UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT

JANUARY 1990

by

U.S. Geological Survey

NATIONAL EARTHQUAKE INFORMATION CENTER[1]

Open-File Report 90-601 A

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1USGS, Denver, Colorado

ANNOUNCEMENT

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EDR No. 1-90
Part 1 of 2
P. 1-150

U. S. DEPARTMENT OF THE INTERIOR

Geological Survey

EARTHQUAKE DATA REPORT

The Earthquake Data Report (EDR) is a bulletin of all seismic phase and amplitude data which were associated with events published in the Preliminary Determination of Epicenters (PDE) Monthly Listing. It also contains information about the hypocentral computations (such as standard errors) that are not included in the PDE Monthly Listing. A machine-readable version of this EDR is available from the Books and Open-File Reports Section of the U.S. Geological Survey.

All data in the EDR are grouped by event, with events listed by origin time in date/time order through the month. All times are in Coordinated Universal Time (UTC). Locations are in decimal degrees of geographic latitude and longitude. Depths are in kilometers below the free surface. Hypocentral coordinates are determined by a modified Geiger's method and may be constrained by reported first arriving P-waves, Pdiff, and the DF branch of PKP. Data are corrected for station elevation and for the ellipticity of the Earth. Outliers may be truncated (ie., removed from the calculation) either automatically or manually. The solution is allowed to converge between rounds of automatic truncation to insure a unique result. Convergence is aided by step length damping.

The error bars of the computed hypocentral coordinates are 90% marginal confidence intervals incorporating Baysian information to stabilize estimates derived from small samples (Jordan and Sverdrup, 1981). It is assumed that the travel-time errors *of the data used* are independent, unbiased, and have an expected standard deviation of 1 s. Monte Carlo experiments suggest that the error bars are accurate for events constrained by more than about 30 data. However, care should be exercised in interpreting these numbers in terms of absolute location accuracy because of unmodeled biases. Analysis of events with independently known coordinates indicates that most PDE determinations are accurate to a few tenths of a degree in epicentral position and 25 km in depth. For special studies, we urge that inquiry be made to this office for possible recomputation of hypocenters of interest, using more complete instrumental data.

Restricted focal depths occur in four instances. If at any point in the computation the depth becomes negative, the solution is automatically restricted at 33 km and indicated by "NORMAL DEPTH". If the unrestricted depth computation is unsatisfactory, and in the judgment of the reviewing geophysicist the earthquake probably has a shallow focus, a solution may be held at 33 km. These are also indicated by "NORMAL DEPTH". The geophysicist may restrain the depth at any value indicated by evidence from available seismograms. These are indicated by, for example, "DEPTH = 100 KM (GEOPHYSICIST)". If two or more pP phases are identified, and in general, yield depths within 10 km of the mean, then the depth is automatically restricted to this value and denoted by, for example, "DEPTH = 51 KM (5 DEPTH PHASES)". pP phases may also appear as unidentified second arrivals with associated travel-time residuals. Hypocentral coordinates derived from other sources, such as the California Institute of Technology, the University of California at Berkeley, and the U. S. Department of Energy are noted on the EDR.

Two types of magnitude are computed: body-wave magnitude (m_b) and surface-wave magnitude (M_{SZ}). Each is a 25% trimmed mean of individual station values. Station magnitudes not used in the trimmed mean are marked with an X. This includes station magnitudes of either type which deviate significantly from the mean and surface-wave magnitudes determined from horizontal amplitudes. Body-wave magnitudes are computed according to the formula $\log(A/T) + Q$, derived by Gutenberg and Richter (1956), where A is the P-wave amplitude in micrometers, T is the period in seconds, and Q is the depth-distance factor. Surface-wave magnitudes are computed from the formula $\log(A/T) + 1.66\log(\Delta) + 3.3$, where A is the maximum vertical surface-wave amplitude in micrometers, T is the period in seconds, and Δ is the epicentral distance in degrees. Surface-wave magnitudes are determined only for earthquakes whose focal depths (taking into account the computed standard deviations) are potentially less than 50 km, for stations having

$20° \leq \Delta \leq 160°$, and for reported periods of $18 \leq T \leq 22$ s. No correction for focal depth is used in the M_S calculation. Body-wave magnitudes are not determined from PKP arrivals or for stations having $\Delta \leq 5°$. Amplitude values stated in this report are in nanometers (nm) for body-waves and micrometers (μm) for surface-waves.

The travel-time residual (observed – computed) is based on the 1940 Jeffreys-Bullen P and 1968 Bolt PKP travel-time tables. Phases not used in the computation are marked by an X. The azimuth from the epicenter to the station is measured clockwise from north. The epicentral distance is the central angle in degrees.

Hypocenter Symbols

& Indicates that parameters of the hypocenter were supplied or determined by a computational procedure not normally used by the National Earthquake Information Service (NEIS). The source or nature of the determination is indicated by a 2 to 5 letter code enclosed by angle brackets and appearing in the first line of comments. A "-P" appended to the code indicates that the computation is preliminary. These codes are included with the list of abbreviations in the PDE Monthly Listing.

% Indicates a single network solution. A non-furnished hypocenter has been computed using data reported by a single network of stations for which the date and/or origin time cannot be confirmed from seismograms available to a NEIS analyst. Also, if we define η to be the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse, then $\eta \leq 16.0$ km.

* Indicates a less reliable solution. In general, $8.5 < \eta \leq 16.0$ km.

? Indicates a poor solution, published for completeness of the catalog. In general, $\eta > 16.0$ km. This includes poor solutions computed using data reported by a single network.

The lack of any symbol indicates that $\eta \leq 8.5$ km.

Note: On printers available to the NEIS for this publication, the symbol for degrees (°) appears as "`".

References

Bolt, Bruce A. (1968), Estimation of PKP Travel Times, *Bull. Seis. Soc. Am.*, **58**, pp. 1305–1324.

Gutenberg, B. and C. F. Richter (1956), Magnitude and Energy of Earthquakes, *Ann. di Geofisica*, **9**, no. 1, pp. 1–15.

Jeffreys, Harold and K. E. Bullen (1940), *Seismological Tables*, British Assoc. for the Advancement of Science, Gray Milne Trust.

Jordan, Thomas H. and Keith A. Sverdrup (1981), Teleseismic Location Techniques and their Application to Earthquake Clusters in the South-Central Pacific, *Bull. Seis. Soc. Am.*, **71**, pp. 1105–1130.

& JAN 01, 1990 00h 22m 33.56s
61.719 N 149.671 W
DEPTH = 38.8km
SOUTHERN ALASKA (2)
<AGS-P>. ML 2.9 (PMR).

PWA	0.12	235	iPd	22	40.30	0.2
PMR	0.29	116	iPd	22	40.80	-0.8
PLRM	0.29	116	iP	22	40.74	-0.8
			eS	22	47.29	
PME	0.32	106	iP	22	41.20	-0.7
			iS	22	47.68	
GHO	0.36	81	iP	22	41.68	-0.9
			eS	22	48.84	
PMS	0.48	174	iPd	22	43.50	-0.5
SUA	0.57	244	iP	22	44.82	-0.6
			eS	22	53.96	
CUT	0.74	338	iP	22	46.90	-0.7
SKT	0.92	287	iP	22	49.42	-0.7
CGLM	1.19	251	iP	22	54.14	0.0
NCG	1.23	256	iP	22	54.67	0.0
			eS	23	11.25	
NKA	1.24	218	eP	22	56.38	1.7
SLKM	1.24	193	eP	22	54.28	-0.5
HUR	1.26	1	eP	22	55.43	0.4
			eS	23	11.41	
SPU	1.27	246	iP	22	54.97	-0.1
			eS	23	11.98	
CRP	1.28	250	eP	22	55.41	0.1
NCA	1.38	77	iP	22	56.00	-0.7
			eS	23	15.23	
BGL	1.38	252	eP	22	56.94	0.1
			eS	23	16.05	
CKL	1.38	249	iP	22	56.80	-0.1
GLI	1.50	123	iP	22	57.48	-0.9
SEW	1.62	176	eP	23	01.35	1.2
VZW	1.64	112	eP	22	59.73	-0.7
TOA	1.70	75	iPc	23	01.40	0.1
RND	1.74	12	eP	23	01.57	-0.3
RDT	1.76	230	eP	23	01.71	-0.4
KLU	1.81	96	iP	23	01.87	-1.0
FID	1.82	121	eP	23	01.46	-1.6
PAX	2.33	55	eP	23	10.22	-0.1
DDM	2.72	39	eP	23	17.62	1.8
SVW	2.93	261	ePc	23	17.50	-1.3
TTA	3.20	295	eP	23	21.40	-1.2
FBA	3.30	14	eP	23	22.60	-1.5
IMA	4.71	340	eP	23	42.40	-1.8

33 obs. associated

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* JAN 01, 1990 02h 47m 41.25± 2.10s
36.323 N ±21.9km 26.969 E ±10.7km
DEPTH = 144.8 ± 24.6 km
DODECANESE ISLANDS (369)
MD 3.3 (ATH).

KAP	0.79	168	eP	48	04.50	0.4
NPS	1.53	227	eP	48	10.00	-1.1
			eS	48	31.80	
HSL	2.12	95	eP	48	18.40	0.5
ELL	2.40	79	ePn	48	21.00	-0.5
VAM	2.43	249	eP	48	22.40	0.7
HOT	7.57	146	eP	49	30.00	0.0
			eS	50	52.00	

S.D. = 1.1 on 6 of 6 obs.

? JAN 01, 1990 03h 25m 58.27± 0.98s
44.384 N ±10.6km 7.312 E ± 9.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

STV	0.14	176	P	26	01.64	0.0
			S	26	03.85	
ENR	0.18	154	P	26	02.29	0.0
			S	26	04.90	
PZZ	0.19	309	P	26	02.64	0.0
			S	26	05.49	
ROB	0.41	102	P	26	06.68	0.0
			S	26	12.69	

S.D. = 0.0 on 4 of 4 obs.

JAN 01, 1990 06h 34m 04.00± 0.48s
41.714 N ± 5.7km 19.431 E ± 4.0km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 3.3 (SKO).

LACI	0.22	110	iPgc	34	09.00	0.2
SDA	0.31	10	ePg	34	19.30	8.9X
PUK	0.48	46	ePg	34	12.80	-0.9
TIR	0.49	138	iPgc	34	13.50	-0.5
KKS	0.82	63	ePg	34	20.00	0.2
BERA	1.08	159	ePg	34	25.00	0.7
OHR	1.19	120	iPnd	34	24.50	-1.8
TPE	1.48	163	ePn	34	31.60	0.9
SKO	1.52	80	iPn	34	32.00	0.7
	0.5s	319.00nm				
			i	34	34.20	
			i	34	35.50	
			iSn	34	52.20	
			LQ	34	54.70	
LCI	1.77	220	P	34	34.00	-0.9
			eSn	34	56.80	
LSK	1.80	150	ePn	34	37.40	2.1
BRT	1.87	244	P	34	37.20	0.8
			eSn	35	00.70	
VAY	2.39	98	ePn	34	42.00	-1.8
HVAR	2.65	305	i(Pn)	34	51.90	4.4X
SGO	3.32	251	P	34	56.00	-1.0
DUI	3.72	271	P	35	02.50	-0.4
SDI	4.20	272	P	35	10.20	0.6
BZS	4.21	21	ePc	35	11.50	1.9
MNS	5.07	280	P	35	21.00	-0.9
ASS	5.19	287	P	35	23.70	0.0

S.D. = 1.2 on 18 of 20 obs.

JAN 01, 1990 07h 49m 35.57± 0.15s
21.772 S ± 4.0km 179.361 W ± 3.6km
DEPTH = 599.5km (4 depth phases)
5.2mb (43 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.B.: 14S, 22C
Centroid Locotion:
Origin Time 07:49:45.9 1.0
Lat 21.70S 0.08 Lon 179.78W 0.08
Dep 627.1 5.2 Half-durotion 1.9
Moment Tensor; Scole 10**17 Nm
Mrr= 0.91 0.07 Mtt=-0.32 0.13
Mff=-0.59 0.12 Mrt=-0.73 0.12
Mrf=-1.01 0.11 Mtf=-0.23 0.11
Principol Axes:

T	Vol= 1.59	Plg=62	Azm=128
N	-0.19	2	34
P	-1.40	28	303

Best Double Couple:Mo=1.5*10**17
NP1:Strike= 29 Dip=17 Slip= 84
NP2: 215 73 92

SVA	4.18	330	iPc	51	03.90	1.2
			eS	52	59.90	
MBU	5.11	339	iPd	51	11.70	1.9
RAO	7.56	170	iP	51	32.00	0.8
			eS	52	56.30	
AFI	10.64	44	eP	51	59.00	-2.1
			S	53	52.00	
PVC	12.28	287	iPc	52	19.90	2.9
DZM	13.18	266	iPd	52	27.40	1.4
			iS	54	49.00	
			ScP	59	47.00	
HBZ	15.90	187	eP	52	52.60	0.4
	0.2s	41.00nm			5.5mb	
TUTZ	17.35	192	P	53	07.10	1.0
HITZ	17.39	193	P	53	08.00	1.5
HATZ	17.50	192	P	53	07.80	0.2
RATZ	17.55	193	eP	53	09.00	1.0
PGZ	19.15	190	P	53	21.50	-1.3
MNG	19.29	192	P	53	22.30	-1.9
			eS	56	20.00	
KIW	19.64	193	P	53	26.20	-1.2
MTW	19.81	192	P	53	27.40	-1.5
CAW	19.85	192	P	53	27.90	-1.3
WDW	20.01	193	P	53	29.30	-1.5
MRW	20.04	193	eP	53	29.70	-1.3
			eS	56	36.20	
WEL	20.08	193	P	53	30.60	-0.7
TCW	20.12	194	eP	53	30.60	-1.1
HNR	23.36	298	eP	54	01.00	-0.3
BRS	25.92	252	iPc	54	24.80	1.1
			i	54	30.80	
			e	55	08.00	
			e	55	46.30	
			i	56	10.00	
			eS	58	10.80	
			e	00	16.20	
			e	01	52.00	
			e(ScS)	05	55.00	
COO	27.19	245	iPd	54	36.30	1.5
TBI	27.64	99	iP	54	38.70	0.1
	0.9s	50.00nm			5.1mb	
AFR	28.15	87	iP	54	43.40	0.2
	0.9s	60.00nm			5.2mb	
PAE	28.31	87	iP	54	45.00	0.5
	0.9s	35.00nm			5.0mb	
PPT	28.33	87	iP	54	45.10	0.4
	0.9s	55.00nm			5.2mb	
PPN	28.48	87	iP	54	46.40	0.5
	0.9s	20.00nm			4.7mb	
TVO	28.59	87	iP	54	47.40	0.4
	0.9s	75.00nm			5.3mb	
RMQ	29.43	254	iPd	54	55.40	1.3
	1.0s	206.00nm			5.7mb	
			e	57	42.00	
PMO	30.57	83	iP	55	03.30	-0.5
	0.9s	45.00nm			5.1mb	
VAH	30.74	83	iP	55	04.40	-0.8
	0.9s	55.00nm			5.2mb	
CAN	30.75	237	eP	55	06.40	1.1
TPT	30.83	83	iP	55	05.40	-0.6
	0.9s	85.00nm			5.4mb	
RUV	30.99	83	iP	55	06.70	-0.6
	0.9s	110.00nm			5.5mb	
CTA	32.12	267	iPd	55	17.00	0.1
	1.0s	232.00nm			5.8mb	
			iS	59	47.00	
			iScP	00	36.70	
			iSS	03	04.00	
			iScS	04	38.00	
CMS	32.47	245	iPd	55	20.80	1.1
	0.2s	33.00nm			5.6mb	
KDB	34.39	286	eP	55	35.00	-0.9
STK	36.10	245	iPd	55	51.10	1.3
	0.2s	26.00nm			5.5mb	
ADE	38.89	241	iPd	56	13.90	1.3
	0.7s	21.92nm			4.8mb	
ASPA	43.01	258	iPd	56	44.00	-1.4
	0.3s	196.00nm			6.1mb	
Z	18s	0.29um			4.2Msz	
			ePcP	58	21.20	
			ScP	01	18.10	
			iS	02	27.10	
			iScS	05	39.70	
			LR	13	53.90	
WB5	43.17	264	iPd	56	45.80	-0.8
			eScP	01	17.50	
			eS	02	28.50	
WRA	43.18	264	Pc	56	46.20	-0.5
	0.3s	22.60nm			5.2mb	
FORR	47.59	248	iPd	57	19.90	-0.4
	0.4s	110.00nm			5.7mb	
MTN	47.92	272	iPd	57	21.70	-1.3
			e	01	37.00	
			e	03	35.00	
WARB	49.25	254	iPd	57	31.90	-0.8
	0.3s	22.00nm			5.2mb	
KNA	49.30	268	iPd	57	32.40	-0.8
	0.4s	59.00nm			5.5mb	
GUA	49.60	312	eP	57	35.10	-0.2
	0.8s	226.87nm			5.8mb	
GUMO	49.67	312	eP	57	34.50	-1.3
	0.6s	96.52nm			5.5mb	
			eS	04	08.00	
PJG	49.67	312	eP	57	34.50	-1.3
DRV	51.74	199	eP	57	50.50	0.2
			e	04	43.20	
COOL	53.56	247	iPd	58	02.40	-1.4
	0.3s	6.00nm			4.4mb	
AAI	53.92	282	eP	58	06.40	-0.1
MBL	56.25	259	iPd	58	21.40	-1.2
KLB	56.37	246	iPd	58	22.60	-0.7
	0.3s	7.00nm			4.4mb	
MEKA	56.38	252	eP	58	22.90	-0.6
	0.3s	6.00nm			4.4mb	
SBA	56.53	183	P	58	27.00	3.3X
NWAO	56.67	244	eP	58	24.70	-0.6
BAL	57.38	247	iPd	58	29.20	-1.0
	0.3s	9.00nm			4.5mb	
MUN	57.64	245	eP	58	31.40	-0.5

01d 07h

MRWA	58.19	248	iPd	58	34.90	-0.8	FBA	89.75	13	P	01	30.00	-1.4	ABH	151.42	351	ePKPd	08	22.60	6.0X
	0.5s	11.00nm			4.3mb			1.0s	60.00nm			5.5mb		TOD	151.48	349	ePKP	08	22.72	6.0X
NANU	59.85	256	iPd	58	46.40	-0.3				pP	03	42.00	612kmX	DOU	151.56	355	iPKPc	08	22.80	6.1X
	0.4s	80.00nm			5.3mb		LRM	90.50	40	eP	01	35.20	-0.4				e	08	33.70	
TRT	66.79	271	iPd	59	30.40	-0.5	BW06	90.76	44	P	01	36.50	-0.4				e	10	43.20	
	0.7s	51.80nm			5.1mb			1.2s	17.12nm			4.9mb		RUP	151.67	351	ePKP	08	23.40	6.4X
SPA	68.36	180	iPc	59	41.40	1.6				pP	03	52.00	632kmX	WLF	151.82	352	iPKP	08	24.00	6.9X
	1.1s	36.90nm			4.8mb		GOL	92.11	48	P	01	43.00	-0.2				e	10	46.00	
			e	01	43.40		GLD	92.24	48	P	01	43.50	-0.1	KBA	152.74	341	iPKPc	08	26.20	7.4X
KAKJ	69.20	326	P	59	43.60	-1.3		1.2s	30.30nm			5.2mb			0.5s	8.40nm				
CHJJ	69.70	325	P	59	46.70	-1.2	LZH	92.54	308	P	01	46.10	1.0				i	08	28.50	
IIDJ	69.87	324	P	59	47.50	-1.4		1.0s	33.00nm			5.3mb					i	08	40.40	
BAG	70.02	298	eP	59	48.90	-1.5				pP	01	48.60	8kmX				ipPKP	10	48.30	
WKYJ	70.26	321	eP	59	50.60	-0.7	INK	95.83	16	eP	01	57.00	-2.1				i	10	50.20	
MAT	70.49	325	iPd	59	50.90	-1.6	SOD	131.56	347	ePKP	07	41.00	-0.7	CDF	152.89	350	ePKP	08	26.10	7.3X
	1.0s	50.00nm			5.0mb		SUF	135.55	344	ePKP	07	49.00	-0.4	FLN	153.05	2	ePKP	08	25.70	6.8X
NIIJ	70.60	326	eP	59	53.30	0.2	NUR	137.78	343	ePKP	07	49.00	-4.6X	LDF	153.23	1	ePKP	08	25.90	6.8X
MTMJ	70.74	325	P	59	52.90	-1.2		0.5s	21.10nm					LJU	153.26	338	e(PKP)	08	20.80	1.5
TKSJ	71.00	320	eP	59	54.60	-0.9				i	07	54.40					i	08	26.40	
YONJ	72.18	321	eP	00	01.30	-1.0	NB2	140.07	352	PKP	07	49.00	-8.8X				epPKP	10	46.10	
KUSJ	72.53	333	eP	00	02.90	-1.2		0.5s	4.40nm								e	10	52.00	
HOOJ	72.55	332	eP	00	04.20	0.0	HFS	140.57	350	ePKP	07	49.20	-9.5X	FEL	153.29	349	ePKP	08	26.48	7.1X
MRRJ	73.58	331	eP	00	09.20	-0.8		0.4s	9.20nm					FVI	153.34	341	PKP	08	26.50	7.2X
ASAJ	74.23	333	eP	00	13.20	-0.5	LWI	143.57	233	iPKPc	08	04.60	-0.9	GRR	153.42	2	ePKP	08	26.60	7.2X
PRS	79.61	44	ePc	00	43.00	0.2	KAS	145.96	313	ePKP	08	10.50	2.0	HAU	153.43	351	ePKP	08	26.60	7.1X
GCC	79.63	43	ePc	00	42.90	0.1	EKA	146.37	4	PKP	08	09.00	0.4	VBY	153.47	337	e(PKP)	08	19.00	-0.6
PCC	79.67	43	eP	00	42.90	-0.1		0.7s	13.70nm								e	08	58.50	
MAW	79.94	200	eP	00	45.00	1.0	BBTK	147.29	311	iPKPd	08	13.00	2.2X	VOY	153.49	339	ePKP	08	20.10	0.4
PRI	79.96	45	e(P)	00	44.80	0.1	DMU	147.41	8	ePKP	08	12.60	2.3X				e	08	26.50	
BRK	79.97	42	ePc	00	44.80	0.2	VRI	147.90	325	ePKPc	08	16.50	5.1X				epPKP	10	46.50	
BKS	79.99	42	ePc	00	45.20	0.5	DCN	147.90	9	ePKP	08	13.70	2.6X				i	10	52.40	
MHC	80.04	43	ePc	00	45.50	0.3		0.5s	53.00nm					LPF	153.76	3	ePKP	08	27.40	7.6X
AIA	80.30	157	eP	00	48.10	2.3	KRA	147.93	336	ePKP	08	14.20	2.9X	OHR	154.27	323	ePKP	08	28.50	7.7X
PAS	80.48	47	eP	00	47.00	-0.3				e	10	30.80			1.2s	0.06nm				
MWC	80.60	47	eP	00	48.00	-0.2	DLE	148.06	8	ePKP	08	14.10	2.7X				i	08	46.20	
BAR	80.71	49	eP	00	49.00	0.4	KSP	148.50	341	iPKPd	08	16.20	4.0X				e	10	46.50	
FHC	80.74	39	ePc	00	49.40	0.8				ic	08	22.20		LOR	154.43	355	ePKP	08	29.00	8.2X
RVR	80.94	48	eP	00	50.00	0.3				e	10	35.00		SSF	154.66	355	ePKP	08	29.50	8.4X
			e	03	01.00		SPC	148.52	335	iPKP	08	15.50	3.0X	LBF	154.70	355	ePKP	08	30.20	9.0X
PLM	80.94	49	eP	00	50.00	0.1	WIT	148.67	353	e(PKP)	08	14.00	1.7	VAI	155.06	346	PKP	08	21.00	-0.6
			e	03	02.00					e	08	17.00		MFF	155.22	1	ePKP	08	30.60	8.7X
SBB	81.02	47	eP	00	50.00	-0.2				e(pPKP	10	35.50		LIC	163.60	160	PKPc	08	31.20	-0.8
			e	03	01.00					e	10	39.00			0.8s	15.00nm				
FRI	81.08	44	ePc	00	50.20	-0.1	ETA	148.68	8	ePKP	08	21.50	9.2X	KIC	163.82	160	PKP	08	31.48	-0.7
ISA	81.13	46	eP	00	51.00	0.3	ECB	148.93	9	ePKP	08	22.40	9.7X	TIC	164.00	159	PKPc	08	31.70	-0.7
			e	03	00.00		CLL	148.98	345	ePKP	08	13.00	0.2	LKO	166.45	153	PKPc	08	34.48	0.1
CMB	81.25	43	ePc	00	51.20	-0.1	CLL	148.98	345	iPKP	08	17.10	4.3X		0.8s	16.00nm				
			epP	02	58.90	603km		1.3s	62.00nm						S.D. = 1.1 on 143 of 185 obs.					
WDC	81.46	40	iPc	00	52.50	0.3				pPKP	10	36.80		----------					
			epP	03	00.20	602km	BRG	149.14	343	iPKP	08	17.50	4.4X	JAN 01, 1990 09h 03m 12.88± 0.88s					
ORV	81.47	41	ePc	00	52.30	0.1		1.0s	46.00nm					36.417 N ± 8.2km 140.568 E ± 9.1km					
CLC	81.80	46	eP	00	54.00	-0.1				e	10	33.00		DEPTH = 67.9 ± 6.5 km					
			e	03	03.00		ECP	149.17	8	ePKP	08	23.30	10.2X	4.8mb (12 obs.)					
MIN	81.88	41	ePc	00	54.10	-0.4		1.2s	204.00nm					NEAR EAST COAST OF HONSHU, JAPAN(228)					
TPC	81.92	48	eP	00	55.00	0.3	WTS	149.45	352	e(PKP)	08	14.00	0.5						
			e	03	04.00			0.6s	43.00nm					KAKJ	0.38	237	iP+	03	24.00	-0.6
GSC	82.05	47	eP	00	56.00	0.6				i(P'P'	08	18.20					S	03	31.40	
			e	03	04.00					e	08	24.00		CHJJ	1.32	254	iPd	03	35.80	0.0
IPM	82.08	278	ePd	00	57.00	1.2				e(pPKP	10	36.50					S	03	51.90	
	0.9s	48.00nm			5.0mb					e	10	43.00		NIIJ	1.50	304	iPd	03	38.30	0.1
GLA	82.21	50	eP	00	57.00	0.8	MOX	149.92	346	ePKP	08	19.00	4.7X	YAMJ	1.80	347	iPd	03	42.20	-0.1
			e	03	07.00			1.3s	36.00nm								eS	04	03.00	
KVN	83.30	43	P	01	04.00	2.3				e	10	42.00		MAT	1.91	274	iPc	03	44.00	0.2
			pP	03	12.00	600km	SRO	150.38	336	iPKP	08	23.00	7.9X	MTMJ	2.23	275	P	03	49.40	1.0
SNG	83.45	280	eP	01	04.80	2.2				e	10	40.40		IIDJ	2.35	247	P	03	51.90	1.9
LON	85.69	36	P	01	13.50	0.6				e	10	46.40					eS	04	21.80	
BJI	85.91	316	eP	01	13.50	-0.5	ZST	150.51	337	ePKP	08	22.50	7.2X	OFUJ	2.80	18	P	03	54.40	-1.8
	1.0s	15.00nm			4.7mb					e	10	41.10					eS	04	27.10	
			pP	03	21.00	592km	ELL	150.57	307	ePKP	08	20.70	4.8X	CHTO	40.48	256	eP	10	47.20	0.6
			eSKS	10	41.00		VKA	150.73	338	iPKPc	08	21.50	5.9X		0.8s	0.92nm			3.7mb	X
			eS	11	02.00			0.6s	18.30nm					GUN	46.54	276	P	11	36.00	0.1
PGC	86.02	33	eP	01	14.00	-0.3				epPKP	10	40.50			0.4s	18.00nm			5.4mb	
NNT	86.35	285	iPd	01	18.70	2.1	ENN	150.77	353	e(PKP)	08	16.00	0.5	PKI	47.06	276	P	11	39.20	-0.8
PMR	86.55	14	P	01	15.50	-1.1		0.7s	20.00nm						0.6s	14.00nm			5.1mb	
PNT	88.42	34	iPc	01	26.70	1.1				e(P'P'	08	21.00		KKN	47.07	276	P	11	39.60	-0.4
	0.7s	17.00nm			5.0mb					e	08	29.50			0.8s	22.00nm			5.1mb	
KMI	88.80	298	Pc	01	30.00	1.8				e(pPKP	10	41.00		DMN	47.29	276	P	11	41.40	-0.3
BDT	88.82	289	eP	01	30.20	2.1				e	10	47.00		GKN	47.50	277	P	11	43.00	-0.3
	1.1s	41.60nm			5.3mb		KHC	150.82	342	ePKP	08	17.00	1.2	FBA	49.99	32	eP	12	04.20	2.5
ANMO	89.19	52	P	01	30.00	0.3				i	08	22.00			0.8s	1.00nm			3.9mb	
	1.0s	12.50nm			4.8mb		GRF	150.90	346	ePKP	08	22.60	6.8X	INK	55.25	27	eP	12	40.00	-0.8
CHG	89.49	290	iPd	01	33.50	2.3				e	08	33.10		WB5	56.30	187	eP	12	47.80	-1.0
	1.1s	37.97nm			5.2mb					e	10	42.20		WRA	56.36	187	Pd	12	47.20	-2.1
			e	03	46.50					e	10	46.90			0.6s	3.90nm			4.6mb	
CHTO	89.49	290	iPd	01	33.30	2.2	MEM	150.91	353	PKP	08	14.70	-1.0	MBC	57.31	16	eP	12	55.00	-0.4
	1.0s	29.50nm			5.2mb					e	08	21.30			0.9s	3.00nm			4.4mb	
			pP	03	40.20	583kmX				e	08	29.80		ASPA	60.09	187	eP	13	14.90	-0.4

0.9s 4.00nm 4.5mb
Z 19s 0.05um 3.6Msz
LR 22 30.20
GBA 60.49 265 P 13 17.30 -0.9
KEV 63.78 339 eP 13 40.00 0.6
SOD 65.27 337 eP 13 49.00 -0.1
SUF 68.23 333 iP 14 07.10 -0.8
0.4s 7.30nm 5.0mb
NUR 70.17 332 iP 14 18.90 -0.9
HFS 74.37 335 eP 14 42.00 -2.6
1.0s 6.30nm 4.5mb
NB2 74.49 337 P 14 44.80 -0.6
0.7s 7.60nm 4.7mb
LRM 75.06 44 iPc 14 50.90 1.7
FRB 77.53 13 eP 15 02.00 -0.3
CLL 81.29 330 iPd 15 22.80 0.0
0.9s 10.00nm 4.8mb
KHC 82.71 328 eP 15 31.20 0.9
GRF 83.26 330 iPc 15 34.60 1.5
0.8s 11.00nm 4.9mb
ALQ 85.51 49 eP 15 46.80 1.9
ZOBO 147.58 59 ePKP 22 50.00 0.7
LPB 147.78 60 ePKP 22 51.00 1.6
CNCB 148.05 60 PKP 22 52.00 2.0X
S.D. = 1.2 on 35 of 36 obs.

? JAN 01, 1990 09h 30m 26.70± 0.93s
40.401 N ± 9.5km 28.646 E ± 9.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT 0.56 266 iPg 30 41.00 3.0X
iSg 30 51.50
EDC 0.60 265 iPg 30 38.50 -0.3
eSg 30 48.50
ISK 0.73 25 ePg 30 41.80 0.7
eSg 30 51.30
DST 0.79 181 iPg 30 42.50 0.3
eSg 30 56.50
HRT 0.88 61 ePg 30 43.00 -0.7
S.D. = 1.1 on 4 of 5 obs.

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* JAN 01, 1990 09h 38m 15.39± 1.17s
23.616 S ±13.9km 179.922 W ±23.0km
DEPTH = 540.8 ± 19.5 km
4.8mb (5 obs.)
SOUTH OF FIJI ISLANDS (171)

SVA 5.68 344 eP 39 51.00 -0.4
DZM 12.67 274 iPd 41 03.10 1.7
PGZ 17.25 190 eP 41 46.80 0.2
MNG 17.39 192 eP 41 46.40 -1.6
S 44 39.90
KIW 17.74 193 eP 41 51.90 0.6
MTW 17.91 191 eP 41 51.80 -1.2
CAW 17.94 192 eP 41 53.20 -0.1
WDW 18.11 192 eP 41 54.60 -0.3
BLW 18.12 191 eP 41 55.60 0.6
MRW 18.13 193 eP 41 54.90 -0.2
TCW 18.21 194 eP 41 57.20 1.3
MSZ 23.24 202 eP 42 42.00 -0.2
CTA 31.55 270 iPd 43 55.60 0.6
0.6s 37.00nm 5.2mb
ASPA 42.15 260 iPc 45 21.00 -1.0
0.5s 11.00nm 4.6mb
Z 20s 0.08um 3.6Msz
iS 51 02.30
LR 55 00.10
WB5 42.49 266 eP 45 24.00 -0.7
WRA 42.50 266 Pd 45 24.10 -0.7
0.4s 3.60nm 4.3mb
FORR 46.44 249 iPd 45 55.00 -0.2
0.5s 23.00nm 5.0mb
SPA 66.53 180 iPc 48 14.60 1.5
0.8s 24.58nm 4.8mb
CLL 150.60 343 iPKPd 57 07.40 6.6X
1.0s 13.00nm
BRG 150.74 342 iPKP 57 08.00 6.9X
0.9s 12.00nm
S.D. = 1.0 on 18 of 20 obs.

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* JAN 01, 1990 10h 33m 44.05± 1.07s
16.302 N ±17.8km 63.417 W ± 7.3km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 3.6 (FDF).

BPA 1.67 63 eP 34 12.08 0.7
eS 34 30.51
PAG 1.69 99 eP 34 22.70 10.9X
S 34 51.30
ANG 1.74 61 eP 34 12.00 -0.4
SEG 1.84 87 eP 34 20.00 6.2X
S 34 45.00
BBL 2.02 112 iPc 34 29.34 12.9X
MDN 2.17 117 eP 34 18.41 -0.2
DEG 2.26 89 eP 34 24.40 4.4X
S 34 53.40
LPR 3.08 311 P 34 30.30 -1.2
SJG 3.17 305 iP 34 33.20 0.4
PORP 3.54 300 P 34 39.00 1.0
LRS 3.83 302 P 34 42.00 -0.1
S.D. = 0.9 on 7 of 11 obs.

& JAN 01, 1990 13h 22m 47.80s
36.978 N 121.810 W
DEPTH = 15.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

GCC 0.16 289 iPc 22 51.50 -0.5
iS 22 54.20
SAO 0.36 126 iPd 22 54.50 -0.9
MHC 0.39 20 iPd 22 55.70 -0.2
i 23 00.00
iS 23 01.30
ARN 0.43 31 iPd 22 56.30 -0.3
PCC 0.69 319 ePd 23 00.40 -0.6
PRS 0.74 151 ePc 23 01.30 -0.5
eS 23 11.00
LLA 0.78 117 ePc 23 01.80 -0.8
BKS 0.96 339 eP 23 04.00 -1.6
iS 23 18.10
BRK 0.96 338 e(P) 23 04.50 -1.1
eS 23 17.80
ZSP 1.03 340 ePd 23 05.30 -1.5
PRI 1.24 132 eP 23 10.40 -0.1
CMB 1.55 47 e(P) 23 13.40 -1.5
iS 23 31.80
FRI 1.68 89 eP 23 14.70 -2.1
KVN 3.59 54 eP 23 48.50 4.3
14 obs. associated

JAN 01, 1990 14h 10m 03.05± 0.51s
9.412 S ± 8.1km 107.260 E ± 7.5km
DEPTH = 31.9km (5 depth phases)
4.7mb (7 obs.)
SOUTH OF JAVA (282)

TRT 5.58 73 ePc 11 25.70 -0.3
iS 12 27.00
IPM 15.22 336 ePd 13 35.60 -1.9
e 13 43.20
NANU 15.29 150 eP 13 32.00 -6.3X
eS 16 07.00
MBL 16.82 135 eP 13 52.00 -5.9X
eS 16 44.00
TSM 17.31 39 ePc 14 04.20 0.2
KKM 17.76 30 eP 14 11.00 1.3
AAI 21.55 76 eP 14 52.00 0.0
NNT 23.10 341 eP 15 07.20 -0.1
NST 25.90 344 eP 15 33.00 -1.1
LOE 27.20 348 iPd 15 46.00 0.0
BDT 27.71 343 eP 15 51.00 0.3
WRA 28.17 115 Pd 15 53.10 -1.8
0.9s 6.40nm 4.3mb
WB5 28.17 115 eP 15 54.20 -0.7
ASPA 29.13 122 eP 16 02.50 -1.0
1.4s 10.00nm 4.3mb
Z 17s 0.62um 4.3MszX
LR 32 39.60
KMI 34.61 353 Pc 16 53.50 1.8
1.5s 0.80nm 3.4mb X
N 10s 0.80um
pP 17 03.50 35km
KOD 35.49 303 eP 17 10.00 10.5X
GBA 37.41 307 P 17 16.00 0.8
SSE 42.43 18 Pc 17 56.60 0.0
1.4s 60.00nm 5.1mb
Z 14s 0.40um 4.5MszX
E 12s 0.20um
i 18 05.70 31km
eS 23 36.00
POO 43.10 310 eP 18 03.60 1.3

LZH 45.37 356 Pc 18 21.50 1.0
2.0s 98.00nm 5.4mb
Z 14s 0.80um 4.8MszX
N 12s 0.60um
pP 18 27.00 18kmX
sP 18 31.00
CAN 45.92 131 eP 18 26.00 1.2
BRS 46.44 119 iPc 18 30.80 1.8
0.9s 4.00nm 4.4mb
i 18 39.80 30km
NDI 47.71 324 eP 18 38.00 -0.9
BJI 49.89 9 eP 18 54.50 -1.0
1.2s 16.00nm 4.9mb
Z 16s 0.29um 4.4MszX
QUE 55.24 317 eP 19 30.50 -5.4X
MAIO 63.90 318 eP 20 34.00 -1.3
i 20 44.00 32km
SLR 76.10 246 eP 21 50.00 0.0
0.7s 6.85nm 4.8mb
BUL 76.22 252 iPd 22 06.60 15.8X
1.0s 5.50nm
i 22 16.70 32km
PRY 76.74 245 eP 21 54.00 0.3
ALQ 140.08 45 PKP 29 34.80 3.8X
TUL 146.30 35 ePKP 29 44.30 2.9X
1.3s 12.30nm
LPB 153.82 190 PKP 30 10.00 16.2X
ZOBO 154.08 190 ePKP 30 02.00 7.6X
S.D. = 1.1 on 24 of 33 obs.

JAN 01, 1990 14h 49m 00.69± 0.16s
10.507 S ± 3.3km 161.387 E ± 3.8km
DEPTH = 36.7km (19 depth phases)
5.2mb (12 obs.) 4.8Msz (3 obs.)
SOLOMON ISLANDS (193)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 18C
Centroid Location:
Origin Time 14:49: 7.6 0.6
Lat 10.71S 0.10 Lon 160.88E 0.09
Dep 30.1 6.1 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 6.09 0.42 Mtt=-0.47 0.80
Mff=-5.61 0.67 Mrt=-3.38 1.14
Mrf= 0.25 1.38 Mtf= 2.02 0.44
Principal Axes:
T Val= 7.54 Plg=66 Azm=174
N -1.07 22 335
P -6.48 7 68
Best Double Couple:Mo=7.0*10**16
NP1:Strike=181 Dip=43 Slip= 124
NP2: 318 56 63

PVC 9.84 138 iPc 51 22.50 -0.3
DZM 12.48 158 iPd 51 59.10 0.3
iS 54 12.60
KDB 14.05 273 eP 52 23.50 4.0X
SVA 18.18 117 eP 53 15.20 3.1X
BRS 18.65 205 iPc 53 20.20 2.3
i 53 26.80
i 54 04.00
e 56 43.00
RMO 19.88 215 iPc 53 33.00 1.1
1.0s 265.00nm 5.5mb
e 53 49.00 80kmX
COO 21.84 202 iPc 53 53.10 1.2
CMS 25.37 212 eP 54 27.00 0.8
e 54 29.00 7kmX
CAN 27.15 203 eP 54 43.20 0.5
WB5 27.65 247 iPc 54 47.20 -0.1
epP 55 06.00 82kmX
WRA 27.69 247 Pc 54 47.40 -0.3
0.9s 39.60nm 5.1mb
STK 28.06 218 eP 54 51.00 0.1
ASPA 29.28 240 iPc 55 00.60 -1.4
1.1s 18.00nm 4.7mb
Z 20s 3.22um 4.9Msz
LR 05 49.30
BFD 31.52 210 eP 55 22.00 0.4
ADE 31.94 217 iPc 55 26.20 0.8
0.8s 35.82nm 5.3mb
KNA 32.17 257 iPc 55 27.40 -0.1
MNG 32.48 160 P 55 28.90 -1.1
0.4s 16.00nm 5.3mb
KIW 32.51 161 P 55 29.40 -0.8
TCW 32.63 162 P 55 30.80 -0.4

01d 14h

PGZ	32.76	159	P	55	31.00	-1.3	MWC	88.15	55	eP	01	50.00	0.4	MEKA	20.35	198	iPd	11	29.00	0.2
MRW	32.78	161	P	55	31.40	-1.1				e	02	02.00	39km		0.3s	23.00nm				5.3mb
CAW	32.78	161	P	55	31.50	-1.1	SBB	88.45	54	eP	01	51.00	0.2	KDB	21.80	98	eP	11	42.50	0.3
WDW	32.90	161	P	55	32.40	-1.2				e	02	02.00	35km	QCP	22.07	349	eP	11	42.00	-2.5
MTW	32.97	160	P	55	32.80	-1.4	RVR	88.64	55	eP	01	52.00	0.3	MRWA	23.59	201	eP	11	57.20	-1.0
MOW	33.12	161	P	55	34.10	-1.5				e	02	04.00	39km	FORR	23.70	174	iPc	11	58.00	-1.2
BLW	33.15	160	P	55	34.40	-1.4	PEC	88.79	55	P	01	52.50	0.0	COOL	23.89	189	eP	11	59.30	-1.7
MSZ	34.50	172	P	55	47.40	0.0	CLC	88.90	53	eP	01	54.00	1.0	BAG	23.89	349	eP	11	58.90	-2.3
WARB	36.33	240	iPc	56	03.30	0.1				e	02	05.00	35km	CTA	24.07	124	iPc	12	02.90	0.2
	0.6s	20.00nm				5.2mb	PLM	88.91	56	eP	01	54.00	0.7		1.2s	88.28nm				5.2mb
FORR	36.92	232	eP	56	09.10	1.0				e	02	05.00	35km	BAL	24.64	198	eP	12	07.00	-0.7
MBL	41.24	250	iPc	56	43.80	-0.3	BAR	88.92	57	eP	01	54.00	0.9		0.4s	22.00nm				5.1mb
COOL	42.45	235	eP	56	54.00	0.0				e	02	05.00	35km	KLB	25.27	195	eP	12	12.50	-0.8
MEKA	43.43	242	eP	57	03.40	1.4	KVN	89.28	50	P	01	55.80	0.9	MUN	26.07	198	eP	12	19.10	-1.2
NANU	45.39	249	eP	57	18.20	0.4				pP	02	06.20	32km	NWAO	26.67	195	iPd	12	25.00	-0.6
KLB	45.42	236	eP	57	17.50	-0.4	TNP	89.72	51	P	01	57.00	0.0	IPM	26.84	295	ePd	12	27.50	0.2
BAL	46.00	237	eP	57	22.30	-0.2	TPC	89.74	55	eP	01	58.00	1.0				e	13	54.00	
MRWA	46.23	240	eP	57	24.40	0.0				e	02	09.00	35km	RKG	27.82	195	iPd	12	41.00	5.4X
NWAO	46.26	234	iPd	57	24.80	0.3	GLA	90.51	57	eP	02	01.00	0.5		0.5s	41.00nm				5.3mb
	0.7s	23.00nm				5.2mb				e	02	13.00	39km	SNG	28.40	300	eP	12	36.60	-4.3X
Z	20s	0.70um				4.6Msz	PNT	90.81	40	eP	02	14.00	12.5X	STK	28.92	150	iPc	12	45.70	0.5
MUN	46.79	236	eP	57	29.00	0.2		0.9s	14.00nm						0.6s	33.00nm				5.1mb
KKM	47.89	288	eP	57	39.40	1.6	INK	90.81	20	ePc	02	11.60	10.5X				e	14	09.00	
KAKJ	50.58	338	P	57	57.90	0.0	LRM	94.79	44	eP	02	21.10	0.9				e	17	05.00	
IIDJ	50.84	335	P	57	59.00	-1.0	ALQ	97.68	56	eP	02	34.90	1.4	RMQ	29.48	133	eP	12	50.00	-0.1
CHJJ	50.89	337	P	57	58.90	-1.4	ZOBO	124.25	118	PKP	07	58.00	-0.9				e	14	14.00	
OPA	51.11	51	P	58	02.00	-0.2	ECRI	145.06	339	ePKP	08	35.00	-1.2				e	20	29.00	
MAT	51.63	336	eP	58	04.00	-2.0	EBR	145.41	334	ePKP	08	47.50	10.8X	ADE	30.30	158	iPd	12	59.10	2.0
	1.4s	53.49nm				5.3mb	ETOR	146.45	337	ePKP	08	40.00	1.4		0.7s	53.42nm				5.2mb
MTMJ	51.83	336	P	58	06.40	-1.2	GUD	147.37	339	ePKP	08	42.50	2.4X	CMS	30.89	144	iPc	13	02.90	0.8
NIIJ	51.94	337	eP	58	07.30	-0.9	ASMO	150.10	336	iPKPc	08	50.00	5.6X				e	14	29.00	
SSE	56.55	318	eP	58	39.70	-2.4	AAPN	150.29	336	ePKP	08	50.00	5.3X				i	21	23.90	
			pP	58	50.60	37km	ALOJ	150.46	336	ePKP	08	52.40	7.4X	NNT	32.07	308	eP	13	12.20	0.0
			sP	59	05.00			S.D. = 0.9		on 90 of 103 obs.				BRS	32.95	131	iPc	13	17.00	-2.6
			esS	03	16.00												i	13	20.00	
ASAJ	56.97	344	eP	58	44.40	-0.5		JAN 01, 1990 16h 07m 27.32± 0.35s						NST	33.68	313	iPc	13	27.00	1.3
IPM	61.94	281	ePd	59	19.50	-0.2		7.183 S ± 3.7km 125.242 E ± 5.4km						LOE	33.72	317	iPc	13	26.50	0.5
NNT	65.38	289	eP	59	42.20	0.0		DEPTH = 527.1 ± 4.7 km						BFD	33.76	155	eP	13	26.00	-0.2
BJI	65.43	323	eP	59	41.50	-0.6		5.2mb (21 obs.)						COO	34.14	136	iPd	13	32.10	2.6
Z	23s	0.31um				4.4MszX		BANDA SEA					(280)	CAN	35.50	145	eP	13	42.00	1.2
NST	65.99	292	eP	59	46.50	0.5		CENTROID, MOMENT TENSOR					(HRV)				e	15	15.20	
KMI	67.21	303	eP	00	04.50	10.4X		Data Used: GDSN						BDT	35.52	313	eP	13	42.20	1.1
CHG	68.11	295	eP	59	59.00	-0.5		L.P.B.: 12S, 21C							1.0s	82.80nm				5.3mb
CHTO	68.11	295	eP	59	58.90	-0.6		Centroid Location:						CHG	36.60	315	ePd	13	51.00	1.0
	1.0s	3.50nm				4.4mb		Origin Time 16:07:30.8 0.8							1.2s	65.23nm				5.1mb
			pP	00	10.00	37km		Lat 7.01S 0.10 Lon 125.52E 0.12						CHTO	36.60	315	iP	13	51.00	1.0
LZH	71.26	314	eP	00	29.20	10.5X		Dep 545.2 6.7 Half-duration 1.6							0.8s	24.52nm				4.8mb
	1.5s	42.00nm						Moment Tensor; Scale 10**16 Nm									pP	15	23.00	497kmX
Z	20s	0.50um				4.8Msz		Mrr=-6.99 0.71 Mtt=-0.76 1.14						SSE	38.26	354	iPc	14	03.30	0.0
			pP	00	34.00	15kmX		Mff= 7.75 1.41 Mrt= 0.12 1.09							1.0s	141.00nm				5.5mb
			i	00	47.50			Mrf= 3.87 1.35 Mtf= 5.54 1.04									esS	19	12.00	
KDC	77.73	23	eP	00	55.10	-0.1		Principal Axes:									i	22	43.00	
SVW	78.99	20	ePc	01	02.60	0.4		T Val= 11.17 Plg=11 Azm=295						KMI	38.87	326	Pc+	14	11.00	2.2
SPA	79.56	180	iPc	01	05.50	0.1		N -2.97 18 201							1.5s	0.20nm				2.5mb X
	0.9s	27.73nm				5.2mb		P -8.20 69 56									pP	14	24.00	49kmX
TTA	80.21	18	ePc	01	08.90	0.1		Best Double Couple:Mo=9.7*10**16									S	19	31.00	
PMR	81.58	22	eP	01	15.60	-0.2		NP1:Strike= 47 Dip=37 Slip= -59						TKSJ	41.78	11	eP	14	31.60	-0.1
	0.9s	10.40nm				4.8mb		NP2: 190 59 -111						WKYJ	42.33	13	eP	14	35.70	-0.4
TOA	82.99	22	ePc	01	24.00	0.7								DZM	42.36	115	iPc	14	37.00	0.3
IMA	83.19	17	ePc	01	24.20	-0.1	AAI	4.55	40	iPc	08	53.00	0.3	YONJ	42.85	10	eP	14	39.90	-0.3
	0.8s	9.40nm				4.9mb				eS	09	07.00		TSRJ	43.68	13	P	14	46.70	0.0
MAW	83.60	202	eP	01	26.00	-0.2	MKS	6.06	288	iPc	09	08.00	1.7	IIDJ	44.08	15	P	14	49.30	-0.7
FBA	84.19	19	ePc	01	28.30	-1.0				iS	09	10.50		CHJJ	44.90	16	P	14	55.00	-1.2
BRK	85.82	50	eP	01	38.30	0.4	MTN	8.08	135	eP	09	25.00	-1.2	MTMJ	45.10	14	P	14	55.90	-2.0
			epP	01	50.20	39km	KNA	9.19	158	iPc	09	37.30	-0.3	MAT	45.16	15	iPd	14	57.20	-1.0
KOD	85.95	281	eP	01	40.20	0.8	TRT	12.51	267	ePd	10	09.20	-2.7		0.8s	40.30nm				5.0mb
PRS	86.07	52	eP	01	40.20	1.0				iS	12	26.50		KAKJ	45.38	17	P	14	58.60	-1.3
			epP	01	51.80	38km	TSM	13.40	328	ePd	10	23.10	2.1	LZH	47.51	336	iPd	15	17.40	1.0
MHC	86.14	51	eP	01	40.30	0.6	DAV	14.18	1	eP	10	29.50	0.6		1.2s	272.00nm				5.6mb
			epP	01	52.00	38km				eS	13	05.00					pP	15	20.50	10kmX
ARN	86.23	51	P	01	40.20	0.2	MBL	14.85	200	iPc	10	34.90	-0.7				sP	15	23.30	
WDC	86.39	48	ePc	01	41.20	0.5	WB5	15.42	146	iPc	10	41.10	-0.2				S	21	31.50	
			epP	01	42.90	5kmX				eS	13	22.80		BJI	47.73	351	Pd	15	16.50	-1.2
LLA	86.48	52	eP	01	41.90	0.6	WRA	15.45	146	Pc	10	41.50	-0.1		1.2s	64.00nm				5.0mb
			epP	01	53.60	38km		0.5s	56.30nm			5.4mb					PcP	16	37.00	
PRI	86.57	52	ePc	01	42.90	1.1	KKM	15.93	325	ePd	10	48.30	1.9				PP	17	17.00	
			epP	01	54.60	38km		1.1s	70.10nm			5.2mb					eScP	19	42.00	
GBA	86.65	284	P	01	50.00	7.6X				e	11	30.00					eS	21	30.00	
SYP	86.69	54	eP	01	55.00	12.5X				e	13	31.00		GBA	51.76	293	P	15	47.00	-1.0
BCH	86.77	54	P	01	43.60	0.8	NANU	17.93	210	iPc	11	06.50	0.8	MSZ	52.59	142	P	15	54.00	0.5
ORV	86.87	49	e(P)	01	43.50	0.5	MNDI	18.32	88	eP	11	13.50	3.6X	MNG	55.69	135	P	16	14.80	-0.8
MIN	87.01	48	eP	01	42.60	-1.3	ASPA	18.38	154	iPc	11	11.30	1.1		0.4s	2.00nm				3.8mb X
			epP	01	53.80	36km		0.5s	132.00nm			5.8mb		PGZ	56.25	135	eP	16	19.20	-0.2
CMB	87.29	51	ePc	01	45.50	0.3	Z	21s	0.31um			4.3MszX		HBZ	56.69	131	P	16	22.90	0.4
			epP	01	57.20	38km				eS	14	13.10			0.6s	36.00nm				4.9mb
FRI	87.54	52	ePc	01	46.80	0.5				LR	19	34.70		POO	56.76	298	iPd	16	22.00	-1.3
			epP	01	58.60	38km	WARB	18.94	176	iPc	11	16.70	1.1	NDI	58.41	310	iP	16	32.00	-2.4

QUE	67.08	307	eP	17	24.50	-5.8X
MAIO	75.16	310	iPd	18	17.50	0.4
	0.8s		17.20nm			4.6mb
TTA	91.25	27	eP	19	37.10	0.3
IMA	92.90	24	eP	19	44.70	0.2
	0.9s		9.40nm			4.9mb
PMR	94.18	29	eP	19	49.50	-0.7
	0.9s		10.40nm			5.0mb
INK	100.79	22	ePdiff	20	19.50	-0.3
MBC	102.85	13	ePdiff	20	29.50	0.7
	1.0s		6.00nm			5.3mb
BSF	114.22	319	ePKP	25	07.80	-0.6
HAU	114.46	320	ePKP	25	08.40	-0.3
KVN	115.12	50	PKP	25	11.10	0.6
TNP	116.00	51	PKP	25	12.60	0.4
LOR	116.29	320	ePKP	25	11.40	-0.8
LBF	116.30	319	ePKP	25	12.00	-0.3
SSF	116.58	319	ePKP	25	12.80	0.1
AVF	116.77	319	ePKP	25	12.60	-0.5
PEC	116.83	56	PKP	25	14.30	0.6
PLM	117.16	56	PKP	25	15.50	1.0
BGF	117.18	319	ePKP	25	14.00	0.1
TCF	117.68	319	ePKP	25	14.90	0.0
PTI	118.36	45	PKP	25	16.50	0.0
DUG	118.82	48	PKP	25	18.20	0.8
GLA	118.90	56	PKP	25	18.90	1.3
IMW	119.02	43	PKP	25	17.50	-0.4
MFF	119.09	320	ePKP	25	17.20	-0.3
LPF	119.09	322	ePKP	25	17.20	-0.2
FFC	119.48	29	ePKP	25	18.00	0.0
	0.9s		14.00nm			
MSU	119.75	50	PKP	25	20.50	1.1
BW06	120.34	44	PKP	25	20.00	-0.4
FRB	122.67	7	ePKP	25	23.00	-0.8
GOL	124.39	46	PKP	25	28.30	0.0
ANMO	125.17	52	PKP	25	29.50	-0.4
ALQ	125.17	52	iPKPc	25	31.30	1.4
	1.0s		5.00nm			
KIC	130.34	272	PKPc	25	41.00	0.9
	0.6s		5.00nm			
LIC	130.62	272	PKPc	25	41.30	0.7
	0.7s		9.00nm			
TIC	130.64	273	PKPc	25	41.50	0.9
LKO	131.33	276	PKPc	25	43.12	1.2
	0.7s		17.00nm			
CNCB	152.81	151	PKP	26	22.00	2.7X
			i	26	29.00	
			i	28	28.00	
LPB	152.99	151	PKP	26	28.00	8.6X
			i	28	32.00	
ZOBO	153.21	150	PKP	26	23.00	3.1X
			i	26	32.50	
	S.D. = 1.1		on	97	of 104	obs.

JAN 01, 1990 16h 20m 34.39± 1.04s
42.577 N ± 4.9km 12.599 E ±14.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

NS	0.20	163	Pc	20	39.20	0.4
			eSg	20	42.70	
ASS	0.50	5	P	20	44.80	0.3
			eSg	20	51.40	
RMP	0.77	174	P	20	48.50	-0.9
RDP	0.82	174	P	20	51.00	0.6
			eSg	21	02.50	
AZI	0.86	133	P	20	52.00	1.2
ARV	0.95	15	P	20	52.20	-0.4
			eSg	21	06.90	
GDI	1.26	133	P	20	56.50	-1.3
			eSg	21	14.70	
VAY	7.54	96	ePn	22	27.00	0.0
	S.D. = 1.0		on	8	of 8	obs.

JAN 01, 1990 16h 38m 24.41± 0.36s
46.801 N ± 3.6km 9.738 E ± 3.4km
DEPTH = 5.0km (geophysicist)
SWITZERLAND (544)
ML 3.1 (FUR), 3.1 (GRF), 3.0 (LDG).

OSS	0.30	112	ePc	38	29.30	-1.2
FDL	0.36	211	ePc	38	30.90	-0.9
AX	0.52	329	ePc	38	35.40	0.5
MA	0.92	221	ePc	38	40.90	-1.6
DI	1.02	181	P	38	44.20	0.0
FLA	1.15	307	ePc	38	46.50	0.2
VAI	1.15	216	P	38	46.10	-0.2
			eSg	39	02.40	
SLE	1.28	319	ePd	38	49.10	0.4
SAL	1.31	155	P	38	49.40	0.3
			eSg	39	06.40	
SCE	1.37	79	eP	38	48.80	-1.6
MMK	1.44	239	ePc	38	50.30	-1.1
FEL	1.59	313	ePn	38	53.25	-0.2
ORO	1.69	227	P	38	55.00	0.1
			eSn	39	16.00	
FUR	1.72	37	iPc	38	56.50	1.3
DIX	1.76	247	ePc	38	56.90	0.9
BOB	2.04	186	P	38	58.50	-1.4
EMS	2.07	250	ePd	39	02.00	1.5
FVI	2.10	95	P	39	02.70	2.0
			eSn	39	29.90	
LSD	2.24	234	P	39	02.23	-0.8
BSF	2.25	298	Pn	39	02.60	-0.4
			Pg	39	09.60	
			Sn	39	26.80	
CDF	2.32	315	Pn	39	03.20	-0.7
			Pg	39	09.60	
			Sg	39	38.40	
RSP	2.39	227	P	39	04.07	-0.9
			S	39	29.92	
PCP	2.41	201	P	39	08.53	3.3X
LPG	2.45	239	Pn	39	08.80	2.8
LPL	2.45	239	Pn	39	08.40	2.5
KBA	2.49	82	eP	39	08.20	1.8
GRC1	2.50	28	ePn	39	04.70	-1.8
			ePg	39	12.80	
			e(Sn)	39	34.20	
			eSg	39	42.90	
HAU	2.60	299	Pn	39	07.30	-0.5
			Sg	39	49.00	
MME	2.69	165	P	39	07.20	-2.2
BNI	2.76	232	P	39	10.80	0.5
			eSn	39	42.90	
RRL	2.79	229	P	39	12.53	1.7
FIN	2.81	203	P	39	12.01	1.2
ROB	2.83	208	P	39	12.22	1.1
PZZ	2.95	220	P	39	11.40	-1.5
VOY	2.98	103	ePn	39	14.80	1.6
			e(Sn)	39	57.80	
TRI	3.00	110	eP	39	15.60	2.1
			e	39	54.60	
ENR	3.05	213	P	39	13.55	-0.7
			S	39	48.22	
STV	3.07	214	P	39	13.45	-1.1
			S	39	47.76	
PII	3.13	170	P	39	13.10	-2.2
IMI	3.17	205	P	39	16.63	0.7
SBF	3.36	210	Pn	39	19.80	1.2
			Sn	39	59.00	
KHC	3.48	46	Pn	39	19.10	-1.2
			Pg	39	26.30	
			Sn	39	59.80	
			Sg	40	12.50	
FRF	3.91	215	Pn	39	27.50	1.1
LBF	3.95	275	Pn	39	26.60	-0.5
			Sg	40	29.00	
LOR	4.05	279	Pn	39	28.40	0.0
			Sg	40	31.50	
SMF	4.06	270	Pn	39	28.50	0.0
			Pg	39	41.60	
			Sg	40	32.60	
SSF	4.28	276	Pn	39	31.40	-0.2
			Sg	40	40.00	
PRU	4.52	43	ePn	39	34.00	-1.0
			e	40	25.50	
			eSg	40	42.50	
BGF	4.75	270	Pn	39	36.90	-1.5
	S.D. = 1.3		on	48	of 49	obs.

? JAN 01, 1990 17h 13m 46.71± 1.34s
50.370 N ±21.8km 173.770 E ±19.9km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
ALEUTIAN ISLANDS REGION (16)

SMY	2.37	5	eP	14	24.00	-0.1
FBA	24.68	39	eP	19	10.50	5.1X
INK	30.99	35	eP	20	02.00	-0.7
FRB	56.25	28	eP	23	26.00	0.5
GUN	67.76	287	P	24	43.40	-0.2
	0.5s		9.00nm			5.1mb
NB2	68.06	351	P	24	41 00	-3.6X
	0.6s		2.80nm			4.5mb
KKN	68.21	287	P	24	45.80	-0.4
PKI	68.29	287	P	24	47.60	0.7
DMN	68.45	287	P	24	48.60	0.8
GKN	68.45	288	P	24	46.20	-1.4
HFS	68.68	349	eP	24	42.60	-5.7X
	0.4s		1.40nm			4.4mb
PRU	78.45	346	eP	25	46.00	0.6
KHC	79.43	347	P	25	50.80	0.0
KBA	81.47	347	eP	26	02.00	0.2
	1.1s		8.10nm			4.7mb
	S.D. = 0.8		on	11	of 14	obs.

JAN 01, 1990 17h 21m 38.88± 0.17s
19.151 S ± 4.9km 167.313 E ± 4.3km
DEPTH = 10.0km (geophysicist)
5.2mb (19 obs.) 4.7Msz (5 obs.)
VANUATU ISLANDS REGION (185)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 24C
Centroid Location:
Origin Time 17:21:50.0 0.7
Lat 19.12S 0.08 Lon 166.44E 0.08
Dep 41.7 4.9 Half-duration 1.7
Moment Tensor; Scale 10**17 Nm
Mrr=-0.81 0.05 Mtt=-0.33 0.10
Mff= 1.13 0.10 Mrt= 0.14 0.11
Mrf=-0.30 0.12 Mtf=-0.16 0.06
Principal Axes:

	Val=	Plg=	Azm=
T	1.20	9	83
N	-0.33	11	352
P	-0.88	76	212

Best Double Couple:Mo=1.0**17
NP1:Strike=186 Dip=37 Slip= -72
NP2: 344 55 -103

PVC	1.69	34	iPd	22	06.50	-2.1
			iS	22	27.00	
DZM	3.02	196	iPc	22	25.10	-2.5
HNR	12.01	323	P	24	33.00	-0.1
			S	26	40.00	
BRS	15.67	236	iPd	25	20.80	-0.6
			i	25	28.00	
			e	25	39.00	
COO	18.01	228	eP	25	55.00	3.9X
RMO	18.59	243	iPd	26	00.00	1.8
	0.5s		56.00nm			5.0mb
CTA	19.86	264	iPc+	26	13.20	0.1
	1.0s		245.00nm			5.5mb
			iS	30	00.00	
AFI	20.71	79	eP	26	32.00	9.9X
			e	32	00.00	
RAB	20.97	313	eP	26	25.00	0.2
KDB	21.75	293	eP	26	34.00	1.4
MNG	22.51	164	P	26	39.60	-0.5
	0.4s		7.00nm			4.5mb
PGZ	22.74	162	P	26	43.80	1.6
CAN	22.84	221	eP	26	44.50	1.1
CMS	22.93	233	iPc	26	46.00	1.8
WEL	22.96	165	eP	26	46.00	1.5
MSZ	25.45	179	P	27	09.00	0.6
STK	26.37	236	eP	27	17.00	-0.2
BFD	28.14	225	eP	27	33.00	-0.2
ADE	29.81	232	e(P)	27	32.30	-16.1X
WB5	31.04	263	eP	27	57.00	-2.3
			e	30	53.80	
WRA	31.06	263	P	27	59.00	-0.4
	1.1s		8.30nm			4.5mb
ASPA	31.39	256	iPc	28	00.30	-2.1
	1.0s		58.00nm			5.4mb
Z	20s		2.77um			4.9Msz
			LR	39	50.10	
MTN	35.29	275	eP	28	35.00	-1.3
FORR	37.22	244	eP	28	51.00	-1.4
GUA	39.27	324	eP	28	53.80	-15.9X
GUMO	39.34	324	eP	28	54.00	-16.2X
	0.8s		43.92nm			
MBL	44.49	259	eP	29	51.50	-0.9
NWAO	46.64	243	eP	30	08.00	-1.4
MUN	47.44	244	eP	30	14.50	-1.3
RKT	53.69	105	iP	31	01.50	-1.8
	0.9s		55.00nm			5.6mb
MAT	61.84	334	(P)	31	59.00	-1.6
	1.0s		15.00nm			5.1mb
IPM	69.32	283	ePd	32	49.20	0.1
WHN	70.95	313	Pd	32	59.40	0.7

01d 17h

1.0s 0.05nm 2.6mb X
pP 33 09.00 31kmX
DL2 71.86 324 eP 33 03.40 -0.6
MDJ 72.19 333 eP 33 06.00 0.2
PP 33 15.40
TIA 72.68 319 Pd 33 08.40 -0.5
CN2 73.45 330 Pd 33 13.80 0.6
Z 18s 0.30um 4.6Msz
sP 33 28.00
NNT 73.66 290 eP 33 15.60 0.6
NST 74.60 293 iPd 33 22.00 1.6
BJI 75.73 322 eP 33 26.00 -0.5
1.0s 0.02nm 2.2mb X
Z 20s 0.30um 4.6Msz
eS 43 10.00
BDT 76.24 294 eP 33 31.00 1.2
TIY 76.54 318 Pc 33 31.10 -0.1
Z 22s 0.50um 4.8Msz
KMI 76.69 303 Pd 33 34.00 1.5
XAN 76.72 313 P 33 31.40 -0.9
CHG 76.96 295 ePd 33 35.20 1.3
0.8s 15.30nm 5.1mb
CHTO 76.96 295 iP 33 34.60 0.7
1.1s 232.63nm 6.2mb X
pP 33 43.80 29kmX
MAW 77.83 202 eP 33 38.00 0.3
CD2 78.75 308 eP 33 43.40 -0.1
HHC 78.98 320 P 33 44.60 -0.1
BTO 79.77 319 eP 33 49.50 0.6
LZH 81.33 313 eP 33 59.00 1.7
5.0s 0.47nm 2.8mb X
Z 18s 0.40um 4.8Msz
sP 34 09.00
KDC 83.57 20 ePc 34 09.00 0.8
SVW 85.34 17 ePc 34 18.30 1.2
GTA 85.75 314 eP 34 19.60 -0.2
TTA 86.74 16 P 34 24.00 -0.1
1.0s 15.00nm 5.2mb
PCC 86.81 49 eP 34 24.40 -0.4
GCC 86.87 49 ePc 34 24.90 -0.2
PRS 87.01 50 ePc 34 26.00 0.1
BRK 87.06 48 eP 34 25.70 -0.3
BKS 87.08 48 iPd 34 26.60 0.5
1.0s 91.00nm 6.0mb
SAO 87.15 50 ePc 34 27.00 0.5
SYP 87.25 52 eP 34 28.00 0.8
MHC 87.26 49 eP 34 27.30 0.1
ARN 87.34 49 P 34 27.60 0.1
PRI 87.44 50 eP 34 28.20 0.1
LLA 87.44 50 eP 34 27.70 -0.3
BCH 87.45 51 P 34 29.10 1.0
PMR 87.64 19 eP 34 28.50 0.2
0.7s 5.70nm 5.0mb
LSA 87.94 302 P 34 32.40 1.3
WDC 88.10 46 ePc 34 31.00 0.0
ORV 88.35 47 eP 34 32.10 -0.1
PAS 88.45 53 eP 34 32.00 -0.8
CMB 88.46 49 ePc 34 32.50 -0.4
FRI 88.50 50 ePc 34 32.60 -0.4
MWC 88.56 53 eP 34 34.00 0.4
MIN 88.63 46 eP 34 33.20 -0.5
ISA 88.85 52 eP 34 35.00 0.2
LBFM 88.88 45 P 34 35.80 0.8
SBB 88.93 53 eP 34 35.00 -0.2
TOA 88.96 20 ePc 34 34.20 -0.5
RVR 88.99 53 eP 34 35.00 -0.4
BAR 89.00 55 eP 34 35.00 -0.5
PEC 89.11 54 P 34 35.90 -0.1
PLM 89.12 54 eP 34 36.00 -0.3
CLC 89.56 52 eP 34 38.00 -0.1
IMA 89.89 15 ePc 34 39.20 0.1
1.2s 7.80nm 4.8mb
GSC 89.94 52 eP 34 40.00 0.0
TPC 90.04 54 eP 34 40.00 -0.4
BMW 90.37 40 P 34 41.00 -0.6
KVN 90.51 49 P 34 41.90 -0.8
FBA 90.53 18 ePc 34 39.90 -2.0
GLA 90.58 55 eP 34 44.00 1.1
TNP 90.75 50 P 34 43.80 0.0
0.8s 8.82nm 5.1mb
LON 91.36 41 P 34 42.40 -3.8X
GUN 91.56 299 P 34 47.40 -0.5
1.0s 16.00nm 5.3mb
RMW 91.69 40 P 34 47.80 0.1
PKI 91.83 298 P 34 48.60 -0.5
1.0s 17.00nm 5.4mb
KKN 92.01 299 P 34 49.20 -0.6
1.0s 18.00nm 5.4mb
DMN 92.10 298 P 34 50.00 -0.3
1.0s 39.00nm 5.7mb
GKN 92.62 299 P 34 51.60 -1.0
PNT 93.81 39 eP 35 00.00 2.7
0.7s 5.00nm 5.0mb
GBA 94.26 283 P 35 00.00 0.0
DAU 95.91 49 P 35 11.60 4.0X
INK 97.04 19 eP 35 11.00 -0.6
ALQ 97.75 56 P 35 15.80 -0.1
0.8s 2.33nm 4.9mb
FRB 121.87 26 ePKP 40 31.00 -3.3X
BUL 123.76 228 iPKPc 40 53.40 13.9X
0.9s 8.40nm
SOD 125.71 342 iPKP 40 41.20 -0.5
SUF 128.96 338 ePKP 40 46.00 -2.0
0.6s 10.30nm
NUR 130.94 337 iPKP 40 51.00 -0.8
0.7s 20.00nm
UPP 133.90 339 iPKP 40 57.70 0.3
NB2 134.87 344 PKP 40 58.20 -1.2
0.8s 6.40nm
HFS 134.92 342 ePKP 40 55.60 -3.8X
0.8s 5.50nm
SPC 140.06 326 ePKP 41 09.20 -0.4
KSP 140.94 331 ePKP 41 03.00 -7.9X
BRG 141.97 333 ePKP 41 09.40 -3.3X
1.4s 21.00nm
CLL 142.05 334 e(PKP)41 07.00 -5.8X
ZST 142.31 327 ePKP 41 10.60 -2.8X
PRU 142.34 331 ePKP 41 10.00 -3.4X
MOX 143.13 334 ePKP 41 12.00 -2.7X
EKA 143.16 351 PKP 41 10.00 -4.6X
0.7s 10.40nm
WIT 143.18 340 ePKP 41 15.00 0.3
SKO 143.21 316 e(PKP)41 11.50 -3.6X
KHC 143.39 331 PKP 41 13.60 -1.7
WTS 143.83 340 ePKP 41 12.50 -3.3X
0.9s 30.00nm
GRF 144.02 333 ePKP 41 13.90 -2.4
PTJ 144.37 325 ePKP 41 13.60 -3.5X
KBA 144.94 329 ePKP 41 15.50 -2.7X
0.7s 22.20nm
i 41 19.90
e 42 40.50
VBY 145.00 325 iPKPd 41 07.00 -11.0X
DMU 145.03 354 ePKP 41 16.00 -1.8
DMU 145.03 354 ePKP 41 26.70 8.9X
LJU 145.04 326 ePKPc 41 16.50 -1.6
TOD 145.08 335 ePKP 41 16.46 -1.6
FUR 145.14 332 ePKP 41 17.60 -0.7
1.4s 186.00nm
ENN 145.17 339 iPKPd 41 17.50 -0.6
1.0s 151.00nm
e 41 25.00
CEY 145.29 326 ePKP 41 18.00 -0.6
ABH 145.33 337 ePKP 41 17.49 -1.0
VOY 145.38 327 iPKPc 41 17.30 -1.5
e 41 27.50
FVI 145.56 328 PKP 41 19.00 0.1
DLE 145.60 353 ePKP 41 17.70 -1.1
0.7s 64.00nm
DCN 145.62 354 ePKP 41 17.70 -1.1
0.7s 381.00nm
UCC 145.65 341 PKP 41 20.00 1.0
TRI 145.66 326 ePKPc 41 20.30 1.1
RUP 145.66 337 ePKP 41 18.72 -0.4
WLF 146.02 338 PKP 41 21.00 1.4
ETA 146.14 353 iPKPd 41 20.10 0.4
0.7s 108.00nm
DOU 146.18 340 PKP 41 19.50 -0.4
ECB 146.53 353 iPKPd 41 21.00 0.7
0.8s 111.00nm
CDF 146.63 336 iPKPc 41 21.70 0.9
SLE 146.66 334 ePKPd 41 21.70 0.9
ECP 146.67 353 iPKPd 41 21.60 1.0
0.7s 165.00nm
SAX 146.69 332 ePKPc 41 23.20 2.0X
OSS 146.75 331 ePKPd 41 20.90 -0.3
FEL 146.77 334 ePKP 41 21.44 0.3
ZLA 146.92 333 ePKPc 41 22.80 1.5
VDL 147.21 331 ePKPc 41 23.40 1.4
VAL 147.22 357 ePKP 41 25.00 3.6X
BSF 147.29 335 iPKPc 41 23.40 1.5
HAU 147.33 336 iPKPc 41 23.60 1.8
SAL 147.37 329 PKP 41 24.50 2.6X
ARV 147.56 324 PKP 41 24.50 2.2X
TDS 147.72 315 PKP 41 21.50 -1.2
TMA 147.77 331 ePKPd 41 21.50 -1.3
SFI 147.87 326 PKP 41 27.50 4.8X
SGO 147.91 318 PKP 41 25.50 2.6X
PGD 147.97 326 PKP 41 27.60 4.4X
ASS 147.99 324 PKP 41 25.70 2.6X
VAI 148.00 331 PKP 41 22.30 -0.6
CRE 148.01 325 PKP 41 26.00 2.8X
SDI 148.17 321 PKP 41 24.80 1.4
MMK 148.22 332 ePKPc 41 25.40 1.8
AZI 148.22 321 PKP 41 26.50 3.1X
FIR 148.28 326 ePKP 41 26.00 2.6X
MME 148.29 327 PKP 41 26.20 2.4X
MNS 148.42 323 PKP 41 26.90 3.1X
BDI 148.43 327 PKP 41 25.80 2.0
DIX 148.44 333 ePKPd 41 27.50 3.5X
BOB 148.50 329 PKP 41 27.50 3.6X
ORX 148.54 332 PKP 41 25.77 1.8
ORO 148.54 332 PKP 41 28.00 4.0X
EMS 148.65 333 ePKPd 41 27.70 3.4X
PII 148.71 327 PKP 41 26.50 2.4X
RMP 148.76 322 PKP 41 24.50 0.2
RDP 148.79 322 PKP 41 26.50 2.1X
FLN 148.86 344 ePKP 41 27.70 3.5X
LOR 148.86 338 iPKPc 41 28.10 3.8X
LDF 148.92 344 ePKP 41 27.70 3.4X
LSD 149.04 332 PKP 41 28.44 3.5X
LBF 149.06 338 iPKPc 41 28.30 3.6X
PCP 149.10 330 PKP 41 27.31 2.5X
GRC 149.11 339 PKP 41 28.80 4.1X
SSF 149.16 338 iPKPc 41 28.90 4.1X
LPG 149.18 333 iPKPc 41 29.40 4.2X
RSP 149.23 332 PKP 41 26.79 1.7
GRR 149.30 344 iPKPc 41 29.00 4.1X
SMF 149.40 337 iPKPc 41 28.90 3.7X
AVF 149.45 338 iPKPc 41 28.90 3.7X
FIN 149.51 330 PKP 41 27.92 2.5X
BNI 149.57 332 PKP 41 30.00 4.4X
ROB 149.61 330 PKP 41 28.64 3.0X
RRL 149.62 332 PKP 41 29.77 3.9X
LPF 149.68 344 iPKPc 41 29.80 4.3X
DOI 149.74 331 PKP 41 29.50 3.7X
PZZ 149.80 331 PKP 41 28.85 2.9X
BGF 149.83 338 iPKPc 41 30.40 4.6X
ENR 149.87 331 PKP 41 28.03 2.0
IMI 149.89 330 PKP 41 28.03 2.0
STV 149.90 331 PKP 41 28.44 2.4X
FOUF 149.93 332 ePKPc 41 25.93 0.0
i 41 31.69
PLDF 150.05 337 PKP 41 30.87 4.6X
SBF 150.14 330 iPKPc 41 30.40 4.0X
AGO 150.16 338 PKP 41 30.98 4.7X
MAF 150.22 338 iPKPc 41 31.40 5.0X
TCF 150.28 339 iPKPc 41 31.40 4.9X
PYM 150.47 337 PKP 41 32.03 5.2X
LSF 150.54 340 iPKPc 41 31.80 4.9X
FRF 150.74 331 iPKPc 41 32.00 4.8X
MFF 150.74 342 iPKPc 41 32.20 5.1X
LBL 150.82 337 PKP 41 33.07 5.8X
LRG 150.95 331 iPKPc 41 33.00 5.5X
LMR 150.98 330 iPKPc 41 32.80 5.2X
RJF 151.38 339 iPKPc 41 34.20 6.1X
CAF 151.51 338 iPKPc 41 34.60 6.2X
LFF 151.96 339 iPKPc 41 35.40 6.4X
LPO 152.03 339 iPKPc 41 35.70 6.6X
S.D. = 1.1 on 146 of 225 obs.

JAN 01, 1990 18h 03m 19.25± 0.57s
6.830 N ± 4.2km 72.995 W ± 3.8km
DEPTH = 157.8 ± 5.8 km
5.3mb (24 obs.)
NORTHERN COLOMBIA (99)
Felt in Tachira, Venezuela.

BOG 2.44 206 iPd 04 03.00 2.2
iS 04 32.00
CEOS 5.11 64 iPc 04 36.00 0.9
FISA 5.70 39 iPc 04 43.50 0.5
iS 05 46.00
MORO 6.12 49 iPc 04 49.00 0.3
PLAV 6.22 61 iPd 04 50.50 0.4
iS 06 00.00
UPA 6.82 289 iPd 04 55.00 -3.0
0.7s 164.38nm 5.5mb
i 06 10.80
OLLA 6.90 62 iPc 05 00.00 0.9
eS 06 08.00

CAR 7.02 58 eP 05 32.00 31.1X
eS 06 40.00
LLAV 7.11 59 iPd 05 02.00 0.0
TCE 11.76 70 eP 06 04.84 1.6
TPP 11.93 72 eP 06 06.98 1.6
TRN 12.07 71 eP 06 06.18 -1.1
GRW 12.37 64 eP 05 59.20 -12.0X
PIG 12.75 69 eP 06 02.08 -14.0X
PORP 12.76 28 P 06 14.40 -1.8
BOT 12.87 70 eP 06 01.37 -16.2X
LRS 12.87 27 P 06 15.50 -2.2
SJG 13.05 30 i(P) 06 18.00 -1.9
SVB 13.21 60 eP 06 21.10 -0.9
SVV 13.26 60 eP 06 22.25 -0.4
SLB 13.66 58 eP 06 27.54 -0.2
FDF 14.03 55 eP 06 30.80 -1.7
BBL 14.22 52 eP 06 34.00 -0.7
PAG 14.37 50 eP 06 36.00 -0.7
MGG 14.57 51 eP 06 40.00 0.8
SEG 14.73 49 eP 06 42.00 0.9
DEG 15.01 50 eP 06 43.00 -1.7
NNA 19.08 192 iPd 07 31.50 -0.8
0.8s 8.21nm 4.1mb X
eS 11 14.00
ARE 23.19 176 eP 08 13.00 -0.4
ZOBO 23.45 168 Pc 08 17.00 0.8
1.1s 40.60nm 4.8mb
S 12 20.00
LPB 23.71 168 P 08 18.00 -0.5
1.0s 64.00nm 5.1mb
S 12 22.90
CNCB 24.01 168 P 08 21.70 0.2
S 12 25.00
JSC 28.36 345 P 09 01.90 1.4
LHS 28.44 346 P 09 02.80 1.5
PRM 28.47 344 P 09 03.20 1.7
GBTN 30.49 342 P 09 20.40 1.0
RSCP 30.88 340 P 09 24.00 1.2
0.9s 232.34nm 5.9mb
BLA 30.99 348 P 09 24.90 1.1
PWLA 31.26 336 P 09 26.70 0.6
NA2 31.45 353 P 09 28.00 0.3
OLY 33.20 332 P 09 42.80 -0.2
BAO 33.34 132 eP 09 45.50 1.0
FVM 34.81 336 P 09 57.10 0.4
CLE 35.34 349 iP 10 03.70 2.6
TUL 35.70 327 iPc 10 03.60 -0.6
0.9s 47.80nm 5.2mb
e 10 09.30
e 12 29.80
SIO 35.85 327 eP 10 03.70 -1.8
e 12 31.00
MEO 36.46 323 iPc 10 09.50 -1.2
HBVT 37.38 360 P 10 20.00 1.7
PTN 37.63 358 P 10 22.00 1.6
EMM 38.07 6 P 10 25.80 1.9
CBM 40.17 5 P 10 43.40 2.1
ALQ 41.59 317 iPc 10 54.30 0.9
1.0s 15.75nm 4.6mb
ANMO 41.59 317 P 10 54.40 1.0
GLD 43.71 323 P 11 11.60 1.1
1.0s 95.00nm 5.4mb
GOL 43.77 323 P 11 11.70 0.6
0.7s 76.46nm 5.4mb
GLA 46.72 310 eP 11 35.00 0.7
RSON 47.15 342 P 11 35.80 -1.6
0.8s 182.29nm 5.7mb
MSU 47.38 318 P 11 32.00 -7.6X
DAU 47.81 320 P 11 43.00 0.0
BAR 48.00 308 eP 11 45.00 0.8
TPC 48.09 310 eP 11 35.00 -9.9X
SCH 48.11 5 ePc 11 45.20 0.5
0.5s 95.00nm 5.7mb
PLM 48.41 309 eP 11 48.00 0.5
DUG 48.69 319 P 11 49.70 0.1
1.0s 27.50nm 4.9mb
PEC 48.85 310 P 11 50.90 0.2
RVR 49.05 310 eP 11 53.00 0.8
GSC 49.15 312 eP 11 53.00 -0.1
e 12 30.00
MWC 49.66 310 eP 11 57.00 -0.2
SBB 49.67 310 eP 11 57.00 0.0
PTI 49.88 322 P 11 58.80 0.2
CLC 49.95 312 eP 11 59.00 -0.2
ISA 50.54 311 eP 12 04.00 0.3
e 12 20.00
TNP 50.64 315 P 12 04.40 -0.2

1.1s 50.87nm 5.1mb
SYP 51.25 309 eP 12 09.00 -0.1
BCH 51.57 310 P 12 11.80 0.3
BLP 51.58 309 P 12 11.30 -0.2
KVN 51.69 315 P 12 12.40 -0.1
FRI 51.98 312 eP 12 13.00 -1.4
e 12 24.60
PRI 52.36 311 eP 12 16.80 -0.6
LLA 52.75 311 ePc 12 19.40 -0.7
CMB 52.89 313 ePc 12 20.60 -0.5
e 12 29.60
PRS 52.96 311 ePc 12 21.20 -0.4
e 12 27.00
FFC 53.12 339 iPc 12 21.60 -0.9
0.4s 24.00nm 5.3mb
SAO 53.18 311 ePc 12 22.60 -0.6
ARN 53.46 312 P 12 25.80 0.4
MHC 53.54 312 ePc 12 27.10 1.1
GCC 53.69 311 eP 12 26.70 -0.2
SES 53.75 331 iPc 12 27.50 0.2
0.8s 67.00nm 5.5mb
pP 13 05.00 164kmX
PCC 54.15 312 eP 12 30.10 -0.2
BRK 54.20 312 ePc 12 30.80 0.1
ORV 54.30 315 ePc 12 31.30 -0.1
e 12 38.10
MIN 54.69 315 ePc 12 33.20 -1.2
NWRM 54.87 313 P 12 35.60 0.1
LBFM 55.30 316 P 12 38.00 -0.9
WDC 55.44 315 ePc 12 36.90 -2.7
DPW 56.06 325 P 12 43.80 -0.2
FHC 56.54 315 ePc 12 47.50 0.0
EDM 56.67 332 iPc 12 47.00 -1.3
FRB 56.90 2 eP 12 49.00 -0.5
0.5s 38.00nm 5.5mb
PNT 57.61 326 eP 12 55.00 0.1
0.9s 55.00nm 5.5mb
LON 57.63 322 P 12 54.70 -0.4
BMW 58.37 321 P 12 59.80 -0.5
GMW 58.59 323 P 13 00.30 -1.4
PGC 59.49 324 eP 13 08.00 0.2
LKO 66.69 83 Pc 13 55.28 -0.4
0.7s 11.50nm 4.9mb
TIC 67.45 86 Pc 13 59.08 -1.4
0.7s 15.00nm 4.9mb
LIC 67.48 86 Pc 13 59.40 -1.3
0.6s 32.00nm 5.3mb
KIC 67.75 86 P 14 01.18 -1.2
DCN 70.16 36 eP 14 15.90 -0.5
ECP 70.39 37 eP 14 26.60 8.8X
DMU 70.52 35 eP 14 18.20 -0.4
AIA 72.18 176 eP 14 22.10 -6.0X
INK 73.06 340 iPc 14 33.10 -0.2
0.7s 37.00nm 5.2mb
MBC 73.82 350 iPc 14 38.20 0.6
0.6s 65.00nm 5.5mb
TOA 76.15 332 ePc 14 52.10 0.9
FBA 77.41 335 ePc 14 58.20 0.2
PMR 77.44 332 ePc 14 58.50 0.3
0.8s 30.80nm 5.1mb
IMA 80.01 336 ePc 15 12.70 0.4
0.9s 15.60nm 4.7mb
SVW 80.49 331 ePc 15 14.60 -0.2
TTA 80.78 333 ePc 15 16.10 -0.2
NB2 81.26 29 P 15 19.40 0.6
0.7s 5.10nm 4.4mb
HFS 82.47 30 eP 15 23.40 -1.6
0.4s 1.30nm 4.1mb X
Z 17s 0.26um 4.7MszX
LR 49 06.00
KBA 82.56 43 eP 15 26.00 0.0
0.5s 1.60nm 4.1mb X
KHC 82.64 41 eP 15 27.40 1.2
PRU 83.24 40 eP 15 31.00 1.8
GBA 144.31 55 PKP 22 37.00 -2.0
KMI 147.97 7 PKPc 22 49.00 3.9X
FORR 148.99 217 ePKP 22 46.00 -0.2
0.4s 27.00nm
e 22 50.00
ASPA 149.22 234 ePKP 22 46.60 -0.3
e 22 50.40
WRA 150.45 241 PKPc 22 48.50 -0.2
0.7s 6.00nm
WB5 150.45 241 ePKP 22 48.80 0.1
i 22 53.80
e 23 33.50
CHG 153.31 17 ePKP 22 55.20 2.3X

CHTO 153.31 17 ePKP 22 54.50 1.6
i 23 01.70
BDT 154.81 18 ePKP 22 57.00 2.1X
S.D. = 1.1 on 123 of 134 obs.

% JAN 01, 1990 18h 19m 32.10± 0.88s
45.037 N ± 5.8km 7.302 E ±10.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

RSP 0.12 345 P 19 35.88 0.7
S 19 38.13
RRL 0.39 253 P 19 40.16 0.1
S 19 45.29
LSD 0.43 346 P 19 40.39 -0.6
S 19 45.86
PZZ 0.55 195 P 19 43.19 -0.2
S 19 50.57
ROB 0.85 151 P 19 48.52 0.1
S.D. = 0.7 on 5 of 5 obs.

? JAN 01, 1990 18h 25m 42.63± 6.92s
43.901 N ±32.0km 8.859 E ±39.7km
DEPTH = 10.0km (geophysicist)
CORSICA (380)

FIN 0.56 304 P 25 53.86 -0.2
S 25 56.11
PCP 0.68 341 P 25 56.22 0.1
S 26 00.11
IMI 0.70 271 P 25 56.22 -0.3
S 26 06.37
ROB 0.81 299 P 25 57.96 -0.5
S 26 03.29
SBF 1.03 268 Pg 26 07.50 5.4X
Sg 26 19.00
ENR 1.09 288 P 26 03.70 0.6
S 26 13.24
STV 1.16 288 P 26 04.73 0.4
S 26 14.78
PZZ 1.40 296 P 26 08.21 -0.1
S 26 21.95
S.D. = 0.5 on 7 of 8 obs.

? JAN 01, 1990 18h 36m 21.90± 3.41s
35.122 N ±25.3km 50.721 E ±10.9km
DEPTH = 10.0km (geophysicist)
IRAN (348)

IR5 0.15 308 eP 36 25.00 -0.4
IR4 0.19 52 eP 36 26.40 0.2
IR1 0.29 355 eP 36 29.00 0.9
IR2 0.56 15 eP 36 32.00 -1.3
IR7 0.59 351 eP 36 34.00 0.1
S.D. = 1.2 on 5 of 5 obs.

? JAN 01, 1990 18h 46m 01.20± 1.41s
44.415 N ±12.2km 8.112 E ±10.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

ROB 0.21 235 P 46 05.65 -0.2
S 46 14.66
FIN 0.22 161 P 46 05.65 -0.3
S 46 07.86
PCP 0.34 68 P 46 08.23 0.1
S 46 12.82
IMI 0.53 198 P 46 12.30 0.4
S 46 18.66
S.D. = 0.5 on 4 of 4 obs.

% JAN 01, 1990 19h 04m 20.39± 0.74s
39.927 N ± 6.5km 29.155 E ± 6.8km
DEPTH = 5.0km (geophysicist)
TURKEY (366)

DST 0.52 232 iPg 04 29.80 -1.0
eSg 04 37.00
YLV 0.66 15 iPg 04 33.20 -0.4
iSg 04 43.70
GPA 0.96 67 ePg 04 39.10 0.0
iSg 04 53.40
BNT 1.04 295 ePn 04 41.20 0.7
ALT 1.14 139 ePn 04 41.80 -0.5
KHL 1.63 170 ePn 04 51.00 1.1

01d 19h

S.D. = 1.0 on 6 of 6 obs.

? JAN 01, 1990 19h 31m 07.39± 7.45s
33.222 S ±19.0km 72.162 W ±52.8km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.56	117	iPd	31	19.10	0.4
			iS	31	26.10	
ROCH	1.00	76	iP	31	26.50	0.0
TACH	1.11	113	iPd	31	27.60	-0.6
			iS	31	41.50	
PEL	1.24	87	iPd	31	30.50	0.0
			iS	31	46.00	
PCH	1.43	107	iP	31	33.00	-0.5
			iS	31	51.50	
			i	31	53.50	
CHCH	1.45	120	iPc	31	34.00	0.3
			iS	31	51.20	
FCH	1.57	94	iPd	31	36.00	0.3
			i	31	55.90	

S.D. = 0.5 on 7 of 7 obs.

? JAN 01, 1990 19h 50m 17.15± 0.95s
44.322 N ±10.1km 7.452 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

ENR	0.10	193	P	50	19.80	-0.1
			S	50	21.59	
STV	0.12	230	P	50	20.36	0.1
			S	50	22.28	
ROB	0.30	95	P	50	23.49	0.0
			S	50	27.00	
PZZ	0.31	306	P	50	23.64	0.0
			S	50	27.80	

S.D. = 0.2 on 4 of 4 obs.

& JAN 01, 1990 22h 59m 43.30s
32.560 N 115.800 W
DEPTH = 4.0km
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 3.2 (PAS).

IKP	0.27	289	iPc	59	48.70	-0.1
BAR	0.75	279	iPc	59	57.00	-1.2
GLA	0.96	59	iPc	00	00.20	-1.9
CPE	1.14	287	iPc	00	03.70	-1.5
PLM	1.19	312	ePc	00	04.30	-1.9
PEC	1.75	320	eP	00	13.60	-1.1

6 obs. associated

& JAN 01, 1990 23h 17m 18.10s
38.313 N 118.670 W
DEPTH = 11.0km
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 3.1 (BRK).

KVN	0.86	31	iPd	17	33.80	-0.9
SVP	0.91	131	iPc	17	34.60	-1.0
PPK	1.07	145	iPc	17	38.00	-0.3
TNP	1.17	101	iP	17	39.60	-0.4
MZP	1.19	121	iPc	17	39.60	-0.7
MGM	1.27	133	iPc	17	41.50	-0.3
LCH	1.35	143	eP	17	42.80	-0.1
CMB	1.38	259	iPc	17	42.80	-0.5
			iS	18	00.80	
GMN	1.51	132	eP	17	44.80	-0.5
FRI	1.56	212	eP	17	46.10	0.4
			eS	18	06.20	
ARN	2.46	248	eP	17	59.20	0.4
ORV	2.53	300	eP	18	00.10	0.3
MHC	2.54	249	eP	18	01.10	1.0
			iSg	18	37.00	
BKS	2.85	262	eP	18	08.00	3.7
			eS	18	41.50	
PRS	2.92	228	eP	18	07.10	1.7
MIN	3.05	313	ePb	18	12.70	5.4
LTCM	3.28	306	eP	18	10.00	-0.5
BCH	3.32	200	eP	18	10.00	-1.1
ABL	3.48	187	e(P)	18	19.00	5.5
WDC	3.75	308	ePg	18	26.20	9.0
LBFM	3.91	322	eP	18	20.30	0.7

21 obs. associated

? JAN 01, 1990 23h 29m 53.73± 2.79s
51.571 N ±19.9km 178.298 W ±33.0km
DEPTH = 33.0km (normal)
4.4mb (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.05	72	iPc	30	10.40	-1.8
KDC	16.10	57	eP	33	40.00	1.2
TTA	16.47	38	eP	33	46.00	2.4
IMA	19.12	31	eP	34	15.50	-0.9
FBA	20.60	38	eP	34	31.50	-0.7
INK	27.12	35	eP	35	34.00	-1.1
LON	36.46	75	eP	36	57.80	0.6
LBFM	39.27	82	eP	37	22.50	1.5
KVN	42.96	82	eP	37	51.30	0.0
TNP	44.10	83	eP	38	01.00	0.4
	0.7s		1.85nm		4.0mb	
BW06	45.95	73	eP	38	14.50	-0.8
GOL	50.32	73	eP	38	48.50	-0.9
	0.7s		7.89nm		4.8mb	

S.D. = 1.4 on 12 of 12 obs.

? JAN 02, 1990 00h 15m 03.15± 1.49s
44.366 N ±14.2km 7.173 E ±16.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

PZZ	0.15	340	P	15	06.72	0.0
			S	15	09.65	
STV	0.16	138	P	15	06.92	0.0
			S	15	09.95	
ENR	0.23	128	P	15	08.09	0.0
			S	15	11.81	
ROB	0.51	98	P	15	13.40	0.0

S.D. = 0.0 on 4 of 4 obs.

JAN 02, 1990 01h 25m 06.56± 0.20s
8.344 N ± 3.7km 127.441 E ± 4.5km
DEPTH = 40.9km (7 depth phases)
5.4mb (34 obs.) 4.9Msz (6 obs.)
PHILIPPINE ISLANDS REGION (248)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 19C
Centroid Location:
Origin Time 01:25: 9.6 0.5
Lat 8.27N 0.05 Lon 127.89E 0.09
Dep 15.0 BDY Half-duration 2.2
Moment Tensor; Scale 10**17 Nm
Mrr=-2.02 0.14 Mtt=-0.07 0.12
Mff= 2.09 0.22 Mrt=-1.25 0.25
Mrf= 1.85 0.32 Mtf=-1.58 0.11
Principal Axes:

	Val=	Plg	Azm
T	3.77	21	241
N	-0.88	6	149
P	-2.90	68	44

Best Double Couple:Mo=3.3*10**17
NP1:Strike=342 Dip=25 Slip= -76
NP2: 146 66 -96

DAV	2.23	236	iPc+	25	45.00	3.1
QCP	8.83	316	eP	27	09.00	-5.7X
TSM	10.17	247	ePc	27	37.50	4.4X
BAG	10.45	321	eP	27	34.80	-2.3
			eS	29	20.00	
KKM	11.37	259	ePd	27	53.80	4.2X
JAY	17.07	129	ePd	29	04.50	0.5
ANP	17.67	342	eP	29	16.00	4.5X
GUMO	17.88	72	eP	29	14.00	0.0
			eS	32	32.00	
PJG	17.88	72	eP	29	13.60	-0.4
GUA	17.91	72	eP	29	14.00	-0.4
HKC	18.86	319	eP	29	26.00	0.0
			S	32	54.00	
MTN	21.37	170	iPd	29	52.20	-0.5
TRT	21.72	223	ePd	29	55.80	-0.5
	0.8s		65.60nm		5.1mb	
SSE	23.38	346	P	30	14.50	2.1
	1.0s		56.00nm		5.0mb	
Z	18s		2.70um		4.7Msz	
N	10s		1.00um			
			pP	31	07.00	
			S	34	28.00	
			sS	35	36.00	
KNA	23.97	177	iPd	30	19.10	0.8
	0.6s		231.00nm		5.9mb	
KGM	24.82	257	eP	30	31.00	4.4X
KDB	26.44	132	eP	30	41.50	-0.2
IPM	26.51	264	ePc	30	44.00	1.6
	0.7s		25.90nm		4.9mb	
SNG	26.60	269	eP	30	45.00	1.8
			eS	35	31.00	
LOE	26.60	292	eP	30	42.50	-0.7
NNT	27.56	281	eP	30	50.50	-1.5
NST	27.66	288	iPc	30	53.50	0.7
KMI	28.86	308	Pc	31	03.00	-0.9
Z	18s		4.80um		5.2Msz	
N	15s		1.50um			
E	15s		2.40um			
			pP	31	14.00	41km
			S	35	52.00	
WB5	28.86	166	iPd	31	02.00	-1.6
BDT	29.07	291	eP	31	05.20	-0.4
	1.2s		73.70nm		5.2mb	
CHG	29.54	294	iPc	31	18.50	8.6X
	1.1s		81.65nm		5.4mb	
			eS	36	10.00	
CHTO	29.54	294	iPc	31	08.60	-1.2
	1.3s		95.18nm		5.4mb	
			pP	31	23.30	60kmX
MAT	29.73	18	eP	31	09.00	-2.3
	1.4s		46.51nm		5.0mb	
Z	20s		3.55um		5.0Msz	
MBL	30.26	194	iPd	31	15.20	-0.9
ASPA	32.43	169	iPd	31	33.90	-1.3
Z	21s		1.85um		4.7Msz	
			iS	36	44.80	
			LR	44	58.50	
NANU	32.86	201	eP	31	38.80	0.0
BJI	33.13	344	eP	31	40.50	-0.5
	2.0s		352.00nm		5.9mb	
Z	20s		1.80um		4.8Msz	
N	13s		0.96um			
			ePcP	34	25.00	
			eS	36	54.00	
			esS	37	05.00	
			ePcS	38	10.00	
			eScS	42	06.00	
CTA	33.78	147	iPd-	31	46.20	-0.7
	1.0s		109.00nm		5.7mb	
			iS	37	10.00	
WARB	34.33	181	iPd	31	51.80	0.2
	0.4s		19.00nm		5.4mb	
LZH	35.01	326	Pc	31	57.00	-0.5
	1.5s		104.00nm		5.5mb	
Z	20s		2.50um		5.0Msz	
N	13s		1.30um			
E	14s		1.40um			
			pP	32	09.40	46km
			sP	32	15.00	
			ePP	33	18.00	
			PcP	34	31.00	
			eS	37	27.20	
			SS	40	40.00	
MEKA	35.81	194	eP	32	04.10	-0.1
	0.4s		16.00nm		5.3mb	
MRRJ	36.01	17	eP	32	05.40	-0.3
HOOJ	36.67	20	eP	32	12.30	1.1
KUSJ	37.79	21	eP	32	22.00	1.4
ASAJ	38.02	18	eP	32	23.10	0.5
MRWA	38.94	196	iPd	32	30.40	0.0
	0.4s		28.00nm		5.4mb	
FORR	38.97	179	iPd	32	30.10	-0.5
	0.5s		166.00nm		6.1mb	
COOL	39.47	189	eP	32	34.30	-0.5
	0.5s		15.00nm		5.0mb	
BAL	40.07	194	iPc	32	40.10	0.3
	0.5s		28.00nm		5.3mb	
RMO	40.34	150	eP	32	41.00	-1.1
KLB	40.78	193	eP	32	45.90	0.3
	0.4s		15.00nm		5.1mb	
MUN	41.51	194	eP	32	52.00	0.5
	0.8s		83.00nm		5.5mb	
NWAO	42.18	193	eP	32	57.20	0.2
	0.7s		58.00nm		5.4mb	
STK	42.22	162	iPd	32	57.40	0.0
	0.6s		41.00nm		5.3mb	
BRS	43.17	146	iPc	33	03.70	-1.6
	0.8s		10.20nm		4.6mb	
			i	33	24.70	88kmX
			i	33	38.50	
			e	33	57.00	
			eS	39	36.00	
RKG	43.32	193	eP	33	11.50	5.1X

0.4s 102.00nm 5.9mb
CMS 43.34 157 eP 33 06.00 -0.5
GUN 43.75 302 Pc 33 09.60 -0.8
PKI 44.04 301 Pc 33 11.60 -1.2
KKN 44.22 301 Pc 33 12.60 -1.5
DMN 44.31 301 Pc 33 13.80 -1.1
ADE 44.37 167 iPd 33 15.60 0.7
0.6s 98.67nm 5.8mb
GKN 44.82 302 Pc 33 12.60 -6.3X
COO 45.26 150 eP 33 21.00 -1.1
e 35 11.00 631kmX
BWA 46.95 156 eP 33 36.40 1.0
e 35 26.60 622kmX
CAN 47.96 156 iPd 33 43.50 0.2
e 35 34.80 625kmX
DZM 48.74 129 iPd 33 49.10 -0.5
GBA 49.30 281 P 33 53.00 -0.9
KOD 49.32 276 eP 33 54.10 -0.4
NDI 51.31 300 iPc 34 07.00 -2.1
0.5s 28.17nm 5.5mb
POO 52.93 287 iPd 34 20.30 -1.2
iS 41 46.00
BOM 53.93 287 eP 34 23.50 -5.2X
eS 41 59.00
QUE 60.39 300 eP 35 07.00 -7.6X
eS 43 26.50
MAIO 67.35 306 eP 36 00.00 0.0
eS 45 05.00
IR4 74.26 304 eP 36 41.50 -0.3
IR2 74.26 305 eP 36 42.50 0.7
IR1 74.43 304 eP 36 43.20 0.4
SVW 76.43 29 eP 36 54.20 0.7
TTA 76.50 27 eP 36 54.20 0.3
KDC 77.69 33 eP 37 00.80 0.4
IMA 77.91 24 eP 37 02.00 0.3
1.2s 33.20nm 5.2mb
TAB 77.93 307 eP 37 03.00 0.6
PMR 79.59 29 eP 37 10.50 -0.2
1.0s 47.50nm 5.4mb
BHD 79.69 302 ePd 37 10.00 -1.9
eS 47 06.00
FBA 80.28 26 eP 37 13.60 -0.8
MSL 80.53 306 eP 37 09.50 -6.8X
e 37 19.50 32km
TOA 80.99 28 eP 37 19.00 0.7
KVT 85.63 311 iP 37 43.30 0.9
INK 85.64 22 eP 37 42.00 0.1
KEV 85.83 340 eP 37 38.00 -4.8X
SOD 86.50 338 iP 37 48.80 2.7
HLBJ 86.59 302 Pc 37 47.80 0.4
HRI 86.90 303 e(P) 37 45.00 -3.9X
SALJ 87.12 302 Pc 37 50.00 0.0
MKRJ 87.22 301 Pc 37 48.00 -2.5
MBC 87.33 13 ePd 37 50.60 0.6
0.7s 25.00nm 5.6mb
SUF 87.78 333 iP 37 52.50 0.1
0.6s 20.30nm 5.6mb
PRNI 87.94 300 eP 37 55.00 1.1
SBA 88.78 172 P 37 59.60 2.7
NUR 89.03 331 iP 37 58.60 0.2
0.7s 25.40nm 5.7mb
MLR 92.08 316 eP 38 14.00 1.0
UPP 92.57 332 iP 38 15.40 0.6
HFS 94.28 333 ePKP 38 20.30 -2.4
0.5s 2.80nm 4.9mb
Z 16s 0.49um 5.1MszX
LR 22 34.00
KRA 94.68 322 eP 38 24.90 0.2
e 38 25.40 2kmX
SPC 94.77 321 eP 38 26.00 0.6
NB2 94.99 334 P 38 24.70 -1.3
0.9s 9.20nm 5.2mb
SRO 96.43 320 eP 38 35.60 2.8
KSP 96.60 323 eP 38 34.00 0.5
e 38 47.20 44km
ZST 97.06 321 eP 38 35.00 -0.6
BRG 97.96 324 eP 38 39.70 0.1
2.4s 85.00nm 5.8mb
e 38 53.00 44km
PRU 97.96 323 eP 38 42.00 2.4
e 38 54.00 39km
CLL 98.32 325 eP 38 42.00 0.8
2.4s 65.00nm 5.7mb
KHC 98.87 323 P 38 44.80 1.0
e 38 57.40 41km
MOX 99.40 324 e(P) 38 47.00 0.8
KVN 103.21 47 Pdiff 39 06.00 2.3X

KIC 130.13 286 PKP 44 15.90 1.0
LIC 130.45 285 PKP 44 16.60 1.1
UPA 148.09 58 ePKP 44 50.20 3.0X
LPB 162.79 120 PKP 45 09.50 2.9X
S.D. = 1.1 on 98 of 114 obs.

JAN 02, 1990 01h 36m 33.20± 1.29s
38.808 S ± 5.8km 175.218 E ±10.7km
DEPTH = 248.6 ± 14.2 km
NORTH ISLAND, NEW ZEALAND (159)

RATZ 0.44 98 P 37 05.60 -0.3
HITZ 0.44 77 P 37 05.90 0.1
KETZ 0.45 131 P 37 06.00 0.0
TUTZ 0.61 81 P 37 06.50 0.1
HATZ 0.69 97 Pc 37 06.50 -0.2
MNG 1.82 174 P 37 14.50 0.2
S 37 43.10
PGZ 1.98 156 Pd 37 15.90 0.2
KIW 2.07 186 Pc 37 16.60 0.1
CAW 2.30 183 Pc 37 18.80 0.1
MTW 2.36 175 Pc 37 19.10 -0.2
MRW 2.45 189 Pc 37 20.20 0.0
S 37 53.80
WDW 2.46 184 Pd 37 20.10 -0.2
WEL 2.50 188 P 37 20.60 0.0
TCW 2.51 196 Pc 37 21.00 0.3
BLW 2.57 176 Pc 37 21.30 -0.1
GBZ 2.59 5 P 37 22.00 0.4
MOW 2.61 179 Pc 37 21.70 -0.1
HBZ 2.71 65 P 37 22.50 -0.3
COB 2.97 219 P 37 24.90 -0.7
S 38 02.50
CCW 3.04 194 P 37 26.90 0.5
S.D. = 0.3 on 20 of 20 obs.

• JAN 02, 1990 02h 19m 21.42± 0.69s
21.771 S ±15.2km 13.126 W ±11.6km
DEPTH = 10.0km (geophysicist)
4.7mb (8 obs.)
SOUTH ATLANTIC RIDGE (410)

LIC 28.93 17 P 25 23.82 0.8
KIC 29.14 17 P 25 25.52 0.6
TIC 29.34 17 P 25 27.28 0.6
LKO 31.99 14 Pc 25 51.04 0.9
0.9s 23.50nm 5.1mb
BAO 33.53 274 e(P) 26 04.80 1.0
HVD 35.62 112 eP 26 28.00 6.4X
KSR 36.74 104 eP 26 22.70 -8.5X
PRY 37.23 106 eP 26 40.50 5.3X
SLR 38.00 104 eP 26 43.00 1.3
LWI 45.14 70 ePc 27 36.90 -3.6X
CNCB 51.79 265 P 28 32.00 -0.6
LPB 51.97 266 P 28 33.00 -0.8
Z 16s 0.67um 4.8MszX
LR 42 24.00
ARE 55.13 265 eP 28 58.00 1.0
LSF 68.99 11 eP 30 29.10 0.2
1.0s 10.00nm 5.0mb
TCF 69.15 11 eP 30 30.10 0.2
1.0s 6.80nm 4.8mb
LPG 69.35 15 eP 30 31.60 0.1
0.8s 4.50nm 4.7mb
SMF 69.80 12 eP 30 34.00 0.1
AVF 69.85 12 eP 30 34.00 -0.1
1.0s 6.00nm 4.7mb
SKO 71.03 27 eP 30 40.00 -1.4
GRB5 73.95 17 eP 30 58.00 -0.5
1.2s 12.00nm 4.8mb
KHC 74.49 18 P 31 01.40 -0.3
ZST 74.73 20 eP 31 02.60 -0.5
SRO 74.80 21 eP 31 05.40 1.9
PRU 75.54 18 eP 31 08.50 0.8
e 31 13.00
MLR 75.79 27 eP 31 07.50 -1.8
BRG 76.16 17 e(P) 31 16.40 5.2X
CLL 76.30 17 eP 31 18.00 6.0X
SPC 76.64 22 eP 31 13.10 -1.1
HFS 84.49 13 (P) 31 52.90 -2.4
0.5s 0.70nm 4.1mb
NB2 84.83 12 P 31 56.80 -0.3
1.1s 4.40nm 4.6mb
NUR 87.53 18 eP 32 11.00 0.7
MAIO 89.60 50 eP 32 20.00 -0.8
SUF 89.75 17 eP 32 21.00 0.2
MAT 151.10 53 (PKP) 39 13.00 2.5X

S.D. = 1.0 on 27 of 34 obs.

? JAN 02, 1990 02h 27m 11.27± 4.00s
11.701 S ±38.2km 122.498 E ±18.1km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
SOUTH OF TIMOR (293)

KNA 7.30 124 eP 28 59.30 0.9
eS 30 19.00
MTN 8.51 99 eP 29 16.00 0.7
eS 30 35.00
MBL 9.75 195 eP 29 32.80 0.5
eS 31 15.00
NANU 12.68 211 eP 30 11.70 -0.5
eS 32 22.00
WB5 14.01 127 eP 30 28.10 -1.7
eS 32 55.50
WRA 14.03 127 Pd 30 28.60 -1.4
0.8s 21.20nm 4.9mb X
WARB 14.93 165 eP 30 42.00 0.3
0.3s 2.00nm 3.9mb
eS 33 22.00
ASPA 16.10 139 iPd 30 58.00 1.1
0.5s 14.00nm 4.3mb
Z 18s 0.13um
eS 33 49.40
LR 40 22.20
MRWA 18.45 198 eP 31 29.70 3.5X
eS 34 38.00
S.D. = 1.3 on 8 of 9 obs.

? JAN 02, 1990 04h 10m 22.60± 0.99s
44.660 N ±12.6km 7.034 E ±18.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

PZZ 0.16 163 P 10 26.75 0.3
S 10 30.03
FOUF 0.22 234 iPd 10 12.03 -15.4X
RRL 0.32 326 P 10 29.21 0.0
S 10 34.44
STV 0.46 153 P 10 31.67 -0.4
S 10 37.72
ROB 0.70 121 P 10 36.59 0.1
S.D. = 0.5 on 4 of 5 obs.

• JAN 02, 1990 04h 33m 54.67± 1.17s
3.446 S ±13.3km 146.320 E ±18.2km
DEPTH = 33.0km (normal)
4.6mb (5 obs.) 4.3Msz (1 obs.)
BISMARCK SEA (203)

LAT 3.26 168 eP 34 46.50 1.9
MNDI 3.78 224 eP 35 00.00 7.8X
KDB 6.04 172 eP 35 23.00 -1.2
CTA 16.54 180 iPc 37 49.60 3.7X
1.1s 34.18nm 4.4mb
iS 41 08.00
WB5 20.07 215 eP 38 27.90 -0.4
WRA 20.14 215 Pd 38 28.00 -1.0
0.9s 31.00nm 4.6mb
ASPA 23.41 210 iPd 39 03.30 1.5
1.4s 42.00nm 4.8mb
Z 20s 1.08um 4.3Msz
eS 43 27.40
LR 48 33.50
BRS 24.60 166 iP 39 12.00 -1.3
DZM 26.91 135 iPc 39 35.10 0.1
CHTO 51.60 297 eP 43 00.80 0.4
1.0s 2.25nm 4.1mb
LZH 55.85 319 eP 43 31.50 -0.2
1.5s 33.00nm 5.1mb
S.D. = 1.3 on 9 of 11 obs.

% JAN 02, 1990 06h 26m 52.30± 1.57s
23.059 N ±10.6km 121.372 E ±13.7km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWF1 0.30 347 iPd 26 58.70 0.1
eS 27 03.00
TWG 0.36 229 iPd 26 59.50 -0.3
eS 27 05.90
TWK 0.84 284 iPd 27 08.10 -0.4
TWM1 0.90 255 ePd 27 10.30 0.7

02d 06h

```
TWD      1.04   11 eP     27 11.60   -0.3
TWC      1.60   16 eP     27 20.90    0.2
      S.D. = 0.5   on    6 of    6 obs.
-------------------------------------------
?  JAN  02, 1990  06h 44m 17.56± 1.19s
   25.083 S ± 9.5km   70.003 W ±21.8km
   DEPTH =  33.0km  (normol)
 NEAR COAST OF NORTHERN CHILE      (122)

CYA      5.04  133 e(P)   45 33.00    0.1
PEL      8.05  184 ePd    46 14.50   -0.7
FCH      8.22  182 eP     46 20.00    2.2X
CNCB     8.45   13 P      46 32.00   10.9X
LCCH     8.47  189 eP     46 22.50    1.5
TACH     8.58  185 eP     46 21.50   -0.9
ARE      8.69  351 eP     46 38.00   13.7X
LPB      8.69   12 eP     46 45.00   20.6X
ZOBO     8.94   12 eP     46 28.00    0.0
                 e        46 39.00
      S.D. = 1.4   on    5 of    9 obs.
-------------------------------------------
   JAN  02, 1990  07h 02m 47.40± 0.67s
   19.109 S ±11.7km  169.323 E ± 7.5km
   DEPTH = 242.5 ±  6.5 km
   4.7mb ( 11 obs.)
 VANUATU ISLANDS                   (186)

PVC      1.67  325 iP     03 27.50    0.9
                 iS     03 56.50
DZM      3.99  222 iPc    03 52.00    0.6
                 iS     04 42.20
SGE      8.31   81 ePd    04 42.80   -2.7
BRS     17.28  238 iPc    06 36.20    0.8
        0.6s     18.00nm          4.7mb
COO     19.48  231 iPc    06 59.20    1.2
                 e      07 37.00
RMQ     20.32  245 iPd    07 07.90    1.6
CTA     21.75  264 iPd    07 21.90    1.6
        1.0s     56.00nm          5.0mb
                 i      08 01.20
                 iS     11 07.40
CAN     24.16  224 eP     07 43.00   -0.2
CMS     24.50  235 eP     07 46.00   -0.3
        0.7s     34.00nm          5.0mb
ADE     31.35  234 iPd    08 47.10   -0.4
        0.7s     21.92nm          4.9mb
WB5     32.93  263 iPd    08 59.80   -1.4
WRA     32.95  263 Pd     08 59.10   -2.3
        0.7s     14.40nm          4.7mb
ASPA    33.24  256 iPd    09 02.90   -1.0
        0.5s    282.00nm          6.2mb X
      Z  22s      0.07um          3.3MszX
                 eS     13 58.70
                 LR     21 15.90
MTN     37.19  274 iPc    09 36.40   -0.8
FORR    38.95  244 eP     09 51.00   -0.6
WARB    39.88  252 iPd    09 59.30    0.0
        0.3s     5.00nm          4.4mb
MBL     46.36  259 iPd    10 51.00   -0.5
NANU    50.18  256 eP     11 20.30   -0.4
        0.6s     21.00nm          4.8mb
SPA     71.01  180 eP     14 33.90   53.4X
        1.1s     12.50nm
KDC     82.88   20 P      14 45.80    0.1
GCC     85.41   48 eP     14 59.20    0.4
BLP     85.43   51 P      15 00.00    1.1
PRS     85.53   49 ePc    15 00.00    0.6
BRK     85.62   48 eP     15 00.10    0.3
MHC     85.81   48 ePc    15 02.30    1.4
ARN     85.89   48 P      15 01.70    0.5
BCH     85.95   51 P      15 02.20    0.6
PRI     85.95   50 ePc    15 04.40    2.8
LLA     85.97   49 eP     15 02.00    0.4
PHAM    86.01   50 P      15 02.10    0.3
TTA     86.19   15 P      15 02.20    0.0
        0.8s     8.62nm          4.6mb
WDC     86.71   45 ePc    15 05.40    0.4
PAS     86.91   52 eP     15 06.00   -0.1
ORV     86.93   46 ePc    15 06.30    0.2
PMR     86.98   19 P      15 06.00    0.2
        0.7s     5.09nm          4.5mb
CMB     87.01   48 ePc    15 06.60    0.0
FRI     87.02   49 ePc    15 06.70    0.1
MWC     87.03   52 eP     15 06.00   -0.9
MIN     87.23   46 eP     15 07.30   -0.4
ISA     87.34   51 eP     15 09.00    0.8
SBB     87.40   52 eP     15 09.00    0.4
BAR     87.43   54 eP     15 09.00    0.3
RVR     87.44   53 eP     15 09.00    0.3
LBFM    87.51   45 P      15 09.80    0.7
PEC     87.56   53 P      15 09.20   -0.1
PLM     87.56   54 eP     15 09.00   -0.5
CLC     88.05   51 eP     15 12.00    0.4
GSC     88.42   52 eP     15 13.00   -0.4
TPC     88.49   53 eP     15 13.00   -0.8
GLA     89.00   55 eP     15 16.00   -0.2
KVN     89.07   48 P      15 16.30   -0.2
TNP     89.28   49 P      15 17.30   -0.3
        1.2s     15.59nm          4.8mb
GMW     89.90   39 P      15 19.80   -0.1
FBA     89.93   17 eP     15 17.90   -1.8
        0.9s      1.30nm          3.9mb
RMW     90.44   39 P      15 22.20   -0.3
PNT     92.59   38 eP     15 32.00   -0.3
INK     96.40   18 eP     15 48.00   -1.2
VAY    144.07  315 ePKP   21 53.20   -2.5X
KHC    144.26  332 iPKP   21 54.20   -1.6
        1.0s      7.00nm
SKO    144.49  317 iPKP   21 55.20   -1.2
        1.0s     59.00nm
GRF    144.81  335 iPKP   21 55.80   -0.9
DOU    146.76  342 PKPc   22 01.10    1.2
CDF    147.35  338 ePKP   22 03.00    2.0
        0.6s      3.60nm
BSF    148.01  338 ePKP   22 04.70    2.6X
HAU    148.03  338 ePKP   22 04.70    2.7X
        0.6s      5.40nm
LOR    149.50  340 ePKP   22 08.40    4.1X
        1.0s     14.80nm
LBF    149.71  340 ePKP   22 09.00    4.3X
        0.8s      4.00nm
GRR    149.73  347 ePKP   22 08.60    4.0X
        0.8s     14.50nm
SSF    149.80  341 ePKP   22 09.20    4.5X
        0.8s      4.00nm
LPG    149.98  335 ePKP   22 10.30    4.8X
        0.8s      5.30nm
SMF    150.06  340 ePKP   22 08.90    3.7X
        0.8s      2.60nm
LPF    150.10  347 ePKP   22 09.70    4.6X
        0.8s     10.70nm
TCF    150.89  341 ePKP   22 11.50    5.0X
        0.6s      2.10nm
SBF    151.02  332 ePKP   22 11.50    4.7X
        0.8s     10.70nm
LSF    151.12  342 ePKP   22 11.80    5.0X
        1.0s     18.00nm
      S.D. = 1.0   on   61 of   75 obs.
-------------------------------------------
   JAN  02, 1990  07h 06m 30.82± 0.52s
   43.067 N ± 6.1km    0.674 W ± 4.1km
   DEPTH =  10.0km  (geophysicist)
 PYRENEES                          (378)
      MD 1.0 (STR).

ATE      0.03  312 Pg     06 32.53   -0.3
                 Sg     06 33.48
ISSF     0.10  246 Pg     06 33.62    0.0
                 Sg     06 35.51
MADF     0.13  307 Pg     06 34.11    0.1
                 Sg     06 36.23
LHE      0.16  166 Pg     06 34.49   -0.1
OGE      0.18   55 Pg     06 34.87    0.0
JAU      0.23   97 Pg     06 35.82    0.0
BOH      0.25  278 Pg     06 36.26    0.1
                 Sg     06 39.86
ELYF     0.25  294 Pg     06 36.33    0.1
                 Sg     06 40.01
      S.D. = 0.2   on    8 of    8 obs.
-------------------------------------------
   JAN  02, 1990  07h 36m 15.82± 0.27s
   10.718 S ± 6.0km  166.073 E ± 7.8km
   DEPTH = 139.7km  (  2 depth phases)
   4.7mb (  7 obs.)
 SANTA CRUZ ISLANDS                (184)

DZM     11.29  178 iPc    38 58.00    3.7X
                 iS     40 56.90
BRS     20.78  215 iPd    40 48.60    1.1
        0.7s     17.00nm          4.6mb
                 i      45 27.20
CTA     21.24  242 iPc    40 52.90    0.8
        1.0s     44.00nm          4.8mb
RMQ     22.66  224 eP     41 08.00    2.1
COO     23.75  212 eP     41 18.00    1.4
                 e      43 43.00
KRP     28.39  164 P      41 59.80    0.8
CAN     29.00  210 eP     42 04.70    0.1
MNG     30.92  166 eP     42 20.60   -0.8
PGZ     31.12  165 P      42 21.60   -1.4
TCW     31.22  168 P      42 25.10    1.1
CAW     31.29  167 eP     42 24.90    0.3
MRW     31.33  167 eP     42 24.50   -0.4
WDW     31.43  167 eP     42 24.30   -1.5
MTW     31.44  166 eP     42 24.60   -1.3
WB5     31.86  250 eP     42 28.40   -1.4
WRA     31.90  249 Pd     42 29.20   -0.9
        1.1s      7.70nm          4.4mb
ASPA    33.23  243 iPc    42 40.20   -1.5
        0.9s     12.00nm          4.6mb
      Z  20s      0.08um          3.4Msz
                 LR     55 54.60
MSZ     33.87  178 P      42 53.00    6.2X
TTA     79.02   17 P      48 05.10   -0.4
SPA     79.35  180 iPc    48 07.30   -0.1
        0.6s     20.33nm          5.1mb
PMR     80.14   20 P      48 11.50    0.1
FHC     82.21   46 ePc    48 22.50   -0.2
GCC     82.35   50 ePc    48 23.60    0.2
PRS     82.59   51 ePc    48 25.20    0.5
FBA     82.91   18 P      48 24.20   -1.6
        0.7s     15.99nm          5.0mb
LLA     83.01   51 eP     48 28.10    1.2
WDC     83.15   47 e(P)   48 28.90    1.4
ORV     83.56   48 ePc    48 29.20   -0.4
MIN     83.74   47 eP     48 30.20   -0.5
LBFM    83.88   46 P      48 32.00    0.6
CMB     83.89   50 ePc    48 31.30    0.0
FRI     84.07   51 ePc    48 32.20    0.0
PAS     84.41   54 eP     48 18.00  -16.0X
SBB     84.84   53 eP     48 36.00   -0.2
RVR     85.00   54 eP     48 37.00    0.1
PEC     85.15   54 P      48 38.60    0.9
PLM     85.24   55 P      48 38.20   -0.2
                 pP     49 29.80  211kmX
CLC     85.35   52 eP     48 39.00    0.3
GMW     85.45   40 P      48 38.50   -0.4
KVN     85.90   49 P      48 41.50   -0.1
                 pP     49 16.00  135km
RMW     86.04   40 P      48 41.40   -0.5
TPC     86.09   54 eP     48 43.00    0.6
TNP     86.28   50 P      48 43.30   -0.2
        0.8s      2.21nm          4.1mb
                 pP     49 20.00  144km
GLA     86.80   56 eP     48 47.00    1.1
BW06    93.10   47 P      49 14.30   -1.0
      S.D. = 0.9   on   42 of   45 obs.
-------------------------------------------
&  JAN  02, 1990  08h 01m 11.70s
   37.048 N         121.793 W
   DEPTH =  10.0km
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 2.5 (BRK).

GCC      0.16  264 iPd    01 15.00   -0.5
                 iS     01 18.50
MHC      0.32   22 iPc    01 18.30    0.0
                 eS     01 23.20
ARN      0.37   35 iP     01 19.00   -0.2
SAO      0.40  135 iPc    01 17.90   -1.9
                 i      01 19.30
PCC      0.65  314 iPc    01 23.70   -1.0
                 eS     01 33.40
PRS      0.79  154 iPd    01 26.30   -0.8
                 i      01 27.20
LLA      0.81  122 ePd    01 26.80   -0.6
BKS      0.90  337 iPc    01 28.50   -0.4
                 iS     01 41.10
BRK      0.90  336 iPc    01 28.40   -0.6
                 eS     01 41.80
ZSP      0.97  338 ePc    01 29.90   -0.2
                 eS     01 43.40
CMB      1.49   48 ePd    01 37.30   -1.3
FRI      1.67   91 e(P)   01 42.60    1.5
KVN      3.53   54 eP     02 05.50   -2.4
      13 obs. associated
-------------------------------------------
   JAN  02, 1990  08h 22m 56.57± 0.60s
    3.433 S ± 6.9km  145.947 E ± 9.9km
   DEPTH =  33.0km  (normol)
   5.1mb (  5 obs.)
```

NEAR N COAST OF PAPUA NEW GUINEA(200)

LAT	3.37	162	eP	23 49.00	0.9
MNDI	3.54	220	eP	23 57.50	6.7X
JAY	5.31	280	ePd	24 20.80	5.0X
KDB	6.12	169	eP	24 26.50	-0.6
CTA	16.56	179	iPc	26 53.90	5.9X
	0.9s	25.21nm		4.3mb	
			iS	30 08.00	
MTN	17.38	237	eP	26 58.00	-0.4
WB5	19.87	214	iPc	27 28.00	-0.1
WRA	19.94	214	Pc	27 29.00	0.2
	0.9s	80.60nm		5.0mb	
KNA	20.87	233	eP	27 38.00	-0.4
RMQ	23.08	174	eP	28 02.00	1.5
BRS	24.70	165	eP	28 16.00	-0.2
DZM	27.18	135	iPc	28 38.10	-1.3
FORR	32.06	210	iPd	29 22.30	-0.3
TIY	51.40	326	eP	32 00.50	-0.1
Z	30s	0.60um		4.4MszX	
CD2	52.75	314	eP	32 11.20	0.4
LZH	55.59	319	eP	32 32.00	0.3
Z	25s	0.30um		4.3MszX	
GTA	60.11	320	eP	33 03.40	0.0
GUN	65.60	303	P	33 47.30	7.0X
	0.8s	14.00nm		5.1mb	
PKI	65.89	302	P	33 48.80	6.7X
KKN	66.07	302	P	33 50.40	7.3X
	0.8s	16.00nm		5.2mb	
DMN	66.16	302	P	33 51.20	7.5X
	0.8s	20.00nm		5.3mb	
GKN	66.67	302	P	33 47.90	1.0X

S.D. = 0.7 on 14 of 22 obs.

% JAN 02, 1990 08h 23m 09.38± 0.92s
40.233 N ±10.0km 27.024 E ± 8.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

MFT	0.59	19	iPg	23 21.50	0.2
			iSg	23 28.00	
EDC	0.65	80	iPg	23 22.50	0.1
			eSg	23 30.50	
EZN	0.67	233	iPg	23 22.60	-0.1
BNT	0.70	80	iPg	23 22.50	-0.6
			iSg	23 31.00	
DST	1.38	116	ePn	23 35.20	0.5
YLV	1.82	79	iPn	23 44.50	3.4X

S.D. = 0.6 on 5 of 6 obs.

& JAN 02, 1990 09h 50m 53.10s
33.650 N 116.770 W
DEPTH = 13.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.4 (PAS). Felt (IV) at Anzo and Winchester. Felt (III) at Hemet, Indio and North Palm Springs.

PLM	0.31	195	iPd	50 59.40	-0.3
PEC	0.41	307	iPc	51 00.80	-0.7
RVR	0.61	304	ePc	51 04.10	-1.0
TPC	0.75	53	iPc	51 07.10	-0.5
CPE	0.82	200	iPd	51 07.40	-1.2
HAY	0.95	86	ePd	51 10.40	-0.5
BAR	0.97	175	iPd	51 10.40	-0.9
IKP	1.14	151	eP	51 14.20	-0.1
MWC	1.21	298	ePc	51 14.70	-0.9
SBB	1.36	320	eP	51 17.40	-0.3
CIS	1.39	260	eP	51 16.70	-1.4
GSC	1.65	359	iPd	51 21.40	-0.5
GLA	1.73	110	eP	51 20.50	-2.6
CLC	2.27	343	iPd	51 29.80	-1.0
ABL	2.36	301	eP	51 31.50	-0.8
BCH	3.14	300	eP	51 42.30	-0.9
BLP	3.15	288	eP	51 41.50	-1.7
TNP	4.44	355	iPd	52 01.20	-0.6
CMB	5.27	327	eP	52 13.50	0.1
KVN	5.50	349	eP	52 15.90	-0.9

20 obs. associated

& JAN 02, 1990 11h 41m 48.55s
63.087 N 150.464 W
DEPTH = 109.2km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.39	106	iP	42 04.62	-0.3
			eS	42 16.62	
CUT	0.69	172	iP	42 06.90	-0.1
			eS	42 21.62	
RND	0.80	66	iP	42 07.65	-0.4
			eS	42 21.97	
MCK	0.95	46	iP	42 08.98	-0.4
			eS	42 23.99	
SKT	1.22	204	iP	42 11.97	-0.4
			eS	42 30.14	
PWA	1.47	169	iP	42 15.24	0.0
			eS	42 36.09	
GHO	1.50	151	iP	42 15.61	-0.2
PME	1.61	155	eP	42 16.48	-0.5
			eS	42 38.32	
NEA	1.62	22	iP	42 15.93	-1.2
			eS	42 37.35	
PLRM	1.62	157	eP	42 16.39	-0.8
SUA	1.63	185	eP	42 17.33	-0.1
			eS	42 39.99	
NCG	1.87	206	iP	42 19.86	-0.5
PMS	1.90	167	eP	42 20.19	-0.5
			eS	42 44.09	
CGLM	1.93	203	eP	42 20.45	-0.7
CCB	1.96	36	iP	42 20.32	-1.1
CRP	1.99	204	eP	42 21.74	-0.3
			eS	42 47.83	
NCA	2.01	121	iP	42 21.50	-0.7
RDS	2.02	29	iP	42 21.17	-1.1
			eS	42 46.45	
BGL	2.04	207	eP	42 22.55	-0.1
SPU	2.05	202	eP	42 21.92	-0.8
CKL	2.09	206	eP	42 22.81	-0.5
FBA	2.17	32	iP	42 23.05	-1.1
DDM	2.18	69	eP	42 23.88	-0.6
TOA	2.22	114	iP	42 24.52	-0.4
PAX	2.28	91	iP	42 25.22	-0.5
			eS	42 53.00	
SDG	2.33	102	eP	42 25.91	-0.4
GLM	2.34	34	iP	42 25.36	-1.1
SLKM	2.59	177	eP	42 29.46	-0.3
KLU	2.66	125	iP	42 28.99	-1.7
FID	3.01	139	eP	42 33.54	-1.8
SVW	3.13	233	eP	42 36.19	-0.9
GLB	3.52	115	iP	42 40.84	-1.5
CNPM	3.59	186	iP	42 42.39	-0.9
BALM	4.34	115	eP	42 51.31	-2.3
DWY	5.02	74	P	43 00.80	-2.1
INK	8.71	46	eP	43 51.00	-2.1

36 obs. associated

& JAN 02, 1990 12h 13m 47.27s
61.496 N 146.331 W
DEPTH = 32.1km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.20	91	iP	13 53.46	-0.4
			eS	13 58.51	
VZW	0.45	194	iP	13 56.09	-1.1
			eS	14 03.70	
NCA	0.55	335	iP	13 57.40	-1.3
			iS	14 06.06	
TOA	0.62	7	iP	13 58.73	-1.0
GLI	0.72	211	iP	14 00.00	-1.1
			eS	14 10.41	
FID	0.75	186	iP	14 01.00	-0.5
			eS	14 12.92	
SDG	1.10	19	iP	14 05.40	-1.1
			eS	14 19.39	
GLB	1.21	91	iP	14 06.89	-1.2
GHO	1.27	284	eP	14 07.96	-1.0
PME	1.30	277	eP	14 08.89	-0.4
			eS	14 26.96	
PLRM	1.34	275	iP	14 09.60	-0.3
			eS	14 26.49	
PAX	1.53	15	iP	14 11.71	-1.1
			eS	14 30.94	
PMS	1.58	262	eP	14 13.56	0.2
			eS	14 34.43	
PWA	1.70	277	eP	14 15.22	0.1
BALM	1.98	102	iP	14 18.28	-1.0
SEW	2.07	229	eP	14 20.47	0.0
CUT	2.07	298	eP	14 20.46	0.0
			eS	14 46.89	
SUA	2.12	271	iP	14 21.71	0.5
SLKM	2.14	244	eP	14 22.05	0.6

RND	2.25	330	eP	14 22.85	-0.2
DDM	2.31	5	eP	14 24.02	0.1
DOT	2.40	25	eP	14 24.80	-0.4
SKT	2.52	283	eP	14 25.97	-0.9
MCK	2.55	333	eP	14 26.95	-0.3
NCG	2.80	271	eP	14 30.40	-0.5
FBA	3.48	350	eP	14 39.49	-1.0
DWY	4.08	48	P	14 48.50	-0.4

27 obs. associated

? JAN 02, 1990 12h 14m 10.95± 1.02s
31.228 S ± 9.1km 68.757 W ±10.3km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.27	112	e(P)	14 23.00	6.4X
			S	14 33.20	
CFA	0.58	131	iPd	14 23.00	0.2
			S	14 35.00	
RTCV	0.66	164	iPd	14 23.80	-0.3
			S	14 33.80	
RTBS	0.74	234	e(P)	14 25.50	0.1
			S	14 39.50	
RTRS	1.22	330	e(P)	14 33.50	-0.1
			S	14 50.50	

S.D. = 0.4 on 4 of 5 obs.

& JAN 02, 1990 12h 54m 32.23s
61.816 N 150.867 W
DEPTH = 54.7km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT	0.35	298	iP	54 41.84	-0.6
SUA	0.36	170	iP	54 42.70	0.1
			eS	54 50.92	
PWA	0.50	109	iP	54 43.66	-0.2
			iS	54 52.70	
CUT	0.65	25	iP	54 45.11	-0.6
			iS	54 55.40	
NCG	0.74	237	iP	54 46.13	-0.8
			eS	54 57.83	
CGLM	0.75	227	iP	54 46.30	-0.7
			eS	54 57.35	
CRP	0.83	229	iP	54 47.48	-0.6
			eS	54 59.74	
PMS	0.85	132	iP	54 47.46	-0.8
			eS	54 59.98	
SPU	0.85	222	iP	54 47.66	-0.7
			iS	55 00.52	
PLRM	0.86	104	iP	54 47.35	-0.9
			eS	55 00.64	
PME	0.89	101	iP	54 48.14	-0.7
BGL	0.92	233	eP	54 48.53	-0.7
GHO	0.92	92	iP	54 48.79	-0.5
			eS	55 02.85	
CKL	0.94	229	iP	54 48.77	-0.8
NKA	1.09	190	eP	54 52.95	1.5
HUR	1.30	26	eP	54 53.70	-0.7
			eS	55 09.91	
SLKM	1.35	166	eP	54 53.90	-1.2
RDT	1.45	212	eP	54 55.98	-0.6
NNL	1.79	187	eP	55 01.99	0.7
RND	1.85	29	eP	55 00.99	-1.1
SEW	1.85	157	eP	55 02.51	0.4
NCA	1.92	83	eP	55 01.98	-1.1
GLI	2.05	116	iP	55 02.40	-2.4
MCK	2.12	24	eP	55 05.33	-0.5
TOA	2.24	80	eP	55 06.75	-0.8
FID	2.37	115	eP	55 06.53	-2.9
KLU	2.38	96	iP	55 07.50	-2.1
SVW	2.39	255	iP	55 07.69	-2.0
SDG	2.60	72	eP	55 13.39	0.8
PAX	2.77	63	eP	55 13.76	-1.4
DDM	3.03	47	eP	55 19.43	0.5
DOT	3.63	57	eP	55 26.94	-0.4

32 obs. associated

? JAN 02, 1990 13h 23m 41.92± 1.88s
35.908 N ±84.0km 146.464 E ±21.3km
DEPTH = 33.0km (normal)
OFF EAST COAST OF HONSHU, JAPAN (229)

KAKJ	5.10	275	P	24 57.90	-0.2
CHJJ	6.06	274	P	25 11.70	0.1
NIIJ	6.15	285	P	25 12.90	0.1
MAT	6.70	278	iPc	25 26.00	5.4X

02d 13h

0.7s 43.15nm 5.4mb X
eS 26 33.00
MTMJ 7.03 278 P 25 29.10 3.8X
CHTO 45.05 261 eP 32 06.20 9.7X
0.9s 1.07nm 3.7mb X
GUN 51.34 279 P 32 45.60 -0.1
0.8s 26.00nm 5.2mb
PKI 51.86 279 P 32 49.50 -0.2
KKN 51.87 279 P 32 49.60 0.0
0.6s 18.00nm 5.2mb
DMN 52.08 279 P 32 52.50 1.2
GKN 52.29 280 P 32 51.80 -0.9
INK 53.53 27 eP 33 08.00 6.9X
MBC 56.44 17 eP 33 34.00 11.8X
WB5 56.65 194 eP 34 15.00 50.7X
NB2 76.73 339 P 35 29.20 -2.1X
0.8s 2.50nm 4.3mb
S.D. = 0.7 on 8 of 15 obs.

% JAN 02, 1990 13h 50m 43.76± 1.86s
42.888 N ±13.5km 0.771 W ± 6.2km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.2 (STR).

LHE 0.11 77 Pg 50 46.68 -0.1
Sg 50 48.66
ISSF 0.14 353 Pg 50 47.20 0.0
Sg 50 50.12
ATE 0.20 14 Pg 50 48.31 0.1
Sg 50 51.72
ESCF 0.24 37 Pg 50 48.93 0.0
Sg 50 52.58
MADF 0.26 352 Pg 50 49.14 -0.1
Sg 50 54.31
BOH 0.28 321 Pg 50 49.68 0.0
Sg 50 54.34
ELYF 0.32 330 Pg 50 50.54 0.0
JAU 0.33 63 Pg 50 50.74 0.1
OGE 0.36 38 Pg 50 51.04 0.0
Sg 50 56.33
S.D. = 0.1 on 9 of 9 obs.

JAN 02, 1990 15h 20m 30.23± 2.02s
7.991 N ± 7.9km 127.305 E ±11.8km
DEPTH = 68.9 ± 17.3 km
4.4mb (5 obs.)
PHILIPPINE ISLANDS REGION (248)

DAV 1.94 242 eP 21 02.00 0.5
MTN 21.05 170 eP 25 09.00 -1.7
KNA 23.63 176 eP 25 36.50 0.4
LOE 26.61 293 eP 26 06.00 1.7
WB5 28.55 166 eP 26 20.50 -1.3
WRA 28.61 166 Pc 26 21.20 -1.1
0.6s 2.90nm 4.1mb
CHG 29.56 294 eP 26 31.00 0.1
CHTO 29.56 294 eP 26 31.00 0.1
1.3s 4.90nm 4.0mb
pP 26 42.00 40kmX
BJI 33.43 344 eP 27 03.50 -1.0
1.4s 33.00nm 5.0mb
LZH 35.22 326 eP 27 20.00 -0.2
Z 20s 0.40um 4.2Msz
SHL 37.98 302 eP 27 42.80 -0.7
eS 33 34.00
MRWA 38.56 196 iPc 27 48.70 0.6
FORR 38.63 179 eP 27 48.20 -0.3
BAL 39.70 194 eP 27 57.00 -0.5
KLB 40.40 193 eP 28 03.50 0.2
MUN 41 13 194 eP 28 10.00 0.8
RKG 42.95 193 eP 28 30.00 5.9X
BRS 42.96 146 eP 28 24.00 -0.3
GUN 43.82 302 P 28 31.60 -0.1
ADE 44.06 166 iPc 28 34.00 0.8
PKI 44.11 302 P 28 33.40 -0.7
KKN 44.28 302 P 28 34.60 -0.8
DMN 44.38 302 P 28 36.00 -0.1
GKN 44.89 302 P 28 39.80 -0.3
BWA 46.68 156 eP 28 55.80 1.8
CAN 47.70 156 eP 29 02.20 0.2
GBA 49.23 281 Pd 29 13.90 -0.2
0.7s 2.80nm 4.4mb
INK 86.02 22 eP 33 05.00 1.0
MBC 87.70 13 eP 33 13.00 0.9
0.8s 5.00nm 4.7mb
ZOBO 162.83 120 PKP 40 31.00 4.1X

S.D. = 0.9 on 28 of 30 obs.

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* JAN 02, 1990 15h 34m 16.92± 0.68s
2.849 S ±10.7km 128.687 E ±16.0km
DEPTH = 33.0km (normal)
4.7mb (8 obs.)
CERAM SEA (270)

MTN 10.22 166 eP 36 45.00 0.5
e 36 51.00
eS 38 40.00
KNA 12.82 180 eP 37 20.20 0.6
WB5 17.81 162 eP 38 22.10 -2.0
i 38 25.40
eS 41 40.50
WRA 17.87 162 Pd 38 24.00 -0.7
0.6s 9.10nm 4.1mb
MBL 20.14 205 iPd 38 51.10 -0.1
0.6s 24.00nm 4.7mb
NANU 23.39 212 eP 39 25.20 1.5
0.6s 14.00nm 4.6mb
CTA 24.24 136 iPc 39 33.90 1.8
eS 44 08.00
FORR 27.86 181 eP 40 04.00 -1.6
BRS 33.56 139 eP 40 55.00 -1.2
CHG 36.33 308 eP 41 22.00 2.1
CHTO 36.33 308 eP 41 21.00 1.1
0.9s 2.13nm 4.1mb
BWA 36.40 152 eP 41 21.80 1.5
CAN 37.40 152 eP 41 29.20 0.5
BJI 44.20 346 eP 42 10.00 -14.6X
GUN 51.28 310 P 43 20.00 -0.6
0.8s 13.00nm 4.9mb
PKI 51.48 309 P 43 20.80 -1.3
KKN 51.69 309 P 43 22.60 -0.9
0.8s 12.00nm 4.9mb
DMN 51.73 309 P 43 23.20 -0.7
GKN 52.29 309 P 43 27.40 -0.5
0.8s 12.00nm 4.9mb
GBA 53.39 289 Pc 43 35.80 -0.2
0.6s 2.50nm 4.4mb
MAIO 75.08 309 eP 45 58.00 0.3
S.D. = 1.2 on 20 of 21 obs.

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* JAN 02, 1990 16h 26m 37.73± 1.12s
43.420 N ±10.9km 146.063 E ± 8.3km
DEPTH = 73.4 ± 9.8 km
4.6mb (10 obs.)
KURIL ISLANDS (221)

KUSJ 1.04 252 iPd 26 57.50 0.4
eS 27 10.50
MAT 9.14 224 iPc 28 48.20 -0.9
0.6s 8.67nm 4.8mb
eS 30 24.00
CN2 14.94 279 eP 30 05.40 -0.7
BJI 22.50 272 eP 31 31.00 -0.8
TIY 26.06 269 eP 32 07.00 1.1
STO 26.80 276 P 32 13.80 1.1
CD2 35.59 264 eP 33 29.80 -0.1
IMA 39.40 34 eP 34 02.10 0.5
0.7s 3.60nm 4.4mb
WMQ 41.48 291 P 34 19.50 0.6
FBA 41.83 36 eP 34 22.10 0.8
CHTO 46.43 253 iP 35 00.50 1.6
0.9s 3.41nm 4.3mb
INK 47.09 30 eP 35 03.00 -0.4
GUN 50.24 273 P 35 28.80 0.0
0.8s 45.00nm 5.6mb
KKN 50.75 273 P 35 32.40 0.0
PKI 50.78 273 P 35 32.40 -0.4
DMN 50.98 273 P 35 34.40 0.2
0.5s 16.00nm 5.3mb
GKN 51.09 274 P 35 35.00 0.0
0.6s 16.00nm 5.2mb
WRA 63.96 192 Pc 37 04.70 -0.6
0.8s 1.90nm 4.1mb
GBA 65.27 265 P 37 14.00 0.1
KVN 68.16 57 eP 37 32.70 0.4
pP 37 50.00 64kmX
NB2 69.62 338 P 37 39.60 -1.1
0.8s 2.20nm 4.1mb
HFS 69.69 337 eP 37 39.60 -1.4
0.5s 2.60nm 4.4mb
CLL 77.24 332 iP 38 24.60 -0.4
0.9s 8.00nm 4.7mb
S.D. = 0.8 on 23 of 23 obs.

% JAN 02, 1990 16h 44m 32.67± 2.21s
44.288 N ±13.6km 6.989 E ±16.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

PZZ 0.23 20 P 44 38.01 0.3
S 44 40.86
STV 0.24 100 P 44 38.30 0.4
S 44 41.27
ENR 0.32 101 P 44 39.53 0.3
S 44 43.13
ROB 0.63 89 P 44 44.93 -0.5
S 44 52.86
RRL 0.65 347 P 44 45.69 -0.1
IMI 0.75 120 P 44 47.53 0.1
FIN 0.88 95 P 44 49.17 -0.4
S.D. = 0.4 on 7 of 7 obs.

JAN 02, 1990 17h 45m 25.10± 0.85s
36.965 N ± 7.7km 114.921 W ± 9.4km
DEPTH = 5.0km (geophysicist)
SOUTHERN NEVADA (41)
ML 3.1 (NEIS).

NOP 1.30 230 eP 45 50.50 0.9
TNP 2.14 302 eP 46 02.30 0.1
MSU 2.67 54 eP 46 10.00 0.2
KVN 3.26 311 eP 46 17.70 -0.4
PEC 3.57 211 eP 46 21.70 -0.6
DUG 3.62 26 eP 46 27.50 4.3X
GLA 3.90 179 eP 46 31.00 3.9X
PLM 3.94 204 eP 46 27.50 -0.2
PV09 4.84 70 eP 46 45.00 4.4X
ALQ 7.15 104 eP 47 26.70 13.5X
1.0s 5.00nm
S.D. = 0.7 on 6 of 10 obs.

% JAN 02, 1990 17h 50m 29.10± 0.85s
38.945 N ± 8.4km 27.857 E ± 8.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.72 221 ePg 50 42.70 -0.6
iSg 50 55.70
DST 0.89 42 iPg 50 44.50 -1.7
eSg 50 58.50
EDC 1.40 0 ePn 50 54.50 -0.1
BNT 1.41 2 iPn 50 53.90 -0.9
KHL 1.44 115 iPn 50 55.70 0.3
EZN 1.48 307 iPn 50 56.50 0.8
ALT 1.76 86 ePn 51 00.00 0.1
YLV 2.00 35 iPn 51 05.40 2.1
S.D. = 1.4 on 8 of 8 obs.

? JAN 02, 1990 18h 50m 19.09± 1.03s
48.005 N ± 9.4km 16.949 E ± 8.1km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 2.1 (VKA). Felt (IV) at
Nickelsdorf.

ZST 0.22 28 iPgd 50 22.80 -1.0
iSg 50 26.70
SOP 0.42 219 iPg 50 26.90 -0.7
VKA 0.50 302 iPgc 50 30.00 0.8
iSg 50 39.20
SRO 0.94 101 eP 50 37.80 0.8
i(Sg) 50 48.10
S.D. = 1.7 on 4 of 4 obs.

JAN 02, 1990 20h 21m 32.62± 0.11s
13.408 N ± 2.5km 144.439 E ± 2.9km
DEPTH = 135.8km (geophysicist)
5.7mb (48 obs.)
MARIANA ISLANDS (216)
Felt (IV) in the Agana-Sonto
Rito-Nimitz Hill-Apro Harbor
area and (III) throughout much
of the other parts of the
island. Depth from broadband
displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike= 65 Dip=65 Slip= 90
NP2: 245 25 90
Principal Axes:

02d 20h

T Plg=70 Azm=335
P 20 155
Comment: The focol mechonism is poorly controlled and corresponds to reverse foulting. The preferred foult plane is NP2.
RADIATED ENERGY
No. of sta: 5 Focol mech. F
Energy 2.1±0.7*10**13 Nm
MOMENT TENSOR SOLUTION
Dep 129 No. of sta: 18
Moment Tensor; Scale 10**17 Nm
Mrr= 1.77 Mtt=-2.44
Mff= 0.67 Mrt= 3.61
Mrf= 2.79 Mtf=-0.32
Principol axes:
T Val= 5.09 Plg=53 Azm=307
N -0.03 15 59
P -5.06 33 159
Best Double Couple:Mo=5.1*10**17
NP1:Strike=292 Dip=19 Slip= 145
NP2: 56 79 74
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 33C
Centroid Locotion:
Origin Time 20:21:38.3 0.2
Lat 13.09N 0.03 Lon 144.05E 0.04
Dep 147.5 1.4 Holf-durotion 3.1
Moment Tensor; Scale 10**17 Nm
Mrr= 3.05 0.15 Mtt=-2.72 0.16
Mff=-0.33 0.18 Mrt= 4.38 0.14
Mrf= 2.22 0.15 Mtf=-1.15 0.18
Principol Axes:
T Val= 5.76 Plg=61 Azm=330
N 0.12 2 64
P -5.87 29 156
Best Double Couple:Mo=5.8*10**17
NP1:Strike=253 Dip=16 Slip= 99
NP2: 64 74 87

GUMO 0.45 67 iPc 21 54.90 2.6
eS 22 09.00
PJG 0.45 67 iPc 21 54.90 2.6
JAY 16.25 193 ePc 25 17.00 2.5
0.7s 211.40nm 5.6mb
RAB 19.10 156 iPd- 25 44.00 -3.4X
DAV 19.59 253 ePc+ 25 54.00 1.5
1.6s 1333.33nm 6.1mb
LAT 20.09 173 eP 25 59.50 1.8
KAGJ 21.65 327 eP 26 14.60 1.5
WKYJ 22.22 340 iP+ 26 20.10 1.3
TKSJ 22.55 337 P 26 23.10 1.2
OCP 22.70 276 eP 26 30.70 7.2X
KUMJ 22.75 329 P 26 25.40 1.6
IIDJ 22.75 346 P 26 23.90 0.0
KDB 22.89 173 eP 26 26.50 1.2
KAKJ 23.02 351 P 26 26.00 -0.4
CHJJ 23.07 349 P 26 24.80 -2.1
TSRJ 23.31 342 P 26 28.10 -1.2
SHK 23.58 335 iPc 26 32.10 0.2
0.8s 119.40nm 5.4mb
MAT 23.70 347 iPc 26 32.60 -0.5
Z 20s 2.48um 4.7Msz
eS 30 42.00
MTMJ 23.83 347 P 26 34.10 -0.4
YONJ 23.84 337 iP+ 26 34.80 0.3
SHNJ 23.91 332 eP 26 35.00 -0.1
NIIJ 24.22 349 P 26 38.00 -0.1
YAMJ 24.97 352 P 26 45.10 0.0
OFUJ 25.69 355 eP 26 51.30 -0.3
OZH 26.92 299 Pc 27 02.00 -1.0
0.8s 0.10nm 2.5mb X
sP 27 46.00
PcP 30 22.00
AOMJ 27.28 353 eP 27 06.80 0.7
HNR 27.42 145 eP 27 08.00 0.4
eS 31 28.00
SSE 27.70 313 Pc 27 09.50 -0.5
1.0s 0.07nm 2.3mb X
Z 20s 1.50um 4.6Msz
N 15s 1.10um
sS 28 00.50
PcP 30 23.20
eS 31 44.00
KKM 28.74 258 ePd 27 20.80 1.1
1.0s 102.50nm 5.5mb
HOOJ 28.89 358 P 27 20.70 0.2
MRRJ 29.06 355 eP 27 20.60 -1.4
MTN 29.23 207 iPd 27 23.20 -0.6
NJ2 29.89 313 Pc 27 28.80 -0.7
Z 18s 1.50um 4.7Msz
PcP 30 28.80
ScP 33 56.20
GZH 31.00 293 iPc 27 40.00 0.6
DL2 32.44 326 Pc 27 52.00 0.3
8.0s 0.70nm 2.5mb X
Z 18s 1.20um 4.6Msz
E 14s 1.80um
sP 28 38.00
PcP 30 34.40
S 32 54.00
WHN 32.55 306 iPc 27 53.00 0.2
5.0s 1.00nm 2.8mb X
N 12s 1.31um
E 12s 1.22um
sP 28 40.00
PcP 30 36.00
eS 32 52.00
KNA 32.86 209 eP 27 55.20 -0.4
CTA 33.33 177 iPd 28 00.20 0.5
1.0s 145.00nm 5.7mb
iPP 29 20.00
iS 33 04.00
iScP 34 10.00
i 36 06.00
CTAO 33.33 177 iPd 27 59.22 -0.5
iPP 29 20.24
TIA 33.41 318 Pc 28 00.00 -0.2
Z 20s 2.10um 4.9Msz
N 12s 0.60um
E 12s 1.00um
PcP 30 38.20
eS 33 12.50
ScP 34 08.40
MDJ 33.59 341 iPc 28 02.70 1.1
3.0s 0.90nm 3.0mb X
N 14s 1.40um
iPcP 30 39.50
SNY 33.62 331 iPc 28 01.20 -0.8
6.0s 0.70nm 2.6mb X
Z 24s 3.20um 5.0MszX
N 14s 1.50um
PcP 30 38.40
QIZ 33.65 284 Pc 28 03.00 0.5
sP 28 47.00
PP 29 19.00
PcP 30 40.10
eS 33 17.00
CN2 34.39 335 iPc 28 08.90 0.3
5.0s 0.80nm 2.7mb X
sP 28 53.00
PP 29 30.00
PcP 30 41.40
eS 33 27.00
eScP 34 12.00
WB5 34.53 197 eP 28 09.20 -0.8
eS 33 25.60
eScP 34 12.00
WRA 34.60 197 Pd 28 09.80 -0.7
1.0s 183.60nm 5.8mb
BJI 36.33 322 iPc 28 24.36 -0.5
1.0s 266.00nm 6.0mb
Z 22s 3.08um 5.0Msz
epPc 28 54.00 131kmX
esPd 29 08.89
ePP 29 52.20
PcP 30 46.50
esS 34 45.00
esS 34 47.56
eSS 36 39.02
eScS 38 25.00
TIY 37.36 316 iPc 28 34.00 0.2
0.9s 0.20nm 2.9mb X
N 11s 1.00um
E 11s 1.10um
sP 29 21.00
GYA 37.66 296 iPc 28 38.00 1.5
1.2s 0.40nm 3.1mb X
N 15s 1.00um
E 15s 0.90um
sP 29 26.00
PcP 30 51.40
S 34 16.20
ScP 34 24.40
SS 35 15.00
ScS 38 33.80
TRT 37.91 238 ePd 28 38.40 -0.1
1.0s 173.10nm 5.8mb
XAN 38.18 309 iPc 28 40.50 -0.1
N 12s 1.50um
pP 29 18.00 174kmX
S 34 21.00
PVC 38.90 142 iPc 28 47.80 1.2
HHC 39.64 320 iPc 28 52.20 -0.5
Z 20s 3.10um 5.1Msz
N 17s 2.00um
E 17s 1.30um
pP 29 24.00 143kmX
RMQ 39.88 174 iPd 28 54.80 0.2
BTO 40.48 318 iPc 29 01.00 1.4
N 13s 0.80um
pP 29 32.50 141kmX
sP 29 47.50
PP 30 40.00
S 34 54.50
eSS 37 55.00
KMI 40.89 293 iPc 29 04.71 1.4
1.1s 0.40nm 3.0mb X
pP 29 52.00 223kmX
i 34 38.00
eS 35 05.51
esS 36 00.96
eSS 38 12.56
PP 40 32.00
HIA 41.13 335 iPc 29 05.24 0.5
epPc 29 35.20 133kmX
esPd 29 50.60
eS 35 17.50
esS 35 57.36
eSS 38 16.73
CD2 41.23 302 iPc 29 06.00 0.2
0.8s 0.20nm 2.9mb X
sP 29 55.00
S 35 07.00
sS 36 04.00
ScS 38 54.00
LOE 41.30 281 iPc 29 29.10 22.6X
i 31 04.00 520kmX
BRS 41.35 169 iPc 29 07.60 0.8
0.8s 27.00nm 5.0mb
i 29 41.00 150kmX
e 34 40.20
eS 35 12.50
eSS 38 22.00
MBL 42.00 216 eP 29 12.10 0.0
0.3s 53.00nm 5.7mb
KGM 42.21 258 ePc 29 15.30 1.3
LZH 42.81 309 iPc 29 19.72 1.0
6.0s 1134.00nm 5.7mb X
Z 18s 1.41um 4.9Msz
pP 29 52.50 147kmX
esPd 30 06.07
i 30 21.00
ePP 31 00.00
PcP 31 15.00
e 31 35.44
iS 35 32.78
ePS 36 22.44
esS 36 27.25
eSS 38 44.21
NST 42.89 279 iPc 29 22.00 2.6
e 31 10.80 635kmX
KLM 43.50 260 eP 29 24.00 -0.4
SNG 43.51 266 eP 29 26.00 1.5
0.7s 202.74nm 5.9mb
e 31 11.00 595kmX
eS 35 23.40
NNT 43.52 274 iPc 29 25.80 1.2
IPM 43.70 263 ePc 29 27.20 1.1
1.0s 130.90nm 5.6mb
BDT 43.91 281 iPc 29 22.00 -5.7X
0.7s 167.60nm 5.8mb
CHG 43.95 283 iPc 29 28.80 0.8
0.9s 120.59nm 5.6mb
e 31 12.50 582kmX
eS 36 46.00
CHTO 43.95 283 iPc 29 28.70 0.7
1.0s 112.50nm 5.5mb
i 31 12.60 584kmX

02d 20h

COO	44.31	171	eP	29	31.00	0.2	SIT	73.55	34	eP	32	51.40	-0.7		0.5s	12.00nm		5.3mb					
STK	45.11	183	iPc	29	36.80	-0.2	INK	74.69	22	iPc	32	57.60	-1.0	DUG	90.94	48	P	34	23.00	0.4			
	0.7s	158.00nm			5.8mb			0.9s	252.00nm			6.0mb			0.8s	34.44nm		5.6mb					
NANU	45.61	219	eP	29	41.00	-0.1	MAIO	78.17	305	iPc+	33	19.00	0.3	BHD	90.94	304	ePc	34	19.00	-3.6X			
PPI	45.76	256	ePd	29	41.50	-0.9		0.7s	21.92nm			5.0mb					eS	44	41.00				
SMY	45.80	25	eP	29	42.80	0.6				eS	43	04.00					e	46	02.00				
SVA	45.91	132	eP	29	45.10	1.7	MBC	78.55	14	iPc	33	19.50	-0.4	MSL	91.01	308	ePd	34	24.50	1.6			
PSI	46.22	261	iPc	29	45.50	-0.6		1.0s	248.00nm			5.9mb					eS	45	27.00				
	0.7s	43.00nm			5.2mb		DRV	79.91	182	eP	33	27.40	0.2	IMW	91.05	44	P	34	21.10	-2.2			
FORR	46.72	199	eP	29	49.20	-0.5	PGC	81.45	42	ePc	33	36.50	0.7	GLA	91.56	56	eP	34	26.00	0.5			
	0.3s	102.00nm			6.0mb			0.9s	159.00nm			5.8mb		MSU	91.94	50	P	34	28.00	0.6			
GTA	46.98	312	iPc	29	52.20	0.2	MCW	81.85	42	P	33	38.80	0.9	DAU	91.99	48	P	34	28.00	0.3			
	1.0s	0.20nm			2.8mb	X	BMW	82.00	44	P	33	39.80	1.0	FFC	92.19	32	iPc	34	27.40	-0.5			
Z	22s	0.90um			4.7Msz		GMW	82.09	43	P	33	39.80	0.6		0.9s	62.00nm			5.8mb				
E	13s	0.80um					FHC	82.55	50	ePc	33	43.50	1.7	NUR	92.23	335	iP	34	25.00	-3.0			
		pP		30	23.10	135kmX	SHW	82.73	44	P	33	43.70	1.0		0.6s	7.80nm			5.1mb				
		PcP		31	22.60		RMW	82.76	43	P	33	43.50	0.7				e	47	12.00				
		PP		31	45.50		LON	82.90	44	P	33	43.70	0.2				e	49	48.00				
		S		36	30.50		WDC	83.67	50	iPc	33	48.50	1.1	BW06	92.39	45	P	34	29.00	-0.4			
		SS		37	25.00		PNT	83.78	41	iPc	33	48.50	0.7	UPP	95.47	336	iP	34	42.30	-0.6			
MEKA	47.08	212	eP	29	52.00	-0.7		0.7s	182.00nm			6.0mb		KAS	96.13	315	eP	34	46.00	-0.4			
	0.3s	12.00nm			5.1mb		NWRM	83.85	52	P	33	49.00	0.6	GOL	96.46	47	P	34	48.00	-0.2			
ADE	48.41	186	iPd	30	03.60	0.7	VGB	83.87	45	P	33	48.80	0.4		1.0s	52.50nm			5.9mb				
	0.6s	173.33nm			6.0mb		LBFM	83.99	49	P	33	50.30	1.0	GLD	96.55	47	P	34	49.40	1.0			
CAN	48.65	175	iPd	30	04.90	0.2	LTCM	84.06	50	P	33	50.10	0.7		1.0s	60.00nm			6.0mb				
		e		35	10.00		MIN	84.42	50	iPc	33	51.80	0.4	HFS	96.80	338	ePKP	34	47.70	-1.2			
BSI	49.04	266	eP	30	09.00	1.0	PCC	84.45	53	iPc	33	52.30	0.9		0.4s	3.80nm			5.2mb				
COOL	49.40	207	iPc	30	09.50	-1.0	BRK	84.46	53	ePc	33	52.50	1.1	NB2	97.07	339	P	34	47.60	-2.6			
	0.4s	19.00nm			5.2mb		BKS	84.48	53	iPc	33	52.70	1.2		0.8s	4.20nm			5.0mb				
ADK	49.43	31	eP	30	10.00	-0.4		0.9s	389.00nm			6.3mb		ANMO	97.48	52	P	34	53.40	0.7			
	0.7s	108.60nm			5.8mb					i	34	28.20	140kmX		0.9s	21.22nm			5.6mb				
MRWA	50.50	213	iPc	30	18.20	-0.7				i	34	46.10		ALQ	97.48	52	eP	34	53.50	0.7			
	0.3s	15.00nm			5.3mb		ORV	84.67	51	ePc	33	53.10	0.6		1.0s	20.25nm			5.6mb				
SHL	50.71	292	iP	30	19.90	-0.9	GCC	84.85	53	ePc	33	54.40	1.0				pP	38	48.10				
		eS		37	00.00		DPW	85.04	42	P	33	54.20	0.0	RSON	98.47	33	P	34	55.20	-1.4			
BAL	51.25	211	eP	30	23.00	-1.6	MHC	85.06	53	iPc	33	55.80	1.2		0.8s	20.03nm			5.7mb				
	0.3s	25.00nm			5.5mb		IR2	85.14	305	eP	33	54.50	-0.5	FRB	99.01	14	eP	34	58.00	-0.8			
KLB	51.55	209	eP	30	25.40	-1.4	ARN	85.14	53	P	33	55.80	0.9	WTS	105.27	334	e(PKP)	39	45.00	4.6X			
MUN	52.61	210	iPc	30	33.60	-1.1	IR4	85.23	305	eP	33	55.50	0.0		0.8s	8.00nm							
NWAO	52.90	209	eP	30	35.00	-1.7	SAO	85.34	53	ePc	33	56.50	0.6	EKA	106.28	341	PKPc	39	57.80	15.6X			
RKG	53.95	208	iPd	30	47.20	2.7	IR1	85.36	305	eP	33	56.40	0.2		0.8s	7.80nm							
	0.4s	33.00nm			5.6mb		PRS	85.50	54	iPc	33	58.00	1.3	ABH	106.49	333	ePKP	39	35.99	-6.9X			
GUN	56.19	295	Pc	31	01.00	-0.3				ePP	37	13.20		ENN	106.55	334	ePKP	39	43.00	0.1			
PKI	56.59	294	Pc	31	03.20	-0.9	NEW	85.64	42	P	33	57.40	0.2		0.8s	11.00nm							
KKN	56.71	294	Pc	31	04.00	-0.9	LLA	85.77	54	iPc	33	59.30	1.3	RUP	106.84	333	ePKP	39	38.37	-5.2X			
DMN	56.86	294	Pc	31	05.20	-0.7	CMB	85.87	52	iPc	33	59.50	1.0	WLF	107.27	333	PKP	39	46.00	1.8			
WMO	56.96	314	iPc	31	06.26	0.1				ePP	37	10.40		NAI	107.45	273	ePKP	40	08.00	22.0X			
		esPd		31	51.45		PRI	86.10	54	iPc	34	01.40	1.6	DOU	107.62	334	PKP	39	45.50	0.6			
		ePP		33	11.89		PHAM	86.38	54	P	34	02.00	1.0				e	40	05.60				
		ePS		39	24.52		EDM	86.54	36	iPc	34	01.70	0.2				e	46	17.00				
GKN	57.29	295	Pc	31	08.00	-0.8	KEV	86.56	342	eP	34	00.00	-1.2	DMU	108.64	343	ePKP	39	46.80	0.1			
KRP	58.81	151	P	31	19.90	1.0				e	45	16.00		DLE	109.06	342	ePKP	39	47.20	-0.3			
SDN	59.51	33	ePc	31	21.90	-1.6				e	52	54.00		DCN	109.23	342	ePKP	39	47.40	-0.4			
KIW	60.93	154	P	31	32.00	-1.3	FRI	86.64	53	iPc	34	03.10	0.9	ECP	109.97	341	ePKP	39	47.80	-1.5			
TCW	60.95	155	P	31	32.60	-0.8	BLP	86.68	55	P	34	03.00	0.5	LPG	110.02	330	ePKP	39	48.50	-1.5			
MNG	60.97	153	P	31	32.40	-1.3	BCH	86.78	55	P	34	04.00	0.9		0.6s	12.60nm							
MRW	61.14	154	P	31	33.60	-1.1	KVN	87.35	51	P	34	06.50	0.6	LOR	110.07	333	ePKP	39	50.40	0.7			
CAW	61.20	154	P	31	34.30	-0.9				pP	37	33.00			1.2s	29.70nm							
WEL	61.22	154	P	31	34.00	-1.2	ABL	87.55	55	P	34	08.00	1.0	LBF	110.23	332	ePKP	39	49.70	-0.4			
	1.1s	********	nm		8.1mb	X	BJA	87.60	296	iP	34	07.80	0.8		0.8s	9.40nm							
WDW	61.30	154	P	31	34.40	-1.4	BEE	87.67	296	iP	34	08.10	0.8	SSF	110.39	333	ePKP	39	50.30	0.0			
PGZ	61.32	153	P	31	35.10	-0.9		0.5s	377.00nm			6.7mb	X		1.2s	32.70nm							
MTW	61.42	154	P	31	35.10	-1.6	8BU	87.68	296	iP	34	08.00	0.6	FOUF	110.70	329	iPKPd	39	41.47	-9.4X			
MOW	61.53	154	P	31	36.20	-1.2	SOD	87.89	340	iP	34	07.90	0.2	FLN	110.74	336	ePKP	39	50.60	-0.3			
BLW	61.58	154	P	31	37.10	-0.7	ISA	87.94	54	eP	34	08.00	-0.6		0.6s	16.20nm							
MSZ	61.61	161	P	31	38.00	0.1	TAB	88.10	309	eP	34	08.00	-1.4	PWLA	110.79	44	PKP	39	50.00	-1.4			
	1.0s	137.00nm			5.9mb					e	39	59.00		SBF	110.84	328	ePKP	39	50.60	-0.7			
KHZ	61.66	156	eP	31	35.90	-2.3	TNP	88.28	51	P	34	11.00	0.6		0.8s	25.20nm							
NDI	63.83	295	iPc	31	51.00	-1.9				pP	37	38.00		GRR	111.19	336	ePKP	39	51.70	0.0			
	1.0s	260.00nm			6.1mb		KER	88.47	305	ePd	34	09.50	-1.8		0.6s	11.50nm							
		eS		39	13.00		PAS	88.57	55	eP	34	10.55	-1.0	FRF	111.45	328	ePKP	39	51.90	-0.5			
SVW	64.01	28	ePc	31	53.10	-0.5				eS	44	45.37			0.8s	21.40nm							
KDC	64.48	32	iPc	31	55.50	-1.0	CLC	88.59	54	eP	34	11.00	-0.7	LPF	111.55	336	ePKP	39	52.40	0.0			
TTA	64.50	26	ePc	31	55.80	-0.9	MWC	88.64	55	eP	34	11.00	-1.2		0.7s	29.50nm							
GBA	64.94	279	P	31	59.00	-1.2	SBB	88.71	55	eP	34	12.00	-0.3	TCF	111.56	333	ePKP	39	52.60	0.1			
KSH	65.01	307	Pd	32	02.00	1.5	SES	88.80	38	iPc	34	12.30	-0.1		0.8s	16.60nm							
IMA	66.58	23	ePc	32	09.00	-1.1		0.8s	173.00nm			6.2mb		LRG	111.68	328	ePKP	39	52.80	0.0			
	1.1s	54.70nm			5.4mb		RVR	89.25	55	eP	34	14.00	-0.8		0.8s	29.50nm							
		epP		32	38.10	118kmX	GSC	89.35	54	eP	34	15.00	-0.3	LMR	111.69	328	ePKP	39	52.60	-0.2			
PMR	67.14	28	ePc	32	11.60	-1.8	LRM	89.41	43	iPc	34	16.00	0.4		0.8s	25.20nm							
	0.8s	222.60nm			6.1mb		SLY	89.41	306	eP	34	08.00	-7.4X	LSF	111.88	333	ePKP	39	53.00	-0.1			
POO	67.69	285	iPc	32	17.00	-0.7	PEC	89.45	55	P	34	16.00	0.2		1.0s	20.00nm							
	0.8s	428.36nm			6.4mb		PLM	89.83	56	eP	34	17.00	-0.8	RSCP	112.08	42	PKP	39	52.40	-1.5			
FBA	68.56	25	eP	32	20.00	-2.3	BAR	90.17	56	eP	34	18.00	-1.1	RSNY	112.33	29	PKP	39	51.00	-3.0X			
TOA	68.63	28	ePc	32	22.30	-0.5	TPC	90.28	55	eP	34	18.00	-1.6	MFF	112.33	334	ePKP	39	53.70	-0.2			
QUE	72.67	298	eP	32	40.50	-7.4X	PTI	90.40	46	P	34	21.00	0.8		0.8s	16.10nm							
		eS		41	55.00		SUF	90.46	336	iP	34	17.80	-2.0	CAF	112.66	332	ePKP	39	55.00	0.3			

	0.8s	10.70nm				
GBTN	112.94	42	PKP	39	54.70	-0.8
HBVT	113.15	28	PKP	39	54.80	-0.8
LPO	113.25	332	ePKP	39	56.10	0.3
	0.6s	16.20nm				
LFF	113.25	333	ePKP	39	56.10	0.3
	0.8s	14.50nm				
NAV	114.03	38	PKP	39	56.40	-1.3
BLA	114.33	38	PKP	39	56.30	-1.9
EPF	114.92	332	ePKP	40	00.00	0.8
	0.8s	20.10nm				
CVL	114.97	36	PKP	39	58.20	-1.1
PRM	115.11	42	PKP	39	59.80	0.1
NA2	115.28	36	PKP	39	59.10	-0.8
LWI	115.45	274	ePKPc	40	01.40	0.2
JSC	115.70	41	PKP	40	00.40	-0.4
LHS	115.86	41	PKP	40	00.00	-1.1
ESEL	116.14	328	ePKP	40	01.80	0.3
ECRI	116.53	333	ePKP	40	03.00	0.7
EROQ	116.59	330	ePKP	40	02.00	-0.3
SGS	116.87	42	PKP	40	03.40	0.3
ETOR	117.76	332	ePKP	40	05.00	0.3
ECHE	118.21	330	ePKP	40	06.00	0.5
BUL	118.50	254	iPKPd	40	21.60	14.8X
	0.5s	21.13nm				
GUD	118.85	333	ePKP	40	07.30	0.5
SLR	119.10	248	iPKPc	40	08.40	0.6
	0.9s	25.21nm				
			i	42	05.00	
TOL	119.42	332	iPKPc	40	08.00	0.2
	1.0s	50.00nm				
EVIA	119.70	331	ePKP	40	08.50	0.0
EALH	119.78	329	ePKP	40	08.80	0.3
PRY	119.85	247	iPKPc	40	09.20	0.0
	0.6s	14.29nm				
KSR	120.36	248	iPKPd	40	11.70	1.5
	0.9s	11.54nm				
EBAN	120.68	331	ePKP	40	10.50	0.3
ENIJ	120.87	329	ePKP	40	10.00	-0.6
BLF	120.97	244	iPKPc	40	11.60	0.4
AFC	121.30	330	ePKP	40	10.70	-0.9
ASMO	121.31	331	iPKPd	40	11.00	-0.6
HVD	121.52	242	iPKPd	40	07.50	-4.7X
AAPN	121.53	331	iPKPc	40	11.50	-0.5
ACHM	121.55	330	iPKPc	40	11.50	-0.5
APHE	121.61	330	iPKPd	40	11.50	-0.7
EHOR	121.64	332	ePKP	40	12.50	0.5
ALOJ	121.68	331	iPKPd	40	11.60	-0.7
ATEJ	121.79	330	iPKPd	40	12.00	-0.6
EPRU	122.33	331	ePKP	40	13.60	0.2
EVAL	122.51	333	ePKP	40	14.30	0.6
TAF	122.64	328	iPKPd	40	15.00	0.9
EJIF	122.86	331	ePKP	40	14.80	0.4
IFR	125.05	329	iPKPc	40	20.00	1.0
AVE	126.35	331	iPKP	40	21.50	0.2
			i	40	28.50	
			i	41	08.00	
TIO	128.20	329	iPKPc	40	25.40	0.3
UPA	131.00	65	ePKP	40	31.00	0.3
			e	43	42.00	
PT10	139.62	93	e(PKP)	40	40.50	-6.4X
NNA	139.74	93	ePKP	40	41.50	-5.6X
	1.0s	35.00nm				
ANG	140.06	41	ePKP	40	40.19	-7.3X
BPA	140.12	41	ePKP	40	40.19	-7.5X
SEG	140.82	42	ePKP	40	39.50	-9.4X
PAG	140.98	42	ePKP	40	41.00	-8.3X
MGG	141.30	42	ePKP	40	42.00	-7.8X
BBL	141.48	43	ePKP	40	43.00	-7.2X
MDN	141.69	43	ePKP	40	44.61	-5.9X
DPMT	141.74	43	ePKP	40	45.13	-5.4X
FDF	142.27	43	ePKP	40	46.48	-5.1X
CRM	142.41	43	ePKP	40	46.64	-5.1X
BIM	142.48	43	ePKP	40	47.49	-4.5X
LKO	142.51	306	PKP	40	47.44	-4.6X
MVM	142.57	43	ePKP	40	47.44	-4.6X
SLB	143.00	44	ePKP	40	47.77	-5.1X
SVV	143.24	45	ePKP	40	48.99	-4.2X
SVB	143.25	45	ePKP	40	48.93	-4.3X
SSV	143.25	45	ePKP	40	48.93	-4.4X
KIC	143.63	301	PKP	40	50.38	-3.6X
TIC	143.71	301	PKPc	40	50.80	-3.3X
LIC	143.95	301	PKPc	40	51.76	-2.7X
TCE	144.66	49	ePKP	40	52.95	-2.7X
ZON	144.67	126	ePKPd	40	55.00	-0.3
TRN	144.95	48	ePKPc	40	54.16	-1.9
TPP	145.13	49	ePKP	40	56.35	-0.1

ARE	145.18	100	ePKP	40	58.00	1.2
MBO	146.80	326	iPKP	41	02.50	3.4X
ZOBO	148.41	99	PKP	41	10.00	7.6X
	Z 17s		1.15um			5.7MszX
			LR	01	54.00	
LPB	148.43	100	PKPc	41	04.00	1.7
	1.0s		380.00nm			
	Z 16s		1.68um			5.9MszX
			LR	01	30.00	
CNCB	148.54	100	iPKPc	41	04.50	1.9
			i	51	19.00	
BAO	167.76	102	ePKP	41	25.50	1.0
BDF	167.84	102	ePKP	41	25.97	1.4
	S.D. = 1.0		on 284 of 325 obs.			

JAN 02, 1990 20h 35m 41.79± 0.28s
38.607 N ± 3.1km 24.194 E ± 2.4km
DEPTH = 10.0km (geophysicist)
4.6mb (4 obs.)
AEGEAN SEA (365)
ML 4.5 (ATH).

ATH	0.74	211	iPnd	35	56.30	0.1
NEO	1.03	313	ePbd	36	02.50	1.2
PAIG	1.38	343	ePb	36	07.10	0.1
AGG	1.51	286	ePb	36	09.60	0.6
OUR	1.73	355	ePb	36	12.60	0.5
PRK	1.74	68	ePb	36	12.80	0.6
PLG	1.86	342	iPnd	36	13.90	0.0
APE	1.86	145	iPnd	36	13.50	-0.6
LIT	1.99	319	ePn	36	16.10	0.2
EZN	2.05	53	iPn	36	16.60	-0.2
VLI	2.13	208	iPnd	36	17.20	-0.7
THE	2.23	335	ePn	36	20.30	0.9
			eSn	36	47.00	
SMG	2.27	112	ePn	36	20.00	0.2
ITM	2.29	232	ePn	36	21.20	1.0
IZM	2.42	94	iPn	36	22.60	0.6
KZN	2.53	313	ePn	36	24.00	0.4
SRS	2.55	350	ePn	36	23.90	0.0
			eSn	36	54.00	
GRG	2.72	330	ePn	36	26.70	0.3
			eSn	36	59.20	
RDO	2.74	22	ePn	36	25.90	-0.6
KNT	2.74	339	ePn	36	27.30	0.7
VLS	2.86	263	ePn	36	30.10	1.7
VAY	2.98	336	iPnc	36	31.00	1.0
MMB	3.00	353	iPc	36	31.00	0.7
			eSg	37	22.00	
RZN	3.10	7	iP	36	33.00	1.1
			iSg	37	27.00	
KDZ	3.18	17	iP	36	32.00	-0.8
			iSg	37	22.00	
LSK	3.18	300	ePn	36	35.00	2.1
VAM	3.19	180	ePn	36	31.70	-1.3
KBN	3.30	309	iPn	36	36.20	1.7
EDC	3.33	57	iPn	36	34.50	-0.4
KKB	3.37	346	iPd	36	36.00	0.5
BNT	3.37	58	iPn	36	34.70	-0.8
SRN	3.50	293	iPn	36	41.60	4.4X
PLD	3.52	6	eP	36	39.00	1.5
			iSg	39	37.00	
NPS	3.53	161	ePn	36	36.80	-0.9
YER	3.55	113	iPn	36	38.70	0.5
DIM	3.59	16	eP	36	39.00	0.4
			eSg	36	52.00	
DST	3.59	72	ePn	36	39.00	0.3
OHR	3.62	315	iPn	36	40.20	1.1
TPE	3.65	299	iPnd	36	42.50	3.0X
KAP	3.87	141	ePn	36	42.00	-0.6
BERA	3.89	304	ePn	36	46.50	3.7X
PGB	3.94	360	iPc	36	44.00	0.4
			iSg	37	52.00	
SKO	3.97	329	iPnc	36	44.70	0.7
	1.2s		95.00nm			
	Z 10s		5.01um			
	N 11s		5.20um			
	E 10s		5.50um			
			iPb	36	52.20	
			i	37	04.70	
			e	37	25.00	
			eSn	37	31.00	
			iSb	37	40.00	
			iSg	37	46.00	
			LQ	38	06.70	
VTS	4.05	350	iP	36	47.00	1.7
			iSg	38	02.00	

KHL	4.19	92	iPn	36	48.60	1.3
PHP	4.21	318	ePn	36	47.70	0.3
DMK	4.21	39	iPn	36	46.50	-1.0
JMB	4.26	25	iPd	36	48.00	-0.2
			iSg	38	00.00	
TIR	4.31	311	iPnd	36	52.00	3.2X
YLV	4.45	62	iPn	36	49.20	-1.8
ISK	4.48	55	ePn	36	49.70	-1.5
KKS	4.51	321	ePn	36	54.00	2.3
LACI	4.58	313	ePn	36	55.20	2.6
GBZT	4.60	60	eP	37	02.00	9.0X
ALT	4.64	83	ePn	36	54.80	1.1
ELL	4.90	110	ePn	37	02.00	4.7X
BCI	4.90	321	ePn	37	01.30	4.1X
SDA	4.95	315	ePn	37	01.30	3.4X
KSL	4.96	118	ePb	37	03.70	5.7X
GPA	5.02	69	iPn	36	59.40	0.4
LCI	5.13	292	Pc	37	00.00	-0.4
			eSn	37	52.40	
BCK	5.18	101	eP	37	02.70	1.5
BRT	5.85	295	P	37	11.40	0.8
BUC1	5.90	13	eP	37	40.00	28.8X
BUC	5.97	13	eP	37	31.00	18.7X
ROI	6.01	282	P	37	12.80	-0.1
BAI	6.17	296	P	37	13.80	-1.3
TDS	6.20	282	P	37	16.20	0.7
			eSn	38	24.00	
CSI	6.25	283	P	37	15.80	-0.6
CZI	6.32	278	P	37	17.60	0.4
MMN	6.50	284	P	37	20.80	1.1
CMP	6.69	5	ePc	37	14.00	-8.5X
ISR	6.76	14	eP	37	23.00	-0.5
BBTK	6.76	77	eP	37	25.00	1.3
			e	37	53.00	
BEO	6.81	337	ePn	37	25.50	1.4
			e(Sg)	39	34.00	
MGR	6.87	286	P	37	25.50	0.5
MLR	7.00	10	ePd	37	26.00	-1.0
SGO	7.13	289	Pc	37	29.30	0.6
CFR	7.21	23	eP	37	28.00	-1.6
BZS	7.26	346	ePc	37	28.50	-1.9
DEV	7.33	353	ePd	37	31.00	-0.5
HVAR	7.43	310	iP	37	31.30	-1.6
VRI	7.50	14	iPc	37	35.00	1.2
KAS	7.85	66	eP	37	45.00	6.2X
DUI	8.06	295	P	37	41.30	-0.4
SDI	8.53	295	P	37	48.80	0.5
			eSn	39	17.50	
AZI	8.89	296	P	37	54.50	1.4
AQU	9.03	298	P	37	56.00	0.7
BMR	9.08	357	ePd	38	06.00	10.3X
RDP	9.33	293	P	38	00.00	0.6
RMP	9.36	294	P	38	00.20	0.5
ZAG	9.43	322	iP	37	59.50	-1.1
PTJ	9.50	323	eP	37	59.60	-2.1
MNS	9.55	297	P	38	02.60	0.3
VBY	9.57	319	ePd	38	00.50	-2.0
ARV	9.80	303	P	38	03.50	-2.3
			eSn	39	48.00	
LJU	10.31	319	ePc	38	10.50	-2.2
TRI	10.50	316	P	38	12.50	-2.8
CRE	10.51	302	P	38	12.00	-3.6X
MAO	10.63	295	P	38	17.20	0.0
VOY	10.63	318	eP	38	14.50	-2.8
SOP	10.64	331	eP	38	18.20	0.9
ZST	10.88	334	e(P)	38	19.60	-0.9
SPC	10.95	346	eP	38	22.20	0.5
VKA	11.22	332	e(P)	38	24.00	-1.1
BDI	11.58	302	P	38	29.00	-1.2
FVI	11.59	317	P	38	28.00	-2.1
K8A	11.61	320	iPc	38	28.30	-2.4
	1.0s		22.30nm			5.4mb X
			i	39	40.80	
SAL	12.32	309	P	38	37.00	-3.0X
BOB	12.62	304	P	38	41.50	-2.6
KHC	13.00	327	iP	38	49.90	0.8
	1.2s		40.00nm			5.5mb X
PRU	13.30	332	eP	38	52.00	-1.0
			e	39	01.50	
KSP	13.45	338	eP	38	55.50	0.5
			e	39	20.50	
VAI	13.52	307	P	38	52.40	-3.6X
SBF	13.66	298	eP	38	57.50	-0.4
	1.0s		16.00nm			4.9mb X
ORO	13.92	305	P	39	01.00	-0.3
GRB1	14.04	324	iPc	39	11.50	8.7X
	1.5s		61.00nm			5.2mb

02d 20h

```
      Z  15s      1.10um
FRF     14.12 296 eP     39 03.60   -0.4
        1.0s     13.60nm          4.7mb X
BRG     14.25 333 eP     38 55.80   -9.7X
                  e      39 31.30
LRG     14.30 295 eP     39 04.60   -1.7
        1.2s     23.80nm          4.8mb X
BNI     14.55 302 P      39 11.20    1.5
CLL     14.95 332 iPd    39 15.70    1.1
        1.3s     30.00nm          4.6mb
                  i      39 20.90
MOX     14.98 328 eP     39 16.00    1.0
        1.3s     24.00nm          4.5mb
                  e      39 21.50
                  e      39 39.00
NB2     23.88 344 P      40 56.10    0.1
        0.9s     12.60nm          4.5mb
     S.D. = 1.2  on 105 of 124 obs.
-------------------------------------
?  JAN  02, 1990  20h 43m 12.92± 2.19s
   44.355 N ±15.9km    7.140 E ±21.3km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                  (545)
     ML 1.7 (GEN).

PZZ     0.15 350 P       43 16.58    0.0
                 S       43 19.35
STV     0.17 130 P       43 16.88    0.0
                 S       43 19.76
ENR     0.24 122 P       43 18.07    0.0
                 S       43 21.70
ROB     0.53  96 P       43 23.62    0.0
                 S       43 30.94
     S.D. = 0.0  on   4 of   4 obs.
-------------------------------------
*  JAN  02, 1990  20h 51m 07.93± 1.38s
   33.407 S ±11.3km   72.522 W ±12.2km
   DEPTH =  10.0km  (geophysicist)
   4.7mb (  1 obs.)
 OFF COAST OF CENTRAL CHILE      (134)
     Felt (IV) in the Volparaiso
     area.

LCCH    0.80  95 iPd    51 23.10   -0.3
LNV     1.08 121 iPd    51 27.70   -0.4
ROCH    1.34  71 iPd    51 37.50    4.7X
TACH    1.35 101 iPd    51 31.60   -1.1
SAN     1.56  92 iPd    51 35.80    0.1
                 iS     51 53.00
PEL     1.56  81 iP     51 36.50    0.7
CHCH    1.64 109 iP     51 36.50   -0.5
PCH     1.69  98 iPd    51 37.50   -0.2
JACH    1.77  66 iPc    51 40.00    1.0
                 iS     52 00.50
FCH     1.87  88 iPd    51 41.00    0.5
MDZ     3.12  81 iP     52 02.70    4.5X
                 iS     52 38.20
RFA     3.63 113 e(P)   52 07.20    1.8
RTCV    3.70  66 e(P)   52 11.50    5.1X
ZON     3.74  61 eP     52 09.00    2.0
RTLL    4.01  60 ePd    52 16.20    5.5X
CFA     4.04  65 iPd    52 11.50    0.3
RTRS    4.15  40 iPd    52 16.00    3.4X
MRA     5.82  82 ePd    52 35.70   -0.6
TCA     7.02  75 ePc    52 51.00   -2.3
ANT     9.84  11 eP     53 42.50   10.0X
ARE    16.90   3 eP     55 09.00    2.6
CNCB   17.03  15 P      55 07.00   -1.3
LPB    17.27  14 P      55 17.00    5.8X
       1.1s     75.95nm          4.7mb
     Z  20s      0.71um
                 LR     33 26.00
ZOBO   17.52  14 eP     55 12.00   -2.5
     Z  20s      0.32um
                 LR     33 14.00
LIC    74.97  72 P      02 50.74   -0.7
KIC    75.28  72 P      02 52.52   -0.7
LKO    76.53  69 P      03 00.98    0.7
GBA   146.32 119 PKP    10 50.00    0.2
     S.D. = 1.3  on  21 of  28 obs.
-------------------------------------
%  JAN  02, 1990  21h 03m 49.93± 0.94s
   38.565 N ± 7.3km   23.932 E ±15.1km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)

ATH     0.62 196 iPbd   04 02.50    0.2
                 eSn    04 12.50
NEO     0.92 324 ePb    04 08.50    0.9
PLG     1.85 348 ePn    04 21.00   -0.9
APE     1.96 139 ePn    04 24.00    0.4
VLI     2.01 203 ePn    04 23.60   -0.6
ITM     2.10 230 ePb    04 29.70    4.0X
     S.D. = 1.1  on   5 of   6 obs.
-------------------------------------
   JAN  02, 1990  21h 38m 18.61± 0.19s
    2.550 S ± 3.5km  127.713 E ± 4.7km
   DEPTH =  34.0km  (  5 depth phases)
   5.4mb ( 25 obs.)  4.7Msz (  7 obs.)
 CERAM SEA                       (270)
      CENTROID, MOMENT TENSOR    (HRV)
      Data Used: GDSN
      L.P.B.: 11S, 27C
      Centroid Location:
      Origin Time      21:38:21.3 0.6
      Lat  1.81S 0.08 Lon 128.32E 0.10
      Dep  55.4 6.7 Half-duration  1.9
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.83 0.20  Mtt= 1.18 0.16
        Mff=-0.35 0.30  Mrt= 0.29 0.23
        Mrf=-0.16 0.16  Mtf= 1.08 0.21
       Principol Axes:
        T  Val=  1.76  Plg= 4   Azm=333
        N       -0.60      49       68
        P       -1.16      41      240
      Best Double Couple:Mo=1.5*10**17
       NP1:Strike= 25 Dip=59 Slip=-151
       NP2:       279     66      -34

DAV     9.81 347 eP     40 37.00   -3.5X
MTN    10.77 162 eP     40 55.00    1.3
TSM    11.75 305 ePd    41 07.60    0.6
                 e      43 18.40
JAY    12.98  90 ePc    41 06.70  -16.7X
KNA    13.16 176 eP     41 25.70   -0.1
                 e      41 36.00
KKM    14.31 307 ePd    41 41.20    0.2
       1.2s   103.60nm          5.3mb
TRT    15.86 251 ePc    42 03.00    1.9
       0.5s    25.80nm          4.6mb
QCP    18.30 339 eP     42 37.90    6.2X
WB5    18.41 160 eP     42 30.80   -2.3
                 eS     46 00.00
WRA    18.46 160 Pd     42 31.60   -2.1
       0.4s    28.40nm          4.8mb
LAT    19.65 103 eP     42 48.00    0.3
MBL    20.03 202 eP     42 50.20   -1.4
       0.4s    44.00nm          5.1mb
BAG    20.11 340 ePc+   42 50.00   -2.8
                 eS     46 32.00
KDB    20.52 110 eP     42 53.50   -3.2X
ASPA   21.83 165 ePd    43 09.20   -0.9
       1.0s   447.00nm          5.8mb
     Z  22s      5.30um          4.9MszX
                 eS     47 05.60
                 e      54 26.60
                 LR     54 40.70
GUA    23.38  46 eP     43 25.50    0.2
       1.2s   287.50nm          5.7mb
GUMO   23.38  46 eP     43 25.00   -0.3
RAB    24.47  94 eP     43 37.00    1.1
KGM    24.81 280 ePc    43 44.30    5.1X
CTA    25.13 135 iPd    43 42.60    0.3
       1.8s   813.64nm          6.0mb
                 i      43 54.90   49kmX
                 iS     48 13.00
MEKA   25.50 199 eP     43 45.00   -0.6
       0.3s    9.00nm          4.8mb
KLM    26.66 282 eP     44 03.00    6.6X
IPM    27.59 285 ePd    44 08.40    3.4X
       1.1s   130.30nm          5.5mb
QIZ    27.73 321 eP     44 06.00   -0.1
     N  12s      1.10um
                 pP     44 16.00   36km
                 S      48 46.00
                 sS     49 00.00
FORR   28.15 179 eP     44 08.60   -1.2
       0.4s    59.00nm          5.6mb
SNG    28.72 290 eP     44 05.60   -9.5X
                 eS     49 07.50
QZH    28.73 343 Pc     44 14.30   -0.8
     Z  28s      1.50um          4.4MszX
MRWA   28.77 202 eP     44 14.60   -0.9
       0.6s    19.00nm          5.0mb

COOL   28.86 192 eP     44 15.50   -0.8
PSI    29.25 280 ePd    44 21.00    1.1
BAL    29.79 199 eP     44 25.00    0.4
KLB    30.37 197 eP     44 29.00   -0.8
MUN    31.21 199 eP     44 36.50   -0.6
       0.6s    43.00nm          5.4mb
RMO    31.21 142 eP     44 37.00   -0.2
NNT    31.60 299 eP     44 41.20    0.5
NWAO   31.78 197 eP     44 40.50   -1.6
       0.7s    38.00nm          5.4mb
     Z  20s      2.10um          4.8Msz
     N  20s      1.80um
     E  20s      1.60um
STK    31.97 157 eP     44 42.70   -1.1
LOE    32.40 309 eP     44 49.00    1.3
HNR    32.76 103 eP     44 50.00   -0.9
RKG    32.91 196 eP     44 56.00    4.0X
CMS    33.47 151 eP     44 56.00   -0.9
ADE    33.84 164 iPd    44 59.60   -0.5
       0.8s    49.25nm          5.5mb
SSE    34.03 350 eP     45 00.30   -1.4
     Z  20s      1.20um          4.6Msz
     E  12s      0.20um
                 PcP    47 40.00
                 eS     50 16.00
BRS    34.42 138 iP     45 04.10   -1.1
                 ipP    45 14.80   38km
                 e      47 53.00
BDT    34.48 306 eP     45 07.00    1.2
       0.8s    57.10nm          5.6mb
GYA    35.29 326 iPd    45 13.60    0.9
     N  15s      0.80um
     E  15s      0.90um
                 PcP    47 45.00
                 S      50 47.00
WHN    35.29 340 iPc    45 12.00   -0.5
       4.0s      0.75nm          3.0mb X
     Z  28s      1.51um          4.6MszX
                 sP     45 25.00
CHTO   35.38 308 eP     45 14.50    1.1
       1.0s     65.00nm          5.5mb
NJ2    35.42 347 Pd     45 13.00   -0.6
     Z  20s      0.60um          4.3Msz
COO    36.06 143 eP     45 19.00   -0.1
KMI    36.65 320 Pc     45 26.50    2.1
       4.0s      0.60nm          2.8mb X
                 S      51 09.00
BWA    37.12 151 eP     45 28.90    0.9
CAN    38.12 151 eP     45 36.20   -0.2
                 e      51 43.60
IIDJ   39.02  13 P      45 42.80   -1.1
TIA    39.81 347 Pd     45 49.20   -1.2
CHJJ   39.82  14 P      45 48.80   -1.7
MTMJ   40.05  13 P      45 51.30   -1.2
MAT    40.10  13 iPd    45 51.10   -1.7
       1.3s    117.31nm          5.5mb
     Z  20s      2.13um          5.0Msz
                 eS     51 47.00
CD2    40.35 327 eP     45 54.00   -0.9
XAN    40.47 336 iPd    45 55.00   -0.9
       1.0s      0.10nm          2.5mb X
                 S      52 06.00
DL2    41.63 353 P      46 04.40   -0.8
       4.0s      0.40nm          2.5mb X
     Z  28s      0.70um          4.4MszX
     E  14s      0.90um
                 eS     52 20.00
YAMJ   42.09  15 eP     46 08.90   -0.2
DZM    42.32 120 iPc    46 12.30    1.0
TIY    42.49 342 iPd    46 12.00   -0.5
     N  14s      0.60um
PVC    42.58 114 iPc    46 14.00    0.6
OFUJ   43.37  16 eP     46 19.60    0.1
BJI    43.68 347 eP     46 20.00   -2.0
       1.0s      0.05nm          2.2mb X
     Z  18s      0.41um          4.4Msz
                 ePcP   48 08.00
                 eScP   52 00.00
                 eS     52 44.00
                 eScS   56 21.00
SNY    44.33 356 iPc    46 25.40   -1.8
       0.8s      0.10nm          2.7mb X
     N  20s      1.10um
     E  24s      1.80um
                 pP     46 37.00   41km
                 S      52 52.00
LZH    44.43 332 Pc     46 29.20    0.8
```

	1.5s	0.19nm		2.7mb X
Z	28s	2.10um		4.9MszX
E	20s	1.90um		
		pP	46	36.50	24km
		sP	46	40.00	
		PP	48	13.00	
		eS	52	58.00	
		sS	53	10.00	
		eSS	56	10.00	
AOMJ	44.44	14 eP	46	30.20	2.1
SHL	44.55	311 iP	46	29.40	-0.1
		eS	53	04.40	
HHC	45.64	343 P	46	36.40	-1.5
Z	22s	1.30um		4.8Msz	
BTO	45.89	341 eP	46	39.00	-0.8
N	14s	0.50um			
CN2	46.19	358 Pc	46	40.00	-1.9
	4.0s	0.40nm		2.7mb X
Z	20s	1.20um		4.8Msz
N	14s	0.40um		
E	14s	0.50um		
		epP	46	49.00	30km
		eS	53	20.00	
		SS	56	35.00	
MDJ	46.99	2 Pc	46	47.50	-0.8
Z	25s	1.50um		4.9MszX
		eS	53	36.00	
GUN	50.35	310 P	47	15.40	0.4
PKI	50.54	309 P	47	16.40	-0.1
	1.0s	42.00nm		5.4mb
KKN	50.75	309 P	47	18.00	0.1
	1.0s	56.00nm		5.5mb
DMN	50.79	309 P	47	18.60	0.3
	1.2s	122.00nm		5.8mb
GKN	51.35	309 P	47	22.40	0.0
SGE	51.46	110 ePd	47	26.10	2.8
SVA	52.06	111 eP	47	30.20	2.5
GBA	52.38	289 Pc	47	30.10	0.0
	0.9s	18.40nm		5.0mb
MSZ	54.87	146 P	47	48.70	0.6
KRP	56.12	135 P	47	57.90	0.7
HITZ	56.63	136 P	48	02.00	1.0
RATZ	56.71	136 P	48	03.20	1.7
TCW	56.82	139 P	48	02.20	0.0
MRW	57.11	139 P	48	03.70	-0.5
WEL	57.18	139 eP	48	03.00	-1.7
MNG	57.33	138 P	48	06.10	0.3
NDI	57.50	307 eP	48	06.00	-1.2
MTW	57.60	139 P	48	09.00	1.3
WMQ	58.45	327 P	48	14.00	0.4
Z	16s	0.70um		4.9MszX
		PP	50	21.30	
		S	56	14.00	
QUE	66.40	304 eP	48	59.50	-7.6X
MAIO	74.13	309 eP	49	54.00	0.2
		eS	59	36.00	
MAW	78.25	201 eP	50	11.00	-5.3X
IR4	80.72	306 eP	50	26.00	-4.5X
IR2	80.80	307 eP	50	32.00	1.2
IR1	80.92	306 eP	50	31.00	-0.5
KER	83.68	305 eP	50	46.00	0.2
RUV	84 42	105 eP	51	03.00	13.4X
	1 2s	60 00nm			
TAB	84.78	308 eP	50	52.00	0.7
SLY	85 14	306 ePd	51	02.00	9.1X
		eS	01	16.00	
SVW	85.80	28 eP	50	58.10	2.4
BHD	85.81	303 ePd	50	58.50	2.2
		eS	01	25.50	
KDC	86.70	32 eP	51	01.90	1.8
MSL	87.12	306 ePd	51	06.50	3.9X
		eS	01	34.00	
IMA	87.70	24 eP	51	06.10	1.1
	1.0s	13.80nm		5.2mb
PMR	88.96	28 eP	51	11.40	0.5
	1.2s	31.30nm		5.5mb
FBA	89.95	25 eP	51	16.50	1.0
TOA	90.41	28 eP	51	19.40	1.6
NAI	90.85	269 iP	51	22.00	1.0
	1.0s	23.00nm		5.5mb
INK	95.60	22 eP	51	41.00	-0.5
BUL	97.66	249 iPd	52	08.90	17.0X
	0.9s	5.46nm			
MBC	97.82	13 eP	51	51.50	0.1
	1.0s	4.00nm		4.9mb
VRI	99.48	316 ePd	52	01.00	1.5
FRB	117.78	8 ePKP	57	03.00	0.3
ALQ	120.37	51 ePKP	57	08.10	-0.8
	1.5s	15.97nm			
LKO	133.09	281 PKP	57	36.68	3.2X
NNA	151.64	121 ePKP	58	13.50	7.9X
	0.9s	19.33nm			
PT08	151.91	121 iPKPc	58	15.50	9.1X
UPA	152.16	76 e(PKP)	58	24.50	18.2X
YJA	152.24	153 e(PKP)	58	09.50	2.7X
ARE	153.23	136 ePKP	58	04.00	-4.1X
CNCB	155.30	142 PKP	58	15.00	3.8X
LPB	155.43	141 ePKP	58	20.00	8.7X
Z	24s	0.78um		5.4MszX
ZOBO	155.62	141 ePKP	58	20.00	8.3X
		LR	58	12.00	
BAO	161.44	193 ePKP	58	19.00	1.2
S.D. = 1.2 on 104 of 129 obs.					

JAN 02, 1990 21h 38m 24.65± 0.51s
40.606 N ± 7.3km 79.002 E ± 8.5km
DEPTH = 10.0km (geophysicist)
4.9mb (8 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	2.59	245 Pgd	39	16.00	8.6X
		eSg	39	56.50	
WMQ	7.21	61 Pn	40	11.50	-1.2
		Sn	41	30.30	
NDI	11.98	188 iPc	41	18.30	-0.2
		eS	43	26.50	
GKN	13.40	158 P	41	36.60	-1.0
KKN	13.79	156 P	41	42.60	-0.2
	0.5s	10.00nm		4.9mb
GUN	13.87	154 P	41	43.80	-0.2
DMN	13.91	157 P	41	43.40	-0.9
	0.5s	12.00nm		5.0mb
PKI	14.04	156 P	41	45.00	-1.1
	0.4s	12.00nm		5.0mb
QUE	14.29	227 eP	41	44.00	-5.3X
		eS	44	28.50	
MAIO	15.87	261 eP	42	14.00	4.2X
GTA	15.99	88 eP	42	08.40	-3.0
Z	28s	1.00um			
		PcP	47	03.50	
SHL	18.45	140 eP	42	44.00	1.8
		eS	46	09.00	
LZH	19.98	95 eP	42	59.50	-0.6
CD2	22.23	108 P	43	29.70	6.7X
POO	22.44	193 ePc	43	31.50	6.3X
BTO	23.49	80 eP	43	37.60	2.2
HHC	24.60	79 eP	43	48.00	1.8
TIY	26.00	85 Pd	44	01.80	2.5
GYA	26.90	113 P	44	10.80	3.1X
GBA	26.93	183 P	44	12.00	4.1X
		e	47	28.00	
CHG	27.65	136 eP	44	21.00	6.4X
		e	45	14.40	
CHTO	27.65	136 e(P)	44	16.20	1.6
	1.0s	2.25nm		3.9mb
SUF	38.07	323 eP	45	45.00	0.3
	0.7s	7.20nm		4.5mb
NUR	38.47	320 iP	45	48.50	0.5
MLR	38.49	295 eP	45	50.00	1.4
		e	52	05.00	
HFS	43.91	319 eP	46	32.70	0.0
	0.5s	11.90nm		5.0mb
NB2	45.05	320 P	46	41.50	-0.6
	0.8s	4.40nm		4.4mb
CLL	45.65	307 eP	46	47.00	0.2
EKA	53.74	315 P	47	48.00	-0.9
	2.5s	145.00nm		5.5mb X
MBC	62.84	5 ePc	48	50.50	-1.7
	0.7s	10.00nm		5.1mb
INK	68.71	12 eP	49	29.00	-0.9
S.D. = 1.4 on 23 of 31 obs.					

JAN 02, 1990 21h 46m 47.24± 0.68s
36.118 N ± 6.7km 27.210 E ± 7.2km
DEPTH = 5.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.57	183 ePb	46	58.30	-0.3
		eSb	47	07.20	
YER	1.33	40 iPn	47	10.80	-1.6
NPS	1.56	237 ePb	47	15.30	-0.3
SMG	1.62	349 ePb	47	16.80	0.4
APE	1.65	306 ePb	47	17.50	0.5
KSL	1.92	89 ePn	47	21.50	0.6
ELL	2.27	73 ePn	47	26.80	0.8
BCK	3.03	63 ePn	47	32.00	-4.8X
S.D. = 1.0 on 7 of 8 obs.					

& JAN 02, 1990 22h 09m 18.40s
46.227 N 111.397 W
DEPTH = 0.5km
MONTANA (456)
<BUT>. ML 3.7 (BUT).

SXM	0.15	121 iPc	09	21.60	0.1
LCCM	0.51	221 iPc	09	28.40	-0.3
HRY	0.57	328 iPd	09	29.50	-0.3
MEMT	0.69	154 ePd	09	31.90	-0.3
BUT	0.84	256 iPc	09	34.60	-0.5
		eS	09	47.70	
LRM	0.84	242 iPc	09	34.50	-0.6
BGMT	1.09	205 iPc	09	38.90	-1.1
MCMT	1.73	217 iPnc	09	49.70	-0.4
LTMT	1.77	197 ePn	09	50.80	0.0
IMW	2.35	172 iP	09	59.50	0.3
EBI	3.32	282 ePn	10	12.90	0.2
BW06	3.69	158 eP	10	20.00	1.9
SES	4.18	3 eP	10	23.00	-1.8
LNOR	4.81	268 eP	10	34.00	0.2
DPW	4.93	292 eP	10	33.00	-2.6
GBL	5.59	277 eP	10	43.00	-1.8
		eS	12	16.00	
SAW	5.67	288 eP	10	43.00	-3.0
LON	7.21	278 eP	11	08.50	0.9
FFC	10.40	32 eP	11	46.00	-5.8
0.5s 4.00nm 5.2mb X					
19 obs. associated					

JAN 02, 1990 22h 36m 11.06± 1.80s
44.349 N ±13.4km 7.146 E ±18.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.16	348 P	36	14.84	0.0
		S	36	17.51	
STV	0.17	129 P	36	15.05	0.1
		S	36	17.92	
ENR	0.23	122 P	36	16.36	0.3
		S	36	19.97	
ROB	0.52	96 P	36	21.59	-0.1
IMI	0.69	129 P	36	24.47	-0.3
		S	36	33.92	
S.D. = 0.3 on 5 of 5 obs.					

JAN 02, 1990 22h 54m 34.73± 0.55s
43.055 N ± 5.3km 27.605 E ± 6.6km
DEPTH = 12.8 ± 4.4 km
BULGARIA (359)

PSN	0.76	34 iPc	54	48.00	-1.2
		Sg	54	57.00	
JMB	0.95	232 iPd	54	54.00	1.4
		iSg	55	08.00	
DMK	1.24	175 iPn	54	59.00	1.5
PVL	1.67	276 iPd	55	05.00	1.2
		iSg	55	30.00	
BUC1	1.72	319 eP	55	30.00	25.4X
BUC	1.74	322 eP	55	27.50	22.7X
DIM	1.83	237 eP	55	06.00	-0.1
		eSg	55	09.00	
		eSg	55	33.00	
KDZ	2.15	230 iP	55	12.00	1.3
		iS	55	45.00	
CFR	2.17	10 eP	55	12.00	1.0
ISR	2.22	340 eP	55	12.50	0.7
ISK	2.26	151 ePn	55	12.10	-0.3
MFT	2.28	186 iPn	55	12.60	-0.1
PLD	2.34	247 eP	55	12.00	-1.5
		iSg	55	44.00	
BNT	2.71	175 iPn	55	18.10	-0.6
HRT	2.71	145 ePn	55	19.10	0.3
EDC	2.71	176 ePn	55	18.50	-0.3
YLV	2.82	151 iPn	55	26.60	6.3X
CMP	2.88	321 ePc	55	19.00	-2.2
VRI	2.88	348 ePd	55	23.00	1.8
MMB	3.23	244 iP	55	27.00	0.9
VTS	3.27	263 eP	55	27.00	0.2
		Sg	56	17.00	
DST	3.53	167 eP	55	35.00	4.6X

02d 22h

KKB	3.55	252	iP	55 30.00	-0.7
KNT	3.98	243	eP	55 35.10	-1.6
VAY	4.12	247	ePn	55 41.60	2.9X
SKO	4.68	259	ePn	55 40.00	-6.8X
BZS	5.00	303	ePc	55 47.50	-3.7X

S.D. = 1.3 on 20 of 27 obs.

% JAN 02, 1990 22h 57m 52.51± 1.24s
44.367 N ±12.1km 7.187 E ±15.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.15	336	P	57 56.14	0.0
			S	57 59.02	
STV	0.16	141	P	57 56.46	0.2
			S	57 59.34	
ENR	0.22	130	P	57 57.55	0.2
			S	58 01.07	
ROB	0.50	98	P	58 02.61	0.0
IMI	0.68	132	P	58 05.55	-0.5

S.D. = 0.4 on 5 of 5 obs.

JAN 02, 1990 23h 24m 34.08± 0.42s
36.596 N ± 4.7km 25.651 E ± 4.4km
DEPTH = 26.4 ± 4.2 km
4.4mb (1 obs.)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

APE	0.48	348	iPgd	24 42.70	-1.4
NPS	1.33	181	ePb	24 56.70	-0.4
SMG	1.46	40	ePb	24 58.30	-0.6
KAP	1.62	130	ePb	25 02.00	0.8
VAM	1.67	225	ePb	25 02.50	0.5
ATH	2.07	312	ePb	25 08.50	0.8
YER	2.18	75	iPn	25 11.60	2.3
VLI	2.19	274	ePn	25 09.70	0.3
IZM	2.21	35	iPn	25 14.80	5.1X
PRK	2.69	10	ePn	25 15.70	-0.8
ITM	3.04	282	ePb	25 25.50	3.9X
KSL	3.21	97	ePn	25 25.70	1.8
EZN	3.27	9	iPn	25 23.20	-1.5
NEO	3.32	325	ePn	25 25.60	0.1
ELL	3.43	86	ePn	25 29.40	2.3
KHL	3.53	60	ePn	25 36.00	7.4X
DST	3.81	37	ePn	25 44.70	12.2X
BCK	4.04	76	ePn	25 40.60	4.7X
PLG	4.15	336	ePn	25 36.80	-0.5
BNT	4.15	25	iP	25 50.00	12.7X
LIT	4.29	326	eP	25 39.90	0.6
			eS	25 54.70	
ALT	4.30	54	ePn	25 49.00	9.5X
VLS	4.33	293	ePb	25 47.50	7.7X
MFT	4.37	16	iP	25 50.00	9.5X
RDO	4.54	359	ePn	25 41.50	-1.4
THE	4.55	333	eP	25 43.20	0.3
KZN	4.80	322	ePn	25 46.80	0.3
YLV	4.92	35	eP	26 06.00	17.8X
KNT	5.04	336	eP	25 50.00	0.1
VAY	5.29	334	ePn	25 54.30	0.9
SKO	6.28	330	eP	26 11.00	3.6X
TDS	7.95	295	P	26 27.00	-3.8X
CZI	7.97	292	P	26 30.90	-0.1
CSI	8.03	296	P	26 32.20	0.3
MMN	8.28	296	P	26 35.90	0.5
KOT	8.42	140	eP	26 35.00	-2.3
			eS	27 57.50	
MGR	8.68	297	P	26 41.00	0.0
SGO	9.01	299	P	26 46.00	0.5
DSI	9.50	119	eP	26 50.00	-2.2
			eS	28 32.00	
PRNI	9.99	126	eP	26 59.00	0.0
SDI	10.51	303	P	27 03.00	-3.2X
KBA	13.90	323	eP	27 57.00	5.3X
			e	28 00.50	
KHC	15.31	329	P	28 19.50	9.5X
PRU	15.61	332	eP	28 19.20	5.4X
KSP	15.75	338	eP	28 16.00	0.5
GRB1	16.35	326	iPc	28 30.70	7.5X
	1.7s		48.00nm	4.4mb	
BRG	16.56	333	e(P)	28 34.00	8.1X
CLL	17.26	332	e(P)	28 42.00	7.3X
KIC	40.95	230	P	32 15.50	-0.7
WB5	116.34	96	ePKP	43 17.20	-0.1
WRA	116.35	96	PKP	43 35.00	17.7X

S.D. = 1.1 on 31 of 51 obs.

% JAN 03, 1990 00h 27m 35.66± 2.02s
44.316 N ±14.4km 7.067 E ±18.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

PZZ	0.19	7	P	27 39.56	-0.4
			S	27 42.51	
STV	0.20	111	P	27 39.82	-0.3
			S	27 42.71	
ENR	0.27	109	P	27 41.03	-0.3
			S	27 44.49	
ROB	0.58	92	P	27 46.80	-0.6
RRL	0.64	342	P	27 48.15	-0.5
IMI	0.72	124	P	27 49.30	-0.5

S.D. = 0.2 on 6 of 6 obs.

JAN 03, 1990 00h 43m 47.97± 1.29s
6.700 N ± 7.7km 126.477 E ± 9.4km
DEPTH = 106.5 ± 12.4 km
4.7mb (8 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	0.98	293	ePd	44 07.50	-1.4
QCP	9.50	327	eP	45 47.00	-16.6X
BAG	11.25	330	eP	46 34.50	7.5X
GUMO	19.34	68	eP	48 09.70	2.0
	Z 22s		0.41um		
			eS	51 40.00	
PJG	19.34	68	eP	48 09.50	1.8
GUA	19.37	68	eP	48 09.70	1.7
KNA	22.42	174	eP	48 39.00	0.3
LOE	26.40	296	eP	49 18.00	1.5
WB5	27.53	164	eP	49 18.70	-8.0X
			i	49 25.80	
WRA	27.58	164	Pc	49 24.50	-2.7
	0.6s		2.90nm	4.1mb	
KMI	29.17	312	eP	49 54.00	12.3X
			pP	50 04.00	36kmX
CHG	29.37	297	eP	49 44.70	1.4
CHTO	29.37	297	eP	49 44.00	0.7
	0.6s		1.40nm	3.8mb	
ASPA	31.04	167	iPd	49 56.40	-1.5
	0.3s		11.00nm	5.1mb	
	Z 20s		0.25um	3.9Msz	
			eS	54 59.30	
			LR	05 48.90	
WARB	32.69	180	eP	50 13.00	0.8
BJI	34.46	346	eP	50 24.00	-3.3X
MRWA	37.11	195	eP	50 50.00	0.2
FORR	37.37	178	iPd	50 50.00	-1.9
	0.3s		36.00nm	5.8mb X	
COOL	37.72	188	eP	50 55.00	0.1
BAL	38.26	194	eP	51 00.40	0.9
KLB	38.98	192	eP	51 06.70	1.3
MUN	39.69	194	iPd	51 13.00	1.7
NWAO	40.37	192	eP	51 18.70	1.8
RKG	41.53	192	eP	51 33.00	6.7X
BRS	42.38	144	eP	51 31.00	-2.5
GUN	43.83	304	P	51 46.80	1.1
	0.8s		19.00nm	4.9mb	
PKI	44.10	303	P	51 47.80	-0.1
	0.8s		11.00nm	4.7mb	
KKN	44.28	303	P	51 49.40	0.2
	0.9s		17.00nm	4.9mb	
DMN	44.37	303	P	51 50.00	0.1
GKN	44.89	303	P	51 54.20	0.2
BWA	45.86	155	eP	52 02.00	0.7
CAN	46.87	155	eP	52 09.50	0.2
GBA	48.69	282	P	52 26.00	2.4X
MAIO	67.54	306	eP	54 36.00	0.8
KEV	87.03	340	eP	56 20.00	-2.3
INK	87.51	21	eP	56 22.50	-2.1
SOD	87.64	338	eP	56 24.00	-1.2
SUF	88.81	333	eP	56 30.00	-0.9
MBC	89.13	13	eP	56 31.00	-1.2
	0.7s		3.00nm	4.5mb	
NUR	90.00	331	iP	56 42.00	5.5X
HFS	95.29	332	ePKP	56 58.70	-2.2
	0.8s		1.90nm	4.6mb	
	Z 15s		0.11um	4.4MszX	
			LR	39 18.00	
BRG	98.71	324	e(P)	57 22.50	6.0X
KHC	99.58	322	eP	57 19.90	-0.7
KIC	129.62	284	PKP	02 48.30	1.2

S.D. = 1.5 on 35 of 44 obs.

? JAN 03, 1990 01h 32m 22.23± 6.95s
33.575 N ±64.7km 25.910 E ±13.6km
DEPTH = 33.0km (normal)
EASTERN MEDITERRANEAN SEA (371)
MD 3.9 (ATH).

NPS	1.70	352	ePn	32 49.00	-1.0
KAP	2.23	28	ePn	32 59.00	1.4
VAM	2.31	323	ePn	32 59.50	0.8
KSL	3.95	49	ePn	33 21.00	-0.9
ELL	4.56	45	ePn	33 30.10	-0.7
BCK	5.44	43	ePn	33 44.10	0.9
KOT	6.21	124	eP	34 01.50	7.5X
			e	35 11.00	
KZN	7.49	335	ePn	34 11.50	-0.5

S.D. = 1.2 on 7 of 8 obs.

JAN 03, 1990 01h 43m 40.94± 7.66s
51.380 N ±47.9km 20.825 E ±47.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.8 (KRA), 2.9 (VKA).

KRA	1.44	203	ePg	44 07.20	0.1
			iSg	44 17.00	
SPC	2.23	190	ePn	44 19.60	1.0
			i(Sg)	44 38.80	
KSP	2.91	261	ePn	44 27.80	-0.3
			iPg	44 30.70	
			iS	44 54.80	
PSZ	3.52	190	ePn	44 35.70	-1.1
SRO	3.93	206	eP	44 56.00	13.5X
			e	45 34.70	
ZST	4.00	219	e(P)	44 43.90	0.4
			e	45 15.10	
PRU	4.23	253	Pn	44 47.30	0.4
			Pg	44 49.20	
			eSg	45 26.50	
VKA	4.27	225	iPgc	44 46.80	-0.6
			eSn	45 19.70	
			iSg	45 26.40	
			i	45 34.30	
BRG	4.36	266	ePg	44 58.00	9.3X
			iSg	45 42.00	
CLL	4.90	272	ePg	45 12.00	15.6X
			iSg	46 04.70	
KHC	5.17	247	iPn	44 54.80	-5.3X
			Sg	45 51.20	
KBA	6.52	232	e(Pg)	45 47.50	28.1X
	0.8s		3.80nm		
			e	46 35.00	

S.D. = 0.9 on 7 of 12 obs.

JAN 03, 1990 01h 47m 28.37± 0.37s
43.527 N ± 4.0km 0.491 W ± 6.5km
DEPTH = 16.0 ± 5.3 km
PYRENEES (378)
ML 3.4 (LDG). mbLg 3.3 (MDD).
Felt (IV) at Artix and (III) in parts of the Lacq oilfield, France.

OGE	0.36	178	Pg	47 35.64	-0.3
MADF	0.45	212	Pg	47 36.76	-0.7
			Sg	47 42.78	
ESCF	0.45	188	P	47 36.98	-0.6
			Sg	47 42.68	
ATE	0.47	199	Pg	47 36.92	-0.9
			Sg	47 43.04	
JAU	0.50	170	Pg	47 38.15	-0.2
			Sg	47 44.76	
ELYF	0.51	226	Pg	47 37.74	-0.8
ISSF	0.55	204	Pg	47 38.49	-0.7
BOH	0.57	222	Pg	47 38.51	-1.1
LHE	0.62	189	Pg	47 39.87	-0.6
EPF	0.78	129	Pn	47 45.20	2.0
			Pg	47 45.80	
			Sg	47 56.70	
LFF	1.67	32	Pn	47 59.20	2.2
			Pg	48 02.80	
			Sg	48 26.00	
LPO	1.67	46	Pn	47 59.60	2.5
			Pg	48 02.70	
			Sg	48 27.00	
ECRI	1.74	239	iP	48 00.40	2.2
			eS	48 22.00	

RJF	2.29	38	Pn	48	06.80	0.8
			Pg	48	13.80	
			Sg	48	45.80	
CAF	2.31	52	Pn	48	07.60	1.2
			Pg	48	15.00	
			Sg	48	46.00	
EROO	2.78	166	eP	48	22.00	8.9X
			eS	48	56.00	
EBR	2.80	165	ePn	48	29.00	15.7X
			e	49	00.00	
			e	49	10.00	
ETOR	2.94	204	eP	48	16.20	0.8
			eS	48	52.50	
LSF	3.08	27	Pn	48	18.00	0.8
			Sg	49	09.60	
MFF	3.09	4	Pn	48	17.90	0.6
			Pg	48	28.00	
			Sg	49	08.00	
TCF	3.36	34	Pn	48	21.10	-0.2
			Sg	49	18.00	
MAF	3.46	38	Pn	48	22.60	-0.1
			Sg	49	21.10	
BGF	3.84	37	Pn	48	27.60	-0.5
			Sg	49	34.40	
GUD	3.97	225	eP	48	30.40	0.5
			eS	49	16.00	
AVF	4.25	38	Pn	48	33.80	0.0
			Sg	49	45.00	
SMF	4.37	43	Pn	48	36.00	0.4
			Sg	49	50.80	
LPF	4.52	355	Pn	48	37.20	-0.5
SSF	4.52	37	Pn	48	36.60	-1.1
			Pg	48	54.80	
			Sg	49	53.60	
GRR	4.87	357	Pn	48	42.00	-0.6

S.D. = 1.1 on 27 of 29 obs.

JAN 03, 1990 08h 25m 06.43± 0.25s
42.243 N ± 4.7km 48.303 E ± 3.8km
DEPTH = 10.3km (5 depth phases)
4.9mb (42 obs.) 4.3Msz (3 obs.)
CASPIAN SEA (338)

TAB	4.44	201	eP	26	17.00	1.6
IR7	6.77	164	eP	26	48.70	0.3
IR2	6.87	162	eP	26	50.00	0.2
TEH	6.92	159	eP	26	48.00	-2.5
SLY	6.98	199	ePc	26	58.50	7.3X
			e	27	25.00	
			e	28	51.00	
IR1	7.07	164	eP	26	52.00	-0.5
MSL	7.09	216	ePc	26	57.50	4.9X
			e	27	23.50	
			e	28	56.50	
IR5	7.24	165	eP	26	54.40	-0.6
IR4	7.28	163	eP	26	55.00	-0.5
KER	7.93	187	eP	27	07.00	2.4
BHD	9.47	200	eP	27	34.00	8.2X
			e	30	03.00	
			e	30	41.00	
MAIO	10.51	121	iPc	27	38.00	-2.2
			eS	29	36.00	
BBTK	11.98	264	eP	28	03.00	2.8
ALT	14.17	263	eP	28	31.00	1.7
PSN	14.80	282	iPd	28	40.00	2.6
KHL	14.86	261	eP	28	41.00	2.8
ELL	15.22	255	eP	28	46.10	3.1X
VRI	15.92	290	ePc	28	54.50	2.5
MLR	16.44	289	ePc	29	03.00	4.3X
OASM	16.58	195	ePd	28	59.00	-1.6
DIM	16.88	277	eP	29	06.00	1.8
PVL	16.90	281	iPd	29	11.00	6.6X
KDZ	17.03	276	iPc	29	07.00	0.9
RYD	17.53	185	eP+	29	10.00	-2.5
RZN	17.54	276	iPd	29	15.00	2.3
PGB	17.82	279	iPd	29	19.00	3.0
BMR	18.34	296	ePc	29	24.00	1.7
VTS	18.52	280	iPc	29	27.00	2.3
KKB	18.72	277	iPd	29	29.00	2.0
VAY	19.20	276	eP	29	32.00	-0.8
BZS	19.48	289	eP	29	34.50	-1.7
SKO	19.91	278	eP	29	41.00	0.1
	1.1s		61.00nm			4.8mb
			i	29	43.50	10km
			i	29	46.50	
BEO	20.32	287	iP	29	44.50	-0.6
OHR	20.55	276	iP	29	47.50	-0.1
	1.2s		0.15nm			2.2mb X
SPC	20.71	299	eP	29	47.80	-1.6
PSZ	20.78	296	iP	29	48.60	-1.4
KRA	21.05	302	eP	29	52.00	-0.7
			e	29	56.00	15km
KSH	21.09	88	eP	29	55.30	2.0
KMSA	22.04	190	eP+	30	03.50	0.6
ZST	22.67	296	iP	30	08.70	-0.2
SOP	23.01	295	eP	30	14.10	1.9
NUR	23.28	330	eP	30	15.00	0.4
	0.7s		48.10nm			5.2mb
HVAR	23.36	283	iP	30	15.90	0.3
KSP	23.48	303	eP	30	18.80	2.0
			e	36	36.50	
TDS	24.21	275	P	30	27.50	3.6X
CSI	24.21	275	P	30	26.30	2.3
SUF	24.31	335	iP	30	25.70	1.1
	0.5s		9.80nm			4.7mb
CZI	24.49	274	P	30	25.70	-0.9
PRU	24.49	300	Pd	30	27.60	1.1
	1.5s		33.50nm			4.8mb
MGR	24.65	276	P	30	30.00	1.8
SGO	24.72	277	P	30	29.50	0.6
BRG	24.96	302	eP	30	31.20	0.1
	1.2s		21.00nm			4.7mb
			e	31	16.00	234kmX
TRI	24.98	290	P	30	31.50	0.2
KHC	25.05	298	iP	30	31.50	-0.6
	1.2s		15.00nm			4.6mb
			e	30	49.00	77kmX
DUI	25.09	280	P	30	33.00	0.5
KBA	25.19	293	iPc	30	32.80	-0.8
	0.8s		34.00nm			5.1mb
			i	30	34.70	7km
			i	30	38.80	
SDI	25.55	281	P	30	38.00	1.2
FVI	25.60	292	P	30	37.70	0.6
CLL	25.60	303	iP	30	36.70	-0.4
AZI	25.76	281	P	30	42.00	3.3X
UPP	25.77	324	iPd	30	39.50	0.9
			i	30	43.40	14km
ARV	25.83	285	P	30	40.20	0.8
MNS	26.23	282	P	30	44.00	0.9
CRE	26.52	285	P	30	50.50	4.7X
GRF	26.61	299	eP	30	45.60	-0.9
Z	22s		0.10um			3.3Msz
PGD	26.64	286	P	30	48.00	0.9
NDI	27.01	111	iPc	30	51.00	0.7
	0.7s		27.40nm			5.1mb
BDI	27.41	287	P	30	52.50	-1.5
HFS	27.66	322	eP	30	54.60	-1.3
	0.9s		44.50nm			5.2mb
SOD	27.79	342	iP	30	57.80	0.7
BO8	28.12	289	P	31	04.00	3.7X
WMO	28.66	73	P	31	06.20	1.0
Z	16s		1.00um			4.5MszX
SBF	29.70	287	eP	31	13.00	-1.5
	0.7s		1.30nm			3.9mb X
HAU	29.87	296	eP	31	13.70	-2.3
	0.6s		10.80nm			4.9mb
LPG	29.89	291	eP	31	15.00	-1.6
	0.6s		6.30nm			4.6mb
BNI	30.02	290	P	31	17.50	0.0
RGS	30.30	326	iP	31	19.00	-0.6
FRF	30.32	287	eP	31	18.20	-1.8
	0.6s		10.80nm			4.9mb
LRG	30.54	287	eP	31	20.10	-1.8
	0.8s		13.40nm			4.9mb
L8F	31.58	294	eP	31	29.40	-1.7
	0.8s		8.00nm			4.7mb
LOR	31.63	295	eP	31	29.60	-1.9
	0.6s		3.00nm			4.4mb
SMF	31.72	293	eP	31	29.80	-2.5
	0.6s		4.80nm			4.6mb
SSF	31.89	294	eP	31	32.20	-1.6
AVF	32.03	294	eP	31	32.60	-2.4
	0.6s		4.50nm			4.6mb
POO	32.09	130	iPc	31	37.00	1.2
	1.0s		30.00nm			5.2mb
GKN	32.67	104	P	31	41.40	0.4
	0.6s		17.00nm			5.2mb
TCF	32.89	293	eP	31	41.00	-1.6
	0.6s		4.80nm			4.6mb
DMN	33.24	104	P	31	46.60	0.6
KKN	33.26	104	P	31	45.80	-0.4
LSF	33.37	293	eP	31	44.50	-2.1
	0.6s		8.10nm			4.8mb
PKI	33.48	104	P	31	48.40	0.2
GUN	33.62	103	P	31	49.80	0.3
LDF	34.10	298	eP	31	51.30	-1.7
	0.6s		7.90nm			4.8mb
GRR	34.62	297	eP	31	55.20	-2.2
	0.8s		18.80nm			5.0mb
LPF	34.79	297	eP	31	56.80	-2.1
	0.6s		7.20nm			4.7mb
EKA	35.51	310	P	32	04.00	-0.9
	0.5s		6.20nm			4.7mb
HYB	35.74	125	ePc	32	07.70	0.4
	0.8s		30.80nm			5.2mb
GBA	38.08	130	P	32	27.30	0.4
LZH	42.85	79	eP	33	06.20	-0.2
Z	18s		0.50um			4.5Msz
CD2	45.23	86	eP	33	26.00	0.4
LWI	47.67	207	iPc	33	45.10	0.0
TIY	48.32	73	eP	33	50.20	0.3
Z	18s		0.60um			4.6Msz
CHG	48.64	103	eP	33	53.00	0.6
CHTO	48.64	103	iP	33	53.30	0.9
	0.6s		6.73nm			4.9mb
BDT	49.70	104	eP	34	02.00	1.5
	0.8s		41.50nm			5.5mb
NST	51.55	105	eP	34	17.50	2.9
CN2	54.44	60	eP	34	36.00	0.2
LKO	57.18	251	Pc	34	54.48	-1.5
	0.7s		11.50nm			5.0mb
TIC	58.83	249	Pc	35	05.20	-2.3
KIC	58.84	248	Pc	35	05.00	-2.6
	0.8s		19.00nm			5.3mb
LIC	59.14	248	Pc	35	07.10	-2.5
MBC	61.53	357	eP	35	25.00	-0.2
	0.5s		2.00nm			4.5mb
FRB	63.21	334	eP	35	36.00	-0.5
INK	69.77	1	eP	36	17.00	-1.0
SLR	70.12	199	iPd	36	21.50	0.6
	1.0s		15.00nm			5.1mb
KSR	70.59	200	eP	36	24.20	0.3
IMA	70.69	9	P	36	23.30	-0.7
	1.0s		7.19nm			4.8mb
PRY	71.46	200	iPc	36	28.40	-0.7
BFS	71.61	200	iPd	36	27.50	-2.4
	0.6s		25.00nm			5.5mb
FBA	72.45	7	P	36	34.30	-0.1
	0.8s		10.34nm			5.0mb
TTA	73.38	11	P	36	39.80	-0.1
	1.0s		7.50nm			4.7mb
BLF	73.87	200	iPd	36	44.00	0.8
	0.7s		20.00nm			5.3mb
PMR	75.56	9	P	36	52.30	0.0
	0.9s		8.33nm			4.8mb
FFC	80.13	343	iPc	37	18.70	1.0
	0.7s		26.00nm			5.3mb
EDM	83.61	349	iPc	37	36.50	0.6
SES	85.99	347	ePc	37	48.00	0.1
GOL	95.01	340	P	38	31.00	0.2
	0.9s		7.95nm			5.1mb
TUL	95.58	331	ePd	38	33.80	0.8
	1.0s		18.00nm			5.5mb
			e	38	36.00	7km
SIO	95.91	332	e(P)	38	33.20	-1.4
PV09	97.06	342	P	38	40.80	0.7
TNP	98.97	348	P	38	50.00	1.3
	0.8s		2.82nm			5.0mb
ZOBO	120.26	275	ePKP	44	08.00	7.8X
LPB	120.41	275	ePKP	44	03.00	2.7X
CNCB	120.49	275	PKP	44	01.50	0.8
TPT	149.56	32	iPKP	45	00.30	7.3X
	0.8s		30.00nm			
RUV	149.84	31	iPKP	45	00.80	7.4X
	0.8s		25.00nm			

S.D. = 1.4 on 122 of 136 obs.

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* JAN 03, 1990 08h 53m 38.93± 1.03s
35.457 N ± 8.9km 141.272 E ±11.5km
DEPTH = 10.0km (geophysicist)
4.3mb (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	1.16	310	iPd	53	59.50	-1.1
			S	54	11.20	
CHJJ	1.94	288	P	54	11.70	-0.6
			eS	54	36.70	
NIIJ	2.55	315	P	54	20.50	-0.5
IIDJ	2.74	271	P	54	25.70	1.9
YAMJ	2.89	340	P	54	26.10	0.3

03d 08h

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MTMJ     3.03 293 P      54 28.00   0.1
OFUJ     3.63   5 P      54 37.00   0.7
WB5     55.42 188 eP     03 14.80  -1.0
WRA     55.49 188 Pc     03 16.50   0.2
         0.8s      2.40nm          4.3mb
      S.D. = 1.1  on   9 of   9 obs.
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   JAN 03, 1990  09h 40m 10.56± 0.67s
   38.759 N ± 5.7km   22.531 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)
      ML 3.2 (ATH).

AGG      0.31 329 eP     40 09.50  -7.4X
NEO      0.77  44 ePn    40 25.00  -0.6
ATH      1.22 130 ePb    40 34.60   1.4
LIT      1.34 359 eP     40 36.60   1.3
VLS      1.63 250 ePn    40 39.00  -0.4
ITM      1.65 197 ePb    40 40.00   0.3
KZN      1.65 339 ePb    40 40.00   0.2
VLI      2.06 171 ePn    40 44.50  -1.2
GRG      2.20 357 eP     40 47.50  -0.1
KNT      2.42   7 eP     40 48.60  -2.1
OHR      2.70 331 ePn    40 56.00   1.1
      S.D. = 1.3  on  10 of  11 obs.
-------------------------------------
%  JAN 03, 1990  10h 58m 31.17± 3.15s
   43.884 N ±20.6km    7.120 E ±14.8km
   DEPTH =  10.0km  (geophysicist)
 NEAR SOUTH COAST OF FRANCE      (379)

STV      0.39  22 P      58 39.07  -0.1
                S      58 47.17
IMI      0.56  87 P      58 41.94  -0.6
PZZ      0.62 359 P      58 43.07  -0.7
                S      58 53.63
ROB      0.68  53 P      58 44.82   0.1
                S      58 56.92
FIN      0.85  67 P      58 47.69   0.1
                S      59 00.81
RRL      1.06 347 P      58 50.66  -0.7
PCP      1.22  57 P      58 53.74  -0.1
LSD      1.57   1 P      59 00.81   1.4
      S.D. = 0.8  on   8 of   8 obs.
-------------------------------------
&  JAN 03, 1990  11h 07m 11.14s
   58.820 N          154.831 W
   DEPTH = 129.8km
 ALASKA PENINSULA                ( 12)
      <AGS-P>.

CDD      0.63  79 eP     07 30.24  -1.0
                eS     07 45.61
AUL      0.92  51 eP     07 32.92  -0.6
PDB      1.02  18 eP     07 33.31  -1.2
                eS     07 50.99
KDC      1.64 130 eP     07 39.08  -2.0
                eS     08 02.76
RED      1.92  32 eP     07 43.37  -1.2
CNPM     1.98  68 eP     07 43.87  -1.5
                eS     08 08.82
RDT      2.15  34 iP     07 46.18  -1.3
NNL      2.18  54 eP     07 47.72  -0.1
SVW      2.33 351 iP     07 48.46  -1.3
NKA      2.65  42 eP     07 54.85   1.1
CKL      2.69  27 iP     07 53.16  -1.3
BGL      2.74  25 eP     07 54.26  -0.8
SPU      2.75  29 eP     07 53.59  -1.5
CRP      2.80  28 iP     07 54.72  -1.2
CGLM     2.87  28 eP     07 55.29  -1.5
SLKM     2.89  52 eP     07 55.49  -1.4
NCG      2.92  26 eP     07 56.37  -1.0
SEW      3.03  63 eP     07 57.02  -1.7
SUA      3.35  36 eP     08 01.34  -1.8
SKT      3.57  26 eP     08 04.34  -1.6
PMS      3.59  45 eP     08 03.97  -2.3
PWA      3.76  39 eP     08 06.02  -2.5
PLRM     3.98  43 eP     08 07.68  -3.7
PME      4.04  43 eP     08 08.78  -3.4
GHO      4.17  42 eP     08 10.93  -3.1
CUT      4.24  30 eP     08 12.53  -2.4
GLI      4.41  59 eP     08 14.35  -2.9
FID      4.64  62 eP     08 16.94  -3.4
VZW      4.73  58 eP     08 19.07  -2.5
NCA      5.09  48 eP     08 22.94  -3.5
KLU      5.20  55 eP     08 24.72  -3.2
TOA      5.40  49 eP     08 27.70  -3.0
RND      5.44  30 eP     08 27.82  -3.3
       33 obs. associated
-------------------------------------
&  JAN 03, 1990  11h 54m 27.40s
   33.250 N          116.370 W
   DEPTH =   9.0km
 SOUTHERN CALIFORNIA             ( 43)
      <PAS-P>. ML 3.4 (PAS). Felt
      (III) at Indio and Lakeside.
      Also felt at Romono, Warner
      Springs and in the Palm Springs
      area.

PLM      0.42 284 iPc    54 35.40  -0.7
BAR      0.62 204 iPd    54 38.70  -1.2
IKP      0.64 160 iPd    54 39.40  -0.8
CPE      0.72 239 iPc    54 40.10  -1.5
HAY      0.76  53 iPd    54 41.50  -0.9
TPC      0.89  17 iPd    54 43.80  -0.9
PEC      0.92 314 iPc    54 43.90  -1.2
RVR      1.12 312 iPc    54 47.20  -1.3
GLA      1.31  98 iPc    54 49.20  -2.5
MWC      1.71 305 iPc    54 57.50  -0.2
CIS      1.71 276 iPd    54 55.60  -1.9
PAS      1.75 301 iPd    54 58.10   0.0
TNP      4.87 352 eP     55 42.80   0.0
KVN      5.96 347 eP     55 58.50   0.5
       14 obs. associated
-------------------------------------
%  JAN 03, 1990  15h 09m 09.37± 0.94s
   40.075 N ± 7.7km   27.815 E ± 7.7km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                          (366)

EDC      0.27   8 iPg    09 15.50   0.4
                iSg    09 19.50
BNT      0.29  16 iPg    09 14.60  -0.9
                iSg    09 18.10
DST      0.78 127 iPg    09 24.20  -0.4
                eSg    09 34.20
EZN      1.17 258 iPn    09 31.40   0.2
YLV      1.29  67 iPn    09 34.10   0.8
      S.D. = 0.9  on   5 of   5 obs.
-------------------------------------
?  JAN 03, 1990  15h 12m 12.24± 1.31s
   36.052 N ±65.6km   53.162 E ±14.0km
   DEPTH =  10.0km  (geophysicist)
 IRAN                            (348)

TEH      1.48 258 eP     12 37.00  -2.0
IR2      1.88 259 eP     12 45.40   0.6
IR4      2.01 247 eP     12 47.10   0.3
IR7      2.10 261 eP     12 49.00   0.9
IR1      2.11 253 eP     12 48.70   0.5
IR5      2.26 249 eP     12 50.00  -0.4
MAIO     5.13  85 ePn    13 31.00   0.0
                eSn    14 36.00
      S.D. = 1.2  on   7 of   7 obs.
-------------------------------------
*  JAN 03, 1990  15h 46m 21.46± 2.48s
   37.940 S ±19.6km  176.318 E ±16.1km
   DEPTH = 239.3 ± 18.2 km
 NORTH ISLAND, NEW ZEALAND       (159)

UTU      0.26 203 P      46 52.50  -0.2
TAZ      0.33 153 Pc     46 52.60  -0.1
TUTZ     0.81 198 Pc     46 54.80   0.1
HITZ     0.88 209 Pc     46 55.10   0.1
HATZ     0.97 191 Pc     46 55.20  -0.3
RATZ     1.02 205 P      46 55.90   0.1
KETZ     1.27 204 eP     46 57.70   0.2
HBZ      1.61  78 P      46 59.90   0.0
PGZ      2.68 181 P      47 10.60   0.5
MNG      2.75 193 Pd     47 11.20   0.2
                S      47 45.80
KIW      3.12 200 P      47 14.80  -0.2
MTW      3.28 191 P      47 16.50  -0.3
CAW      3.31 197 P      47 17.20   0.1
WDW      3.48 197 P      47 18.80  -0.3
BLW      3.49 191 P      47 19.00  -0.2
MRW      3.52 200 P      47 19.30  -0.2
                S      48 02.20
WEL      3.55 199 eP     47 19.70  -0.2
MOW      3.57 193 P      47 19.90  -0.3
TCW      3.63 205 P      47 20.60  -0.2
CCW      4.14 202 P      47 27.50   0.7
KHZ      4.95 205 P      47 37.00   0.2
      S.D. = 0.3  on  21 of  21 obs.
-------------------------------------
?  JAN 03, 1990  16h 01m 26.30± 1.58s
   6.539 S ±11.9km  152.917 E ±23.6km
   DEPTH =  33.0km  (normal)
   4.1mb (  2 obs.)
 NEW BRITAIN REGION              (192)

RAB      2.45 342 eP     02 05.00   0.2
                iS     02 38.00
PMG      6.38 243 eP     03 02.00   1.5
RMQ     20.23 191 eP     06 01.00  -0.6
BRS     20.74 180 eP     06 08.00   1.2
WB5     22.37 232 eP     06 21.10  -2.1
WRA     22.42 232 Pc     06 23.00  -0.8
         0.7s      2.60nm          3.8mb
ASPA    24.98 225 eP     06 49.20   0.6
         1.0s     10.00nm          4.4mb
      Z  22s       0.11um          3.3MszX
                LR     15 36.50
      S.D. = 1.5  on   7 of   7 obs.
-------------------------------------
%  JAN 03, 1990  18h 16m 35.63± 0.76s
   41.998 N ± 5.7km   14.033 E ± 6.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN ITALY                  (390)

SDI      0.33 209 Pc     16 42.50  -0.1
                eSg    16 46.80
AZI      0.45 269 Pc     16 44.90   0.2
                eSg    16 52.00
DUI      0.46 137 P      16 45.20   0.1
                eSg    16 51.00
AQU      0.59 307 P      16 47.30  -0.3
                eSg    16 56.70
RMP      1.01 260 P      16 54.60  -0.2
                eSg    17 09.60
RDP      1.01 257 P      16 54.50  -0.3
                eSg    17 09.40
MNS      1.08 291 P      16 56.40   0.5
                eSg    17 12.00
ASS      1.48 317 P      17 03.00   0.7
ARV      1.70 332 P      17 04.80  -0.7
      S.D. = 0.5  on   9 of   9 obs.
-------------------------------------
*  JAN 03, 1990  18h 58m 04.59± 0.85s
   31.813 S ±10.1km   69.734 W ± 9.4km
   DEPTH =  10.0km  (geophysicist)
 SAN JUAN PROVINCE, ARGENTINA    (137)

RTCV     1.02  93 iPd    58 22.50  -1.4
                S      58 44.00
RTLL     1.18  66 iPd    58 23.20  -3.5X
                S      58 46.50
CFA      1.29  81 iP     58 29.50   1.0
                S      58 47.00
PEL      1.55 211 iPd    58 33.10   0.8
                iS     58 54.60
FCH      1.58 197 iPd    58 34.50   1.5
                iS     58 57.90
ROCH     1.58 223 iPd    58 33.20   0.3
                iS     58 55.20
RTRS     1.65   8 iPc    58 34.00   0.3
                S      58 56.20
PCH      1.92 200 iPc    58 38.40   0.7
                iS     59 04.50
TACH     2.10 209 iPc    58 38.90  -1.3
                iS     59 07.00
CHCH     2.25 200 iP     58 42.50   0.0
                iS     59 10.70
LCCH     2.27 223 iPd    58 41.00  -1.7
LNV      2.56 213 iPc    58 44.40  -2.4X
                iS     59 15.00
      S.D. = 1.2  on  10 of  12 obs.
-------------------------------------
?  JAN 03, 1990  19h 42m 27.00± 4.36s
   5.114 S ±45.8km  148.408 E ±44.8km
   DEPTH = 219.0 ± 14.0 km
   3.8mb (  1 obs.)
 NEW BRITAIN REGION              (192)

LAT      2.07 222 eP     43 08.00   0.0
PMG      4.44 196 eP     43 35.50   0.0
WB5     20.05 222 eP     46 45.20   0.1
WRA     20.12 222 Pd     46 45.70  -0.1
         0.3s      1.00nm          3.8mb
MAW     83.60 203 eP     54 31.50   0.0
```

S.D. = 0.1 on 5 of 5 obs.

? JAN 03, 1990 21h 12m 45.80± 3.58s
41.689 N ±29.4km 12.749 E ±18.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.07	341	Pd	12 48.30	0.0
			eSg	12 50.00	
RMP	0.13	344	P	12 49.10	0.2
			eSg	12 51.10	
AZI	0.59	59	P	12 58.00	0.2
			eSg	13 07.00	
MNS	0.70	356	P	12 59.30	-0.3
			eSg	13 10.00	
SDI	0.80	88	P	13 01.20	-0.2
			eSg	13 12.40	

S.D. = 0.3 on 5 of 5 obs.

? JAN 03, 1990 21h 31m 54.16± 6.64s
41.535 N ±33.2km 12.570 E ±34.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.25	26	P	31 59.40	-0.1
			eSg	32 00.90	
RMP	0.29	20	Pd	32 00.40	0.1
			eSg	32 02.00	
AZI	0.79	55	P	32 09.50	0.0
			eSg	32 19.50	
MNS	0.85	5	P	32 10.60	0.0
			eSg	32 22.10	
SDI	0.95	79	P	32 12.30	0.0
			eSg	32 24.40	

S.D. = 0.1 on 5 of 5 obs.

? JAN 03, 1990 21h 36m 43.03± 4.05s
12.555 S ±31.8km 115.556 E ±33.5km
DEPTH = 33.0km (normol)
4.5mb (5 obs.)
NORTHWEST OF AUSTRALIA (588)

MBL	9.48	155	eP	38 59.70	-0.7
	0.3s	18.00nm			5.8mb X
			eS	40 48.00	
NANU	9.95	180	eP	39 05.00	-1.9
			eS	40 57.00	
MEKA	14.26	169	eP	40 04.60	-0.2
	0.3s	10.00nm			4.9mb
			eS	42 32.00	
MRWA	16.59	179	eP	40 32.00	-2.7X
			eS	43 33.00	
WARB	17.11	144	eP	40 43.00	1.7
			eS	43 53.00	
BAL	18.00	177	eP	40 52.00	-0.4
			eS	44 11.00	
COOL	18.96	165	eP	41 05.00	0.8
	0.3s	9.00nm			4.5mb
			eS	44 29.00	
MUN	19.34	178	eP	41 11.00	2.3X
			eS	44 40.00	
WRA	19.46	115	Pc	41 09.60	-0.6
	0.6s	8.00nm			4.2mb
WB5	19.47	114	eP	41 09.10	-1.1
			i	41 13.30	
NWAO	20.34	176	eP	41 21.00	1.7
			eS	45 05.00	
ASPA	20.62	125	iPd	41 23.10	0.8
	0.6s	16.00nm			4.6mb
RKG	21.46	177	eP	41 47.00	16.3X
CTA	30.36	108	iPd	42 54.10	-0.2
	0.9s	8.40nm			4.5mb

S.D. = 1.3 on 11 of 14 obs.

* JAN 03, 1990 21h 52m 38.54± 0.94s
37.837 S ±10.0km 176.195 E ±17.2km
DEPTH = 307.6 ± 10.4 km
3.1mb (1 obs.)
NORTH ISLAND, NEW ZEALAND (159)

TUTZ	0.89	190	P	53 19.80	0.4
HITZ	0.93	201	Pc	53 20.10	0.5
HATZ	1.06	184	Pc	53 20.30	0.0
RATZ	1.08	198	Pd	53 20.80	0.3
KETZ	1.33	199	P	53 22.20	0.3
HBZ	1.69	83	P	53 22.90	-1.1
PGZ	2.78	179	Pd	53 33.70	0.7
MNG	2.83	191	Pd	53 33.90	0.3
			S	54 16.70	
KIW	3.18	198	Pc	53 37.10	0.1
MTW	3.36	189	Pc	53 38.80	0.0
CAW	3.38	195	Pc	53 39.10	0.1
WDW	3.55	195	P	53 40.50	-0.2
BLW	3.57	189	P	53 41.20	0.2
MRW	3.58	198	P	53 41.00	0.0
			S	54 30.20	
WEL	3.62	197	P	53 41.50	0.1
MOW	3.65	191	P	53 41.80	-0.1
TCW	3.68	203	Pc	53 42.20	0.0
COB	4.21	218	P	53 45.90	-2.0
			S	54 41.00	
KHZ	5.01	203	P	53 56.90	0.0
WRA	40.37	284	P	59 49.00	0.4
	0.5s	0.50nm			3.1mb

S.D. = 0.6 on 20 of 20 obs.

? JAN 03, 1990 21h 52m 46.55± 1.35s
32.628 N ±10.5km 121.375 E ±15.5km
DEPTH = 10.0km (geophysicist)
EASTERN CHINA (664)

SSE	1.54	186	Pn	53 13.30	-0.7
			Pg	53 14.70	
			Sn	53 33.70	
			Sg	53 35.00	
NJ2	2.21	256	ePn	53 25.00	1.2
			iPg	53 30.20	
TIA	5.01	317	ePn	54 02.00	-1.6
			Sn	55 01.50	
			Sg	55 22.70	
WHN	6.34	253	ePn	54 22.50	0.1
			Pg	54 45.00	
BJI	8.50	332	eP	54 49.00	-3.6X
TIY	8.90	307	eP	55 03.00	4.8X
	N 10s	0.25um			
CN2	11.60	15	eP	55 36.00	0.8

S.D. = 1.6 on 5 of 7 obs.

JAN 04, 1990 01h 13m 40.44± 1.17s
44.316 N ±10.6km 7.044 E ±10.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

PZZ	0.19	12	P	13 45.28	0.5
			S	13 48.05	
STV	0.21	109	P	13 45.49	0.4
			S	13 48.33	
FOUF	0.28	319	e(Pg)c	13 46.50	0.1
			iSg	13 49.62	
ENR	0.28	108	P	13 46.67	0.2
			S	13 50.08	
ROB	0.59	92	P	13 51.86	-0.6
			S	13 59.75	
RRL	0.63	343	P	13 52.85	-0.5
IMI	0.73	123	P	13 54.84	0.0
			S	15 04.03	
FIN	0.84	97	P	13 56.64	-0.1

S.D. = 0.5 on 8 of 8 obs.

JAN 04, 1990 02h 30m 50.14± 0.46s
45.949 N ± 4.1km 7.180 E ± 5.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (LDG).

DIX	0.21	51	iPd	30 52.90	-1.9
EMS	0.21	305	iPc	30 53.90	-0.9
LSD	0.49	182	P	31 00.05	-0.1
			S	31 06.53	
LPL	0.53	216	Pg	31 01.20	0.2
			Sg	31 09.80	
LPG	0.54	214	Pg	31 01.40	0.2
			Sg	31 10.00	
MMK	0.56	79	iPd	30 59.20	-2.4
ORX	0.64	119	P	31 01.40	-1.7
			S	31 08.58	
ORO	0.65	120	P	31 02.50	-0.7
			eSg	31 10.40	
RSP	0.80	176	P	31 05.48	-0.3
			S	31 16.17	
BNI	0.96	202	P	31 10.10	1.5
			eSg	31 22.20	
RRL	1.07	195	P	31 10.47	0.1
			S	31 25.61	
VAI	1.11	94	P	31 13.50	2.5
			eSg	31 25.30	
PZZ	1.45	182	P	31 16.73	0.2
			S	31 35.15	
LLS	1.56	53	ePd	31 19.60	1.5
PCP	1.71	145	P	31 20.22	0.1
STV	1.71	177	P	31 19.45	-0.7
			S	31 38.84	
ROB	1.73	163	P	31 20.89	0.5
ENR	1.73	174	P	31 19.96	-0.6
ZLA	1.74	28	ePc	31 22.20	1.5
FIN	1.89	157	P	31 19.61	-3.1X
BSF	1.90	352	Pg	31 24.50	1.5
			Sg	31 48.70	
SAX	1.98	48	ePc	31 26.90	2.6
FEL	2.01	16	ePn	31 22.56	-2.0
SLE	2.03	26	ePd	31 22.90	-1.9
SBF	2.09	175	Pg	31 31.20	5.4X
IMI	2.10	166	P	31 26.84	1.0
HAU	2.13	345	Pg	31 29.00	2.7
			Sg	31 55.00	
FRF	2.42	189	Pg	31 36.40	6.0X
LBF	2.44	296	Pn	31 29.90	-0.8
			Sg	32 06.60	
CDF	2.47	1	Pg	31 35.00	3.9X
			Sg	32 07.20	
BGF	3.07	283	Pn	31 39.10	-0.4
			Sg	32 26.40	
MAF	3.22	277	Pn	31 40.40	-1.4
			Sg	32 30.80	

S.D. = 1.5 on 28 of 32 obs.

? JAN 04, 1990 03h 06m 23.57± 1.97s
3.629 S ±29.1km 142.315 E ±17.7km
DEPTH = 225.6 ± 23.4 km
4.0mb (2 obs.)
NEAR N COAST OF PAPUA NEW GUINEA (200)

JAY	1.95	304	ePd	07 04.20	0.2
MNDI	2.84	152	eP	07 14.00	0.5
			eS	07 44.00	
LAT	5.55	123	eP	07 45.50	-0.7
PMG	7.49	140	eP	08 08.00	-3.0X
MTN	14.36	230	iPc	09 37.00	-1.2
			e	12 02.00	
WB5	17.92	205	eP	10 20.00	0.6
WRA	17.98	205	Pc	10 20.60	0.5
	0.7s	3.70nm			4.0mb
ASPA	21.52	201	eP	11 02.30	6.7X
	1.0s	6.00nm			4.1mb

S.D. = 1.2 on 6 of 8 obs.

JAN 04, 1990 04h 09m 09.78± 0.38s
36.479 N ± 7.0km 82.567 E ± 5.9km
DEPTH = 10.0km (geophysicist)
4.5mb (12 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	5.99	302	ePg	10 45.50	4.8X
E	10s	4.80um			
WMO	8.32	27	P	11 12.00	-1.3
NDI	8.99	212	eP	11 22.00	-0.5
GTA	13.92	73	eP	12 37.40	7.9X
LZH	17.16	85	eP	13 12.00	0.6
	1.5s	0.03nm			1.1mb X
Z	12s	0.30um			
E	12s	0.50um			
			pP	13 19.80	
MAIO	18.57	276	eP	13 28.00	-0.8
XAN	21.64	89	P	14 01.00	-1.2
CHG	22.75	136	iPd	14 12.90	-0.4
	1.0s	14.25nm			4.4mb
CHTO	22.75	136	eP	14 12.70	-0.6
	1.0s	11.50nm			4.3mb
GYA	22.80	109	P	14 13.60	-0.3
GBA	23.24	193	P	14 18.70	0.6
TIY	23.81	78	eP	14 25.80	2.2
Z	12s	0.60um			4.3MszX
HFS	48.86	322	eP	17 56.30	-0.8
	0.6s	2.50nm			4.4mb
NB2	50.02	323	P	18 05.40	-0.6
	1.0s	5.80nm			4.5mb
LPG	55.97	305	eP	18 52.10	1.3
	0.6s	3.60nm			4.6mb
LOR	57.25	307	eP	19 00.20	0.6
	0.8s	4.00nm			4.5mb

04d 04h

LBF 57.27 307 eP 19 01.00 1.2
0.8s 4.50nm 4.6mb
SSF 57.55 307 eP 19 02.20 0.5
0.8s 3.20nm 4.4mb
TCF 58.66 307 eP 19 08.80 -0.7
0.8s 4.00nm 4.6mb
GRR 59.82 310 eP 19 17.50 0.1
0.8s 5.30nm 4.7mb
MBC 66.69 6 eP 20 02.00 -0.3
0.7s 2.00nm 4.4mb
INK 72.10 13 eP 20 36.00 0.3
WRA 74.43 130 Pd 20 56.10 6.1X
0.7s 1.10nm 4.0mb
S.D. = 1.0 on 20 of 23 obs.

% JAN 04, 1990 05h 04m 31.47± 0.96s
39.688 N ± 7.6km 16.404 E ± 8.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

TDS 0.06 240 Pd 04 34.30 0.6
eSg 04 36.70
CSI 0.12 315 P 04 34.20 -0.4
ROI 0.17 132 P 04 35.50 0.1
MMN 0.38 302 P 04 38.90 -0.3
CZI 0.51 204 P 04 41.50 -0.4
eSg 04 48.50
MGR 0.79 305 P 04 47.30 0.4
eSg 05 00.50
S.D. = 0.5 on 6 of 6 obs.

& JAN 04, 1990 05h 10m 58.64s
61.188 N 150.880 W
DEPTH = 51.3km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA 0.28 13 iP 11 07.83 -0.2
eS 11 15.64
NKA 0.48 202 iP 11 11.30 1.5
CGLM 0.56 283 iP 11 10.40 -0.5
eS 11 20.18
SPU 0.57 270 iP 11 10.50 -0.5
eS 11 20.17
CRP 0.62 278 iP 11 11.24 -0.5
PMS 0.64 84 iP 11 11.48 -0.4
NCG 0.65 290 eP 11 11.12 -1.0
eS 11 22.29
PWA 0.67 46 iP 11 11.76 -0.4
eS 11 22.68
CKL 0.71 271 iP 11 12.11 -0.6
BGL 0.73 277 iP 11 12.46 -0.7
eS 11 24.67
SLKM 0.75 154 iP 11 12.64 -0.7
SKT 0.85 339 iP 11 13.78 -0.8
PLRM 0.93 64 iP 11 14.60 -1.1
eS 11 28.30
RDT 0.97 231 iP 11 15.49 -0.7
PME 0.99 63 iP 11 15.51 -1.0
eS 11 29.60
GHO 1.11 57 iP 11 17.06 -1.1
eS 11 32.46
NNL 1.17 190 iP 11 19.64 0.7
RED 1.21 231 eP 11 18.75 -0.8
CUT 1.26 13 iP 11 19.14 -1.0
eS 11 35.79
SEW 1.30 146 eP 11 19.54 -1.1
CNPM 1.68 186 eP 11 25.24 -0.8
GLI 1.87 98 iP 11 25.99 -2.8
NCA 2.10 66 iP 11 30.66 -1.4
VZW 2.10 92 iP 11 29.70 -2.4
PDB 2.16 231 iP 11 31.72 -1.1
FID 2.19 100 iP 11 30.04 -3.3
KLU 2.41 81 iP 11 33.97 -2.5
TOA 2.43 66 eP 11 35.64 -1.1
28 obs. associoted

% JAN 04, 1990 05h 26m 22.86± 3.48s
41.669 N ±29.2km 12.766 E ±16.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP 0.10 338 P 26 25.20 -0.4
eSg 26 26.50
RMP 0.15 342 Pc 26 26.10 -0.2
eSg 26 28.20
AZI 0.59 57 P 26 34.50 -0.3
eSg 26 44.00
MNS 0.72 355 P 26 37.50 0.5
SDI 0.79 87 P 26 38.40 0.2
eSg 26 50.80
S.D. = 0.5 on 5 of 5 obs.

JAN 04, 1990 05h 32m 21.04± 0.12s
15.397 S ± 4.3km 172.850 W ± 3.2km
DEPTH = 53.5km (geophysicist)
6.4mb (45 obs.)
SAMOA ISLANDS REGION (169)
Ms 6.4 (BRK), 6.3 (PAS).
Mo=1.0•10••19 Nm (PPT). Felt at Pago Pago, American Samoo. Depth from broadband displacement seismogroms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=140 Dip=60 Slip= -90
NP2: 320 30 -90
Principal Axes:
T Plg=15 Azm=230
P 75 50
Comment: The focal mechonism is poorly controlled and corresponds to normol faulting. The preferred fault plane is NP1.
RADIATED ENERGY
No. of sto: 14 Focol mech. F
Energy 1.0±0.2•10••14 Nm
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 39C M.W.: 11S, 22C
Centroid Location:
Origin Time 05:32:30.5 0.2
Lat 15.45S 0.02 Lon 173.17W 0.02
Dep 59.8 1.0 Half-duration 7.1
Moment Tensor; Scale 10••18 Nm
Mrr=-4.92 0.10 Mtt= 4.30 0.10
Mff= 0.63 0.10 Mrt=-0.56 0.12
Mrf= 3.99 0.13 Mtf=-2.63 0.10
Principol Axes:
T Vol= 6.24 Plg=14 Azm=214
N 0.82 25 311
P -7.06 61 98
Best Double Couple:Mo=6.7•10••18
NP1:Strike=274 Dip=38 Slip=-133
NP2: 144 63 -62

AFI 1.81 35 iPc 32 50.00 -0.3
MBU 8.25 258 ePd 34 22.30 1.5
SVA 8.75 251 ePc 34 29.00 1.3
eS 36 00.00
SGE 9.12 255 ePc 34 34.10 1.3
NDF 9.59 254 iPd 34 43.70 4.5X
RAR 13.69 117 P 35 31.00 -3.3X
S 37 55.00
PVC 18.21 260 iPc 36 34.00 2.3X
DZM 20.69 248 iPd 36 53.20 -6.1X
iS 40 44.90
ScP 44 46.00
AFR 22.23 99 iP 37 15.00 0.4
PAE 22.42 99 iP 37 16.80 0.3
PPT 22.42 99 iP 37 17.00 0.5
1.3s 1650.00nm 6.3mb
PPN 22.56 99 iP 37 18.20 0.4
TVO 22.74 99 iP 37 20.20 0.5
TBI 23.42 113 iP 37 26.80 0.6
1.3s 2425.00nm 6.5mb
HBZ 23.46 198 P 37 26.10 -0.4
0.7s 669.00nm 6.2mb
PMO 24.08 92 iP 37 33.00 0.3
1.3s 2205.00nm 6.5mb
VAH 24.32 93 iP 37 34.90 -0.1
1.3s 880.00nm 6.1mb
TPT 24.35 92 iP 37 35.40 0.1
1.3s 2205.00nm 6.5mb
RUV 24.56 93 iP 37 37.20 -0.1
1.3s 1430.00nm 6.3mb
TAZ 24.61 200 P 37 36.50 -1.1
UTU 24.67 201 eP 37 37.20 -1.0
KRP 24.68 202 P 37 37.10 -1.2
HITZ 25.29 201 eP 37 41.20 -2.9
HATZ 25.35 200 eP 37 40.90 -3.7X
PGZ 26.85 199 eP 37 55.10 -3.4X
HNR 27.20 279 eP 38 03.00 1.1
eS 42 12.00
KIW 27.51 200 eP 38 02.70 -1.8
MOW 27.90 199 P 38 03.90 -4.1X
WEL 27.94 200 P 38 04.00 -4.3X
Z 20s 68.09um 6.2Msz
S 42 32.00
TCW 28.04 201 eP 38 05.50 -3.7X
KHZ 29.36 201 P 38 16.60 -4.5X
MSZ 33.42 205 P 38 54.00 -2.6
BRS 34.05 244 iPc 38 57.00 -5.4X
i 39 05.00
i 39 15.00
e 39 54.00
ePP 40 26.00
e(S) 43 20.00
iS 44 15.00
e 44 36.00
i 00 38.50
RKT 36.49 108 iP 39 22.40 -0.7
1.2s 810.00nm 6.5mb
RIV 37.26 234 eP 39 27.00 -2.5
e 41 08.00
eS 45 00.00
RMQ 37.39 246 eP 39 25.00 -5.7X
e 39 29.00
PFH 38.89 28 P 39 46.30 3.1X
CTA 39.16 257 Pc 39 40.10 -5.5X
1.0s 25.00nm 5.0mb X
i 39 58.60
i 41 20.00
iS 45 30.00
i 49 24.00
iScS 49 55.00
CTAO 39.16 257 ePc 39 40.93 -4.7X
epPc 39 56.32 61kmX
ePP 41 18.91
iPcP 41 49.54
HON 39.29 22 P 39 49.00 2.5
pP 40 09.00 83kmX
KIP 39.38 22 ePd 39 50.56 3.3X
esPd 40 10.59
CAN 39.45 233 eP 39 43.20 -4.7X
i 41 28.40
PMG 39.47 274 eP 39 44.00 -4.2X
BWA 39.60 234 eP 39 42.10 -7.1X
OPA 39.63 22 P 39 53.40 4.1X
LAT 40.29 278 eP 39 59.00 4.0X
STK 44.50 240 iPd 40 24.50 -4.7X
e 40 28.00
MCQ 44.75 203 eP 40 31.00 0.2
BFD 44.99 233 eP 40 28.00 -5.0X
ADE 47.46 237 iPd+ 40 47.40 -5.2X
1.0s 180.00nm 6.0mb
JAY 47.51 281 ePd 40 50.60 -2.6
WB5 50.34 257 eP 41 10.00 -4.9X
e 44 27.80
e 48 22.90
WRA 50.36 257 Pd 41 09.90 -5.2X
0.9s 37.90nm 5.4mb
ASPA 50.62 252 eP 41 11.40 -5.6X
1.1s 363.00nm 6.3mb
Z 22s 97.54um 6.8MszX
e 41 18.90
eS 48 19.40
LR 00 18.40
e 11 47.80
GUA 50.72 302 e(P) 41 19.00 1.2
1.1s 222.78nm 6.1mb
GUMO 50.78 302 ePd 41 20.62 2.4
1.2s 316.67nm 6.2mb
esP 41 40.48
PJG 50.78 302 e(P) 41 18.30 0.0
KNA 56.08 261 eP 41 56.80 -0.6
WARB 57.15 249 iPd 41 59.60 -5.4X
0.9s 205.00nm 6.2mb
AAI 59.12 275 eP 42 31.00 12.1X
DRV 59.78 200 eP 42 23.00 0.4
COOL 61.84 243 eP 42 32.00 -5.3X
SBA 63.30 185 iPd- 42 48.10 2.0X
MBL 63.78 254 eP 42 45.20 -5.0X
0.5s 64.00nm 5.9mb
MEKA 64.38 248 eP 42 52.20 -1.9
KLB 64.70 242 eP 42 51.00 -5.1X
DAV 64.96 286 eP 42 53.00 -4.9X
NWAO 65.08 241 eP 42 56.56 -2.0
epPc 43 11.46 54kmX
RKG 65.22 239 eP 42 56.00 -3.4X
0.6s 58.00nm 5.8mb

BAL		65.67	243	eP	42	58.00	-4.3X	YONJ		71.55	316	eP	43	39.60	1.0	ANP		75.59	302	eP	44	04.50	2.1
MUN		66.00	242	eP	43	01.00	-3.4X	PAS		71.63	45	eP	43	38.00	-1.1	BMW		76.04	33	P	44	04.20	-0.3
MRWA		66.39	245	eP	43	02.50	-4.5X					ePP	46	25.00		SHW		76.38	34	P	44	07.00	0.5
ADK		67.08	357	eP	43	07.80	-2.9X					ePPP	48	58.00		VGB		76.75	35	P	44	08.60	0.2
NANU		67.56	252	eP	43	10.00	-4.4X					eSKS	53	01.00		LON		76.97	33	iPd	44	11.56	1.9
		0.4s		57.00nm			5.9mb					eS	53	33.00						isPc	44	32.09	
KAKJ		67.84	320	P	43	14.60	-1.2					ePS	53	58.00						ePP	47	02.29	
CHJJ		68.48	320	P	43	18.40	-1.4					eSS	57	36.00		PGC		77.36	31	eP	44	12.00	0.4
SMY		68.78	352	P	43	20.00	-1.3					eSSS	01	48.00				1.2s		1007.00nm			6.7mb
		1.0s		500.00nm			6.4mb					eLg	02	05.00		RMW		77.42	33	P	44	11.90	-0.3
	Z	21s		27.92um			6.5Msz					eLR	04	34.00		SVW		77.48	8	eP	44	11.10	-1.1
IIDJ		68.80	318	P	43	22.40	0.5	PAS		71.63	45	iPd	43	41.59	2.5	QZH		77.91	300	Pd	44	16.00	0.8
OFUJ		68.85	323	eP	43	20.50	-1.6					esPc	44	02.78				7.0s		1.70nm			3.2mb X
YAMJ		69.21	322	P	43	23.20	-1.1					ePP	46	31.26			Z	36s		18.20um			6.1MszX
NIIJ		69.23	321	P	43	21.60	-2.8					eS	52	54.17			E	26s		10.00um			
MAT		69.28	320	iPd	43	22.00	-2.8					iS	53	01.07						sP	44	38.00	
		1.7s		961.54nm			6.5mb					isS	53	28.38						iS	54	06.00	
	Z	20s		7.80um			5.9Msz					eSKS	53	38.59		MSU		78.05	44	P	44	16.50	0.4
				iS	52	29.00						eSS	57	34.34		SSE		78.38	307	P	44	18.00	0.3
MTMJ		69.56	319	P	43	25.60	-1.0	SHK		71.71	315	ePd	43	41.10	1.6			7.0s		1.70nm			3.1mb X
WKYJ		69.56	316	eP	43	27.30	0.7	MWC		71.75	45	eP	43	39.00	-1.1		Z	20s		3.40um			5.7Msz
KUSJ		70.01	328	P	43	27.50	-1.6	OCP		71.80	291	eP	43	42.00	1.7		N	20s		4.20um			
TSRJ		70.08	317	eP	43	31.20	1.5	ASAJ		71.80	328	eP	43	39.80	0.0		E	22s		5.80um			
HOOJ		70.24	327	eP	43	28.90	-1.5	BAR		71.88	47	eP	43	41.00	0.4					sP	44	41.50	
BLP		70.35	44	P	43	32.00	0.7	KUMJ		71.90	312	eP	43	39.80	-0.9					PP	47	16.00	
TKSJ		70.46	315	eP	43	33.50	1.5	FHC		71.94	37	eP	43	40.80	-0.1					S	54	05.00	
AOMJ		70.59	324	eP	43	35.10	2.5					eP'P'	11	28.80						SKS	54	14.00	
SYP		70.62	44	eP	43	34.00	0.8	RVR		72.10	46	eP	43	40.00	-1.9					ScS	54	30.00	
PRS		70.76	42	ePd	43	32.00	-1.8	PLM		72.11	47	eP	43	41.00	-1.2					sS	54	36.00	
				eP'P'	11	32.70		SB8		72.17	45	eP	43	41.00	-1.4	AGX		78.43	63	(P)	44	22.30	4.2X
GCC		70.79	41	ePd	43	33.40	-0.5	PEC		72.19	46	P	43	41.00	-1.5	DUG		78.50	43	P	44	17.60	-0.8
				eP'P'	11	32.20		FRI		72.23	42	ePd	43	41.70	-0.9	MRX		78.61	66	(P)	44	22.50	3.4X
PCC		70.83	40	ePd	43	33.60	-0.6					eP'P'	11	21.30		SIT		78.64	20	eP	44	20.00	1.5
BCH		70.93	44	P	43	34.60	-0.4	ISA		72.28	44	eP	43	42.00	-1.0		Z	20s		15.00um			6.3Msz
SAO		70.98	42	eP	43	34.40	-0.7	CMB		72.41	41	iPd	43	46.42	2.7	ACX		78.81	69	(P)	44	23.50	3.2X
	Z	20s		33.00um			6.6Msz					iPcP	43	56.80		PMR		79.01	11	eP	44	19.60	-0.9
	N	20s		12.00um								esPc	44	06.78				1.3s		1179.20nm			6.7mb
	E	20s		25.00um								isP	44	28.70			Z	20s		15.00um			6.3Msz
				eS	52	54.00						e	46	24.70		TTA		79.18	8	eP	44	21.40	-0.1
				e	53	12.00						e(PP)	47	04.90		MDJ		79.35	322	Pc	44	23.00	0.3
				ePS	53	44.00						ePPP	49	13.60			Z	24s		26.20um			6.5MszX
				e	57	08.00						iS	53	09.51			E	23s		16.40um			
				eSSS	01	44.00						eSKS	53	37.93						eSP	44	52.00	
				eLQ	02	57.00						eSS	57	43.34		III		79.67	68	(P)	44	27.50	2.3
				eLR	04	20.00						eP'P'	11	23.20		PNT		79.73	32	ePd	44	23.00	-1.7
TSM		71.08	280	ePd	43	38.20	2.1	CMB		72.41	41	ePd	43	43.00	-0.7			1.2s		879.00nm			6.6mb
PRI		71.11	43	ePd	43	36.10	0.0					iPcP	43	56.80		CRX		79.84	67	(P)	44	29.00	2.8
				eP'P'	11	32.10						ipP	44	14.70	127kmX	ANM		79.92	3	P	44	25.80	0.5
BRK		71.14	40	eP	43	35.50	-0.5					isP	44	28.70		TOA		80.06	12	eP	44	26.10	-0.2
	Z	20s		39.00um			6.7Msz					e	46	24.70		PTI		80.18	40	P	44	27.40	0.0
				eS	53	03.00						e(PP)	47	04.90		ALQ		80.39	50	iPd	44	28.70	-0.1
				eLR	04	23.00						ePPP	49	13.60				1.2s		402.34nm			6.2mb
KAGJ		71.15	311	eP	43	35.50	-0.7					eP'P'	11	23.20			Z	19s		17.19um			6.4Msz
BKS		71.15	40	ePd	43	36.10	0.0	PET		72.43	342	eP	43	41.00	-2.4	ANMO		80.39	50	P	44	29.00	0.2
		1.5s		2216.00nm			6.9mb					eS	53	08.00			Z	21s		6.34um			5.9Msz
	Z	20s		17.00um			6.3Msz	PFO		72.53	47	iPc	43	47.54	2.9X	ANMO		80.39	50	iPd	44	32.24	3.5X
	N	20s		11.00um								esPd	44	07.90			Z	21s		6.34um			5.9Msz
	E	20s		12.00um								iS	53	12.30						isPc	44	52.93	
				iPcP	43	51.40						esS	53	44.58						iS	54	37.23	
				epP	43	58.30	85kmX	SHNJ		72.56	314	eP	43	43.60	-1.0	NJ2		80.59	307	iPd	44	32.00	2.5
				isP	44	10.50		ORV		72.64	39	ePd	43	44.10	-0.8			7.0s		2.80nm			3.3mb X
				iS	52	58.00						eP'P'	11	21.30			Z	37s		19.50um			6.2MszX
				i(SS)	57	19.00		WDC		72.65	38	ePd	43	44.50	-0.5					sP	44	57.00	
				i(SSS)	01	06.00						ipP	44	14.10	117kmX	PPM		80.65	67	(P)	44	32.50	1.7
				iLQ	03	09.00						eP'P'	11	22.00		HKC		80.68	296	iP	44	33.10	2.9X
				iLR	04	28.00		BAG		72.90	293	ePd-	43	46.00	-1.1					S	54	39.00	
MHC		71.20	41	ePd	43	36.40	-0.2			1.0s		184.00nm			6.0mb	IIT		80.92	67	(P)	44	35.00	3.1X
	Z	20s		28.00um			6.5Msz					eS	53	10.00		VNM		81.34	60	(P)	44	36.00	2.4
	N	20s		19.00um				CLC		72.96	44	eP	43	46.00	-1.0	CN2		81.42	320	iP	44	33.00	-0.7
	E	20s		23.00um				MIN		73.06	39	ePd	43	46.50	-1.1			6.0s		5.50nm			3.7mb X
				iPcP	43	49.40						eP'P'	11	19.30			Z	25s		17.70um			6.3MszX
				i	43	59.40		TPC		73.08	47	eP	43	47.00	-0.7		N	20s		4.60um			
				eS	52	57.00		TRT		73.12	266	ePd	43	47.60	-0.7		E	20s		4.00um			
				e	53	26.00				1.4s		815.10nm			6.5mb	DL2		81.56	314	P	44	37.00	2.5
				ePS	53	52.00		GSC		73.21	45	eP	43	48.00	-0.5			1.5s		1.10nm			3.6mb X
				e	57	20.00		GLA		73.39	48	eP	43	50.00	0.5		Z	25s		7.20um			5.9MszX
				e(SS)	57	32.00		YSS		73.81	330	iPd	43	55.00	3.5X		N	21s		7.10um			
				e(SSS)	01	23.00						iS	53	21.00			E	24s		12.60um			
				eLQ	02	58.00		KVN		74.46	41	iPd	43	55.00	-0.8					PP	47	49.00	
				e	03	18.00		TNP		74.48	43	iPd	43	55.00	-0.9					sS	55	15.00	
				eLR	04	27.00		SPA		74.70	180	iPd	43	55.00	-1.7	SNY		81.63	317	iPc	44	34.60	-0.2
				eP'P'	11	28.50				1.1s		242.86nm			6.0mb			1.6s		1.40nm			3.7mb X
LLA		71.21	42	eP	43	36.20	-0.3		Z	19s		7.30um			6.0Msz		Z	29s		11.50um			6.1MszX
				eP'P'	11	30.80		KDC		74.80	11	eP	43	55.50	-1.6		N	33s		4.70um			
SDN		71.23	7	eP	43	35.20	-1.0	MZX		75.43	61	(P)	44	02.50	1.1		E	30s		10.80um			
ARN		71.27	41	P	43	36.80	-0.1	TATO		75.52	301	iPd	44	02.72	0.8					sS	55	08.00	
MRRJ		71.45	326	eP	43	36.90	-0.9					esPd	44	23.91		GZH		81.67	297	eP	44	37.60	2.2

04d 05h

		8.0s		4.60nm			3.5mb X			3.0s		2.80nm			4.1mb X		MBC	96.82	11	eP	45	45.50	-1.2
	Z	38s		14.90um			6.1MszX		Z	34s		10.70um			6.0MszX			1.6s		274.00nm			6.5mb
	E	23s		8.70um					N	12s		1.00um					TCA	97.01	125	e(P)	45	51.20	2.5X
OXX		81.71	70	(P)	44	38.00	2.1		E	12s		0.60um					GTA	97.59	309	iPd	45	53.00	1.9
IISM		81.74	68	(P)	44	38.50	2.7					SKS	55	40.00				7.5s		0.80nm			3.3mb X
BW06		81.92	42	iPd	44	35.40	-1.2	TSI		89.56	274	ePc	45	15.50	0.8			Z	26s		9.00um		6.1MszX
COL		82.29	11	iPd	44	40.09	2.3	LOE		90.28	288	eP	45	19.00	1.1			E	26s		12.50um		
				esPc	45	00.62		BTO		90.43	312	P	45	18.00	-0.3		GBTN	97.73	55	P	45	50.60	-1.1
				iS	54	50.27			N	20s		1.80um					LPB	99.26	110	Pd	46	03.00	3.5X
FBA		82.29	11	eP	44	36.20	-1.6		E	20s		3.70um						1.8s		272.73nm			6.5mb
IMA		82.49	8	eP	44	38.10	-0.8					sP	45	47.00						LR	18	40.00	
LVVM		82.82	67	(P)	44	42.50	1.1					SKS	55	33.50			CNCB	99.28	110	P	46	02.60	2.8X
ILT		83.17	358	iPd	44	41.00	-1.2	LNV		90.71	125	iPd	45	22.60	3.0X		ZOBO	99.32	110	iPd	46	02.20	2.2
				iS	55	00.00		LCCH		90.74	125	iP	45	22.60	2.8X			1.5s		96.77nm			6.1mb
GOL		83.27	46	P	44	43.00	-0.7	NNT		90.84	283	eP	45	21.00	0.5			Z	24s		5.61um		6.0MszX
	Z	20s		15.00um			6.4Msz	TACH		91.18	125	eP	45	24.90	3.0X					eLR	18	44.00	
GLD		83.40	46	P	44	43.50	-0.8	NST		91.29	286	eP	45	25.50	3.0X		BOG	99.67	88	eP	46	03.00	1.6
		1.2s		688.89nm			6.6mb	LCR2		91.44	80	iPd	45	26.50	2.9X					ePP	50	06.00	
	Z	20s		19.00um			6.5Msz	SJS		91.45	80	iPc	45	36.00	12.5X		SHL	101.14	294	iPdiff	46	09.00	1.4
OIZ		83.40	292	eP	44	46.00	1.6	KMI		91.50	296	eP	45	23.00	-0.7					iS	56	46.00	
	E	25s		12.40um				KMI		91.50	296	Pd-	45	26.00	2.3X		DLA	101.22	49	Pdiff	46	08.90	1.6
				PP	48	01.00				2.0s		0.30nm			3.4mb X		ELF	101.47	48	Pdiff	46	09.70	1.3
				eS	55	01.00			Z	38s		18.40um			6.2MszX		LDN	101.54	48	Pdiff	46	09.90	1.2
WHN		83.53	304	Pd	44	46.50	1.6		E	20s		5.20um					LSA	102.58	298	Pdiff	46	18.40	4.1X
		7.0s		2.40nm			3.3mb X					sP	45	40.00				N	10s		0.84um		
	Z	36s		10.20um			5.9MszX					SKS	55	56.00			CBN	103.59	54	e(Pdif	46	17.00	-1.0
	E	18s		3.85um								S	56	29.00			SCP	103.61	51	iPdiff	46	19.73	1.7
TIA		83.61	310	Pd	44	47.00	1.8	PCH		91.52	125	eP	45	25.00	1.4					ePP	50	35.46	
	E	22s		10.00um								i	45	26.50			TOV	105.03	84	ePdiff	46	07.90	-17.1X
				sP	45	10.00		PEL		91.54	125	iPc	45	25.00	1.4		TBR	106.39	51	Pdiff	46	36.00	5.6X
AIA		83.69	156	eP	44	43.60	-1.4			1.6s		766.67nm			6.9mb		RSNY	106.51	48	Pdiff	46	31.00	0.1
KGM		84.59	274	ePd	44	53.10	2.6X	FCH		91.80	125	eP	45	27.00	1.9		WMQ	107.26	312	ePdiff	46	36.00	1.7
SES		84.90	34	ePd	44	50.50	-0.9					i	45	28.70				Z	28s		6.33um			6.0MszX
		1.0s	1323.00	nm			7.0mb	FFC		91.81	33	iPc	45	23.20	-0.9		CAR	107.94	84	iPdiff	46	34.00	-4.0X
				pP	45	11.00	75kmX			2.0s	1114.00	nm			6.9mb		FRB	110.02	27	ePdiff	46	47.00	1.1
EDM		85.21	31	ePc	44	51.50	-1.3	OLY		91.98	54	P	45	24.80	-0.6		HYB	111.85	283	ePdiff	46	56.00	0.8
BJI		85.85	313	iPd	44	59.17	2.9X	CD2		92.26	301	eP	45	26.20	-0.7		HYB	111.85	283	ePKPd	50	52.00	-0.6
		2.0s	1607.00	nm			6.9mb		Z	30s		5.90um			5.9MszX			1.2s		85.70nm			
	Z	24s		9.55um			6.1MszX		N	18s		4.40um					GBA	112.21	279	PKP	50	52.70	-0.5
				ipPc	45	13.57	49kmX	POW		92.40	53	P	45	27.20	-0.1		KSH	115.89	307	PKPc	51	01.00	1.1
				esP	45	21.35		PT10		92.40	103	ePd	45	30.60	2.9X			E	12s		1.40um		
				eS	55	36.00		NNA		92.54	103	iPd	45	30.50	2.1		KBS	116.41	359	ePKP	50	59.20	-0.4
				esS	56	10.00				0.3s		88.31nm			6.7mb		POO	116.45	283	iPKPc	51	02.00	0.6
BJI		85.85	313	ePd	44	55.00	-1.3		Z	17s		1.87um			5.6MszX					eS	57	49.00	
		6.0s		4.06nm			3.8mb X	RFA		92.72	127	ePc	45	30.00	1.0		FRU	116.78	310	ePKP	51	01.00	-0.4
	Z	24s		9.55um			6.1MszX	BDT		92.75	287	eP	45	29.90	0.7			1.8s		200.00nm			
	E	22s		3.55um						0.5s		95.60nm			6.5mb		DAG	117.17	6	iPKPc	51	00.30	-0.7
				esP	45	24.00		MDZ		93.08	125	i(P)	45	33.00	2.3			0.9s		36.97nm			
				eS	55	17.00		CHG		93.21	289	ePc	45	32.70	1.3			Z	23s		16.74um		6.6MszX
MEO		86.25	53	e(P)	44	57.00	-1.4			1.0s		84.00nm			6.1mb			E	20s		10.07um		
IPM		87.47	275	ePc	45	04.20	-0.6					eS	49	36.00						e	52	10.00	
		1.0s	180.10	nm			6.2mb	CHTO		93.21	289	eP	45	31.30	0.0		BAO	117.42	117	ePKP	50	57.20	-6.2X
HIA		87.51	323	iPd	45	06.75	2.5	FVM		93.51	52	P	45	31.00	-1.4		BOM	117.47	284	ePKP	51	04.50	1.3
				epPc	45	21.81	52kmX	LZH		93.65	306	iPd	45	35.10	1.8					eS	57	52.00	
				esP	45	28.60				1.5s		328.00nm			6.5mb		JNW	123.59	6	ePKP	51	16.80	3.4X
				ePP	48	31.41			Z	40s		25.70um			6.4MszX		KEV	124.27	352	iPKP	51	12.00	-2.8X
TIY		87.65	310	eP	45	05.50	0.3		E	18s		3.40um						1.1s		223.10nm			
	E	22s		8.00um								PP	45	43.80						e	53	02.00	
				pP	45	23.00	62kmX					epPc	45	50.66	53kmX					e	54	54.00	
				sP	45	33.50						i	46	12.00			APA	125.17	348	iPKPc	51	15.00	-1.6
MAW		87.97	198	ePd	45	07.00	0.9					i	46	41.00			TRO	125.29	355	iPKP	51	17.50	0.8
INK		88.14	14	eP	45	06.00	-0.8					PP	49	30.00			SOD	126.53	351	iPKP	51	18.20	-1.0
		1.3s	697.00	nm			6.7mb					PPP	51	30.00			AKU	126.97	13	iPKP	51	20.20	0.1
				pP	45	28.50	83kmX					SKS	56	05.00				1.0s		132.00nm			
SIO		88.33	52	eP	45	08.00	-0.4					eSKS	56	06.45				Z	22s		29.63um		6.9Msz
GYA		88.51	298	P	45	10.60	1.0					i	56	25.00						i	51	22.80	
		5.0s		2.10nm			3.7mb X					S	56	44.00			MAIO	129.16	304	iPKPc	51	23.90	-1.5
	Z	36s		8.80um			5.9MszX					sS	57	16.00				1.8s		308.10nm			
	N	22s		5.00um								i	57	58.00						i	53	39.00	
	E	22s		2.10um								PS	58	06.00			HVD	130.97	201	iPKPc	51	24.50	-4.6X
				S	55	38.00						i	02	56.00				1.5s		194.44nm			
SNG		88.56	278	eP	45	12.20	2.3X					SSS	06	40.00						i	04	04.50	
		1.3s	453.85	nm			6.6mb	PWLA		94.51	55	P	45	36.40	-0.6		BLF	132.08	203	iPKPd	51	31.00	-0.2
				eS	55	35.90		ANT		94.87	116	iPd-	45	41.50	2.5X		RGS	132.38	358	iPKP	51	31.70	1.2
TUL		88.78	52	ePd-	45	10.40	-0.1	RSON		95.10	39	P	45	37.40	-2.0		PUL	132.56	344	iPKPd	51	32.00	1.1
		1.0s	140.00	nm			6.2mb		Z	22s		35.98um			6.8Msz		NUR	133.19	348	iPKP	51	22.90	-9.2X
	Z	21s		24.03um			6.6Msz					pP	46	00.00	82kmX			1.0s		236.00nm			
				LR	14	00.00		TIK		95.13	344	eP	45	37.00	-2.1					i	51	32.80	
PSI		89.00	273	ePd	45	11.50	-0.5					eS	56	53.00						e	54	02.00	
		1.1s	228.80	nm			6.4mb	UPA		95.51	82	iP-	45	44.00	2.0					e	55	00.00	
XAN		89.06	306	P	45	11.00	-1.0		Z	20s		3.19um			5.8Msz					e	04	24.00	
		1.6s		0.50nm			3.6mb X	PSO		95.64	90	eP	45	47.00	3.7X					e	05	52.00	
	N	11s		1.60um				MRA		95.72	126	e(P)	45	43.60	0.8					e	10	12.00	
	E	12s		1.90um				ARE		96.20	109	eP	45	47.00	1.5		PRY	133.53	205	ePKP	51	28.00	-6.0X
				sP	45	38.00				1.7s		346.15nm			6.6mb					i	51	34.20	
				S	55	43.00		RSCP		96.63	55	P	45	45.00	-1.8		BFS	133.83	205	iPKPc	51	33.00	-1.6
HHC		89.41	313	Pc	45	13.70	0.1		Z	21s		29.89um			6.7Msz			1.5s		381.94nm			

SLR	134.23	207	iPKPd	51	36.10	0.7
	1.4s	174.42nm				
	Z 22s	16.67um			6.7Msz	
		e		04	03.20	
OBN	134.32	337	iPKPd	51	34.00	-0.4
	1.4s	610.00nm				
	Z 22s	8.50um			6.4Msz	
NB2	134.33	357	PKP	51	35.00	0.7
	1.3s	149.10nm				
KSR	134.71	205	ePKP	51	18.50	-17.8X
	1.1s	54.05nm				
		i		51	39.00	
UPP	134.95	353	iPKP	51	22.90	-12.5X
		i		51	36.20	
HFS	135.08	355	ePKP	51	23.70	-12.0X
	0.9s	31.60nm				
	Z 20s	3.26um			6.0Msz	
		LR		39	21.00	
IR2	136.10	306	ePKP	51	38.00	-0.6
IR4	136.21	305	ePKP	51	38.40	-0.5
IR7	136.32	306	ePKP	51	38.60	-0.4
IR1	136.33	305	ePKP	51	39.00	-0.1
TAB	138.78	311	ePKP	51	35.00	-8.6X
BUL	138.86	212	ePKP	51	48.70	4.5X
	0.9s	12.60nm				
		i		51	52.10	
		i		51	58.00	
		i		52	07.90	
		i		55	02.10	
EKA	139.36	9	PKP	51	36.00	-7.8X
	1.2s	23.70nm				
DMU	140.03	13	ePKP	51	40.00	-5.1X
SLY	140.30	308	iPKPd	51	39.00	-7.1X
		i		51	45.50	
		iPKS		55	21.00	
DCN	140.47	14	ePKP	51	39.70	-6.2X
	1.0s	176.00nm				
DLE	140.68	13	ePKP	51	40.60	-5.7X
	1.0s	93.00nm				
ETA	141.31	13	ePKP	51	43.10	-4.3X
	1.0s	139.00nm				
ECB	141.49	14	ePKP	51	44.50	-3.2X
	1.2s	255.00nm				
ECP	141.76	13	ePKP	51	46.80	-1.4
	1.0s	151.00nm				
MSL	141.77	310	ePKPd	51	46.00	-2.8X
		ePP		54	11.00	
		ePKS		55	24.00	
		ePPP		57	08.00	
RYD	141.90	290	ePKP	51	45.00	-4.4X
BHD	141.94	305	ePKPc	51	45.50	-3.7X
		i		51	55.00	
		iPKS		55	29.00	
		i		55	45.00	
WIT	142.67	0	ePKP	51	47.00	-2.8X
DBN	143.35	2	ePKP-	51	49.00	-1.9
	Z 20s	5.50um			6.3Msz	
		e		52	15.00	
		iPP		55	06.00	
		e		55	25.00	
		eSS		14	00.00	
		e		15	02.00	
WTS	143.49	0	iPKPc	51	48.30	-2.9X
	1.2s	428.00nm				
		e		52	08.50	
CLL	143.87	354	ePKP	51	48.00	-3.9X
CLL	143.87	354	iPKP	51	50.20	-1.7
	Z 19s	4.00um			6.2Msz	
KSP	143.88	350	ePKPc	51	48.00	-3.9X
	1.3s	386.00nm				
		ic		51	50.90	
		i		52	15.50	
		i		55	30.00	
		e		03	04.00	
KRA	143.90	346	ePKP	51	47.60	-4.4X
	1.2s	830.00nm				
	Z 24s	13.00um			6.6MszX	
	E 24s	10.60um				
		i		51	50.90	
		i		51	57.00	
IAS	144.05	336	ePKP	51	53.00	0.7
KMSA	144.17	284	ePKP+	51	49.90	-3.5X
BRG	144.19	353	iPKPd	51	50.20	-2.3X
	Z 22s	6.50um			6.4Msz	
	N 22s	7.00um				
	E 22s	4.50um				
		i		52	11.60	
		i		52	37.00	
		e		55	28.00	
		e		59	02.00	
		e		05	44.00	
		e		14	08.00	
KVT	144.20	321	iPKP	51	50.40	-2.5X
OASM	144.46	293	ePKP+	51	51.00	-2.8X
UZH	144.59	343	ePKP	51	52.00	-1.2
UCC	144.62	3	PKP	51	52.00	-1.1
		e		52	15.00	
		e		55	13.00	
SPC	144.64	345	ePKP	51	50.60	-2.9X
		i		51	54.40	
ENN	144.71	1	iPKPc	51	51.30	-2.0
	1.2s	1190.00nm				
		e		52	10.00	
PTT	144.71	337	ePKP	51	53.00	-0.5
OBO	144.75	269	ePKP+	51	55.36	0.9
BIR	144.78	335	ePKP	51	55.00	1.4
MEM	144.87	1	PKPc	51	51.40	-2.2X
		i		51	54.00	
HOF	144.96	355	iPKPc	51	49.90	-3.9X
PRU	144.98	352	PKPd	51	51.20	-2.6X
	1.5s	959.80nm				
	Z 21s	10.10um			6.6Msz	
	N 21s	6.60um				
	E 22s	1.90um				
		e		52	13.50	
BMR	145.09	341	ePKPc	51	52.00	-2.1
ARO	145.10	268	iPKP+	51	55.40	0.3
SGH	145.28	268	ePKP+	51	56.12	0.7
DOU	145.33	3	PKPc	51	52.20	-2.2X
		i		51	57.00	
		e		55	15.00	
		e		14	21.00	
KAS	145.36	324	iPKPd	51	54.20	-0.7
CEI	145.40	342	ePKP	51	53.00	-1.6
DAF	145.42	268	ePKP+	51	56.56	0.9
CFR	145.42	333	ePKP	51	53.00	-1.7
VRI	145.46	336	ePKPc	51	54.00	-0.8
KSU	145.48	268	ePKP+	51	56.79	1.0
HLD	145.51	268	iPKP+	51	56.93	1.2
ABH	145.61	360	ePKPd	51	53.20	-1.8
GRF	145.64	355	iPKPc	51	53.50	-1.5
	Z 22s	6.20um			6.3Msz	
		e		51	55.00	
		e		51	58.20	
		e		52	11.00	
		e		52	17.30	
GAZ	145.65	315	iPKP	51	54.50	-0.9
RUP	145.79	0	ePKP	51	54.58	-0.7
WLF	145.81	1	iPKP	51	57.00	1.8X
TOD	145.86	358	ePKPd	51	54.41	-1.0
PSZ	145.90	345	iPKP	51	53.90	-1.7
KHC	145.95	352	iPKPc	51	54.50	-1.1
	1.2s	315.00nm				
	Z 24s	8.60um			6.4MszX	
	N 24s	5.50um				
	E 22s	6.20um				
		e		55	15.00	
MLR	146.08	336	ePKPc	51	55.00	-1.0
ISR	146.14	335	iPKPc	51	55.00	-1.0
FLN	146.14	9	ePKP	51	54.60	-1.2
ZST	146.28	348	ePKP	51	55.40	-0.7
		i		52	17.60	
		i		52	33.80	
		e		52	50.00	
NAI	146.33	243	iPKP	51	56.00	-1.5
	1.3s	92.31nm				
LDF	146.36	9	ePKP	51	55.00	-1.2
VKA	146.36	349	ePKPd	51	55.00	-1.2
	5.2s	********nm				
	Z 22s	6.80um			6.4Msz	
		i		52	11.40	
		i		52	18.80	
SRO	146.38	346	ePKP	51	55.00	-1.2
		i		52	31.00	
GRR	146.45	10	ePKP	51	55.70	-0.6
GWF	146.51	359	PKP	51	57.69	1.2
BUD	146.52	345	ePKP	51	55.00	-1.5
PSN	146.59	332	iPKPc	51	59.00	2.3X
STU	146.68	358	i(PKP)	51	58.50	1.8X
	1.5s	1666.67nm				
	Z 20s	17.02um			6.8Msz	
LPF	146.76	10	ePKP	51	56.00	-0.8
DEV	146.85	340	iPKP	51	59.50	2.4X
SOP	146.88	348	iPKPc	51	57.30	0.3
STR	146.90	359	PKP	51	58.30	1.3
KMR	146.93	351	iPKP+	51	57.20	0.1
		i		52	01.20	
		ipPKP		52	26.10	
		iPP		55	28.00	
WLS	147.08	360	PKP	51	58.90	1.5
CDF	147.08	360	PKP	51	58.13	0.7
FUR	147.15	355	ePKP	51	58.30	0.8
	Z 20s	6.10um			6.4Msz	
		i		52	01.80	
VITF	147.26	1	PKP	51	58.88	1.3
ECH	147.27	360	PKP	51	58.96	1.3
HAU	147.48	1	ePKP	51	58.40	0.4
BZS	147.51	341	ePKP	51	56.50	-1.6
FEL	147.61	359	PKP	51	59.01	0.6
MOF	147.64	0	PKP	51	59.38	1.0
BSF	147.66	0	PKP	51	59.50	1.1
SLE	147.71	358	ePKPd	51	57.40	-1.0
TAIF	147.98	286	ePKP	52	03.30	3.4X
ZLA	147.99	358	ePKPd	51	57.90	-1.0
KBA	147.99	352	iPKPd	51	58.70	-0.4
	1.1s	448.00nm				
		i		52	02.90	
		eSKKS		02	15.00	
HRT	148.00	327	ePKP	52	00.00	0.9
BBS	148.02	360	PKP	52	00.16	1.2
GPA	148.03	325	ePKP	51	59.40	0.2
LOR	148.10	4	ePKP	51	58.40	-0.7
ITU	148.13	328	iPKPc	52	00.00	0.8
GBZT	148.14	327	ePKP	52	02.00	2.7X
LOMF	148.14	0	PKP	52	00.24	1.0
ISK	148.14	328	ePKP	51	58.50	-0.8
SAX	148.19	357	ePKPd	51	58.70	-0.8
JMB	148.27	332	iPKPd	52	01.00	1.6
SSF	148.28	5	ePKP	51	58.60	-0.7
MFF	148.30	10	ePKP	51	58.60	-0.7
YLV	148.34	327	iPKP	51	59.20	-0.5
LBF	148.40	4	ePKP	51	58.80	-0.8
AVF	148.54	5	ePKP	51	58.50	-1.2
BEO	148.58	342	ePKP	52	01.00	1.2
		i		53	05.50	
LLS	148.58	358	ePKPd	51	59.30	-0.8
OSS	148.70	356	ePKPd	51	59.40	-0.8
PTJ	148.70	348	ePKP	51	58.90	-1.2
HLBJ	148.71	307	PKPd	52	01.10	0.5
SMF	148.72	4	ePKP	51	58.90	-1.2
BGF	148.73	6	ePKP	51	59.40	-0.7
ZAG	148.78	348	iPKP	51	59.00	-1.1
LJU	148.83	350	ePKPc	52	00.00	-0.2
LSF	148.88	8	ePKP	51	59.30	-1.0
GLH	148.92	309	ePKP	52	02.00	1.3
TCF	148.93	7	ePKP	51	59.60	-0.8
VOY	148.94	351	ePKP	52	01.00	0.5
VDL	148.94	357	ePKPd	52	00.00	-0.7
ALT	148.99	324	ePKP	52	01.40	0.6
FAM	149.00	314	ePKP	52	03.00	2.2X
BURJ	149.02	308	PKPc	52	02.20	1.1
MAF	149.03	6	ePKP	51	59.90	-0.7
DIM	149.07	333	ePKP	52	03.00	2.3X
CEY	149.14	350	ePKP	52	00.50	-0.3
LFK	149.17	315	ePKP	51	54.80	-6.4X
SALJ	149.21	308	PKPd	52	02.10	0.7
VBY	149.22	349	iPKPd	52	00.40	-0.4
PGB	149.24	335	iPKPd	52	02.00	0.9
MFT	149.24	329	iPKP	52	01.20	0.1
BNT	149.25	328	iPKP	52	03.70	2.6X
AGO	149.25	5	PKP	52	02.56	1.7
MASJ	149.31	307	PKPd	52	03.20	1.7X
TMA	149.35	358	ePKPd	52	00.40	-0.9
PLDF	149.38	5	PKP	52	03.02	1.8X
PLD	149.39	334	iPKPd	52	02.00	0.8
DIX	149.41	360	ePKPd	52	01.60	0.1
EMS	149.42	0	ePKPd	52	01.50	0.1
DST	149.42	326	iPKP	52	01.70	0.3
MMK	149.43	359	ePKPd	52	01.40	-0.1
EMON	149.44	21	ePKP	52	03.00	1.7
KDZ	149.44	332	iPKPc	52	03.00	1.7X
STS	149.47	23	ePKP	52	03.50	2.2X
CSS	149.48	314	ePKP	52	02.40	0.8
RIY	149.53	350	iPKPd	52	02.00	0.7
PYM	149.54	6	PKP	52	03.45	2.0X
DSI	149.64	307	ePKP	52	03.00	1.1
RZN	149.72	333	iPKP	52	03.00	1.0
BCK	149.77	321	ePKP	52	02.50	0.5
RDO	149.79	332	ePKP	52	00.00	-1.8
RJF	149.81	8	ePKP	52	01.20	-0.5
KHL	149.83	323	ePKP	52	01.00	-1.1

04d 05h

ORX	149.85	359	PKP	52	02.00	0.1
LPG	149.99	1	ePKP	52	02.40	0.0
LSD	150.03	360	PKP	52	02.31	-0.1
LFF	150.06	9	ePKP	52	01.60	-0.5
LBL	150.08	6	PKP	52	04.87	2.8X
AYN	150.20	302	ePKP+	52	02.30	-0.5
PPCY	150.20	315	e(PKP)	52	02.50	-0.1
MMB	150.22	334	ePKPc	52	04.00	1.5X
CAF	150.25	7	ePKP	52	02.20	-0.3
KKB	150.25	336	iPKP	52	04.00	1.5X
RSP	150.34	360	PKP	52	02.62	-0.1
LPO	150.37	9	ePKP	52	02.10	-0.5
ERUA	150.42	22	ePKP	52	05.00	2.2X
EZN	150.45	329	iPKP	52	01.80	-1.0
PRNI	150.45	305	ePKP	52	04.00	0.8
WAJH	150.55	296	ePKP	52	03.30	-0.1
RRL	150.57	1	PKP	52	03.95	0.7
ELL	150.64	321	ePKP	52	04.00	0.6
SKO	150.79	338	iPKP	52	03.30	0.0
	1.6s	328.00nm				
	Z 19s	5.85um			6.4Msz	
	N 19s	6.44um				
	E 19s	2.85um				
		iP'P'	52	08.50		
		i	52	18.50		
		i	52	34.00		
		e	54	03.00		
		iSKP	55	48.00		
		iPP	56	14.00		
		i	00	19.00		
		iSKKS	03	00.00		
		i	05	30.00		
		iSKSP	06	29.00		
		i	07	10.00		
		iSS	15	00.00		
		iSSS	21	00.00		
BCI	150.91	340	iPKP	52	02.30	-1.1
PRK	150.92	328	ePKP	52	04.50	0.9
VAY	150.92	336	iPKP	52	03.60	0.1
	1.3s	1.00nm				
		i	52	09.30		
		i	52	18.40		
KNT	150.92	335	ePKPd	52	04.80	1.3
PCP	150.93	358	PKP	52	03.44	-0.1
PZZ	150.99	0	PKP	52	04.05	0.3
IZM	151.03	326	iPKP	52	03.40	-0.4
KKS	151.06	339	ePKP	52	05.20	1.6
ROB	151.19	359	PKP	52	04.87	1.0
HVAR	151.19	346	iPKP	52	04.50	0.6
STV	151.25	360	PKP	52	04.56	0.5
KSL	151.25	320	ePKP	52	02.00	-2.2
ENR	151.26	360	PKP	52	03.74	-0.3
FIN	151.27	358	PKP	52	04.97	1.0
GRG	151.29	335	ePKPd	52	04.00	-0.1
THE	151.34	334	ePKP	52	03.80	-0.3
PLG	151.35	333	ePKP	52	04.50	0.3
YER	151.36	323	iPKP	52	04.80	0.4
PHP	151.39	339	iPKPd	52	04.40	0.2
SDA	151.41	341	ePKP	52	03.00	-1.2
ELYF	151.46	13	PKP	52	05.89	1.6
FIR	151.50	354	ePKP	52	03.50	-0.8
MADF	151.51	12	PKP	52	06.09	1.7X
BOH	151.52	13	PKP	52	06.20	1.7X
ARV	151.56	351	PKPd	52	06.80	2.3X
OGE	151.56	12	PKP	52	06.50	2.0X
CRE	151.57	353	PKP	52	08.50	3.9X
IMI	151.57	359	PKP	52	05.38	0.9
ATE	151.60	12	PKP	52	06.46	1.9X
PII	151.62	355	PKP	52	06.50	2.0X
SBF	151.63	360	ePKP	52	03.50	-1.1
ESCF	151.63	12	PKP	52	06.29	1.7X
ISSF	151.63	12	PKP	52	07.29	2.6X
ECRI	151.64	15	ePKP	52	05.20	0.5
LACI	151.69	340	ePKP	52	07.20	2.6X
JAU	151.71	12	PKP	52	06.84	2.0X
SMG	151.76	326	ePKP	52	04.00	-0.9
OHR	151.77	338	iPKP	52	03.40	-1.5
	1.4s	3.14nm				
		i	52	10.40		
		i	52	20.10		
FNA	151.84	337	ePKP	52	00.00	-5.0X
EPF	151.85	11	ePKP	52	04.60	-0.3
TIR	151.89	339	ePKP	52	06.50	1.5
FRF	151.93	1	ePKP	52	04.00	-1.0
LIT	151.98	334	ePKPd	52	05.20	0.0
LRG	152.03	1	ePKP	52	04.70	-0.4
KZN	152.10	336	ePKP	52	06.00	0.6
NEO	152.32	332	ePKP	52	05.50	-0.2
LWI	152.33	233	iPKPc	52	07.20	0.5
BERA	152.44	339	ePKP	52	05.20	-0.5
LSK	152.69	337	ePKP	52	06.50	0.2
MNS	152.69	351	PKP	52	07.10	1.0
LIS	152.70	29	iPKPd	52	08.50	2.3X
TPE	152.78	338	iPKPd	52	07.50	1.3X
EPLA	152.84	23	ePKP	52	08.50	2.1X
ETER	152.93	7	ePKP	52	08.50	2.1X
GUD	152.99	19	ePKP	52	07.00	0.3
KAP	153.09	322	ePKP	52	08.00	1.2
KOT	153.10	307	ePKP	52	08.00	1.0
			e	52	16.50	
RMP	153.25	351	PKP	52	12.00	5.1X
ETOR	153.43	16	ePKP	52	09.80	2.5X
HLW	153.51	307	ePKP-	52	08.00	0.4
TOL	153.71	20	ePKP	52	09.35	1.7
			ipPKP	52	16.00	
			e	52	51.40	
			ePKS	55	38.00	
			iPP	56	06.00	
			ePP	56	07.36	
			ePPP	59	20.00	
			iPPS	09	24.00	
			iSS	15	45.00	
EBR	154.02	12	iPKPc	52	10.30	2.4X
			ePP	56	08.00	
NPS	154.21	323	ePKP	52	10.00	1.6X
AKSR	154.31	293	ePKP	52	10.50	1.7X
AMAN	154.31	293	iPKPd	52	10.00	1.2
MMN	154.40	344	PKP	52	08.80	0.3
CSI	154.43	344	PKP	52	09.50	0.9
VLI	154.54	329	ePKP	52	19.00	10.2X
ROI	154.54	343	PKP	52	10.00	1.3
AKRL	154.58	293	iPKPd	52	10.00	0.9
ITM	154.65	332	ePKP	52	09.00	0.1
EVAL	154.70	27	ePKP	52	11.30	2.3X
AGMR	154.76	293	iPKPd	52	11.00	1.6X
ECHE	154.87	15	ePKP	52	10.00	0.8
CZI	154.99	343	PKP	52	09.20	0.0
EHOR	155.12	24	ePKP	52	12.00	2.5X
EVIA	155.34	18	ePKP	52	11.80	1.9X
EBAN	155.35	21	ePKP	52	11.30	1.4
EPRU	155.86	25	ePKP	52	12.60	2.0X
SOI	156.08	342	PKP	52	12.50	1.7X
ATN	156.17	344	PKP	52	11.80	0.8
EJIF	156.20	26	ePKP	52	14.00	2.9X
AFC	156.25	22	ePKP	52	12.30	1.0
EALH	156.38	17	ePKP	52	13.50	2.3X
MAL	156.39	24	iPKPd	52	12.30	1.0
			iPP	56	24.00	
			iPPS	16	50.00	
			iSS	21	40.00	
MNO	156.58	345	PKP	52	12.50	0.7
GIB	156.69	346	PKP	52	15.50	3.7X
MEU	157.30	344	PKP	52	14.90	2.3X
FAI	157.45	346	PKP	52	16.30	3.7X
PTS	158.24	349	PKP	52	16.20	2.7
BCAO	164.38	227	iPKP	52	22.01	1.5
			e	53	31.53	
LIC	164.97	126	PKP	52	19.06	-1.9
	1.3s	529.50nm				
TIC	165.23	125	PKP	52	19.20	-2.0
	1.4s	614.50nm				
KIC	165.28	126	PKP	52	19.34	-1.9
LKO	166.27	114	PKP	52	20.54	-1.5
	1.6s	721.00nm				

S.D. = 1.2 on 411 of 566 obs.

JAN 04, 1990 06h 18m 35.49± 0.77s
47.463 N ± 8.9km 115.941 W ± 8.6km
DEPTH = 0.0km (geophysicist)
MONTANA (456)

CL 2.7 (BUT). Probable rockburst. Felt at Silverton and Wallace, Idaho.

EBI	0.64	191	P	18	48.50	0.3
NEW	1.13	316	eP	18	58.00	0.4
			eS	19	13.00	
DPW	1.58	286	eP	19	04.40	-0.5
LRM	2.91	123	ePn	19	24.70	0.5
PNT	3.07	308	eP	20	11.00	44.8X
	0.5s	8.00nm				
MCMT	3.40	140	ePn	19	31.00	-0.2
BGMT	3.50	128	ePn	19	32.10	-0.5

S.D. = 0.6 on 6 of 7 obs.

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* JAN 04, 1990 07h 14m 04.03± 2.58s
34.829 N ±25.9km 26.647 E ±10.4km
DEPTH = 10.0km (geophysicist)
CRETE (370)

KAP	0.84	31	ePg	14	18.50	-1.7
			eSg	14	34.50	
VAM	2.09	287	ePb	14	40.00	0.5
APE	2.41	338	ePn	14	44.70	0.5
YER	2.66	29	ePn	14	47.70	0.0
KSL	2.72	61	ePn	14	49.00	0.5
SMG	2.88	3	ePn	14	52.50	1.8
VLI	3.56	303	ePn	14	58.90	-1.5

S.D. = 1.5 on 7 of 7 obs.

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* JAN 04, 1990 09h 13m 32.60± 1.34s
31.428 S ±10.7km 68.444 W ±10.2km
DEPTH = 105.0 ± 16.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.10	348	iPc	13	47.00	-0.7
ZON	0.23	240	eP	13	48.00	0.0
RTCV	0.44	190	iPc	13	49.00	0.2
RTBS	0.89	255	iPd	13	53.20	0.7
RTRS	1.53	325	i(P)	13	59.80	0.0
MRA	2.52	114	iPc	14	13.80	1.0
			S	14	39.40	
TCA	3.30	89	iPc	14	22.90	-0.4
RFA	3.33	180	ePc	14	23.10	-0.7

S.D. = 0.8 on 8 of 8 obs.

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* JAN 04, 1990 11h 14m 59.42± 0.83s
6.556 S ± 9.8km 153.317 E ±11.9km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
NEW BRITAIN REGION (192)

RAB	2.61	334	eP	15	40.00	-0.2
PMG	6.73	245	eP	16	39.00	0.5
DZM	19.97	142	iPc	19	32.00	0.0
WB5	22.67	232	eP	19	59.60	0.3
WRA	22.73	232	Pc	20	02.80	2.9X
	0.5s	4.10nm			4.2mb	
ASPA	25.25	226	eP	20	23.40	-0.9
	1.0s	12.00nm			4.4mb	
MBC	95.68	14	eP	28	23.00	0.4

S.D. = 0.7 on 6 of 7 obs.

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* JAN 04, 1990 12h 16m 38.38± 1.60s
36.342 N ±10.9km 141.408 E ±13.1km
DEPTH = 55.1 ± 11.8 km
4.4mb (4 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	1.01	263	iPd	16	55.10	-1.4
			eS	17	09.50	
CHJJ	1.97	262	P	17	08.70	-1.3
			eS	17	34.30	
NIIJ	2.13	296	P	17	12.70	0.6
YAMJ	2.13	330	P	17	12.60	0.4
MAT	2.59	275	eP	17	19.00	0.4
			eS	17	57.00	
OFUJ	2.74	4	P	17	19.30	-1.5
MTMJ	2.91	276	P	17	24.00	0.6
IIDJ	2.97	254	P	17	25.20	1.1
AOMJ	4.29	349	eP	17	43.50	0.9
TSRJ	4.47	261	P	17	46.70	1.5
WKYJ	5.21	248	P	17	55.40	-0.3
TKSJ	6.47	251	P	18	13.40	0.1
YONJ	6.56	262	eP	18	14.70	0.1
ASAJ	7.82	7	P	18	28.10	-4.0X
BJI	20.15	288	eP	21	08.50	-2.0
LZH	30.19	281	eP	22	46.00	0.3
	1.5s	21.00nm			4.6mb	
KMI	34.86	262	eP	23	24.50	-2.1
CHTO	41.12	257	eP	24	19.00	0.3
	0.7s	1.27nm			3.8mb	
INK	55.01	27	eP	26	06.00	0.1
WB5	56.31	188	eP	26	16.00	0.2
MBC	57.19	16	eP	26	21.00	-0.5
ASPA	60.10	188	eP	26	50.00	7.7X
	0.6s	3.00nm			4.6mb	
GBA	61.16	266	P	26	50.00	0.3
KHC	83.13	328	eP	29	01.50	2.0
GRF	83.67	330	e(P)	29	16.10	13.9X
	1.1s	6.00nm				

ALQ 85.04 50 eP 29 09.90 0.3
1.0s 1.75nm 4.1mb
S.D. = 1.1 on 23 of 26 obs.

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* JAN 04, 1990 12h 58m 13.17± 0.85s
3.906 S ±10.8km 131.545 E ±12.2km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
WEST IRIAN REGION (196)

AAI 3.35 274 ePd 59 05.80 1.3
MTN 8.89 183 eP 00 21.50 -0.9
eS 01 58.00
KNA 12.08 193 eP 01 02.50 -3.5X
0.3s 20.00nm 5.8mb X
eS 03 14.00
WB5 16.11 170 eP 01 56.20 -2.8
eS 04 49.00
WRA 16.17 171 Pc 01 59.40 -0.3
0.3s 5.20nm 4.1mb
PMG 16.43 110 eP 02 03.50 0.5
ASPA 19.78 174 iPd 02 44.40 0.7
0.5s 40.00nm 5.0mb
Z 20s 0.18um 3.3MszX
iS 06 18.40
LR 13 06.50
CTA 21.55 139 iPd 03 04.00 2.1
0.7s 6.85nm 4.2mb
WARB 22.64 192 iPd 03 14.20 1.4
NANU 24.18 219 eP 03 27.00 -0.7
FORR 27.00 187 eP 03 54.50 0.5
LOE 36.26 307 eP 05 15.50 0.0
e 09 36.50
CHG 39.24 306 iPd 05 40.60 0.0
BJI 45.96 344 eP 06 33.00 -1.8
Z 14s 0.59um 4.7MszX
e 08 54.00
CNCB 151.79 137 PKP 18 11.00 9.9X
LPB 151.90 137 ePKP 18 12.00 10.9X
ZOBO 152.07 136 ePKP 18 11.00 9.5X
S.D. = 1.5 on 13 of 17 obs.

JAN 04, 1990 13h 05m 01.34± 0.89s
24.196 N ± 6.4km 121.909 E ± 9.4km
DEPTH = 30.2 ± 5.3 km
4.2mb (5 obs.)
TAIWAN (244)

TWD 0.31 248 iPd 05 06.90 -2.0
eS 05 11.00
TWC 0.41 352 iPc 05 10.40 0.0
eS 05 17.00
TWZ 0.95 342 iPc 05 19.90 1.4
eS 05 33.70
TWO 0.98 275 ePc 05 19.50 0.4
eS 05 32.40
ANP 1.05 340 iPc 05 21.40 1.4
eS 05 38.00
TWG 1.57 209 eP 05 29.70 2.2
TWK 1.60 235 eP 05 29.30 1.4
TWM1 1.93 225 eP 05 34.80 2.1
QZH 3.11 285 Pn 05 48.20 -1.3
Z 12s 3.00um
E 12s 2.50um
Sn 06 23.60
SSE 6.90 355 Pc 06 41.20 -1.8
Z 18s 0.90um
E 12s 1.10um
pP 06 47.00
S 08 00.50
GZH 7.93 264 eP 06 55.80 -1.7
E 12s 1.90um
S 08 29.60
NJ2 8.28 342 Pd 06 59.00 -3.2X
Z 16s 1.20um 4.3MszX
eS 08 33.00
WHN 9.22 315 eP 07 11.00 -4.3X
Z 12s 1.69um
eS 08 57.00
GYA 13.97 282 P 08 18.80 -0.8
N 10s 0.60um
E 10s 1.20um
eS 10 52.60
XAN 14.99 314 eP 08 31.00 -1.8
TIY 15.72 331 eP 08 43.40 1.1
N 12s 0.90um
CD2 17.42 297 eP 09 03.00 -0.8
KMI 17.45 277 eP 09 05.00 0.6
Z 12s 2.50um
E 10s 1.20um
pP 09 14.50
SNY 17.64 4 eP 09 09.00 2.6X
Z 16s 0.90um
N 15s 0.70um
BTO 19.16 331 eP 09 26.00 0.9
N 12s 0.80um
LZH 19.57 311 eP 09 30.00 0.0
Z 16s 1.30um
N 10s 0.50um
E 10s 0.50um
CN2 19.77 8 eP 09 31.60 -0.3
Z 12s 0.60um
epP 09 39.00 29kmX
MDJ 21.31 15 eP 09 49.50 1.7
Z 15s 0.50um 4.0MszX
CHG 22.02 260 ePd 09 57.90 2.9X
0.9s 10.50nm 4.3mb
CHTO 22.02 260 eP 09 57.70 2.7
0.9s 8.74nm 4.2mb
GTA 24.05 314 eP 10 15.80 0.9
SHL 27.25 279 iP 10 45.00 -0.1
LSA 27.91 288 P 10 53.20 1.8
WMO 34.13 313 P 11 46.00 0.3
Z 12s 0.70um 4.6MszX
eS 17 03.00
WB5 45.46 163 eP 13 17.70 -1.9
WRA 45.51 164 Pc 13 18.50 -1.5
0.6s 1.10nm 4.0mb
ASPA 48.98 165 eP 14 00.20 13.0X
0.8s 4.00nm
CTA 50.00 150 iPc 13 56.10 1.1
1.1s 13.29nm 4.9mb
MAIO 54.42 298 eP 14 29.00 0.8
MBC 73.10 13 eP 16 28.00 -2.2
0.5s 1.00nm 4.1mb
S.D. = 1.5 on 30 of 35 obs.

& JAN 04, 1990 13h 20m 44.05s
57.790 N 150.543 W
DEPTH = 10.0km (geophysicist)
4.3mb (1 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 4.1 (PMR).

KDC 1.05 269 iP 21 02.10 -1.6
CNPM 1.78 349 iP 21 13.38 -1.7
iS 21 33.99
XLV 1.78 340 iP 21 13.40 -1.7
eS 21 33.59
BRLK 1.99 355 iP 21 16.14 -2.0
eS 21 38.63
CDD 1.99 306 iP 21 16.04 -2.2
AUL 2.20 318 eP 21 19.75 -1.4
NNL 2.29 351 eP 21 20.70 -1.8
SEW 2.39 13 iP 21 21.31 -2.5
eS 21 45.48
SLKM 2.73 3 iP 21 26.00 -2.8
eS 21 56.95
MID 2.75 51 eP 21 28.68 -0.2
PDB 2.76 318 iP 21 26.06 -3.1
eS 21 57.09
RED 2.88 337 iP 21 27.51 -3.3
eS 21 59.98
RDT 2.95 342 eP 21 28.75 -3.1
NKA 2.98 353 eP 21 30.96 -1.3
SPU 3.49 348 iP 21 35.97 -3.5
PMS 3.50 8 ePd 21 36.70 -3.0
CKL 3.54 346 eP 21 36.73 -3.5
GLI 3.57 28 eP 21 37.77 -2.8
eS 22 15.92
CRP 3.58 347 eP 21 37.71 -3.2
CGLM 3.61 349 iP 21 37.90 -3.3
BGL 3.61 346 eP 21 37.97 -3.3
FID 3.63 33 iP 21 38.70 -2.7
eS 22 17.33
SUA 3.69 359 iP 21 39.02 -3.4
NCG 3.72 348 iP 21 39.56 -3.3
VZW 3.86 30 iP 21 42.49 -2.3
PLRM 3.88 10 iP 21 41.86 -3.1
PMR 3.88 10 iPd 21 42.00 -3.0
PWA 3.89 5 eP 21 42.50 -2.6
PME 3.93 11 eP 21 42.62 -3.0
GHO 4.08 11 iP 21 45.12 -2.7
SVW 4.22 324 eP 21 46.00 -3.8
SKT 4.23 354 eP 21 46.97 -3.1
KLU 4.39 30 eP 21 50.01 -2.3
NCA 4.61 22 eP 21 53.10 -2.4
CUT 4.63 2 eP 21 53.14 -2.5
TOA 4.85 25 eP 21 57.60 -1.3
GLB 5.01 40 eP 21 58.71 -2.3
BALM 5.30 49 eP 22 03.25 -2.0
RND 5.70 8 eP 22 07.01 -3.8
PAX 5.77 24 eP 22 09.26 -2.6
PCA 5.81 62 iP 22 10.55 -1.7
TTA 5.83 335 eP 22 08.80 -3.8
FBA 7.26 9 eP 22 28.30 -4.3
IMA 8.44 351 eP 22 43.30 -6.0
INK 13.01 29 eP 23 49.00 -2.3
MBC 21.63 20 eP 25 33.00 -2.8
1.0s 12.00nm 4.3mb
KVN 28.14 118 eP 26 38.50 0.3
47 obs. ossocioted

JAN 04, 1990 14h 38m 40.00± 0.43s
43.950 N ± 6.5km 18.042 E ± 6.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (KBA), 2.4 (LJU).

HVAR 1.39 237 iPnc 39 05.70 0.3
iSn 39 27.10
BEO 1.94 62 ePn 39 13.50 0.2
iSg 39 38.40
BCI 2.17 136 ePg 39 15.70 -0.9
SDA 2.21 151 ePn 39 17.30 0.1
PTJ 2.45 324 e(Pn) 39 19.70 -1.0
eSn 39 55.50
VBY 2.52 309 ePn 39 22.80 1.2
iSn 39 54.40
LACI 2.62 151 ePn 39 24.00 1.0
PHP 2.87 141 iPnd 39 26.20 -0.4
TIR 2.93 152 ePn 39 30.50 3.1X
RIY 2.96 299 ePn 39 32.50 4.7X
BZS 3.04 56 ePc 39 25.00 -4.0X
CEY 3.13 306 ePn 39 31.00 0.7
e(Sn) 40 10.00
e(Sg) 40 28.50
SKO 3.18 127 ePn 39 31.00 0.0
LJU 3.25 311 e(Pn) 39 32.10 0.0
e(Sn) 40 09.00
OHR 3.49 143 ePn 39 38.20 2.7X
TRI 3.52 302 eP 39 33.80 -1.9
e 39 47.20
i 40 23.30
BUD 3.60 11 eP 39 46.10 9.1X
VOY 3.60 307 ePn 39 37.30 0.2
eSn 40 23.50
SRO 3.87 3 eP 40 06.00 25.2X
i 40 51.50
ZST 4.30 352 eP 40 32.80 45.9X
KBA 4.55 315 iPnc 39 50.40 -0.2
iSn 40 40.20
KHC 6.03 331 eP 40 12.20 0.9
e 41 21.00
PRU 6.50 340 ePn 40 21.50 3.5X
eSn 41 42.00
S.D. = 0.9 on 15 of 23 obs.

JAN 04, 1990 18h 01m 04.46± 0.76s
44.765 N ± 7.4km 117.627 W ± 7.0km
DEPTH = 5.0km (geophysicist)
OREGON (32)
ML 3.0 (BUT).

CPI 1.31 133 iPc 01 29.80 0.7
eS 01 49.00
WPI 1.61 156 Pd 01 33.20 -0.3
eS 01 58.50
EBI 2.33 26 P 01 45.00 0.8
VGB 2.35 290 eP 01 44.30 -0.1
MCMT 3.40 87 ePn 01 59.70 0.2
BUT 3.78 69 e(Pg) 02 10.00 5.2X
eSg 03 05.70
LRM 3.80 72 ePn 02 04.50 -0.7
BGMT 3.99 81 ePn 02 07.70 -0.1
HRY 4.50 62 ePn 02 14.60 -0.4
S.D. = 0.6 on 8 of 9 obs.

JAN 04, 1990 18h 08m 57.09± 0.85s
23.429 N ± 6.1km 121.923 E ± 8.9km
DEPTH = 10.0km (geophysicist)

04d 18h

4.0mb (1 obs.)
TAIWAN (244)

TWF1	0.58	263	iPd	09	09.20	0.4
			eS	09	15.30	
TWD	0.71	335	iPd	09	11.50	0.4
			eS	09	18.90	
TWG	0.99	232	eP	09	17.50	1.6
TWC	1.18	357	iPc	09	19.80	0.8
TWQ	1.30	310	ePc	09	19.80	-1.4
			eS	09	33.90	
TWK	1.33	263	ePc	09	20.70	-0.9
			eS	09	35.50	
TWZ	1.69	349	ePc	09	26.40	-0.4
ANP	1.79	348	eP	09	29.00	0.8
WB5	44.72	163	eP	17	12.00	-0.4
WRA	44.78	163	Pd	17	12.20	-0.6
	0.6s		1.40nm			4.0mb

S.D. = 1.1 on 10 of 10 obs.

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* JAN 04, 1990 18h 54m 31.52± 0.71s
41.600 S ±12.7km 85.278 E ±14.0km
DEPTH = 10.0km (geophysicist)
5.0mb (8 obs.) 5.1Msz (1 obs.)
SOUTHEAST INDIAN RISE (435)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 8S, 16C
Centroid Locotion:
Origin Time 18:54:39.2 1.5
Lot 41.54S 0.12 Lon 84.96E 0.13
Dep 15.0 FIX Half-durotion 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 0.60 0.34 Mtt= 4.85 0.37
Mff=-5.45 0.36 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf= 1.03 0.55
Principal Axes:
T Val= 4.95 Plg= 0 Azm=174
N 0.60 90 180
P -5.55 0 84
Best Double Couple:Mo=5.2*10**16
NP1:Strike=219 Dip=90 Slip=-180
NP2: 309 90 0

ASPA	44.06	82	iPd	02	41.40	0.0
	1.2s		17.00nm			4.8mb
	Z 21s		2.73um			5.1Msz
			LR	18	30.90	
WRA	46.64	78	Pc	03	01.10	-0.8
	1.2s		23.40nm			5.1mb
WB5	46.70	78	eP	03	02.10	-0.2
SPA	48.59	180	iPd	03	16.40	-0.5
	1.4s		47.06nm			5.4mb
BUL	52.14	276	iPd	03	56.10	11.6X
	1.2s		165.63nm			
CTA	55.40	87	iPc	04	08.50	0.2
	1.2s		29.69nm			5.2mb
GBA	55.40	351	Pd	04	06.70	-1.5
	1.0s		6.60nm			4.6mb
HYB	59.05	353	ePd	04	34.00	0.0
	1.0s		20.00nm			5.2mb
POO	60.76	348	eP	04	45 00	-0 7
CHG	61.43	15	eP	04	51 00	0 7
CHTO	61.43	15	eP	04	49.90	-0.3
	1.0s		3.25nm			4 4mb
KMI	68.33	17	Pc	05	35 50	0.3
LZH	79.16	15	eP	06	39.00	1.1
	1.8s		30.00nm			5.0mb
	Z 30s		0.50um			4 7MszX
MAIO	81.04	339	iPc	06	48.00	0.1
INK	146.24	25	ePKP	14	13.00	1.6

S.D. = 0.9 on 14 of 15 obs.

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* JAN 04, 1990 18h 58m 14.22± 2.37s
45.367 N ± 8.2km 6.589 E ±18.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

LPG	0.17	41	Pg	58	18.50	0.2
			Sg	58	21.40	
LSD	0.41	77	P	58	22.37	-0.3
			S	58	27.91	
RRL	0.47	163	P	58	24.11	0.3
			S	58	32.11	
RSP	0.52	114	P	58	25.04	0.3
			S	58	32.52	
PZZ	0.94	157	P	58	31.70	-0.5
			S	58	44.73	

S.D. = 0.5 on 5 of 5 obs.

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* JAN 04, 1990 19h 41m 41.19± 1.62s
24.605 S ± 8.4km 71.273 W ±19.7km
DEPTH = 33.0km (normal)
OFF COAST OF NORTHERN CHILE (121)

ANT	1.19	41	iPc	42	01.30	-0.3
			iS	42	13.70	
SLA	5.26	93	ePd	43	00.60	0.9
YJA	5.83	67	ePc	43	29.00	20.9X
CYA	6.22	129	e(P)	43	12.00	-1.2
ZON	7.28	162	ePd	43	37.00	8.9X
ARE	8.10	359	eP	43	40.00	0.2
LPB	8.56	21	P	43	46.00	-0.3
CCH	8.64	35	P	43	49.20	2.0X
ZOBO	8.80	20	P	43	49.80	0.1
	Z 20s		0.23um			
			S	45	50.00	
			LR	47	08.00	
MRA	9.19	149	eP	43	55.00	0.6

S.D. = 0.8 on 7 of 10 obs.

? JAN 04, 1990 20h 37m 24.93± 5.84s
47.594 N ±32.0km 9.449 E ±48.5km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

SAX	0.35	192	ePd	37	32.10	-0.2
SLE	0.67	285	ePd	37	37.80	-0.4
FEL	1.01	287	ePn	37	44.45	0.3
VDL	1.11	179	eP	37	45.50	-0.4
TMA	1.54	195	eP	37	53.30	0.7

S.D. = 0.7 on 5 of 5 obs.

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* JAN 04, 1990 20h 41m 39.75± 1.37s
47.465 N ±16.1km 9.147 E ±17.2km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

SAX	0.25	148	ePd	41	44.70	-0.5
SLE	0.53	304	ePd	41	50.40	-0.2
FEL	0.87	299	ePn	41	56.59	0.0
VDL	1.00	167	eP	41	58.00	-0.9
OSS	1.03	138	eP	42	00.20	0.8
TMA	1.37	188	eP	42	05.90	0.8

S.D. = 0.9 on 6 of 6 obs.

JAN 04, 1990 20h 44m 51.78± 0.48s
47.387 N ± 5.0km 9.027 E ± 4.7km
DEPTH = 5.0km (geophysicist)
GERMANY (543)
ML 2.9 (LDG), 2.6 (KBA), 2.6 (FUR). MD 2.8 (STR).

SAX	0.26	122	iPd	44	56.30	-0.7
ZLA	0.44	283	ePc	45	01.00	0.3
LLS	0.52	182	ePc	45	02.20	0.0
SLE	0 52	317	iPd	45	02.00	-0.3
FEL	0 84	306	Pg	45	07.88	-0.7
			Sg	45	19.24	
VDL	0.95	161	ePd	45	09.60	-0.9
BBS	1 03	275	Pg	45	11.89	0.1
OSS	1.04	132	ePd	45	10.50	-1.4
TMA	1.29	185	eP	45	16.40	0.2
MOF	1.36	291	Pg	45	17.62	0.1
			Sg	45	36.32	
LOMF	1.50	269	Pg	45	20.56	1.2
			Sg	45	40.53	
ECH	1.51	304	Pg	45	19.88	0.4
			Sg	45	40.12	
MMK	1.52	209	ePc	45	20.60	0.7
WLS	1.52	313	Pg	45	20.66	0.9
			Sg	45	40.48	
CDF	1.56	312	Pn	45	18.80	-1.5
			Sg	45	41.76	
BSF	1.58	287	Pg	45	22.00	1.4
			Sg	45	42.40	
FUR	1.71	62	eP	45	22.70	0.4
DIX	1.72	221	eP	45	24.50	1.8
GWF	1.85	330	Pg	45	26.44	2.0
			Sg	45	51.26	
SCE	1.86	100	eP	45	25.60	0.8
HAU	1.91	290	Pn	45	24.40	-1.0
			Pg	45	28.20	
			Sg	45	53.00	
EMS	1.95	228	eP	45	29.20	3.1X
VITF	2.21	293	Pn	45	27.74	-1.9
TOD	2.22	356	ePn	45	27.05	-2.8
GRC1	2.32	45	e(Pn)	45	33.70	2.5
			e(Pg)	45	35.70	
			e(Sn)	45	55.10	
			eSg	46	02.70	
LPL	2.45	221	Pg	45	38.00	4.7X
LPG	2.46	221	Pg	45	38.20	4.7X
			Sg	46	11.20	
KBA	2.96	94	ePg	45	45.50	5.0X
			i	45	47.50	
			iSg	46	22.50	
LBF	3.47	265	Pg	45	57.80	10.3X
			Sg	46	40.60	
KHC	3.51	58	ePg	45	55.60	7.5X
			Sg	46	41.70	
LOR	3.52	270	Pg	45	58.60	10.4X
			Sg	46	42.60	
SMF	3.62	260	Pg	46	00.60	10.9X
			Sg	46	46.40	
SSF	3.78	267	Pg	46	03.00	11.1X
			Sg	46	51.20	
BGF	4.31	261	Pn	45	58.10	-1.4
			Pg	46	12.00	
			Sg	47	08.00	

S.D. = 1.3 on 25 of 34 obs.

JAN 04, 1990 20h 49m 42.66± 0.57s
47.413 N ± 5.1km 9.101 E ± 5.7km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 3.0 (LDG), 2.9 (FUR), 2.7 (KBA). MD 2.2 (STR).

SAX	0.23	134	iPd	49	47.80	0.0
ZLA	0.49	278	ePc	49	52.60	0.0
SLE	0.54	311	iPd	49	53.60	0.0
LLS	0.55	188	ePc	49	53.80	0.0
FEL	0.87	303	Pg	49	59.50	0.0
			Sg	50	11.00	
VDL	0.96	165	ePd	50	01.10	0.0
OSS	1.02	135	eP	50	02.00	0.0
TMA	1.32	187	ePd	50	07.70	0.6
MOF	1.40	289	Pg	50	12.50	4.2X
			Sg	50	32.00	
LOMF	1.55	269	Pg	50	14.00	3.6X
			Sg	50	32.50	
VAI	1.56	188	P	50	13.40	2.9X
			eSn	50	33.60	
MMK	1.57	210	eP	50	12.20	1.3
CDF	1.58	310	Pg	50	13.10	2.2
			Sg	50	33.20	
BSF	1.62	286	Pn	50	11.60	0.2
			Pg	50	13.60	
			Sg	50	34.00	
FUR	1.65	62	eP	50	13.90	2.1
DIX	1.77	222	eP	50	16.10	2.3
SCE	1.82	101	iPc	50	17.20	2.8X
GWF	1.85	328	Pg	50	18.50	3.8X
			Sg	50	42.00	
HAU	1.95	289	Pn	50	16.00	-0.2
			Pg	50	19.50	
			Sg	50	44.40	
EMS	2.01	229	eP	50	20.70	3.5X
TOD	2.20	355	ePn	50	18.39	-1.4
GRC1	2.26	45	e(Pn)	50	25.50	4.8X
			e(Pg)	50	27.80	
			e(Sn)	50	46.40	
			eSg	50	54.30	
LPL	2.51	222	Pg	50	29.80	5.5X
LPG	2.51	221	Pg	50	29.90	5.4X
			Sg	51	02.40	
FVI	2.65	107	P	50	32.70	6.6X
			eSn	51	07.90	
BNI	2.90	216	P	50	39.50	9.7X
KBA	2.91	95	iPgc	50	36.20	6.2X
			i	50	39.00	
			eSg	51	12.60	
KHC	3.45	58	ePg	50	47.00	9.5X
			Sg	51	31.00	
LBF	3.52	265	Pg	50	49.50	11.0X
			Sg	51	32.40	
LOR	3.57	270	Pg	50	50.00	10.8X
			Sg	51	34.00	
SMF	3.68	260	Pg	50	52.40	11.6X

```
                Sg    51 38.40
     S.D. = 1.1  on  15 of  31 obs.
-------------------------------------------
   JAN  04, 1990  22h 16m 52.10± 0.79s
   36.140 N ± 6.0km  120.112 W ± 7.5km
   DEPTH =  5.0km  (geophysicist)
 CENTRAL CALIFORNIA                ( 39)
     ML 2.7 (BRK).

PKEM    0.08 178 iPd    16 54.50   0.5
PHAM    0.38 218 eP     17 00.40   0.6
PRI     0.45 270 eP     17 02.30   1.2
LLA     0.82 306 eP     17 08.80   0.3
                eS      17 20.40
FRI     0.91  21 ePd    17 08.80  -1.2
                eS      17 23.90
BCH     0.95 179 eP     17 08.90  -1.9
PRS     1.04 281 eP     17 11.70  -0.4
SAO     1.24 301 eP     17 15.10  -0.6
CMB     1.90 353 eP     17 24.60  -1.0
                eS      17 49.70
TNP     3.02  49 eP     17 44.00   2.4
KVN     3.32  28 eP     17 49.50   3.6X
     S.D. = 1.4  on  10 of  11 obs.
-------------------------------------------
   JAN  04, 1990  22h 24m 01.17± 0.54s
    3.156 S ± 5.6km  148.464 E ± 8.9km
   DEPTH =  33.0km  (normal)
   5.1mb (  9 obs.)  4.4Msz (  1 obs.)
 BISMARCK SEA                      (203)
      CENTROID, MOMENT TENSOR      (HRV)
      Doto Used: GDSN
      L.P.B.:  9S, 16C
      Centroid Locotion:
      Origin Time        22:24: 3.7 1.5
      Lot  3.08S 0.11 Lon 148.29E 0.14
      Dep  15.0 FIX Holf-durotion  1.5
      Moment Tensor;    Scole 10**16 Nm
        Mrr= 0.31 0.42  Mtt= 0.71 0.47
        Mff=-1.02 0.57  Mrt= 1.78 1.51
        Mrf=-1.75 1.51  Mtf= 4.81 0.41
       Principol Axes:
        T  Vol=  4.75  Plg= 4  Azm=321
        N         1.27      68       60
        P        -6.01      21      230
      Best Double Couple:Mo=5.4*10**16
       NP1:Strike=  8 Dip=72 Slip=-167
       NP2:        274     78      -18

LAT     3.77 203 eP     24 58.00  -0.4
RAB     3.84 106 eP     24 59.00  -0.4
PMG     6.35 192 eP     25 34.00  -0.9
JAY     7.78 274 ePd    25 54.50  -0.5
JAY     7.78 274 ePd    25 54.60  -0.4
GUA    16.96 348 e(P)   27 54.80  -2.8
CTA    16.97 187 iPd    27 58.50   0.7
       1.8s   190.91nm          4.9mb
                iS      31 10.00
GUMO   17.01 348 e(P)   27 58.30   0.0
PJG    17.01 348 e(P)   27 58.30   0.0
WB5    21 58 219 eP     28 48.90  -1.3
WRA    21 64 218 Pd     28 49.50  -1.4
       0.9s   27.10nm          4.7mb
PMO    23.20 179 eP     29 07.00   0.8
BRS    24.45 171 iP     29 20.00   1.7
                i       29 29.80
ASPA   24.78 213 eP     29 21.10  -0.5
       1.5s   71.00nm          5.0mb
     Z 22s     1.48um          4.4MszX
                eS      33 48.00
                LR      38 57.10
DZM    25.66 139 iPc    29 36.90   7.0X
WAR8   31.03 220 eP     30 17.00  -1.3
SSE    42.84 325 P      31 58.00   0.0
       1.6s   89.00nm          5.2mb
     Z 22s     0.60um          4.4Msz
     E 12s     0.20um
                pP      32 05.00  23kmX
                eS      38 20.00
LOE    50.42 296 eP     33 00.00   2.0
NST    51.33 293 eP     33 07.40   2.5
BJI    52.19 329 eP     33 10.00  -1.0
     Z 32s     0.76um          4.5MszX
KMI    52.50 305 Pd     33 14.50   0.6
CHG    53.38 296 ePd    33 21.00   0.8
       1.3s   32.69nm          5.2mb
CHTO   53.38 296 eP     33 21.00   0.8
       1.3s   23.69nm          5.0mb
LZH    57.07 317 P      33 47.00   0.1
       1.8s   51.00nm          5.3mb
     Z 23s     0.50um          4.6MszX
HYB    71.87 289 ePc    35 23.50   0.0
       1.4s   50.00nm          5.3mb
GBA    72.37 285 Pd     35 27.10   0.7
       1.2s   18.60nm          5.0mb
QUE    84.25 301 eP     36 21.00 -10.5X
INK    88.49  21 eP     36 58.00   6.8X
LPB   138.92 120 PKP    43 13.00 -14.6X
                e       43 31.00
ZOBO  139.01 119 ePKP   43 25.00  -3.0X
       1.2s   10.81nm
                i       43 31.00
KIC   153.11 278 PKP    44 00.00   9.6X
     S.D. = 1.2  on  25 of  31 obs.
-------------------------------------------
   JAN  04, 1990  23h 20m 26.13± 0.80s
   47.392 N ± 6.9km    9.135 E ± 8.5km
   DEPTH =  10.0km  (geophysicist)
 GERMANY                           (543)
     ML 2.7 (LDG). MD 2.1 (STR).

SAX     0.20 135 iPd    20 30.30  -0.4
ZLA     0.51 280 ePc    20 35.00  -1.6
LLS     0.53 190 ePc    20 36.20  -0.7
SLE     0.57 311 iPd    20 36.00  -1.8
FEL     0.90 303 Pg     20 42.00  -1.5
                Sg      20 53.00
VDL     0.93 166 ePd    20 43.60  -0.5
OSS     0.99 135 eP     20 45.10   0.1
TMA     1.30 188 eP     20 50.20  -0.1
MMK     1.56 211 eP     20 54.70   0.5
WLS     1.57 311 Pg     20 53.50  -0.7
                Sg      21 14.00
CDF     1.61 310 Pg     20 55.60   0.8
                Sg      21 15.70
BSF     1.65 286 Pg     20 56.20   0.9
                Sg      21 16.40
DIX     1.77 223 eP     20 58.60   1.4
GWF     1.88 328 Pg     21 00.00   1.4
                Sg      21 25.00
HAU     1.98 289 Pg     21 02.30   2.2
                Sg      21 26.80
EMS     2.01 230 eP     21 03.20   2.5X
GRC1    2.26  44 e(Pn)  21 07.80   3.6X
                e(Pg)   21 10.30
                e(Sn)   21 28.50
                eSg     21 36.80
LPL     2.51 222 Pg     21 12.00   4.2X
                Sg      21 44.80
LBF     3.54 265 Pg     21 32.00   9.7X
                Sg      22 16.60
LOR     3.59 270 Pg     21 32.50   9.5X
                Sg      22 17.00
     S.D. = 1.3  on  15 of  20 obs.
-------------------------------------------
? JAN  04, 1990  23h 23m 28.57± 1.38s
   51.455 N ±27.1km  173.873 W ±10.0km
   DEPTH =  33.0km  (normal)
   4.5mb ( 12 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (  7)

ADK     1.80 285 iPc    23 57.90   0.1
KDC    13.87  55 eP     26 52.00   7.3X
TTA    14.96  33 eP     27 03.00   3.9X
IMA    17.87  27 eP     27 37.50   1.5
FBA    19.05  35 eP     27 47.50  -2.7X
INK    25.65  34 eP     28 55.00  -1.4
MBC    32.40  21 eP     29 56.00  -0.8
EDM    36.06  63 ePc    30 29.20   0.7
SES    38.54  66 eP     30 50.00   0.6
KVN    40.23  85 eP     31 18.50  14.8X
                e       31 31.00
FFC    41.57  56 eP     31 14.50   0.2
       0.6s    6.00nm          4.5mb
BW06   43.32  75 e(P)   31 43.30  14.2X
RSON   47.85  57 eP     32 03.30  -1.4
HFS    68.60 356 (P)    34 27.50  -2.2
       0.5s    1.70nm          4.4mb
GRF    79.14 357 eP     35 31.50   0.5
       1.0s    6.00nm          4.5mb
LOR    81.64   2 eP     35 44.70   0.4
       0.8s    4.00nm          4.5mb
KBA    81.65 355 iPd    35 45.50   0.9
       0.6s    4.60nm          4.7mb
SSF    81.84   2 eP     35 45.80   0.5
       0.6s    2.70nm          4.4mb
LBF    81.92   1 eP     35 45.80   0.0
       1.0s    4.00nm          4.4mb
AVF    82.11   2 eP     35 47.70   1.0
       1.0s   10.00nm          4.8mb
SMF    82.26   2 eP     35 45.80  -1.7
       1.0s    8.00nm          4.7mb
TCF    82.58   3 eP     35 49.60   0.4
       0.8s    3.20nm          4.4mb
LSF    82.60   3 eP     35 49.70   0.4
       0.6s    3.60nm          4.6mb
MAF    82.66   2 eP     35 49.80   0.2
       0.8s    4.50nm          4.6mb
SLR   149.27 318 iPKPc  43 15.50   4.7X
       0.7s   10.27nm
                i       43 31.50
KSR   149.95 320 ePKP   43 07.40  -4.5X
PRY   150.65 318 ePKP   43 14.40   1.5X
     S.D. = 1.1  on  19 of  27 obs.
-------------------------------------------
   JAN  04, 1990  23h 25m 57.19± 0.44s
   32.381 N ± 4.2km  138.821 E ± 4.0km
   DEPTH = 247.7 ±  3.6 km
   5.1mb ( 54 obs.)
 SOUTH OF HONSHU, JAPAN            (211)
      CENTROID, MOMENT TENSOR      (HRV)
      Doto Used: GDSN
      L.P.B.: 12S, 14C
      Centroid Locotion:
      Origin Time        23:25:59.4 1.4
      Lot 32.16N 0.12 Lon 138.79E 0.21
      Dep 270.3 6.8 Half-duration  1.5
      Moment Tensor;    Scole 10**16 Nm
        Mrr= 2.15 0.47  Mtt=-3.61 0.81
        Mff= 1.46 0.88  Mrt=-0.75 1.33
        Mrf=-2.11 0.87  Mtf=-5.12 0.81
       Principol Axes:
        T  Vol=  5.30  Plg=26  Azm= 62
        N         1.82      62      216
        P        -7.12      11      327
      Best Double Couple:Mo=6.2*10**16
       NP1:Strike=102 Dip=64 Slip= 169
       NP2:        197     80       26

IIDJ    3.18 347 iPd    26 51.80  -0.2
WKYJ    3.27 305 iPd    26 54.00   1.1
                S       27 37.30
CHJJ    3.66   2 iP+    26 56.30  -1.1
                S       27 41.00
TSRJ    3.93 324 iPd    27 01.40   0.9
                S       27 50.80
KAKJ    3.98  16 P      26 56.90  -4.1X
                S       27 43.70
MAT     4.18 353 iPd-   27 02.50  -1.0
                iS      27 53.10
MTMJ    4.28 349 P      27 04.30  -0.4
TKSJ    4.31 293 iPd    27 06.00   1.0
                S       27 59.30
NIIJ    4.85   2 P      27 09.30  -2.3
                eS      28 04.70
YONJ    5.27 304 iPd    27 17.70   1.0
SHK     5.56 294 iPd    27 21.30   0.9
       0.9s   504.20nm          5.5mb
YAMJ    5.86   9 P      27 21.30  -2.8
                S       28 27.50
SHNJ    6.69 287 eP     27 35.80   1.3
                eS      28 55.60
KUMJ    6.76 273 P      27 37.50   2.1
                eS      28 57.20
OFUJ    7.07  18 P      27 35.10  -4.3X
                S       28 49.40
SSE    15.06 270 P      29 19.50   0.0
       1.0s   25.00nm          4.6mb
     N 16s     0.90um
                eS      32 03.00
                sS      32 09.00
GUMO   19.51 162 eP     30 09.60   2.0
       0.8s  111.27nm          5.4mb
GUA    19.57 162 eP     30 10.30   2.1
       0.6s   64.00nm          5.3mb
BJI    19.77 299 Pc     30 09.50  -0.5
       1.5s  215.00nm          5.5mb
     Z 16s     0.41um
                eS      33 36.00
                esS     33 52.00
LZH    29.06 287 eP     31 42.00   5.2X
```

04d 23h

Z 17s 0.30um 4.0MszX
N 10s 0.20um
i 32 20.00
CHG 38.19 259 eP 32 55.80 1.0
CHTO 38.19 259 eP 32 54.00 -0.7
1.0s 8.00nm 4.2mb
pP 33 42.20 231kmX
SHL 41.36 273 eP 33 20.00 -0.9
PMG 42.31 168 eP 33 27.00 -1.3
TTA 50.47 33 eP 34 31.50 -0.2
SVW 50.51 35 eP 34 32.70 0.7
BRW 51.52 22 eP 34 40.00 0.7
IMA 51.78 29 eP 34 40.80 -0.7
KDC 52.06 39 eP 34 43.90 0.5
WB5 52.14 185 eP 34 42.00 -2.4
eScP 39 27.00
WRA 52.20 185 Pd 34 42.70 -2.2
0.7s 26.40nm 4.8mb
CTA 52.65 171 eP 34 47.00 -1.2
PMR 53.64 34 eP 34 54.40 -0.6
0.8s 34.20nm 4.9mb
FBA 54.18 30 eP 34 58.70 -0.2
ASPA 55.93 185 eP 35 10.80 -1.0
0.6s 39.00nm 5.1mb
eS 42 37.30
HYB 56.00 270 iPd 35 10.50 -2.1
1.0s 30.00nm 4.8mb
MBL 56.25 201 iPd 35 12.10 -2.0
0.4s 9.00nm 4.7mb
GBA 58.76 267 P 35 31.00 -0.8
WARB 59.38 193 eP 35 35.00 -0.7
POO 59.47 274 iPc 35 36.20 -0.4
INK 59.49 26 iPc 35 35.80 -0.2
0.4s 27.00nm 5.2mb
DZM 60.25 150 iPc 35 41.90 0.1
QUE 60.36 289 eP 35 30.00 -12.7X
MBC 61.58 15 ePd 35 49.70 -0.3
0.5s 42.00nm 5.3mb
MAIO 63.85 298 eP 36 05.00 -0.5
KEV 67.03 339 iP 36 25.00 -0.1
0.7s 40.00nm 5.3mb
SOD 68.42 337 iP 36 25.00 -8.7X
i 36 33.40
DAG 70.22 355 iPd 36 45.10 0.6
0.8s 47.01nm 5.3mb
IR2 70.47 300 eP 36 47.00 0.1
IR4 70.65 300 eP 36 48.00 0.0
IR7 70.66 300 eP 36 49.00 1.0
IR1 70.73 300 eP 36 49.00 0.5
IR5 70.90 300 eP 36 50.00 0.5
TAB 72.65 304 eP 37 00.00 0.3
NUR 73.04 332 iP 37 00.80 -0.5
0.7s 30.70nm 5.1mb
WDC 75.61 51 eP 37 16.90 0.5
MSL 75.68 304 ePd 37 20.50 3.6X
eS 47 26.00
UPP 76.18 334 iP 37 19.20 0.1
ORV 76.82 52 eP 37 23.20 0.1
SES 77.11 38 eP 37 25.00 0.4
0.4s 26.00nm 5.3mb
BRK 77.17 53 eP 37 25.90 0.8
BKS 77.19 53 iPd 37 26.30 1.1
0.7s 58.00nm 5.4mb
HFS 77.42 335 eP 37 24.90 -1.1
0.5s 44.90nm 5.5mb
NB2 77.63 337 P 37 26.50 -0.7
0.7s 41.00nm 5.3mb
MHC 77.87 54 eP 37 29.80 0.7
CMB 78.35 52 ePc 37 32.10 0.5
PRS 78.58 54 eP 37 33.50 0.7
LLA 78.72 54 eP 37 34.30 0.7
FFC 78.77 31 iPc 37 33.40 -0.1
0.6s 17.00nm 5.0mb
LRM 78.99 42 ePc 37 36.00 0.8
PRI 79.17 54 eP 37 37.20 1.1
FRI 79.36 53 eP 37 37.30 0.3
VRI 80.86 319 ePc 37 47.00 2.3
CLC 81.43 53 eP 37 48.00 0.1
MLR 81.52 319 ePd 37 49.00 0.7
KRA 81.72 325 iPc 37 48.90 -0.1
0.7s 56.00nm 5.4mb
FRB 81.77 12 ePd 37 39.40 -9.6X
0.5s 32.00nm 5.3mb
SBB 81.90 54 eP 37 51.00 0.6
MWC 82.00 55 eP 37 51.00 -0.1
GSC 82.25 53 eP 37 53.00 0.8
KSP 82.89 327 iPd 37 55.30 0.2

0.7s 67.00nm 5.5mb
e 05 00.00
e 41 07.50
PLM 83.31 55 eP 37 59.00 1.2
BZS 83.79 321 eP 37 59.50 -0.2
BAR 83.82 55 eP 38 01.00 0.9
BRG 83.93 328 iP 38 00.00 -0.2
0.7s 31.00nm 5.2mb
CLL 84.02 329 iPd 38 00.50 -0.2
0.9s 51.00nm 5.3mb
PRU 84.29 328 Pc 38 02.20 0.1
0.9s 14.00nm 4.8mb
ZST 84.35 325 eP 38 02.50 0.1
e 03 01.80
i 03 06.10
i 03 17.30
i 03 49.60
ELL 84.42 310 eP 38 03.00 -0.2
GLA 84.88 54 eP 38 06.00 0.5
HOF 85.24 329 iPc 38 07.00 0.1
0.8s 20.00nm 5.0mb
KHC 85.34 327 iP 38 07.90 0.5
GRB3 85.99 328 eP 38 10.80 0.3
1.3s 18.00nm 4.7mb
EKA 86.76 339 P 38 14.00 -0.2
1.0s 16.10nm 4.8mb
KBA 86.94 326 eP 38 14.50 -0.9
0.5s 3.80nm 4.5mb
e 41 39.50
VOY 87.43 325 e(P) 38 15.90 -1.8
FVI 87.55 326 P 38 18.00 -0.1
CDF 88.65 330 eP 38 23.00 -0.4
0.8s 6.40nm 4.6mb
DMU 89.09 341 eP 38 25.50 0.2
ALQ 89.25 48 eP 38 25.50 -1.1
1.0s 2.50nm 4.1mb
BSF 89.30 330 eP 38 25.80 -0.7
0.6s 3.60nm 4.5mb
SAL 89.34 327 P 38 26.50 -0.1
HAU 89.36 330 eP 38 26.60 -0.1
0.8s 5.30nm 4.5mb
DLE 89.53 340 eP 38 27.10 -0.2
DCN 89.69 340 eP 38 27.40 -0.6
1.0s 81.00nm 5.6mb
VAI 89.95 328 P 38 29.30 -0.1
SFI 89.96 325 P 38 32.00 2.6
PGD 90.06 325 P 38 32.00 1.8
CRE 90.13 324 P 38 31.50 1.1
ASS 90.18 324 P 38 32.50 1.9
BOB 90.48 327 P 38 32.50 0.6
ORX 90.49 328 P 38 30.50 -1.5
ORO 90.49 328 P 38 31.50 -0.6
SDI 90.58 322 P 38 32.30 -0.2
LOR 90.97 331 eP 38 33.60 -0.5
1.0s 12.00nm 4.8mb
LSD 90.99 328 P 38 34.30 -0.2
LPG 91.14 329 eP 38 34.80 -0.5
0.6s 18.30nm 5.2mb
LBF 91.15 331 eP 38 34.20 -0.8
0.6s 3.60nm 4.5mb
GRC 91.27 332 P 38 35 73 0.3
SSF 91.28 331 eP 38 35 10 -0.4
1.0s 12.00nm 4 8mb
FLN 91.42 334 eP 38 35 80 -0.3
0.6s 9.00nm 4.9mb
LDF 91.43 334 eP 38 35 70 -0.5
0.6s 14.40nm 5.1mb
SMF 91.48 331 eP 38 35.80 -0.6
0.8s 12.00nm 4.9mb
BNI 91.52 328 P 38 37.30 0.5
AVF 91.56 331 eP 38 36.30 -0.5
0.7s 18.70nm 5.2mb
RRL 91.57 328 P 38 36.14 -1.1
PZZ 91.75 328 P 38 34.30 -3.6X
GRR 91.88 334 eP 38 38.10 -0.1
0.7s 39.60nm 5.5mb
BGF 91.95 331 eP 38 38.10 -0.5
0.8s 8.00nm 4.8mb
PLDF 92.11 331 P 38 39.12 -0.3
LPF 92.24 334 eP 38 39.90 0.0
0.6s 27.00nm 5.5mb
AGO 92.25 331 P 38 39.69 -0.3
MAF 92.34 331 eP 38 40.30 -0.1
0.7s 9.90nm 5.0mb
TCF 92.43 332 eP 38 40 60 -0.3
0.6s 13.80nm 5.2mb
PYM 92.54 331 P 38 41.14 -0.3

LSF 92.73 332 eP 38 42.00 -0.2
MFF 93.10 333 eP 38 43.90 0.0
0.6s 18.00nm 5.3mb
RJF 93.51 331 eP 38 45.80 0.0
0.8s 24.10nm 5.3mb
CAF 93.60 331 eP 38 46.50 0.2
0.6s 8.40nm 5.0mb
LFF 94.13 332 eP 38 48.80 0.2
0.6s 21.60nm 5.5mb
LPO 94.16 331 eP 38 48.80 0.0
0.6s 5.30nm 4.9mb
TIC 128.12 312 PKP 44 36.00 0.1
0.4s 3.50nm
KIC 128.16 311 PKP 44 36.10 0.1
0.5s 3.50nm
LIC 128.45 312 PKP 44 36.60 0.1
0.4s 3.00nm
ARE 148.32 67 ePKP 45 17.00 4.4X
ZOBO 150.79 63 PKP 45 17.00 0.3
1.0s 30.00nm
i 45 23.20
LPB 150.97 63 PKP 45 18.00 1.3
i 45 25.00
CCH 152.97 62 ePKP 45 22.00 2.5X
i 45 40.00
S.D. = 0.9 on 138 of 148 obs.

JAN 05, 1990 00h 02m 18.66± 0.75s
45.803 N ± 8.3km 15.509 E ± 5.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.0 (KBA).

PTJ 0.33 73 ePg 02 24.70 -0.8
eSg 02 30.20
ZAG 0.33 88 iPg 02 25.10 -0.4
iSg 02 30.50
VBY 0.35 211 ePgc 02 27.00 1.2
iSg 02 34.20
LJU 0.72 290 iPg 02 30.80 -2.1
iSg 02 39.00
CEY 0.76 266 ePg 02 33.80 0.3
i 02 35.40
eSg 03 44.50
RIY 0.91 240 iPg 02 35.50 -0.6
iSg 03 48.90
VOY 1.15 282 ePgd 02 38.50 -1.7
e(Sg) 02 55.70
TRI 1.22 266 P 02 41.50 0.1
eSn 03 12.50
KBA 1.97 311 iPgd 02 53.20 0.7
iSg 03 18.00
SOP 2.01 21 eP 02 55.00 1.9
FVI 2.05 294 P 02 55.50 1.9
eSn 03 37.50
VKA 2.52 12 ePn 02 59.00 -1.4
e(Pg) 03 04.00
HVAR 2.71 165 iPn 03 06.10 3.1X
KHC 3.58 339 ePn 03 16.30 1.0
ePg 03 26.10
eSn 03 55.00
Sg 04 18.80
GRC1 4 19 321 ePn 03 31.40 7.4X
e(Pg) 03 50.10
e(Sn) 04 19.10
e(Sg) 04 40.30
PRU 4.24 352 Pn 03 35.50 10.8X
Pg 03 47.30
Sn 04 20.50
Sg 04 44.50
S.D. = 1.4 on 13 of 16 obs.

JAN 05, 1990 00h 29m 50.65± 0.61s
38.413 N ± 6.0km 22.144 E ± 4.2km
DEPTH = 5.0km (geophysicist)
3.9mb (9 obs.)
GREECE (364)
ML 3.6 (THE), 3.4 (ATH).

AGG 0.63 13 ePbc 30 01.90 -1.3
NEO 1.23 43 ePn 30 14.00 0.0
VLS 1.25 260 ePn 30 10.00 -4.3X
ATH 1.31 109 ePn 30 16.00 0.6
LIT 1.71 9 ePn 30 20.50 -0.7
eSn 30 47.00
VLI 1.81 159 ePn 30 21.90 -0.7
KZN 1.91 351 ePn 30 24.00 -0.3

LSK	2.11	326	iPnd	30	28.70	1.6
PLG	2.20	27	ePn	30	27.50	-0.9
SRN	2.22	312	iPn	30	28.80	0.2
THE	2.31	16	ePn	30	28.70	-1.2
			eSn	31	00.00	
OUR	2.39	36	ePn	30	30.20	-0.9
KBN	2.44	335	ePn	30	33.70	2.0
TPE	2.50	319	ePn	30	33.60	0.9
GRG	2.55	4	ePnd	30	32.50	-0.8
SOH	2.58	21	ePnd	30	33.40	-0.4
KNT	2.81	12	ePn	30	36.10	-0.9
			eSn	31	12.00	
BERA	2.85	324	ePn	30	38.50	0.9
VLO	2.90	316	ePn	30	38.40	0.1
SRS	2.92	22	ePn	30	38.20	-0.4
APE	3.00	116	ePn	30	41.50	1.7
MMB	3.40	20	iPc	30	43.00	-2.4
			eS	31	28.00	
TIR	3.41	330	ePn	30	46.20	0.6
PHP	3.52	339	ePn	30	46.70	-0.4
KKB	3.52	11	iP	30	47.00	-0.2
			iS	31	29.00	
LACI	3.72	331	ePn	30	50.00	0.0
LCI	3.77	302	P	30	48.10	-2.6
			(Sn)	31	28.10	
RDO	3.78	43	ePn	30	50.70	-0.1
RZN	3.82	30	iP	30	53.00	1.4
			iS	31	41.00	
KKS	3.89	341	ePn	30	54.60	2.2
SDA	4.13	331	ePn	30	56.20	0.5
VTS	4.25	11	iP	30	58.00	0.4
			iSg	31	48.00	
BCI	4.26	339	ePn	31	00.00	2.5
ROI	4.50	287	P	31	00.50	-0.5
BRT	4.54	304	P	31	01.50	-0.1
TDS	4.69	287	P	31	03.00	-0.8
CSI	4.75	288	P	31	02.60	-2.1
CZI	4.76	282	P	31	01.20	-3.6X
SOI	4.81	268	P	31	05.80	0.4
			eSn	31	53.70	
MMN	5.01	289	P	31	06.40	-1.8
SGO	5.71	294	P	31	17.60	-0.5
			eSn	32	18.50	
HVAR	6.43	320	iPn	31	26.30	-2.0
DUI	6.73	301	P	31	31.50	-1.2
SDI	7.18	300	P	31	37.70	-1.3
MLR	7.62	21	eP	31	49.00	3.9X
VRI	8.19	23	ePd	31	54.50	1.5
CLL	14.42	336	eP	33	23.00	5.8X
SMF	15.78	307	eP	33	36.80	1.7
	0.8s		5.30nm			3.8mb
LBF	15.84	309	eP	33	37.80	1.9
	0.6s		3.60nm			3.7mb
LOR	16.04	309	eP	33	40.40	2.0
	0.8s		2.60nm			3.4mb
AVF	16.14	307	eP	33	41.30	1.5
	0.8s		4.50nm			3.7mb
SSF	16.16	308	eP	33	41.10	1.1
	0.8s		8.00nm			3.9mb
BGF	16.37	306	eP	33	43.90	1.2
	0.8s		10.70nm			4.0mb
HFS	22.39	349	eP	34	47.70	-3.4X
	0.5s		1.90nm			3.8mb
NB2	23.66	347	P	35	00.40	-3.2X
	0.7s		5.30nm			4.2mb
EKA	23.99	323	P	35	04.00	-2.7
	0.9s		7.80nm			4.3mb
S.D. = 1.4 on 50 of 56 obs.						

% JAN 05, 1990 00h 49m 34.89± 1.15s
36.948 N ± 7.5km 5.338 W ±11.4km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.5 (MDD).

EPRU	0.09	78	iP	49	36.30	-1.2
			eS	49	38.00	
EJIF	0.51	192	ePg	49	45.00	-0.2
			eSg	49	53.50	
MAL	0.78	106	iPgc	49	51.20	1.2
EHOR	0.87	5	ePg	49	52.00	0.4
			eSg	50	03.00	
AFC	1.47	77	ePn	50	01.00	-0.5
EBAN	1.73	45	ePn	50	05.50	0.3
S.D. = 1.1 on 6 of 6 obs.						

JAN 05, 1990 00h 55m 17.49± 1.02s
43.416 N ± 5.9km 5.415 E ± 7.3km
DEPTH = 10.4 ± 4.7 km
NEAR SOUTH COAST OF FRANCE (379)
MD 2.6 (STR).

GELF	0.03	164	Pg	55	18.93	-0.7
TREF	0.21	354	Pg	55	21.62	-0.5
BERF	0.23	117	Pg	55	22.20	-0.2
PUYF	0.24	61	Pg	55	21.42	-1.2
PRAF	0.43	335	Pg	55	26.53	0.3
VILF	0.49	26	Pg	55	26.13	-1.3
TAVF	0.51	67	Pg	55	27.07	-0.8
GANF	0.68	31	Pg	55	31.50	0.5
CALN	1.12	72	Pn	55	39.18	0.6
			Sg	55	55.45	
MVIF	1.35	69	Pn	55	42.43	0.0
			Sg	56	02.00	
REVF	1.46	76	Pn	55	44.49	0.7
			Sg	56	05.03	
TOUF	1.46	65	Pn	55	44.40	0.4
			Sg	56	04.49	
AURF	1.47	71	Pn	55	44.31	0.3
FOUF	1.49	41	ePc	55	56.80	12.6X
			e(Sg)	56	03.09	
AUTN	1.57	68	Pn	55	46.31	0.7
			Sg	56	07.65	
DOI	1.71	50	P	55	49.00	1.5
			eSn	56	11.70	
BNI	1.87	29	P	55	54.00	4.1X
			eSn	56	14.80	
CKI	2.30	63	P	55	59.80	3.8X
			eSn	56	28.50	
S.D. = 0.9 on 15 of 18 obs.						

JAN 05, 1990 01h 51m 01.40± 0.77s
29.411 N ± 6.2km 52.120 E ± 9.8km
DEPTH = 10.0km (geophysicist)
4.3mb (6 obs.)
SOUTHERN IRAN (353)

IR4	5.90	350	eP	52	31.00	-0.1
IR5	5.93	348	eP	52	32.50	1.0
IR1	6.11	349	eP	52	34.00	0.0
IR2	6.32	351	eP	52	35.00	-2.0
IR7	6.40	349	eP	52	39.00	0.8
KER	6.51	320	eP	52	41.00	1.2
RYD	6.78	228	iPd	52	45.10	1.7
BHD	7.65	302	ePn	53	37.00	41.4X
			eSn	55	20.00	
QASM	8.30	249	ePd	53	04.10	-0.6
SLY	8.32	320	eP	53	05.50	0.5
			iS	54	37.00	
			i	55	57.00	
MSL	10.25	315	eP	53	33.00	1.4
KMSA	11.35	219	eP+	53	45.70	-1.0
PRNI	14.89	278	ePc	54	41.00	7.3X
BBTK	18.99	308	iPd	55	26.00	0.5
ELL	19.97	297	eP	55	37.00	0.2
KHL	20.72	301	eP	55	44.70	0.1
GPA	20.88	307	eP	55	47.00	0.9
MLR	26.10	315	eP	56	40.50	3.4X
ZST	32.73	315	eP	57	35.60	-0.6
KHC	35.25	315	iPd	57	57.80	-0.2
LPG	38.88	307	eP	58	28.40	-0.6
	0.8s		5.90nm			4.3mb
HFS	40.08	331	eP	58	37.90	-0.4
	0.4s		1.80nm			4.1mb
SMF	41.05	308	eP	58	45.60	-0.9
	0.8s		5.30nm			4.3mb
SSF	41.33	309	eP	58	46.60	-2.2
	1.0s		6.00nm			4.3mb
NB2	41.60	331	P	58	49.70	-1.2
	0.8s		2.80nm			4.0mb
CHG	43.77	93	eP	59	10.50	1.4
LIC	58.45	259	P	01	00.00	-0.1
MBC	74.46	358	eP	02	41.00	-0.1
	0.6s		2.00nm			4.3mb
FRB	76.13	337	eP	02	54.00	3.2X
S.D. = 1.1 on 25 of 29 obs.						

? JAN 05, 1990 01h 56m 25.81± 1.40s
46.001 N ±13.8km 15.443 E ± 7.8km
DEPTH = 5.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.7 (LJU).

ZAG	0.42	116	i(Pg)	56	34.20	0.0
			iSg	56	37.50	
VBY	0.51	195	eP	56	36.10	0.0
			e(Sn)	56	40.00	
LJU	0.63	274	e(Pg)	56	38.00	-0.5
			eSg	56	48.00	
VOY	1.08	272	ePg	56	47.20	0.5
			eSg	57	03.00	
TRI	1.21	257	iP	57	05.60	16.8X
KBA	1.80	307	i(P)	57	26.40	28.4X
	1.0s		5.40nm			
			e	57	53.50	
S.D. = 0.8 on 4 of 6 obs.						

? JAN 05, 1990 02h 19m 39.10± 5.81s
47.515 N ±18.5km 8.532 E ±54.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.5 (LDG).

FEL	0.50	316	ePn	19	48.74	-0.6
BSF	1.22	286	Pg	20	01.00	-0.8
			Sg	20	22.60	
HAU	1.55	289	Pg	20	08.60	1.8
			Sg	20	33.20	
LPL	2.35	213	Pg	20	18.50	-0.1
LPG	2.36	212	Pg	20	18.60	-0.2
			Sg	20	51.60	
S.D. = 1.5 on 5 of 5 obs.						

& JAN 05, 1990 03h 37m 40.10s
59.250 N 154.884 W
DEPTH = 100.5km
SOUTHERN ALASKA (2)
<AGS-P>.

CDD	0.72	116	iP	37	56.98	-1.0
AUL	0.76	79	eP	38	03.23	4.9
			eS	38	12.05	
CNPM	1.89	80	eP	38	10.99	-0.7
			eS	38	33.59	
SLKM	2.67	60	eP	38	17.93	-4.2
SEW	2.89	70	eP	38	20.97	-4.1
PMS	3.32	51	eP	38	26.44	-4.6
6 obs. associated						

JAN 05, 1990 04h 02m 41.63± 0.47s
39.334 N ± 4.7km 20.529 E ± 3.4km
DEPTH = 6.0 ± 2.8 km
GREECE-ALBANIA BORDER REGION (392)
ML 3.3 (THE). MD 3.6 (ATH).

SRN	0.68	323	iPg	02	54.40	-0.9
LSK	0.82	4	iPgd	02	57.00	-0.9
TPE	1.04	338	iPgc	03	01.50	-0.1
VLS	1.16	178	ePb	03	04.00	0.4
KBN	1.31	10	ePn	03	06.00	-0.1
KZN	1.36	44	ePb	03	05.70	-1.5
VLO	1.38	325	ePn	03	09.40	2.0
AGG	1.43	102	ePb	03	07.80	-0.4
BERA	1.44	342	ePn	03	09.30	1.1
LIT	1.70	63	ePn	03	12.30	0.4
TIR	2.07	346	ePn	03	18.50	1.2
NEO	2.09	90	ePn	03	18.60	0.9
GRG	2.16	41	ePn	03	19.00	0.3
LCI	2.22	298	P	03	20.00	0.5
			eSn	03	44.30	
THE	2.28	55	ePn	03	20.00	-0.3
PHP	2.35	358	ePn	03	21.30	-0.1
LACI	2.38	345	ePn	03	21.80	0.0
PLG	2.47	64	ePn	03	23.00	-0.2
KNT	2.57	44	ePn	03	24.30	-0.2
SOH	2.63	55	ePn	03	24.70	-0.7
KKS	2.74	358	ePn	03	30.30	3.4X
PUK	2.75	350	ePn	03	24.10	-2.9X
SDA	2.79	344	ePn	03	26.70	-0.9
OUR	2.84	68	ePn	03	27.10	-1.2
BRT	2.98	302	P	03	35.00	4.7X
BCI	3.05	354	iPn	03	32.70	1.5
ROI	3.07	276	P	03	31.00	-0.7
TDS	3.26	277	P	03	34.50	0.2
CSI	3.31	279	P	03	34.80	-0.2
ATN	4.13	255	P	03	45.30	-1.3
SGO	4.19	289	P	03	48.50	1.0
RDO	4.24	63	ePn	03	48.50	0.3
HVAR	4.92	323	iPn	03	55.10	-2.7
SDI	5.64	297	P	04	08.20	0.1
S.D. = 1.0 on 31 of 34 obs.						

JAN 05, 1990 04h 21m 09.57± 0.42s
47.429 N ± 4.3km 9.072 E ± 3.9km
DEPTH = 8.7 ± 3.3 km
GERMANY (543)
ML 3.3 (FUR), 3.2 (LDG). MD 2.9 (STR).

SAX	0.26	134	iPd	21 14.90	-0.1
ZLA	0.47	277	ePc	21 19.60	0.6
SLE	0.52	311	iPd	21 20.60	0.6
LLS	0.56	185	ePd	21 20.70	-0.3
FEL	0.84	302	ePn	21 26.54	0.5
VDL	0.98	164	iPd	21 28.20	-0.3
OSS	1.04	135	ePd	21 28.90	-0.6
TMA	1.33	186	ePd	21 34.80	0.4
ECH	1.51	302	Pg	21 38.64	1.8
			Sg	21 58.77	
LOMF	1.53	268	Pg	21 39.18	2.0
			Sg	21 59.20	
CDF	1.56	310	Pn	21 37.50	-0.1
			Pg	21 38.90	
			Sg	22 00.02	
MMK	1.57	209	ePc	21 39.20	1.2
BSF	1.59	286	Pg	21 39.76	1.6
			Sg	22 01.37	
FUR	1.66	63	iPd	21 41.40	2.4
DIX	1.77	221	eP	21 43.10	2.3
GWF	1.83	328	Pg	21 45.13	3.7X
SCE	1.84	101	ePn	21 43.80	2.0
HAU	1.93	288	Pn	21 42.90	0.0
			Pg	21 46.80	
			Sg	22 11.80	
EMS	2.00	228	eP	21 47.70	3.5X
TOD	2.19	355	ePn	21 45.49	-1.2
VITF	2.23	292	Pg	21 52.21	5.0X
LPL	2.50	221	Pn	21 51.80	0.4
			Pg	21 56.60	
LPG	2.51	221	Pn	21 51.90	0.4
			Pg	21 56.80	
			Sg	22 30.00	
RUP	2.64	330	ePn	21 53.78	0.7
ABH	2.66	338	ePn	21 53.62	0.3
FVI	2.67	107	P	21 59.70	6.2X
			eSn	22 34.50	
GRF	2.68	31	ePn	21 52.20	-1.5
			e(Pg)	21 54.40	
			e	22 12.50	
			e(Sn)	22 13.60	
			eSg	22 21.10	
BNI	2.90	216	P	22 04.70	7.8X
			eSn	22 41.10	
KBA	2.93	95	iP	21 58.40	1.0
			iPgd	22 02.60	
			i	22 04.10	
			iSg	22 39.80	
WLF	2.96	320	P	22 06.00	8.4X
			S	22 44.00	
KHC	3.46	59	iPn	22 03.00	-1.7
			Pg	22 13.70	
			Sg	22 59.00	
LBF	3.50	265	Pn	22 05.40	0.1
			Pg	22 16.40	
			Sg	23 00.60	
LOR	3.55	269	Pn	22 05.20	-0.8
			Pg	22 16.20	
			Sg	23 00.90	
VOY	3.60	111	e(Pn)	22 17.90	11.1X
			eSn	23 00.40	
SMF	3.66	260	Pn	22 07.20	-0.4
			Pg	22 18.80	
			Sg	23 05.20	
SSF	3.81	267	Pn	22 09.40	-0.3
			Pg	22 22.20	
			Sg	23 10.00	
AVF	3.96	263	Pn	22 11.00	-0.8
			Pg	22 25.00	
			Sg	23 13.60	
DOU	3.99	314	eP	22 48.80	36.6X
BGF	4.35	261	Pn	22 16.00	-1.4
			Pg	22 31.10	
			Sg	23 27.00	
PRU	4.44	53	Pg	22 35.00	16.4X
			Sg	23 30.50	
MAF	4.63	257	Pn	22 20.00	-1.3
TCF	4.84	259	Pn	22 22.00	-2.4
			Pg	22 40.20	

LSF	5.31	260	Pg	22 48.60	17.6X

S.D. = 1.3 on 33 of 43 obs.

JAN 05, 1990 05h 25m 13.04± 0.81s
38.663 N ± 5.4km 26.155 E ±10.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.2 (ATH).

PRK	0.59	9	ePb	25 25.70	0.7
			eSn	25 37.50	
IZM	0.91	107	iPn	25 30.70	0.2
SMG	1.09	150	ePn	25 34.00	0.4
EZN	1.17	6	iPn	25 34.80	0.0
APE	1.67	197	ePn	25 42.00	-0.4
EDC	2.14	38	ePn	25 48.00	-1.2
DST	2.14	63	ePn	25 54.50	5.2X
RDO	2.53	349	ePn	25 55.00	0.3

S.D. = 0.8 on 7 of 8 obs.

JAN 05, 1990 06h 39m 40.45± 0.33s
7.828 N ± 5.5km 127.198 E ± 8.3km
DEPTH = 33.0km (normal)
4.0mb (3 obs.) 3.4Msz (1 obs.)
PHILIPPINE ISLANDS REGION (248)

SSE	23.82	347	P	44 51.20	-0.2
	1.0s		0.01nm		1.4mb X
	N 16s		0.44um		
	E 16s		0.38um		
			sS	49 12.00	
NJ2	25.32	343	Pc	45 06.40	0.6
LOE	26.58	293	eP	45 18.00	0.3
WB5	28.42	166	eP	45 34.00	-0.4
			e	45 39.60	
WRA	28.48	166	Pd	45 34.20	-0.7
	0.8s		1.90nm		3.8mb
CHTO	29.53	295	eP	45 44.30	-0.1
	1.0s		2.50nm		3.9mb
TIA	29.71	343	eP	45 45.00	-0.8
ASPA	31.98	168	eP	46 05.60	-0.3
	0.5s		3.00nm		4.4mb
	Z 19s		0.08um		3.4Msz
			LR	58 16.70	
TIY	32.62	338	eP	46 11.10	-0.3
CTA	33.49	146	eP	46 20.00	0.9
BJI	33.56	345	eP	46 18.50	-0.9
	1.2s		0.03nm		2.1mb X
SNY	34.01	355	iPc	46 23.10	-0.2
LZH	35.30	326	Pc	46 34.50	-0.2
	1.0s		0.02nm		2.0mb X
HHC	35.71	339	eP	46 38.50	0.4
SHL	37.97	302	iP	46 57.30	-0.1
GUN	43.82	302	P	47 45.80	0.1
	0.8s		46.00nm		5.3mb X
PKI	44.10	302	P	47 48.00	0.0
	0.6s		14.00nm		4.9mb X
KKN	44.28	302	P	47 49.40	0.1
DMN	44.37	302	P	47 50.00	-0.1
GKN	44.89	302	P	47 53.80	-0.3
	0.6s		17.00nm		5.1mb X
GBA	49.16	281	P	48 28.00	0.4
WMQ	49.70	323	eP	48 32.00	0.5
MAIO	67.45	306	iPc	50 35.80	0.3
M8C	87.88	13	eP	52 28.50	1.0

S.D. = 0.5 on 24 of 24 obs.

• JAN 05, 1990 06h 42m 10.55± 2.05s
41.736 N ±17.4km 126.807 W ±11.8km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)

LVP	5.37	35	eP	43 33.04	0.3
APM	5.46	41	eP	43 34.24	0.3
CDFW	5.57	37	eP	43 35.38	-0.1
YEL	5.58	35	eP	43 36.54	0.8
ESD	5.58	35	eP	43 36.63	0.8
ERK	5.59	34	eP	43 35.31	-0.5
CZM	5.63	32	eP	43 36.23	-0.1
GULW	5.63	40	eP	43 36.54	0.1
VTHM	5.70	51	eP	43 37.40	0.0
KOSW	5.78	34	eP	43 38.34	0.0
LMW	5.90	32	eP	43 40.16	0.0
GLK	6.10	36	eP	43 42.65	-0.4
LON	6.16	34	eP	43 43.70	-0.1
WPW	6.24	36	eP	43 44.34	-0.6
RVC	6.25	32	eP	43 44.29	-0.9
JBO	6.28	51	eP	43 46.07	0.5
FMW	6.37	34	eP	43 46.71	-0.2
GSM	6.54	32	eP	43 49.56	0.4
LRM	11.15	64	eP	44 53.00	-0.3
FFC	20.89	43	eP	46 55.00	-0.2
	1.2s		23.00nm		4.4mb
RSON	24.45	57	eP	47 36.50	6.2X
INK	26.87	354	eP	47 53.00	0.2

S.D. = 0.4 on 21 of 22 obs.

JAN 05, 1990 06h 51m 16.86± 0.66s
41.746 N ± 4.0km 127.036 W ± 5.9km
DEPTH = 10.0km (geophysicist)
4.1mb (4 obs.) 4.6Msz (1 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)

FHC	2.49	111	eP	51 57.80	-0.2
LBFM	3.88	94	eP	52 19.00	0.9
MIN	4.34	107	eP	52 24.20	-0.3
KMOR	4.66	32	eP	52 28.61	-0.4
ORV	4.75	116	eP	52 29.00	-1.2
GT2	4.86	44	eP	52 30.72	-1.1
			eS	53 52.57	
PGO	4.99	40	eP	52 34.45	0.9
NLO	5.05	30	eP	52 35.28	0.8
VBEM	5.17	48	eP	52 35.74	-0.5
TDH	5.20	45	eP	52 35.98	-0.8
			eS	53 56.82	
VLMM	5.24	42	eP	52 36.93	-0.3
			eS	53 58.69	
VLL	5.38	45	eP	52 38.97	-0.2
			eS	54 00.56	
RVW	5.38	34	eP	52 39.54	0.4
VFP	5.40	47	eP	52 39.42	-0.1
VIPM	5.45	57	eP	52 39.18	-1.1
LVP	5.46	36	eP	52 40.50	0.2
BMW	5.46	29	eP	52 40.48	0.2
CROR	5.47	52	eP	52 39.24	-1.2
MTMW	5.52	38	eP	52 40.55	-0.6
APM	5.56	42	eP	52 41.51	-0.2
FL2	5.59	36	eP	52 42.51	0.4
SHW	5.63	36	eP	52 43.47	0.7
JLK	5.64	37	eP	52 43.16	0.4
HSR	5.64	37	eP	52 43.64	0.7
CDFW	5.66	38	eP	52 41.95	-1.1
YEL	5.67	36	eP	52 44.10	0.8
ERK	5.68	35	eP	52 43.37	0.0
ESD	5.68	37	eP	52 44.01	0.6
CZM	5.71	33	eP	52 44.06	0.3
SOSW	5.71	37	eP	52 44.48	0.6
GULW	5.74	41	eP	52 43.97	-0.3
TDL	5.77	35	eP	52 44.42	-0.2
VTHM	5.83	52	eP	52 43.68	-1.8
APW	5.83	31	eP	52 46.69	1.3
KOSW	5.86	35	eP	52 46.18	0.3
ASR	5.90	40	eP	52 46.29	-0.2
VGB	5.90	48	eP	52 45.91	-0.5
CPW	5.93	27	eP	52 46.78	0.0
LMW	5.99	33	eP	52 47.90	0.2
OBH	6.02	21	eP	52 47.93	-0.1
ARN	6.11	134	e(P)	52 50.00	0.6
LON	6.25	35	eP	52 51.00	-0.4
RMW	6.82	31	eP	53 00.00	0.5
KVN	7.33	109	eP	53 06.00	-0.7
PGC	7.35	19	eP	53 06.00	-0.7
TNP	8.38	113	e(P)	53 17.50	-4.0X
LRM	11.30	64	eP	54 02.00	0.4
MSU	11.83	101	eP	54 10.50	1.7
SES	14.05	47	eP	54 39.00	0.9
ALQ	17.49	106	eP	55 23.00	0.4
	1.0s		2.50nm		3.3mb
FFC	21.00	43	eP	56 03.00	0.4
	0.9s		20.00nm		4.5mb
PMR	23.91	334	eP	56 29.50	-1.8
RSON	24.58	57	eP	56 42.00	4.0X
TUL	24.94	93	e(P)	56 44.50	3.0X
	1.4s		4.90nm		4.0mb
	Z 21s		1.88um		4.6Msz
			LR	04 00.00	
FBA	26.05	340	eP	56 55.00	3.4X
INK	26.85	355	eP	56 44.00	-14.9X
TTA	27.21	331	eP	57 02.00	-0.4
IMA	28.54	337	eP	57 14.70	0.2
MBC	34.76	3	eP	58 10.50	1.7
	0.8s		3.00nm		4.2mb
FRB	39.82	36	eP	58 55.00	3.6X

S.D. = 0.8 on 54 of 60 obs.

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* JAN 05, 1990 07h 07m 27.62± 2.57s
41.842 N ±10.9km 126.885 W ±25.9km
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)

FHC	2.42	114	eP	08 07.00	-0.9
LBFM	3.78	96	eP	08 28.00	0.6
MIN	4.26	109	eP	08 33.50	-0.7
BMW	5.33	28	eP	08 50.00	0.9
ARN	6.10	136	eP	09 01.00	1.0
LON	6.11	35	eP	08 59.00	-1.1
KVN	7.26	110	eP	09 16.00	-0.5
LRM	11.16	64	eP	10 11.70	1.2
FFC	20.86	43	iPd	12 11.30	-0.6
	1.0s		16.00nm		4.3mb
RSON	24.44	57	eP	12 53.50	6.2X
FRB	39.68	36	eP	15 01.00	0.0

S.D. = 1.0 on 10 of 11 obs.

JAN 05, 1990 07h 16m 51.78± 0.37s
41.836 N ± 2.7km 126.796 W ± 4.5km
DEPTH = 10.0km (geophysicist)
4.7mb (19 obs.) 5.1Msz (2 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)
ML 4.4 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.8.: 15S, 26C
Centroid Locotion:
Origin Time 07:17: 1.0 0.6
Lat 42.28N 0.07 Lon 127.60W 0.07
Dep 15.0 FIX Holf-durotion 1.9
Moment Tensor; Scole 10**17 Nm
Mrr=-1.38 0.08 Mtt=-0.04 0.13
Mff= 1.42 0.10 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf= 0.11 0.08
Principol Axes:

T	Val= 1.43	Plg= 0	Azm= 94
N	-0.04	0	4
P	-1.38	90	180

Best Double Couple:Mo=1.4*10**17
NP1:Strike=184 Dip=45 Slip= -90
NP2: 4 45 -90

FHC	2.36	115	ePc	17 30.60	-0.5
WDC	3.45	110	iPc	17 46.60	0.0
			eS	19 17.00	
LBFM	3.71	96	eP	17 51.50	0.9
LTCM	3.89	113	eP	17 52.30	-0.6
GROR	4.19	32	eP	17 56.95	-0.2
MIN	4.20	109	ePc	17 56.90	-0.5
KMOR	4.49	31	eP	18 00.92	-0.5
ORV	4.62	118	e(P)	18 03.10	-0.2
GT2	4.67	43	eP	18 03.79	-0.3
PGO	4.81	39	eP	18 06.69	0.8
NLO	4.89	28	eP	18 07.31	0.2
VBEM	4.98	48	eP	18 07.96	-0.5
GMO	5.00	57	eP	18 08.48	-0.4
TDH	5.01	45	eP	18 08.42	-0.5
VLMM	5.06	41	eP	18 09.57	0.0
VLL	5.19	44	eP	18 11.27	-0.1
VFP	5.21	46	eP	18 11.27	-0.4
RVW	5.21	33	eP	18 11.80	0.2
VIPM	5.25	57	eP	18 11.56	-0.8
CROR	5.27	51	eP	18 11.60	-1.0
BRK	5.28	137	e(P)	18 12.00	-0.5
			eS	19 19.00	
LVP	5.28	35	eP	18 12.62	-0.1
BKS	5.29	137	ePd	18 12.10	-0.6
			e(S)	19 13.50	
BMW	5.30	28	eP	18 12.29	-0.6
MTMW	5.34	37	eP	18 12.82	-0.7
APM	5.38	42	eP	18 13.96	-0.1
FL2	5.41	35	eP	18 15.18	0.6
SHW	5.46	35	eP	18 15.84	0.6
JLK	5.46	36	eP	18 15.31	0.1
HSR	5.46	36	eP	18 15.27	-0.1
CDFW	5.48	37	eP	18 15.31	-0.2
YEL	5.49	36	eP	18 16.24	0.5
ESD	5.50	36	eP	18 16.25	0.4
ERK	5.50	34	eP	18 15.42	-0.4
PCC	5.51	140	eP	18 15.00	-0.8
VGB	5.71	48	eP	18 17.60	-1.1
MHC	6.00	137	ePc	18 23.50	0.7
ARN	6.05	136	eP	18 21.70	-1.7
GCC	6.07	141	e(P)	18 22.40	-1.3
LON	6.08	34	eP	18 23.90	0.1
CMB	6.22	126	eP	18 25.00	-0.9
SAO	6.55	139	eP	18 29.00	-1.5
RMW	6.65	31	eP	18 32.00	0.0
LLA	6.91	137	e(P)	18 34.60	-1.0
PRS	6.93	141	e(P)	18 34.80	-1.0
KVN	7.19	110	eP	18 38.50	-1.2
PGC	7.21	18	eP	18 39.00	-0.7
FRI	7.31	129	e(P)	18 40.90	-0.3
PRI	7.42	138	e(P)	18 44.20	1.3
ISA	8.95	131	eP	19 05.00	0.9
CLC	9.36	127	eP	19 16.00	6.3X
SBB	10.03	132	eP	19 20.00	1.0
GSC	10.18	127	eP	19 27.00	5.9X
PAS	10.25	136	eP	19 23.00	1.0
MWC	10.25	135	eP	19 23.00	0.8
RVR	10.79	133	eP	19 30.00	0.6
LRM	11.10	64	eP	19 34.30	0.5
TPC	11.46	129	eP	19 43.00	4.5X
PLM	11.56	134	eP	19 35.00	-5.0X
MSU	11.67	102	eP	19 43.00	1.5
DAU	11.81	92	eP	19 45.00	1.5
BAR	12.18	135	eP	20 01.00	12.8X
BW06	12.80	80	eP	19 56.50	-0.3
GLA	12.92	129	eP	20 07.00	8.8X
SES	13.86	47	eP	20 10.00	-0.5
GOL	16.37	90	eP	20 42.30	-1.1
ANMO	17.34	107	eP	20 57.50	1.9
ALQ	17.35	107	eP	20 58.80	3.1X
	1.7s		38.46nm		4.3mb
	Z 20s		9.57um		
FFC	20.82	43	iPc	21 34.80	-0.8
	0.6s		13.00nm		4.5mb X
FFC	20.82	43	eP	21 42.00	6.4X
	1.3s		101.00nm		5.0mb
MEO	23.16	98	iPd	22 02.40	3.1X
PMR	23.91	333	eP	22 06.00	-0.2
	1.5s		74.32nm		5.0mb
RSON	24.39	57	eP	22 11.30	0.4
	1.5s		97.93nm		5.2mb
SIO	24.45	94	e(P)	22 15.50	3.8X
TUL	24.77	94	eP+	22 18.90	4.1X
	1.0s		11.70nm		4.5mb
	Z 19s		8.68um		5.3Msz
			eS	26 35.00	
			LR	29 42.00	
LNO	24.77	94	e(P)	22 18.00	3.3X
FBA	26.03	340	eP	22 26.00	-0.4
	1.0s		7.50nm		4.3mb
INK	26.77	354	eP	22 33.00	-0.2
TTA	27.22	331	eP	22 35.50	-1.9
	1.4s		28.41nm		4.8mb
IMA	28.53	337	eP	22 48.30	-1.0
	1.3s		11.79nm		4.5mb
RSCP	32.52	87	eP	23 25.40	0.6
BRW	33.09	343	eP	23 28.20	-1.1
MBC	34.66	3	eP	23 42.00	-0.9
	1.5s		25.00nm		4.9mb
JSC	36.30	87	eP	23 57.00	-0.2
FRB	39.64	36	eP	24 25.00	0.1
KEV	67.07	10	eP	27 42.00	-4.8X
SOD	69.26	11	iP	27 56.40	-4.1X
NB2	71.93	20	P	28 15.00	-1.8
	1.4s		12.20nm		4.8mb
SUF	73.56	13	eP	28 24.90	-1.3
	0.6s		17.50nm		5.3mb
NUR	75.37	14	eP	28 38.00	1.3
ARE	77.23	126	eP	28 44.00	-4.2X
ZOBO	79.15	123	P	28 58.50	-0.6
	1.0s		4.25nm		4.4mb
			LR	57 14.00	
BJI	80.50	316	P	28 55.00	-10.3X
	Z 26s		0.79um		4.9MszX
			eS	38 52.00	
CLL	80.85	24	eP	29 09.00	2.0
	1.9s		25.00nm		4.9mb
LOR	81.08	32	eP	29 11.00	2.7
	0.8s		2.60nm		4.3mb
SSF	81.11	32	eP	29 11.10	2.7
	0.6s		2.70nm		4.5mb
AVF	81.27	32	eP	29 11.30	2.0
	1.0s		10.80nm		4.8mb
LBF	81.36	32	eP	29 12.20	2.4
	0.6s		1.80nm		4.3mb
SMF	81.59	32	eP	29 13.00	2.1
	0.8s		2.60nm		4.3mb
KSP	82.24	23	eP	29 14.20	0.0
PRU	82.48	24	eP	29 16.50	1.0
KHC	82.94	25	eP	29 19.80	1.8
SSE	84.19	307	eP	29 23.00	-1.6
	Z 20s		0.50um		4.9Msz
			eS	39 48.00	
			PS	40 40.00	
SPC	84.83	21	eP	29 27.70	0.0
ZST	84.84	23	e(P)	29 27.40	-0.2
LZH	89.67	321	eP	29 51.50	0.0
	1.5s		33.00nm		5.4mb
	Z 27s		0.80um		5.0Msz
WRA	109.49	260	PKPd	35 16.80	-7.5
	0.6s		0.60nm		

S.D. = 1.0 on 90 of 107 obs.

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* JAN 05, 1990 07h 22m 40.49± 2.64
41.771 N ± 9.4km 126.694 W ±23.2k
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34

FHC	2.26	114	eP	23 17.50	-1.0
LBFM	3.63	95	eP	23 38.50	0.4
GT2	4.67	42	eP	23 52.47	-0.3
PGO	4.81	38	eP	23 54.93	0.3
VBEM	4.96	47	eP	23 57.74	0.8
TDH	5.01	44	eP	23 57.08	-0.5
VLMM	5.06	40	eP	23 58.18	-0.1
VLL	5.18	43	eP	24 00.05	0.0
VFP	5.20	45	eP	24 01.05	0.8
VIPM	5.22	56	eP	24 00.12	-0.5
RVW	5.22	32	eP	24 00.78	0.3
LVP	5.29	34	eP	24 01.49	-0.1
BMW	5.32	27	eP	24 01.58	-0.4
MTMW	5.35	36	eP	24 01.39	-0.9
			eS	25 01.17	
APM	5.38	41	eP	24 02.73	0.0
HSR	5.47	35	eP	24 04.36	0.1
CDFW	5.49	36	eP	24 03.79	-0.5
YEL	5.50	35	eP	24 04.91	0.3
ESD	5.51	35	eP	24 05.11	0.4
ERK	5.51	33	eP	24 04.56	-0.1
SOSW	5.54	35	eP	24 05.01	-0.1
GULW	5.55	40	eP	24 05.28	0.0
CZM	5.55	31	eP	24 04.98	-0.2
TDL	5.60	34	eP	24 05.86	-0.1
VTHM	5.62	51	eP	24 06.03	-0.1
APW	5.68	29	eP	24 07.71	0.8
KOSW	5.70	33	eP	24 07.25	0.0
ASR	5.72	38	eP	24 07.32	-0.3
LMW	5.83	31	eP	24 09.58	0.5
GL2	5.96	43	eP	24 10.41	-0.5
LON	6.09	34	eP	24 13.00	0.3
KVN	7.10	110	eP	24 28.00	0.9

S.D. = 0.5 on 32 of 32 obs.

? JAN 05, 1990 09h 36m 54.38± 2.92s
21.236 S ±50.5km 178.349 W ±31.7km
DEPTH = 550.3 ± 23.2 km
4.4mb (6 obs.)
FIJI ISLANDS REGION (181)

SVA	4.32	315	eP	38 19.50	0.2
SGE	5.05	315	iPc	38 25.10	-0.4
DZM	14.17	264	iPc	39 56.20	0.9
BRS	26.98	251	iP	41 55.00	0.8
CTA	33.10	266	iPd	42 46.80	0.3
	0.5s		21.13nm		5.0mb
ASPA	44.04	258	eP	44 14.80	-0.5
	0.6s		18.00nm		4.8mb
	Z 18s		0.07um		3.6Msz
			LR	58 49.20	
WB5	44.17	263	eP	44 15.70	-0.6
WRA	44.18	263	Pc	44 15.20	-1.2
	0.5s		2.30nm		4.0mb
WARB	50.30	253	iPd	45 02.20	-0.4
NANU	60.89	255	iPd	46 16.10	0.0
	0.4s		15.00nm		4.8mb
KVN	82.27	43	eP	48 19.20	-0.3
TNP	82.28	44	eP	48 20.00	0.3
	0.8s		1.47nm		3.6mb
CHTO	90.19	290	iP	48 58.50	1.0
	0.5s		1.02nm		4.0mb

S.D. = 0.7 on 13 of 13 obs.

JAN 05, 1990 10h 08m 16.53± 0.61s
44.570 N ± 6.1km 9.182 E ± 4.9km

05d 10h

DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.5 (GEN).

BOB	0.27	44	Pc	08 21.20	-1.1
			eSg	08 25.40	
PCP	0.46	267	P	08 25.01	-0.8
			S	08 31.32	
CKI	0.66	258	P	08 31.50	1.8
FIN	0.79	243	P	08 31.37	-0.5
			S	08 42.39	
ROB	0.98	254	P	08 34.91	-0.3
			S	08 48.08	
BDI	1.14	116	P	08 38.70	0.8
			eSg	08 53.70	
IMI	1.14	235	P	08 36.98	-0.9
			S	08 52.48	
ENR	1.31	255	P	08 40.07	-0.7
			S	08 56.58	
VAI	1.33	348	P	08 41.80	0.8
			eSg	08 59.20	
ORX	1.36	322	P	08 40.96	-0.7
			S	40 56.82	
STV	1.37	257	P	08 41.46	-0.3
			S	08 58.79	
DOI	1.39	268	P	08 43.70	1.7
			eSg	09 02.70	
SBF	1.44	241	Pn	08 42.20	-0.5
			Sn	09 03.60	
RSP	1.49	294	P	08 43.45	0.0
PZZ	1.49	268	P	08 43.45	0.0
LSD	1.69	302	P	08 46.53	0.1
RRL	1.74	282	P	08 47.76	0.5

S.D. = 0.9 on 17 of 17 obs.

JAN 05, 1990 10h 10m 21.81± 0.22s
8.800 S ± 5.1km 106.442 E ± 5.9km
DEPTH = 29.0km (6 depth phases)
5.3mb (21 obs.) 5.8Msz (8 obs.)
SOUTH OF JAVA (282)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 18S, 39C
Centroid Location:
Origin Time 10:10:38.5 0.7
Lat 8.75S FIX; Lon 106.53E FIX
Dep 15.0 FIX Half-duration 2.8
Moment Tensor; Scale 10**17 Nm
Mrr= 2.27 0.17 Mtt=-3.41 0.15
Mff= 1.15 0.23 Mrt=-3.33 0.82
Mrf= 3.67 0.42 Mtf= 0.16 0.18
Principal Axes:

	Vol= 6.09	Plg=51	Azm=245
N	-0.61	23	124
P	-5.47	29	20

Best Double Couple:Mo=5.8*10**17
NP1:Strike= 64 Dip=26 Slip= 27
NP2: 309 78 113

KGM	11 19	344	eP	13 02.00	-0.9
MES	13 41	75	ePc	13 35.20	2.5
PSI	13 66	326	ePd	13 30.00	-6.0X
IPM	14.35	338	ePd	13 40.50	-4.6X
	1 0s	27.70nm		4.8mb	
NANU	16 23	149	eP	14 03.00	-6.4X
	0.3s	12.00nm		4.5mb	
			eS	16 48.00	
TSM	17.37	42	ePc	14 33.10	9.2X
FFM	17.67	34	ePd	14 28.70	0.9
MBL	17.82	135	eP	14 24.70	-4.8X
			eS	17 27.00	
MEKA	21.10	149	eP	15 06.00	-0.5
			eS	18 50.00	
AAI	22.21	78	ePd	15 21.50	3.9X
MRWA	22.21	157	eP	15 17.00	-0.5
NNT	22.27	342	eP	15 19.20	1.0
BAL	23.72	158	eP	15 32.00	-0.3
MTN	24.57	102	eP	15 41.00	0.3
DAV	24.75	51	eP	15 38.00	-4.5X
MUN	24.78	160	eP	15 42.00	-0.6
KLB	25.00	157	eP	15 43.00	-1.7
NST	25.10	346	eP	15 45.00	-0.8
WARB	25.82	135	eP	15 51.00	-1.5
			eS	20 43.00	
COOL	25.90	150	eP	15 53.00	-0.2
NWAO	26.00	159	eP	15 53.00	-1.1
LOE	26.45	350	eP	15 56.50	-1.8
BDT	26.90	344	eP	16 02.00	-0.4
RKG	26.96	160	eP	16 05.00	2.1
QCP	27.44	32	eP	16 15.00	7.7X
CHG	28.42	345	iPd	16 14.00	-2.2
	1.0s	59.25nm		5.3mb	
			eS	21 36.00	
CHTO	28.42	345	iPd	16 13.90	-2.3
	1.2s	76.39nm		5.3mb	
BAG	28.69	29	eP+	16 16.00	-2.9
			e(S)	21 02.00	
WRA	29.16	115	Pc	16 22.30	-0.6
	1.4s	92.60nm		5.3mb	
WB5	29.16	115	iPd	16 22.00	-1.0
ASPA	30.14	123	iPd	16 30.20	-1.5
	1.1s	41.00nm		5.2mb	
Z	20s	17.44um		5.7Msz	
			iS	22 23.30	
			LR	30 01.30	
HKC	31.83	14	P	16 49.00	2.6
			S	21 59.00	
KMI	33.91	354	eP	17 04.00	-0.8
KMI	33.91	354	Pd	17 05.00	0.2X
Z	15s	37.60um		6.2MszX	
N	13s	26.40um			
E	13s	22.80um			
			sP	17 19.50	150kmX
			i	17 37.50	
			S	22 30.00	
KOD	34.49	303	eP	17 01.40	-8.6X
			eS	22 42.00	
GBA	36.39	307	P	17 25.10	-0.7
ANP	36.83	23	eP	17 31.00	1.5
SHL	36.98	338	iP	17 30.00	-0.9
			iS	23 12.00	
HYB	37.92	313	iPc	17 38.30	-0.4
	1.0s	90.00nm		5.6mb	
			eS	23 28.00	
ADE	39.37	136	iPc-	17 50.80	0.1
	1.2s	109.38nm		5.5mb	
STK	39.88	130	iPc	17 54.90	0.0
CTA	40.05	111	iPd	17 57.20	0.7
	1.0s	90.00nm		5.5mb	
			iS	23 52.00	
			iSSS	27 04.00	
PMG	40.19	94	eP	17 58.00	0.4
	1.0s	40.00nm		5.1mb	
PKI	41.50	331	P	18 08.40	-0.2
GUN	41.56	332	P	18 09.20	0.1
DMN	41.68	331	P	18 10.00	0.1
KKN	41.74	331	P	18 10.40	-0.1
POO	42.09	310	eP	18 13.30	0.1
			iSn	24 35.00	
SSE	42.11	19	Pc	18 13.00	-0.1
	1.0s	42.00nm		5.1mb	
Z	20s	3.00um		5.2Msz	
N	12s	3.50um			
E	12s	4.90um			
			iS	24 32.00	
			sS	25 08.00	
			ScS	28 00.00	
GKN	42.23	331	P	18 14.20	-0.2
CMS	42.98	127	eP	18 20.00	-0.3
BOM	43.09	310	eP	18 22.70	1.4
			eS	24 26.20	
BFD	43.17	137	eP	18 23.00	1.2
RMQ	43.74	119	eP	18 27.00	0.4
LZH	44.71	357	Pc	18 34.00	-0.4
	1.2s	155.00nm		5.8mb	
Z	15s	33.90um		6.4MszX	
N	13s	23.20um			
E	15s	11.70um			
			pP	18 41.80	26km
			sP	18 45.20	
			i	18 56.70	
			PP	20 13.00	
			PcP	20 32.00	
			PPP	20 47.00	
			ScP	24 10.00	
			PcS	24 19.00	
			eS	24 50.00	
			sS	25 07.50	
			PS	25 40.00	
			i	26 16.00	
			i	26 50.00	
			ScS	28 29.00	
BWA	46.14	130	eP	18 47.50	1.8
NDI	46.74	324	iPc	18 48.50	-1.9
	1.0s	138.00nm		5.9mb	
			ePP	20 36.00	
			eS	25 35.00	
CAN	46.93	131	eP	18 51.90	-0.1
BRS	47.44	119	iPc	18 55.60	-0.5
			i	19 06.60	38km
			i	19 17.60	
			eS	25 56.00	
			eSS	29 00.00	
BJI	49.42	10	Pc+	19 08.50	-2.6
	1.0s	68.00nm		5.6mb	
Z	12s	14.47um		6.2MszX	
N	12s	8.06um			
			eS	26 11.00	
HNR	52.79	95	eP+	19 36.00	-1.1
			eS	27 04.00	
MAT	54.08	32	(P)	19 43.00	-3.2X
	1.2s	20.31nm		5.0mb	
Z	20s	2.13um		5.2Msz	
			eS	27 15.00	
QUE	54.24	317	eP	19 35.00	-12.7X
			eS	27 20.00	
DZM	58.99	110	iPc	20 22.20	0.5
DRV	62.13	166	eP	20 40.00	-2.3
MAIO	62.90	318	iPc+	20 46.00	-2.0
			eS	29 20.00	
MSZ	63.69	136	P	20 52.60	-0.3
SNZO	67.93	131	eP	21 28.00	7.8X
			S	30 24.00	
TEH	68.15	314	eP	21 20.00	-1.8
			eS	30 20.00	
IR4	68.25	313	eP	21 23.00	0.5
IR2	68.46	314	eP	21 26.00	2.3
IR5	68.47	313	eP	21 25.00	1.2
IR1	68.49	313	eP	21 27.00	3.1X
IR7	68.69	314	eP	21 29.00	3.9X
NAI	69.69	272	eP	21 36.00	4.2X
AAE	69.69	283	eP	21 34.50	2.7
BHD	72.24	309	ePd	21 48.00	1.5
			ePP	24 29.00	
			eS	31 06.00	
			eSS	35 35.00	
SLY	72.35	312	ePd	21 45.50	-1.6
			ePP	24 18.00	
			ePPP	26 09.00	
			eS	31 03.50	
			eScS	31 33.00	
			eSS	35 04.00	
TAB	72.82	314	eP+	21 49.00	-1.1
MSL	74.41	312	ePc	22 01.50	2.3
			e	22 10.50	29km
			eS	31 32.50	
			ePS	32 16.00	
SBA	75.39	169	e(P)	22 04.00	-0.1
SLR	75.61	246	iPc	22 07.50	1.0
	1.2s	46.88nm		5.4mb	
Z	17s	7.48um		6.1MszX	
BUL	75.65	251	iPc	22 20.90	14.1X
	1.4s	24.42nm			
PRY	76.27	244	iPd	22 10.80	0.6
	1.0s	25.00nm		5.2mb	
BFS	76.89	244	iPc	22 11.00	-2.6
	1.0s	50.00nm		5.5mb	
LWI	77.45	270	ePc	22 17.50	0.4
HVD	77.81	241	iPc	22 18.00	-0.7
PRNI	78.73	303	eP	22 23.00	-0.5
ASW	78.81	297	iPd	22 25.00	1.0
			eS	32 23.00	
GLH	78.90	306	eP	22 23.00	-1.4
SPA	81.26	180	iPd	22 36.70	0.2
	1.1s	30.36nm		5.2mb	
Z	18s	3.29um		5.7Msz	
B8TK	83.29	312	iPd	22 48.00	0.5
			i	22 52.00	13kmX
ELL	84.59	308	eP	22 55.00	0.9
ALT	85.04	311	eP	22 55.00	-1.3
KHL	85.29	310	eP	22 58.00	0.4
ITU	86.38	312	iPc	23 04.00	1.2
BCAO	88.61	275	iPd	23 15.20	1.1
	1.0s	85.00nm		6.0mb	
			id	23 23.60	26km
VRI	89.17	317	ePd	23 17.50	1.4
MLR	89.61	316	ePd	23 19.50	1.1
BZS	92.62	316	eP	23 32.50	0.5
BEO	93.30	315	e(P)	23 35.00	-0.2
			i	27 21.00	
SUF	93.33	333	eP	23 37.20	2.3

NUR	93.57	331	eP	23	45.00	9.0X
	Z 16s		1.70um			5.6MszX
			e	34	10.00	
			LR	12	26.00	
SOD	94.16	338	iP	23	39.00	0.3
KRA	94.43	320	eP	23	49.50	9.2X
			e	23	59.50	31km
SRO	95.19	317	eP	23	52.80	9.0X
			e	27	32.80	
ZST	96.05	318	e(P)	23	47.90	0.1
			e	23	55.40	23km
			e	27	51.20	
			i(Sg)	55	02.50	
KSP	96.84	320	eP	24	00.00	8.7X
			e	27	46.00	
BRG	98.33	320	e(P)	24	06.70	8.7X
	1.7s		32.00nm			5.6mb
			e	27	53.00	
			e	28	02.00	
			eSKS	34	32.00	
CLL	98.95	321	e(P)	24	18.00	17.3X
			e	28	01.00	
FBA	104.60	25	Pdiff	28	50.00	264.2X
MBC	108.21	10	ePKP	28	52.00	3.9X
	1.2s		9.00nm			
INK	108.97	20	ePKP	28	55.00	5.3X
LON	124.26	38	PKP	29	20.00	0.3
FRB	125.03	357	ePKP	29	20.00	-0.5
SES	128.23	30	ePKP	29	28.00	0.8
FFC	128.91	21	ePKP	29	30.00	1.8
	0.6s		5.00nm			
KVN	130.08	46	PKP	29	32.40	1.1
BCH	130.11	51	PKP	29	38.80	7.5X
TNP	131.12	46	PKP	29	33.00	-0.3
ISA	131.16	50	ePKP	29	38.00	4.8X
CLC	131.76	49	ePKP	29	45.00	10.6X
SBB	132.02	51	ePKP	29	42.00	7.1X
GSC	132.56	50	ePKP	29	46.00	10.1X
DUG	133.15	42	PKP	29	47.90	10.9X
MSU	134.43	43	PKP	29	40.70	1.1
RSON	134.88	18	PKP	29	50.00	10.3X
ANMO	140.21	44	PKP	29	48.40	-2.0
ALQ	140.21	44	ePKP	29	47.20	-3.2X
	1.0s		7.50nm			
	Z 18s		1.89um			5.9Msz
			pP	32	47.50	
RSNY	144.38	1	PKP	29	54.50	-2.6X
BAO	144.92	226	ePKP	29	58.50	-0.5
MEO	145.43	38	iPKPd	29	59.20	0.0
SIO	146.09	34	ePKP	30	02.00	1.7
			e	30	10.00	
LNO	146.25	34	e(PKP)	30	01.50	1.1
TUL	146.25	34	ePKPc	30	02.20	1.7
	0.9s		49.30nm			
	Z 21s		3.49um			6.1Msz
			e	30	09.70	
			e	30	30.80	
FVM	147.20	25	PKP	30	04.00	2.0X
POW	148.39	28	PKP	30	07.30	3.4X
PRIN	148.55	2	PKP	30	06.30	2.3X
LST	148.73	26	PKP	30	09.00	4.6X
OLY	148.79	29	PKP	30	08.00	3.4X
CBN	150.52	6	ePKP	30	13.00	5.9X
NA2	150.56	7	PKP	30	12.90	5.8X
CVL	150.61	8	PKP	30	12.90	5.6X
NAV	150.86	12	PKP	30	13.00	5.3X
BLA	151.04	11	PKP	30	13.20	5.2X
RSCP	151.15	21	PKP	30	13.40	5.2X
GBTN	151.54	18	PKP	30	15.00	6.2X
CCH	152.97	196	PKP	30	20.50	8.8X
PRM	153.56	17	PKP	30	20.00	8.3X
LHS	153.59	14	PKP	30	19.80	8.1X
PPM	153.65	65	(PKP)	30	15.50	2.6X
LPB	154.26	192	ePKP	30	20.00	6.4X
	Z 20s		2.84um			6.1Msz
			LR	27	50.00	
ZOBO	154.52	192	PKP	30	14.00	-0.1
	1.2s		15.20nm			
	Z 20s		1.46um			5.8Msz
			eLR	27	44.00	
CAR	173.25	285	ePKP	30	37.00	6.9X
UPA	174.09	88	e(PKP)	30	40.00	9.7X
	Z 20s		1.77um			
BOG	175.82	173	e(PKP)	30	35.00	3.8X
	S.D. = 1.3		on 101 of 156 obs.			

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* JAN 05, 1990 10h 44m 51.53± 0.55s
8.184 N ± 7.8km 126.712 E ±13.2km
DEPTH = 33.0km (normal)
4.9mb (7 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MTN	21.35	168	eP	49	37.00	-1.2
			e	49	42.00	
SSE	23.37	348	eP	49	58.70	0.6
LOE	26.00	293	eP	50	24.00	0.6
NST	27.03	288	eP	50	35.00	2.2
WB5	28.89	165	eP	50	50.30	0.7
			e	50	56.00	
WRA	28.94	165	P	50	53.00	2.9
	0.8s		1.30nm			3.7mb X
WARB	34.16	180	iPd	51	35.90	0.0
MEKA	35.49	193	eP	51	47.00	-0.3
SHL	37.38	302	iP	52	02.20	-1.2
MRWA	38.59	195	iPd	52	13.50	0.2
	0.6s		17.00nm			5.0mb
FORR	38.83	178	iPd	52	14.70	-0.6
	0.3s		24.00nm			5.5mb
COOL	39.21	188	eP	52	18.00	-0.5
BAL	39.74	194	eP	52	23.00	0.1
KLB	40.47	192	eP	52	29.00	0.2
MUN	41.18	194	eP	52	35.00	0.4
NWAO	41.87	192	eP	52	40.00	-0.3
RKG	43.02	192	eP	52	54.00	4.3X
GUN	43.22	302	P	52	52.00	0.0
8RS	43.45	145	iP	52	51.60	-1.7
PKI	43.51	302	P	52	53.60	-0.7
	0.8s		12.00nm			4.7mb
KKN	43.69	302	P	52	55.00	-0.6
	0.8s		15.00nm			4.8mb
DMN	43.77	302	P	52	55.80	-0.5
	0.6s		11.00nm			4.8mb
GKN	44.29	302	P	52	59.40	-1.0
	0.6s		10.00nm			4.8mb
INK	86.05	22	eP	57	30.00	0.2
MBC	87.64	13	eP	57	38.00	0.6
	0.7s		8.00nm			5.1mb
	S.D. = 1.1		on 24 of 25 obs.			

JAN 05, 1990 11h 35m 39.61± 1.40s
36.006 N ± 9.8km 71.203 E ± 7.0km
DEPTH = 79.6 ± 14.5 km
4.6mb (17 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

KSH	5.12	46	P	36	57.40	1.9
			S	37	51.50	
QUE	6.81	213	eP	37	11.00	-8.0X
			eS	38	32.00	
NDI	8.90	143	iPc	37	49.00	1.5
	0.6s		106.67nm			5.8mb X
			iS	39	25.00	
MAIO	9.47	275	iPc	37	55.60	0.1
	0.7s		5.40nm			4.6mb
			eS	39	35.00	
GKN	13.90	121	P	38	52.80	-1.7
DMN	14.47	121	P	39	00.60	-1.4
KKN	14.48	120	P	38	59.60	-2.4
PKI	14.71	121	P	39	03.00	-2.1
GUN	14.83	119	P	39	04.00	-2.7
POO	17.56	172	eP	39	47.00	6.3X
			eS	43	44.10	
LSA	17.89	105	P	39	46.60	1.6
HYB	19.63	159	eP	40	06.30	1.8
	1.0s		25.00nm			4.5mb
			eS	44	11.50	
SHL	20.55	115	iP	40	14.80	0.7
			iS	49	49.80	
GTA	22.85	73	eP	40	37.80	1.0
GBA	23.00	164	P	40	43.00	4.8X
			S	45	53.00	
LZH	26.33	80	eP	41	05.00	-4.9X
CHG	29.84	118	eP	41	43.80	2.3
CHTO	29.84	118	eP	41	43.60	2.1
	0.5s		1.15nm			3.8mb
BTO	30.63	70	P	41	48.70	0.3
TIY	32.85	75	eP	42	08.70	1.0
BJI	35.37	70	eP	42	29.00	-0.2
WHN	36.26	86	eP	42	37.00	0.2
SNY	40.64	65	iPd	43	13.70	0.5
SSE	41.58	82	P	43	22.00	1.0
BRG	43.06	309	i(P)	43	34.00	1.1
	1.0s		16.00nm			4.8mb
HFS	43.56	322	eP	43	35.30	-1.5
	0.3s		10.80nm			5.2mb
NB2	44.87	323	P	43	45.70	-1.7
	0.6s		11.40nm			4.9mb
GRF	44.89	307	eP	43	49.20	1.5
	0.9s		6.00nm			4.4mb
BSF	48.05	305	eP	44	13.70	1.0
	0.6s		5.40nm			4.6mb
HAU	48.31	306	eP	44	15.60	1.0
	0.4s		2.20nm			4.5mb
SMF	50.27	304	eP	44	29.80	0.2
	0.6s		2.70nm			4.5mb
AVF	50.56	305	eP	44	32.40	0.6
	0.6s		2.70nm			4.5mb
DAG	55.28	344	iPc	45	05.30	-1.1
	0.6s		10.00nm			5.0mb
BCAO	57.64	250	ePd	45	25.30	1.3
	0.4s		2.00nm			4.6mb
MBC	67.82	3	iPc	46	28.80	-1.8
	0.4s		8.00nm			5.0mb
INK	74.37	9	ePc	47	07.90	-1.9
KIC	74.92	267	P	47	12.90	-1.0
TIC	74.98	267	P	47	13.00	-1.3
WB5	81.57	122	eP	47	49.90	-0.1
WRA	81.59	122	Pd	47	50.00	-0.2
	0.4s		1.10nm			4.1mb
ASPA	83.84	125	iPd	48	01.60	-0.1
	0.6s		4.00nm			4.6mb
FFC	89.44	356	eP	48	27.00	-1.6
	0.7s		8.00nm			5.0mb
	S.D. = 1.5		on 38 of 42 obs.			

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* JAN 05, 1990 11h 59m 54.92± 0.60s
12.486 N ±16.6km 57.841 E ± 5.2km
DEPTH = 10.0km (geophysicist)
4.4mb (6 obs.)
ARABIAN SEA (417)

POO	16.55	67	eP	03	49.00	0.1
GBA	19.12	84	P	04	21.00	0.2
HYB	20.60	74	eP	04	36.50	-0.5
MAIO	23.76	3	eP	05	14.00	5.6X
NDI	24.20	45	eP	05	17.00	4.3X
SHL	34.60	63	iP	06	46.60	0.1
8CAO	39.65	262	ePd	07	29.20	0.2
	0.4s		3.00nm			4.3mb
BUL	43.34	222	iPc	08	11.60	12.3X
	0.8s		7.46nm			
KHC	51.58	324	P	09	12.40	9.0X
LPG	54.26	318	eP	09	23.70	0.0
	0.8s		4.00nm			4.5mb
LBF	56.57	319	eP	09	40.20	0.0
	0.8s		3.20nm			4.4mb
LOR	56.74	319	eP	09	41.40	0.0
	0.5s		1.40nm			4.2mb
SSF	56.90	318	eP	09	42.30	-0.2
	0.6s		1.80nm			4.3mb
BGF	57.17	318	eP	09	44.60	0.2
	0.8s		7.20nm			4.8mb
TIC	62.14	271	P	10	18.80	-0.4
LIC	62.23	271	P	10	19.90	0.2
	S.D. = 0.3		on 12 of 16 obs.			

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* JAN 05, 1990 12h 01m 43.76± 0.73s
59.822 N ± 7.5km 73.353 W ±13.8km
DEPTH = 10.0km (geophysicist)
4.0mb (1 obs.)
NORTHERN QUEBEC (443)

FRB	4.55	28	eP	02	53.00	-1.2
SCH	6.15	142	eP	03	18.90	2.1
CBM	13.28	164	P	04	54.00	-0.7
RSON	14.59	241	P	05	06.00	-5.9X
PTN	15.31	184	eP	05	20.00	-1.2
BNH	15.31	174	eP	05	22.50	1.2
RSNY	15.32	183	eP	05	20.00	-1.4
HBVT	15.49	179	eP	05	23.20	-0.4
FFC	16.22	264	eP	05	27.00	-6.0X
	0.4s		5.00nm			4.0mb
TBR	18.71	182	P	06	00.00	-4.1X
MBC	22.80	334	eP	06	47.00	-0.1
SES	23.22	263	eP	06	52.00	0.5
INK	26.55	314	eP	07	24.00	1.1
	S.D. = 1.3		on 10 of 13 obs.			

& JAN 05, 1990 12h 22m 36.12s
61.357 N 151.489 W
DEPTH = 74.9km

05d 12h

SOUTHERN ALASKA (2)
<AGS-P>.

CGLM	0.25	259	eP	22 47.33	-0.5
NCG	0.32	279	iP	22 47.67	-0.6
			eS	22 57.17	
SPU	0.32	237	eP	22 47.76	-0.5
CRP	0.33	255	eP	22 48.12	-0.3
SUA	0.37	73	iP	22 48.58	-0.1
			eS	22 58.07	
CKL	0.44	249	iP	22 48.56	-0.6
BGL	0.45	258	eP	22 48.50	-0.7
SKT	0.63	358	iP	22 49.86	-1.0
NKA	0.63	169	iP	22 52.23	1.4
PWA	0.83	68	iPc	22 52.80	-0.2
RDT	0.90	210	iP	22 53.29	-0.8
PMS	0.94	96	iPc	22 54.00	-0.4
SLKM	1.05	143	eP	22 54.86	-1.0
RED	1.13	214	iP	22 56.05	-0.8
PLRM	1.16	77	iP	22 55.91	-1.2
PMR	1.16	77	iPc	22 56.00	-1.1
			iS	23 11.80	
CUT	1.20	28	eP	22 56.87	-0.8
PME	1.21	76	iP	22 56.75	-1.0
GHO	1.30	70	eP	22 57.80	-1.2
NNL	1.32	176	eP	22 59.66	0.4
			eS	23 17.62	
SEW	1.61	141	eP	23 01.60	-1.5
BRLK	1.63	169	eP	23 03.34	0.0
			eS	23 23.81	
CNPM	1.84	176	eP	23 04.95	-1.4
HUR	1.84	27	eP	23 05.01	-1.3
XLV	1.91	184	eP	23 05.85	-1.4
SVW	2.01	265	iPc	23 07.10	-1.6
GLI	2.19	101	iP	23 07.98	-3.0
AUL	2.20	207	eP	23 10.48	-0.8
NCA	2.31	72	eP	23 11.06	-1.8
RND	2.40	30	eP	23 11.84	-2.1
VZW	2.41	95	eP	23 11.34	-2.8
FID	2.51	102	eP	23 11.83	-3.7
TOA	2.64	71	iP	23 16.00	-1.3
TTA	2.65	309	iPc	23 15.40	-2.1
MCK	2.66	25	eP	23 16.14	-1.5
CDD	2.66	205	eP	23 16.29	-1.3
KLU	2.68	85	eP	23 15.10	-2.8
PAX	3.26	58	eP	23 24.29	-1.7
NEA	3.41	18	eP	23 24.81	-3.3
DDM	3.57	44	eP	23 29.59	-0.7
KDC	3.66	188	eP	23 29.30	-2.1
GLB	3.69	85	eP	23 28.78	-3.2
CCB	3.70	25	eP	23 29.03	-3.1
DMW	3.79	42	eP	23 32.50	-0.8
RDS	3.80	22	eP	23 30.47	-3.0
FBA	3.93	24	ePd	23 32.30	-3.0
GLM	4.09	25	eP	23 34.48	-3.1
DOT	4.14	53	eP	23 34.67	-3.6
TGL	4.25	94	eP	23 35.97	-4.0
BALM	4.44	90	eP	23 38.74	-3.8
IMA	4.83	349	iP	23 45.20	-2.8
DWY	6.17	59	P	24 03.30	-3.2
SDN	7.66	222	eP	24 26.80	-0.3
BRW	10.21	350	e(P)	24 57.90	-3.9
INK	10.31	40	eP	24 59.00	-4.3

55 obs. associated

JAN 05, 1990 12h 44m 31.92± 1.26s
38.653 S ± 8.9km 175.679 E ±10.1km
DEPTH = 165.5 ± 10.6 km
NORTH ISLAND, NEW ZEALAND (159)

HITZ	0.09	129	Pc	44 54.20	0.2
RATZ	0.23	162	Pd	44 54.20	0.0
TUTZ	0.25	104	Pc	44 54.30	0.0
HATZ	0.40	127	Pc	44 54.50	-0.2
KETZ	0.45	183	P	44 55.30	0.3
UTU	0.62	40	P	44 56.00	0.1
WHH	0.68	110	P	44 55.50	-0.8
TAZ	0.77	57	P	44 56.60	-0.2
MOH	1.24	113	Pd	45 01.00	0.5
MNG	1.97	184	P	45 08.50	0.5
			S	45 32.60	
PGZ	2.02	167	P	45 08.80	0.3
KIW	2.29	195	Pc	45 11.90	0.2
HBZ	2.32	64	P	45 12.20	0.1
CAW	2.50	191	P	45 14.30	0.1
MTW	2.51	183	Pc	45 14.10	-0.2
WDW	2.66	191	Pd	45 16.00	-0.2
MRW	2.68	196	P	45 16.40	0.0
			S	45 48.10	
BLW	2.72	183	P	45 16.60	-0.3
WEL	2.72	195	eP	45 16.80	-0.1
TCW	2.78	202	P	45 17.60	0.0
MOW	2.78	187	P	45 17.40	-0.3
CCW	3.29	199	eP	45 24.50	0.5
KHZ	4.10	203	P	45 34.20	-0.2

S.D. = 0.3 on 23 of 23 obs.

JAN 05, 1990 13h 03m 44.30± 0.60s
19.258 S ± 4.0km 69.529 W ± 6.5km
DEPTH = 108.7 ± 6.2 km
5.0mb (9 obs.)
NORTHERN CHILE (123)
Felt (IV) at Arica, (III) at Iquique and (II) at Toconao.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 17C
Centroid Location:
Origin Time 13:03:50.6 0.5
Lat 19.47S 0.05 Lon 69.24W 0.06
Dep 132.0 2.3 Half-duration 1.8
Moment Tensor; Scale 10**17 Nm
Mrr= 0.01 0.07 Mtt=-0.19 0.12
Mff= 0.18 0.13 Mrt= 0.26 0.06
Mrf=-1.62 0.08 Mtf=-0.26 0.11
Principal Axes:

T	Val= 1.79	Plg=43	Azm= 76
N	-0.26	7	172
P	-1.53	46	270

Best Double Couple:Mo=1.7*10**17
NP1:Strike= 97 Dip= 7 Slip=-165
NP2: 353 88 -83

LPB	3.03	27	P	04 34.10	2.2
ZOBO	3.26	24	iPd	04 36.20	1.1
ARE	3.35	326	iP	04 34.80	-1.3
			eS	05 13.00	
CCH	3.72	60	P	04 41.30	0.2
ANT	4.50	190	iP	04 49.40	-2.0
			iS	05 52.80	
YJA	4.75	128	iPc	04 56.40	1.0
SLA	6.61	146	ePc	05 19.50	-1.1
PT03	7.97	310	iPc	06 02.90	23.8X
			eS	07 35.10	
PT06	8.46	309	eP	06 42.20	56.4X
			iS	08 10.60	
CYA	9.76	160	iPd	06 03.50	0.2
NNA	10.09	315	eP	06 05.50	-2.3X
	0.8s		26.12nm	5.2mb	
PT10	10.11	314	eP	06 13.50	5.5X
			eS	08 20.00	
RTRS	10.86	180	e(P)	06 17.00	-0.9
RTLL	12.06	176	e(P)	06 37.00	3.3X
ZON	12.26	177	eP	06 40.00	3.6X
RTBS	12.35	180	e(P)	06 42.00	4.5X
CFA	12.35	175	e(P)	06 30.00	-7.6X
TCA	12.83	161	e(P)	06 40.50	-3.3X
MRA	13.54	166	e(P)	06 51.40	-1.6
SAN	14.17	184	eP	07 02.00	0.7
			i	07 08.60	
LCCH	14.28	187	iPc	07 03.00	0.5
PCH	14.33	183	eP	07 04.70	1.3
TACH	14.39	185	iPc	07 04.30	0.2
CHCH	14.65	184	iPc	07 13.00	5.6X
LNV	14.73	186	iPc	07 08.00	-0.4
ITB1	15.03	114	e(P)	07 08.30	-3.9X
ITB	15.23	114	e(P)	07 10.50	-4.3X
ITB7	15.37	115	eP	07 18.40	1.9
RFA	15.48	177	e(P)	07 16.70	-1.2
BAO	20.86	83	eP	08 15.50	-4.0X
PPM	47.60	321	(P)	12 13.50	1.7
JSC	54.40	348	P	13 01.00	-1.2
PRM	54.43	347	P	13 01.60	-0.9
LHS	54.50	349	P	13 01.60	-1.4
GBTN	56.37	346	P	13 14.60	-1.8
RSCP	56.64	344	P	13 16.40	-2.0
	0.8s		192.31nm	6.2mb X	
FVM	60.23	341	P	13 41.80	-1.4
TUL	60.24	336	eP	13 42.40	-0.9
	1.2s		22.70nm	5.1mb	
			i	14 06.60	
LNO	60.24	336	e(P)	13 41.60	-1.6
SIO	60.30	335	eP	13 42.90	-0.8
			e	14 06.40	
RSNY	63.66	356	P	14 04.70	-1.2
			pP	14 29.00	96kmX
ALQ	64.31	327	iPc	14 10.50	-0.1
	1.7s		57.69nm	5.2mb	
GLD	67.50	331	P	14 31.00	0.2
GOL	67.53	331	P	14 30.30	-0.8
	0.9s		27.46nm	5.2mb	
			pP	14 54.00	92kmX
GLA	67.66	320	eP	14 30.00	-1.8
			e	14 56.00	
LIC	68.34	75	Pc	14 33.82	-2.6
	Z 20s		0.35um	4.6Msz	
TIC	68.52	74	Pc	14 35.12	-2.4
BAR	68.55	318	eP	14 38.00	0.7
			e	15 02.00	
KIC	68.66	75	P	14 36.02	-2.3
TPC	69.12	320	eP	14 42.00	1.2
			e	15 07.00	
LKO	69.18	71	Pc	14 40.26	-1.3
RVR	69.86	319	eP	14 46.00	0.7
MSU	70.01	326	P	14 47.00	0.6
GSC	70.39	320	eP	14 50.00	1.4
			e	15 14.00	
PAS	70.46	319	eP	14 50.00	1.1
SBB	70.60	319	eP	14 50.00	0.1
SPA	70.86	180	eP	14 52.10	1.0
	1.1s		12.50nm	4.7mb	
CLC	71.21	320	eP	14 54.00	0.5
ISA	71.64	320	eP	14 57.00	0.9
BW06	71.89	330	P	14 57.00	-0.7
TNP	72.51	322	P	15 02.20	0.8
	1.0s		7.50nm	4.5mb	
RSON	72.98	344	P	15 02.00	-1.6
	0.8s		30.05nm	5.2mb	
			pP	15 27.00	96kmX
FRI	73.26	320	eP	15 05.40	-0.1
PRI	73.30	319	eP	15 07.10	1.2
IMW	73.40	330	P	15 07.00	0.5
KVN	73.68	323	P	15 08.70	0.6
LLA	73.78	319	eP	15 09.90	1.4
SCH	73.81	2	eP	15 08.00	-0.3
PRS	73.86	319	eP	15 10.30	1.3
CMB	74.35	321	e(P)	15 12.50	0.6
LRM	75.56	331	eP	15 18.90	0.1
ORV	75.99	321	eP	15 22.10	1.0
MIN	76.56	322	eP	15 24.30	-0.2
WDC	77.26	321	e(P)	15 27.50	-0.6
TIO	77.87	51	iP	15 32.40	0.5
			i	15 58.60	
SES	78.41	334	eP	15 35.00	0.7
			pP	15 59.00	91kmX
FFC	78.73	341	eP	15 36.00	0.1
	1.0s		13.00nm	4.7mb	
AVE	78.99	49	iP	15 38.00	0.2
			i	16 04.00	
IFR	80.75	50	iP	15 48.00	0.6
			i	16 14.00	
EDM	81.49	335	iPc	15 50.60	0.0
FRB	82.73	0	eP	15 56.00	-0.7
HVD	84.56	120	iPc	16 02.50	-4.6X
BLF	85.62	119	eP	16 13.50	1.1
KSR	87.31	116	iPd	16 21.90	1.2
BCAO	89.62	85	iPd	16 32.20	0.6
	0.8s		7.00nm	4.8mb	
			id	16 58.30	
BUL	90.77	112	iPc	16 52.60	15.6X
	1.8s		47.73nm		
INK	98.65	340	eP	17 12.00	0.4
ASPA	131.60	209	iPKPc	22 47.10	0.6
	Z 18s		0.19um	4.8Msz	
			i	23 12.80	
			i	26 03.50	
			ePKS	26 36.80	
			LR	37 48.40	
WRA	134.55	212	PKPc	22 53.10	0.9
	1.2s		9.50nm		
WB5	134.59	212	ePKP	22 53.20	0.9
			e	23 19.00	
			e	26 14.00	
POO	145.38	85	ePKP	23 12.80	1.0
KOD	146.90	101	ePKP	23 17.00	2.3X
GBA	147.85	95	PKP	23 19.00	3.3X
NDI	148.29	66	iPKPc	23 17.20	1.1
	1.2s		62.50nm		
HYB	149.67	88	ePKPc	23 24.00	5.4X
			e	23 54.00	
MAT	150.20	311	iPKPd	23 25.10	6.2X

0.8s 20.15nm
S.D. = 1.2 on 77 of 96 obs.

& JAN 05, 1990 14h 01m 22.72s
66.824 N 150.345 W
DEPTH = 74.2km
ALASKA (676)
<AGS-P>.

IMA	1.54	242	eP	01 48.73	-0.2
			eS	02 08.68	
FBA	2.20	150	eP	01 57.23	-0.5
			eS	02 25.37	
RDS	2.20	155	eP	01 57.34	-0.5
			eS	02 26.84	
GLM	2.21	145	eP	01 56.15	-1.8
			eS	02 26.35	
NEA	2.32	166	eP	01 58.52	-0.9
CCB	2.43	153	eP	01 59.49	-1.4

6 obs. associated

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* JAN 05, 1990 14h 45m 27.74± 1.34s
50.419 N ±14.5km 18.976 E ± 9.0km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.9 (KRA).

KRA	0.72	120	iPgc	45 41.60	-0.3
			eSg	45 51.50	
SPC	1.48	146	iPn	45 55.00	0.4
			i(Sg)	46 13.20	
KSP	1.76	285	ePn	45 58.50	0.0
	0.7s		40.00nm		
			iPg	46 00.90	
			iSn	46 22.10	
			iSg	46 25.00	
ZST	2.54	210	eP	46 09.50	-0.1
SRO	2.64	190	eP	46 11.10	-0.1
			e	47 05.50	
PRU	2.88	263	Pg	46 20.60	6.1X
			Sg	46 58.20	
8RG	3.23	280	ePg	46 27.00	7.5X
			eSg	47 12.00	
KHC	3.73	252	Pg	46 35.30	8.7X
			Sg	47 22.00	

S.D. = 0.4 on 5 of 8 obs.

JAN 05, 1990 15h 18m 46.24± 1.10s
4.056 S ± 4.4km 80.877 W ±10.7km
DEPTH = 52.0 ± 9.1 km
5.0mb (10 obs.) 4.3Msz (1 obs.)
PERU-ECUADOR BORDER REGION (110)
Felt (V) at Tumbes, Peru.

TUNG	3.57	43	eP	19 41.00	0.1
VC1	4.20	36	iPd	19 50.20	0.3
GGP	4.48	31	iPd	19 53.70	-0.1
			eS	20 46.00	
CAYA	5.02	35	P	20 01.20	-0.3
COTA	5.05	30	P	20 01.50	-0.3
NNA	8.83	153	eP	20 50.00	-4.2X
	0.6s		6.67nm	4.8mb	
			eS	22 53.00	
PT10	8.86	154	eP	20 54.50	0.1
PT06	10.70	155	eP	21 20.10	0.5
			eS	23 24.90	
ARE	15.39	144	eP	22 26.00	4.0X
ZOBO	17.44	135	P	22 47.00	-1.2
	1.0s		47.50nm	4.6mb	
	Z 18s		0.47um		
			i	22 50.50	
			S	27 25.00	
			LR	29 40.00	
LPB	17.64	136	P	22 51.00	0.5
	1.0s		40.00nm	4.5mb	
			S	27 24.00	
			LR	29 34.00	
TUL	42.14	342	iPc	26 36.00	0.8
	0.8s		38.50nm	5.2mb	
			e	26 45.80	
LNO	42.14	342	eP	26 35.30	0.2
SIO	42.15	341	eP	26 35.50	0.1
SCH	59.82	9	eP	28 47.00	-1.5
SES	60.13	338	eP	28 50.00	-0.7
FRB	68.25	6	eP	29 52.00	8.6X
LKO	76.21	79	Pc	30 32.00	0.5
LIC	76.42	83	P	30 32.40	-0.3
TIC	76.46	82	P	30 32.80	-0.1
	0.8s		6.50nm	4.7mb	
KIC	76.71	83	Pc	30 34.40	0.1
	0.6s		9.50nm	5.0mb	
INK	80.80	343	eP	30 55.50	0.0
MBC	83.18	351	ePc	31 08.50	0.8
	1.0s		21.00nm	5.1mb	
SPA	85.97	180	iPc	31 22.90	0.8
	0.9s		22.27nm	5.4mb	
			i	31 33.20	
EKA	86.35	34	Pd	31 24.50	0.6
	1.1s		14.40nm	5.1mb	
DAG	87.76	12	iPc	31 31.80	1.4
	0.8s		8.21nm	5.0mb	
ASPA	136.32	229	iPKPd	38 04.20	-0.6
	0.7s		12.00nm		
	Z 21s		0.05um	4.3Msz	
			LR	46 40.50	
WRA	137.97	234	PKPc	38 07.20	-0.8
	0.4s		4.70nm		
WB5	137.98	234	ePKP	38 07.20	-0.8
SSE	146.01	325	ePKP	38 21.40	-0.3
LZH	147.83	353	iPKPc	38 28.00	3.3X
	1.0s		49.00nm		
			i	38 37.70	

S.D. = 0.7 on 27 of 31 obs.

JAN 05, 1990 16h 04m 48.57± 0.80s
41.554 N ± 7.7km 20.017 E ± 6.4km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.6 (SKO).

TIR	0.24	209	iPgd	04 53.30	-0.3
LACI	0.25	290	iPgc	04 54.40	0.6
PHP	0.34	67	iPg	04 55.10	-0.6
PUK	0.50	349	iPgd	04 56.70	-1.9
SDA	0.60	320	iPgc	05 01.60	0.9
OHR	0.74	127	iPg	05 01.70	-1.4
			iSg	05 13.10	
SKO	1.14	68	iPg	05 11.40	1.4
			iSg	05 26.80	
VAY	1.93	96	ePn	05 23.00	1.2

S.D. = 1.5 on 8 of 8 obs.

JAN 05, 1990 16h 35m 01.28± 0.55s
47.403 N ± 5.4km 9.074 E ± 5.9km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 3.0 (LDG), 2.9 (FUR), 2.6 (KBA). MD 2.3 (STR).

SAX	0.24	130	iPd	35 05.50	-1.1
ZLA	0.47	280	ePc	35 10.20	-0.7
SLE	0.54	313	iPd	35 11.30	-0.8
LLS	0.54	186	ePd	35 11.40	-0.8
FEL	0.86	304	Pg	35 17.00	-0.9
			Sg	35 27.00	
VDL	0.96	163	ePd	35 18.80	-0.8
OSS	1.02	134	eP	35 19.40	-1.4
TMA	1.31	186	ePd	35 25.40	-0.2
LOMF	1.53	269	Pg	35 30.50	1.8
			Sg	35 48.50	
WLS	1.54	312	Pg	35 29.50	0.7
			Sg	35 49.00	
VAI	1.55	188	P	35 31.20	2.3
			eSg	35 52.20	
MMK	1.55	210	ePd	35 29.90	0.7
CDF	1.58	311	Pg	35 31.20	1.8
			Sg	35 51.30	
BSF	1.60	286	Pn	35 30.00	0.2
			Pg	35 31.60	
			Sg	35 52.00	
FUR	1.67	62	eP	35 32.00	1.3
SCE	1.83	101	eP	35 34.80	1.6
GWF	1.85	329	Pg	35 35.50	2.2
			Sg	35 59.00	
HAU	1.94	289	Pn	35 34.00	-0.6
			Pg	35 37.60	
			Sg	36 02.40	
EMS	1.99	229	eP	35 38.50	3.0X
TOD	2.21	355	ePn	35 36.10	-2.5
LPL	2.49	221	Pg	35 47.60	5.0X
LPG	2.49	221	Pg	35 47.60	4.8X
			Sg	36 20.00	
ABH	2.68	338	ePn	35 43.91	-1.3
KBA	2.93	95	ePgd	35 54.00	5.1X
			eSg	36 31.00	
KHC	3.47	58	ePg	36 04.40	8.0X
			Sg	36 49.50	
LBF	3.50	265	Pg	36 07.00	10.1X
			Sg	36 50.20	
LOR	3.55	270	Pg	36 07.80	10.3X
			Sg	36 51.60	
SMF	3.66	260	Pg	36 08.60	9.5X
			Sg	36 55.60	
SSF	3.81	267	Pg	36 13.00	11.7X
			Sg	37 01.00	
AVF	3.96	263	Pg	36 15.60	12.3X
BGF	4.35	261	Pn	36 07.40	-1.5
			Pg	36 22.00	
			Sg	37 17.60	
TCF	4.84	259	Pg	36 31.00	15.1X

S.D. = 1.5 on 21 of 32 obs.

JAN 05, 1990 16h 58m 14.33± 0.79s
39.746 N ± 8.7km 20.617 E ± 8.9km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

IGT	0.31	226	ePg	58 20.80	0.1
OHR	1.37	6	ePn	58 39.00	-0.5
LIT	1.48	76	ePb	58 40.40	-0.7
			eSb	59 01.50	
AGG	1.51	118	ePb	58 41.50	0.0
GRG	1.82	48	ePb	58 46.70	0.7
VAY	2.17	43	ePn	58 51.30	0.4
SKO	2.31	15	ePn	58 57.50	4.5X

S.D. = 0.7 on 6 of 7 obs.

JAN 05, 1990 18h 27m 00.12± 0.27s
18.863 N ± 4.7km 106.795 W ± 4.2km
DEPTH = 33.0km (normal)
5.4mb (52 obs.) 5.9Msz (12 obs.)
OFF COAST OF JALISCO, MEXICO (54)
Ms 6.0 (BRK). Mo=3.0*10**18 Nm (PPT).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 38C
Centroid Location:
Origin Time 18:27: 0.2 0.4
Lat 18.54N 0.03 Lon 106.83W 0.03
Dep 15.0 FIX Half-duration 3.8
Moment Tensor; Scale 10**17 Nm
Mrr=-0.23 0.23 Mtt=-4.61 0.30
Mff= 4.84 0.33 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-8.90 0.28
Principal Axes:
T Val= 10.19 Plg= 0 Azm=239
N -0.23 90 180
P -9.96 0 149
Best Double Couple:Mo=1.0*10**18
NP1:Strike=284 Dip=90 Slip=-180
NP2: 14 90 0

GUM2	3.75	61	(P)	27 50.00	-7.2X
MZX	4.33	5	iP	28 03.21	-2.1
			iS	28 53.56	
AGX	5.17	54	iP	28 18.79	1.5
MRX	5.36	80	iP	28 25.70	5.8X
CRX	6.75	84	eP	28 39.24	-0.6
			iS	30 00.02	
ACX	6.90	106	iP	28 40.65	-0.9
			(S)	29 58.92	
III	6.96	93	eP	28 40.71	-2.0
			(S)	29 53.96	
IIC	7.17	82	(P)	28 44.70	-1.1
UNM	7.21	85	eP	28 47.00	0.7
PPM	7.73	87	iP	28 51.41	-2.4
			(S)	30 31.16	
IIT	8.03	88	iP	28 57.12	-0.6
			iS	30 31.02	
IISM	8.92	88	iP	29 08.16	-1.5
VNM	9.01	38	(P)	29 15.50	4.6X
OXX	9.75	99	iP	29 21.01	-0.4
TPX	14.46	104	eP	30 25.00	0.6
GLA	15.86	335	eP	30 43.00	0.4
ALQ	16.02	1	iPd	30 46.70	1.9
	2.0s		401.47nm	5.2mb	
			pP	35 43.60	
ANMO	16.02	1	P	30 46.20	1.4
	2.0s		544.12nm	5.3mb	
BAR	16.37	329	eP	30 49.00	-0.1

05d 18h

PLM		17.01	330	eP	30	58.00	0.7	NNA		42.57	134	ePd	34	54.00	-0.9	IFR		89.05	55	eP	39	37.00	-16.8X
		1.0s		48.00nm			5.2mb			1.0s		48.00nm			5.2mb					i	39	53.00	
TPC		17.28	333	eP	31	01.00	0.5		Z	20s		3.55um			5.3Msz	ENN		89.08	36	eP	39	54.00	0.7
MEO		17.45	23	iPc	31	02.00	-0.7					eS	41	10.00				1.0s		52.00nm			5.8mb
RVR		17.78	330	eP	31	07.00	0.3	PAG		43.05	86	eP	34	59.00	0.1	MAF		89.24	41	eP	39	54.40	0.2
PAS		18.29	329	eP	31	12.00	-1.0	SCH		47.01	31	ePd	35	29.20	-0.8			1.2s		23.80nm			5.4mb
				eLg	35	00.00				1.0s		5.30nm			4.5mb	BGF		89.26	41	eP	39	54.20	-0.1
				eLR	35	47.00		TOA		51.11	337	eP	36	01.90	0.4			0.8s		9.40nm			5.2mb
MWC		18.30	329	eP	31	15.00	1.7	KDC		51.25	331	P	36	03.50	1.0	SSF		89.43	40	eP	39	55.40	0.3
SBB		18.56	330	eP	31	15.00	-1.4			0.8s		24.14nm			5.2mb			1.2s		24.90nm			5.4mb
GSC		18.62	334	eP	31	17.00	-0.2	ZOBO		51.64	130	Pc	36	05.20	-1.5	AVF		89.46	40	eP	39	55.10	-0.1
SIO		19.20	27	eP	31	23.10	-1.0			1.1s		31.90nm			5.2mb			1.2s		11.90nm			5.1mb
CLC		19.40	333	eP	31	25.00	-1.4					S	43	31.00		LOR		89.55	40	eP	39	56.30	0.6
SYP		19.52	326	eP	31	26.00	-1.8					LR	52	32.00				1.2s		32.70nm			5.5mb
TUL		19.56	28	ePc+	31	27.20	-1.0	FRB		51.79	21	eP	36	08.00	1.4	WLF		89.75	37	P	39	59.00	2.5
		2.0s		20.00nm			4.1mb X			1.4s		94.00nm			5.6mb	LBF		89.75	40	eP	39	56.60	-0.1
	Z	21s		23.26um			5.7Msz	LPB		51.83	130	P	36	08.00	0.0			0.8s		8.00nm			5.0mb
				eS	35	14.00				1.0s		80.00nm			5.6mb	SMF		89.83	40	eP	39	57.10	0.1
				LR	37	00.00			Z	20s		14.18um			6.0Msz			1.2s		17.80nm			5.2mb
LNO		19.57	28	eP	31	27.50	-0.6					S	43	33.00		RUP		90.24	36	eP	40	00.49	1.6
ISA		19.66	331	eP	31	29.00	-0.4					LR	52	50.00		VITF		90.36	38	P	40	00.10	0.8
BCH		20.08	327	P	31	33.00	-0.7	PMR		51.90	336	eP	36	06.30	-1.2	ABH		90.43	36	eP	39	59.10	-0.6
GLD		20.86	3	P	31	43.00	1.1			1.3s		89.60nm			5.6mb	HAU		90.68	38	eP	40	01.80	0.9
		1.0s		230.00nm			5.5mb	INK		52.21	348	eP	36	08.00	-1.7			1.2s		35.70nm			5.6mb
PRI		21.11	327	eP	31	43.70	-0.7			0.8s		54.00nm			5.6mb	GWF		90.93	37	P	40	02.67	0.7
FRI		21.32	331	iPd	31	45.40	-1.0	RUV		52.36	232	eP	36	11.00	-0.5	CDF		91.01	37	P	40	03.05	0.6
LLA		21.62	328	eP	31	48.30	-1.2			1.2s		95.00nm			5.6mb	BSF		91.02	38	P	40	02.95	0.4
PRS		21.62	327	ePd	31	49.00	-0.5	TPT		52.41	233	eP	36	12.00	0.1	ECH		91.04	38	P	40	03.14	0.6
KVN		22.38	336	P	31	58.20	1.0			1.2s		75.00nm			5.5mb	WLS		91.06	37	P	40	03.19	0.5
GCC		22.48	327	e(P)	31	56.40	-1.5	FBA		53.45	340	P	36	17.50	-1.5	TOD		91.27	36	eP	40	02.92	-0.6
CMB		22.48	331	eP	31	55.80	-2.2			1.0s		21.25nm			5.1mb	LOMF		91.28	39	P	40	04.31	0.6
ARN		22.49	328	P	32	00.00	1.9	CCH		53.80	130	P	36	21.00	-1.4	FEL		91.71	38	P	40	06.29	0.5
MHC		22.54	328	e(P)	31	58.00	-0.7	ANT		55.22	139	eP	36	30.00	-2.4	BNI		92.33	41	P	40	11.00	2.3
BKS		23.25	328	eP	32	04.60	-0.9					i	36	32.00		GRF		92.55	35	eP	40	08.30	-1.1
		2.4s		1196.00nm			6.0mb	TTA		55.34	335	eP	36	30.30	-2.6		Z	22s		4.80um			5.9Msz
	Z	20s		45.00um			5.9Msz	PPN		55.36	232	eP	36	35.00	1.5					e	40	13.70	
	N	20s		32.00um						1.2s		75.00nm			5.6mb	CLL		92.59	33	eP	40	12.00	2.4
	E	20s		41.00um				IMA		56.12	339	P	36	35.50	-3.1X			2.5s		44.00nm			5.4mb
				ePP	32	45.00				1.0s		20.00nm			5.1mb		Z	18s		3.00um			5.8Msz
				ePPP	32	54.00		MBC		57.78	356	eP	36	49.00	-1.0					e	40	30.00	
				e	36	18.00				1.2s		80.00nm			5.6mb	DOI		92.96	41	P	40	16.50	5.0X
				eS	36	32.00		SAN		62.41	146	iPd	37	22.80	0.5	VAI		93.19	39	P	40	12.50	0.1
				eLQ	37	06.00		LNV		62.42	147	eP	37	20.70	-1.5	BRG		93.33	33	eP	40	16.50	3.5X
				eLR	37	59.00		PCH		62.62	146	eP	37	24.00	0.3			2.0s		44.00nm			5.5mb
BRK		23.26	328	eP	32	05.00	-0.5	CHCH		62.79	147	eP	37	25.00	0.2					e	40	53.00	
	Z	20s		46.00um			5.9Msz	BAO		67.26	117	eP	37	49.50	-4.7X					e	42	51.00	
				ePPP	32	53.00		DAG		71.32	14	iPc	38	20.00	1.9					e	43	58.00	
				eLQ	38	09.00				0.9s		38.66nm			5.4mb					e	52	11.00	
				e	38	33.00		AKU		72.45	26	iPc	38	30.80	5.9X	KHC		94.14	35	P	40	19.00	2.2
				eLR	39	18.00				2.5s		577.78nm			6.1mb		Z	18s		4.50um			6.0Msz
SRA		23.31	109	eP	32	08.00	1.6	DCN		80.60	37	iPd	39	15.80	5.0X		N	20s		1.90um			
SJS		23.72	109	iPc	32	14.30	3.9X			1.0s		104.00nm			5.8mb		E	18s		3.30um			
FVM		23.81	33	P	32	11.20	0.3	DMU		80.63	36	eP	39	16.30	5.4X	PRU		94.15	34	eP	40	22.00	5.2X
		1.0s		260.00nm			5.7mb	DLE		81.04	37	iPd	39	17.80	4.7X		Z	17s		4.10um			6.0MszX
BW06		23.95	355	P	32	12.50	-0.1			0.9s		58.00nm			5.6mb		N	15s		2.30um			
ORV		24.22	331	eP	32	15.60	0.7	ECB		81.21	38	eP	39	13.00	-1.0		E	17s		3.10um			
MIN		24.91	332	eP	32	21.60	-0.1	ETA		81.42	37	eP	39	18.00	2.9					e	41	21.00	
RSCP		25.08	44	P	32	23.00	-0.3	ECP		81.51	38	eP	39	16.00	0.5	KMR		95.06	35	iP-	40	19.40	-1.6
		1.0s		200.65nm			5.7mb	EKA		82.17	34	P	39	22.00	3.0X	FVI		95.14	37	P	40	21.50	0.1
WDC		25.52	331	eP	32	25.30	-2.0			2.0s		310.90nm			6.0mb	KBA		95.19	36	e(P)	40	22.50	0.6
LRM		27.29	351	eP	32	43.80	0.0											1.5s		50.00nm			5.7mb
UPA		28.18	107	eP	32	51.10	-0.8	GRR		86.20	40	eP	39	38.60	-0.9					i	40	26.20	
	Z	20s		10.11um			5.4Msz			1.0s		21.60nm			5.3mb					e	40	47.00	
BLA		29.44	46	P	33	04.50	1.4	LPF		86.24	40	eP	39	39.60	-0.1								
		1.0s		52.00nm			5.2mb			1.2s		29.70nm			5.4mb	VOY		96.09	37	e(P)	40	28.00	2.1
RMW		31.05	340	P	33	08.20	-9.1X	FLN		86.28	40	eP	39	39.00	-0.9	LJU		96.45	37	e(P)	40	29.00	1.6
SES		31.64	355	iPd	33	22.00	-0.4			1.0s		36.00nm			5.6mb	CEY		96.57	37	e(P)	40	27.50	-0.5
		1.5s		566.00nm			6.2mb	NB2		86.31	26	P	39	40.80	0.9	ZST		96.58	34	eP	40	32.00	4.1X
CBN		32.03	47	eP	33	24.00	-1.9			1.6s		47.60nm			5.5mb					e	44	21.90	
RSON		33.58	15	P	33	38.20	-1.0	AVE		87.35	56	iP	39	47.00	1.6	VBY		97.18	37	e(P)	40	30.20	-0.5
		2.0s		336.54nm			5.9mb					i	40	28.50						i	40	35.90	
	Z	19s		29.10um			6.0Msz	TIO		88.31	58	iP	39	52.50	2.3	PTJ		97.34	36	eP	40	31.10	-0.4
PSO		33.81	118	eP	33	43.00	1.0	AAPN		88.38	51	eP	39	53.00	2.6	ZAG		97.40	36	eP	40	34.50	2.8
EDM		34.67	353	iPd	33	47.60	-1.0	ALOJ		88.47	51	eP	39	55.00	4.1X	MNS		97.43	41	P	40	34.00	2.0
BOG		34.94	110	eP	33	56.00	4.3X	LSF		88.58	41	eP	39	51.50	0.4	SRO		97.45	34	eP	40	35.80	4.0X
				iS	39	30.00				1.0s		10.00nm			5.1mb					e	44	33.00	
FFC		35.99	5	iPc	33	58.90	-0.8	LFF		88.65	43	eP	39	52.30	0.9	SPC		97.57	32	eP	40	36.50	3.9X
		1.2s		66.00nm			5.4mb			1 0s		17.60nm			5.3mb	WMQ		116.23	348	ePKP	45	45.50	3.5X
SDV		36.41	101	eP	34	03.60	-0.4	DOU		88.66	37	Pc	39	55.70	4.4X		Z	22s		4.50um			6.0Msz
TOV		36.90	99	eP	34	07.00	-1.0					S	48	43.00						ePP	46	48.00	
RSNY		37.14	39	P	34	07.50	-2.0	WTS		88.96	35	eP	39	55.00	2.3	LZH		118.13	332	ePKP	45	50.00	4.0X
		1.0s		65.08nm			5.4mb			1.0s		16.00nm			5.3mb		Z	27s		4.10um			5.9MszX
	Z	20s		7.91um			5.5Msz	RJF		88.99	42	eP	39	53.50	0.5		N	19s		2.50um			
CEOS		38.51	99	eP	34	20.00	-1.5			0.8s		9.10nm			5.2mb					i	47	07.00	
CAR		39.38	96	iP	34	24.00	-4.8X	TCF		88.99	41	eP	39	53.10	0.1					ePP	47	25.00	
				iS	40	32.00				1.0s		14.80nm			5.3mb					SKKKS	56	42.00	
OLLA		39.63	97	iPc	34	20.00	-10.9X	LPO		89.05	43	eP	39	54.00	0.7					SS	03	38.00	
PT10		42.54	134	eP	34	52.50	-2.1			0.8s		5.30nm			4.9mb	LZH		118.13	332	ePKP	45	45.00	-1.0

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BCAO   121.42   72 ePKPc 45 52.80   0.2
         0.6s      8.00nm
                   ic    45 56.20
CD2    122.46  329 ePKP  45 51.70  -2.5X
WB5    122.58  258 ePKP  45 50.00  -4.6X
WB5    122.58  258 ePKP  45 54.00  -0.6
WRA    122.62  258 PKPd  45 53.40  -1.3
         0.9s      5.00nm
MAIO   123.63   13 ePKP  46 01.00   4.6X
                   e     47 41.00
GYA    124.46  323 PKP   46 01.60   3.3X
KMI    127.67  326 ePKP  46 04.50  -0.2
GUN    131.91  345 PKP   46 11.40  -1.4
GKN    132.12  346 PKP   46 12.20  -0.7
KKN    132.17  346 PKP   46 12.20  -0.9
SHL    132.25  337 ePKP  46 18.00   4.7X
PKI    132.35  345 PKP   46 12.60  -1.0
DMN    132.39  346 PKP   46 12.60  -1.0
NDI    132.57  355 ePKP  46 15.00   1.4
LWI    133.51   75 ePKPc 46 17.10   1.0
CHG    134.83  325 ePKP  46 19.90   1.8
CHTO   134.83  325 ePKP  46 19.70   1.6
         0.9s      3.41nm
BLF    136.10  113 ePKP  46 26.00   5.5X
KSR    136.79  108 ePKP  46 23.80   1.9
PRY    137.30  109 ePKP  46 26.70   3.9X
         0.6s      5.36nm
SLR    138.03  108 iPKPc 46 32.00   7.8X
     Z  18s      4.12um          6.2Msz
POO    142.83  359 ePKP  46 18.70 -14.1X
HYB    143.57  351 ePKP  46 29.50  -4.6X
         1.2s     42.90nm
PSI    146.85  308 ePKPc 46 41.00   1.4
GBA    147.47  352 PKP   46 44.00   3.5X
KOD    150.78  351 ePKP  46 49.40   3.3X
       S.D. = 1.3   on 155 of 193 obs.
-------------------------------------
?  JAN  05, 1990  19h 58m 38.27± 5.24s
   15.724 N ±41.8km   97.258 W ±21.5km
   DEPTH =  33.0km  (normal)
 NEAR COAST OF OAXACA, MEXICO      ( 66)

OXX      1.44   21 iP    59 02.35  -0.2
                  iS    59 18.91
ACX      2.74  295 iP    59 21.00   0.0
                  (S)   59 53.00
IISM     3.25  358 iP    59 28.59   0.5
                  iS    00 09.86
III      3.38  322 iP    59 34.15   3.9X
                  iS    00 12.84
IIT      3.43  343 eP    59 30.98   0.0
                  iS    00 14.56
PPM      3.57  339 iP    59 32.21  -1.0
                  iS    00 18.29
CRX      4.33  328 (P)   59 49.00   5.2X
IIC      4.45  335 (P)   59 46.09   0.6
       S.D. = 0.7   on   6 of   8 obs.
-------------------------------------
&  JAN  05, 1990  20h 18m 39.81s
   63.106 N          149.746 W
   DEPTH =  97.5km
 CENTRAL ALASKA                    (  1)
      <AGS-P>.

HUR      0 14  159 iP    18 53.30   1.3
RND      0 50   53 iP    18 55.39  -0.3
MCK      0.73   30 iP    18 57.26  -0.3
                  eS    19 10.32
CUT      0.74  199 iP    18 57.38  -0.2
GHO      1.39  164 iP    19 05.01  -0.1
SKT      1.40  217 iP    19 04.55  -0.5
PWA      1.46  182 iPc   19 05.80   0.0
NEA      1.51   11 iP    19 05.63  -0.8
                  iS    19 25.83
PME      1.52  167 iP    19 06.27  -0.3
PLRM     1.55  169 eP    19 06.34  -0.5
PMR      1.55  169 iPc   19 06.50  -0.4
                  iS    19 29.40
SUA      1.71  196 eP    19 08.80  -0.4
NCA      1.75  128 eP    19 09.44  -0.2
CCB      1.77   28 iP    19 08.94  -0.8
                  eS    19 30.49
RDS      1.87   22 iP    19 10.35  -0.7
                  eS    19 33.12
PMS      1.87  177 iPc   19 10.60  -0.5
DDM      1.87   67 eP    19 11.42   0.2
                  eS    19 34.64

TOA      1.93  120 iPc   19 12.30   0.3
PAX      1.95   92 eP    19 12.44   0.2
FBA      2.00   25 iPc   19 12.10  -0.6
SDG      2.02  105 eP    19 13.14   0.1
DMW      2.03   60 eP    19 12.99  -0.2
NCG      2.05  215 eP    19 12.76  -0.8
CGLM     2.09  211 eP    19 13.80  -0.3
GLM      2.15   28 iP    19 14.18  -0.7
CRP      2.16  213 eP    19 14.77  -0.4
SPU      2.21  210 eP    19 14.71  -1.0
BGL      2.23  215 eP    19 16.00   0.1
CKL      2.27  214 eP    19 16.12  -0.4
KLU      2.41  130 eP    19 16.54  -1.8
VZW      2.54  142 eP    19 18.42  -1.7
GLI      2.56  150 iP    19 18.75  -1.6
DOT      2.62   75 eP    19 21.47   0.4
SLKM     2.62  185 eP    19 20.78  -0.3
FID      2.82  145 eP    19 22.20  -1.7
RDT      2.84  208 eP    19 23.04  -1.1
TTA      2.86  269 iPd   19 23.60  -0.9
SEW      3.02  177 eP    19 25.34  -1.1
RED      3.06  209 eP    19 27.61   0.5
NNL      3.16  194 eP    19 29.12   0.6
GLB      3.24  118 iP    19 28.60  -1.0
SVW      3.41  237 iPd   19 31.00  -1.0
IMA      3.42  332 iPc   19 31.00  -1.2
TGL      4.03  123 eP    19 38.51  -2.0
MID      4.04  154 e(P)  19 40.10  -0.4
DWY      4.71   74 P     19 48.10  -1.6
KDC      5.55  195 e(P)  19 59.60  -1.7
INK      8.46   45 eP    20 40.00  -1.3
BRW      8.66  345 eP    20 41.50  -2.5
SIT      9.40  124 eP    20 51.00  -3.0
       50 obs. associated
-------------------------------------
?  JAN  05, 1990  20h 31m 07.13± 2.99s
   36.123 N ±68.2km  144.047 E ±30.7km
   DEPTH =  33.0km  (normal)
   4.3mb (  1 obs.)
 OFF EAST COAST OF HONSHU, JAPAN (229)

MAT      4.73  277 eP    32 18.00   0.0
                  eS    33 08.00
LAT     42.64  176 eP    39 07.00   4.9X
PMG     45.38  176 e(P)  39 54.50  30.2X
GUN     49.37  278 P     39 56.60   0.7
PKI     49.89  278 P     39 58.20  -1.7
KKN     49.90  278 P     40 00.80   1.0
DMN     50.12  278 P     40 02.20   0.7
GKN     50.32  279 P     40 02.40  -0.6
N82     75.83  338 P     42 51.40   0.0
         0.9s     2.90nm          4.3mb
       S.D. = 1.1   on   7 of   9 obs.
-------------------------------------
   JAN  05, 1990  20h 37m 59.89± 0.54s
   39.849 N ± 4.1km   23.411 E ± 4.7km
   DEPTH =  10.0km  (geophysicist)
 AEGEAN SEA                        (365)
      ML 3.4 (THE). MD 3.4 (ATH).

PAIG     0.22   69 ePg    38 04.20  -0.5
PLG      0.52    3 ePb    38 09.70  -0.8
NEO      0.56  195 ePb    38 10.60  -0.7
LIT      0.75  290 ePgd   38 14.60   0.0
THE      0.85  337 ePg    38 16.50   0.2
                  eSg   38 28.70
SOH      0.97  357 ePg    38 19.40   1.0
AGG      1.18  226 ePb    38 22.70   0.8
SRS      1.27    6 ePb    38 23.20  -0.3
KZN      1.34  290 ePb    38 24.10  -0.5
GRG      1.35  325 ePbd   38 24.40  -0.3
                  eSb   38 43.90
KNT      1.37  344 ePbd   38 25.10   0.1
VAY      1.60  337 iPn    38 28.40   0.1
RDO      2.08   51 ePn    38 36.00   0.8
OHR      2.36  303 ePn    38 56.80  17.5X
SKO      2.59  325 ePn    38 42.50  -0.1
       S.D. = 0.6   on  14 of  15 obs.
-------------------------------------
?  JAN  05, 1990  21h 05m 40.32± 8.41s
   47.551 N ±22.8km    8.776 E ±79.6km
   DEPTH =  10.0km  (geophysicist)
 SWITZERLAND                       (544)
      ML 2.7 (LDG).

FEL      0.61  303 ePn   05 51.61  -1.1
CDF      1.33  311 Pg    06 05.10   0.2

                  Sg    06 24.80
BSF      1.37  283 Pg    06 05.30  -0.2
                  Sg    06 25.80
HAU      1.70  286 Pg    06 11.60   1.4
                  Sg    06 36.20
LPL      2.48  215 Pg    06 21.40  -0.1
LPG      2.48  215 Pg    06 21.60  -0.1
                  Sg    06 55.00
       S.D. = 1.1   on   6 of   6 obs.
-------------------------------------
   JAN  05, 1990  23h 56m 36.09± 1.30s
   21.441 N ± 5.5km  145.914 E ± 7.9km
   DEPTH =  78.9 ± 12.0 km
   4.9mb ( 12 obs.)
 MARIANA ISLANDS REGION            (215)

GUMO     7.87  187 e(P)  58 31.20   1.1
GUA      7.92  187 e(P)  58 30.10  -0.6
         0.3s     51.95nm          5.7mb
IIDJ    15.65  335 eP    00 16.20   2.9X
CHJJ    15.76  339 eP    00 10.60  -4.1X
MAT     16.48  338 eP    00 22.00  -1.7
         1.2s     51.56nm          4.6mb
                  eS    03 30.00
KAGJ    16.59  309 eP    00 27.20   2.1
MTMJ    16.66  337 eP    00 26.10   0.0
KUMJ    17.38  313 eP    00 35.40   0.5
SSE     24.12  299 P+    01 44.00  -1.7
     Z  18s      1.30um          4.5Msz
     N  12s      0.70um
     E  14s      0.50um
                  S     06 00.00
                  sS    06 08.00
MTN     37.04  204 eP    03 39.00  -1.1
LZH     39.35  301 iPd   03 59.50  -0.1
         4.0s    400.00nm          5.7mb X
     Z  18s      1.20um          4.8Msz
     N  15s      1.40um
                  sP    04 14.00
                  i     04 25.00
                  PP    05 39.50
                  eS    09 48.50
                  sS    10 07.00
                  i     10 35.00
WB5     42.59  196 eP    04 25.20  -0.9
WRA     42.66  196 Pd    04 26.30  -0.3
         0.9s     12.20nm          4.7mb
ASPA    46.34  195 iPd   04 55.40  -0.7
         0.6s      9.00nm          4.9mb
     Z  23s      0.66um          4.5MszX
                  LR    22 44.00
DZM     47.66  154 iPc   05 07.40   0.8
WARB    50.90  202 eP    05 31.00  -0.3
GUN     54.48  290 P     05 58.80   0.4
PKI     54.94  289 P     06 00.80  -1.0
KKN     55.02  290 P     06 02.20   0.0
         0.8s     36.00nm          5.5mb
DMN     55.20  289 P     06 03.80   0.2
GKN     55.55  290 P     06 06.00   0.0
         1.0s     70.00nm          5.6mb
NDI     61.91  292 iPc   06 49.80  -0.1
         1.0s     45.00nm          5.5mb
GBA     65.34  276 P     07 12.00  -0.5
INK     66.79   24 eP    07 20.00  -0.9
POO     67.23  282 iPd   07 26.20   1.6
MBC     70.46   15 eP    07 43.00  -0.5
         1.2s     18.00nm          4.9mb
MAIO    74.86  303 iPc   08 11.80   1.6
WDC     77.51   51 eP    08 23.70  -1.1
ORV     78.58   52 eP    08 30.60  -0.2
MHC     79.17   54 eP    08 39.10   4.9X
PRS     79.71   55 e(P)  08 35.90  -1.1
CMB     79.89   53 eP    08 38.20   0.2
FRI     80.75   54 eP    08 42.40   0.0
FFC     84.69   33 eP    09 03.00   0.7
         0.8s      7.00nm          4.7mb
HFS     89.93  338 eP    09 26.90  -0.6
         0.6s      3.10nm          4.7mb
NB2     90.08  340 P     09 28.00  -0.3
         0.9s      4.40nm          4.7mb
ALQ     91.41   52 eP    09 37.10   2.0
         1.1s      6.61nm          4.9mb
SLR    123.14  253 ePKP  15 17.00  -8.8X
ZOBO   147.42   87 ePKP  16 13.00   1.7
         1.5s     49.46nm
     Z  23s      0.10um          4.5MszX
                  LR    05 24.00
```

6d 00h

LPB 147.51 B7 PKP 16 12.00 0.8
i 16 21.00
S.D. = 1.0 on 36 of 40 obs.

& JAN 06, 1990 01h 29m 24.87s
60.718 N 151.118 W
DEPTH = 47.5km
KENAI PENINSULA, ALASKA (14)
<AGS-P>. ML 3.9 (PMR).

NKA	0.06	293	iP	29	34.14	3.5
SLKM	0.49	115	iP	29	35.56	-0.4
RDT	0.65	258	iP	29	37.32	-0.7
SPU	0.65	316	iP	29	37.48	-0.6
NNL	0.68	188	iP	29	38.80	0.4
			eS	29	49.75	
CGLM	0.73	324	iP	29	38.71	-0.5
CRP	0.75	318	iP	29	39.11	-0.3
CKL	0.76	309	iP	29	38.93	-0.7
SUA	0.77	14	iP	29	39.01	-0.7
			eS	29	51.40	
BGL	0.83	312	iP	29	39.90	-0.6
NCG	0.85	324	iP	29	40.32	-0.5
RED	0.87	251	iP	29	40.22	-0.8
PMS	0.93	54	iPd	29	41.00	-0.7
BRLK	0.96	173	eP	29	41.83	-0.4
			eS	29	55.64	
SEW	1.03	126	eP	29	41.87	-1.3
			eS	29	57.22	
PWA	1.11	32	iPd	29	44.00	-0.3
CNPM	1.20	183	iP	29	44.62	-0.9
			eS	30	01.02	
SKT	1.28	351	iP	29	46.12	-0.6
PLRM	1.30	47	iP	29	46.04	-0.9
			eS	30	04.26	
PMR	1.30	47	iPc	29	46.10	-0.8
			iS	30	04.10	
XLV	1.30	194	eP	29	45.84	-1.1
			eS	30	03.47	
PME	1.36	47	iP	29	47.01	-0.8
GHO	1.50	44	iP	29	48.78	-1.0
CUT	1.74	13	eP	29	52.85	-0.3
AUE	1.77	221	eP	29	53.01	-0.6
AUL	1.77	222	eP	29	53.42	-0.2
GLI	1.98	84	iP	29	53.76	-2.8
CDD	2.20	217	eP	29	58.91	-0.8
SVW	2.23	282	iPc	29	57.90	-2.3
VZW	2.26	79	eP	29	58.00	-2.5
FID	2.28	87	iP	29	57.36	-3.4
HIN	2.30	96	iP	29	58.16	-3.0
			eS	30	27.97	
HUR	2.37	17	eP	30	03.09	1.0
			eS	30	32.65	
NCA	2.43	56	eP	30	01.33	-1.7
KLU	2.64	71	iP	30	03.65	-2.4
CVA	2.65	91	iP	30	02.83	-3.2
			eS	30	34.30	
MID	2.72	116	eP	30	04.10	-3.0
TOA	2.76	58	iPc	30	06.30	-1.4
KTH	2.85	2	eP	30	08.58	-0.4
			eS	30	43.01	
RND	2.90	21	eP	30	09.89	0.2
SGAM	2.92	92	iP	30	06.27	-3.7
			eS	30	39.47	
KDC	3.06	194	eP	30	09.10	-2.8
MCK	3.19	18	eP	30	14.15	0.4
RAGM	3.20	93	eP	30	09.97	-3.9
TTA	3.21	316	iPd	30	12.70	-1.4
SDG	3.22	53	eP	30	13.20	-1.0
PAX	3.50	47	eP	30	16.96	-1.3
GLB	3.62	75	eP	30	16.80	-3.2
			eS	31	00.30	
DDM	3.94	36	eP	30	24.55	0.1
NEA	3.99	13	eP	30	23.73	-1.3
WAX	4.09	90	iP	30	21.94	-4.6
SNH	4.14	94	eP	30	25.21	-2.0
CCB	4.23	20	eP	30	26.85	-1.5
BALM	4.30	82	iP	30	25.69	-3.9
CYK	4.33	95	eP	30	28.21	-1.6
RDS	4.34	17	eP	30	28.57	-1.5
FBA	4.47	19	eP	30	29.80	-1.9
GLM	4.61	20	eP	30	32.19	-1.7
PCA	5.42	92	eP	30	40.46	-4.8
IMA	5.49	349	eP	30	43.80	-2.6
DWY	6.38	53	P	30	52.50	-6.1
SDN	7.33	227	e(P)	31	11.60	-0.3
INK	10.70	37	eP	31	54.00	-4.2
BRW	10.87	350	e(P)	31	56.20	-4.3
MBC	18.99	23	eP	33	43.00	-1.8

65 obs. associated

& JAN 06, 1990 03h 36m 15.29s
62.901 N 152.173 W
DEPTH = 165.4km
CENTRAL ALASKA (1)
<AGS-P>.

SKT	0.97	162	eP	36	41.13	-0.5
CUT	1.01	119	eP	36	41.51	-0.4
HUR	1.16	85	eP	36	42.26	-0.9
NCG	1.50	180	eP	36	45.98	-0.6
RND	1.59	70	eP	36	46.25	-1.1
			eS	37	09.81	
SUA	1.59	154	eP	36	47.34	-0.1
			eS	37	11.20	
CGLM	1.60	177	eP	36	46.85	-0.7
CRP	1.64	180	eP	36	47.52	-0.5
BGL	1.65	184	eP	36	47.68	-0.3
PWA	1.65	138	iP	36	47.53	-0.4
MCK	1.68	59	eP	36	47.43	-0.9
CKL	1.71	183	eP	36	48.26	-0.5
SPU	1.73	178	eP	36	47.89	-0.9
			eS	37	13.16	
GHO	1.89	125	eP	36	49.94	-0.7
			eS	37	16.83	
PLRM	1.94	131	eP	36	49.84	-1.2
PME	1.95	130	eP	36	50.07	-1.1
PMS	2.07	142	eP	36	51.70	-0.9
RDT	2.34	183	eP	36	54.99	-0.8
RED	2.51	187	eP	36	57.43	-0.4
SLKM	2.58	158	eP	36	58.13	-0.4
NCA	2.65	108	eP	36	58.31	-1.1
TOA	2.90	103	eP	37	01.74	-0.8
NNL	2.90	171	eP	37	03.14	0.6
PAX	3.07	86	eP	37	03.37	-1.3
GLI	3.15	128	eP	37	04.15	-1.4
KLU	3.25	113	eP	37	05.45	-1.6
CNPM	3.42	172	eP	37	07.94	-1.1
FID	3.46	126	eP	37	08.03	-1.5
GLB	4.19	107	eP	37	17.79	-1.2
BALM	5.00	108	eP	37	28.44	-1.4

30 obs. associated

* JAN 06, 1990 03h 43m 00.59± 0.48s
8.337 N ± 8.7km 126.660 E ±14.0km
DEPTH = 33.0km (normal)
5.1mb (5 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

KNA	24.02	175	eP	48	15.00	1.4
LOE	25.89	293	eP	48	32.00	0.5
CHG	28.84	294	eP	48	58.50	0.2
CHTO	28.84	294	eP	48	58.70	0.4
	1.3s		12.25nm			4.4mb
			pP	49	12.00	53kmX
WB5	29.05	165	eP	48	59.10	-1.0
			e	53	40.80	
WRA	29.10	165	Pd	48	58.70	-1.9
	0.6s		1.20nm			3.8mb X
MAT	29.98	19	(P)	49	09.00	0.6
WARB	34.31	180	iPd	49	47.20	0.9
FORR	38.99	178	iPd	50	25.90	0.3
	0.3s		17.00nm			5.3mb
BRS	43.60	145	iPd	51	04.20	0.5
GBA	48.54	281	P	51	57.00	14.0X
INK	85.93	22	eP	55	39.00	0.7
SOD	86.21	338	eP	55	39.00	-0.7
SUF	87.44	333	eP	55	45.00	-0.7
	0.4s		12.20nm			5.5mb
MBC	87.50	13	eP	55	47.00	1.2
	0.7s		10.00nm			5.2mb
NUR	88.67	331	eP	55	51.00	-0.6
HFS	93.93	332	eP	56	14.30	-1.8
	0.6s		1.90nm			4.7mb

S.D. = 1.1 on 16 of 17 obs.

* JAN 06, 1990 04h 04m 08.89± 0.78s
14.658 S ±16.7km 72.061 W ± 9.6km
DEPTH = 10.0km (geophysicist)
PERU (116)

ARE	1.88	163	iPd	04	41.40	-0.2
ZOBO	4.12	113	Pc	05	14.00	0.2
	0.9s		8.65nm			
			S	06	02.00	
PT06	4.22	281	iPd	05	15.20	0.5
			iS	05	57.10	
LPB	4.25	117	P	05	16.00	0.5
			S	06	06.00	
NNA	5.36	299	eP	05	30.50	-0.4
	0.4s		6.78nm			4.6mb X
			eS	06	28.00	
CCH	6.30	116	P	05	44.00	-0.5

S.D. = 0.6 on 6 of 6 obs.

JAN 06, 1990 04h 20m 17.43± 0.59s
45.345 N ± 5.3km 26.986 E ± 6.5km
DEPTH = 10.0km (geophysicist)
ROMANIA (358)

ISR	0.37	237	iPc	20	26.00	0.9
VRI	0.56	341	iPd	20	28.50	-0.2
MLR	0.75	282	iPc	20	32.50	0.3
CFR	0.84	101	iPd	20	33.50	-0.1
BIR	1.02	26	eP	20	37.00	0.2
PVL	2.44	210	eP	20	59.00	1.1
JMB	2.89	186	iP	21	06.00	1.6
			iSg	21	47.00	
PGB	3.46	217	iP	21	12.00	-0.4
			iSg	22	06.00	
DIM	3.46	198	ePg	21	13.00	0.6
			eSg	22	04.00	
PLD	3.64	208	iPd	21	17.00	2.1X
BZS	3.79	276	ePc	21	21.50	4.4X
KDZ	3.87	198	iP	21	17.00	-1.2
RZN	4.01	205	iP	21	20.00	-0.4
			iSg	22	23.00	
MMB	4.44	213	ePg	21	25.00	-1.4
KKB	4.49	221	iP	21	26.00	-1.0
VAY	5.15	220	ePn	21	33.00	-3.4X
SKO	5.25	232	ePn	21	56.50	18.7X

S.D. = 1.0 on 13 of 17 obs.

JAN 06, 1990 04h 25m 04.05± 0.75s
45.413 N ± 7.2km 26.901 E ± 9.4km
DEPTH = 33.0km (normal)
ROMANIA (358)

ISR	0.37	223	iPc	25	11.50	-1.4
VRI	0.47	345	iPc	25	14.50	0.2
MLR	0.68	277	iPd	25	17.50	0.2
CFR	0.91	104	iPc	25	19.50	-1.0
BIR	0.99	30	eP	25	22.00	0.3
PSN	1.96	152	eP	25	40.00	4.4X
PVL	2.47	208	iPd	25	45.00	2.2
			iSg	26	24.00	
JMB	2.95	185	iP	25	52.00	2.3
			iSg	26	34.00	
PGB	3.48	216	iP	25	57.00	-0.2
			Sg	26	51.00	
DIM	3.50	197	ePg	26	07.00	9.5X
			eSg	26	50.00	
BZS	3.72	275	ePc	26	09.00	8.5X
VTS	3.88	225	eP	26	03.00	0.0
KDZ	3.91	197	eP	26	02.00	-1.3
RZN	4.05	204	iP	26	05.00	-0.4
MMB	4.46	212	eP	26	12.00	0.8
KKB	4.50	219	iP	26	10.00	-1.7

S.D. = 1.4 on 13 of 16 obs.

? JAN 06, 1990 04h 47m 14.72± 1.05s
50.992 N ±12.6km 6.835 E ±13.0km
DEPTH = 31.9 ± 14.7 km
GERMANY (543)
MD 2.8 (UCC).

ENN	0.62	249	eP	47	28.00	0.9
	0.8s		37.00nm			
MEM	0.65	234	eP	47	24.50	-3.0X
WTS	1.01	359	eP	47	32.50	-0.1
	0.9s		14.00nm			
ABH	1.20	157	ePn	47	35.62	0.2
RUP	1.30	174	ePn	47	36.71	-0.1
WLF	1.40	198	eP	47	43.00	4.8X
DOU	1.69	239	P	47	41.50	-0.9
			S	48	02.50	

S.D. = 1.3 on 5 of 7 obs.

% JAN 06, 1990 05h 11m 14.67± 0.88s
15.369 N ±12.3km 92.801 W ± 9.5km
DEPTH = 33.0km (normal)

MEXICO-GUATEMALA BORDER REGION (62)

TPX	0.70	131	iP	11	28.07	0.0
			iS	11	45.72	
SCX	1.37	7	iP	11	37.59	0.0
			iS	12	02.43	
OXX	4.13	295	iP	12	18.98	1.7
			(S)	13	12.47	
IISM	5.66	310	iP	12	38.01	-0.7
			(S)	13	46.94	
IIT	6.39	305	iP	12	49.50	0.2
PPM	6.67	304	iP	12	53.74	0.3
ACX	6.94	283	iP	12	56.00	-0.8
III	7.05	296	iP	12	57.85	-0.6

S.D. = 0.9 on 8 af 8 abs.

& JAN 06, 1990 05h 35m 44.20s
40.520 N 125.762 W
DEPTH = 5.0km
4.1mb (5 abs.) 3.8Msz (1 abs.)
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 4.2 (BRK).

FHC	1.38	78	iPc	36	08.30	-1.8
			iS	36	24.60	
WDC	2.46	88	iPc	36	23.00	-2.6
			i	36	34.20	
			i	36	37.70	
			eS	36	52.50	
MIN	3.18	92	iPc	36	32.70	-3.2
ORV	3.41	105	eP	36	36.40	-2.8
BRK	3.79	133	eP	36	41.30	-3.3
			eS	37	22.50	
BKS	3.80	133	iPc	36	41.95	-2.8
PCC	4.00	138	eP	36	44.60	-2.9
MHC	4.52	133	eP	36	51.30	-3.6
GCC	4.56	139	eP	36	52.70	-2.7
ARN	4.57	132	eP	36	52.40	-3.2
CMB	4.85	119	eP	36	57.20	-2.5
SAO	5.05	137	eP	36	58.70	-3.7
PGO	5.51	25	eP	37	13.48	4.6
TDH	5.59	30	eP	37	13.47	3.3
CROR	5.68	37	eP	37	13.76	2.4
VFP	5.74	32	eP	37	15.41	3.1
VLL	5.78	30	eP	37	16.48	3.8
NLO	5.82	16	eP	37	20.00	6.8
VTHM	6.03	38	eP	37	18.93	2.8
RVW	6.04	20	eP	37	21.02	4.7
LVP	6.06	23	eP	37	20.87	4.2
KVN	6.08	101	eP	37	13.50	-3.6
MTMW	6.08	24	eP	37	20.31	3.3
VGB	6.19	35	eP	37	21.00	2.6
FL2	6.19	23	eP	37	22.31	3.7
GULW	6.20	28	eP	37	22.23	3.6
CDFW	6.21	25	eP	37	22.31	3.5
HSR	6.22	24	eP	37	23.36	4.3
SHW	6.22	23	eP	37	23.31	4.3
BMW	6.23	16	eP	37	23.00	3.9
ESD	6.25	24	eP	37	23.57	4.0
YEL	6.25	23	eP	37	23.61	4.1
ERK	6.30	22	eP	37	24.04	4.0
CZM	6.37	21	eP	37	25.50	4.5
ASR	6.40	27	eP	37	25.12	3.6
KOSW	6.48	22	eP	37	27.41	4.8
GL2	6.52	32	eP	37	26.41	3.2
APW	6.53	19	eP	37	29.03	5.7
JBO	6.58	39	eP	37	26.76	2.8
GLK	6.75	25	eP	37	29.91	3.4
LON	6.85	23	eP	37	31.00	3.1
PATW	6.92	37	eP	37	31.57	2.8
ISA	7.52	128	eP	37	35.00	-2.2
CLC	7.96	124	eP	37	41.00	-2.4
SBB	8.57	130	eP	37	48.00	-4.0
MWC	8.78	133	eP	37	56.00	1.1
GSC	8.79	124	eP	37	53.00	-1.9
RVR	9.33	132	eP	38	01.00	-1.3
DUG	9.89	88	eP	38	08.00	-2.2
TPC	10.04	127	eP	38	08.00	-4.2
MSU	10.69	96	eP	38	18.50	-2.8
BAR	10.70	134	eP	38	21.00	-0.2
LRM	11.07	57	eP	38	25.80	-0.6
IMW	11.50	68	eP	38	32.50	0.1
BW06	12.33	74	eP	38	41.00	-2.6
GOL	15.63	86	eP	39	25.50	-1.5
	0.7s		7.59nm			4.1mb
ANMO	16.25	104	eP	39	33.50	-1.4
ALQ	16.25	104	eP	39	34.50	-0.4
	1.0s		2.50nm			3.3mb
FFC	21.28	40	eP	40	34.50	1.0
	1.0s		7.00nm			4.0mb
SIO	23.60	92	e(P)	40	58.70	2.0
TUL	23.93	91	eP	41	00.90	1.0
	1.3s		12.30nm			4.4mb
Z	18s		0.31um			3.8Msz
			LR	48	00.00	
RSON	24.48	54	eP	41	06.00	0.9
	1.0s		31.18nm			4.9mb
PMR	25.44	334	eP	41	23.50	9.4
INK	28.16	354	eP	41	46.00	7.0
TTA	28.75	331	eP	41	56.30	11.8
IMA	30.04	338	eP	42	04.50	8.4
JSC	35.61	86	eP	42	44.00	-0.6
MBC	35.93	3	eP	42	53.00	6.1

68 obs. assaciated

? JAN 06, 1990 06h 01m 35.60± 3.32s
27.957 N ± 9.8km 51.953 E ±35.0km
DEPTH = 57.9 ± 16.5 km
4.5mb (12 obs.)
PERSIAN GULF (352)

DHR	2.31	225	ePd	02	12.00	0.1
KER	7.61	328	e(P)	03	59.00	32.6X
BHD	8.40	311	ePn	04	32.50	55.3X
			eSn	06	33.00	
KMSA	10.16	224	ePd	03	56.10	-5.4X
MSL	11.23	321	ePn	04	15.50	-0.3
			eSn	06	18.00	
KBA	35.62	313	iPc	08	30.20	0.4
	0.7s		3.60nm			4.4mb
KHC	36.18	316	eP	08	36.00	1.7
LPG	39.66	309	eP	09	04.90	1.1
	0.8s		5.30nm			4.5mb
BSF	40.11	312	eP	09	07.00	-0.2
	0.4s		1.60nm			4.2mb
HFS	41.29	332	eP	09	16.40	-0.2
	0.4s		9.10nm			4.9mb
Z	15s		0.16um			4.0MszX
			LR	26	12.00	
NB2	42.81	332	P	09	28.50	-0.6
	0.7s		2.10nm			4.0mb
LDF	44.79	312	eP	09	44.80	-0.4
	0.4s		2.70nm			4.4mb
FLN	45.05	312	eP	09	46.80	-0.5
	0.4s		3.40nm			4.5mb
GRR	45.25	312	eP	09	48.80	-0.1
	0.4s		2.70nm			4.5mb
LPF	45.33	311	eP	09	48.50	-1.0
	0.4s		2.20nm			4.4mb
LKO	56.97	263	Pd	11	18.20	0.4
	0.5s		5.00nm			4.8mb
KIC	57.72	259	Pc	11	22.60	-0.4
	0.5s		2.00nm			4.5mb
TIC	57.82	260	Pd	11	23.60	-0.2
LIC	58.03	259	Pd	11	24.80	-0.4
	0.4s		7.50nm			5.2mb
FRB	77.41	337	eP	13	26.00	0.4

S.D. = 0.7 on 17 of 20 obs.

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* JAN 06, 1990 06h 36m 41.69± 0.65s
3.121 S ± 7.7km 141.124 E ±10.2km
DEPTH = 33.0km (normal)
4.8mb (9 obs.)
PAPUA NEW GUINEA (202)

JAY	0.73	325	iPc	36	54.00	-1.6
			iS	37	09.50	
MNDI	3.93	140	eP	37	43.00	1.5
			eS	38	36.00	
LAT	6.82	121	eP	38	16.00	-6.1X
MTN	13.82	225	iPc	39	58.60	0.9
			eS	42	29.00	
KNA	17.48	223	eP	40	44.50	-0.1
	0.3s		27.00nm			4.9mb
CTA	17.59	164	eP	40	54.00	7.9X
WB5	17.92	201	eP	40	50.00	-0.1
			eS	44	20.60	
WRA	17.98	201	Pc	40	49.40	-1.6
	0.7s		18.20nm			4.3mb
HNR	19.72	109	eP	41	05.00	-6.7X
ASPA	21.59	198	eP	41	29.90	-0.9
	0.7s		11.00nm			4.4mb
Z	17s		0.21um			3.6MszX
			eS	48	05.80	
			LR	49	43.20	
RMQ	24.36	163	eP	41	58.00	0.0
BRS	26.58	156	iPc	42	17.80	-1.1
WARB	26.81	210	eP	42	21.50	0.5
MBL	27.40	227	eP	42	27.00	0.7
DZM	30.97	130	iPd	42	54.60	-3.8X
NANU	31.45	230	iPc	43	04.20	1.7
CAN	32.86	168	eP	43	12.80	-2.0
COOL	33.44	212	eP	43	20.00	0.1
LOE	43.89	299	eP	44	51.80	4.6X
CHG	46.88	299	eP	45	15.00	4.0X
CHTO	46.88	299	eP	45	14.10	3.1X
	0.5s		1.40nm			4.2mb
LZH	52.28	322	P	45	56.50	4.0X
GUN	61.41	304	PKP	47	01.00	3.2X
PKI	61.68	304	PKP	47	04.40	4.8X
KKN	61.86	304	P	47	03.60	2.9X
DMN	61.94	304	PKP	47	02.40	1.1
GKN	62.47	304	PKP	47	07.60	2.9X
	0.6s		9.00nm			5.1mb
TTA	80.78	24	P	48	55.50	2.2X
	0.8s		8.19nm			4.8mb
IMA	83.02	22	P	49	07.30	2.3X
	0.8s		5.82nm			4.7mb
PMR	83.23	27	P	49	06.00	0.1
	0.9s		11.98nm			5.0mb
FBA	84.88	24	P	49	15.00	0.8
	0.8s		9.48nm			5.0mb
INK	91.15	22	eP	49	52.00	7.8X
RSON	113.98	35	PKP	55	22.00	2.9X
LPB	145.14	125	PKP	56	24.00	5.0X
KIC	145.84	277	PKP	56	23.00	3.2X
LKO	146.33	282	PKP	56	24.46	3.9X

S.D. = 1.2 on 17 of 36 abs.

? JAN 06, 1990 07h 16m 53.30± 5.37s
6.734 S ±52.1km 133.843 E ±21.8km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
AROE ISLANDS REGION (204)

MTN	6.64	204	eP	18	34.00	2.9X
			eS	20	09.00	
KNA	10.25	209	iPd	19	22.10	0.9
	0.7s		411.00nm			6.8mb X
			e	19	27.00	
WB5	13.08	178	eP	20	00.20	0.7
			eS	22	39.60	
			i	23	41.20	
WRA	13.14	178	Pd	19	58.80	-1.5
	0.7s		4.30nm			4.6mb
ASPA	16.84	180	ePd	20	48.20	0.0
	0.9s		15.00nm			4.1mb
Z	20s		1.00um			
			eS	26	31.20	
			LR	28	17.50	
CTA	17.92	139	eP	21	03.00	1.2
			eS	26	40.00	
WARB	20.52	199	eP	21	32.00	0.4
ADE	28.45	172	e(P)	22	45.70	-1.7

S.D. = 1.4 on 7 af 8 abs.

& JAN 06, 1990 09h 37m 17.40s
62.454 N 151.263 W
DEPTH = 95.6km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.46	96	iP	37	32.04	-0.6
			eS	37	43.14	
SKT	0.49	195	iP	37	32.18	-0.7
HUR	0.92	54	eP	37	36.05	-0.8
			eS	37	49.92	
SUA	1.02	166	eP	37	37.74	-0.4
			eS	37	53.45	
PWA	1.04	140	eP	37	37.82	-0.3
			eS	37	53.61	
KTH	1.11	8	iP	37	38.12	-1.1
			eS	37	53.26	
NCG	1.14	202	iP	37	38.60	-0.9
CGLM	1.20	197	eP	37	39.29	-1.0
CRP	1.26	200	eP	37	40.36	-0.7
			eS	37	58.77	
GHO	1.30	121	eP	37	40.89	-0.5
			eS	37	58.97	
BGL	1.31	205	eP	37	41.09	-0.5
PLRM	1.33	130	eP	37	40.56	-1.0

06d 09h

SPU	1.33	197	iP	37 40.79	-1.0
PME	1.34	127	eP	37 41.18	-0.6
CKL	1.36	202	eP	37 41.49	-0.7
			eS	38 01.15	
PMS	1.46	146	eP	37 42.66	-0.7
			eS	38 01.34	
RND	1.46	48	eP	37 42.41	-1.0
			eS	38 01.09	
MCK	1.66	38	eP	37 44.99	-1.0
NKA	1.72	180	eP	37 48.11	1.5
RDT	1.96	197	eP	37 49.03	-0.9
SLKM	2.02	165	eP	37 50.91	0.3
NCA	2.13	101	eP	37 51.12	-1.0
RED	2.17	200	eP	37 51.90	-0.7
NEA	2.35	24	eP	37 52.91	-2.0
TOA	2.41	96	eP	37 54.96	-0.9
SEW	2.52	159	eP	37 56.96	-0.2
GLI	2.54	127	eP	37 55.81	-1.8
VZW	2.64	120	eP	37 57.41	-1.6
CCB	2.69	34	eP	37 57.77	-1.8
KLU	2.70	109	eP	37 57.68	-2.2
PAX	2.72	76	eP	37 59.72	-0.4
RDS	2.76	29	eP	37 58.94	-1.6
FID	2.85	125	eP	37 59.60	-2.3
FBA	2.90	31	eP	38 00.85	-1.6
CNPM	2.94	180	eP	38 03.02	0.0
GLM	3.07	32	eP	38 03.15	-1.7
AUL	3.26	200	eP	38 09.34	2.0
GLB	3.66	103	eP	38 11.08	-1.9

38 obs. associated

JAN 06, 1990 12h 47m 54.22± 0.79s
33.937 S ± 9.0km 70.076 W ± 5.2km
DEPTH = 20.6 ± 6.2 km
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.48	270	iPc	48 05.00	1.1
PCH	0.48	311	iPc	48 03.00	-1.0
SAN	0.69	315	iPc	48 06.30	-1.1
			iS	48 16.70	
TACH	0.77	291	iPc	48 08.90	0.0
LNV	1.11	269	iPc	48 15.50	1.0
			iS	48 32.00	
ROCH	1.24	321	iPd	48 15.50	-1.1
			iS	48 32.90	
LCCH	1.33	290	iPc	48 18.10	0.5
			iS	48 37.50	
MDZ	1.47	45	e(P)	48 24.90	5.2X
RFA	1.57	122	iPc	48 20.90	-0.3
RTCV	2.44	32	iP	48 34.00	0.3
ZON	2.66	27	e(P)	48 39.00	2.2
			eS	49 14.00	
CFA	2.79	34	iPd	48 39.00	0.3
RTLL	2.93	28	e(P)	48 42.00	1.4
RTRS	3.79	8	eP	48 56.50	3.7X
MRA	3.97	69	eP	48 53.60	-1.6
TCA	5.30	62	eP	49 10.20	-4.1X
LPB	17.42	6	P	51 59.00	0.9
ZOBO	17.68	6	P	52 00.00	-1.5
Z 20s		0.10um			
			LR	58 46.00	
KIC	73.52	70	P	59 27.40	-0.2
ALQ	76.52	330	eP	59 44.00	-0.7

S.D. = 1.2 on 17 of 20 obs.

% JAN 06, 1990 12h 58m 52.97± 1.16s
30.905 S ± 9.7km 117.129 E ±13.9km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

BAL	0.47	309	eP	59 02.00	-0.5
			eS	59 08.00	
KLB	0.87	142	iPd	59 10.30	0.6
			iS	59 21.60	
MUN	1.33	216	iPc	59 18.40	0.9
			eS	59 26.00	
MRWA	1.95	329	iPd	59 26.90	0.5
			eS	59 50.00	
NWAO	2.02	177	eP	59 26.00	-1.4
COOL	3.45	91	eP	00 24.00	36.1X

S.D. = 1.4 on 5 of 6 obs.

? JAN 06, 1990 13h 44m 56.53± 3.10s
35.386 N ±25.3km 22.274 E ±21.0km
DEPTH = 50.0 ± 20.3 km
3.8mb (2 obs.)
MEDITERRANEAN SEA (400)

VLI	1.43	22	ePb	45 19.60	-0.9
VAM	1.57	89	ePb	45 22.60	0.1
ITM	1.81	351	ePb	45 29.00	3.2X
			eSb	45 56.60	
ATH	2.83	24	ePn	45 41.60	1.3
VLS	3.10	335	ePn	45 45.40	1.3
APE	3.12	57	ePb	45 51.10	6.6X
KZN	4.93	356	ePn	46 10.60	0.6
OHR	5.83	349	ePn	46 22.20	-0.5
VAY	5.93	2	ePn	46 23.60	-0.4
SKO	6.61	355	iPn	46 32.60	-0.9
HFS	25.38	350	(P)	50 20.10	-0.3
	0.4s		1.40nm		3.8mb
NB2	26.63	348	P	50 31.60	-0.4
	0.8s		1.70nm		3.7mb

S.D. = 1.0 on 10 of 12 obs.

JAN 06, 1990 15h 34m 11.27± 0.66s
44.548 N ± 5.6km 7.257 E ± 7.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

PZZ	0.12	249	P	34 14.66	0.3
			S	34 16.61	
STV	0.31	171	P	34 17.63	-0.1
			S	34 21.53	
ENR	0.34	160	P	34 18.25	-0.1
			S	34 22.66	
RRL	0.50	318	P	34 21.22	-0.3
			S	34 29.12	
ROB	0.51	120	P	34 21.63	0.1
RSP	0.60	360	P	34 23.68	0.1
			S	34 32.70	

S.D. = 0.3 on 6 of 6 obs.

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* JAN 06, 1990 16h 30m 47.45± 1.75s
16.865 N ± 4.3km 61.929 W ±27.2km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

BPA	0.19	21	eP	30 52.02	0.3
			eS	30 55.17	
ANG	0.30	18	eP	30 53.50	-0.3
			eS	30 57.15	
SEG	0.61	138	ePc	30 59.95	0.2
			S	31 09.80	
PAG	0.86	164	eP	31 04.36	0.2
			S	31 16.70	
DOG	0.88	160	eP	31 04.30	-0.1
MGG	1.11	148	eP	31 08.00	-0.3
			S	31 21.20	
BBL	1.40	162	eP	31 13.00	-0.1
			S	31 32.00	

S.D. = 0.3 on 7 of 7 obs.

JAN 06, 1990 16h 36m 05.65± 0.84s
45.841 N ±10.7km 11.904 E ± 5.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 3.2 (K8A).

FVI	0.97	39	Pc	36 23.20	-0.8
			eSg	36 37.00	
SAL	0.99	257	P	36 24.80	0.3
TRI	1.31	95	P	36 29.80	0.0
			eSg	36 48.50	
VOY	1.40	81	iPnd	37 30.10	58.8X
			eSn	37 49.30	
OSS	1.49	305	iPc	36 31.30	-1.3
MDI	1.53	268	P	36 33.50	0.4
KBA	1.59	38	iPgd	36 33.80	-0.2
			iSg	36 55.80	
CEY	1.77	92	eP	36 58.40	21.9X
			eSg	37 00.00	
VDL	1.81	292	ePc	36 37.40	0.1
TMA	2.13	278	eP	36 41.20	-0.7
SAX	2.26	310	eP	36 44.50	0.6
FUR	2.36	350	eP	36 48.50	3.4X
VBY	2.37	97	eP	37 20.00	34.8X
			eSg	37 28.40	
KHC	3.48	18	ePn	37 02.50	1.5
			Pg	37 08.60	
			eSn	37 39.90	
			eSg	37 55.00	

S.D. = 0.9 on 10 of 14 obs.

% JAN 06, 1990 18h 25m 04.87± 0.68s
33.574 S ± 8.2km 71.132 W ± 6.7km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

TACH	0.18	116	iPc	25 12.50	1.2
LCCH	0.38	285	iPd	25 14.00	0.3
			iS	25 23.20	
SAN	0.41	73	iPc	25 14.50	0.3
			iS	25 23.60	
LNV	0.45	211	iP	25 14.20	-0.4
			iS	25 23.00	
PCH	0.52	95	iPc	25 15.20	-0.6
			iS	25 25.00	
CHCH	0.54	132	iPc	25 15.80	-0.3
			iS	25 25.20	
ROCH	0.61	10	iPc	25 16.80	-0.5

S.D. = 0.8 on 7 of 7 obs.

JAN 06, 1990 18h 25m 59.04± 0.97s
53.015 N ± 6.7km 152.684 E ± 4.3km
DEPTH = 554.7 ± 13.7 km
4.3mb (17 obs.)
SEA OF OKHOTSK (663)

MDJ	17.31	250	Pc	29 31.50	1.3
MAT	19.35	217	iPd	29 48.90	-0.7
	1.0s		22.00nm		4.7mb
TTA	28.19	49	ePc	31 08.20	-0.4
BRW	28.60	31	eP	31 11.80	-0.1
IMA	29.11	42	iPc	31 16.30	-0.3
	0.6s		16.90nm		4.8mb
KDC	30.77	59	eP	31 29.50	-1.1
PMS	31.42	52	eP	31 36.10	0.0
PMR	31.56	51	P	31 37.00	-0.2
	0.5s		8.06nm		4.6mb
FBA	31.63	44	iPc	31 38.20	0.4
TIY	31.67	257	Pc	31 39.40	0.9
NJ2	32.11	243	Pd	31 41.50	-0.6
WHN	35.73	246	eP	32 11.20	-1.1
INK	36.64	37	iPc	32 19.50	0.1
	0.5s		19.00nm		5.0mb
GTA	38.15	271	iPd	32 33.10	0.8
MBC	38.85	22	eP	32 37.50	0.2
	0.5s		2.00nm		4.0mb
CD2	41.54	258	P	32 59.40	-0.1
WMQ	42.72	285	P	33 10.00	1.3
CHTO	53.56	252	iPd	34 30.20	0.1
	0.7s		7.47nm		4.1mb
			pP	36 18.20	568kmX
GUN	54.43	270	P	34 36.00	-0.6
KKN	54.88	271	P	34 39.40	-0.2
PKI	54.97	270	P	34 40.00	-0.3
GKN	55.12	271	P	34 40.80	-0.3
	0.6s		28.00nm		4.8mb
DMN	55.12	271	P	34 41.20	-0.1
WDC	56.07	66	eP	34 47.90	0.5
FFC	56.20	42	iPc	34 47.40	-0.7
	0.6s		13.00nm		4.4mb
ORV	57.35	66	eP	34 55.90	-0.3
BGMT	58.36	56	ePc	35 03.40	0.1
CMB	59.04	67	eP	35 08.10	0.4
KVN	59.58	65	P	35 11.80	0.4
PRS	59.70	69	eP	35 12.10	0.1
LLA	59.74	68	eP	35 12.70	0.5
FRI	60.16	67	eP	35 15.10	0.1
TNP	60.75	65	P	35 19.40	0.3
BW06	61.37	56	P	35 22.80	-0.4
	0.8s		3.43nm		3.8mb
NB2	62.22	340	P	35 27.60	-0.5
	0.7s		1.00nm		3.3mb
HFS	62.51	338	eP	35 28.70	-1.2
	0.3s		2.30nm		4.1mb
ANMO	68.85	60	P	36 10.70	0.9
	0.6s		1.42nm		3.7mb
GBA	70.38	267	Pc	36 18.40	-0.4
	0.6s		5.40nm		4.3mb
SIO	73.31	52	eP	36 35.70	0.3
LNO	73.42	52	eP	36 35.80	-0.1
TUL	73.42	52	eP	36 36.10	0.0
	0.8s		11.70nm		4.5mb
WB5	74.31	198	iPd	36 40.80	-0.3
WRA	74.38	198	Pc	36 41.30	-0.1
	0.7s		5.70nm		4.2mb
K8A	74.43	332	iPc	36 42.40	0.7
	0.5s		3.10nm		4.1mb

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ASPA   78.09 198 iPd   37 02.10   0.5
       0.6s    13.00nm          4.5mb
     S.D. = 0.6  on  45 of  45 obs.
-----------------------------------
   JAN  06, 1990  19h 10m 49.89± 0.42s
   45.035 N ± 3.2km    7.567 E ± 4.1km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                (545)
      ML 2.6 (GEN).

RSP     0.25 298 P     10 56.09   0.9
                 S     10 59.55
LSD     0.51 326 P     11 00.53   0.2
                 S     11 06.94
RRL     0.57 259 P     11 01.51   0.0
                 S     11 08.16
DOI     0.58 203 P     11 02.00   0.3
                 eSg   11 10.30
PZZ     0.62 212 P     11 01.76  -0.8
                 S     11 08.87
BNI     0.63 272 Pc    11 03.60   0.9
                 eSg   11 11.60
ORO     0.66  26 P     11 03.10   0.0
                 eSg   11 12.00
ORX     0.67  26 P     11 02.17  -1.0
                 S     11 09.81
LPG     0.74 309 Pg    11 04.30  -0.3
FOUF    0.75 228 ePgd  11 04.48  -0.1
                 e(Sg) 11 13.26
LPL     0.76 310 Pg    11 04.70  -0.2
                 Sg    11 14.00
ROB     0.77 164 P     11 05.78   0.8
                 S     11 15.83
STV     0.81 192 P     11 04.55  -1.1
                 S     11 14.22
ENR     0.81 187 P     11 05.04  -0.7
                 S     11 14.92
PCP     0.85 125 P     11 07.19   0.8
                 S     11 18.19
FIN     0.94 151 P     11 08.41   0.5
                 S     11 20.08
     S.D. = 0.7  on  16 of  16 obs.
-----------------------------------
   JAN  06, 1990  20h 44m 35.93± 0.57s
   50.411 N ± 5.6km   19.058 E ± 6.0km
   DEPTH =  10.0km  (geophysicist)
 POLAND                        (548)
      ML 4.0 (GRF), 3.6 (K8A), 3.6
      (KRA), 3.4 (VKA).

KRA     0.67 122 iPgd  44 50.00   0.8
                 iSg   44 58.50
SPC     1.45 147 iPn   45 03.50   1.2
                 i(Sg) 45 22.20
KSP     1.81 285 iPn   45 08.60   1.2
       0.7s   191.00nm
                 iPg   45 11.70
                 iS    45 35.50
PSZ     2.55 167 eP    45 17.60  -0.5
ZST     2.56 211 e(Pn) 45 17.60  -0.5
                 e     45 23.80
                 i     45 49.40
SRO     2.65 191 iPn   45 26.50   7.1X
                 i     46 11.10
VKA     2.80 221 iPgd  45 27.00   5.5X
                 i     45 31.80
                 i     45 34.10
                 iSg   46 03.00
BUD     2.93 180 eP    45 30.00   6.6X
PRU     2.93 263 Pn    45 23.50   0.1
                 Pg    45 30.50
                 Sg    46 07.00
SOP     3.19 212 eP    45 29.10   2.1
BRG     3.29 280 ePg   45 37.00   8.5X
                 iSg   46 24.00
KHC     3.78 252 Pn    45 35.30  -0.2
                 Pg    45 43.00
                 Sg    46 34.40
CLL     3.94 286 ePg   45 51.00  13.3X
                 iSg   46 43.00
HOF     4.60 272 ePn   45 48.00   0.9
PTJ     4.97 206 eP    45 49.60  -2.8
KBA     5.04 231 iPnc  45 53.50   0.0
                 iPg   46 11.80
                 i     47 16.60
GRC1    5.09 257 ePn   45 53.70  -0.4
                 ePg   46 11.40
                 eSn   46 46.70
                 eSg   47 15.00
BZS     5.10 159 eP    45 53.50  -0.6
FVI     5.66 230 P     46 05.00   3.0X
                 (Sn)  47 34.00
NUR    10.60  15 iP    47 10.40  -0.4
       0.8s    14.70nm          5.4mb X
NB2    11.52 341 P     47 22.60  -0.8
       1.0s     4.00nm          4.7mb X
SUF    12.93  15 eP    47 42.10  -0.1
       0.4s     6.10nm          5.2mb X
     S.D. = 1.2  on  16 of  22 obs.
-----------------------------------
?  JAN  06, 1990  20h 48m 23.14±10.85s
   42.237 N ±71.0km    8.994 E ±54.0km
   DEPTH =  10.0km  (geophysicist)
 CORSICA                       (380)
      ML 2.8 (LDG).

SBF     1.99 325 Pn    48 56.80  -0.4
                 Sn    49 25.80
FIN     2.05 344 P     48 57.54  -0.6
                 S     49 23.99
LMR     2.13 302 Pg    48 59.20  -0.1
                 Sg    49 29.40
FRF     2.17 308 Pn    48 59.40  -0.5
                 Sn    49 31.00
ROB     2.21 339 P     48 59.53  -1.0
                 S     49 27.38
LRG     2.29 303 Pn    49 02.00   0.5
                 Sn    49 34.40
ENR     2.30 330 P     49 08.46   6.7X
                 S     49 31.99
PCP     2.33 352 P     49 02.30   0.2
STV     2.35 329 P     49 03.23   0.8
                 S     49 31.68
PZZ     2.65 329 P     49 06.46  -0.4
LPG     3.64 334 Pn    49 21.00   0.0
LPL     3.66 334 Pn    49 21.60   0.3
CAF     5.71 300 Pn    49 49.20  -0.8
     S.D. = 0.6  on  12 of  13 obs.
-----------------------------------
%  JAN  06, 1990  21h 12m 20.70± 1.28s
   39.634 N ± 8.4km   22.894 E ±16.8km
   DEPTH =  10.0km  (geophysicist)
 GREECE                        (364)

LIT     0.56 326 ePg   12 32.00  -0.1
                 eSg   12 40.40
AGG     0.75 216 ePg   12 35.40   0.0
                 eSg   12 48.00
THE     1.00   3 ePg   12 39.40  -0.2
                 eSg   12 53.60
SOH     1.24  16 ePb   12 43.70   0.0
GRG     1.37 344 ePb   12 46.10   0.2
KNT     1.53   0 ePb   12 48.20   0.2
                 eSb   13 08.50
     S.D. = 0.2  on   6 of   6 obs.
-----------------------------------
?  JAN  06, 1990  21h 40m 51.33± 0.96s
   46.307 N ± 9.9km    2.557 E ± 8.3km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                        (538)
      ML 1.7 (LDG).

MAF     0.09 176 Pg    40 53.90   0.0
                 Sg    40 55.40
TCF     0.24 266 Pg    40 56.80   0.3
                 Sg    41 00.00
BGF     0.32  39 Pg    40 58.00   0.0
                 Sg    41 02.50
LSF     0.71 266 Pg    41 05.10  -0.3
                 Sg    41 14.40
     S.D. = 0.4  on   4 of   4 obs.
-----------------------------------
*  JAN  06, 1990  21h 42m 03.12± 2.34s
   34.546 N ±20.8km   26.184 E ± 6.0km
   DEPTH =  17.2 ±  8.8 km
   4.2mb ( 12 obs.)
 CRETE                         (370)
      MD 4.1 (ATH).

NPS     0.86 327 ePn   42 21.30   2.1
KAP     1.29  39 ePn   42 24.50  -1.8
                 eSn   42 39.50
VAM     1.84 298 ePb   42 41.40   7.2X
                 eSn   43 00.10
APE     2.57 348 ePn   42 45.40   0.6
YER     3.10  33 iPn   42 51.90  -0.3
KSL     3.19  60 ePn   42 54.40   0.9
SMG     3.20   9 ePn   42 53.10  -0.5
VLI     3.42 310 ePn   43 00.90   4.2X
ELL     3.75  53 ePn   43 02.10   0.6
IZM     3.94  12 ePn   43 03.00  -1.1
BCK     4.61  50 eP    43 15.90   2.2
KHL     4.63  35 ePn   43 13.00  -1.1
KBA    15.82 326 iPc   45 50.70   4.0X
PRU    17.64 335 P     46 09.80   0.4
LPG    18.42 312 eP    46 20.00   0.5
       0.6s     3.00nm          3.6mb
CDF    19.74 320 eP    46 34.50  -0.4
       0.4s     2.70nm          3.9mb
HAU    20.00 318 eP    46 36.90  -0.7
       0.4s     2.20nm          3.8mb
SMF    20.75 312 eP    46 44.60  -0.8
       0.6s     6.30nm          4.2mb
LBF    20.83 313 eP    46 45.30  -0.9
       0.6s     5.40nm          4.1mb
LOR    21.04 314 eP    46 47.70  -0.6
       0.6s     6.30nm          4.2mb
AVF    21.12 312 eP    46 48.60  -0.5
       0.6s     3.60nm          4.0mb
SSF    21.15 313 eP    46 49.10  -0.3
       1.0s    10.00nm          4.2mb
DOU    22.16 321 P     46 59.30  -0.2
       0.5s     6.90nm          4.4mb
                e      09 10.00
LDF    24.02 314 eP    47 18.20   0.5
       0.6s     6.10nm          4.3mb
FLN    24.31 314 eP    47 21.20   0.7
       0.6s     9.00nm          4.5mb
GRR    24.38 313 eP    47 21.80   0.6
       0.6s     5.40nm          4.3mb
     S.D. = 1.1  on  23 of  26 obs.
-----------------------------------
   JAN  06, 1990  21h 44m 56.26± 0.16s
   10.681 S ± 3.7km   92.987 E ± 3.2km
   DEPTH =  14.8km  (geophysicist)
   5.7mb ( 46 obs.)  5.5Msz ( 24 obs.)
 SOUTH INDIAN OCEAN            (425)
      Two events obout 1.5 seconds
      oport. Depth from broodbond
      displocement seismograms, bosed
      on first event.
      FAULT PLANE SOLUTION: P-Woves
       NP1:Strike= 60 Dip=73 Slip=  90
       NP2:       240     17        90
       Principol Axes:
        T                Plg=62  Azm=330
        P                  28        150
      Comment: The focal mechonism is
        poorly controlled ond
        corresponds to reverse
        faulting. The preferred fault
        plane is NP2.
      RADIATED ENERGY
       No. of sta:   7  Focal mech.  C
       Energy        7.7±1.6*10**12 Nm
      MOMENT TENSOR SOLUTION
      Dep  20              No. of sta: 14
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 1.59        Mtt= 1.58
        Mff=-3.17        Mrt= 5.31
        Mrf= 2.67        Mtf=-3.43
       Principol axes:
        T  Val=  6.93  Plg=43  Azm=  5
        N        0.85      32      239
        P       -7.78      30      128
      Best Double Couple:Mo=7.4*10**17
       NP1:Strike=166 Dip=33 Slip=  14
       NP2:       64     82       122
      CENTROID, MOMENT TENSOR    (HRV)
      Dato Used: GDSN
      L.P.B.: 14S, 29C
      Centroid Locotion:
      Origin Time       21:45: 1.9 0.4
      Lat 11.24S 0.05 Lon  92.57E 0.05
      Dep  15.0 BDY Half-durotion  3.4
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 6.05 0.27  Mtt=-0.25 0.28
        Mff=-5.80 0.41  Mrt=-6.45 0.77
        Mrf=-5.65 1.08  Mtf=-5.95 0.29
       Principol Axes:
        T  Val= 10.31  Plg=61  Azm=163
```

06d 21h

N 2.87 15 43
P -13.18 24 306
Best Double Couple:Mo=1.2*10**18
NP1:Strike= 8 Dip=25 Slip= 52
NP2: 229 70 106
TSI 15.14 22 ePd 48 32.00 0.7
KLM 16.18 33 eP 48 45.00 0.3
BSI 16.23 8 iPd 48 47.00 1.6
1.0s 305.00nm 5.4mb
KGM 16.27 40 ePc 48 47.00 1.1
IPM 17.14 28 ePd 48 58.40 1.4
1.4s 367.40nm 5.3mb
SNG 19.30 23 iPc 49 23.60 0.0
1.2s 353.13nm 5.5mb
eS 52 59.20
TRT 19.62 83 ePc 49 25.50 -1.8
0.5s 27.00nm 4.8mb
NNT 24.07 16 iPd 50 14.00 2.0
MBL 27.79 115 eP 50 47.80 0.9
BDT 28.38 12 eP 50 53.00 0.9
1.2s 126.40nm 5.6mb
KKM 28.48 55 ePd 50 55.00 1.8
1.7s 331.60nm 5.8mb
GBA 28.64 327 P 50 57.00 2.5
0.8s 8.10nm 4.5mb X
TSM 29.03 61 ePd 50 57.00 -1.1
LOE 29.21 17 iPc 51 01.00 1.3
BAL 29.64 135 eP 51 05.00 1.5
CHG 29.89 11 iPc 51 06.00 0.2
1.0s 42.50nm 5.2mb
CHTO 29.89 11 eP 51 06.00 0.2
MUN 30.15 138 eP 51 10.00 2.0
KLB 30.95 136 eP 51 15.00 -0.1
HYB 31.35 333 eP 51 19.00 0.3
1.0s 70.00nm 5.5mb
eS 56 24.00
NWAO 31.42 139 eP 51 21.00 1.8
COOL 32.96 132 eP 51 23.00 -9.6X
QIZ 33.88 29 Pc 51 41.00 0.3
N 12s 5.60um
POO 34.63 327 eP 51 49.00 1.8
eS 57 20.00
KMI 36.83 15 iPc 52 07.92 1.9
ic 52 09.41
epP 52 11.90 13kmX
esP 52 14.21
ePP 53 35.40
eS 57 54.10
sS 58 06.00
SS 00 33.00
DAV 36.93 63 eP 52 06.00 -0.7
MTN 37.38 97 eP 52 11.00 0.5
QCP 37.52 48 eP 52 05.30 -6.3X
BAG 38.34 46 eP+ 52 18.00 -0.7
PKI 38.73 349 P 52 21.40 -0.6
HKC 38.81 32 e(P) 52 24.00 1.6
DMN 38.82 349 P 52 22.20 -0.5
KKN 38.96 349 P 52 23.20 -0.7
GUN 38.97 350 P 52 23.80 -0.3
GZH 39.03 31 eP 52 25.00 0.8
Z 18s 5.50um 5.4Msz
N 16s 5.50um
E 14s 1.80um
eS 58 17.00
GYA 39.24 20 iPc 52 27.00 0.9
1.4s 0.10nm 2.3mb X
Z 20s 2.20um 5.0Msz
N 13s 3.60um
E 13s 4.20um
PP 54 04.00
S 58 25.00
GKN 39.29 348 P 52 26.00 -0.6
LSA 40.18 358 Pc 52 36.30 2.1
N 12s 1.10um
E 13s 0.90um
S 58 46.00
WRA 40.84 108 Pc 52 39.70 0.4
1.1s 51.10nm 5.2mb
WB5 40.86 108 eP 52 39.80 0.4
ASPA 41.02 114 eP 52 40.10 -0.6
0.9s 34.00nm 5.1mb
Z 22s 3.63um 5.2MszX
eS 58 28.60
LR 07 30.10
NDI 42.00 339 iPc 52 49.50 0.9
1.2s 148.44nm 5.6mb

ePP 54 38.00
eS 59 11.20
CD2 42.63 14 P 52 52.50 -1.3
Z 16s 3.60um 5.4MszX
N 13s 3.40um
pP 53 02.00 32kmX
S 59 13.50
sS 59 25.00
QZH 43.33 35 eP 53 01.50 2.0
Z 19s 3.80um 5.3Msz
N 14s 3.40um
eS 59 28.00
WHN 45.84 26 iPc 53 20.00 0.4
4.0s 0.80nm 3.0mb X
Z 20s 3.80um 5.3Msz
N 12s 1.30um
E 14s 3.90um
pP 53 28.00 27kmX
PP 55 08.00
eS 00 01.50
XAN 46.98 18 iPc 53 28.50 -0.2
3.0s 1.10nm 3.4mb X
N 14s 3.80um
E 14s 4.50um
sP 53 38.00
PP 55 20.00
S 00 18.00
LZH 47.63 12 iPc 53 33.51 -0.4
1.5s 282.00nm 6.1mb
ic 53 35.00
epP 53 38.64 17kmX
esP 53 40.13
pPP 55 24.00
ePP 55 28.45
i 55 36.00
iS 00 27.47
isS 00 36.74
S 04 10.00
QUE 47.74 329 eP 53 23.50 -11.4X
eS 00 21.00
JAY 48.04 84 ePd 53 37.00 -0.3
ADE 48.04 128 iPd 53 37.30 0.2
0.5s 59.15nm 5.9mb
NJ2 49.17 29 Pc 53 45.00 -0.7
Z 22s 2.80um 5.2Msz
N 14s 3.40um
E 15s 2.30um
SP 53 54.00
S 00 56.00
STK 49.48 123 iPd 53 48.40 0.2
SSE 49.57 32 Pd 53 49.00 0.2
1.5s 0.29nm 3.1mb X
Z 20s 3.70um 5.4Msz
N 18s 7.90um
E 18s 1.60um
sP 53 58.50
PP 55 48.00
eScP 59 06.00
eS 00 56.00
esS 01 06.00
eSS 04 28.00
GTA 50.24 7 iPc 53 53.40 -0.5
1.6s 0.30nm 3.0mb X
Z 18s 2.10um 5.2Msz
E 15s 2.50um
sP 54 02.50
S 01 03.80
sS 01 14.00
TIY 51.47 20 Pc 54 03.30 0.0
1.3s 0.10nm 2.6mb X
N 14s 3.50um
E 14s 4.00um
PP 56 04.00
S 01 22.00
TIA 51.90 25 eP 54 05.50 -0.9
9.0s 1.00nm 2.7mb X
Z 17s 5.10um 5.6MszX
N 16s 3.90um
E 16s 2.10um
eS 01 23.00
CTA 52.02 107 iPc 54 08.00 0.3
1.4s 104.65nm 5.6mb
iS 01 28.00
i 05 48.00
KSH 52.33 343 P 54 10.00 0.2
Z 16s 4.80um 5.6MszX
E 15s 7.80um

pP 54 17.50 25kmX
S 01 37.00
CMS 52.92 121 eP 54 14.00 -0.3
PMG 53.30 94 iPc 54 18.00 0.7
1.4s 372.09nm 6.2mb
BTO 53.40 16 P 54 17.50 -0.2
N 14s 5.60um
E 12s 1.60um
sP 54 26.00
S 01 48.50
eSS 05 32.00
HHC 54.07 17 Pc 54 22.60 0.0
Z 18s 7.90um 5.8Msz
N 15s 6.20um
E 14s 1.50um
sP 54 32.50
PP 56 26.00
S 02 01.00
sS 02 12.00
WMQ 54.45 355 iPc 54 24.71 -0.6
ic 54 26.36
epP 54 29.84 17kmX
esP 54 31.99
ePP 56 33.00
iS 02 01.61
isS 02 11.54
ARO 54.49 292 iP+ 54 28.50 2.4
RMQ 54.74 115 eP 54 27.00 -0.8
BJI 54.86 22 iPc 54 28.16 -0.1
ic 54 29.98
epP 54 32.29 14kmX
esP 54 34.94
iS 02 11.79
isS 02 21.06
BWA 55.62 124 eP 54 35.50 1.4
DL2 56.09 27 eP 54 37.40 0.2
3.0s 1.10nm 3.4mb X
Z 19s 2.70um 5.4Msz
E 14s 1.80um
eS 02 19.00
CAN 56.27 125 eP 54 38.60 -0.1
MAIO 56.38 328 iPc 54 39.00 -0.5
1.2s 31.25nm 5.2mb
eS 02 32.00
NAI 56.57 276 iP 54 43.00 1.6
KMSA 56.81 303 eP+ 54 40.30 -2.5
RYD 57.31 309 eP+ 54 44.10 -2.1
AAE 57.39 288 eP 54 47.50 0.2
BRS 58.40 116 iPd 54 53.80 -0.1
i 54 58.60
e 55 07.00
eS 02 56.00
SNY 59.33 26 iPc 54 58.00 -2.0
1.4s 0.20nm 3.1mb X
Z 21s 4.20um 5.5Msz
N 14s 1.70um
E 15s 2.40um
S 03 04.00
MAW 60.27 193 iPc 55 05.60 -0.5
IR4 60.57 321 eP 55 09.30 0.5
TEH 60.60 322 eP 55 18.00 9.0X
eS 03 26.00
IR1 60.82 321 eP 55 10.00 -0.5
IR2 60.85 321 eP 55 10.00 -0.6
IR7 61.05 321 eP 55 11.50 -0.5
CN2 61.74 26 iPc 55 15.00 -1.4
4.0s 0.90nm 3.3mb X
Z 20s 4.20um 5.6Msz
N 16s 1.70um
sP 55 23.00
ePP 57 29.00
eS 03 35.00
KER 62.44 318 eP 55 19.00 -2.4
BUL 62.45 253 iPd 55 35.70 13.9X
1.0s 75.00nm
IIDJ 62.51 41 P 55 21.30 -0.5
SLR 62.72 247 iPd 55 23.50 0.0
1.3s 269.23nm 6.3mb
Z 17s 4.76um 5.7MszX
MTMJ 63.13 39 P 55 23.20 -2.7
MAT 63.36 40 iPc 55 25.70 -1.6
2.0s 411.76nm 6.3mb
Z 20s 1.77um 5.2Msz
eS 03 59.00
PRY 63.47 245 iPd 55 27.60 -0.9
1.2s 170.00nm 6.1mb
CHJJ 63.55 41 P 55 26.90 -1.7

BHD	63.64	315	ePd	55 28.50	-0.7
			i	56 38.50	
			ePP	57 52.00	
			ePPP	59 27.00	
			eS	04 02.00	
			eScS	05 16.00	
			eSS	08 23.00	
KSR	63.97	246	iPc	55 31.70	-0.1
	1.1s	67.57nm			5.7mb
BFS	64.08	245	iPc	55 27.00	-5.5X
	1.0s	300.00nm			6.4mb
HIA	64.16	19	iPc	55 31.24	-1.2
			ic	55 32.56	
			epPd	55 35.38	13kmX
			iS	04 08.30	
			isS	04 18.23	
MDJ	64.24	28	Pc	55 33.00	0.1
Z	20s	3.50um			5.5Msz
N	18s	4.20um			
			epP	55 38.00	16kmX
			S	04 12.00	
SLY	64.24	318	iPd	55 32.50	-0.6
			i	55 41.00	
			ePP	58 03.00	
			ePPP	59 31.00	
			iS	04 05.50	
NIIJ	64.29	40	eP	55 31.80	-1.6
KAKJ	64.41	41	P	55 31.70	-2.4
BLF	64.66	243	iPc	55 36.00	-0.2
	0.9s	46.15nm			5.7mb
TAB	65.20	321	eP	55 38.00	-1.5
			i	55 46.00	
HNR	65.83	96	ePc	55 44.00	0.3
WAJH	65.94	305	eP+	55 44.30	0.1
MSL	66.25	318	iPd	55 49.00	3.0X
			e	55 56.00	
			ePP	58 13.00	
			eS	04 38.50	
ASW	68.09	301	iPc	56 08.00	10.1X
			eS	04 00.00	
BADA	68.22	307	eP+	55 57.30	-1.3
PRNI	69.03	308	e(P)	55 59.00	-4.7X
DSI	69.30	310	eP	56 02.00	-3.2X
SUR	69.35	239	iPc	56 05.50	-0.4
	0.7s	109.59nm			6.1mb
HRI	69.82	311	eP	56 07.00	-1.5
DZM	70.83	110	iPc	56 15.20	0.3
HLW	71.68	306	eP	56 20.50	0.7
LFK	72.37	312	iP	56 23.10	-0.8
KVT	73.45	319	iP	56 29.50	-0.5
BBTK	75.03	316	iPc	56 38.00	-1.3
BCK	75.47	313	eP	56 40.10	-1.7
BCAO	75.61	277	iPc	56 42.68	-0.3
	1.1s	109.00nm			5.8mb
			ic	56 44.51	
			epPd	56 46.99	14kmX
			ic	58 24.80	
ELL	75.65	312	eP	56 41.80	-1.2
SBA	76.22	168	(P)	56 50.30	5.0X
ALT	76.50	315	eP	56 46.00	-1.7
KHL	76.60	314	eP	56 46.00	-2.2
GPA	76.91	316	eP	56 49.00	-0.8
KRP	77.67	127	P	57 01.80	7.7X
IZM	78.25	313	iP	56 56.80	-0.5
SPA	79.39	180	iPc	57 02.70	-0.4
	1.8s	272.22nm			6.0mb
Z	19s	4.43um			5.8Msz
JMB	80.37	317	eP	57 09.00	0.4
CFR	80.48	320	ePc	57 09.00	-0.1
KDZ	80.84	315	eP	57 12.00	0.9
DIM	80.92	316	eP	57 11.00	-0.5
RZN	81.34	315	iP	57 14.00	0.0
BUC1	81.50	318	ePc	57 16.00	1.5
PLD	81.51	316	eP	57 15.00	0.4
PVL	81.51	317	iPd	57 16.00	1.4
VRI	81.68	320	iPc	57 15.00	-0.4
SRS	81.91	314	eP	57 15.60	-1.1
MMB	81.99	315	ePc	57 18.00	0.8
MLR	82.02	319	iPc	57 17.50	0.1
AGG	82.06	312	eP	57 16.20	-1.4
KNT	82.41	314	eP	57 18.10	-1.2
CMP	82.52	319	ePc	57 19.00	-0.8
KKB	82.54	315	iP	57 20.00	0.0
GRG	82.69	314	eP	57 19.60	-1.2
VAY	82.70	314	iP	57 19.40	-1.4
VTS	82.72	316	iPc	57 21.00	-0.1
FNA	83.36	313	eP	57 23.60	-0.7

SKO	83.72	315	iP	57 25.00	-1.1
	1.4s	104.00nm			5.9mb
Z	19s	2.76um			5.7Msz
N	18s	1.62um			
E	19s	2.76um			
			i	57 27.00	
			iPcP	57 34.50	
			i(pP)	57 43.00	65kmX
			ePP	00 44.00	
			ePPP	02 46.00	
			iS	07 44.00	
			iSKS	07 57.00	
			iSS	13 33.00	
			LR	35 52.00	
OHR	83.88	314	iP	57 25.30	-1.6
	1.3s	0.07nm			2.7mb X
BERA	84.35	313	eP	57 29.00	-0.2
BMR	84.43	321	ePd	57 30.00	0.5
TIR	84.62	314	eP	57 30.00	-0.6
BCI	84.82	315	eP	57 31.90	0.4
LACI	84.83	314	eP	57 26.50	-5.0X
BZS	84.88	318	eP	57 31.50	-0.2
SDA	85.10	314	eP	57 33.00	0.1
BEO	85.38	317	eP	57 33.00	-1.2
			e	04 05.00	
LCI	85.68	312	P	57 36.50	0.7
GRI	86.36	310	P	57 40.95	1.6
	1.3s	144.30nm			6.0mb
BRT	86.39	313	P	57 41.70	2.3
SOI	86.43	310	P	57 41.70	2.1
ROI	86.47	311	P	57 40.70	0.8
TDS	86.67	311	P	57 43.00	2.2
CZI	86.69	311	P	57 41.30	0.5
CSI	86.73	311	P	57 41.90	0.8
PSZ	86.79	320	eP	57 41.00	-0.3
SPC	87.00	321	eP	57 41.80	-0.6
BUD	87.20	319	eP	57 42.00	-1.1
MGR	87.38	311	P	57 44.50	0.3
MNO	87.42	309	P	57 47.50	2.8
KRA	87.48	322	eP	57 44.00	-0.4
	1.4s	168.00nm			6.1mb
Z	18s	1.60um			5.5Msz
			e	57 52.00	
SGO	87.68	312	Pc	57 46.50	0.9
SRO	87.76	319	iP	57 46.30	0.5
GIB	87.94	309	P	57 48.50	1.4
DUI	88.59	313	P	57 51.50	1.4
ZST	88.65	320	eP	57 49.60	-0.5
ZAG	88.68	317	iP	57 50.20	-0.1
PTJ	88.72	317	eP	57 50.30	-0.3
RFI	88.84	312	P	57 50.72	-0.4
	0.5s	115.80nm			6.4mb
SOP	88.85	319	iPc	57 52.00	0.9
NUR	88.88	333	iP	57 50.50	-0.4
	1.1s	120.00nm			6.1mb
			e	08 44.00	
			e	09 48.00	
			e	14 42.00	
			e	18 16.00	
SDI	89.07	313	P	57 52.60	0.3
VBY	89.08	317	ePc	57 52.00	-0.2
SUF	89.16	335	eP	57 51.50	-0.7
	1.3s	587.10nm			6.7mb X
VKA	89.17	319	eP	57 52.50	-0.1
	3.5s	366.00nm			6.1mb X
AZI	89.42	313	P	57 54.50	0.7
AQU	89.53	313	P	57 55.60	1.1
CEY	89.71	317	ePc	57 56.00	0.8
LJU	89.72	317	Pc	57 55.00	-0.2
RDP	89.88	312	P	57 56.90	0.8
RMP	89.90	313	P	57 57.50	1.3
MNS	90.06	313	Pc	57 57.20	0.3
VOY	90.14	317	ePc	57 56.40	-0.9
ARV	90.15	314	P	57 59.50	2.2
ASS	90.24	314	P	57 59.50	1.7
PRU	90.78	321	eP	58 00.50	0.5
	1.5s	26.80nm			5.3mb
Z	16s	1.80um			5.6MszX
N	16s	0.60um			
E	16s	1.00um			
			e	58 37.50	
			eS	08 54.00	
			ePS	10 00.00	
			eSS	14 54.00	
			ePKKS	19 08.00	
KBA	90.78	318	eP	58 00.00	-0.3
	1.3s	39.70nm			5.6mb

			e	58 28.00	
CRE	90.88	314	P	58 01.50	0.7
SOD	90.99	339	iP	58 01.40	0.8
SFI	91.02	314	P	58 03.20	2.0
FVI	91.03	317	Pc	58 02.00	0.8
PGD	91.10	314	P	58 03.50	1.6
KHC	91.16	320	iPc	58 02.00	0.2
	1.4s	80.00nm			5.9mb
Z	18s	1.60um			5.5Msz
N	16s	0.70um			
E	17s	1.20um			
			e	58 09.30	
BRG	91.38	322	iP	58 03.00	0.2
	1.6s	70.00nm			5.8mb
			e	58 10.00	
			e	01 26.00	
			e	01 53.00	
			e	02 19.00	
			e	08 08.00	
			e	08 40.00	
FIR	91.41	314	eP	58 03.00	0.0
MME	91.89	315	P	58 09.00	3.4X
BDI	91.93	314	P	58 06.00	0.4
CLL	92.07	322	iP	58 05.70	-0.2
	1.6s	63.00nm			5.8mb
Z	19s	1.00um			5.3Msz
OGA	92.27	317	eP	58 07.20	0.0
	1.4s	73.00nm			5.9mb
SAL	92.33	316	P	58 08.50	1.3
HOF	92.52	321	iPc	58 09.40	1.4
GRF	92.78	320	eP	58 03.80	-5.5X
Z	18s	1.60um			5.5Msz
			e	58 09.10	
VAI	93.58	316	P	58 14.50	1.5
HFS	93.90	330	eP	58 13.30	-0.8
	1.5s	67.20nm			5.8mb
SBF	94.13	314	eP	58 15.50	-0.2
	1.2s	44.00nm			5.7mb
BNI	94.88	315	P	58 20.50	1.3
LPG	94.90	315	eP	58 19.50	0.0
	1.3s	14.40nm			5.2mb
NB2	95.30	331	P	58 19.50	-1.1
	1.3s	19.80nm			5.4mb
HAU	95.61	318	eP	58 22.10	-0.2
	1.3s	17.30nm			5.3mb
LBF	97.04	316	eP	58 29.00	0.1
	1.4s	17.40nm			5.4mb
LOR	97.16	317	eP	58 29.40	0.0
	1.2s	16.00nm			5.5mb
SSF	97.37	316	eP	58 30.50	0.2
	1.4s	17.40nm			5.5mb
BGF	97.75	316	eP	58 32.40	0.4
	1.4s	39.20nm			5.8mb
MAF	97.90	315	eP	58 33.00	0.3
	1.4s	26.10nm			5.6mb
TIC	99.04	275	P	58 39.40	0.9
DAG	105.25	347	ePKP	03 28.00	8.9X
	1.4s	39.53nm			
IMA	109.08	23	ePKP	03 25.80	-1.0
	0.7s	2.00nm			
PMS	112.35	28	ePKP	03 32.00	-1.0
PMR	112.43	27	PKP	03 30.50	-2.5X
INK	114.99	17	ePKP	03 36.00	-1.8
FRB	125.42	350	ePKP	03 56.00	-1.8
PNT	132.93	29	ePKP	04 13.00	0.3
BAO	133.35	237	ePKP	04 14.50	-0.1
LON	133.53	33	PKP	04 11.00	-3.0X
FFC	134.49	12	ePKP	04 11.00	-4.5X
	0.9s	12.00nm			
SES	135.73	22	ePKP	04 17.00	-1.0
WDC	136.77	40	ePKP	04 17.40	-2.8X
ORV	138.00	41	ePKP	04 15.60	-7.0X
LRM	138.79	27	ePKP	04 23.00	-1.2
RSON	139.57	7	PKP	04 15.00	-10.1X
CMB	139.57	42	PKP	04 23.50	-2.1X
KVN	140.44	39	PKP	04 20.00	-7.3X
IMW	140.96	28	PKP	04 20.50	-7.7X
TNP	141.58	40	PKP	04 22.00	-7.4X
	0.8s	5.39nm			
SYP	141.70	46	ePKP	04 26.00	-3.6X
ISA	142.15	44	ePKP	04 26.00	-4.3X
BW06	142.47	28	PKP	04 23.00	-7.9X
CLC	142.66	43	ePKP	04 26.00	-5.1X
SBB	143.13	45	ePKP	04 28.00	-4.0X
PAS	143.17	46	ePKP	04 28.14	-3.8X
			e	16 14.75	
MWC	143.21	46	ePKP	04 28.00	-4.3X

06d 22h

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DAU    143.44   32 PKP    04 28.50   -4.2X
GSC    143.48   43 ePKP   04 29.00   -3.6X
RVR    143.81   45 ePKP   04 29.00   -4.1X
PEC    144.02   45 PKP    04 30.50   -3.0X
MSU    144.30   35 PKP    04 32.00   -2.1X
HBVT   144.34  343 PKP    04 30.50   -3.2X
PLM    144.52   46 ePKP   04 32.00   -2.5X
RSNY   144.58  345 PKP    04 31.00   -3.1X
TPC    144.67   44 ePKP   04 33.00   -1.6
PTN    144.67  345 PKP    04 31.70   -2.5X
BAR    145.01   47 ePKP   04 34.00   -1.2
CCH    145.32  217 PKP    04 36.00   -0.5
HRV    145.54  340 iPKP   04 34.26   -1.5
                   i      04 36.58
                   epPKPd 04 39.23
GLA    146.11   45 ePKP   04 38.00    0.9
GOL    146.81   26 PKP    04 37.00   -1.3
       Z  20s     0.70um              5.4Msz
GLD    146.84   26 PKP    04 36.00   -2.2X
LPB    147.12  215 PKP    04 41.00    1.4
        1.2s    240.63nm
       Z  18s     1.03um              5.7Msz
                   LR     58 36.00
ELF    147.23  352 PKP    04 38.50    0.0
ZOBO   147.34  215 PKPc   04 40.20    0.1
       Z  20s     0.88um              5.5Msz
                   eLR    55 12.00
LDN    147.37  352 PKP    04 38.60   -0.1
DLA    147.60  353 PKP    04 38.90   -0.1
PNJ    147.82  342 ePKP   04 40.50    1.1
                   e      04 41.30
ARE    148.97  210 ePKP   04 47.00    4.6X
ANMO   150.04   33 PKP    04 43.00   -0.4
ALQ    150.05   33 PKP    04 43.30   -0.1
        1.5s    295.14nm
       Z  20s     1.15um              5.7Msz
CBN    151.26  344 ePKP   04 45.00    0.2
NA2    151.43  345 PKP    04 50.80    5.7X
CVL    151.75  346 PKP    04 51.30    5.7X
FVM    152.64    6 PKP    04 50.00    3.1X
LNO    153.65   16 e(PKP) 04 48.60    0.4
TUL    153.65   16 ePKP-  04 47.70   -0.6
        1.2s    33.60nm
       Z  20s     1.80um              5.9Msz
                   e      04 55.00
                   e      08 47.00
                   LR     00 00.00
SIO    153.66   17 ePKP   04 48.00   -0.4
MEO    153.79   22 iPKPd  04 47.80   -0.8
NNA    155.32  204 ePKP   04 52.00    0.8
        1.0s    16.00nm
JSC    155.93  348 PKP    04 50.00   -1.4
CAR    160.25  271 ePKP   04 55.00   -2.2X
BOG    165.83  246 e(PKP) 05 08.00    5.1X
     S.D. = 1.1  on 237 of 286 obs.
```

JAN 06, 1990 23h 15m 13.98± 0.57s
55.925 N ± 5.2km 4.383 W ± 5.4km
DEPTH = 10.0km (geophysicist)
UNITED KINGDOM (533)
ML 2.2 (BGS). Felt (IV) at Strathblane, Milngavie and Beorsden near Glasgow.

```
EAB      0.26    5 iPgc   15 19.70    0.1
                   eSg    15 22.90
EAU      0.53   98 iPgc   15 25.60    0.9
EBH      0.59   56 iPgc   15 25.90    0.0
                   eSg    15 33.40
ELO      0.66   34 iPgc   15 26.80   -0.4
                   eSg    15 35.40
EDI      0.67   90 ePbc   15 27.90    0.6
                   eSb    15 37.00
EBL      0.77  101 iPbc   15 27.00   -2.0
                   eSb    15 40.00
EDU      0.99   50 ePbd   15 32.80    0.1
                   eSb    15 45.30
ESY      1.00   90 ePbc   15 33.40    0.6
                   eSb    15 46.70
MCD      1.78   20 ePn    15 44.90    0.0
DMU      2.50  217 eP     15 55.00   -0.3
                   eS     16 32.80
DLE      2.93  206 eP     16 01.40    0.0
                   eS     16 46.80
DCN      3.09  214 eP     16 04.00    0.4
                   eS     16 52.80
     S.D. = 0.8  on  12 of  12 obs.
```

---

* JAN 06, 1990 23h 22m 31.99± 1.35s
31.523 S ±11.8km 68.517 W ±11.1km
DEPTH = 109.0 ± 15.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

```
ZON      0.14  261 iPd    22 47.50   -0.2
                   eS     23 00.00
CFA      0.25  109 iPd    22 48.00    0.0
RTCV     0.34  183 iP     22 48.00   -0.1
RTRS     1.57  329 e(P)   22 59.80   -0.2
PCH      2.69  218 eP     23 16.80    2.2
                   iS     23 43.20
TACH     2.95  223 iP     23 18.40    0.4
                   iS     23 53.50
RFA      3.24  179 iPc    23 21.10   -0.9
TCA      3.36   88 iPc    23 24.00    0.3
LNV      3.44  224 iP     23 22.90   -1.7
                   iS     23 55.10
     S.D. = 1.3  on   9 of   9 obs.
```

% JAN 07, 1990 01h 31m 36.38± 5.67s
61.341 N ±30.2km 3.422 E ±31.5km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 2.3 (BER).

```
SUE      0.71  113 iP     31 50.08   -0.2
                   eS     31 55.25
ASK      1.22  134 eP     31 59.18    0.1
                   eS     32 11.11
BER      1.34  135 eP     32 01.10    0.0
                   eS     32 14.70
HYA      1.35   96 eP     32 01.31    0.2
                   eS     32 16.05
ODD1     2.13  131 eP     32 12.26   -0.3
                   eS     32 35.21
KMY      2.32  156 eP     32 14.97   -0.2
                   eS     32 37.64
BLS1     2.59  138 eP     32 19.60    0.5
                   eS     32 45.60
     S.D. = 0.4  on   7 of   7 obs.
```

% JAN 07, 1990 01h 53m 20.30± 0.78s
41.861 N ± 7.4km 12.783 E ± 6.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

```
RMP      0.08  230 Pc     53 22.70   -0.1
                   eSg    53 26.20
RDP      0.11  206 Pc     53 23.50    0.2
                   eSg    53 25.70
AZI      0.50   75 P      53 31.00    0.5
                   eSg    53 39.00
MNS      0.53  352 P      53 30.90   -0.1
                   eSg    53 39.30
SDI      0.79  101 P      53 35.10   -0.6
                   eSg    53 47.20
     S.D. = 0.6  on   5 of   5 obs.
```

JAN 07, 1990 02h 03m 25.47± 0.33s
40.293 N ± 4.4km 19.945 E ± 2.6km
DEPTH = 6.4 ± 2.6 km
ALBANIA (391)
ML 3.3 (THE). MD 3.6 (ATH).

```
TPE      0.05   87 iPgc   03 25.00   -2.1
VLO      0.39  297 iPgc   03 32.60   -0.7
BERA     0.41    0 iPgc   03 32.00   -1.7
IGT      0.82  158 ePg    03 40.40   -1.2
OHR      1.04   38 iPn    03 42.40   -3.1X
TIR      1.05  357 iPgd   03 47.00    1.3
LACI     1.35  353 ePn    03 50.60   -0.1
KZN      1.40   89 ePn    03 50.90   -0.6
                   eSn    04 13.50
LCI      1.52  272 Pc     03 52.00   -1.2
PUK      1.75  359 ePn    03 52.90   -3.5X
SDA      1.75  349 ePn    03 57.00    0.5
LIT      1.96   95 ePn    04 00.10    0.6
                   eSn    04 27.00
GRG      1.98   70 ePn    03 59.50   -0.4
SKO      2.02   33 ePn    04 01.00    0.6
                   iSg    04 28.90
BCI      2.07    3 ePn    04 02.40    1.3
BRT      2.17  287 P      04 02.80    0.2
                   eSn    04 34.20
VLS      2.17  166 ePn    04 02.40   -0.2
AGG      2.24  124 ePn    04 04.80    1.2
VAY      2.24   62 iPn    04 03.00   -0.6
THE      2.33   81 ePn    04 04.80   -0.1
KNT      2.41   68 ePn    04 05.60   -0.4
BAI      2.48  290 P      04 05.00   -2.0
SOH      2.65   77 ePn    04 09.80    0.3
PLG      2.68   87 ePn    04 10.50    0.6
ROI      2.69  256 P      04 11.70    1.6
TDS      2.84  258 P      04 13.00    0.8
KKB      2.85   55 iP     04 13.00    0.7
CSI      2.85  261 P      04 14.10    1.7
MMN      3.06  264 P      04 15.50    0.3
CZI      3.13  251 P      04 20.50    4.4X
MMB      3.14   64 ePc    04 16.00   -0.5
                   eSg    04 55.00
VTS      3.36   46 iPc    04 20.00    0.3
                   Sg     05 00.00
MGR      3.37  269 P      04 19.40   -0.2
SGO      3.55  276 P      04 22.00   -0.1
SOI      3.75  235 P      04 25.50    0.5
RZN      3.87   67 iP     04 28.00    1.0
DUI      4.37  290 P      04 33.00   -1.0
SDI      4.85  289 Pd     04 39.90   -0.8
     S.D. = 1.0  on  35 of  38 obs.
```

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* JAN 07, 1990 03h 20m 05.73± 1.67s
46.455 N ± 9.9km 0.867 W ±16.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

```
MFF      0.52   73 Pg     20 16.00   -0.2
                   Sg     20 25.80
LSF      1.67   96 Pn     20 32.00   -3.2X
                   Pg     20 36.70
                   Sg     20 59.20
LFF      1.89  143 Pg     20 36.80   -1.5
                   Sg     21 02.40
GRR      1.93    0 Pg     20 39.00    0.0
                   Sg     21 05.20
RJF      2.02  124 Pg     20 41.00    0.7
                   Sg     21 07.10
TCF      2.14   93 Pn     20 38.60   -3.3X
                   Pg     20 45.20
                   Sg     21 13.80
LPO      2.28  140 Pg     20 45.00    0.9
                   Sg     21 14.00
MAF      2.39   94 Pg     20 49.20    3.6X
                   Sg     21 20.90
CAF      2.56  126 Pg     20 51.20    3.2X
                   Sg     21 24.60
BGF      2.57   86 Pg     20 53.00    5.0X
                   Sg     21 28.40
     S.D. = 1.4  on   5 of  10 obs.
```

% JAN 07, 1990 04h 57m 22.24± 1.41s
27.382 S ±13.3km 117.643 E ±16.5km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

```
MEKA     1.10   46 eP     57 43.00    0.0
                   eS     58 00.00
MRWA     2.34  218 eP     58 01.50    0.2
                   eS     58 30.00
KLB      4.20  179 eP     58 29.00    1.3
                   eS     59 14.00
COOL     4.64  140 eP     58 33.70   -0.4
                   eS     59 25.00
MUN      4.75  195 eP     58 34.40   -1.2
                   eS     59 29.00
     S.D. = 1.3  on   5 of   5 obs.
```

---

* JAN 07, 1990 05h 31m 52.93± 2.00s
1.406 N ±13.7km 126.473 E ±16.0km
DEPTH = 88.9 ± 17.3 km
4.7mb (4 obs.)
MOLUCCA PASSAGE (266)

```
AAI      5.34  161 eP     33 10.60   -1.2
TSM      8.84  289 ePd    34 02.00    2.0
MKS      9.60  227 e(P)c  34 09.50   -0.8
KKM     11.22  295 ePd    34 33.00    0.8
MTN     14.89  162 eP     35 19.00   -1.1
W85     22.53  160 eP     36 46.70    0.4
WRA     22.58  160 Pc     36 46.80    0.0
        0.4s    10.10nm              4.5mb
MBL     23.35  196 eP     36 54.70    0.5
```

ASPA 25.95 164 iPd 37 19.90 1.0
0.4s 18.00nm 4.9mb
eS 41 56.10
CHTO 32.05 304 eP 38 12.10 -1.4
0.5s 2.81nm 4.3mb
STK 36.08 158 iPd 38 49.00 1.1
BRS 38.21 140 iP 39 07.00 1.1
SHL 41.08 309 iP 39 29.30 -0.5
GUN 46.91 308 P 40 16.40 -0.5
0.4s 20.00nm 5.3mb
PKI 47.13 307 P 40 18.00 -0.7
KKN 47.33 307 P 40 19.50 -0.6
DMN 47.39 307 P 40 21.00 0.4
GKN 47.93 307 P 40 24.90 0.2
GBA 49.99 287 Pc 40 39.80 -0.6
SUF 93.49 333 iP 45 08.60 9.0X
S.D. = 1.0 on 19 of 20 obs.

JAN 07, 1990 06h 50m 23.12± 0.51s
41.321 N ± 7.5km 49.452 E ±11.1km
DEPTH = 33.0km (normal)
4.6mb (5 obs.)
CASPIAN SEA (338)

TAB 4.05 218 eP 51 16.00 -8.4X
IR7 5.68 170 eP 51 47.60 0.0
IR2 5.76 168 eP 51 49.00 0.3
IR1 5.98 170 eP 51 51.80 0.1
MAIO 9.30 119 eP 52 38.00 0.0
eS 54 13.00
NUR 24.50 330 iP 55 40.50 0.3
0.6s 9.10nm 4.5mb
SUF 25.51 335 iP 55 51.50 1.8
0.5s 37.70nm 5.2mb
HFS 28.91 323 eP 56 19.70 -1.1
0.4s 2.80nm 4.3mb
GKN 31.62 104 P 56 44.80 -0.6
GBA 36.83 130 Pd 57 30.30 0.4
0.8s 3.20nm 4.2mb
BCAO 45.99 225 iPc 58 44.80 -0.3
0.5s 10.00nm 5.0mb
ic 59 00.10
FRB 64.41 334 eP 00 57.00 -0.8
S.D. = 0.8 on 11 of 12 obs.

JAN 07, 1990 07h 26m 13.02± 0.57s
39.940 N ± 6.1km 77.558 E ± 9.2km
DEPTH = 10.0km (geophysicist)
4.1mb (3 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH 1.31 249 Pg 26 44.00 6.7X
Sg 27 06.00
WMQ 8.50 60 P 28 18.80 -0.3
S 29 51.00
NDI 11.23 182 eP 28 58.00 1.4
0.5s 28.17nm 5.9mb X
eS 30 58.00
QUE 13.03 225 eP 29 12.00 -9.1X
e 31 34.00
GKN 13.27 152 P 29 23.00 -1.2
0.4s 17.00nm 5.5mb X
KKN 13.70 150 P 29 29.40 -0.6
0.4s 13.00nm 5.2mb X
DMN 13.80 151 P 29 30.90 -0.4
0.4s 12.00nm 5.1mb X
GUN 13.83 148 P 29 31.30 -0.5
PKI 13.95 150 P 29 32.40 -0.9
0.4s 15.00nm 5.2mb X
GTA 17.14 85 eP 30 14.20 -0.1
SHL 18.69 136 iP 30 34.20 0.6
XAN 25.65 93 eP 31 45.90 1.4
TIY 27.16 83 eP 32 02.20 3.8X
N 26s 0.70um
CHTO 27.98 133 e(P) 32 07.10 1.2
1.0s 3.25nm 4.1mb
HFS 43.69 319 eP 34 19.10 -0.3
0.7s 2.00nm 4.0mb
NB2 44.87 321 P 34 29.00 0.0
0.7s 4.30nm 4.5mb
MBC 63.59 4 ePc 36 44.70 -0.9
0.5s 14.00nm 5.4mb X
INK 69.59 12 eP 37 24.00 0.3
S.D. = 0.9 on 15 of 18 obs.

JAN 07, 1990 07h 45m 44.74± 0.27s
8.170 N ± 4.6km 126.801 E ± 7.4km
DEPTH = 28.3km (11 depth phases)
5.0mb (19 obs.) 4.3Msz (6 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV 1.62 229 ePc+ 46 16.00 4.2X
1.1s 2784.81nm
QCP 8.53 319 eP 48 46.00 56.6X
TSM 9.52 246 ePc 48 11.00 7.9X
BAG 10.20 324 eP 48 13.90 1.3
KKM 10.72 259 ePc 48 27.50 7.9X
JAY 17.46 127 ePc 49 47.70 -0.4
GUMO 18.53 72 eP 50 06.00 4.7X
eS 53 37.00
QIZ 19.68 305 eP 50 14.40 -0.4
E 17s 1.60um
TRT 21.17 222 ePd 50 31.80 1.6
MTN 21.32 168 iPd 50 31.10 -0.6
SSE 23.40 348 P 50 53.00 0.8
Z 20s 0.60um 4.1Msz
pP 51 04.00 43kmX
KGM 24.16 257 eP 51 03.50 3.7X
NJ2 24.88 344 Pc 51 10.00 3.4X
Z 20s 0.60um 4.1Msz
IPM 25.86 264 ePd 51 20.00 4.1X
0.7s 20.70nm 4.9mb
SNG 25.97 270 eP 51 13.00 -3.9X
PMG 26.76 130 eP 51 22.50 -1.7
NST 27.11 288 eP 51 29.00 1.6
KMI 28.47 309 eP 51 52.50 12.5X
BDT 28.54 291 eP 51 40.80 0.4
WB5 28.85 165 eP 51 41.20 -1.9
e 56 28.50
WRA 28.91 165 Pc 51 41.70 -1.9
1.1s 15.10nm 4.6mb
CHG 29.03 294 eP 51 45.60 0.8
CHTO 29.03 294 eP 51 44.60 -0.2
1.0s 9.00nm 4.4mb
pP 51 52.20 26km
TIA 29.27 344 eP 51 44.80 -2.0
MBL 29.94 193 eP 51 52.00 -0.9
0.5s 10.00nm 4.9mb
XAN 30.57 330 P 51 55.00 -3.4X
CD2 31.22 320 eP 52 09.20 5.0X
TIY 32.16 338 eP 52 15.00 2.7
Z 15s 1.00um 4.6MszX
N 11s 0.50um
S 57 26.00
ASPA 32.39 168 iPc 52 12.90 -1.6
0.4s 17.00nm 5.3mb
Z 20s 0.44um 4.1Msz
LR 06 14.30
NANU 32.48 200 iPd 52 15.40 0.3
0.5s 12.00nm 5.1mb
BJI 33.13 345 eP 52 18.50 -2.1
eS 57 36.00
SNY 33.64 356 Pd 52 24.60 -0.4
Z 20s 0.80um 4.4Msz
N 20s 0.70um
E 16s 0.60um
S 57 46.00
CTA 33.99 146 iPc 52 28.80 0.5
1.2s 37.50nm 5.2mb
WARB 34.15 180 iPd 52 29 90 0.3
LZH 34.80 326 eP 52 33 00 -2.3
Z 15s 1.20um 4.8MszX
N 12s 0.60um
E 12s 0.50um
MEKA 35.50 193 eP 52 41.20 0.0
CN2 35.51 358 eP 52 41.00 -0.1
Z 18s 0.60um 4.4Msz
pP 52 48.00 24km
eS 58 16.00
MDJ 36.39 3 Pd 52 49.50 1.0
epP 52 59.00 32km
SHL 37.46 302 iP 52 57.50 -0.5
iS 58 45.00
MRWA 38.60 195 eP 53 07.70 0.4
FORR 38.82 178 iPd 53 08.70 -0.3
0.3s 19.00nm 5.3mb
COOL 39.21 188 eP 53 12.20 -0.1
GTA 39.40 326 eP 53 11.80 -2.2
LSA 39.69 307 P 53 19.80 2.9
BAL 39.75 194 iPc 53 17.00 0.2
KLB 40.47 192 eP 53 23.00 0.3
MUN 41.18 194 iPd 53 29.30 0.7
1.0s 106.00nm 5.5mb
NWAO 41.87 192 eP 53 35.00 0.8
STK 42.26 161 eP 53 37.00 -0.4
RKG 43.02 192 iPd 53 49.10 5.5X
GUN 43.30 302 P 53 46.00 -0.5
0.8s 42.00nm 5.2mb
BRS 43.39 145 iPc 53 46.60 -0.1
0.6s 5.50nm 4.5mb
i 53 53.50 23km
ePP 55 36.00
PKI 43.59 302 P 53 48.40 -0.4
KKN 43.77 302 P 53 49.40 -0.7
DMN 43.86 302 P 53 49.90 -0.9
ADE 44.35 166 iPd 53 55.00 0.5
1.0s 66.00nm 5.4mb
GKN 44.37 302 P 53 53.90 -1.0
BWA 47.05 155 eP 54 17.70 1.8
BFD 47.46 163 eP 54 19.00 0.0
CAN 48.06 155 eP 54 25.80 2.0
GBA 48.71 281 Pc 54 35.10 6.1X
0.9s 7.40nm 4.7mb
WMQ 49.20 323 eP 54 32.00 -0.5
Z 20s 0.70um 4.7Msz
eS 01 32.00
MAIO 66.94 306 iPd 56 36.00 -1.2
SVW 76.89 29 eP 57 37.50 1.6
e 57 46.50 29km
TTA 76.94 27 eP 57 37.20 1.0
e 57 46.30 29km
BRW 77.97 19 eP 57 42.40 0.8
e 57 52.00 31km
KDC 78.18 33 e(P) 57 44.20 1.3
e 57 53.80 31km
IMA 78.33 24 eP 57 44.20 0.4
1.0s 8.10nm 4.7mb
i 57 53.10 28km
PMR 80.04 29 eP 57 53.10 0.1
0.9s 14.60nm 5.0mb
e 58 02.50 30km
KEV 85.77 340 eP 58 24.00 1.7
INK 86.03 22 eP 58 24.00 0.4
SOD 86.42 338 eP 58 24.00 -1.6
MBC 87.63 13 eP 58 32.00 0.7
0.9s 22.00nm 5.4mb
SUF 87.65 333 eP 58 30.50 -1.1
0.4s 10.20nm 5.5mb
NUR 88.88 331 iP 58 36.70 -0.8
i 58 46.00 29km
DAG 92.91 353 eP 58 55.40 -0.5
0.6s 5.33nm 5.1mb
HFS 94.14 333 eP 59 00.30 -1.6
0.5s 0.80nm 4.4mb
LIC 129.88 285 PKP 04 56.60 2.3
S.D. = 1.2 on 64 of 78 obs.

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* JAN 07, 1990 08h 19m 04.44± 1.25s
17.885 S ±12.1km 70.625 W ±12.0km
DEPTH = 66.6 ± 11.4 km
4.7mb (4 obs.)
NEAR COAST OF PERU (115)
Felt (III) at Arequipa.

ARE 1.64 330 iPd 19 30.30 -1.6
iS 19 51.30
LPB 2.76 61 Pc 19 49.20 1.5
1.0s 440.00nm
ZOBO 2.88 56 iPc 19 50.00 0.5
S 20 36.00
ANT 5.79 178 eP 20 29.80 0.0
PT03 6.30 307 eP 21 10.40 33.4X
eS 22 44.10
TUL 58.57 336 eP 28 56.10 -0.5
0.9s 8.90nm 4.9mb
Z 21s 0.29um 4.4Msz
LR 45 00.00
LNO 58.57 336 e(P) 28 55.80 -0.7
SIO 58.63 336 eP 28 56.50 -0.5
ALQ 62.60 327 eP 29 22.80 -1.4
1.0s 2.50nm 4.3mb
LIC 69.01 76 Pc 30 04.30 -1.1
KIC 69.32 76 Pc 30 05.60 -1.7
LKO 69.75 72 Pc 30 09.04 -0.9
0.9s 9.50nm 4.7mb
KVN 71.96 323 iP 30 24.90 1.8
LLA 72.06 319 eP 30 25.80 2.3
LRM 73.86 331 eP 30 35.60 1.5
PNT 79.74 330 eP 31 08.00 1.5
0.8s 8.00nm 4.7mb
FRB 81.38 1 eP 31 14.00 -0.7

07d 08h

GBA 148.99 93 PKPd 38 48.70 5.7X
0.8s 4.00nm
S.D. = 1.5 on 16 of 18 obs.

JAN 07, 1990 09h 06m 43.44± 0.15s
15.947 S ± 3.1km 74.245 W ± 3.6km
DEPTH = 48.0km (17 depth phoses)
5.9mb (64 obs.) 5.3Msz (7 obs.)
NEAR COAST OF PERU (115)
Felt (II) at Arequipa.
RADIATED ENERGY
No. of sta: 4 Focal mech. C
Energy 1.4±0.7*10**13 Nm
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 28C
Centroid Location:
Origin Time 09:06:51.1 0.4
Lat 16.31S 0.06 Lon 74.82W 0.11
Dep 30.2 5.1 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr= 1.16 0.12 Mtt=-0.82 0.10
Mff=-0.34 0.19 Mrt=-0.73 0.25
Mrf=-0.60 0.25 Mtf= 1.21 0.13
Principal Axes:
T Val= 1.88 Plg=53 Azm=133
N -0.05 37 305
P -1.83 4 38
Best Double Couple:Mo=1.9*10**17
NP1:Strike=161 Dip=52 Slip= 140
NP2: 278 59 45

ARE	2.69	101	iPc	07	24.80	-0.8
			e(S)	07	38.00	
PT10	4.67	325	eP	07	56.00	2.8
			eS	08	52.00	
NNA	4.67	327	iP	07	54.00	0.7
	0.5s	23.24nm				
			eS	08	50.50	
ZOBO	5.89	94	iPc	08	12.50	1.5
LPB	5.93	96	Pc	08	13.50	2.1
	1.0s	1284.00nm			6.3mb	
ANT	8.52	156	iPc	08	42.00	-5.0X
			iS	10	08.10	
YJA	10.32	128	iPd	09	17.00	4.7X
SLA	11.98	138	ePd	09	31.80	-2.6
TUNG	15.02	344	eP	10	18.00	3.3X
VC1	15.75	345	P	10	30.70	6.4X
QUR	16.23	345	(P)	10	35.00	4.7X
GGP	16.25	344	(P)	10	31.50	0.8
CAYA	16.35	347	P	10	34.30	2.5
COTA	16.67	346	P	10	38.10	2.1
LCCH	17.62	173	iPd	10	47.00	-0.1
TCA	17.67	152	eP	10	46.80	-1.1
SAN	17.73	170	iPc	10	48.60	0.1
			iS	14	11.00	
TACH	17.88	171	iPc	10	50.40	0.0
PCH	17.92	170	ePc	10	51.00	0.1
LNV	18.11	172	iPd	10	52.50	-0.7
MRA	18.13	156	ePd	10	54.10	0.7
CHCH	18.20	170	iPc	10	54.50	0.2
FFA	19.45	166	eP	11	08.00	-1.1
BOG	20.44	1	iPc	11	22.00	2.1
			eS	15	14.00	
ITB1	20.52	118	eP	11	18.40	-1.9
ITB	20.72	118	e(P)	11	17.50	-4.9X
ITB7	20.87	119	eP	11	22.40	-1.6
SDV	24.93	8	eP	12	03.90	-0.1
BAO	25.26	93	eP	12	05.50	-1.6
BDF	25.34	93	iPc	12	06.88	-1.0
			e	12	23.43	
			eS	16	31.05	
CEOS	25.50	14	iPd	12	08.00	-1.2
TOV	25.94	10	eP	12	12.50	-0.8
TOV	25.94	10	iPc	12	13.20	-0.1
PLAV	26.51	15	eP	12	18.00	-0.7
OLLA	26.83	16	iPd	12	20.50	-1.0
LLAV	27.26	16	eP	12	25.00	-0.5
MORO	27.28	13	eP	12	24.50	-1.2
FISA	27.47	10	iPc	12	25.50	-1.8
SJS	27.49	339	iPc	12	30.20	2.6
SRA	27.76	338	iPc	12	32.00	1.9
PORP	34.61	13	P	13	29.00	-1.1
CPD	34.75	14	P	13	29.00	-2.4
SJG	34.77	14	iP	13	30.00	-1.5
TPX	35.45	329	(P)	13	39.50	2.2
OXX	39.60	325	(P)	14	15.00	2.6
IISM	41.51	326	(P)	14	30.50	2.7
IIT	42.05	325	(P)	14	35.50	2.9
III	42.19	323	(P)	14	36.00	2.3
PPM	42.26	325	(P)	14	37.50	2.9
HBF	48.95	353	P	15	26.60	-0.4
SGS	49.23	353	P	15	28.40	-0.6
AIA	49.72	175	eP	15	48.50	16.0X
PRM	50.35	351	P	15	36.60	-1.1
JSC	50.39	352	P	15	36.80	-1.1
LHS	50.53	353	P	15	37.80	-1.2
PWLA	52.32	346	P	15	50.60	-2.0
RSCP	52.38	348	P	15	51.70	-1.4
	0.9s	241.64nm			6.2mb	
BLA	53.19	354	P	15	58.10	-0.9
	1.2s	56.82nm			5.5mb	
NAV	53.33	353	P	15	58.80	-1.3
OLY	53.71	343	P	16	01.60	-1.2
CVL	53.79	356	P	16	02.90	-0.4
NA2	53.88	357	P	16	03.90	-0.1
CBN	53.94	357	eP	16	04.00	-0.4
LST	54.20	345	P	16	05.20	-1.2
POW	54.24	343	P	16	05.50	-1.2
TUL	55.46	339	eP	16	13.60	-2.0
	1.1s	210.10nm			6.1mb	
Z	22s	2.12um			5.2Msz	
			LR	34	00.00	
LNO	55.46	339	eP	16	14.10	-1.4
SIO	55.50	338	eP	16	14.50	-1.4
MEO	55.50	336	iPc	16	14.30	-1.7
FVM	55.76	345	P	16	15.80	-1.9
PRIN	56.02	360	P	16	21.50	2.0
SCP	56.55	357	ePc	16	23.55	0.2
			e	16	33.81	
PNJ	56.56	0	iP	16	22.90	-0.5
DHN	58.59	357	P	16	36.40	-1.3
DLA	58.90	354	P	16	37.35	-2.5
LDN	59.04	354	P	16	38.60	-2.2
ALQ	59.14	329	iPc	16	40.70	-1.2
	1.0s	67.50nm			5.7mb	
Z	20s	0.71um			4.8Msz	
ANMO	59.14	329	iPc	16	40.93	-0.9
	1.3s	122.60nm			5.9mb	
			ipPd	16	53.18	43km
			iPcP	17	26.69	
			eS	24	44.79	
			e	28	52.41	
ELF	59.20	354	P	16	39.60	-2.3
HBVT	60.02	1	P	16	46.30	-1.2
			pP	17	00.00	49km
RSNY	60.20	360	P	16	47.40	-1.3
	0.7s	39.22nm			5.6mb	
PTN	60.23	359	P	16	47.50	-1.4
GLA	62.26	322	eP	17	02.00	-1.0
GLD	62.48	333	P	17	03.80	-0.7
	1.5s	148.44nm			5.9mb	
GOL	62.51	333	P	17	03.60	-1.2
	1.3s	143.23nm			5.9mb	
CBM	62.83	5	P	17	05.70	-0.6
			pP	17	20.00	51km
BAR	63.12	320	eP	17	09.00	0.4
			e	17	23.00	
PLM	63.70	321	eP	17	13.00	0.4
TPC	63.73	322	eP	17	13.00	0.4
			e	17	27.00	
PEC	64.25	321	P	17	16.40	0.4
RVR	64.45	321	eP	17	17.00	-0.3
			e	17	31.00	
MSU	64.79	328	P	17	18.30	-1.4
GSC	65.01	322	eP	17	21.00	0.0
MWC	65.02	321	eP	17	21.00	-0.2
			e	17	33.00	
PAS	65.04	321	eP	17	22.00	0.9
SBB	65.19	321	eP	17	21.00	-1.2
			e	17	36.00	
DAU	65.78	330	P	17	26.20	0.1
CLC	65.83	322	eP	17	25.00	-1.2
ABL	66.15	321	P	17	28.30	-0.2
			pP	17	43.60	55km
ISA	66.24	322	eP	17	29.00	0.1
			e	17	43.00	
DUG	66.38	329	P	17	30.20	0.4
	1.0s	70.00nm			5.7mb	
SYP	66.40	320	eP	17	30.00	0.0
			e	17	44.00	
BLP	66.68	320	P	17	32.10	0.5
BW06	66.84	332	P	17	31.00	-1.8
BCH	66.90	320	P	17	33.90	0.8
			pP	17	48.20	51km
TNP	67.19	324	P	17	35.00	0.0
	0.8s	58.82nm			5.7mb	
			pP	17	48.00	45km
PHAM	67.52	321	P	17	37.70	0.8
FRI	67.87	322	eP	17	38.10	-1.0
PRI	67.88	321	eP	17	39.70	0.4
			epP	17	53.30	48km
KVN	68.36	325	P	17	42.00	-0.3
LLA	68.37	321	eP	17	42.00	-0.2
			epP	17	56.00	49km
PRS	68.44	320	eP	17	42.70	0.1
			epP	17	57.00	51km
RSON	68.67	347	P	17	41.80	-2.0
	1.1s	164.60nm			5.9mb	
SAO	68.77	321	e(P)	17	44.60	-0.1
CMB	68.97	322	eP	17	45.50	-0.4
			epP	17	59.00	47km
ARN	69.20	321	P	17	48.30	0.9
			pP	18	02.00	48km
MHC	69.26	321	eP	17	48.00	0.2
GCC	69.27	321	eP	17	47.70	0.0
BKS	69.97	321	eP	17	52.80	0.8
	1.0s	174.00nm			6.0mb	
BRK	69.98	321	e(P)	17	51.60	-0.4
LRM	70.52	333	eP	17	55.30	-0.2
ORV	70.63	323	eP	17	56.40	0.4
			epP	18	10.50	50km
SCH	70.77	5	eP	17	55.00	-1.5
	1.1s	8.80nm			4.6mb	X
MIN	71.22	324	eP	17	59.00	-0.7
WDC	71.91	323	eP	18	01.70	-1.9
			epP	18	16.30	52km
LIC	71.94	78	Pc	18	02.50	-1.9
	0.9s	72.00nm			5.6mb	
Z	20s	1.40um			5.2Msz	
LBFM	72.04	324	P	18	04.90	0.2
			pP	18	18.70	48km
TIC	72.09	77	Pc	18	03.24	-2.0
	1.2s	101.50nm			5.6mb	
LKO	72.52	74	P	18	07.16	-0.6
	0.8s	97.50nm			5.8mb	
SES	73.55	336	ePd	18	12.50	-0.6
	1.2s	161.00nm			5.8mb	
			pP	18	25.00	43km
SPA	74.16	180	iPc	18	17.30	0.7
	1.0s	68.00nm			5.5mb	
FFC	74.24	344	iPc	18	16.00	-1.0
	1.1s	38.00nm			5.2mb	
LON	75.63	328	P	18	25.00	-0.2
PNT	76.36	331	eP	18	30.00	0.8
	1.0s	53.00nm			5.5mb	
EDM	76.66	337	eP	18	29.50	-1.4
TIO	79.42	54	iPc	18	47.50	0.9
			i	19	06.00	
FRB	79.56	3	eP	18	45.00	-1.4
SBA	80.33	191	e(P)	18	51.10	0.6
AVE	80.34	51	iPc	18	52.50	1.2
IFR	82.16	52	iPc	19	02.00	1.0
EVAL	82.72	48	eP	19	05.00	1.3
NKM	82.76	50	iPc	19	05.50	1.6
			i	19	15.50	
EJIF	83.15	49	eP	19	07.80	1.9
EZAM	83.48	43	eP	19	08.20	0.8
EPRU	83.54	49	eP	19	09.80	1.9
EHOR	83.90	48	eP	19	10.70	1.1
STS	83.92	42	eP	19	10.20	0.6
EPLA	84.29	46	iPc	19	12.50	0.9
ATEJ	84.40	49	iPd	19	13.60	1.2
ALOJ	84.42	49	iPc	19	13.40	0.9
AAPN	84.49	49	iPc	19	13.50	0.7
ERUA	84.61	43	eP	19	14.20	1.1
ACHM	84.62	49	iPc	19	14.00	0.6
APHE	84.66	49	iPc	19	14.40	0.7
TAF	84.74	52	iPc	19	15.00	1.0
ASMO	84.79	49	iPc	19	15.00	0.8
AFC	84.89	49	eP	19	15.20	0.4
EMON	84.97	42	eP	19	15.50	0.6
EBAN	85.09	48	eP	19	16.80	1.2
TOL	85.62	47	iPc	19	18.08	-0.1
	1.2s	531.25nm			6.6mb	
			esPd	19	35.96	
			eS	29	57.00	
ENIJ	85.74	50	eP	19	18.20	-0.7
GUD	85.86	46	eP	19	20.20	0.6
EVIA	86.20	48	eP	19	22.00	0.7
ETOR	87.39	46	iPc	19	28.00	1.0

ECHE	87.67	48	eP	19	29.00	0.7	RSP	95.30	45	P	20	04.41	0.7		0.7s	10.40nm							
ECRI	87.80	45	iPc	19	29.40	0.6	LSD	95.32	44	P	20	04.82	0.9	WB5	134.63	219	ePKP	25	58.80	-0.4			
BOH	89.00	45	P	19	35.22	0.6	EMS	95.35	44	ePc	20	03.80	-0.2				i	26	12.20				
EROQ	89.12	47	eP	19	35.80	0.7	VITF	95.38	41	P	20	03.50	-0.3	MTN	141.94	223	iPKPc	26	06.90	-5.9X			
ISSF	89.12	45	P	19	35.74	0.5	ROB	95.47	46	P	20	04.10	-0.3	HIA	144.86	344	iPKPc	26	14.36	-2.5			
MADF	89.15	45	P	19	35.33	0.1	HAU	95.55	42	eP	20	04.30	-0.3				epPKP	26	27.27				
EBR	89.18	47	eP	19	36.00	0.7		1.2s	23.80nm				5.5mb	KSH	145.01	42	PKPd	26	18.00	0.5			
LHE	89.20	45	P	19	36.01	0.5	LOMF	95.66	42	P	20	05.07	-0.2	MDJ	145.04	330	iPKPc	26	16.50	-0.7			
ATE	89.21	45	P	19	35.83	0.3	DIX	95.67	44	eP	20	05.70	0.1		Z 28s		0.70um			5.3MszX			
JAU	89.41	45	P	19	33.19	-3.5X	FIN	95.67	46	P	20	04.71	-0.6				epPKP	26	28.00				
DCN	89.59	33	eP	19	36.50	-0.5	BSF	95.78	42	P	20	05.07	-0.8				ePP	29	36.00				
	1.0s	116.00nm			6.2mb		MBC	95.89	350	eP	20	05.00	-0.6	CN2	147.58	333	PKPc	26	20.00	-1.4			
EPF	89.89	45	iPc	19	39.10	0.3		0.6s	12.00nm				5.6mb		Z 20s		0.60um			5.4Msz			
	1.3s	90.20nm			5.9mb		WLF	95.93	40	iP	20	07.40	1.2				pPKP	26	31.00				
DLE	89.95	34	eP	19	38.80	0.1	MOF	96.01	42	P	20	06.43	-0.4				PP	29	51.00				
	1.2s	119.00nm			6.1mb		MMK	96.03	44	ePc	20	07.70	0.5	WMQ	148.26	25	ePKP	26	23.21	0.6			
DMU	90.04	33	eP	19	38.60	-0.5	ENN	96.12	39	iPc	20	07.30	0.2				i	26	26.02				
HVD	90.12	122	iPc	19	34.50	-5.8X		1.0s	71.00nm				6.1mb				i	26	39.43				
	0.9s	58.82nm			5.9mb					e	20	21.50		POO	149.44	80	iPKP	26	27.10	2.0X			
LFF	90.87	43	iPc	19	43.10	0.0	ECH	96.13	42	P	20	07.27	0.0		1.1s	156.96nm							
LPF	90.91	40	iPc	19	42.90	-0.3	BUL	96.18	113	iPc	20	23.50	15.2X	SHK	149.57	312	ePKP	26	25.00	0.2			
	1.1s	63.40nm			5.9mb			1.0s	55.50nm					SNY	149.98	333	ePKP	26	24.60	-0.6			
MFF	90.92	42	iPc	19	43.20	-0.1	CDF	96.26	42	P	20	07.59	-0.4	NDI	150.80	59	iPKPc	26	27.00	0.2			
	0.6s	36.00nm			6.0mb		RUP	96.50	40	ePc	20	09.25	0.3		1.1s	362.03nm							
MAW	91.03	165	iPd	19	43.90	0.3	VAI	96.52	44	Pc	20	09.50	0.5	GBA	152.53	91	PKPd	26	30.20	0.6			
LPO	91.07	44	iPc	19	44.00	-0.1	FEL	96.58	42	P	20	08.20	-1.3		1.0s	51.50nm							
	0.8s	67.10nm			6.1mb		GWF	96.66	41	P	20	09.58	0.0	HYB	153.91	83	ePKPd	26	31.70	0.1			
GRR	91.16	40	iPc	19	44.10	-0.2	TMA	96.66	44	ePc	20	09.50	-0.4		1.0s	70.00nm							
	0.8s	48.30nm			6.0mb		BOB	96.68	45	P	20	10.50	0.6				e	26	39.50				
BLF	91.16	121	iPc	19	45.00	-0.2	ABH	96.86	40	ePc	20	10.66	0.2	BJI	154.33	341	ePKP	26	32.00	0.5			
	1.0s	84.00nm			6.1mb		SLE	96.86	42	ePc	20	10.50	-0.1		Z 26s		0.66um			5.3MszX			
RJF	91.52	43	iPc	19	45.90	-0.2	PMR	96.88	332	P	20	08.50	-1.8	HHC	154.68	350	ePKP	26	32.30	0.2			
	1.0s	68.00nm			6.0mb			0.8s	6.90nm				5.2mb	BTO	155.16	352	ePKP	26	33.00	0.3			
FLN	91.53	39	iPc	19	46.00	-0.1	WTS	97.01	38	iPc	20	11.90	0.8	GTA	156.05	11	ePKP	26	34.20	0.1			
	1.0s	64.00nm			6.0mb			0.9s	57.00nm				6.1mb	GKN	157.08	55	PKP	26	35.40	-0.4			
LDF	91.69	40	iPc	19	46.60	-0.2				e	20	21.00		TIA	157.42	335	ePKP	26	36.10	0.4			
	0.8s	48.30nm			6.0mb					e	20	25.00		TIY	157.53	346	PKPd	26	37.30	1.4			
CAF	91.74	44	iPc	19	47.20	0.0	PII	97.15	47	P	20	12.50	0.6		Z 22s		1.00um			5.6Msz			
	0.8s	33.50nm			5.8mb		VDL	97.16	44	eP	20	12.20	0.0				sPKP	26	52.00				
LSF	91.86	42	iPc	19	47.40	-0.3	SAX	97.28	43	ePc	20	13.10	0.3				e	27	08.00				
	1.0s	60.00nm			6.0mb		BDI	97.29	46	P	20	13.00	0.4				PP	30	45.00				
TCF	92.32	42	iPc	19	49.30	-0.5	FBA	97.51	336	P	20	12.00	-1.1	DMN	157.62	55	PKP	26	36.40	-0.2			
	1.1s	48.80nm			5.8mb			0.8s	13.79nm				5.5mb	KKN	157.68	55	PKP	26	36.40	-0.2			
BFS	92.38	119	iPc	19	45.50	-5.3X				pP	20	26.00	47km	PKI	157.88	55	PKP	26	36.00	-1.0			
	1.2s	187.50nm			6.4mb		TOD	97.56	41	ePc	20	13.45	-0.2	GUN	158.09	54	PKP	26	37.00	-0.2			
MAF	92.53	43	iPc	19	50.40	-0.4	OSS	97.66	44	ePc	20	14.40	0.0		1.0s	56.00nm							
	1.0s	54.00nm			5.9mb		FIR	97.68	47	e(P)	20	17.00	2.8	SSE	159.36	320	PKP	26	38.60	0.6			
EKA	92.63	33	Pd	19	50.90	-0.1	PGD	98.03	47	P	20	16.50	0.4		Z 20s		0.50um			5.4Msz			
	1.1s	29.90nm			5.6mb		DAG	98.05	11	iPc	20	15.80	0.5				pPKP	26	51.50				
LBL	92.63	44	P	19	51.76	0.6		0.9s	6.72nm				5.2mb				e	27	15.00				
PYM	92.65	43	P	19	51.44	0.0	CRE	98.13	47	P	20	16.50	0.0	LZH	159.87	5	ePKP	26	40.00	1.3			
BGF	92.83	42	iPc	19	51.80	-0.3	RDP	98.22	49	P	20	18.50	1.6				sP	26	53.50				
AGO	92.84	43	P	19	52.08	-0.1	OGA	98.29	44	iPd	20	17.70	0.4	NJ2	160.03	326	PKPd	26	39.00	0.3			
PRY	92.95	119	iPd	19	52.50	-0.9		1.3s	64.00nm				6.0mb	LSA	160.83	42	PKP	26	43.00	2.8			
PLDF	93.13	43	P	19	53.69	0.1	MNS	98.35	48	P	20	18.00	0.6	XAN	161.76	352	PKP	26	41.50	1.0			
GRC	93.23	42	P	19	53.13	-0.8	ASS	98.50	48	P	20	18.50	0.4	TSM	163.20	227	ePKPd	26	44.80	2.4X			
AVF	93.23	42	eP	19	53.40	-0.5	FUR	98.77	42	eP	20	19.50	0.3	WHN	163.48	333	ePKP	26	42.00	-0.2			
	1.0s	28.00nm			5.6mb			1.0s	58.00nm				6.1mb	CD2	164.99	7	ePKP	26	43.80	0.1			
AFI	93.28	255	ePc	19	51.82	-3.1X	AZI	98.80	49	P	20	15.50	-3.8X	GYA	169.51	356	PKP	26	48.00	0.9			
SSF	93.42	42	iPc	19	54.30	-0.5	SDI	99.01	49	Pc	20	21.50	1.1				pPKP	27	01.00				
	1.0s	24.00nm			5.6mb		GRF	99.10	41	iPc	20	21.00	0.4				e	28	00.00				
SMF	93.50	42	eP	19	55.00	-0.2		1.1s	42.00nm				5.9mb				PP	31	48.00				
	1.1s	64.40nm			6.0mb			Z 20s	0.60um				5.1Msz	SNG	169.94	149	ePKP	26	48.00	0.5			
LBF	93.70	42	iPc	19	55.60	-0.6	FVI	99.40	44	Pc	20	22.50	0.5	KMI	170.44	17	PKPc	26	47.50	-0.3			
	1.0s	18.00nm			5.5mb		HOF	99.66	40	iPd	20	23.70	0.5	KMI	170.44	17	PKP+	26	48.00	0.2			
LOR	93.72	42	iPc	19	55.80	-0.4	SGO	99.85	51	P	20	25.00	0.8	CHG	172.90	65	ePKPc	26	48.80	0.1			
	1.4s	52.20nm			5.8mb		KBA	99.88	44	iPc	20	24.00	-0.5		1.3s	52.88nm							
BCAO	93.87	87	iPc	19	58.20	0.5		0.6s	8.30nm				5.4mb				e	28	16.20				
	0.8s	95.00nm			6.3mb		KHC	100.48	42	iPdiff	20	27.50	0.5				e	35	25.00				
		id	20	13.00			CLL	100.58	40	iPdiff	20	27.60	0.3	CHTO	172.90	65	ePKP	26	48.70	0.0			
INK	94.06	341	iPc	19	56.50	-0.8		1.8s	62.00nm				5.9mb		1.3s	40.85nm							
	1.0s	69.00nm			6.0mb					i	20	39.40		BDT	173.40	78	ePKP	26	50.00	1.1			
		pP	20	09.00	41km		BRG	101.07	40	iPdiff	20	30.10	0.6	LOE	175.88	69	ePKP	26	51.00	1.4			
LRG	94.17	46	iPc	19	58.80	0.5		1.4s	44.00nm				5.9mb		S.D. = 1.0		on 303 of 322 obs.						
	1.4s	121.90nm			6.1mb		PRU	101.27	41	ePdiff	20	30.50	0.1	---									
LMR	94.24	46	iPc	19	58.90	0.2		1.0s	14.50nm				5.6mb										
	1.3s	86.60nm			6.0mb		KSP	102.53	40	iPdiff	20	37.00	1.0		JAN 07, 1990 11h 01m 49.71± 0.65s								
FRF	94.40	46	iPc	19	59.60	0.2	ZST	102.59	43	ePdiff	20	36.10	-0.3		64.904 N ± 6.0km 148.973 W ± 4.7km								
	1.4s	87.10nm			6.0mb					e	24	44.80			DEPTH = 20.0km (geophysicist)								
BNI	94.87	45	P	20	02.50	0.8	KRA	104.71	42	ePdiff	20	44.50	-1.2		CENTRAL ALASKA						(1)		
RRL	94.91	45	P	20	02.46	0.4	CTA	126.47	229	iPKPc	25	43.00	-0.7		Foreshock.								
PZZ	95.00	45	P	20	03.07	0.7		1.1s	50.63nm														
SBF	95.04	46	iPc	20	02.30	-0.1	MAIO	134.28	55	iPKPd	25	58.60	0.4	NEA	0.33	188	eP	01	57.64	0.7			
	1.3s	79.40nm			6.0mb					e	28	23.00		RDS	0.36	102	iP	01	57.58	0.1			
STV	95.08	46	P	20	02.97	0.4	WRA	134.60	219	PKPc	25	43.50	-15.6X	FBA	0.50	90	iPc	01	59.50	-0.3			
DOU	95.10	39	Pc	20	02.20	-0.3		0.6s	0.70nm					CCB	0.56	117	iP	02	01.42	0.6			
UCC	95.19	39	iP	19	58.00	-4.8X	WRA	134.60	219	PKPd	26	12.20	13.1X	GLM	0.68	82	eP	02	02.02	-0.8			
														MCK	1.18	179	eP	02	11.23	0.1			

07d 11h

RND	1.51	178	eP	02 16.12	0.6
KTH	1.60	213	eP	02 15.98	-1.2
DMW	1.64	120	eP	02 21.03	3.3X
DDM	1.76	128	eP	02 23.25	3.8X
IMA	2.28	303	eP	02 27.80	0.7
OOT	2.49	118	eP	02 37.97	8.1X
PWA	3.29	188	iPc	02 41.20	0.0
PLRM	3.33	181	eP	02 41.63	-0.1
PMR	3.33	181	iPc	02 41.90	0.2
SUA	3.55	194	eP	02 44.64	-0.3
PMS	3.68	184	eP	02 47.50	0.6
TTA	3.69	241	eP	02 43.00	-3.9X
BGL	3.97	205	eP	02 50.02	-0.9
DWY	4.22	97	P	02 52.30	-2.1X
BRW	7.05	339	eP	03 43.30	9.1X

S.D. = 0.7 on 15 of 21 obs.

JAN 07, 1990 11h 02m 05.66± 0.26s
64.778 N ± 4.2km 148.868 W ± 4.8km
DEPTH = 20.0km (geophysicist)
4.9mb (35 obs.) 4.6Msz (2 obs.)
CENTRAL ALASKA (1)

ML 5.5 (PMR). Felt (V) at Ester, Fairbanks and Manley Hot Springs; (IV) at Anderson, Eielson Air Force Base, Nenana and North Pole; (III) at Clear, Delta Junction, Minto and Tanana.

FBA	0.48	75	e(P)	02 13.50	-1.8
IMA	2.39	305	e(P)	02 43.00	-1.5
TOA	2.94	154	iP	02 55.20	2.9X
PWA	3.17	189	eP	02 56.30	0.8
PMR	3.20	182	iP	02 56.60	0.7
PMS	3.56	185	iP	03 02.40	1.3
TTA	3.67	243	eP	02 55.60	-7.0X
GLI	4.00	167	eP	03 08.57	1.4
DWY	4.16	96	P	03 07.10	-2.4
SVW	4.80	223	eP	03 16.50	-2.2
INK	7.07	53	eP	03 44.00	-6.4X
ANM	7.08	276	eP	03 49.20	-1.5
BRW	7.18	339	e(P)	03 48.00	-4.1X
KDC	7.27	196	ePc	03 51.90	-1.4
SDN	11.08	217	eP	04 47.50	1.6
MBC	14.86	27	eP	05 27.00	-9.0X
	0.7s	24.00nm		4.7mb	
ADK	19.28	241	eP	06 28.50	-3.0X
	1.0s	200.00nm		5.3mb	
EDM	21.30	106	eP	06 51.50	-1.4
PNT	21.90	121	eP	07 03.00	4.1X
SES	24.38	108	eP	07 23.00	-0.2
FFC	25.06	91	eP	07 29.00	-0.6
	1.0s	8.00nm		4.3mb	
LRM	27.50	116	eP	07 57.70	5.1X
WDC	28.60	135	eP	08 03.80	1.6
MIN	29.10	134	eP	08 07.70	0.8
BW06	31.18	116	eP	08 25.50	0.0
RSON	31.35	90	eP	08 25.50	-1.1
KVN	31.39	130	eP	08 27.00	-0.3
CMB	31.59	134	e(P)	08 39.00	10.1X
ARN	31.88	136	eP	08 31.00	-0.4
TNP	32.56	130	eP	08 35 50	-2.0
	0.9s	7.81nm		4.6mb	
FRB	32.72	54	eP	08 34.00	-4.4X
MSU	33.92	123	eP	08 50.00	0.7
ISA	34.37	133	eP	08 54.00	0.9
CLC	34.51	132	eP	08 55.00	0.8
GSC	35.23	131	eP	09 06.00	5.5X
			e	09 14.00	
DAG	35.34	18	eP	08 56.50	-4.4X
	0.7s	25.34nm		5.2mb	
GOL	35.45	114	eP	09 03.00	0.5
	0.8s	6.40nm		4.6mb	
SBB	35.47	133	eP	09 03.00	0.5
			e	09 17.00	
MWC	35.83	134	eP	09 07.00	1.3
TPC	36.57	131	eP	09 10.00	-1.8
PLM	37.01	133	eP	09 19.00	3.4X
BAR	37.69	133	eP	09 31.00	9.9X
ANMO	39.19	119	eP	09 34.30	0.5
	0.9s	4.20nm		4.1mb	
ALQ	39.19	119	eP	09 34.50	0.6
	1.0s	5.00nm		4.2mb	
SIO	42.49	107	e(P)	10 05.90	5.2X
TUL	42.56	106	eP	10 05.90	4.6X
	1.0s	8.30nm		4.4mb	
	Z 21s	0.47um		4.4Msz	
		LR	23 00.00		
FVM	43.03	99	eP	10 03.00	-2.2
KEV	45.71	2	iP	10 26.60	0.3
	0.7s	13.30nm		5.0mb	
BLA	47.95	91	eP	10 41.50	-2.9
	1.0s	7.50nm		4.7mb	
SOD	48.10	2	iP	10 43.30	-1.8
CN2	49.72	289	P	10 58.60	0.7
JSC	50.08	93	eP	11 00.00	-0.8
SNY	52.12	289	eP	11 12.60	-3.6X
SUF	52.76	3	eP	11 20.60	-0.1
	0.8s	52.30nm		5.5mb	
NB2	53.61	12	P	11 18.30	-8.8X
	1.0s	7.70nm		4.6mb	
HFS	54.72	11	eP	11 34.10	-1.0
	0.7s	9.30nm		4.9mb	
	Z 15s	0.12um		4.1MszX	
		LR	34 44.00		
NUR	54.93	4	eP	11 31.00	-5.7X
BJI	56.60	294	eP	11 50.50	1.6
EKA	57.37	22	Pd	11 54.90	0.7
	0.7s	23.90nm		5.3mb	
HHC	57.68	298	eP	11 54.40	-2.4
	N 14s	1.10um			
	E 13s	0.80um			
DCN	58.55	26	eP	12 03.10	0.6
TIY	60.07	295	eP	12 14.60	1.3
	N 14s	0.70um			
WMQ	63.09	317	eP	12 33.00	-0.6
GTA	63.21	306	eP	12 32.50	-2.0
	Z 16s	0.60um		4.9MszX	
CLL	63.40	13	iPd	12 35.70	0.3
		e		13 04.00	
DOU	63.62	19	Pc	12 37.80	0.9
		e		13 05.90	
BRG	63.92	12	iP	12 39.00	0.2
	1.0s	18.00nm		5.2mb	
KSP	64.14	10	eP	12 37.00	-3.3X
		e		12 40.80	
FLN	64.15	23	eP	12 40.70	0.3
	0.8s	11.80nm		5.1mb	
WLF	64.25	18	Pc	12 42.00	1.0
LDF	64.37	22	eP	12 42.20	0.4
	0.8s	8.00nm		4.9mb	
GRR	64.45	23	eP	12 43.20	0.9
	0.8s	8.00nm		4.9mb	
XAN	64.65	296	eP	12 44.50	0.6
LZH	64.74	301	eP	12 45.50	0.9
	Z 18s	0.50um		4.8Msz	
LPF	64.77	23	eP	12 45.20	0.9
	1.0s	13.60nm		5.1mb	
PRU	64.85	12	Pd	12 45.50	0.6
KRA	65.17	8	eP	12 47.80	0.9
	0.8s	33.00nm		5.5mb	
KHC	65.61	13	iPc	12 47.20	-2.6
CDF	65.63	17	eP	12 50.70	0.7
HAU	65.91	18	eP	12 52.40	0.7
	1.0s	9.60nm		4.9mb	
BSF	66.13	18	eP	12 53.80	0.5
	0.8s	5.30nm		4.7mb	
LOR	66.28	20	eP	12 55.00	0.9
	0.8s	14.70nm		5.2mb	
MFF	66.30	23	eP	12 55.50	1.3
	1.0s	16.00nm		5.1mb	
SSF	66.43	20	eP	12 56.00	1.0
	0.8s	16.10nm		5.2mb	
LBF	66.58	20	eP	12 56.70	0.7
	0.8s	8.00nm		4.9mb	
AVF	66.67	20	eP	12 57.00	0.4
	0.6s	4.50nm		4.8mb	
BGF	66.82	21	eP	12 58.20	0.6
	0.8s	10.70nm		5.0mb	
ZST	66.84	10	eP	12 58.10	0.5
SMF	66.89	20	eP	12 58.20	0.2
	0.8s	5.90nm		4.8mb	
LSF	66.92	22	eP	12 59.00	0.8
	0.8s	17.40nm		5.3mb	
TCF	66.99	21	eP	12 59.30	0.7
	0.8s	4.50nm		4.7mb	
LFF	68.06	23	eP	13 06.40	1.0
	1.0s	28.00nm		5.4mb	
CAF	68.29	22	eP	13 07.60	0.7
	0.8s	4.00nm		4.6mb	
LPO	68.39	23	eP	13 08.40	1.0
	0.8s	8.00nm		4.9mb	
GYA	72.28	294	P	13 28.60	-2.8
SKO	73.32	8	iP	13 38.10	1.0
OHR	74.14	8	eP	13 46.00	4.1X
MAIO	76.82	337	iPd	13 59.60	2.3X
GUN	78.35	312	P	14 03.00	-3.2X
SHL	78.54	306	iP	14 09.20	2.1X
KKN	78.66	313	P	14 04.10	-3.6X
GKN	78.66	314	P	14 04.50	-3.2X
PKI	78.82	313	P	14 06.00	-2.8
DMN	78.88	313	P	14 05.40	-3.6X

S.D. = 1.3 on 77 of 104 obs.

? JAN 07, 1990 11h 23m 31.56± 0.99s
64.845 N ±10.1km 148.910 W ± 8.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ALASKA (1)

FBA	0.48	83	iPc	23 41.30	0.0
IMA	2.34	304	eP	24 10.80	0.0
TOA	3.01	155	eP	24 22.40	2.2X
PWA	3.24	188	eP	24 22.80	-0.5
PMS	3.63	185	eP	24 29.50	0.5
TTA	3.68	242	eP	24 38.00	8.2X
DWY	4.18	97	P	24 33.00	-3.8X

S.D. = 0.8 on 4 of 7 obs.

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* JAN 07, 1990 11h 45m 42.48± 0.99s
64.891 N ± 9.3km 148.916 W ± 8.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ALASKA (1)

ML 3.8 (PMR).

FBA	0.48	88	eP	45 51.80	-0.4
IMA	2.31	303	eP	46 21.50	0.2
TOA	3.06	155	iP	46 33.20	1.5
PWA	3.28	188	ePd	46 34.30	-0.6
PMR	3.31	182	ePd	46 34.80	-0.6
PMS	3.67	185	eP	46 40.50	0.0
TTA	3.70	241	eP	46 36.70	-4.3X
DWY	4.19	97	P	46 45.00	-2.8X
INK	7.02	54	eP	47 23.00	-4.6X

S.D. = 1.0 on 6 of 9 obs.

JAN 07, 1990 13h 28m 47.47± 0.26s
41.518 N ± 5.9km 142.053 E ± 4.6km
DEPTH = 70.1km (9 depth phases)
5.2mb (54 obs.)
HOKKAIDO, JAPAN REGION (224)

Felt (IV) at Misawa, Honshu.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 28C
Centroid Location:
Origin Time 13:28:52.2 0.4
Lat 41.19N 0.05 Lon 141.66E 0.05
Dep 52.0 4.6 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.07 0.05 Mtt= 0.01 0.07
Mff=-1.08 0.08 Mrt= 0.23 0.09
Mrf= 0.77 0.11 Mtf=-0.73 0.09
Principal Axes:
T Val= 1.32 Plg=72 Azm=270
N 0.36 7 23
P -1.68 16 116
Best Double Couple:Mo=1.5*10**17
NP1:Strike=217 Dip=29 Slip= 105
NP2: 19 62 82

SAP	1.63	341	iP	29 13.80	-0.8
			eS	29 33.00	
SHK	10.16	230	eP	31 13.70	0.8
SSE	19.73	245	Pc	33 13.00	-0.9
	0.8s	34.00nm		4.7mb	
	Z 20s	1.40um			
	N 16s	1.30um			
	E 16s	0.80um			
		PP	33 28.00		
		eS	36 40.00		
		sS	37 04.00		
GUMO	27.93	174	eP	34 46.80	13.7X
LZH	30.09	272	eP	34 50.00	-2.5
	Z 28s	1.90um		4.6MszX	
	N 15s	0.90um			
	E 15s	0.80um			
		i	35 35.00		
		S	39 30.00		
KMI	36.34	256	Pc+	35 46.00	-0.6
	Z 24s	1.40um		4.7MszX	

E 16s 0.90um
pP 35 54.50 29kmX
sP 35 57.00
S 41 24.00
TTA 41.51 38 ePd 36 29.50 0.5
IMA 42.62 33 eP 36 37.70 -0.3
CHG 43.03 252 ePc 36 42.30 0.5
0.9s 47.48nm 5.3mb
CHTO 43.03 252 eP 36 42.10 0.3
0.8s 41.91nm 5.3mb
KDC 43.56 45 P 36 44.00 -1.6
SHL 44.12 265 iP 36 50.20 -0.6
eS 43 48.00
NST 44.31 247 eP 36 54.00 1.9
PMR 44.79 39 eP 36 55.20 -0.3
0.5s 8.20nm 4.8mb
FBA 45.09 35 eP 36 57.50 -0.3
TOA 46.11 38 eP 37 06.20 0.1
NNT 46.76 244 eP 37 12.00 0.5
GUN 47.36 272 P 37 16.80 0.1
KKN 47.87 272 P 37 20.20 -0.3
PKI 47.89 272 P 37 20.20 -0.6
DMN 48.10 272 P 37 21.90 -0.4
GKN 48.24 273 P 37 22.00 -1.3
INK 50.20 29 eP 37 37.00 -0.5
0.5s 30.00nm 5.6mb
IPM 51.89 236 ePd 37 52.50 1.4
MBC 52.10 17 eP 37 51.00 -0.9
0.8s 13.00nm 5.0mb
HYB 58.91 266 eP 38 40.00 -1.7
0.8s 46.20nm 5.7mb
KEV 59.44 339 iP 38 43.20 -1.5
QUE 60.16 285 eP 38 38.50 -11.9X
SOD 61.04 336 iP 38 52.90 -2.7
DAG 61.37 355 iPc 38 55.20 -2.5
0.7s 38.36nm 5.6mb
WRA 61.56 188 Pc 38 58.10 -1.5
1.1s 29.30nm 5.3mb
POO 61.76 270 iPc 39 02.20 1.0
MAIO 62.11 295 eP 39 03.00 -0.3
GBA 62.14 264 Pc 39 01.80 -1.8
0.7s 34.90nm 5.6mb
SUF 64.22 333 iP 39 15.10 -1.6
0.6s 154.00nm 6.1mb
PNT 64.65 46 eP 39 19.00 -0.7
1.2s 56.00nm 5.4mb
ASPA 65.29 188 iPd 39 22.40 -1.6
0.6s 19.00nm 5.2mb
Z 23s 0.47um 4.6MszX
ipP 39 42.70 78km
LR 06 21.50
NUR 66.24 331 eP 39 28.00 -1.7
0.7s 34.70nm 5.4mb
FHC 67.02 55 P 39 40.00 5.0X
RMO 67.95 174 eP 39 41.00 0.3
SES 68.43 41 eP 39 39.00 -4.7X
WARB 68.86 195 eP 39 46.00 -0.4
BRS 69.28 170 eP 39 39.00 -10.0X
e 40 08.60
ORV 69.29 55 P 39 48.00 -1.1
FFC 69 69 34 eP 39 50.00 -1.2
0.8s 15.00nm 5.0mb
HFS 70.22 335 eP 39 52.50 -1.9
0.4s 22.90nm 5.5mb
Z 17s 0.31um 4.6MszX
LR 10 09.00
NB2 70.25 337 P 39 53.80 -0.9
0.6s 13.50nm 5.1mb
LRM 70.63 46 eP 40 16.60 19.1X
CMB 70.91 56 P 39 59.00 0.0
1.0s 46.67nm 5.4mb
pP 40 17.00 67km
KVN 71.68 54 P 40 03.00 -0.8
pP 40 22.50 73km
SLY 71.77 302 ePd 40 03.50 -0.6
FRB 72.30 14 eP 40 05.00 -1.8
0.6s 33.00nm 5.4mb
IMW 72.69 46 P 40 09.50 -0.4
MSL 72.77 303 ePd 40 13.50 3.5X
TNP 72.83 54 P 40 09.50 -1.1
0.9s 37.11nm 5.3mb
pP 40 29.00 73km
ISA 73.58 57 eP 40 30.00 15.1X
BHD 73.94 300 ePd 40 18.00 1.2
CLC 74.03 56 eP 40 18.00 0.5
e 40 36.00
BW06 74.19 47 P 40 17.60 -0.9
pP 40 37.00 72km
BBU 74.26 291 eP 40 17.40 -1.4
0.4s 92.00nm 6.1mb
BJA 74.29 291 iP 40 17.20 -1.8
BEE 74.33 291 eP 40 17.50 -1.7
SBB 74.61 57 eP 40 21.00 0.1
e 40 40.00
PAS 74.74 58 eP 40 41.00 19.5X
MWC 74.76 58 eP 40 24.00 2.1
e 40 41.00
GSC 74.86 56 eP 40 41.00 18.7X
KAS 75.08 312 eP 40 24.00 0.6
RVR 75.34 58 eP 40 33.00 8.0X
MSU 75.56 51 P 40 27.50 1.1
pP 40 46.00 68km
VRI 75.64 319 ePc 40 27.00 0.5
KRA 75.67 326 eP 40 26.70 0.2
0.8s 57.00nm 5.6mb
RSON 75.94 33 P 40 26.00 -2.0
PLM 76.08 58 P 40 30.00 0.6
PLM 76.08 58 eP 40 48.00 18.6X
TPC 76.11 57 eP 40 30.00 0.6
e 40 48.00
SPC 76.19 325 eP 40 30.30 0.6
KSP 76.56 328 iPc 40 31.20 -0.3
e 40 49.00
i 41 10.00
BAR 76.64 58 eP 40 51.00 18.7X
B8TK 76.68 312 eP 40 33.00 0.5
BRG 77.45 329 iPd 40 36.60 0.2
1.8s 48.00nm 5.1mb
i 40 53.60
e 41 15.00
e 44 02.00
CLL 77.46 330 iPc 40 35.80 -0.6
1.6s 46.00nm 5.2mb
ipP 40 52.90 62km
GLA 77.57 57 eP 40 39.00 1.6
e 40 57.00
RYD 77.89 292 ePd 40 38.30 -1.0
PRU 77.92 328 P 40 39.70 0.7
e 40 56.50
SRO 78.07 325 iP 40 40.30 0.5
BZS 78.27 322 eP 40 41.50 0.5
ZST 78.29 326 eP 40 41.70 0.6
WIT 78.45 334 eP 40 43.50 1.7
e 41 03.00
GOL 78.60 47 P 40 43.00 -0.3
1.0s 32.50nm 5.2mb
pP 41 02.00 70km
HOF 78.69 330 eP 40 43.20 0.0
SOP 78.92 326 eP 40 47.10 2.6
KHC 78.99 328 iP 40 45.70 0.8
e 40 57.50
EKA 79.08 341 P 40 46.00 0.8
0.7s 8.80nm 4.8mb
WTS 79.09 334 eP 40 46.00 0.7
0.9s 19.00nm 5.0mb
e 41 08.50
QASM 79.12 295 ePd 40 45.70 -0.3
LFK 79.37 308 iP 40 47.50 0.3
GRF 79.44 330 iPc 40 47.10 -0.2
1.2s 62.00nm 5.4mb
Z 20s 0.60um 4.9Msz
KHL 79.55 312 eP 40 47.00 -1.2
ENN 80.43 333 eP 40 52.00 -0.5
1.0s 24.00nm 5.1mb
ELL 80.44 311 eP 40 53.10 0.0
PTJ 80.58 325 eP 40 53.50 0.0
KBA 80.73 327 iPc 40 54.60 0.2
0.7s 17.00nm 5.1mb
SCH 80.92 16 eP 40 55.00 -0.1
VAY 81.03 318 eP 40 56.70 0.8
LJU 81.07 326 e(P) 40 56.00 0.0
SKO 81.10 319 iP 40 57.40 1.2
VBY 81.19 325 e(P) 40 57.00 0.4
DMU 81.29 342 eP 40 57.50 0.5
WLF 81.29 333 eP 40 59.00 2.0
ANMO 81.34 51 P 40 59.00 1.1
1.2s 27.34nm 5.1mb
pP 41 18.00 69km
ALQ 81.34 51 eP 40 58.20 0.3
1.3s 38.46nm 5.2mb
VOY 81.35 326 e(P) 40 57.00 -0.6
FVI 81.35 327 P 40 58.00 0.6
CEY 81.36 326 e(P) 40 57.50 0.0
DOU 81.44 334 P 40 48.20 -9.7X
e 40 58.20
TRI 81.66 326 ePc 40 58.50 -0.5
DLE 81.76 342 eP 41 00.40 0.9
OGA 81.83 328 eP 41 01.00 0.8
DCN 81.88 342 eP 41 00.80 0.7
1.0s 74.00nm 5.6mb
CDF 81.95 331 eP 41 00.80 0.1
0.8s 8.00nm 4.7mb
OHR 82.06 319 iP 41 01.20 -0.1
0.7s 0.04nm 2.5mb X
i 41 20.50
KMSA 82.19 290 eP 41 02.70 0.4
AYN 82.24 302 eP 41 03.70 1.4
HQL 82.57 303 eP 41 04.70 0.6
HAU 82.63 332 eP 41 04.00 -0.1
0.6s 5.40nm 4.7mb
8ADA 83.11 302 ePd 41 08.00 1.1
VAI 83.53 329 P 41 09.00 0.3
ARV 83.79 325 P 41 11.50 1.4
PGD 84.00 326 P 41 13.00 1.6
ORX 84.03 330 P 41 11.28 -0.2
CRE 84.10 326 P 41 13.50 1.7
LOR 84.13 333 eP 41 11.60 -0.2
1.0s 26.00nm 5.2mb
MME 84.16 327 P 41 13.70 1.4
BOB 84.18 328 P 41 12.90 0.7
FLN 84.22 336 eP 41 11.80 -0.4
0.6s 7.20nm 4.9mb
ASS 84.26 325 P 41 15.00 2.5
LDF 84.26 336 eP 41 12.10 -0.3
0.6s 7.20nm 4.9mb
BDI 84.31 327 P 41 12.10 -0.7
LBF 84.33 333 eP 41 12.50 -0.3
1.0s 18.00nm 5.1mb
SSF 84.43 333 eP 41 13.20 0.0
0.8s 9.40nm 4.9mb
LSD 84.49 330 P 41 14.66 0.7
DUI 84.61 323 P 41 16.50 2.2
LPG 84.61 330 eP 41 14.90 0.3
0.6s 19.80nm 5.3mb
GRR 84.67 336 eP 41 14.50 0.1
0.8s 16.10nm 5.1mb
SMF 84.67 333 eP 41 14.60 0.1
0.6s 9.00nm 5.0mb
RSP 84.71 330 P 41 13.84 -1.0
AVF 84.71 333 eP 41 14.80 0.1
0.6s 21.60nm 5.4mb
PCP 84.73 329 P 41 14.56 -0.3
MNS 84.80 325 P 41 16.00 0.7
SDI 84.86 324 P 41 16.50 0.9
CKI 84.93 329 P 41 16.00 0.2
BNI 85.01 330 P 41 18.00 1.6
LPF 85.04 336 eP 41 16.40 0.1
0.8s 11.80nm 5.0mb
RRL 85.09 330 P 41 16.71 -0.2
SGO 85.10 322 P 41 18.00 1.3
FIN 85.14 329 P 41 15.38 -1.5
ROB 85.20 329 P 41 16.00 -1.2
DOI 85.26 329 P 41 16.50 -1.1
CSI 85.26 321 P 41 17.60 0.0
ROI 85.29 321 P 41 18.70 0.9
PZZ 85.32 329 P 41 16.51 -1.4
TDS 85.33 321 P 41 19.30 1.4
STV 85.45 329 P 41 16.30 -2.2
MAF 85.48 333 eP 41 19.00 0.5
0.8s 33.50nm 5.5mb
TCF 85.54 333 eP 41 19.20 0.3
0.8s 5.90nm 4.7mb
CZI 85.78 321 P 41 18.40 -1.7
LSF 85.80 334 eP 41 20.40 0.3
0.6s 18.00nm 5.3mb
MEO 85.88 46 iPc 41 21.70 1.0
MFF 86.03 335 eP 41 21.90 0.6
0.8s 21.40nm 5.3mb
SIO 86.35 44 eP 41 23.90 0.9
TUL 86.49 44 eP 41 24.20 0.5
1.3s 9.50nm 4.7mb
Z 23s 0.69um 5.0MszX
LR 11 00.00
RJF 86.64 333 eP 41 24.90 0.6
0.6s 7.90nm 5.0mb
CAF 86.78 333 eP 41 26.00 1.0
0.8s 32.20nm 5.5mb
LFF 87.22 334 eP 41 27.90 0.9
0.8s 34.90nm 5.6mb
LPO 87.29 333 eP 41 28.20 0.8
0.6s 12.60nm 5.2mb

07d 13h

RSCP 91.70 37 P 41 45.50 -2.8
JSC 94.72 35 P 42 03.50 1.3
BCAO 111.27 297 ePKPd 47 33.00 17.8X
0.6s 6.00nm
ic 48 04.30
KIC 123.49 319 PKP 47 38.40 -0.2
LIC 123.75 319 PKP 47 38.80 -0.3
ZOBO 143.84 55 PKP 48 15.00 -2.2X
1.0s 8.75nm
Z 22s 0.22um 4.9Msz
LR 38 14.00
LPB 144.06 55 PKP 48 21.00 3.6X
YJA 149.87 59 iPKPc 48 29.00 2.3X
BAO 152.78 22 e(PKP) 48 25.00 -5.7X
S.D. = 1.1 on 165 of 184 obs.

JAN 07, 1990 14h 05m 21.96± 1.41s
11.848 S ± 6.0km 166.564 E ± 6.3km
DEPTH = 163.8 ± 11.8 km
5.1mb (20 obs.)
SANTA CRUZ ISLANDS (184)

HNR 6.93 290 iP 07 01.00 -1.2
eS 08 24.00
DZM 10.17 181 iPc 07 47.00 2.0
iS 09 37.90
MBU 12.83 115 iPc 08 28.80 9.2X
PMG 19.23 275 eP 09 35.00 -1.0
BRS 20.16 218 iPd 09 46.80 1.3
0.8s 9.00nm 4.3mb
e 09 52.00
e 10 09.00
e 13 55.00
CTA 21.16 245 eP 09 56.00 0.6
i 10 18.80
RMQ 22.21 226 iPc 10 07.00 1.4
KRP 27.18 164 P 10 54.00 2.0
CMS 27.35 221 iPc 10 53.80 0.2
0.5s 18.00nm 5.0mb
e 10 58.00
e 11 28.00
HBZ 27.72 160 eP 10 57.50 0.7
MNG 29.72 166 P 11 14.10 -0.6
0.3s 36.00nm 5.6mb
KIW 29.82 167 P 11 15.30 -0.3
PGZ 29.91 165 P 11 15.10 -1.2
0.4s 86.00nm 5.8mb
TCW 30.03 168 P 11 17.30 0.0
CAW 30.09 167 P 11 17.50 -0.4
MRW 30.13 168 P 11 18.00 -0.3
WEL 30.20 168 eP 11 18.40 -0.4
WDW 30.23 167 P 11 18.40 -0.7
MTW 30.23 167 P 11 18.10 -1.1
BLW 30.43 167 P 11 20.30 -0.6
MOW 30.43 167 P 11 20.30 -0.6
STK 30.44 225 iPd 11 21.70 0.6
WB5 31.94 251 iPc 11 33.20 -1.2
WRA 31.97 251 Pc 11 33.20 -1.5
1.3s 29.30nm 4.9mb
MSZ 32.73 178 P 11 41.20 0.3
ASPA 33.17 245 iPc 11 43.40 -1.6
0.9s 23.00nm 4.9mb
Z 19s 0.10um 3.5Msz
iPcP 14 24.00
LR 23 43.40
MHZ 33.18 176 eP 11 45.00 0.0
ADE 34.18 223 iPc 11 54.00 0.4
0.9s 45.38nm 5.2mb
MTN 34.61 265 eP 11 57.00 -0.4
WARB 40.17 243 iPc 12 43.80 0.1
FORR 40.24 236 iPd 12 44.70 0.5
0.3s 29.00nm 5.4mb
M8L 45.61 252 iPc 13 28.00 0.3
0.4s 13.00nm 4.9mb
COOL 45.98 238 iPc 13 30.00 -0.5
0.5s 23.00nm 5.0mb
MEKA 47.39 245 eP 13 41.00 -0.7
KLB 48.96 238 eP 13 53.00 -0.7
0.4s 7.00nm 4.7mb
BAL 49.65 240 eP 13 58.20 -0.8
NWAO 49.69 237 eP 13 58.70 -0.5
0.5s 16.00nm 4.9mb
NANU 49.69 250 iPc 13 59.70 0.3
MRWA 50.01 242 eP 14 01.30 -0.4
0.4s 8.00nm 4.7mb
MUN 50.33 238 eP 14 03.70 -0.4
TSM 50.79 285 ePc 14 10.00 2.2

KKM 53.14 287 ePc 14 25.70 0.3
1.0s 110.80nm 5.6mb
SSE 60.98 316 Pd 15 19.00 -1.2
0.8s 48.00nm 5.4mb
IPM 67.18 280 ePc 16 01.20 0.4
0.6s 32.30nm 5.3mb
LOE 70.32 293 iPc 16 21.00 1.0
KMI 72.22 301 Pc+ 16 32.50 0.9
pP 16 41.50 29kmX
sP 16 45.00
BDT 72.72 292 eP 16 35.00 0.8
CHG 73.28 294 ePc 16 38.20 0.7
0.8s 28.36nm 5.0mb
CHTO 73.28 294 iPc 16 38.10 0.6
0.7s 26.05nm 5.1mb
pP 17 13.80 145kmX
LZH 75.89 312 iPc 16 53.50 1.1
1.0s 82.00nm 5.4mb
SHL 81.60 298 iP 17 23.80 0.4
GUN 87.41 299 P 17 53.10 0.5
PKI 87.72 299 P 17 54.20 0.1
KKN 87.89 299 P 17 55.00 0.2
DMN 87.99 299 P 17 55.80 0.5
GKN 88.49 299 P 17 57.20 -0.4
HYB 91.62 287 eP 18 11.00 -1.0
1.0s 30.00nm 5.3mb
GBA 91.90 283 P 18 14.00 0.7
SOD 118.56 344 ePKP 23 44.00 -7.2X
ZOBO 119.12 116 PKP 23 54.50 0.0
SUF 121.92 340 iPKP 23 56.80 -0.9
0.5s 52.20nm
NUR 123.95 338 iPKP 24 01.40 -0.3
0.8s 22.00nm
BUL 127.82 233 iPKPd 24 25.20 14.6X
1.0s 20.00nm
BRG 135.12 336 ePKP 24 23.80 0.4
CLL 135.15 337 iPKP 24 24.20 0.8
1.0s 10.00nm
ZST 135.71 331 ePKP 24 24.80 0.3
e 27 47.00
KHC 136.61 334 ePKP 24 25.80 -0.5
OHR 138.18 320 ePKP 24 29.00 -0.5
LPF 142.47 346 ePKP 24 34.00 -2.9X
S8F 143.37 334 iPKPc 24 35.40 -3.3X
0.8s 37.60nm
LSF 143.44 342 ePKP 24 36.20 -2.4X
0.8s 14.70nm
MFF 143.58 345 ePKP 24 35.70 -3.1X
0.6s 6.10nm
FRF 143.95 335 iPKPc 24 37.50 -2.0X
0.8s 32.20nm
LRG 144.15 335 ePKP 24 38.60 -1.3
0.8s 59.10nm
LMR 144.19 335 iPKPc 24 38.50 -1.4
0.6s 30.60nm
RJF 144.29 342 ePKP 24 39.10 -1.0
0.6s 3.60nm
CAF 144.46 341 ePKP 24 40.10 -0.3
0.8s 17.40nm
LFF 144.86 342 ePKP 24 40.90 -0.1
0.8s 24.10nm
LPO 144.96 342 ePKP 24 41.40 0.2
0.8s 18.80nm
BCAO 147.53 260 iPKPd 24 47.50 1 1
0.3s 150.00nm
ic 24 50 30
ic 26 19.00
ECRI 147.91 345 ePKP 24 50.50 4.3X
ETOR 149.45 343 ePKP 24 54.20 5.5X
GUD 150.17 346 ePKP 24 56.20 6.3X
TOL 150.87 345 iPKPd 24 56 00 5.2X
EVIA 151.60 342 ePKP 24 59.80 7.8X
ASMO 153.15 343 iPKPd 25 02.00 7.7X
AAPN 153.30 343 iPKPc 25 02.50 8.0X
ACHM 153.41 343 iPKPc 25 02.50 7.9X
ALOJ 153.49 343 ePKP 25 02.00 7.2X
APHE 153.51 342 iPKPd 25 03.00 8.2X
ATEJ 153.64 343 iPKPd 25 02.80 7.8X
KIC 169.83 238 PKP 25 11.80 0.2
LIC 169.99 237 PKP 25 12.00 0.4
TIC 170.22 239 PKP 25 12.10 0.3
LKO 171.96 254 PKP 25 13.82 1.3
0.9s 7.00nm
S.D. = 0.9 on 76 of 95 obs.

& JAN 07, 1990 16h 13m 16.73s
32.968 N 80.218 W

DEPTH = 5.4km
SOUTH CAROLINA (511)
<GLD>. MD 2.1 (GLD).

SVS 0.03 272 iPc 13 18.60 0.6
MGS 0.10 137 iPd 13 19.00 0.1
WSS 0.13 201 iPd 13 18.90 -0.5
S 13 21.65
BCS 0.13 84 iPd 13 19.46 0.0
S 13 21.91
HBF 0.14 255 iPc 13 19.44 -0.2
S 13 21.12
TWB 0.18 33 iPd 13 20.37 0.0
DRC 0.20 314 iPc 13 20.21 -0.6
S 13 24.29
SGS 0.33 312 eP 13 23.50 0.0
S 13 28.33
COW 0.58 316 eP 13 27.80 -0.5
S 13 35.60
JSC 1.57 327 eP 13 44.50 -0.7
S 14 05.40
LHS 1.59 342 eP 13 45.00 -0.5
PRM 2.11 302 eP 13 55.22 2.1
S 14 21.20
12 obs. associated

• JAN 07, 1990 16h 21m 23.83± 2.29s
35.817 N ±15.7km 1.227 E ±15.9km
DEPTH = 10.0km (geophysicist)
ALGERIA (396)
mbLg 3.7 (MDD).

ACU 2.99 335 ePn 22 12.80 0.6
eSn 22 48.50
ENIJ 3.01 294 eP 22 11.00 -1.4
eS 22 47.50
TAF 3.14 252 eP 22 22.00 7.7X
e 22 26.00
i 22 32.00
EVIA 4.10 314 ePn 22 29.80 1.9
eSn 23 15.00
AFC 4.10 292 ePn 22 29.00 0.9
ECHE 4.15 336 ePn 22 28.50 -0.1
eSn 23 15.00
ESEL 4.16 18 ePn 22 29.00 0.3
EBAN 4.65 302 ePnc 22 36.00 0.3
eSn 23 29.40
EROQ 5.04 353 ePn 22 40.50 -0.7
IFR 5.72 248 iP 22 51.00 0.0
i 23 20.50
i 24 39.00
TOL 5.82 316 ePn 22 51.00 -1.3
ePg 23 17.00
eSg 24 12.00
GUD 6.41 320 ePn 23 00.30 -0.5
S.D. = 1.1 on 11 of 12 obs.

• JAN 07, 1990 16h 43m 19.42± 1.50s
21.744 N ±11.9km 121.245 E ± 9.4km
DEPTH = 9.8 ± 4.1 km
4.4mb (2 obs.) 4.1Msz (1 obs.)
TAIWAN REGION (243)

TWG 1.08 352 iPc 43 40.50 0.7
eS 43 51.50
TWM1 1.32 325 ePd 43 45.50 1.7
eS 43 58.40
TWK 1.67 335 ePc 43 49.30 0.4
TWD 2.35 8 ePc 43 58.70 0.1
eS 44 23.00
TWC 2.91 11 ePc 44 07.30 0.8
TWZ 3.35 5 ePc 44 13.50 0.6
ANP 3.43 4 eP 44 17.50 3.4X
QZH 4.01 323 Pc 44 19.80 -2.4
S 45 05.00
HKC 6.59 276 P 44 59.70 1.0
S 46 05.20
MCO 7.15 274 eP 45 07.00 0.4
GZH 7.43 282 eP 45 12.20 1.6
NJ2 10.49 349 Pd 45 48.50 -4.3X
S 47 40.00
WHN 10.73 326 Pd 45 52.00 -4.1X
E 16s 0.90um
PP 46 03.00
eS 47 40.50
QIZ 11.03 258 eP 46 08.00 7.7X
GYA 14.12 292 P 46 41.80 0.0

		PP	46 52.00		
		S	49 07.00		
TIA	14.86	347 eP	46 50.80	-0.5	
XAN	16.37	321 Pc	47 10.10	-0.9	
TIY	17.64	336 Pc	47 27.60	0.6	
N	10s	0.20um			
CD2	18.12	304 eP	47 33.30	0.3	
BJI	18.74	348 eP	47 39.00	-1.5	
HHC	20.74	339 eP	48 01.60	-1.3	
Z	20s	0.80um		4.1Msz	
LZH	20.84	317 P	48 04.00	0.0	
	1.5s	0.08nm		1.8mb X	
BTO	21.07	336 eP	48 05.00	-1.3	
CHG	21.12	266 eP	48 11.00	4.2X	
CHTO	21.12	266 e(P)	48 06.90	0.1	
		i	48 10.90		
		i	48 23.60		
CN2	22.27	8 eP	48 19.40	1.2	
MDJ	23.83	15 eP	48 35.00	1.6	
GTA	25.40	319 eP	48 47.40	-1.3	
SHL	27.14	284 eP	49 04.50	-0.5	
WMO	35.42	316 P	50 17.00	-0.7	
MTN	35.72	163 eP	49 55.00	-25.3X	
WB5	43.31	162 eP	51 16.20	-7.2X	
WRA	43.36	162 P	51 14.00	-9.8X	
	0.6s	1.00nm		3.8mb	
MUN	53.63	185 eP	52 54.40	11.2X	
BRG	83.70	323 iP	55 49.40	-0.3	
PRU	83.75	322 P	55 50.00	0.0	
CLL	84.03	323 iP	55 50.80	-0.6	
	1.2s	16.00nm		5.1mb	
KHC	84.70	321 eP	55 55.10	0.2	
S.D. = 1.1 on 29 of 38 obs.					

& JAN 07, 1990 17h 18m 03.91s
61.153 N 149.737 W
DEPTH = 34.1km
SOUTHERN ALASKA (2)
<AGS-P>.

PMS	0.13	43 iP	18 09.93	-0.1	
PWA	0.50	352 iP	18 14.06	-0.5	
PLRM	0.53	33 iP	18 13.92	-0.9	
SUA	0.58	303 eP	18 15.10	-0.6	
		eS	18 23.66		
PME	0.59	35 iP	18 14.93	-0.8	
SLKM	0.69	200 eP	18 16.33	-0.9	
GHO	0.73	32 iP	18 17.17	-0.7	
NKA	0.84	241 eP	18 20.35	1.0	
SEW	1.06	172 eP	18 21.43	-1.1	
CGLM	1.11	279 iP	18 22.90	-0.4	
SPU	1.12	272 iP	18 22.82	-0.7	
SKT	1.19	315 eP	18 24.27	-0.2	
NCG	1.20	283 iP	18 24.42	-0.1	
CKL	1.26	273 iP	18 25.08	-0.4	
CUT	1.28	349 eP	18 25.78	0.1	
		eS	18 41.39		
BGL	1.29	276 eP	18 25.62	-0.3	
GLI	1.32	101 eP	18 25.38	-0.8	
RDT	1.43	247 eP	18 27.50	-0.4	
VZW	1.55	92 eP	18 29.37	-0.2	
NCA	1.63	58 eP	18 30.76	0.0	
		eS	18 50.58		
FID	1.64	103 eP	18 29.60	-1.3	
RED	1.66	245 eP	18 31.02	-0.2	
		eS	18 52.96		
HIN	1.76	114 eP	18 31.61	-1.0	
		eS	18 55.77		
TOA	1.95	59 eP	18 35.98	0.6	
		eS	18 59.75		
CVA	2.04	106 eP	18 35.54	-1.0	
		eS	19 04.22		
SGAM	2.31	104 eP	18 39.21	-1.3	
		eS	19 09.36		
RAGM	2.60	105 eP	18 42.89	-1.6	
27 obs. associated					

& JAN 07, 1990 17h 41m 13.67s
65.112 N 149.202 W
DEPTH = 9.4km
ALASKA (676)
<AGS-P>.

RDS	0.53	122 eP	41 24.03	-0.4	
NEA	0.54	174 iP	41 24.27	-0.3	
		eS	41 30.68		
FBA	0.64	109 iP	41 25.91	-0.5	
		eS	41 33.25		
CCB	0.76	127 eP	41 27.91	-0.6	
		eS	41 35.90		
GLM	0.78	98 eP	41 28.38	-0.6	
		eS	41 37.84		
HDA	1.20	125 eP	41 35.78	-0.3	
		eS	41 49.10		
RND	1.72	175 eP	41 45.05	1.1	
KTH	1.74	206 eP	41 46.64	2.5	
		eS	42 05.97		
8 obs. associated					

JAN 07, 1990 19h 50m 34.22± 1.15s
44.161 N ± 9.0km 140.828 E ± 4.4km
DEPTH = 25.4 ± 9.0 km
4.8mb (14 obs.) 4.8Msz (1 obs.)
EASTERN SEA OF JAPAN (223)

SAP	1.16	161 iP	50 55.50	0.7	
		iS	51 12.30		
MDJ	8.06	277 eP	52 32.00	-0.6	
Z	15s	5.20um			
N	12s	11.60um			
DL2	15.30	257 eP	54 17.00	7.0X	
	1.0s	0.10nm		2.0mb X	
N	11s	3.40um			
E	11s	1.60um			
		eS	57 07.00		
BJI	18.73	266 eP	54 52.00	-1.1	
	1.0s	0.01nm		1.1mb X	
Z	16s	1.46um			
N	13s	1.84um			
		eS	58 24.00		
TIA	19.73	254 eP	55 04.80	0.0	
Z	14s	1.70um			
N	11s	0.90um			
E	12s	2.30um			
SSE	20.24	236 P	55 14.00	3.9X	
	0.8s	0.01nm		1.4mb X	
HHC	21.78	271 eP	55 25.00	-0.9	
Z	13s	1.90um		4.7MszX	
TIY	22.33	263 eP	55 33.00	1.6	
N	11s	1.30um			
		S	59 38.50		
BTO	22.97	272 eP	55 38.00	0.3	
N	12s	5.80um			
E	12s	2.10um			
		eS	59 40.50		
WHN	24.93	246 eP	56 00.50	3.9X	
E	12s	1.20um			
XAN	26.60	259 P	56 11.50	-0.7	
N	12s	1.00um			
E	12s	0.80um			
LZH	29.21	267 eP	56 37.00	1.0	
	1.5s	0.06nm		2.1mb X	
Z	14s	1.80um		4.8MszX	
GTA	30.72	276 eP	56 48.80	-0.5	
N	14s	3.50um			
KMI	36.23	251 eP	57 36.00	-1.3	
WMO	37.67	289 P	57 48.20	-0.8	
Z	12s	2.50um		5.2MszX	
IMA	40.92	35 P	58 15.00	-0.7	
CHG	43 10	248 eP	58 35.00	1.0	
CHTO	43.10	248 eP	58 34.00	0.0	
	1.0s	3.25nm		4.0mb	
GUN	46.44	269 P	59 02.40	1.3	
	0.7s	26.00nm		5.3mb	
KKN	46.94	269 P	59 05.80	0.9	
PKI	46.98	269 P	59 06.00	0.7	
DMN	47.18	269 P	59 07.80	1.0	
GKN	47.28	270 P	59 07.60	0.1	
	0.6s	20.00nm		5.3mb	
KSH	47.45	288 eP	59 09.80	1.1	
N	12s	2.10um			
NDI	52.23	275 iPc	59 45.20	0.0	
	0.6s	26.67nm		5.3mb	
SOD	58.26	335 eP	00 43.00	14.6X	
MAIO	60.21	293 eP	00 43.00	0.6	
POO	60.90	268 eP	00 41.50	-5.7X	
SUF	61.47	332 iP	00 51.30	0.8	
	0.8s	38.60nm		5.6mb	
NUR	63.50	330 eP	00 58.00	-6.0X	
WB5	64.00	187 eP	01 06.50	-1.1	
WRA	64.06	187 Pd	01 07.10	-1.0	
	0.9s	5.10nm		4.7mb	
WDC	67.26	55 e(P)	01 29.50	1.0	
ASPA	67.79	187 iPc	01 31.30	-0.6	
	1.2s	7.00nm		4.7mb	
FFC	67.99	34 eP	01 32.00	-0.9	
	1.1s	40.00nm		5.5mb	
ORV	68.53	55 e(P)	01 37.00	0.5	
FRB	69.95	13 eP	01 42.00	-2.7	
CMB	70.17	56 eP	01 46.50	-0.1	
KVN	70.85	54 P	01 51.00	0.0	
TNP	72.01	54 P	01 58.00	0.0	
	0.7s	4.63nm		4.6mb	
BW06	73.03	46 P	02 03.10	-0.8	
	1.2s	9.59nm		4.7mb	
DUG	73.08	50 P	02 05.30	1.2	
CLC	73.32	56 eP	02 05.00	-0.4	
SPC	73.52	324 eP	01 49.20	-17.3X	
DAU	73.78	49 P	02 09.20	0.8	
KSP	73.85	327 eP	02 07.50	-0.7	
SBB	73.94	57 eP	02 07.00	-2.1	
MWC	74.12	58 eP	02 11.00	0.7	
MSU	74.61	51 P	02 14.00	0.9	
BRG	74.73	328 e(P)	02 19.50	6.3X	
CLL	74.73	329 iPd	02 12.50	-0.7	
	1.4s	11.00nm		4.7mb	
PRU	75.21	327 eP	02 16.00	0.0	
TPC	75.41	57 eP	02 18.00	0.4	
KHC	76.27	327 iP	02 21.00	-1.1	
GRF	76.71	329 eP	02 24.50	0.0	
	1.2s	5.00nm		4.4mb	
Z	19s	0.40um		4.8Msz	
GLA	76.87	57 P	02 26.40	0.6	
OHR	79.48	318 eP	02 30.50	-9.4X	
ANMO	80.35	50 P	02 46.40	1.5	
	1.2s	10.74nm		4.8mb	
ALQ	80.36	50 eP	02 45.50	0.6	
	1.2s	7.81nm		4.6mb	
TIC	120.79	320 PKP	09 18.36	-7.6X	
KIC	120.91	319 PKP	09 17.90	-8.2X	
LIC	121.16	319 PKP	09 18.86	-7.7X	
S.D. = 1.0 on 50 of 62 obs.					

JAN 07, 1990 20h 53m 29.23± 0.26s
32.159 S ± 7.2km 57.447 E ± 5.8km
DEPTH = 10.0km (geophysicist)
5.3mb (35 obs.) 4.8Msz (3 obs.)
ATLANTIC-INDIAN RISE (428)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 24C
Centroid Location:
Origin Time 20:53:36.7 1.0
Lat 31.94S 0.08 Lon 57.54E 0.10
Dep 15.0 FIX Half-duration 1.7
Moment Tensor; Scale 10**17 Nm
Mrr=-0.29 0.04 Mtt= 1.08 0.07
Mff=-0.79 0.06 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-0.11 0.04
Principal Axes:
T Val= 1.08 Plg= 0 Azm=183
N -0.29 90 180
P -0.79 0 93
Best Double Couple:Mo=0.9*10**17
NP1:Strike=228 Dip=90 Slip=-180
NP2: 318 90 0

SLR	26.26	277 iPd	59 05.50	-1.1	
	0.9s	36.13nm		5.1mb	
Z	18s	3.44um		4.9Msz	
PRY	26.54	274 eP	59 06.70	-2.5	
	0.9s	19.23nm		4.8mb	
BLF	27.02	268 iPd	59 12.00	-1.6	
	1.0s	40.00nm		5.1mb	
BFS	27.14	273 iPc	59 08.00	-6.6X	
	1.0s	60.00nm		5.3mb	
HVD	27.27	265 eP	59 12.00	-3.8X	
	1.0s	30.00nm		5.0mb	
KSR	27.39	275 eP	59 11.50	-5.4X	
	1.0s	32.00nm		5.0mb	
		i	59 16.40		
BUL	28.42	288 iPd	59 38.50	12.2X	
	1.0s	35.00nm			
SUR	30.88	260 eP	59 47.00	-1.3	
	0.6s	20.00nm		5.2mb	
MAW	35.63	176 eP	00 28.00	-0.7	
NAI	36.37	324 iP	00 36.40	0.6	
	1.0s	25.00nm		5.0mb	
KOD	46.30	28 eP	01 58.00	0.7	
MUN	49.23	106 iPd	02 20.40	0.6	
RKG	49.30	109 eP	02 20.00	-0.4	

07d 21h

GBA 49.37 26 Pd 02 20.30 -0.6
1.1s 38.30nm 5.3mb
NWAO 49.79 108 eP 02 24.00 -0.2
Z 20s 0.60um 4.6Msz
N 20s 0.30um
E 20s 0.40um
MRWA 49.90 103 eP 02 25.60 0.6
BAL 50.05 105 iPd 02 26.40 0.3
KLB 50.61 106 eP 02 30.00 -0.4
BCAO 51.88 307 iPc 02 38.60 -1.6
0.3s 13.00nm 5.3mb
ic 03 17.00
POO 52.80 20 iPd 02 48.20 1.2
1.2s 65.63nm 5.4mb
MEKA 52.90 101 eP 02 48.00 0.2
HYB 53.28 25 iPd 02 49.50 -1.0
1.0s 90.00nm 5.7mb
COOL 53.58 107 iPd 02 52.30 -0.4
0.5s 15.00nm 5.2mb
KMSA 53.68 345 eP 02 52.10 -1.4
IPM 55.21 57 ePd 03 06.00 1.2
0.9s 167.10nm 6.1mb
MBL 56.15 95 iPd 03 11.00 -0.5
0.8s 132.00nm 6.0mb
TRT 56.60 77 iPd 03 15.90 1.1
0.7s 158.80nm 6.2mb
SNG 56.76 54 eP 03 15.00 -0.9
RYD 57.50 348 eP+ 03 19.70 -1.3
SPA 58.01 180 iPc 03 23.20 -1.2
1.1s 77.98nm 5.7mb
QASM 59.42 345 eP+ 03 33.00 -1.4
NNT 60.14 49 iPd 03 38.60 -0.8
AGMR 60.28 334 iPd 03 42.00 1.8
ANMR 60.41 334 iPd 03 42.00 0.9
QUE 62.66 9 eP 03 44.15 -12.3X
NST 62.72 47 eP 03 56.50 -0.3
SBA 62.72 167 (P) 04 00.70 4.5X
BDT 63.23 45 eP 03 59.90 -0.2
NDI 63.36 19 eP 03 59.20 -1.6
CHG 64.41 44 ePd 04 07.00 -0.9
0.9s 18.07nm 5.3mb
CHTO 64.41 44 iPd 04 07.00 -0.9
pP 04 12.70 18kmX
LOE 65.02 47 eP 04 11.80 -0.1
PRNI 65.71 339 eP 04 15.00 -1.1
SHL 66.14 34 iP 04 18.00 -1.2
iS 13 08.00
BHD 66.24 348 ePd 04 22.00 2.6
HLW 66.47 335 eP 04 09.50 -11.4X
MDSJ 66.54 340 Pd 04 21.60 0.1
DSI 66.73 340 eP 04 25.00 2.4
MASJ 66.78 340 Pd 04 22.70 -0.4
ASPA 66.82 104 iPd 04 22.90 -0.6
0.8s 79.00nm 6.0mb
i 04 26.70
KER 66.87 351 eP 04 22.00 -1.6
IR2 67.74 354 eP 04 25.00 -4.1X
IR7 67.81 354 eP 04 28.00 -1.5
MAIO 68.13 2 eP 04 30.00 -1.4
0.8s 10.98nm 5.1mb
i 04 35.00
eS 13 36.00
HRI 68.22 341 eP 04 30.00 -2.1
SLY 68.33 350 ePd 04 31.50 -1.1
i 04 37.50
WRA 68.87 101 Pc 04 36.30 -0.1
0.7s 84.20nm 6.0mb
WB5 68.92 101 iPd 04 36.10 -0.6
STK 69.39 115 iPd 04 39.30 -0.1
0.7s 35.00nm 5.6mb
MSL 69.49 348 ePd 04 46.50 6.8X
MTN 69.55 93 iPd 04 40.10 -0.5
KIC 70.43 291 P 04 46.42 0.5
LIC 70.57 291 P 04 47.12 0.3
1.2s 32.00nm 5.3mb
Z 20s 0.49um 4.8Msz
TAB 70.63 351 eP 04 45.00 -1.9
LFK 70.74 339 eP 04 46.50 -1.0
KMI 71.50 43 Pd 04 51.50 -1.0
pP 04 57.00 18kmX
CMS 72.80 117 iPc 05 00.40 0.4
LKO 73.02 293 P 05 00.96 -0.5
BWA 73.37 120 eP 05 05.30 2.0
CAN 73.38 121 eP 05 04.00 0.6
BBTK 75.21 341 eP 05 12.00 -1.7
IZM 75.61 336 eP 05 17.00 1.0
CTA 78.61 107 iPd 05 33.00 -0.1
1.0s 71.00nm 5.7mb
i 05 38.90
VAY 79.88 334 eP 05 44.00 4.6X
BRS 80.07 116 iPc 05 41.20 0.2
0.9s 4.00nm 4.4mb
ATN 80.15 328 P 05 44.50 3.6X
OHR 80.37 333 eP 05 41.00 -1.1
1.4s 0.08nm 2.5mb X
LZH 80.61 36 P 05 44.00 0.4
1.6s 78.00nm 5.5mb
pP 06 05.00 78kmX
i 06 28.00
GIB 80.67 327 P 05 44.50 0.7
CZI 80.72 329 P 05 46.80 2.9
ROI 80.82 329 P 05 47.80 3.3X
MSZ 80.82 137 P 05 44.50 0.0
SKO 80.87 334 eP 05 37.60 -7.1X
1.1s 28.00nm 5.2mb
i 05 48.10
i 05 54.80
TDS 80.99 329 P 05 46.90 1.6
CSI 81.11 329 P 05 50.20 4.2X
MGR 81.72 329 P 05 50.00 0.9
SGO 82.18 329 P 05 52.50 1.1
MLR 82.40 338 ePd 05 54.50 1.7
VRI 82.50 339 ePd 05 51.00 -2.1
DUI 83.45 329 P 06 03.00 4.9X
BZS 83.95 336 eP 05 50.00 -10.5X
MNS 84.81 328 P 06 06.10 1.2
VBY 86.25 332 e(P) 06 21.60 9.6X
CEY 86.78 331 e(P) 06 19.50 4.9X
SRO 87.01 335 eP 06 20.70 5.1X
SSE 87.15 50 P 06 17.00 0.3
1.0s 28.00nm 5.5mb
sS 16 48.00
VOY 87.23 331 e(P) 06 19.00 2.1
SPC 87.51 337 eP 06 19.70 1.4
ZST 87.77 334 eP 06 17.50 -1.8
e 06 21.00
VKA 88.12 334 e(P) 06 23.00 2.0
1.5s 33.90nm 5.4mb
BOB 88.14 328 P 06 24.00 2.8
FVI 88.14 331 P 06 21.50 0.5
KRA 88.35 337 eP 06 23.80 1.8
i 06 34.80
CKI 88.40 327 P 06 23.00 0.6
VAI 89.29 328 P 06 27.60 1.1
APHE 89.37 315 eP 06 33.00 5.6X
NKM 89.42 313 iP 06 32.00 4.6X
i 06 38.00
ORO 89.46 328 P 06 24.00 -3.5X
ATEJ 89.54 315 eP 06 32.60 4.4X
MAL 89.66 315 eP 06 32.30 3.8X
ALOJ 89.73 315 eP 06 35.00 6.0X
AAPN 89.87 315 eP 06 32.50 2.8
KHC 89.87 333 P 06 24.80 -4.5X
i 06 34.50
PRU 90.20 334 P 06 34.70 3.9X
e 06 41.00
KSP 90.27 335 eP 06 30.70 -0.4
e 06 36.20
BRG 91.15 334 eP 06 40.60 5.5X
1.7s 46.00nm 5.5mb
GRF 91.24 332 eP 06 34.80 -0.8
e 06 38.90
e 06 41.40
EPF 91.28 322 eP 06 38.90 2.9X
1.0s 10.80nm 5.1mb
TOL 91.54 317 eP 06 39.00 1.8
CAF 91.75 324 eP 06 40.80 2.8X
0.8s 8.00nm 5.1mb
CLL 91.85 334 eP 06 44.00 5.7X
1.6s 16.00nm 5.1mb
TCF 92.65 325 eP 06 43.60 1.4
1.2s 14.80nm 5.3mb
LSF 92.96 325 eP 06 43.20 -0.3
1.2s 14.80nm 5.3mb
WLF 93.32 329 P 06 39.00 -6.0X
DOU 94.32 329 P 06 43.80 -5.9X
e 06 56.50
ZOBO 109.05 236 ePKP 12 02.00 -0.1
LR 44 30.00
FRB 134.12 330 ePKP 12 47.00 -0.8
MBC 135.81 359 ePKP 12 49.00 -1.7
0.7s 2.00nm
TTA 142.63 25 PKP 13 01.90 -1.7
FBA 143.74 18 ePKP 13 00.80 -4.5X
SVW 143.92 27 ePKP 13 03.50 -2.3X
HBF 144.61 283 PKP 13 08.20 0.4
BLA 145.20 290 PKP 13 06.40 -2.3X
LHS 145.21 285 PKP 13 09.90 1.1
NAV 145.50 290 PKP 13 07.40 -1.9
JSC 145.55 285 PKP 13 07.30 -2.1
PMR 145.89 22 ePKP 13 07.80 -1.2
0.7s 17.10nm
TOA 146.40 20 ePKP 13 10.70 0.7
PRM 146.43 284 PKP 13 09.40 -1.4
RSON 151.71 320 PKP 13 22.40 3.9X
FFC 153.14 333 ePKP 13 24.00 3.6X
1.0s 12.00nm
FVM 153.15 291 PKP 13 25.90 5.0X
KVN 172.23 333 PKP 13 40.00 0.8
TNP 172.65 325 PKP 13 40.00 0.6
CMB 173.87 344 PKP 13 39.80 0.2
TPC 174.21 291 ePKP 13 42.00 2.1X
GSC 174.28 305 ePKP 13 41.00 1.1
CLC 174.50 313 ePKP 13 41.00 1.1
FRI 174.64 335 ePKPc 13 41.40 1.6
BAR 175.00 278 ePKP 13 47.00 6.9X
PLM 175.06 285 ePKP 13 51.00 10.7X
ISA 175.13 317 ePKP 13 42.00 1.9
SBB 175.31 304 ePKP 13 42.00 1.8
S.D. = 1.3 on 111 of 153 obs.

JAN 07, 1990 21h 59m 33.26± 0.64s
15.428 S ±11.0km 71.442 W ± 7.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN PERU (117)

ARE 1.03 183 iPd 59 53.00 0.1
iS 00 07.00
ZOBO 3.30 105 iPc 00 27.00 0.4
S 01 06.20
LPB 3.40 109 P 00 28.90 1.1
1.0s 80.00nm
S 01 11.00
CNCB 3.60 113 iPc 00 30.30 -0.5
S 01 12.50
PT03 4.45 288 iPd 00 42.50 0.1
eS 01 26.90
CCH 5.44 112 P 00 55.70 -1.1
PT08 6.04 304 eP 01 06.10 0.9
iS 02 15.90
NNA 6.26 302 eP 01 07.00 -1.1
0.5s 4.93nm 4.6mb X
eS 02 17.00
S.D. = 1.0 on 8 of 8 obs.

% JAN 07, 1990 22h 20m 26.53± 0.91s
36.867 N ± 7.5km 5.260 W ±12.4km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.3 (MDD).

EPRU 0.10 13 iP 20 29.00 -0.3
eS 20 31.20
EJIF 0.45 202 eP 20 35.50 -0.1
eS 20 43.00
EHOR 0.95 1 eP 20 44.30 -0.3
eS 20 57.20
EVAL 1.39 302 eP 20 52.20 0.3
eS 21 11.00
EBAN 1.75 42 eP 20 57.50 0.4
eS 21 20.00
S.D. = 0.5 on 5 of 5 obs.

JAN 07, 1990 23h 35m 09.15± 0.74s
20.142 N ± 6.5km 98.752 E ± 8.4km
DEPTH = 49.5 ± 14.9 km
4.3mb (1 obs.)
BURMA (296)

CHG 1.33 172 iPn 35 32.20 0.5
iPg 35 33.20
iSg 35 50.50
CHTO 1.33 172 iPd 35 32.20 0.5
BDT 2.89 175 ePn 35 54.00 0.2
ePg 36 01.20
eSg 36 10.00
LOE 3.92 133 ePn 36 07.80 -0.6
ePg 36 08.50
eSg 37 06.00
NST 4.63 163 ePn 36 17.50 -0.9
ePg 36 34.50

			eSg	37	21.00	
KMI	6.18	36	Pgc	37	00.00	19.7X
			Sg	38	19.00	
NNT	7.57	173	eP	37	00.00	0.4
SHL	8.32	312	iP	37	10.50	0.3
			eS	39	07.00	
CD2	11.63	22	eP	37	54.80	-0.4
GUN	14.07	306	P	38	29.40	1.5X
PKI	14.27	304	P	38	30.00	-0.4
KKN	14.47	304	P	38	35.20	2.2X
GKN	15.07	304	P	38	40.40	-0.4
TIY	21.17	31	eP	39	53.60	1.1
N	10s		0.20um			
WRA	52.93	137	Pc	44	22.60	-0.3
	0.7s		2.40nm			4.3mb
S.D. = 0.7 on 12 of 15 obs.						

JAN 08, 1990 00h 11m 30.04± 0.54s
63.080 N ± 7.0km 150.661 W ± 7.0km
DEPTH = 136.6 ± 11.5 km
4.2mb (1 obs.)
CENTRAL ALASKA (1)

PMR	1.66	154	P	12	00.80	0.1
FBA	2.22	33	P	12	07.30	-0.2
TOA	2.30	113	P	12	09.30	0.8
TTA	2.45	269	P	12	10.40	0.0
SVW	3.06	232	P	12	18.60	0.3
IMA	3.27	338	P	12	20.90	-0.2
DWY	5.11	74	Pd	12	45.10	-0.5
KDC	5.43	190	eP	12	49.20	-0.6
INK	8.78	46	eP	13	34.00	-1.0
MBC	16.74	26	eP	15	19.00	1.7
HFS	56.53	9	eP	20	59.20	-0.4
	0.7s		2.20nm			4.2mb
S.D. = 0.9 on 11 of 11 obs.						

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* JAN 08, 1990 00h 12m 32.48± 0.90s
35.934 N ± 8.0km 118.578 W ±10.4km
DEPTH = 5.0km (geophysicist)
CENTRAL CALIFORNIA (39)
ML 2.9 (NEIS).

ABL	1.20	206	eP	12	54.50	-1.0
BCH	1.44	239	eP	12	59.20	-0.1
PHAM	1.48	267	eP	13	00.00	0.2
PEC	2.35	150	eP	13	13.50	1.1
TNP	2.40	27	eP	13	12.20	-1.1
CMB	2.55	326	eP	13	16.20	1.0
PLM	2.94	151	eP	13	24.00	3.1X
KVN	3.13	7	eP	13	28.00	4.4X
S.D. = 1.2 on 6 of 8 obs.						

JAN 08, 1990 00h 41m 02.56± 0.70s
31.750 S ± 8.0km 68.083 W ± 5.9km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.19	317	iPd	41	07.50	0.6
RTCV	0.40	254	iP	41	11.00	0.2
ZON	0.55	292	eP	41	12.00	-1.6
			eS	41	22.00	
RTRS	1.97	323	iPd	41	37.50	1.2
MRA	2.12	109	ePd	41	39.20	0.7
			S	42	05.00	
TCA	3.01	83	e(P)	41	50.00	-1.2
RFA	3.03	186	ePd	41	51.70	0.2
CYA	3.85	32	eP	42	03.00	-0.1
S.D. = 1.2 on 8 of 8 obs.						

JAN 08, 1990 00h 48m 01.87± 0.28s
37.860 N ± 7.2km 72.353 E ± 6.7km
DEPTH = 33.0km (normal)
4.8mb (23 obs.)
TAJIK SSR (715)
Felt (III) at Khorog and Dushonbe.

QUE	8.87	212	eP	50	01.00	-9.9X
			eS	51	32.50	
NDI	10.01	155	eP	50	29.30	2.8
	0.5s		133.80nm			6.5mb X
			iS	51	10.50	
MAIO	10.39	265	iPc	50	31.70	-0.1
	0.7s		9.85nm			5.2mb
			eS	52	18.00	
GKN	14.24	130	P	51	22.80	-0.5
KKN	14.78	129	P	51	29.60	-0.9
DMN	14.81	130	P	51	30.60	-0.3
PKI	15.02	129	P	51	33.20	-0.5
GUN	15.07	127	P	51	33.60	-0.8
BOM	18.90	179	eP	52	21.00	-1.2
			eS	55	50.50	
POO	19.30	176	iPc	52	28.00	1.0
			iS	56	06.00	
TAB	20.51	279	eP	52	41.00	1.1
HYB	21.08	163	iPc	52	44.30	-1.5
	1.0s		80.00nm			5.1mb
			eS	56	27.00	
GBA	24.58	168	P	53	18.60	-1.5
			S	57	58.60	
CHG	29.96	122	eP	54	11.90	2.4
CHTO	29.96	122	eP	54	11.00	1.5
	1.0s		2.00nm			3.9mb
KHL	33.49	284	eP	54	39.00	-1.3
ELL	33.57	281	eP	54	40.00	-1.0
VRI	34.52	298	ePd	54	49.00	0.1
MLR	35.09	298	ePd	54	55.00	1.0
SUF	37.36	327	eP	55	13.30	0.6
NUR	37.38	323	iP	55	13.10	0.2
	0.7s		22.70nm			5.1mb
BZS	38.10	298	eP	55	19.50	0.3
SPC	38.72	304	e(P)	55	25.50	0.9
KRA	38.88	306	iPd	55	25.60	-0.1
SOD	38.98	334	iP	55	27.00	0.7
KEV	39.95	337	eP	55	28.00	-6.3X
UPP	40.69	321	iP	55	41.70	1.3
KSP	41.17	307	iPc	55	45.10	0.6
PRU	42.36	306	P	55	55.00	0.7
BRG	42.65	307	iP	55	56.50	-0.1
	1.0s		20.00nm			4.8mb
HFS	42.68	321	eP	55	55.90	-0.9
	0.7s		36.10nm			5.2mb
KHC	43.08	305	eP	56	00.70	0.4
TDS	43.11	291	P	56	01.00	0.4
CSI	43.11	291	P	56	01.90	1.3
CLL	43.19	308	iPc	56	01.10	0.0
MMN	43.30	291	P	56	02.60	0.5
CZI	43.39	290	P	56	02.40	-0.4
MGR	43.56	291	P	56	04.50	0.3
SGO	43.62	292	Pd	56	05.50	0.8
DUI	43.95	294	P	56	09.00	1.5
FVI	44.03	301	P	56	08.00	0.2
GRB1	44.29	305	iPd	56	10.90	0.8
	1.1s		17.00nm			4.8mb
ARV	44.58	297	P	56	13.50	1.1
ASS	44.88	296	P	56	16.50	1.6
MNS	45.04	295	P	56	16.50	0.3
CRE	45.24	297	P	56	19.50	1.6
PGD	45.35	298	P	56	20.00	1.3
BDI	46.09	298	P	56	24.70	0.2
BOB	46.71	299	P	56	30.50	1.1
VAI	46.90	301	P	56	24.00	-6.7X
ORO	47.50	301	P	56	34.00	-1.6
BSF	47.76	304	iPd	56	36.70	-1.0
	0.6s		6.10nm			4.8mb
HAU	48.01	304	iPd	56	38.60	-0.9
	0.6s		3.60nm			4.6mb
LPG	48.36	301	eP	56	41.80	-0.8
	0.8s		8.00nm			4.8mb
BNI	48.53	300	P	56	43.50	-0.2
LBF	49.82	304	iPd	56	51.70	-1.8
	0.6s		2.10nm			4.3mb
SMF	50.00	303	iPd	56	53.60	-1.3
	0.6s		4.80nm			4.7mb
SSF	50.11	304	iPd	56	54.30	-1.4
	0.6s		2.10nm			4.3mb
AVF	50.29	303	iPd	56	55.70	-1.3
	0.6s		10.80nm			5.0mb
MAF	50.97	303	iPd	57	01.40	-0.8
	0.8s		10.70nm			4.9mb
TCF	51.19	303	iPd	57	02.90	-1.0
	0.6s		5.40nm			4.7mb
LSF	51.65	303	iPd	57	06.00	-1.4
	0.6s		4.50nm			4.6mb
GRR	52.56	307	eP	57	12.40	-1.7
	0.6s		7.90nm			4.9mb
LFF	52.59	302	eP	57	13.50	-0.9
	0.6s		3.60nm			4.5mb
MFF	52.64	304	eP	57	14.00	-0.8
	0.6s		4.30nm			4.6mb
BCAO	59.15	250	ePd	57	58.00	-3.9X
	0.6s		3.00nm			4.6mb
			ic	58	33.00	
MBC	65.93	3	iPd	58	46.00	-0.1
	0.7s		27.00nm			5.5mb
INK	72.39	10	eP	59	26.00	0.0
FFC	87.66	357	eP	00	47.00	-0.9
	0.7s		7.00nm			5.0mb
CPD	111.96	317	PKP	06	45.00	9.4X
SJG	112.02	317	iPKP	06	47.00	11.2X
PORP	112.33	318	PKP	06	52.80	16.5X
S.D. = 1.1 on 65 of 72 obs.						

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* JAN 08, 1990 02h 42m 30.41± 1.58s
34.569 N ±19.3km 26.262 E ± 6.6km
DEPTH = 69.2 ± 20.2 km
CRETE (370)
MD 3.7 (ATH).

NPS	0.87	323	ePn	42	47.10	-0.4
KAP	1.23	37	ePn	42	52.10	-0.1
VAM	1.89	297	ePn	43	02.90	1.8
APE	2.56	347	ePn	43	11.80	1.3
KSL	3.12	59	ePn	43	17.70	-0.6
ELL	3.68	53	eP	43	26.70	0.5
KHL	4.58	34	eP	43	38.00	-0.8
OHR	7.83	328	e(Pn)	44	24.50	0.5
SOI	8.95	296	P	44	38.10	-1.2
ROI	9.21	306	P	44	47.10	4.1X
CZI	9.34	303	P	44	43.10	-1.6
ATN	9.42	295	P	44	45.50	-0.2
CSI	9.50	306	P	44	48.20	1.3
MEU	9.54	289	P	44	45.90	-1.6
SGO	10.55	308	P	45	01.00	0.0
KIC	40.08	233	P	50	01.70	1.0
S.D. = 1.2 on 15 of 16 obs.						

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* JAN 08, 1990 02h 42m 52.56± 1.78s
53.621 N ±18.3km 170.326 E ±19.2km
DEPTH = 33.0km (normal)
4.4mb (5 obs.)
NEAR ISLANDS, ALEUTIAN ISLANDS (5)
ML 4.0 (PMR).

SMY	2.44	110	ePc	43	31.00	0.1
ADK	8.07	97	eP	44	49.20	-1.1
TTA	19.77	49	ePc	47	23.00	0.5
BRW	22.85	27	eP	47	53.70	0.3
FBA	23.70	45	ePc	48	02.10	0.3
INK	29.66	39	eP	48	56.00	-0.8
MBC	34.12	24	eP	49	35.00	-0.7
	0.6s		3.00nm			4.4mb
PNT	42.24	66	eP	50	44.00	0.1
	0.7s		6.00nm			4.4mb
KVN	49.41	77	eP	51	41.80	0.7
TNP	50.58	77	eP	51	50.70	0.6
	0.6s		2.93nm			4.4mb
BCH	50.88	82	eP	51	52.60	0.3
BW06	51.77	67	eP	52	08.00	8.9X
NB2	64.48	349	P	53	37.00	9.4X
	0.7s		3.10nm			4.5mb
HFS	65.06	347	(P)	53	30.90	-0.4
	0.4s		0.80nm			4.2mb
KHC	75.75	344	P	54	49.00	12.7X
S.D = 0.7 on 12 of 15 obs.						

? JAN 08, 1990 02h 57m 32.92± 1.07s
48.039 N ±11.3km 7.714 E ± 8.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.3 (LDG).

FEL	0.26	129	iPgd	57	38.45	0.0
CDF	0.47	322	Pg	57	42.60	0.0
			Sg	57	48.20	
BSF	0.65	252	Pg	57	46.10	0.1
			Sg	57	55.20	
HAU	0.92	268	Pg	57	50.40	-0.1
			Sg	58	03.50	
S.D. = 0.1 on 4 of 4 obs.						

? JAN 08, 1990 04h 17m 37.11± 0.78s
18.048 S ±22.5km 172.708 W ±16.1km
DEPTH = 33.0km (normal)
5.0mb (4 obs.) 4.9Msz (1 obs.)
TONGA ISLANDS REGION (174)

AFI	4.21	12	eP	18	39.00	-1.7
SGE	8.94	271	eP	19	17.10	-30.0X
KRP	22.32	205	P	22	39.80	6.5X

08d 04h

BRS	33.08	247	iP	24 11.10	-1.0
CTA	38.77	260	eP	24 59.00	-1.6
			eS	31 10.00	
WB5	49.92	259	eP	26 27.90	-2.1
ASPA	49.97	254	iPd	26 28.80	-1.6
	0.8s		37.00nm	5.5mb	
	Z 22s		0.19um	4.1MszX	
			iS	33 36.40	
			LR	37 52.70	
FRI	74.10	42	e(P)	29 10.30	-1.6
CMB	74.32	40	eP	29 12.90	-0.4
TNP	76.34	42	P	29 24.50	-0.5
KVN	76.36	41	P	29 23.70	-1.4
PNT	81.89	32	eP	30 01.00	6.5X
ANMO	82.00	49	P	29 56.40	0.8
LRM	83.69	38	eP	30 03.70	-0.5
BW06	83.80	41	P	30 04.70	-0.1
	1.1s		6.55nm	4.7mb	
GOL	85.01	46	P	30 10.50	-0.5
	1.1s		11.22nm	5.0mb	
GLD	85.14	46	P	30 10.00	-1.5
SES	87.00	34	eP	30 20.00	-0.2
MEO	87.74	52	e(P)	30 25.00	0.8
BJI	87.76	313	eP	30 25.00	1.0
	1.5s		0.03nm	2.4mb X	
TIY	89.45	310	Pd	30 34.50	2.2
	Z 20s		0.50um	4.9Msz	
GYA	89.86	298	P	30 37.00	2.5
INK	90.67	14	eP	30 38.00	0.8
XAN	90.71	306	P	30 40.00	1.8
HHC	91.30	313	eP	30 41.60	0.8
CHG	94.17	288	eP	30 57.00	2.7X
CHTO	94.17	288	e(P)	30 52.90	-1.4
	0.6s		4.21nm	5.0mb	
NAI	145.18	240	iPKP	37 29.30	15.1X
	1.0s		20.00nm		
WIT	145.30	1	ePKP	37 17.00	4.1X
WTS	146.12	1	ePKP	37 18.00	3.7X
	1.3s		35.00nm		
KRA	146.49	345	ePKP	37 16.80	1.8
			e	37 19.50	
KSP	146.50	350	ePKP	37 17.20	2.2X
	1.1s		52.00nm		
			i	37 20.50	
			i	37 27.00	
CLL	146.50	354	iPKPc	37 16.50	1.5
	1.3s		64.00nm		
			i	37 26.80	
BRG	146.82	352	iPKP	37 18.10	2.6X
	1.3s		42.00nm		
			i	37 27.70	
SPC	147.22	344	ePKP	37 19.60	3.2X
ENN	147.34	2	ePKP	37 22.00	5.7X
	0.9s		7.00nm		
PRU	147.61	351	PKP	37 20.00	3.2X
			e	37 22.80	
DOU	147.95	3	PKP	37 24.60	7.3X
ABH	148.24	360	ePKP	37 24.70	6.8X
GRF	148.27	355	ePKP	37 22.80	4.9X
			e	37 25.90	
RUP	148 42	0	ePKP	37 25.43	7 3X
WLF	148 45	1	PKP	37 25.00	6.9X
TOD	148 50	358	ePKP	37 25.38	7.1X
KHC	148 58	352	iPKP	37 24.20	5.8X
	1 2s		11.00nm		
ZST	148 88	347	ePKP	37 26.70	7.8X
SRO	148.97	346	ePKP	37 26.60	7.6X
BBTK	149.07	320	ePKP	37 22.00	2.4X
SOP	149 48	348	ePKP	37 26.70	6.9X
CDF	149.71	0	ePKP	37 23.20	2.9X
	1.2s		22.05nm		
BZS	150.04	340	ePKP	37 24.00	3.3X
HAU	150.11	1	ePKP	37 24.00	3.2X
	1.2s		23.80nm		
FEL	150.24	359	ePKP	37 29.69	8.6X
LOR	150.72	5	ePKP	37 25.80	4.1X
	1.2s		23.80nm		
SSF	150.90	5	ePKP	37 26.20	4.2X
	1.2s		20.85nm		
LBF	151.01	5	ePKP	37 26.30	4.1X
	1.2s		14.90nm		
OGA	151.09	355	iPKPc	37 32.30	9.8X
	1.2s		24.00nm		
AVF	151.15	6	ePKP	37 26.30	4.0X
	1.2s		11.90nm		
BGF	151.33	6	ePKP	37 26.90	4.3X
	1.2s		17.85nm		

SMF	151.34	5	ePKP	37 26.50	3.8X
	1.2s		14.90nm		
LJU	151.44	349	e(PKP)	37 27.00	4.2X
LSF	151.47	8	ePKP	37 26.80	3.9X
	1.2s		11.90nm		
TCF	151.53	7	ePKP	37 27.10	4.1X
	0.8s		4.05nm		
VOY	151.56	350	ePKP	37 32.00	8.9X
MAF	151.63	7	ePKP	37 27.30	4.2X
	1.0s		10.00nm		
CEY	151.76	349	e(PKP)	37 27.00	3.7X
VBY	151.83	348	ePKP	37 34.30	10.9X
OHR	154.25	336	ePKP	37 29.50	2.5X
BCAO	162.56	220	ePKPd	37 43.20	5.8X
	0.7s		26.00nm		
			ic	38 29.00	

S.D. = 1.5 on 25 of 68 obs.

? JAN 08, 1990 04h 47m 36.70± 7.09s
52.601 N ±20.8km 4.163 W ±52.6km
DEPTH = 10.0km (geophysicist)
UNITED KINGDOM (533)

YRH	0.37	310	eP	47 43.50	-0.7
			eS	47 47.20	
ETA	1.25	275	eP	48 01.00	1.1
			eS	48 16.60	
ECP	1.42	254	eP	48 07.20	4.8X
			eS	48 28.20	
DLE	1.60	296	eP	48 04.30	-0.7
			eS	48 21.70	
ECB	1.62	263	eP	48 04.50	-0.8
			eS	48 24.20	
DCN	2.02	293	eP	48 13.40	2.2X
			eS	48 34.20	
DMU	2.10	309	eP	48 13.50	1.2
			eS	48 34.40	

S.D. = 1.4 on 5 of 7 obs.

JAN 08, 1990 08h 10m 45.59± 0.35s
9.161 N ± 5.6km 127.003 E ± 6.0km
DEPTH = 42.7km (3 depth phases)
5.2mb (19 obs.) 4.2Msz (2 obs.)
PHILIPPINE ISLANDS REGION (248)

DAV	2.50	215	eP	11 24.50	-0.2
	1.0s	2328.00nm			
QCP	7.95	314	eP	12 18.00	-23.5X
BAG	9.55	320	eP	13 04.10	0.4
TSM	10.13	242	ePc	13 13.60	2.0
KKM	11.13	255	ePd	13 27.30	2.0
	1.0s	91.40nm		5.9mb	
GUMO	18.05	74	e(P)	14 54.30	-0.8
	Z 23s	0.79um			
			e	15 03.50	
PJG	18.05	74	e(P)	14 59.30	4.2X
GUA	18.09	74	e(P)	14 54.20	-1.3
MTN	22.24	169	eP	15 42.00	1.6
			e	17 47.00	
SSE	22.49	347	P	15 44.00	1.4
	1.0s	99.00nm		5.2mb	
	Z 20s	0.50um		3.9Msz	
	N 14s	0.30um			
			S	19 52.00	
			sS	20 06.00	
LOE	25.90	291	eP	16 16.00	0.4
IPM	26.18	262	ePd	16 18.70	0.5
	1.1s	101.10nm		5.3mb	
			e	16 28.50	36km
SNG	26.19	268	eP	16 17.50	-0.8
NNT	26.99	280	eP	16 24.40	-1.2
NST	27.01	287	eP	16 24.80	-1.0
BDT	28.39	289	eP	16 38.00	-0.2
PSI	28.64	259	ePc	16 40.00	-0.6
CHG	28.83	292	ePc	16 41.50	-0.8
	1.1s	20.57nm		4.7mb	
CHTO	28.83	292	eP	16 41.00	-1.2
	1.1s	17.67nm		4.6mb	
WB5	29.75	166	eP	16 50.30	-0.2
WRA	29.81	166	P	16 51.00	0.0
	0.8s	2.60nm		4.0mb X	
MBL	30.94	193	eP	16 57.00	-3.9X
ASPA	33.32	168	eP	17 20.80	-0.9
	0.6s	4.00nm		4.5mb	
	Z 23s	0.30um		3.9MszX	
			iS	22 34.10	
			LR	31 08.60	

LZH	34.09	325	P	17 34.00	5.5X
	Z 20s	0.70um		4.4Msz	
CTA	34.70	147	eP	17 35.00	1.4
WARB	35.13	181	eP	17 37.00	-0.3
SHL	37.12	301	iP	17 53.00	-1.3
			iS	23 46.50	
MRWA	39.60	195	eP	18 14.10	-0.7
FORR	39.79	179	eP	18 16.00	-0.3
COOL	40.21	188	eP	18 18.80	-1.0
BAL	40.76	194	eP	18 23.60	-0.7
KLB	41.48	192	eP	18 29.00	-1.1
MUN	42.19	194	iPd	18 35.40	-0.6
NWAO	42.88	192	eP	18 41.10	-0.5
GUN	42.95	301	P	18 42.40	-0.4
STK	43.13	162	eP	18 44.00	0.3
PKI	43.25	301	P	18 44.00	-1.2
	0.8s	38.00nm		5.2mb	
KKN	43.43	301	P	18 45.60	-0.9
	0.8s	42.00nm		5.2mb	
DMN	43.52	301	P	18 46.40	-0.9
	0.8s	44.00nm		5.3mb	
RKG	44.03	192	eP	18 55.00	4.1X
GKN	44.03	301	P	18 50.20	-1.1
	0.8s	46.00nm		5.3mb	
BRS	44.09	146	eP	18 50.00	-1.6
			i	19 03.60	51km
			i	21 01.10	
ADE	45.26	166	e(P)	19 02.80	1.9
HYB	47.75	285	eP	19 20.30	-0.5
	1.0s	70.00nm		5.6mb	
GBA	48.73	280	P	19 27.60	-0.7
NDI	50.53	300	eP	19 40.30	-1.7
POO	52.28	286	iPc	19 55.00	-0.5
QUE	59.61	300	eP	20 49.00	0.9
MSZ	65.06	149	P	21 33.10	9.3X
MAIO	66.52	306	iPc	21 34.00	0.4
	0.7s	9.53nm		5.0mb	
IR4	73.44	304	eP	22 16.40	0.5
IR1	73.62	304	eP	22 18.00	1.1
KEV	84.92	340	eP	23 27.00	10.0X
INK	85.04	22	eP	23 22.00	4.3X
	1.2s	49.00nm		5.5mb	
			pP	23 34.50	41km
SOD	85.58	338	eP	23 29.00	8.6X
MBC	86.63	13	ePc	23 30.00	4.6X
	0.9s	58.00nm		5.8mb	
SUF	86.86	333	eP	23 31.40	4.6X
NUR	88.11	331	iP	23 35.00	2.2
	0.8s	16.10nm		5.3mb	
NAI	90.40	269	iP	23 47.00	2.2
	0.8s	11.19nm		5.3mb	
HFS	93.36	333	eP	23 54.10	-3.2X
	0.5s	1.00nm		4.5mb	
NB2	94.07	334	P	24 06.20	5.6X
	0.8s	2.90nm		4.8mb	
KSP	95.69	323	eP	24 10.30	2.1
			e	24 53.50	171kmX
			e	26 50.00	
BRG	97.05	324	i(P)	24 16.50	2.2
	1.0s	10.00nm		5.3mb	
CNCB	163.55	119	ePKP	30 53.00	6.7X
LPB	163.56	118	PKP	30 51.00	4.9X
ZOBO	163.65	117	PKP	30 48.00	1.6
	1.0s	3.75nm			

S.D. = 1.2 on 51 of 66 obs.

JAN 08, 1990 09h 25m 58.87± 0.61s
36.078 N ± 6.8km 27.111 E ± 6.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.53	174	ePb	26 09.50	-0.1
			eSb	26 17.00	
NPS	1.47	237	ePb	26 25.00	-0.4
APE	1.61	308	ePb	26 26.00	-1.5
			eSb	26 50.90	
SMG	1.64	352	ePb	26 28.00	0.2
KSL	2.00	88	ePn	26 33.00	-0.1
IZM	2.32	3	ePn	26 44.00	6.3X
ELL	2.35	73	ePn	26 38.50	0.2
VAM	2.46	255	ePg	26 45.50	5.8X
VLI	3.43	282	ePn	26 54.00	0.6
ITM	4.31	286	ePn	27 07.00	1.0

S.D. = 0.9 on 8 of 10 obs.

& JAN 08, 1990 09h 30m 44.40s

36.840 N 121.613 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.7 (BRK). Felt in Monterey County.

SAO	0.15	119	iPd	30	47.40	-0.2
GCC	0.36	302	iPc	30	51.30	-0.3
MHC	0.50	357	iPd	30	54.50	0.1
			iS	31	02.30	
ARN	0.51	7	iPd	30	54.40	-0.3
PRS	0.54	159	iPd	30	55.00	-0.3
LLA	0.58	112	ePd	30	55.90	-0.1
			iS	31	04.80	
PCC	0.90	317	ePc	31	00.60	-1.6
PRI	1.03	132	ePc	31	04.10	-0.5
BKS	1.15	335	eP	31	05.40	-1.0
BRK	1.15	334	e(P)	31	04.50	-2.0
ZSP	1.22	335	eP	31	05.70	-1.9
			i	31	07.80	
			eS	31	25.20	
PHAM	1.40	135	eP	31	09.60	-1.2
FRI	1.53	84	ePd	31	11.60	-1.0
CMB	1.54	39	eP	31	11.00	-1.8
BCH	2.06	143	eP	31	18.20	-2.2
KVN	3.55	50	eP	31	47.00	5.4
TNP	3.71	69	eP	31	50.00	6.1

17 obs. associated

JAN 08, 1990 10h 28m 44.09± 0.55s
36.045 N ± 5.5km 27.220 E ± 5.4km
DEPTH = 30.5 ± 5.5 km
4.1mb (6 obs.)
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

KAP	0.49	184	ePg	28	55.00	0.5
			eSg	29	03.50	
YER	1.38	38	iPn	29	07.00	-0.5
NPS	1.52	240	ePb	29	11.40	1.9
SMG	1.69	350	ePb	29	10.00	-1.9
APE	1.70	307	ePb	29	11.20	-0.9
KSL	1.92	87	ePn	29	18.00	2.8X
ELL	2.28	71	ePn	29	23.20	2.7
IZM	2.35	1	ePn	29	21.00	-0.4
VAM	2.54	256	ePg	29	30.00	5.9X
KHL	2.92	38	ePn	29	30.50	0.9
PRK	3.28	347	ePg	29	41.50	6.9X
ATH	3.40	305	ePg	29	45.90	9.6X
VLI	3.52	282	ePn	29	37.60	-0.4
DST	3.73	17	ePn	29	41.00	0.1
EZN	3.84	350	ePn	29	39.00	-3.5X
ITM	4.41	286	ePn	29	52.60	2.0
NEO	4.54	317	ePn	29	51.00	-1.6
LFK	5.20	97	ePn	30	05.40	3.6X
RDO	5.26	346	ePn	30	01.80	-0.8
BBTK	5.79	47	eP	30	12.00	1.7
HLW	7.07	150	(P)	30	26.00	-2.2
			(S)	31	46.00	
OHR	7.13	317	ePn	30	34.80	5.8X
KOT	7.22	146	eP	30	29.50	-0.7
			eS	31	52.50	
HRI	7.55	109	e(P)	30	35.00	0.1
DSI	8.12	121	eP	30	41.00	-1.9
			e(S)	32	12.00	
PRNI	8.65	129	eP	30	49.00	-1.1
CZI	9.35	293	P	30	58.50	-1.2
KBA	15.12	321	e(P)	32	22.50	5.3X
	1.0s		14.30nm		4.2mb	
			i	32	24.70	
KHC	16.45	327	P	32	35.00	0.8
KSP	16.76	335	eP	32	41.00	3.1X
AVF	20.79	308	eP	33	24.50	-0.6
	1.0s		4.00nm		3.8mb	
SSF	20.80	309	eP	33	22.20	-3.0X
	0.6s		4.50nm		4.0mb	
BGF	21.03	307	eP	33	33.18	5.7X
	0.6s		4.95nm		4.1mb	
DOU	21.57	318	P	33	33.60	0.6
	0.5s		3.10nm		4.0mb	
BCAO	32.46	196	iPc	35	15.90	2.0
	0.6s		7.00nm		4.7mb	
KIC	41.59	232	P	36	31.00	0.1
GKN	48.74	82	P	37	28.40	0.3

S.D. = 1.4 on 26 of 37 obs.

JAN 08, 1990 11h 05m 47.16± 0.41s
24.368 S ± 5.3km 179.105 E ± 3.6km
DEPTH = 517.8 ± 4.9 km
5.0mb (34 obs.)
SOUTH OF FIJI ISLANDS (171)

SVA	6.25	354	iPd	07	27.10	-0.4
			eS	08	09.10	
SGE	6.83	350	ePd	07	33.20	-0.2
			eS	08	43.20	
MBU	7.37	357	iPc	07	39.20	0.6
DZM	11.86	279	iPc	08	26.90	1.6
			iS	10	39.10	
AFI	13.50	41	iPd	08	38.00	-4.1X
KRP	13.85	192	P	08	47.10	1.6
			S	11	21.50	
WEL	17.26	191	P	09	20.00	0.8
			S	12	10.00	
MSZ	22.21	201	P	10	06.50	0.7
			S	13	37.50	
BRS	23.87	257	iPd	10	22.50	1.5
	0.5s		12.50nm		4.7mb	
			i	10	41.60	
			i	11	12.60	
			e	12	32.60	
			e	14	03.60	
RMQ	27.46	259	iPc	10	54.00	1.1
			e	13	54.00	
CNB	27.91	240	eP	10	58.00	1.2
CAN	28.20	240	iPc	11	00.60	1.3
			i	11	19.50	
			iPcP	13	57.10	
BWA	28.46	242	eP	11	00.80	-0.7
			i	11	19.60	
TBI	28.74	94	iP	11	04.00	0.0
	0.6s		30.00nm		5.0mb	
AFR	29.80	83	iP	11	12.60	-0.6
	0.9s		105.00nm		5.4mb	
PAE	29.94	83	iP	11	13.80	-0.6
	0.9s		30.00nm		4.9mb	
PPT	29.97	83	iP	11	14.20	-0.5
	0.9s		70.00nm		5.2mb	
PPN	30.11	83	iP	11	15.30	-0.6
	0.9s		40.00nm		5.0mb	
CMS	30.16	249	iPc	11	16.90	0.6
			e	15	39.00	
TVO	30.20	84	iP	11	16.10	-0.6
	0.9s		75.00nm		5.3mb	
CTA	30.66	271	iPd	11	20.60	-0.1
	0.5s		119.72nm		5.7mb	
			iPP	12	56.00	
			iPcP	14	02.70	
			iS	15	46.00	
			iScP	16	58.50	
			iSS	18	35.00	
TOO	31.51	237	eP	11	28.00	0.3
PMO	32.36	79	iP	11	34.70	-0.3
	0.9s		40.00nm		5.0mb	
VAH	32.52	80	iP	11	35.80	-0.5
	0.9s		30.00nm		4.9mb	
TPT	32.62	80	iP	11	37.00	-0.1
	0.9s		85.00nm		5.3mb	
RUV	32.76	80	iP	11	38.00	-0.3
	0.9s		75.00nm		5.3mb	
BFD	33.70	239	iPd	11	47.30	1.2
			e	14	10.00	
STK	33.79	249	eP	11	47.60	0.7
	0.4s		64.00nm		5.5mb	
			e	14	12.00	
			e	16	33.00	
PMG	33.89	291	eP	11	47.70	-0.1
ADE	36.44	244	iPd	12	09.90	1.0
ASPA	41.16	261	iPd	12	47.40	0.0
	0.3s		150.00nm		6.0mb	
Z	19s		0.17um		3.9Msz	
			iS	18	21.50	
			LR	25	47.20	
WB5	41.55	267	eP	12	49.80	-0.8
			iScP	17	38.90	
			iS	18	26.80	
WRA	41.56	267	Pd	12	49.60	-1.0
	0.5s		68.40nm		5.4mb	
FORR	45.34	250	iPd	13	19.90	-0.2
	0.3s		79.00nm		5.7mb	
MTN	46.68	275	eP	13	29.00	-1.6
WARB	47.21	256	iPd	13	33.60	-0.9
KNA	47.84	270	eP	13	38.50	-0.9
	0.3s		35.00nm		5.3mb	

COOL	51.28	249	iPd	14	03.30	-1.5
SBA	53.87	183	iPd	14	24.20	1.5
KLB	54.05	248	iPd	14	23.50	-1.2
	0.4s		8.00nm		4.4mb	
MEKA	54.27	254	eP	14	25.00	-1.3
NWAO	54.30	246	eP	14	25.10	-1.3
	0.5s		10.00nm		4.4mb	
RKG	54.33	245	eP	14	25.10	-1.5
	0.4s		43.00nm		5.1mb	
MBL	54.40	261	iPd	14	26.00	-1.2
	0.3s		17.00nm		4.9mb	
BAL	55.10	249	eP	14	30.50	-1.5
	0.3s		9.00nm		4.6mb	
MUN	55.30	247	eP	14	32.40	-1.0
MRWA	55.96	250	iPd	14	36.90	-1.1
	0.4s		12.00nm		4.6mb	
NANU	57.88	258	eP	14	50.00	-1.3
	0.3s		38.00nm		5.2mb	
SPA	65.78	180	iPc	15	42.80	0.6
	1.2s		209.86nm		5.6mb	
IPM	81.07	279	ePd	17	08.80	-0.6
	0.6s		58.10nm		5.3mb	
MDJ	82.20	327	Pd	17	15.80	1.4
			pP	19	08.50	514kmX
SYP	82.27	47	eP	17	16.00	0.8
PRS	82.45	45	ePd	17	16.80	1.0
GCC	82.47	44	eP	17	16.60	0.7
PCC	82.52	43	ePd	17	16.80	0.6
WHN	82.64	308	Pd	17	17.80	0.9
SAO	82.66	44	ePd	17	17.30	0.4
PRI	82.78	45	eP	17	18.70	1.0
NWRM	82.81	42	P	17	18.00	0.5
BRK	82.83	43	eP	17	18.40	0.7
BKS	82.85	43	eP	17	18.90	1.1
	0.8s		38.00nm		5.0mb	
MHC	82.89	44	ePd	17	19.00	0.8
ARN	82.96	44	P	17	19.20	0.8
ABL	82.96	47	P	17	19.20	0.5
PLM	83.70	49	eP	17	22.00	-0.4
CN2	83.78	324	iPd	17	22.30	0.0
PEC	83.80	49	P	17	22.90	0.2
SBB	83.80	48	eP	17	23.00	0.2
FRI	83.91	45	eP	17	23.50	0.4
ISA	83.93	47	eP	17	24.00	0.6
TIA	83.96	314	Pd	17	23.70	0.3
CMB	84.10	44	ePd	17	24.40	0.3
ORV	84.33	42	ePd	17	25.50	0.3
WDC	84.34	41	ePd	17	25.80	0.6
CLC	84.60	47	eP	17	26.00	-0.7
TPC	84.68	49	eP	17	28.00	0.9
GSC	84.84	48	eP	17	28.00	0.1
GLA	84.95	50	eP	17	30.00	1.6
NNT	85.68	286	iPd	17	33.00	0.9
KVN	86.15	44	P	17	34.00	-0.2
TNP	86.15	45	P	17	34.10	-0.2
	0.7s		7.96nm		4.6mb	
NST	86.68	289	eP	17	38.10	1.2
BJI	86.81	317	eP	17	37.50	0.5
	1.5s		0.03nm		1.8mb X	
TIY	87.91	313	Pd	17	43.20	0.8
XAN	88.39	309	Pd	17	45.00	0.3
GMW	88.59	35	P	17	45.70	0.4
LON	88.61	36	P	17	45.50	0.1
RMW	89.05	36	P	17	47.70	0.2
CHG	89.08	291	iPd	17	49.10	1.0
	1.1s		20.25nm		4.9mb	
CHTO	89.08	291	eP	17	49.10	1.0
	1.0s		15.00nm		4.8mb	
			pP	19	37.70	481kmX
MSU	89.70	47	P	17	51.50	0.6
DUG	90.17	45	P	17	52.90	0.0
	0.5s		1.74nm		4.2mb	
HHC	90.17	315	P	17	54.00	1.2
CD2	90.66	304	eP	17	55.60	0.4
PNT	91.34	35	eP	17	58.00	0.1
	0.7s		10.00nm		4.9mb	
ALQ	91.89	52	eP	18	00.50	-0.5
ANMO	91.89	52	P	18	01.60	0.6
	0.8s		3.96nm		4.5mb	
GOL	94.88	49	P	18	14.30	-0.4
	0.7s		5.95nm		4.9mb	
INK	98.70	16	eP	18	29.00	-1.9
MBC	107.12	13	ePKP	23	12.50	-1.8
	0.6s		3.00nm			
DHN	115.18	52	PKP	23	28.40	-2.3X
PRIN	117.31	56	PKP	23	33.00	-1.8
PTN	117.75	51	PKP	23	33.20	-2.3X

08d 11h

HBVT	119.09	51	PKP	23	36.20	-1.9
BNH	120.40	51	PKP	23	39.50	-1.1
FRB	121.45	29	ePKP	23	40.00	-1.9
MIM	122.02	51	PKP	23	44.00	0.4
EMM	123.09	51	PKP	23	39.50	-6.2X
BUL	127.25	216	iPKPd	24	09.30	14.6X
	0.5s	13.38nm				
QASM	139.92	282	ePKP	24	11.70	-6.5X
UPP	142.24	345	iPKP	24	15.80	-5.3X
NB2	142.41	350	PKP	24	16.90	-4.6X
	0.6s	15.90nm				
HFS	142.84	348	ePKP	24	16.80	-5.4X
	0.4s	113.60nm				
WAJH	146.15	281	iPKPd	24	31.10	2.3X
AYN	146.80	286	ePKP+	24	32.70	3.0X
HRI	146.84	294	e(PKP)	24	30.00	0.2
DSI	147.28	291	iPKPd	24	33.50	3.1X
HQL	147.63	287	iPKPd	24	16.90	-14.2X
PRNI	147.66	289	e(PKP)	24	34.00	2.9X
BADA	147.67	285	iPKPd	24	34.80	3.7X
LFK	148.36	298	iPKP	24	34.40	2.3X
EKA	149.03	3	PKPc	24	36.30	3.9X
	0.5s	10.90nm				
VRI	149.10	321	ePKPd	24	37.00	4.1X
GPA	149.42	309	ePKP	24	38.00	4.5X
KRA	149.66	333	iPKPd	24	38.10	4.6X
	0.6s	53.00nm				
		e		26	45.50	
MLR	149.77	321	ePKPd	24	38.50	4.5X
YLV	149.98	310	iPKP	24	39.00	4.6X
DMU	150.16	7	iPKPd	24	38.90	4.7X
SPC	150.19	332	iPKP	24	39.80	5.2X
KSP	150.42	338	ePKP	24	32.70	-2.0
DCN	150.67	8	ePKP	24	39.60	4.7X
	0.6s	50.00nm				
KHL	150.68	306	iPKP	24	41.10	5.5X
DLE	150.81	7	iPKPd	24	40.20	5.1X
ELL	150.88	302	iPKP	24	41.50	5.5X
CLL	151.05	342	iPKP	24	41.20	5.6X
	0.8s	100.00nm				
		i		24	51.40	
		pPKP		26	43.30	
BNT	151.07	310	iPKP	24	41.50	5.5X
BRG	151.16	340	iPKP	24	35.50	-0.3
		i		24	42.00	
		i		24	52.00	
		pPKP		26	43.40	
		eSKP		27	17.00	
PRU	151.74	339	PKPd	24	43.00	6.4X
		e		24	55.20	
HOF	152.26	342	ePKP	24	44.00	6.6X
ZST	152.28	334	ePKP	24	36.40	-1.0
		e		24	44.40	
		e		24	56.40	
		e		26	52.00	
BCAO	152.75	226	iPKPc	24	39.60	0.4
	0.2s	72.00nm				
		id		24	47.20	
		ic		25	00.60	
		ic		26	11.00	
KHC	152.80	339	PKP	24	38.00	-0.2
		e		24	46.00	
		i		26	53.60	
MEM	153.26	350	PKP	24	45.80	7.1X
		e		26	49.70	
TOD	153.69	346	ePKP	24	47.11	7.7X
ABH	153.69	348	ePKP	24	47.34	8.0X
RUP	153.96	348	ePKP	24	46.50	6.7X
DOU	153.96	352	PKP	24	47.90	8.2X
		i		25	03.30	
		e		26	51.20	
OHR	155.37	318	ePKP	24	48.00	6.0X
		i		25	10.10	
LIC	161.53	167	PKP	24	49.04	-0.5
KIC	161.72	168	PKP	24	49.28	-0.5
TIC	161.94	167	PKP	24	49.46	-0.6
LKO	164.59	162	PKPd	24	52.82	0.2
	0.8s	11.00nm				

S.D. = 0.9 on 114 of 152 obs.

JAN 08, 1990 12h 26m 49.93± 0.99s
24.060 S ±14.0km 179.372 E ±12.5km
DEPTH = 573.3 ± 12.4 km
5.0mb (9 obs.)
SOUTH OF FIJI ISLANDS (171)

SVA	5.98	352	ePd	28	29.00	-1.1
			eS	29	16.60	
SGE	6.58	348	ePd	28	35.10	-0.6
MBU	7.08	355	iPd	28	41.70	1.4
DZM	12.07	277	iPd	29	29.40	-0.1
AFI	13.11	41	eP	29	40.00	0.1
HNR	23.57	305	eP	31	19.00	0.5
BRS	24.17	256	iPd	31	24.40	0.5
	1.0s	3.50nm				3.9mb X
CNB	28.27	240	iPc	32	00.60	0.8
CAN	28.56	240	iPc	32	02.80	0.5
BWA	28.82	242	iPc	32	02.80	-1.7
CMS	30.50	248	iPc	32	19.10	0.3
CTA	30.90	271	iPc	32	23.00	0.7
	1.0s	46.00nm				5.1mb
TOO	31.88	237	iPc	32	31.00	0.6
BFD	34.07	239	eP	32	49.00	0.3
STK	34.13	248	iPc	32	50.00	0.7
	0.4s	25.00nm				5.2mb
ADE	36.79	243	iPc	33	11.90	0.6
	0.7s	34.25nm				5.1mb
ASPA	41.44	261	iPc	33	49.50	0.6
	0.4s	93.00nm				5.7mb
Z	18s	0.08um				3.6Msz
			iS	39	23.80	
			LR	45	12.40	
WB5	41.81	267	iPc	33	52.10	0.3
			eScP	38	41.00	
			eS	39	27.00	
WRA	41.82	267	Pc	33	49.70	-2.2
	0.6s	47.40nm				5.2mb
MTN	46.90	275	eP	34	31.00	-0.2
WARB	47.52	256	iPc	34	35.60	-0.3
KNA	48.09	270	eP	34	40.50	0.2
COOL	51.62	249	eP	35	05.30	-0.8
KLB	54.39	247	eP	35	25.40	-0.4
NWAO	54.65	246	eP	35	27.00	-0.5
RKG	54.68	244	eP	35	27.40	-0.4
	0.4s	26.00nm				4.9mb
MBL	54.69	260	iPc	35	27.90	-0.1
	0.3s	12.00nm				4.7mb
BAL	55.44	248	eP	35	32.50	-0.6
MUN	55.64	247	eP	35	34.30	-0.2
MRWA	56.29	250	eP	35	39.00	0.0
	0.4s	8.00nm				4.4mb
NANU	58.19	258	iPc	35	53.00	1.1
	0.4s	24.00nm				4.8mb
HFS	142.59	348	ePKP	45	19.20	0.2
	0.4s	3.30nm				
KSP	150.23	338	ePKP	45	42.80	11.2X

S.D. = 0.8 on 32 of 33 obs.

JAN 08, 1990 12h 58m 33.35± 1.05s
7.888 N ± 4.2km 126.498 E ± 6.5km
DEPTH = 88.3 ± 9.4 km
5.1mb (19 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	1.21	229	ePd-	58	55.40	-0.4
TSM	9.14	247	ePc	00	49.20	4.8X
BAG	10.26	326	eP	01	00.50	0.7
KKM	10 37	260	ePc	01	05 50	4.3X
GUMO	18 91	71	eP	03	04 00	14.0X
TRT	20 76	222	ePc	03	13 00	3.8X
MTN	21 11	167	eP	03	13 00	0.3
KNA	23.59	175	eP	03	37 00	-0.1
SSE	23 62	349	P	03	37.00	-0.2
Z	20s	0.50um				4.0Msz
N	10s	0.20um				
			sP	03	51 00	
			S	07	42.00	
			sS	07	52.00	
IPM	25.53	264	ePd	03	59.10	3.5X
	1.1s	76.00nm				5.1mb
LOE	25.92	294	eP	04	01.00	1.8
NNT	26.74	282	eP	04	06.80	0.1
NST	26.92	289	eP	04	09.60	1.3
BDT	28.37	292	eP	04	22.80	1.5
	0.7s	34.40nm				5.1mb
KMI	28.42	310	eP	04	22.00	-0.1
WRA	28.71	165	Pc	04	22.30	-2.2
	0.5s	1.50nm				3.9mb X
CHG	28.88	295	iPc	04	26.40	0.4
	1.1s	20.57nm				4.7mb
CHTO	28.88	295	eP	04	25.80	-0.2
	1.1s	18.85nm				4.6mb
MBL	29 60	193	eP	04	32.00	-0.4
NANU	32 11	199	eP	04	53.00	-1.4
ASPA	32.18	167	iPc	04	53.50	-1.6
	0.4s	10.00nm				5.0mb
Z	21s	0.14um				3.6Msz
			iPcP	07	42.30	
			iS	10	00.30	
			iPcS	11	24.80	
			eScS	15	15.70	
			LR	19	28.60	
WARB	33.87	180	iPd	05	09.90	0.3
LZH	34.87	327	P	05	16.50	-1.8
Z	26s	0.50um				4.1MszX
MEKA	35.16	192	eP	05	21.00	0.4
SHL	37.35	302	iP	05	39.90	0.5
			eS	11	25.50	
MRWA	38.25	195	eP	05	46.50	-0.1
COOL	38.89	187	eP	05	51.80	-0.2
BAL	39.41	193	eP	05	56.00	-0.3
KLB	40.14	192	eP	06	02.50	0.3
MUN	40.84	193	eP	06	09.10	1.1
NWAO	41.53	192	eP	06	14.80	1.1
STK	42.09	161	iPd	06	18.20	0.0
RKG	42.69	192	eP	06	29.00	5.9X
	0.5s	34.00nm				5.4mb
GUN	43.20	303	P	06	28.20	0.4
BRS	43.33	145	iPc	06	27.60	-0.8
	0.6s	8.00nm				4.7mb
			e	06	40.00	
			i	08	17.60	
			e	12	03.00	
PKI	43.48	302	P	06	30.00	-0.1
	0.8s	23.00nm				5.1mb
KKN	43.66	302	P	06	31.20	-0.2
	0.8s	27.00nm				5.1mb
DMN	43.75	302	P	06	32.00	-0.2
	0.8s	25.00nm				5.1mb
ADE	44.16	166	iPd	06	35.90	0.9
	0.9s	31.93nm				5.1mb
GKN	44.27	302	P	06	35.80	-0.5
	0.4s	16.00nm				5.2mb
BWA	46.92	155	eP	06	58.40	1.4
BFD	47.28	163	eP	07	00.00	0.3
HYB	47.62	286	iPc	07	02.50	-0.2
	1.0s	25.00nm				5.0mb
CAN	47.93	155	eP	07	05.00	0.1
GBA	48.47	281	P	07	09.00	-0.2
NDI	50.73	301	eP	07	24.00	-2.4
ADK	63.70	35	eP	08	57.00	-0.6
MSZ	64.24	148	P	09	01.90	0.8
MAIO	66.86	306	iPc	09	18.00	-0.3
SVW	77.28	29	eP	10	20.60	1.1
TTA	77.33	27	ePc	10	20.40	0.7
BRW	78.33	19	iPc	10	26.10	1.1
KDC	78.58	33	eP	10	27.30	0.8
PMR	80.43	29	ePc	10	36.30	-0.2
	0.8s	17.10nm				5.0mb
FBA	81.09	26	eP	10	39.50	-0.4
	0.8s	6.80nm				4.6mb
TOA	81.84	28	eP	10	45.10	1.2
KEV	85.93	340	eP	11	04.00	-0.4
INK	86.40	22	eP	11	07.00	0.2
SOD	86.56	338	eP	11	06.00	-1.6
MBC	87.97	13	ePc	11	14.40	0.2
	0.8s	15.00nm				5.1mb
NUR	88.98	331	iP	11	18.20	-1.0
	0.7s	33.40nm				5.6mb
DAG	93.15	352	iPc	11	36.30	-2.0
	0.8s	15.67nm				5.4mb
HFS	94.25	332	eP	11	42.90	-0.7
	0.5s	7.90nm				5.4mb
ALQ	114.37	46	PKP	17	05.00	-0.3
LKO	129.23	289	PKPc	17	34.64	0.6
	0.5s	9.00nm				
KIC	129.35	285	PKP	17	34.86	0.6
TIC	129.54	285	PKP	17	35.10	0.5
LIC	129.66	285	PKPc	17	35.36	0.5
	0.6s	7.50nm				
LNV	149.24	150	iPKPd	18	15.60	6.4X
PCH	149.95	151	ePKP	18	17.30	6.8X
CNCB	163.32	123	PKP	18	31.00	3.0X
LPB	163.36	122	ePKP	18	31.00	3.1X
ZOBO	163.46	122	PKPc	18	30.60	2.4X
	1.1s	11.60nm				

S.D. = 0.9 on 62 of 73 obs.

• JAN 08, 1990 13h 23m 41.47± 0.90s
42.565 N ± 7.5km 24.047 E ±16.6km
DEPTH = 10.0km (geophysicist)

BULGARIA (359)

SRS	1.49	193	eP	24 07.90	-0.3
KNT	1.64	212	ePn	24 10.40	-0.1
VAY	1.66	222	ePn	24 11.00	0.3
GRG	2.02	218	ePn	24 16.30	0.2
MLR	3.23	24	ePd	24 33.50	0.2
BZS	3.52	331	ePc	24 37.00	-0.2

S.D. = 0.3 on 6 of 6 obs.

JAN 08, 1990 13h 43m 42.66± 0.97s
47.428 N ± 8.8km 9.114 E ± 8.3km
DEPTH = 10.0km (geophysicist)

GERMANY (543)

SAX	0.24	138	iPd	43 47.90	0.0
ZLA	0.50	277	eP	43 52.70	0.0
SLE	0.54	309	iPd	43 53.60	0.0
LLS	0.56	188	eP	43 53.80	-0.5
VDL	0.97	165	ePd	44 01.20	-0.1
OSS	1.02	136	eP	44 02.10	0.0
TMA	1.33	187	eP	44 07.90	0.5
EMS	2.02	229	eP	44 20.80	3.4X
KHC	3.43	59	eP	45 35.10	57.8X

S.D. = 0.4 on 7 of 9 obs.

? JAN 08, 1990 13h 49m 07.41± 6.89s
12.461 S ±64.0km 119.461 E ±35.5km
DEPTH = 33.0km (normal)

SOUTH OF SUMBA ISLAND (292)

MBL	8.66	178	iPc	51 13.00	-0.4
			eS	53 10.00	
NANU	10.72	200	eP	51 33.00	-8.8X
	0.3s		4.00nm		5.2mb X
			eS	53 47.00	
MEKA	14.11	183	eP	52 27.00	-0.1
			eS	55 17.00	
WB5	16.10	119	eP	52 53.00	0.0
MRWA	16.98	190	eP	53 00.00	-4.1X
BAL	18.24	188	eP	53 19.00	-0.7
COOL	18.40	175	eP	53 24.00	2.3X
KLB	19.10	184	eP	53 32.00	1.7
MUN	19.65	188	eP	53 36.00	-0.5
NWAO	20.47	185	eP	53 48.00	2.9X

S.D. = 1.1 on 6 of 10 obs.

JAN 08, 1990 14h 30m 12.73± 0.65s
36.072 N ± 7.1km 27.198 E ± 6.2km
DEPTH = 10.0km (geophysicist)

DODECANESE ISLANDS (369)

KAP	0.52	182	ePb	30 23.10	-0.2
			eSb	30 31.50	
YER	1.37	39	iPn	30 34.90	-3.1X
SMG	1.66	350	ePb	30 43.00	1.1
APE	1.67	307	ePb	30 41.50	-0.7
KSL	1.93	88	ePn	30 47.00	1.1
ELL	2.29	72	ePn	30 50.70	-0.5
IZM	2.32	1	ePn	30 58.00	6.4X
KHL	2.91	39	ePn	30 59.00	-1.1
VLI	3.50	282	ePn	31 08.00	-0.2
ITM	4.38	286	ePn	31 21.40	0.5

S.D. = 1.0 on 8 of 10 obs.

% JAN 08, 1990 16h 17m 09.22± 4.36s
43.910 N ±32.7km 7.795 E ± 6.2km
DEPTH = 10.0km (geophysicist)

NEAR SOUTH COAST OF FRANCE (379)
ML 1.8 (GEN).

ROB	0.39	8	P	17 17.28	0.1
			S	17 22.25	
ENR	0.42	320	P	17 17.50	-0.2
			S	17 23.21	
FIN	0.42	45	P	17 17.80	-0.1
			S	17 23.40	
STV	0.48	315	P	17 18.93	0.0
			S	17 24.88	
PZZ	0.78	320	P	17 24.67	0.2
			S	17 34.41	
PCP	0.83	40	P	17 25.32	0.0

S.D. = 0.2 on 6 of 6 obs.

? JAN 08, 1990 17h 33m 25.98± 3.42s
37.560 N ±19.5km 20.717 E ±25.7km
DEPTH = 10.0km (geophysicist)

IONIAN SEA (399)
MD 3.2 (ATH).

VLS	0.62	351	ePg	33 39.00	0.5
ITM	1.04	111	ePg	33 45.50	0.0
AGG	1.93	41	ePb	34 01.10	1.8
VLI	1.96	115	ePg	34 07.70	8.1X
IGT	1.99	351	ePb	34 03.70	3.6X
NEO	2.63	48	ePn	34 09.00	-0.2
LIT	2.89	28	ePn	34 13.10	0.2
OHR	3.55	1	ePn	34 19.50	-2.7X
GRG	3.64	21	ePn	34 22.80	-0.7
SOH	3.85	31	ePn	34 26.40	-0.1
KNT	3.97	24	ePn	34 27.70	-0.6
SRS	4.19	31	ePn	34 30.50	-0.9

S.D. = 0.9 on 9 of 12 obs.

? JAN 08, 1990 17h 33m 36.09± 1.35s
12.296 S ±15.3km 74.686 W ± 9.7km
DEPTH = 33.0km (normal)

PERU (116)

PT08	1.85	280	eP	34 06.50	0.1
			eS	34 40.60	
PT03	2.00	213	iPd	34 08.40	0.1
			eS	34 46.40	
PT06	2.21	226	eP	34 11.10	-0.1
PT10	2.24	275	eP	34 11.60	-0.1
			eS	34 52.10	
ZOBO	7.49	123	eP	35 06.00	-20.3X
			e	35 27.00	
LPB	7.65	124	P	35 39.00	10.6X
CNCB	7.89	125	eP	35 32.00	0.0

S.D. = 0.1 on 5 of 7 obs.

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* JAN 08, 1990 17h 51m 17.55± 0.83s
36.074 N ± 7.6km 27.149 E ± 9.0km
DEPTH = 10.0km (geophysicist)

DODECANESE ISLANDS (369)

KAP	0.52	178	ePb	51 28.00	-0.1
			eSb	51 37.90	
YER	1.40	40	ePn	51 39.90	-3.2X
APE	1.64	308	ePb	51 47.00	0.5
SMG	1.65	351	ePb	51 46.00	-0.6
KSL	1.97	88	ePn	51 51.00	-0.3
ELL	2.33	72	ePn	51 57.20	0.6

S.D. = 0.7 on 5 of 6 obs.

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* JAN 08, 1990 17h 56m 47.12± 0.82s
23.295 N ±12.4km 142.494 E ±14.8km
DEPTH = 33.0km (normal)
4.6mb (4 obs.) 3.6Msz (1 obs.)

VOLCANO ISLANDS REGION (213)

SSE	20.46	297	Pc	01 23.50	-1.1
	1.0s		28.00nm		4.6mb
	Z 12s		0.50um		4.1MszX
	E 14s		0.30um		
			i	01 30.00	
			i	05 14.00	
			sS	05 36.00	
CHG	40.78	272	eP	04 27.00	-0.1
CHTO	40.78	272	eP	04 26.90	-0.2
	1.1s		3.24nm		4.0mb
BDT	41.12	270	eP	04 31.00	1.1
NNT	41.91	263	eP	04 35.30	-1.1
WB5	43.64	191	eP	04 50.40	0.0
WRA	43.71	191	Pc	04 51.00	0.1
	1.1s		17.20nm		4.7mb
ASPA	47.42	191	eP	05 20.20	-0.3
	Z 19s		0.06um		3.6Msz
			LR	15 43.50	
GUN	50.89	288	P	05 47.00	-0.7
PKI	51.35	287	P	05 53.40	2.2
KKN	51.43	288	P	05 52.80	1.2
GKN	51.96	288	P	05 51.60	-4.0X
INK	66.37	24	eP	07 36.00	1.5
MBC	69.48	15	eP	07 53.00	-0.8
HFS	87.01	337	eP	09 28.50	-1.7
	0.6s		2.30nm		4.6mb
ZOBO	150.39	82	PKP	16 39.00	6.3X

S.D. = 1.2 on 14 of 16 obs.

? JAN 08, 1990 18h 04m 00.98± 0.88s
37.745 N ±10.3km 23.130 E ±12.4km
DEPTH = 33.0km (normal)

SOUTHERN GREECE (368)
ML 2.9 (ATH).

ATH	0.52	64	ePg	04 11.60	-0.2
			eSg	04 19.10	
VLI	1.04	189	ePb	04 19.50	0.3
			eSg	04 35.50	
ITM	1.11	240	ePg	04 20.00	-0.3
NEO	1.56	3	ePb	04 27.00	0.2
OHR	3.82	332	e(Pn)	05 05.00	6.1X

S.D. = 0.5 on 4 of 5 obs.

JAN 08, 1990 19h 06m 44.41± 0.55s
13.254 N ± 4.9km 143.877 E ± 5.3km
DEPTH = 140.9 ± 5.0 km
5.1mb (19 obs.)

SOUTH OF MARIANA ISLANDS (210)
Felt (II) on Guam.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 21C
Centroid Location:
Origin Time 19:06:43.4 1.1
Lat 12.82N 0.09 Lon 143.94E 0.17
Dep 135.0 3.0 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 4.96 0.69 Mtt=-3.97 0.69
Mff=-0.99 0.91 Mrt= 2.07 0.58
Mrf=-0.60 0.60 Mtf=-2.33 0.77
Principal Axes:

T	Val= 5.61	Plg=72	Azm= 34
N	-0.13	15	246
P	-5.47	9	153

Best Double Couple:Mo=5.5*10**16
NP1:Strike=226 Dip=38 Slip= 65
NP2: 77 56 109

GUMO	1.02	71	iP	07 08.70	0.0
PJG	1.02	71	eP	07 08.80	0.1
GUA	1.05	74	eP	07 08.80	-0.2
			eS	07 25.50	
MNDI	19.28	181	eP	11 03.00	2.0
LAT	20.02	171	eP	11 09.50	1.2
PMG	22.75	172	eP	11 34.50	-0.8
SHK	23.49	336	eP	11 43.00	0.6
SSE	27.41	314	Pc	12 18.50	-0.2
	1.5s		35.00nm		4.8mb
	Z 20s		0.50um		4.1Msz
			PPP	13 04.00	
			eS	16 40.00	
			sS	16 48.00	
CTA	33.21	176	iPc	13 09.70	-0.3
	0.8s		11.57nm		4.7mb
			eS	18 20.00	
WB5	34.23	196	eP	13 17.70	-1.0
			iPcP	15 52.10	
			eS	18 33.10	
WRA	34.30	196	Pd	13 18.30	-1.0
	0.6s		20.10nm		5.0mb
ASPA	37.97	195	iPd	13 49.70	-0.5
	0.7s		17.00nm		4.9mb
	Z 20s		0.32um		4.1Msz
			iS	19 29.30	
			iPcS	20 38.20	
			LR	29 06.50	
DZM	41.50	148	iP	14 19.90	0.5
MBL	41.56	215	iPc	14 19.50	-0.3
	0.3s		10.00nm		5.0mb
LZH	42.48	310	iPc	14 29.00	1.6
	1.5s		94.00nm		5.2mb
			i	15 00.00	
SNG	42.96	266	eP	14 32.00	0.7
NNT	42.99	274	eP	14 32.60	1.0
IPM	43.14	262	ePc	14 34.40	1.6
BDT	43.41	281	eP	14 36.20	1.3
CHG	43.45	283	eP	14 35.50	0.2
CHTO	43.45	283	eP	14 35.70	0.4
	0.7s		0.95nm		3.6mb X
			pP	15 05.00	129kmX
COOL	49.02	206	eP	15 17.00	-1.9
	0.5s		25.00nm		5.2mb
MRWA	50.08	212	iPc	15 25.90	-1.0
	0.4s		17.00nm		5.2mb
BFD	50.17	181	eP	15 27.00	-0.5
BAL	50.84	211	iPc	15 31.70	-1.0
	0.4s		30.00nm		5.4mb
KLB	51.15	209	iPc	15 33.70	-1.3

08d 19h

MUN	52.21	210	eP	15	41.40	-1.5
NWAO	52.50	208	eP	15	44.00	-1.1
RKG	53.56	208	iPd	15	55.30	2.5
	0.5s	71.00nm			5.8mb	
MSZ	61.65	161	P	16	48.80	-0.5
HYB	62.88	283	iPc	16	57.00	-1.1
	1.0s	20.00nm			5.0mb	
			e	17	34.00	
GBA	64.43	279	P	17	07.00	-1.1
PMR	67.54	28	P	17	25.20	-1.9
	0.5s	11.57nm			5.0mb	
QUE	72.26	298	eP	17	57.00	0.3
PMO	73.12	110	iP	18	03.40	1.9
	0.9s	55.00nm			5.3mb	
TPT	73.36	110	iP	18	04.70	1.7
	0.9s	35.00nm			5.1mb	
RUV	73.64	110	iP	18	06.30	1.7
	0.9s	35.00nm			5.1mb	
INK	75.04	22	ePc	18	10.20	-1.6
MAIO	77.80	305	iPc	18	28.30	0.4
			i	19	03.00	
MBC	78.83	14	eP	18	31.00	-1.7
	0.5s	10.00nm			4.8mb	
WDC	84.19	50	eP	19	01.50	0.3
PNT	84.26	41	eP	19	01.00	-0.4
	0.7s	18.00nm			5.0mb	
ORV	85.19	51	eP	19	05.80	-0.5
MHC	85.59	53	eP	19	08.60	0.1
PRS	86.03	54	eP	19	11.00	0.5
LLA	86.30	53	eP	19	12.00	0.2
CMB	86.39	52	eP	19	12.40	0.1
PRI	86.63	54	eP	19	14.30	0.7
FRI	87.17	53	eP	19	15.80	-0.2
BCH	87.32	55	P	19	17.60	0.7
SYP	87.57	55	eP	19	19.00	0.9
KVN	87.87	50	P	19	19.70	0.1
TNP	88.80	51	P	19	24.20	0.2
	0.8s	17.35nm			5.2mb	
PAS	89.11	55	eP	19	25.00	-0.3
CLC	89.12	54	eP	19	25.00	-0.4
MWC	89.18	55	eP	19	26.00	0.1
RVR	89.79	55	eP	19	28.00	-0.5
GSC	89.88	54	eP	19	29.00	0.0
PLM	90.37	56	eP	19	30.00	-1.4
SUF	90.38	336	eP	19	29.70	-0.9
BAR	90.71	56	eP	19	32.00	-0.8
TPC	90.81	55	eP	19	33.00	-0.3
GLA	92.09	56	eP	19	39.00	-0.2
NUR	92.14	334	eP	19	20.00	-18.7X
FFC	92.61	32	iPc	19	40.10	-0.9
	0.9s	13.00nm			5.1mb	
PV09	94.70	49	P	19	50.70	-0.7
BCAO	122.96	284	ePKPd	25	26.90	0.5
	0.4s	4.00nm				
KIC	143.24	300	PKP	26	00.86	-3.6X
TIC	143.32	301	PKP	26	00.98	-3.6X
LIC	143.55	300	PKP	26	01.80	-3.2X
	0.5s	19.00nm				
ARE	145.69	100	ePKP	26	09.00	0.1
ZOBO	148.93	100	PKPc	26	15.20	0.8
LPB	148.95	100	PKP	26	20.00	5.8X
CNCB	149.05	101	PKP	26	16.10	1.5
BAO	168.26	103	ePKP	26	37.10	1.2

S.D. = 1.0 on 70 of 75 obs.

? JAN 08, 1990 19h 43m 06.01± 3.62s
32.305 S ±13.8km 69.527 W ±19.5km
DEPTH = 118.7 ± 58.2 km
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.95	62	iPd	43	28.00	0.2
			S	43	44.00	
CFA	1.30	58	iPd	43	30.50	-0.9
			S	44	03.50	
RTLL	1.33	43	e(P)	43	32.00	0.2
			S	43	51.50	
ROCH	1.42	242	iP	43	32.50	-0.5
			iS	43	51.80	
PCH	1.55	212	iP	43	35.00	0.6
			iS	43	57.00	
TACH	1.79	221	iPd	43	37.40	0.1
			iS	44	01.50	
CHCH	1.88	210	iPc	43	39.50	1.1
			iS	44	04.00	
RTRS	2.13	2	iPd	43	42.00	0.5
LNV	2.28	223	iPd	43	42.20	-1.2
			iS	44	09.70	

S.D. = 1.0 on 9 of 9 obs.

JAN 08, 1990 19h 44m 34.67± 0.19s
52.038 N ± 4.3km 169.446 W ± 3.1km
DEPTH = 33.0km (normal)
5.6mb (68 obs.) 5.7Msz (21 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
ML 5.6 (PMR), Ms 5.8 (BRK), 5.3 (PAS). Mo=1.6*10**18 Nm (PPT).
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.B.: 16S, 39C
Centroid Locotion:
Origin Time 19:44:38.3 0.2
Lot 52.34N 0.03 Lon 169.51W 0.05
Dep 15.0 FIX Holf-durotion 3.9
Moment Tensor; Scole 10**17 Nm
Mrr= 7.13 0.18 Mtt=-4.79 0.23
Mff=-2.33 0.19 Mrt= 9.14 0.82
Mrf= 4.18 0.73 Mtf=-4.90 0.21
Principal Axes:
T Val= 12.22 Plg=63 Azm=347
N 1.14 8 240
P -13.36 26 146
Best Double Couple:Mo=1.3*10**18
NP1:Strike=218 Dip=21 Slip= 66
NP2: 63 71 99

ADK	4.48	271	iPc	45	40.70	-1.3
SDN	6.26	55	eP	46	07.00	-0.1
SMY	10.09	280	eP	46	59.20	-1.0
Z	18s	48.00um				
KDC	11.30	53	eP	47	14.80	-1.9
SVW	11.84	34	eP	47	25.80	1.8
TTA	13.06	28	eP	47	42.20	1.9
PMS	14.25	42	eP	47	52.50	-3.4X
PMR	14.61	41	eP	47	58.20	-2.3
Z	19s	39.00um				
TOA	16.08	42	ePc	48	16.80	-2.8
IMA	16.16	23	eP	48	20.50	-0.2
FBA	17.03	33	eP	48	28.90	-2.6
BRW	20.16	12	eP	49	06.50	-2.0
SIT	20.27	62	eP	49	10.00	0.2
Z	19s	29.00um			5.7Msz	
INK	23.65	33	eP	49	40.50	-2.8
	0.5s	67.00nm			5.4mb	
GMW	30.04	80	eP	50	42.50	0.0
RMW	30.68	79	eP	50	48.50	0.3
MBC	30.86	21	eP	50	48.00	-1.4
	0.4s	19.00nm			5.2mb	
PNT	31.20	75	eP	50	52.00	-0.7
	1.0s	115.00nm			5.6mb	
HON	31.92	160	eP	50	59.50	0.3
NEW	33.14	75	eP	51	09.80	0.1
EDM	33.33	65	iPc	51	10.60	-0.7
	0.8s	158.00nm			6.0mb	
LBFM	33.76	89	eP	51	16.00	0.7
WDC	33.80	91	e(P)	51	17.50	2.1
MIN	34.51	91	e(P)	51	22.20	0.4
ORV	35.05	92	eP	51	27.60	1.4
BRK	35.61	94	e(P)	51	32.30	1.4
Z	18s	20.00um			5.9Msz	
			eS	57	16.00	
			eLQ	59	42.00	
			eLR	01	30.00	
			e	04	00.00	
BKS	35.62	94	e(P)	51	29.80	-1.3
	1.0s	65.00nm			5.5mb	
Z	20s	13.00um			5.7Msz	
N	20s	6 00um				
E	20s	12 00um				
			e	57	16.80	
			e	59	30.00	
SES	35.77	69	eP	51	31.00	-1.3
	0.6s	202.00nm			6.2mb	
MHC	36.33	95	eP	51	37.50	0.3
ARN	36.39	95	eP	51	38.00	0.4
CMB	36.67	93	eP	51	41.00	1.1
	1.4s	61.97nm			5.3mb	
LRM	37.11	76	eP	51	42.40	-1.4
			e	51	57.70	
PRS	37.14	96	eP	51	44.50	0.6
LLA	37.22	95	eP	51	45.40	0.8
KVN	37.45	90	eP	51	47.30	0.6
FRI	37.74	93	eP	51	49.50	0.6
HPI	37.84	80	eP	51	51.00	1.0
TNP	38.59	90	eP	51	56.50	0.2

PTI	38.75	80	eP	51	56.50	-1.0
FFC	38.93	58	iPc	51	57.70	-1.0
	0.6s	17.00nm			5.0mb	
IMW	39.05	78	eP	51	59.50	-0.6
SYP	39.18	97	eP	52	14.00	12.8X
			e	52	28.00	
ISA	39.36	94	eP	52	15.00	12.5X
CLC	39.80	93	eP	52	07.00	0.8
			e	54	25.00	
DUG	40.02	84	eP	52	08.30	0.2
PAS	40.55	96	eP	52	20.00	7.8X
			esP	52	28.00	
			epP	52	42.00	93kmX
			ePP	53	42.00	
			eS	58	29.00	
			eSS	01	20.00	
			eLg	01	29.00	
			eScS	02	09.00	
			eLR	03	08.00	
MWC	40.57	95	eP	52	13.00	0.4
GSC	40.62	93	eP	52	13.00	0.0
			e	52	25.00	
DAU	40.85	83	eP	52	15.00	-0.1
RVR	41.14	95	eP	52	17.00	-0.1
PEC	41.34	95	eP	52	19.50	0.7
PLM	41.89	95	eP	52	24.00	0.5
BAR	42.46	96	eP	52	28.00	0.0
GLA	43.34	94	eP	52	36.00	0.8
			e	52	49.00	
SHK	44.36	270	eP	52	45.10	1.7
GOL	44.87	80	eP	52	47.60	-0.2
	0.9s	132.58nm			5.8mb	
Z	20s	8.75um			5.7Msz	
RSON	45.20	60	eP	52	48.40	-1.5
	0.8s	116.19nm			5.8mb	
			e	53	03.00	
ANMO	47.24	85	eP	53	06.50	0.0
Z	20s	2.02um			5.1Msz	
ALQ	47.25	85	iPd	53	06.50	0.0
	1.0s	25.00nm			5.2mb	
Z	20s	14.36um			5.9Msz	
FRB	49.28	35	eP	53	20.00	-1.6
	0.4s	33.00nm			5.7mb	
KBS	49.30	360	eP	53	24.00	2.4
DAG	50.12	8	iPc	53	25.20	-2.7
	0.8s	141.79nm			6.0mb	
Z	18s	9.90um			5.9Msz	
N	18s	6.19um				
E	18s	8.25um				
GDH	50.32	25	eP	53	26.00	-3.5X
			i	54	04.00	
			i	01	02.00	
			i	05	10.00	
GUMO	52.90	241	e(P)	53	46.20	-3.5X
Z	20s	1.76um			5.1Msz	
			e	53	48.00	
			eS	01	15.00	
PJG	52.90	241	e(P)	53	48.50	-1.1
GUA	52.92	241	e(P)	53	48.00	-1.8
	0.7s	115.07nm			5.9mb	
TUL	53 11	77	eP	53	46.20	-4.8X
	1.0s	14.00nm			4.9mb	
Z	18s	8.20um			5.8Msz	
			LR	06	00.00	
SSE	53.78	276	P+	53	54.00	-1.9
	1 0s	99.00nm			5.8mb	
Z	20s	9.20um			5.8Msz	
N	18s	4.90um				
E	18s	1.60um				
			sP	54	06.00	
			ePP	56	00.00	
			S	01	28.00	
			PS	01	40.00	
			ScS	04	38.00	
			SS	05	20.00	
FVM	54.91	71	eP	54	02.00	-2.2
			e	54	15.50	
SCH	55.74	43	eP	54	09.00	-1.0
	0.7s	55.00nm			5.7mb	
CLE	57.60	63	iP	54	27.00	3.6X
ANP	57.79	270	eP	54	23.00	-2.0
KEV	57.93	353	iP	54	23.20	-2.1
	0.8s	46.90nm			5.6mb	
TRO	58.49	357	eP	54	27.00	-2.2
PTN	58.96	56	eP	54	30.60	-2.3
RSNY	59.21	56	eP	54	32.40	-2.2
RSCP	59.36	70	eP	54	34.60	-1.2

e 54 47.30
HBVT 60.09 55 eP 54 37.70 -2.9
LOF 60.13 359 eP 54 31.48 -9.1X
SOD 60.30 353 iP 54 39.80 -2.0
AKU 60.57 13 iPc 54 45.40 1.8
1.1s 81.01nm 5.8mb
LZH 60.67 292 eP 54 43.00 -1.9
8.0s 1047.00nm 6.0mb X
Z 18s 14.90um 6.2Msz
N 17s 7.30um
E 17s 8.70um
S 03 15.00
BLA 61.19 66 eP 54 47.50 -0.8
0.8s 127.52nm 6.1mb
CVL 61.74 64 eP 54 50.50 -1.4
e 55 05.00
CBN 62.18 63 eP 54 55.00 0.2
JSC 62.80 69 eP 54 57.00 -2.0
e 55 11.00
LHS 62.92 68 eP 54 57.80 -2.0
e 55 12.00
PPM 63.43 93 (P) 55 03.50 -0.5
NSS 63.77 359 iPc 55 02.93 -2.0
BAG 64.92 265 eP 55 08.00 -5.3X
eS 03 52.00
SUF 64.93 352 eP 55 10.60 -1.9
0.5s 179.90nm 6.4mb
RGS 65.29 0 eP 55 13.30 -1.5
MOL 65.71 2 eP 55 15.63 -1.9
OXX 66.11 93 (P) 55 21.00 0.1
HNR 66.64 213 eP 55 24.00 0.0
e(S) 04 16.00
NUR 67.24 352 iP 55 25.40 -1.8
0.9s 216.30nm 6.2mb
Z 16s 5.00um 5.8MszX
e 05 00.00
e 09 12.00
LR 26 08.00
NB2 67.27 360 P 55 25.40 -2.2
0.8s 63.50nm 5.8mb
HFS 68.15 358 eP 55 30.40 -2.6
0.6s 67.20nm 5.9mb
Z 17s 2.16um 5.4MszX
LR 23 14.00
UPP 68.31 356 iP 55 33.40 -0.6
1.0s 200.00nm 6.2mb
i 55 35.50
DAV 69.16 254 eP 55 36.00 -3.9X
KMI 69.30 284 Pc+ 55 39.50 -1.4
Z 20s 4.50um 5.7Msz
N 18s 4.60um
E 18s 3.40um
pP 55 47.50 26kmX
sP 55 50.00
e 04 48.00
sS 05 02.00
VAH 69.62 158 eP 55 43.00 0.5
0.9s 40.00nm 5.5mb
PPN 71.44 160 eP 55 54.00 0.5
0.9s 50.00nm 5.6mb
PMG 71.63 226 eP 55 53.50 -1.2
EKA 72.39 8 P 56 00.00 1.2
1.5s 114.10nm 5.6mb
COP 72.64 359 iP 56 08.20 8.0X
0.8s 71.64nm 5.7mb
DMU 73.43 11 eP 56 04.60 -0.3
DCN 73.93 11 eP 56 05.50 -2.3
0.9s 77.00nm 5.7mb
DLE 74.07 11 eP 56 07.70 -0.9
SHL 75.32 293 eP 56 14.20 -2.3
iS 05 56.50
WIT 75.47 2 eP 56 18.00 1.4
e 56 28.50
LOE 75.76 280 eP 56 18.50 -0.4
WTS 76.29 2 eP 56 21.50 0.2
1.0s 45.00nm 5.4mb
e 56 31.00
CHG 76.37 283 ePc 56 21.30 -1.0
1.0s 27.25nm 5.2mb
eS 06 26.00
CHTO 76.37 283 eP 56 21.10 -1.2
DZM 76.75 203 iPc 56 27.30 3.0X
CLL 77.01 358 eP 56 24.00 -1.3
1.6s 71.00nm 5.4mb
Z 18s 2.50um 5.6Msz
i 56 27.80
KSP 77.38 356 eP 56 26.00 -1.4

0.9s 40.00nm 5.4mb
BRG 77.43 358 iP 56 27.30 -0.3
1.3s 44.00nm 5.3mb
i 56 31.00
i 56 37.10
ENN 77.50 3 eP 56 28.00 0.0
1.0s 106.00nm 5.8mb
e 56 31.50
BDT 77.54 282 eP 56 29.00 0.3
1.0s 41.40nm 5.4mb
MEM 77.66 3 P 56 29.00 0.2
KRA 77.97 354 iPd 56 30.30 -0.3
1.1s 86.00nm 5.7mb
Z 16s 3.20um 5.7MszX
E 16s 2.70um
HOF 78.02 359 iPd 56 30.90 0.0
NST 78.07 280 eP 56 31.50 -0.1
DOU 78.12 4 P 56 31.20 -0.2
PRU 78.30 357 Pd 56 32.70 0.3
Z 18s 3.70um 5.8Msz
N 18s 2.50um
E 18s 2.40um
i 56 36.00
ABH 78.43 2 eP 56 32.18 -1.0
RUP 78.60 2 eP 56 33.63 -0.5
WLF 78.61 3 P 56 35.00 0.9
GRF 78.65 360 eP 56 34.30 -0.1
Z 21s 1.90um 5.4Msz
e 56 38.90
TOD 78.72 1 eP 56 34.42 -0.4
SPC 78.81 354 eP 56 35.70 0.2
FLN 79.14 7 eP 56 36.00 -1.1
0.8s 181.80nm 6.1mb
KHC 79.18 358 iPc 56 37.00 -0.3
1.3s 78.50nm 5.5mb
Z 18s 3.50um 5.7Msz
N 18s 2.10um
E 18s 2.00um
e 56 50.00
GWF 79.33 2 P 56 37.46 -0.7
LDF 79.33 7 eP 56 37.30 -0.8
0.8s 32.25nm 5.4mb
GRR 79.48 8 eP 56 38.90 0.0
0.8s 24.20nm 5.2mb
LPF 79.82 8 eP 56 40.80 0.1
0.8s 32.25nm 5.4mb
CDF 79.89 2 eP 56 41.00 -0.2
1.2s 77.35nm 5.6mb
WLS 79.89 2 P 56 41.14 -0.1
VKA 79.96 356 eP 56 41.50 0.0
4.0s 597.00nm 5.9mb X
ZST 79.99 356 iP 56 41.80 0.2
VITF 80.05 3 P 56 41.61 -0.3
ECH 80.08 2 P 56 42.42 0.2
PSZ 80.10 354 iP 56 42.60 0.2
HAU 80.27 3 eP 56 42.80 -0.4
0.8s 43.00nm 5.5mb
SRO 80.31 355 eP 56 43.60 0.3
FEL 80.44 2 P 56 44.03 -0.2
MOF 80.45 2 P 56 44.43 0.2
BSF 80.46 3 eP 56 43.90 -0.4
1.0s 68.00nm 5.6mb
SOP 80.53 356 iPd 56 47.20 2.7
SLE 80.56 1 ePd 56 44.50 -0.2
BUD 80.59 354 eP 56 45.00 0.1
NNT 80.70 278 eP 56 45.40 -0.5
e 23 52.80
NDI 80.77 305 iPd 56 46.00 -0.1
eS 07 06.00
SS 11 44.00
GRC 80.84 5 P 56 47.05 0.9
ZLA 80.84 1 ePd 56 46.50 0.2
BBS 80.84 2 P 56 47.01 0.8
LOR 80.91 5 eP 56 46.40 -0.2
1.0s 58.00nm 5.5mb
LOMF 80.94 3 P 56 46.90 0.1
SAX 81.09 1 ePd 56 48.00 0.2
SSF 81.10 5 eP 56 47.40 -0.1
LBF 81.20 5 eP 56 47.70 -0.4
0.8s 37.60nm 5.4mb
KBA 81.24 358 iPc 56 47.60 -0.9
1.0s 192.00nm 6.1mb
i 56 52.90
MFF 81.31 7 eP 56 48.60 -0.1
0.8s 59.10nm 5.6mb
AVF 81.36 5 eP 56 48.60 -0.3
0.8s 43.00nm 5.5mb

LLS 81.46 1 ePd 56 49.80 0.1
OGA 81.47 360 iPd 56 51.00 1.2
VRI 81.49 349 ePd 56 51.50 1.9
SMF 81.53 5 eP 56 49.50 -0.3
CTA 81.54 222 iPc 56 49.00 -1.1
1.0s 54.00nm 5.5mb
iS 07 00.00
BGF 81.56 5 eP 56 49.90 -0.1
OSS 81.66 0 ePd 56 51.20 0.5
FVI 81.73 358 P 56 52.50 1.7
LSF 81.79 6 eP 56 50.80 -0.3
TCF 81.79 6 eP 56 50.80 -0.4
1.2s 62.50nm 5.5mb
VDL 81.85 1 ePd 56 53.30 1.6
MAF 81.88 6 eP 56 51.70 0.1
0.8s 26.00nm 5.3mb
MLR 81.95 349 ePc 56 53.00 0.8
AGO 82.08 5 P 56 53.29 0.6
PLDF 82.19 5 P 56 53.66 0.3
MAIO 82.20 322 iPc 56 53.00 -0.6
0.7s 17.47nm 5.2mb
EMS 82.22 3 ePd 56 54.90 1.2
DIX 82.23 2 ePd 56 55.20 1.4
TMA 82.23 1 ePd 56 53.90 0.2
LJU 82.24 357 eP 56 53.00 -0.5
BZS 82.26 352 eP 56 53.00 -0.6
MMK 82.27 2 ePd 56 55.20 1.2
VOY 82.27 358 eP 56 53.40 -0.4
CMP 82.27 350 ePd 56 56.00 2.3
MTN 82.37 238 iPc 56 53.70 -0.8
PYM 82.38 5 P 56 54.49 0.2
VAI 82.46 1 Pc 56 55.80 1.2
CEY 82.55 357 e(P) 56 52.80 -2.3
MDI 82.56 1 P 56 57.80 2.7
TRI 82.60 358 eP 56 57.10 1.8
e 08 24.00
e 12 56.00
e 16 30.00
eLR 25 48.00
ORX 82.69 2 P 56 55.74 -0.2
ORO 82.69 2 P 56 57.60 1.6
RJF 82.73 6 eP 56 56.10 0.0
0.6s 12.65nm 5.2mb
SAL 82.74 0 Pc 56 57.70 1.7
VBY 82.75 357 eP 56 57.10 0.9
LSD 82.84 2 P 56 58.30 1.3
LBL 82.91 5 P 56 57.86 0.9
UPA 82.94 85 e(P) 57 08.00 10.4X
Z 20s 2.09um 5.5Msz
RIY 82.94 357 ePd 56 57.20 0.1
LFF 83.03 7 eP 56 57.80 0.2
0.6s 43.30nm 5.7mb
CAF 83.14 6 eP 56 58.40 0.2
0.8s 30.90nm 5.5mb
BEO 83.14 353 eP 56 58.50 0.3
RSP 83.15 2 P 56 59.02 0.6
BNI 83.23 3 Pc 57 01.60 2.8
LPO 83.32 7 eP 56 59.30 0.2
0.6s 18.05nm 5.4mb
RRL 83.37 3 P 57 00.76 1.1
BOB 83.57 1 Pc 57 02.10 1.6
PCP 83.79 1 P 57 00.04 -1.5
PZZ 83.79 2 P 57 01.58 -0.1
DOI 83.80 2 P 57 02.90 1.2
CKI 83.90 2 P 57 03.70 1.6
ROB 84.02 2 P 57 02.40 -0.4
STV 84.06 2 P 57 01.99 -1.0
ENR 84.08 2 P 57 02.10 -1.0
FIN 84.11 2 P 57 01.48 -1.7
MME 84.15 360 P 57 05.80 2.2
PVL 84.27 349 iPd 57 05.00 1.1
BDI 84.28 360 Pc 57 06.10 2.0
TOUF 84.29 2 P 57 05.24 1.0
AUTN 84.31 2 P 57 05.24 0.8
SNG 84.36 274 eP 57 05.40 0.6
eS 07 28.00
MVIF 84.40 2 P 57 05.53 0.7
RSM 84.40 359 P 57 07.30 2.8
AURF 84.41 2 P 57 05.46 0.7
SFI 84.42 359 P 57 06.90 2.3
SBF 84.44 2 eP 57 05.40 0.5
PGD 84.46 359 Pc 57 07.20 2.1
CALN 84.54 3 P 57 05.68 0.2
PII 84.62 0 P 57 06.20 0.6
KVT 84.65 341 iP 57 06.60 0.7
CRE 84.71 359 P 57 07.60 1.3
FRF 84.72 3 eP 57 06.60 0.4

08d 19h

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8.0s 56.40nm 4.8mb X
KAS 84.81 343 iPd 57 08.80 2.0
LRG 84.82 3 eP 57 07.50 0.9
1.0s 76.00nm 5.8mb
ARV 84.82 358 P 57 09.00 2.3
EPF 84.90 8 eP 57 07.20 0.0
0.8s 42.00nm 5.7mb
LMR 84.94 3 eP 57 08.00 0.7
0.8s 53.75nm 5.8mb
TAB 84.99 332 eP 57 07.00 -0.8
HVAR 85.03 356 iPc 57 06.70 -1.0
VTS 85.11 351 iP 57 09.00 0.6
ASS 85.25 358 P 57 10.60 1.6
BCI 85.61 353 eP 57 10.70 0.1
BRS 85.74 213 iP 57 11.50 0.2
1.0s 2.50nm 4.4mb X
eS 07 36.00
KDZ 85.80 349 iP 57 13.00 1.3
KKB 85.84 351 iP 57 12.00 0.1
RZN 85.85 349 iP 57 12.00 -0.1
ITU 85.86 346 eP 57 12.00 0.1
IR7 85.87 328 eP 57 12.20 0.0
SKO 85.89 352 iP 57 10.90 -1.2
1.3s 84.00nm 5.8mb
Z 17s 2.83um 5.7MszX
N 17s 3.47um
E 17s 2.40um
iPcP 57 15.40
i 57 24.50
iS 07 52.50
i 08 46.00
iPS 09 04.00
iSS 13 40.00
iSSS 17 45.00
LR 43 59.00
MNS 85.94 358 Pc 57 12.60 0.2
AQU 85.96 358 P 57 13.90 1.4
SDA 86.00 353 eP 57 11.80 -0.8
MMB 86.05 350 eP 57 14.00 1.1
IR1 86.10 328 eP 57 14.50 1.1
IPM 86.13 272 ePc 57 14.90 1.2
0.9s 27.30nm 5.5mb
IR4 86.20 328 eP 57 15.00 1.1
AZI 86.32 358 P 57 15.50 1.4
RMO 86.34 217 eP 57 14.00 -0.3
LACI 86.37 353 eP 57 14.40 0.0
VAY 86.44 351 iP 57 14.50 -0.3
GPA 86.46 345 eP 57 15.00 0.0
RMP 86.51 358 P 57 15.70 0.6
SRS 86.53 350 eP 57 15.40 0.1
KNT 86.56 351 eP 57 15.40 0.0
RDP 86.56 358 P 57 18.60 3.1X
SDI 86.59 358 Pc 57 16.10 0.5
DUI 86.62 357 P 57 17.80 2.0
TIR 86.64 353 eP 57 14.70 -1.1
WB5 86.69 232 eP 57 15.00 -1.2
WRA 86.76 232 Pc 57 14.50 -2.0
0.8s 31.60nm 5.6mb
EDC 86.77 347 eP 57 16.50 0.1
OHR 86.80 352 iPd 57 16.60 -0.1
1.3s 0.15nm 3.1mb X
i 57 25.10
SOH 86.85 350 eP 57 17.00 0.1
EBR 87.11 8 eP 57 20.00 2.0
BERA 87.28 353 eP 57 18.90 0.1
BRT 87.28 355 P 57 20.00 1.1
DST 87.38 346 eP 57 20.10 0.6
MSL 87.45 334 ePc 57 14.00 -5.8X
eS 08 08.00
EZN 87.49 348 iP 57 19.20 -0.7
TOL 87.58 11 eP 57 20.00 -0.4
LIT 87.65 351 eP 57 20.40 -0.3
TPE 87.68 353 eP 57 21.00 0.2
SGO 87.69 356 P 57 22.50 1.7
LCI 87.78 354 P 57 23.00 1.7
TOV 88.24 76 eP 57 25.20 1.3
IGT 88.41 352 eP 57 26.40 2.1
KHL 88.50 345 eP 57 24.00 -0.9
AGG 88.74 351 eP 57 24.90 -1.1
IZM 88.77 347 eP 57 25.00 -1.1
PSI 88.90 273 iPd 57 26.00 -1.0
1.0s 93.20nm 6.1mb
HYB 89.25 298 iPc 57 27.50 -1.2
1.0s 150.00nm 6.3mb
CAR 89.38 74 eP 57 31.00 1.6
CEOS 89.71 76 eP 57 30.00 -0.9
OLLA 89.84 74 eP 57 33.00 1.4
ELL 89.98 345 eP 57 31.00 -1.0
ASMO 90.10 11 eP 57 32.00 -0.6
AAPN 90.11 12 iPc 57 33.40 0.8
ASPA 90.15 230 iPc 57 31.80 -0.8
0.9s 87.00nm 6.0mb
Z 24s 0.43um 4.8MszX
eS 08 03.60
LR 10 10.80
ALOJ 90.31 12 iPc 57 33.50 0.0
ACHM 90.34 11 eP 57 34.00 0.4
ATEJ 90.51 12 eP 57 33.80 -0.7
APHE 90.51 11 eP 57 37.00 2.5
MAL 90.64 12 eP 57 36.00 1.2
eS 08 34.00
POO 90.86 302 iPc 57 37.60 1.4
iS 08 11.50
BOM 91.09 303 eP 57 32.50 -4.7X
eS 08 20.50
CMS 91.94 217 eP 57 41.00 0.4
HRI 92.23 339 e(P) 57 43.00 0.6
SHMJ 92.75 339 P 57 48.00 3.3X
GBA 92.98 296 P 57 45.00 -0.9
JARJ 93.18 339 Pd 57 49.00 2.3
STK 93.92 220 eP 57 50.00 0.3
DSI 93.95 339 eP 57 50.00 -0.1
PRNI 95.21 339 e(P) 57 57.00 0.9
ZOBO 109.60 91 ePKP 03 08.00 3.8X
Z 22s 1.24um 5.4Msz
SKS 13 00.00
LR 38 36.00
LPB 109.81 92 (PKP) 03 07.00 2.6X
Z 20s 1.77um 5.6Msz
e 03 30.00
SKS 12 40.00
LR 38 10.00
CNCB 110.10 92 ePKP 03 08.00 2.8X
TIC 120.05 18 PKP 03 22.10 -1.4
KIC 120.38 18 PKP 03 23.20 -1.0
LIC 120.45 18 PKP 03 23.40 -0.9
Z 20s 5.50um 6.2Msz
BCAO 123.34 350 iPKPd 03 30.30 0.5
0.5s 8.00nm
ic 03 42.00
id 05 07.10
LWI 128.08 337 ePKPd 03 39.70 0.4
SPA 141.85 180 ePKP 03 58.70 -4.7X
0.9s 12.73nm
BUL 145.19 329 iPKPd 04 24.20 13.7X
0.7s 44.18nm
SLR 150.49 326 iPKPc 04 24.50 5.7X
1.0s 20.00nm
Z 19s 4.86um 6.3Msz
PRY 151.87 327 iPKPc 04 27.20 6.4X
0.7s 15.00nm
BFS 152.07 328 iPKPc 04 29.00 7.9X
1.0s 240.00nm
BLF 154.31 327 ePKP 04 31.50 7.4X
1.0s 60.00nm
KIM 154.43 330 iPKPc 04 33.00 8.7X
HVD 155.92 327 iPKPc 04 34.50 8.2X
POF 156.31 339 ePKP 04 36.00 9.4X
S.D. = 1.2 on 307 of 337 obs.
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JAN 08, 1990 20h 11m 45.23± 0.41s
52.044 N ± 9.1km 169.351 W ± 5.2km
DEPTH = 33.0km (normal)
5.0mb (46 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
ML 4.5 (PMR).

```
ADK 4.54 271 ePc 12 52.10 -1.2
SDN 6.21 54 ePc 13 17.90 1.0
PMS 14.20 42 eP 15 04.30 -1.6
TOA 16.04 42 eP 15 28.50 -1.1
FBA 16.99 32 eP 15 40.10 -1.5
BRW 20.14 12 eP 16 17.00 -1.8
INK 23.61 33 eP 16 51.50 -2.0
MBC 30.83 21 eP 17 58.50 -1.2
0.4s 3.00nm 4.4mb
PNT 31.14 75 eP 18 03.00 0.3
EDM 33.27 65 eP 18 22.00 0.6
LBFM 33.70 89 eP 18 30.00 4.6X
WDC 33.74 91 e(P) 18 27.00 1.5
SES 35.71 69 eP 18 43.00 0.7
CMB 36.61 93 e(P) 18 48.60 -1.4
KVN 37.39 90 eP 18 57.50 0.7
TNP 38.53 90 eP 19 07.50 1.1
0.8s 5.15nm 4.4mb
FFC 38.88 59 eP 19 09.00 0.2
0.7s 6.00nm 4.5mb
BW06 40.45 79 eP 19 22.00 -0.2
0.7s 10.23nm 4.7mb
GOL 44.81 80 eP 19 58.50 0.6
0.9s 17.05nm 4.9mb
RSON 45.14 60 eP 19 59.00 -1.0
e 20 17.50
ANMO 47.19 85 eP 20 14.50 -2.1
ALQ 47.19 85 eP 20 14.00 -2.6
1.0s 7.50nm 4.6mb
FRB 49.24 35 eP 20 31.00 -0.8
DAG 50.10 8 iPc 20 36.00 -2.3
0.9s 31.09nm 5.3mb
SSE 53.84 276 Pc 21 06.50 -0.4
1.2s 39.00nm 5.3mb
SCH 55.70 43 eP 21 20.00 -0.3
HBVT 60.03 55 eP 21 50.00 -0.9
SOD 60.30 353 iP 21 50.70 -1.6
LZH 60.72 292 P 21 55.00 -0.8
1.5s 38.00nm 5.3mb
pP 22 04.00 29kmX
CVL 61.68 64 eP 22 01.50 -0.6
JSC 62.75 69 eP 22 06.00 -3.2X
SUF 64.93 352 iP 22 21.50 -1.6
0.5s 38.80nm 5.8mb
NUR 67.24 353 iPd 22 36.20 -1.6
0.8s 41.10nm 5.6mb
NB2 67.27 360 P 22 36.60 -1.5
0.7s 9.20nm 5.0mb
HFS 68.15 358 eP 22 41.20 -2.3
0.7s 15.70nm 5.2mb
KMI 69.36 285 Pc 22 50.50 -1.3
sP 23 05.00
CHG 76.43 283 eP 23 32.50 -0.7
CHTO 76.43 283 eP 23 32.10 -1.0
1.6s 13.12nm 4.7mb
CLL 77.00 358 eP 23 35.00 -0.8
KSP 77.38 356 eP 23 37.80 -0.1
BRG 77.42 358 iP 23 37.60 -0.5
1.2s 19.00nm 5.0mb
e 23 49.00
ENN 77.49 3 eP 23 38.50 0.0
1.0s 22.00nm 5.1mb
e 23 50.00
BDT 77.60 282 eP 23 40.00 0.4
MEM 77.65 3 P 23 40.20 0.8
e 23 51.00
DOU 78.11 4 Pc 23 42.60 0.7
PRU 78.29 357 eP 23 42.50 -0.5
GRF 78.64 360 iPc 23 45.50 0.6
1.2s 27.00nm 5.1mb
SPC 78.81 354 eP 23 45.60 -0.5
KHC 79.17 358 iPc 23 48.50 0.6
1.2s 15.00nm 4.9mb
e 24 00.00
LDF 79.32 7 eP 23 48.30 -0.3
1.0s 12.00nm 4.8mb
GRR 79.47 8 eP 23 49.40 0.0
1.0s 16.00nm 5.0mb
LPF 79.80 8 eP 23 51.40 0.2
1.0s 8.00nm 4.7mb
CDF 79.88 2 eP 23 52.10 0.4
1.0s 8.00nm 4.7mb
ZST 79.99 356 eP 23 52.50 0.3
HAU 80.26 3 eP 23 54.00 0.3
1.2s 17.85nm 4.9mb
SRO 80.31 355 eP 23 54.40 0.5
BSF 80.45 3 eP 23 55.00 0.2
1.0s 12.00nm 4.8mb
NDI 80.81 305 iP 23 56.20 -0.7
LOR 80.90 5 eP 23 57.40 0.3
1.0s 16.00nm 5.0mb
SSF 81.08 5 eP 23 58.60 0.6
1.2s 22.30nm 5.0mb
LBF 81.19 5 eP 23 58.80 0.2
1.0s 12.00nm 4.9mb
KBA 81.23 358 iP 23 59.10 0.1
1.0s 26.80nm 5.2mb
i 24 10.80
MFF 81.30 8 eP 23 59.60 0.5
1.0s 24.00nm 5.2mb
AVF 81.35 5 eP 23 59.70 0.3
1.1s 14.65nm 4.9mb
SMF 81.52 5 eP 24 00.80 0.5
1.2s 23.80nm 5.1mb
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BGF 81.55 5 eP 24 00.80 0.3
1.0s 16.00nm 5.0mb
LSF 81.77 6 eP 24 02.00 0.4
1.0s 28.00nm 5.2mb
TCF 81.78 6 eP 24 01.90 0.2
1.0s 8.00nm 4.7mb
MAF 81.87 6 eP 24 02.70 0.6
1.0s 8.00nm 4.7mb
MAIO 82.23 322 eP 24 05.00 0.7
VAI 82.46 1 Pc 24 06.70 1.6
ORO 82.68 2 P 24 08.00 1.5
LFF 83.02 7 eP 24 08.70 0.6
1.0s 12.00nm 4.9mb
CAF 83.13 6 eP 24 09.50 0.8
1.0s 10.00nm 4.9mb
BNI 83.22 3 Pc 24 11.50 2.1
LPO 83.31 7 eP 24 10.10 0.5
1.0s 12.00nm 5.0mb
BOB 83.56 1 Pc 24 13.30 2.3
CKI 83.89 2 P 24 14.50 1.9
BDI 84.27 0 P 24 16.50 1.9
SBF 84.43 2 eP 24 15.90 0.5
1.1s 43.95nm 5.6mb
QUE 84.45 314 eP 24 17.00 1.1
PGD 84.46 359 P 24 18.00 2.4
FIR 84.56 360 eP 24 17.00 1.1
PII 84.62 0 P 24 17.50 1.3
CRE 84.70 359 P 24 17.00 0.2
FRF 84.71 3 eP 24 17.30 0.6
1.0s 28.00nm 5.4mb
LRG 84.81 3 eP 24 18.30 1.1
0.8s 9.40nm 5.0mb
ARV 84.82 358 P 24 19.30 2.0
LMR 84.93 3 eP 24 18.80 1.0
1.0s 8.00nm 4.9mb
ASS 85.25 359 Pc 24 21.90 2.4
SKO 85.90 352 iP 24 22.40 -0.3
MNS 85.93 358 P 24 23.40 0.5
AZI 86.32 358 P 24 26.50 1.8
VAY 86.44 351 eP 24 22.80 -2.5
SDI 86.59 358 P 24 26.50 0.4
DUI 86.62 357 P 24 27.50 1.2
OHR 86.80 352 eP 24 26.50 -0.7
1.4s 0.08nm 2.7mb X
e 24 39.20
WRA 86.81 232 Pc 24 26.00 -1.3
0.8s 4.80nm 4.8mb
GRG 86.82 351 eP 24 27.90 0.6
OUR 87.27 350 eP 24 29.30 -0.1
LIT 87.65 351 eP 24 30.20 -1.1
PSI 88.96 273 eP 24 30.00 -7.8X
HYB 89.30 298 iPc 24 38.50 -1.0
1.0s 30.00nm 5.6mb
ASPA 90.19 230 iPc 24 42.00 -1.4
1.1s 13.00nm 5.1mb
Z 22s 1.60um 5.4MszX
LR 31 40.70
GBA 93.03 297 Pd 24 55.90 -0.8
1.1s 8.90nm 5.1mb
BUL 145.21 329 iPKPd 31 35.40 14.3X
1.0s 23.50nm
SLR 150.52 326 iPKPc 31 35.50 6.1X
0.9s 33.61nm
PRY 151.89 327 iPKPc 31 37.70 6.3X
0.9s 7.69nm
BFS 152.10 328 iPKPd 31 39.00 7.3X
0.7s 23.29nm
BLF 154.34 327 ePKP 31 38.00 3.3X
KIM 154.46 330 ePKP 31 42.00 7.1X
HVD 155.94 327 iPKPc 31 45.00 8.1X
S.D. = 1.2 on 102 of 112 obs.

JAN 08, 1990 20h 32m 00.22± 0.59s
36.119 N ± 6.4km 27.213 E ± 5.6km
DEPTH = 5.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP 0.57 183 ePb 32 11.20 -0.4
eSb 32 20.00
YER 1.33 40 iPn 32 23.70 -1.6
NPS 1.56 237 ePn 32 28.50 -0.2
SMG 1.61 349 ePb 32 30.00 0.6
APE 1.65 305 ePb 32 29.50 -0.5
KSL 1.92 89 ePn 32 34.00 0.2
ELL 2.26 73 ePn 32 40.20 1.2
IZM 2.27 1 ePn 32 44.00 4.9X
VAM 2.55 255 ePg 32 47.00 4.1X
KHL 2.87 39 ePn 32 51.00 3.4X
VLI 3.50 281 ePn 32 56.50 0.1
ITM 4.38 286 ePn 33 09.50 0.5
S.D. = 0.9 on 9 of 12 obs.

JAN 08, 1990 21h 04m 53.04± 0.36s
37.365 N ± 5.0km 118.309 W ± 3.1km
DEPTH = 5.0km (geophysicist)
CALIFORNIA-NEVADA BORDER REGION (40)
ML 3.3 (NEIS).

PPK 0.33 79 iPc 05 00.20 0.6
SVP 0.53 49 iP 05 04.20 0.4
LCH 0.54 104 iPc 05 03.50 -0.4
MGM 0.65 83 iPc 05 05.90 -0.2
MCA 1.09 131 iPc 05 12.70 -1.3
TNP 1.12 50 iPd 05 15.00 0.3
FRI 1.18 252 iPc 05 14.00 -1.5
iS 05 28.40
KVN 1.69 6 eP 05 23.50 -0.1
CMB 1.78 293 ePc 05 23.90 -0.8
iS 05 46.60
PKEM 1.95 229 eP 05 27.80 0.7
LLA 2.24 251 ePd 05 31.40 0.1
PRI 2.25 238 ePc 05 31.50 -0.1
PHAM 2.27 228 eP 05 32.90 1.1
ARN 2.57 271 eP 05 35.50 -0.5
SAO 2.58 258 ePc 05 36.20 0.0
BCH 2.61 214 eP 05 36.50 -0.1
ABL 2.62 197 eP 05 38.00 1.1
MHC 2.66 270 ePd 05 38.20 0.8
eS 06 11.70
S.D. = 0.8 on 18 of 18 obs.

? JAN 08, 1990 21h 23m 08.20± 0.94s
28.313 N ±16.9km 16.925 W ± 6.7km
DEPTH = 10.0km (geophysicist)
CANARY ISLANDS REGION (394)
mbLg 3.2 (MDD). Felt (III) ot
Punto Teno.

CTFE 0.61 74 P 23 21.20 0.8
S 23 29.50
TBT 0.94 293 P 23 25.80 -0.4
S 23 36.00
CHIE 1.09 238 iPd 23 29.00 0.4
iS 23 41.90
GGC 1.15 99 P 23 29.00 -0.8
S 23 42.00
CFTV 2.51 87 P 23 47.10 -2.6X
S 24 12.70
S.D. = 1.2 on 4 of 5 obs.

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* JAN 08, 1990 21h 25m 14.29± 0.78s
32.085 S ±10.8km 69.979 W ±11.8km
DEPTH = 33.0km (normal)
MENDOZA PROVINCE, ARGENTINA (139)

ROCH 1.24 224 iPc 25 36.90 1.3
iS 25 55.20
RTCV 1.25 80 e(P) 25 36.50 1.0
RTLL 1.49 60 iP 25 38.50 -0.6
S 25 58.50
CFA 1.56 73 iPd 25 39.50 -0.5
S 26 00.00
PCH 1.60 196 iP 25 41.50 0.8
iS 26 04.50
TACH 1.76 207 iPc 25 42.50 -0.4
iS 26 06.20
CHCH 1.93 197 iPc 25 45.50 0.1
iS 26 11.50
RTRS 1.96 13 iPd 25 46.00 0.2
LNV 2.22 212 iPd 25 47.70 -1.8
iS 26 13.80
S.D. = 1.1 on 9 of 9 obs.

JAN 08, 1990 21h 39m 45.46± 0.42s
52.127 N ± 8.5km 169.442 W ± 5.6km
DEPTH = 33.0km (normal)
4.9mb (40 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
ML 4.4 (PMR).

ADK 4.48 270 P 40 50.90 -1.9
SDN 6.21 55 eP 41 18.40 1.3
TTA 12.98 28 eP 42 51.10 1.1
PMS 14.18 42 eP 43 04.10 -1.7
PMR 14.54 41 eP 43 08.50 -1.9
TOA 16.01 42 eP 43 28.10 -1.5
IMA 16.08 24 eP 43 30.00 -0.4
FBA 16.95 33 P 43 40.00 -1.3
0.7s 11.63nm 4.1mb
INK 23.58 33 eP 44 52.00 -1.4
MBC 30.78 21 eP 45 59.00 -0.5
0.3s 2.00nm 4.4mb
WDC 33.80 91 eP 46 34.50 8.3X
MIN 34.51 91 e(P) 46 40.20 7.6X
ORV 35.05 92 e(P) 46 45.00 8.0X
SES 35.74 69 eP 46 43.00 0.2
CMB 36.67 93 e(P) 46 58.80 8.1X
PRS 37.15 96 e(P) 47 02.00 7.3X
KVN 37.45 90 P 46 57.00 -0.5
FRI 37.74 94 e(P) 47 06.30 6.6X
BCH 38.69 96 eP 47 09.50 1.7
FFC 38.88 59 eP 47 10.00 0.9
0.7s 5.00nm 4.4mb
BW06 40.49 79 eP 47 21.50 -1.3
1.0s 12.25nm 4.6mb
PLM 41.89 95 eP 47 35.00 0.7
GLA 43.35 94 eP 47 46.00 0.0
GOL 44.85 80 eP 47 55.50 -2.9X
0.8s 8.93nm 4.7mb
RSON 45.15 60 eP 47 59.00 -1.3
1.0s 15.18nm 4.9mb
ANMO 47.23 85 eP 48 14.50 -2.7X
1.0s 6.25nm 4.6mb
ALQ 47.24 85 eP 48 20.30 3.1X
1.5s 13.89nm 4.7mb
FRB 49.20 35 eP 48 31.00 -0.8
DAG 50.03 8 iPc 48 36.30 -1.7
0.9s 23.53nm 5.2mb
SSE 53.77 276 P 49 05.30 -1.4
1.5s 42.00nm 5.2mb
pP 49 17.50 43kmX
FVM 54.88 72 eP 49 13.10 -1.7
SCH 55.68 43 eP 49 20.00 -0.4
SOD 60.21 353 iP 49 50.40 -1.6
LZH 60.64 292 P 49 55.00 -0.5
1.5s 38.00nm 5.3mb
SUF 64.84 352 eP 50 21.80 -0.9
0.6s 44.60nm 5.7mb
NUR 67.15 352 iP 50 36.50 -1.0
0.7s 22.70nm 5.4mb
NB2 67.18 360 P 50 36.60 -1.2
0.8s 10.50nm 5.0mb
HFS 68.06 358 eP 50 41.20 -2.0
1.0s 16.40nm 5.1mb
UPP 68.22 356 iP 50 55.90 11.7X
CLL 76.92 358 e(P) 51 36.00 0.4
e 51 47.00
KSP 77.29 356 eP 51 38.00 0.3
BRG 77.34 358 iP 51 38.00 0.1
1.2s 19.00nm 5.0mb
e 51 50.00
ENN 77.41 3 eP 51 39.00 0.7
1.0s 16.00nm 5.0mb
e 51 58.00
BDT 77.53 282 eP 51 39.00 -0.4
MEM 77.57 3 P 51 40.30 1.2
DOU 78.03 4 P 51 42.80 1.1
PRU 78.21 357 P 51 42.50 -0.2
e 51 52.00
GRF 78.56 360 iPc 51 45.60 0.9
2.3s 117.00nm 5.5mb
SPC 78.73 354 eP 51 45.20 -0.6
KHC 79.09 358 iPc 51 48.50 0.9
e 51 59.00
LDF 79.25 7 eP 51 48.60 0.2
1.2s 17.85nm 4.9mb
GRR 79.39 8 eP 51 49.80 0.6
1.2s 17.85nm 4.9mb
CDF 79.80 2 eP 51 52.10 0.6
ZST 79.90 356 eP 51 52.80 0.9
HAU 80.18 3 eP 51 54.20 0.7
1.0s 12.00nm 4.8mb
SRO 80.22 355 eP 51 55.70 2.1X
BSF 80.37 3 eP 51 55.00 0.4
1.0s 8.00nm 4.7mb
LOR 80.82 5 eP 51 57.70 0.8
1.2s 17.85nm 4.9mb
SSF 81.01 5 eP 51 58.70 0.8
1.0s 14.00nm 4.9mb
LBF 81.11 5 eP 51 58.80 0.4

08d 21h

	1.2s	8.95nm		4.6mb		
KBA	81.15	358 ePd	51	58.50	-0.3	
	1.2s	35.70nm		5.2mb		
		e	52	08.00		
MFF	81.22	7 eP	51	59.80	0.8	
	1.1s	19.55nm		5.0mb		
AVF	81.27	5 eP	51	59.80	0.6	
	1.2s	16.35nm		4.9mb		
SMF	81.44	5 eP	52	00.70	0.6	
	1.2s	19.35nm		5.0mb		
BGF	81.47	5 eP	52	00.90	0.6	
	1.0s	10.00nm		4.8mb		
FVI	81.64	358 P	52	02.50	1.4	
LSF	81.70	6 eP	52	02.10	0.6	
	1.2s	23.80nm		5.1mb		
TCF	81.70	6 eP	52	02.10	0.6	
	1.0s	8.00nm		4.7mb		
MAF	81.79	6 eP	52	02.70	0.7	
	1.2s	11.90nm		4.8mb		
MLR	81.86	349 ePc	51	52.00	-10.5X	
MAIO	82.13	322 iPd	52	04.60	0.6	
BZS	82.17	352 eP	51	59.50	-4.4X	
PTJ	82.24	356 eP	52	03.70	-0.7	
VAI	82.37	1 P	52	07.00	2.1	
ORO	82.60	2 P	52	01.50	-4.8X	
LPG	82.70	3 eP	52	07.10	0.0	
	1.2s	8.95nm		4.7mb		
LFF	82.94	7 eP	52	09.00	1.1	
	0.8s	9.40nm		4.9mb		
CAF	83.05	6 eP	52	09.60	1.0	
	1.0s	8.00nm		4.8mb		
BNI	83.14	3 P	52	12.50	3.3X	
LPO	83.23	7 eP	52	10.40	0.9	
	1.0s	8.00nm		4.8mb		
BOB	83.48	1 Pd	52	13.50	2.7X	
BDI	84.19	360 P	52	16.50	2.1X	
QUE	84.35	314 eP	52	17.40	1.8	
PGD	84.37	359 P	52	18.00	2.5X	
FIR	84.47	359 eP	52	17.00	1.3	
PII	84.53	0 P	52	16.00	0.0	
CRE	84.62	359 P	52	19.00	2.4X	
ARV	84.73	358 P	52	19.40	2.3X	
EPF	84.81	8 eP	52	17.90	0.4	
	0.8s	5.35nm		4.8mb		
ASS	85.17	358 P	52	21.20	1.9X	
SKO	85.81	352 eP	52	08.00	-14.5X	
		i	52	17.00		
		i	52	22.40		
		i	52	32.60		
MNS	85.85	358 P	52	23.50	0.8	
VAY	86.35	351 eP	52	17.40	-7.7X	
SDI	86.50	358 P	52	25.50	-0.5	
OHR	86.71	352 eP	52	29.50	2.5X	
	1.2s	0.50nm		3.6mb	X	
		e	53	27.20		
		e	53	37.50		
WRA	86.82	232 Pc	52	25.20	-2.4	
	0.9s	4.10nm		4.7mb		
ASPA	90.21	230 iPd	52	42.80	-0.8	
	1.0s	13.00nm		5.2mb		
	Z 22s	1.02um		5.2MszX		
		LR	09	09.80		
BUL	145 11	329 iPKPd	59	35.00	13.9X	
	1.0s	19.50nm				
SLR	150 42	326 iPKPc	59	34.50	5.1X	
PRY	151 79	327 ePKP	59	37.50	6.0X	
BFS	152.00	328 ePKP	59	39.50	7.8X	
HVD	155.84	327 ePKP	59	35.00	-2.0X	
	S.D. = 1.1	on 73 of 102 obs.				

JAN 08, 1990 21h 40m 02.84± 0.38s
46.408 N ±10.5km 152.369 E ± 7.5km
DEPTH = 55.4km (3 depth phases)
5.0mb (9 obs.)
KURIL ISLANDS (221)

SVW	33.08	45 eP	46	35.50	0.5	
IMA	34.39	36 eP	46	45.90	-0.4	
BRW	34.50	26 eP	46	47.00	0.0	
PMR	36.20	44 eP	47	02.10	0.5	
FBA	36.75	38 eP	47	06.10	0.0	
	0.9s	13.50nm		4.9mb		
INK	42.22	32 eP	47	51.50	0.2	
CHG	51.54	256 eP	49	05.90	0.7	
CHTO	51.54	256 eP	49	05.80	0.6	
	0.9s	5.97nm		4.6mb		
		pP	49	20.00	53km	
GUN	54.52	275 P	49	27.60	-0.1	
	0.5s	15.00nm		5.3mb		
KKN	55.01	275 P	49	31.50	0.4	
	0.4s	5.00nm		4.9mb		
PKI	55.06	275 P	49	31.50	-0.1	
DMN	55.24	275 P	49	33.00	0.2	
	0.6s	13.00nm		5.1mb		
GKN	55.32	276 P	49	33.00	-0.2	
	0.6s	17.00nm		5.3mb		
SES	59.74	47 eP	50	03.00	-1.0	
FFC	61.33	40 iPc	50	14.20	-0.5	
	0.7s	14.00nm		5.2mb		
CMB	62.02	63 eP	50	20.70	1.1	
		e	50	35.60	54km	
PRS	62.47	65 eP	50	22.80	0.3	
		e	50	38.70	59km	
WB5	67.96	198 eP	50	57.40	-0.5	
WRA	68.02	198 Pd	50	57.70	-0.6	
	0.7s	2.40nm		4.3mb		
NB2	68.38	341 P	50	59.20	-1.0	
	0.7s	7.30nm		4.8mb		
	S.D. = 0.6	on 20 of 20 obs.				

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* JAN 08, 1990 22h 54m 39.46± 0.66s
29.863 N ± 6.4km 50.377 E ±12.9km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
SOUTHERN IRAN (353)

BBU	3.63	179 iPn	55	39.80	5.0X	
	0.2s	89.00nm				
BEE	3.83	178 (Pn)	55	39.30	1.8	
BJA	3.86	177 (Pn)	55	38.60	0.6	
IR4	5.38	5 eP	56	00.00	0.4	
IR1	5.54	3 eP	56	02.50	0.5	
IR7	5.83	2 eP	56	06.00	0.0	
RYD	6.12	214 ePd	56	10.50	0.5	
QASM	7.12	240 eP+	56	24.00	-0.1	
KMSA	10.85	211 eP+	57	13.30	-2.3	
NDI	23.43	86 eP	59	45.00	-1.5	
HFS	38.96	332 eP	02	03.90	0.0	
	0.4s	2.00nm		4.2mb		
	S.D. = 1.3	on 10 of 11 obs.				

? JAN 09, 1990 00h 21m 35.60± 5.85s
16.564 N ±12.5km 61.795 W ±24.8km
DEPTH = 114.7 ± 54.5 km
LEEWARD ISLANDS (92)

SEG	0.32	120 eP	21	51.99	-0.2	
		S	22	03.70		
BPA	0.48	353 eP	21	52.58	-0.5	
		eS	22	05.06		
PAG	0.54	168 eP	21	53.35	-0.2	
		S	22	07.80		
DOG	0.56	162 eP	21	53.28	-0.3	
		S	22	06.60		
ANG	0.59	357 eP	21	53.41	-0.4	
		eS	22	07.99		
DEG	0.75	109 ePd	21	54.60	-0.5	
		S	22	08.90		
MGG	0.79	144 iPc	21	55.36	-0.1	
		S	22	09.80		
BBL	1.08	164 ePc	21	57.60	-0.7	
	S.D. = 0.3	on 8 of 8 obs.				

& JAN 09, 1990 00h 33m 04.06s
60.605 N 151.832 W
DEPTH = 65.8km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

RDT	0.29	264 iP	33	14.64	-0.3	
NKA	0.32	64 iP	33	16.79	1.7	
RED	0.50	249 eP	33	16.20	-0.6	
SPU	0.59	349 iP	33	17.15	-0.5	
		eS	33	27.79		
NNL	0.62	155 iP	33	18.65	0.6	
CKL	0.64	338 eP	33	17.68	-0.7	
CRP	0.68	347 iP	33	18.42	-0.4	
BGL	0.71	338 eP	33	18.56	-0.6	
SLKM	0.80	96 iP	33	19.56	-0.6	
NCG	0.82	349 eP	33	19.78	-0.6	
SUA	1.01	31 iP	33	22.34	-0.6	
CNPM	1.12	164 iP	33	23.54	-0.7	
PMS	1.28	59 iPc	33	25.60	-0.8	
SEW	1.29	112 eP	33	24.91	-1.5	
SKT	1.39	6 eP	33	26.65	-1.2	
PWA	1.41	41 iPc	33	27.50	-0.6	
PDB	1.44	236 iP	33	26.57	-1.9	
PLRM	1.64	52 eP	33	29.72	-1.5	
PMR	1.64	52 iPc	33	29.80	-1.4	
PME	1.70	52 eP	33	30.66	-1.4	
CDD	1.91	209 eP	33	33.58	-1.5	
SVW	1.92	287 iPd	33	32.60	-2.6	
CUT	1.96	22 eP	33	34.59	-1.0	
		eS	33	59.78		
KDC	2.89	187 eP	33	45.60	-3.0	
TTA	3.06	321 ePd	33	48.90	-2.3	
TOA	3.11	59 eP	33	50.20	-1.7	
FBA	4.69	22 eP	34	10.30	-3.7	
IMA	5.55	352 ePc	34	23.30	-2.8	
INK	11.00	38 eP	35	37.00	-3.8	
	29 obs. associated					

JAN 09, 1990 02h 29m 26.69± 0.15s
28.225 N ± 3.9km 88.163 E ± 2.5km
DEPTH = 79.1km (14 depth phases)
5.5mb (53 obs.)
TIBET (306)
Felt strongly at Gongtok, India.
Also felt at Panchagarh,
Bangladesh.

LSA	3.00	60 iPgc	30	15.90	2.5	
NDI	9.65	275 iPc	31	40.60	-4.2X	
		iS	33	19.40		
KMI	13.39	100 eP	32	31.50	-3.5X	
N	10s	1.90um				
CHG	13.61	131 eP	32	55.20	17.5X	
CHTO	13.61	131 ePn	32	35.40	-2.3	
		ePg	32	44.80		
CD2	13.84	75 eP	32	36.60	-4.0X	
HYB	13.93	221 iPc	32	35.70	-6.1X	
	0.8s	200.00nm		5.5mb	X	
		eS	34	55.50		
GTA	14.76	38 eP	32	51.20	-1.4	
Z	20s	1.40um				
E	10s	0.70um				
BDT	14.80	135 eP	32	49.10	-4.0X	
KSH	15.08	321 P	32	54.20	-2.5	
LZH	15.41	55 eP	32	58.00	-3.0X	
	1.5s	0.09nm		1.8mb	X	
N	10s	4.70um				
E	10s	1.00um				
		eS	35	45.00		
WMQ	15.57	359 P	33	02.00	-0.8	
POO	16.29	237 iPc	33	06.50	-5.5X	
	0.7s	305.48nm		5.6mb		
GYA	16.54	92 P	33	11.80	-3.3X	
		S	36	18.00		
		ScS	45	10.00		
NST	16.70	136 eP	33	18.50	1.5	
		e	36	16.00		
BOM	16.84	240 iPd	33	14.00	-4.8X	
		iS	36	05.50		
GBA	17.65	217 P	33	23.30	-5.5X	
		S	36	11.30		
QUE	18.62	281 eP	33	39.00	-1.8	
XAN	18.68	67 P	33	38.50	-2.8	
N	12s	1.50um				
		S	37	00.00		
NNT	18.94	143 eP	33	43.70	-0.6	
		e	37	44.00		
BTO	21.78	50 P	34	14.00	0.5	
N	10s	0.50um				
E	10s	0.40um				
		pP	34	23.00	32kmX	
		PP	34	39.00		
		S	38	10.00		
QIZ	21.84	110 Pc	34	14.60	0.5	
N	12s	0.57um				
		eS	38	05.00		
TIY	22.40	59 Pc	34	19.40	-0.1	
N	11s	1.80um				
		PP	34	49.00		
		S	38	20.50		
WHN	22.92	78 eP	34	25.00	0.5	
Z	12s	0.60um		4.3MszX		
E	11s	0.90um				
		eS	38	28.00		
GZH	23.25	97 eP	34	30.00	2.2	
SNG	24.02	148 eP	34	42.80	7.5X	
MAIO	25.48	296 iPd	34	50.80	1.7	

		0.7s	34.94nm		4.9mb		KRA	55.20	313	iPd	38 52.80	-0.6		ASS	61.18	306	Pd	39 36.00	0.7
			eS	39 28.00				0.7s	59.00nm		5.7mb			MNS	61.32	305	Pd	39 36.10	-0.1
TIA		25.70	65 P	34 51.30	0.3				e		39 10.10	67kmX		GIB	61.38	300	P	39 36.00	-0.7
BJI		25.90	56 Pd	34 54.00	1.2		BEO	55.34	307	eP	38 54.50	0.1		RDP	61.44	304	Pc	39 31.80	-5.3X
		1.2s	0.05nm		1.9mb X		PSZ	55.40	311	eP	38 54.10	-0.8					iSg	39 32.90	
	Z	26s	0.99um		4.2MszX		OHR	55.61	302	iP	38 55.00	-1.5		OGA	61.51	310	iPd	39 36.60	-1.0
	N	11s	0.87um					1.1s	0.10nm			2.8mb X			0.8s	112.00nm			6.0mb
			e	35 21.00	128kmX				e		39 17.80	92kmX		CRE	61.56	307	Pd	39 39.00	1.1
			eS	39 24.00			BCI	55.96	304	eP	38 57.70	-1.2		SFI	61.57	307	Pd	39 39.60	1.8
IPM		26.51	150 ePc	35 08.90	10.3X		PUK	56.13	304	iPd	38 59.90	-0.3		PGD	61.67	307	Pd	39 40.00	1.3
			e	35 18.30	33kmX		TIR	56.27	303	iPd	39 00.00	-1.2		MEKA	61.84	149	eP	39 38.80	-1.0
NJ2		26.77	74 Pc	35 00.70	-0.2		BERA	56.32	302	iPc	39 00.30	-1.2		FIR	62.02	307	iPc	39 41.00	0.2
PSI		27.39	156 eP	35 11.40	4.8X		UPP	56.32	325	iPd	39 01.90	0.6		SAL	62.12	309	Pd	39 42.60	1.2
SSE		28.78	76 Pc	35 18.50	-0.6			0.7s	400.00nm			6.6mb X		OSS	62.14	310	ePd	39 41.10	-0.7
		0.8s	0.05nm		2.2mb X		TPE	56.34	301	eP	39 00.60	-1.1		MME	62.32	308	Pd	39 44.80	1.7
	Z	12s	0.50um		4.3MszX		SDA	56.43	304	iPc	39 02.00	-0.3		TOD	62.40	314	ePd	39 42.95	-0.4
	N	12s	0.90um				SRO	56.47	311	iP	39 02.60	0.1		BDI	62.42	307	Pd	39 44.00	0.4
			PcP	38 27.00			TRO	56.62	337	eP	39 03.00	-0.3		PII	62.55	307	Pd	39 44.30	0.0
			eS	40 08.00			ZST	57.23	311	iPd	39 07.50	-0.4		SAX	62.55	311	ePd	39 43.90	-0.7
DL2		29.70	60 P	35 27.80	0.6		KSP	57.46	314	iPd	39 09.50	0.0		VDL	62.64	310	ePd	39 44.50	-0.6
		1.0s	0.10nm		2.5mb X			1.0s	74.00nm			5.8mb		LLS	62.87	311	ePd	39 45.80	-0.9
SNY		31.78	55 Pd	35 45.00	-0.5				e		39 31.00	85km		SLE	63.00	312	ePd	39 46.50	-0.8
		1.0s	0.06nm		2.3mb X		VKA	57.74	311	ePd	39 11.00	-0.5		BOB	63.05	308	Pd	39 49.10	1.4
	Z	22s	1.00um		4.5Msz			0.7s	30.40nm			5.5mb		TMA	63.13	310	ePd	39 47.30	-1.0
	N	22s	1.20um				MBL	57.85	145	iPc	39 01.90	-10.6X		ZLA	63.13	312	ePd	39 47.30	-0.9
CN2		33.61	52 iPd	36 01.20	-0.2			0.5s	18.00nm					ABH	63.14	314	ePd	39 48.20	0.0
		1.0s	0.10nm		2.7mb X		LCI	57.88	302	P	39 12.00	-0.5		WTS	63.14	317	ePd	39 48.50	0.4
			PcP	38 39.20			HFS	58.29	325	eP	39 13.90	-1.3			0.9s	94.00nm			5.8mb
TAB		36.12	297 eP	36 25.00	2.0			0.7s	242.20nm			6.4mb					e	40 12.50	95kmX
MDJ		36.70	52 iPd	36 28.50	0.9		ZAG	58.32	309	iPd	39 15.70	0.2		VAI	63.25	310	Pd	39 48.20	-0.7
TSM		37.13	125 ePc	36 30.70	-0.8		PTJ	58.33	309	iPd	39 15.40	-0.3		FEL	63.29	312	P	39 48.63	-0.7
BHD		37.75	289 ePc	36 39.00	2.4		BRT	58.33	303	Pd	39 16.40	0.7		GWF	63.29	313	P	39 49.12	-0.1
			eS	42 24.00			LOF	58.41	335	iPd	39 14.77	-1.1		RUP	63.49	314	ePd	39 50.32	-0.2
TSRJ		40.93	67 P	37 01.60	-1.3		HVAR	58.45	305	iPd	39 15.50	-0.9		WLS	63.59	313	P	39 50.83	-0.4
MTMJ		42.34	66 P	37 13.90	-0.7		PRU	58.67	314	Pd	39 17.90	0.0		CDF	63.64	313	P	39 51.03	-0.6
MAT		42.67	66 eP	37 17.00	-0.2			0.9s	62.90nm			5.7mb		PCP	63.73	308	P	39 50.98	-1.2
		1.0s	30.00nm		5.1mb				e		40 03.20	198kmX		MMK	63.75	310	ePd	39 52.20	-0.4
			eS	42 36.00			VBY	58.88	308	iPd	39 19.50	0.1		ECH	63.77	313	P	39 51.84	-0.5
TRT		42.83	143 ePc	37 19.50	0.9		BRG	58.93	315	iPd	39 20.00	0.3		ORO	63.85	310	Pd	39 52.20	-0.8
NIIJ		43.26	65 P	37 21.20	-0.7			1.1s	105.00nm			5.9mb		MOF	63.87	312	P	39 52.71	-0.4
KVT		44.14	301 eP	37 30.10	1.0				i		39 43.00	92kmX		MEM	63.94	315	P	39 53.30	0.0
JARJ		44.93	289 Pd	37 39.20	3.6X		NSS	58.99	331	iP	39 18.80	-1.1		CKI	63.94	308	P	39 54.00	0.5
HRI		44.95	290 iPd	37 37.50	1.8		ROI	59.08	301	P	39 20.80	-0.1		WLF	64.07	314	iPd	39 55.40	1.2
QUTJ		45.04	287 Pd	37 38.10	1.7		TDS	59.23	301	Pd	39 23.30	1.4		BSF	64.10	312	P	39 53.93	-0.7
SALJ		45.19	288 Pc	37 35.00	-2.6		CSI	59.24	302	P	39 21.10	-0.9		DIX	64.12	310	ePd	39 55.00	0.0
KFNJ		45.22	288 Pc	37 39.00	1.3		COP	59.27	320	iPc	39 23.00	1.0		LOMF	64.19	312	P	39 54.49	-0.7
OFUJ		45.26	62 eP	37 37.50	-0.5			0.7s	82.19nm			6.0mb		HAU	64.34	312	iPd	39 55.70	-0.4
AYN		45.51	284 eP+	37 41.30	1.3		LJU	59.28	309	eP	39 22.00	-0.2			0.8s	45.65nm			5.5mb
KAS		45.86	301 iPd	37 44.10	1.3		GRI	59.36	300	P	39 23.71	0.9		EMS	64.45	310	ePd	39 56.70	-0.3
PRNI		46.07	286 iPd	37 46.00	1.5			0.7s	72.20nm			5.9mb		RSP	64.46	309	P	39 54.27	-2.8
HOL		46.24	285 eP	37 47.00	1.2		CEY	59.41	309	iPd	39 23.10	0.0		LWI	64.46	252	iPc	39 57.00	-0.6
HOOJ		46.39	57 eP	37 48.10	1.3		KHC	59.42	313	iPd	39 23.20	0.1		VITF	64.53	313	P	39 56.75	-0.5
BADA		46.44	284 ePd	37 48.80	1.4			1.0s	45.00nm			5.6mb		BAL	64.53	153	iPc	39 56.00	-1.4
BBTK		46.69	299 iPd	37 50.00	0.6				e		39 45.00	86km					e	40 16.00	77km
KUSJ		47.42	56 eP	37 54.50	-0.5		CLL	59.46	315	iPd	39 22.70	-0.7		DOI	64.64	309	P	39 57.20	-1.0
ELL		49.22	296 iP	38 09.50	0.4			1.5s	63.00nm			5.5mb		STV	64.65	308	P	39 56.62	-1.6
KHL		49.33	298 eP	38 09.00	-0.9		NB2	59.47	327	P	39 22.40	-1.0		SBF	64.68	308	iPd	39 58.10	-0.3
CFR		49.87	307 eP	38 13.00	-0.8			0.8s	112.30nm			6.0mb			0.9s	108.10nm			5.8mb
DST		49.88	299 iP	38 14.30	0.2		CZI	59.49	301	P	39 23.70	0.1		LPG	64.72	310	iPd	39 58.90	0.0
DMK		50.34	302 iP	38 17.20	-0.2		RIY	59.51	308	eP	39 20.60	-3.1X			1.0s	109.40nm			5.7mb
VRI		50.85	308 ePd	38 22.50	1.2		RGS	59.72	329	iP	39 24.20	-0.8		PZZ	64.74	309	P	39 56.73	-2.1
MLR		51.41	307 iPd	38 27.00	1.3		VOY	59.72	309	iPd	39 24.90	-0.4		AURF	64.75	308	P	39 58.41	-0.4
CMP		52.06	307 ePc	38 32.00	1.5		SGO	59.81	303	Pd	39 27.00	1.2		TOUF	64.77	308	P	39 59.02	-0.1
KDZ		52.10	302 iP	38 32.00	1.2		SOI	59.81	300	Pd	39 26.60	0.8		RRL	64.85	309	P	39 58.78	-0.9
PLD		52.58	303 eP	38 34.00	-0.3		KBS	59.86	347	eP	39 25.70	-0.1		MVIF	64.87	308	P	39 59.28	-0.4
RZN		52.61	303 iP	38 35.00	0.2		TRI	59.87	309	iPd	39 25.50	-0.7		BNI	64.88	309	Pd	40 00.20	0.4
NUR		52.87	326 iPd	38 36.30	0.1		KBA	59.91	310	iPd	39 24.80	-1.9		UCC	64.91	316	P	40 06.00	6.4X
		1.0s	136.00nm		5.9mb			0.6s	27.10nm			5.6mb		DOU	64.94	315	P	40 00.00	0.1
PGB		52.92	304 iP	38 37.00	0.1				i		39 39.20	53kmX		FOUF	64.95	309	e(P)d	39 59.71	-0.3
BMR		52.99	310 ePd	38 39.00	1.7				i		39 47.40			CALN	65.09	308	P	40 00.27	-0.9
OUR		53.34	301 ePd	38 39.90	0.1		GM8	59.93	300	P	39 28.07	1.2		FRF	65.31	308	iPd	40 01.90	-0.5
SOD		53.38	335 iPd	38 39.80	0.0			0.6s	40.10nm			5.7mb			0.8s	59.10nm			5.6mb
SRS		53.52	302 eP	38 41.00	-0.3		MSI	60.16	300	P	39 29.20	1.0		WB5	65.43	132	iPd	40 02.90	-0.5
VTS		53.62	304 iP	38 43.00	0.9		DUI	60.19	304	Pd	39 29.20	0.6		WRA	65.46	132	Pc	40 03.50	-0.1
SOH		53.74	302 eP	38 42.70	-0.2		ATN	60.24	300	Pd	39 29.40	0.6			0.5s	11.80nm			5.1mb
KKB		53.81	303 iP	38 43.00	-0.3		FVI	60.38	310	Pd	39 29.50	-0.1		LMR	65.47	307	iPd	40 03.10	-0.3
KEV		53.90	338 iP	38 43.80	0.2		SDI	60.65	304	Pd	39 31.70	0.0			1.0s	68.00nm			5.5mb
		0.9s	104.80nm		5.9mb		AQU	60.81	305	Pd	39 33.40	0.7		WARB	65.53	142	iPd	40 03.60	-0.3
KNT		54.04	302 ePd	38 44.50	-0.5		GRF	60.84	314	iPd	39 33.30	0.5		LRG	65.54	308	iPd	40 03.90	0.1
THE		54.06	301 ePd	38 44.70	-0.5			1.5s	127.00nm			5.8mb			0.8s	83.95nm			5.7mb
VAY		54.26	302 eP	38 46.00	-0.7		AZI	60.87	305	Pd	39 33.90	0.9		MUN	65.55	154	eP	40 02.30	-1.6
BZS		54.44	308 eP	38 47.50	-0.4		MNO	60.89	300	Pd	39 34.60	1.1					e	40 23.00	80km
LIT		54.50	301 eP	38 46.80	-1.7		ARV	60.89	306	Pd	39 34.50	1.3		KL8	65.83	152	eP	40 04.10	-1.6
KTK1		55.00	337 iPd	38 51.44	-0.3		PZI	60.94	299	P	39 34.74	1.0					e	41 02.40	253kmX
SKO		55.01	303 iPd	38 51.10	-1.0			1.1s	116.30nm			5.9mb		LOR	66.16	312	iPd	40 07.40	-0.4
		0.9s	980.00nm		6.8mb X		MOL	61.08	329	iPd	39 33.97	-0.3			1.0s	46.00nm			5.4mb
SPC		55.06	312 iPd	38 52.90	0.3		RSM	61.14	307	Pd	39 36.20	1.3		LBF	66.16	312	iPd	40 07.20	-0.6

09d 02h

	1.0s	41.00nm		5.3mb		
SMF	66.35	312	iPd	40 08.60	-0.4	
SSF	66.45	312	iPd	40 09.30	-0.3	
DAG	66.51	346	iPd	40 08.20	-1.4	
	1.0s	31.00nm		5.2mb		
AVF	66.63	312	iPd	40 10.20	-0.6	
	0.8s	43.00nm		5.4mb		
COOL	66.67	149	eP	40 09.00	-2.1	
			e	41 03.00	232kmX	
PLDF	66.69	311	P	40 10.80	-0.5	
NWAO	66.79	154	eP	40 10.20	-1.6	
			e	40 30.00	75km	
AGO	66.99	311	P	40 12.97	-0.1	
BGF	67.03	312	iPd	40 12.90	-0.4	
	1.0s	35.00nm		5.2mb		
LBL	67.16	310	P	40 14.12	0.0	
MAF	67.32	311	iPd	40 15.10	-0.1	
	1.1s	68.35nm		5.5mb		
TCF	67.53	312	iPd	40 16.60	0.1	
ASPA	67.86	135	iPc	40 06.70	-12.1X	
	0.4s	183.00nm				
LSF	67.99	312	iPd	40 19.10	-0.3	
	0.9s	32.75nm		5.3mb		
EKA	68.01	322	Pc	40 19.40	0.1	
	1.0s	61.80nm		5.5mb		
PMG	68.15	114	eP	40 20.70	0.0	
LDF	68.32	314	iPd	40 21.00	-0.4	
	0.8s	60.45nm		5.6mb		
FLN	68.50	315	iPd	40 21.80	-0.6	
	1.2s	65.45nm		5.4mb		
GRR	68.85	314	iPd	40 24.30	-0.3	
	0.8s	44.35nm		5.4mb		
MFF	68.98	312	iPd	40 25.00	-0.4	
	1.0s	32.00nm		5.2mb		
LPF	69.09	314	iPd	40 25.80	-0.2	
	1.2s	50.60nm		5.3mb		
BCAO	69.98	264	iPd	40 31.10	-1.0	
	0.6s	17.00nm		5.1mb		
			id	40 51.90	79km	
			ic	42 12.10		
DMU	70.55	321	eP	40 35.10	0.2	
DLE	70.56	321	eP	40 34.80	-0.1	
DCN	70.95	321	eP	40 37.50	0.2	
BRW	71.06	18	eP	40 37.90	0.3	
CTA	73.87	124	iPd	40 55.10	0.1	
	1.0s	31.00nm		5.2mb		
			i	41 15.70	77km	
TOL	74.08	307	iPd	40 56.00	0.0	
	1.2s	78.13nm		5.5mb		
MBC	74.37	7	iPd	40 57.40	0.4	
	0.6s	26.00nm		5.3mb		
IMA	74.95	22	ePd	41 01.10	0.4	
	0.9s	12.50nm		4.8mb		
APHE	75.00	304	iPc	41 01.50	-0.1	
AAPN	75.17	304	eP	41 01.60	-0.9	
ALOJ	75.24	304	eP	41 02.00	-0.9	
TTA	75.97	25	ePd	41 07.50	1.0	
SVW	77.18	27	ePd	41 14.90	1.7	
IFR	77.51	301	iPd	41 17.00	1.3	
			i	41 38.00	79km	
FBA	77.60	21	ePd	41 16.00	0.7	
STK	78.46	136	eP	41 20.00	-0.6	
			e	41 41.00	78km	
SLR	78.68	233	eP	41 24.00	1.9	
	1.5s	44.44nm		5.2mb		
ADE	78.92	140	iPd	41 23.40	0.3	
	0.7s	23.29nm		5.2mb		
INK	78.95	15	ePd	41 23.50	0.9	
	0.8s	43.00nm		5.4mb		
AVE	79.32	302	iP	41 26.20	0.8	
			i	41 47.50	80km	
PMR	79.33	24	ePd	41 25.60	0.8	
	0.7s	27.10nm		5.3mb		
RMQ	79.65	127	iPd	41 28.50	1.3	
			e	41 49.00	76km	
PRY	79.99	232	e(P)	41 09.20	-20.0X	
TOA	80.03	23	ePd	41 30.30	1.6	
TIO	80.28	300	iP	41 31.50	0.8	
			i	41 52.50	78km	
BFS	80.46	233	eP	41 39.50	7.9X	
KDC	80.49	28	ePd	41 32.10	1.1	
BLF	82.23	231	iPc	41 41.00	0.2	
			i	42 03.00	82km	
KIM	82.99	232	iPc	42 04.00	19.3X	
BRS	83.04	126	iPd	41 46.00	1.1	
			i	42 06.60	76km	
			i	42 55.60		

HVD	83.63	230	eP	42 05.00	17.1X	
FRB	86.51	350	ePd	42 01.70	0.1	
POF	86.78	234	eP	42 04.00	0.6	
	0.9s	13.45nm		5.0mb		
KIC	89.58	277	P	42 17.60	0.4	
LIC	89.89	277	P	42 19.00	0.4	
SCH	94.53	346	eP	42 40.00	0.6	
FFC	96.93	6	iPd	42 50.60	0.3	
	0.8s	22.00nm		5.7mb		
PNT	98.93	18	eP	43 01.00	1.6	
BW06	107.49	14	PKP	47 46.00	-0.1	
ANMO	115.67	13	PKP	48 02.70	0.9	
ALQ	115.67	13	ePKP	48 01.90	0.0	
	1.0s	2.50nm				
ITB	146.24	267	e(PKP)	49 00.50	1.6	
ITB7	146.29	266	e(PKP)	49 01.00	2.0X	
CCH	154.03	289	ePKP	49 14.00	2.8X	
ZOBO	155.09	294	PKPc	49 14.00	1.1	
	1.1s	14.50nm				
LPB	155.21	293	PKP	49 14.00	1.1	
CNCB	155.26	292	PKP	49 15.00	1.9	
			i	49 39.20		

S.D. = 1.0 on 265 of 291 obs.

? JAN 09, 1990 02h 38m 51.53± 4.66s
45.734 N ±38.5km 13.213 E ±44.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

ORX	3.67	270	Pg	39 50.88	1.3	
FIN	3.87	249	Pg	39 52.73	0.4	
ROB	4.05	251	Pg	39 54.47	-0.5	
LSD	4.26	268	Pg	39 56.73	-1.4	
ENR	4.38	252	Pg	39 56.62	-3.0X	
BRG	5.17	5	P	40 10.69	0.0	

S.D. = 1.4 on 5 of 6 obs.

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* JAN 09, 1990 03h 36m 15.25± 1.00s
21.987 S ± 9.5km 68.614 W ±13.8km
DEPTH = 33.0km (normol)
CHILE-BOLIVIA BORDER REGION (124)

ANT	2.38	224	eP	36 52.80	0.0	
			iS	37 17.00		
YJA	2.89	94	iPc	37 04.50	4.1X	
CCH	5.14	27	P	37 32.00	-0.3	
CNCB	5.18	7	eP	37 33.00	-0.1	
LPB	5.45	5	P	37 38.50	1.8	
ZOBO	5.71	5	P	37 39.00	-1.5	
	1.0s	15.00nm		4.5mb	X	
			i	38 30.00		
ITB1	13.34	104	eP	39 24.80	0.1	

S.D. = 1.4 on 6 of 7 obs.

JAN 09, 1990 04h 18m 55.19± 1.43s
11.108 N ± 8.2km 139.838 E ± 7.6km
DEPTH = 44.6 ± 13.7 km
4.9mb (9 obs.) 4.4Msz (1 obs.)
WEST CAROLINE ISLANDS (209)

GUMO	5.50	63	eP	20 17.40	0.7	
PJG	5.50	63	eP	20 17.30	0.6	
GUA	5.51	64	eP	20 17.80	0.8	
	0.9s	605.04nm		6.0mb	X	
			eS	21 22.50		
DAV	14.64	255	eP	22 20.50	-0.8	
QCP	18.62	283	eP	22 54.00	-17.5X	
BAG	19.43	288	eP	23 21.50	0.3	
KAGJ	21.63	339	eP	23 46.00	2.4X	
PMG	21.64	160	eP	23 41.00	-2.8	
KUMJ	22.88	340	eP	23 55.70	-0.2	
SHNJ	24.26	342	eP	24 09.30	0.0	
TSRJ	24.57	352	P	24 09.90	-2.4	
CHJJ	24.84	358	P	24 11.90	-3.0X	
MAT	25.36	357	(P)	24 18.00	-1.8	
	1.2s	25.00nm		4.6mb		
			(S)	29 42.00		
MTMJ	25.43	356	P	24 20.30	-0.3	
NIIJ	26.03	358	P	24 23.90	-2.1	
WB5	31.26	190	eP	25 12.00	-1.2	
WRA	31.33	190	P	25 14.00	0.2	
	0.8s	5.10nm		4.4mb		
ASPA	35.04	190	iPd	25 46.40	0.4	
Z	22s	1.09um		4.6MszX		
			LR	39 25.10		
KMI	37 77	297	Pc	26 11.50	2.2X	
CHG	40.17	286	eP	26 31.10	2.0	

CHTO	40.17	286	eP	26 30.90	1.9	
	1.0s	5.75nm		4.3mb		
LZH	40.93	313	eP	26 36.50	1.2	
	1.5s	19.00nm		4.6mb		
Z	18s	0.50um		4.4Msz		
GUN	53.12	297	P	28 12.00	0.7	
	1.2s	104.00nm		5.7mb		
PKI	53.49	296	P	28 14.20	0.2	
	1.0s	24.00nm		5.2mb		
KKN	53.63	296	P	28 15.00	0.1	
	1.2s	42.00nm		5.3mb		
DMN	53.76	296	P	28 16.40	0.5	
GKN	54.22	296	P	28 19.00	-0.2	
	1.0s	30.00nm		5.3mb		
MAIO	75.77	305	eP	30 40.00	1.4	
INK	78.52	22	eP	30 51.00	-2.0	
			pP	31 08.00	61kmX	
MBC	81.85	14	eP	31 09.50	-1.1	
	1.0s	8.00nm		4.7mb		
PNT	88.44	40	eP	31 46.00	1.9	
SOD	88.46	339	eP	31 43.00	-0.8	
WDC	88.57	49	ePc	31 45.80	1.0	
MIN	89.32	49	ePc	31 49.90	1.3	
CMB	90.81	51	ePc	31 56.40	1.0	
FRI	91.60	52	eP	31 59.70	0.7	
NUR	92.31	333	eP	31 59.00	-2.8	
SES	93.37	37	eP	32 08.00	1.1	
LPB	152.36	104	PKP	38 42.00	-0.2	
ZOBO	152.37	104	PKP	38 43.00	0.6	
	1.1s	13.05nm				
CNCB	152.43	105	ePKP	38 40.00	-2.5X	
CCH	154.07	107	ePKP	38 54.00	9.6X	

S.D. = 1.4 on 36 of 42 obs.

JAN 09, 1990 04h 41m 21.42± 0.71s
36.132 N ± 7.4km 27.175 E ± 7.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.58	180	ePg	41 32.40	-0.8	
			eSg	41 41.10		
YER	1.34	41	iPn	41 44.70	-1.4	
NPS	1.54	236	ePb	41 49.00	0.0	
SMG	1.60	350	ePb	41 49.50	-0.2	
APE	1.62	306	ePn	41 50.80	0.7	
KSL	1.95	90	ePn	41 55.80	0.9	
IZM	2.26	2	ePn	42 04.00	4.5X	
ELL	2.29	74	ePn	42 00.70	0.8	
VAM	2.53	254	ePb	42 06.50	3.4X	

S.D. = 1.1 on 7 of 9 obs.

JAN 09, 1990 04h 58m 39.17± 0.20s
51.963 N ± 4.8km 169.383 W ± 2.9km
DEPTH = 33.0km (normol)
5.4mb (62 obs.) 5.3Msz (13 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
ML 5.2 (PMR). Ms 5.4 (BRK).
Mo=8.0*10**17 Nm (PPT).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 37C
Centroid Locotion:
Origin Time 04:58:47.2 0.3
Lot 52.31N 0.03 Lon 169.24W 0.05
Dep 15.0 FIX Half-duration 3.0
Mament Tensor; Scale 10**17 Nm
Mrr= 3.48 0.10 Mtt=-2.20 0.14
Mff=-1.27 0.11 Mrt= 4.06 0.47
Mrf= 1.82 0.43 Mtf=-2.79 0.12
Principol Axes:

T	Val= 5.61	Plg=63	Azm=353
N	0.84	11	239
P	-6.44	24	144

Best Double Couple:Mo=6.0*10**17
NP1:Strike=211 Dip=24 Slip= 60
NP2: 63 70 102

ADK	4.52	272	ePd	59 46.40	-0.6	
SDN	6.27	54	eP	00 12.00	0.3	
SMY	10.14	281	e(P)	01 03.00	-2.4	
KDC	11.31	53	eP	01 22.50	1.1	
SVW	11.88	34	eP	01 29.50	0.4	
TTA	13.10	28	eP	01 45.00	-0.4	
PMR	14.64	41	eP	02 02.60	-2.8	
Z	19s	17.00um				
TOA	16.11	42	ePc	02 21.00	-3.5X	

IMA 16.21 23 ePc 02 26.50 0.6
FBA 17.07 32 eP 02 33.00 -3.5X
BRW 20.23 12 eP 03 10.90 -2.8
SIT 20.27 62 e(P) 03 14.20 -0.1
Z 19s 15.00um 5.4Msz
INK 23.69 33 eP 03 45.00 -3.2X
0.6s 39.00nm 5.1mb
MBC 30.92 21 eP 04 52.00 -2.4
0.4s 10.00nm 5.0mb
PNT 31.18 75 eP 04 58.00 1.0
KUSJ 31.77 272 eP 04 59.40 -2.8
ASAJ 32.51 275 eP 05 08.20 -0.5
FHC 32.73 92 ePd 05 19.00 8.3X
HOOJ 33.04 272 eP 05 11.70 -1.5
EDM 33.32 65 eP 05 15.00 -0.7
LBFM 33.72 89 eP 05 19.00 -0.5
WDC 33.76 91 ePd 05 24.80 5.2X
eScP 11 44.00
MRRJ 34.38 274 eP 05 23.00 -1.9
MIN 34.47 90 ePd 05 33.20 7.3X
ORV 35.01 91 e(P) 05 31.00 0.7
BRK 35.57 94 e(P) 05 42.40 7.3X
Z 18s 10.00um 5.6Msz
eLR 15 38.00
BKS 35.58 94 eP 05 43.00 7.8X
1.4s 138.00nm 5.7mb
Z 20s 5.00um 5.3Msz
N 20s 3.20um
E 20s 5.00um
eS 11 26.00
e(LQ) 14 14.00
eLR 15 16.00
SES 35.76 69 ePd 05 35.50 -1.2
0.8s 83.00nm 5.7mb
MHC 36.28 95 eP 05 45.50 4.2X
ARN 36.34 94 eP 05 41.50 -0.2
CMB 36.62 93 eP 05 44.50 0.4
1.0s 26.67nm 5.1mb
LRM 37.09 76 eP 05 46.90 -1.3
PRS 37.10 96 eP 05 46.90 -1.1
LLA 37.17 95 eP 05 47.90 -0.8
KVN 37.41 89 eP 05 50.00 -0.9
FRI 37.70 93 eP 05 54.70 1.7
TNP 38.55 90 eP 06 00.00 -0.5
1.0s 26.67nm 5.0mb
KAKJ 38.68 266 P 06 00.50 -0.7
NIIJ 38.74 268 P 06 01.20 -0.6
FFC 38.94 58 eP 06 03.00 -0.2
0.8s 11.00nm 4.7mb
SYP 39.14 97 eP 06 21.00 15.7X
ISA 39.31 94 eP 06 07.00 0.3
e 06 21.00
CHJJ 39.51 267 P 06 07.50 -0.7
MAT 39.67 268 eP 06 09.00 -0.6
1.0s 34.00nm 5.1mb
Z 20s 3.19um 5.2Msz
eS 12 17.00
CLC 39.76 93 eP 06 11.00 0.7
MTMJ 39.90 269 eP 06 13.40 1.9
SBB 40.35 95 eP 06 15.00 -0.3
e 06 30.00
BW06 40.49 79 eP 06 16.00 -0.5
PAS 40.50 96 eP 06 30.00 13.6X
MWC 40.52 95 eP 06 18.00 1.2
e 06 31.00
IIDJ 40.54 267 P 06 16.00 -0.8
GSC 40.58 93 eP 06 18.00 0.9
RVR 41.09 95 eP 06 28.00 6.8X
e 06 46.00
MSU 41.40 86 eP 06 25.00 1.0
PLM 41.84 95 eP 06 27.50 -0.1
BAR 42.41 96 eP 06 34.00 1.9
WKYJ 42.81 268 eP 06 33.50 -1.8
GLA 43.30 94 eP 06 40.00 0.7
YONJ 43.49 270 eP 06 46.20 5.4X
TKSJ 43.92 269 eP 06 41.00 -3.3X
RSON 45.20 60 eP 06 52.50 -1.9
0.9s 17.43nm 5.0mb
SHNJ 45.64 271 eP 06 57.20 -0.9
KUMJ 46.88 270 eP 07 07.60 -0.3
ANMO 47.21 85 eP 07 10.00 -0.7
ALQ 47.21 85 eP 07 11.50 0.7
1.5s 62.50nm 5.4mb
Z 20s 3.01um 5.3Msz
KAGJ 47.77 268 eP 07 17.80 2.9
FRB 49.32 35 eP 07 24.00 -2.4
KBS 49.38 360 iP 07 26.00 -0.7

DAG 50.19 8 iPd 07 31.00 -1.9
0.9s 90.76nm 5.8mb
MEO 52.15 80 e(P) 07 53.40 5.0X
SIO 52.88 77 eP 07 57.80 3.9X
GUMO 52.90 241 eP 07 55.00 0.9
eS 15 28.00
TUL 53.08 77 e(P) 07 53.80 -1.5
1.0s 4.30nm 4.4mb X
Z 20s 2.80um 5.3Msz
i 08 00.90
i 08 15.70
LR 27 00.00
SSE 53.83 276 P+ 08 00.00 -0.8
1.5s 215.00nm 5.9mb
Z 20s 1.40um 5.0Msz
N 16s 0.90um
E 16s 0.80um
pP 08 08.00 26kmX
PP 10 18.00
S 15 36.00
PS 15 55.00
sS 15 58.00
eSS 19 34.00
FVM 54.89 71 eP 08 06.50 -2.1
SCH 55.77 43 ePd 08 13.60 -1.1
1.0s 73.00nm 5.7mb
CLE 57.60 63 iP 08 39.50 11.6X
KEV 58.01 353 iP 08 28.00 -2.3
1.0s 44.00nm 5.5mb
i 08 34.00
e 21 10.00
PTN 58.97 56 eP 08 35.40 -2.0
RSNY 59.22 56 eP 08 36.50 -2.7
RSCP 59.35 70 eP 08 38.20 -2.1
HBVT 60.10 55 eP 08 43.00 -2.2
SOD 60.38 353 iP 08 45.00 -1.8
i 08 51.00
LZH 60.73 292 eP 08 48.50 -1.3
1.5s 150.00nm 5.9mb
Z 18s 6.60um 5.8Msz
N 16s 3.10um
E 17s 2.80um
pP 08 57.00 28kmX
eS 17 25.00
BLA 61.18 66 eP 08 50.60 -2.1
0.9s 12.40nm 5.0mb
CVL 61.73 64 eP 08 55.20 -1.2
CBN 62.18 63 eP 09 05.00 5.7X
PRM 62.30 69 eP 08 57.00 -3.2X
JSC 62.79 69 eP 09 02.00 -1.5
LHS 62.91 68 eP 09 02.50 -1.7
PPM 63.39 93 (P) 09 09.50 1.3
OXX 66.06 93 (P) 09 25.00 -0.2
NUR 67.32 353 iP 09 30.50 -1.7
0.8s 113.00nm 6.0mb
i 09 36.80
e 23 36.00
NB2 67.35 360 P 09 31.10 -1.4
0.8s 47.30nm 5.6mb
HFS 68.23 358 eP 09 35.60 -2.4
0.9s 43.20nm 5.5mb
Z 18s 0.91um 5.0Msz
LR 37 26.00
UPP 68.39 356 iP 09 37.70 -1.2
PMO 69.25 158 eP 09 57.00 12.3X
1.6s 190.00nm
TPT 69.30 157 eP 09 59.00 14.0X
1.6s 240.00nm
KMI 69.36 285 Pc+ 09 44.50 -1.3
Z 20s 1.80um 5.3Msz
pP 09 53.50 29kmX
sP 09 59.50
S 18 53.00
sS 19 14.00
VAH 69.54 158 eP 10 02.00 15.5X
1.6s 215.00nm
PPN 71.35 160 eP 10 13.00 15.5X
1.6s 215.00nm
PMG 71.61 226 eP 09 58.00 -1.1
EKA 72.46 8 P 10 03.00 -0.7
1.4s 58.00nm 5.4mb
COP 72.71 359 eP 10 13.40 8.3X
0.7s 46.58nm 5.6mb
DMU 73.50 11 eP 10 15.70 5.9X
DCN 74.00 11 eP 10 06.50 -6.2X
1.2s 136.00nm 5.8mb
DLE 74.14 11 eP 10 18.70 5.2X

WIT 75.54 2 eP 10 22.50 1.0
WTS 76.37 2 eP 10 26.00 -0.2
1.0s 36.00nm 5.3mb
e 10 33.50
CHG 76.43 283 ePc 10 26.10 -1.0
1.3s 29.81nm 5.1mb
CHTO 76.43 283 eP 10 26.50 -0.6
DZM 76.69 203 iPc 10 35.70 7.2X
GUN 76.91 299 P 10 30.00 -0.1
CLL 77.08 358 eP 10 29.00 -1.2
1.5s 40.00nm 5.2mb
KKN 77.33 299 P 10 32.20 -0.1
PKI 77.43 299 P 10 32.60 -0.4
KSP 77.46 356 ePc 10 31.50 -0.8
1.1s 36.00nm 5.3mb
i 10 38.00
BRG 77.50 358 iP 10 32.00 -0.5
1.7s 110.00nm 5.6mb
i 10 38.00
i 10 43.60
GKN 77.51 299 P 10 32.80 -0.4
DMN 77.57 299 P 10 33.60 0.0
ENN 77.57 3 eP 10 32.50 -0.4
1.1s 69.00nm 5.6mb
e 10 38.00
BDT 77.60 282 eP 10 34.00 0.5
MEM 77.73 3 P 10 33.40 -0.3
KRA 78.05 354 eP 10 35.00 -0.6
1.1s 64.00nm 5.6mb
Z 22s 1.60um 5.3Msz
E 22s 2.50um
e 10 42.70
e 10 46.90
HOF 78.10 359 eP 10 35.00 -0.8
1.5s 39.00nm 5.2mb
NST 78.12 280 eP 10 37.00 0.6
DOU 78.19 4 P 10 35.80 -0.5
i 10 43.60
PRU 78.37 357 Pd 10 37.50 0.2
e 10 43.30
ABH 78.50 2 ePc 10 37.70 -0.4
RUP 78.67 2 ePc 10 38.97 -0.1
WLF 78.68 3 P 10 39.00 0.0
GRF 78.72 360 iPc 10 39.50 0.2
1.4s 115.00nm 5.7mb
Z 20s 1.10um 5.2Msz
e 10 45.80
e 10 52.30
TOD 78.80 1 ePc 10 39.61 -0.1
SPC 78.89 354 iP 10 40.20 -0.3
FLN 79.21 7 eP 10 41.60 -0.3
1.2s 35.70nm 5.2mb
KHC 79.25 358 iP 10 42.60 0.4
1.3s 54.00nm 5.4mb
e 10 48.80
LDF 79.40 7 eP 10 42.60 -0.4
1.0s 24.00nm 5.1mb
GWF 79.41 2 P 10 42.87 -0.2
GRR 79.55 8 eP 10 43.70 -0.1
1.0s 26.00nm 5.2mb
LPF 79.89 8 eP 10 45.60 0.0
1.2s 47.60nm 5.4mb
CDF 79.96 2 P 10 45.82 -0.3
WLS 79.96 2 P 10 45.97 -0.1
VKA 80.03 356 eP 10 46.50 0.1
ZST 80.07 356 eP 10 46.90 0.4
VITF 80.12 3 P 10 46.71 -0.1
ECH 80.16 2 P 10 47.23 0.1
PSZ 80.18 354 eP 10 47.20 -0.1
HAU 80.34 3 eP 10 48.20 0.1
1.0s 28.00nm 5.2mb
SRO 80.39 355 eP 10 48.40 0.2
FEL 80.52 2 P 10 48.69 -0.4
MOF 80.52 2 P 10 49.11 0.0
BSF 80.53 3 P 10 48.87 -0.3
SLE 80.63 1 ePd 10 49.70 0.1
NNT 80.75 278 eP 10 51.00 0.4
NDI 80.84 305 iPc 10 50.00 -1.0
1.0s 70.00nm 5.6mb
eS 21 18.00
BBS 80.92 2 P 10 50.98 -0.2
ZLA 80.92 2 ePd 10 51.70 0.6
LOR 80.98 5 eP 10 51.80 0.4
0.8s 22.85nm 5.2mb
LOMF 81.01 3 P 10 52.21 0.5
SAX 81.16 1 ePd 10 53.40 0.7
SSF 81.17 5 eP 10 52.70 0.3

09d 05h

	1.0s	42.00nm		5.4mb		SNG	84.41	274	eP	11	10.80	1.3		KRP	90.48	192	e(P)	11	39.00	0.8	
LBF	81.27	5	eP	10	53.00	0.0		MVIF	84.47	3	P	11	10.29	0.6				epP	11	46.00	22kmX	
	1.1s	31.75nm		5.2mb			RSM	84.48	359	P	11	11.90	2.5					sP	11	54.00		
KBA	81.31	358	iPc	10	52.40	-1.0		AURF	84.49	2	P	11	10.50	0.9		ATEJ	90.57	12	eP	11	42.50	3.2X	
	1.3s	290.00nm		6.1mb			QUE	84.49	314	eP	10	57.60	-12.4X			MAL	90.71	12	eP	11	59.50	19.9X	
			i	10	53.70				1.2s	131.25nm						POO	90.93	302	iPd	11	41.20	0.2	
			i	11	01.20						eS	21	25.00				0.9s	48.74nm			5.9mb		
			i	11	07.00			SFI	84.49	359	P	11	12.30	2.8		GBA	93.05	296	P	11	50.30	-0.4	
			i	11	18.80			SBF	84.51	2	eP	11	10.30	0.6		LKO	117.17	18	PKP	17	29.10	6.5X	
MFF	81.38	7	eP	10	53.60	0.1			0.8s	40.30nm				5.7mb		TIC	120.11	18	PKP	17	34.00	5.8X	
	1.0s	52.00nm		5.5mb			PGD	84.54	359	P	11	12.70	2.7		KIC	120.44	18	PKP	17	34.50	5.7X	
AVF	81.43	5	eP	10	53.80	0.1		REVF	84.64	2	P	11	11.13	0.8		LIC	120.51	18	PKP	17	34.10	5.2X	
	1.0s	34.00nm		5.3mb			FIR	84.64	360	eP	11	11.50	1.3		BCAO	123.42	351	ePKPd	17	35.10	0.6	
CTA	81.51	222	iPd	10	54.80	0.3		PII	84.70	0	P	11	11.30	0.8			0.7s	15.00nm					
	1.0s	20.00nm		5.1mb			KVT	84.73	341	iP	11	11.80	0.9					id	17	41.70		
			i	11	01.70			CRE	84.78	359	P	11	13.00	1.9					id	19	15.40		
			iS	21	12.00			FRF	84.79	3	eP	11	11.70	0.6		LWI	128.16	337	iPKPc	17	44.70	0.7	
LLS	81.54	1	ePd	10	55.40	0.8			1.0s	38.00nm				5.5mb		BUL	145.27	329	iPKPd	18	29.70	14.6X	
OGA	81.55	360	iPd	10	55.90	1.2		KAS	84.89	343	eP	11	03.50	-8.2X			1.0s	9.00nm					
VRI	81.57	349	eP	10	54.50	0.0		LRG	84.89	3	eP	11	12.60	1.1		KSR	151.16	328	iPKPd	18	30.90	6.6X	
SMF	81.60	5	eP	10	54.70	0.0			1.0s	40.00nm				5.6mb			0.7s	37.50nm					
	1.1s	56.15nm		5.5mb			ARV	84.90	358	P	11	13.40	1.8					i	18	37.90		
BGF	81.63	5	eP	10	55.00	0.2		JMB	84.94	348	ePd	11	12.00	0.2		BFS	152.15	328	iPKPd	18	33.50	7.8X	
	1.2s	50.60nm		5.4mb			LMR	85.02	3	eP	11	13.00	0.8					i	18	38.00		
OSS	81.73	0	ePd	10	56.40	0.8			1.0s	36.00nm				5.5mb		BLF	154.39	327	iPKPd	18	38.00	9.3X	
FVI	81.81	358	P	10	56.60	0.9		HVAR	85.10	356	iP	11	17.80	5.2X			1.0s	50.00nm					
LSF	81.86	6	eP	10	56.30	0.3		VTS	85.19	351	iPd	11	15.00	1.7					i	18	44.00		
	1.0s	50.00nm		5.5mb			ASS	85.33	358	Pd	11	15.30	1.5		KIM	154.52	330	iPKPd	18	37.50	8.6X	
TCF	81.86	6	eP	10	56.10	0.0		BCI	85.69	353	eP	11	15.30	-0.2			1.0s	25.00nm					
	1.1s	22.00nm		5.1mb			IR2	85.90	328	eP	11	20.00	3.1X		POF	156.40	339	ePKP	18	50.00	18.8X	
VDL	81.93	1	ePd	10	57.80	1.2		KKB	85.92	351	eP	11	17.00	0.2			0.9s	16.81nm					
MAF	81.95	6	eP	10	57.00	0.5		RZN	85.93	349	iPd	11	17.00	0.0			S.D. = 1.1	on 257 of 307 obs.					
	1.0s	19.00nm		5.1mb			SKO	85.97	352	eP	11	16.80	-0.2		---								
MLR	82.03	349	ePd	10	57.50	0.4			1.5s	177.00nm				6.1mb		%	JAN 09, 1990 05h 29m 51.14± 1.04s							
CFR	82.06	348	eP	10	52.00	-5.0X					e	11	24.00				39.898 N ±11.9km	113.894 E ± 9.2km					
AGO	82.15	5	P	10	58.11	0.5					e	11	28.70				DEPTH = 10.0km	(geophysicist)					
PLDF	82.26	5	P	10	58.80	0.6		MNS	86.02	358	P	11	18.10	0.9			NORTHEASTERN CHINA					(658)	
MAIO	82.28	322	eP	10	59.00	0.5		AOU	86.03	358	P	11	19.20	1.9									
			eS	21	35.00			SDA	86.08	353	eP	11	17.30	-0.2		BJI	1.76	85	ePn	30	21.50	-0.3	
EMS	82.30	3	ePd	10	59.60	1.1		MMB	86.13	350	ePd	11	19.00	1.2					Pg	30	22.50		
DIX	82.30	2	ePd	10	59.90	1.2		IR1	86.19	328	eP	11	19.00	0.7					Sg	30	48.00		
TMA	82.30	1	ePd	10	59.20	0.7		IR4	86.28	328	eP	11	18.00	-0.8		HHC	2.02	299	Pg	30	26.00	0.3	
LJU	82.32	357	e(P)	10	57.00	-1.4		RMO	86.30	217	iPd	11	20.20	1.6					Sg	30	53.20		
MMK	82.34	2	ePd	11	00.30	1.5					e	11	26.00			TIY	2.46	208	Pgd	30	33.00	1.0	
BZS	82.34	352	eP	10	57.00	-1.5		AZI	86.40	358	P	11	20.40	1.4					Sn	31	03.80		
VOY	82.35	358	eP	10	57.80	-0.9		LACI	86.45	353	eP	11	19.00	-0.3					Sg	31	06.00		
CMP	82.35	350	ePc	11	02.00	3.3X		MFT	86.50	347	iP	11	19.60	-0.1		BTO	3.05	285	Pg	30	44.80	4.4X	
MTN	82.37	238	iPc	10	59.10	0.1		VAY	86.52	351	iP	11	20.00	0.3					Sg	31	22.10		
			e	11	05.00			GPA	86.54	345	eP	11	21.00	1.1		TIA	4.48	144	ePn	31	01.00	0.4	
PTJ	82.41	356	eP	10	58.50	-0.5		BBTK	86.56	343	iPd	11	21.00	0.9					Pg	31	10.90		
PYM	82.45	5	P	10	59.52	0.3					i	14	52.00						eSg	32	08.90		
ZAG	82.49	356	iP	11	00.00	0.7		SRS	86.61	350	iPd	11	20.00	-0.2		XAN	7.07	216	Pn	31	35.90	-1.4	
VAI	82.54	1	P	11	01.00	1.5		KNT	86.64	351	ePc	11	20.80	0.5		LZH	8.80	248	P	32	20.00	18.5X	
CEY	82.62	357	e(P)	10	59.40	-0.6		SDI	86.67	358	P	11	21.10	0.6			S.D. = 1.3	on 5 of 7 obs.					
TRI	82.67	358	eP	10	52.10	-8.1X		WB5	86.68	232	eP	11	19.80	-0.8		---								
ORX	82.76	2	P	11	01.60	0.7					e	11	26.20			?	JAN 09, 1990 05h 29m 51.23± 3.94s							
ORO	82.77	2	P	11	03.00	2.1		DUI	86.70	357	P	11	21.00	0.4			53.323 N ±75.2km	170.324 W ±51.9km					
RJF	82.80	6	eP	11	01.20	0.3		TIR	86.72	353	eP	11	21.00	0.3			DEPTH = 33.0km	(normol)					
	1.2s	17.85nm		5.0mb			WRA	86.74	232	Pd	11	20.60	-0.3			4.6mb (1 obs.)						
SAL	82.81	0	P	11	02.30	1.4			0.8s	10.00nm				5.1mb			FOX ISLANDS, ALEUTIAN ISLANDS					(9)	
VBY	82.83	357	eP	11	01.50	0.4		EDC	86.85	347	iP	11	22.50	1.2									
LSD	82.91	2	P	11	03.14	1.3		OHR	86.88	352	iP	11	20.20	-1.3		ADK	4.14	252	eP	30	53.00	-0.6	
LBL	82.98	5	P	11	02.57	0.8			1.3s	0.11nm				2.9mb X		INK	22.88	35	eP	34	52.00	-0.4	
RIY	83.02	357	eP	11	01.80	-0.2					i	11	27.80			NUR	65.89	352	eP	40	34.00	-1.2	
LFF	83.10	7	eP	11	02.90	0.4					i	11	33.40			NB2	65.98	359	P	40	35.90	0.0	
	1.4s	87.15nm		5.7mb			EBR	87.18	8	eP	11	28.00	5.1X				0.9s	4.80nm			4.6mb		
CAF	83.21	6	eP	11	03.60	0.5		BERA	87.36	353	eP	11	23.80	0.1		GUN	75.76	298	P	41	36.20	0.5	
	1.2s	38.70nm		5.4mb			BRT	87.36	355	P	11	24.80	1.0		KKN	76.18	298	P	41	38.20	0.3	
RSP	83.22	2	P	11	03.96	0.7		DST	87.47	346	eP	11	25.30	0.9		PKI	76.28	298	P	41	39.00	0.3	
BNI	83.31	3	Pc	11	06.40	2.7		MSL	87.54	334	ePd	11	28.50	3.8X		GKN	76.35	299	P	41	39.00	0.2	
LPO	83.39	7	eP	11	04.30	0.3					ePcP	11	36.50			KBA	79.93	357	eP	41	59.00	0.9	
	1.2s	41.65nm		5.4mb							eS	22	03.00				S.D. = 0.7	on 9 of 9 obs.					
RRL	83.44	3	P	11	06.21	1.7	TOL	87.64	11	eP	11	25.00	-0.2		---								
BOB	83.65	1	P	11	07.50	2.1	LIT	87.73	351	iPd	11	24.70	-0.9		*	JAN 09, 1990 05h 47m 12.66± 0.79s							
PCP	83.86	1	P	11	06.21	-0.2	TPE	87.76	353	eP	11	25.00	-0.7			41.161 N ± 6.3km	20.047 E ± 9.1km						
PZZ	83.86	3	P	11	07.44	0.9	KHL	88.58	345	eP	11	28.00	-1.8			DEPTH = 10.0km	(geophysicist)						
DOI	83.87	2	P	11	08.40	1.9	TDS	88.62	356	P	11	28.00	-1.8			ALBANIA						(391)	
CKI	83.97	2	P	11	08.10	1.2	IZM	88.85	347	eP	11	37.00	6.0X			ML 2.3 (SKO).							
ROB	84.09	2	P	11	06.83	-0.8	PSI	88.94	273	iPd	11	31.20	-0.5										
STV	84.13	2	P	11	07.03	-0.8		0.6s	14.20nm				5.5mb			TIR	0.23	324	iPgc	47	17.70	0.1	
ENR	84.15	2	P	11	06.93	-1.0	ASPA	90.13	230	Pc	11	37.10	0.1			BERA	0.46	189	ePg	47	22.00	-0.1	
FIN	84.19	2	P	11	06.93	-1.1		Z 20s	0.22um				4.6Msz			OHR	0.57	95	iPg	47	24.40	0.1	
MME	84.22	360	P	11	10.50	2.0					i	11	43.40						iSg	47	33.70		
PVL	84.35	349	iPd	11	09.00	0.2					LR	24	42.20			PUK	0.89	353	ePg	47	29.20	-0.5	
BDI	84.36	0	P	11	10.90	2.0	ASMO	90.17	11	iPc	11	37.00	-0.4			SDA	0.95	334	ePg	47	31.00	0.3	
TOUF	84.36	2	P	11	10.04	0.9	AAPN	90.17	12	iPc	11	38.00	0.6			SKO	1.32	52	ePg	47	41.00	3.9X	
AUTN	84.38	2	P	11	10.09	0.8	ALOJ	90.37	12	iPd	11	38.60	0.3						eSg	47	58.00		

S.D. = 0.4 on 5 of 6 obs.

JAN 09, 1990 06h 01m 25.58± 0.63s
39.281 N ± 4.7km 0.843 W ± 7.6km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.1 (MDO). Felt (V) at Millares.

ECHE	0.32	342	iP	01	32.30	0.0
			eS	01	37.50	
ACU	0.84	156	eP	01	42.00	0.2
			eS	01	53.80	
EVIA	1.45	244	iP	01	51.70	-0.2
			eS	02	10.00	
EALH	1.49	198	eP	01	52.50	0.1
			eS	02	12.00	
ETOR	1.80	329	eP	02	00.80	3.9X
			eS	02	22.80	
EROQ	1.82	32	eP	01	56.50	-0.6
			eS	02	18.50	
EBR	1.85	33	ePn	01	39.00	-18.5X
			eSg	02	25.00	
TOL	2.55	285	ePg	02	16.00	8.3X
			e(Sn)	02	36.00	
			iSg	02	49.00	
EBAN	2.56	245	eP	02	06.80	-1.0
			eS	02	37.30	
GUD	2.89	299	eP	02	12.60	0.0
			eS	02	46.00	
AFC	2.93	227	eP	02	14.00	0.7
			eS	02	48.20	
ECRI	3.56	340	eP	02	22.80	0.8

S.D. = 0.7 on 9 of 12 obs.

JAN 09, 1990 06h 35m 04.12± 0.60s
30.804 N ± 9.6km 103.252 E ± 5.6km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	0.45	76	ePg	35	13.20	-0.8
			Sg	35	20.00	
GYA	5.27	144	Pn	36	23.00	0.3
			Sn	37	20.60	
			Sg	37	51.00	
LZH	5.29	5	ePg	36	46.00	22.9X
N	16s		3.10um			
KMI	5.68	185	Pnc	36	28.50	-0.1
			Pg	36	46.00	
			Sg	37	59.00	
XAN	5.78	55	Pn	36	30.50	0.7
			Pg	36	52.50	
			Sn	37	37.20	
			Sg	38	12.00	
GUN	15.42	264	P	38	42.60	1.4
PKI	15.91	263	P	38	47.20	-0.4
	1.0s		36.00nm		4.5mb	
KKN	15.96	264	P	38	47.40	-0.7
	0.8s		21.00nm		4.3mb	
DMN	16.16	263	P	38	51.00	0.4
GKN	16.46	265	P	38	53.60	-0.7
	0.8s		20.00nm		4.3mb	
CN2	21.83	47	eP	40	03.00	7.7X

S.D. = 0.8 on 9 of 11 obs.

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* JAN 09, 1990 08h 30m 29.53± 0.96s
53.102 S ± 9.4km 160.038 E ±18.2km
DEPTH = 10.0km (geophysicist)
4.7mb (2 obs.) 4.6Msz (1 obs.)
MACQUARIE ISLANDS REGION (167)

MCQ	1.54	204	iPc	30	55.10	-1.9
			iS	31	12.10	
CBZ	5.56	88	iP	32	42.50	48.3X
			S	33	51.80	
MSZ	9.90	35	P	32	53.90	-0.8
			S	34	40.50	
TOO	18.54	321	eP	34	49.00	1.1
CNB	19.32	333	eP	34	56.00	-1.5
CAN	19.42	332	eP	34	59.80	1.2
			eTT	51	51.00	
BWA	20.42	331	eP	35	10.10	0.7
CTA	34.63	337	eP	37	20.00	-0.8
ASPA	35.44	316	eP	37	27.00	-0.7
	0.9s		11.00nm		4.7mb	
Z	18s		0.93um		4.6Msz	
			LR	50	37.20	
SPA	37.08	180	eP	37	43.50	2.1
	1.1s		16.67nm		4.7mb	
WB5	38.63	319	eP	37	43.40	-11.2X
OHR	150.19	263	ePKP	50	27.30	11.1X
SKO	150.32	265	ePKP	50	17.00	0.7

S.D. = 1.5 on 10 of 13 obs.

? JAN 09, 1990 09h 39m 00.06± 4.76s
32.542 S ±34.8km 71.355 W ±24.1km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.52	146	iPd	39	10.80	-0.3
			i	39	20.50	
JACH	0.66	102	iPd	39	13.10	0.1
			iS	39	24.60	
LCCH	0.95	191	eP	39	17.00	0.0
			iS	40	30.50	
SAN	1.08	148	eP	39	17.00	-1.9
			iS	39	30.50	
TACH	1.16	163	iP	39	20.50	0.4
			iS	39	30.80	
PCH	1.29	147	eP	39	22.70	0.8
			iS	39	42.00	
LNV	1.41	182	iP	39	23.10	-0.5
			iS	39	42.60	
CHCH	1.51	157	iPc	39	26.50	1.4
			iS	39	47.10	

S.D. = 1.2 on 8 of 8 obs.

JAN 09, 1990 10h 20m 51.95± 0.92s
33.810 S ±10.7km 69.966 W ± 7.7km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

PCH	0.49	292	iPc	21	02.20	0.2
			iS	21	10.50	
CHCH	0.58	258	iPd	21	03.60	-0.2
			iS	21	13.50	
SAN	0.68	301	eP	21	05.50	0.0
			iS	21	15.70	
TACH	0.82	281	iPd	21	08.00	0.1
			iS	21	20.20	
ROCH	1.21	313	iP	21	14.40	-0.2
			iS	21	32.30	
LNV	1.21	263	iPd	21	14.50	0.0
			iS	21	32.20	
RFA	1.57	128	ePc	21	20.00	0.0
			S	21	41.00	

S.D. = 0.2 on 7 of 7 obs.

JAN 09, 1990 10h 28m 21.06± 0.45s
43.164 N ± 5.5km 0.399 W ± 4.4km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 3.3 (LDG). mbLg 3.3 (MDD). Felt (IV) at Arudy, France. Also felt in the Ossau Valley, France.

OGE	0.05	275	Pg	28	24.23	0.9
JAU	0.13	170	Pg	28	24.28	0.0
			Sg	28	26.28	
ESCF	0.15	237	Pg	28	24.24	-0.4
			Sg	28	26.07	
ATE	0.24	251	Pg	28	25.73	-0.4
			Sg	28	28.58	
LHE	0.30	213	Pg	28	26.44	-0.9
			Sg	28	29.22	
MADF	0.31	267	Pg	28	27.57	0.1
			Sg	28	31.83	
ISSF	0.32	245	Pg	28	27.44	-0.3
			Sg	28	31.63	
BOH	0.45	262	Pg	28	29.84	-0.5
			Sg	28	35.89	
EPF	0.56	104	Pg	28	32.80	0.4
			Sg	28	41.00	
ECRI	1.65	251	eP	28	52.30	2.1
			eS	29	13.60	
LPO	1.90	36	Pg	28	58.80	5.0X
			Sg	29	24.00	
LFF	1.96	24	Pg	28	59.70	5.1X
			Sg	29	26.00	
EROQ	2.42	165	eP	29	07.30	6.1X
			eS	29	36.00	
CAF	2.50	44	Pn	29	03.60	1.1
			Pg	29	09.90	
			Sg	29	42.50	
RJF	2.54	32	Pg	29	10.30	7.3X
			Sg	29	44.30	
ETOR	2.65	208	eP	29	05.00	0.4
LSF	3.38	23	Pn	29	13.60	-1.3
			Pg	29	26.00	
			Sg	30	09.50	
MFF	3.44	3	Pg	29	27.20	11.4X
			Sg	30	12.00	
TCF	3.63	30	Pn	29	18.40	-0.2
			Pg	29	31.30	
			Sg	30	17.00	
MAF	3.72	34	Pn	29	19.10	-0.6
			Sg	30	21.40	
GUD	3.77	229	eP	29	20.30	-0.3
			eS	30	03.00	
BGF	4.10	33	Pg	29	39.50	14.4X
			Sg	30	33.00	
SMF	4.60	39	Pg	29	48.80	16.5X
			Sg	30	49.80	

S.D. = 0.9 on 16 of 23 obs.

% JAN 09, 1990 10h 49m 00.93± 0.80s
43.086 N ±13.2km 0.605 W ± 5.9km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.8 (STR).

ESCF	0.02	108	Pg	49	02.62	-0.3
			Sg	49	05.27	
ATE	0.07	270	Pg	49	02.94	-0.4
			Sg	49	04.20	
OGE	0.13	49	Pg	49	04.35	0.3
			Sg	49	07.94	
ISSF	0.15	248	Pg	49	04.85	0.3
			Sg	49	07.93	
MADF	0.17	291	Pg	49	04.80	0.0
			Sg	49	07.48	

S.D. = 0.5 on 5 of 5 obs.

% JAN 09, 1990 12h 09m 57.56± 1.31s
40.278 N ±11.7km 23.136 E ±14.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)

THE	0.38	340	ePg	10	04.80	-0.5
PAIG	0.54	130	ePg	10	08.50	-0.1
SOH	0.57	17	ePg	10	09.40	0.3
GRG	0.88	321	ePg	10	14.90	0.4
KNT	0.90	349	ePg	10	14.60	-0.2

S.D. = 0.5 on 5 of 5 obs.

JAN 09, 1990 12h 23m 28.93± 0.70s
40.517 N ± 6.2km 21.877 E ± 7.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.9 (THE).

GRG	0.59	42	ePg	23	41.90	1.0
LIT	0.63	131	ePg	23	40.40	-1.2
VAY	0.96	33	ePn	23	46.00	-1.2
KNT	1.01	50	ePg	23	49.20	1.2
OHR	1.01	306	ePn	23	48.10	0.0
SKO	1.49	347	ePn	23	55.00	-0.7
AGG	1.53	167	ePb	23	56.90	0.5
IGT	1.54	231	ePb	23	56.90	0.4

S.D. = 1.1 on 8 of 8 obs.

JAN 09, 1990 12h 28m 28.53± 0.84s
36.723 N ± 7.5km 21.524 E ± 4.1km
DEPTH = 20.5 ± 6.5 km
SOUTHERN GREECE (368)
MD 3.6 (ATH).

ITM	0.56	35	ePb	28	38.50	-1.0
VLI	1.14	90	ePb	28	49.90	0.7
VLS	1.63	333	ePn	28	56.80	0.5
ATH	2.15	54	ePn	29	01.70	-2.1
AGG	2.38	15	eP	29	08.90	1.8
VAM	2.53	120	ePn	29	10.00	0.7
NEO	2.91	27	ePn	29	15.20	0.6
APE	3.23	83	ePn	29	18.50	-0.7
LIT	3.46	12	eP	29	23.50	1.1
KZN	3.58	3	ePn	29	25.20	0.9
OHR	4.42	353	ePn	29	34.50	-1.6
SOI	4.56	289	P	29	38.20	0.2

09d 12h

		eSn	30	24.90		
		e	33	42.00		
KNT	4.56	13 eP	29	38.10	0.0	
VAY	4.66	10 ePn	29	39.70	0.2	
CZI	4.93	302 P	29	42.90	-0.4	
		eSn	30	31.50		
TDS	5.03	307 P	29	44.50	-0.1	
ATN	5.03	288 P	29	44.70	0.0	
		eSn	30	36.30		
SKO	5.24	359 ePn	29	43.00	-4.7X	
MEU	5.30	276 P	29	47.80	-0.8	
		eSn	30	45.50		
BRT	5.35	322 P	29	48.40	-0.8	
		eSn	30	44.70		
MNO	5.57	285 P	29	53.50	0.9	
		eSn	30	51.50		
MGR	5.79	308 P	29	55.00	-0.5	
		eSn	30	57.50		
SGO	6.19	310 P	30	01.50	0.5	
		eSn	31	05.50		
KBA	12.00	332 e(P)	31	30.50	9.0X	
	0.6s	2.10nm			4.6mb X	
	S.D. = 1.0	on 22 of 24 obs.				

? JAN 09, 1990 12h 53m 14.16± 1.25s
0.732 S ±13.6km 133.320 E ±24.3km
DEPTH = 33.0km (normal)
4.2mb (3 obs.)
WEST IRIAN REGION (196)

AAI	5.90	240 eP	54	47.40	5.7X	
MTN	12.23	190 iP	56	09.00	0.0	
		eS	58	23.00		
KNA	15.58	197 eP	56	53.00	-0.1	
WB5	19.06	177 eP	57	34.90	-1.7	
		eS	01	03.20		
WRA	19.12	177 P	57	38.00	0.7	
	0.8s	7.90nm			4.0mb	
ASPA	22.80	179 iPc	58	17.50	2.1X	
	0.5s	27.00nm			5.0mb	
	Z 22s	0.28um			3.7MszX	
		iS	02	25.40		
		LR	02	47.60		
WARB	26.11	194 eP	58	51.00	4.0X	
FORR	30.36	189 eP	59	27.00	1.7	
BRS	32.42	146 iPd	59	42.80	-0.7	
CHTO	38.95	302 eP	00	38.50	-0.7	
	1.2s	4.51nm			4.1mb	
CNCB	152.70	131 PKP	13	11.00	7.6X	
LPB	152.78	130 ePKP	13	23.00	19.7X	
ZOBO	152.92	130 PKP	13	04.50	0.8	
	1.0s	7.50nm				
		i	13	10.00		
	S.D. = 1.3	on 8 of 13 obs.				

* JAN 09, 1990 13h 57m 55.64± 1.35s
50.134 N ±14.3km 5.364 E ± 6.1km
DEPTH = 10.0km (geophysicist)
BELGIUM (541)
ML 2.7 (LDG).

RUP	1.18	111 ePg	58	17.43	-0.2	
ABH	1.43	99 ePn	58	20.86	-0.8	
CDF	2.13	143 Pn	58	32.80	1.0	
		Pg	58	38.00		
		Sg	59	03.10		
HAU	2.23	163 Pn	58	34.70	1.5	
		Sg	59	06.80		
BSF	2.49	157 Pg	58	43.30	6.4X	
LBF	3.28	197 Pg	58	57.00	8.8X	
SSF	3.31	203 Pn	58	48.40	-0.2	
		Sg	59	40.40		
AVF	3.60	203 Pn	58	52.60	-0.1	
SMF	3.64	197 Pn	58	53.00	-0.2	
		Pg	59	03.60		
		Sg	59	50.00		
FLN	4.05	252 Pn	58	59.90	0.9	
MAF	4.34	207 Pn	59	02.20	-0.9	
TCF	4.39	210 Pn	59	02.40	-1.4	
GRR	4.43	249 Pn	59	04.80	0.4	
	S.D. = 1.0	on 11 of 13 obs.				

* JAN 09, 1990 14h 09m 24.76± 1.12s
22.451 S ±21.3km 173.642 E ±18.2km
DEPTH = 33.0km (normal)
4.8mb (2 obs.)
LOYALTY ISLANDS REGION (189)

SGE	6.29	41 iP	10	57.80	0.0	
		eS	11	20.50		
CAN	25.02	234 eP	14	48.00	0.7	
BWA	25.11	236 eP	14	47.90	-0.3	
PMG	28.52	293 eP	15	20.00	0.5	
ASPA	36.51	260 iPd	16	28.90	-0.2	
	0.7s	16.00nm			5.0mb	
	Z 22s	0.06um			3.3MszX	
		eS	22	09.60		
		LR	24	38.10		
WB5	36.65	267 iPd	16	30.20	-0.1	
WRA	36.66	266 Pd	16	29.90	-0.5	
	0.5s	4.50nm			4.6mb	
WARB	42.81	255 eP	17	15.70	-5.7X	
	S.D. = 0.5	on 7 of 8 obs.				

JAN 09, 1990 14h 42m 58.25± 0.37s
21.738 S ± 5.0km 179.396 W ± 3.3km
DEPTH = 603.9 ± 4.8 km
5.4mb (43 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 6S, 10C
Centroid Location:
Origin Time 14:43: 6.2 2.2
Lat 21.50S 0.17 Lon 179.76W 0.17
Dep 623.210.8 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 0.49 1.10 Mtt=-4.28 2.27
Mff= 3.79 1.68 Mrt=-3.66 1.46
Mrf=-8.84 1.34 Mtf=-3.44 1.21
Principal Axes:
T Val= 11.14 Plg=39 Azm= 88
N -0.40 29 205
P -10.74 37 320
Best Double Couple:Mo=1.1*10**17
NP1:Strike=112 Dip=29 Slip= 177
NP2: 205 89 61

SVA	4.13	330 ePc	44	25.60	0.3	
SGE	4.84	328 iP	44	31.80	1.1	
		e	44	43.00		
NDF	4.95	323 ePc	44	32.00	0.6	
		e	44	46.00		
		e	44	50.00		
MBU	5.06	339 iPd	44	33.00	0.6	
DZM	13.15	266 iPc	45	49.10	0.8	
		iS	48	07.50		
		ScP	53	10.00		
KRP	16.71	194 P	46	24.90	2.3	
WEL	20.10	193 eP	46	53.00	-1.1	
		eS	50	00.00		
HNR	23.32	298 eP	47	21.00	-2.4	
		eS	50	53.00		
BRS	25.90	252 iPc	47	46.60	0.6	
		e	47	57.60		
		i	48	38.00		
		i(ScP)	53	39.60		
TBI	27.67	99 iP	48	00.70	-0.7	
	0.9s	125.00nm			5.5mb	
AFR	28.18	87 iP	48	04.90	-1.0	
	0.9s	100.00nm			5.4mb	
PAE	28.34	87 iP	48	06.20	-1.0	
	0.9s	60.00nm			5.2mb	
PPT	28.36	87 iP	48	06.60	-0.9	
	0.9s	105.00nm			5.5mb	
PPN	28.51	87 iP	48	07.70	-1.0	
	0.9s	55.00nm			5.2mb	
TVO	28.62	87 iP	48	08.60	-1.1	
	0.9s	160.00nm			5.6mb	
RMQ	29.41	254 iPd	48	17.40	1.0	
	0.9s	198.00nm			5.7mb	
CNB	30.46	237 iPc	48	26.40	1.1	
	0.8s	159.00nm			5.7mb	
PMO	30.59	83 iP	48	25.80	-0.6	
	0.9s	125.00nm			5.5mb	
CAN	30.74	237 iPd	48	28.60	0.9	
		iScP	53	54.80		
VAH	30.77	83 iP	48	26.90	-1.0	
	0.9s	125.00nm			5.5mb	
TPT	30.86	83 iP	48	27.90	-0.7	
	0.9s	150.00nm			5.6mb	
BWA	30.95	239 iPd	48	28.10	-1.3	
		iScP	53	54.80		
RUV	31.01	83 iP	48	29.20	-0.8	
	0.9s	250.00nm			5.8mb	

CTA	32.09	267 iPd	48	39.20	0.1	
	0.7s	297.95nm			6.0mb	
		iPcP	51	09.80		
		iS	53	10.00		
		iScP	54	00.00		
		iScS	58	01.00		
CMS	32.46	245 iPd	48	42.70	0.7	
TOO	34.12	235 iPd	48	56.90	1.0	
	0.7s	56.00nm			5.3mb	
PMG	34.39	286 eP	48	58.00	-0.2	
	0.9s	319.33nm			5.9mb	
LAT	35.75	290 eP	49	09.50	0.1	
STK	36.09	245 iPd	49	13.20	1.1	
	0.8s	121.00nm			5.6mb	
		e	54	14.00		
ADE	38.88	241 iPd	49	35.10	0.2	
	0.6s	66.67nm			5.3mb	
RKT	40.97	101 iP	49	51.60	0.0	
	0.9s	70.00nm			5.2mb	
ASPA	42.98	258 iPd	50	07.50	-0.1	
	0.7s	276.00nm			5.9mb	
	Z 17s	0.18um			4.0MszX	
		iPcP	51	44.00		
		iScP	54	41.10		
		iS	55	48.70		
		ScS	59	02.80		
		LR	06	32.80		
WB5	43.14	264 iPd	50	08.00	-0.9	
		eScP	54	40.00		
		eS	55	50.00		
WRA	43.15	264 Pd	50	08.00	-0.9	
	0.5s	75.30nm			5.5mb	
FORR	47.58	248 iPd	50	42.00	-0.6	
	0.3s	105.00nm			5.8mb	
MTN	47.89	272 iPd	50	43.80	-1.4	
WARB	49.22	254 iPd	50	54.30	-0.7	
	0.3s	34.00nm			5.4mb	
KNA	49.27	268 eP	50	54.50	-0.8	
COOL	53.54	247 iPd	51	25.00	-1.1	
	0.3s	13.00nm			4.8mb	
AAI	53.88	282 ePc	51	27.30	-1.3	
KLB	56.35	246 iPd	51	44.70	-0.9	
	0.4s	20.00nm			4.8mb	
MEKA	56.36	252 eP	51	44.30	-1.4	
	0.3s	18.00nm			4.8mb	
NWAO	56.65	244 iPd	51	47.00	-0.6	
RKG	56.73	243 iPd	51	47.30	-0.8	
	0.3s	25.00nm			4.9mb	
BAL	57.37	247 iPd	51	51.70	-0.8	
	0.4s	37.00nm			5.0mb	
MUN	57.62	245 eP	51	53.00	-1.2	
	0.5s	212.00nm			5.6mb	
NANU	59.82	256 eP	52	08.70	-0.2	
TRT	66.75	271 iPd	52	52.60	-0.4	
	0.6s	134.00nm			5.6mb	
SPA	68.39	180 eP	53	03.60	1.2	
	0.9s	76.36nm			5.2mb	
KKM	68.83	286 iPd	53	06.20	0.6	
	0.7s	88.00nm			5.4mb	
KAKJ	69.15	326 P	53	06.60	-0.4	
CHJJ	69.66	325 P	53	09.20	-0.8	
IIDJ	69.82	324 P	53	10.50	-0.5	
WKYJ	70.21	321 eP	53	12.90	-0.4	
MAT	70.45	325 iPd	53	13.90	-0.7	
	1.0s	84.00nm			5.2mb	
NIIJ	70.55	326 P	53	14.70	-0.4	
OFUJ	70.63	329 eP	53	15.50	0.0	
MTMJ	70.70	325 P	53	15.90	-0.3	
YAMJ	70.73	327 P	53	16.40	0.2	
TSRJ	70.93	323 P	53	17.50	0.1	
TKSJ	70.95	320 eP	53	16.80	-0.7	
YONJ	72.14	321 eP	53	23.70	-0.7	
AOMJ	72.40	329 eP	53	27.60	1.8	
SHNJ	72.82	319 eP	53	27.50	-0.8	
ADK	73.34	2 ePd	53	29.70	-1.1	
	0.6s	85.40nm			5.5mb	
SSE	77.49	311 Pc	53	53.50	-0.6	
	1.0s	28.00nm			4.7mb	
SDN	78.45	11 eP	53	57.80	-0.7	
PRS	79.61	44 ePc	54	06.20	1.1	
BCH	79.78	46 P	54	05.70	-0.4	
PRI	79.95	45 ePc	54	08.30	1.3	
BRK	79.97	42 e(P)	54	07.90	1.0	
MHC	80.04	43 ePc	54	08.50	1.0	
RVR	80.94	48 eP	54	12.00	0.0	
PLM	80.94	49 eP	54	13.00	0.7	
SBB	81.02	47 eP	54	13.00	0.5	

FRI	81.08	44	ePc	54	13.10	0.5	KSP	148.46	341	iPKPd	01	39.20	4.8X	LOR	154.39	355	ePKP	01	52.10	9.1X
ISA	81.13	46	eP	54	14.00	1.0		0.8s		60.00nm					0.4s		2.00nm			
CMB	81.25	43	ePc	54	14.20	0.6				i	01	45.20		SSF	154.63	355	ePKP	01	52.60	9.3X
WDC	81.46	40	iPc	54	15.40	0.9				e	04	02.00			0.6s		2.70nm			
ORV	81.46	41	eP	54	15.00	0.5	SPC	148.47	335	iPKPd	01	38.80	4.1X	AGG	154.65	318	ePKP	01	51.50	7.8X
CLC	81.80	46	eP	54	17.00	0.6	MLR	148.52	325	ePKPc	01	39.00	4.2X	LBF	154.67	355	ePKP	01	52.80	9.4X
MIN	81.88	41	ePc	54	17.20	0.4	GPA	148.75	313	ePKP	01	39.30	4.1X		0.6s		1.80nm			
IPM	82.04	278	ePd	54	19.50	1.5	CLL	148.94	345	iPKP	01	35.20	0.2	MFF	155.19	1	ePKP	01	53.60	9.5X
	0.9s		79.60nm			5.2mb		1.2s		84.00nm					0.6s		5.40nm			
GSC	82.05	47	eP	54	18.00	0.3				i	01	39.90		BCAO	155.54	228	ePKPd	01	50.50	4.9X
GLA	82.22	50	eP	54	19.00	0.5				pPKP	04	02.50			0.5s		19.00nm			
KVN	83.30	43	iPd	54	24.30	0.3	BRG	149.10	343	iPKPd	01	40.00	4.7X				ic	02	16.70	
			pP	56	32.00	599kmX				i	01	46.10			S.D. = 0.9 on 121 of 198 obs.					
TNP	83.32	45	P	54	24.80	0.7				epPKP	04	04.00		----------						
	0.8s		12.50nm			4.5mb	YLV	149.25	314	iPKP	01	41.00	5.0X		JAN 09, 1990 15h 35m 49.07± 0.18s					
SVW	84.76	11	eP	54	30.10	-0.3	WTS	149.42	352	ePKP	01	41.00	5.3X		11.591 N ± 3.6km 95.017 E ± 3.5km					
TTA	86.39	10	eP	54	38.40	0.1		0.9s		100.00nm					DEPTH = 33.0km (normal)					
LOE	86.46	290	iPd	54	41.50	2.1	PSZ	149.63	334	ePKP	01	40.80	4.5X		5.2mb (59 obs.) 5.3Msz (7 obs.)					
PMR	86.52	14	ePd	54	38.30	-0.5	PRU	149.73	342	iPKPd	01	42.00	5.7X		ANDAMAN ISLANDS REGION (703)					
	0.6s		18.30nm			5.0mb		0.7s		63.20nm					Felt in the Ranong area,					
TOA	87.66	15	eP	54	44.60	0.4				e	01	49.50			Thailand.					
KMI	88.76	298	Pd	54	51.50	1.2	JMB	150.01	320	iPKP	01	43.00	6.1X		CENTROID, MOMENT TENSOR (HRV)					
PV09	88.96	48	P	54	51.00	-0.1	HOF	150.13	345	iPKPd	01	42.60	5.7X		Data Used: GDSN					
ALQ	89.19	52	iPc	54	52.30	0.2				i	01	51.30			L.P.B.: 10S, 21C					
	1.0s		10.00nm			4.7mb	KHL	150.17	310	ePKP	01	43.10	5.6X		Centroid Location:					
CHG	89.44	290	eP	54	54.90	1.6	PVL	150.30	322	iPKPd	01	53.00	15.7X		Origin Time 15:35:49.2 0.6					
	1.0s		25.00nm			5.1mb	BNT	150.32	315	iPKP	01	43.00	5.5X		Lat 11.50N 0.03 Lon 95.01E 0.06					
CHTO	89.44	290	iPd	54	55.00	1.7	SRO	150.34	336	i(PKP)	01	43.30	6.0X		Dep 59.4 4.0 Half-duration 2.8					
	1.0s		22.75nm			5.1mb	ZST	150.47	337	iPKP	01	43.30	5.8X		Moment Tensor; Scale 10**17 Nm					
			pP	57	08.80	623kmX				i	01	53.40			Mrr=-0.25 0.10 Mtt=-1.57 0.18					
IMA	89.68	10	eP	54	53.40	-0.2	MFT	150.51	316	iPKP	01	43.50	5.6X		Mff= 1.82 0.19 Mrt= 0.52 0.20					
	1.0s		35.00nm			5.2mb	ELL	150.52	307	ePKP	01	43.70	5.6X		Mrf=-0.58 0.20 Mtf= 4.14 0.17					
FBA	89.73	13	ePd	54	52.30	-1.3	BZS	150.63	329	ePKP	01	37.00	-0.8		Principal Axes:					
BW06	90.76	44	P	55	00.00	0.9	VKA	150.69	338	(PKP)	01	44.30	6.5X		T Vol= 4.60 Plg= 2 Azm=124					
LNV	91.94	128	iPd	55	05.00	0.4				i	01	54.70			N -0.12 80 21					
GOL	92.11	48	P	55	05.20	-0.3	ENN	150.73	353	iPKPc	01	44.20	6.5X		P -4.48 10 214					
	0.5s		4.68nm			4.8mb		0.9s		59.00nm					Best Double Couple:Mo=4.5*10**17					
TACH	92.43	128	eP	55	08.00	1.1				e	01	53.00			NP1:Strike=258 Dip=81 Slip= -6					
LZH	92.49	308	Pd	55	08.50	1.3	KHC	150.78	342	ePKP	01	38.00	0.0		NP2: 349 84 -171					
	1.0s		49.00nm			5.5mb				i	01	44.50								
PCH	92.76	128	ePd	55	09.00	0.5				i	01	55.10		NNT	4.72	77	ePn	36	06.00	-53.8X
INK	95.81	16	eP	55	20.00	-1.2	GRF	150.86	346	iPKPc	01	44.80	6.8X				eSg	36	56.50	
ZOBO	102.79	113	ePdiff	55	57.00	2.5X				e	01	55.00		BSI	6.06	177	iPc	37	20.00	1.2
GUN	103.84	295	Pdiff	55	59.80	1.1X	MEM	150.87	353	PKP	01	44.20	6.3X		1.0s		332.80nm			5.9mb
PKI	104.14	294	Pdiff	56	00.40	0.4X	KDZ	151.19	319	iPKPd	01	45.00	6.2X	BDT	6.82	34	eP	37	27.50	-1.9
KKN	104.31	294	Pdiff	56	01.40	0.8X	ABH	151.38	351	iPKPd	01	45.60	6.8X	PCT	6.94	63	eP	37	20.00	-11.2X
DMN	104.41	294	Pdiff	56	01.80	0.7X	TOD	151.44	349	iPKPd	01	45.45	6.6X	SNG	7.05	128	eP	37	28.40	-4.3X
GKN	104.92	294	Pdiff	56	03.00	-0.2X	DOU	151.53	355	iPKPc	01	46.00	7.1X		1.0s		208.00nm			6.0mb
QUE	120.48	293	ePKP	00	44.10	0.0				i	01	56.70					eS	39	53.50	
DAG	124.08	5	ePKP	00	47.40	-2.0	RZN	151.59	320	ePKP	01	46.00	6.4X	CHG	8.12	27	eP	37	47.00	-0.7
MAIO	127.24	300	iPKPc	00	57.00	0.2	RUP	151.63	351	iPKPd	01	46.41	7.2X		0.8s		20.90nm			5.3mb
			e	02	57.00		VTS	151.90	323	iPKPd	01	49.00	9.1X				eS	39	52.00	
SUF	135.51	344	ePKP	01	01.30	-10.3X	MMB	152.24	321	ePKPd	01	47.00	6.7X	CHTD	8.12	27	eP	37	47.10	-0.5
	0.4s		1.90nm				KBA	152.70	341	iPKPc	01	46.30	5.3X	LOE	8.70	48	eP	37	54.50	-1.1
NUR	137.74	343	ePKP	01	08.00	-7.8X		0.9s		17.80nm				IPM	9.16	139	ePd	37	57.70	-4.3X
	0.7s		18.70nm							i	02	01.10			0.8s		140.70nm			6.2mb X
			i	01	16.80					i(PP)	02	02.40					e	38	15.00	
HFS	140.54	350	ePKP	01	13.40	-7.5X	OUR	152.84	318	ePKP	01	47.80	6.7X				e	39	36.40	
	0.4s		15.00nm				CDF	152.85	350	ePKP	01	48.80	7.8X	PSI	9.65	156	eP	38	03.50	-5.3X
			e	01	14.50			0.8s		8.05nm					1.0s		158.70nm			6.2mb X
LWI	143.56	233	iPKPd	01	27.40	-0.4	KNT	152.99	321	ePKP	01	47.80	6.5X	KLM	10.69	142	eP	38	19.00	-4.0X
EDR	144.79	3	ePKPd	01	27.60	-0.7	FLN	153.02	2	iPKPd	01	49.00	7.9X				e	40	13.00	
EDU	145.13	4	iPKPd	01	29.00	0.2		0.4s		9.15nm				KGM	12.58	139	ePd	38	48.00	-0.6
ELO	145.17	4	ePKP	01	29.10	0.2	VAY	153.08	322	ePKP	01	48.00	6.6X				e	40	59.00	
EAB	145.40	5	ePKP	01	29.80	0.5		1.0s		0.10nm				KMI	15.32	27	Pc	39	28.00	3.2X
EBH	145.40	4	iPKPd	01	30.60	1.3				i	02	04.30			Z 18s		21.70um			
	0.8s		71.00nm				LDF	153.20	1	iPKPd	01	49.30	8.0X		N 11s		13.30um			
EBL	145.90	4	ePKPd	01	31.40	1.3		0.4s		3.45nm					E 11s		18.60um			
	0.7s		30.00nm				LJU	153.22	338	e(PKP)	01	49.50	8.0X				pP	39	33.00	
KAS	145.92	313	iPKPd	01	34.20	3.5X	SKO	153.29	324	iPKP	01	49.00	7.3X				S	42	13.00	
EKA	146.34	4	PKP	01	32.00	1.2				i	02	05.30					sS	42	25.00	
	0.8s		20.30nm				GRR	153.38	2	iPKPd	01	49.90	8.3X				SS	42	34.00	
WAJH	146.91	285	ePKP	01	36.00	3.4X		0.4s		6.85nm				QIZ	16.09	61	Pc	39	39.00	4.4X
HRI	146.93	298	ePKP	01	31.00	-1.6	HAU	153.39	351	ePKP	01	49.70	8.0X		N 10s		31.00um			
BBTK	147.25	311	iPKPd	01	36.00	3.0X		0.6s		3.60nm							eS	42	28.00	
AYN	147.31	290	iPKP+	01	37.00	3.8X	VBY	153.43	337	ePKPd	01	50.20	8.4X				SS	42	49.00	
DMU	147.39	8	ePKP	01	35.70	3.1X	VOY	153.45	339	e(PKP)	01	49.40	7.5X	GBA	17.28	279	P	39	51.60	2.1
DSI	147.53	295	iPKPd	01	37.00	3.5X				i	02	04.70		PKI	18.28	332	P	40	00.40	-1.8
VRI	147.85	325	ePKPd	01	37.00	3.4X	BSF	153.49	351	ePKP	01	49.90	8.0X	GUN	18.36	333	P	40	01.60	-1.6
DCN	147.88	9	iPKPc	01	36.70	3.4X		0.6s		3.60nm				LSA	18.37	349	P	40	04.30	0.7
KRA	147.89	336	ePKP	01	37.00	3.5X	CEY	153.52	338	e(PKP)	01	50.00	8.1X		Z 12s		3.90um			
	0.4s		68.00nm				LPF	153.73	2	iPKPd	01	50.60	8.6X		N 12s		2.80um			
PRNI	148.03	293	ePKP	01	39.00	4.6X		0.5s		7.30nm					E 13s		1.80um			
DLE	148.03	8	iPKPc	01	37.20	3.6X	LIT	153.90	319	ePKP	01	48.30	5.7X	GYA	18.42	35	iPd	40	04.40	0.7
HQL	148.10	291	ePKP	01	38.70	4.2X	OHR	154.23	323	ePKP	01	50.00	7.0X		Z 14s		16.30um			
BADA	148.21	289	ePKP+	01	38.90	4.3X		1.1s		0.44nm					N 11s		21.70um			
LFK	148.23	302	iPKP	01	38.70	4.1X				i	02	08.60			E 11s		9.50um			

09d 15h

DMN 18.45 331 P 40 02.40 -1.9
KKN 18.52 332 P 40 03.20 -1.9
GKN 19.01 331 P 40 09.20 -1.7
CD2 20.86 22 eP 40 30.00 -0.8
Z 12s 23.40um 5.8MszX
N 11s 21.30um
sP 40 45.50
PP 41 00.00
GZH 20.87 54 P 40 30.70 -0.2
6.0s 1.20nm 2.5mb X
Z 12s 14.30um 5.6MszX
N 12s 13.00um
E 10s 13.80um
HKC 21.17 57 P 40 38.00 4.1X
S 44 35.00
POO 21.56 291 iPc 40 38.30 0.3
1.2s 134.38nm 5.2mb
KKM 21.65 103 ePd 40 40.50 1.5
1.4s 192.50nm 5.3mb
NDI 23.79 318 iPd 41 01.00 1.3
1.5s 750.00nm 6.0mb
eS 45 22.00
TSM 23.96 106 ePc 41 00.40 -1.1
BAG 25.25 76 eP 41 14.00 -0.1
eS 45 41.00
QCP 25.55 80 eP 41 26.00 9.2X
LZH 25.66 17 eP 41 18.00 0.2
9.0s 1.38nm 2.6mb X
Z 28s 13.40um 5.3MszX
N 13s 5.10um
E 10s 5.40um
pP 41 28.50 39kmX
XAN 25.70 27 P 41 16.80 -1.3
8.0s 1.10nm 2.5mb X
N 13s 16.00um
E 13s 13.10um
S 45 45.00
QZH 25.97 56 Pd 41 22.00 1.4
5.0s 0.90nm 2.6mb X
Z 18s 11.60um 5.5Msz
N 13s 10.30um
TRT 25.97 137 iPd 41 20.60 0.0
0.6s 159.90nm 5.8mb
WHN 26.02 41 eP 41 20.00 -1.0
7.0s 1.80nm 2.8mb X
Z 14s 14.80um 5.7MszX
E 12s 10.50um
eS 45 53.00
GTA 28.03 8 iPc 41 40.40 1.0
1.2s 0.10nm 2.4mb X
Z 22s 6.20um 5.2Msz
E 13s 6.50um
pP 41 49.00 30kmX
S 46 14.50
NJ2 29.94 43 Pc 41 56.00 -0.5
Z 15s 7.40um 5.4MszX
N 10s 6.80um
E 11s 4.00um
TIY 30.34 28 eP 42 01.80 1.8
E 12s 20.90um
S 47 01.50
DAV 30.47 96 eP 42 03.50 2.1
SSE 31.02 47 Pd 42 12.00 6.0X
1.2s 0.02nm 1.9mb X
N 14s 13.10um
E 14s 6.50um
PP 43 08.00
S 47 09.00
sS 47 22.00
SS 48 48.00
TIA 31.61 35 eP 42 13.80 2.6
N 13s 4.60um
E 14s 10.50um
eS 47 18.00
BTO 31.78 22 eP 42 12.00 -0.7
N 12s 10.60um
E 12s 11.10um
eS 47 25.00
QUE 31.95 310 iPc 42 15.40 0.9
eS 52 49.00
KSH 32.49 332 P 42 19.30 0.3
N 24s 9.50um
HHC 32.58 24 eP 42 21.00 1.3
Z 14s 11.80um 5.7MszX
N 13s 12.80um
E 12s 5.30um
sP 42 35.00
PP 43 26.00
S 47 34.00
WMQ 32.73 350 P 42 21.30 0.3
Z 20s 6.10um 5.3Msz
eS 47 41.00
BJI 33.95 30 eP 42 32.00 0.5
Z 16s 7.86um 5.5MszX
N 13s 5.90um
eS 48 00.00
DL2 36.06 36 Pd 42 49.00 -0.5
Z 16s 5.70um 5.4MszX
N 14s 7.70um
E 11s 6.40um
PP 44 16.00
S 48 32.00
SNY 39.12 34 Pd 43 19.00 3.9X
Z 14s 7.40um 5.7MszX
N 15s 5.90um
E 14s 8.30um
PP 44 51.00
S 49 17.00
NANU 39.45 149 eP 43 17.00 -1.1
MAIO 40.37 314 iPc+ 43 26.00 0.3
eS 49 46.00
MBL 40.67 143 iPc 43 15.50 -12.6X
0.9s 46.00nm
CN2 41.46 34 Pd 43 35.00 0.6
5.0s 0.60nm 2.6mb X
Z 13s 10.70um 5.9MszX
N 13s 1.80um
E 13s 4.50um
PP 45 15.00
S 49 51.00
MDJ 44.28 35 eP 44 03.00 5.6X
Z 20s 4.90um 5.4Msz
E 14s 5.20um
epP 44 10.00 23kmX
ePP 45 48.00
S 50 30.00
sS 50 46.00
MTMJ 45.79 50 eP 44 09.40 -0.3
MAT 46.08 50 (P) 44 14.00 2.1
1.0s 10.00nm 4.7mb
Z 20s 2.48um 5.2Msz
eS 50 57.00
IR4 46.33 308 eP 44 14.20 0.2
CHJJ 46.50 51 eP 44 16.30 1.1
IR1 46.55 308 eP 44 17.10 1.3
IR7 46.71 309 eP 44 18.10 1.1
BAL 46.85 154 eP 44 18.00 0.0
NIIJ 46.92 49 eP 44 24.80 6.3X
MUN 47.84 156 eP 44 24.60 -1.1
1.1s 4.00nm 4.4mb
WARB 48.54 141 eP 44 30.00 -1.3
GUMO 48.63 82 eP 44 46.00 13.9X
eS 51 38.00
NWAO 49.09 155 eP 44 34.00 -1.3
Z 20s 1.70um 5.0Msz
N 20s 1.60um
E 20s 0.50um
COOL 49.13 150 eP 44 34.00 -1.7
0.6s 29.00nm 5.5mb
WB5 49.79 129 eP 44 39.20 -1.7
WRA 49.80 129 Pc 44 39.90 -1.2
0.8s 37.80nm 5.5mb
RKG 49.99 156 eP 44 45.00 2.7X
SLY 50.64 307 ePc 44 47.00 -0.3
e 44 55.00
ASPA 51.71 133 iPd 44 52.30 -3.2X
0.8s 41.00nm 5.4mb
Z 22s 5.07um 5.5MszX
eS 52 01.50
LR 06 41.20
DSI 58.21 300 e(P) 45 42.00 -0.7
PRNI 58.42 298 eP 45 44.00 -0.3
NAI 59.23 262 eP 45 53.00 2.7X
CTA 59.44 122 iPd 45 51.10 -0.3
1.1s 25.32nm 5.3mb
BBTK 61.41 309 eP 46 02.00 -2.7
STK 62.09 136 iPc 46 18.20 9.0X
ADE 62.10 140 iPc 46 08.90 -0.3
0.8s 62.69nm 5.8mb
ELL 63.24 305 eP 46 15.00 -2.0
KHL 63.71 307 eP 46 20.00 0.0
RMO 64.48 127 eP 46 25.00 0.0
VRI 66.67 315 iPc 46 38.50 -0.3
MLR 67.17 315 ePc 46 42.00 -0.2
LWI 67.22 263 ePc 46 43.50 0.3
HNR 67.84 105 eP 46 45.00 -1.7
TOO 68.02 139 eP 46 48.00 0.5
BRS 68.07 126 iP 46 46.80 -1.2
i 46 58.60
BWA 68.25 134 eP 46 50.60 1.6
CAN 69.13 135 eP 46 53.80 -0.6
VAY 69.27 310 eP 46 53.20 -2.0
SUF 70.13 333 eP 46 59.50 -0.4
1.1s 53.10nm 5.5mb
SKO 70.15 310 eP 46 58.00 -2.5
i 47 02.60
i 47 06.50
NUR 70.34 330 eP 46 58.00 -3.3X
i 47 10.40
OHR 70.60 310 eP 46 59.20 -4.2X
1.3s 0.07nm 2.5mb X
SOD 71.11 338 eP 47 06.00 0.1
i 47 16.00
SPC 71.37 318 eP 47 06.50 -1.5
PSZ 71.52 317 eP 47 06.80 -2.0
KRA 71.62 319 eP 47 08.40 -0.9
1.0s 50.00nm 5.5mb
KEV 71.65 340 eP 47 09.00 -0.1
e 47 21.00
BUL 72.53 245 iPc 47 29.90 14.6X
1.0s 12.00nm
SRO 72.58 317 iP 47 15.00 0.0
ZST 73.40 317 eP 47 19.00 -0.8
SOP 73.76 316 eP 47 22.00 0.1
VKA 73.93 317 e(P) 47 23.50 0.6
KSP 73.99 320 ePc 47 22.80 -0.3
1.0s 31.00nm 5.3mb
TDS 74.02 308 P 47 24.40 0.9
ZAG 74.15 314 iP 47 25.80 1.6
PTJ 74.17 315 eP 47 22.80 -1.6
SOI 74.30 306 P 47 31.00 5.8X
MGR 74.60 309 P 47 26.00 -0.9
VBY 74.67 314 eP 47 27.50 0.3
SLR 74.76 239 iPc 47 27.00 -1.2
1.0s 20.00nm 5.1mb
Z 18s 6.19um 5.9Msz
PRU 75.10 319 P 47 29.50 -0.1
e 47 38.70
LJU 75.16 315 eP 47 29.50 -0.5
CEY 75.24 314 eP 47 30.50 -0.1
BRG 75.47 320 iP 47 31.90 0.2
1.3s 80.00nm 5.6mb
i 47 40.50
VOY 75.61 315 eP 47 31.90 -0.8
HFS 75.71 329 eP 47 32.50 -0.3
0.6s 25.10nm 5.4mb
Z 20s 0.00um 2.3MszX
e 47 35.00
ePcP 47 43.70
e 47 53.50
LR 17 08.00
TRI 75.71 314 eP 47 31.70 -1.4
KHC 75.74 318 P 47 33.00 -0.3
1.4s 22.00nm 5.0mb
PRY 75.86 238 iPd 47 34.20 -0.4
BCAO 75.89 272 iPd 47 36.00 1.2
1.6s 78.00nm 5.5mb
id 47 45.10
ic 48 33.50
KBA 75.95 316 eP 47 32.50 -2.2
1.2s 21.40nm 5.0mb
e 47 42.00
KSR 75.97 240 eP 47 35.00 -0.2
FVI 76.36 315 P 47 39.50 2.8
ARV 76.39 312 P 47 36.00 -1.1
BFS 76.43 239 iPc 47 38.00 0.3
0.9s 33.61nm 5.4mb
CRE 77.11 312 P 47 41.50 0.3
PGD 77.26 313 P 47 43.50 1.4
GRF 77.26 319 eP 47 42.40 0.7
1.2s 22.00nm 5.1mb
e 47 48.20
e 47 51.10
OGA 77.55 316 iPc 47 43.00 -0.7
1.3s 28.00nm 5.1mb
BLF 77.70 237 iPc 47 44.80 0.1
0.9s 30.77nm 5.3mb
MME 77.97 313 P 47 53.10 7.0X
SAL 77.98 314 P 47 46.50 0.7
BDI 78.05 313 P 47 46.50 0.2
PII 78.13 312 P 47 47.00 0.4

KIM	78.73	237	iPc	47	49.00	-1.4
BOB	78.81	314	P	47	51.00	0.5
VAI	79.19	315	Pd	47	52.80	0.5
FEL	79.51	317	eP	47	53.55	-0.7
ABH	79.62	319	eP	47	55.03	0.3
CKI	79.68	313	P	47	58.00	2.9X
WTS	79.87	321	eP	47	57.00	1.1
	1.0s	21.00nm			5.1mb	
		e		48	06.00	
WIT	79.88	322	eP	47	59.00	3.1X
CDF	79.94	317	eP	47	56.40	-0.1
	1.0s	8.00nm			4.7mb	
RUP	79.95	319	eP	47	56.67	0.2
BSF	80.33	317	eP	47	58.30	-0.3
	1.2s	14.90nm			4.9mb	
SBF	80.34	313	eP	47	58.60	-0.1
	0.8s	13.45nm			5.0mb	
MEM	80.52	320	P	48	08.60	9.2X
ENN	80.56	320	eP	48	02.00	2.4
	1.1s	27.00nm			5.2mb	
HAU	80.61	317	eP	47	59.90	-0.1
	1.0s	16.00nm			5.0mb	
LPG	80.63	315	eP	48	00.70	0.2
	0.8s	16.10nm			5.1mb	
BNI	80.74	314	P	48	04.10	3.2X
FRF	80.95	313	eP	48	01.90	0.1
	0.8s	21.50nm			5.2mb	
LMR	81.08	312	eP	48	02.70	0.2
	1.0s	20.00nm			5.1mb	
LRG	81.17	313	eP	48	03.60	0.6
	0.8s	30.90nm			5.4mb	
DOU	81.49	319	P	48	03.90	-0.6
		e		48	14.30	
LBF	82.34	316	eP	48	08.90	-0.2
	0.8s	12.75nm			5.0mb	
LOR	82.37	317	eP	48	09.30	0.1
	1.0s	18.00nm			5.1mb	
SMF	82.48	316	eP	48	09.80	0.0
	1.2s	17.85nm			5.0mb	
SSF	82.64	316	eP	48	10.80	0.2
	0.9s	9.85nm			4.9mb	
AVF	82.79	316	eP	48	11.40	0.0
	1.0s	10.00nm			4.9mb	
POF	82.94	238	iPd	48	14.00	1.6
	1.0s	14.00nm			5.0mb	
SUR	83.15	235	iPd	48	16.00	2.3
	0.9s	75.63nm			5.8mb	
BGF	83.17	316	eP	48	13.80	0.4
	1.0s	12.00nm			5.0mb	
MAF	83.42	316	eP	48	15.10	0.5
	0.8s	6.70nm			4.8mb	
TCF	83.65	316	eP	48	16.30	0.5
	1.0s	12.00nm			5.0mb	
CAF	83.99	314	eP	48	18.30	0.7
	1.0s	11.00nm			5.0mb	
DAG	84.07	348	eP	48	16.20	-1.2
LSF	84.12	316	eP	48	18.70	0.5
	0.9s	9.85nm			5.0mb	
RJF	84.31	315	eP	48	20.10	1.0
	1.2s	17.85nm			5.1mb	
LPO	84.65	314	eP	48	21.70	0.8
	1.0s	12.00nm			5.0mb	
LDF	84.78	318	eP	48	21.90	0.5
	1.0s	22.00nm			5.3mb	
BRW	84.83	18	eP	48	22.50	1.3
LFF	84.92	315	eP	48	22.60	0.5
	1.2s	17.85nm			5.1mb	
FLN	84.98	319	eP	48	23.00	0.6
	1.0s	22.00nm			5.3mb	
EKA	85.17	325	P	48	32.00	8.8X
	1.7s	175.30nm			6.0mb	
MFF	85.19	316	eP	48	24.00	0.5
	0.9s	9.85nm			5.0mb	
GRR	85.30	318	eP	48	24.00	0.0
	0.9s	9.80nm			5.0mb	
LPF	85.49	318	eP	48	25.70	0.7
	1.0s	16.00nm			5.2mb	
IMA	87.88	22	ePc	48	37.50	1.0
	0.7s	5.00nm			4.9mb	
TTA	88.18	26	P	48	39.70	1.8
TOL	89.50	311	eP	48	54.00	9.4X
MBC	89.99	8	eP	48	46.00	-0.1
FBA	90.60	22	eP	48	51.20	2.1
PMR	91.66	26	eP	48	54.10	0.0
INK	93.20	16	eP	49	01.00	-0.1
LBFM	117.29	31	PKP	54	42.20	8.9X
CMB	120.54	32	PKP	54	51.00	11.6X
KVN	120.92	30	PKP	54	41.20	0.9
BW06	121.40	21	PKP	54	40.00	-1.1
DUG	122.37	25	PKP	54	52.50	9.6X
DAU	122.82	24	PKP	54	54.00	10.0X
GSC	124.48	32	ePKP	54	49.00	1.9
GOL	125.56	19	PKP	54	58.00	8.7X
GLD	125.57	19	PKP	54	59.00	9.8X
PLM	125.96	33	ePKP	54	43.00	-7.2X
BAR	126.58	33	ePKP	55	03.00	11.8X
GLA	127.26	32	PKP	55	02.40	9.9X
ANMO	129.44	23	PKP	55	00.40	3.6X
ALQ	129.44	23	ePKP	54	58.50	1.7
	1.0s	10.00nm				
			pP	58	18.00	
BAO	143.85	259	e(PKP)	55	23.00	-0.8
CNCB	162.72	251	PKP	55	54.00	3.8X
LPB	162.90	251	PKP	56	03.00	12.8X
	Z 24s	1.94um				
			LR	55	48.00	
	S.D. = 1.1	on 163 of 206 obs.				

% JAN 09, 1990 16h 17m 26.06± 0.94s
31.346 S ±11.4km 68.828 W ±10.0km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.31	87	eP	17	35.40	1.4
			S	17	46.70	
CFA	0.57	118	ePd	17	36.80	-0.9
			S	17	49.10	
RTCV	0.57	154	iPc	17	37.20	-0.5
			S	17	48.90	
RTBS	0.62	239	eP	17	39.00	0.7
			S	17	52.00	
RTRS	1.29	335	ePc	17	47.20	-0.7
			S	18	07.00	
	S.D. = 1.4	on 5 of 5 obs.				

? JAN 09, 1990 18h 31m 43.25±12.71s
10.040 S ±95.2km 123.932 E ±64.2km
DEPTH = 33.0km (normal)
3.9mb (2 obs.)
TIMOR (289)

KNA	7.38	141	eP	33	32.50	1.1
	0.3s	23.00nm			5.7mb X	
			eS	34	58.00	
MTN	7.59	112	eP	33	35.00	0.6
			eS	34	59.00	
WB5	14.04	135	eP	35	00.00	-2.1
			eS	37	34.00	
WRA	14.07	136	Pd	35	02.10	-0.3
	0.6s	2.50nm			4.1mb	
WARB	16.26	171	eP	35	31.00	0.1
ASPA	16.56	146	eP	35	35.20	0.5
	0.5s	4.00nm			3.8mb	
	Z 21s	0.06um			3.7MszX	
			iS	38	37.20	
			LR	40	43.70	
	S.D. = 1.5	on 6 of 6 obs.				

JAN 09, 1990 18h 43m 54.45± 0.26s
19.876 S ± 8.8km 168.033 E ± 8.0km
DEPTH = 33.9km (20 depth phases)
4.5mb (5 obs.) 5.0Msz (1 obs.)
VANUATU ISLANDS (186)

PVC	2.14	7	iPc	44	29.30	0.7
			iS	44	58.00	
DZM	2.64	214	iPc	44	31.20	-4.5X
			iS	45	00.30	
RMQ	18.89	246	eP	48	16.00	1.2
CTA	20.47	266	iPc	48	35.90	3.8X
	1.0s	25.00nm			4.5mb	
BWA	22.63	226	eP	48	54.80	1.1
			e	49	04.70	37km
CAN	22.77	224	eP	48	56.00	0.9
			i	49	06.10	38km
CMS	23.06	236	eP	48	59.00	1.0
			e	49	08.00	32km
MSZ	24.72	180	P	49	13.10	-0.8
STK	26.55	238	iPc	49	30.80	-0.3
WRA	31.65	264	Pc	50	15.20	-1.8
	0.7s	2.10nm			4.1mb	
ASPA	31.88	257	iPd	50	17.10	-1.9
	0.9s	27.00nm			5.1mb	
	Z 20s	3.46um			5.0Msz	
			i	50	27.30	37km
			LR	01	39.10	
GCC	86.83	49	eP	56	36.90	0.0
			epP	56	47.70	34km
PRS	86.96	50	ePd	56	38.00	0.5
			epP	56	48.50	33km
BRK	87.04	48	ePd	56	38.10	0.3
SAO	87.10	49	e(P)	56	38.80	0.6
			epP	56	49.00	32km
MHC	87.22	49	ePd	56	39.40	0.4
			epP	56	49.90	33km
BCH	87.37	51	eP	56	40.30	0.6
PRI	87.38	50	eP	56	40.30	0.6
			epP	56	50.90	33km
LLA	87.39	50	eP	56	39.80	0.2
			epP	56	50.50	34km
WDC	88.11	46	ePd	56	43.20	0.2
			ipP	56	53.80	33km
ORV	88.34	47	eP	56	44.00	-0.1
			epP	56	54.70	34km
CMB	88.43	49	ePd	56	44.50	-0.1
			epP	56	55.10	33km
FRI	88.44	50	ePd	56	44.50	-0.1
			ipP	56	55.30	34km
MWC	88.46	53	eP	56	44.00	-1.0
			e	56	55.00	35km
ISA	88.76	51	eP	56	46.00	-0.3
			e	56	57.00	35km
SBB	88.83	52	eP	56	46.00	-0.6
			e	56	56.00	31km
RVR	88.87	53	eP	56	46.00	-0.8
			e	56	57.00	35km
PLM	89.00	54	eP	56	48.00	0.4
CLC	89.47	52	eP	56	49.00	-0.6
			e	57	00.00	35km
GSC	89.85	52	eP	56	51.00	-0.4
GLA	90.43	55	eP	56	55.00	0.9
			e	57	05.00	31km
KVN	90.48	48	iPc	56	54.30	-0.1
TNP	90.70	50	eP	56	55.10	-0.4
	0.7s	4.22nm			4.9mb	
FBA	91.02	17	eP	56	55.90	-0.2
	1.0s	0.70nm			4.0mb	
	S.D. = 0.8	on 32 of 34 obs.				

JAN 09, 1990 18h 51m 29.21± 0.10s
24.753 N ± 2.7km 95.241 E ± 2.4km
DEPTH = 119.2km (geophysicist)
6.1mb (83 obs.)
BURMA (296)

Felt strongly at Kohima, Gauhati and Silchar, India. Also felt at Balurghat, India. Felt strongly at Dacca, Bangladesh. Also felt at Chittagong and Rongpur, Bangladesh. Two events about 2.8 seconds apart. Depth from broadband displacement seismograms, based on first event. Depth of second event was 120.0 kilometers.

FAULT PLANE SOLUTION: P-Waves
NP1:Strike=250 Dip=62 Slip= 37
NP2: 141 58 146
Principal Axes:
T Plg=45 Azm=107
P 3 14
Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a large reverse component. The preferred fault plane is not determined.

RADIATED ENERGY
No. of sta: 4 Focal mech. C
Energy 1.1±0.5*10**14 Nm

MOMENT TENSOR SOLUTION
Dep 119 No. of sta: 9
Moment Tensor; Scale 10**18 Nm
Mrr= 1.59 Mtt=-1.60
Mff= 0.01 Mrt=-3.45
Mrf=-0.57 Mtf=-0.01
Principal axes:

	Val=	Plg=	Azm=
T	3.85	57	167
N	-0.02	3	262
P	-3.83	33	354

Best Double Couple:Mo=3.8*10**18

09d 18h

NP1:Strike= 98 Dip=13 Slip= 106
NP2: 261 78 86
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 28C M.W.: 12S, 23C
Centraid Location:
Origin Time 18:51:36.2 0.2
Lat 24.42N 0.02 Lon 94.95E 0.02
Dep 129.6 1.0 Half-duration 5.0
Moment Tensor; Scale 10**18 Nm
Mrr= 2.02 0.06 Mtt=-1.58 0.08
Mff=-0.44 0.08 Mrt=-2.09 0.05
Mrf=-1.01 0.05 Mtf= 1.01 0.07
Principal Axes:
T Val= 3.44 Plg=58 Azm=142
N -0.78 24 276
P -2.67 20 16
Best Double Couple:Mo=3.0*10**18
NP1:Strike=140 Dip=32 Slip= 139
NP2: 267 69 64

LSA		6.13	324	P	53	00.80	1.6
KMI		6.82	85	Pd	53	11.50	3.1X
	Z	10s	63.90um				
				S	54	24.00	
CHG		6.84	149	eP	53	08.00	-0.4
				eS	54	14.00	
CHTO		6.84	149	iPc	53	08.20	-0.2
BDT		8.25	154	eP	53	27.00	-0.6
LOE		9.49	139	ePn	53	09.00	-35.3X
				ePg	53	45.00	
				eSg	55	54.00	
CD2		9.72	49	eP	53	46.40	-0.9
	Z	18s	54.70um				
				S	55	37.00	
NST		10.13	152	ePn	53	53.50	0.7
				ePg	54	15.00	
				eSg	56	31.00	
GYA		10.45	78	P	53	57.60	0.4
	Z	16s	18.80um				
				ScS	06	51.00	
KBR		11.42	158	iPc	54	14.00	4.2X
PCT		11.58	149	eP	54	13.30	1.4
NNT		12.82	160	eP	54	28.70	0.4
LZH		13.51	31	ePd	54	36.15	-1.1
		1.5s	1.70nm			3.2mb	X
				ed	54	39.46	
				iS	57	24.42	
				sS	57	31.00	
QIZ		14.70	110	Pc	54	52.80	0.4
	E	12s	25.80um				
				sS	57	49.00	
				SS	58	00.00	
XAN		15.08	49	iPd	54	54.00	-3.2X
		6.0s	8.50nm			3.2mb	X
				S	57	43.00	
GTA		15.12	14	iPd	54	55.70	-2.0
	Z	15s	56.60um				
	N	15s	41.50um				
				PP	55	16.00	
				S	57	35.00	
NDI		16.57	288	iPc	55	11.60	-4 2X
		0.6s	553.33nm			6.0mb	
				iS	58	05.00	
MCO		17.01	95	iP	55	23.40	2 2
HKC		17.53	94	P	55	24 00	-3 6X
HKC		17.53	94	iP	55	28.50	0 9
				S	58	46.00	
WHN		17.88	67	Pd	55	31.50	-0 3
		4.0s	11.90nm			3.5mb	X
	Z	14s	29.00um			3.6Msz	
	N	12s	17.30um				
	E	12s	32.90um				
				sP	56	04.00	
				iS	58	46.00	
SNG		18.22	163	eP	55	35.00	-0.8
				eS	58	58.80	
BSI		19.15	180	iPd	55	45.50	-0.3
		1.0s	1663.80nm			6.3mb	
TIY		19.53	45	Pd	55	47.20	-2.6
		1.0s	1.20nm			3.2mb	X
	E	10s	10.40um				
				PP	56	17.00	
				S	59	16.50	
WMQ		20.00	344	ePd	55	56.47	1.9
				ed	55	58.63	8kmX
				eS	59	34.58	

BTO		20.06	34	iPd	55	54.00	-1.3
	N	10s	35.50um				
	E	10s	23.00um				
				S	59	32.00	
GBA		20.12	240	P	55	55.60	-0.2
				S	59	25.60	
POO		20.81	257	iPd	56	03.00	0.1
		1.2s	1512.50nm			6.2mb	
HHC		21.06	36	iPd	56	04.00	-1.3
		5.0s	3.60nm			3.0mb	X
	Z	20s	51.10um			5.9Msz	
	N	13s	32.10um				
	E	13s	19.40um				
				PP	56	37.00	
				S	59	49.00	
QZH		21.19	85	Pc	56	06.00	-0.6
		4.0s	2.20nm			2.9mb	X
	Z	15s	23.70um			5.7MszX	
TSI		21.37	171	ePc	56	10.00	1.6
KSH		21.87	317	P	56	17.00	3.6X
	Z	15s	61.80um			6.1MszX	
	N	10s	31.10um				
	E	11s	22.50um				
				iS	00	08.00	
TIA		22.00	54	Pd	56	15.70	1.2
				S	00	08.00	
				ScS	07	19.20	
PSI		22.21	170	iPd	56	17.50	0.7
		1.0s	386.40nm			5.7mb	
KLM		22.39	163	eP	56	19.80	1.3
		1.0s	1108.70nm			6.2mb	
BJI		23.26	44	ePd	56	27.95	1.3
				ed	56	30.60	10kmX
				eS	00	35.22	
SSE		23.75	69	Pd	56	31.50	0.0
		4.0s	6.50nm			3.4mb	X
	Z	20s	9.70um			5.3Msz	
	N	10s	11.90um				
	E	10s	5.70um				
				S	00	30.00	
TATO		23.81	84	ePc	56	33.85	1.7
				ec	56	37.00	11kmX
ANP		23.81	83	iP+	56	35.00	2.7
				iS	00	50.00	
KGM		23.91	160	ePc	56	35.00	1.8
		1.0s	1008.90nm			6.2mb	
				e	57	02.50	134kmX
BAG		25.10	104	ePc+	56	45.00	0.4
				eS	01	02.00	
QUE		25.64	289	iPd	56	51.30	1.7
				eS	01	29.00	
QCP		26.28	108	eP	56	43.00	-12.3X
DSH		26.29	308	eP	56	57.00	1.7
	Z	11s	14.00um			5.8MszX	
				eS	01	20.00	
DL2		26.37	51	Pd	56	56.80	0.8
		1.2s	0.90nm			3.2mb	X
	Z	15s	11.10um			5.5MszX	
	N	11s	4.00um				
	E	14s	11.30um				
				S	01	20.00	
KKM		27.40	129	ePd	57	07.50	1.9
		1.1s	618.10nm			6.1mb	
				e	57	14.00	23kmX
				e	00	22.00	
IRK		28.33	12	eP	57	15.00	1.4
				eS	01	54.00	
SNY		28.99	47	Pc	57	18.80	-0.7
		4.0s	1.40nm			3.0mb	X
	Z	18s	14.00um			5.6Msz	
	N	11s	6.90um				
	E	12s	5.40um				
				sP	58	03.00	
				sS	02	40.00	
TSM		29.98	129	ePc	57	27.10	-1.5
				e	00	27.50	
				e	03	58.10	
HIA		31.07	32	ePd	57	40.16	2.3
				ePP	58	38.17	
				eS	02	37.76	
CN2		31.12	45	Pd	57	38.00	-0.3
		4.0s	1.00nm			2.9mb	X
	Z	14s	15.60um			5.8MszX	

	N	12s	1.60um				
	E	12s	6.70um				
MAIO		32.70	299	iPd	57	54.40	2.1
		0.7s	56.23nm				5.5mb
				eS	03	04.00	
SHK		33.80	64	eP	58	01.00	-0.8
DAV		33.92	116	ePc+	58	04.00	1.1
		1.0s	760.00nm				6.4mb
MDJ		34.15	46	Pd	58	05.00	0.3
	Z	20s	10.60um				5.6Msz
	E	12s	5.70um				
				S	03	16.00	
TRT		36.44	150	ePd	58	25.20	1.0
		1.0s	903.20nm				6.6mb
MKS		37.99	138	ePd	58	39.00	1.7
		1.5s	724.10nm				6.3mb
MAT		38.50	62	iPd	58	41.50	0.1
		1.0s	350.00nm				6.1mb
	Z	20s	4.61um				5.3Msz
				eS	04	27.00	
TEH		39.15	297	eP	58	52.00	5.0X
IR4		39.52	296	iPd	58	51.00	1.0
IR1		39.70	296	iPd	58	54.00	2.5
AAI		42.71	127	ePc	59	17.50	1.4
				eS	01	06.00	
TAB		43.34	300	iP	59	23.00	1.8
				i	59	49.00	112kmX
				i	01	09.00	
				i	04	51.00	
SLY		43.93	296	ePd	59	27.50	1.7
				ipP	59	53.00	110kmX
				esP	59	57.50	
				i	01	01.00	
				ePcP	01	17.00	
				i	05	03.00	
				iS	05	50.00	
				isS	06	37.00	
				iSS	09	10.00	
				iSSS	10	24.00	
BHD		44.91	293	ePd	59	36.00	2.3
				i	00	01.50	109kmX
				iPcP	01	18.00	
				iS	06	03.00	
				i	06	40.00	
				iScS	09	21.00	
				i	10	03.50	
BKR		45.76	305	iPd	59	43.00	2.5
				iS	06	20.00	
MSL		45.84	297	ePd	59	45.00	4.0X
				ipP	00	09.00	102kmX
				eScS	05	02.50	
				eS	06	19.50	
GUMO		47.94	94	eP	59	57.20	-0.5
		0.8s	427.53nm				6.3mb
PJG		47.94	94	eP	59	57.20	-0.5
GUA		48.00	94	eP	59	57.60	-0.6
		0.8s	656.72nm				6.5mb
				eS	06	49.00	
RUWJ		49.64	292	Pc	00	13.30	2.6
TIK		50.59	13	eP	00	16.00	-1.2
				eS	07	21.00	
NANU		50.99	156	eP	00	20.10	-0.7
ARO		51.21	265	iP+	00	25.30	2.5
MTN		51.21	133	iPd	00	21.00	-1.6
KVT		51.35	304	iP	00	24.90	1.4
M8L		51.52	150	iPc	00	22.30	-2.6
		0.8s	442.00nm				6.4mb
HLBJ		51.81	292	Pc	00	26.20	-0.9
KNA		51.86	137	iPc	00	26.30	-1.2
		0.7s	898.00nm				6.8mb
HRI		52.13	294	iPc	00	30.00	0.5
QUTJ		52.16	291	Pd	00	29.30	-0.5
BURJ		52.21	293	Pd	00	30.00	-0.1
OBN		52.22	322	iPd	00	30.00	0.3
		1.5s	770.00nm				6.4mb
	Z	17s	17.00um				6.2MszX
SALJ		52.34	292	Pc	00	30.30	-0.8
MASJ		52.35	292	Pd	00	30.20	-1.0
DSI		52.66	292	ePc	00	34.00	0.7
KAS		53.06	304	eP	00	37.20	0.9
PRNI		53.17	290	iPc	00	38.00	0.8
FAM		53.35	296	e(P)	00	39.00	0.7
LFK		53.70	297	iP	00	41.30	0.3
BBTK		53.90	302	iPc	00	42.00	-0.5
CSS		53.90	296	eP	00	42.20	-0.3
PET		54.71	41	eP	00	49.00	0.9
				eS	08	16.00	

09d 19h

PPCY	54.72	296	eP	00	48.50	0.1	VTS	60.80	306	iPd	01	32.00	1.0	KBS	64.60	348	iP	01	55.70	0.3
GPA	55.75	303	eP	00	55.00	-0.8	PMG	60.94	117	iPc	01	31.40	-0.7	SOP	64.69	313	iP	01	56.30	-0.1
MEKA	55.80	155	eP	00	55.10	-1.1		1.0s	920.00nm			6.7mb		HFS	64.70	327	eP	01	54.90	-1.4
	0.4s	31.00nm			5.6mb		PLG	60.94	304	eP	01	31.00	-0.9		0.8s	273.50nm			6.2mb	
AAE	55.88	264	eP	00	58.50	1.1	KKB	60.99	306	iPd	01	32.00	-0.2				e	02	00.20	17kmX
MNDI	56.24	117	eP	01	03.00	3.1X	ASPA	61.00	139	iPc	01	31.50	-0.9	VKA	64.75	314	eP	01	56.50	-0.4
AKSR	56.32	283	eP	01	01.50	1.5		0.9s	384.00nm			6.4mb			3.5s	1306.00nm			6.3mb X	
AMAN	56.32	283	eP	01	03.80	3.8X	Z	22s	2.40um			5.3MszX					id	01	57.50	3kmX
ASW	56.32	283	iPd	01	02.00	1.9				ipP	02	06.20	146kmX				e	10	29.50	
			eS	08	38.00					ePcS	06	15.40					e	10	42.00	
YLV	56.43	303	iP	01	00.40	-0.4				iS	09	40.30		LCI	65.08	305	P	01	57.70	-1.3
ELL	56.44	299	iP	01	01.20	0.3				LR	10	42.30		ZAG	65.41	311	iPc	02	01.20	0.2
KHL	56.55	301	iP	01	00.70	-0.9				ScS	11	05.40		PTJ	65.41	311	eP	02	00.50	-0.7
ISK	56.63	304	eP	00	57.00	-5.0X	NWAO	61.07	159	eP	01	34.00	1.4	BRT	65.52	305	P	02	00.80	-1.1
ITU	56.66	304	eP	01	04.00	1.8		0.5s	111.00nm			6.1mb		HVAR	65.60	308	iPc	02	00.90	-1.4
APA	56.71	336	iPc	01	02.80	0.6				eS	09	44.00					i(S)	10	37.90	
			eS	08	46.00		ATH	61.13	301	eP	01	32.00	-1.1	PRU	65.62	316	Pc	02	02.50	0.2
AGMR	56.77	283	eP	01	03.50	0.3	VAM	61.22	298	eP	01	33.00	-0.8		0.9s	34.90nm			5.3mb	
KSL	56.78	298	eP	01	01.00	-2.2	NEO	61.28	303	eP	01	32.00	-2.2				e	02	16.50	50kmX
CFR	57.00	309	eP	01	04.50	0.0	VAY	61.45	305	iPc	01	33.60	-1.7	BAI	65.72	306	P	02	00.00	-3.1X
PSN	57.07	307	iPc	01	06.00	1.0		0.6s	0.18nm			3.2mb X		BRG	65.84	317	iP	02	03.80	0.1
DST	57.10	302	iP	01	05.20	-0.2				iS	09	46.70			1.1s	280.00nm			6.1mb	
BIR	57.31	310	eP	01	07.00	0.3	BZS	61.54	310	ePd	01	34.50	-1.3		N 22s	10.00um				
IAS	57.32	311	eP	01	12.00	5.3X				e	30	46.50			E 22s	5.00um				
DMK	57.53	305	iP	01	07.60	-0.7	VLI	61.97	300	eP	01	36.00	-2.8				ipP	02	33.50	121kmX
BNT	57.56	303	iP	01	08.40	-0.1	RKG	62.05	160	eP	01	40.30	1.1				i	03	07.00	
EDC	57.60	303	iP	01	07.50	-1.3		0.5s	124.00nm			6.2mb					e	13	38.00	
YER	57.68	300	eP	01	03.40	-6.1X	SPC	62.05	314	iPc	01	38.70	-0.7				eP'P'	30	37.00	
VRI	57.96	310	iPc	01	12.00	0.7				i	02	05.60	109kmX	COP	65.94	322	iPc	02	04.00	-0.3
MFT	57.99	304	iP	01	09.00	-2.7				e(S)	09	53.90			1.0s	280.00nm			6.1mb	
ISR	58.13	309	ePc	01	14.00	1.4	KRA	62.16	315	eP	01	39.20	-0.6	BRL	65.97	318	eP	02	06.00	1.5
IZM	58.30	301	iP	01	12.70	-1.1		1.1s	179.00nm			6.0mb					epP	02	34.50	115kmX
JMB	58.34	306	iPc	01	14.00	0.1	Z	20s	7.00um			5.8Msz		VBY	65.97	311	eP	02	04.90	0.2
WB5	58.46	136	iPc	01	14.00	-1.0	E	20s	6.60um					NBO	66.02	328	P	02	04.10	-0.7
WRA	58.49	136	Pc	01	13.80	-1.5				e	01	41.30	7kmX		0.5s	76.20nm			5.9mb	
	0.8s	310.00nm			6.4mb					e	30	45.20		KMR	66.23	314	iP+	02	06.20	-0.1
BUC	58.51	308	ePc	01	17.00	1.9				e	30	51.70					ipP	02	36.00	121kmX
MLR	58.53	310	ePc	01	16.00	0.6	NAI	62.19	254	iPd	01	43.20	2.4				iPP	04	35.80	
BUC1	58.56	308	ePd	01	16.50	1.0	SKO	62.19	306	iPc	01	39.30	-0.9				ipPP	05	04.60	
SUF	58.73	330	iP	01	16.50	0.1		0.8s	332.00nm			6.4mb					iPPP	06	17.40	
SMG	58.73	300	eP	01	16.00	-0.7				i	01	40.50	4kmX				iS	10	52.10	
BAL	58.76	158	eP	01	15.10	-1.8				i	02	31.00		ROI	66.28	304	P	02	07.80	1.0
	0.8s	139.00nm			6.0mb					i	03	22.00		CLL	66.35	317	iP	02	06.60	-0.4
KAP	58.81	298	eP	01	16.00	-1.3				iPP	04	03.00			1.2s	195.00nm			5.9mb	
EZN	58.84	303	iP	01	16.50	-0.9				iPPP	05	18.00			Z 18s	5.50um			5.8Msz	
PRK	58.95	302	eP	01	16.00	-2.2				iScP	06	03.00					ipP	02	35.40	116kmX
WARB	59.03	147	iPc	01	18.10	-0.8				iPSP	08	14.00					eS	10	46.00	
	0.3s	59.00nm			6.1mb					iS	09	56.00					P'P'	30	33.00	
PVL	59.17	307	iPd	01	21.00	1.3				iPS	10	32.00		LJU	66.36	311	ePc	02	06.80	-0.4
CMP	59.19	309	ePd	01	21.00	1.2				i	11	50.00		KHC	66.39	315	iPc	02	07.40	0.1
SOD	59.19	335	iP	01	19.40	-0.1				iSS	14	10.00			1.2s	115.00nm			5.7mb	
NUR	59.25	327	iP	01	19.90	0.0				iSSS	17	06.00			Z 20s	4.30um			5.7Msz	
	0.7s	178.90nm			6.2mb		KZN	62.22	304	eP	01	41.00	0.5		N 20s	6.50um				
Z	18s	32.60um			6.5Msz		TRO	62.27	337	iP	01	40.00	-0.2		E 19s	2.60um				
		i		01	23.60	12kmX	RAB	62.32	109	eP	01	42.00	0.7				e	02	24.20	62kmX
		e		09	20.00		PSZ	62.43	313	iP	01	41.30	-0.5	TDS	66.44	304	P	02	08.00	0.2
		e		10	04.00		BEO	62.46	309	eP	01	42.00	0.1	CSI	66.45	304	P	02	07.60	-0.3
		e		11	00.00		UPP	62.75	326	iPc	01	44.00	0.5	CEY	66.49	311	iPc	02	07.90	-0.2
		LR		29	12.00			1.0s	1900.00nm			7.0mb		GRI	66.57	303	P	02	09.02	0.4
LAT	59.26	115	eP	01	20.00	-0.7				i	02	12.00	114kmX		0.8s	298.20nm			6.2mb	
RDO	59.26	305	eP	01	20.00	-0.3				i	10	03.90		RIY	66.60	311	eP	02	07.90	-0.8
KDZ	59.29	305	iPc	01	20.00	-0.6	OHR	62.81	305	iP	01	41.00	-3.3X	CZI	66.69	304	P	02	08.80	-0.6
KEV	59.49	338	iP	01	22.00	0.5		1.2s	0.42nm			3.3mb X		CTA	66.70	127	iPc+	02	08.70	-1.0
	1.5s	864.70nm			6.6mb					iPcP	02	15.00			1.0s	510.00nm			6.4mb	
Z	16s	14.40um			6.2MszX					iS	10	00.50					i	02	31.10	87kmX
		e		09	18.00		BUD	63.07	312	eP	01	45.00	-0.9				iS	10	54.00	
		e		10	12.00		BCI	63.13	307	eP	01	46.10	-0.2	CTAO	66.70	127	ePc	02	08.18	-1.5
		e		13	12.00		PUK	63.31	306	eP	01	46.20	-1.3				ec	02	11.00	9kmX
		LR		30	04.00		TIR	63.46	305	iPd	01	46.50	-2.0	VOY	66.80	311	iPc	02	09.10	-1.0
PLD	59.76	306	eP	01	24.00	0.2	SRO	63.50	313	iP	01	48.50	-0.2	MGR	66.91	305	P	02	09.90	-0.9
DRA	59.79	309	ePd	01	23.00	-0.9				e(S)	10	14.60		KBA	66.95	313	iPKPc	02	08.90	-2.2
RZN	59.81	305	iPc	01	24.00	-0.3				e	30	46.60			0.7s	118.00nm			5.9mb	
APE	59.86	300	eP	01	23.00	-1.6	BERA	63.51	305	iPd	01	47.00	-1.9				i	02	15.00	20kmX
MUN	59.86	159	iPd	01	22.70	-1.8	VLS	63.52	302	eP	01	46.00	-3.0X				iPP	05	07.50	
	1.0s	680.00nm			6.7mb		LACI	63.52	306	eP	01	47.00	-1.9				i	05	25.80	
KLB	60.02	158	eP	01	23.50	-2.1	TPE	63.54	304	eP	01	47.00	-2.1				eSKKS	11	15.00	
	0.8s	84.00nm			5.8mb		SDA	63.61	306	iPc	01	48.40	-1.1	TRI	66.95	311	iPc	02	09.90	-1.0
BMR	60.04	312	ePd	01	28.00	2.4	FORR	63.62	149	eP	01	48.00	-1.5				i	02	40.40	124kmX
PGB	60.10	306	iPd	01	27.00	0.8		0.3s	66.00nm			6.0mb					e	10	53.20	
NPS	60.11	298	eP	01	26.00	-0.3	SRN	63.63	304	iP	01	47.60	-2.0				e	11	54.40	
MMB	60.55	305	ePc	01	28.00	-1.2	ZST	64.25	313	eP	01	53.00	-0.6				e	16	18.00	
DEV	60.62	310	ePc	01	30.00	0.5				i	02	21.40	115kmX				e	19	50.00	
COOL	60.63	154	eP	01	28.00	-1.7				e(S)	10	36.10					eLR	25	36.00	
	1.0s	253.00nm			6.2mb		KSP	64.37	316	iPc	01	54.00	-0.4	SGO	67.00	305	P	02	11.20	-0.1
CEI	60.74	312	eP	01	36.00	5.7X		1.0s	296.00nm			6.2mb					(S)	10	54.60	
UZH	60.76	313	eP	01	32.00	1.6				i	02	22.50	116kmX	SOI	67.03	303	P	02	11.50	0.0
		eS		09	06.00					eS	10	23.00		GMB	67.15	303	P	02	13.15	0.7

09d 19h

	0.7s	117.60nm		5.9mb				e	03 00.00					i	03 07.60	11kmX						
HOF	67.24	316 iPc	02 12.40	-0.3				e	30 27.00					e	03 38.00							
	0.7s	67.00nm		5.6mb		PCP	70.82	311 P	02 33.81	-1.0				eS	12 12.00							
DUI	67.37	307 P	02 13.10	-0.6		MOF	70.85	315 P	02 34.58	-0.4				e(sS)	12 40.00							
		eS	11 03.00			ORX	70.90	312 P	02 33.81	-1.6				e	13 16.00							
MSI	67.38	303 P	02 12.50	-1.2		ORO	70.91	312 P	02 34.50	-0.9		MFF	75.95	315 iPc	03 04.40	-0.1						
FVI	67.43	312 P	02 13.50	-0.4		WLF	70.98	317 iPc	02 37.00	1.5		LFF	75.97	313 iPc	03 05.10	0.5						
		e	02 37.90	96kmX				e	11 46.00			BFD	76.00	143 eP	03 04.00	-0.8						
		eS	11 01.50			CKI	71.04	311 P	02 35.50	-0.5				e	03 07.00	10kmX						
NPA	67.45	240 iPc	02 15.90	1.5		BSF	71.08	315 P	02 35.73	-0.7		LPF	76.00	317 iPc	03 04.90	0.1						
		e	10 59.00			JNW	71.14	340 eP	02 38.70	2.5		BCAO	76.09	268 ePc	03 05.30	-0.6						
ATN	67.46	303 P	02 13.10	-1.1		FIN	71.15	311 P	02 35.76	-1.0			0.7s	230.00nm		6.1mb						
GRF	67.78	316 iPc	02 16.20	0.1		DIX	71.16	313 ePc	02 37.10	0.0				ic	03 07.79							
	Z 21s	6.20um		5.8Msz		LOMF	71.19	314 P	02 36.42	-0.6				epPd	03 35.76	120kmX						
		e	02 19.90	12kmX		HAU	71.32	315 iPc	02 37.20	-0.5				ed	03 38.41							
		e	02 44.80				0.8s	62.95nm		5.5mb				id	06 07.80							
SDI	67.82	307 P	02 16.00	-0.5		DAG	71.34	347 iPc	02 36.00	-1.3		TTA	76.32	26 eP	03 06.00	-0.4						
		e	02 41.00	98kmX			0.8s	311.94nm		6.2mb		AKU	76.71	337 iPc	03 10.70	2.3						
		eS	11 02.00			ROB	71.35	311 P	02 37.40	-0.6			1.1s	258.23nm		5.9mb						
AQU	67.97	308 P	02 17.90	0.5		IMI	71.45	310 P	02 38.01	-0.6		EPF	76.93	311 iPc	03 10.10	0.0						
		eS	11 07.70			EMS	71.48	313 ePc	02 38.70	-0.2			0.8s	62.95nm		5.5mb						
ARV	68.02	309 P	02 18.20	0.5		VITF	71.49	315 P	02 38.21	-0.4		MBC	76.99	8 eP	03 09.50	-0.2						
AZI	68.03	307 P	02 18.10	0.4		LSD	71.51	312 P	02 39.14	0.0			0.5s	126.00nm		6.0mb						
MNO	68.10	303 P	02 19.00	0.5		RSP	71.53	312 P	02 37.19	-1.9		DMU	77.15	324 eP	03 12.70	1.7						
MEU	68.13	302 P	02 18.70	0.1		STK	71.64	140 iPc	02 38.70	-1.0		DLE	77.20	323 iPc	03 12.60	1.3						
PZI	68.16	302 P	02 19.15	0.4				e	02 42.00	11kmX			0.8s	190.00nm		5.9mb						
	0.8s	276.50nm		6.2mb		ENR	71.68	311 P	02 38.32	-1.7		SVW	77.34	28 ePd	03 12.30	0.3						
HYA	68.19	329 eP	02 21.60	3.3X		DOI	71.72	311 P	02 39.00	-1.3		JAU	77.41	312 P	03 13.33	0.4						
BLS2	68.22	326 eP	02 21.20	2.5		STV	71.74	311 P	02 38.42	-2.0		OGE	77.43	312 P	03 12.39	-0.4						
ODD1	68.24	327 eP	02 19.50	0.7		AUTN	71.75	311 P	02 40.99	0.4		BWA	77.52	137 iPc	03 14.10	0.8						
RSM	68.27	309 P	02 20.63	1.5		AUTN	71.75	311 P	02 41.02	0.4		DCN	77.58	323 eP	03 14.50	1.2						
	1.3s	221.50nm		5.9mb		UCC	71.77	318 iP+	02 43.00	2.8			1.0s	232.00nm		5.9mb						
ASS	68.32	309 P	02 19.60	0.0		LPG	71.77	312 iPc	02 40.90	0.1		ATE	77.62	312 P	03 14.04	0.2						
MNS	68.48	308 P	02 19.90	-0.7			0.8s	440.75nm		6.3mb		LHE	77.63	312 P	03 14.26	0.3						
OGA	68.54	313 iPc	02 20.00	-1.1		SBF	71.78	310 iPc	02 39.80	-0.8		SDN	77.66	35 eP	03 13.00	-0.7						
	0.8s	166.00nm		5.9mb		PZZ	71.82	311 P	02 38.63	-2.3		MADF	77.67	312 P	03 14.58	0.4						
GIB	68.60	303 P	02 20.00	-1.4		DOU	71.83	317 Pc	02 40.40	-0.2		ISSF	77.70	312 P	03 15.12	0.7						
RMP	68.60	307 P	02 20.60	-0.7		AURF	71.85	310 P	02 40.51	-0.5		ELYF	77.78	312 P	03 15.04	0.3						
RDP	68.61	307 P	02 21.10	-0.3		REVF	71.86	310 P	02 40.91	-0.1		BOH	77.82	312 P	03 14.77	-0.3						
SFI	68.69	310 P	02 22.90	1.2		TOUF	71.86	311 P	02 40.62	-0.6		TOO	77.93	141 ePc	03 15.70	0.2						
CRE	68.69	309 P	02 22.50	0.6		RRL	71.92	312 P	02 41.09	-0.5				e	03 19.00	11kmX						
BER	68.77	328 iP	02 26.20	4.3X		BNI	71.95	312 P	02 41.90	0.2		COL	78.42	23 ePc	03 20.69	2.9						
PGD	68.79	310 P	02 24.10	1.5				eS	02 47.00					ed	03 48.33	107kmX						
ASK	68.82	328 eP	02 25.50	3.3X		MVIF	71.96	311 P	02 41.12	-0.7				iS	13 06.11							
FAI	69.05	302 P	02 25.40	1.3		FOUF	72.03	311 e(P)d	02 41.76	-0.2				eSKS	13 25.15							
FIR	69.14	310 eP	02 25.00	0.5				i	02 44.16					ePS	13 48.32							
OSS	69.18	313 ePc	02 24.30	-0.6				i(pP)	03 14.78	133kmX		FBA	78.42	23 ePc	03 17.00	-0.8						
SAL	69.19	312 P	02 25.80	1.1		CALN	72.19	310 P	02 42.62	-0.5		CAN	78.47	138 iPc	03 18.20	-0.4						
TOD	69.33	316 eP	02 25.31	-0.3		ADE	72.28	144 iPc	02 42.90	-0.6		BUL	78.68	242 iPd+	03 34.90	14.8X						
MME	69.42	310 P	02 27.50	0.9			0.8s	664.18nm		6.5mb				iS	13 20.90							
BDI	69.53	310 P	02 27.20	0.2		BRW	72.33	19 eP	02 42.60	-0.6				iPS	14 18.00							
MAO	69.56	308 P	02 28.30	1.2		FRF	72.41	310 iPc	02 43.60	-0.6		CNB	78.69	137 eP	03 19.00	-0.8						
SAX	69.57	314 ePc	02 26.70	-0.7		RMO	72.55	131 iPc	02 46.00	0.8				e	03 22.00	10kmX						
OLP	69.58	134 eP	02 27.00	-0.4			0.9s	508.00nm		6.3mb		REY	78.92	337 eP	03 25.80	5.3X						
CVT	69.62	303 P	02 27.30	-0.2				e	03 05.00	71kmX		PMR	79.77	26 ePc	03 24.00	-1.1						
PII	69.67	310 P	02 27.40	-0.3		LMR	72.58	310 iPc	02 45.00	-0.2			1.0s	56.90nm		5.3mb						
VDL	69.68	313 ePc	02 27.60	-0.4		LRG	72.65	310 iPc	02 45.60	0.0		Z	19s	11.00um		6.2Msz						
MDI	69.70	312 P	02 28.00	0.2			0.8s	125.95nm		5.8mb		VAL	79.82	323 eP	03 27.00	1.5						
LWI	69.70	258 iPc	02 28.10	-0.5		LOR	73.14	315 iPc	02 48.00	-0.4		KDC	80.40	30 eP	03 28.10	-0.4						
WIT	69.84	320 eP	02 30.00	1.4			0.8s	125.95nm		5.8mb		INK	80.58	16 ePc	03 28.50	-0.8						
LVI	69.88	303 P	02 28.20	-0.9		LBF	73 16	314 iPc	02 48 00	-0.6			0.8s	145.00nm		5.8mb						
LLS	69.89	313 ePc	02 28.70	-0.6		SMF	73.35	314 iPc	02 49.20	-0.4		TOA	80.63	25 eP	03 29.90	0.1						
WTS	69.96	319 iPc	02 30.00	0.7		SSF	73.44	315 iPc	02 49.90	-0.2		TOL	81.20	310 ePc	03 32.86	-0.3						
	0.7s	206.00nm		6.1mb		AVF	73.62	314 iPc	02 51.00	-0.2			1.3s	653.85nm		6.3mb						
		e	02 32.50	8kmX		GRC	73.64	315 P	02 51 40	0.1				ec	03 36.33							
		e	02 58.00			PLDF	73.71	313 P	02 51 87	0.0				epPd	04 03.15	118kmX						
		e	30 22.00			CMS	73.93	137 eP	02 52.00	-1.1				ed	04 06.13							
SLE	69.99	314 ePc	02 28.80	-0.9		AGO	74.01	314 P	02 53 76	0.3				iS	13 36.11							
ABH	70.05	317 eP	02 29.39	-0.6		BGF	74.03	314 iPc	02 53 40	-0.2				ePS	14 21.91							
ZLA	70.13	314 ePc	02 30.00	-0.6		PYM	74.19	313 P	02 54 74	0.1				eSS	19 30.00							
BOB	70.14	311 P	02 31.70	1.0		LBL	74 20	313 P	02 54 82	0.3				eSSS	22 30.00							
TMA	70 18	312 ePc	02 30.10	-0.9		MAF	74.32	314 iPc	02 55 60	0.3		SLR	81.89	237 ePc	03 37.30	0.3						
GWF	70.24	316 P	02 31.38	0.2		TCF	74.53	314 iPc	02 56.70	0.2			1.0s	1600.00nm		6.8mb						
STR	70.25	315 P	02 31.57	0.4		EKA	74.58	324 P	02 57.00	0.4				ic	03 39.79							
FEL	70.28	314 P	02 31.26	-0.3			0.8s	118.70nm		5.7mb				epP	04 08.09	120kmX						
VAI	70.31	312 P	02 31.30	-0.3		LSF	74.99	314 iPc	02 59.90	0.8				i	04 11.07							
		eS	11 27.40			CAF	75.09	313 iPc	03 00.10	0.3				e	04 23.16							
RUP	70.40	316 eP	02 32.14	0.0		LDF	75.23	317 iPc	03 00.20	-0.2				ePP	06 53.19							
PTS	70.48	302 P	02 33.40	0.6		RJF	75.33	313 iPc	03 01.60	0.6				S	13 40.00							
WLS	70.56	315 P	02 32.76	-0.4		FLN	75.39	317 iPc	03 01.90	0.6		ASMO	82.04	307 iPd	03 36.60	-1.1						
CDF	70.61	315 P	02 33.10	-0.4			0.9s	102 35nm		5.6mb		TAF	82.13	305 iPd	03 39.00	0.9						
ECH	70.74	315 P	02 33.64	-0.6		IMA	75.71	23 eP	03 02.30	-0.7				i	04 13.00	134kmX						
MMK	70.80	313 ePc	02 34.50	-0.4			1.2s	23.40nm		4.9mb X		APHE	82.17	307 iPc	03 38.60	0.2						
MEM	70.81	318 Pc	02 34.70	0.2		GRR	75.76	317 iPc	03 03.60	0.2		ACHM	82.21	307 iPd	03 38.00	-0.5						
ENN	70.82	318 ePc	02 34.50	-0.1		LPO	75 76	313 iPc	03 03 90	0.4		AAPN	82.34	307 eP	03 38.50	-0.7						
	0.8s	98.00nm		5.7mb		BRS	75 91	129 iPc	03 04.20	-0.4		ALOJ	82.41	307 iPc	03 38.60	-1.0						
		e	02 37.50	10kmX			0.8s	33.50nm		5.2mb		ATEJ	82.43	307 iPc	03 39.50	-0.3						

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TAU	82.64	144	ePc	03	39.88	-0.4	
			ic	03	42.20		
			epP	04	09.51	115kmX	
			ePP	06	56.80		
			epPP	07	36.53		
PVC	82.75	113	iPc	03	43.60	2.2	
MAL	82.79	307	eP	03	44.00	2.6	
			iS	13	48.00		
KSR	83.01	238	iPc	03	42.70	-0.2	
	1.0s	630.00nm			6.5mb		
PRY	83.13	236	iPd	03	43.20	-0.2	
	0.7s	187.50nm			6.1mb		
DZM	83.33	118	iPc	03	45.10	0.7	
GDH	83.57	349	iPc	03	45.00	0.2	
	0.9s	137.82nm			5.8mb		
			i	13	57.00		
BFS	83.64	237	iPc	03	45.50	-0.5	
			i	04	16.50	120kmX	
NKM	84.08	306	iPd	03	48.20	0.2	
IFR	84.71	304	iPc	03	53.00	1.6	
			i	04	23.00	116kmX	
LIS	85.26	311	iPd	03	56.40	2.6	
KIM	86.11	236	iPd	03	57.00	-1.3	
	0.7s	363.01nm			6.4mb		
			i	04	27.00	115kmX	
AVE	86.52	305	eP	03	57.50	-2.6	
			i	04	01.00	11kmX	
			i	04	23.00		
			i	04	57.00		
			i	06	11.00		
TIO	87.49	303	iPc	04	07.00	2.0	
			i	04	35.90	110kmX	
POF	90.10	238	iPd	04	17.00	0.0	
	1.0s	110.00nm			5.9mb		
SGE	90.84	109	eP	04	22.00	1.2	
FRB	90.88	353	eP	04	19.00	-1.1	
	1.2s	316.00nm			6.4mb		
SUR	90.88	235	iPc	04	22.00	1.2	
	1.0s	56.00nm			5.7mb		
SVA	91.52	109	ePc	04	24.80	1.1	
CFTV	93.90	304	iPKP	04	36.00	1.2	
			i(PP)	05	10.50		
MAW	95.18	192	iP	04	40.30	0.8	
HON	95.38	64	P	05	00.00	18.4X	
	Z 19s	1.61um			5.5Msz		
MSZ	95.66	137	P	04	41.20	-1.0	
LKO	95.73	283	Pc	04	44.86	1.5	
	0.8s	68.00nm			6.2mb		
KIC	96.36	280	PKPc	04	46.20	0.0	
TIC	96.49	280	PKPc	04	46.60	-0.1	
LIC	96.68	280	PKPc	04	47.40	-0.2	
	1.1s	104.50nm			6.2mb		
	Z 20s	2.50um			5.7Msz		
KRP	97.68	128	eP	04	48.00	-3.5X	
			e	04	54.00	19kmX	
WEL	98.58	131	eP	04	53.00	-2.4	
			eS	08	53.00		
SCH	99.27	350	eP	04	59.00	0.3	
	1.0s	52.00nm			6.1mb		
			pP	05	30.00	118kmX	
FFC	99.48	10	iPc	04	58.50	-1.1	
	1.1s	29.00nm			5.8mb		
PNT	99.98	22	eP	05	04.00	1.9	
SES	101.64	17	ePdiff	05	05.00	-4.3X	
RSON	104.31	6	Pdiff	05	30.00	9.0X	
	Z 20s	3.28um			5.9Msz		
LRM	105.39	20	ePdiff	05	41.50	15.2X	
KVN	109.28	27	PKP	09	54.30	7.2X	
RSNY	110.41	352	PKP	10	00.00	11.2X	
	Z 22s	3.92um			5.9Msz		
CLC	112.23	28	ePKP	09	53.00	0.4	
GSC	113.01	28	ePKP	09	54.00	-0.2	
GLD	113.05	17	PKP	10	00.00	5.8X	
	Z 19s	7.82um			6.3Msz		
GOL	113.06	17	PKP	10	00.00	5.6X	
	Z 18s	5.59um			6.2Msz		
SBB	113.08	29	ePKP	10	01.00	6.7X	
			e	11	17.00		
SPA	114.61	180	ePKP	09	55.20	-1.1	
	0.9s	82.73nm					
			e	10	58.70		
BAR	115.29	30	ePKP	10	05.00	6.4X	
GLA	115.77	28	ePKP	10	12.00	12.5X	
ANMO	117.17	20	PKP	10	00.20	-2.1X	
	Z 18s	1.24um			5.6Msz		
ANMO	117.17	20	ePdiff	06	37.59	18.9X	
			eSKS	16	47.27		
			eS	18	54.22		
			ePS	20	55.16		
ALQ	117.17	20	ePKP	10	01.70	-0.6	
	1.0s	10.00nm					
	Z 20s	2.62um			5.9Msz		
			pP	20	24.90		
TUL	118.77	10	ePKP	10	06.90	1.9	
	0.9s	9.20nm					
	Z 22s	4.19um			6.0Msz		
MEO	119.36	13	e(PKP)	10	08.00	1.8	
AFR	119.41	97	iPKP	10	07.20	0.5	
	0.9s	45.00nm					
PAE	119.63	97	iPKP	10	07.00	-0.1	
	0.9s	35.00nm					
TVO	119.96	97	ePKP	10	09.00	1.1	
	0.9s	60.00nm					
RSCP	119.97	1	PKP	10	00.00	-7.4X	
	Z 19s	1.32um			5.6Msz		
PMO	120.27	93	iPKP	10	08.80	0.4	
	0.9s	70.00nm					
TPT	120.52	93	iPKP	10	09.30	0.4	
	0.9s	70.00nm					
VAH	120.59	94	iPKP	10	09.30	0.3	
	0.9s	60.00nm					
RUV	120.80	93	iPKP	10	09.80	0.4	
	0.9s	45.00nm					
TBI	121.41	103	iPKP	10	10.30	-0.1	
	0.8s	80.00nm					
BPA	132.83	329	ePKP	10	31.93	-0.6	
			eS	11	14.63		
SEG	133.23	329	ePKP	10	41.70	8.5X	
MGG	133.56	328	ePKP	10	49.47	15.6X	
BBL	133.98	328	ePKP	10	51.55	16.9X	
RKT	134.28	99	ePKP	10	38.00	3.0X	
	0.9s	20.00nm					
LVVM	134.34	15	(PKP)	10	32.00	-3.2X	
PPM	134.40	18	(PKP)	10	36.00	-0.1	
III	134.80	20	(PKP)	10	39.00	2.6X	
ACX	136.09	21	(PKP)	10	44.00	5.3X	
OXX	136.81	17	(PKP)	10	44.00	3.7X	
AIA	137.41	193	ePKP	10	39.60	-0.1X	
TRN	138.08	324	ePKP	10	40.00	-2.5X	
LLAV	140.85	331	ePKP	10	43.50	-4.1X	
CAR	140.87	331	ePKP	10	40.00	-7.7X	
MORO	141.13	334	ePKP	10	44.50	-3.6X	
FISA	141.17	335	ePKP	10	45.80	-2.3X	
OLLA	141.25	331	ePKP	10	41.50	-6.8X	
PLAV	141.69	332	ePKP	10	44.40	-4.9X	
TOV	142.69	335	iPKPc	10	48.80	-2.0	
BDF	144.34	278	ePKP	10	52.07	-1.6X	
			i	10	54.88		
			ePP	14	11.76		
			epPP	14	44.21		
BAO	144.41	278	ePKPc	10	52.50	-1.2	
ITB	152.29	263	ePKP	11	11.80	6.0X	
ITB7	152.29	263	e(PKP)	11	10.50	4.7X	
ITB1	152.43	264	e(PKP)	11	08.80	2.9X	
TCA	161.04	245	ePKPc	11	17.20	0.7	
MRA	161.63	241	ePKP	11	19.00	2.1X	
YJA	162.15	274	ePKPd	11	20.50	2.2X	
ZOBO	162.29	295	PKPc	11	19.00	0.3	
	1.0s	96.25nm					
			SKS	16	18.00		
			LR	20	09.10		
LPB	162.41	295	PKP	11	19.90	1.3	
	1.1s	202.53nm					
	Z 20s	5.67um					
			(PKS)	12	10.00		
			SKS	16	24.00		
			LR	00	08.00		
CNCB	162.45	294	PKP	11	20.00	1.1	
RFA	162.71	231	ePKP	11	19.00	1.0	
MDZ	163.89	236	e(PKP)	11	22.10	2.8X	
CHCH	164.68	230	ePKP	11	21.50	1.6	
PCH	164.75	231	iPKPd	11	21.00	0.9	
ARE	165.10	301	ePKP	11	21.00	-0.1	
LNV	165.20	229	iPKPd	11	21.40	1.2	
NNA	165.26	328	iPKPc	11	32.30	11.4X	
	0.8s	14.93nm					
	Z 20s	0.53um					
ROCH	165.44	233	iPKPd	11	24.00	3.2X	
	S.D. = 1.1	on 442 of 506 obs.					

• JAN 09, 1990 19h 09m 45.93± 1.05s
18.070 N ±17.9km 64.754 W ± 9.9km
DEPTH = 33.0km (normal)
5.0mb (2 obs.)

VIRGIN ISLANDS (91)
Felt on St. Thomas.

LPR	1.09	283	iP	10	05.50	0.6	
PORP	1.79	270	iP	10	16.00	1.0	
LRS	2.00	277	iP	10	17.00	-1.1	
ANG	2.93	108	eP	10	31.25	0.0	
			eS	11	13.21		
PAG	3.57	124	eP	10	45.01	4.5X	
			S	11	34.00		
DTMT	4.31	130	eP	10	55.86	4.9X	
LHS	21.73	322	P	14	33.00	-3.3X	
JSC	21.86	321	P	14	35.40	-2.2	
PRM	22.40	319	P	14	43.00	-0.1	
NA2	22.99	333	P	14	49.00	0.3	
CVL	23.18	332	P	14	51.80	1.2	
BLA	23.52	327	P	14	55.60	1.6	
	0.7s	41.94nm			5.1mb		
NAV	23.79	327	P	15	01.00	4.4X	
PRIN	23.83	341	P	15	01.70	4.9X	
GBTN	24.59	319	P	15	06.50	2.2X	
RSCP	25.41	318	P	15	10.90	-1.3	
	0.9s	37.17nm			5.0mb		
	S.D. = 1.4	on 10 of 16 obs.					

JAN 09, 1990 19h 20m 58.58± 0.63s
56.645 N ± 4.7km 4.341 W ± 6.1km
DEPTH = 10.0km (geophysicist)

UNITED KINGDOM (533)
ML 2.5 (BGS). Felt (IV) in the Glen Lyon-Loch Ronnoch oreo.

ELO	0.39	116	iPgc	21	06.40	-0.2	
			eSg	21	11.60		
EAB	0.46	180	iPgc	21	07.40	-0.5	
			eSg	21	13.50		
EBH	0.61	130	iPg+	21	10.70	-0.2	
			eSg	21	18.70		
EDU	0.74	97	iPbc	21	13.00	-0.1	
			eSb	21	22.70		
EAU	0.94	148	ePb	21	16.40	-0.1	
EDI	0.97	138	ePb	21	16.70	-0.3	
			eSb	21	29.60		
KPL	1.00	315	ePb	21	17.40	-0.1	
			eSb	21	30.10		
MCD	1.11	32	ePbc	21	19.50	0.0	
			eSb	21	33.60		
EBL	1.13	140	ePbc	21	20.00	0.2	
			eSb	21	35.30		
ESY	1.21	126	iPbc	21	21.00	-0.1	
			eSb	21	36.30		
EKA	1.47	153	Pc	21	26.40	1.3	
	0.3s	9.40nm					
	S.D. = 0.5	on 11 of 11 obs.					

? JAN 09, 1990 20h 43m 14.70± 2.48s
17.410 N ±16.1km 100.911 W ±21.1km
DEPTH = 33.0km (normal)
GUERRERO, MEXICO (59)

ACX	1.14	118	iP	43	34.50	0.1	
			iS	43	54.00		
III	1.68	55	iP	43	43.00	0.7	
			(S)	44	18.00		
MRX	2.30	353	eP	43	51.00	0.0	
			(S)	44	23.00		
CRX	2.30	30	iP	43	57.00	5.6X	
			(S)	44	34.00		
UNM	2.52	40	(P)	44	04.50	10.0X	
			(S)	44	39.00		
PPM	2.73	52	(P)	43	57.00	-0.6	
			(S)	44	47.00		
IIT	2.95	57	(P)	44	09.00	8.5X	
			(S)	44	53.50		
IISM	3.71	64	(P)	44	19.00	8.0X	
			(S)	45	22.00		
OXX	4.01	94	eP	44	15.50	-0.2	
			(S)	45	24.00		
LVVM	4.82	61	(P)	44	44.50	17.6X	
	S.D. = 0.6	on 5 of 10 obs.					

& JAN 09, 1990 22h 01m 57.10s
59.927 N 151.264 W
DEPTH = 43.5km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

09d 22h

NNL	0.12	352	eP	02	05.11	2.4
BRLK	0.25	130	eP	02	04.99	-0.3
			eS	02	11.42	
CNPM	0.40	178	iP	02	06.14	-0.7
			eS	02	13.68	
XLV	0.53	206	eP	02	07.16	-1.2
			eS	02	15.86	
SLKM	0.78	41	eP	02	11.11	-0.8
NKA	0.82	1	eP	02	13.63	1.3
RDT	0.86	319	eP	02	12.18	-0.9
			eS	02	24.86	
SEW	0.93	78	eP	02	12.99	-0.9
			eS	02	27.11	
AUL	1.23	245	eP	02	17.57	-0.6
SPU	1.32	343	eP	02	18.79	-0.6
			eS	02	36.38	
PMS	1.57	32	eP	02	22.59	-0.4
CDD	1.57	232	eP	02	22.50	-0.5
			eS	02	43.23	
GHO	2.18	31	eP	02	30.61	-1.0
SVW	2.46	301	eP	02	34.09	-1.6
FID	2.52	69	eP	02	33.14	-3.3
CUT	2.53	11	eP	02	35.13	-1.5
VZW	2.59	62	eP	02	35.21	-2.4
NCA	3.00	44	eP	02	42.24	-1.1
TOA	3.30	46	eP	02	46.62	-1.1
RND	3.68	17	eP	02	52.34	-0.6
GLB	3.97	64	eP	02	54.02	-3.0
PAX	4.13	40	eP	02	57.60	-1.8
WRH	4.80	17	eP	03	06.09	-2.6

23 obs. associated

% JAN 09, 1990 23h 29m 23.64± 0.77s
42.791 N ± 6.0km 12.654 E ±13.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ASS	0.28	1	P	29	29.60	0.1
			eSg	29	34.10	
MNS	0.41	177	P	29	31.70	-0.3
			eSg	29	37.70	
ARV	0.74	17	P	29	37.80	-0.3
			eSg	29	49.40	
CRE	0.98	329	P	29	43.50	1.2
PGD	1.28	328	P	29	46.50	-1.0
SDI	1.39	141	P	29	49.40	0.4
			eSg	30	08.60	

S.D. = 0.9 on 6 of 6 obs.

% JAN 09, 1990 23h 45m 19.27± 0.77s
26.453 S ± 5.8km 27.383 E ± 8.0km
DEPTH = 5.0km (geophysicist)
REPUBLIC OF SOUTH AFRICA (584)

PRY	0.48	170	iPc	45	28.80	-0.1
			S	45	35.00	
BFS	0.69	230	iPc	45	34.50	1.3
			i	47	25.50	
KSR	0.73	323	iPd	45	33.70	-0.2
			S	45	42.40	
SLR	1.08	49	iPc	45	40.50	0.4
	0.5s	235.92nm				
			S	45	52.90	
BLF	2.85	202	iPd	46	06.50	0.1
	0.9s	141.54nm				
KIM	3.25	225	iPd	46	11.50	-0.6
	0.5s	49.30nm				
HVD	4.46	201	iPc	46	23.00	-6.2X
	0.9s	16.81nm				
			S	47	23.80	
POF	7.19	244	eP	47	31.00	23.3X
			S	48	58.50	
SUR	8.23	223	eP	47	21.50	-0.8
			S	48	50.00	

S.D. = 0.9 on 7 of 9 obs.

? JAN 10, 1990 01h 26m 50.43± 2.58s
17.787 S ±32.5km 178.690 W ±26.1km
DEPTH = 589.6 ± 30.6 km
4.6mb (5 obs.)
FIJI ISLANDS REGION (181)

DZM	14.61	251	iPc	29	56.90	1.9
CAN	33.57	232	eP	32	44.10	-0.2
BWA	33.67	234	eP	32	44.20	-1.0
TOO	37.04	231	iPc	33	13.20	0.3
WB5	44.37	260	eP	34	11.10	-0.3
ASPA	44.57	254	iPd	34	12.80	-0.1
	0.8s		41.00nm		5.0mb	
			iS	40	05.30	
FORR	49.78	244	eP	34	50.60	-1.5
	0.4s		16.00nm		4.9mb	
WARB	51.07	250	eP	35	01.00	-0.7
KVN	79.99	44	iP	38	00.90	0.2
TNP	80.06	45	iP	38	01.10	0.0
	0.9s		4.10nm		3.9mb	
PNT	84.79	34	ePd	38	25.00	0.8
	0.7s		9.00nm		4.5mb	
FBA	85.75	13	iP	38	26.90	-1.6
PV09	85.82	47	eP	38	29.80	0.0
BW06	87.45	44	eP	38	36.10	-1.3
	0.9s		6.57nm		4.4mb	
INK	91.84	15	eP	38	56.00	-0.7
KSP	144.92	343	iPKPc	45	22.80	0.5
SPC	145.13	338	ePKP	45	23.70	0.7
CLL	145.28	347	iPKPc	45	23.20	0.3
	0.9s		24.00nm			
BRG	145.48	346	iPKP	45	24.20	0.9
	1.1s		16.00nm			
WTS	145.59	354	ePKPd	45	24.50	1.2
	0.8s		16.00nm			
PRU	146.16	345	PKP	45	26.50	2.1X
ENN	146.89	355	ePKP	45	31.00	5.5X
	0.7s		6.00nm			
ZST	147.04	340	ePKP	45	29.20	3.4X
KHC	147.19	345	iPKPc	45	29.20	3.1X
CDF	149.07	352	ePKP	45	33.60	4.5X
FLN	149.07	2	ePKP	45	33.40	4.4X
LDF	149.25	2	ePKP	45	33.70	4.4X
GRR	149.43	3	ePKP	45	34.20	4.7X
HAU	149.58	353	ePKP	45	34.80	5.0X
BSF	149.70	353	ePKP	45	35.10	5.0X
LJU	149.76	342	e(PKP)	45	35.00	4.9X
LPF	149.77	3	ePKP	45	35.00	5.0X
VOY	149.96	342	e(PKP)	45	35.00	4.4X
VBY	150.02	340	ePKPd	45	36.40	5.9X
LOR	150.52	356	ePKP	45	37.10	5.8X
SSF	150.75	357	ePKP	45	37.60	6.0X
LBF	150.80	356	ePKP	45	37.50	5.8X
MFF	151.24	2	ePKP	45	38.40	6.1X
BGF	151.28	358	ePKP	45	38.70	6.3X
OHR	151.35	328	ePKP	45	33.50	0.8
TCF	151.57	359	ePKP	45	39.20	6.4X
LSF	151.62	360	ePKP	45	39.10	6.2X
MAF	151.63	358	ePKP	45	39.70	6.8X
LPG	152.00	352	ePKP	45	42.30	8.5X

S.D. = 1.0 on 21 of 44 obs.

& JAN 10, 1990 02h 03m 22.89s
61.492 N 151.170 W
DEPTH = 63.3km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.21	98	eP	03	33.13	0.1
NCG	0.48	260	eP	03	34.55	-0.7
			eS	03	44.38	
SKT	0.52	341	iP	03	34.40	-1.1
SPU	0.53	234	eP	03	35.14	-0.5
			eS	03	45.50	
PWA	0.64	75	eP	03	36.40	-0.4
			eS	03	47.54	
NKA	0.75	183	eP	03	39.83	1.7
CUT	1.01	25	eP	03	40.26	-1.2
			eS	03	54.76	
SLKM	1.09	154	eP	03	41.68	-0.9
RDT	1.10	214	eP	03	42.11	-0.6
			eS	03	58.10	
GHO	1.11	74	eP	03	41.75	-1.1
			eS	03	57.61	
NNL	1.46	182	eP	03	48.33	0.9
SEW	1.63	148	eP	03	49.13	-0.7
HUR	1.66	25	eP	03	49.52	-0.7
			eS	04	10.77	
CNPM	1.97	181	eP	03	53.89	-0.8
GLI	2.07	105	eP	03	53.25	-2.7
KTH	2.07	3	eP	03	54.90	-1.2
NCA	2.13	74	eP	03	55.24	-1.6
RND	2.20	28	eP	03	57.14	-0.8
PDB	2.27	222	eP	03	57.26	-1.5
VZW	2.27	99	eP	03	56.60	-2.2
FID	2.40	106	eP	03	57.28	-3.3
TOA	2.45	73	eP	04	00.04	-1.3
KLU	2.52	88	eP	03	59.55	-2.8
GLB	3.53	88	eP	04	13.06	-3.5

24 obs. associated

% JAN 10, 1990 02h 17m 38.08± 0.90s
41.950 N ± 7.5km 14.045 E ± 7.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

SDI	0.30	215	Pc	17	44.30	0.0
			eSg	17	49.50	
DUI	0.42	133	P	17	46.70	0.0
			eSg	17	53.60	
AZI	0.46	275	P	17	46.80	-0.5
			eSg	17	54.00	
AQU	0.62	310	P	17	50.10	-0.6
RDP	1.01	260	P	17	57.50	0.3
MNS	1.10	294	P	17	59.60	0.8
			eSg	18	16.00	
ASS	1.52	318	P	18	05.50	0.2

S.D. = 0.6 on 7 of 7 obs.

• JAN 10, 1990 02h 45m 40.30± 0.90s
11.218 N ±12.3km 94.903 E ±10.8km
DEPTH = 33.0km (normal)
ANDAMAN ISLANDS REGION (703)

NST	6.74	48	eP	47	30.40	10.8X
SNG	6.92	125	eP	47	22.00	-0.1
			eS	49	47.30	
BDT	7.19	33	eP	47	26.00	0.2
CHG	8.50	27	eP	47	49.00	4.8X
CHTO	8.50	27	eP	47	49.00	4.8X
KMI	15.70	27	eP	49	29.50	8.5X
PKI	18.55	333	P	49	57.00	0.2
DMN	18.72	332	P	49	59.20	0.3
KKN	18.80	333	P	49	59.60	-0.2
GKN	19.28	331	P	50	04.00	-1.4
POO	21.59	292	eP	50	29.50	-0.1
NDI	23.99	319	eP	50	54.00	1.1
LZH	26.05	17	eP	51	22.50	9.9X
			pP	51	33.50	42kmX

S.D. = 0.8 on 8 of 13 obs.

JAN 10, 1990 02h 57m 50.59± 0.52s
5.650 N ± 3.7km 75.784 W ± 4.4km
DEPTH = 61.5 ± 5.8 km
5.0mb (24 obs.)
COLOMBIA (103)
Felt at Manizales.

HOBC	1.33	195	iPd	58	12.66	-0.8
CLMC	1.92	204	iPc	58	21.55	-0.1
BOG	1.99	121	iP	58	27.00	4.2X
			iS	58	52.00	
HOQC	2.33	201	iPc	58	26.86	-0.6
ANCC	2.38	207	eP	58	26.47	-1.5
DIAC	2.38	190	ePc	58	28.11	0.0
SALC	2.81	199	iPc	58	34.64	0.5
PURC	3.36	190	iPc	58	42.92	0.7
PSO	4.69	199	eP	59	02.50	1.7
UPA	4.98	312	eP	59	04.80	0 2
			e	59	57.70	
SDV	6.04	58	iPnc	59	21.10	1.5
			iSn	00	27.60	
QUR	6.40	205	eP	59	26.00	1.2
GGP	6.43	206	eP	59	25.30	-0.1
TOV	7.22	55	ePn	59	36.20	0.3
			iSn	00	54.70	
FISA	8.47	48	eP	59	52.00	-1.2
			eS	02	26.60	
MORO	9.03	54	eP	00	00.00	-0.9
SJS	9.23	298	eP	00	06.00	2.2
OLLA	9.90	63	iPd	00	10.50	-2.3
			eS	03	00.40	
LLAV	10.10	61	iP	00	13.20	-2.3
NNA	17.55	183	eP	01	55.50	2.7
			e	02	15.00	
PT10	17.65	184	e(P)	01	58.00	4.1X
ARE	22.38	169	eP	02	46.00	0.7
ZOBO	23.06	161	PKP	02	51.00	-1.2
	1.0s		57.50nm		5.0mb	
	Z 20s		0.88um		4.2Msz	
			SKS	10	08.00	
LPB	23.31	161	PKP	02	52.50	-2.0
	1.0s		40.00nm		4.8mb	
	Z 18s		1.72um		4.6Msz	
			SKS	10	15.00	

CNCB 23.61 161 PKPc 02 58.20 0.6
SKS 10 08.00
CCH 24.79 158 P 03 07.90 -0.8
JSC 28.94 351 P 03 46.40 0.3
LHS 29.06 351 P 03 47.90 0.7
RSCP 31.14 344 P 04 06.20 0.5
0.8s 92.15nm 5.6mb
PWLA 31.31 340 P 04 07.10 -0.1
BLA 31.70 353 P 04 12.00 1.4
0.8s 13.42nm 4.8mb
NAV 31.85 352 P 04 12.80 0.9
CVL 32.27 356 P 04 16.80 1.3
NA2 32.38 357 P 04 17.50 1.1
OLY 33.04 336 P 04 21.40 -0.8
BAO 34.71 128 eP 04 35.50 -1.5
FVM 34.84 340 P 04 37.00 -0.7
TUL 35.29 331 eP 04 40.70 -0.9
0.8s 25.60nm 5.2mb
e 04 56.50
HBVT 38.63 3 P 05 11.00 1.4
RSNY 38.76 1 P 05 12.10 1.4
1.0s 28.92nm 5.1mb
PTN 38.77 1 P 05 12.20 1.4
ALQ 40.63 320 iPd 05 27.90 1.4
1.1s 18.99nm 4.8mb
ANMO 40.63 320 P 05 27.20 0.7
CBM 41.66 8 P 05 36.70 2.2
GOL 43.12 326 P 05 46.60 -0.3
0.9s 41.67nm 5.2mb
GLA 45.39 312 P 06 05.60 0.6
PLM 47.04 311 eP 06 18.00 -0.2
RSON 47.48 345 P 06 20.30 -0.9
0.9s 74.12nm 5.6mb
BW06 47.52 326 P 06 21.00 -0.9
1.2s 12.33nm 4.7mb
RVR 47.71 312 eP 06 23.00 -0.3
DUG 47.82 322 P 06 24.10 -0.1
GSC 47.90 314 eP 06 25.00 0.2
MWC 48.32 312 eP 06 28.00 -0.2
SBB 48.36 312 eP 06 28.00 -0.3
IMW 49.02 327 P 06 32.90 -0.6
ISA 49.27 313 eP 06 34.00 -1.4
TNP 49.54 317 P 06 37.30 -0.3
0.7s 7.78nm 4.8mb
SCH 49.56 7 ePd 06 37.00 -0.2
0.6s 32.00nm 5.5mb
KVN 50.63 317 P 06 45.30 -0.5
FRI 50.76 314 ePc 06 45.60 -1.0
LRM 51.09 328 ePd 06 48.50 -0.7
LLA 51.49 313 ePc 06 51.40 -0.8
CMB 51.72 315 ePc 06 53.50 -0.4
MHC 52.30 314 ePc 06 58.60 0.2
ORV 53.18 316 e(P) 07 03.50 -1.2
FFC 53.30 341 eP 07 04.00 -1.3
0.6s 13.00nm 5.1mb
SES 53.47 333 ePd 07 05.70 -1.0
MIN 53.62 317 ePc 07 06.00 -2.1
WDC 54.36 317 eP 07 09.90 -3.5X
EDM 56.46 334 eP 07 21.50 -6.9X
PNT 57.06 327 eP 07 32.00 -0.7
GMW 57.88 324 P 07 37.10 -1.3
FRB 58.22 4 eP 07 39.00 -1.5
LKO 69.59 82 Pc 08 56.44 0.6
0.9s 15.50nm 4.9mb
TIC 70.31 85 Pc 08 58.64 -1.6
KIC 70.60 85 Pc 09 00.80 -1.2
0 9s 22.00nm 5.1mb
TOL 72.39 50 eP 09 14.00 1.7
INK 73.24 341 ePd 09 15.70 -1.0
MBC 74.48 350 ePd 09 23.00 -0.7
0.6s 27.00nm 5.4mb
GRR 75.79 42 eP 09 32.10 0.4
1.1s 26.30nm 5.1mb
EPF 76.02 47 eP 09 33.60 0.4
0.9s 6.50nm 4.6mb
MFF 76.05 43 eP 09 34.20 1.0
0.6s 4.30nm 4.6mb
FLN 76.09 41 eP 09 34.60 1.2
1.1s 39.00nm 5.3mb
LDF 76.30 41 eP 09 36.10 1.5
LFF 76.49 45 eP 09 37.00 1.3
LPO 76.79 46 eP 09 38.40 1.0
DAG 77.29 11 eP 09 39.00 -0.6
FBA 77.32 335 P 09 39.40 -0.5
1.0s 10.00nm 4.8mb
IMA 79.95 336 P 09 53.80 -0.6
NAO 83.45 29 P 10 14.00 1.4

0.8s 4.40nm 4.5mb
HFS 84.88 30 eP 10 19.00 -0.7
1.9s 124.40nm 5.7mb
e 10 21.00
e 10 26.50
e 10 36.40
KHC 85.35 41 P 10 34.50 12.1X
PRU 85.93 40 eP 10 27.00 1.8
e 10 46.00
KSP 86.98 39 eP 10 32.00 1.7
BCAO 93.85 85 iPc 11 04.50 1.3
0.8s 13.00nm 5.4mb
ic 11 29.00
WMQ 128.55 15 PKP 17 01.00 8.4X
Z 16s 6.24um 6.4MszX
QUE 129.56 43 ePdiff13 52.00 9.3X
eS 30 09.70
BJI 133.22 347 Pdiff 13 56.50 -2.0X
7.0s 0.83nm
Z 16s 19.20um 6.9MszX
E 14s 9.93um
BTO 133.67 354 iPKPc 16 42.00 -20.5X
N 13s 9.10um
XAN 140.28 354 PKP 17 05.00 -9.9X
GKN 141.58 28 PKP 17 10.40 -7.2X
KKN 142.06 28 PKP 17 13.80 -4.7X
DMN 142.13 28 PKP 17 12.80 -5.9X
PKI 142.30 28 PKP 17 12.20 -6.9X
LSA 142.68 19 ePKP 17 23.30 3.5X
Z 17s 10.30um 6.7MszX
N 14s 3.60um
E 17s 4.70um
FORR 146.36 219 ePKP 17 24.10 -1.3
GBA 147.25 54 PKP 17 29.00 1.8
e 19 44.00
WB5 147.45 241 ePKP 17 26.90 -0.5
WRA 147.45 241 PKPc 17 27.00 -0.4
0.5s 7.80nm
KOD 149.04 59 ePKP 17 35.20 4.7X
WARB 150.40 224 ePKP 17 36.00 4.1X
KLB 151.24 205 ePKP 17 38.50 5.5X
MUN 151.50 202 ePKP 17 39.00 5.7X
MTN 152.51 253 iPKP 17 39.00 3.8X
e 18 41.00
e 20 36.00

S.D. = 1.2 on 94 of 114 obs.

JAN 10, 1990 03h 09m 18.85± 0.26s
39.646 N ± 5.7km 143.288 E ± 4.0km
DEPTH = 33.7km (7 depth phases)
5.3mb (41 obs.)

OFF EAST COAST OF HONSHU, JAPAN (229)

Felt (II JMA) at Morioka; (I JMA) at Aomori, Hachinohe, Miyako, Akita, Sakata, and Utsunomiya.

CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 21C
Centroid Locotion:
Origin Time 03:09:24.7 0.7
Lat 38.92N 0.12 Lon 142.78E 0.10
Dep 15.0 FIX Half-durotion 2.6
Moment Tensor; Scale 10**17 Nm
Mrr= 1 48 0.16 Mtt= 0.06 0.19
Mff=-1.53 0.18 Mrt= 0.89 0.48
Mrf= 3.31 0.57 Mtf=-0.68 0.19
Principol Axes:
T Vol= 3.65 Plg=58 Azm=282
N 0.29 3 16
P -3.94 32 108
Best Double Couple:Mo=3.8*10**17
NP1:Strike=207 Dip=13 Slip= 101
NP2: 15 77 87

SAP 3.71 337 eP 10 14.00 -1.2
eS 10 58.00
MAT 5.06 234 iPc 10 34.80 0.3
0.8s 380.60nm 5.9mb
eS 11 43.00
YSS 7.38 357 P 11 03.00 -3.9X
SHK 9.89 242 eP 11 43.00 1.2
MDJ 11.31 300 Pc 12 02.80 1.6
Z 15s 75.40um
E 14s 44.30um
epP 12 07.20
esP 12 10.50

ePP 12 13.00
CN2 13.95 293 Pc 12 35.00 -1.3
5.0s 2.20nm 3.2mb X
Z 12s 33.00um 3.7MszX
N 12s 9.00um
E 12s 11.00um
pP 12 42.00
SNY 15.10 285 Pc 12 51.00 -0.3
Z 16s 27.20um
N 12s 7.50um
E 15s 15.20um
DL2 16.79 274 Pc 13 12.00 -0.9
6.0s 2.10nm 2.4mb X
Z 18s 12.40um 4.1Msz
N 12s 10.90um
SSE 19.90 251 Pc 13 48.00 -2.3
5.0s 0.80nm 2.3mb X
Z 14s 17.60um 4.6Msz
N 12s 11.20um
E 12s 10.40um
pP 13 56.80 34km
TIA 20.90 269 P 13 58.20 -2.4
Z 14s 35.20um 5.9MszX
N 13s 13.20um
E 12s 28.00um
eS 17 53.90
NJ2 21.16 257 Pc 14 01.40 -1.9
Z 16s 14.50um 5.5MszX
N 12s 19.10um
E 12s 7.10um
TIY 24.11 275 eP 14 30.50 -1.9
N 14s 16.30um
HHC 24.18 283 eP 14 31.00 -2.1
Z 15s 35.50um 6.0MszX
S 18 50.00
WHN 25.27 258 ePd 14 42.00 -1.5
8.0s 1.60nm 2.7mb X
Z 16s 14.30um 5.6MszX
N 12s 6.00um
E 14s 18.60um
sP 14 53.00
BTO 25.38 283 iPc 14 44.50 -0.1
N 14s 11.40um
E 14s 15.70um
QZH 25.40 242 Pc 14 45.00 0.2
5.0s 1.60nm 2.9mb X
Z 16s 8.90um 5.4MszX
N 14s 7.50um
E 14s 10.10um
S 19 14.00
GUMO 25.99 176 eP 14 57.00 6.7X
XAN 27.96 269 Pd 15 08.00 -0.2
1.3s 0.10nm 2.3mb X
N 13s 13.90um
E 12s 7.30um
GZH 30.25 246 eP 15 30.60 1.8
Z 16s 15.50um 5.7MszX
N 10s 8.50um
E 13s 16.50um
BAG 30.45 227 eP 15 26.00 -4.9X
LZH 31.17 276 eP 15 37.00 0.0
1.5s 0.15nm 2.6mb X
Z 15s 15.70um 5.8MszX
N 13s 9.20um
E 13s 17.60um
QCP 31.63 224 eP 15 32.00 -8.9X
GYA 33.16 258 P 15 53.40 -1.1
N 15s 4.40um
E 15s 2.70um
S 21 15.40
CD2 33.21 267 eP 15 53.80 -0.9
GTA 33.29 284 eP 15 55.20 -0.3
1.2s 0.14nm 2.7mb X
Z 16s 27.40um 6.1MszX
E 16s 26.20um
eS 21 08.50
QIZ 35.37 244 eP 16 16.00 2.6
N 14s 11.20um
eS 21 52.00
KMI 36.86 259 Pc 16 26.50 0.4
Z 18s 15.50um 5.8Msz
N 13s 11.30um
E 14s 7.90um
S 22 12.00
TSM 42.00 219 Pc 17 10.70 2.2
TTA 42.44 36 P 17 10.40 -1.4
CHG 43.39 255 ePc 17 20.00 0.1

10d 03h

Sta	Dist	Az	Phase	Time	Res
	0.9s	19.33nm			4.9mb
			e	19 19.50	
BRW	43.43	24	eP	17 20.30	0.7
IMA	43.69	32	eP	17 22.30	0.3
BDT	44.32	253	eP	17 28.40	1.0
NST	44.51	250	eP	17 30.00	1.1
PMR	45.66	38	eP	17 37.40	-0.2
Z	20s	2.00um			5.1MszX
FBA	46.11	34	eP	17 41.30	0.1
TOA	47.02	37	eP	17 49.80	1.3
KKN	48.92	275	P	18 03.40	-0.5
PKI	48.93	274	P	18 03.60	-0.5
DMN	49.14	274	P	18 05.20	-0.5
GKN	49.31	275	P	18 06.00	-0.8
KSH	50.74	293	P	18 18.60	1.0
INK	51.39	28	eP	18 21.00	-1.0
MBC	53.60	17	eP	18 36.50	-1.9
	1.0s	28.00nm			5.2mb
NDI	54.65	280	iPd	18 46.80	0.1
			eS	26 38.00	
KBS	58.35	350	eP	19 13.60	1.1
WB5	59.80	190	eP	19 21.30	-1.8
WRA	59.86	190	Pd	19 22.10	-1.4
	0.9s	14.70nm			5.1mb
KEV	61.53	339	iP	19 23.00	-11.4X
POO	62.74	272	iPc	19 43.70	0.5
GBA	62.89	265	Pd	19 43.20	-0.9
	0.8s	21.00nm			5.3mb
SOD	63.13	337	iP	19 39.50	-5.5X
			i	19 45.60	20kmX
DAG	63.31	355	eP	19 44.00	-2.1
MAIO	63.77	296	eP	19 50.00	0.2
KOD	64.95	262	eP	20 03.00	5.0X
DZM	65.10	156	iPc	20 05.00	6.6X
PNT	65.28	46	eP	19 58.00	-1.4
	0.8s	18.00nm			5.2mb
RMQ	65.99	175	eP	20 02.40	-1.5
SUF	66.31	333	iP	20 04.40	-1.3
	0.5s	9.10nm			5.1mb
BRS	67.27	171	iPc	20 04.60	-7.6X
			e	20 11.00	21kmX
			e	20 31.00	
WARB	67.31	196	eP	20 13.00	0.6
LBFM	68.32	54	P	20 19.00	0.0
NUR	68.34	332	eP	20 16.80	-1.6
WDC	68.35	55	ePc	20 18.40	-0.5
MIN	69.07	55	e(P)	20 24.10	0.6
SES	69.22	41	eP	20 22.50	-1.7
ORV	69.58	55	e(P)	20 25.00	-1.5
IR4	70.20	300	eP	20 31.00	0.5
IR1	70.24	300	eP	20 32.00	1.2
GCC	70.71	58	ePc	20 34.20	0.8
FFC	70.72	34	iPd	20 31.40	-1.7
	0.7s	10.00nm			5.0mb
CMB	71.17	56	ePc	20 35.80	-0.5
UPP	71.25	334	iP	20 36.50	0.3
LRM	71.26	46	eP	20 36.40	-0.5
			e	22 34.60	570kmX
PRS	71.53	58	ePc	20 40.20	1.8
TAB	71.56	304	eP	20 21.00	-17.7X
			i	22 37.00	688kmX
FVN	72.02	54	P	20 40.20	-1.3
FRI	72.22	57	ePc	20 43.00	0.6
HFS	72.31	336	eP	20 40.90	-1.7
	1.2s	65.70nm			5.5mb
			e	20 44.90	13kmX
NAO	72.63	338	P	20 43.30	-1.2
	0.9s	24.80nm			5.2mb
SLY	73.56	303	ePd	20 50.00	-0.3
ISA	73.81	57	eP	20 58.00	6.1X
FRB	73.89	14	eP	20 50.00	-1.7
DUG	74.55	50	P	20 56.20	0.0
	0.8s	4.17nm			4.5mb
MSL	74.60	305	ePd	21 01.00	4.7X
BW06	74.79	47	P	20 57.00	-0.7
	0.8s	4.29nm			4.5mb
SBB	74.83	58	eP	20 56.00	-1.8
MWC	74.96	58	eP	21 05.00	6.3X
GSC	75.11	56	eP	21 01.00	1.6
BHD	75.70	301	ePd	21 03.50	0.8
KVT	75.94	312	iP	21 05.10	1.1
PLM	76.28	58	eP	21 06.00	-0.2
BAR	76.82	59	eP	21 17.00	8.0X
RSON	77.00	33	P	21 08.90	-0.7
	0.9s	13.01nm			5.0mb
KAS	77.04	313	eP	21 11.00	0.8
VRI	77.68	320	eP	21 11.00	-2.5

Sta	Dist	Az	Phase	Time	Res
KRA	77.75	327	ePc	21 14.20	0.5
	1.4s	112.00nm			5.7mb
			i	21 25.20	36km
GLA	77.80	57	eP	21 16.00	1.6
SPC	78.27	326	eP	21 16.70	-0.2
MLR	78.33	320	eP	21 18.00	0.7
BBTK	78.63	313	eP	21 19.00	0.0
KSP	78.65	329	eP	21 18.30	-0.4
	1.2s	34.00nm			5.2mb
			i	21 47.00	112kmX
CMP	78.94	321	ePc	21 21.00	0.6
GOL	79.19	47	P	21 22.60	0.4
	0.8s	7.29nm			4.7mb
BRG	79.54	330	iP	21 23.70	0.2
	1.7s	46.00nm			5.2mb
			i	21 34.00	33km
CLL	79.55	331	iP	21 23.80	0.2
	1.4s	45.00nm			5.3mb
PRU	80.01	329	P	21 27.00	0.9
			e	21 36.50	30km
BUD	80.09	325	e(P)	21 23.00	-3.5X
SRO	80.15	326	eP	21 27.70	0.9
JMB	80.17	318	eP	21 29.00	1.9
PVL	80.27	319	iPd	21 24.00	-3.6X
BZS	80.32	323	ePc	21 27.50	-0.3
ZST	80.37	327	eP	21 28.80	0.8
WIT	80.54	335	eP	21 30.00	1.2
			e	23 28.00	547kmX
			e	23 38.00	
VKA	80.65	327	eP	21 29.00	-0.5
HOF	80.78	331	iPc	21 30.40	0.2
	1.6s	61.00nm			5.3mb
SOP	81.00	327	iPc	21 34.10	2.7
KHC	81.07	329	iPc	21 31.50	-0.3
	1.0s	10.50nm			4.8mb
			e	21 41.50	32km
WTS	81.18	334	eP	21 31.00	-1.2
	1.3s	81.00nm			5.6mb
			e	23 30.50	554kmX
LFK	81.27	309	eP	21 34.30	1.2
PGB	81.34	319	eP	21 35.00	1.7
KDZ	81.36	318	iP	21 35.00	1.6
BEO	81.46	323	e(P)	21 34.00	0.2
			i	23 31.50	542kmX
KHL	81.51	313	eP	21 34.00	-0.3
RZN	81.69	318	iPd	21 36.00	0.7
ANMO	81.79	51	P	21 35.80	-0.2
	1.1s	12.82nm			4.9mb
VTS	81.79	320	iPd	21 33.00	-2.8
MMB	82.27	319	eP	21 39.00	0.8
ELL	82.39	312	eP	21 47.00	8.0X
KKB	82.39	319	iPd	21 40.00	1.2
TOD	82.49	332	eP	21 38.90	-0.3
ENN	82.52	334	eP	21 40.00	0.8
	1.2s	71.00nm			5.6mb
			e	23 37.00	537kmX
			e	23 48.00	
DSI	82.62	305	e(P)	21 40.00	-0.1
MEM	82.63	334	P	21 40.20	0.5
PTJ	82.65	326	eP	21 39.30	-0.8
SRS	82.69	319	eP	21 41.10	0.8
ZAG	82.71	326	eP	21 41.00	0.7
ABH	82.71	333	eP	21 41.14	0.9
KBA	82.81	328	iPKPc	21 40.40	-0.7
	0.9s	13.80nm			5.0mb
			i	21 51.80	37km
			ePP	23 38.30	
			i	23 50.10	
KNT	83.01	319	eP	21 42.80	0.9
RUP	83.03	333	eP	21 42.79	0.8
VAY	83.05	319	eP	21 38.00	-4.2X
			i	21 43.00	16kmX
OUR	83.06	318	eP	21 42.90	0.7
SKO	83.13	320	eP	21 42.40	-0.2
	1.4s	86.00nm			5.7mb
			i	21 44.00	5kmX
LJU	83.15	327	e(P)	21 42.00	-0.6
VBY	83.27	326	e(P)	21 44.90	1.7
			i	23 42.00	536kmX
WLF	83.38	334	P	21 45.00	1.4
GRG	83.41	319	eP	21 44.50	0.4
FVI	83.43	328	P	21 44.00	0.0
CEY	83.43	327	eP	21 44.50	0.4
GWF	83.44	332	P	21 45.40	1.3
DOU	83.54	335	P	21 50.80	6.3X
PRNI	83.69	304	eP	21 47.00	1.4
TRI	83.74	327	P	21 40.00	-5.5X

Sta	Dist	Az	Phase	Time	Res
TRI	83.74	327	eP	21 44.70	-0.8
			e	23 42.90	542kmX
DLE	83.83	342	eP	21 53.00	7.1X
OGA	83.91	329	eP	21 47.50	0.8
	1.2s	28.00nm			5.3mb
DCN	83.95	343	eP	21 55.00	8.5X
LIT	84.00	319	eP	21 46.60	-0.5
WLS	84.02	332	P	21 47.17	0.2
CDF	84.04	332	P	21 47.33	0.1
OHR	84.10	320	iP	21 46.20	-1.4
	1.0s	0.07nm			2.8mb X
			i	21 57.00	34km
FEL	84.23	332	P	21 47.33	-0.9
ECH	84.25	332	P	21 48.33	0.2
MOF	84.57	332	P	21 49.45	-0.4
VITF	84.67	333	P	21 50.72	0.6
BSF	84.71	332	P	21 49.67	-0.9
HAU	84.72	333	eP	21 50.10	-0.4
LOMF	85.10	332	P	21 51.95	-0.6
SAL	85.15	329	P	21 54.00	1.4
VAI	85.62	330	P	21 54.70	-0.3
ARV	85.86	326	P	21 58.00	1.7
PGD	86.08	327	P	22 00.00	2.5
ORO	86.13	330	P	22 11.00	13.3X
CRE	86.18	327	P	22 08.00	10.0X
LOR	86.22	334	eP	21 57.60	-0.4
	1.4s	36.50nm			5.4mb
BOB	86.27	329	P	22 01.50	3.1X
ASS	86.33	326	P	22 00.40	1.7
FIR	86.35	327	eP	21 53.00	-5.6X
LDF	86.35	337	eP	21 58.20	-0.4
	1.5s	73.10nm			5.7mb
LBF	86.43	333	eP	21 58.30	-0.8
	1.4s	19.10nm			5.1mb
MEO	86.49	47	eP	22 01.50	2.0
SSF	86.52	334	eP	21 59.10	-0.4
	1.5s	22.90nm			5.2mb
DUI	86.67	324	P	22 02.50	2.1
LPG	86.70	331	eP	22 00.40	-0.3
	1.3s	23.10nm			5.2mb
GRR	86.76	337	eP	22 00.40	-0.2
	1.4s	64.40nm			5.7mb
SMF	86.77	333	eP	22 00.40	-0.3
	1.3s	26.70nm			5.3mb
AVF	86.81	334	eP	22 00.60	-0.2
	1.5s	69.90nm			5.7mb
MNS	86.88	326	P	22 02.00	0.7
SDI	86.92	325	P	22 08.50	6.9X
CKI	87.02	330	P	22 19.00	17.1X
BNI	87.10	331	P	22 11.00	8.5X
LPF	87.13	337	eP	22 02.40	0.0
	1.5s	66.80nm			5.7mb
BGF	87.18	334	eP	22 02.50	-0.2
	1.3s	21.60nm			5.2mb
TUL	87.19	44	e(P)	22 02.70	-0.2
	1.2s	5.50nm			4.7mb
TDS	87.38	322	P	22 16.00	12.2X
MAF	87.57	334	eP	22 04.70	0.1
	1.4s	43.50nm			5.5mb
TCF	87.63	334	eP	22 04.90	0.0
	1.3s	19.40nm			5.2mb
CZI	87.83	322	P	22 03.30	-2.5
LSF	87.89	335	eP	22 06.20	0.1
MFF	88.13	336	eP	22 07.30	0.1
	1.1s	21.40nm			5.4mb
FVM	88.37	40	P	22 09.20	0.6
RJF	88.73	334	eP	22 10.40	0.2
CAF	88.87	334	eP	22 11.10	0.2
	1.5s	41.70nm			5.5mb
LFF	89.31	334	eP	22 12.90	0.0
LPO	89.39	334	eP	22 13.20	-0.1
SLR	124.67	264	iPKPc	28 10.00	-6.8X
			i	30 16.00	
LNV	151.76	89	ePKP	29 11.00	6.3X
PCH	152.32	88	ePKPc	29 12.20	6.5X
			e	31 11.00	

S.D. = 1.1 on 176 of 209 obs.

JAN 10, 1990 03h 11m 17.63± 0.71s
39.706 N ± 4.4km 143.306 E ± 4.0km
DEPTH = 36.6 ± 6.3 km
5.7mb (48 obs.) 5.5Msz (5 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)
Felt (II JMA) at Morioka and Akita; (I JMA) at Sendai, Aomori and Miyako.
CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN
L.P.B.: 10S, 26C
Centroid Location:
Origin Time 03:11:21.1 0.6
Lat 40.01N FIX;Lon 142.97E FIX
Dep 15.0 FIX Half-duration 3.3
Moment Tensor; Scale 10**17 Nm
Mrr= 1.56 0.19 Mtt= 1.27 0.22
Mff=-2.84 0.22 Mrt= 2.01 0.54
Mrf= 4.72 0.56 Mtf= 0.98 0.21
Principal Axes:
T Val= 5.69 Plg=49 Azm=314
N 0.16 21 197
P -5.85 33 93
Best Double Couple:Mo=5.8*10**17
NP1:Strike=132 Dip=23 Slip= 23
NP2: 20 81 111
OFUJ 1.41 244 iP+ 11 41.60 0.3
S 12 04.40
AOMJ 2.40 292 P 11 57.30 1.9
YAMJ 2.97 240 eP 12 04.80 1.2
KUSJ 3.55 17 P 12 09.10 -2.5
NIIJ 4.18 235 eP 12 21.90 1.2
KAKJ 4.28 216 eP 12 20.10 -2.0
S 13 07.40
CHJJ 5.00 224 eP 12 28.90 -3.3X
eS 13 28.80
MAT 5.11 233 (P) 12 35.00 1.1
0.8s 671.64nm 6.1mb X
eS 13 38.00
MTMJ 5.34 236 eP 12 38.90 1.8
IIDJ 6.01 227 eP 12 46.30 -0.3
TSRJ 7.15 237 eP 13 04.10 1.7
WKYJ 8.25 231 eP 13 16.60 -1.3
YONJ 9.03 243 P 13 29.10 0.5
TKSJ 9.36 235 eP 13 32.80 -0.3
SNY 15.10 284 iPc 14 49.00 -0.9
Z 16s 41.30um
N 12s 9.70um
E 13s 17.60um
DL2 16.80 274 eP 15 11.00 -0.6
8.0s 3.40nm 2.5mb X
Z 14s 15.70um 5.4MszX
N 12s 17.30um
E 14s 12.60um
SSE 19.94 251 P 15 47.00 -2.2
BJI 20.80 280 Pc 15 54.50 -3.6X
3.0s 1.30nm 2.8mb X
Z 16s 29.10um 5.7MszX
E 13s 14.00um
TIA 20.91 269 P 15 55.40 -3.9X
TIY 24.12 275 eP 16 29.00 -2.0
N 12s 8.40um
HHC 24.18 283 P 16 29.00 -2.6
WHN 25.30 258 Pc 16 41.70 -0.6
8.0s 3.40nm 3.0mb X
Z 12s 12.10um 5.6MszX
N 12s 2.40um
E 13s 13.70um
OZH 25.44 242 P 16 43.00 -0.6
GZH 30.28 246 P 17 27.50 -0.1
S 22 27.00
LZH 31.18 276 P 17 34.50 -1.1
GYA 33.19 258 iPc 17 52.00 -1.2
3 0s 2.10nm 3.5mb X
Z 16s 6.10um 5.4MszX
N 13s 5.20um
E 13s 8.60um
pP 18 00.00 27kmX
S 23 10.60
CD2 33.23 267 eP 17 51.20 -2.2
Z 16s 16.20um 5.8MszX
N 13s 28.10um
eS 23 04.00
GTA 33.29 284 P 17 54.00 0.1
QIZ 35.41 244 eP 18 13.00 0.8
N 13s 10.60um
KMI 36.88 259 P 18 25.00 0.2
WMQ 41.03 294 P 19 00.00 1.1
Z 13s 9.80um 5.9MszX
KKM 41.44 223 eP 19 03.50 0.9
TSM 42.05 219 ePc 19 08.20 0.7
CHTO 43.42 255 eP 19 18.80 0.2
1.0s 44.75nm 5.2mb
pP 19 24.20 18kmX
IMA 43.64 32 P 19 19.30 -0.7

1.0s 30.00nm 5.0mb
PMR 45.60 38 eP 19 34.80 -0.8
1.0s 0.90nm 3.6mb X
FBA 46.06 34 P 19 38.60 -0.6
1.1s 68.75nm 5.5mb
INK 51.33 28 eP 20 19.50 -0.5
0.9s 26.00nm 5.2mb
IPM 51.73 239 ePd 20 25.00 1.4
1.4s 112.30nm 5.7mb
KGM 52.20 234 eP 20 28.00 0.9
HON 52.85 92 P 20 50.00 18.0X
Z 20s 1.06um 4.9Msz
MBC 53.54 17 eP 20 36.00 -0.4
PSI 54.52 239 ePd 20 43.50 -0.8
NDI 54.65 280 eP 20 44.00 -1.2
eS 28 34.00
WB5 59.86 190 eP 21 19.50 -2.4
KEV 61.48 339 iP 21 21.40 -11.1X
1.0s 68.00nm
Z 16s 10.10um 6.1MszX
i 21 46.20
LR 53 20.00
GBA 62.91 265 P 21 41.80 -0.9
SOD 63.08 337 iP 21 42.20 -1.0
ASPA 63.65 190 iPc 21 46.20 -1.1
0.9s 24.00nm 5.3mb
MAIO 63.75 296 iPc 21 48.00 -0.2
DZM 65.15 156 iPc 21 54.70 -2.5
RMQ 66.05 175 eP 22 02.00 -0.7
SUF 66.27 333 iP 22 02.80 -1.0
0.7s 33.40nm 5.5mb
FHC 67.26 55 eP 22 11.30 0.7
BRS 67.33 171 iPc 22 09.60 -1.3
WARB 67.37 196 eP 22 10.00 -1.2
LBFM 68.28 54 P 22 18.00 0.8
NUR 68.29 332 iP 22 06.80 -9.8X
1.0s 42.00nm 5.5mb
i 22 17.40
WDC 68.30 55 eP 22 17.00 0.0
MIN 69.02 55 eP 22 21.50 -0.2
ORV 69.54 55 eP 22 23.80 -0.9
BRK 70.01 57 eP 22 27.10 -0.5
GDH 70.65 6 iPd 22 30.00 -0.9
1.0s 40.00nm 5.4mb
e 29 50.00
e 45 25.00
FFC 70.66 34 eP 22 31.00 -0.2
1.1s 44.00nm 5.4mb
GCC 70.67 58 eP 22 31.30 -0.3
MHC 70.72 57 eP 22 31.80 -0.3
ARN 70.79 57 P 22 32.20 -0.2
CMB 71.13 56 eP 22 34.20 -0.2
UPP 71.20 334 iP 22 34.60 0.2
1.5s 300.00nm 6.1mb
LRM 71.21 46 eP 22 34.60 -0.5
PRS 71.49 58 eP 22 36.20 -0.4
LLA 71.60 58 eP 22 37.00 -0.2
KVN 71.97 54 P 22 39.80 0.1
PRI 72.06 58 eP 22 40.70 0.6
FRI 72.18 57 eP 22 40.20 -0.4
HFS 72.26 336 eP 22 39.80 -0.9
1.5s 289.90nm 6.0mb
e 22 41.40
e 22 49.90
NAO 72.58 338 P 22 41.60 -1.0
1.3s 116.80nm 5.7mb
SYP 73.47 59 eP 22 51.00 2.6
ISA 73.77 57 eP 23 05.00 14.9X
BWA 73.91 176 eP 22 49.70 -0.9
DUG 74.50 51 P 22 54.70 0.4
1.0s 24.50nm 5.1mb
MSL 74.57 305 ePd 22 58.50 3.9X
BW06 74.74 47 P 22 55.00 -0.8
1.0s 37.50nm 5.3mb
SBB 74.78 58 eP 23 04.00 8.0X
CAN 74.84 175 eP 22 57.10 1.2
PAS 74.89 58 eP 23 01.00 4.5X
MWC 74.92 58 eP 23 12.00 15.1X
GSC 75.07 57 eP 23 00.00 2.4
DAU 75.28 50 P 22 58.80 -0.2
RVR 75.50 58 eP 23 02.00 2.0
BHD 75.69 301 iPd 23 02.50 1.5
MSU 75.95 52 P 23 04.10 1.4
COP 76.20 334 iPc 23 04.00 0.5
1.1s 146.84nm 5.9mb
PLM 76.24 58 P 23 05.00 0.6
BAR 76.78 59 eP 23 10.00 2.8

RSON 76.94 33 P 23 05.70 -2.0
1.0s 23.59nm 5.2mb
Z 20s 1.69um 5.4Msz
KRA 77.70 327 iPc 23 12.20 0.3
1.4s 168.00nm 5.9mb
Z 18s 7.90um 6.1Msz
E 18s 10.80um
e 23 21.20
GLA 77.75 57 eP 23 16.00 3.4X
SPC 78.22 326 eP 23 14.60 -0.5
e 26 10.10
KSP 78.60 329 iPc 23 17.20 0.3
1.4s 99.00nm 5.6mb
i 23 28.80
e 26 11.30
BBTK 78.60 313 iPc 23 18.00 0.7
GOL 79.14 47 P 23 20.20 -0.2
1.3s 49.48nm 5.3mb
Z 20s 1.25um 5.2Msz
GLD 79.19 47 eP 23 20.80 0.2
1.7s 73.91nm 5.4mb
Z 18s 7.18um 6.1Msz
BRG 79.50 330 iPc 23 21.60 -0.1
2.2s 160.00nm 5.6mb
i 23 33.50
e 26 17.00
CLL 79.51 331 iPc 23 21.40 -0.4
1.6s 120.00nm 5.6mb
e 23 33.00
HRT 79.65 315 eP 23 24.00 1.2
PRU 79.97 329 iPc 23 04.50 -19.8X
1.6s 92.50nm
e 23 34.00
YLV 79.99 315 iP 23 20.10 -4.6X
BUD 80.05 325 iP 23 25.00 0.3
SRO 80.11 326 iP 23 24.70 -0.3
JMB 80.13 318 iP 23 27.00 1.7
ZST 80.33 327 eP 23 26.80 0.6
VKA 80.60 327 iPc 23 28.20 0.5
4.3s 931.00nm 6.1mb X
HOF 80.73 331 iPc 23 28.50 0.1
1.4s 116.00nm 5.7mb
EDC 80.97 316 eP 23 30.50 0.8
KHC 81.03 329 P 23 30.50 0.5
Z 16s 4.00um 5.9MszX
N 16s 4.00um
E 15s 4.10um
e 23 40.40
HRI 81.24 306 eP 23 32.00 0.6
PGB 81.31 319 iP 23 33.00 1.4
KDZ 81.32 318 iP 23 33.00 1.4
KHL 81.48 313 eP 23 32.00 -0.6
RZN 81.66 318 iP 23 35.00 1.4
ANMO 81.74 51 P 23 35.10 0.9
1.2s 58.59nm 5.5mb
VTS 81.76 320 iPd 23 36.00 2.0
KKB 82.36 319 iP 23 38.00 1.0
ELL 82.36 312 eP 23 37.00 -0.2
SCH 82.38 17 eP 23 37.00 0.1
TOD 82.45 332 ePc 23 37.32 0.0
MEM 82.58 334 P 23 37.70 -0.2
DSI 82.60 305 eP 23 39.00 0.6
SRS 82.65 319 eP 23 38.90 0.4
ABH 82.66 333 ePc 23 38.43 0.0
KRP 82.73 155 eP 23 41.00 2.4
KNT 82.97 319 eP 23 40.30 0.1
RUP 82.99 333 ePc 23 40.43 0.3
SOH 82.99 319 eP 23 40.60 0.3
VAY 83.02 319 iP 23 40.40 0.0
1.3s 0.11nm 2.8mb X
SKO 83.09 320 iPc 23 41.00 0.2
1.5s 227.00nm 6.0mb
Z 16s 7.32um 6.1MszX
N 16s 8.25um
E 15s 3.40um
i 23 51.80
i 25 35.00
LR 05 03.00
THE 83.33 319 eP 23 42.10 0.1
WLF 83.33 334 P 23 42.00 0.2
GRG 83.37 319 eP 23 42.60 0.3
CEY 83.39 327 ePc 23 42.10 -0.2
DOU 83.49 335 P 23 43.80 1.2
PRNI 83.66 304 ePc 23 45.00 1.1
DLE 83.78 342 eP 23 44.50 0.4
OGA 83.87 329 iPc 23 45.60 0.7
1.9s 159.00nm 5.8mb

10d 03h

DCN	83.90	343	eP	23 42.90	-1.8
LIT	83.97	319	eP	23 45.30	0.0
CDF	84.00	332	eP	23 44.30	-1.1
	1.5s	94.00nm		5.7mb	
FNA	84.02	320	eP	23 45.50	-0.1
OHR	84.06	320	iP	23 44.20	-1.6
	1.0s	0.09nm		2.9mb	X
SLE	84.10	331	ePd	23 46.40	0.6
FEL	84.18	332	ePc	23 46.21	-0.2
SAX	84.21	330	ePd	23 47.40	0.7
OSS	84.36	330	ePd	23 48.30	0.9
ZLA	84.37	331	ePd	23 47.90	0.7
LLS	84.65	330	ePd	23 49.60	0.7
BSF	84.66	332	eP	23 47.60	-1.2
	1.5s	52.20nm		5.5mb	
HAU	84.67	333	eP	23 47.50	-1.2
	1.4s	55.70nm		5.5mb	
VDL	84.79	330	ePd	23 50.50	1.0
TMA	85.34	330	ePd	23 52.50	0.2
MMK	85.73	331	ePd	23 55.30	1.0
DIX	85.91	331	ePd	23 56.30	1.0
LOR	86.17	334	eP	23 55.00	-1.2
	1.2s	84.40nm		5.8mb	
FLN	86.26	337	eP	23 55.50	-1.1
	1.3s	64.90nm		5.7mb	
HLW	86.30	306	eP	23 59.00	1.9
LDF	86.30	337	eP	23 55.70	-1.1
	1.5s	119.00nm		5.9mb	
FIR	86.31	327	eP	23 58.00	1.2
GRC	86.42	334	P	23 58.31	1.0
SSF	86.47	334	eP	23 56.60	-1.0
	1.5s	101.30nm		5.8mb	
LPG	86.65	331	eP	23 58.00	-0.9
	1.2s	53.50nm		5.6mb	
GRR	86.71	337	eP	23 57.90	-0.9
	1.5s	146.20nm		6.0mb	
SMF	86.72	333	eP	23 57.70	-1.2
	1.5s	148.30nm		6.0mb	
AVF	86.76	334	eP	23 57.90	-1.1
LPF	87.08	337	eP	23 59.90	-0.7
	1.5s	139.90nm		6.0mb	
BGF	87.14	334	eP	24 00.10	-0.8
	1.5s	88.70nm		5.8mb	
PLDF	87.38	333	P	24 03.21	1.0
AGO	87.48	333	P	24 03.78	1.2
MAF	87.52	334	eP	24 02.30	-0.5
	1.5s	158.70nm		6.1mb	
TCF	87.59	334	eP	24 02.30	-0.8
	1.5s	104.40nm		5.9mb	
PYM	87.78	333	P	24 04.93	0.8
LSF	87.85	335	eP	24 03.50	-0.8
	1.2s	84.40nm		5.9mb	
MFF	88.08	336	eP	24 04.80	-0.6
	1.6s	124.30nm		5.9mb	
LBL	88.15	333	P	24 07.00	1.3
FVM	88.32	40	P	24 06.80	0.1
RJF	88.68	334	eP	24 07.70	-0.6
	1.5s	87.70nm		5.9mb	
CAF	88.83	334	eP	24 08.70	-0.4
	1.6s	111.90nm		5.9mb	
LFF	89.26	334	eP	24 10.50	-0.6
	1.5s	114.90nm		6.0mb	
LPO	89.34	334	eP	24 10.90	-0.6
	1.5s	77.30nm		5.8mb	
EPF	91.09	334	eP	24 18.30	-1.4
	1.5s	26.10nm		5.4mb	
BUL	121.37	269	ePKP	30 24.50	15.5X
S.D. = 1.1 on 175 of 190 obs					

JAN 10, 1990 03h 40m 47.54± 0.96s
61.841 N ±11.5km 151.038 W ± 5.7km
DEPTH = 70.7 ± 25.2 km
SOUTHERN ALASKA (2)
Felt (II) at Palmer.

PWA	0.58	109	iPc	41 01.60	0.2
PMS	0.93	130	iPc	41 05.20	-0.3
PMR	0.94	105	iPc	41 05.30	-0.3
TOA	2.31	81	eP	41 24.80	0.6
SVW	2.32	254	iPd	41 24.10	-0.1
TTA	2.56	297	eP	41 28.10	0.4
FBA	3.40	24	eP	41 39.10	-0.2
IMA	4.40	346	eP	41 53.20	-0.3
DWY	5.74	62	P	42 12.00	-0.1
S.D. = 0.4 on 9 of 9 obs.					

? JAN 10, 1990 03h 45m 45.79± 2.21s
17.107 S ±33.7km 72.333 W ±11.0km
DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)

ARE	1.03	52	eP	46 04.00	-0.2
			eS	46 28.00	
LPB	4.10	83	P	46 52.00	3.9X
ZOBO	4.12	79	P	46 49.20	0.6
CNCB	4.18	87	P	46 49.00	-0.3
PT03	4.55	312	eP	46 54.60	0.4
			eS	47 34.60	
NNA	6.71	319	eP	47 28.90	4.3X
	0.5s	3.52nm		4.5mb	X
			eS	48 44.70	
PT10	6.72	317	e(P)	47 37.00	12.2X
			e(S)	48 41.00	
PPM	44.28	323	iP	53 54.50	-0.4
S.D. = 0.7 on 5 of 8 obs.					

? JAN 10, 1990 03h 51m 36.68±18.98s
15.307 N ±102.km 103.276 W ±118.km
DEPTH = 33.0km (normal)
OFF COAST OF GUERRERO, MEXICO (65)

ACX	3.63	64	iP	52 31.50	-0.5
			iS	52 52.00	
III	4.76	50	iP	52 41.00	-7.1X
			(S)	53 15.00	
MRX	4.80	24	eP	52 49.00	0.4
			(S)	53 26.50	
CRX	5.33	40	eP	52 55.00	-1.4
			(S)	53 35.00	
UNM	5.59	44	(P)	53 00.00	0.0
			(S)	53 36.50	
IIT	6.02	51	(P)	53 06.00	0.0
			(S)	53 50.00	
OXX	6.54	73	eP	53 13.00	-0.3
			(S)	54 23.00	
IISM	6.72	56	(P)	53 17.50	1.8
LVVM	7.86	55	(P)	53 40.00	8.4X
S.D. = 1.2 on 7 of 9 obs.					

? JAN 10, 1990 04h 36m 12.26± 6.07s
17.045 N ±36.2km 101.603 W ±41.9km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	1.68	96	iP	36 39.50	-0.2
			iS	37 04.00	
III	2.43	57	iP	36 50.00	-0.7
			(S)	37 21.00	
MRX	2.67	8	(P)	36 54.00	0.1
CRX	2.98	38	(P)	37 06.00	7.5X
			(S)	37 37.00	
PPM	3.47	54	iP	37 05.00	-0.8
IISM	4.46	64	(P)	37 21.00	1.6
OXX	4.67	89	(P)	37 43.50	21.0X
S.D. = 1.4 on 5 of 7 obs.					

? JAN 10, 1990 05h 18m 31.20± 1.84s
32.142 S ±36.5km 14.105 W ±20.9km
DEPTH = 10.0km (geophysicist)
4.4mb (5 obs.)
SOUTH ATLANTIC RIDGE (410)

BAO	34.88	290	e(P)	25 26.00	0.9
LIC	39.12	14	P	26 00.50	-0.1
	0.8s	4.50nm		4.2mb	
KIC	39.31	15	P	26 02.00	-0.2
	0.8s	6.50nm		4.3mb	
TIC	39.53	14	P	26 03.70	-0.3
	0.9s	6.50nm		4.3mb	
BCAO	47.81	47	ePc	27 11.40	0.4
	0.4s	4.00nm		4.9mb	
CNCB	50.86	274	P	27 34.00	-1.1
LPB	51.09	274	P	27 37.00	0.3
LSF	79.30	11	eP	30 38.20	0.0
LPG	79.56	15	eP	30 40.00	0.0
	0.9s	6.50nm		4.6mb	
S.D. = 0.6 on 9 of 9 obs.					

JAN 10, 1990 05h 38m 25.60± 0.45s
36.078 N ± 4.1km 27.130 E ± 3.3km
DEPTH = 39.5 ± 5.7 km
4.5mb (28 obs)
DODECANESE ISLANDS (369)
MD 4.5 (ATH).

KAP	0.53	176	ePb	38 35.70	-1.0
YER	1.40	41	iPn	38 48.70	-0.4
NPS	1.48	237	ePb	38 50.00	-0.2
APE	1.62	308	ePb	38 51.70	-0.5
SMG	1.64	352	ePb	38 51.00	-1.5
KSL	1.99	88	ePn	39 00.00	2.6
IZM	2.32	3	iPn	39 00.90	-1.3
ELL	2.34	73	iPn	39 04.80	2.2
VAM	2.48	255	ePb	39 06.50	2.1
KHL	2.95	40	iPn	39 11.00	-0.1
PRK	3.24	348	ePn	39 11.00	-4.1X
ATH	3.32	306	ePn	39 16.50	0.1
VLI	3.44	282	ePn	39 18.50	0.4
DST	3.72	18	ePn	39 21.40	-0.6
EZN	3.80	351	iPn	39 21.00	-2.1
EDC	4.30	7	ePn	39 28.50	-1.8
BNT	4.32	8	iPn	39 29.60	-0.9
ITM	4.33	286	ePb	39 33.20	2.5
NEO	4.47	317	ePn	39 32.30	-0.4
MFT	4.70	1	iPn	39 35.60	-0.5
AGG	4.81	309	eP	39 38.80	1.2
YLV	4.82	21	iPn	39 38.10	0.5
GPA	4.89	30	ePn	39 41.00	2.3
OUR	4.92	331	eP	39 39.70	0.7
GBZT	5.04	20	ePn	39 47.50	6.8X
HRT	5.14	22	ePn	39 51.00	8.9X
CSS	5.18	101	eP	39 42.50	-0.2
			e(Sn)	40 44.50	
ISK	5.20	16	ePn	40 01.00	18.0X
ITU	5.23	16	ePn	40 00.00	16.6X
			iSg	41 13.00	
LFK	5.27	97	ePn	39 45.80	1.7
LIT	5.43	319	eP	39 46.00	-0.3
KDZ	5.72	347	iP	39 50.00	-0.3
DMK	5.76	5	ePn	39 47.90	-2.9
BBTK	5.82	48	iPc	39 53.00	1.1
RZN	5.91	342	iP	39 52.00	-1.2
KZN	5.97	317	ePn	39 54.10	0.2
KNT	6.06	328	eP	39 56.00	0.9
MMB	6.11	335	ePc	39 55.00	-0.8
GRG	6.12	324	eP	39 56.70	0.7
VAY	6.33	327	eP	40 01.00	2.1
KKB	6.58	333	iP	40 00.00	-2.4
SRN	6.79	306	eP	40 06.40	1.1
TPE	7.01	309	eP	40 10.90	2.5
HLW	7.14	149	ePn	40 09.50	-0.7
			eSn	41 26.50	
VTS	7.18	336	iP	40 10.00	-0.9
BERA	7.29	311	eP	40 14.10	1.9
SKO	7.36	325	eP	40 09.70	-3.7X
	1.1s	44.00nm		5.3mb	X
			i	40 16.30	
			i	40 19.80	
			i	40 31.90	
KAS	7.40	42	eP	40 16.00	2.0
HRI	7.63	109	eP	40 15.00	-2.1
TIR	7.74	315	eP	40 23.00	4.4X
LACI	8.02	316	eP	40 24.00	1.6
BURJ	8.14	116	Pc	40 53.00	28.7X
SALJ	8.18	117	Pc	40 51.70	26.9X
DSI	8.20	121	eP	40 23.00	-2.0
			eS	41 55.00	
PRNI	8.72	129	eP	40 30.00	-2.3
SOI	9.07	286	P	40 36.00	-1.0
TDS	9.25	296	P	40 41.60	2.1
CZI	9.27	293	P	40 38.90	-0.8
CSI	9.33	297	P	40 40.80	0.2
MLR	9.45	355	eP	40 43.00	0.7
HQL	9.52	133	eP	40 41.30	-1.9
VRI	9.79	358	eP	40 46.00	-0.9
MGR	9.98	297	P	40 48.50	-1.0
			eSn	42 39.00	
BADA	10.05	136	eP	40 47.70	-2.8
MNO	10.12	284	P	40 46.00	-5.6X
AYN	10.38	131	eP	40 42.30	-12.6X
DUI	11.34	303	P	41 09.50	1.4
SDI	11.79	302	P	41 17.80	3.6X
PTJ	12.93	323	eP	41 30.40	1.1
8HD	14.47	96	ePd	42 05.00	15.4X
SLY	14.91	86	eP	42 01.50	6.2X
FVI	15.03	319	P	42 03.00	6.3X
KBA	15.05	321	iPd	41 58.50	1.3
	1.0s	70.40nm		4.9mb	
			i	42 03.40	
			i	42 07.30	
OGA	16.15	317	eP	42 15.60	4.2X
KHC	16.39	327	iP	42 16.90	2.7

	1.0s	17.50nm		4.1mb		
PRU	16.64	331	eP	42 17.00	-0.3	
KSP	16.70	335	eP	42 20.50	2.4	
LPG	18.03	308	eP	42 34.60	-0.5	
	0.8s	14.70nm		4.2mb		
TOD	18.99	321	eP	42 46.52	0.1	
BSF	19.09	314	eP	42 45.90	-1.8	
	0.8s	14.50nm		4.3mb		
IR1	19.13	85	eP	42 53.00	4.7X	
IR4	19.33	85	eP	42 53.00	2.4	
HAU	19.43	314	eP	42 50.40	-1.1	
	0.7s	8.80nm		4.1mb		
ABH	19.81	320	eP	42 55.64	0.1	
RUP	19.96	319	eP	42 56.94	-0.2	
SMF	20.35	308	eP	42 59.40	-1.8	
	0.9s	8.10nm		4.1mb		
LBF	20.40	309	eP	43 00.00	-1.7	
	0.9s	13.70nm		4.3mb		
WLF	20.42	318	P	43 02.00	0.2	
LOR	20.59	310	eP	43 02.30	-1.3	
	1.1s	19.50nm		4.4mb		
AVF	20.71	308	eP	43 03.50	-1.4	
	1.0s	22.00nm		4.5mb		
SSF	20.72	309	eP	43 03.80	-1.2	
	0.9s	37.60nm		4.8mb		
CAF	20.94	303	eP	43 06.50	-0.8	
	0.9s	10.40nm		4.2mb		
BGF	20.95	307	eP	43 06.10	-1.3	
	0.6s	11.70nm		4.4mb		
MAF	21.01	306	eP	43 06.80	-1.2	
	1.1s	17.00nm		4.3mb		
MEM	21.04	320	P	43 08.90	0.8	
TCF	21.27	306	eP	43 10.50	-0.1	
RJF	21.42	303	eP	43 11.70	-0.4	
	1.3s	24.50nm		4.4mb		
LPO	21.48	302	eP	43 12.00	-0.7	
	0.9s	11.10nm		4.3mb		
DOU	21.50	318	Pd	43 13.90	1.1	
	0.9s	32.50nm		4.7mb		
LSF	21.70	306	eP	43 13.90	-1.0	
LFF	21.85	302	eP	43 16.00	-0.4	
MFF	22.91	306	eP	43 26.60	-0.3	
	0.9s	11.10nm		4.3mb		
LDF	23.57	311	eP	43 32.60	-0.6	
	1.1s	26.30nm		4.7mb		
FLN	23.85	311	eP	43 35.50	-0.5	
	1.1s	34.10nm		4.8mb		
LPF	23.95	309	eP	43 36.20	-0.6	
	1.3s	50.50nm		4.9mb		
GRR	23.95	310	eP	43 36.60	-0.3	
	1.1s	45.90nm		4.9mb		
MAIO	26.06	80	eP	43 59.00	1.8	
IFR	26.55	274	iP	44 07.00	5.2X	
SUF	26.67	359	eP	43 57.20	-5.2X	
NAO	26.86	342	P	44 03.20	-1.0	
	1.0s	8.30nm		4.3mb		
BCAO	32.47	196	iPc	44 57.00	2.5	
	0.7s	9.00nm		4.8mb		
TIC	41.52	233	P	46 11.42	0.6	
KIC	41.56	232	P	46 11.82	0.7	
LIC	41 84	232	P	46 14.16	0.7	
GEN	48 80	82	P	47 09.30	0.2	
DMN	49.35	83	P	47 14.60	1.2	
FKN	49.41	82	P	47 14.00	0.2	
	0.8s	13.00nm		5.0mb		
PKI	49.61	83	P	47 16.20	0.7	
	1.0s	22.00nm		5.1mb		
GUN	49.84	82	P	47 17.60	0.3	
GBA	50.20	103	Pd	47 21.30	1.6	
	0.8s	7.10nm		4.7mb		
FRB	60.69	330	eP	48 33.00	-1.8	
FFC	79.56	333	eP	50 30.00	0.3	
	1.0s	12.00nm		4.8mb		
BAO	87.51	249	eP	51 14.00	3.2X	
TUL	90.86	317	eP	51 27.40	1.0	
	1.1s	9.50nm		5.1mb		

S.D. = 1.4 on 104 of 124 obs.

JAN 10, 1990 06h 11m 06.17± 0.78s
22.466 N ± 5.1km 94.552 E ± 7.5km
DEPTH = 122.5 ± 10.2 km
4.8mb (3 obs.)
BURMA (296)

SHL	3.93	322	iP	13 03.30	57.4X	
			iS	13 40.00		
CHG	5.49	131	eP	12 26.00	-0.9	
CHTO	5.49	131	eP	12 26.10	-0.8	
BDT	6.67	140	eP	12 43.20	0.1	
LSA	7.83	338	P	12 58.50	-0.7	
			S	14 09.60		
NST	8.57	141	eP	13 09.40	0.6	
NNT	10.99	152	eP	13 42.50	1.4	
GYA	11.72	68	P	14 02.00	11.1X	
CD2	11.76	42	eP	13 52.40	1.2	
LZH	15.80	29	eP	14 42.00	-1.1	
HYB	15.86	254	eP	14 52.00	8.2X	
			eS	17 20.50		
NDI	16.81	295	eP	14 56.50	0.9	
			eS	17 44.00		
XAN	17.10	44	P	15 00.00	0.9	
GTA	17.48	14	eP	15 02.70	-1.1	
GBA	18.49	244	P	15 15.00	-0.6	
			S	15 25.00		
WMQ	22.04	347	P	15 52.60	0.9	
WB5	57.30	134	eP	20 43.20	-0.3	
WRA	57.33	134	Pd	20 44.00	0.3	
	0.6s	7.50nm		4.9mb		
MUN	57.97	158	eP	20 47.50	-0.5	
NWAO	59.19	158	eP	20 56.00	-0.5	
	0.5s	2.60nm		4.5mb		
ASPA	59.72	138	eP	21 00.40	0.1	
	0.6s	12.00nm		5.1mb		
NAO	67.62	328	P	22 18.70	27.3X	
	1.0s	8.30nm				

S.D. = 0.9 on 18 of 22 obs.

JAN 10, 1990 06h 37m 25.21± 0.78s
36.189 N ± 8.1km 27.293 E ± 7.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.64	189	ePg	37 36.50	-1.6	
			eSg	37 46.00		
YER	1.23	40	iPn	37 47.20	-1.0	
SMG	1.56	347	ePb	37 52.70	-0.3	
NPS	1.65	236	ePg	37 55.80	1.5	
APE	1.67	302	ePn	37 55.00	0.4	
KSL	1.86	91	ePb	37 58.80	1.5	
ELL	2.18	74	ePn	38 04.30	2.1X	
IZM	2.20	359	ePn	38 08.00	5.6X	
VAM	2.63	254	ePg	38 13.00	4.5X	
KHL	2.78	39	ePn	38 07.00	-3.6X	
VLI	3.55	280	ePn	38 21.00	-0.5	
ITM	4.42	284	ePn	38 34.00	0.1	

S.D. = 1.3 on 8 of 12 obs.

JAN 10, 1990 06h 37m 54.82± 0.13s
24.516 N ± 3.0km 94.682 E ± 3.1km
DEPTH = 86.5km (7 depth phases)
5.2mb (46 obs.)
BURMA-INDIA BORDER REGION (294)

LSA	6.05	329	Pd	39 25.60	1.7	
			S	40 26.40		
CHG	6.92	144	iPn	39 35.20	-0.3	
			ePg	39 59.20		
			eSg	41 21.20		
CHTO	6.92	144	iPnc	39 35.40	-0.1	
KMI	7.35	84	Pc	39 46.00	4.4X	
Z	10s	2.50um				
BDT	8.29	150	eP	39 53.70	-0.5	
	1.0s	393.30nm		6.1mb		
GUN	8.60	295	P	39 55.40	-3.5X	
PKI	8.88	292	P	39 59.00	-3.7X	
KKN	9.05	293	P	40 01.20	-3.8X	
DMN	9.14	292	P	40 02.20	-4.0X	
GKN	9.66	293	P	40 08.80	-4.4X	
NST	10.18	149	iPc	40 20.10	0.1	
GYA	11.00	77	P	40 32.40	1.3	
			S	42 33.00		
			ScS	53 25.60		
NNT	12.79	157	eP	40 56.00	1.3	
LZH	13.98	32	eP	41 08.50	-1.8	
	1.0s	0.18nm		2.3mb X		
Z	28s	1.47um		5.6MszX		
			sP	41 37.00		
QIZ	15.10	108	eP	41 24.00	-0.7	
E	14s	2.10um				
GTA	15.47	15	Pd	41 27.60	-1.8	
	1.2s	0.30nm		2.4mb X		
E	11s	1.30um				
XAN	15.62	49	Pc	41 31.50	0.2	
NDI	16.16	289	iPc	41 35.80	-2.3	
			eS	44 19.00		
HYB	16.63	248	iPd	41 46.00	2.0	
	1.0s	100.00nm		5.0mb		
			e	42 21.50		
			eS	44 32.00		
GZH	17.14	91	eP	41 52.00	1.8	
SNG	18.15	161	eP	42 02.30	-0.4	
	0.7s	91.78nm		5.1mb		
			eS	45 24.50		
			e	47 21.20		
WHN	18.44	67	eP	42 05.00	-1.1	
BSI	18.92	178	ePd	42 11.00	-0.6	
GBA	19.56	239	P	42 17.50	-0.9	
			S	45 47.50		
TIY	20.06	45	Pc	42 21.10	-2.4	
WMQ	20.09	345	iPd	42 25.00	1.2	
			sS	46 30.00		
			ScP	50 04.60		
			ScS	53 47.00		
POO	20.26	257	iPd	42 26.00	0.3	
			iS	45 57.50		
BTO	20.55	35	P	42 28.00	-0.6	
IPM	20.74	162	ePc	42 31.60	1.0	
	0.9s	187.10nm		5.4mb		
BOM	21.06	259	eP	42 33.40	-0.3	
			eS	46 15.00		
HHC	21.55	37	eP	42 39.00	0.3	
KSH	21.70	318	Pc	42 40.00	-0.1	
QZH	21.72	84	Pd	42 41.00	0.7	
PSI	22.08	169	ePc	42 44.70	0.8	
	1.1s	178.90nm		5.4mb		
NJ2	22.54	65	Pc	42 49.00	0.7	
BJI	23.78	44	eP	43 01.50	1.2	
	1.0s	0.12nm		2.3mb X		
			ScP	50 14.00		
KGM	23.88	158	ePd	43 03.60	2.2	
SSE	24.31	68	Pd	43 07.00	1.5	
	1.0s	0.21nm		2.5mb X		
Z	20s	0.50um		4.0Msz		
			pP	43 28.00	96km	
			sS	47 48.00		
			PcS	50 20.00		
QUE	25.24	289	eP	43 14.70	0.2	
			e	47 57.30		
PPI	25.44	167	eP	43 15.00	-1.2	
KKM	27.65	128	eP	43 29.00	-7.5X	
TSM	30.23	128	ePc	43 57.90	-1.7	
CN2	31.64	45	eP	44 13.80	2.1	
			ScP	50 35.40		
MAIO	32.37	300	iPd	44 18.80	0.5	
	0.8s	31.11nm		5.2mb		
			i	44 38.00		
TRT	36.50	149	ePd	44 54.60	1.1	
	0.9s	422.80nm		6.4mb X		
TAB	43.02	300	eP	45 50.00	2.4	
SLY	43.58	297	ePd	45 41.00	-10.9X	
			e	46 13.00		
BHD	44.54	293	ePd	46 02.00	2.3	
MSL	45.50	298	eP	46 07.50	0.2	
NANU	50.99	155	eP	46 50.00	0.2	
	0.5s	17.00nm		5.3mb		
MBL	51.57	150	iPc	46 54.90	0.6	
	0.9s	266.00nm		6.3mb X		
BADA	53.08	288	eP+	47 05.70	0.2	
BBTK	53.60	302	eP	47 10.00	0.6	
MEKA	55.81	154	eP	47 25.00	-0.4	
HRT	55.90	304	eP	47 26.50	0.5	
YLV	56.14	304	iP	47 27.60	-0.2	
KHL	56.23	301	iP	47 26.70	-1.8	
MRWA	57.22	158	iPc	47 35.60	0.3	
YER	57.35	300	iP	47 30.70	-5.7X	
MLR	58.29	310	ePd	47 43.50	0.6	
WB5	58.65	135	eP	47 44.50	-1.0	
SUF	58.68	330	eP	47 45.70	0.5	
	0.5s	26.80nm		5.6mb		
WRA	58.68	135	Pd	47 45.40	-0.3	
	1.0s	144.10nm		6.0mb		
BAL	58.73	158	iPc	47 44.90	-1.0	
WARB	59.11	146	iPc	47 48.10	-0.5	
	0.3s	8.00nm		5.3mb		
NUR	59.17	327	eP	47 48.80	0.2	
SOD	59.19	335	iP	47 49.00	0.3	
KEV	59.52	338	iP	47 51.20	0.3	
	0.7s	22.70nm		5.4mb		
MUN	59.82	159	iPc	47 52.20	-1.2	
	0.8s	210.00nm		6.3mb X		

10d 06h

KLB	60.00	157	eP	47	53.10	-1.5	RSP	71.30	312	P	49	04.75	-2.4	FRB	91.05	353	eP	50	51.50	1.1
COOL	60.64	154	eP	47	57.00	-2.0	ENR	71.45	311	P	49	08.75	0.8	KIC	95.90	280	(P)	51	14.60	1.0
NWAO	61.04	158	iPc	48	00.10	-1.5	DAG	71.46	347	iPd	49	06.40	-0.9	BW06	109.41	19	PKP	56	16.50	-0.5
	0.7s	60.00nm			5.8mb			1.0s	27.00nm			5.1mb		KVN	109.72	27	PKP	56	18.00	0.4
ASPA	61.16	139	iPc	48	02.10	-0.6	STV	71.51	311	P	49	07.01	-1.3	MSU	112.44	23	PKP	56	22.00	-0.8
	0.9s	87.00nm			5.8mb		LPG	71.55	312	eP	49	08.40	-0.4	SPA	114.37	180	ePKP	56	25.10	-0.5
Z	21s	0.11um			4.0Msz			0.7s	11.00nm			4.9mb			0.7s	10.94nm				
		ipP		48	24.60	89km			pP		49	30.60	85km	ANMO	117.56	20	PKP	56	33.30	0.6
		LR		54	47.00		PZZ	71.59	311	P	49	08.65	-0.2	ALQ	117.56	20	ePKP	56	44.70	11.9X
PMG	61.28	117	eP	48	03.00	-0.6	RRL	71.69	312	P	49	09.27	-0.3		1.0s	5.00nm				
SPC	61.85	314	e(P)	48	07.00	-0.3	BNI	71.73	312	P	49	10.30	0.6	BAO	143.94	277	ePKP	57	21.40	-1.2
		e		48	27.40					e	49	31.20		ZOBO	161.93	294	PKP	57	49.40	1.3
KRA	61.97	315	eP	48	07.40	-0.4	STK	71.79	139	eP	49	09.00	-0.9	LPB	162.03	293	PKP	57	50.00	2.0
		e		48	24.70		ADE	72.39	143	iPc	49	13.10	-0.4	CNCB	162.07	292	PKP	57	50.80	2.6X
RKG	62.01	159	eP	48	10.00	1.9		0.8s	64.18nm			5.6mb			S.D. = 1.0		on 171 of 189 obs.			
SRO	63.29	313	eP	48	15.10	-1.4	BRW	72.72	19	eP	49	16.30	1.5	----------						
FORR	63.68	148	eP	48	18.30	-0.9	RMQ	72.79	131	iPc	49	16.80	0.9	* JAN 10, 1990 07h 41m 08.11± 0.41s						
ZST	64.04	313	eP	48	21.60	0.2		1.0s	147.00nm			5.8mb		13.139 S ± 9.9km 172.612 W ± 9.8km						
		i		48	41.60		LOR	72.95	315	eP	49	15.90	-0.7	DEPTH = 33.0km (normol)						
KSP	64.19	316	ePd	48	22.50	0.1		0.5s	2.40nm			4.3mb		4.8mb (8 obs.)						
	1.0s	25.00nm			5.1mb		LBF	72.96	314	eP	49	15.80	-0.9	SAMOA ISLANDS					(170)	
		ic		48	43.00			0.5s	3.60nm			4.5mb								
		e		50	43.50		SMF	73.15	314	eP	49	17.10	-0.7	AFI	1.12	133	iPc	41	28.00	0.5
HFS	64.62	327	eP	48	24.60	-0.4		0.5s	8.00nm			4.9mb					S	41	46.00	
	0.6s	62.30nm			5.7mb		SSF	73.24	314	eP	49	17.80	-0.5	CTA	39.94	254	iPd	48	51.40	10.1X
PTJ	65.18	311	eP	48	48.50	19.5X		0.7s	10.30nm			4.8mb			0.5s	40.85nm				
HVAR	65.34	308	iP	48	27.90	-2.0				pP	49	40.10	85km	WB5	51.11	255	eP	50	19.90	9.8X
PRU	65.43	316	P	48	30.30	-0.1	AVF	73.42	314	eP	49	18.80	-0.6	WRA	51.13	255	Pc	50	20.00	9.7X
		e		48	51.20			0.8s	8.50nm			4.7mb			0.4s	5.80nm			4.9mb	
BRG	65.66	317	iP	48	32.00	0.2	BGF	73.83	314	eP	49	21.20	-0.5	ASPA	51.57	250	eP	50	17.00	3.4X
	1.2s	19.00nm			4.9mb		MAF	74.12	314	eP	49	23.30	-0.1		0.5s	16.00nm			5.2mb	
		i		48	49.20		TCF	74.33	314	eP	49	24.60	-0.1	COOL	63.08	242	eP	51	33.50	-1.4
VBY	65.74	311	e(P)	48	33.00	0.6		0.6s	9.00nm			4.8mb		KLB	65.97	241	eP	51	53.70	0.0
		e		48	53.80		EKA	74.48	324	P	49	26.00	0.7	BAL	66.90	242	iPd	52	00.70	1.0
NAO	65.95	328	P	48	33.20	-0.3		1.8s	101.60nm			5.4mb			0.3s	9.00nm			5.3mb	
	0.7s	24.50nm			5.2mb		LSF	74.79	314	eP	49	26.80	-0.5	MUN	67.29	241	eP	52	02.30	0.2
TDS	66.15	304	P	48	36.00	0.8	CAF	74.88	313	eP	49	27.90	0.0	MRWA	67.58	244	eP	52	07.50	3.6X
		e		48	55.00			0.5s	2.40nm			4.3mb		CMB	70.57	41	P	52	22.00	-0.2
CLL	66.17	317	eP	48	34.00	-1.1	LDF	75.05	317	eP	49	28.40	-0.3	KVN	72.62	42	P	52	35.10	0.5
	1.9s	31.00nm			4.9mb			0.7s	11.00nm			4.9mb		TNP	72.67	43	P	52	35.40	0.4
		i		48	55.90		RJF	75.12	313	eP	49	29.50	0.3		0.9s	3.91nm			4.4mb	
KHC	66.19	315	iP	48	35.80	0.4		0.5s	4.30nm			4.6mb		PMR	76.77	11	P	52	58.50	0.8
		i		48	57.00		FLN	75.22	317	eP	49	28.70	-1.0	TTA	76.92	8	P	53	00.00	1.4
CEY	66.26	311	e(P)	48	35.50	-0.4	LPO	75.55	313	eP	49	31.60	-0.1	ANMO	78.77	50	P	53	09.00	-0.6
VOY	66.57	311	e(P)	48	37.30	-0.6		0.5s	7.20nm			4.8mb			0.7s	3.00nm			4.4mb	
		e		48	57.00		GRR	75.58	317	eP	49	31.60	-0.2	FBA	80.05	10	P	53	15.60	0.0
MGR	66.63	305	P	48	39.00	0.8		0.7s	8.80nm			4.8mb			0.7s	12.35nm			5.0mb	
		e		49	00.00		LFF	75.76	313	eP	49	32.90	0.1	BW06	80.09	42	P	53	15.50	-1.1
TRI	66.72	311	P	48	34.50	-4.2X		0.5s	5.80nm			4.7mb			1.0s	3.50nm			4.3mb	
KBA	66.73	313	iPc	48	37.30	-1.7				pP	49	55.00	83km	GOL	81.54	46	P	53	23.00	-1.3
	1.1s	23.30nm			5.0mb		MFF	75.76	315	eP	49	32.40	-0.4		0.8s	11.16nm			4.9mb	
		i		48	58.80		LPF	75.82	316	eP	49	32.90	-0.2	GLD	81.67	46	P	53	25.00	0.1
		e		51	13.00			0.7s	6.60nm			4.6mb		INK	85.90	14	eP	53	45.50	0.0
CTA	66.97	127	iPc	48	40.00	-0.6				pP	49	55.20	84km	PRU	142.79	352	ePKP	00	39.50	-0.3
	1.0s	100.00nm			5.7mb		IMA	76.13	23	eP	49	35.50	0.8	KHC	143.75	353	ePKP	00	35.50	-6.1X
DUI	67.10	307	P	48	42.40	1.1	BRS	76.16	129	iPc	49	34.60	-0.7	ZST	144.13	349	ePKP	00	35.00	-7.2X
FVI	67.21	312	P	48	42.00	0.2				i	49	59.60		OHR	149.77	340	e(PKP)	00	48.00	-3.6X
SDI	67.56	307	P	48	44.50	0.4	TTA	76.75	26	P	49	38.00	-0.2		S.D. = 0.8		on 17 of 25 obs.			
AZI	67.77	307	P	48	45.80	0.5	TTA	76.75	26	eP	49	45.40	7.2X	----------						
ARV	67.77	309	P	48	46.50	1.1	MBC	77.29	8	ePc	49	42 30	1.5	JAN 10, 1990 07h 50m 43.87± 0.55s						
		e		49	08.00			0.6s	16.00nm			5 1mb		39.279 N ± 4.9km 28.297 E ± 6.1km						
MNS	68.22	308	P	48	48.20	0.0	BWA	77.69	137	eP	49	44 70	1.0	DEPTH = 10.0km (geophysicist)						
		e		49	09.50		SVW	77.78	28	eP	49	49 90	6.1X	TURKEY					(366)	
OGA	68.33	313	iPc	48	48.50	-0.6	TOO	78.06	141	eP	49	46 00	0.4		MD 3.7 (ATH).					
CRE	68.44	309	P	48	50.00	0.3	BUL	78.12	241	iPd	50	02 00	15 6X							
PGD	68.55	310	P	48	51.50	1.1		0.9s	52.94nm					DST	0.41	38	iPg	50	53.00	0.6
		e		49	12.00		CAN	78.64	137	eP	49	48 90	0.0	BNT	1.11	345	iPn	51	05.00	0.2
LWI	69.15	257	iPc	48	55.00	0.4	FBA	78.83	23	eP	49	50.00	0.6	EDC	1.12	343	iPn	51	04.50	-0.3
MME	69.19	310	P	48	56.50	2.1	CN8	78.86	137	eP	49	50 00	-0.1	IZM	1.19	223	iPn	51	04.50	-1.7
		e		49	10.90		PMR	80.20	26	eP	49	56.50	-0.3	KHL	1.35	135	iPn	51	09.60	0.8
BDI	69.29	310	P	48	54.50	-0.3	KDC	80.86	30	P	50	00 00	-0.3	YLV	1.53	32	iPn	51	12.50	1.2
PII	69.43	310	P	48	54.00	-1.5	INK	80.95	16	iPd	50	02.30	1.7	PRK	1.57	269	ePb	51	11.80	0.0
ABH	69.87	317	eP	48	58.62	0.4		0.8s	39.00nm			5.3mb		EZN	1.62	290	iPn	51	12.60	0.1
FEL	70.08	314	eP	48	59.33	-0.3	SLR	81.33	237	iPc	50	05.00	1.5	MFT	1.70	333	iPn	51	14.00	0.3
VAI	70.09	312	P	48	58.80	-0.7		0.6s	100.00nm			5.9mb		GBZT	1.75	30	ePn	51	18.40	4.0X
RUP	70.22	316	eP	49	00.20	-0.2	Z	19s	6.60um			6.0MszX					ePg	51	20.00	
CDF	70.42	315	eP	49	00.90	-0.7	KSR	82.46	237	iPc	50	10.20	0.8				iSg	51	42.50	
	0.5s	3.40nm			4.5mb			0.8s	62.50nm			5.6mb		GPA	1.85	56	ePn	51	15.00	-0.9
		pP		49	22.96	84km	BFS	83.08	236	iPc	50	13.00	0.4	ISK	1.88	18	ePn	51	15.00	-1.3
PCP	70.59	311	P	49	02.70	0.0		1.0s	90.00nm			5.7mb		ITU	1.91	17	ePn	51	16.00	-0.7
ORX	70.68	312	P	49	00.75	-2.6	GDH	83.71	349	eP	50	16.00	1.1				iSg	51	46.00	
BSF	70.88	315	eP	49	03.60	-0.9	IFR	84.43	304	iP	50	15 50	-3.9X	SMG	1.94	217	ePn	51	19.50	2.3
FIN	70.91	311	P	49	04.14	-0.5	BLF	84.69	235	iPc	50	21.00	0.3	YER	2.14	180	ePn	51	19.00	-1.2
ROB	71.12	311	P	49	05.78	-0.2		0.9s	215.38nm			6.1mb		RDO	2.82	312	ePn	51	30.30	0.5
HAU	71.12	315	eP	49	05.10	-0.7	HVD	85.98	234	iPd	50	23.50	-3.6X	BBTK	3.50	79	eP	51	52.00	12.5X
IMI	71.22	310	P	49	06.19	-0.3	SUR	90.33	234	iPc	50	50.00	2.2				eS	52	42.00	
LSD	71.29	312	P	49	07.42	0.2		0.7s	27.40nm			5 6mb			S.D. = 1 1		on 15 of 17 obs.			

JAN 10, 1990 08h 02m 11.93± 0.90s
30.996 S ± 8.5km 69.118 W ± 6.9km
DEPTH = 28.8 ± 6.7 km
CHILE-ARGENTINA BORDER REGION (127)

RTLL	0.65	121	e(P)	02 23.20	-1.5
ZON	0.66	146	iPd	02 25.50	0.5
			eS	02 55.00	
RT8S	0.72	203	ePc	02 26.30	0.4
RTRS	0.87	340	i(P)	02 11.90	-16.2X
CFA	0.97	129	iPd	02 29.20	-0.4
			S	02 48.50	
RTCV	1.00	150	iPc	02 31.20	1.2
			S	02 51.10	
ROCH	2.54	219	iPd	02 51.00	-1.4
			iS	03 28.00	
SAN	2.78	208	eP	02 54.50	-0.9
PCH	2.87	204	iPd	02 57.10	0.3
			iS	03 38.50	
TACH	3.07	210	iP	02 59.50	-0.1
CHCH	3.20	203	iP	03 02.10	0.6
			iS	03 48.00	
MRA	3.23	117	ePc	03 00.70	-1.1
LNV	3.53	213	iP	03 04.10	-2.0
RFA	3.80	172	ePc	03 10.00	-0.1
			S	04 17.00	
TCA	3.90	96	ePd	03 05.90	-5.5X
CNCB	14.16	4	P	06 15.20	42.0X
LPB	14.43	4	P	05 37.00	0.4
			e	06 10.00	
ZOBO	14.69	4	P	06 21.00	40.9X
MAW	75.34	163	eP	14 01.00	7.1X

S.D. = 1.1 on 14 of 19 obs.

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* JAN 10, 1990 09h 46m 18.71± 0.84s
36.092 N ±10.0km 27.235 E ± 7.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

KAP	0.54	185	ePg	46 28.60	-1.1
			eSg	46 38.00	
NPS	1.56	238	ePn	46 47.60	1.1
APE	1.68	306	ePb	46 47.00	-1.4
KSL	1.90	89	ePb	46 51.70	0.2
ELL	2.25	72	ePn	46 57.00	0.3
VAM	2.56	255	ePn	47 01.80	0.9

S.D. = 1.3 on 6 of 6 obs.

JAN 10, 1990 10h 04m 15.19± 0.35s
39.280 N ± 3.2km 28.218 E ± 4.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.7 (ATH).

DST	0.45	44	iPg	04 24.10	-0.3
BNT	1.10	348	iPg	04 35.40	-0.4
			iSg	04 50.40	
EDC	1.10	346	iPn	04 35.50	-0.3
IZM	1.15	221	iPn	04 35.60	-1.2
KHL	1.40	133	iPn	04 40.70	-0.1
PRK	1.51	269	iPbc	04 42 20	-0.1
			eSb	05 03.50	
EZN	1.56	291	iPn	04 43.20	0.2
YLV	1.56	34	iPn	04 42.90	-0.2
MFT	1.67	335	iPn	04 45.40	0.8
GBZT	1.78	32	ePn	04 47.90	1.8
			iPg	04 50.00	
			iSg	05 14.40	
ISK	1.90	20	ePn	04 47.30	-0.5
GPA	1.90	57	iPn	04 48.20	0.2
SMG	1.91	215	ePb	04 50.50	2.5
			eSn	05 15.50	
ITU	1.92	18	ePn	04 48.00	-0.2
			iSg	05 18.00	
YER	2.14	179	iPn	04 50.10	-1.4
DMK	2.56	352	iPn	04 56.50	-0.9
RDO	2.77	313	ePn	05 01.50	1.1
ELL	2.86	152	iPn	05 02.30	0.5
APE	3.06	225	ePb	05 11.00	6.5X
KDZ	3.19	319	iP	05 06.00	-0.3
KSL	3.34	161	ePn	05 08.20	-0.2
JMB	3.42	339	eP	05 11.00	1.5
DIM	3.44	324	iP	05 10.00	0.2
MMB	4.13	305	eP	05 20.00	0.3
PGB	4.48	318	eP	05 24.00	-0.7
PVL	4.49	332	iPd	05 25.00	0.2
KKB	4.69	305	iP	05 27.00	-0.7
KAS	4.73	62	eP	05 43.00	14.7X
VAY	4.78	297	ePn	05 34.00	5.1X
VTS	5.03	313	eP	05 32.00	-0.6
OHR	5.97	290	ePn	05 42.40	-3.3X
MLR	6.43	346	eP	05 52.50	0.1
VRI	6.68	351	ePc	05 55.00	-0.7

S.D. = 0.9 on 29 of 33 obs.

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* JAN 10, 1990 10h 06m 01.59± 0.32s
52.192 S ± 7.6km 13.514 E ± 9.8km
DEPTH = 10.0km (geophysicist)
5.5mb (12 obs.) 5.0Msz (3 obs.)
SOUTHWEST OF AFRICA (413)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 19C
Centroid Locotion:
Origin Time 10:06: 9.7 0.4
Lat 52.04S 0.03 Lon 14.15E 0.12
Dep 15.0 FIX Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr=-1.38 0.10 Mtt= 1.23 0.08
Mff= 0.15 0.14 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-0.57 0.13
Principal Axes:

	Val=	Plg=	Azm=
T	1.48	0	203
N	-0.09	0	113
P	-1.38	90	180

Best Double Couple:Mo=1.4*10**17
NP1:Strike=293 Dip=45 Slip= -90
NP2: 113 45 -90

SUR	20.50	18	iPc	10 42.00	-0.4
	1.1s	607.59nm		5.9mb	
POF	23.28	14	iPd	11 11.00	0.9
	1.0s	55.00nm		5.1mb	
POF	23.28	14	iPd	11 11.50	1.4
	1.3s	105.77nm		5.2mb	
HVD	23.31	27	iPc	11 06.50	-4.0X
	1.0s	140.00nm		5.5mb	
BLF	24.91	27	iPd	11 26.00	-0.1
	1.2s	220.00nm		5.7mb	
BFS	27.17	27	iPd	11 45.50	-1.5
	1.2s	93.75nm		5.4mb	
BUL	34.09	26	iPc	13 02.50	14.1X
			ipP	14 07.10	332kmX
SPA	38.00	180	eP	13 20.90	-0.2
	0.9s	38.18nm		5.2mb	
Z	20s	2.66um		5.0Msz	
LWI	51.40	20	iPc	15 10.10	1.3
BCAO	56.57	6	iPc	15 45.70	-0.9
	0.7s	28.00nm		5.4mb	
		id	16 21.20		
LIC	60.31	339	Pd	16 11.46	-1.1
Z	20s	0.75um		4.8Msz	
KIC	60.37	339	P	16 11.62	-1.5
BAO	60.39	283	eP	16 13.00	-0.5
TIC	60.71	339	P	16 14.24	-1.1
CCH	70 15	267	P	17 13.90	-2.7
CNCB	71.72	266	P	17 27.50	1.1
LPB	72.00	266	iPc	17 30.00	2.1
	1.0s	80.00nm		5.8mb	
Z	20s	1.42um		5.2Msz	
		LR	40 40.00		
NWAO	72.33	121	eP	17 28.00	-1.2
MUN	72.52	120	eP	17 29.00	-1.3
ARE	74.14	264	iPc	17 41.60	1.3
BFD	80.53	141	eP	18 15.00	-0.1
WARB	82.61	124	eP	18 26.10	-0.1
CAN	84.57	145	eP	18 37.10	1.0
STK	84.77	138	eP	18 17.00	-20.0X
BWA	85.17	144	e(P)	18 40.00	0.9
GBA	85.47	61	P	18 41.60	1.0
ASPA	88.34	128	iPd	18 54.00	-0.7
	0.9s	55.00nm		5.9mb	
TRT	89.53	102	ePc	19 01.50	1.1
	1.3s	229.70nm		6.3mb	
WRA	91.69	126	Pc	19 10.00	-0.4
	0.9s	5.20nm		4.9mb	
WB5	91.76	126	eP	19 10.30	-0.4
OHR	93.14	6	e(P)	19 18.50	2.1
FRI	144.06	264	ePKP	25 38.00	-0.4
PRI	144.10	262	ePKP	25 37.60	-1.1
LLA	144.58	262	e(PKP)	25 38.60	-0.8
PRS	144.65	261	ePKP	25 39.20	-0.3
LRM	144.70	282	ePKP	25 39.20	-0.4
CMB	145.14	265	ePKPc	25 40.30	0.0
MHC	145.47	263	ePKPc	25 42.00	1.0
SES	145.99	290	ePKP	25 41.00	-0.4
BKS	146.17	263	ePKP	25 44.10	2.1X
BRK	146.19	263	ePKPc	25 44.00	2.0
ORV	146.77	266	ePKPc	25 45.50	2.6X
MIN	147.31	267	ePKPc	25 47.30	3.3X
WDC	148.02	266	ePKPc	25 47.90	3.0X
EDM	148.40	293	ePKP	25 48.50	3.4X
MBC	149.93	340	ePKP	25 44.50	-2.3X
	1.1s	47.00nm			
PNT	150.61	283	ePKP	25 55.00	6.4X
INK	157.46	328	ePKP	25 58.00	0.6

S.D. = 1.2 on 38 of 48 obs.

JAN 10, 1990 10h 09m 35.38± 0.70s
39.307 N ± 5.9km 28.158 E ± 7.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.47	50	iPg	09 44.60	-0.4
EDC	1.06	348	iPn	09 55.50	0.1
BNT	1.06	350	iPn	09 56.40	1.0
IZM	1.15	218	iPn	09 57.10	0.2
KHL	1.45	132	ePn	10 01.50	-0.2
EZN	1.51	291	iPn	10 06.70	4.3X
YLV	1.57	36	iPn	10 03.40	0.0
MFT	1.62	336	ePn	10 02.90	-1.3
GPA	1.93	59	ePn	10 09.00	0.5

S.D. = 0.8 on 8 of 9 obs.

% JAN 10, 1990 10h 14m 52.67± 0.72s
43.528 N ± 7.1km 12.458 E ± 6.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ARV	0.35	95	P	15 00.00	0.0
			eSg	15 06.00	
CRE	0.38	285	P	15 00.50	0.0
			eSg	15 07.00	
RSM	0.40	359	P	15 00.90	0.1
			eSg	15 06.90	
ASS	0.48	162	P	15 02.40	-0.1
			eSg	15 12.30	
SFI	0.59	312	P	15 03.70	-0.9
			eSg	15 11.30	
PGD	0.64	303	P	15 06.40	0.8
			eSg	15 15.80	

S.D. = 0.7 on 6 of 6 obs.

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* JAN 10, 1990 10h 21m 21.12± 0.63s
24.616 S ±25.4km 175.337 W ±11.0km
DEPTH = 76.7km (2 depth phases)
5.0mb (12 obs.)
SOUTH OF TONGA ISLANDS (175)

AFI	11.17	18	eP	23 48.00	-12.0X
DZM	16.92	275	iPc	25 19.20	4.7X
CTA	35.73	269	iPc	28 15.00	0.5
	0.6s	15.33nm		5.1mb	
PMG	38.77	286	eP	28 39.00	-1.0
ASPA	46.11	260	eP	29 39.00	-0.7
	0.4s	7.00nm		4.9mb	
WB5	46.59	265	eP	29 43.20	-0.2
WRA	46.60	265	Pc	29 42.90	-0.6
	0.7s	5.10nm		4.6mb	
FORR	50.01	250	eP	30 09.80	0.1
NANU	62.76	256	eP	31 42.00	1.2
PRS	79.16	42	eP	33 18.20	-0.9
BCH	79.20	43	P	33 20.20	0.7
GCC	79.25	41	eP	33 18.40	-1.1
PRI	79.47	42	eP	33 21.30	0.4
BRK	79.66	40	eP	33 21.00	-0.7
MHC	79.67	41	e(P)	33 19.50	-2.5
ARN	79.74	41	P	33 23.00	0.8
MWC	79.88	45	eP	33 23.00	-0.2
PLM	80.12	46	eP	33 24.00	-0.5
RVR	80.17	46	eP	33 23.00	-1.6
PEC	80.25	46	P	33 24.80	-0.2
SBB	80.32	45	eP	33 25.00	-0.4
ISA	80.52	44	eP	33 27.00	0.6
FRI	80.60	42	eP	33 26.70	0.0
CMB	80.88	41	eP	33 28.30	0.1
CLC	81.17	44	eP	33 30.00	0.2
ORV	81.23	39	eP	33 29.30	-0.7
GLA	81.29	48	eP	33 31.00	0.5

10d 10h

WDC	81.33	38 ePd	33 30.70	0.2		
GSC	81.35	45 eP	33 31.00	0.2		
MIN	81.70	39 eP	33 32.40	-0.2		
LBFM	82.21	38 P	33 36.20	0.9		
TNP	82.82	42 eP	33 38.40	-0.2		
	1.2s	65.04nm		5.4mb		
		pP	33 59.70	79km		
KVN	82.90	41 P	33 38.60	-0.3		
IPM	86.12	277 ePc	34 15.00	19.6X		
MSU	86.24	45 P	33 56.80	1.1		
RMW	86.40	33 P	33 56.00	-0.1		
PSI	87.24	274 iPc	33 42.00	-18.8X		
DAU	87.92	43 P	34 04.20	0.3		
ALQ	88.09	50 iPd	34 05.00	0.3		
	1.0s	9.50nm		4.9mb		
ANMO	88.10	50 P	34 05.00	0.3		
	1.1s	12.66nm		5.0mb		
PV09	88.20	46 P	34 04.50	-0.8		
PMR	88.47	12 P	34 06.20	0.6		
	1.2s	32.20nm		5.4mb		
TTA	88.59	9 P	34 07.50	1.2		
PNT	88.72	33 eP	34 08.00	0.9		
	1.1s	38.00nm		5.5mb		
BW06	90.31	42 P	34 14.20	-0.8		
	1.3s	5.74nm		4.7mb		
GOL	91.32	46 P	34 20.00	0.3		
	0.9s	6.82nm		5.0mb		
GLD	91.44	46 P	34 21.00	0.8		
FBA	91.74	11 eP	34 21.20	0.4		
	1.0s	25.00nm		5.6mb		
		pP	34 41.90	75km		
CHG	93.92	289 eP	34 36.50	4.7X		
CHTO	93.92	289 e(P)	34 31.70	-0.1		
	1.0s	3.25nm		4.7mb		
INK	97.60	14 eP	34 48.00	0.6		
HFS	143.95	352 ePKP	40 46.60	-2.1X		
	0.5s	2.30nm				
LWI	144.48	225 iPKPc	40 53.00	1.7X		
EKA	148.78	9 PKP	41 02.00	5.2X		
	1.1s	22.30nm				
KRA	151.96	339 ePKP	41 10.50	8.8X		
KSP	152.32	344 iPKPc	41 11.70	9.5X		
CLL	152.59	349 iPKPd	41 11.00	8.4X		
	1.5s	34.00nm				
SPC	152.60	337 ePKP	41 11.60	8.7X		
BRG	152.82	347 ePKP	41 05.00	2.1X		
	2.0s	42.00nm				
		e	41 12.00			
KHC	154.55	346 PKP	41 08.20	2.8X		
		e	41 30.50			
BCAO	155.90	216 iPKPc	41 09.50	1.2X		
	1.1s	14.00nm				
		ic	41 32.10			
	S.D. = 0.8	on 46 of 61 obs.				

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* JAN 10, 1990 11h 15m 57.25± 0.78s
33.127 N ± 8.8km 47.153 E ±11.3km
DEPTH = 33.0km (normal)
4.4mb (2 obs.)
WESTERN IRAN (347)

KER	1.22	358 eP	16 19.00	0.8		
BHD	2.32	274 ePnd	16 45.00	11.0X		
		eSn	17 17.00			
SLY	2.82	331 iPnc	16 46.00	5.1X		
		iPg	16 53.00			
		iSn	17 19.00			
		iS*	17 24.50			
		iSg	17 28.00			
IR1	3.71	51 eP	16 54.00	0.2		
IR4	3.75	55 eP	16 54.00	-0.4		
TEH	4.36	52 eP	17 16.00	13.0X		
MSL	4.63	316 ePn	17 22.00	15.3X		
		eSn	18 03.00			
TAB	4.98	352 e(P)	17 21.00	9.2X		
OASM	7.69	205 eP	17 50.00	0.2		
GBA	33.73	118 Pc	22 37.80	0.0		
	0.6s	2.10nm		4.2mb		
HFS	34.79	331 eP	22 45.60	-0.9		
	0.4s	3.30nm		4.6mb		
	S.D. = 0.7	on 6 of 11 obs.				

JAN 10, 1990 11h 53m 21.65± 0.20s
11.654 N ± 4.0km 95.143 E ± 3.3km
DEPTH = 33.0km (normal)
5.3mb (46 obs.) 5.4Msz (7 obs.)
ANDAMAN ISLANDS REGION (703)

CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 22C
Centroid Location:
Origin Time 11:53:22.8 0.5
Lat 11.71N 0.03 Lon 95.03E 0.05
Dep 61.0 3.2 Half-duration 2.5
Moment Tensor; Scale 10**17 Nm
Mrr=-0.28 0.15 Mtt=-2.29 0.26
Mff= 2.57 0.29 Mrt= 0.06 0.25
Mrf=-1.19 0.25 Mtf= 6.84 0.25
Principal Axes:

	Val=	Plg=	Azm=
T	7.51	7	125
N	-0.31	81	347
P	-7.20	6	216

Best Double Couple:Mo=7.3*10**17
NP1:Strike=260 Dip=81 Slip= 0
NP2: 170 90 171

NNT	4.59	78 iPn	54 29.00	-1.5		
		iSg	55 19.80			
KBR	4.88	61 eP	53 40.00	-54.7X		
KBR	4.88	61 eP	55 00.00	25.3X		
BSI	6.12	179 ePd	54 57.50	5.3X		
	1.0s	332.80nm		6.0mb		
NST	6.28	50 iPd	54 53.50	-1.0		
BDT	6.70	33 eP	54 59.20	-1.1		
	1.0s	255.30nm		6.0mb		
PCT	6.81	63 eP	55 01.30	-0.5		
SNG	7.00	129 ePn	55 01.00	-3.5X		
		ePg	55 31.00			
		eSn	56 35.20			
		eSg	57 16.20			
CHG	8.01	27 ePc	55 18.50	-0.2		
	1.0s	422.50nm		6.5mb X		
		eS	57 04.00			
CHTO	8.01	27 ePn	55 17.00	-1.7		
LOE	8.56	47 eP	55 21.20	-5.2X		
IPM	9.13	140 ePc	55 30.20	-3.9X		
	0.4s	48.70nm		6.0mb		
		e	57 11.50			
PSI	9.66	157 i(P)	55 39.00	-2.5		
KLM	10.66	142 eP	56 01.00	5.8X		
KGM	12.55	139 ePc	56 21.00	0.2		
		e	59 16.50			
PPI	13.11	156 eP	56 33.50	5.2X		
SHL	14.18	348 eP	56 39.50	-2.9X		
		iS	59 26.00			
KMI	15.21	27 Pd	56 59.00	3.1X		
Z	14s	20.80um				
N	13s	25.00um				
		sP	57 07.50			
QIZ	15.95	61 eP	57 07.80	2.4		
N	17s	59.30um				
		sS	00 21.00			
HY8	17.05	292 eP	57 16.00	-3.3X		
	1.4s	450.00nm		5.4mb		
		e	57 20.00			
		eS	00 30.00			
GBA	17.39	278 P	57 23.00	-0.5		
KOD	17.41	267 eP	57 26.90	2.8		
		eS	00 40.00			
PKI	18.28	331 P	57 32.80	-2.0		
GYA	18.29	35 iPd	57 35.60	0.8		
	4.0s	2.10nm		2.6mb X		
Z	18s	18.20um		4.6Msz		
N	13s	14.10um				
E	13s	19.60um				
LSA	18.34	349 P	57 36.20	0.5		
N	11s	2.40um				
E	11s	1.50um				
		PP	57 48.00			
		S	01 00.00			
GUN	18.36	333 P	57 34.20	-1.6		
DMN	18.46	331 P	57 35.40	-1.5		
KKN	18.53	331 P	57 37.00	-0.7		
GKN	19.01	330 P	57 41.60	-2.0		
GZH	20.73	54 eP	58 01.50	-0.6		
Z	14s	15.10um		5.5MszX		
N	14s	17.70um				
E	12s	17.80um				
CD2	20.76	21 iPd	58 01.60	-0.7		
Z	12s	14.90um		5.6MszX		
N	11s	15.90um				
		pP	58 11.60	39kmX		
HKC	21.03	57 iP	58 05.50	0.4		
		S	02 04.00			
KKM	21.55	103 ePd	58 13.00	2.5		
POO	21.65	291 iPc	58 11.20	-0.3		
	0.9s	139.50nm		5.4mb		
BOM	22.69	291 eP	58 22.50	0.8		
		iS	02 30.00			
NDI	23.82	318 iPc	58 32.00	-0.7		
	0.5s	63.38nm		5.4mb		
		eS	02 48.00			
TSM	23.86	106 ePc	58 32.40	-0.7		
BAG	25.12	76 eP	58 47.00	1.5		
		eS	03 13.00			
QCP	25.42	80 eP	58 30.00	-18.1X		
LZH	25.57	16 eP	58 50.00	0.5		
	3.0s	0.80nm		2.8mb X		
Z	16s	18.70um		5.7MszX		
N	11s	7.00um				
E	10s	7.40um				
		pP	59 02.00	47kmX		
		eS	03 10.00			
XAN	25.59	27 Pd	58 48.50	-1.1		
	1.0s	0.10nm		2.4mb X		
N	12s	13.50um				
E	11s	10.30um				
		pP	59 03.00	61kmX		
WHN	25.89	41 eP	58 52.00	-0.4		
Z	14s	16.00um		5.7MszX		
N	12s	7.30um				
E	12s	12.20um				
		pP	59 04.00	47kmX		
TRT	25.93	137 iPd	58 53.10	0.2		
	0.8s	93.80nm		5.4mb		
GTA	27.95	8 iPd	59 12.00	0.7		
Z	22s	7.40um		5.2Msz		
E	13s	6.10um				
		eS	03 52.00			
ANP	28.34	58 eP	59 22.00	7.1X		
NJ2	29.81	43 Pc	59 28.20	0.3		
Z	14s	9.20um		5.6MszX		
N	10s	7.40um				
E	13s	5.90um				
		S	04 20.00			
TIY	30.22	28 eP	59 31.20	-0.4		
E	15s	3.90um				
		PP	00 36.00			
DAV	30.35	96 eP	59 36.90	4.0X		
SSE	30.89	47 P	59 38.00	0.6		
Z	20s	7.80um		5.4Msz		
N	12s	14.00um				
E	12s	6.10um				
		PP	00 40.00			
		S	04 42.00			
		SS	06 28.00			
TIA	31.49	35 eP	59 45.10	2.4		
Z	22s	6.80um		5.3Msz		
N	13s	6.30um				
E	14s	8.50um				
		S	04 50.90			
BTO	31.67	22 eP	59 45.00	0.6		
N	13s	14.80um				
E	13s	8.50um				
		S	04 54.00			
QUE	32.00	309 eP	59 46.70	-0.8		
		e	05 02.60			
		e	10 24.80			
HHC	32.48	24 P	59 51.50	0.1		
Z	16s	13.10um		5.7MszX		
N	13s	12.30um				
E	12s	8.70um				
		PP	00 59.00			
		PcP	02 38.00			
		S	05 05.00			
KSH	32.49	332 eP	59 49.40	-2.2		
WMQ	32.69	350 P	59 54.00	0.8		
Z	20s	8.30um		5.4Msz		
		S	05 10.80			
BJI	33.84	30 eP	00 03.50	0.4		
	2.0s	0.14nm		2.5mb X		
Z	22s	9.60um		5.5Msz		
E	14s	8.10um				
		eS	05 28.00			
DL2	35.94	36 P	00 25.00	4.0X		
	3.0s	0.40nm		2.8mb X		
Z	14s	8.10um		5.6MszX		
N	13s	7.60um				
E	13s	8.50um				
		eS	06 04.00			
AAI	36.23	113 eP	00 30.00	6.2X		

SNY	39.00	34	Pc	00	42.50	-4.2X				i	05	09.50		SUR	83.29	235	iPc	05	49.00	2.0
	6.0s		1.00nm			2.8mb X	LJU	75.21	315	e(P)	05	09.50	6.6X		0.7s		34.25nm			5.6mb
Z	16s		10.50um			5.8MszX	CEY	75.29	314	e(P)	05	09.00	5.6X	MAF	83.46	316	eP	05	47.20	-0.2
N	16s		9.50um				BRG	75.51	320	eP	05	04.00	-0.5		0.8s		17.40nm			5.2mb
E	15s		10.50um					1.2s		19.00nm			5.0mb	TCF	83.69	316	eP	05	48.30	-0.3
			PP	02	17.00					e	05	11.50			1.0s		24.00nm			5.3mb
			S	06	49.00		VOY	75.65	315	eP	05	04.70	-0.8	CAF	84.04	315	eP	05	50.20	-0.2
MAIO	40.41	313	eP	00	57.00	-1.6	HFS	75.72	329	eP	05	01.30	-4.2X		0.9s		14.70nm			5.2mb
			e	02	52.00			0.4s		2.60nm			4.6mb	DAG	84.04	348	eP	05	54.00	4.2X
			eS	07	12.00		TRI	75.75	314	eP	05	12.20	6.2X	Z	22s		4.89um			5.8Msz
MBL	40.64	143	eP	01	00.00	-0.5	KHC	75.78	318	P	05	06.50	0.4	E	23s		3.64um			
CN2	41.34	34	Pd	01	06.20	0.2				e	05	13.10		LSF	84.17	316	eP	05	50.50	-0.5
	4.0s		0.60nm			2.7mb X				eSg	19	05.60			0.8s		17.40nm			5.3mb
Z	15s		10.00um			5.8MszX	KBA	75.99	316	e(P)	05	07.00	-0.6	RJF	84.35	315	eP	05	51.90	0.0
N	12s		1.40um					1.0s		16.10nm			5.0mb		0.9s		16.30nm			5.2mb
E	12s		3.40um							e	05	12.50		LPO	84.70	314	eP	05	53.60	-0.1
			eS	07	20.00					i	05	17.50			0.9s		24.20nm			5.4mb
			SS	10	19.00					i	05	21.70		BRW	84.73	18	eP	05	54.20	0.9
MAT	45.94	50	(P)	01	46.00	2.6	BCAO	76.02	272	ePd	05	08.40	0.3	LDF	84.81	318	eP	05	54.30	0.2
	1.5s		61.11nm			5.3mb		0.6s		17.00nm			5.2mb		0.9s		45.80nm			5.7mb
Z	20s		3.55um			5.3Msz				id	05	15.00		LFF	84.96	315	eP	05	54.90	0.0
			eS	08	30.00					ic	05	20.50			0.9s		16.30nm			5.2mb
IR4	46.39	308	iPc	01	48.00	0.9	CLL	76.09	320	eP	05	06.00	-1.8	FLN	85.01	319	eP	05	55.10	0.0
IR1	46.61	308	iPc	01	48.00	-0.8		1.8s		76.00nm			5.4mb		0.9s		40.60nm			5.6mb
MUN	47.84	156	eP	01	57.00	-1.3				i	05	14.40		EKA	85.19	325	P	06	02.00	6.1X
KER	49.10	306	eP	02	11.00	2.7	FVI	76.40	315	P	05	16.50	6.9X		1.1s		34.00nm			5.5mb
COOL	49.12	150	eP	02	06.00	-2.2	ARV	76.44	312	P	05	10.50	0.5	MFF	85.23	316	eP	05	56.10	-0.2
WB5	49.73	129	eP	02	12.00	-1.1	BFS	76.56	239	iPc	05	18.00	6.9X		0.9s		34.00nm			5.6mb
WRA	49.75	129	Pc	02	12.10	-1.1		0.7s		24.66nm			5.3mb	GRR	85.33	318	eP	05	56.90	0.1
	0.8s		23.80nm			5.3mb	NB2	76.95	330	P	05	11.40	-1.0		1.1s		21.40nm			5.3mb
SLY	50.71	307	ePd	02	27.00	6.7X		1.3s		62.00nm			5.5mb	LPF	85.53	318	eP	05	57.90	0.2
			e	09	32.25		CRE	77.15	312	P	05	16.00	2.0		1.1s		53.70nm			5.7mb
TAB	50.77	310	eP	02	30.00	9.0X	SFI	77.21	313	P	05	17.00	2.9	IMA	87.77	22	eP	06	09.50	0.9
BHD	51.04	303	ePd	02	11.00	-11.9X	PGD	77.30	313	P	05	16.00	1.1	TTA	88.07	26	P	06	11.60	1.7
ASPA	51.66	133	iPc	02	26.70	-1.1	KBS	77.33	349	iP	05	22.00	7.8X	TOL	89.56	311	eP	06	18.00	0.6
	0.8s		29.00nm			5.3mb	DZM	77.51	116	iPc	05	25.90	9.6X	MBC	89.91	8	eP	06	22.00	3.7X
Z	22s		5.88um			5.6MszX	OGA	77.59	316	iPc	05	16.30	-0.2		1.0s		8.00nm			4.9mb
			LR	24	18.00		MME	78.01	313	P	05	22.00	3.1X	ASMO	89.96	308	eP	06	21.00	1.5
KAS	60.96	311	eP	03	36.00	1.8	BDI	78.10	313	P	05	28.80	9.6X	APHE	90.02	308	eP	06	20.50	0.7
BBTK	61.46	309	eP	03	43.00	5.3X	BOB	78.86	314	P	05	27.70	4.4X	ATEJ	90.28	308	eP	06	20.50	-0.5
STK	62.05	136	eP	03	41.00	-0.5	VAI	79.23	315	P	05	29.00	3.9X	FBA	90.49	22	eP	06	21.70	0.5
ADE	62.06	140	e(P)	03	41.60	0.0	PCP	79.52	313	P	05	26.67	-0.2	PMR	91.55	26	eP	06	26.60	0.5
ELL	63.31	305	eP	03	47.00	-3.0X	CKI	79.72	313	P	05	36.50	8.6X	INK	93.11	16	eP	06	33.00	-0.2
KHL	63.77	307	eP	03	48.00	-5.0X	FIN	79.80	313	P	05	28.21	-0.1	FHC	116.51	32	PKP	12	11.00	6.8X
RMO	64.42	127	eP	03	57.00	-0.2	ORX	79.80	315	P	05	28.83	0.4	CMB	120.43	32	PKP	12	17.80	6.1X
VRI	66.71	315	eP	04	01.00	-10.7X	WTS	79.90	321	eP	05	36.50	7.9X	KVN	120.80	30	PKP	12	20.00	7.4X
MLR	67.21	314	eP	04	14.50	-0.5		0.8s		23.00nm			5.2mb	BW06	121.30	21	PKP	12	13.50	0.0
LWI	67.36	263	ePc	04	20.00	3.4X	WIT	79.90	322	eP	05	37.50	8.9X	DUG	122.26	25	PKP	12	17.80	2.5X
HNR	67.74	105	eP	04	26.00	7.4X	CDF	79.98	317	eP	05	28.40	-0.9	DAU	122.71	24	PKP	12	17.60	1.2
TOO	67.98	139	eP	04	20.00	0.2	ROB	80.03	313	P	05	29.77	0.1	RSNY	123.29	351	PKP	12	09.00	-7.9X
			e	04	28.00		IMI	80.06	313	P	05	29.91	0.1	PEC	125.27	33	PKP	12	30.30	9.1X
BRS	68.01	126	iPc	04	20.00	-0.2	ENR	80.36	313	P	05	32.16	0.7	GOL	125.46	19	PKP	12	20.00	-1.7
			i	04	28.60		RSP	80.36	314	P	05	31.60	0.1	GLA	127.14	32	PKP	12	29.80	4.9X
CAN	69.08	135	eP	04	26.80	0.1	BSF	80.37	317	eP	05	30.50	-0.9	ANMO	129.33	23	PKP	12	30.80	1.6
			e	04	34.90		SBF	80.39	313	eP	05	30.50	-1.1	ALQ	129.34	23	PKP	12	32.50	3.3X
VAY	69.33	310	eP	04	25.00	-3.1X		0.9s		39.30nm			5.4mb		1.0s		5.00nm			
SUF	70.13	333	eP	04	32.50	0.0	LSD	80.40	314	P	05	32.01	0.2	BAO	143.99	259	e(PKP)	12	58.00	1.4
SKO	70.20	310	eP	04	32.50	-0.9	STV	80.42	313	P	05	32.59	0.8	LLAV	151.63	320	ePKP	13	23.00	14.2X
			i	04	41.50		DOI	80.45	314	P	05	35.50	3.6X	OLLA	151.97	319	ePKP	13	17.50	8.2X
NUR	70.35	330	eP	04	38.80	4.9X	PZZ	80.55	314	P	05	33.29	0.8	FISA	152.50	325	ePKP	13	25.00	15.1X
OHR	70.66	310	eP	04	31.80	-4.5X	MEM	80.56	320	P	05	39.40	7.3X	TOV	153.96	324	ePKP	13	20.30	8.3X
	1.2s		0.06nm			2.5mb X	ENN	80.59	320	e(P)	05	41.00	8.7X		S.D. = 1.1		on 141 of 208 obs.			
SOD	71.10	338	iP	04	38.70	0.3		1.3s		24.00nm			5.0mb	---						
			i	04	46.80		HAU	80.65	317	eP	05	32.00	-0.8	?	JAN 10, 1990 12h 32m 54.93±14.44s					
SPC	71.40	318	eP	04	40.80	0.0		0.9s		20.90nm			5.1mb		44.154 N ±76.8km			7.474 E ±54.9km		
			e	05	10.80		LPG	80.68	315	eP	05	32.60	-0.7		DEPTH = 10.0km (geophysicist)					
PSZ	71.56	317	eP	04	40.30	-1.3		0.7s		15.40nm			5.1mb		NORTHERN ITALY					(545)
KEV	71.63	340	eP	04	49.00	7.5X	RRL	80.72	314	P	05	33.29	-0.2		ML 2.4 (LDG).					
			e	04	55.00		BNI	80.79	314	P	05	33.90	0.2							
KRA	71.66	319	eP	04	41.80	-0.2	FRF	81.00	313	eP	05	34.00	-0.7	AUTN	0.16	192	Pg	32	58.22	-0.6
	0.6s		33.00nm			5.5mb		0.9s		27.50nm			5.3mb				Sg	33	02.51	
			e	04	52.50		LMR	81.13	312	eP	05	34.80	-0.5	TOUF	0.22	229	Pg	32	59.11	-0.6
SRO	72.62	317	eP	04	49.40	1.6		1.0s		24.00nm			5.2mb				Sg	33	03.64	
BUL	72.67	245	iPc	05	02.00	13.3X	LRG	81.22	313	eP	05	35.70	-0.1	AURF	0.29	202	Pg	33	01.08	0.1
	1.0s		10.00nm					0.7s		22.00nm			5.3mb				Sg	33	06.87	
			i	05	10.90		DOU	81.52	319	P	05	38.90	1.7	SBF	0.29	186	Pg	33	01.20	0.1
ZST	73.44	317	eP	04	52.10	-0.5	LBF	82.38	316	eP	05	40.90	-1.0				Sg	33	07.60	
			e	05	02.70			0.9s		29.40nm			5.3mb	FRF	0.84	226	Pg	33	11.50	0.3
UPP	73.73	329	iP	04	55.70	1.7	LOR	82.41	317	eP	05	41.20	-0.8				Sg	33	24.80	
VKA	73.97	317	ePc	05	06.50	10.8X		1.1s		35.10nm			5.3mb	LRG	1.07	229	Pg	33	15.20	0.2
KSP	74.02	320	eP	04	56.00	0.1	SMF	82.52	316	eP	05	41.70	-0.9				Sg	33	30.90	
			i	05	07.50			0.9s		26.80nm			5.3mb	LMR	1.08	221	Pg	33	15.20	0.0
CZI	74.25	308	P	05	04.80	7.4X	SSF	82.68	316	eP	05	42.80	-0.6				Sg	33	30.80	
MGR	74.66	309	P	05	12.00	12.2X		1.4s		56.60nm			5.5mb		S.D. = 0.5		on 7 of 7 obs.			
VBY	74.71	314	e(P)	05	01.50	1.5	AVF	82.83	316	eP	05	43.30	-0.8	---						
			i	05	11.40			0.7s		8.80nm			5.0mb	&	JAN 10, 1990 12h 44m 19.16s					
PRU	75.13	319	eP	05	02.20	-0.2	BGF	83.21	316	eP	05	45.70	-0.4		55.619 N			160.898 W		

10d 12h

DEPTH = 113.5km
ALASKA PENINSULA (12)
<PAL>.

SGB	0.26	106	eP	44	34.70	0.6
			eS	44	46.50	
SASA	0.36	141	iPd	44	35.23	-0.5
			eS	44	47.10	
PVV	0.56	245	iPd	44	36.45	-0.6
			eS	44	49.10	
DLG	0.72	229	eP	44	37.68	-0.6
			eS	44	51.31	
IVF	0.82	70	ePc	44	38.64	-0.5
			eS	44	52.29	
DRRA	1.06	229	iPd	44	40.97	-0.5
SNKA	1.58	224	ePd	44	46.63	-0.8
			eS	45	06.99	
RED	6.46	39	eP	45	53.77	0.5
CNPM	6.51	49	eP	45	52.03	-1.8
RDT	6.70	39	eP	45	55.93	-0.6
CKL	7.17	35	eP	46	02.87	-0.1
BGL	7.20	35	eP	46	03.90	0.5
SPU	7.25	36	eP	46	03.22	-0.8
CRP	7.28	35	eP	46	04.37	-0.2
			eS	47	00.24	
NCG	7.38	35	eP	46	05.93	0.0
SLKM	7.48	45	eP	46	05.03	-2.1
SEW	7.58	49	eP	46	06.00	-2.4
SUA	7.90	38	eP	46	11.02	-1.9
SKT	8.02	33	eP	46	13.96	-0.4
PLRM	8.57	41	eP	46	17.94	-3.9
CUT	8.73	34	eP	46	21.83	-2.1
GLI	8.98	48	eP	46	23.49	-3.9
FID	9.18	50	eP	46	25.73	-4.3
KLU	9.78	47	eP	46	34.51	-3.7
GLB	10.65	50	eP	46	46.62	-3.1
PAX	10.77	41	eP	46	47.47	-3.9
TGL	10.82	54	eP	46	49.69	-2.3
BALM	11.14	53	eP	46	53.55	-2.7

28 obs. associated

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* JAN 10, 1990 12h 52m 06.70± 1.04s
36.014 N ±10.9km 27.203 E ±10.6km
DEPTH = 33.0km (normal)
DODECANESE ISLANDS (369)

KAP	0.46	183	eP	52	16.40	-0.4
			eS	52	25.20	
YER	1.42	38	ePn	52	30.00	-0.4
APE	1.71	309	eP	52	35.00	0.4
KSL	1.93	86	eP	52	39.50	1.7
ELL	2.30	71	ePn	52	42.00	-1.2

S.D. = 1.5 on 5 of 5 obs.

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* JAN 10, 1990 13h 04m 00.31± 0.86s
36.039 N ± 9.6km 27.378 E ± 8.3km
DEPTH = 33.0km (normal)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.51	199	ePg	04	10.00	-1.2
			eSg	04	19.20	
YER	1.31	33	ePn	04	21.00	-1.5
NPS	1.63	242	ePb	04	29.00	1.9
SMG	1.72	346	ePb	04	29.00	0.6
KSL	1.79	87	ePn	04	33.20	3.9X
APE	1.81	305	ePb	04	28.20	-1.5
ELL	2.16	70	ePn	04	35.00	0.2
IZM	2.36	358	ePn	04	41.00	3.5X
VAM	2.66	257	ePb	04	44.80	3.0X
KHL	2.85	36	ePn	04	46.00	1.4
VLI	3.65	282	ePn	04	56.20	0.4
ITM	4.53	286	ePn	05	08.00	-0.4

S.D. = 1.4 on 9 of 12 obs.

JAN 10, 1990 13h 10m 12.33± 0.25s
52.117 N ± 5.7km 169.236 W ± 3.6km
DEPTH = 33.0km (normal)
5.6mb (61 obs.) 5.3Msz (7 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GOSN
L.P.B.: 10S, 22C
Centroid Location:
Origin Time 13:10:17.6 0.5
Lat 52.23N 0.09 Lon 169.94W 0.15
Dep 15.0 FIX Half-duration 2.0

Moment Tensor; Scale 10**17 Nm
Mrr= 1.19 0.08 Mtt=-0.63 0.12
Mff=-0.56 0.09 Mrt= 1.11 0.32
Mrf= 1.06 0.36 Mtf=-0.03 0.08
Principal Axes:

	Val=	Plg=	Azm=
T	2.07	60	316
N	-0.56	1	47
P	-1.50	30	138

Best Double Couple:Mo=1.8*10**17
NP1:Strike=231 Dip=15 Slip= 94
NP2: 47 75 89

ADK	4.61	270	ePc	11	20.30	-1.1
SDN	6.11	55	eP	11	44.40	1.8
KDC	11.15	53	eP	12	50.40	-1.9
SVW	11.70	34	eP	13	02.30	2.5
TTA	12.92	28	eP	13	18.10	1.9
PMR	14.46	41	eP	13	34.40	-1.9
Z	20s	10.00um				
TOA	15.93	42	eP	13	53.00	-2.4
IMA	16.03	23	eP	13	56.90	0.1
FBA	16.89	32	eP	14	04.60	-2.8
INK	23.51	33	ePd	15	17.80	-1.9
	0.8s	43.00nm			5.0mb	
MBC	30.74	21	eP	16	24.50	-1.5
	0.3s	9.00nm			5.0mb	
PNT	31.05	75	ePd	16	29.00	-0.1
EDM	33.18	65	eP	16	47.50	-0.1
LBFM	33.63	90	eP	16	53.00	1.1
WDC	33.67	91	ePc	16	51.90	-0.1
MIN	34.38	91	eP	16	57.50	-0.8
ORV	34.92	92	eP	17	06.70	3.9X
BRK	35.49	95	e(P)	17	08.60	1.0
BKS	35.50	95	e(P)	17	10.80	3.1X
	1.0s	57.00nm			5.5mb	
Z	20s	3.20um			5.1Msz	
E	20s	2.30um				
		eLR		26	00.00	
SES	35.62	69	eP	17	08.00	-0.7
MHC	36.20	95	eP	17	14.20	0.4
ARN	36.27	95	eP	17	15.00	0.8
CMB	36.54	93	e(P)	17	17.00	0.5
LRM	36.97	77	eP	17	20.70	0.4
PRS	37.02	96	e(P)	17	20.20	-0.3
KVN	37.32	90	eP	17	23.50	0.2
FRI	37.62	94	eP	17	27.40	1.9
TNP	38.46	90	eP	17	34.00	1.1
PTI	38.61	81	eP	17	35.50	1.5
FFC	38.78	59	eP	17	35.00	-0.1
	0.9s	17.00nm			4.8mb	
FFC	38.78	59	eP	17	47.00	11.9X
	1.1s	40.00nm				
SYP	39.06	97	eP	17	41.00	3.2X
MAT	39.77	268	eP	17	42.00	-1.5
	2.3s	363.64nm			5.7mb	
		eS		23	26.00	
DUG	39.89	84	eP	17	45.00	0.4
	1.0s	32.50nm			5.0mb	
BW06	40.37	79	eP	17	48.50	-0.1
	1.0s	19.00nm			4.8mb	
DAU	40.71	83	eP	17	52.50	0.9
MSU	41.30	86	eP	17	56.00	-0.4
PLM	41.76	96	eP	18	01.20	1.1
GLA	43.22	94	eP	18	13.00	1.1
GOL	44.73	80	eP	18	24.70	0.4
	1.0s	41.25nm			5.3mb	
GLD	44.79	80	eP	18	25.50	0.8
	1.0s	70.00nm			5.5mb	
RSON	45.04	60	eP	18	25.50	-0.8
	1.0s	54.23nm			5.4mb	
ANMO	47.11	86	eP	18	43.00	-0.1
	1.2s	33.20nm			5.2mb	
ALQ	47.11	86	eP	18	43.50	0.4
	1.0s	19.50nm			5.1mb	
Z	18s	3.21um			5.3Msz	
KBS	49.22	360	iPd	18	58.70	0.0
DAG	50.02	9	iPc	19	02.30	-2.5
	1.1s	125.32nm			5.9mb	
TUL	52.96	77	ePd	19	26.90	-0.7
	1.2s	15.90nm			4.9mb	
		i		19	40.00	
SSE	53.90	276	Pd	19	33.20	-1.3
	1.5s	294.00nm			6.1mb	
Z	20s	1.40um			5.0Msz	
		pP		19	40.00	22kmX
		sP		19	42.20	
		S		27	10.00	
		sS		27	24.00	
FVM	54.76	72	eP	19	38.50	-2.3
SCH	55.60	43	eP	19	46.00	-0.6
OLY	55.82	75	eP	19	46.00	-2.5
PTN	58.81	56	eP	20	07.50	-2.0
HBVT	59.93	55	eP	20	15.00	-2.3
SOD	60.24	353	iP	20	17.70	-1.3
NAV	60.75	66	eP	20	21.70	-1.3
LZH	60.76	292	eP	20	22.00	-1.2
	1.5s	132.00nm				5.8mb
Z	18s	3.90um				5.6Msz
		i		21	03.00	
		eS		38	20.00	
BLA	61.04	66	eP	20	23.30	-1.6
CVL	61.58	64	eP	20	27.00	-1.5
		e		20	40.00	
NA2	61.88	63	eP	20	29.00	-1.5
CBN	62.03	63	eP	20	30.00	-1.5
JSC	62.65	69	eP	20	34.00	-1.7
SUF	64.87	352	iP	20	48.50	-1.3
	0.6s	38.40nm				5.7mb
HNR	66.78	213	eP	21	16.00	13.5X
NUR	67.17	353	iP	21	03.20	-1.3
NB2	67.19	360	P	21	03.60	-1.1
	0.8s	42.30nm				5.6mb
HFS	68.08	358	eP	21	07.90	-2.3
	0.7s	53.50nm				5.7mb
UPP	68.24	356	iP	21	11.00	-0.2
EKA	72.30	8	Pd	21	35.50	-0.4
	1.3s	90.10nm				5.6mb
DMU	73.33	11	eP	21	41.00	-0.9
DCN	73.83	11	eP	21	44.60	-0.2
	1.2s	190.00nm				6.0mb
DLE	73.97	11	eP	21	42.60	-3.1X
	1.2s	119.00nm				5.8mb
WIT	75.39	3	eP	21	55.00	1.2
SHL	75.41	293	iP	21	52.80	-1.9
LOE	75.88	280	eP	21	57.00	-0.2
WTS	76.21	3	eP	21	58.00	-0.5
	1.2s	69.00nm				5.5mb
CHG	76.48	283	ePc	22	00.00	-0.6
	1.0s	27.50nm				5.2mb
DZM	76.87	203	iPc	22	17.10	14.5X
CLL	76.93	359	iPd	22	02.20	-0.3
	1.5s	71.00nm				5.5mb
		i		22	17.60	
KSP	77.31	356	iPd	22	04.60	-0.1
	1.2s	63.00nm				5.5mb
BRG	77.35	358	iPc	22	04.50	-0.4
	1.4s	80.00nm				5.6mb
		i		22	11.90	
ENN	77.41	3	eP	22	05.00	-0.2
	1.2s	156.00nm				5.9mb
		e		22	14.50	
		e		22	23.50	
MEM	77.57	3	P	22	06.80	0.8
BDT	77.65	282	eP	22	07.00	0.0
KRA	77.91	354	iPc	22	07.50	-0.4
	1.3s	125.00nm				5.8mb
		e		22	11.20	
HOF	77.94	359	iPd	22	08.30	0.1
	1.5s	63.00nm				5.4mb
DOU	78.03	4	Pd	22	08.90	0.3
NST	78.18	280	eP	22	01.00	-8.9X
PRU	78.22	358	iPc	22	09.50	-0.2
	1.3s	45.10nm				5.3mb
		e		22	15.30	
WLF	78.52	3	P	22	09.00	-2.3
		i		22	13.00	
SPC	78.75	354	iP	22	11.80	-1.0
FLN	79.04	8	eP	22	12.70	-1.5
	1.5s	104.40nm				5.6mb
KHC	79.10	358	iPc	22	15.00	0.4
	1.2s	70.00nm				5.5mb
LDF	79.24	7	eP	22	13.80	-1.5
	1.1s	58.60nm				5.5mb
GWF	79.25	2	P	22	14.49	-0.9
GRR	79.38	8	eP	22	14.80	-1.2
	1.3s	96.70nm				5.6mb
LPF	79.72	8	eP	22	16.80	-1.1
	1.3s	93.80nm				5.6mb
CDF	79.81	2	P	22	18.41	0.0
WLS	79.81	2	P	22	17.93	-0.5
ZST	79.92	356	iPc	22	19.90	1.0
VITF	79.96	3	P	22	18.70	-0.4
ECH	80.00	2	P	22	19.03	-0.4
HAU	80.19	3	eP	22	19.40	-1.0

1.2s 79.70nm 5.6mb
SRO 80.24 355 iP 22 21.10 0.5
FEL 80.36 2 P 22 20.99 -0.5
MOF 80.36 2 P 22 20.99 -0.4
BSF 80.37 3 P 22 20.82 -0.7
SOP 80.46 356 iPd 22 24.10 2.3
SLE 80.48 2 ePd 22 22.30 0.3
BHG 80.52 359 iPc 22 22.60 0.4
1.4s 78.00nm 5.5mb
BUD 80.53 354 iP 22 22.80 0.6
GRC 80.75 5 P 22 23.60 0.3
BBS 80.76 2 P 22 23.65 0.2
ZLA 80.76 2 ePd 22 24.00 0.5
LOR 80.82 5 eP 22 22.70 -1.1
1.2s 111.50nm 5.7mb
NDI 80.83 305 iPc 22 23.00 -1.1
eS 32 40.00
LOMF 80.85 3 P 22 24.11 0.1
SAX 81.00 1 ePd 22 25.80 0.7
SSF 81.01 5 eP 22 23.90 -0.8
1.1s 90.30nm 5.7mb
LBF 81.11 5 eP 22 24.10 -1.2
1.1s 52.20nm 5.4mb
KBA 81.16 358 iPc 22 25.30 -0.4
1.3s 252.00nm 6.1mb
id 22 25.70
MFF 81.22 8 eP 22 25.10 -0.7
1.3s 173.20nm 5.9mb
AVF 81.27 5 eP 22 24.90 -1.2
LLS 81.38 1 ePd 22 27.80 0.9
OGA 81.39 360 iPc 22 27.40 0.4
1.1s 58.00nm 5.5mb
VRI 81.43 349 ePd 22 29.50 2.5
SMF 81.44 5 eP 22 25.90 -1.1
BGF 81.47 6 eP 22 26.20 -1.0
1.3s 133.50nm 5.8mb
OSS 81.57 0 ePd 22 28.90 1.0
FVI 81.65 359 P 22 29.50 1.5
CTA 81.69 222 iPd 22 28.20 -0.3
1.1s 54.43nm 5.5mb
LSF 81.69 6 eP 22 27.50 -0.8
TCF 81.70 6 eP 22 27.30 -1.1
1.2s 53.50nm 5.4mb
VDL 81.77 1 ePd 22 30.30 1.3
MAF 81.79 6 eP 22 28.20 -0.6
1.3s 54.10nm 5.4mb
MLR 81.90 349 ePd 22 30.00 0.4
AGO 81.99 5 P 22 34.83 4.9X
PLDF 82.10 5 P 22 31.11 0.6
EMS 82.14 3 ePd 22 32.20 1.3
DIX 82.14 2 ePd 22 32.50 1.5
TMA 82.14 1 ePd 22 31.50 0.6
LJU 82.17 357 e(P) 22 30.50 -0.3
MMK 82.18 2 ePd 22 32.90 1.7
VOY 82.19 358 eP 22 30.20 -0.8
BZS 82.20 352 eP 22 29.50 -1.4
MAIO 82.21 322 iPc 22 31.00 -0.3
CMP 82.22 350 ePc 22 27.00 -4.1X
PTJ 82.26 356 e(P) 22 31.40 0.0
PYM 82.28 5 P 22 31.73 0.2
VAI 82.38 1 Pd 22 33.70 1.9
CEY 82.47 357 eP 22 32.50 0.1
TRI 82.52 358 P 22 32.40 -0.2
ORX 82.60 2 P 22 33.85 0.7
ORO 82.61 2 P 22 35.20 2.0
RJF 82.63 7 eP 22 32.20 -1.0
1.2s 49.90nm 5.5mb
SAL 82.66 0 Pd 22 35 00 1.7
VBY 82.68 357 iPd 22 34.20 0.7
LSD 82.76 3 P 22 35.90 1.7
RIY 82.87 357 iPd 22 34.00 -0.4
LFF 82.94 7 eP 22 34.10 -0.7
1.3s 137.10nm 5.9mb
CAF 83.05 6 eP 22 34.80 -0.6
1.1s 56.10nm 5.6mb
RSP 83.06 2 P 22 36.62 1.0
BEO 83.08 353 iP 22 36.00 0.5
BNI 83.15 3 Pd 22 38.50 2.4
LPO 83.23 7 eP 22 35.60 -0.7
1.2s 77.30nm 5.7mb
RRL 83.28 3 P 22 39.29 2.4
BOB 83.49 1 Pd 22 39.60 1.9
FOUF 83.67 3 ePc 22 40.17 1.7
i 22 40.83
PCP 83.70 2 P 22 39.19 0.4
PZZ 83.71 3 P 22 39.49 0.6
DOI 83.71 3 P 22 39.00 0.1

CKI 83.81 2 Pd 22 40.80 1.5
ROB 83.94 2 P 22 40.31 0.3
STV 83.97 2 P 22 38.98 -1.2
ENR 83.99 2 P 22 39.90 -0.4
FIN 84.03 2 P 22 40.21 -0.2
MME 84.07 0 P 22 43.40 2.5
BDI 84.20 0 Pd 22 42.70 1.4
AUTN 84.22 2 P 22 42.75 1.1
IMI 84.32 2 P 22 41.75 -0.2
RSM 84.32 359 Pd 22 44.60 2.8X
SFI 84.34 359 Pd 22 44.90 3.0X
SBF 84.36 2 eP 22 41.50 -0.6
1.1s 112.30nm 6.0mb
PGD 84.38 359 Pd 22 44.80 2.4
QUE 84.45 314 iPc 22 43.10 0.1
eS 33 06.60
FIR 84.48 360 eP 22 43.50 0.9
SNG 84.48 275 eP 22 42.60 -0.4
PII 84.54 0 P 22 44.00 1.1
CRE 84.63 359 P 22 45.50 2.0
FRF 84.64 3 eP 22 42.80 -0.6
1.1s 97.60nm 5.9mb
ARV 84.75 358 P 22 46.50 2.5
KAS 84.77 343 eP 22 44.00 -0.2
EPF 84.80 8 eP 22 43.10 -1.3
1.1s 63.40nm 5.7mb
LMR 84.86 3 eP 22 44.30 -0.2
1.2s 109.40nm 5.9mb
TAB 84.98 333 eP 22 45.00 -0.4
ASS 85.18 359 P 22 47.70 1.5
SKO 85.83 352 iP 22 49.00 -0.5
1.4s 185.00nm 6.1mb
i 23 00.00
MAO 85.85 360 Pd 22 51.00 1.5
MNS 85.86 359 P 22 50.20 0.6
AQU 85.88 358 P 22 51.90 2.2
BRS 85.88 213 iPc 22 50.00 0.3
IR1 86.11 328 iPc 22 51.00 -0.1
IR4 86.20 328 iPc 22 52.00 0.4
AZI 86.25 358 Pd 22 53.00 1.6
IPM 86.26 273 ePd 22 53.20 1.2
YLV 86.29 346 iP 22 52.80 1.0
MFT 86.37 348 iP 22 53.50 1.3
VAY 86.38 351 iP 22 51.50 -0.6
1.3s 0.14nm 3.0mb X
GPA 86.41 345 eP 22 53.00 0.6
BBTK 86.44 343 eP 22 53.00 0.4
RMO 86.48 217 iPd 22 53.70 1.1
RDP 86.49 359 P 22 54.50 1.7
KNT 86.50 351 eP 22 53.50 0.7
SDI 86.52 358 Pd 22 54.10 1.2
DUI 86.55 357 P 22 54.50 1.4
BNT 86.70 347 iP 22 53.80 0.0
EDC 86.72 347 iP 22 53.50 -0.3
OHR 86.74 352 iP 22 52.10 -1.9
1.5s 0.24nm 3.2mb X
i 23 04.30
GRG 86.75 351 eP 22 54.30 0.2
SOH 86.79 350 ePd 22 54.20 -0.1
WB5 86.84 232 eP 22 52.10 -2.5
OUR 87.21 350 eP 22 56.00 -0.2
MSL 87.44 334 ePd 23 01.50 4.1X
TOL 87.47 11 iPd 22 58.50 1.0
1.1s 50.63nm 5.7mb
MGR 88.03 356 Pd 23 00.70 0.6
KHL 88.46 345 eP 23 00.00 -2.4
TDS 88.47 356 P 23 04.00 1.7
AGG 88.68 351 eP 23 02.40 -0.9
PSI 89.03 273 ePd 23 05.00 -0.2
GRI 89.31 356 P 23 07.19 0.9
0.2s 8.80nm 5.7mb
HYB 89.33 298 iPc 23 05.50 -1.3
1.0s 90.00nm 6.0mb
ASMO 90.00 12 iPc 23 10.50 0.8
AAPN 90.00 12 iPc 23 10.50 0.8
ALOJ 90.20 12 iPd 23 11.50 0.8
ACHM 90.24 12 iPc 23 12.00 1.2
ASPA 90.30 230 iPc 23 09.90 -1.0
1.1s 21.00nm 5.3mb
Z 19s 0.18um 4.5Msz
LR 30 06.60
ATEJ 90.40 12 iPc 23 12.40 0.7
APHE 90.41 12 eP 23 13.00 1.4
POO 90.92 302 iPd 23 14.40 0.3
HRI 92.20 339 eP 23 21.00 1.1
GBA 93.06 297 P 23 24.00 0.1
DSI 93.92 339 e(P) 23 25.00 -2.7

PRNI 95.18 339 eP 23 34.00 0.4
KOD 95.80 295 eP 23 36.50 -0.4
TIC 119.93 18 PKPd 29 00.56 -0.4
0.9s 12.00nm
KIC 120.26 18 PKPd 29 01.04 -0.6
1.0s 15.00nm
LIC 120.34 18 PKPd 29 01.30 -0.4
Z 20s 1.00um 5.5Msz
BCAO 123.28 351 iPKPd 29 08.00 0.6
0.6s 11.00nm
id 30 45.60
LWI 128.06 337 iPKPd 29 17.80 0.9
BUL 145.18 330 iPKPc 30 02.90 14.8X
1.0s 57.50nm
SLR 150.50 327 iPKPc 30 02.60 6.2X
0.9s 138.66nm
Z 20s 3.55um 6.2Msz
KSR 151.08 329 iPKPd 30 04.00 6.7X
1.0s 50.00nm
PRY 151.87 327 iPKPc 30 04.80 6.3X
0.9s 42.31nm
BFS 152.07 328 iPKPc 30 04.50 5.8X
0.9s 225.21nm
BLF 154.31 328 iPKPd 30 10.50 8.7X
1.0s 20.00nm
HVD 155.92 327 ePKP 30 03.00 -0.9
S.D. = 1.2 on 236 of 255 obs.

? JAN 10, 1990 13h 33m 48.89± 3.03s
16.838 S ±38.0km 74.835 W ±25.1km
DEPTH = 33.0km (normal)
4.8mb (1 obs.)
NEAR COAST OF PERU (115)

PT03 2.98 342 eP 34 34.50 -0.4
ARE 3.23 84 eP 34 37.00 -1.7
iS 35 09.00
PT06 3.32 334 iPc 34 41.20 1.4
iS 36 27.30
PT08 5.13 341 iPd 35 05.10 -0.7
iS 36 03.60
PT10 5.17 336 eP 35 09.50 3.5X
eS 35 14.00
e(S) 36 15.00
NNA 5.20 338 eP 35 09.00 2.5X
0.6s 18.67nm 4.7mb X
eS 35 12.00
eS 36 00.50
ZOBO 6.46 86 P 35 25.50 0.7
LPB 6.46 88 P 35 28.00 3.3X
1.0s 70.00nm 5.4mb X
CNCB 6.56 91 P 35 28.00 1.8
i 35 30.00
TUL 56.09 340 eP 43 27.40 0.1
1.0s 10.70nm 4.8mb
KIC 73.00 78 (P)c 45 16.60 -1.2
WRA 133.55 219 PKP 53 12.00 7.5X
0.7s 1.00nm
GBA 153.06 93 PKPd 53 47.00 9.2X
0.6s 3.90nm
S.D. = 1.5 on 8 of 13 obs.

JAN 10, 1990 13h 38m 11.35± 0.94s
40.096 N ± 5.2km 20.027 E ±11.0km
DEPTH = 5.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

TPE 0.20 356 iPgd 38 14.00 -1.4
SRN 0.22 185 iPg 38 15.90 0.1
LSK 0.44 83 ePg 38 19.80 -0.4
BERA 0.61 354 iPgd 38 24.30 0.8
IGT 0.61 157 eP 38 23.50 -0.1
OHR 1.17 30 ePn 38 34.80 1.1
S.D. = 1.2 on 6 of 6 obs.

JAN 10, 1990 14h 13m 20.41± 0.33s
44.532 N ± 2.9km 7.282 E ± 3.5km
DEPTH = 15.7 ± 6.9 km
NORTHERN ITALY (545)
ML 2.7 (GEN), 3.0 (LDG).

DOI 0.04 222 Pd 13 24.50 1.0
eSg 13 26.00
PZZ 0.13 258 Pc 13 24.17 -0.2
S 13 26.41
STV 0.29 174 P 13 26.46 -0.4
S 13 30.20

10d 14h

ENR	0.32	162	Pc	13 26.95	-0.4
			S	13 31.04	
FOUF	0.36	270	iPgc	13 27.63	-0.3
			eSg	13 31.57	
ROB	0.48	119	Pc	13 30.21	0.1
			S	13 36.61	
RRL	0.53	318	Pc	13 31.10	0.1
			S	13 38.29	
RSP	0.62	358	P	13 31.93	-0.6
			S	13 40.08	
BNI	0.68	321	Pc	13 34.70	1.2
			eSg	13 43.90	
SBF	0.68	171	Pg	13 33.10	-0.4
			Sg	13 41.60	
CKI	0.72	98	P	13 35.70	1.5
			eSg	13 44.90	
FIN	0.74	116	Pc	13 34.61	0.1
			S	13 44.50	
IMI	0.76	145	P	13 34.53	-0.3
			S	13 44.29	
PCP	0.90	89	Pc	13 37.86	0.6
			S	13 50.17	
LSD	0.93	355	P	13 37.40	-0.5
			S	13 49.44	
LPG	1.04	339	Pg	13 40.40	0.7
			Sg	13 54.90	
LPL	1.06	339	Pg	13 40.80	0.8
FRF	1.07	205	Pg	13 40.20	0.0
			Sg	13 54.30	
ORX	1.21	24	P	13 40.82	-1.7
			S	13 54.48	
LRG	1.27	212	Pn	13 43.80	0.5
			Pg	13 44.10	
			Sg	14 01.70	
LMR	1.32	205	Pn	13 44.20	0.0
			Pg	13 44.80	
			Sg	14 02.00	
BOB	1.56	81	P	13 49.00	1.3

S.D. = 0.8 on 22 of 22 obs.

? JAN 10, 1990 14h 49m 06.16± 1.04s
31.369 S ±10.0km 69.306 W ±11.0km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS	0.32	203	iP	49 14.50	0.4
RTLL	0.72	87	e(P)c	49 20.80	0.9
			S	49 38.20	
RTCV	0.82	127	iPd	49 20.40	-0.9
			S	49 37.90	
CFA	0.94	105	iPc	49 23.00	-0.1
			S	49 41.30	
RTRS	1.20	354	iPd	49 26.40	-0.3
			S	49 47.80	

S.D. = 1.0 on 5 of 5 obs.

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* JAN 10, 1990 15h 33m 50.48± 0.94s
36.066 N ±10.7km 27.439 E ±11.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.56	203	ePg	34 00.80	-1.0
			eSg	34 10.50	
VER	1.26	32	ePn	34 13.00	-1.0
NPS	1.69	242	ePn	34 20.80	0.6
SMG	1.71	344	ePn	34 21.00	0.6
KSL	1.74	88	ePb	34 23.00	2.1
APE	1.83	304	ePb	34 19.00	-3.3X
ELL	2.11	70	ePn	34 25.00	-1.3

S D. = 1 7 on 6 of 7 obs.

& JAN 10, 1990 16h 07m 06.40s
37.012 N 121.780 W
DEPTH = 8.0km (geophysicist)
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.1 (BRK). Felt in the Uvas Canyon County Park area.

GCC	0.17	276	iPc	07 09.80	-0.4
			eS	07 12.30	
MHC	0.35	19	iPd	07 13.10	-0.4
			i	07 14.40	
			eS	07 19.00	
SAO	0.36	132	eP	07 13.60	-0.2
PCC	0.68	316	eP	07 20.10	0.0
LLA	0.78	120	eP	07 21.10	-0.7
BKS	0.94	337	e(P)	07 37.50	13.1
PRI	1.25	134	e(P)	07 33.20	3.3
CMB	1.51	47	e(P)c	07 34.20	0.4
		8 obs. associated			

JAN 10, 1990 16h 11m 46.73± 0.16s
10.073 S ± 4.1km 123.819 E ± 4.7km
DEPTH = 32.7km (3 depth phases)
5.6mb (43 obs.) 4.9Msz (12 obs.)
TIMOR (289)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Location:
Origin Time 16:11:46.8 0.9
Lat 10.32S 0.07 Lon 124.35E 0.08
Dep 58.7 4.1 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.18 0.09 Mtt=-1.62 0.12
Mff= 0.45 0.18 Mrt= 0.42 0.16
Mrf=-0.24 0.13 Mtf=-1.01 0.12
Principal Axes:
T Val= 1.45 Plg=57 Azm= 60
N 0.61 33 252
P -2.07 5 158
Best Double Couple:Mo=1.8*10**17
NP1:Strike=218 Dip=49 Slip= 44
NP2: 95 58 129

MKS	6.47	318	ePc	13 28.50	6.3X
MTN	7.68	112	iPc	13 32.70	-6.4X
AAI	7.69	35	ePd	13 43.00	3.7X
	1.0s	55.50nm		5.6mb	
			eS	16 03.00	
TRT	11.30	281	iPd	14 25.40	-3.6X
	0.9s	91.10nm		6.0mb	
			iS	16 34.20	
MBL	11.67	199	iPd	14 26.40	-7.7X
WB5	14.10	135	eP	14 55.00	-11.3X
WRA	14.12	135	Pc	14 56.30	-10.3X
TSM	15.31	338	ePd	15 29.10	6.9X
WARB	16.25	171	eP	15 25.30	-8.9X
			eS	18 14.00	
ASPA	16.59	146	iPd	15 29.00	-9.6X
	0.5s	251.00nm		5.6mb	
Z	17s	17.98um		3.9Msz	
			iS	18 24.80	
			LR	22 22.30	
DAV	17.14	6	eP	15 48.00	2.5
MEKA	17.19	196	eP	15 40.20	-6.0X
	0.3s	28.00nm		4.9mb	
			eS	18 39.00	
KKM	17.71	334	ePd	15 57.00	4.2X
	0.8s	310.50nm		5.5mb	
			e	16 43.50	
			e	19 27.00	
JAY	18.38	67	ePd	15 59.00	-1.9
MNDI	20.02	80	eP	16 21.00	0.9
MRWA	20.41	200	iPc	16 18.90	-4.9X
	0.7s	117.00nm		5.4mb	
			eS	19 50.00	
COOL	20.86	186	iPc	16 22.90	-5.5X
	0.8s	246.00nm		5.6mb	
			eS	19 58.00	
FORR	21.05	170	eP	16 24.00	-6.4X
	0.4s	172.00nm		5.8mb	
			eS	20 03.00	
BAL	21.48	197	iPc	16 30.10	-4.6X
	0.8s	201.00nm		5.6mb	
			eS	20 16.00	
KLB	22.14	194	eP	16 37.00	-4.3X
	0.6s	50.00nm		5.1mb	
			eS	20 30.00	
MUN	22.91	197	eP	16 44.00	-4.9X
	0.8s	139.00nm		5.5mb	
			eS	20 49.00	
NWAO	23.54	194	eP	16 49.00	-6.0X
	0.7s	71.00nm		5.3mb	
Z	20s	1.70um		4.5Msz	
			eS	21 12.00	
RKG	24.69	194	iPd	17 08.10	2.0
	0.5s	53.00nm		5.4mb	
PPI	25.18	291	eP	17 09.00	-1.9
QLP	25.34	133	eP	17 11.00	-1.4
			e	17 20.00	32km
BAG	26.51	353	eP	17 23.00	-0.5
IPM	26.97	302	ePd	17 26.40	-1.2
STK	27.23	145	iPc	17 27.20	-2.6
			e	17 41.00	56kmX
			e	22 24.00	
PSI	27.85	296	ePd	17 34.50	-1.0
ADE	28.26	154	eP+	17 36.50	-2.7
	0.9s	115.97nm		5.6mb	
RMQ	28.67	128	iPc	17 41.00	-1.9
			e	18 16.00	169kmX
			e	22 55.00	
SNG	28.77	306	eP	17 41.80	-2.0
			eS	22 32.00	
CMS	29.50	139	eP	17 48.00	-2.3
			e	18 21.00	157kmX
			e	23 33.00	
GUMO	31.45	42	eP	18 14.70	7.1X
			eS	23 28.50	
BFD	31.84	151	iPd	18 08.50	-2.4
			e	18 45.00	174kmX
			e	24 14.00	
QIZ	32.03	334	P	18 11.60	-1.1
E	17s	1.70um			
BRS	32.26	126	iPd	18 13.10	-1.6
	0.6s	33.00nm		5.4mb	
			i	18 26.00	50kmX
			eS	23 28.00	
			e(SS)	25 00.00	
BSI	32.35	297	eP	18 14.00	-1.5
NNT	32.85	313	eP	18 17.50	-2.4
BWA	33.07	141	eP	18 21.50	-0.2
			e	19 20.10	298kmX
TOO	33.62	148	iPc	18 25.40	-1.1
	0.4s	63.00nm		5.9mb	
			e	25 23.00	
CAN	34.02	142	eP	18 28.30	-1.7
			iPP	19 34.70	
CNB	34.24	141	eP	18 30.00	-1.9
			e	25 40.00	
GZH	34.51	343	eP	18 33.80	-0.4
Z	18s	1.40um		4.7Msz	
NST	34.71	317	eP	18 35.40	-0.5
LOE	34.96	321	eP	18 38.00	-0.1
			e	21 11.40	
			e	23 56.50	
QZH	35.17	352	eP	18 39.50	-0.3
N	28s	2.20um			
E	28s	2.20um			
HNR	35.60	92	eP	18 42.00	-1.6
BDT	36.58	318	eP	18 51.10	-0.7
	1.0s	144.90nm		5.8mb	
CHG	37.76	319	iPc	19 01.40	-0.3
	1.0s	87.25nm		5.6mb	
CHTO	37.76	319	iPc	19 01.60	-0.1
	0.6s	41.81nm		5.5mb	
			PcP	21 20.10	
GYA	39.96	336	iPc	19 20.00	-0.1
N	18s	1.50um			
E	18s	0.80um			
			sP	19 34.80	
			PcP	21 26.60	
			S	25 21.00	
KMI	40.57	330	Pc	19 27.00	1.7
Z	20s	2.40um		5.0Msz	
E	20s	2.90um			
			sP	19 39.50	
			S	25 36.00	
SSE	41.01	357	Pd	19 28.20	-0.3
	0.8s	0.03nm		2.1mb X	
Z	20s	0.90um		4.6Msz	
			pP	19 39.00	38km
			PP	21 07.20	
			ScS	29 23.00	
WHN	41.39	348	iPc	19 32.00	0.4
KAGJ	41.58	9	eP	19 32.10	-1.1
NJ2	42.15	354	Pc	19 38.00	0.2
Z	20s	1.20um		4.8Msz	
DZM	42.52	112	iPd	19 40.00	-1.2
KUMJ	42.89	9	eP	19 43.10	-0.8
PVC	43.77	105	iPc	19 49.00	-2.3
SHNJ	44.50	9	eP	19 56.10	-0.8
TKSJ	44.88	12	eP	20 00.20	0.2
CD2	45.07	335	iPc	20 01.10	-0.5
			eS	26 33.00	
SHK	45.15	10	iP	20 02.10	0.0
	1.0s	160.00nm		5.9mb	

10d 16h

WKYJ	45.44	14	P	20	04.70	0.1	TDD	83.28	283	eP+	24	15.68	3.5X	AVF	117.99	318	ePKP	30	31.50	-0.4
YONJ	45.93	11	P	20	08.70	0.4	ARO	83.28	283	iP+	24	15.00	2.8X	KVN	118.03	51	PKP	30	33.00	0.5
XAN	46.10	343	Pc	20	08.50	-1.2	SGH	83.47	283	eP+	24	16.35	3.2X	BGF	118.39	318	ePKP	30	32.80	0.1
	1.0s		0.10nm			2.7mb X	DAF	83.60	283	eP+	24	17.32	3.5X	MAF	118.67	317	ePKP	30	33.70	0.5
N	14s		1.50um				AFR	83.63	107	iP	24	15.80	2.0	PAS	118.73	57	ePKP	30	34.00	0.3
			pP	20	17.00	28km		0.9s		70.00nm			5.8mb	MWC	118.81	57	ePKP	30	35.00	0.9
TIA	46.46	353	eP	20	11.30	-1.2	KSU	83.67	283	eP+	24	17.85	3.7X	TNP	118.89	52	PKP	30	35.00	0.8
TSRJ	46.80	14	P	20	15.00	-0.1	HLD	83.70	283	eP+	24	17.95	3.7X		0.9s		10.42nm			
SHL	47.14	319	iP	20	16.80	-1.4	PAE	83.80	107	iP	24	16.60	1.9	SBB	118.94	56	ePKP	30	35.00	0.8
			eS	25	34.50			0.9s		60.00nm			5.7mb	CLC	118.96	55	ePKP	30	35.00	0.8
IIDJ	47.22	16	P	20	17.80	-0.8	PPT	83.81	107	iP	24	16.80	2.0	LSF	119.35	318	ePKP	30	34.30	-0.2
CHJJ	48.05	17	P	20	23.80	-1.3		0.9s		75.00nm			5.8mb	CAF	119.37	316	ePKP	30	35.00	0.4
MTMJ	48.24	15	P	20	26.10	-0.5	PPN	83.95	107	iP	24	17.50	2.0	RVR	119.40	57	ePKP	30	36.00	1.0
MAT	48.30	16	iPc	20	25.80	-1.2		0.9s		35.00nm			5.5mb	PEC	119.59	57	PKP	30	36.00	0.6
			eS	27	40.00		TVO	84.09	107	iP	24	18.60	2.3	GSC	119.68	55	ePKP	30	37.00	1.4
KAKJ	48.54	18	P	20	27.70	-1.1		0.9s		50.00nm			5.7mb	SES	119.75	37	ePKPc	30	34.70	-0.5
TIY	48.72	348	Pc	20	28.50	-1.7	KER	84.86	306	eP	24	21.00	1.1	PLM	119.91	57	ePKP	30	37.00	0.8
Z	22s		1.83um			5.0Msz	PMO	85.80	104	iP	24	27.00	2.2	LPO	120.04	316	ePKP	30	36.30	0.4
E	13s		0.80um					0.9s		45.00nm			5.7mb	BAR	120.16	58	ePKP	30	37.00	0.5
			S	27	33.50		VAH	86.02	105	iP	24	27.80	2.0	GRR	120.20	321	ePKP	30	36.10	0.1
DL2	48.77	358	eP	20	29.00	-1.4		0.9s		35.00nm			5.6mb	LFF	120.27	316	ePKP	30	36.70	0.4
Z	16s		0.60um			4.7MszX	TPT	86.07	104	iP	24	28.20	2.1	MFF	120.35	318	ePKP	30	36.40	0.0
NIIJ	49.17	16	P	20	32.90	-0.7		0.9s		30.00nm			5.5mb	LPF	120.44	320	ePKP	30	36.50	0.0
LZH	49.62	339	iPc	20	37.50	0.1	RUV	86.26	105	iP	24	29.00	2.0	LRM	120.44	42	ePKP	30	37.70	0.8
	6.0s		0.66nm			2.8mb X		0.9s		30.00nm			5.5mb	GLA	121.65	57	ePKP	30	40.00	0.6
Z	22s		1.50um			4.9Msz	SLY	86.46	307	iPc	24	28.00	0.4	DUG	121.78	49	PKP	30	40.00	0.5
			eS	27	41.00		TAB	86.47	309	eP	24	29.00	1.1	FFC	122.67	30	iPKPc	30	40.80	0.3
KOD	50.33	292	eP	20	41.00	-2.2	AAE	86.74	280	eP	24	32.00	2.1		1.0s		33.00nm			
			eS	28	04.00		BHD	86.77	304	ePd	24	32.00	2.8X	DAU	122.87	48	PKP	30	42.20	0.4
YAMJ	50.33	17	eP	20	42.90	0.4				eS	35	01.50		BW06	123.38	45	PKP	30	42.00	-0.6
BJI	50.36	352	Pc	20	41.00	-1.6	NAI	86.84	269	iPc	24	34.50	4.2X	ASMO	125.69	309	ePKP	30	47.00	-0.2
	1.0s		0.04nm			2.3mb X		1.0s		25.00nm			5.4mb	FRB	125.69	7	ePKP	30	46.00	-0.1
Z	20s		1.26um			4.9Msz	TAIF	87.60	292	eP	24	34.00	0.3	AAPN	125.99	309	ePKP	30	47.50	-0.3
			PcP	22	02.00		MSL	88.50	307	ePd	24	41.50	4.0X	GOL	127.38	47	PKP	30	50.80	0.3
			PcS	25	58.50					eS	35	11.00			1.0s		50.00nm			
			eS	27	48.00		BUL	91.40	249	iPd	25	06.90	15.4X	IFR	127.78	305	iPKP	30	53.00	1.6
LSA	50.53	323	Pc	20	45.60	0.8	BFS	91.69	242	iPc	24	52.00	-0.8	ALQ	128.03	53	iPKPd	30	53.00	1.2
			S	27	55.00			0.5s		21.13nm			5.8mb		1.0s		22.50nm			
MSZ	51.22	140	P	20	48.00	-1.2	KSR	91.81	243	eP	24	53.10	-0.3	ANMO	128.03	53	PKP	30	52.80	1.0
SNY	51.64	360	iPc	20	51.80	-0.5	DSI	93.88	301	eP	25	04.00	1.5		1.0s		18.75nm			
	0.8s		0.04nm			2.4mb X	PRNI	94.01	300	eP	25	05.00	1.8	KIC	128.99	270	PKPc	30	53.46	-0.5
Z	24s		1.00um			4.8MszX	SVW	94.21	29	eP	25	04.70	1.2	RSON	129.01	30	PKP	30	42.00	-10.9X
N	22s		1.20um				TTA	94.45	27	eP	25	04.30	-0.3		0.9s		30.20nm			
			S	28	09.00		SUR	95.45	236	eP	25	11.50	1.4	LIC	129.26	270	PKP	30	53.96	-0.5
OFUJ	51.65	18	P	20	52.50	0.0		0.7s		27.40nm			5.8mb	Z	20s		0.51um			5.2Msz
GBA	51.69	296	P	20	50.00	-3.2X	IMA	96.10	24	eP	25	12.50	0.3	TIC	129.31	270	PKP	30	53.88	-0.7
HHC	51.92	348	P	20	53.50	-1.1		0.9s		9.80nm			5.3mb	SIO	135.53	48	ePKP	31	06.90	1.1
Z	32s		2.50um			5.0MszX	BRW	96.10	19	eP	25	12.40	0.5	TUL	135.84	48	ePKP	31	04.70	-1.7
BTO	52.01	347	eP	20	54.00	-1.3	PMR	97.38	29	eP	25	17.30	-0.4		1.2s		31.80nm			
N	17s		1.60um				FBA	98.36	26	P	25	20.00	-2.2				i	31	07.00	
			eS	28	18.00			1.0s		8.75nm			5.2mb	HBVT	142.84	20	PKP	31	15.00	-3.8X
MCO	52.34	155	iPd	20	56.40	-1.2	INK	103.98	22	ePdiff	25	47.00	-0.3	RSCP	143.12	42	PKP	31	14.80	-4.8X
HYB	52.41	301	iPc	20	55.50	-3.1X	BCAO	105.79	272	iPdiff	25	57.70	1.0	ANT	143.66	158	ePKP	31	16.00	-4.8X
	1.0s		90.00nm			5.7mb		0.7s		9.00nm			5.9mb	NAV	144.95	35	PKP	31	22.00	-0.7
CN2	53.64	1	eP	21	05.20	-2.0				id	30	10.60		ITB7	144.96	183	ePKP	31	22.20	-0.8
	1.0s		0.03nm			2.3mb X	MBC	105.97	13	ePdiff	25	51.00	-5.0X	BLA	145.24	35	PKP	31	22.70	-0.5
KRP	53.93	130	P	21	09.50	0.0		0.8s		5.00nm			5.6mb	ITB	145.29	183	PKPd	31	23.50	-0.1
GTA	54.05	337	iPc	21	10.20	-0.3	SPC	106.43	318	ePKP	30	01.40	-8.7X	PNJ	145.42	24	iPKPd	31	23.10	-0.2
	1.5s		0.20nm			2.9mb X	SRO	107.81	317	ePKP	30	29.00	16.6X	ITB1	145.45	183	ePKP	31	23.70	-0.1
Z	22s		1.00um			4.8Msz	PRU	110.03	320	ePKP	30	07.00	-9.6X	PRIN	145.64	25	PKP	31	23.00	-0.7
WEL	54.42	134	P	21	10.20	-2.9				e	30	52.00		CVL	145.75	32	PKP	31	24.00	0.0
	1.0s	********	nm			8.4mb X	KHC	110.78	319	ePKP	30	17.90	-0.2	NA2	146.01	31	PKP	31	24.70	0.3
MDJ	54.68	5	iPc	21	15.70	0.8				e	30	59.30		PRM	146.14	41	PKP	31	26.00	1.3
Z	25s		1.00um			4.8MszX	CLL	110.79	321	iPKP	30	17.80	-0.2	YJA	146.68	164	iPKPd	31	09.50	-17.0X
			S	28	55.00					i	31	05.90		JSC	146.72	40	PKP	31	27.00	1.4
POO	56.90	300	iPd	21	29.10	-2.3	FVI	111.69	316	PKP	30	26.50	6.7X	LHS	146.87	39	PKP	31	26.00	0.1
NDI	59.23	312	iPc	21	43.00	-4.5X	MNS	112.32	312	PKP	30	34.00	12.8X	PT03	149.17	141	e(PKP)	31	31.30	1.2
			eS	29	52.00		WDC	114.42	50	ePKP	30	25.60	0.3	ARE	149.59	150	ePKP	31	31.00	0.0
WMQ	62.88	331	iPc	22	11.80	-0.2	VAI	114.56	316	PKP	30	26.00	0.6	PT10	149.82	136	ePKP	31	35.50	4.4X
Z	20s		1.70um			5.2Msz	LBFM	114.80	49	PKP	30	26.00	-0.3	NNA	149.97	136	iPKPc	31	36.00	4.7X
			eS	30	41.50		PNT	114.81	40	ePKPd	30	26.00	0.2		0.9s		90.76nm			
KSH	66.31	321	Pd	22	35.00	0.5	BRK	114.98	53	ePKP	30	27.10	0.7	CNCB	150.85	156	iPKPc	31	35.00	1.7
QUE	67.72	308	iPc	22	42.30	-1.4	ORV	115.35	51	ePKP	30	27.40	0.3				SKS	36	58.60	
SMY	75.83	29	P	23	31.50	0.2	BSF	115.46	318	ePKP	30	26.70	-0.5	CCH	151.00	160	iPKPc	31	39.70	6.6X
	0.8s	229.89nm				6.2mb	MHC	115.53	53	ePKP	30	28.50	0.8	LPB	151.06	156	PKP	31	35.00	1.6
MAIO	75.98	311	iPc	23	33.00	0.3	ARN	115.61	53	PKP	30	28.50	0.7		1.0s		280.00nm			
	0.8s		17.57nm			5.1mb	HAU	115.71	319	ePKP	30	27.40	-0.2	Z	22s		0.74um			5.4Msz
			eS	33	32.00		PRS	115.86	55	ePKP	30	29.20	1.0				i	31	40.50	
SPA	79.99	180	iPc	23	52.80	-1.4	LPG	116.02	316	ePKP	30	28.40	-0.2				SKS	36	58.00	
	1.3s		70.83nm			5.5mb	LLA	116.17	54	ePKP	30	30.00	1.2				LR	23	30.00	
ADK	80.01	33	P	23	54.50	0.2	BNI	116.17	315	PKP	30	33.00	4.3X	ZOBO	151.28	156	iPKPc	31	35.00	1.1
	0.8s	113.79nm				5.9mb	CMB	116.42	53	ePKP	30	29.50	0.2		1.5s		274.19nm			
IR4	82.13	308	iPc	24	07.00	1.0	PRI	116.45	55	ePKP	30	30.80	1.3				SKS	36	58.00	
IR1	82.35	308	iPc	24	08.00	0.9	FRI	117.10	54	ePKP	30	31.30	0.8				LR	23	10.00	
ATA	82.92	283	eP+	24	13.49	3.2X	EDM	117.38	35	ePKPc	30	31.00	0.4	BAO	153.20	198	e(PKP)	31	21.00	-15.1X
TBI	83.09	112	iP	24	12.20	1.2	LOR	117.53	318	ePKP	30	30.90	-0.1		S.D. = 1.2		on 192 of 242 obs.			
	0.9s		55.00nm			5.7mb	SSF	117.82	318	ePKP	30	31.50	-0.1	----------						

JAN 10, 1990 23h 01m 21.96± 0.75s
26.559 N ± 7.6km 86.663 E ± 6.0km
DEPTH = 68.5 ± 11.6 km
4.7mb (4 obs.)
NEPAL-INDIA BORDER REGION (309)

PKI	1.51	312	P	01	49.00	1.3
GUN	1.52	333	P	01	48.30	0.4
DMN	1.74	307	P	01	52.00	1.2
KKN	1.74	315	P	01	51.50	0.7
GKN	2.31	309	P	01	59.40	0.8
SHL	4.80	101	iP	02	32.20	-1.4
			eS	03	24.50	
LSA	5.05	51	ePn	02	38.00	0.7
			Sn	03	33.20	
NDI	8.64	286	iPn	03	25.00	-1.7
			ePg	04	08.00	
			eSn	04	53.00	
HYB	11.80	221	iPc	04	08.50	-1.0
	1.0s		50.00nm		5.4mb	
			eS	06	10.00	
CHG	13.70	122	eP	04	34.90	0.3
CHTO	13.70	122	eP	04	34.70	0.1
POO	14.27	239	iPc	04	40.30	-1.8
			iS	07	10.40	
BOM	14.87	242	eP	04	48.60	-1.2
			eS	07	40.60	
GBA	15.52	216	P	04	58.00	-0.1
			S	07	38.00	
NST	16.58	128	eP	05	15.50	4.1X
WMQ	17.24	3	eP	05	17.00	-2.7
GYA	17.90	86	P	05	26.40	-1.6
KOD	18.42	210	eP	05	36.00	1.5
XAN	20.59	63	P	05	56.00	-1.7
TIY	24.42	57	eP	06	35.50	0.1
WHN	24.62	74	eP	06	39.00	1.8
HFS	58.91	326	eP	11	15.40	-0.6
	0.4s		1.10nm		4.3mb	
WB5	65.36	130	eP	12	01.10	1.7
WRA	65.38	130	Pd	12	01.60	2.0
	0.5s		3.70nm		4.6mb	
BCAO	68.48	264	iPc	12	20.40	1.0
	0.5s		5.00nm		4.7mb	

S.D. = 1.4 on 24 of 25 obs.

• JAN 10, 1990 23h 51m 24.53± 0.86s
36.132 N ± 9.9km 27.225 E ± 8.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.58	184	ePn	51	35.50	-0.8
			eSn	51	47.70	
YER	1.31	40	ePn	51	47.00	-1.8
NPS	1.57	237	ePn	51	52.50	0.0
APE	1.65	305	ePb	51	54.50	0.8
KSL	1.91	90	ePn	51	58.70	1.3
ELL	2.25	73	ePn	52	03.00	0.5

S.D. = 1.5 on 6 of 6 obs.

& JAN 10, 1990 23h 59m 49.91s
60.386 N 146.811 W
DEPTH = 21.8km
SOUTHERN ALASKA (2)
<AGS-P>.

HIN	0.15	86	iP	59	54.88	0.1
			iS	59	59.63	
FID	0.40	24	iP	59	57.27	-1.1
GLI	0.51	344	iP	59	59.21	-1.0
CVA	0.55	73	iP	59	59.86	-0.9
			eS	00	08.01	
VZW	0.69	10	iP	00	01.95	-1.2
SGAM	0.80	81	iP	00	03.86	-1.2
			eS	00	16.24	
RAGM	1.06	89	eP	00	07.94	-1.5
			eS	00	22.71	
KLU	1.19	21	iP	00	09.77	-1.6
SEW	1.35	259	iP	00	11.56	-1.9
NCA	1.61	360	eP	00	16.75	-0.6
			eS	00	34.88	
PME	1.65	320	eP	00	17.15	-0.7
			eS	00	36.82	
SLKM	1.69	276	iP	00	16.62	-1.9
GHO	1.73	324	eP	00	18.34	-0.8
			eS	00	33.72	
GLB	1.81	53	iP	00	18.63	-1.6
TGL	2.00	78	eP	00	20.93	-2.1
SUA	2.20	301	eP	00	24.00	-2.0
BALM	2.29	72	iP	00	25.01	-2.2
PAX	2.67	13	P	00	31.89	-0.7
SPU	2.69	290	eP	00	29.85	-3.0
CGLM	2.71	292	eP	00	30.43	-2.7
BGL	2.87	290	eP	00	32.52	-2.9

21 obs. associated

& JAN 11, 1990 01h 22m 10.30s
35.220 N 118.220 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.5 (PAS), 4.1 (BRK). Felt (II) at Frozier Pork.

ISA	0.49	335	iPd	22	19.50	-0.6
SBB	0.62	148	iPd	22	21.90	-0.8
CLC	0.78	40	iPd	22	24.80	-1.2
ABL	0.90	246	iPc	22	26.80	-1.5
MWC	1.00	172	iPd	22	29.00	-1.0
PAS	1.07	178	ePd	22	30.10	-0.9
GSC	1.16	86	iPc	22	32.10	-0.5
RVR	1.41	150	iPd	22	35.90	-0.9
BCH	1.53	269	iPc	22	37.40	-1.1
PKEM	1.75	299	eP	22	42.10	0.4
PHAM	1.88	290	eP	22	42.40	-1.1
BLP	1.91	250	eP	22	43.50	-0.4
FRI	2.14	326	iPd	22	47.60	0.4
			e	23	11.20	
			iS	23	15.00	
PRI	2.19	296	ePc	22	47.50	-0.7
LLA	2.61	303	ePc	22	53.50	-0.5
PRS	2.79	294	ePc	22	54.90	-1.7
SAO	3.04	301	iPc	23	00.40	0.4
CMB	3.31	329	ePd	23	05.30	1.4
ARN	3.42	309	eP	23	05.00	-0.5
MHC	3.48	308	ePd	23	06.10	-0.4
KVN	3.83	1	eP	23	11.90	0.4
BKS	4.18	311	eP	23	15.10	-1.2
BRK	4.19	310	ePc	23	15.40	-1.0
ALQ	9.65	88	eP	25	07.40	34.3
	1.0s		2.50nm			

24 obs. associated

• JAN 11, 1990 01h 56m 50.95± 0.87s
36.138 N ± 9.8km 27.183 E ± 8.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.59	181	ePb	57	02.50	-0.3
YER	1.33	41	ePn	57	13.70	-1.8
NPS	1.55	236	ePn	57	18.00	-0.6
SMG	1.59	350	ePn	57	22.20	3.0X
APE	1.62	305	ePn	57	20.70	1.0
KSL	1.94	90	ePn	57	24.70	0.4
ELL	2.28	74	ePn	57	30.60	1.3
VAM	2.53	254	ePb	57	38.80	6.0X

S.D. = 1.5 on 6 of 8 obs.

• JAN 11, 1990 02h 09m 51.07± 1.02s
25.766 N ± 8.7km 125.263 E ± 8.8km
DEPTH = 150.0 ± 9.7 km
4.4mb (4 obs.)
SOUTHWESTERN RYUKYU ISLANDS (246)

TWZ	3.40	259	ePc	10	45.40	1.3
ANP	3.44	261	eP	10	45.70	1.0
TWQ	4.28	251	ePc	10	56.60	0.8
TWF1	4.34	237	ePd	10	55.30	-1.2
TWG	4.82	233	ePc	11	01.60	-1.3
TWK	5.01	241	eP	11	05.70	0.2
QZH	6.09	264	Pc	11	19.80	-0.1
WHN	10.74	299	Pd	12	22.50	0.7
DL2	13.45	348	eP	13	01.80	4.8X
QIZ	15.75	248	eP	13	29.60	3.6X
SNY	16.08	355	iPc	13	30.80	0.9
TIY	16.13	321	Pc	13	32.00	1.3
BJI	16.14	334	eP	13	31.00	0.4
GYA	16.72	276	P	13	39.80	1.8
CN2	17.99	0	iPc	13	52.20	-0.6
HHC	18.87	326	eP	14	00.60	-1.7
BTO	19.49	323	P	14	08.00	-0.7
CD2	19.60	290	eP	14	08.60	-1.3
LZH	21.02	304	P	14	23.50	-0.8
GTA	25.29	309	eP	15	03.80	-1.5
GUN	35.11	282	P	16	32.60	0.3
PKI	35.56	282	P	16	36.00	0.0
KKN	35.65	282	P	16	36.80	0.2
DMN	35.82	282	P	16	39.00	0.9
GKN	36.19	283	P	16	41.20	0.1
TTA	62.28	30	eP	19	59.50	0.4
SVW	62.57	33	eP	20	01.90	0.9
IMA	63.13	27	eP	20	05.10	0.4
	0.7s		5.30nm		4.6mb	
PMR	65.62	32	eP	20	20.50	-0.1
FBA	65.70	28	eP	20	21.70	0.6
TOA	66.91	31	eP	20	30.20	1.3
SOD	69.74	336	eP	20	33.00	-13.2X
INK	70.36	23	ePd	20	50.00	0.1
MBC	70.90	13	eP	20	52.00	-1.1
SUF	71.46	331	eP	20	55.60	-1.0
HFS	77.97	332	eP	21	32.00	-1.7
	0.4s		0.90nm		3.9mb	
NB2	78.53	333	P	21	35.70	-1.2
	0.8s		3.80nm		4.2mb	
FFC	90.17	25	iPd	22	36.40	1.1
	0.8s		20.00nm		5.2mb	

S.D. = 1.0 on 35 of 38 obs.

JAN 11, 1990 02h 59m 04.21± 0.80s
36.121 N ± 7.9km 27.214 E ± 8.4km
DEPTH = 5.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.57	183	ePg	59	15.20	-0.4
YER	1.33	40	ePn	59	27.00	-2.2
NPS	1.56	237	ePb	59	32.50	-0.2
SMG	1.61	349	ePb	59	34.50	1.1
APE	1.65	305	ePb	59	34.00	0.0
KSL	1.92	89	ePn	59	38.50	0.7
ELL	2.26	73	ePn	59	44.00	1.1

S.D. = 1.4 on 7 of 7 obs.

% JAN 11, 1990 03h 17m 16.80± 0.95s
39.971 N ±14.4km 31.372 E ± 8.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

GPA	0.87	292	ePn	17	33.20	-0.4
BBTK	1.08	96	eP	17	37.00	-0.1
			iS	17	52.00	
HRT	1.55	304	ePn	17	45.80	1.2
YLV	1.64	292	ePn	17	45.00	-0.9
ISK	2.07	303	ePn	17	56.80	4.7X
DST	2.15	261	ePn	17	57.50	4.3X
KHL	2.19	222	ePn	17	54.00	0.2
EDC	2.72	279	ePn	18	07.50	6.2X

S.D. = 1.1 on 5 of 8 obs.

• JAN 11, 1990 03h 53m 51.86± 0.87s
38.155 N ± 8.1km 27.454 E ± 9.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.29	328	iPg	53	56.90	-1.0
			iSg	54	03.90	
SMG	0.66	228	ePb	54	04.00	-1.0
YER	1.21	147	ePn	54	14.00	-0.5
PRK	1.43	320	ePb	54	19.50	1.7
KHL	1.64	83	ePn	54	22.30	1.4
DST	1.71	32	ePn	54	22.50	0.6
APE	1.87	235	ePg	54	28.00	3.7X
EDC	2.21	8	ePn	54	28.50	-0.6
BNT	2.23	9	ePn	54	27.00	-2.4
YLV	2.83	31	ePn	54	41.00	3.0X
PII	13.95	299	Pd	57	20.90	9.2X
			eSg	57	28.30	
MME	13.98	301	Pd	57	14.10	1.7
			eSg	57	16.50	
BDI	14.00	300	Pc	57	15.50	2.9X
			eSg	57	19.30	
BOB	15.02	302	P	57	34.00	8.2X

S.D. = 1.6 on 9 of 14 obs.

? JAN 11, 1990 04h 13m 49.51± 1.26s
17.429 S ±31.2km 178.953 W ±24.3km
DEPTH = 553.3 ± 9.5 km
5.0mb (6 obs.)
FIJI ISLANDS REGION (181)

11d 04h

MBU	2.27	281	iPc	15	01.40	0.1
SGE	2.98	266	eP	15	48.00	42.6X
DZM	14.50	249	iPc	16	54.00	0.3
BRS	27.90	244	iPc	18	57.20	0.0
RMQ	31.21	248	iPd	19	26.20	0.6
	0.7s	61.00nm			5.3mb	
CTA	33.02	260	iPc	19	41.10	0.3
	0.9s	25.21nm			4.8mb	
BWA	33.68	233	eP	19	44.80	-1.5
CMS	34.81	240	iPd	19	56.30	0.6
TOO	37.07	230	iPd	19	44.10	-30.2X
	0.7s	30.00nm				
STK	38.41	240	iPd	20	26.30	1.0
WB5	44.19	259	iPd	21	10.90	-0.5
WRA	44.21	259	Pc	21	11.30	-0.3
	0.7s	8.10nm			4.4mb	
ASPA	44.43	254	iPd	21	13.20	0.0
	0.6s	90.00nm			5.5mb	
			iS	27	08.20	
FORR	49.71	244	iPd	21	52.70	-0.4
	0.4s	36.00nm			5.3mb	
WARB	50.95	250	iPd	22	02.10	-0.3
	0.3s	7.00nm			4.7mb	
MBL	57.59	256	iPd	22	48.60	-0.5
KVN	79.91	44	eP	25	02.10	-0.3
INK	91.56	15	eP	25	57.00	-0.7
CLL	144.88	347	iPKPd	32	25.80	0.9
BRG	145.08	346	e(PKP)	32	26.00	0.8
FLN	148.72	2	ePKP	32	34.40	3.3X
LDF	148.90	2	ePKP	32	34.80	3.4X
GRR	149.08	2	ePKP	32	35.30	3.6X
	0.7s	4.40nm				
LPF	149.43	3	ePKP	32	36.40	4.2X
LOR	150.15	356	ePKP	32	38.00	4.7X
	0.5s	1.70nm				
SSF	150.38	357	ePKP	32	38.80	5.1X
	0.9s	3.20nm				
LBF	150.43	356	ePKP	32	38.60	4.8X
S.D. = 0.7 on 18 of 27 obs.						

? JAN 11, 1990 05h 31m 41.79± 4.45s
45.193 N ±40.8km 14.853 E ± 7.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 3.0 (LJU), 2.6 (TRI). Felt (IV) at Senj.

RIY	0.36	295	i(Pg)	31	47.90	-1.4
			iSg	31	55.70	
VBY	0.42	42	ePg	31	48.80	-1.6
			iSg	31	55.60	
CEY	0.62	331	e(Pg)	31	55.00	0.6
			eSg	33	06.40	
LJU	0.88	345	eP	32	09.50	10.8X
			eSg	32	14.00	
TRI	0.92	304	ePg	32	00.30	0.9
			iSg	32	15.30	
ZAG	1.01	51	eP	32	02.80	1.9
			eSg	32	15.40	
PTJ	1.05	47	ePg	32	01.00	-0.7
			iSg	32	16.10	
VOY	1.08	322	ePg	32	02.30	0.2
			eSg	32	20.00	
S.D. = 1.6 on 7 of 8 obs.						

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* JAN 11, 1990 05h 31m 48.76± 1.68s
33.326 S ±10.8km 72.292 W ±15.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.62	104	iP	32	01.50	0.2
LNV	0.97	131	iPd	32	06.30	-0.8
			iS	32	15.50	
ROCH	1.13	72	iPd	32	11.50	1.4
SAN	1.37	96	iPd	32	13.60	-0.3
			iS	32	25.40	
			iS	32	32.20	
CHCH	1.50	114	iPd	32	14.70	-1.0
			iS	32	30.00	
PCH	1.51	102	iPd	32	15.50	-0.5
RFA	3.49	115	ePc	32	45.00	0.8
ZON	3.53	61	eP	32	49.00	4.2X
MRA	5.61	82	ePc	33	17.00	2.7
TCA	6.81	75	ePd	33	29.50	-1.8
CYA	7.41	51	e(P)	33	38.00	-1.5
CCH	16.81	21	P	35	53.00	6.8X
CNCB	16.90	14	eP	35	51.00	3.5X
LPB	17.14	14	eP	35	50.00	-0.5
ZOBO	17.40	14	P	35	54.00	0.2
	Z 20s		0.06um			
			LR	41	28.00	
GBA	146.19	118	PKP	51	31.40	1.0
S.D. = 1.4 on 13 of 16 obs.						

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* JAN 11, 1990 05h 32m 30.09± 0.85s
36.407 N ± 9.3km 27.576 E ± 9.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.91	201	ePg	32	47.00	-0.6
YER	0.92	38	iPn	32	46.30	-1.4
SMG	1.43	336	ePb	32	56.50	0.5
KSL	1.65	99	ePb	32	58.70	-0.5
APE	1.77	293	ePg	33	08.00	7.0X
ELL	1.91	79	ePn	33	04.80	1.7
NPS	1.96	235	ePn	33	04.00	0.2
IZM	2.00	353	ePn	33	08.00	3.6X
KHL	2.46	38	ePn	33	15.00	4.0X
S.D. = 1.4 on 6 of 9 obs.						

? JAN 11, 1990 06h 49m 37.92± 1.74s
25.896 S ±62.9km 174.076 W ±26.0km
DEPTH = 33.0km (normal)
5.0mb (3 obs.)
SOUTH OF TONGA ISLANDS (175)

DZM	18.20	278	iPc	53	50.90	1.1
ASPA	47.03	261	iPd	58	07.60	-0.8
	0.4s	8.00nm			5.1mb	
WB5	47.63	266	eP	58	11.80	-1.3
WRA	47.64	266	Pc	58	11.70	-1.4
	0.6s	2.40nm			4.4mb	
FORR	50.64	250	iPc	58	37.70	1.6
	0.4s	13.00nm			5.3mb	
WARB	52.84	256	iPd	58	53.00	0.2
GUN	109.96	292	PKP	08	07.60	-0.9
PKI	110.24	292	PKP	08	10.40	1.4
KKN	110.42	292	PKP	08	12.80	3.6X
DMN	110.50	291	PKP	08	14.20	4.8X
S.D. = 1.5 on 8 of 10 obs.						

JAN 11, 1990 07h 00m 36.53± 0.43s
44.989 N ± 4.1km 7.619 E ± 3.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

DIX	1.10	352	P	00	57.80	0.4
EMS	1.18	336	P	00	59.80	1.0
VAI	1.20	42	P	00	59.35	0.6
TMA	1.42	38	P	01	02.60	0.0
VDL	1.98	40	P	01	11.20	0.6
LLS	2.11	27	P	01	12.30	-0.2
SAL	2.14	72	P	01	12.80	0.0
BDI	2.32	112	P	01	16.70	1.2
LOMF	2.43	347	P	01	17.57	0.7
			S	01	55.02	
OSS	2.45	45	P	01	18.00	0.7
BBS	2.48	358	P	01	18.20	0.6
ZLA	2.55	12	P	01	19.39	0.7
SAX	2.56	27	P	01	20.39	1.4
SLE	2.84	12	P	01	22.80	0.0
MOF	2.88	353	P	01	23.22	-0.2
BSF	2.90	349	P	01	23.53	-0.2
FEL	2.90	5	P	01	23.42	-0.3
PLDF	2.98	291	P	01	24.48	-0.3
CTI	3.03	68	P	01	24.23	-1.2
LBL	3.11	276	P	01	26.46	0.0
ECH	3.24	355	P	01	28.04	-0.4
			S	02	02.80	
AGO	3.33	290	P	01	29.61	-0.1
PYM	3.34	285	P	01	29.47	-0.4
			S	02	07.23	
VITF	3.42	341	P	01	30.97	0.1
WLS	3.43	357	P	01	30.45	-0.7
CDF	3.43	356	P	01	30.65	-0.6
STR	3.60	2	P	01	33.17	-0.3
MAO	3.63	134	P	01	32.90	-1.0
GWF	3.99	0	P	01	38.06	-1.0
ARV	4.10	109	P	01	41.54	0.9
ASS	4.11	116	P	01	41.86	1.1
TRI	4.39	78	P	01	42.58	-2.1
MNS	4.50	124	P	01	47.11	0.8
LJU	4.97	75	P	01	51.10	-1.9
S.D. = 0.9 on 34 of 34 obs.						

? JAN 11, 1990 07h 35m 47.58± 9.14s
52.797 N ±160.km 169.830 W ±103.km
DEPTH = 33.0km (normal)
4.4mb (3 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK	4.30	260	eP	36	52.20	-0.1
MBC	30.24	22	eP	41	57.00	0.2
	0.4s	1.00nm			4.0mb	
SUF	64.14	352	iP	46	20.80	0.5
NAO	66.73	360	P	46	37.00	0.1
	0.8s	3.10nm			4.5mb	
HFS	67.39	358	eP	46	40.10	-1.0
	0.5s	2.70nm			4.6mb	
GUN	76.27	298	P	47	35.20	0.2
GKN	76.86	299	P	47	38.20	0.2
S.D. = 0.6 on 7 of 7 obs.						

& JAN 11, 1990 08h 35m 46.10s
39.400 N 123.277 W
DEPTH = 7.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK). Felt (IV) at Redwood Valley and Willits; (III) at Fort Bragg and Potter Valley.

NWRM	0.99	162	eP	36	03.30	-1.8
WDC	1.31	25	iPd	36	09.70	-0.9
			eS	36	26.70	
ORV	1.38	83	ePd	36	10.40	-1.4
			eS	36	28.50	
FHC	1.50	339	eP	36	11.70	-1.8
			e	36	16.00	
MIN	1.60	53	eP	36	13.50	-1.5
			e	36	20.50	
			eS	36	36.50	
BRK	1.72	152	eP	36	14.80	-1.8
BKS	1.73	151	eP	36	14.40	-2.3
PCC	2.02	159	eP	36	18.10	-2.9
			e	36	24.80	
LBFM	2.21	28	eP	36	23.00	-1.0
MHC	2.42	147	eP	36	24.40	-2.5
			e	36	35.00	
ARN	2.46	146	eP	36	24.80	-2.6
GCC	2.57	157	eP	36	25.90	-2.9
CMB	2.64	120	eP	36	29.50	-0.4
KVN	4.04	93	eP	36	48.00	-1.8
TNP	4.92	104	e(P)	37	00.00	-2.4
15 obs. associated						

? JAN 11, 1990 08h 50m 35.79± 1.05s
39.135 N ± 9.2km 27.589 E ±17.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.78	199	ePg	50	51.00	0.0
			eSg	51	02.00	
DST	0.93	59	ePn	50	53.60	0.0
EDC	1.23	10	ePn	50	58.00	-0.6
BNT	1.25	12	ePn	50	59.60	0.7
S.D. = 0.9 on 4 of 4 obs.						

& JAN 11, 1990 09h 29m 47.60s
61.718 N 150.446 W
DEPTH = 46.3km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.28	104	eP	29	56.35	0.1
			eS	30	02.93	
SUA	0.29	209	eP	29	56.70	0.2
			eS	30	04.22	
SKT	0.58	298	iP	29	58.71	-1.0
			eS	30	08.08	
PMS	0.64	138	eP	29	59.84	-0.7
PLRM	0.64	101	eP	29	59.60	-0.9
PME	0.68	97	eP	30	00.36	-0.7
			eS	30	11.43	
CUT	0.69	7	eP	30	00.19	-1.0
GHO	0.73	85	eP	30	01.18	-0.6
			eS	30	12.86	
CGLM	0.85	242	eP	30	03.02	-0.5
			eS	30	14.60	
NKA	1.05	202	eP	30	07.28	1.2

10d 17h

% JAN 10, 1990 17h 37m 34.81± 0.73s
43.605 N ± 6.9km 12.452 E ± 6.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

RSM	0.32	0	Pc	37	42.40	0.9
			eSg	37	48.50	
CRE	0.36	274	P	37	42.10	-0.2
			eSg	37	48.00	
ARV	0.37	106	Pd	37	41.60	-0.9
			eSg	37	47.60	
SFI	0.54	306	P	37	45.50	-0.2
			eSg	37	56.20	
ASS	0.56	164	P	37	45.50	-0.6
			eSg	37	53.70	
PGD	0.59	297	P	37	46.40	-0.5
			eSg	37	57.10	
MNS	1.23	172	P	37	59.30	1.6
			eSn	38	16.40	

S.D. = 1.1 on 7 of 7 obs.

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* JAN 10, 1990 17h 40m 17.40± 2.44s
51.116 N ±20.1km 16.002 E ±13.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.7 (VKA), 3.4 (KBA), 2.8 (KRA).

KSP	0.33	146	iP	40	24.20	0.0
	0.3s	145.00nm				
			iS	40	32.20	
BRG	1.32	260	iPg	40	42.00	0.2
			iSg	41	02.50	
PRU	1.46	220	ePn	40	44.00	0.2
			Pg	40	46.00	
			Sn	41	03.40	
			Sg	41	08.50	
CLL	1.90	277	iPg	40	50.60	0.5
			i	40	54.50	
			eSg	41	18.00	
KHC	2.53	219	ePn	41	00.00	0.8
			Pg	41	08.20	
			Sn	41	34.00	
			Sg	41	45.90	
KRA	2.72	111	eP	41	05.50	3.5X
			eS	41	41.10	
HOF	2.74	255	ePn	41	01.00	-1.3
VKA	2.86	176	iPgc	41	12.40	8.5X
			iSg	41	55.10	
ZST	3.01	166	eP	41	36.30	30.3X
			i	42	03.10	
KBA	4.40	204	ePn	41	25.50	-0.4
			iSg	42	43.20	
NRA0	9.96	347	Pn	42	30.50	-13.0X
			Sn	44	17.50	

S.D. = 0.8 on 7 of 11 obs.

JAN 10, 1990 18h 25m 08.96± 0.82s
31.329 S ± 7.9km 68.698 W ± 6.9km
DEPTH = 117.2 ± 10.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.20	90	ePc	25	25.00	-0.8
ZON	0.22	176	iPd	25	25.50	-0.3
			eS	25	38.00	
CFA	0.48	125	iPd	25	26.70	-0.1
RTCV	0.55	166	iPc	25	27.50	0.3
RTRS	1.33	330	iPc	25	35.70	1.2
ROCH	2.56	230	iP	25	50.00	-0.2
			iS	26	21.00	
SAN	2.69	218	iPd	25	53.00	1.2
PCH	2.75	213	iPd	25	53.50	0.8
			iS	26	28.00	
MRA	2.76	114	ePd	25	54.10	1.4
TACH	2.99	219	iPc	25	55.50	-0.3
			iS	26	31.70	
CHCH	3.08	212	iPc	25	57.30	0.4
			iS	26	34.50	
LCCH	3.24	228	iPc	25	59.00	0.0
RFA	3.44	177	ePc	26	01.10	-0.7
			S	26	30.70	
LNV	3.48	220	iPc	26	00.50	-1.8
			iS	26	31.50	
TCA	3.51	91	ePd	26	02.80	-0.1
CYA	3.82	42	iPc	26	06.00	-1.0

S.D. = 1.0 on 16 of 16 obs.

JAN 10, 1990 18h 28m 51.63± 1.33s
10.439 S ± 6.5km 124.203 E ±10.0km
DEPTH = 77.0 ± 16.9 km
5.0mb (12 obs.)
TIMOR (289)

MKS	6.99	318	iPc	30	34.50	1.0
MTN	7.19	110	iPd	30	36.60	0.3
			eS	31	58.00	
AAI	7.79	31	eP	30	46.70	2.2
MBL	11.46	201	eP	31	20.00	-14.3X
TRT	11.74	282	ePc	31	36.50	-1.6
WB5	13.57	135	iPc	31	59.60	-2.6
			eS	34	25.00	
WRA	13.60	135	Pd	32	00.60	-1.9
	0.5s		7.90nm			4.5mb
TSM	15.79	337	eP	32	36.40	5.5X
WARB	15.83	172	eP	32	29.00	-2.3
	0.3s		8.00nm			4.3mb
ASPA	16.08	146	iPc	32	34.60	0.1
	0.4s		72.00nm			5.2mb
	Z 21s		1.74um			3.9Msz
			iS	35	30.30	
			LR	39	02.90	
MEKA	16.96	198	eP	32	46.00	0.6
KKM	18.20	334	ePc	33	01.50	0.6
	0.8s		55.20nm			4.8mb
MRWA	20.20	201	iPc	33	22.90	0.2
	0.3s		5.00nm			4.3mb
COOL	20.54	188	eP	33	27.00	0.8
FORR	20.63	170	iPd	33	28.70	1.7
	0.4s		25.00nm			4.9mb
BAL	21.24	198	eP	33	34.00	0.7
KLB	21.88	195	eP	33	42.20	2.6
MUN	22.67	198	eP	33	48.00	0.6
NWAO	23.28	195	eP	33	55.00	1.7
CTA	23.31	117	iPc	34	01.20	7.5X
	1.7s		196.15nm			5.3mb
			iS	38	16.00	
RKG	24.43	195	eP	34	11.50	7.1X
STK	26.72	146	eP	34	31.00	5.3X
			e	39	40.00	
ADE	27.77	154	e(P)	34	43.20	8.0X
BRS	31.74	126	iP	35	17.00	6.4X
NNT	33.38	313	eP	35	23.00	-1.9
BDT	37.11	318	eP	35	56.60	0.1
	1.0s		42.80nm			5.3mb
CHG	38.28	319	ePd	36	06.00	-0.5
	1.0s		17.00nm			4.9mb
CHTO	38.28	319	eP	36	05.80	-0.6
	0.9s		14.49nm			4.9mb
KMI	41.08	330	Pd	36	31.00	1.3
MAT	48.55	15	eP	37	29.00	0.0
	0.8s		17.16nm			5.1mb
LZH	50.10	338	eP	37	41.50	0.4
	1.0s		66.00nm			5.6mb
GBA	52.19	296	P	37	56.00	-1.0
HYB	52.92	301	iP	38	00.30	-2.2
QUE	68.24	308	eP	39	46.30	-0.4
TAB	86.99	309	eP	41	34.00	4.0X
CNCB	150 37	156	PKP	48	44 50	12.7X
LPB	150.57	155	PKP	48	46 00	14.1X
ZOBO	150 79	155	PKP	48	44.70	12.3X
	1 1s		9.28nm			

S.D. = 1.5 on 27 of 38 obs.

JAN 10, 1990 21h 14m 46.58± 0.94s
44.489 N ± 8.6km 114.159 W ± 7.7km
DEPTH = 5.0km (geophysicist)
WESTERN IDAHO (33)
ML 3.7 (BUT).

MCMT	0.99	70	iPc	15	05.60	-0.5
LTMT	1.47	88	eP	15	14.00	0.0
BGMT	1.68	63	ePn	15	17.50	0.5
LRM	1.80	42	ePn	15	18.80	0.1
BUT	1.90	36	ePg	15	23.40	3.3X
			eSn	15	45.40	
			eSg	15	48.60	
PTI	2.07	141	eP	15	22 40	-0.2
IMW	2.39	103	eP	15	27.70	0.4
DMMT	2.58	23	ePn	15	29.40	-0.5
EBI	2.72	330	P	15	33.00	1.1
DPW	4.40	322	eP	15	54.70	-0.9
KVN	6.18	210	eP	16	28.00	7.1X

S.D. = 0.7 on 9 of 11 obs.

JAN 10, 1990 21h 20m 48.02± 0.75s
44.481 N ± 7.2km 10.045 E ± 9.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

BOB	0.51	304	P	20	58.70	0.3
			eSg	21	07.90	
MME	0.55	121	Pd	20	59.40	0.0
			eSg	21	08.10	
BDI	0.58	136	P	20	59.30	-0.5
			eSg	21	08.10	
PII	0.83	155	P	21	04.30	0.2
			eSg	21	15.20	
SAL	1.18	17	P	21	10.50	0.5
			eSg	21	27.50	
MDI	1.32	350	P	21	11.60	-0.7
			eSg	21	31.50	

S.D. = 0.6 on 6 of 6 obs.

? JAN 10, 1990 21h 59m 09.08± 1.35s
20.860 S ± 8.7km 70.969 W ±24.3km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF NORTHERN CHILE (122)
Felt (III) in the Antofogasto area.

ANT	2.88	170	iPc	59	55.80	0.0
			iS	00	03.50	
ARE	4.40	353	iPd	00	17.80	0.0
			iS	01	29.40	
CNCB	4.92	36	iPc	00	25.10	-0.3
LPB	5.09	33	P	00	28.80	1.1
	1.1s		126.58nm			5.4mb X
ZOBO	5.30	31	P	00	30.00	-0.8
			S	02	34.00	

S.D. = 1.0 on 5 of 5 obs.

& JAN 10, 1990 22h 35m 24.23s
60.969 N 150.315 W
DEPTH = 56.3km
3.5mb (1 obs.)
KENAI PENINSULA, ALASKA (14)
<AGS-P>. Felt (II) at Anchorage and Palmer.

PMS	0.46	53	iPd	35	35.40	-0.2
SLKM	0.47	174	iP	35	35.28	-0.4
			eS	35	43.86	
NKA	0.51	244	iP	35	37.36	1.3
SUA	0.54	338	iP	35	36.08	-0.5
			eS	35	45.63	
PWA	0.72	17	iPc	35	38.10	-0.4
PLRM	0.85	42	iP	35	39.49	-0.7
			eS	35	51.39	
PMR	0.85	42	iPc	35	39.60	-0.6
SPU	0.87	285	iP	35	40.34	-0.3
PME	0.91	43	iP	35	40.48	-0.5
SEW	0.97	153	iP	35	40.76	-1.1
NCG	0.99	297	iP	35	42.16	-0.1
GHO	1.05	39	iP	35	42.34	-0.7
NNL	1.05	208	iP	35	43.36	0.4
RDT	1.10	250	iP	35	43.26	-0.5
			eS	35	58.23	
SKT	1.17	331	iP	35	44.25	-0.4
BRLK	1.24	193	iP	35	44.96	-0.7
CUT	1.44	1	eP	35	47.54	-0.8
CNPM	1.52	198	iP	35	48.79	-0.7
			eS	36	07.31	
GLI	1.58	92	iP	35	48.14	-2.1
XLV	1.67	205	eP	35	50.60	-1.0
			eS	36	10.28	
FID	1.89	95	eP	35	51.96	-2.7
NCA	1.97	57	iP	35	54.79	-0.9
KLU	2.19	74	iP	35	57.29	-1.6
TOA	2.29	58	eP	35	59.80	-0.5
SVW	2.59	275	eP	36	03.00	-1.5
PAX	3.04	47	eP	36	10.02	-1.1
TTA	3.33	309	eP	36	13.50	-1.6
KDC	3.42	200	eP	36	13.50	-2.7
CCB	3.87	16	eP	36	21.20	-1.3
FBA	4.11	15	eP	36	24.70	-1.3
IMA	5.34	345	eP	36	41.30	-2.0
DWY	5.91	54	P	36	48.50	-2.8
INK	10.26	37	eP	37	47.50	-3.8
MBC	18.61	23	eP	39	36.00	-2.9
	0.6s		2.00nm			3.5mb

34 obs. associated

SLKM	1.22	175	eP	30	07.50	-1.1
HUR	1.32	16	eP	30	09.37	-0.6
			eS	30	26.34	
RDT	1.49	220	eP	30	11.57	-0.8
			eS	30	31.22	
SEW	1.69	163	eP	30	14.42	-0.7
NNL	1.73	194	eP	30	16.05	0.3
NCA	1.74	79	eP	30	15.30	-0.6
GLI	1.82	116	eP	30	15.08	-2.0
RND	1.85	23	eP	30	16.48	-1.0
VZW	1.99	108	eP	30	17.85	-1.6
TOA	2.06	77	eP	30	20.97	0.5
FID	2.15	115	eP	30	19.21	-2.5
KLU	2.17	94	eP	30	20.26	-1.8
CNPM	2.23	190	eP	30	21.14	-1.7

23 obs. associoted

? JAN 11, 1990 09h 51m 55.51± 0.99s
39.102 N ± 9.2km 27.738 E ±15.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.80	208	ePg	52	11.00	0.0
			eSg	52	23.00	
DST	0.85	54	ePn	52	12.00	0.0
EDC	1.25	4	ePn	52	18.50	-0.2
BNT	1.26	6	ePn	52	19.10	0.2

S.D. = 0.2 on 4 of 4 obs.

? JAN 11, 1990 09h 58m 13.59± 1.58s
39.246 N ± 9.0km 27.860 E ±18.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.97	209	ePg	58	32.00	0.0
			eSg	58	46.00	
EDC	1.10	0	ePn	58	33.50	-0.7
BNT	1.11	2	iPn	58	35.10	0.7
EZN	1.32	296	ePn	58	38.00	0.0

S.D. = 1.0 on 4 of 4 obs.

JAN 11, 1990 11h 10m 51.20± 0.96s
35.066 N ± 6.6km 135.951 E ± 9.5km
DEPTH = 25.8 ± 7.3 km
4.8mb (18 obs.) 3.7Msz (1 obs.)
SOUTHERN HONSHU, JAPAN (232)
Felt (IV JMA) at Noro, (III JMA) at Kyoto and Mie and (II JMA) at Gifu, Kobe, Nagoya and Osoko.

TSRJ	0.47	3	iP+	10	59.80	-1.1
			S	11	06.20	
WKYJ	0.89	199	iPd	11	08.90	0.9
			S	11	21.20	
MAT	2.35	51	iPc	11	29.50	0.6
			eS	12	03.00	
SHK	2.75	260	eP	11	35.20	0.7
	0.8s		74.63nm			
BJI	16.44	293	eP	14	43.50	1.8
	1.5s		29.00nm		4.2mb	
Z	14s		0.88um		3.3MszX	
LZH	26.08	282	eP	16	22.00	-2.6X
	3.5s		480.00nm		5.5mb	X
Z	13s		1.60um		4.7MszX	
E	13s		1.10um			
			pP	16	30.00	28kmX
			i	16	47.50	
			i	16	57.50	
			eS	21	05.00	
MTN	47.87	186	iPd	19	27.70	-1.2
IMA	50.61	30	P	19	49.50	-0.2
	1.3s		14.15nm		4.8mb	
PMR	52.82	35	P	20	04.50	-1.7
	1.3s		23.58nm		5.0mb	
FBA	53.10	31	P	20	07.50	-0.8
	1.2s		11.36nm		4.7mb	
HYB	53.69	266	eP	20	18.00	4.7X
WB5	54.66	182	eP	20	18.80	-1.4
WRA	54.73	182	Pc	20	19.20	-1.5
	0.8s		8.50nm		4.8mb	
GBA	56.62	263	Pc	20	38.60	4.1X
	1.1s		22.70nm		5.1mb	
INK	58.12	26	ePc	20	43.20	-1.2
ASPA	58.44	182	iPd	20	46.00	-1.1
	0.8s		8.00nm		4.8mb	
Z	18s		0.05um		3.7Msz	
			LR	25	51.80	

MBC	59.63	16	eP	20	53.00	-1.9
	0.9s		7.00nm		4.8mb	
BRS	64.12	163	iPc	21	25.00	-0.5
			i	26	16.80	
DAG	67.31	354	iPd	21	43.40	-2.0
	1.0s		8.00nm		4.8mb	
GMW	71.81	44	P	22	14.00	0.6
PNT	72.62	42	eP	22	18.00	-0.2
SHW	72.86	45	P	22	19.70	-0.1
NB2	74.21	335	P	22	25.40	-1.8
	1.1s		11.00nm		4.8mb	
DPW	74.21	42	P	22	27.50	0.0
LBFM	75.74	49	P	22	37.00	0.4
WDC	75.76	50	eP	22	37.00	0.5
MIN	76.48	50	eP	22	40.40	-0.3
ORV	77.00	51	eP	22	43.40	0.0
FFC	77.69	30	eP	22	46.00	-0.9
	1.0s		26.00nm		5.2mb	
CMB	78.59	52	eP	22	52.70	0.5
LRM	78.60	42	ePc	22	53.10	0.7
KVN	79.44	50	P	22	57.10	0.1
FRB	79.61	11	eP	22	57.00	-0.2
FRI	79.63	52	eP	22	58.10	0.3
BCH	80.45	54	P	23	02.30	-0.1
PTI	80.51	44	P	23	03.80	1.1
TNP	80.57	50	P	23	03.80	0.7
	1.0s		10.00nm		4.8mb	
DUG	81.95	46	P	23	10.80	0.6
	1.0s		8.00nm		4.7mb	
BW06	82.15	43	P	23	11.30	0.0
	1.0s		7.80nm		4.7mb	
DAU	82.72	45	P	23	15.00	0.5
PEC	83.15	53	P	23	16.10	-0.3
MSU	83.40	47	P	23	19.10	1.2
OHR	83.62	317	eP	23	18.50	-0.2
PLM	83.68	54	P	23	19.80	0.5
GLA	85.20	53	P	23	27.70	0.9
GOL	86.55	43	P	23	34.00	0.3
	1.3s		15.63nm		5.1mb	
GLD	86.60	43	P	23	35.70	1.9
	1.3s		17.24nm		5.1mb	
ANMO	89.20	47	P	23	43.00	-3.4X
	1.0s		4.75nm		4.8mb	
ALQ	89.20	47	iPd	23	47.80	1.4
	1.0s		3.00nm		4.6mb	
ZOBO	151.47	55	PKP	30	40.00	0.8
	1.0s		12.50nm			
LPB	151.67	55	PKP	30	47.00	7.7X
CNCB	151.95	56	PKP	30	42.00	2.1
			i	30	48.00	

S.D. = 1.1 on 47 of 52 obs.

JAN 11, 1990 11h 14m 43.29± 0.70s
25.047 N ± 6.5km 95.364 E ± 5.2km
DEPTH = 141.8 ± 8.8 km
4.7mb (8 obs.)
BURMA-INDIA BORDER REGION (294)

SHL	3.19	280	iP	15	33.50	-0.1
			eS	16	07.60	
LSA	5.96	322	iPc	16	14.80	4.0X
			S	17	16.20	
KMI	6.69	88	eP	16	23.00	2.4
CHG	7.04	151	ePd	16	25.00	-0.1
	0.8s		17.72nm		4.6mb	
BDT	8.47	156	eP	16	43.90	-0.4
GUN	8.96	291	Pc	16	51.30	0.1
PKI	9.28	288	Pc	16	55.20	-0.2
CD2	9.44	50	eP	16	34.60	-22.6X
KKN	9.44	289	Pc	16	57.00	-0.4
DMN	9.55	288	Pc	16	58.20	-0.7
GKN	10.05	289	Pc	17	04.40	-1.0
GYA	10.28	80	P	17	14.00	5.6X
NST	10.34	154	eP	17	10.40	1.4
NNT	13.06	161	eP	17	51.30	6.7X
LZH	13.20	32	Pc	17	46.00	-0.5
QIZ	14.70	111	P	18	09.20	3.8X
XAN	14.80	50	P	18	04.50	-2.3
NDI	16.59	287	eP	18	32.50	3.5X
			eS	21	24.00	
HYB	17.40	247	eP	18	44.00	5.1X
	0.8s		15.40nm		4.4mb	
			eS	21	41.00	
WHN	17.66	68	Pc	18	42.00	0.1
	0.6s		0.03nm		1.8mb	X
TIY	19.24	45	eP	18	57.20	-1.9
WMQ	19.75	343	iPd	19	06.20	2.0

BTO	19.76	35	eP	19	03.10	-1.3
GBA	20.36	239	P	19	11.60	1.1
			S	22	47.60	
HHC	20.76	37	eP	19	15.00	0.5
KOD	22.49	232	eP	19	35.50	3.6X
BJI	22.97	44	eP	19	37.50	1.5
TWK	22.99	89	ePc	19	56.90	20.5X
TWM1	23.00	90	ePd	19	51.00	14.5X
SSE	23.54	69	Pc	19	43.00	1.4
TWF1	23.71	89	ePc	19	56.70	13.4X
MAT	38.26	62	(P)	21	51.00	-0.3
SUF	58.53	330	iP	24	28.40	1.7
WB5	58.60	136	iPc	24	26.10	-1.5
WRA	58.63	136	Pc	24	26.50	-1.3
	0.6s		14.90nm		5.1mb	
SOD	58.97	335	eP	24	31.00	1.4
NUR	59.06	327	eP	24	28.00	-2.3
WARB	59.22	147	eP	24	30.70	-1.1
	0.3s		7.00nm		5.1mb	
ASPA	61.15	139	iPc	24	43.80	-1.3
	0.5s		49.00nm		5.7mb	X
Z	20s		0.05um		3.7Msz	
			LR	31	47.00	
HFS	64.52	327	eP	25	06.70	0.0
	0.5s		3.30nm		4.5mb	
NB2	65.62	328	P	25	14.00	0.2
	0.6s		2.50nm		4.3mb	
RMO	72.66	131	iPc	25	58.00	0.6
BCAO	76.21	268	ePc	26	18.40	0.3
	0.6s		7.00nm		4.6mb	
			id	26	56.30	
MBC	76.68	8	eP	26	20.00	0.4
BUL	78.91	242	iPc	26	47.10	14.2X
	0.9s		4.20nm			
LKO	95.78	283	P	27	56.18	1.2
	0.6s		4.00nm		5.0mb	

S.D. = 1.3 on 34 of 46 obs.

? JAN 11, 1990 11h 22m 08.65± 4.86s
32.721 S ±29.6km 71.528 W ±32.5km
DEPTH = 33.0km (normol)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.50	120	iPd	22	20.10	0.6
			iS	22	29.00	
JACH	0.79	87	iP	22	23.30	-0.1
			iS	22	34.60	
LNV	1.24	175	eP	22	30.00	0.4
			iS	22	44.90	
			i	22	48.50	
PCH	1.24	137	iPd	22	29.60	-0.2
			iS	22	45.00	
CHCH	1.41	149	iPd	22	31.70	-0.6
			iS	22	49.80	

S.D. = 0.7 on 5 of 5 obs.

JAN 11, 1990 13h 31m 31.27± 0.52s
16.759 N ± 7.4km 85.833 W ± 5.3km
DEPTH = 10.0km (geophysicist)
4.6mb (8 obs.)
CARIBBEAN SEA (94)

TPX	6.46	254	eP	33	25.00	16.3X
SCX	6.52	271	iP	33	09.00	-0.6
SRA	6.77	168	eP	33	37.00	23.7X
SJS	7.00	165	eP	33	45.30	28.8X
UPA	9.87	141	e(P)	33	55.50	-0.8
OXX	10.43	273	iP	34	03.00	-1.2
LVVM	10.51	288	iP	34	00.00	-5.1X
IISM	11.21	283	iP	34	12.50	-2.2
IIT	12.09	283	eP	34	27.00	0.2
PPM	12.39	283	iP	34	31.00	-0.2
III	13.10	279	eP	34	39.00	-1.4
CRX	13.43	283	(P)	34	44.00	-0.8
SGS	17.05	15	P	35	29.00	-2.4
PRM	17.53	10	P	35	35.50	-1.9
JSC	17.92	12	P	35	40.00	-2.2
PWLA	18.26	354	P	35	48.70	2.3
RSCP	18.77	1	P	35	51.00	-1.7
	0.5s		59.46nm		5.1mb	
OLY	19.33	346	P	36	00.40	0.8
BLA	20.93	12	P	36	16.80	0.2
	0.8s		26.85nm		4.7mb	
NAV	20.96	11	P	36	17.10	0.2
TUL	21.03	337	eP	36	19.90	2.3
	0.8s		7.40nm		4.1mb	
MEO	21.27	330	iPc	36	20.30	0.2

11d 13h

FVM	21.53	350	P	36 22.40	-0.2
CVL	22.11	16	P	36 29.00	0.5
NA2	22.44	17	P	36 32.80	1.1
PRIN	25.42	20	P	37 06.00	5.4X
ALQ	25.84	318	iPc	37 05.50	0.7
	1.0s	12.50nm		4.6mb	
			pP	42 44.80	
ANMO	25.84	318	P	37 05.90	1.1
	1.0s	11.25nm		4.5mb	
GLA	30.76	307	eP	37 49.00	-0.1
DAU	32.25	322	P	38 02.00	-0.5
PLM	32.44	306	eP	38 05.00	0.9
PEC	32.88	307	P	38 08.40	0.7
GSC	33.20	310	eP	38 11.00	0.5
SBB	33.70	308	eP	38 15.00	0.1
CLC	34.00	310	eP	38 18.00	0.5
ISA	34.58	309	eP	38 24.00	1.5
TNP	34.77	314	P	38 25.40	1.1
	0.6s	5.62nm		4.6mb	
KVN	35.84	315	P	38 33.70	0.3
FRI	36.04	311	eP	38 35.00	0.2
CMB	36.97	312	eP	38 43.60	0.9
			e	38 57.00	
ARN	37.52	310	P	38 48.00	0.7
MHC	37.60	310	eP	38 49.40	1.4
LBFM	39.49	316	P	39 04.30	0.4
SCH	40.73	17	eP	39 14.00	0.3
FRB	48.43	10	eP	40 13.00	-2.4
INK	59.61	341	eP	41 36.50	-0.9
MBC	62.00	351	eP	41 52.50	-1.1
	0.8s	5.00nm		4.8mb	
FBA	63.17	335	P	42 00.50	-1.0
	0.7s	1.60nm		4.3mb	
LKO	78.03	84	P	43 33.76	1.4
TIC	79.35	86	PKP	43 41.10	1.6
LIC	79.45	87	PKP	43 40.30	0.2
KIC	79.69	86	PKP	43 41.30	-0.1
SUF	84.89	25	iP	44 07.90	0.6
GBA	145.60	30	PKP	51 11.00	-1.3
	S.D. = 1.2	on	49 of	54 obs.	

JAN 11, 1990 13h 40m 22.06± 0.54s
43.855 N ± 5.3km 12.085 E ± 5.2km
DEPTH = 14.0 ± 5.9 km
CENTRAL ITALY (381)
MD 3.2 (FIR).

SFI	0.18	292	Pc	40 26.80	0.3
			eSg	40 29.50	
CRE	0.25	203	Pc	40 26.70	-1.0
			iSg	40 28.50	
PGD	0.26	275	Pc	40 28.00	0.0
			eSg	40 31.10	
FIR	0.60	263	ePg	40 34.00	0.1
			eSg	40 42.00	
ARV	0.72	119	P	40 37.00	1.2
			eSg	40 48.40	
ASS	0.89	152	P	40 39.60	0.8
			eSg	40 51.70	
MME	1.06	289	P	40 43.50	1.7
			eSg	40 57.40	
BDI	1.09	281	P	40 43.60	1.3
PII	1.14	264	P	40 43.10	0.1
MNS	1.53	163	P	40 49.00	0.0
			eSn	41 07.80	
MAO	1.59	206	P	40 50.20	0.4
TRI	2.21	32	e(P)	40 57.60	-1.1
			e	41 30.10	
			i	41 38.00	
CEY	2.52	41	eP	41 16.00	12.8X
			eSn	41 47.50	
VOY	2.53	30	e(Pn)	41 08.50	5.1X
			eSn	41 39.30	
FVI	2.78	10	P	41 08.50	1.6
			eSn	41 42.50	
VBY	2.80	53	eP	41 45.80	38.6X
			e(Sn)	42 00.40	
KBA	3.34	15	e(Pg)	41 15.00	-0.1
	0.7s	13.40nm			
			i	41 38.00	
			i(Sg)	42 01.50	
			i	42 19.60	
PTJ	3.43	52	eP	41 26.40	10.2X
KHC	5.38	11	eP	42 39.00	55.2X
	S.D. = 1.0	on	14 of	19 obs.	

& JAN 11, 1990 14h 19m 29.14s

60.141 N 152.501 W
DEPTH = 94.9km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.31	334	eP	19 42.93	-0.6
			eS	19 54.07	
RDT	0.44	6	eP	19 43.73	-0.5
			eS	19 55.15	
NNL	0.61	99	eP	19 45.74	0.2
XLV	0.79	150	eP	19 46.20	-1.0
NKA	0.87	45	eP	19 49.34	1.3
CNPM	0.89	133	eP	19 47.48	-0.8
			eS	20 01.97	
AUL	0.90	212	eP	19 47.52	-0.8
PDB	0.92	248	eP	19 47.62	-1.0
			eS	20 01.97	
SPU	1.07	12	eP	19 49.88	-0.4
			eS	20 06.10	
SLKM	1.19	71	eP	19 50.66	-1.1
			eS	20 07.76	
SEW	1.53	90	eP	19 54.41	-1.4
SUA	1.58	32	eP	19 56.43	-0.3
			eS	20 17.35	
SVW	1.82	304	iPc	19 58.30	-1.4
PMS	1.82	51	iPd	19 59.20	-0.5
SKT	1.91	14	eP	19 59.91	-0.9
PWA	1.98	39	eP	20 01.20	-0.6
PLRM	2.20	47	eP	20 03.11	-1.6
PMR	2.20	47	eP	20 03.20	-1.5
PME	2.26	47	eP	20 04.25	-1.2
GHO	2.39	45	eP	20 05.78	-1.6
KDC	2.40	180	eP	20 04.20	-3.2
CUT	2.51	24	eP	20 08.04	-0.9
FID	3.05	76	eP	20 12.55	-3.7
HUR	3.16	24	eP	20 17.70	-0.1
TTA	3.26	331	eP	20 17.80	-1.5
NCA	3.33	54	eP	20 18.18	-1.9
KLU	3.50	64	eP	20 19.88	-2.6
TOA	3.65	55	eP	20 22.80	-1.7
RND	3.71	26	eP	20 24.27	-1.1
MCK	3.98	24	eP	20 28.29	-0.8
PAX	4.40	47	eP	20 32.94	-2.0
GLB	4.45	69	eP	20 32.83	-2.8
CCB	5.02	24	eP	20 40.46	-3.0
FBA	5.25	22	ePc	20 44.60	-2.0
IMA	5.97	355	eP	20 55.50	-1.3
	35 obs. ossociated				

JAN 11, 1990 16h 04m 07.70± 0.79s
23.563 S ± 4.9km 69.131 W ±10.3km
DEPTH = 87.6 ± 8.6 km
4.7mb (10 obs.)
NORTHERN CHILE (123)

SLA	3.52	110	iPd	05 05.00	3.6X
YJA	3.62	68	iPc	05 04.80	1.7
CYA	5.71	149	iPd	05 34.00	2.3
CCH	6.76	25	P	05 46.00	-0.4
			i	06 15.70	
CNCB	6.81	9	Pc	05 46.80	-0.5
LPB	7.06	8	P	05 52.00	1.3
	1.0s	100.00nm		5.4mb	
			i	06 40.00	
ZOBO	7.32	8	Pc	05 52.00	-2.4
			S	06 32.00	
			LR	08 52.00	
ARE	7.40	342	eP	05 50.00	-5.3X
			iS	07 10.50	
ZON	7.96	177	ePd	06 03.00	0.3
TCA	8.73	153	eP	06 13.00	-0.2
MRA	9.32	162	eP	06 21.90	0.8
PCH	10.09	187	eP	06 30.00	-1.8
LCCH	10.11	192	iPd	06 43.60	11.8X
LNV	10.55	190	eP	06 37.00	-0.7
RFA	11.18	177	ePd	06 44.00	-2.3
NNA	13.65	326	eP	07 19.50	0.6
	0.7s	6.16nm		4.1mb	
BAO	21.40	72	eP	08 47.00	-3.1X
JSC	58.67	348	P	13 55.00	-3.1X
RSCP	60.87	345	P	14 11.00	-2.3
	1.0s	59.65nm		5.6mb	
FVM	64.41	341	P	14 34.20	-2.4
ALQ	68.11	328	iPd	15 00.90	0.4
	1.0s	12.50nm		4.8mb	
ANMO	68.11	328	P	14 59.80	-0.7
	0.9s	8.40nm		4.7mb	
LIC	69.17	73	P	15 05.60	-1.5
KIC	69.48	73	P	15 07.40	-1.7
LKO	70.26	70	P	15 13.68	-0.2
	0.9s	8.00nm		4.6mb	
GLA	71.19	321	P	15 20.20	1.1
GLD	71.43	331	P	15 20.00	-0.6
	0.6s	20.49nm		5.2mb	
GOL	71.45	331	P	15 20.40	-0.5
	0.7s	4.61nm		4.5mb	
MSU	73.76	326	P	15 35.10	0.7
DAU	74.75	328	P	15 40.40	0.2
DUG	75.36	327	P	15 44.10	0.7
BCH	75.79	319	P	15 48.00	2.0
BW06	75.80	330	P	15 45.00	-1.0
	1.1s	2.50nm		4.0mb	
TNP	76.14	323	P	15 49.00	1.0
	0.7s	3.33nm		4.3mb	
PRI	76.78	319	eP	15 52.50	1.0
LLA	77.27	320	eP	15 54.50	0.5
KVN	77.31	323	P	15 54.00	-0.5
PRS	77.33	319	eP	15 54.90	0.5
CMB	77.90	321	eP	15 57.10	-0.4
ARN	78.11	320	P	16 01.00	2.3
ORV	79.57	321	eP	16 07.30	0.8
WDC	80.85	322	e(P)	16 12.20	-1.1
LBFM	81.00	323	P	16 14.10	-0.2
DPW	83.64	329	P	16 28.00	0.4
FRB	87.02	0	eP	16 43.00	-0.8
BUL	88.86	111	iPd	17 10.00	16.0X
	0.9s	4.20nm			
ASPA	128.00	207	ePKP	23 05.70	0.1
	0.6s	8.00nm			
WRA	131.07	210	PKPc	23 12.60	1.1
	1.2s	10.00nm			
KOD	145.50	107	ePKP	23 38.80	0.4
GBA	146.87	101	PKP	23 41.00	0.9
			e	24 08.00	
MAT	153.14	305	ePKP	23 57.00	7.9X
	1.0s	9.00nm			
	S.D. = 1.3	on	44 of	51 obs.	

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* JAN 11, 1990 16h 42m 11.71± 2.70s
39.970 N ±19.7km 24.420 E ±13.6km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.7 (THE).

OUR	0.49	317	ePgd	42 20.90	-0.8
			eSg	42 26.80	
PAIG	0.57	266	ePg	42 22.20	-1.1
SOH	1.18	317	ePg	42 33.30	-0.4
			eSg	42 47.80	
SRS	1.31	331	ePb	42 35.30	-0.6
ALN	1.55	53	ePb	43 07.40	28.1X
KNT	1.66	316	ePb	42 42.50	1.5
			eSb	43 03.00	
MMB	1.70	342	ePg	42 40.00	-1.6
RZN	1.73	7	iPc	42 43.00	0.8
GRG	1.83	303	ePb	42 43.50	0.0
KDZ	1.84	24	eP	42 43.00	-0.6
VAY	1.95	314	ePn	42 48.00	2.8
VTS	2.77	341	eP	42 57.00	-0.1
	S.D. = 1.4	on	11 of	12 obs.	

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* JAN 11, 1990 17h 05m 28.03± 2.30s
37.606 N ±14.7km 20.697 E ±20.9km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
ML 3.0 (THE). MD 3.4 (ATH).

VLS	0.58	352	ePg	05 40.10	0.4
ITM	1.07	113	ePg	05 47.20	-0.9
AGG	1.91	42	ePb	06 02.60	1.6
IGT	1.94	352	ePb	06 01.90	0.5
VLI	2.00	116	ePn	06 03.00	0.8
KZN	2.82	17	ePn	06 15.00	0.9
LIT	2.86	29	ePb	06 14.50	0.0
OHR	3.50	1	iPn	06 24.10	0.5
GRG	3.60	21	ePn	06 24.40	-0.6
KNT	3.94	25	ePn	06 29.50	-0.3
VAY	3.98	21	ePn	06 29.50	-0.9
SKO	4.40	7	ePn	06 34.50	-1.8
	S.D. = 1.1	on	12 of	12 obs.	

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* JAN 11, 1990 18h 05m 55.47± 0.71s
56.484 N ± 9.3km 152.719 W ±10.3km
DEPTH = 33.0km (normal)

4.6mb (5 obs.)
KODIAK ISLAND REGION (13)
ML 4.1 (PMR).

KDC	1.27	5	iPc	06	18.50	1.5
SDN	4.52	259	eP	07	01.10	-2.3
SVW	4.88	343	ePc	07	08.70	0.3
PMR	5.45	18	eP	07	14.90	-1.5
TOA	6.56	28	eP	07	31.20	-0.9
TTA	6.68	347	eP	07	33.10	-0.7
FBA	8.78	14	eP	08	00.20	-2.8X
IMA	9.63	358	eP	08	13.60	-1.3
INK	14.73	29	eP	09	29.00	6.2X
PNT	21.05	96	eP	10	45.00	6.3X
MBC	23.26	19	eP	11	02.50	2.2
	0.8s	18.00nm			4.6mb	
LBFM	25.01	114	e(P)	11	18.00	0.2
KVN	28.65	113	e(P)	11	50.00	-1.1
BW06	30.58	98	e(P)	12	01.00	-7.3X
DAG	43.87	14	iPc	14	00.00	0.4
	0.6s	6.67nm			4.6mb	
KEV	54.06	0	eP	15	16.00	-2.2
SOD	56.46	0	iP	15	36.20	0.5
SUF	61.13	1	iP	16	08.80	0.6
	0.6s	4.10nm			4.7mb	
NB2	62.14	9	P	16	15.40	0.3
	0.7s	4.20nm			4.7mb	
HFS	63.23	8	eP	16	21.20	-1.0
	0.4s	1.30nm			4.4mb	
NUR	63.33	1	eP	16	22.00	-0.8
GUN	82.44	310	P	18	17.20	1.2
KKN	82.80	311	P	18	18.80	1.1
GKN	82.88	311	P	18	19.20	1.2
PKI	82.93	311	P	18	19.60	1.1
DMN	83.03	311	P	18	20.20	1.3
S.D. = 1.3 on 22 of 26 obs.						

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* JAN 11, 1990 18h 23m 10.97± 0.97s
37.132 N ± 8.8km 29.488 E ± 9.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.51	139	iPg	23	21.30	0.0
YER	0.96	271	iPn	23	28.50	-0.8
KHL	1.19	1	ePn	23	31.80	-1.4
CIN	1.21	293	eP	23	45.00	11.5X
ALT	1.98	14	ePn	23	46.00	1.0
IZM	2.17	306	ePn	23	49.20	1.5
DST	2.56	345	ePn	23	53.00	-0.2
S.D. = 1.4 on 6 of 7 obs.						

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* JAN 11, 1990 18h 57m 03.54± 1.31s
51.674 N ± 8.3km 16.343 E ±13.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.8 (VKA), 3.7 (KBA).

KSP	0.83	182	iPd	57	20.00	0.4
			iS	57	28.80	
BRG	1.71	243	ePn	57	33.20	-0.3
			iPg	57	35.00	
			iSg	57	55.00	
PRU	2.04	215	Pn	57	38.50	0.2
			e	57	40.10	
			Sn	57	57.10	
			Sg	58	02.50	
CLL	2.12	261	iPn	57	39.80	0.4
			iPg	57	43.00	
			iSg	58	08.70	
KRA	2.80	124	iPd	58	01.70	12.6X
			iS	58	40.80	
KHC	3.10	216	iPn	57	53.50	0.1
			Pg	57	59.90	
			iSn	58	29.80	
			Sg	58	37.90	
HOF	3.13	246	iPnc	57	53.70	-0.2
VKA	3.41	180	e(P)	58	00.00	2.1
			iPgd	58	07.70	
			iSg	58	51.30	
ZST	3.52	172	eP	58	09.50	10.2X
			e(Sn)	58	56.30	
			i	59	06.60	
SOP	4.00	178	eP	58	19.30	13.2X
SRO	4.07	161	eP	58	49.60	42.5X
			e	59	13.40	
BHG	4.55	211	eP	58	30.10	16.1X
KBA	5.00	204	iPnc	58	19.70	-0.8
			iSg	59	38.20	
			i	59	42.20	
PTJ	5.78	183	eP	58	29.20	-2.3
OGA	5.94	218	eP	58	34.20	0.5
NRA0	9.47	346	Pn	59	22.80	0.0
NRA0	9.47	346	P	59	27.80	5.0X
			Lg	01	07.50	
S.D. = 1.2 on 11 of 17 obs.						

? JAN 11, 1990 19h 22m 48.29± 0.75s
40.788 S ±21.2km 78.243 E ±13.6km
DEPTH = 10.0km (geophysicist)
4.8mb (5 obs.) 5.2Msz (1 obs.)
MID-INDIAN RISE (429)

SLR	43.81	274	iPd	30	55.50	-0.7
	1.5s	44.44nm			5.1mb	
BFS	44.33	272	eP	30	58.00	-2.4
KSR	44.79	273	eP	31	01.20	-3.0X
SUR	46.16	261	eP	31	15.00	0.0
BUL	46.77	281	iPc	31	34.50	14.6X
	1.0s	14.50nm				
SPA	49.40	180	iPc	31	41.90	2.0
	1.1s	17.26nm			5.0mb	
	Z 20s	2.48um			5.2Msz	
WRA	51.75	84	Pd	31	56.90	-1.2
	1.3s	7.90nm			4.5mb	
WB5	51.81	84	eP	31	57.00	-1.6
GBA	54.12	359	Pc	32	11.90	-3.6X
	0.2s	0.70nm			4.3mb	
HYB	57.90	0	eP	32	44.50	1.7
LWI	58.76	297	ePd	32	49.50	0.3
BCAO	70.62	294	iPd	34	06.80	0.8
	1.0s	15.00nm			5.1mb	
		id		34	16.00	
MAIO	78.62	345	eP	35	01.00	9.3X
LZH	80.03	21	P	35	00.00	0.6
TAB	83.73	335	eP	35	24.00	5.4X
INK	147.58	21	ePKP	42	31.00	0.7
S.D. = 1.5 on 11 of 16 obs.						

JAN 11, 1990 19h 39m 00.77± 0.46s
36.523 N ± 8.2km 26.469 E ± 4.7km
DEPTH = 158.8 ± 9.7 km
4.0mb (1 obs.)
DODECANESE ISLANDS (369)

APE	0.93	306	eP	39	25.40	-0.7
KAP	1.13	149	eP	39	27.20	-0.5
SMG	1.22	14	eP	39	27.40	-1.1
YER	1.58	67	iPn	39	32.00	-0.2
CIN	1.68	50	eP	39	38.00	4.8X
VAM	2.15	239	eP	39	40.50	1.9
KSL	2.55	98	eP	39	43.40	0.1
PRK	2.72	357	eP	39	44.80	-0.7
ELL	2.78	84	iPn	39	46.80	0.5
VLI	2.85	275	eP	39	47.90	0.8
KHL	3.02	53	ePn	39	51.30	1.9
ITM	3.70	282	eP	39	59.60	1.6
VLS	4.97	291	eP	40	14.50	-0.2
HRI	8.28	110	eP	40	58.00	-1.0
ROI	8.38	294	P	40	59.80	-0.5
SOI	8.44	284	P	41	00.10	-0.9
			eSn	42	24.90	
BRT	8.45	304	P	41	00.50	-0.6
TDS	8.58	294	P	41	02.00	-0.9
CZI	8.60	291	P	41	02.80	-0.4
CSI	8.65	295	P	41	04.50	0.6
DSI	8.89	121	eP	41	06.00	-1.0
ATN	8.92	284	P	41	06.50	-0.9
MEU	9.27	277	P	41	11.10	-1.0
			eSn	42	45.10	
MGR	9.30	296	P	41	11.50	-0.9
			eSn	42	47.00	
SGO	9.63	298	P	41	17.50	0.9
MBH	9.75	131	eP	41	19.00	0.8
KBA	14.37	321	e(P)	42	20.50	2.4
	0.5s	4.10nm			4.0mb	
		id		42	21.80	
S.D. = 1.1 on 26 of 27 obs.						

? JAN 11, 1990 20h 08m 18.38±11.28s
51.804 N ±63.2km 16.776 E ±71.3km
DEPTH = 33.0km (normal)
3.6mb (1 obs.)
POLAND (548)
ML 3.3 (VKA).

KSP	1.01	198	iPd	08	36.60	0.4
	0.5s	52.00nm				
			iS	08	46.00	
BRG	2.00	243	iPg	08	51.60	1.0
			iSg	09	11.20	
PRU	2.30	219	Pn	08	55.00	0.2
			ePg	08	57.00	
			Sn	09	13.70	
			eSg	09	21.00	
CLL	2.41	260	(Pg)	08	56.10	-0.2
			i	09	03.40	
			iSg	09	25.30	
KRA	2.66	130	eP	09	17.20	17.4X
			eS	09	54.40	
KHC	3.37	219	Pn	09	09.40	-0.6
			Pg	09	16.00	
			Sn	09	46.00	
			Sg	09	55.70	
HOF	3.43	246	iPnc	09	10.30	-0.6
VKA	3.56	185	iPgc	09	24.80	12.2X
			iSg	10	08.30	
ZST	3.62	177	eP	10	12.70	59.2X
KBA	5.23	207	iPd	09	36.20	-0.3
	0.4s	1.00nm			3.6mb	
S.D. = 0.7 on 7 of 10 obs.						

JAN 11, 1990 20h 23m 51.30± 0.13s
5.166 S ± 3.1km 150.982 E ± 3.5km
DEPTH = 188.4km (3 depth phases)
5.1mb (20 obs.)
NEW BRITAIN REGION (192)

LAT	4.23	249	eP	24	56.00	-0.2
PMG	5.67	222	eP	25	15.00	0.1
			eS	26	08.00	
MNDI	7.35	262	eP	25	59.00	21.7X
HNR	9.85	116	eP	26	08.00	-1.7
CTA	15.53	197	iPd	27	22.50	0.7
	1.0s	133.00nm			5.3mb	
			iS	30	16.00	
GUA	19.54	342	eP	28	07.30	0.7
	0.8s	447.76nm			6.0mb	
GUMO	19.60	342	eP	28	06.80	-0.4
MTN	21.03	247	iPc	28	22.00	0.5
RMQ	21.31	185	iPd	28	25.60	1.4
WB5	21.80	226	iPd	28	29.80	0.7
			ePcP	32	21.00	
			eS	32	29.20	
			iScP	35	43.90	
WRA	21.86	226	Pc	28	30.30	0.6
	0.5s	38.50nm			5.2mb	
BRS	22.17	176	iPc	28	33.00	0.4
	0.5s	53.00nm			5.3mb	
			i	28	58.00	123kmX
			eS	32	46.00	
QLP	22.25	196	iPd	28	34.00	0.7
DZM	22.50	140	iPc	28	35.10	-0.8
KNA	24.22	243	eP	28	52.00	-0.3
ASPA	24.68	220	iPd	28	56.50	-0.1
	0.6s	108.00nm			5.6mb	
	Z 21s	0.28um			3.7Msz	
			ePP	29	30.70	
			eS	33	02.40	
			iScP	35	51.80	
			LR	37	33.30	
			iScS	39	42.60	
CMS	26.63	190	iPd	29	13.30	-0.9
STK	28.00	197	iPd	29	25.60	-1.0
			e	29	30.00	15kmX
BWA	29.21	184	eP	29	36.60	-0.8
CAN	30.06	183	iPd	29	44.40	-0.5
WARB	31.28	226	iPd	29	55.40	-0.2
	0.3s	5.00nm			4.7mb	
ADE	31.75	199	iPd	29	59.30	-0.4
	0.6s	102.67nm			5.7mb	
BFD	32.78	193	eP	30	08.00	-0.5
FORR	33.40	217	eP	30	13.00	-0.9
MBL	34.13	239	iPc	30	19.90	-0.5
MRWA	40.82	230	iPd	31	15.70	-0.3
RKG	42.65	223	iPc	31	33.20	2.4
BJI	55.21	328	eP	33	06.00	-0.8
	1.2s	81.00nm			5.4mb	
			e	33	50.00	194km
			eS	41	58.00	
KMI	55.70	305	Pc	33	12.00	1.1
			i	33	54.50	187km
CHG	56.52	296	eP	33	17.10	0.6

11d 20h

CHTO 56.52 296 eP 33 17.00 0.5
epP 33 59.20 184km
LZH 60.24 317 Pc 33 42.50 0.3
1.2s 24.00nm 4.8mb
PP 34 26.00 214kmX
i 34 31.50
PMO 60.80 104 iP 33 46.80 0.7
0.7s 25.00nm 5.1mb
TPT 61.07 104 iP 33 48.20 0.3
0.7s 25.00nm 5.1mb
VAH 61.07 104 iP 33 47.40 -0.5
0.7s 10.00nm 4.7mb
RUV 61.30 104 iP 33 49.70 0.3
0.7s 15.00nm 4.9mb
SHL 64.94 301 iP 34 12.50 -0.8
GUN 70.77 302 P 34 49.80 0.1
PKI 71.07 301 P 34 51.40 -0.1
1.0s 21.00nm 4.8mb
KKN 71.24 301 P 34 52.20 -0.2
0.8s 38.00nm 5.2mb
DMN 71.34 301 P 34 53.00 0.0
0.8s 36.00nm 5.2mb
GKN 71.85 302 P 34 55.70 -0.2
0.8s 34.00nm 5.1mb
HYB 74.90 289 eP 35 12.50 -1.1
GBA 75.32 285 P 35 16.00 0.1
SVW 77.86 24 eP 35 29.70 0.4
TTA 78.78 22 eP 35 33.90 -0.4
IMA 81.41 20 eP 35 48.10 -0.1
1.0s 8.10nm 4.4mb
FBA 82.90 22 eP 35 54.20 -1.5
SPA 84.87 180 iPd 36 06.30 0.5
0.8s 10.00nm 4.6mb
INK 89.44 21 ePc 36 26.50 -1.1
WDC 90.65 49 eP 36 33.90 0.2
PRS 91.13 54 e(P) 36 36.40 0.4
ORV 91.34 51 eP 36 36.60 -0.3
PRI 91.68 54 e(P) 36 39.80 1.1
CMB 92.07 52 eP 36 40.50 0.1
FRI 92.52 53 eP 36 42.50 0.1
ISA 93.42 55 eP 36 47.00 0.3
PAS 93.57 56 eP 36 48.00 0.7
MWC 93.66 56 eP 36 49.00 1.0
SBB 93.89 56 eP 36 49.00 0.2
CLC 94.14 55 eP 36 50.00 0.0
RVR 94.22 56 eP 36 51.00 0.7
PLM 94.61 57 eP 36 53.00 0.7
BAR 94.73 58 eP 36 54.00 1.3
GSC 94.76 55 eP 36 54.00 1.1
MBC 94.90 14 eP 36 51.50 -1.1
0.9s 12.00nm 5.1mb
GLA 96.30 57 eP 37 01.00 1.2
SES 99.04 40 ePc 37 11.00 -0.9
HFS 116.34 338 ePKP 42 11.40 -2.2
0.9s 2.90nm
NB2 116.63 339 PKP 42 13.00 -1.2
0.8s 3.20nm
BRG 122.07 329 iPKP 42 24.10 -0.7
CLL 122.28 330 iPKPd 42 25.00 -0.2
0.9s 8.00nm
PRU 122.29 328 ePKP 42 24.50 -0.7
OHR 122.97 317 ePKP 42 26.00 -0.9
KHC 123.30 328 PKP 42 27.50 0.2
MEM 126.06 333 PKP 42 32.20 -0.3
BSF 127.61 330 ePKP 42 35.30 -0.5
HAU 127.71 331 ePKP 42 35.60 -0.3
LPG 129.20 328 ePKP 42 39.10 0.0
LOR 129.43 331 ePKP 42 39.40 0.3
LBF 129.58 331 ePKP 42 39.50 0.0
SSF 129.75 331 ePKP 42 40.10 0.4
SBF 129.88 326 ePKP 42 40.30 0.1
SMF 129.88 331 ePKP 42 40.20 0.2
FLN 130.24 336 ePKP 42 40.20 -0.4
BGF 130.43 331 ePKP 42 41.40 0.4
FRF 130.52 326 ePKP 42 41.10 -0.2
GRR 130.69 335 ePKP 42 41.80 0.4
LMR 130.74 326 ePKP 42 41.90 0.2
LRG 130.74 326 ePKP 42 42.00 0.3
TCF 130.92 332 ePKP 42 42.20 0.2
LPF 131.05 335 ePKP 42 41.90 -0.2
LSF 131.27 332 ePKP 42 43.00 0.3
MFF 131.77 333 ePKP 42 43.10 -0.5
BCAO 132.62 271 iPKPd 42 46.60 0.4
0.7s 13.00nm
id 43 34.00
CNCB 135.73 120 ePKP 42 38.00 -14.7X
LPB 135.75 120 PKP 42 37.00 -15.5X

BAO 152.07 138 ePKP 43 20.50 0.8
e 44 05.00
KIC 155.82 274 PKP 43 34.40 9.6X
TIC 156.08 275 PKP 43 34.90 9.7X
LIC 156.11 274 PKP 43 34.00 8.8X
LKO 156.37 282 PKPc 43 36.60 11.0X
S.D. = 0.7 on 95 of 102 obs.

JAN 11, 1990 20h 37m 21.98± 0.60s
36.138 N ± 6.4km 27.169 E ± 5.8km
DEPTH = 10.0km (geophysicist)
4.0mb (1 obs.)
DODECANESE ISLANDS (369)

KAP 0.59 180 ePg 37 33.40 -0.4
YER 1.34 42 iPn 37 46.00 -0.7
NPS 1.54 236 ePb 37 48.70 -0.8
SMG 1.59 350 ePb 37 51.30 1.1
APE 1.61 306 ePb 37 50.10 -0.5
KSL 1.95 90 ePb 37 56.00 0.5
IZM 2.26 2 ePn 37 58.00 -2.0
ELL 2.29 74 iPn 38 01.70 1.2
VAM 2.52 254 ePg 38 10.10 6.5X
KHL 2.88 40 ePn 38 09.00 0.2
PRK 3.18 347 ePb 38 19.10 6.1X
DST 3.65 18 ePn 38 25.00 5.3X
ALT 3.73 38 ePn 38 20.00 -1.0
ITM 4.34 285 ePn 38 30.90 1.4
BBTK 5.76 48 eP 38 50.00 0.3
KBA 15.02 321 e(P) 41 01.50 5.4X
1.2s 7.10nm 4.0mb
KHC 16.35 327 eP 41 13.80 0.7
GBA 50.18 103 Pc 46 39.50 19.5X
0.9s 4.10nm
S.D. = 1.1 on 13 of 18 obs.

JAN 11, 1990 21h 14m 57.83± 0.24s
35.786 N ± 5.4km 80.757 E ± 4.3km
DEPTH = 10.0km (geophysicist)
5.3mb (35 obs.) 4.9Msz (1 obs.)
KASHMIR-TIBET BORDER REGION (304)

KSH 5.27 315 P 16 20.50 1.8
Z 10s 18.00um
eS 17 24.00
NDI 7.69 204 eP 16 53.50 1.0
eS 18 23.00
GKN 8.43 156 P 17 02.20 -0.9
KKN 8.85 153 P 17 07.80 -1.1
DMN 8.95 154 P 17 09.20 -1.2
GUN 8.98 150 P 17 10.60 -0.2
PKI 9.10 153 P 17 11.20 -1.2
WMO 9.63 31 P 17 17.00 -2.6
S 19 04.80
LSA 10.65 122 iPd 17 37.20 3.3X
pP 17 43.00
QUE 12.86 248 eP 18 03.20 -0.4
SHL 13.97 134 iP 18 13.00 -5.2X
eS 22 26.00
GTA 15.53 71 eP 18 44.00 5.4X
Z 10s 2.40um
E 11s 1.70um
MAIO 17.21 278 iPd 19 00.50 0.6
1.5s 65.32nm 4.5mb
eS 22 21.00
POO 18.24 201 iPd 19 14.00 1.2
1.1s 98.73nm 4.9mb
LZH 18.70 82 Pc 19 18.00 -0.4
1.6s 0.10nm 1.8mb X
Z 20s 1.50um 4.9MszX
N 10s 1.90um
pP 19 24.00
sP 19 28.00
PP 19 37.50
CD2 19.81 98 eP 19 31.00 -0.4
N 10s 3.80um
S 23 14.00
KMI 21.68 113 Pd 19 51.00 0.1
Z 12s 1.90um 4.7MszX
N 10s 1.10um
eS 23 49.00
GBA 22.29 189 P 19 58.00 1.2
XAN 23.13 86 P 20 06.80 1.7
E 12s 1.30um
CHG 23.32 132 eP 20 05.90 -1.1
1.0s 13.25nm 4.4mb
BTO 23.44 69 eP 20 10.00 1.9

N 11s 0.70um
E 11s 0.90um
sP 20 20.50
eS 24 18.00
GYA 23.99 106 P 20 15.00 1.5
Z 16s 0.80um 4.3MszX
N 11s 1.10um
E 11s 1.00um
BDT 24.57 134 eP 20 19.90 0.8
HHC 24.62 69 P 20 21.00 1.4
N 10s 1.10um
E 10s 0.70um
TIY 25.40 76 eP 20 27.60 0.7
NST 26.47 134 eP 20 32.50 -4.4X
TAB 27.53 285 eP 20 49.00 2.3
BJI 28.15 71 eP 20 53.00 1.0
Z 16s 1.75um 4.7MszX
E 14s 0.99um
eS 25 38.00
WHN 28.52 91 eP 20 55.00 -0.5
Z 16s 1.78um 4.8MszX
N 13s 1.51um
E 12s 0.98um
NNT 28.75 139 eP 21 07.80 10.1X
TIA 29.32 78 eP 21 03.20 0.5
N 15s 1.20um
QIZ 30.59 115 eP 21 20.00 5.9X
SNY 33.64 66 iPc 21 45.80 5.2X
Z 14s 0.90um 4.6MszX
N 18s 0.70um
E 16s 0.60um
CN2 34.91 63 Pc 21 52.00 0.5
BBTK 37.78 291 iPc 22 17.00 1.1
MDJ 37.84 61 eP 22 18.50 2.3
pP 22 25.00 22kmX
PRNI 38.46 275 eP 22 25.00 3.3X
MBH 38.76 275 eP 22 27.00 2.9X
KHL 40.54 289 eP 22 38.00 -0.9
ELL 40.61 287 eP 22 39.00 -0.5
VRI 41.40 301 ePd 22 46.50 0.8
MLR 41.98 301 ePc 22 52.00 1.3
BZS 44.98 302 ePc 23 15.00 0.2
VAY 45.11 295 eP 23 15.30 -0.6
KRA 45.52 308 iP 23 18.90 -0.2
1.2s 91.00nm 5.6mb
e 25 05.70
e 25 16.00
MAT 45.78 71 eP 23 21.00 -0.3
1.0s 15.00nm 4.9mb
SKO 45.79 297 eP 23 21.70 0.4
1.5s 63.00nm 5.4mb
i 25 12.00
BUD 46.45 304 eP 23 27.00 0.5
UPP 46.52 322 iP 23 28.00 1.2
SRO 46.88 305 eP 23 30.10 0.3
e 25 25.70
ZST 47.62 306 eP 23 35.50 -0.2
KSP 47.75 309 ePc 23 36.70 0.0
e 25 27.60
SOP 48.07 305 iPd 23 40.80 1.6
HFS 48.50 322 eP 23 41.50 -0.9
1.1s 65.50nm 5.6mb
Z 16s 0.00um 1.4MszX
LR 41 14.00
PTJ 48.82 303 eP 23 45.00 -0.1
ZAG 48.82 303 eP 23 47.00 2.0
PRU 48.98 308 Pc 23 46.50 0.3
1.8s 62.50nm 5.3mb
Z 15s 1.60um 5.1MszX
N 18s 2.60um
E 18s 0.70um
e 25 43.00
BRG 49.21 310 iPc 23 47.50 -0.5
1.6s 80.00nm 5.5mb
e 25 39.00
NB2 49.69 323 P 23 51.00 -0.6
0.8s 31.20nm 5.3mb
CLL 49.73 310 eP 23 51.00 -0.9
1.7s 69.00nm 5.4mb
KHC 49.75 308 iP 23 52.90 0.7
1.4s 44.00nm 5.3mb
e 25 50.50
LJU 49.76 303 eP 23 51.50 -0.8
CEY 49.90 303 eP 23 53.00 -0.4
TDS 50.13 295 P 23 56.70 1.5
VOY 50.19 303 e(P) 23 51.00 -4.7X
VOY 50.19 303 eP 23 55.20 -0.5

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KBA    50.33 305 e(P)   23 54.50   -2.3
       1.3s     19.80nm          4.9mb
TRI    50.36 303 P      23 57.50    0.7
MGR    50.56 296 P      23 58.40   -0.1
HOF    50.61 309 iPc    23 58.80    0.1
SGO    50.62 296 P      24 02.00    3.2X
FVI    50.81 304 P      24 01.50    1.3
BSS    50.92 297 P      23 59.30   -1.8
DUI    50.92 298 P      24 03.50    2.2
ATN    51.24 293 P      24 04.00    0.4
SDI    51.37 298 P      24 05.00    0.4
ARV    51.49 301 P      24 06.50    1.0
AZI    51.56 299 P      24 07.50    1.5
ASS    51.80 300 P      24 08.10    0.2
OGA    51.92 305 eP     24 07.80   -1.2
MNS    51.98 299 P      24 09.70    0.4
RMP    52.13 299 P      24 12.00    1.6
RDP    52.14 298 P      24 11.00    0.5
CRE    52.14 301 P      24 13.50    3.0X
PGD    52.23 301 P      24 12.70    1.4
SAL    52.58 304 P      24 13.50   -0.1
FIR    52.58 301 eP     24 15.00    1.3
BDI    52.96 302 P      24 17.50    0.9
PII    53.11 301 P      24 16.50   -1.1
ABH    53.42 310 eP     24 20.40    0.5
BOB    53.55 303 P      24 22.00    1.1
FEL    53.64 307 eP     24 20.87   -0.7
VAI    53.69 304 P      24 21.50   -0.3
RUP    53.78 309 eP     24 24.70    2.2
CDF    53.97 308 eP     24 21.10   -2.9
       1.5s     56.40nm          5.4mb
BSF    54.44 307 eP     24 24.50   -3.0X
       1.3s     60.60nm          5.5mb
HAU    54.68 308 eP     24 26.30   -2.9
       1.6s     62.10nm          5.4mb
DOI    55.12 303 P      24 33.00    0.5
LPG    55.15 305 eP     24 30.50   -2.5
       1.5s    101.30nm          5.6mb
SBF    55.20 302 eP     24 30.10   -2.9
       1.4s     78.40nm          5.5mb
BNI    55.34 304 P      24 34.50    0.4
FRF    55.83 302 eP     24 34.40   -3.1X
       1.5s     45.90nm          5.3mb
LMR    56.00 302 eP     24 36.10   -2.6
LRG    56.07 302 eP     24 36.60   -2.5
LOR    56.51 307 eP     24 38.90   -3.5X
       1.3s     21.60nm          5.0mb
LBF    56.52 307 eP     24 38.90   -3.6X
       1.2s     14.80nm          4.9mb
SMF    56.72 307 eP     24 40.50   -3.4X
       1.3s     36.10nm          5.2mb
SSF    56.80 307 eP     24 41.30   -3.1X
       1.3s     28.80nm          5.1mb
AVF    56.99 307 eP     24 42.70   -3.1X
       1.5s     67.90nm          5.5mb
DAG    57.62 344 iPc    24 48.00   -1.8
       1.1s     12.66nm          4.9mb
MAF    57.69 306 eP     24 48.00   -2.7
       1.5s     57.40nm          5.4mb
TCF    57.90 307 eP     24 49.40   -2.8
       1.5s     52.20nm          5.3mb
EKA    58.20 318 P      24 54.00   -0.1
       1.5s     65.10nm          5.5mb
LSF    58.36 307 eP     24 52.30   -3.1X
CAF    58.47 305 eP     24 53.80   -2.4
       1.3s     21.60nm          5.1mb
RJF    58.70 306 eP     24 55.70   -2.1
       1.6s     74.60nm          5.5mb
TOL    64.63 302 eP     25 32.00   -5.8X
BCAO   65.01 257 ePd    25 39.50   -1.0
       1.0s     55.00nm          5.7mb
                 id     25 42.00
                 ic     25 47.50
                 id     26 13.90
M8C    67.51   5 eP     26 03.50    7.9X
       0.9s     13.00nm          5.1mb
FBA    72.72  20 eP     26 27.80    0.3
INK    73.10  13 eP     26 29.00   -0.7
BUL    74.36 230 eP     26 55.50   17.7X
WB5    75.10 128 eP     26 40.90   -1.0
WRA    75.13 128 Pd     26 41.40   -0.7
       0.7s      6.80nm          4.8mb
ASPA   77.60 131 iPc    26 54.90   -1.0
       0.7s     10.00nm          5.0mb
LKO    81 55 276 P      27 19.40    2.0
KIC    82.67 273 PKP    27 25.00    1.7
TIC    82.74 273 PKP    27 25.40    1.8
LIC    82.99 273 PKP    27 26.20    1.3
FFC    89.82   2 eP     28 00.00    2.2
       1.0s     10.00nm          5.0mb
ZOBO  146.16 297 PKP    34 38.00   -2.1
       1.2s     13.51nm
      Z 20s      0.20um          4.9Msz
                  LR     25 24.00
LPB   146.32 297 PKP    34 40.00   -0.1
CNCB  146.41 296 PKP    34 40.00   -0.5
ARE   148.69 301 ePKP   34 49.00    5.2X
      S.D. = 1.4  on 110 of 134 obs.
-------------------------------------
*  JAN  11, 1990  21h 23m 35.63± 1.04s
    5.006 S ±17.3km  102.429 E ±19.2km
   DEPTH =  33.0km  (normal)
   4.8mb (  4 obs.)
 SOUTHERN SUMATERA                (274)

KLM     8.09 354 eP     25 34.50    0.7
PCI    17.85  77 ePd    27 45.00    1.8
BDT    22.37 351 eP     28 29.00   -3.5X
CHG    23.92 352 eP     28 44.90   -2.8
GBA    30.94 307 Pc     29 53.50    1.5
       0.9s      6.40nm          4.4mb
W85    34.42 118 eP     30 21.20   -1.2
WRA    34.42 118 Pd     30 21.60   -0.7
       0.4s      2.00nm          4.4mb
ASPA   35.55 125 iPc    30 31.00   -1.0
       0.4s     11.00nm          5.1mb
      Z 24s      0.06um          3.3MszX
                  LR     46 17.40
NDI    41.36 326 iPc    31 20.50    0.2
CTA    45.16 113 iPd    31 50.70   -0.7
       1.0s     28.00nm          5.1mb
STK    45.36 131 eP     31 55.00    2.2
BRS    52.78 121 iP     32 50.20    0.0
      S.D. = 1.6  on  11 of  12 obs.
-------------------------------------
?  JAN  11, 1990  21h 25m 30.77± 4.36s
    32.625 S ±32.0km   71.397 W ±21.7km
    DEPTH =  28.6 ±  9.0 km
 NEAR COAST OF CENTRAL CHILE      (135)

ROCH    0.47 137 iPd    25 40.90    0.0
                 iS     25 49.80
JACH    0.68  95 iPd    25 44.10   -0.1
                 iS     25 53.60
LCCH    0.86 190 iPc    25 47.00    0.2
                 iS     25 57.00
TACH    1.10 160 iPc    25 49.30   -0.9
                 i      26 05.50
                 iS     26 06.80
PCH     1.24 143 iP     25 52.50    0.2
                 i      26 10.50
                 i      26 13.00
LNV     1.33 180 iPc    25 53.30   -0.1
                 iS     26 10.00
CHCH    1.45 155 iPc    25 56.00    0.7
                 i      26 17.00
      S.D. = 0.7  on   7 of   7 obs.
-------------------------------------
*  JAN  11, 1990  22h 20m 42.52± 0.44s
    57.328 N ±25.0km   36.544 W ± 6.6km
    DEPTH =  10.0km  (geophysicist)
    4.5mb ( 11 obs.)
 NORTH ATLANTIC OCEAN             (402)

SCH    17.00 274 eP     24 43.00    1.4
BGF    26.19  97 eP     26 18.80    0.1
       0.7s      7.00nm          4.5mb
SSF    26.24  96 eP     26 18.70   -0.4
       0.8s      5.90nm          4.3mb
MAF    26.26  98 eP     26 20.50    1.2
LOR    26.30  95 eP     26 19.40   -0.3
       0.9s      9.80nm          4.5mb
LBF    26.54  95 eP     26 21.50   -0.4
       0.8s      8.50nm          4.5mb
MBC    33.70 335 eP     27 25.50    0.3
       1.0s      6.00nm          4.5mb
BLA    35.11 254 P      27 33.00   -4.8X
       0.6s      7.27nm          4.7mb
FVM    39.87 265 P      28 00.00  -17.7X
GLD    46.60 279 P      29 13.00    0.6
       1.0s     16.25nm          5.0mb
GOL    46.71 279 P      29 13.20   -0.2
       1.0s     12.50nm          4.9mb
DAU    49.33 284 P      29 33.30   -0.5
ANMO   50.80 275 P      29 43.30   -1.6
       1.0s      4.06nm          4.3mb
ALQ    50.80 275 eP     29 45.40    0.4
       1.0s      2.50nm          4.1mb
MSU    51.20 283 P      29 47.80   -0.2
KVN    53.90 288 P      30 07.10   -1.0
TNP    54.17 286 P      30 09.50   -0.6
       1.0s      9.5Bnm          4.8mb
GLA    56.73 280 P      30 28.30   -0.3
BCH    57.87 286 P      30 38.00    1.4
AIA   124.05 194 ePdiff 36 27.30   12.6X
      S.D. = 0.9  on  17 of  20 obs.
-------------------------------------
&  JAN  11, 1990  23h 08m 57.90s
   35.230 N          118.220 W
   DEPTH =   3.0km
 CENTRAL CALIFORNIA                ( 39)
      <PAS-P>. ML 3.4 (PAS).

ISA     0.48 335 iPd    09 07.20   -0.3
SBB     0.63 149 iPd    09 09.60   -0.9
CLC     0.78  41 iPd    09 12.60   -0.8
ABL     0.90 246 iPc    09 14.40   -1.6
MWC     1.01 172 iPd    09 16.70   -1.1
PAS     1.08 178 iPd    09 17.80   -1.1
RVR     1.42 150 iPd    09 23.60   -1.0
BCH     1.53 269 iPc    09 25.00   -1.2
PEC     1.60 146 eP     09 26.00   -1.1
PKEM    1.75 299 eP     09 29.40    0.1
PHAM    1.88 289 eP     09 30.50   -0.7
BLP     1.91 250 eP     09 31.00   -0.7
FRI     2.13 326 eP     09 35.10    0.3
                iS     10 01.70
PLM     2.18 149 eP     09 34.50   -1.3
PRI     2.19 295 eP     09 35.20   -0.6
LLA     2.61 303 eP     09 41.40   -0.3
PRS     2.79 294 eP     09 43.00   -1.3
                eS     10 14.90
TNP     2.96  16 eP     09 48.30    1.4
SAO     3.03 301 eP     09 47.80    0.1
CMB     3.30 329 P      09 53.20    1.7
GLA     3.55 127 eP     09 53.00   -2.2
KVN     3.82   1 eP     09 59.00    0.0
BKS     4.17 310 e(P)   10 02.90   -1.0
ORV     5.05 330 e(P)   10 16.50    0.2
       24 obs. associated
-------------------------------------
&  JAN  11, 1990  23h 26m 41.47s
   59.613 N          153.609 W
   DEPTH = 118.1km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

AUL     0.25 159 eP     26 57.61    0.9
PDB     0.34 301 iP     26 57.63   -1.0
                eS     27 10.51
RED     0.91  27 eP     27 02.02   -0.9
XLV     0.97  99 eP     27 02.47   -0.9
                eS     27 18.68
CNPM    1.21  93 eP     27 04.83   -1.0
                eS     27 23.10
NNL     1.24  69 eP     27 06.14   -0.1
NKA     1.64  45 eP     27 11.47    0.7
SPU     1.75  25 eP     27 11.36   -0.9
SLKM    1.92  61 eP     27 13.33   -1.0
                eS     27 37.79
SEW     2.16  75 eP     27 15.83   -1.4
SUA     2.34  36 eP     27 19.08   -0.7
PMS     2.59  49 eP     27 21.61   -1.4
GHO     3.16  45 eP     27 28.23   -2.4
VZW     3.80  65 eP     27 36.98   -2.1
       14 obs. associated
-------------------------------------
    JAN  12, 1990  00h 54m 57.82± 0.74s
    36.095 N ± 7.5km   27.156 E ± 6.7km
    DEPTH =  10.0km  (geophysicist)
 DODECANESE ISLANDS                (369)

KAP     0.54 178 ePg    55 08.70   -0.1
YER     1.38  41 iPn    55 21.60   -1.5
APE     1.63 307 ePb    55 26.80    0.1
SMG     1.63 351 ePb    55 27.70    1.1
CIN     1.68  26 eP     55 30.00    2.7
KSL     1.97  89 ePb    55 31.90    0.4
IZM     2.30   2 ePn    55 35.00   -1.4
ELL     2.31  73 iPn    55 37.30    0.6
VAM     2.50 255 ePb    55 44.10    4.9X
```

12d 00h

KHL	2.92	40	ePn	55 43.00	-2.2
PRK	3.22	348	ePb	55 54.00	4.6X
VLI	3.46	282	ePn	55 53.00	0.2
DST	3.69	18	ePn	56 06.00	9.8X
ALT	3.77	38	ePn	55 58.00	0.6
ITM	4.34	286	ePn	56 05.00	-0.4
BBTK	5.80	48	eP	56 26.00	0.0
KBA	15.05	321	e(P)	58 37.00	4.8X

S.D. = 1.4 on 13 of 17 obs.

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* JAN 12, 1990 02h 19m 52.26± 1.42s
37.174 N ±14.1km 4.035 W ±16.6km
DEPTH = 33.0km (normal)
SPAIN (377)

ALOJ	0.09	221	iPc	19 58.50	0.3
ACHM	0.18	113	eP	20 00.00	1.2
ATEJ	0.26	176	iPc	19 59.00	-0.7
ASMO	0.30	52	eP	19 59.50	-0.6
APHE	0.36	129	eP	20 00.60	-0.3

S.D. = 1.1 on 5 of 5 obs.

JAN 12, 1990 02h 33m 38.60± 0.75s
36.063 N ± 7.6km 27.194 E ± 8.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.51	182	ePb	33 49.00	0.0
YER	1.38	39	ePn	34 01.90	-2.1
NPS	1.52	239	ePb	34 05.20	-0.6
SMG	1.67	350	ePb	34 08.70	0.8
APE	1.67	307	ePb	34 08.60	0.5
KSL	1.94	88	ePn	34 12.40	0.5
ELL	2.29	72	ePn	34 18.00	0.8
VAM	2.52	256	ePb	34 23.80	3.5X

S.D. = 1.3 on 7 of 8 obs.

JAN 12, 1990 03h 24m 59.08± 0.25s
12.672 N ± 5.5km 87.489 W ± 5.0km
DEPTH = 86.2km (6 depth phases)
5.3mb (19 obs.)
NEAR COAST OF NICARAGUA (74)
Felt strongly in the Monogua oreo. Also felt (III) at San Salvador, El Salvador.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Locotion:
Origin Time 03:25: 3.5 1.1
Lat 12.18N 0.11 Lon 87.65W 0.08
Dep 15.0 FIX Half-durotion 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.57 0.11 Mtt=-0.94 0.10
Mff=-0.62 0.15 Mrt= 1.06 0.25
Mrf=-1.70 0.30 Mtf= 1.24 0.12
Principal Axes:

T	Val= 2.53	Plg=63	Azm= 75
N	0.34	12	321
P	-2.88	24	226

Best Double Couple:Mo=2.7*10**17
NP1:Strike=293 Dip=24 Slip= 60
NP2: 145 70 102

QZA	1.70	300	iPd	25 26.00	-1.6
LFU	1.91	304	iPd	25 29.50	-1.1
SJAS	1.91	301	iPd	25 29.20	-1.4
SSS	1.94	301	iPc	25 29.30	-1.7
			eS	25 52.40	
VSS	2.01	302	iPc	25 31.30	-0.7
TME	2.26	307	iPd	25 34.00	-1.2
YPE	2.57	304	eP	25 38.50	-1.2
SJS	4.33	129	iPc	26 03.40	-0.6
			S	27 06.00	
LCR2	4.49	130	eP	26 04.90	-1.4
LIO	5.11	121	eP	26 13.60	-1.1
TPX	5.14	296	iP	26 14.05	-1.1
			iS	27 06.50	
SCX	6.41	310	iP	26 35.50	2.7
			iS	27 49.00	
UPA	8.63	114	eP	27 03.70	0.4
OXX	9.94	297	iP	27 21.00	-0.4
			iS	29 05.00	
IISM	11.40	305	iP	27 42.00	1.4
			(S)	29 42.00	
IIT	12.17	303	eP	27 53.00	1.8
PPM	12.46	302	iP	27 55.50	0.3
			(S)	30 13.00	
ACX	12.67	291	(P)	27 58.00	0.5
III	12.86	298	eP	28 01.00	0.9
CRX	13.49	301	(P)	28 17.00	8.5X
PSO	15.22	138	eP	28 31.50	0.6
COTA	15.25	143	eP	28 31.00	-0.5
BOG	15.49	120	eP	28 36.00	1.7
			eS	31 32.00	
GGP	15.51	145	P	28 36.30	1.4
QUR	15.55	144	P	28 36.90	1.7
CAYA	15.66	142	eP	28 38.20	1.5
VC1	16.01	145	eP	28 43.50	2.4
SDV	16.98	101	eP	28 53.00	0.2
TOV	17.59	98	eP	29 01.10	0.8
CAR	20.26	94	eP	29 27.00	-3.1X
LLAV	20.38	94	eP	29 29.50	-1.8
OLLA	20.45	95	eP	29 30.50	-1.6
PRM	21.82	12	P	29 47.50	1.9
PWLA	22.22	359	P	29 49.70	0.2
JSC	22.24	14	P	29 52.20	2.4
LHS	22.54	15	P	29 54.80	2.1
RSCP	22.89	4	P	29 58.00	1.9
OLY	23.01	352	P	29 58.00	0.7
GBTN	23.08	7	P	30 01.10	3.1X
MEO	24.21	337	eP	30 08.00	-0.9
TUL	24.32	343	eP	30 10.00	0.1
	1.3s		340.60nm		5.6mb
Z	21s		1.53um		4.5Msz
			LR	35 30.00	
BLA	25.24	13	P	30 18.20	-0.5
CBN	26.98	18	eP	30 32.00	-2.5
			e	30 58.00	121kmX
ALQ	28.05	325	iPd	30 44.90	0.4
	1.0s		43.00nm		5.0mb
Z	20s		0.71um		4.3Msz
			pP	31 05.20	90km
ANMO	28.06	325	P	30 46.20	1.7
	1.5s		121.53nm		5.3mb
CLE	29.18	9	iP	31 14.00	19.7X
PRIN	29.79	20	P	31 03.90	4.1X
GOL	31.21	333	P	31 12.60	-0.1
	1.4s		130.55nm		5.5mb
			pP	31 32.80	88km
GLA	32.18	314	eP	31 21.00	0.1
ARE	32.99	151	eP	31 28.00	-0.3
BAR	33.31	312	eP	31 32.00	1.3
RSNY	33.65	17	P	31 34.00	0.5
	1.4s		65.49nm		5.3mb
PLM	33.79	312	eP	31 36.00	1.0
MSU	33.82	324	P	31 35.80	0.5
RVR	34.48	313	eP	31 41.00	0.2
ZOBO	34.55	146	P	31 41.00	-1.1
Z	24s		0.91um		4.4MszX
			S	37 08.00	
			LR	41 58.00	
DAU	34.64	327	P	31 42.90	0.5
GSC	34.77	315	eP	31 44.00	0.7
LPB	34.78	146	P	31 40.00	-3.9X
Z	24s		1.55um		4.7MszX
			e	31 43.00	10kmX
			PcP	34 11.00	
			eLR	42 06.00	
CNCB	35.07	146	P	31 46 00	-0.5
MWC	35.08	313	eP	31 46.00	-0 2
PAS	35.13	313	eP	31 47.00	0 7
SBB	35.16	314	eP	31 47.00	0 4
DUG	35.33	325	P	31 48.80	0.7
	1.1s		32.89nm		5.2mb
BW06	35.57	332	P	31 49 60	-0.6
	1.0s		17.00nm		4.9mb
ISA	36.11	315	eP	31 56.00	1.3
CCH	36.55	144	P	31 58.00	-0.8
TNP	36.61	319	P	31 59.50	0.5
	1.2s		32.26nm		5.1mb
SYP	36.62	312	eP	31 44.00	-15.0X
FRI	37.66	316	eP	32 07.40	-0.1
KVN	37.74	320	P	32 08.40	0.0
			pP	32 30.20	93km
PRI	37.89	314	eP	32 10.30	0.7
LLA	38.32	314	eP	32 13.50	0.4
RSON	38.42	354	P	32 12.00	-1.7
	0.7s		29.41nm		5.3mb
CMB	38.66	317	eP	32 16.40	0.4
ARN	39.09	315	P	32 20.50	0.9
MHC	39.16	315	eP	32 21.20	0.9
LRM	39.24	332	ePd	32 21.50	0.6
ORV	40.21	318	eP	32 30.10	1.4
MIN	40.70	319	eP	32 32.70	-0.2
WDC	41.43	319	eP	32 37.20	-1.5
SES	42.26	338	ePd	32 44.30	-1.2
	1.5s		217.00nm		5.8mb
FHC	42.48	318	P	32 49.40	2.0
	0.9s		84.62nm		5.6mb
FFC	43.47	348	eP	32 54.00	-1.2
	1.1s		95.00nm		5.5mb
LON	44.56	326	P	33 03.90	-0.3
SCH	45.08	17	eP	33 07.00	-1.1
	0.5s		31.00nm		5.4mb
PNT	45.12	331	eP	33 08.00	-0.5
	1.0s		79.00nm		5.5mb
EDM	45.39	338	iPc	33 10.00	-0.6
GMW	45.58	327	P	33 11.00	-1.1
BAO	48.15	125	e(P)	33 33.00	0.2
FCH	48.59	161	eP	33 35.60	-0.7
LNV	48.83	162	iPc	33 36.10	-1.5
FRB	52.72	10	eP	34 03.00	-3.7X
	0.6s		34.00nm		5.6mb
GDH	60.52	13	eP	35 16.00	13.9X
			e	55 30.00	
INK	62.98	343	eP	35 17.00	-1.6
			pP	35 38.00	82km
MBC	65.80	352	eP	35 34.00	-2.7
	0.9s		13.00nm		4.9mb
			pP	35 55.00	81km
FBA	66.21	336	P	35 37.80	-1.7
	1.0s		15.00nm		4.9mb
			pP	35 59.60	84km
IMA	68.92	336	P	35 55.40	-1.2
	1.1s		6.25nm		4.4mb
TTA	69.07	333	P	35 55.20	-2.3
	1.2s		22.73nm		4.9mb
GRR	78.42	43	eP	37 06.00	14.1X
	0.8s		17.10nm		
LDF	78.89	43	eP	37 07.40	13.0X
	0.8s		10.70nm		
MFF	79.10	45	eP	37 09.50	13.9X
	0.9s		11.10nm		
LIC	81.33	86	P	37 24.22	16.2X
Z	20s		0.35um		4.7Msz
SSF	81.52	44	eP	37 20.30	11.9X
KIC	81.58	85	P	37 25.54	16.2X
LOR	81.72	43	eP	37 21.40	11.9X
	1.0s		8.80nm		
NB2	83.19	29	P	37 35.40	18.5X
	0.9s		5.20nm		
CLL	86.67	38	eP	37 52.00	17.7X
	1.9s		19.00nm		
			e	38 46.00	221kmX
BRG	87.36	38	e(P)	37 57.80	20.1X
KHC	87.63	40	P	37 55.50	16.4X
			eSg	54 31.10	
KBA	88.07	42	eP	37 56.50	15.1X
	0.7s		1.50nm		
			e	38 02.00	17kmX
WB5	139.27	254	ePKP	44 08.20	-10.5X
			e	44 18.00	
WRA	139.29	254	PKP	44 12.00	-6.8X
	1.2s		6.20nm		
ASPA	139.32	248	ePKP	44 03.80	-15.0X
Z	20s		0.06um		4.4Msz
			LR	51 57.10	
WARB	145.24	242	ePKP	44 27.70	-1.3
CHG	148.08	348	ePKP	44 35.50	1.7
TSM	149.56	302	ePKP	44 41.00	4.8X
BDT	149.59	348	ePKP	44 40.00	3.9X
NWAO	149.71	224	ePKP	44 40.00	4.1X
GBA	149.92	30	PKP	44 44.00	7.3X
	0.6s		2.10nm		
MBL	152.57	248	ePKP	44 46.30	5.8X

S.D. = 1.2 on 92 of 121 obs.

JAN 12, 1990 03h 25m 26.25± 0.46s
38.828 N ± 3.9km 26.304 E ± 5.4km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PRK	0.42	357	ePg	25 35.50	0.7
IZM	0.87	119	iPg	25 42.40	-0.5
EZN	1.00	1	ePg	25 45.70	0.6
SMG	1.19	159	ePb	25 49.30	0.8
APE	1.86	199	ePb	25 57.40	-1.1
CIN	1.86	131	eP	26 00.00	1.5
EDC	1.94	38	iPn	25 58.50	-1.0
DST	1.97	66	ePn	25 59.10	-0.9

BNT	1.97	39	iPn	26	00.20	0.2
MFT	2.10	21	iPn	26	02.20	0.3
YER	2.30	137	ePn	26	04.40	-0.5
RDO	2.39	346	ePn	26	06.20	0.2
KHL	2.57	100	ePn	26	09.00	0.3
KDZ	2.90	347	iPd	26	13.00	-0.3
YLV	2.94	53	iPn	26	14.20	0.3
RZN	3.10	337	iPc	26	17.00	0.7
			iS	26	52.00	
DMK	3.19	20	iPn	26	16.90	-0.5
HRT	3.27	51	ePn	26	27.00	8.4X
MMB	3.39	325	eP	26	20.00	-0.3
NPS	3.60	189	ePb	26	27.10	3.8X
JMB	3.64	3	eP	26	36.00	12.2X
VAY	3.80	312	ePn	26	38.30	12.3X
KKB	3.91	322	eP	26	28.00	0.4
PGB	4.06	337	eP	26	29.00	-0.7
VTS	4.43	329	eP	26	36.00	0.8
PVL	4.45	351	iPc	26	33.00	-2.2
BBTK	5.11	77	eP	27	12.00	27.3X
			iS	28	15.50	
VRI	7.04	2	eP	27	13.00	1.1

S.D. = 0.9 on 23 of 28 obs.

% JAN 12, 1990 04h 29m 36.48± 1.11s
42.972 N ± 7.6km 13.265 E ±11.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ASS	0.45	283	P	29	45.90	0.2
			eSg	29	53.50	
ARV	0.58	336	Pc	29	48.10	-0.1
			eSg	29	57.50	
AQU	0.63	171	P	29	49.30	0.2
			eSg	29	59.50	
MNS	0.73	217	P	29	50.60	-0.2
			eSg	30	02.30	
SDI	1.33	162	P	30	01.00	0.0

S.D. = 0.2 on 5 of 5 obs.

% JAN 12, 1990 04h 54m 48.22± 0.46s
43.065 N ± 5.8km 0.667 W ± 3.5km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

ATE	0.03	309	Pg	54	50.07	-0.2
			Sg	54	51.21	
ESCF	0.07	79	Pg	54	50.48	-0.1
			Sg	54	51.92	
ISSF	0.10	248	Pg	54	51.07	0.0
			Sg	54	53.15	
MADF	0.14	306	Pg	54	51.64	0.1
			Sg	54	53.87	
LHE	0.16	168	Pg	54	51.88	0.0
			Sg	54	54.45	
OGE	0.18	54	Pg	54	52.24	0.0
			Sg	54	55.36	
JAU	0.22	97	Pg	54	53.16	0.1
			Sg	54	56.66	
BOH	0.26	279	Pg	54	53.73	0.0
			Sg	54	57.33	
ELYF	0.26	294	Pg	54	53.83	0.1
			Sg	54	57.25	

S.D. = 0.1 on 9 of 9 obs

JAN 12, 1990 05h 00m 38.62± 0.79s
37.067 N ± 8.1km 3.891 W ± 6.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.2 (MDD). Felt (IV) at Chimeneos.

AFC	0.33	56	iP	00	45.50	-0.1
			eS	00	50.00	
MAL	0.54	231	iPgd	00	47.00	-2.5
			iSg	00	54.50	
EPRU	1.08	265	eP	01	00.50	1.6
			eS	01	16.00	
EBAN	1.10	4	eP	00	59.70	0.4
			eS	01	15.00	
EHOR	1.31	305	eP	01	03.00	0.1
			eS	01	20.60	
ENIJ	1.34	94	eP	01	04.00	0.6
			eS	01	21.40	
EJIF	1.41	245	eP	01	06.00	1.7
			eS	01	25.00	
EVIA	1.91	35	eP	01	11.40	-0.3
			eS	01	35.60	
EVAL	2.33	284	eP	01	22.00	4.4X
			eS	01	50.20	
TOL	2.81	358	e(Pg)	01	51.00	26.5X
			eSg	02	11.00	
EPLA	3.45	331	eP	01	32.80	-0.7
			eS	02	12.30	
GUD	3.58	357	eP	01	34.60	-0.8
			eS	02	15.00	
ETOR	4.01	20	eP	01	41.40	-0.1

S.D. = 1.3 on 11 of 13 obs.

? JAN 12, 1990 06h 14m 41.92± 1.12s
44.388 N ±10.6km 15.423 E ±19.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.6 (TRI).

VBY	1.12	354	ePg	15	03.30	0.4
			iSg	15	19.40	
			iSn	15	21.80	
HVAR	1.42	148	i(Pn)	15	07.80	0.1
			iSn	15	27.70	
CEY	1.52	333	eP	15	31.00	21.8X
			e(Sg)	15	32.00	
PTJ	1.56	14	eP	15	09.50	-0.3
TRI	1.77	319	e(Pg)	15	12.60	-0.1
			e(Sg)	15	35.00	

S.D. = 0.5 on 4 of 5 obs.

JAN 12, 1990 06h 56m 38.49± 0.36s
79.068 N ± 5.1km 2.241 E ± 6.0km
DEPTH = 10.0km (geophysicist)
4.7mb (19 obs.)
GREENLAND SEA (640)

KBS	1.86	90	iPc	57	08.50	-2.2
			iS	57	27.70	
DAG	4.95	253	iPc	57	51.80	-2.8
	0.7s		458.90nm			
JNW	8.51	204	iP	58	44.60	0.0
JNE	8.54	204	iP	58	45.20	0.3
JMI	8.64	205	iP	58	46.40	0.1
SOD	13.49	137	iP	59	52.60	0.6
AKU	14.62	215	eP	00	15.10	8.3X
	0.9s		33.61nm		4.9mb	
GDH	17.17	266	iPc	00	32.20	-7.3X
	0.9s		102.52nm		5.0mb	
			i	03	21.00	
			e	06	40.00	
SUF	17.90	143	eP	00	49.10	0.5
HFS	19.36	163	eP	01	06.10	-0.5
	0.5s		3.20nm		3.8mb	
NUR	19.89	146	iP	01	07.40	-4.9X
	0.6s		20.90nm		4.6mb	
			i	01	22.70	
MBC	21.70	327	eP	01	32.00	1.2
	1.2s		14.00nm		4.2mb	
CLL	28.13	166	iPc	02	43.40	11.3X
	1.7s		25.00nm			
BRG	28.61	164	e(P)	02	39.80	3.4X
	1.7s		22.00nm		4.7mb	
KSP	28.78	161	eP	02	48.50	10.6X
PRU	29.53	164	eP	02	47.70	3.1X
KHC	30.33	165	eP	02	54.50	2.6
INK	30.64	329	ePc	02	54.40	0.1
SPC	30.69	157	eP	03	05.70	10.5X
ZST	31.46	161	eP	03	13.60	11.8X
SRO	31.92	159	eP	03	19.00	13.2X
LOR	31.93	178	eP	03	05.70	-0.1
SSF	32.13	178	eP	03	07.50	-0.1
	1.3s		12.20nm		4.7mb	
LBF	32.21	178	eP	03	07.90	-0.5
	1.1s		9.70nm		4.6mb	
BGF	32.63	179	eP	03	12.00	0.0
	1.1s		22.90nm		5.0mb	
TCF	32.90	180	eP	03	14.00	-0.3
	1.1s		17.00nm		4.9mb	
LSF	32.94	181	eP	03	14.40	-0.3
MAF	32.97	180	eP	03	14.80	-0.1
RJF	33.89	181	eP	03	23.00	0.1
MLR	34.85	150	ePc	03	43.00	11.6X
FBA	35.18	338	P	03	35.40	1.5
	0.8s		4 31nm		4.4mb	
EPF	36.16	182	eP	03	42.40	0.0
	1.2s		27.90nm		5.0mb	
FFC	39.43	298	eP	04	10.00	0.4
	0.8s		12.00nm		4.6mb	
CBM	40.64	262	P	04	20.20	0.5
RSON	41.69	289	P	04	28.20	0.0
	1.4s		37.33nm		4.9mb	
MIM	42.44	263	P	04	35.30	0.9
EMM	42.63	261	P	04	36.50	0.5
BNH	43.49	265	P	04	43.80	0.8
HBVT	44.05	266	P	04	48.50	0.9
RSNY	44.15	268	P	04	49.00	0.6
	1.4s		35.36nm		5.0mb	
SES	45.10	304	eP	04	56.80	0.8
LRM	49.77	304	eP	05	32.80	0.0
LON	50.27	312	P	05	35.50	-0.9
BW06	52.26	300	P	05	51.80	0.0
	1.1s		3.69nm		4.2mb	
GLD	54.48	295	P	06	09.30	1.2
GOL	54.55	295	P	06	08.60	-0.2
	1.0s		10.38nm		4.8mb	
PRM	55.77	272	P	06	15.50	-1.9
PV09	56.36	299	P	06	21.30	-0.7
TUL	56.53	285	e(P)	06	21.00	-1.8
	1.0s		8.30nm		4.7mb	
KVN	57.26	307	P	06	28.60	0.4
TNP	58.07	306	P	06	31.70	-2.2
	0.7s		1.67nm		4.2mb	
ANMO	59.37	295	P	06	43.20	0.2
CHG	72.93	80	eP	08	09.50	0.1

S.D. = 1.0 on 42 of 53 obs.

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* JAN 12, 1990 07h 07m 59.53± 1.31s
35.267 N ±19.1km 26.228 E ± 6.4km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.8 (ATH).

NPS	0.50	270	iPgc	08	09.70	0.0
KAP	0.82	70	ePg	08	14.30	-1.2
VAM	1.66	275	ePb	08	29.10	0.3
APE	1.88	343	ePb	08	33.00	0.9
YER	2.50	41	ePn	08	40.30	-0.6
KSL	2.86	72	ePn	08	47.50	1.5
VLI	3.04	299	ePn	08	47.60	-0.9

S.D. = 1.2 on 7 of 7 obs.

? JAN 12, 1990 07h 18m 21.31± 4.97s
33.080 S ±13.7km 72.184 W ±36.6km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.65	128	iP	18	34.50	0.2
			iS	18	42.60	
ROCH	0.99	84	iPd	18	40.00	-0.3
			iS	18	53.00	
LNV	1.09	144	iPd	18	41.60	-0.1
			iS	18	55.00	
SAN	1.33	107	ePd	18	45.70	-0.1
JACH	1.40	74	iPd	18	47.00	0.1
			iS	18	55.00	
PCH	1.50	112	iPc	18	48.00	-0.3
			iS	19	08.50	
CHCH	1.54	124	iPc	18	48.70	-0.1
			iS	19	08.70	
FCH	1.61	99	iPc	18	50.70	0.6
			iS	19	10.60	

S.D. = 0.4 on 8 of 8 obs.

JAN 12, 1990 08h 27m 00.56± 0.56s
36.132 N ± 6.3km 27.229 E ± 5.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.58	184	ePn	27	12.50	0.2
YER	1.31	40	iPn	27	23.70	-1.1
NPS	1.58	237	ePn	27	27.70	-0.9
SMG	1.60	349	ePn	27	29.40	0.4
APE	1.66	305	ePn	27	30.00	0.2
KSL	1.91	90	ePn	27	34.00	0.6
ELL	2.25	73	ePn	27	38.90	0.4
IZM	2.26	1	ePn	27	38.00	-0.6
VAM	2.57	255	ePn	27	41.80	-1.1
KHL	2.85	39	ePn	27	47.00	0.0
BCK	3.01	63	ePn	27	55.00	5.8X
VLI	3.51	281	ePb	27	58.00	1.7

S.D. = 1.0 on 11 of 12 obs.

12d 08h

JAN 12, 1990 08h 55m 42.83± 0.81s
36.164 N ± 8.1km 27.063 E ± 8.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.62	172	ePn	55 55.00	-0.3
			eSn	56 04.80	
YER	1.38	45	iPn	56 07.30	-0.8
NPS	1.48	233	ePn	56 10.00	0.4
			eSn	56 30.00	
APE	1.53	307	ePn	56 10.00	-0.2
SMG	1.55	353	ePb	56 12.10	1.6
KSL	2.04	91	iPnd	56 17.10	-0.5
IZM	2.23	4	ePn	56 18.00	-2.5
ELL	2.37	75	iPn	56 22.90	0.5
VAM	2.45	253	ePb	56 29.00	5.6X
KHL	2.91	42	ePn	56 32.00	1.8
BCK	3.11	64	ePn	56 37.70	4.8X
ITM	4.25	285	ePn	56 52.00	2.9X

S.D. = 1.5 on 9 of 12 obs.

? JAN 12, 1990 09h 07m 26.12± 0.85s
8.393 N ±13.7km 126.617 E ±27.0km
DEPTH = 33.0km (normal)
4.6mb (1 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

CHG	28.78	294	eP	13 24.00	0.7
BJI	32.87	345	eP	13 57.50	-1.6
WARB	34.37	180	eP	14 11.40	-0.9
FORR	39.04	178	eP	14 52.00	0.4
INK	85.89	22	eP	20 04.50	0.9
MBC	87.46	13	ePd	20 11.70	0.5
	0.9s		3.00nm		4.6mb

S.D. = 1.3 on 6 of 6 obs.

& JAN 12, 1990 09h 10m 23.10s
36.405 N 120.788 W
DEPTH = 14.0km
3.9mb (1 obs.)
CENTRAL CALIFORNIA (39)
<BRK>. ML 4.2 (BRK).
Mo=4.5*10**15 Nm (BRK). Felt (III) at Aromos, Cormel Valley ond Dos Polos.

LLA	0.25	329	iPc	10 28.20	-0.4
PRI	0.28	159	iPc	10 29.30	0.0
PRS	0.48	261	iPc	10 32.20	-0.5
SAO	0.64	304	iPd	10 34.95	-0.6
			e	10 35.38	
			eS	10 43.40	
			e	10 44.45	
PKEM	0.65	122	eP	10 36.00	0.3
PHAM	0.65	151	eP	10 35.60	-0.1
FRI	1.05	56	iPc	10 41.30	-1.2
ARN	1.12	328	ePc	10 42.00	-1.7
GCC	1.15	303	ePc	10 42.70	-1.6
MHC	1.16	324	iPc	10 43.23	-1.3
			eS	11 03.05	
BCH	1.35	155	eP	10 46.50	-1.0
CMB	1.66	11	ePd	10 50.60	-1.3
PCC	1.68	311	iPc	10 50.70	-1.4
BLP	1.87	170	eP	10 54.20	-0.7
BKS	1.87	322	eP	10 53.50	-1.4
BRK	1.88	322	ePc	10 53.50	-1.5
ABL	2.01	140	eP	10 55.00	-2.1
ORV	3.20	350	eP	11 13.30	-0.5
TNP	3.30	58	eP	11 15.60	0.0
KVN	3.39	38	eP	11 16.20	-0.6
PEC	3.89	129	eP	11 21.60	-2.1
LTCM	3.94	345	eP	11 23.40	-1.0
PLM	4.44	132	eP	11 29.00	-2.6
GLA	5.94	123	eP	11 49.00	-3.7
LON	10.36	356	eP	12 54.50	0.2
LRM	11.31	31	eP	13 10.90	3.5
ALQ	11.75	93	eP	13 25.30	11.9
	1.0s		1.75nm		
INK	32.74	351	eP	16 57.00	-0.1
MBC	39.94	1	eP	18 07.00	9.1
	0.7s		2.00nm		3.9mb

29 obs. associated

? JAN 12, 1990 09h 50m 57.40± 0.89s
23.075 S ±11.8km 131.122 E ± 9.1km
DEPTH = 10.0km (geophysicist)
NORTHERN TERRITORY, AUSTRALIA (591)

ASPA	2.62	104	iPd	51 40.80	0.2
	0.4s		136.00nm		
			iS	52 11.90	
WB5	4.39	44	eP	52 05.40	-0.2
			e(S)	52 52.00	
WARB	5.12	232	eP	52 19.80	3.8X
			eS	53 17.00	
FORR	8.20	199	eP	52 59.00	-0.2
			eS	54 24.00	
MBL	10.64	278	eP	53 33.10	0.2

S.D. = 0.4 on 4 of 5 obs.

JAN 12, 1990 10h 22m 17.61± 0.64s
50.465 N ± 5.4km 6.011 E ± 7.4km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.1 (UCC).

MEM	0.14	359	iP	22 20.80	-0.1
ENN	0.31	350	iPgc	22 24.10	0.1
	0.5s		66.00nm		
			iSg	22 26.60	
WLF	0.81	173	iP	22 33.00	-0.2
			iS	22 41.00	
DOU	0.98	248	iPd	22 36.30	0.1
			iS	22 48.90	
RUP	1.02	138	ePn	22 37.22	0.3
ABH	1.15	120	ePn	22 39.02	-0.1

S.D. = 0.2 on 6 of 6 obs.

JAN 12, 1990 10h 32m 10.80± 0.92s
39.630 N ± 7.7km 22.939 E ± 7.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.6 (THE).

LIT	0.58	324	ePg	32 21.70	-0.9
			eSg	32 30.30	
PAIG	0.64	62	ePgc	32 23.80	0.1
			eSg	32 34.30	
AGG	0.77	218	ePgc	32 25.30	-0.5
			eSg	32 38.30	
THE	1.00	1	ePg	32 29.40	-0.3
			eSg	32 43.30	
OUR	1.07	48	ePb	32 31.10	0.2
SOH	1.23	15	ePb	32 33.70	0.0
GRG	1.39	343	ePb	32 35.40	-0.8
			eSb	32 54.00	
KNT	1.53	359	ePb	32 38.20	0.0
VAY	1.71	351	ePn	32 40.70	-0.1
OHR	2.21	313	ePn	32 50.30	2.3

S.D. = 1.0 on 10 of 10 obs.

? JAN 12, 1990 10h 42m 05.00± 0.89s
36.040 N ± 8.2km 27.241 E ±11.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.49	186	ePb	42 15.20	0.2
NPS	1.54	240	ePb	42 32.20	-0.3
			eSn	42 50.00	
SMG	1.70	349	ePn	42 35.00	0.2
ELL	2.27	71	ePn	42 43.00	-0.2
VAM	2.55	257	ePb	42 51.60	4.5X

S.D. = 0.5 on 4 of 5 obs.

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* JAN 12, 1990 11h 17m 45.95± 0.93s
52.952 N ±19.3km 169.760 W ±11.9km
DEPTH = 33.0km (normal)
4.8mb (17 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK	4.37	259	e(P)	18 50.30	-1.4
SVW	11.21	38	eP	20 31.00	4.2X
TTA	12.35	31	eP	20 50.90	8.7X
PMS	13.71	45	eP	20 57.90	-2.3
IMA	15.40	25	eP	21 31.10	8.8X
	1.0s		4.40nm		3.6mb X
TOA	15.55	45	eP	21 22.00	-2.1
FBA	16.37	34	eP	21 35.00	0.5
INK	23.00	34	eP	22 48.00	-0.2
MBC	30.08	22	eP	23 54.00	0.2
	0.4s		2.00nm		4.3mb
KVN	37.64	90	e(P)	24 59.50	-0.1
SOD	59.37	353	eP	27 46.00	-0.7
SUF	63.99	352	eP	28 16.60	-1.1
	0.6s		5.00nm		4.8mb
NUR	66.30	352	iP	28 31.70	-0.9
	0.8s		19.10nm		5.2mb
NB2	66.36	359	P	28 32.60	-0.4
	0.8s		80.00nm		5.9mb X
HFS	67.23	358	eP	28 36.70	-1.8
	0.4s		3.60nm		4.8mb
KSP	76.45	356	eP	29 33.50	0.0
BRG	76.50	358	i(P)	29 33.40	-0.4
PRU	77.37	357	eP	29 39.00	0.4
SPC	77.88	353	eP	29 26.20	-15.5X
			e	29 41.10	
KHC	78.26	358	P	29 43.50	0.0
ZST	79.06	355	iP	29 48.70	0.8
HAU	79.37	3	eP	29 49.50	-0.1
BSF	79.55	2	eP	29 50.60	-0.1
	1.2s		11.90nm		4.8mb
LOR	80.01	4	eP	29 53.10	0.0
	1.1s		10.70nm		4.8mb
SSF	80.20	5	eP	29 54.10	0.0
	1.1s		12.20nm		4.8mb
LBF	80.30	4	eP	29 54.20	-0.4
	1.1s		12.20nm		4.8mb
KBA	80.31	358	ePc	29 54.00	-0.9
	1.0s		15.20nm		4.9mb
			i	30 12.90	
AVF	80.46	5	eP	29 55.20	-0.2
	1.1s		14.60nm		4.9mb
SMF	80.63	4	eP	29 56.30	-0.1
FVI	80.81	358	P	29 59.00	1.8
LSF	80.90	6	eP	29 57.90	0.1
TCF	80.90	6	eP	29 57.50	-0.3
	1.1s		10.70nm		4.8mb
VAI	81.55	1	P	30 03.00	1.9
CAF	82.25	6	eP	30 05.00	0.1
	1.1s		7.30nm		4.6mb
BNI	82.33	3	P	30 08.00	2.6
BOB	82.66	1	P	30 09.00	1.9
SBF	83.53	2	eP	30 11.50	-0.1
	0.9s		16.30nm		5.2mb
PGD	83.54	359	P	30 14.00	2.3
FRF	83.82	3	eP	30 13.10	0.2
	1.1s		16.60nm		5.1mb
ARV	83.90	358	P	30 14.50	1.1
LRG	83.91	3	eP	30 14.20	0.8
EPF	84.02	7	eP	30 13.40	-0.6
	0.8s		5.30nm		4.8mb
LMR	84.04	3	eP	30 14.50	0.5
	1.1s		19.50nm		5.2mb
ASS	84.33	358	P	30 17.00	1.4
MNS	85.02	358	P	30 19.50	0.5
SDI	85.67	357	P	30 23.00	0.7
HYB	88.66	297	eP	30 35.50	-1.7
GBA	92.40	296	Pc	30 52.10	-2.4
	0.9s		4.80nm		4.9mb
WIN	149.21	348	ePKP	37 15.50	-12.7X
SLR	149.62	326	iPKPc	37 30.50	1.8X
	0.9s		21.01nm		
KSR	150.19	329	ePKP	37 30.00	0.4
PRY	151.00	327	ePKP	37 33.50	2.8X
BFS	151.19	328	iPKPd	37 32.00	1.0X
BLF	153.44	327	ePKP	37 20.00	-14.2X

S.D. = 1.2 on 45 of 54 obs.

JAN 12, 1990 13h 21m 30.21± 1.90s
8.486 N ±10.9km 72.637 W ±18.6km
DEPTH = 197.5 ± 24.0 km
4.4mb (14 obs.)
VENEZUELA (101)

BMG	1.47	197	eP	22 28.00	24.1X
BOG	4.09	200	eP	22 36.00	2.0
			eS	23 22.00	
UPA	6.84	275	ePc	23 06.80	-2.3
			e	24 20.50	
ZOBO	25.00	170	P	26 38.00	-0.3
LPB	25.26	170	P	26 41.00	0.5
CNCB	25.55	170	P	26 43.30	0.0
BAO	34.21	134	e(P)	27 58.00	-1.2
LKO	66.13	83	Pc	31 58.16	-0.7
	0.6s		5.00nm		4.5mb
LIC	67.02	87	Pc	32 02.60	-1.9
KIC	67.29	87	Pc	32 04.00	-2.2
GRR	71.61	42	eP	32 32.20	0.4
	0.5s		6.40nm		4.6mb

```
INK    71.64 340 eP    32 32.00   0.4
EPF    71.82  48 eP    32 33.50   0.2
       0.5s     5.10nm          4.5mb
MFF    71.86  44 eP    32 33.60   0.3
       0.5s     5.80nm          4.6mb
FLN    71.91  41 eP    32 34.00   0.4
       0.5s     3.40nm          4.3mb
LDF    72.12  42 eP    32 35.20   0.3
       0.5s     4.30nm          4.4mb
MBC    72.26 349 ePc   32 36.00   0.8
       0.7s     4.00nm          4.3mb
LFF    72.29  46 eP    32 37.20   1.3
       0.4s     3.40nm          4.4mb
LPO    72.58  46 eP    32 37.70   0.1
       0.5s     3.40nm          4.3mb
RJF    72.87  45 eP    32 39.30   0.0
CAF    73.23  46 eP    32 41.60   0.2
       0.5s     3.60nm          4.4mb
BGF    73.91  44 eP    32 45.10  -0.2
AVF    74.27  44 eP    32 47.10  -0.3
       0.5s     1.70nm          4.0mb
SMF    74.60  44 eP    32 48.60  -0.7
LOR    74.65  43 eP    32 49.60   0.0
       0.5s     2.90nm          4.3mb
NB2    79.65  29 P     33 18.40   1.6
       0.7s     4.10nm          4.3mb
BCAO   90.51  85 iPd   34 12.70   1.2
       0.5s    13.00nm          5.2mb
GKN   137.59  30 PKP   40 26.20  -7.0X
DMN   138.15  30 PKP   40 28.20  -6.2X
GUN   138.27  29 PKP   40 29.00  -5.7X
PKI   138.33  30 PKP   40 29.60  -5.2X
WB5   151.52 244 ePKP  41 02.10   5.6X
WRA   151.53 244 PKPd  41 03.20   6.7X
       0.5s     4.40nm
     S.D. = 1.1  on  26 of  33 obs.
-------------------------------------
   JAN  12, 1990  15h 28m 14.79± 1.03s
    4.979 N ± 3.6km  126.508 E ± 5.4km
   DEPTH =  61.9 ±  9.5 km
   5.4mb ( 37 obs.)
 TALAUD ISLANDS                  (263)
      CENTROID, MOMENT TENSOR    (HRV)
      Dotо Used: GDSN
      L.P.B.: 14S, 28C
      Centroid Location:
      Origin Time        15:28:15.1 0.3
      Lat  4.77N 0.05 Lon 126.42E 0.05
      Dep  48.4 3.1 Half-durotian  2.8
      Moment Tensor;   Scole 10**17 Nm
        Mrr= 3.30 0.19  Mtt= 1.33 0.22
        Mff=-4.63 0.28  Mrt=-0.02 0.25
        Mrf= 2.11 0.29  Mtf=-1.42 0.24
       Principal Axes:
        T  Val=  3.88  Plg=72  Azm=240
        N        1.55       11        9
        P       -5.43       13      102
      Best Double Couple:Mo=4.7*10**17
       NP1:Strike=207 Dip=33 Slip= 111
       NP2:          2      59       77

DAV     2.29 336 eP    28 51.90   1.0
TSM     8.44 265 ePd   30 19.00   2.1
AAI     8.77 169 eP    30 20.00  -1.4
KKM    10.30 276 ePc   30 47.00   4.5X
       0.9s   151.90nm          6.1mb
QCP    10.99 331 eP    30 42.50  -9.2X
MKS    12.33 215 ePd   31 15.00   5.4X
BAG    12.76 333 eP    31 15.00  -0.6
                eS     33 46.00
MTN    18.29 166 eP    32 22.00  -4.0X
TRT    18.72 228 ePc   32 32.50   1.4
       0.6s    57.40nm          5.0mb
GUMO   20.02  63 eP    32 37.00  -8.3X
                eS     36 22.00
ANP    20.65 347 eP    32 50.00  -1.9
KNA    20.72 174 eP    32 50.50  -2.0
       0.8s   162.00nm          5.4mb
HKC    20.96 326 P     32 55.00   0.2
                S      36 58.00
KGM    23.33 264 ePd   33 22.00   3.6X
KLM    24.87 267 eP    33 35.00   1.7
PMG    25.05 125 eP    33 44.00   9.0X
IPM    25.40 270 ePc   33 40.10   1.8
       0.8s    67.70nm          5.2mb
SNG    25.84 276 eP    33 39.00  -3.3X
       1.1s   121.52nm          5.3mb

                eS     37 15.20
W85    25.88 163 eP    33 40.50  -2.2
                eS     38 11.80
WRA    25.94 163 Pc    33 44.90   1.7
       1.3s   172.90nm          5.4mb
KAGJ   26.39   8 eP    33 48.20   0.9
SSE    26.46 350 P+    33 46.00  -1.8
       1.1s    82.00nm          5.2mb
     Z 20s      2.80um          4.8Msz
     N 12s      0.70um
     E 12s      0.60um
                pP     34 05.00   84kmX
                PPP    34 58.00
                S      38 16.00
                sS     38 52.00
                SS     39 44.00
PCT    26.51 293 eP    33 55.00   6.5X
MBL    26.79 194 eP    33 50.00  -1.0
       0.7s    43.00nm          5.1mb
NNT    27.50 288 eP    34 01.00   3.5X
PSI    27.61 266 ePd   33 59.40   0.8
KUMJ   27.71   8 eP    33 59.60   0.3
NST    28.00 294 iPd   34 02.00   0.0
ASPA   29.37 166 iPd   34 11.10  -3.2X
     Z 20s      3.80um          5.0Msz
                iS     39 10.20
                iScS   44 49.90
                LR     48 38.50
NANU   29.40 201 eP    34 13.50  -1.1
       0.6s    55.00nm          5.4mb
BDT    29.56 297 eP    34 17.00   0.9
       1.0s    69.00nm          5.3mb
CHG    30.21 299 ePd   34 22.00   0.2
       0.9s    29.41nm          5.0mb
                eS     39 54.00
KMI    30.35 314 eP    34 23.00  -0.3
     Z 23s      9.40um          5.4MszX
     E 15s      1.90um
                e      34 24.00
                sP     34 55.00
                PP     35 22.50
                eS     39 11.00
                sS     39 41.00
WARB   30.98 180 eP    34 27.00  -1.5
       0.3s    7.00nm           4.9mb
CTA    31.58 143 iPd   34 34.00   0.2
       1.3s    90.38nm          5.4mb
                iS     39 36.00
                iScP   41 07.20
TSRJ   31.64  15 eP    34 36.30   2.1
IIDJ   32.13  18 eP    34 37.90  -0.6
MEKA   32.34 193 iPd   34 39.10  -1.3
       0.3s    46.00nm          5.8mb
CHJJ   32.99  19 eP    34 44.00  -1.9
MTMJ   33.12  17 eP    34 48.90   1.7
MAT    33.20  17 (P)   34 47.00  -0.8
       1.1s    17.72nm          4.8mb
     Z 20s      4.96um          5.2Msz
                eS     39 53.00
KAKJ   33.52  20 eP    34 56.20   5.7X
NIIJ   34.08  18 eP    34 55.60   0.2
YAMJ   35.26  19 eP    35 05.20  -0.3
MRWA   35.47 196 iPd   35 06.30  -1.0
       0.4s    21.00nm          5.4mb
FORR   35.66 178 eP    35 09.00   0.2
       0.4s    41.00nm          5.7mb
BJI    36.13 346 eP    35 12.50  -0.2
       1.0s   157.00nm          5.9mb
     Z 22s      2.77um          5.0Msz
                eS     40 46.00
                esS    41 00.00
                eScP   41 22.50
                eScS   45 31.00
HNR    36.27 113 eP    35 33.00   18.7X
OFUJ   36.62  20 eP    35 21.10   4.2X
LZH    37.32 329 Pc    35 20.00  -3.1X
       1.2s   207.00nm          5.9mb
     Z 24s      8.10um          5.4MszX
     N 15s      1.50um
     E 16s      1.80um
                pP     35 33.50   51kmX
                sP     35 38.50
                PP     36 55.00
                PPP    37 18.00
                PcP    37 26.00
                eS     41 13.00
                i      41 21.00

                sS     41 39.00
                SS     43 44.00
RMQ    37.98 147 eP    35 28.00  -0.5
MUN    38.04 194 iPd   35 28.50  -0.4
NWAO   38.71 193 eP    35 34.00  -0.5
SHL    38.97 305 iP    35 36.60  -0.5
                iS     41 33.40
STK    39.37 160 eP    35 42.00   2.0
                e      35 46.00
                e      35 55.00
RKG    39.86 192 eP    35 49.00   5.0X
CMS    40.68 154 eP    35 51.00   0.2
BRS    40.98 143 iPc   35 52.10  -1.3
       0.8s    18.00nm          4.9mb
                i      35 58.00
                i      36 03.00
                e(PP)  37 53.00
                e      41 42.00
                eS     42 04.00
ADE    41.36 165 e(P)  35 55.80  -0.6
       0.9s   117.65nm          5.7mb
BWA    44.31 154 eP    36 21.90   1.4
BFD    44.53 162 eP    36 22.00  -0.1
GUN    44.82 305 P     36 24.20  -0.9
PKI    45.08 304 P     36 27.00  -0.1
KKN    45.27 305 P     36 28.20  -0.2
CAN    45.32 154 eP    36 29.80   1.3
DMN    45.34 304 P     36 29.00  -0.1
CNB    45.48 154 eP    36 31.00   1.2
GKN    45.87 305 P     36 33.00  -0.2
TOO    45.87 159 eP    36 34.00   1.2
DZM    47.44 126 iPc   36 44.30  -1.2
HYB    48.50 289 eP    36 52.00  -1.7
       0.8s    38.50nm          5.5mb
                i      36 54.00
KOD    48.85 279 eP    36 57.00   0.2
GBA    49.10 284 P     36 47.00  -11.3X
NDI    52.26 303 iPd   37 20.50  -1.7
       0.8s    33.58nm          5.4mb
BOM    54.11 290 eP    37 25.00  -10.9X
QUE    61.30 302 eP    38 25.00  -1.7
MSZ    61.79 148 P     38 29.30  -0.1
MAIO   68.59 307 iPc+  39 12.20  -1.3
       1.0s    18.00nm          5.0mb
                eS     48 28.00
IR4    75.39 305 eP    39 53.60  -0.5
IR1    75.58 305 eP    39 54.50  -0.6
IR7    75.66 305 eP    39 54.80  -0.8
TAB    79.22 308 eP    40 10.00  -5.2X
                e      40 17.00
TTA    79.89  27 eP    40 19.50   1.3
KDC    81.01  32 eP    40 24.40   0.4
BRW    81.07  19 eP    40 25.50   1.3
IMA    81.34  24 eP    40 26.60   0.7
       0.8s    18.30nm          5.1mb
PMR    82.96  29 eP    40 34.00  -0.1
       1.0s    42.50nm          5.4mb
FBA    83.69  25 eP    40 37.60  -0.3
TOA    84.38  28 eP    40 42.70   1.3
SBA    85.59 172 (P)   40 50.20   3.1X
KEV    88.65 340 eP    41 03.00   0.9
KAS    88.80 311 eP    41 04.50   1.0
PRNI   88.82 300 e(P)  41 04.00   0.2
MBH    88 97 300 eP    41 04.00  -0.4
INK    89.09  21 eP    41 03.50  -0.7
SOD    89.24 338 iP    41 05.00   0.1
NAI    89.81 269 eP    41 10.00   1.0
SUF    90.35 333 iP    41 09.80  -0.4
       0.7s    35.30nm          5.8mb
MBC    90.79  13 eP    41 13.00   1.0
       0.8s     8.00nm          5.1mb
NUR    91.51 331 iP    41 15.60   0.1
       0.9s    55.80nm          6.0mb
VRI    93.25 316 ePc   41 23.50  -0.4
MLR    93.85 316 ePd   41 27.00   0.1
SPA    94.95 180 iPc   41 32.90   1.5
       0.9s    14.09nm          5.4mb
     Z 20s      1.71um          5.5Msz
UPP    95.07 331 iP    41 24.60  -7.3X
DAG    96.01 352 iPd   41 34.80  -1.2
       1.0s    39.00nm          5.9mb
KRA    96.73 322 eP    41 39.70   0.0
       0.7s    30.00nm          5.9mb
     Z 16s      1.00um          5.4MszX
                e      41 45.70
                e      41 53.70
HFS    96.82 332 eP    41 38.50  -1.4
```

12d 15h

1.6s 169.00nm 6.3mb
VAY 97.13 313 eP 41 39.40 -2.3
NB2 97.58 334 P 41 42.20 -1.2
0.8s 16.50nm 5.6mb
OHR 98.47 313 eP 41 42.00 -5.8X
KSP 98.72 323 ePd 41 49.30 0.6
e 42 31.50
BUL 99.10 250 iPc 42 05.50 14.4X
1.1s 14.56nm
PRU 100.06 323 Pdiff 41 54.60 -0.2X
Z 19s 2.10um 5.7Msz
N 19s 1.10um
E 20s 1.70um
BRG 100.11 324 iPdiff41 55.40 0.4X
1.2s 30.00nm 5.8mb
i 42 14.20
i 42 37.50
e 45 20.00
CLL 100.50 324 iPdiff41 56.90 0.2X
1.3s 21.00nm 5.6mb
KHC 100.95 322 ePdiff41 59.00 0.2X
e 48 46.60
PNT 101.46 38 ePdiff42 02.00 0.9X
0.7s 8.00nm 5.5mb
GDH 105.93 0 ePKP 46 21.00 -11.6X
e 46 43.00
KVN 106.17 47 Pdiff 42 22.00 -0.6X
BCAO 107.45 276 ePKPd 46 42.10 4.9X
0.6s 4.00nm
id 46 53.30
GOL 114.81 42 PKP 46 51.00 0.2
KIC 130.05 283 PKP 47 20.92 0.6
0.8s 20.00nm
LKO 130.13 287 PKP 47 22.06 1.6
TIC 130.26 283 PKP 47 21.24 0.5
LIC 130.35 282 PKP 47 21.20 0.3
0.9s 23.00nm
SJS 146.14 64 iPKPc 47 52.80 3.0X
LCR2 146.27 64 ePKP 47 54.70 4.6X
LNV 146.71 152 iPKPd 47 53.00 3.1X
CHCH 147.07 153 ePKP 47 53.00 2.3
PCH 147.40 153 ePKP 47 54.70 3.5X
ROCH 147.71 152 ePKP 47 55.70 3.8X
FCH 147.74 153 ePKP 47 57.50 5.4X
UPA 150.57 62 iPKP 48 02.50 6.0X
1.2s 131.25nm
TCA 151.78 160 e(PKP)48 02.00 4.0X
ARE 158.98 124 e(PKP)48 19.00 10.9X
CNCB 161.56 131 PKP 48 14.00 2.9X
LPB 161.64 130 ePKP 48 07.00 -4.0X
Z 24s 1.55um
LR 44 40.00
ZOBO 161.78 129 PKPc 48 13.00 1.7
1.1s 17.40nm
Z 24s 0.55um
LR 44 32.00
BAO 168.11 207 e(PKP)48 16.00 -0.2
S.D. = 1.1 on 97 of 139 obs.

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* JAN 12, 1990 16h 02m 02.63± 0.73s
36.069 N ± 7.9km 27.307 E ± 9.2km
DEPTH = 33.0km (normal)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP 0.53 192 ePn 02 13.60 -0.1
YER 1.32 36 ePn 02 25.00 0.0
NPS 1.60 240 ePn 02 29.00 0.1
SMG 1.68 347 ePn 02 30.00 -0.1
KSL 1.84 88 ePn 02 32.50 0.0
ELL 2.21 71 ePn 02 42.40 4.6X
S.D. = 0.1 on 5 of 6 obs.

? JAN 12, 1990 16h 25m 30.16± 4.74s
43.840 N ±23.6km 8.713 E ±24.5km
DEPTH = 10.0km (geophysicist)
CORSICA (380)
ML 2.0 (GEN).

FIN 0.52 316 P 25 40.73 0.1
S 25 47.70
IMI 0.60 277 P 25 42.37 0.0
S 25 50.16
PCP 0.71 350 P 25 44.25 0.0
S 25 53.50
ROB 0.76 307 P 25 44.93 -0.1
S 25 54.47
ENR 1.01 293 P 25 49.52 0.2
S 26 02.08
STV 1.08 292 P 25 50.37 -0.2
S 26 04.14
PZZ 1.34 300 P 25 54.87 0.0
S 26 10.52
S.D. = 0.1 on 7 of 7 obs.

JAN 12, 1990 18h 21m 34.68± 0.29s
22.228 S ± 4.6km 69.916 W ± 6.8km
DEPTH = 42.3km (2 depth phases)
5.0mb (5 obs.)
NORTHERN CHILE (123)
Felt (V) in the Tocopillo area.

ANT 1.54 197 iPc 22 00.20 0.1
i 22 11.90
iS 22 17.80
YJA 4.09 90 ePd 22 37.20 0.4
SLA 4.76 122 e(P) 22 52.50 6.5X
CNCB 5.69 19 P 23 05.20 5.7X
LPB 5.92 17 P 23 03.00 0.4
1.0s 400.00nm 5.9mb
i 23 09.00
S 24 34.00
ARE 5.93 345 eP 23 01.00 -1.6
iS 24 06.80
CCH 5.99 37 Pc 23 12.80 9.4X
ZOBO 6.16 16 Pd 23 10.50 4.3X
S 24 12.00
CYA 7.23 150 iPd 23 21.60 1.1
ZON 9.35 173 ePd 23 54.00 4.1X
TCA 10.24 153 eP 24 01.00 -1.2
ROCH 10.75 185 eP 24 20.90 11.7X
MRA 10.81 161 ePc 24 08.00 -1.8
FCH 11.06 182 eP 24 14.50 0.9
LCCH 11.30 187 eP 24 30.00 13.5X
iS 26 47.80
PCH 11.36 183 eP 24 26.50 9.0X
CHCH 11.68 183 iPd 24 35.40 13.7X
iS 26 48.00
LNV 11.76 186 iPd 24 34.10 11.4X
iS 26 57.10
RFA 12.56 175 e(P) 24 29.00 -4.5X
BAO 21.74 76 e(P) 26 24.00 -0.5
FVM 62.92 342 e(P) 31 57.20 -1.7
ALQ 66.60 328 iPc 32 23.30 0.2
1.0s 12.50nm 4.9mb
SPA 67.91 180 iPc 32 30.90 -0.1
1.0s 14.50nm 5.0mb
i 32 43.30 42km
LIC 69.49 74 P 32 41.20 -0.1
TIC 69.68 74 P 32 42.90 0.4
KIC 69.80 74 P 32 43.30 0.1
0.7s 7.00nm 4.8mb
GOL 69.94 332 eP 32 43.90 0.0
LKO 70.49 71 P 32 48.54 1.1
PRI 75.30 320 e(P)c 33 17.00 1.5
LLA 75.79 320 e(P)c 33 18.50 0.4
KVN 75.82 323 ePd 33 18.50 0.1
pP 33 31.00 42km
CMB 76.41 321 eP 33 21.10 -0.5
MHC 76.69 320 ePc 33 24.20 0.9
GCC 76.69 320 ePc 33 23.80 0.7
LRM 77.96 331 eP 33 31.20 0.9
ORV 78.08 322 ePc 33 31.70 1.0
WDC 79.36 322 ePc 33 36.70 -1.0
SES 80.92 335 ePc 33 45.20 -0.7
FFC 81.42 342 iPc 33 47.80 -0.5
1.2s 25.00nm 5.1mb
FRB 85.69 1 eP 34 05.00 -4.7X
WRA 131.85 211 PKPd 40 45.50 -0.2
0.9s 5.00nm
WB5 131.89 211 ePKP 40 45.50 -0.3
KOD 146.57 106 ePKP 41 16.00 3.2X
GBA 147.83 100 PKP 41 17.00 2.6X
NDI 149.70 71 iPKP 41 23.00 6.0X
HYB 149.99 93 ePKPd 41 23.50 5.7X
e 41 36.50
MAT 151.77 307 ePKP 41 26.00 6.1X
0.8s 30.60nm
S.D. = 0.9 on 30 of 47 obs.

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* JAN 12, 1990 18h 51m 12.27± 1.47s
32.386 S ±14.7km 179.707 W ±18.8km
DEPTH = 83.0 ± 14.0 km
5.0mb (2 obs.)
SOUTH OF KERMADEC ISLANDS (179)

RAO 3.48 27 eP 52 05.00 -0.2
S 52 47.70
KRP 6.76 214 P 52 51.20 0.5
DZM 16.02 306 iPc 55 01.10 7.1X
WRA 42.76 275 Pc 59 02.90 -0.3
0.3s 1.80nm 4.4mb
WB5 42.77 275 eP 59 03.00 -0.3
FORR 44.11 257 eP 59 14.00 0.0
SPA 57.79 180 iPc 00 56.30 -0.7
0.8s 37.50nm 5.5mb
BUL 121.15 211 iPKPd 10 10.30 12.7X
1.0s 5.00nm
SUF 145.48 339 iPKP 10 40.80 -0.6
BCAO 147.36 215 iPKPc 10 45.00 -1.0
0.6s 10.00nm
id 10 46.20
NUR 147.63 338 iPKP 10 44.60 -0.3
NB2 150.46 349 PKP 10 53.60 4.2X
0.8s 9.80nm
HFS 150.86 346 ePKP 10 52.70 2.8
0.4s 1.90nm
KIC 153.68 169 (PKP) 11 00.10 4.7X
S.D. = 1.3 on 10 of 14 obs.

& JAN 12, 1990 19h 50m 56.50s
36.340 N 120.370 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.0 (BRK), 3.2 (PAS).

PRI 0.31 230 iPd 51 02.60 -0.2
PKEM 0.35 143 iPc 51 04.00 0.4
PHAM 0.50 183 eP 51 06.00 -0.6
LLA 0.54 301 ePc 51 07.20 -0.1
PRS 0.81 270 ePc 51 10.90 -1.6
FRI 0.84 39 iPd 51 12.40 -0.7
SAO 0.96 296 iPd 51 14.50 -0.7
BCH 1.18 169 eP 51 16.70 -2.2
ARN 1.37 318 eP 51 20.50 -1.7
MHC 1.43 315 ePd 51 21.70 -1.4
GCC 1.48 298 e(P) 51 21.80 -1.8
ISA 1.68 113 eP 51 24.90 -1.7
CMB 1.69 360 ePc 51 26.00 -0.8
iS 51 48.10
ABL 1.76 147 eP 51 24.60 -3.3
BLP 1.78 181 e(P) 51 25.30 -2.6
TNP 3.06 54 eP 51 46.00 -0.5
KVN 3.25 33 eP 51 49.70 0.5
ORV 3.33 345 eP 51 49.50 -0.7
PLM 4.15 135 eP 51 58.20 -3.7
19 obs. associated

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* JAN 12, 1990 20h 10m 01.94± 0.98s
42.299 N ±10.7km 15.535 E ±10.3km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)

DUI 1.03 232 P 10 22.30 0.9
eSg 10 36.50
HVAR 1.11 37 iPg 10 23.00 0.3
iSg 10 39.70
SDI 1.41 246 P 10 26.50 -1.2
eSg 10 46.50
SGO 1.75 186 P 10 33.00 0.5
eSg 10 53.50
BRT 1.89 138 P 10 34.00 -0.6
eSg 10 56.00
S.D. = 1.2 on 5 of 5 obs.

JAN 12, 1990 22h 17m 05.90± 0.16s
53.896 N ± 2.5km 131.424 W ± 3.1km
DEPTH = 10.0km (geophysicist)
5.3mb (54 obs.) 4.2Msz (2 obs.)
QUEEN CHARLOTTE ISLANDS REGION (22)
Felt (IV) ot Masset, Port Clements, Juskotlo, Tlell, Prince Rupert ond on Bonilla Island, British Columbio. Also felt (IV) ot Ketchikon ond Metlokotlo, Alosko. Also felt at Kitimat, Lownhill, Sondspit, Skidegote, Smithers and Terrace, British Columbio.

MSTB 0.42 285 Pc 17 15.40 0.9

BNAB	0.62	130	P	17	16.30	-2.0	ANMO	25.79	127	eP	22	38.50	-0.2		0.9s	21.90nm		5.2mb					
			S	17	23.80			1.1s	15.82nm			4.6mb		FEL	72.94	27	eP	28	38.35	1.4
CWB	0.81	205	Pd	17	20.50	-1.2	ALQ	25.79	127	iPc	22	38.80	0.1	KHC	73.18	23	iPd	28	39.40	1.2
NDB	0.90	274	P	17	22.50	-0.7		1.0s	12.50nm			4.6mb			1.0s	7.00nm		4.7mb		
VIB	0.93	226	Pd	17	22.60	-1.1	MEO	29.88	116	iPd	23	15.50	-0.1	AGO	73.19	31	P	28	38.71	0.4
LIB	1.03	291	Pc	17	24.80	-0.5	SIO	30.39	112	e(P)	23	19.60	-0.5	RJF	73.35	33	eP	28	39.10	-0.1
BNB	1.34	189	Pd	17	28.80	-1.8	TUL	30.55	111	eP	23	20.20	-1.3		1.1s	45.90nm		5.5mb		
BBB	2.63	129	Pc	17	46.40	-2.7		1.0s	33.30nm			5.2mb		PLDF	73.41	31	P	28	38.81	-0.8
SIT	3.87	327	eP	18	06.10	-0.5	Z	20s	0.27um			3.9Msz		PYM	73.42	31	P	28	37.56	-2.1
PHC	4.03	141	P	18	05.70	-3.1			LR		34	00.00		LFF	73.42	33	eP	28	39.90	0.3
FSB	4.21	79	P	18	08.80	-2.8	FRB	32.65	47	eP	23	39.00	-0.6		0.7s	22.00nm		5.3mb		
EDB	4.83	145	P	18	18.23	-2.1		1.0s	69.00nm			5.5mb		TIY	73.49	312	eP	28	40.50	0.2
CBB	5.38	133	P	18	25.94	-2.2	PWLA	35.58	104	eP	24	03.80	-1.3	KRA	73.65	19	eP	28	41.30	0.4
BTB	5.76	138	P	18	31.24	-2.3	SCH	36.48	62	eP	24	12.00	-0.6				e	28	44.50	
WHC	7.14	345	P	18	52.10	-0.8	GDH	37.12	35	iPc	24	19.20	1.5	LPO	73.80	33	eP	28	42.10	0.3
PGC	7.25	133	eP	18	56.00	1.6		1.0s	20.00nm			4.8mb			0.8s	21.40nm		5.2mb		
OBC	7.48	139	eP	18	58.26	0.6	BLA	38.49	94	eP	24	28.50	-1.2	CAF	73.86	32	eP	28	42.40	0.2
MCW	7.50	131	eP	18	59.56	1.6		0.8s	33.56nm			5.1mb			1.1s	30.20nm		5.2mb		
OSD	7.80	138	eP	19	02.40	0.1	DAG	42.96	18	iPd	25	10.10	4.2X	LBL	73.96	32	P	28	44.10	1.4
MBW	7.86	127	eP	19	04.73	1.7		1.0s	41.00nm			5.1mb		SPC	74.54	19	eP	28	45.40	-0.9
CMW	8.01	129	eP	19	06.40	1.2	SOD	57.94	10	iP	27	03.40	3.4X	LPG	74.76	29	eP	28	48.60	0.8
OBH	8.14	141	eP	19	09.12	2.2	NB2	61.63	20	P	27	24.80	-0.7		0.7s	6.60nm		4.8mb		
HDW	8.20	136	eP	19	07.93	0.2		1.0s	19.20nm			5.2mb		ZST	74.85	21	eP	28	52.40	4.5X
JCW	8.27	130	eP	19	09.20	0.6	SUF	62.40	11	eP	27	29.50	-1.1	EPF	74.99	34	eP	28	48.90	0.1
RPW	8.27	127	eP	19	09.06	0.3	CN2	62.70	307	Pc	27	31.80	-1.0		1.1s	24.40nm		5.1mb		
SMW	8.35	139	eP	19	11.41	1.6	HFS	62.95	19	eP	27	34.70	0.5	KBA	75.05	24	ePc	28	48.00	-1.3
GMW	8.39	136	eP	19	11.64	1.3		0.6s	2.60nm			4.6mb			1.2s	21.40nm		5.1mb		
HTW	8.63	131	eP	19	14.30	0.6	EKA	63.12	30	P	27	39.00	3.6X				e	28	52.50	
PNT	8.66	117	eP	19	13.00	-1.1		1.0s	29.30nm			5.4mb		NJ2	75.16	304	Pc	28	49.50	-0.4
RMW	8.87	133	eP	19	18.00	0.9	DMU	63.17	33	eP	27	39.00	3.2X	SRO	75.47	21	eP	28	51.40	0.0
BMW	9.10	141	eP	19	19.50	-0.6	DLE	63.81	33	eP	27	36.80	-3.2X	SBF	76.46	29	eP	28	57.90	0.8
LON	9.43	135	eP	19	23.00	-1.7	NUR	64.36	13	iP	27	41.70	-1.7		0.7s	18.50nm		5.3mb		
DPW	10.30	121	eP	19	36.00	-0.7		0.9s	38.90nm			5.6mb		FRF	76.50	30	eP	28	57.70	0.4
EDM	10.77	86	eP	19	39.50	-3.7X			i		27	47.00			0.7s	8.80nm		5.0mb		
VGB	10.85	136	eP	19	46.00	1.8	SNY	65.10	307	Pd	27	48.30	-0.2	LRG	76.51	30	eP	28	58.40	1.1
DWY	10.98	341	P	19	45.00	-0.9	WTS	68.86	26	eP	28	17.00	4.9X	LMR	76.67	30	eP	28	58.80	0.6
TOA	11.33	322	eP	19	52.90	2.2		1.0s	25.00nm			5.4mb			0.8s	10.70nm		5.0mb		
PMR	12.17	316	eP	20	02.20	0.2	FLN	69.65	32	eP	28	16.80	-0.2	VBY	76.98	23	e(P)	29	04.50	4.6X
	1.1s	34.40nm			5.5mb			0.7s	24.20nm			5.5mb		WMQ	77.07	332	P	29	01.80	1.2
SES	12.99	97	eP	20	11.00	-2.1	ENN	69.74	27	eP	28	18.00	0.5				pP	29	05.00	10kmX
FBA	13.77	330	eP	20	22.80	-0.4		0.8s	54.00nm			5.7mb		GTA	77.14	322	eP	29	00.00	-1.1
FHC	14.03	156	e(P)	20	29.30	2.6			i		28	22.20		FIR	77.60	27	eP	28	58.00	-5.3X
			e	20	36.50		GRR	69.86	33	eP	28	18.40	0.1	XAN	78.11	312	P	29	06.20	-0.2
LBFM	14 09	149	eP	20	28.50	0.8		0.7s	33.00nm			5.6mb		LZH	78.49	317	Pc	29	12.50	3.9X
INK	14.50	357	eP	20	33.00	0.3	MEM	69.91	27	P	28	19.20	0.7		1.6s	0.04nm		2.3mb X		
WDC	14.61	152	ePc	20	35.50	1.2			i		28	23.40		ASMO	78.54	40	iP	29	07.50	-1.3
			i	20	42.70		LDF	69.91	32	eP	28	18.50	-0.1	WHN	78.58	307	P	29	08.50	-0.4
LRM	14.63	116	eP	20	35.20	0.3		0.7s	22.90nm			5.4mb					pP	29	12.50	13kmX
SVW	14.81	309	eP	20	36.00	-0.9	BJI	69.92	311	eP	28	15.00	-3.8X	ALOJ	78.62	40	iPc	29	14.40	5.1X
MIN	15.09	150	e(P)	20	40.70	-0.1	DOU	69.98	28	Pc	28	19.50	0.5	ATEJ	78.82	40	eP	29	12.00	1.6
			i	20	47.80				e		28	23.30		VRI	78.88	15	eP	29	11.00	0.6
TTA	15.64	315	eP	20	46.50	-1.3	ABH	70.98	27	eP	28	25.52	0.4	APHE	78.91	40	eP	29	11.60	0.7
ORV	15.85	151	e(P)	20	50.30	-0.2	CLL	71.01	23	eP	28	26.00	0.7	SKO	81.70	20	eP	29	25.00	-0.5
			e	20	55.60		RUP	71.02	27	eP	28	25.82	0.4	OHR	82.40	21	eP	29	27.80	-1.4
IMA	16.39	327	eP	20	58.80	1.5	HHC	71.26	314	P	28	27.00	-0.1	VAY	82.56	19	eP	29	30.40	0.5
	1.5s	172.80nm			5.0mb		BRG	71.64	22	eP	28	29.00	0.0	CD2	83.02	315	eP	29	32.20	-0.4
IMW	16.72	118	eP	21	02.50	0.6		1.6s	30.00nm			5.1mb		GYA	85.60	310	iPd	29	46.00	0.3
FFC	17.15	75	eP	21	03.00	-3.9X			i		28	34.00		ARE	86.70	124	eP	29	52.00	0.6
	0.7s	23.00nm			4.4mb		MFF	71.66	33	eP	28	29.30	0.1	ZOBO	88.22	121	Pd	29	57.00	-2.0
KVN	17 41	143	eP	21	11.00	0.6		0.7s	14.10nm			5.2mb			1.0s	19.50nm		5.4mb		
CMB	17 59	150	eP	21	13.00	0.5	GRC	72.05	31	P	28	31.80	0.3	Z	18s	0.17um		4.5Msz		
	1 2s	24 31nm			4.2mb X		BTO	72.12	315	eP	28	31.50	-0.7			eLR	00	36.00		
ARN	17 91	154	eP	21	15.80	-0.7	KSP	72.17	21	eP	28	30.00	-2.2	LPB	88.46	121	P	30	01.00	1.0
BW06	18 22	119	eP	21	21.50	0.9	CDF	72.25	27	eP	28	33.00	0.1	CNCB	88.75	121	P	30	01.00	-0.5
TNP	18 59	143	eP	21	25.50	0.5		0.9s	16.30nm			5.1mb		MAIO	89.68	351	eP	30	06.00	0.7
DUG	18 59	130	eP	21	25.50	0.5	LOR	72.31	30	eP	28	33.30	0.2	GUN	92.37	328	P	30	18.80	0.7
	1.1s	26 32nm			4.3mb			0.8s	32.20nm			5.5mb			1.0s	72.00nm		6.0mb		
LLA	18.75	153	eP	21	28.30	1.4	HAU	72.37	28	eP	28	33.50	0.1	KKN	92.67	328	P	30	20.00	0.7
FRI	18 75	150	ePc	21	27.50	0.7		0.8s	8.00nm			4.9mb			0.9s	21.00nm		5.5mb		
ISA	20 36	148	eP	21	45.00	-0.1	SSF	72.39	31	eP	28	33.90	0.3	GKN	92.67	329	P	30	19.60	0.3
CLC	20.50	146	eP	21	47.00	0.5		0.9s	43.20nm			5.5mb			1.2s	38.00nm		5.7mb		
BRW	20.69	337	eP	21	48.90	0.8	LSF	72.51	32	eP	28	34.30	0.0	PKI	92.83	328	P	30	20.40	0.2
ABL	20.89	151	eP	21	50.60	-0.1		0.9s	32.70nm			5.4mb			1.0s	14.00nm		5.3mb		
GSC	21.23	145	eP	21	53.00	-1.1	AVF	72.59	31	eP	28	34.40	-0.3	DMN	92.89	328	P	30	21.20	0.8
SBB	21.46	148	eP	21	56.00	-0.4		0.9s	31.70nm			5.4mb			0.9s	27.00nm		5.7mb		
MWC	21.82	149	eP	22	01.00	0.9	PRU	72.60	22	eP	28	38.50	3.7X	WRA	108.33	261	PKPc	35	38.60	2.8X
PAS	21.85	149	eP	22	01.00	0.7	LBF	72.60	30	eP	28	34.80	-0.1		0.7s	1.00nm				
RVR	22.24	148	eP	22	04.00	-0.1		1.1s	32.70nm			5.3mb		SPA	143.71	180	ePKP	36	22.90	-18.4X
GOL	22.63	118	eP	22	09.00	0.8	BGF	72.65	31	eP	28	34.90	-0.2		1.1s	23.81nm				
	1.2s	90.16nm			5.1mb			0.8s	27.40nm			5.4mb		KSR	147.70	39	ePKP	36	51.00	1.7X
MBC	22.91	7	eP	22	12.00	1.7	BSF	72.65	28	eP	28	35.20	0.0	POF	147.87	52	iPKPd	36	54.00	4.8X
	1.0s	77.00nm			5.2mb			1.1s	14.60nm			5.0mb			0.6s	6.67nm				
PLM	23.00	147	eP	22	13.00	1.2	TCF	72.69	32	eP	28	35.10	-0.3	SLR	148.08	36	iPKPd	36	52.50	2.6X
RSON	23.05	82	eP	22	11.00	-0.9		0.9s	26.20nm			5.3mb			0.9s	12.60nm				
	1.0s	58.30nm			5.1mb		MAF	72.86	32	eP	28	36.50	0.1	BFS	148.59	40	ePKP	36	56.00	5.3X
BAR	23 68	148	eP	22	19.00	0.8		1.0s	26.00nm			5.3mb			0.6s	12.00nm				
GLA	23.95	144	eP	22	22.00	1.1	SMF	72.87	30	eP	28	36.10	-0.3	BLF	150.34	42	ePKP	37	02.00	8.7X

12d 22h

HVD 151.37 45 ePKP 36 34.00 -20.8X
S.D. = 1.1 on 161 of 184 obs.

JAN 12, 1990 22h 48m 15.52± 0.47s
53.831 N ± 5.5km 131.400 W ± 5.5km
DEPTH = 10.0km (geophysicist)
4.2mb (5 obs.)
QUEEN CHARLOTTE ISLANDS REGION (22)
Felt ot Prince Rupert, British Columbio. Also felt in the northern part of Grohom Islond.

MST8	0.46	292	P	48 25.60	0.8
BNAB	0.57	126	P	48 26.50	-0.5
			S	48 34.00	
CWB	0.76	208	P	48 31.00	0.6
VIB	0.89	230	Pd	48 33.10	0.4
NDB	0.92	278	P	48 33.30	0.2
LIB	1.07	294	Pc	48 35.10	-0.5
BNB	1.28	190	Pd	48 39.20	0.0
BBB	2.58	128	P	48 56.70	-1.3
SIT	3.93	327	eP	49 16.80	-0.3
			iS	50 16.80	
FSB	4.21	78	P	49 18.00	-3.2X
EDB	4.77	144	P	49 28.65	-0.4
BTB	5.70	138	P	49 41.63	-0.7
WHC	7.21	345	P	50 02.10	-1.4
PNT	8.62	117	eP	50 25.00	1.9
LON	9.37	135	eP	50 37.50	4.0X
PWA	12.56	316	e(P)	51 15.70	-1.2
SES	12.97	97	eP	51 24.00	1.6
FBA	13.83	330	eP	51 33.00	-0.7
INK	14.56	357	eP	51 46.00	2.8
SVW	14.86	309	eP	51 54.20	7.0X
TTA	15.70	315	eP	51 59.00	0.9
	1.1s		28.13nm	4.4mb	
IMA	16.45	327	eP	52 08.00	0.3
	1.0s		17.50nm	4.1mb	
FFC	17.15	75	eP	52 15.00	-1.5
	0.5s		4.00nm	3.8mb	
KVN	17.35	143	eP	52 22.80	3.5X
TNP	18.52	143	eP	52 37.50	3.6X
BRW	20.75	337	e(P)	52 55.70	-2.7
M8C	22.97	7	eP	53 22.50	1.9
	1.0s		16.00nm	4.5mb	
ANMO	25.74	127	eP	53 52.00	4.2X
	0.9s		3.15nm	4.0mb	

S.D. = 1.4 on 22 of 28 obs.

JAN 12, 1990 23h 12m 44.69± 1.05s
31.510 S ±10.8km 69.547 W ± 9.3km
DEPTH = 146.0 ± 13.1 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.74	93	iPd	13 07.50	0.1
			eS	13 22.00	
RTCV	0.93	112	iPc	13 08.70	-0.1
RTLL	0.94	79	eP	13 08.30	-0.6
JACH	1.47	217	iPc	13 14.50	0.5
			iS	13 35.00	
ROCH	1.91	220	iPc	13 19.00	-0.2
			iS	13 43.00	
FCH	1.92	199	iPd	13 20.10	0.7
			iS	13 45.50	
SAN	2.15	206	iPc	13 22.20	0.3
			e	13 47.20	
			iS	13 48.60	
PCH	2.26	201	ePd	13 23.70	0.5
			iS	13 52.50	
TACH	2.44	208	iPc	13 24.60	-0.7
			iS	13 55.50	
CHCH	2.59	201	iPc	13 27.90	0.6
			iS	14 00.00	
LCCH	2.60	221	iPc	13 27.20	-0.1
			iS	13 59.10	
LNV	2.90	212	iPc	13 30.10	-1.0
			iS	14 01.60	
RFA	3.38	165	ePd	13 37.00	-0.4
TCA	4.24	89	ePd	13 49.00	0.2
CYA	4.46	48	iPc	13 52.00	0.2

S.D. = 0.6 on 15 of 15 obs.

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* JAN 12, 1990 23h 33m 05.35± 0.89s
64.989 N ±12.3km 149.243 W ± 7.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ALASKA (1)

FBA	0.62	98	iPc	33 18.50	0.6
IMA	2.14	302	eP	33 42.00	0.3
PMR	3.41	179	eP	34 00.00	0.4
TTA	3.63	238	eP	34 02.40	-0.4
DWY	4.34	98	P	34 12.00	-0.9
INK	7.07	55	eP	34 49.00	-2.3X

S.D. = 0.9 on 5 of 6 obs.

? JAN 12, 1990 23h 33m 15.37± 1.65s
52.329 N ±31.6km 169.284 W ±14.2km
DEPTH = 33.0km (normal)
4.5mb (4 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK	4.58	267	eP	34 24.50	0.4
INK	23.35	33	eP	38 22.00	0.9
MBC	30.55	21	eP	39 28.00	0.6
	0.5s		3.00nm	4.3mb	
SES	35.57	69	eP	40 11.00	-0.3
SUF	64.65	352	iP	43 51.20	-0.2
NUR	66.96	353	eP	44 05.00	-1.2
NB2	66.98	360	P	44 06.20	-0.2
	0.7s		3.00nm	4.5mb	
HFS	67.87	358	eP	44 10.90	-1.0
	0.4s		4.10nm	4.9mb	
KBA	80.95	358	iPd	45 28.70	1.0
	0.8s		5.10nm	4.6mb	

S.D. = 0.9 on 9 of 9 obs.

JAN 13, 1990 00h 23m 15.22± 0.65s
44.268 N ± 4.6km 15.271 E ± 7.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (KBA), 2.8 (ZAG), 2.6 (LJU). MD 3.0 (TRI).

VBY	1.24	360	ePg	23 36.40	-1.8
VBY	1.24	360	iPn	23 37.40	-0.8X
			iSg	23 52.70	
			iSn	23 55.70	
RIY	1.25	330	ePg	23 37.60	-0.7
			iSg	23 55.00	
HVAR	1.38	142	iPn	23 40.80	0.3
			iSn	24 01.60	
CEY	1.59	338	ePn	23 43.50	0.0
			eSn	24 05.00	
ZAG	1.63	18	eP	23 45.80	1.8
			iSg	24 06.00	
PTJ	1.70	16	ePn	23 44.60	-0.6
			eSg	24 04.20	
TRI	1.79	324	ePg	23 45.80	-0.6
			iSg	24 10.70	
LJU	1.85	344	ePn	23 47.90	0.7
			eSn	24 11.50	
ARV	1.85	246	P	23 47.20	-0.1
			eSg	24 10.80	
VOY	2.01	332	ePn	23 49.80	0.1
			eSn	24 18.10	
ASS	2.24	239	P	23 53.60	0.6
			eSn	24 19.10	
CRE	2.48	256	P	23 57.50	1.1
MNS	2.67	226	P	23 58.90	-0.1
SDI	2.77	203	P	23 59.10	-1.5
FVI	2.91	324	P	24 01.90	-0.5
			eSn	24 36.00	
KBA	3.12	335	ePn	24 06.80	1.3
			iPgc	24 15.00	
			i	24 20.90	
			iSn	24 41.10	
			iSg	24 52.60	

S.D. = 1.0 on 16 of 17 obs.

? JAN 13, 1990 01h 18m 29.70± 1.18s
17.388 S ±30.6km 176.882 W ±18.8km
DEPTH = 403.5 ± 9.8 km
4.4mb (6 obs.)
FIJI ISLANDS REGION (181)

MBU	4.22	275	iPd	19 45.30	0.6
SGE	4.96	267	iP	19 53.10	0.9
			e	20 09.00	
AFI	6.01	56	eP	20 02.00	-1.3
DZM	16.37	251	iPc	21 58.10	-0.4
BRS	29.70	245	iPc	24 02.50	0.0
	0.9s		5.50nm	3.9mb	
RMQ	33.05	248	iPd	24 32.40	1.2
	0.6s		43.00nm	5.0mb	
CTA	34.97	260	iPc	24 46.90	-0.5
	0.7s		7.53nm	4.1mb	
TOO	38.63	231	eP	25 19.00	1.5
STK	40.16	241	iPd	25 33.40	3.3X
ADE	43.14	237	eP	25 55.00	0.9
	0.6s		17.33nm	4.6mb	
WB5	46.14	259	eP	26 16.00	-1.7
WRA	46.16	259	Pc	26 14.40	-3.5X
	0.2s		1.10nm	3.8mb	
ASPA	46.34	254	iPd	26 18.30	-1.0
	0.5s		46.00nm	5.1mb	
FORR	51.51	244	eP	26 57.20	-0.9
WARB	52.83	250	eP	27 07.00	-0.9
MBL	59.52	255	eP	27 53.00	-1.7
KVN	78.52	43	eP	29 50.60	1.4
FBA	84.99	12	eP	30 21.40	-0.1
CHTO	90.19	290	eP	30 48.00	1.0
KAS	144.47	319	ePKP	37 21.50	1.1
KHC	147.22	347	ePKP	37 28.70	4.1X
KBA	149.21	346	ePKP	37 31.00	3.0X
	0.5s		1.60nm		
LJU	149.89	344	e(PKP)	37 34.00	5.2X
VOY	150.06	345	e(PKP)	37 32.00	2.8X
VBY	150.19	343	ePKP	37 36.50	7.2X
CEY	150.20	344	e(PKP)	37 35.50	6.2X
OHR	151.88	331	e(PKP)	37 37.30	5.3X

S.D. = 1.2 on 18 of 27 obs.

JAN 13, 1990 01h 25m 36.06± 0.51s
43.642 N ± 5.5km 10.244 E ± 4.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
ML 2.5 (LDG).

PII	0.22	69	P	25 40.20	-0.6
			eSg	25 42.30	
BDI	0.49	31	P	25 45.40	-0.7
			eSg	25 52.30	
MME	0.64	31	P	25 49.00	-0.1
			eSg	25 57.70	
PGD	1.10	77	P	25 56.90	0.1
			eSg	26 11.80	
CRE	1.24	90	P	25 59.50	0.3
BOB	1.26	333	P	26 00.40	0.8
MAO	1.39	151	P	26 02.20	0.7
PGF	1.42	220	Pn	26 01.80	-0.3
			Sn	26 18.40	
CKI	1.62	300	P	26 05.00	0.3
LRG	2.83	268	Pn	26 20.80	-1.3
LPL	3.13	308	Pn	26 27.20	0.6

S.D. = 0.7 on 11 of 11 obs.

JAN 13, 1990 02h 07m 26.84± 0.33s
16.826 N ± 5.1km 99.509 W ± 3.9km
DEPTH = 28.4km (7 depth phases)
5.3mb (42 obs.) 5.0Msz (4 obs.)
NEAR COAST OF GUERRERO, MEXICO (58)
Felt in the Acopulco area.
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 11S, 20C
Centroid Locotion:
Origin Time 02:07:31.5 1.1
Lot 16.33N 0.09 Lon 99.67W 0.08
Dep 34.2 4.9 Holf-durotion 1.8
Moment Tensor; Scole 10**16 Nm
Mrr= 7.41 0.50 Mtt=-8.73 0.89
Mff= 1.31 1.05 Mrt= 4.32 1.57
Mrf=-3.85 1.39 Mtf= 0.62 0.63
Principol Axes:

T	Val= 10.00	Plg=65	Azm= 62
N	0.04	19	284
P	-10.03	16	189

Best Double Couple:Mo=1.0*10**17
NP1:Strike=253 Dip=34 Slip= 54
NP2: 114 63 112

ACX	0.34	277	iP	07 32.43	-2.3
			(S)	07 36.14	
III	1.54	1	iP	07 54.72	1.8
			iS	08 34.91	
PPM	2.38	21	iP	08 06.08	0.8
			(S)	08 30.98	
IIT	2.46	27	iP	08 06.89	0.7
			(S)	09 01.10	
UNM	2.51	7	eP	08 08.00	1.1
			(S)	08 37.00	

CRX	2.57	356	eP	08	09.50	1.7
OXX	2.68	84	iP	08	11.00	1.8
			iS	08	42.63	
IIC	2.93	5	eP	08	13.76	0.9
IISM	2.96	43	iP	08	14.24	1.3
			(S)	08	57.49	
MRX	3.28	331	iP	08	19.50	2.0
			iS	09	05.50	
LVVM	4.10	45	eP	08	29.30	0.1
			(S)	09	15.57	
AGX	5.67	333	(P)	09	09.70	18.3X
SCX	6.59	90	(P)	09	03.60	-0.7
TPX	7.23	104	(P)	09	28.20	14.8X
			(S)	11	22.00	
MZX	9.08	315	(P)	09	40.50	1.4
MEO	17.90	2	iPc	11	34.50	-1.0
SIO	19.06	8	ePc	11	47.50	-2.1
ALQ	19.08	342	iPc	11	49.90	-0.2
	1.3s	72.12nm			4.8mb	
			pP	17	34.30	
ANMO	19.09	342	P	11	49.40	-0.7
	1.5s	118.06nm			4.9mb	
Z	20s	10.64um			5.1Msz	
TUL	19.29	9	iPc-	11	50.10	-2.3
	1.0s	118.00nm			5.1mb	
Z	21s	3.47um			4.8MszX	
			eS	15	27.50	
			LR	16	45.00	
OLY	19.93	20	P	11	57.10	-2.3
UPA	20.96	109	iP-	12	16.00	5.8X
			iS	16	20.00	
GLA	21.26	322	eP	12	13.00	-0.2
BAR	22.13	319	eP	12	21.00	-0.9
RSCP	22.44	31	P	12	23.00	-1.9
CPE	22.53	318	eP	12	36.80	11.0X
FVM	22.54	19	P	12	23.70	-2.2
PLM	22.70	320	eP	12	28.00	0.3
PRM	23.07	39	P	12	32.60	1.5
PEC	23.24	320	P	12	33.50	0.7
GOL	23.36	349	P	12	33.90	-0.2
	0.8s	49.11nm			5.1mb	
Z	20s	10.00um			5.3Msz	
GLD	23.38	349	P	12	33.60	-0.6
	1.2s	35.35nm			4.8mb	
Z	20s	8.00um			5.2Msz	
RVR	23.44	320	eP	12	35.00	0.3
JSC	23.87	40	P	12	39.00	0.2
GSC	24.01	323	eP	12	42.00	1.7
MWC	24.02	320	eP	12	42.00	1.5
PAS	24.04	319	eP	12	42.00	1.5
SBB	24.19	321	eP	12	43.00	1.0
LHS	24.28	40	P	12	43.40	0.6
MSU	24.29	335	P	12	44.10	0.9
ABL	25.15	319	P	12	52.30	0.8
ISA	25.24	322	eP	12	53.00	0.9
DAU	25.61	339	P	12	56.10	0.2
BCH	25.91	319	P	12	59.30	0.9
NAV	26.25	35	P	13	01.20	-0.3
TNP	26.28	327	P	13	02.50	0.6
	0.9s	39.71nm			5.0mb	
BLA	26.39	36	P	13	02.40	-0.3
	0.8s	43.62nm			5.1mb	
PHAM	26.52	320	P	13	04.70	0.7
FRI	26.87	322	ePc	13	06.70	-0.4
PRI	26.89	320	ePc	13	06.70	-0.7
BW06	27.25	344	P	13	09.60	-1.2
	1.1s	19.05nm			4.7mb	
LLA	27 36	320	ePc	13	11.50	-0.1
			epP	13	19.90	30km
PRS	27.45	319	ePc	13	12.90	0.5
KVN	27.46	327	P	13	13.70	1.0
CMB	27.98	323	ePc	13	17.30	0.1
			epP	13	25.80	30km
PTI	28.18	340	P	13	18.60	-0.6
ARN	28.20	321	P	13	19.50	0.3
MHC	28.26	321	ePc	13	21.60	1.7
			epP	13	28.80	25km
CBN	28.83	38	eP	13	31.00	6.2X
ORV	29.65	324	ePc	13	33.30	1.0
			epP	13	41.50	28km
MIN	30.26	325	e(P)	13	37.70	-0.1
			epP	13	46.30	30km
LRM	30.87	342	iPc	13	43.10	-0.1
			e	16	40.20	
WDC	30.94	325	ePc	13	41.80	-1.8
FHC	31.90	323	ePc	13	52.80	0.7
			epP	14	01.00	29km
VGB	33.69	333	P	14	07.20	-0.4
RSON	34.27	7	P	14	10.00	-2.5
	1.0s	29.83nm			5.2mb	
SES	34.75	347	ePc	14	15.80	-0.9
			pP	14	24.00	28km
LON	35.10	333	P	14	20.00	0.3
GMW	36.14	333	P	14	28.30	-0.2
PNT	36.29	338	ePc	14	30.00	0.3
	1.1s	90.00nm			5.6mb	
MCW	37.03	334	P	14	36.20	0.2
FFC	37.87	358	iPc	14	42.10	-0.8
	0.9s	106.00nm			5.7mb	
FFC	37.87	358	eP	14	50.00	7.1X
	1.0s	81.00nm			5.5mb	
EDM	37.90	346	iPc	14	42.50	-0.8
	0.8s	91.00nm			5.7mb	
ZOBO	45.16	135	P	15	46.00	2.2
Z	24s	0.51um			4.4MszX	
			LR	31	40.00	
LPB	45.36	135	P	15	52.00	6.8X
	1.0s	30.00nm			5.2mb	
Z	18s	1.03um			4.8Msz	
			LR	31	12.00	
SCH	45.50	26	eP	15	44.00	-1.4
CNCB	45.64	136	P	15	48.50	1.0
CCH	47.28	134	P	15	55.50	-4.8X
FRB	51.47	17	eP	16	30.00	-1.5
	1.0s	66.00nm			5.5mb	
INK	55.79	345	iPc	17	02.10	-1.2
	0.9s	92.00nm			5.8mb	
PMR	56.68	334	P	17	08.30	-1.5
	0.8s	18.97nm			5.2mb	
FBA	57.86	338	P	17	16.80	-1.3
	1.0s	25.00nm			5.2mb	
TTA	60.16	334	P	17	32.40	-1.8
	1.0s	25.00nm			5.3mb	
BAO	60.19	120	eP	17	34.00	-1.1
MBC	60.33	355	ePc	17	34.50	-0.6
	1.0s	44.00nm			5.5mb	
DAG	71.61	14	iPc	18	45.60	-1.6
	1.1s	41.77nm			5.4mb	
EKA	79.89	35	P	19	35.00	0.6
	1.0s	24.40nm			5.2mb	
GRR	83.20	42	eP	19	52.20	0.4
	0.9s	22.90nm			5.3mb	
FLN	83.32	41	eP	19	53.00	0.5
	0.9s	20.90nm			5.3mb	
LDF	83.60	41	eP	19	54.30	0.4
	0.8s	11.80nm			5.1mb	
MAL	84.09	54	iPd	19	59.00	2.4
IFR	84.43	57	iP	20	00.00	1.3
LFF	85.33	45	eP	20	03.00	0.4
	1.1s	34.10nm			5.5mb	
LSF	85.42	43	eP	20	03.10	0.0
	1.0s	22.80nm			5.4mb	
EPF	85.67	46	eP	20	04.70	0.2
	1.1s	20.50nm			5.3mb	
LPO	85.71	45	eP	20	04.80	0.2
	1.1s	24.40nm			5.3mb	
RJF	85.72	44	eP	20	04.70	0.1
	0.9s	26.20nm			5.5mb	
TCF	85.85	43	eP	20	05.10	-0.2
	0.9s	21 20nm			5.4mb	
DOU	86.00	39	Pc	20	07.20	1.3
	0.9s	17 50nm			5.3mb	
MAF	86.10	43	eP	20	06.50	0 0
	1.1s	32.70nm			5.5mb	
BGF	86.17	43	eP	20	06.60	-0.2
	1.1s	10.70nm			5.0mb	
CAF	86.22	44	eP	20	07.10	0.0
SSF	86.42	42	eP	20	07.70	-0.3
ENN	86.54	38	eP	20	08.00	-0.5
	0.8s	33.00nm			5.6mb	
LOR	86.57	42	eP	20	08.70	-0.1
	0.9s	16.30nm			5.3mb	
WTS	86.58	36	eP	20	09.00	0.4
	0.8s	13.00nm			5.2mb	
LBF	86.75	42	eP	20	09.10	-0.6
	0.7s	4.40nm			4.8mb	
HAU	87.85	40	eP	20	14.60	-0.4
	0.8s	8.00nm			5.1mb	
BSF	88.20	40	eP	20	16.20	-0.5
CDF	88.27	40	eP	20	16.40	-0.6
	1.0s	8.00nm			5.0mb	
LKO	90.98	80	P	20	30.78	0.5
	1.1s	19.00nm			5.3mb	
BRG	91.09	36	iP	20	30.10	0.0
	1.1s	16.00nm			5.3mb	
			e	20	39.20	
KHC	91.71	37	iPc	20	33.10	0.1
PRU	91.85	36	P	20	34.00	0.4
			e	20	42.50	
TIC	92.37	82	P	20	36.70	0.1
LIC	92.49	83	P	20	37.00	-0.1
Z	20s	0.14um			4.4Msz	
KIC	92.72	83	P	20	38.00	-0.2
ZST	94.20	37	eP	20	45.10	0.7
			e	20	53.50	
			e	24	38.60	
WB5	128.95	258	ePKP	26	33.10	-1.3
WRA	128.98	258	PKPd	26	34.00	-0.4
	0.7s	3.50nm				
POO	144.26	11	ePKP	27	02.00	-0.7
NNT	145.13	326	iPKPc	27	04.20	0.0
HYB	145.92	3	iPKPc	27	04.80	-0.7
	1.0s	60.00nm				
			e	27	14.00	
GBA	149.61	6	PKP	27	15.30	4.0X

S.D. = 1.1 on 116 of 125 obs.

JAN 13, 1990 03h 32m 15.27± 0.19s
12.661 N ± 4.1km 125.038 E ± 5.5km
DEPTH = 36.1km (6 depth phases)
5.3mb (30 obs.) 4.6Msz (4 obs.)
SAMAR, PHILIPPINE ISLANDS (251)
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.8.: 8S, 14C
Centroid Location:
Origin Time 03:32:16.4 0.8
Lat 12.71N 0.07 Lon 125.28E 0.11
Dep 22.8 7.9 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 4.92 0.63 Mtt=-0.80 0.60
Mff=-4.12 0.83 Mrt=-3.08 1.42
Mrf= 3.48 1.46 Mtf= 2.00 0.47
Principol Axes:
T Val= 6.85 Plg=67 Azm=217
N -0.05 8 327
P -6.80 21 61
Best Double Couple:Mo=6.8*10**16
NP1:Strike=166 Dip=25 Slip= 110
NP2: 324 67 81

OCP	4.32	297	eP	33	23.00	2.6
DAV	5.56	175	eP	33	46.50	8.7X
BAG	5.70	311	eP	33	37.50	-2.5
TSM	10.85	220	ePd	34	56.80	5.5X
KKM	10.91	234	ePd	35	01.00	8.8X
MKS	18.60	198	iPd	36	36.40	4.5X
SSE	18.69	350	P	36	32.50	-0.3
	1.5s	108.00nm			4.8mb	
Z	20s	0.90um			4.1MszX	
N	16s	0.80um				
E	14s	0.50um				
			pP	36	38.50	
			S	40	02.00	
			sS	40	12.00	
GUMO	19.33	85	eP	36	41.50	0.8
			eS	40	22.00	
PJG	19.33	85	eP	36	40.80	0.1
TRT	23.69	212	iPc	37	26.60	1.8
	0.6s	167.10nm			5.7mb	
KMI	24.42	304	Pc+	37	32.50	0.4
Z	18s	3.30um			4.9Msz	
E	20s	1.70um				
			sP	37	43.00	
			S	42	06.00	
			sS	42	18.00	
NNT	24.69	273	eP	37	31.00	-3.5X
IPM	25.04	253	ePc	37	39.70	1.8
	0.8s	104.70nm			5.5mb	
			e	37	50.50	41km
CHG	25.83	287	eP	37	46.00	0.7
MTN	26.05	166	iPd	37	46.60	-0.7
MAT	26.56	24	(P)	38	00.00	8.1X
	1.0s	19.00nm			4.7mb	
Z	20s	1.42um			4.5Msz	
			eS	42	30.00	
PSI	27.68	251	ePd	38	02.50	0.3
	0.6s	19.00nm			4.9mb	
BJI	28.37	346	eP	38	07.00	-1.2
	1.5s	58.00nm			5.0mb	
Z	20s	0.30um			3.9Msz	

13d 03h

			eS	42	50.00	
LZH	30.14	324	Pc	38	23.50	-0.8
	1.2s		93.00nm			5.4mb
	Z 18s		1.70um			4.7Msz
	N 15s		1.00um			
			pP	38	34.50	40km
			i	38	38.00	
			PPP	39	34.50	
			eS	43	19.00	
			sS	43	35.00	
			eSS	45	00.00	
			i	45	16.00	
WRA	33.67	164	Pd	38	53.80	-1.3
	0.8s		15.90nm			5.0mb
SHL	33.75	297	iP	38	54.50	-1.5
MBL	34.00	189	eP	38	56.30	-1.6
NANU	36.22	195	eP	39	16.00	-0.9
ASPA	37.13	166	iPc	39	24.10	-0.4
	0.6s		63.00nm			5.7mb
			eS	45	07.70	
WARB	38.64	178	iPc	39	37.70	0.5
	0.4s		25.00nm			5.4mb
CTA	38.66	147	iPd	39	37.90	0.4
	1.0s		35.00nm			5.1mb
			i	41	50.00	
MEKA	39.55	189	eP	39	44.00	-0.7
	0.4s		21.00nm			5.3mb
MRWA	42.54	192	eP	40	08.30	-0.9
	0.4s		21.00nm			5.2mb
FORR	43.36	176	iPc	40	15.70	-0.1
	0.4s		60.00nm			5.7mb
COOL	43.45	185	eP	40	15.00	-1.7
BAL	43.76	190	eP	40	18.00	-1.1
KLB	44.55	189	iPd	40	24.40	-1.1
HYB	45.06	282	iPc	40	30.40	0.5
	1.0s		75.00nm			5.5mb
MUN	45.18	191	iPd	40	29.20	-1.4
RMQ	45.23	149	eP	40	32.00	0.9
			e	42	12.00	545kmX
NWAO	45.94	189	iPd	40	35.50	-1.0
GBA	46.31	277	P	40	40.00	0.2
KOD	46.64	272	eP	40	43.10	0.3
STK	47.04	161	iPd	40	48.10	2.8X
			e	40	56.00	26km
RKG	47.09	189	iPd	40	49.30	3.6X
NDI	47.17	297	iP	40	45.00	-1.5
BRS	48.05	146	iPc	40	52.10	-1.3
			i	40	56.60	15kmX
			i	41	02.30	
			i	42	22.80	
			e(PP)	42	46.00	
CMS	48.21	156	eP	40	55.50	1.0
ADE	49.11	165	iPc	41	02.00	0.6
	0.9s		146.22nm			6.0mb
POO	49.52	284	iPc	41	04.50	-0.3
BWA	51.83	155	iPc	41	24.10	1.9
BFD	52.23	162	eP	41	25.00	-0.1
CAN	52.84	155	eP	41	30.40	0.7
CNB	52.99	155	eP	41	31.70	0.9
DZM	53 30	130	iPc	41	33.10	-0.2
TOO	53 53	160	eP	41	35.00	0.3
MAIO	62.95	304	iPc	42	41.00	0.1
			eS	51	24.00	
TAB	73.47	306	eP	43	47.00	0.6
TTA	73 79	28	eP	43	47.10	-0.6
SLY	74.30	304	ePd	43	50.00	-1.0
BRW	74.31	19	eP	43	50.90	0.4
IMA	74.98	25	eP	43	54.60	0.0
	1.3s		23.90nm			5.0mb
			e	44	03.50	29km
BHD	75.42	301	ePd	43	59.00	1.4
MSL	76.13	305	ePd	44	05.50	3.9X
PMR	76.99	29	e(P)	44	04.50	-1.3
TAIF	80.62	290	eP	44	19.00	-7.6X
KEV	80.99	340	iP	44	27.00	-0.3
	0.9s		28.70nm			5.3mb
SOD	81.63	337	iP	44	31.00	0.3
INK	82.52	22	iPc	44	34.80	-0.5
HRI	82.59	302	eP	44	38.00	1.4
KAS	82.70	311	iPc	44	37.80	0.9
SUF	82.89	333	eP	44	36.60	-0.7
	0.6s		10.20nm			5.1mb
MBC	83.66	13	ePc	44	41.00	-0.1
	0.9s		26.00nm			5.4mb
PRNI	83 75	300	eP	44	44.00	1.5
LFK	84.02	305	iP	44	44.50	0.7
NUR	84.14	331	iP	44	43.70	0.0
	1.0s		34.00nm			5.4mb
			i	44	57.20	46km
CSS	84.24	304	eP	44	45.00	0.1
PPCY	85.05	304	eP	44	49.20	0.4
GPA	85.48	310	eP	44	50.00	-1.0
ALT	85.91	309	eP	44	53.20	0.0
KHL	86.52	308	eP	44	55.00	-1.2
ELL	86.58	307	eP	44	55.00	-1.6
VRI	86.72	316	ePc	44	58.00	1.1
MLR	87.35	316	iPd	45	00.50	0.4
DAG	88.25	352	iPc	45	02.00	-1.7
	1.0s		6.00nm			4.8mb
SLL	89.41	333	eP	45	09.30	-0.2
	0.8s		35.30nm			5.7mb
KRA	89.85	322	ePc	44	56.70	-15.1X
	0.8s		99.00nm			
			e	45	07.70	35km
KRA	89.85	322	eP	45	11.20	-0.6
SPC	89.95	321	eP	45	11.70	-0.8
NB2	90.09	334	P	45	11.40	-1.4
	0.9s		8.50nm			5.0mb
VAY	90.89	313	iP	45	15.30	-1.4
	1.2s		0.06nm			2.9mb X
SKO	91.49	314	iPd	45	18.70	-0.8
	1.1s		57.00nm			5.9mb
SRO	91.63	320	eP	45	20.70	0.7
KSP	91.74	323	ePc	45	20.30	-0.2
OHR	92.22	313	eP	45	21.30	-1.7
	1.2s		0.05nm			2.8mb X
ZST	92.25	320	eP	45	23.30	0.4
VKA	92.71	321	ePc	45	25.40	0.4
BRG	93.10	324	iP	45	27.00	0.3
	1.2s		17.00nm			5.4mb
PRU	93.11	323	P	45	27.50	0.7
CLL	93.46	324	iPd	45	28.60	0.3
PTJ	93.84	319	eP	45	30.10	-0.2
KHC	94.03	322	P	45	32.00	0.9
			e	48	35.50	
VBY	94.44	318	eP	45	34.90	1.9
LJU	94.70	319	eP	45	34.50	0.3
CEY	94.89	319	ePc	45	35.00	-0.1
KBA	95.03	320	iPc	45	33.50	-2.4
	0.7s		6.50nm			5.2mb
			id	45	34.60	3kmX
BHG	95.04	321	iPd	45	36.40	0.6
	1.3s		31.00nm			5.6mb
VOY	95.11	319	iPc	45	35.80	-0.4
FVI	95.58	320	P	45	38.50	0.3
TDS	95.92	313	P	45	41.50	1.6
SGO	96.31	314	P	45	42.50	0.8
OGA	96.55	321	iPd	45	43.20	0.3
	0.9s		19.00nm			5.6mb
ARV	96.76	317	P	45	44.50	0.8
SDI	96.90	315	P	45	44.00	-0.4
AZI	97.05	316	P	45	45.50	0.6
ABH	97.20	325	eP	45	44.22	-1.3
CRE	97.36	318	P	45	47.00	0.5
MNS	97.40	316	P	45	47.00	0.4
RUP	97.57	325	eP	45	43.45	-3.8X
FEL	97.91	323	eP	45	48.45	-0.4
BDI	98.06	318	P	45	50.00	0.4
VAI	98.40	321	P	45	51.50	0.6
BOB	98.48	319	P	45	52.00	0.5
LPG	99.82	321	eP	45	58.00	0.1
	0.8s		5.30nm			5.1mb
BNI	100.08	321	Pdiff	45	57.50	-1.3X
BUL	100.20	252	iPdiff	46	13.80	13.9X
	1.0s		5.00nm			
LOR	100.64	324	ePdiff	46	01.00	-0.1X
LBF	100.72	323	ePdiff	46	01.30	-0.2X
SSF	100.95	324	ePdiff	46	02.60	0.2X
KIC	126.64	288	PKP	51	17.02	-0.5
TIC	126.79	288	PKP	51	17.32	-0.5
LIC	126.95	288	PKP	51	17.54	-0.6
TACH	154.53	148	ePKP	52	14.50	9.1X
PCH	154.77	148	ePKPd	52	15.50	9.7X
LPB	166.72	108	PKP	52	22.00	2.7
CNCB	166.75	110	PKP	52	22.00	2.5
ZOBO	166.76	107	PKPd	52	22.00	2.4
	1.0s		8.75nm			

S.D. = 1.1 on 113 of 132 obs.

JAN 13, 1990 03h 33m 35.69± 0.92s
38.854 N ± 6.4km 26.494 E ±12.1km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.1 (ATH).

PRK	0.43	336	ePg	33	44.00	-0.4
			eSb	33	51.00	
IZM	0.76	127	ePg	33	49.90	-0.6
			eSg	33	57.90	
EZN	0.98	352	iPg	33	54.40	0.2
SMG	1.18	167	ePb	33	58.00	0.4
DST	1.82	65	ePn	34	14.00	6.7X
EDC	1.83	35	ePn	34	07.50	0.1
BNT	1.86	36	ePn	34	08.20	0.3

S.D. = 0.5 on 6 of 7 obs.

JAN 13, 1990 03h 56m 16.56± 1.06s
64.768 N ± 6.8km 5.909 E ±11.7km
DEPTH = 33.0km (normal)
NORWEGIAN SEA (642)
MD 3.2 (BER).

MOL	2.32	161	iP	56	54.22	1.0
			eS	57	17.36	
NSS	2.62	92	iP	56	58.32	0.9
			eS	57	24.24	
RGS	2.66	129	iP	56	57.60	-0.4
			iS	57	23.50	
HYA	3.62	178	iP	57	12.20	0.6
			eS	57	48.08	
SUE	3.76	189	eP	57	14.38	0.8
			eS	57	52.60	
ASK	4.31	185	eP	57	20.07	-1.4
			eS	58	06.30	
LOF	4.56	39	eP	57	26.10	1.2
			eS	58	12.50	
NRA0	4.80	145	Pn	57	27.90	-0.5
			Pg	57	38.00	
			S	58	20.20	
ODD1	4.89	176	iP	57	29.16	-0.5
			iS	58	19.05	
BLS1	5.41	175	eP	57	37.52	0.4
			eS	58	30.70	
KMY	5.59	184	eP	57	38.80	-0.6
			eS	58	36.50	
HFS	5.89	139	eP	57	44.50	0.8
	0.5s		6.70nm			4.5mb X
KTK1	8.02	50	iP	58	12.55	-1.0
			eS	59	36.00	
SOD	8.80	64	iP	58	23.00	-1.3
			iS	59	54.00	
			i	01	35.00	
KEV	9.54	49	iP	58	35.00	0.5
			iS	00	13.00	
NUR	9.61	108	iP	58	35.00	-0.5
			iS	00	15.00	

S.D. = 0.9 on 16 of 16 obs.

? JAN 13, 1990 04h 02m 22.57± 2.05s
44.540 N ±17.1km 7.278 E ± 9.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.13	255	P	02	25.87	0.0
			S	02	27.77	
STV	0.30	174	P	02	28.84	0.0
			S	02	32.84	
ENR	0.33	162	P	02	29.41	0.0
			S	02	33.77	
ROB	0.49	120	P	02	32.54	0.0
			S	02	39.10	

S.D. = 0.0 on 4 of 4 obs.

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* JAN 13, 1990 04h 39m 43.69± 1.06s
40.018 N ± 8.4km 122.514 W ± 9.4km
DEPTH = 10.0km (geophysicist)
NORTHERN CALIFORNIA (36)
ML 2.7 (BRK).

LTCM	0.35	57	iPd	39	53.00	2.0
WDC	0.56	358	iPd	39	54.30	-0.8
			iS	40	01.00	
MIN	0.77	65	iPc	39	58.80	0.0
			iS	40	08.80	
ORV	0.91	120	eP	40	00.80	-0.3
			eS	40	12.50	
FHC	1.37	305	ePc	40	10.30	1.5
LBFM	1.41	19	eP	40	07.60	-2.0
ARN	2.77	164	eP	40	28.70	-0.3
KVN	3.55	104	eP	40	40.00	-0.1

S.D. = 1.5 on 8 of 8 obs.

JAN 13, 1990 05h 05m 59.47± 0.38s
36.107 N ± 3.6km 27.188 E ± 2.9km
DEPTH = 43.1 ± 5.1 km
4.6mb (34 obs.) 3.9Msz (1 obs.)
DODECANESE ISLANDS (369)
MD 4.7 (ATH).

KAP	0.56	181	iPgc	06	10.30	-0.8
YER	1.35	40	iPn	06	22.70	0.4
NPS	1.53	237	iPbc	06	25.30	0.5
SMG	1.62	350	iPbd	06	25.00	-1.0
APE	1.64	306	iPbd	06	26.00	-0.4
KSL	1.94	89	iPbd	06	32.60	2.1
ELL	2.29	73	iPn	06	38.70	3.1X
IZM	2.29	1	iPn	06	29.00	-6.6X
VAM	2.53	255	ePg	06	47.00	8.0X
KHL	2.89	39	iPn	06	44.30	0.1
BCK	3.05	63	ePn	06	48.10	1.7
PRK	3.22	347	ePn	06	47.00	-1.7
ATH	3.34	305	ePb	06	56.00	5.4X
VLI	3.48	281	ePn	06	52.20	-0.4
DST	3.67	18	ePn	06	54.80	-0.5
ALT	3.75	37	ePn	06	58.30	1.9
EZN	3.77	350	iPn	06	54.50	-2.1
EDC	4.27	7	iPn	07	03.50	-0.1
BNT	4.28	8	ePn	07	03.70	-0.2
ITM	4.36	286	iPnd	07	06.60	1.5
PPCY	4.38	105	ePn	07	05.70	0.5
			eSn	07	57.50	
AGG	4.83	308	eP	07	12.30	0.7
GPA	4.84	30	ePn	07	15.00	3.2X
ALN	4.87	350	eP	07	08.20	-3.8X
HRT	5.09	22	ePn	07	18.00	2.7
CSS	5.14	101	eP	07	16.00	0.1
			eSn	08	14.00	
ISK	5.16	16	ePn	07	20.00	3.8X
PLG	5.18	326	ePn	07	17.00	0.5
ITU	5.19	15	eP	07	35.00	18.4X
RDO	5.19	346	ePn	07	15.30	-1.4
LFK	5.23	97	ePn	07	18.00	0.7
LIT	5.44	319	eP	07	16.40	-3.9X
VLS	5.66	293	ePn	07	25.00	1.6
FAM	5.66	99	eP	07	26.50	3.1X
KDZ	5.70	347	iP	07	23.00	-0.9
BBTK	5.77	48	eP	07	25.00	0.1
RZN	5.90	342	eP	07	25.00	-1.8
KZN	5.98	316	ePn	07	27.10	-0.8
DIM	6.07	348	eP	07	28.00	-1.0
MMB	6.10	335	ePd	07	28.00	-1.5
GRG	6.13	324	eP	07	28.00	-1.8
PLD	6.29	343	eP	07	50.00	17.9X
VAY	6.33	327	iP	07	33.50	0.8
JMB	6.37	356	eP	07	35.00	1.8
KKB	6.58	332	iP	07	36.00	-0.2
PGB	6.85	341	eP	07	40.00	0.1
OHR	7.07	317	eP	07	41.70	-1.4
HLW	7.14	150	ePn	07	43.50	-0.5
			eSn	09	01.00	
VTS	7.17	336	iPd	07	45.00	0.4
PVL	7.24	349	eP	07	45.00	-0.4
KAS	7.35	42	eP	07	49.00	2.0
SKO	7.37	324	eP	07	46.70	-0.5
Z	11s		2.08um			
N	11s		1.80um			
E	11s		3.22um			
			i	07	54.50	
			i	08	17.00	
HRI	7.59	109	eP	07	49.00	-1.4
SHMJ	7.85	113	Pd	07	54.50	0.6
DSI	8.18	121	eP	07	56.00	-2.5
			e(S)	09	29.00	
JARJ	8.22	115	Pd	07	59.00	-0.1
LCI	8.40	303	P	07	58.40	-3.1X
MBH	9.04	132	eP	08	09.00	-1.3
ROI	9.08	296	P	08	13.50	2.5
SOI	9.11	286	P	08	10.50	-0.8
			eSn	09	42.20	
BRT	9.16	304	P	08	12.30	0.3
TDS	9.28	296	P	08	13.90	0.2
CMP	9.30	351	ePc	08	12.00	-1.9
CZI	9.30	293	P	08	12.80	-1.1
CSI	9.36	296	P	08	15.70	1.0
HQL	9.50	134	ePd	08	15.70	-1.0
ATN	9.59	286	P	08	19.50	1.6
MMN	9.61	296	P	08	12.80	-5.4X
VRI	9.76	358	eP	08	20.50	0.3
MEU	9.91	279	P	08	18.20	-4.2X
MGR	10.01	297	P	08	24.10	0.4
			eSn	10	05.50	
BADA	10.04	137	eP	08	21.90	-2.2
MNO	10.16	284	P	08	25.50	-0.4
			eSn	10	05.80	
SGO	10.33	299	P	08	29.50	1.4
			eSn	10	12.50	
AYN	10.36	132	eP+	08	27.20	-1.3
BZS	10.39	338	eP	08	27.00	-1.8
BSS	10.78	299	P	08	30.30	-3.8X
DUI	11.36	303	P	08	43.50	1.3
SDI	11.82	302	P	08	48.10	-0.2
MNS	12.87	304	P	09	03.90	1.7
PTJ	12.93	323	e(P)	09	02.50	-0.6
VBY	13.02	320	e(P)	09	04.00	-0.1
ASS	13.18	306	P	09	08.50	2.2
ARV	13.20	308	P	09	08.00	1.4
SRO	13.42	333	eP	09	16.60	7.2X
CEY	13.61	319	e(P)	09	15.50	3.5X
LJU	13.75	320	e(P)	09	13.00	-0.8
CRE	13.89	307	P	09	19.50	3.7X
TRI	13.95	318	e(P)	09	23.70	7.4X
			e(S)	12	12.20	
			e	14	50.00	
VOY	14.08	319	eP	09	17.80	-0.4
PGD	14.16	308	P	09	22.00	2.7
ZST	14.19	331	eP	09	27.70	8.2X
FIR	14.41	307	eP	09	32.00	9.6X
BHD	14.43	96	ePd	09	21.00	-1.7
VKA	14.56	330	e(P)	09	29.00	4.7X
SLY	14.86	87	eP	09	36.00	7.6X
KRA	14.90	342	eP	09	36.40	7.6X
	1.1s		50.00nm		4.7mb	
			e	09	41.00	
FVI	15.04	319	P	09	33.00	2.5
KBA	15.06	321	ePd	09	31.10	0.1
	1.1s		83.00nm		4.9mb	
			i	09	37.00	
			i	09	42.80	
BHG	15.72	322	iPd	09	45.10	5.7X
KHC	16.39	327	iP	09	51.00	3.1X
	1.2s		30.00nm		4.3mb	
			eSg	16	22.10	
PRU	16.64	330	P	09	52.80	1.9
			e	10	33.10	
KSP	16.69	335	eP	09	53.00	1.4
	1.4s		49.00nm		4.4mb	
VAI	16.95	311	P	09	58.00	3.1X
SBF	16.98	303	eP	09	55.90	0.5
	0.9s		34.00nm		4.5mb	
FRF	17.42	302	eP	10	01.10	0.3
	0.9s		11.10nm		4.0mb	
LMR	17.44	301	eP	10	02.10	1.0
BRG	17.57	331	eP	10	04.60	2.0
	1.2s		22.00nm		4.2mb	
			i	10	48.00	
LRG	17.58	301	eP	10	03.20	0.4
CLL	18.28	331	iP	10	12.50	1.1
	1.3s		31.00nm		4.3mb	
FEL	18.42	316	eP	10	18.00	4.7X
BBS	18.49	314	P	10	17.14	3.1X
LOMF	18.84	313	P	10	19.86	1.5
WLS	19.08	316	P	10	20.52	-0.7
ECH	19.09	316	P	10	18.88	-2.3
BSF	19.10	314	P	10	20.24	-1.2
CDF	19.13	316	P	10	22.02	0.3
GWF	19.25	318	P	10	22.86	-0.2
HAU	19.44	314	eP	10	23.30	-1.9
	0.8s		11.80nm		4.2mb	
VITF	19.76	314	P	10	28.16	-0.4
ABH	19.82	320	eP	10	28.70	-0.5
RUP	19.97	319	eP	10	30.50	-0.3
SMF	20.37	308	eP	10	33.80	-1.1
	1.1s		24.40nm		4.5mb	
LBF	20.42	309	eP	10	34.50	-1.0
	0.9s		12.10nm		4.2mb	
WLF	20.43	318	iPc	10	36.00	0.5
LOR	20.61	310	eP	10	35.70	-1.7
	1.2s		36.80nm		4.6mb	
AVF	20.73	308	eP	10	37.00	-1.7
	0.9s		18.60nm		4.4mb	
SSF	20.74	309	eP	10	37.30	-1.5
	1.1s		57.10nm		4.8mb	
CAF	20.97	303	eP	10	40.70	-0.4
	1.0s		12.00nm		4.2mb	
BGF	20.97	307	eP	10	39.80	-1.3
	0.9s		28.50nm		4.6mb	
MAF	21.03	306	eP	10	41.10	-0.7
	0.7s		14.30nm		4.4mb	
MEM	21.04	320	P	10	42.80	1.1
ENN	21.18	320	e(P)	10	47.00	3.9X
	1.0s		27.00nm		4.6mb	
RJF	21.45	303	eP	10	45.10	-0.8
LPO	21.51	301	eP	10	45.60	-0.9
	0.7s		8.80nm		4.3mb	
DOU	21.51	318	Pc	10	46.40	-0.1
	0.9s		57.50nm		5.0mb	
LFF	21.88	302	eP	10	49.60	-0.6
MFF	22.93	306	eP	11	00.30	-0.3
	1.1s		29.30nm		4.7mb	
LDF	23.59	310	eP	11	05.30	-1.6
FLN	23.87	311	eP	11	07.90	-1.8
	1.1s		36.10nm		4.8mb	
GRR	23.97	310	eP	11	10.10	-0.5
	1.0s		40.00nm		4.9mb	
NUR	24.47	357	iP	11	16.30	0.9
	1.1s		62.40nm		5.1mb	
HFS	25.57	344	eP	11	26.00	0.2
	1.2s		78.80nm		5.1mb	
IFR	26.59	274	iP	11	37.00	1.3
SUF	26.65	359	eP	11	37.00	1.3
NB2	26.95	343	P	11	36.40	-2.1
	0.7s		2.50nm		3.9mb	
BCAO	32.51	196	iPd	12	31.30	2.9X
	0.7s		25.00nm		5.2mb	
			ic	13	17.90	
LKO	39.81	237	Pc	13	32.36	2.1
	0.8s		10.00nm		4.7mb	
TIC	41.58	233	P	13	45.84	1.1
	0.8s		9.50nm		4.6mb	
KIC	41.61	232	P	13	46.18	1.1
	0.8s		14.00nm		4.7mb	
LIC	41.90	233	P	13	48.52	1.1
Z	20s		0.15um		3.9Msz	
DAG	45.53	347	iPc	14	15.10	-1.0
	1.0s		6.00nm		4.4mb	
GKN	48.75	82	P	14	43.40	1.2
DMN	49.30	83	P	14	48.40	1.9
KKN	49.36	82	P	14	48.00	1.1
	0.6s		10.00nm		5.0mb	
PKI	49.56	83	P	14	50.20	1.6
GUN	49.79	82	P	14	52.00	1.6
FRB	60.69	330	eP	16	06.00	-2.3
SCH	63.51	320	eP	16	26.00	-1.4
BJI	67.24	56	eP	16	52.00	0.5
	1.2s		13.00nm		4.9mb	
FFC	79.56	333	eP	18	03.00	-0.1
	1.0s		10.00nm		4.7mb	
SES	86.32	335	eP	18	38.00	0.0
BAO	87.57	249	eP	18	47.90	3.4X
LRM	90.69	333	eP	18	59.80	0.6

S.D. = 1.3 on 132 of 164 obs.

JAN 13, 1990 05h 11m 09.11± 0.59s
35.981 N ± 6.2km 27.188 E ± 5.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.9 (ATH).

KAP	0.43	181	ePg	11	18.00	0.1
YER	1.45	37	iPn	11	28.90	-6.5X
NPS	1.47	241	ePb	11	35.50	-0.1
APE	1.72	310	ePb	11	39.00	-0.3
SMG	1.75	351	ePb	11	38.50	-1.1
KSL	1.95	85	ePn	11	42.60	0.1
ELL	2.33	70	ePn	11	48.00	-0.2
IZM	2.41	1	ePn	11	51.00	1.7
VAM	2.50	258	ePb	11	55.00	4.6X
KHL	2.99	38	ePn	11	57.00	-0.5
PRK	3.34	348	ePg	12	08.00	5.6X
VLI	3.51	283	ePn	12	04.00	-0.8
ITM	4.40	287	ePn	12	18.50	1.0

S.D. = 0.9 on 10 of 13 obs.

% JAN 13, 1990 05h 19m 00.35± 0.72s
36.051 N ± 6.6km 27.161 E ± 7.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.50	179	ePb	19	11.00	0.5
			eSb	19	20.00	
NPS	1.49	239	ePb	19	27.50	0.4
APE	1.66	308	ePb	19	29.60	-0.1

13d 05h

SMG	1.67	351	ePb	19 29.70	-0.1
KSL	1.96	87	ePn	19 33.20	-0.8
VAM	2.49	256	ePg	19 47.10	5.5X
PRK	3.27	348	ePb	19 54.00	1.4
VLI	3.47	282	ePn	19 54.20	-1.3
ITM	4.36	287	ePn	20 08.10	0.0

S.D. = 1.0 on 8 of 9 obs.

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* JAN 13, 1990 05h 47m 33.52± 2.50s
30.222 N ±25.5km 114.440 W ±10.9km
DEPTH = 10.0km (geophysicist)
4.6mb (6 obs.)
GULF OF CALIFORNIA (49)

GLA	2.84	353	ePc	48 16.40	-3.4X
PLM	3.74	327	eP	48 30.00	-2.7X
PEC	4.33	328	eP	48 39.80	-1.1
GSC	5.44	339	eP	48 58.70	1.9
BCH	6.86	318	eP	49 16.00	-0.8
PRI	7.88	320	eP	49 40.10	9.1X
FRI	8.05	328	eP	49 41.20	7.9X
			e	51 55.30	
TNP	8.17	344	eP	49 34.10	-1.1
ALQ	8.22	53	iPd	49 32.20	-3.6X
	0.9s	23.11nm		5.4mb	
			pP	51 44.40	
ANMO	8.22	53	eP	49 31.20	-4.6X
LLA	8.38	321	eP	49 43.50	5.6X
PRS	8.41	318	eP	49 44.40	6.1X
CMB	9.22	329	eP	49 52.60	3.1X
			e	52 28.60	
ARN	9.24	322	eP	49 50.00	0.2
MHC	9.29	322	e(P)	49 54.90	4.3X
KVN	9.31	342	eP	49 52.00	1.1
DUG	10.04	7	e(P)	50 01.00	0.1
DAU	10.49	13	eP	50 07.50	0.1
ORV	10.96	330	e(P)	50 11.70	-1.7
GOL	12.02	36	eP	50 29.50	1.4X
BW06	13.13	16	eP	50 42.50	-0.3
MEO	14.13	67	iPd	50 57.20	1.4
LRM	15.65	5	eP	51 21.00	5.1X
RSSD	16.14	28	eP	51 20.00	-2.2
TUL	16.62	65	e(P)	51 28.50	0.4
	0.9s	10.80nm		4.0mb	
	Z 18s	0.88um		6.1MszX	
			e	51 31.90	
			LR	56 00.00	
LON	17.47	343	eP	51 40.50	1.8
BMW	17.61	340	eP	51 42.50	2.0
PNT	19.47	350	eP	52 08.00	4.7X
	0.8s	8.00nm		4.0mb	
RSON	25.79	31	eP	53 04.80	-1.3
	0.9s	20.91nm		4.8mb	
FFC	26.08	17	iPc	53 08.70	0.0
	0.9s	14.00nm		4.7mb	
INK	39.73	349	eP	55 02.00	-5.4X
MBC	46.16	358	ePc	56 02.30	2.8X
	1.0s	7.00nm		4.6mb	
DAG	62.12	15	eP	57 56.00	-0.5

S.D. = 1.3 on 18 of 33 obs.

& JAN 13, 1990 05h 52m 48.52s
62.328 N 151.188 W
DEPTH = 85.3km
CENTRAL ALASKA (1)
<AGS-P>.

SKT	0.38	205	eP	53 01.51	-0.6
			eS	53 11.76	
CUT	0.44	79	iP	53 01.86	-0.6
SUA	0.89	166	iP	53 06.72	-0.3
PWA	0.92	137	iPc	53 06.90	-0.3
HUR	0.97	47	eP	53 06.80	-1.0
			eS	53 20.50	
NCG	1.04	207	iP	53 07.78	-0.9
CGLM	1.10	201	iP	53 08.47	-0.9
CRP	1.16	204	iP	53 09.51	-0.8
			eS	53 25.52	
GHO	1.20	117	iP	53 10.23	-0.5
BGL	1.21	209	eP	53 10.22	-0.6
PLRM	1.22	126	eP	53 09.97	-0.9
PMR	1.22	126	iPd	53 10.00	-0.8
SPU	1.22	200	iP	53 09.87	-1.1
PME	1.24	124	eP	53 10.34	-0.7
CKL	1.26	206	iP	53 10.63	-0.9
PMS	1.33	144	ePc	53 11.60	-0.7
NKA	1.59	181	eP	53 17.13	1.5
RDT	1.86	199	eP	53 18.00	-1.2
SLKM	1.89	165	eP	53 18.27	-1.3
RED	2.06	202	eP	53 21.22	-0.8
TTA	2.31	287	iPc	53 23.60	-1.8
TOA	2.36	93	eP	53 25.00	-1.1
SVW	2.44	242	iPd	53 25.40	-1.7
FBA	2.99	29	eP	53 32.60	-2.1
IMA	3.91	345	eP	53 45.00	-2.5

25 obs. associated

% JAN 13, 1990 06h 27m 42.46± 0.67s
36.912 N ± 6.8km 4.854 W ± 5.3km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.7 (MDD).

EPRU	0.31	280	eP	27 48.30	-0.6
			eS	27 53.50	
MAL	0.40	117	iPgc	27 50.00	-0.7
			iSg	27 55.00	
EJIF	0.67	227	eP	27 56.50	0.6
			eS	28 06.00	
EHOR	0.96	341	eP	28 01.00	0.3
			eS	28 13.60	
AFC	1.10	72	eP	28 03.80	0.5
			eS	28 18.50	
EBAN	1.51	34	eP	28 10.00	0.4
			eS	28 30.60	
EVIA	2.54	47	eP	28 30.80	6.4X
			eS	29 01.30	
TOL	3.03	12	ePg	28 41.00	9.6X
			eSg	29 20.00	
GUD	3.77	8	eP	28 41.30	-0.7
			eS	29 24.80	

S.D. = 0.7 on 7 of 9 obs.

JAN 13, 1990 06h 55m 07.28± 0.52s
45.667 N ± 6.3km 26.428 E ± 8.2km
DEPTH = 160.9 ± 7.8 km
4.0mb (4 obs.)
ROMANIA (358)

MLR	0.38	243	iPc	55 29.50	0.4
CMP	1.06	248	iPc	55 35.00	1.1
PTT	1.27	359	eP	55 36.00	0.3
CFR	1.31	111	iPd	55 36.00	0.0
BUC1	1.35	192	iPd	55 36.50	0.0
MDB	1.51	289	iPd	56 02.00	23.9X
IAS	1.72	27	eP	56 03.00	22.8X
PSN	2.35	147	eP	55 45.00	-2.5
DEV	2.48	276	iPd	55 55.00	5.9X
PVL	2.57	198	iPc	55 51.00	0.8
			iS	56 22.00	
BMR	2.85	316	ePc	55 55.00	1.4
JMB	3.20	178	iPc	55 58.00	-0.1
BZS	3.38	271	ePc	56 00.00	-0.3
PGB	3.52	208	iPc	56 01.00	-1.2
DIM	3.67	190	eP	56 05.00	0.8
PLD	3.77	200	eP	56 14.00	8.5X
VTS	3.85	218	iP	56 07.00	0.3
DMK	3.96	165	ePn	56 07.00	-1.0
KDZ	4.08	191	iP	56 10.00	0.5
RZN	4.17	198	iPc	56 11.00	0.2
KKB	4.50	214	eP	56 15.00	-0.1
MMB	4.52	207	ePd	56 16.00	0.6
VAY	5.17	214	eP	56 26.00	2.1
OHR	6.13	224	eP	56 33.70	-2.9
HFS	16.35	337	eP	58 46.00	-2.7
	0.5s	0.80nm		3.3mb	
NB2	17.80	335	P	59 05.80	-0.2
	0.7s	2.60nm		3.7mb	
MAIO	26.50	99	eP	00 30.00	-1.4
GKN	48.73	90	P	03 38.80	1.4
	0.6s	5.00nm		4.4mb	
KKN	49.31	90	P	03 43.20	1.3
	0.6s	6.00nm		4.4mb	
GUN	49.66	90	P	03 46.00	1.3

S.D. = 1.4 on 26 of 30 obs.

JAN 13, 1990 07h 04m 14.26± 0.62s
36.115 N ± 7.4km 27.174 E ± 5.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.56	180	ePb	04 26.00	0.3
			eSb	04 35.00	
ARG	0.78	82	ePb	04 29.00	-0.4
YER	1.35	41	ePn	04 39.00	-0.2
NPS	1.53	237	ePb	04 41.10	-0.5
			eSb	05 01.00	
APE	1.63	306	ePb	04 43.50	0.4
KSL	1.95	89	ePn	04 48.00	0.3
ELL	2.29	73	ePn	04 53.00	0.2
VAM	2.52	255	ePb	04 59.60	3.7X

S.D. = 0.5 on 7 of 8 obs.

% JAN 13, 1990 07h 11m 43.35± 1.22s
40.500 N ±14.5km 28.144 E ± 8.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT	0.22	230	iPg	11 48.60	0.4
			iSg	11 52.60	
EDC	0.26	235	iPg	11 48.50	-0.4
			iSg	11 52.50	
YLV	0.94	86	iPg	12 01.10	-0.2
DST	0.97	157	ePg	12 01.80	0.0
			eSg	12 15.80	
HRT	1.20	74	ePn	12 06.00	0.2

S.D. = 0.5 on 5 of 5 obs.

JAN 13, 1990 07h 43m 47.25± 0.58s
36.131 N ± 7.3km 27.170 E ± 5.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

KAP	0.58	180	ePb	43 59.00	0.0
			eSb	44 08.50	
ARG	0.78	83	iPbc	44 02.00	-0.4
YER	1.34	41	ePn	44 10.80	-1.2
NPS	1.54	236	ePb	44 14.00	-0.7
			eSb	44 35.00	
SMG	1.60	350	ePb	44 16.00	0.4
APE	1.62	306	ePb	44 17.30	1.4
KSL	1.95	90	ePn	44 21.10	0.3
ELL	2.29	74	iPn	44 27.00	1.2
VAM	2.52	254	ePn	44 29.00	0.1
KHL	2.88	40	ePn	44 32.00	-2.2
BCK	3.05	63	ePn	44 38.00	1.5
PRK	3.19	347	ePb	44 44.00	5.6X
ATH	3.32	305	ePn	44 41.00	0.8
VLI	3.46	281	ePn	44 41.00	-1.3
ALT	3.74	38	ePn	44 50.00	3.7X

S.D. = 1.2 on 13 of 15 obs.

JAN 13, 1990 08h 16m 26.90± 0.70s
36.105 N ± 8.3km 27.239 E ± 6.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.56	185	ePg	16 38.00	-0.2
ARG	0.73	81	ePg	16 40.00	-1.2
YER	1.33	39	ePn	16 51.00	-0.4
NPS	1.57	238	ePb	16 55.00	0.1
APE	1.68	305	ePb	16 56.40	-0.1
KSL	1.90	89	ePb	17 00.20	0.6
ELL	2.25	73	ePn	17 06.00	1.2

S.D. = 0.9 on 7 of 7 obs.

% JAN 13, 1990 08h 33m 08.05± 0.94s
39.061 N ± 7.6km 27.621 E ± 9.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.72	203	ePg	33 22.00	-0.2
			eSg	33 35.00	
DST	0.95	55	ePn	33 26.80	0.6
EZN	1.26	308	ePn	33 32.00	0.5
EDC	1.30	8	ePn	33 31.50	-0.6
BNT	1.31	10	ePn	33 32.00	-0.3

S.D. = 0.8 on 5 of 5 obs.

JAN 13, 1990 08h 46m 34.97± 0.69s
36.039 N ± 7.5km 27.157 E ± 6.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.3 (ATH).

KAP	0.49	178	ePb	46 45.00	0.1
			eSb	46 53.00	
ARG	0.80	77	ePb	46 50.00	-0.6

YER	1.42	39	ePn	47 00.00	-0.9
NPS	1.48	239	ePb	47 01.00	-0.6
APE	1.66	309	ePb	47 05.00	0.6
KSL	1.97	87	ePb	47 09.00	0.3
ELL	2.33	71	ePn	47 15.00	0.9

S.D. = 0.8 on 7 of 7 obs.

% JAN 13, 1990 09h 59m 05.50± 0.89s
39.145 N ± 7.3km 27.617 E ± 9.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.80	201	ePg	59 21.00	0.0
			eSg	59 33.00	
DST	0.91	59	iPn	59 22.90	0.0
EZN	1.21	305	ePn	59 28.00	0.0
EDC	1.21	9	ePn	59 27.50	-0.6
BNT	1.23	11	ePn	59 29.00	0.6

S.D. = 0.6 on 5 of 5 obs.

JAN 13, 1990 09h 59m 36.71± 0.78s
44.934 N ± 6.3km 8.972 E ± 5.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.4 (GEN).

BOB	0.38	116	Pd	59 43.80	-0.7
			eSg	59 48.50	
PCP	0.50	218	P	59 45.86	-0.9
			S	59 53.27	
CKI	0.71	224	P	59 52.50	1.8
			eSg	00 05.50	
FIN	0.91	217	P	59 54.20	0.1
			S	00 06.41	
ORO	0.98	315	P	59 57.00	1.5
			eSg	00 12.00	
ORX	0.99	315	P	59 54.77	-0.8
			S	00 07.72	
ROB	1.01	231	P	59 56.55	0.6
			S	00 10.08	
RSP	1.24	281	P	59 59.09	-0.7
IMI	1.28	218	P	59 59.73	-0.8
			S	00 16.35	
DOI	1.30	251	P	00 03.10	2.2
			eSn	00 23.00	
ENR	1.32	238	P	00 00.06	-1.0
			S	00 17.53	
STV	1.36	240	P	00 01.78	-0.1
			S	00 19.89	
LSD	1.39	293	P	00 01.70	-0.6
			S	00 20.15	
PZZ	1.40	253	P	00 01.34	-1.1
			S	00 19.49	
BDI	1.45	126	P	00 04.00	0.9
RRL	1.55	270	P	00 04.12	-0.5

S.D. = 1.2 on 16 of 16 obs.

JAN 13, 1990 10h 22m 13.49± 0.64s
36.149 N ± 7.1km 27.187 E ± 5.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.0 (ATH)

KAP	0.60	181	ePb	22 25.00	-0.6
			eSb	22 33.50	
ARG	0.76	85	ePg	22 28.00	-0.4
YER	1.32	42	iPn	22 37.80	-0.1
NPS	1.56	236	ePb	22 40.60	-0.7
			eSb	23 00 00	
SMG	1.58	350	ePn	22 42.00	0.4
APE	1.62	305	ePb	22 43.00	0.8
KSL	1.94	90	ePn	22 47.00	0.2
IZM	2.25	2	ePn	22 49.00	-2.3
ELL	2.27	74	ePn	22 52.40	0.6
VAM	2.54	254	ePg	23 00.30	4.9X
KHL	2.86	40	ePn	22 59.00	-1.1
BCK	3.03	63	ePn	23 04.40	2.0
ATH	3.32	304	ePg	23 17.00	10.5X
VLI	3.47	281	ePb	23 13.00	4.3X
ITM	4.35	285	ePn	23 22.30	1.1

S.D. = 1.2 on 12 of 15 obs.

JAN 13, 1990 10h 26m 29.91± 0.47s
36.081 N ± 5.3km 27.165 E ± 3.9km
DEPTH = 30.4 ± 4.6 km
4.5mb (2 obs)
DODECANESE ISLANDS (369)
ML 4.2 (CSS). MD 4.3 (ATH).

KAP	0.53	179	iPnc	26 40.60	-0.2
ARG	0.79	80	iPnc	26 44.60	-0.2
YER	1.38	40	iPn	26 52.80	-0.6
NPS	1.50	238	iPbc	26 55.80	0.7
APE	1.64	307	ePn	26 56.00	-1.1
SMG	1.65	351	ePn	26 57.00	-0.1
KSL	1.96	88	iPnd	27 03.00	1.4
ELL	2.31	72	ePn	27 07.90	1.1
IZM	2.31	2	ePn	27 05.00	-1.7
VAM	2.50	255	ePn	27 09.20	-0.2
KHL	2.92	39	ePn	27 14.00	-1.4
BCK	3.07	62	ePn	27 19.60	2.0
PRK	3.24	348	ePn	27 20.00	0.2
ATH	3.34	305	ePn	27 20.00	-1.3
VLI	3.47	282	ePn	27 22.60	-0.5
DST	3.70	18	ePn	27 31.00	4.5X
ALT	3.78	37	ePn	27 28.00	0.4
ITM	4.35	286	iPnd	27 38.00	2.3
PPCY	4.39	104	eP	27 37.00	0.8
AGG	4.83	309	eP	27 43.60	1.1
CSS	5.15	101	eP	27 46.50	-0.5
			eSn	28 47.50	
RDO	5.22	346	ePn	27 49.50	1.7
LFK	5.24	97	ePn	27 47.40	-0.9
VLS	5.65	294	ePn	27 54.50	0.4
BBTK	5.80	48	eP	27 56.00	-0.2
KZN	5.99	316	ePn	28 00.00	1.2
GRG	6.13	324	eP	28 00.20	-0.7
VAY	6.35	327	ePn	28 19.30	15.5X
OHR	7.08	317	ePn	28 07.20	-6.9X
HRI	7.60	109	eP	28 19.00	-2.5
DSI	8.18	121	eP	28 26.00	-3.5X
			eS	29 57.00	
MBH	9.03	132	eP	28 36.00	-5.2X
CZI	9.29	293	P	28 42.90	-1.9
KHC	16.40	327	P	30 20.90	1.6
SSF	20.74	309	eP	31 07.60	-2.8
	0.7s		8.10nm		4.2mb
BCAO	32.48	196	iPd	33 00.90	0.9
	0.5s		7.00nm		4.8mb
LKO	39.78	237	P	34 02.42	0.5
TIC	41.54	233	P	34 16.20	-0.2
KIC	41.58	232	P	34 16.40	-0.3

S.D. = 1.3 on 34 of 39 obs.

JAN 13, 1990 10h 33m 32.33± 0.57s
36.064 N ± 6.8km 27.244 E ± 5.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.52	186	ePg	33 42.00	-0.8
ARG	0.73	78	ePb	33 47.00	0.3
YER	1.36	38	ePn	33 55.80	-1.5
NPS	1.55	239	ePb	33 59.60	-0.4
			eSb	34 20.00	
SMG	1.67	349	ePb	34 02.00	0.3
APE	1.71	307	ePb	34 02.60	0.3
KSL	1.90	88	ePn	34 06.60	1.6
ELL	2.26	72	ePn	34 11.00	0.6
IZM	2.33	0	ePn	34 07.00	-4.3X
VAM	2.56	256	ePg	34 19.50	4.9X
KHL	2.90	38	ePn	34 18.00	-1.4
BCK	3.03	62	ePn	34 28.00	6.8X
VLI	3.54	282	ePn	34 28.60	0.2
ITM	4.42	286	ePn	34 41.80	0.8
YLV	4.80	20	iPn	35 35.00	48.6X

S.D. = 1.1 on 11 of 15 obs.

% JAN 13, 1990 11h 10m 09.37± 0.79s
43.696 N ± 8.8km 12.037 E ± 8.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.09	222	P	10 12.00	-0.1
			eSg	10 13.50	
SFI	0.26	329	P	10 15.50	0.6
PGD	0.29	308	P	10 15.00	-0.5
			eSg	10 20.00	
ARV	0.69	106	P	10 22.50	-0.5
			ePg	10 32.00	
ASS	0.77	144	P	10 25.00	0.5
			eSg	10 35.50	

S.D. = 0.8 on 5 of 5 obs.

JAN 13, 1990 11h 15m 44.53± 1.09s
15.781 N ± 4.6km 147.215 E ± 6.1km
DEPTH = 40.1 ± 9.9 km
5.0mb (17 obs.)
MARIANA ISLANDS REGION (215)

GUMO	3.15	227	eP	16 33.60	0.7
PJG	3.15	227	eP	16 33.50	0.6
GUA	3.15	225	eP	16 32.70	-0.3
			eS	17 07.20	
KAKJ	21.29	344	P	20 28.80	-1.0
IIDJ	21.31	339	P	20 29.70	-0.4
CHJJ	21.48	342	P	20 30.90	-0.8
MAT	22.18	340	eP	20 39.00	0.3
	0.8s		20.15nm		4.6mb
MTMJ	22.35	340	P	20 38.10	-2.4
NIIJ	22.58	343	P	20 42.40	-0.3
YAMJ	23.19	346	P	20 49.50	0.9
OFUJ	23.72	349	eP	20 55.20	1.5
PMG	25.03	180	eP	21 06.00	-0.5
SSE	28.23	307	P	21 36.70	0.8
	1.0s		17.00nm		4.7mb
			eS	26 48.00	
CTA	35.66	182	iPc	22 40.30	-0.6
	0.9s		18.49nm		5.0mb
BJI	36.25	318	eP	22 44.00	-1.7
WB5	37.62	200	eP	22 56.30	-1.2
WRA	37.69	200	Pd	22 56.70	-1.4
	1.5s		20.10nm		4.8mb
RMQ	42.04	178	iPc	23 34.20	0.2
DZM	42.07	153	iPc	23 32.60	-1.8
LZH	43.50	306	Pd	23 45.00	-1.1
			pP	24 02.00	68kmX
LOE	43.55	279	eP	23 47.00	0.5
NST	45.24	277	eP	24 01.00	0.9
NNT	46.07	272	eP	24 08.30	1.6
CHG	46.08	281	eP	24 07.00	0.2
BDT	46.15	279	eP	24 07.90	0.6
WARB	46.26	206	eP	24 08.00	0.0
IPM	46.70	261	ePd	24 13.80	2.1
NANU	49.14	220	eP	24 30.20	-0.3
	0.8s		86.00nm		5.8mb
PSI	49.27	260	ePc	24 32.40	0.7
	0.7s		5.50nm		4.7mb
			e	26 10.00	
ADE	51.11	189	e(P)	24 45.20	-0.2
TTA	61.20	26	eP	25 57.40	-0.1
IMA	63.36	23	eP	26 11.60	-0.3
	1.0s		16.10nm		5.1mb
PMR	63.79	29	eP	26 13.20	-1.4
	1.0s		27.50nm		5.3mb
BRW	64.58	17	eP	26 19.70	0.1
TOA	65.28	28	eP	26 24.30	0.0
FBA	65.29	25	eP	26 23.40	-0.9
HYB	65.49	282	ePc	26 31.50	5.1X
GBA	67.25	278	Pc	26 36.60	-1.0
	0.5s		1.60nm		4.3mb
POO	69.70	284	eP	26 51.60	-1.2
INK	71.48	23	iPd	27 01.80	-0.9
	0.9s		31.00nm		5.3mb
MBC	75.60	14	eP	27 27.00	0.4
	1.0s		15.00nm		4.9mb
GMW	78.53	44	P	27 42.30	-1.1
FHC	78.98	51	eP	27 47.40	1.4
MAIO	79.03	305	eP	27 48.00	1.5
RMW	79.20	44	P	27 47.90	0.7
LON	79.34	44	P	27 47.50	-0.4
WDC	80.10	51	ePc	27 52.70	0.7
PNT	80.24	42	eP	27 53.00	0.4
	1.0s		22.00nm		5.1mb
MIN	80.84	51	ePc	27 56.10	-0.1
ORV	81.10	51	ePc	27 57.70	0.4
PRS	81.94	55	ePc	28 02.70	0.9
CMB	82.30	53	ePc	28 04.40	0.7
EDM	83.05	37	iPc	28 11.60	4.4X
FRI	83.08	54	ePc	28 08.30	0.7
KVN	83.78	51	P	28 11.90	0.5
TNP	84.70	52	P	28 16.30	0.2
	0.8s		6.49nm		4.8mb
CLC	85.03	54	eP	28 18.00	0.4
SBB	85.15	55	eP	28 19.00	0.8
SES	85.28	39	ePd	28 19.00	0.5
GSC	85.79	55	eP	28 21.00	-0.4
LRM	85.85	44	eP	28 22.00	0.3
DAG	87.26	357	eP	28 28.00	0.3
DUG	87.36	49	P	28 28.50	-0.6
	1.0s		18.75nm		5.3mb

13d 11h

GLA	88.01	56	eP	28 40.00	7.8X
FFC	88.75	33	eP	28 35.50	0.2
	1.0s	24.00nm		5.5mb	
RSSD	92.03	43	P	28 50.70	-0.3
GOL	92.89	47	P	28 55.10	0.0
	1.0s	37.50nm		5.8mb	
ALQ	93.91	52	eP	29 01.00	1.2
	1.0s	2.50nm		4.6mb	
FRB	96.05	15	eP	29 08.00	-0.8
KIC	144.57	306	PKPc	35 17.78	-1.6
	1.0s	22.50nm			
TIC	144.61	307	PKP	35 17.78	-1.7
LIC	144.88	306	PKP	35 18.82	-1.1
ZOBO	146.06	96	PKPd	35 24.00	1.4
LPB	146.10	96	PKP	35 23.00	0.6
CNCB	146.23	97	PKPd	35 25.50	2.7
S.D. = 1.0		on	72 of	75 obs.	

• JAN 13, 1990 11h 16m 54.88± 0.99s
39.346 N ±10.9km 119.753 W ± 7.9km
DEPTH = 5.0km (geophysicist)
NEVADA (37)
ML 2.8 (BRK).

KVN	1.32	102	iPc	17 19.70	-0.2
ORV	1.37	279	ePd	17 22.20	1.6
			eS	17 39.90	
CMB	1.40	201	eP	17 19.50	-1.6
MIN	1.74	306	eP	17 24.60	-1.5
FRI	2.35	179	ePc	17 34.20	-0.6
			eS	18 02.50	
TNP	2.35	122	eP	17 35.90	0.9
ARN	2.44	216	eP	17 36.70	0.7
WDC	2.47	301	eP	17 42.70	6.2X
MHC	2.49	217	eP	17 37.50	0.6
S.D. = 1.4		on	8 of	9 obs.	

JAN 13, 1990 11h 37m 39.19± 0.58s
36.072 N ± 6.8km 27.200 E ± 5.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.52	182	ePg	37 50.00	0.3
			eSg	37 59.00	
ARG	0.76	79	ePg	37 54.00	-0.1
YER	1.37	39	ePn	38 04.00	-0.4
NPS	1.52	238	ePb	38 05.80	-0.7
			eSb	38 24.50	
APE	1.67	307	ePb	38 09.00	0.3
KSL	1.93	88	ePg	38 16.50	4.1X
ELL	2.29	72	ePn	38 18.00	0.3
VAM	2.53	256	ePb	38 24.70	3.7X
VLI	3.50	282	ePn	38 35.00	0.3
S.D. = 0.5		on	7 of	9 obs.	

JAN 13, 1990 11h 49m 30.45± 0.65s
36.104 N ± 7.2km 27.193 E ± 6.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

KAP	0.55	182	ePb	49 42.00	0.3
			eSb	49 51.00	
ARG	0.76	81	ePb	49 45.00	-0.3
YER	1.35	40	ePn	49 54.00	-1.3
NPS	1.54	237	ePb	49 57.00	-0.9
			eSb	50 17.00	
SMG	1.63	350	ePb	50 00.00	0.8
APE	1.65	306	ePb	50 00.00	0.4
KSL	1.94	89	ePb	50 04.50	0.8
ELL	2.28	73	ePn	50 09.00	0.1
VAM	2.53	255	ePn	50 08.20	-4.1X
S.D. = 0.9		on	8 of	9 obs.	

JAN 13, 1990 11h 56m 13.27± 0.63s
36.080 N ± 6.7km 27.145 E ± 5.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.53	177	iPgd	56 24.00	0.0
ARG	0.81	80	ePb	56 28.00	-0.9
YER	1.39	41	ePn	56 37.60	-1.2
NPS	1.49	237	ePb	56 40.00	-0.1
			eSb	57 00.00	
APE	1.63	308	ePb	56 43.60	1.4
SMG	1.64	351	ePb	56 43.40	1.1
KSL	1.97	88	ePb	56 47.30	0.2
IZM	2.32	2	ePn	56 51.00	-1.1
ELL	2.33	73	ePn	56 52.90	0.6
VAM	2.49	255	ePg	57 00.00	5.5X
KHL	2.94	40	ePn	57 00.00	-0.9
BCK	3.09	62	ePn	57 05.00	2.0
VLI	3.45	282	ePn	57 07.00	-1.2
S.D. = 1.2		on	12 of	13 obs.	

JAN 13, 1990 12h 58m 12.46± 0.64s
36.165 N ± 7.6km 27.123 E ± 6.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 4.0 (ATH).

KAP	0.61	176	iPgd	58 23.80	-1.0
			eSg	58 33.00	
ARG	0.81	86	ePb	58 28.00	-0.2
YER	1.34	44	iPn	58 32.20	-5.0X
NPS	1.52	234	ePb	58 39.00	-0.8
			eSb	59 00.00	
SMG	1.56	352	ePb	58 39.50	-0.7
APE	1.57	306	ePb	58 39.00	-1.4
KSL	1.99	91	ePn	58 47.30	0.8
IZM	2.23	3	ePn	58 49.00	-1.1
ELL	2.32	75	ePn	58 52.70	1.3
VAM	2.49	253	ePg	58 58.30	4.6X
KHL	2.88	41	ePn	58 59.10	-0.2
BCK	3.07	64	ePn	59 05.00	3.1X
VLI	3.42	281	ePb	59 08.50	1.6
ITM	4.30	285	ePn	59 21.20	1.8
S.D. = 1.3		on	11 of	14 obs.	

? JAN 13, 1990 13h 40m 22.70± 3.36s
37.041 N ±26.9km 27.768 E ±20.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.42	77	iPg	40 29.70	-1.6
IZM	1.41	344	ePn	40 47.70	-0.8
ELL	1.74	99	ePn	40 53.00	-0.3
KHL	1.89	47	ePn	40 55.10	-0.3
BCK	2.29	79	ePn	41 02.60	1.4
ALT	2.73	42	ePn	41 09.00	1.5
S.D. = 1.6		on	6 of	6 obs.	

? JAN 13, 1990 13h 44m 01.04±13.78s
45.143 N ±102.km 18.197 E ±74.1km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (ZAG), 2.4 (KBA).

ZAG	1.70	294	iPg	44 30.20	-0.6
			iSg	44 44.20	
VBY	2.11	281	e(Pn)	44 44.80	8.0X
			eSn	45 04.00	
SRO	2.67	2	iP	44 44.20	-0.7
			i	45 12.60	
CEY	2.72	284	eP	45 18.50	32.9X
LJU	2.73	291	eP	44 44.50	-1.2
			eSn	45 11.00	
ZST	3.15	347	eP	44 52.40	0.9
			e	45 13.30	
VOY	3.15	288	ePn	44 53.30	1.6
			eSn	45 25.70	
KBA	3.89	302	iPgc	45 01.60	-0.7
	0.6s	2.90nm			
			e	45 28.50	
			iSg	45 37.60	
			eSg	54 35.90	
KHC	5.08	323	eP	45 55.00	35.9X
S.D. = 1.4		on	6 of	9 obs.	

JAN 13, 1990 13h 46m 09.73± 0.59s
36.168 N ± 6.3km 27.208 E ± 5.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.62	183	ePb	46 21.60	-0.5
ARG	0.74	86	ePg	46 24.60	0.3
YER	1.30	42	iPn	46 32.70	-1.1
SMG	1.57	349	ePn	46 37.60	0.0
NPS	1.58	236	ePn	46 38.00	0.1
APE	1.62	304	ePb	46 38.80	0.3
KSL	1.92	91	ePb	46 43.00	0.2
ELL	2.25	74	ePn	46 48.40	0.7
VAM	2.56	254	ePg	47 00.00	8.0X
S.D. = 0.7		on	8 of	9 obs.	

JAN 13, 1990 14h 03m 15.33± 0.62s
36.095 N ± 7.0km 27.121 E ± 5.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

KAP	0.54	175	ePn	03 26.00	-0.3
ARG	0.82	81	ePn	03 31.00	-0.2
YER	1.40	42	iPn	03 39.20	-1.7
NPS	1.48	236	ePn	03 42.10	0.1
			eSn	04 02.50	
APE	1.61	308	ePn	03 43.00	-0.9
SMG	1.63	352	ePn	03 45.00	0.9
KSL	1.99	89	ePn	03 49.10	-0.3
IZM	2.30	3	ePn	03 52.00	-1.9
ELL	2.34	73	ePn	03 54.90	0.3
VAM	2.47	255	ePb	04 03.00	6.7X
KHL	2.94	40	ePn	04 05.00	2.0
BCK	3.10	63	ePn	04 06.20	0.9
ATH	3.31	306	ePb	04 13.00	4.9X
VLI	3.43	282	ePn	04 09.50	-0.4
ALT	3.79	38	ePn	04 20.00	4.9X
ITM	4.32	286	ePn	04 24.10	1.6
PRNI	8.74	129	eP	05 20.00	-4.7X
KHC	16.37	327	eP	07 11.40	4.8X
SUF	26.66	359	iP	08 41.20	-14.6X
	0.4s	1.90nm			
S.D. = 1.3		on	13 of	19 obs.	

• JAN 13, 1990 14h 13m 42.67± 0.43s
22.082 S ± 9.7km 170.399 E ± 9.6km
DEPTH = 28.4km (2 depth phases)
4.9mb (5 obs.) 4.4Msz (1 obs.)
LOYALTY ISLANDS REGION (189)

DZM	3.67	269	iPc	14 38.90	-0.1
			iS	15 20.90	
PVC	4.74	335	iPd	15 02.50	8.4X
			iS	16 14.00	
SGE	8.37	59	eP	15 48.00	2.7X
MBU	9.35	59	eP	15 48.00	-10.7X
KRP	16.40	165	P	17 32.90	0.5
RMO	20.21	253	eP	18 19.00	0.9
CTA	22.61	271	eP	18 44.00	1.5
			iS	22 54.00	
BWA	22.88	233	eP	18 44.20	-0.9
CAN	22.88	230	e(P)	18 44.30	-0.8
CMS	23.81	242	eP	18 54.00	-0.1
ASPA	33.61	260	eP	20 20.90	-2.0
	1.2s	13.00nm		4.7mb	
Z	19s	0.65um		4.4Msz	
			LR	33 54.40	
WRA	33.68	267	Pd	20 31.80	8.2X
	1.3s	11.30nm		4.6mb	
MAT	65.76	332	(P)	24 27.00	-0.2
	1.0s	15.00nm		5.1mb	
SPA	68.05	180	eP	24 42.90	1.3
	1.1s	11.90nm		4.9mb	
TIA	76.78	318	eP	25 33.20	-0.2
CN2	77.44	328	P	25 36.40	-0.4
BJI	79.82	321	eP	25 49.50	-0.4
TIY	80.65	317	eP	25 54.00	-0.5
KMI	80.69	302	Pc	25 56.50	1.3
			pP	26 05.50	29km
CHG	80.81	295	iPc	25 56.90	1.2
	1.2s	23.44nm		5.1mb	
XAN	80.82	312	P	25 55.60	0.1
LZH	85.43	312	eP	26 20.50	1.3
	1.2s	0.02nm		2.1mb X	
			epP	26 29.50	28km
GTA	89.86	313	eP	26 41.50	1.1
KVN	90.31	48	e(P)	26 43.50	0.9
GUN	95.49	298	P	27 10.00	3.1X
PKI	95.75	297	P	27 08.20	0.1
KKN	95.94	297	P	27 09.00	0.2
DMN	96.01	297	P	27 09.60	0.4
GKN	96.54	297	P	27 11.20	-0.2
SPC	144.09	326	ePKP	33 15.10	-2.3
KSP	144.89	331	iPKPc	33 16.30	-2.2
	1.0s	74.00nm			
PSZ	145.05	325	iPKP	33 16.80	-2.2
BRG	145.88	333	iPKPc	33 20.00	-0.2
	1.5s	48.00nm			
			i	33 30.80	

```
CLL   145.94 334 ePKP   33 19.00   -1.2
       2.0s     70.00nm
                  e     33 31.00
SRO   145.95 326 ePKP   33 20.50    0.1
PRU   146.28 332 PKP    33 21.00    0.1
ZST   146.32 327 e(PKP) 33 21.80    0.8
                  e     38 44.60
EKA   146.45 353 PKPd   33 20.50   -0.4
       0.8s     15.50nm
WIT   146.88 342 ePKP   33 24.00    2.4X
SKO   147.31 315 ePKP   33 23.50    0.7
       1.1s     36.00nm
KHC   147.34 331 iPKP   33 25.00    2.4X
       1.0s     10.50nm
WTS   147.55 341 ePKP   33 24.50    1.7
       1.0s     20.00nm
OHR   148.14 314 ePKP   33 25.00    0.8
       1.4s      0.06nm
ENN   148.90 341 ePKP   33 28.00    3.0X
       0.9s     15.00nm
KBA   148.94 329 ePKP   33 26.70    1.3
       0.8s      5.80nm
MEM   149.01 341 PKP    33 28.20    3.1X
VBY   149.05 325 ePKP   33 29.30    3.9X
LJU   149.07 326 ePKP   33 28.50    3.1X
ABH   149.13 338 ePKP   33 28.80    3.4X
CEY   149.33 326 e(PKP) 33 29.00    3.1X
VOY   149.40 327 e(PKP) 33 28.70    2.6X
RUP   149.45 339 ePKP   33 29.56    3.6X
FVI   149.56 329 PKP    33 30.50    4.4X
TRI   149.69 327 ePKP   33 29.80    3.5X
WLF   149.79 339 PKP    33 29.00    2.7X
DOU   149.89 342 iPKPc  33 31.10    4.6X
CDF   150.47 337 ePKP   33 31.50    3.9X
       0.9s      7.80nm
FEL   150.64 335 ePKP   33 33.14    5.2X
BSF   151.13 337 ePKP   33 33.20    4.6X
HAU   151.14 338 ePKP   33 33.20    4.7X
       0.7s      7.40nm
ARV   151.61 324 PKP    33 35.50    6.1X
VAI   151.94 332 PKP    33 27.40   -2.3
PGD   152.01 326 PKP    33 37.50    7.4X
CRE   152.06 325 PKP    33 44.50   14.4X
MGR   152.08 316 PKP    33 35.50    5.4X
FLN   152.40 347 ePKP   33 35.80    5.5X
       0.9s      9.80nm
BOB   152.48 330 PKP    33 49.00   18.3X
LDF   152.48 346 ePKP   33 36.00    5.6X
MNS   152.49 323 PKP    33 48.50   17.8X
LOR   152.62 340 ePKP   33 36.50    5.8X
GRR   152.84 347 ePKP   33 36.90    6.0X
       1.0s     13.60nm
LPG   153.08 334 ePKP   33 38.20    6.4X
LPF   153.21 347 ePKP   33 37.60    6.2X
       1.0s      9.60nm
BNI   153.48 334 PKP    33 41.00    8.9X
     S.D. = 1.2  on  38 of  74 obs.
-------------------------------------
?  JAN 13, 1990  14h 30m 04.19± 2.30s
   30.835 S ±12.6km  117.752 E ±22.6km
   DEPTH =  10.0km  (geophysicist)
 WESTERN AUSTRALIA                (590)

KLB     0.76 179 iPc    30 18.90   -0.1
                 iS     30 27.80
BAL     0.93 284 eP     30 21.80   -0.1
                 eS     30 32.90
MUN     1.74 229 iPc    30 34.80    0.1
                 iS     30 56.10
MRWA    2.22 316 eP     30 41.60    0.1
                 eS     31 09.00
     S.D. = 0.2  on   4 of   4 obs.
-------------------------------------
*  JAN 13, 1990  15h 06m 19.46± 2.47s
   4.646 N ±17.0km  125.128 E ±21.8km
   DEPTH = 216.2 ± 22.6 km
   5.0mb (  6 obs.)
 TALAUD ISLANDS                   (263)

AAI     8.83 160 eP     08 23.50   -0.8
                 eS     09 53.00
MTN    18.37 161 iPc    10 20.40   -0.3
KNA    20.58 170 eP     10 44.00    1.0
WB5    26.01 160 iPd    11 33.30   -1.2
WRA    26.06 160 Pd     11 33.70   -1.3
       0.8s     13.40nm          4.7mb
LOE    26.19 301 eP     11 36.00   -0.2
ASPA   29.41 163 iPd    12 04.40   -0.6
       0.6s     22.00nm          5.0mb
WARB   30.68 177 eP     12 17.00    0.9
       0.5s     23.00nm          5.1mb
CTA    32.18 140 iPd    12 28.40   -0.7
MRWA   34.79 194 iPc    12 52.00    0.6
       0.4s      5.00nm          4.5mb
FORR   35.41 176 iPd    12 56.70    0.2
       0.3s     15.00nm          5.1mb
LZH    36.92 331 P      13 11.50    2.1
ADE    41.42 163 iPd    13 47.80    1.4
       0.5s     39.44nm          5.2mb
BRS    41.56 142 iPc    13 47.00   -0.7
       0.8s      2.50nm          3.8mb X
BWA    44.64 152 eP     14 14.80    2.5
CAN    45.65 152 eP     14 21.50    1.2
GBA    47.84 284 P      14 37.00   -0.6
KIC   128.77 282 PKP    25 02.70   -1.0
LKO   128.91 286 PKP    25 03.78   -0.2
       0.6s      4.50nm
TIC   128.99 282 PKP    25 03.00   -1.1
LIC   129.08 282 PKP    25 03.10   -1.1
     S.D. = 1.2  on  21 of  21 obs.
-------------------------------------
*  JAN 13, 1990  17h 02m 06.06± 0.50s
   18.262 S ±14.8km  175.963 W ±12.8km
   DEPTH = 271.6km  (  2 depth phases)
   5.2mb ( 11 obs.)
 TONGA ISLANDS                    (173)

SVA     5.31 271 ePd    03 32.10    5.3X
AFI     5.91  44 iPc    03 24.60   -9.6X
                 (S)    04 25.00
PVC    14.97 270 iPc    05 31.00    4.5X
DZM    16.94 254 iPc    05 49.90    1.3
KRP    20.96 199 P      06 30.00    1.1
8RS    30.14 247 iP     07 52.80   -0.4
                 i      07 58.00   18kmX
RMO    33.55 249 iPd    08 24.60    2.0
       0.7s     61.00nm          5.3mb
CNB    35.08 234 eP     08 36.00    0.5
CTA    35.68 261 iPd    08 41.00    0.3
       1.0s     71.00nm          5.2mb
CMS    36.89 242 iPc    08 51.20    0.5
TOO    38.77 232 eP     09 06.00   -0.2
STK    40.51 242 eP     09 24.00    3.5X
JAY    45.24 285 iPc    09 53.30   -5.4X
                  e     10 38.00  206kmX
WB5    46.84 260 eP     10 10.90   -0.3
WRA    46.85 260 Pc     10 11.20   -0.1
       0.3s     14.10nm          4.8mb
ASPA   46.94 254 iPd    10 12.10    0.2
       0.8s    376.00nm          5.8mb
                 iS     16 44.30
MTN    51.12 268 eP     10 43.00   -0.8
FORR   51.93 245 iPc    10 59.00    9.4X
       0.4s     76.00nm          5.5mb
KNA    52.75 264 eP     10 56.00    0.2
       0.4s     40.00nm          5.2mb
COOL   57.90 245 eP     11 30.50   -2.0
MBL    60.15 256 eP     11 47.10   -0.8
       0.4s     18.00nm          5.0mb
MEKA   60.56 249 eP     11 49.30   -1.3
KLB    60.75 244 eP     11 50.50   -1.3
NWAO   61.10 242 eP     11 53.00   -1.1
RKG    61.21 241 eP     11 54.50   -0.4
BAL    61.73 245 eP     11 56.00   -2.3
MUN    62.04 243 iPc    11 59.70   -0.6
MRWA   62.49 246 eP     12 02.20   -1.1
NANU   63.86 253 eP     12 12.00   -0.3
MAT    69.60 322 eP     12 47.00   -0.9
       0.8s     14.18nm          4.7mb
TRT    70.01 268 iPc    12 51.80    1.0
SPA    71.85 180 eP     13 00.90   -0.2
       1.0s      6.50nm          4.3mb
KVN    78.57  42 e(P)   13 37.20   -2.2
                  pP    14 39.90  265km
PNT    83.74  33 eP     14 05.00   -0.7
ALQ    84.51  51 eP     14 01.70   -8.4X
       1.0s      2.50nm          4.0mb X
FBA    85.66  12 ePd    14 13.60   -1.3
                  pP    15 20.00  278km
BJI    85.68 315 eP     14 17.00    1.5
NNT    88.59 284 iPc    14 33.20    3.3X
                  e     29 32.00
KMI    90.07 296 Pc     14 40.00    3.1X
BDT    90.75 288 eP     14 42.80    2.9X
       1.0s     73.80nm          5.6mb
CHG    91.31 289 ePd    14 44.50    2.0
       0.9s     28.99nm          5.2mb
INK    91.63  15 eP     14 41.00   -1.9
WIT   145.46 357 ePKP   21 14.00    1.1
KAS   145.70 319 ePKP   21 15.50    1.7
KRA   145.81 342 ePKP   21 14.20    0.6
KSP   146.06 346 ePKP   21 12.00   -2.0
       0.9s     33.00nm
                  ic    21 15.40
                  i     21 29.80
CLL   146.27 350 iPKPd  21 15.40    1.1
                  i     21 30.80
                  i     22 25.90
WTS   146.27 357 ePKP   21 15.50    1.2
       0.9s     17.00nm
SPC   146.48 341 ePKP   21 16.60    1.6
BRG   146.52 349 iPKP   21 16.30    1.6
       1.0s     20.00nm
PRU   147.24 347 PKPd   21 18.00    2.1
                  e     21 20.60
MLR   147.30 331 ePKPc  21 19.00    2.6X
MEM   147.69 358 PKPc   21 19.20    2.6X
SNF   147.82 360 PKP    21 16.20   -0.6
HRI   147.93 304 e(PKP) 21 20.00    2.3
DOU   148.24 359 PKPc   21 20.80    3.3X
                  e     21 37.10
KHC   148.25 348 ePKP   21 17.50   -0.1
                  i     21 21.50
SRO   148.30 342 iPKP   21 21.70    4.1X
ZST   148.30 343 ePKP   21 21.90    4.2X
                  e     37 13.30
ABH   148.33 356 ePKP   21 21.15    3.4X
TOD   148.50 354 ePKP   21 21.42    3.4X
RUP   148.54 356 ePKP   21 21.65    3.6X
WLF   148.63 357 PKP    21 22.00    3.9X
                  e     21 38.00
DSI   148.76 301 e(PKP) 21 22.00    3.1X
FLN   149.36   6 ePKP   21 23.00    3.7X
FLN   149.36   6 ePKP   21 40.40   21.1X
LDF   149.56   5 ePKP   21 23.30    3.7X
LDF   149.56   5 ePKP   21 40.70   21.1X
GRR   149.69   6 ePKP   21 23.80    4.0X
GRR   149.69   6 ePKP   21 41.30   21.5X
CDF   149.81 356 ePKP   21 24.10    4.0X
CDF   149.81 356 ePKP   21 40.80   20.7X
LPF   150.02   7 ePKP   21 24.50    4.2X
KHL   150.12 317 ePKP   21 26.00    5.1X
KBA   150.26 347 iPKPc  21 24.30    3.4X
       0.5s      5.30nm
HAU   150.27 357 ePKP   21 25.30    4.6X
HAU   150.27 357 ePKP   21 41.90   21.2X
FEL   150.28 355 ePKP   21 25.79    4.9X
8SF   150.42 356 ePKP   21 25.60    4.5X
BSF   150.42 356 ePKP   21 42.20   21.1X
LJU   150.96 345 e(PKP) 21 26.00    4.2X
LOR   151.07   0 ePKP   21 27.10    5.2X
VOY   151.13 346 iPKP   21 29.40    7.2X
CEY   151.27 345 ePKP   21 28.30    6.0X
VBY   151.27 343 ePKPc  21 28.50    6.3X
SSF   151.27   1 ePKP   21 27.70    5.5X
LBF   151.36   0 ePKP   21 27.70    5.3X
MFF   151.53   6 ePKP   21 27.90    5.3X
AVF   151.54   1 ePKP   21 27.80    5.2X
SMF   151.69   0 ePKP   21 28.10    5.2X
BGF   151.76   2 ePKP   21 28.70    5.7X
TCF   152 01   3 ePKP   21 29.00    5.6X
LSF   152.01   4 ePKP   21 28.90    5.6X
MAF   152.09   2 ePKP   21 29.60    6.1X
LPG   152.75 356 ePKP   21 31.90    7.1X
OHR   153.07 331 ePKP   21 23.50   -1.5
CAF   153.36   3 ePKP   21 32.40    7.1X
BCAO  160.25 228 ePKPc  21 35.10    0.4
       0.5s     13.00nm
                  ic    22 18.00
     S.D. = 1.3  on  46 of  98 obs.
-------------------------------------
*  JAN 13, 1990  17h 17m 38.41± 0.49s
   21.967 S ±16.6km  170.169 E ± 9.3km
   DEPTH =  33.0km  (normal)
   4.7mb (  6 obs.)  4.2Msz (  1 obs.)
 LOYALTY ISLANDS REGION           (189)

DZM     3.46 268 iPd    18 32.10    0.7
                 iS     19 13.90
PVC     4.55 337 iP     18 57.00   10.2X
SGE     8.50  61 eP     19 41.50   -0.8
```

13d 17h

SVA	8.68	65	ePc	19	42.70	-2.0
BRS	16.70	248	eP	21	30.00	-1.6
RMO	20.04	253	eP	22	13.00	1.5
CTA	22.40	270	iPd	22	37.30	1.8
	0.9s	9.24nm			4.2mb	
CNB	22.53	229	eP	22	37.00	0.2
BWA	22.78	232	eP	22	35.60	-3.7X
CAN	22.79	230	eP	22	38.90	-0.5
CMS	23.67	241	eP	22	48.00	0.1
ASPA	33.42	260	iPc	24	14.40	-2.0
	0.8s	11.00nm			4.8mb	
	Z 19s	0.48um			4.2Msz	
		LR		37	45.50	
WB5	33.46	267	eP	24	14.40	-2.4
WRA	33.47	267	P	24	16.00	-0.9
	0.8s	3.30nm			4.3mb	
MTN	38.25	277	iPc	24	57.50	0.1
MAT	65.56	332	(P)	28	21.00	0.0
	1.2s	28.13nm			5.2mb	
SPA	68.17	180	eP	28	31.20	-6.2X
	1.0s	8.00nm			4.8mb	
		e		29	09.90	
TIA	76.55	318	Pc	29	26.40	-0.8
CN2	77.23	329	Pc	29	29.80	-1.0
GYA	78.09	305	P	29	36.00	-0.1
BJI	79.59	321	eP	29	43.00	-0.8
TIY	80.42	317	eP	29	48.60	0.2
KMI	80.45	302	Pd	29	50.20	1.2
		pP		30	01.00	35kmX
CHG	80.57	295	iPc	29	50.40	0.9
	0.9s	15.76nm			5.0mb	
XAN	80.59	312	P	29	49.10	-0.2
HHC	82.85	319	eP	30	06.20	5.2X
PRI	87.20	49	e(P)	30	26.50	3.6X
LLA	87.24	49	e(P)	30	28.60	5.7X
FRI	88.29	49	eP	30	30.20	2.3
GTA	89.62	313	eP	30	34.00	-0.4
KVN	90.39	48	e(P)	30	35.00	-3.0X
GUN	95.25	298	P	31	03.40	2.6
PKI	95.51	297	P	31	01.60	-0.4
KKN	95.69	298	P	31	02.40	-0.3
DMN	95.77	297	P	31	03.00	-0.1
GKN	96.30	298	P	31	04.60	-0.8
LPB	111.29	119	Pdiff	32	10.00	-3.0X
ZOBO	111.41	119	Pdiff	32	15.00	1.3
KSP	144.69	331	iPKPc	37	10.20	-3.0X
	0.9s	65.00nm				
PSZ	144.83	325	iPKP	37	11.30	-2.3
BRG	145.69	333	iPKPc	37	13.40	-1.5
	1.4s	36.00nm				
SRO	145.73	326	ePKP	37	12.90	-2.1
CLL	145.74	334	iPKP	37	13.20	-1.7
	1.7s	44.00nm				
		i		37	24.30	
PRU	146.08	331	PKP	37	14.30	-1.3
		e		37	33.50	
EKA	146.31	353	PKPd	37	14.10	-1.6
	0.9s	16.70nm				
VAY	146.61	313	ePKP	37	15.00	-1.7
SKO	147.08	315	ePKP	37	16.00	-1.4
KHC	147.14	331	iPKP	37	18.20	0.9
	1.2s	15.00nm				
BCAO	147.45	242	ePKPd	37	16 50	-2 4
	0.5s	13.00nm				
		ic		37	19.50	
		ic		37	40 00	
OHR	147.90	314	ePKP	37	19.20	0.4
	1.2s	0.05nm				
ENN	148.72	341	ePKP	37	21.00	1.3
	1.0s	17.00nm				
		e		37	25.00	
KBA	148.73	329	ePKPd	37	20.00	-0.2
	1.0s	8.90nm				
VBY	148.83	325	ePKPd	37	22.50	2.4
MEM	148.83	340	PKP	37	21.50	1.6
LJU	148.85	326	ePKP	37	22.00	1.9
ABH	148.95	338	ePKP	37	22.15	1.9
CEY	149.11	326	ePKP	37	23.00	2.4
VOY	149.19	327	ePKP	37	21.90	1.1
RUP	149.27	338	ePKP	37	23.02	2.3
FVI	149.35	329	PKP	37	20.50	-0.3
SNF	149.43	342	PKP	37	22.70	1.9
WLF	149.61	339	PKPc	37	22.00	0.9
DOU	149.71	341	PKP	37	24.10	2.8X
CDF	150.28	337	ePKP	37	25.10	2.8X
FEL	150.44	335	ePKP	37	26.21	3.6X
BSF	150.94	337	ePKP	37	26.70	3.3X
HAU	150.96	337	ePKP	37	26.60	3.3X
ARV	151.39	324	PKP	37	29.50	5.4X
VAI	151.74	332	PKP	37	28.60	4.2X
PGD	151.79	326	PKP	37	32.50	7.6X
ASS	151.83	324	PKP	37	40.50	15.7X
SDI	152.03	320	PKP	37	22.50	-2.6X
BDI	152.24	327	PKP	37	35.50	10.1X
FLN	152.24	347	ePKP	37	29.20	4.1X
MNS	152.27	322	PKP	37	42.50	17.1X
BOB	152.27	330	PKP	37	35.50	10.1X
LDF	152.32	346	ePKP	37	29.50	4.3X
LOR	152.44	340	ePKP	37	30.00	4.5X
GRR	152.68	347	ePKP	37	30.30	4.6X
LPG	152.89	334	ePKP	37	31.70	5.2X
LPF	153.05	347	ePKP	37	31.20	5.0X
CKI	153.08	331	PKP	37	36.00	9.6X
BNI	153.28	333	PKP	37	33.50	6.6X

S.D. = 1.5 on 53 of 83 obs.

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* JAN 13, 1990 18h 31m 06.01± 2.06s
18.033 N ± 7.9km 100.306 W ±20.1km
DEPTH = 10.0km (geophysicist)
GUERRERO, MEXICO (59)

III	0.87	67	iP	31	24.20	1.4
			iS	31	37.90	
ACX	1.23	160	iP	31	29.00	0.0
CRX	1.49	23	(P)	31	33.50	0.4
UNM	1.67	39	eP	31	36.00	0.3
MRX	1.86	333	(P)	31	15.20	-23.0X
			(S)	31	50.50	
PPM	1.90	57	iP	31	38.70	-0.5
IIT	2.14	62	eP	31	41.70	-0.7
			iS	32	09.30	
IISM	2.94	71	eP	31	52.30	-1.3
			(S)	32	40.00	
OXX	3.55	105	iP	32	02.90	0.5

S.D. = 1.0 on 8 of 9 obs.

JAN 13, 1990 18h 31m 16.66± 1.46s
15.789 N ± 4.6km 147.213 E ± 8.1km
DEPTH = 48.1 ± 13.0 km
5.1mb (9 obs.) 4.1Msz (1 obs.)
MARIANA ISLANDS REGION (215)

PJG	3.15	226	eP	32	05.50	0.5
GUA	3.16	225	eP	32	05.50	0.4
			eS	32	40.70	
KAKJ	21.28	344	P	36	00.10	-1.0
IIDJ	21.30	339	eP	35	58.90	-2.6
CHJJ	21.47	342	P	36	02.10	-1.0
MAT	22.17	340	(P)	36	09.00	-1.1
MTMJ	22.34	340	P	36	10.60	-1.2
NIIJ	22.57	343	P	36	13.60	-0.4
YAMJ	23.18	346	eP	36	20.70	0.8
OFUJ	23.71	349	eP	36	26.80	1.8
PMG	25.04	180	eP	36	37.00	-1.0
HOOJ	26.72	354	eP	36	53.50	0.2
MRRJ	27.06	350	eP	36	56.90	0.4
KUSJ	27.30	356	eP	36	59.10	0.4
SSE	28.22	307	eP	37	09.50	2.3
	Z 18s	0.40um			4.1Msz	
	E 16s	0.40um				
			eS	42	12.00	
ASAJ	28 50	353	eP	37	10.40	0.9
CTA	35 66	182	iPc	38	11.60	-0.7
BJI	36 24	318	eP	38	17.00	0.0
WB5	37.63	200	eP	38	28.50	-0.4
WRA	37.70	200	P	38	30.00	0.6
	1.8s	39.20nm			5.0mb	
ASPA	41.32	199	eP	39	00.90	1.5
RMO	42.05	178	eP	39	05.00	-0.4
DZM	42.08	153	iPc	39	04.90	-0.9
KMI	42.53	290	Pd	39	11.50	1.8
BRS	43.26	173	iPc	39	15.50	0.2
NST	45.24	277	eP	39	32.50	1.1
MBL	45.50	217	eP	39	32.20	-1.1
NNT	46.07	272	eP	39	38.80	0.8
CHG	46.08	281	eP	39	37.60	-0.4
BDT	46.15	279	eP	39	39.00	0.4
WARB	46.27	206	eP	39	39.00	-0.4
IPM	46.70	261	ePd	39	40.40	-2.6
FORR	49.88	202	eP	40	07.00	-0.4
MRWA	53.95	214	eP	40	37.00	-0.9
TTA	61 20	26	eP	41	28.30	-0.4
IMA	63 35	23	eP	41	42.30	-0.8
	1.2s	22.50nm			5.1mb	
PMR	63.78	29	eP	41	43.70	-2.0
	1.0s	22.50nm			5.2mb	
BRW	64.57	17	eP	41	50.70	-0.1
FBA	65.28	25	eP	41	54.40	-1.1
HYB	65.48	282	eP	41	57.00	-0.6
GBA	67.25	278	P	42	10.00	1.2
POO	69.70	284	iPd	42	28.20	4.2X
INK	71.48	23	iPd	42	33.20	-0.7
	1.4s	68.00nm			5.4mb	
MBC	75.60	14	eP	42	58.00	0.2
	0.7s	8.00nm			4.8mb	
MAIO	79.03	305	eP	43	18.00	0.4
PNT	80.23	42	eP	43	24.00	0.2
	1.0s	17.00nm			4.9mb	
ORV	81.10	51	ePc	43	28.70	0.2
MHC	81.49	54	eP	43	32.80	2.1
LLA	82.20	54	ePc	43	36.40	2.1
CMB	82.30	53	ePc	43	35.40	0.6
FRI	83.07	54	ePc	43	39.30	0.5
KEV	85.13	342	eP	43	50.00	1.5
SES	85.28	39	ePd	43	49.20	-0.5
	1.4s	118.00nm			5.9mb	
LRM	85.84	44	eP	43	53.20	0.3
SOD	86.57	341	iP	43	55.00	-0.7
DAG	87.25	357	iPc	43	59.20	0.4
	1.0s	10.00nm			5.0mb	
FFC	88.75	33	eP	44	06.50	0.1
	1.4s	51.00nm			5.6mb	
SUF	89.36	337	eP	44	09.30	0.1
NUR	91.23	335	eP	44	17.00	-0.8
FRB	96.04	15	eP	44	39.00	-0.9
KIC	144.56	306	PKPc	50	49.04	-1.5
TIC	144.60	307	PKPc	50	49.08	-1.5
LIC	144.87	306	PKPc	50	49.98	-1.0
ZOBO	146.06	96	PKP	50	56.00	2.3
LPB	146.10	96	PKP	50	58.00	4.5X
CNCB	146.23	97	PKP	50	56.00	2.1
CCH	148.01	98	PKP	51	01.00	4.6X

S.D. = 1.2 on 64 of 67 obs.

% JAN 13, 1990 18h 55m 46.66± 2.09s
16.053 N ± 8.8km 61.049 W ±17.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.4 (FDF).

DEG	0.26	358	eP	55	51.94	-0.2
			S	55	59.20	
MGG	0.29	243	eP	55	52.19	-0.5
SEG	0.56	309	eP	55	58.30	0.3
PAG	0.61	268	eP	55	59.00	0.0
			S	56	10.70	
BBL	0.67	218	eP	56	00.30	0.3

S.D. = 0.5 on 5 of 5 obs.

? JAN 13, 1990 19h 11m 47.29± 2.31s
7.504 N ±30.8km 94.174 E ±13.3km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
NICOBAR ISLANDS REGION (704)

NNT	7.45	47	iPc	13	37.70	1.2
BDT	10.77	26	eP	14	21.80	-0.5
CHG	12.16	22	eP	14	41.10	-0.1
GBA	17.53	292	P	15	52.00	1.1
HYB	18.14	304	eP	15	58.00	-0.6
HFS	78.79	330	eP	23	48.20	0.1
	0.4s	0.80nm			4.1mb	
INK	97.34	16	eP	25	17.00	-1.2

S.D. = 1.1 on 7 of 7 obs.

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* JAN 13, 1990 19h 20m 07.05± 0.36s
17.617 S ±10.1km 167.700 E ± 9.6km
DEPTH = 22.4km (3 depth phases)
4.9mb (4 obs.) 4.1Msz (1 obs.)
VANUATU ISLANDS (186)

PVC	0.60	102	iPd	20	16.20	-2.5
			iS	20	23.00	
DZM	4.59	195	iPc	21	16.70	-0.2
			iS	22	06.10	
RMO	19.64	240	eP	24	39.00	1.7
			e	24	50.00	50kmX
CTA	20.44	260	eP	24	47.00	1.2
			i	25	19.00	
PMG	21.56	290	eP	25	29.00	31.8X
CNB	24.01	219	eP	25	19.00	-2.3

13d 19h

BWA	24.02	222	eP	25	22.20	0.9	LPO	150.73	340	ePKP	39	56.60	3.2X				eS	13	18.00	
CAN	24.24	220	eP	25	21.30	-2.1		S.D. = 1.5 on 63 of 79 obs.						QCP	24.86	8	eP	08	54.00	-8.7X
STK	27.55	234	eP	25	58.00	3.7X	----------							BAG	26.55	6	eP	09	19.00	0.3
			e	26	04.00	21km	JAN 13, 1990 20h 03m 41.92± 0.25s							NNT	28.88	321	eP	09	39.80	0.1
TOO	27.85	220	eP	25	50.00	-7.0X	10.171 S ± 4.9km 117.826 E ± 6.6km							PMG	28.91	91	eP	09	42.00	2.1
WB5	31.62	261	eP	26	29.60	-1.2	DEPTH = 36.3km (18 depth phases)							CTA	29.11	113	eP	09	40.00	-1.8
WB5	31.62	261	eP	26	48.10	17.3X	5.2mb (24 obs.) 4.8Msz (11 obs.)										iS	14	32.00	
WRA	31.64	260	P	26	31.00	0.0	SOUTH OF SUMBAWA ISLAND (291)							QIZ	30.06	345	eP	09	50.80	0.6
	0.7s	2.20nm			4.2mb		CENTROID, MOMENT TENSOR (HRV)								N 15s	3.00um				
ASPA	32.14	253	iPd	26	49.90	14.5X	Data Used: GDSN							STK	30.83	138	iPd	09	58.20	1.4
	0.9s	138.00nm					L.P.B.: 11S, 23C										e	13	07.00	
	Z 19s	0.38um			4.1Msz		Centroid Locotion:							NST	31.09	325	eP	09	59.50	0.3
		ipP	27	22.30	152kmX		Origin Time 20:03:49.7 1.2							ADE	31.18	146	e(P)	10	09.80	9.8X
		iS	32	42.50			Lat 10.05S 0.12 Lon 118.09E 0.11								0.9s	25.21nm			5.0mb	
		eScS	36	13.70			Dep 56.7 5.8 Half-durotion 1.5							LOE	31.68	330	eP	10	04.00	-0.5
		LR	39	03.70			Moment Tensor; Scale 10**16 Nm										e	12	59.00	
ASPA	32.14	253	iPd	26	34.30	-1.1	Mrr= 7.63 0.65 Mtt=-0.12 0.70							BDT	32.99	326	eP	10	15.00	-0.8
FORR	38.24	242	iPd	27	27.90	0.6	Mff=-7.51 1.01 Mrt=-6.63 0.89								1.0s	107.60nm			5.7mb	
	0.4s	47.00nm			5.6mb		Mrf= 2.56 0.78 Mtf=-0.93 0.90							GZH	33.34	352	P	10	18.80	0.0
WARB	38.90	250	eP	27	38.00	5.0X	Principal Axes:							RMO	33.42	123	eP	10	20.00	0.4
MBL	45.16	257	eP	28	24.10	-0.1	T Val= 11.80 Plg=59 Azm=196										e	10	32.00	45km
MAT	60.65	333	eP	30	16.00	-2.7	N -3.87 29 353							CMS	33.51	133	eP	10	20.00	-0.3
	1.0s	13.00nm			5.0mb		P -7.94 10 88							CHG	34.30	327	eP	10	27.00	-0.2
MDJ	71.01	332	eP	31	23.00	-2.0	Best Double Couple:Mo=9.9*10**16							CHTO	34.30	327	eP	10	27.00	-0.2
		pP	31	29.50	21km		NP1:Strike=209 Dip=43 Slip= 135										pP	10	38.00	40km
CN2	72.32	329	Pd	31	31.00	-1.9	NP2: 335 61 57							BFD	34.93	144	eP	10	32.00	-0.5
SPA	72.49	180	iPc	31	32.10	-1.8								TOO	36.93	142	eP	10	50.00	0.6
	0.9s	9.09nm			4.8mb		MKS	5.18	18	iPc	05	02.50	3.3X	BWA	36.94	136	eP	10	51.70	2.2
		e	31	40.00	25km		TRT	5.68	295	iPd	05	05.30	-0.9				e	13	23.90	
BJI	74.76	321	eP	31	46.00	-1.2		0.6s	11.90nm			4.6mb		BRS	37.08	122	iPc	10	51.80	1.0
	1.0s	0.01nm			1.9mb X		MBL	11.09	170	eP	06	13.50	-7.8X		0.6s	3.00nm			4.3mb	
TIY	75.66	318	eP	31	51.50	-1.0		0.4s	111.00nm			6.4mb X					ipP	11	02.40	37km
XAN	75.94	313	P	31	52.10	-2.0				eS	08	02.00					e	11	10.00	
CHTO	76.65	295	eP	31	58.10	-0.2	KNA	12.02	119	eP	06	28.50	-5.3X				eS	16	36.00	
HHC	78.04	320	eP	32	04.40	-1.4				eS	08	28.00		CAN	37.83	136	eP	10	57.60	0.6
BTO	78.86	319	eP	32	10.00	-0.2	AAI	12.14	59	eP	06	47.10	11.7X				e	13	26.00	
GTA	84.95	314	eP	32	41.30	-0.7	MTN	13.31	103	iPc	06	45.40	-5.5X	GYA	37.99	344	P	10	59.00	0.5
WMQ	95.03	314	eP	33	28.00	-1.4				eS	09	04.00			N 18s	1.40um				
ABH	144.06	338	ePKP	39	38.68	-3.9X	TSM	14.30	1	ePd	07	13.10	9.1X		E 18s	0.60um				
FVI	144.44	330	PKP	39	39.50	-3.7X	KKM	16.19	354	ePc	07	33.00	4.4X				pP	11	09.60	37km
OGA	145.05	332	ePKP	39	42.40	-2.2		0.6s	62.40nm			4.9mb					PcP	13	16.40	
	0.5s	22.00nm					MEKA	16.37	178	eP	07	24.90	-5.8X				S	16	47.00	
CDF	145.39	337	ePKP	39	42.20	-2.7		0.3s	134.00nm			5.5mb		KMI	38.04	337	Pc	11	01.00	2.0
FEL	145.54	336	ePKP	39	43.00	-2.3				eS	10	11.00			Z 18s	1.80um			4.9Msz	
BSF	146.05	337	ePKP	39	44.50	-1.6	WARB	17.98	154	eP	07	46.30	-4.6X		E 15s	0.90um				
HAU	146.07	337	ePKP	39	44.70	-1.3		0.3s	27.00nm			4.9mb					pP	11	11.00	34km
ARV	146.52	326	PKP	39	48.00	1.1				eS	10	52.00					S	16	50.00	
SFI	146.80	327	PKP	39	49.50	2.3	WRA	18.66	123	Pd	07	54.60	-4.7X	CNB	38.08	136	eP	11	11.00	11.9X
VAI	146.83	333	PKP	39	47.70	0.5		0.9s	14.90nm			4.2mb		WHN	40.62	355	Pc	11	21.00	0.9
DUI	146.85	322	PKP	39	46.00	-1.5	DAV	18.80	25	eP	08	03.10	2.1		1.0s	0.11nm			2.6mb X	
TDS	146.86	317	PKP	39	48.80	1.3	MRWA	19.03	185	eP	07	58.00	-5.7X		Z 18s	1.82um			5.0Msz	
PGD	146.90	327	PKP	39	49.50	1.9		0.3s	27.00nm			5.0mb					pP	11	32.00	39km
CRE	146.95	327	PKP	39	48.50	0.8				eS	11	07.00					eS	17	20.00	
ASS	146.96	325	PKP	39	47.50	-0.1	BAL	20.36	183	eP	08	17.00	-1.2	SSE	41.16	4	Pd	11	25.00	0.5
SGO	147.00	320	PKP	39	48.50	0.9				eS	11	43.00			1.2s	0.04nm			2.0mb X	
BCAO	147.09	250	iPKPd	40	03.80	15.2X	ASPA	20.38	133	iPc	08	15.90	-2.6		Z 20s	0.60um			4.5Msz	
MGR	147.09	319	PKP	39	50.00	2.2		0.9s	60.00nm			4.9mb			N 10s	0.20um				
SDI	147.20	323	PKP	39	49.00	1.0		Z 19s	4.10um			4.8Msz					pP	11	35.40	36km
AZI	147.24	323	PKP	39	49.50	1.5				ipP	08	31.90	76kmX	HNR	41.49	93	eP	11	37.00	9.4X
BDI	147.33	329	PKP	39	48.40	0.2				eS	11	53.30		NJ2	41.99	1	Pc	11	32.60	1.3
BOB	147.36	331	PKP	39	50.00	1.8				LR	15	55.80			Z 20s	0.90um			4.6Msz	
MNS	147.41	324	PKP	39	49.00	0.7	KLM	20.82	308	ePc	08	23.00	0.0				pP	11	43.30	37km
FLN	147.48	345	ePKP	39	47.70	-0.5	COOL	20.84	172	iPd	08	20.80	-2.3				S	17	46.00	
LDF	147.55	345	ePKP	39	47.90	-0.4				eS	11	56.00		CD2	43.02	342	eP	11	39.30	-0.6
LOR	147.57	339	ePKP	39	48.30	-0.1	KLB	21.32	180	eP	08	26.00	-1.9		Z 16s	1.20um			4.9MszX	
PLI	147.62	328	PKP	39	49.50	1.0				eS	11	06.00			N 15s	1.30um				
LBF	147.78	339	ePKP	39	48.50	-0.3	MUN	21.75	184	eP	08	30.00	-2.3				pP	11	50.00	37km
RDP	147.80	324	PKP	39	51.50	2.5X				i	08	37.00	25kmX	SHL	43.59	325	iP	11	43.50	-1.2
SSF	147.87	340	ePKP	39	49.10	0.2				eS	12	15.00					iS	18	08.50	
SOI	147.90	315	PKPc	39	51.70	2.5X	IPM	22.24	310	ePc	08	38.10	0.8	XAN	44.77	349	iPc	11	53.20	-0.8
GRR	147.92	346	ePKP	39	49.10	0.2		1.1s	108.60nm			5.2mb			1.4s	0.10nm			2.5mb X	
LPG	147.98	334	ePKP	39	50.20	0.7				e	09	27.00			N 18s	2.00um				
CKI	148.16	331	PKP	39	51.00	1.6	NWAO	22.65	181	eP	08	40.00	-1.2		E 18s	1.40um				
LPF	148.30	346	ePKP	39	50.30	0.8		Z 20s	3.80um			4.8Msz		TIA	46.14	359	Pc	12	03.80	-0.9
BNI	148.37	334	PKP	39	53.00	3.1X		N 20s	1.30um						N 16s	1.40um				
BGF	148.53	340	ePKP	39	50.90	0.9		E 20s	2.80um								eS	18	41.00	
MAF	148.92	340	ePKP	39	51.90	1.3				i	08	48.00	29km	GBA	46.52	300	P	12	08.00	0.0
TCF	148.98	340	ePKP	39	52.10	1.4				eS	13	00.00		LSA	47.24	328	Pc	12	15.00	0.9
SBF	148.98	332	ePKP	39	51.80	0.9	FORR	22.69	157	iPd	08	39.90	-1.6	HYB	47.51	305	iPc	12	14.70	-1.2
LSF	149.23	341	ePKP	39	52.50	1.4		0.4s	49.00nm			5.3mb			1.0s	60.00nm			5.6mb	
MFF	149.39	343	ePKP	39	53.10	1.8				eS	12	43.00					iS	19	04.20	
FRF	149.57	332	ePKP	39	53.30	1.6	PSI	22.75	303	ePd	08	44.00	1.7	LZH	47.86	345	Pc	12	18.00	-0.5
LRG	149.78	332	ePKP	39	54.30	2.4		0.8s	40.50nm			4.9mb			1.4s	0.06nm			2.4mb X	
LMR	149.81	332	ePKP	39	54.20	2.2	TSI	23.50	304	iPc	08	51.00	1.4		Z 20s	1.20um			4.9Msz	
RJF	150.08	340	ePKP	39	55.20	2.8X	RKG	23.80	182	eP	08	58.00	5.7X				pP	12	29.50	41km
CAF	150.23	339	ePKP	39	55.70	3.1X		0.4s	45.00nm			5.3mb		TIY	47.90	354	eP	12	17.00	-1.7
LFF	150.65	341	ePKP	39	56.30	3.1X				e	09	08.00	37km		Z 23s	1.07um			4.8MszX	

13d 20h

N 15s 0.69um
S 19 10.00
DZM 47.99 110 iPc 12 22.70 3.0X
TSRJ 48.59 20 eP 12 23.10 -0.9
GUN 48.88 322 P 12 25.20 -1.6
PKI 48.93 321 P 12 25.30 -1.8
0.4s 20.00nm 5.5mb
DMN 49.15 321 P 12 27.00 -1.7
0.7s 48.00nm 5.6mb
KKN 49.17 321 P 12 27.00 -1.8
0.4s 17.00nm 5.4mb
IIDJ 49.21 22 eP 12 28.30 -0.5
GKN 49.72 321 P 12 31.00 -2.0
BJI 49.98 358 eP 12 34.00 -0.5
1.5s 0.08nm 2.5mb X
Z 16s 0.87um 4.9MszX
eS 19 40.00
CHJJ 50.12 22 eP 12 33.70 -2.0
MTMJ 50.16 21 P 12 34.90 -1.3
MAT 50.27 21 iPc 12 33.60 -3.3X
1.2s 115.63nm 5.8mb
Z 20s 0.71um 4.7Msz
(S) 19 40.00
KAKJ 50.71 23 eP 12 35.00 -5.2X
BTO 51.03 352 P 12 42.00 -0.7
N 16s 1.40um
E 14s 0.40um
pP 12 51.50 32km
sP 12 56.00
S 19 55.00
HHC 51.09 354 P 12 42.00 -1.2
Z 30s 1.60um 4.9MszX
N 18s 1.40um
eS 19 51.00
POO 51.92 303 iPc 12 48.00 -1.7
SNY 52.01 5 iPc 12 48.40 -1.5
1.2s 0.10nm 2.7mb X
Z 19s 0.50um 4.6Msz
N 19s 0.70um
pP 12 58.30 33km
GTA 52.09 342 Pd 12 50.60 -0.2
1.2s 0.10nm 2.7mb X
YAMJ 52.38 22 P 12 52.20 -0.7
OFUJ 53.79 23 eP 13 02.20 -1.0
CN2 54.16 7 Pc 13 04.20 -1.6
Z 20s 0.70um 4.7Msz
pP 13 14.00 32km
ScS 22 52.00
NDI 55.05 316 iP 13 10.00 -2.6
eS 20 44.00
MDJ 55.56 10 Pc 13 16.00 0.0
pP 13 27.00 37km
WMQ 60.31 335 P 13 48.00 -1.5
Z 16s 0.70um 4.9MszX
S 22 00.50
ScS 23 35.00
KSH 62.82 325 Pd 14 06.60 0.1
MAW 67.75 200 iPd 14 38.40 0.7
MAIO 71.69 314 iPd 15 02.50 0.0
0.9s 28.56nm 5.3mb
eS 24 20.00
RYD 77.56 298 iPd 15 37.00 0.6
IR4 77.58 310 eP 15 37.50 1.1
IR7 77.97 310 eP 15 39.00 0.5
SPA 79.90 180 iPc 15 49.10 0.6
1.2s 28.17nm 5.1mb
Z 20s 1.13um 5.2Msz
SPA 79.90 180 eP 15 52.00 3.5X
KER 80.19 308 eP 15 49.50 -1.1
SLY 81.84 308 ePd 16 00.50 1.5
eS 26 06.00
BHD 81.99 306 ePd 16 03.50 3.6X
ePcP 16 14.00
eS 26 12.50
TAB 82.02 311 eP 16 02.00 1.9
MSL 83.90 308 ePc 16 14.50 4.9X
e 16 26.00 37km
SLR 85.25 245 iPd 16 18.20 1.4
1.0s 15.00nm 5.1mb
BUL 85.83 250 iPc 16 36.60 16.8X
1.0s 11.50nm
ipP 16 47.50 35km
BFS 86.39 243 eP 16 21.00 -1.5
KSR 86.46 244 eP 16 24.20 1.3
BLF 86.54 241 iPd 16 36.00 12.8X
AYN 87.79 300 ePd 16 31.70 2.7
BADA 88.57 299 eP+ 16 36.10 3.4X

JARJ 88.58 303 Pd 16 36.00 3.2X
MASJ 88.66 302 Pd 16 37.00 3.8X
KFNJ 88.72 303 Pd 16 36.90 3.5X
SALJ 88.75 303 Pc 16 37.00 3.4X
AOBJ 88.79 300 Pd 16 36.80 3.0X
SHMJ 88.84 303 Pd 16 37.60 3.6X
DSI 88.91 302 e(P) 16 36.00 1.7
MBH 88.94 300 eP 16 36.00 1.5
HRI 88.98 304 eP 16 37.00 2.2
BBTK 92.68 310 eP 16 52.00 0.3
KHL 94.90 308 eP 17 03.00 1.1
MLR 98.48 315 ePd 17 20.00 2.0
IMA 98.61 24 eP 17 19.50 1.3
1.0s 9.20nm 5.3mb
SUF 99.73 332 eP 17 22.00 -1.2
KEV 99.75 339 eP 17 17.00 -6.2X
SOD 99.77 337 eP 17 21.00 -2.3
BCAO 99.90 273 iPd 17 28.50 3.4X
1.0s 10.00nm 5.3mb
NUR 100.34 330 ePdiff17 34.00 8.0X
OHR 101.88 310 ePdiff17 31.20 -2.3X
HFS 105.79 330 ePdiff17 38.40 -11.9X
1.0s 14.80nm
INK 106.26 22 ePdiff17 53.00 0.9
INK 106.26 22 ePKP 22 16.00 12.4X
KHC 106.94 318 ePKP 21 54.00 -11.6X
LBF 113.60 317 ePKP 22 31.10 12.8X
SSF 113.91 317 ePKP 22 30.90 12.1X
0.7s 2.20nm
BGF 114.45 317 ePKP 22 32.10 12.2X
0.7s 3.30nm
LDF 115.95 319 ePKP 22 23.60 0.9
GRR 116.47 319 ePKP 22 24.20 0.5
LPF 116.68 319 ePKP 22 25.00 0.9
0.4s 2.20nm
PNT 118.64 39 ePKP 22 40.00 12.2X
BRK 119.72 52 e(PKP)22 48.30 18.1X
PRS 120.70 54 ePKP 22 45.10 13.0X
LLA 120.99 53 ePKPc 22 46.80 14.1X
FRI 121.89 53 ePKPc 22 47.40 13.1X
KIC 123.09 271 PKP 22 38.40 1.1
SES 123.32 35 ePKP 22 39.00 2.3
LIC 123.36 271 PKP 22 38.82 1.0
TIC 123.41 271 PKP 22 38.94 1.0
LKO 124.31 275 PKP 22 42.04 2.3
LRM 124.43 41 ePKP 22 41.00 1.6
e 22 51.90
FRB 126.32 4 ePKP 22 42.00 -0.1
ANT 145.38 167 ePKP 23 20.00 1.6
i 23 31.80
CCH 152.34 172 PKP 23 34.60 4.7X
0.6s 1.00nm
i 23 50.60
CNCB 152.58 168 PKP 23 40.00 9.5X
LPB 152.83 167 PKP 23 42.00 11.3X
0.9s 50.42nm
ZOBO 153.08 167 PKP 23 41.00 9.8X
1.0s 20.00nm
LR 15 20.00
S.D. = 1.4 on 102 of 152 obs.

JAN 13, 1990 20h 05m 10.39± 0.62s
27.602 N ± 7.8km 115.091 W ± 6.3km
DEPTH = 10.0km (geophysicist)
5.1mb (28 obs)
OFF W. COAST OF BAJA CALIFORNIA (47)

GLA 5.44 2 eP 06 30.20 -3.3X
PLM 5.93 346 eP 06 38.70 -1.9
PEC 6.52 345 eP 06 46.70 -2.0
BLP 8.29 328 eP 07 12.20 -1.4
BCH 8.68 332 eP 07 17.50 -1.5
PHAM 9.37 332 eP 07 30.00 1.6
PRI 9.74 332 ePd 07 32.60 -1.1
FRI 10.14 339 eP 07 39.00 -0.1
PRS 10.20 330 e(P) 07 39.70 -0.2
LLA 10.26 333 ePd 07 39.90 -0.9
ANMO 10.40 43 eP 07 41.00 -1.8
SAO 10.60 331 e(P) 07 44.20 -1.2
TNP 10.60 351 eP 07 47.00 1.4
MSU 11.15 12 eP 07 54.50 1.4
MHC 11.17 332 eP 07 55.00 1.7
CMB 11.31 338 eP 07 55.10 0.0
KVN 11.69 348 eP 08 00.50 0.1
BKS 11.87 331 iPc 08 06.90 4.2X
0.7s 39.00nm 5.8mb
eLQ 10 25.00

eLR 10 46.00
BRK 11.88 331 e(P) 08 04.00 1.2
DUG 12.70 8 eP 08 15.00 1.0
ORV 13.06 338 eP 08 20.20 1.6
DAU 13.17 13 eP 08 21.50 1.2
MIN 13.80 339 ePd 08 32.40 3.8X
GOL 14.52 31 eP 08 40.00 2.0
FHC 15.07 333 ePd 08 49.40 4.4X
BW06 15.80 15 eP 08 55.50 0.8
MEO 15.82 59 iPc 08 59.80 4.9X
CRX 16.31 117 (P) 09 14.30 12.9X
IMW 16.60 11 eP 09 05.00 0.0
PPM 17.33 116 iP 09 23.60 9.1X
SIO 17.91 58 eP 09 19.60 -1.6
LRM 18.31 6 eP 09 27.20 1.0
TUL 18.36 58 ePd 09 26.10 -0.6
1.2s 75.00nm 4.7mb
Z 21s 2.01um 5.9MszX
eS 12 52.00
LR 14 35.00
VGB 18.44 347 eP 09 27.70 0.0
RSSD 18.73 25 eP 09 32.50 1.1
LON 19.83 346 eP 09 43.00 -1.2
BMW 19.90 343 eP 09 44.00 -0.9
GMW 20.80 345 eP 09 53.00 -1.3
OLY 21.58 63 eP 10 02.00 -0.2
MCW 21.88 346 eP 10 05.00 -0.2
PNT 21.96 352 eP 10 09.00 3.0X
1.0s 29.00nm 4.7mb
PGC 21.99 345 eP 10 06.00 -0.2
SES 22.97 7 ePd 10 15.40 -0.6
FVM 23.11 57 eP 10 19.00 1.6
EDM 25.62 2 eP 10 40.50 -1.0
RSCP 26.29 65 eP 10 50.00 2.1
RSON 28.33 29 eP 11 04.50 -1.7
0.9s 27.88nm 5.1mb
FFC 28.74 16 eP 11 08.50 -1.4
1.2s 21.00nm 4.8mb
PRM 28.75 69 eP 11 08.50 -1.7
JSC 29.68 69 eP 11 17.00 -1.5
LHS 30.06 68 eP 11 22.00 0.0
RSNY 36.46 51 eP 12 17.50 0.2
1.0s 28.92nm 5.1mb
HBVT 37.44 52 eP 12 26.40 0.9
TOA 40.16 338 eP 12 50.40 2.3
PMR 40.85 336 eP 12 54.50 0.9
0.9s 91.67nm 5.5mb
INK 42.19 350 eP 13 05.00 0.5
FBA 42.66 340 eP 13 08.50 0.1
1.0s 23.75nm 4.9mb
SCH 44.15 38 eP 13 21.00 0.3
TTA 44.22 335 eP 13 21.50 0.2
1.0s 37.50nm 5.2mb
IMA 45.27 339 ePd 13 30.20 0.5
1.0s 38.00nm 5.3mb
FRB 46.82 26 eP 13 40.00 -1.8
MBC 48.75 359 eP 13 57.50 0.8
0.9s 36.00nm 5.4mb
BRW 49.45 344 e(P) 14 01.90 -0.3
ZOBO 63.04 128 P 15 45.00 4.1X
LPB 63.24 128 P 15 38.00 -4.0X
e 15 46.00
CNCB 63.51 128 P 15 37.00 -7.0X
DAG 64.79 15 iPd 15 49.80 -1.1
0.8s 17.16nm 5.3mb
CCH 65.18 127 P 15 58.60 4.0X
NB2 81.55 23 P 17 31.20 1.8
1.0s 10.30nm 4.8mb
FLN 84.20 37 eP 17 44.00 0.8
1.1s 21.40nm 5.3mb
GRR 84.22 38 eP 17 44.00 0.7
1.0s 16.00nm 5.2mb
LPF 84.33 38 eP 17 44.40 0.6
1.1s 19.50nm 5.2mb
LDF 84.49 37 eP 17 45.40 0.8
0.7s 11.00nm 5.2mb
MFF 85.66 39 eP 17 51.30 0.8
1.1s 29.30nm 5.4mb
DOU 86.01 34 eP 17 52.60 0.4
MAT 86.11 309 (P) 17 54.00 1.0
0.9s 26.89nm 5.4mb
LSF 86.80 38 eP 17 55.20 -1.0
1.0s 10.00nm 5.0mb
TCF 87.15 38 eP 17 58.50 0.6
1.0s 8.00nm 4.9mb
BGF 87.33 38 eP 17 57.70 -1.0
1.0s 10.00nm 5.0mb

RJF	87.36	39	eP	17	59.60	0.7
SSF	87.37	37	eP	17	58.10	-0.8
	0.9s	5.50nm			4.8mb	
MAF	87.38	38	eP	17	58.00	-1.0
	1.0s	6.80nm			4.9mb	
LOR	87.42	37	eP	17	58.30	-0.9
	0.9s	8.10nm			5.0mb	
AVF	87.45	37	eP	17	58.10	-1.2
	1.0s	6.80nm			4.9mb	
SMF	87.81	37	eP	18	00.70	-0.3
	1.0s	6.80nm			4.9mb	
HAU	88.24	35	eP	18	02.30	-0.8
	0.7s	6.60nm			5.1mb	
CDF	88.44	34	eP	18	03.10	-1.1
AAPN	88.57	48	eP	18	11.20	6.2X
BSF	88.58	35	eP	18	03.80	-1.1
ALOJ	88.69	48	iPc	18	07.20	1.5
ASMO	88.79	48	iPc	18	08.50	2.4
CMS	111.05	245	ePKP	24	04.00	18.0X
			e	24	18.00	
WRA	116.72	260	PKPd	24	00.10	2.9X
	0.7s	2.20nm				
BCAO	125.11	62	ePKPd	24	15.80	2.4X
	0.6s	8.00nm				
			ic	24	20.60	
BLF	145.99	102	iPKPc	24	55.00	3.2X
	0.9s	23.08nm				
BUL	146.08	85	iPKPd	25	10.20	18.1X
	1.0s	6.50nm				
			ipP	25	15.00	
KSR	146.09	96	ePKP	24	55.10	3.0X
BFS	146.19	98	iPKPc	24	52.00	-0.1
	1.0s	28.00nm				
SLR	147.29	95	iPKPd	24	58.00	4.1X
	1.5s	111.11nm				
Z	20s	3.19um			6.1Msz	

S.D. = 1.2 on 79 of 99 obs.

JAN 13, 1990 20h 15m 58.78± 0.43s
44.197 N ± 4.1km 7.495 E ± 3.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

ENR	0.06	299	P	16	00.92	-0.2
			S	16	02.00	
STV	0.13	291	P	16	02.08	0.1
			S	16	04.15	
AUTN	0.21	194	Pg	16	03.02	-0.4
			Sg	16	06.96	
TOUF	0.26	224	Pg	16	04.36	0.1
ROB	0.29	70	P	16	05.19	0.4
			S	16	09.02	
AURF	0.33	201	Pg	16	06.16	0.5
			Sg	16	10.95	
IMI	0.40	135	P	16	06.86	-0.2
			S	16	12.61	
PZZ	0.42	318	P	16	07.38	0.0
			S	16	13.12	
FIN	0.51	88	P	16	09.30	0.1
			S	16	16.30	
PCP	0.83	65	P	16	14.53	-0.3

S.D. = 0.3 on 10 of 10 obs.

JAN 13, 1990 20h 18m 17.75± 0.43s
10.812 S ± 8.3km 166.008 E ± 8.8km
DEPTH = 47.0km (3 depth phases)
4.9mb (7 obs.)
SANTA CRUZ ISLANDS (184)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 13S, 26C
Centroid Location:
Origin Time 20:18:26.2 0.4
Lot 11.14S 0.06 Lon 165.34E 0.05
Dep 53.4 3.6 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.49 0.06 Mtt= 0.18 0.12
Mff=-1.68 0.13 Mrt=-0.18 0.10
Mrf=-0.28 0.12 Mtf= 0.29 0.08
Principal Axes:

	Val=	Plg=	Azm=
T	1.55	80	147
N	0.19	9	353
P	-1.74	4	262

Best Double Couple:Mo=1.6*10**17
NP1:Strike=342 Dip=41 Slip= 76
NP2: 181 50 102

HNR	6.12	282	eP	19	48.00	0.0
			eS	19	54.00	
DZM	11.20	178	iPc	20	57.90	-0.4
			iS	22	58.90	
PMG	18.61	273	eP	22	35.00	1.2
BRS	20.67	215	iPd	22	56.00	-0.2
			i	23	10.00	63kmX
CTA	21.14	242	iPc	23	02.90	1.8
	1.0s	27.50nm			4.6mb	
			i	23	12.00	33kmX
			iS	26	55.00	
RMQ	22.55	224	eP	23	17.00	1.9
			e	23	29.00	48km
BWA	28.47	212	eP	24	09.80	-0.8
CAN	28.89	210	eP	24	14.20	-0.2
WB5	31.77	250	eP	24	38.60	-1.4
WRA	31.80	250	P	24	40.00	-0.3
	0.7s	9.40nm			4.7mb	
TOO	32.40	211	eP	24	46.00	0.6
ASPA	33.13	243	eP	24	50.40	-1.5
	1.0s	20.00nm			4.9mb	
Z	22s	2.86um			4.9MszX	
			LR	35	43.80	
MTN	34.18	263	eP	25	01.00	0.0
WARB	40.15	242	eP	25	51.00	-0.2
MBL	45.42	251	eP	26	30.00	-4.0X
MEKA	47.35	244	eP	26	49.00	-0.2
MRWA	50.03	241	eP	27	11.00	1.1
MAT	53.88	332	eP	27	38.00	-0.6
	1.3s	71.15nm			5.5mb	
SSE	59.87	316	Pc	28	21.00	-0.2
	0.8s	11.00nm			5.0mb	
Z	12s	0.40um			4.8MszX	
			i	28	34.40	48km
IPM	66.46	280	ePd	29	05.90	0.8
BJI	68.46	321	eP	29	17.00	-0.2
	1.0s	12.00nm			4.9mb	
Z	28s	0.69um			4.7MszX	
N	14s	0.43um				
KMI	71.22	301	Pd	29	35.50	0.9
			pP	29	48.50	45km
CHG	72.37	294	eP	29	41.90	0.6
LZH	74.79	312	Pc	29	50.00	-5.3X
	1.2s	31.00nm			5.1mb	
			pP	30	08.50	68kmX
			i	30	18.00	
PRS	82.70	51	ePd	30	40.40	2.3
CMB	84.00	50	ePd	30	46.00	1.3
FRI	84.18	51	ePd	30	47.00	1.5
HYB	90.79	287	eP	31	17.50	-0.3
LRM	91.84	44	eP	31	23.40	1.0
SUF	120.76	340	ePKP	37	04.80	-1.0
	0.6s	4.60nm				
NUR	122.80	338	ePKP	37	09.40	-0.3
APO	126.24	343	ePKP	37	15.20	-1.3
	0.4s	3.20nm				
NB2	126.55	345	PKP	37	16.60	-0.5
	0.7s	1.80nm				
ZST	134.54	331	ePKP	37	34.50	1.8
KBA	137.10	333	ePKP	37	36.00	-1.8
			e	37	39.20	
LPG	141.14	337	ePKP	37	39.90	-5.5X
	0.6s	1.80nm				
SBF	142.21	334	ePKP	37	42.40	-4.6X
	0.7s	4.40nm				
MFF	142.44	344	ePKP	37	42.70	-4.5X
FRF	142.78	335	ePKP	37	43.30	-4.6X
	0.7s	5.20nm				
LRG	142.99	335	ePKP	37	44.60	-3.6X
	0.9s	9.80nm				
LMR	143.03	335	ePKP	37	44.60	-3.7X
	0.6s	6.10nm				
CAF	143.31	341	ePKP	37	46.50	-2.3
LFF	143.71	342	ePKP	37	47.30	-2.1
	0.7s	6.60nm				
LPO	143.81	342	ePKP	37	47.90	-1.7
EPF	145.56	341	ePKP	37	53.00	0.3
	0.7s	4.40nm				
BCAO	147.16	261	ePKPd	37	56.80	0.7
	0.2s	68.00nm				
			id	38	14.40	
			id	38	25.00	
TOL	149.73	345	ePKP	37	40.00	-19.4X
ASMO	152.00	342	iPKPc	38	09.50	6.5X
AAPN	152.16	343	iPKPc	38	10.00	6.7X
ACHM	152.26	342	iPKPc	38	10.40	7.0X
ALOJ	152.34	343	iPKPc	38	10.60	7.0X
APHE	152.36	342	iPKPd	38	10.00	6.4X
ATEJ	152.50	343	ePKP	38	10.20	6.4X

S.D. = 1.2 on 38 of 53 obs.

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* JAN 13, 1990 20h 47m 55.33± 1.01s
39.425 N ±12.7km 76.881 W ±13.7km
DEPTH = 5.0km (geophysicist)
CHESAPEAKE BAY REGION (493)
mbLg 2.5 (NEIS). MD 2.6 (NED).
Felt (V) at Rondallstown; (IV) at Eldersburg, Ellicott City, Granite and Woodstock; (III) at Owings Mills, Maryland.

MVL	0.70	35	iP	48	09.90	0.5
			S	48	19.00	
NED	0.95	73	eP	48	13.50	-0.3
BWD	1.07	69	iP	48	15.20	-0.8
			iS	48	29.80	
BVD	1.12	71	eP	48	17.50	0.7
			iS	48	32.40	
CBN	1.28	198	e(P)	48	21.00	1.5
			e	48	36.00	
			e	48	39.00	
CNV	1.28	198	ePn	48	19.20	-0.3
NA2	1.46	208	eP	48	21.50	-0.9
NA12	1.64	209	ePn	48	24.80	-0.1
GHV	1.89	211	ePn	48	28.20	-0.3
CVL	1.90	221	eP	48	27.00	-1.7X
PRIN	1.91	60	eP	48	33.10	4.3X
BLA	3.55	233	e(P)	49	00.00	7.7X
NAV	3.73	237	e(P)	49	06.00	11.2X

S.D. = 0.9 on 9 of 13 obs.

JAN 13, 1990 20h 56m 57.26± 0.46s
36.082 N ± 5.5km 27.158 E ± 4.8km
DEPTH = 10.0km (geophysicist)
4.1mb (3 obs.)
DODECANESE ISLANDS (369)
ML 4.3 (CSS), 4.0 (ATH).

KAP	0.53	179	iPgd	57	09.00	1.0
ARG	0.79	80	ePb	57	13.00	0.3
YER	1.39	40	iPn	57	22.60	-0.1
NPS	1.50	237	iPbd	57	24.60	0.4
APE	1.64	307	ePb	57	25.10	-1.2
SMG	1.64	351	ePb	57	24.50	-1.7
KSL	1.96	88	ePn	57	32.10	1.2
IZM	2.31	2	ePn	57	34.00	-2.0
ELL	2.32	73	iPn	57	38.00	1.8
VAM	2.50	255	ePn	57	39.60	1.0
KHL	2.93	39	ePn	57	44.80	0.0
PRK	3.24	348	ePn	57	47.00	-2.0
ATH	3.34	305	ePg	58	00.00	9.5X
VLI	3.46	282	ePn	57	52.10	-0.2
ALT	3.78	37	ePn	57	57.00	0.0
ITM	4.35	286	iPbd	58	08.00	3.1X
PPCY	4.40	104	eP	58	06.50	0.9
YLV	4.80	21	ePn	58	15.00	3.6X
CSS	5.16	101	eP	58	17.00	0.6
			eSn	59	17.50	
PLG	5.19	327	ePn	58	19.00	2.2
RDO	5.21	346	ePn	58	16.70	-0.4
LFK	5.25	97	ePn	58	19.00	1.3
VLS	5.65	294	ePn	58	26.00	2.7
BBTK	5.80	48	eP	58	15.00	-10.5X
KZN	5.98	316	ePn	58	28.00	0.0
VAY	6.34	327	ePn	58	35.00	2.0
OHR	7.07	317	ePn	58	44.00	0.7
HLW	7.13	149	ePn	58	42.50	-1.6
			eSn	00	00.00	
HRI	7.61	109	eP	58	48.00	-2.9
DSI	8.19	121	eP	58	55.00	-3.9X
			eS	01	24.00	
MBH	9.04	132	eP	59	06.00	-4.7X
			eS	00	40.00	
KBA	15.06	321	ePc	00	35.50	3.7X
	1.1s	5.80nm			3.9mb	
KHC	16.40	327	P	00	50.00	1.1
LBF	20.41	309	eP	01	35.30	-1.8
AVF	20.73	308	eP	01	36.20	-4.1X
SSF	20.74	309	eP	01	36.70	-3.7X
	0.7s	4.40nm			3.9mb	
BCAO	32.48	196	iPc	03	30.10	-0.1
	0.6s	7.00nm			4.8mb	
TIC	41.54	233	(P)	04	45.00	-1.6
KIC	41.58	232	(P)	04	45.20	-1.7

13d 21h

S.D. = 1.5 on 30 of 39 obs.

% JAN 13, 1990 21h 12m 48.91± 0.84s
39.018 N ± 6.5km 27.759 E ± 9.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.73	212	ePg	13 03.00	-0.3
			eSg	13 14.20	
DST	0.89	49	iPg	13 05.10	-1.0
			iSg	13 19.10	
EDC	1.33	3	ePn	13 13.50	0.1
BNT	1.34	5	iPn	13 14.20	0.6
KHL	1.55	116	ePn	13 17.00	0.4
ALT	1.83	88	ePn	13 21.00	0.2
YLV	1.98	38	iPn	13 26.70	3.8X

S.D. = 0.7 on 6 of 7 obs.

• JAN 13, 1990 21h 53m 31.64± 3.80s
0.272 N ± 9.4km 122.017 E ±14.4km
DEPTH = 193.0 ± 42.1 km
5.3mb (7 obs.)
MINAHASSA PENINSULA (265)

MTN	15.86	146	iPd	57 06.50	0.5
KNA	17.26	158	iPc	57 22.30	-0.3
	0.3s	34.00nm		5.2mb	
MBL	21.41	186	iPc	58 05.00	-0.2
WB5	23.40	150	eP	58 24.10	-0.4
WRA	23.44	150	Pc	58 25.10	0.2
	0.5s	42.30nm		5.3mb	
ASPA	26.45	155	iPc	58 52.20	-0.5
	0.5s	28.00nm		5.2mb	
WARB	26.68	171	iPc	58 54.80	0.1
	0.4s	25.00nm		5.3mb	
MEKA	26.94	187	eP	58 56.30	-0.8
	0.3s	21.00nm		5.3mb	
CHTO	29.20	310	eP	59 18.60	1.2
MRWA	29.88	191	iPc	59 22.40	-0.9
	0.4s	22.00nm		5.2mb	
FORR	31.49	170	iPd	59 36.10	-1.1
	0.4s	41.00nm		5.5mb	
STK	36.96	152	iPc	00 26.30	2.4
MAT	39.09	21	eP	00 40.00	-1.6
BJI	39.94	353	eP	00 48.50	0.1
CAN	43.45	147	eP	01 18.40	1.2
HYB	46.03	294	eP	01 38.50	0.6
GBA	46.08	289	P	01 38.00	-0.3

S.D. = 1.1 on 17 of 17 obs.

% JAN 13, 1990 22h 13m 54.01± 0.86s
43.080 N ± 8.2km 0.458 W ± 7.3km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

JAU	0.08	123	Pg	13 56.58	0.0
			Sg	13 58.28	
ESCF	0.09	269	Pg	13 56.44	-0.1
			Sg	13 57.96	
OGE	0.09	353	Pg	13 56.65	0.0
ATE	0.18	272	Pg	13 58.13	0.1
			Sg	14 00.83	
LHE	0.21	216	Pg	13 58.61	0.1
			Sg	14 01.47	

S.D. = 0.1 on 5 of 5 obs.

JAN 13, 1990 22h 18m 02.09± 1.63s
32.835 S ± 8.1km 70.117 W ±10.2km
DEPTH = 122.6 ± 21.2 km
CHILE-ARGENTINA BORDER REGION (127)

JACH	0.43	291	iPd	18 19.60	-0.7
			iS	18 32.50	
FCH	0.51	197	iP	18 20.50	-0.6
			iS	18 34.50	
ROCH	0.76	259	iPc	18 23.70	0.9
			iS	18 40.00	
SAN	0.77	216	iPd	18 22.50	0.0
			iS	18 37.20	
PCH	0.85	203	iPd	18 23.70	0.4
			iS	18 40.00	
TACH	1.07	220	iP	18 24.50	-0.8
			iS	18 41.50	
CHCH	1.18	202	iPd	18 27.50	0.9
			iS	18 45.50	
LCCH	1.38	242	iPc	18 28.70	0.1
			iS	18 43.20	
LNV	1.56	224	iPd	18 30.00	-0.7
			iS	18 51.20	
RTCV	1.65	54	iPc	18 31.80	-0.1
			(S)	18 44.30	
ZON	1.77	44	eP	18 34.00	0.6
CFA	2.01	53	iPd	18 36.40	0.1
			S	19 01.00	
RTLL	2.05	43	ePc	18 37.00	0.2
			S	19 03.00	
RFA	2.37	145	ePc	18 41.50	0.6
MRA	3.74	85	ePc	18 58.10	-1.0

S.D. = 0.7 on 15 of 15 obs.

• JAN 13, 1990 22h 40m 21.81± 1.87s
6.960 S ±13.7km 147.386 E ±19.7km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)
ML 4.6 (PMG).

LAT	0.49	308	iPd	40 32.00	-0.3
PMG	2.44	185	eP	40 09.00	-51.3X
	0.9s	117.65nm			
			eS	40 58.00	
MNDI	3.79	282	e(P)	41 20.00	0.5
WB5	18.02	223	eP	44 32.00	0.5
WRA	18.08	223	Pc	44 31.80	-0.4
	0.7s	5.70nm		3.8mb	
RMQ	19.46	176	eP	44 54.00	5.1X
BRS	20.95	166	iPc	45 04.80	0.3
ASPA	21.06	217	eP	45 05.10	-0.6
	0.5s	16.00nm		4.7mb	
			ePP	47 09.50	

S.D. = 0.6 on 6 of 8 obs.

JAN 13, 1990 22h 48m 06.98± 0.63s
36.073 N ± 6.7km 27.303 E ± 6.4km
DEPTH = 10.0km (geophysicist)
4.7mb (1 obs.)
DODECANESE ISLANDS (369)
ML 4.0 (CSS), 4.0 (ATH).

KAP	0.53	191	iPbd	48 19.00	1.3
			eSb	48 27.00	
YER	1.32	36	iPn	48 32.60	1.2
SMG	1.68	347	ePb	48 35.30	-1.1
APE	1.74	305	ePb	48 35.50	-1.9
KSL	1.85	88	ePn	48 42.10	3.2X
ELL	2.21	71	ePn	48 48.10	3.8X
IZM	2.32	359	ePn	48 45.00	-0.9
VAM	2.61	256	ePb	48 51.00	1.1
KHL	2.86	38	ePn	48 53.80	0.2
BCK	2.98	61	ePn	49 01.30	6.1X
PRK	3.27	346	ePn	48 54.00	-5.3X
ATH	3.44	305	ePg	49 08.00	6.3X
VLI	3.58	282	ePn	49 01.80	-1.9
DST	3.68	16	ePn	49 07.00	1.8
PPCY	4.28	105	eP	49 16.70	3.1X
ITM	4.46	286	ePb	49 17.00	0.8
CSS	5.04	101	eP	49 26.70	2.3
			eSn	50 26.50	
LFK	5.13	97	ePn	49 36.00	10.2X
RDO	5.25	345	ePn	49 25.50	-1.9
BBTK	5.72	47	eP	49 34.00	-0.2
VLS	5.76	293	ePn	49 34.50	-0.1
OHR	7.16	317	ePn	49 56.00	1.7
HRI	7.49	109	e(P)	49 57.00	-2.0
DSI	8.08	121	eP	50 05.00	-2.1
			e(S)	51 37.00	
MBH	8.94	132	eP	50 16.00	-3.1X
KBA	15.14	321	eP	51 45.50	2.9X
KHC	16.47	327	iPd	52 01.50	1.9
BCAO	32.51	196	ePc	54 39.90	-0.2
	0.4s	4.00nm		4.7mb	

S.D. = 1.6 on 19 of 28 obs.

JAN 13, 1990 23h 08m 27.27± 0.55s
35.992 N ± 6.2km 27.178 E ± 5.5km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.)
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

KAP	0.44	180	iPbc	08 37.50	1.3
ARG	0.80	73	ePn	08 42.00	-0.8
YER	1.45	38	iPn	08 51.60	-1.9
NPS	1.47	241	ePn	08 52.50	-1.3
			eSn	09 12.00	
APE	1.71	309	ePn	08 58.00	0.7
SMG	1.73	351	ePn	08 59.20	1.6
KSL	1.95	86	ePn	09 01.00	0.2
ELL	2.33	70	ePn	09 06.90	0.5
IZM	2.40	2	ePn	09 07.00	-0.3
KHL	2.99	38	ePn	09 15.00	-0.6
BCK	3.11	61	ePn	09 18.80	1.5
ATH	3.40	307	ePn	09 21.50	0.0
ITM	4.39	287	ePn	09 35.50	0.0
BCAO	32.40	196	ePc	14 58.40	-1.0
	0.5s	3.00nm		4.5mb	

S.D. = 1.2 on 14 of 14 obs.

• JAN 13, 1990 23h 49m 14.38± 0.87s
10.488 S ±12.9km 124.052 E ±12.7km
DEPTH = 33.0km (normal)
4.2mb (3 obs.)
TIMOR (289)

KNA	6.96	139	eP	51 00.00	3.3X
			eS	52 17.00	
MTN	7.32	109	iP	51 02.90	1.2
			eS	52 25.00	
MBL	11.36	200	eP	51 58.50	1.0
			eS	54 00.00	
WB5	13.64	134	eP	52 28.20	0.2
			eS	54 52.20	
WRA	13.67	135	Pc	52 25.80	-2.5
	0.5s	1.80nm		4.2mb	
WARB	15.80	171	eP	52 56.00	-0.2
ASPA	16.12	146	iPd	53 01.10	0.8
	0.6s	18.00nm		4.4mb	
			eS	55 54.20	
KMI	41.04	330	eP	56 58.00	1.3
GBA	52.08	296	Pc	58 23.30	-0.4
	0.8s	1.60nm		4.0mb	
HYB	52.82	301	ePc	58 28.00	-1.3
LPB	150.59	156	PKP	09 14.00	13.7X
ZOBO	150.81	155	PKP	09 12.20	11.4X
	1.1s	5.80nm			

S.D. = 1.5 on 9 of 12 obs.

JAN 13, 1990 23h 51m 06.26± 0.56s
36.065 N ± 6.1km 27.058 E ± 5.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.52	169	ePb	51 17.30	0.5
			eSb	51 26.00	
NPS	1.42	236	ePn	51 32.00	-0.2
YER	1.45	42	ePn	51 32.00	-0.6
APE	1.59	310	ePn	51 34.00	-0.5
APE	1.59	310	ePn	51 34.10	-0.4
SMG	1.65	354	ePn	51 37.00	1.7
KSL	2.05	88	ePn	51 41.00	-0.1
ELL	2.40	73	ePn	51 46.00	-0.3
VAM	2.42	255	ePb	51 51.00	4.6X
BCK	3.16	63	ePn	52 02.80	5.8X
VLI	3.39	282	ePn	52 00.20	0.0

S.D. = 0.8 on 9 of 11 obs.

JAN 14, 1990 00h 09m 06.88± 0.74s
36.039 N ± 8.4km 27.187 E ± 7.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.49	181	ePb	09 17.00	0.2
ARG	0.78	77	ePb	09 22.00	-0.1
YER	1.40	39	ePn	09 30.50	-2.1
NPS	1.50	239	ePb	09 32.00	-1.8
APE	1.68	308	ePn	09 36.00	-0.5
SMG	1.69	351	ePn	09 38.00	1.5
KSL	1.94	87	ePn	09 40.70	0.5
ELL	2.31	71	ePn	09 46.40	0.8
VAM	2.51	256	ePb	09 50.00	1.6
BCK	3.08	62	ePn	10 02.90	6.4X

S.D. = 1.5 on 9 of 10 obs.

• JAN 14, 1990 00h 25m 32.08± 0.85s
6.316 N ±12.6km 74.248 W ±17.8km
DEPTH = 238.2 ± 10.0 km
4.5mb (4 obs.)
NORTHERN COLOMBIA (99)

BMG	1.39	57	eP	26	09.00	0.2
BOG	1.69	174	iPc	26	06.00	-5.5X
			iS	26	36.00	
UPA	5.87	297	iPc	26	58.60	-0.4
	0.9s		67.23nm			4.6mb
PSO	5.94	211	eP	27	06.50	6.2X
ZOBO	23.24	165	P	30	20.00	-0.4
			i	30	57.50	
LPB	23.50	165	P	30	23.00	0.3
	1.0s		40.00nm			4.9mb
CNCB	23.80	165	P	30	25.70	0.1
LRM	51.37	326	eP	34	15.90	1.1
SES	53.60	332	eP	34	30.00	-0.9
PNT	57.34	326	eP	34	59.00	1.4
	0.5s		2.00nm			4.0mb
LIC	68.75	86	P	36	03.60	-9.2X
KIC	69.03	86	P	36	05.50	-9.0X
INK	73.13	340	eP	36	32.00	-5.8X
MBC	74.10	350	eP	36	42.00	-1.3
	0.6s		4.00nm			4.3mb
WRA	149.11	241	PKPc	44	57.80	7.9X
	0.4s		1.80nm			
	S.D. = 1.1		on	9	of 15	obs.

JAN 14, 1990 00h 28m 26.85± 0.57s
36.076 N ± 6.8km 27.134 E ± 5.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.52	176	ePb	28	37.60	0.1
			eSb	28	46.80	
ARG	0.82	80	ePb	28	42.10	-0.5
YER	1.40	41	ePn	28	51.50	-1.0
NPS	1.48	237	ePb	28	53.00	-0.5
APE	1.63	308	ePb	28	56.50	0.8
SMG	1.65	352	ePb	28	56.50	0.6
KSL	1.98	88	ePn	29	01.00	0.2
ELL	2.34	72	ePn	29	06.90	0.9
VAM	2.48	255	ePn	29	09.00	1.1
BCK	3.10	62	ePn	29	22.00	5.2X
VLI	3.45	282	ePn	29	20.00	-1.6
	S.D. = 1.0		on	10	of 11	obs.

? JAN 14, 1990 01h 19m 14.12± 2.87s
21.288 S ±18.4km 169.925 E ±20.3km
DEPTH = 79.9 ± 20.0 km
4.9mb (4 obs.)
LOYALTY ISLANDS REGION (189)

DZM	3.33	256	iPd	20	03.40	-1.6
			iS	20	38.40	
PVC	3.84	336	iP	20	13.00	0.9
			iS	20	57.50	
BRS	16.76	245	iP	23	06.80	1.5
RMQ	20.03	251	iPd	23	45.00	1.8
	0.9s		63.00nm			4.9mb
CTA	22.17	269	eP	24	07.00	2.2
CMS	23.81	240	eP	24	21.00	0.4
PMG	24.89	295	eP	24	31.00	-0.1
WB5	33.28	266	eP	25	44.20	-2.0
WRA	33.29	266	Pc	25	44.30	-2.0
	0.6s		2.20nm			4.2mb
ASPA	33.32	259	iPd	25	44.50	-2.0
	1.1s		20.00nm			4.9mb
MAT	64.85	332	eP	29	45.00	-1.9
	1.0s		15.00nm			4.9mb
SPA	68.84	180	eP	30	33.30	21.4X
	1.0s		7.00nm			
CHG	80.09	295	eP	31	18.70	1.6
CHTO	80.09	295	eP	31	18.00	0.9
KVN	90.10	48	e(P)	32	06.30	-0.5
SUF	131.84	339	ePKP	38	18.70	-0.4
	0.6s		3.90nm			
NUR	133.86	337	ePKP	38	22.20	-0.8
BRG	144.98	333	iPKPc	38	42.50	-0.9
	1.1s		24.00nm			
CLL	145.03	335	iPKP	38	42.70	-0.8
	1.1s		18.00nm			
SRO	145.05	326	i(PKP)	38	42.90	-0.7
PRU	145.38	332	ePKP	38	44.00	-0.1
ZST	145.42	327	iPKP	38	44.30	0.0
EKA	145.61	353	PKP	38	44.00	-0.4
	1.0s		19.10nm			
VKA	145.76	328	e(PKP)	38	45.00	0.1
KHC	146.44	332	iPKPc	38	47.50	1.5
	1.0s		9.00nm			

SKO	146.44	315	ePKP	38	47.00	0.8
OHR	147.27	314	ePKP	38	49.00	1.4
BCAO	147.57	243	ePKPc	38	53.10	4.3X
	0.5s		4.00nm			
TOD	148.02	337	ePKP	38	51.62	3.1X
KBA	148.03	329	ePKP	38	49.80	1.0
	0.8s		6.40nm			
MEM	148.12	340	PKP	38	51.40	2.9X
VBY	148.15	325	e(PKP)	38	52.00	3.2X
LJU	148.16	327	e(PKP)	38	56.60	7.8X
ABH	148.24	338	ePKP	38	52.42	3.6X
CEY	148.43	326	e(PKP)	38	52.50	3.2X
VOY	148.50	327	ePKP	38	52.30	2.8X
RUP	148.56	338	ePKP	38	53.35	4.0X
DOU	149.00	342	PKPc	38	53.80	3.8X
CDF	149.57	337	ePKP	38	55.30	4.3X
FEL	149.74	335	ePKP	38	55.53	4.2X
BSF	150.23	337	ePKP	38	57.00	4.9X
HAU	150.25	338	ePKP	38	57.00	5.0X
ARV	150.71	324	PKP	39	00.00	7.2X
VAI	151.03	332	PKP	38	59.00	5.9X
PGD	151.10	326	PKP	39	02.00	8.4X
SGO	151.13	317	PKP	39	01.50	8.1X
CRE	151.16	326	PKP	39	07.50	13.9X
SDI	151.37	321	PKP	39	00.00	6.1X
FLN	151.53	347	ePKP	38	59.80	6.0X
BDI	151.54	328	PKP	39	00.50	6.4X
ORO	151.57	333	PKP	39	01.00	6.9X
BOB	151.58	330	PKP	39	00.50	6.4X
MNS	151.59	323	PKP	39	10.50	16.3X
LDF	151.61	346	ePKP	38	59.90	5.9X
LOR	151.73	340	ePKP	39	00.40	6.2X
LBF	151.94	339	ePKP	39	00.80	6.2X
GRR	151.97	347	ePKP	39	01.00	6.5X
SSF	152.03	340	ePKP	39	01.10	6.5X
LPG	152.18	334	ePKP	39	02.00	6.7X
LPF	152.34	347	ePKP	39	01.80	6.8X
BNI	152.57	334	PKP	39	03.70	8.1X
BGF	152.68	340	ePKP	39	02.40	6.8X
DOI	152.77	332	PKP	39	01.50	5.6X
TCF	153.12	341	ePKP	39	03.40	7.2X
LSF	153.36	342	ePKP	39	03.70	7.2X
	S.D. = 1.4		on	27	of 65	obs.

JAN 14, 1990 01h 38m 49.98± 0.51s
36.056 N ± 5.6km 27.152 E ± 4.4km
DEPTH = 23.6 ± 4.7 km
4.5mb (3 obs.)
DODECANESE ISLANDS (369)
ML 4.4 (CSS), 4.0 (ATH).

KAP	0.50	178	iPgc	39	00.50	0.3
			eSg	39	08.50	
ARG	0.80	78	ePb	39	05.00	-0.2
YER	1.41	40	iPn	39	14.50	0.1
NPS	1.48	238	ePb	39	16.00	0.6
APE	1.65	308	ePb	39	16.50	-1.4
SMG	1.67	351	ePb	39	16.00	-2.0
KSL	1.97	87	iPnd	39	24.00	1.6
ELL	2.33	72	ePn	39	29.60	1.9
IZM	2.34	2	ePn	39	24.00	-3.7X
KHL	2.95	39	ePn	39	35.90	-0.5
BCK	3.10	62	ePn	39	40.90	2.4
PRK	3.26	348	ePn	39	41.00	0.3
ATH	3.35	306	ePn	39	42.20	0.2
VLI	3.46	282	ePn	39	43.00	-0.7
DST	3.73	18	ePn	39	48.20	0.7
EZN	3.82	350	ePn	39	47.00	-1.7
BNT	4.34	8	ePn	40	00.00	4.0X
ITM	4.35	286	ePn	39	58.10	1.8
PPCY	4.40	104	ePn	39	57.00	0.1
			eSn	40	47.50	
YLV	4.83	21	ePn	40	05.00	1.9
CSS	5.16	100	eP	40	07.00	-0.7
			eSn	41	06.70	
RDO	5.24	347	ePn	40	06.60	-2.2
LFK	5.25	97	ePn	40	09.90	0.8
BBTK	5.82	48	eP	40	17.00	-0.2
OHR	7.09	317	eP	40	35.20	0.3
	1.0s		0.03nm			2.3mb X
HRI	7.60	109	eP	40	38.00	-4.2X
DSI	8.18	121	eP	40	48.00	-2.1
MBH	9.02	132	eP	40	55.00	-6.8X
CZI	9.29	293	P	41	02.00	-3.5X
CSI	9.35	297	P	41	08.40	2.0
KBA	15.08	321	eP	42	27.00	3.8X
	1.0s		6.30nm			3.9mb

			e	42	31.80	
			e	56	42.00	
KHC	16.42	327	iP	42	42.00	1.7
BCAO	32.46	196	ePd	45	21.30	0.6
	0.6s		4.00nm			4.5mb
LKO	39.75	237	P	46	27.74	5.0X
KIC	41.56	232	(P)	46	36.40	-1.1
GKN	48.79	82	P	47	34.60	-0.8
	0.6s		5.00nm			4.7mb
DMN	49.33	83	P	47	39.20	-0.5
KKN	49.40	82	P	47	39.00	-1.1
PKI	49.59	82	P	47	40.80	-1.0
GUN	49.83	82	P	47	42.60	-1.0
	S.D. = 1.3		on	33	of 40	obs.

% JAN 14, 1990 01h 40m 27.46± 0.80s
43.567 N ±11.8km 12.306 E ± 8.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.26	283	P	40	33.50	0.4
ARV	0.47	98	P	40	37.30	0.3
			eSg	40	44.00	
SFI	0.48	317	P	40	36.50	-0.8
PGD	0.52	306	P	40	38.50	0.4
			eSg	40	46.50	
ASS	0.56	152	P	40	38.50	-0.4
			eSg	40	47.50	
	S.D. = 0.8		on	5	of 5	obs.

? JAN 14, 1990 01h 43m 49.41± 2.40s
29.064 N ±33.6km 130.824 E ±20.4km
DEPTH = 33.0km (normal)
4.7mb (1 obs.)
RYUKYU ISLANDS (238)

TSRJ	7.79	33	P	45	43.10	-0.2
SSE	8.59	286	eP	46	17.50	23.1X
Z	20s		0.50um			
E	12s		0.40um			
IIDJ	8.77	41	eP	46	06.10	9.2X
MAT	9.70	38	eP	46	10.00	0.2
BJI	16.27	316	P	47	37.00	0.1
GUN	39.34	280	P	51	17.00	-0.8
	0.8s		13.00nm			4.7mb
PKI	39.82	279	P	51	24.00	2.2
KKN	39.88	280	P	51	20.80	-1.4
SLL	77.32	333	eP	55	56.00	14.0X
	0.5s		1.40nm			
NB2	77.78	334	P	55	58.50	13.9X
	0.7s		1.60nm			
	S.D. = 1.6		on	6	of 10	obs.

* JAN 14, 1990 02h 00m 20.32± 1.15s
4.857 S ± 9.9km 152.450 E ±12.5km
DEPTH = 82.9 ± 10.7 km
4.9mb (5 obs.)
NEW BRITAIN REGION (192)

RAB	0.72	337	iPc+	00	35.00	-1.6
LAT	5.71	252	eP	01	47.00	2.7
PMG	6.93	229	eP	02	02.00	0.8
			eS	03	20.00	
CTA	16.30	201	eP	04	06.00	0.4
RMQ	21.80	189	iPd	05	07.70	0.7
DZM	21.83	143	iPc	05	08.10	0.7
BRS	22.41	179	iP	05	12.10	-1.0
MTN	22.50	248	iPd	05	15.00	1.1
WB5	23.09	228	iPd	05	19.30	-0.4
			eS	09	26.50	
WRA	23.15	228	Pd	05	19.90	-0.3
	0.7s		20.50nm			4.6mb
ASPA	25.88	222	iPd	05	45.20	-1.0
	0.6s		19.00nm			4.8mb
WARB	32.54	227	eP	06	45.00	-0.7
FORR	34.55	219	iPc	07	01.70	-1.2
	0.3s		32.00nm			5.6mb
MBL	35.55	240	eP	07	10.30	-1.3
	0.3s		5.00nm			4.9mb
MEKA	38.94	233	eP	07	39.20	-0.8
INK	88.63	21	eP	13	06.00	1.0
MBC	94.25	14	eP	13	32.00	1.1
	0.9s		6.00nm			5.0mb
SES	97.87	40	eP	13	49.00	1.1
DSI	115.52	303	ePKP	18	45.00	-9.9X
PRNI	116.07	301	e(PKP)	18	55.00	-1.1
MBH	116.27	301	e(PKP)	19	00.00	3.6X

14d 02h

S.D. = 1.2 on 19 of 21 obs.

JAN 14, 1990 02h 29m 23.91± 0.48s
36.127 N ± 4.5km 27.102 E ± 3.4km
DEPTH = 28.2 ± 4.1 km
4.2mb (12 obs.)
DODECANESE ISLANDS (369)
ML 4.4 (CSS), 4.1 (ATH).

KAP	0.58	174	iPbc	29 35.30	-0.2
ARG	0.83	84	ePb	29 38.50	-1.2
YER	1.38	43	iPn	29 47.50	0.0
NPS	1.49	235	ePn	29 50.50	1.5
APE	1.58	307	ePn	29 50.30	0.0
SMG	1.59	352	ePb	29 50.40	-0.1
KSL	2.01	89	ePn	29 57.40	0.9
IZM	2.27	3	ePn	29 58.00	-2.3
ELL	2.35	74	ePn	30 03.10	1.6
VAM	2.47	254	ePn	30 03.50	0.4
KHL	2.92	41	ePn	30 09.40	-0.2
BCK	3.10	64	ePn	30 14.40	2.3
PRK	3.18	348	ePn	30 13.30	0.1
ATH	3.28	305	ePn	30 15.60	1.1
VLI	3.41	281	ePn	30 16.60	0.1
DST	3.68	19	ePn	30 19.00	-1.3
EZN	3.74	351	ePn	30 19.00	-2.1
EDC	4.26	8	ePn	30 34.00	5.6X
BNT	4.27	8	ePn	30 34.00	5.3X
ITM	4.29	286	iPbd	30 35.60	6.6X
PPCY	4.45	105	eP	30 30.50	-0.8
YLV	4.78	21	ePn	30 42.00	6.1X
RDO	5.16	347	ePn	30 40.50	-0.7
CSS	5.21	101	eP	30 41.20	-0.8
LFK	5.30	97	ePn	30 45.90	2.6
VLS	5.59	293	ePn	30 47.20	-0.2
KDZ	5.67	347	iP	30 49.00	0.5
BBTK	5.81	49	eP	30 51.50	1.0
RZN	5.86	342	eP	30 53.00	1.7
KZN	5.92	316	ePn	30 52.50	0.5
MMB	6.06	335	eP	30 53.00	-0.9
VAY	6.28	327	eP	31 04.40	7.4X
KKB	6.53	333	eP	31 00.00	-0.6
OHR	7.01	317	eP	31 04.00	-3.3X
VTS	7.13	336	iP	31 09.00	0.0
HLW	7.19	149	ePn	31 09.00	-0.9
			eSn	32 24.00	
PVL	7.21	350	eP	31 30.00	19.9X
SKO	7.31	325	eP	31 13.00	1.5
HRI	7.66	109	eP	31 13.00	-3.6X
DSI	8.25	121	eP	31 21.00	-3.6X
			e(S)	32 51.00	
LCI	8.33	303	P	31 24.00	-1.8
ROI	9.01	296	P	31 34.50	-0.7
SOI	9.04	286	P	31 31.00	-4.5X
			eSn	33 13.00	
BRT	9.09	304	P	31 37.50	1.2
MBH	9.10	132	eP	31 32.00	-4.4X
TDS	9.21	296	P	31 38.00	0.1
CZI	9.23	293	P	31 34.10	-4.0X
CSI	9.28	296	P	31 39.40	0.4
ATN	9.51	286	P	31 39.50	-2.6
ATN	9.51	286	eP	31 44.00	1.9X
MMN	9.54	297	P	31 41.20	-1.2
MGR	9.94	297	P	31 46.00	-1.9
SGO	10.26	299	P	31 53.00	0.6
			eSn	33 49 00	
SDI	11.75	302	P	32 13.50	0.8
MNS	12.80	304	P	32 26.00	-0.7
CEY	13.55	319	e(P)	32 44.00	7.4X
VOY	14.02	319	e(P)	32 45.90	3.0X
FVI	14.97	319	P	33 01.00	5.8X
KBA	15.00	321	i(P)	33 01.70	6.0X
	1.2s	30.00nm		4.5mb	
			e	33 07.50	
			i	33 14.20	
KHC	16.33	327	iP	33 15.50	2.8
	1.0s	10.00nm		3.9mb	
			e	34 01.00	
PRU	16.59	331	eP	33 19.00	3.1X
			e	33 22.50	
KSP	16.64	335	eP	33 19.50	2.9
VAI	16.88	311	P	33 24.50	4.9X
BNI	17.86	306	P	33 35.50	3.5X
LPG	17.99	308	eP	33 35.10	1.4
	0.8s	4.00nm		3.6mb	
CLL	18.23	331	eP	33 39.00	2.7
ABH	19.76	320	eP	33 53.99	-0.4
SMF	20.30	308	eP	33 59.60	-0.6
	1.2s	13.00nm		4.2mb	
LBF	20.35	309	eP	33 59.80	-0.9
	1.0s	10.00nm		4.1mb	
LOR	20.54	310	eP	34 01.80	-0.8
	1.2s	11.90nm		4.1mb	
AVF	20.67	308	eP	34 03.10	-0.8
	1.0s	8.80nm		4.1mb	
SSF	20.68	309	eP	34 02.70	-1.3
	1.0s	18.00nm		4.4mb	
BGF	20.90	307	eP	34 06.00	-0.4
	1.0s	16.00nm		4.4mb	
MEM	20.98	320	P	34 08.90	1.8
DOU	21.45	318	Pc	34 11.60	-0.2
BCAO	32.51	196	iPd	35 55.80	1.3
	0.6s	8.00nm		4.8mb	
LKO	39.76	236	Pd	36 57.04	1.0
	0.6s	5.00nm		4.4mb	
TIC	41.53	233	P	37 10.50	-0.1
KIC	41.57	232	Pd	37 11.00	0.1
	0.6s	3.00nm		4.2mb	
LIC	41.85	232	Pd	37 13.20	0.0
GKN	48.82	82	P	38 08.00	-0.9
DMN	49.36	83	P	38 12.00	-1.2
KKN	49.43	82	P	38 12.00	-1.7
PKI	49.62	83	P	38 15.00	-0.3
GUN	49.86	82	P	38 16.00	-1.1

S.D. = 1.3 on 65 of 85 obs.

JAN 14, 1990 02h 32m 12.92± 0.60s
36.112 N ± 6.8km 27.103 E ± 6.0km
DEPTH = 10.0km (geophysicist)
4.1mb (2 obs.)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

KAP	0.56	174	ePb	32 24.60	0.3
			eSb	32 33.00	
ARG	0.83	83	ePb	32 28.60	-0.4
YER	1.39	43	ePn	32 37.50	-0.9
NPS	1.48	236	ePb	32 40.00	0.4
			eSb	32 59.70	
APE	1.59	308	ePb	32 40.00	-1.1
SMG	1.61	352	ePb	32 43.00	1.6
KSL	2.01	89	ePn	32 48.00	0.8
IZM	2.29	3	ePn	32 54.00	2.7
ELL	2.35	73	ePn	32 53.10	0.8
VAM	2.46	254	ePb	32 58.60	4.8X
KHL	2.93	40	ePn	32 59.00	-1.5
PRK	3.20	348	ePb	33 07.50	3.3X
ATH	3.28	305	ePn	33 07.00	1.6
VLI	3.41	281	ePn	33 07.00	-0.3
RDO	5.17	347	ePn	33 30.00	-2.2
KBA	15.01	321	ePc	35 51.00	4.2X
	0.5s	1.10nm		3.6mb	
MEM	21.00	320	P	36 58.40	-0.2
DOU	21.46	318	P	37 02.60	-0.8
BCAO	32.50	196	iPc	38 45.30	-0.6
	0.6s	6.00nm		4.7mb	

S.D. = 1.4 on 16 of 19 obs.

JAN 14, 1990 03h 03m 19.23± 0.10s
37.819 N ± 2.5km 91.971 E ± 2.0km
DEPTH = 12.2km (geophysicist)
6.1mb (88 obs.) 6.1Msz (16 obs.)
QINGHAI PROVINCE, CHINA (325)
Ms 6.1 (PAS), 6.0 (BRK). Slight damage in the Mongyoi-Lenghu area. Depth from broadband displocement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=260 Dip=72 Slip= 90
NP2: 80 18 90
Principal Axes:
T Plg=63 Azm=170
P 27 350
Comment: The focal mechonism is poorly controlled ond corresponds to reverse faulting. The preferred fault plone is NP2.
RADIATED ENERGY
No. of sto: 5 Focal mech. M
Energy 2.4±0.7*10**13 Nm
MOMENT TENSOR SOLUTION
Dep 14 No. of sto: 11
Moment Tensor; Scale 10**18 Nm
Mrr= 0.99 Mtt=-0.98
Mff=-0.01 Mrt=-0.15
Mrf=-0.38 Mtf=-0.22
Principal axes:
T Val= 1.12 Plg=72 Azm= 96
N -0.06 17 254
P -1.06 7 346
Best Double Couple:Mo=1.1*10**18
NP1:Strike= 94 Dip=41 Slip= 116
NP2: 241 54 69
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 10S, 26C
Centroid Location:
Origin Time 03:03:30.9 0.6
Lot 37.60N 0.05 Lon 92.10E 0.10
Dep 15.0 BDY Half-duration 3.8
Moment Tensor; Scale 10**18 Nm
Mrr= 0.68 0.04 Mtt=-1.24 0.04
Mff= 0.56 0.05 Mrt=-0.35 0.17
Mrf= 0.16 0.12 Mtf= 0.49 0.04
Principal Axes:
T Val= 0.79 Plg=56 Azm=269
N 0.64 32 111
P -1.43 10 15
Best Double Couple:Mo=1.1*10**18
NP1:Strike= 72 Dip=45 Slip= 41
NP2: 310 63 127

GTA	6.34	73	iPnc	04 54.80	-0.1
	Z 15s	222.00um			
	N 12s	390.00um			
WMQ	6.82	333	iPnd	05 01.20	-0.3
LSA	8.13	185	iPc	05 24.80	4.6X
	N 10s	336.00um			
			S	06 57.00	
LZH	9.66	97	ePc	05 38.68	-2.5
	8.0s	3.86nm		3.9mb X	
	Z 10s	23.00um			
	N 12s	349.00um			
	E 12s	262.00um			
			pP	05 42.50	
			sP	05 45.00	
GUN	11.12	209	P	06 01.80	0.4
KKN	11.47	211	P	06 06.00	0.0
GKN	11.56	214	P	06 07.20	0.0
PKI	11.61	210	P	06 08.00	-0.1
DMN	11.70	212	P	06 09.20	0.0
CD2	11.92	122	P	06 12.00	0.0
	Z 10s	127.00um			
			S	08 30.00	
TLG	12.35	301	iP	06 17.00	-0.8
			iS	08 43.00	
KSH	12.61	282	Pd	06 19.00	-2.3
	Z 10s	58.80um			
			S	08 38.50	
FRU	14.15	296	iPc	06 39.60	-1.9
			eS	09 14.00	
XAN	14.24	100	P	06 37.80	-5.0X
	1.2s	0.40nm		3.0mb X	
	N 10s	47.40um			
	E 10s	82.60um			
			pP	06 50.50	
BTO	14.27	73	P	06 41.00	-2.1
			pP	06 46.00	
			PP	06 53.00	
			S	09 16.00	
NDI	15.33	238	iP	06 51.00	-5.9X
	0.6s	406.67nm		5.9mb	
			eS	09 48.00	
HHC	15.46	73	Pc	06 56.00	-2.7
	4.0s	5.10nm		3.2mb X	
	Z 15s	132.00um		5.2Msz	
KMI	15.62	141	ePc	06 59.44	-1.6
	4.0s	4.40nm		3.1mb X	
			sP	07 06.00	
			PP	07 13.00	
			eS	10 09.97	
TIY	16.19	84	Pc	07 03.00	-5.0X
	Z 22s	92.70um			
	E 12s	57.70um			
GYA	16.80	128	iPc	07 14.00	-1.9
	3.0s	4.40nm		3.1mb X	
	Z 12s	21.90um		4.8MszX	
	N 10s	45.60um			
	E 10s	38.20um			
			pP	07 20.00	

			S	10	20.00			MDJ		28.91	64	Pc	09	20.50	0.6			0.6s	141.40nm		6.1mb
IRK	16.84	27	iPd	07	16.00	-0.2			N	12s	49.00um						SOD	46.30	331	iP	11	46.00	0.0
			eS	10	30.00							pP	09	24.00	12kmX					i	11	52.00	20kmX
BJI	18.95	76	iPc	07	42.58	0.2						sP	09	28.00			DSI	46.35	280	eP	11	46.00	-0.8
	6.0s	18.30nm				3.5mb X						PP	10	10.00			LFK	46.35	286	iP	11	47.90	1.0
	N 13s	149.00um										PcP	12	30.00			KEV	46.44	334	iP	11	47.90	0.8
			eS	11	13.33							S	14	11.00				1.1s	247.10nm			6.1mb
WHN	19.86	105	iPc	07	52.00	-0.9		KOD		30.41	209	eP	09	32.60	-1.3					i	11	53.00	17kmX
	5.0s	16.80nm				3.6mb X						iS	14	34.00						eS	18	32.00	
	Z 14s	74.00um				4.2Msz		TEH		32.40	279	eP	09	58.00	7.0X		CSS	46.62	285	eP	11	49.20	0.2
			iS	11	35.00							eS	15	10.00			AYN	47.00	276	eP	11	53.00	1.0
CHG	19.89	160	iPc	07	52.00	-1.4		SHK		32.84	83	iP	09	55.00	0.3		NUR	47.02	321	iP	11	51.40	-0.4
	0.1s	2916.67nm				7.6mb X				1.0s	196.00nm				6.0mb			0.9s	185.90nm			6.2mb
			eS	11	32.00			IR4		32.92	278	iPc	09	57.00	1.4			Z 16s	31.20um			6.4MszX
TIA	20.14	87	Pc	07	54.40	-1.5		BAG		32.99	122	eP+	09	56.00	-0.4					i	11	57.30	20kmX
	7.0s	11.20nm				3.3mb X						eS	15	23.00						eS	18	42.00	
	N 14s	375.00um						IR7		33.01	279	iPc	09	57.70	1.3					LR	32	40.00	
	E 14s	79.90um						IPM		34.10	164	ePc	10	06.30	0.5		GPA	47.09	293	eP	11	52.70	0.0
			S	11	33.40					1.1s	324.90nm				6.2mb		IAS	47.17	303	eP	11	55.00	1.9
LOE	22.07	154	iPc	08	15.50	-0.2						e	10	11.90	19kmX		CFR	47.25	300	eP	11	54.00	0.2
NJ2	22.74	97	iPc	08	22.00	-0.2		QCP		34.60	124	eP	09	57.00	-13.1X		BIR	47.34	302	eP	11	56.00	1.5
	6.0s	5.90nm				3.3mb X		TSI		34.68	168	ePc	10	05.00	-5.8X		AQBJ	47.37	278	Pc	11	56.00	1.0
	N 14s	75.20um						PSI		35.53	168	ePc	10	15.40	-2.6		PPCY	47.40	286	e(P)	11	54.50	-0.6
	E 13s	122.00um								1.0s	15.00nm				4.8mb X		PET	47.47	49	iPc	11	55.00	-0.4
			S	12	30.00			TAB		35.72	285	ePc	10	21.00	1.3					eS	18	40.00	
HIA	23.02	51	eP	08	25.78	0.9		KER		36.16	278	ePc	10	24.00	0.6		MBH	47.49	278	eP	11	56.00	0.1
			eS	12	37.61			MAT		36.57	77	eP	10	25.00	-1.7		GBZT	47.56	294	iPd	11	58.40	2.0
NST	23.21	160	iPc	08	28.00	1.1				1.0s	39.00nm				5.2mb		PSN	47.62	298	iPd	11	56.00	-0.8
DL2	23.24	78	Pc	08	27.00	0.0			Z 20s		10.99um				5.6Msz		YLV	47.69	294	iP	11	57.10	-0.3
	6.0s	11.20nm				3.6mb X						eS	16	05.00			KTK1	47.70	333	iP	11	57.38	0.3
	Z 15s	69.50um				6.2MszX		DHR		36.99	264	iPd	10	30.50	0.3		ISK	47.76	295	eP	11	59.70	1.8
	N 12s	45.60um						SLY		37.03	281	iPd	10	32.00	1.5		ITU	47.78	295	iPc	11	59.00	1.0
	E 15s	116.00um										iPP	12	04.00			WAJH	47.79	273	eP+	11	59.10	0.8
GZH	23.48	123	iP	08	29.20	-0.3						iS	16	20.00			BADA	47.94	276	iP+	11	57.30	-2.1
	4.0s	13.80nm				3.9mb X						eSSS	19	28.50			KHL	48.30	291	iP	12	01.60	-0.7
	Z 12s	42.00um				6.1MszX						iLR	20	36.50			ISR	48.36	301	ePc	12	04.50	1.9
	N 15s	105.00um						BKR		37.06	292	iPc	10	32.00	1.1		DMK	48.46	296	iP	12	02.90	-0.4
	E 14s	64.80um										iS	16	20.00			DST	48.53	293	iP	12	03.30	-0.7
			iS	12	42.50			KGM		37.12	161	ePc	10	32.60	1.2		ELL	48.57	289	eP	12	03.00	-1.4
HYB	23.49	214	iPc	08	27.80	-1.9				1.0s	454.60nm				6.2mb		MLR	48.67	301	iPc	12	07.00	1.9
	1.0s	300.00nm				5.8mb						e	10	37.80	17kmX		BNT	48.80	294	iP	12	06.60	0.6
			iS	12	43.00			YSS		37.99	59	iPd	10	38.00	-0.4		EDC	48.85	294	iP	12	05.50	-0.8
MCO	24.29	124	iP	08	38.10	0.7						eS	16	30.00			BUC	48.87	300	iP	12	08.00	1.6
QIZ	24.36	135	iPc	08	38.50	0.4		KKM		38.56	139	iPc	10	44.90	1.3		KSL	49.04	288	iPd	12	06.70	-1.1
	N 12s	49.20um								1.2s	1147.80nm				6.5mb		JMB	49.10	297	iPc	12	10.00	1.8
	E 12s	46.20um										i	11	03.00	74kmX		TRT	49.23	152	iPc	12	10.00	0.6
			pP	08	45.00	23kmX		MSL		38.61	283	iPd	10	48.50	4.7X			1.2s	1120.40nm			6.8mb
			S	12	54.00							esP	11	09.50			TRO	49.25	334	eP	12	09.05	0.1
			sS	13	04.00							ePP	12	17.00			CMP	49.35	301	ePc	12	14.00	3.8X
SNY	24.53	71	iPc	08	39.40	-0.1						ePPP	12	47.00			MDB	49.55	302	eP	12	15.00	3.3X
	6.0s	11.50nm				3.7mb X						e	16	11.00			BMR	49.73	305	iPd	12	15.00	2.0
	N 14s	179.00um										eS	16	41.50			PVL	49.74	298	iPc	12	15.00	1.8
			pP	08	46.00	23kmX		BHD		38.66	278	iPd	10	46.00	1.8		IZM	49.94	292	eP	12	15.00	0.2
			S	12	59.00							iPP	12	15.50			DIM	49.97	297	eP	12	16.00	1.1
HKC	24.57	123	iP	08	41.00	0.9						eS	16	39.00			DRA	50.05	301	ePd	12	16.00	0.5
			S	13	09.00							iScS	20	58.00			ARG	50.10	289	eP	12	16.50	0.5
POO	24.90	224	iPc	08	43.00	-0.4						iLQ	22	41.00			EZN	50.13	294	iP	12	15.60	-0.6
	0.9s	218.49nm				5.8mb						i	24	10.00			KDZ	50.18	296	iPc	12	18.00	1.4
SSE	24.94	97	Pc	08	44.00	0.4		TIK		38.75	18	iPd	10	44.00	-0.5		HLW	50.22	280	eP+	12	17.00	0.0
	5.0s	7.20nm				3.6mb X						eS	16	40.00						eS	19	32.00	
	N 14s	106.00um						RYD		40.54	265	iP+	10	59.40	-0.6		UZH	50.25	306	iP	12	19.00	2.0
	E 14s	59.60um						OBN		40.68	313	iPc	11	00.00	-0.7					eS	19	26.00	
			pP	08	50.00	21kmX				1.1s	738.00nm				6.3mb		RDO	50.26	296	iPd	12	17.40	0.3
BOM	25.20	227	iPd	08	44.00	-2.1			Z 14s		74.00um				6.7MszX		PRK	50.37	293	iPd	12	18.00	0.0
			iS	13	17.00							iS	17	10.00			CEI	50.40	305	eP	12	21.00	2.9X
MAIO	25.89	277	iPc+	08	54.20	1.5		TSM		41.07	138	ePd	11	03.60	-0.6		SMG	50.51	291	eP	12	19.00	0.0
	1.0s	150.00nm				5.6mb				1.1s	829.60nm				6.4mb		PLD	50.54	297	eP	12	20.00	0.8
			eS	13	28.00			QASM		42.31	268	iP+	11	14.30	-0.2		UPP	50.58	321	iP	12	20.20	0.9
CN2	25.92	66	iPc	08	52.00	-0.7		KVT		42.68	293	iP	11	18.20	0.8			0.8s	700.00nm			6.7mb
	5.0s	6.80nm				3.6mb X		GAZ		42.92	287	iP	11	18.50	-0.7					i	19	33.00	
	Z 10s	52.00um				6.4MszX		DAV		43.16	127	eP	11	23.00	1.6		DEV	50.61	302	iPc	12	21.00	1.2
	N 10s	78.00um								1.5s	1666.67nm				6.6mb		RZN	50.66	297	iPc	12	21.00	0.6
	E 10s	58.00um						SIM		43.19	299	iPc	11	22.00	0.6		PGB	50.77	298	iPc	12	22.00	0.9
			pP	08	58.50	23kmX						eS	17	50.00			ATA	50.78	252	eP+	12	23.17	1.8
			S	13	20.00			PUL		44.20	320	iPc	11	31.00	1.7		TDD	50.79	253	eP+	12	23.27	1.8
QZH	26.00	112	Pc	08	53.00	-0.6						eS	18	00.00			KHKI	50.98	149	ePc	12	21.50	-1.3
	5.0s	5.20nm				3.5mb X		KAS		44.27	294	iPc	11	31.40	1.1					e	17	12.00	
	Z 13s	52.10um				6.3MszX		KMSA		44.48	261	iP+	11	31.00	-1.2		ARO	51.01	252	eP+	12	25.00	1.8
	N 13s	73.60um						HRI		45.40	282	iPc	11	39.00	-0.5		KAP	51.07	288	iPd	12	23.00	-0.3
	E 13s	47.10um						BBTK		45.43	292	eP	11	40.50	0.8		DAF	51.20	253	eP+	12	26.14	1.6
			pP	09	01.00	28kmX		BBTK		45.43	292	eP	11	44.00	4.3X		SGH	51.23	253	eP+	12	26.73	1.9
			S	13	24.00			SHMJ		45.59	281	Pc	11	42.70	1.8		LOF	51.27	332	eP	12	24.19	-0.3
			sS	13	38.00			JARJ		45.64	281	Pc	11	42.00	0.7		KBS	51.28	346	iP	12	25.20	0.8
NNT	26.06	163	iPc	08	55.00	0.8		SALJ		45.93	280	Pc	11	44.50	0.8		HLD	51.28	253	eP+	12	26.78	1.7
GBA	27.37	212	P	09	04.00	-2.2		MASJ		46.02	280	Pc	11	45.50	1.2		KSU	51.32	253	eP+	12	27.02	1.5
ANP	28.04	108	iP+	09	14.00	1.6		FAM		46.10	285	e(P)	11	45.00	0.2		MMB	51.39	297	ePc	12	26.00	0.2
			iS	14	10.00			SUF		46.26	324	eP	11	45.50	-0.2		SPC	51.41	307	iP	12	27.20	1.2

14d 03h

VTS		51.42	298	iPc	12	26.00	-0.2					iS	20	38.00			PII		59.61	304	P	13	24.90	-0.2
BZS		51.55	302	eP	12	26.50	-0.4	KHC		55.59	309	iP	12	57.20	0.4		GIB		59.67	296	P	13	24.50	-1.2
				e	45	13.50				1.3s		133.00nm			5.8mb		WLS		59.68	310	P	13	24.85	-0.8
APE		51.71	291	eP	12	28.00	-0.3		Z	12s		21.00um			6.4MszX		CDF		59.73	310	P	13	25.17	-0.8
ASW		51.71	273	iPd	12	28.00	-0.4		N	14s		22.00um					MAO		59.74	302	P	13	26.50	0.5
				eS	19	50.00			E	12s		18.00um					VAI		59.85	307	P	13	26.00	-0.7
AMAN		51.75	272	iPd	12	29.00	0.3	KMR		55.62	307	iP+	12	57.40	0.5		BOB		59.87	305	P	13	28.00	1.0
KKB		51.75	297	iPc	12	29.00	0.5					iPP	15	03.00			ECH		59.88	310	P	13	26.17	-0.8
TIM		51.78	303	iPc	12	29.00	0.4	AAE		55.69	253	iP	12	58.70	0.5		WLF		59.89	311	iPc	13	28.00	1.1
AKSR		51.83	272	iPc	12	30.50	1.2	VBY		55.80	304	iPc	12	58.80	0.5		BBS		59.97	309	P	13	26.69	-0.9
PLG		52.01	296	iPd	12	30.00	-0.5	HVAR		55.87	301	iPc	12	57.30	-1.5		MOF		60.05	309	P	13	27.77	-0.4
AKRL		52.06	272	iPd	12	31.50	0.5	LCI		55.92	297	P	12	59.50	0.3		MCT		60.11	296	P	13	30.40	1.6
AGAL		52.09	272	iPc	12	31.00	-0.2	LJU		56.08	305	iPc	13	00.00	-0.3		FAI		60.24	296	P	13	30.50	1.0
VAY		52.30	297	iPc	12	31.70	-0.9					eS	20	48.00			BSF		60.26	309	P	13	28.81	-0.9
		1.0s		0.15nm			2.9mb X	HOF		56.22	311	iPc	13	01.00	-0.3		LOMF		60.44	309	P	13	29.95	-0.9
NPS		52.35	289	eP	12	32.50	-0.6			1.4s		343.00nm			6.2mb		ORX		60.45	307	P	13	28.51	-2.5
NSS		52.41	327	iP	12	31.58	-1.5	BRT		56.23	298	Pc	13	02.00	0.6		ORO		60.45	307	P	13	30.30	-0.7
HFS		52.47	322	eP	12	32.60	-1.1	CEY		56.26	305	iPc	13	01.50	-0.1		HAU		60.46	310	eP	13	30.00	-0.9
		0.9s		182.20nm			6.0mb	BAI		56.37	299	P	13	01.00	-1.4				1.2s		151.10nm			6.0mb
	Z	18s		15.50um			6.1Msz	BER		56.43	323	eP	13	02.80	0.3		UCC		60.47	313	P+	13	31.00	0.1
				LR	33	29.00		RIY		56.43	304	eP	13	02.00	-0.8		PCP		60.55	305	P	13	30.25	-1.4
BEO		52.58	302	iP	12	35.30	0.6	KBA		56.46	307	iPc	13	01.60	-1.7		VITF		60.59	310	P	13	31.39	-0.3
				iS	20	02.80				0.9s		106.00nm			5.9mb		DOU		60.63	312	P	13	31.60	-0.4
BUD		52.69	305	eP	12	35.00	-0.4					iPP	15	10.30	771kmX						S	21	51.00	
ATH		52.70	293	eP	12	36.00	0.4					i	15	16.40							e	23	27.00	
SKO		52.87	298	iPc	12	36.10	-0.8					i	15	24.00			SNF		60.64	313	P	13	32.40	0.4
		1.4s		406.00nm			6.2mb					(PPP)	16	26.70			CKI		60.77	305	P	13	33.20	0.1
	Z	12s		11.43um			6.1MszX					esS	21	15.50			FIN		60.91	305	P	13	32.30	-1.7
	N	15s		11.65um				VOY		56.50	305	iPc	13	02.20	-1.2		BRW		60.97	20	eP	13	34.10	0.1
	E	14s		12.58um				BHG		56.53	307	iPc	13	03.60	0.1		LSD		61.05	307	P	13	34.66	-0.6
				i	12	46.20	33kmX			1.5s		695.00nm			6.5mb		ROB		61.09	305	P	13	33.74	-1.6
				i	13	15.00		TRI		56.70	305	ePc	13	03.80	-0.9		RSP		61.11	306	P	13	32.81	-2.7
				iPP	14	38.00						iPP	15	16.00			IMI		61.25	305	P	13	35.89	-0.5
				i	15	27.00						e(S)	21	06.00			LPG		61.28	307	eP	13	36.90	0.0
				iPcS	17	38.00						e(SS)	24	55.00					0.9s		291.70nm			6.4mb
				iScP	17	50.00						e(SSS)	27	38.00			DOI		61.40	306	P	13	36.20	-1.3
				iPS	20	28.00						eLR	30	30.00			ENR		61.41	305	P	13	35.58	-2.0
				i	21	10.00		FVI		57.00	306	Pc	13	06.50	-0.3		STV		61.47	305	P	13	35.38	-2.5
				iScS	22	16.00		ROI		57.20	297	P	13	08.60	0.2		PZZ		61.50	306	P	13	35.48	-2.7
				iSS	24	15.00		CSI		57.31	297	P	13	09.30	0.1		AUTN		61.51	305	P	13	38.06	-0.3
				iSSS	25	20.00		TDS		57.33	297	Pc	13	10.10	0.8		RRL		61.52	306	P	13	37.53	-0.9
SRO		53.04	306	iP	12	38.70	0.6	MMN		57.48	298	P	13	15.80	5.5X		BNI		61.53	307	P	13	38.30	-0.1
AAI		53.23	133	eP	12	36.00	-3.8X	ACI		57.55	297	P	13	12.10	1.3		S8F		61.56	305	eP	13	37.30	-1.2
KZN		53.23	296	eP	12	38.20	-1.5	CZI		57.65	297	P	13	10.80	-0.7		TOUF		61.62	305	P	13	38.72	-0.4
VAM		53.35	290	eP	12	39.00	-1.5	SGO		57.68	299	Pc	13	12.30	0.6		AURF		61.62	305	P	13	38.61	-0.4
KSP		53.39	310	eP	12	40.50	-0.1	MGR		57.68	298	P	13	12.20	0.5		REVF		61.66	305	P	13	38.66	-0.5
KSP		53.39	310	iPc	12	41.40	0.8X	DUI		57.82	300	P	13	13.80	1.1		MVIF		61.73	305	P	13	39.24	-0.6
		1.3s		205.00nm			5.9mb	BSS		57.93	299	P	13	14.10	0.6		EDU		61.95	321	eP	13	39.90	-1.0
				eS	20	12.00		DAG		58.02	345	eP	13	11.00	-2.7		CALN		61.97	305	P	13	40.72	-0.7
NB2		53.47	323	P	12	40.30	-0.8			1.0s		126.00nm			5.9mb		ESY		62.03	321	eP	13	40.30	-1.1
		0.9s		175.40nm			6.0mb		Z	20s		12.48um			6.0Msz				1.1s		125.00nm			6.0mb
OHR		53.63	297	iP	12	39.70	-2.8		N	18s		9.62um					FRF		62.21	305	eP	13	41.80	-1.0
		1.3s		0.15nm			2.8mb X		E	18s		8.52um							1.4s		252.60nm			6.2mb
ZST		53.69	307	eP	12	42.80	0.0	ARV		58.10	303	P	13	15.50	0.9		LOR		62.30	310	eP	13	42.00	-1.4
	Z	11s		1.10um			5.2MszX	SOI		58.19	296	P	13	15.80	0.5				1.1s		114.40nm			6.0mb
				i	14	45.00	681kmX	SDI		58.24	300	Pc	13	15.80	0.1		EDI		62.32	321	eP	13	42.90	-0.4
VLI		53.76	292	eP	12	41.00	-2.5	TOD		58.33	311	ePc	13	15.50	-0.7		EBH		62.33	321	eP	13	43.20	-0.2
VKA		54.17	307	ePc	12	46.50	0.2	WIT		58.36	315	eP	13	17.50	1.2				1.0s		83.00nm			5.9mb
		1.7s		457.00nm			6.2mb	AZI		58.38	301	Pc	13	17.40	0.9		ELO		62.33	321	eP	13	42.40	-1.0
				iPP	14	53.50		ASS		58.46	302	P	13	18.80	1.6				1.2s		150.00nm			6.0mb
				eS	20	24.00		MSI		58.49	296	P	13	17.90	0.5		LBF		62.35	309	eP	13	42.60	-1.2
SOP		54.21	306	iPc	12	48.90	2.3	ATN		58.58	296	eP	13	17.20	-0.8		MTN		62.35	136	iPc	13	42.40	-1.5
COP		54.22	317	iPd	12	47.80	1.3	WTS		58.59	314	ePc	13	18.00	0.1		LMR		62.40	305	eP	13	43.40	-0.7
		1.2s		481.25nm			6.4mb			1.0s		161.00nm			6.1mb		LRG		62.45	305	eP	13	44.00	-0.3
ITM		54.32	292	iPd	12	46.00	-1.6	SFI		58.65	304	P	13	20.00	1.6				1.3s		282.00nm			6.3mb
BRL		54.68	313	eP	12	51.00	1.0	CRE		58.70	303	P	13	20.00	1.0		EKA		62.57	320	Pd	13	45.00	0.0
PRU		54.72	309	Pc	12	50.40	0.0	MNS		58.73	302	P	13	19.10	0.0				1.2s		174.30nm			6.1mb
		1.5s		267.90nm			6.1mb	PGD		58.75	304	Pc	13	20.50	1.1		SMF		62.59	309	eP	13	44.40	-0.9
	Z	15s		26.40um			6 4MszX	SAL		58.83	306	P	13	20.50	0.8		SSF		62.61	310	eP	13	44.30	-1.1
	N	18s		42.60um				RMP		58.95	301	P	13	20.40	-0.2		GRC		62.76	310	P	13	45.92	-0.5
	E	20s		16.50um				RDP		58.96	301	P	13	20.70	0.0		AVF		62.82	309	eP	13	45.70	-1.1
				e	12	54.60	14kmX	ABH		58.98	311	ePc	13	20.41	-0.3		PLDF		63.03	309	P	13	47.54	-0.8
				S	20	29.00		FIR		59.10	304	iPc	13	23.00	1.4		BGF		63.24	309	eP	13	48.50	-1.1
MOL		54.77	326	iP	12	49.89	-0.7					iS	21	30.00			AGO		63.30	309	P	13	49.49	-0.5
BRG		54.80	311	iPc	12	50.80	-0.1	MNO		59.22	296	P	13	23.10	0.3		KNA		63.52	140	eP	13	51.50	-0.1
		1.4s		260.00nm			6.1mb	GWF		59.29	310	P	13	22.23	-0.7		PYM		63.51	309	P	13	50.99	-0.5
				i	12	56.50	19kmX	RUP		59.34	311	ePc	13	22.85	-0.4		MAF		63.57	309	eP	13	51.40	-0.4
				eS	20	32.00		STR		59.36	310	P	13	22.75	-0.6		LBL		63.61	308	P	13	51.61	-0.3
				e	24	58.00		BDI		59.42	304	Pc	13	23.70	-0.2		AKU		63.69	334	iP	13	53.80	1.6
VLS		54.89	294	eP	12	49.20	-2.6	DBN		59.48	314	eP	13	22.00	-2.0				1.3s		176.92nm			6.1mb
PTJ		55.20	304	eP	12	52.90	-1.2		Z	13s		61.60um			6.9MszX		TCF		63.75	309	eP	13	52.40	-0.6
ZAG		55.21	304	iPc	12	53.70	-0.3					eS	21	40.00			NAI		63.98	246	iPc	13	56.00	1.0
CLL		55.22	311	iPc	12	53.60	-0.4					eSS	26	24.00					1.0s		34.00nm			5.5mb
		1.5s		380.00nm			6.2mb	FEL		59.50	309	P	13	23.70	-0.7		NANU		64.02	156	eP	13	54.00	-0.8
				i	12	58.60	16kmX	ENN		59.58	313	ePc	13	24.00	-0.8				0.5s		34.00nm			5.8mb
				eS	20	36.00				1.0s		157.00nm			6.1mb		LDF		64.06	312	eP	13	53.80	-1.1
ILT		55.34	27	iPd	12	55.00	0.4	MEM		59.59	313	P	13	25.40	0.5				1.2s		220.10nm			6.2mb

LSF	64.19	310	eP	13	54.90	-0.9		0.7s	221.00nm		6.3mb				esP	16	28.43						
FLN	64.19	313	eP	13	54.80	-1.0	Z	20s	7.40um		6.0Msz				ePP	20	03.69						
	1.3s	194.90nm			6.1mb		N	20s	5.10um			BLF	90.64	233	iPc	16	23.00	0.0				
MBL	64.25	151	eP	13	55.50	-0.9	E	20s	4.30um				1.0s	70.00nm			5.9mb						
	0.8s	154.00nm			6.2mb		KLB	73.13	157	iPc	14 50.70	-0.5	KIM	91.29	234	iPc	16	26.00	0.1				
MBC	64.47	8	ePd	13	57.10	-0.1		0.7s	42.00nm		5.6mb		KIC	91.42	279	Pc	16	26.64	-0.1				
	1.1s	503.00nm			6.6mb		COOL	73.58	154	iPc	14 53.20	-0.7	TIC	91.46	279	Pc	16	26.74	-0.2				
CAF	64.49	308	eP	13	57.90	0.0		0.7s	96.00nm		6.0mb		RSON	91.56	4	P	16	26.90	0.1				
GRR	64.59	313	eP	13	57.50	-0.9	NWAO	74.21	158	iPc	14 56.88	-0.6		1.0s	130.15nm			6.2mb					
RJF	64.65	309	eP	13	58.80	0.0		0.7s	121.00nm		6.0mb			Z 20s	11.30um			6.3Msz					
LPF	64.87	312	eP	13	59.40	-0.8	Z	20s	7.10um		6.0Msz		LIC	91.73	279	Pc	16	27.96	-0.2				
	1.2s	113.00nm			5.9mb		N	20s	5.40um					Z 20s	3.00um			5.7Msz					
IMA	64.90	24	eP	14	00.40	0.1	E	20s	4.10um				DZM	91.80	117	iPc	16	29.90	1.6				
	1.2s	162.00nm			6.1mb				epP	15	00.52 12kmX		WIN	92.40	243	iPc	16	32.00	0.8				
MFF	65.03	311	eP	14	00.30	-1.0			esPd	15	03.66			1.0s	50.00nm			5.9mb					
LPO	65.16	308	eP	14	01.80	-0.3	BCAO	74.22	263	iPc	14 57.30	-0.7		Z 18s	5.84um			6.1Msz					
DMU	65.18	320	iPd	14	02.50	0.4		0.6s	148.00nm		6.2mb		LRM	93.89	17	eP	16	38.80	0.8				
DLE	65.30	319	eP	14	02.10	-0.7			epPd	15	01.10 12kmX		WDC	95.82	26	ePc	16	47.80	1.1				
	1.0s	115.00nm			6.0mb				esPd	15	02.76		MIN	96.35	25	ePc	16	49.80	0.5				
LFF	65.31	309	eP	14	03.00	0.0			ic	15	12.50		HBVT	97.09	349	P	16	53.00	0.7				
DCN	65.65	319	eP	14	05.10	0.0			ic	16	21.70		ORV	97.09	25	e(P)	16	52.10	-0.3				
	1.0s	197.00nm			6.2mb				ePP	17	33.88		RSNY	97.11	350	P	16	53.20	0.8				
REY	65.91	334	eP	14	11.10	4.5X	LIS	74.88	307	iPc	15 02.10	0.6		1.1s	70.39nm			6.2mb					
TTA	65.98	28	eP	14	08.00	0.8	RKG	75.22	159	eP	15 03.00	-0.3		Z 20s	6.78um			6.1Msz					
EPF	66.51	307	eP	14	09.80	-1.1	IFR	75.30	301	iPd	15 05.00	0.8	RSSD	97.16	12	P	16	54.30	1.3				
	0.7s	41.30nm			5.7mb		FORR	76.20	149	iPd	15 09.00	0.2	KVN	98.66	23	P	17	01.70	2.0				
OGE	66.95	307	P	14	13.37	-0.3		0.5s	75.00nm		6.0mb		CMB	98.84	25	ePc	17	02.00	1.6				
JAU	66.95	307	P	14	14.46	0.6	CTA	76.93	128	iPc+	15 13.20	-0.1	SAO	99.61	27	ePc	17	17.00	13.1X				
ATE	67.14	307	P	14	14.36	-0.5		1.2s	460.94nm		6.4mb			Z 20s	5.00um			6.0Msz					
LHE	67.17	307	P	14	15.17	0.0			iS	25	07.00			N 20s	2.80um								
MADF	67.18	308	P	14	14.72	-0.4	CTAO	76.93	128	iPc	15 12.16	-1.1		E 20s	4.30um								
ISSF	67.23	307	P	14	14.98	-0.5		1.2s	460.94nm		6.4mb				ePP	21	20.00						
ELYF	67.28	308	P	14	15.01	-0.7			epPd	15	15.97 12kmX				eSKS	27	52.00						
BOH	67.32	308	P	14	15.52	-0.6			esP	15	17.46				eSP	30	19.00						
COL	67.53	24	ePc	14	16.88	-0.1			iS	25	07.00				eSS	35	28.00						
			epPc	14	20.86	13kmX	AVE	76.97	302	iPd	15 14.00	0.6			e	35	37.00						
			esPd	14	22.51					i	15	43.50 116kmX			e	36	12.00						
FBA	67.53	24	eP	14	17.00	0.1				i	16	13.50			eSSS	40	00.00						
VAL	67.93	319	eP	14	20.00	0.4	SIT	77.41	24	e(P)	15 17.30	1.9			e	48	05.00						
			S	23	16.00		FRB	77.59	351	eP	15 14.00	-2.2			eLR	57	59.00						
MEKA	68.77	155	eP	14	24.00	-1.1		1.1s	176.00nm		6.1mb		FRI	100.01	25	ePdiff	17	07.10	1.6				
	0.4s	26.00nm			5.8mb		TIO	78.28	300	iP	15 20.50	-0.4	PRS	100.03	27	ePdiff	17	03.40	-2.2				
INK	68.88	17	iPc	14	25.50	0.3				i	16	05.40 184kmX	GLD	101.21	13	Pdiff	17	18.80	7.8X				
	1.2s	217.00nm			6.2mb		OLP	80.66	134	eP	15 34.00	0.6		Z 20s	12.00um			6.4Msz					
PMR	69.32	27	eP	14	27.80	-0.2	BUL	82.84	238	iPc	15 59.90	14.8X	GOL	101.23	14	Pdiff	17	18.80	7.6X				
	1.0s	150.00nm			6.1mb			1.0s	157.50nm				GSC	102.51	24	ePdiff	17	19.00	2.2				
	Z 20s	16.00um			6.3Msz		RMO	83.23	131	iPc	15 49.00	2.2	SBB	102.73	25	ePdiff	17	17.00	-0.8				
PMG	69.70	120	eP	14	31.00	0.0		1.4s	792.00nm		6.7mb		PAS	103.11	25	ePdiff	17	27.12	7.8X				
	1.3s	76.92nm			5.7mb		STK	83.36	139	iPc	15 49.50	2.2			eSKS	27	58.78						
WB5	69.88	137	iPc	14	31.90	-0.1		0.7s	82.00nm		6.0mb				eS	29	09.29						
WRA	69.92	138	Pd	14	32.50	0.3				e	15	54.00 14kmX			ePS	30	41.33						
	1.0s	289.50nm			6.4mb		ADE	84.41	143	iPc	15 53.10	0.5	BAR	104.95	25	ePdiff	21	28.00	240.4X				
TOA	69.99	25	eP	14	33.50	1.3		1.0s	250.00nm		6.4mb		GLA	105.20	23	ePKP	21	29.00	-14.1X				
GDH	70.25	348	iPd	14	33.40	-0.2	CMS	85.31	136	eP	15 57.00	-0.1	ANMO	105.61	16	ePdiff	17	15.16	-15.6X				
	1.1s	101.27nm			5.9mb		SCH	85.95	348	eP	16 00.00	-0.1			eSKS	28	14.76						
			i	14	38.00	15kmX		1.1s	182.00nm		6.2mb				eSKKS	29	02.44						
			i	23	42.00		BRS	86.33	129	iPd-	16 02.90	0.6			eS	29	30.58						
			i	28	40.00					ipP	16	08.00 16kmX			ePS	30	54.67						
MRWA	70.38	158	eP	14	34.40	-0.4				i	16	24.00	ALQ	105.61	16	ePdiff	17	27.20	-3.6X				
LWI	70.52	251	iPc	14	36.20	-0.1				eS	26	36.00		1.0s	3.75nm			5.3mb					
FDC	70.59	31	iPc	14	36.30	0.5	EDM	86.71	15	iPc	16 05.20	1.2		Z 20s	5.67um			6.1Msz					
TOL	70.97	306	iPc	14	38.11	-0.4	SLR	86.97	234	iPc	16 05.00	-0.6			pP	21	56.00						
	1.3s	1423.08nm			6.9mb			1.6s	316.67nm		6.3mb		TUL	106.29	7	ePdiff	17	35.20	1.7				
			epP	14	41.75	12kmX		Z 22s	18.52um		6.4Msz			1.0s	4.30nm			5.4mb					
			esP	14	43.40		FFC	87.05	8	iPc	16 05.80	0.3		Z 20s	8.80um			6.3Msz					
			ePP	17	20.00			1.2s	193.00nm		6.2mb				LR	54	00.00						
			iS	23	56.32		KSR	87.95	235	iPd	16 10.20	-0.2	SPA	127.63	180	iPKPc	22	24.00	-1.0				
			ePS	24	44.00		BFD	88.03	142	iPc	16 10.30	0.0	SPA	127.63	180	iPKPc	22	24.10	-0.9				
			i	24	44.88			1.0s	141.00nm		6.2mb			1.0s	76.50nm								
			eSS	28	24.00		PGC	88.34	23	eP	16 14.00	2.2		Z 20s	3.06um			6.0Msz					
			eSSS	31	44.00		MCW	88.50	22	P	16 14.60	1.9			i	22	39.10						
WARB	71.50	147	eP	14	42.00	0.3	BFS	88.74	234	iPd	16 11.00	-3.1X	ITB	148.50	284	ePKP	23	08.00	4.2X				
BAL	71.89	158	eP	14	42.80	-1.1		0.5s	21.13nm		5.7mb		ITB7	148.65	284	e(PKP)	23	07.70	3.6X				
CRT	72.17	303	eP	14	46.00	0.2	PNT	88.84	20	eP	16 16.00	1.7	AIA	149.20	199	ePKP	23	08.00	4.4X				
ASMO	72.18	304	iPd	14	45.00	-0.9		1.3s	207.00nm		6.3mb		ZOBO	152.28	315	iPKPc	23	11.00	0.5				
APHE	72.37	303	iPc	14	46.40	-0.7	BWA	88.96	136	iPc	16 16.10	1.3		1.5s	145.16nm								
ACHM	72.38	303	iPc	14	46.00	-1.0	GMW	89.52	23	P	16 19.80	2.3			LR	15	20.00						
AAPN	72.45	304	iPc	14	46.20	-1.4	TOO	89.81	140	iPc	16 19.60	0.8	LPB	152.47	315	PKPc	23	12.00	1.5				
ALOJ	72.55	304	iPd	14	46.80	-1.4	SES	89.85	14	eP	16 19.00	-0.1		1.3s	230.77nm								
ATEJ	72.60	303	iPd	14	47.40	-1.1		1.4s	281.00nm		6.3mb				LR	15	30.00						
TAF	72.71	301	iPd	14	29.00	-20.1X				pP	16	25.00 19kmX	CNCB	152.63	314	iPKPc	23	12.60	1.7				
ASPA	72.75	140	iPc	14	48.70	-0.5	RMW	89.90	22	P	16 22.00	2.6	ARE	154.21	321	ePKP	23	15.00	2.2				
	1.3s	437.00nm			6.4mb		LKO	90.13	282	Pc	16 21.36	0.5	FCH	164.89	282	ePKP	23	26.00	1.7				
			eS	24	09.30			0.8s	64.50nm		5.9mb				e	24	24.00						
MAL	72.97	303	iPd	14	50.00	-0.4	CNB	90.14	136	eP	16 20.00	-0.4	PCH	165.17	281	ePKP	23	25.50	1.2				
			iS	24	20.00		PVC	90.38	112	iPd	16 23.60	1.9	SAN	165.22	282	ePKP	23	25.50	1.3				
MUN	73.03	159	iPc	14	50.00	-0.6	LON	90.53	22	ePc	16 23.30	1.0	ROCH	165.30	284	ePKP	23	25.50	0.9				

14d 03h

CHCH 165.39 280 ePKP 23 32.50 8.1X
LNV 165.99 281 iPKPd 23 26.00 1.3
S.D. = 1.1 on 437 of 468 obs.

? JAN 14, 1990 03h 07m 05.26±21.52s
42.590 N ±94.5km 129.585 W ±143.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)

NLO	5.62	49	eP	08 30.99	0.0
GT2	5.88	62	eP	08 34.62	0.1
PGO	5.89	58	eP	08 34.83	0.2
BMW	5.98	47	eP	08 35.39	-0.5
RVW	6.06	52	eP	08 36.84	-0.2
VLMM	6.18	59	eP	08 38.60	-0.3
LVP	6.21	54	eP	08 39.03	-0.3
TDH	6.24	62	eP	08 39.60	-0.2
VBEM	6.29	64	eP	08 40.61	0.1
MTMW	6.31	54	eP	08 40.68	0.0
FL2	6.31	53	eP	08 40.74	0.0
CPW	6.35	44	eP	08 41.74	0.6
CZM	6.36	50	eP	08 40.98	-0.3
ERK	6.38	52	eP	08 41.68	0.0
SHW	6.38	53	eP	08 41.91	0.2
VLL	6.38	61	eP	08 41.94	0.2
APW	6.40	48	eP	08 41.52	-0.4
JLK	6.40	54	eP	08 42.08	0.0
STD	6.41	53	eP	08 42.12	0.0
YEL	6.42	53	eP	08 42.39	0.1
ESD	6.43	53	eP	08 42.60	0.1
SOSW	6.46	53	eP	08 43.08	0.2
VFP	6.46	62	eP	08 43.35	0.4
TDL	6.47	52	eP	08 43.00	-0.1
APM	6.50	58	eP	08 43.19	-0.1
KOSW	6.55	51	eP	08 44.15	0.1
LMW	6.61	49	eP	08 44.86	-0.1
GULW	6.63	57	eP	08 45.43	0.1
ASR	6.74	55	eP	08 46.83	0.0
VIPM	6.79	71	eP	08 47.30	-0.3
LON	6.93	50	eP	08 49.20	-0.2
GLK	6.94	52	eP	08 49.91	0.3
RVC	6.95	49	eP	08 49.85	0.2

S.D. = 0.2 on 33 of 33 obs.

JAN 14, 1990 03h 09m 41.47± 0.55s
36.151 N ± 7.0km 27.171 E ± 5.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

KAP	0.60	180	ePn	09 54.20	0.6
ARG	0.78	85	ePn	09 55.70	-0.9
YER	1.33	42	iPn	10 04.50	-1.5
NPS	1.55	236	ePn	10 08.00	-1.1
			eSn	10 29.00	
SMG	1.58	350	ePb	10 11.00	1.5
APE	1.61	305	ePn	10 10.40	0.4
KSL	1.95	90	ePn	10 14.70	-0.3
IZM	2.24	2	ePn	10 20.00	0.8
ELL	2.29	74	ePn	10 20.70	0.8
VAM	2.53	254	ePn	10 25.00	1.8
KHL	2.87	40	ePn	10 28.00	-0.1
BCK	3.04	64	ePn	10 32.90	2.4
ATH	3.31	304	ePn	10 33.00	-1.3
VLI	3.46	281	ePn	10 36.20	-0.3
ITM	4.34	285	ePn	10 49.00	0.0
BBTK	5.75	48	eP	11 08.00	-1.0
BMG	94.08	282	eP	23 00.00	-1.7

S.D. = 1.3 on 17 of 17 obs.

JAN 14, 1990 03h 33m 12.99± 0.21s
45.352 N ± 4.3km 150.930 E ± 4.0km
DEPTH = 33.0km (normal)
5.5mb (58 obs.)
KURIL ISLANDS (221)

KUSJ	5.01	245	P	34 25.90	-1.8
			eS	35 22.10	
SAP	7.27	255	eP	35 00.00	0.5
MAT	13.02	232	eP	36 14.00	-4.2X
	0.7s		28.77nm	5.4mb	
MTMJ	13.22	233	P	36 17.80	-3.1X
IIDJ	13.97	230	eP	36 28.60	-2.1
TSRJ	15.00	234	P	36 42.50	-1.6
WKYJ	16.17	232	P	37 02.50	3.1X
YONJ	16.72	239	eP	37 09.30	3.1X
TKSJ	17.22	235	eP	37 10.80	-1.7

SHK	17.64	239	iP	37 20.00	2.3
	1.3s		384.62nm	5.4mb	
SHNJ	18.87	240	eP	37 32.10	-0.7
KUMJ	20.14	237	eP	37 46.80	-0.1
KAGJ	21.08	235	eP	37 55.90	-0.7
BJI	25.96	271	eP	38 44.50	0.5
	1.2s		138.00nm	5.4mb	
SSE	27.18	249	Pd	38 55.50	0.3
	1.0s		99.00nm	5.4mb	
			pP	39 02.50	25kmX
TTA	34.47	40	eP	39 58.70	-0.8
IMA	35.83	35	eP	40 10.30	-0.8
	0.7s		11.20nm	4.9mb	
BRW	35.89	26	eP	40 11.00	-0.3
LZH	36.42	272	Pc	40 16.00	-0.4
	1.0s		324.00nm	6.2mb	
			i	40 32.00	
			i	40 43.00	
PMR	37.66	43	eP	40 25.90	-0.4
	1.1s		14.10nm	4.7mb	
FBA	38.20	37	ePc	40 31.00	0.2
TOA	39.03	42	eP	40 38.60	0.7
INK	43.64	31	iPc	41 16.50	1.0
	1.1s		42.00nm	5.1mb	
MBC	46.42	19	eP	41 37.00	-0.6
	1.0s		15.00nm	4.9mb	
LOE	49.40	252	eP	42 01.00	-0.5
CHG	50.31	256	ePc	42 08.40	-0.1
	1.0s		39.50nm	5.4mb	
SHL	50.81	268	iP	42 12.20	-0.3
BDT	51.36	254	eP	42 17.00	0.6
NNT	54.20	250	eP	42 38.00	0.4
PNT	57.28	51	eP	43 01.00	1.5
	0.8s		10.00nm	4.9mb	
DAG	57.98	357	iPd	43 02.20	-1.8
	1.1s		59.49nm	5.6mb	
KEV	58.15	340	eP	43 16.00	10.7X
EDM	58.38	45	eP	43 06.00	-1.2
IPM	59.40	242	ePd	43 16.10	1.4
SOD	60.00	338	eP	43 16.00	-2.1
WDC	60.53	61	ePc	43 22.80	0.7
MTN	60.63	202	eP	43 22.00	-0.9
SES	61.20	46	eP	43 25.00	-1.6
MIN	61.24	61	eP	43 28.30	1.1
ORV	61.78	61	e(P)	43 32.00	1.3
FFC	62.78	39	iPc	43 36.00	-1.1
	1.0s		23.00nm	5.3mb	
LRM	63.26	51	eP	43 39.70	-1.0
CMB	63.40	62	e(P)	43 41.00	-0.4
SUF	63.64	335	eP	43 40.50	-2.1
KVN	64.18	60	P	43 46.20	-0.5
PRI	64.39	64	ePc	43 50.20	2.2
CTA	65.26	185	eP	43 55.00	1.5
TNP	65.32	60	P	43 54.20	0.0
NUR	65.81	334	iP	43 54.90	-1.7
	0.8s		19.10nm	5.2mb	
MAIO	66.19	298	eP	44 00.00	0.4
WB5	66.65	197	eP	44 01.20	-1.2
			i	44 14.80	
WRA	66.71	197	Pd	44 01.80	-1.0
	0.9s		15.10nm	5.1mb	
BW06	66.80	52	P	44 03.10	-0.5
	1.0s		6.00nm	4.6mb	
FRB	66.86	18	eP	44 01.00	-2.2
POO	68.06	274	iPd	44 11.20	-0.4
	0.9s		62.18nm	5.7mb	
DZM	68.57	165	iPd	43 56.30	-18.2X
DZM	68.57	165	iPc	44 15.90	1.4
GBA	68.87	268	P	44 15.60	-0.9
RSSD	68.89	48	P	44 15.40	-1.2
NB2	69.05	340	P	44 15.60	-1.4
	1.0s		57.20nm	5.6mb	
RSON	69.08	38	P	44 15.40	-2.0
	1.0s		24.40nm	5.2mb	
HFS	69.22	339	eP	44 16.10	-1.9
	0.7s		33.40nm	5.5mb	
ASPA	70.42	197	iPd	44 25.90	0.2
	1.2s		27.00nm	5.2mb	
			ipP	44 39.10	46kmX
GOL	71.20	52	P	44 30.00	-0.8
RMQ	71.52	182	eP	44 33.00	0.7
BRS	72.41	178	eP	44 28.00	-9.6X
			i	44 54.80	
TAB	72.84	307	eP	44 41.00	0.6
ALO	73.87	57	eP	44 42.50	-4.0X
	1.8s		28.41nm	5.0mb	
KER	75.00	304	eP	44 52.00	-0.9

			e	49 43.00	
SLY	75.05	306	iPd	44 53.00	0.0
SCH	75.21	21	eP	44 53.00	-0.6
MSL	75.82	308	iPd	45 02.50	5.1X
KSP	76.45	332	iPc	45 00.20	-0.5
	1.1s		91.00nm	5.7mb	
SPC	76.50	329	iP	45 01.40	0.2
KAS	77.02	317	iPc	45 05.20	1.1
CLL	77.09	334	iPc	45 03.50	-0.7
	1.3s		160.00nm	5.9mb	
			e	45 21.00	
BRG	77.18	334	iP	45 04.20	-0.5
	1.4s		75.00nm	5.5mb	
EKA	77.32	345	P	45 06.00	0.6
	1.2s		52.10nm	5.4mb	
BHD	77.35	305	iPd	45 08.00	2.0
WIT	77.52	339	eP	45 07.50	1.0
PRU	77.76	333	Pc	45 08.00	0.1
	1.4s		72.00nm	5.5mb	
PSN	77.80	321	iPd	45 07.00	-1.3
CMP	77.87	324	ePd	45 09.00	0.3
WTS	78.23	338	eP	45 10.50	0.1
	1.0s		102.00nm	5.8mb	
HOF	78.31	335	iPc	45 10.00	-1.0
	1.3s		126.00nm	5.8mb	
SRO	78.35	330	iP	45 12.00	0.8
BUD	78.37	329	iP	45 12.50	1.2
	0.9s		95.62nm	5.8mb	
ZST	78.45	330	eP	45 11.60	-0.1
VKA	78.66	331	eP	45 13.00	0.1
	1.0s		46.10nm	5.4mb	
BBTK	78.69	316	eP	45 14.00	0.6
KHC	78.82	333	iPc	45 14.20	0.4
	1.1s		75.00nm	5.6mb	
SOP	79.08	331	iPc	45 17.40	2.2
TUL	79.17	49	eP	45 15.90	-0.1
	1.2s		20.00nm	5.0mb	
DMU	79.33	347	eP	45 16.60	0.1
PVL	79.41	323	iPd	45 18.00	0.9
BWA	79.44	182	eP	45 19.80	2.6
JMB	79.48	322	iPc	45 18.00	0.5
GPA	79.52	318	eP	45 18.00	0.2
ENN	79.58	338	iPc	45 17.80	0.0
	1.0s		114.00nm	5.8mb	
MEM	79.70	338	Pc	45 17.90	-0.6
YLV	79.74	319	iP	45 19.10	0.1
TOD	79.84	336	ePc	45 19.05	-0.3
DLE	79.86	346	eP	45 19.60	0.3
	1.0s		74.00nm	5.6mb	
DCN	79.93	347	eP	45 20.10	0.4
	1.2s		85.00nm	5.6mb	
ABH	79.95	337	eP	45 19.76	-0.1
BEO	80.07	327	iP	45 20.30	-0.3
SNF	80.23	339	P	45 21.40	0.1
RUP	80.24	337	ePc	45 21.24	-0.3
DIM	80.27	322	eP	45 23.00	1.3
BHG	80.28	333	eP	45 22.10	0.4
	1.5s		130.00nm	5.7mb	
FVM	80.36	45	P	45 21.40	-0.9
PGB	80.45	323	iPc	45 23.00	0.2
WLF	80.52	338	P	45 21.00	-1.9
DOU	80.54	339	P	45 23.50	0.5
BNT	80.57	319	iP	45 24.60	1.2
EDC	80.61	320	iP	45 23.50	0.0
KDZ	80.65	322	iPd	45 25.00	1.2
KBA	80.69	332	iPc	45 22.50	-1.6
	1.0s		69.30nm	5.6mb	
			i	46 09.50	
GWF	80.74	336	P	45 23.87	-0.3
VTS	80.82	324	iPc	45 25.00	0.2
PTJ	80.82	330	eP	45 24.00	-0.7
ZAG	80.88	330	iPc	45 25.00	0.1
RZN	80.92	322	iPc	45 26.00	0.6
RDO	81.01	321	iPd	45 26.00	0.4
STR	81.06	336	P	45 25.67	-0.1
LJU	81.19	331	eP	45 26.00	-0.5
FVI	81.30	332	P	45 27.50	0.5
WLS	81.33	336	P	45 27.05	-0.2
CDF	81.35	336	P	45 27.05	-0.4
VBY	81.41	330	eP	45 28.00	0.4
VOY	81.42	331	eP	45 26.80	-1.0
MMB	81.43	323	ePc	45 28.00	0.1
KHL	81.44	317	eP	45 27.40	-0.7
KKB	81.47	323	iPc	45 28.00	-0.1
CEY	81.49	331	eP	45 27.50	-0.6
ECH	81.56	336	P	45 28.13	-0.3
BCK	81.61	316	eP	45 12.00	-16.9X

14d 03h

FEL	81.63	336	P	45 28.58	-0.3
TRI	81.75	331	eP	45 28.30	-1.1
OLY	81.76	47	P	45 28.60	-1.0
RIY	81.85	331	eP	45 29.30	-0.6
VITF	81.89	337	P	45 29.93	-0.1
MOF	81.90	336	P	45 29.77	-0.5
HAU	81.98	337	eP	45 30.70	0.1
	1.0s	28.00nm		5.2mb	
BSF	82.02	337	P	45 30.31	-0.6
SKO	82.07	324	iPc	45 30.60	-0.5
	1.2s	227.00nm		6.1mb	
		i		45 38.70	
VAY	82.14	323	iP	45 31.60	0.1
	1.2s	0.17nm		3.0mb X	
BBS	82.15	336	P	45 30.71	-0.8
HRI	82.20	310	eP	45 32.00	-0.1
LOMF	82.44	336	P	45 32.73	-0.4
ELL	82.50	316	eP	45 33.00	-0.7
PLG	82.55	322	iPd	45 34.20	0.5
JARJ	82.88	309	Pd	45 37.00	1.4
SAL	82.90	333	P	45 36.50	1.1
FLN	83.00	341	iPc	45 36.00	0.2
	1.1s	53.70nm		5.6mb	
OHR	83.05	324	eP	45 35.30	-1.0
	1.2s	0.09nm		2.8mb X	
LDF	83.07	341	iPc	45 36.60	0.4
	1.2s	59.50nm		5.6mb	
VAI	83.22	334	Pd	45 38.00	1.0
KFNJ	83.31	309	P	45 38.80	1.1
KZN	83.32	323	eP	45 36.60	-1.1
LOR	83.33	338	iPc	45 37.20	-0.4
	1.2s	75.50nm		5.7mb	
GRR	83.43	342	iPc	45 38.50	0.4
	1.0s	72.00nm		5.8mb	
GRC	83.51	339	P	45 39.05	0.6
LBF	83.56	338	iPc	45 38.80	0.0
	1.3s	55.50nm		5.5mb	
SSF	83.61	338	iPc	45 39.30	0.3
	1.2s	39.80nm		5.4mb	
ORX	83.67	335	P	45 38.84	-0.6
ORO	83.67	335	P	45 40.00	0.5
DSI	83.70	309	eP	45 40.00	0.3
LPF	83.81	342	iPc	45 40.40	0.4
	1.2s	77.30nm		5.7mb	
AVF	83.90	338	iPc	45 40.80	0.3
SMF	83.91	338	iPc	45 40.70	0.1
SFI	83.97	332	P	45 43.50	2.7
ARV	83.97	331	P	45 42.50	1.6
BOB	83.99	334	P	45 43.00	1.9
PGD	84.05	332	P	45 43.50	2.0
LSD	84.07	335	P	45 42.02	0.3
LPG	84.15	336	iPc	45 42.80	0.6
	1.0s	28.80nm		5.4mb	
CRE	84.19	331	P	45 44.00	1.9
BGF	84.25	338	iPc	45 42.70	0.4
	1.2s	53.50nm		5.6mb	
BDI	84.26	332	Pd	45 43.30	0.9
RSP	84.32	335	P	45 41.72	-1.1
ASS	84.44	331	P	45 44.50	1.2
PCP	84 48	334	P	45 43.36	-0.1
BNI	84 58	335	P	45 46.00	1.9
PII	84 58	332	P	45 44.50	0.6
PLDF	84 59	338	P	45 44.66	0.6
MAF	84 64	339	iPc	45 45.00	0.8
AGO	84 65	338	P	45 44.90	0.6
CKI	84.67	334	Pd	45 45.20	0.8
TCF	84.67	339	iPc	45 45.00	0.6
	1.0s	38 00nm		5.5mb	
RRL	84.67	335	P	45 44.48	-0.2
BRT	84.68	327	P	45 45.50	1.0
LCI	84.85	326	P	45 46.00	0.7
LSF	84.87	339	iPc	45 46.10	0.7
FIN	84.88	334	P	45 44.48	-1.0
OOI	84.91	335	P	45 44.50	-1.2
ROB	84.91	334	P	45 44.38	-1.3
MFF	84.95	340	iPc	45 46.60	0.8
	1.2s	47.60nm		5.6mb	
PZZ	84.95	335	P	45 44.79	-1.2
PYM	84.96	338	P	45 46.25	0.3
DUI	85.04	329	P	45 48.00	1.6
MNS	85.04	330	Pd	45 46.50	0.2
ENR	85.11	335	P	45 44.48	-2.2
STV	85.12	335	P	45 44.79	-2.0
AZI	85.12	330	P	45 47.70	1.1
SDI	85.23	329	Pd	45 48.10	0.8
IMI	85.25	334	P	45 46.43	-1.0
AUTN	85.31	334	P	45 47.90	0.0

MBH	85.35	308	ePc	45 47.00	-1.0
TOUF	85.35	335	P	45 48.27	0.2
LBL	85.37	338	P	45 48.53	0.7
SBF	85.43	334	iPc	45 48.10	-0.2
	1.2s	71.40nm		5.8mb	
AURF	85.44	335	P	45 47.90	-0.5
MVIF	85.49	335	P	45 48.57	-0.1
RMP	85.54	330	Pd	45 49.70	0.9
REVF	85.56	334	P	45 48.92	0.0
RDP	85.58	330	P	45 50.20	1.1
VLS	85.60	323	eP	45 48.50	-0.7
SGO	85.68	328	P	45 50.50	1.0
CALN	85.70	335	P	45 49.83	0.1
RJF	85.76	339	iPc	45 51.10	1.2
	0.8s	21.40nm		5.4mb	
VLI	85.80	321	eP	45 49.60	-0.5
ITM	85.86	322	eP	45 49.00	-1.5
FRF	85.95	335	iPc	45 50.80	0.0
	1.2s	53.50nm		5.6mb	
MGR	85.96	327	P	45 50.50	-0.4
NA2	86.06	36	P	45 51.80	0.4
TDS	86.07	327	P	45 51.00	-0.5
LRG	86.13	335	iPc	45 52.10	0.4
	1.0s	60.00nm		5.8mb	
LMR	86.19	335	iPc	45 52.40	0.4
	1.0s	68.00nm		5.8mb	
LFF	86.30	339	iPc	45 53.80	1.3
	1.2s	59.50nm		5.7mb	
LPO	86.42	339	iPc	45 54.40	1.3
	1.2s	53.50nm		5.6mb	
TOL	92.23	341	eP	46 20.50	-0.1
BCAO	114.81	306	ePKPc	51 52.80	0.6
	0.7s	3.00nm			
LKO	121.41	333	PKP	52 04.20	-0.5
TIC	123.93	331	PKP	52 08.80	-0.8
KIC	124.10	330	PKP	52 09.00	-0.9
LIC	124.32	331	PKP	52 09.50	-0.8
BUL	126.65	278	iPKPc	52 29.30	14.5X
	1.0s	5.00nm			
ZOBO	136.33	61	PKP	52 39.00	5.1X
LPB	136.55	61	PKP	52 40.00	5.9X
CNCB	136.83	62	PKP	52 35.00	0.2
	S.D. = 1.0	on 228 of 241 obs.			

JAN 14, 1990 03h 34m 59.78± 0.46s
44.811 N ± 2.5km 6.730 E ± 5.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.7 (LDG), 2.6 (GEN).

RRL	0.12	20	P	35 03.18	0.2
			S	35 06.36	
BNI	0.24	351	Pc	35 05.70	0.6
			eSg	35 10.10	
PZZ	0.40	139	P	35 08.10	0.0
			S	35 14.15	
DOI	0.48	130	P	35 10.10	0.6
			eSg	35 15.70	
RSP	0.51	48	P	35 10.77	0.7
			S	35 18.46	
LPG	0.69	1	Pg	35 13.00	-0.6
			Sg	35 22.80	
LPL	0.71	0	Pg	35 13.20	-0.7
STV	0.71	143	P	35 13.85	0.0
			S	35 23.90	
LSD	0.71	25	P	35 13.74	-0.3
			S	35 23.53	
ENR	0.77	140	P	35 14.36	-0.4
			S	35 24.76	
ROB	0.97	122	P	35 18.26	0.1
			S	35 31.68	
ORO	1.20	47	P	35 23.50	1.3
			eSg	35 40.00	
ORX	1.21	47	P	35 21.53	-0.8
FIN	1.22	119	P	35 22.56	0.1
			S	35 38.61	
IMI	1.23	137	P	35 22.61	0.0
FRF	1.25	183	Pg	35 23.30	0.2
			Sg	35 39.00	
PCP	1.32	101	P	35 23.07	-1.2
LRG	1.38	191	Pg	35 25.00	-0.1
			Sg	35 43.20	
LMR	1.49	186	Pg	35 26.60	0.1
			Sg	35 45.40	
	S.D. = 0.6	on 19 of 19 obs.			

JAN 14, 1990 03h 38m 04.65± 0.16s
45.345 N ± 3.5km 150.913 E ± 3.0km
DEPTH = 48.0km (3 depth phases)
5.7mb (62 obs.) 5.7Msz (1 obs.)
KURIL ISLANDS (221)

KUSJ	4.99	245	P	39 16.20	-2.8
ASAJ	6.02	261	P	39 35.20	1.8
HOOJ	6.26	244	P	39 35.80	-0.9
SAP	7.26	255	eP	39 51.00	0.3
MAT	13.01	232	eP	41 05.00	-4.0X
	0.7s	44.52nm		5.5mb	
		eS		43 42.00	
MTMJ	13.20	233	P	41 08.20	-3.4X
IIDJ	13.95	230	P	41 19.70	-1.7
WKYJ	16.16	232	eP	41 49.00	-1.0
YONJ	16.71	239	eP	41 55.50	-1.3
TKSJ	17.21	235	eP	42 01.30	-1.7
SHK	17.63	239	eP	42 07.40	-0.9
SHNJ	18.86	240	eP	42 16.50	-6.8X
SHNJ	18.86	240	eP	42 22.80	-0.5
KUMJ	20.12	237	eP	42 36.00	-1.1
KAGJ	21.06	235	eP	42 47.00	0.2
ADK	22.27	61	e(P)	42 54.40	-4.2X
BJI	25.94	271	eP	43 34.00	0.0
	1.5s	288.00nm		5.6mb	
Z	16s	13.10um		5.6MszX	
E	14s	6.95um			
SSE	27.16	249	Pd	43 45.50	0.2
TTA	34.49	40	eP	44 48.70	-1.0
IMA	35.84	35	ePc	45 00.40	-0.9
	1.3s	69.60nm		5.4mb	
BRW	35.90	26	iPc	45 00.80	-0.7
KDC	36.23	49	e(P)	45 02.40	-2.0
LZH	36.41	272	Pc	45 06.00	-0.4
	1.6s	389.00nm		6.1mb	
PMR	37.67	43	eP	45 16.50	0.0
	1.1s	40.60nm		5.3mb	
FBA	38.21	37	iPc	45 20.60	-0.4
TOA	39.04	42	eP	45 28.20	0.1
INK	43.65	31	iPc	46 05.50	-0.2
	0.8s	95.00nm		5.6mb	
MBC	46.43	19	ePc	46 27.00	-0.8
	0.9s	24.00nm		5.1mb	
LOE	49.39	252	eP	46 52.00	0.5
CHG	50.30	256	ePc	46 58.20	-0.2
	0.9s	49.37nm		5.5mb	
SHL	50.80	268	iP	47 02.00	-0.4
BDT	51.35	254	eP	47 06.00	-0.3
	1.0s	34.50nm		5.3mb	
NST	51.69	252	eP	47 09.80	0.8
KBS	53.66	351	eP	47 23.50	0.6
NNT	54.19	250	eP	47 28.50	1.0
PNT	57.29	51	eP	47 49.00	-0.6
	1.0s	36.00nm		5.4mb	
LON	57.47	55	P	47 50.00	-0.9
SNG	57.65	245	eP	47 50.90	-1.5
DAG	57.99	357	eP	47 51.50	-2.5
KEV	58.15	340	eP	47 55.00	-0.3
EDM	58.39	45	iPc	47 55.60	-1.7
KGM	60.00	238	eP	48 10.50	1.8
SOD	60.00	338	iP	48 06.60	-1.5
TRO	60.07	343	eP	48 08.00	-0.5
WDC	60.54	61	ePc	48 11.00	-1.2
MTN	60.62	202	eP	48 12.00	-0.8
SES	61.21	46	eP	48 15.00	-1.7
MIN	61.26	61	eP	48 16.70	-0.6
ORV	61.79	61	eP	48 20.70	0.0
PSI	62.17	243	iPc	48 25.00	1.6
		e		50 00.00	452kmX
BRK	62.33	63	eP	48 22.20	-2.1
FFC	62.80	39	iPc	48 25.80	-1.3
	1.0s	71.00nm		5.8mb	
TRT	62.98	224	ePd	48 27.80	-0.9
LRM	63.27	51	eP	48 30.30	-0.4
CMB	63.41	62	ePc	48 30.60	-0.9
SUF	63.64	335	eP	48 31.10	-1.4
	0.6s	13.20nm		5.2mb	
PRS	63.84	64	eP	48 35.00	0.8
LLA	63.93	64	eP	48 36.00	1.1
KVN	64.19	60	P	48 36.90	0.1
GDH	64.30	9	iPc	48 35.20	-1.5
	1.0s	40.00nm		5.4mb	
PRI	64.40	64	eP	48 40.80	2.7
FRI	64.48	63	eP	48 38.50	0.1
CTA	65.25	185	iPd	48 43.00	-0.4
	1.2s	39.06nm		5.3mb	
TNP	65.33	60	P	48 44.00	-0.2

14d 03h

HYB	65.48	270	iPc	48	44.20	-0.9			1.0s	89.00nm		5.7mb	ELL	82.50	316	eP	50	23.40	-0.1
	1.0s	120.00nm			5.9mb		BZS	78.96	326	eP	50	03.50	-0.9	GRG	82.51	323	eP	50	22.70	-0.7
NUR	65.81	334	iP	48	45.20	-1.4	SIO	79.03	50	ePd	50	03.80	-1.3	HBVT	82.53	30	P	50	23.00	-0.4
	0.6s	20.90nm			5.3mb		SOP	79.08	331	iPc	50	07.00	1.9	THE	82.54	323	eP	50	22.70	-0.7
ISA	66.09	63	eP	48	50.00	1.2	TUL	79.19	49	ePd	50	06.00	0.1	PLG	82.55	322	iPc	50	23.10	-0.5
MAIO	66.19	298	iPc	48	49.50	0.0		1.3s	83.20nm			5.5mb		SHMJ	82.60	310	Pd	50	26.00	2.1
DUG	66.63	56	P	48	52.40	0.1	DMU	79.34	347	eP	50	06.20	-0.2	JARJ	82.87	309	Pd	50	26.00	0.6
	1.0s	17.50nm			5.1mb		PVL	79.41	323	iPc	50	07.00	0.1	SAL	82.90	333	P	50	25.50	0.3
WB5	66.64	197	eP	48	52.00	-0.2	BWA	79.43	182	eP	50	19.20	12.2X	BNH	82.96	29	P	50	26.80	1.2
		e		49	06.00	49km	JMB	79.48	322	iPc	50	08.00	0.7	HVAR	82.99	328	iP	50	24.40	-1.4
WRA	66.70	197	Pd	48	51.70	-1.0	GPA	79.51	318	eP	50	08.00	0.4	FLN	83.00	341	iPc	50	25.90	0.2
	0.7s	30.30nm			5.4mb		ENN	79.58	338	iPc	50	07.60	-0.1		1.4s	217.80nm			6.0mb	
BW06	66.81	52	P	48	53.00	-0.6		1.0s	156.00nm			5.9mb		OHR	83.05	324	iPc	50	25.20	-1.0
	1.0s	20.00nm			5.1mb		MEM	79.70	338	Pc	50	08.20	-0.1		1.9s	0.97nm			3.5mb X	
FRB	66.87	18	eP	48	51.00	-2.2	YLV	79.73	319	iP	50	08.10	-0.7	LDF	83.08	341	iPc	50	26.30	0.2
	0.5s	24.00nm			5.5mb		TOD	79.84	336	ePc	50	09.00	-0.2		1.3s	151.60nm			5.9mb	
SBB	67.12	63	eP	48	56.00	0.6	DLE	79.87	346	eP	50	08.90	-0.3	KSL	83.16	316	eP	50	26.00	-0.7
GSC	67.36	62	eP	48	57.00	0.0		0.9s	134.00nm			5.9mb		LIT	83.18	323	eP	50	25.10	-1.7
DAU	67.39	55	P	48	59.90	2.5				e	04	53.00		VAI	83.22	334	Pc	50	27.60	0.8
RVR	67.85	64	eP	48	47.00	-12.9X	DCN	79.93	347	eP	50	09.60	0.0	KFNJ	83.31	309	P	50	28.60	1.1
POO	68.05	274	iPc	49	00.70	-0.7		1.2s	136.00nm			5.8mb		KZN	83.32	323	eP	50	27.00	-0.6
	0.9s	99.16nm			5.8mb					e	04	52.00		LOR	83.33	338	iPc	50	27.60	0.1
UPP	68.41	337	iP	49	02.10	-0.8	ABH	79.95	337	ePc	50	09.62	-0.2		1.2s	92.90nm			5.7mb	
DZM	68.57	165	iPd	49	06.40	2.0	UCC	79.95	339	P	50	12.00	2.3	MASJ	83.38	309	Pd	50	29.00	0.9
GBA	68.86	268	P	49	05.60	-0.7	BEO	80.07	327	iP	50	10.50	0.1	GRR	83.44	341	iPc	50	28.40	0.5
RSSD	68.90	48	P	49	06.90	0.3	SNF	80.23	339	Pc	50	11.00	-0.2	GRC	83.51	339	P	50	28.81	0.5
AKU	68.98	355	iP	49	06.50	0.2	RUP	80.24	337	ePc	50	11.29	-0.1	LBF	83.56	338	iPc	50	28.60	-0.1
	1.0s	44.00nm			5.4mb		DIM	80.27	322	eP	50	13.00	1.4		1.3s	104.60nm			5.7mb	
NB2	69.05	340	P	49	05.60	-1.4	BHG	80.28	333	iPc	50	12.00	0.5	SSF	83.62	338	iPc	50	29.20	0.3
	0.6s	35.60nm			5.5mb			1.7s	340.00nm			6.0mb			1.3s	111.90nm			5.7mb	
RSON	69.10	38	P	49	06.00	-1.4	CAN	80.31	182	eP	50	12.00	0.3	ORX	83.67	335	P	50	29.21	-0.1
	1.0s	157.27nm			5.9mb		FVM	80.37	45	P	50	12.40	0.2	ORO	83.67	335	P	50	30.50	1.1
BAR	69.15	64	eP	49	08.00	0.0	PGB	80.45	323	iPc	50	13.00	0.4	DSI	83.69	309	eP	50	29.00	-0.5
HFS	69.22	339	eP	49	06.10	-1.9	WLF	80.52	338	P	50	09.00	-3.7X	ARG	83.79	317	eP	50	30.00	0.1
	0.7s	52.90nm			5.6mb		DOU	80.54	339	Pc	50	12.70	-0.1	LPF	83.81	341	iPc	50	30.40	0.5
GLA	70.07	63	eP	49	13.00	-0.6	BNT	80.57	319	iP	50	14.10	0.9		1.5s	317.50nm			6.1mb	
ASPA	70.41	197	iPc	49	15.40	-0.2	EDC	80.60	320	iP	50	13.50	0.1	AVF	83.91	338	iPc	50	30.70	0.3
	0.8s	53.00nm			5.5mb		KBA	80.69	332	iPc	50	12.80	-1.1	SMF	83.91	338	iPc	50	30.70	0.3
		epP		49	30.10	52km		1.5s	274.00nm			6.0mb		SFI	83.97	332	P	50	33.50	2.8
KOD	71.16	265	eP	49	20.50	-0.3	ADE	80.70	190	e(P)	50	13.70	-0.1	ARV	83.97	331	P	50	31.50	0.7
GOL	71.21	52	P	49	21.00	0.2	GWF	80.75	336	P	50	13.83	-0.2	BOB	83.99	333	Pc	50	32.20	1.2
	1.0s	25.00nm			5.1mb		VTS	80.82	324	iPc	50	15.00	0.3	PGD	84.05	332	P	50	33.50	2.1
GLD	71.26	52	P	49	21.60	0.6	PTJ	80.82	330	iPc	50	14.10	-0.4	LSD	84.07	335	P	50	31.98	0.4
RMQ	71.51	182	eP	49	25.00	2.8	DST	80.84	319	iP	50	14.80	0.1	LPG	84.15	336	iPc	50	32.40	0.4
IR7	71.99	303	iPc	49	25.80	0.5	ZAG	80.88	330	iPc	50	14.50	-0.2		1.2s	83.30nm			5.7mb	
IR4	72.13	302	iPc	49	27.00	0.9	RZN	80.92	322	iPc	50	16.00	0.7	CRE	84.19	331	P	50	33.50	1.5
BRS	72.41	178	iP	49	28.50	1.0	ALN	80.98	321	eP	50	15.10	-0.2	BGF	84.25	338	iPc	50	32.60	0.5
		e		49	41.00	43km	RDO	81.00	321	iPc	50	16.00	0.6	BDI	84.26	332	P	50	34.90	2.6
TAB	72.83	307	eP	49	31.00	0.8	STR	81.06	336	P	50	15.56	0.0	RSP	84.32	335	P	50	32.80	0.2
COP	73.43	337	iPd	49	33.80	0.7	LJU	81.19	331	eP	50	15.60	-0.8	ATH	84.41	321	eP	50	33.50	0.5
	1.8s	690.91nm			6.3mb		FVI	81.30	332	P	50	17.50	0.6	ASS	84.44	331	P	50	34.50	1.3
ALQ	73.89	57	iPd	49	36.90	0.4	WLS	81.33	336	P	50	16.91	-0.2	PCP	84.48	334	P	50	33.42	0.1
	1.0s	15.00nm			4.9mb		CDF	81.35	336	P	50	17.03	-0.3	BNI	84.58	335	Pc	50	35.50	1.5
WARB	74.54	203	eP	49	41.00	1.1	VBY	81.41	330	ePc	50	17.40	-0.1	PII	84.59	332	P	50	34.50	0.7
SLY	75.04	306	iPd	49	43.50	0.7	VOY	81.42	331	eP	50	16.50	-1.2	PLDF	84.59	338	P	50	34.21	0.3
SCH	75.22	21	eP	49	43.00	-0.6	MMB	81.43	323	ePc	50	18.00	0.3	MAF	84.64	339	iPc	50	34.90	0.8
MSL	75.81	308	iPd	49	51.50	4.2X	KHL	81.44	317	eP	50	17.60	-0.3	AGO	84.65	338	P	50	34.66	0.5
BRL	75.99	335	eP	49	48.00	0.1	KKB	81.47	323	iPc	50	18.00	0.1	CKI	84.67	334	P	50	34.80	0.6
KVT	76.12	315	iP	49	49.70	0.7	CEY	81.50	331	ePc	50	17.50	-0.5	TCF	84.67	339	iPc	50	34.90	0.7
KSP	76.45	332	iPc	49	50.40	-0.2	ECH	81.57	336	P	50	18.04	-0.3	RRL	84.67	335	P	50	34.95	0.4
	0.9s	82.00nm			5.7mb		BCK	81.60	316	iP	50	18.90	0.1	BRT	84.68	327	P	50	35.50	1.1
SPC	76.50	329	eP	49	51.40	0.3	FEL	81.63	336	P	50	18.32	-0.5	KAP	84.78	317	eP	50	35.20	0.3
BMR	76.53	326	ePd	49	52.00	1.0	CLE	81.67	37	iP	50	20.70	1.8	LCI	84.85	326	P	50	35.50	0.3
CFR	76.62	322	eP	49	51.00	-0.6	EZN	81.72	320	iP	50	18.60	-0.6	LSF	84.88	339	iPc	50	36.10	0.8
KAS	77.02	317	iPc	49	55.20	1.2	TRI	81.75	331	eP	50	18.00	-1.2	FIN	84.88	334	P	50	33.01	-2.3
CLL	77.09	334	iPc	49	53.20	-0.9	OLY	81.77	47	P	50	18.50	-1.1	DOI	84.91	335	P	50	35.70	0.1
	1.4s	245.00nm			6.0mb		LFK	81.82	313	iP	50	20.90	1.0	ROB	84.91	334	P	50	34.65	-0.9
BRG	77.18	334	iPc	49	54.10	-0.5	RIY	81.85	331	eP	50	18.80	-1.0	PZZ	84.95	335	P	50	34.85	-1.0
	1.8s	170.00nm			5.8mb		VITF	81.89	337	P	50	19.84	-0.1	MFF	84.95	340	iPc	50	36.30	0.7
EKA	77.32	345	P	49	55.00	-0.3	CBM	81.90	26	P	50	20.00	0.0		1.3s	118.40nm			5.9mb	
	1.1s	63.60nm			5.6mb		MOF	81.90	336	P	50	19.89	-0.3	PYM	84.96	338	P	50	36.14	0.4
BHD	77.34	305	iPd	49	58.00	2.2	HAU	81.98	337	iPc	50	20.50	0.0	DUI	85.04	329	P	50	37.50	1.3
WIT	77.52	339	eP	49	57.00	0.6		1.3s	79.40nm			5.6mb		MNS	85.04	330	P	50	36.50	0.3
PRU	77.76	333	Pc	49	57.80	0.0	BSF	82.02	336	P	50	20.43	-0.4	ENR	85.11	335	P	50	34.65	-1.9
	1.8s	175.00nm			5.8mb		SKO	82.06	324	iPc	50	20.80	-0.2	AZI	85.12	330	P	50	37.50	1.0
		e		50	07.50	31kmX		1.5s	308.00nm			6.1mb		STV	85.12	335	P	50	34.24	-2.4
PSN	77.80	321	iPc	49	57.00	-1.1	Z	18s	2.78um			5.7Msz		SDI	85.23	329	Pc	50	37.50	0.3
WTS	78.23	338	iPc	50	00.30	0.0	N	18s	3.17um					IMI	85.25	334	P	50	36.60	-0.7
	0.9s	128.00nm			5.9mb		E	18s	7.23um					AQBJ	85.29	308	Pd	50	38.80	1.2
HOF	78.31	335	iPc	50	00.50	-0.4	KNT	82.13	323	eP	50	21.00	-0.3	MBH	85.35	308	iPc	50	37.00	-0.8
	1.6s	318.00nm			6.1mb		VAY	82.14	323	iP	50	21.20	-0.1	LBL	85.38	338	P	50	37.83	0.1
SRO	78.35	330	eP	50	01.50	0.5		1.4s	0.29nm			3.1mb X		SBF	85.43	334	iPc	50	38.00	-0.2
ZST	78.45	330	iP	50	02.00	0.4	BBS	82.15	336	P	50	21.03	-0.3		1.4s	165.50nm			6.0mb	
MEO	78.50	52	eP	50	01.00	-1.2	HRI	82.20	310	eP	50	11.00	-11.0X	NAV	85.44	39	P	50	38.50	0.2
VKA	78.66	331	ePc	50	03.00	0.2	PRK	82.22	320	eP	50	22.00	0.2	MAO	85.54	331	P	50	40.20	1.6
	1.5s	169.00nm			5.8mb		IZM	82.45	319	eP	50	20.00	-3.1X	RMP	85.54	330	P	50	39.50	0.9
KHC	78.82	333	iPc	50	04.50	0.8	LOMF	82.45	336	P	50	22.81	-0.2	VLS	85.60	323	eP	50	38.20	-0.8

BSS	85.67	328	P	50	40.00	0.7
SGO	85.68	328	P	50	39.50	0.2
NPS	85.76	318	eP	50	39.00	-0.9
RJF	85.76	339	iPc	50	39.60	-0.1
	1.2s	109.40nm			5.9mb	
VLI	85.79	321	eP	50	38.00	-2.0
ITM	85.86	322	iPc	50	39.00	-1.3
CVL	85.89	37	P	50	40.80	0.4
FRF	85.95	335	iPc	50	40.80	0.2
	1.4s	148.10nm			6.0mb	
MGR	85.95	327	P	50	41.00	0.3
CAF	85.97	338	iPc	50	41.10	0.3
CSI	85.98	327	P	50	40.90	0.0
MMN	86.00	327	P	50	42.50	1.6
ROI	86.05	326	P	50	41.40	0.1
TDS	86.07	327	P	50	42.70	1.4
NA2	86.07	36	P	50	41.20	-0.1
LRG	86.13	335	iPc	50	42.20	0.7
	1.4s	136.10nm			6.0mb	
CBN	86.16	36	eP	50	42.00	0.3
LMR	86.19	335	iPc	50	42.30	0.5
	1.3s	231.00nm			6.2mb	
LFF	86.30	339	iPc	50	42.20	-0.1
	1.2s	136.80nm			6.1mb	
VAM	86.30	319	eP	50	43.50	1.0
LPO	86.42	339	iPc	50	43.10	0.1
	1.2s	95.20nm			5.9mb	
CZI	86.53	326	P	50	42.30	-1.2
PRM	87.39	42	P	50	48.50	0.7
SOI	87.55	326	P	50	47.50	-1.0
JSC	87.75	41	P	50	49.20	-0.3
LHS	87.79	40	P	50	50.00	0.3
EPF	88.19	339	eP	50	51.40	-0.2
	1.2s	36.80nm			5.5mb	
TOL	92.23	341	eP	51	10.50	0.1
BCAO	114.80	306	ePKPc	56	43.00	1.1
	1.2s	21.00nm				
		ic		57	38.30	
LKO	121.41	333	PKPc	56	54.14	-0.3
	0.6s	7.00nm				
TIC	123.93	331	PKP	56	58.24	-1.1
KIC	124.10	330	PKP	56	58.64	-1.0
	0.9s	11.50nm				
LIC	124.32	331	PKP	56	59.02	-1.0
BUL	126.64	278	iPKPd	57	20.90	16.4X
	1.0s	12.50nm				
		ipP		59	12.50	
KSR	131.53	274	ePKP	57	09.00	-4.8X
BFS	132.25	273	iPKPc	57	12.00	-3.0X
BLF	134.00	271	iPKPc	57	19.20	0.9
ROCH	145.60	84	ePKP	57	40.50	1.3
TACH	146.02	85	iPKPc	57	39.50	-0.1
FCH	146.30	84	iPKPc	57	41.80	1.3
PCH	146.30	84	ePKP	57	40.50	0.3
ITB1	150.95	53	e(PKP)	57	54.30	6.8X

S.D. = 1.0 on 301 of 315 obs.

JAN 14, 1990 03h 47m 02.13± 0.79s
35.927 N ± 8.4km 27.223 E ± 7.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.38	186	ePb	47	11.20	1.3
ARG	0.79	68	ePn	47	16.60	-0.8
NPS	1.47	244	ePn	47	27.00	-1.7
APE	1.78	310	ePn	47	33.00	-0.1
SMG	1.80	350	ePb	47	35.00	1.5
KSL	1.92	84	ePn	47	35.00	-0.2
ELL	2.32	69	ePn	47	41.00	-0.1

S.D. = 1.4 on 7 of 7 obs.

JAN 14, 1990 03h 52m 46.78± 0.42s
45.310 N ± 8.3km 151.021 E ± 7.7km
DEPTH = 33.0km (normal)
5.0mb (34 obs.)
KURIL ISLANDS (221)

KUSJ	5.05	246	P	54	00.60	-1.5
			eS	54	57.20	
MAT	13.05	232	(P)	55	49.00	-3.4X
	0.8s	17.16nm			5.2mb	
BJI	26.02	271	eP	58	17.50	-0.9
	1.2s	19.00nm			4.6mb	
SSE	27.22	249	P	58	30.00	0.6
	1.0s	23.00nm			4.8mb	
IMA	35.83	35	eP	59	44.30	-0.6
	0.7s	4.30nm			4.5mb	
BRW	35.90	26	eP	59	44.90	-0.3
LZH	36.48	272	Pc	59	50.50	-0.2
	1.0s	51.00nm			5.4mb	
PMS	37.46	43	eP	59	58.00	-0.5
FBA	38.19	37	eP	00	04.70	0.1
INK	43.65	31	eP	00	50.00	0.7
MBC	46.44	19	eP	01	11.00	-0.6
	0.5s	2.00nm			4.3mb	
CHG	50.36	256	eP	01	42.60	-0.1
PNT	57.26	51	eP	02	43.00	9.8X
DAG	58.03	357	eP	02	35.00	-3.1X
NDI	59.25	281	iPd	02	47.00	-0.3
SOD	60.06	338	eP	03	09.00	16.6X
WDC	60.50	61	eP	03	09.70	14.0X
MIN	61.21	61	eP	03	11.00	10.3X
FFC	62.78	39	eP	03	10.00	-0.8
	1.0s	15.00nm			5.1mb	
LRM	63.23	51	eP	03	14.00	-0.3
HYB	65.56	270	eP	03	33.50	4.0X
NUR	65.88	334	iP	03	29.60	-1.2
WB5	66.62	197	eP	03	35.40	-0.6
WRA	66.69	197	P	03	37.00	0.5
	1.1s	5.50nm			4.6mb	
FRB	66.88	18	eP	03	35.00	-2.2
POO	68.13	275	eP	03	45.50	-0.3
GBA	68.93	268	P	03	49.90	-0.8
NB2	69.11	340	P	03	49.70	-1.5
	0.7s	8.20nm			4.9mb	
HFS	69.28	339	eP	03	50.10	-2.1
	0.6s	11.90nm			5.1mb	
ASPA	70.40	197	eP	04	01.00	1.6
	1.0s	7.00nm			4.7mb	
SCH	75.22	22	eP	04	27.00	-0.5
MSL	75.90	308	ePd	04	35.00	3.4X
KSP	76.52	332	ePc	04	34.50	-0.4
SPC	76.56	329	eP	04	34.80	-0.6
CLL	77.15	334	iPc	04	37.30	-1.1
	1.4s	39.00nm			5.2mb	
BRG	77.24	334	iP	04	37.60	-1.3
	1.2s	19.00nm			5.0mb	
MLR	77.39	324	ePc	04	40.00	0.1
BHD	77.43	305	ePd	04	39.00	-1.2
PRU	77.83	333	Pc	04	42.00	-0.1
	1.1s	15.30nm			4.9mb	
		e		35	48.00	
		eSn		36	03.30	
		Sg		36	10.50	
WTS	78.29	338	eP	04	44.50	-0.1
	0.7s	15.00nm			5.1mb	
HOF	78.37	335	iPc	04	44.80	-0.3
	1.1s	16.00nm			5.0mb	
SRO	78.42	330	iP	04	45.80	0.5
ZST	78.52	331	eP	04	46.30	0.4
BBTK	78.76	316	eP	04	47.00	-0.6
KHC	78.88	333	iPc	04	48.40	0.4
	1.1s	16.00nm			4.9mb	
DMU	79.39	347	eP	04	51.20	0.6
ENN	79.64	338	iPc	04	51.80	-0.2
	0.7s	15.00nm			5.1mb	
		e		04	57.00	
KBA	80.76	332	iPd	04	57.50	-0.7
	0.5s	3.90nm			4.7mb	
		e		17	02.00	
		e(Sg)		37	49.00	
PTJ	80.89	330	eP	04	58.20	-0.6
FVI	81.37	332	P	05	04.50	3.4X
CDF	81.42	337	eP	05	01.40	-0.2
	1.2s	14.20nm			4.9mb	
SKO	82.14	325	eP	05	05.10	-0.2
VAY	82.21	323	eP	05	05.30	-0.4
FLN	83.06	341	eP	05	09.90	0.0
	1.0s	16.00nm			5.1mb	
OHR	83.12	324	eP	05	05.50	-5.0X
VAI	83.28	334	P	05	12.00	0.9
LOR	83.39	338	eP	05	11.80	0.1
	1.0s	10.00nm			4.9mb	
GRR	83.49	342	eP	05	12.50	0.3
	0.8s	18.80nm			5.3mb	
L8F	83.62	338	eP	05	12.60	-0.4
	1.0s	8.00nm			4.8mb	
SSF	83.68	338	eP	05	13.30	0.1
	1.0s	8.00nm			4.8mb	
AVF	83.97	338	eP	05	14.80	0.2
	1.0s	14.00nm			5.1mb	
SMF	83.97	338	eP	05	14.80	0.1
	1.2s	26.70nm			5.3mb	
ARV	84.04	331	P	05	16.00	1.0
BOB	84.06	334	P	05	16.50	1.3
PGD	84.12	332	P	05	18.00	2.4
LPG	84.22	336	eP	05	17.00	0.7
	0.8s	4.00nm			4.6mb	
CRE	84.26	331	P	05	18.00	1.7
BGF	84.31	339	eP	05	16.60	0.2
	1.0s	10.00nm			4.9mb	
BDI	84.32	333	P	05	18.00	1.5
ASS	84.51	331	P	05	19.00	1.5
BNI	84.64	335	P	05	20.50	2.3
MAF	84.70	339	eP	05	19.00	0.7
	1.0s	22.00nm			5.3mb	
TCF	84.73	339	eP	05	18.80	0.3
	0.8s	4.00nm			4.7mb	
LSF	84.94	339	eP	05	19.80	0.3
	1.0s	22.00nm			5.3mb	
MFF	85.01	341	eP	05	20.10	0.2
DUI	85.11	329	P	05	22.00	1.5
MNS	85.11	330	P	05	20.50	0.0
AZI	85.19	330	P	05	22.00	1.2
SDI	85.30	329	P	05	21.50	0.0
CAF	86.03	338	eP	05	25.90	0.8
	1.0s	12.00nm			5.1mb	
LFF	86.36	339	eP	05	26.40	-0.2
	1.0s	12.00nm			5.1mb	
ZOBO	136.30	61	ePKP	11	54.00	-13.6X
LPB	136.51	62	ePKP	12	06.00	-1.8
CNCB	136.79	62	ePKP	12	06.00	-2.5X

S.D. = 0.9 on 72 of 84 obs.

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* JAN 14, 1990 04h 04m 49.26± 1.11s
45.356 N ±19.6km 150.920 E ±20.9km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
KURIL ISLANDS (221)

KUSJ	5.00	245	P	06	03.70	-0.3
			eS	07	00.20	
ASAJ	6.03	261	eP	06	23.00	4.6X
HOOJ	6.27	244	P	06	23.30	1.5
			S	07	35.60	
MAT	13.02	232	eP	07	53.00	-1.5
INK	43.64	31	eP	12	52.00	0.2
WRA	66.72	197	Pd	15	39.50	0.4
	0.8s	1.30nm			4.1mb	
NB2	69.04	340	P	15	52.30	-1.0
	0.8s	2.20nm			4.3mb	
CLL	77.08	334	eP	16	40.00	-0.4
KHC	78.81	333	P	16	51.00	1.0

S.D. = 1.2 on 8 of 9 obs.

JAN 14, 1990 04h 23m 16.38± 0.69s
36.014 N ± 8.7km 27.170 E ± 6.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.46	179	ePb	23	26.00	0.2
			eSb	23	35.00	
ARG	0.80	75	ePb	23	31.00	-0.9
NPS	1.47	240	ePb	23	42.00	-1.0
			eSb	24	02.00	
APE	1.69	309	ePb	23	46.50	0.4
KSL	1.96	86	ePb	23	51.30	1.3
ELL	2.33	71	ePn	23	55.00	-0.5
VAM	2.49	257	ePn	23	58.00	0.4
BCK	3.10	61	ePn	24	12.00	5.6X

S.D. = 1.0 on 7 of 8 obs.

? JAN 14, 1990 04h 27m 10.68± 3.63s
1.625 N ±26.0km 126.997 E ±20.8km
DEPTH = 115.4 ± 24.7 km
4.8mb (3 obs.)
MOLUCCA PASSAGE (266)

AAI	5.41	167	e(P)	28	31.90	1.6
MTN	14.95	164	iPd	30	34.90	-2.4
			eS	30	39.00	
KNA	17.35	174	eP	31	06.50	-0.7
WB5	22.56	162	eP	32	01.20	-0.8
WRA	22.61	162	Pc	32	01.60	-0.9
	0.5s	24.30nm			4.8mb	
MBL	23.70	197	eP	32	13.70	0.6
ASPA	26.02	165	iPc	32	36.20	1.4
	0.4s	23.00nm			5.1mb	
NANU	26.51	204	eP	32	40.00	0.7
WARB	27.65	181	eP	32	49.00	-0.6

14d 04h

MEKA 29.24 196 eP 33 03.70 -0.2
MRWA 32.43 198 eP 33 31.70 -0.1
STK 36.08 159 iPd 34 04.10 1.1
BWA 41.12 153 eP 34 45.80 0.9
CAN 42.12 153 eP 34 53.00 -0.1
GBA 50.43 286 Pd 35 58.20 -0.6
0.5s 1.50nm 4.2mb
S.D. = 1.2 on 15 of 15 obs.

? JAN 14, 1990 04h 28m 24.00± 2.10s
45.627 N ±33.4km 150.451 E ±43.3km
DEPTH = 33.0km (normal)
4.5mb (3 obs.)
KURIL ISLANDS (221)

MAT 12.93 230 eP 31 28.00 -0.1
0.9s 6.72nm 4.7mb
INK 43.58 32 eP 36 26.00 0.0
NB2 68.67 340 P 39 25.20 -0.6
0.8s 3.10nm 4.4mb
HFS 68.84 338 eP 39 25.60 -1.1
0.4s 1.50nm 4.4mb
CLL 76.69 334 eP 40 14.00 1.0
KHC 78.42 333 P 40 24.40 1.8
KBA 80.29 332 eP 40 32.00 -1.0
S.D. = 1.3 on 7 of 7 obs.

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* JAN 14, 1990 04h 42m 02.65± 0.94s
19.059 S ± 8.9km 69.790 W ±14.3km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

CNCB 2.82 38 iPd 42 46.80 -0.2
LPB 2.98 33 P 42 50.00 0.8
ARE 3.05 328 eP 42 50.00 0.0
iS 43 27.80
ZOBO 3.20 30 P 42 51.60 -0.7
ANT 4.66 187 e(P) 43 12.50 0.0
S.D. = 0.8 on 5 of 5 obs.

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* JAN 14, 1990 04h 57m 00.53± 1.05s
45.236 N ±17.3km 151.081 E ±16.6km
DEPTH = 33.0km (normal)
4.6mb (9 obs.)
KURIL ISLANDS (221)

KUSJ 5.06 247 P 58 14.60 -1.4
eS 59 10.80
ASAJ 6.12 262 P 58 33.20 2.2
HOOJ 6.32 246 eP 58 34.70 0.9
S 59 43.40
MAT 13.03 233 (P) 00 05.00 -0.9
BJI 26.06 271 eP 02 33.00 0.5
LZH 36.53 272 Pd 04 04.50 -0.4
1.0s 20.00nm 5.0mb
INK 43.69 31 eP 05 05.00 1.6
WRA 66.63 197 Pc 07 50.20 0.4
0.9s 2.30nm 4.3mb
GBA 68.97 268 P 08 04.00 -0.7
NB2 69.19 340 P 08 03.80 -1.7
0.6s 2.10nm 4.4mb
HFS 69.37 339 eP 08 04.30 -2.2
0.4s 1.70nm 4.5mb
CLL 77.24 335 eP 08 52.00 -0.6
KHC 78.97 333 iP 09 02.50 0.3
KBA 80.84 332 iPd 09 11.70 -0.7
0.7s 3.10nm 4.4mb
LOR 83.48 338 eP 09 26.00 0.1
1.0s 8.00nm 4.8mb
SMF 84.06 338 eP 09 28.90 0.0
1.0s 6.00nm 4.7mb
BGF 84.40 339 eP 09 32.20 1.6
1.0s 6.00nm 4.7mb
MAF 84.78 339 eP 09 33.30 0.8
1.0s 12.00nm 5.0mb
S.D. = 1.3 on 18 of 18 obs.

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* JAN 14, 1990 05h 11m 01.30± 0.93s
36.057 N ±10.3km 27.092 E ± 8.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP 0.51 172 ePg 11 12.00 0.4
ARG 0.85 79 ePb 11 16.00 -1.7
NPS 1.44 237 ePb 11 27.00 -0.5
eSg 11 50.00
APE 1.61 309 ePb 11 30.00 0.1
KSL 2.02 88 ePb 11 35.50 -0.3
ELL 2.37 72 ePn 11 43.00 2.0
S.D. = 1.6 on 6 of 6 obs.

JAN 14, 1990 05h 12m 55.14± 0.42s
36.154 N ± 5.1km 27.212 E ± 3.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP 0.60 183 ePb 13 07.50 0.2
eSb 13 16.00
ARG 0.74 85 ePg 13 09.50 -0.2
YER 1.30 41 iPn 13 18.50 -0.8
NPS 1.58 236 ePb 13 22.40 -0.8
eSb 13 46.00
SMG 1.58 349 ePb 13 23.00 -0.2
APE 1.63 305 ePb 13 24.60 0.6
KSL 1.92 90 ePn 13 28.60 0.4
IZM 2.24 1 ePn 13 33.00 0.1
ELL 2.25 74 ePn 13 34.00 0.9
VAM 2.56 254 ePn 13 36.60 -0.8
KHL 2.84 40 ePn 13 41.00 -0.5
BCK 3.01 63 ePn 13 48.90 5.1X
ATH 3.33 304 ePg 13 56.00 7.7X
VLI 3.49 281 ePn 13 51.20 0.6
ITM 4.37 285 ePn 14 03.60 0.5
S.D. = 0.6 on 13 of 15 obs.

JAN 14, 1990 05h 37m 28.91± 0.44s
37.452 N ± 4.4km 26.943 E ± 4.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

SMG 0.27 342 iPgc 37 35.30 0.7
IZM 0.98 15 ePn 37 48.00 0.5
YER 1.11 106 iPn 37 49.50 -0.4
APE 1.19 252 ePb 37 50.00 -1.1
ARG 1.56 142 ePb 37 56.00 -0.7
PRK 1.87 344 ePb 38 05.00 3.9X
eSn 38 30.00
KAP 1.91 174 ePb 38 00.00 -1.8
KHL 2.22 66 ePn 38 06.00 -0.4
EZN 2.42 349 iPn 38 08.30 -0.8
NPS 2.43 207 ePn 38 08.00 -1.4
ELL 2.47 106 ePn 38 11.90 1.9
KSL 2.50 121 ePg 38 16.00 5.7X
DST 2.52 31 iPn 38 16.40 5.8X
ATH 2.61 282 ePn 38 12.00 0.2
BCK 2.90 89 ePn 38 17.90 1.8
EDC 2.98 14 ePn 38 17.00 0.0
BNT 3.00 14 ePn 38 16.00 -1.3
VAM 3.01 228 ePn 38 18.00 0.5
VLI 3.29 258 ePb 38 23.30 1.8
RDO 3.85 344 ePn 38 29.00 -0.4
ITM 4.01 268 ePn 38 34.20 2.5
KDZ 4.35 345 iPd 38 36.00 -0.6
RZN 4.57 339 iP 38 39.00 -0.8
BBTK 5.14 61 eP 38 48.00 0.1
KKB 5.32 327 iP 38 50.00 -0.3
iSg 39 54.00
VTS 5.88 332 iP 38 58.00 -0.3
S.D. = 1.2 on 23 of 26 obs.

? JAN 14, 1990 05h 40m 37.52± 1.65s
5.346 N ±34.1km 126.455 E ±26.6km
DEPTH = 33.0km (normal)
5.0mb (6 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

BJI 35.76 346 P 47 38.50 3.1X
LZH 36.98 329 Pd 47 47.00 1.0
1.0s 34.00nm 5.2mb
SHL 38.72 305 iP 48 02.00 1.3
BRS 41.31 143 iP 48 35.80 14.0X
GUN 44.57 305 P 48 48.80 -0.1
0.6s 30.00nm 5.3mb
PKI 44.83 304 P 48 50.40 -0.5
KKN 45.01 304 P 48 51.80 -0.5
0.5s 8.00nm 4.9mb
DMN 45.09 304 P 48 53.00 0.0
GKN 45.62 304 P 48 56.40 -0.6
0.4s 5.00nm 4.8mb
GBA 48.96 283 P 49 23.00 -0.1
SUF 90.00 333 eP 53 34.40 -0.4
0.4s 4.10nm 5.0mb
NB2 97.23 334 P 54 07.00 -1.1
0.8s 2.50nm 4.8mb
LIC 130.22 283 (PKP) 59 48.10 1.0
S.D. = 0.9 on 11 of 13 obs.

JAN 14, 1990 06h 12m 32.11± 0.45s
36.174 N ± 5.7km 27.126 E ± 4.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.1 (CSS). MD 3.9 (ATH).

KAP 0.62 176 ePg 12 43.90 -0.7
eSg 12 52.10
ARG 0.81 87 ePb 12 47.60 -0.2
YER 1.34 44 iPn 12 56.90 0.1
NPS 1.53 234 ePb 12 58.60 -0.9
eSb 13 18.40
SMG 1.55 351 ePb 12 58.80 -0.9
APE 1.56 305 ePb 12 59.40 -0.6
KSL 1.99 91 ePn 13 06.70 0.6
IZM 2.22 3 ePn 13 09.00 -0.6
ELL 2.32 75 ePn 13 12.20 1.2
VAM 2.50 253 ePb 13 15.10 1.7
KHL 2.87 41 ePn 13 19.00 0.1
BCK 3.06 64 ePn 13 24.90 3.4X
VLI 3.42 280 ePn 13 25.90 -0.6
ITM 4.30 285 ePn 13 40.60 1.5
PPCY 4.45 105 eP 13 41.00 -0.1
CSS 5.20 102 eP 13 50.50 -1.3
eSn 14 50.50
LFK 5.29 98 ePn 13 54.00 0.9
S.D. = 1.0 on 16 of 17 obs.

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* JAN 14, 1990 07h 08m 53.81± 1.83s
8.208 S ±11.0km 108.818 E ±10.5km
DEPTH = 88.8 ± 17.3 km
5.0mb (8 obs.)
JAVA (277)

TRT 3.81 83 ePd 09 52.90 1.5
iS 10 38.50
KHKI 6.72 92 ePd 10 31.60 -0.1
eS 11 41.00
e 13 56.00
KGM 11.54 331 eP 11 44.00 6.8X
NANU 15.66 156 eP 12 29.00 -1.7
0.4s 66.00nm 5.2mb
MBL 16.70 142 eP 12 42.70 -1.0
0.3s 12.00nm 4.7mb
eS 15 31.00
AAI 19.78 78 eP 13 18.40 -1.2
MEKA 20.50 154 eP 13 27.50 0.6
0.3s 28.00nm 5.1mb
e 13 34.00
eS 17 04.00
MRWA 21.96 163 eP 13 43.00 1.4
e 13 54.00
eS 17 36.00
MTN 22.41 104 eP 13 46.00 0.0
BAL 23.47 163 eP 14 15.70 19.4X
WARB 24.63 139 eP 14 08.00 0.5
e 14 29.00
eS 18 41.00
KLB 24.71 162 eP 14 29.00 20.8X
WB5 27.32 118 eP 14 31.70 -0.6
WRA 27.32 118 Pd 14 31.90 -0.4
0.8s 8.20nm 4.3mb
ASPA 28.52 126 eP 14 42.20 -1.0
0.8s 19.00nm 4.8mb
e 15 28.20
eS 20 16.20
GBA 37.95 305 P 16 03.70 -1.0
CTA 38.08 112 iPd 16 05.60 -0.1
0.9s 26.89nm 5.2mb
STK 38.50 132 iPc 16 11.10 2.0
0.4s 25.00nm 5.5mb
BRS 45.69 120 iPc 17 08.20 0.4
i 17 10.80
SLR 77.99 245 iPd 20 44.50 -0.1
BLF 79.64 242 eP 20 54.00 0.4
BCAO 90.90 274 ePc 21 50.10 0.6
0.6s 6.00nm 5.0mb
S.D. = 1.1 on 19 of 22 obs.

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* JAN 14, 1990 07h 20m 11.34± 0.46s
45.312 N ± 8.5km 151 033 E ± 9.5km
DEPTH = 33.0km (normal)

4.9mb (31 obs.)
KURIL ISLANDS (221)

MAT	13.05	232	eP	23 13.00	-4.0X
	1.1s	16.46nm		5.0mb	
BJI	26.03	271	eP	25 43.00	0.0
	1.0s	15.00nm		4.5mb	
Z	16s	0.29um		3.9MszX	
		eS		30 16.00	
LZH	36.49	272	Pc	27 15.00	-0.4
	1.2s	55.00nm		5.3mb	
INK	43.64	31	eP	28 14.00	0.2
MBC	46.44	19	eP	28 36.00	-0.1
	0.6s	2.00nm		4.3mb	
CHG	50.37	256	eP	29 08.00	0.7
DAG	58.02	357	eP	30 01.00	-1.7
NDI	59.26	281	eP	30 11.50	-0.4
SOD	60.06	338	eP	30 15.00	-1.9
WDC	60.49	61	eP	30 34.50	14.3X
FFC	62.77	39	eP	30 35.00	-0.3
	0.9s	12.00nm		5.0mb	
LRM	63.22	51	eP	30 42.90	4.1X
SUF	63.71	335	eP	30 39.70	-1.7
	0.6s	4.90nm		4.8mb	
KVN	64.13	60	eP	30 44.60	-0.2
HYB	65.57	270	eP	30 53.20	-0.9
NUR	65.88	334	eP	30 53.50	-1.9
WB5	66.63	197	eP	30 59.90	-0.7
WRA	66.70	197	Pd	31 00.40	-0.6
	0.8s	4.20nm		4.6mb	
FRB	66.87	18	eP	31 00.00	-1.7
POO	68.14	275	eP	31 09.50	-0.9
GBA	68.94	268	Pd	31 25.00	9.7X
	0.2s	133.10nm		6.7mb X	
GBA	68.94	268	P	31 14.60	-0.7
NB2	69.11	340	P	31 14.50	-1.3
	0.6s	4.20nm		4.7mb	
HFS	69.28	339	eP	31 15.20	-1.6
	0.7s	16.10nm		5.2mb	
Z	15s	0.09um		4.1MszX	
		LR		00 56.00	
ASPA	70.40	197	iPd	31 24.50	0.5
	1.0s	7.00nm		4.7mb	
KOD	71.24	266	eP	31 30.00	0.3
KSP	76.52	332	iPc	31 59.40	-0.1
SPC	76.57	329	eP	32 00.20	0.2
CLL	77.16	334	iPc	32 02.30	-0.6
	1.2s	30.00nm		5.2mb	
BRG	77.25	334	eP	32 03.00	-0.4
	1.2s	13.00nm		4.8mb	
MLR	77.39	324	ePc	32 06.00	1.5
PRU	77.83	333	P	32 06.80	0.1
WTS	78.29	338	eP	32 09.50	0.4
	0.7s	20.00nm		5.2mb	
SRO	78.42	330	eP	32 10.50	0.6
ZST	78.52	331	eP	32 10.80	0.3
KHC	78.88	333	iPc	32 13.30	0.8
	1.0s	14.00nm		4.9mb	
ENN	79.64	338	eP	32 17.00	0.5
	0.7s	16.00nm		5.1mb	
MEM	79.76	338	P	32 17.40	0.2
KBA	80.76	332	iPd	32 22.50	-0.3
	0.8s	14.10nm		5.0mb	
CDF	81.42	337	eP	32 26.30	0.2
	0.8s	5.30nm		4.6mb	
SKO	82.14	325	eP	32 30.50	0.6
LOR	83.39	338	eP	32 36.60	0.3
	0.8s	5.30nm		4.7mb	
GRR	83.49	342	eP	32 37.40	0.7
	1.0s	28.00nm		5.3mb	
LBF	83.63	338	eP	32 38.00	0.5
	0.6s	2.70nm		4.6mb	
SSF	83.68	338	eP	32 38.20	0.5
	0.8s	4.00nm		4.6mb	
AVF	83.97	338	eP	32 39.60	0.4
	1.0s	14.00nm		5.1mb	
SMF	83.97	338	eP	32 39.80	0.6
	1.0s	18.80nm		5.2mb	
LPG	84.22	336	eP	32 41.80	0.9
	0.8s	5.30nm		4.8mb	
BGF	84.32	339	eP	32 41.80	0.9
	1.0s	10.00nm		4.9mb	
MAF	84.70	339	eP	32 44.10	1.2
	1.0s	14.00nm		5.1mb	
TCF	84.73	339	eP	32 44.00	0.9
	1.0s	8.00nm		4.9mb	
LSF	84.94	339	eP	32 45.10	1.0
	1.0s	20.00nm		5.3mb	
CAF	86.03	338	eP	32 51.10	1.5
	1.1s	12.20nm		5.0mb	
LRG	86.19	335	eP	32 51.40	1.1
	1.2s	20.20nm		5.2mb	
LMR	86.26	335	eP	32 51.40	0.7
	0.8s	8.00nm		5.0mb	

S.D. = 0.9 on 51 of 55 obs.

JAN 14, 1990 07h 27m 58.33± 0.63s
36.087 N ± 7.1km 27.111 E ± 5.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.9 (ATH).

KAP	0.54	174	ePn	28 09.50	0.3
			eSn	28 17.50	
ARG	0.83	81	ePn	28 13.60	-0.8
YER	1.41	42	iPn	28 22.90	-1.1
NPS	1.47	236	ePn	28 25.00	0.1
			eSn	28 43.90	
APE	1.61	308	ePn	28 24.90	-1.9
SMG	1.63	352	ePb	28 28.50	1.3
KSL	2.00	88	ePn	28 32.60	0.1
IZM	2.31	3	ePn	28 38.00	0.9
ELL	2.35	73	ePn	28 38.40	0.7
VAM	2.46	255	ePb	28 44.60	5.4X
BCK	3.11	63	ePn	28 55.00	6.6X
VLI	3.43	282	ePn	28 51.70	-1.1
ITM	4.31	286	ePn	29 07.00	1.6
LFK	5.29	97	ePn	29 24.00	4.7X

S.D. = 1.3 on 11 of 14 obs.

JAN 14, 1990 07h 43m 38.01± 0.52s
39.545 N ± 4.6km 22.183 E ± 5.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.8 (THE). MD 3.0 (ATH).

AGG	0.53	168	ePg	43 47.80	-1.0
			eSg	43 56.90	
LIT	0.60	23	ePg	43 50.10	-0.1
KZN	0.82	338	iPbd	43 53.40	-0.6
PAIG	1.22	71	ePb	44 00.90	0.3
PLG	1.28	49	ePb	44 02.00	0.3
GRG	1.42	7	ePb	44 03.60	-0.3
IGT	1.43	270	ePb	44 03.30	-0.7
SOH	1.56	35	ePb	44 06.00	0.1
KNT	1.71	18	ePb	44 08.10	0.2
VAY	1.80	9	ePn	44 09.20	-0.1
VLS	1.85	223	ePn	44 11.60	1.6
OHR	1.89	326	ePn	44 11.00	0.4
SKO	2.49	347	ePn	44 23.50	4.3X
			i	44 26.70	
			i	45 03.40	

S.D. = 0.7 on 12 of 13 obs.

JAN 14, 1990 08h 22m 03.40± 0.66s
36.075 N ± 7.6km 27.225 E ± 6.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.52	184	ePb	22 14.10	0.1
			eSb	22 22.50	
ARG	0.74	79	ePn	22 17.70	-0.3
YER	1.36	39	iPn	22 27.40	-1.0
NPS	1.54	239	ePn	22 29.50	-1.5
			eSn	22 49.60	
SMG	1.66	349	ePb	22 34.90	2.3
APE	1.69	307	ePn	22 33.00	-0.1
KSL	1.91	88	ePn	22 37.00	0.7
ELL	2.27	72	ePn	22 41.70	0.1
IZM	2.32	1	ePn	22 41.00	-1.3
VAM	2.55	256	ePb	22 47.70	2.2
KHL	2.90	39	ePn	22 55.00	4.5X
BCK	3.03	62	ePn	22 58.00	5.6X
VLI	3.52	282	ePn	22 57.60	-1.6
ITM	4.40	286	ePn	23 12.00	0.2

S.D. = 1.4 on 12 of 14 obs.

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* JAN 14, 1990 08h 24m 14.95± 0.91s
36.143 N ±10.2km 27.223 E ± 9.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.59	184	ePg	24 25.50	-1.4
			eSg	24 35.50	
SMG	1.59	349	ePb	24 41.40	-1.8
APE	1.65	305	ePg	24 44.70	0.7
KSL	1.91	90	ePn	24 49.00	1.2
ELL	2.25	74	ePn	24 53.00	0.1
VAM	2.57	254	ePn	24 58.50	1.3

S.D. = 1.7 on 6 of 6 obs.

JAN 14, 1990 08h 44m 51.59± 0.62s
36.118 N ± 7.8km 27.149 E ± 5.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.57	178	ePb	45 03.00	-0.1
			eSb	45 11.90	
ARG	0.80	83	ePb	45 06.50	-0.6
YER	1.36	42	ePn	45 15.90	-0.8
NPS	1.51	236	ePb	45 19.10	0.3
SMG	1.61	351	ePb	45 21.50	1.5
APE	1.61	307	ePb	45 18.50	-1.7
KSL	1.97	89	ePn	45 25.70	0.3
IZM	2.28	2	ePn	45 34.00	4.1X
ELL	2.31	73	ePn	45 30.90	0.5
VAM	2.50	254	ePg	45 38.60	5.6X
KHL	2.90	40	ePn	45 43.00	4.2X
BCK	3.07	63	ePn	45 46.00	4.9X
VLI	3.45	281	ePn	45 45.40	-1.0
ITM	4.33	286	ePn	46 00.50	1.5

S.D. = 1.2 on 10 of 14 obs.

JAN 14, 1990 09h 12m 31.97± 1.54s
43.954 N ± 7.1km 8.513 E ±10.7km
DEPTH = 10.0km (geophysicist)
CORSICA (380)
ML 2.8 (GEN), 2.5 (LDG).

FIN	0.34	319	P	12 38.46	-0.5
			S	12 42.87	
IMI	0.45	265	P	12 40.92	-0.3
			S	12 47.89	
CKI	0.50	340	P	12 42.30	0.2
			eSg	12 48.70	
ROB	0.57	307	P	12 42.77	-0.9
			S	12 50.15	
PCP	0.59	2	P	12 42.97	-0.9
			S	12 50.87	
SBF	0.78	264	Pg	12 47.60	0.3
			Sg	12 58.50	
AUTN	0.78	273	Pg	12 47.39	0.0
			Sg	12 58.74	
ENR	0.83	289	P	12 47.48	-0.7
			S	12 58.84	
REVF	0.86	256	Pg	12 48.51	0.0
			Sg	13 00.55	
AURF	0.86	266	Pg	12 48.66	0.1
			Sg	13 01.45	
STV	0.90	289	P	12 49.23	-0.1
			S	13 01.03	
TOUF	0.91	274	Pg	12 49.44	-0.2
			Sg	13 02.73	
MVIF	0.98	267	Pg	12 50.96	0.2
			Sg	13 05.91	
DOI	1.06	302	Pc	12 52.60	0.5
			eSg	13 07.00	
PZZ	1.15	299	P	12 53.02	-0.6
			S	13 07.69	
CALN	1.19	261	Pg	12 54.60	0.3
FRF	1.41	254	Pn	12 56.20	-1.4
			Pg	12 58.80	
			Sg	13 16.60	
RSP	1.50	324	P	12 58.96	0.0
			S	13 16.15	
RRL	1.57	309	P	13 00.51	0.4
LMR	1.58	248	Pn	12 58.60	-1.5
			Sn	13 17.00	
LRG	1.64	253	Pg	13 03.00	2.1
			Sg	13 23.20	
ORX	1.72	347	P	13 01.61	-0.6
LSD	1.79	328	P	13 04.10	0.8
LPG	1.99	321	Pn	13 07.60	1.3
			Sn	13 32.80	
LPL	2.01	322	Pn	13 07.60	1.0

S.D. = 0.9 on 25 of 25 obs.

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* JAN 14, 1990 09h 31m 29.83± 0.67s
29.906 S ±13.0km 177.205 W ±12.3km

14d 09h

DEPTH = 33.0km (normal)
4.9mb (4 obs.) 4.3Msz (1 obs.)
KERMADEC ISLANDS (178)
Felt on Raoul Island.

RAO	0.90	316	iP	31 45.40	-0.7
			iS	31 57.20	
MRW	13.07	208	eP	34 37.00	1.3
			eS	36 53.00	
DZM	16.63	294	iPc	35 25.60	3.5X
MSZ	18.86	215	P	35 47.00	-2.5
BRS	26.43	268	iPd	37 08.20	2.7
RMQ	30.13	268	eP	37 41.00	2.1
CTA	34.41	278	iPc	38 16.90	0.6
	0.7s	9.25nm		4.8mb	
STK	35.26	256	eP	38 26.00	2.5
ASPA	43.83	266	eP	39 33.70	-1.0
	0.6s	12.00nm		4.9mb	
Z	20s	0.37um		4.3Msz	
			LR	56 48.40	
WRA	44.77	271	Pc	39 41.10	-1.2
	0.6s	11.70nm		4.9mb	
WB5	44.77	271	eP	39 41.20	-1.1
FORR	46.79	254	eP	39 56.00	-2.1
WARB	49.29	260	eP	40 16.00	-1.7
SPA	60.26	180	iPd	41 37.60	0.4
	0.9s	9.09nm		4.9mb	
			i	41 48.10	
MAT	78.23	325	eP	43 32.00	4.3X
PRS	84.19	42	ePc	44 00.70	1.6
FRI	85.62	43	ePc	44 05.60	-0.6
CMB	85.94	41	eP	44 07.30	-0.5
ORV	86.35	40	e(P)	44 08.90	-0.9
WDC	86.50	38	ePc	44 09.90	-0.6
SUF	143.86	342	ePKP	51 01.80	-0.8
NUR	146.08	341	iPKP	51 05.60	-0.8
	0.9s	28.70nm			
			i	51 14.90	
NB2	148.36	352	PKP	51 11.80	1.7
	0.8s	7.20nm			
HFS	148.89	349	ePKP	51 12.60	1.7
	1.0s	14.80nm			
BCAO	150.62	213	ePKPd	51 22.20	7.2X
	0.5s	3.00nm			
			id	51 28.90	

S.D. = 1.6 on 22 of 25 obs.

& JAN 14, 1990 09h 41m 49.03s
65.059 N 149.088 W
DEPTH = 19.1km
ALASKA (676)
<AGS-P>.

RDS	0.46	120	iP	41 58.54	0.1
NEA	0.48	179	iP	41 58.57	-0.2
FBA	0.57	106	iP	42 00.41	0.1
			eS	42 08.22	
CCB	0.69	126	iP	42 02.34	0.2
			eS	42 11.74	
GLM	0.72	95	iP	42 02.89	0.0
			eS	42 13.81	
HDA	1.13	125	eP	42 09.12	-0.5
			eS	42 25.07	
MCK	1.33	177	eP	42 12.27	-0.4
			eS	42 29.86	
RND	1.66	176	eP	42 17.17	-0.3
DDM	1.90	131	eP	42 19.79	-1.0
HUR	2.10	187	eP	42 24.12	0.3
IMA	2.16	300	eP	42 25.00	0.3
DOT	2.60	121	eP	42 31.21	0.2
CUT	2.72	192	eP	42 32.21	-0.3
NCA	3.24	161	eP	42 41.41	1.4
TOA	3.24	155	eP	42 40.89	0.9
GHO	3.30	179	eP	42 40.19	-0.7
DWY	4.29	99	P	42 53.70	-1.1
INK	6.98	55	eP	43 31.00	-1.6

18 obs. associated

% JAN 14, 1990 10h 16m 33.36± 0.97s
39.097 N ± 7.9km 27.548 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.73	198	ePg	16 47.60	-0.2
			eSg	17 01.60	
DST	0.98	58	iPn	16 52.50	0.5
EZN	1.19	308	ePn	16 56.00	0.4
EDC	1.27	11	iPn	16 57.50	0.5
BNT	1.29	13	iPn	16 56.00	-1.3

S.D. = 1.1 on 5 of 5 obs.

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* JAN 14, 1990 10h 32m 18.91± 0.80s
45.278 N ±13.0km 151.050 E ±15.0km
DEPTH = 33.0km (normal)
4.8mb (27 obs.)
KURIL ISLANDS (221)

MAT	13.04	232	eP	35 23.00	-1.4
BJI	26.04	271	eP	37 52.00	1.3
	1.0s	12.00nm		4.4mb	
Z	16s	0.58um		4.2MszX	
LZH	36.50	272	Pc	39 22.50	-0.6
	1.0s	34.00nm		5.2mb	
			pP	39 38.50	63kmX
INK	43.66	31	eP	40 22.00	0.4
MBC	46.47	19	eP	40 43.50	-0.4
	0.5s	1.00nm		4.0mb	
CHG	50.37	256	eP	41 15.40	0.5
DAG	58.06	357	iPd	42 08.40	-2.1
	0.8s	5.22nm		4.7mb	
SUF	63.75	335	eP	42 47.80	-1.4
	0.5s	2.70nm		4.6mb	
HYB	65.58	270	eP	43 01.00	-0.7
NUR	65.92	334	eP	43 01.60	-1.6
WRA	66.67	197	Pc	43 08.60	0.2
	0.8s	3.00nm		4.4mb	
FRB	66.90	18	eP	43 07.50	-2.0
GBA	68.95	268	P	43 22.60	-0.3
NB2	69.14	340	P	43 22.20	-1.4
	0.5s	4.60nm		4.8mb	
HFS	69.32	339	eP	43 22.80	-1.8
	0.6s	11.10nm		5.1mb	
KSP	76.56	332	iPc	44 06.80	-0.4
SPC	76.60	329	eP	44 07.40	-0.3
CLL	77.19	335	iPc	44 10.20	-0.5
	1.1s	17.00nm		5.0mb	
BRG	77.28	334	i(P)	44 11.20	0.0
MLR	77.42	324	ePc	44 13.50	1.2
PRU	77.86	333	P	44 14.50	0.1
WTS	78.33	338	eP	44 17.00	0.1
	0.7s	12.00nm		5.0mb	
HOF	78.41	335	iPd	44 17.50	0.0
	0.8s	8.00nm		4.8mb	
SRO	78.45	330	eP	44 18.50	0.8
ZST	78.55	331	e(P)	44 18.80	0.6
KHC	78.92	333	iP	44 21.00	0.7
	1.0s	7.00nm		4.6mb	
ENN	79.68	338	eP	44 24.50	0.2
	0.7s	11.00nm		5.0mb	
KBA	80.79	332	iPd	44 30.30	-0.3
	0.8s	11.50nm		4.9mb	
CDF	81.45	337	eP	44 34.10	0.2
	0.8s	5.30nm		4.6mb	
VAY	82.25	323	eP	44 38.00	0.0
FLN	83.09	341	eP	44 42.60	0.3
	1.0s	12.00nm		5.0mb	
LDF	83.17	341	eP	44 43.10	0.4
	1.0s	8.00nm		4.8mb	
GRR	83.53	342	eP	44 45.20	0.7
	0.8s	10.70nm		5.0mb	
LBF	83.66	338	eP	44 45.60	0.3
	1.0s	10.00nm		4.9mb	
SSF	83.71	338	eP	44 45.90	0.4
	1.0s	4.00nm		4.5mb	
AVF	84.00	338	eP	44 47.50	0.6
	1.0s	10.00nm		4.9mb	
SMF	84.01	338	eP	44 47.60	0.6
	1.0s	12.00nm		5.0mb	
LPG	84.25	336	eP	44 49.50	0.9
	0.8s	5.30nm		4.8mb	
BGF	84.35	339	eP	44 49.40	0.7
	0.6s	2.70nm		4.6mb	
MAF	84.74	339	eP	44 51.80	1.2
	0.9s	11.40nm		5.1mb	
LSF	84.97	339	eP	44 52.80	1.0
	0.9s	9.80nm		5.0mb	
CAF	86.07	338	eP	44 59.00	1.6
	1.0s	6.00nm		4.8mb	

S.D. = 0.9 on 42 of 42 obs.

? JAN 14, 1990 12h 28m 02.03± 7.67s
43.801 N ±38.5km 8.828 E ±40.7km
DEPTH = 10.0km (geophysicist)
CORSICA (380)

ML 2.3 (GEN).

FIN	0.61	313	P	28 14.10	-0.2
			S	28 21.07	
IMI	0.69	279	P	28 15.74	0.0
			S	28 23.74	
PCP	0.77	345	P	28 17.48	0.4
			S	28 26.92	
ROB	0.85	306	P	28 18.20	-0.2
			S	28 27.64	
ENR	1.10	293	P	28 23.61	0.8
			S	28 34.91	
STV	1.17	293	P	28 24.69	0.7
			S	28 36.53	
PZZ	1.43	300	P	28 27.84	-0.3
			S	28 42.78	

S.D. = 0.6 on 7 of 7 obs.

JAN 14, 1990 12h 46m 00.72± 0.48s
45.392 N ± 9.8km 150.915 E ± 7.3km
DEPTH = 33.0km (normal)
4.9mb (29 obs.) 3.8Msz (1 obs.)
KURIL ISLANDS (221)

MAT	13.04	232	(P)	49 03.00	-3.2X
	0.7s	6.85nm		4.8mb	
MDJ	15.10	275	eP	49 37.50	4.3X
CN2	18.19	274	Pd	50 11.00	-1.1
	1.0s	0.01nm		0.9mb X	
Z	16s	0.60um			
			epP	50 21.00	
			eS	53 28.00	
SNY	20.07	270	iPd	50 33.40	-0.5
BJI	25.94	271	eP	51 32.50	0.9
	1.0s	0.01nm		1.5mb X	
Z	20s	0.30um		3.8Msz	
TIA	27.01	262	eP	51 42.50	1.1
TIY	29.58	269	eP	52 05.40	0.7
BTO	30.06	276	eP	52 09.00	0.0
XAN	33.88	265	P	52 42.10	-0.3
LZH	36.40	272	Pc	53 04.00	0.0
	1.0s	0.05nm		2.4mb X	
CD2	39.24	265	iPc	53 27.40	-0.3
GYA	39.92	257	P	53 33.00	-0.5
INK	43.61	31	eP	54 03.00	0.0
WMQ	44.00	292	P	54 07.80	1.3
MBC	46.39	19	eP	54 29.00	3.9X
	0.5s	2.00nm		4.3mb	
LSA	48.82	273	P	54 47.60	2.4
CHG	50.31	256	eP	54 56.20	0.0
GUN	53.59	274	P	55 21.40	0.2
KKN	54.08	275	P	55 25.00	0.3
PKI	54.12	274	P	55 25.20	0.1
DMN	54.31	275	P	55 26.80	0.4
GKN	54.40	275	P	55 27.00	0.0
NDI	59.16	281	eP	56 00.50	-0.1
SOD	59.96	338	eP	56 04.00	-1.6
SES	61.18	46	eP	56 13.00	-1.2
FFC	62.76	39	eP	56 24.00	-0.6
	1.0s	15.00nm		5.1mb	
LRM	63.24	51	eP	56 28.30	0.0
SUF	63.60	335	eP	56 28.10	-2.0
KVN	64.17	60	eP	56 37.10	2.7
HYB	65.48	270	ePc	56 42.00	-0.9
NUR	65.77	334	eP	56 38.00	-6.1X
WB5	66.68	197	eP	56 49.50	-0.8
WRA	66.75	197	Pd	56 49.60	-1.2
	0.8s	2.80nm		4.4mb	
GBA	68.86	268	P	57 03.00	-1.2
NB2	69.01	340	P	57 03.20	-1.3
	0.7s	5.60nm		4.7mb	
HFS	69.18	339	eP	57 02.70	-2.8
	0.4s	2.40nm		4.6mb	
KSP	76.41	332	ePc	57 47.70	-0.5
CLL	77.05	334	iPc	57 50.90	-0.8
	1.1s	25.00nm		5.2mb	
BRG	77.14	334	eP	57 51.90	-0.3
	1.1s	15.00nm		4.9mb	
MLR	77.28	324	ePc	57 54.50	1.2
EKA	77.28	345	P	57 53.00	0.1
	0.7s	4.80nm		4.6mb	
PRU	77.72	333	Pc	57 55.40	0.0
WTS	78.19	338	eP	57 58.00	0.1
	0.8s	21.00nm		5.2mb	
KHC	78.77	333	iP	58 01.60	0.3
	1.0s	11.50nm		4.8mb	
ENN	79.54	338	iPc	58 05.40	0.1

```
        0.7s     20.00nm          5.2mb
KBA    80.65 332 iPd    58 11.20  -0.4
        0.7s      8.80nm          4.9mb
CDF    81.31 336 eP     58 14.90   0.0
        0.8s      6.40nm          4.7mb
HAU    81.94 337 eP     58 18.10   0.0
VAY    82.10 323 eP     58 10.00  -9.0X
OHR    83.01 324 eP     58 23.00  -0.9
LOR    83.29 338 eP     58 25.30   0.2
        0.8s      9.40nm          5.0mb
GRR    83.39 341 eP     58 26.00   0.4
        0.8s     13.40nm          5.1mb
LBF    83.52 338 eP     58 26.20  -0.2
        0.8s      2.60nm          4.4mb
SSF    83.57 338 eP     58 27.20   0.6
        0.9s      3.90nm          4.5mb
AVF    83.86 338 eP     58 28.40   0.4
        1.0s     10.00nm          4.9mb
SMF    83.87 338 eP     58 28.40   0.3
        1.2s     26.70nm          5.3mb
LPG    84.11 336 eP     58 30.40   0.7
        0.8s      8.00nm          4.9mb
BGF    84.21 338 eP     58 30.20   0.4
        0.8s      5.90nm          4.8mb
MAF    84.60 339 eP     58 32.60   0.9
        0.8s     13.40nm          5.2mb
TCF    84.62 339 eP     58 32.50   0.6
        0.9s      6.50nm          4.8mb
LSF    84.83 339 eP     58 33.70   0.8
        0.8s      9.40nm          5.0mb
MFF    84.91 340 eP     58 33.50   0.2
        0.6s      3.60nm          4.7mb
CAF    85.93 338 eP     58 39.60   1.1
        1.0s     12.00nm          5.1mb
LRG    86.09 335 eP     58 39.90   0.7
        1.0s     13.60nm          5.1mb
LMR    86.15 335 eP     58 40.10   0.6
        1.0s     13.60nm          5.1mb
     S.D. = 0.9   on  60 of  65 obs.
-------------------------------------
*  JAN  14, 1990  13h 04m 50.91± 0.84s
   20.065 S ± 8.8km   69.545 W ±18.3km
   DEPTH = 106.4 ± 14.1 km
 NORTHERN CHILE                  (123)

CNCB    3.56  25 iPc    05 45.90   0.1
                S       06 18.00
ANT     3.71 192 eP     05 47.20   0.0
LPB     3.77  22 iPc    05 49.20   0.7
        1.2s   625.00nm
                S       06 31.00
ZOBO    4.01  20 iPc    05 51.00  -0.9
ARE     4.03 332 eP     05 52.00   0.0
                iS      06 39.60
LIC    68.57  75 P      15 44.60   0.0
KIC    68.89  75 P      15 46.60   0.0
     S.D. = 0.7   on   7 of   7 obs.
-------------------------------------
?  JAN  14, 1990  13h 47m 26.40± 4.16s
   29.513 S ±27.3km  176.385 W ±50.6km
   DEPTH =  33.0km  (normal)
   4.8mb (  3 obs.)
 KERMADEC ISLANDS REGION         (177)

RAO     1.36 281 iP     47 48.30  -1.0
                iS      48 01.30
MRW    13.76 209 eP     50 41.00  -0.3
                eS      52 56.00
DZM    17.14 292 iPc    51 30.10   5.1X
BRS    27.16 267 iPd    53 10.10   1.3
RMQ    30.86 267 eP     53 44.00   2.1
CTA    35.06 277 iPc    54 19.00   0.5
        0.7s     13.70nm          5.0mb
STK    36.05 255 eP     54 29.00   2.2
ASPA   44.57 265 eP     55 36.40  -0.9
        0.6s      7.00nm          4.7mb
     Z  17s      0.60um          4.6MszX
                LR      13 35.80
WRA    45.48 270 Pc     55 43.50  -1.0
        0.5s      6.70nm          4.8mb
WB5    45.48 271 iP     55 44.20  -0.3
FORR   47.58 254 eP     56 00.00  -1.0
WARB   50.06 259 eP     56 18.50  -1.7
N82   148.07 353 PKP    07 13.50   7.3X
        0.7s      5.00nm
     S.D. = 1.5   on  11 of  13 obs.
-------------------------------------
*  JAN  14, 1990  14h 38m 37.69± 0.91s
   35.407 N ±15.0km   26.082 E ± 5.9km
   DEPTH =  10.0km  (geophysicist)
 CRETE                           (370)
      MD 3.7 (ATH).

NPS     0.41 250 iPgc   38 45.60  -0.5
KAP     0.90  81 ePg    38 53.20  -1.8
                eSg     39 06.00
VAM     1.54 271 ePn    39 06.20   1.0
APE     1.72 345 ePb    39 07.00  -0.8
ARG     1.85  63 ePg    39 11.50   1.8
VLI     2.86 298 ePn    39 23.00  -1.2
KSL     2.93  75 ePn    39 25.30   0.1
IZM     3.13  17 ePn    39 36.00   8.0X
ELL     3.38  66 ePn    39 32.00   0.4
ITM     3.79 299 ePn    39 38.50   1.0
     S.D. = 1.4   on   9 of  10 obs.
-------------------------------------
%  JAN  14, 1990  15h 10m 11.27± 0.81s
   37.012 N ± 8.9km   4.806 W ± 6.5km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                           (377)
      mbLg 2.7 (MDD).

EPRU    0.34 262 eP     10 17.70  -0.7
                eS      10 22.00
EJIF    0.77 224 eP     10 26.00  -0.3
                eS      10 36.60
EHOR    0.88 337 iP     10 28.30   0.2
                eS      10 40.20
AFC     1.04  76 eP     10 31.70   0.7
                eS      10 46.50
EBAN    1.41  35 eP     10 36.50  -0.4
                eS      10 56.80
EVAL    1.65 291 eP     10 42.00   1.6
                eS      11 03.50
EVIA    2.44  48 eP     10 51.80  -0.1
                eS      11 21.10
GUD     3.66   8 eP     11 08.30  -1.0
     S.D. = 1.0   on   8 of   8 obs.
-------------------------------------
   JAN  14, 1990  15h 24m 56.11± 0.59s
   36.065 N ± 6.4km   27.206 E ± 5.6km
   DEPTH =  10.0km  (geophysicist)
 DODECANESE ISLANDS              (369)
      MD 3.4 (ATH).

KAP     0.51 183 ePn    25 06.90   0.4
                eSn     25 16.00
ARG     0.76  78 ePn    25 11.00   0.0
NPS     1.52 239 ePn    25 22.70  -0.7
SMG     1.67 350 ePn    25 25.60   0.2
APE     1.68 307 ePn    25 25.50  -0.2
KSL     1.93  88 ePn    25 29.00  -0.2
VAM     2.53 256 ePb    25 42.60   4.7X
VLI     3.51 282 ePn    25 52.30   0.6
     S.D. = 0.5   on   7 of   8 obs.
-------------------------------------
   JAN  14, 1990  15h 53m 15.51± 0.52s
   45.734 N ± 7.4km   10.580 E ± 5.3km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                  (545)

SAL     0.13 197 P      53 18.80   0.1
                eSg     53 20.50
MDI     0.61 274 P      53 27.50  -0.3
                eSg     53 37.90
BOB     1.25 220 P      53 38.50  -0.4
                eSg     53 56.50
VAI     1.27 277 P      53 39.70   0.6
                eSg     53 56.20
SCE     1.52  31 ePg    53 42.60  -0.3
FVI     1.75  60 P      53 46.00  -0.1
                eSg     54 08.20
TRI     2.23  90 eP     54 20.50  27.5X
VOY     2.33  81 ePn    53 55.00   0.4
                eSn     54 24.00
KBA     2.34  54 eP     53 54.80   0.0
     S.D. = 0.4   on   8 of   9 obs.
-------------------------------------
%  JAN  14, 1990  16h 53m 35.32± 1.08s
   43.755 N ±12.2km   12.315 E ± 7.7km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                   (381)

CRE     0.29 244 P      53 41.20  -0.3
                eSg     53 45.50
SFI     0.37 297 P      53 43.00   0.0
                eSg     53 48.60
PGD     0.45 286 P      53 44.60   0.1
                eSg     53 51.60
ARV     0.52 119 P      53 45.70  -0.2
                eSg     53 54.50
ASS     0.73 160 P      53 50.00   0.3
                eSg     54 00.60
     S.D. = 0.3   on   5 of   5 obs.
-------------------------------------
   JAN  14, 1990  17h 08m 38.82± 0.57s
   35.248 N ± 4.1km   26.068 E ± 2.8km
   DEPTH =  22.2 ±  4.3 km
   4.5mb ( 29 obs.)
 CRETE                           (370)
      ML 4.5 (THE). MD 4.5 (ATH). Felt
      at Ayios Nikolaos and Sitia.

KAP     0.95  71 iPgc   08 55.70  -0.9
VAM     1.54 276 ePb    09 06.60   1.5
APE     1.87 347 ePb    09 09.60  -0.4
ARG     1.93  59 ePb    09 11.50   0.7
SMG     2.53  14 ePn    09 18.50  -0.9
YER     2.60  43 iPn    09 21.30   0.9
CIN     2.86  34 eP     09 26.00   2.0
VLI     2.93 301 iPnd   09 25.60   0.5
KSL     2.99  72 ePn    09 28.00   2.1
IZM     3.29  17 iPn    09 28.70  -1.4
ATH     3.31 326 ePn    09 31.30   0.9
ELL     3.45  63 ePn    09 34.40   1.8
ITM     3.86 301 ePn    09 40.40   2.1
PRK     3.99   2 ePn    09 39.00  -1.1
KHL     4.14  41 iPn    09 42.80   0.5
BCK     4.26  58 ePn    09 46.10   2.0
EZN     4.57   2 iPn    09 46.30  -2.1
DST     4.80  24 iPn    09 52.70   1.0
AGG     4.81 323 ePn    09 52.90   1.2
                eSn     10 55.20
ALT     4.99  39 ePn    09 54.60   0.3
PPCY    5.16  92 eP     09 55.50  -1.2
EDC     5.28  15 ePn    09 58.00  -0.4
BNT     5.31  15 iPn    09 57.30  -1.4
OUR     5.34 343 ePn    09 58.10  -1.1
PLG     5.52 339 ePn    10 01.60  -0.2
MFT     5.61   9 iPn    10 00.80  -2.3
LIT     5.61 331 ePn    10 03.20   0.1
                eSn     11 10.80
ALN     5.64 360 ePn    10 01.50  -1.9
RDO     5.90 356 ePn    10 05.60  -1.5
THE     5.91 336 ePn    10 07.20   0.0
                eSn     11 21.30
YLV     5.92  25 iPn    10 09.80   2.4
CSS     5.96  91 eP     10 07.00  -1.0
                eSn     11 14.80
SOH     5.96 340 ePn    10 07.00  -1.0
GPA     6.05  32 ePn    10 10.00   0.8
KZN     6.09 327 ePn    10 11.10   1.3
LFK     6.11  88 iPn    10 10.80   0.7
SRS     6.18 342 ePn    10 11.10   0.1
IGT     6.26 315 ePn    10 12.20   0.1
ISK     6.27  21 ePn    10 19.00   6.7X
ITU     6.29  21 eP     10 18.00   5.4X
GRG     6.39 334 eP     10 13.80  -0.3
KNT     6.41 338 eP     10 14.40   0.1
KDZ     6.41 356 iP     10 13.00  -1.4
FAM     6.51  90 eP     10 19.30   3.6X
RZN     6.52 351 iP     10 15.00  -1.0
MMB     6.59 345 eP     10 18.00   1.1
VAY     6.66 337 iP     10 19.00   1.2
        0.8s      0.13nm          2.9mb X
                i       10 26.30
HLW     6.98 139 ePn    10 21.00  -1.3
                eSn     11 36.00
KKB     7.01 341 iP     10 22.00  -0.7
BBTK    7.02  47 eP     10 23.00   0.0
OHR     7.17 326 iP     10 26.40   1.3
JMB     7.22   3 iP     10 26.00   0.4
PGB     7.44 349 iP     10 28.00  -0.8
SKO     7.63 333 iP     10 31.00  -0.4
                i       10 42.40
VTS     7.66 344 iPd    10 33.00   1.0
PVL     7.98 356 eP     10 32.00  -4.2X
LCI     8.19 311 P      10 36.00  -3.2X
                eSn     12 03.10
HRI     8.25 101 eP     10 36.00  -4.1X
SHMJ    8.44 105 Pc     10 40.00  -2.7
```

14d 17h

SOI	8.53	292	P	10	44.10	0.2	SSF	20.60	312	eP	13	17.00	-1.9	MUN	107.73	117	ePdiff23	05.70	7.6X
			eSn	12	08.80		CAF	20.69	305	eP	13	18.70	-1.2	KLB	108.67	116	ePdiff22	56.80	-5.5X
PSN	8.58	10	eP	10	42.00	-2.6		0.8s		10.70nm			4.3mb		0.4s		7.00nm		6.2mb X
DSI	8.60	113	eP	10	41.00	-4.0X	BGF	20.79	310	eP	13	19.40	-1.5	NWAO	108.95	117	ePdiff22	58.50	-5.0X
SALJ	8.64	109	Pc	10	43.10	-2.5		1.0s		26.00nm			4.6mb	LAT	118.95	77	ePKP	27 16.00	-11.8X
KFNJ	8.70	110	P	10	43.90	-2.4	MAF	20.83	309	eP	13	19.10	-2.2	PMG	120.68	79	ePKP	27 34.00	2.9X
ROI	8.70	303	P	10	46.30	-0.1		1.0s		12.00nm			4.3mb		S.D. = 1.4		on 141 of 185 obs.		
			eSn	12	13.80		TCF	21.09	309	eP	13	23.00	-0.9						
JARJ	8.76	107	Pd	10	44.60	-2.6		1.0s		12.00nm			4.3mb		JAN 14, 1990 17h 27m 42.77± 0.76s				
MASJ	8.79	111	Pc	10	45.00	-2.6	MEM	21.15	323	P	13	25.50	1.1		37.769 N ± 7.9km 14.960 E ± 6.3km				
CZI	8.86	299	P	10	47.40	-1.1	ENN	21.29	323	eP	13	30.00	4.2X		DEPTH = 10.0km (geophysicist)				
			eSn	12	14.00			1.0s		42.00nm			4.8mb		SICILY				(398)
TDS	8.90	303	P	10	48.90	-0.2	LSF	21.51	308	eP	13	28.70	0.5						
			eSn	12	22.50			0.8s		13.40nm			4.4mb	MNO	0.26	308	P	27 48.80	0.4
BRT	8.97	311	P	10	49.00	-1.0	DOU	21.56	320	P	13	28.30	-0.3				eSg	27 52.80	
			eSn	12	25.50			0.6s		27.30nm			4.9mb	ATN	0.56	45	P	27 54.40	0.3
CSI	8.99	303	P	10	40.60	-9.7X	WTS	21.68	326	e(P)	13	32.50	2.8X	MEU	0.67	182	P	27 55.40	-0.7
			eSn	12	20.00			0.9s		11.00nm			4.3mb				eSg	28 04.60	
ATN	9.00	292	P	10	50.80	0.3	KMSA	21.97	128	ePd	13	35.30	2.3	GIB	0.77	287	P	27 57.50	-0.4
			eSn	12	24.40		MFF	22.72	308	eP	13	40.60	0.5				eSg	28 11.00	
MEU	9.19	285	P	10	53.60	0.4		0.8s		38.60nm			5.0mb	SOI	0.92	70	P	28 01.50	1.2
			eSn	12	29.30		LDF	23.47	313	eP	13	47.10	-0.4				eSg	28 15.50	
MBH	9.23	124	eP	10	51.00	-2.6		0.6s		12.60nm			4.6mb	FAI	1.13	245	P	28 04.80	0.8
MMN	9.24	303	P	10	52.50	-1.3	FLN	23.76	313	eP	13	49.80	-0.5	CZI	1.72	32	P	28 11.20	-1.6
BAI	9.32	312	P	10	50.00	-4.8X		0.8s		24.10nm			4.8mb				eSg	28 32.80	
AQBJ	9.37	123	Pd	10	54.00	-1.6	LPF	23.81	311	eP	13	50.50	-0.2		S.D. = 1.2		on 7 of 7 obs.		
MGR	9.65	303	P	10	57.30	-2.2		0.8s		32.20nm			4.9mb						
			eSn	12	41.50		APHE	24.06	283	ePc	13	56.00	2.5		JAN 14, 1990 17h 41m 45.29± 0.61s				
HQL	9.66	126	iP+	10	56.10	-3.4X	ASMO	24.07	284	ePd	13	58.00	4.4X		36.086 N ± 6.7km 27.132 E ± 5.6km				
SGO	10.02	305	P	11	03.70	-0.7	ACHM	24.16	283	ePc	13	58.50	4.1X		DEPTH = 10.0km (geophysicist)				
CMP	10.04	356	ePd	11	06.00	1.2	TOL	24.26	290	eP	14	03.00	7.8X		DODECANESE ISLANDS				(369)
GIB	10.06	289	P	11	09.50	4.3X	ATEJ	24.33	283	ePc	13	59.00	2.9X		MD 3.8 (ATH).				
MLR	10.23	360	ePc	11	10.00	2.5	AAPN	24.38	284	eP	13	59.00	2.5						
BSS	10.46	305	P	11	09.30	-1.3	ALOJ	24.38	283	ePc	13	58.50	1.9	KAP	0.54	176	ePg	41 56.60	0.5
AYN	10.55	124	eP+	11	07.90	-3.9X	NUR	25.29	358	iP	14	05.90	1.0				eSb	42 04.10	
HVAR	10.87	320	i(Pn)	11	12.70	-3.5X				e	14	12.00		ARG	0.81	81	ePb	41 59.80	-1.3
BZS	10.90	343	eP	11	14.50	-1.9	IFR	25.75	275	iPc	14	12.50	2.8X	YER	1.40	41	ePn	42 09.30	-1.6
DUI	11.12	309	P	11	18.00	-1.7	HFS	26.17	346	eP	14	11.40	-1.7	NPS	1.49	237	ePb	42 12.10	0.1
SDI	11.56	308	P	11	26.70	1.1		0.4s		0.60nm			3.6mb	APE	1.62	308	ePb	42 12.20	-1.8
MNS	12.63	308	P	11	46.50	6.5X	Z	17s		0.16um			3.6MszX	SMG	1.64	352	ePb	42 14.40	0.2
ASS	13.00	311	P	11	50.00	5.1X				LR	24	36.00		CIN	1.69	27	eP	42 15.00	0.0
ARV	13.06	313	P	11	57.50	11.8X	MAIO	27.07	78	eP	14	26.00	4.3X	KSL	1.99	88	ePb	42 19.00	-0.3
PTJ	13.11	327	eP	11	40.50	-5.9X	SUF	27.50	0	eP	14	23.70	-1.5	IZM	2.31	3	ePn	42 26.00	2.0
SRO	13.82	338	eP	12	01.50	5.9X	NB2	27.51	344	P	14	22.40	-3.0X	ELL	2.33	73	ePn	42 24.40	-0.1
PGD	14.01	312	P	12	02.50	4.2X		0.9s		2.80nm			4.0mb	VAM	2.48	255	ePg	42 31.60	5.3X
			eSn	14	23.00		EKA	28.40	324	P	14	39.00	5.6X	KHL	2.94	40	ePn	42 33.00	0.1
ZST	14.55	335	eP	12	13.70	8.5X		0.8s		9.40nm			4.6mb	BCK	3.10	63	ePn	42 37.00	1.8
SPC	14.58	345	eP	12	05.00	-0.7	BCAO	31.44	195	iPd	15	03.00	2.1	VLI	3.44	282	ePn	42 39.10	-0.9
FVI	15.12	323	P	12	20.00	7.5X		0.8s		14.00nm			4.9mb	ITM	4.33	286	ePn	42 53.90	1.3
KBA	15.19	325	eP	12	13.50	-0.2				id	15	10.00			S.D. = 1.3		on 14 of 15 obs.		
	0.8s		8.00nm			4.1mb	QUE	34.59	87	eP	15	31.20	2.8X						
			e	12	19.80		KSH	39.49	69	eP	16	10.50	1.0		JAN 14, 1990 17h 52m 11.65± 0.55s				
			i	12	27.80		TIC	40.33	232	P	16	17.16	0.7		62.561 N ± 5.8km 151.223 W ± 5.1km				
TAB	16.50	74	eP	12	34.00	3.4X	KIC	40.36	232	Pd	16	17.52	0.8		DEPTH = 105.3 ± 17.0 km				
KHC	16.64	330	P	12	30.90	-1.3	LIC	40.65	232	Pd	16	19.98	0.9		CENTRAL ALASKA				(1)
			i	12	41.00		NDI	43.49	84	eP	16	43.00	0.7						
SBF	16.72	307	eP	12	34.50	1.2	HYB	49.70	97	eP	17	31.40	0.0	PWA	1.11	145	iPc	52 33.60	-0.3
	0.8s		42.90nm			4.6mb				e	17	34.50		PMR	1.38	134	iPc	52 37.00	-0.1
VAI	16.85	314	P	12	37.00	2.2	GKN	49.78	81	P	17	32.00	0.0	PMS	1.54	148	ePc	52 38.90	-0.2
PRU	16.97	334	Pd	12	35.00	-1.2	DMN	50.32	81	P	17	36.60	0.3	TTA	2.23	282	iPd	52 48.10	0.0
			e	13	24.00			0.9s		81.00nm			5.7mb X	TOA	2.40	99	iPd	52 50.90	0.6
KSP	17.12	339	eP	12	40.80	2.7X	KKN	50.38	81	P	17	36.40	-0.3	SVW	2.55	237	iPd	52 52.30	0.1
FRF	17.13	305	eP	12	38.20	-0.1		0.7s		39.00nm			5.5mb	FBA	2.80	31	iPc	52 55.80	0.3
	0.8s		10.70nm			4.0mb	PKI	50.58	81	P	17	38.00	-0.3	IMA	3.68	344	iPc	53 08.00	0.4
LMR	17.13	304	eP	12	38.90	0.6		1.0s		66.00nm			5.6mb X	KDC	4.87	188	e(P)	53 24.00	0.2
	1.0s		12.00nm			4.0mb	GUN	50.82	81	P	17	40.20	0.0	DWY	5.52	69	P	53 32.30	-0.5
LPG	17.89	311	eP	12	48.50	0.5	GBA	50.87	102	P	17	40.00	-0.2	BRW	9.04	349	eP	54 20.10	-0.7
	0.8s		6.70nm			3.8mb	LSA	54.32	76	P	18	08.00	1.6	INK	9.33	44	eP	54 25.00	0.3
BRG	17.92	334	eP	12	51.90	3.9X	GTA	57.26	62	eP	18	27.00	-0.1		S.D. = 0.5		on 12 of 12 obs.		
	1.3s		20.00nm			4.1mb	FRB	60.97	330	eP	18	51.00	-1.2						
			e	13	16.00		CD2	63.66	70	eP	19	10.30	-0.4	*	JAN 14, 1990 18h 00m 52.80± 1.08s				
CLL	18.61	334	eP	12	58.00	1.4	HHC	64.97	57	P	19	19.00	-0.2		55.758 N ±14.9km 156.509 W ±12.3km				
	1.2s		18.00nm			4.1mb	CHG	65.64	84	eP	19	23.10	-0.6		DEPTH = 33.0km (normal)				
IR7	19.98	82	eP	13	15.00	2.3	XAN	66.13	64	eP	19	26.60	-0.1		4.7mb (5 obs.)				
IR5	20.02	83	eP	13	15.00	1.9	BDT	66.50	85	eP	19	29.00	-0.1		SOUTH OF ALASKA				(17)
RUP	20.05	322	eP	13	13.89	0.7	TIY	66.98	59	eP	19	32.00	-0.1		ML 4.4 (PMR).				
IR1	20.08	82	eP	13	16.00	2.3	GYA	68.01	73	P	19	38.60	-0.2						
SMF	20.21	311	eP	13	12.10	-2.8	NST	68.24	86	eP	19	40.30	0.1	SDN	2.30	261	iPc	01 28.80	-0.4
	1.2s		27.90nm			4.5mb	BJI	68.47	56	eP	19	41.00	-0.3	KDC	2.98	46	iPd	01 39.40	0.6
IR4	20.27	83	eP	13	18.00	2.2	INK	75.63	352	eP	20	24.00	0.7	SVW	5.39	5	eP	02 14.30	1.4
LBF	20.28	312	eP	13	13.20	-2.4	FFC	79.90	332	iPc	20	47.10	0.0	PMS	6.59	31	iP	02 30.40	0.4
	0.8s		22.80nm			4.6mb		0.6s		8.00nm			4.9mb	PMR	7.00	30	eP	02 35.00	-0.5
LOR	20.49	313	eP	13	15.50	-2.2	MBL	104.85	106	ePdiff22	58.00		12.5X	TTA	7.20	2	eP	02 39.30	0.9
	0.6s		9.00nm			4.3mb		0.8s		16.00nm				TOA	8.30	36	eP	02 53.50	-0.3
WLF	20.49	321	P	13	22.00	4.4X	MRWA	106.15	114	iPdiff23	10.10		19.0X	FBA	10.12	22	eP	03 16.30	-2.6
AVF	20.58	311	eP	13	16.40	-2.2	BAL	107.39	115	iPdiff23	04.00		7.4X	IMA	10.44	6	eP	03 21.00	-2.2
	1.0s		34.00nm			4.7mb		0.4s		17.00nm			6.5mb X	IMA	10.44	6	eP	03 24.70	1.5X

BRW	15.61	360	e(P)	04 32.80	1.2	
INK	16.41	31	eP	04 42.00	0.2	
MBC	24.66	20	ePc	06 13.30	2.1	
	0.5s	11.00nm		4.7mb		
FRB	41.60	42	eP	08 45.00	6.4X	
DAG	45.06	13	iPd	09 06.30	-0.2	
	0.7s	9.59nm		4.8mb		
KEV	54.77	359	eP	10 20.00	-0.8	
SOD	57.17	359	iP	10 38.50	0.4	
SUF	61.84	359	iP	11 10.30	0.0	
	0.6s	6.60nm		4.9mb		
NB2	63.14	7	P	11 18.80	-0.2	
	0.9s	4.30nm		4.6mb		
SLL	63.83	6	eP	11 23.20	-0.3	
	0.5s	2.60nm		4.6mb		
NUR	64.07	359	eP	11 25.10	0.0	
GUN	81.24	307	P	13 06.60	-0.5	
KKN	81.62	308	P	13 08.80	-0.1	
GKN	81.72	308	P	13 09.40	0.1	
PKI	81.75	308	P	13 10.00	0.3	
DMN	81.85	308	P	13 10.80	0.6	

S.D. = 1.0 on 24 of 26 obs.

JAN 14, 1990 19h 20m 11.45± 0.74s
36.100 N ± 7.9km 27.189 E ± 6.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.55	181	iPnd	20 22.10	-0.4	
			eSn	20 31.60		
ARG	0.77	81	ePn	20 26.70	0.3	
YER	1.36	40	ePn	20 34.20	-2.2	
SMG	1.63	350	ePn	20 40.60	0.4	
APE	1.65	306	ePb	20 41.40	0.8	
KSL	1.94	89	ePn	20 45.30	0.6	
ELL	2.29	73	ePn	20 50.90	1.0	
BCK	3.05	63	ePn	21 07.00	6.3X	
VLI	3.49	281	ePn	21 06.40	-0.4	

S.D. = 1.2 on 8 of 9 obs.

JAN 14, 1990 21h 04m 03.26± 1.32s
29.709 S ± 7.1km 177.467 W ± 5.3km
DEPTH = 58.3 ± 10.5 km
5.5mb (20 obs.) 6.0Msz (15 obs.)
KERMADEC ISLANDS (178)
Ms 5.9 (BRK). Mo=2.0*10**18 Nm (PPT). Felt lightly on Raoul Island.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 37C
Centroid Location:
Origin Time 21:04:12.7 0.4
Lat 29.52S 0.03 Lon 177.79W 0.04
Dep 30.1 1.9 Half-duration 4.1
Moment Tensor; Scale 10**18 Nm
Mrr= 1.08 0.03 Mtt= 0.22 0.04
Mff=-1.30 0.04 Mrt= 0.17 0.06
Mrf= 0.78 0.09 Mtf=-0.61 0.03
Principal Axes:
T Val= 1.31 Plg=73 Azm=268
N 0.43 6 17
P -1.74 16 109
Best Double Couple:Mo=1.5*10**18
NP1:Strike=207 Dip=30 Slip= 102
NP2: 14 61 83

RAO	0.60	319	iP	04 14 90	-1.4	
			iS	04 27.10		
KRP	10.05	214	eP	06 33.00	5.6X	
SVA	12.13	341	eP	06 57.00	1.5	
			eS	09 04.00		
			LR	10 48.00		
SGE	12.78	340	eP	07 08.00	3.7X	
MRW	13.14	207	eP	07 00.00	-8.8X	
			S	09 22.00		
MBU	13.15	344	eP	07 08.00	-1.1	
DZM	16.34	294	iPd	07 54.90	4.5X	
			iS	11 12.60		
AFI	16.58	20	eP	07 40.00	-13.4X	
			S	10 44.00		
PVC	17.63	309	iPc	08 11.50	5.2X	
MSZ	18.89	214	P	08 15.90	-5.7X	
			S	11 32.00		
TBI	25.81	82	eP	09 26.00	-4.6X	
	1.3s	215.00nm		5.5mb		
BRS	26.21	268	iPc	09 37.00	2.6	
			i	09 40.40		
			i	09 59.00		
			i	10 16.00		
			eS	14 20.00		
RIV	26.93	253	eP	09 43.00	2.1	
Z	18s	32.44um		5.9Msz		
			eS	14 19.00		
			e	16 59.00		
PPT	28.18	71	eP	09 55.00	2.6	
	1.3s	205.00nm		5.6mb		
CNB	28.44	250	eP	09 57.00	2.4	
			e	13 08.00		
			e	16 25.00		
CAN	28.74	250	eP	09 58.40	1.1	
BWA	29.21	252	eP	10 00.90	-0.6	
HNR	29.21	309	eP	10 04.00	2.4	
RMQ	29.91	268	iPc	10 11.00	3.2X	
			e	10 21.00		
CMS	31.55	257	iPc	10 24.90	2.7	
			e	16 52.00		
TOO	31.66	246	eP	10 24.00	0.8	
			e	13 13.00		
			e	16 52.00		
CTA	34.15	278	iPc+	10 45.00	0.1	
	1.2s	348.44nm		6.2mb		
			iPP	12 05.00		
			iS	16 28.00		
STK	35.09	256	iPd	10 56.50	3.7X	
			e	10 58.00		
			e	17 24.00		
ADE	37.17	250	e(P)+	11 07.20	-3.2X	
	0.9s	87.39nm		5.7mb		
RAB	38.33	306	eP	11 21.00	0.8	
RKT	38.46	90	eP	11 20.00	-1.2	
	1.6s	150.00nm		5.6mb		
PMG	38.74	294	eP	11 30.00	6.3X	
LAT	40.53	297	eP	11 41.00	2.5	
ASPA	43.61	266	iPc	12 03.00	-0.7	
	0.5s	80.00nm		5.7mb		
Z	18s	74.22um		6.6Msz		
			eScP	17 54.00		
			eS	18 33.50		
			LR	29 36.80		
WRA	44.54	271	Pc	12 11.90	0.7	
	0.7s	133.50nm		5.8mb		
WB5	44.54	271	eP	12 10.40	-0.8	
			e	14 00.00		
			eS	17 49.00		
FORR	46.62	254	eP	12 26.00	-1.5	
	0.4s	66.00nm		5.9mb		
SBA	48.76	184	e(P)	12 44.90	1.3	
WARB	49.10	260	eP	12 45.60	-1.3	
KNA	51.08	273	eP	13 01.50	-0.6	
COOL	52.41	252	eP	13 10.00	-2.0	
	0.5s	16.00nm		5.3mb		
RKG	54.96	247	eP	13 30.00	-0.7	
KLB	55.01	250	eP	13 29.20	-1.8	
NWAO	55.07	249	eP	13 29.00	-2.5	
	0.5s	13.00nm		5.2mb		
			eS	21 28.00		
BAL	56 15	251	eP	13 37.00	-2.3	
MUN	56.17	250	eP	13 35.00	-4.4X	
MBL	56.67	263	eP	13 41.00	-2.2	
MRWA	57 16	253	eP	13 44.00	-2.5	
AAI	57.48	286	eP	13 52.50	3.6X	
SPA	60.46	180	iPd	14 09.20	0.1	
	1.0s	50.00nm		5.6mb		
SPA	60.46	180	ePd	14 10.00	0.9X	
Z	20s	12.25um		6.0Msz		
DAV	65.77	294	eP	14 40.00	-4.6X	
KHKI	65.88	274	ePd	14 43.50	-1.8	
			e	16 43.20		
TRT	68.78	273	ePd	15 03.60	0.0	
TSM	70.25	287	ePd	15 14.20	1.7	
AIA	72.36	156	e(P)	15 28.00	3.6X	
KKM	72.79	288	eP	15 32.80	5.0X	
MAW	73.12	200	eP	15 29.00	0.2	
QCP	73.82	298	eP	15 39.00	5.3X	
BAG	75.28	299	eP	15 40.00	-2.3	
KAKJ	76.70	326	P	15 51.00	1.3	
CHJJ	77.16	325	P	15 52.50	0.3	
IIDJ	77.26	324	P	15 58.70	5.8X	
WKYJ	77.51	322	eP	15 54.70	0.4	
MAT	77.94	325	eP	15 56.00	-0.5	
			eS	25 49.00		
KAGJ	77.96	317	eP	15 56.90	0.2	
MTMJ	78.18	325	P	15 58.40	0.4	
TKSJ	78.18	321	eP	15 59.00	1.1	
KUMJ	78.96	318	eP	16 04.20	2.0	
YONJ	79.40	321	eP	16 04.60	0.1	
SHNJ	79.94	319	eP	16 06.90	-0.5	
ANP	80.02	306	e(P)	16 08.00	-0.2	
ADK	81.24	0	P	16 14.00	0.2	
KGM	81.63	277	eP	16 16.00	-0.8	
HKC	83.62	300	P	16 28.00	1.1	
SYP	83.81	44	eP	16 30.00	2.3	
SSE	84.00	311	P+	16 28.00	-0.6	
	1.0s	28.00nm		5.2mb		
Z	20s	2.90um		5.7Msz		
E	20s	2.20um				
			SKS	26 52.00		
			S	27 08.00		
			sS	27 28.00		
			PS	27 59.00		
			SS	32 42.00		
BCH	84.19	44	P	16 30.70	1.1	
PRS	84.20	42	eP	16 29.60	0.1	
GCC	84.32	41	eP	16 30.20	0.2	
SAO	84.46	42	eP	16 31.40	0.6	
PRI	84.49	43	eP	16 32.40	1.3	
LLA	84.65	42	eP	16 33.00	1.3	
BAR	84.66	48	eP	16 36.00	4.1X	
PAS	84.67	46	eP	16 32.00	0.1	
MHC	84.74	41	eP	16 32.50	0.2	
BRK	84.75	41	eP	16 32.30	0.1	
BKS	84.77	41	iPd	16 34.40	2.1	
	1.0s	74.00nm		5.7mb		
Z	20s	5.00um		5.9Msz		
N	20s	3.20um				
E	20s	3.00um				
			eS	26 59.00		
			e(SS)	32 18.00		
			eLQ	38 24.00		
			eLR	42 24.00		
MWC	84.79	46	eP	16 32.00	-0.7	
ARN	84.81	42	P	16 33.40	0.8	
IPM	84.90	278	ePd	16 34.40	0.9	
	0.8s	40.60nm		5.6mb		
PLM	84.98	47	eP	16 34.00	0.3	
RVR	85.07	46	eP	16 33.00	-0.9	
PEC	85.14	46	P	16 33.80	-0.5	
SBB	85.24	46	eP	16 33.00	-1.8	
ISA	85.48	44	eP	16 36.00	0.0	
FRI	85.63	43	ePd	16 36.40	-0.2	
LNV	85.75	127	iPc	16 37.10	-0.3	
PSI	85.77	275	iPc	16 39.40	1.6	
			e	19 00.00		
CMB	85.94	42	ePd	16 37.90	-0.3	
SDN	85.95	10	eP	16 37.70	0.0	
GLA	86.09	48	eP	16 38.00	-1.1	
CLC	86.12	45	eP	16 38.80	-1.1	
TACH	86.24	127	eP	16 40.50	0.5	
GSC	86.27	46	eP	16 40.00	0.0	
CHCH	86.29	127	eP	16 48.10	7.9X	
ORV	86.35	40	ePd	16 39.70	-0.4	
WDC	86.49	39	iPd	16 40.60	-0.2	
SNG	86.55	280	eP	16 41.00	-0.6	
			eS	27 11.00		
PCH	86.56	127	eP	16 41.80	0.2	
ROCH	86.57	126	eP	16 41.80	0.0	
MIN	86.84	39	ePd	16 41.60	-1.1	
FCH	86.87	127	eP	16 43.50	0.1	
TNP	87.83	43	P	16 47.20	-0.4	
	1.1s	40.04nm		5.5mb		
KVN	87.95	42	P	16 46.00	-2.1	
KDC	89.62	13	eP	16 55.20	-0.1	
NNT	90.02	284	eP	17 00.00	1.9	
PPM	90.05	68	(P)	17 04.90	6.1X	
BMW	90.29	34	P	16 57.00	-1.8	
SHW	90.58	35	P	17 00.40	0.2	
LOE	90.79	290	eP	17 00.00	-1.6	
VGB	90.84	36	P	17 00.80	-0.5	
MSU	91.17	45	P	17 01.90	-1.4	
LON	91.18	35	P	17 01.20	-1.6	
GMW	91.26	34	P	17 01.50	-1.6	
RMW	91.67	34	P	17 04.80	-0.3	
BJI	92.76	315	eP	17 10.50	0.3	
	1.5s	31.00nm		5.5mb		
Z	24s	4.46um		5.8MszX		
E	22s	3.55um				
			eSKS	27 44.00		
			eS	28 22.00		
			PS	29 44.00		
			eSS	34 50.00		

14d 21h

ANMO 92.79 51 P 17 10.10 -0.6
BDT 92.96 288 eP 17 15.50 4.0X
CHG 93.79 289 eP 17 16.00 0.6
PMR 93.83 13 eP 17 13.60 -1.0
0.8s 6.80nm 5.1mb
Z 20s 3.00um 5.8Msz
TTA 93.90 10 eP 17 14.60 -0.4
KMI 93.92 297 ePKP 17 16.00 -0.2
Z 20s 3.90um 5.9Msz
E 22s 4.00um
PP 21 06.00
SKKS 27 54.00
PNT 94.01 34 eP 17 16.00 0.3
0.8s 13.00nm 5.4mb
ARE 95.21 112 eP 17 25.00 2.5
BW06 95.32 43 P 17 21.60 -0.7
LRM 95.48 40 eP 17 24.60 1.7
FBA 97.10 12 eP 17 28.70 -0.8
IMA 97.21 10 e(P) 17 30.90 0.8
1.2s 10.80nm 5.3mb
CNCB 97.83 114 P 17 38.00 3.3X
LPB 97.89 114 eP 17 40.00 5.2X
Z 22s 2.59um 5.7Msz
S 28 30.00
LR 49 26.00
ZOBO 98.02 114 P 17 27.00 -8.5X
1.0s 5.00nm 5.0mb
S 28 18.00
LR 49 24.00
LZH 98.68 307 Pc 17 37.00 -0.5
Z 25s 2.60um 5.6MszX
pP 17 52.00 51kmX
sP 17 57.00
PP 21 08.00
i 23 26.00
S 28 16.00
i 28 58.00
i 30 38.00
SS 34 40.00
i 36 13.00
SES 98.98 36 eP 17 37.00 -1.3
INK 102.99 15 ePdiff17 57.00 1.1X
KOD 108.04 272 ePKP 22 20.20 -6.9X
POO 114.85 278 ePKP 22 39.00 -0.6
BLF 117.30 203 ePKP 23 04.00 19.8X
SLR 119.59 207 ePKP 23 04.00 15.4X
1.5s 55.56nm
Z 20s 6.74um 6.3Msz
i 23 10.50
BUL 124.43 210 iPKPc 23 12.40 14.4X
1.0s 15.00nm
QUE 124.89 288 ePKP 22 59.00 0.3
WIN 126.17 197 ePKP 23 03.80 2.3
0.7s 11.64nm
Z 18s 5.84um 6.3Msz
DAG 131.80 6 ePKP 23 08.00 -2.3
MAIO 132.36 294 ePKP 23 12.00 -0.7
NAI 135.06 233 ePKP 23 18.00 -0.6
KEV 137.55 348 ePKP 23 16.00 -5.4X
1.0s 38.00nm
i 23 34.80
IR4 139.14 291 ePKP 23 27.00 1.4
IR1 139.33 291 ePKP 23 32.00 6.1X
IR7 139.43 291 ePKP 23 37.00 11.0X
LWI 139.50 223 ePKP- 23 19.00 -7.9X
SOD 139.64 346 ePKP 23 28.00 2.8
SOD 139.64 346 iPKP 23 21.20 -4.0X
i 23 40.00
TAB 142.98 295 ePKP+ 23 28.00 -4.3X
e 27 27.00
SLY 143.57 291 ePKP 23 30.00 -3.1X
SUF 143.60 342 ePKP 23 28.60 -3.7X
0.8s 55.00nm
QASM 143.72 274 ePKPd 23 30.00 -3.8X
BHD 144.30 287 iPKPd 23 34.00 -0.4
MSL 145.50 292 iPKPd 23 40.00 3.6X
i 23 47.50
NUR 145.82 341 iPKP 23 36.30 0.1
1.3s 793.20nm
NB2 148.14 352 PKP 23 39.20 -0.8
1.3s 248.30nm
UPP 148.17 346 iPKP 23 41.50 1.6
HFS 148.66 349 ePKP 23 39.70 -1.0
0.8s 52.00nm
Z 20s 2.23um 6.0Msz
LR 17 24.00
WAJH 149.80 272 ePKPd 23 48.40 4.9X

GAZ 150.24 294 iPKP 23 47.00 3.1X
KVT 150.59 302 iPKP 23 50.40 6.0X
BCAO 150.65 214 iPKPd 23 45.90 0.7
0.9s 50.00nm
id 23 51.50
ic 25 18.60
ic 26 57.60
id 30 19.70
JARJ 151.30 284 PKPd 23 52.70 7.0X
MASJ 151.46 283 PKPd 23 53.20 7.2X
SHMJ 151.49 285 PKPd 23 53.10 7.2X
KFNJ 151.50 283 PKPd 23 53.00 7.1X
SALJ 151.51 283 PKPd 23 52.90 6.8X
HRI 151.53 286 e(PKP)23 45.00 -1.1
DSI 151.73 282 e(PKP)23 45.00 -1.3
HQL 151.74 277 ePKPd 23 46.60 0.2
AQBJ 151.81 278 PKPd 23 54.00 7.5X
MBH 151.96 278 ePKP 23 45.00 -1.7
KAS 152.20 303 iPKPc 23 53.80 7.0X
COP 153.10 348 iPKPd 23 58.00 10.6X
0.8s 134.33nm
BBTK 153.30 300 ePKP 23 47.00 -1.4
LFK 153.33 290 ePKP 23 55.80 7.3X
CSS 153.52 289 ePKP 23 56.50 7.7X
PPCY 154.33 289 e(PKP)23 50.00 0.2
CFR 154.61 315 ePKP 23 54.00 4.2X
GPA 155.01 302 ePKP 23 56.00 5.4X
HLW 155.02 278 ePKP 23 50.50 -0.4
eSn 27 36.00
eSn 28 55.00
VRI 155.13 317 ePKPc 24 06.00 15.5X
BCK 155.44 296 ePKP 23 51.00 -0.3
ALT 155.48 300 ePKP 24 02.00 10.6X
LIC 155.58 162 PKP 23 51.22 -0.9
Z 20s 1.00um 5.6Msz
ISR 155.62 316 ePKP 24 00.00 8.7X
ITU 155.70 305 ePKP 23 48.00 -3.5X
KIC 155.78 162 PKP 23 51.52 -0.9
MLR 155.79 317 ePKP 23 51.00 -0.7
BMR 155.85 324 ePKPd 24 07.00 15.5X
TIC 155.98 161 PKP 23 52.08 -0.6
ELL 156.10 294 ePKP 23 52.00 -0.3
KHL 156.10 298 ePKP 23 51.00 -1.2
SPC 156.33 330 ePKP 23 50.70 -1.6
e 24 20.90
CMP 156.45 317 ePKPd 24 02.00 9.6X
KSP 156.50 338 ePKP 23 51.00 -1.3
1.0s 106.00nm
id 24 21.30
WIT 156.72 354 e(PKP)23 54.00 1.6
CLL 157.05 343 ePKP 23 55.00 2.1
i 24 08.90
i 24 23.30
BRG 157.19 341 ePKP 23 51.90 -1.2
Z 20s 2.50um 6.0Msz
N 20s 3.00um
E 20s 1.00um
e 24 02.00
e 24 24.00
i 24 32.00
e 25 10.00
WTS 157.51 353 ePKP 23 54.00 0.6
0.9s 20.00nm
e 24 26.00
PRU 157.80 339 PKP 23 54.00 0.1
Z 19s 2.40um 6.1Msz
N 19s 1.60um
E 17s 0.70um
e 24 26.50
BUD 158.15 329 e(PKP)24 06.00 11.7X
SRO 158.21 330 ePKP 23 54.00 -0.4
i 24 28.20
ZST 158.41 333 ePKP 23 54.00 -0.6
i 24 27.80
e 30 56.50
VKA 158.66 334 (PKP) 23 54.00 -0.9
1.0s 32.90nm
ePP 24 30.00
ENN 158.81 354 ePKP 23 57.00 2.1
0.9s 13.00nm
e 24 31.00
e 24 39.50
KHC 158.85 340 iPKPd 23 54.60 -0.5
1.2s 10.00nm
Z 20s 3.80um 6.2Msz
N 19s 1.70um
E 20s 1.40um

i 24 32.30
MEM 158.96 354 PKP 23 55.20 0.1
e 28 12.90
SOP 159.04 333 ePKP 23 54.30 -1.0
SNF 159.18 357 PKP 23 55.50 0.2
BEO 159.31 322 ePKP 23 56.00 0.3
ABH 159.50 351 ePKP 23 55.10 -0.7
RUP 159.74 351 ePKP 23 55.24 -0.9
WLF 159.88 353 PKP 23 57.00 0.9
VAY 160.04 311 ePKP 23 55.00 -1.6
1.0s 0.10nm
i 24 36.00
BHG 160.32 339 ePKP 23 56.30 -0.4
i 24 38.40
SKO 160.44 314 ePKP 23 54.80 -2.2
1.2s 178.00nm
Z 19s 2.33um
N 19s 1.07um
E 20s 2.88um
i 24 38.50
i 28 20.00
i 31 07.00
PTJ 160.71 331 ePKP 23 56.70 -0.6
KBA 160.73 337 e(PKP)23 55.00 -2.4
1.1s 3.50nm
FLN 160.83 6 ePKP 23 57.00 -0.1
LDF 161.03 5 ePKP 23 57.10 -0.3
GRR 161.17 7 ePKP 23 57.40 -0.1
LJU 161.18 333 e(PKP)23 56.50 -1.1
OHR 161.30 312 ePKP 23 56.70 -1.3
1.5s 0.08nm
i 24 43.00
VBY 161.32 331 e(PKP)24 00.60 2.8
FVI 161.34 337 PKP 23 54.50 -3.2X
FEL 161.37 348 ePKP 23 56.98 -0.9
VOY 161.43 334 e(PKP)23 58.70 0.7
CEY 161.47 333 ePKP 23 59.00 1.0
e 24 42.50
HAU 161.49 352 ePKP 23 57.30 -0.6
LPF 161.50 8 ePKP 23 57.60 -0.2
BSF 161.61 351 ePKP 23 57.60 -0.5
OGA 161.64 341 ePKP 23 57.60 -0.8
i 24 44.80
LOR 162.44 357 ePKP 23 58.60 -0.3
SSF 162.66 358 ePKP 23 58.80 -0.3
LBF 162.72 357 ePKP 23 58.70 -0.5
SAL 162.93 341 PKP 24 02.50 3.2X
AVF 162.93 358 ePKP 23 58.80 -0.5
MFF 163.00 6 ePKP 23 59.40 0.0
SMF 163.06 357 ePKP 23 58.90 -0.6
VAI 163.14 345 PKP 23 56.90 -2.6
BGF 163.18 359 ePKP 23 59.20 -0.4
TCF 163.45 1 ePKP 23 59.40 -0.5
LSF 163.47 2 ePKP 23 59.60 -0.3
MAF 163.51 360 ePKP 23 59.90 -0.1
LPG 163.89 349 ePKP 24 00.40 -0.3
ARV 163.92 332 PKP 24 03.50 3.0X
BOB 164.00 342 PKP 24 02.70 2.1
PGD 164.08 335 PKP 24 06.50 5.7X
CRE 164.20 334 PKP 24 07.50 6.7X
BDI 164.30 338 PKP 24 03.50 2.6
BNI 164.34 349 PKP 24 02.10 1.1
ASS 164.39 331 PKP 24 07.00 6.0X
RJF 164.41 3 ePKP 24 00.90 0.1
PII 164.63 338 PKP 24 04.00 3.0X
DUI 164.65 324 PKP 24 03.00 1.7
DOI 164.77 347 PKP 24 10.00 8.7X
CAF 164.81 1 ePKP 24 01.00 -0.2
AZI 164.91 327 PKP 24 04.50 3.2X
TDS 164.94 315 PKP 24 03.00 1.5
MNS 164.94 330 PKP 24 01.50 0.1
SDI 164.94 326 PKP 24 02.00 0.5
SGO 164.97 319 PKP 24 04.00 2.6
SBF 165.34 346 ePKP 24 01.90 0.1
EPF 166.59 7 ePKP 24 02.80 0.0
TOL 168.51 26 ePKP 24 06.00 1.8
ePKKP 25 20.00
iPP 29 02.00
ePPP 33 40.00
ePS 42 49.00
iSS 49 50.00
AAPN 170.61 34 iPKPc 24 07.60 2.0
ASMO 170.75 33 ePKPc 24 07.50 1.9
ALOJ 170.77 35 ePKPc 24 09.50 3.8X
AVE 170.79 65 ePKP 24 06.00 0.4
i 24 31.50
ACHM 170.91 34 ePKP 24 10.00 4.3X

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ATEJ   170.97   36 iPKPc 24 07.80    2.0
APHE   171.10   34 iPKPc 24 08.00    2.2
TIO    171.45   79 iPKP  24 13.50    7.3X
IFR    172.45   58 iPKPd 24 08.50    2.0
      S.D. = 1.3  on 208 of 284 obs.
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*  JAN  14, 1990  21h 10m 30.23± 0.53s
   29.080 S ±22.3km  177.628 W ±11.8km
   DEPTH =  33.0km  (normal)
   5.5mb (  3 obs.)  5.7Msz (  2 obs.)
 KERMADEC ISLANDS                (178)

MRW     13.64 205 eP     13 23.00 -20.6X
                 S       15 47.00
DZM     15.97 292 iPc    14 24.10  10.0X
BRS     26.10 267 iPd    16 04.00   1.1
CAN     28.83 249 eP     16 27.50  -0.1
BWA     29.27 251 eP     16 29.30  -2.3
RMQ     29.80 267 eP     16 38.00   1.6
CTA     33.93 277 iPc    17 14.00   1.4
        1.2s    98.44nm          5.6mb
PMG     38.36 294 eP     17 40.00 -10.1X
        1.1s    91.14nm
WB5     44.39 271 eP     18 38.90  -0.7
WRA     44.39 271 Pc     18 37.90  -1.7
        0.7s    33.30nm          5.3mb
FORR    46.66 254 eP     18 54.00  -3.5X
SPA     61.08 180 eP     20 44.00   0.8
SPA     61.08 180 iPd    20 45.90   2.7X
        0.9s    37.73nm          5.5mb
     Z  20s      3.38um          5.5Msz
                 i       20 52.80
MAT     77.35 325 eP     22 27.00   3.7X
PRS     83.83  42 ePd    22 58.00   0.3
LLA     84.28  43 e(P)   23 00.50   0.5
MHC     84.36  42 e(P)   23 00.30  -0.2
RVR     84.74  46 eP     23 02.00  -0.3
SBB     84.90  46 eP     23 03.00  -0.2
FRI     85.27  43 ePd    23 04.00  -0.8
CMB     85.57  42 ePd    23 05.70  -0.7
CLC     85.77  45 eP     23 07.00  -0.5
GLA     85.78  49 eP     23 08.00   0.4
GSC     85.94  46 eP     23 05.00  -3.4X
WDC     86.09  39 ePd    23 08.30  -0.5
MIN     86.44  39 e(P)   23 11.80   1.0
KVN     87.58  42 eP     23 16.00  -0.4
ALQ     92.50  51 eP     23 27.00 -12.5X
        1.0s    2.50nm
     Z  18s      3.35um          5.8Msz
MAIO   131.98 294 iPdiff26 42.00   6.0X
        1.0s    17.50nm
                 e       26 54.00
KEV    136.91 348 ePKP   29 52.00   1.6
SOD    139.00 346 ePKP   29 55.00   0.7
BHD    143.99 288 ePKPd  30 02.00  -2.1
MSL    145.13 293 iPKPd  30 08.00   2.0
                 e       30 13.50
NUR    145.18 341 iPKP   30 03.30  -2.0
        1.0s    88.00nm
NB2    147.50 352 PKP    30 09.80   0.6
        1.1s    27.80nm
HFS    148.01 349 ePKP   30 10.50   0.5
        0.9s    21.80nm
KSP    155.87 338 iPKPd  30 49.10  27.4X
        1.0s    27.00nm
CLL    156.41 343 ePKP   30 49.00  26.7X
        1.2s    18.00nm
PRU    157.16 339 ePKP   30 46.50  23.1X
                 e       30 55.00
MEM    158.32 354 PKP    30 37.50  12.9X
DOU    158.94 356 PKP    30 37.70  12.3X
      S.D. = 1.2  on  27 of  41 obs.
-------------------------------------
?  JAN  14, 1990  21h 13m 01.92± 3.65s
   45.680 N ± 7.9km     1.158 E ±34.0km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                          (538)
      ML 1.6 (LDG).

RJF     0.45 146 Pg      13 11.00  -0.1
                 Sg      13 16.40
LSF     0.63  24 Pg      13 14.20  -0.3
                 Sg      13 22.60
TCF     0.95  50 Pg      13 19.60  -0.5
                 Sg      13 31.40
MAF     1.12  61 Pg      13 22.80  -0.2
                 Sg      13 36.60
BGF     1.47  53 Pg      13 29.50   1.1
                 Sg      13 46.60
      S.D. = 0.9  on   5 of   5 obs.
-------------------------------------
%  JAN  14, 1990  21h 13m 24.39± 3.16s
   45.692 N ± 5.9km     1.157 E ±30.1km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                          (538)
      ML 2.1 (LDG).

RJF     0.46 147 Pg      13 33.60  -0.2
                 Sg      13 39.00
LSF     0.62  25 Pg      13 36.60  -0.2
                 Sg      13 44.40
TCF     0.95  51 Pg      13 42.20  -0.2
                 Sg      13 53.80
CAF     1.00 140 Pg      13 43.50   0.2
                 Sg      13 55.40
MAF     1.12  61 Pg      13 45.20  -0.1
                 Sg      13 59.00
BGF     1.46  53 Pg      13 51.40   0.6
                 Sg      14 08.80
      S.D. = 0.4  on   6 of   6 obs.
-------------------------------------
*  JAN  14, 1990  21h 21m 15.47± 1.13s
   66.933 N ± 8.4km   156.514 W ±15.2km
   DEPTH =   5.0km  (geophysicist)
 ALASKA                          (676)
      ML 3.7 (PMR).

IMA     1.43 126 iPd     21 41.30  -0.9
TTA     4.03 177 eP      22 18.70  -0.5
FBA     4.12 116 iPd     22 19.30  -1.0
BRW     4.39 359 eP      22 24.40   0.1
SVW     5.86 176 eP      22 44.70  -0.4
PWA     6.04 148 eP      22 47.80   0.3
PMR     6.25 146 eP      22 50.00  -0.5
PMS     6.47 149 eP      22 54.90   1.2
TOA     6.58 133 eP      22 57.00   1.7
      S.D. = 1.1  on   9 of   9 obs.
-------------------------------------
   JAN  14, 1990  21h 25m 50.41± 0.50s
   36.089 N ± 6.2km    27.156 E ± 4.8km
   DEPTH =  10.0km  (geophysicist)
   4.4mb (  1 obs.)
 DODECANESE ISLANDS              (369)
      ML 4.2 (CSS), 4.1 (ATH).

KAP     0.54 178 ePg     26 02.90   1.6
ARG     0.80  81 ePg     26 05.20  -0.7
YER     1.38  41 iPn     26 15.00  -0.8
NPS     1.50 237 ePb     26 18.10   0.7
APE     1.63 307 ePb     26 18.50  -0.8
SMG     1.64 351 ePb     26 18.20  -1.1
CIN     1.68  26 eP      26 21.00   1.0
KSL     1.97  88 ePn     26 25.40   1.3
IZM     2.31   2 ePn     26 27.80  -1.3
ELL     2.32  73 ePn     26 30.80   1.5
VAM     2.50 255 ePn     26 32.90   1.2
KHL     2.92  40 ePn     26 38.90   1.0
PRK     3.23 348 ePg     26 51 00   8.9X
ATH     3.33 305 ePg     26 53 70  10.1X
VLI     3.46 282 ePn     26 45 20  -0.2
ALT     3.78  38 ePn     26 53 00   3.0X
EZN     3.79 350 ePn     26 47 00  -3.0X
ITM     4.34 286 ePn     27 00 10   2.1
PPCY    4.40 104 e(P)    27 00.00   1.2
GPA     4.87  30 ePn     27 12.00   6.5X
CSS     5.16 101 eP      27 10.00   0.5
                 eSn     28 11.20
LFK     5.25  97 ePn     27 13.80   2.9X
BBTK    5.80  48 eP      27 20.00   1.4
HLW     7.14 149 ePn     27 36.00  -1.4
                 eSn     28 55.00
HRI     7.61 109 eP      27 40.00  -4.1X
DSI     8.19 121 eP      27 50.00  -2.1
                 eS      29 20.00
MBH     9.04 132 eP      28 01.00  -2.9
ROI     9.07 296 P       28 05.10   0.8
CZI     9.28 293 P       28 06.50  -0.7
CSI     9.34 296 P       28 05.70  -2.4
KBA    15.05 321 eP      29 29.00   4.1X
        1.0s    17.00nm          4.4mb
                 i       29 33.90
                 i       29 38 60
                 e       31 07.00
      S.D. = 1.5  on  23 of  31 obs.
-------------------------------------
   JAN  14, 1990  21h 28m 14.52± 0.63s
   5.571 S ± 5.2km   128.605 E ± 7.4km
   DEPTH = 338.8 ±  7.8 km
   4.8mb ( 12 obs.)
 BANDA SEA                       (280)

AAI     1.92 348 ePd     29 05.00   0.5
                 eS      29 49.10
MTN     7.65 161 iPd     30 04.10  -0.9
KNA    10.12 179 iPd     30 34.80   0.0
        0.4s    155.00nm          5.7mb
                 eS      32 24.00
KHKI   13.20 257 ePd     31 11.90  -0.1
                 e       33 03.20
WB5    15.29 159 iP      31 33.70  -1.7
WRA    15.34 159 Pd      31 35.10  -0.9
        0.4s    11.40nm          4.6mb
TRT    16.00 262 ePd     31 43.00   0.0
MBL    17.68 208 iPc     32 00.20  -0.1
        0.4s    32.00nm          5.0mb
ASPA   18.70 165 iPc     32 10.80   0.1
                 eS      35 23.50
                 iScS    43 04.30
PMG    18.78 103 eP      32 13.00   1.6
        0.9s    75.63nm          5.0mb
WARB   20.58 185 iPc     32 31.00   1.9
        0.3s    17.00nm          4.9mb
NANU   21.09 216 eP      32 36.00   2.0
CTA    22.42 132 eP      32 47.00   0.2
MEKA   23.03 204 iPc     32 52.20  -0.2
        0.3s    25.00nm          5.0mb
FORR   25.15 181 eP      33 11.00  -0.7
        0.4s    35.00nm          5.1mb
COOL   26.14 195 eP      33 20.10  -0.6
MRWA   26.37 205 iPc     33 22.50  -0.3
        0.4s    14.00nm          4.7mb
BAL    27.30 203 eP      33 31.00  -0.1
KLB    27.81 200 eP      33 35.30  -0.3
MUN    28.72 202 iPc     33 43.10  -0.5
STK    28.86 157 eP      33 46.50   1.7
                 e       34 48.60
SSE    37.14 349 Pd      34 56.00   0.6
        1.0s    28.00nm          4.6mb
MAT    42.85  11 iPd     35 40.40  -1.6
        0.8s    26.87nm          4.5mb
BJI    46.81 347 eP      36 13.00   0.0
        1.0s    18.00nm          4.3mb
LZH    47.50 333 Pd      36 18.50  -0.1
        1.2s    28.00nm          4.4mb
     Z  17s      0.90um          4.8MszX
                 pP      36 22.50  13kmX
GBA    54.25 291 P       37 09.00   0.1
HYB    54.45 296 eP      37 10.30  -0.1
INK    98.06  22 eP      41 13.00  -0.6
ZOBD  152.71 143 PKP     47 36.00   9.2X
      S.D. = 1.0  on  28 of  29 obs.
-------------------------------------
   JAN  14, 1990  21h 31m 25.19± 0.60s
   36.029 N ± 6.6km    27.162 E ± 5.5km
   DEPTH =  10.0km  (geophysicist)
 DODECANESE ISLANDS              (369)
      MD 3.9 (ATH).

KAP     0.48 179 ePg     31 35.30   0.4
                 eSg     31 44.00
ARG     0.80  76 ePg     31 39.60  -1.2
YER     1.43  39 iPn     31 49.10  -2.1
NPS     1.48 239 ePb     31 51.00  -0.8
APE     1.67 309 ePg     31 55.30   0.6
SMG     1.70 351 ePb     31 53.40  -1.6
CIN     1.73  25 eP      31 56.00   0.5
KSL     1.96  87 ePn     31 59.00   0.2
ELL     2.33  71 ePn     32 03.90  -0.4
IZM     2.37   2 ePn     32 06.00   1.3
VAM     2.49 256 ePg     32 11.10   4.7X
KHL     2.97  39 ePn     32 14.00   0.8
BCK     3.10  62 ePn     32 17.20   2.1
VLI     3.48 283 ePn     32 20.20  -0.2
ITM     4.37 287 ePn     32 33.50   0.4
      S.D. = 1.2  on  14 of  15 obs.
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*  JAN  14, 1990  21h 40m 12.26± 0.57s
   21.348 N ±11.1km   146.098 E ±13.0km
   DEPTH =  33.0km  (normal)
   4.6mb (  5 obs.)  5.1Msz (  1 obs.)
 MARIANA ISLANDS REGION          (215)
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14d 21h

MAT	16.63	337	(P)	44 05.00	0.6
	1.0s		14.00nm		4.0mb
MTMJ	16.81	336	P	44 08.30	1.4
LZH	39.54	301	eP	47 41.50	-0.6
Z	18s		2.30um		5.1Msz
			epP	47 45.00	12kmX
WB5	42.55	196	eP	48 06.70	0.0
WRA	42.62	196	Pc	48 07.70	0.4
	0.6s		2.80nm		4.2mb
MBC	70.51	15	eP	51 25.00	-0.2
	1.2s		7.00nm		4.6mb
PNT	76.82	42	eP	52 02.00	-0.5
WDC	77.43	51	ePd	52 05.70	-0.3
MIN	78.18	51	eP	52 08.50	-1.8
ORV	78.50	52	eP	52 11.10	-0.8
MHC	79.09	54	e(P)	52 17.10	1.7
PRS	79.62	55	e(P)	52 18.00	-0.1
CMB	79.81	53	ePd	52 18.90	-0.2
LLA	79.85	55	e(P)	52 17.90	-1.4
PRI	80.22	55	e(P)	52 23.80	2.4
FRI	80.66	54	eP	52 23.70	0.1
SOD	81.01	340	eP	52 25.00	0.2
SES	81.65	39	eP	52 29.00	0.5
SUF	83.87	336	eP	52 38.20	-1.5
	0.6s		6.40nm		5.0mb
APO	89.70	339	eP	53 06.50	-1.7
	0.8s		8.90nm		5.1mb
ZOBO	147.26	87	PKP	59 55.00	2.0
LPB	147.34	88	ePKP	59 57.00	4.1X
CNCB	147.52	88	PKP	59 57.30	3.9X
S.D. = 1.2		on	21 of	23 obs.	

JAN 14, 1990 22h 19m 50.35± 0.80s
43.223 N ± 7.9km 29.870 E ± 8.3km
DEPTH = 10.0km (geophysicist)
BLACK SEA (360)

PSN	1.31	291	eP	20 15.00	0.4
			iSg	20 32.00	
CVD	1.73	310	iP	20 43.00	22.4X
DMK	2.10	229	iPn	20 26.50	0.5
ISK	2.24	196	ePn	20 28.00	0.0
CFR	2.32	328	eP	20 27.00	-2.1
JMB	2.53	254	iP	20 32.00	-0.1
YLV	2.68	188	iPn	20 34.70	0.3
ISR	3.06	310	eP	20 40.00	0.3
KAS	3.43	121	eP	20 45.00	0.0
MLR	3.62	310	eP	20 50.00	2.3
RZN	4.11	250	iP	20 53.00	-1.7
			iSg	21 40.00	
BZS	6.38	295	eP	21 31.50	4.9X
SUF	19.65	355	eP	24 41.00	19.0X
GKN	46.24	91	P	28 24.80	7.1X
PKI	47.05	90	P	28 24.40	0.1
GUN	47.20	90	P	28 18.80	-6.7X
S.D. = 1.3		on	11 of	16 obs.	

JAN 14, 1990 22h 29m 54.41± 0.59s
36.116 N ± 6.8km 27.148 E ± 5.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 3.8 (ATH).

KAP	0.56	178	ePg	30 05.50	-0.4
			eSg	30 15.20	
ARG	0.80	83	ePb	30 09.00	-0.9
YER	1.37	42	iPn	30 18.50	-1.0
NPS	1.51	236	ePb	30 21.10	-0.5
			eSb	30 42.00	
SMG	1.61	351	ePb	30 20.70	-2.2
APE	1.61	307	ePg	30 24.00	1.0
CIN	1.66	27	eP	30 25.00	1.3
KSL	1.97	89	ePb	30 28.50	0.3
IZM	2.28	2	ePn	30 32.00	-0.7
ELL	2.31	73	ePn	30 33.60	0.3
VAM	2.50	254	ePg	30 39.50	3.7X
KHL	2.91	40	ePn	30 41.00	-0.6
BCK	3.07	63	ePn	30 46.00	2.1
ATH	3.31	305	ePg	30 56.00	8.7X
VLI	3.45	281	ePn	30 48.50	-0.7
ALT	3.76	38	ePn	31 00.00	6.2X
ITM	4.33	286	ePn	31 03.00	1.2
KHC	16.36	327	P	33 46.40	0.7
S.D. = 1.2		on	15 of	18 obs.	

? JAN 14, 1990 22h 32m 40.70± 1.28s
18.827 N ±19.7km 120.421 E ±25.6km
DEPTH = 33.0km (normal)
4.4mb (3 obs.)
LUZON, PHILIPPINE ISLANDS (249)

QCP	4.21	171	eP	33 45.50	1.3
CHG	20.33	273	eP	37 16.50	-0.5
WB5	40.83	160	eP	40 20.00	-1.0
WRA	40.88	160	Pd	40 20.50	-0.9
	0.6s		3.40nm		4.3mb
ASPA	44.24	162	iPd	40 49.10	0.2
	0.8s		11.00nm		4.7mb
SUF	75.39	332	eP	44 23.50	0.9
SLL	81.91	331	eP	45 04.70	6.6X
	0.5s		1.70nm		4.3mb
S.D. = 1.2		on	6 of	7 obs.	

? JAN 15, 1990 00h 29m 02.13± 8.61s
48.837 N ±57.3km 0.782 W ±30.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

FLN	0.21	111	Pg	29 06.80	0.1
			Sg	29 10.40	
GRR	0.45	187	Pg	29 11.40	0.1
			Sg	29 18.00	
LDF	0.50	119	Pg	29 12.20	-0.1
			Sg	29 19.50	
LPF	0.82	192	Pg	29 18.00	-0.1
			Sg	29 29.50	
MFF	2.28	169	Pg	29 44.80	4.5X
			Sg	30 14.20	
LSF	3.02	148	Pg	29 59.20	8.3X
			Sg	30 38.00	
TCF	3.26	140	Pg	30 03.40	9.1X
BGF	3.35	132	Pg	30 03.40	7.9X
BGF	3.35	132	Pg	30 04.80	9.3X
			Sg	30 49.00	
S.D. = 0.1		on	4 of	9 obs.	

JAN 15, 1990 01h 21m 51.54± 1.07s
44.025 N ± 3.1km 128.352 W ±10.3km
DEPTH = 10.0km (geophysicist)
4.5mb (4 obs.) 4.0Msz (1 obs.)
OFF COAST OF OREGON (30)

NLO	4.04	58	eP	22 56.09	1.3
BMW	4.37	54	eP	22 59.16	-0.4
GT2	4.49	73	eP	23 00.53	-0.7
RVW	4.50	60	eP	23 01.13	-0.2
OBH	4.56	42	eP	23 02.08	0.0
LVP	4.68	62	eP	23 03.75	-0.3
CPW	4.70	49	eP	23 04.21	-0.1
VLMM	4.74	69	eP	23 04.54	-0.3
FL2	4.77	61	eP	23 05.90	0.6
MTMW	4.79	63	eP	23 05.34	-0.2
SMW	4.81	45	eP	23 05.62	-0.2
ERK	4.82	60	eP	23 05.70	-0.3
SHW	4.84	61	eP	23 06.12	-0.2
TDH	4.85	73	eP	23 05.81	-0.6
HSR	4.87	62	eP	23 06.86	0.2
STD	4.87	61	eP	23 06.53	-0.1
JLK	4.88	62	eP	23 06.73	0.0
YEL	4.88	61	eP	23 06.80	-0.1
ESD	4.90	62	eP	23 07.62	0.5
TDL	4.92	60	eP	23 07.39	0.0
SOSW	4.92	61	eP	23 07.82	0.4
CDFW	4.93	63	eP	23 07.41	-0.1
VBEM	4.95	76	eP	23 07.41	-0.4
VLL	4.97	71	eP	23 07.72	-0.3
KOSW	4.99	59	eP	23 08.77	0.5
LMW	5.02	56	eP	23 09.01	0.2
APM	5.04	68	eP	23 09.59	0.6
VFP	5.08	73	eP	23 09.53	-0.1
GULW	5.16	66	eP	23 11.11	0.4
HDW	5.18	44	eP	23 11.31	0.3
ASR	5.24	64	eP	23 11.82	0.0
GMW	5.25	46	eP	23 11.00	-0.9
RVC	5.35	55	eP	23 13.72	0.3
LON	5.35	57	eP	23 13.30	-0.2
WDC	5.52	127	eP	23 17.30	1.6
RMW	5.73	51	eP	23 18.80	0.1
MIN	6.21	124	eP	23 26.00	0.3
ORV	6.79	129	eP	23 33.20	-0.5
CMB	8.49	132	eP	23 56.00	-1.4
KVN	9.15	119	eP	24 07.00	0.3
FRI	9.62	134	e(P)	24 13.20	0.2
LRM	11.42	75	eP	24 43.70	5.8X
SES	13.37	55	eP	25 10.00	6.2X
RSSD	17.46	81	eP	25 59.00	2.1X
GOL	17.64	96	eP	25 58.00	-1.1
ANMO	19.13	111	eP	26 18.50	1.1
ALQ	19.13	111	eP	26 20.70	3.2X
	2.0s		29.41nm		4.2mb
FFC	20.11	49	iPc	26 28.10	0.1
	0.8s		19.00nm		4.5mb
RSON	24.24	61	eP	27 09.50	0.2
MEO	24.67	102	iPd	27 14.00	0.4
TUL	26.11	97	eP	27 27.00	-0.1
	1.5s		21.50nm		4.6mb
Z	18s		0.36um		4.0Msz
			LR	35 54.00	
RSCP	33.60	90	eP	28 31.50	-2.5X
JSC	37.35	89	eP	29 04.50	-1.3
FRB	38.59	38	eP	29 16.00	0.2
BRG	79.97	23	eP	34 08.00	6.0X
	1.3s		15.00nm		4.8mb
KHC	81.42	24	eP	34 16.00	6.2X
S.D. = 0.6		on	49 of	56 obs.	

JAN 15, 1990 01h 26m 45.03± 0.76s
36.152 N ± 8.9km 27.240 E ± 7.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.60	185	ePg	26 55.30	-1.9
			eSg	27 09.30	
ARG	0.72	85	ePg	27 00.00	0.8
YER	1.29	40	ePn	27 08.40	-0.6
SMG	1.59	348	ePg	27 16.80	3.6X
NPS	1.59	237	ePb	27 14.50	1.1
			eSb	27 34.50	
CIN	1.60	25	eP	27 20.00	6.7X
			ePg	28 15.00	
			iSg	28 25.00	
APE	1.65	304	ePb	27 14.50	0.3
KSL	1.90	90	ePg	27 23.20	5.5X
ELL	2.23	74	ePn	27 24.00	1.3
IZM	2.24	0	ePn	27 21.00	-1.8
VAM	2.58	254	ePn	27 30.80	3.3X
KHL	2.83	39	ePn	27 37.00	5.8X
BCK	2.99	63	ePn	27 40.00	6.6X
VLI	3.52	281	ePn	27 42.30	1.5
ITM	4.39	285	ePn	27 52.50	-0.8
S.D. = 1.5		on	9 of	15 obs.	

JAN 15, 1990 03h 19m 44.74± 1.12s
30.688 N ± 4.4km 103.317 E ± 5.0km
DEPTH = 22.1 ± 9.0 km
4.8mb (12 obs.)
SICHUAN PROVINCE, CHINA (307)
ML 4.8 (BJI).

CD2	0.44	60	iPgd	19 54.00	0.2
			Sg	20 01.80	
GYA	5.14	144	iPnd	21 02.20	-0.2
			Pg	21 16.00	
			Sn	22 02.00	
LZH	5.40	5	ePn	21 11.50	5.3X
			eSn	22 10.00	
KMI	5.57	185	Pnc	21 09.50	0.9
Z	10s		3.50um		
E	10s		12.10um		
XAN	5.80	53	Pn	21 10.80	-0.9
			Pg	21 34.20	
			Sn	22 17.00	
			Sg	22 50.20	
GTA	9.16	343	eP	22 02.20	3.4X
E	12s		2.70um		
			eS	23 46.60	
WHN	9.51	88	Pd	22 03.50	0.1
LSA	10.58	268	P	22 18.60	0.1
BTO	11.29	27	eP	22 27.00	-0.9
N	10s		1.80um		
E	10s		1.50um		
SHL	11.31	246	iP	22 27.00	-1.2
			eS	26 18.00	
HHC	12.14	31	eP	22 41.00	1.6
Z	10s		1.30um		
N	10s		1.50um		
CHG	12.47	200	eP	22 44.50	0.7
TIA	12.77	61	eP	22 47.70	-0.1
QIZ	13.03	152	eP	22 50.00	-1.2

BDT	13.95	197	eP	23	10.20	6.9X	
	0.9s	48.40nm			5.3mb		
BJI	14.03	45	eP	23	03.00	-1.3	
	1.0s	0.01nm			1.7mb X		
QZH	14.67	109	eP	23	16.30	3.5X	
NST	15.23	192	eP	23	25.30	5.2X	
WMQ	18.03	321	eP	23	56.00	0.5	
Z	16s	1.00um					
NNT	18.31	191	eP	24	00.00	0.9	
CN2	21.87	47	Pd	24	39.00	1.3	
NDI	22.75	272	eP	24	47.00	0.4	
SNG	23.53	187	eP	24	55.20	1.0	
KSH	23.95	299	P	25	01.00	2.7	
IPM	26.06	185	ePd	25	19.50	1.1	
	0.9s	24.30nm			4.8mb		
HYB	26.12	245	eP	25	18.50	-0.5	
GBA	29.28	240	Pc	25	46.40	-1.2	
	0.8s	2.80nm			4.1mb		
POO	29.30	252	eP	25	46.00	-1.9	
MAIO	36.74	291	iPc	26	53.30	0.9	
			eS	32	48.00		
KEV	56.84	336	eP	29	29.00	-0.5	
SOD	56.97	333	iP	29	34.00	3.5X	
SOD	56.97	333	iP	29	30.20	-0.3	
SUF	57.39	328	iP	29	32.80	-0.7	
	0.7s	7.20nm			4.8mb		
NUR	58.33	325	eP	29	39.00	-1.0	
WB5	58.47	145	iPc	29	41.30	-0.2	
WRA	58.51	145	Pc	29	41.60	-0.2	
	0.8s	22.30nm			5.3mb		
MLR	60.44	308	eP	29	56.00	1.0	
ASPA	61.49	148	iPc	30	01.00	-1.3	
	1.2s	10.00nm			4.8mb		
HFS	63.74	326	eP	30	15.60	-1.1	
	1.0s	14.90nm			5.1mb		
SKO	64.59	305	eP	30	21.00	-1.5	
NB2	64.64	327	P	30	21.20	-1.5	
	0.8s	5.80nm			4.8mb		
KSP	65.10	316	eP	30	26.00	0.3	
CTA	65.20	135	eP	30	26.00	-0.8	
BRG	66.49	316	e(P)	30	34.30	-0.3	
			e	30	40.40		
KBA	68.22	313	e(P)	30	46.00	0.1	
	1.0s	2.20nm			4.3mb		
MBC	70.03	10	eP	30	57.00	0.7	
	1.0s	6.00nm			4.7mb		
INK	72.77	19	ePc	31	13.20	0.4	
LPG	73.04	313	eP	31	15.50	0.3	
	1.0s	10.80nm			4.8mb		
BCAO	83.27	271	ePd	32	11.20	-0.3	
	0.6s	6.00nm			4.9mb		
PNT	91.65	26	eP	32	53.00	1.6	
CCH	163.64	322	PKP	39	45.50	-2.2	
ZOBO	163.65	329	PKPc	39	49.00	0.9	
	1.1s	9.28nm					
LPB	163.87	329	PKP	39	50.00	1.9	
CNCB	164.06	328	PKP	39	50.00	1.6	
S.D. = 1.1 on 48 of 54 obs.							

JAN 15, 1990 04h 13m 31.80± 0.66s
36.065 N ± 7.5km 27.133 E ± 6.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.51	176	ePb	13	42.70	0.5	
			eSb	13	50.90		
ARG	0.82	79	ePb	13	47.20	-0.4	
YER	1.41	41	iPn	13	50.30	-7.3X	
NPS	1.47	238	ePb	13	58.00	-0.4	
APE	1.63	308	ePb	13	59.50	-1.2	
SMG	1.66	352	ePb	14	02.50	1.5	
KSL	1.99	88	ePn	14	06.50	0.7	
ELL	2.34	72	ePn	14	10.00	-1.0	
VAM	2.48	255	ePg	14	17.80	5.0X	
BCK	3.10	62	ePn	14	28.80	7.0X	
VLI	3.45	282	ePn	14	27.00	0.4	
S.D. = 1.1 on 8 of 11 obs.							

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* JAN 15, 1990 04h 17m 13.89± 1.25s
31.691 S ±12.7km 69.298 W ±11.7km
DEPTH = 139.8 ± 16.5 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.55	75	iPd	17	34.20	-0.4	
			eS	17	45.00		
CFA	0.91	85	iPd	17	37.00	-0.2	
JACH	1.48	228	ePd	17	43.50	0.6	
			iS	18	04.00		
FCH	1.83	207	iPc	17	48.20	1.0	
			iS	18	12.50		
ROCH	1.93	228	iP	17	51.50	3.3X	
			iS	18	19.30		
PCH	2.18	208	iP	17	51.50	0.4	
			iS	18	19.30		
TACH	2.40	215	iP	17	53.40	-0.3	
			iS	18	22.00		
CHCH	2.51	207	iPc	17	55.50	0.3	
			iS	18	25.50		
LNV	2.87	218	iPd	17	58.40	-1.4	
			iS	18	30.50		
RFA	3.15	167	iPc	18	03.00	-0.5	
			S	18	39.00		
TCA	4.04	86	ePc	18	15.70	0.5	
CYA	4.44	44	e(P)	18	20.50	0.0	
S.D. = 0.8 on 11 of 12 obs.							

JAN 15, 1990 04h 48m 20.12± 0.60s
36.109 N ± 7.9km 27.151 E ± 5.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.56	178	ePb	48	31.40	0.0	
			eSb	48	40.60		
ARG	0.80	82	ePb	48	34.50	-1.1	
YER	1.37	41	ePn	48	43.30	-2.0	
NPS	1.51	236	ePb	48	46.50	-0.7	
SMG	1.62	351	ePb	48	47.80	-0.9	
APE	1.62	307	ePg	48	50.00	1.2	
KSL	1.97	89	ePn	48	54.00	0.1	
IZM	2.29	2	ePn	48	53.00	-5.5X	
ELL	2.31	73	ePn	48	59.50	0.5	
VAM	2.50	255	ePn	49	02.10	0.6	
KHL	2.91	40	ePn	49	08.00	0.6	
BCK	3.07	63	ePn	49	11.80	2.1	
VLI	3.45	281	ePn	49	13.50	-1.5	
ITM	4.33	286	ePn	49	28.60	1.0	
S.D. = 1.3 on 13 of 14 obs.							

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* JAN 15, 1990 04h 56m 51.77± 1.15s
9.602 S ±11.5km 110.365 E ±13.8km
DEPTH = 33.0km (normal)
4.6mb (4 obs.) 3.4Msz (1 obs.)
SOUTH OF JAVA (282)

TRT	2.93	50	ePd	57	36.60	-0.5	
			iS	58	04.40		
KHKI	5.32	77	ePd	58	10.90	-0.1	
			eS	59	09.20		
			e	01	27.10		
NANU	13.81	160	eP	00	06.70	-0.8	
	0.3s	7.00nm			5.0mb		
			eS	02	31.00		
MBL	14.67	143	iPd	00	17.80	-1.0	
			eS	02	47.00		
MTN	20.62	101	iPc	01	30.00	-1.1	
	0.5s	25.00nm			4.8mb		
WARB	22.58	139	eP	02	04.00	13.2X	
			eS	05	59.00		
COOL	23.43	156	eP	02	13.40	14.4X	
			eS	06	21.00		
WRA	25.33	117	Pc	02	17.10	-0.3	
	0.7s	7.40nm			4.4mb		
WB5	25.33	117	eP	02	19.80	2.4	
ASPA	26.48	125	eP	02	29.40	1.4	
	1.0s	8.00nm			4.3mb		
Z	21s	0.13um			3.4Msz		
			eS	07	33.00		
			LR	12	29.60		
GBA	40.00	305	P	04	25.30	-0.1	
GBA	40.00	305	Pc	04	35.70	10.3X	
	0.6s	3.70nm					
S.D. = 1.3 on 9 of 12 obs.							

JAN 15, 1990 05h 29m 03.45± 0.23s
37.988 N ± 2.8km 118.210 W ± 2.6km
DEPTH = 5.0km (geophysicist)
4.4mb (6 obs.)
CALIFORNIA-NEVADA BORDER REGION (40)
ML 5.0 (BRK), 4.7 (PAS). Felt (IV) at Lee Vining and Mono City, California. Felt (III) at Benton, California.

SVP	0.42	130	iPc	29	12.00	0.0	
PPK	0.61	157	iPc	29	15.70	0.0	
MGM	0.79	134	iPc	29	18.80	-0.6	
TNP	0.79	83	iPc	29	19.10	-0.3	
LCH	0.87	149	iPc	29	20.10	-0.7	
KVN	1.06	5	iPd	29	23.70	-0.4	
MCA	1.53	151	iPc	29	31.50	0.0	
FRI	1.55	231	iPd	29	31.60	-0.2	
CMB	1.72	272	iPc	29	33.70	-0.5	
YMT5	1.77	127	iPc	29	34.90	-0.2	
LSM	1.98	128	iP	29	38.10	0.0	
CLC	2.22	167	iPc	29	40.90	-0.7	
PKEM	2.45	219	eP	29	45.50	0.7	
LLA	2.57	239	ePc	29	47.40	0.9	
			i	29	48.80		
PRI	2.69	228	ePc	29	48.80	0.5	
ARN	2.71	257	eP	29	48.30	-0.2	
PHAM	2.77	220	eP	29	49.00	-0.4	
MHC	2.80	258	ePd	29	50.00	0.1	
			i	29	53.00		
			iSn	30	23.20		
			iSb	30	28.10		
			iSg	30	30.90		
SAO	2.85	246	ePd	29	50.30	-0.2	
			i	29	53.40		
			eSg	30	30.10		
GSC	2.91	157	iPc	29	50.60	-0.8	
ORV	3.01	302	ePc	29	52.00	-0.7	
PRS	3.02	238	iPd	29	54.90	2.1	
GCC	3.16	254	ePc	29	56.50	1.7	
BCH	3.18	209	eP	29	54.70	-0.5	
BKS	3.18	269	iPc	29	54.50	-0.6	
			iSb	30	37.80		
			iSg	30	43.20		
ZSP	3.20	270	ePnc	29	54.70	-0.6	
			ePb	29	58.00		
			iPg	30	00.00		
			iSg	30	43.80		
BRK	3.20	269	ePc	29	55.10	-0.3	
ABL	3.24	195	eP	29	56.50	0.4	
PCC	3.34	263	ePd	29	56.60	-0.8	
MIN	3.54	313	ePc	30	00.00	-0.3	
LTCM	3.77	307	eP	30	04.00	0.5	
BLP	3.85	208	eP	30	04.30	-0.4	
WDC	4.24	309	ePc	30	09.20	-0.9	
LBFM	4.39	321	eP	30	13.00	0.4	
DUG	4.74	61	eP	30	17.30	-0.2	
PLM	4.75	166	eP	30	17.00	-0.7	
MSU	4.78	82	eP	30	17.40	-0.7	
DAU	5.92	64	eP	30	35.10	0.9	
PTI	6.60	41	eP	30	45.50	1.7	
BW06	8.15	51	eP	31	06.00	0.5	
LRM	8.92	27	eP	31	17.60	1.4	
LON	9.15	344	eP	31	22.20	3.1X	
ALQ	9.94	104	eP	31	31.70	1.5	
	1.0s	50.00nm			6.0mb X		
			pP	32	11.80		
			sP	34	20.00		
GOL	10.16	76	eP	31	35.50	2.2	
PNT	11.37	355	eP	31	52.00	2.5	
RSSD	12.32	56	eP	32	00.00	-2.7	
SES	13.42	20	eP	32	17.00	0.0	
EDM	15.60	11	ePc	32	45.00	-0.6	
MEO	16.12	95	eP	32	56.00	3.6X	
SIO	17.67	91	e(P)	33	14.10	2.2	
TUL	18.03	90	eP	33	19.60	3.2X	
	1.0s	15.70nm			4.1mb		
Z	19s	0.40um			4.0Msz		
			LR	38	30.00		
FFC	20.06	28	iPd	33	37.70	-2.5	
	0.7s	13.00nm			4.4mb		
OLY	21.55	88	eP	33	55.50	-0.2	
RSON	21.60	46	eP	33	53.80	-2.3	
	1.3s	27.03nm			4.5mb		
FVM	21.87	81	eP	33	58.30	-0.6	
PMR	30.41	331	eP	35	19.30	0.8	
	1.0s	11.25nm			4.7mb		
INK	31.53	349	eP	35	27.50	-0.8	
MBC	38.35	360	eP	36	27.00	0.5	
	0.8s	4.00nm			4.2mb		
FRB	39.07	33	eP	36	32.00	-0.6	
ZOBO	71.56	129	eP	40	30.00	1.6	
Z	24s	0.08um			3.9MszX		
			LR	07	18.00		
HFS	74.54	23	eP	40	43.30	-1.3	
	1.0s	16.40nm			5.0mb		
ZST	85.43	28	eP	41	42.70	-0.4	

15d 05h

SRO 86.20 28 eP 41 47.40 0.5
S.D. = 1.1 on 60 of 63 obs.

JAN 15, 1990 05h 57m 18.45± 0.74s
68.460 N ± 6.4km 147.815 W ± 7.5km
DEPTH = 10.0km (geophysicist)
ALASKA (676)
ML 3.3 (PMR).

IMA	3.31	226	eP	58 10.30	-1.1
GLM	3.49	177	eP	58 14.06	0.1
FBA	3.58	180	eP	58 15.00	-0.1
RDS	3.65	182	eP	58 15.96	-0.3
CCB	3.83	180	eP	58 18.34	-0.4
HDA	4.09	175	eP	58 22.51	0.2
BRW	4.20	317	eP	58 24.30	0.4
DDM	4.76	169	eP	58 31.89	-0.1
MCK	4.77	186	eP	58 31.80	-0.3
DOT	5.07	161	eP	58 36.09	-0.2
RND	5.09	185	eP	58 35.95	-0.7
INK	5.29	85	eP	58 39.00	-0.3
DWY	5.57	139	P	58 42.90	-0.4
PAX	5.60	169	eP	58 43.46	-0.4
TOA	6.42	173	eP	58 57.20	1.8
PMS	7.28	187	eP	59 09.10	1.6

S.D. = 0.8 on 16 of 16 obs.

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* JAN 15, 1990 06h 18m 00.13± 0.62s
48.784 S ±13.2km 122.324 E ±17.2km
DEPTH = 10.0km (geophysicist)
4.6mb (5 obs.) 4.0Msz (1 obs.)
SOUTH OF AUSTRALIA (437)

CMS	24.77	54	eP	23 23.00	-0.1
ASPA	26.69	24	eP	23 40.50	-0.6
	1.1s		13.00nm	4.5mb	
	Z 21s		0.45um	4.0Msz	
			LR	32 58.50	
RMQ	30.28	52	eP	24 14.00	0.5
WRA	30.36	23	P	24 16.00	1.8
	1.3s		8.60nm	4.4mb	
WB5	30.42	23	eP	24 14.50	-0.3
CTA	34.48	42	iP	24 49.60	-0.6
	1.1s		31.65nm	5.1mb	
SPA	41.41	180	iPd	25 48.60	0.6
	1.1s		25.00nm	4.9mb	
GBA	73.72	314	Pd	29 35.60	-0.3
	0.9s		4.80nm	4.5mb	
HYB	76.53	317	eP	29 52.00	-0.1
MBC	143.45	21	ePKP	37 31.00	-3.9X
	1.2s		9.00nm		
SES	145.98	67	ePKP	37 40.00	0.0
MEO	146.86	100	iPKPd	37 40.50	-1.4
DAG	148.04	344	iPKPd	37 43.50	1.0
	1.1s		20.25nm		
SIO	148.93	100	ePKP	37 46.50	1.4
TUL	149.36	100	e(PKP)	37 44.00	-1.8
	0.9s		21.60nm		
			e	37 48.00	
FFC	152.32	61	ePKP	37 54.00	4.4X
	1.2s		21.00nm		

S.D. = 1.1 on 14 of 16 obs.

? JAN 15, 1990 06h 40m 56.56± 3.45s
79.728 N ±44.5km 3.205 E ±12.1km
DEPTH = 33.0km (normal)
3.6mb (1 obs.)
GREENLAND SEA (640)
MD 2.8 (BER).

KBS	1.82	112	iPc	41 26.00	0.0
			eS	41 40.00	
DAG	5.35	248	iPd	42 16.00	0.0
	0.4s		23.73nm	5.0mb X	
DAG	5.35	248	iPc	43 10.50	54.5X
	0.4s		33.90nm		
KEV	11.65	136	eP	43 49.00	5.8X
SOD	13.87	140	eP	44 11.00	-1.6
SUF	18.33	145	eP	45 11.40	2.0
NRA0	19.25	168	Pn	45 20.60	0.1
HFS	19.95	165	eP	45 27.60	-0.5
	0.5s		1.70nm	3.6mb	

S.D. = 1.5 on 6 of 8 obs.

JAN 15, 1990 07h 15m 48.08± 0.77s
36.091 N ± 8.0km 27.158 E ± 7.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.54	179	ePg	15 58.90	-0.1
ARG	0.79	81	ePb	16 02.90	-0.6
YER	1.38	41	ePn	16 11.10	-2.3
NPS	1.51	237	ePb	16 14.50	-0.6
APE	1.63	307	ePb	16 17.60	0.6
SMG	1.63	351	ePb	16 17.60	0.7
KSL	1.96	88	ePb	16 23.00	1.3
ELL	2.31	73	ePn	16 28.00	1.1

S.D. = 1.4 on 8 of 8 obs.

JAN 15, 1990 08h 08m 26.62± 0.58s
45.824 N ± 6.2km 14.654 E ± 4.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.2 (LJU), 2.8 (KBA). Felt (V) in the Velike Losce area.

CEY	0.18	242	iPgd	08 30.90	0.2
			iSg	08 33.90	
LJU	0.23	339	iPgd	08 31.00	-0.7
			iSg	08 34.00	
RIY	0.52	201	iPg	08 36.80	-0.3
			iSn	08 45.50	
VBY	0.53	127	ePgc	08 37.50	0.2
			iSg	08 45.20	
VOY	0.57	292	iPgd	08 37.50	-0.7
			eSg	08 46.50	
TRI	0.63	260	P	08 38.60	-0.7
			eSn	08 47.00	
PTJ	0.91	85	iPgc	08 43.90	-0.3
			i(Sg)	08 54.50	
ZAG	0.93	90	iPg	08 44.50	0.1
			i(Sn)	09 01.00	
FVI	1.51	301	P	08 56.10	2.4
			eSn	09 18.00	
KBA	1.55	325	iPgc	08 54.10	-0.3
			iSg	09 14.30	
KHC	3.39	348	ePn	09 31.60	11.0X
			e	10 18.80	
SPC	5.07	46	ePn	10 07.80	23.2X
			e(Sg)	10 27.00	

S.D. = 1.0 on 10 of 12 obs.

? JAN 15, 1990 09h 50m 19.54± 1.29s
4.235 S ±15.4km 127.051 E ±21.0km
DEPTH = 10.0km (geophysicist)
4.5mb (3 obs.)
BANDA SEA (280)

TLE	5.85	104	ePc	51 47.80	-0.6
MTN	9.46	155	eP	52 39.00	0.1
WB5	17.11	156	eP	54 18.80	-1.7
WRA	17.15	156	Pc	54 19.70	-1.4
	0.6s		5.50nm	3.9mb	
ASPA	20.42	162	eP	55 00.70	1.0
	1.2s		33.00nm	4.6mb	
CTA	24.46	132	iPd	55 41.20	1.3
	1.6s		71.67nm	5.1mb	
BWA	36.00	149	eP	57 25.60	2.8X
CAN	37.00	149	eP	57 33.00	1.8
LZH	45.62	333	P	58 41.50	-0.6

S.D. = 1.5 on 8 of 9 obs.

& JAN 15, 1990 10h 02m 36.91s
58.912 N 152.698 W
DEPTH = 65.5km
KODIAK ISLAND REGION (13)
<AGS-P>.

AUE	0.57	323	eP	02 49.62	-0.6
			eS	02 58.26	
AUL	0.61	321	eP	02 49.94	-0.7
XLV	0.74	42	eP	02 51.48	-0.7
			eS	03 00.79	
CNPM	0.97	50	eP	02 54.59	-0.5
PDB	1.17	320	iP	02 56.41	-1.2
KDC	1.17	175	eP	02 58.00	0.3
NNL	1.34	32	eP	03 00.17	0.2
			eS	03 17.03	
RED	1.51	359	eP	03 01.31	-1.1
			eS	03 19.57	
RDT	1.67	5	eP	03 03.61	-1.0
SLKM	2.03	37	eP	03 08.36	-1.2
SEW	2.04	53	eP	03 07.89	-1.7
CKL	2.30	4	eP	03 12.79	-0.5
SPU	2.30	8	eP	03 12.75	-0.5
SVW	2.65	328	ePc	03 16.50	-1.6
PMS	2.82	33	eP	03 19.50	-1.1
PMR	3.22	32	eP	03 24.40	-1.8
TTA	4.34	340	eP	03 40.50	-1.5
TOA	4.54	42	eP	03 43.60	-1.2
FBA	6.44	19	eP	04 08.00	-3.2

19 obs. associated

? JAN 15, 1990 10h 12m 20.30± 1.00s
45.866 N ±13.4km 14.652 E ± 9.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

LJU	0.20	335	iPgd	12 25.00	0.4
			e(Sg)	12 29.00	
			i	13 00.00	
VOY	0.55	288	ePg	12 31.30	-0.3
			e(Sg)	12 41.00	
VBY	0.56	130	e(Pg)	12 32.00	0.4
			eSg	12 38.90	
			i	12 42.40	
PTJ	0.91	87	ePg	12 37.40	-0.4
			eSg	12 48.50	

S.D. = 0.8 on 4 of 4 obs.

JAN 15, 1990 10h 16m 51.47± 0.45s
53.865 N ± 4.9km 131.345 W ± 3.9km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
QUEEN CHARLOTTE ISLANDS REGION (22)
Felt at Prince Rupert, British Columbia. Also felt in the northern part of Graham Island.

MSTB	0.48	287	Pc	17 02.10	0.9
BNAB	0.56	131	Pc	17 02.70	-0.2
			S	17 10.20	
SKB	0.73	212	Pd	17 05.90	0.1
PCB	0.74	258	Pd	17 05.30	-0.8
RUB	0.78	53	Pd	17 07.00	0.4
CWB	0.81	209	Pd	17 07.20	0.0
VIB	0.94	230	Pd	17 09.30	-0.2
NDB	0.95	276	P	17 10.00	0.4
LIB	1.08	292	P	17 11.60	-0.2
BNB	1.31	191	P	17 15.50	-0.3
BBB	2.58	129	Pc	17 32.60	-1.3
SIT	3.92	326	eP	17 52.10	-0.8
FSB	4.17	79	P	17 55.00	-1.5
EDB	4.78	145	P	18 04.79	-0.4
BTB	5.70	138	P	18 17.66	-0.7
PNT	8.60	117	eP	19 06.00	7.1X
LON	9.37	136	e(P)	19 12.50	3.0
SES	12.94	97	eP	19 59.00	1.0
INK	14.53	357	eP	20 19.00	0.3
IMA	16.44	327	eP	20 48.90	5.3X
FFC	17.11	75	eP	20 42.00	-10.0X
MBC	22.93	7	eP	22 00.50	4.4X
	0.8s		2.00nm	3.7mb	

S.D. = 1.1 on 18 of 22 obs.

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* JAN 15, 1990 10h 41m 48.48± 2.53s
37.864 N ±12.8km 20.158 E ±22.0km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
MD 3.3 (ATH).

VLS	0.46	47	ePg	41 58.00	0.1
ITM	1.56	115	ePb	42 16.40	0.0
VLI	2.49	116	ePg	42 40.50	10.8X
KZN	2.74	27	ePn	42 34 60	1.2
OHR	3.28	8	ePn	42 41.00	0.0
GRG	3.54	29	eP	42 44.00	-0.7
KNT	3.92	32	eP	42 49.30	-0.7
DST	6.85	73	iPn	44 02.40	31.0X

S.D. = 0.9 on 6 of 8 obs.

? JAN 15, 1990 10h 45m 00.84± 0.94s
39.033 N ± 8.2km 27.915 E ±10.9km
DEPTH = 5.0km (geophysicist)
TURKEY (366)

DST	0.80	44	iPg	45 16.40	-0.4
			iSg	45 30.40	
IZM	0.81	219	ePg	45 17.00	-0.1
			eSg	45 31.00	
BNT	1.32	0	ePn	45 26.00	0.3

KHL 1.44 119 ePn 45 28.00 0.2
YLV 1.90 36 iPn 45 37.80 3.5X
S.D. = 0.5 on 4 of 5 obs.

JAN 15, 1990 11h 08m 04.84± 0.38s
10.092 N ± 6.5km 126.385 E ± 8.3km
DEPTH = 45.3km (2 depth phases)
5.1mb (14 obs.)
PHILIPPINE ISLANDS REGION (248)

QCP 6.88 312 eP 09 35.80 -9.9X
BAG 8.45 319 eP 10 06.00 -1.7
MNI 8.73 190 eP 10 14.50 3.1X
TSM 10.10 235 eP 10 33.00 2.7
KKM 10.84 249 eP 10 42.50 2.0
SSE 21.45 348 Pd 12 52.60 1.3
0.8s 76.00nm 5.1mb
i 13 03.20 41km
i 13 21.20
MTN 23.27 168 eP 13 08.00 -1.4
IPM 25.73 260 ePc 13 34.40 1.4
0.9s 60.00nm 5.1mb
KNA 25.78 175 eP 13 33.00 -0.4
NST 26.17 285 eP 13 38.00 0.9
BDT 27.52 288 eP 13 51.70 2.4
CHG 27.92 291 eP 13 53.50 0.5
PMG 28.33 132 eP 13 57.00 0.3
MAT 28.43 20 (P) 13 57.00 -0.4
WB5 30.80 165 eP 14 16.60 -2.1
WRA 30.86 165 Pc 14 17.10 -2.1
1.0s 11.20nm 4.6mb
LZH 32.99 325 P 14 36.00 -1.9
1.4s 25.00nm 4.9mb
pP 14 55.50 83kmX
ASPA 34.35 168 iPd 14 48.10 -1.5
0.4s 19.00nm 5.4mb
eS 20 10.70
CTA 35.80 147 iPd 15 02.30 0.2
0.8s 9.33nm 4.8mb
WARB 36.06 180 Pd 15 04.10 0.0
0.3s 14.00nm 5.4mb
MRWA 40.34 194 eP 15 39.20 -0.7
FORR 40.74 178 iPd 15 42.20 -0.8
0.4s 88.00nm 5.9mb
COOL 41.05 187 eP 15 44.70 -1.0
BAL 41.52 193 eP 15 49.00 -0.5
KLB 42.26 191 iPc 15 55.00 -0.6
MUN 42.95 193 eP 16 00.50 -0.7
NWAO 43.66 191 eP 16 06.00 -0.9
STK 44.20 161 iPd 16 13.00 1.7
i 16 26.20 49km
RKG 44.81 191 iPc 16 20.30 4.1X
BRS 45.20 146 iPc 16 19.80 0.3
e 18 09.00 624kmX
i 22 39.00
ADE 46.31 166 iPd 16 28.50 0.4
0.7s 31.51nm 5.4mb
HYB 46.93 284 eP 16 31.50 -1.8
GBA 47.97 279 P 16 39.90 -1.6
BWA 48.96 156 iPd 16 50.80 1 9
e 23 19.30
CAN 49.97 156 eP 16 57.50 0.9
CNB 50.12 155 iPd 16 58.80 1.1
DZM 50.65 129 iPd 17 03.30 1.3
POO 51.44 286 eP 17 07.00 -1.1
MAIO 65.49 305 eP 18 45.00 -1.0
FBA 79.16 26 eP 20 07.50 1.3
INK 84.41 22 ePd 20 35.30 1.9
SUF 85.76 333 iP 20 39.90 -0.4
0.5s 5.50nm 5.0mb
MBC 85.86 13 eP 20 42.50 1.9
0.9s 13.00nm 5.1mb
NUR 87.01 331 iP 20 46.00 -0.4
0.7s 13.30nm 5.3mb
HFS 92.26 332 eP 21 09.20 -1.9
0.4s 1.80nm 4.9mb
NB2 92.97 334 P 21 12.60 -1.9
0.8s 3.60nm 4.9mb
CNCB 164.52 117 PKP 28 08.00 1.9
LPB 164.53 116 (PKP) 28 06.00 0.0
ZOBO 164.60 115 PKP 28 07.00 0.8
1.2s 6.76nm
S.D. = 1.4 on 46 of 49 obs.

JAN 15, 1990 11h 11m 05.22± 0.22s
47.271 N ± 5.2km 153.537 E ± 3.9km
DEPTH = 51.6km (10 depth phases)
4.9mb (41 obs.)
KURIL ISLANDS (221)

MAT 15.63 232 iPc 14 40.40 -3.1X
0.9s 63.87nm 4.8mb
SHK 20.18 238 iP 15 38.50 0.5
1.0s 92.00nm 5.1mb
TTA 31.84 42 ePd 17 27.00 0.0
e 19 47.80
SVW 31.90 45 eP 17 28.20 0.7
e 19 48.50
IMA 33.22 36 ePd 17 38.90 -0.1
0.8s 8.60nm 4.7mb
e 19 55.20
BRW 33.37 27 eP 17 40.30 0.3
KDC 33.60 52 eP 17 41.20 -1.0
PMS 34.84 45 eP 17 52.90 0.0
FBA 35.57 39 ePd 18 00.00 1.0
LZH 38.16 271 eP 18 20.00 -1.3
1.4s 47.00nm 5.2mb
i 18 41.50 91kmX
INK 41.06 33 iPd 18 45.50 0.9
MBC 44.01 20 ePd 19 09.30 0.7
0.5s 5.00nm 4.5mb
KMI 45.62 259 Pc 19 22.50 0.1
CHG 52.52 257 eP 20 16.00 0.6
0.9s 17.86nm 5.1mb
CHTO 52.52 257 eP 20 15.90 0.5
pP 20 30.30 54km
PNT 54.67 53 eP 20 30.00 -0.9
0.8s 14.00nm 5.0mb
GUN 55.24 275 P 20 34.80 -1.0
KKN 55.73 275 P 20 38.00 -1.1
EDM 55.75 47 eP 20 38.00 -0.7
0.7s 28.00nm 5.4mb
PKI 55.78 275 P 20 38.40 -1.2
DMN 55.96 275 P 20 40.60 -0.2
GKN 56.03 276 P 20 40.40 -0.8
0.4s 17.00nm 5.4mb
WDC 58.03 63 ePd 20 55.20 0.2
e 21 05.50 34kmX
SES 58.57 48 ePc 20 57.80 -0.9
ORV 59.29 64 e(P) 21 03.20 -0.6
FFC 60.15 40 iPc 21 09.20 -0.3
0.8s 12.00nm 5.1mb
FFC 60.15 40 eP 21 20.00 10.5X
0.7s 14.00nm
LRM 60.65 53 ePc 21 13.20 -0.1
CMB 60.92 64 eP 21 15.00 0.0
e 21 25.80 36kmX
KVN 61.67 62 eP 21 19.80 -0.4
e 21 32.00 42km
PTI 62.57 56 P 21 26.00 -0.1
TNP 62.82 63 P 21 27.20 -0.7
0.8s 5.88nm 4.8mb
BW06 64.20 54 P 21 36.00 -0.9
0.8s 5.43nm 4.6mb
FRB 64.46 19 ePd 21 36.50 -1.5
DAU 64.81 57 P 21 41.10 0.1
RSSD 66.27 50 P 21 49.40 -0.8
HYB 67.28 271 eP 21 53.00 -3.7X
CTA 67.36 187 iPd 21 56.00 -0.9
1.0s 12.00nm 4.9mb
NB2 67.83 341 P 21 58.70 -0.8
0.9s 18.90nm 5.1mb
HFS 68.07 340 eP 21 59.60 -1.4
0.4s 19.00nm 5.5mb
Z 16s 0.27um 4.6MszX
LR 53 12.00
GOL 68.60 54 P 22 05.20 0.2
0.8s 4.46nm 4.5mb
WB5 69.03 199 eP 22 06.90 -0.4
WRA 69.10 199 P 22 08.00 0.2
1.2s 12.70nm 4.7mb
POO 69.69 276 eP 22 11.00 -0.6
DZM 69.99 167 iPc 22 13.20 0.0
GBA 70.72 269 P 22 17.00 -0.8
ALQ 71.32 59 iPd 22 22.10 0.6
0.7s 3.42nm 4.4mb
SCH 72.74 23 eP 22 29.00 -0.4
ASPA 72.79 199 iPc 22 30.60 0.6
0.8s 29.00nm 5.3mb
epP 22 45.80 54km
RMO 73.54 184 iPc 22 36.00 1.8
KRA 75.10 331 iPc 22 42.60 -0.4
0.7s 34.00nm 5.4mb
KSP 75.56 334 iPd 22 44.70 -1.0
SPC 75.74 330 eP 22 46.20 -0.8
EKA 75.90 347 P 22 47.00 -0.5
0.6s 6.30nm 4.7mb
CLL 76.11 336 iPd 22 48.20 -0.5
1.0s 51.00nm 5.4mb
e 23 02.00 48km
VRI 76.19 325 ePc 22 48.50 -0.8
BRG 76.23 335 iP 22 48.80 -0.6
0.9s 14.00nm 4.9mb
SIO 76.41 52 eP 22 50.80 0.1
TUL 76.56 51 iP 22 51.40 -0.1
1.2s 10.90nm 4.7mb
e 23 11.80 76kmX
MLR 76.81 325 ePc 22 53.50 0.6
KAS 76.84 318 iPc 22 54.20 1.1
PRU 76.85 334 Pd 22 52.60 -0.3
e 32 25.50
e 33 24.00
Sg 33 31.50
SRO 77.58 331 i(P) 22 57.50 0.6
ZST 77.64 332 iP 22 57.80 0.5
KHC 77.90 334 iPd 22 59.00 0.3
i 23 14.00 53km
WET 78.09 335 iP 23 00.30 0.5
BZS 78.33 328 eP 23 00.50 -0.6
MEM 78.56 340 P 23 20.50 18.2X
e 24 18.40 243kmX
TOD 78.79 337 eP 23 03.44 -0.2
ABH 78.86 338 eP 23 03.75 -0.3
DOU 79.37 340 Pc 23 06.80 0.1
e 23 21.70 52km
KBA 79.80 334 iPc 23 08.90 -0.4
1.0s 33.40nm 5.2mb
i 23 23.80 52km
PTJ 80.03 331 eP 23 09.40 -1.0
CDF 80.28 338 eP 23 11.90 0.1
0.8s 16.10nm 5.0mb
FVI 80.41 334 P 23 12.50 0.2
FEL 80.59 337 eP 23 13.29 -0.1
OGA 80.68 335 iPc 23 14.90 0.9
1.1s 19.00nm 4.9mb
i 23 30.00 53km
HAU 80.90 338 eP 23 15.00 0.1
0.8s 11.80nm 4.9mb
BSF 80.94 338 eP 23 15.30 0.0
0.8s 9.10nm 4.8mb
SKO 81.52 326 iP 23 18.00 -0.2
i 23 33.20 53km
VAY 81.64 325 eP 23 18.70 -0.1
LFK 81.81 314 iP 23 20.80 0.9
LOR 82.19 340 eP 23 21.70 0.0
0.8s 9.90nm 4.9mb
VAI 82.23 336 P 23 23.50 1.7
ELL 82.34 318 eP 23 23.00 0.2
LBF 82.43 340 eP 23 23.00 0.0
0.8s 5.30nm 4.6mb
SSF 82.47 340 eP 23 23.20 0.1
1.0s 12.00nm 4.9mb
OHR 82.51 326 eP 23 22.00 -1.5
1.0s 0.05nm 2.5mb X
e 23 37.70 55km
AVF 82.76 340 eP 23 24.90 0.3
1.0s 14.00nm 4.9mb
SMF 82.78 339 eP 23 25.10 0.4
1.2s 32.70nm 5.2mb
8O8 83.05 335 P 23 28.00 1.8
BGF 83.10 340 eP 23 27.20 0.8
LPG 83.12 337 eP 23 27.70 0.8
0.8s 13.40nm 5.0mb
ARV 83.15 332 P 23 31.00 4.3X
PGD 83.19 333 P 23 29.50 2.4
CRE 83.34 333 P 23 26.00 -1.8
PLDF 83.47 339 P 23 44.10 15.7X
MAF 83.48 340 eP 23 29.00 0.7
1.0s 18.00nm 5.1mb
TCF 83.50 340 eP 23 28.70 0.3
1.0s 8.00nm 4.7mb
AGO 83.50 340 P 23 44.17 15.7X
BNI 83.55 337 P 23 29.00 0.1
LSF 83.69 341 eP 23 29.70 0.3
1.2s 20.80nm 5.0mb
PYM 83.82 340 P 23 46.68 16.5X
DOI 83.91 336 P 23 29.50 -1.1
MNS 84.23 332 P 23 34.00 1.8
LBL 84.25 339 P 23 48.12 16.0X
AZI 84.34 331 P 23 34.00 1.3
SDI 84.47 331 P 23 33.50 0.1

15d 11h

FRF 84.94 337 eP 23 37.00 1.3
1.0s 8.00nm 4.8mb
LRG 85.12 337 eP 23 37.40 0.8
0.8s 13.40nm 5.1mb
LMR 85.19 337 eP 23 37.60 0.7
0.8s 5.30nm 4.7mb
MGR 85.28 329 P 23 37.00 -0.4
LPB 134.05 62 ePKP 30 22.00 2.9X
CNCB 134.34 63 PKP 30 21.20 1.4
S.D. = 0.8 on 104 of 114 obs.

JAN 15, 1990 12h 42m 25.91± 0.25s
24.403 N ± 3.9km 122.147 E ± 4.1km
DEPTH = 24.8km (5 depth phases)
5.1mb (24 abs.)
TAIWAN REGION (243)
Felt (III JMA) at Ilan, Suao and Taipei; (II JMA) at Hsinchu and Hualien; (I JMA) at Keelung and Taichung.

TWC 0.34 307 iPc 42 36.30 2.8
eS 42 40.10
TWD 0.60 238 iPd 42 38.10 0.4
eS 42 44.80
TWZ 0.86 323 iPd 42 44.80 2.6
eS 42 56.40
ANP 0.97 324 iPc 42 46.00 2.1
TWQ 1.20 264 iPd 42 48.70 1.5
eS 43 02.00
TWF1 1.30 217 eP 42 50.90 2.3
TWG 1.86 212 eP 42 59.20 2.6
TWK 1.89 234 eP 42 59.10 1.9
TWM1 2.23 226 eP 43 04.80 2.8
QZH 3.28 280 Pc 43 15.60 -1.2
S 43 51.30
SSE 6.72 353 Pc 44 05.50 0.0
0.5s 0.71nm 3.9mb X
Z 14s 5.20um 4.4Msz
HKC 7.62 256 iP 44 16.70 -1.5
iS 45 39.00
BAG 8.09 191 eP 44 24.50 -0.4
NJ2 8.15 340 Pc 44 24.40 -1.2
Z 14s 7.10um
S 45 54.60
GZH 8.17 263 P 44 24.50 -1.4
Z 16s 7.40um
MCO 8.22 256 eP 44 24.40 -2.1
WHN 9.24 313 Pc 44 38.00 -2.6
Z 14s 7.10um
S 46 21.00
QCP 9.77 186 eP 44 37.20 -10.7X
KAGJ 10.27 47 P 44 57.20 2.4
KUMJ 11.13 41 eP 45 11.10 4.6X
SHNJ 12.44 37 eP 45 27.80 3.5X
TIA 12.54 341 eP 45 24.80 -0.8
Z 14s 4.70um
QIZ 12.62 247 eP 45 32.40 5.7X
N 17s 4.00um
E 18s 3.70um
eS 47 40.40
GYA 14.14 282 P 45 46.00 -0.9
DL2 14.47 358 eP 45 53.00 2.1
0.9s 0.10nm 2.4mb X
Z 15s 1.80um 4.8MszX
E 14s 4.40um
sP 46 10.00
sS 48 51.00
XAN 15.00 313 P 45 57.40 -0.7
pP 46 06.70
TIY 15.65 330 eP 46 07.60 1.2
N 11s 3.91um
E 14s 5.48um
TSRJ 16.32 44 eP 46 24.50 9.6X
BJI 16.38 344 eP 46 19.00 3.3X
N 14s 2.58um
E 13s 3.26um
SNY 17.42 4 iPc 46 32.60 3.8X
Z 12s 3.70um
N 10s 2.00um
E 11s 0.90um
pP 46 41.00
CD2 17.52 296 eP 46 29.40 -0.8
Z 16s 4.50um
KMI 17.64 276 Pd 46 34.50 2.6
Z 15s 14.20um
MTMJ 18.12 44 P 46 39.50 1.8

MAT 18.36 45 (P) 46 40.00 -0.5
1.1s 16.46nm 4.1mb
eS 50 15.00
CHJJ 18.59 47 eP 46 44.00 0.7
HHC 18.64 334 P 46 46.60 2.6
Z 18s 4.80um
N 13s 3.30um
E 13s 1.70um
pP 46 55.00
S 50 08.00
SS 50 27.00
BTO 19.08 331 eP 46 50.00 0.6
N 13s 5.00um
E 13s 2.80um
pP 46 55.00 19km
PP 47 07.50
KKM 19.12 198 eP 46 55.00 5.0X
KAKJ 19.47 49 eP 46 49.50 -4.4X
CN2 19.54 7 P 46 55.00 0.4
Z 13s 3.00um
N 11s 1.30um
E 11s 1.00um
pP 47 02.00 28km
S 50 30.00
LZH 19.60 311 Pc 46 55.50 0.0
1.2s 0.12nm 2.1mb X
Z 20s 6.90um 6.4MszX
pP 47 02.50 27km
sS 50 48.00
LOE 20.29 254 eP 47 03.50 0.8
TSM 20.44 192 eP 47 03.90 -0.4
MDJ 21.06 15 eP 47 13.20 2.8
Z 15s 2.60um 4.7MszX
E 13s 2.40um
PP 47 34.80
OFUJ 22.06 44 eP 47 17.50 -3.1X
CHG 22.26 260 ePd 47 24.00 1.2
1.0s 65.00nm 5.0mb
NST 22.41 251 eP 47 26.40 2.3
BDT 22.75 256 eP 47 28.90 1.4
GUMO 23.99 113 eP 47 45.00 5.4X
eS 52 27.00
GTA 24.06 314 eP 47 40.60 0.3
1.2s 0.10nm 2.2mb X
Z 16s 3.50um 4.9MszX
E 13s 3.30um
LSA 28.06 288 iPc 48 20.00 2.0
IPM 28.31 229 ePd 48 20.00 0.1
PSI 31.12 230 ePc 48 42.50 -2.3
e 51 00.00
GUN 32.67 284 P 48 58.00 -0.8
PKI 33.10 283 P 49 01.40 -1.1
0.8s 41.00nm 5.4mb
KKN 33.20 284 P 49 02.20 -1.1
DMN 33.36 284 P 49 03.90 -0.8
GKN 33.76 284 P 49 06.60 -1.5
WMQ 34.14 313 eP 49 11.00 -0.1
Z 12s 2.80um 5.2MszX
E 11s 1.90um
MTN 38.05 166 eP 49 41.00 -3.2X
e 49 56.00 59kmX
LAT 39.24 139 eP 49 56.00 1.7
NDI 40.24 286 iPd 50 02.50 0.0
HYB 41.18 269 eP 50 10.00 -0.4
KSH 41.51 303 P 50 15.00 2.1
PMG 41.54 141 eP 50 14.00 0.9
GBA 43.45 264 P 50 28.20 -0.6
POO 45.15 272 eP 50 41.50 -1.1
WB5 45.60 164 eP 50 45.20 -0.8
i 50 51.20 20km
WRA 45.65 164 Pd 50 46.00 -0.4
0.7s 7.80nm 4.7mb
QUE 49.00 290 eP 51 09.20 -3.7X
ASPA 49.12 166 eP 51 13.80 0.2
CTA 50.07 150 iPd 51 21.20 0.3
1.0s 50.00nm 5.5mb
eS 59 02.00
WARB 50.48 175 eP 51 21.00 -2.9
MAIO 54.51 298 eP 51 55.00 0.8
eS 59 36.00
FORR 55.23 174 eP 51 57.00 -2.2
RMO 56.75 151 iPd 52 11.00 0.8
1.0s 98.00nm 5.8mb
STK 58.97 161 eP 52 27.00 1.3
BRS 59.37 148 eP 52 26.00 -2.6
ADE 61.10 164 e(P) 52 32.60 -7.7X
DZM 63.14 133 iPc 52 54.80 0.6

BWA 63.60 156 eP 52 58.70 1.7
BRW 64.26 21 eP 53 00.10 -0.7
CAN 64.61 156 eP 53 05.00 1.4
TTA 64.88 30 ePc 53 05.20 0.1
SVW 65.23 32 eP 53 08.00 0.7
IMA 65.62 26 eP 53 09.00 -0.9
0.8s 6.80nm 4.8mb
FBA 68.21 27 eP 53 25.30 -0.8
PMR 68.25 31 eP 53 25.20 -1.2
0.5s 9.20nm 5.2mb
KEV 69.10 338 eP 53 33.00 1.5
TOA 69.51 30 ePc 53 35.00 0.7
SOD 69.82 336 iP 53 34.20 -1.8
i 53 52.20 67kmX
SUF 71.29 331 eP 53 43.50 -1.4
0.5s 9.20nm 5.1mb
NUR 72.65 329 iP 53 54.10 1.1
0.8s 17.60nm 5.1mb
i 54 05.30 37kmX
INK 72.69 22 eP 53 52.00 -1.2
0.7s 25.00nm 5.4mb
MBC 72.85 13 eP 53 52.50 -1.6
0.4s 3.00nm 4.7mb
KAS 73.15 308 eP 53 56.00 -0.5
BBTK 74.35 307 eP 54 02.00 -1.6
DAG 76.30 351 iPd 54 11.30 -2.6
0.8s 7.46nm 4.8mb
VRI 76.48 314 ePc 54 14.50 -0.9
ec 58 42.50
MLR 77.13 314 ePc 54 19.00 -0.2
ELL 77.52 305 eP 54 19.00 -2.5
HFS 77.80 331 eP 54 22.50 0.1
0.5s 6.40nm 4.9mb
Z 17s 1.83um 5.5MszX
LR 26 30.00
NB2 78.44 332 P 54 25.40 -0.6
0.7s 9.00nm 4.9mb
KSP 80.80 322 ePc 54 38.50 -0.3
VAY 81.03 311 eP 54 38.70 -1.5
SKO 81.52 312 eP 54 41.80 -1.0
PRU 82.20 322 eP 54 45.00 -1.1
e 55 08.30 87kmX
OHR 82.33 312 eP 54 44.50 -2.6
CLL 82.40 323 eP 54 49.00 1.8
KHC 83.16 321 P 54 51.00 -0.2
e 55 06.50 54kmX
PTJ 83.31 318 eP 54 51.20 -0.9
KBA 84.31 319 e(P) 54 54.00 -3.3X
0.8s 6.40nm 4.9mb
i 55 03.70 31km
FVI 84.89 319 P 55 06.00 6.1X
TDS 86.02 312 P 55 06.50 0.8
SGO 86.28 313 P 55 07.50 0.6
MGR 86.32 313 P 55 03.00 -4.2X
PGC 86.69 37 eP 55 10.00 1.2
SDI 86.70 315 P 55 09.50 0.4
AZI 86.80 315 P 55 10.00 0.5
PGD 86.92 317 P 55 11.00 0.7
PNT 88.37 35 eP 55 17.00 0.0
EDM 88.98 30 iPc 55 20.10 0.3
LPG 89.02 321 eP 55 19.60 -0.9
1.0s 10.80nm 5.1mb
LBF 89.73 323 eP 55 22.90 -0 6
1.0s 6.00nm 4.8mb
SMF 90.00 323 eP 55 23.30 -1.4
1.0s 12.00nm 5.1mb
BGF 90.60 323 eP 55 27.00 -0.5
1.0s 12.00nm 5.1mb
MAF 90.96 323 eP 55 28.20 -0.9
1.2s 14.80nm 5.2mb
FRB 91.75 5 eP 55 30.00 -2.3
WDC 91.76 44 ePc 55 33.70 0.8
SES 91.95 31 eP 55 33.00 -0.6
pP 55 46.00 43kmX
CAF 92.03 322 eP 55 33.70 -0.4
1.0s 10.00nm 5.2mb
RJF 92.11 323 eP 55 33.90 -0.5
1.0s 12.00nm 5.3mb
MIN 92.48 43 ePc 55 36.00 -0.4
FFC 92.58 24 iPd 55 35.60 -0.8
0.8s 27.00nm 5.7mb
ORV 93.00 44 ePc 55 38.80 0.2
LRM 94.34 35 eP 55 45.70 0.7
CMB 94.59 45 ePc 55 46.80 0.8
FRI 95.64 45 eP 55 51.00 0.2
ZOBO 167.43 52 PKP 02 33.30 1.2
1.0s 10.50nm

		i	03	38.00	
		LR	02	30.00	
LPB	167.62	53 ePKP	02	30.00	-2.0
	1.0s	36.00nm			
	S.D. = 1.4	on 123 of 140 obs.			

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* JAN 15, 1990 13h 21m 27.10± 0.82s
11.311 S ±10.4km 118.587 E ± 9.7km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
SOUTH OF SUMBAWA ISLAND (291)

KHKI	4.15	315 eP	22	30.10	0.4
		eS	23	14.10	
		e	24	27.20	
TRT	6.88	301 ePd	23	07.80	-0.5
MBL	9.87	173 eP	24	47.50	57.7X
		eS	26	30.00	
NANU	11.56	194 eP	24	11.00	-2.0
		eS	26	10.00	
MTN	12.36	98 eP	24	22.00	-1.7
		eS	26	34.00	
WARB	16.63	154 eP	25	18.50	-1.0
WB5	17.41	121 eP	25	28.30	-1.0
		eS	28	36.10	
WRA	17.42	121 Pc	25	29.90	0.5
	0.9s	5.00nm		3.6mb	
MRWA	17.98	187 eP	25	35.00	-1.3
		eS	28	37.00	
ASPA	19.06	132 iPc	25	51.40	1.8
	0.9s	27.00nm		4.5mb	
BAL	19.28	185 eP	25	52.00	-0.1
COOL	19.62	173 eP	25	56.00	0.1
MUN	20.69	186 eP	26	08.00	1.0
		eS	29	44.00	
FORR	21.35	157 eP	26	16.00	2.3
NWAO	21.55	183 eP	26	17.00	1.3
	S.D. = 1.4	on 14 of 15 obs.			

? JAN 15, 1990 13h 23m 27.64± 4.54s
42.579 N ±12.5km 126.116 W ±51.5km
DEPTH = 10.0km (geophysicist)
4.3mb (1 obs.)
OFF COAST OF OREGON (30)

FHC	2.39	137 ePc	24	06.70	-0.8
WDC	3.34	125 ePc	24	21.30	0.3
LBFM	3.38	110 eP	24	22.00	0.2
MIN	4.06	122 eP	24	29.20	-2.0
BMW	4.41	27 eP	24	35.50	-0.6
ORV	4.61	129 e(P)	24	38.40	-0.6
LON	5.18	35 eP	24	48.30	1.3
CMB	6.31	134 ePc	25	04.90	1.9
KVN	7.03	117 eP	25	14.00	0.8
PNT	8.12	32 eP	25	27.00	-1.3
	0.5s	3.00nm		4.8mb X	
FFC	19.93	44 iPc	28	03.10	0.9
	0.8s	12.00nm		4.3mb	
	S.D. = 1.3	on 11 of 11 obs.			

JAN 15, 1990 16h 00m 10.66± 0.66s
44.854 N ± 6.9km 114.047 W ± 6.0km
DEPTH = 5.0km (geophysicist)
WESTERN IDAHO (33)
ML 3.0 (BUT).

MCMT	0.85	91 iPd	00	27.40	-0.3
LTMT	1.42	103 eP	00	36.80	-0.6
BGMT	1.47	74 ePn	00	38.80	0.7
LRM	1.48	49 iPnc	00	38.90	0.6
BUT	1.56	41 ePg	00	42.50	3.2X
		eSn	01	04.10	
		eSg	01	06.50	
DMMT	2.21	24 ePn	00	48.60	-0.2
MEMT	2.30	70 ePn	00	49.60	-0.4
PTI	2.32	148 e(P)	01	03.00	12.7X
SXM	2.38	56 ePn	00	51.70	0.5
HRY	2.42	39 ePn	00	51.50	-0.1
BW06	3.86	121 e(P)	01	15.00	2.8X
DPW	4.17	318 e(P)	01	16.00	-0.4
KVN	6.54	209 eP	01	50.40	0.4
	S.D. = 0.6	on 10 of 13 obs.			

& JAN 15, 1990 16h 15m 14.75s
59.891 N 140.417 W
DEPTH = 16.1km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

TGL	1.48	307 eP	15	38.84	-2.0
BALM	1.49	321 eP	15	39.19	-1.8
GLB	2.28	314 eP	15	50.05	-2.3
KLU	3.15	303 eP	16	02.70	-1.9
VZW	3.26	294 eP	16	04.26	-1.9
GLI	3.46	290 eP	16	06.27	-2.7
TOA	3.58	311 eP	16	09.35	-1.4
NCA	3.77	307 eP	16	11.51	-2.0
DWY	4.20	6 P	16	11.00	-8.6
GHO	4.57	298 eP	16	19.68	-5.2
PMS	4.71	291 eP	16	24.19	-2.7
	11 obs. associated				

& JAN 15, 1990 16h 31m 55.45s
59.143 N 144.616 W
DEPTH = 10.0km (geophysicist)
4.4mb (5 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 4.0 (PMR).

MID	0.93	289 iPc	32	09.70	-3.5
TGL	1.85	28 eP	32	22.75	-4.8
FID	1.87	331 eP	32	23.10	-4.6
GLI	2.14	326 eP	32	26.45	-5.2
VZW	2.15	334 eP	32	26.70	-5.2
BALM	2.21	30 eP	32	27.71	-5.2
GLB	2.34	10 eP	32	29.39	-5.2
PCA	2.41	65 eP	32	30.76	-4.9
KLU	2.45	345 eP	32	30.80	-5.3
NCA	3.06	340 eP	32	39.77	-5.0
TOA	3.07	346 iPc	32	40.40	-4.5
SLKM	3.14	298 eP	32	39.89	-6.1
PMS	3.25	313 eP	32	41.70	-5.8
PME	3.32	321 eP	32	43.76	-4.7
PMR	3.33	320 iPc	32	43.70	-4.8
GHO	3.39	323 eP	32	44.71	-4.9
CNPM	3.41	279 eP	32	45.18	-4.6
SDG	3.43	353 eP	32	44.83	-5.2
NNL	3.51	288 eP	32	48.44	-2.7
NKA	3.70	299 eP	32	49.04	-4.8
SUA	3.84	310 eP	32	49.78	-6.1
PAX	3.86	354 eP	32	50.71	-5.6
CUT	4.29	322 eP	32	57.31	-4.9
RED	4.32	291 eP	32	55.53	-7.2
KDC	4.37	255 eP	32	59.00	-4.3
BGL	4.42	302 eP	32	58.21	-6.0
SKT	4.44	313 eP	32	58.34	-6.1
HUR	4.55	330 eP	33	00.48	-5.5
DDM	4.70	353 eP	33	03.16	-5.0
PDB	4.93	282 eP	33	06.63	-4.6
HDA	5.40	349 eP	33	11.23	-6.7
DWY	5.51	24 P	33	13.50	-6.0
SVW	5.84	294 eP	33	18.30	-5.9
FBA	5.97	347 iPd	33	18.90	-7.0
GLM	6.01	349 eP	33	19.08	-7.4
TTA	6.71	309 eP	33	29.70	-6.8
IMA	8.10	333 ePd	33	48.50	-7.5
INK	10.41	23 eP	34	20.00	-7.6
PNT	17.51	113 eP	35	59.00	-2.0
MBC	19.34	18 eP	36	17.00	-6.2
	0.9s	6.00nm		3.9mb	
SES	21.05	100 eP	36	38.00	-3.6
FFC	23.37	82 eP	37	02.00	-2.5
	0.9s	13.00nm		4.5mb	
LRM	23.41	110 eP	37	03.70	-1.6
KVN	26.26	128 e(P)	37	27.60	-4.9
RSSD	28.78	103 eP	37	51.20	-4.2
DAG	40.15	17 iPd	39	28.10	-4.3
	0.7s	4.11nm		4.2mb	
NB2	58.69	13 P	41	48.90	-6.0
	0.9s	4.70nm		4.6mb	
KBA	72.60	16 iPd	43	19.70	-4.8
	0.7s	4.10nm		4.6mb	
GUN	83.75	317 P	44	22.80	-3.4
KKN	84.07	317 P	44	24.00	-3.6
GKN	84.10	318 P	44	24.00	-3.7
PKI	84.23	317 P	44	24.80	-3.8
DMN	84.30	317 P	44	25.40	-3.4
	53 obs. ossociated				

JAN 15, 1990 17h 20m 39.92± 0.32s
37.635 N ± 3.2km 22.900 E ± 2.8km
DEPTH = 10.0km (geophysicist)
4.0mb (2 obs.)
SOUTHERN GREECE (368)
ML 3.7 (ATH), 3.5 (THE).

ATH	0.73	62 ePg	20	55.10	0.9
ITM	0.90	240 iPbc	20	56.50	-0.6
VLI	0.92	178 ePb	20	56.80	-0.6
AGG	1.46	342 ePb	21	07.10	0.8
NEO	1.69	9 ePn	21	10.10	0.5
VLS	1.91	287 ePn	21	14.60	1.8
APE	2.17	104 ePn	21	17.00	0.3
VAM	2.46	154 ePn	21	20.20	-0.5
LIT	2.48	353 ePn	21	20.90	-0.1
IGT	2.76	314 ePn	21	25.80	0.7
PLG	2.77	9 ePn	21	25.00	-0.2
KZN	2.81	342 ePn	21	26.50	0.7
OUR	2.82	17 ePn	21	25.40	-0.5
THE	2.99	1 ePn	21	28.20	0.0
PRK	3.10	58 ePn	21	31.50	1.8
SMG	3.12	87 ePn	21	30.00	-0.1
SOH	3.20	6 ePn	21	31.30	0.0
NPS	3.22	136 ePn	21	32.70	1.1
GRG	3.34	354 ePn	21	33.40	0.1
EZN	3.46	50 ePn	21	44.40	9.5X
SRS	3.52	9 ePn	21	35.50	-0.2
KNT	3.52	360 ePn	21	36.00	0.2
IZM	3.53	76 iPn	21	35.20	-0.7
VAY	3.69	356 ePn	21	39.00	0.8
OHR	3.83	336 iPn	21	40.70	0.4
MMB	4.00	9 iPc	21	42.00	-0.6
		i	22	34.00	
KAP	4.02	120 ePb	21	46.50	3.7X
RDO	4.06	29 ePn	21	42.20	-1.1
ALN	4.07	36 ePn	21	42.80	-0.7
KKB	4.23	2 iP	21	46.00	0.2
KDZ	4.46	25 eP	21	48.00	-1.0
SKO	4.48	346 iPn	21	49.00	-0.3
DIM	4.85	24 eP	21	04.00	-50.7X
VTS	4.96	3 iP	21	57.00	0.7
ROI	5.32	293 P	22	01.10	-0.3
BRT	5.48	308 P	22	04.00	0.4
		eSn	23	02.40	
TDS	5.52	293 P	22	04.80	0.6
		eSn	23	03.10	
CZI	5.54	289 P	22	04.50	0.0
CSI	5.60	295 P	22	05.00	-0.2
MMN	5.85	295 P	22	10.00	1.3
PVL	5.88	18 iPc	22	06.00	-3.1X
ATN	5.91	277 P	22	09.40	-0.1
		eSn	23	14.30	
MGR	6.25	296 P	22	14.20	-0.3
		eSn	23	22.00	
SGO	6.59	299 P	22	19.20	0.0
		eSn	23	29.60	
BSS	7.03	299 Pd	22	24.80	-0.6
		eSn	23	40.00	
HVAR	7.41	320 iPn	22	27.90	-2.7
SDI	8.10	303 P	22	40.30	-0.1
KHC	13.33	333 eP	23	59.50	7.9X
HFS	23.27	348 eP	25	46.40	-1.8
	0.4s	2.20nm		4.1mb	
NB2	24.56	346 P	25	57.10	-3.6X
	0.9s	3.60nm		4.0mb	
	S.D. = 0.9	on 44 of 50 obs.			

& JAN 15, 1990 17h 33m 54.91s
65.935 N 150.437 W
DEPTH = 88.0km
ALASKA (676)
<AGS-P>.

IMA	1.33	277 eP	34	18.99	0.0
		eS	34	36.99	
RDS	1.47	138 eP	34	20.07	-0.5
		eS	34	39.45	
NEA	1.48	157 eP	34	20.04	-0.7
		eS	34	40.22	
FBA	1.52	132 eP	34	20.56	-0.6
GLM	1.59	125 eP	34	20.77	-1.4
		eS	34	43.02	
CCB	1.70	138 eP	34	22.00	-1.6
HDA	2.13	135 eP	34	28.07	-1.2
MCK	2.30	163 eP	34	31.03	-0.7
RND	2.63	164 eP	34	35.78	-0.4
DWY	5.04	107 P	35	09.00	-0.4
INK	7.00	63 eP	35	36.00	-0.6
	11 obs. ossociated				

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* JAN 15, 1990 18h 41m 56.19± 1.51s

15d 18h

45.045 N ± 6.3km 7.329 E ±12.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

RSP	0.12	334	P	42 00.04	0.8
			S	42 02.30	
RRL	0.41	252	P	42 04.45	-0.1
			S	42 09.58	
LSD	0.43	343	P	42 04.86	-0.2
			S	42 10.09	
BNI	0.46	271	P	42 06.10	0.4
			eSg	42 10.60	
PZZ	0.56	197	P	42 07.63	-0.1
			S	42 15.42	
LPG	0.61	318	Pg	42 07.90	-0.8
			Sg	42 15.20	

S.D. = 0.7 on 6 of 6 obs.

? JAN 15, 1990 19h 02m 48.27± 9.68s
31.831 S ±59.4km 69.894 W ±67.5km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	1.07	75	iPc	03 08.00	0.9
			eS	03 25.00	
RTCV	1.16	92	iPd	03 08.00	-0.2
RTLL	1.31	68	iPd	03 09.80	-0.7
			S	03 29.00	
RTRS	1.70	13	iPd	03 16.00	0.0

S.D. = 1.2 on 4 of 4 obs.

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* JAN 15, 1990 19h 07m 00.08± 1.49s
45.054 N ± 8.6km 7.517 E ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

RSP	0.21	298	P	07 05.87	1.2
			S	07 08.13	
LSD	0.48	328	P	07 10.79	0.9
			S	07 15.92	
RRL	0.54	256	P	07 10.18	-0.8
			S	07 15.41	
PZZ	0.62	208	P	07 13.36	0.6
			S	07 21.05	
LPG	0.70	310	Pg	07 12.60	-1.5
			Sg	07 20.80	
SUF	20.69	25	ePKP	11 42.00	-0.4

S.D. = 1.4 on 6 of 6 obs.

JAN 15, 1990 19h 18m 06.28± 0.24s
14.972 S ± 7.3km 166.804 E ± 8.3km
DEPTH = 33.0km (normal)
4.9mb (6 obs.) 4.4Msz (1 obs.)
VANUATU ISLANDS (186)

PVC	3.11	152	iP	18 54.50	0.4
			iS	19 40.00	
DZM	7.07	183	iPc	19 48.20	-2 0
			iS	21 08.10	
HNR	8.67	309	eP	20 12.00	-0 5
			eS	21 51 00	
BRS	17.97	224	iP	22 17.00	1 6
PMG	19.98	284	eP	22 42.00	3 1X
CTA	20.24	252	iPd	22 41.80	0.2
	1.0s		50.00nm	4.8mb	
			iS	26 38.00	
RMQ	20.37	233	eP	22 44.00	1.0
			e	22 52.00	
KRP	24.13	163	P	23 24.50	4.3X
CMS	25.26	226	eP	23 32.00	0.9
BWA	25.50	217	eP	23 34.00	0.7
			e	23 38.90	
			e	23 44.70	
WB5	31.30	256	eP	24 24.00	-1.8
WRA	31.33	256	Pc	24 23.40	-2.7
	0.5s		1.60nm	4.1mb	
ASPA	32.17	249	iPc	24 32.30	-1.2
	1.3s		20.00nm	4.9mb	
	Z 20s		0.87um	4.4Msz	
			LR	36 32.30	
FORR	38.77	239	eP	25 30.20	0.6
MAT	57.91	333	iPd	27 56.60	-1.0
	1.2s		28.13nm	5.2mb	
KMI	74.05	302	Pc	29 42.50	1.1
CHG	74.77	295	eP	29 46.60	1.2
LZH	78.15	313	Pc	30 05.00	0.8
	1.2s		34.00nm	5.2mb	
SHL	83.29	299	eP	30 32.50	0.8
KVN	88.14	49	eP	30 55.00	-0.4
PNT	90.88	39	eP	31 07.00	-0.8
	0.6s		4.00nm	4.9mb	
HYB	92.76	287	eP	31 17.00	-0.1
GBA	92.85	283	P	31 18.40	1.0
NB2	130.74	345	PKP	37 16.20	0.8
	0.9s		6.60nm		
KHC	139.50	333	ePKP	37 32.50	0.3
FVI	141.73	331	PKP	37 35.50	-0.7
HAU	143.31	338	ePKP	37 36.30	-2.7
ARV	143.85	327	PKPd	37 39.00	-1.0
VAI	144.09	334	PKPd	37 39.20	-1.1
PGD	144.21	329	PKP	37 40.50	-0.3
ROI	144.23	319	PKP	37 39.80	-1.0
DUI	144.24	323	PKP	37 34.50	-6.3X
CRE	144.27	328	PKP	37 40.00	-0.9
CSI	144.29	319	PKP	37 39.00	-1.9
ASS	144.29	327	PKPd	37 39.50	-1.4
TDS	144.33	319	PKPd	37 40.80	-0.1
AQU	144.38	325	PKPd	37 40.80	-0.2
MMN	144.41	320	PKP	37 37.50	-3.5X
SGO	144.43	321	PKPd	37 40.50	-0.5
MME	144.49	330	PKP	37 41.80	0.4
FIR	144.52	329	ePKP	37 40.00	-1.1
MGR	144.53	321	PKPd	37 40.00	-1.3
SDI	144.58	324	PKPd	37 40.80	-0.6
BSS	144.59	322	PKP	37 40.70	-0.6
AZI	144.61	325	PKP	37 40.50	-0.8
ORX	144.61	334	PKP	37 39.10	-2.3
ORO	144.62	334	PKP	37 40.50	-0.9
BDI	144.63	330	PKPd	37 40.40	-1.0
BOB	144.64	332	PKPd	37 41.60	0.2
CZI	144.71	319	PKP	37 40.10	-1.4
FLN	144.72	345	ePKP	37 40.10	-1.2
MNS	144.76	326	PKPd	37 40.90	-0.7
LDF	144.79	345	ePKP	37 40.40	-1.0
LOR	144.81	340	ePKP	37 40.70	-0.8
PII	144.92	330	PKP	37 41.10	-0.7
LBF	145.02	339	iPKPc	37 41.30	-0.6
GRC	145.04	341	PKP	37 41.80	-0.1
LSD	145.10	335	PKP	37 42.28	-0.1
SSF	145.11	340	iPKPc	37 41.80	-0.2
RMP	145.13	325	PKP	37 42.90	0.7
GRR	145.16	346	ePKP	37 41.60	-0.4
RDP	145.16	325	PKP	37 43.00	0.6
PCP	145.23	332	PKP	37 41.36	-1.0
LPG	145.23	335	iPKPc	37 42.90	0.2
RSP	145.30	334	PKP	37 41.67	-0.9
SMF	145.36	339	iPKPc	37 42.30	-0.2
AVF	145.40	340	iPKPc	37 42.60	0.1
SOI	145.40	317	PKPd	37 44.20	1.4
CKI	145.44	332	PKP	37 43.10	0.4
LPF	145.54	346	iPKPc	37 43.00	0.3
MAO	145.55	327	PKP	37 43.90	1.0
BNI	145.63	335	PKP	37 45.10	1.9
FIN	145.64	332	PKP	37 41.97	-1.1
RRL	145.69	334	PKP	37 43.51	0.1
ROB	145 72	333	PKP	37 42.49	-0.8
BGF	145 77	340	iPKPc	37 43.80	0.6
DOI	145 83	334	PKP	37 42.50	-1.0
PZZ	145.89	334	PKP	37 41.67	-2.0
IMI	146.02	332	PKP	37 43.21	-0.6
PLDF	146.02	339	PKP	37 44.93	1.2
AGO	146.12	339	PKP	37 44.93	1.1
AUTN	146.15	333	PKP	37 44.62	0.4
MAF	146.16	340	ePKP	37 45.10	1.3
TCF	146.21	341	iPKPc	37 45.10	1.1
TOUF	146.22	333	PKP	37 44.92	0.7
SBF	146.26	333	iPKPc	37 44.80	0.6
AURF	146.28	333	PKP	37 45.07	0.8
MVIF	146.35	333	PKP	37 45.20	0.8
REVF	146.38	333	PKP	37 45.12	0.8
PYM	146.42	339	PKP	37 45.91	1.5
LSF	146.46	341	iPKPc	37 45.60	1.3
CALN	146.58	333	PKP	37 45.83	1.1
MFF	146.63	344	iPKPc	37 46.40	1.9
LBL	146.79	339	PKP	37 47.17	2.4
FRF	146.84	333	iPKPc	37 46.60	1.6
LRG	147.05	333	ePKP	37 47.80	2.5
BCAO	147.07	255	iPKPd	37 46.40	0.1
	0.5s		18.00nm		
			ic	37 48.60	
LMR	147.08	333	iPKPc	37 47.60	2.2
RJF	147.31	341	ePKP	37 48.40	2.7
CAF	147.47	340	ePKP	37 49.20	3.2X
LFF	147.88	341	ePKP	37 49.80	3.2X
LPO	147.97	340	ePKP	37 50.20	3.4X
EPF	149.72	340	ePKP	37 55.90	6.3X

S.D. = 1.2 on 95 of 103 obs.

JAN 15, 1990 20h 19m 48.25± 0.30s
38.769 N ± 3.2km 24.831 E ± 2.8km
DEPTH = 6.9 ± 2.1 km
AEGEAN SEA (365)
ML 3.3 (ATH), 3.2 (THE).

ATH	1.18	228	ePn	20 10.50	-0.1
PRK	1.22	67	ePb	20 11.50	0.3
NEO	1.36	294	ePn	20 13.80	0.2
EZN	1.57	47	iPn	20 15.50	-1.0
OUR	1.70	337	ePb	20 17.90	-0.5
APE	1.78	162	ePn	20 18.70	-1.1
SMG	1.90	123	ePn	20 21.50	0.1
PLG	1.93	327	ePn	20 21.90	0.1
IZM	1.94	100	ePn	20 20.80	-1.2
AGG	1.97	278	ePb	20 22.10	-0.3
			eSb	20 48.60	
LIT	2.25	307	ePn	20 26.20	-0.3
ALN	2.32	23	ePn	20 28.30	0.8
SOH	2.34	331	ePn	20 27.50	-0.4
THE	2.35	323	ePn	20 27.60	-0.3
RDO	2.44	13	ePn	20 28.10	-1.0
VLI	2.54	217	ePn	20 29.40	-1.1
MFT	2.76	42	iPn	20 39.50	5.7X
ITM	2.79	236	ePn	20 34.50	0.3
KNT	2.81	329	ePn	20 33.80	-0.7
EDC	2.82	55	ePn	20 35.00	0.4
BNT	2.87	55	ePn	20 33.00	-2.2
GRG	2.88	320	ePn	20 35.30	-0.1
KDZ	2.91	9	eP	20 34.00	-1.9
			iS	21 22.00	
MMB	2.94	344	iPc	20 35.00	-1.3
			i	21 24.00	
DST	3.07	73	ePn	20 37.70	-0.4
VAY	3.08	326	ePn	20 38.20	0.0
KKB	3.37	337	iP	20 42.00	-0.4
VLS	3.38	261	ePn	20 32.50	-10.0X
KHL	3.71	95	ePn	20 48.10	0.9
KAP	3.72	149	ePn	20 47.00	-0.3
OHR	3.88	308	ePn	20 49.60	-0.1
YLV	3.94	61	eP	20 52.00	1.5
VTS	4.01	343	iP	20 52.00	0.4
SKO	4.12	322	ePn	20 53.00	0.1
			e	21 08.70	
PVL	4.46	5	iPd	20 50.00	-7.8X
CZI	6.79	277	P	21 31.00	0.3

S.D. = 0.8 on 33 of 36 obs.

? JAN 15, 1990 20h 49m 33.38± 1.25s
44.376 N ±13.0km 7.195 E ±14.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.15	333	P	49 36.91	0.0
			S	49 39.89	
STV	0.16	145	P	49 37.12	0.0
			S	49 40.19	
ENR	0.22	132	P	49 38.24	0.0
			S	49 42.14	
ROB	0.49	99	P	49 43.37	0.0

S.D. = 0.1 on 4 of 4 obs.

JAN 15, 1990 21h 24m 19.64± 0.81s
36.093 N ± 8.2km 27.261 E ± 8.6km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.3 (ATH).

KAP	0.55	187	ePb	24 30.70	0.0
YER	1.33	38	ePn	24 42.00	-2.1
NPS	1.58	239	ePn	24 47.50	-0.2
SMG	1.65	348	ePn	24 50.50	1.8
APE	1.70	305	ePn	24 49.00	-0.5
KSL	1.88	89	ePn	24 52.50	0.4
ELL	2.23	72	ePn	24 58.00	0.7

S.D. = 1.5 on 7 of 7 obs.

? JAN 15, 1990 23h 47m 04.66± 3.52s
35.035 S ±21.9km 70.844 W ±28.7km
DEPTH = 111.3 ± 24.0 km

4.0mb (1 obs.)
CHILE-ARGENTINA BORDER REGION (127)

RFA	1.97	83	iPd	47	38.90	1.0
CFA	4.05	33	ePc	48	05.50	-0.3
RTLL	4.20	29	ePc	48	07.20	-0.5
RTRS	4.99	14	iPc	48	17.70	-0.8
MRA	5.02	60	ePd	48	19.50	0.7
TCA	6.41	57	eP	48	37.00	-1.1
ZOBO	18.85	8	P	51	21.00	1.7
KIC	74.48	71	(P)	58	33.00	0.2
ALQ	77.16	331	iPc	58	48.20	0.5
	1.0s		2.50nm			4.0mb
GBA	144.32	119	PKP	06	28.10	-1.4

S.D. = 1.2 on 10 of 10 obs.

JAN 15, 1990 23h 57m 33.75± 0.31s
8.414 S ± 7.2km 74.199 W ± 8.4km
DEPTH = 162.7km (3 depth phases)
4.6mb (24 obs.)
PERU-BRAZIL BORDER REGION (112)

ARE	8.42	162	eP	59	25.00	-9.1X
VC1	8.79	331	eP	59	39.00	-0.1
CAYA	9.24	336	eP	59	45.00	-0.1
COTA	9.62	334	eP	59	58.50	8.4X
ZOBO	9.80	143	P	59	51.00	-1.6
			i	00	06.00	
LPB	10.03	144	P	59	55.00	-0.4
	0.9s		42.02nm			5.0mb
			i	00	14.00	
			S	02	46.00	
CNCB	10.32	145	Pd	59	59.00	-0.3
PRM	42.97	350	P	05	18.30	0.0
JSC	42.98	351	P	05	18.20	-0.2
LHS	43.11	352	P	05	19.80	0.3
RSCP	45.07	347	P	05	34.70	-0.5
	0.7s		32.87nm			5.0mb
PWLA	45.10	344	P	05	33.80	-1.6
BLA	45.76	353	P	05	40.60	0.0
	0.6s		8.07nm			4.5mb
NAV	45.91	353	P	05	42.00	0.3
CVL	46.32	355	P	05	45.10	0.1
NA2	46.42	356	P	05	46.20	0.5
OLY	46.62	341	P	05	45.80	-1.6
TUL	48.55	337	iP	06	02.30	0.0
	1.0s		14.30nm			4.6mb
			e	06	07.80	18kmX
			e	07	19.60	
FVM	48.58	343	P	06	01.30	-1.2
SIO	48.62	336	eP	06	02.20	-0.6
ALQ	52.81	327	iPd	06	35.50	0.8
	1.0s		7.50nm			4.4mb
ANMO	52.81	327	P	06	35.00	0.3
	1.2s		13.67nm			4.6mb
GOL	55.90	331	eP	06	57.00	-0.2
			e	07	52.00	248kmX
GLA	56.51	319	P	07	02.00	0.6
MSU	58.55	326	P	07	16.10	0.3
RSSD	58.85	335	P	07	17.30	-0.4
DAU	59.40	328	P	07	21.00	-0.7
DUG	60.09	327	P	07	26.50	0.4
BW06	60.28	331	P	07	26.40	-1.1
	0.8s		5.36nm			4.5mb
TNP	61.21	322	P	07	31.50	-2.4
	0.8s		4.66nm			4.4mb
RSON	61.40	346	P	07	32.50	-2.2
	0.8s		15.02nm			4.9mb
KVN	62.36	322	eP	07	41.00	-0.5
			epP	08	20.00	165km
CMB	63.15	320	P	07	46.60	0.1
	1.1s		9.80nm			4.6mb
SCH	63.30	5	eP	07	47.00	-0.2
ARN	63.48	319	P	07	49.10	0.4
LRM	63.93	331	eP	07	51.40	-0.4
ORV	64.75	321	P	07	57.90	1.1
LBFM	66.06	322	P	08	05.60	0.1
SES	66.73	335	ePd	08	09.30	0.0
FFC	67.08	343	eP	08	10.00	-1.4
	0.7s		7.00nm			4.6mb
VGB	67.99	327	P	08	18.00	0.7
DPW	68.18	330	P	08	19.40	1.0
LON	69.32	327	P	08	25.40	0.0
RMW	69.76	328	P	08	27.50	-0.7
PNT	69.85	330	eP	08	30.00	1.5
BMW	69.92	326	eP	08	29.90	0.8
			epP	09	27.00	245kmX
TIC	70.57	80	P	08	32.60	-1.0
KIC	70.79	80	Pd	08	34.10	-0.8
FRB	72.08	3	eP	08	41.00	-0.5
TOL	80.46	47	eP	09	30.00	1.0
MFF	85.29	42	eP	09	54.10	0.7
	0.6s		5.40nm			4.5mb
GRR	85.37	40	eP	09	54.10	0.4
	0.6s		7.20nm			4.7mb
LFF	85.40	43	eP	09	54.60	0.6
	0.6s		12.60nm			4.9mb
LPO	85.63	44	eP	09	55.80	0.7
	0.6s		5.40nm			4.5mb
CAF	86.30	44	eP	09	58.60	0.2
	0.6s		1.80nm			4.1mb
INK	86.98	341	eP	10	02.00	0.8
			pP	10	14.00	39kmX
MAF	86.98	43	eP	10	01.80	0.1
	0.6s		2.70nm			4.3mb
BGF	87.26	42	eP	10	03.20	0.2
	0.6s		6.30nm			4.7mb
AVF	87.65	42	eP	10	04.60	-0.3
	1.0s		4.80nm			4.4mb
SMF	87.94	42	eP	10	06.10	-0.2
	0.8s		5.30nm			4.6mb
MBC	88.52	350	eP	10	10.00	1.5
	1.1s		19.00nm			5.0mb
			pP	10	50.50	160km
LPG	89.65	44	eP	10	15.60	0.9
	0.8s		8.50nm			4.8mb
PMR	90.27	332	P	10	17.10	0.3
	1.1s		15.31nm			4.9mb
FBA	90.70	336	eP	10	19.40	0.6
			pP	11	00.60	163km
IMA	93.38	336	P	10	31.20	-0.1
	0.9s		4.32nm			4.7mb
WRA	140.21	225	PKPc	16	46.00	0.3
	1.0s		5.50nm			
WB5	140.23	225	ePKP	16	39.00	-6.7X
NDI	146.38	49	ePKP	16	58.00	1.9
BJI	147.17	345	ePKP	16	58.00	1.1
			e	17	41.50	
GBA	151.70	77	PKPd	17	05.20	0.6
	0.7s		1.90nm			
GBA	151.70	77	PKP	17	11.70	7.1X
HYB	152.01	69	ePKP	17	12.00	7.0X

S.D. = 0.9 on 67 of 72 obs.

? JAN 16, 1990 00h 51m 01.18± 7.74s
34.394 S ±44.6km 71.927 W ±40.0km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.61	45	iPd	51	14.10	0.6
			iS	51	24.60	
LCCH	0.96	18	iPc	51	18.60	-0.9
			iS	51	31.70	
TACH	1.10	48	iPd	51	21.50	-0.4
			iS	51	36.50	
CHCH	1.15	67	iPd	51	22.50	-0.3
			iS	51	38.50	
PCH	1.40	57	iPd	51	26.70	-0.2
			iS	51	45.50	
SAN	1.41	49	eP	51	27.00	0.1
			iS	51	46.00	
ROCH	1.61	29	iPc	51	29.00	-0.9
			iS	51	52.00	
FCH	1.73	52	eP	51	31.50	-0.2
			iS	51	57.00	
JACH	2.04	33	eP	51	38.50	2.5
			iS	52	03.40	

S.D. = 1.2 on 9 of 9 obs.

& JAN 16, 1990 01h 41m 10.17s
59.620 N 145.726 W
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 3.6 (PMR).

MID	0.37	239	ePc	41	17.50	-0.2
HIN	0.87	334	iP	41	25.88	-1.1
			eS	41	39.46	
SGAM	0.92	16	iP	41	26.94	-0.8
CVA	0.93	359	iP	41	26.73	-1.2
RAGM	0.93	34	eP	41	26.80	-1.2
FID	1.19	342	eP	41	30.79	-1.7
			eS	41	50.43	
GLI	1.44	332	eP	41	34.21	-2.0
			eS	41	55.29	
VZW	1.50	344	eP	41	35.40	-1.8
			eS	41	57.66	
SNH	1.56	68	eP	41	36.62	-1.4
			eS	41	57.86	
WAX	1.67	59	iP	41	37.97	-1.6
			eS	41	59.88	
CYK	1.70	73	eP	41	39.16	-0.8
			eS	42	01.46	
TGL	1.84	51	eP	41	40.67	-1.5
KLU	1.88	357	eP	41	40.09	-2.6
SEW	1.94	286	eP	41	40.31	-3.1
			eS	42	06.65	
GLB	2.06	27	eP	41	43.81	-1.5
BALM	2.20	48	eP	41	45.68	-1.7
SLKM	2.42	293	eP	41	47.41	-3.1
NCA	2.44	348	eP	41	49.14	-1.6
TOA	2.50	355	iPc	41	50.50	-1.1
PMS	2.50	312	iPd	41	49.20	-2.4
PMR	2.60	321	iPc	41	50.70	-2.1
GHO	2.67	325	eP	41	52.25	-1.8
PCA	2.80	78	eP	41	53.72	-2.2
			eS	42	26.49	
CNPM	2.81	270	eP	41	54.37	-1.5
NNL	2.84	281	eP	41	53.59	-2.8
PWA	2.89	317	ePc	41	54.40	-2.6
SDG	2.92	2	eP	41	55.96	-1.5
NKA	2.98	295	eP	41	56.29	-1.9
SUA	3.09	309	eP	41	57.12	-2.9
BCPM	3.10	81	eP	41	57.93	-2.0
			eS	42	35.21	
PAX	3.37	2	eP	42	01.77	-2.1
RDT	3.48	289	eP	42	02.06	-3.4
HON	3.49	90	iP	42	02.48	-3.1
SKT	3.70	312	eP	42	04.98	-3.6
CDD	4.12	264	eP	42	12.03	-2.5
DDM	4.18	359	eP	42	13.88	-1.6
PDB	4.29	276	eP	42	14.32	-2.7
MCK	4.40	341	eP	42	16.53	-2.0
SVW	5.13	291	eP	42	24.30	-4.6
DWY	5.35	31	P	42	29.30	-2.7
FBA	5.39	351	eP	42	30.50	-2.0
IMA	7.42	334	eP	42	58.40	-2.8
INK	10.21	26	eP	43	35.00	-4.7
MBC	19.06	19	eP	45	32.00	-2.6
	1.0s		5.00nm			3.7mb

44 obs. associated

% JAN 16, 1990 02h 43m 50.89± 0.48s
44.422 N ± 4.1km 7.406 E ± 4.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 3.1 (GEN).

STV	0.19	198	P	43	54.90	-0.2
			S	43	57.19	
ENR	0.20	177	P	43	54.85	-0.4
			S	43	57.09	
PZZ	0.23	291	P	43	56.61	0.6
			S	43	59.68	
ROB	0.36	111	P	43	58.52	0.3
			S	44	03.03	
FIN	0.61	110	P	44	03.01	-0.3
			S	44	10.74	
RRL	0.67	319	P	44	04.51	0.2
			S	44	13.11	
RSP	0.74	352	P	44	05.29	-0.2
			S	44	14.91	
PCP	0.82	81	P	44	07.84	1.0
			S	44	18.29	
LSD	1.05	350	P	44	10.81	-0.1
			S	44	23.48	
ORX	1.28	18	P	44	13.75	-0.9
			S	44	27.88	

S.D. = 0.6 on 10 of 10 obs.

? JAN 16, 1990 02h 51m 57.29± 1.16s
31.252 S ±10.6km 117.446 E ±12.7km
DEPTH = 5.0km (geophysicist)
WESTERN AUSTRALIA (590)

KLB	0.43	142	eP	52	05.80	-0.2
			iS	52	11.30	
BAL	0.90	315	eP	52	14.00	-1.1
			eS	52	25.00	
MUN	1.28	235	iPd	52	21.70	0.2

16d 02h

		iS	52 39.10			
MRWA	2.38	328 eP	52 38.70	1.0		
		eS	53 09.00			
S.D. = 1.5	on	4 of	4 obs.			

% JAN 16, 1990 03h 32m 19.88± 2.10s
41.723 N ±16.5km 12.744 E ±10.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.04	330 Pc	32 22.00	0.0		
		eSg	32 23.30			
RMP	0.09	341 Pc	32 22.70	0.2		
		eSg	32 25.40			
AZI	0.58	63 P	32 31.70	0.1		
		eSg	32 40.30			
MNS	0.66	356 P	32 32.80	-0.3		
		eSg	32 43.10			
AQU	0.80	38 P	32 35.50	0.1		
SDI	0.80	91 P	32 35.40	-0.1		
		eSg	32 48.40			
ASS	1.35	357 P	32 44.80	0.1		
		eSn	33 01.20			
S.D. = 0.2	on	7 of	7 obs.			

* JAN 16, 1990 04h 01m 46.09± 1.68s
8.765 N ±14.0km 126.924 E ± 9.9km
DEPTH = 67.9 ± 19.8 km
4.6mb (3 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	2.14	219 ePc+	02 20.00	-0.2		
BAG	9.80	321 eP	04 09.00	2.1		
GUMO	18.24	73 eP	05 55.20	-1.1		
PJG	18.24	73 eP	05 55.50	-0.8		
GUA	18.27	73 eP	05 55.50	-1.2		
QIZ	19.45	303 eP	06 13.00	2.8X		
N 13s		0.90um				
E 15s		2.30um				
SSE	22.85	347 eP	06 20.50	-23.9X		
Z 16s		0.40um		4.0MszX		
		sP	06 44.50			
		S	10 59.00			
WB5	29.39	166 eP	07 47.50	2.2		
WRA	29.45	166 Pc	07 54.90	9.1X		
0.9s		3.90nm		4.1mb		
TIY	31.66	338 eP	08 09.00	3.8X		
E 12s		0.30um				
BJI	32.59	345 eP	08 12.50	-0.6		
SNY	33.06	355 eP	08 18.40	1.2		
MDJ	35.79	3 eP	08 43.20	2.6		
GUN	43.09	302 P	09 40.80	-1.0		
0.8s		30.00nm		5.1mb		
PKI	43.39	301 P	09 40.40	-3.8X		
KKN	43.56	301 P	09 43.40	-2.0		
DMN	43.65	301 P	09 44.00	-2.2		
GKN	44.17	301 P	09 49.20	-1.1		
GBA	48.72	280 P	10 27.00	0.9		
WMQ	48.80	323 eP	10 25.70	-0.7		
MAIO	66.69	306 eP	12 32.00	-0.3		
		e	12 43.00			
INK	85.44	22 eP	14 20.00	2.8X		
MBC	87.03	13 eP	14 27.00	2.1		
1.0s		5.00nm		4.6mb		
DAG	92.34	353 eP	14 44.40	-5.3X		
S.D. = 1.7	on	17 of	24 obs.			

& JAN 16, 1990 04h 30m 03.00s
37.362 N 121.717 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

MHC	0.06	109 iPc	30 04.80	-0.2		
		iS	30 06.30			
ARN	0.15	95 iPc	30 05.80	-0.4		
GCC	0.40	214 ePd	30 10.60	-0.5		
		eS	30 17.60			
PCC	0.55	285 ePc	30 13.20	-0.8		
SAO	0.63	160 iPd	30 15.20	-0.5		
BKS	0.66	321 eP	30 15.60	-0.6		
		eS	30 26.30			
BRK	0.67	320 eP	30 15.90	-0.5		
		eS	30 25.40			
		e	30 27.30			
ZSP	0.72	324 eP	30 17.10	-0.3		
		iS	30 30.00			
LLA	0.97	140 ePc	30 20.50	-1.2		
PRS	1.07	165 iPd	30 22.40	-0.9		
CMB	1.25	57 ePc	30 25.70	-0.9		
		eS	30 41.80			
FRI	1.65	102 eP	30 31.00	-1.4		
		eS	30 50.90			
KVN	3.31	58 eP	31 02.60	6.1		
13 obs. associated						

* JAN 16, 1990 05h 58m 27.22± 3.49s
44.221 N ±16.7km 129.349 W ±23.9km
DEPTH = 10.0km (geophysicist)
4.2mb (1 obs.)
OFF COAST OF OREGON (30)

OOW	5.03	44 eP	59 44.72	0.2		
RVW	5.05	65 eP	59 44.70	-0.1		
CPW	5.16	56 eP	59 46.22	-0.1		
OTR	5.20	40 eP	59 47.47	0.6		
LVP	5.25	67 eP	59 47.64	0.0		
APW	5.31	60 eP	59 48.61	0.2		
CZM	5.31	63 eP	59 48.18	-0.3		
OSD	5.33	46 eP	59 48.96	0.0		
VLMM	5.36	73 eP	59 49.52	0.2		
MTMW	5.36	68 eP	59 49.30	0.0		
ERK	5.37	65 eP	59 49.12	-0.3		
STD	5.42	66 eP	59 50.43	0.2		
YEL	5.44	66 eP	59 50.93	0.5		
TDL	5.47	65 eP	59 50.54	-0.3		
TDH	5.49	76 eP	59 50.97	-0.2		
CDFW	5.50	67 eP	59 51.35	0.1		
KOSW	5.52	64 eP	59 51.45	-0.1		
STW	5.57	43 eP	59 52.42	0.3		
HDW	5.57	50 eP	59 52.35	0.1		
VLL	5.59	74 eP	59 52.75	0.2		
VBEM	5.60	79 eP	59 52.75	0.0		
GMW	5.66	52 eP	59 53.26	-0.2		
VFP	5.72	76 eP	59 54.28	-0.1		
ASR	5.81	68 eP	59 55.82	0.2		
RVC	5.85	60 eP	59 56.17	0.0		
LON	5.87	62 eP	59 56.30	-0.1		
GLK	5.93	64 eP	59 57.68	0.3		
WPW	6.02	63 eP	59 59.00	0.4		
FMW	6.03	61 eP	59 58.45	-0.3		
GSM	6.07	58 eP	59 59.29	0.0		
RMW	6.18	56 eP	00 00.77	-0.1		
MCW	6.34	43 eP	00 03.12	0.2		
HTW	6.38	53 eP	00 03.91	0.3		
PNT	8.40	49 eP	00 30.00	-1.9		
0.4s		4.00nm		5.0mb X		
FFC	20.53	50 eP	03 08.00	0.0		
1.0s		11.00nm		4.2mb		
S.D. = 0.4	on	35 of	35 obs.			

& JAN 16, 1990 06h 44m 16.41s
60.996 N 151.228 W
DEPTH = 62.0km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA	0.25	181 eP	44 27 93	1.5		
SPU	0.44	295 eP	44 27.93	-0.2		
		eS	44 37 33			
SUA	0.52	26 eP	44 28.71	-0.3		
		eS	44 38.59			
SLKM	0.70	134 eP	44 30.12	-0 8		
		eS	44 41.78			
PMS	0.85	72 eP	44 32.35	-0.4		
		eS	44 44.81			
PWA	0.92	44 eP	44 33.56	-0.1		
		eS	44 48.02			
NNL	0.96	182 eP	44 34.52	0.4		
SKT	1.00	352 iP	44 34.29	-0.4		
PLRM	1.18	59 eP	44 35.99	-1.0		
SEW	1.25	135 eP	44 36.82	-1.2		
GHO	1.36	54 eP	44 38.64	-0.9		
CNPM	1.48	180 eP	44 40.20	-1.0		
CUT	1.49	17 eP	44 40.88	-0.4		
PDB	1.91	232 eP	44 45.72	-1.4		
		eS	45 08.94			
AUL	1.96	215 eP	44 46.14	-1.7		
GLI	2.02	92 eP	44 45.73	-3.0		
HUR	2.13	20 eP	44 50.10	-0.1		
SVW	2.14	275 eP	44 48.64	-1.8		
VZW	2.28	86 eP	44 49.84	-2 5		
NCA	2.34	63 eP	44 51.62	-1.6		
KLU	2.61	77 eP	44 54.61	-2.5		
TOA	2.66	63 eP	44 56.69	-1.1		
PAX	3.36	51 eP	45 06.74	-1.0		
GLB	3.62	80 eP	45 08.05	-3.2		
24 obs. associated						

JAN 16, 1990 07h 14m 44.16± 0.81s
37.234 N ± 7.7km 20.940 E ± 4.1km
DEPTH = 10.0km (geophysicist)
4.1mb (2 obs.)
IONIAN SEA (399)
ML 4.1 (THE), 3.9 (ATH).

ITM	0.79	94 ePg	14 59.20	-0.3		
VLS	0.98	344 ePg	15 01.60	-1.2		
AGG	2.10	31 ePn	15 21.80	2.0		
IGT	2.34	348 ePn	15 23.80	0.5		
NEO	2.74	40 ePn	15 30.00	1.0		
SRN	2.74	345 ePn	15 26.40	-2.6		
LSK	2.92	355 iPn	15 31.52	-0.1		
LIT	3.11	22 ePn	15 33.70	-0.4		
KZN	3.14	12 ePn	15 35.60	1.0		
TPE	3.14	347 iPnd	15 39.00	4.4X		
VLO	3.42	341 P	15 45.80	7.2X		
APE	3.67	91 ePb	15 48.50	6.3X		
PLG	3.70	31 ePn	15 43.00	0.4		
OHR	3.87	358 iPn	15 44.30	-0.8		
GRG	3.89	17 ePn	15 44.40	-0.9		
OUR	3.90	37 ePn	15 46.10	0.7		
SOI	3.97	284 P	15 45.80	-0.5		
SOH	4.05	27 ePn	15 46.70	-0.8		
ROI	4.15	306 P	15 50.80	1.8		
TIR	4.19	349 ePn	15 50.00	0.5		
KNT	4.21	21 ePn	15 49.00	-0.8		
CZI	4.27	299 P	15 50.20	-0.5		
VAY	4.27	17 iPn	15 50.00	-0.7		
TDS	4.35	305 P	15 53.00	1.2		
CSI	4.44	306 P	15 56.50	3.3X		
PHP	4.47	355 ePn	15 54.20	0.8		
LACI	4.50	348 ePn	15 53.00	-0.8		
MMN	4.70	306 P	15 58.50	1.7		
SKO	4.75	5 iPn	15 55.70	-1.8		
MEU	4.80	270 P	15 56.60	-1.7		
		eSn	16 47.70			
SDA	4.90	347 ePn	16 00.50	0.9		
KKB	4.91	19 eP	16 00.00	0.2		
MNO	5.01	280 P	16 00.90	-0.4		
MGR	5.11	306 P	16 02.40	-0.2		
BCI	5.17	353 ePn	16 03.40	0.0		
RDO	5.29	41 ePn	16 07.50	2.4		
RZN	5.32	32 iPc	16 05.00	-0.7		
SGO	5.51	309 P	16 08.50	0.4		
GIB	5.54	280 P	15 55.80	-13.0X		
		eSn	16 46.30			
KDZ	5.61	37 eP	16 09.00	-0.6		
VTS	5.63	17 iP	16 10.00	0.0		
PLD	5.66	30 eP	16 29.00	18.6X		
PVL	6.86	28 eP	16 24.00	-3.1X		
HVAR	6.86	331 i(Pn)	16 29.30	2.1		
KSL	7.03	97 ePn	16 30.00	0.3		
CMP	8.60	20 ePc	16 50.00	-1.5		
VBY	9.30	334 ePn	17 05.00	3.8X		
		eSn	18 44.30			
VRI	9.65	25 ePc	17 06.00	-0.1		
CEY	9.80	332 e(P)	17 09.50	1.4		
		e(S)	18 53.00			
VOY	10.25	331 eP	17 14.10	-0.2		
		eS	19 00.20			
KHC	13.04	338 eP	18 01.40	9.4X		
CLL	15.16	341 eP	18 26.00	6.2X		
1.7s		21.00nm		4.3mb		
NB2	24.61	349 P	20 03.60	-1.9		
0.9s		3.40nm		4.0mb		
S.D. = 1.2	on	43 of	53 obs.			

? JAN 16, 1990 07h 24m 59.22± 5.08s
46.508 N ±16.5km 14.776 E ±42.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.1 (KBA). MD 2.3 (LJU).

LJU	0.49	200 ePg	25 08.50	-0.8		
		eSg	25 16.20			
VOY	0.78	232 iPgc	25 14.70	0.3		
		eSg	25 29.00			
CEY	0.81	198 eP	25 15.50	0.6		
		e(Sg)	25 28.00			
KBA	1.14	301 ePgc	25 20.50	-0.1		

```
                i      25 23.10
                iSg    25 36.30
                i      25 37.70
      S.D. = 1.0  on   4 of   4 obs.
-------------------------------------
?  JAN  16, 1990   07h 28m 00.55± 5.99s
   44.411 N ±24.2km     6.445 E ±49.8km
   DEPTH =  33.0km  (normal)
 FRANCE                              (538)

PZZ      0.48   79 P      28 10.08   -0.9
                 S      28 16.54
RRL      0.56   25 P      28 11.82   -0.5
                 S      28 19.10
STV      0.65  105 P      28 12.54   -0.9
                 S      28 21.05
ENR      0.72  104 P      28 13.46   -1.0
                 S      28 23.72
RSP      0.94   38 P      28 17.36   -0.2
                 S      28 29.25
ROB      1.03   96 P      28 19.51    0.7
FIN      1.28   98 P      28 22.69    0.4
      S.D. = 0.8  on   7 of   7 obs.
-------------------------------------
   JAN  16, 1990   07h 36m 31.66± 0.22s
   31.664 S ± 7.6km   178.085 W ± 5.8km
   DEPTH =  23.0km  (  5 depth phases)
   5.4mb ( 14 obs.)  5.5Msz ( 14 obs.)
 KERMADEC ISLANDS REGION             (177)
      Ms 5.8 (BRK).
      CENTROID, MOMENT TENSOR        (HRV)
      Data Used: GDSN
      L.P.B.: 15S, 37C
      Centroid Location:
      Origin Time        07:36:44.8 0.6
      Lat 31.53S 0.05 Lon 178.30W 0.05
      Dep  15.0 BDY Half-duration  2.6
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 2.46 0.08  Mtt= 0.45 0.13
        Mff=-2.91 0.11  Mrt= 0.17 0.25
        Mrf= 2.68 0.32  Mtf=-1.36 0.08
       Principal Axes:
        T  Val=  3.62  Plg=65  Azm=253
        N        0.76      12       12
        P       -4.38      21      106
      Best Double Couple:Mo=4.0*10**17
       NP1:Strike=218 Dip=26 Slip= 119
       NP2:          6     67       76

RAO      2.41    3 iP     37 09.00   -1.4
                 S      38 07.00
MRW     11.17  209 eP     39 09.00   -3.9X
                 eS     41 05.00
SVA     13.85  346 eP     39 50.50    1.7
                 eS     40 51.50
DZM     16.77  301 iPc    40 33.20    6.5X
MSZ     16.99  216 eP     40 25.00   -4.2X
PVC     18.55  315 iPc    41 06.00   17.3X
RAR     19.39   62 P      40 47.00  -12.0X
                 S      45 52.00
BRS     25.67  272 iPc+   42 05.10    3.5X
                 i      42 09.80   17km
                 i      42 15.00
                 eS     46 30.00
CNB     27.32  253 eP     42 19.00    2.2
CAN     27.62  253 eP     42 21.70    2.3
BWA     28.14  255 eP     42 24.10   -0.1
RMO     29.37  272 eP     42 39.00    3.8X
HNR     30.08  313 eP     42 46.00    4.4X
TOO     30.42  249 eP     42 44.00   -0.5
                 e      42 50.00   21km
CMS     30.66  261 eP     42 48.00    1.4
CTA     33.95  281 iPd-   43 17.50    2.0
        1.2s   296.88nm          6.1mb
                 i      44 45.00 490kmX
                 iS     48 45.00
STK     34.14  259 iPc    43 20.40    3.3X
                 e      43 50.00 135kmX
ADE     36.05  253 iPc+   43 33.80    0.4
        1.2s    56.25nm          5.4mb
RAB     39.07  308 e(P)   44 04.00    5.2X
                 eS     50 02.00
PMG     39.10  297 eP     44 10.00   11.0X
LAT     41.00  300 eP     44 24.00    9.3X
ASPA    42.99  268 iPd    44 31.20    0.2
        0.9s    88.00nm          5.5mb
      Z 19s      9.58um          5.7Msz

                 eS     50 56.40
                 LR     02 44.40
WRA     44.08  273 Pd     44 39.90    0.0
        0.4s     13.00nm          5.1mb
SBA     46.78  184 e(P)   44 58.70   -1.9
COOL    51.33  254 eP     45 35.00   -1.4
TLE     52.71  289 ePd    45 48.00    1.1
KLB     53.88  252 eP     45 53.00   -2.3
GUA     57.26  316 eP     46 20.50    0.6
GUMO    57.33  316 eP     46 19.50   -0.9
      Z 18s      2.99um          5.4Msz
                 eS     54 20.50
SPA     58.51  180 iPd    46 27.70   -0.7
        1.5s     87.50nm          5.6mb
      Z 20s      5.36um          5.7Msz
SPA     58.51  180 iPd    46 29.00    0.6X
NANU    59.00  261 eP     46 30.00   -2.1
DAV     66.11  295 eP     47 18.00   -1.4
MAW     71.10  201 eP     47 49.50   -0.2
QCP     74.27  299 eP     48 08.00   -1.1
BAG     75.76  300 eP     48 16.00   -1.9
                 eS     58 06.00
MAT     79.24  325 iPc+   48 35.60   -0.9
        1.2s     46.88nm          5.4mb
      Z 20s      1.77um          5.4Msz
                 eS     58 58.00
SSE     84.88  311 P+     49 04.00   -1.8
        6.0s     0.80nm          3.1mb X
      Z 20s      1.10um          5.2Msz
                 pP     49 12.00   25km
                 S      59 33.00
                 sS     00 00.00
BLP     85.34   44 P      49 09.70    1.6
SYP     85.57   45 eP     49 11.00    1.6
BCH     85.96   44 P      49 12.50    1.2
PRS     86.00   43 eP     49 11.20   -0.2
GCC     86.13   42 eP     49 12.80    0.8
ABL     86.25   45 P      49 13.20    0.3
SAO     86.26   42 e(P)   49 12.70    0.1
      Z 20s      2.20um          5.6Msz
      N 20s      1.10um
      E 20s      1.80um
                 e      49 22.00   29km
                 e      49 55.00
                 eSKS   59 49.00
                 eS     00 00.00
                 eScS   00 26.00
                 ePS    00 52.00
                 e      01 20.00
                 e      02 54.00
                 e      05 00.00
                 eSS    05 50.00
                 eRScS  12 26.00
                 eLQ    13 00.00
                 eLR    17 24.00
PRI     86.28   43 ePc     49 12.90    0.0
BAR     86.37   48 eP      49 13.00   -0.3
SNG     86.38  281 eP      49 14.80    1.1
PAS     86.41   46 eP      49 15.00    1.6
LLA     86.44   43 e(P)    49 14.20    0.6
MWC     86.53   46 eP      49 13.00   -1.3
MHC     86.55   42 ePc     49 14.20    0.0
      Z 20s      2.60um          5.6Msz
      N 20s      1.90um
      E 20s      2.20um
BRK     86.58   41 e(P)    49 13.50   -0.6
BKS     86.59   41 iPc     49 15.60    1.4
        0.9s     62.00nm          5.8mb
      Z 20s      5.00um          5.9Msz
      N 20s      3.00um
      E 20s      2.50um
                 eS     59 32.00
                 eSSS   09 30.00
                 eLQ    12 26.00
                 eLR    17 02.00
ARN     86.62   42 P       49 15.00    0.6
NWRM    86.64   40 P       49 15.10    0.7
PLM     86.69   47 eP      49 13.00   -2.1
RVR     86.80   47 eP      49 15.00   -0.3
PEC     86.86   47 P       49 15.70    0.0
SBB     86.98   46 eP      49 16.00   -0.3
ISA     87.25   45 eP      49 17.00   -0.5
FRI     87.42   43 ePc     49 17.80   -0.4
CMB     87.75   42 ePc     49 19.30   -0.6
GLA     87.78   49 eP      49 20.00   -0.1
CLC     87.88   45 eP      49 20.00   -0.6
GSC     88.01   46 eP      49 21.00   -0.3

ORV     88.18   40 eP      49 21.20   -0.7
WDC     88.34   39 ePc     49 22.30   -0.3
MIN     88.68   40 ePc     49 23.50   -0.9
LBFM    89.23   39 P       49 27.10    0.0
TNP     89.61   44 P       49 27.70   -1.3
        1.3s     63.61nm          5.7mb
KVN     89.75   42 P       49 28.30   -1.3
VGB     92.73   36 P       49 43.00    0.1
MSU     92.92   46 P       49 45.20    1.0
NNA     93.15  106 ePc     49 45.50   -0.1
        1.0s     13.00nm          5.3mb
RMW     93.58   34 P       49 47.50    0.6
BJI     93.77  315 eP      49 49.00    1.3
        1.5s     26.00nm          5.4mb
      Z 20s      1.20um          5.4Msz
                 eSKS   00 24.00
                 eS     01 04.00
KMI     94.32  297 Pd     49 52.50    1.5
      Z 20s      1.10um          5.3Msz
                 pP     50 00.00   23km
                 sP     50 11.00
                 S      00 32.00
ALQ     94.42   51 iPc     49 50.80   -0.4
        1.1s     12.66nm          5.3mb
      Z 18s      2.66um          5.7Msz
ANMO    94.42   51 P       49 51.80    0.6
        1.3s     20.43nm          5.4mb
ARE     94.97  113 eP      49 55.00    0.7
PMR     95.85   13 P       49 57.50    0.7
PNT     95.92   34 eP      49 59.00    1.5
BW06    97.10   44 P       50 03.80    0.5
        0.8s     2.86nm           4.9mb
LRM     97.32   40 eP      50 05.00    0.8
CNCB    97.50  115 P       50 07.30    1.2
LPB     97.58  115 P       50 08.00    1.7
      Z 16s      2.02um          5.7MszX
                 PP     54 05.00
                 SKS    00 46.00
                 LR     22 08.00
ZOBO    97.71  114 P       50 07.60    0.5
        1.1s     7.25nm           5.1mb
      Z 22s      1.16um          5.3Msz
                 SKS    00 48.00
                 LR     22 16.00
FBA     99.11   13 P       50 10.00   -1.5
LZH     99.41  307 ePKP    50 10.00   -3.8X
LZH     99.41  307 PKP     50 30.00   16.2X
      Z 20s      0.90um          5.3Msz
      N 17s      0.90um
                 ePP    54 10.00
                 i      54 44.00
                 SKKS   00 55.00
                 SKKKS  01 52.00
                 i      08 50.00
                 i      09 38.00
                 i      20 50.00
RSSD   101.16   45 Pdiff   50 21.50   -0.2X
MBC    113.66   13 ePKP    55 08.50   -0.2
        1.0s     4.00nm
BUL    122.48  210 ePKP    55 40.90   13.6X
QUE    124.96  287 ePKP    55 32.00    0.0
FRB    126.49   31 ePKP    55 31.00   -2.6
SCH    127.25   43 ePKP    55 34.00   -1.4
MAIO   132.63  292 iPKPd   55 47.00    0.7
                 i      59 16.00
DAG    133.79    6 ePKP    55 47.00   -0.2
TAB    143.28  293 ePKP    56 03.00   -2.9X
SLY    143.72  288 ePKPc   56 03.50   -3.0X
                 e      56 46.50
BHD    144.31  284 iPKPd   56 07.00   -0.6
                 e      00 17.00
SUF    145.28  341 ePKP    56 06.40   -1.9
        0.8s     87.00nm
MSL    145.69  289 iPKPd   56 14.50    4.6X
NUR    147.47  339 iPKP    56 13.60    1.7
        0.9s     64.20nm
RGS    148.16  353 ePKP    56 17.30    4.3X
BCAO   148.74  213 iPKPc   56 16.60    1.1
        1.0s     75.00nm
                 ic     56 19.00
                 ic     57 50.90
NB2    149.98  351 PKP     56 17.80    1.9
        1.3s     78.90nm
HFS    150.46  348 ePKP    56 19.70    3.1X
        1.4s     72.00nm
      Z 19s      0.84um          5.6Msz
                 e      56 27.30
```

16d 07h

		e	56	35.80		
		e	56	41.20		
		LR	53	58.00		
AYN	150.50	274 ePKP	56	17.30	-0.3	
JARJ	151.19	280 PKPd	56	25.00	6.3X	
BADA	151.26	272 ePKP	56	20.30	1.5	
KFNJ	151.36	279 PKPd	56	26.00	7.2X	
SHMJ	151.40	281 PKP	56	27.00	8.1X	
AMAN	151.57	262 ePKP	56	25.50	6.1X	
AKRL	151.65	261 iPKPc	56	26.20	6.7X	
MBH	151.65	275 e(PKP)	56	19.00	-0.3	
PRNI	151.67	276 ePKP	56	26.00	6.6X	
AGMR	151.75	261 iPKPd	56	26.50	6.9X	
KAS	152.76	300 ePKP	56	28.00	7.3X	
LFK	153.44	286 ePKP	56	29.70	7.9X	
LIC	153.87	164 PKP	56	23.68	0.7	
KIC	154.07	165 PKP	56	23.86	0.6	
	1.4s	37.50nm				
TIC	154.28	164 PKP	56	24.10	0.6	
CFR	155.54	311 ePKP	56	24.00	-0.2	
KRA	157.23	329 ePKP	56	25.90	-0.4	
		e	56	36.90		
SPC	157.71	327 ePKP	56	29.60	2.4	
		e	57	01.40		
		e	13	45.80		
KSP	158.07	335 ePKP	56	29.00	1.7	
		i	57	01.00		
CLL	158.73	341 ePKP	56	26.00	-2.0	
BRG	158.84	339 iPKP	56	30.10	2.0	
	1.4s	23.00nm				
		i	56	45.50		
		i	57	04.00		
BZS	159.32	318 ePKP	56	27.00	-1.8	
SRO	159.60	327 e(PKP)	56	28.70	-0.3	
		i	57	07.50		
MOX	159.71	342 ePKP	56	12.00	-17.1X	
	Z 16s	1.40um			5.9MszX	
	N 16s	1.00um				
	E 18s	1.20um				
		e	56	24.00		
		e	57	08.00		
ZST	159.86	329 ePKP	56	29.10	-0.2	
		e	57	09.20		
		e	13	46.20		
		i(Sn)	14	28.30		
		e	17	09.80		
KHC	160.46	337 iPKPd	56	29.80	-0.2	
	Z 18s	1.80um				
	N 18s	0.60um				
	E 18s	1.00um				
		i	57	12.00		
SOP	160.48	329 ePKP	56	30.40	0.4	
VAY	160.84	306 ePKP	56	27.00	-3.5X	
		e	57	12.70		
SKO	161.33	309 iPKP	56	28.50	-2.5	
		i	57	16.50		
		i	00	58.00		
		i	02	01.00		
		i	07	52.00		
OHR	162.14	307 ePKP	56	30.00	-2.0	
KBA	162.28	334 ePKP	56	30.00	-2.1	
	2.2s	95.90nm				
		ePP	57	18.00		
		e	00	52.00		
LJU	162.63	329 ePKP	56	32.00	-0.2	
VBY	162.72	327 ePKP	56	35.00	2.7X	
		e	57	21.50		
TOL	170.48	29 ePKP	56	34.00	-4.5X	
		eSP	22	45.00		
IFR	173.78	71 iPKP	56	40.50	0.3	
	S.D. = 1.2	on 109 of 144 obs.				

JAN 16, 1990 07h 56m 33.47± 0.23s
31.725 S ± 7.6km 177.996 W ± 5.6km
DEPTH = 33.0km (normal)
5.4mb (11 obs.) 5.5Msz (3 obs.)
KERMADEC ISLANDS REGION (177)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 26C
Centroid Location:
Origin Time 07:56:46.4 1.0
Lat 31.27S 0.07 Lon 178.26W 0.10
Dep 15.0 FIX Half-duration 2.4
Moment Tensor; Scale 10**17 Nm
Mrr= 2.32 0.17 Mtt= 0.82 0.28
Mff=-3.14 0.19 Mrt= 0.33 0.53
Mrf= 0.18 0.78 Mtf=-1.23 0.16
Principal Axes:
T Val= 2.39 Plg=77 Azm= 4
N 1.12 12 197
P -3.50 3 106
Best Double Cauple:Ma=3.0*10**17
NP1:Strike=183 Dip=44 Slip= 72
NP2: 28 49 107

MRW	11.15	210 eP	59	15.00	1.4	
		eS	01	06.00		
SVA	13.92	346 eP	59	52.70	2.0	
DZM	16.87	301 iPc	00	35.10	6.4X	
MSZ	16.99	216 eP	00	22.00	-8.0X	
BRS	25.75	272 iPd	02	06.10	3.2X	
	1.0s	5.00nm			4.1mb X	
		i	02	09.00		
		i	02	35.00		
		e(S)	06	37.00		
		e	08	19.00		
CNB	27.38	254 eP	02	20.00	2.2	
		e	05	37.00		
CAN	27.68	254 eP	02	22.20	1.7	
BWA	28.20	255 eP	02	24.90	-0.3	
RMQ	29.44	272 iPd	02	40.00	3.6X	
		e	09	28.00		
HNR	30.18	313 eP	02	42.00	-1.0	
TOO	30.47	249 eP	02	46.00	0.6	
		e	02	49.00		
		e	05	45.00		
CMS	30.72	261 eP	02	49.00	1.3	
CTA	34.03	281 iPc	03	18.60	1.9	
	1.2s	242.19nm			6.0mb	
		iS	08	47.00		
		i	09	29.00		
STK	34.21	259 eP	03	21.00	2.9X	
ADE	36.11	253 iPd	03	33.20	-1.1	
	1.0s	30.00nm			5.2mb	
LAT	41.10	300 eP	04	19.00	3.0X	
ASPA	43.06	268 iPd	04	31.90	-0.2	
	0.9s	69.00nm			5.4mb	
		eS	10	44.70		
WRA	44.16	274 Pd	04	40.70	-0.3	
	0.7s	39.80nm			5.3mb	
WB5	44.17	274 eP	04	40.90	-0.2	
FORR	45.67	256 eP	04	52.00	-0.9	
	0.5s	33.00nm			5.5mb	
SBA	46.72	184 e(P)	05	01.10	0.5	
WARB	48.33	262 eP	05	12.00	-1.9	
JAY	48.52	298 ePd	05	15.50	0.0	
		e	07	14.50		
MTN	50.20	280 eP	05	26.00	-2.4	
COOL	51.39	254 eP	05	35.00	-2.3	
KLB	53.93	252 eP	05	53.00	-3.1X	
SPA	58.45	180 iPc	06	27.80	-0.5	
	1.0s	113.00nm			5.9mb	
	Z 19s	4.30um			5.6Msz	
SPA	58.45	180 eP	06	30.00	1.7X	
NANU	59.07	261 eP	06	31.80	-1.1	
MAW	71.07	201 eP	07	49.00	-0.9	
MAT	79.33	325 (P)	08	35.00	-2.3	
	1.1s	22.78nm			5.1mb	
SYP	85.56	45 eP	09	10.00	0.3	
BCH	85.95	44 P	09	12.70	1.1	
PRS	85.99	43 ePd	09	11.80	0.1	
GCC	86.13	42 ePd	09	12.40	0.1	
PHAM	86.21	43 P	09	13.50	0.7	
ABL	86.24	45 P	09	13.00	-0.2	
PCC	86.24	41 eP	09	12.70	-0.1	
SAO	86.25	42 eP	09	12.70	-0.2	
PRI	86.27	43 eP	09	13.80	0.6	
BAR	86.35	48 eP	09	14.00	0.5	
PAS	86.40	46 eP	09	13.00	-0.7	
LLA	86.44	43 eP	09	14.30	0.4	
MWC	86.52	46 eP	09	15.00	0.5	
MHC	86.55	42 ePd	09	14.90	0.4	
BRK	86.57	41 eP	09	13.70	-0.7	
BKS	86.59	41 eP	09	15.20	0.6	
	1.1s	77.00nm			5.8mb	
ARN	86.61	42 P	09	15.00	0.3	
NWRM	86.64	40 P	09	15.00	0.3	
PLM	86.68	47 eP	09	15.00	-0.3	
RVR	86.78	46 eP	09	15.00	-0.6	
PEC	86.85	47 P	09	15.40	-0.6	
SBB	86.97	46 eP	09	16.00	-0.6	
ISA	87.24	45 eP	09	18.00	0.2	
FRI	87.41	43 eP	09	18.40	-0.1	
CMB	87.74	42 eP	09	19.90	-0.3	
GLA	87.77	49 eP	09	21.00	0.6	
CLC	87.87	45 eP	09	21.00	0.2	
GSC	88.00	46 eP	09	21.00	-0.5	
ORV	88.18	40 eP	09	21.70	-0.5	
WDC	88.34	39 eP	09	22.90	0.0	
MIN	88.68	40 eP	09	23.90	-0.9	
LBFM	89.23	39 P	09	23.90	-3.5X	
TNP	89.61	44 P	09	29.00	-0.3	
	1.0s	21.46nm			5.4mb	
KVN	89.74	42 P	09	29.20	-0.7	
MSU	92.91	46 P	09	44.50	0.0	
DUG	93.58	44 P	09	50.00	2.6	
BJI	93.87	315 eP	09	49.00	0.5	
	Z 20s	1.20um			5.4Msz	
		eSKS	20	24.00		
		eS	21	04.00		
ALQ	94.40	51 iPc	09	51.50	0.1	
	1.0s	5.25nm			4.9mb	
BW06	97.10	44 P	10	02.50	-1.1	
CNCB	97.41	115 eP	10	02.00	-4.0X	
LPB	97.48	115 P	10	06.00	-0.2	
ZOBO	97.62	114 P	10	06.00	-1.0	
	1.5s	9.68nm			5.1mb	
	Z 20s	1.49um			5.5Msz	
		LR	42	06.00		
RSSD	101.15	45 Pdiff	10	21.00	-0.9X	
INK	105.05	16 ePKP	14	46.00	-6.8X	
MBC	113.70	13 ePKP	15	08.00	-1.1	
	1.0s	4.00nm				
BUL	122.46	210 ePKP	15	42.00	14.4X	
QUE	125.05	287 ePKP	15	33.00	0.6	
FRB	126.50	31 ePKP	15	32.00	-1.9	
SCH	127.24	43 ePKP	15	34.00	-1.7	
GDH	131.36	23 ePKP	15	45.00	2.0	
		e	35	40.00		
		e	43	50.00		
MAIO	132.72	292 ePKP	15	49.00	2.2	
		i	19	16.00		
TAB	143.37	292 e(PKP)	16	07.00	0.6	
SLY	143.81	288 ePKPd	16	03.00	-3.9X	
BHD	144.40	284 ePKPd	16	08.50	0.5	
SUF	145.36	341 ePKP	16	07.30	-1.4	
	0.9s	186.50nm				
MSL	145.78	289 iPKPd	16	15.00	4.7X	
NUR	147.55	339 iPKP	16	14.30	2.0	
	1.1s	127.20nm				
		i	16	20.40		
RGS	148.23	353 ePKP	16	16.80	3.4X	
BCAO	148.73	213 iPKPc	16	18.20	2.5	
	0.9s	41.00nm				
		ic	16	19.60		
		id	16	31.60		
		ic	17	50.60		
UPP	149.99	344 iPKP	16	20.20	4.1X	
NB2	150.06	351 PKP	16	20.80	4.5X	
	1.3s	76.90nm				
HFS	150.54	348 ePKP	16	20.20	3.2X	
	1.0s	36.80nm				
		e	16	32.70		
AYN	150.58	273 ePKP	16	17.30	-0.7	
JARJ	151.27	280 PKPc	16	25.30	6.2X	
BADA	151.34	272 ePKP	16	25.00	5.8X	
KFNJ	151.44	279 PKP	16	26.90	7.7X	
SHMJ	151.49	281 PKP	16	27.00	7.7X	
HRI	151.57	282 ePKP	16	27.00	7.4X	
DSI	151.65	279 e(PKP)	16	26.00	6.5X	
MBH	151.73	275 e(PKP)	16	20.00	0.3	
AGMR	151.81	261 iPKPd	16	16.50	-3.5X	
KAS	152.86	300 iPKPc	16	29.40	8.3X	
LFK	153.53	286 ePKP	16	27.00	4.8X	
LIC	153.79	164 PKP	16	23.00	-0.1	
BBTK	153.86	297 ePKP	16	22.00	-0.6	
KIC	153.99	165 PKP	16	23.30	-0.1	
TIC	154.20	164 PKP	16	23.60	-0.1	
SKO	161.42	309 ePKP	16	39.00	7.6X	
		i	17	17.50		
TOL	170.50	29 ePKP	16	39.00	0.3	
	S.D. = 1.1	on 81 of 110 obs.				

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* JAN 16, 1990 08h 12m 43.76± 1.38s
51.303 N ±14.5km 15.587 E ± 7.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 4.1 (VKA), 3.9 (KBA).

KSP	0.64	136 iPc	12	52.40	-4.2X	

	0.3s	181.00nm				
		i	12	54.70		
		iS	13	01.90		
BRG	1.12	248 ePn	13	05.50	0.7	
		iPg	13	07.60		
		iSg	13	27.00		
PRU	1.48	207 Pn	13	10.40	0.0	
		Pg	13	12.50		
		eSn	13	29.00		
		Sg	13	36.40		
		i	13	43.60		
CLL	1.62	271 iPn	13	11.60	-0.8	
		iPg	13	14.90		
		iSg	13	41.00		
KHC	2.53	211 iPn	13	26.40	0.8	
		Pg	13	35.00		
		eSn	13	59.50		
		Sg	14	10.90		
HOF	2.55	249 iPnc	13	25.50	-0.4	
MOX	2.60	257 ePn	13	27.00	0.5	
		ePg	13	35.00		
		iSg	14	14.00		
WET	2.77	220 iPnc	13	29.50	0.4	
KRA	3.04	113 eP	13	33.00	0.3	
		iS	14	12.70		
VKA	3.08	171 iPgc	13	39.30	6.0X	
		i	13	40.60		
		iSg	14	23.10		
SOP	3.68	170 eP	13	50.00	8.1X	
KBA	4.48	200 iPnd	13	51.70	-1.6	
	1.1s	14.00nm				
		iSg	15	05.30		
		i	15	10.20		
		e	17	28.50		
VOY	5.39	193 e(Pn)	14	13.70	7.4X	
		eSn	15	43.20		
DOU	7.09	264 eP	14	38.50	8.5X	
	S.D. = 0.9	on 9 of 14 obs.				

JAN 16, 1990 08h 41m 54.83± 0.43s
5.253 S ± 6.9km 132.381 E ± 7.1km
DEPTH = 44.2km (3 depth phases)
5.0mb (14 obs.) 4.9Msz (1 obs.)
AROE ISLANDS REGION (204)

TLE	0.53	136 ePc	42	08.00	1.9	
AAI	4.45	290 eP	43	01.00	-0.7	
		eS	43	56.00		
MTN	7.65	189 iPc	43	42.80	-3.7X	
JAY	8.74	72 ePc	44	00.50	-1.1	
PCI	13.25	289 iPd	45	02.40	-0.3	
WB5	14.67	173 eP	45	16.10	-5.2X	
		eS	47	44.40		
WRA	14.73	173 Pc	45	17.10	-5.0X	
	0.8s	18.50nm			4.5mb	
PMG	15.22	107 eP	45	27.00	-1.5	
TSM	17.11	303 ePd	45	55.30	2.8	
ASPA	18.37	176 iPc	46	05.20	-2.9	
	0.6s	44.00nm			4.8mb	
		iS	49	16.00		
KKM	19.66	305 ePd	46	23.80	0.6	
	1.0s	108.00nm			5.1mb	
MBL	19.95	216 eP	46	24.30	-1.9	
	0.4s	13.00nm			4.6mb	
CTA	19.99	139 iPc	46	26.80	0.2	
	1.2s	103.91nm			5.0mb	
WARB	21.52	194 eP	46	43.00	0.7	
	0.5s	16.00nm			4.7mb	
		eS	50	52.00		
QCP	22.72	331 eP	47	00.20	6.1X	
NANU	23.69	222 iPd	47	04.40	0.8	
	0.3s	18.00nm			5.1mb	
BAG	24.49	332 eP	47	11.00	-0.5	
FORR	25.78	188 eP	47	24.00	0.6	
	0.4s	41.00nm			5.3mb	
RMQ	26.28	145 eP	47	42.00	13.9X	
COOL	27.60	201 eP	47	39.00	-1.1	
STK	27.86	163 e(P)	47	44.00	1.6	
MRWA	28.44	211 eP	47	47.60	0.0	
BAL	29.22	208 eP	47	54.50	-0.2	
BRS	29.36	141 eP	47	48.00	-8.0X	
ADE	30.14	170 e(P)	47	56.60	-6.3X	
MUN	30.60	208 eP	48	13.00	6.1X	
NWAO	30.95	205 eP	48	11.00	1.0	
BWA	32.61	155 eP	48	27.80	3.2X	
		e	48	39.70	45km	
IPM	32.80	287 ePc	48	26.60	0.1	
	1.0s	60.30nm			5.4mb	
CAN	33.62	155 eP	48	35.00	1.6	
		e	48	47.00	45km	
DZM	36.94	120 iPc	49	02.90	1.0	
BDT	39.84	305 eP	49	26.50	0.6	
CHG	40.71	307 ePc	49	34.00	0.8	
	1.0s	32.25nm			5.0mb	
KMI	41.74	318 Pc	49	42.50	0.7	
		sP	49	55.00		
MAT	41.93	7 (P)	49	39.00	-3.9X	
BJI	47.48	343 eP	50	27.00	-0.3	
	1.0s	12.00nm			4.8mb	
LZH	49.06	329 eP	50	40.00	0.2	
	1.5s	42.00nm			5.2mb	
Z	18s	1.20um			4.9Msz	
N	16s	0.80um				
		i	50	52.00	43km	
GBA	57.66	290 Pc	51	40.80	-2.7	
	0.9s	4.00nm			4.5mb	
HYB	57.72	294 eP	51	42.50	-1.5	
	1.0s	30.00nm			5.3mb	
POO	62.32	294 eP	52	15.00	-0.5	
QUE	71.76	304 eP	53	14.00	-1.2	
MAIO	79.45	308 eP	54	00.00	1.4	
NNA	146.27	121 ePKP	01	46.00	13.8X	
	0.9s	4.20nm				
NNA	146.27	121 ePKPc	01	32.00	-0.2	
	1.0s	11.00nm				
ARE	148.02	133 ePKP	01	39.00	3.8X	
CNCB	150.24	138 PKP	01	46.00	7.0X	
LPB	150.36	137 PKP	01	51.00	12.0X	
ZOBO	150.52	137 ePKP	01	46.00	6.6X	
	1.0s	15.00nm				
		i	01	50.00		
CCH	151.01	141 PKP	01	50.80	11.0X	
	S.D. = 1.3	on 33 of 49 obs.				

? JAN 16, 1990 09h 31m 01.93± 2.79s
43.692 N ±20.1km 10.351 E ±12.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

PII	0.13	77 Pc	31	05.00	0.0	
		eSg	31	06.90		
BDI	0.41	26 P	31	10.20	-0.2	
		eSg	31	16.90		
MME	0.56	27 P	31	13.70	0.2	
		eSg	31	23.40		
BO8	1.26	329 P	31	25.30	0.0	
		eSg	31	43.60		
	S.D. = 0.3	on 4 of 4 obs.				

* JAN 16, 1990 10h 15m 13.54± 1.62s
17.038 N ±16.7km 102.031 W ±11.0km
DEPTH = 33.0km (normol)
4.0mb (1 obs.)
NEAR COAST OF MICHOACAN, MEXICO (56)

ACX	2.09	94 iP	15	46.90	0.0	
		iS	16	10.60		
MRX	2.77	17 iP	15	56 70	0.2	
		iS	16	38.80		
III	2.78	61 iPc	15	56 40	-0.5	
		iS	16	39 70		
CRX	3.25	43 eP	16	04 30	0.6	
PPM	3.82	58 iPd	16	11 30	-0.6	
OXX	5.08	89 iPc	16	30.20	0.6	
		iS	17	25.30		
TUL	19.60	15 ePd	19	38.20	-3.8X	
	0.7s	6.20nm			4.0mb	
KVN	26.04	331 eP	20	46.60	0.8	
INK	55.00	346 eP	24	42.50	-1.2	
	S.D. = 0.8	on 8 of 9 obs.				

* JAN 16, 1990 10h 22m 36.58± 1.56s
35.458 N ±20.1km 26.865 E ± 9.1km
DEPTH = 33.0km (normol)
CRETE (370)

KAP	0.27	70 ePb	22	43.00	-1.0	
APE	1.94	327 ePn	23	08.20	0.4	
YER	2.03	34 ePn	23	07.00	-2.2	
VAM	2.18	269 ePn	23	11.00	-0.2	
		eSn	23	37.00		
KSL	2.31	73 ePn	23	14.50	1.5	
CIN	2.35	24 eP	23	15.00	1.3	
ELL	2.78	62 ePn	23	20.00	0.1	
	S.D. = 1.6	on 7 of 7 obs.				

? JAN 16, 1990 10h 34m 24.46± 0.99s
39.065 N ± 9.4km 27.673 E ±16.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.74	206 ePg	34	39.00	0.0	
		eSg	34	51.00		
DST	0.92	54 ePn	34	42.00	0.0	
EDC	1.29	7 ePn	34	48.00	-0.3	
BNT	1.30	8 ePn	34	48.90	0.3	
	S.D. = 0.5	on 4 of 4 obs.				

JAN 16, 1990 10h 52m 08.28± 0.22s
31.587 S ± 7.3km 178.046 W ± 5.5km
DEPTH = 33.0km (normol)
5.5mb (12 obs.) 5.4Msz (12 obs.)
KERMADEC ISLANDS REGION (177)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 28C
Centroid Location:
Origin Time 10:52:15.7 0.5
Lat 31.53S 0.04 Lon 177.86W 0.05
Dep 15.0 FIX Half-duration 2.3
Moment Tensor; Scale 10**17 Nm
Mrr= 2.21 0.08 Mtt= 0.26 0.14
Mff=-2.47 0.10 Mrt=-0.63 0.25
Mrf= 0.76 0.35 Mtf=-0.86 0.07
Principal Axes:
T Vol= 2.59 Plg=68 Azm=211
N 0.20 21 12
P -2.79 7 104
Best Double Couple:Mo=2.7*10**17
NP1:Strike=217 Dip=43 Slip= 122
NP2: 356 55 64

RAO	2.33	3 eP	52	43.40	-1.7	
		S	53	14.50		
MRW	11.25	209 eP	54	46.00	-3.8X	
		eS	56	43.00		
SVA	13.78	346 eP	55	26.20	2.6	
		eS	56	25.00		
DZM	16.76	301 iPd	56	08.30	6.1X	
MSZ	17.07	216 eP	56	00.00	-5.9X	
PVC	18.51	315 iPc	56	30.00	6.1X	
RAR	19.33	62 P	56	29.00	-4.7X	
		S	59	52.00		
BRS	25.70	272 iPd-	57	41.10	3.9X	
	1.5s	23.50nm			4.6mb	
CNB	27.38	253 eP	57	54.00	1.4	
		e	01	12.00		
CAN	27.68	253 eP	57	57.30	2.0	
		e	58	09.20		
BWA	28.19	255 eP	57	59.90	-0.1	
		e	58	12.10		
RMQ	29.40	271 iPd	58	14.20	3.4X	
	1.2s	338.00nm			6.0mb	
		e	01	17.00		
		e	05	02.00		
HNR	30.06	312 eP	58	16.00	-0.7	
TOO	30.48	249 eP	58	21.70	1.4	
		e	01	18.00		
CMS	30.70	261 eP	58	24.00	1.7	
CTA	33.97	281 iPc+	58	52.50	1.6	
	1.3s	528.85nm			6.3mb	
		i	00	17.00		
		iS	04	17.00		
		iScP	05	16.00		
STK	34.19	259 eP	58	56.00	3.2X	
ADE	36.11	253 iPc	59	09.40	0.3	
	1.2s	71.88nm			5.5mb	
RAB	39.05	308 e(P)	59	32.00	-1.9	
		eS	11	20.00		
PMG	39.09	297 eP	59	35.00	0.7	
LAT	40.99	300 eP	59	54.00	4.1X	
ASPA	43.02	268 iPc	00	03.50	-3.1X	
	1.4s	176.00nm			5.6mb	
Z	19s	6.19um			5.5Msz	
		iS	06	30.00		
		iScS	10	03.80		
		LR	18	00.20		
WRA	44.11	273 Pd	00	16.00	0.6	
	1.5s	203.30nm			5.7mb	
WB5	44.12	273 iPc	00	14.90	-0.6	
FORR	45.66	256 eP	00	27.00	-0.6	

6d 11h

BA 46.85 184 P 00 38.00 1.5
ARB 48.30 262 eP 00 47.00 -1.6
TN 50.14 280 eP 01 02.00 -0.7
OOL 51.39 254 eP 01 10.30 -1.8
LE 52.71 289 ePd 01 22.00 -0.2
LB 53.93 252 eP 01 29.10 -1.8
UN 55.07 251 eP 01 37.00 -2.3
UA 57.23 316 e(P) 01 44.00 -10.9X
UMO 57.30 316 e(P) 01 46.50 -8.8X
Z 18s 2.46um 5.4Msz
eS 09 58.00
PJG 57.30 316 e(P) 01 43.70 -11.6X
SPA 58.59 180 iPc 02 02.10 -2.0X
1.1s 42.86nm 5.5mb
Z 19s 4.30um 5.6Msz
SPA 58.59 180 iPc 02 03.00 -1.1
NANU 59.05 261 iPc 02 07.00 -0.6
DAV 66.10 295 eP 02 51.00 -3.6X
MAW 71.19 201 eP 03 25.00 -0.4
BAG 75.76 300 eP 03 48.00 -5.0X
MAT 79.19 325 iPd 04 10.40 -1.0
1.8s 127.27nm 5.6mb
Z 20s 1.42um 5.3Msz
eS 14 35.00
SYP 85.49 45 eP 04 44.00 -0.2
BCH 85.88 44 P 04 47.00 0.9
PRS 85.92 43 eP 04 46.70 0.6
GCC 86.05 42 ePc 04 47.00 0.3
PHAM 86.14 43 P 04 49.00 1.7
PRI 86.20 43 e(P) 04 48.60 1.0
BAR 86.29 48 eP 04 49.00 0.9
PAS 86.33 46 eP 04 49.00 0.8
LLA 86.37 43 e(P) 04 48.90 0.6
SNG 86.40 281 eP 04 48.80 -0.1
MWC 86.45 46 eP 04 49.00 0.0
MHC 86.47 42 eP 04 49.40 0.4
BRK 86.50 41 e(P) 04 48.50 -0.4
ARN 86.54 42 P 04 49.80 0.6
NWRM 86.56 40 P 04 50.00 0.8
PLM 86.61 47 eP 04 50.00 0.2
RVR 86.72 47 eP 04 49.00 -1.1
PEC 86.78 47 P 04 50.50 0.0
SBB 86.90 46 eP 04 51.00 -0.1
ISA 87.17 45 eP 04 53.00 0.7
FRI 87.34 43 ePc 04 53.00 0.0
CMB 87.67 42 ePc 04 54.50 -0.1
GLA 87.71 49 eP 04 55.00 0.1
CLC 87.80 45 eP 04 55.00 -0.3
GSC 87.94 46 eP 04 56.00 0.0
ORV 88.10 40 ePc 04 56.20 -0.4
WDC 88.26 39 ePc 04 57.50 0.2
MIN 88.60 40 eP 04 58.50 -0.7
LBFM 89.15 39 P 05 02.00 0.1
TNP 89.53 44 P 05 03.30 -0.5
1.5s 41.67nm 5.5mb
KVN 89.67 42 P 05 03.60 -0.7
MSU 92.84 46 P 05 19.50 0.5
LON 93.00 35 P 05 20.00 0.7
DUG 93.51 44 P 05 20.00 -1.9
BJI 93.74 315 eP 05 23.00 0.3
1.5s 39.00nm 5.6mb
Z 18s 1.17um 5.4Msz
eSKS 26 00.00
eS 26 40.00
CHG 93.94 290 eP 05 26.90 2.7
KMI 94.32 297 Pc+ 05 26.50 0.4
Z 21s 0.90um 5.2Msz
pP 05 39.00 41kmX
S 16 05.00
ALQ 94.34 51 eP 05 23.80 -2.2
1.0s 2.75nm 4.6mb
Z 20s 1.68um 5.5Msz
ANMO 94.35 51 P 05 36.00 10.0X
1.2s 10.74nm
CNCB 97.51 115 P 05 43.60 2.3
LPB 97.58 115 P 05 51.00 9.6X
Z 20s 0.71um 5.2Msz
PP 09 30.00
SKS 16 16.00
LR 37 34.00
ZOBO 97.71 114 P 05 43.00 0.8
1.1s 6.38nm 5.1mb
Z 24s 0.55um 5.0MszX
SKS 16 24.00
LZH 99.39 307 ePKP 05 50.00 1.2
Z 20s 0.80um 5.2Msz
N 18s 1.20um

i 06 20.00
ePP 09 54.00
i 10 20.00
SKKS 16 30.00
SKKKS 17 32.00
i 24 50.00
SES 100.78 37 ePdiff05 54.00 -0.7X
MBC 113.57 13 ePKP 10 44.00 0.3
1.0s 4.00nm
SLR 117.70 207 ePKP 10 54.60 1.4
Z 18s 4.81um 6.2Msz
QUE 124.97 287 ePKP 11 07.80 0.7
FRB 126.41 31 ePKP 11 07.00 -1.6
SCH 127.17 43 ePKP 11 09.00 -1.4
MAIO 132.63 292 iPKPd 11 21.80 0.4
i 14 50.00
DAG 133.71 6 ePKP 11 20.00 -2.1
TAB 143.28 293 ePKP+ 11 37.00 -4.0X
SLY 143.72 288 ePKPd 11 38.00 -3.6X
BHD 144.32 284 iPKPd 11 43.00 0.3
ePKS 15 24.00
SUF 145.21 341 ePKP 11 41.80 -1.5
MSL 145.70 289 iPKPd 11 49.00 4.0X
NUR 147.41 339 iPKP 11 49.30 2.4
1.1s 124.80nm
BCAO 148.82 213 iPKPc 11 51.00 0.3
1.0s 90.00nm
ic 11 54.20
ic 12 12.00
id 13 20.00
UPP 149.84 344 iPKP 12 01.00 10.3X
NB2 149.91 351 PKP 11 50.40 -0.5
1.3s 76.10nm
HFS 150.39 348 ePKP 11 55.20 3.6X
1.4s 121.10nm
Z 18s 0.81um 5.6Msz
e 12 02.70
e 12 22.20
LR 09 11.00
AYN 150.53 274 ePKP 11 51.68 -1.1
HSHJ 151.00 275 PKPd 12 02.00 8.4X
KVT 151.10 299 iPKP 11 59.90 6.5X
BADA 151.29 272 ePKP 11 52.67 -1.2
KFNJ 151.38 280 PKPd 12 00.90 7.0X
SALJ 151.39 280 PKPd 12 01.20 7.1X
HRI 151.50 282 ePKP 11 59.00 4.7X
AGAL 151.51 261 iPKPc 12 02.00 7.6X
DSI 151.58 279 e(PKP) 12 00.00 5.7X
AMAN 151.61 262 iPKPc 12 01.50 7.0X
MBH 151.68 275 ePKP 11 54.00 -0.5
AKRL 151.70 261 iPKPc 12 01.50 6.8X
AGMR 151.79 261 iPKPc 12 02.00 7.2X
KAS 152.75 300 ePKP 12 02.50 6.7X
LFK 153.45 287 ePKP 12 06.20 9.3X
BBTK 153.76 297 ePKP 11 56.00 -1.3
LIC 153.94 164 PKP 11 57.40 -0.7
Z 20s 0.60um 5.4Msz
KIC 154.13 165 PKP 11 57.90 -0.5
TIC 154.34 164 PKP 11 57.72 -1.0
CFR 155.51 311 ePKP 12 00.00 0.7
VRI 156.11 314 ePKPd 12 20.00 19.9X
KRA 157.18 329 ePKP 12 11.80 10.5X
e 12 32.80
CMP 157.44 314 ePKPc 12 04.00 2.1
SPC 157.67 327 ePKP 12 01.00 -1.2
i 12 35.90
KSP 158.02 335 ePKP 12 02.20 -0.1
1.2s 63.00nm
i 12 36.10
CLL 158.67 341 ePKP 11 54.00 -9.0X
BRG 158.78 339 ePKP 12 03.90 0.7
e 12 10.40
e 12 19.00
e 12 38.00
e 12 46.00
e 13 14.00
e 15 48.00
BZS 159.28 318 ePKP 12 18.00 14.1X
ZST 159.81 330 ePKP 12 03.20 -1.2
e 12 43.50
KHC 160.41 337 PKP 12 04.50 -0.5
Z 18s 1.30um 5.9MszX
E 18s 1.00um
i 12 47.00
SOP 160.43 329 ePKP 12 04.60 -0.4
VAY 160.82 306 ePKP 12 07.00 1.4
i 12 48.40

SKO 161.30 309 ePKP 12 06.00 -0.1
1.2s 64.00nm
Z 18s 0.87um 5.7Msz
N 18s 0.88um
e 12 16.50
i 12 52.20
KBA 162.23 334 ePKP 12 14.00 6.9X
2.2s 103.00nm
i(PP) 12 54.00
LJU 162.58 330 e(PKP) 12 07.00 -0.3
VBY 162.67 327 e(PKP) 12 07.00 -0.3
VOY 162.87 331 ePKP 12 06.70 -1.0
CEY 162.87 329 ePKP 12 19.50 11.9X
e 12 57.00
VAI 164.79 342 PKP 12 09.50 0.2
i 13 06.40
SDI 166.13 320 PKP 12 11.80 1.1
e 13 12.00
TOL 170.40 29 ePKP 12 15.00 1.5
ePKKP 13 30.00
ePP 17 18.00
IFR 173.72 70 iPKP 12 13.50 -1.8
S.D. = 1.1 on 103 of 145 obs.

& JAN 16, 1990 11h 41m 45.79s
62.958 N 149.217 W
DEPTH = 75.2km
CENTRAL ALASKA (1)
<AGS-P>.

HUR 0.19 276 eP 41 57.07 1.7
RND 0.48 20 eP 41 58.93 -0.2
CUT 0.74 222 eP 42 01.71 0.0
eS 42 13.55
MCK 0.79 9 eP 42 02.37 0.1
eS 42 14.87
GHO 1.20 173 eP 42 06.81 -0.6
PWA 1.35 194 iPc 42 09.30 0.0
PLRM 1.37 178 eP 42 09.28 -0.3
eS 42 28.48
PMR 1.37 178 iPc 42 09.20 -0.4
SKT 1.46 229 iP 42 10.60 -0.2
NCA 1.47 130 eP 42 10.56 -0.5
NEA 1.63 2 eP 42 12.40 -0.6
TOA 1.65 120 iPc 42 13.60 0.2
SUA 1.66 206 eP 42 13.84 0.2
eS 42 36.63
PAX 1.71 88 eP 42 13.88 -0.4
PMS 1.73 186 eP 42 14.10 -0.3
SDG 1.75 103 eP 42 14.57 -0.1
CCB 1.81 20 eP 42 14.51 -1.0
FBA 2.05 17 iPd 42 18.00 -0.8
NCG 2.08 223 eP 42 19.42 0.1
GLM 2.19 21 eP 42 19.82 -1.0
VZW 2.28 145 eP 42 20.49 -1.6
GLI 2.32 153 eP 42 20.86 -1.6
NKA 2.42 204 eP 42 26.40 2.5
DOT 2.43 71 eP 42 23.28 -0.8
SLKM 2.51 191 eP 42 25.20 0.1
FID 2.57 148 eP 42 24.23 -1.7
RDT 2.83 214 eP 42 28.08 -1.6
SEW 2.87 182 eP 42 29.16 -0.9
HIN 2.88 152 eP 42 28.42 -1.9
eS 43 06.06
CVA 2.93 144 iP 42 29.47 -1.5
eS 43 07.41
GLB 2.96 119 eP 42 30.09 -1.3
RED 3.06 215 eP 42 33.48 0.6
NNL 3.09 200 eP 42 33.93 0.7
TTA 3.11 273 iPc 42 32.90 -0.6
SGAM 3.12 140 eP 42 31.14 -2.5
eS 43 11.68
RAGM 3.37 138 eP 42 35.38 -1.8
eS 43 20.05
SVW 3.54 241 eP 42 38.80 -0.8
IMA 3.67 330 ePc 42 40.70 -0.7
TGL 3.75 123 eP 42 40.20 -2.3
WAX 3.94 127 eP 42 43.04 -2.1
PDB 3.98 219 eP 42 45.18 -0.5
SNH 4.13 130 eP 42 46.10 -1.7
DWY 4.52 72 P 42 51.20 -2.0
KDC 5.47 199 eP 43 03.90 -2.6
INK 8.40 44 eP 43 45.00 -1.9
45 obs. associated

& JAN 16, 1990 12h 01m 02.50s
37.070 N 121.943 W

DEPTH = 13.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

GCC	0.06	227	iPd	01	04.60	-0.6
			iS	01	06.50	
ARN	0.43	49	iPd	01	09.50	-1.9
SAO	0.50	127	iPd	01	11.10	-1.6
PCC	0.55	321	ePc	01	12.80	-0.7
BKS	0.84	344	iPd	01	18.10	-0.3
			eS	01	29.30	
PRS	0.87	148	ePc	01	18.10	-0.8
ZSP	0.91	344	eP	01	18.60	-1.0
			eS	01	32.80	
LLA	0.92	119	eP	01	18.80	-1.0
PRI	1.38	132	e(P)	01	28.40	0.8
CMB	1.57	52	ePc	01	28.50	-1.6
			eS	01	48.30	
KVN	3.62	56	eP	01	57.70	-1.9

11 obs. associated

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* JAN 16, 1990 12h 03m 45.42± 0.69s
6.427 S ±11.3km 150.563 E ± 9.6km
DEPTH = 33.0km (normal)
4.9mb (3 obs.)
NEW BRITAIN REGION (192)
ML 5.1 (PMG).

RAB	2.74	36	iPd	04	27.00	-1.0
	0.5s	41.26nm				4.6mb
			iS	04	56.00	
LAT	3.55	266	eP	04	40.00	0.5
PMG	4.49	229	eP	04	54.00	1.0
			eS	05	45.00	
CTA	14.21	197	iPc	07	13.00	6.5X
	0.9s	15.13nm				4.6mb
			i	07	31.20	
			i	08	21.00	
TLE	17.73	272	ePc	07	51.90	0.4
MTN	20.18	250	eP	08	15.00	-5.2X
			e	08	20.00	
WB5	20.65	228	iPd	08	23.90	-1.1
			i	08	35.00	
			i	10	00.30	
WRA	20.71	228	P	08	24.50	-1.1
	0.9s	54.70nm				4.9mb
DZM	21.84	137	iPc	08	38.00	0.8
ASPA	23.46	221	iPd	08	52.60	-0.4
	1.0s	44.00nm				4.9mb
			iS	13	05.80	
WARB	30.11	227	eP	09	54.00	-0.5
INK	90.76	21	eP	16	47.50	1.4
PRS	92.21	54	eP	17	03.60	10.2X
ORV	92.46	51	eP	16	58.50	4.0X
CMB	93.17	52	ePc	17	02.10	4.2X
FRI	93.60	53	eP	17	04.20	4.4X

S.D. = 1.1 on 10 of 16 obs.

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* JAN 16, 1990 12h 25m 58.12± 1.52s
5.137 S ±15.1km 137.783 E ± 9.4km
DEPTH = 92.8 ± 14.2 km
4.0mb (3 obs.)
NEAR S. COAST OF WEST IRIAN (205)

TLE	5.04	264	eP	27	12.00	-0.7
MNDI	5.93	100	eP	27	26.00	0.6
MTN	10.09	220	eP	28	23.00	1.0
			eS	30	19.00	
WB5	15.03	192	eP	29	26.30	-0.5
			e	29	32.80	
			eS	32	09.80	
WRA	15.09	193	Pd	29	32.70	5.0X
	0.4s	3.50nm				3.9mb
CTA	16.99	152	iPc	29	50.10	-1.4
	0.9s	11.76nm				4.1mb
ASPA	18.80	191	iPd	30	14.20	1.0
			iS	33	44.20	
WARB	23.49	206	eP	31	04.10	3.7X
GBA	62.72	288	Pd	36	19.80	3.9X
	0.3s	0.40nm				3.9mb
CNCB	146.47	131	PKP	45	30.00	-0.3
LPB	146.55	131	(PKP)	45	31.00	0.8
ZOBO	146.69	130	PKP	45	30.00	-0.6

S.D. = 1.1 on 9 of 12 obs.

& JAN 16, 1990 12h 41m 01.32s
62.123 N 149.647 W

DEPTH = 64.6km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.41	314	eP	41	11.85	-1.1
GHO	0.49	136	iP	41	12.84	-1.0
			eS	41	22.85	
PME	0.58	149	eP	41	13.61	-1.0
			eS	41	24.19	
SUA	0.84	219	eP	41	17.50	-0.4
			eS	41	30.46	
HUR	0.86	0	eP	41	17.21	-0.8
			eS	41	29.65	
SKT	0.90	262	iP	41	17.54	-1.0
			eS	41	31.10	
NCA	1.34	94	eP	41	23.85	-0.5
RND	1.34	15	eP	41	23.49	-0.9
NCG	1.39	240	eP	41	24.47	-0.7
TOA	1.63	89	eP	41	28.37	-0.1
SLKM	1.64	190	eP	41	27.65	-0.9
MCK	1.65	11	eP	41	28.56	0.0
GLI	1.75	134	eP	41	29.18	-0.8
VZW	1.82	124	eP	41	29.79	-1.3
KLU	1.88	108	eP	41	30.74	-1.1
SDG	1.96	76	eP	41	33.01	0.1
RDT	2.05	222	eP	41	33.71	-0.4
FID	2.05	131	eP	41	33.06	-1.1
PAX	2.11	64	eP	41	34.53	-0.6
GLB	2.86	101	eP	41	44.08	-1.4

20 obs. associated

JAN 16, 1990 12h 57m 20.70± 0.41s
43.560 N ± 2.4km 127.402 W ± 4.8km
DEPTH = 10.0km (geophysicist)
4.8mb (19 obs.) 4.9Msz (3 obs.)
OFF COAST OF OREGON (30)
ML 5.1 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 28C
Centroid Location:
Origin Time 12:57:29.1 0.5
Lat 43.46N 0.06 Lon 128.28W 0.06
Dep 15.0 FIX Half-duration 2.3
Moment Tensor; Scale 10**17 Nm
Mrr=-0.02 0.10 Mtt=-2.19 0.16
Mff= 2.20 0.12 Mrt=-0.32 0.34
Mrf=-0.29 0.32 Mtf=-1.60 0.10
Principal Axes:

T	Val= 2.74	Plg= 4	Azm= 72
N	0.03	81	187
P	-2.77	8	342

Best Double Couple:Mo=2.8*10**17
NP1:Strike=117 Dip=82 Slip=-177
NP2: 27 87 -8

GROR	3.22	55	eP	58	12.02	-0.4
KMOR	3.48	52	eP	58	15.48	-0.6
			eS	59	00.94	
FHC	3.75	136	eP	58	20.70	0.8
NLO	3.78	47	eP	58	20.34	0.0
GT2	4.01	65	eP	58	24.18	0.6
PGO	4.02	60	eP	58	24.20	0.6
BMW	4.15	44	eP	58	24.85	-0.7
ONR	4.19	36	eP	58	25.35	-0.7
RVW	4.20	50	eP	58	26.43	0.2
VLMM	4.31	61	eP	58	28.46	0.5
			eS	59	22.42	
LVP	4.35	53	eP	58	28.69	0.3
			eS	59	23.69	
TDH	4.38	65	eP	58	29.33	0.5
			eS	59	23.38	
VBEM	4.43	68	eP	58	29.72	0.0
MTMW	4.44	54	eP	58	29.97	0.3
FL2	4.45	52	eP	58	30.34	0.4
CZM	4.51	49	eP	58	30.23	-0.4
OBH	4.51	32	eP	58	29.71	-0.9
VLL	4.51	63	eP	58	31.41	0.7
SHW	4.52	53	eP	58	31.32	0.5
ERK	4.52	51	eP	58	30.79	-0.1
HSR	4.54	53	eP	58	31.80	0.6
JLK	4.54	53	eP	58	31.54	0.4
STD	4.55	52	eP	58	31.45	0.2
CPW	4.55	40	eP	58	30.23	-1.0
YEL	4.55	53	eP	58	31.84	0.4
APW	4.57	46	eP	58	30.98	-0.5
ESD	4.57	53	eP	58	32.08	0.5
LBFM	4.64	117	eP	58	32.80	0.1
WDC	4.69	128	eP	58	31.90	-1.2
			i	58	35.90	
LON	5.08	49	iPc	58	39.00	0.3
VGB	5.12	65	eP	58	39.30	0.0
GMW	5.14	37	eP	58	38.30	-1.2
LTCM	5.17	129	eP	58	41.50	1.6
MIN	5.38	125	e(P)	58	40.90	-2.3
			e	58	46.30	
RMW	5.54	43	iPd	58	44.80	-0.4
PGC	5.78	27	eP	58	47.00	-1.5
ORV	5.97	130	e(P)	58	51.90	0.7
			i	58	54.20	
MCW	6.02	30	eP	58	51.30	-0.7
NWRM	6.13	145	eP	58	52.00	-1.5
ZSP	6.83	143	e(P)	59	02.10	-1.3
BRK	6.89	144	ePd	59	02.60	-1.6
			e	59	22.40	
			eS	00	30.00	
			eLR	00	47.20	
BKS	6.90	144	eP	59	03.50	-0.8
			eS	00	22.00	
PCC	7.16	146	e(P)	59	05.10	-2.8
MHC	7.61	143	ePd	59	13.00	-1.3
			e	00	35.00	
			eS	00	42.00	
			eLQ	00	53.00	
			eLR	01	12.00	
ARN	7.65	142	eP	59	13.30	-1.5
CMB	7.67	134	ePd	59	16.20	1.1
GCC	7.72	146	eP	59	13.80	-2.0
DPW	7.75	53	eP	59	15.20	-1.0
PNT	7.88	40	iPc	59	16.50	-1.5
SAO	8.17	144	e(P)	59	16.00	-6.2X
KVN	8.32	120	eP	59	24.50	0.0
LLA	8.52	142	e(P)	59	24.30	-2.7
PRS	8.57	145	ePd	59	24.20	-3.6X
FRI	8.81	136	ePd	59	31.60	0.7
PRI	9.04	143	eP	59	33.00	-1.2
TNP	9.46	122	eP	59	41.50	1.3
ISA	10.46	136	eP	59	55.00	1.2
SYP	10.70	145	eP	59	59.00	1.8
CLC	10.80	132	eP	00	01.00	2.5
LRM	10.88	73	ePc	59	58.90	-0.9
SBB	11.56	137	eP	00	08.00	-0.8
GSC	11.62	132	eP	00	10.00	0.4
MWC	11.82	139	eP	00	14.00	1.6
PAS	11.83	140	eP	00	13.00	0.6
RVR	12.34	137	eP	00	18.00	-1.2
PEC	12.52	137	eP	00	21.80	0.0
BW06	13.06	87	eP	00	29.00	0.0
SES	13.08	53	eP	00	28.00	-1.2
	0.9s	82.00nm				5.9mb X
PLM	13.10	138	eP	00	30.00	0.3
EDM	13.42	39	eP	00	33.00	-0.5
BAR	13.74	139	eP	00	38.00	0.1
GLA	14.39	133	eP	00	47.00	0.6
RSSD	16.86	80	eP	01	18.50	0.0
GOL	16.91	96	eP	01	18.40	-0.7
GLD	17.00	95	eP	01	20.50	0.3
	1.0s	120.00nm				5.0mb
ANMO	18.32	111	eP	01	37.90	1.2
ALQ	18.33	111	iPc	01	38.50	1.8
	1.0s	42.50nm				4.6mb
Z	20s	5.50um				5.4Msz
			pP	08	16.00	
FFC	19.91	47	eP	01	54.00	-1.1
	1.0s	252.00nm				5.5mb
KDC	21.15	321	eP	02	10.00	2.2
	1.0s	30.00nm				4.6mb
TOA	21.61	336	e(P)	02	16.30	3.7X
PMR	22.18	332	e(P)	02	17.50	-0.6
	1.8s	47.60nm				4.6mb
Z	21s	4.70um				4.9Msz
RSON	23.87	60	eP	02	35.00	0.2
	1.0s	73.21nm				5.2mb
MEO	23.90	102	iPd	02	37.50	2.2
FBA	24.26	339	eP	02	39.70	1.3
	1.0s	17.50nm				4.6mb
INK	25.02	355	eP	02	45.00	-0.7
SIO	25.07	98	eP	02	47.30	0.7
TUL	25.37	97	eP	02	50.80	1.4
	1.3s	111.70nm				5.4mb
Z	20s	1.45um				4.5Msz
			e	03	04.90	
			eS	07	40.00	
			LR	10	49.00	

16d 13h

TTA 25.50 329 eP 02 49.40 -1.1
IMA 26.77 336 eP 03 01.40 -0.8
FVM 28.39 89 eP 03 17.00 -0.1
OLY 28.68 94 eP 03 20.00 0.3
BRW 31.31 342 eP 03 41.50 -1.2
RSCP 32.91 90 eP 03 57.00 -0.2
MBC 32.97 4 eP 03 56.00 -1.1
0.7s 11.00nm 4.9mb
NAV 35.64 84 eP 04 21.50 0.8
BLA 35.96 84 eP 04 24.00 0.7
0.8s 16.78nm 5.0mb
JSC 36.67 89 eP 04 28.50 -0.8
LHS 36.91 88 eP 04 31.00 -0.2
FRB 38.53 38 eP 04 46.00 1.5
SCH 39.97 52 eP 04 57.00 0.3
GDH 44.47 29 eP 05 17.00 -16.2X
e 12 15.00
e 15 30.00
i 22 50.00
DAG 52.07 16 eP 06 34.00 1.8
NB2 70.47 20 P 08 38.20 1.3
0.9s 4.00nm 4.5mb
HFS 71.86 19 ePc 08 47.20 2.0
0.2s 1.50nm 4.7mb
CLL 79.46 24 e(P) 09 36.00 7.6X
LOR 79.85 31 eP 09 38.00 7.4X
1.2s 17.80nm 4.9mb
SSF 79.88 32 eP 09 38.30 7.5X
1.2s 8.90nm 4.6mb
BRG 80.12 24 eP 09 39.50 7.5X
1.3s 22.00nm 5.0mb
e 09 46.40
CDF 80.13 29 eP 09 41.00 8.8X
1.2s 11.90nm 4.7mb
BSF 80.45 29 eP 09 41.20 7.3X
1.0s 8.00nm 4.7mb
ZOBO 80.47 123 P 09 36.00 1.0
1.0s 9.50nm 4.7mb
LR 34 10.00
LPB 80.69 123 eP 09 43.00 7.0X
Z 24s 0.78um 5.0MszX
LR 34 12.00
KSP 80.82 22 eP 09 36.80 1.1
e 09 50.00
CNCB 80.97 123 P 09 39.00 1.3
KHC 81.56 25 P 09 54.10 14.4X
CCH 82.54 122 P 09 44.70 -0.7
KBA 83.31 26 iP 09 55.70 6.7X
1.1s 8.10nm 4.8mb
i 10 02.50
SPC 83.38 21 eP 09 56.80 7.5X
i 10 04.80
ZST 83.44 23 eP 09 58.00 8.6X
e 10 04.10
SRO 84.12 22 eP 10 06.60 13.8X
LZH 88.05 321 eP 10 16.50 3.9X
Z 20s 1.10um 5.3Msz
N 17s 0.60um
S.D. = 1.1 on 104 of 121 obs.

? JAN 16, 1990 13h 44m 06.58±10.52s
51.491 N ±56.4km 16.400 E ±70.8km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP 0.65 186 iPd 44 19.20 -0.4
0.3s 39.00nm
iS 44 27.70
BRG 1.66 249 iPg 44 35.10 -0.8
iSg 44 54.60
PRU 1.91 219 Pg 44 39.60 0.1
e 44 44.00
Sn 44 56.50
Sg 45 03.50
CLL 2.14 266 ePg 44 43.00 0.3
eSg 45 09.00
KHC 2.98 219 Pg 44 55.50 0.8
Sn 45 28.50
Sg 45 37.20
MOX 3.13 256 ePg 45 02.00 5.1X
iSg 45 42.00
S.D. = 0.9 on 5 of 6 obs.

• JAN 16, 1990 14h 11m 20.35± 1.11s
42.194 N ± 9.7km 24.251 E ±10.9km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)

ML 2.9 (THE).

SRS 1.18 205 ePb 11 47.10 4.7X
eSb 12 03.80
KNT 1.45 225 ePb 11 46.00 -0.6
eSb 12 07.50
SOH 1.53 206 ePn 11 49.00 1.3
eSn 12 14.90
VAY 1.53 236 ePn 11 46.70 -1.0
GRG 1.86 229 ePn 11 52.90 0.4
eSn 12 19.40
ALN 1.87 133 ePn 11 52.30 -0.3
eSn 12 25.00
OUR 1.87 186 ePn 11 56.90 4.3X
eSn 12 27.70
BZS 3.92 332 ePc 12 22.00 0.2
S.D. = 1.0 on 6 of 8 obs.

JAN 16, 1990 14h 18m 09.58± 0.38s
33.218 N ± 6.3km 46.776 E ± 4.9km
DEPTH = 11.6km (3 depth phases)
4.7mb (22 obs.)
IRAN-IRAQ BORDER REGION (346)
Felt in the Ilam area, Iran.

KER 1.16 14 iPd 18 29.20 -2.1
eS 18 41.00
BHD 2.00 272 iPnd 18 51.00 7.4X
iSn 19 19.00
SLY 2.60 336 iPnd 18 54.50 2.4
iP• 18 58.50
iSn 19 26.50
iS• 19 31.50
iSg 19 35.00
IR1 3.91 55 eP 19 12.00 1.1
IR4 3.97 58 eP 19 13.00 1.3
MSL 4.34 318 iPnd 19 22.00 5.1X
ePg 19 37.50
eSn 20 10.50
iSg 20 32.50
e 20 51.50
TEH 4.56 55 eP 19 21.00 0.8
eS 20 28.00
TAB 4.85 356 e(P) 19 20.00 -4.3X
TA8 4.85 356 e(P) 19 29.00 4.7X
BEE 7.88 155 ePn 20 07.30 0.6
(Sn) 21 33.70
BJA 7.94 154 (Pn) 20 06.00 -1.5
(Sn) 21 33.20
SHMJ 9.27 270 P 20 45.00 19.0X
KFNJ 9.47 265 P 20 40.00 11.3X
HSHJ 10.11 253 P 20 36.20 -1.6
MBH 10.72 254 eP 20 45.00 -0.9
MAIO 10.90 70 eP 20 55.00 6.4X
QUE 17.43 95 eP 22 18.00 3.6X
MLR 20.17 313 eP 22 50.00 3.2X
CMP 20.62 312 ePd 22 53.00 1.7
OHR 22.09 298 eP 23 05.00 -1.3
CZI 25.36 292 P 23 40.90 2.9
SPC 25.37 317 eP 23 24.50 -13.7X
i 23 29.60 18km
MGR 25.89 294 P 23 45.50 2.6
NDI 26.45 92 eP 23 48.00 -0.2
ZST 26.81 313 eP 23 52.50 1.2
VBY 27.10 306 eP 23 55.50 1.4
eSg 24 00.20
KHC 29.32 313 P 24 12.30 -1.8
VAI 31.62 305 P 24 35.00 0.6
SBF 32.28 301 eP 24 40.90 0.6
0.8s 18.80nm 5.1mb
SUF 32.28 342 iP 24 38.80 -1.2
0.4s 4.90nm 4.8mb
DOI 32.49 302 P 24 42.40 0.3
HYB 32.59 111 iPc 24 44.00 0.8
0.8s 27.10nm 5.2mb
BNI 32.95 303 Pc 24 47.60 1.3
LPG 32.96 304 eP 24 46.70 0.2
0.8s 11.20nm 4.8mb
BSF 33.31 308 eP 24 48.80 -0.5
0.8s 6.30nm 4.6mb
HAU 33.64 308 eP 24 51.40 -0.7
0.8s 5.30nm 4.5mb
GBA 34.05 118 P 24 57.00 1.2
HFS 34.55 331 eP 24 58.50 -1.3
0.4s 8.10nm 5.0mb
epP 25 01.00 9km
esP 25 02.50

LBF 35.06 306 eP 25 04.30 -0.1
0.8s 5.30nm 4.5mb
SMF 35.11 305 eP 25 04.70 -0.1
0.8s 28.20nm 5.2mb
LOR 35.18 306 eP 25 05.00 -0.3
1.0s 8.00nm 4.5mb
SSF 35.39 306 eP 25 07.20 0.1
0.8s 13.90nm 4.9mb
AVF 35.46 306 eP 25 07.40 -0.3
0.8s 9.90nm 4.7mb
BGF 35.78 305 eP 25 10.30 -0.2
0.8s 8.00nm 4.6mb
MAF 35.94 304 eP 25 12.10 0.3
0.9s 8.10nm 4.6mb
NB2 36.08 331 P 25 11.10 -1.7
0.7s 2.80nm 4.2mb
TCF 36.20 305 eP 25 14.30 0.3
1.0s 6.80nm 4.5mb
MFF 37.84 305 eP 25 27.60 -0.2
1.0s 16.00nm 4.8mb
KEV 38.21 349 eP 25 29.00 -1.5
FLN 38.25 308 eP 25 30.70 -0.5
0.8s 8.00nm 4.5mb
GRR 38.47 308 eP 25 33.00 0.1
0.8s 18.80nm 4.9mb
LPF 38.56 307 eP 25 33.30 -0.4
0.8s 8.00nm 4.5mb
BCAO 38.91 229 iPc 25 40.30 3.3X
0.4s 23.00nm 5.2mb
id 25 42.70 8km
CHG 48.56 94 eP 26 54.20 -0.7
KIC 54.66 253 (P) 27 42.00 1.2
MBC 70.45 357 eP 29 24.50 -0.7
0.5s 1.00nm 4.2mb
FRB 70.80 335 eP 29 27.00 -0.5
INK 78.79 0 eP 30 12.00 -1.2
FBA 81.54 6 e(P) 30 26.60 -1.4
S.D. = 1.2 on 48 of 59 obs.

% JAN 16, 1990 15h 11m 33.52± 0.86s
0.179 S ± 6.8km 78.312 W ± 7.0km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)

QUR 0.22 272 iP+ 11 39.00 0.5
eS 11 41.20
GGP 0.28 271 iPd 11 39.20 -0.5
S 11 43.80
CAYA 0.42 52 iP+ 11 42.20 0.0
S 11 48.80
VC1 0.47 191 P 11 43.10 0.0
S 11 50.50
COTA 0.51 357 eP 11 44.00 0.0
S.D. = 0.5 on 5 of 5 obs.

? JAN 16, 1990 15h 11m 37.96± 4.62s
34.561 N ±49.5km 31.169 E ±22.1km
DEPTH = 33.0km (normal)
CYPRUS (372)
ML 3.1 (CSS).

PPCY 1.02 71 e(P) 11 56.00 0.0
CSS 1.82 77 eP 12 07.00 -0.6
eS 12 29.70
LFK 2.07 69 ePn 12 11.70 0.6
ELL 2.41 335 ePn 12 18.00 1.9
BCK 2.93 351 ePn 12 23.80 0.4
YER 3.48 318 ePn 12 31.00 -0.1
KHL 3.98 341 ePn 12 36.00 -2.3
S.D. = 1.6 on 7 of 7 obs.

% JAN 16, 1990 15h 38m 19.27± 0.89s
39.225 N ± 8.3km 29.153 E ±10.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT 0.76 103 ePg 38 33.00 -1.3
KHL 0.95 162 ePg 38 38.20 0.8
eSg 38 51.70
YLV 1.35 7 iPn 38 44.70 0.5
GPA 1.39 40 ePn 38 45.00 0.3
BNT 1.48 320 iPn 38 45.70 -0.2
EDC 1.50 319 ePn 38 45.00 -1.2
ISK 1.84 358 ePn 38 52.00 0.9
S.D. = 1.1 on 7 of 7 obs.

% JAN 16, 1990 15h 46m 56.22± 0.68s

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U. S. DEPARTMENT OF THE INTERIOR

Geological Survey

EARTHQUAKE DATA REPORT

The Earthquake Data Report (EDR) is a bulletin of all seismic phase and amplitude data which were associated with events published in the Preliminary Determination of Epicenters (PDE) Monthly Listing. It also contains information about the hypocentral computations (such as standard errors) that are not included in the PDE Monthly Listing. A machine-readable version of this EDR is available from the Books and Open-File Reports Section of the U.S. Geological Survey.

All data in the EDR are grouped by event, with events listed by origin time in date/time order through the month. All times are in Coordinated Universal Time (UTC). Locations are in decimal degrees of geographic latitude and longitude. Depths are in kilometers below the free surface. Hypocentral coordinates are determined by a modified Geiger's method and may be constrained by reported first arriving P-waves, Pdiff, and the DF branch of PKP. Data are corrected for station elevation and for the ellipticity of the Earth. Outliers may be truncated (ie., removed from the calculation) either automatically or manually. The solution is allowed to converge between rounds of automatic truncation to insure a unique result. Convergence is aided by step length damping.

The error bars of the computed hypocentral coordinates are 90% marginal confidence intervals incorporating Baysian information to stabilize estimates derived from small samples (Jordan and Sverdrup, 1981). It is assumed that the travel-time errors *of the data used* are independent, unbiased, and have an expected standard deviation of 1 s. Monte Carlo experiments suggest that the error bars are accurate for events constrained by more than about 30 data. However, care should be exercised in interpreting these numbers in terms of absolute location accuracy because of unmodeled biases. Analysis of events with independently known coordinates indicates that most PDE determinations are accurate to a few tenths of a degree in epicentral position and 25 km in depth. For special studies, we urge that inquiry be made to this office for possible recomputation of hypocenters of interest, using more complete instrumental data.

Restricted focal depths occur in four instances. If at any point in the computation the depth becomes negative, the solution is automatically restricted at 33 km and indicated by "NORMAL DEPTH". If the unrestricted depth computation is unsatisfactory, and in the judgment of the reviewing geophysicist the earthquake probably has a shallow focus, a solution may be held at 33 km. These are also indicated by "NORMAL DEPTH". The geophysicist may restrain the depth at any value indicated by evidence from available seismograms. These are indicated by, for example, "DEPTH = 100 KM (GEOPHYSICIST)". If two or more pP phases are identified, and in general, yield depths within 10 km of the mean, then the depth is automatically restricted to this value and denoted by, for example, "DEPTH = 51 KM (5 DEPTH PHASES)". pP phases may also appear as unidentified second arrivals with associated travel-time residuals. Hypocentral coordinates derived from other sources, such as the California Institute of Technology, the University of California at Berkeley, and the U. S. Department of Energy are noted on the EDR.

Two types of magnitude are computed: body-wave magnitude (m_b) and surface-wave magnitude (M_{SZ}). Each is a 25% trimmed mean of individual station values. Station magnitudes not used in the trimmed mean are marked with an X. This includes station magnitudes of either type which deviate significantly from the mean and surface-wave magnitudes determined from horizontal amplitudes. Body-wave magnitudes are computed according to the formula $\log(A/T) + Q$, derived by Gutenberg and Richter (1956), where A is the P-wave amplitude in micrometers, T is the period in seconds, and Q is the depth-distance factor. Surface-wave magnitudes are computed from the formula $\log(A/T) + 1.66\log(\Delta) + 3.3$, where A is the maximum vertical surface-wave amplitude in micrometers, T is the period in seconds, and Δ is the epicentral distance in degrees. Surface-wave magnitudes are determined only for earthquakes whose focal depths (taking into account the computed standard deviations) are potentially less than 50 km, for stations having

$20° \leq \Delta \leq 160°$, and for reported periods of $18 \leq T \leq 22$ s. No correction for focal depth is used in the M_S calculation. Body-wave magnitudes are not determined from PKP arrivals or for stations having $\Delta \leq 5°$. Amplitude values stated in this report are in nanometers (nm) for body-waves and micrometers (μm) for surface-waves.

The travel-time residual (observed – computed) is based on the 1940 Jeffreys-Bullen P and 1968 Bolt PKP travel-time tables. Phases not used in the computation are marked by an X. The azimuth from the epicenter to the station is measured clockwise from north. The epicentral distance is the central angle in degrees.

Hypocenter Symbols

& Indicates that parameters of the hypocenter were supplied or determined by a computational procedure not normally used by the National Earthquake Information Service (NEIS). The source or nature of the determination is indicated by a 2 to 5 letter code enclosed by angle brackets and appearing in the first line of comments. A "-P" appended to the code indicates that the computation is preliminary. These codes are included with the list of abbreviations in the PDE Monthly Listing.

% Indicates a single network solution. A non-furnished hypocenter has been computed using data reported by a single network of stations for which the date and/or origin time cannot be confirmed from seismograms available to a NEIS analyst. Also, if we define η to be the geometric mean of the semi-major and semi-minor axes of the horizontal 90% confidence ellipse, then $\eta \leq 16.0$ km.

* Indicates a less reliable solution. In general, $8.5 < \eta \leq 16.0$ km.

? Indicates a poor solution, published for completeness of the catalog. In general, $\eta > 16.0$ km. This includes poor solutions computed using data reported by a single network.

The lack of any symbol indicates that $\eta \leq 8.5$ km.

Note: On printers available to the NEIS for this publication, the symbol for degrees (°) appears as "`".

References

Bolt, Bruce A. (1968), Estimation of PKP Travel Times, *Bull. Seis. Soc. Am.*, **58**, pp. 1305–1324.

Gutenberg, B. and C. F. Richter (1956), Magnitude and Energy of Earthquakes, *Ann. di Geofisica*, **9**, no. 1, pp. 1–15.

Jeffreys, Harold and K. E. Bullen (1940), *Seismological Tables*, British Assoc. for the Advancement of Science, Gray Milne Trust.

Jordan, Thomas H. and Keith A. Sverdrup (1981), Teleseismic Location Techniques and their Application to Earthquake Clusters in the South-Central Pacific, *Bull. Seis. Soc. Am.*, **71**, pp. 1105–1130.

39.209 N ± 6.9km 29.122 E ± 7.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.55	316	iPg	47	06.00	-1.4
			iSg	47	14.20	
ALT	0.78	101	ePg	47	10.80	-0.8
KHL	0.94	160	ePn	47	14.90	0.7
YLV	1.37	8	iPn	47	21.70	0.3
GPA	1.41	40	ePn	47	22.00	0.0
BNT	1.47	321	iPn	47	23.70	0.9
EDC	1.49	320	ePn	47	24.00	0.9
IZM	1.66	241	ePn	47	25.00	-0.6

S.D. = 1.0 on 8 of 8 obs.

? JAN 16, 1990 16h 45m 09.90± 1.56s
5.205 S ±27.8km 154.106 E ±20.5km
DEPTH = 408.3 ± 16.6 km
4.6mb (3 obs.)
SOLOMON ISLANDS (193)

RAB	2.18	297	iPd	46	08.00	-0.1
	0.5s	357.61nm				
			iS	46	57.00	
CTA	16.65	207	iPc	48	42.70	1.5
	0.8s	45.52nm				4.9mb
DZM	20.59	146	iPc	49	20.00	-0.1
WB5	24.12	231	eP	49	52.40	-0.4
WRA	24.18	231	Pc	49	53.00	-0.4
	0.5s	10.90nm				4.6mb
WARB	33.53	229	eP	51	14.70	-0.4
	0.4s	9.00nm				4.5mb
PCI	34.48	276	iPd	51	24.00	0.8
FORR	35.33	221	eP	51	29.30	-0.9

S.D. = 1.0 on 8 of 8 obs.

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* JAN 16, 1990 18h 01m 51.90± 0.87s
29.355 N ±16.9km 129.956 E ±12.2km
DEPTH = 33.0km (normal)
4.3mb (7 obs.)
RYUKYU ISLANDS (238)

MAT	9.97	42	eP	04	17.00	1.1
			eS	04	38.00	
BJI	15.54	317	eP	05	35.00	4.9X
	1.5s	13.00nm				3.9mb
LZH	22.93	294	eP	06	55.00	0.7
			i	07	10.00	
GUN	38.54	279	P	09	14.40	0.7
	0.5s	5.00nm				4.6mb
PKI	39.03	279	P	09	17.20	-0.5
KKN	39.09	279	P	09	18.60	0.5
DMN	39.28	279	P	09	21.00	1.3
GKN	39.59	279	P	09	22.20	0.0
WRA	49.19	175	P	10	39.00	0.1
	0.6s	1.60nm				4.2mb
GBA	50.91	264	Pd	10	51.50	-0.7
	0.9s	2.00nm				4.1mb
MBC	66.44	14	eP	12	39.00	-0.6
	1.0s	5.00nm				4.6mb
HFS	76.77	333	eP	13	38.50	-2.9
	0.6s	1.50nm				4.2mb
			e	14	31.90	
FFC	85.12	27	eP	14	26.00	0.4
	0.7s	5.00nm				4.8mb

S.D. = 1.2 on 12 of 13 obs.

? JAN 16, 1990 19h 55m 12.87±14.27s
5.197 S ±143.km 147.250 E ±98.1km
DEPTH = 219.6 ± 23.0 km
4.9mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	1.47	190	iPc	55	48.00	-0.3
			eS	56	10.00	
MNDI	3.70	255	eP	56	12.90	0.4
CTA	14.83	184	eP	58	34.00	0.4
WB5	19.24	220	eP	59	22.00	-0.8
			eS	02	44.00	
WRA	19.30	219	Pd	59	22.30	-1.1
	0.6s	22.00nm				4.9mb
ASPA	22.42	214	iPd	59	55.50	1.4
	0.6s	21.00nm				4.9mb
			iS	03	48.50	

S.D. = 1.5 on 6 of 6 obs.

& JAN 16, 1990 20h 08m 22.00s
40.232 N 124.138 W
DEPTH = 2.0km
5.1mb (52 obs.) 5.5Msz (9 obs.)
NEAR COAST OF NORTHERN CALIF. (35)

<BRK>. ML 5.3 (BRK). Damage (VII) ot Honey Dew. Also slight domoge (VI) ot Redway, Weott ond Whitethorn. Felt (V) ot Eureko, Gorberville, Leggett, Mirondo, Myers Flot, Piercy, Redcrest, Rio Dell, Westport ond Willits. Felt in Humboldt, Lake, Mendocino ond Trinity Counties.

CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 11S, 23C
Centroid Locotion:
Origin Time 20:08:30.6 0.6
Lot 40.06N 0.05 Lon 124.94W 0.06
Dep 15.0 FIX Holf-durotion 2.2
Moment Tensor; Scole 10**17 Nm
Mrr= 0.46 0.07 Mtt=-2.12 0.11
Mff= 1.65 0.09 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-0.53 0.07
Principol Axes:

	Val=	Plg=	Azm=
T	1.73	0	262
N	0.46	90	180
P	-2.19	0	172

Best Double Couple:Mo=2.0*10**17
NP1:Strike=307 Dip=90 Slip=-180
NP2: 37 90 0

FHC	0.58	12	iPc	08	33.80	0.2
			eS	08	43.60	
WDC	1.27	74	iPc	08	44.60	-1.7
LTCM	1.54	90	iPd	08	49.20	-1.4
MIN	1.94	86	iPc	08	54.20	-2.3
NWRM	2.02	151	ePd	08	53.80	-3.7
LBFM	2.04	56	iPc	08	56.50	-1.4
ORV	2.14	108	ePc	08	56.00	-3.2
ZSP	2.71	147	ePd	09	04.20	-3.2
			iPg	09	15.50	
BRK	2.77	148	ePc	09	04.70	-3.6
BKS	2.78	147	iPd	09	04.80	-3.6
			e	09	21.00	
			e(S)	09	51.55	
PCC	3.05	153	iPc	09	08.00	-4.2
MHC	3.48	145	ePd	09	15.30	-3.2
			eS	10	24.00	
			e	10	35.90	
ARN	3.53	144	eP	09	15.60	-3.4
GCC	3.61	152	ePd	09	15.70	-4.4
CMB	3.65	126	iPd	09	18.80	-2.0
SAO	4.06	148	eP	09	22.00	-4.5
LLA	4.40	144	iPd	09	27.50	-3.8
PRS	4.46	150	ePd	09	27.30	-4.9
FRI	4.74	132	ePd	09	34.20	-2.0
KVN	4.81	102	iPc	09	34.80	-2.6
GMO	4.82	28	eP	09	35.61	-1.9
PRI	4.91	145	ePd	09	35.00	-3.8
VIPM	5.01	30	eP	09	38.13	-2.0
GT2	5.11	15	eP	09	39.17	-2.3
GROR	5.13	4	eP	09	40.43	-1.3
VBEM	5.18	20	eP	09	40.01	-2.5
PKEM	5.24	141	eP	09	41.00	-2.2
CROR	5.29	25	eP	09	41.78	-2.2
PHAM	5.29	145	eP	09	40.10	-3.9
TDH	5.34	18	eP	09	44.61	-0.2
PGO	5.38	13	eP	09	43.83	-1.3
KMOR	5.42	5	eP	09	46.98	1.1
VFP	5.45	20	eP	09	44.17	-2.2
TNP	5.79	110	eP	09	49.00	-2.2
VGB	5.83	24	eP	09	49.40	-2.2
BCH	5.98	146	eP	09	49.00	-4.7
SHW	6.12	12	eP	09	52.50	-3.2
BMW	6.28	6	eP	09	55.00	-2.9
SYP	6.59	149	eP	09	59.00	-3.4
LON	6.73	14	eP	10	01.30	-3.0
CLC	6.79	128	eP	10	03.00	-2.2
SBB	7.47	136	eP	10	11.00	-3.7
GSC	7.61	128	eP	10	14.00	-2.7
MWC	7.71	139	eP	10	15.00	-3.2
PAS	7.71	140	eP	10	15.00	-3.1
RVR	8.24	137	eP	10	22.00	-3.5
PGC	8.43	3	eP	10	26.00	-2.0
PEC	8.43	136	eP	10	25.00	-3.2
DUG	8.67	87	eP	10	29.50	-2.0
PLM	9.01	137	eP	10	33.00	-3.3
PNT	9.63	18	eP	10	45.00	0.3
BAR	9.64	139	eP	10	42.00	-2.8
LTMT	9.88	60	ePc	10	46.70	-1.7
BGMT	10.20	57	ePc	10	49.90	-2.9
LRM	10.21	53	ePc	10	50.00	-3.0
BUT	10.24	52	eP	10	50.30	-3.0
GLA	10.35	131	eP	10	52.00	-2.7
HRY	11.03	50	eP	11	00.70	-3.3
SXM	11.13	54	ePc	11	01.80	-3.7
BW06	11.23	72	eP	11	04.00	-2.8
PV09	11.75	94	eP	11	13.00	-0.9
SES	13.70	38	eP	11	35.00	-4.6
			pP	11	43.00	
GOL	14.41	86	eP	11	47.40	-1.9
GLD	14.51	86	eP	11	49.00	-1.6
EDM	14.93	26	eP	11	51.50	-4.2
ANMO	14.97	105	eP	11	56.00	-0.6
ALQ	14.97	105	iPd	11	57.80	1.2
	1.1s	72.78nm				5.1mb
Z	20s	0.89um				5.8Msz
			pP	16	22.20	
RSSD	15.40	69	eP	11	57.50	-4.6
SIT	18.35	340	e(P)	12	37.00	-2.0
	1.2s	78.79nm				4.8mb
FFC	20.72	38	iPd	13	00.90	-5.1
	0.8s	45.00nm				4.9mb
MEO	20.96	97	iPd	13	03.20	-5.5
SIO	22.35	93	eP	13	16.40	-6.3
TUL	22.68	92	eP	13	20.60	-5.4
	1.3s	86.60nm				5.1mb
Z	18s	9.16um				5.3Msz
			e	13	30.20	
			eS	17	39.00	
			LR	19	42.00	
RSON	23.65	53	eP	13	30.00	-5.3
	0.8s	56.09nm				5.2mb
OLY	26.13	90	eP	13	54.00	-5.1
POW	26.13	88	eP	13	55.00	-4.1
FVM	26.17	84	eP	13	54.50	-5.0
	1.0s	60.00nm				5.3mb
PMR	26.25	333	eP	13	57.00	-3.0
	1.5s	175.68nm				5.6mb
Z	20s	6.00um				5.1Msz
FBA	28.24	339	P	14	16.50	-1.5
	1.2s	18.94nm				4.8mb
SVW	28.42	328	eP	14	17.80	-2.0
INK	28.59	353	eP	14	18.00	-3.2
	1.2s	48.00nm				5.2mb
TTA	29.60	331	eP	14	27.40	-3.0
	1.2s	30.30nm				5.0mb
PPM	30.41	126	eP	14	37.80	-0.8
RSCP	30.60	86	eP	14	35.00	-4.5
IMA	30.79	337	eP	14	38.00	-3.0
	1.2s	24.62nm				5.0mb
OXX	33.09	126	eP	15	02.30	0.6
NAV	33.67	81	eP	15	03.40	-3.0
BLA	33.99	81	eP	15	05.50	-3.6
	0.8s	13.42nm				4.9mb
JSC	34.39	86	eP	15	07.00	-5.5
CVL	35.22	79	eP	15	16.50	-3.1
MBC	36.17	2	ePd	15	25.40	-1.8
	1.0s	27.00nm				5.0mb
FRB	39.77	35	eP	15	54.00	-3.5
	1.0s	77.00nm				5.3mb
SCH	40.21	49	ePc	15	57.70	-3.6
	0.7s	33.00nm				5.1mb
GDH	46.23	28	eP	16	47.00	-2.9
			e	27	10.00	
			e	33	56.00	
DAG	54.60	16	iPd	17	49.80	-3.8
	0.7s	13.01nm				5.1mb
Z	18s	8.52um				5.9Msz
N	17s	1.36um				
E	17s	5.03um				
FISA	56.10	105	eP	18	03.10	-2.2
SDV	56.72	108	eP	18	06.90	-3.0
TOV	56.74	107	eP	18	08.10	-1.8
TOV	56.74	107	iPc	18	08.60	-1.3
LLAV	58.49	104	eP	18	21.00	-1.2
OLLA	58.79	104	eP	18	21.70	-2.6
NNA	67.96	129	eP	19	21.70	-3.0
	1.1s	29.11nm				5.4mb
KEV	68.30	10	eP	19	20.00	-6.1
MAT	72.59	303	eP	19	50.00	-2.7
	1.4s	37.21nm				5.3mb
NB2	72.73	21	P	19	50.10	-3.0

16d 20h

	0.9s	18.30nm		5.2mb		
HFS	74.16	20 eP	19 58.00	-3.4		
	1.2s	21.30nm		5.0mb		
		e	20 03.20			
		e	20 09.90			
SUF	74.66	14 eP	20 01.60	-2.6		
	0.7s	7.10nm		4.8mb		
ARE	74.66	128 (P)	20 04.00	-1.2		
NUR	76.40	15 iP	20 10.40	-3.8		
		i	20 19.80			
ZOBO	76.59	125 iPd	20 13.00	-3.6		
	1.1s	24.65nm		5.2mb		
		LR	41 44.00			
LPB	76.80	125 P	20 06.00	-11.6		
Z	24s	1.16um		5.1MszX		
		LR	41 30.00			
CNCB	77.09	125 P	20 12.00	-7.3		
FLN	78.37	34 eP	20 26.60	1.3		
	1.0s	16.00nm		5.1mb		
GRR	78.49	35 eP	20 28.50	2.6		
	1.0s	36.00nm		5.4mb		
LDF	78.65	34 eP	20 29.30	2.5		
	1.1s	43.90nm		5.4mb		
LPF	78.68	35 eP	20 29.30	2.3		
	1.0s	25.60nm		5.2mb		
ENN	79.39	30 e(P)	20 31.50	0.7		
	0.9s	27.00nm		5.2mb		
		e	20 36.00			
DOU	79.42	31 Pc	20 37.00	6.0		
MFF	80.16	35 eP	20 36.30	1.2		
	0.8s	8.00nm		4.7mb		
RUP	80.68	30 eP	20 44.41	6.6		
LSF	81.17	35 eP	20 42.60	2.2		
LOR	81.37	33 eP	20 44.10	2.7		
	1.4s	36.50nm		5.2mb		
SSF	81.38	33 eP	20 43.90	2.4		
	1.0s	18.00nm		5.1mb		
TCF	81.44	34 eP	20 43.80	2.0		
	1.0s	22.00nm		5.2mb		
CLL	81.46	26 ePd	20 45.00	3.2		
	1.5s	40.00nm		5.3mb		
Z	18s	2.00um		5.5Msz		
		e	21 14.00			
BGF	81.50	34 eP	20 44.20	2.1		
	1.0s	24.00nm		5.2mb		
AVF	81.53	33 eP	20 44.10	1.8		
	0.8s	12.00nm		5.0mb		
MOX	81.55	27 eP	20 48.00	5.7		
	1.8s	54.00nm		5.3mb		
LBF	81.64	33 eP	20 45.00	2.1		
	1.2s	17.80nm		5.0mb		
MAF	81.64	34 eP	20 44.70	1.8		
	1.4s	47.90nm		5.4mb		
HAU	81.78	31 eP	20 46.00	2.4		
	0.8s	5.30nm		4.7mb		
CDF	81.82	30 eP	20 46.40	2.6		
	1.0s	12.00nm		5.0mb		
LFF	81.84	36 eP	20 46.20	2.3		
	0.8s	16.10nm		5.2mb		
SMF	81.85	33 eP	20 46.10	2.1		
	1.0s	6.00nm		4.7mb		
RJF	81.90	35 eP	20 46.30	2.1		
	0.8s	9.10nm		4.9mb		
BSF	82.10	31 eP	20 47.50	2.1		
	0.8s	5.30nm		4.7mb		
GUMO	82.11	281 e(P)	20 40.00	-5.7		
BRG	82.14	25 eP	20 47.90	2.6		
	1.8s	64.00nm		5.5mb		
		i	20 51.10			
LPO	82.24	36 eP	20 48.20	2.2		
	0.8s	5.30nm		4.7mb		
CAF	82.44	35 eP	20 49.30	2.2		
	0.8s	10.70nm		5.1mb		
FEL	82.54	30 eP	20 48.95	1.3		
GUD	82.75	42 e(P)	20 53.00	4.1		
KSP	82.91	24 eP	20 51.00	1.6		
BJI	83.04	318 eP	20 48.00	-2.2		
Z	20s	0.36um		4.7Msz		
		eS	31 18.00			
PRU	83.09	25 Pd	20 52.00	1.7		
Z	18s	2.20um		5.6Msz		
N	16s	1.30um				
E	16s	1.50um				
		e	20 55.50			
EPF	83.13	38 eP	20 52.70	2.0		
	1.2s	20.80nm		5.2mb		
TOL	83.37	42 eP	20 51.00	-0.9		
		eS	31 10.00			
KHC	83.51	26 P	20 55.40	2.9		
Z	18s	2.00um		5.5Msz		
N	18s	1.80um				
E	18s	1.50um				
ETOR	83.67	40 e(P)	20 53.20	-0.4		
BNI	84.31	33 P	20 57.00	0.2		
ORO	84.38	32 P	21 01.60	4.5		
VAI	84.49	31 P	20 57.10	-0.3		
KRA	84.71	22 iPc	21 04.70	6.2		
	1.4s	112.00nm		5.9mb		
Z	18s	2.30um		5.6Msz		
E	18s	3.20um				
		e	21 18.70			
EROO	84.87	39 e(P)	21 03.00	3.5		
EBR	84.91	39 eP	21 04.00	4.4		
DOI	85.00	33 P	20 59.00	-1.2		
EVIA	85.09	42 e(P)	21 04.00	3.2		
VKA	85.17	25 eP	21 07.00	6.1		
KBA	85.18	28 eP	20 57.50	-3.7		
	1.7s	67.60nm		5.6mb		
		e	21 06.00			
		e	21 24.60			
AAPN	85.25	44 iPd	21 01.00	-0.6		
SAL	85.39	30 P	21 09.00	7.1		
ALOJ	85.40	44 iPc	21 01.00	-1.4		
ASMO	85.41	44 iPd	21 02.00	-0.4		
CKI	85.48	32 P	21 02.00	-0.5		
ZST	85.49	25 eP	21 05.00	2.6		
FRF	85.51	34 eP	21 04.70	2.0		
	1.2s	26.10nm		5.3mb		
ACHM	85.55	44 eP	21 01.50	-1.6		
AFC	85.59	44 e(P)	21 05.00	1.6		
ATEJ	85.60	44 eP	21 01.00	-2.4		
LMR	85.64	34 eP	21 05.40	2.1		
	1.2s	23.80nm		5.2mb		
BOB	85.67	31 P	21 06.00	2.5		
APHE	85.74	44 iPd	21 04.00	-0.1		
SOP	85.76	25 eP	21 07.90	4.1		
SRO	86.21	24 eP	21 13.60	7.6		
		e	53 41.50			
VOY	86.28	28 eP	21 09.30	2.8		
AVE	86.38	49 eP	21 08.00	0.9		
LJU	86.49	27 e(P)	21 08.00	0.5		
BDI	86.71	31 P	21 10.50	1.8		
CEY	86.72	28 e(P)	21 13.50	4.9		
PTJ	87.11	27 eP	21 16.40	5.8		
ZAG	87.19	27 eP	21 15.50	4.6		
VBY	87.21	27 eP	21 14.00	3.0		
IFR	87.51	47 eP	21 13.00	0.1		
DZM	89.47	240 iPc	21 25.10	3.0		
LZH	92.17	323 eP	21 35.00	0.4		
	2.0s	28.00nm		5.3mb		
Z	18s	2.50um		5.7Msz		
N	16s	1.10um				
E	16s	1.20um				
		i	21 51.60			
		eS	32 40.00			
SKO	92.42	25 eP	21 39.50	4.0		
Z	14s	1.02um		5.4MszX		
N	15s	1.36um				
E	14s	0.82um				
OHR	92.99	26 eP	21 43.20	5.0		
BCAO	123.89	47 ePKPd	27 26.00	2.2		
	0.4s	3.00nm				
POF	148.78	81 iPKPd	28 10.50	1.9		
	0.9s	21.01nm				
BUL	149.29	57 iPKPc	28 26.10	16.2		
	1.0s	5.50nm				
KSR	151.96	68 ePKP	28 16.20	2.4		
	0.8s	10.63nm				
		i	28 24.90			
KIM	152.08	75 ePKP	28 23.00	9.2		
BFS	152.50	70 ePKP	28 13.00	-1.5		
	1.0s	50.00nm				
SLR	152.86	66 ePKP	28 17.70	2.7		
	0.9s	25.21nm				
		i	28 27.10			
BLF	153.31	75 ePKP	28 21.50	5.9		
HVD	153.56	78 ePKP	28 22.50	6.6		
	196 obs. associated					

& JAN 16, 1990 21h 07m 56.40s
40.225 N 124.407 W
DEPTH = 9.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.4 (BRK).

FHC	0.66	29 iPc	08 09.30	-0.3		
		eS	08 18.20			
WDC	1.47	75 ePc	08 20.40	-2.7		
LTCM	1.75	90 eP	08 25.00	-2.1		
MIN	2.15	86 iPd	08 30.20	-2.8		
LBFM	2.22	59 eP	08 32.10	-2.0		
ORV	2.33	106 ePd	08 33.20	-2.4		
BRK	2.88	144 e(P)	08 44.10	0.8		
PCC	3.15	149 ePc	08 46.30	-0.7		
GCC	3.71	149 ePc	08 53.20	-1.9		
SAO	4.16	145 eP	09 01.00	-0.5		
PRS	4.56	147 ePc	09 05.30	-1.9		
KVN	5.01	102 eP	09 10.70	-3.0		
12 obs. associated						

? JAN 17, 1990 01h 20m 26.01± 4.36s
29.221 S ±28.1km 72.013 W ±27.8km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

RTRS	2.41	114 iPd	21 03.90	-0.1		
RTBS	3.29	138 e(P)	21 18.00	1.6		
JACH	3.66	161 iP	21 23.50	1.7		
		iS	22 00.20			
RTLL	3.72	125 e(P)	21 24.00	1.5		
ROCH	3.84	167 iPd	21 24.40	0.0		
		iS	22 08.00			
RTCV	3.99	132 e(P)	21 25.00	-1.4		
CFA	4.03	127 eP	21 25.80	-1.3		
		S	22 09.00			
LCCH	4.26	175 iP	21 30.00	-0.2		
		iS	22 27.50			
FCH	4.35	161 iPd	21 32.50	0.7		
		iS	22 16.10			
TACH	4.51	169 iPd	21 33.60	-0.3		
		iS	22 19.50			
PCH	4.57	164 iPc	21 34.10	-0.6		
		iS	22 20.90			
LNV	4.75	174 iPd	21 36.70	-0.4		
		iS	22 36.60			
CHCH	4.84	166 iP	21 39.00	0.6		
CYA	5.51	83 e(P)	21 48.00	0.1		
		(S)	22 47.00			
RFA	6.30	152 ePc	21 57.00	-2.1		
TCA	6.76	110 eP	22 10.80	5.3X		
S.D. = 1.2 on 15 of 16 obs.						

% JAN 17, 1990 01h 41m 18.54± 0.99s
38.995 N ± 5.6km 16.399 E ±12.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

CZI	0.30	317 P	41 25.00	0.1		
ACI	0.39	337 P	41 34.30	7.8X		
ROI	0.59	13 P	41 30.30	-0.2		
TDS	0.66	356 P	41 31.70	-0.1		
		eSg	41 41.00			
CSI	0.79	354 P	41 34.50	0.7		
MMN	0.95	341 P	41 36.40	-0.2		
		eSg	41 51.00			
SOI	0.96	196 P	41 36.80	0.0		
		eSg	41 52.10			
MGR	1.31	331 P	41 42.50	-0.3		
		eSn	42 01.00			
S.D. = 0.4 on 7 of 8 obs.						

? JAN 17, 1990 02h 04m 41.94± 1.55s
32.336 S ±41.3km 178.005 W ±22.7km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
SOUTH OF KERMADEC ISLANDS (179)

DZM	17.18	303 iPc	08 41.00	-0.1		
BRS	25.77	273 iPc	10 14.00	2.5		
CTA	34.15	282 iPc	11 25.80	-0.4		
	0.9s	13.87nm		4.9mb		
ASPA	43.04	269 eP	12 38.90	-1.5		
	1.0s	8.00nm		4.4mb		
WRA	44.20	274 Pc	12 49.20	-0.5		
	0.6s	9.60nm		4.8mb		
WB5	44.20	274 eP	12 49.50	-0.3		
SUF	145.93	340 ePKP	24 14.20	-3.9		
	0.9s	17.30nm				
NUR	148.12	339 iPKP	24 21.10	-0.6		
	1.0s	26.00nm				
		i	24 32.70			
BCAO	148.21	213 ePKPd	24 27.90	4.6		

	0.5s	8.00nm				
		ic	24	38.20		
NB2	150.66	351 PKP	24	26.60		0.9
	0.8s	3.60nm				
MBH	151.77	274 ePKP	24	34.00		5.8X
PRNI	151.80	275 ePKP	24	35.00		6.6X
	S.D. = 1.4	on	8 of	12 obs.		

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* JAN 17, 1990 02h 28m 59.37± 1.33s
34.028 N ±14.0km 26.242 E ±10.4km
DEPTH = 33.0km (normal)
CRETE (370)

KAP	1.70	27 ePn	29	27.50		0.3
VAM	2.17	310 ePn	29	35.70		1.8
APE	3.09	349 ePn	29	47.00		0.0
VLI	3.81	316 ePn	29	55.00		-2.1
ELL	4.04	47 eP	30	00.60		0.0
BCK	4.92	45 ePn	30	13.00		0.0
DSI	8.07	105 eP	30	56.00		-1.2
PRNI	8.28	114 eP	31	01.00		0.9
	S.D. = 1.4	on	8 of	8 obs.		

? JAN 17, 1990 02h 37m 08.87± 1.09s
16.342 N ±10.5km 61.335 W ± 6.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.1 (FDF).

SEG	0.17	290 iPc	37	12.75		-0.1
		S	37	15.60		
DEG	0.27	96 eP	37	14.55		0.1
		S	37	18.60		
PAG	0.45	227 eP	37	18.30		0.2
		S	37	25.50		
BBL	0.83	190 iPc	37	24.72		-0.1
		S	37	35.10		
	S.D. = 0.2	on	4 of	4 obs.		

JAN 17, 1990 02h 43m 51.35± 0.47s
44.417 N ± 3.2km 7.516 E ± 4.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.8 (LDG).

DOI	0.21	294 Pd	43	56.10		0.1
		eSg	43	59.00		
TOUF	0.45	206 Pg	44	00.04		-0.5
		Sg	44	04.53		
CKI	0.55	89 P	44	04.10		1.7
		eSg	44	11.80		
SBF	0.56	186 Pg	44	01.80		-0.9
		Sg	44	09.20		
CALN	0.80	214 Pg	44	06.54		-0.5
		Sg	44	16.03		
BNI	0.87	317 Pc	44	08.20		0.0
		eSg	44	19.20		
FRF	1.06	217 Pg	44	10.40		-0.9
		Sg	44	23.20		
LPG	1.21	334 Pn	44	14.10		0.0
		Sg	44	31.00		
LPL	1.23	333 Pn	44	14.40		0.0
ORO	1.25	15 P	44	14.30		-0.4
		eSn	44	30.50		
LRG	1.27	221 Pn	44	14 60		-0.4
		Pg	44	15.10		
		Sg	44	30.80		
LMR	1.30	214 Pg	44	15.30		-0.2
		Sg	44	31.20		
BOB	1.42	75 P	44	21.80		4.5X
TREF	1.73	243 Pg	44	23.82		2.2
		Sg	44	47.63		
PRAF	1.80	251 Pg	44	25.06		2.4
GELF	1.83	236 Pg	44	24.49		1.4
PGF	2.16	149 Pn	44	26.70		-1.2
		Sn	44	52.00		
SMF	3.41	312 Pn	44	45.20		-0.5
		Sg	45	39.60		
LBF	3.57	317 Pn	44	47.80		-0.1
		Sg	45	45.20		
HAU	3.68	348 Pn	44	49.20		-0.3
		Sn	45	31.20		
LOR	3.83	319 Pn	44	51.20		-0.4
BGF	3.92	305 Pn	44	52.50		-0.4
		Sg	45	55.60		
CAF	3.92	279 Pn	44	52.80		-0.1
MAF	3.93	299 Pn	44	52.70		-0.3
TCF	4.18	298 Pn	44	56.40		-0.2
LSF	4.60	296 Pn	45	02.20		-0.4
	S.D. = 1.0	on	25 of	26 obs.		

? JAN 17, 1990 03h 33m 39.84± 1.53s
32.652 S ±39.4km 178.680 W ±26.9km
DEPTH = 33.0km (normal)
4.8mb (3 obs.) 4.1Msz (1 obs.)
SOUTH OF KERMADEC ISLANDS (179)

DZM	16.88	305 iPc	37	36.20		0.9
CTA	33.66	283 iPc	40	19.30		-0.5
	0.8s	29.10nm			5.3mb	
LAT	41.07	302 eP	41	07.00	-15.1X	
ASPA	42.46	270 iPd	41	33.80		0.2
	0.6s	10.00nm			4.7mb	
	Z 18s	0.21um			4.1Msz	
		LR	00	46.10		
WRA	43.65	275 Pd	41	42.70		-0.5
	1.0s	7.80nm			4.4mb	
WB5	43.66	275 eP	41	42.80		-0.5
SUF	146.03	340 ePKP	53	09.30		-6.9X
	0.8s	48.80nm				
BCAO	147.64	213 iPKPc	53	22.20		1.9
	0.6s	11.00nm				
		ic	53	26.00		
		id	53	35.30		
NUR	148.20	338 iPKP	53	15.90		-3.8X
	0.9s	20.30nm				
NB2	150.87	350 PKP	53	22.40		-1.5
	1.2s	9.30nm				
MBH	151.22	273 ePKP	53	28.00		2.7X
PRNI	151.26	275 ePKP	53	29.00		3.6X
BBTK	153.74	295 ePKP	53	32.00		3.2X
	S.D. = 1.4	on	7 of	13 obs.		

? JAN 17, 1990 04h 14m 32.79± 4.31s
51.469 N ±28.5km 16.078 E ±25.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.4 (VKA).

KSP	0.64	168 iP	14	46.00		0.3
	0.3s	61.00nm				
		iS	14	55.30		
BRG	1.47	247 iPg	15	00.00		0.7
		iSg	15	20.00		
PRU	1.78	214 Pn	15	03.90		0.2
		Pg	15	05.90		
		Sn	15	22.50		
		Sg	15	29.40		
CLL	1.93	266 iPn	15	05.40		-0.6
		iPg	15	08.10		
		iSg	15	34.80		
KHC	2.84	215 Pn	15	19.10		0.1
		Pg	15	25.50		
		Sn	15	54.60		
		Sg	16	04.30		
HOF	2.90	248 iPnc	15	19.30		-0.6
MOX	2.93	255 ePn	15	21.00		0.7
		ePg	15	28.00		
		iSg	16	07.00		
WET	3.10	223 eP	15	22.90		0.2
VKA	3.21	177 iPgd	15	34.60		10.3X
		iSg	16	17.60		
GRF	3.57	242 ePg	15	43.00		13.7X
		eSg	16	28.00		
KBA	4.74	203 iP	15	45.10		-1.1
	0.5s	0.60nm				
	S.D. = 0.7	on	9 of	11 obs.		

% JAN 17, 1990 05h 25m 33.66± 1.11s
43.134 N ± 8.0km 1.001 W ± 9.7km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

BOH	0.03	194 Pg	25	35.76		0.0
ELYF	0.04	10 Pg	25	35.78		0.0
		Sg	25	38.36		
MADF	0.13	85 Pg	25	36.92		0.0
		Sg	25	41.03		
ISSF	0.18	125 Pg	25	37.91		0.1
		Sg	25	42.35		
ATE	0.22	102 Pg	25	38.40		-0.1
		Sg	25	43.45		
	S.D. = 0.1	on	5 of	5 obs.		

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* JAN 17, 1990 05h 29m 16.22± 0.81s
38.301 N ± 7.2km 21.642 E ±10.9km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.0 (ATH).

VLS	0.84	262 eP	29	32.70		0.3
ITM	1.14	168 eP	29	37.00		-0.6
VLI	1.89	146 eP	29	49.30		0.5
KZN	2.01	3 eP	29	51.10		0.5
OHR	2.88	347 ePn	30	02.30		-0.8
	S.D. = 0.9	on	5 of	5 obs.		

JAN 17, 1990 06h 38m 05.78± 0.33s
31.673 S ± 6.1km 116.995 E ± 5.5km
DEPTH = 6.9km (2 depth phases)
5.2mb (8 obs.)
WESTERN AUSTRALIA (590)
ML 5.5 (MUN). Felt (VI) at Meckering. Also felt in the Perth area.

KLB	0.66	83 iPd	38	20.40		1.4
MUN	0.74	245 iPd	38	21.20		0.7
BAL	1.09	347 iPc	38	28.50		1.9
NWAO	1.27	171 iPd	38	29.90		0.3
RKG	2.39	180 iPc	38	53.30		7.3X
MRWA	2.59	340 iPc	38	50.00		1.1
COOL	3.64	79 iPc	39	03.00		-0.7
MEKA	5.22	15 iPd	39	24.50		-1.6
NANU	9.17	351 eP	40	13.40		-8.0X
	0.3s	66.00nm			6.5mb X	
FORR	9.54	88 eP	40	21.40		-5.1X
WARB	10.06	60 eP	40	28.80		-5.0X
MBL	10.77	14 iPc	40	37.80		-5.7X
	0.3s	31.00nm			6.2mb X	
ASPA	16.95	66 iPd	41	57.60		-7.5X
	0.8s	225.00nm			5.3mb	
	Z 18s	1.78um			4.4Msz	
		iS	44	53.30		
		LR	48	25.90		
WRA	19.47	57 Pc	42	29.30		-6.9X
	0.7s	35.80nm			4.8mb	
WB5	19.53	57 eP	42	30.20		-6.6X
		eS	45	54.00		
STK	20.90	97 iPd	42	52.00		0.8
		e	46	35.00		
		e	46	57.00		
BFD	21.75	112 eP	42	59.70		0.0
		e	43	02.00		8km
		e	46	58.00		
MTN	22.81	38 eP	43	09.00		-1.4
		e	47	14.00		
TOO	24.12	112 iPd	43	25.20		2.1
		e	48	06.00		
TRT	24.19	349 ePd	43	27.10		3.3X
	1.1s	96.40nm			5.3mb	
QLP	24.30	85 eP	43	26.00		1.1
		e	47	51.00		
BWA	26.43	104 eP	43	47.80		2.8X
CAN	26.87	107 eP	43	48.80		-0.3
CNB	27.17	107 eP	43	51.00		-0.8
		e	49	54.00		
RMQ	28.17	88 eP	44	01.50		0.6
		e	51	25.00		
CTA	28.65	73 iPd	44	04.80		-0.5
	1.0s	20.00nm			4.9mb	
BRS	31.33	91 iPd	44	29.40		0.3
	0.6s	7.00nm			4.7mb	
		i	44	31.00	6km	
		ePP	45	04.00		
		e	46	44.50		
		e(S)	49	10.00		
		eLR	51	34.00		
MSZ	41.45	123 P	45	58.00		3.4X
DZM	44.02	90 iPc	46	22.30		-0.2
CHG	53.10	338 eP	47	27.00		0.7
SPA	58.50	180 iPc	48	04.10		-0.8
	1.0s	54.00nm			5.6mb	
GBA	58.87	314 P	48	07.30		-0.4
HYB	61.17	317 iPc	48	23.70		0.1
	1.0s	30.00nm			5.4mb	
SHL	61.77	334 iP	48	27.20		-0.5
SSE	62.55	4 P	48	30.00		-2.5
LZH	68.52	349 eP	49	12.50		1.4
	1.4s	45.00nm			5.5mb	

17d 06h

			i	49	35.00	87kmX
BJI	71.35	359	eP	49	28.00	0.0
MAIO	86.44	317	eP	50	51.00	0.6
IMA	118.23	28	PKP	56	54.40	-0.3
PMR	119.11	33	PKP	56	55.90	-0.3
FBA	120.37	29	PKP	56	57.00	-1.6
LIC	120.38	258	PKP	56	59.70	-0.4
INK	126.21	26	ePKP	57	10.00	0.2
CNCB	131.56	174	PKP	57	21.00	-1.2
LPB	131.82	173	ePKP	57	24.00	1.5
ZOBO	132.08	173	PKP	57	21.00	-2.2
KVN	135.05	65	PKP	57	29.00	1.2
TNP	135.59	66	PKP	57	29.00	0.1
LRM	139.57	55	ePKP	57	30.60	-5.5X
MSU	139.58	66	PKP	57	28.90	-7.4X
BW06	141.75	60	PKP	57	34.00	-6.1X
ALQ	143.75	73	iPKPc	57	41.40	-2.3
	1.0s		11.75nm			
ANMO	143.75	73	PKP	57	42.00	-1.7
FFC	144.11	38	iPKPd	57	41.30	-2.1
	0.8s		18.00nm			
GOL	144.93	65	PKP	57	46.20	0.6
GLD	145.05	65	PKP	57	46.70	1.0
PPM	145.61	103	iPKP	57	49.30	1.6
RSSD	145.66	57	PKP	57	47.00	0.3
FRB	147.72	5	ePKP	57	51.00	2.0
RSON	150.32	41	PKP	57	58.00	4.5X
SIO	152.08	73	e(PKP)	58	04.40	7.8X
TUL	152.50	72	ePKP	58	05.20	8.0X
	1.2s		17.30nm			
			e	58	15.70	
	S.D. = 1.2		on 45 of 62 obs.			

JAN 17, 1990 07h 23m 01.92± 0.69s
64.349 N ± 8.2km 148.396 W ± 7.9km
DEPTH = 33.0km (normal)
CENTRAL ALASKA (1)
ML 4.0 (PMR). Felt (III) at Healy.

FBA	0.61	25	iPd	23	14.80	0.7
TOA	2.47	155	eP	23	42.30	1.5
PMR	2.79	187	eP	23	44.80	-0.3
IMA	2.82	310	eP	23	47.10	1.4
TTA	3.68	251	eP	23	56.50	-1.5
DWY	3.93	90	P	23	59.60	-1.8
SVW	4.65	229	eP	24	11.00	-0.7
INK	7.17	50	eP	24	46.00	-1.1
LON	22.88	128	e(P)	28	04.00	0.7
KVN	30.96	130	e(P)	29	19.00	1.0
	S.D. = 1.4		on 10 of 10 obs.			

% JAN 17, 1990 07h 28m 01.45± 1.23s
44.405 N ± 6.6km 6.354 E ±17.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.3 (LDG).

FRF	0.87	166	Pg	28	18.40	0.2
			Sg	28	29.00	
SBF	0.95	124	Pg	28	19.60	0.0
			Sg	28	33.30	
LRG	0.95	180	Pg	28	20.00	0.5
			Sg	28	33.00	
LMR	1.08	174	Pg	28	21.00	-0.7
			Sg	28	35.40	
LPL	1.14	13	Pg	28	23.00	0.0
	S.D. = 0.6		on 5 of 5 obs.			

% JAN 17, 1990 07h 41m 15.05± 0.77s
31.741 S ± 6.8km 116.996 E ± 7.8km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

KLB	0.67	77	iPd	41	28.70	0.4
			iS	41	37.30	
MUN	0.71	250	iPd	41	29.50	0.4
			iS	41	38.60	
BAL	1.16	348	eP	41	36.70	0.0
			eS	41	51.00	
NWAO	1.20	170	eP	41	37.00	-0.4
			eS	41	54.00	
MRWA	2.66	341	eP	41	58.30	-0.4
			iS	42	33.50	
	S.D. = 0.6		on 5 of 5 obs.			

JAN 17, 1990 07h 52m 51.45± 0.62s
36.052 N ± 5.7km 27.091 E ± 5.3km
DEPTH = 36.3 ± 9.6 km
4.3mb (12 obs.)
DODECANESE ISLANDS (369)
ML 4.4 (CSS), 4.3 (ATH).

KAP	0.50	172	ePb	53	01.70	-0.4
ARG	0.85	79	ePb	53	05.00	-2.1
NPS	1.44	237	ePn	53	17.50	2.0
YER	1.45	41	iPn	53	13.70	-1.9
APE	1.61	309	ePb	53	17.10	-1.0
SMG	1.67	353	ePb	53	19.00	0.2
CIN	1.74	27	eP	53	21.00	1.2
KSL	2.02	87	ePn	53	24.30	0.5
IZM	2.35	3	ePn	53	23.80	-4.6X
ELL	2.38	72	ePn	53	30.10	1.1
VAM	2.44	256	ePn	53	32.50	2.8X
BCK	3.14	62	ePn	53	41.10	1.3
PRK	3.25	349	ePn	53	41.00	-0.3
ATH	3.31	306	ePn	53	41.90	-0.2
			eSb	54	34.80	
VLI	3.42	282	ePn	53	44.00	0.4
DST	3.75	18	ePn	53	56.00	7.6X
ITM	4.30	287	ePn	53	59.40	3.1X
EDC	4.33	8	ePn	54	01.00	4.4X
BNT	4.35	8	ePn	53	59.00	2.2
PPCY	4.44	104	eP	53	58.50	0.3
YLV	4.85	21	ePn	54	08.00	3.9X
GPA	4.93	30	ePn	54	17.00	11.8X
CSS	5.20	100	eP	54	06.20	-2.8X
			eSn	55	08.20	
BBTK	5.86	48	eP	54	17.00	-1.4
			e	55	28.00	
VAY	6.34	327	eP	54	25.50	0.6
OHR	7.06	318	eP	54	19.80	-15.2X
	1.3s		0.05nm			
SKO	7.37	325	eP	54	38.00	-1.3
DSI	8.22	121	eP	55	49.00	57.8X
			eS	56	15.00	
MBH	9.06	132	eP	55	01.00	-1.8
			eS	56	36.00	
CZI	9.25	293	P	55	04.00	-1.4
CSI	9.31	297	P	55	09.40	3.1X
VOY	14.07	319	eP	56	12.90	2.5
KBA	15.05	321	eP	56	24.00	0.8
	1.2s		35.70nm			4.5mb
			i	56	27.50	
			i	56	30.00	
			i	56	33.70	
KHC	16.39	327	Pc	56	42.00	1.7
	1.2s		10.00nm			3.8mb
PRU	16.65	331	eP	56	48.50	5.0X
KSP	16.71	336	eP	56	45.60	1.4
GRF	17.87	325	e(P)	56	56.00	-2.7
LPG	18.02	308	eP	57	02.00	1.0
	0.7s		5.50nm			3.8mb
CLL	18.29	331	e(P)	57	07.00	3.1X
MOX	18.37	327	e(P)	57	05.00	0.1
BSF	19.08	314	eP	57	11.70	-2.0
CDF	19.11	316	eP	57	13.50	-0.5
	0.8s		6.40nm			3.9mb
LBF	20.39	310	eP	57	25.80	-2.0
	0.9s		9.80nm			4.2mb
AVF	20.71	309	eP	57	29.60	-1.4
	0.9s		12.10nm			4.3mb
SSF	20.72	309	eP	57	28.30	-2.8X
	0.9s		21.20nm			4.5mb
CAF	20.93	303	eP	57	32.80	-0.5
	1.1s		14.60nm			4.3mb
BGF	20.94	308	eP	57	31.40	-2.0
	0.8s		12.60nm			4.3mb
MEM	21.04	320	iPc	57	35.40	1.2
TCF	21.26	306	eP	57	36.90	0.3
	0.9s		9.80nm			4.2mb
RJF	21.41	303	eP	57	37.40	-0.8
DOU	21.50	318	P	57	39.30	0.3
NUR	24.53	357	eP	58	11.00	2.5
MAIO	26.10	80	eP	58	28.00	4.3X
SUF	26.70	359	eP	58	28.30	-0.5
BCAO	32.44	196	iPc	59	22.40	2.0
	0.7s		13.00nm			4.9mb
TIC	41.48	233	P	00	36.82	0.1
KIC	41.51	232	Pd	00	37.10	0.1
	0.7s		7.00nm			4.5mb
LIC	41.80	232	Pd	00	39.42	0.1
CHG	64.73	84	eP	03	51.00	22.5X
	S.D. = 1.4		on 43 of 59 obs.			

• JAN 17, 1990 09h 05m 58.66± 0.56s
9.928 N ±11.5km 126.576 E ±11.2km
DEPTH = 33.0km (normal)
4.9mb (2 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

GUMO	18.27	77	eP	10	10.00	-1.5
SSE	21.65	347	eP	10	46.00	-2.3
CHTO	28.15	291	eP	11	50.20	0.0
WB5	30.60	165	eP	12	21.30	9.3X
WRA	30.65	166	Pc	12	12.30	-0.2
	0.5s		0.50nm			3.6mb X
CTA	35.57	147	iP	12	55.10	0.0
MRWA	40.23	194	eP	13	33.00	-1.1
GUN	42.20	301	P	13	50.60	-0.1
PKI	42.50	300	P	13	52.40	-0.8
KKN	42.67	300	P	13	54.80	0.3
DMN	42.77	300	P	13	55.40	0.1
BRS	44.96	146	eP	14	13.40	0.7
GBA	48.19	279	P	14	38.00	-0.3
INK	84.49	22	eP	18	32.00	2.8
SOD	84.72	337	eP	18	25.00	-5.3X
SUF	85.99	333	eP	18	38.00	1.2
	0.5s		3.70nm			4.9mb
DAG	91.14	352	iPd	19	02.00	1.0
	0.9s		5.88nm			5.0mb
	S.D. = 1.3		on 15 of 17 obs.			

% JAN 17, 1990 10h 39m 29.64± 1.18s
1.081 S ± 6.4km 78.303 W ±20.8km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)

TUNG	0.36	203	iPd	39	37.20	0.0
			S	39	43.00	
VC1	0.45	347	iPd	39	38.80	-0.2
			S	39	44.00	
QUR	0.93	346	P+	39	47.80	0.1
			eS	39	59.70	
GGP	0.95	342	iPd	39	48.00	-0.1
			S	40	04.00	
CAYA	1.20	15	P	39	52.10	-0.2
COTA	1.41	359	eP	39	56.20	0.4
	S.D. = 0.3		on 6 of 6 obs.			

? JAN 17, 1990 10h 42m 14.19± 0.95s
39.072 N ± 8.0km 27.520 E ± 9.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.70	197	ePg	42	28.00	-0.1
			eSg	42	40.00	
DST	1.01	58	iPn	42	33.60	0.2
			iSg	42	47.60	
EZN	1.19	310	ePn	42	36.60	0.2
BNT	1.32	13	iPn	42	38.20	-0.4
	S.D. = 0.5		on 4 of 4 obs.			

• JAN 17, 1990 11h 10m 16.53± 0.53s
9.764 N ± 7.7km 126.242 E ±14.8km
DEPTH = 33.0km (normal)
4.6mb (6 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

SSE	21.74	348	eP	15	08.00	0.9
			i	15	21.00	
IPM	25.53	260	ePc	15	49.10	5.0X
CHTO	27.91	292	eP	16	07.00	1.2
WB5	38.52	165	eP	16	31.40	2.2
WRA	30.58	165	Pd	16	38.60	8.9X
	0.7s		2.00nm			4.0mb
BJI	31.45	345	eP	16	37.00	-0.2
WARB	35.73	179	eP	17	13.00	-1.3
	0.3s		5.00nm			4.9mb
MRWA	39.99	194	iPd	17	49.90	-0.1
GUN	42.00	301	P	18	07.20	0.2
PKI	42.30	300	P	18	09.20	-0.2
MUN	42.60	193	eP	18	11.00	-0.3
NWAO	43.31	191	eP	18	17.00	-0.1
GBA	47.89	280	Pc	18	53.60	-0.2
	0.8s		5.40nm			4.6mb
INK	84.76	22	eP	22	48.00	-0.4
SUF	85.99	333	iP	22	54.60	0.0
	0.4s		4.70nm			5.1mb
MBC	86.21	13	eP	22	56.00	0.5
	0.7s		1.00nm			4.2mb

```
NUR     87.22 331 iP     23 12.80   12.1X
DAG     91.26 352 iPd    23 18.40   -1.1
        0.8s       2.99nm          4.7mb
BZS     93.13 317 eP     23 27.50   -1.1
     S.D. = 1.0   on  16 of  19 obs.
-------------------------------------------
   JAN  17, 1990  11h 23m 31.27± 0.32s
   37.560 N ± 3.5km    21.117 E ± 2.8km
   DEPTH =  10.0km  (geophysicist)
   4.3mb (  5 obs.)
 SOUTHERN GREECE                   (368)
      ML 4.0 (THE), 4.0 (ATH).

VLS      0.74 326 ePg    23 45.50   -0.4
ITM      0.75 120 ePg    23 45.70   -0.2
VLI      1.68 119 ePn    24 02.50    1.7
AGG      1.74  33 ePb    24 03.80    2.0
IGT      2.06 343 ePn    24 06.70    0.3
ATH      2.10  78 ePn    24 08.20    1.3
NEO      2.40  43 ePn    24 12.00    0.7
SRN      2.48 340 iPn    24 13.20    1.0
LSK      2.62 351 iPnc   24 15.10    0.7
LIT      2.75  22 ePn    24 16.40    0.1
KZN      2.79  10 ePn    24 18.00    1.2
TPE      2.86 343 iPnc   24 17.50   -0.3
PAIG     3.10  39 ePn    24 21.00   -0.1
BERA     3.27 344 iPnc   24 23.80    0.3
VAM      3.28 130 ePn    24 24.40    0.6
PLG      3.34  32 ePn    24 24.50   -0.2
THE      3.39  25 ePn    24 25.30    0.1
GRG      3.54  16 ePn    24 27.10   -0.2
APE      3.55  97 ePn    24 27.40   -0.2
OHR      3.56 356 iPn    24 27.50   -0.2
SOH      3.69  27 ePn    24 30.00    0.4
LCI      3.71 319 P      24 29.70   -0.1
                 eSn     25 13.30
KNT      3.85  20 ePn    24 32.30    0.4
TIR      3.90 346 ePn    24 31.50   -1.0
VAY      3.92  16 iPn    24 32.30   -0.5
SRS      4.04  28 ePn    24 34.30   -0.1
SOI      4.04 279 P      24 34.80    0.3
ROI      4.09 301 P      24 36.80    1.6
PHP      4.16 353 iP     24 34.80   -1.3
GMB      4.20 280 P      24 37.63    0.7
LACI     4.21 345 iPnc   24 36.40   -0.5
CZI      4.25 294 P      24 37.40   -0.1
NPS      4.29 121 ePn    24 37.30   -0.8
TDS      4.29 301 P      24 38.30    0.2
                 eSn     25 29.10
CSI      4.38 302 P      24 44.20    4.8X
PRK      4.38  66 ePn    24 37.10   -2.3
SKO      4.41   3 iPn    24 38.40   -1.4
                 iPb     24 46.80
                 iPg     24 55.80
                 iSn     25 27.80
                 iSb     25 41.00
                 iSg     25 49.70
BRT      4.50 319 P      24 41.50    0.5
PUK      4.58 348 iPnc   24 30.80  -11.2X
SDA      4.62 345 ePn    24 42.00   -0.7
MMN      4.64 302 P      24 44.20    1.3
EZN      4.66  59 iPn    24 43.70   .0.4
BCI      4.87 351 iPnc   24 44.20   -2.0
IZM      4.93  78 ePn    24 45.00   -2.1
MEU      4.95 267 Pd     24 46.90   -0.6
                 eSn     25 40.60
RDO      4.96  42 ePn    24 46.60   -0.8
MGR      5.05 302 P      24 48.50   -0.3
                 eSn     25 46.20
MNO      5.10 276 Pd     24 49.90    0.1
SGO      5.42 305 P      24 55.40    1.3
BSS      5.87 305 P      25 01.00    0.6
HVAR     6.65 329 iPn    25 08.10   -3.2X
ELL      7.07  94 eP     25 19.00    1.6
BEO      7.27 356 eP     25 38.00   17.9X
MLR      8.71  23 ePd    25 46.50    6.2X
VBY      9.07 333 ePn    25 49.00    3.9X
                 eSn     27 35.00
PTJ      9.18 337 eP     25 40.90   -5.8X
RIY      9.27 329 eP     25 44.50   -3.4X
VRI      9.30  25 ePd    25 50.00    1.7
CEY      9.58 331 eP     25 48.50   -3.7X
                 eS      27 35.50
LJU      9.79 332 e(P)   25 51.80   -3.3X
                 e       26 04.00
                 e(S)    27 44.00
VOY     10.03 330 eP     25 54.50   -4.0X

                 eS      27 45.00
KBA     11.11 331 eP     26 19.00    5.7X
        0.6s      4.20nm          5.0mb X
                 e       26 35.00
                 e       28 07.50
                 i       28 28.20
KHC     12.79 337 P      26 33.60   -2.3
NUR     23.08   4 eP     28 57.00   19.3X
NB2     24.32 348 P      28 50.00    0.2
        0.9s      5.90nm          4.2mb
SUF     25.38   5 eP     29 00.40    0.6
BCAO    33.05 185 ePd    30 09.40    0.3
        0.3s      5.00nm          4.9mb
TIC     38.88 224 P      30 57.40   -1.2
        0.6s      3.00nm          4.2mb
KIC     38.96 224 P      30 58.20   -1.1
        0.6s      3.00nm          4.1mb
LIC     39.23 224 P      31 00.40   -1.1
        0.6s      9.00nm          4.6mb
     S.D. = 1.0   on  57 of  70 obs.
-------------------------------------------
?  JAN  17, 1990  11h 51m 26.81± 0.87s
   39.860 N ± 7.3km    28.804 E ± 8.4km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

DST      0.29 208 ePg    51 32.70   -0.2
                 eSg     51 39.70
YLV      0.83  31 iPn    51 42.70   -0.2
BNT      0.84 306 iPn    51 43.20    0.2
ALT      1.29 128 ePn    51 51.00    0.2
     S.D. = 0.4   on   4 of   4 obs.
-------------------------------------------
?  JAN  17, 1990  11h 54m 14.76± 8.55s
   38.660 N ±62.4km    23.657 E ±36.1km
   DEPTH =  10.0km  (geophysicist)
 GREECE                            (364)
      ML 2.6 (THE).

AGG      1.10 290 ePg    54 35.40    0.0
                 eS      54 51.40
PAIG     1.27   1 ePbc   54 38.30    0.0
OUR      1.69   8 ePbc   54 44.40    0.0
LIT      1.70 328 ePbc   54 44.50   -0.1
                 eSb     55 05.80
     S.D. = 0.1   on   4 of   4 obs.
-------------------------------------------
   JAN  17, 1990  12h 05m 29.84± 0.27s
   43.589 N ± 2.7km   127.443 W ± 3.7km
   DEPTH =  10.0km  (geophysicist)
   5.4mb ( 55 obs.)  5.2Msz (  7 obs.)
 OFF COAST OF OREGON               ( 30)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 27C
      Centroid Location:
      Origin Time        12:05:36.7 0.5
      Lat 43.52N 0.05 Lon 128.50W 0.05
      Dep  15.0 FIX Half-duration  2.6
      Moment Tensor;    Scale 10**17 Nm
        Mrr= 0.18 0.11  Mtt=-3.07 0.18
        Mff= 2.89 0.13  Mrt= 0.60 0.38
        Mrf=-0.87 0.33  Mtf=-1.84 0.11
       Principal Axes:
        T  Val=  3.70   Plg=16   Azm= 73
        N       -0.07      73      273
        P       -3.62       5      165
      Best Double Couple:Mo=3.7*10**17
       NP1:Strike=210 Dip=75 Slip=   8
       NP2:       118     83      165

GROR     3.23  56 eP     06 21.13   -0.5
KMOR     3.49  53 ePc    06 24.48   -0.8
NLO      3.78  47 eP     06 29.62    0.1
                 eS      07 19.40
FHC      3.79 136 ePc    06 29.60    0.0
GT2      4.03  65 eP     06 33.26    0.4
PGO      4.03  61 eP     06 33.39    0.5
BMW      4.15  45 eP     06 34.27   -0.5
                 eS      07 26.60
ONR      4.19  37 ePc    06 34.70   -0.4
                 eS      07 27.68
RVW      4.21  51 eP     06 35.47    0.0
VLMM     4.33  61 ePc    06 37.62    0.4
LVP      4.36  54 ePc    06 37.99    0.3
TDH      4.39  65 eP     06 38.52    0.3
MTMW     4.45  55 ePc    06 39.18    0.2

VBEM     4.45  69 eP     06 38.89   -0.2
FL2      4.46  52 eP     06 39.46    0.3
                 eS      07 35.42
OBH      4.51  33 eP     06 39.13   -0.5
CZM      4.51  49 eP     06 39.41   -0.4
SHW      4.52  53 eP     06 40.70    0.6
ERK      4.53  51 eP     06 40.09    0.0
VLL      4.53  64 eP     06 40.63    0.5
CPW      4.55  40 ePc    06 39.62   -0.7
APW      4.57  46 eP     06 40.28   -0.3
                 eS      07 38.26
LBFM     4.68 117 eP     06 42.40    0.0
WDC      4.73 128 ePc    06 42.90    0.0
                 i       07 22.00
LON      5.08  50 iPc    06 48.10    0.2
GMW      5.13  38 iPc    06 47.70   -0.9
VGB      5.14  66 ePc    06 48.40   -0.3
LTCM     5.21 129 eP     06 51.50    1.8
MIN      5.43 125 eP     06 55.70    2.8
RMW      5.54  44 iPd    06 54.20   -0.2
PGC      5.77  27 eP     06 57.00   -0.5
ORV      6.01 130 eP     07 01.80    0.9
MCW      6.02  31 eP     07 00.90   -0.1
NWRM     6.18 145 eP     07 01.00   -2.2
ZSP      6.87 143 ePc    07 11.50   -1.6
BRK      6.93 144 eP     07 11.00   -2.9
                 eS      08 39.00
                 eLR     08 57.00
BKS      6.94 144 eP     07 13.90   -0.1
                 lS      08 05.00
PCC      7.20 146 eP     07 15.60   -2.0
MHC      7.65 143 ePc    07 23.50   -0.5
ARN      7.69 142 eP     07 22.50   -2.1
CMB      7.71 134 ePc    07 26.00    1.2
DPW      7.75  53 eP     07 24.50   -1.0
GCC      7.76 146 e(P)   07 22.90   -2.6
PNT      7.87  41 eP     07 27.00   -0.1
SAO      8.22 144 ePc    07 30.20   -1.7
KVN      8.36 120 eP     07 34.50    0.3
LLA      8.56 142 e(P)   07 32.90   -3.8X
NEW      8.58  53 eP     07 36.50   -0.5
PRS      8.62 145 e(P)   07 33.00   -4.5X
FRI      8.85 136 ePc    07 41.20    0.6
PRI      9.08 143 ePc    07 43.00   -0.9
TNP      9.50 122 eP     07 51.00    1.1
ISA     10.51 136 eP     08 04.00    0.4
SYP     10.74 145 eP     08 10.00    3.1X
CLC     10.85 132 eP     08 10.00    1.8
LRM     10.90  73 eP     08 07.30   -1.9
PTI     11.03  89 eP     08 12.50    1.7
SBB     11.60 137 eP     08 18.00   -0.5
GSC     11.66 132 eP     08 21.00    1.7
MWC     11.86 139 eP     08 23.00    0.9
PAS     11.87 139 eP     08 23.00    0.9
RVR     12.38 137 eP     08 26.00   -2.9
DAU     12.45  99 eP     08 30.50    0.3
PEC     12.57 137 eP     08 31.00   -0.5
MSU     12.59 109 eP     08 32.50    0.5
BW06    13.08  87 eP     08 38.00   -0.6
SES     13.09  53 ePc    08 36.60   -1.8
        0.9s     82.00nm          5.9mb
PLM     13.15 137 eP     08 39.00   -0.3
EDM     13.41  39 eP     08 41.50   -1.1
BAR     13.79 139 eP     08 49.00    1.4
SIT     14.38 342 eP     08 54.70   -0.5
        1.4s    227.27nm          5.6mb
GLA     14.43 133 eP     08 57.00    0.9
GOL     16.94  96 eP     09 28.00   -0.7
        1.3s    218.75nm          5.1mb
GLD     17.03  95 eP     09 29.50   -0.2
        1.4s    155.41nm          4.9mb
ANMO    18.36 111 eP     09 46.80    0.5
ALQ     18.36 111 iPd    09 47.00    0.6
        2.0s    176.47nm          4.9mb
     Z  22s      4.26um           4.8Msz
                 pP      17 22.70
FFC     19.92  47 iPc    10 03.70   -0.6
        1.4s    609.00nm          5.7mb
KDC     21.11 321 eP     10 15.20   -1.4
        1.2s    181.82nm          5.3mb
TOA     21.57 336 eP     10 22.90    1.5
PMR     22.14 332 eP     10 25.90   -1.0
        1.2s    212.12nm          5.5mb
RSON    23.88  60 eP     10 44.00   -0.1
        1.6s    157.48nm          5.3mb
     Z  20s     11.30um           5.3Msz
MEO     23.94 102 eP     10 45.50    0.7
```

17d 12h

FBA 24.22 339 eP 10 46.00 -1.2
1.1s 75.00nm 5.2mb
SVW 24.27 326 eP 10 48.00 0.2
INK 24.98 355 ePd 10 53.80 -0.8
1.1s 112.00nm 5.5mb
SIO 25.11 98 e(P) 10 56.20 0.1
TUL 25.40 97 eP+ 11 00.00 1.1
1.3s 79.90nm 5.2mb
Z 20s 6.80um 5.2Msz
eS 15 37.00
LR 17 34.00
TTA 25.46 329 eP 10 58.70 -0.5
IMA 26.73 336 ePd 11 10.50 -0.5
FVM 28.42 89 eP 11 26.20 -0.3
PWLA 31.43 92 eP 11 52.90 -0.4
MBC 32.94 4 ePd 12 05.90 -0.1
1.0s 54.00nm 5.4mb
RSCP 32.94 90 eP 12 05.80 -0.8
1.2s 204.08nm 5.9mb
PPM 34.39 126 eP 12 20.80 1.0
BLA 35.98 84 eP 12 33.00 0.3
PRM 35.99 90 eP 12 32.50 -0.3
JSC 36.70 89 eP 12 37.00 -1.7
CVL 37.07 82 eP 12 42.50 0.7
RSNY 37.48 70 eP 12 44.20 -0.9
1.1s 16.56nm 4.7mb
Z 20s 9.04um 5.6Msz
CBN 37.76 81 eP 12 48.00 0.5
FRB 38.53 38 eP 12 54.00 0.3
HBVT 38.53 69 eP 12 52.80 -1.1
SCH 39.97 52 eP 13 06.00 0.1
GDH 44.46 29 ePd 13 44.00 1.7
1.0s 42.00nm 5.3mb
e 20 22.00
e 23 20.00
DAG 52.05 16 iPc 14 40.10 -1.1
1.0s 42.00nm 5.3mb
KEV 65.43 10 iP 16 14.30 0.0
1.1s 40.80nm 5.5mb
SOD 67.63 11 iP 16 28.00 -0.4
i 16 33.40
MAT 68.72 300 eP 16 32.00 -3.7X
0.8s 6.72nm 4.9mb
Z 21s 0.72um 4.9Msz
eS 25 43.00
NB2 70.45 20 P 16 44.80 -1.1
1.2s 66.00nm 5.6mb
UPP 72.99 18 iP 17 04.60 3.6X
NUR 73.78 14 eP 17 06.00 0.4
1.0s 70.00nm 5.7mb
i 17 14.80
WTS 76.91 27 e(P) 17 33.00 9.4X
1.0s 31.00nm 5.4mb
FLN 76.94 33 eP 17 22.80 -1.0
1.4s 60.90nm 5.5mb
GRR 77.09 33 eP 17 24.20 -0.4
1.1s 55.60nm 5.6mb
LDF 77.21 33 eP 17 24.70 -0.6
1.3s 57.70nm 5.5mb
LPF 77.30 34 eP 17 25.30 -0.5
1.3s 53.40nm 5.5mb
ENN 77.65 28 e(P) 17 30.00 2.3
1.0s 40.00nm 5.5mb
DOU 77.75 29 Pc 17 31.20 3.0
BJI 78.91 316 eP 17 35.00 0.2
2.0s 55.00nm 5.2mb
Z 20s 0.90um 5.1Msz
eS 27 32.00
eSS 32 36.00
ABH 78.96 28 eP 17 36.09 1.2
CLL 79.44 24 eP 17 42.00 4.5X
1.4s 81.00nm 5.5mb
MOX 79.61 25 eP 17 43.00 4.6X
1.8s 46.00nm 5.2mb
e 17 49.00
LSF 79.77 33 eP 17 38.00 -1.4
LOR 79.84 31 eP 17 38.90 -0.8
1.3s 62.80nm 5.4mb
SSF 79.87 32 eP 17 39.00 -0.9
1.5s 62.60nm 5.4mb
TCF 80.01 33 eP 17 39.40 -1.3
1.2s 35.70nm 5.2mb
BGF 80.04 32 eP 17 39.60 -1.2
1.3s 39.70nm 5.2mb
AVF 80.04 32 eP 17 39.40 -1.4
1.3s 50.50nm 5.3mb
BRG 80.11 24 iP 17 41.90 0.8
1.8s 70.00nm 5.3mb
i 17 45.80
i 17 51.20
CDF 80.11 29 eP 17 40.20 -1.1
1.2s 47.60nm 5.3mb
LBF 80.12 31 eP 17 40.00 -1.3
1.3s 36.10nm 5.2mb
HAU 80.13 29 eP 17 40.40 -0.9
1.3s 43.30nm 5.3mb
MAF 80.21 33 eP 17 40.70 -1.0
1.3s 54.10nm 5.4mb
SMF 80.35 32 eP 17 40.80 -1.7
1.1s 20.50nm 5.0mb
BSF 80.44 29 eP 17 41.60 -1.4
1.3s 72.20nm 5.5mb
ZOBO 80.51 123 P 17 43.20 -1.2
0.9s 24.87nm 5.2mb
LR 39 36.00
LFF 80.52 34 eP 17 42.30 -1.1
1.3s 53.40nm 5.4mb
RJF 80.54 34 eP 17 42.10 -1.4
1.0s 29.60nm 5.2mb
LPB 80.73 123 P 17 47.00 1.7
LR 39 34.00
KSP 80.80 22 eP 17 49.50 4.7X
1.2s 77.00nm 5.6mb
i 17 55.10
CNCB 81.02 123 P 17 49.50 2.5
PRU 81.07 24 eP 17 48.50 2.3
e 17 56.00
CAF 81.08 34 eP 17 45.00 -1.4
1.3s 26.70nm 5.1mb
KHC 81.55 25 iPc 17 50.90 2.1
1.2s 25.00nm 5.2mb
TOL 82.47 40 eP 17 55.00 1.3
KRA 82.49 21 eP 17 57.50 3.9X
0.9s 70.00nm 5.8mb
i 18 03.50
CCH 82.58 122 P 17 54.30 -0.5
OGA 82.73 27 eP 18 01.00 5.8X
BNI 82.76 31 P 17 57.00 1.8
SSE 82.76 306 P 17 56.00 0.7
1.2s 39.00nm 5.4mb
Z 20s 0.50um 4.9Msz
eS 28 12.00
SS 33 32.00
VAI 82.82 29 P 18 01.00 5.7X
KBA 83.30 26 e(P) 17 58.00 0.0
1.5s 87.50nm 5.7mb
i 18 07.50
SPC 83.36 21 eP 18 03.60 5.2X
ZST 83.42 23 eP 18 03.40 5.0X
i 18 08.50
FVI 83.55 26 P 18 05.00 6.0X
SAL 83.66 28 P 18 01.00 1.4
LRG 84.00 32 eP 18 00.90 -0.5
BOB 84.01 29 P 17 58.50 -3.1X
FRF 84.02 32 eP 18 00.50 -1.0
1.1s 41.00nm 5.6mb
SBF 84.06 31 eP 18 00.60 -1.2
1.2s 41.60nm 5.5mb
SRO 84.11 22 eP 18 07.60 5.7X
LMR 84.16 32 eP 18 01.20 -1.0
1.3s 53.40nm 5.6mb
VOY 84.40 26 e(P) 18 04.30 0.8
PSZ 84.44 21 eP 18 08.60 4.9X
AAPN 84.47 42 eP 18 06.00 1.9
LJU 84.59 26 e(P) 18 06.50 2.1
ASMO 84.61 42 eP 18 06.00 1.2
ALOJ 84.64 42 iPc 18 05.00 0.1
TRI 84.65 26 eP 18 05.90 1.3
ACHM 84.77 42 iPc 18 07.00 1.5
CEY 84.83 26 e(P) 18 06.50 0.9
ATEJ 84.83 42 iPc 18 06.00 0.0
APHE 84.96 42 iPc 18 07.50 0.9
PTJ 85.16 25 e(P) 18 07.50 0.2
RIY 85.17 26 eP 18 07.80 0.6
ZAG 85.24 25 i(P) 18 14.50 6.9X
VBY 85.30 25 e(P) 18 09.20 1.3
PGD 85.59 28 P 18 14.00 4.4X
SFI 85.59 28 P 18 18.00 8.6X
PGF 85.77 31 eP 18 09.60 -0.9
CRE 85.88 28 P 18 15.00 4.0X
ARV 86.34 28 P 18 15.00 1.8
ASS 86.62 28 P 18 17.30 2.7
LZH 88.01 321 eP 18 20.50 -1.1
1.6s 62.00nm 5.7mb
Z 20s 1.80um 5.5Msz
E 17s 1.10um
pP 18 27.50 22kmX
sP 18 32.50
i 18 39.30
eSKS 28 44.00
eS 29 13.00
VRI 88.02 18 ePc 18 22.00 0.7
MLR 88.20 18 ePd 18 32.00 9.7X
SDI 88.22 28 P 18 24.00 1.6
DUI 88.48 28 P 18 25.00 1.4
CFR 88.98 17 eP 18 15.00 -10.8X
DZM 89.07 238 iPc 18 24.90 -1.6
SGO 89.75 27 P 18 31.00 1.5
MGR 90.21 27 P 18 34.00 2.3
SKO 90.35 23 eP 18 35.50 3.2X
TDS 90.91 27 P 18 42.00 7.1X
OHR 90.97 23 eP 18 30.50 -4.8X
VAY 91.27 22 eP 18 40.50 4.0X
POF 150.41 72 ePKP 25 28.50 11.1X
1.0s 25.00nm
KSR 152.65 58 ePKP 25 29.00 7.9X
i 25 40.70
SUR 152.75 76 ePKP 25 29.00 8.0X
0.7s 20.55nm
SLR 153.40 56 ePKP 25 29.00 6.9X
1.2s 46.88nm
i 25 41.00
PRY 153.77 59 ePKP 25 26.00 3.4X
BLF 154.45 64 ePKP 25 08.50 -14.9X
S.D. = 1.2 on 168 of 202 obs.

& JAN 17, 1990 13h 23m 21.70s
55.874 N 160.886 W
DEPTH = 164.3km
ALASKA PENINSULA (12)
<PAL>.

SGB 0.41 143 eP 23 44.00 0.8
eS 24 00.25
SASA 0.58 157 ePd 23 44.66 -0.6
eS 24 01.26
PVV 0.72 226 eP 23 45.38 -0.7
eS 24 02.66
IVF 0.76 88 ePc 23 45.68 -0.7
eS 24 03.57
DRRA 1.24 220 eP 23 49.56 -0.6
eS 24 09.87
5 obs. associated

% JAN 17, 1990 13h 26m 24.14± 0.75s
41.137 N ± 9.1km 28.460 E ± 6.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT 0.03 295 iPg 26 25.60 -0.5
ISK 0.46 99 ePg 26 33.10 -0.4
DMK 0.86 323 iPg 26 41.00 0.2
iSg 26 53.10
BNT 0.88 208 ePn 26 41.20 0.1
HRT 0.97 109 ePn 26 42.90 0.3
S.D. = 0.5 on 5 of 5 obs.

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* JAN 17, 1990 13h 35m 42.94± 1.15s
36.895 N ±11.7km 29.379 E ± 7.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL 0.45 109 iPg 35 52.00 -0.1
eSg 36 02.00
YER 0.91 286 iPn 36 00.50 0.1
BCK 1.12 59 iPn 36 04.20 0.2
CIN 1.25 305 eP 36 11.00 4.9
KHL 1.43 5 iPn 36 08.40 -0.6
ALT 2.23 15 ePn 36 21.00 0.4
S.D. = 0.5 on 5 of 6 obs.

JAN 17, 1990 14h 27m 45.86± 0.71
40.213 N ± 5.3km 23.904 E ± 6.3km
DEPTH = 10.0km (geophysicist)
GREECE (364
ML 2.5 (THE).

OUR 0.14 26 ePgc 27 48.60 -0.5
PAIG 0.33 211 ePg 27 52.30 -0.5
SOH 0.74 326 ePg 27 59.80 -0.6
THE 0.83 301 ePg 28 02.00 0.1

		eSg	28	11.70	
SRS	0.93	345 ePg	28	02.90	-0.8
		eSg	28	14.20	
LIT	1.09	265 ePbc	28	05.90	-0.5
		eSb	28	21.20	
KNT	1.22	321 ePb	28	09.10	0.6
		eSb	28	23.90	
VAY	1.50	318 ePn	28	14.00	1.2
AGG	1.70	226 ePb	28	16.20	0.4
ALN	1.77	67 ePb	28	17.10	0.4

S.D. = 0.7 on 10 of 10 obs.

% JAN 17, 1990 15h 39m 28.86± 0.74s
31.724 S ± 6.6km 117.006 E ± 7.6km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

KLB	0.66	79 eP	39	42.10	0.2
		iS	39	50.40	
MUN	0.72	249 iPc	39	43.30	0.2
		iS	39	52.40	
BAL	1.14	347 eP	39	50.30	0.0
		iS	40	04.40	
NWAO	1.21	171 eP	39	51.30	-0.2
		eS	40	08.00	
MRWA	2.65	340 eP	40	12.10	-0.2
		eS	40	48.00	

S.D. = 0.3 on 5 of 5 obs.

& JAN 17, 1990 16h 11m 14.40s
36.878 N 121.630 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.0 (BRK). Felt at Prunedale and San Juan Bautista.

SAO	0.19	127 iPc	11	18.00	-0.2
GCC	0.33	297 iPc	11	20.70	-0.4
MHC	0.46	359 iPd	11	23.80	0.1
ARN	0.48	9 iP	11	23.90	-0.1
PRS	0.58	159 iPc	11	25.60	-0.5
LLA	0.61	115 iPd	11	26.30	-0.3
PCC	0.86	316 ePc	11	30.50	-1.0
PRI	1.07	133 ePc	11	34.60	-0.5
BKS	1.11	334 eP	11	34.40	-1.2
		eS	11	51.00	
BRK	1.11	333 e(P)	11	34.20	-1.5
		i	11	35.40	
ZSP	1.18	335 eP	11	35.20	-1.6
		i	11	37.10	
		iS	11	53.90	
PHAM	1.44	136 eP	11	39.50	-1.7
CMB	1.52	40 e(P)	11	40.70	-1.6
FRI	1.54	85 eP	11	41.00	-1.6
		i	11	42.00	
KVN	3.53	51 eP	12	10.00	-1.3

15 obs. associated

JAN 17, 1990 16h 21m 51.95± 0.61s
37.297 N ± 5.8km 20.848 E ± 3.5km
DEPTH = 57.1 ± 7.2 km
4.3mb (5 obs.)
IONIAN SEA (399)

ITM	0.87	97 ePg	22	06.00	-2.3
AGG	2.08	34 ePb	22	27.10	2.0
IGT	2.27	350 ePn	22	28.20	0.5
ATH	2.37	73 ePn	22	29.10	-0.1
KEK	2.55	341 ePn	22	33.50	1.9
SRN	2.66	346 ePn	22	32.60	-0.6
NEO	2.74	42 ePn	22	35.00	0.6
LSK	2.86	356 iPnc	22	36.90	0.8
TPE	3.06	348 ePn	22	38.00	-1.0
LIT	3.08	24 ePn	22	39.40	0.2
		eSn	23	12.70	
KZN	3.09	13 ePn	22	40.20	0.8
VAM	3.30	124 ePn	22	44.50	2.2
BERA	3.47	349 ePn	22	45.50	0.8
PLG	3.68	33 ePn	22	47.50	-0.2
LCI	3.78	324 Pd	22	49.20	0.2
		eSn	23	30.80	
OHR	3.81	359 iPnd	22	50.20	0.7
GRG	3.85	18 ePnd	22	49.70	-0.3
SOI	3.88	283 P	22	50.60	0.2
OUR	3.90	38 ePn	22	50.40	-0.3
SOH	4.02	28 ePn	22	52.90	0.4
ROI	4.06	305 P	22	56.40	3.4X
TIR	4.12	350 ePn	22	53.50	-0.2
KNT	4.17	22 ePn	22	54.80	0.2
CZI	4.18	299 P	22	54.50	-0.1
VAY	4.23	18 iPn	22	55.00	-0.4
TDS	4.25	305 P	22	56.00	0.3
PHP	4.40	356 iPnc	22	55.90	-1.8
LACI	4.42	349 ePn	22	59.70	1.7
BRT	4.56	323 Pd	23	00.40	0.4
		eSn	23	51.60	
SKO	4.69	5 iPn	23	01.00	-0.9
		iSn	23	42.10	
		iSg	23	56.00	
MEU	4.73	269 P	23	02.10	-0.4
		eSn	23	52.50	
PUK	4.80	351 iPnc	23	01.00	-2.3
SDA	4.83	348 ePn	23	03.20	-0.5
MNO	4.93	279 P	23	05.60	0.2
MGR	5.02	306 P	23	07.80	1.3
		eSn	24	01.00	
BCI	5.10	353 iPnc	23	37.70	30.1X
ALN	5.41	47 ePn	23	11.60	-0.4
SGO	5.41	309 P	23	12.30	0.4
DUI	6.59	313 P	23	28.00	-0.5
SDI	7.00	311 P	23	33.00	-1.2
ASS	8.51	315 P	23	55.00	-0.2
ARV	8.64	318 P	23	56.50	-0.4
MLR	9.04	23 eP	24	05.50	3.1X
V8Y	9.21	335 ePn	24	02.50	-2.2
PTJ	9.34	338 eP	24	03.40	-3.1X
VRI	9.63	25 ePc	24	11.00	0.6
CEY	9.71	332 eP	24	15.00	3.5X
		eS	26	03.50	
VOY	10.16	331 e(P)	24	16.50	-1.2
		eS	26	07.40	
KBA	11.24	333 eP	24	29.00	-3.5X
	0.9s	26.90nm		5.3mb	
		e	26	26.00	
		e	26	34.00	
GRF	14.21	334 ePc	25	20.40	8.9X
CLL	15.08	341 iPc	25	29.90	7.1X
	1.3s	24.00nm		4.3mb	
NUR	23.36	5 iP	27	09.20	13.5X
	0.9s	25.30nm			
EKA	24.30	326 P	27	07.00	2.1
	0.9s	16.10nm		4.5mb	
NB2	24.53	349 P	27	07.80	0.6
	0.7s	4.00nm		4.0mb	
SUF	25.66	6 eP	27	18.50	0.8
	0.6s	5.80nm		4.3mb	
GKN	53.61	80 P	31	09.60	-0.2
DMN	54.16	80 P	31	13.80	-0.2
KKN	54.21	80 P	31	13.30	-1.0
PKI	54.42	80 P	31	15.40	-0.6
GUN	54.63	80 P	31	17.00	-0.5

S.D. = 1.1 on 51 of 60 obs.

JAN 17, 1990 16h 58m 48.98± 0.37s
2.495 S ± 6.4km 138.738 E ± 6.9km
DEPTH = 33.0km (normal)
4.8mb (10 obs.) 4.9Msz (2 obs.)
WEST IRIAN (201)

JAY	1.96	91 ePd	59	19.80	-0.8
		e	05	02.50	
MNDI	6.11	127 eP	00	26.50	7.0X
TLE	6.74	242 ePd	00	31.90	3.7X
LAT	9.21	117 eP	01	09.00	6.4X
PMG	10.82	130 eP	01	26.00	1.2
MTN	12.75	216 iPc	01	48.60	-2.1
		e	04	10.00	
RAB	13.51	98 e(P)	02	02.00	1.1
GUMO	17.10	21 eP	02	46.30	-0.9
Z	19s	0.85um			
		eS	06	13.00	
W85	17.80	194 eP	02	55.20	-0.8
		eS	06	07.00	
WRA	17.87	194 P	02	56.00	-0.8
	0.7s	11.70nm		4.1mb	
PCI	18.96	274 ePc	03	15.00	4.8X
CTA	18.96	158 iPc	03	16.30	6.0X
	1.0s	30.00nm		4.5mb	
		iS	06	45.00	
ASPA	21.56	192 iPd	03	37.50	-0.4
	0.8s	35.00nm		4.8mb	
		eS	07	33.10	
HNR	22.18	109 eP	03	43.00	-1.0
RMO	25.72	159 iPd	04	22.00	3.8X
		e	12	46.00	
WARB	26.26	205 eP	04	24.30	1.1
	0.4s	9.00nm		4.7mb	
BRS	28.17	153 iP	04	42.40	1.8
		e(S)	09	12.00	
CN8	34.11	164 eP	05	34.00	1.0
MAT	38.84	359 eP	06	12.00	-0.8
	1.5s	38.89nm		5.0mb	
SNG	39.24	284 eP	06	17.30	0.9
LOE	41.51	300 eP	06	37.00	1.9
NNT	41.53	292 eP	06	41.60	6.3X
NST	42.23	297 eP	06	42.00	1.0
CHG	44.50	300 eP	07	00.30	0.8
BJI	47.11	336 eP	07	19.50	-0.3
	1.5s	16.00nm		4.8mb	
Z	24s	0.64um		4.5MszX	
LZH	50.33	323 Pd	07	45.70	0.7
	1.8s	51.00nm		5.2mb	
Z	20s	0.40um		4.4Msz	
		pP	07	50.00	14kmX
		sP	07	54.00	
HYB	62.52	291 eP	09	10.00	-2.3
GBA	62.85	287 Pc	09	14.40	0.0
	1.2s	7.70nm		4.7mb	
GBA	62.85	287 P	09	18.00	3.6X
QUE	75.60	302 eP	10	33.00	0.0
SVW	80.66	27 eP	11	01.30	1.4
TTA	81.20	25 eP	11	03.50	0.7
MAIO	82.81	307 iPd	11	13.70	2.0
IMA	83.34	22 eP	11	14.70	0.8
PMR	83.76	27 eP	11	14.50	-1.4
	1.5s	55.60nm		5.5mb	
F8A	85.29	24 eP	11	21.70	-1.8
INK	91.46	22 eP	11	52.00	-0.9
MBC	95.24	14 eP	12	10.00	-0.2
	1.5s	10.00nm		5.0mb	
GRF	115.34	325 ePKP	17	43.50	14.4X
Z	18s	0.80um		5.4Msz	
		ec	17	47.70	
		ic	17	53.20	
TIC	143.65	278 PKP	18	28.90	5.5X
LKO	143.87	283 PKP	18	21.74	-2.0
CNCB	147.38	127 PKP	18	34.20	4.0X
LPB	147.44	126 ePKP	18	46.00	15.9X
ZOBO	147.56	126 PKP	18	34.00	3.5X
	1.2s	10.14nm			
Z	24s	0.06um		4.3MszX	
		LR	10	06.00	

S.D. = 1.3 on 31 of 44 obs.

• JAN 17, 1990 16h 59m 31.28± 1.03s
20.887 S ± 9.3km 67.679 W ±13.6km
DEPTH = 33.0km (normal)
SOUTHERN BOLIVIA (125)

YJA	2.40	123 e(P)	00	08.80	-0.7
CCH	3.78	23 P	00	28.80	-0.1
ANT	3.78	222 eP	00	29.50	0.9
CNC8	4.07	356 iPc	00	35.00	1.7
		S	01	25.00	
LPB	4.35	355 P	00	38.50	1.3
ZOBO	4.61	355 iPc	00	40.00	-1.0
		S	01	36.00	
ARE	5.69	320 eP	00	54.00	-2.1
		eS	01	57.00	

S.D. = 1.7 on 7 of 7 obs.

? JAN 17, 1990 17h 17m 19.95±16.86
43.320 N ±80.6km 128.215 W ±107.k
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30

NLO	4.38	49 eP	18	28.12	0.0
GT2	4.65	65 eP	18	32.06	0.2
BMW	4.74	47 eP	18	32.63	-0.6
RVW	4.82	52 eP	18	33.98	-0.3
VLMM	4.95	61 eP	18	36.19	0.0
LVP	4.97	54 eP	18	36.47	0.0
OBH	5.04	36 eP	18	37.66	0.3
MTMW	5.06	56 eP	18	37.70	-0.1
FL2	5.07	53 eP	18	38.17	0.3
VBEM	5.07	68 eP	18	37.52	-0.5
CZM	5.11	51 eP	18	38.15	-0.3
ERK	5.13	52 eP	18	38.69	-0.1
SHW	5.13	54 eP	18	38.32	-0.5
VLL	5.15	63 eP	18	39.22	0.2
HSR	5.16	54 eP	18	39.58	0.4

17d 17h

JLK	5.16	55	eP	18 39.30	0.1
APW	5.17	48	eP	18 38.91	-0.2
STD	5.17	54	eP	18 39.29	0.0
YEL	5.17	54	eP	18 39.77	0.4
ESD	5.19	54	eP	18 39.57	-0.1
CDFW	5.21	55	eP	18 39.66	-0.1
SOSW	5.22	54	eP	18 40.43	0.4
TDL	5.23	53	eP	18 40.17	0.0
KOSW	5.31	52	eP	18 41.30	0.1
LMW	5.37	49	eP	18 42.14	0.0
ASR	5.50	57	eP	18 44.08	0.1
GLK	5.70	53	eP	18 47.17	0.3
RVC	5.71	48	eP	18 46.90	0.0

S.D. = 0.3 on 28 of 28 obs.

? JAN 17, 1990 17h 28m 26.86± 1.66s
32.044 S ±43.6km 177.669 W ±23.4km
DEPTH = 33.0km (normal)
4.9mb (3 obs.)
SOUTH OF KERMADEC ISLANDS (179)

DZM	17.27	301	iPc	32 27.20	0.0
BRS	26.04	273	iPc	34 00.60	1.7
RMO	29.73	272	eP	34 34.00	1.6
CTA	34.37	281	iPc	35 12.20	-0.8
	1.0s		30.00nm	5.2mb	
ASPA	43.33	269	iPd	36 26.70	-0.9
	0.6s		14.00nm	4.9mb	
WRA	44.46	274	Pd	36 35.60	-1.2
	0.4s		3.80nm	4.6mb	
WB5	44.47	274	eP	36 36.00	-0.9
SPA	58.13	180	iPc	38 33.80	14.3X
	1.0s		14.00nm		
SUF	145.75	341	ePKP	48 01.50	-1.3
	0.6s		41.00nm		
NUR	147.95	339	iPKP	48 08.10	1.7
	0.9s		30.40nm		
			i	48 24.00	
BCAO	148.61	212	ePKPd	48 17.10	8.2X
	0.5s		5.00nm		
			ic	48 31.50	
NB2	150.41	351	PKP	48 15.00	4.7X
	0.9s		7.30nm		
MBH	152.04	274	ePKP	48 21.00	7.5X
PRNI	152.06	275	ePKP	48 20.00	6.3X

S.D. = 1.5 on 9 of 14 obs.

& JAN 17, 1990 17h 47m 58.44s
62.344 N 147.695 W
DEPTH = 68.0km
CENTRAL ALASKA (1)
<AGS-P>.

NCA	0.54	130	eP	48 10.60	-1.1
			eS	48 20.95	
TOA	0.75	108	eP	48 13.62	-0.5
GHO	0.82	226	eP	48 13.63	-1.2
			eS	48 26.64	
PLRM	1.01	223	eP	48 16.41	-0.8
SDG	1.02	79	eP	48 16.50	-0.9
HUR	1.10	306	eP	48 17.24	-1.2
			eS	48 32.27	
RND	1.19	334	eP	48 18.70	-1.0
			eS	48 34.68	
CUT	1.20	274	eP	48 18.95	-0.8
PAX	1.21	58	eP	48 19.00	-0.9
VZW	1.40	157	eP	48 21.44	-1.0
GLI	1.50	169	eP	48 22.85	-0.9
			eS	48 41.28	
MCK	1.50	338	eP	48 23.57	-0.3
DDM	1.67	29	eP	48 27.17	1.0
SUA	1.69	240	eP	48 26.75	0.3
SKT	1.84	260	eP	48 27.86	-0.5
GLB	2.05	114	eP	48 30.71	-0.7
HDA	2.10	9	eP	48 32.05	0.1
SLKM	2.21	214	eP	48 34.31	0.8
CCB	2.31	359	eP	48 34.06	-0.9
SPU	2.38	243	eP	48 36.47	0.5
TGL	2.82	122	eP	48 40.90	-1.3

21 obs. associated

• JAN 17, 1990 18h 18m 34.32± 3.08s
41.102 N ±26.8km 20.179 E ±13.7km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.5 (SKO).

TIR	0.34	316	iPgd	18 42.70	1.4
OHR	0.47	89	iPg	18 43.90	0.0
			iSg	18 52.00	
PHP	0.62	19	ePg	18 46.90	0.2
LACI	0.64	327	ePg	18 45.20	-1.9
PUK	0.96	347	ePg	18 53.00	0.4
SDA	1.05	331	ePg	18 58.70	4.7X
SKO	1.29	47	ePg	19 04.50	6.3X
			iSg	19 16.50	
VAY	1.82	82	ePn	19 09.00	3.1X

S.D. = 1.7 on 5 of 8 obs.

• JAN 17, 1990 19h 19m 08.42± 1.89s
41.119 N ±18.1km 20.222 E ± 9.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.2 (SKO).

TIR	0.35	310	iPgd	19 15.50	-0.2
OHR	0.44	91	iPgc	19 16.60	-0.7
			iSg	19 23.70	
PHP	0.59	16	ePg	19 20.00	-0.4
LACI	0.64	323	ePg	19 21.00	-0.3
PUK	0.96	345	ePg	19 27.20	0.6
SKO	1.25	47	ePg	19 35.50	3.9X
			eSg	19 47.80	
VAY	1.78	83	ePn	19 40.40	0.9

S.D. = 0.8 on 6 of 7 obs.

• JAN 17, 1990 21h 08m 40.94± 0.86s
36.116 N ± 9.2km 27.296 E ± 8.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.57	190	ePg	08 51.20	-1.3
YER	1.29	38	iPn	09 03.20	-1.7
CIN	1.61	23	eP	09 11.00	1.5
SMG	1.63	347	ePb	09 09.20	-0.5
APE	1.71	304	ePb	09 10.00	-1.0
KSL	1.85	89	ePn	09 14.20	1.2
ELL	2.20	73	ePn	09 18.00	-0.2
IZM	2.28	359	ePn	09 23.00	3.8X
VAM	2.62	255	ePb	09 25.80	1.8
KHL	2.83	38	ePn	09 36.00	8.9X
BCK	2.96	62	ePn	09 36.30	7.3X

S.D. = 1.6 on 8 of 11 obs.

JAN 17, 1990 21h 28m 16.32± 0.67s
39.709 N ± 6.9km 16.866 E ± 5.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.27	239	P	28 21.90	-0.1
TDS	0.41	263	Pc	28 25.10	0.4
			eSg	28 34.00	
CSI	0.45	279	P	28 24.40	-1.1
ACI	0.63	235	P	28 29.40	0.5
MMN	0.70	285	P	28 30.20	0.1
CZI	0.75	229	P	28 30.60	-0.4
			eSg	28 40.70	
LCI	1.04	53	Pd	28 36.00	0.0
			eSg	28 51.50	
MGR	1.10	293	P	28 38.10	1.2
BRT	1.20	12	P	28 37.00	-1.6
			eSg	28 54.90	
BAI	1.41	0	P	28 40.00	-2.0
SGO	1.46	306	P	28 44.30	1.6
			eSn	29 03.10	
SOI	1.75	201	P	28 45.20	-1.7
BSS	1.91	305	P	28 49.40	0.2
SRN	2.42	85	ePn	29 00.10	3.6X
TPE	2.49	75	ePg	29 00.00	2.5
TIR	2.81	53	ePn	29 29.70	27.6X
LSK	2.90	80	ePn	29 07.90	4.4X
SDI	3.06	312	P	29 06.20	0.6
OHR	3.31	64	ePn	29 09.00	-0.3

S.D. = 1.3 on 16 of 19 obs.

& JAN 17, 1990 22h 12m 04.59s
59.885 N 153.827 W
DEPTH = 142.4km
SOUTHERN ALASKA (2)
<AGS-P>.

PDB	0.21	242	iP	12 22.96	0.4
AUL	0.54	158	eP	12 24.81	-0.7
AUE	0.58	156	eP	12 24.88	-0.8
RED	0.75	44	eP	12 26.14	-0.9
RDT	0.99	45	eP	12 28.00	-0.9
			eS	12 49.01	
XLV	1.15	111	eP	12 29.55	-0.8
NNL	1.28	82	eP	12 31.72	0.1
			eS	12 54.95	
CNPM	1.36	104	eP	12 31.33	-1.1
			eS	12 53.55	
CKL	1.51	29	eP	12 33.25	-0.9
			eS	12 57.00	
BGL	1.55	27	eP	12 33.79	-0.8
SPU	1.57	33	eP	12 33.53	-1.2
CRP	1.61	30	eP	12 34.48	-0.9
			eS	12 59.70	
SLKM	1.91	69	eP	12 37.10	-1.5
SUA	2.19	42	eP	12 40.39	-1.8
			eS	13 09.75	
SEW	2.21	82	eP	12 40.67	-1.5
			eS	13 09.22	
SKT	2.38	27	eP	12 43.08	-1.3
PWA	2.63	46	eP	12 44.65	-2.7
VZW	3.79	69	eP	13 00.28	-2.3

18 obs. associated

& JAN 17, 1990 23h 27m 18.00s
33.870 N 118.260 W
DEPTH = 14.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.3 (PAS). Felt (V) at Compton; (IV) at Bellflower, Corson, Harbor City, Paramount and Wilmington; (III) at Artesia, Bueno Park, Gardeno, Howthorne, Lakewood, Long Beach, Los Alamitos, Los Angeles, Seal Beach and Torrance.

PAS	0.29	15	iPd	27 23.70	-0.6
MWC	0.39	25	iPd	27 25.60	-0.7
CIS	0.48	195	iPd	27 27.30	-0.4
RVR	0.75	80	eP	27 31.20	-1.0
SBB	0.89	24	iPd	27 34.10	-0.7
PEC	0.91	88	iPd	27 34.20	-1.0
SCI	0.92	195	eP	27 34.70	-0.5
ABL	1.26	321	iPc	27 40.80	-0.4
PLM	1.28	113	ePc	27 39.80	-1.6
CPE	1.38	135	eP	27 40.80	-2.0
BLP	1.90	292	eP	27 48.80	-1.5
BCH	2.00	312	eP	27 51.30	-0.5
GLA	2.98	105	eP	28 05.50	-0.3
TNP	4.29	11	eP	28 25.50	1.0
CMB	4.50	338	e(P)	28 30.00	2.7
KVN	5.17	1	eP	28 39.80	2.8

16 obs. associated

JAN 18, 1990 01h 04m 31.05± 0.34s
10.797 S ± 5.7km 113.653 E ± 7.7km
DEPTH = 45.8km (3 depth phases)
5.1mb (15 obs.)
SOUTH OF JAVA (282)

KHKI	3.09	39	iPc	05 18.60	0.0
			iS	05 54.10	
			e	11 47.90	
PCI	11.59	32	ePd	07 16.80	0.0
NANU	11.84	172	eP	07 11.00	-9.0X
	0.4s		75.00nm	6.1mb X	
			eS	09 13.00	
MBL	11.89	151	iPc	07 12.40	-8.4X
	0.3s		19.00nm	5.6mb	
			iS	09 09.40	
KGM	16.36	320	eP	08 23.00	3.8X
MEKA	16.39	164	eP	08 15.60	-4.0X
	0.3s		14.00nm	4.6mb	
			eS	11 00.00	
MTN	17.23	99	iPc	08 11.60	-18.5X
MRWA	18.46	174	iPc	08 41.00	-4.2X
			eS	11 49.00	
WARB	19.62	143	eP	08 56.00	-2.8
	0.3s		7.00nm	4.4mb	
			eS	12 19.00	
IPM	19.78	320	ePc	09 01.20	0.7
	0.9s		124.60nm	5.2mb	
BAL	19.91	172	eP	09 01.00	-0.8
			eS	12 25.00	
KLB	21.04	170	eP	09 15.00	1.6
COOL	21.16	162	eP	09 13.00	-1.7

			eS	13	50.00	
MUN	21.21	174	eP	09	14.00	-1.1
			eS	12	54.00	
WB5	21.90	117	iPd	09	21.30	-0.9
			eS	13	18.60	
WRA	21.90	117	Pd	09	21.20	-1.0
	0.6s	42.70nm			5.0mb	
NWAO	22.27	172	eP	09	27.00	1.3
			eS	13	16.00	
ASPA	23.15	126	iPd	09	35.70	1.2
	0.6s	28.00nm			4.9mb	
			iS	13	46.50	
FORR	24.04	148	iPd	09	42.80	-0.1
	0.5s	262.00nm			6.0mb	
			eS	14	00.00	
NNT	27.03	329	eP	10	12.00	0.9
BDT	31.40	332	eP	10	50.20	0.1
CTA	32.70	110	iPc	11	02.10	0.5
	1.2s	37.50nm			5.1mb	
			i	11	15.00	50km
CHG	32.80	334	eP	11	02.80	0.4
	1.0s	14.25nm			4.8mb	
STK	33.25	133	eP	11	08.00	1.8
KMI	37.25	344	Pc	11	42.50	1.9
			sP	11	56.50	
BWA	39.47	132	eP	12	01.70	2.8X
BRS	40.28	120	iPc	12	07.50	1.9
	1.3s	4.00nm			4.0mb	X
CAN	40.32	133	eP	12	07.00	1.2
SSE	42.27	10	Pc	12	22.00	0.2
	0.6s	22.00nm			5.1mb	
			i	12	34.00	44km
GBA	43.34	303	P	12	30.00	-0.7
GUN	46.95	326	P	13	00.00	0.2
PKI	46.95	325	P	12	59.70	-0.1
	0.8s	30.00nm			5.3mb	
DMN	47.15	325	P	13	01.40	0.1
KKN	47.19	325	P	13	01.40	-0.1
	0.8s	39.00nm			5.4mb	
LZH	47.54	349	Pc	13	04.00	-0.1
	1.2s	35.00nm			5.2mb	
Z	15s	0.40um			4.5MszX	
			pP	13	08.00	13kmX
			sP	13	10.00	
GKN	47.72	325	P	13	05.40	-0.2
POO	48.90	306	iPc	13	14.30	-0.5
BJI	50.63	3	eP	13	26.50	-1.1
	1.0s	12.00nm			4.9mb	
DZM	51.64	110	iPc	13	36.10	0.4
MAT	52.46	25	eP	13	39.00	-2.5
	0.6s	12.00nm			5.1mb	
QUE	60.64	314	eP	14	39.00	-1.2
SLR	81.26	245	iPd	16	45.00	0.5
			i	16	58.00	44km
BUL	81.75	251	iPd	17	03.10	16.0X
	0.8s	3.73nm				
PRY	81.82	244	eP	16	40.00	-7.4X
BFS	82.43	244	eP	16	45.00	-5.5X
BAO	148.06	215	ePKP	24	02.80	-8.3X
CNCB	152.52	177	PKP	24	28.30	10.0X
LPB	152.79	176	ePKP	24	27.00	8.5X
ZOBO	153.05	176	PKP	24	23.90	4.8X
	1.0s	13.00nm				
Z	24s	0.06um			4.3MszX	
			i	24	39.60	
			eLR	43	30.00	
	S.D. = 1.2	on	35 of	49	obs.	

? JAN 18, 1990 01h 15m 32.61±19.07s
40.327 N ±34.0km 127.286 W ±157.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)
ML 3.7 (BRK).

FHC	2.56	78	e(P)	16	14.10	-0.8
			e(S)	16	45.00	
WDC	3.63	84	eP	16	30.50	0.5
LBFM	4.22	74	eP	16	39.00	0.4
MIN	4.34	88	eP	16	40.20	-0.1
BRK	4.61	120	e(P)	16	50.50	6.5X
BKS	4.63	120	iPd	16	44.40	0.2
MHC	5.32	122	ePc	16	54.00	-0.2
ARN	5.39	122	eP	16	55.00	0.0
SAO	5.80	126	eP	17	00.70	0.0
KVN	7.20	97	eP	17	37.00	16.4X
EDM	16.01	32	eP	19	22.50	3.2X
	S.D. = 0.4	on	8 of	11	obs.	

* JAN 18, 1990 02h 10m 07.25± 1.32s
34.443 N ±15.2km 23.949 E ± 6.7km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.9 (ATH).

VAM	0.98	12	ePb	10	24.00	-1.9
NPS	1.59	59	ePb	10	38.30	2.7
APE	2.92	26	ePn	10	55.40	0.8
ITM	3.19	330	ePn	11	00.70	2.3
YER	4.43	51	iPn	11	16.00	-0.1
KSL	4.90	68	ePn	11	22.00	-0.7
ELL	5.37	63	iPn	11	29.10	-0.4
KHL	5.93	48	ePn	11	36.80	-0.5
BCK	6.17	59	eP	11	40.00	-0.7
VAY	6.95	351	eP	11	54.60	3.0X
SOI	7.33	302	P	11	56.10	-0.8
			eSn	13	09.00	
MEU	7.80	292	P	12	03.70	0.2
			eSn	13	23.00	
CZI	7.87	310	P	12	03.70	-0.8
DSI	10.02	103	eP	12	34.00	-0.2
			e(S)	14	16.00	
	S.D. = 1.4	on	13 of	14	obs.	

? JAN 18, 1990 02h 48m 22.16± 1.89s
15.409 S ±55.5km 72.316 W ±25.1km
DEPTH = 169.7 ± 52.3 km
SOUTHERN PERU (117)

ARE	1.31	143	iPd	48	52.20	0.0
ZOBO	4.12	103	iPc	49	25.20	-0.6
			S	50	11.00	
PT06	4.19	291	iPd	49	25.60	-0.5
			eS	50	11.10	
LPB	4.21	106	P	49	27.00	0.3
CNCB	4.39	109	P	49	30.00	0.7
PT08	5.35	309	iP	49	40.90	-0.8
			eS	50	39.70	
PT10	5.61	306	eP	49	46.00	1.3
			eS	50	46.00	
CCH	6.24	109	P	49	53.00	-0.4
	S.D. = 1.0	on	8 of	8	obs.	

JAN 18, 1990 03h 09m 23.77± 0.99s
18.250 N ±13.1km 66.777 W ± 8.9km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)
Felt at Hormigueros.

LRS	0.08	304	iP	09	26.20	0.0
PORP	0.24	146	iP	09	29.00	0.2
SJG	0.61	103	iP	09	36.00	-0.1
			S	09	48.00	
CPD	0.85	104	iP	09	39.60	-0.5
			S	09	54.60	
LPR	0.86	86	iP	09	40.90	0.5
			S	09	55.90	
	S.D. = 0.5	on	5 of	5	obs.	

JAN 18, 1990 03h 27m 07.78± 0.51s
46.108 N ± 6.2km 6.314 E ± 6.2km
DEPTH = 5.0km (geophysicist)
SWITZERLAND (544)
ML 2.7 (LDG).

LPL	0.66	154	Pg	27	19.60	-1.4
			Sg	27	28.00	
LPG	0.68	153	Pg	27	20.00	-1.5
			Sg	27	28.70	
LSD	0.88	138	P	27	22.77	-2.5
			S	27	31.23	
BNI	1.09	166	Pd	27	31.20	2.4
			eSg	27	45.50	
RSP	1.16	145	P	27	28.80	-1.3
			S	27	42.72	
RRL	1.23	164	P	27	30.36	-1.0
			S	27	44.69	
ORX	1.26	112	P	27	29.49	-2.2
			S	27	43.48	
ORO	1.26	112	P	27	31.20	-0.5
			iSg	27	47.20	
PZZ	1.70	161	P	27	39.24	0.9
			S	27	59.37	
VAI	1.73	97	Pd	27	40.40	1.8
			eSn	28	00.50	
DOI	1.73	157	P	27	40.50	1.7
BSF	1.76	11	Pg	27	40.70	1.6
			Sg	28	03.60	
SMF	1.79	288	Pg	27	43.60	4.0X
			Sg	28	07.20	
LBF	1.84	299	Pn	27	39.60	-0.7
			Sg	28	08.10	
HAU	1.90	1	Pn	27	40.80	-0.3
			Pg	27	44.00	
			Sg	28	08.60	
STV	2.00	159	P	27	44.74	2.1
ENR	2.04	157	P	27	43.51	0.3
LOR	2.05	305	Pn	27	43.00	-0.3
			Pg	27	48.00	
			Sg	28	14.80	
ROB	2.12	148	P	27	45.13	0.7
AVF	2.16	290	Pn	27	45.20	0.3
			Pg	27	50.60	
			Sg	28	18.20	
SSF	2.16	297	Pn	27	43.80	-1.1
			Pg	27	50.80	
			Sg	28	18.40	
PCP	2.22	134	P	27	46.10	0.3
FIN	2.32	144	P	27	48.66	1.3
SBF	2.38	160	Pg	27	51.00	2.8X
			Sg	28	20.80	
BGF	2.44	282	Pn	27	49.00	0.0
			Pg	27	55.80	
			Sg	28	29.20	
MAF	2.61	274	Pn	27	51.00	-0.3
			Pg	27	58.90	
			Sg	28	33.00	
TCF	2.86	275	Pn	27	54.60	-0.3
			Pg	28	03.50	
			Sg	28	40.40	
	S.D. = 1.4	on	25 of	27	obs.	

* JAN 18, 1990 03h 38m 17.73± 2.69s
39.935 N ±12.1km 23.751 E ±23.2km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.5 (THE).

THE	0.92	319	ePg	38	35.20	-0.1
SOH	0.94	341	ePg	38	34.00	-1.6
LIT	0.98	280	ePg	38	36.50	0.1
			eSg	38	48.40	
SRS	1.19	354	ePb	38	40.50	0.6
AGG	1.43	231	ePb	38	43.50	-0.2
VAY	1.65	327	ePn	38	48.00	1.2
	S.D. = 1.2	on	6 of	6	obs.	

& JAN 18, 1990 04h 14m 39.06s
60.033 N 152.381 W
DEPTH = 70.9km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.43	333	eP	14	51.18	-0.5
			eS	15	01.49	
RDT	0.54	359	iP	14	52.07	-0.6
NNL	0.54	89	iP	14	53.10	0.5
XLV	0.67	150	eP	14	53.16	-0.7
			eS	15	04.76	
CNPM	0.77	131	eP	14	54.42	-0.7
			eS	15	07.04	
AUL	0.84	220	eP	14	55.24	-0.7
NKA	0.91	38	eP	14	57.95	1.2
PDB	0.95	256	iP	14	56.12	-1.0
			iS	15	09.80	
SPU	1.16	8	iP	14	59.25	-0.8
			eS	15	15.49	
CKL	1.17	1	iP	14	59.33	-0.8
SLKM	1.18	65	eP	14	59.29	-0.9
			eS	15	15.79	
BGL	1.23	360	iP	15	00.30	-0.7
CRP	1.24	5	eP	15	00.51	-0.7
			eS	15	17.94	
SEW	1.47	86	eP	15	02.32	-1.7
			eS	15	21.82	
SUA	1.65	29	eP	15	05.82	-0.7
			eS	15	28.01	
PMS	1.85	48	eP	15	08.25	-1.0
			eS	15	30.07	
PWA	2.03	36	eP	15	10.80	-0.9
			eS	15	32.55	
PLRM	2.23	44	eP	15	12.59	-1.9

18d 04h

GHO	2.43	43	eP	15	15.42	-1.9
			eS	15	44.09	
CUT	2.59	22	eP	15	18.13	-1.3
HUR	3.23	23	iP	15	28.29	-0.2
NCA	3.34	52	eP	15	27.70	-2.4
KLU	3.49	62	iP	15	29.07	-3.1
			eS	16	07.81	
RND	3.78	25	eP	15	34.83	-1.3
MCK	4.05	22	eP	15	39.00	-1.0
CCB	5.10	23	eP	15	51.66	-2.9

26 obs. associated

? JAN 18, 1990 04h 43m 45.58± 6.99s
46.533 N ±27.3km 4.472 E ±54.2km
DEPTH = 33.0km (normal)
FRANCE (538)
ML 2.3 (LDG).

SMF	0.45	285	Pg	43	55.00	-0.5
			Sg	44	00.20	
LBF	0.57	323	Pg	43	56.60	-0.6
			Sg	44	03.60	
AVF	0.81	289	Pg	44	01.00	0.4
			Sg	44	10.80	
LOR	0.85	330	Pg	44	01.40	0.3
			Sg	44	11.80	
SSF	0.85	309	Pg	44	01.40	0.3
			Sg	44	11.50	
BGF	1.12	272	Pg	44	05.30	0.3
			Sg	44	20.00	
TCF	1.58	262	Pn	44	11.80	0.1
			Sg	44	33.20	
LSF	2.06	263	Pn	44	18.20	-0.3

S.D. = 0.5 on 8 of 8 obs.

? JAN 18, 1990 05h 38m 51.10± 1.84s
3.430 N ±24.8km 123.217 E ±29.9km
DEPTH = 512.8 ± 18.7 km
4.4mb (4 obs.)
CELEBES SEA (262)

TSM	5.19	279	eP	40	22.00	0.7
PCI	5.47	218	ePd	40	23.00	-0.9
KKM	7.45	291	ePc	40	44.00	0.7
	0.6s		49.50nm			4.8mb X
MTN	17.98	154	iPd	42	30.20	-0.4
WB5	25.62	155	iPc	43	39.30	-1.8
WRA	25.67	155	Pc	43	39.90	-1.6
	0.3s		2.90nm			4.3mb
CHTO	28.23	305	e(P)	44	04.10	0.1
WARB	29.62	174	eP	44	16.70	0.7
	0.3s		4.00nm			4.5mb
FORR	34.40	173	eP	44	56.70	0.4
	0.4s		23.00nm			5.1mb
BRS	41.85	139	iP	45	57.00	-0.2
	0.5s		4.00nm			4.2mb
GUN	43.11	308	P	46	08.00	0.4
PKI	43.32	308	P	46	08.40	-0.9
KKN	43.53	308	P	46	09.80	-0.9
DMN	43.58	307	P	46	10.80	-0.4
BWA	44.50	150	eP	46	20.40	2.4
CAN	45.50	150	eP	46	26.90	1.2
GBA	46.31	285	P	46	32.40	0.3
PVC	49.19	117	iPc	46	47.50	-6.4X

S.D. = 1.2 on 17 of 18 obs.

JAN 18, 1990 05h 42m 35.91± 0.20s
30.108 S ± 6.9km 177.665 W ± 5.3km
DEPTH = 24.6km (4 depth phases)
5.5mb (24 obs.) 5.3Msz (2 obs.)
KERMADEC ISLANDS (178)
Felt on Raoul Island.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 24C
Centroid Location:
Origin Time 05:42:48.8 1.0
Lat 29.67S 0.06 Lon 177.93W 0.09
Dep 31.8 4.4 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.24 0.08 Mtt= 0.55 0.14
Mff=-1.78 0.10 Mrt= 0.20 0.17
Mrf= 0.23 0.21 Mtf=-0.65 0.08
Principal Axes:

T	Val= 1.29	Plg=76	Azm=355
N	0.68	13	196
P	-1.97	5	105

Best Double Couple:Mo=1.6*10**17
NP1:Strike=181 Dip=42 Slip= 70
NP2: 27 51 107

RAO	0.8s	345	iP	42	52.90	0.4
			S	43	06.00	
MRW	12.7s	207	eP	45	36.00	-1.8
			eS	47	48.00	
DZM	16.3s	296	iPc	46	32.10	6.6X
MSZ	18.4s	214	P	46	47.00	-4.7X
BRS	26.0s	269	iPd-	48	12.10	3.2X
	1.2s		22.00nm			4.7mb
			ipP	48	18.60	23km
			isP	48	22.50	
			e(PP)	48	52.00	
			eS	52	56.00	
CNB	28.1s	251	ePc	48	31.10	2.8
	1.2s		167.00nm			5.6mb
CAN	28.4s	251	eP	48	33.30	2.4
BWA	28.9s	253	eP	48	35.20	0.0
RMO	29.7s	269	eP	48	46.00	3.5X
CMS	31.3s	258	iPd	48	58.20	1.9
TOO	31.3s	246	eP	48	59.00	2.3
	1.0s		147.00nm			5.8mb
OLP	33.6s	266	eP	49	19.00	2.4
BFD	33.6s	247	eP	49	18.00	1.0
CTA	34.0s	279	iPc+	49	21.20	0.9
	1.3s		432.69nm			6.2mb
			iS	55	11.00	
ADE	36.8s	251	eP	49	45.20	0.8
	0.8s		34.33nm			5.2mb
LAT	40.5s	298	eP	50	17.00	1.8
ASPA	43.4s	266	eP	50	37.90	-0.7
	0.8s		60.00nm			5.4mb
Z	19s		8.09um			5.6Msz
			iS	57	12.00	
			LR	08	04.50	
WRA	44.3s	272	Pc	50	45.70	-0.6
	0.9s		123.00nm			5.8mb
WB5	44.3s	272	iPd	50	46.20	-0.2
			e	56	31.80	
			e	57	25.70	
FORR	46.3s	255	eP	51	01.30	-0.6
	0.4s		33.00nm			5.7mb
SBA	48.3s	184	(P)	51	18.90	1.9
WARB	48.8s	260	eP	51	20.40	-1.2
MTN	50.2s	278	iPc	51	30.80	-1.4
COOL	52.1s	253	eP	51	45.00	-1.5
KLB	54.7s	251	eP	52	04.00	-1.5
BAL	55.8s	252	eP	52	12.00	-1.9
MBL	56.4s	263	eP	52	16.30	-2.0
GUMO	56.4s	315	eP	52	16.80	-1.6
			eS	00	23.00	
MRWA	56.8s	253	iPd	52	19.70	-1.5
SPA	60.0s	180	iPc	52	44.10	1.0
	1.2s		128.17nm			5.9mb
			i	52	52.50	27km
PCI	65.9s	284	ePd	53	23.20	0.9
	1.0s		14.50nm			5.1mb
TSM	70.2s	287	ePc	53	50.20	1.2
MAW	72.6s	200	eP	54	04.00	0.9
KKM	72.7s	288	ePc	54	04.00	-0.4
	1.0s		67.90nm			5.6mb
KAKJ	76.9s	326	P	54	27.80	0.0
CHJJ	77.3s	325	P	54	29.50	-0.9
MAT	78.1s	325	eP	54	34.00	-0.7
	1.2s		56.25nm			5.5mb
			eS	05	11.00	
NIIJ	78.3s	326	eP	54	37.00	1.5
MTMJ	78.4s	325	P	54	35.80	-0.3
TSRJ	78.5s	323	eP	54	40.80	4.2X
ADK	81.6s	1	P	54	52.30	-0.5
	1.3s		391.51nm			6.3mb
SMY	82.8s	355	P	54	58.40	-0.4
	1.0s		316.67nm			6.4mb
BLP	83.9s	44	P	55	05.90	0.6
BCH	84.5s	44	P	55	09.50	0.9
PRS	84.6s	42	ePc	55	08.90	0.4
GCC	84.7s	42	ePc	55	09.80	0.8
PCC	84.8s	41	ePc	55	09.70	0.2
SAO	84.8s	42	ePc	55	10.70	0.9
ABL	84.8s	45	P	55	10.60	0.4
PRI	84.9s	43	eP	55	10.50	0.4
LLA	85.0s	42	eP	55	10.90	0.2
MHC	85.1s	42	ePc	55	11.80	0.5
BRK	85.1s	41	eP	55	11.30	0.1
BKS	85.1s	41	eP	55	12.30	1.0
	1.1s		103.00nm			6.0mb
			eLR	21	02.00	
ARN	85.2s	42	P	55	11.20	-0.4
NWRM	85.2s	40	P	55	12.20	0.8
PLM	85.3s	47	P	55	10.60	-2.0
PEC	85.5s	47	P	55	12.50	-0.7
SBB	85.6s	46	eP	55	14.00	0.2
ISA	85.8s	45	eP	55	15.00	0.0
FRI	86.0s	43	ePc	55	15.70	0.1
			e	55	37.30	79kmX
FHC	86.2s	38	ePc	55	13.00	-3.8X
CMB	86.3s	42	ePc	55	17.00	-0.2
			e	55	38.50	79kmX
GLA	86.4s	48	eP	55	20.00	2.1
CLC	86.5s	45	eP	55	19.00	0.9
GSC	86.6s	46	eP	55	19.00	0.1
ORV	86.7s	40	ePc	55	18.70	-0.4
LTCM	86.8s	39	P	55	20.00	0.4
WDC	86.9s	39	ePc	55	19.80	0.1
MIN	87.2s	39	ePc	55	20.80	-0.8
LBFM	87.7s	39	P	55	24.50	0.2
TNP	88.2s	43	P	55	26.30	-0.2
	1.2s		46.37nm			5.7mb
KVN	88.3s	42	P	55	26.50	-0.5
NNT	89.9s	285	eP	55	35.50	0.7
BMW	90.7s	34	P	55	38.20	0.5
SHW	91.0s	35	P	55	39.80	0.7
NST	91.1s	287	eP	55	42.10	1.7
VGB	91.2s	36	P	55	40.50	0.3
MSU	91.5s	46	P	55	43.00	0.9
LON	91.6s	35	P	55	41.10	-0.7
GMW	91.6s	34	P	55	42.10	0.0
RMW	92.1s	34	P	55	44.30	0.2
BJI	92.9s	315	eP	55	48.00	0.1
	1.0s		12.00nm			5.3mb
Z	22s		0.62um			5.0Msz
ALQ	93.1s	51	iPd	55	50.00	0.5
	1.1s		9.49nm			5.1mb
ANMO	93.1s	51	P	55	49.50	0.0
	1.5s		27.78nm			5.5mb
DAU	93.3s	44	P	55	49.80	-0.3
CHG	93.7s	289	eP	55	53.00	0.8
PTI	94.1s	42	P	55	54.50	0.8
PMR	94.2s	13	P	55	39.60	-14.0X
TTA	94.3s	10	P	55	53.90	-0.1
	1.3s		25.94nm			5.5mb
PNT	94.4s	34	eP	55	55.00	0.3
BW06	95.7s	43	eP	56	00.50	-0.6
			e	56	08.00	23km
LRM	95.9s	40	eP	56	01.30	-0.5
GOL	96.5s	48	P	56	04.80	-0.2
	1.0s		11.25nm			5.3mb
GLD	96.6s	48	P	56	06.80	1.4
	1.3s		18.68nm			5.4mb
FBA	97.5s	12	P	56	07.00	-1.4
	1.1s		15.00nm			5.4mb
IMA	97.6s	10	P	56	09.30	0.3
	1.3s		9.43nm			5.2mb
SES	99.4s	37	eP	56	17.00	-0.3
RSSD	99.8s	45	eP	56	18.90	-0.6
			pP	56	26.80	25km
INK	103.4s	15	ePdiff	56	42.00	7.2X
GBA	109.4s	275	PKPc	01	05.90	-0.6
	0.9s		5.10nm			
MBC	112.0s	13	ePKP	01	08.50	-1.2
	1.0s		2.00nm			
POO	114.7s	278	ePKP	01	15.00	-1.6
BUL	124.0s	210	iPKPc	01	49.00	14.6X
	1.0s		16.00nm			
QUE	124.8s	288	ePKP	01	36.40	0.6
FRB	124.9s	31	ePKP	01	33.00	-1.7
SCH	125.8s	42	ePKP	01	35.00	-1.8
DAG	132.2s	6	iPKPd	01	45.80	-2.4
	0.9s		7.56nm			
MAIO	132.3s	293	iPKPd	01	50.00	0.1
IR4	139.1s	290	ePKP	02	02.00	-0.7
IR1	139.3s	291	ePKP	02	01.00	-2.0
IR7	139.4s	291	ePKP	02	03.00	-0.2
RYD	140.5s	273	ePKP	02	01.50	-3.9X
KMSA	140.8s	266	ePKPd	02	04.50	-1.6
TAB	142.9s	294	ePKP	02	05.00	-4.5X
SLY	143.5s	290	ePKPd	02	08.00	-2.3
QASM	143.5s	274	ePKP	02	07.00	-3.7X
SUF	143.9s	342	iPKP	02	06.80	-3.3X
	0.7s		32.80nm			
MSL	145.4s	291	iPKPd	02	17.00	3.4X
NUR	146.1s	340	iPKP	02	13.80	0.0

1.0s 194.00nm
RGS 146.66 353 iPKP 02 15.50 0.9
NB2 148.51 352 PKP 02 20.00 2.3
1.0s 52.10nm
UPP 148.51 345 iPKP 02 20.00 2.3
HFS 149.01 349 ePKP 02 20.80 2.3
0.8s 43.30nm
Z 17s 0.31um 5.2MszX
LR 56 16.00
BCAO 150.23 214 iPKPd 02 22.40 0.6
0.6s 126.00nm
id 02 28.00
id 02 34.00
id 04 03.80
AYN 150.73 276 ePKP+ 02 21.00 -1.0
BADA 151.52 275 ePKP 02 20.67 -2.6
HQL 151.62 277 ePKPd 02 22.33 -1.0
PRNI 151.83 279 e(PKP) 02 13.00 -10.7X
MBH 151.84 278 e(PKP) 02 23.00 -0.7
AKRL 152.21 264 iPKPc 02 32.00 7.6X
KAS 152.27 302 iPKPc 02 30.30 6.2X
AGMR 152.31 264 iPKPc 02 34.00 9.5X
LFK 153.31 289 iPKP 02 33.50 7.8X
CSS 153.48 289 ePKP 02 33.00 7.1X
LIC 155.25 162 PKP 02 29.20 0.4
VRI 155.30 316 ePKPd 02 36.00 8.0X
KIC 155.46 163 PKP 02 29.56 0.5
TIC 155.66 162 PKP 02 29.82 0.4
MLR 155.96 316 ePKP 02 14.50 -14.6X
SPC 156.58 329 ePKP 02 30.10 0.2
e 02 40.30
e 02 57.80
KSP 156.80 337 ePKP 02 29.30 -0.5
1.1s 118.00nm
i 02 59.50
CLL 157.37 342 ePKP 02 30.00 -0.5
CLL 157.37 342 ePKP 02 40.00 9.5X
BRG 157.51 341 ePKP 02 30.10 -0.6
1.3s 90.00nm
i 03 02.40
i 03 19.20
PRU 158.11 339 ePKP 02 38.50 7.1X
e 03 05.50
BZS 158.37 321 ePKP 02 31.00 -0.8
ZST 158.68 332 ePKP 02 31.50 -0.6
e 03 07.80
KHC 159.16 339 PKP 02 32.40 -0.3
i 03 10.00
VAY 160.17 310 ePKP 02 32.50 -1.4
i 03 14.00
SKO 160.58 313 ePKP 02 33.20 -1.1
1.1s 62.00nm
i 03 16.90
KBA 161.03 336 ePKP 02 39.00 4.1X
0.6s 8.90nm
i(PP) 03 16.60
OHR 161.44 311 ePKP 02 33.00 -2.3
1.4s 0.05nm
i 03 19.00
LJU 161.45 332 ePKP 02 34.00 -1.1
e 03 19.00
VOY 161.71 334 ePKP 02 35.70 0.2
e 03 19.90
CEY 161.74 332 e(PKP) 02 35.00 -0.4
e 03 20.50
GUD 168.24 25 ePKP 02 43.00 1.7
ETOR 168.73 17 e(PKP) 02 43.00 1.4
TOL 168.94 26 ePKP 02 42.00 0.4
EVIA 170.60 24 ePKP 02 44.20 1.5
S.D. = 1.1 on 135 of 160 obs.

? JAN 18, 1990 06h 17m 31.39± 0.95s
37.697 N ± 9.9km 3.965 W ± 9.7km
DEPTH = 33.0km (normal)
SPAIN (377)
mbLg 2.7 (MDD).

EBAN 0.49 17 iP 17 42.00 0.1
eS 17 49.00
AFC 0.55 143 iPgd 17 43.00 0.1
eSg 17 51.60
EHOR 1.02 277 ePg 17 49.40 0.0
eSg 18 02.60
EVIA 1.49 50 iPnc 17 56.00 -0.2
eSn 18 14.00
S.D. = 0.2 on 4 of 4 obs.

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* JAN 18, 1990 07h 28m 08.45± 0.61s
28.611 N ±11.8km 129.529 E ±14.3km
DEPTH = 33.0km (normal)
4.4mb (6 obs.)
RYUKYU ISLANDS (238)

BJI 15.84 319 eP 31 58.00 7.5X
1.0s 24.00nm 4.3mb
LZH 22.90 296 eP 33 10.50 -0.1
2.0s 28.00nm 4.4mb
i 33 34.00
CHG 29.58 258 eP 34 14.00 1.3
WB5 48.43 174 eP 36 48.90 -0.7
WRA 48.49 174 P 36 50.00 -0.1
0.9s 4.30nm 4.5mb
FBA 61.40 29 eP 38 24.00 0.6
INK 66.26 24 ePd 38 55.10 0.1
MBC 67.25 14 eP 39 01.00 -0.3
0.7s 9.00nm 5.0mb
HFS 77.25 332 eP 39 59.10 -1.6
0.6s 1.20nm 4.1mb
NB2 77.69 334 P 40 02.60 -0.6
0.8s 3.60nm 4.5mb
KVN 87.80 46 eP 40 57.20 1.3
S.D. = 1.0 on 10 of 11 obs.

& JAN 18, 1990 08h 00m 04.10s
40.265 N 124.337 W
DEPTH = 6.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK).

FHC 0.60 26 iPc 00 16.00 -0.1
iS 00 26.20
WDC 1.41 77 ePc 00 27.30 -3.0
i 00 30.30
LTCM 1.69 91 eP 00 36.60 2.2
MIN 2.09 87 e(P) 00 37.30 -3.0
LBFM 2.15 59 eP 00 39.30 -1.9
ORV 2.29 107 e(P) 00 43.70 0.6
eS 01 06.60
6 obs. associated

& JAN 18, 1990 08h 32m 40.10s
40.158 N 124.408 W
DEPTH = 5.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK).

FHC 0.72 27 iPc 32 54.20 -0.3
iS 33 04.10
WDC 1.49 73 ePc 33 05.50 -2.0
i 33 08.30
eS 33 24.50
MIN 2.15 84 e(P) 33 14.70 -2.6
eS 33 43.20
LBFM 2.25 57 eP 33 17.50 -1.3
4 obs. associated

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* JAN 18, 1990 08h 49m 39.77± 2.62s
24.344 N ±10.9km 122.413 E ±20.9km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWC 0.58 297 iPd 49 50.70 -0.8
eS 49 54.60
TWD 0.79 251 iPd 49 54.30 -0.8
eS 50 01.10
TWZ 1.07 315 ePc 50 00.10 0.2
eS 50 11.30
ANP 1.17 316 iPd 50 02.40 0.8
0.7s 767.12nm
eS 50 16.50
TWK 2.06 239 ePc 50 15.60 0.7
SSE 6.81 351 eP 51 21.50 -0.7
Lg 53 22.60
S.D. = 1.0 on 6 of 6 obs.

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* JAN 18, 1990 09h 22m 33.23± 0.64s
4.385 S ± 8.8km 135.261 E ± 8.3km
DEPTH = 33.0km (normal)
4.8mb (6 obs.)
WEST IRIAN REGION (196)

TLE 2.79 243 ePd 23 16.80 0.2
0.4s 10.00nm
AAI 7.08 275 eP 24 18.00 0.7
MNDI 8.54 102 eP 24 38.00 0.1
MTN 9.35 206 iPd 24 45.90 -2.8
eS 26 27.00
PMG 12.82 114 eP 25 34.00 -1.9
WB5 15.43 183 eP 26 06.20 -4.0X
e 26 16.10
eS 28 50.00
WRA 15.49 183 Pc 26 07.00 -4.0X
0.6s 5.90nm 4.0mb
PCI 15.79 282 ePd 26 20.00 5.2X
CTA 18.93 146 iP 26 55.00 0.9
0.8s 12.69nm 4.2mb
iS 30 29.00
ASPA 19.21 184 eP 26 55.60 -1.9
0.7s 90.00nm 5.1mb
Z 19s 4.46um 3.4Msz
iS 30 20.60
LR 34 32.10
PJG 20.24 28 eP 27 08.60 0.0
WARB 23.19 200 eP 27 39.00 0.8
0.6s 15.00nm 4.7mb
QLP 23.68 160 eP 27 44.00 1.1
FORR 27.18 194 eP 28 16.60 0.9
BWA 32.29 159 eP 29 02.20 0.8
CAN 33.30 159 eP 29 12.30 2.2
CHG 42.55 304 eP 30 28.00 0.1
BJI 47.56 340 eP 31 06.00 -1.6
1.0s 24.00nm 5.2mb
LZH 49.85 326 iPd 31 26.00 0.4
1.5s 71.00nm 5.5mb
i 31 35.00
pP 31 52.00 110kmX
sP 32 03.50
CNCB 148.84 133 PKP 42 22.00 5.3X
LPB 148.93 133 ePKP 42 24.00 7.3X
ZOBO 149.08 132 PKP 42 25.00 7.9X
1.0s 10.00nm
S.D. = 1.5 on 16 of 22 obs.

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* JAN 18, 1990 09h 31m 40.83± 1.18s
23.835 S ±12.8km 67.595 W ±10.3km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

SLA 2.11 115 iPc 32 14.00 -0.7
YJA 2.54 50 ePc 32 22.50 1.4
ANT 2.59 272 iPc 32 21.80 0.5
iS 32 52.70
CNCB 7.00 357 P 33 23.00 -1.2
LPB 7.28 356 P 33 28.00 0.0
ZOBO 7.54 356 P 33 29.00 -2.9X
S 34 48.00
S.D. = 1.5 on 5 of 6 obs.

? JAN 18, 1990 10h 03m 30.76± 1.01s
39.076 N ± 9.2km 27.584 E ±17.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.72 200 ePg 03 45.00 0.0
eSg 03 58.00
DST 0.97 57 ePn 03 49.20 0.0
EDC 1.29 10 ePn 03 55.00 0.4
BNT 1.30 11 iPn 03 54.50 -0.4
S.D. = 0.6 on 4 of 4 obs.

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* JAN 18, 1990 10h 43m 24.07± 1.46s
35.251 N ±13.1km 22.694 E ± 9.2km
DEPTH = 82.2 ± 13.2 km
3.7mb (2 obs.)
MEDITERRANEAN SEA (400)

VAM 1.24 82 ePn 43 46.50 0.0
VLI 1.48 8 ePn 43 50.50 0.9
ITM 2.02 342 ePb 44 01.50 4.6
NPS 2.39 89 ePn 44 03.00 1.1
ATH 2.84 17 ePn 44 10.00 2.0
APE 2.93 51 ePn 44 09.00 -0.3
VLS 3.37 331 ePn 44 15.20 -0.3
KAP 3.67 84 ePn 44 20.20 0.5
AGG 3.78 356 ePn 44 22.30 1.2
NEO 4.07 6 ePn 44 26.00 0.8
PAIG 4.73 9 ePn 44 34.10 -0.3
LIT 4.84 358 ePn 44 36.40 0.4
KEK 5.01 334 ePn 44 38.50 0.1
KZN 5.10 352 ePn 44 40.00 0.4
OUR 5.18 11 ePn 44 40.20 -0.4

18d 10h

KSL	5.67	79	ePn	44	45.20	-2.4
GRG	5.70	358	ePn	44	46.10	-1.9
SRS	5.90	7	ePn	44	50.20	-0.5
KNT	5.90	1	ePn	44	49.90	-0.9
OHR	6.04	346	ePn	44	49.00	-3.7X
VAY	6.06	359	ePn	44	51.00	-1.9
ALN	6.23	24	ePn	44	55.60	0.4
KHL	6.28	59	ePg	44	56.00	0.0
DST	6.42	46	ePn	45	17.20	19.3X
CZI	6.56	309	P	44	59.20	-0.6
			eS	46	04.20	
YLV	7.48	43	ePn	45	17.00	4.4X
HFS	25.58	350	eP	48	48.00	1.3
	0.4s		2.00nm		4.0mb	
NB2	26.84	348	P	48	58.80	0.5
	0.4s		0.70nm		3.5mb	
S.D. = 1.1 on 24 of 28 obs.						

& JAN 18, 1990 11h 45m 26.50s
41.173 N 123.777 W
DEPTH = 33.0km (normal)
4.9mb (41 obs.) 4.7Msz (2 obs.)
NORTHERN CALIFORNIA (36)
<BRK>. ML 4.6 (BRK). Felt (V) at Hoopa, Klamath, Orick, Salyer, Westhoven and Willow Creek. Felt (IV) at Arcata, Boyside, Blue Lake, Carlotta, Eureka, Fields Landing, Fortuna, Kneeland, Korbel, Loleta, Miranda, Orleans, Redcrest and Trinidad. Felt in Del Norte, Humboldt, Mendocino, Siskiyou and Trinity Counties.

FHC	0.40	203	iPc	45	34.30	-1.4
WDC	1.11	122	iPc	45	45.30	-0.5
			i	45	56.40	
			iS	45	58.30	
LBFM	1.43	82	iPc	45	50.60	0.0
LTCM	1.58	127	iPd	45	51.90	-0.7
MIN	1.85	116	iPc	45	55.10	-1.4
ORV	2.37	132	iPc	46	01.50	-2.5
NWRM	2.80	166	eP	46	08.20	-1.7
ZSP	3.43	159	ePc	46	18.10	-0.9
			iS	46	51.50	
BRK	3.50	160	ePd	46	19.10	-0.8
BKS	3.50	160	iPc	46	19.10	-0.9
			eS	46	52.30	
PCC	3.82	163	iPc	46	22.60	-1.9
GMO	3.87	32	eP	46	24.58	-0.7
VIPM	4.06	34	eP	46	26.66	-1.4
CMB	4.08	139	iPc	46	26.40	-1.9
			iS	47	10.50	
GT2	4.13	15	eP	46	28.01	-0.9
MHC	4.17	156	ePc	46	27.95	-1.6
			i	46	30.60	
			eS	47	19.95	
			eLQ	47	32.30	
			eLR	47	43.90	
GROR	4.18	1	eP	46	28.44	-1.1
ARN	4.20	155	eP	46	28.50	-1.3
VBEM	4.20	22	eP	46	28.75	-1.2
CROR	4.32	27	eP	46	30.72	-0.9
GCC	4.36	161	iPd	46	30.20	-2.0
TDH	4.36	19	eP	46	28.80	-3.5
PGO	4.40	12	eP	46	31.37	-1.3
KMOR	4.47	3	eP	46	32.04	-1.7
VFP	4.47	21	eP	46	33.01	-0.9
VLMM	4.54	16	eP	46	32.71	-2.1
VLL	4.55	19	eP	46	34.28	-0.7
VTHM	4.65	29	eP	46	35.81	-0.4
SAO	4.76	157	eP	46	35.80	-2.0
APM	4.81	18	eP	46	37.64	-0.9
KVN	4.84	114	iPc	46	37.40	-1.7
VGB	4.86	26	eP	46	38.62	-0.6
NLO	4.92	3	eP	46	39.40	-0.7
MTMW	4.98	13	eP	46	39.30	-1.7
LVP	4.99	11	eP	46	39.51	-1.7
GULW	5.01	18	eP	46	40.39	-1.0
RVW	5.03	8	eP	46	40.46	-1.2
LLA	5.06	153	ePc	46	40.20	-1.9
CDFW	5.10	14	eP	46	41.34	-1.3
JLK	5.11	13	eP	46	41.70	-1.1
FL2	5.13	11	eP	46	41.80	-1.3
HSR	5.13	12	eP	46	42.06	-1.1
SHW	5.14	12	eP	46	42.23	-1.1
ESD	5.16	13	eP	46	42.45	-1.1
JBO	5.16	33	eP	46	43.22	-0.3
YEL	5.17	12	eP	46	42.40	-1.3
PRS	5.19	158	ePc	46	41.40	-2.5
STD	5.19	12	eP	46	42.96	-1.0
SOSW	5.20	13	eP	46	43.12	-1.0
ASR	5.22	17	eP	46	43.41	-1.0
ERK	5.24	11	eP	46	43.11	-1.5
FRI	5.24	142	ePd	46	43.20	-1.4
GL2	5.24	23	eP	46	43.71	-1.0
TDL	5.30	12	eP	46	42.50	-3.0
BMW	5.32	4	eP	46	43.59	-2.1
CZM	5.34	9	eP	46	44.38	-1.6
KOSW	5.41	12	eP	46	46.17	-0.8
PATW	5.54	30	eP	46	48.31	-0.4
PRI	5.58	153	ePc	46	49.40	-0.1
GLK	5.61	15	eP	46	48.65	-1.3
ONR	5.70	0	eP	46	49.53	-1.5
LON	5.75	14	eP	46	50.00	-1.9
WPW	5.75	15	eP	46	50.46	-1.4
PKEM	5.86	149	eP	46	53.50	0.2
TNP	5.93	119	iPc	46	52.30	-2.2
GMW	6.41	6	eP	46	59.00	-2.1
RMW	6.44	12	eP	46	59.50	-2.1
BCH	6.65	153	eP	47	02.50	-2.0
HTW	6.78	12	eP	47	04.74	-1.6
ISA	6.90	141	eP	47	09.00	1.0
CLC	7.22	136	eP	47	12.00	-0.4
ABL	7.26	149	eP	47	11.80	-1.4
SYP	7.28	154	eP	47	11.00	-2.4
PGC	7.48	2	eP	47	13.00	-3.0
SBB	8.00	142	eP	47	22.00	-1.4
GSC	8.03	135	eP	47	23.00	-0.8
MWC	8.28	145	eP	47	27.00	-0.5
PAS	8.30	146	eP	47	26.00	-1.5
DUG	8.39	93	eP	47	27.00	-1.9
PNT	8.65	18	eP	47	30.00	-2.4
PTI	8.66	75	eP	47	32.00	-0.7
RVR	8.78	143	eP	47	33.00	-1.2
PEC	8.97	142	eP	47	35.40	-1.3
MSU	9.31	103	eP	47	40.30	-1.4
LRM	9.45	57	eP	47	42.00	-1.6
DAU	9.53	90	eP	47	44.00	-0.8
PLM	9.55	143	eP	47	43.00	-1.9
BAR	10.20	144	eP	47	53.00	-0.8
BW06	10.71	77	eP	47	59.50	-1.4
GLA	10.80	136	eP	48	01.00	-0.9
SES	12.79	40	eP	48	23.00	-5.7
	1.0s		125.00nm		6.0mb X	
EDM	13.96	27	eP	48	40.10	-4.0
GOL	14.10	90	eP	48	44.00	-2.2
GLD	14.20	90	eP	48	46.00	-1.5
ANMO	14.98	109	eP	48	56.60	-1.1
ALQ	14.99	109	iPc	48	56.80	-0.9
	1.0s		45.00nm		4.7mb	
Z	20s		6.21um		4.8Msz	
			pP	53	20.80	
FFC	19.81	39	eP	49	51.00	-5.9
	0.7s		13.00nm		4.4mb	
SIO	22.14	95	e(P)	50	15.30	-5.5
TUL	22.46	94	eP	50	17.70	-6.3
	1.0s		133.30nm		5.4mb	
Z	19s		2.75um		4.7Msz	
			i	50	25.70	
			eS	54	29.00	
			LR	57	55.00	
LNO	22.46	94	eP	50	25.50	1.6
RSON	22.88	55	eP	50	23.80	-4.2
	1.0s		35.25nm		4.8mb	
TOA	24.90	335	eP	51	00.00	12.4
PMR	25.55	332	eP	51	04.10	10.6
	1.0s		80.00nm			
PMR	25.55	332	eP	50	54.00	0.5
	1.1s		106.25nm		5.4mb	
			i	51	04.00	
OLY	25.87	92	eP	50	51.00	-5.8
FBA	27.46	338	eP	51	11.00	-0.1
INK	27.70	352	eP	51	11.50	-1.6
INK	27.70	352	eP	51	22.00	8.9
	1.0s		45.00nm		5.1mb	
SVW	27.78	327	eP	51	14.60	0.5
TTA	28.92	330	eP	51	24.00	-0.3
	1.1s		37.50nm		5.0mb	
			e	51	33.50	
IMA	30.03	336	eP	51	33.90	-0.5
	1.1s		25.00nm		4.9mb	
			e	51	43.00	
PPM	30.77	128	iP	51	41.00	-0.7
JSC	34.06	88	e(P)	52	03.50	-6.2
MBC	35.22	2	ePd	52	18.50	-0.7
	1.0s		9.00nm		4.7mb	
MBC	35.22	2	ePd	52	28.50	9.3
	0.8s		74.00nm		5.7mb	
FRB	38.84	36	eP	52	47.00	-2.7
			pP	52	56.00	30kmX
SCH	39.39	50	eP	52	52.00	-2.5
GDH	45.28	28	eP	53	30.00	-12.2
			i	53	52.00	
			e	12	40.00	
DAG	53.62	16	iPd	54	43.70	-2.5
	0.7s		22.60nm		5.3mb	
KEV	67.33	11	iP	56	28.00	8.3
SOD	69.47	12	iP	56	31.00	-2.0
			i	56	41.20	
DCN	71.16	35	eP	56	51.50	8.0
	1.0s		121.00nm		5.9mb	
DLE	71.52	34	eP	56	54.30	8.7
NB2	71.75	21	P	56	44.80	-2.2
	0.9s		14.60nm		5.0mb	
MAT	72.30	303	eP	56	49.00	-1.7
	1.0s		30.00nm		5.2mb	
HFS	73.18	21	eP	56	52.70	-2.7
	1.0s		31.20nm		5.3mb	
Z	17s		0.00um		1.9MszX	
			LR	25	53.00	
ARE	75.02	128	iPc	57	06.90	-0.1
NUR	75.42	16	eP	57	13.00	4.7
LPB	77.13	126	P	57	18.00	-1.0
CNCB	77.41	126	P	57	20.00	-0.7
FLN	77.44	35	eP	57	18.60	-1.2
	1.0s		16.00nm		5.0mb	
GRR	77.56	35	iPd	57	19.70	-0.8
	0.8s		16.10nm		5.1mb	
LDF	77.72	34	iPd	57	20.30	-1.0
	0.8s		6.40nm		4.7mb	
LPF	77.75	35	iPd	57	20.50	-1.0
	0.8s		9.10nm		4.9mb	
DOU	78.47	31	P	57	24.50	-0.9
			e	57	34.90	
MEM	78.60	30	P	57	25.20	-0.9
MFF	79.24	36	eP	57	28.40	-1.3
	0.8s		5.30nm		4.6mb	
LSF	80.25	35	iPd	57	33.80	-1.3
	0.8s		8.50nm		4.8mb	
LOR	80.43	33	iPd	57	35.10	-1.0
	0.8s		9.90nm		4.9mb	
SSF	80.45	33	iPd	57	35.20	-1.0
	0.9s		6.50nm		4.6mb	
CLL	80.49	26	iPc	57	35.30	-1.0
			i	57	45.50	
TCF	80.51	35	iPd	57	35.10	-1.5
	1.0s		16.00nm		5.0mb	
BGF	80.57	34	iPd	57	35.40	-1.4
	0.8s		10.70nm		4.9mb	
AVF	80.60	34	iPd	57	35.70	-1.2
	0.8s		6.70nm		4.7mb	
LBF	80.70	33	iPd	57	36.20	-1.4
	0.9s		6.50nm		4.6mb	
MAF	80.71	35	iPd	57	36.20	-1.4
	1.2s		11.90nm		4.8mb	
HAU	80.84	31	eP	57	38.20	-0.1
	0.8s		3.70nm		4.4mb	
CDF	80.87	31	iPd	57	37.60	-0.9
SMF	80.92	34	iPd	57	37.20	-1.5
	0.8s		4.00nm		4.5mb	
LFF	80.92	36	iPd	57	37.60	-1.1
	0.8s		16.10nm		5.1mb	
RJF	80.98	36	eP	57	37.70	-1.3
	0.8s		9.10nm		4.8mb	
BSF	81.15	31	iPd	57	39.00	-1.0
	0.8s		8.00nm		4.8mb	
BRG	81.17	26	iPd	57	39.00	-0.9
	1.4s		30.00nm		5.1mb	
			i	57	48.80	
			i	57	53.10	
GRF	81.26	28	eP	57	40.00	-0.4
Z	19s		0.40um		4.8Msz	
			e	57	49.80	
CAF	81.52	36	iPd	57	40.40	-1.5
	1.0s		18.00nm		5.0mb	
KSP	81.94	24	eP	57	42.50	-1.4
			e	57	53.20	
PRU	82.13	26	P	57	44.30	-0.6
			e	57	54.20	

KHC	82.54	27	P	57	46.80	-0.4
LPG	83.04	33	eP	57	49.80	-0.3
	1.0s	10.00nm			4.9mb	
DOI	84.06	33	P	57	54.50	-0.5
KBA	84.22	28	eP	57	54.00	-1.9
	1.0s	8.90nm			4.9mb	
		e		58	04.50	
		e		01	56.00	
		iSg		02	05.20	
ZST	84.52	25	eP	57	56.60	-0.6
		e		58	05.60	
ALOJ	84.54	44	iPc	57	58.50	0.9
ASMO	84.54	44	iPc	57	57.20	-0.4
LRG	84.54	34	eP	57	56.70	-0.6
	1.0s	17.60nm			5.2mb	
FRF	84.58	34	iPd	57	56.50	-1.0
	1.2s	23.80nm			5.3mb	
SPC	84.60	23	eP	57	57.70	-0.1
MAL	84.66	45	iPc	57	58.30	0.3
		i		58	08.00	
ACHM	84.68	44	iPc	57	58.50	0.2
LMR	84.71	34	iPd	57	57.30	-0.9
	0.9s	13.10nm			5.1mb	
BOB	84.72	31	Pd	57	59.00	0.7
ATEJ	84.73	44	iPc	57	58.50	-0.1
APHE	84.87	44	iPc	57	58.50	-0.8
SRO	85.24	25	eP	58	01.20	0.4
		e		58	10.30	
AVE	85.55	49	iP	58	10.50	7.9
CEY	85.76	28	e(P)	58	12.50	9.0
PTJ	86.15	27	eP	58	03.00	-2.5
VBY	86.25	28	ePc	58	05.60	-0.3
PGD	86.36	31	P	58	02.00	-4.6
IFR	86.67	47	iPd	58	07.50	-0.9
		i		58	17.50	
ASS	87.40	30	P	58	11.50	-0.1
ROCH	88.35	138	iPc	58	15.50	-0.8
TACH	88.93	138	iPd	58	18.00	-0.7
LNV	88.94	139	iPc	58	18.00	-0.7
FCH	89.00	138	ePd	58	19.40	-0.1
BAO	89.83	111	eP	58	21.00	-2.5
OZM	90.17	241	iPc	58	25.90	1.0
LZH	91.58	323	eP	58	31.20	-0.3
	1.4s	29.00nm			5.5mb	
		pP		58	41.70	33kmX
		i		59	05.00	
OHR	92.02	26	eP	58	25.30	-8.0
WB5	111.57	262	ePKP	03	57.20	-2.2
WRA	111.63	262	PKPc	03	57.50	-2.0
	0.7s	1.90nm				
GBA	122.07	335	PKP	04	17.40	-2.1
BCAO	123.04	47	ePKPc	04	20.30	-1.2
	0.8s	7.00nm				
SPA	130.98	180	ePKP	04	35.10	-0.2
	1.3s	68.33nm				
LWI	134.03	40	ePKP+	04	54.00	11.2
BUL	148.54	57	iPKPd	05	25.20	17.1
	1.0s	25.00nm				
SUR	150.47	84	iPKPd	05	14.50	3.7
	1.0s	68.00nm				
KSR	151.35	67	iPKPc	05	16.10	3.8
	0.7s	10.00nm				
KIM	151.57	74	iPKPd	05	17.30	4.8
BFS	151.91	69	iPKPc	05	11.00	-2.0
	1.0s	70.00nm				
SLR	152.22	65	iPKPd	05	19.00	5.5
	1.0s	45.00nm				
		i		05	29.50	
PRY	152.41	68	ePKP	05	17.00	3.2
	1.0s	10.00nm				
BLF	152.79	73	iPKPc	05	21.50	7.3
	1.0s	24.00nm				
HVD	153.09	77	iPKPc	05	29.00	14.4
	204 obs. associated					

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* JAN 18, 1990 12h 21m 03.67± 1.36s
31.869 S ± 6.6km 72.691 W ±14.3km
DEPTH = 28.1 ± 5.6 km
OFF COAST OF CENTRAL CHILE (134)

ROCH	1.80	128	iPc	21	32.80	-0.7
			iS	21	52.50	
LCCH	1.86	150	iPc	21	53.40	19.2X
			i	21	55.00	
			iS	22	05.50	
JACH	1.95	115	iPc	21	34.00	-1.6
			iS	21	54.90	
TACH	2.31	141	iP	21	41.50	0.9
			iS	22	06.50	
SAN	2.33	133	eP	21	41.00	0.1
			iS	22	06.70	
			i	22	09.50	
LNV	2.34	153	iPc	21	42.00	1.0
			iS	22	16.00	
FCH	2.49	126	iPc	21	42.60	-1.0
			iS	22	09.00	
PCH	2.53	134	iPc	21	43.70	-0.2
			iS	22	11.00	
CHCH	2.68	141	iPc	21	46.50	0.6
			iS	22	15.50	
RTRS	3.25	59	iPc	21	55.10	1.2
			S	22	34.80	
ZON	3.43	86	eP	21	58.00	1.3
			eS	22	35.00	
RTLL	3.64	83	ePc	22	01.10	1.5
			S	22	42.20	
CFA	3.80	87	ePc	22	01.50	-0.3
			S	22	45.50	
RFA	4.57	130	eP	22	13.10	0.3
CYA	6.88	62	e(P)	22	45.00	-0.3
TCA	6.93	88	e(P)	22	42.00	-4.0X
			S	24	03.00	
ANT	8.38	14	e(P)	23	32.70	26.5X
CNCB	15.59	17	P	24	47.20	3.5X
LPB	15.83	16	eP	24	46.00	-0.6
ZOBO	16.08	16	P	24	50.00	0.0
BAO	27.69	60	eP	26	49.50	-2.1
LIC	74.64	72	P	32	43.40	0.9
KIC	74.95	73	P	32	45.10	0.8
GBA	147.16	117	PKP	40	48.90	4.9X
HYB	150.28	112	ePKP	40	58.00	9.1X
	S.D. = 1.1		on 19 of 25 obs.			

JAN 18, 1990 12h 45m 23.60± 0.14s
30.141 S ± 4.7km 177.688 W ± 4.0km
DEPTH = 13.4km (6 depth phases)
6.0mb (29 obs.) 5.8Msz (23 obs.)
KERMADEC ISLANDS (178)
Ms 5.8 (BRK). Mo=1.3*10**18 Nm
(PPT). Felt on Raoul Island.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=350 Dip=65 Slip= 90
NP2: 170 25 90
Principal Axes:
T Plg=70 Azm=260
P 20 80
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sta: 4 Focal mech. M
Energy 2.9±1.3*10**12 Nm
MOMENT TENSOR SOLUTION
Dep 25 No. of sta: 16
Moment Tensor; Scale 10**17 Nm
Mrr= 5.28 Mtt= 0.05
Mff=-5.33 Mrt= 0.42
Mrf= 6.14 Mtf= 2.90
Principal axes:
T Val= 8.40 Plg=62 Azm=294
N 0.43 17 170
P -8.84 22 73
Best Double Couple:Mo=8.6*10**17
NP1:Strike=134 Dip=27 Slip= 51
NP2: 357 69 108
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 34C
Centroid Location:
Origin Time 12:45:39.7 0.5
Lat 29.74S 0.03 Lon 178.07W 0.04
Dep 32.5 2.1 Half-duration 3.8
Moment Tensor; Scale 10**18 Nm
Mrr= 0.84 0.02 Mtt= 0.26 0.04
Mff=-1.10 0.03 Mrt= 0.11 0.05
Mrf= 0.60 0.07 Mtf=-0.48 0.03
Principal Axes:
T Val= 1.01 Plg=74 Azm=263
N 0.40 6 15
P -1.41 15 107
Best Double Couple:Mo=1.2*10**18
NP1:Strike=206 Dip=30 Slip= 103

NP2: 12 60 83

RAO	0.91	347	P	45	42.10	1.4
			S	45	52.70	
SVA	12.48	343	eP	48	24.40	0.8
MRW	12.67	207	eP	48	24.00	-2.1
			eS	50	39.00	
NDF	13.10	339	eP	48	38.00	6.1X
SGE	13.12	341	eP	48	30.00	-2.3
SGE	13.12	341	eP	48	39.00	6.7X
MBU	13.51	345	eP	48	39.00	1.6
DZM	16.35	296	iPd	49	21.10	6.7X
			iS	52	48.90	
PVC	17.76	311	iPc	49	39.30	7.3X
RAR	18.41	65	P	49	36.00	-4.1X
			S	52	40.00	
MSZ	18.43	214	eP	49	36.00	-4.1X
BRS	26.00	269	iPd-	51	01.90	4.0X
			ipP	51	09.00	25kmX
			e	51	20.00	
			e	51	52.00	
			e	55	09.00	
			iS	55	36.00	
			e(SS)	56	56.00	
			e	19	16.00	
RIV	26.63	254	eP	51	08.00	4.5X
			eS	55	56.00	
CNB	28.11	251	ePc	51	21.00	3.8X
	1.3s	400.00nm			6.0mb	
			e	54	32.00	
CAN	28.41	251	iPc	51	22.90	3.0X
BWA	28.89	253	iPc	51	24.90	0.7
HNR	29.34	310	eP	51	29.00	0.8
			eS	56	16.00	
RMQ	29.70	269	iPc	51	35.20	3.7X
	1.2s	485.00nm			6.2mb	
			e	58	19.00	
CMS	31.27	258	iPd	51	48.20	2.9
			e	51	56.00	27kmX
TOO	31.31	246	eP	51	48.00	2.3
	1.0s	304.00nm			6.1mb	
			e	54	40.00	
OLP	33.59	267	eP	52	08.00	2.4
BFD	33.65	247	eP	52	08.00	2.0
CTA	34.02	279	iPc+	52	11.00	1.6
	1.2s	718.75nm			6.5mb	
Z	18s	31.27um			6.1Msz	
			i	53	36.00	469kmX
			iS	57	33.00	
CTAO	34.02	279	iPc	52	10.81	1.4
	1.2s	718.75nm			6.5mb	
Z	18s	31.27um			6.1Msz	
			e	52	12.97	7km
			e	52	14.62	
			e	52	18.10	
			e	52	23.56	
			ePP	53	27.86	
			i	53	36.00	
			iS	57	33.00	
ADE	36.85	251	iPc	52	36.20	2.8
	1.4s	400.00nm			6.0mb	
RAB	38.43	306	e(P)	52	46.00	-0.7
			eS	58	24.00	
PMG	38.74	295	eP	52	50.00	0.6
LAT	40.56	298	eP	53	06.00	1.6
ASPA	43.39	267	iPc	53	27.90	0.2
	1.8s	319.00nm			5.8mb	
Z	19s	43.92um			6.4Msz	
			LR	10	54.50	
WRA	44.36	272	Pd	53	38.70	3.3X
	0.9s	224.30nm			6.0mb	
WB5	44.36	272	eP	53	35.70	0.2
			e	59	20.50	
DRV	44.48	202	eP	53	35.00	-0.8
FORR	46.32	255	eP	53	50.50	-0.4
	0.4s	78.00nm			6.1mb	
SBA	48.31	184	P	54	09.60	3.6X
			S	01	16.80	
WARB	48.83	260	eP	54	10.00	-0.7
MTN	50.21	279	eP	54	20.00	-1.3
			e	55	37.00	377km
COOL	52.10	253	eP	54	34.00	-1.5
RKG	54.62	248	eP	54	52.00	-2.1
KLB	54.68	251	eP	54	53.00	-1.6
NWAO	54.74	249	iPc	54	52.99	-2.0
Z	20s	5.90um			5.7Msz	
N	20s	5.80um				

18d 12h

E 20s 6.80um
e 54 56.63 12km
e 55 03.25
BAL 55.83 252 eP 55 02.00 -0.9
MUN 55.84 250 eP 55 02.00 -0.9
GUA 56.42 315 eP 55 03.30 -4.0X
0.8s 137.31nm 6.0mb
Z 21s 9.15um 5.8Msz
MBL 56.43 263 iPd 55 06.30 -1.1
GUMO 56.49 315 eP 55 04.30 -3.4X
1.3s 535.95nm 6.4mb
e 55 29.70 104kmX
eS 03 13.00
MRWA 56.85 253 iPd 55 09.30 -1.0
AAI 57.41 286 eP 55 10.50 -3.9X
NANU 59.59 260 eP 55 28.50 -0.9
SPA 60.03 180 iPc 55 33.80 1.6
1.4s 272.55nm 6.2mb
Z 20s 5.77um 5.7Msz
SPA 60.03 180 eP 55 34.00 1.8
KHKI 65.72 274 ePd 56 04.20 -6.2X
e 59 46.00
DAV 65.78 294 eP 56 09.00 -1.7
PCI 65.91 284 ePd 56 13.20 1.6
1.2s 19.50nm 5.2mb
TSM 70.19 287 ePc 56 40.00 1.7
AIA 72.05 156 eP 56 50.10 1.4
MAW 72.64 200 eP 56 54.00 1.8
KKM 72.73 288 ePc 56 54.00 0.3
1.4s 288.80nm 6.2mb
OCP 73.86 298 eP 57 12.20 12.1X
BAG 75.32 299 eP+ 57 07.00 -1.7
KAKJ 76.95 326 P 57 17.80 0.5
CHJJ 77.40 325 P 57 20.40 0.6
WKYJ 77.73 322 eP 57 20.10 -1.7
KAGJ 78.14 317 P 57 24.30 0.3
MAT 78.18 325 eP 57 23.00 -1.1
1.3s 259.62nm 6.1mb
Z 20s 1.77um 5.4Msz
eS 07 06.00
TKSJ 78.39 321 eP 57 25.80 0.5
MTMJ 78.42 325 P 57 26.50 1.0
KUMJ 79.15 318 eP 57 29.00 -0.5
SHK 79.56 320 eP 57 32.50 0.8
YONJ 79.61 321 eP 57 31.50 -0.5
ANP 80.12 307 eP 57 34.00 -1.0
SHNJ 80.14 319 eP 57 38.30 -4.5X
KUSJ 80.64 333 eP 57 37.50 0.3
KGM 81.50 277 ePd 57 44.10 1.7
ADK 81.67 1 P 57 41.60 -0.8
1.6s 1049.18nm 6.6mb
QZH 82.03 305 Pc 57 44.00 -0.9
5.0s 1.30nm 3.3mb X
Z 24s 1.50um 5.3MszX
sP 57 57.00
ASAJ 82.32 332 eP 57 47.90 1.9
SMY 82.83 355 P 57 48.10 -0.3
1.2s 580.81nm 6.6mb
BLP 84.02 44 P 57 57.00 2.1
SSE 84.14 311 Pc 57 52.00 -3.6X
Z 22s 2.80um 5.6Msz
pP 57 59.20 23km
SKS 08 14.00
SYP 84.25 45 eP 57 58.00 1.7
BCH 84.63 44 P 57 59.20 1.1
PRS 84.65 42 ePc 57 58.80 0.7
GZH 84.75 300 P 57 57.00 -1.8
eS 08 21.00
IPM 84.77 278 ePd 57 59.90 0.8
1.0s 31.90nm 5.5mb
GCC 84.77 42 ePc 57 59.00 0.4
PCC 84.88 41 e(P) 57 59.40 0.3
SAO 84.91 42 e(P) 57 59.40 0.1
ABL 84.93 45 P 58 00.00 0.2
PRI 84.93 43 eP 58 00.30 0.7
BAR 85.09 48 eP 58 01.00 0.6
LLA 85.10 42 ePc 58 00.70 0.4
PAS 85.11 46 ePc 58 02.98 2.6
eS 08 20.96
eSKS 08 23.98
QIZ 85.13 295 eP 58 02.00 1.2
N 20s 2.40um
sP 58 14.00
eS 08 29.00
SS 08 41.00
MHC 85.19 42 ePc 58 01.50 0.6
BRK 85.21 41 ePc 58 01.10 0.3

BKS 85.22 41 eP 58 01.30 0.4
0.9s 102.00nm 6.0mb
Z 20s 3.90um 5.8Msz
N 20s 2.60um
E 20s 2.50um
eS 08 28.00
eLQ 20 18.00
eLR 23 54.00
MWC 85.23 46 eP 58 01.00 -0.2
ARN 85.26 42 P 58 00.70 -0.4
NWRM 85.26 40 P 58 02.00 1.0
PLM 85.41 47 eP 58 03.00 0.8
RVR 85.50 46 eP 58 02.00 -0.4
PEC 85.57 47 P 58 01.80 -1.0
LNV 85.64 127 ePd 58 05.00 1.8
SBB 85.68 46 eP 58 03.00 -0.3
ISA 85.93 45 eP 58 05.00 0.5
FRI 86.08 43 ePc 58 05.00 -0.1
TACH 86.14 127 eP 58 06.50 0.7
NJ2 86.28 310 Pc 58 04.00 -2.2
7.5s 1.10nm 3.1mb X
Z 26s 2.40um 5.5MszX
FHC 86.33 38 ePc 58 07.20 0.9
CMB 86.39 42 iPc 58 06.17 -0.6
SNG 86.44 280 eP 58 07.80 0.4
e 01 03.10
SAN 86.44 127 eP 58 08.00 0.7
PCH 86.45 127 eP 58 07.50 0.1
GLA 86.52 48 eP 58 08.00 0.5
CLC 86.56 45 eP 58 08.00 0.3
GSC 86.71 46 eP 58 09.00 0.6
FCH 86.77 127 eP 58 10.50 1.2
ORV 86.80 40 ePc 58 08.50 -0.2
LTCM 86.91 39 P 58 09.80 0.6
WDC 86.94 39 ePc 58 09.50 0.2
MIN 87.29 39 ePc 58 10.50 -0.7
LBFM 87.83 39 P 58 13.70 -0.2
TNP 88.28 43 P 58 15.90 -0.2
1.4s 138.54nm 6.1mb
KVN 88.40 42 P 58 16.20 -0.4
WHN 88.41 307 eP 58 18.00 1.5
Z 22s 2.00um 5.5Msz
E 20s 2.60um
sP 58 32.00
MDJ 88.57 325 Pc 58 17.50 0.5
Z 20s 3.50um 5.8Msz
SS 14 50.00
DL2 88.94 317 iPc 58 19.00 0.1
4.0s 1.10nm 3.5mb X
Z 26s 1.60um 5.3MszX
E 18s 1.20um
esS 09 13.00
SNY 89.77 320 iPc 58 22.60 -0.1
4.0s 1.10nm 3.5mb X
Z 22s 3.00um 5.7Msz
N 22s 2.40um
sS 09 24.00
NNT 89.94 285 eP 58 26.00 1.9
TIA 89.99 313 Pc 58 24.10 0.1
Z 27s 3.30um 5.6MszX
N 24s 3.10um
E 29s 4.50um
CN2 90.10 323 iPc 58 24.00 -0.2
6.0s 1.20nm 3.3mb X
Z 25s 3.20um 5.7MszX
N 18s 1.00um
E 18s 2.20um
SP 58 37.00
eS 09 18.00
PPM 90.39 68 (P) 58 26.00 -0.8
BMW 90.75 34 P 58 27.80 0.5
NST 91.18 287 eP 58 31.00 1.2
VGB 91.30 36 P 58 29.50 -0.3
MSU 91.61 46 P 58 32.10 0.4
LON 91.64 35 iPc 58 30.39 -1.0
e 58 32.54 7km
GYA 91.66 300 P 58 31.60 -0.4
sP 58 47.00
GMW 91.72 34 P 58 32.00 0.3
RMW 92.14 34 P 58 33.20 -0.4
DUG 92.26 44 P 58 33.50 -1.0
1.7s 45.45nm 5.6mb
MCW 92.50 33 P 58 36.20 1.0
BDT 92.91 288 eP 58 38.80 1.1
BJI 92.93 315 eP 58 37.50 0.2
6.0s 0.41nm 3.0mb X
Z 22s 3.08um 5.7Msz

N 20s 1.15um
eSKS 09 08.00
ALO 93.20 51 iPc 58 39.50 0.5
1.5s 65.97nm 5.8mb
Z 18s 3.75um 5.9Msz
ANMO 93.21 51 eP 58 38.94 -0.1
1.7s 64.90nm 5.8mb
e 58 41.59 8km
e 58 44.90
iS 09 51.43
ePS 11 01.62
DAU 93.33 45 P 58 40.60 0.9
CHG 93.75 289 ePc 58 42.20 0.6
1.3s 21.15nm 5.4mb
CHTO 93.75 289 ePc 58 42.00 0.4
e 58 49.50 23km
TIY 93.90 312 Pc 58 42.20 0.2
N 20s 1.80um
sP 58 57.00
SKS 09 13.50
SS 16 10.00
KMI 93.95 297 Pc 58 43.00 0.3
Z 22s 2.30um 5.6Msz
PP 02 33.00
PTJ 94.17 42 P 58 44.20 1.0
XAN 94.17 307 P 58 44.10 0.8
N 20s 1.80um
E 19s 1.80um
SKS 09 13.50
DPW 94.20 36 P 58 43.20 0.1
PMR 94.30 13 P 58 43.00 -0.1
1.0s 21.25nm 5.5mb
TTA 94.36 10 P 58 43.80 0.3
1.0s 21.25nm 5.5mb
PNT 94.47 34 eP 58 45.00 0.7
BW06 95.77 43 P 58 50.00 -0.7
1.3s 13.52nm 5.3mb
LRM 95.93 40 eP 58 51.00 -0.4
CD2 96.18 302 eP 58 52.80 0.2
Z 20s 0.94um 5.3Msz
HHC 96.25 314 P 58 53.00 0.3
Z 32s 4.90um 5.8MszX
GOL 96.60 48 P 58 54.50 0.0
1.6s 69.72nm 5.9mb
GLD 96.72 48 P 58 56.50 1.5
BTO 97.08 313 P 58 56.50 0.0
N 24s 3.20um
E 24s 3.20um
FBA 97.56 12 P 58 56.00 -1.9
1.0s 18.75nm 5.6mb
CNCB 97.83 114 P 59 09.50 8.5X
LPB 97.89 114 P 59 08.00 6.8X
SKS 09 42.00
LR 31 04.00
LZH 98.78 307 eP 59 05.00 0.7
7.0s 0.34nm 3.1mb X
SES 99.44 37 eP 59 07.00 0.2
RSSD 99.85 45 P 59 08.50 -0.6
EDM 100.00 33 eP 59 08.00 -1.3
GTA 103.20 308 ePdiff59 23.90 -0.3X
INK 103.46 15 ePdiff59 24.50 0.1
KOD 107.86 272 ePKP 03 52.00 -1.4
GBA 109.45 275 PKP 03 55.70 -0.2
MBC 112.10 13 ePKP 03 58.00 -1.2
0.7s 4.00nm
POO 114.72 278 ePKP 04 05.00 -1.0
NDI 115.90 289 iPKPc 04 06.00 -1.9
ePS 16 20.00
ePPS 17 06.00
eSS 21 32.00
eSS 25 20.00
BLF 116.83 203 ePKP 04 10.50 0.6
KIM 117.63 202 iPKPc 04 12.60 1.2
PRY 118.36 206 ePKP 04 13.50 0.6
BFS 118.64 205 ePKP 04 06.00 -7.4X
SLR 119.12 207 ePKP 04 13.00 -1.3
Z 20s 4.26um 6.1Msz
e 14 29.50
KSR 119.54 206 ePKP 04 14.50 -0.7
BUL 123.96 210 iPKPd 04 39.20 15.4X
1.0s 26.00nm
QUE 124.84 288 ePKP 04 25.00 -0.2
FRB 125.02 31 ePKP 04 22.00 -2.2
SCH 125.90 42 ePKP 04 25.00 -1.3
DAG 132.25 6 iPKPd 04 35.30 -2.5
0.8s 11.19nm
Z 22s 1.63um 5.7Msz

MAIO	132.36	293	iPKPc	04	39.20	-0.1
			e	06	54.00	
KEV	137.93	347	ePKP	04	46.00	-2.7
IR4	139.11	290	ePKP	04	45.00	-7.1X
IR1	139.31	291	ePKP	04	44.00	-8.5X
IR7	139.40	291	ePKP	04	52.00	-0.6
SOD	140.01	346	iPKPc	04	45.80	-6.7X
KMSA	140.82	266	ePKP	04	50.60	-4.9X
KER	142.11	288	ePKP	05	09.00	11.5X
TAB	142.98	294	ePKP+	04	55.00	-3.9X
SLY	143.54	290	iPKPd	04	56.00	-3.7X
			ePKS	08	37.00	
QASM	143.56	274	ePKP	04	56.00	-4.1X
SUF	143.95	342	iPKP	04	56.10	-3.4X
	1.0s	141.20nm				
8HD	144.24	286	iPKPd	05	00.60	-0.4
			ePKS	08	42.00	
MSL	145.48	291	iPKPd	05	06.50	3.5X
NUR	146.16	340	iPKPc	05	03.60	0.3
	1.3s	688.80nm				
RGS	146.69	353	ePKP	05	06.00	1.9
UPP	148.54	345	iPKP	05	09.70	2.6
N82	148.54	352	PKP	05	05.80	-1.4
	1.2s	233.40nm				
HFS	149.04	349	ePKP	05	06.50	-1.5
	0.9s	92.30nm				
	Z 21s	1.35um			5.7Msz	
		LR		58	09.00	
SHBJ	149.85	283	PKPd	05	15.60	5.4X
BCAO	150.19	214	ePKP	05	10.97	-0.2
	0.8s	180.00nm				
		e		05	16.77	
		ic		05	17.10	
		e		05	22.73	
		id		05	23.70	
		ic		08	19.70	
		ePP		08	49.71	
KVT	150.65	301	iPKP	05	16.90	5.8X
AYN	150.71	276	ePKP	05	10.00	-1.4
MDSJ	150.90	282	PKPc	05	17.30	5.5X
HITJ	151.00	278	PKPd	05	18.20	6.1X
QUTJ	151.07	281	PKPd	05	18.00	5.9X
BURJ	151.34	283	PKPc	05	18.80	6.3X
SHMJ	151.41	284	PKPc	05	20.00	7.6X
HRI	151.46	285	e(PKP)	05	11.00	-1.6
8ADA	151.51	275	ePKP	05	11.33	-1.3
HQL	151.60	277	ePKP	05	11.67	-1.1
MBH	151.83	278	e(PKP)	05	13.00	-0.1
KAS	152.27	302	ePKP	05	21.00	7.5X
FAM	152.92	289	ePKP	05	22.00	7.5X
LFK	153.30	289	iPKP	05	23.30	8.2X
BBTK	153.35	300	ePKP	05	14.00	-1.1
CSS	153.47	289	ePKP	05	22.70	7.4X
EKA	154.52	7	PKP	05	25.00	9.0X
	1.3s	19.20nm				
HLW	154.88	277	ePKP	05	18.00	0.7
GPA	155.08	302	ePKP	05	17.00	-0.3
LIC	155.23	162	PKP	05	18.84	0.6
	1.6s	72.50nm				
	Z 20s	1.25um			5.7Msz	
VRI	155.31	316	ePKPd	05	26.00	8.6X
HRT	155.40	303	ePKP	05	17.00	-0.8
KIC	155.43	163	PKP	05	19.12	0.6
	1.7s	92.50nm				
BCK	155.45	295	ePKP	05	26.00	8.0X
TIC	155.63	162	PKP	05	19.46	0.6
MLR	155.97	316	ePKPc	05	22.00	3.5X
KRA	156.08	331	ePKP	05	24.00	5.7X
	Z 19s	4.10um			6.3Msz	
ELL	156.10	293	ePKP	05	19.00	0.0
KHL	156.13	297	ePKP	05	18.00	-0.9
CTT	156.19	305	iPKP	05	17.00	-1.8
SPC	156.60	329	ePKP	05	18.10	-1.2
			e	09	17.30	
KSP	156.82	337	ePKP	05	19.00	-0.3
	1.1s	196.00nm				
		ed		05	31.00	
		id		05	49.50	
CLL	157.40	342	iPKPc	05	19.20	-0.8
	1.9s	40.00nm				
CLL	157.40	342	ePKP	05	29.00	9.0X
	1.9s	72.00nm				
BRG	157.53	340	iPKP	05	19.50	-0.7
		i		05	31.90	
		i		05	51.00	
		e		06	11.00	
PSZ	157.69	328	ePKP	05	20.30	-0.3
IZM	157.84	298	ePKP	05	27.00	6.0X
PRU	158.13	338	ePKP	05	23.50	2.6
	Z 20s	2.00um			6.0Msz	
	N 18s	1.50um				
	E 18s	1.00um				
		i		05	54.80	
MOX	158.36	344	ePKP	05	20.00	-1.2
	2.0s	83.00nm				
		e		05	35.00	
		e		05	55.00	
8ZS	158.38	321	ePKP	05	20.50	-0.8
BUD	158.41	328	ePKP	05	19.00	-2.3
SRO	158.48	330	ePKP	05	21.00	-0.3
		i		05	56.60	
ZST	158.70	332	ePKP	05	20.80	-0.8
		i		05	58.30	
		e		09	27.50	
VKA	158.96	333	(PKP)	05	20.00	-1.9
		i		05	57.80	
KHC	159.19	339	PKP	05	21.50	-0.7
	Z 20s	2.20um			6.0Msz	
	N 20s	1.10um				
	E 20s	1.00um				
		e		06	00.00	
UCC	159.31	356	PKP	05	22.00	-0.1
SOP	159.33	332	ePKPd	05	23.00	0.7
GRF	159.34	343	ePKP	05	22.10	-0.2
	Z 23s	1.40um			5.7MszX	
BEO	159.52	321	ePKP	05	21.50	-1.1
DOU	159.99	356	PKP	05	23.50	0.6
		e		06	02.30	
KNT	160.03	309	ePKP	05	21.70	-1.6
VAY	160.18	310	ePKP	05	21.40	-2.0
	1.2s	0.00nm				
		i		06	03.40	
GRG	160.46	309	ePKP	05	22.70	-1.1
SKO	160.59	313	ePKP	05	22.50	-1.3
SKO	160.59	313	iPKP	05	38.00	14.2X
	1.2s	110.00nm				
	Z 20s	2.52um				
	N 22s	1.53um				
	E 19s	1.78um				
		i		06	06.50	
		iPP		09	46.00	
		i		10	07.00	
BHG	160.65	338	ePKP	05	23.10	-0.6
		i		06	06.40	
PTJ	160.99	330	e(PKP)	05	24.00	-0.2
K8A	161.05	336	iPKPc	05	21.60	-2.7
	1.5s	125.00nm				
		iPP		06	05.80	
		e		28	44.00	
FNA	161.23	310	ePKP	05	21.80	-2.8
AGG	161.32	304	ePKP	05	23.80	-0.9
CDF	161.36	350	ePKP	05	24.00	-0.5
OHR	161.45	311	ePKP	05	17.80	-7.0X
	2.0s	0.19nm				
		i		06	04.70	
LJU	161.47	332	ePKP	05	23.50	-1.1
		e		06	08.00	
VBY	161.60	330	ePKP	05	25.00	0.3
		e		06	09.90	
GRR	161.62	7	ePKP	05	24.20	-0.4
VOY	161.74	333	ePKP	05	24.70	-0.3
		e		06	09.40	
FEL	161.75	348	ePKP	05	23.65	-1.3
CEY	161.77	332	ePKP	05	24.00	-0.9
		e		06	09.50	
HAU	161.89	351	ePKP	05	24.80	-0.2
LPF	161.95	7	ePKP	05	24.30	-0.6
BSF	162.00	350	ePKP	05	24.50	-0.7
BBS	162.24	348	PKP	05	11.95	-13.4X
CTI	162.52	338	PKP	05	25.00	-0.8
LOR	162.86	356	ePKP	05	25.60	-0.3
SSF	163.08	357	ePKP	05	25.90	-0.2
LBF	163.13	356	ePKP	05	26.00	-0.3
AVF	163.36	358	ePKP	05	26.10	-0.3
MFF	163.45	6	ePKP	05	26.30	-0.2
SMF	163.48	356	ePKP	05	25.80	-0.8
VAI	163.51	344	PKPd	05	26.00	-0.5
		i		06	17.70	
BGF	163.60	359	ePKP	05	26.60	-0.1
TCF	163.88	0	ePKP	05	26.80	-0.2
LSF	163.91	2	ePKP	05	26.90	-0.1
MAF	163.94	359	ePKP	05	26.70	-0.3
ARV	164.20	330	PKPd	05	27.00	-0.4
		e		06	21.50	
LPG	164.28	348	ePKP	05	27.50	-0.3
ASS	164.67	330	PKPc	05	26.50	-1.4
		i		06	26.80	
BNI	164.72	348	PKP	05	38.00	10.0X
		e		06	24.90	
RJF	164.85	2	ePKP	05	27.90	0.0
CAF	165.24	1	ePKP	05	28.50	0.2
MGR	165.29	316	PKP	05	27.00	-1.4
		e		06	25.00	
LPO	165.46	3	ePKP	05	28.80	0.4
FRF	166.17	347	ePKP	05	28.00	-1.0
LMR	166.41	347	ePKP	05	28.60	-0.6
EPF	167.04	6	ePKP	05	29.80	0.0
GUD	168.27	25	ePKP	05	32.60	1.8
TOL	168.98	26	ePKP	05	32.50	1.4
			ePKKP	06	43.00	
			ePP	10	38.00	
			eSKS	12	33.00	
			eSS	31	42.00	
EBR	169.24	7	(PKP)	05	28.00	-3.2X
EVAL	169.43	43	ePKP	05	33.00	1.6
EVIA	170.64	24	ePKP	05	33.60	1.4
AVE	171.14	67	ePKP	05	34.00	1.6
ASMO	171.21	33	iPKPc	05	33.00	0.5
ALOJ	171.23	36	iPKPc	05	34.00	1.4
MAL	171.36	39	iPKPd	05	33.50	1.1
			iPP	10	40.00	
			iSS	31	52.00	
ACHM	171.37	35	iPKPc	05	34.20	1.7
ATEJ	171.43	36	iPKPc	05	34.00	1.3
APHE	171.56	35	iPKPc	05	34.50	1.8
TIO	171.71	82	iPKP	05	34.50	1.6
IFR	172.83	60	iPKPd	05	35.50	2.1
TAF	173.86	39	iPKP	05	36.00	2.4

S.D. = 1.1 on 262 of 320 obs.

JAN 18, 1990 12h 48m 26.64± 0.56s
36.220 N ± 8.1km 27.133 E ± 4.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

ARG	0.80	90	ePg	48	41.50	-0.7
YER	1.30	45	iPn	48	49.70	-1.0
SMG	1.50	351	ePb	48	54.50	0.9
APE	1.54	304	ePb	48	54.00	-0.2
NPS	1.56	233	ePb	48	54.50	0.0
KSL	1.99	92	ePn	49	01.00	0.4
ELL	2.30	76	ePn	49	06.20	0.9
VAM	2.52	252	ePn	49	08.50	0.3
KHL	2.84	42	ePn	49	13.00	0.1
VLI	3.42	280	ePn	49	20.50	-0.5

S.D. = 0.7 on 10 of 10 obs.

? JAN 18, 1990 13h 15m 01.00± 4.28s
42.303 N ±38.1km 24.011 E ±13.7km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)
ML 2.7 (THE).

SRS	1.23	195	ePb	15	23.00	-0.8
			eSb	15	44.70	
KNT	1.41	217	ePb	15	25.90	-0.8
VAY	1.46	228	ePn	15	26.50	-0.8
SOH	1.56	199	ePb	15	27.90	-1.0
			eSb	15	54.80	
GRG	1.81	222	ePn	15	34.40	2.0
OUR	1.97	181	ePn	15	36.60	1.9
ALN	2.07	132	ePn	15	35.80	-0.4

S.D. = 1.6 on 7 of 7 obs.

JAN 18, 1990 14h 01m 51.48± 0.52s
44.743 N ± 4.9km 114.187 W ± 4.8km
DEPTH = 5.0km (geophysicist)
WESTERN IDAHO (33)
ML 3.2 (BUT).

MCMT	0.96	84	iPd	02	10.00	-0.3
LTMT	1.50	98	eP	02	19.20	-0.1
BGMT	1.60	71	ePnd	02	21.10	0.4
LRM	1.63	48	iPnc	02	21.60	0.4
BUT	1.71	41	ePn	02	22.80	0.6
			iPg	02	25.10	
			eSn	02	45.90	
			iSg	02	49.20	
LCCM	1.96	55	ePn	02	26.00	0.1
PTI	2.29	144	e(P)	02	30.00	-0.6

18d 14h

DMMT	2.36	25	ePn	02	31.20	-0.5
MEMT	2.43	68	ePn	02	32.50	-0.2
EBI	2.49	328	Pn	02	34.00	0.5
SXM	2.52	55	ePn	02	34.40	0.4
HRY	2.57	39	ePn	02	34.30	-0.2
BW06	3.89	119	e(P)	02	55.50	2.1X
DPW	4.19	320	e(P)	02	56.50	-0.9
PNT	5.89	323	eP	03	44.00	22.5X
KVN	6.39	209	eP	03	29.50	0.7

S.D. = 0.5 on 14 of 16 obs.

% JAN 18, 1990 14h 22m 15.22± 1.07s
39.281 N ±10.8km 29.168 E ±12.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.53	308	iPg	22	24.30	-1.6
			eSg	22	31.30	
ALT	0.77	107	ePg	22	29.00	-1.3
KHL	1.00	164	ePg	22	35.10	0.9
			eSg	22	46.60	
KCT	1.15	327	iPn	22	37.90	1.1
YLV	1.29	7	ePn	22	40.00	0.8

S.D. = 1.9 on 5 of 5 obs.

? JAN 18, 1990 15h 01m 48.98± 7.70s
31.080 N ±26.1km 141.051 E ±97.4km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)
SOUTH OF HONSHU, JAPAN (211)

IIDJ	5.11	330	P	03	06.40	1.0
CHJJ	5.24	341	P	03	07.20	0.1
MAT	5.94	337	eP	03	16.00	-1.0
	1.1s		27.85nm			4.8mb
MTMJ	6.12	335	P	03	19.90	0.3
BJI	22.07	301	eP	06	41.50	-1.1
	1.5s		31.00nm			4.5mb
CHG	39.86	262	eP	09	21.90	0.5

S.D. = 1.1 on 6 of 6 obs.

? JAN 18, 1990 15h 34m 19.49± 0.91s
50.473 N ± 9.5km 6.019 E ± 8.4km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 1.2 (UCC).

MEM	0.14	357	iPc	34	22.73	0.0
			iS	34	24.88	
DOU	0.99	248	iP	34	38.20	0.0
			iS	34	50.30	
			i	00	34.00	
RUP	1.02	139	ePn	34	39.04	0.2
ABH	1.15	120	ePn	34	40.81	-0.2

S.D. = 0.2 on 4 of 4 obs.

& JAN 18, 1990 15h 49m 13.50s
58.319 N 154.793 W
DEPTH = 99.3km
4.4mb (6 obs.)
ALASKA PENINSULA (12)
<AGS-P>.

AUE	1.28	35	eP	49	36.57	-0.8
			eS	49	53.61	
AUL	1.28	33	eP	49	36.47	-0.9
			eS	49	53.57	
KDC	1.35	114	iPc	49	37.00	-1.2
PDB	1.51	12	iP	49	38.58	-1.6
			eS	49	57.14	
XLV	1.96	53	eP	49	44.69	-1.3
			eS	50	09.58	
CNPM	2.21	55	eP	49	47.82	-1.5
			eS	50	13.96	
RED	2.35	25	eP	49	49.71	-1.5
BRLK	2.49	53	eP	49	51.22	-1.8
NNL	2.50	45	eP	49	52.34	-0.8
RDT	2.57	27	iP	49	52.30	-1.9
SVW	2.83	352	iPd	49	55.20	-2.5
NKA	3.03	35	eP	49	59.99	-0.4
CKL	3.14	22	iP	50	00.22	-1.8
SPU	3.19	25	eP	50	00.47	-2.2
BGL	3.19	21	iP	50	01.11	-1.6
SLKM	3.21	45	eP	50	00.15	-2.7
CRP	3.24	23	iP	50	01.66	-1.8
SEW	3.28	55	eP	50	01.14	-2.6
SUA	3.76	31	eP	50	08.13	-2.3
PMS	3.95	40	eP	50	10.26	-2.8
PWA	4.15	34	eP	50	12.77	-3.0
SGB	4.16	231	eP	50	13.81	-2.1
			eS	50	58.90	
SDN	4.33	229	ePd	50	15.70	-2.4
SASA	4.33	229	eP	50	15.66	-2.5
			eS	51	02.95	
PLRM	4.34	39	iP	50	14.47	-3.9
PMR	4.34	39	iPd	50	14.50	-3.9
PME	4.40	39	eP	50	15.51	-3.7
MID	4.53	72	eP	50	18.50	-2.4
GHO	4.54	38	iP	50	17.32	-3.9
			eS	51	05.59	
TTA	4.67	353	eP	50	20.30	-2.6
CUT	4.67	27	iP	50	19.84	-3.1
GLI	4.68	53	eP	50	18.86	-4.2
HIN	4.73	60	eP	50	21.07	-2.7
PVV	4.84	235	eP	50	23.10	-2.2
			eS	51	16.47	
VZW	5.00	53	eP	50	23.99	-3.5
CVA	5.13	60	eP	50	25.84	-3.4
HUR	5.32	26	eP	50	27.72	-4.2
DRRA	5.35	234	eP	50	29.31	-3.1
			eS	51	28.48	
SGAM	5.36	62	eP	50	29.32	-3.2
NCA	5.42	44	eP	50	29.51	-3.9
KLU	5.48	51	eP	50	30.35	-3.9
RAGM	5.58	64	eP	50	32.77	-2.7
TOA	5.73	45	eP	50	34.10	-3.6
RND	5.87	27	eP	50	35.04	-4.5
SNKA	5.87	232	eP	50	36.42	-3.1
MCK	6.13	25	eP	50	38.83	-4.3
SDG	6.23	43	eP	50	40.79	-3.6
GL8	6.35	56	iP	50	42.40	-3.8
SNH	6.41	68	eP	50	44.52	-2.5
WAX	6.46	66	eP	50	44.70	-3.1
PAX	6.54	41	eP	50	44.50	-4.3
TGL	6.56	63	eP	50	45.82	-3.2
CYK	6.57	69	eP	50	46.78	-2.2
NEA	6.85	21	eP	50	47.74	-5.2
BALM	6.87	61	eP	50	49.82	-3.5
DDM	6.99	35	eP	50	51.67	-3.2
HDA	7.17	28	eP	50	52.09	-5.3
CCB	7.17	25	eP	50	51.98	-5.4
RDS	7.26	23	eP	50	53.23	-5.3
FBA	7.39	24	eP	50	55.20	-5.2
DOT	7.46	40	eP	50	56.85	-4.6
GLM	7.56	25	eP	50	57.28	-5.4
PCA	7.67	70	eP	51	01.61	-2.7
IMA	7.80	3	ePd	51	02.40	-3.6
DWY	9.37	46	P	51	23.20	-4.1
SIT	10.50	89	e(P)	51	37.50	-4.9
INK	13.75	35	eP	52	21.00	-4.0
MBC	21.93	22	eP	53	55.50	-3.8
	0.6s		4.00nm			3.9mb
PNT	22.40	98	eP	54	06.00	1.9
EDM	23.57	84	iPd	54	14.60	-0.9
	0.5s		26.00nm			4.9mb
FFC	28.73	74	eP	55	00.00	-3.0
	0.7s		5.00nm			4.3mb
KVN	30.41	113	e(P)	55	20.00	1.8
FRB	39.09	45	eP	56	28.00	-3.8
GUN	80.40	309	P	01	11.40	-4.1
KKN	80.75	309	P	01	13.40	-3.8
	0.4s		4.00nm			4.6mb
PKI	80.90	309	P	01	14.00	-4.1
DMN	80.99	309	P	01	14.60	-3.9
	0.5s		9.00nm			4.9mb
BHD	87.35	344	ePKPd	02	10.00	19.9
WRA	97.20	244	P	02	33.00	-2.6
	0.6s		0.40nm			4.1mb
SLR	147.37	355	iPKPc	08	42.00	-2.1
KSR	147.55	357	ePKP	08	13.00	-31.5
BFS	148.58	357	ePKP	08	39.00	-7.0
PRY	148.59	356	ePKP	08	37.00	-9.1
KIM	150.44	1	ePKP	08	50.50	1.7
BLF	150.79	358	iPKPc	08	51.30	2.0

85 obs. associated

% JAN 18, 1990 16h 18m 07.89± 0.56s
44.537 N ± 5.1km 7.176 E ± 6.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.06	239	P	18	09.99	-0.3
			S	18	11.43	
STV	0.31	160	P	18	14.59	0.2
			S	18	18.50	
ENR	0.36	151	P	18	15.34	0.1
			S	18	19.97	
RRL	0.47	324	P	18	18.13	0.5
			S	18	23.63	
ROB	0.55	116	P	18	19.22	0.0
			S	18	26.60	
RSP	0.62	5	P	18	19.95	-0.5
			S	18	27.12	
FIN	0.81	114	P	18	23.74	0.1
			S	18	34.16	
IMI	0.81	140	P	18	23.48	-0.2
			S	18	33.78	

S.D. = 0.4 on 8 of 8 obs.

JAN 18, 1990 16h 48m 10.84± 0.83s
36.031 N ± 7.9km 27.078 E ± 8.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.49	171	ePb	48	21.50	0.8
			eSb	48	30.00	
ARG	0.87	77	ePb	48	25.70	-1.8
NPS	1.42	238	ePb	48	37.00	0.3
YER	1.47	41	ePn	48	34.10	-3.3X
APE	1.62	310	ePb	48	37.20	-2.4
SMG	1.69	353	ePb	48	40.70	0.3
CIN	1.76	27	eP	48	43.00	1.4
KSL	2.03	87	ePb	48	45.00	-0.5
IZM	2.37	4	ePn	48	52.00	1.6
ELL	2.39	72	ePn	48	51.00	0.2
VAM	2.42	256	ePb	48	55.00	3.9X
BCK	3.16	62	ePn	49	04.60	3.0X

S.D. = 1.6 on 9 of 12 obs.

JAN 18, 1990 17h 08m 58.80± 0.44s
44.123 N ± 3.4km 7.377 E ± 4.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

ENR	0.11	17	P	09	01.72	0.0
			S	09	03.36	
STV	0.13	343	P	09	01.93	0.0
			S	09	03.87	
AUTN	0.13	164	Pg	09	02.25	0.1
			Sg	09	04.89	
SAOF	0.19	137	Pg	09	03.09	0.1
AURF	0.24	189	Pg	09	04.10	0.1
			Sg	09	07.58	
MVIF	0.28	216	Pg	09	04.56	-0.2
ROB	0.39	64	P	09	06.95	0.1
			S	09	12.08	
IMI	0.43	120	P	09	07.38	-0.1
			S	09	13.58	
PZZ	0.43	333	P	09	07.67	0.1
			S	09	13.14	
FIN	0.60	82	P	09	10.95	-0.1
			S	09	18.89	

S.D. = 0.1 on 10 of 10 obs.

JAN 18, 1990 17h 55m 28.85± 0.73s
36.097 N ± 7.9km 27.198 E ± 7.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.55	182	eP	55	40.60	0.7
			eS	55	49.50	
ARG	0.76	81	eP	55	44.60	0.9
YER	1.35	40	ePn	55	53.60	-0.2
NPS	1.54	238	eP	55	56.50	0.2
SMG	1.63	350	eP	55	59.50	1.8
APE	1.66	306	eP	55	57.20	-0.9
CIN	1.66	25	eP	56	05.00	6.9X
KSL	1.93	89	eP	56	00.20	-1.8
ELL	2.28	73	ePn	56	10.00	2.8X
VLI	3.49	281	eP	56	23.60	-0.7

S.D. = 1.4 on 8 of 10 obs.

& JAN 18, 1990 18h 16m 07.30s
37.157 N 122.025 W
DEPTH = 10.0km
CENTRAL CALIFORNIA (39
<BRK>. ML 3.0 (BRK).

```
GCC     0.13 170 iP     16 10.00  -0.4
                 iS     16 12.30
MHC     0.36  59 iPd    16 14.60  -0.1
                 i      16 18.00
ARN     0.44  64 iPd    16 15.80  -0.4
PCC     0.45 320 ePc    16 15.60  -0.8
                 eS     16 22.20
SAO     0.61 130 iP     16 17.80  -1.8
BKS     0.74 347 iPd    16 21.70  -0.1
                 iS     16 31.90
8RK     0.74 345 ePc    16 21.30  -0.5
                 eS     16 31.10
ZSP     0.81 347 ePc    16 22.20  -0.7
                 eS     16 34.40
PRS     0.98 147 ePc    16 24.70  -1.2
LLA     1.02 122 ePc    16 25.40  -1.2
PRI     1.49 132 ePc    16 33.40  -0.8
CMB     1.57  56 e(P)   16 34.30  -1.0
FRI     1.86  94 e(P)   16 35.80  -3.7
KVN     3.63  57 eP     17 11.60   6.7
       14 obs. associated
-----------------------------------------
   JAN 18, 1990  18h 30m 00.62± 1.53s
    0.032 S ± 8.2km  124.603 E ± 8.1km
   DEPTH =  80.8 ± 14.9 km
   4.9mb ( 11 obs.)
 MOLUCCA SEA                        (269)

PCI     4.84 260 ePd    31 13.50   0.9
                 e(S)   31 50.70
AAI     5.10 135 ePd    31 15.50  -0.7
                 eS     32 12.30
MKS     7.27 225 iPc    31 48.00   1.8
                 iS     33 07.00
                 e      36 24.40
TSM     7.77 303 ePc    31 57.00   3.8X
       0.2s   163.20nm          6.4mb X
TLE     9.86 125 iPd    32 17.30  -4.3X
                 eS     33 59.00
KKM    10.32 306 ePd    32 32.50   4.4X
       0.5s    29.40nm          5.5mb
KHKI   12.20 227 ePc    33 07.60  14.6X
                 e      34 24.70
MTN    14.28 153 eP     33 18.00  -2.3
KGM    21.38 276 eP     34 49.00   5.7X
MBL    21.51 192 eP     34 44.00  -0.6
WB5    21.92 155 iPc    34 47.70  -1.1
                 e      38 44.60
WRA    21.97 155 Pc     34 48.20  -1.0
       0.6s    13.80nm          4.5mb
IPM    23.99 281 ePc    35 10.90   1.9
       0.8s    33.90nm          4.8mb
NANU   24.07 201 eP     35 09.00  -0.7
PMG    24.30 113 eP     35 12.50   0.5
SNG    24.97 287 eP     35 18.70   0.4
ASPA   25.17 160 iPd    35 19.00  -1.1
       1.2s    73.00nm          5.0mb
                 iS     39 45.00
WARB   26.07 176 eP     35 28.30  -0.2
       0.3s     6.00nm          4.6mb
NNT    27.67 298 eP     35 42.50  -0.6
NST    28.76 304 eP     35 52.00  -0.9
CTA    29.10 135 iPd    35 56.00   0.0
       1.1s    18.99nm          4.6mb
BDT    30.50 306 eP     36 08.00  -0.3
FORR   30.83 174 eP     36 09.00  -2.1
       0.5s    50.00nm          5.5mb
CHG    31.39 308 eP     36 16.00  -0.2
       0.9s    30.04nm          5.1mb
RMQ    35.11 140 eP     36 49.00   0.7
ADE    37.17 161 iPc    37 06.60   1.0
       0.7s    20.55nm          5.2mb
CMS    37.19 149 iPc    37 06.70   1.0
BRS    38.37 137 iPd    37 16.00   0.3
       0.9s     6.00nm          4.5mb
MAT    38.52  18 (P)    37 16.00  -0.9
BFD    40.52 158 eP     37 34.00   0.7
SHL    40.57 311 eP     37 33.50  -0.6
                 eS     43 17.50
BJI    40.62 350 P      37 34.50   0.4
LZH    40.79 334 eP     37 38.00   2.2
       1.2s    41.00nm          5.1mb
                 ScP    43 18.50
CAN    41.84 150 iPc    37 46.30   2.1
TOO    42.04 155 eP     37 48.00   2.1
DZM    46.27 121 iPc    38 21.10   0.9
HYB    48.51 293 eP     38 37.00  -0.7

GBA    48.63 288 P      38 37.00  -1.6
NDI    53.51 306 eP     39 13.00  -2.3
MSZ    58.70 145 P      39 52.80   0.7
MRW    61.04 139 P      40 07.80  -0.4
INK    94.42  21 eP     43 13.00   0.6
     S.D. = 1.3  on  37 of  42 obs.
-----------------------------------------
*  JAN 18, 1990  18h 38m 09.22± 0.56s
   56.040 S ±13.6km   27.402 W ±11.4km
   DEPTH =  33.0km  (normal)
   5.3mb (  9 obs.)
 SOUTH SANDWICH ISLANDS REGION      (153)

AIA    19.99 228 eP     42 41.80   0.6
SPA    34.14 180 iPc    44 53.30   0.4
       1.0s    34.00nm          5.2mb
SUR    40.75  75 eP     45 50.00   1.3
KIM    45.72  76 iPc    46 29.50   0.6
BLF    46.21  77 iPd    46 33.50   0.7
BFS    48.26  76 iPd    46 42.00  -6.9X
       0.7s    17.81nm          5.2mb
PRY    48.62  77 iPd    46 51.90   0.2
       0.7s    10.00nm          5.0mb
CNCB   49.75 305 P      47 01.20   0.3
                 i      51 33.00
SLR    50.00  77 iPd    47 02.00  -0.3
       0.9s    16.81nm          5.1mb
LPB    50.04 305 P      47 03.00   0.0
BUL    54.68  73 iPc    47 52.00  14.6X
       1.1s    37.97nm
LIC    64.74  25 Pd     48 45.70  -0.6
       0.7s    43.00nm          5.7mb
KIC    64.94  25 Pd     48 46.86  -0.7
       0.8s    33.50nm          5.5mb
TIC    65.14  25 Pd     48 48.16  -0.8
       0.6s    35.50nm          5.6mb
BCAO   71.00  49 iPd    49 25.80   0.3
       0.6s    94.00nm          6.0mb
ASPA   99.03 163 iPd    51 45.70  -2.2
       0.9s     5.00nm          5.0mb
FRB   123.60 339 ePKP   57 00.00  -3.2X
PKI   125.04  92 PKP    57 04.80  -2.8X
KKN   125.14  92 PKP    57 05.00  -2.7X
GUN   125.57  92 PKP    57 06.40  -2.3
MBC   143.92 336 ePKP   57 37.00  -3.9X
       0.5s     3.00nm
INK   145.72 321 ePKP   57 41.00  -3.1X
                 pP     58 25.00
FBA   150.42 312 ePKP   57 54.10   2.4
BJI   151.29 108 ePKP   57 58.00   4.3X
     S.D. = 1.3  on  16 of  24 obs.
-----------------------------------------
   JAN 18, 1990  19h 59m 22.09± 0.13s
    5.286 S ± 3.3km  150.609 E ± 3.7km
   DEPTH = 136.2km  (  9 depth phases)
   5.6mb ( 29 obs.)
 NEW BRITAIN REGION                 (192)
      CENTROID, MOMENT TENSOR       (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 22C
      Centroid Location:
      Origin Time          19:59:25.3 0.6
      Lat  5.50S 0.06 Lon 150.74E 0.06
      Dep 148.4 1.5 Half-duration  2.3
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-1.80 0.09  Mtt= 1.46 0.13
        Mff= 0.34 0.13  Mrt=-0.81 0.10
        Mrf= 0.04 0.10  Mtf= 1.26 0.14
       Principal Axes:
        T  Val=  2.39  Plg= 9  Azm=148
        N       -0.34       16       241
        P       -2.04       71        30
      Best Double Couple:Mo=2.2*10**17
       NP1:Strike=220 Dip=39 Slip=-117
       NP2:         72      56       -70

RAB     1.90  55 iPd-   59 57.70   2.1
LAT     3.84 249 eP     00 24.00   3.4X
PMG     5.34 220 iPd    00 42.90   2.1
                 eS     01 44.00
MNDI    6.97 263 eP     01 25.00  21.8X
HNR    10.13 115 ePd    01 46.00   0.7
                 eS     02 38.00
CTA    15.31 196 iPc+   02 53.70   1.4
       1.1s   727.85nm          5.9mb
                 iS     05 42.00
                 i      06 09.80

TLE    17.78 268 ePd    03 24.00   1.4
GUA    19.54 343 eP     03 42.80   1.3
       0.9s   4383.19nm          6.8mb X
                 i      03 43.80   4kmX
GUMO   19.60 343 eP     03 42.50   0.4
                 eS     07 24.00
PJG    19.60 343 eP     03 42.30   0.2
MTN    20.64 247 iPd    03 52.30  -0.4
                 e      07 33.00
RMQ    21.16 185 iPc    03 59.80   2.0
                 e      04 23.00 116kmX
WB5    21.45 226 iPd    04 01.00   0.2
                 eS     07 49.00
WRA    21.51 226 Pd     04 01.60   0.2
       0.5s    44.40nm          5.1mb
QLP    22.04 195 iPc    04 08.00   2.4
BRS    22.08 175 iPc+   04 08.00   1.1
       0.8s    97.00nm          5.3mb
     Z 18s     21.00um          5.6Msz
                 i      04 18.00  37kmX
                 e(PP)  04 30.00
                 iS     08 02.00
                 i      08 31.00
                 i(ScP)11 26.00
                 e      14 37.00
e                iScS   15 13.00
AAI    22.40 273 eP     04 11.00   0.9
DZM    22.66 139 iPc    04 13.00   0.4
ASPA   24.35 220 iPd    04 29.80   0.9
       0.6s   182.00nm          5.8mb
     Z 19s     1.47um          4.5Msz
                 iPP    04 58.40
                 eS     08 35.20
                 LR     14 24.60
                 iScS   15 18.80
CMS    26.45 189 iPc    04 47.50  -0.6
CNB    29.90 182 eP     05 19.80   0.6
                 i      05 25.90  21kmX
CAN    29.93 183 eP     05 20.00   0.7
WARB   30.93 225 iPd    05 28.50   0.2
       0.3s    41.00nm          5.6mb
ADE    31.52 199 iPc    05 33.40   0.1
       0.6s    69.33nm          5.6mb
TOO    32.47 188 iPc    05 42.20   0.6
                 e      08 25.00
                 e      11 58.00
BFD    32.59 192 ePc    05 42.20  -0.3
FORR   33.08 217 iPd    05 46.10  -0.8
MBL    33.75 239 iPd    05 52.60  -0.2
       0.4s   112.00nm          6.0mb
TSM    33.84 286 ePc    05 55.40   1.8
KKM    36.14 288 ePc    06 14.50   1.3
BAG    36.70 307 ePd-   06 18.00   0.0
                 eS     11 52.00
MEKA   37.23 232 eP     06 22.50   0.3
       0.4s    76.00nm          5.8mb
COOL   37.61 224 eP     06 25.00  -0.4
NANU   37.98 240 eP     06 28.50   0.0
KLB    40.39 226 eP     06 48.00  -0.3
       0.7s    80.00nm          5.6mb
MRWA   40.46 230 eP     06 49.00   0.1
       0.4s    63.00nm          5.7mb
BAL    40.63 228 eP     06 50.00  -0.2
       0.7s   122.00nm          5.7mb
KAGJ   40.87 334 eP     06 54.70   2.5
NWAO   41.51 224 eP     06 57.00  -0.4
MUN    41.71 226 eP     06 59.00  -0.1
       0.9s   548.00nm          6.2mb
WKYJ   41.78 341 P      07 00.80   1.2
KUMJ   42.05 335 eP     07 03.60   1.8
MSZ    42.06 162 P      07 03.00   1.3
                 ePcP   08 54.00
TKSJ   42.08 339 P      07 04.10   2.0
IIDJ   42.27 345 P      07 05.20   1.5
RKG    42.31 223 iPc    07 07.00   3.0
       0.6s   157.00nm          5.9mb
KAKJ   42.42 347 P      07 04.50  -0.2
CHJJ   42.53 346 P      07 05.70   0.0
TSRJ   42.87 342 P      07 09.80   1.4
SHK    43.07 338 iPd    07 11.40   1.3
       1.0s   900.00nm          6.4mb
MAT    43.20 345 iPd    07 10.50  -0.6
       1.1s   156.96nm          5.6mb
                 eS     13 33.00
SHNJ   43.31 336 eP     07 13.30   1.3
MTMJ   43.34 345 P      07 12.80   0.4
YONJ   43.37 339 iPd    07 14.30   1.7
```

18d 20h

NIIJ	43.67	347	P	07	15.50	0.6				e	12	57.00	138km	TDS	126.50	317	PKP	18	11.10	0.2
SSE	45.81	324	Pd	07	34.00	2.0	ABL	93.12	55	P	12	23.00	0.7	ARV	126.76	322	PKP	18	10.50	-0.8
	1.4s	352.00nm			5.9mb					pP	12	58.30	137km	SGO	126.77	318	PKP	18	10.50	-0.9
Z	18s	0.50um			4.5Msz		ISA	93.79	55	eP	12	25.00	-0.2	DUI	126.78	320	PKP	18	08.00	-3.5X
		pP	08	08.00	151kmX		PNT	93.82	41	eP	12	25.00	0.1	MGR	126.80	317	PKP	18	11.00	-0.5
		sP	08	21.00			PAS	93.94	56	eP	12	27.00	1.2	SNF	126.84	334	PKP	18	10.80	-0.4
		PP	09	22.50			MAIO	93.99	306	iPc	12	26.00	-0.1	FEL	126.89	329	ePKPc	18	10.69	-0.9
		S	14	08.00			MWC	94.04	56	eP	12	27.00	0.5	DOU	127.00	333	PKP	18	11.00	-0.5
		eSS	17	30.00			SBB	94.26	56	eP	12	27.00	-0.4	ASS	127.17	322	PKP	18	10.50	-1.7
KGM	47.79	278	eP	07	48.00	0.1	KVN	94.29	51	P	12	27.80	0.2	SFI	127.18	323	PKP	18	12.50	0.5
IPM	50.48	280	ePd	08	09.10	0.6				pP	13	02.20	133km	PGD	127.28	323	PKP	18	12.00	-0.5
SNG	51.40	283	eP	08	15.90	0.5	CLC	94.51	55	eP	12	29.00	0.5	CRE	127.29	323	PKP	18	11.00	-1.4
NST	54.13	294	eP	08	36.80	1.2	RVR	94.59	56	eP	12	27.00	-1.8	SOI	127.42	315	PKP	18	12.20	-0.5
BJI	55.12	328	Pd-	08	43.00	0.7	DPW	94.68	42	P	12	29.00	0.0	MNS	127.53	321	PKPc	18	11.40	-1.4
	1.8s	451.00nm			6.1mb		PEC	94.76	57	P	12	30.30	0.6	BSF	127.53	330	ePKP	18	12.20	-0.6
		epP	09	20.00	160kmX		TNP	94.93	52	P	12	30.40	-0.2	FIR	127.62	323	ePKP	18	13.00	0.1
		esP	09	36.00				0.8s		4.90nm			4.9mb	HAU	127.63	330	ePKP	18	12.50	-0.3
		eS	16	12.00						pP	13	06.40	140km	VAI	127.78	327	PKPc	18	12.00	-1.1
		esS	17	16.00			PLM	94.98	57	eP	12	31.00	0.1	BDI	127.84	324	PKP	18	12.00	-1.4
KMI	55.47	305	Pd-	08	46.00	0.6	MBC	95.10	14	eP	12	30.00	-0.3	RDP	127.84	321	PKP	18	13.10	-0.4
	2.0s	0.70nm			3.2mb	X		1.0s		11.00nm			5.2mb	BOB	128.08	325	PKP	18	13.70	-0.2
		pP	09	21.00	150kmX		BAR	95.11	58	eP	12	32.00	0.7	PII	128.08	324	PKP	18	12.00	-1.8
		sP	09	36.00			GLA	96.67	57	eP	12	40.00	1.6	LPG	129.10	328	ePKP	18	16.40	0.3
		S	17	23.00			EDM	97.82	37	ePd	12	43.00	-0.1	LOR	129.36	331	ePKP	18	16.30	0.2
BDT	55.66	295	eP	08	46.30	-0.3	SES	99.37	40	eP	12	50.00	-0.2	BNI	129.43	327	PKP	18	15.00	-1.5
CHG	56.24	297	eP	08	51.00	0.2	BW06	100.79	48	Pdiff	12	55.30	-1.7X	LBF	129.50	331	ePKP	18	16.40	-0.1
	1.1s	63.29nm			5.5mb			0.9s		2.97nm			4.9mb	SSF	129.67	331	ePKP	18	17.20	0.5
LZH	60.08	317	iPd	09	18.70	1.3				pP	13	31.20		PGF	129.67	323	ePKP	18	17.00	0.0
	1.5s	544.00nm			6.3mb		GOL	104.14	51	Pdiff	13	00.00	-12.0X	SBF	129.77	326	ePKP	18	16.60	-0.5
Z	20s	0.40um			4.6Msz		RSSD	104.68	46	Pdiff	13	13.30	-0.9X	SMF	129.81	331	ePKP	18	17.00	0.0
		pP	09	52.00	140km		KEV	106.12	342	ePKP	17	30.00	-1.0	AVF	129.94	331	ePKP	18	17.00	-0.2
		sP	10	07.00			SOD	107.44	340	ePdiff	13	25.00	-0.6X	FLN	130.20	335	ePKP	18	17.80	0.2
		ePP	11	25.00			SUF	109.93	336	iPdiff	13	36.40	-0.4X	BGF	130.35	331	ePKP	18	18.30	0.3
		i	12	21.00			SUF	109.93	336	ePKP	17	37.00	-1.4	FRF	130.41	326	ePKP	18	18.00	-0.2
		eS	17	20.00			NUR	111.64	334	ePdiff	13	49.00	4.6X	LMR	130.63	326	ePKP	18	18.60	0.0
		PS	18	03.00			NUR	111.64	334	ePKP	17	40.00	-1.7	LRG	130.64	326	ePKP	18	19.00	0.4
		sS	18	23.00			B8TK	114.62	312	ePKP	17	46.00	-2.3	GRR	130.65	335	ePKP	18	17.70	-0.8
		SS	21	18.00			FRB	115.18	18	ePKP	17	47.00	-1.4	MAF	130.73	331	ePKP	18	19.10	0.3
PMO	61.13	104	eP	09	25.00	0.4	SLR	116.15	238	iPKPd	17	50.00	-1.7	TCF	130.85	331	ePKP	18	19.40	0.4
	1.1s	115.00nm			5.7mb			0.8s		22.39nm				LPF	131.00	335	ePKP	18	19.60	0.4
TPT	61.40	104	eP	09	27.00	0.6	HFS	116.31	338	ePKP	17	49.00	-1.7	LSF	131.20	332	ePKP	18	19.40	-0.3
	1.1s	80.00nm			5.6mb			0.5s		2.20nm				MFF	131.71	333	ePKP	18	20.40	-0.2
SHL	64.68	301	iP	09	47.50	-0.6	NB2	116.61	339	PKP	17	50.00	-1.3	BCAO	132.25	271	ePKPd	18	17.60	-5.0X
KOD	74.45	282	eP	10	48.00	0.0		0.8s		7.50nm					0.6s		25.00nm			
HYB	74.59	290	eP	10	47.00	-1.4	BLF	116.63	234	iPKPc	17	51.50	-1.0				ic	18	23.00	
	1.0s	30.00nm			5.0mb		VRI	116.96	319	ePKP	17	50.00	-2.4				id	21	36.10	
GBA	75.00	286	P	10	50.00	-0.7	BFS	116.99	236	iPKPc	17	45.50	-7.7X	LPO	132.51	331	ePKP	18	23.00	0.8
NDI	78.09	301	iPd	11	05.50	-2.3	MLR	117.61	319	ePKP	17	53.00	-0.8	LFF	132.54	331	ePKP	18	23.00	0.8
SVW	78.12	24	ePd	11	07.80	0.5	BUL	117.67	244	iPKPc	18	09.00	14.3X	ARE	133.09	118	e(PKP)	18	25.00	0.5
TTA	79.02	22	ePd	11	12.10	-0.2		1.0s		40.00nm				CNCB	135.99	121	PKP	18	17.00	-13.3X
POO	79.19	290	eP	11	13.00	-1.0	KSP	120.79	328	ePKP	17	58.00	-1.5				i	21	42.00	
PMR	81.03	25	ePd	11	21.50	-1.3				e	19	05.50		LPB	136.01	120	PKP	18	19.00	-11.2X
	1.0s	32.50nm			5.0mb		POF	121.44	231	iPKPc	18	02.40	1.0				i	18	32.00	
IMA	81.65	20	ePd	11	25.80	-0.3		0.7s		16.44nm							i	21	52.00	
	0.9s	19.20nm			4.9mb		VAY	121.49	316	ePKP	17	59.40	-1.7	ZOBO	136.10	120	PKP	18	16.00	-14.5X
TOA	82.51	25	ePd	11	30.70	0.1	ZST	121.78	325	ePKP	18	01.30	-0.2		1.0s		36.25nm			
FBA	83.15	22	ePd	11	32.00	-1.7				e	19	39.00					i	18	31.00	
MAW	84.28	203	iPc	11	40.30	0.9	BRG	121.98	329	iPKP	18	01.00	-0.8				LR	38	40.00	
QUE	87.17	301	eP	11	53.80	-0.8		1.4s		28.00nm				ASMO	140.41	327	ePKP	18	29.00	-8.3X
		eS	32	51.00						e	19	34.00		AAPN	140.65	328	iPKPd	18	29.50	-8.3X
INK	89.69	21	ePd	12	04.80	-0.7				e	20	17.00		APHE	140.68	327	iPKPd	18	30.00	-7.8X
	1.2s	55.00nm			5.5mb		SKO	122.01	317	ePKP	18	05.00	2.9X	ALOJ	140.79	327	iPKPd	18	30.80	-7.2X
BRK	90.95	52	eP	12	12.50	0.6		1.0s		102.00nm				ATEJ	140.88	327	iPKPd	18	31.00	-7.2X
BKS	90.97	52	eP	12	13.90	1.9	SCH	122.18	25	ePKP	18	01.00	-1.0	IFR	143.97	324	iPKPc	18	41.50	-2.2
	0.7s	25.00nm			5.5mb		PRU	122.19	328	PKP	18	01.80	-0.4	AVE	145.43	326	iPKP	18	45.00	-1.0
WDC	91.01	50	ePc	12	12.80	0.6	CLL	122.20	330	iPKP	18	01.30	-0.8				i	19	09.00	
		e	12	46.80	131km			0.9s		19.00nm				TIO	147.09	323	iPKP	18	50.50	1.6
GCC	91.07	53	ePc	12	13.10	0.6				e	18	40.00		BAO	152.23	139	ePKP	18	53.00	-4.1X
BMW	91.15	44	P	12	13.30	0.5	OHR	122.80	316	ePKP	18	01.80	-1.9	KIC	155.45	274	PKP	19	00.70	-0.8
MHC	91.38	53	eP	12	14.80	0.7	KHC	123.20	328	iPKP	18	04.00	-0.2		1.3s		49.00nm			
ARN	91.47	53	P	12	15.00	0.6	MOX	123.30	330	ePKP	18	06.00	1.7	TIC	155.72	274	PKP	19	00.96	-0.9
PRS	91.50	54	ePc	12	15.40	0.9				e	19	48.00		LIC	155.74	273	PKP	19	01.00	-0.9
GMW	91.57	43	P	12	14.40	-0.2	WET	123.57	328	iPKPc	18	04.70	-0.3		1.4s		53.00nm			
		pP	12	50.00	138km		PTJ	123.66	323	ePKP	18	02.70	-2.6		S.D. = 1.0 on 199 of 223 obs.					
LBFM	91.58	49	P	12	15.70	0.6	GRF	124.09	329	ePKP	18	06.00	0.0	---						
		pP	12	51.00	137km		Z	19s		0.20um			4.8Msz	JAN 18, 1990 20h 57m 49.29± 0.16s						
ORV	91.70	51	ePc	12	15.60	0.2				e(PP)	19	48.00		20.760 S ± 5.5km 178.487 W ± 3.2km						
LLA	91.87	54	ePc	12	17.20	0.9	VBY	124.28	323	ePKP	18	02.50	-3.9X	DEPTH = 585.6km (14 depth phases,						
PRI	92.05	54	eP	12	18.80	1.6				i	18	07.40		5.7mb (40 obs.)						
LON	92.15	43	P	12	17.00	-0.4	KBA	124.52	326	ePKP	18	04.50	-2.6	FIJI ISLANDS REGION (181						
RMW	92.22	43	P	12	18.00	0.3		0.9s		6.90nm				CENTROID, MOMENT TENSOR (HRV						
CMB	92.44	52	iPc	12	19.50	0.6	FVI	125.12	326	PKP	18	08.00	0.1	Data Used: GDSN						
		e	12	53.70	132km		ABH	125.78	331	ePKPc	18	09.05	-0.2	L.P.B.: 12S, 24C						
BCH	92.44	55	P	12	20.10	1.1	EKA	125.84	342	PKPd	18	08.90	-0.2	Centroid Location:						
SYP	92.48	56	eP	12	17.00	-2.2		2.4s		354.50nm				Origin Time 20:57:56.8 0.(						
VGB	92.76	45	P	12	20.10	-0.1	MEM	126.00	333	iPKPc	18	09.30	-0.2	Lat 20.53S 0.07 Lon 178.87W 0.0						
FRI	92.89	53	iPc	12	21.50	0.6	CTI	126.07	326	PKP	18	09.00	-1.1	Dep 593.2 4.2 Half-duration 2.5						

Moment Tensor; Scale 10**17 Nm
Mrr=-0.77 0.14 Mtt= 1.64 0.25
Mff=-0.87 0.21 Mrt=-2.19 0.19
Mrf=-3.61 0.18 Mtf=-0.76 0.16
Principal Axes:
T Val= 3.55 Plg=42 Azm=143
N 1.53 15 40
P -5.08 44 295
Best Double Couple:Mo=4.3*10**17
NP1:Strike=305 Dip=15 Slip= -4
NP2: 39 89 -105

SVA	3.90	312	iPc	59	12.30		-1.2
			eS	00	16.30		
MBU	4.60	324	iPd	59	18.90		0.2
SGE	4.63	312	iP	59	19.40		0.3
			eS	59	38.00		
			e	00	20.00		
NDF	4.86	307	iPc	59	20.00		-0.7
			e	59	48.00		
			e	00	02.00		
PVC	12.82	281	iPd	00	37.20		1.0
DZM	14.10	262	iPd	00	49.60		0.7
			iS	03	17.90		
			ScP	08	06.80		
			ScS	11	49.00		
HNR	23.64	295	eP	02	16.00		-2.0
MSZ	26.37	202	e(P)	02	42.00		0.2
TBI	27.01	101	iP	02	47.20		-0.3
	1.0s	80.00nm				5.3mb	
BRS	27.02	250	iPc+	02	48.10		0.4
			i	02	58.50		38kmX
			e	03	08.00		
			i(PP)	04	20.00		
			i	06	37.00		
			iS	06	47.00		
			iScP	09	38.00		
			iScS	12	33.00		
AFR	27.29	88	iP	02	49.00		-1.1
	1.5s	555.00nm				6.0mb	
PPT	27.48	88	iP	02	50.80		-0.9
	1.5s	575.00nm				6.0mb	
			epP	04	17.00		
PPN	27.62	88	iP	02	51.60		-1.3
	1.5s	320.00nm				5.7mb	
			epP	04	19.00		
PMO	29.64	84	iP	03	09.30		-1.0
	1.5s	435.00nm				5.9mb	
			epP	04	39.00		
VAH	29.83	85	iP	03	10.30		-1.6
	1.5s	280.00nm				5.7mb	
			epP	04	40.00		
TPT	29.90	84	iP	03	11.60		-1.0
	1.5s	465.00nm				5.9mb	
			epP	04	42.00		
RUV	30.07	85	iP	03	12.80		-1.2
	1.5s	475.00nm				5.9mb	
			epP	04	43.00		
RMO	30.50	253	iPd	03	19.10		1.5
	1.0s	363.00nm				6.0mb	
			e	08	51.00		
CNB	31.70	236	iPc	03	28.80		1.1
	0.8s	246.00nm				5.9mb	
			e	05	10.00		
			e	08	54.00		
CAN	31.99	236	eP	03	31.00		0.9
CTA	33.01	265	iPd-	03	39.00		0.2
	1.2s	890.63nm				6.3mb	
			iS	08	17.00		
			iScP	08	57.20		
			iSS	11	20.00		
			iScS	13	00.20		
CMS	33.64	244	iPd	03	44.40		0.5
OLP	34.55	253	iPd	03	52.20		0.7
PMG	34.96	284	iPd	03	54.90		-0.1
TOO	35.38	234	iPd	03	59.40		1.1
			e	09	06.00		
LAT	36.24	288	eP	04	06.00		0.5
BFD	37.51	236	ePd	04	16.20		0.4
			e	09	12.00		
MNDI	39.44	286	eP	04	32.80		0.9
ADE	40.10	240	iPd	04	36.90		0.1
	0.8s	164.18nm				5.6mb	
RKT	40.32	102	iP	04	38.20		-0.4
	1.2s	130.00nm				5.4mb	
ASPA	44.02	257	iPd	05	07.50		-0.3
	1.1s	1237.00nm				6.4mb	

			iScP	09	40.00		
			iS	10	57.30		
			iScS	14	04.20		
WB5	44.10	263	iPd	05	07.20		-1.2
			eS	10	57.30		
WRA	44.11	262	Pc	05	08.40		-0.1
	0.9s	250.20nm				5.7mb	
MTN	48.71	271	iPd	05	41.10		-2.4
FORR	48.74	247	iPd	05	42.00		-1.5
	0.4s	162.00nm				5.9mb	
GUA	49.55	310	eP	05	48.80		-0.8
	1.0s	1640.00nm				6.5mb	
TLE	49.58	281	ePd	05	47.00		-2.9X
	0.8s	21.00nm				4.7mb	
GUMO	49.62	310	eP	05	49.40		-0.7
	1.0s	1104.00nm				6.3mb	
PJG	49.62	310	eP	05	49.40		-0.7
WARB	50.32	253	iPd	05	54.70		-0.5
	0.3s	42.00nm				5.4mb	
AAI	54.52	281	eP	06	24.00		-1.4
COOL	54.71	246	eP	06	25.00		-1.6
MBL	57.26	258	eP	06	43.00		-1.2
	0.7s	324.00nm				5.7mb	
MEKA	57.48	251	eP	06	44.90		-0.7
KLB	57.53	245	eP	06	45.00		-0.9
	0.7s	121.00nm				5.3mb	
NWAO	57.84	244	eP	06	47.00		-1.1
RKG	57.93	242	iPd	06	48.10		-0.6
	0.6s	260.00nm				5.7mb	
BAL	58.53	246	eP	06	52.00		-0.7
	0.7s	153.00nm				5.4mb	
MUN	58.80	245	eP	06	54.00		-0.5
	0.9s	387.00nm				5.7mb	
MRWA	59.33	248	iPd	06	57.30		-0.7
NANU	60.89	255	eP	07	08.00		-0.3
DAV	61.51	291	eP	07	11.90		-0.5
MKS	62.04	275	iPc	07	17.00		1.1
			e	08	08.00	222kmX	
KHKI	64.60	270	ePd	07	30.50		-1.7
			e	07	38.50	26kmX	
TSM	66.95	284	ePc	07	48.80		2.2
KAKJ	68.83	325	P	07	56.80		-0.7
CHJJ	69.36	324	P	08	00.10		-0.6
KKM	69.38	285	ePd	08	02.50		1.1
	1.3s	478.00nm				5.9mb	
IIDJ	69.54	323	P	08	01.00		-0.9
WKYJ	69.99	321	eP	08	04.10		-0.4
MAT	70.15	324	iPd	08	04.30		-1.1
	1.5s	313.89nm				5.6mb	
NIIJ	70.23	325	P	08	05.10		-0.7
OFUJ	70.24	328	eP	08	05.00		-0.8
BAG	70.28	297	eP	08	05.50		-1.2
YAMJ	70.38	326	P	08	06.50		-0.1
MTMJ	70.40	324	P	08	06.40		-0.5
TSRJ	70.68	322	P	08	08.40		0.0
TKSJ	70.75	320	eP	08	08.50		-0.4
YONJ	71.92	320	eP	08	15.20		-0.5
KUSJ	72.00	333	eP	08	15.60		-0.3
HOOJ	72.06	331	eP	08	16.90		0.7
SHNJ	72.66	318	eP	08	18.60		-1.3
MRRJ	73.11	330	eP	08	21.60		-0.6
ASAJ	73.72	332	P	08	26.70		1.0
SSE	77.50	310	Pd	08	47.00		0.3
	1.0s	75.00nm				5.1mb	
Z	24s	0.80um				5.0MszX	
			sP	09	02.00		
			PP	11	48.20		
			S	18	05.00		
BLP	77.92	46	P	08	49.40		0.6
SYP	78.18	46	eP	08	51.00		0.6
PRS	78.32	44	iPc	08	51.80		0.9
			e	10	55.90	588km	
GCC	78.34	43	ePc	08	51.30		0.3
PCC	78.38	42	ePc	08	51.50		0.3
BCH	78.49	45	P	08	52.40		0.4
			pP	10	56.40	587km	
SAO	78.53	43	ePc	08	52.20		0.2
NWRM	78.65	41	P	08	52.80		0.3
PRI	78.67	44	ePc	08	54.00		1.1
BRK	78.68	42	ePc	08	53.30		0.6
BKS	78.70	42	iPc	08	53.70		0.8
	0.9s	131.00nm				5.4mb	
MHC	78.75	43	ePc	08	54.30		1.0
LLA	78.77	44	ePc	08	53.50		0.2
ARN	78.82	43	P	08	54.00		0.4
			pP	10	58.00	586km	
ABL	78.88	46	P	08	54.20		0.0

			pP	10	58.10	586km	
PAS	79.19	47	eP	08	55.00		-0.5
MWC	79.31	47	eP	08	58.00		1.6
BAR	79.43	49	eP	08	57.00		0.2
FHC	79.44	39	ePc	08	57.80		1.1
RVR	79.66	48	eP	08	58.00		0.1
PLM	79.66	48	eP	08	58.00		-0.2
KGM	79.69	276	ePc	09	00.50		2.0
SBB	79.73	47	eP	08	58.00		-0.4
			e	11	02.00	584km	
PEC	79.75	48	P	09	00.80		2.3
			pP	11	02.80	572kmX	
FRI	79.79	44	ePc	08	58.80		0.3
ISA	79.84	46	eP	09	00.00		1.0
CMB	79.96	43	iPc	09	00.00		0.5
			e	11	02.50	575kmX	
WDC	80.16	40	iPc	09	01.20		0.8
			ePcP	09	07.40	579km	
			e	11	04.50		
ORV	80.17	41	ePc	09	01.00		0.5
LTCM	80.19	40	P	09	00.40		-0.2
CLC	80.52	46	eP	09	02.00		-0.5
			e	11	07.00	589km	
MIN	80.58	40	ePc	09	03.00		0.2
AIA	80.91	157	eP	09	05.40		1.5
GLA	80.94	50	eP	09	06.00		1.3
LBFM	81.02	40	P	09	05.70		0.6
			pP	11	10.40	586km	
KVN	82.01	43	P	09	10.30		0.2
			pP	11	15.20	585km	
TNP	82.03	44	P	09	10.40		0.1
			pP	11	15.10	583km	
IPM	82.75	278	ePd	09	16.00		1.9
	1.0s	301.30nm				5.8mb	
BMW	83.46	35	P	09	17.30		0.3
			pP	11	25.00	598kmX	
SVW	83.64	11	e(P)	09	17.10		-0.5
SHW	83.82	36	P	09	19.50		0.6
PSI	84.02	275	ePd	09	21.80		1.4
	0.8s	35.40nm				5.0mb	
			e	12	42.50		
			e	14	45.00		
SNG	84.08	280	iPd	09	22.60		2.0
	1.0s	344.00nm				5.9mb	
VGB	84.21	37	P	09	20.30		-0.4
GMW	84.37	34	P	09	21.90		0.5
			pP	11	25.80	574kmX	
LON	84.39	35	P	09	20.90		-0.7
PGC	84.73	33	eP	09	23.00		0.0
RMW	84.84	35	P	09	23.90		0.2
MCW	85.06	33	P	09	25.70		1.0
			pP	11	31.30	583km	
TTA	85.28	10	eP	09	25.20		-0.3
PMR	85.38	14	eP	09	25.40		-0.5
	1.3s	84.90nm				5.3mb	
MSU	85.62	46	P	09	28.30		0.4
			pP	11	35.00	588km	
BJI	85.76	316	Pd-	09	29.00		0.8
	1.5s	197.00nm				5.6mb	
			epP	11	40.00	614kmX	
			esP	12	28.00		
			eSKS	18	57.00		
			eS	19	16.00		
DUG	86.06	44	P	09	30.00		0.1
	0.8s	4.17nm				4.2mb	X
			pP	11	36.50	586km	
PCT	86.16	287	eP	09	32.00		1.4
TOA	86.50	15	eP	09	31.70		0.3
NNT	86.89	285	iPd	09	36.00		1.9
DPW	87.03	36	P	09	34.00		-0.2
PNT	87.12	34	iPc	09	35.20		0.6
	1.2s	88.00nm				5.4mb	
DAU	87.19	45	P	09	35.20		-0.3
			pP	11	42.80	591km	
PPM	87.63	69	iP	09	39.30		1.1
NST	87.68	288	iPd	09	40.00		2.3
			e	13	15.00		
PTI	87.72	42	P	09	38.20		0.5
ALQ	87.92	51	eP	09	36.70		-2.2
	1.9s	92.11nm				5.3mb	
IMA	88.58	10	eP	09	40.50		-0.6
FBA	88.59	13	eP	09	39.60		-1.4
KMI	89.06	297	Pd-	09	46.00		1.7
	2.0s	0.70nm				3.2mb	X
			PcP	09	56.50		
			pP	10	06.00	72kmX	
			PP	12	40.00		

18d 21h

			S	19	20.00		FAM	148.13	303	ePKP	16	31.30	4.2X	GWF	151.42	352	PKP	16	38.43	6.7X
			sS	19	55.00		MLR	148.19	326	ePKPc	16	27.00	-0.1	EZN	151.52	317	iPKP	16	37.80	5.7X
LRM	89.20	40	eP	09	44.80	0.2	CLL	148.21	346	iPKPc	16	26.90	0.2	FUR	151.55	346	ePKP	16	32.20	0.3
BDT	89.27	289	eP	09	46.90	1.9		1.6s		26.00nm							i	16	39.10	
	1.0s	268.40nm				6.1mb	BRG	148.39	345	iPKP	16	26.60	-0.5				i	16	50.50	
BW06	89.47	43	P	10	05.00	19.2X				i	16	31.40		BHG	151.57	344	ePKP	16	38.50	6.6X
CHG	89.90	290	iPd	09	49.30	1.3				i	16	36.60					i	16	50.60	
	1.0s	156.50nm				5.9mb				epPKP	18	48.00		VTS	151.61	325	iPKP	16	39.00	6.6X
			e	13	36.00		LFK	148.41	304	iPKP	16	31.90	4.2X	HLW	151.62	295	ePKP	16	40.00	7.5X
GOL	90.83	48	P	09	52.00	-0.2	PRNI	148.42	294	ePKP	16	33.00	5.2X	IZM	151.68	314	ePKP	16	37.00	4.6X
	1.0s	40.00nm				5.4mb	WTS	148.55	354	ePKP	16	32.00	4.8X	STR	151.79	351	PKP	16	39.89	7.7X
			pP	12	05.00	617kmX		0.9s		80.00nm				PRK	151.88	316	ePKP	16	52.20	19.6X
SES	92.35	36	ePc	09	58.20	-0.4				e	18	47.00		WLS	152.01	352	PKP	16	39.66	7.1X
LZH	92.56	308	P	09	59.60	-0.5	MBH	148.61	293	e(PKP)	16	33.00	5.0X	FLN	152.82	3	ePKP	16	39.40	6.9X
	1.2s	114.00nm				5.8mb	CSS	148.67	304	ePKP	16	31.80	3.8X	CDF	152.02	352	PKP	16	39.51	6.8X
			pP	12	12.00	612kmX	GPA	148.68	315	iPKP	16	32.00	4.1X	KBA	152.04	343	iPKPc	16	38.30	5.4X
			ePP	13	49.00		GBZT	148.99	316	ePKP	16	32.00	3.7X		0.8s		14.40nm			
			i	15	35.00		PRU	149.05	344	ePKP	16	28.20	0.1				ipPKP	16	50.30	
			SKS	19	38.00					iP'P'	16	32.80					isPKP	17	00.50	
			S	20	21.00					i	16	39.70					ePP	18	52.50	
EDM	92.58	33	eP	09	59.00	-0.6				pPKP	18	49.00					e	20	16.00	
INK	94.64	15	eP	10	08.00	-0.7	ITU	149.10	317	ePKP	16	33.00	4.6X	KKB	152.17	324	iPKP	16	40.00	7.0X
CNCB	102.28	113	Pdiff	10	49.20	4.4X	PSZ	149.11	336	iPKP	16	32.60	4.2X	LDF	152.20	2	ePKP	16	39.80	7.0X
			i	15	11.00		MOX	149.13	347	ePKP	16	28.00	-0.2	ECH	152.23	352	PKP	16	41.02	8.1X
LPB	102.30	113	Pdiff	10	49.00	4.2X		1.9s		47.00nm				PTJ	152.26	338	ePKP	16	39.50	6.4X
			e	15	18.00					epPKP	18	48.00		ZAG	152.33	338	iPKP	16	39.50	6.5X
KOD	106.60	275	ePKP	15	21.80	10.8X	YLV	149.16	316	iPKP	16	33.80	5.1X	GRR	152.37	3	ePKP	16	40.40	7.4X
GBA	107.68	278	PKP	15	28.00	15.4X	HOF	149.39	347	ePKP	16	28.80	0.2	VITF	152.37	354	PKP	16	40.41	7.4X
HYB	107.77	282	ePKP	15	16.00	3.2X				i	16	33.70		SRS	152.38	322	ePKP	16	39.80	6.5X
			e	15	38.50					i	16	40.80		FEL	152.44	351	ePKPc	16	33.72	0.4
NDI	111.80	294	ePKP	15	19.00	-1.1	ALT	149.42	313	ePKP	16	29.00	-0.1	FEL	152.44	351	PKP	16	40.54	7.2X
DAG	123.03	5	ePKP	15	38.00	-2.2	CTT	149.45	318	ePKP	16	27.00	-2.0	HAU	152.54	353	ePKP	16	41.00	7.7X
MAIO	127.48	300	iPKPc	15	50.40	0.3	PPCY	149.46	304	e(PKP)	16	33.50	4.3X	MOF	152.59	352	PKP	16	40.87	7.4X
KEV	128.64	349	ePKP	15	45.00	-6.1X	SRO	149.79	337	iPKP	16	35.20	6.0X	LJU	152.61	340	ePKP	16	40.50	7.0X
SOD	130.75	347	ePKP	15	55.00	-0.2				i	16	43.70					e	16	53.50	
IR4	134.51	299	ePKP	15	51.00	-12.6X	BCK	149.80	310	iPKP	16	34.70	5.0X	FVI	152.64	343	PKP	16	40.00	6.6X
IR1	134.67	300	ePKP	15	50.00	-13.9X	JMB	149.80	321	ePKP	16	35.00	5.6X	OUR	152.66	321	ePKP	16	40.60	6.9X
IR7	134.71	300	ePKP	16	03.00	-0.9	BUD	149.80	336	iPKP	16	34.80	5.5X	BSF	152.66	352	PKP	16	40.93	7.3X
SUF	134.81	344	ePKP	15	54.00	-9.0X		1.2s		53.01nm				SOH	152.71	322	ePKP	16	40.10	6.3X
NUR	137.06	343	ePKP	16	07.00	-0.4	ENN	149.85	354	ePKP	16	35.00	5.8X	LPF	152.71	4	ePKP	16	41.10	7.6X
	0.6s	10.40nm						0.9s		46.00nm				KNT	152.75	323	ePKP	16	40.50	6.7X
TAB	137.76	304	ePKP	16	00.00	-9.6X				e	16	42.00		VAY	152.82	324	ePKP	16	33.00	-0.9
RYD	138.36	284	ePKP	16	01.00	-9.9X				e	18	50.00			1.2s		0.27nm			
NB2	139.18	353	PKP	16	02.00	-9.3X	ZST	149.88	339	ePKP	16	19.50	-9.9X				iPKKP	16	40.50	
	0.8s	11.10nm								i	16	35.20					i	16	56.00	
HFS	139.72	351	ePKP	16	03.50	-8.7X				i	16	43.80		VOY	152.82	341	ePKP	16	41.00	7.1X
	0.4s	8.10nm								e	18	50.90		VBY	152.85	339	iPKPd	16	42.00	8.2X
BHD	140.08	297	ePKPd	16	08.50	-5.2X	MEM	150.00	354	PKP	16	35.20	5.8X				ipPKP	19	00.40	
MSL	140.58	302	ePKPd	16	12.50	-2.0				e	18	51.30		BBS	152.92	351	PKP	16	41.77	7.9X
AAE	142.26	258	ePKP	16	17.00	-1.5	PVL	150.03	324	iPKPc	16	29.00	-0.8	CEY	152.92	340	ePKP	16	41.50	7.6X
KVT	144.44	313	iPKP	16	22.30	1.2	VKA	150.08	340	ePKPd	16	35.00	5.3X				i	16	55.50	
EKA	145.30	5	PKP	16	23.00	1.0	KHC	150.09	344	iPKPc	16	30.50	0.7	SKO	152.98	326	ePKP	16	33.10	-1.0
	1.8s	141.20nm								i	16	36.10			1.5s		101.00nm			
KAS	145.86	314	iPKPc	16	24.20	0.8				i	16	45.00					iPKKP	16	42.10	
SHBJ	145.90	297	PKPd	16	17.00	-6.8X				ipPKP	18	53.50					i	16	56.70	
DMU	146.30	9	ePKP	16	25.60	2.0	GRF	150.11	347	ePKP	16	29.80	0.1				i	18	59.00	
DCN	146.78	10	ePKP	16	26.60	2.2				id	16	36.00		THE	153.06	322	ePKP	16	41.30	7.1X
	0.6s	65.00nm								e	16	43.20		LOMF	153.12	352	PKP	16	42.14	7.9X
DLE	146.94	9	ePKP	16	27.40	2.7				e(PP)	18	52.00		GRG	153.16	323	ePKP	16	33.30	-1.1
	0.8s	55.00nm					DST	150.14	315	iPKP	16	35.50	5.4X	BCI	153.39	328	ePKP	16	42.60	8.0X
MDSJ	147.13	296	PKPc	16	34.20	8.4X	KHL	150.17	312	iPKP	16	35.80	5.5X	CTI	153.44	344	PKP	16	42.50	7.8X
BBTK	147.23	312	ePKP	16	25.00	-0.8	BNT	150.21	317	iPKP	16	36.80	6.6X	LOR	153.49	356	ePKP	16	43.10	8.5X
			e	18	16.00		BZS	150.21	331	ePKP	16	29.50	-0.4	LIT	153.68	322	ePKP	16	34.10	-1.0
SHMJ	147.31	299	PKPd	16	41.90	15.9X	SNF	150.23	356	PKP	16	37.20	7.4X	SSF	153.71	357	ePKP	16	43.70	8.8X
KRA	147.32	338	ePKP	16	24.40	-1.0	EDC	150.25	317	iPKP	16	36.00	5.8X	LBF	153.76	356	ePKP	16	43.80	8.8X
	1.0s	56.00nm					WET	150.25	345	ePKP	16	30.40	0.4	OHR	153.93	325	ePKP	16	35.50	0.0
			e	16	28.00					i	16	36.30					iPKKP	16	43.60	
			e	16	32.20					i	16	45.20					i	17	00.10	
BURJ	147.38	298	PKPd	16	41.00	14.8X	SOP	150.51	339	iPKPd	16	37.60	7.2X	SDA	153.93	328	ePKP	16	44.00	8.7X
QUTJ	147.39	296	PKPd	16	44.00	17.8X	ABH	150.55	352	ePKP	16	30.61	0.2	AVF	153.99	357	ePKP	16	43.80	8.5X
VRI	147.53	326	ePKPd	16	29.00	3.1X	ELL	150.59	309	ePKP	16	35.00	4.0X	MFF	154.19	3	ePKP	16	44.20	8.7X
KFNJ	147.57	297	PKPc	16	32.00	5.7X	DOU	150.62	356	iPKP	16	36.90	6.5X	BGF	154.24	358	ePKP	16	44.80	9.2X
BRD	147.60	326	ePKPc	16	31.00	5.0X				e	18	54.00		TIR	154.25	327	ePKP	16	45.00	9.2X
TLB	147.66	323	ePKPd	16	30.00	3.9X	TOD	150.64	350	ePKPc	16	30.72	0.2	AGG	154.47	320	ePKP	16	35.00	-1.2
MKRJ	147.66	296	PKPc	16	39.80	13.2X	DIM	150.67	322	ePKP	16	32.00	1.2	TCF	154.53	359	ePKP	16	45.20	9.1X
WIT	147.76	354	ePKP	16	31.00	5.0X	RUP	150.79	353	ePKPc	16	31.46	0.7	LSF	154.57	360	ePKP	16	45.10	9.0X
			e	18	45.00		AMAN	150.80	282	iPKPc	16	38.50	7.0X	MAF	154.59	358	ePKP	16	45.40	9.3X
KSP	147.80	342	ePKP	16	25.50	-0.7	AGAL	150.89	281	ePKP	16	39.00	7.4X	LSK	154.72	324	ePKP	16	37.30	0.7
	1.3s	174.00nm					KDZ	150.99	321	iPKPd	16	38.00	6.7X	LPG	154.95	351	ePKP	16	47.20	10.2X
			id	16	29.80		AKRL	151.00	282	iPKPc	16	39.00	7.2X	ARV	155.40	340	PKP	16	37.00	-0.3
			i	16	33.20		PLD	151.11	323	ePKP	16	38.00	6.6X	BNI	155.40	351	PKP	16	39.00	1.6
			e	18	44.00		AGMR	151.16	281	iPKPc	16	40.00	8.0X	BDI	155.56	344	PKP	16	37.50	-0.1
DSI	147.87	297	e(PKP)	16	31.00	4.2X	KOT	151.19	295	ePKP	16	38.50	6.6X	ASS	155.87	340	PKP	16	47.50	9.4X
SPC	147.93	337	ePKP	16	22.70	-4.0X	RDO	151.23	320	ePKP	16	49.30	17.7X	MNS	156.48	339	PKP	16	37.50	-1.3
			i	16	31.70		BEO	151.34	331	iPKP	16	38.30	6.6X				i	17	10.60	
			e	18	43.70					i	16	49.00		BCAO	156.82	228	iPKPc	16	41.40	1.4
ISR	148.11	325	ePKPc	16	30.50	3.6X	RZN	151.37	322	ePKP	16	39.00	6.9X		0.5s		44.00nm			

			ic	17	15.40	
			id	17	43.70	
			id	19	28.70	
MGR	157.26	331	PKP	16	37.50	-2.3
			i	17	13.60	
TOL	160.35	13	ePKP	16	28.50	-14.7X
LIC	164.22	155	PKP	16	47.32	-0.3
	1.2s		26.00nm			
KIC	164.46	156	PKP	16	47.78	-0.1
	0.9s		13.00nm			
TIC	164.61	155	PKP	16	47.66	-0.4
	1.0s		10.50nm			

S.D. = 1.0 on 201 of 321 obs.

JAN 18, 1990 21h 03m 22.89± 0.22s
44.271 N ± 1.7km 7.385 E ± 2.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (LDG), 2.5 (GEN).

ENR	0.05	151	P	03	24.73	-0.4
			S	03	26.06	
STV	0.05	238	P	03	24.62	-0.5
			S	03	25.96	
DOI	0.25	337	Pc	03	28.50	0.2
			eSg	03	31.80	
TOUF	0.28	201	Pg	03	28.88	0.1
AUTN	0.28	174	Pg	03	28.97	0.2
			Sg	03	32.50	
PZZ	0.31	319	P	03	29.24	-0.2
			S	03	33.75	
SAOF	0.31	157	Pg	03	29.49	0.1
			Sg	03	33.78	
ROB	0.35	86	P	03	30.57	0.4
			S	03	35.49	
AURF	0.39	186	Pg	03	30.79	-0.1
			Sg	03	36.31	
SBF	0.41	175	Pg	03	31.30	0.0
			Sg	03	37.00	
MVIF	0.41	204	Pg	03	31.55	0.2
FOUF	0.50	301	ePgc	03	32.63	-0.5
			e(Sg)	03	39.40	
IMI	0.51	135	P	03	33.14	-0.1
			S	03	40.42	
REVF	0.53	181	Pg	03	33.67	0.0
			Sg	03	40.47	
FIN	0.59	96	P	03	34.88	-0.1
			S	03	42.88	
CALN	0.63	215	Pg	03	35.76	0.1
CKI	0.66	76	Pc	03	36.00	0.0
			eSg	03	42.00	
RRL	0.78	327	P	03	37.85	-0.4
			S	03	48.62	
PCP	0.87	72	P	03	40.42	0.7
RSP	0.88	354	P	03	38.89	-1.1
FRF	0.89	217	Pg	03	40.80	0.9
			Sg	03	51.00	
BNI	0.93	327	P	03	40.70	-0.1
			eSg	03	52.80	
LRG	1.10	223	Pg	03	43.70	0.1
			Sg	03	57.80	
LMR	1.13	214	Pg	03	44.40	0.3
			Sg	03	59.00	
LSD	1.20	352	P	03	45.95	0.6
LPG	1.31	340	Pg	03	47.70	0.4
			Sg	04	50.00	
LPL	1.33	340	Pg	03	48.00	0.4
PGF	2.09	145	Pn	03	57.00	-1.4

S.D. = 0.5 on 28 of 28 obs.

? JAN 18, 1990 22h 12m 16.42± 0.91s
35.985 N ±10.7km 27.252 E ± 9.3km
DEPTH = 33.0km (normal)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.44	188	ePb	12	26.00	-0.1
			eSb	12	34.70	
ARG	0.74	72	ePn	12	30.50	0.0
NPS	1.52	242	ePn	12	41.70	0.1
APE	1.76	308	ePn	12	45.00	-0.1

S.D. = 0.2 on 4 of 4 obs.

? JAN 18, 1990 22h 51m 08.50±14.93s
41.902 N ±102.km 23.182 E ±17.7km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)
ML 2.4 (THE).

KNT	0.77	196	ePgc	51	23.20	-0.3
			eSg	51	33.40	
SRS	0.84	158	ePg	51	24.70	-0.1
			eSg	51	36.60	
SOH	1.09	173	ePgc	51	29.10	0.1
			eSg	51	43.80	
GRG	1.11	212	ePg	51	29.50	0.1
			eSg	51	44.40	
THE	1.28	187	ePb	51	32.40	0.2

S.D. = 0.3 on 5 of 5 obs.

JAN 18, 1990 23h 53m 20.22± 0.67s
33.730 S ± 7.8km 69.951 W ± 4.9km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

PCH	0.48	283	iPc	53	30.30	0.3
FCH	0.49	325	iPc	53	21.00	-9.3X
			iS	53	39.00	
CHCH	0.62	251	iPc	53	32.00	-0.7
			iS	53	41.00	
SAN	0.65	295	iPc	53	33.20	-0.1
			iS	53	43.50	
TACH	0.83	275	iPc	53	36.50	0.3
			iS	53	48.40	
ROCH	1.17	310	iPc	53	42.50	0.3
			iS	53	59.60	
JACH	1.18	333	iPd	53	43.00	0.8
			iS	54	00.00	
LNV	1.24	259	iPc	53	42.80	-0.4
			iS	54	00.00	
LCCH	1.37	280	iPd	53	45.60	0.2
			iS	54	04.50	
RFA	1.61	131	iPc	53	49.00	0.2
			S	54	05.00	
RTBS	2.11	12	e(P)	54	26.00	30.1X
RTCV	2.21	33	ePc	54	12.10	14.5X
RTLL	2.70	28	eP	54	02.50	-2.0
RTRS	3.57	7	e(P)	54	02.60	-14.2X
MRA	3.80	71	e(P)	54	21.20	1.2

S.D. = 0.9 on 11 of 15 obs.

JAN 19, 1990 01h 08m 00.44± 0.76s
34.162 N ± 9.7km 26.567 E ± 5.9km
DEPTH = 84.0 ± 16.3 km
3.8mb (1 obs.)
CRETE (370)

NPS	1.35	325	iPc	08	25.50	1.1
KAP	1.47	20	eP	08	25.20	-0.7
VAM	2.31	303	eP	08	38.78	1.6
APE	3.02	344	eP	08	47.00	0.0
KSL	3.15	51	eP	08	48.00	-0.8
CIN	3.65	19	eP	08	57.00	1.4
ELL	3.75	46	ePn	08	56.70	-0.6
VLI	3.91	312	eP	08	59.00	-0.3
BCK	4.64	44	ePn	09	09.20	-0.4
ITM	4.83	310	eP	09	12.00	-0.2
LFK	5.84	77	ePn	09	26.00	-0.3
KOT	6.14	132	ePn	09	30.50	0.1
			eSn	10	31.00	
VLS	6.28	311	eP	09	33.70	1.4
PRNI	8.09	116	eP	09	58.00	0.8
MBH	8.31	120	eP	10	00.00	-0.2
			e(S)	11	25.00	
SOI	9.36	298	P	10	13.60	-0.9
			eSn	11	48.80	
ROI	9.66	307	P	10	18.50	-0.1
CZI	9.78	304	P	10	18.10	-2.1
CSI	9.95	307	P	10	23.90	1.3
MGR	10.62	307	P	10	28.80	-2.7
HFS	27.32	346	eP	13	40.50	1.7
	0.5s		1.60nm		3.8mb	

S.D. = 1.3 on 21 of 21 obs.

? JAN 19, 1990 02h 23m 00.19± 0.89s
31.679 S ± 8.0km 116.975 E ± 8.4km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

KLB	0.68	83	iPd	23	13.30	-0.3
			iS	23	22.00	
MUN	0.72	245	eP	23	14.00	-0.3
			eS	23	23.00	
BAL	1.09	348	eP	23	21.00	0.3
			eS	23	35.00	
NWAO	1.26	170	eP	23	24.00	0.3
			eS	23	39.00	
RKG	2.38	179	eP	23	51.00	11.1X
			iS	24	26.70	

S.D. = 0.6 on 4 of 5 obs.

& JAN 19, 1990 02h 52m 31.31s
61.715 N 150.352 W
DEPTH = 45.7km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.1 (PMR).

PWA	0.23	106	iPd	52	39.20	-0.3
SUA	0.31	217	eP	52	40.17	-0.2
			eS	52	48.06	
PLRM	0.60	101	iP	52	42.23	-1.3
PMR	0.60	101	iPc	52	42.30	-1.3
PMS	0.61	141	iPc	52	42.60	-1.2
PME	0.64	97	eP	52	42.99	-1.1
GHO	0.68	85	eP	52	43.83	-1.0
			eS	52	55.34	
CUT	0.69	3	eP	52	44.21	-0.7
SPU	0.98	238	eP	52	48.21	-0.7
			eS	53	01.89	
NKA	1.07	204	eP	52	51.26	1.2
SLKM	1.21	177	eP	52	50.80	-1.4
			eS	53	07.83	
HUR	1.31	14	eP	52	53.52	0.0
			eS	53	10.75	
RDT	1.52	222	eP	52	55.81	-0.7
			eS	53	16.57	
SEW	1.68	164	eP	52	57.81	-0.8
NCA	1.70	79	eP	52	58.48	-0.5
NNL	1.74	196	eP	53	00.15	0.6
GLI	1.78	117	eP	52	58.40	-1.8
RND	1.83	22	eP	53	00.68	-0.3
VZW	1.94	108	P	53	01.14	-1.4
TOA	2.02	77	ePd	53	03.50	-0.1
MCK	2.13	17	eP	53	04.93	-0.2
KLU	2.13	94	eP	53	03.51	-1.7
CNPM	2.24	192	eP	53	06.57	-0.1
SDG	2.40	68	eP	53	09.81	0.8
PAX	2.60	59	eP	53	11.91	-0.1
SVW	2.61	259	iPc	53	10.50	-1.5
PDB	2.70	226	eP	53	11.89	-1.4
TTA	2.91	297	iPc	53	14.80	-1.5
DDM	2.93	43	eP	53	17.73	1.1
HDA	3.11	28	eP	53	18.26	-0.9
GLB	3.14	92	eP	53	17.29	-2.3
CCB	3.16	20	eP	53	18.07	-1.7
FBA	3.40	19	ePd	53	21.80	-1.3
IMA	4.61	343	eP	53	38.70	-1.7
DWY	5.52	60	P	53	53.20	0.1
INK	9.69	40	eP	54	50.00	-0.9

36 obs. associated

? JAN 19, 1990 03h 09m 26.07± 7.75s
33.958 S ±38.5km 70.576 W ±26.6km
DEPTH = 99.1 ± 54.9 km
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.07	292	iPc	09	50.00	9.8X
PCH	0.34	9	iPc	09	41.10	0.0
			iS	09	51.00	
TACH	0.43	315	iPc	09	41.50	0.0
			iS	09	52.00	
SAN	0.51	352	iP	09	42.00	-0.1
			iS	09	52.20	
FCH	0.67	21	iPd	09	43.80	0.0
			iS	09	56.50	
LNV	0.69	270	iPc	09	43.60	0.1
			iS	09	56.00	
LCCH	0.96	300	iPc	09	46.10	-0.1
ROCH	1.05	340	iPc	09	47.70	0.2
			iS	10	01.50	
JACH	1.27	359	iPc	09	49.90	-0.1
			IS	10	06.50	

S.D. = 0.1 on 8 of 9 obs.

JAN 19, 1990 03h 32m 08.73± 0.44s
46.188 N ±10.0km 151.970 E ± 6.5km
DEPTH = 33.0km (normal)
5.0mb (24 obs.)
KURIL ISLANDS (221)

FBA	37.09	38	eP	39	18.00	0.7

19d 03h

LZH	37.12	272	eP	39	18.50	0.5
	1.0s	30.00nm			5.1mb	
INK	42.55	32	ePc	40	03.00	0.7
MBC	45.39	20	eP	40	25.50	0.3
	0.5s	1.00nm			4.0mb	X
CHG	51.22	256	ePc	41	11.90	0.8
	0.9s	15.76nm			5.0mb	
SHL	51.56	268	iP	41	13.20	-0.7
SES	60.10	47	eP	42	14.00	-0.8
FFC	61.68	39	iPc	42	24.90	-0.6
	0.9s	10.00nm			4.9mb	
LRM	62.16	52	eP	42	29.10	-0.1
KVN	63.13	61	eP	42	35.90	0.3
SUF	63.19	335	eP	42	33.00	-2.3
TNP	64.28	61	eP	42	43.10	0.0
NUR	65.38	334	eP	42	55.00	5.4X
BW06	65.71	53	ePc	42	51.90	-0.4
FRB	65.84	18	eP	42	51.00	-1.4
WRA	67.73	198	P	43	05.00	0.0
	1.3s	2.80nm			4.2mb	
HFS	68.70	339	eP	43	08.60	-2.0
	0.6s	7.50nm			4.9mb	
POO	68.72	275	eP	43	10.50	-0.9
GBA	69.62	269	P	43	16.00	-0.8
GOL	70.11	53	eP	43	20.00	0.1
MLR	77.07	324	ePc	44	00.50	0.4
PRU	77.34	333	eP	44	01.50	0.1
SRO	77.99	330	eP	44	05.10	0.2
ZST	78.07	331	eP	44	05.40	0.0
KHC	78.40	334	iPc	44	07.50	0.3
	1.0s	10.50nm			4.8mb	
GRF	78.60	335	iPc	44	09.00	0.7
	1.0s	36.00nm			5.3mb	
MEM	79.19	339	P	44	11.60	0.2
DOU	80.01	339	P	44	16.20	0.3
KBA	80.28	333	iPc	44	17.00	-0.7
	0.8s	20.50nm			5.2mb	
CDF	80.87	337	eP	44	20.80	0.2
	0.8s	10.70nm			4.9mb	
HAU	81.49	337	eP	44	24.00	0.2
	0.8s	8.00nm			4.8mb	
BSF	81.53	337	eP	44	23.90	-0.2
	0.8s	8.00nm			4.8mb	
VAY	81.90	324	eP	44	26.40	0.5
FLN	82.43	342	eP	44	28.60	0.0
	1.0s	16.00nm			5.0mb	
LOR	82.82	339	iPc	44	30.90	0.2
	0.8s	14.70nm			5.1mb	
GRR	82.87	342	eP	44	31.20	0.3
	0.8s	10.70nm			5.0mb	
LBF	83.05	339	iPc	44	31.90	-0.1
	0.8s	8.00nm			4.9mb	
SSF	83.10	339	iPc	44	32.60	0.5
	1.0s	10.00nm			4.9mb	
LPF	83.24	342	eP	44	32.50	-0.3
	1.0s	20.00nm			5.2mb	
AVF	83.39	339	iPc	44	34.00	0.4
	0.9s	13.10nm			5.1mb	
SMF	83.40	339	iPc	44	34.10	0.4
	0.8s	20.10nm			5.3mb	
LPG	83.69	336	iPc	44	36.40	0.9
	0.8s	10.70nm			5.0mb	
BGF	83.74	339	eP	44	36.10	0.7
	0.8s	8.00nm			4.9mb	
MAF	84.12	339	iPc	44	38.20	0.8
	0.8s	18.80nm			5.3mb	
TCF	84.14	339	eP	44	38.10	0.6
	0.9s	9.80nm			5.0mb	
LSF	84.34	340	eP	44	39.10	0.6
	1.0s	12.00nm			5.0mb	
S.D. = 0.7		on	45	of	46	obs.

& JAN 19, 1990 05h 17m 47.70s
36.535 N 121.158 W
DEPTH = 8.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

LLA	0.19	65	iPc	17	51.60	-0.2
PRS	0.27	220	iPd	17	53.10	-0.1
SAO	0.33	315	iPc	17	53.70	-0.7
PRI	0.56	134	ePd	17	58.50	-0.5
GCC	0.84	307	ePc	18	03.20	-0.8
ARN	0.87	340	eP	18	04.10	-0.5
MHC	0.89	334	ePc	18	04.70	-0.4
			eS	18	16.00	
PKEM	0.97	119	eP	18	06.50	0.2
FRI	1.25	68	iPd	18	09.60	-1.5
			iS	18	25.50	
PCC	1.37	315	ePc	18	11.10	-2.0
BKS	1.59	328	eP	18	16.40	0.2
BRK	1.60	327	e(P)	18	17.00	0.7
BCH	1.60	147	eP	18	14.10	-2.4
CMB	1.62	22	e(P)	18	15.80	-0.9
			eS	18	36.60	
KVN	3.49	43	eP	18	50.60	7.1
15 obs. associated						

? JAN 19, 1990 07h 01m 29.25± 6.33s
33.906 S ±28.0km 70.551 W ±22.5km
DEPTH = 94.9 ± 47.2 km
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.09	252	iPc	01	43.00	0.1
			iS	01	53.00	
PCH	0.29	6	iPc	01	43.50	0.0
			iS	01	53.90	
TACH	0.41	308	iPc	01	44.10	0.0
			iS	01	55.00	
SAN	0.46	348	iPd	01	44.40	-0.1
			iS	01	54.60	
FCH	0.62	21	eP	01	46.00	-0.1
			iS	01	58.50	
LNV	0.72	266	iPc	01	46.50	0.0
			iS	01	58.60	
LCCH	0.95	297	iPc	01	49.00	0.0
			iS	02	02.50	
ROCH	1.01	337	iPd	01	50.00	0.1
			iS	02	04.40	
JACH	1.22	358	iPd	01	52.30	0.0
			iS	02	09.40	
S.D. = 0.1		on	9	of	9	obs.

& JAN 19, 1990 08h 46m 43.23s
63.196 N 150.566 W
DEPTH = 131.4km
4.4mb (3 obs.)
CENTRAL ALASKA (1)
<AGS-P>. Felt (III) at McKinley Park.

HUR	0.48	117	eP	47	02.19	-0.4
			eS	47	16.74	
RND	0.80	74	eP	47	04.51	-0.4
			eS	47	21.37	
CUT	0.81	170	eP	47	04.53	-0.3
			eS	47	21.11	
MCK	0.91	53	eP	47	05.43	-0.3
			eS	47	22.76	
NEA	1.54	25	eP	47	10.96	-1.2
PWA	1.58	168	iPc	47	12.50	-0.2
GHO	1.62	151	eP	47	12.91	-0.3
			eS	47	36.78	
SUA	1.74	183	eP	47	14.62	-0.1
PMR	1.74	157	iPc	47	13.80	-0.8
			iS	47	38.10	
CCB	1.90	39	eP	47	15.48	-1.0
RDS	1.95	32	iP	47	16.10	-1.1
HDA	2.01	51	eP	47	16.87	-1.0
PMS	2.01	166	iPc	47	17.40	-0.5
CRP	2.07	202	eP	47	17.98	-0.8
			eS	47	43.80	
FBA	2.10	34	iPc	47	18.10	-0.8
NCA	2.11	123	eP	47	18.60	-0.5
SPU	2.14	200	eP	47	18.37	-1.1
DDM	2.19	72	eP	47	19.83	-0.3
			eS	47	48.36	
TOA	2.31	116	iPc	47	21.60	0.0
DMW	2.33	66	eP	47	21.06	-0.7
PAX	2.33	93	eP	47	21.74	-0.2
SDG	2.40	104	eP	47	22.25	-0.5
NKA	2.48	188	eP	47	25.25	1.5
TTA	2.49	266	iPd	47	22.00	-2.0
SLKM	2.70	176	eP	47	25.74	-0.9
RDT	2.77	199	eP	47	26.66	-0.9
DOT	2.96	78	eP	47	29.12	-0.9
SEW	3.15	170	eP	47	31.26	-1.2
SVW	3.17	231	iPd	47	30.80	-1.9
IMA	3.18	336	iPc	47	31.00	-2.0
NNL	3.18	187	eP	47	33.38	0.5
GLB	3.61	116	eP	47	37.80	-0.8
RAGM	3.97	133	eP	47	41.96	-1.5
			eS	48	28.53	
DWY	5.84	75	Pd	47	56.30	-1.5
KDC	5.55	191	eP	48	02.80	-1.8
INK	8.67	46	eP	48	43.00	-3.8
MBC	16.62	26	eP	50	29.00	-0.2
	0.6s	3.00nm			3.8mb	
EDM	21.68	100	iPc	51	24.10	0.2
SES	24.68	103	eP	51	53.00	0.1
FFC	25.84	86	eP	52	03.00	-0.5
	1.1s	13.00nm			4.4mb	
DAG	37.08	17	iPd	53	38.80	-2.6
	0.6s	8.67nm			4.7mb	
41 obs. associated						

% JAN 19, 1990 09h 32m 00.97± 2.66s
39.586 N ±13.3km 23.951 E ±20.1km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG	0.40	329	ePg	32	09.50	0.4
OUR	0.75	2	ePg	32	15.20	-0.4
LIT	1.24	295	ePb	32	23.20	-0.8
AGG	1.38	246	ePb	32	26.40	0.2
			eSb	32	47.10	
GRG	1.81	320	ePb	32	33.10	0.6
S.D. = 0.8		on	5	of	5	obs.

& JAN 19, 1990 12h 13m 04.90s
37.637 N 119.053 W
DEPTH = 2.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.6 (BRK).

FRI	0.83	219	iPd	13	20.60	-0.9
			i	13	24.30	
			iS	13	30.80	
PPK	0.93	103	eP	13	22.40	-1.3
SVP	1.00	85	eP	13	23.70	-1.1
CMB	1.13	291	iPd	13	25.50	-1.3
			iS	13	40.30	
LCH	1.19	109	eP	13	26.70	-1.2
MGM	1.25	99	eP	13	28.20	-0.9
TNP	1.52	72	iPc	13	33.00	-0.4
KVN	1.60	28	iPd	13	34.30	-0.1
MCA	1.73	124	eP	13	35.70	-0.4
PKEM	1.79	209	eP	13	37.00	0.0
LLA	1.82	237	iPd	13	37.90	0.4
PRI	1.97	221	ePc	13	40.80	1.0
ARN	1.99	262	eP	13	40.00	0.0
MHC	2.08	263	ePd	13	41.80	0.4
SAO	2.10	246	iPd	13	41.90	0.4
PRS	2.27	236	ePd	13	44.40	0.4
LSM	2.39	111	eP	13	45.40	-0.5
GCC	2.42	256	eP	13	45.80	-0.4
BKS	2.53	276	eP	13	48.00	0.3
			iS	14	23.60	
BRK	2.55	276	ePd	13	48.10	0.1
ZSP	2.56	278	ePc	13	48.80	0.8
BCH	2.58	199	eP	13	48.80	0.2
PCC	2.65	268	ePc	13	49.30	-0.1
ORV	2.71	316	e(P)	13	50.90	0.6
ABL	2.78	183	eP	13	51.50	-0.1
NWRM	3.14	286	eP	13	56.30	0.0
BLP	3.26	200	eP	13	58.80	0.8
MIN	3.36	324	e(P)	14	00.80	1.2
PEC	4.04	157	eP	14	09.00	-0.2
LBFM	4.31	330	eP	14	13.50	0.4
PLM	4.63	157	eP	14	18.00	0.3
MSU	5.50	79	e(P)	14	33.00	2.9
GLA	5.73	142	eP	14	33.50	0.3
33 obs. associated						

& JAN 19, 1990 12h 39m 17.90s
35.230 N 118.220 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.6 (PAS), 4.0 (BRK). Felt (III) at Mojave.

ISA	0.48	335	iPd	39	27.20	-0.3
SBB	0.63	149	iPd	39	29.60	-0.9
CLC	0.78	41	iPc	39	32.50	-0.9
ABL	0.90	246	iPc	39	34.40	-1.5
MWC	1.01	172	iPd	39	36.70	-1.1
PAS	1.08	178	eP	39	37.80	-1.0
RVR	1.42	150	iPd	39	43.60	-0.9
BCH	1.53	269	iPc	39	44.90	-1.2
PEC	1.60	146	eP	39	45.70	-1.3
MCA	1.61	28	eP	39	46.60	-0.5

PKEM	1.75	299	eP	39 49.50	0.3
PHAM	1.88	289	eP	39 51.00	-0.1
BLP	1.91	250	eP	39 51.00	-0.6
FRI	2.13	326	ePd	39 55.00	0.3
			iS	40 21.50	
LSM	2.18	46	eP	39 54.40	-1.2
PLM	2.18	149	ePd	39 54.70	-1.0
PRI	2.19	295	ePd	39 55.00	-0.7
LLA	2.61	303	ePc	40 01.10	-0.5
PRS	2.79	294	ePc	40 03.00	-1.2
TNP	2.96	16	eP	40 06.20	-0.5
SAO	3.03	301	iPc	40 07.90	0.3
CMB	3.30	329	ePd	40 13.00	1.6
			iS	40 57.30	
MHC	3.48	308	eP	40 13.30	-0.7
GCC	3.55	302	ePc	40 15.70	0.9
GLA	3.55	127	eP	40 12.50	-2.5
KVN	3.82	1	eP	40 18.50	-0.4
PCC	4.05	305	ePc	40 21.40	-0.6
BKS	4.17	310	iPd	40 23.20	-0.6
BRK	4.19	310	eP	40 22.70	-1.2
ZSP	4.23	311	ePc	40 24.30	-0.2
ORV	5.05	330	eP	40 33.70	-2.5
MSU	5.85	54	eP	40 46.00	-1.7

32 obs. associated

JAN 19, 1990 12h 46m 16.94± 0.65s
44.470 N ± 5.3km 12.045 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

SFI	0.57	194	Pd	46 27.20	-1.2
			eSg	46 36.80	
RSM	0.62	151	P	46 30.30	1.0
PGD	0.64	202	Pc	46 28.00	-1.9
MME	1.00	255	P	46 36.70	0.6
			eSg	46 52.00	
BDI	1.12	249	P	46 38.50	0.6
			eSn	46 54.30	
ARV	1.17	146	P	46 40.20	1.4
			eSn	46 56.20	
ASS	1.47	162	P	46 43.00	-0.5
			eSn	47 01.60	
CTI	1.60	350	P	46 45.40	-0.1
			eSn	47 07.00	
BOB	1.88	280	P	46 50.70	1.2
			eSn	47 13.10	
FVI	2.19	13	P	46 53.20	-0.6
			eSn	47 21.30	
OGA	2.50	344	iPnd	47 03.10	4.6X
SCE	2.58	355	ePn	46 59.00	-0.6

S.D. = 1.2 on 11 of 12 obs.

% JAN 19, 1990 13h 09m 52.67± 0.99s
31.818 S ±17.7km 67.837 W ± 8.1km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

RTCV	0.60	266	iPc	10 04.30	-0.5
RTLL	0.73	312	iPc	10 05.70	-1.3
RTBS	1.39	276	ePd	10 18.20	0.2
			S	10 39.00	
MRA	1.90	109	ePd	10 26.20	0.8
RTRS	2.15	319	iPd	10 30.90	1.8
			S	10 58.30	
TCA	2.81	81	ePc	10 37.50	-1.1
RFA	2.99	190	e(P)	10 47.20	6.1X
			S	11 24.50	

S.D. = 1.5 on 6 of 7 obs.

? JAN 19, 1990 14h 54m 03.69± 2.57s
2.158 N ±34.5km 127.135 E ±38.6km
DEPTH = 33.0km (normal)
4.6mb (2 obs.)
MOLUCCA PASSAGE (266)

AAI	5.90	170	eP	55 32.00	0.8
TSM	9.28	283	ePd	56 18.90	0.6
WB5	23.02	162	eP	59 07.90	0.9
ASPA	26.50	166	eP	59 41.10	1.0
	0.4s		23.00nm		5.1mb
	Z 23s		0.07um		3.1MszX
			LR	12 20.10	
WARB	28.18	181	eP	59 54.50	-0.9
FORR	32.04	178	eP	00 34.30	-2.2
HYB	50.04	291	eP	02 58.00	0.4
GBA	50.42	286	Pd	02 59.80	-0.7
	0.7s		1.40nm		4.1mb

S.D. = 1.3 on 8 of 8 obs.

JAN 19, 1990 16h 36m 47.86± 0.73s
36.061 N ± 8.4km 27.214 E ± 6.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.51	184	ePg	36 58.00	-0.2
ARG	0.75	78	ePb	37 01.70	-0.9
NPS	1.53	239	ePb	37 15.50	0.3
APE	1.69	307	ePb	37 17.30	-0.3
KSL	1.92	88	ePb	37 21.20	0.3
ELL	2.28	72	ePn	37 27.00	0.8
VAM	2.54	256	ePg	37 34.80	5.1X

S.D. = 0.8 on 6 of 7 obs.

% JAN 19, 1990 16h 53m 12.08± 0.84s
35.899 N ±15.6km 27.444 E ± 9.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.2 (ATH).

KAP	0.41	212	ePg	53 20.50	0.0
ARG	0.64	60	ePb	53 24.50	-0.4
NPS	1.62	247	ePb	53 40.00	-0.8
KSL	1.75	82	ePn	53 43.00	0.4
VAM	2.69	260	ePn	53 56.90	0.8

S.D. = 0.9 on 5 of 5 obs.

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* JAN 19, 1990 17h 09m 21.25± 2.00s
15.236 N ± 5.4km 60.545 W ±23.2km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.4 (FDF).

CRM	0.60	217	iPd	09 33.43	0.2
			S	09 42.10	
MVM	0.76	207	iPc	09 35.66	0.2
			S	09 46.00	
FDF	0.77	230	iPd	09 35.31	-0.4
	0.1s		0.95nm		
			S	09 45.50	
BIM	0.88	215	iPc	09 37.13	-0.1
			S	09 48.50	
BBL	0.94	288	eP	09 38.27	0.1
			S	09 49.00	
DEG	1.18	335	eP	09 41.30	-0.2
			S	09 55.60	
PAG	1.35	306	eP	09 44.00	0.0
			S	10 01.10	
SEG	1.48	322	eP	09 46.10	0.2

S.D. = 0.3 on 8 of 8 obs.

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* JAN 19, 1990 17h 29m 35.31± 0.96s
7.430 S ±15.1km 126.679 E ±15.4km
DEPTH = 325.4 ± 19.7 km
5.1mb (3 obs.)
BANDA SEA (280)

AAI	4.01	22	ePc	30 43.50	0.0
MTN	6.94	141	iPc	31 17.30	0.2
			eS	32 30.00	
WB5	14.45	150	iPd	32 46.70	-1.2
ASPA	17.57	158	eP	33 21.30	0.4
	0.3s		83.00nm		5.6mb
			iS	36 25.00	
NANU	18.48	214	eP	33 30.00	-0.1
WARB	18.65	180	iPc	33 33.00	1.2
	0.3s		11.00nm		4.7mb
CTA	22.76	126	eP	34 12.00	0.2
FORR	23.34	177	iPd	34 16.70	-0.3
	0.4s		29.00nm		5.0mb
MRWA	23.90	204	eP	34 21.70	-0.5

S.D. = 0.8 on 9 of 9 obs.

? JAN 19, 1990 18h 44m 27.63± 0.99s
21.761 S ±39.6km 170.141 E ±19.8km
DEPTH = 33.0km (normal)
LOYALTY ISLANDS REGION (189)

DZM	3.45	264	iP	45 19.10	-1.3
			iS	46 00.10	
BRS	16.76	247	iP	48 23.60	2.1
RMO	20.07	252	eP	49 01.00	-0.1
CTA	22.37	270	iPc	49 25.00	0.5
CMS	23.75	241	eP	49 36.00	-1.9
ASPA	33.43	260	eP	51 05.50	-0.2
	Z 23s		0.20um		3.8MszX
			LR	03 23.80	
CHG	80.46	295	eP	56 40.00	1.8
CHTO	80.46	295	eP	56 38.00	-0.1
			pP	56 51.40	46kmX
KSP	144.49	331	iPKP	04 00.00	-2.1
BRG	145.49	333	iPKP	04 03.20	-0.6
	1.6s		28.00nm		
			i	04 07.80	
CLL	145.55	334	ePKP	04 02.00	-1.8
	1.3s		19.00nm		
SRO	145.55	326	ePKP	04 03.20	-0.7
PRU	145.89	332	ePKP	04 06.00	1.5
ZST	145.92	327	e(PKP)	04 05.20	0.6
EKA	146.10	353	PKP	04 04.00	-0.6
	1.1s		28.00nm		
SKO	146.92	315	ePKP	04 11.00	4.6X
KHC	146.94	331	ePKP	04 07.50	1.2
GRF	147.52	334	ePKP	04 12.50	5.4X
BCAO	147.53	242	iPKPc	04 10.00	1.8
	0.6s		8.00nm		
			ic	04 21.20	

S.D. = 1.5 on 17 of 19 obs.

? JAN 19, 1990 18h 52m 48.77±25.09s
16.930 N ±126.km 100.122 W ±183.km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.26	103	iP	52 53.50	-0.8
			iS	52 57.00	
III	1.57	23	eP	53 16.50	-0.4
			iS	53 39.50	
PPM	2.56	34	eP	53 31.50	0.1
IIJ	2.81	7	(P)	53 42.50	7.4X
OXX	3.26	87	eP	53 42.00	0.9
			iS	54 16.00	

S.D. = 1.2 on 4 of 5 obs.

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* JAN 19, 1990 19h 07m 46.13± 1.42s
35.339 N ± 9.5km 141.227 E ±10.5km
DEPTH = 22.3 ± 8.5 km
4.9mb (5 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	1.22	316	P	08 07.80	0.0
			eS	08 26.50	
BJI	20.35	291	eP	12 31.00	7.4X
GUN	47.19	277	P	16 21.40	1.9
PKI	47.71	277	P	16 23.20	-0.4
KKN	47.73	277	P	16 24.00	0.4
DMN	47.94	277	P	16 25.60	0.3
GKN	48.16	278	P	16 26.60	-0.3
	0.8s		12.00nm		5.0mb
WB5	55.30	188	eP	17 19.00	-1.3
INK	55.97	27	eP	17 24.00	-0.6
ASPA	59.09	188	eP	17 47.90	0.8
	0.5s		5.00nm		4.9mb
GBA	60.94	266	P	17 59.00	-1.0
SOD	66.47	337	eP	18 44.00	8.4X
FORR	66.99	192	eP	18 39.00	-0.2
SUF	69.43	334	iP	18 53.30	-0.8
	0.7s		8.90nm		5.0mb
NUR	71.37	332	eP	19 05.00	-0.9
LRM	75.47	44	eP	19 31.30	0.8
HFS	75.57	336	eP	19 29.20	-1.2
	0.4s		1.40nm		4.4mb
NB2	75.69	337	P	19 30.80	-0.4
	0.8s		6.20nm		4.7mb
KVN	75.91	52	eP	19 33.90	0.9
FRB	78.46	13	eP	19 46.00	-0.4
KSP	81.46	328	eP	20 03.60	0.9
CLL	82.49	330	e(P)	20 08.00	0.0
KHC	83.91	328	eP	20 16.00	0.6
GRF	84.46	330	eP	20 19.00	0.8
ZOBO	147.65	62	PKP	27 32.50	3.7X
LPB	147.84	62	PKP	27 36.00	7.1X
CNCB	148.10	62	PKP	27 35.00	5.5X

S.D. = 0.9 on 22 of 27 obs.

& JAN 19, 1990 20h 12m 43.23s
59.798 N 152.179 W
DEPTH = 66.0km
SOUTHERN ALASKA (2
<AGS-P>.

19d 20h

XLV	0.42	146	eP	12	54.16	-0.9
			eS	13	03.44	
NNL	0.51	61	eP	12	55.97	0.0
CNPM	0.55	119	eP	12	55.75	-0.7
			eS	13	05.81	
BRLK	0.66	92	eP	12	56.78	-0.8
RED	0.69	335	eP	12	57.12	-0.9
			eS	13	08.92	
PDB	1.02	270	eP	13	00.91	-1.1
			eS	13	14.90	
SLKM	1.21	53	eP	13	03.39	-1.2
SPU	1.39	2	eP	13	06.05	-1.0
SEW	1.41	76	eP	13	07.14	0.0
SUA	1.82	22	eP	13	12.52	-0.4
GHO	2.54	37	eP	13	21.77	-1.3

11 obs. associated

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* JAN 19, 1990 20h 30m 54.62± 0.95s
21.333 S ± 9.5km 68.817 W ±12.3km
DEPTH = 125.3 ± 10.1 km
4.6mb (1 obs.)
CHILE-BOLIVIA BORDER REGION (124)

ANT	2.78	212	i(P)	31	37.60	-1.3
			iS	32	04.50	
YJA	3.19	106	iPc	31	46.20	1.5
SLA	4.56	138	iPc	32	03.50	0.6
CNCB	4.57	10	iPc	32	03.70	0.3
			i	32	25.00	
CCH	4.67	33	P	32	04.60	0.1
LPB	4.82	8	eP	32	02.00	-4.7X
	1.0s	100.00nm				
			i	32	08.00	
ZOBO	5.08	8	P	32	09.20	-1.1
			S	33	48.00	
ARE	5.47	332	iPd	32	11.50	-3.8X
			iS	33	09.30	
BAO	20.54	77	eP	35	21.40	-3.8X
LIC	68.26	74	P	41	46.00	1.7
TIC	68.45	73	P	41	43.50	-2.0
KIC	68.57	74	P	41	44.30	-1.9
LKO	69.23	70	P	41	49.06	-1.2
	0.6s	5.00nm			4.6mb	
PRI	75.30	319	e(P)	42	27.00	1.2
LLA	75.78	319	ePc	42	29.50	1.1
ORV	78.02	321	ePc	42	42.20	1.5
WDC	79.29	321	eP	42	47.20	-0.4

S.D. = 1.5 on 14 of 17 obs.

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* JAN 19, 1990 20h 50m 58.44± 0.95s
46.221 N ± 9.3km 12.592 E ± 6.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (KBA).

FVI	0.39	19	P	51	06.00	-0.5
			eSg	51	12.70	
CTI	0.68	255	P	51	11.60	-0.4
			(Sg)	51	19.90	
VOY	0.92	101	e(Pn)	51	16.30	0.1
			eSg	51	30.20	
KBA	1.00	31	ePg	51	17.80	0.3
			iSg	51	30.30	
OGA	1.26	301	ePg	51	22.50	0.5

S.D. = 0.6 on 5 of 5 obs.

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* JAN 19, 1990 21h 22m 58.86± 0.91s
31.475 S ± 9.1km 69.194 W ±15.1km
DEPTH = 112.9 ± 7.3 km
4.5mb (2 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.64	77	iPd	23	17.00	-0.3
RTCV	0.68	125	eP	23	18.20	0.5
CFA	0.83	99	ePc	23	19.30	0.4
RTRS	1.32	350	iPd	23	24.20	0.1
MRA	3.11	108	ePc	23	47.50	0.4
RFA	3.34	170	iPc	23	49.00	-0.6
TCA	3.94	89	e(P)	23	57.50	-0.9
CNCB	14.64	5	Pd	26	22.80	0.6
LPB	14.91	4	eP	26	20.00	-5.4X
ARE	15.09	352	eP	26	27.00	-0.6
ZOBO	15.17	4	Pd	26	28.50	-0.4
	1.0s	20.00nm			4.3mb	
LKO	73.20	67	Pc	34	19.04	0.4
	0.8s	11.50nm			4.7mb	
GBA	144.61	113	PKP	42	22.00	-2.2
HYB	147.61	108	ePKP	42	31.50	2.4

S.D. = 1.2 on 13 of 14 obs.

? JAN 19, 1990 21h 34m 11.68± 5.27s
40.648 N ±32.8km 22.494 E ±28.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 1.9 (THE).

GRG	0.32	347	ePg	34	18.30	0.0
THE	0.36	92	ePg	34	19.08	0.0
			eSg	34	24.00	
KNT	0.60	31	ePg	34	23.80	0.0
			eSg	34	31.40	
VAY	0.67	5	ePg	34	25.00	-0.1
			eSg	34	35.70	
SOH	0.68	75	ePg	34	25.10	0.0

S.D. = 0.1 on 5 of 5 obs.

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* JAN 19, 1990 22h 05m 13.72± 1.01s
19.906 S ±11.8km 47.173 W ±15.1km
DEPTH = 10.0km (geophysicist)
BRAZIL (528)
Felt (VI) at Franca, Pedregulho, Rifaino and Sacramento.

VAO	3.09	176	eP	06	03.80	0.4
			eS	06	38.30	
BMA	3.95	135	eP	06	15.50	-0.3
			eS	06	58.00	
BAO	4.32	349	eP	06	21.30	0.2
			eS	07	11.70	
CNCB	19.99	275	P	09	51.20	1.3
LPB	20.16	276	eP	09	50.00	-1.6
ZOBO	20.24	277	P	09	55.00	2.4X
	Z 20s		0.12um		3.2Msz	
			LR	28	30.00	

S.D. = 1.5 on 5 of 6 obs.

JAN 19, 1990 22h 33m 53.32± 0.72s
36.065 N ± 7.4km 27.225 E ± 7.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.3 (ATH).

KAP	0.52	185	ePg	34	04.00	0.2
ARG	0.74	78	ePb	34	07.50	-0.4
YER	1.37	38	ePn	34	16.00	-2.4
NPS	1.54	239	ePb	34	20.50	-0.3
SMG	1.67	349	ePb	34	24.00	1.3
CIN	1.68	24	eP	34	24.00	1.1
APE	1.69	307	ePn	34	22.50	-0.6
KSL	1.91	88	ePn	34	26.80	0.6
ELL	2.27	72	ePn	34	32.00	0.4
VAM	2.55	256	ePg	34	40.00	4.7X

S.D. = 1.3 on 9 of 10 obs.

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* JAN 19, 1990 23h 41m 43.80± 1.86s
61.857 N ± 9.6km 4.715 E ±18.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 3.4 (NAO). MD 3.4 (BER).
Felt.

SUE	0.80	178	iPg	42	00.78	1.4
			iSg	42	10.95	
HYA	0.99	134	iP	42	04.12	1.6
			eS	42	19.27	
ASK	1.40	170	eP	42	09.21	-0.1
			eSg	42	25.07	
MOL	1.51	60	eP	42	11.22	0.4
			eS	42	32.51	
ODD1	2.16	154	iP	42	20.49	0.1
			iS	42	46.14	
KMY	2.67	174	iP	42	26.05	-1.5
			eS	42	57.59	
BLS1	2.68	156	eP	42	27.34	-0.6
			eS	43	00.14	
RGS	2.90	64	eP	42	31.50	0.6
			eS	43	09.00	
NB2	3.23	102	P	42	34.90	-0.6
NSS	4.24	48	eP	42	49.85	0.0
			iS	43	37.40	
HFS	4.70	108	eP	42	55.00	-1.4
	0.3s	6.20nm				
NUR	9.71	89	iP	44	01.80	-4.7X
			iS	45	46.00	
			iSg	46	50.00	

S.D. = 1.1 on 11 of 12 obs.

JAN 20, 1990 00h 24m 48.15± 0.75s
36.957 N ± 8.1km 29.329 E ± 6.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.51	114	iPg	24	57.80	-0.7
			iSg	25	06.80	
YER	0.86	282	ePn	25	03.60	-1.1
KSL	0.86	166	ePb	25	05.40	0.7
BCK	1.12	63	ePn	25	09.50	0.2
CIN	1.18	303	eP	25	11.00	0.8
ARG	1.22	233	ePb	25	14.50	3.7X
			eSb	25	34.00	
KHL	1.37	6	iPn	25	13.40	0.0

S.D. = 1.0 on 6 of 7 obs.

? JAN 20, 1990 00h 31m 54.06± 7.58s
50.973 N ±66.2km 19.749 E ±48.5km
DEPTH = 33.0km (normal)
POLAND (548)
ML 2.8 (KRA).

KRA	0.93	172	ePgc	32	11.00	0.3
			iSg	32	21.20	
SPC	1.81	170	iPn	32	23.40	-0.3
			e(Sg)	32	43.90	
KSP	2.19	268	iPg	32	28.90	0.0
			iS	32	50.70	
ZST	3.27	213	eP	33	17.00	32.8X
PRU	3.47	256	ePg	32	54.50	7.5X
			Sg	33	24.50	
KHC	4.38	248	ePg	33	00.00	-0.1
			Sg	33	48.00	

S.D. = 0.4 on 4 of 6 obs.

JAN 20, 1990 01h 27m 09.80± 0.12s
35.832 N ± 2.9km 52.954 E ± 1.8km
DEPTH = 24.5km (7 depth phases)
5.5mb (73 obs.) 5.9Msz (22 obs.)
IRAN (348)
Slight damage in the Firuzkuh area. Felt at Tehran.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 34C
Centroid Location:
Origin Time 01:27:13.2 0.2
Lat 35.58N 0.03 Lon 53.29E 0.03
Dep 33.0 FIX Half-duration 3.7
Moment Tensor; Scale 10**17 Nm
Mrr= 2.37 0.21 Mtt=-1.73 0.33
Mff=-0.64 0.22 Mrt= 3.77 0.50
Mrf= 0.02 0.46 Mtf= 9.37 0.25
Principal Axes:

T	Val= 9.24	Plg=22	Azm=316
N	1.89	65	105
P	-11.13	12	222

Best Double Couple:Mo=1.0*10**18
NP1:Strike=357 Dip=66 Slip= 172
NP2: 91 83 24

KER	5.02	255	eP	28	29.00	3.4X
MHI	5.32	83	iPnd	28	29.00	-0.8
	0.8s	641.79nm			6.3mb	
			eSn	29	32.00	
TAB	5.76	295	iPc+	28	39.20	3.2X
SLY	6.07	270	iPnd	28	44.50	4.2X
			iP*	29	04.50	
			iPg	29	24.50	
			iSn	30	20.00	
			iS*	30	53.00	
BHD	7.52	253	ePnd	29	02.50	1.9
			iP*	29	25.00	
			iPg	29	46.00	
			Sn	30	46.00	
			Sg	31	22.00	
MSL	7.96	277	ePd	29	12.50	5.7X
			eS	31	32.50	
DHR	9.80	195	eP	29	31.20	-1.0
BBU	9.82	193	(Pn)	29	32.20	-0.3
BEE	10.00	193	iPn	29	36.10	1.1
			(Sn)	31	22.20	
BJA	10.01	192	iPn	29	34.70	-0.5
			(Sn)	31	24.10	

RYD 12.35 208 iP+ 30 04.30 -2.8X
OASM 12.63 222 eP 30 05.80 -4.9X
HRI 14.42 265 eP 30 35.00 0.6
JARJ 14.55 261 Pd 30 39.30 3.2X
SALJ 14.84 260 Pd 30 44.20 4.4X
KFNJ 14.89 260 Pd 30 45.80 5.4X
DSI 15.23 259 eP 30 44.00 -0.9
FAM 15.48 272 eP 30 51.70 3.6X
HSHJ 15.77 252 Pd 30 41.00 -11.0X
LFK 15.82 274 iP 30 55.70 3.1X
AYN 15.91 249 eP 30 52.00 -1.6
KAS 15.98 296 eP 30 58.00 3.4X
CSS 16.03 273 eP 30 58.30 3.1X
AQBJ 16.23 253 P 31 00.00 2.2
MBH 16.35 253 eP 31 00.00 0.8
BBTK 16.44 290 iPc 31 02.00 1.4
BADA 16.84 249 eP 31 05.00 -0.5
PPCY 16.84 273 eP 31 08.70 3.2X
WAJH 17.01 240 eP 31 06.67 -1.0
KMSA 17.10 208 eP 31 06.83 -2.1
BCK 18.02 282 iP 31 22.50 2.3
TAIF 18.20 221 eP 31 23.47 0.7
GPA 18.37 291 eP 31 25.00 0.6
ALT 18.41 287 eP 31 25.00 -0.1
KSH 18.58 72 P 31 24.00 -3.2X
N 18s 112.00um
ELL 18.60 280 eP 31 28.80 1.4
KHL 18.85 285 eP 31 30.40 -0.1
KSL 18.91 278 eP 31 31.50 0.4
GBZT 19.08 292 eP 31 35.00 1.9
HLW 19.10 258 iP+ 31 35.14 1.8
e 31 52.00 84kmX
e 31 55.00
e 32 01.00
eS 35 15.00
YLV 19.11 291 iP 31 33.40 -0.1
ISK 19.41 293 eP 31 36.90 -0.1
ITU 19.45 293 iPc 31 36.00 -1.4
DST 19.59 288 iP 31 39.20 0.0
YER 19.87 281 iP 31 36.10 -6.0X
CTT 19.89 293 iP 31 41.90 -0.3
ARG 20.08 278 iPc 31 43.90 -0.3
BNT 20.19 290 iP 31 46.40 1.0
DMK 20.49 295 iP 31 48.90 0.5
MFT 20.71 292 iP 31 40.40 -10.5X
ASW 20.92 241 iPd 31 55.00 2.0
eS 35 52.00
KAP 20.93 277 eP 31 53.50 0.5
CFR 20.98 304 ePc 31 53.50 0.1
AMAN 20.98 241 iPd 31 57.00 3.5X
SMG 20.99 283 eP 31 53.80 0.2
AKSR 21.10 240 iPd 31 59.00 4.2X
AKRL 21.31 241 eP 32 00.00 3.1X
AGAL 21.37 240 eP 32 01.00 3.4X
EZN 21.38 289 iP 31 57.50 0.0
PRK 21.40 287 iPd 31 59.30 1.5
BIR 21.67 307 eP 32 00.00 -0.5
NDI 21.69 102 iPd 32 00.00 -0.8
0.8s 369.40nm 5.9mb
iS 35 58.00
IAS 22.04 309 eP 32 05.00 0.9
RDO 22.06 292 eP 32 05.70 1.3
APE 22.07 281 eP 32 05.50 0.9
VRI 22.14 305 iPc 32 05.50 0.3
BUC 22.18 301 ePc 32 06.00 0.5
BUC 22.18 301 iPc 32 08.00 2.5X
NPS 22.23 277 eP 32 07.00 0.8
MLR 22.56 304 iPc 32 12.00 2.6
VAM 23.35 277 eP 32 18.00 0.9
ATH 23.44 284 iPc 32 20.80 2.9X
e 36 36.40
e 39 06.40
DRA 23.52 301 ePc 32 22.00 3.3X
PLG 23.60 290 eP 32 20.00 0.4
NEO 23.77 287 eP 32 22.50 1.3
VAY 24.31 292 iPc 32 27.70 1.4
0.8s 0.30nm 2.9mb X
BMR 24.80 308 ePc 32 36.00 4.9X
KZN 24.88 290 eP 32 33.40 1.4
ITM 24.92 282 iPc 32 32.50 0.1
SKO 25.19 294 iPc 32 35.00 0.2
1.8s 322.00nm 5.7mb
Z 17s 12.29um 5.5MszX
N 20s 37.23um
E 17s 14.63um
i 32 46.00 42kmX
iPP 33 20.00

i 33 54.40
iS 37 07.50
iSS 38 15.00
i 39 30.00
LR 43 50.00
POO 25.26 128 eP 32 38.30 2.7
iS 37 10.00
BZS 25.54 302 eP 32 38.50 0.5
TDD 25.59 203 iP+ 32 43.41 4.7X
OHR 25.63 292 iPc 32 39.30 0.2
1.1s 0.22nm 2.7mb X
ATA 25.82 202 iP+ 32 45.40 4.5X
TIM 25.84 302 iPc 32 43.00 2.2
ARO 25.87 203 iP+ 32 45.40 4.0X
iS+ 37 35.00
VLS 25.88 285 iPc 32 40.00 -1.4
SGH 26.02 204 iP+ 32 47.14 4.3X
BEO 26.21 300 iP 32 44.50 0.2
iS 37 38.50
KEK 26.41 288 eP 32 46.00 -0.2
PSZ 27.21 307 iP 32 54.20 0.7
SPC 27.32 309 eP 32 55.80 1.1
BUD 27.68 305 eP 32 58.80 1.1
WMQ 27.69 63 iPd 32 57.60 -0.3
Z 12s 20.20um 5.9MszX
N 10s 13.20um
E 10s 18.20um
S 37 43.00
KRA 27.77 311 ePc 32 58.40 -0.1
1.1s 229.00nm 5.8mb
Z 18s 6.30um 5.2Msz
E 18s 9.30um
i 33 04.70 22km
i 33 21.60
e 37 54.00
LCI 27.80 290 P 33 02.00 3.2X
GKN 27.91 97 P 32 59.20 -1.0
SRO 28.22 306 iP 33 02.30 -0.2
DMN 28.45 98 P 33 04.80 -0.4
KKN 28.52 97 P 33 05.10 -0.6
PKI 28.71 97 P 33 06.80 -0.8
ROI 28.90 288 P 33 07.50 -1.4
HVAR 28.93 296 iP 33 08.50 -0.5
GUN 28.95 96 P 33 09.00 -0.8
ZST 29.09 306 eP 33 09.60 -0.8
i 33 35.30 118kmX
CSI 29.10 289 P 33 10.80 0.2
HYB 29.19 122 eP 33 10.50 -1.1
e 33 32.00 95kmX
eS 38 00.00
CZI 29.27 288 P 33 12.40 0.3
SOP 29.35 305 iPc 33 13.20 0.4
SOI 29.45 285 Pd 33 14.10 0.4
ZAG 29.47 301 iPc 33 14.00 0.2
PTJ 29.50 301 eP 33 12.90 -1.3
VKA 29.62 306 e(P) 33 14.50 -0.7
3.0s 560.00nm 5.8mb
Z 12s 3.60um 5.2MszX
ePP 34 10.00
LR 50 47.00
MGR 29.64 290 P 33 17.00 1.5
AAE 29.65 209 eP 33 19.20 3.1X
ATN 29.90 286 eP 33 13.00 -4.8X
VBY 29.94 301 iPd 33 19.40 1.3
BSS 30.18 291 P 33 20.80 0.6
KSP 30.23 311 iPc 33 20.70 0.1
1.1s 79.00nm 5.5mb
DUI 30.40 293 Pd 33 23.00 0.7
MEU 30.47 284 Pd 33 23.70 0.7
LJU 30.50 301 ePc 33 23.00 0.0
eS 38 24.00
RIY 30.54 300 eP 33 23.10 -0.2
CEY 30.54 301 eP 33 23.50 0.1
NUR 30.63 333 iP 33 23.60 -0.3
0.8s 61.60nm 5.5mb
i 34 21.00 295kmX
e 38 24.00
e 39 04.00
SDI 30.88 293 P 33 26.00 -0.4
VOY 30.94 301 eP 33 25.90 -1.1
TRI 31.00 301 iPc 33 28.00 0.6
KMR 31.03 305 i(P) 33 42.10 14.5X
i 34 38.60 289kmX
PRU 31.11 309 P 33 28.00 -0.3
Z 16s 6.10um 5.4MszX
N 17s 8.90um
E 18s 4.90um

e 34 24.00 286kmX
S 38 32.00
AZI 31.15 294 P 33 30.00 1.3
AQU 31.17 294 Pd 33 29.80 0.8
RBL 31.21 302 P 33 29.00 -0.3
GBA 31.21 129 P 33 30.00 0.6
MCT 31.41 285 Pd 33 33.20 1.9
KBA 31.43 303 ePc 33 30.00 -1.3
1.3s 128.00nm 5.6mb
i 33 38.80 31km
e 39 06.00
ARV 31.50 296 Pd 33 31.50 -0.3
KHC 31.56 307 iPc 33 32.00 -0.4
Z 18s 5.00um 5.2Msz
N 18s 4.00um
E 18s 6.50um
e 33 44.00 46kmX
SUF 31.63 337 iP 33 32.40 -0.3
0.7s 26.70nm 5.2mb
BRG 31.68 311 iP 33 33.40 0.1
2.5s 200.00nm 5.6mb
Z 17s 6.00um 5.3MszX
N 17s 9.00um
E 17s 6.00um
i 33 47.90 58kmX
e 34 07.00
e 34 20.00
e 38 50.00
RDP 31.70 293 P 33 34.40 0.7
ASS 31.70 296 P 33 34.90 1.2
MNS 31.70 294 Pd 33 33.80 0.1
RMP 31.71 293 P 33 33.90 0.2
FVI 31.76 302 P 33 33.50 -0.5
BHG 31.82 304 iPc 33 34.30 -0.3
0.9s 129.00nm 5.8mb
RSM 31.86 297 Pd 33 36.40 1.5
WET 32.02 307 eP 33 35.60 -0.7
i 33 38.00 8kmX
CVT 32.06 285 P 33 36.70 -0.1
CRE 32.22 297 P 33 38.50 0.3
SFI 32.29 297 Pd 33 40.70 2.0
CLL 32.36 311 iPc 33 39.40 0.2
1.6s 205.00nm 5.8mb
Z 18s 5.00um 5.3Msz
i 33 57.80 78kmX
eS 38 48.00
PGD 32.38 297 eP 33 40.60 0.8
BRL 32.47 313 eP 33 42.00 1.9
CTI 32.50 301 P 33 40.50 -0.2
LSA 32.55 90 P 33 43.40 1.7
Z 13s 12.00um 5.8MszX
N 14s 15.20um
E 15s 9.70um
pP 33 49.00 19km
S 38 49.00
FIR 32.72 297 iPc 33 44.00 1.6
iPP 35 00.00
iS 39 02.00
MAO 32.83 294 P 33 43.90 0.4
HOF 32.86 309 iPc 33 44.00 0.4
OGA 32.99 303 eP 33 44.70 -0.3
MOX 33.08 310 eP 33 46.00 0.4
Z 16s 4.20um 5.2MszX
N 17s 6.40um
E 17s 5.70um
UPP 33.10 328 iP 33 37.00 -8.5X
1.0s 200.00nm 6.0mb
i 33 45.00 28km
MME 33.12 298 P 33 47.34 1.1
GRF 33.17 308 ePc 33 46.10 -0.3
Z 19s 5.00um 5.2Msz
e 33 53.60 26km
e 33 58.70
e 34 11.10
BDI 33.20 297 P 33 45.40 -1.3
PII 33.25 297 Pd 33 46.60 -0.5
SAL 33.27 300 P 33 47.60 0.4
OSS 33.58 302 ePd 33 50.10 0.0
KOD 33.84 133 eP 33 53.20 0.4
eS 39 22.00
COP 33.88 319 iPd 33 44.00 -8.4
0.9s 245.38nm 6.1mb
BOB 34.02 299 Pd 33 54.80 1.0
VDL 34.03 302 ePd 33 54.10 0.0
SAX 34.16 303 ePd 33 54.60 -0.7
LLS 34.38 302 ePd 33 56.20 -0.9
PGF 34.42 295 iPc 33 56.80 -0.5

20d 01h

TMA		34.44	301	ePd	33	56.90	-0.6	RGS		37.64	330	iP	34	24.20	0.0	BTO		44.42	66	iPd	35	21.00	0.6
VAI		34.50	301	Pd	33	57.10	-0.7	LBF		37.82	303	eP	34	25.00	-1.0		N	14s		6.50um			
PCP		34.66	298	P	33	57.88	-1.5			1.2s		50.50nm			5.2mb		E	14s		12.60um			
TOD		34.72	307	eP	33	59.42	-0.3	BLS2		37.84	323	eP	34	28.30	2.3					sP	35	33.00	
SLE		34.77	304	ePd	33	58.90	-1.3	LOR		37.89	303	iPc	34	25.70	-0.9					PP	37	08.00	
SHL		34.80	96	iP	33	59.40	-1.5			1.1s		51.20nm			5.3mb					S	41	55.00	
				eS	39	30.00		SMF		37.92	302	iPc	34	26.20	-0.6	GUD		44.44	294	eP	35	20.00	-0.7
CKI		34.86	298	Pd	34	00.30	-0.6	PLDF		38.09	301	P	34	27.71	-0.6	DLE		44.46	312	eP	35	35.00	14.6X
FIN		34.91	298	P	34	00.65	-0.8	SSF		38.14	303	iPc	34	28.10	-0.5	BCAO		44.51	234	iPc	35	22.60	1.3
HFS		34.97	326	eP	34	01.40	-0.3	ODD1		38.17	324	eP	34	29.00	0.3			0.7s		180.00nm			6.1mb
		0.9s		170.40nm			6.0mb	AVF		38.25	302	iPc	34	29.00	-0.5					id	36	45.00	423kmX
	Z	16s		5.17um			5.4MszX	LBL		38.40	300	P	34	30.92	0.2					id	38	30.40	
				LR	47	13.00		GRC		38.43	303	P	34	30.72	-0.3	TOL		44.54	293	iPc	35	21.00	-0.3
SOD		34.99	343	iP	34	02.00	0.2	AGO		38.43	301	P	34	30.92	-0.2			1.8s		454.55nm			6.1mb
				i	34	55.00	264kmX	PYM		38.53	301	P	34	31.76	-0.3					ePP	37	05.00	
				e	40	47.00		TRO		38.58	342	eP	34	33.20	1.2					eS	42	08.00	
ORX		35.05	300	P	34	00.75	-2.0	BGF		38.61	302	eP	34	32.30	-0.2					eSS	45	28.00	
ORO		35.05	300	P	34	05.00	2.3			0.9s		24.50nm			5.0mb	DMU		44.66	313	eP	35	23.00	0.9
MMK		35.07	301	ePd	34	02.30	-0.7	HYA		38.78	326	eP	34	35.20	1.5	TAF		44.67	286	iP	35	24.50	2.1
FEL		35.10	304	P	34	01.54	-1.6	MAF		38.82	301	iPc	34	34.20	-0.1	BOT		44.71	102	eP	35	22.60	-0.2
ROB		35.15	298	P	34	02.60	-1.0	TCF		39.06	302	iPc	34	36.30	-0.1			0.5s		71.60nm			5.8mb
IMI		35.15	297	P	34	02.90	-0.7	CAF		39.26	299	iPc	34	37.60	-0.4	EBAN		44.77	291	eP	35	23.00	-0.2
SAOF		35.39	297	P	34	05.07	-0.5			1.2s		42.80nm			5.1mb	DCN		44.90	312	eP	35	36.90	13.0X
BBS		35.42	303	P	34	04.29	-1.4	LSF		39.53	302	iPc	34	40.00	-0.3	ASMO		44.96	290	iPc	35	24.00	-0.8
GWF		35.43	306	P	34	04.82	-1.0			1.1s		53.70nm			5.2mb	APHE		45.03	289	iPd	35	25.00	-0.4
DIX		35.45	301	ePd	34	05.70	-0.6	RJF		39.61	300	iPc	34	41.20	0.3	ACHM		45.09	289	eP	35	25.00	-0.8
ENR		35.48	298	P	34	04.24	-2.1			0.9s		62.20nm			5.3mb	AAPN		45.26	290	eP	35	26.00	-1.2
AUTN		35.48	297	P	34	06.74	0.2	NAI		39.87	206	iPd	34	46.60	3.0X	ATEJ		45.29	289	iPd	35	26.50	-1.0
SBF		35.48	297	iPc	34	05.90	-0.5			1.5s		27.78nm			4.8mb	ALOJ		45.30	289	eP	35	26.00	-1.6
REVF		35.54	297	P	34	06.95	0.1	LPO		39.90	299	eP	34	43.30	0.0	XAN		45.38	75	Pd	35	28.00	-0.1
STV		35.55	298	P	34	05.37	-1.6			1.2s		44.00nm			5.1mb			1.0s		0.20nm			3.0mb X
ABH		35.56	308	eP	34	06.91	0.0	LFF		40.19	300	iPc	34	45.50	-0.2		N	18s		35.90um			
AURF		35.56	297	P	34	06.95	-0.1			1.1s		109.30nm			5.5mb		E	19s		31.90um			
RSP		35.57	299	P	34	04.65	-2.5	LDF		40.54	305	iPc	34	47.70	-0.8					PP	37	16.00	
WLS		35.57	305	P	34	05.60	-1.4			0.8s		30.60nm			5.1mb					S	42	12.00	
DOI		35.59	298	Pd	34	05.90	-1.4	MFF		40.66	302	eP	34	48.70	-0.8	HHC		45.51	65	Pd	35	30.00	0.9
TOUF		35.61	298	P	34	07.65	0.0			1.2s		103.50nm			5.4mb			3.5s		0.70nm			3.0mb X
CDF		35.62	305	P	34	06.01	-1.5	EPF		40.71	297	eP	34	48.40	-1.6		Z	16s		14.80um			6.0MszX
LSD		35.63	300	P	34	07.21	-0.7			1.3s		28.80nm			4.8mb		N	12s		1.70um			
MOF		35.69	304	P	34	07.37	-0.7	FLN		40.77	306	eP	34	50.00	-0.4		E	12s		7.60um			
MVIF		35.69	297	P	34	07.95	-0.3			0.7s		18.50nm			4.9mb					eS	42	11.00	
ECH		35.69	305	P	34	06.88	-1.1	LZH		40.80	74	Pd	34	51.00	0.0	EHOR		45.98	291	eP	35	32.00	-0.7
PZZ		35.70	298	P	34	06.08	-2.2			5.0s		1.24nm			2.9mb X	EPLA		46.01	294	eP	35	32.50	-0.5
EMS		35.79	301	ePd	34	08.50	-0.6		Z	22s		35.70um			6.2Msz	ERUA		46.24	297	e(P)	35	34.80	0.0
RUP		35.86	307	eP	34	09.50	0.0		N	19s		47.20um				KBS		46.34	350	iPd	35	36.00	1.0
LOMF		35.88	303	P	34	09.71	0.0		E	21s		29.80um				GYA		46.41	86	P	35	37.00	0.6
CALN		35.88	297	P	34	09.90	0.0					pP	35	03.00	44kmX		N	15s		15.00um			
RRL		35.91	299	P	34	09.26	-0.9					PP	36	30.00			E	15s		10.80um			
BSF		35.92	304	P	34	08.49	-1.6					PcP	36	47.00						sP	35	52.00	
LPG		35.92	300	iPc	34	09.80	-0.5					S	41	06.50						S	42	19.00	
		0.8s		62.90nm			5.6mb					sS	41	18.00		NST		46.49	103	eP	35	37.00	0.1
FOUF		35.92	298	ePc	34	09.77	-0.2					ScS	44	47.00		LOE		46.80	100	eP	35	39.00	-0.4
BNI		35.98	299	Pd	34	10.30	-0.4	EBR		40.95	293	eP	34	51.00	-0.9	VAL		46.80	311	eP	35	40.00	1.0
FRF		36.07	297	eP	34	10.10	-1.2					eS	41	12.00		TIY		46.98	69	Pd	35	41.00	0.3
		1.1s		107.40nm			5.7mb	EROQ		41.01	293	eP	34	52.20	-0.3		Z	18s		43.80um			6.5Msz
LMR		36.19	296	eP	34	11.00	-1.2	GRR		41.04	305	iPc	34	52.00	-0.6		N	16s		14.80um			
		1.2s		38.00nm			5.2mb			1.0s		85.60nm			5.4mb		E	16s		14.10um			
HAU		36.22	304	eP	34	11.30	-1.2	LPF		41.18	304	iPc	34	53.30	-0.4					S	42	35.00	
		1.3s		72.20nm			5.4mb			1.4s		121.90nm			5.4mb	STS		47.15	298	eP	35	44.00	2.1
WTS		36.28	311	iPc	34	14.30	1.5	ESY		42.24	316	eP	35	02.50	0.2	EVAL		47.18	291	eP	35	41.70	-0.5
		0.9s		57.00nm			5.5mb			0.9s		116.00nm			5.6mb	IFR		47.22	285	iPd	35	42.00	-0.8
				e	35	36.00	425kmX	EDR		42.28	318	eP	35	02.80	0.1	NNT		47.97	107	eP	35	48.00	-0.6
LRG		36.29	297	eP	34	12.30	-0.7	ECHE		42.30	292	eP	35	03.80	0.7	LIS		48.66	293	iPc	35	53.10	-0.6
		1.1s		58.60nm			5.4mb	CD2		42.33	82	eP	35	03.80	0.4	AVE		49.08	286	iP	35	56.00	-1.1
NB2		36.46	327	P	34	13.70	-0.7		Z	22s		12.10um			5.7Msz					i	36	11.00	57kmX
		1.1s		95.80nm			5.6mb		N	15s		19.80um								i	36	25.00	
VITF		36.47	305	P	34	13.41	-1.1	EKA		42.51	315	P	35	04.00	-0.5	BJI		49.12	65	eP	35	57.50	0.3
WIT		36.48	312	eP	34	16.50	1.9			1.2s		88.20nm			5.4mb			1.0s		0.06nm			2.6mb X
				e	35	37.00	417kmX	EDU		42.51	317	eP	35	02.00	-2.6		Z	20s		15.00um			6.0Msz
MEM		36.62	309	Pc	34	16.30	0.6			0.9s		98.00nm			5.5mb		N	16s		13.90um			
ENN		36.68	309	eP	34	17.00	0.7	EDI		42.56	316	eP	35	05.70	0.8					PP	37	52.00	
		0.9s		45.00nm			5.3mb	EBH		42.76	317	eP	35	05.20	-1.4	TIO		49.84	283	iPd	36	02.00	-1.1
KEV		36.80	345	iP	34	17.40	0.4	ECRI		42.84	297	eP	35	07.00	-0.6					i	36	26.50	102kmX
		1.0s		86.00nm			5.6mb	ETOR		42.85	294	eP	35	06.80	-0.8	AKU		50.23	329	iP	36	06.90	1.5
	Z	16s		11.40um			5.8MszX	ELO		42.89	317	eP	35	02.50	-5.2X			0.9s		47.06nm			5.5mb
				i	35	24.20	332kmX			0.9s		116.00nm			5.6mb	WHN		50.92	77	eP	36	09.00	-2.1
				e	40	04.00		EVIA		43.68	291	eP	35	14.00	-0.4			1.5s		1.20nm			3.6mb X
				e	42	32.00		KMI		43.81	90	Pd	35	15.00	-0.8		Z	16s		6.50um			5.7MszX
				LR	52	38.00			Z	20s		13.00um			5.8Msz		N	18s		23.60um			
GTA		36.97	70	iPd	34	19.00	0.0		N	15s		9.70um					E	18s		8.90um			
		3.5s		1.10nm			3.1mb X		E	15s		9.90um								pP	36	18.00	30km
	Z	15s		26.20um			6.1MszX					pP	35	26.00	39kmX					S	43	25.00	
	E	13s		19.90um								S	41	47.00		TIA		51.01	69	Pc	36	12.10	0.3
				S	40	08.00						ScS	45	08.00			Z	15s		13.50um			6.1MszX
DOU		37.48	308	P	34	23.90	0.9	CHG		43.81	100	ePd	35	15.20	-0.4		N	16s		12.00um			
		0.9s		117.50nm			5.7mb			0.9s		49.37nm			5.3mb		E	16s		12.70um			
				S	40	26.00						eS	41	48.00						sP	36	25.00	

```
                eS    43 29.90
DAG    51.26 344 iPc   36 12.20  -0.9
       1.0s     67.00nm          5.5mb
SNG    52.02 111 eP    36 18.40  -1.2
                eS    43 42.10
QIZ    52.50  93 eP    36 22.50  -0.7
     N  22s     20.60um
     E  21s     23.30um
                eS    43 48.00
GZH    53.35  86 eP    36 30.00   0.6
     Z  18s      6.10um          5.7Msz
     N  16s     13.00um
     E  15s      5.70um
                eS    43 58.00
DL2    53.48  65 eP    36 30.00  -0.2
     Z  20s      6.60um          5.7Msz
     N  12s     44.20um
     E  18s     14.20um
                S     44 03.00
PSI    53.74 117 iPd   36 31.50  -0.9
                e     40 30.00
NJ2    53.87  74 Pc    36 33.20   0.1
     Z  18s     19.70um          6.2Msz
     N  15s      4.50um
     E  15s     10.70um
                S     44 11.00
SNY    53.93  61 eP    36 33.00  -0.4
     Z  20s     15.70um          6.1Msz
     N  15s      6.50um
     E  12s      8.10um
                esP   36 47.00
                S     44 07.50
                sS    44 22.00
                SS    47 52.00
IPM    54.02 114 ePd   36 35.10   0.7
       1.0s     47.80nm          5.5mb
CN2    54.62  58 eP    36 37.50  -1.0
       5.0s      0.50nm          2.8mb X
     Z  20s     14.80um          6.1Msz
     E  14s     12.30um
                epP   36 42.50   16km
                PP    38 38.00
                eS    44 13.00
SSE    56.08  74 Pd    36 48.00  -1.2
       1.0s      0.16nm          3.0mb X
     Z  18s     11.60um          6.0Msz
     N  14s      6.20um
     E  14s      2.60um
                SS    48 26.00
QZH    56.72  82 Pc    36 53.50  -0.4
     Z  20s      8.10um          5.8Msz
     N  20s     20.70um
                S     44 44.00
PPI    56.98 119 eP    36 57.00   1.1
MDJ    57.18  56 eP    36 56.50  -0.4
     Z  25s     18.50um          6.1MszX
     N  12s     10.20um
                SS    48 45.00
KGM    57.42 114 eP    37 01.00   2.0
LKO    59.05 259 P     37 09.44  -1.0
KIC    60.28 255 P     37 17.10  -1.7
       0.8s     31.00nm          5.5mb
TIC    60.33 256 P     37 17.52  -1.7
       0.8s     10.00nm          5.0mb
LIC    60.59 255 P     37 19.28  -1.6
       0.9s     30.50nm          5.4mb
     Z  19s      6.70um          5.8Msz
                S     45 34.00
GDH    62.46 337 eP    37 32.00  -0.8
                e     52 45.00
BAG    62.58  89 eP    37 35.00   0.4
                eS    46 04.00
KUMJ   62.86  68 eP    37 36.80   0.8
SHK    63.35  65 eP    37 39.30   0.1
YONJ   63.63  64 eP    37 42.20   1.1
TPI    63.82 115 ePd   37 43.50   1.0
QCP    63.93  90 eP    37 34.00  -9.3X
TKSJ   64.61  65 eP    37 47.70   0.2
KKM    64.88 101 ePc   37 50.00   0.5
       0.9s     58.30nm          5.7mb
MBO    65.52 270 eP    37 53.70   0.2
SLR    65.52 204 iPc   37 53.00  -0.5
       1.0s     30.00nm          5.4mb
     Z  18s     13.75um          6.2Msz
WKYJ   65.64  64 eP    37 54.80   0.6
KSR    66.12 206 eP    37 56.80  -0.5
       0.7s      6.00nm          4.8mb
MAT    66.44  61 eP    37 58.00  -1.3
       1.0s     50.00nm          5.6mb
     Z  19s      5.56um          5.8Msz
                eS    46 49.00
PRY    66.90 205 iPc   38 02.20  -0.1
       0.7s     17.50nm          5.3mb
BFS    67.11 205 iPd   37 55.50  -8.1X
       0.7s     82.19nm          6.0mb
MBC    68.09 358 ePd   38 09.50   0.5
       1.0s    106.00nm          5.9mb
                pP    38 27.50   67kmX
BLF    69.34 205 iPd   38 18.20   0.8
       0.9s     76.92nm          5.8mb
KIM    69.51 206 iPd   38 19.00   0.5
       0.9s     34.45nm          5.5mb
FRB    70.54 336 eP    38 23.00  -1.2
       1.0s     77.00nm          5.8mb
BRW    71.09  10 eP    38 29.00   1.6
POF    71.92 210 iPc   38 34.00   1.1
       0.3s     77.92nm          6.2mb
CER    75.70 209 iPc   38 55.20   0.4
       0.7s     55.00nm          5.7mb
SCH    76.00 329 eP    38 56.00  -0.3
INK    76.06   2 iPd   38 55.70  -0.7
       1.0s     63.00nm          5.6mb
IMA    76.36  11 eP    38 59.00   0.7
       0.8s     48.00nm          5.6mb
FBA    78.29   9 eP    39 09.50   0.7
TTA    78.87  13 eP    39 13.50   1.3
TOA    81.18   9 eP    39 26.50   2.0
PMR    81.27  10 eP    39 26.10   1.3
       1.2s     79.00nm          5.6mb
KDC    84.35  13 eP    39 42.00   1.3
MBL    84.91 120 eP    39 44.00  -0.1
SIT    87.21   5 e(P)  39 57.00   2.1
FFC    87.26 346 ePc   39 55.10  -0.2
       0.8s     32.00nm          5.6mb
RSON   88.82 340 P     40 03.90   1.1
       1.4s     31.93nm          5.5mb
MUN    89.79 131 eP    40 07.00  -0.5
EDM    90.52 352 ePc   40 11.50   0.7
       1.0s     97.00nm          6.0mb
NWAO   91.07 131 eP    40 17.00   3.6X
COOL   92.18 127 eP    40 21.00   2.4
SES    92.99 350 eP    40 22.20   0.0
CBN    93.17 323 eP    40 22.00  -1.2
PNT    94.97 355 eP    40 32.00   0.7
MCW    95.78 357 P     40 42.00   6.9X
ASPA   96.63 114 eP    40 38.80  -0.3
       0.9s      5.00nm          5.0mb
     Z  19s      0.41um          4.9Msz
                LR    53 31.40
RMW    96.95 356 P     40 41.70   1.2
LON    97.66 356 P     40 44.80   1.2
LRM    97.66 350 eP    40 45.80   1.9
RSSD   97.72 343 P     40 41.70  -2.5
CTA   104.06 105 ePdiff41 13.00   0.4
                iSKS  52 00.00
BAO   107.74 263 ePKP  45 20.80 -16.3X
CCH   123.39 272 ePKP  46 08.00   0.8
ZOBO  124.41 274 PKP   46 09.00  -0.5
       1.2s     10.14nm
     Z  20s      3.01um          6.0Msz
                LR    27 22.00
LPB   124.53 274 PKP   46 07.00  -2.5
     Z  20s      4.61um          6.1Msz
                LR    27 20.00
CNCB  124.58 274 PKPd  46 11.30   1.5
ARE   127.24 276 ePKP  46 08.00  -6.5X
     S.D. = 1.0  on 348 of 394 obs.
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&  JAN  20, 1990  01h 35m 17.28s
   62.022 N          150.886 W
   DEPTH =  53.1km
 CENTRAL ALASKA                  (  1)
      <AGS-P>.

CUT      0.48  37 iP    35 28.21  -0.4
SUA      0.56 173 iP    35 29.58  -0.1
PWA      0.61 127 iPc   35 29.80  -0.3
NCG      0.87 225 iP    35 32.87  -0.7
PLRM     0.94 117 iP    35 33.55  -0.8
PMR      0.94 117 iPc   35 33.60  -0.8
                iS    35 47.60
GHO      0.96 104 iP    35 34.17  -0.7
                eS    35 48.65
PME      0.96 113 iP    35 34.14  -0.6
CRP      0.97 219 iP    35 34.36  -0.7
PMS      1.00 140 iPc   35 34.70  -0.7
SPU      1.01 214 iP    35 34.61  -0.9
                eS    35 49.64
BGL      1.05 224 iP    35 35.45  -0.6
CKL      1.08 221 iP    35 35.74  -0.7
HUR      1.12  31 iP    35 35.77  -1.2
                eS    35 50.11
NKA      1.29 188 eP    35 40.65   1.3
                eS    35 58.79
SLKM     1.55 168 eP    35 42.03  -1.0
RDT      1.63 207 eP    35 43.14  -0.9
RND      1.68  33 eP    35 42.97  -1.8
                eS    36 02.47
RED      1.85 210 eP    35 46.38  -0.8
NCA      1.92  89 eP    35 46.78  -1.3
MCK      1.94  27 eP    35 46.76  -1.6
NNL      2.00 186 eP    35 49.91   0.7
SEW      2.05 159 eP    35 48.74  -1.1
GLI      2.15 121 eP    35 48.74  -2.6
TOA      2.22  86 iPc   35 51.30  -1.1
VZW      2.29 113 eP    35 51.04  -2.3
KLU      2.42 100 iP    35 53.05  -2.2
SVW      2.44 250 iPc   35 53.40  -2.1
CNPM     2.51 184 eP    35 55.72  -0.7
TTA      2.55 293 iPc   35 54.60  -2.4
PDB      2.76 217 eP    35 58.42  -1.6
FBA      3.21  24 iPd   36 03.70  -2.6
IMA      4.24 344 iPc   36 18.20  -2.9
KDC      4.36 191 eP    36 22.00  -0.6
DWY      5.60  64 P     36 39.10  -0.9
INK      9.62  42 eP    37 33.00  -2.6
       36 obs. associated
-------------------------------------
?  JAN  20, 1990  01h 50m 33.64± 3.0Bs
   38.367 N ±19.1km   73.303 E ±18.5km
   DEPTH = 160.4 ± 33.3 km
   4.4mb (  4 obs.)
 TAJIK-XINJIANG BORDER REGION     (719)

NDI     10.19 160 eP    52 56.00  -1.0
        0.5s     21.13nm          5.0mb
                IS    54 39.00
MAIO    11.19 264 eP    53 11.00   0.9
HYB     21.37 166 eP    55 10.50   1.1
                e     59 00.00
GBA     24.93 170 P     55 48.00   4.5X
HFS     42.76 321 eP    58 14.70  -1.5
        0.4s      1.70nm          4.0mb
BCAO    60.03 250 ePd   00 25.00  -0.8
        0.5s      3.00nm          4.4mb
MBC     65.38   3 ePc   01 01.00   0.8
        0.5s      3.00nm          4.4mb
INK     71.76  10 eP    01 40.00   0.4
      S.D. = 1.5  on  7 of  8 obs.
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*  JAN  20, 1990  02h 11m 29.43± 1.34s
   24.641 N ± 8.8km  122.641 E ±12.5km
   DEPTH =  10.0km  (geophysicist)
   4.3mb (  1 obs.)
 TAIWAN REGION                    (243

TWC      0.72 268 iPd   11 41.50  -2.1
                eS    11 48.30
TWZ      1.07 295 ePc   11 50.00   0.5
TWD      1.11 240 ePc   11 49.30  -0.9
                eS    12 01.30
ANP      1.15 298 iPd   11 51.90   0.8
       0.8s  2149.25nm
                eS    12 03.50
TWF1     1.78 224 ePd   12 01.90   1.5
TWK      2.40 236 eP    12 10.00   0.6
SSE      6.56 349 P     13 07.50  -0.8
       0.5s      0.03nm          2.5mb
     N  10s      0.80um
     E  10s      1.20um
LZH     19.79 310 Pc    16 04.00   1.0
        1.8s     30.00nm          4.3mb
ASPA    49.25 166 eP    20 19.60  -0.6
      S.D. = 1.3  on   9 of   9 obs.
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*  JAN  20, 1990  02h 15m 06.47± 0.76
   36.053 N ±11.8km   53.309 E ± 7.7k
   DEPTH =  38.6km  (  2 depth phases
   4.5mb (  4 obs.)
 IRAN                             (348
      Felt in the Firuzkuh area.
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20d 02h

TEH	1.59	259	eP	15	32.00	-0.8
MAIO	5.01	85	iPnd	16	21.80	0.5
	0.9s	38.36nm				4.8mb X
			eSn	17	23.00	
KER	5.36	253	eP	16	26.00	-0.2
TAB	5.93	292	eP	16	35.00	0.6
SLY	6.36	268	ePd	16	50.00	9.8X
			iS	18	23.00	
			i	18	29.00	
BHD	7.86	252	eP	17	32.00	30.9X
			e	19	06.50	
MSL	8.22	275	eP	17	12.00	5.8X
			eS	19	33.00	
DSI	15.56	258	eP	18	45.00	0.4
PRNI	16.34	255	e(P)	18	55.00	0.3
MBH	16.69	253	e(P)	19	00.00	1.0
ELL	18.85	279	eP	19	25.00	-0.9
TLB	21.01	302	ePc	19	48.50	-0.4
MLR	22.68	303	ePc	20	07.00	1.3
KSP	30.30	311	eP	21	27.50	11.3X
NUR	30.57	332	eP	21	32.00	13.6X
			e	21	41.00	31km
SUF	31.54	336	eP	21	35.50	8.6X
KBA	31.55	303	eP	21	29.50	2.1
	0.8s	3.20nm				4.2mb
			e	21	49.00	84kmX
CLL	32.43	311	eP	21	34.00	-0.8
			i	21	46.10	46km
SOD	34.87	342	eP	21	59.00	3.3X
HFS	34.94	326	eP	21	55.00	-1.4
	1.3s	25.30nm				5.0mb
NB2	36.44	327	P	22	08.80	-0.3
	0.9s	5.10nm				4.4mb
BCAO	44.87	234	iPd	23	18.00	-1.1
	0.3s	3.00nm				4.6mb
FRB	70.45	336	eP	26	18.00	-0.4

S.D. = 1.0 on 16 of 23 obs.

JAN 20, 1990 02h 35m 26.85± 1.12s
48.101 N ±10.3km 9.277 E ± 7.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.8 (LDG), 2.2 (FUR), 2.1 (KBA).

SLE	0.62	238	iPc	35	38.70	-0.7
SAX	0.85	177	ePd	35	42.30	-1.2
ZLA	0.86	224	ePc	35	43.50	0.0
FEL	0.88	256	ePn	35	43.50	-0.3
LLS	1.25	189	ePd	35	50.20	0.0
FUR	1.34	87	iPgd	35	51.30	-0.3
CDF	1.37	284	Pg	35	53.60	1.5
			Sg	36	11.80	
OSS	1.53	157	ePd	35	53.40	-1.0
VDL	1.62	175	iPc	35	56.70	1.0
BSF	1.69	262	Pn	35	55.20	-1.5
			Sg	36	21.30	
HAU	1.97	268	Pg	36	04.30	3.7X
			Sg	36	29.20	
TMA	2.02	188	iPc	36	04.00	2.6
KBA	2.94	109	e(Pg)	36	22.00	7.4X
			iSg	36	54.80	
LPL	3.12	215	Pg	36	23.00	5.8X

S.D. = 1.4 on 11 of 14 obs.

JAN 20, 1990 02h 55m 54.84± 0.26s
40.097 N ± 5.7km 142.314 E ± 5.0km
DEPTH = 47.5km (8 depth phases)
5.2mb (48 obs.) 5.7Msz (5 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

MAT	4.80	224	iPc	57	09.00	2.6
	0.5s	246.48nm				
			eS	58	16.00	
SSE	19.35	249	P	00	16.50	-2.7
	1.0s	73.00nm				4.9mb
	Z 20s	0.60um				4.0Msz
			i	00	23.50	26kmX
BJI	19.99	278	eP	00	22.50	-3.5X
	1.5s	66.00nm				4.7mb
	Z 20s	1.20um				
LZH	30.38	275	eP	02	02.00	-2.7
	1.5s	46.00nm				5.0mb
	Z 25s	1.10um				4.4MszX
			sP	02	08.70	
KMI	36.21	258	Pd	02	55.50	0.3
SVW	42.66	39	eP	03	49.10	1.0
			e	04	02.50	50km
CHG	42.79	253	iPc	03	50.00	0.4
	1.0s	32.00nm				5.0mb
BRW	43.33	24	eP	03	57.80	4.5X
IMA	43.71	32	ePd	03	57.30	0.7
	0.8s	17.80nm				4.9mb
			i	04	03.90	22kmX
BDT	43.75	251	eP	03	57.70	0.4
NST	43.96	249	eP	04	01.00	1.9
PMS	45.59	39	eP	04	11.20	-0.5
PMR	45.77	38	P	04	25.00	12.0X
Z	20s	6.00um				5.5Msz
FBA	46.15	34	eP	04	15.60	-0.4
NNT	46.34	246	eP	04	18.20	0.2
SNG	49.61	240	eP	04	45.10	1.6
INK	51.35	28	iPc	04	55.70	-0.4
	0.6s	6.00nm				4.8mb
MBC	53.39	17	ePc	05	10.90	-0.4
	1.0s	25.00nm				5.2mb
NDI	53.83	279	iPc	05	14.30	-0.8
KBS	57.77	350	iPd	05	42.80	-0.1
WB5	60.12	189	eP	05	58.10	-1.6
WRA	60.19	189	Pc	05	58.50	-1.6
	0.6s	6.00nm				4.9mb
KEV	60.84	339	iP	06	03.20	-0.9
	1.0s	34.00nm				5.4mb
POO	61.98	271	eP	06	12.50	0.0
GBA	62.19	264	P	06	13.00	-0.9
SOD	62.43	337	iP	06	13.60	-1.2
DAG	62.80	355	iPc	06	15.50	-1.6
	0.9s	19.33nm				5.2mb
MAIO	62.90	296	eP	06	19.00	0.5
ASPA	63.92	189	iPc	06	23.90	-1.1
	1.1s	11.00nm				4.8mb
KOD	64.27	262	eP	06	27.30	-0.7
PNT	65.50	45	eP	06	35.00	-0.2
SUF	65.57	333	iP	06	34.30	-1.0
	0.7s	20.70nm				5.3mb
DZM	65.81	155	iPc	06	51.80	14.4X
EDM	66.52	39	eP	06	40.50	-1.1
DPW	67.09	46	P	06	44.80	-0.6
NUR	67.59	332	iP	06	47.00	-1.1
	0.8s	19.10nm				5.2mb
WDC	68.70	55	ePc	07	09.10	13.7X
ORV	69.94	55	ePc	07	10.40	7.3X
FFC	70.76	34	iPc	07	07.60	-0.2
	0.9s	26.00nm				5.2mb
LRM	71.48	45	eP	07	12.40	-0.2
			i	07	26.30	49km
CMB	71.54	56	P	07	20.70	7.9X
	1.2s	13.89nm				4.8mb
CMB	71.54	56	e(P)	07	13.70	0.9
HFS	71.59	336	eP	07	11.50	-1.2
	1.3s	71.90nm				5.5mb
Z	16s	0.46um				4.8MszX
			LR	36	30.00	
NB2	71.64	337	P	07	12.20	-0.8
	1.0s	37.40nm				5.3mb
KVN	72.36	54	P	07	17.50	-0.4
			pP	07	31.40	49km
KER	72.38	300	eP	07	18.00	0.0
FRI	72.60	56	e(P)	07	22.60	3.6X
TNP	73.50	54	P	07	24.60	0.0
			pP	07	38.20	47km
FRB	73.64	14	ePc	07	24.20	-0.4
	0.8s	38.00nm				5.4mb
BW06	75.03	46	P	07	32.80	-0.6
SBB	75.22	57	eP	07	28.00	-6.4X
MWC	75.35	58	eP	07	45.00	9.7X
RVR	75.94	57	eP	07	51.00	12.6X
VRI	76.85	320	ePd	07	44.50	1.2
KRA	76.95	326	iPc	07	43.70	0.0
	0.6s	45.00nm				5.7mb
			e	07	57.00	46km
RSON	77.03	33	P	07	43.00	-1.1
	0.9s	6.97nm				4.7mb
Z	22s	4.23um				5.7Msz
RSSD	77.09	43	P	07	43.80	-1.1
			pP	07	57.40	47km
SPC	77.47	325	eP	07	46.90	0.1
MLR	77.51	320	ePc	07	49.00	1.9
BBTK	77.78	312	iPc	07	49.00	0.4
KSP	77.87	328	iPc	07	49.20	0.4
GLA	78.18	57	eP	08	04.00	13.1X
BRG	78.77	330	iP	07	53.20	-0.5
	1.6s	38.00nm				5.1mb
			e	10	40.00	
CLL	78.79	330	iPc	07	53.70	-0.1
	1.2s	30.00nm				5.1mb
			e	08	04.00	33kmX
PRU	79.24	329	Pc	07	56.80	0.5
	1.0s	21.70nm				5.0mb
SRO	79.35	325	iP	07	57.60	0.7
GOL	79.43	47	P	07	58.40	0.5
	1.2s	16.39nm				4.8mb
Z	20s	3.00um				5.6Msz
GLD	79.48	46	P	08	00.00	2.0
Z	20s	5.00um				5.9Msz
BZS	79.51	322	eP	07	57.00	-0.8
ZST	79.58	326	eP	07	59.00	0.9
MOX	79.85	331	eP	08	00.00	0.4
EKA	80.48	341	P	08	03.00	0.2
	2.6s	299.80nm				5.8mb
WET	80.57	329	iPc	08	04.30	0.9
	1.2s	33.00nm				5.1mb
KHL	80.65	313	eP	08	04.00	-0.2
GRF	80.77	330	iPc	08	05.50	1.0
	1.2s	70.00nm				5.5mb
Z	20s	0.30um				4.6MszX
			e	08	18.70	45km
			e	08	31.10	
RDO	80.82	317	eP	08	05.00	0.2
ELL	81.53	311	eP	08	08.80	0.0
BHG	81.71	328	iPd	08	10.90	1.5
MEM	81.89	334	P	08	16.00	5.8X
KBA	82.03	328	eP	08	10.50	-0.8
	1.0s	26.80nm				5.2mb
ANMO	82.09	51	P	08	13.60	1.8
			pP	08	27.60	48km
ALQ	82.09	51	iPc	08	13.00	1.1
	1.0s	7.50nm				4.7mb
Z	19s	3.87um				5.8Msz
KSL	82.15	311	eP	08	11.30	-0.6
VAY	82.22	319	eP	08	13.00	0.8
SKO	82.30	320	iPc	08	13.50	0.9
	1.1s	64.00nm				5.6mb
LJU	82.36	326	eP	08	13.00	0.2
RBL	82.45	327	P	08	13.00	-0.4
PLG	82.47	318	iPc	08	13.50	0.0
VBY	82.47	326	e(P)	08	14.00	0.6
VOY	82.64	327	eP	08	13.50	-0.9
CEY	82.64	326	eP	08	14.00	-0.3
FVI	82.65	328	P	08	14.00	-0.3
DMU	82.70	342	eP	08	15.00	0.6
TRI	82.95	326	iPc	08	14.10	-1.7
OGA	83.14	329	eP	08	18.00	0.9
DLE	83.17	342	eP	08	17.40	0.5
OHR	83.27	320	iPc	08	17.90	0.2
	1.0s	0.08nm				2.7mb X
CDF	83.29	332	eP	08	17.70	0.0
	0.8s	8.00nm				4.8mb
DCN	83.30	342	eP	08	17.80	0.3
SLE	83.38	331	ePd	08	18.00	-0.1
CTI	83.56	328	P	08	18.50	-0.6
OSS	83.64	329	ePd	08	20.00	0.4
LLS	83.94	330	ePd	08	21.70	0.6
KAP	83.94	312	eP	08	21.50	0.4
BSF	83.96	332	eP	08	20.80	-0.3
HAU	83.97	332	eP	08	20.90	-0.2
VDL	84.07	329	ePd	08	22.50	0.7
SAL	84.37	328	P	08	21.50	-1.5
TMA	84.62	330	ePd	08	24.60	0.1
VAI	84.85	329	Pc	08	25.50	0.1
MMK	85.01	330	ePd	08	27.40	0.8
NPS	85.03	313	eP	08	26.00	-0.6
ARV	85.07	326	P	08	27.50	0.8
DIX	85.20	330	ePd	08	28.10	0.5
PGD	85.29	327	eP	08	29.00	1.1
ORO	85.36	330	P	08	27.50	-0.7
EMS	85.39	331	ePd	08	28.70	0.3
CRE	85.39	326	P	08	28.50	0.1
LOR	85.48	333	iPc	08	28.50	-0.1
	1.0s	42.00nm				5.6mb
BOB	85.50	328	P	08	29.50	0.7
ASS	85.54	326	P	08	29.50	0.5
FLN	85.60	336	eP	08	29.40	0.2
ITM	85.63	316	eP	08	29.00	-0.6
LDF	85.64	336	eP	08	29.40	0.0
LBF	85.68	333	iPc	08	29.50	-0.2
	1.0s	26.00nm				5.4mb
VAM	85.71	314	eP	08	10.50	-19.5X
SSF	85.78	333	iPc	08	30.20	0.1
	0.9s	22.90nm				5.4mb
DUI	85.86	324	P	08	31.00	0.3

```
LPG     85.94 330 iPc    08 31.50   0.2
        0.8s    21.40nm          5.4mb
SMF     86.02 333 eP     08 31.30   0.0
        1.2s    41.60nm          5.5mb
GRR     86.05 336 iPc    08 31.60   0.2
        1.1s    45.90nm          5.6mb
AVF     86.07 333 iPc    08 31.70   0.2
        0.9s    58.90nm          5.8mb
MNS     86.08 325 P      08 31.50  -0.2
SDI     86.12 324 P      08 31.50  -0.5
CKI     86.25 329 P      08 31.50  -1.0
BNI     86.34 330 P      08 30.50  -2.6
LPF     86.42 336 eP     08 33.60   0.4
        1.1s    39.00nm          5.5mb
BGF     86.45 333 iPc    08 33.60   0.2
        0.8s     8.00nm          5.0mb
RDP     86.57 325 P      08 23.00 -11.2X
MAF     86.83 333 iPc    08 35.90   0.6
        1.0s    36.00nm          5.6mb
TCF     86.90 334 iPc    08 36.00   0.3
        1.1s    19.50nm          5.2mb
SBF     87.05 329 eP     08 35.80  -0.7
        0.8s     8.00nm          5.0mb
LSF     87.16 334 iPc    08 37.30   0.4
        0.9s    36.00nm          5.6mb
SIO     87.24  44 e(P)   08 49.30  11.9X
TUL     87.39  44 eP     08 50.70  12.6X
        1.5s    33.20nm
MFF     87.41 335 eP     08 38.50   0.5
        1.0s    40.00nm          5.6mb
LMR     87.86 329 eP     08 39.60  -0.7
RJF     87.99 333 eP     08 41.50   0.6
        0.9s     9.80nm          5.0mb
CAF     88.13 333 eP     08 42.60   1.0
        1.2s    22.00nm          5.3mb
LFF     88.58 334 eP     08 44.50   0.8
        0.8s    11.80nm          5.2mb
LPO     88.65 333 eP     08 44.70   0.6
KIC    124.70 319 PKP    14 50.40  -0.8
ZOBO   144.47  57 PKP    15 27.00  -1.6
        1.2s    10.14nm
LPB    144.68  57 PKP    15 33.00   4.3X
CNCB   144.96  57 PKP    15 30.00   0.6
CCH    146.56  56 PKP    15 32.90   1.2
BAO    154.02  23 ePKP   15 50.50   7.8X
      S.D. = 0.9  on 138 of 157 obs.
-----------------------------------------
&  JAN  20, 1990  03h 41m 43.36s
   59.435 N          152.972 W
   DEPTH =  79.8km
 SOUTHERN ALASKA                  (  2)
      <AGS-P>.

AUL     0.24 258 iP      41 54.95  -0.5
XLV     0.64  88 iP      41 58.01  -0.6
                eS       42 09.69
PDB     0.71 300 iP      41 58.42  -0.9
                eS       42 10.41
CNPM    0.89  83 iP      42 00.61  -0.8
                iS       42 15.05
RED     0.99   6 eP      42 01.69  -1.0
                eS       42 16.00
NNL     1.04  54 eP      42 03.64   0.4
                eS       42 19.04
RDT     1.18  14 iP      42 04.13  -0.8
NKA     1.57  33 eP      42 11.28   1.3
                eS       42 34.18
KDC     1.71 171 eP      42 09.93  -1.9
SLKM    1.75  51 eP      42 11.53  -1.0
CKL     1.80  10 iP      42 12.54  -0.6
SPU     1.81  14 iP      42 12.58  -0.7
BGL     1.86   9 iP      42 13.47  -0.5
CRP     1.88  12 iP      42 13.86  -0.5
SEW     1.90  68 eP      42 13.03  -1.4
                eS       42 35.46
NCG     2.02  11 eP      42 15.58  -0.6
SVW     2.14 323 eP      42 16.62  -1.1
                eS       42 41.13
SUA     2.32  28 eP      42 19.66  -0.6
                eS       42 49.02
PMS     2.48  42 eP      42 21.43  -1.1
                eS       42 50.27
        19 obs. associated
-----------------------------------------
%  JAN  20, 1990  04h 16m 06.48± 1.57s
   39.403 N ±10.3km   28.392 E ±15.6km
   DEPTH =  10.0km  (geophysicist)

 TURKEY                           (366)

DST     0.27  42 iPg     16 11.30  -0.9
                eSg      16 18.30
KCT     0.84 358 iPg     16 23.80   1.0
BNT     1.02 339 ePn     16 24.80  -0.9
YLV     1.38  33 iPn     16 32.80   0.9
KHL     1.39 140 ePn     16 32.00   0.0
      S.D. = 1.3  on   5 of   5 obs.
-----------------------------------------
&  JAN  20, 1990  06h 46m 03.85s
   58.045 N          155.608 W
   DEPTH =  61.0km
 ALASKA PENINSULA                 ( 12)
      <AGS-P>.

PDB     1.90  22 iP      46 33.20  -1.2
                eS       46 56.90
CNPM    2.72  55 eP      46 44.58  -1.4
                eS       47 16.85
RED     2.79  30 eP      46 45.72  -1.4
                eS       47 16.66
NNL     3.00  46 eP      46 49.09  -0.8
RDT     3.02  32 eP      46 48.39  -1.9
CKL     3.57  26 eP      46 56.51  -1.6
BGL     3.62  25 eP      46 57.28  -1.4
SPU     3.63  28 eP      46 56.77  -2.0
CRP     3.68  27 eP      46 57.92  -1.7
SLKM    3.71  46 eP      46 58.20  -1.7
                eS       47 40.47
SEW     3.79  54 eP      46 58.00  -3.0
SUA     4.22  34 eP      47 04.31  -2.9
PMS     4.44  41 eP      47 06.99  -3.2
PWA     4.63  36 eP      47 09.34  -3.4
CUT     5.12  29 eP      47 16.00  -3.7
GLI     5.19  53 eP      47 15.75  -5.0
HIN     5.24  59 eP      47 17.44  -4.0
VZW     5.51  53 eP      47 21.06  -4.1
CVA     5.64  59 eP      47 22.55  -4.4
SGAM    5.87  61 eP      47 25.92  -4.4
KLU     5.99  51 eP      47 27.50  -4.5
RAGM    6.09  63 eP      47 28.89  -4.4
        22 obs. associated
-----------------------------------------
•  JAN  20, 1990  06h 52m 56.90± 1.85s
   16.003 N ±22.7km   96.440 W ± 8.7km
   DEPTH =  60.1 ± 10.2 km
   4.2mb (  4 obs.)
 OAXACA, MEXICO                   ( 60)

OXX     1.11 346 iPd     53 16.50  -0.2
                iS       53 40.00
PSM     1.51  62 iP      53 21.00  -1.2
                iS       53 54.00
ACX     3.39 285 (P)     53 48.00  -0.6
                iS       54 29.50
IIT     3.49 330 (P)     53 55.50   5.3X
                (S)      54 47.50
PPM     3.69 326 eP      53 52.00  -1.2
                (S)      54 50.00
SCX     3.72  78 eP      53 54.50   1.3
                (S)      54 41.00
III     3.73 310 (P)     53 55.50   1.9
TPX     4.17 105 (P)     54 25.50  25.9X
UNM     4.22 322 (P)     54 12.50  12.1X
IIJ     4.86 320 (P)     54 09.50  -0.2
                (S)      55 18.50
SIO    19.66   0 eP      57 24.90   1.2
TUL    19.83   2 eP      57 24.90  -0.6
       1.0s     9.30nm          4.1mb
ALQ    20.89 336 eP      57 37.20   0.6
       1.0s     5.00nm          3.8mb
ANMO   20.89 336 eP      57 36.60   0.0
GOL    24.87 343 eP      58 16.50   0.9
LRM    32.62 339 eP      59 26.00   0.8
FFC    38.88 355 eP      00 18.00   0.0
       1.1s    13.00nm          4.7mb
INK    57.34 345 eP      02 38.00  -2.8
MBC    61.44 354 eP      03 09.00   0.0
       0.9s     3.00nm          4.4mb
      S.D. = 1.3  on  16 of  19 obs.
-----------------------------------------
%  JAN  20, 1990  07h 02m 39.04± 2.96s
   22.798 N ±21.5km   121.091 E ±12.3km
   DEPTH =   5.0km  (geophysicist)
 TAIWAN REGION                    (243)

TWG     0.03 322 iPd     02 39.30  -1.0
                eS       02 40.40
TWM1    0.62 273 eP      02 51.40   0.0
TWK     0.72 310 iPc     02 53.30  -0.2
TWD     1.36  20 eP      03 04.40  -0.1
TWO     1.49 351 ePc     03 06.80   0.3
     S.D. = 0.7  on   5 of   5 obs.
-----------------------------------------
   JAN  20, 1990  07h 20m 21.83± 0.22s
   15.262 S ± 8.5km   173.376 W ± 6.4km
   DEPTH =  33.6km  (  3 depth phases)
   5.5mb ( 25 obs.)  5.5Msz ( 10 obs.)
 TONGA ISLANDS                    (173)
      Ms 5.9 (BRK).
      CENTROID, MOMENT TENSOR     (HRV)
      Doto Used: GDSN
      L.P.B.: 12S, 28C
      Centroid Locotion:
      Origin Time        07:20:28.5 0.3
      Lot 15.91S 0.05 Lon 173.13W 0.05
      Dep  15.0 FIX Holf-durotion  3.0
      Moment Tensor;    Scole 10**17 Nm
        Mrr= 1.92 0.11   Mtt= 1.96 0.16
        Mff=-3.88 0.14   Mrt= 2.35 0.30
        Mrf= 4.45 0.42   Mtf= 1.43 0.11
       Principol Axes:
        T  Vol=  6.14   Plg=47  Azm=324
        N        0.16       29       196
        P       -6.30       28        89
      Best Double Couple:Mo=6.2*10**17
       NP1:Strike=130 Dip=32 Slip=  20
       NP2:        22     79       120

AFI     2.05  49 iPc     20 44.00 -10.7X
                S        24 00.00
MBU     7.78 256 iPd     22 23.80   8.1X
SVA     8.32 249 eP      22 30.00   6.8X
SGE     8.66 253 iP      22 34.70   6.7X
NDF     9.14 253 ePc     22 41.50   7.0X
RAR    14.21 117 P       23 34.00  -8.8X
                S        26 32.00
PVC    17.73 259 iPc     24 36.00   8.1X
DZM    20.27 247 iPc     24 56.00  -1.5
PAE    22.94  99 eP      25 25.00   0.7
       1.4s    250.00nm          5.5mb
TVO    23.26 100 eP      25 28.00   0.5
       1.4s    220.00nm          5.5mb
TBI    23.94 113 eP      25 33.00  -0.9
       1.5s    225.00nm          5.5mb
PMO    24.59  93 iP      25 39.40  -0.9
       1.4s    405.00nm          5.8mb
VAH    24.84  93 iP      25 40.00  -2.6
       1.4s    210.00nm          5.5mb
TPT    24.86  93 iP      25 41.80  -1.1
       1.4s    540.00nm          5.9mb
RUV    25.08  93 iP      25 43.60  -1.3
       1.4s    270.00nm          5.7mb
HNR    26.68 279 eP      26 04.00   4.1X
                eS       30 50.00
MSZ    33.32 205 eP      26 58.00  -0.7
BRS    33.65 243 iPc     27 01.00  -0.8
                eS       32 18.00
                e        35 00.00
COO    35.26 238 eP      27 14.50  -1.2
RMO    36.98 246 eP      27 30.00  -0.1
CTA    38.70 257 iPc     27 44.00  -0.6
       0.9s    10.08nm          4.6mb
                iPP      29 24.00
                iS       33 43.00
CN8    38.85 232 eP      27 45.00  -0.8
CAN    39.13 232 eP      27 46.80  -1.3
BWA    39.27 234 eP      27 47.90  -1.4
CMS    40.52 239 eP      27 58.00  -1.6
TOO    42.57 231 eP      28 15.00  -1.4
8FD    44.67 232 eP      28 32.00  -1.3
ADE    47.12 236 iPc     28 51.80  -1.0
       0.8s    23.88nm          5.2mb
WB5    49.87 257 eP      29 12.80  -1.6
WRA    49.90 257 Pc      29 12.70  -1.8
       0.7s     8.40nm          4.9mb
ASPA   50.18 252 iPd     29 14.60  -2.1
       0.9s    62.00nm          5.6mb
     Z 22s    12.71um          5.9MszX
                LR       48 04.00
GUMO   50.28 303 eP      29 08.00  -9.4X
FORR   55.47 243 iPd     29 55.00  -0.9
       0.4s    20.00nm          5.5mb
```

20d 07h

COOL	61.45	243	eP	30	36.00	-1.7	CHG	92.68	289	eP	33	40.50	8.3X	BGF	148.64	5	ePKP	40	05.90	2.6
SBA	63.39	185	e(P)	30	51.60	1.8	LZH	93.16	306	eP	33	37.30	3.0X	LFK	148.71	315	ePKP	40	08.00	4.2X
VNDA	63.51	186	P	30	52.40	1.8		6.0s		378.00nm			6.0mb X	VOY	148.72	350	ePKP	40	04.70	1.2
KLB	64.32	242	eP	30	56.00	-0.7	Z	20s		1.20um			5.3Msz	LSF	148.81	7	ePKP	40	05.90	2.3
DAV	64.43	286	eP	30	46.00	-11.6X	E	18s		1.10um				TCF	148.85	6	ePKP	40	06.40	2.8
MUN	65.62	242	eP	31	05.00	-0.1				pP	33	48.20	34km	CEY	148.92	349	ePKP	40	07.00	3.2X
MAT	68.85	320	eP	31	24.00	-1.2				sP	33	53.00		MAF	148.95	5	ePKP	40	06.80	3.0X
	1.3s	105.77nm			5.7mb					ePP	37	17.60		VBY	148.99	348	ePKP	40	05.30	1.5
	Z 20s	3.19um			5.6Msz					SKS	44	10.00		CTI	149.02	353	PKP	40	07.50	3.5X
		eS	40	30.00						eS	44	48.00		TRI	149.06	350	iPKPc	40	05.90	2.0
QCP	71.27	292	eP	31	33.50	-6.9X				i	45	57.00		KDZ	149.09	332	ePKP	40	09.00	4.9X
MHC	71.43	41	ePc	31	40.90	-0.2				PS	46	16.00		DSI	149.15	307	iPKPc	40	10.00	5.5X
MWC	72.02	46	eP	31	43.00	-1.8				SS	51	20.00		VTS	149.26	336	iPKPd	40	10.00	5.4X
BAR	72.16	48	eP	31	45.00	-0.5	MBC	96.79	11	eP	33	49.50	-0.3	PLDF	149.28	4	PKP	40	09.66	5.3X
RVR	72.37	46	eP	31	45.00	-1.6		1.4s		13.00nm			5.3mb	RIY	149.31	349	ePKP	40	08.60	4.3X
BAG	72.38	293	eP	31	46.00	-1.2	DMN	106.95	295	PKP	39	00.00	13.3X	RZN	149.37	333	ePKP	40	10.00	5.2X
PLM	72.39	47	eP	31	45.00	-2.0	SOD	126.31	351	ePKP	39	31.00	8.8X	KHL	149.41	323	ePKP	40	09.50	4.7X
SBB	72.44	45	eP	31	45.00	-2.1	MAIO	128.67	304	ePKP	39	30.00	2.2	RDO	149.43	331	ePKP	40	08.50	3.9X
FRI	72.47	43	ePc	31	46.40	-0.7	SUF	130.64	348	ePKP	39	31.70	1.2	VAI	149.44	357	PKPc	40	09.00	4.5X
		e	32	07.70	81kmX			0.6s		2.90nm				HITJ	149.51	303	PKPc	40	11.00	5.7X
CMB	72.65	41	ePc	31	47.80	-0.4	NUR	132.96	348	ePKP	39	34.00	-1.0	SAL	149.57	355	PKP	40	10.00	5.3X
WDC	72.86	38	ePc	31	49.30	0.0	APO	134.48	355	ePKP	39	39.80	1.9	ORO	149.71	358	PKP	40	10.50	5.4X
		e	32	22.70	135kmX	KSP	143.66	350	ePKP	39	53.40	-1.5	RJF	149.74	7	ePKP	40	08.90	3.9X
ORV	72.86	40	ePc	31	49.20	-0.2	CLL	143.68	353	ePKP	39	51.00	-3.9X	LPG	149.86	360	ePKP	40	10.30	4.7X
CLC	73.22	45	eP	31	51.00	-0.6	BRG	143.99	352	ePKP	39	52.00	-3.5X	MMB	149.88	334	ePKP	40	11.00	5.6X
MIN	73.27	39	ePc	31	51.10	-0.9	SPC	144.37	345	ePKP	39	55.20	-1.2	KKB	149.92	335	iPKPc	40	11.00	5.6X
GLA	73.68	48	eP	31	53.00	-1.4	MOX	144.48	355	ePKP	39	56.00	-0.3	LBL	149.99	5	PKP	40	11.45	6.2X
KVN	74.69	42	P	31	59.20	-1.1	PRU	144.77	351	PKP	39	56.50	-0.3	LFF	150.00	8	ePKP	40	09.50	4.1X
TNP	74.72	43	P	31	59.00	-1.5	HOF	144.78	354	ePKP	39	55.80	-1.1	CAF	150.18	7	ePKP	40	10.10	4.4X
	1.3s	24.66nm			5.0mb		KAS	144.95	323	ePKP	39	58.00	0.5	ELL	150.22	320	ePKP	40	12.00	5.9X
SPA	74.84	180	iPc	32	02.50	1.8	VRI	145.13	335	ePKPc	39	36.50	-21.1X	MBH	150.27	304	ePKP	40	12.00	5.8X
	0.9s	28.18nm			5.3mb		GRF	145.46	355	ePKPc	39	57.80	-0.2	BNI	150.30	360	PKP	40	12.70	6.7X
	Z 18s	2.27um			5.5Msz			Z 19s		0.80um			5.5Msz	LPO	150.31	8	ePKP	40	10.30	4.4X
LON	77.14	34	P	32	13.50	-0.3				e	40	07.10		SKO	150.47	337	iPKPc	40	12.40	6.2X
PGC	77.51	31	eP	32	17.00	1.4				e	40	36.80			1.3s		82.00nm			
RMW	77.59	33	P	32	15.80	-0.5				e	41	02.90			Z 19s		1.13um			5.7Msz
SSE	77.89	307	P+	32	16.00	-2.1	ABH	145.46	359	ePKP	39	57.68	-0.4		N 19s		0.09um			
	6.0s	0.90nm			3.0mb X		PSZ	145.64	344	ePKP	39	58.90	0.4		E 19s		0.99um			
	Z 22s	1.40um			5.2Msz		RUP	145.65	359	ePKP	39	58.62	0.2				i	40	20.00	
		S	42	16.00			MLR	145.75	336	ePKPd	39	59.50	0.7	BOB	150.49	356	PKPc	40	11.90	5.7X
		sS	42	40.00			WET	145.82	353	ePKP	39	59.00	0.3	VAY	150.58	335	ePKP	40	12.00	5.6X
MSU	78.31	45	P	32	20.80	0.1	NAI	145.93	244	iPKPc	40	04.20	4.0X	KSL	150.82	320	ePKP	40	12.50	5.6X
DUG	78.74	43	P	32	29.00	6.1X	ZST	146.04	347	iPKP	40	00.50	1.5	DOI	150.85	359	PKP	40	18.00	11.2X
PMR	78.98	12	eP	32	22.00	-1.5	FLN	146.09	8	ePKP	39	58.40	-0.7	CKI	150.90	358	PKP	40	11.50	4.7X
	1.4s	86.60nm			5.6mb		SRO	146.13	346	ePKP	40	01.00	1.8	MME	150.96	354	PKP	40	17.00	9.8X
TTA	79.11	8	P	32	27.70	3.4X				e	41	23.60		RSM	151.00	351	PKP	40	14.60	7.7X
	1.2s	64.39nm			5.5mb		VKA	146.13	348	e(PKP)	40	00.00	0.8	SFI	151.09	352	PKP	40	14.00	7.0X
TTA	79.11	8	eP	32	24.00	-0.3		7.0s		2090.00nm				BDI	151.10	354	PKP	40	11.50	4.3X
PNT	79.89	32	eP	32	26.00	-2.7				i	40	25.00		PGD	151.15	352	ePKP	40	14.50	7.1X
ANMO	80.70	50	P	32	33.40	-0.1	BUD	146.26	345	ePKP	40	01.00	1.6	FIR	151.31	353	ePKP	40	14.00	6.7X
	1.8s	119.32nm			5.6mb		LDF	146.30	8	ePKP	39	58.90	-0.5	ARV	151.34	350	PKP	40	14.00	6.5X
IMW	B1.83	40	P	32	39.50	0.1	GRR	146.40	9	ePKP	39	59.50	-0.1	CRE	151.36	352	PKP	40	13.50	5.9X
LRM	81.89	38	eP	32	38.70	-0.9	BBTK	146.52	322	iPKPc+	40	02.00	1.8	SMG	151.36	325	ePKP	40	13.50	5.9X
BW06	B2.15	42	P	32	40.60	-0.4	DEV	146.55	339	ePKPc	40	01.00	1.1	PII	151.44	354	PKP	40	21.00	13.5X
FBA	82.26	11	ePc	32	40.20	-0.6	SOP	146.64	348	ePKPc	40	04.10	4.1X	OHR	151.46	337	iPKP	40	13.20	5.4X
		pP	32	48.90	28km	KMR	146.72	351	iPKP-	40	03.50	3.4X		1.1s		0.14nm			
IMA	82.42	8	eP	32	41.50	-0.3	LPF	146.72	9	ePKP	40	00.20	0.1	SBF	151.49	359	ePKP	40	12.70	5.0X
	1.5s	37.70nm			5.2mb		CDF	146.94	359	ePKP	40	01.30	0.7	KZN	151.77	335	ePKP	40	20.00	11.7X
GOL	B3.54	46	P	32	47.20	-1.1	FUR	146.97	354	ePKP	40	03.00	2.4	FRF	151.80	360	ePKP	40	13.80	5.7X
	1.8s	193.45nm			5.9mb			1.1s		59.00nm				ASS	151.81	351	PKP·	40	16.00	7.8X
	Z 20s	2.25um			5.5Msz		SHBJ	147.15	307	PKPc	40	05.20	3.8X	LRG	151.90	0	ePKP	40	14.30	6.1X
GLD	83.67	46	P	32	47.60	-1.2	BZS	147.21	340	ePKP	40	02.50	1.5	LMR	152.02	0	ePKP	40	14.10	5.7X
	Z 20s	3.50um			5.7Msz		BHG	147.22	352	ePKP	40	03.00	2.0	MNS	152.47	350	PKP	40	17.00	7.8X
SES	85.08	35	ePd	32	54.50	-1.0	HAU	147.35	0	ePKP	40	02.70	1.5	PGF	152.73	356	ePKP	40	15.90	6.3X
	1.4s	130.00nm			5.9mb		FEL	147.46	358	ePKP	40	02.63	1.1	SDI	152.93	348	PKP	40	17.00	7.1X
EDM	85.36	32	ePd	32	56.30	-0.5	BSF	147.52	360	ePKP	40	03.30	1.7	HLW	153.02	307	ePKP	40	29.00	18.7X
BJI	85.39	313	eP	32	59.00	1.8	GPA	147.63	325	ePKP	40	05.00	3.1X	KEK	153.05	337	ePKP	40	18.00	8.0X
	2.0s	139.00nm			5.8mb		KBA	147.79	351	ePKP	40	03.00	0.9	MGR	154.02	344	PKP	40	32.50	21.2X
	Z 25s	1.30um			5.2MszX			1.0s		23.20nm				ATN	155.89	343	PKP	40	15.50	1.5
		eS	43	17.00						i	40	08.20		BCAO	164.09	229	iPKPc	40	25.10	1.5
		esS	44	14.00						i	40	18.60			0.7s		12.00nm			
RSSD	86.34	42	P	33	01.80	-0.3	PVL	147.87	334	iPKPd	40	07.00	4.9X				i	40	36.30	
MAW	87.93	199	eP	33	10.50	1.3	GRC	147.92	5	PKP	40	05.45	3.4X				i	41	22.00	
INK	88.13	14	eP	33	09.00	-0.9	LOR	148.01	4	ePKP	40	04.30	2.1	KIC	165.77	127	PKP	40	31.00	6.0X
		pP	33	21.00	39km	HRI	148.13	309	ePKP	40	07.00	4.0X		S.D. = 1.4		on 121 of 215 obs.				
SIO	88.65	52	eP	33	17.80	4.6X	SSF	148.19	4	ePKP	40	04.90	2.4	----------						
TUL	89.10	52	eP	33	15.00	-0.3	MFF	148.25	9	ePKP	40	04.80	2.2	JAN 20, 1990 08h 07m 16.34± 0.88s						
	1.3s	26.80nm			5.4mb		BEO	148.29	341	e(PKP)	40	06.50	3.8X	39.428 N ± 6.7km 28.292 E ± 9.4km						
	Z 22s	3.49um			5.7Msz		LBF	148.30	3	ePKP	40	05.00	2.2	DEPTH = 10.0km (geophysicist)						
		LR	01	23.00			FVI	148.34	352	PKP	40	06.00	3.3X	TURKEY						(366)
KMI	90.99	296	eP	33	31.50	6.9X	AVF	148.45	4	ePKP	40	05.10	2.2							
	Z 20s	1.30um			5.4Msz		MDSJ	148.45	306	PKPc	40	07.90	4.4X	DST	0.31	56	iPg	07	22.30	-0.6
		S	44	05.00			PTJ	148.47	347	ePKP	40	06.00	2.9X	KCT	0.82	3	iPg	07	32.20	0.0
		sS	44	34.00			BURJ	148.54	308	PKPc	40	07.90	4.2X	BNT	0.97	343	iPg	07	33.60	-1.2
FFC	91.97	33	ePc	33	27.10	-1.0	ZAG	148.54	347	iPKP	40	08.00	4.9X				iSg	07	47.10	
	1.7s	55.00nm			5.7mb		LJU	148.60	349	ePKP	40	06.50	3.3X	YLV	1.41	36	iPn	07	42.20	0.1
BDT	92.22	287	eP	33	32.00	2.0	SMF	148.62	4	ePKP	40	05.70	2.4	KHL	1.46	139	ePn	07	42.00	-0.9

MFT	1.56	331	ePn	07	42.70	-1.6
GBZT	1.62	33	ePn	07	46.60	1.6
			iSg	08	10.80	
ISK	1.74	19	ePn	07	46.60	-0.1
HRT	1.75	37	ePn	07	48.00	1.1
GPA	1.77	60	ePn	07	46.00	-1.3
CIN	1.83	185	eP	07	49.00	0.9
DMK	2.43	351	iPn	07	58.50	1.9
BBTK	3.47	82	eP	08	24.00	12.4X
			eS	09	11.00	

S.D. = 1.3 on 12 of 13 obs.

JAN 20, 1990 09h 13m 13.96± 0.38s
6.649 S ± 4.1km 105.911 E ± 4.6km
DEPTH = 64.1 ± 3.3 km
5.3mb (22 obs.)
SUNDA STRAIT (276)
Felt (IV) at Jokorto, Jovo.
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 13S, 24C
Centroid Locotion:
Origin Time 09:13:19.5 0.7
Lot 7.06S 0.07 Lon 106.14E 0.09
Dep 58.8 4.4 Half-duration 1.8
Moment Tensor; Scale 10**17 Nm
Mrr=-0.54 0.05 Mtt= 0.49 0.06
Mff= 0.05 0.09 Mrt= 0.22 0.11
Mrf=-0.60 0.09 Mtf= 1.12 0.09
Principol Axes:

	Vol=	Plg=	Azm=
T	1.44	6	139
N	-0.10	52	41
P	-1.34	37	234

Best Double Couple:Mo=1.4*10**17
NP1:Strike=269 Dip=59 Slip= -24
NP2: 12 69 -147

TPI	4.24	24	iPd	14	22.30	4.8X
			e	23	00.00	
TRT	6.75	99	ePd	14	54.80	2.1
			iS	16	18.20	
PPI	8.25	318	eP	15	13.80	0.3
KGM	8.99	343	ePd	15	29.00	5.4X
	0.7s	366.00nm				6.4mb X
			e	15	48.20	
PSI	11.61	323	ePc	16	08.00	8.8X
	1.5s	28.00nm				5.0mb X
			e	22	00.00	
IPM	12.17	336	ePc	16	12.90	6.2X
	1.5s	301.30nm				6.0mb X
			e	16	59.10	
MKS	13.56	85	e(P)d	16	31.00	6.0X
			e	18	44.00	
SNG	14.71	339	eP	16	46.30	6.3X
			eS	18	55.40	
BSI	16.06	318	eP	17	07.00	9.8X
KKM	16.27	39	ePc	17	06.50	6.5X
	0.7s	76.80nm				5.0mb
NANU	18.34	151	eP	17	22.00	-3.5X
	0.3s	28.00nm				4.9mb
MBL	19.74	138	iPc	17	40.00	-1.4
			eS	21	02.00	
NNT	20.07	342	eP	17	47.00	2.1
AAI	22.38	84	eP	18	08.50	0.3
NST	22.90	346	eP	18	09.00	-4.2X
KNA	24.15	114	iPd	18	24.20	-1.2
LOE	24.26	350	eP	18	28.00	1.6
MRWA	24.38	158	eP	18	26.50	-1.0
BDT	24.70	344	eP	18	32.50	1.9
MTN	25.59	106	eP	18	37.00	-2.0
			e	23	05.00	
CHG	26.22	345	eP	18	45.00	0.2
CHTO	26.22	345	eP	18	45.00	0.2
			pP	19	03.50	81kmX
MUN	26.97	160	eP	18	51.00	-0.6
			eS	23	55.00	
KLB	27.18	157	eP	18	52.00	-1.4
			eS	24	05.00	
COOL	28.02	151	eP	19	00.00	-1.1
			eS	24	20.00	
NWAO	28.19	160	eP	19	00.30	-2.2
			eS	24	29.00	
WB5	30.59	118	iPc	19	23.10	-1.1
WRA	30.59	118	Pd	19	23.70	-0.5
	1.0s	04.20nm				5.4mb
ASPA	31.77	125	iPc	19	33.70	-0.8
	0.7s	31.00nm				5.2mb
	Z 21s	0.39um				4.1Msz
			iS	24	35.30	
			LR	33	40.30	
FORR	31.82	142	eP	19	33.00	-1.8
GYA	32.92	1	P	19	45.20	0.7
GBA	34.70	305	P	20	00.40	0.5
HYB	36.09	312	ePd	20	11.30	-0.4
	1.0s	50.00nm				5.4mb
			e	20	29.00	
CD2	37.40	357	eP	20	21.00	-1.6
LSA	38.82	339	eP	20	36.10	1.1
PKI	39.37	331	P	20	38.80	-0.7
GUN	39.43	331	P	20	38.70	-1.3
DMN	39.55	330	P	20	39.80	-1.1
KKN	39.62	331	P	20	40.10	-1.3
GKN	40.11	330	P	20	44.20	-1.2
SSE	40.28	20	eP	20	44.00	-2.4
POO	40.32	309	eP	20	48.00	0.9
XAN	40.57	4	Pc	20	48.50	-0.3
LAT	40.80	92	eP	20	55.00	3.9X
PMG	40.91	97	eP	20	52.50	0.6
ADE	41.29	138	iPc	20	55.00	0.2
	0.8s	73.13nm				5.5mb
CTA	41.33	113	iPd	20	56.00	0.7
	1.0s	27.50nm				5.0mb
			i	21	09.90	
			iScP	26	38.00	
			iS	27	05.20	
LZH	42.55	358	Pc	21	05.50	0.3
	1.5s	0.03nm				1.8mb X
	Z 20s	0.60um				4.5Msz
	E 10s	0.30um				
			PcP	22	57.50	
			PcS	26	50.00	
			eS	27	18.30	
			ScS	30	57.50	
TIA	43.91	13	eP	21	15.70	-0.4
TIY	44.55	7	eP	21	21.00	-0.3
NDI	44.71	323	iPc	21	22.50	-0.1
	0.5s	17.61nm				5.1mb
			eS	27	49.80	
CMS	44.71	129	eP	21	23.00	0.3
BFD	45.10	138	eP	21	26.50	0.9
RMQ	45.27	121	eP	21	29.00	1.8
			e	26	55.00	
GTA	46.17	353	iPc	21	34.60	0.4
	Z 22s	0.70um				4.6Msz
			PcP	23	09.60	
			ScS	31	19.70	
BJI	47.41	11	eP	21	43.50	-0.3
	1.0s	0.01nm				1.8mb X
HHC	47.55	6	eP	21	44.80	-0.2
BWA	47.93	131	eP	21	52.20	4.1X
			e	22	04.30	
CAN	48.74	132	eP	21	55.40	1.1
			e	22	08.20	
BRS	48.96	121	iPc	21	57.50	1.3
	0.6s	11.00nm				5.1mb
			i	22	03.50	
			i	22	12.50	
			e	27	09.00	
COO	49.19	125	eP	22	00.00	2.1
SNY	50.88	17	eP	22	06.60	-3.8X
QUE	52.32	317	eP	22	20.50	-1.3
			eS	29	40.50	
MAT	52.55	33	(P)	22	20.00	-3.2X
WMQ	52.87	344	P	22	24.60	-0.9
CN2	53.24	18	Pd	22	26.50	-1.6
	Z 22s	0.50um				4.5Msz
			PcP	23	34.60	
			eS	29	45.00	
KSH	53.58	331	eP	22	29.20	-1.6
MDJ	55.30	20	eP	22	42.00	-1.2
DZM	60.25	112	iPc	23	18.00	-0.4
MAIO	60.96	318	iPd	23	22.00	-1.0
	1.0s	22.50nm				5.3mb
MSZ	65.59	136	P	23	54.00	0.8
NPA	65.80	257	e(P)	23	59.00	3.9X
KMSA	66.04	296	ePd	23	54.33	-2.3
MAW	67.39	196	iPc	24	04.60	0.3
NAI	69.10	271	iPd	24	16.00	-0.2
	0.9s	15.13nm				4.9mb
BHD	70.49	309	ePc	24	25.00	1.0
SLY	70.54	311	ePc	24	24.00	-0.3
TAB	70.95	314	eP	24	23.00	-3.9X
WAJH	74.67	299	eP	24	48.20	-0.6
AYN	75.88	302	iP+	24	55.00	-0.6
SLR	76.02	245	iPc	24	55.00	-1.7
	0.9s	50.42nm				5.4mb
	Z 20s	3.55um				5.7MszX
HITJ	76.25	303	P	24	58.00	0.1
MDSJ	76.44	305	Pc	24	57.70	-1.2
VNDA	76.51	169	iPd	24	58.80	0.5
BADA	76.63	301	eP	24	59.33	-0.5
PRY	76.73	244	iPc	25	01.20	0.5
	1.2s	80.00nm				5.6mb
BURJ	76.98	305	Pc	25	01.60	-0.3
PRNI	77.12	303	ePd	25	03.00	0.4
DSI	77.13	304	eP	25	03.00	0.4
KSR	77.26	245	iPc	25	03.70	0.0
	0.8s	12.50nm				4.9mb
SBA	77.59	169	P	25	06.00	1.7
BLF	77.83	242	iPc	25	07.50	0.8
LFK	79.64	308	eP	25	16.70	0.4
KAS	81.17	314	eP	25	24.50	0.2
BBTK	81.47	312	iPc	25	27.00	1.0
ELL	82.85	308	eP	25	33.00	-0.2
POF	83.27	241	iPd	25	38.00	2.7X
	0.3s	64.94nm				6.1mb
SPA	83.40	180	iPd	25	35.70	0.2
	1.2s	130.28nm				5.8mb
KHL	83.52	310	eP	25	36.00	-0.5
CER	83.57	237	iPc	25	37.60	0.7
	0.7s	17.00nm				5.2mb
VRI	87.25	317	ePd	25	55.00	0.2
KDZ	87.32	312	eP	25	56.00	0.8
PVL	87.68	314	iPc	25	58.00	1.2
MLR	87.71	316	iPd	25	58.00	0.9
RZN	87.84	312	eP	25	59.00	1.1
BCAO	87.91	275	iPd	26	00.00	1.4
	0.8s	114.00nm				6.1mb
			i	26	16.40	
			i	27	28.60	
PGB	88.40	313	eP	26	01.00	0.6
KKB	89.07	312	iPc	26	04.00	0.4
VTS	89.11	313	iPd	26	05.00	1.1
VAY	89.36	312	eP	26	05.20	0.3
SKO	90.30	312	eP	26	08.50	-0.8
OHR	90.65	311	eP	26	10.20	-0.8
	1.1s	0.07nm				2.9mb X
			e	26	27.70	
BZS	90.72	316	eP	26	14.00	2.9X
SUF	91.19	333	eP	26	13.40	0.5
	0.6s	4.20nm				5.0mb
NUR	91.45	331	eP	26	11.00	-3.1X
	0.6s	13.00nm				5.5mb
			e	26	37.00	
SOD	91.98	338	iP	26	16.50	0.0
KEV	92.37	340	eP	26	18.00	-0.2
HFS	96.82	330	eP	26	38.20	-0.6
	0.9s	3.70nm				4.9mb
DAG	104.01	349	iPdiff	27	08.50	-2.2X
	1.0s	8.00nm				5.6mb
INK	107.13	20	ePKP	31	34.00	0.2
KIC	111.15	274	PKP	31	42.80	-0.2
LIC	111.43	274	PKP	31	43.20	-0.4
TIC	111.45	275	PKP	31	43.30	-0.3
LKO	112.21	278	PKP	31	45.20	0.1
GMW	121.92	37	PKP	32	03.00	0.4
PNT	122.85	34	ePKP	32	04.00	-0.3
	0.7s	9.00nm				
PNT	122.85	34	ePKP	32	21.00	16.7X
FRB	122.87	357	ePKP	32	03.00	-0.8
LON	122.89	37	PKP	32	04.50	-0.1
EDM	123.67	27	iPKP	32	05.50	-0.4
	0.7s	17.00nm				
DPW	124.42	35	PKP	32	04.20	-3.3X
WDC	125.19	44	ePKPc	32	25.70	16.5X
SES	126.62	29	ePKP	32	11.00	-0.7
FFC	127.09	20	ePKP	32	12.00	-0.4
	0.8s	10.00nm				
CMB	127.77	46	ePKPc	32	14.50	0.2
LRM	128.82	34	ePKP	32	16.60	0.3
			e	32	33.30	
KVN	128.94	44	ePKP	32	17.50	0.8
			pP	32	33.60	
TNP	130.00	45	ePKP	32	21.10	2.3
RSON	133.00	17	ePKP	32	23.50	-0.2
MSU	133.21	42	PKP	32	24.80	-0.1
			pP	32	41.40	
RSSD	134.40	30	PKP	32	26.30	-0.6
			pP	32	41.50	
GOL	136.73	36	PKP	32	31.50	-0.1
			pP	32	48.10	

20d 09h

ANMO	139.01	42	PKP	32	36.80	1.0
			pP	32	53.00	
TUL	144.73	31	iPKPd	32	44.20	-1.3
	1.2s		206.80nm			
FVM	145.46	23	PKP	32	46.00	-0.7
BAO	145.96	229	ePKP	32	48.50	0.2
POW	146.72	26	PKP	32	50.00	1.2
CBN	148.45	5	ePKP	32	52.00	0.5
NA2	148.49	6	PKP	32	55.40	3.8X
CVL	148.56	7	PKP	32	55.10	3.4X
NAV	148.87	10	PKP	32	55.20	2.9X
PWLA	149.00	23	PKP	32	55.70	3.2X
RSCP	149.31	19	ePKP	32	56.10	3.1X
LHS	151.62	12	PKP	32	56.30	-0.2
PRM	151.65	15	PKP	32	57.40	0.9
JSC	151.72	13	PKP	32	57.30	0.7
III	152.66	62	(PKP)	33	07.00	8.3X
SGS	152.92	12	PKP	32	59.80	1.5
CCH	154.87	198	PKP	33	04.80	3.0X
CNCB	155.92	194	PKP	33	04.00	0.4
LPB	156.22	194	PKP	33	04.00	0.2
	1.1s		50.63nm			
			i	33	33.00	
ZOBO	156.48	194	PKPc	33	05.80	1.4
	1.5s		18.82nm			
	S.D. = 1.0		on 132 of 162 obs.			

& JAN 20, 1990 11h 06m 13.30s
38.795 N 122.775 W
DEPTH = 4.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 3.4 (BRK).
Mo=1.9*10**14 Nm (BRK).

NWRM	0.35	195	iPd	06	20.30	0.0
ZSP	0.94	154	ePd	06	31.20	-0.6
			iS	06	46.30	
BRK	1.01	156	ePd	06	32.50	-0.4
			eS	06	45.20	
BKS	1.01	155	iPd	06	31.80	-1.2
			e	06	34.90	
			eS	06	46.30	
ORV	1.25	52	eP	06	35.60	-1.5
PCC	1.33	166	ePc	06	38.70	0.3
			eS	06	55.80	
MHC	1.70	148	e(P)	06	42.60	-1.5
ARN	1.74	145	eP	06	42.70	-1.9
WDC	1.79	6	e(P)	06	42.80	-2.4
			ePbd	06	50.20	
MIN	1.79	30	e(P)	06	43.30	-2.1
			e	06	59.10	
CMB	2.02	111	iPc	06	47.00	-1.7
KVN	3.66	85	eP	07	10.00	-2.0
TNP	4.42	98	e(P)	07	31.20	8.3
	13 obs. associated					

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* JAN 20, 1990 11h 35m 54.05± 0.60s
7.656 S ± 9.1km 87.617 E ±11.2km
DEPTH = 10.0km (geophysicist)
5.0mb (6 obs.) 4.3Msz (1 obs.)
SOUTH INDIAN OCEAN (425)

BSI	15.14	31	eP	39	28.00	-1.8
IPM	18.08	48	ePd	40	09.10	2.0
KOD	20.44	330	eP	40	37.70	2.9X
GBA	23.42	334	P	41	04.00	-0.2
GBA	23.42	334	P	41	15.00	10.8X
	1.3s		16.80nm			
HYB	26.47	340	eP	41	37.50	4.1X
CHG	28.58	23	eP	41	52.00	-0.5
CHTO	28.58	23	eP	41	52.00	-0.5
			pP	41	56.00	14kmX
PKI	35.08	357	P	42	50.70	0.8
DMN	35.14	356	P	42	51.30	1.0
KKN	35.31	356	P	42	52.00	0.3
	0.8s		14.00nm		4.9mb	
GUN	35.40	357	P	42	52.80	0.2
	0.6s		18.00nm		5.1mb	
GKN	35.57	355	P	42	54.00	0.2
LZH	46.11	18	eP	44	19.50	-1.0
	1.5s		37.00nm		5.2mb	
	Z 22s		0.40um		4.3Msz	
WRA	46.83	110	Pd	44	25.40	-0.9
	0.8s		3.10nm		4.4mb	
WBS	46.85	110	eP	44	26.20	-0.2
BJI	54.30	27	eP	45	22.80	-0.7
	1.5s		26.00nm		5.0mb	
CTA	57.99	109	eP	45	50.00	0.3
SLR	59.13	245	iPd	45	56.00	-1.7
BCAO	69.96	278	iPc	47	13.20	4.9X
	0.7s		8.00nm		5.0mb	
CNCB	145.74	225	PKP	55	37.50	1.3
PV09	145.77	24	ePKP	55	35.50	0.1
			pP	55	42.10	
LPB	146.02	225	PKP	55	37.80	1.3
GOL	146.03	18	ePKP	55	31.20	-4.5X
ZOBO	146.21	225	PKP	55	27.00	-10.0X
ANMO	149.92	23	ePKP	55	47.20	5.3X
			pP	55	53.40	
ALQ	149.92	23	iPKPd	55	47.30	5.4X
	1.0s		7.50nm			
	S.D. = 1.1		on 19 of 27 obs.			

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* JAN 20, 1990 11h 51m 27.03± 1.31s
50.279 N ±16.6km 18.936 E ± 8.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.1 (KBA).

KRA	0.68	109	iPgc	51	40.40	-0.2
			iSg	51	50.10	
SPC	1.38	142	iPn	51	52.90	0.4
			i(Sg)	52	10.20	
KSP	1.78	290	ePn	51	58.00	0.0
	0.8s		100.00nm			
			iPg	52	01.10	
			iS	52	26.00	
ZST	2.41	211	eP	52	05.00	-2.0
PSZ	2.44	165	eP	52	15.10	7.4X
SRO	2.50	190	iP	52	16.70	8.3X
			e	52	56.10	
VKA	2.65	221	ePn	52	12.50	2.0
			eSg	52	52.00	
PRU	2.84	266	Pn	52	13.00	-0.3
			Pg	52	21.20	
			Sg	52	57.40	
BRG	3.24	283	ePg	52	28.00	9.2X
			eSg	53	12.00	
KHC	3.66	254	Pg	52	25.00	0.0
			Sg	53	20.20	
CLL	3.90	288	ePg	52	43.00	14.7X
			eSg	53	34.00	
WET	4.09	256	eP	52	43.30	12.3X
KBA	4.90	231	iPg	53	02.40	19.8X
			iSg	54	02.20	
			i	54	07.00	
	S.D. = 1.5		on 7 of 13 obs.			

JAN 20, 1990 11h 55m 47.72± 0.82s
36.097 N ± 7.8km 27.216 E ± 8.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

KAP	0.55	184	ePg	55	58.80	0.0
ARG	0.75	81	iPgc	56	02.00	-0.3
YER	1.35	39	iPn	56	11.30	-1.2
NPS	1.55	238	ePb	56	15.00	-0.4
SMG	1.64	349	ePb	56	17.30	0.7
ELL	2.27	73	ePn	56	27.10	1.2
VAM	2.55	255	ePb	56	33.50	3.7X
KHL	2.89	39	ePn	56	39.00	4.3X
BCK	3.03	62	ePn	56	43.30	6.6X
	S.D. = 1.1		on 6 of 9 obs.			

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* JAN 20, 1990 12h 38m 56.92± 1.18s
35.985 N ±13.7km 29.080 E ± 6.5km
DEPTH = 10.0km (geophysicist)
EASTERN MEDITERRANEAN SEA (371)

KSL	0.43	72	iPbc	39	05.90	0.2
ARG	0.81	287	ePb	39	13.20	0.6
ELL	1.01	41	ePn	39	16.00	-0.2
YER	1.32	331	ePn	39	21.00	-0.3
KAP	1.61	255	ePb	39	25.00	-0.4
BCK	1.91	39	ePn	39	24.30	-5.5X
	S.D. = 0.6		on 5 of 6 obs.			

? JAN 20, 1990 14h 03m 50.57± 1.78s
44.222 N ±17.8km 8.241 E ±12.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

FIN	0.03	241	P	03	52.42	-0.2
			S	03	54.06	
ROB	0.28	285	P	03	56.32	-0.1
			S	03	59.91	
PCP	0.39	34	P	03	58.17	-0.4
ENR	0.59	271	P	04	01.86	-0.7
	S.D. = 0.5		on 4 of 4 obs.			

JAN 20, 1990 15h 02m 50.45± 0.69s
37.779 N ± 7.2km 15.020 E ± 5.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.8 (ROM).

MNO	0.30	301	Pd	02	57.20	0.4
			eSg	03	02.50	
ATN	0.52	42	iP	03	01.20	0.3
			eS	03	09.50	
MSI	0.60	45	P	03	03.20	0.7
MEU	0.68	186	Pd	03	03.60	-0.4
			eSg	03	13.70	
GIB	0.81	285	P	03	06.50	0.2
			eSg	03	18.70	
SOI	0.87	70	P	03	07.40	0.3
			eSg	03	20.00	
FAI	1.18	245	P	03	12.70	0.2
CZI	1.68	31	P	03	18.30	-1.7
ROI	2.16	34	P	03	28.70	1.7
CSI	2.23	26	P	03	28.10	0.1
			eSg	03	56.60	
MGR	2.39	10	P	03	28.50	-1.8
			eSn	03	56.80	
	S.D. = 1.1		on 11 of 11 obs.			

JAN 20, 1990 15h 22m 57.09± 1.33s
32.618 S ± 6.2km 71.586 W ±13.0km
DEPTH = 32.1 ± 4.5 km
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.60	126	iPd	23	09.90	0.5
JACH	0.84	95	iPd	23	12.60	-0.1
LCCH	0.85	179	iPc	23	13.50	0.7
			iS	23	25.70	
SAN	1.14	137	eP	23	16.80	-0.1
			iS	23	32.00	
TACH	1.17	152	iPc	23	17.50	0.2
FCH	1.30	123	iPc	23	19.00	-0.4
			iS	23	36.00	
LNV	1.34	174	iPd	23	19.10	-0.6
			iS	23	25.10	
			iS	23	35.50	
PCH	1.35	138	iPc	23	19.60	-0.3
			iS	23	34.00	
CHCH	1.53	149	iPc	23	22.40	-0.1
			iS	23	42.20	
RTBS	2.05	63	ePc	23	30.60	0.7
			S	23	56.80	
ZON	2.69	67	eP	23	40.00	0.9
RTCV	2.69	75	iPd	23	39.20	0.1
RTLL	2.94	65	ePd	23	41.80	-0.9
RTRS	3.04	37	iPc	23	43.70	-0.4
			S	24	22.00	
	S.D. = 0.6		on 14 of 14 obs.			

JAN 20, 1990 16h 58m 17.53± 0.81s
39.909 N ± 6.9km 29.127 E ± 7.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.49	232	iPg	58	27.10	-0.4
			iSg	58	33.60	
YLV	0.68	16	iPg	58	32.40	1.3
GBZT	0.91	15	iPgc	58	34.20	-0.8
			iSg	58	49.60	
GPA	0.98	67	iPn	58	34.80	-1.4
BNT	1.03	296	iPn	58	36.90	-0.1
EDC	1.06	295	iPn	58	36.00	-1.6
ISK	1.16	357	ePn	58	39.90	0.8
ITU	1.20	356	ePn	58	34.00	-5.8X
			iSg	58	55.00	
KHL	1.61	169	iPn	58	47.20	1.0
MFT	1.66	302	ePn	58	48.00	1.1
CIN	2.44	200	eP	59	05.00	6.9X
	S.D. = 1.3		on 9 of 11 obs.			

JAN 20, 1990 16h 59m 00.89± 0.48s
6.082 S ± 8.0km 81.224 W ±11.2km

DEPTH = 25.5km (2 depth phases)
5.1mb (8 obs.) 5.2Msz (2 obs.)
NEAR COAST OF NORTHERN PERU (109)
Felt (IV) in the Piuro oreo.
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 13S, 26C
Centroid Location:
Origin Time 16:59: 7.3 0.5
Lat 6.53S 0.08 Lon 81.25W 0.08
Dep 15.0 FIX Half-durotion 1.8
Moment Tensor; Scole 10**17 Nm
Mrr= 0.98 0.06 Mtt= 0.00 0.05
Mff=-0.98 0.09 Mrt= 0.23 0.16
Mrf=-1.32 0.19 Mtf= 0.35 0.06
Principol Axes:
T Val= 1.64 Plg=63 Azm= 86
N 0.10 5 347
P -1.74 26 255
Best Double Couple:Mo=1.7*10**17
NP1:Strike=334 Dip=19 Slip= 76
NP2: 169 71 95

CHP8	1.51	117	iPc	59	27.50	1.0
			e(S)	59	50.00	
PT10	7.29	145	eP	00	53.00	4.5X
			e(S)	02	17.00	
NNA	7.29	144	iPc	00	49.00	0.4
	0.4s		8.47nm			5.2mb
			e	00	54.00	
			eS	02	22.50	
PT08	7.44	142	iPd	00	50.40	-0.6
			eS	02	38.60	
PSO	8.21	28	eP	00	59.00	-2.7
PT02	8.29	146	eP	01	02.50	-0.1
			eS	02	46.00	
PT06	9.08	148	eP	01	14.90	1.5
			eS	03	16.50	
PT03	9.50	146	eP	01	16.60	-2.7
			eS	03	12.10	
BOG	12.81	34	eP	02	06.00	1.4
			eS	05	04.00	
ARE	14.05	138	eP	02	24.00	3.2X
ARE	14.05	138	iPc	02	30.00	9.2X
			iS	03	03.90	
UPA	15.06	6	eP	02	38.00	4.2X
	1.0s		24.00nm			4.5mb
	Z 20s		7.80um			4.9MszX
ZOBO	16.35	129	iPd	02	26.10	-24.9X
	Z 20s		3.36um			
			S	06	08.00	
			LR	08	18.80	
LPB	16.53	130	iPd	02	24.10	-29.0X
	1.0s		1620.00nm			
			S	06	13.00	
			LR	08	24.00	
CNCB	16.78	131	iPd	02	21.90	-34.6X
ANT	20.38	150	eP	02	56.50	-42.0X
BAO	33.94	109	eP	05	43.00	-1.7
PRM	39.96	359	eP	06	33.30	-1.7
TUL	43.95	343	iPc	07	08.50	0.8
	1.0s		25.00nm			5.0mb
	Z 22s		1.00um			4.7Msz
			e	07	16.00	25km
			LR	19	00.00	
ALO	47.23	332	eP	07	35.20	1.2
	1.0s		12.50nm			4.9mb
GOL	50.72	336	eP	08	01.20	0.2
			pP	08	09.00	26km
RSSD	54.04	340	ePc	08	25.90	0.2
TNP	55.23	326	eP	08	34.00	-0.5
KVN	56.40	326	e(P)	08	43.70	0.8
LRM	58.71	335	eP	08	58.80	-0.3
SCH	61.86	9	eP	09	18.00	-2.2
SES	61.88	339	ePd	09	20.00	-0.5
PNT	64.50	333	eP	09	39.00	1.3
	0.7s		9.00nm			5.0mb
EDM	65.02	339	iP	09	40.00	-1.0
FRB	70.29	6	eP	10	12.00	-1.8
LIC	77.02	82	P	10	53.40	-0.6
	Z 20s		4.00um			5.7Msz
TIC	77.09	82	P	10	53.80	-0.6
KIC	77.32	82	P	10	55.20	-0.5
INK	82.62	343	iPd	11	22.80	-0.1
ALOJ	83.45	52	iPc	11	30.00	1.9
ATEJ	83.48	52	iPc	11	30.00	1.8
AAPN	83.48	51	eP	11	29.50	1.3
ACHM	83.67	52	eP	11	30.50	1.4
APHE	83.75	52	eP	11	31.00	1.4
ASMO	83.79	51	iPc	11	31.00	1.3
TOL	84.11	49	eP	11	32.00	0.8
MBC	85.12	351	eP	11	35.50	0.0
	1.3s		22.00nm			5.2mb
EKA	88.22	34	P	11	58.00	7.1X
	1.5s		30.10nm			5.4mb
DAG	89.80	12	iPd	11	57.90	-0.2
	0.8s		8.96nm			5.1mb
WB5	136.51	233	ePKP	18	27.20	3.8X
BTO	144.19	345	ePKP	18	34.00	-2.7
TIA	145.61	333	ePKP	18	38.00	-1.1
TIY	146.15	340	ePKP	18	41.00	1.0
	Z 30s		0.63um			5.2MszX
GTA	146.81	359	ePKP	18	41.80	0.7
SSE	147.43	323	ePKP	18	53.00	10.9X
	1.0s		14.00nm			
			i	20	20.00	
LZH	149.78	352	ePKP	18	50.00	4.1X
			pPKP	18	56.50	
XAN	150.63	343	PKPd	18	52.50	5.4X
GKN	154.40	30	PKP	18	53.60	0.8
KKN	154.89	29	PKP	18	53.90	0.3
	S.D. = 1.3		on 41 of 54 obs.			

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* JAN 20, 1990 18h 20m 47.27± 1.77s
29.790 S ± 8.4km 72.359 W ±14.9km
DEPTH = 20.4 ± 9.6 km
5.3mb (1 obs.)
OFF COAST OF CENTRAL CHILE (134)

RTRS	2.54	99	iPc	21	29.90	1.7
RTBS	3.12	127	ePc	21	38.10	1.8
			e	21	39.90	
			S	22	19.20	
ROCH	3.38	160	iPd	21	40.00	-0.2
			iS	22	27.40	
ZON	3.62	120	eP	21	47.00	3.4X
RTLL	3.69	116	eP	21	47.60	3.1X
LCCH	3.74	170	eP	21	44.50	-0.6
			iS	22	43.00	
RTCV	3.88	123	ePc	21	48.50	1.3
SAN	3.93	159	eP	21	53.70	5.9X
			iS	22	44.50	
FCH	3.94	154	iPd	21	49.00	0.7
CFA	3.98	118	ePc	21	49.20	0.6
TACH	4.04	163	iPc	21	49.50	0.1
PCH	4.13	158	iP	21	51.00	0.2
			iS	22	36.00	
LNV	4.23	169	eP	21	51.00	-1.1
			iS	22	55.00	
MDZ	4.30	137	eP	22	01.50	8.3X
CHCH	4.38	161	iPc	21	54.10	-0.2
			iS	22	55.50	
CYA	5.90	78	iPc	22	15.20	-0.5
			S	23	29.00	
RFA	5.96	147	ePc	22	16.00	-0.6
MRA	6.27	116	ePd	22	19.50	-1.5
TCA	6.87	105	ePc	22	27.30	-2.2
CNCB	13.53	18	P	24	07.90	6.8X
ZOBO	14.01	17	eP	24	07.00	-0.4
			i	24	13.20	
BAO	26.45	63	eP	26	22.00	-2.9
LIC	73.75	73	P	32	23.60	1.5
TIC	73.99	72	P	32	24.80	1.3
KIC	74.06	73	P	32	25.40	1.5
BCAO	92.95	87	iPd	34	04.60	3.9X
	0.5s		6.00nm			5.3mb
GBA	147.78	113	PKPd	40	35.10	5.3X
	0.6s		1.80nm			
HYB	150.73	108	ePKP	40	42.60	8.2X
	S.D. = 1.4		on 20 of 28 obs.			

? JAN 20, 1990 18h 43m 17.38± 1.15s
34.301 S ±26.2km 97.818 W ±15.5km
DEPTH = 10.0km (geophysicist)
4.9mb (6 obs.)
WEST CHILE RISE (686)

ARE	29.55	60	eP	49	25.00	0.2
CNCB	31.89	64	Pc	49	45.80	0.0
LPB	31.98	64	P	49	47.00	0.6
			LR	58	50.00	
ZOBO	32.13	63	iPc	49	47.50	-0.4
	1.0s		25.00nm			5.1mb
			S	55	14.00	
			LR	59	06.00	
ALQ	69.36	352	eP	54	29.70	2.4
	1.0s		5.00nm			4.6mb
ANMO	69.36	352	P	54	29.00	1.7
JSC	69.96	15	P	54	29.00	-1.8
PRI	73.25	341	ePc	54	51.10	0.5
PRS	73.62	340	ePc	54	55.80	3.2X
FRI	73.80	342	e(P)	54	53.00	-0.6
TNP	74.24	344	P	54	56.50	0.1
	0.8s		3.04nm			4.4mb
MHC	74.65	340	ePc	55	02.30	3.6X
CMB	74.96	342	e(P)	55	00.40	0.0
8KS	75.31	340	ePc	55	02.90	0.6
KVN	75.36	344	P	55	02.00	-0.9
DAU	75.37	349	P	55	03.00	0.0
BW06	77.46	351	P	55	12.50	-2.0
WDC	77.92	341	e(P)	55	10.90	-5.9X
RSSD	78.25	355	P	55	20.00	1.1
FHC	78.53	340	e(P)	55	18.30	-1.9
IMW	78.74	350	P	55	22.00	0.3
LRM	80.84	350	eP	55	33.20	0.3
RSNY	81.28	17	P	55	34.00	-0.9
	0.8s		12.02nm			5.0mb
RSON	84.87	3	P	55	51.00	-2.0
	0.8s		16.03nm			5.3mb
PNT	85.48	346	eP	55	59.00	2.8
	0.7s		5.00nm			4.8mb
MSL	148.23	75	ePKPd	03	03.50	1.8
BHD	148.69	81	ePKPd	03	01.50	-1.0
BJI	152.42	292	ePKP	03	05.50	-2.4
CHG	158.54	228	ePKP	03	36.00	19.5X
CHTO	158.54	228	e(PKP)	03	18.00	1.5
	S.D. = 1.4		on 26 of 30 obs.			

JAN 20, 1990 19h 16m 14.16± 1.03s
34.727 N ±10.2km 26.167 E ± 6.6km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.7 (ATH).

NPS	0.70	320	iPgc	16	25.70	-2.3
KAP	1.17	45	ePg	16	34.00	-1.9
VAM	1.75	293	ePb	16	46.00	1.3
ARG	2.18	47	iPgd	16	53.00	2.0
APE	2.39	348	ePn	16	52.50	-1.6
YER	2.95	35	iP	17	01.70	-0.3
SMG	3.02	10	ePn	17	01.50	-1.4
KSL	3.12	63	ePn	17	06.00	1.8
CIN	3.26	28	eP	17	09.00	2.7
VLI	3.29	308	ePn	17	06.50	-0.3
ELL	3.65	55	eP	17	12.00	0.0
ATH	3.80	329	ePn	17	13.50	-0.4
KHL	4.49	36	eP	17	23.00	-0.9
BCK	4.50	51	eP	17	27.90	3.9X
NEO	5.14	334	ePn	17	33.80	0.8
PLG	6.04	340	ePn	17	45.50	-0.1
RDO	6.43	356	ePn	17	50.00	-1.1
KZN	6.57	329	iPnc	17	54.20	0.9
VAY	7.17	338	eP	18	02.00	0.5
OHR	7.65	328	eP	18	10.00	1.6
SKO	8.13	334	eP	18	15.50	0.5
PRNI	8.64	118	eP	18	21.00	-1.2
			e(S)	20	02.60	
MBH	8.88	121	eP	18	25.00	-0.4
KHC	17.14	331	eP	20	28.20	13.0X
	S.D. = 1.4		on 22 of 24 obs.			

% JAN 20, 1990 19h 17m 00.52± 1.12s
44.223 N ± 9.4km 8.253 E ± 8.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

FIN	0.03	247	P	17	03.01	0.4
			S	17	04.34	
ROB	0.28	285	P	17	06.19	-0.3
			S	17	10.39	
PCP	0.38	33	P	17	08.34	0.0
			S	17	13.78	
IMI	0.41	220	P	17	08.55	-0.3
			S	17	14.90	
ENR	0.60	271	P	17	12.85	0.2
STV	0.67	272	P	17	13.98	0.1
	S.D. = 0.4		on 6 of 6 obs.			

JAN 20, 1990 19h 25m 20.18± 0.20s
45.153 N ± 1.8km 7.175 E ± 2.3km

20d 19h

DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 3.8 (GEN), 3.3 (LDG). MD 3.3 (STR).

RSP	0.06	91	Pc	25	22.77	0.2
LSD	0.31	357	Pg	25	25.95	-0.7
RRL	0.36	230	Pg	25	26.02	-1.7
			S	26	30.18	
BNI	0.37	254	Pd	25	26.00	-1.8
			iSg	25	30.30	
LPG	0.46	319	Pg	25	28.00	-1.5
			Sg	25	33.60	
LPL	0.48	320	Pg	25	28.40	-1.6
PZZ	0.65	185	Pg	25	31.87	-1.4
DOI	0.65	176	Pd	25	32.40	-0.8
			eSg	25	42.40	
FOUF	0.68	204	iPgd	25	32.32	-1.4
			e(Sg)	25	42.67	
ORO	0.74	50	Pd	25	34.40	-0.3
			eSg	25	46.40	
ORX	0.74	50	Pc	25	34.51	-0.3
			S	25	44.34	
STV	0.91	173	P	25	36.50	-1.2
			S	25	48.40	
EMS	0.93	350	ePd	25	37.30	-0.8
ENR	0.94	169	Pg	25	36.89	-1.3
			Sg	25	48.57	
DIX	0.94	10	ePd	25	37.40	-0.9
ROB	0.99	150	Pn	25	38.71	-0.3
			Pg	25	42.63	
			Sn	25	44.25	
			Sg	25	51.10	
			e	25	57.02	
			e	26	00.34	
ROB	0.99	150	Pc	25	42.14	3.1X
			e	25	56.03	
MMK	1.06	31	ePc	25	39.80	-0.5
CKI	1.07	132	Pc	25	40.90	0.6
			eSg	25	55.60	
TOUF	1.14	177	Pg	25	41.45	-0.2
AUTN	1.17	171	Pg	25	41.67	-0.5
SAOF	1.20	167	Pg	25	41.30	-1.2
MVIF	1.26	181	Pg	25	43.79	0.2
AURF	1.27	175	Pg	25	43.68	-0.1
SBF	1.30	172	Pn	25	42.90	-1.4
			Pg	25	44.40	
VAI	1.33	57	P	25	44.20	-0.5
			eSn	26	03.00	
CALN	1.41	188	Pg	25	46.84	0.7
REVF	1.42	174	Pg	25	46.09	0.0
TMA	1.53	51	ePd	25	46.90	-0.8
FRF	1.64	194	Pn	25	49.90	0.8
BOB	1.66	103	P	25	51.70	2.2
			eSn	26	11.70	
VILF	1.67	219	Pn	25	52.17	2.6
			Sg	26	14.92	
TAVF	1.73	208	Pn	25	52.65	2.1
			Sg	26	17.09	
LRG	1.80	199	Pn	25	53.00	1.6
			Sg	26	18.00	
LMR	1.88	195	Pn	25	53.80	.1.2
			Sg	26	20.00	
MDI	1.89	70	P	25	52.10	-0.7
			eSn	26	16.30	
PUYF	1.93	214	Pn	25	56.20	2.7
			Sg	26	22.67	
PRAF	1.97	228	Pn	25	57.22	3.2X
TREF	2.00	221	Pn	25	56.90	2.6
BERF	2.13	211	P	25	59.37	3.1X
LLS	2.14	36	ePd	25	59.70	3.2X
GELF	2.17	216	Pn	26	00.25	3.4X
BBS	2.32	6	Pn	26	00.47	1.4
ZLA	2.48	19	ePd	26	02.60	1.3
OSS	2.58	52	ePc	26	03.10	0.3
PLDF	2.63	289	Pn	26	04.32	0.9
BSF	2.69	355	Pn	26	04.42	0.0
MOF	2.70	359	Pn	26	04.63	0.1
SMF	2.77	304	Pn	26	06.00	0.6
			Pg	26	12.20	
			Sg	26	47.20	
SLE	2.77	19	ePc	26	06.00	0.6
LBL	2.78	273	Pn	26	05.34	-0.2
FEL	2.78	12	Pn	26	06.02	0.3
LBF	2.88	311	Pn	26	07.60	0.6
			Pg	26	15.60	
			Sg	26	50.80	

HAU	2.91	349	Pn	26	07.60	0.2
			Pg	26	17.00	
PGF	2.92	152	Pn	26	06.70	-0.9
			Sn	26	40.00	
AGO	2.98	289	Pn	26	09.15	0.8
PYM	2.99	283	Pn	26	09.20	0.6
ECH	3.06	360	Pn	26	09.37	-0.2
LOR	3.13	314	Pn	26	10.80	0.4
			Pg	26	20.10	
			Sg	26	56.20	
AVF	3.13	303	Pn	26	10.80	0.4
			Pg	26	19.20	
			Sg	26	59.20	
VITF	3.17	345	Pn	26	11.39	0.4
OGA	3.18	56	eP	26	18.10	6.7X
SSF	3.19	308	Pn	26	12.00	0.7
			Sg	27	02.00	
CDF	3.26	1	Pn	26	12.22	-0.2
WLS	3.26	2	Pn	26	12.05	-0.4
CTI	3.27	73	P	26	12.10	-0.4
BGF	3.34	296	Pn	26	13.60	0.2
			Pg	26	23.20	
			Sg	27	06.40	
MAF	3.40	290	Pn	26	14.60	0.2
			Pg	26	24.00	
			Sg	27	07.20	
CAF	3.63	268	Pn	26	17.80	0.2
			Sn	26	58.00	
TCF	3.66	290	Pn	26	18.60	0.5
			Sg	27	14.70	
GWF	3.84	4	Pn	26	19.81	-0.8
RJF	4.00	274	Pn	26	23.20	0.4
LSF	4.10	288	Pn	26	24.90	0.6
			Sg	27	29.20	
FVI	4.17	68	P	26	24.70	-0.5
LPO	4.28	266	Pn	26	26.00	-0.8
LFF	4.57	270	Pn	26	29.00	-1.8
KBA	4.70	64	ePn	26	32.50	-0.5
			iSg	27	45.10	
DOU	5.24	342	P	26	40.20	-0.2
GRF	5.31	30	ePn	26	42.20	0.8
			ePg	27	00.80	
			eSn	27	42.00	
			eSg	28	11.00	
MFF	5.31	288	Pn	26	41.00	-0.5
			Sn	28	08.40	
EPF	5.36	249	Pn	26	41.00	-1.2
MEM	5.52	352	iP	26	44.40	0.1
SNF	5.70	341	iP	26	47.70	0.8
KHC	5.91	45	ePg	26	51.80	2.0
			eSg	27	56.30	
MOX	6.25	27	(Pn)	27	17.00	22.3X
			eSg	28	40.00	
LPF	6.35	300	Pn	26	55.20	-0.9
GRR	6.40	303	Pn	26	55.80	-0.9
KRA	9.92	56	eP	28	06.40	20.7X

S.D. = 1.1 on 80 of 88 obs.

JAN 20, 1990 19h 56m 46.01± 0.73s
19.978 S ± 9.0km 133.706 E ± 7.6km
DEPTH = 10.0km (geophysicist)
4.4mb (2 obs.)
NORTHERN TERRITORY, AUSTRALIA (591)

WB5	0.63	81	iPc	56	57.70	-1.0
KNA	6.31	311	eP	58	23.00	1.6
			eS	59	33.00	
MTN	7.51	340	eP	58	37.00	-1.2
			eS	59	57.00	
WARB	8.97	225	eP	59	02.00	3.5X
	0.2s		10.00nm			5.8mb X
			eS	00	43.00	
FORR	11.95	204	eP	59	40.10	0.8
	0.4s		52.00nm			6.2mb X
MBL	13.05	262	eP	59	50.50	-3.7X
MEKA	15.42	242	eP	00	24.90	-0.4
	0.3s		7.00nm			4.5mb
COOL	15.69	224	eP	00	28.00	-0.8
			eS	03	14.00	
NANU	17.14	258	eP	00	49.00	1.8
KLB	18.41	228	eP	01	02.00	-1.1
MRWA	18.53	237	eP	01	03.00	-1.5
	0.3s		6.00nm			4.3mb
BRS	18.95	117	iP	01	11.40	1.7
NWAO	19.56	225	eP	01	17.00	0.0
			eS	04	43.00	
MUN	19.72	229	eP	01	19.00	0.2

			eS	04	51.00	

S.D. = 1.3 on 12 of 14 obs.

JAN 20, 1990 20h 19m 13.45± 0.82s
62.211 N ± 8.0km 150.953 W ± 7.1km
DEPTH = 86.6 ± 23.3 km
CENTRAL ALASKA (1)

PWA	0.76	137	iPc	19	30.60	0.2
PMR	1.06	125	iPd	19	33.50	-0.4
PMS	1.17	145	iPd	19	35.50	0.2
TOA	2.25	91	ePd	19	49.30	-0.2
TTA	2.45	289	iPd	19	52.70	0.4
SVW	2.49	246	iPd	19	53.70	1.0
FBA	3.05	26	iPd	19	59.50	-0.9
IMA	4.05	344	iPd	20	13.70	-0.8
KDC	4.54	190	eP	20	20.00	-1.1
DWY	5.54	65	P	20	36.70	1.6
INK	9.50	42	eP	21	39.00	9.8X

S.D. = 1.1 on 10 of 11 obs.

& JAN 20, 1990 20h 29m 25.60s
37.175 N 122.043 W
DEPTH = 10.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

GCC	0.15	166	iPd	29	28.50	-0.5
			iS	29	31.20	
MHC	0.36	62	iPc	29	33.00	-0.1
			iS	29	38.50	
PCC	0.42	320	ePc	29	33.70	-0.5
			iS	29	39.90	
ARN	0.44	67	iPc	29	34.20	-0.4
SAO	0.63	130	iP	29	36.40	-1.9
BKS	0.72	348	iPd	29	39.40	-0.3
			iS	29	50.40	
BRK	0.72	346	ePd	29	39.20	-0.5
ZSP	0.79	348	ePc	29	40.50	-0.4
			eS	29	52.30	
PRS	1.00	147	eP	29	43.40	-1.2
LLA	1.04	122	eP	29	44.00	-1.3
CMB	1.57	56	e(P)	29	52.10	-1.5
			eSg	30	15.30	
KVN	3.63	58	e(P)	30	31.00	7.8

12 obs. associated

% JAN 20, 1990 20h 29m 38.21± 1.90s
44.088 N ±12.0km 8.283 E ±12.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

FIN	0.13	336	P	29	42.38	1.0
			S	29	43.63	
IMI	0.34	238	P	29	45.00	-0.2
			S	29	49.92	
ROB	0.36	305	P	29	44.84	-0.8
			S	29	49.46	
PCP	0.49	22	P	29	47.79	-0.4
			S	29	54.69	
ENR	0.64	283	P	29	51.51	0.5
			S	29	59.53	
STV	0.71	283	P	29	52.23	0.0

S.D. = 0.8 on 6 of 6 obs.

% JAN 20, 1990 20h 32m 45.80± 0.98s
44.229 N ± 7.6km 8.244 E ± 7.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

FIN	0.03	232	P	32	48.25	0.4
			S	32	49.48	
ROB	0.28	284	P	32	51.53	-0.1
			S	32	55.22	
PCP	0.38	35	P	32	53.58	0.0
			S	32	58.91	
IMI	0.41	219	P	32	53.99	-0.2
			S	32	59.53	
ENR	0.59	270	P	32	57.58	-0.3
			S	33	05.37	
STV	0.66	272	P	32	59.22	0.2
			S	33	07.32	
PZZ	0.86	289	P	33	02.60	0.1

S.D. = 0.3 on 7 of 7 obs.

JAN 20, 1990 20h 35m 48.04± 0.74s
44.266 N ± 5.1km 8.235 E ± 6.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.4 (LDG), 2.2 (GEN).

FIN	0.06	199	P	35 50.05	-0.3
			S	35 51.38	
ROB	0.26	276	P	35 53.53	-0.1
			S	35 57.23	
PCP	0.35	39	P	35 55.38	0.0
			S	36 01.53	
IMI	0.43	215	P	35 55.89	-1.0
			S	36 02.05	
ENR	0.59	266	P	35 59.38	-0.6
			S	36 07.17	
STV	0.65	268	P	36 01.22	0.1
			S	36 09.33	
SBF	0.70	235	Pg	36 02.00	0.0
			Sg	36 11.00	
PZZ	0.85	287	P	36 04.40	-0.1
			S	36 15.38	
RSP	1.13	322	P	36 09.02	-0.2
FRF	1.35	239	Pg	36 13.00	0.2
			Sg	36 30.00	
LMR	1.56	234	Pg	36 16.60	0.8
			Sg	36 35.80	
LRG	1.58	240	Pg	36 17.40	1.3
			Sg	36 37.60	

S.D. = 0.7 on 12 of 12 obs.

% JAN 20, 1990 20h 38m 43.65± 1.21s
44.220 N ± 9.3km 8.274 E ± 8.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.05	258	P	38 45.58	-0.3
			S	38 47.32	
ROB	0.30	285	P	38 49.27	-0.7
			S	38 53.17	
PCP	0.38	31	P	38 51.42	0.0
			S	38 56.86	
IMI	0.42	222	P	38 52.04	-0.1
			S	38 58.40	
ENR	0.61	271	P	38 56.76	0.7
			S	39 03.42	
STV	0.68	272	P	38 57.78	0.5
			S	39 04.86	
PZZ	0.89	289	P	39 00.45	-0.3
			S	39 12.04	

S.D. = 0.6 on 7 of 7 obs.

% JAN 20, 1990 20h 41m 32.11± 1.24s
44.218 N ± 9.6km 8.274 E ± 9.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.05	259	P	41 34.47	0.2
			S	41 35.71	
ROB	0.30	285	P	41 37.86	-0.5
			S	41 41.55	
PCP	0.38	31	P	41 39.91	0.0
			S	41 45.24	
IMI	0.41	222	P	41 40.22	-0.4
			S	41 46.47	
ENR	0.61	271	P	41 45.24	0.7
			S	41 51.50	
STV	0.68	272	P	41 46.37	0.7
			S	41 53.65	
PZZ	0.89	289	P	41 48.63	-0.6

S.D. = 0.7 on 7 of 7 obs.

% JAN 20, 1990 21h 15m 30.58± 1.25s
44.248 N ±11.6km 8.258 E ± 8.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.05	223	P	15 32.52	-0.3
			S	15 33.85	
ROB	0.28	280	P	15 36.10	-0.4
			S	15 39.90	
PCP	0.36	35	P	15 38.05	0.1
			S	15 42.87	
ENR	0.60	268	P	15 43.49	0.7
			S	15 50.26	
STV	0.67	270	P	15 44.41	0.4
			S	15 51.90	
PZZ	0.87	288	P	15 46.87	-0.5

S.D. = 0.6 on 6 of 6 obs.

? JAN 20, 1990 21h 21m 14.30± 4.10s
35.593 N ±13.8km 51.443 E ±33.6km
DEPTH = 10.0km (geophysicist)
IRAN (348)
Felt in the Firuzkuh oreo.

TEH	0.15	342	ePc	21 18.00	0.1
IR4	0.57	232	eP	21 26.00	0.1
IR1	0.64	254	eP	21 28.50	1.3
IR7	0.69	279	eP	21 27.50	-0.5
IR5	0.80	242	eP	21 29.00	-0.9

S.D. = 1.2 on 5 of 5 obs.

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* JAN 20, 1990 21h 23m 43.82± 2.88s
34.954 N ±30.8km 26.114 E ± 8.0km
DEPTH = 5.0km (geophysicist)
CRETE (370)
MD 3.4 (ATH).

NPS	0.51	307	iPgd	23 53.50	-0.6
KAP	1.05	55	ePg	24 02.10	-2.0
VAM	1.63	287	ePb	24 14.00	0.7
ARG	2.07	52	ePn	24 20.20	0.6
APE	2.16	348	ePb	24 21.00	0.0
CIN	3.08	31	eP	24 36.00	2.0
VLI	3.12	305	ePn	24 34.00	-0.6

S.D. = 1.5 on 7 of 7 obs.

% JAN 20, 1990 21h 45m 46.53± 0.74s
44.249 N ± 6.1km 8.209 E ± 5.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

FIN	0.04	181	P	45 48.75	0.1
			S	45 50.08	
ROB	0.25	281	P	45 51.72	-0.1
			S	45 56.13	
PCP	0.38	39	P	45 54.29	0.0
IMI	0.41	214	P	45 54.80	-0.1
ENR	0.57	268	P	45 58.18	0.1
STV	0.64	270	P	45 59.31	0.0
PZZ	0.83	288	P	46 02.90	0.1

S.D. = 0.1 on 7 of 7 obs.

JAN 20, 1990 21h 54m 22.51± 0.49s
39.525 N ± 5.0km 24.844 E ± 4.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.1 (ATH), 2.8 (THE).

OUR	1.05	321	ePbc	54 42.90	0.7
PRK	1.14	104	ePb	54 41.50	-2.3
			eSb	54 58.00	
EZN	1.18	75	iPn	54 43.40	-1.1
NEO	1.27	261	ePg	54 46.00	-0.2
PLG	1.37	309	ePg	54 47.40	-0.3
ALN	1.65	33	ePbc	54 51.10	-0.5
RDO	1.70	18	ePb	54 52.00	-0.4
SOH	1.73	319	ePbc	54 53.00	0.2
ATH	1.78	210	ePb	54 50.80	-2.7
THE	1.82	308	ePb	54 53.80	-0.2
SRS	1.86	329	ePbc	54 54.40	-0.2
LIT	1.90	288	ePn	54 54.50	-0.8
AGG	2.01	256	ePnd	54 58.00	1.0
RZN	2.16	357	iP	55 00.00	0.8
KDZ	2.17	11	iPd	54 59.00	-0.1
			iS	55 29.00	
KNT	2.21	318	ePn	55 00.10	0.3
MMB	2.23	338	eP	55 00.00	-0.1
GRG	2.35	308	ePnc	55 02.30	0.4
SMG	2.39	139	ePg	55 05.00	2.7
KZN	2.49	289	ePn	55 03.00	-0.8
VAY	2.50	317	ePn	55 04.40	0.6
BNT	2.51	70	ePn	55 06.00	2.0
APE	2.51	167	ePb	55 06.00	1.9
KKB	2.70	331	iPc	55 07.00	0.3
VLI	3.18	209	ePn	55 12.90	-0.6
VTS	3.30	339	iP	55 17.00	1.6
PVL	3.71	6	eP	55 19.00	-2.0

S.D. = 1.3 on 27 of 27 obs.

% JAN 20, 1990 21h 59m 53.74± 0.89s
36.180 N ±19.9km 53.110 E ± 7.6km
DEPTH = 10.0km (geophysicist)
IRAN (348)
Felt in the Firuzkuh oreo.

TEH	1.47	253	iPc	00 20.00	-0.4
IR4	2.03	243	eP	00 28.00	-0.5
IR7	2.08	258	eP	00 30.00	0.7
IR1	2.11	250	eP	00 30.00	0.3
MAIO	5.16	87	ePn	01 13.00	0.0
			eSn	02 12.00	
KER	5.24	251	eP	01 32.00	17.9X
TAB	5.74	291	eP	01 21.00	-0.2

S.D. = 0.6 on 6 of 7 obs.

JAN 20, 1990 22h 35m 20.03± 0.68s
47.345 N ± 5.3km 11.777 E ± 7.3km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 2.6 (FUR), 2.3 (KBA).

SCE	0.31	188	iPgd	35 26.50	0.0
			iSg	35 31.40	
OGA	0.70	227	ePg	35 33.20	-0.8
FUR	0.89	338	ePg	35 37.80	0.7
FVI	1.02	137	P	35 39.80	0.5
			eSg	35 52.90	
KBA	1.10	103	iPgc	35 40.30	-0.5
			iSg	35 54.70	
CTI	1.30	184	Pc	35 44.80	0.6
			eSg	36 01.10	
WET	1.95	22	eP	35 53.00	-0.5
VOY	1.96	131	e(Pn)	35 59.40	5.6X
			eSn	36 22.60	
GRF	2.38	351	ePg	36 05.70	6.0X
			eSg	36 36.00	
HOF	2.97	1	eP	36 16.00	7.9X

S.D. = 0.8 on 7 of 10 obs.

% JAN 20, 1990 23h 07m 29.47± 1.36s
44.206 N ±10.0km 8.294 E ± 9.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.06	273	P	07 31.90	0.1
			S	07 33.13	
ROB	0.32	286	P	07 35.49	-0.6
			S	07 38.87	
PCP	0.38	28	P	07 37.33	0.0
			S	07 42.97	
IMI	0.42	225	P	07 37.64	-0.3
			S	07 43.39	
ENR	0.63	272	P	07 42.77	0.6
			S	07 49.03	
STV	0.70	273	P	07 44.10	0.8
			S	07 50.56	
PZZ	0.91	290	P	07 46.36	-0.6

S.D. = 0.7 on 7 of 7 obs.

% JAN 20, 1990 23h 10m 07.44± 1.44s
44.200 N ±10.5km 8.292 E ± 9.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.06	279	P	10 09.90	0.1
			S	10 11.33	
ROB	0.32	287	P	10 13.49	-0.6
			S	10 17.18	
PCP	0.39	28	P	10 15.44	0.1
IMI	0.41	225	P	10 15.44	-0.4
ENR	0.63	273	P	10 21.08	1.0
STV	0.70	274	P	10 22.00	0.7
PZZ	0.91	290	P	10 24.05	-0.9

S.D. = 0.8 on 7 of 7 obs.

JAN 20, 1990 23h 43m 30.90± 0.74s
44.222 N ± 7.6km 8.257 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

FIN	0.04	249	P	43 32.91	-0.1
			S	43 34.25	

20d 23h

ROB	0.29	285	P	43	36.40	-0.5
			S	43	39.78	
PCP	0.38	33	P	43	38.35	-0.4
			S	43	44.29	
IMI	0.41	220	P	43	38.55	-0.7
			S	43	44.50	
ENR	0.60	271	P	43	43.88	0.8
STV	0.67	272	P	43	44.71	0.4
RMP	4.05	125	P	44	34.80	0.5
			eSg	44	37.30	

S.D. = 0.7 on 7 of 7 obs.

% JAN 20, 1990 23h 45m 23.40± 0.91s
44.238 N ± 7.1km 8.239 E ± 7.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.04	218	P	45	25.76	0.3
			S	45	26.78	
ROB	0.27	282	P	45	29.14	0.0
			S	45	32.83	
PCP	0.37	36	P	45	31.09	0.0
IMI	0.41	218	P	45	31.60	-0.3
ENR	0.59	269	P	45	35.81	0.4
STV	0.66	271	P	45	36.32	-0.2
PZZ	0.86	289	P	45	39.91	-0.1

S.D. = 0.3 on 7 of 7 obs.

% JAN 21, 1990 00h 32m 04.28± 0.74s
44.264 N ± 6.6km 8.185 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

FIN	0.06	163	Pc	32	06.95	0.4
			S	32	08.24	
ROB	0.23	278	P	32	09.09	-0.1
			S	32	14.03	
PCP	0.38	43	P	32	11.93	-0.2
			S	32	17.77	
IMI	0.41	211	P	32	12.57	-0.2
			S	32	18.51	
ENR	0.55	266	P	32	15.53	0.0
			S	32	22.21	
STV	0.62	268	P	32	16.15	-0.6
			S	32	23.12	
PZZ	0.81	288	P	32	20.90	0.8
			S	32	31.85	

S.D. = 0.6 on 7 of 7 obs.

? JAN 21, 1990 00h 34m 47.44± 1.54s
16.874 N ±16.6km 99.346 W ±10.9km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.49	270	eP	34	58.00	0.1
			iS	35	10.50	
III	1.50	356	eP	35	12.50	0.0
			iS	35	38.00	
PPM	2.29	17	eP	35	22.50	-1.6
			iS	35	54.00	
IIT	2.35	25	(P)	35	26.50	1.7
OXX	2.52	85	(P)	35	27.00	-0.2
			iS	35	47.00	
IIJ	2.87	353	(P)	35	39.50	7.2X

S.D. = 1.6 on 5 of 6 obs.

% JAN 21, 1990 01h 02m 09.04± 1.00s
44.232 N ± 8.6km 8.234 E ± 8.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

FIN	0.03	218	P	02	11.32	0.2
			S	02	12.66	
ROB	0.27	284	P	02	14.81	0.1
			S	02	18.71	
PCP	0.38	36	P	02	16.86	0.0
IMI	0.41	218	P	02	17.17	-0.2
ENR	0.58	270	P	02	20.86	-0.1

S.D. = 0.2 on 5 of 5 obs.

? JAN 21, 1990 01h 08m 16.23± 9.57s
9.032 S ±90.2km 128.551 E ±17.5km
DEPTH = 161.4 ± 34.5 km
4.2mb (1 obs.)

TIMOR SEA (290)

MTN	4.56	146	eP	09	25.00	0.2
			eS	10	22.00	
KNA	6.68	178	eP	09	53.00	-0.1
			eS	11	13.00	
WB5	12.16	153	eP	11	05.20	-0.2
			e	13	22.00	
			e	16	28.20	
WRA	12.21	153	Pd	11	05.30	-0.6
	0.3s		2.90nm			4.2mb
MBL	14.70	214	eP	11	37.50	0.0
ASPA	15.43	161	eP	11	47.40	0.7
			eS	14	34.30	
			iPcP	16	19.60	
			iScS	22	18.60	
WARB	17.15	186	eP	12	12.00	4.2X

S.D. = 0.7 on 6 of 7 obs.

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* JAN 21, 1990 01h 08m 48.95± 1.66s
31.571 S ± 8.9km 179.457 W ± 8.6km
DEPTH = 196.6 ± 15.8 km
4.9mb (5 obs.)
KERMADEC ISLANDS REGION (177)

WEL	10.75	204	eP	11	18.00	-0.8
			S	13	13.80	
SVA	13.53	351	eP	11	54.60	0.4
DZM	15.73	304	iPc	12	22.00	0.5
BRS	24.50	273	iPd	13	52.20	0.5
			i	13	57.00	
			i	14	40.20	
COO	24.53	265	eP	13	54.00	2.0
CAN	26.53	253	eP	14	11.10	0.9
BWA	27.03	255	eP	14	13.30	-1.5
RMO	28.19	272	eP	14	26.00	0.7
CTA	32.78	282	iPc	15	04.70	-0.8
	1.0s		39.00nm			5.0mb
			i	15	09.30	
WRA	42.91	274	Pc	16	28.10	-1.8
	0.9s		50.50nm			5.1mb
FORR	44.50	257	eP	16	41.00	-1.4
SPA	58.60	180	iPc	18	28.70	1.4
	0.8s		27.92nm			5.1mb
MAT	78.50	326	eP	20	20.00	-9.6X
	1.2s		18.75nm			4.7mb
PRS	86.73	43	ePc	21	12.00	0.4
GCC	86.85	43	eP	21	12.20	0.1
PCC	86.95	42	ePc	21	12.10	-0.5
PRI	87.01	44	ePc	21	13.80	0.7
PLM	87.49	48	eP	21	15.00	-0.6
SBB	87.76	47	eP	21	16.00	-0.7
ISA	88.01	45	eP	21	18.00	0.1
FRI	88.16	44	ePc	21	18.30	-0.1
CMB	88.47	43	iPc	21	19.50	-0.5
GLA	88.61	49	eP	21	22.00	1.3
CLC	88.64	46	eP	21	20.00	-0.9
WDC	89.01	40	ePc	21	22.10	-0.3
TNP	90.36	44	iP	21	29.00	0.0
	1.0s		6.25nm			4.5mb
KVN	90.48	43	eP	21	29.00	-0.5
SOD	140.99	344	ePKP	27	53.00	-3.3X
SUF	144.79	340	ePKP	27	59.50	-3.4X
	0.6s		97.70nm			
NUR	146.96	338	iPKP	28	06.30	-0.2
	0.8s		61.60nm			
BCAO	148.15	216	ePKPd	28	11.40	1.5
	0.2s		24.00nm			
			i	28	12.70	
			i	29	46.10	
UPP	149.49	343	iPKP	28	12.60	2.1X
	0.9s		100.00nm			
			i	28	18.10	
NB2	149.70	350	PKP	28	13.30	2.4X
	0.7s		10.30nm			
HFS	150.12	347	ePKP	28	13.50	2.0X
	0.7s		18.60nm			
MBH	150.48	276	iPKPd	28	18.00	5.0X
PRNI	150.50	277	ePKP	28	17.00	3.9X
LIC	154.25	167	PKP	28	26.40	7.6X
KIC	154.44	168	PKP	28	26.90	7.8X
TIC	154.66	167	PKP	28	27.90	8.5X

S.D. = 1.0 on 28 of 39 obs.

? JAN 21, 1990 01h 37m 42.32± 6.64s
41.490 N ±41.8km 23.606 E ±24.5km
DEPTH = 10.0km (geophysicist)

GREECE-BULGARIA BORDER REGION (363)

SRS	0.37	182	ePg	37	50.60	0.6
			eSg	37	59.40	
KNT	0.63	239	ePg	37	54.80	-0.1
			eSg	38	06.00	
SOH	0.69	196	ePg	37	56.50	0.4
THE	0.98	210	ePb	37	59.70	-1.3
			eSb	38	18.50	
GRG	1.05	240	ePb	38	02.80	0.6
			eSb	38	19.60	
OUR	1.19	166	ePb	38	04.20	-0.3

S.D. = 0.9 on 6 of 6 obs.

JAN 21, 1990 01h 59m 40.09± 0.31s
51.979 N ± 7.0km 170.007 W ± 4.0km
DEPTH = 33.0km (normal)
5.2mb (51 obs.) 4.6Msz (6 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 20C
Centroid Location:
Origin Time 01:59:44.6 1.8
Lat 52.25N 0.26 Lon 170.57W 0.31
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 1.91 0.65 Mtt=-0.60 0.95
Mff=-1.31 0.50 Mrt= 4.89 1.32
Mrf= 4.55 1.81 Mtf=-0.63 0.60
Principal Axes:

T	Val= 7.08	Plg=52	Azm=319
N	-0.35	3	226
P	-6.74	38	134

Best Double Couple:Mo=6.9*10**16
NP1:Strike=205 Dip= 8 Slip= 69
NP2: 46 83 93

ADK	4.13	271	iPc	00	41.90	-0.5
SDN	6.58	55	eP	01	16.20	-0.7
KDC	11.61	53	eP	02	22.90	-3.4X
SVW	12.08	35	eP	02	35.10	2.4
TTA	13.27	29	eP	02	53.70	5.1X
PMS	14.52	42	eP	03	02.30	-2.6
IMA	16.35	24	eP	03	30.30	1.8
TOA	16.36	42	eP	03	26.20	-2.4
FBA	17.26	33	eP	03	38.10	-1.8
BRW	20.29	12	eP	04	14.70	-0.5
INK	23.89	33	eP	04	49.00	-2.1
	0.6s		14.00nm			4.7mb
MBC	31.04	21	ePc	05	55.90	-0.5
	0.5s		10.00nm			4.9mb
LON	31.35	80	e(P)	06	00.00	0.5
PNT	31.55	74	eP	06	02.00	0.8
EDM	33.67	65	ePc	06	19.00	-0.6
	0.7s		24.00nm			5.2mb
WDC	34.14	90	eP	06	26.30	2.5
SES	36.11	69	eP	06	39.00	-1.6
CMB	37.01	92	eP	06	48.80	0.6
KVN	37.80	89	eP	06	55.70	0.7
TNP	38.94	90	eP	07	05.50	0.9
FFC	39.26	58	iPc	07	05.40	-1.4
	0.6s		8.00nm			4.7mb
MAT	39.29	268	(P)	07	06.00	-1.3
	1.0s		28.00nm			5.0mb
Z	20s		0.71um			4.5Msz
			eS	13	10.00	
BW06	40.86	78	eP	07	19.70	-0.7
	1.2s		10.27nm			4.4mb
DAU	41.20	82	eP	07	24.50	1.1
RSSD	43.40	73	eP	07	40.00	-1.2
GOL	45.22	79	eP	07	55.00	-1.0
	0.9s		14.68nm			4.9mb
ANMO	47.59	85	eP	08	13.00	-1.7
	1.3s		10.21nm			4.7mb
ALQ	47.60	85	eP	08	11.10	-3.6X
	1.1s		6.33nm			4.5mb
			pP	09	58.70	595kmX
FRB	49.52	35	ePc	08	27.40	-1.5
	0.6s		38.00nm			5.6mb
DAG	50.23	8	iPc	08	32.20	-1.9
	1.0s		52.00nm			5.5mb
BJI	50.52	287	eP	08	36.50	-0.3
	1.2s		18.00nm			4.9mb
Z	20s		0.90um			4.8Msz
SIO	53.26	77	e(P)	09	06.40	8.9X
SSE	53.44	275	Pc	08	58.00	-0.9

1.0s 28.00nm 5.2mb
Z 20s 0.50um 4.6Msz
sP 09 31.00
eS 16 40.00
TUL 53.46 76 eP 09 11.40 12.4X
1.3s 15.60nm
Z 21s 0.46um 4.5Msz
LR 31 00.00
SCH 56.02 43 eP 09 17.00 -0.5
KEV 57.94 353 iP 09 29.00 -1.8
0.9s 22.00nm 5.2mb
PTN 59.28 56 eP 09 43.70 3.2X
RSNY 59.53 56 eP 09 40.40 -1.9
1.0s 9.04nm 4.9mb
SOD 60.32 353 iP 09 45.30 -2.0
LZH 60.37 292 iPd 09 48.00 -0.3
1.5s 90.00nm 5.7mb
Z 18s 0.80um 4.9Msz
CBM 60.99 50 e(P) 09 50.00 -2.2
SUF 64.94 352 eP 10 16.30 -1.7
0.5s 10.10nm 5.2mb
NUR 67.25 352 iP 10 31.10 -1.6
1.0s 44.00nm 5.5mb
NB2 67.33 359 P 10 31.70 -1.6
0.9s 14.00nm 5.1mb
HFS 68.20 358 eP 10 36.50 -2.2
1.0s 30.50nm 5.3mb
Z 16s 0.24um 4.5MszX
LR 35 32.00
KMI 68.98 284 Pc 10 43.50 -0.9
SHL 75.02 292 iP 11 18.60 -1.6
LOE 75.43 280 eP 11 21.50 -0.9
CHG 76.05 283 eP 11 25.00 -0.9
CLL 77.06 358 iPd 11 31.00 0.0
2.2s 72.00nm 5.3mb
BDT 77.21 282 eP 11 31.90 -0.5
KSP 77.42 356 ePc 11 33.00 0.0
e 11 44.00
BRG 77.47 357 iP 11 33.20 -0.1
1.3s 34.00nm 5.2mb
e 11 45.00
e 11 54.00
ENN 77.57 3 e(P) 11 34.00 0.2
1.0s 29.00nm 5.3mb
e 11 45.50
MEM 77.73 3 P 11 35.50 0.8
e 11 45.80
MOX 77.74 359 eP 11 35.00 0.2
SNF 77.77 4 eP 11 45.50 10.6X
KRA 77.99 353 eP 11 35.20 -1.0
1.2s 58.00nm 5.5mb
e 11 47.60
DOU 78.20 4 Pc 11 37.90 0.6
PRU 78.34 357 P 11 38.00 -0.1
e 11 58.50
GRF 78.70 359 ePc 11 40.70 0.6
1.4s 70.00nm 5.5mb
Z 18s 0.20um 4.5Msz
e 11 52.60
e 12 01.80
SPC 78.83 353 eP 11 40.70 -0.4
KHC 79.22 358 iPc 11 43.00 0.0
1.2s 25.00nm 5.1mb
e 11 54.80
FLN 79.24 7 eP 11 42.70 -0.3
LDF 79.43 7 eP 11 43.50 -0.6
0.7s 8.80nm 4.9mb
GRR 79.58 7 eP 11 44.80 -0.1
LPF 79.92 7 eP 11 46.90 0.2
1.1s 19.50nm 5.0mb
CDF 79.96 2 eP 11 47.10 0.1
ZST 80.02 355 iP 11 47.40 0.2
SRO 80.33 354 eP 11 49.50 0.6
HAU 80.35 2 eP 11 49.30 0.3
0.9s 14.40nm 5.0mb
NDI 80.51 305 eP 11 49.50 -0.7
BSF 80.53 2 eP 11 50.10 0.0
1.0s 20.00nm 5.1mb
SLE 80.63 1 ePd 11 50.80 0.3
GRC 80.93 5 P 11 52.73 0.7
LOR 80.99 4 iPc 11 52.70 0.3
1.2s 33.90nm 5.2mb
SAX 81.15 0 ePd 11 54.30 0.7
SSF 81.18 4 iPc 11 53.80 0.4
1.1s 37.60nm 5.3mb
KBA 81.28 358 iPc 11 53.70 -0.4
1.1s 59.30nm 5.5mb
e 12 14.50
LBF 81.28 4 iPc 11 53.90 -0.1
1.1s 19.50nm 5.0mb
MFF 81.41 7 eP 11 55.00 0.4
1.1s 36.10nm 5.3mb
AVF 81.45 5 iPc 11 55.00 0.2
1.0s 24.00nm 5.2mb
LLS 81.53 1 ePd 11 56.40 0.9
SMF 81.61 4 iPc 11 55.80 0.1
1.1s 39.00nm 5.3mb
BGF 81.65 5 iPc 11 56.20 0.3
1.3s 36.10nm 5.2mb
OSS 81.71 360 ePd 11 57.40 1.0
FVI 81.78 358 P 11 57.00 0.6
LSF 81.88 6 iPc 11 57.40 0.3
1.1s 48.80nm 5.4mb
TCF 81.88 5 iPc 11 57.30 0.2
1.0s 14.00nm 4.9mb
MAF 81.97 5 eP 11 58.00 0.5
1.0s 10.80nm 4.8mb
AGO 82.17 5 P 11 59.03 0.4
BZS 82.27 352 eP 11 59.00 -0.1
PLDF 82.28 4 P 11 59.82 0.6
TMA 82.29 1 ePd 12 00.20 0.8
DIX 82.30 2 ePd 12 01.10 1.5
MMK 82.33 1 ePd 12 01.20 1.5
CTI 82.34 359 P 11 58.00 -1.6
PTJ 82.37 356 eP 12 01.50 1.8
PYM 82.47 5 P 12 00.89 0.7
VAI 82.53 1 P 12 01.00 0.6
ORX 82.75 1 P 12 02.59 0.8
SAL 82.79 360 P 12 02.50 0.8
RJF 82.82 6 eP 12 02.10 0.1
LPG 82.86 2 eP 12 03.10 0.5
LSD 82.91 2 P 12 04.02 1.3
RIY 82.98 357 eP 12 02.70 0.0
LBL 82.99 5 P 12 03.67 0.9
LFF 83.13 7 eP 12 04.20 0.6
0.9s 26.20nm 5.3mb
RSP 83.22 2 P 12 04.95 0.8
CAF 83.23 6 eP 12 04.80 0.7
1.0s 16.80nm 5.1mb
BNI 83.31 2 P 12 06.20 1.6
LPO 83.42 6 eP 12 05.60 0.6
1.0s 16.00nm 5.1mb
RRL 83.44 2 P 12 07.00 1.5
BOB 83.63 0 Pd 12 07.60 1.4
PCP 83.85 1 P 12 07.10 -0.2
PZZ 83.86 2 P 12 08.02 0.5
CKI 83.97 1 P 12 07.70 -0.1
ROB 84.09 2 P 12 07.61 -0.9
ENR 84.15 2 P 12 08.84 0.0
FIN 84.18 1 P 12 08.43 -0.5
OUE 84.20 313 eP 12 09.00 -0.5
MME 84.21 359 Pc 12 11.00 1.7
BDI 84.34 360 P 12 09.50 -0.3
TOUF 84.36 2 P 12 10.70 0.6
AUTN 84.38 2 P 12 10.85 0.6
SAOF 84.39 2 P 12 10.46 0.5
RSM 84.45 358 Pc 12 11.30 1.1
IMI 84.47 2 P 12 10.08 -0.4
MVIF 84.47 2 P 12 10.94 0.4
AURF 84.49 2 P 12 10.94 0.4
SBF 84.51 2 eP 12 11.00 0.3
0.9s 20.90nm 5.3mb
PGD 84.51 359 Pd 12 12.00 1.2
FIR 84.62 359 eP 12 12.00 1.0
REVF 84.63 2 P 12 11.67 0.4
PII 84.68 360 P 12 11.30 0.0
CRE 84.76 359 P 12 12.50 0.6
FRF 84.80 2 eP 12 12.50 0.5
1.1s 29.30nm 5.4mb
ARV 84.87 358 P 12 13.00 0.6
LRG 84.89 3 eP 12 13.60 1.2
1.2s 44.00nm 5.5mb
EPF 85.00 7 iPc 12 13.00 -0.1
1.1s 24.40nm 5.3mb
LMR 85.02 3 eP 12 13.90 0.8
1.2s 41.60nm 5.5mb
ASS 85.30 358 P 12 14.50 -0.1
PGF 85.85 1 iPc 12 18.10 0.7
SKO 85.90 351 iP 12 18.00 0.4
MNS 85.99 358 Pd 12 17.60 -0.4
AQU 86.00 357 P 12 17.90 -0.2
AZI 86.36 357 Pc 12 20.00 0.2
MFT 86.40 347 iP 12 20.50 0.4
VAY 86.44 351 eP 12 20.70 0.5
ALN 86.45 348 eP 12 20.80 0.5
SRS 86.53 350 eP 12 20.60 -0.1
KNT 86.56 350 eP 12 21.00 0.2
SDI 86.64 357 Pd 12 21.10 -0.1
DUI 86.66 357 Pc 12 22.00 0.6
OHR 86.81 352 eP 12 21.20 -0.9
1.3s 0.08nm 2.8mb X
GRG 86.82 351 eP 12 22.20 0.1
SOH 86.85 350 eP 12 22.60 0.3
LIT 87.65 350 eP 12 24.80 -1.4
TOL 87.70 11 eP 12 27.00 0.6
MGR 88.13 356 P 12 21.00 -7.4X
PSI 88.56 272 ePc 12 31.00 0.2
e 13 50.00
HYB 88.97 297 ePc 12 31.50 -1.3
1.0s 50.00nm 5.8mb
e 12 43.50
ASPA 89.84 230 eP 12 35.10 -1.5
1.2s 9.00nm 4.9mb
ASMO 90.23 11 iPc 12 39.50 1.0
AAPN 90.23 11 iPc 12 39.00 0.4
ALOJ 90.43 11 eP 12 39.50 0.0
ACHM 90.47 11 iPc 12 40.50 0.9
POO 90.59 302 iPd 12 40.30 -0.1
ATEJ 90.63 11 eP 12 40.50 0.0
GBA 92.70 296 P 12 49.00 -1.0
SLR 150.35 325 iPKPd 19 28.60 4.6X
1.0s 30.00nm
KSR 150.94 327 ePKP 19 25.50 0.6
0.7s 5.00nm
PRY 151.72 326 iPKPd 19 31.60 5.6X
0.7s 6.00nm
BFS 151.93 327 iPKPc 19 27.00 0.7
0.3s 64.94nm
BLF 154.17 326 ePKP 19 41.00 11.6X
S.D. = 1.0 on 164 of 175 obs.

• JAN 21, 1990 01h 59m 55.98± 0.98s
39.444 N ± 8.2km 28.360 E ±10.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.26 52 iPg 00 00.80 -0.7
iSg 00 06.80
BNT 0.97 340 iPg 00 14.20 -0.2
YLV 1.36 34 iPn 00 22.20 1.1
MFT 1.58 329 ePn 00 24.00 -0.1
EZN 1.62 284 ePn 00 18.60 -6.0X
ISK 1.71 18 ePn 00 29.00 3.1X
CIN 1.85 187 eP 00 28.00 0.0
S.D. = 1.0 on 5 of 7 obs.

% JAN 21, 1990 03h 37m 41.77± 1.21s
38.688 N ± 6.5km 15.539 E ±18.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

ATH 0.53 187 Pd 37 53.20 0.7
eSg 38 03.80
CZI 0.70 41 P 37 58.60 3.0X
SOI 0.74 146 Pd 37 55.30 -0.9
eSg 38 07.70
ROI 1.19 42 P 38 05.10 1.1
CSI 1.23 28 P 38 04.40 -0.3
MGR 1.45 0 Pc 38 07.40 -0.6
eSn 38 28.30
S.D. = 1.2 on 5 of 6 obs.

? JAN 21, 1990 03h 52m 42.22± 2.07s
8.764 N ±31.0km 82.824 W ±12.4km
DEPTH = 73.7 ± 8.8 km
4.6mb (2 obs.)
PANAMA-COSTA RICA BORDER REGION (80)
MD 4.6 (UPA).

BUS 1.21 311 iPc 53 01.30 -3.0X
S 53 20.20
LIO 1.25 350 iPc 53 04.80 0.4
LCR2 1.52 310 iPc 53 09.10 1.0
S 53 36.20
ICR 1.56 321 eP 53 07.80 -1.2
SJS 1.68 314 iPd 53 06.00 -4.3X
S 53 30.80
SRA 2.07 309 eP 53 14.70 -0.9
S 53 45.70
AR6 2.65 309 iPd 53 24.30 0.7
UPA 3.26 86 iPd 53 32.00 0.0

21d 03h

0.9s 84.03nm
S 54 20.50
LRM 44.84 331 eP 00 51.90 0.8
FFC 48.32 345 eP 01 18.00 0.0
0.8s 8.00nm 4.7mb
EDM 50.73 337 iPd 01 36.00 -0.5
MBC 70.30 351 eP 03 49.00 -0.3
1.0s 6.00nm 4.5mb
GBA 150.37 42 PKPc 12 24.50 2.4X
1.0s 4.20nm
S.D. = 0.9 on 10 of 13 obs.

• JAN 21, 1990 04h 27m 04.79± 1.13s
19.282 S ±13.1km 169.127 E ±12.1km
DEPTH = 155.0 ± 9.8 km
4.6mb (3 obs.)
VANUATU ISLANDS (186)

PVC 1.72 333 iPc 27 37.50 0.1
iS 28 03.00
DZM 3.74 222 iPc 28 02.00 -0.6
iS 28 44.80
RMQ 20.08 245 eP 31 30.00 1.9
CTA 21.55 264 iPd 31 45.00 2.2
0.6s 7.33nm 4.3mb
CNB 23.67 224 iPd 32 04.40 1.1
BWA 23.78 226 eP 32 03.30 -1.1
CAN 23.91 224 eP 32 06.10 0.5
WB5 32.72 263 eP 33 23.40 -1.4
WRA 32.74 263 Pc 33 23.60 -1.4
0.8s 6.10nm 4.4mb
ASPA 33.02 256 iPd 33 26.10 -1.3
0.6s 56.00nm 5.5mb
FORR 38.71 245 iPc 34 15.20 -0.1
WARB 39.65 252 eP 34 23.10 0.0
MBL 46.15 259 eP 35 15.50 -0.1
PRS 85.79 49 eP 39 28.20 0.3
MHC 86.06 48 ePd 39 29.50 0.1
PRI 86.21 50 eP 39 30.50 0.4
WDC 86.97 45 e(P) 39 33.70 0.2
CMB 87.26 48 ePd 39 34.90 -0.2
FRI 87.28 49 ePd 39 34.70 -0.3
MIN 87.48 46 e(P) 39 35.80 -0.4
S.D. = 1.0 on 20 of 20 obs.

% JAN 21, 1990 04h 52m 03.21± 0.83s
37.985 N ±16.4km 14.601 E ± 6.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.09 126 P 51 57.50 -8.5X
eSg 52 12.00
GIB 0.45 271 P 52 11.50 -1.0
eSg 52 24.50
ATN 0.70 75 P 52 16.50 -0.6
eSg 52 27.00
MCT 0.84 246 P 52 20.50 0.9
SOI 1.15 85 P 52 24.50 -0.2
eSn 52 37.00
CZI 1.72 44 P 52 33.80 0.5
TDS 2.15 39 P 52 40.00 0.4
S.D. = 0.9 on 6 of 7 obs.

& JAN 21, 1990 05h 15m 07.04s
59.161 N 152.054 W
DEPTH = 66.4km
SOUTHERN ALASKA (2)
<AGS-P>.

CNPM 0.56 49 eP 15 19.63 -0.7
eS 15 29.08
AUL 0.74 288 eP 15 21.68 -0.7
eS 15 33.10
CDD 0.85 255 eP 15 22.96 -0.8
eS 15 34.47
NNL 0.96 23 eP 15 25.54 0.4
PDB 1.26 301 eP 15 27.92 -1.1
eS 15 43.74
RDT 1.43 353 eP 15 30.26 -1.1
eS 15 48.15
NKA 1.64 14 eP 15 35.89 1.7
SPU 2.03 360 eP 15 39.35 -0.3
CRP 2.11 359 eP 15 41.11 0.2
9 obs. associated

JAN 21, 1990 05h 26m 52.31± 1.42s
1.777 N ± 7.2km 127.282 E ± 9.1km
DEPTH = 139.5 ± 13.2 km
5.1mb (14 obs.)
HALMAHERA (267)

AAI 5.50 170 iPd 28 13.90 0.6
PCI 7.91 250 ePd 28 44.50 -1.3
eS 29 13.50
TSM 9.51 285 eP 29 08.50 1.3
MKS 10.45 228 iPc 29 22.30 2.7
KKM 11.83 291 ePc 29 37.00 -0.8
MTN 15.02 165 eP 30 16.00 -2.7
e 33 31.00
TRT 17.38 237 ePc 30 49.00 1.1
KNA 17.48 175 iPd 30 47.10 -1.9
TPI 20.13 257 ePd 31 16.50 -1.0
e 32 30.00
WB5 22.62 162 iPc 31 42.30 0.2
WRA 22.67 163 Pc 31 42.70 0.1
0.3s 49.30nm 5.4mb
MBL 23.93 197 eP 31 55.00 0.2
0.4s 15.00nm 4.8mb
ASPA 26.10 166 iPc 32 14.30 -0.6
0.6s 28.00nm 5.0mb
eS 36 43.80
IPM 26.36 277 ePd 32 17.90 0.5
0.5s 17.70nm 4.9mb
NANU 26.77 205 eP 32 21.10 0.1
0.4s 31.00nm 5.3mb
CTA 28.61 140 iPd 32 42.60 4.9X
0.9s 7.56nm 4.4mb
NNT 29.33 293 iPc 32 43.50 -0.6
MEKA 29.46 196 iPd 32 45.00 -0.2
0.3s 12.00nm 5.1mb
LOE 29.52 303 eP 32 46.00 0.1
FORR 32.45 179 iPd 33 10.10 -1.2
0.4s 51.00nm 5.7mb
CHG 32.52 303 ePd 33 12.20 0.1
1.0s 12.50nm 4.6mb
MRWA 32.66 198 iPc 33 05.20 -7.9X
0.4s 13.00nm 5.1mb
COOL 33.00 190 eP 33 15.00 -1.1
BAL 33.74 197 eP 33 22.00 -0.5
0.4s 13.00nm 5.0mb
KLB 34.40 194 eP 33 27.50 -0.6
MUN 35.18 196 iPc 33 34.20 -0.5
NWAO 35.80 195 iPc 33 40.40 0.5
0.4s 14.00nm 5.1mb
MAT 36.04 15 eP 33 40.00 -1.9
RKG 36.94 194 eP 33 54.60 5.1X
BRS 37.99 142 iPd 33 58.00 -0.4
ADE 38.09 165 eP 34 00.00 0.8
BJI 39.40 347 eP 34 11.00 1.1
LZH 40.46 330 P 34 20.50 1.7
1.0s 38.00nm 5.1mb
BWA 41.12 153 eP 34 26.50 2.3
e 36 02.50
BFD 41.26 161 eP 34 26.00 0.8
SHL 41.49 308 iP 34 27.50 0.0
CAN 42.13 153 eP 34 33.70 1.3
e 36 13.40
CNB 42.29 153 eP 34 35.00 1.2
TOO 42.63 158 eP 34 37.60 1.1
KOD 50.19 282 eP 35 36.10 -0.4
GBA 50.66 286 P 35 39.00 -0.7
NDI 54.66 304 iPd 36 08.00 -1.2
0.6s 33.33nm 5.4mb
POO 54.92 291 iPc 36 11.00 -0.2
S.D. = 1.2 on 40 of 43 obs.

• JAN 21, 1990 05h 59m 25.20± 1.41s
51.649 N ± 7.5km 16.418 E ±14.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.3 (VKA), 3.2 (KBA).

KSP 0.81 186 iPd 59 41.60 0.7
0.6s 112.00nm
iS 59 51.00
BRG 1.74 244 iPg 59 57.40 1.8
iSg 00 17.10
PRU 2.05 216 ePg 00 00.00 0.0
i 00 06.20
Sg 00 26.00
CLL 2.16 262 iPn 00 01.50 -0.2
iPg 00 05.00
eSg 00 30.00
KRA 2.74 124 eP 00 21.80 11.8X
eS 01 00.40
KHC 3.11 217 iPn 00 15.10 -0.1
Pg 00 20.90
Sn 00 51.40
Sg 01 03.50
HOF 3.17 247 ePn 00 15.50 -0.5
MOX 3.19 254 ePg 00 24.00 7.7X
iSg 01 24.00
WET 3.38 223 ePn 00 19.20 0.1
VKA 3.39 181 iPgd 00 29.30 10.1X
iSg 01 13.30
ZST 3.49 172 eP 01 05.50 45.0X
e 01 14.70
GRF 3.84 241 e(Pn) 00 25.00 -0.6
ePg 00 36.90
e(Sn) 01 16.00
eSg 01 26.80
BHG 4.55 212 eP 00 52.30 16.6X
KBA 5.00 205 ePnc 00 41.00 -1.1
i 02 03.90
NRA0 9.50 345 Pn 01 45.00 0.0
Sn 03 29.50
S.D. = 0.9 on 10 of 15 obs.

• JAN 21, 1990 06h 16m 22.32± 1.20s
47.981 N ±15.0km 9.384 E ± 8.0km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.5 (LDG).

FEL 0.93 264 ePn 16 39.59 -0.5
FUR 1.28 81 ePg 16 46.20 0.1
CDF 1.47 288 Pg 16 48.60 -0.4
Sg 17 06.70
TOD 1.67 347 ePg 16 50.48 -1.3
BSF 1.75 266 Pn 16 53.60 0.6
Pg 16 56.40
Sg 17 16.40
HAU 2.04 272 Pg 16 59.50 2.4X
Sg 17 24.60
ABH 2.25 328 ePn 17 01.82 1.6
S.D. = 1.3 on 6 of 7 obs.

JAN 21, 1990 07h 31m 02.11± 1.36s
29.973 S ± 5.0km 71.947 W ± 8.3km
DEPTH = 32.8 ± 10.0 km
4.9mb (7 obs.) 4.5Msz (1 obs.)
NEAR COAST OF CENTRAL CHILE (135)

RTRS 2.16 96 iPc 31 38.60 2.1
RTBS 2.73 129 ePc 31 47.30 2.8
JACH 2.94 157 eP 31 52.40 4.7X
iS 32 23.00
ROCH 3.09 165 iPd 31 49.00 -1.0
iS 32 35.60
ZON 3.22 120 eP 31 55.00 3.4X
RTLL 3.29 115 ePc 31 55.50 2.9X
RTCV 3.48 124 ePc 31 58.00 2.6
LCCH 3.51 175 iPd 32 54.00 58.4X
iS 33 47.10
CFA 3.58 118 ePd 31 58.00 1.2
FCH 3.63 158 eP 31 57.50 -0.2
iS 32 43.00
iS 32 51.50
SAN 3.64 163 eP 32 56.00 58.5X
iS 33 45.00
i 33 52.50
TACH 3.77 167 iPc 31 58.20 -1.1
iS 32 40.50
i 32 55.00
PCH 3.84 162 iPd 31 59.90 -0.5
iS 32 56.10
LNV 4.00 174 iPd 32 00.00 -2.6X
i 32 10.00
iS 33 07.00
CHCH 4.10 165 iPd 32 03.10 -1.0
iS 32 50.50
CYA 5.59 76 ePc 32 24.00 -1.2
RFA 5.62 149 ePc 32 24.80 -0.8
MRA 5.87 116 ePc 32 28.10 -1.0
ANT 6.39 13 eP 32 29.30 -7.1X
TCA 6.48 104 iPc 32 36.00 -1.8
SLA 7.76 49 e(P) 32 53.50 -2.2
ARE 13.46 2 eP 34 13.00 -0.5
CNCB 13.60 16 P 34 16.40 0.8
LPB 13.84 16 P 34 19.00 0.4
LR 38 54.00

ZOBO	14.08	15 P	34	15.50	-6.5X
	0.8s	12.23nm			4.6mb
	Z 20s	0.73um			4.5MszX
		i	34	21.00	
		LR	38	40.00	
BAO	26.22	62 eP	36	32.50	-3.5X
SPA	60.19	180 eP	41	08.70	-0.4
	1.2s	16.20nm			5.0mb
TUL	69.27	339 eP	42	07.00	-0.9
	1.1s	14.90nm			5.0mb
SIO	69.27	339 eP	42	14.70	6.7X
ALQ	72.30	331 eP	42	27.00	0.4
	1.0s	2.75nm			4.2mb
ANMO	72.30	331 P	42	27.10	0.5
LIC	73.46	73 P	42	32.20	-1.3
	Z 20s	0.24um			4.5Msz
TIC	73.70	72 P	42	33.60	-1.3
KIC	73.77	73 Pc	42	34.20	-1.1
GLA	74.68	324 eP	42	41.00	0.7
GOL	75.97	334 P	42	47.60	-0.1
PAS	77.28	322 eP	42	48.00	-6.9X
SBB	77.51	323 eP	42	56.00	-0.2
MSU	77.79	329 P	42	58.50	0.6
CLC	78.26	324 eP	43	01.00	0.7
ISA	78.60	323 eP	43	13.00	10.8X
RSSD	79.36	337 P	43	05.90	-0.4
TNP	79.83	325 P	43	09.70	0.7
	1.1s	5.41nm			4.5mb
PRI	80.12	322 e(P)	43	14.50	4.0X
BW06	80.23	333 P	43	10.00	-1.0
LLA	80.63	322 ePd	43	14.20	1.2
		e	43	23.10	
PRS	80.64	322 eP	43	14.20	1.1
KVN	81.02	325 P	43	15.70	0.5
CMB	81.40	323 eP	43	17.90	0.9
GCC	81.50	322 ePd	43	13.60	-3.9X
IMW	81.71	333 P	43	19.30	0.4
ORV	83.11	324 eP	43	26.90	1.1
		e	43	35.90	
WDC	84.41	324 eP	43	30.60	-1.7
		e	43	40.20	
LBFM	84.65	325 P	43	34.30	0.5
TIO	86.29	51 iP	43	43.30	1.1
SES	87.19	336 eP	43	45.00	-0.9
FFC	88.23	343 eP	43	49.50	-1.3
	1.4s	28.00nm			5.4mb
LON	88.64	328 P	43	52.90	-0.1
RMW	89.17	329 P	43	54.90	-0.6
EDM	90.33	337 eP	43	59.50	-1.3
BCAO	92.61	86 iPc	44	13.20	1.1
	0.8s	18.00nm			5.6mb
		i	44	22.40	
KOD	145.39	118 ePKP	50	38.70	-0.6
POO	146.92	102 ePKP	50	42.10	0.7
GBA	147.38	113 PKP	50	44.00	1.9
HYB	150.33	108 ePKPc	50	51.00	4.3X
	0.9s	29.20nm			
		e	51	01.00	

S.D. = 1.2 on 50 of 65 obs.

• JAN 21, 1990 07h 49m 41.96± 0.64s
24.090 S ± 8.5km 66.830 W ±11.5km
DEPTH = 210.1 ± 7.2 km
4.5mb (3 obs.)
SALTA PROVINCE, ARGENTINA (129)

SLA	1.37	118 e(P)	50	16.50	0.5
YJA	2.27	33 iPd	50	26.40	1.5
ANT	3.30	276 iPc	50	35.60	-0.5
		i	51	10.20	
		iS	51	17.00	
CNCB	7.32	351 P	51	28.00	0.2
TCA	7.49	165 ePd	51	28.20	-1.3
LPB	7.61	351 P	51	31.80	0.3
ZOBO	7.87	351 Pc	51	33.00	-2.2
ARE	8.76	329 eP	51	42.00	-4.2X
NNA	15.34	320 eP	53	09.50	0.3
	0.8s	14.93nm			4.5mb
SPA	66.05	180 iPd	00	09.70	1.6
	0.7s	21.09nm			5.0mb
KIC	67.63	72 P	00	16.50	-2.0
	0.6s	4.50nm			4.4mb
CER	74.11	120 eP	01	10.70	13.7X
TNP	77.85	322 eP	01	19.00	1.1
KVN	79.01	322 eP	01	24.50	0.3
HVD	80.00	119 eP	01	51.00	21.3X
KIM	80.11	117 eP	01	31.00	0.7
BLF	81.12	118 eP	01	35.00	-0.6
PRY	83.02	116 eP	01	45.60	0.2
SLR	84.16	115 iPc	01	51.00	-0.1

S.D. = 1.2 on 16 of 19 obs.

JAN 21, 1990 07h 53m 31.90± 0.25s
41.534 N ± 4.6km 88.728 E ± 4.2km
DEPTH = 33.0km (normal)
4.6mb (23 obs.)
SOUTHERN XINJIANG, CHINA (321)

WMQ	2.41	342 iPnc	54	11.40	1.5
GTA	8.71	100 eP	55	36.60	-2.1
	Z 10s	2.90um			
KSH	9.93	262 P	55	54.40	-1.1
LZH	12.98	110 eP	56	35.00	-1.8
	1.0s	0.03nm			2.4mb X
GUN	13.79	191 P	56	47.60	-0.1
PKI	14.19	192 P	56	52.20	-0.7
DMN	14.21	193 P	56	51.40	-1.6
NDI	15.89	220 iPc	57	14.50	-0.1
	0.5s	7.04nm			4.1mb
CD2	16.08	126 eP	57	18.80	1.6
	Z 12s	1.10um			
	N 10s	0.80um			
SHL	16.14	170 iP	57	18.00	0.0
		eS	00	28.70	
HHC	17.20	85 eP	57	31.50	0.3
TIY	18.64	94 eP	57	49.20	0.1
KMI	20.08	140 Pc	58	05.00	-0.6
BJI	20.81	85 eP	58	12.00	-0.8
QUE	20.91	244 eP	58	15.50	1.4
		eS	02	01.50	
GYA	21.09	130 P	58	15.40	-0.4
TIA	22.68	94 eP	58	33.40	1.8
	Z 15s	0.60um			4.2MszX
	N 10s	1.00um			
MAIO	23.28	267 eP	58	39.00	1.5
		eS	03	04.00	
WHN	23.36	110 Pc	58	39.50	1.3
	N 12s	1.05um			
	E 12s	0.98um			
		pP	58	52.50	53kmX
CHG	24.27	156 eP	58	49.00	1.8
HYB	25.58	203 eP	59	01.00	1.4
SUF	41.79	322 eP	01	20.90	1.5
	0.4s	1.20nm			4.0mb
SOD	41.84	329 iP	01	21.20	1.4
KEV	42.01	333 eP	01	21.00	-0.1
NUR	42.57	319 eP	01	26.90	1.0
HFS	48.02	319 eP	02	08.50	-0.8
	0.4s	4.90nm			4.9mb
	Z 17s	0.19um			4.1MszX
		LR	42	02.00	
NB2	49.00	321 P	02	15.60	-1.4
	0.5s	4.00nm			4.7mb
CLL	50.92	308 eP	02	32.00	0.3
	0.9s	8.00nm			4.7mb
BSF	56.01	306 eP	03	08.80	-0.7
	0.8s	5.30nm			4.6mb
DOU	56.31	310 P	03	12.70	1.2
SBF	57.43	302 eP	03	19.40	-0.3
	0.8s	16.10nm			5.1mb
LOR	58.03	307 eP	03	22.80	-1.0
	0.6s	3.00nm			4.5mb
LBF	58.10	307 eP	03	23.20	-1.1
	0.8s	4.00nm			4.5mb
SMF	58.34	306 eP	03	25.00	-0.9
	0.8s	9.40nm			4.9mb
SSF	58.34	307 eP	03	25.10	-0.8
	0.6s	1.80nm			4.3mb
AVF	58.57	307 eP	03	26.70	-0.8
	1.0s	6.00nm			4.6mb
BGF	58.98	307 eP	03	30.00	-0.4
	0.6s	2.70nm			4.6mb
MAF	59.32	306 eP	03	32.60	-0.1
	0.6s	8.10nm			5.0mb
TCF	59.50	307 eP	03	33.50	-0.5
	0.6s	9.00nm			5.1mb
LDF	59.74	310 eP	03	35.30	-0.3
	0.6s	5.40nm			4.9mb
FLN	59.86	310 eP	03	36.60	0.2
	0.4s	2.20nm			4.6mb
LSF	59.93	307 eP	03	36.70	-0.2
	0.6s	2.70nm			4.6mb
RJF	60.41	306 eP	03	40.40	0.2
LPO	60.93	305 eP	03	43.90	0.1
	0.6s	2.70nm			4.6mb
LFF	61.07	306 eP	03	44.90	0.2
	0.6s	9.00nm			5.1mb
MBC	61.13	7 eP	03	44.00	-0.7
	1.0s	7.00nm			4.7mb
EPF	62.31	304 eP	03	53.20	0.0
	0.6s	2.70nm			4.6mb
INK	66.01	16 eP	04	16.00	-0.8
WB5	74.29	136 eP	05	08.80	1.1
WRA	74.33	136 Pc	05	08.20	0.3
	0.8s	3.50nm			4.4mb

S.D. = 1.0 on 50 of 50 obs.

? JAN 21, 1990 08h 10m 10.62± 3.28s
44.216 N ±30.9km 8.294 E ±19.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.4 (GEN).

FIN	0.06	263 P	10	12.83	-0.1
		S	10	14.16	
ROB	0.31	285 P	10	17.04	-0.1
		S	10	19.91	
PCP	0.37	29 P	10	18.27	0.0
		S	10	23.80	
ENR	0.63	271 P	10	23.50	0.2

S.D. = 0.3 on 4 of 4 obs.

? JAN 21, 1990 08h 12m 03.63±24.77s
22.373 N ±196.km 121.436 E ±24.0km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWG	0.56	323 iPc	12	14.90	-0.1
		eS	12	20.30	
TWK	1.25	316 ePd	12	26.80	0.0
TWD	1.71	5 eP	12	33.40	-0.1
TWQ	1.97	344 ePc	12	37.50	0.1
TWC	2.26	10 eP	12	41.60	0.1

S.D. = 0.1 on 5 of 5 obs.

JAN 21, 1990 08h 27m 18.03± 0.96s
43.391 N ± 5.9km 5.426 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.01	173 Pg	27	19.29	-0.6
BERF	0.21	112 Pg	27	22.46	-0.2
TREF	0.24	352 Pg	27	21.99	-1.1
PUYF	0.24	55 Pg	27	21.80	-1.5
PRAF	0.45	336 Pg	27	27.25	0.0
VILF	0.51	24 Pg	27	27.58	-0.7
TAVF	0.51	64 Pg	27	27.07	-1.4
GANF	0.70	30 Pg	27	31.43	-0.5
REVF	1.45	75 Pn	27	44.98	0.6
TOUF	1.46	64 Pn	27	44.33	-0.3
		Sg	28	05.85	
AURF	1.47	70 Pn	27	44.76	0.2
FOUF	1.50	40 ePc	27	46.57	1.6
		e(Sg)	28	04.94	
AUTN	1.57	67 Pn	27	46.17	-0.1
		Sg	28	08.84	
STV	1.62	58 P	27	47.41	0.7
		S	28	06.28	
PZZ	1.64	47 P	27	48.33	1.1
		S	28	08.33	
SAOF	1.66	68 Pn	27	46.76	-0.5
ENR	1.67	59 P	27	47.51	0.0
		S	28	06.79	
RRL	1.81	32 P	27	51.92	2.2
IMI	1.86	73 P	27	50.38	0.1

S.D. = 1.0 on 19 of 19 obs.

? JAN 21, 1990 09h 41m 16.56± 0.94s
44.321 N ±18.7km 7.217 E ±17.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

STV	0.11	135 P	41	19.40	-0.1
		S	41	20.94	
ENR	0.17	123 P	41	20.63	0.1
		S	41	22.89	
PZZ	0.20	336 P	41	21.04	0.0
		S	41	23.91	
FOUF	0.37	304 e(Pg)c	41	24.28	0.0

21d 09h

e(Sg) 41 29.24
S.D. = 0.1 on 4 of 4 obs.

JAN 21, 1990 09h 49m 19.58± 0.82s
23.605 N ± 6.3km 121.698 E ±11.5km
DEPTH = 27.8 ± 6.5 km
3.9mb (1 obs.)
TAIWAN (244)

TWF1	0.45	236	iPd	49 28.20	-0.8
TWD	0.48	349	iPd	49 29.00	-0.6
			eS	49 36.90	
TWG	0.97	217	ePc	49 37.70	0.4
TWC	1.01	8	eP	49 37.90	0.1
			eS	49 52.50	
TWQ	1.03	310	ePc	49 37.50	-0.7
			eS	49 51.20	
TWK	1.16	253	iPd	49 40.10	0.0
			eS	49 54.80	
TWZ	1.49	356	eP	49 44.80	0.1
ANP	1.58	354	eP	49 48.80	2.7X
SSE	7.47	357	eP	51 09.20	-0.3
			Lg	53 24.50	
WRA	45.01	163	P	57 34.00	-0.6
	0.3s		0.50nm	3.9mb	

S.D. = 0.5 on 9 of 10 obs.

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* JAN 21, 1990 10h 12m 15.25± 0.56s
8.565 N ± 8.8km 127.825 E ± 8.5km
DEPTH = 33.0km (normal)
3.6mb (1 obs.)
PHILIPPINE ISLANDS REGION (248)

GUMO	17.45	72	eP	16 17.30	-0.6
PJG	17.45	72	eP	16 18.00	0.1
LOE	26.87	292	eP	17 56.00	0.8
WB5	28.99	167	eP	18 15.30	1.0
WRA	29.05	167	Pc	18 16.00	1.2
	0.5s		0.60nm	3.6mb	
MEKA	36.11	194	eP	19 15.40	-0.9
SHL	38.12	301	eP	19 33.20	-0.2
FORR	39.19	180	eP	19 42.70	0.7
MRWA	39.26	196	eP	19 34.00	-8.6X
COOL	39.74	189	eP	19 46.00	-0.6
BAL	40.38	195	eP	19 51.00	-0.9
KLB	41.07	193	eP	19 57.00	-0.5
MUN	41.82	195	eP	20 03.30	-0.3
NWAO	42.48	193	eP	20 09.00	0.0

S.D. = 0.8 on 13 of 14 obs.

JAN 21, 1990 10h 42m 58.33± 0.48s
15.561 N ± 6.0km 91.579 W ± 5.0km
DEPTH = 212.5 ± 5.0 km
4.5mb (34 obs.)
MEXICO-GUATEMALA BORDER REGION (62)

TPX	0.93	225	iPd	43 29.00	-0.2
			iS	43 52.00	
SCX	1.55	319	iP	43 35.20	1.4
			iS	44 01.50	
PSM	3.52	289	iP	43 53.00	-2.3
			iS	44 31.00	
OXX	5.17	288	iPd	44 14.50	-1.5
			iS	45 04.50	
IIT	7.29	299	iP	44 44.00	0.5
PPM	7.58	298	iPd	44 48.50	1.0
III	8.05	291	iP	44 52.50	-0.9
ACX	8.06	280	iP	44 51.00	-2.3
UNM	8.17	298	eP	44 56.00	1.0
CRX	8.62	297	eP	45 00.50	-0.5
IIJ	8.81	299	iP	45 04.50	0.9
MRX	10.05	296	eP	45 20.00	1.0
SIO	20.54	349	e(P)	47 22.70	1.0
TUL	20.61	350	eP	47 22.10	-0.3
	0.7s		14.50nm	4.6mb	
ALO	23.47	328	eP	47 51.00	0.6
	1.0s		12.50nm	4.5mb	
ANMO	23.47	328	P	47 51.70	1.3
			pP	48 32.40	214kmX
GOL	26.91	336	P	48 21.50	-0.4
			pP	49 06.50	228kmX
CLE	27.26	17	iP	48 26.30	1.5
GLA	27.32	314	eP	48 26.00	0.5
PRIN	28.75	27	P	48 42.80	4.7X
PLM	28.92	312	eP	48 40.00	0.1
MSU	29.18	326	P	48 46.00	3.8X
MWC	30.22	313	eP	48 50.00	-1.4
SBB	30.30	314	eP	48 52.00	0.0
RSSD	30.37	342	P	48 52.40	-0.2
CLC	30.76	316	eP	48 56.00	0.0
BW06	31.20	334	P	48 59.20	-0.7
ISA	31.27	315	eP	48 48.00	-12.4X
TNP	31.85	320	P	49 06.40	0.8
	0.9s		9.11nm	4.4mb	
PTN	32.15	23	P	49 11.50	3.6X
RSNY	32.30	23	P	49 10.00	0.8
IMW	32.70	334	P	49 14.50	1.6
FRI	32.83	316	e(P)	49 12.90	-0.9
KVN	32.99	320	P	49 16.40	1.0
PRI	33.04	314	e(P)	49 11.60	-4.2X
LLA	33.47	314	e(P)	49 18.90	-0.5
CMB	33.85	317	ePc	49 22.90	0.2
MHC	34.33	315	ePc	49 27.40	0.6
LRM	34.88	334	ePc	49 31.70	0.2
ORV	35.42	318	e(P)	49 37.00	1.2
WDC	36.65	319	ePc	49 44.50	-1.6
LBFM	36.69	321	P	49 47.30	0.6
FHC	37.70	318	P	49 56.70	1.8
FHC	37.70	318	eP	49 50.20	-4.7X
VGB	38.64	327	P	50 03.90	1.2
DPW	38.99	331	P	50 05.70	0.1
ZOBO	39.20	143	iPc	50 09.00	0.9
	1.0s		28.75nm	4.8mb	
			i	52 15.00	
LPB	39.42	143	P	50 12.00	2.2
			i	52 15.00	
CNCB	39.71	143	P	50 14.00	1.7
			i	52 16.00	
FFC	39.91	351	eP	50 13.00	0.1
	0.6s		6.00nm	4.3mb	
LON	39.99	327	P	50 14.20	0.4
			pP	50 58.00	206kmX
PNT	40.69	332	eP	50 20.00	0.6
	0.7s		12.00nm	4.5mb	
GMW	41.01	328	P	50 21.60	-0.5
EDM	41.30	340	iPc	50 23.80	-0.7
	0.5s		22.00nm	4.9mb	
MCW	41.78	329	P	50 28.40	0.0
SCH	43.63	21	ePc	50 43.20	-0.1
	0.8s		32.00nm	4.9mb	
FRB	50.71	13	eP	51 37.00	-1.0
BAO	53.04	124	eP	51 54.80	-1.3
INK	59.07	343	iPc	52 36.60	-1.4
MBC	62.42	353	ePc	52 59.60	-0.8
	0.5s		6.00nm	4.6mb	
DAG	71.03	13	iPc	53 53.00	-1.4
	0.5s		19.01nm	5.1mb	
STS	74.53	49	e(P)	54 14.50	-0.9
ERUA	75.62	50	e(P)	54 21.80	0.2
EKA	76.47	36	P	54 26.00	0.0
	0.8s		12.40nm	4.7mb	
GUD	78.12	51	e(P)	54 36.00	0.4
AAPN	78.76	54	eP	54 39.00	-0.1
ALOJ	78.81	55	iPd	54 40.00	0.6
ATEJ	78.92	55	iPd	54 41.00	1.0
LPF	78.96	43	eP	54 39.40	-0.4
	0.6s		9.00nm	4.7mb	
ECRI	78.97	49	e(P)	54 40.60	0.6
APHE	79.16	55	iPc	54 42.10	0.8
FLN	79.18	42	eP	54 41.00	0.0
	0.8s		13.40nm	4.7mb	
LDF	79.45	42	eP	54 41.70	-0.7
	0.8s		6.40nm	4.4mb	
MFF	79.84	44	eP	54 44.20	-0.3
	0.6s		3.60nm	4.3mb	
LFF	B0.79	46	eP	54 49.50	0.0
	0.6s		10.80nm	4.8mb	
EPF	B0.93	48	eP	54 50.30	-0.1
	1.0s		8.00nm	4.4mb	
LSF	B1.04	45	eP	54 50.20	-0.6
	0.6s		4.50nm	4.4mb	
RJF	B1.25	45	eP	54 51.60	-0.3
	0.8s		5.30nm	4.3mb	
TCF	B1.49	44	eP	54 52.60	-0.6
	0.8s		6.70nm	4.4mb	
CAF	B1.71	46	eP	54 54.10	-0.3
	0.8s		4.00nm	4.2mb	
MAF	B1.75	44	eP	54 54.20	-0.3
	0.8s		6.70nm	4.4mb	
BGF	B1.86	44	eP	54 54.70	-0.4
	0.6s		6.30nm	4.5mb	
DOU	B2.11	40	P	54 56.90	0.6
AVF	B2.14	44	eP	54 55.80	-0.7
	0.8s		4.00nm	4.2mb	
SSF	B2.17	43	eP	54 56.10	-0.6
	0.6s		3.90nm	4.3mb	
LOR	B2.36	43	eP	54 57.20	-0.5
	0.8s		8.00nm	4.5mb	
SMF	B2.50	44	eP	54 57.70	-0.7
	0.8s		4.00nm	4.2mb	
LBF	B2.51	43	eP	54 57.60	-0.9
	0.8s		4.00nm	4.2mb	
NB2	B2.59	29	P	54 59.40	0.8
	0.8s		3.90nm	4.2mb	
MEM	B2.85	40	P	55 03.20	3.2X
HAU	B3.78	42	eP	55 05.00	0.1
	0.6s		5.40nm	4.5mb	
HFS	B4.05	29	eP	55 05.60	-0.3
	0.9s		16.80nm	4.8mb	
BSF	B4.12	42	eP	55 06.40	-0.3
	0.8s		5.30nm	4.3mb	
LPG	B4.76	44	eP	55 09.90	-0.3
	1.0s		6.80nm	4.4mb	
KIC	B5.29	85	P	55 12.40	-0.6
SOD	B6.01	20	iP	55 15.30	-0.3
SUF	B8.28	24	eP	55 26.10	-0.5
	0.6s		4.80nm	4.5mb	
NUR	B8.80	26	eP	55 47.00	18.0X
WB5	136.12	257	ePKP	01 56.30	-0.4
WRA	136.15	257	PKP	01 58.00	1.3
	0.6s		2.20nm		
ASPA	136.55	252	ePKP	01 47.80	-9.6X
FORR	140.71	240	ePKP	02 01.00	-3.7X
TSM	144.67	301	ePKPc	02 12.00	-0.1
BDT	145.77	342	ePKP	02 13.20	-0.6
HYB	145.82	17	ePKP	02 13.00	-0.9
GBA	149.05	21	PKP	02 22.00	2.9X
MBL	149.70	255	ePKP	02 24.40	4.5X
MUN	149.90	232	ePKP	02 20.00	0.1
			e	02 25.00	
BAL	150.09	235	ePKP	02 20.50	0.2
			e	02 25.00	
MRWA	151.20	237	ePKP	02 19.50	-2.5X

S.D. = 0.9 on 97 of 110 obs.

& JAN 21, 1990 10h 55m 49.23s
60.391 N 152.728 W
DEPTH = 127.1km
SOUTHERN ALASKA (2)
<AGS-P>.

RDT	0.24	41	iP	56 06.41	0.9
			eS	56 19.90	
NNL	0.80	115	eP	56 10.72	0.4
NKA	0.82	64	eP	56 11.46	1.0
CKL	0.83	13	iP	56 10.10	-0.7
			eS	56 26.63	
SPU	0.86	22	iP	56 10.11	-0.8
BGL	0.89	11	iP	56 10.84	-0.4
CRP	0.92	17	iP	56 10.97	-0.7
PDB	0.95	231	iP	56 10.43	-1.3
CNPM	1.15	138	eP	56 12.96	-0.7
			eS	56 31.24	
SLKM	1.25	84	eP	56 13.45	-1.3
			eS	56 32.71	
SUA	1.45	41	eP	56 16.26	-0.8
			eS	56 37.79	
SEW	1.66	99	eP	56 18.02	-1.3
PMS	1.77	60	eP	56 19.43	-1.3
GHO	2.31	51	eP	56 25.38	-2.1
CUT	2.34	29	eP	56 26.68	-1.1

15 obs. associated

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* JAN 21, 1990 11h 42m 31.95± 0.96s
26.028 S ± 6.7km 69.763 W ±24.2km
DEPTH = 96.9 ± 49.5 km
NORTHERN CHILE (123)

ANT	2.39	346	iPc	43 10.00	-0.1
TCA	6.97	141	ePc	44 13.20	-0.1
MRA	7.28	152	e(P)d	44 14.70	-2.7X
FCH	7.29	183	eP	44 18.70	0.9
PCH	7.59	185	eP	44 20.50	-1.3
TACH	7.67	187	eP	44 10.00	-12.7X
LNV	8.03	190	eP	44 28.00	0.4
CNCB	9.32	11	P	44 47.00	1.2
LPB	9.57	10	eP	44 54.00	4.9X
ZOBO	9.83	9	P	44 51.50	-1.2

S.D. = 1.3 on 7 of 10 obs.

& JAN 21, 1990 12h 32m 42.50s

36.140 N 120.020 W
DEPTH = 6.0km (geophysicist)
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.3 (PAS). Felt (III) at Avenal.

PKEM	0.11	223	iP	32	44.80	-0.1
PRI	0.52	270	iPc	32	52.10	-0.9
LLA	0.88	303	ePc	32	58.10	-1.8
FRI	0.89	16	iPd	32	58.90	-1.0
BCH	0.95	183	eP	32	59.20	-1.9
PRS	1.11	280	ePc	33	01.50	-2.2
SAO	1.31	299	iPd	33	04.60	-2.5
ISA	1.34	110	ePc	33	06.30	-1.4
BLP	1.61	191	eP	33	08.60	-2.9
ARN	1.71	315	eP	33	10.20	-2.9
MHC	1.77	313	ePc	33	11.90	-2.1
GCC	1.82	300	ePc	33	12.60	-2.0
CMB	1.91	351	iPd	33	15.20	-0.8
			iS	33	40.00	
PCC	2.33	306	e(P)	33	20.00	-2.0
BKS	2.48	315	e(P)	33	21.20	-2.9
BRK	2.49	315	e(P)	33	26.60	2.4
TNP	2.96	48	eP	33	30.90	-0.2
PEC	3.25	133	eP	33	32.00	-3.0
KVN	3.28	27	eP	33	37.00	1.3
PLM	3.81	136	eP	33	40.00	-3.1

20 obs. associated

JAN 21, 1990 13h 10m 07.93± 0.68s
2.623 N ± 5.6km 79.825 W ± 8.1km
DEPTH = 14.5 ± 4.5 km
4.9mb (16 obs.)
SOUTH OF PANAMA (83)

COTA	2.72	147	iPd	10	50.70	-1.6
PSO	2.87	120	eP	10	55.00	0.6
GGP	3.04	156	iP+	10	55.50	-1.4
			S	11	28.00	
QUR	3.06	155	iP+	10	55.90	-1.2
			S	11	30.00	
CAYA	3.13	144	P	10	58.00	-0.1
VC1	3.54	156	iPd	11	04.20	0.2
			S	11	42.00	
TUNG	4.24	161	P	11	15.00	1.1
BOG	6.08	71	eP	11	41.00	1.2
			eS	12	08.00	
UPA	6.32	3	iPc	11	44.00	1.1
	1.0s		40.00nm			5.2mb
NNA	14.81	169	eP	13	39.00	0.2
	0.6s		6.00nm			4.3mb
ARE	20.67	157	eP	14	51.00	0.6
ZOBO	22.05	149	P	14	49.30	-15.3X
	1.0s		22.50nm			
Z	24s		0.19um			3.4MszX
			i	15	04.80	
			LR	21	52.00	
LPB	22.28	149	P	15	07.00	0.2
	1.0s		40.00nm			4.8mb
CNCB	22.57	149	P	15	10.00	0.2
PRM	31.39	356	eP	16	31.00	0.5
OLY	34.45	343	eP	16	56.50	-0.7
TUL	36.27	338	eP	17	12.00	-0.7
	1.0s		15.00nm			4.8mb
SIO	36.32	337	e(P)	17	12.90	-0.2
ANMO	40.58	326	iP	17	51.10	2.2
	1.0s		25.00nm			4.9mb
GLD	43.56	331	eP	18	15.00	1.8
	1.0s		16.00nm			4.8mb
GOL	43.59	331	eP	18	14.50	0.9
	1.0s		15.00nm			4.7mb
PV09	44.63	327	eP	18	23.00	1.0
RSSD	46.55	336	iP	18	38.00	0.9
BW06	47.98	331	iP	18	48.50	0.1
	1.0s		7.50nm			4.7mb
TNP	49.14	321	iP	18	57.50	0.1
	1.0s		5.00nm			4.5mb
RSON	49.47	348	eP	18	57.00	-2.5
	1.0s		16.27nm			5.0mb
KVN	50.27	321	eP	19	06.80	0.7
LLA	50.77	317	e(P)	19	09.90	0.2
LRM	51.62	331	eP	19	16.30	0.0
ORV	52.72	320	ePc	19	25.60	1.2
SCH	53.11	9	eP	19	26.00	-1.0
WDC	53.95	320	e(P)	19	31.60	-1.8
SES	54.43	336	eP	19	36.00	-0.8
FFC	54.99	345	eP	19	39.00	-1.8
	1.2s		28.00nm			5.2mb
EDM	57.52	337	ePd	19	57.60	-1.4
PNT	57.54	330	eP	20	00.00	0.8
FRB	61.55	6	eP	20	24.00	-2.5
LIC	74.61	84	P	21	48.00	-1.0
TIC	74.61	84	Pd	21	48.20	-0.8
INK	74.81	342	eP	21	49.00	-0.1
KIC	74.90	84	Pd	21	49.90	-0.8
	0.6s		9.00nm			5.0mb
MBC	76.79	351	ePd	21	59.50	-0.7
	0.8s		16.00nm			5.1mb
DOU	84.41	40	P	22	41.80	0.7
ENN	85.29	39	eP	22	46.00	0.5
MEM	85.34	40	Pc	22	46.20	0.5
WTS	85.87	38	eP	22	48.50	0.2
	0.8s		31.00nm			5.6mb
RUP	86.00	41	eP	22	50.18	1.0
ABH	86.31	40	eP	22	51.60	0.9
NB2	88.23	29	P	23	00.20	0.5
	0.9s		7.50nm			5.0mb
HFS	89.50	30	eP	23	04.70	-1.0
	0.5s		2.00nm			4.6mb
WRA	142.47	240	PKPd	29	37.60	-5.4X
	0.6s		1.60nm			
COOL	145.61	213	ePKP	29	47.00	-1.0
KLB	146.76	208	ePKP	29	50.40	0.5
BAL	148.07	208	ePKP	29	54.00	2.0X
SHL	150.85	16	iPKP	30	02.00	5.4X
GBA	152.27	54	PKPd	30	04.90	6.2X
	1.0s		7.10nm			

S.D. = 1.1 on 51 of 56 obs.

& JAN 21, 1990 13h 20m 33.52s
59.779 N 152.960 W
DEPTH = 96.2km
SOUTHERN ALASKA (2)
<AGS-P>.

AUL	0.47	211	eP	20	48.25	-0.6
			eS	21	00.29	
AUE	0.47	207	iP	20	48.04	-0.8
			eS	20	59.96	
PDB	0.62	271	iP	20	49.15	-1.0
			iS	21	01.47	
XLV	0.71	117	iP	20	50.24	-0.7
			eS	21	03.77	
RDT	0.84	19	iP	20	51.65	-0.7
			iS	21	05.82	
NNL	0.88	72	iP	20	53.04	0.4
CNPM	0.91	105	iP	20	52.25	-0.7
			eS	21	06.87	
BRLK	1.05	90	eP	20	53.72	-0.8
NKA	1.29	41	iP	20	58.50	1.1
CKL	1.46	12	iP	20	58.92	-0.6
SPU	1.48	17	iP	20	59.02	-0.7
BGL	1.52	10	iP	20	59.83	-0.4
CRP	1.55	15	iP	21	00.20	-0.5
SLKM	1.55	61	eP	20	59.49	-1.2
NCG	1.68	13	iP	21	01.82	-0.5
SEW	1.80	78	eP	21	01.98	-1.8
			eS	21	25.88	
SVW	1.88	316	iPd	21	03.40	-1.5
SUA	2.01	32	iP	21	06.18	-0.6
KDC	2.05	173	iPd	21	05.00	-2.1
PMS	2.23	47	iPc	21	08.40	-1.2
PWA	2.41	38	iPc	21	11.10	-0.9
PLRM	2.62	44	iP	21	12.86	-1.9
			eS	21	42.77	
PMR	2.62	44	iPc	21	12.90	-1.8
PME	2.68	44	eP	21	13.83	-1.7
			eS	21	45.76	
GHO	2.81	43	iP	21	15.63	-1.9
CUT	2.94	25	eP	21	17.94	-1.2
GLI	3.12	67	eP	21	18.38	-3.2
HIN	3.29	76	eP	21	21.48	-2.5
			eS	21	57.82	
MID	3.38	93	iPd	21	23.50	-1.7
VZW	3.43	65	iP	21	23.00	-2.9
TTA	3.49	336	iPd	21	24.70	-2.0
HUR	3.59	25	eP	21	27.40	-0.6
CVA	3.69	75	eP	21	26.39	-2.9
			eS	22	05.97	
NCA	3.73	51	eP	21	27.83	-2.2
KLU	3.87	61	iP	21	29.47	-2.5
			eS	22	13.06	
SGAM	3.94	76	eP	21	29.74	-3.2
			eS	22	13.18	
TOA	4.05	52	iPc	21	32.60	-1.9
RND	4.13	27	eP	21	33.90	-1.7
RAGM	4.19	78	eP	21	33.69	-2.7
			eS	22	18.88	
MCK	4.40	24	iP	21	38.06	-1.2
GLB	4.81	66	iP	21	41.93	-3.0
PAX	4.82	45	iP	21	42.77	-2.3
TGL	5.14	75	eP	21	47.20	-2.4
NEA	5.15	19	eP	21	47.10	-2.5
DDM	5.24	37	eP	21	49.94	-1.0
CYK	5.28	82	eP	21	49.09	-2.3
BALM	5.41	72	eP	21	50.19	-3.2
CC8	5.45	24	eP	21	50.73	-3.0
RDS	5.54	22	eP	21	52.46	-2.6
FBA	5.67	23	iPd	21	54.40	-2.5
GLM	5.83	24	eP	21	56.21	-2.9
SDN	6.02	226	eP	21	58.90	-2.7
IMA	6.32	357	ePd	22	04.10	-1.8
PCA	6.39	82	eP	22	04.18	-2.7
PCA	6.39	82	eP	22	04.25	-2.6
BCPM	6.71	83	eP	22	08.39	-2.8
HQN	7.15	87	iP	22	13.85	-3.3

57 obs. associated

? JAN 21, 1990 13h 39m 40.73± 9.03s
35.924 N ±51.6km 51.382 E ±38.5km
DEPTH = 10.0km (geophysicist)
IRAN (348)
Felt in the Firuzkuh area.

TEH	0.19	179	eP	39	45.00	0.0
IR7	0.67	251	eP	39	54.00	-0.1
IR1	0.76	228	eP	39	56.00	0.4
IR4	0.79	210	eP	39	56.00	-0.2
IR5	0.96	223	eP	39	59.00	-0.2

S.D. = 0.3 on 5 of 5 obs.

• JAN 21, 1990 13h 54m 45.73± 1.04s
34.830 N ±10.3km 28.015 E ± 8.8km
DEPTH = 33.0km (normal)
EASTERN MEDITERRANEAN SEA (371)
MD 4.0 (HLW).

KAP	1.00	317	iPbc	55	03.40	0.0
ARG	1.39	4	ePn	55	08.30	-0.6
KSL	1.81	44	ePn	55	16.10	1.0
YER	2.31	5	iP	55	20.90	-1.4
ELL	2.46	38	ePn	55	23.80	-0.7
CIN	2.77	1	eP	55	29.00	0.4
VAM	3.18	282	ePn	55	36.90	2.3
BCK	3.35	38	ePn	55	38.70	1.6
VLI	4.54	296	ePn	55	52.10	-1.8
KOT	5.85	146	ePn	56	11.75	-0.7
			eSn	57	16.75	

S.D. = 1.5 on 10 of 10 obs.

JAN 21, 1990 14h 38m 05.49± 0.61s
42.804 N ± 4.9km 13.113 E ± 8.9km
DEPTH = 7.4 ± 6.8 km
CENTRAL ITALY (381)

ASS	0.43	309	Pc	38	13.90	-0.2
			eSg	38	20.90	
AQU	0.50	154	P	38	14.60	-0.9
			eSg	38	23.60	
MNS	0.53	217	Pd	38	15.30	-0.8
			eSg	38	23.70	
ARV	0.71	350	P	38	18.90	-0.7
			eSg	38	30.40	
AZI	0.85	164	P	38	23.00	0.9
CRE	1.18	315	P	38	29.00	1.1
SDI	1.21	154	P	38	29.10	0.7
			eSn	38	46.30	
RSM	1.22	337	P	38	29.00	0.6
			eSn	38	46.50	
PGD	1.48	317	P	38	32.50	-0.1
KBA	4.28	2	eP	39	12.00	-0.6
	0.5s		0.90nm			
			e	39	20.00	

S.D. = 0.9 on 10 of 10 obs.

? JAN 21, 1990 15h 20m 36.11± 1.77s
35.428 N ±29.0km 141.032 E ±23.9km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

21d 15h

```
MAT     2.55 297 eP    21 16.00   0.0
                eS     21 45.00
GUN    47.03 277 P     29 07.40   0.7
KKN    47.56 277 P     29 10.40  -0.4
GKN    47.99 278 P     29 13.80  -0.3
GBA    60.79 266 Pd    30 47.40   0.0
        0.4s     0.90nm          4.3mb
NB2    75.55 337 P     32 18.80   0.0
        0.7s     1.00nm          3.9mb
     S.D. = 0.5  on   6 of   6 obs.
-------------------------------------
*  JAN  21, 1990  15h 23m 13.19± 1.65s
   7.205 S ±15.5km  151.634 E ±21.2km
   DEPTH =  33.0km  (normal)
   4.0mb (  1 obs.)
 NEW BRITAIN REGION                (192)

RAB     3.04  10 e(P)  24 00.00  -0.1
LAT     4.63 277 eP    24 23.00   0.3
PMG     4.94 243 eP    24 26.50  -0.6
WB5    20.96 231 eP    27 56.70   0.7
WRA    21.02 231 Pd    27 56.30  -0.3
        0.7s     4.50nm          4.0mb
ASPA   23.62 224 eP    28 27.60   5.3X
     S.D. = 0.7  on   5 of   6 obs.
-------------------------------------
   JAN  21, 1990  16h 43m 44.67± 0.34s
   21.098 S ±11.3km  173.780 W ± 6.8km
   DEPTH =  33.0km  (normal)
   5.1mb ( 13 obs.)  5.0Msz (  3 obs.)
 TONGA ISLANDS                     (173)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 29C
      Centroid Location:
      Origin Time        16:43:53.4 0.8
      Lat 20.95S 0.06 Lon 174.09W 0.08
      Dep  15.0 FIX Half-duration  2.0
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 0.86 0.04  Mtt= 0.33 0.07
        Mff=-1.18 0.06  Mrt= 0.23 0.14
        Mrf= 1.02 0.18  Mtf=-0.26 0.04
      Principal Axes:
       T  Val=  1.29  Plg=67  Azm=288
       N        0.37      3       191
       P       -1.66     23       100
      Best Double Couple:Mo=1.5*10**17
       NP1:Strike=184 Dip=23 Slip=  82
       NP2:        13     68        93

SVA     7.89 291 ePc   45 40.70   0.6
MBU     8.19 299 eP    45 51.00   6.7X
SGE     8.57 293 eP    45 51.00   1.4
PVC    17.22 278 iP    47 46.00   1.7
DZM    18.42 263 iPd   48 00.20   0.9
MSZ    27.96 209 eP    49 42.00   7.9X
BRS    31.07 252 iPc   50 01.90  -0.2
        0.7s     4.50nm          4.4mb
                 i     51 24.00
CNB    35.22 238 eP    50 39.00   0.9
CAN    35.51 238 eP    50 41.30   0.7
CTA    37.36 264 iPc   50 54.10  -2.1
        0.9s    31.09nm          5.2mb
                 iPP   52 30.00
                 iS    56 53.00
                 i     59 54.00
CMS    37.48 245 eP    50 57.00  -0.1
TOO    38.78 236 eP    51 09.00   1.0
ASPA   48.23 257 iPc   52 22.30  -2.2
        1.2s    23.00nm          5.1mb
     Z  17s     3.00um          5.3MszX
                 iPP   53 52.20
                 eS    59 34.50
                 LR    13 12.60
WB5    48.41 262 eP    52 23.70  -2.2
FORR   52.65 247 eP    52 57.00  -1.0
MTN    53.11 270 eP    52 59.00  -2.7
GUMO   53.27 307 eP    52 48.30 -14.5X
     Z  18s     0.59um          4.7Msz
                eS     01 04.00
VNDA   57.70 186 e(P)  53 35.10   1.1
COOL   58.59 246 eP    53 40.00  -1.0
KLB    61.37 245 eP    54 00.00   0.0
MBL    61.48 257 eP    53 58.00  -2.8
NWAO   61.63 243 eP    54 02.00   0.3
RKG    61.66 242 eP    54 03.00   1.1
BAL    62.42 246 eP    54 07.00   0.0

MUN    62.62 244 eP    54 07.00  -1.4
MRWA   63.26 247 eP    54 04.80  -7.8X
NANU   65.04 254 eP    54 24.00  -0.3
PCI    67.69 278 ePd   54 42.50   1.2
SPA    69.03 180 eP    54 54.20   5.2X
        1.1s    24.40nm          5.2mb
MAT    73.09 321 iPd   55 11.50  -2.1
        0.9s    16.81nm          5.0mb
                 eS    04 34.00
PRS    75.59  41 eP    55 28.80   0.7
BCH    75.66  43 P     55 30.50   1.8
PRI    75.90  42 eP    55 29.50  -0.5
BRK    76.05  40 eP    55 29.50  -1.1
MHC    76.08  40 e(P)  55 30.40  -0.6
MWC    76.38  45 eP    55 33.00   0.2
PLM    76.66  46 eP    55 35.00   0.6
SBB    76.82  45 eP    55 34.00  -1.1
ISA    76.99  43 eP    55 36.00   0.0
FRI    77.04  42 ePc   55 35.30  -0.8
CMB    77.28  41 ePc   55 36.50  -1.1
ORV    77.60  39 eP    55 37.90  -1.3
CLC    77.65  44 eP    55 40.00   0.3
WDC    77.68  37 eP    55 37.00  -2.6
GLA    77.87  47 P     55 42.50   1.6
MIN    78.06  38 e(P)  55 42.00   0.1
TNP    79.27  42 P     55 48.30  -0.4
        1.2s    21.17nm          5.0mb
KVN    79.31  41 P     55 48.10  -0.8
RMW    82.68  33 P     56 05.80  -0.4
MSU    82.74  44 P     56 08.00   1.0
DAU    84.38  43 P     56 15.50   0.1
ALQ    84.74  50 iPd   56 18.40   1.3
        1.2s    24.61nm          5.3mb
ANMO   84.74  50 P     56 18.40   1.3
        1.3s    34.86nm          5.4mb
PMR    84.74  12 eP    56 12.90  -3.4X
DPW    84.79  34 P     56 16.80  -0.1
TTA    84.91   8 eP    56 17.10  -0.1
PNT    85.00  32 eP    56 18.00   0.1
        0.9s    14.00nm          5.2mb
BW06   86.74  42 P     56 26.60  -0.4
        1.2s     4.11nm          4.5mb
IPM    87.16 276 ePd   56 31.50   2.2
GOL    87.85  46 P     56 34.20   1.8
        1.1s     9.62nm          5.0mb
FBA    88.03  11 eP    56 31.20  -1.1
IMA    88.22   8 eP    56 33.20  -0.2
        1.0s     5.30nm          4.8mb
BJI    89.12 314 eP    56 38.50   0.4
     Z  20s     0.60um          5.0Msz
                eS     07 12.00
SES    90.07  35 eP    56 42.00  -0.4
EDM    90.51  32 ePc   56 44.80   0.5
RSSD   90.88  43 P     56 46.00  -0.5
TUL    92.93  53 e(P)  56 56.80   1.0
        1.5s    10.80nm          5.1mb
KMI    93.15 296 Pd    56 59.00   1.7
                pP     57 10.50  37kmX
BDT    93.56 287 eP    57 01.00   2.0
INK    93.86  14 eP    56 58.00  -1.3
CHG    94.17 288 eP    57 03.00   1.2
MAIO  131.45 300 ePKP  02 57.00   1.1
QASM  145.53 286 ePKP  03 21.00  -0.7
LWI   147.96 226 ePKPc 03 31.70   5.5X
WIT   148.34 359 ePKP  03 35.00   9.7X
                e      03 45.00
KRA   149.13 343 ePKP  03 30.60   3.9X
WTS   149.16 359 ePKP  03 35.00   8.4X
        1.0s    13.00nm
                e      03 46.50
KAS   149.18 317 ePKP  03 33.00   5.8X
KSP   149.27 347 ePKP  03 30.20   3.3X
CLI   149.36 331 ePKPc 03 32.50   5.3X
CLL   149.38 352 iPKPc 03 31.80   4.8X
        1.7s    65.00nm
                i      03 42.00
BRG   149.67 350 ePKP  03 32.00   4.5X
        1.5s    36.00nm
                e      03 36.60
SPC   149.82 342 ePKP  03 44.60  16.6X
CFR   149.95 328 ePKP  03 34.00   6.0X
VRI   150.12 331 ePKP  03 34.00   5.7X
MOX   150.21 353 ePKPc 03 33.50   5.2X
        1.7s    38.00nm
ENN   150.39   0 ePKP  03 40.00  11.5X
        1.0s    19.00nm
                e      04 28.00

PRU   150.43 349 PKP   03 34.70   6.1X
                e      03 39.50
HOF   150.50 353 iPKPd 03 35.00   6.2X
MEM   150.55   0 PKP   03 35.20   6.4X
BBTK  150.64 315 iPKPc 03 35.00   5.5X
MLR   150.77 331 ePKPc 03 35.50   6.0X
DOU   151.03   2 PKPc  03 39.00   9.5X
GRF   151.19 353 ePKP  03 36.20   6.4X
     Z  19s     0.30um          5.1Msz
KHC   151.42 350 PKPd  03 36.00   5.8X
        1.3s    29.00nm
ZST   151.58 345 ePKP  03 35.90   5.5X
SRO   151.62 343 ePKP  03 36.80   6.3X
BUD   151.71 342 ePKP  03 37.00   6.4X
FLN   151.88   9 ePKP  03 38.20   7.3X
        1.0s    13.60nm
AYN   151.97 292 ePKP  03 38.00   6.4X
LDF   152.10   9 ePKP  03 38.70   7.5X
        0.8s     5.30nm
SOP   152.19 345 ePKP  03 39.00   7.7X
BZS   152.47 336 ePKP  03 39.00   7.2X
LPF   152.50  11 ePKP  03 39.60   7.9X
        0.8s    13.40nm
MBH   152.77 294 ePKP  03 41.00   8.3X
BAQA  152.90 292 ePKP  03 40.43   7.5X
BHG   152.90 350 ePKP  03 51.60  19.2X
KBA   153.44 349 ePKP  03 40.00   6.6X
        1.0s     4.50nm
                 e     03 43.50
                 e     10 24.00
                 i     10 47.50
LOR   153.82   4 ePKP  03 42.80   9.1X
        1.0s     6.00nm
PTJ   154.00 344 ePKP  03 34.50   0.4
LJU   154.20 347 ePKP  03 35.50   1.3
                 e     03 42.00
VOY   154.35 348 e(PKP)03 31.50  -3.0X
VBY   154.55 345 e(PKP)03 42.50   7.9X
TRI   154.68 348 ePKP  03 43.00   8.2X
SKO   155.55 332 ePKP  03 28.00  -8.2X
     S.D. = 1.2  on  69 of 115 obs.
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*  JAN  21, 1990  16h 52m 54.03± 0.93s
   34.419 N ±19.9km   70.560 E ±17.4km
   DEPTH =  33.0km  (normal)
   4.5mb (  6 obs.)
 AFGHANISTAN                       (709)

NDI     8.06 133 eP    54 51.00  -0.7
                eS     56 21.00
GKN    13.63 114 P     56 07.80   0.2
        0.4s    14.00nm          5.2mb
DMN    14.19 115 P     56 14.40  -0.6
        0.6s    24.00nm          5.0mb
KKN    14.23 114 P     56 14.40  -1.0
PKI    14.44 114 P     56 17.40  -0.9
        0.6s    23.00nm          4.9mb
GUN    14.63 112 P     56 20.20  -0.5
SHL    20.44 110 eP    57 33.30   1.9
GBA    21.64 162 P     57 44.00   0.5
        0.6s     0.80nm          3.3mb X
HFS    44.50 323 eP    01 02.40  -1.3
        0.5s     1.20nm          4.0mb
NB2    45.84 324 P     01 13.30  -1.2
        0.7s     1.30nm          4.0mb
INK    76.01   9 eP    04 41.00   1.9
WRA    81.21 121 P     05 10.00   1.8
        0.8s     1.50nm          4.0mb
     S.D. = 1.4  on  12 of  12 obs.
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&  JAN  21, 1990  18h 12m 18.89s
   61.471 N          150.646 W
   DEPTH =  58.9km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

SUA     0.05 261 eP    12 27.45   1.2
                eS     12 35.25
PWA     0.41  63 eP    12 29.31  -0.6
PMS     0.57 113 iP    12 31.12  -0.6
                eS     12 41.51
NCG     0.73 265 iP    12 33.27  -0.4
                eS     12 44.59
PLRM    0.74  80 iP    12 32.77  -0.8
                eS     12 43.76
SPU     0.74 247 iP    12 33.05  -0.7
                eS     12 44.51
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CRP	0.76	255	iP	12	33.53	-0.5
NKA	0.79	202	iP	12	35.47	1.3
PME	0.79	78	eP	12	33.61	-0.7
			eS	12	45.51	
CKL	0.86	252	iP	12	34.65	-0.7
BGL	0.87	257	eP	12	34.80	-0.6
GHO	0.88	69	iP	12	34.85	-0.6
			eS	12	48.06	
CUT	0.95	11	eP	12	35.73	-0.7
			eS	12	48.95	
SLKM	0.99	168	iP	12	36.09	-0.8
RDT	1.24	224	iP	12	39.92	-0.5
			eS	12	56.53	
NNL	1.47	193	iP	12	44.19	0.7
RED	1.48	225	iP	12	43.36	-0.3
			eS	13	02.91	
SEW	1.49	156	eP	12	44.02	0.3
HUR	1.58	17	eP	12	45.53	0.5
GLI	1.82	107	eP	12	46.35	-2.0
NCA	1.89	72	eP	12	48.45	-1.0
CNPM	1.97	189	eP	12	49.42	-1.1
VZW	2.02	100	eP	12	49.47	-1.7
TOA	2.22	71	eP	12	53.54	-0.4
KLU	2.27	87	eP	12	52.75	-1.9

25 obs. assocloted

% JAN 21, 1990 18h 31m 11.85± 2.83s
41.654 N ±21.1km 12.799 E ±11.9km
DEPTH = 5.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.12	329	Pc	31	14.70	0.3
			iSg	31	17.80	
RMP	0.17	335	P	31	15.50	0.1
			eSg	31	19.40	
AZI	0.58	55	P	31	23.80	0.3
			eSg	31	33.60	
MNS	0.74	353	P	31	26.10	-0.4
			eSg	31	36.80	
SDI	0.76	86	P	31	27.00	-0.2
			eSg	31	39.70	
AQU	0.83	33	P	31	42.80	14.4X

S.D. = 0.5 on 5 of 6 obs.

• JAN 21, 1990 18h 44m 38.34± 0.89s
4.858 S ±10.2km 152.297 E ±12.7km
DEPTH = 91.8 ± 8.9 km
4.0mb (1 obs.)
NEW BRITAIN REGION (192)

RAB	0.67	349	iPd	44	55.00	0.0
			iS	45	11.50	
PMG	6.82	228	eP	46	17.50	-0.1
DZM	21.92	143	iPc	49	25.60	0.0
WB5	22.97	228	eP	49	36.00	0.2
WRA	23.03	228	Pc	49	36.50	0.2
	0.6s		4.60nm			4.0mb
ASPA	25.77	222	eP	50	02.10	-0.3
			iPP	50	22.50	
CHG	57.56	296	eP	54	21.30	0.2
PKI	72.03	301	P	55	54.80	-0.2

S.D. = 0.3 on 8 of 8 obs.

? JAN 21, 1990 19h 07m 39.68± 9.98s
32.805 S ±55.5km 71.939 W ±61.6km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

LCCH	0.74	155	iPc	07	54.00	0.4
			iS	08	02.10	
ROCH	0.80	102	iPd	07	54.60	-0.1
			iS	08	04.00	
TACH	1.19	135	iPc	08	00.10	0.0
			iS	08	12.00	
LNV	1.23	159	iPd	08	00.40	-0.2
			iS	08	13.10	
SAN	1.25	121	eP	08	01.30	0.3
			iS	08	14.60	
PCH	1.45	125	iPd	08	04.00	0.1
			iS	08	19.50	
FCH	1.48	111	iPd	08	04.60	0.0
			iS	08	21.00	
CHCH	1.56	137	iPd	08	05.00	-0.4
			iS	08	22.50	

S.D. = 0.3 on 8 of 8 obs.

• JAN 21, 1990 19h 09m 18.67± 1.49s
7.859 N ± 9.9km 127.012 E ± 9.2km
DEPTH = 62.8 ± 14.4 km
4.4mb (3 obs.) 3.8Msz (1 obs.)
PHILIPPINE ISLANDS REGION (248)

DAV	1.62	242	ePc+	09	46.00	0.5
			eS	10	15.50	
GUMO	18.44	71	eP	13	31.70	0.1
SSE	23.75	348	eP	14	24.00	-2.1
	Z 16s		0.40um			4.0MszX
			S	18	44.00	
WB5	28.50	165	eP	15	15.70	5.4X
WRA	28.55	165	Pc	15	15.10	4.3X
	0.6s		2.70nm			4.1mb
ASPA	32.05	168	eP	15	46.60	4.9X
	Z 20s		0.20um			3.8Msz
			LR	30	11.60	
SHL	37.80	302	eP	16	31.20	0.1
MRWA	38.36	196	eP	16	26.50	-8.9X
FORR	38.50	178	eP	16	36.00	-0.5
MUN	40.93	194	eP	16	56.00	-0.7
BRS	43.02	145	iP	17	14.00	0.2
GUN	43.64	302	P	17	19.80	0.4
	0.8s		13.00nm			4.8mb
PKI	43.93	302	P	17	21.80	0.1
KKN	44.11	302	P	17	23.00	0.0
DMN	44.20	302	P	17	24.00	0.2
GKN	44.71	302	P	17	27.40	-0.4
GBA	48.97	281	Pc	17	59.90	-1.2
	1.1s		4.40nm			4.4mb
INK	86.24	22	eP	22	03.00	8.7X
SOD	86.78	338	eP	21	58.00	1.0
SUF	88.02	333	eP	22	03.10	0.1
NUR	89.25	331	eP	22	11.00	2.1

S.D. = 1.0 on 16 of 21 obs.

% JAN 21, 1990 19h 10m 27.51± 2.01s
39.504 N ±14.0km 23.563 E ±15.3km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG	0.43	12	ePg	10	36.10	-0.2
OUR	0.89	21	ePg	10	44.60	0.0
LIT	1.02	306	ePg	10	46.70	-0.1
			eSg	11	01.10	
AGG	1.07	244	ePb	10	47.70	0.0
SOH	1.33	353	ePb	10	52.30	0.3

S.D. = 0.3 on 5 of 5 obs.

% JAN 21, 1990 19h 36m 37.04± 3.53s
41.708 N ±28.9km 12.740 E ±18.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.05	341	Pd	36	39.30	0.0
			eSg	36	40.90	
RMP	0.11	345	P	36	40.00	0.1
			eSg	36	43.00	
AZI	0.59	61	Pd	36	49.10	0.1
			eSg	36	58.40	
MNS	0.68	356	P	36	50.30	-0.2
			eSg	37	01.00	
SDI	0.81	90	P	36	52.60	-0.1
			eSg	37	05.70	

S.D. = 0.2 on 5 of 5 obs.

• JAN 21, 1990 20h 26m 12.61± 1.98s
7.198 S ±15.1km 128.077 E ±19.2km
DEPTH = 81.5 ± 21.9 km
3.8mb (2 obs.)
BANDA SEA (280)

MTN	6.37	152	iPd	27	47.90	2.1
			eS	28	51.00	
KNA	8.53	176	iPc	28	14.80	-0.7
			eS	29	40.00	
PCI	10.32	307	ePd	28	39.40	-0.5
			eS	29	15.80	
WB5	14.01	155	eP	29	27.70	-1.0
WRA	14.05	155	Pd	29	27.60	-1.7
	0.4s		1.50nm			3.6mb
MBL	16.01	209	eP	29	54.80	0.5
ASPA	17.30	162	iPd	30	11.10	0.6
	0.4s		4.00nm			4.0mb
			iS	33	06.60	
GUN	53.66	312	P	35	29.00	0.3
PKI	53.82	312	P	35	29.80	0.0
KKN	54.03	312	P	35	31.40	0.1
DMN	54.06	312	P	35	31.80	0.3
GKN	54.63	312	P	35	35.40	-0.2

S.D. = 1.1 on 12 of 12 obs.

? JAN 21, 1990 20h 53m 41.35± 3.18s
44.358 N ±25.7km 148.659 E ±44.4km
DEPTH = 33.0km (normal)
4.8mb (6 obs.)
KURIL ISLANDS (221)

KUSJ	3.13	248	P	54	29.60	0.2
			S	54	59.70	
MAT	11.14	229	eP	56	21.00	-0.4
LZH	34.84	272	P	00	31.50	0.1
CHTO	48.50	255	eP	02	24.00	1.1
	1.0s		2.50nm			4.2mb
GUN	52.06	274	P	02	50.40	-0.2
	0.8s		13.00nm			4.9mb
KKN	52.56	274	P	02	54.00	-0.1
	0.8s		12.00nm			4.9mb
PKI	52.60	274	P	02	54.40	-0.2
DMN	52.79	274	P	02	55.80	-0.1
	0.6s		10.00nm			5.0mb
GKN	52.90	275	P	02	56.20	-0.4
	0.4s		6.00nm			4.9mb
NB2	69.42	339	P	04	40.50	-7.2X
	0.8s		1.50nm			4.1mb

S.D. = 0.5 on 9 of 10 obs.

? JAN 21, 1990 21h 14m 29.38±14.25s
41.702 N ±103.km 12.712 E ±92.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.06	4	Pd	14	31.60	-0.1
			eSg	14	33.90	
RMP	0.11	356	P	14	32.40	0.2
			eSg	14	35.50	
MNS	0.68	358	P	14	42.90	0.0
			eSg	14	53.40	
SDI	0.83	89	P	14	45.40	0.0
			eSg	14	57.70	

S.D. = 0.2 on 4 of 4 obs.

? JAN 21, 1990 21h 26m 56.40± 1.55s
34.750 N ±19.4km 57.287 E ±18.9km
DEPTH = 33.0km (normal)
4.5mb (5 obs.)
IRAN (348)

MHI	2.37	49	iPnd	27	34.50	0.6
	0.6s		250.67nm			
			eSn	28	07.00	
KER	8.41	270	e(P)	29	14.00	15.0X
QUE	9.34	116	eP	29	14.40	2.4
TAB	9.43	294	eP	29	21.00	7.8X
GKN	24.26	99	P	32	11.00	-0.7
	0.8s		11.00nm			4.5mb
DMN	24.79	99	P	32	17.00	0.0
	0.8s		15.00nm			4.6mb
KKN	24.86	98	P	32	17.40	-0.2
	0.8s		12.00nm			4.5mb
PKI	25.05	99	P	32	19.40	-0.2
	0.9s		28.00nm			4.9mb
GUN	25.30	98	P	32	20.20	-1.7
HFS	37.84	326	eP	34	12.00	0.6
	0.4s		0.80nm			3.9mb
CHG	40.13	102	eP	34	30.10	-0.8

S.D. = 1.3 on 9 of 11 obs.

? JAN 21, 1990 21h 28m 01.95±28.75s
35.333 N ±45.9km 51.831 E ±190.km
DEPTH = 10.0km (geophysicist)
IRAN (348)
Felt in the Firuzkuh area.

TEH	0.54	318	eP	28	13.00	0.0
IR4	0.77	263	eP	28	17.00	0.0
IR1	0.94	275	eP	28	20.00	0.1
IR5	1.03	264	eP	28	21.50	0.0
IR7	1.06	291	eP	28	22.00	-0.1

S.D. = 0.1 on 5 of 5 obs.

JAN 21, 1990 21h 41m 51.53± 0.62s
39.976 N ± 6.7km 20.493 E ± 6.7km
DEPTH = 5.0km (geophysicist)

21d 21h

GREECE-ALBANIA BORDER REGION (392)
MD 3.1 (ATH). ML 3.0 (THE).

LSK	0.19	25	iPgc	41 54.30	-1.2
SRN	0.39	256	iPg	42 00.40	1.0
IGT	0.46	196	ePg	41 58.90	-1.9
KEK	0.60	244	ePg	42 03.00	-0.5
KZN	1.03	71	ePg	42 12.40	0.8
OHR	1.16	12	iPn	42 13.60	-0.1
TIR	1.45	341	ePn	42 21.00	2.6X
LIT	1.54	85	ePb	42 18.50	-1.2
			eSb	42 41.40	
LACI	1.76	341	ePn	42 25.40	2.6X
VLS	1.80	178	ePb	42 25.00	1.6
VAY	2.07	49	ePn	42 32.00	4.6X
SKO	2.12	19	ePn	42 28.60	0.5
	1.1s	69.00nm			
			i	42 30.00	
			iSg	42 59.00	
			Lg	43 04.20	
SDA	2.17	340	ePn	42 32.80	4.0X
KNT	2.18	56	ePn	42 28.50	-0.5
PLG	2.30	79	ePn	42 32.00	1.3
S.D. = 1.3 on 11 of 15 obs.					

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* JAN 21, 1990 21h 49m 59.62± 1.78s
32.210 S ±10.2km 70.103 W ±12.3km
DEPTH = 112.7 ± 27.8 km
CHILE-ARGENTINA BORDER REGION (127)

JACH	0.63	221	iP	50 18.10	0.1
			iS	50 43.00	
ROCH	1.08	225	iPc	50 22.00	-0.4
			iS	50 40.00	
FCH	1.13	188	iPd	50 23.70	0.7
			iS	50 43.00	
RTCV	1.37	76	iPd	50 24.40	-1.1
ZON	1.38	62	eP	50 26.00	0.4
			eS	50 44.00	
PCH	1.45	194	iPc	50 26.70	0.2
			iS	50 48.50	
TACH	1.60	206	iPd	50 28.00	-0.2
			iS	50 50.00	
RTLL	1.65	58	iPd	50 22.20	-6.6X
			S	50 48.80	
LCCH	1.76	224	iPd	50 29.90	-0.3
			iS	50 52.50	
CHCH	1.78	195	iPd	50 31.50	1.0
			iS	50 54.50	
LNV	2.06	212	iPc	50 33.10	-0.8
			iS	50 59.00	
RTRS	2.11	15	iPd	50 35.10	0.5
S.D. = 0.8 on 11 of 12 obs.					

? JAN 21, 1990 21h 50m 15.38± 1.82s
27.505 N ±19.4km 140.751 E ±27.9km
DEPTH = 483.1 ± 25.9 km
3.8mb (1 obs.)
BONIN ISLANDS REGION (212)

CHJJ	8.65	350	P	52 19.00	-0.5
			eS	53 56.70	
KAKJ	8.69	357	P	52 19.60	-0.3
			eS	53 58.30	
TSRJ	8.98	334	eP	52 24.50	1 5
MAT	9.26	347	(P)	52 20.00	-6.2X
MTMJ	9.39	345	eP	52 27.40	-0.2
NIIJ	9.82	352	P	52 31.60	-0.3
WB5	47.51	188	eP	58 07.50	0.1
GUN	48.22	284	P	58 12.60	-0.7
KKN	48.77	284	P	58 16.00	-1.3
GKN	49.27	284	P	58 22.20	1.2
NB2	82.76	338	P	01 49.00	0.6
	0.7s	2.10nm			3.8mb
S.D. = 1.0 on 10 of 11 obs.					

JAN 21, 1990 22h 10m 04.04± 0.33s
34.020 N ± 5.9km 70.065 E ± 5.0km
DEPTH = 33.0km (normal)
4.7mb (10 obs.)
AFGHANISTAN (709)

KSH	7.21	39	P	11 52.00	2.1
NDI	8.10	129	iPd	12 01.50	-0.8
	0.6s	100.00nm			6.1mb X
			eS	13 33.00	
MAIO	8.95	288	eP	12 14.00	-0.1
			eS	14 20.00	
GKN	13.86	112	P	13 17.60	-2.9X
DMN	14.41	112	P	13 24.40	-3.5X
KKN	14.46	111	P	13 24.80	-3.6X
PKI	14.66	112	P	13 27.60	-3.6X
GUN	14.86	110	P	13 30.00	-3.9X
BOM	15.26	170	eP	13 37.80	-0.9
			eS	17 54.10	
POO	15.79	167	eP	13 45.00	-0.6
			eS	18 18.80	
WMQ	16.82	49	eP	13 56.50	-2.1
HYB	18.20	153	eP	14 19.00	3.1X
			eS	17 34.00	
LSA	18.42	98	eP	14 19.30	0.4
BJA	18.63	250	iP	14 21.00	-0.1
	0.6s	51.00nm			4.9mb
BBU	18.64	251	(P)	14 21.90	0.7
BEE	18.69	250	eP	14 21.20	-0.5
TAB	19.60	289	eP	14 34.00	1.4
SHL	20.70	108	iP	14 43.40	-0.7
			eS	18 27.00	
GBA	21.40	160	P	14 53.00	1.9
			S	19 53.00	
GTA	24.39	69	eP	15 23.00	2.5X
KOD	24.63	162	eP	15 26.00	2.8X
CHG	29.84	113	eP	16 12.00	1.4
XAN	32.07	79	eP	16 30.20	0.1
ELL	32.69	286	eP	16 34.90	-0.7
TIY	34.32	71	eP	16 52.20	2.6X
NUR	39.43	326	eP	17 31.30	-0.9
SUF	39.65	330	iP	17 33.70	-0.4
	0.5s	3.40nm			4.4mb
KRA	39.74	309	eP	17 35.80	0.8
			e	17 40.80	
SOD	41.68	336	eP	17 50.00	-0.7
KEV	42.84	340	eP	18 01.00	0.9
PRU	43.21	309	eP	18 04.50	1.0
BRG	43.60	310	iP	18 08.40	1.8
	1.1s	16.00nm			4.7mb
KBA	44.11	305	eP	18 11.70	0.7
	0.6s	1.70nm			4.0mb
HFS	44.57	324	eP	18 13.00	-1.4
	0.5s	6.40nm			4.7mb
Z	17s	0.23um			4.2MszX
			LR	36 48.00	
MOX	45.08	310	eP	18 18.50	-0.1
NB2	45.93	325	P	18 23.60	-1.5
	0.6s	4.70nm			4.6mb
MAT	54.61	66	(P)	19 27.00	-4.6X
BCAO	56.09	250	iPd	19 41.20	-1.4
	0.5s	5.00nm			4.8mb
DAG	56.92	344	eP	19 55.40	7.6X
MBC	69.84	2	eP	21 12.00	-0.8
	0.8s	18.00nm			5.2mb
INK	76.47	9	eP	21 51.00	-0.7
WB5	81.33	121	eP	22 19.50	0.7
WRA	81.35	121	Pd	22 19.50	0.5
	1.1s	11.30nm			4.8mb
ASPA	83.48	124	eP	22 32.00	2.1X
	0.9s	8.00nm			4.8mb
S.D. = 1.1 on 32 of 44 obs.					

% JAN 21, 1990 22h 55m 35.74± 1.02s
39.236 N ± 8.5km 28.960 E ±12.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.45	325	iPg	55 44.30	-0.6
			eSg	55 53.30	
KHL	1.01	154	ePg	55 55.00	0.0
			eSg	56 08.20	
KCT	1.11	335	iPn	55 56.90	0.3
YLV	1.37	13	iPn	56 00.40	-0.5
GPA	1.48	44	ePn	56 02.00	-0.4
ISK	1.83	2	ePn	56 08.60	1.2
S.D. = 0.9 on 6 of 6 obs.					

? JAN 22, 1990 02h 31m 45.14± 3.83s
0.644 S ±21.7km 80.799 W ±34.1km
DEPTH = 33.0km (normal)
4.2Msz (1 obs.)
NEAR COAST OF ECUADOR (105)

GGP	2.25	78	Pd	32 20.70	-0.7
			eS	32 49.40	
QUR	2.32	78	iPd	32 21.60	-0.6
			S	32 50.50	
VC1	2.40	90	iP+	32 23.50	0.1
TUNG	2.48	108	P	32 24.50	0.1
			eS	32 53.20	
COTA	2.65	68	P	32 27.00	0.1
			S	33 02.30	
CAYA	2.91	76	P	32 31.60	1.0
			S	33 07.60	
ZOBO	19.93	142	P	36 18.00	0.1
LPB	20.15	142	P	36 22.00	2.0X
Z	18s	1.03um			4.2Msz
			LR	18 20.00	
CNCB	20.43	143	P	36 23.00	-0.1
S.D. = 0.6 on 8 of 9 obs.					

JAN 22, 1990 02h 32m 04.47± 0.24s
20.929 S ± 9.2km 173.870 W ± 4.9km
DEPTH = 37.1km (6 depth phases)
5.4mb (27 obs.) 5.1Msz (11 obs.)
TONGA ISLANDS (173)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 22C
Centroid Location:
Origin Time 02:32:12.3 1.6
Lat 20.96S 0.08 Lon 173.78W 0.11
Dep 15.0 FIX Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr= 1.11 0.07 Mtt= 0.23 0.12
Mff=-1.35 0.09 Mrt= 0.22 0.22
Mrf=-0.19 0.32 Mtf=-0.62 0.06
Principal Axes:

	Val=	Plg=	Azm=
T	1.22	70	25
N	0.35	20	198
P	-1.57	2	289

Best Double Couple:Mo=1.4*10**17
NP1:Strike= 38 Dip=46 Slip= 118
NP2: 181 51 64

AFI	7.26	16	eP	33 42.00	-9.0X
			eS	35 12.00	
MBU	8.04	298	iP	34 10.00	8.1X
SGE	8.43	292	iP	34 10.00	2.6
RAR	13.16	94	P	35 03.00	-8.5X
			S	37 19.00	
PVC	17.11	278	iPd	36 05.00	2.4
DZM	18.36	263	iPd	36 18.80	0.7
			i	40 00.50	
SNZO	22.51	203	eP	37 08.00	5.9X
			S	41 12.00	
TBI	22.73	101	eP	37 04.00	-0.5
	1.3s	150.00nm			5.3mb
AFR	22.99	86	eP	37 08.00	1.0
	1.3s	150.00nm			5.3mb
PAE	23.15	86	eP	37 10.00	1.4
	1.3s	110.00nm			5.2mb
PPT	23.17	86	eP	37 10.00	1.2
	1.3s	180.00nm			5.4mb
PPN	23.31	86	eP	37 11.00	0.8
	1.3s	85.00nm			5.1mb
TVO	23.43	87	eP	37 12.00	0.6
	1.3s	140.00nm			5.3mb
TPT	25.64	81	eP	37 32.00	-0.5
	1.3s	95.00nm			5.2mb
MSZ	28.07	208	P	38 03.00	8.6X
BRS	31.04	251	iPc	38 19.80	-1.5
	1.3s	3.00nm			3.9mb X
Z	18s	57.00um			6.3MszX
			iS	43 46.50	
RMQ	34.58	253	iPd	38 52.20	0.1
CNB	35.23	238	iPc	38 57.50	-0.1
CAN	35.53	238	eP	39 00.00	-0.1
BWA	35.79	240	eP	38 59.90	-2.4
CTA	37.29	264	iPd	39 13.30	-1.7
	1.5s	115.28nm			5.5mb
Z	18s	3.44um			5.2Msz
			iS	45 12.00	
CMS	37.47	245	eP	39 15.50	-0.9
TDO	38.81	236	iPd	39 28.20	0.6
BFD	41.02	237	eP	39 46.70	0.9
ADE	43.77	241	eP	40 07.70	-0.7
JAY	47.86	286	ePd	40 39.70	-1.4
			e	41 58.00	398kmX
ASPA	48.18	257	iPc	40 41.10	-2.5
	1.3s	63.00nm			5.5mb
Z	17s	2.72um			5.3MszX
			iPP	42 10.80	
			iPcS	46 02.50	

			iS	47	35.30	
			LR	01	30.60	
WB5	48.35	262	eP	40	42.20	-2.6
WRA	48.36	262	Pc	40	41.50	-3.4X
	1.3s		45.60nm			5.3mb
FORR	52.64	247	eP	41	15.00	-2.3
MTN	53.03	269	iPc	41	17.70	-2.8X
GUA	53.04	307	eP	41	18.30	-2.1
	1.0s		184.00nm			6.0mb
GUMO	53.10	307	eP	41	18.00	-2.9X
Z	18s		0.69um			4.7Msz
			eS	49	02.50	
WARB	54.39	252	iPd	41	28.40	-1.9
COOL	58.59	246	eP	41	59.00	-1.3
KLB	61.37	245	eP	42	18.70	-0.6
MBL	61.43	257	eP	42	17.00	-2.9X
NWAO	61.63	243	eP	42	21.30	0.2
BAL	62.41	246	eP	42	25.30	-1.0
MUN	62.62	244	eP	42	27.30	-0.4
MRWA	63.25	247	eP	42	31.00	-0.9
NANU	65.01	254	eP	42	43.00	-0.4
PCI	67.58	278	ePc	43	02.00	2.1
	1.0s		10.50nm			4.9mb
MAT	72.90	321	eP	43	30.00	-1.8
	1.2s		35.94nm			5.2mb
			eS	53	02.00	
SYP	75.26	44	eP	43	43.00	-2.7
PRS	75.52	41	ePc	43	46.70	-0.3
GCC	75.59	41	e(P)	43	46.70	-0.6
BCH	75.60	43	P	43	48.00	0.4
PRI	75.84	42	e(P)	43	48.70	-0.2
LLA	75.96	41	e(P)	43	50.20	0.7
MHC	76.00	40	eP	43	49.40	-0.5
ARN	76.07	41	P	43	50.00	-0.2
PAS	76.20	45	eP	43	51.00	0.1
MWC	76.32	45	eP	43	51.00	-0.8
BAR	76.33	47	eP	43	51.00	-0.7
PLM	76.60	46	eP	43	53.00	-0.4
RVR	76.64	45	eP	43	53.00	-0.3
PEC	76.72	46	P	43	53.10	-0.8
SBB	76.76	45	eP	43	53.00	-1.1
ISA	76.93	43	eP	43	55.00	0.0
FRI	76.97	42	ePc	43	54.40	-0.7
			e	44	06.30	40km
			e	44	12.30	
CMB	77.21	41	ePc	43	55.90	-0.6
			e	44	07.50	38km
			e	44	13.90	
CLC	77.59	44	eP	43	58.00	-0.6
WDC	77.60	38	eP	43	58.00	-0.5
GLA	77.81	47	eP	44	01.00	1.1
MIN	77.98	38	ePc	43	59.40	-1.4
			e	44	11.50	40km
			e	44	17.50	
LBFM	78.47	37	P	44	04.00	0.4
TNP	79.20	42	P	44	07.50	-0.1
	1.2s		29.91nm			5.1mb
KVN	79.24	41	P	44	07.30	-0.5
SSE	80.96	308	Pc	44	16.50	-0.3
	1.0s		33.00nm			5.3mb
Z	20s		0.50um			4.9Msz
			eS	53	40.00	
			eSS	58	12.00	
VGB	81.82	35	P	44	20.70	-0.4
LON	82.10	33	P	44	21.90	-0.7
RMW	82.58	33	P	44	24.50	-0.5
MSU	82.67	44	P	44	26.50	0.5
KGM	84.00	274	ePd	44	35.10	2.1
DAU	84.32	43	P	44	35.20	0.8
PMR	84.60	12	eP	44	33.70	-1.1
	1.8s		83.30nm			5.6mb
Z	22s		4.60um			5.8Msz
ALQ	84.69	50	iPc	44	36.90	0.7
	1.7s		62.50nm			5.5mb
ANMO	84.69	50	P	44	37.20	1.0
	1.8s		82.39nm			5.6mb
DPW	84.70	34	P	44	35.30	-0.5
TTA	84.76	8	ePc	44	35.40	-0.4
PNT	84.90	32	eP	44	37.00	0.3
	1.0s		26.00nm			5.4mb
TOA	85.65	13	eP	44	40.00	-0.2
LRM	86.62	38	eP	44	45.00	-0.6
BW06	86.67	42	P	44	44.80	-1.1
IPM	87.06	276	ePd	44	50.20	2.1
	1.1s		68.50nm			5.8mb
GOL	87.80	46	P	44	50.70	-0.7
	1.2s		26.64nm			5.4mb
FBA	87.88	11	eP	44	49.90	-1.0
IMA	88.07	8	ePc	44	51.50	-0.5
	1.3s		23.60nm			5.3mb
PSI	88.34	273	ePd	44	54.60	0.3
			e	45	56.00	253kmX
SNG	88.37	278	eP	44	56.80	2.5
BJI	88.94	314	eP	44	57.00	0.5
	1.8s		123.00nm			5.9mb
Z	20s		0.60um			5.0Msz
			eS	55	18.00	
SES	89.98	35	ePd	45	01.00	-0.2
EDM	90.41	32	eP	45	02.50	-0.6
RSSD	90.82	43	P	45	05.00	-0.5
LOE	91.06	288	eP	45	08.50	1.7
NST	91.86	286	eP	45	13.50	3.0X
SIO	92.45	53	e(P)	45	11.50	-1.4
TUL	92.90	53	eP	45	16.20	1.2
	1.4s		11.90nm			5.1mb
Z	18s		1.13um			5.4Msz
			LR	15	45.00	
KMI	93.00	296	Pc	45	17.00	1.0
Z	20s		1.20um			5.3Msz
			pP	45	28.00	35km
			eS	55	57.00	
BDT	93.43	287	eP	45	19.00	1.3
INK	93.71	14	eP	45	17.00	-1.0
CHG	94.03	288	ePd	45	22.90	2.4
	1.1s		23.42nm			5.5mb
CHTO	94.03	288	eP	45	22.00	1.5
	1.0s		15.00nm			5.4mb
			e	45	32.50	33km
LZH	96.12	306	eP	45	31.00	1.0
	1.5s		19.00nm			5.4mb
Z	18s		0.50um			5.0Msz
			pP	45	42.50	37km
LPB	98.24	111	P	45	49.00	8.7X
Z	18s		1.03um			5.4Msz
			LR	18	20.00	
ZOBO	98.32	111	P	45	48.00	7.2X
Z	20s		0.55um			5.1Msz
			LR	18	14.00	
QUE	124.91	293	ePKP	51	03.80	0.9
MAIO	131.30	300	iPKPd	51	16.00	1.2
			e	54	42.00	
BHD	143.99	298	ePKPc	51	38.00	-0.1
MSL	144.30	304	ePKPc	51	41.00	2.5X
QASM	145.40	286	ePKP	51	40.10	-0.7
LWI	148.01	227	ePKPc	51	46.70	1.1
WIT	148.17	359	ePKP	51	49.50	5.2X
KRA	148.94	343	ePKP	51	49.40	3.7X
			i	51	58.20	
WTS	148.99	359	ePKP	51	50.00	4.4X
	1.0s		21.00nm			
			e	52	04.50	
KAS	149.00	317	ePKP	51	47.00	0.8
KSP	149.09	347	ePKP	51	49.50	3.6X
	1.4s		84.00nm			
CLL	149.20	352	iPKPc	51	50.50	4.5X
	1.8s		145.00nm			
			i	52	00.80	
BRG	149.49	350	iPKP	51	51.60	5.1X
	1.6s		105.00nm			
			i	52	02.60	
			e	52	15.00	
SPC	149.63	342	ePKP	51	51.70	4.7X
CFR	149.76	328	ePKPc	51	52.50	5.5X
BMR	149.85	336	ePKPd	51	53.00	5.9X
VRI	149.94	331	ePKPd	51	52.50	5.2X
MOX	150.03	353	ePKP	51	53.00	5.7X
	1.5s		62.00nm			
			e	52	03.00	
ENN	150.22	0	e(PKP)	51	53.00	5.4X
	1.1s		53.00nm			
			e	51	58.50	
PRU	150.24	349	PKP	51	53.00	5.4X
	1.4s		36.00nm			
			e	52	04.00	
MEM	150.38	0	PKP	51	54.50	6.7X
BBTK	150.46	316	ePKP	51	49.00	0.5X
MLR	150.58	331	ePKPc	51	50.00	1.5
DOU	150.87	2	PKPc	51	55.30	6.7X
PSZ	150.87	341	ePKP	51	54.70	5.9X
GRF	151.01	353	ePKPc	51	55.40	6.6X
Z	21s		0.30um			5.1Msz
			e	52	00.00	
			e	52	07.00	
KHC	151.24	350	ePKP	51	50.30	1.1
			e	51	56.00	
WET	151.33	351	iPKPc	51	55.80	6.4X
ZST	151.40	345	ePKP	51	53.80	4.4X
SRO	151.43	343	iPKP	51	56.00	6.5X
BUD	151.52	341	ePKP	51	56.00	6.4X
AYN	151.83	292	ePKP	51	57.10	6.4X
SOP	152.01	345	ePKP	51	56.80	6.4X
BZS	152.28	336	ePKP	51	57.50	6.7X
PRNI	152.40	296	e(PKP)	51	59.00	7.5X
CDF	152.56	358	ePKP	51	58.50	7.2X
MBH	152.63	295	e(PKP)	52	00.00	8.2X
HAU	152.99	360	ePKP	51	59.50	7.7X
	0.8s		5.30nm			
BSF	153.16	359	ePKP	51	59.80	7.7X
	0.8s		5.30nm			
KBA	153.26	349	ePKP	51	59.00	6.6X
	1.2s		11.40nm			
			i	52	11.00	
BEO	153.39	337	ePKP	52	01.00	8.6X
LOR	153.66	3	ePKP	52	01.00	8.3X
	1.2s		8.90nm			
PTJ	153.82	344	ePKP	51	53.60	0.5
FVI	153.83	350	PKP	52	03.00	10.1X
SSF	153.84	4	ePKP	52	01.40	8.4X
	1.3s		28.80nm			
LBF*	153.95	3	ePKP	52	01.70	8.5X
	1.0s		6.00nm			
LJU	154.02	347	e(PKP)	51	53.00	-0.3
			e	52	01.00	
VOY	154.17	348	e(PKP)	51	55.00	1.4
CEY	154.33	347	ePKP	52	02.50	8.8X
VBY	154.36	345	e(PKP)	51	55.30	1.6
LSF	154.46	7	ePKP	52	02.20	8.4X
	1.2s		16.00nm			
TRI	154.50	348	ePKP	52	01.60	7.8X
VAI	155.03	356	PKP	51	58.00	3.5X
SAL	155.12	353	PKP	52	07.00	12.4X
VAY	155.36	329	ePKP	52	04.00	8.9X
			i	52	21.00	
SKO	155.36	332	ePKP	51	55.50	0.3
			i	52	05.00	
			i	55	51.00	
LFF	155.64	9	ePKP	52	03.60	8.2X
	1.0s		17.60nm			
CAF	155.83	7	ePKP	52	06.60	10.8X
	1.0s		6.00nm			
BNI	155.94	359	PKP	51	58.00	1.9
OHR	156.34	332	ePKP	51	55.50	-1.1
BCAO	159.65	218	iPKPd	52	14.10	12.9X
	1.6s		39.00nm			
			i	52	42.20	
LIC	161.82	142	PKP	52	05.20	1.9
KIC	162.09	142	PKP	52	05.40	1.8
	S.D. = 1.2		on 112 of 170 obs.			

% JAN 22, 1990 02h 40m 49.90± 0.81s
40.867 N ± 6.5km 22.919 E ± 7.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 1.9 (THE).

THE	0.24	171	ePg	40	54.30	-0.7
			eSg	40	57.50	
KNT	0.30	357	ePg	40	56.30	0.2
			eSg	41	00.80	
SOH	0.33	98	ePg	40	56.80	0.0
			eSg	41	01.80	
GRG	0.40	283	ePg	40	57.70	-0.4
			eSg	41	03.70	
LIT	0.83	203	ePg	41	06.90	0.9
	S.D. = 0.9		on 5 of 5 obs.			

% JAN 22, 1990 03h 20m 34.68± 1.27s
29.471 S ±16.1km 68.043 W ±15.0km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTRS	1.42	240	iPc	20	58.60	0.3
RTLL	1.89	191	ePd	21	06.00	0.7
			S	21	31.30	
CYA	2.22	63	iPc	21	09.90	0.0
RTCV	2.42	190	iPd	21	12.70	-0.1
			S	21	43.40	
RTBS	2.50	209	eP	21	13.00	-0.9
	S.D. = 0.8		on 5 of 5 obs.			

JAN 22, 1990 03h 36m 10.12± 0.82s

22d 03h

41.709 N ± 7.0km 12.688 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.05	23	Pd	36	12.10	-0.3
			iSg	36	14.90	
RMP	0.10	6	Pd	36	12.90	0.0
			eSg	36	15.60	
AZI	0.62	63	Pc	36	21.80	-0.9
			eSg	36	31.30	
MNS	0.68	359	Pc	36	23.10	-0.5
			eSg	36	35.00	
SDI	0.84	90	Pc	36	25.50	-0.9
			eSg	36	38.40	
DUI	1.33	91	P	36	35.00	0.3
MAO	1.35	302	Pd	36	34.00	-0.9
			eSg	36	53.00	
ASS	1.36	359	P	36	35.10	-0.1
			eSn	36	53.10	
ARV	1.80	6	P	36	42.40	1.0
			eSg	37	03.40	
BSS	1.84	119	P	36	42.20	0.2
CRE	1.99	344	P	36	44.50	0.2
PGD	2.28	342	P	36	48.50	0.0
SGO	2.29	119	P	36	49.00	0.5
PTJ	4.81	28	eP	37	26.50	2.1X
KBA	5.39	5	e(P)	37	33.50	0.9

S.D. = 0.7 on 14 of 15 obs.

? JAN 22, 1990 03h 45m 21.85±19.98s
43.329 N ±95.0km 128.341 W ±127.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)

KMOR	4.17	55	eP	46	31.24	4.3X
NLO	4.45	50	eP	46	31.00	0.1
GT2	4.73	65	eP	46	34.87	-0.1
BMW	4.80	47	eP	46	35.61	-0.4
RVW	4.88	53	eP	46	36.86	-0.2
LVP	5.04	55	eP	46	39.47	0.1
OBH	5.09	37	eP	46	40.33	0.4
TDH	5.09	65	eP	46	39.93	-0.2
MTMW	5.14	56	eP	46	40.65	-0.1
CPW	5.18	43	eP	46	40.88	-0.4
CZM	5.18	51	eP	46	40.97	-0.3
ERK	5.20	53	eP	46	41.86	0.2
SHW	5.20	55	eP	46	42.31	0.6
HSR	5.23	55	eP	46	42.32	0.2
APW	5.23	49	eP	46	41.57	-0.4
VLL	5.23	64	eP	46	42.12	0.1
ESD	5.26	55	eP	46	42.87	0.3
CDFW	5.28	56	eP	46	42.65	-0.1
SOSW	5.29	55	eP	46	43.07	0.2
VFP	5.32	66	eP	46	43.41	0.0
APM	5.33	61	eP	46	43.36	-0.2
KOSW	5.38	52	eP	46	44.23	0.1
LON	5.75	51	eP	46	49.30	-0.1

S.D. = 0.3 on 22 of 23 obs.

? JAN 22, 1990 04h 23m 27.70±11.30s
60.791 N ±36.5km 2.745 E ±90.2km
DEPTH = 10.0km (geophysicist)
NORTH SEA (534)
MD 1.9 (BER).

SUE	1.02	74	eP	23	46.67	-0.3
			eS	23	58.16	
HYA	1.72	76	eP	23	58.00	0.2
			eS	24	15.82	
KMY	2.02	140	eP	24	02.00	-0.2
			eS	24	26.00	
ODD1	2.12	113	eP	24	03.90	0.2
			iS	24	27.84	
MOL	2.90	50	eP	24	07.43	-7.3X
			eS	24	37.72	

S.D. = 0.4 on 4 of 5 obs.

JAN 22, 1990 05h 08m 54.12± 0.39s
22.127 S ± 9.6km 169.993 E ± 7.4km
DEPTH = 33.0km (normal)
5.0mb (6 obs.) 4.4Msz (1 obs.)
LOYALTY ISLANDS REGION (189)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 21C
Centroid Location:
Origin Time 05:08:59.0 0.7
Lat 22.32S 0.16 Lon 169.67E 0.11
Dep 37.0 6.6 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm

Mrr= 5.73	0.43	Mtt=-0.42	0.92
Mff=-5.32	0.84	Mrt= 4.56	1.03
Mrf=-0.16	0.88	Mtf= 3.13	0.50

Principal Axes:

T	Val= 8.29	Plg=60	Azm=348
N	-1.04	27	142
P	-7.25	11	238

Best Double Couple:Mo=7.8*10**16
NP1:Strike=358 Dip=42 Slip= 134
NP2: 126 62 58

DZM	3.29	270	iPc	09	44.10	-0.6
			iS	10	25.10	
PVC	4.64	340	iP	10	04.50	0.7
			iS	11	23.00	
SGE	8.72	60	iP	11	01.10	0.0
SVA	8.90	65	iPd	11	02.00	-1.4
MBU	9.69	60	iP	11	01.10	-13.4X
BRS	16.49	248	iPd+	12	46.80	2.1
			i-	12	49.10	
			e	13	09.00	
			eS	16	00.00	
			e	25	04.00	
SNZO	19.53	169	P	13	24.00	2.2
			S	16	44.00	
RMQ	19.83	253	eP	13	26.00	0.9
CTA	22.24	271	eP	13	51.00	1.3
	1.0s	23.00nm			4.6mb	
			iS	18	00.00	
CNB	22.30	229	eP	13	51.00	0.7
BWA	22.55	232	eP	13	50.90	-1.9
CAN	22.56	230	eP	13	53.00	0.1
CMS	23.45	241	eP	14	02.60	1.1
OLP	23.87	254	eP	14	06.00	0.5
PMG	25.31	296	eP	14	20.00	0.5
TOO	26.13	228	eP	14	26.00	-1.0
ASPA	33.23	260	iPc	15	28.00	-2.5
	0.7s	9.00nm			4.8mb	
Z	23s	1.39um			4.6MszX	
			LR	27	48.30	
WB5	33.29	267	eP	15	29.20	-1.8
WRA	33.30	267	P	15	30.00	-1.1
	0.4s	1.10nm			4.1mb	
MTN	38.11	277	iPc	16	12.10	0.2
WARB	39.63	255	eP	16	23.00	-1.6
GUA	43.14	323	eP	16	54.00	0.6
GUMO	43.21	323	eP	16	55.00	1.0
Z	20s	0.46um			4.4Msz	
			eS	24	01.00	
MBL	46.46	261	eP	17	19.20	-0.8
MAT	65.62	332	eP	19	34.00	-3.1X
	1.0s	45.00nm			5.5mb	
BJI	79.61	321	eP	20	59.00	-0.6
KMI	80.39	302	Pd	21	05.00	0.6
			pP	21	13.50	27kmX
CHG	80.49	295	ePd	21	05.50	0.7
	1.0s	24.50nm			5.2mb	
LZH	85.18	312	eP	21	29.50	0.8
	1.5s	38.00nm			5.4mb	
WDC	88.40	45	ePc	22	03.60	19.5X
SHL	89.32	298	iP	21	48.40	-0.6
FRB	123.41	27	ePKP	27	44.00	-4.8X
SUF	132.64	338	ePKP	28	05.10	-1.4
NUR	134.65	337	ePKP	28	06.00	-4.4X
APO	138.11	343	ePKP	28	06.80	-10.2X
	0.4s	1.40nm				
KSP	144.75	331	ePKP	28	24.50	-4.5X
	1.2s	68.00nm				
			id	28	25.70	
PSZ	144.86	324	ePKP	28	26.30	-3.1X
BZS	145.18	320	ePKP	28	28.00	-1.8
BRG	145.75	333	ePKP	28	28.90	-1.8
	1.5s	90.00nm				
			i	28	29.90	
			e	28	39.00	
SRO	145.77	325	ePKP	28	30.60	-0.2
			e	30	01.50	
			e	36	05.20	
CLL	145.81	334	ePKP	28	28.00	-2.8X
	1.8s	105.00nm				
			i	28	30.10	
			i	28	38.90	
PRU	146.14	331	ePKP	28	30.00	-1.4
	2.0s	70.30nm				
			e	28	39.60	
ZST	146.16	327	ePKP	28	29.40	-2.0
EKA	146.45	353	PKP	28	30.00	-1.7
	0.7s	24.30nm				
VAY	146.60	313	ePKP	28	30.50	-1.9
MOX	146.88	335	ePKP	28	33.00	0.4
	1.7s	51.00nm				
HOF	147.04	334	iPKPc	28	33.80	1.0
	1.4s	44.00nm				
SKO	147.08	314	ePKP	28	33.00	-0.1
			i	28	49.80	
KHC	147.20	331	iPKPd	28	33.50	0.4
	1.3s	18.00nm				
			e	28	49.50	
BCAO	147.23	242	ePKPd	28	32.90	-1.3
	0.3s	8.00nm				
			i	28	35.00	
WTS	147.47	341	ePKP	28	34.50	1.1
	0.9s	19.00nm				
WET	147.50	332	iPKPc	28	35.50	1.9
GRF	147.79	334	ePKP	28	34.00	0.0
OHR	147.90	313	ePKP	28	32.30	-2.2
	1.9s	0.18nm				
DMU	148.19	357	ePKP	28	34.90	0.4
BHG	148.54	330	iPKPc	28	47.80	12.5X
DCN	148.76	357	ePKP	28	36.40	1.0
	0.8s	71.00nm				
DLE	148.78	356	ePKP	28	36.60	1.2
KBA	148.78	328	ePKP	28	35.50	-0.4
	0.6s	7.10nm				
			i	28	40.70	
ENN	148.81	340	ePKP	28	38.00	2.4X
	0.8s	19.00nm				
V8Y	148.86	325	ePKP	28	39.60	3.7X
LJU	148.89	326	ePKP	28	37.50	1.6
MEM	148.93	340	PKP	28	38.40	2.7X
ABH	149.03	338	ePKP	28	38.85	2.8X
CEY	149.15	326	ePKP	28	37.50	1.1
VOY	149.23	327	ePKP	28	38.00	1.4
RUP	149.36	338	ePKP	28	39.88	3.3X
TRI	149.52	326	iPKPc	28	40.00	3.2X
DOU	149.81	341	PKP	28	39.40	2.3
OGA	150.03	330	ePKP	28	41.20	3.3X
CDF	150.36	336	ePKP	28	41.00	2.8X
	0.6s	3.60nm				
FEL	150.52	335	ePKP	28	41.00	2.5X
BSF	151.02	336	ePKP	28	41.90	2.7X
	0.8s	8.00nm				
HAU	151.04	337	ePKP	28	42.20	3.1X
	0.8s	13.40nm				
VAI	151.80	332	PKP	28	43.00	2.8
MNS	152.29	322	PKP	28	47.50	6.3X
LOR	152.53	339	ePKP	28	46.20	4.9X
	0.8s	7.20nm				
LBF	152.74	339	ePKP	28	46.00	4.4X
	1.0s	10.00nm				
SSF	152.83	340	ePKP	28	46.60	4.9X
	1.0s	6.00nm				
LPG	152.96	334	ePKP	28	47.70	5.4X
	0.8s	4.00nm				
BNI	153.35	333	PKP	28	52.00	9.3X

S.D. = 1.4 on 54 of 81 obs.

JAN 22, 1990 05h 16m 12.31± 0.63s
20.902 S ±20.1km 174.016 W ±11.1km
DEPTH = 33.0km (normal)
4.8mb (9 obs.) 5.2Msz (1 obs.)
TONGA ISLANDS (173)

SVA	7.62	290	eP	18	04.00	0.1
DZM	18.22	263	iPc	20	26.60	2.1
CAN	35.42	238	eP	23	08.00	0.5
BWA	35.69	240	eP	23	09.20	-0.5
CTA	37.16	264	eP	23	23.00	0.8
TOO	38.71	236	eP	23	36.00	0.9
ASPA	48.06	257	iPd	24	49.20	-1.7
	1.2s	19.00nm				5.0mb
			ePcP	26	19.10	
WB5	48.22	262	eP	24	50.30	-1.8
WRA	48.23	262	Pc	24	49.80	-2.4
	1.1s	9.20nm				4.7mb
MTN	52.89	269	eP	25	26.00	-1.7
SYP	75.33	44	eP	28	07.00	12.6X
PLM	76.68	46	eP	28	08.00	5.8X
RVR	76.72	45	eP	28	06.00	3.9X
PEC	76.80	46	P	28	05.50	2.9X
SBB	76.83	45	eP	28	02.00	-0.8

ISA	77.00	44	eP	28	04.00	0.3
CMB	77.28	41	P	28	03.00	-2.2X
	1.3s	13.66nm			4.8mb	
CLC	77.66	44	eP	28	09.00	1.6
GLA	77.90	48	eP	28	14.00	5.3X
TNP	79.27	42	P	28	15.00	-1.3
	0.9s	7.00nm			4.7mb	
KVN	79.31	41	P	28	16.00	-0.5
RMW	82.63	33	P	28	33.50	-0.1
MSU	82.75	44	P	28	35.00	0.3
DAU	84.39	43	P	28	43.50	0.4
TTA	84.75	8	P	28	43.10	-1.0
	1.2s	13.26nm			5.0mb	
ALQ	84.78	50	eP	28	46.10	1.1
	1.0s	4.50nm			4.6mb	
Z	18s	0.86um			5.2Msz	
ANMO	84.78	50	P	28	46.30	1.3
	1.6s	17.71nm			5.0mb	
PNT	84.95	32	eP	28	49.00	3.7X
FBA	87.88	11	P	28	58.00	-1.3
	1.0s	14.50nm			5.2mb	
IMA	88.06	8	P	28	59.80	-0.5
	1.0s	4.06nm			4.7mb	
BJI	88.83	314	eP	29	06.00	1.7
SES	90.03	35	eP	29	09.00	-0.8
EDM	90.46	32	ePc	29	11.70	0.0
BDT	93.29	287	eP	29	27.40	2.0
INK	93.72	14	eP	29	26.00	-0.3
CHG	93.90	289	eP	29	30.00	1.8
LWI	147.93	227	ePKPd	35	59.20	5.4X
KAS	148.88	317	ePKP	36	03.00	8.6X
KSP	149.04	347	ePKP	35	58.50	4.3X
CLL	149.16	351	ePKP	35	59.00	4.7X
	1.7s	26.00nm				
BRG	149.44	350	ePKP	36	00.00	5.2X
	1.6s	25.00nm				
			e	36	10.00	
MOX	149.99	353	ePKP	36	02.00	6.4X
			e	36	13.00	
PRU	150.19	349	ePKP	36	01.00	5.1X
			e	36	15.00	
MLR	150.49	331	ePKP	36	02.50	5.8X
KHC	151.19	350	PKPc	36	04.00	6.5X
ZST	151.33	344	e(PKP)	36	10.10	12.4X
KBA	153.21	349	ePKP	36	13.50	12.8X
	1.2s	4.30nm				
SGO	158.86	340	PKP	35	52.60	-15.2X
	S.D. = 1.3	on	29 of	48	obs.	

& JAN 22, 1990 05h 59m 37.28s
60.074 N 152.519 W
DEPTH = 93.5km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.37	340	eP	59	51.09	-0.7
RDT	0.50	6	iP	59	52.00	-0.7
			eS	00	04.11	
NNL	0.61	92	eP	59	53.85	0.3
AUL	0.83	214	eP	59	54.96	-0.7
AUE	0.84	211	eP	59	54.76	-0.9
CNPM	0.85	130	eP	59	55.56	-0.3
PDB	0.89	252	iP	59	55.31	-1.0
			eS	00	09.48	
NKA	0.92	43	eP	59	57.74	1.1
CKL	1.13	4	eP	59	58.30	-0.8
			eS	00	15.86	
SPU	1.13	11	iP	59	58.33	-0.8
			eS	00	14.77	
BGL	1.20	3	iP	59	59.35	-0.6
			eS	00	16.38	
CRP	1.21	8	eP	59	59.49	-0.7
			eS	00	16.68	
SLKM	1.22	68	eP	59	58.96	-1.2
CDD	1.28	207	eP	59	59.44	-1.5
NCG	1.35	7	eP	00	01.17	-0.6
SEW	1.54	88	eP	00	02.30	-1.7
SUA	1.64	31	eP	00	04.93	-0.6
			eS	00	26.12	
PMS	1.87	50	eP	00	07.46	-1.0
			eS	00	30.35	
PLRM	2.25	46	eP	00	11.34	-2.1
GHO	2.45	44	eP	00	14.48	-1.7
			eS	00	43.02	
CUT	2.58	24	eP	00	16.50	-1.4
KLU	3.53	63	eP	00	28.28	-2.8
KTH	3.57	12	eP	00	29.77	-1.9
RND	3.77	26	eP	00	32.54	-1.8
	24 obs. ossociated					

& JAN 22, 1990 06h 01m 10.90s
37.318 N 122.125 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.2 (BRK).
Mo=1.5*10**14 Nm (BRK).

PCC	0.27	312	iPc	01	16.10	-0.4
			iS	01	20.70	
GCC	0.31	160	iPc	01	16.80	-0.3
			i	01	19.30	
MHC	0.39	86	iPc	01	18.80	0.1
			iS	01	25.10	
ARN	0.47	86	iPc	01	20.20	-0.2
BKS	0.56	351	iPd	01	21.60	-0.6
			iS	01	29.50	
BRK	0.56	349	iPd	01	21.60	-0.6
			iS	01	30.10	
ZSP	0.63	351	iPd	01	23.30	-0.3
			eS	01	32.90	
SAO	0.78	135	iP	01	25.00	-1.3
PRS	1.16	148	ePd	01	31.20	-1.6
LLA	1.18	126	ePc	01	32.00	-1.2
NWRM	1.29	332	eP	01	33.90	-1.1
CMB	1.56	62	ePd	01	37.80	-1.3
			eS	01	56.50	
PRI	1.66	135	ePc	01	40.20	-0.4
FRI	1.96	99	eP	01	43.00	-1.8
			eS	02	08.60	
BCH	2.69	142	eP	01	52.70	-2.8
KVN	3.61	60	eP	02	14.50	5.9
TNP	3.97	77	eP	02	21.30	7.6
	17 obs. ossociated					

• JAN 22, 1990 06h 12m 08.69± 1.01s
43.413 N ±18.3km 149.613 E ±15.1km
DEPTH = 33.0km (normal)
4.4mb (5 obs.)
KURIL ISLANDS REGION (222)

KUSJ	3.60	267	P	13	02.80	-0.6
			S	13	40.90	
INK	45.79	30	eP	20	30.00	1.6
GUN	52.82	275	P	21	24.20	0.6
	0.8s	15.00nm			5.0mb	
KKN	53.33	275	P	21	28.00	0.9
PKI	53.36	275	P	21	28.00	0.5
DMN	53.56	275	P	21	29.80	0.9
GKN	53.67	276	P	21	30.20	0.6
SOD	61.45	338	eP	22	21.00	-2.7
WRA	64.59	196	Pd	22	44.00	-0.9
	0.8s	2.30nm			4.3mb	
SUF	65.00	335	eP	22	47.50	0.4
GBA	67.86	268	Pd	23	05.50	-0.5
	0.6s	1.60nm			4.3mb	
FRB	68.99	17	eP	23	12.00	-0.3
NB2	70.55	340	P	23	21.80	-0.1
	0.8s	3.90nm			4.5mb	
HFS	70.68	338	eP	23	22.30	-0.4
	0.5s	1.10nm			4.2mb	
	S.D. = 1.1	on	14 of	14	obs.	

& JAN 22, 1990 06h 38m 14.65s
63.355 N 149.507 W
DEPTH = 100.8km
CENTRAL ALASKA (1)
<AGS-P>.

RND	0.30	80	iP	38	29.69	0.0
HUR	0.38	189	iP	38	29.73	-0.3
			eS	38	41.33	
MCK	0.46	34	eP	38	30.52	0.0
			eS	38	41.87	
KTH	0.67	288	iP	38	31.65	-0.5
CUT	1.02	200	iP	38	34.95	-0.6
			eS	38	51.34	
NEA	1.24	9	eP	38	37.43	-0.7
CCB	1.50	29	iP	38	40.58	-0.7
HDA	1.55	46	iP	38	41.39	-0.5
			eS	39	02.84	
RDS	1.59	21	iP	38	41.96	-0.6
GHO	1.61	170	iP	38	42.46	-0.4
			eS	39	03.64	
DDM	1.69	73	eP	38	43.94	0.2
			eS	39	06.22	
PWA	1.72	186	iP	38	44.08	0.0
FBA	1.72	25	iP	38	43.51	-0.6
PME	1.75	173	eP	38	44.06	-0.4
PLRM	1.78	174	eP	38	44.11	-0.7
DMW	1.82	66	eP	38	45.17	-0.3
NCA	1.84	137	eP	38	45.45	-0.3
PAX	1.87	100	eP	38	46.13	-0.1
			eS	39	09.67	
GLM	1.88	29	iP	38	45.56	-0.7
TOA	1.98	128	eP	38	47.46	-0.1
SUA	1.98	197	eP	38	46.79	-0.9
SDG	1.99	113	eP	38	47.52	-0.2
PMS	2.12	181	eP	38	48.60	-0.8
NCG	2.32	213	eP	38	49.96	-2.1
CRP	2.43	212	eP	38	52.10	-1.6
SPU	2.49	210	eP	38	52.41	-1.9
KLU	2.51	137	eP	38	53.04	-1.5
CKL	2.54	213	eP	38	53.38	-1.7
NKA	2.75	198	eP	38	59.13	1.4
SLKM	2.88	187	eP	38	58.76	-0.8
RDT	3.11	207	eP	39	01.92	-0.8
IMA	3.26	329	eP	39	03.17	-1.7
SEW	3.26	179	eP	39	03.75	-1.0
GLB	3.27	123	eP	39	03.65	-1.3
NNL	3.43	195	eP	39	06.79	-0.3
SVW	3.64	235	eP	39	08.83	-1.2
CNPM	3.93	193	iP	39	12.08	-1.9
BALM	4.08	122	eP	39	14.28	-1.8
TGL	4.08	127	eP	39	14.30	-1.8
PDB	4.22	214	eP	39	16.66	-1.2
DWY	4.54	77	P	39	20.50	-1.7
INK	8.21	46	eP	40	11.00	-1.6
	42 obs. ossociated					

? JAN 22, 1990 06h 44m 42.76± 2.66s
7.719 S ±17.9km 130.198 E ±36.4km
DEPTH = 33.0km (normal)
3.9mb (1 obs.)
TANIMBAR ISLANDS REGION (281)

TLE	3.28	51	iPc	45	33.00	0.0
			iS	46	10.00	
MTN	5.18	170	eP	46	06.00	6.0X
			eS	47	08.00	
KNA	8.10	190	iPd	46	41.10	0.0
			eS	48	11.00	
WB5	12.75	162	eP	47	44.60	0.0
			e	50	06.20	
WRA	12.80	162	Pc	47	45.30	0.0
ASPA	16.25	168	eP	48	30.20	-0.1
	0.5s	5.00nm			3.9mb	
			iS	51	30.90	
	S.D. = 0.1	on	5 of	6	obs.	

JAN 22, 1990 08h 25m 34.07± 0.53s
31.612 S ±17.5km 178.083 W ± 9.1km
DEPTH = 33.0km (normal)
5.2mb (4 obs.)
KERMADEC ISLANDS REGION (177)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 27C
Centroid Location:
Origin Time 08:25:41.7 0.5
Lat 31.55S FIX; Lon 178.12W FIX
Dep 15.0 FIX Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.30 0.07 Mtt=-0.02 0.12
Mff=-1.28 0.09 Mrt=-0.49 0.22
Mrf=-0.55 0.26 Mtf=-0.90 0.06
Principal Axes:

	Val=	Plg=	Azm=
T	1.49	74	156
N	0.42	9	31
P	-1.91	13	299

Best Double Couple: Mo=1.7*10**17
NP1: Strike= 16 Dip=33 Slip= 73
NP2: 216 58 101

DZM	16.75	301	iPc	29	29.60	1.8
MSZ	17.03	216	P	29	22.00	-9.2X
BRS	25.67	272	iPc	31	05.00	2.3
	1.2s	4.00nm			3.9mb	X
			e	31	10.50	
			e	31	18.50	
			eS	35	54.00	
COO	25.70	264	eP	31	06.00	3.0X

22d 08h

CNB	27.34	253	eP	31	19.00	1.0
			e	34	36.00	
CAN	27.64	253	eP	31	21.00	0.3
BWA	28.16	255	eP	31	24.10	-1.3
RMQ	29.37	271	eP	31	38.00	1.7
			e	34	42.00	
TOO	30.44	249	eP	31	46.00	0.2
			e	34	43.00	
CMS	30.67	261	eP	31	48.00	0.2
BFD	32.79	249	eP	32	07.00	0.7
QLP	33.19	269	eP	32	10.00	0.0
CTA	33.94	281	iPc	32	17.00	0.5
	1.0s		96.50nm			5.7mb
			i	32	31.50	
			iPP	33	48.00	
			iS	38	00.00	
ADE	36.07	253	eP	32	34.00	-0.6
PMG	39.08	297	eP	32	52.00	-7.9X
QIS	39.35	276	eP	33	01.00	-1.2
			e	33	14.50	
LAT	40.98	300	eP	33	19.00	3.4X
ASPA	42.99	268	iPc	33	30.80	-1.3
	0.5s		28.00nm			5.2mb
Z	17s		1.93um			5.1MszX
			iS	39	52.40	
			LR	51	37.00	
WRA	44.08	273	Pc	33	39.40	-1.6
	0.5s		15.30nm			5.1mb
WB5	44.09	274	eP	33	40.10	-0.9
FORR	45.63	256	eP	33	51.00	-2.2
WARB	48.27	262	eP	34	10.00	-4.1X
MTN	50.11	280	iPc	34	27.20	-1.1
KNA	50.70	275	eP	34	32.00	-0.7
COOL	51.35	254	eP	34	34.00	-3.6X
SPA	58.56	180	eP	35	29.50	-0.2
	0.9s		15.91nm			5.1mb
GCC	86.09	42	e(P)	38	12.60	-0.1
PAS	86.37	46	eP	38	34.00	19.8X
MHC	86.51	42	e(P)	38	14.60	-0.4
PLM	86.65	47	eP	38	25.00	9.2X
RVR	86.76	47	eP	38	25.00	8.9X
SBB	86.94	46	eP	38	20.00	2.9X
ISA	87.21	45	eP	38	26.00	7.7X
FRI	87.38	43	eP	38	21.50	2.5X
CMB	87.71	42	eP	38	21.30	0.7
GLA	87.75	49	eP	38	26.00	5.1X
CLC	87.84	45	eP	38	21.00	-0.3
ORV	88.14	40	e(P)	38	20.20	-2.4
WDC	88.30	39	eP	38	20.90	-2.4
BJI	93.73	315	eP	38	52.00	3.5X
ZOBO	97.73	114	eP	39	10.00	1.9
			SKS	49	52.00	
			LR	11	28.00	
INK	104.96	16	ePdiff	43	56.00	257.4X
GBA	109.23	274	PKP	44	06.00	3.1X
	0.8s		1.40nm			
MBC	113.60	13	ePKP	44	11.00	1.5
	0.5s		1.00nm			
QUE	124.94	287	ePKP	44	32.30	-0.5
FRB	126.45	31	ePKP	44	36.00	1.6
MAIO	132.61	292	ePKP	44	44.00	-3.2X
KEV	139.28	347	ePKP	44	46.00	-12.5X
SOD	141.34	345	ePKP	44	54.00	-8.3X
BHD	144.30	284	ePKPc	45	08.00	-0.4
SUF	145.23	341	ePKP	45	07.00	-2.1
	0.6s		123.70nm			
MSL	145.67	289	ePKPd	45	13.00	2.3
			e	45	28.50	
NUR	147.42	339	iPKP	45	13.90	1.2
	0.9s		64.20nm			
RGS	148.11	353	ePKP	45	15.80	2.0
BCAO	148.78	213	iPKPc	45	20.10	3.7X
	0.5s		33.00nm			
			i	45	23.60	
			i	46	47.50	
UPP	149.86	344	iPKP	45	19.00	2.4X
NB2	149.93	351	PKP	45	19.60	2.8X
	1.1s		53.90nm			
HFS	150.41	348	ePKP	45	20.00	2.6X
	0.8s		13.20nm			
AYN	150.50	274	ePKP	45	23.30	4.8X
BADA	151.26	272	ePKP+	45	25.10	5.4X
HQL	151.40	274	ePKP+	45	25.30	5.4X
KAS	152.74	300	ePKP	45	28.50	7.0X
BBTK	153.75	297	iPKPc	45	30.00	6.9X
LIC	153.92	164	PKP	45	31.20	7.3X
KSP	158.03	335	ePKP	45	46.00	17.9X

			e	46	00.00	
ZST	159.81	329	ePKP	45	48.60	18.4X
KBA	162.24	334	ePKP	45	19.00	-13.9X
	0.7s		2.60nm			
			e	45	49.50	
			e(Sg)	46	31.50	
	S.D. = 1.4		on 35 of 67 obs.			

? JAN 22, 1990 09h 17m 43.40± 0.92s
36.017 N ± 8.6km 27.260 E ±10.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.47	189	ePn	17	52.50	-0.5
			eSg	18	02.00	
ARG	0.73	74	ePn	17	58.00	0.3
			eSn	18	10.50	
NPS	1.54	241	ePb	18	11.50	0.6
SMG	1.72	349	ePn	18	13.10	-0.4
	S.D. = 0.9		on 4 of 4 obs.			

? JAN 22, 1990 09h 24m 14.82± 1.60s
44.118 N ±11.3km 8.226 E ±13.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.4 (GEN).

FIN	0.09	352	P	24	18.19	0.7
			S	24	19.42	
ROB	0.31	305	P	24	21.06	-0.2
			S	24	25.06	
IMI	0.32	230	P	24	21.47	0.0
			S	24	25.37	
PCP	0.48	28	P	24	24.14	-0.5
			S	24	28.35	
	S.D. = 0.9		on 4 of 4 obs.			

% JAN 22, 1990 09h 26m 15.77± 1.62s
44.230 N ±16.1km 8.258 E ±11.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

FIN	0.04	239	P	26	17.82	-0.1
			S	26	19.05	
ROB	0.29	283	P	26	21.62	-0.2
			S	26	25.00	
PCP	0.37	33	P	26	23.46	0.0
			S	26	28.38	
ENR	0.60	270	P	26	28.28	0.3
STV	0.67	271	P	26	29.10	-0.1
	S.D. = 0.2		on 5 of 5 obs.			

? JAN 22, 1990 09h 28m 19.39± 1.56s
44.245 N ±15.7km 8.265 E ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

FIN	0.05	229	P	28	21.23	-0.4
			S	28	22.66	
ROB	0.29	280	P	28	24.72	-0.7
			S	28	28.51	
PCP	0.36	34	P	28	26.77	0.0
			S	28	32.00	
ENR	0.61	269	P	28	32.41	0.7
	S.D. = 1.1		on 4 of 4 obs.			

? JAN 22, 1990 09h 29m 56.32± 1.44s
44.238 N ±14.3km 8.252 E ±11.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

FIN	0.04	228	P	29	58.31	-0.2
			S	29	59.64	
ROB	0.28	282	P	30	01.90	-0.3
			S	30	05.59	
PCP	0.37	35	P	30	03.95	0.0
			S	30	08.97	
ENR	0.60	269	P	30	08.87	0.4
			S	30	15.74	
	S.D. = 0.5		on 4 of 4 obs.			

% JAN 22, 1990 09h 32m 13.88± 0.97s
44.247 N ± 8.9km 8.232 E ± 7.1km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 1.8 (GEN).

FIN	0.04	204	P	32	16.00	0.0
			S	32	17.33	
ROB	0.26	281	P	32	19.69	0.2
			S	32	23.18	
PCP	0.37	37	P	32	21.54	0.0
			S	32	26.77	
ENR	0.58	268	P	32	25.85	0.1
STV	0.65	270	P	32	26.87	-0.1
PZZ	0.85	288	P	32	30.15	-0.2
	S.D. = 0.2		on 6 of 6 obs.			

JAN 22, 1990 10h 25m 43.88± 0.50s
41.558 N ± 5.9km 14.262 E ± 4.9km
DEPTH = 9.4 ± 4.1 km
SOUTHERN ITALY (390)
ML 1.6 (KBA).

DUI	0.18	55	Pc	25	46.60	-1.3
			iSg	25	49.70	
SDI	0.37	294	Pd	25	50.30	-1.1
			eSg	25	57.50	
BSS	0.87	152	P	26	01.50	0.8
			eSg	26	15.90	
AQU	1.02	321	P	26	02.60	-0.7
			eSg	26	19.20	
RDP	1.17	280	P	26	06.00	0.1
			eSg	26	23.00	
RMP	1.20	283	P	26	06.00	-0.2
			eSg	26	23.90	
SGO	1.27	141	Pc	26	06.80	-0.8
			eSg	26	25.00	
MNS	1.44	306	P	26	10.00	-0.1
			eSn	26	29.00	
MGR	1.73	145	P	26	14.00	-0.2
ASS	1.92	322	P	26	18.80	1.7
			eSn	26	40.50	
ARV	2.17	334	P	26	22.00	1.4
HVAR	2.29	44	iPn	26	21.80	-0.6
			iSn	27	07.30	
BRT	2.32	106	P	26	57.00	34.2X
TDS	2.47	140	P	26	32.00	7.1X
CRE	2.68	321	P	26	27.00	-1.0
PGD	2.98	322	P	26	31.00	-1.2
VBY	4.01	10	eP	27	03.50	16.8X
			e(Sn)	28	18.60	
TRI	4.16	355	eP	27	32.50	43.6X
			e	28	16.10	
CEY	4.18	2	eP	27	10.50	21.3X
			eSn	27	17.50	
			e	27	27.50	
VOY	4.48	357	ePn	26	53.90	0.4
			eSn	28	28.30	
LJU	4.49	2	eP	27	13.00	19.5X
			e(Sn)	27	46.00	
PTJ	4.51	15	P	27	20.90	27.0X
OHR	4.94	93	eP	27	00.50	0.4
KBA	5.56	354	ePn	27	10.30	1.4
			eSg	27	33.50	
KHC	7.59	357	eP	27	46.60	9.4X
			e	29	02.00	
	S.D. = 1.1		on 17 of 25 obs.			

? JAN 22, 1990 10h 30m 02.77± 1.59s
38.100 N ±18.1km 4.861 W ±10.6km
DEPTH = 10.0km (geophysicist)
SPAIN (377
mbLg 2.6 (MDD).

EHOR	0.41	228	ePg	30	11.20	0.0
			eSg	30	16.80	
EBAN	0.85	85	ePg	30	19.00	-0.2
			eSg	30	30.00	
AFC	1.34	129	ePn	30	27.70	0.1
			eSg	30	45.40	
EVIA	1.93	73	ePn	30	36.20	0.2
			eSn	31	01.20	
	S.D. = 0.3		on 4 of 4 obs.			

JAN 22, 1990 10h 59m 10.42± 0.73
40.695 N ± 7.1km 29.149 E ± 5.9k
DEPTH = 10.0km (geophysicist)
TURKEY (366

YLV	0.21	127	iPg	59	14.40	-0.7

		iSg	59	17.40	
GBZT	0.24 67	ePg	59	21.00	5.4X
ISK	0.38 350	ePg	59	18.30	0.2
HRT	0.41 72	ePg	59	19.10	0.2
		eSg	59	25.90	
KCT	0.75 234	iPg	59	23.90	-1.2
BNT	1.00 251	iPg	59	28.90	-0.4
EDC	1.04 251	ePg	59	30.50	0.5
		eSg	59	42.50	
DST	1.16 200	ePn	59	33.60	1.5
		eSg	59	48.60	
S.D. = 1.1		on 7 of 8 obs.			

& JAN 22, 1990 11h 04m 14.40s
40.308 N 124.413 W
DEPTH = 8.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK).

FHC	0.59 33	iPc	04	26.30	0.0
		iS	04	36.00	
WDC	1.46 79	ePd	04	38.90	-2.1
		eS	04	57.50	
LTCM	1.75 93	eP	04	49.70	4.4
LBFM	2.18 61	eP	04	50.60	-1.0
ORV	2.36 108	e(P)	04	52.70	-1.4
ARN	3.71 142	eP	05	10.40	-2.9
KVN	5.03 102	e(P)	05	30.50	-1.6
7 obs. associated					

% JAN 22, 1990 11h 20m 08.81± 0.97s
44.337 N ±10.0km 8.186 E ± 8.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN	0.13 173	P	20	12.84	0.9
		S	20	15.71	
ROB	0.23 260	P	20	14.68	0.9
		S	20	18.38	
PCP	0.33 51	P	20	15.40	-0.2
		S	20	20.12	
IMI	0.48 207	P	20	17.56	-1.0
ENR	0.56 259	P	20	19.71	-0.6
S.D. = 1.2		on 5 of 5 obs.			

• JAN 22, 1990 13h 18m 24.22± 3.72s
36.593 N ±31.4km 71.258 E ±11.8km
DEPTH = 88.6 ± 51.6 km
4.5mb (7 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

QUE	7.33 211	eP	20	10.00	-0.7
		eS	21	27.50	
NDI	9.35 146	eP	20	40.00	1.9
		eS	22	15.50	
MAIO	9.48 272	eP	20	40.00	0.0
		eS	22	18.00	
GKN	14.18 123	P	21	41.90	-0.4
DMN	14.75 123	P	21	49.40	-0.3
0.8s	34.00nm			4.6mb	
KKN	14.75 123	P	21	48.90	-0.8
0.6s	24.00nm			4.6mb	
PKI	14.98 123	P	21	51.80	-0.9
0.6s	21.00nm			4.5mb	
GUN	15.08 121	P	21	53.80	-0.3
0.4s	9.00nm			4.3mb	
HFS	43.12 322	eP	26	16.90	0.0
0.5s	6.10nm			4.7mb	
NB2	44.43 323	P	26	26.90	-0.7
0.6s	3.30nm			4.3mb	
MBC	67.23 3	eP	29	11.50	1.0
0.5s	1.00nm			4.0mb	
S.D. = 1.0		on 11 of 11 obs.			

? JAN 22, 1990 16h 10m 27.85± 5.64s
30.085 S ±35.6km 71.884 W ±31.1km
DEPTH = 173.2 ± 38.7 km
NEAR COAST OF CENTRAL CHILE (135)

RTRS	2.10 93	iPd	11	06.00	0.1
RTBS	2.61 128	ePc	11	12.00	0.1
ROCH	2.97 166	iPd	11	16.00	-0.6
RTLL	3.19 114	ePc	11	18.70	-0.4
		S	11	51.20	
RTCV	3.38 122	iPc	11	21.80	0.4
LCCH	3.39 176	iPc	11	22.00	0.5
		iS	11	56.00	
FCH	3.51 158	iPd	11	23.50	0.1
TACH	3.65 167	iPc	11	24.90	0.1
PCH	3.71 162	iPd	11	25.90	0.1
LNV	3.88 174	iPc	11	27.50	-0.3
		iS	12	06.50	
CHCH	3.98 165	iPc	11	29.10	0.0
		iS	12	08.50	
MRA	5.77 115	ePc	11	52.50	0.0
S.D. = 0.3		on 12 of 12 obs.			

% JAN 22, 1990 16h 17m 51.92± 0.76s
46.206 N ± 7.7km 1.851 E ± 5.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (LDG).

LSF	0.23 281	Pg	17	56.70	-0.1
		Sg	17	59.70	
TCF	0.26 72	Pg	17	57.60	0.1
		Sg	18	01.20	
MAF	0.50 88	Pg	18	02.00	0.0
		Sg	18	09.00	
BGF	0.77 63	Pg	18	07.00	0.0
		Sg	18	17.20	
RJF	0.93 195	Pg	18	10.40	0.7
		Sg	18	22.40	
CAF	1.29 173	Pn	18	15.20	-0.6
		Pg	18	16.80	
		Sg	18	33.80	
S.D. = 0.6		on 6 of 6 obs.			

• JAN 22, 1990 16h 41m 06.29± 1.31s
30.438 S ± 9.4km 70.993 W ±13.3km
DEPTH = 31.3 ± 7.5 km
CHILE-ARGENTINA BORDER REGION (127)

RTRS	1.35 79	iPd	41	27.30	-1.8
RTBS	1.80 133	ePc	41	37.20	1.6
		e	41	38.00	
		S	42	11.00	
RTLL	2.34 113	e(P)	41	47.50	4.0X
ROCH	2.53 180	iPd	41	47.00	0.7
RTCV	2.54 125	ePd	41	48.20	1.9
CFA	2.64 117	eP	41	48.80	1.2
		S	42	31.20	
FCH	2.94 168	iPc	41	53.70	1.5
		iS	42	38.10	
SAN	3.02 175	iPc	41	55.00	1.9
		iS	42	38.00	
LCCH	3.07 189	iP	41	52.70	-1.0
		iS	42	35.50	
PCH	3.20 173	iPd	41	56.10	0.4
TACH	3.21 179	iPc	41	55.60	-0.1
CHCH	3.50 175	iPd	42	00.50	0.6
		iS	42	47.50	
LNV	3.52 186	iPd	41	58.00	-2.2
		iS	42	42.60	
RFA	4.82 154	ePd	42	18.20	-0.4
MRA	4.93 115	ePd	42	18.40	-1.6
CYA	4.95 68	i(P)	42	12.50	-8.0X
TCA	5.58 101	ePc	42	01.00	-28.3X
ANT	6.73 5	e(P)	42	46.50	1.1
ZOBO	14.35 11	eP	44	08.40	-21.4X
S.D. = 1.6		on 15 of 19 obs.			

• JAN 22, 1990 17h 13m 56.17± 1.35s
5.175 S ±13.9km 153.250 E ±14.7km
DEPTH = 10.0km (geophysicist)
4.1mb (1 obs.)
NEW IRELAND REGION (190)

RAB	1.45 312	iPd	14	22.50	0.0
		iS	14	40.00	
PMG	7.37 235	eP	15	47.00	0.6
0.5s	42.25nm			5.9mb	X
DZM	21.10 144	iPc	18	43.70	0.2
MTN	23.12 249	eP	19	04.00	0.5
WB5	23.48 230	eP	19	07.00	0.0
WRA	23.54 230	Pc	19	06.30	-1.3
0.7s	3.80nm			4.1mb	
S.D. = 0.9		on 6 of 6 obs.			

JAN 22, 1990 17h 26m 11.46± 0.10s
3.885 N ± 2.8km 96.100 E ± 2.1km
DEPTH = 45.7km (geophysicist)
6.0mb (88 obs.) 5.8Msz (29 obs.)

NORTHERN SUMATERA (706)
Two events about 5.3 seconds apart. Depth from broadband displacement seismograms, based on first event.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=128 Dip=73 Slip= 90
NP2: 308 17 90
Principal Axes:
T Plg=62 Azm= 38
P 28 218
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sta: 6 Focal mech. C
Energy 1.5±0.4•10••13 Nm
MOMENT TENSOR SOLUTION
Dep 49 No. of sta: 13
Moment Tensor; Scale 10••18 Nm
Mrr= 1.50 Mtt=-1.20
Mff=-0.30 Mrt= 1.52
• Mrf=-0.74 Mtf= 0.63
Principal axes:
T Val= 2.26 Plg=66 Azm= 25
N 0.02 1 116
P -2.28 24 207
Best Double Couple:Mo=2.3•10••18
NP1:Strike=298 Dip=21 Slip= 92
NP2: 116 69 89
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 41C
Centroid Location:
Origin Time 17:26:19.2 0.2
Lat 3.55N 0.03 Lon 95.93E 0.03
Dep 50.1 1.9 Half-duration 5.0
Moment Tensor; Scale 10••18 Nm
Mrr= 1.84 0.05 Mtt=-1.01 0.07
Mff=-0.83 0.07 Mrt= 1.08 0.08
Mrf=-1.03 0.09 Mtf= 1.33 0.06
Principal Axes:
T Val= 2.33 Plg=72 Azm= 44
N 0.41 0 313
P -2.74 18 223
Best Double Couple:Mo=2.5•10••18
NP1:Strike=313 Dip=27 Slip= 89
NP2: 133 63 90

IPM	4.96 82	ePd	27	28.00	2.6
		e	30	15.90	
SNG	5.56 54	iPn	27	36.90	3.1X
		ePg	27	42.20	
		eSg	28	06.50	
KLM	5.59 98	ePd	27	36.00	1.7
0.9s	1264.60nm			6.3mb	
KGM	7.44 104	ePc	28	03.80	3.5X
0.7s	2085.40nm			7.1mb	X
		e	28	38.10	
		e	30	21.90	
NNT	9.37 22	iPn	28	28.60	1.8
		iSg	28	30.20	
KSI	9.89 139	ePd	28	32.20	-1.9
		eS	30	12.50	
		e	37	00.00	
PCT	11.94 26	eP	29	05.70	3.9X
KLI	12.33 135	ePd	29	04.80	-2.3
NST	12.37 18	iPc	29	10.50	2.9X
TPI	13.30 120	iPc	29	20.80	0.9
		e	39	00.00	
BDT	13.58 12	iPc	29	25.50	1.9
1.0s	284.40nm			6.1mb	
LOE	14.53 22	eP	29	39.50	3.5X
CHG	15.09 10	iPc	29	45.80	2.3
1.0s	255.00nm			5.4mb	
		eS	32	48.00	
KKM	20.15 83	ePd	30	44.00	-0.9
0.9s	1125.30nm			6.2mb	
		e	31	03.00	97kmX
QIZ	20.17 41	Pc	30	45.80	0.8
N 16s	57.40um				
		PP	31	08.00	
		sS	34	42.00	
GBA	20.80 299	P	30	52.00	0.5
		S	34	22.00	

22d 17h

HYB 21.83 309 iP 31 02.80 0.9
1.0s 640.00nm 6.0mb
iS 35 02.00
TSM 21.92 88 ePc 31 01.10 -1.6
1.0s 480.60nm 5.9mb
SHL 21.93 350 iP 30 59.00 -4.1X
iS 35 00.40
KMI 22.06 16 Pc 31 06.00 1.6
Z 28s 54.20um 5.8MszX
N 14s 25.50um
E 17s 25.90um
pP 31 15.50 35kmX
sP 31 21.00
KHKI 22.95 122 ePc 31 12.80 -0.1
e(S) 34 02.10
e 37 56.00
PCI 24.19 101 ePc 31 27.00 2.0
1.0s 64.50nm 5.1mb
GYA 24.62 23 iPc 31 29.20 0.0
1.2s 0.20nm 2.5mb X
Z 18s 17.60um 5.6Msz
N 15s 14.30um
E 15s 19.40um
MCO 24.80 42 iP 31 32.30 1.5
MKS 25.03 111 ePd 31 36.00 2.9X
HKC 25.34 42 iP 31 37.30 1.5
S 36 10.00
GZH 25.35 40 Pc 31 37.00 1.1
1.4s 0.39nm 2.8mb X
Z 18s 34.80um 5.9Msz
N 18s 30.60um
E 15s 14.60um
PKI 25.67 338 P 31 38.20 -1.1
GUN 25.80 339 P 31 38.80 -1.8
DMN 25.82 337 P 31 39.40 -1.2
KKN 25.91 338 P 31 40.00 -1.5
LSA 26.10 350 Pc 31 44.10 0.7
pP 31 56.00 47kmX
PP 32 24.00
iS 36 14.00
POO 26.18 305 iPc 31 44.40 0.6
iS 36 15.00
GKN 26.35 337 P 31 44.20 -1.2
BAG 27.07 61 ePc+ 31 51.20 -1.0
eS 36 04.00
BOM 27.21 305 eP 31 52.90 -0.2
eS 36 43.40
CD2 27.83 14 P 31 57.20 -1.6
Z 16s 19.20um 5.8MszX
N 15s 27.00um
S 36 39.00
MNI 28.81 94 ePd 32 08.50 0.8
DAV 29.51 83 ePc+ 32 14.50 0.5
1.3s 600.00nm 6.1mb
QZH 30.11 44 P 32 19.00 -0.2
Z 18s 19.10um 5.8Msz
N 18s 16.60um
eS 37 06.00
NDI 30.50 326 iPc 32 21.50 -1.1
1.2s 328.13nm 6.0mb
eS 37 18.00
eSS 38 38.00
WHN 31.62 31 iPc 32 32.50 0.1
1.4s 0.40nm 3.0mb X
Z 20s 15.10um 5.7Msz
N 13s 10.80um
eS 37 40.00
XAN 32.29 20 eP 32 37.00 -1.3
5.0s 1.10nm 3.0mb X
S 37 46.00
ANP 32.33 47 eP+ 32 40.00 1.2
eS 38 27.00
NANU 32.43 145 eP 32 39.40 -0.1
0.6s 42.00nm 5.5mb
LZH 32.83 12 iPc 32 42.50 -0.6
5.0s 0.97nm 2.9mb X
Z 38s 42.80um 5.9MszX
N 23s 14.70um
pP 33 00.00 73kmX
eS 37 59.00
sS 38 16.00
AAI 32.94 103 ePd 32 43.20 -0.9
0.8s 2.00nm 4.0mb X
MBL 34.07 138 iPc 32 52.70 -1.1
NJ2 35.23 35 iPc 33 04.00 0.4
Z 16s 17.70um 5.9MszX
N 13s 6.08um
E 11s 3.80um
GTA 35.52 5 iPc 33 05.20 -1.0
1.1s 0.20nm 3.0mb X
Z 32s 16.10um 5.6MszX
N 16s 6.30um
pP 33 23.50 75kmX
sS 38 56.00
ScS 43 18.80
SSE 35.93 38 Pc 33 09.00 -0.5
1.5s 0.14nm 2.7mb X
Z 20s 17.40um 5.8Msz
N 14s 9.96um
E 14s 5.15um
sP 33 32.00
TIY 36.84 22 Pc 33 17.00 -0.2
1.1s 0.10nm 2.6mb X
N 16s 34.20um
E 15s 20.00um
sP 33 37.00
S 39 01.50
MEKA 37.29 146 eP 33 21.00 0.0
TIA 37.55 28 Pc 33 23.00 -0.2
Z 18s 20.70um 6.0Msz
N 16s 14.50um
E 14s 8.40um
S 39 05.00
KNA 37.76 122 iPc 33 22.80 -2.3
0.8s 54.00nm 5.5mb
TLE 37.81 104 ePc 33 16.80 -8.7X
0.5s 6.00nm 4.8mb X
QUE 37.99 317 iPc+ 33 27.70 0.6
1.0s 665.00nm 6.5mb
eS 39 23.00
MRWA 38.05 151 iPc 33 28.20 0.8
0.8s 64.00nm 5.6mb
MTN 38.56 116 iPd 33 30.60 -1.3
BTO 38.64 17 iPc 33 33.00 0.6
N 17s 45.10um
E 17s 16.20um
PP 35 04.00
S 39 27.00
HHC 39.34 19 iPc 33 39.00 0.7
3.0s 0.60nm 2.9mb X
Z 16s 32.10um 6.2MszX
N 16s 24.90um
E 15s 8.60um
sP 33 57.00
PP 35 11.00
S 39 39.50
sS 39 59.00
KSH 39.83 335 P 33 42.60 0.3
Z 18s 13.50um 5.8Msz
E 17s 12.20um
S 39 40.00
BJI 40.31 24 eP 33 47.00 1.0
5.0s 1.61nm 3.1mb X
Z 28s 20.00um 5.8MszX
E 15s 6.10um
ePP 35 28.00
WMQ 40.46 351 P 33 46.00 -1.4
Z 22s 10.60um 5.7Msz
ScP 39 36.00
ScS 43 49.00
MUN 40.47 153 iPc 33 48.20 0.7
1.0s 224.00nm 5.9mb
Z 20s 7.20um 5.5Msz
N 20s 5.90um
E 20s 4.60um
KLB 40.87 151 eP 33 51.00 0.3
0.7s 33.00nm 5.2mb
DL2 41.88 30 eP 33 59.40 0.5
5.0s 1.20nm 2.9mb X
Z 20s 8.80um 5.6Msz
N 16s 10.90um
E 15s 5.90um
COOL 42.03 147 eP 34 00.50 0.2
0.6s 46.00nm 5.4mb
WARB 42.05 137 iPc 34 00.10 -0.4
0.5s 17.00nm 5.0mb
KAGJ 42.53 46 eP 34 03.80 -0.6
RKG 42.60 154 eP 34 09.00 4.1X
KUMJ 43.22 45 eP 34 11.10 1.1
SHNJ 44.31 43 eP 34 18.10 -0.7
WB5 44.40 124 iPc 34 19.10 -0.7
WRA 44.41 124 Pd 34 20.00 0.2
1.0s 273.60nm 6.0mb
JAY 45.03 97 ePc 34 23.50 -1.4
e 37 45.00
SNY 45.07 29 iPc 34 24.00 -0.7
5.0s 1.80nm 3.2mb X
Z 18s 17.60um 6.0Msz
sP 34 43.00
PP 36 15.00
PcS 39 58.00
S 40 54.00
sS 41 20.00
SHK 45.62 44 eP 34 27.50 -1.7
FORR 46.10 141 iPc 34 32.90 -0.2
0.5s 202.00nm 6.3mb
TKSJ 46.27 45 eP 34 34.50 0.1
YONJ 46.52 43 eP 34 37.40 1.0
MAIO 46.63 318 iPc+ 34 36.80 -0.6
eS 41 14.00
CN2 47.46 29 iPc 34 43.00 -0.6
5.0s 2.90nm 3.5mb X
Z 16s 13.00um 6.0MszX
N 16s 10.00um
E 16s 6.00um
epP 34 55.00 43kmX
sP 35 01.00
PP 36 36.00
eS 41 38.00
WKYJ 47.49 46 P 34 44.20 0.0
TSRJ 48.44 44 P 34 51.40 0.0
MNDI 48.52 102 eP 34 54.00 1.4
BJA 48.79 301 iP 34 52.60 -1.6
0.8s 526.00nm 6.6mb
BEE 48.87 301 iP 34 53.40 -1.5
BBU 48.99 302 iP 34 54.20 -1.6
0.9s 928.00nm 6.8mb
PJG 49.07 75 eP 34 55.20 -1.3
GUA 49.10 76 eP 34 54.70 -2.1
1.2s 312.50nm 6.2mb
OIS 49.11 121 iPc 34 55.20 -1.6
1.0s 272.00nm 6.2mb
e 35 11.00 61kmX
e 35 44.00
e 41 54.00
DHR 49.29 302 iP+ 34 58.60 0.5
MDJ 50.11 31 Pc 35 04.30 0.2
Z 22s 10.28um 5.8Msz
N 17s 11.40um
S 42 12.00
MTMJ 50.25 44 P 35 05.20 -0.2
MAT 50.51 44 eP 35 05.00 -2.3
2.2s 653.85nm 6.3mb
Z 20s 12.41um 5.9Msz
eS 42 50.00
CHJJ 50.82 45 P 35 08.30 -1.3
NIIJ 51.40 44 P 35 12.20 -1.8
KAKJ 51.73 46 P 35 15.40 -1.1
RYD 51.87 298 iP+ 35 17.40 -0.5
LAT 51.88 102 eP 35 18.00 0.0
TEH 51.98 313 eP 35 18.00 -0.6
eS 43 04.00
IR4 52.11 313 iPc 35 18.00 -1.6
IR5 52.33 312 iPd 35 20.50 -0.8
IR1 52.34 313 iPc 35 21.90 0.5
IR7 52.53 313 iPc 35 22.00 -0.8
PMG 52.56 105 iPc 35 21.90 -1.2
0.9s 352.94nm 6.4mb
YAMJ 52.58 44 eP 35 22.00 -0.9
KMSA 52.79 293 iP+ 35 23.70 -1.2
AOMJ 53.99 41 eP 35 35.40 2.2
OFUJ 54.13 43 P 35 33.00 -1.3
KER 54.59 310 eP 35 36.00 -2.0
CTA 54.70 118 iPc+ 35 38.00 -0.8
1.3s 500.00nm 6.4mb
iS 43 15.00
OASM 54.91 299 eP 35 39.70 -0.7
MRRJ 55.40 39 P 35 42.90 -0.6
QLP 55.51 126 ePc 35 44.70 0.2
ADE 55.62 138 iPc 35 45.10 -0.2
1.0s 150.00nm 6.0mb
SLY 56.28 311 iPd 35 47.80 -2.2
ipP 36 06.50 73km
eS 43 30.00
ePS 44 01.50
eScS 45 25.00
e 46 04.00
BHD 56.31 308 iPd 35 50.50 0.3
isP 36 05.50
eS 43 34.00
e 46 41.00

			eSS	47	09.00		PRY		72.88	240	eP	37	36.70	-1.6				e	38	21.60	50kmX
TAB	56.64	314	eP	35	51.00	-1.7			0.6s		23.21nm			5.3mb				e	47	53.00	
AAE	57.15	278	eP	35	59.00	2.1					i	37	54.80	67kmX	BUD	78.42	318	iPc	38	09.00	0.0
ASAJ	57.25	38	P	35	56.00	-0.7	ISR	72.89	316	iPd		37	39.50	1.6		1.5s		166.50nm			5.8mb
KUSJ	58.06	40	eP	36	01.70	-0.7	VRI	72.92	317	iPc		37	38.00	0.0	LCI	78.46	310	Pc	38	08.40	-1.0
MSL	58.34	311	iPd	36	06.00	1.5	DIM	73.01	313	eP		37	36.00	-2.6X	SOD	78.61	338	iP	38	08.70	-1.0
			ePcP	37	12.50		VAM	73.02	306	eP		37	38.50	-0.2	SRO	78.93	318	iPc	38	12.60	0.8
			eS	44	02.50		KDZ	73.03	312	iPc		37	38.00	-0.7				i	38	27.70	53kmX
			ePS	44	32.00		BUC	73.05	315	ePc		37	42.00	3.3X				e(S)	48	36.30	
			eScS	45	52.00		SEK	73.08	239	iPc		37	39.30	-0.2	BRT	79.07	311	Pc	38	12.70	-0.1
CMS	58.93	130	iPc	36	08.20	-0.5		1.0s		100.00nm				5.7mb	KEV	79.22	341	iP	38	12.70	-0.3
			e	36	13.00	16kmX				i		38	01.80	86kmX		0.8s		127.60nm			5.9mb
RMQ	59.17	124	iPc	36	11.40	1.0	BUC1	73.09	315	ePc		37	40.00	1.1				i	38	30.90	66kmX
	0.8s		179.00nm			6.2mb	KSR	73.14	242	iPc		37	38.70	-1.2				e	48	06.00	
			e	36	16.00	15kmX		1.2s		90.00nm				5.6mb				e	48	40.00	
BFD	59.43	138	eP	36	12.50	0.5	PVL	73.37	314	iPc		37	41.00	0.4				e	53	18.00	
NAI	59.48	266	iPc	36	13.60	0.6	DZM	73.37	114	iPd		37	41.80	0.7				e	57	32.00	
TOO	61.63	137	iPc	36	27.70	0.6	MLR	73.38	316	ePd		37	40.50	-0.3	BLY	79.40	315	eP	38	15.30	0.8
			e	36	43.00	56kmX	RZN	73.55	312	iPc		37	41.00	-1.0	ROI	79.47	309	P	38	15.60	0.6
AYN	62.06	301	eP	36	30.00	-0.1	PLD	73.63	313	iPc		37	41.00	-1.1	GRI	79.53	309	P	38	16.10	0.7
BRS	62.83	123	iPd-	36	35.20	0.0	ATH	73.75	308	eP		37	42.00	-0.9	TDS	79.65	309	Pc	38	17.10	1.2
	1.0s		37.00nm			5.5mb				eS		47	06.00		SMY	79.66	37	eP	38	15.50	-0.1
Z	18s		35.00um			6.6Msz	OUR	73.88	311	eP		37	43.10	-0.5	CSI	79.69	310	P	38	17.30	1.1
			i	36	40.00	16kmX	PGB	74.10	313	iP		37	44.00	-0.9	SOI	79.78	308	P	38	16.90	0.3
			e	36	58.00		VLI	74.20	307	eP		37	43.00	-2.6X	ZST	79.78	318	iP	38	16.50	0.1
			eS	45	00.00		MMB	74.27	312	iPc		37	45.00	-0.9				i	38	32.20	56kmX
BADA	62.85	300	eP	36	35.67	0.4	PLG	74.30	311	eP		37	45.00	-1.1	CZI	79.78	309	P	38	17.00	0.4
MASJ	62.91	304	Pc	36	35.00	-0.8	PVC	74.33	110	iP		37	48.00	1.4	HVAR	79.81	313	iPd	38	15.60	-1.1
HOL	62.95	301	iP+	36	36.00	0.0	DRA	74.40	315	ePd		37	46.00	-0.5	POF	79.89	239	P-	38	25.00	7.6X
BURJ	62.95	304	P	36	36.00	-0.1	SOH	74.43	311	eP		37	45.80	-1.1		1.3s		57.69nm			5.4mb
KFNJ	62.97	304	Pd	36	36.30	0.3	BLF	74.50	239	iPc		37	45.00	-2.6	MSZ	79.92	136	P	38	17.00	-0.2
SALJ	63.00	304	Pc	36	36.50	0.2		1.0s		64.00nm				5.5mb				ePP	41	34.00	
CAN	63.04	133	iPc	36	36.20	-0.3	KKB	74.79	312	iPc		37	48.00	-0.9	MMN	79.93	310	P	38	17.80	0.4
			i	36	50.20	50kmX	VTS	74.80	313	iPc		37	48.00	-1.2	GMB	79.93	308	P	38	18.90	1.2
SHMJ	63.10	305	Pd	36	37.20	0.3	AGG	74.96	309	eP		37	48.10	-1.9	SOP	80.10	318	iPc	38	18.50	0.4
DSI	63.15	303	eP	36	38.50	1.3	ITM	75.06	307	eP		37	49.50	-1.1	MSI	80.18	308	P	38	19.60	0.9
MBH	63.20	301	ePc	36	38.00	0.4	VAY	75.09	312	iPc		37	48.80	-1.8	ATN	80.25	308	Pd	38	19.00	-0.2
PRNI	63.22	302	iPc	36	38.50	0.7		1.2s		0.31nm				3.1mb X	MGR	80.28	310	P	38	19.00	-0.3
COO	63.28	127	eP	36	39.00	0.9				i		38	01.20	42kmX	VKA	80.31	318	ePc	38	20.00	0.7
CNB	63.30	133	iPc	36	38.20	0.0	GRG	75.16	311	eP		37	50.00	-1.1		1.7s		812.00nm			6.4mb
AMAN	63.94	295	iPc	36	44.00	1.5	BMR	75.45	318	ePd		37	53.00	0.5				i	38	37.50	63kmX
AGAL	63.98	294	eP	36	45.00	2.2	KZN	75.55	311	eP		37	51.40	-2.0				e(S)	48	20.00	
ASW	64.00	295	iPd	36	44.00	1.0	SKO	76.02	312	iPc		37	53.70	-2.2				e	48	49.50	
			eS	45	16.00			1.0s		92.00nm				5.7mb	ZAG	80.34	316	iPc	38	20.00	0.6
AKRL	64.11	294	iPd	36	45.00	1.4	Z	20s		2.52um				5.5Msz	PTJ	80.36	316	iPc	38	14.70	-5.0X
AGMR	64.25	294	iPd	36	45.50	0.9	N	17s		2.43um					SGO	80.49	310	P	38	20.70	0.4
HNR	64.98	102	eP	36	38.00	-11.4X	E	18s		17.38um					KSP	80.56	321	iPc	38	20.50	0.0
KVT	65.13	314	iP	36	48.50	-1.6				i		37	59.00	17kmX		1.1s		216.00nm			6.0mb
LFK	65.49	307	eP	36	52.90	0.4				i		38	05.20					i	38	36.20	56kmX
CSS	65.58	307	eP	36	52.50	-0.5				iPcP		38	10.30		PZI	80.64	307	P	38	21.97	0.7
KOT	65.83	301	eP	36	54.00	-0.7				iS		47	30.00			0.8s		240.60nm			6.2mb
HLW	66.24	301	eP	36	57.50	0.2				iScS		47	55.00		VBY	80.82	315	iPc	38	22.40	0.4
			eS	45	34.00					iSS		52	28.00		MNO	80.84	308	P	38	24.00	1.4
KAS	66.86	314	eP	37	00.50	-0.7				iSSS		56	25.00		UPP	80.87	330	iP	38	21.50	-0.4
BBTK	67.19	312	iPc+	37	02.00	-1.4				LR		14	22.00			0.9s		100.00nm			5.8mb
BCK	68.29	309	iP	37	08.70	-1.5	CEI	76.14	318	eP		38	08.00	11.6X	BSS	80.88	311	P	38	22.50	0.1
ELL	68.68	308	eP	37	12.10	-0.6	VLS	76.22	308	eP		37	55.40	-1.7	CER	81.16	236	eP	38	25.70	1.6
KSL	68.81	307	eP	37	11.80	-1.6	OHR	76.39	311	iPc		37	56.00	-2.0		0.8s		43.75nm			5.5mb
GPA	69.13	312	eP	37	13.50	-1.8		0.9s		0.19nm				3.1mb X				i	38	49.10	88kmX
KHL	69.30	310	eP	37	13.00	-3.4X				i		38	14.60	68kmX	DUI	81.18	311	Pd	38	24.20	0.1
GBZT	69.88	312	eP	37	18.50	-1.3				eS		47	24.20		LJU	81.36	316	ePc	38	25.00	0.2
YLV	69.88	312	iP	37	18.70	-1.3	BZS	76.39	316	eP		37	57.50	-0.4				eSKS	48	30.00	
ARG	69.99	307	eP	37	18.70	-1.9	TIM	76.68	316	iPc		38	00.00	0.5	GIB	81.37	308	P	38	24.50	-0.7
ISK	70.22	312	eP	37	19.00	-2.9X	BEO	77.10	315	eP		38	02.70	0.9	CEY	81.42	316	iPc	38	25.00	-0.2
DST	70.24	311	iP	37	20.70	-1.4	BCAO	77.33	274	iPc		38	04.20	0.4	RIY	81.42	315	iPc	38	24.30	-0.8
BUL	70.37	247	iPd	37	38.70	15.4X		0.7s		69.00nm				5.8mb	PRU	81.61	320	Pc	38	26.20	0.2
	1.0s		31.00nm							i		39	34.90	403kmX		1.7s		139.70nm			5.7mb
KAP	70.64	306	eP	37	24.50	-0.1				i		41	14.40					e	38	44.50	66kmX
BNT	70.92	311	iP	37	24.70	-1.5	SUF	77.45	334	iP		38	02.30	-1.1	FAI	81.63	307	P	38	41.50	15.1X
EDC	70.97	311	iP	37	26.50	0.1		1.0s		90.50nm				5.8mb	SDI	81.67	311	Pc	38	25.90	-0.7
IZM	71.06	309	iP	37	26.50	-0.6	NUR	77.55	331	iP		38	03.00	-1.0	MCT	81.68	307	eP	38	27.80	0.9
SMG	71.27	308	eP	37	28.30	0.0		0.8s		93.90nm				5.9mb	KMR	81.75	318	iP+	38	26.80	0.0
DMK	71.34	313	iP	37	27.20	-1.5	Z	20s		8.60um				6.1Msz				i	38	49.80	86kmX
PSN	71.43	315	iPc	37	29.00	-0.2				i		38	22.20	71kmX	VOY	81.81	316	iPc	38	27.10	-0.2
TLB	71.74	316	ePc	37	30.80	-0.1				e		47	52.00					eSKS	48	22.40	
CFR	71.79	316	eP	37	31.00	-0.2				e		48	10.00		TRI	81.88	315	iPc	38	27.00	-0.5
NPS	71.86	306	eP	37	32.20	0.3				e		53	24.00		TRO	81.92	340	eP	38	27.50	0.3
SLR	71.90	241	iPc	37	32.00	-0.5				e		57	04.00		AZI	81.96	312	Pc	38	28.20	0.2
	0.9s		100.84nm			5.8mb				LR		15	10.00		AQU	82.00	312	P	38	28.70	0.4
Z	22s		54.44um			6.8Msz	SPC	77.83	319	iP		38	05.90	-0.1	BRG	82.05	321	iPc	38	28.50	0.2
PRK	71.97	310	eP	37	31.60	-0.8				i		38	21.30	55kmX		1.5s		270.00nm			6.1mb
EZN	72.03	311	iP	37	32.00	-0.8				e		41	18.40		Z	18e		3.50um			5.8Msz
APE	72.19	308	eP	37	31.60	-2.3	PSZ	77.89	318	iP		38	06.10	-0.1	N	18s		2.00um			
JMB	72.33	313	iPc	37	34.00	-0.5	KRA	78.15	320	iPc		38	07.20	-0.3	E	18s		3.00um			
BIR	72.40	317	eP	37	36.00	1.2		0.9s		102.00nm				5.8mb				ipP	38	43.60	53km)
BRD	72.62	317	eP	37	37.50	1.3	Z	24s		2.50um				5.5MszX				iSKS	48	44.00	
CLI	72.69	318	iPc	37	37.00	0.4	E	24s		4.00um								iS	49	00.00	

22d 17h

KHC		82.18	319	iPc	38	29.40	0.3	FEL	85.86	318	eP	38	49.76	1.9	CAF	90.14	315	iPc	39	09.50	1.2
		1.0s		53.50nm			5.5mb	ORX	85.93	315	Pc	38	46.71	-1.6		1.8s		181.20nm			6.1mb
	Z	19s		1.80um			5.5Msz	ORO	85.93	315	Pd	38	46.70	-1.6	LSF	90.38	316	iPc	39	10.00	0.6
	N	19s		2.20um				MMK	85.93	316	eP	38	48.70	0.3		1.6s		189.00nm			6.2mb
	E	19s		1.30um				IMI	86.04	314	Pc	38	48.66	-0.1	RJF	90.49	315	iPc	39	11.20	1.3
				e	49	12.70		ROB	86.04	314	Pc	38	48.45	-0.3		1.8s		293.40nm			6.3mb
KBA		82.23	317	iPc	38	27.70	-1.9	GWF	86.10	319	P	38	47.50	-1.4	LPO	90.79	315	iPc	39	12.60	1.3
		1.0s		109.00nm			5.8mb	ABH	86.12	320	eP	38	49.19	0.2		1.6s		273.60nm			6.4mb
				i	38	41.20	46kmX	BLS2	86.26	329	eP	38	50.50	0.9	LFF	91.08	315	iPc	39	13.90	1.3
				e	41	44.00		SAOF	86.28	314	P	38	50.18	0.3		1.8s		300.30nm			6.4mb
				e(S)	48	38.00		WLS	86.29	318	P	38	48.00	-1.9	LDF	91.23	319	eP	39	13.80	0.6
				e	48	58.00		DIX	86.32	316	ePc	38	51.00	0.6		1.0s		96.00nm			6.2mb
				e	50	14.50		CDF	86.34	318	iPc	38	50.20	0.0	FLN	91.44	319	iPc	39	14.80	0.6
ARV		82.38	313	Pc	38	30.80	0.6		1.0s		29.60nm			5.5mb		1.0s		100.00nm			6.2mb
RDP		82.49	311	P	38	31.00	0.1	ENR	86.37	314	P	38	49.27	-1.1	MFF	91.50	317	iPc	39	15.20	0.7
RMP		82.50	311	P	38	30.80	-0.1	SBF	86.37	314	iPc	38	50.80	0.4		1.0s		88.00nm			6.1mb
MNS		82.54	312	Pd	38	30.40	-0.7	AUTN	86.37	314	P	38	51.10	0.5	EPF	91.59	313	eP	39	15.20	0.2
BRL		82.55	322	eP	38	32.00	1.2	REVF	86.42	313	P	38	51.09	0.5		1.6s		55.90nm			5.7mb
ASS		82.57	313	P	38	30.90	-0.4	STV	86.44	314	Pc	38	49.17	-1.6	EBR	91.73	311	iP	39	17.00	1.4
BHG		82.58	317	eP	38	30.80	-0.4	RUP	86.44	319	eP	38	51.15	0.6	DAG	91.78	348	iPc	39	14.20	-1.0
		1.7s		407.00nm			6.2mb	AURF	86.45	314	P	38	51.26	0.5		0.6s		38.00nm			6.0mb
FVI		82.60	316	P	38	44.70	13.5X	RSP	86.46	315	P	38	48.55	-2.3	BRW	91.79	18	eP	39	15.70	0.4
WET		82.64	319	iPc	38	31.60	0.1	DOI	86.49	314	P	38	49.80	-1.2	EROO	91.79	311	eP	39	17.30	1.4
		1.7s		339.00nm			6.1mb	TOUF	86.50	314	P	38	51.52	0.3	LPF	91.91	318	iPc	39	17.20	0.9
CLL		82.67	321	iPc	38	31.20	-0.3	LSD	86.52	315	Pc	38	51.12	-0.2		1.1s		122.00nm			6.2mb
		1.7s		120.00nm			5.7mb	WTS	86.53	322	iPc	38	51.80	1.0	EKA	92.09	326	P	39	18.00	1.0
				i	38	46.90	55kmX		0.9s		203.00nm			6.4mb		1.1s		47.20nm			5.8mb
				eS	48	41.00					e	39	06.00	48kmX	JAU	92.10	313	P	39	18.91	1.4
LVI		82.71	308	P	38	32.20	0.2	MVIF	86.57	314	P	38	51.68	0.2	OGE	92.16	313	P	39	18.16	0.5
RSM		82.74	314	Pc	38	33.30	1.3	HYA	86.58	331	iP	38	51.70	0.8	ESCF	92.24	313	P	39	19.34	1.3
HFS		82.86	330	eP	38	31.70	-0.6	PZZ	86.59	314	P	38	49.58	-2.0	LHE	92.30	313	P	39	19.37	1.0
		1.1s		113.80nm			5.8mb	WIT	86.59	323	iPc	38	52.40	1.3	ATE	92.34	313	P	39	18.66	0.2
	Z	19s		2.88um			5.7Msz				e	39	05.50	44kmX	ISSF	92.41	313	P	39	20.25	1.3
				LR	08	48.00		EMS	86.65	316	ePc	38	52.20	0.3	MADF	92.41	313	P	39	19.45	0.6
CRE		83.10	313	Pd	38	33.70	-0.4	LOMF	86.68	317	P	38	51.00	-0.8	ELYF	92.54	313	P	39	20.05	0.7
SFI		83.18	314	Pc	38	35.70	1.4	BSF	86.68	318	iPc	38	51.60	-0.3	BOH	92.56	313	P	39	20.51	0.9
COP		83.23	325	iPd	38	52.20	17.9X		1.0s		40.00nm			5.6mb	ETOR	93.65	311	eP	39	26.00	1.4
		0.8s		173.13nm				CALN	86.77	313	P	38	53.04	0.6	ECRI	93.72	313	eP	39	26.70	1.8
PGD		83.27	314	iPc	38	36.00	1.0	RRL	86.80	315	Pc	38	51.84	-0.8	SPA	93.86	180	eP	39	27.10	2.0
HOF		83.34	320	eP	38	35.00	0.0	LPG	86.80	315	iPc	38	53.00	0.2		1.1s		19.05nm			5.4mb
CTI		83.37	316	Pc	38	35.50	0.1		1.0s		125.00nm			6.1mb		Z 20s		16.89um			6.5Msz
MOX		83.51	320	iPc	38	36.00	0.1	FOUF	86.82	314	ePc	38	53.04	0.6	EVIA	94.30	309	eP	39	28.80	1.1
		1.8s		168.00nm			5.8mb	BNI	86.87	315	P	38	52.70	-0.2	ENIJ	94.32	307	eP	39	29.50	1.8
	Z	20s		2.90um			5.7Msz	FRF	86.95	313	iPc	38	53.50	0.4	ETA	94.36	323	eP	39	47.00	19.5X
	N	24s		2.60um					1.6s		310.90nm			6.3mb	DLE	94.43	324	eP	39	43.90	16.1X
	E	20s		1.70um				HAU	86.98	318	iPc	38	53.20	0.0	DMU	94.51	325	eP	39	44.00	15.8X
				e	49	00.00			0.8s		65.50nm			5.9mb	IMA	94.54	23	ePc	39	28.60	0.3
FIR		83.61	313	iPc	38	37.00	0.5	BER	87.03	330	eP	38	52.50	-0.6		1.6s		116.90nm			6.1mb
				iS	48	53.00		LMR	87.06	313	iPc	38	54.10	0.4	ECP	94.57	323	eP	39	46.50	18.1X
MAO		83.67	312	Pc	38	37.00	0.2		1.5s		125.30nm			5.9mb		1.0s		197.00nm			
FUR		83.67	318	eP	38	36.50	-0.3	MEM	87.09	320	Pc	38	53.70	0.1	TTA	94.61	26	ePc	39	28.90	0.3
GRF		83.74	319	ePc	38	37.70	0.6				e	39	10.10	57kmX	ECB	94.77	323	eP	39	45.00	15.6X
		2.3s		578.00nm			6.2mb	ENN	87.13	321	ePc	38	54.00	0.2		1.6s		235.00nm			
	Z	20s		3.00um			5.7Msz		1.3s		140.00nm			6.0mb	DCN	94.85	324	eP	39	39.60	9.9X
				e	38	44.70	22kmX				e	39	08.00	47kmX	GUD	95.25	311	eP	39	33.20	1.1
				e	38	52.70					e	42	35.00		TOL	95.30	310	eP	39	33.00	0.9
OGA		83.82	317	iPc	38	37.50	-0.3	LRG	87.17	313	iPc	38	55.00	0.9				eSKS	50	22.00	
		1.0s		147.00nm			6.0mb		1.2s		166.60nm			6.1mb				iS	50	53.00	
MRW		84.00	132	P	38	36.00	-2.5	DOU	88.02	320	P	38	58.70	0.6				eSS	57	20.00	
MME		84.01	314	P	38	39.60	0.7				i	39	16.00	61kmX	AFC	95.32	308	eP	39	32.70	0.2
SNZO		84.02	132	P	38	36.00	-2.5	UCC	88.12	321	P	39	03.00	4.4X	EBAN	95.37	309	eP	39	33.60	1.1
				PP	42	00.00					e	39	23.00	72kmX	ASMO	95.47	308	iPc	39	33.00	-0.1
				S	48	44.00					e	39	30.00		APHE	95.49	308	iPd	39	34.00	0.8
MBU		84.08	107	iP	38	42.30	2.9X	SNF	88.19	320	Pc	38	59.40	0.5	ACHM	95.57	308	eP	39	35.50	2.0
BDI		84.09	314	Pd	38	38.50	-0.5				e	39	15.00	54kmX	ATEJ	95.75	308	iPc	39	33.00	-1.5
PII		84.14	313	P	38	38.20	-0.9	LBF	88.64	317	iPc	39	01.40	0.2	AAPN	95.77	308	iPd	39	34.00	-0.5
NB2		84.14	331	P	38	38.30	-0.6	VNDA	88.65	169	eP	39	00.40	-0.2	ALOJ	95.79	308	iPc	39	34.50	-0.1
		1.2s		144.60nm			5.9mb	LOR	88.70	317	iPc	39	01.80	0.3	EPRU	96.70	308	eP	39	39.00	0.4
SAL		84.15	315	Pc	38	40.00	0.9		1.4s		163.30nm			6.1mb	EJIF	96.98	307	eP	39	40.80	1.0
OSS		84.42	316	ePc	38	41.10	0.3	SMF	88.76	316	iPc	39	01.90	0.1	NKM	97.11	306	iP	39	41.00	0.6
RGS		84.59	333	iP	38	41.00	0.0	SSF	88.95	317	iPc	39	03.20	0.5				i	39	50.00	28kmX
MDI		84.72	315	Pd	38	42.30	0.3		1.6s		182.80nm			6.2mb	IFR	97.20	304	iPd	39	43.00	1.9
VDL		84.88	316	ePc	38	43.30	0.2	PLDF	88.96	316	P	39	02.93	0.1				i	39	56.50	45kmX
BOB		84.91	314	Pd	38	43.50	0.4	AVF	89.08	317	iPc	39	03.60	0.3				i	43	54.50	
SAX		84.97	317	eP+	38	43.90	0.3		1.6s		174.10nm			6.1mb	MBC	97.42	8	ePc	39	40.50	-0.5
KBS		85.09	349	eP	38	42.50	-0.8	GRC	89.23	317	P	39	04.87	0.9		1.0s		46.00nm			6.0mb
LLS		85.21	317	ePc	38	44.70	0.0	LBL	89.28	315	P	39	05.27	1.1	PMR	98.09	26	P	39	43.10	-1.2
ADK		85.25	38	eP	38	44.50	0.0	AGO	89.29	316	P	39	05.06	0.7		Z 20s		7.50um			6.2Msz
PGF		85.26	312	iPc	38	45.50	0.5	PYM	89.41	316	P	39	05.24	0.3	PME	98.12	26	ePc	39	43.50	-0.9
TMA		85.30	316	ePc	38	44.70	-0.5	BGF	89.45	316	iPc	39	05.80	0.8	TOA	99.14	25	eP	39	50.00	0.8
TOD		85.31	319	eP	38	44.85	-0.1	MAF	89.67	316	iPc	39	06.80	0.7	INK	100.24	17	ePdiff	39	53.00	-0.8
VAI		85.37	316	Pc	38	44.60	-0.7		1.2s		51.70nm			5.7mb	KIC	100.32	277	Pdiff	39	55.80	0.4
SLE		85.54	317	ePc	38	46.10	0.0	SBA	89.76	168	(P)	39	06.90	1.1	TIC	100.57	277	Pdiff	39	56.80	0.2
PCP		85.56	314	Pc	38	45.58	-0.8	ETER	89.81	312	e(P)	39	08.00	1.2	LIC	100.61	277	Pdiff	39	56.90	0.2
ZLA		85.61	317	ePc	38	46.60	0.0	TCF	89.91	316	iPc	39	07.90	0.7		Z 20s		4.25um			6.0Msz
CKI		85.75	314	P	38	47.10	-0.1		1.6s		143.00nm			6.0mb	EDM	117.95	20	ePKP	44	54.00	-0.8
FIN		85.80	314	Pc	38	47.12	-0.4	ESEL	90.01	310	eP	39	09.80	2.0	PNT	118.63	26	iPKP	44	56.00	-0.2

```
        0.9s     35.00nm
FFC   119.70   12 ePKP   44 57.00   -1.0
        0.8s     10.00nm
SCH   119.80  349 ePKP   44 58.00   -0.2
SES   121.10   20 ePKP   45 02.00    1.1
LBFM  123.21   34 PKP    45 05.60    0.2
WDC   123.36   35 ePKPc  45 04.80   -0.7
                  e      45 10.80
                  i      45 24.40
                  ePP    46 48.20
MIN   124.05   34 e(PKP) 45 06.10   -1.0
                  e      45 35.80
LRM   124.39   24 ePKP   45 07.50   -0.2
ORV   124.64   35 ePKPc  45 07.40   -0.6
                  e      45 26.60
RSON  124.82    8 PKP    45 06.90   -1.1
      Z  20s      4.52um          6.1Msz
BRK   125.31   37 e(PKP) 45 09.40    0.1
BKS   125.32   37 ePKP   45 10.60    1.2
                  e      45 29.00
GCC   126.01   38 e(PKP) 45 12.20    1.4
MHC   126.03   37 e(PKP) 45 11.30    0.3
ARN   126.09   37 PKP    45 11.60    0.6
CMB   126.31   36 ePKPc  45 10.80   -0.6
                  e      45 30.30
                  e      45 51.50
                  e(PP)  47 02.80
PRS   126.85   38 ePKP   45 12.70    0.3
                  e      45 22.20
KVN   126.89   33 PKP    45 12.80    0.1
LLA   126.92   37 ePKP   45 12.50   -0.1
PRI   127.41   38 ePKPc  45 14.20    0.6
                  e      45 33.70
FRI   127.41   36 ePKPc  45 13.00   -0.4
                  e      45 32.80
CBM   127.52  346 PKP    45 12.60   -0.7
TNP   128.07   33 PKP    45 15.60    0.7
BW06  128.07   24 PKP    45 14.00   -0.8
SYP   128.89   39 ePKP   45 16.00   -0.5
RSSD  128.90   19 PKP    45 13.40   -2.9X
ABL   129.14   38 PKP    45 18.40    1.3
CLC   129.45   36 ePKP   45 16.00   -1.4
SBB   130.10   37 ePKP   45 19.00    0.3
PAS   130.25   38 ePKP   45 20.00    1.1
MWC   130.27   38 ePKP   45 19.00   -0.2
BNH   130.43  348 PKP    45 19.40    0.5
RVR   130.84   37 ePKP   45 20.00    0.0
PEC   131.04   37 PKP    45 21.60    1.1
RSNY  131.06  351 PKP    45 20.00   -0.1
PTN   131.10  352 PKP    45 20.00   -0.2
PLM   131.59   38 ePKP   45 22.00    0.3
                  e      48 42.00
                  e      49 09.00
BAR   132.17   38 ePKP   45 24.00    1.3
                  e      48 45.00
                  e      49 13.00
GOL   132.34   22 PKP    45 23.00   -0.1
      Z  20s      2.50um          5.9Msz
GLD   132.35   22 PKP    45 24.00    1.0
      Z  20s      3.50um          6.1Msz
GLA   133.02   36 ePKP   45 25.00    0.7
                  e      47 53.00
                  e      49 12.00
PRIN  135.16  350 PKP    45 27.70   -0.3
ANMO  135.94   27 PKP    45 31.40    1.4
ALQ   135.94   27 ePKP   45 14.00  -16.0X
        1.0s     47.50nm
      Z  22s      2.78um          5.9Msz
                  pP     48 58.00
BAO   142.81  249 ePKP   45 38.50   -4.3X
ITB7  144.47  231 e(PKP) 45 38.70   -6.6X
ITB   144.67  231 e(PKP) 45 43.90   -1.7
ITB1  144.89  231 e(PKP) 45 45.10   -0.9
MZX   145.25   38 (PKP)  45 46.00   -0.6
RFA   146.09  203 ePKPd  45 48.00    0.1
TCA   147.20  211 ePKPc  45 50.10    0.4
PCH   147.89  201 iPKPd  45 53.90    3.1X
LNV   147.90  200 iPKPd  45 53.50    2.9X
TACH  148.01  201 iPKPd  45 53.60    2.7X
FCH   148.07  202 iPKPd  45 54.50    3.1X
SAN   148.09  201 ePKP   45 54.50    3.5X
ROCH  148.65  201 ePKPd  45 55.70    3.5X
AGX   148.69   34 (PKP)  45 58.50    6.3X
CFA   148.74  206 ePKPd  45 52.50    0.3
RTLL  149.08  206 ePKPd  45 56.70    4.0X
RTBS  149.21  205 ePKPc  45 57.70    4.9X
DEG   149.79  312 ePKP   45 58.50    4.4X
CYA   150.11  213 ePKPd  45 55.00    0.7
PAG   150.43  313 ePKP   46 00.00    4.9X
RTRS  150.51  206 ePKPd  45 56.30    1.6
BBL   150.60  312 ePKP   46 00.50    5.2X
MRX   151.04   35 (PKP)  46 03.50    7.7X
IIJ   151.84   33 (PKP)  46 04.50    6.8X
CRX   152.13   33 (PKP)  46 01.50    3.6X
PPM   152.98   32 (PKP)  46 04.50    5.1X
III   153.08   34 (PKP)  46 06.00    6.9X
ACX   154.04   37 (PKP)  46 04.00    3.8X
OXX   155.62   31 (PKP)  46 05.00    2.4X
LLAV  157.79  310 iPKP   46 06.00    0.7
CAR   157.86  310 iPKP   46 04.00   -1.4
CCH   158.02  231 PKP    46 06.90    1.1
                  e      46 25.00
PLAV  158.70  310 ePKP   46 07.70    1.2
FISA  159.11  316 iPKP   46 08.00    1.3
CNCB  159.77  229 PKP    46 10.00    2.0
                  S      50 55.00
CEOS  159.87  310 iPKP   46 08.30    0.7
LPB   160.03  230 PKP    46 09.50    1.4
        1.2s    109.38nm
      Z  22s     14.81um
                  PKS    50 43.00
                  LR     42 38.00
ZOBO  160.21  230 PKPc   46 09.00    0.5
        1.7s    149.71nm
                  SKS    57 24.00
                  LR     42 04.00
TOV   160.45  314 ePKP   46 07.00   -1.2
SDV   161.67  314 ePKP   46 08.90   -0.7
ARE   162.54  223 ePKP   46 12.00    1.5
UPA   166.50  341 iPKPc  46 04.00   -9.7X
        1.0s     40.00nm
      Z  20s      6.74um
NNA   169.34  221 iPKP   46 16.00    0.3
        0.9s     10.92nm
      Z  20s      1.60um
PSO   171.72  307 ePKP   46 19.50    2.1
      S.D. = 1.0  on 494 of 548 obs.
-------------------------------------------
    JAN  22, 1990  18h 41m 37.41± 2.33s
    1.519 S ±11.4km  150.980 E ±14.5km
    DEPTH =  45.0 ± 21.9 km
 NEW IRELAND REGION                 (190)

RAB     2.91  156 e(P)   42 22.00   -0.4
LAT     6.46  218 eP     43 18.00    5.5X
PMG     8.71  206 eP     43 45.50    1.7
WB5    24.43  221 eP     46 52.70   -0.6
WRA    24.50  221 Pc     46 52.80   -1.1
        0.8s    27.30nm          4.8mb X
DZM    25.37  145 iPd    47 02.20   -0.1
BRS    25.78  176 iPd    47 06.50    0.5
CAN    33.68  183 eP     48 15.80   -0.6
WARB   33.90  222 eP     48 16.50   -1.9
SSE    43.06  321 P      49 32.00   -2.7
        1.0s     0.02nm          1.7mb
XAN    53.01  316 P      50 52.20   -0.1
CHG    54.97  294 eP     51 07.50    0.7
CD2    55.24  310 P      51 08.20   -0.5
HHC    55.34  324 eP     51 09.00   -0.3
LZH    57.63  315 eP     51 26.00    0.2
        1.5s     0.02nm          2.0mb
GTA    62.03  317 eP     51 51.10   -4.8X
SHL    63.10  300 eP     52 02.00   -1.3
LSA    64.90  304 eP     52 18.20    2.8
GUN    68.89  301 P      52 41.20    0.7
PKI    69.21  300 P      52 42.80    0.3
KKN    69.38  300 P      52 43.60    0.3
DMN    69.48  300 P      52 44.60    0.6
GKN    69.98  300 P      52 47.20    0.3
WMQ    72.11  317 P      53 00.00    0.6
HYB    73.72  289 eP     53 01.50   -7.7X
POO    78.29  289 eP     54 01.00   26.0X
INK    86.07   21 eP     54 13.00   -1.3
ZOBO  137.54  116 ePKP   01 02.00    2.0
      S.D. = 1.3  on  24 of  28 obs.
-------------------------------------------
?  JAN  22, 1990  18h 49m 35.07± 2.02s
    11.538 N ±15.6km   92.341 E ±26.2km
    DEPTH =  33.0km  (normal)
    4.8mb (  1 obs.)
 ANDAMAN ISLANDS REGION             (703)

NNT     7.31   81 eP     51 22.70    0.4
                  e      52 51.20
BDT     8.59   48 eP     51 39.50   -0.6
LOE    10.80   56 eP     52 05.50   -5.1X
                  e      52 14.00
BJI    35.35   32 eP     56 30.00    0.5
WB5    51.83  127 eP     58 42.70    0.2
WRA    51.85  127 Pd     58 42.10   -0.5
        0.5s     5.60nm          4.8mb
      S.D. = 0.8  on   5 of   6 obs.
-------------------------------------------
?  JAN  22, 1990  19h 33m 49.32± 3.43s
    13.433 N ±49.2km   88.967 W ±37.3km
    DEPTH =  33.0km  (normal)
 EL SALVADOR                        ( 73)
      Felt (II) at San Salvador.

QZA     0.10  342 iPd    33 55.10    0.0
SJAS    0.30  320 iPd    33 57.40    0.2
SSS     0.33  318 eP     34 02.00    4.4X
                  eS     34 12.30
LFU     0.35  336 iPd    33 57.00   -0.7
VSS     0.41  319 iPc    33 59.00    0.3
TME     0.69  327 iPd    34 03.70    1.0
YPE     0.97  315 iPd    34 06.10   -0.8
CUSS    1.06  297 eP     34 05.80   -2.2X
                  eS     34 22.40
      S.D. = 0.9  on   6 of   8 obs.
-------------------------------------------
%  JAN  22, 1990  19h 52m 30.65± 1.86s
    38.002 N ±13.0km    6.527 W ±15.9km
    DEPTH =  10.0km  (geophysicist)
 SPAIN                              (377)
      mbLg 3.3 (MDD).

EVAL    0.45  203 iP     52 38.90   -0.9
                  eS     52 43.20
EHOR    1.03  100 ePg    52 49.30   -0.8
                  eSg    53 01.50
EPRU    1.46  135 ePg    52 58.00    0.9
                  eSg    53 14.60
EJIF    1.76  151 ePn    53 02.80    1.4
                  eSn    53 22.00
EPLA    2.09    9 ePg    53 12.30    6.1X
                  eSg    53 38.90
EBAN    2.17   85 ePn    53 07.00   -0.3
                  eSn    53 33.00
TOL     2.69   45 ePg    53 16.00    1.2
                  eSn    53 42.00
                  eSg    53 59.00
GUD     3.22   34 ePg    53 34.00   11.7X
                  eSg    54 13.20
EVIA    3.23   77 ePn    53 21.00   -1.4
                  eSn    53 58.60
      S.D. = 1.4  on   7 of   9 obs.
-------------------------------------------
&  JAN  22, 1990  20h 37m 07.85s
    58.973 N          154.370 W
    DEPTH = 124.0km
 ALASKA PENINSULA                   ( 12)
      <AGS-P>.

PDB     0.82    6 iP     37 27.92   -0.9
                  eS     37 43.55
KDC     1.58  140 eP     37 36.40   -0.4
RED     1.66   29 iP     37 36.80   -1.1
                  eS     37 59.65
RDT     1.89   31 iP     37 39.34   -1.3
NNL     1.90   54 eP     37 40.55   -0.1
SVW     2.23  344 eP     37 43.30   -1.6
NKA     2.38   40 eP     37 47.53    0.8
CKL     2.45   24 iP     37 46.45   -1.4
SPU     2.50   27 iP     37 46.72   -1.7
                  eS     38 17.38
BGL     2.50   22 eP     37 47.26   -1.2
CRP     2.55   25 eP     37 47.82   -1.4
SLKM    2.60   52 eP     37 48.48   -1.3
                  eS     38 19.07
NCG     2.68   23 eP     37 49.44   -1.3
SEW     2.75   64 eP     37 50.32   -1.3
                  eS     38 21.79
SUA     3.09   34 eP     37 54.28   -1.9
                  eS     38 29.85
PMS     3.31   45 eP     37 56.80   -2.3
PWA     3.49   38 eP     37 59.17   -2.3
PLRM    3.70   43 eP     38 00.93   -3.3
PMR     3.70   43 eP     38 00.80   -3.5
GHO     3.90   42 eP     38 03.64   -3.4
CUT     3.99   29 eP     38 05.35   -2.8
```

22d 20h

TTA	4.05	349	eP	38	06.70	-2.4
NCA	4.81	48	eP	38	15.99	-3.3
KLU	4.91	55	eP	38	17.69	-3.0
TOA	5.12	49	ePc	38	20.90	-2.7
RND	5.19	29	eP	38	20.80	-3.7
GLB	5.82	60	eP	38	30.07	-3.0
PAX	5.90	43	eP	38	30.78	-3.5
DDM	6.32	37	eP	38	37.86	-2.2
BALM	6.38	66	eP	38	38.34	-2.4
CCB	6.48	26	eP	38	37.35	-4.8
HDA	6.49	30	iP	38	38.03	-4.2
FBA	6.71	25	eP	38	41.10	-4.0
GLM	6.87	26	eP	38	42.97	-4.4

34 obs. associated

& JAN 22, 1990 21h 02m 10.87s
61.278 N 149.923 W
DEPTH = 38.4km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.6 (PMR). Felt (III) at Eagle River and Peters Creek; (II) at Anchorage, Butte and Palmer.

PMS	0.18	101	iPc	02	18.10	0.2
PWA	0.37	3	iPd	02	19.40	-0.5
SUA	0.44	296	iP	02	20.60	-0.2
			eS	02	29.14	
PLRM	0.49	50	iP	02	20.60	-0.8
			iS	02	28.57	
PMR	0.49	50	iPd	02	20.60	-0.8
PME	0.55	50	iP	02	21.61	-0.7
GHO	0.69	44	iP	02	23.45	-0.8
			eS	02	33.54	
SLKM	0.79	191	iP	02	24.61	-1.0
NKA	0.84	231	eP	02	27.26	1.0
SPU	1.04	266	eP	02	28.13	-1.0
			eS	02	42.80	
CRP	1.08	270	eP	02	29.32	-0.5
			eS	02	43.39	
NCG	1.08	278	iP	02	29.75	-0.1
CUT	1.14	352	iP	02	30.16	-0.4
			eS	02	44.96	
CKL	1.17	267	eP	02	30.63	-0.5
BGL	1.19	270	eP	02	31.09	-0.3
			eS	02	47.84	
SEW	1.20	169	eP	02	30.15	-1.3
			eS	02	47.21	
RDT	1.40	241	eP	02	33.75	-0.6
			eS	02	52.24	
NNL	1.41	209	eP	02	34.56	0.1
RED	1.64	240	eP	02	37.25	-0.5
			eS	02	57.96	
NCA	1.64	63	eP	02	37.44	-0.4
			eS	02	59.29	
HUR	1.71	4	eP	02	38.61	-0.1
			eS	03	00.82	
CNPM	1.88	201	iP	02	40.02	-1.1
			eS	03	04.71	
KLU	1.94	82	eP	02	41.03	-1.1
			eS	03	04.27	
TOA	1.97	63	eP	02	42.60	0.0
RND	2.19	13	eP	02	44.87	-0.9
MCK	2.51	10	eP	02	49.96	-0.1
PDB	2.59	237	eP	02	49.85	-1.4
PAX	2.70	49	eP	02	52.96	0.1
SVW	2.76	269	iPc	02	52.70	-1.1
GLB	2.95	84	eP	02	54.39	-2.0
CDD	3.00	220	eP	02	55.89	-1.3
TTA	3.31	303	iPc	03	00.20	-1.3
WRH	3.31	14	eP	03	01.11	-0.4
HDA	3.42	22	eP	03	03.20	0.1
CCB	3.52	15	eP	03	03.14	-1.3
BALM	3.68	90	eP	03	04.70	-2.2
FBA	3.76	14	eP	03	07.80	-0.1
KDC	3.78	201	eP	03	06.50	-1.5
IMA	5.09	342	eP	03	24.40	-2.4
INK	9.90	38	eP	04	33.00	-0.6

40 obs. associated

? JAN 22, 1990 21h 32m 49.29± 0.93s
37.693 N ± 9.4km 3.930 W ± 9.8km
DEPTH = 33.0km (normal)
SPAIN (377)
mbLg 2.6 (MDD).

EBAN	0.48	14	IP	32	59.80	0.1
			eS	33	07.00	
AFC	0.54	145	ePg	33	00.60	0.0
			eSg	33	08.50	
EHOR	1.05	277	ePg	33	07.70	0.0
			eSg	33	21.40	
EVIA	1.47	50	ePn	33	13.70	-0.1
			eSn	33	32.20	
GUD	2.95	357	ePg	33	48.00	13.0X
			eSg	34	21.00	

S.D. = 0.1 on 4 of 5 obs.

% JAN 22, 1990 23h 13m 57.44± 1.06s
35.966 N ±20.2km 52.390 E ± 9.4km
DEPTH = 33.0km (normal)
IRAN (348)

IR4	1.41	240	eP	14	22.00	0.8
IR7	1.47	260	eP	14	23.50	1.5
IR1	1.49	249	iPc	14	21.00	-1.3
IR5	1.65	244	eP	14	24.00	-0.7
KER	4.62	251	eP	15	25.00	18.1X
TAB	5.29	295	eP	15	16.00	-0.3
MAIO	5.76	85	ePn	15	23.00	0.0
			eSn	16	33.00	

S.D. = 1.3 on 6 of 7 obs.

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* JAN 22, 1990 23h 26m 59.99± 1.22s
39.967 N ±12.3km 30.477 E ± 9.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

GPA	0.35	338	iPg	27	06.40	-0.8
YLV	1.04	306	iPn	27	19.00	-0.6
HRT	1.05	324	ePn	27	19.50	-0.4
GBZT	1.14	317	ePn	27	22.00	0.7
			iSg	27	40.00	
DST	1.47	256	iPn	27	24.80	-1.8
ISK	1.54	316	ePn	27	27.80	0.3
BBTK	1.76	93	eP	27	31.00	0.2
			eS	27	56.00	
BNT	2.00	282	ePn	27	36.50	2.3
EDC	2.04	282	ePn	27	37.50	2.8X

S.D. = 1.4 on 8 of 9 obs.

& JAN 22, 1990 23h 45m 41.39s
62.569 N 151.308 W
DEPTH = 93.7km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.51	108	iP	45	56.68	-0.1
			eS	46	08.25	
HUR	0.87	61	eP	45	59.97	-0.3
			eS	46	13.91	
PWA	1.14	143	eP	46	03.30	0.1
SUA	1.14	166	eP	46	03.12	-0.3
			eS	46	20.59	
NCG	1.24	199	eP	46	04.02	-0.5
			eS	46	21.24	
GHO	1.38	125	eP	46	06.20	0.0
			eS	46	25.94	
RND	1.40	52	iP	46	06.15	-0.4
			eS	46	24.65	
BGL	1.41	202	eP	46	06.77	0.1
PLRM	1.42	133	eP	46	06.25	-0.4
SPU	1.44	195	iP	46	06.52	-0.4
			eS	46	26.12	
CKL	1.46	200	iP	46	07.25	-0.1
PMS	1.57	147	eP	46	08.11	-0.5
RDT	2.07	195	eP	46	14.98	-0.3
SEW	2.63	159	eP	46	25.93	3.2
RDS	2.67	30	eP	46	22.55	-0.7
HDA	2.69	45	eP	46	22.86	-0.6
PAX	2.72	79	eP	46	23.66	-0.3
GLM	2.99	34	eP	46	26.66	-1.0
CNPM	3.05	179	eP	46	29.09	0.5

19 obs. associated

JAN 23, 1990 00h 41m 05.79± 0.66s
42.523 N ± 5.1km 71.544 W ± 8.7km
DEPTH = 5.0km (geophysicist)
SOUTHERN NEW ENGLAND (476)
MD 2.5 (WES). mbLg 2.3 (NEIS). Felt (V) at Littleton; (IV) at Ayer, Concord, Nabnosset, Stow and Westford; (III) at Fitchburg, North Billerica, Marlborough, Maynard and West Groton, Massachusetts. Felt in Middlesex and Worcester Counties, Massachusetts.

WES	0.21	130	P	41	10.30	0.1
FLR	0.86	159	P	41	22.70	-0.2
MD2	1.19	214	P	41	28.50	0.0
HNH	1.30	336	P	41	30.50	0.2
TRM	1.97	28	P	41	40.40	0.2
BNH	2.08	6	eP	41	41.30	-0.4
PRIN	3.21	229	eP	41	53.50	-4.4X
PTN	3.23	311	eP	41	47.00	-11.2X

S.D. = 0.3 on 6 of 8 obs.

& JAN 23, 1990 01h 00m 04.09s
61.578 N 146.307 W
DEPTH = 33.1km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.20	115	iP	00	10.36	-0.5
			eS	00	15.34	
NCA	0.48	330	eP	00	13.48	-1.1
			eS	00	22.04	
TOA	0.53	7	iP	00	14.71	-0.5
			eS	00	23.37	
CVA	1.07	165	eP	00	21.67	-1.1
			eS	00	37.25	
HIN	1.19	185	iP	00	23.53	-1.0
			eS	00	40.26	
GLB	1.20	95	iP	00	23.34	-1.4
SGAM	1.21	153	iP	00	23.54	-1.2
			eS	00	39.28	
GHO	1.26	280	eP	00	24.24	-1.4
			eS	00	40.70	
PME	1.30	273	eP	00	25.18	-0.9
			eS	00	42.71	
PLRM	1.35	272	eP	00	25.89	-0.9
			eS	00	43.46	
RAGM	1.44	146	eP	00	27.15	-0.9
			eS	00	47.59	
PAX	1.45	15	eP	00	27.47	-0.9
			eS	00	46.43	
PMS	1.60	259	eP	00	29.77	-0.7
			eS	00	50.34	
PWA	1.71	274	iP	00	31.37	-0.6
			eS	00	53.30	
BALM	1.99	104	eP	00	34.67	-1.5
CUT	2.05	296	eP	00	36.45	-0.4
			eS	01	01.91	
RND	2.18	328	eP	00	38.64	-0.2
SLKM	2.19	242	eP	00	37.95	-0.9
MCK	2.48	332	eP	00	43.06	0.0
HDA	2.85	354	eP	00	48.90	0.6
CCB	3.16	348	eP	00	51.06	-1.5

21 obs. associated

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* JAN 23, 1990 01h 15m 06.84± 1.44s
30.018 S ± 7.9km 72.025 W ±13.9km
DEPTH = 37.8 ± 18.6 km
4.6mb (2 obs.)
OFF COAST OF CENTRAL CHILE (134)

RTRS	2.23	95	ePc	15	43.20	1.1
RTBS	2.75	127	ePc	15	51.20	1.6
			(S)	16	31.00	
ROCH	3.07	164	iPd	15	53.50	-0.8
ZDN	3.26	119	eP	16	00.00	3.2X
RTLL	3.33	114	ePd	16	01.00	3.2X
LCCH	3.47	174	iPd	15	58.90	-0.8
RTCV	3.51	122	ePd	16	02.50	2.0
FCH	3.62	156	eP	16	04.00	1.8
SAN	3.62	162	eP	16	07.50	5.6X
CFA	3.62	117	ePd	16	03.20	1.2
TACH	3.74	166	eP	16	03.00	-0.6
MDZ	3.94	137	eP	16	20.40	13.9X
			i(S)	17	36.70	
LNV	3.96	173	eP	16	06.50	-0.2
CHCH	4.07	164	eP	16	08.00	-0.4
RFA	5.61	148	e(P)	16	29.60	-0.5
CYA	5.67	75	e(P)	16	29.00	-1.8
MRA	5.91	115	ePd	16	32.80	-1.5
ANT	6.45	13	e(P)	16	34.20	-7.6X
TCA	6.54	103	ePc	16	40.80	-2.4
ARE	13.50	2	eP	18	18.00	-8.6X
CNCB	13.66	17	P	18	21.80	0.9

```
LPB     13.90  16 eP     18 25.00   1.1
ZOBO    14.15  16 P      18 26.00  -1.3
        0.8s       4.70nm          4.2mb
     Z  18s        0.23um          5.6Msz
                LR     22 48.00
KIC     73.85  73 P      26 38.90  -1.0
BCAO    92.68  86 ePd    28 18.00   1.4
        0.6s       4.00nm          5.0mb
     S.D. = 1.5  on  19 of  25 obs.
-------------------------------------------
&  JAN  23, 1990  01h 23m 48.14s
   61.188 N          140.376 W
   DEPTH =   0.0km
 SOUTHERN YUKON TERRITORY, CANADA( 18)
      <AGS-P>. ML 3.5 (PMR).

BALM    0.97 262 iP     24 05.75  -1.8
                eS     24 22.62
YAH     1.07 220 eP     24 08.55  -0.8
                eS     24 27.29
PCA     1.10 177 iP     24 08.66  -1.1
                eS     24 27.15
BCPM    1.29 163 iP     24 11.06  -1.9
                eS     24 30.95
YKU     1.67 169 eP     24 19.60   0.8
GLB     1.68 280 eP     24 17.00  -1.9
                eS     24 41.36
HQN     1.90 156 eP     24 20.15  -1.9
WHC     2.61  98 P      24 24.50  -7.9
                S      25 02.50
KLU     2.69 279 iP     24 32.98  -0.6
DWY     2.91   8 P      24 28.30  -8.3
TOA     2.91 291 eP     24 35.30  -1.4
PAX     2.99 309 eP     24 34.91  -2.9
NCA     3.19 288 eP     24 39.99  -0.5
DDM     3.64 318 eP     24 46.82  -0.2
GHO     4.14 282 eP     24 52.23  -1.9
PME     4.18 280 eP     24 57.44   2.8
PLRM    4.23 279 eP     24 55.05  -0.2
PMR     4.23 279 eP     24 55.10  -0.1
HDA     4.42 320 eP     24 50.55  -7.5
PMS     4.44 275 eP     24 57.60  -0.8
RND     4.54 303 eP     24 58.16  -1.6
MCK     4.72 306 eP     25 00.62  -1.7
CUT     4.85 289 eP     25 02.11  -2.0
SLKM    4.86 266 eP     25 02.18  -2.2
GLM     4.97 323 eP     24 57.71  -8.1
SUA     5.00 278 eP     25 06.68   0.3
FBA     5.03 321 eP     25 01.17  -5.4
SPU     5.65 275 eP     25 14.32  -1.2
NCG     5.68 277 eP     25 15.30  -0.7
CRP     5.69 276 eP     25 15.25  -0.9
CKL     5.79 275 eP     25 15.86  -1.6
BGL     5.81 276 eP     25 12.88  -4.8
RDT     5.91 269 eP     25 16.20  -2.9
TTA     7.55 290 eP     25 37.50  -4.7
IMA     7.67 315 eP     25 38.90  -5.1
INK     7.72  19 eP     25 34.00 -10.4
       36 obs. associated
-------------------------------------------
&  JAN  23, 1990  02h 25m 06.60s
   36.932 N          121.702 W
   DEPTH =  10.0km
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 2.5 (BRK).

GCC     0.26 293 iPc    25 11.70  -0.3
                iS     25 15.40
SAO     0.27 129 iPd    25 11.70  -0.5
MHC     0.41   7 iPd    25 15.10   0.0
                iS     25 21.10
ARN     0.44  18 iPd    25 15.60   0.1
PRS     0.66 156 iPd    25 18.80  -0.9
LLA     0.69 117 iPc    25 19.20  -1.0
PCC     0.78 316 iPc    25 21.20  -0.7
                eS     25 32.00
BKS     1.03 336 eP     25 24.40  -1.7
                eS     25 40.10
BRK     1.04 335 e(P)   25 24.30  -1.9
ZSP     1.10 337 eP     25 25.60  -1.7
PRI     1.15 133 ePc    25 27.50  -0.7
                eSg    25 45.10
CMB     1.52  43 e(P)   25 31.10  -2.8
FRI     1.60  87 e(P)   25 32.50  -2.4
KVN     3.55  52 eP     26 10.00   7.0
       14 obs. associated
-------------------------------------------
&  JAN  23, 1990  02h 48m 43.98s
   59.983 N          153.526 W
   DEPTH = 145.7km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

PDB     0.39 240 iP     49 03.45   0.5
                eS     49 18.84
RED     0.58  40 iP     49 04.73  -0.9
                eS     49 21.57
AUL     0.60 176 iP     49 04.99  -0.7
AUE     0.63 173 iP     49 04.96  -0.8
                eS     49 20.61
RDT     0.81  43 iP     49 06.36  -0.8
CDD     1.06 183 iP     49 07.95  -1.2
NNL     1.12  86 eP     49 09.77   0.1
                eS     49 30.88
CNPM    1.25 111 iP     49 10.02  -0.9
                iS     49 29.88
BRLK    1.35  98 iP     49 11.24  -0.8
                eS     49 31.79
CKL     1.35  25 iP     49 11.59  -0.5
                eS     49 32.97
NKA     1.37  55 iP     49 12.95   0.8
BGL     1.40  23 iP     49 12.30  -0.3
SPU     1.41  30 iP     49 11.79  -0.8
                eS     49 35.30
CRP     1.45  27 iP     49 12.74  -0.5
                eS     49 36.00
SVW     1.53 318 eP     49 12.60  -1.3
NCG     1.58  25 iP     49 13.97  -0.5
SLKM    1.73  71 eP     49 14.71  -1.4
                eS     49 38.76
SUA     2.02  41 iP     49 18.48  -1.1
                eS     49 46.45
SEW     2.05  85 eP     49 18.27  -1.5
                eS     49 45.04
KDC     2.31 166 iPd    49 19.90  -3.0
PMS     2.33  55 iPc    49 21.40  -1.9
PWA     2.45  45 iPc    49 22.70  -2.0
PLRM    2.69  51 eP     49 24.85  -2.9
                eS     49 57.45
PMR     2.69  51 ePc    49 24.90  -2.8
PME     2.75  51 eP     49 25.80  -2.7
GHO     2.88  49 eP     49 27.56  -2.7
CUT     2.90  32 eP     49 28.69  -1.7
                eS     50 04.39
TTA     3.19 339 iPd    49 32.40  -1.8
HIN     3.53  80 eP     49 36.11  -2.6
                eS     50 16.65
HUR     3.54  30 eP     49 36.70  -2.0
                eS     50 17.55
MID     3.68  96 eP     49 41.00   0.4
NCA     3.84  55 iP     49 40.10  -2.6
                eS     50 25.27
CVA     3.92  78 eP     49 41.14  -2.5
KLU     4.03  65 eP     49 42.51  -2.8
TOA     4.16  56 iPc    49 44.80  -2.2
SGAM    4.18  79 eP     49 44.40  -2.8
RAGM    4.44  81 iP     49 48.60  -2.1
PAX     4.89  49 eP     49 54.44  -2.3
GLB     4.99  69 eP     49 55.70  -2.4
NEA     5.06  22 eP     49 56.38  -2.5
DDM     5.26  40 iP     50 00.68  -1.0
TGL     5.37  77 eP     50 01.23  -1.9
CCB     5.39  27 eP     50 00.45  -2.8
HDA     5.40  32 eP     50 01.03  -2.5
RDS     5.47  25 eP     50 01.68  -2.7
FBA     5.60  26 iPd    50 03.70  -2.5
BALM    5.63  74 eP     50 04.25  -2.4
GLM     5.77  27 eP     50 05.71  -2.8
IMA     6.11 359 eP     50 11.60  -1.6
INK    12.01  38 eP     51 30.00  -1.3
       50 obs. associated
-------------------------------------------
&  JAN  23, 1990  03h 11m 19.90s
   36.912 N          121.697 W
   DEPTH =  10.0km
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 3.0 (BRK). Felt at
      Watsonville.

SAO     0.25 126 iPd    11 24.80  -0.4
GCC     0.27 296 iPc    11 25.30  -0.2
                iS     11 29.20
MHC     0.43   6 iPd    11 28.70   0.0
                iS     11 35.20
ARN     0.46  17 iPd    11 29.00  -0.2
PRS     0.64 155 iPd    11 32.00  -0.7
LLA     0.67 116 iPc    11 32.60  -0.7
PCC     0.80 317 iPc    11 34.60  -0.8
                iS     11 45.80
BKS     1.05 336 eP     11 38.80  -1.0
                eS     11 53.40
BRK     1.06 335 ePc    11 39.00  -0.8
                eS     11 53.40
ZSP     1.12 337 ePc    11 39.20  -1.7
                i      11 40.90
PRI     1.13 132 ePc    11 40.20  -1.0
CMB     1.53  43 e(P)   11 45.30  -2.1
                eS     12 04.30
FRI     1.60  87 iPd    11 47.70  -0.5
                eS     12 07.10
NWRM    1.81 329 eP     11 49.00  -2.3
BCH     2.16 142 eP     11 53.20  -3.4
ORV     2.64   3 eP     12 03.00  -0.3
ABL     2.88 135 P      12 03.80  -3.0
KVN     3.55  52 eP     12 15.40  -1.0
TNP     3.75  70 eP     12 18.60  -0.7
       19 obs. associated
-------------------------------------------
    JAN  23, 1990  03h 15m 40.07± 0.67s
    24.703 N ± 5.1km  122.565 E ± 9.5km
    DEPTH = 117.2 ±  5.2 km
    4.8mb ( 13 obs.)
 TAIWAN REGION                     (243)

TWC     0.66 262 iPc    15 58.60  -0.4
                eS     16 11.10
TWZ     0.98 294 iPc    16 01.90   0.0
ANP     1.06 297 iPc    16 02.20  -0.7
        1.0s   2480.00nm
                eS     16 15.30
TWD     1.08 235 iPc    16 02.30  -0.6
TWQ     1.63 255 iPc    16 09.90   0.6
                eS     16 31.30
TWK     2.38 233 ePc    16 19.00   0.2
                eS     16 48.30
TWM1    2.71 227 ePc    16 24.40   1.3
OZH     3.62 275 iPd    16 34.20  -1.1
                S      17 12.80
SSE     6.48 349 Pc     17 14.80   0.4
        0.6s       0.07nm          2.2mb X
                S      18 26.00
TIY    15.58 329 eP     19 18.00   3.5X
BJI    16.21 342 eP     19 23.50   1.3
        1.2s       0.03nm          1.5mb X
CD2    17.74 295 eP     19 41.00  -0.1
HHC    18.54 333 P      19 51.00   0.6
BTO    19.01 329 eP     19 56.00   0.6
LZH    19.70 310 eP     20 03.00   0.3
        1.5s       0.03nm          1.4mb X
WB5    45.78 164 eP     23 51.60  -0.1
WRA    45.83 164 Pd     23 52.30   0.2
        0.6s      19.30nm          5.0mb
WARB   50.74 175 iPd    24 30.30   0.3
        0.3s       7.00nm          5.1mb
KEV    68.96 338 eP     26 24.00 -10.1X
SOD    69.71 336 eP     26 38.00  -0.6
SUF    71.21 331 iP     26 46.50  -1.3
        0.6s       4.20nm          4.4mb
INK    72.27  22 eP     26 53.00  -1.0
MBC    72.48  13 eP     26 54.00  -1.1
        0.5s       3.00nm          4.3mb
NUR    72.59 329 eP     26 56.40   0.4
HFS    77.73 331 eP     27 23.50  -1.6
        0.5s       2.00nm          4.2mb
                e      27 28.00
                ePcP   27 32.60
                e      27 54.60
NB2    78.35 332 P      27 27.90  -0.7
        0.7s       3.10nm          4.2mb
PNT    87.91  35 ePd    28 19.00   1.4
        1.0s      17.00nm          5.0mb
LPG    89.03 321 eP     28 23.90   0.5
        0.6s       4.80nm          4.8mb
PGF    89.35 317 eP     28 25.30   0.5
SBF    89.57 319 eP     28 25.40  -0.3
        0.8s       6.40nm          4.8mb
SMF    90.00 323 eP     28 27.50   0.0
        0.8s       5.30nm          4.7mb
AVF    90.18 323 eP     28 28.50   0.2
CAF    92.03 322 eP     28 38.00   1.0
        0.8s       4.00nm          4.7mb
```

23d 03h

RJF	92.10	323	eP	28	38.20	1.0
	0.6s		4.30nm			4.9mb
FFC	92.15	24	iPd	28	37.60	0.3
	0.9s		16.00nm			5.3mb
KIC	120.14	294	PKP	34	18.90	-0.5
TIC	120.22	294	PKP	34	19.00	-0.5
LIC	120.46	294	PKP	34	19.40	-0.6
S.D. = 0.8 on 36 of 38 obs.						

? JAN 23, 1990 04h 05m 10.55± 5.71s
50.946 N ±51.3km 174.420 E ±56.6km
DEPTH = 33.0km (normal)
4.4mb (1 obs.)
ALEUTIAN ISLANDS REGION (16)

SMY	1.80	354	e(P)	05	39.00	-0.7
ADK	5.65	77	eP	06	26.80	-7.5X
TTA	19.88	42	eP	09	41.00	-0.6
IMA	22.15	35	eP	10	07.00	2.2X
FBA	23.97	40	eP	10	23.50	1.1
INK	30.28	36	eP	11	21.50	1.2
MBC	35.61	22	eP	12	09.50	3.1X
	0.9s		5.00nm			4.4mb
PNT	41.04	66	eP	12	51.00	-1.0
EDM	42.70	58	eP	13	05.00	-0.6
FRB	55.54	29	eP	14	45.00	0.7
S.D. = 1.2 on 7 of 10 obs.						

JAN 23, 1990 05h 02m 55.45± 0.95s
31.809 S ± 7.0km 69.471 W ± 6.8km
DEPTH = 139.5 ± 13.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.73	69	iPd	03	17.50	0.2
RTCV	0.80	94	eP	03	17.20	-0.7
RTLL	0.98	61	ePd	03	18.90	-0.5
			S	04	17.80	
CFA	1.07	79	iPc	03	20.20	0.0
RTRS	1.63	0	iP	03	27.20	1.2
FCH	1.66	204	iPd	03	27.50	0.7
			iS	03	51.00	
ROCH	1.74	228	iPd	03	26.80	-0.8
			iS	03	49.60	
SAN	1.92	211	iPd	03	30.00	0.5
			iS	03	55.50	
PCH	2.01	206	iPd	03	30.70	0.1
			iS	03	58.00	
TACH	2.22	214	iPd	03	32.50	-0.5
			iS	04	00.00	
CHCH	2.34	205	iPd	03	35.00	0.4
			iS	04	04.50	
LCCH	2.43	226	iPd	03	35.00	-0.6
			iS	04	04.20	
RFA	3.07	164	ePc	03	44.00	0.0
MRA	3.25	102	iPc	03	47.00	0.8
TCA	4.19	85	ePc	03	58.70	-0.1
CYA	4.62	44	iPd	04	03.80	-0.8
S.D. = 0.7 on 16 of 16 obs.						

? JAN 23, 1990 07h 39m 32.63± 1.42s
23.668 N ±10.8km 120.886 E ± 9.8km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWF1	0.49	130	iPc	39	42.60	0.0
			eS	39	50.00	
TWK	0.54	223	iPc	39	43.60	0.0
			eS	39	52.00	
TWD	0.77	58	iPc	39	47.60	0.0
			eS	39	58.80	
TWG	0.86	169	iPc	39	49.20	0.0
ANP	1.61	21	eP	40	06.20	4.9X
S.D. = 0.0 on 4 of 5 obs.						

JAN 23, 1990 07h 47m 09.58± 0.14s
12.451 S ± 2.6km 75.069 W ± 3.6km
DEPTH = 104.2km (33 depth phases)
5.5mb (72 obs.)
PERU (116)

Felt (V) at Pisco, (IV) at Ica and Lima and (III) at Huancayo. Also felt at Callao.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 29C
Centroid Location:
Origin Time 07:47:16.2 0.4
Lat 12.50S 0.04 Lon 74.95W 0.05
Dep 113.4 2.2 Half-duration 2.5
Moment Tensor; Scale 10**17 Nm
Mrr=-3.05 0.13 Mtt= 0.85 0.20
Mff= 2.21 0.25 Mrt=-0.73 0.11
Mrf= 0.70 0.13 Mtf=-1.66 0.21
Principal Axes:

	Val=	Plg=	Azm=
T	3.47	9	236
N	-0.25	4	145
P	-3.22	80	30

Best Double Couple:Mo=3.3*10**17
NP1:Strike=330 Dip=37 Slip= -83
NP2: 142 54 -95

PT08	1.53	288	iPc	47	37.10	-0.1
PT03	1.69	205	iPc	47	37.40	-1.4
NNA	1.79	285	iPc	47	39.90	-0.3
PT06	1.84	222	iPc	47	38.60	-2.2
PT10	1.89	281	iPc	47	41.10	-0.4
ARE	5.28	139	iPd	48	26.40	-1.4
			eS	49	20.00	
ZOBO	7.73	120	iPc	48	59.80	-1.8
			LR	51	24.00	
LPB	7.88	122	Pc	49	02.00	-1.5
	1.0s		360.00nm			5.9mb
			eS	50	54.00	
			LR	51	17.00	
CNCB	8.11	123	Pc	49	05.00	-1.9
CCH	9.92	121	P	49	26.90	-4.3X
			S	50	35.50	
TUNG	11.46	343	P	49	50.00	-1.7
			(S)	51	55.90	
ANT	12.03	159	eP	49	56.00	-2.8
VC1	12.19	344	eP	50	00.00	-1.5
QUR	12.67	344	P	50	08.00	0.3
GGP	12.69	344	P+	50	08.70	0.6
CAYA	12.78	347	P	50	07.80	-1.4
COTA	13.11	345	eP	50	13.50	0.0
YJA	13.29	138	ePd	50	14.00	-1.8
PSO	13.74	350	eP	50	20.50	-1.1
PURC	14.73	355	eP	50	33.59	-0.9
SALC	15.41	354	ePd	50	42.04	-0.7
DIAC	15.68	356	iPd	50	46.34	0.2
HOOC	15.89	354	ePd	50	48.26	-0.6
ANCC	15.96	353	ePd	50	49.74	0.2
CLMC	16.29	355	eP	50	53.35	-0.5
HOBC	16.73	356	ePc	50	57.40	-1.8
BOG	16.99	3	iP	51	04.50	1.9
			iS	54	19.00	
CYA	18.12	153	iPd	51	15.50	-0.5
CFA	20.08	163	ePd	51	36.50	-0.6
ROCH	20.76	170	ePd	51	44.00	-0.2
MDZ	21.12	165	e(P)	51	38.40	-9.3X
TCA	21.14	154	iPd	51	47.00	-0.8
LCCH	21.17	172	iPd	51	48.00	-0.1
FCH	21.23	169	iPd	51	50.00	0.9
SAN	21.29	170	iPd	51	49.50	0.2
TACH	21.44	171	iPd	51	51.00	0.2
PCH	21.48	170	ePd	51	51.00	-0.3
MRA	21.65	158	e(P)	51	52.20	-0.6
SDV	21.65	12	eP	51	53.70	0.5
LNV	21.67	172	iPc	51	50.40	-2.5
			iS	51	53.00	
UPA	21.75	348	iPd-	51	57.50	3.6X
	0.9s		151.26nm			5.3mb
CHCH	21.76	170	iPc	51	54.60	0.6
CEOS	22.37	18	iP	52	00.00	-0.1
TOV	22.71	14	iPc	52	04.30	0.9
RFA	23.01	166	ePd	52	07.30	1.1
BUS	23.51	338	iPc	52	14.80	3.2X
SJS	23.97	338	iPc	52	19.30	3.6X
MORO	24.12	16	iP	52	18.00	0.9
CAR	24.20	20	iP	52	16.00	-1.9
LLAV	24.21	20	iP	52	18.70	0.7
FISA	24.24	14	iP	52	19.10	0.9
SRA	24.25	337	iPc	52	21.80	3.4X
BAO	26.45	100	eP	52	36.50	-2.4
PORP	31.43	16	P	53	22.70	-0.5
LRS	31.61	15	P	53	22.30	-2.4
TPX	32.07	327	(P)	53	31.00	2.3
OXX	36.32	323	(P)	54	08.00	2.7X
IIT	38.76	323	(P)	54	29.00	3.1X
III	38.96	321	(P)	54	30.00	2.5X
PPM	38.99	323	(P)	54	31.00	2.9X
IIJ	40.16	322	(P)	54	40.50	2.8X
AGX	43.34	322	(P)	55	06.50	3.5X
PRM	46.79	352	P	55	29.30	-1.1
			pP	55	53.70	103km
JSC	46.84	353	P	55	29.50	-1.3
			pP	55	53.90	103km
MZX	46.88	319	(P)	55	33.00	1.8
LHS	46.99	354	P	55	31.00	-0.9
GBTN	48.63	350	P	55	43.00	-1.7
			pP	56	07.50	103km
PWLA	48.75	346	P	55	43.40	-2.2
			pP	56	08.10	104km
RSCP	48.81	349	P	55	44.30	-1.9
	1.0s		162.69nm			5.9mb
			pP	56	08.80	103km
BLA	49.65	354	P	55	51.70	-0.9
NAV	49.79	354	P	55	52.70	-0.9
OLY	50.15	343	P	55	54.40	-2.0
			pP	56	19.40	105km
CVL	50.26	357	P	55	55.80	-1.3
NA2	50.37	357	P	55	57.20	-0.7
CBN	50.43	358	eP	55	58.00	-0.4
FVM	52.19	345	P	56	09.90	-1.9
AIA	53.26	174	eP	56	19.60	0.4
DEK	55.56	348	P	56	35.00	-1.3
ALQ	55.74	329	iPd	56	37.80	-0.2
	1.0s		47.50nm			5.5mb
ANMO	55.75	329	P	56	38.20	0.2
	1.4s		90.12nm			5.6mb
			pP	57	04.00	106km
RSNY	56.73	0	P	56	43.80	-0.8
	1.0s		50.61nm			5.5mb
			pP	57	08.90	102km
PTN	56.75	0	P	56	42.70	-2.0
			pP	57	07.50	101km
GLD	59.02	333	P	57	00.40	-0.6
	1.1s		38.57nm			5.4mb
			pP	57	26.00	104km
GLA	59.04	321	eP	57	01.00	-0.1
GOL	59.05	333	P	57	00.20	-1.0
	0.8s		43.15nm			5.6mb
			pP	57	27.30	111km
CBM	59.44	6	P	57	03.00	-0.4
			pP	57	29.00	106km
BAR	59.94	320	eP	57	07.00	-0.2
PLM	60.51	320	eP	57	11.00	-0.2
PEC	61.05	320	P	57	14.70	0.0
			pP	57	39.90	101km
RVR	61.25	320	eP	57	16.00	-0.1
MSU	61.43	327	P	57	17.40	-0.1
MWC	61.83	320	eP	57	20.00	-0.2
PAS	61.85	320	eP	57	21.00	0.9
SBB	61.99	321	eP	57	21.00	-0.1
RSSD	62.17	337	P	57	21.60	-0.7
			pP	57	47.20	103km
DAU	62.38	329	P	57	23.70	-0.1
			pP	57	49.80	105km
CLC	62.60	322	eP	57	25.00	0.0
DUG	63.00	328	P	57	27.80	0.0
	0.9s		44.17nm			5.4mb
			pP	57	54.30	107km
ISA	63.03	321	eP	57	28.00	0.1
BW06	63.40	332	P	57	28.90	-1.5
MBO	63.44	67	iPd	57	30.80	-0.1
BCH	63.72	320	P	57	33.00	0.5
TNP	63.90	324	P	57	34.00	0.2
	0.8s		29.17nm			5.3mb
			pP	58	01.50	111km
FRI	64.65	321	ePd	57	37.40	-1.0
PRI	64.69	320	iPc	57	39.40	0.6
			epP	58	06.30	108km
PTI	64.78	330	P	57	38.80	-0.6
			pP	58	04.80	104km
KVN	65.07	324	P	57	41.20	-0.1
RSON	65.11	347	P	57	38.90	-2.2
	0.9s		102.23nm			5.8mb
			pP	58	04.90	104km
LLA	65.17	320	ePd	57	42.10	0.3
PRS	65.26	320	ePd	57	42.90	0.6
			epP	58	09.00	104km
CMB	65.74	322	ePd	57	45.40	0.0
ARN	66.00	321	P	57	47.80	0.7
MHC	66.06	321	ePd	57	48.40	0.8
GCC	66.09	320	ePd	57	48.10	0.5
BKS	66.76	321	iPd	57	52.50	0.6
			e	58	20.30	111km
BRK	66.78	321	ePd	57	52.00	0.1
LRM	67.07	333	ePd	57	54.00	0.0
SCH	67.37	5	ePd	57	54.60	-0.8
	0.6s		22.00nm			5.3mb

ORV	67.38	323	ePd	57	56.30	0.5
			ipP	58	23.80	110km
NWRM	67.53	321	P	57	56.50	-0.1
MIN	67.95	323	ePd	57	58.80	-0.7
WDC	68.65	323	ePd	58	02.20	-1.4
LBFM	68.76	324	P	58	04.30	-0.3
			pP	58	32.40	112km
FHC	69.64	322	ePd	58	10.40	0.7
RUV	69.98	258	iP	58	14.30	2.1
	0.9s		20.00nm			4.9mb
SES	70.04	336	iPd	58	11.30	-0.7
	0.6s		129.00nm			5.9mb
TPT	70.24	258	iP	58	15.80	2.0
	0.9s		45.00nm			5.3mb
PMO	70.50	258	iP	58	17.40	2.0
	0.9s		35.00nm			5.2mb
FFC	70.68	344	iPd	58	15.20	-0.6
	0.6s		21.00nm			5.1mb
DPW	71.24	331	P	58	19.10	-0.2
			pP	58	46.00	106km
LIC	72.04	79	Pd	58	23.12	-1.5
	1.0s		118.00nm			5.7mb
			S	07	50.00	
TIC	72.15	79	Pd	58	23.76	-1.6
	1.1s		86.00nm			5.5mb
LON	72.26	328	P	58	24.80	-0.6
KIC	72.35	79	Pd	58	25.12	-1.3
	0.7s		120.50nm			5.8mb
RMW	72.73	329	P	58	27.20	-0.9
			pP	58	53.80	104km
BMW	72.81	327	P	58	29.10	0.5
PNT	72.93	331	iPd	58	30.40	1.2
	0.9s		49.00nm			5.3mb
EDM	73.15	337	iPd	58	29.70	-0.7
	0.8s		214.00nm			6.0mb
			pP	58	56.00	102km
GMW	73.28	328	P	58	31.40	0.1
MCW	74.05	329	P	58	36.80	1.0
FRB	76.13	3	ePd	58	46.50	-0.7
	0.6s		46.00nm			5.5mb
SPA	77.63	180	iPd	58	57.20	1.4
	1.2s		85.21nm			5.4mb
TIO	78.02	54	iPc	58	59.50	0.9
AVE	78.82	52	iPd	59	03.50	0.8
			i	59	30.00	102km
IFR	80.67	53	iPd	59	14.00	1.1
EJIF	81.50	50	eP	59	19.00	2.1
EPRU	81.87	49	eP	59	20.20	1.4
EHOR	82.18	49	eP	59	22.00	1.6
EPLA	82.45	46	eP	59	23.30	1.5
ERUA	82.64	44	eP	59	24.00	1.3
AFC	83.23	50	eP	59	27.20	1.2
TAF	83.23	52	iPc	59	28.00	2.0
EBAN	83.38	49	eP	59	28.00	1.4
TOL	83.82	47	iPd	59	30.00	1.2
	1.2s		281.25nm			6.1mb
GUD	84.03	46	eP	59	31.00	1.1
ENIJ	84.12	50	eP	59	31.00	0.6
EVIA	84.49	49	eP	59	33.50	1.2
VNDA	84.66	191	iPd	59	34.10	1.8
ETOR	85.58	47	eP	59	39.00	1.4
ECRI	85.89	45	eP	59	40.20	1.1
EROO	87.34	47	eP	59	47.20	1.1
EPF	88.01	45	iPd	59	50.00	0.7
	1.2s		47.60nm			5.4mb
AKU	88.54	20	iP	59	53.30	2.0
	1.7s		276.92nm			6.1mb
LPF	88.76	40	iPd	59	52.80	0.1
	1.0s		36.00nm			5.4mb
MFF	88.85	42	iPd	59	53.30	0.1
	1.3s		64.90nm			5.6mb
LFF	88.90	44	iPd	59	53.70	0.3
	1.2s		61.80nm			5.6mb
LPO	89.12	44	iPd	59	54.60	0.1
	1.2s		41.60nm			5.4mb
FLN	89.36	40	iPd	59	55.70	0.2
	1.2s		65.40nm			5.6mb
LDF	89.53	40	iPd	59	56.40	0.1
	1.2s		55.90nm			5.6mb
RJF	89.53	43	iPd	59	56.30	-0.1
	1.2s		38.00nm			5.4mb
CAF	89.79	44	iPd	59	57.80	0.2
	1.2s		27.90nm			5.3mb
LSF	89.84	42	iPd	59	58.00	0.2
	1.3s		50.50nm			5.5mb
EKA	90.14	33	Pd	59	58.80	-0.2
	1.3s		40.10nm			5.4mb
TCF	90.30	43	iPd	59	59.80	-0.2
	1.4s		39.20nm			5.4mb
INK	90.51	342	iPd	00	00.70	0.3
	1.2s		55.00nm			5.6mb
			pP	00	27.00	98km
MAF	90.51	43	iPd	00	00.90	0.0
	1.2s		41.60nm			5.5mb
BGF	90.80	42	iPd	00	02.10	-0.1
	1.2s		65.40nm			5.7mb
AVF	91.20	42	iPd	00	03.80	-0.2
	1.2s		29.70nm			5.4mb
SSF	91.38	42	iPd	00	04.70	-0.2
	1.2s		23.80nm			5.3mb
SMF	91.48	43	iPd	00	05.40	0.0
	1.2s		50.50nm			5.7mb
LBF	91.67	42	iPd	00	05.90	-0.4
	1.2s		19.00nm			5.3mb
LOR	91.67	42	iPd	00	05.80	-0.4
	1.2s		26.70nm			5.4mb
MBC	92.33	350	ePd	00	09.70	1.0
	0.8s		24.00nm			5.6mb
LRG	92.34	46	eP	00	10.10	0.8
	1.3s		43.30nm			5.6mb
LMR	92.41	46	eP	00	10.10	0.4
	1.2s		29.70nm			5.5mb
FRF	92.57	46	eP	00	10.80	0.4
	1.0s		17.60nm			5.3mb
DOU	92.92	39	Pc	00	12.50	0.6
LPG	93.13	44	iPd	00	13.90	0.6
	1.3s		46.90nm			5.7mb
SBF	93.20	46	eP	00	13.70	0.3
	1.2s		29.70nm			5.5mb
PMR	93.43	333	P	00	13.40	-0.6
HAU	93.49	42	iPd	00	14.90	0.3
	1.2s		23.80nm			5.4mb
BLF	93.62	121	iPd	00	16.30	0.4
	1.0s		46.00nm			5.8mb
BSF	93.73	42	iPd	00	15.60	-0.2
	1.2s		26.10nm			5.5mb
FBA	94.02	336	P	00	16.40	-0.2
	1.0s		27.50nm			5.6mb
			pP	00	43.40	101km
CDF	94.19	41	iPd	00	18.00	0.1
	1.2s		14.20nm			5.3mb
BCAO	94.46	86	iPd	00	21.10	1.3
	0.6s		36.00nm			6.0mb
			i	00	47.40	98km
BFS	94.75	119	iPd	00	21.00	-0.1
	0.7s		34.25nm			5.9mb
DAG	94.80	11	iPd	00	19.80	-0.2
	0.6s		10.67nm			5.4mb
SEK	95.06	120	iPc	00	22.80	0.3
	0.7s		13.70nm			5.5mb
KSR	95.14	118	iPd	00	21.70	-1.2
	0.7s		10.00nm			5.4mb
PRY	95.33	119	iPd	00	23.80	0.0
	0.8s		15.63nm			5.5mb
OGA	96.33	44	eP	00	28.50	0.6
	1.2s		34.00nm			5.7mb
SLR	96.37	118	iPd	00	28.70	0.2
	1.0s		20.00nm			5.6mb
CTI	96.59	44	Pc	00	29.50	0.6
IMA	96.71	336	P	00	28.40	-0.7
	0.6s		3.20nm			5.0mb
			pP	00	55.40	101km
GRF	97.00	41	ePd	00	31.40	0.8
	1.8s		72.00nm			5.9mb
			e(pP)	00	58.20	100km
			e(SP)	01	11.80	
SDI	97.34	49	Pc	00	32.50	0.2
BHG	97.72	43	eP	00	34.50	0.6
	1.2s		47.00nm			5.9mb
KBA	97.93	44	eP	00	33.50	-1.5
	1.3s		20.70nm			5.5mb
			e	01	11.50	149kmX
WET	97.97	42	eP	00	35.50	0.5
	1.2s		31.00nm			5.7mb
BUL	98.27	113	iPc	00	42.10	5.0X
	1.0s		17.50nm			5.6mb
KHC	98.42	42	eP	00	36.80	-0.2
NB2	98.99	29	P	00	40.60	1.3
	1.4s		50.80nm			6.0mb
PRU	99.17	41	eP	00	41.00	0.7
			e	01	22.00	162kmX
KSP	100.39	40	ePdiff	00	44.70	-1.3
ZST	100.60	43	ePdiff	00	47.20	0.3
			e	01	27.40	
SRO	101.37	43	ePdiff	00	51.30	1.0
			e	01	31.30	
KRA	102.64	41	ePdiff	00	57.40	1.5
			e	01	38.90	
MAIO	132.84	52	iPKPd	06	15.30	0.7
			e	08	39.00	
WRA	136.71	222	PKPc	06	22.70	0.4
	1.0s		12.90nm			
WB5	136.73	222	ePKP	06	22.30	0.0
QUE	140.70	57	ePKP	06	29.60	0.1
			eS	10	12.00	
MAT	141.69	315	(PKP)	06	25.00	-5.9X
	0.9s		50.42nm			
MBL	143.53	204	ePKP	06	31.40	-3.0X
NANU	143.69	197	ePKP	06	32.50	-2.1
MTN	143.85	227	iPKPd	06	33.60	-1.5
CN2	144.11	334	ePKP	06	32.50	-2.2
WMO	145.40	22	iPKPd	06	38.00	0.9
			pPKP	07	04.50	
SNY	146.52	334	iPKPd	06	40.00	1.2
	Z 23s		0.60um			5.3MszX
POO	149.47	75	ePKP	06	45.00	0.7
NDI	149.55	54	iPKPd	06	45.20	1.2
BJI	150.78	342	ePKP	06	46.00	0.5
			PKS	10	18.00	
HHC	151.12	350	PKP	06	47.40	1.2
BTO	151.61	352	PKP	06	54.00	7.1X
GTA	152.77	9	PKPd	06	49.60	0.9
KOD	152.99	92	ePKP	06	51.70	1.8
GBA	153.19	84	PKP	06	50.00	0.3
TIA	153.91	337	ePKP	06	50.90	0.7
TIY	153.96	346	ePKP	06	50.80	0.5
	Z 20s		0.50um			5.3Msz
HYB	154.05	76	ePKPd	06	51.00	0.1
			e	07	13.00	
SSE	156.14	324	PKP	07	01.50	8.2X
	1.0s		14.00nm			
			S	18	48.00	
LZH	156.45	2	ePKP	06	54.00	0.2
			pPKP	07	23.00	
XAN	158.20	351	PKP	06	55.70	-0.1
LSA	158.59	35	PKP	07	00.80	3.9X
WHN	160.00	336	ePKP	06	59.00	1.2
CD2	161.60	3	PKP	07	01.60	2.1
GYA	165.97	354	iPKPd	07	05.00	1.2
			i	08	04.00	
			PP	11	52.00	
KMI	167.23	9	PKPd	07	06.50	1.6
			pPKP	07	35.00	
CHG	171.44	42	ePKPd	07	08.80	1.6
	1.8s		81.82nm			
	S.D. = 1.1		on 231 of 249 obs.			

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* JAN 23, 1990 09h 08m 37.82± 1.05s
14.756 S ±16.4km 70.346 W ± 9.3km
DEPTH = 33.0km (normal)
PERU (116)

ARE	2.02	213	iPc	09	10.60	0.0
			iS	09	37.40	
ZOBO	2.62	125	iPd	09	20.00	0.8
LPB	2.79	129	iPd	09	21.80	0.2
	0.9s		114.29nm			
			S	09	56.00	
CNCB	3.06	132	iPd	09	24.50	-1.0
			S	09	59.00	
CCH	4.81	123	P	09	46.10	-4.0X
PT03	5.34	278	eP	09	57.60	0.3
			eS	10	55.10	
NNA	6.89	293	ePc	10	19.00	-0.3
	0.4s		12.71nm			5.2mb X
UPA	25.28	338	iPc	14	09.50	6.6X
	1.0s		80.00nm			5.3mb X
	S.D. = 0.8		on 6 of 8 obs.			

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* JAN 23, 1990 09h 29m 19.67± 1.40s
36.056 N ± 9.7km 27.275 E ±14.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.51	189	ePb	29	30.00	0.0
			eSb	29	39.40	
ARG	0.71	77	ePb	29	33.20	-0.4
CIN	1.67	23	eP	29	49.00	-0.1
KSL	1.87	87	ePb	29	52.00	0.0
ELL	2.23	71	ePn	29	57.90	0.5
	S.D. = 0.5		on 5 of 5 obs.			

? JAN 23, 1990 09h 30m 10.73± 2.41s
16.679 N ±21.7km 99.727 W ±14.8km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.23	327	iP	30 17.50	-0.1
			iS	30 24.50	
III	1.71	8	iP	30 39.50	0.7
			iS	31 03.50	
PPM	2.60	24	eP	30 51.00	-0.8
			iS	31 27.50	
UNM	2.69	11	(P)	30 03.50	-49.4X
			(S)	30 40.50	
IIT	2.69	30	(P)	30 53.00	0.1
			(S)	31 35.50	
OXX	2.90	82	eP	30 56.00	0.1
			iS	31 34.00	
IIJ	3.04	360	iP	31 04.50	6.4X
			(S)	31 43.50	

S.D. = 0.8 on 5 of 7 obs.

& JAN 23, 1990 09h 43m 49.82s
61.998 N 150.350 W
DEPTH = 42.5km
SOUTHERN ALASKA (2)
<AGS-P>.

CUT	0.41	5	iP	43 59.06	-0.5
PWA	0.41	147	iP	43 59.48	-0.1
			eS	44 07.58	
SUA	0.57	199	iP	44 01.66	-0.1
			eS	44 11.55	
PLRM	0.71	125	iP	44 02.46	-1.0
			eS	44 13.43	
GHO	0.71	108	iP	44 02.84	-0.8
			eS	44 13.96	
PME	0.73	120	iP	44 02.95	-0.8
			eS	44 14.04	
PMS	0.84	153	iP	44 04.87	-0.6
			eS	44 18.05	
HUR	1.04	18	iP	44 07.20	-0.9
			eS	44 21.15	
NCG	1.05	236	eP	44 07.36	-1.0
CGLM	1.05	230	eP	44 07.83	-0.6
CRP	1.13	230	eP	44 08.77	-0.8
			eS	44 24.40	
SPU	1.16	226	iP	44 09.05	-0.8
BGL	1.22	234	eP	44 10.12	-0.7
CKL	1.25	231	eP	44 10.21	-1.0
			eS	44 27.36	
NKA	1.33	199	eP	44 13.48	1.3
SLKM	1.50	178	eP	44 13.74	-0.9
			eS	44 33.28	
RND	1.57	25	eP	44 14.48	-1.3
NCA	1.66	89	iP	44 16.12	-0.9
RDT	1.74	216	eP	44 17.61	-0.5
			eS	44 39.63	
MCK	1.86	20	eP	44 19.05	-0.7
RED	1.97	218	eP	44 21.59	0.2
TOA	1.97	85	eP	44 20.78	-0.6
KLU	2.17	102	iP	44 22.47	-1.8
SDG	2.31	75	eP	44 26.32	0.1
PAX	2.47	65	eP	44 27.27	-1.3
SVW	2.68	253	eP	44 29.99	-1.5
DDM	2.73	47	eP	44 31.95	-0.3
GLM	3.28	23	eP	44 37.87	-2.2

28 obs. associated

? JAN 23, 1990 10h 00m 19.60± 1.40s
14.618 N ± 8.0km 60.890 W ±13.2km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)
ML 1.9 (FDF).

MVM	0.06	185	iPd	00 21.90	0.0
			S	00 26.30	
CRM	0.14	349	iPc	00 22.85	0.0
			S	00 28.00	
BIM	0.20	240	eP	00 24.06	0.0
			S	00 30.20	
FDF	0.28	294	eP	00 25.43	0.0
	0.1s		0.20nm		
			S	00 32.70	

S.D. = 0.0 on 4 of 4 obs.

? JAN 23, 1990 10h 33m 35.61±21.86s
34.523 N ±173.km 27.754 E ±50.0km
DEPTH = 10.0km (geophysicist)
EASTERN MEDITERRANEAN SEA (371)

KAP	1.13	335	ePb	33 56.80	0.0
ARG	1.72	10	ePb	34 06.70	1.0
KSL	2.19	43	ePn	34 17.00	4.5X
YER	2.64	9	ePn	34 18.00	-1.1
ELL	2.83	38	ePn	34 21.40	-0.4
BCK	3.73	37	ePn	34 34.90	0.4

S.D. = 1.1 on 5 of 6 obs.

% JAN 23, 1990 10h 34m 38.69± 0.99s
40.393 N ± 8.7km 23.260 E ±10.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)

THE	0.33	317	ePg	34 45.40	-0.1
SOH	0.43	9	ePg	34 47.40	-0.2
OUR	0.55	96	ePg	34 50.00	0.1
PAIG	0.57	145	ePg	34 50.10	-0.1
			eSg	34 59.80	
KNT	0.82	340	ePg	34 54.70	0.2

S.D. = 0.2 on 5 of 5 obs.

& JAN 23, 1990 11h 10m 57.10s
40.273 N 124.542 W
DEPTH = 6.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.4 (BRK).

FHC	0.68	39	iPc	11 11.70	1.0
			iS	11 19.80	
WDC	1.56	78	ePc	11 22.90	-2.5
			iS	11 41.70	
			iSg	11 51.00	
LTCM	1.85	91	eP	11 27.50	-2.1
NWRM	2.22	144	eP	11 33.00	-2.0
MIN	2.25	87	ePc	11 32.60	-2.9
LBFM	2.28	61	eP	11 34.40	-1.7
ORV	2.45	106	eP	11 35.50	-2.7
BRK	2.98	143	eP	11 43.50	-2.3
BKS	2.99	142	iPc	11 43.60	-2.3
			e(S)	12 17.30	
MHC	3.70	141	eP	11 53.70	-2.5
ARN	3.75	140	eP	11 54.50	-2.3
SAO	4.26	144	eP	12 00.50	-3.5
KVN	5.12	102	eP	12 13.40	-3.0

13 obs. associated

& JAN 23, 1990 11h 27m 43.37s
60.141 N 153.230 W
DEPTH = 145.8km
4.4mb (1 obs.)
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.36	39	iP	28 03.19	0.8
			eS	28 18.89	
RDT	0.60	43	iP	28 04.24	-0.9
			eS	28 20.30	
PDB	0.60	234	iP	28 03.87	-1.2
			iS	28 20.19	
AUL	0.77	188	iP	28 05.36	-0.8
			eS	28 22.78	
AUE	0.79	185	iP	28 05.29	-1.0
			eS	28 21.67	
NNL	0.97	95	eP	28 07.86	0.1
XLV	1.03	131	eP	28 07.27	-1.0
			eS	28 26.26	
CKL	1.15	22	iP	28 08.73	-0.8
NKA	1.16	58	iP	28 09.94	0.5
			eS	28 32.56	
CNPM	1.18	121	iP	28 08.82	-0.9
			eS	28 28.31	
SPU	1.19	28	iP	28 08.78	-1.1
			iS	28 29.23	
BGL	1.20	20	iP	28 09.44	-0.5
CDD	1.23	190	iP	28 08.73	-1.5
BRLK	1.24	107	iP	28 09.67	-0.6
			eS	28 29.96	
CRP	1.25	25	iP	28 09.71	-0.8
			iS	28 31.57	
NCG	1.37	22	iP	28 10.89	-0.8
SVW	1.53	310	iPc	28 11.60	-1.7
SLKM	1.54	75	iP	28 11.84	-1.6
			eS	28 34.18	
SUA	1.80	41	iP	28 15.04	-1.4
SEW	1.89	89	iP	28 16.19	-1.1
			eS	28 41.15	
PMS	2.12	57	iPd	28 18.10	-2.0
PWA	2.23	46	iPd	28 19.30	-2.1
KDC	2.43	171	iPd	28 20.60	-3.2
PLRM	2.48	52	eP	28 21.44	-3.0
			eS	28 51.96	
PMR	2.48	52	iPd	28 21.50	-2.9
PME	2.54	52	eP	28 22.42	-2.8
GHO	2.66	50	iP	28 24.11	-2.8
CUT	2.68	31	eP	28 25.08	-2.0
TTA	3.10	336	iPc	28 30.20	-2.3
HUR	3.33	30	eP	28 33.08	-2.3
MID	3.56	99	ePd	28 37.10	-1.2
NCA	3.63	56	iP	28 36.72	-2.6
KLU	3.83	66	iP	28 39.18	-2.8
RND	3.88	31	eP	28 40.15	-2.5
TOA	3.95	57	iPd	28 41.50	-2.1
MCK	4.14	28	eP	28 43.68	-2.4
SDG	4.41	54	eP	28 47.58	-2.1
PAX	4.67	49	eP	28 50.89	-2.4
GLB	4.80	70	eP	28 52.30	-2.6
NEA	4.85	22	eP	28 52.30	-3.3
DDM	5.05	40	eP	28 57.03	-1.2
CCB	5.18	27	eP	28 56.53	-3.3
HDA	5.19	32	iP	28 57.05	-3.0
RDS	5.26	24	eP	28 57.87	-3.1
DMW	5.27	39	eP	28 59.02	-2.2
FBA	5.40	25	ePd	28 59.70	-3.1
BALM	5.44	76	eP	29 00.89	-2.7
GLM	5.56	27	eP	29 01.68	-3.4
DOT	5.58	47	eP	29 02.52	-2.8
IMA	5.95	358	ePd	29 08.00	-2.5
SDN	6.19	222	eP	29 09.20	-4.2
PCA	6.49	85	eP	29 15.76	-1.9
DWY	7.56	53	P	29 29.70	-2.4
INK	11.80	38	eP	30 24.00	-3.9
MBC	19.94	23	eP	32 01.00	-4.2
	0.5s		8.00nm		4.4mb
FRB	37.24	47	eP	34 38.00	-3.6

56 obs. associated

JAN 23, 1990 11h 57m 04.32± 0.70s
38.810 N ± 5.5km 23.476 E ± 9.4km
DEPTH = 33.0km (normal)
GREECE (364)
ML 3.3 (ATH), 3.3 (THE).

NEO	0.53	338	iPnc	57 17.70	2.2
ATH	0.86	167	ePn	57 18.70	-1.3
AGG	0.92	284	ePg	57 18.00	-2.9
			eSg	57 30.50	
PAIG	1.13	8	ePb	57 23.70	-0.1
			eSb	57 39.10	
LIT	1.50	330	ePb	57 28.30	-0.9
PLG	1.56	359	ePn	57 29.50	-0.6
OUR	1.57	14	ePb	57 30.20	0.0
			eSb	57 50.90	
THE	1.86	348	ePb	57 34.40	0.0
KZN	1.99	319	ePn	57 36.00	-0.4
SOH	2.01	357	ePn	57 36.60	-0.1
ITM	2.04	217	ePn	57 36.70	-0.3
VLI	2.13	192	ePn	57 38.70	0.4
GRG	2.30	339	ePn	57 39.90	-0.8
			eSn	58 07.60	
VLS	2.35	255	ePb	57 44.00	2.5
APE	2.38	136	ePb	57 50.00	8.1X
KNT	2.39	349	ePn	57 41.80	-0.2
			eSn	58 10.00	
VAY	2.60	345	ePn	57 45.00	0.0
ALN	2.87	43	ePn	57 49.00	0.2
OHR	3.09	319	ePn	57 55.70	3.8X
SKO	3.52	334	ePn	58 03.00	5.0X

S.D. = 1.3 on 17 of 20 obs.

? JAN 23, 1990 12h 32m 20.19± 1.00s
39.057 N ± 9.1km 27.557 E ±17.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.70	199	ePg	32 34.00	0.0
			eSg	32 46.00	
DST	1.00	56	iPn	32 39.10	0.0
EDC	1.31	10	iPn	32 44.50	0.1
BNT	1.33	12	iPn	32 44.60	-0.1

S.D. = 0.1 on 4 of 4 obs.

? JAN 23, 1990 13h 07m 59.11± 3.65s
40.388 N ± 9.7km 25.865 E ±31.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

EZN	0.66	148	iPg	08	12.50	0.2
			iSg	08	21.50	
MFT	1.15	69	iPg	08	21.10	0.4
EDC	1.53	91	ePn	08	26.50	0.1
BNT	1.57	91	iPn	08	26.60	-0.5
DMK	2.02	44	ePn	08	33.60	0.0
DST	2.26	109	ePn	08	37.00	-0.2

S.D. = 0.4 on 6 of 6 obs.

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* JAN 23, 1990 13h 29m 21.21± 1.96s
37.309 N ± 9.9km 141.680 E ± 9.3km
DEPTH = 55.0 ± 16.9 km
4.9mb (9 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

MAT	2.88	256	iPc	30	06.30	0.5
			eS	30	45.00	
BJI	20.08	286	eP	33	52.00	-0.6
LZH	30.23	279	eP	35	35.00	6.0X
NNT	44.79	248	eP	37	41.30	9.9X
GUN	47.34	276	P	37	52.40	0.5
PKI	47.86	275	P	37	56.00	0.0
KKN	47.87	276	P	37	56.00	0.1
GKN	48.28	276	P	37	59.20	0.2
	0.6s		17.00nm			5.2mb
INK	54.05	27	eP	38	41.00	-0.7
MBC	56.20	17	eP	38	56.50	-0.8
	1.0s		8.00nm			4.7mb
WB5	57.30	188	eP	39	04.60	-1.0
WRA	57.36	188	Pc	39	05.40	-0.7
	0.5s		6.90nm			5.0mb
HYB	58.42	268	eP	39	25.00	11.2X
GBA	61.45	266	P	39	34.30	-0.2
			e	39	45.20	
SOD	64.79	337	iP	39	55.20	-0.6
SUF	67.83	333	eP	40	14.60	-0.6
	0.7s		9.70nm			4.9mb
NUR	69.81	332	iP	40	26.50	-0.8
			e	40	38.00	
SES	71.81	40	eP	40	39.00	-0.8
ORV	71.97	54	eP	40	31.20	-9.6X
FFC	73.36	33	iPc	40	48.60	-0.1
	0.7s		19.00nm			5.1mb
CMB	73.54	55	ePc	40	50.60	0.5
HFS	73.93	336	eP	40	51.40	-0.5
	0.4s		21.90nm			5.4mb
			e	40	55.50	
			e	41	02.90	
			e	41	06.90	
NB2	74.02	337	P	40	52.00	-0.5
	0.8s		5.90nm			4.6mb
FRB	76.46	13	eP	41	06.00	-0.2
KSP	79.98	328	eP	41	26.50	0.7
PRU	81.36	329	eP	41	34.00	1.0
KHC	82.42	329	P	41	40.00	1.4
KBA	84.11	327	eP	41	47.50	0.0
	0.7s		2.60nm			4.4mb
ALQ	84.25	50	eP	41	50.50	2.0
	1.0s		2.50nm			4.2mb
ZOBO	146.36	60	PKP	48	58.60	1.3
CNCB	146.83	60	PKP	49	01.30	3.3X

S.D. = 0.9 on 26 of 31 obs.

? JAN 23, 1990 14h 04m 36.63± 4.47s
43.820 N ±21.6km 7.027 E ±23.4km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)

STV	0.48	27	P	04	46.12	-0.2
			S	04	53.86	
ENR	0.50	35	P	04	46.71	0.0
			S	04	54.68	
IMI	0.63	81	P	04	49.15	-0.2
			S	04	59.20	
PZZ	0.69	4	P	04	50.38	0.0
			S	05	00.17	
ROB	0.77	52	P	04	51.92	0.2
			S	05	03.14	
FIN	0.94	65	P	04	54.68	0.2
			S	05	07.82	

S.D. = 0.2 on 6 of 6 obs.

JAN 23, 1990 15h 33m 03.48± 0.57s
38.187 N ± 4.9km 21.999 E ± 7.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.9 (ATH).

AGG	0.87	17	eP	33	19.50	-0.8
ITM	1.01	183	ePn	33	22.00	-0.6
VLS	1.11	270	ePb	33	24.60	0.3
ATH	1.37	98	ePn	33	28.50	-0.1
NEO	1.47	40	ePn	33	30.00	-0.1
VLI	1.65	153	ePn	33	33.00	0.5
LIT	1.95	11	eP	33	36.50	-0.4
KZN	2.12	355	ePn	33	39.50	0.0
PLG	2.46	27	ePn	33	45.50	1.3
OHR	3.06	343	ePn	33	56.00	3.1X
VAY	3.16	8	ePn	33	58.00	3.8X
SKO	3.80	354	ePn	33	55.00	-8.4X

S.D. = 0.7 on 9 of 12 obs.

JAN 23, 1990 15h 40m 53.33± 0.28s
25.185 N ± 4.9km 96.424 E ± 3.9km
DEPTH = 33.0km (normol)
4.7mb (13 obs.) 4.4Msz (2 obs.)
BURMA (296)

KMI	5.72	89	ePn	42	25.50	7.0X
			Pgc	42	41.00	
			Sg	43	23.00	
LSA	6.49	315	Pn	42	32.80	3.3X
CHG	6.76	159	ePn	42	31.30	-1.5
BDT	8.26	163	eP	42	52.50	-1.3
	0.7s		184.80nm			6.3mb X
CD2	8.63	47	ePn	42	59.40	0.4
Z	15s		6.50um			
LOE	9.18	146	eP	43	08.00	1.4
GYA	9.31	80	P	43	07.40	-1.1
			S	44	52.00	
GUN	9.82	288	P	43	15.40	-0.3
NST	10.08	159	eP	43	18.00	-0.9
PKI	10.16	286	P	43	19.20	-1.1
KKN	10.31	287	P	43	21.40	-0.9
DMN	10.43	286	P	43	22.80	-1.2
GKN	10.92	287	P	43	28.60	-1.9
LZH	12.60	29	eP	43	52.00	-1.2
Z	12s		4.50um			
XAN	13.99	48	eP	44	08.00	-3.4X
N	10s		6.50um			
E	10s		1.70um			
WHN	16.72	67	eP	44	46.50	-0.2
Z	14s		2.90um			
			pP	44	55.00	
NDI	17.48	286	iPd	44	59.00	2.8X
	0.6s		21.33nm			4.5mb
			iS	48	02.50	
HYB	18.35	249	eP	45	08.50	1.5
	1.0s		35.00nm			4.5mb
			eS	48	39.00	
TIY	18.47	44	eP	45	08.20	-0.3
Z	14s		3.10um			
N	10s		1.50um			
			sP	45	20.50	
BTO	19.11	33	eP	45	14.00	-2.2
N	11s		5.40um			
E	11s		2.10um			
WMQ	19.91	341	eP	45	26.00	0.9
Z	12s		1.70um			
HHC	20.08	35	eP	45	26.00	-0.9
Z	16s		3.80um			4.8MszX
N	11s		1.50um			
E	11s		2.30um			
NJ2	20.83	66	Pc	45	34.80	0.3
Z	17s		2.70um			4.7MszX
E	11s		1.30um			
TIA	20.88	53	eP	45	35.20	0.1
Z	20s		2.60um			4.6Msz
N	11s		2.20um			
E	11s		2.10um			
			S	49	23.00	
GBA	21.26	241	P	45	39.80	0.7
POO	21.96	257	iPd	45	50.00	3.9X
	0.9s		31.93nm			4.7mb
BJI	22.20	43	eP	45	51.00	2.7
	0.8s		0.02nm			1.5mb X
Z	13s		1.48um			4.6MszX
N	10s		1.09um			
E	12s		1.12um			
KSH	22.31	315	eP	45	53.00	3.4X
SSE	22.59	69	P	45	53.00	0.7
	1.0s		0.03nm			1.7mb X
Z	20s		1.00um			4.2Msz
N	11s		3.30um			
E	11s		0.60um			
			S	49	58.00	
			sS	50	06.00	
BOM	22.74	259	eP	45	57.60	3.8X
			eS	50	04.80	
KOD	23.34	234	eP	46	05.00	4.9X
DL2	25.27	51	eP	46	21.00	2.9X
Z	17s		1.60um			4.6MszX
N	10s		1.10um			
QUE	26.53	287	eP	46	32.00	1.9
SNY	27.91	47	eP	46	41.70	-0.6
Z	13s		1.30um			4.7MszX
CN2	30.06	45	eP	47	01.30	-0.3
Z	15s		1.50um			4.8MszX
N	10s		1.20um			
E	10s		0.50um			
			epP	47	10.00	30kmX
MAIO	33.43	298	eP	47	36.00	4.6X
			eS	53	04.00	
PRNI	54.03	290	eP	50	17.00	0.1
MBH	54.24	290	e(P)	50	17.00	-1.3
ELL	57.17	299	eP	50	39.00	-0.6
WB5	58.04	137	eP	50	46.70	1.1
WRA	58.07	137	P	50	47.00	1.1
	0.8s		4.70nm			4.6mb
VRI	58.51	310	P	50	49.50	0.8
SUF	58.90	330	eP	50	51.60	0.4
	0.6s		6.20nm			4.9mb
MLR	59.09	309	ePc	50	54.00	1.1
SOD	59.25	335	iP	50	53.90	0.4
NUR	59.47	327	eP	50	56.30	1.2
SKO	62.81	306	eP	51	18.00	0.0
UPP	62.99	326	iP	51	19.50	0.7
OHR	63.44	305	eP	51	21.50	-0.7
KSP	64.80	316	eP	51	31.50	0.6
HFS	64.93	327	eP	51	30.70	-0.9
	0.7s		4.90nm			4.7mb
			e	51	34.70	
			e	51	36.20	
			e	51	40.20	
			e	51	46.50	
			ePcP	52	06.00	
NB2	66.01	328	P	51	38.10	-0.5
	0.8s		4.00nm			4.6mb
PRU	66.06	316	eP	51	40.00	1.0
KHC	66.84	315	eP	51	45.80	1.7
VAI	70.81	312	P	52	09.00	0.4
LPG	72.27	312	eP	52	18.10	0.3
	0.8s		10.70nm			4.9mb
LBF	73.62	315	eP	52	25.00	-0.3
	0.8s		8.00nm			4.8mb
SMF	73.82	314	eP	52	26.20	-0.2
	0.8s		9.40nm			4.8mb
AVF	74.09	314	eP	52	28.10	0.2
	0.8s		8.00nm			4.8mb
M8C	76.41	8	eP	52	40.00	-0.7
	1.0s		4.00nm			4.4mb
BCAO	77.17	269	iPd	52	49.60	3.5X
	0.6s		6.00nm			4.8mb
BUL	79.83	242	eP	53	19.60	19.1X
INK	79.86	17	eP	53	01.00	1.3
SLR	83.02	237	eP	53	18.00	0.8
KSR	84.15	238	eP	53	09.00	-14.0X
SEK	84.89	236	eP	53	12.40	-14.1X
BLF	86.37	236	eP	53	38.50	4.6X
BAO	145.41	279	e(PKP)	00	28.00	-2.4

S.D. = 1.1 on 53 of 68 obs.

? JAN 23, 1990 16h 30m 09.96± 7.31s
45.002 N ±46.2km 4.462 E ±31.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538
MD 1.0 (STR).

SSB	0.28	12	Pg	30	15.78	-0.1
			Sg	30	24.24	
LBL	0.89	285	Pg	30	26.48	-0.5
PLDF	1.13	329	Pg	30	30.78	-0.5
			Sg	30	51.94	
PYM	1.27	307	Pg	30	33.98	0.4
			Sg	30	55.28	

23d 16h

AGO	1.41	319	Pg	30	36.37	0.7
			Sg	31	01.18	
BNI	1.57	87	P	30	54.00	15.9X
GRC	2.49	338	Pg	30	57.75	6.6X
S.D. = 0.8 on 5 of 7 obs.						

& JAN 23, 1990 16h 54m 53.05s
59.946 N 151.701 W
DEPTH = 55.6km
KENAI PENINSULA, ALASKA (14)
<AGS-P>. Felt (II) at Homer.

NNL	0.23	64	iP	55	03.00	0.7
BRLK	0.45	114	eP	55	03.75	-0.5
			eS	55	12.50	
CNPM	0.48	151	iP	55	03.92	-0.7
			iS	55	12.84	
XLV	0.49	181	eP	55	03.51	-1.2
			eS	55	12.34	
RED	0.72	312	iP	55	06.82	-0.6
RDT	0.72	331	iP	55	06.87	-0.6
NKA	0.83	16	eP	55	10.51	1.7
SLKM	0.93	52	iP	55	09.47	-0.7
AUE	1.03	236	iP	55	10.60	-0.9
AUL	1.05	238	eP	55	10.90	-0.8
SEW	1.14	81	eP	55	12.23	-0.8
SPU	1.25	352	iP	55	14.23	-0.4
			eS	55	30.98	
PDB	1.27	264	iP	55	13.70	-1.1
CKL	1.29	346	iP	55	14.85	-0.4
CRP	1.34	351	eP	55	15.89	-0.1
BGL	1.37	346	eP	55	16.11	-0.1
CDD	1.42	225	iP	55	16.06	-0.9
NCG	1.48	351	eP	55	17.81	0.0
			iS	55	38.71	
SUA	1.59	17	eP	55	19.43	0.0
PMS	1.68	38	iPc	55	20.50	0.0
PWA	1.93	27	iPd	55	24.40	0.4
PLRM	2.08	36	iP	55	25.28	-0.8
PMR	2.08	36	iPc	55	24.40	-1.7
PME	2.14	37	eP	55	26.30	-0.6
KDC	2.24	191	eP	55	27.00	-1.4
SVW	2.26	303	iPc	55	27.10	-1.6
GHO	2.28	35	eP	55	28.22	-0.8
GLI	2.47	66	eP	55	28.95	-2.7
CUT	2.56	15	eP	55	32.70	-0.2
MID	2.77	99	eP	55	35.00	-0.8
VZW	2.78	64	eP	55	33.73	-2.4
NCA	3.14	47	eP	55	39.81	-1.4
HUR	3.20	17	eP	55	42.70	0.7
KLU	3.24	59	iP	55	40.67	-1.9
TOA	3.45	49	iPc	55	44.60	-1.0
TTA	3.64	327	ePc	55	47.00	-1.3
RND	3.73	20	eP	55	49.16	-0.4
MCK	4.02	18	eP	55	53.17	-0.4
GLB	4.16	65	eP	55	52.16	-3.4
PAX	4.26	42	iP	55	55.56	-1.4
TGL	4.48	76	eP	55	58.52	-1.6
DDM	4.74	33	eP	56	03.90	0.1
HDA	5.00	24	eP	56	05.85	-1.5
CCB	5.06	19	eP	56	06.32	-1.8
RDS	5.17	17	eP	56	08.30	-1.5
FBA	5.29	18	iPc	56	10.30	-1.1
GLM	5.44	20	eP	56	11.72	-1.8
PCA	5.74	84	eP	56	15.25	-2.6
IMA	6.21	353	eP	56	23.50	-0.9
49 obs. associated						

JAN 23, 1990 17h 02m 53.31± 0.66s
18.112 S ± 9.2km 69.719 W ± 7.6km
DEPTH = 146.6 ± 7.9 km
4.7mb (1 obs.)
NORTHERN CHILE (123)

CNCB	2.10	52	iPd	03	30.20	-0.3
			eS	03	58.00	
LPB	2.20	45	iPd	03	32.20	0.7
0.8s 492.54nm						
			S	04	00.00	
ARE	2.36	314	iPc	03	34.10	0.8
			lS	04	03.60	
ZOBO	2.38	40	iPd	03	33.30	-0.6
Z 24s 0.18um						
			LR	13	20.00	
CCH	3.48	79	P	03	47.60	-0.1
			e	04	05.00	
ANT	5.60	187	iPd	04	15.50	-0.1
NNA	9.19	311	eP	05	03.00	-0.8
			eS	06	47.00	
LIC	68.23	75	P	13	40.00	-0.5
KIC	68.54	75	Pc	13	42.20	-0.2
LKO	69.00	72	Pc	13	46.28	1.1
0.4s 5.00nm 4.7mb						
GBA	148.12	93	PKPc	22	37.70	17.2X
0.4s 1.10nm						
S.D. = 0.8 on 10 of 11 obs.						

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* JAN 23, 1990 17h 28m 59.82± 3.38s
22.661 N ±28.0km 120.882 E ± 7.7km
DEPTH = 5.0km (geophysicist)
TAIWAN (244)

TWG	0.24	48	iPc	29	04.10	-0.5
			eS	29	07.10	
TWM1	0.45	291	iPc	29	08.80	-0.1
			eS	29	15.10	
TWK	0.70	329	ePc	29	13.70	-0.2
TWD	1.56	25	ePc	29	28.70	0.5
TWQ	1.61	358	eP	29	29.30	0.4
ANP	2.58	13	eP	29	48.80	5.8X
S.D. = 0.6 on 5 of 6 obs.						

JAN 23, 1990 17h 30m 58.41± 3.37s
51.568 N ±21.0km 16.165 E ±21.6km
DEPTH = 5.0km (geophysicist)
POLAND (548)
ML 4.1 (VKA), 3.8 (KBA).

KSP	0.73	174	iPc	31	12.90	-0.1
0.4s 114.00nm						
			iS	31	22.40	
BRG	1.56	244	iPn	31	27.40	0.6
			iPg	31	28.60	
			iSg	31	48.10	
PRU	1.89	214	Pn	31	31.50	-0.1
			Pg	31	33.60	
			eSn	31	49.50	
			Sg	31	57.60	
CLL	2.00	264	iPn	31	32.80	-0.3
			iPg	31	37.10	
			iSg	32	02.50	
KRA	2.83	121	eP	31	54.10	9.0X
			eS	32	30.10	
KHC	2.95	215	iPn	31	47.10	0.3
			Pg	31	54.80	
			Sn	32	22.00	
			Sg	32	31.80	
HOF	2.99	247	iPnd	31	47.20	-0.2
MOX	3.01	254	ePn	31	48.00	0.3
			iPg	31	56.00	
			iSg	32	36.00	
WET	3.21	222	iPnd	31	50.90	0.4
VKA	3.31	178	e(Pn)	31	52.50	0.6
			(Pg)	32	00.00	
			iSg	32	43.50	
ZST	3.43	169	eP	32	08.30	14.7X
			e	32	43.40	
			i(Sn)	32	47.40	
SPC	3.53	131	ePn	32	06.60	11.4X
			e	32	10.20	
			e(Sn)	32	49.90	
			i	32	52.50	
GRF	3.67	241	ePn	31	57.00	0.0
			ePg	32	08.60	
			e(Sn)	32	41.20	
			eSg	32	54.80	
SOP	3.90	176	eP	32	15.40	15.1X
KBA	4.86	203	iPnd	32	12.80	-1.3
			i(Sn)	33	05.70	
			i	33	20.20	
			iSg	33	28.40	
TNS	5.07	258	ePn	32	22.00	5.1X
			eSn	33	41.60	
MEM	6.47	265	P	32	36.50	-0.1
DOU	7.48	263	P	32	50.50	-0.2
S.D. = 0.5 on 13 of 18 obs.						

& JAN 23, 1990 17h 41m 12.64s
61.628 N 146.414 W
DEPTH = 30.1km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.27	120	iP	41	19.30	-0.6
			eS	41	24.84	
NCA	0.42	332	iP	41	21.30	-0.5
			eS	41	29.32	
TOA	0.49	13	iP	41	22.47	-0.6
			eS	41	30.97	
VZW	0.58	187	iP	41	22.90	-1.4
GLI	0.82	204	iP	41	26.71	-1.3
			eS	41	38.63	
SDG	0.99	24	eP	41	28.99	-1.5
			eS	41	41.77	
CVA	1.13	163	eP	41	31.43	-1.0
			eS	41	47.73	
GHO	1.20	278	eP	41	32.64	-0.9
HIN	1.24	182	iP	41	33.54	-0.4
			iS	41	51.39	
PME	1.25	271	eP	41	33.67	-0.4
			eS	41	50.22	
GLB	1.26	97	iP	41	32.35	-2.0
SGAM	1.27	152	eP	41	33.29	-1.2
			eS	41	50.83	
PLRM	1.30	270	eP	41	34.44	-0.4
			eS	41	52.37	
PAX	1.42	18	iP	41	35.22	-1.4
RAGM	1.51	145	eP	41	37.16	-0.7
			eS	41	57.94	
PMS	1.56	257	eP	41	38.90	0.2
			eS	41	59.39	
PWA	1.65	272	eP	41	40.28	0.3
TGL	1.94	115	eP	41	42.56	-1.7
			eS	42	06.29	
CUT	1.98	295	eP	41	44.96	0.3
			eS	42	10.27	
HUR	2.03	313	eP	41	45.59	0.2
BALM	2.05	105	eP	41	44.08	-1.8
SUA	2.08	267	eP	41	46.42	0.2
			eS	42	13.91	
RND	2.11	329	eP	41	46.78	0.1
SEW	2.13	225	eP	41	47.02	0.2
SLKM	2.17	240	eP	41	47.86	0.5
			eS	42	15.01	
DDM	2.18	6	eP	41	47.47	-0.2
SNH	2.27	128	eP	41	49.11	0.2
			eS	42	16.38	
MCK	2.41	332	eP	41	50.96	0.1
NKA	2.50	251	eP	41	55.01	2.9
SPU	2.75	263	eP	41	56.96	1.3
NCG	2.76	268	eP	41	57.03	1.2
CRP	2.78	265	eP	41	57.40	1.2
HDA	2.80	355	eP	41	55.39	-0.9
CKL	2.88	264	eP	41	57.59	0.0
BGL	2.89	265	eP	41	58.58	0.8
CCB	3.10	349	eP	41	59.89	-0.6
FBA	3.34	350	eP	42	02.51	-1.5
37 obs. associated						

% JAN 23, 1990 19h 13m 13.10± 0.74s
37.028 N ± 6.5km 5.458 W ± 6.6km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

EPRU	0.19	109	iP	13	17.00	-0.4
			eS	13	21.20	
EJIF	0.58	181	ePg	13	25.00	0.2
			eSg	13	31.80	
EHOR	0.81	12	ePg	13	29.40	0.6
			eSg	13	40.60	
EVAL	1.17	299	iPg	13	34.60	-0.3
			eSg	13	50.40	
AFC	1.55	81	ePn	13	41.60	0.7
EBAN	1.75	49	ePn	13	43.40	-0.3
			eSn	14	05.60	
EVIA	2.84	55	ePn	13	58.70	-0.7
S.D. = 0.7 on 7 of 7 obs.						

? JAN 23, 1990 19h 14m 34.62± 1.00s
39.154 N ± 9.1km 27.755 E ±15.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.81	56	iPg	14	50.40	0.0
			eSg	15	00.40	
IZM	0.85	207	ePg	14	51.00	0.0
			eSg	15	04.00	
EDC	1.19	4	ePn	14	56.50	-0.4
BNT	1.21	6	lPn	14	57.50	0.4
YLV	1.88	41	iPn	15	10.00	2.8X

S.D. = 0.5 on 4 of 5 obs.

% JAN 23, 1990 19h 42m 37.97± 1.09s
35.298 N ± 8.6km 50.744 E ± 8.4km
DEPTH = 5.0km (geophysicist)
IRAN (348)
Felt in the Firuzkuh oreo.

IR1	0.13	339	eP	42 39.00	-1.7
IR4	0.14	115	eP	42 40.00	-1.0
IR5	0.16	237	eP	42 42.00	0.7
IR7	0.42	345	eP	42 47.00	0.6
TEH	0.68	50	eP	42 53.00	1.4

S.D. = 1.8 on 5 of 5 obs.

• JAN 23, 1990 20h 06m 53.51± 0.87s
28.507 N ±12.3km 130.423 E ± 9.6km
DEPTH = 33.0km (normal)
4.5mb (2 obs.)
RYUKYU ISLANDS (238)

SSE	8.43	290	eP	08 55.00	-1.3
MAT	10.36	37	eP	09 22.00	-0.9
CN2	15.78	347	eP	10 36.00	1.2
BJI	16.44	318	eP	10 44.50	1.3
TIY	17.62	306	eP	10 56.70	-1.5
XAN	19.18	292	P	11 15.40	-1.8
GYA	21.17	270	P	11 42.80	4.4X
CD2	23.27	282	P	11 58.00	-1.1
LZH	23.66	295	P	12 00.00	-2.9X
GTA	27.50	301	eP	12 37.80	-1.2
GUN	39.09	280	P	14 21.40	1.6
PKI	39.57	280	P	14 24.80	1.0
KKN	39.63	280	P	14 25.40	1.2
DMN	39.82	280	P	14 27.30	1.5
GKN	40.14	281	P	14 29.00	0.6
WB5	48.25	175	eP	15 32.50	-0.8
WRA	48.31	175	Pc	15 44.30	10.5X
	0.7s		4.30nm		
INK	66.03	24	eP	17 39.00	0.3
MBC	67.16	14	eP	17 45.00	-0.8
	0.7s		3.00nm		4.5mb
HFS	77.71	333	eP	18 45.50	-2.7X
	0.4s		1.80nm		4.5mb
			e	18 48.20	
FRB	86.84	8	eP	19 36.00	0.4

S.D. = 1.3 on 17 of 21 obs.

JAN 23, 1990 20h 44m 46.46± 0.37s
19.129 N ± 5.1km 121.236 E ± 6.4km
DEPTH = 25.0km (8 depth phases)
5.1mb (18 obs.) 4.6Msz (2 obs.)
PHILIPPINE ISLANDS REGION (248)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 21C
Centroid Location:
Origin Time 20:44:48.3 0.4
Lat 19.69N 0.06 Lon 121.68E 0.08
Dep 49.0 4.9 Half-duration 1.7
Moment Tensor; Scale 10**17 Nm
Mrr= 0.56 0.06 Mtt=-0.37 0.07
Mff=-0.18 0.09 Mrt= 0.13 0.12
Mrf=-0.28 0.10 Mtf=-1.16 0.08
Principal Axes:

T	Val= 1.06	Plg=30	Azm= 49
N	0.39	60	222
P	-1.45	3	317

Best Double Couple:Mo=1.2*10**17
NP1:Strike= 89 Dip=67 Slip= 160
NP2: 187 71 24

BAG	2.78	193	eP	45 32.50	2.1
TWG	3.68	358	eP	45 44.30	1.2
TWK	4.18	351	ePc	45 49.50	-0.7
			eS	46 34.90	
TWF1	4.20	1	eP	45 52.30	1.8
QCP	4.47	182	eP	46 12.00	17.6X
TWD	4.94	4	ePc	46 02.60	1.7
TWO	5.13	356	ePc	46 03.90	0.2
TWC	5.48	6	eP	46 11.50	2.9X
TWZ	5.95	3	ePc	46 16.80	1.6
ANP	6.03	2	eP	46 23.50	7.1X
QZH	6.28	338	eP	46 17.00	-2.9X
Z	20s		5.60um		
E	13s		2.50um		
			S	47 23.50	

HKC	7.33	297	iP	46 31.10	-3.5X
MCO	7.78	294	iP	46 37.10	-3.9X
			eS	47 59.90	
QIZ	10.77	271	eP	47 17.80	-4.5X
E	15s		7.30um		
SSE	11.91	360	P	47 39.00	1.3
Z	22s		3.30um		
N	12s		1.20um		
E	12s		0.60um		
DAV	12.69	160	eP	47 53.00	4.8X
WHN	12.96	333	Pc	47 48.00	-3.8X
	5.0s		1.10nm	3.2mb	X
Z	20s		3.80um	4.6MszX	
N	14s		2.80um		
			eS	50 06.00	
NJ2	13.05	351	Pc	47 50.50	-2.3
Z	18s		2.30um		
			S	50 09.00	
GYA	15.28	301	P	48 19.80	-2.6X
N	13s		2.80um		
E	13s		3.40um		
			pP	48 28.00	
TIA	17.40	349	eP	48 51.20	2.1
Z	16s		2.20um		
N	16s		1.90um		
			S	52 02.00	
MNI	17.93	168	ePd	48 43.50	-12.4X
KMI	18.14	293	Pd	48 58.00	-0.6
Z	16s		7.60um	4.8MszX	
N	13s		2.40um		
E	13s		3.30um		
			PP	49 14.00	
			S	52 20.00	
			sS	52 27.00	
XAN	18.46	326	iPc	49 02.60	0.2
	5.0s		1.10nm	2.3mb	X
LOE	18.60	268	eP	49 06.00	1.8
CD2	19.68	310	P	49 13.00	-3.9X
Z	17s		3.00um		
N	12s		2.60um		
			eS	52 53.00	
DL2	19.71	1	eP	49 17.00	-0.1
N	14s		1.40um		
E	12s		1.00um		
PCI	19.96	184	ePd	49 23.50	3.7X
TIY	20.05	339	eP	49 21.00	0.3
N	19s		4.40um		
			sP	49 36.00	
			sS	53 13.00	
CHG	21.08	273	eP	49 32.00	0.5
	1.0s		22.50nm	4.6mb	
			e	53 37.00	
BDT	21.20	268	eP	49 32.00	-0.6
BJI	21.29	349	eP	49 33.00	-0.4
	1.0s		0.07nm	2.1mb	X
Z	15s		2.33um	4.7MszX	
N	15s		1.22um		
			epP	49 38.50	20km
			eS	53 20.00	
SNY	22.71	5	iPc	49 47.40	-0.1
Z	15s		1.40um	4.5MszX	
N	10s		0.60um		
E	13s		0.70um		
			S	53 50.00	
			sS	54 04.00	
LZH	22.80	321	P	49 50.50	1.8
	3.0s		0.40nm	2.4mb	X
Z	16s		3.20um	4.9MszX	
N	16s		2.10um		
E	13s		0.80um		
			pP	50 00.00	35km
			PP	50 19.00	
			eS	53 55.00	
MAT	22.88	37	eP	49 49.00	-0.2
	1.1s		34.18nm	4.8mb	
			eS	53 54.00	
HHC	23.18	341	eP	49 54.00	1.7
Z	16s		4.30um	5.0MszX	
N	15s		2.70um		
E	17s		1.50um		
			sP	50 04.00	
			S	54 00.00	
			sS	54 10.00	
SNG	23.30	242	eP	50 04.00	10.6X
GUMO	23.32	100	eP	49 39.00	-14.7X
PJG	23.32	100	eP	49 38.30	-15.4X
GUA	23.38	100	eP	49 38.20	-16.0X

BTO	23.46	338	P	49 57.00	2.0
N	17s		2.40um		
E	17s		1.70um		
IPM	24.45	236	ePc	50 06.10	1.4
CN2	24.85	7	Pc	50 08.00	-0.3
Z	20s		2.00um		4.6Msz
N	14s		0.90um		
E	14s		1.50um		
			epP	50 13.00	18km
			eS	54 32.00	
MDJ	26.35	14	eP	50 20.00	-2.3
Z	20s		1.80um		4.6Msz
			S	54 52.00	
GTA	27.40	322	eP	50 31.40	-0.7
Z	17s		1.50um		4.6MszX
E	14s		1.10um		
			eS	55 11.00	
			sS	55 23.00	
GUN	33.48	292	P	51 26.20	-0.2
	0.8s		27.00nm		5.2mb
PKI	33.85	291	P	51 29.00	-0.7
KKN	33.99	291	P	51 30.00	-0.7
	1.0s		16.00nm		4.9mb
DMN	34.13	291	P	51 31.00	-0.9
GKN	34.58	292	P	51 34.60	-1.1
	0.8s		16.00nm		5.0mb
WMQ	37.33	319	P	52 00.70	2.0
Z	14s		2.10um		5.1MszX
WRA	40.90	161	P	52 30.00	1.5
	0.6s		3.00nm		4.2mb
GBA	42.30	269	P	52 40.10	0.0
KOD	43.15	265	eP	52 48.00	0.6
KSH	43.83	307	P	52 55.50	3.1X
POO	44.74	277	eP	53 03.50	3.5X
QUE	50.15	294	eP	53 42.50	0.2
BRS	55.43	146	eP	54 13.50	-7.9X
MAIO	56.39	301	eP	54 29.00	0.6
			eS	02 31.00	
TAB	66.78	304	eP	55 35.00	-3.4X
BRW	69.47	20	eP	55 54.70	0.4
TTA	69.87	29	eP	55 56.70	-0.3
SVW	70.15	31	eP	55 59.00	0.3
IMA	70.70	26	ePc	56 02.10	0.0
	1.4s		26.20nm		5.2mb
PMR	73.20	30	eP	56 15.40	-1.4
	1.0s		20.00nm		5.1mb
FBA	73.27	26	eP	56 16.30	-0.9
KEV	73.67	339	eP	56 19.00	-0.5
			e	56 25.00	19km
SOD	74.28	336	iP	56 22.30	-0.7
			i	56 30.00	25km
SUF	75.49	332	iP	56 29.50	-0.6
	0.4s		4.00nm		4.8mb
KAS	75.77	309	eP	56 32.00	-0.2
MSZ	76.43	148	P	56 37.00	1.5
NUR	76.74	330	iP	56 35.00	-2.1
			e	56 44.00	29km
INK	77.88	22	eP	56 42.00	-1.3
MBC	78.16	12	eP	56 44.00	-0.7
	0.9s		30.00nm		5.3mb
MLR	80.20	315	ePc	56 56.50	0.0
HFS	81.99	331	eP	57 03.70	-1.7
	0.7s		5.70nm		4.7mb
Z	18s		0.00um		2.4MszX
			e	57 12.00	26km
			e	57 16.70	
			e	57 24.00	
			LR	33 32.00	
KRA	82.55	320	eP	57 08.50	0.0
SPC	82.67	320	eP	57 06.60	-2.9X
NB2	82.70	333	P	57 08.00	-1.2
	0.9s		11.30nm		5.0mb
VAY	83.86	312	eP	57 14.70	-0.7
SRO	84.37	319	e(P)	57 26.70	8.8X
KSP	84.41	322	iPc	57 17.90	-0.2
	0.9s		27.00nm		5.5mb
SKO	84.43	312	eP	57 16.80	-1.5
ZST	84.97	319	e(P)	57 20.70	-0.2
OHR	85.19	312	eP	57 21.00	-1.2
	1.1s		0.03nm		2.4mb X
BRG	85.76	323	eP	57 24.30	-0.5
			e	57 33.50	29km
PRU	85.79	322	eP	57 25.30	0.4
CLL	86.11	323	eP	57 32.00	5.5X
	1.7s		24.00nm		5.1mb
KHC	86.72	321	P	57 30.10	0.5
FIR	90.54	317	eP	57 49.00	1.2

23d 20h

LPG	92.52	320	eP	57	57.40	0.1
	1.0s		10.00nm			5.2mb
PGF	92.58	317	eP	57	57.50	0.2
SBF	92.93	318	eP	57	58.30	-0.6
	1.0s		12.00nm			5.3mb
RMW	92.96	37	P	58	00.20	1.2
FRB	97.04	4	eP	58	16.00	-1.2
FFC	97.72	24	eP	58	20.00	-0.5
	0.8s		6.00nm			5.2mb
CMB	98.92	45	P	58	28.00	1.7
	0.9s		9.73nm			5.3mb
KVN	99.85	43	P	58	31.00	0.3
TNP	100.97	43	Pdiff	58	37.00	1.3
KIC	121.08	290	PKP	03	37.50	-2.0
TIC	121.20	291	PKP	03	37.80	-1.9
LIC	121.39	290	PKP	03	38.10	-2.0
ZOBO	170.64	74	PKP	04	46.00	-8.7X
	Z 24s		0.08um			
			LR	32	40.00	
	S.D. = 1.2		on 77 of 102 obs.			

% JAN 23, 1990 21h 24m 59.87± 0.78s
37.037 N ± 6.7km 5.470 W ± 7.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.0 (MDD).

EPRU	0.20	110	iP	25	04.00	-0.4
			eS	25	08.00	
EJIF	0.58	180	ePg	25	11.80	0.1
			eSg	25	19.00	
EHOR	0.80	13	ePg	25	16.40	1.0
			eSg	25	27.50	
EVAL	1.15	299	ePg	25	21.30	-0.2
			eSg	25	37.00	
AFC	1.55	81	ePn	25	29.00	1.2
			eSn	25	49.50	
EBAN	1.75	49	iPn	25	30.40	0.0
			eSn	25	53.80	
EVIA	2.84	55	ePn	25	45.40	-0.8
ETOR	4.62	34	ePn	26	10.40	-1.0
	S.D. = 0.9		on 8 of 8 obs.			

% JAN 23, 1990 21h 37m 30.00± 0.72s
37.026 N ± 6.0km 5.479 W ± 6.6km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.4 (MDD). Felt (III) in the Coripe area.

EPRU	0.21	107	iP	37	34.40	-0.1
			eS	37	38.00	
EJIF	0.57	179	ePg	37	41.50	-0.1
			eSg	37	48.40	
EHOR	0.81	13	iPgc	37	46.60	0.9
			eSg	37	58.00	
EVAL	1.15	299	iPgd	37	51.70	0.1
			eSg	38	07.00	
AFC	1.56	81	ePn	37	59.20	1.2
			eSn	38	19.00	
EBAN	1.76	49	iPnc	38	00.80	0.0
			eSn	38	23.20	
EVIA	2.85	55	iPn	38	15.90	-0.6
EPLA	3.07	351	ePg	38	28.90	9.4X
			eSg	39	05.50	
GUD	3.76	16	ePn	38	29.00	-0.4
			eSn	39	11.00	
ETOR	4.63	34	ePn	38	40.80	-1.0
			eSn	39	33.60	
	S.D. = 0.8		on 9 of 10 obs.			

JAN 23, 1990 23h 07m 06.17± 0.58s
36.026 N ± 7.6km 137.531 E ± 6.2km
DEPTH = 10.0km (geophysicist)
HONSHU, JAPAN (227)

MTMJ	0.60	22	iP+	07	17.00	-1.4
			S	07	24.70	
IIDJ	0.63	150	iPd	07	18.10	-0.7
			S	07	26.60	
MAT	0.75	47	iPd	07	19.80	-1.1
			iS	07	29.40	
CHJJ	1.19	88	iPd	07	27.80	-0.5
			S	07	44.90	
TSRJ	1.35	249	iP+	07	31.10	0.1
			S	07	49.10	
NIIJ	1.69	44	P	07	36.20	0.3
			S	07	58.10	
KAKJ	2.15	84	P	07	43.30	0.8
			S	08	10.50	
WKYJ	2.40	222	P	07	46.60	0.4
			S	08	16.80	
YAMJ	2.93	42	eP	07	59.90	6.2X
YONJ	3.42	257	P	08	00.50	-0.1
TKSJ	3.51	236	P	08	01.60	-0.3
OFUJ	4.48	46	P	08	18.00	2.3
	S.D. = 1.1		on 11 of 12 obs.			

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* JAN 23, 1990 23h 13m 28.85± 2.02s
21.569 N ± 8.8km 143.252 E ±13.9km
DEPTH = 277.0 ± 19.1 km
4.4mb (6 obs.)
MARIANA ISLANDS REGION (215)

KAKJ	14.83	350	P	16	51.70	4.4X
			S	19	24.60	
CHJJ	14.90	346	P	16	48.80	0.6
			S	19	24.90	
MAT	15.55	345	eP	16	56.00	0.0
	0.8s		17.91nm			4.5mb
MTMJ	15.70	344	P	16	58.10	0.4
NIIJ	16.05	348	P	17	01.30	0.1
MTN	36.21	200	iPd	20	06.80	-0.5
WB5	42.10	193	eP	20	55.70	-0.1
WRA	42.17	193	Pd	20	56.10	-0.2
	0.5s		6.60nm			4.2mb
GBA	62.06	275	Pc	23	27.30	-0.8
	0.7s		2.00nm			3.9mb
INK	67.66	24	eP	23	57.00	-0.8
FHC	78.24	51	eP	25	03.20	3.5X
WDC	79.35	51	ePc	25	05.80	0.2
SOD	79.89	339	iP	25	08.10	0.3
ORV	80.45	51	eP	25	11.10	-0.2
BRK	80.46	53	eP	25	08.70	-2.7
BKS	00.47	53	eP	25	00.30	-3.2X
PRS	81.66	54	ePc	25	18.00	0.3
CMB	81.79	52	ePc	25	18.60	0.2
LLA	81.88	54	ePc	25	19.20	0.3
SUF	82.59	336	iP	25	21.30	-0.6
	0.6s		9.40nm			4.7mb
FRI	82.67	53	ePc	25	23.00	0.1
SES	83.13	38	eP	25	25.40	0.4
NUR	84.43	334	eP	25	30.00	-1.2
FFC	85.90	32	iPc	25	38.80	0.2
	0.8s		12.00nm			4.8mb
HFS	88.87	337	eP	25	50.90	-1.8
	0.8s		2.70nm			4.2mb
			e	26	42.50	209kmX
KIC	138.10	308	PKP	32	24.60	1.3
TIC	138.11	309	PKP	32	24.70	1.3
LIC	138.40	308	PKP	32	25.30	1.4
ZOBO	149.89	85	PKP	32	44.00	0.2
	1.0s		27.50nm			
			i	32	49.40	
LPB	149.98	86	PKP	32	50.00	6.2X
CNCB	150.16	86	PKP	32	46.00	1.8
			i	32	50.80	
	S.D. = 1.0		on 27 of 31 obs.			

? JAN 23, 1990 23h 16m 41.79± 2.28s
14.926 S ±152.km 72.227 W ±80.7km
DEPTH = 33.0km (normal)
PERU (116)

ZOBO	4.17	109	P	17	45.00	-0.3
LPB	4.28	112	P	17	47.00	0.2
CNCB	4.50	115	P	17	50.00	0.1
PT08	5.14	305	iP	17	59.40	0.6
			eS	18	57.60	
NNA	5.36	302	ePd	18	01.00	-0.6
	0.3s		14.29nm			5.0mb
	S.D. = 0.7		on 5 of 5 obs.			

JAN 24, 1990 00h 42m 11.39± 0.48s
48.077 N ± 5.9km 9.403 E ± 3.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 3.0 (FUR), 3.1 (LDG), 3.1 (KBA), 3.4 (VKA).

SLE	0.69	243	ePc	42	23.70	-1.3
SAX	0.83	183	ePd	42	27.40	-0.2
ZLA	0.91	229	ePc	42	28.50	-0.3
FEL	0.96	258	ePn	42	28.71	-1.0
LLS	1.24	193	ePc	42	35.20	0.6
FUR	1.26	85	ePg	42	36.00	1.2
BBS	1.42	245	Pg	42	37.50	0.3
CDF	1.46	284	Pg	42	38.14	0.3
			Sg	42	56.70	
OSS	1.48	160	ePd	42	38.50	0.3
GWF	1.49	308	Pg	42	38.81	0.6
			Sg	42	57.99	
ECH	1.51	276	Pg	42	39.08	0.6
			Sg	42	58.27	
MOF	1.54	262	Pg	42	39.85	0.8
			Sg	42	59.66	
VDL	1.59	178	ePc	42	39.80	-0.1
OGA	1.64	137	iPc	42	42.50	2.0
BSF	1.77	263	Pn	42	40.60	-1.8
			Pg	42	45.00	
			Sg	43	06.70	
BSF	1.77	263	Pg	42	44.14	1.8
			Sg	43	06.66	
SCE	1.88	123	ePn	42	47.40	3.4X
LOMF	1.89	248	Pg	42	45.91	1.9
GRF	2.01	36	ePg	42	50.70	4.9X
			e(Sn)	43	06.20	
			eSg	43	15.30	
HAU	2.05	269	Pg	42	49.40	3.0X
			Sg	43	15.40	
TNS	2.24	344	ePn	42	55.20	6.1X
			eSn	43	22.80	
MMK	2.25	206	ePc	42	48.50	-1.0
VAI	2.25	191	P	42	53.50	4.3X
			eSn	43	22.50	
BHG	2.37	97	iPd	42	58.90	8.0X
DIX	2.42	215	ePc	42	55.90	4.1X
WET	2.54	64	iPnd	42	52.30	-1.1
CTI	2.55	142	P	42	59.40	5.9X
EMS	2.62	221	ePc	42	47.20	-7.5X
ORO	2.64	202	P	43	00.00	5.1X
			eSn	43	25.90	
FVI	2.73	122	P	43	03.00	6.9X
			eSn	43	37.20	
KBA	2.85	109	iPnc	42	57.80	-0.1
			iPg	43	04.50	
			iSg	43	40.10	
MOX	2.95	29	ePg	43	08.00	8.9X
			iSg	43	45.00	
KHC	2.96	68	iPn	42	58.50	-0.9
			Pg	43	06.70	
			Sn	43	29.80	
			Sg	43	47.50	
LPL	3.15	217	Pg	43	10.00	7.8X
			Sg	43	50.40	
LPG	3.16	216	Pn	43	00.80	-1.6
			Pg	43	10.10	
			Sg	43	49.60	
LOR	3.83	260	Pg	43	22.60	10.9X
			Sg	44	10.60	
LBF	3.84	255	Pg	43	21.80	10.0X
			Sg	44	10.00	
PRU	3.88	59	Pg	43	25.50	13.1X
			eSg	44	12.50	
SMF	4.04	251	Pg	43	26.40	11.8X
			Sg	44	17.80	
SSF	4.12	258	Pg	43	27.60	11.9X
			Sg	44	19.00	
VKA	4.63	85	ePn	43	22.00	-1.0
			i(Pg)	43	39.80	
			e	44	41.00	
CSI	9.67	147	P	45	20.00	46.5X
ROI	9.95	146	P	45	15.70	38.3X
	S.D. = 1.2		on 23 of 43 obs.			

? JAN 24, 1990 01h 06m 39.50± 3.06s
51.118 N ±25.7km 16.033 E ±17.7km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.0 (KBA).

KSP	0.32	149	iPd	06	45.90	-0.3
	0.5s		53.00nm			
			iS	06	53.60	
BRG	1.34	260	iPg	07	03.20	-1.0
			iSg	07	23.20	
PRU	1.48	221	Pg	07	07.30	1.2
			Sg	07	31.00	
CLL	1.91	277	(Pg)	07	13.00	0.6
			eSg	07	38.00	
KHC	2.54	219	Pn	07	21.00	-0.5

			Pg	07	26.80	
			Sg	08	06.20	
MOX	2.84	262	ePg	07	32.00	6.3X
			iSg	08	12.00	
GRF	3.39	247	ePg	07	45.00	11.5X
			eSg	08	30.00	
KBA	4.41	205	e(Pg)	08	45.50	57.3X
	0.7s		2.80nm			
			iSg	09	10.20	
			e	11	30.00	
			e	11	37.50	

S.D. = 1.2 on 5 of 8 obs.

% JAN 24, 1990 02h 22m 50.01± 0.77s
37.055 N ± 6.5km 5.463 W ± 7.2km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

EPRU	0.21	116	iP	22	54.00	-0.5
			eS	22	58.20	
EJIF	0.60	180	ePg	23	02.40	0.2
			eSg	23	09.50	
EHOR	0.78	13	ePg	23	06.20	1.0
			eSg	23	17.40	
EVAL	1.15	298	ePg	23	11.30	-0.2
			eSg	23	27.00	
AFC	1.55	82	ePn	23	19.00	1.2
EBAN	1.73	50	iPn	23	20.40	0.1
			eSn	23	43.80	
EVIA	2.82	55	ePn	23	35.40	-0.7
			eSn	24	10.30	
ETOR	4.60	34	ePn	24	00.30	-1.0

S.D. = 0.9 on 8 of 8 obs.

JAN 24, 1990 03h 07m 16.95± 1.07s
27.630 N ± 8.1km 34.254 E ± 9.0km
DEPTH = 10.0km (geophysicist)
RED SEA (554)

BADA	1.11	36	iP+	07	37.40	-0.3
HQL	1.78	23	iPd	07	47.70	-0.2
AYN	1.97	51	iPd	07	50.70	0.0
MBH	2.20	14	eP	07	54.90	0.9
HSHJ	2.41	31	P	07	51.20	-5.9X
WAJH	2.52	125	iPd	07	58.60	0.0
PRNI	2.78	13	eP	08	02.80	0.4
RMN	2.87	6	eP	08	03.60	-0.1
NOH	3.11	11	eP	08	06.60	-0.4
KOT	3.13	318	ePn	08	07.00	-0.2
MKT	3.40	13	eP	08	11.00	-0.1
			eS	09	02.90	

S.D. = 0.4 on 10 of 11 obs.

% JAN 24, 1990 03h 50m 47.67± 0.77s
37.043 N ± 6.8km 5.452 W ± 7.0km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.5 (MDD).

EPRU	0.19	113	iP	50	51.40	-0.6
			eS	50	55.80	
EJIF	0.59	181	ePg	51	00.00	0.4
			eSg	51	07.00	
EHOR	0.79	12	ePg	51	03.80	0.7
			eSg	51	15.00	
EVAL	1.16	298	iPg	51	09.00	-0.4
			eSg	51	24.30	
AFC	1.54	82	ePn	51	16.20	0.9
EBAN	1.73	49	ePn	51	18.00	0.0
			eSn	51	41.00	
EVIA	2.82	55	ePn	51	32.80	-1.0
TOL	3.04	21	e(Pn)	52	25.00	48.3X
			eSn	53	20.00	
			eSb	53	28.50	
			eSg	53	40.00	

S.D. = 0.9 on 7 of 8 obs.

% JAN 24, 1990 03h 51m 08.86± 0.85s
39.124 N ± 5.3km 16.750 E ± 7.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.47	343	P	51	18.40	0.0
CZI	0.49	281	P	51	19.90	1.1
TDS	0.62	329	P	51	21.20	-0.2
			eSg	51	31.80	
CSI	0.74	331	P	51	22.10	-1.3
MMN	0.97	323	P	51	27.40	0.2
SOI	1.18	208	P	51	31.10	0.2
			eSn	51	48.00	
MGR	1.37	318	P	51	33.40	-0.6
ATN	1.39	227	P	51	33.50	-0.8
			eSn	51	51.50	
LCI	1.52	37	P	51	36.60	0.5
			eSn	51	58.70	
BRT	1.79	11	P	51	40.20	0.2
SGO	1.81	323	P	51	41.00	0.7

S.D. = 0.8 on 11 of 11 obs.

% JAN 24, 1990 03h 52m 01.47± 0.77s
37.034 N ± 6.6km 5.511 W ± 7.0km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.3 (MDD).

EPRU	0.23	107	iP	52	06.00	-0.5
			eS	52	10.00	
EJIF	0.58	177	ePg	52	13.50	0.2
			eSg	52	20.30	
EHOR	0.81	15	ePg	52	18.20	1.0
			eSg	52	29.30	
EVAL	1.13	300	iPgd	52	22.30	-0.3
			eSg	52	39.00	
AFC	1.59	81	ePn	52	30.90	1.1
			eSn	52	50.60	
EBAN	1.78	50	iPnc	52	32.30	-0.1
			eSn	52	55.00	
EVIA	2.87	55	ePn	52	47.50	-0.7
EPLA	3.06	352	ePg	53	01.60	10.8X
			eSg	53	37.00	
ETOR	4.64	34	ePn	53	12.60	-0.7
			eSn	54	05.20	

S.D. = 0.8 on 8 of 9 obs.

JAN 24, 1990 03h 56m 31.43± 0.54s
51.715 N ± 4.0km 16.158 E ± 5.0km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 4.3 (GRF), 4.0 (FUR), 4.3 (VKA), 4.0 (KBA).

KSP	0.88	174	iPd	56	47.50	-0.8
	0.5s		286.00nm			
			iS	56	56.80	
BRG	1.62	240	iPn	57	00.60	0.4
			iPg	57	02.20	
			iSg	57	22.10	
BRL	1.92	294	eP	57	11.50	7.0X
PRU	2.01	211	Pnd	57	05.60	-0.2
			ePg	57	07.40	
			eSg	57	30.00	
CLL	2.01	260	iPn	57	06.50	0.7
			iPg	57	10.40	
			iSg	57	35.60	
KRA	2.91	123	eP	57	27.70	9.0X
			iS	58	04.80	
HOF	3.05	244	iPnd	57	21.00	0.5
MOX	3.05	251	ePn	57	21.50	0.9
			iPg	57	30.00	
			iSg	58	09.00	
KHC	3.07	214	iPn	57	20.50	-0.4
			Pg	57	28.50	
			Sg	58	06.30	
WET	3.32	220	ePn	57	24.20	-0.3
VKA	3.46	178	iPnc	57	26.80	0.4
	0.5s		175.00nm			
			iPgc	57	35.20	
			iSg	58	19.00	
ZST	3.58	170	e(Pn)	57	28.10	0.0
			i	57	37.30	
			i(Sn)	58	13.20	
			i	58	24.10	
SPC	3.64	132	i(Pn)	57	40.70	11.6X
			i	57	46.40	
			e	58	23.20	
			i	58	26.70	
			i	58	32.00	
GRF	3.73	239	ePn	57	30.60	0.2
			e(Pg)	57	42.50	
			eSg	58	30.00	
KMR	3.89	200	iPn+	57	32.90	0.4
			iPg	57	45.60	
			iSg	58	30.70	
SOP	4.04	176	eP	57	35.90	1.2
SRO	4.15	159	e(Pn)	57	55.00	18.9X
			e	58	56.80	
			i	59	08.60	
PSZ	4.50	146	eP	57	42.00	0.7
BHG	4.53	209	ePn	57	41.20	-0.4
BUD	4.63	155	e(P)	57	39.00	-4.0X
FUR	4.75	223	ePn	57	44.40	-0.4
KBA	4.99	203	iPnc	57	46.70	-1.6
	0.4s		23.20nm			
			i	59	09.40	
TNS	5.10	256	iPnc	57	49.80	0.1
			eSn	59	12.60	
FVI	5.58	205	P	57	56.00	-0.5
CTI	6.40	209	Pd	58	08.00	-0.2
MEM	6.48	264	Pn	58	08.90	-0.2
			e	59	17.10	
DOU	7.49	262	Pn	58	23.00	-0.3
	0.3s		10.60nm		5.5mb	
			Sn	59	51.00	
HFS	8.55	352	eP	58	38.30	0.2
	0.4s		1.50nm		4.6mb	
NRA0	9.40	346	Pn	58	48.90	-0.9
NUR	10.00	25	eP	59	40.00	42.0X

S.D. = 0.7 on 24 of 30 obs.

JAN 24, 1990 03h 57m 51.52± 0.96s
27.599 N ± 8.1km 34.231 E ± 7.0km
DEPTH = 10.0km (geophysicist)
RED SEA (554)
MD 4.1 (HLW).

BADA	1.15	36	iPd	58	12.70	-0.2
HQL	1.81	23	iP+	58	22.20	-0.8
AYN	2.01	51	iPd	58	26.00	0.2
MBH	2.24	15	eP	58	30.10	1.0
WAJH	2.52	124	iP+	58	33.30	0.2
			eS	58	26.00	
HITJ	2.56	33	Pc	58	32.90	-1.0
PRNI	2.82	14	eP	58	37.70	0.2
RMN	2.91	7	eP	58	39.40	0.7
KOT	3.14	318	ePn	58	42.00	0.1
NOH	3.15	12	eP	58	42.10	0.0
HLW	3.39	312	ePn	58	45.00	-0.6
			ePb	58	52.70	
			ePg	58	57.70	
			eSn	59	33.00	
MKT	3.43	13	eP	58	46.40	0.2
			eS	59	39.50	

S.D. = 0.6 on 12 of 12 obs.

? JAN 24, 1990 04h 05m 38.29± 5.16s
27.617 N ±13.5km 34.144 E ±50.6km
DEPTH = 10.0km (geophysicist)
RED SEA (554)

BADA	1.18	40	iP+	06	00.10	-0.2
			eS	06	13.30	
HQL	1.83	26	eP	06	10.00	0.0
			eS	06	31.00	
AYN	2.06	52	ePd	06	13.50	0.2
			eS	06	38.70	
WAJH	2.59	123	ePd	06	20.93	0.0

S.D. = 0.3 on 4 of 4 obs.

JAN 24, 1990 04h 45m 05.19± 0.32s
39.171 N ± 3.4km 16.925 E ± 2.8km
DEPTH = 47.9 ± 6.2 km
4.5mb (5 obs.)
SOUTHERN ITALY (390)

ROI	0.49	326	P	45	15.50	-0.8
GRI	0.53	228	P	45	14.38	-2.4
ACI	0.59	288	P	45	15.40	-2.1
CZI	0.62	275	P	45	16.90	-0.9
TDS	0.67	317	Pd	45	18.00	-0.5
			eSg	45	30.10	
CSI	0.78	321	P	45	19.70	-0.4
MMN	1.02	315	P	45	25.20	1.9
SOI	1.29	212	P	45	27.00	-0.1
GMB	1.30	220	P	45	27.71	0.3
LCI	1.41	34	P	45	30.00	1.3
			eSn	45	47.90	
MGR	1.43	313	Pd	45	30.40	1.3
MSI	1.44	228	P	45	30.80	1.5
			eSn	45	47.80	
ATN	1.53	229	Pd	45	29.90	-0.6

24d 04h

			eSn	45	53.90	
LPI	1.70	247	P	45	32.91	0.0
BRT	1.72	7	Pd	45	33.30	0.1
SGO	1.86	319	P	45	36.40	1.2
BAI	1.95	359	P	45	37.00	0.6
MNO	2.14	235	P	45	40.30	0.9
MEU	2.60	218	P	45	43.90	-1.8
DUI	3.12	324	P	45	55.50	2.4
FAI	3.18	235	P	45	55.60	1.7
SDI	3.47	318	P	45	58.70	0.6
OHR	3.55	56	iPn	45	59.50	0.3
CVT	3.57	247	P	46	02.60	3.1X
ERC	3.58	253	P	46	01.70	2.0
AZI	3.87	318	P	46	04.60	0.9
HVAR	4.02	355	iPnc	46	04.20	-1.6
			i	46	24.70	
			iSn	46	43.50	
			iSg	46	58.00	
RDP	4.12	310	P	46	07.50	0.2
AQU	4.15	321	P	46	08.90	1.1
RMP	4.16	311	P	46	08.70	0.9
AGG	4.21	90	ePn	46	09.30	0.8
			eSn	46	56.20	
LIT	4.40	76	ePn	46	11.30	0.2
			eSn	47	00.30	
SKO	4.43	49	iPn	46	11.20	-0.4
	1.4s	324.00nm				
			iPg	46	27.30	
			iSn	47	01.00	
			iSg	47	24.00	
MNS	4.55	316	Pd	46	14.00	0.7
GRG	4.56	65	ePn	46	13.50	0.0
VAY	4.82	62	iPn	46	17.50	0.4
THE	4.87	71	ePn	46	35.10	17.4X
			eSn	47	09.20	
KNT	4.99	65	ePn	46	18.70	-0.8
			eSn	46	43.80	
ASS	5.05	322	P	46	22.70	2.2
SOH	5.21	69	ePn	46	22.40	-0.2
ARV	5.26	327	P	46	23.80	0.5
MAO	5.45	308	P	46	26.10	0.1
SRS	5.47	67	ePn	46	25.90	-0.3
OUR	5.56	76	ePn	46	27.50	0.0
MMB	5.73	63	eP	46	31.00	1.1
CRE	5.81	322	P	46	32.00	0.8
VTS	5.86	52	iP	46	31.00	-0.9
BEO	6.23	24	ePn	47	04.00	27.2X
FIR	6.27	319	ePn	46	47.50	10.1X
			iSn	48	10.00	
RIY	6.45	344	ePn	46	38.80	-1.1
VBY	6.45	349	Pn	46	39.80	-0.1
			iSn	47	50.00	
RZN	6.45	65	iP	46	40.00	-0.2
ZAG	6.68	354	i(Pn)	46	40.00	-3.1X
PTJ	6.76	354	e(Pn)	46	43.80	-0.6
BDI	6.81	318	P	46	44.50	-0.5
CEY	6.82	345	ePn	46	44.20	-0.9
			i	46	48.00	
			eSn	47	56.00	
PGF	6.89	302	eP	46	45.60	-0.6
	0.5s	13.70nm			4.9mb X	
TRI	6.94	341	ePn	46	44.50	-2.2
			iSn	48	12.50	
			i	49	07.00	
			iLQ	49	21.60	
LJU	7.09	346	ePn	46	47.80	-1.1
			i	46	51.00	
			eSn	48	03.50	
ALN	7.21	73	ePn	46	50.10	-0.5
VOY	7.21	343	ePn	46	48.50	-2.2
			e(Sn)	48	18.90	
			e(Sg)	48	38.10	
EZN	7.30	82	ePn	46	50.00	-1.9
CTI	7.89	332	P	46	58.60	-1.6
SAL	7.98	326	P	47	00.50	-0.8
FVI	8.02	339	P	46	59.90	-1.8
IZM	8.11	92	ePn	46	59.00	-4.2X
MFT	8.11	75	ePn	46	41.00	-22.3X
KBA	8.32	343	iPc	46	54.00	-12.2X
			i(PP)	47	03.30	
			iPPP	47	10.20	
			iS	48	34.80	
			i	48	42.90	
BUD	8.45	10	e(P)	47	28.00	20.3X
SOP	8.51	358	eP	47	19.10	10.5X
SBF	8.52	306	eP	47	06.60	-2.3X
SRO	8.70	6	eP	47	26.70	15.6X
CIN	8.90	97	eP	47	15.00	0.9
ZST	9.02	1	eP	47	18.10	2.5
LRG	9.03	302	eP	47	16.20	0.5
	1.0s	21.60nm			5.2mb X	
BHG	9.04	342	eP	47	18.60	2.7X
DST	9.07	84	eP	47	17.00	0.5
VKA	9.10	357	iPnd	47	18.50	1.8
			iSn	49	18.20	
TMA	9.12	322	ePc	47	04.70	-12.5X
MLR	9.19	44	eP	47	19.00	0.9
LPG	9.83	313	eP	47	25.30	-1.7
	0.8s	22.80nm			5.4mb X	
KHC	10.24	348	eP	47	23.20	-9.2X
			e	47	31.00	
BCK	10.87	95	eP	47	42.00	0.9
PRU	10.95	352	eP	47	40.00	-1.9
KSP	11.68	358	eP	47	55.50	3.7X
			e	49	56.00	
BRG	11.89	351	e(P)	48	04.00	9.4X
			e	50	44.00	
			e	51	50.00	
LBF	12.26	314	eP	48	04.70	5.0X
	1.1s	15.60nm			4.9mb X	
CLL	12.45	349	e(P)	48	14.00	12.0X
			e	50	55.00	
LOR	12.49	315	eP	48	05.70	3.0X
	1.1s	12.20nm			4.8mb	
EPF	13.09	292	eP	48	17.70	7.0X
	1.0s	10.00nm			4.7mb X	
KOT	15.34	122	ePn	48	35.00	-5.0X
TOL	16.20	279	eP	48	58.00	7.0X
HFS	21.08	356	eP	49	47.10	-0.3
	0.7s	18.10nm			4.5mb	
NB2	22.18	353	P	49	59.00	0.6
	0.9s	18.60nm			4.5mb	
SUF	24.23	10	eP	50	19.50	1.2
	0.6s	5.50nm			4.3mb	
KIC	38.07	217	P	52	19.50	-1.4
LIC	38.32	217	P	52	22.80	-0.3
FRB	53.79	327	eP	54	23.50	-1.1
INK	70.58	349	eP	56	17.00	0.3
FFC	72.87	328	eP	56	31.00	0.3
	0.7s	5.00nm			4.6mb	
LRM	83.98	327	eP	57	19.10	-12.7X

S.D. = 1.2 on 77 of 101 obs.

JAN 24, 1990 04h 46m 27.81± 0.86s
48.062 N ± 8.1km 9.297 E ± 5.5km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.9 (LDG), 2.3 (FUR).

SLE	0.62	242	ePc	46	39.40	-0.9
SAX	0.81	178	ePc	46	43.10	-0.7
ZLA	0.84	227	ePc	46	44.20	0.1
FEL	0.88	258	ePn	46	44.40	-0.5
LLS	1.21	190	ePd	46	51.30	0.8
FUR	1.33	85	ePg	46	52.10	-0.3
CDF	1.40	285	Pg	46	54.40	1.0
			Sg	47	12.40	
OSS	1.49	157	ePc	46	54.20	-0.6
VDL	1.58	176	ePc	46	57.40	1.3
BSF	1.70	263	Pn	46	57.50	-0.3
			Sg	47	21.00	
HAU	1.98	269	Pg	47	05.00	3.3X
			Sg	47	29.80	
EMS	2.57	220	ePd	47	16.80	6.5X

S.D. = 0.9 on 10 of 12 obs.

? JAN 24, 1990 04h 47m 12.78± 8.79s
39.199 N ±21.0km 17.680 E ±68.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.94	294	P	47	30.40	-0.3
TDS	1.14	294	P	47	33.40	-0.7
			eSg	47	40.10	
CZI	1.20	271	P	47	35.80	0.7
CSI	1.22	299	P	47	36.20	0.7
MMN	1.48	298	P	47	42.40	3.0X
SOI	1.70	229	P	47	43.80	1.2
			eSn	47	59.90	
ATN	2.02	240	P	47	45.60	-1.7

S.D. = 1.4 on 6 of 7 obs.

JAN 24, 1990 05h 04m 38.72± 0.68s
40.208 N ± 5.7km 29.988 E ± 5.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

GPA	0.26	72	iPg	04	44.10	-0.1
			iSg	04	48.60	
YLV	0.59	308	iPg	04	50.20	-0.5
HRT	0.66	338	ePg	04	52.20	0.3
GBZT	0.71	325	ePg	04	53.00	0.2
			iSg	05	08.50	
ISK	1.11	321	ePn	04	59.00	-0.5
DST	1.21	241	iPn	05	00.50	-0.7
BNT	1.59	276	ePn	05	07.20	0.2
EDC	1.63	276	iPn	05	08.50	0.9
KHL	1.92	191	ePn	05	12.00	0.2
BBTK	2.16	99	eP	05	22.00	6.6X
			eS	05	53.00	

S.D. = 0.6 on 9 of 10 obs.

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* JAN 24, 1990 05h 07m 25.52± 0.83s
23.947 S ± 9.9km 66.667 W ±10.4km
DEPTH = 230.4 ± 9.0 km
JUJUY PROVINCE, ARGENTINA (128)

SLA	1.32	126	iPd	08	01.50	0.4
YJA	2.07	31	iPd	08	07.20	-0.7
ANT	3.44	273	iPc	08	22.10	-0.2
CCH	6.55	4	P	09	01.40	0.2
CNCB	7.21	350	P	09	10.50	0.6
LPB	7.50	349	P	09	14.00	0.5
ZOBO	7.76	350	P	09	16.30	-0.7
			S	10	41.00	
BAO	19.41	68	eP	11	36.50	0.1
KIC	67.45	72	P	17	58.50	-0.3

S.D. = 0.6 on 9 of 9 obs.

% JAN 24, 1990 05h 17m 29.00± 1.44s
39.146 N ± 7.0km 16.687 E ±14.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.44	348	P	17	36.40	-1.5
CZI	0.44	280	P	17	38.50	0.6
TDS	0.58	332	P	17	40.40	-0.3
			eSg	17	48.90	
CSI	0.70	334	P	17	42.00	-0.9
MMN	0.92	324	P	17	48.20	1.7
SOI	1.18	205	P	17	51.60	0.6
			eSg	18	06.00	
ATN	1.37	225	P	17	52.80	-1.4
			eSg	18	09.90	
BRT	1.77	13	P	18	01.10	1.2
			eSg	18	23.00	

S.D. = 1.4 on 8 of 8 obs.

% JAN 24, 1990 05h 35m 26.01± 1.52s
39.164 N ± 6.3km 17.068 E ±13.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.56	317	P	35	38.10	0.7
CZI	0.73	275	P	35	39.60	-0.7
TDS	0.75	311	P	35	40.80	0.1
			eSg	35	47.40	
CSI	0.86	316	P	35	41.40	-1.2
MMN	1.11	311	P	35	48.20	1.5
SOI	1.35	216	P	35	51.30	0.5
			eSg	36	10.20	
MGR	1.52	310	P	35	53.20	0.0
			eSg	36	10.80	
ATN	1.61	232	P	35	54.20	-0.3
BRT	1.72	3	P	35	55.90	-0.2
			eSg	36	17.10	
SGO	1.94	316	P	35	59.00	-0.3

S.D. = 0.8 on 10 of 10 obs.

& JAN 24, 1990 07h 50m 57.02s
63.071 N 149.346 W
DEPTH = 77.3km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.16	235	eP	51	08.39	1.6
			eS	51	17.04	
RND	0.40	33	eP	51	09.97	0.0
			eS	51	19.91	
MCK	0.69	15	eP	51	12.66	0.1
			eS	51	24.19	

CUT	0.79	213	eP	51	13.29	-0.4
			eS	51	26.46	
GHO	1.32	171	eP	51	20.03	-0.3
PWA	1.45	190	eP	51	21.99	0.1
PME	1.46	174	eP	51	22.27	0.2
PLRM	1.49	176	eP	51	22.28	-0.2
NEA	1.52	4	eP	51	21.86	-1.0
NCA	1.59	132	eP	51	24.25	0.3
HDA	1.71	37	eP	51	24.72	-0.8
CCB	1.72	23	eP	51	24.73	-0.9
DDM	1.72	64	eP	51	25.80	0.1
SUA	1.74	203	eP	51	25.94	0.0
TOA	1.76	122	eP	51	27.47	1.3
PAX	1.77	92	eP	51	26.81	0.4
SDG	1.83	106	eP	51	28.23	1.1
RDS	1.84	16	eP	51	26.48	-0.8
FBA	1.96	20	eP	51	28.09	-0.7
GLM	2.11	23	eP	51	30.04	-0.9
NCG	2.13	219	eP	51	30.70	-0.6
KLU	2.25	133	eP	51	32.36	-0.6
SPU	2.28	215	eP	51	32.64	-0.7
SLKM	2.61	190	eP	51	37.99	0.2

24 obs. associated

JAN 24, 1990 07h 53m 54.55± 0.59s
23.953 S ± 6.3km 70.026 W ±10.7km
DEPTH = 10.0km (geophysicist)
4.7mb (3 obs.)
NEAR COAST OF NORTHERN CHILE (122)
Felt (IV) in the Antofogosto area.

ANT	0.43	305	iPd	54	02.20	-1.2
			iS	54	06.70	
SLA	4.21	101	e(P)	55	11.00	10.7X
CYA	5.87	141	eP	55	29.00	5.3X
RTRS	6.21	175	ePc	55	28.60	0.1
CNCB	7.36	15	P	55	46.00	0.8
			S	57	34.00	
RTLL	7.48	170	e(P)	55	53.70	7.4X
CCH	7.48	30	P	55	52.20	5.5X
			i	55	58.00	
ARE	7.58	349	eP	55	41.00	-7.0X
			eS	56	56.00	
LPB	7.60	14	P	55	49.20	0.7
	1.0s	180.00nm				6.2mb X
			i	55	58.00	
			S	58	18.00	
RTBS	7.70	176	eP	55	58.80	9.5X
CFA	7.79	169	e(P)	55	51.50	0.8
			S	57	30.50	
ZOBO	7.85	13	P	55	51.00	-1.1
	1.0s	101.25nm				6.0mb X
Z	22s	0.45um				4.9MszX
			i	56	02.00	
			S	57	32.50	
			LR	58	42.00	
RTCV	7.99	171	ePc	56	00.00	6.5X
TCA	8.79	148	ePd	56	05.20	0.5
ROCH	9.03	185	eP	56	23.00	14.9X
MRA	9.25	157	ePd	56	10.20	-0.6
FCH	9.34	181	eP	56	22.00	9.5X
PCH	9.64	182	eP	56	24.00	7.6X
TACH	9.70	185	eP	56	23.20	6.1X
LNV	10.04	187	eP	56	30.80	9.0X
RFA	10.86	173	e(P)	56	39.00	5.8X
NNA	13.55	330	eP	57	16.00	6.7X
	0.6s	5.33nm				4.7mb
BAO	22.30	72	eP	58	53.00	-0.9
SPA	66.19	180	eP	04	42.80	-1.7
	0.8s	5.42nm				4.8mb
ALQ	68.00	328	eP	04	59.50	3.2X
	1.0s	2.50nm				4.4mb
KIC	70.38	73	P	05	10.00	-1.1
LKO	71.16	70	P	05	15.84	-0.1
KVN	77.13	324	eP	05	53.00	2.8
GBA	147.59	103	PKP	13	39.70	1.0

S.D. = 1.3 on 14 of 29 obs.

• JAN 24, 1990 08h 01m 21.80± 1.12s
24.009 S ± 9.1km 70.156 W ±16.2km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF NORTHERN CHILE (122)
Felt (II) in the Antofagasta area.

ANT	0.38	322	iPd	01	29.70	0.0
			iS	01	34.00	
CNCB	7.45	16	P	03	14.00	0.3
			S	05	02.00	
CCH	7.59	30	P	03	18.90	3.5X
LPB	7.68	15	P	03	18.00	1.1
	1.0s	44.00nm				5.6mb X
			S	05	14.00	
CFA	7.76	168	e(P)	03	17.50	0.0
			S	05	03.00	
ZOBO	7.93	14	P	03	19.00	-1.5
	0.9s	18.38nm				5.3mb X
			S	05	08.00	
FCH	9.29	181	eP	04	03.20	24.2X
PCH	9.58	182	iP	03	56.50	13.6X
LNV	9.97	186	eP	04	05.00	16.9X

S.D. = 1.3 on 5 of 9 obs.

% JAN 24, 1990 08h 35m 07.13± 0.66s
40.454 N ± 5.6km 23.086 E ± 6.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)

THE	0.20	333	ePg	35	11.00	-0.5
			eSg	35	14.20	
SOH	0.42	29	ePg	35	15.70	0.0
			eSg	35	22.40	
LIT	0.58	232	ePg	35	18.60	-0.2
OUR	0.69	100	ePg	35	21.20	0.3
			eSg	35	32.10	
PAIG	0.70	139	ePg	35	20.70	-0.2
			eSg	35	31.40	
KNT	0.72	349	ePg	35	20.90	-0.4
			eSg	35	32.40	
GRG	0.72	314	ePg	35	22.40	1.0

S.D. = 0.7 on 7 of 7 obs.

& JAN 24, 1990 09h 03m 30.97s
41.763 N 112.628 W
DEPTH = 10.0km
UTAH (478)
<SLC-P>. ML 3.6 (SLC).

PTI	1.12	10	eP	03	52.00	-0.1
DUG	1.57	185	eP	03	59.00	-0.1
DAU	1.70	142	eP	04	01.60	0.4
IMW	2.47	30	eP	04	13.00	0.9
BW06	2.50	65	eP	04	13.50	1.0
LTMT	2.79	8	ePn	04	21.40	4.7
MCMT	3.07	357	ePn	04	25.00	4.4
BGMT	3.50	7	ePn	04	30.60	3.9
LRM	4.06	2	ePn	04	41.00	6.3
LCCM	4.11	7	ePn	04	41.90	6.6
SXM	4.50	13	ePn	04	49.70	8.8
KVN	4.98	239	eP	04	47.20	-0.5
TNP	5.10	225	eP	04	47.80	-1.6

13 obs. associated

& JAN 24, 1990 09h 08m 15.05s
64.034 N 148.374 W
DEPTH = 115.7km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.39	220	eP	08	31.88	-0.3
			eS	08	44.24	
NEA	0.63	331	eP	08	33.30	-0.3
CCB	0.66	22	eP	08	33.53	-0.4
RND	0.67	199	eP	08	33.25	-0.8
HDA	0.72	58	eP	08	34.22	-0.2
RDS	0.80	7	eP	08	34.78	-0.4
FBA	0.91	16	eP	08	35.64	-0.4
GLM	1.05	24	eP	08	36.99	-0.6
DDM	1.14	101	eP	08	38.21	-0.3
			eS	08	55.59	
DMW	1.16	88	eP	08	38.16	-0.6
HUR	1.20	209	eP	08	39.22	0.0
			eS	08	57.34	
PAX	1.68	128	eP	08	44.59	-0.3
CUT	1.85	209	eP	08	46.07	-0.7
DOT	1.95	100	eP	08	46.99	-1.2
GHO	2.28	187	eP	08	51.65	-0.9
PLRM	2.48	188	eP	08	54.58	-0.3
KLU	2.79	155	eP	08	57.63	-1.5
SUA	2.80	204	eP	09	00.63	1.3
SPU	3.33	212	eP	09	06.38	0.0
RDT	3.95	210	eP	09	10.34	-4.4

20 obs. associated

JAN 24, 1990 10h 06m 13.37± 0.22s
49.059 N ± 5.0km 155.553 E ± 3.4km
DEPTH = 44.4km (10 depth phases)
5.3mb (53 obs.)
KURIL ISLANDS (221)

KUSJ	9.60	236	P	08	30.10	-1.8
			eS	10	10.70	
ASAJ	10.17	246	P	08	43.00	3.4X
HOOJ	10.86	237	P	08	49.00	0.0
			eS	10	42.70	
MRRJ	12.09	242	eP	09	06.40	0.8
MAT	17.79	232	(P)	10	19.00	-0.2
	1.2s	51.56nm				4.5mb
BJI	29.19	267	eP	12	12.00	-0.5
TTA	29.61	44	ePc	12	15.80	-0.4
SVW	29.69	48	eP	12	17.20	0.3
IMA	30.98	38	eP	12	27.70	-0.6
	0.6s	9.20nm				4.7mb
BRW	31.16	27	eP	12	29.00	-0.6
SSE	31.48	248	eP	12	33.00	0.2
PMR	32.81	47	eP	12	43.70	-0.4
FBA	33.33	40	ePc	12	48.80	0.1
INK	38.82	34	eP	13	35.50	0.4
	0.6s	18.00nm				5.1mb
			pP	13	48.00	46km
LZH	39.48	271	Pd	13	39.00	-2.2
	1.4s	47.00nm				5.1mb
MBC	41.86	21	ePd	14	00.30	0.3
	0.5s	5.00nm				4.5mb
KMI	47.28	259	eP	14	45.00	0.6
PNT	52.53	55	ePc	15	23.00	-1.1
EDM	53.54	48	iPc	15	31.30	-0.2
	0.6s	38.00nm				5.6mb
CHG	54.24	257	iPc	15	37.90	0.9
	1.0s	50.00nm				5.5mb
LBFM	55.96	64	P	15	49.80	0.3
WDC	56.04	65	eP	15	50.20	0.4
			e	16	03.50	48km
SES	56.38	50	ePc	15	51.20	-1.0
MIN	56.75	65	ePc	15	54.90	-0.2
			e	16	08.90	51km
ORV	57.30	66	e(P)	15	58.00	-0.8
FFC	57.92	42	eP	16	03.00	0.1
	0.8s	15.00nm				5.1mb
LRM	58.51	55	eP	16	07.70	0.2
CMB	58.94	66	eP	16	10.20	-0.2
			e	16	23.80	49km
PRS	59.45	69	e(P)	16	13.00	-0.8
			e	16	26.20	47km
LLA	59.52	68	e(P)	16	15.20	0.8
KVN	59.65	64	P	16	15.50	0.0
PTI	60.46	58	P	16	22.00	1.1
TNP	60.81	65	P	16	23.40	0.0
	0.6s	3.40nm				4.7mb
SUF	61.57	336	eP	16	25.60	-2.3
	0.6s	3.90nm				4.7mb
DUG	61.98	60	P	16	31.20	0.0
			pP	16	42.60	39km
BW06	62.07	56	P	16	31.50	-0.4
	0.6s	3.49nm				4.7mb
			pP	16	44.50	46km
CLC	62.08	67	eP	16	44.00	12.2X
FRB	62.32	20	eP	16	31.00	-1.9
SBB	62.70	68	eP	16	50.00	14.1X
PAS	62.85	68	eP	16	51.00	14.2X
MSU	63.47	61	P	16	41.10	-0.1
NUR	63.81	335	eP	16	41.00	-1.7
RSSD	64.09	52	P	16	44.90	-0.2
			pP	16	56.10	37km
GLA	65.64	67	eP	17	01.00	6.0X
GOL	66.48	56	P	17	01.20	0.6
	0.8s	8.93nm				4.9mb
GLD	66.52	56	P	17	01.50	0.7
			pP	17	13.00	38km
NB2	66.56	342	P	16	58.00	-2.5
	0.7s	4.80nm				4.7mb
HFS	66.85	340	eP	16	59.60	-2.7
	0.5s	6.70nm				4.9mb
HYB	68.57	272	ePd	17	13.80	0.1
	1.0s	25.00nm				5.2mb
ANMO	69.25	60	P	17	17.50	-0.3
	1.0s	4.38nm				4.4mb
ALQ	69.25	60	eP	17	18.80	0.9
	1.0s	2.50nm				4.1mb X
SCH	70.56	24	eP	17	25.00	-0.3

24d 10h

POO 70.85 276 eP 17 28.50 0.9
WB5 71.18 201 eP 17 29.70 0.3
WRA 71.25 201 Pc 17 29.40 -0.4
0.7s 2.40nm 4.3mb
GBA 72.08 270 P 17 35.00 0.1
KRA 74.17 332 eP 17 46.20 -0.4
SIO 74.25 53 eP 17 31.80 -15.6X
TUL 74.40 53 eP 17 47.50 -0.7
1.0s 10.70nm 4.8mb
e 18 00.20 43km
EKA 74.46 348 P 17 48.00 -0.2
1.6s 84.00nm 5.4mb
KSP 74.54 335 iPc 17 48.60 -0.2
CLL 75.01 337 iPd 17 50.90 -0.6
1.4s 39.00nm 5.2mb
BRG 75.16 336 iP 17 52.20 -0.2
1.1s 16.00nm 4.9mb
PRU 75.80 335 Pd 17 56.00 0.0
MOX 75.98 337 eP 17 57.00 0.0
MLR 76.09 326 ePd 17 58.00 0.1
DMU 76.35 349 eP 17 59.10 0.1
SRO 76.65 332 eP 18 01.50 0.7
ZST 76.68 333 iP 18 01.50 0.6
KHC 76.85 335 iPd 18 02.50 0.6
1.0s 18.00nm 5.0mb
DLE 76.91 349 iPd 18 02.10 0.0
0.6s 68.00nm 5.8mb
DCN 76.94 350 eP 18 02.30 0.0
0.8s 63.00nm 5.7mb
GRF 76.96 337 eP 18 02.70 0.2
0.9s 44.00nm 5.5mb
MEM 77.34 341 Pc 18 04.40 -0.1
SNF 77.79 342 P 18 07.40 0.4
ECB 77.84 349 eP 18 07.30 0.0
1.4s 131.00nm 5.8mb
ECP 77.97 349 eP 18 08.00 0.0
1.1s 148.00nm 5.9mb
PTJ 79.09 333 iPd 18 14.10 -0.2
CDF 79.11 339 eP 18 14.40 -0.1
0.7s 22.00nm 5.2mb
ZAG 79.15 332 iP 18 14.50 -0.1
FVI 79.38 335 Pc 18 16.60 0.8
SLE 79.42 338 ePd 18 16.10 0.0
FEL 79.44 338 eP 18 15.70 -0.6
OGA 79.61 336 iPc 18 17.80 0.5
0.8s 42.00nm 5.4mb
VBY 79.66 333 e(P) 18 13.50 -3.8X
HAU 79.71 340 eP 18 17.50 -0.1
0.7s 19.80nm 5.2mb
ZLA 79.71 338 ePd 18 17.80 0.1
BSF 79.77 339 eP 18 17.50 -0.5
0.7s 11.90nm 5.0mb
OSS 80.01 337 ePd 18 19.90 0.5
LLS 80.13 337 ePd 18 20.60 0.5
CTI 80.20 335 Pd 18 19.80 -0.5
VDL 80.37 337 ePd 18 22.20 0.8
FLN 80.39 344 eP 18 21.20 0.1
0.9s 65.50nm 5.6mb
LDF 80.48 344 iPc 18 21.50 -0.2
1.0s 56.00nm 5.5mb
SKO 80.77 327 eP 18 22.50 -0.8
GRR 80.81 344 iPc 18 23.60 0.2
0.8s 76.20nm 5.7mb
TMA 80.88 337 ePd 18 24.30 0.3
VAY 80.93 326 eP 18 24.00 -0.1
LOR 80.96 341 iPc 18 24.30 0.1
0.8s 32.20nm 5.3mb
VAI 81.12 337 Pc 18 24.90 -0.1
MMK 81.15 338 ePd 18 26.70 1.1
LPF 81.19 344 iPc 18 25.80 0.4
0.7s 41.80nm 5.5mb
LBF 81.20 341 eP 18 25.30 -0.3
0.8s 12.00nm 4.9mb
SSF 81.23 341 eP 18 25.90 0.3
0.9s 22.90nm 5.1mb
DIX 81.26 338 ePd 18 27.20 1.0
EMS 81.39 338 ePd 18 27.20 0.5
AVF 81.52 341 iPc 18 27.50 0.4
0.8s 26.00nm 5.3mb
SMF 81.56 341 iPc 18 27.50 0.2
1.0s 44.00nm 5.4mb
OHR 81.76 327 eP 18 27.50 -1.0
1.1s 0.05nm 2.5mb X
BGF 81.85 341 eP 18 29.10 0.2
0.7s 12.10nm 5.0mb
ELL 81.91 319 eP 18 28.00 -1.5
BOB 81.97 336 Pd 18 30.60 1.0

LPG 81.97 338 iPc 18 30.80 0.9
0.7s 41.30nm 5.6mb
MME 82.17 335 Pc 18 32.20 1.3
MAF 82.23 341 iPc 18 31.70 0.8
1.1s 58.60nm 5.5mb
TCF 82.24 342 eP 18 31.50 0.6
1.0s 28.00nm 5.3mb
BDI 82.31 335 Pc 18 32.50 1.1
CRE 82.34 334 Pc 18 32.30 0.7
MFF 82.41 343 iPc 18 32.20 0.5
1.1s 53.70nm 5.5mb
BNI 82.41 338 Pd 18 33.00 1.0
LSF 82.42 342 eP 18 32.30 0.5
DOI 82.78 338 P 18 24.50 -9.4X
BRT 83.20 330 P 18 21.50 -14.5X
MNS 83.26 333 Pd 18 35.50 -0.8
RJF 83.32 342 eP 18 37.40 0.9
SBF 83.33 337 eP 18 36.60 -0.1
0.9s 43.80nm 5.5mb
DUI 83.38 332 P 18 37.00 0.0
AZI 83.40 333 P 18 37.00 0.1
SDI 83.54 332 Pd 18 37.40 -0.3
CAF 83.57 341 eP 18 38.80 0.9
1.1s 43.90nm 5.4mb
FRF 83.82 338 eP 18 39.10 0.1
1.1s 43.90nm 5.4mb
LFF 83.83 342 eP 18 40.20 1.1
0.5s 19.50nm 5.4mb
LPO 83.99 342 eP 18 40.80 0.9
0.7s 22.00nm 5.3mb
LRG 83.99 338 eP 18 40.70 0.8
1.0s 65.60nm 5.7mb
SGO 84.11 331 P 18 40.30 -0.2
PGF 84.15 336 iPc 18 41.20 0.3
0.7s 18.50nm 5.3mb
MGR 84.42 330 Pc 18 41.00 -1.1
EPF 85.74 342 iPc 18 49.70 0.9
0.5s 6.80nm 5.1mb
S.D. = 0.8 on 129 of 138 obs.

? JAN 24, 1990 10h 45m 14.12± 13.87s
51.002 N ±86.3km 19.977 E ±93.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.7 (KRA).

KRA 0.95 181 iPgc 45 32.20 0.0
iSg 45 41.60
KSP 2.34 268 iPg 45 52.70 -0.5
iS 46 17.70
PRU 3.62 256 ePg 46 12.50 1.2
eSg 46 52.00
KHC 4.53 248 ePg 46 23.30 -1.0
Sg 47 16.30
S.D. = 1.6 on 4 of 4 obs.

? JAN 24, 1990 11h 03m 45.85± 0.83s
15.395 N ±11.1km 61.136 W ±30.2km
DEPTH = 170.5 ± 7.4 km
LEEWARD ISLANDS (92)

BBL 0.35 291 iPd 04 09.13 -1.1
S 04 23.20
FDF 0.66 181 iPd 04 10.70 0.1
0.1s 1.30nm
S 04 25.50
CRM 0.67 161 eP 04 10.42 -0.2
S 04 24.60
DOG 0.79 324 iPd 04 11.50 0.1
PAG 0.82 320 ePd 04 11.89 0.2
S 04 28.00
SFG 0.86 356 ePd 04 11.99 0.2
MVM 0.87 164 eP 04 12.02 0.1
BIM 0.87 176 eP 04 12.52 0.5
S 04 29.10
DEG 0.92 5 ePd 04 11.87 -0.4
SEG 1.06 341 ePd 04 14.06 0.7
S 04 31.10
INK 69.30 338 eP 14 36.00 -0.1
S.D. = 0.6 on 11 of 11 obs.

? JAN 24, 1990 11h 23m 39.52± 5.09s
5.034 S ±32.2km 102.678 E ±43.5km
DEPTH = 122.3 ± 39.0 km
4.1mb (1 obs.)
SOUTHERN SUMATERA (274)

KGM 7.03 5 ePc 25 21.50 0.2
CHG 23.98 351 eP 28 43.50 -0.5
WB5 34.18 118 eP 30 15.20 -0.1
WRA 34.18 118 Pd 30 13.80 -1.5
0.5s 1.60nm 4.1mb
LZH 40.92 1 eP 31 12.40 0.9
NDI 41.52 325 iPc 31 16.00 -0.4
BWA 51.41 131 eP 32 35.80 1.6
CAN 52.21 132 eP 32 40.20 0.0
SIO 144.78 27 ePKP 43 03.20 -0.8
TUL 144.88 27 ePKP 43 04.70 0.6
0.7s 12.10nm
S.D. = 1.1 on 10 of 10 obs.

% JAN 24, 1990 11h 25m 26.33± 0.75s
40.141 N ± 5.7km 16.177 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

MMN 0.29 210 P 25 33.60 1.2
CSI 0.37 167 P 25 33.30 -0.7
MGR 0.48 270 Pc 25 35.80 -0.2
eSg 25 42.60
TDS 0.50 166 Pd 25 36.20 -0.2
eSg 25 43.10
ROI 0.64 152 P 25 39.20 -0.1
SGO 0.78 302 P 25 41.10 -0.5
eSg 25 52.90
CZI 0.92 182 P 25 39.00 -4.9X
eSg 25 49.20
BRT 1.07 46 Pd 25 47.00 0.5
eSg 26 03.10
S.D. = 0.0 on 7 of 8 obs.

* JAN 24, 1990 12h 14m 02.40± 1.04s
20.637 S ±10.1km 69.052 W ±17.6km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

ANT 3.30 202 iPd 14 53.00 0.0
CNCB 3.94 15 Pd 15 03.00 0.4
LPB 4.18 13 Pd 15 07.00 1.1
1.0s 320.00nm
CCH 4.25 41 P 15 06.80 0.0
ZOBO 4.43 12 Pc 15 08.00 -1.6
0.9s 87.59nm
i 15 09.20
ARE 4.75 330 eP 15 14.00 0.1
eS 16 01.00
S.D. = 1.2 on 6 of 6 obs.

JAN 24, 1990 13h 17m 47.48± 0.29s
35.690 N ± 3.8km 26.148 E ± 2.9km
DEPTH = 124.0 ± 7.9 km
4.2mb (2 obs.)
CRETE (370)
Felt.

NPS 0.61 226 eP 18 06.70 -0.2
KAP 0.85 99 iPd 18 08.10 -0.6
APE 1.46 340 eP 18 13.10 -2.1
eS 18 29.50
VAM 1.61 260 eP 18 17.20 0.3
ARG 1.69 71 iPc 18 17.70 0.0
SMG 2.09 15 eP 18 21.00 -1.7
YER 2.25 49 iPn 18 24.60 -0.2
CIN 2.46 39 iPnd 18 30.00 2.5
iSg 18 58.00
VLI 2.79 292 iPc 18 32.30 0.5
IZM 2.85 18 iPn 18 31.80 -0.8
ATH 3.00 320 eP 18 35.50 1.0
ELL 3.22 70 iPn 18 38.70 1.1
PRK 3.55 2 iPc 18 40.70 -1.2
ITM 3.71 295 eP 18 45.50 1.4
KHL 3.77 45 iPn 18 45.40 0.5
BCK 3.99 62 iPn 18 48.80 0.9
EZN 4.13 2 iPn 18 48.60 -1.1
NEO 4.29 328 eP 18 52.70 0.7
DST 4.38 26 iP 18 52.80 -0.3
AGG 4.51 319 ePn 18 56.30 1.5
eSn 19 45.20
PAIG 4.66 336 ePn 18 57.20 0.3
EDC 4.84 16 iP 18 59.50 0.1
BNT 4.86 16 iP 18 59.50 -0.2
DUR 4.94 340 ePn 19 01.00 0.3
VLS 5.10 301 eP 19 03.20 0.3
PPCY 5.13 97 eP 19 02.50 -0.8

PLG	5.14	336	eP	19	03.50	0.1
ALN	5.20	359	ePn	19	03.60	-0.6
			eSn	19	55.80	
LIT	5.27	328	ePn	19	06.30	1.1
RDO	5.47	355	eP	19	07.30	-0.5
YLV	5.49	27	iP	19	07.50	-0.8
KZN	5.76	324	eP	19	13.70	1.7
SRS	5.78	340	ePn	19	13.20	1.1
HRT	5.82	27	eP	19	13.00	0.2
CSS	5.92	95	eP	19	12.50	-1.6
GRG	6.03	332	ePn	19	16.80	1.2
			eSn	20	20.30	
KNT	6.03	336	ePn	19	17.00	1.4
LFK	6.04	92	iPn	19	15.20	-0.6
VAY	6.28	335	ePn	19	20.80	1.8
KEK	6.44	310	eP	19	19.70	-1.5
FAM	6.46	94	eP	19	22.20	0.8
BBTK	6.68	50	iPc+	19	26.00	1.4
OHR	6.85	324	ePn	19	27.00	0.2
SKO	7.27	331	ePn	19	25.00	-7.4X
HLW	7.27	142	ePn	19	35.50	3.0X
			eSn	20	49.50	
KOT	7.47	139	ePn	19	35.00	-0.2
			eSn	20	51.00	
HRI	8.28	104	eP	19	44.50	-1.7
SOI	8.43	289	Pd	19	46.70	-1.4
			eSn	21	09.80	
CZI	8.71	297	P	19	50.80	-1.1
DSI	8.72	115	eP	19	52.00	-0.1
BURJ	8.73	110	Pd	19	51.10	-1.1
TDS	8.73	300	P	19	51.80	-0.4
BRT	8.73	309	P	19	50.70	-1.5
			eSn	21	18.80	
ATN	8.91	289	P	19	53.70	-0.9
			eSn	21	22.40	
MMN	9.07	301	P	19	56.40	-0.3
MEU	9.15	282	P	19	57.80	-0.2
QUTJ	9.33	115	Pd	20	00.00	-0.3
MDSJ	9.34	113	Pd	20	00.60	0.1
MBH	9.43	126	eP	20	02.00	0.5
MNO	9.45	287	Pd	20	01.50	-0.6
			eSn	21	34.60	
MGR	9.47	301	P	20	01.30	-0.9
CMP	9.61	355	ePc	20	04.00	0.1
MLR	9.79	359	ePc	20	07.00	0.5
SGO	9.82	303	P	20	05.50	-1.3
			eSn	21	42.20	
HQL	9.87	128	iP+	20	08.67	1.2
			eS	21	46.70	
HITJ	10.09	123	Pc	20	11.00	0.5
FAI	10.17	283	Pd	20	13.20	1.8
VRI	10.18	2	ePd	20	09.00	-2.5
BADA	10.36	131	iP+	20	14.00	0.1
			eS	21	48.00	
AYN	10.75	126	iPd	20	20.80	1.7
			eS	22	11.30	
NB2	27.10	344	P	23	29.60	9.4X
	0.7s		2.10nm			3.8mb
BCAO	31.89	194	ePd	24	11.10	8.1X
	0.5s		5.00nm			4.5mb
TIC	40.65	232	P	25	23.20	6.2X
KIC	40.69	232	P	25	23.40	6.2X
	S.D. = 1.1		on 68 of 74 obs.			

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* JAN 24, 1990 13h 54m 26.01± 2.61s
40.203 N ± 8.5km 124.280 W ±24.1km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF NORTHERN CALIF. (35)
ML 2.9 (BRK).

FHC	0.64	21	iPc	54	38.80	-0.1
			iS	54	47.90	
WDC	1.38	74	ePc	54	51.20	-0.1
MIN	2.05	85	eP	55	01.10	0.0
LBFM	2.14	57	eP	55	02.70	0.2
ORV	2.23	106	e(P)	55	03.60	0.0
ARN	3.57	142	eP	55	22.60	0.0
KVN	4.91	102	eP	55	44.00	2.2X
	S.D. = 0.1		on 6 of 7 obs.			

% JAN 24, 1990 14h 17m 03.76± 0.77s
40.831 N ± 6.1km 28.107 E ± 6.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT	0.50	197	iPg	17	13.60	-0.2
			iSg	17	21.40	
EDC	0.52	201	iPg	17	14.50	0.2
			eSg	17	22.50	
ISK	0.76	72	ePg	17	18.40	-0.2
			eSg	17	29.40	
YLV	1.00	105	iPn	17	22.40	-0.3
DMK	1.02	345	ePn	17	23.10	0.0
HRT	1.18	90	ePn	17	26.40	0.5
	S.D. = 0.4		on 6 of 6 obs.			

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* JAN 24, 1990 14h 23m 48.82± 1.42s
31.527 S ±10.5km 68.610 W ±12.2km
DEPTH = 109.1 ± 15.4 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.06	252	iPd	24	04.50	0.1
			eS	24	15.00	
RTLL	0.23	32	iPc	24	04.10	-0.6
RTCV	0.34	169	iPc	24	05.30	0.4
RTRS	1.54	331	iPc	24	16.60	0.2
MRA	2.62	110	iPc	24	31.00	0.6
RFA	3.24	178	ePc	24	38.50	-0.3
TCA	3.44	88	iPd	24	41.20	-0.4
	S.D. = 0.6		on 7 of 7 obs.			

JAN 24, 1990 16h 18m 59.25± 0.35s
39.187 N ± 4.3km 16.949 E ± 3.6km
DEPTH = 51.7 ± 13.0 km
4.1mb (1 obs.)
SOUTHERN ITALY (390)
MD 3.9 (ATH).

ROI	0.48	323	P	19	09.50	-1.1
CZI	0.63	273	P	19	10.70	-1.6
TDS	0.67	315	Pd	19	11.90	-0.9
CSI	0.78	319	P	19	13.90	-0.3
MMN	1.02	314	P	19	19.20	1.7
SOI	1.31	212	Pc	19	20.60	-0.9
LCI	1.38	34	P	19	23.80	1.3
			eSn	19	47.10	
MGR	1.44	312	P	19	24.30	1.0
			eSn	19	42.60	
MSI	1.47	228	P	19	24.40	0.7
ATN	1.55	229	P	19	23.70	-1.2
			eSn	19	42.90	
BRT	1.70	7	P	19	28.00	1.0
SGO	1.86	318	Pc	19	30.90	1.7
BAI	1.93	358	P	19	29.50	-0.7
MNO	2.17	235	P	19	34.00	0.2
KEK	2.27	76	ePb	19	35.00	0.0
GIB	2.58	243	P	19	39.00	-0.5
IGT	2.65	81	ePn	19	40.70	0.3
VLS	3.02	108	ePb	19	44.50	-1.3
MCT	3.03	240	P	19	48.20	2.1
FAI	3.21	235	P	19	48.60	0.2
OHR	3.52	56	ePn	19	53.50	0.6
AZI	3.87	317	P	19	59.00	1.3
KZN	3.88	72	ePn	19	59.00	1.0
LIT	4.37	76	ePn	20	05.90	1.1
			eSn	20	54.00	
ITM	4.40	116	ePn	20	05.00	-0.2
SKO	4.41	49	ePn	20	05.00	-0.3
	0.9s		59.00nm			
			iSn	20	52.00	
			iSb	21	03.20	
GRG	4.54	65	ePn	20	07.90	0.7
VAY	4.80	62	ePn	20	11.70	0.9
KNT	4.97	65	ePn	20	12.50	-0.7
PLG	5.14	75	ePn	20	14.90	-0.8
ARV	5.26	326	P	20	22.00	4.7X
VLI	5.34	116	ePn	20	18.50	0.1
VBY	6.44	349	e(Pn)	20	33.50	-0.2
			eSn	21	44.90	
PTJ	6.75	354	eP	21	06.80	28.6X
LJU	7.08	346	e(Pn)	20	41.00	-1.7
			e	20	45.00	
			e(Sn)	22	02.00	
VOY	7.20	343	ePn	20	43.20	-1.3
			eSn	21	57.70	
BZS	7.29	27	ePc	20	43.50	-2.2
KBA	8.32	343	i(Pn)	20	18.60	-41.4X
	0.5s		2.00nm			
			e	21	09.00	
			i	21	10.50	
			e	22	27.50	
			e	37	34.00	
			e	37	40.00	
KHC	10.23	347	eP	21	30.10	3.9X
HFS	21.07	355	eP	23	40.50	-0.5
	0.4s		3.70nm			4.1mb
NRA0	21.84	353	Pn	23	55.10	6.5X
	S.D. = 1.1		on 36 of 41 obs.			

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* JAN 24, 1990 16h 19m 22.50± 1.14s
12.752 S ±15.5km 169.703 E ± 9.5km
DEPTH = 680.6 ± 15.1 km
4.6mb (8 obs.)
SANTA CRUZ ISLANDS REGION (183)

DZM	9.77	198	iPc	21	41.90	1.1
RMQ	23.95	232	eP	23	52.00	1.7
CMS	28.81	226	eP	24	22.00	-10.2X
OIS	29.82	251	eP	24	39.00	-1.8
WB5	34.59	253	iPd	25	19.90	-0.6
WRA	34.63	253	Pd	25	20.00	-0.7
	0.4s		12.60nm			4.8mb
MTN	37.59	265	eP	25	45.00	0.0
FORR	42.32	238	iPd	26	21.80	-0.5
	0.4s		52.00nm			5.4mb
WARB	42.54	245	iPd	26	24.60	0.5
	0.3s		25.00nm			5.2mb
MBL	48.27	253	iPd	27	07.70	0.2
KLB	51.13	240	eP	27	27.00	-1.3
NWAO	51.79	238	eP	27	32.00	-1.1
NANU	52.30	251	eP	27	37.00	0.3
MRWA	52.31	243	eP	27	37.10	0.3
MUN	52.49	239	eP	27	37.00	-1.0
MAT	57.32	330	eP	28	08.00	-3.1X
	1.7s		76.92nm			4.7mb
BJI	72.26	320	eP	29	43.00	-0.4
			e	35	27.50	
LOE	73.49	293	eP	29	52.00	1.2
BDT	75.90	292	eP	30	04.80	0.8
CHG	76.45	293	eP	30	08.00	0.9
SVW	78.58	16	eP	30	17.10	-0.4
LZH	78.78	311	eP	30	20.40	1.2
	1.5s		23.00nm			4.5mb
TTA	79.99	15	eP	30	25.00	0.2
PMR	80.87	19	eP	30	28.80	-0.4
	0.6s		9.80nm			4.5mb
BRK	81.10	48	eP	30	30.90	0.1
PRS	81.15	50	eP	30	31.40	0.3
PRI	81.60	50	eP	30	32.50	-1.1
WDC	82.00	45	ePd	30	35.50	0.2
ORV	82.32	47	eP	30	36.80	-0.1
CMB	82.53	48	ePd	30	38.00	-0.1
FRI	82.63	50	eP	30	38.60	0.1
IMA	83.15	14	eP	30	41.10	0.4
PLM	83.52	54	iP	30	43.00	-0.3
FBA	83.77	17	eP	30	42.00	-1.6
KVN	84.57	48	iP	30	47.00	-1.2
TNP	84.87	49	iP	30	50.00	0.3
	1.0s		3.00nm			3.9mb
PNT	87.40	38	eP	31	02.00	0.8
PV09	91.05	51	iP	31	19.00	0.4
GBA	95.09	283	Pd	31	36.50	-0.5
	0.6s		2.00nm			4.5mb
SUF	123.80	341	ePKP	37	05.60	-0.8
	0.6s		10.40nm			
NUR	125.89	340	ePKP	37	09.90	-0.7
MSL	126.76	306	ePKP	37	28.00	15.0X
APO	129.09	345	ePKP	37	15.00	-1.7
NB2	129.30	347	PKP	37	16.40	-0.7
	0.7s		2.60nm			
BRG	137.17	338	i(PKP)	37	34.10	1.8
KHC	138.71	336	ePKP	37	36.50	1.3
CDF	141.56	341	ePKP	37	36.20	-4.2X
HAU	142.21	342	ePKP	37	38.40	-3.0X
BSF	142.22	341	ePKP	37	39.00	-2.6X
FLN	143.18	349	iPKPc	37	41.10	-1.9
LDF	143.28	349	ePKP	37	41.40	-1.7
LOR	143.60	344	ePKP	37	42.80	-1.0
GRR	143.61	349	iPKPc	37	42.80	-0.9
GRC	143.78	345	PKP	37	43.97	-0.1
LBF	143.82	343	iPKPc	37	43.40	-0.8
SSF	143.88	344	ePKP	37	44.00	-0.2
LPF	143.99	349	ePKP	37	44.30	-0.1
SMF	144.17	343	ePKP	37	44.60	-0.2
AVF	144.17	344	iPKPc	37	44.50	-0.2
BST	144.18	353	PKP	37	42.88	-1.8
ROI	144.28	323	PKP	37	46.00	0.8
LPG	144.29	339	ePKP	37	46.00	0.6
TDS	144.36	324	PKP	37	45.50	0.2
MMN	144.40	324	PKP	37	44.20	-1.1
BGF	144.52	344	ePKP	37	45.80	0.4

24d 16h

CZI	144.77	323	PKP	37	46.60	0.6
PLDF	144.85	343	PKP	37	47.07	1.0
MAF	144.91	344	iPKPc	37	47.10	1.1
AGO	144.91	344	PKP	37	47.07	1.0
TCF	144.94	345	ePKP	37	46.90	0.8
LSF	145.14	346	ePKP	37	47.50	1.1
MFF	145.19	348	iPKPc	37	47.50	1.0
PYM	145.22	344	PKP	37	48.04	1.4
SBF	145.45	337	ePKP	37	49.60	2.5X
LBL	145.63	343	PKP	37	50.13	3.0X
PGF	145.92	334	iPKPc	37	49.40	1.5
FRF	146.00	338	ePKP	37	49.70	1.8
RJF	146.03	345	ePKP	37	50.20	2.3X
LRG	146.20	338	ePKP	37	50.70	2.5X
CAF	146.24	344	ePKP	37	51.10	2.8X
LFF	146.57	346	ePKP	37	51.80	3.1X
LPO	146.70	345	ePKP	37	52.10	3.2X
EPF	148.46	345	ePKP	37	57.10	5.2X
ISSF	148.73	347	PKP	37	58.04	5.7X
LHE	148.80	346	PKP	37	58.14	5.7X
ECRI	149.49	349	ePKP	38	00.20	6.8X
STS	149.94	357	ePKP	38	00.40	6.4X
BCAO	150.35	256	iPKPd	38	02.40	6.9X
	0.6s		31.00nm			
			i	38	12.90	
ETOR	151.12	347	ePKP	38	03.50	7.5X
GUD	151.70	350	ePKP	38	04.80	7.9X
	S.D. = 1.0		on 69 of 90 obs.			

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* JAN 24, 1990 16h 21m 49.14± 1.00s
71.922 N ±14.2km 0.351 E ±11.4km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.)
NORWEGIAN SEA (642)

TRO	6.54	102	eP	23	27.80	0.2
KEV	8.99	91	eP	24	12.00	10.3X
SOD	10.16	104	iP	24	17.30	-0.5
NRA0	12.06	153	Pn	24	43.40	-0.4
			Sn	26	56.30	
HFS	12.97	149	eP	24	55.90	0.0
	0.4s		5.20nm		5.1mb X	
SUF	13.43	120	eP	25	01.60	-0.3
	0.6s		8.20nm		4.9mb X	
NUR	14.90	128	iP	25	22.20	1.0
			e	25	30.00	
FFC	42.68	303	eP	29	47.00	0.0
	0.6s		5.00nm		4.4mb	
	S.D. = 0.6		on 7 of 8 obs.			

JAN 24, 1990 16h 24m 19.02± 0.76s
11.911 N ± 6.9km 43.215 E ± 8.5km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 4.5 (ARO).

OBO	0.11	45	eP+	24	21.24	-0.6
MKL	0.21	198	P	24	24.04	0.5
ATA	0.45	181	ePd	24	27.22	-1.0
ARO	0.52	223	ePd	24	29.78	0.1
			S	24	39.82	
DAF	0.74	246	ePd	24	33.61	0.1
SGH	0.74	230	ePd	24	33.27	-0.2
HLD	0.83	248	ePd	24	35.08	0.1
KSU	0.85	243	ePd	24	35.10	-0.3
GBR	1.05	224	ePd	24	37.85	-1.1
NAI	14.57	206	iPd	27	50.00	2.6
MSL	24.36	360	ePd	29	48.00	9.7X
ZST	42.23	334	eP	32	15.30	1.4
KIC	47.62	268	P	32	56.90	-0.7
TIC	47.84	268	P	32	58.90	-0.4
LIC	47.92	268	P	32	59.30	-0.7
	S.D. = 1.1		on 14 of 15 obs.			

% JAN 24, 1990 16h 35m 17.41± 1.05s
11.883 N ± 7.7km 43.268 E ±11.7km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 4.2 (ARO).

OBO	0.11	13	P	35	20.25	0.1
MKL	0.20	215	P	35	22.81	1.0
ATA	0.43	188	P	35	25.81	-0.3
ARO	0.54	230	P	35	28.56	0.2
			S	35	37.69	
SGH	0.76	235	P	35	32.06	-0.3
DAF	0.77	249	P	35	32.47	0.0
GBR	1.07	227	P	35	37.06	-0.6
	S.D. = 0.6		on 7 of 7 obs.			

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* JAN 24, 1990 16h 40m 24.03± 2.31s
39.565 N ±26.6km 16.657 E ± 9.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.07	275	P	40	25.00	-1.4
TDS	0.26	291	P	40	31.00	1.4
			eSn	40	52.00	
CSI	0.35	307	P	40	25.40	-5.9X
CZI	0.53	230	P	40	26.50	-8.3X
MMN	0.61	302	P	40	38.80	2.5X
MGR	1.02	304	P	40	43.00	-0.4
			(Sn)	41	10.00	
BRT	1.38	18	P	40	48.00	-1.2
SGO	1.43	314	P	40	50.50	0.5
OHR	3.52	63	e(Pn)	41	21.00	1.0
	S.D. = 1.5		on 6 of 9 obs.			

JAN 24, 1990 17h 14m 22.12± 0.38s
36.031 N ± 4.6km 137.566 E ± 4.0km
DEPTH = 5.0km (geophysicist)
HONSHU, JAPAN (227)

MTMJ	0.59	19	iP+	14	33.30	-0.6
			S	14	41.00	
IIDJ	0.62	153	iPd	14	34.40	-0.1
			S	14	43.30	
MAT	0.73	45	iPd	14	36.00	-0.7
			iS	14	45.60	
CHJJ	1.16	89	P	14	44.00	-0.2
			S	14	59.80	
TSRJ	1.38	249	P	14	47.50	-0.5
			S	15	06.00	
NIIJ	1.67	43	P	14	52.10	0.0
			S	15	14.40	
KAKJ	2.12	85	P	14	59.50	0.9
			S	15	27.20	
WKYJ	2.42	222	P	15	02.90	-0.2
YAMJ	2.91	42	eP	15	10.20	0.2
YONJ	3.45	257	P	15	17.20	-0.4
TKSJ	3.54	236	P	15	18.10	-0.7
SHK	4.27	251	eP	15	30.50	1.2
OFUJ	4.46	46	P	15	34.50	2.6X
AOMJ	5.03	25	P	15	40.60	0.6
BJI	17.31	290	eP	18	26.50	0.5
	S.D. = 0.7		on 14 of 15 obs.			

JAN 24, 1990 17h 55m 12.87± 0.85s
20.620 N ± 5.7km 99.815 E ± 7.0km
DEPTH = 41.1 ± 12.4 km
BURMA (296)

CHG	1.98	205	iPn	55	44.60	0.1
BDT	3.44	193	ePn	56	04.60	-0.8
			ePg	56	15.80	
			eSg	56	52.00	
LOE	3.67	150	ePn	56	09.00	0.3
			ePg	56	18.00	
			eSg	56	55.00	
NST	4.93	176	ePn	56	26.00	-0.4
			ePg	56	46.00	
			eSg	57	52.00	
KMI	5.23	30	ePn	56	31.50	0.6
			Pg	56	48.50	
KBR	6.57	182	eP	57	36.20	46.6X
			e	58	45.20	
NNT	7.99	181	eP	57	09.00	-0.3
			eS	59	25.40	
GYA	8.56	46	P	57	13.40	-3.9X
			S	58	45.00	
QIZ	9.57	98	eP	57	32.20	1.0
CD2	10.84	18	P	57	47.00	-1.6
	Z 12s		1.80um			
LSA	11.97	321	P	58	05.80	1.6
XAN	15.61	29	eP	58	47.00	-4.7X
	1.0s		0.02nm		1.3mb	
LZH	15.81	12	Pc	58	54.00	-0.3
	2.0s		0.06nm		1.4mb	
WHN	16.40	50	ePc	59	04.00	2.3
PSI	17.84	183	eP	59	25.00	5.2X
			e	00	30.00	
GTA	18.73	360	eP	59	29.50	-1.2
	Z 11s		0.80um			
	E 14s		1.80um			
TIY	20.25	30	Pc	59	45.80	-1.7
	N 12s		2.00um			
	E 12s		2.20um			
HYB	20.35	265	eP	59	49.80	1.2
NJ2	20.48	52	Pc	59	50.00	0.2
TIA	21.70	41	eP	00	00.80	-1.4
BTO	21.73	21	eP	00	03.00	0.4
	N 14s		1.10um			
	E 11s		0.50um			
			eS	03	56.50	
SSE	21.84	57	Pc	00	05.50	1.9
	1.0s		0.01nm		1.3mb	
NDI	22.03	296	eP	00	05.50	0.0
GBA	22.48	255	P	00	14.00	3.9X
HHC	22.51	24	eP	00	09.00	-1.3
	N 11s		0.90um			
BJI	23.89	32	eP	00	23.50	-0.1
	1.7s		0.05nm		1.8mb	
	Z 12s		0.90um		4.5MszX	
	N 11s		0.58um			
POO	24.55	270	eP	00	35.00	4.8X
WMQ	25.25	339	P	00	40.00	3.2X
KSH	27.75	318	eP	01	04.00	4.1X
OUE	31.09	294	eP	01	30.50	0.7
INK	83.28	17	eP	07	36.00	-0.2
SLR	83.31	239	iPc	07	40.50	3.2X
PRY	84.49	239	eP	07	43.20	-0.1
	S.D. = 1.1		on 24 of 33 obs.			

JAN 24, 1990 18h 20m 24.41± 0.45s
38.133 N ± 4.7km 86.434 W ± 3.6km
DEPTH = 5.0km (geophysicist)
4.1mb (1 obs.)
SOUTHERN INDIANA (489)

mbLg 3.8 (NEIS), 4.0 (BLA). Felt (V) ot Leovenworth, Indiono ond Rhodelio, Kentucky. Felt (IV) ot Mouckport, Mognet, Rome ond Soint Croix, Indiono. Also felt (IV) ot Bottletown, Brodenburg, Ekron, Guston, Howesville, Lewisport, Poyneville, Somple, Stephensport, Union Stor, Webster ond West Point, Kentucky.

WDIN	1.01	268	P	20	43.59	-0.4
HAKY	1.03	187	iPc	20	43.44	-0.9
BLO	1.04	356	P	20	45.00	0.5
			S	20	59.50	
NHIL	1.39	262	P	20	49.93	-0.5
			S	21	09.02	
BPIL	1.70	273	P	20	54.96	0.1
			S	21	18.81	
CSIL	1.93	256	P	20	58.44	0.2
			S	21	23.43	
MOTN	1.95	220	iPc	20	59.40	0.9
ANTN	2.18	153	iP	21	02.50	0.6
ABTN	2.26	173	iPc	21	04.20	1.2
ONTN	2.29	135	eP	21	03.90	0.4
RSCP	2.62	165	eP	21	08.50	0.4
DON	2.94	252	P	21	13.04	0.4
GRT	3.03	233	eP	21	13.50	-0.4
MFTN	3.08	231	P	21	14.61	0.1
FVM	3.15	269	eP	21	16.20	0.5
PWLA	3.41	203	eP	21	18.80	-0.5
DEK	4.20	335	Pn	21	44.00	13.6
			Pg	22	18.00	
			Sg	22	37.00	
NAV	4.55	99	eP	21	34.80	-0.7
OLY	4.82	239	eP	21	38.30	-1.1
BLA	4.86	99	eP	21	39.20	-0.8
CLE	5.05	47	iP	21	55.90	13.3
PRM	5.21	140	eP	21	43.50	-1.4
JSC	5.68	131	eP	21	50.00	-1.6
CBN	7.14	87	eP	22	31.00	19.0
PNJ	9.88	70	iP	22	57.60	7.4
			eLR	25	31.30	
PTN	10.74	50	eP	22	59.00	-2.9
RSNY	11.00	51	eP	23	02.00	-3.5
RSON	13.73	340	eP	23	36.00	-6.0
RSSD	14.54	300	eP	23	47.50	-5.5
GLD	14.71	282	e(P)	23	51.50	-3.7
GOL	14.83	282	eP	23	51.00	-5.8
ANMO	16.40	265	eP	24	19.00	1.9
ALO	16.40	265	eP	24	21.90	4.8
FFC	19.68	333	eP	24	55.00	-2.1

0.6s 6.00nm 4.1mb
S.D. = 0.7 on 19 of 34 obs.

JAN 24, 1990 18h 50m 33.99± 0.60s
42.292 N ± 3.3km 126.433 W ± 6.5km
DEPTH = 10.0km (geophysicist)
4.8mb (12 obs.) 4.7Msz (1 obs.)
OFF COAST OF OREGON (30)
ML 4.2 (BRK).

FHC	2.36	128	eP	51	12.80	-0.7
WDC	3.39	119	iPc	51	28.00	0.0
LBFM	3.52	104	eP	51	30.50	0.4
GROR	3.66	32	eP	51	31.60	-0.3
			eS	52	12.62	
LTCM	3.86	121	eP	51	35.00	0.4
KMOR	3.96	31	eP	51	35.57	-0.6
			eS	52	19.52	
MIN	4.12	117	e(P)	51	38.10	-0.4
GT2	4.16	45	eP	51	38.85	-0.1
VBEM	4.47	50	eP	51	43.06	-0.4
GMO	4.53	60	eP	51	44.23	-0.1
VLMM	4.54	43	eP	51	44.75	0.4
ORV	4.63	125	e(P)	51	42.20	-3.4X
			e	51	47.70	
			iS	52	41.00	
VLL	4.67	46	eP	51	46.26	-0.1
RVW	4.68	33	eP	51	46.57	0.2
VFP	4.70	48	eP	51	46.38	-0.4
LVP	4.76	36	eP	51	47.27	-0.2
			eS	52	40.98	
BMW	4.77	28	eP	51	46.66	-1.0
CROR	4.78	54	eP	51	46.86	-1.0
VIPM	4.78	60	eP	51	46.91	-1.0
MTMW	4.81	38	eP	51	47.95	-0.3
			eS	52	42.63	
APM	4.86	43	eP	51	48.83	-0.1
SHW	4.93	36	eP	51	50.41	0.5
JLK	4.93	37	eP	51	51.15	1.2
HSR	4.94	37	eP	51	50.07	0.0
CDFW	4.95	38	eP	51	50.04	-0.2
YEL	4.96	36	eP	51	51.13	0.7
ESD	4.97	37	eP	51	51.59	1.0
ERK	4.97	35	eP	51	51.01	0.5
VGB	5.20	50	eP	51	52.80	-1.0
BKS	5.46	142	eP	51	59.00	1.6
			e(S)	52	56.00	
			iLR	53	30.00	
LON	5.55	35	eP	51	58.50	-0.1
MHC	6.17	142	e(P)	52	06.80	-0.6
ARN	6.21	141	eP	52	07.30	-0.7
CMB	6.29	131	e(P)	52	10.40	1.3
			e	52	12.80	
PGC	6.69	17	eP	52	16.00	1.3
KVN	7.11	114	eP	52	20.80	0.0
PRS	7.13	145	e(P)	52	17.30	-3.5X
FRI	7.41	133	e(P)	52	22.80	-2.0
PRI	7.60	142	e(P)	52	36.50	9.0X
TNP	8.21	118	eP	52	36.20	0.0
PNT	8.48	32	eP	52	41.00	1.3
	0.7s		34.00nm			5.7mb
ISA	9.06	134	eP	52	52.00	4.1X
CLC	9.43	130	eP	53	04.00	11.1X
SBB	10.15	136	eP	53	03.00	0.1
MWC	10.40	138	eP	53	04.00	-2.4
LRM	10.66	66	eP	53	10.00	-0.1
DAU	11.56	94	eP	53	23.00	0.6
BW06	12.46	82	eP	53	34.00	-0.5
SES	13.35	47	eP	53	44.00	-2.0
EDM	14.01	34	eP	53	53.00	-1.6
	1.0s		48.00nm			5.2mb
GOL	16.11	92	eP	54	21.60	-0.7
	1.1s		70.51nm			4.7mb
ANMO	17.23	109	eP	54	37.70	1.3
	1.2s		25.39nm			4.2mb
ALQ	17.23	109	iPd	54	37.00	0.6
	1.0s		15.00nm			4.1mb
	Z 17s		2.98um			5.4Msz
FFC	20.30	44	iPc	55	12.10	-0.3
	0.8s		37.00nm			4.8mb
PMR	23.63	333	eP	55	45.00	-0.7
	2.0s		95.54nm			5.0mb
RSON	23.91	58	eP	55	48.50	0.0
	1.0s		48.81nm			5.0mb
SIO	24.22	96	eP	55	53.30	1.6
TUL	24.53	95	eP	55	56.70	2.0
	1.4s		61.80nm			5.1mb

	Z 18s		2.11um		4.7Msz
			LR	03	00.00	
FBA	25.69	339	eP	56	04.00	-1.5
	1.4s		17.05nm		4.5mb
INK	26.35	354	eP	56	11.50	0.0
TTA	26.95	330	eP	56	15.50	-1.7
	0.9s		6.25nm		4.3mb
MBC	34.19	3	eP	57	22.50	1.5
	1.0s		8.00nm		4.6mb
JSC	36.00	88	eP	57	35.70	-1.3
FRB	39.11	37	eP	58	05.00	2.3
ZOBO	79.18	124	P	02	42.00	0.6
CLL	80.32	24	eP	02	55.00	8.6X
8RG	80.99	24	e(P)	02	52.40	2.5
S.D. = 1.1 on 61 of 67 obs.						

? JAN 24, 1990 18h 59m 11.82± 1.06s
36.352 N ±12.3km 24.393 E ± 9.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)

VAM	0.96	189	eP	59	30.00	0.0
			eS	59	42.00	
VLI	1.23	288	iPc	59	34.70	0.0
			eS	59	50.00	
ITM	2.15	293	eP	59	48.10	-0.1
KAP	2.39	109	eP	59	51.70	0.0
S.D. = 0.1 on 4 of 4 obs.						

JAN 24, 1990 19h 33m 31.11± 0.16s
14.603 N ± 3.2km 119.437 E ± 3.5km
DEPTH = 23.1km (6 depth phases)
5.6mb (27 obs.) 5.8Msz (15 obs.)
LUZON, PHILIPPINE ISLANDS (249)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Locotion:
Origin Time 19:33:33.5 0.4
Lat 14.61N 0.04 Lon 118.69E 0.05
Dep 15.0 FIX Half-duration 2.8
Moment Tensor; Scale 10**17 Nm
Mrr= 4.15 0.19 Mtt=-0.10 0.19
Mff=-4.05 0.28 Mrt= 1.17 0.62
Mrf=-7.16 0.66 Mtf=-1.68 0.22
Principal Axes:

	Val=	Plg=	Azm=
T	8.70	57	68
N	-0.40	13	179
P	-8.29	29	277

Best Double Couple:Mo=8.5*10**17
NP1:Strike= 41 Dip=20 Slip= 133
NP2: 176 76 76

OCP	1.59	89	iP	33	27.00	-31.1X
BAG	2.11	31	ePc+	34	07.00	1.2
HKC	9.14	328	iP	35	42.90	-1.8
			S	37	41.00	
DAV	9.60	140	eP	35	54.00	3.0X
ANP	10.71	10	eP+	36	06.00	-0.3
			eS	38	29.00	
MNI	14.12	157	eP	36	52.50	0.5
PCI	15.41	178	ePd	37	11.00	2.1
	1.0s		3.00nm		3.5mb X
SSE	16.49	5	iP+	37	22.00	-0.6
	1.0s		70.00nm		4.7mb
	Z 18s		56.00um		4.6MszX
	N 10s		8.50um		
	E 10s		24.20um		
			pP	37	32.00	
			PP	37	40.00	
			sP	37	44.00	
			S	40	35.00	
			sS	40	56.00	
LOE	17.25	282	eP	37	33.00	0.8
NST	18.67	276	eP	37	51.10	1.3
KMI	18.85	306	iPc+	37	55.00	2.7X
	Z 16s		60.00um		
	E 11s		41.60um		
			iS	41	30.00	
NNT	19.26	266	eP	37	56.70	-0.3
MKS	19.69	180	ePd	38	03.30	1.4
BDT	19.82	280	eP	38	03.00	-0.2
SNG	19.89	250	eP	38	09.44	5.5X
CHG	20.07	285	ePd	38	06.00	0.1
	1.5s		104.17nm		4.9mb
			eS	42	04.00	
AAI	20.14	154	ePd	38	06.80	0.2

KGM	20.24	233	ePd	38	09.00	1.3
IPM	20.69	243	ePc	38	13.00	0.7
KLM	20.94	239	eP	38	14.50	-0.4
TRT	23.17	197	ePd	38	36.70	-0.4
	1.0s		113.60nm			5.4mb
TSI	23.35	244	eP	38	41.00	2.1
TKSJ	23.39	32	eP	38	40.90	1.8
PSI	23.45	242	eP	38	40.00	0.2
	0.9s		16.00nm			4.6mb
			e	44	25.00	
YONJ	24.07	29	eP	38	46.20	0.5
WKYJ	24.39	34	eP	38	50.20	1.3
GUMO	24.68	89	eP	38	52.00	0.2
PJG	24.68	89	eP	38	51.50	-0.3
GUA	24.73	89	eP	38	51.30	-1.0
	1.2s		225.00nm			5.7mb
	Z 19s		33.24um			5.9Msz
			eS	43	26.50	
BSI	25.41	252	eP	38	58.00	-0.7
8JI	25.50	354	eP	38	59.00	-0.3
	2.0s		283.00nm			5.6mb
	Z 12s		35.90um			6.1MszX
			eS	43	30.00	
LZH	25.55	330	Pc	39	00.50	0.5
	7.0s		4626.00nm			6.2mb X
			pP	39	06.50	21km
			PP	39	38.00	
MAT	27.54	34	(P)	39	13.00	-5.2X
	1.7s		146.15nm			5.4mb
	Z 20s		18.09um			5.6Msz
			eS	43	50.00	
ASAJ	35.45	29	eP	40	27.70	0.1
KUSJ	35.73	32	eP	40	30.60	0.6
WB5	37.28	156	iPc	40	41.10	-2.2
RAB	37.44	117	eP	40	46.00	1.3
			eS	46	40.00	
YSS	37.70	26	eP	40	47.00	0.5
			eS	46	40.00	
HYB	39.35	280	iPc	41	00.70	-0.1
	1.0s		50.00nm			5.2mb
			eS	47	06.00	
IRK	39.47	345	eP	41	01.00	-0.3
			eS	46	55.00	
OIS	40.17	150	iPc	41	06.20	-1.2
			e	41	13.00	23km
G8A	40.71	274	P	41	12.00	0.1
WAR8	41.14	170	iPc	41	14.70	-0.6
KOD	41.18	269	eP	41	17.00	0.8
			eS	47	28.00	
NDI	41.45	297	eP	41	14.00	-3.9X
			PP	43	06.00	
			PPP	44	02.00	
			eS	47	30.00	
CTA	43.40	142	iPc+	41	33.10	-0.8
	1.0s		60.00nm			5.3mb
			iS	48	02.00	
POO	43.78	282	iPd	41	37.00	-0.1
			iS	48	11.00	
HNR	46.73	118	eP	42	08.00	7.4X
NWAO	47.31	183	eP	42	06.00	1.2
	Z 20s		3.20um			5.3Msz
	N 20s		2.00um			
	E 20s		1.60um			
			eS	49	00.00	
FRU	47.56	315	eP	42	07.40	0.5
			eS	49	06.00	
PET	49.25	30	eP	42	28.00	8.3X
			eS	49	34.00	
RMQ	49.81	145	eP	42	25.00	0.6
DSH	50.46	308	eP	42	30.00	0.7
			eS	49	47.00	
QUE	50.52	297	eP	42	30.00	-0.1
			eS	49	45.00	
CMS	52.36	151	eP	42	42.00	-1.7
ADE	52.58	160	eP	42	43.20	-2.1
BRS	52.81	142	iPd-	42	45.10	-2.0
	1.0s		5.00nm			4.4mb X
	Z 19s		30.00um			6.4Msz
			i	42	52.00	23km
			eS	50	16.00	
CAN	57.01	151	eP	43	16.10	-1.5
TIK	57.29	4	iPc	43	17.00	-2.0
			eS	51	14.00	
MAIO	57.36	304	iPc	43	20.00	-0.2
	1.0s		20.00nm			5.1mb
			eS	51	29.00	
DZM	58.75	127	iPc	43	31.00	1.0

24d 19h

TEH	63.89	303	e(P)	44	04.00	-0.8
			eS	53	50.00	
IR4	64.29	302	eP	44	07.00	-0.3
IR1	64.46	302	eP	44	08.00	-0.5
IR7	64.52	303	eP	44	08.50	-0.4
IR5	64.55	302	eP	44	09.00	-0.1
ILT	66.13	21	iPc	44	18.00	-0.4
			iS	53	08.00	
TAB	67.92	305	eP	44	29.00	-1.6
			e	44	32.00	10kmX
RYD	68.65	291	eP+	44	34.20	-0.9
SLY	68.68	303	ePd	44	34.00	-1.1
			ePP	47	10.00	
			ePPP	48	23.00	
			eS	53	28.00	
			ePS	54	07.00	
BHD	69.76	300	iPd	44	42.00	0.3
			eS	53	48.00	
			ePS	54	18.00	
MSL	70.54	304	ePd	44	50.00	3.5X
			ePcP	45	06.00	
			eS	54	01.50	
			ePS	54	34.00	
			eScS	54	45.00	
MSZ	73.60	146	P	45	04.00	-0.3
OBN	74.07	324	iPc	45	06.60	-0.4
	1.6s	110.00nm			5.6mb	
	Z 18s	9.60um			6.1Msz	
			eS	54	38.00	
KRP	74.12	137	P	45	08.00	0.5
BRW	74.29	19	ePc	45	08.70	0.7
TTA	74.64	28	ePc	45	11.30	1.0
SVW	74.90	30	ePc	45	13.00	1.3
SNZO	75.48	140	P	45	20.00	4.8X
			S	55	04.00	
			SS	00	00.00	
			SSS	03	40.00	
IMA	75.51	25	ePc	45	16.20	0.9
	1.6s	60.90nm			5.4mb	
KDC	76.77	33	eP	45	22.70	0.5
HRI	76.95	301	eP	45	25.00	1.0
KAS	77.29	310	eP	45	26.00	0.3
DSI	77.52	300	eP	45	28.00	1.0
SOD	77.72	337	iP	45	27.80	0.4
PMR	77.97	29	ePc	45	28.50	-0.3
	1.5s	76.40nm			5.5mb	
	Z 20s	2.50um			5.5Msz	
HON	78.02	71	P	46	00.00	30.1X
	Z 20s	4.79um			5.8Msz	
FBA	78.07	26	eP	45	29.30	-0.1
MBH	78.25	298	e(P)	45	31.00	0.0
BBTK	78.28	308	eP	45	13.00	-18.2X
KBS	79.08	349	eP	45	46.00	11.3X
NUR	79.76	330	eP	45	38.00	-0.6
	Z 16s	21.80um			6.6MszX	
			e	54	40.00	
			LR	25	32.00	
ELL	81.05	306	eP	45	46.00	-0.1
ASW	81.09	293	iPc	45	48.00	1.6
			eS	56	00.00	
HLW	81.25	299	eP	45	49.00	1.8
			eS	56	01.00	
VRI	81.53	315	ePc	45	49.00	0.7
MLR	82.15	315	ePc	45	52.00	0.3
INK	82.70	21	eP	45	54.00	0.1
	1.2s	48.00nm			5.5mb	
CMP	82.82	315	ePc	46	08.00	12.9X
MBC	82.92	12	ePc	45	55.50	0.5
	1.3s	61.00nm			5.6mb	
NAI	83.19	267	iPc	45	55.00	-2.8X
SMG	83.24	307	eP	45	57.50	0.2
PRK	83.32	309	eP	45	57.70	0.0
UPP	83.32	330	iP	45	56.50	-0.7
RDO	83.43	311	eP	45	57.20	-1.0
UZH	83.82	319	iPc	46	02.00	2.0
			iS	56	28.00	
KRA	84.92	320	eP	46	05.60	0.1
	1.5s	104.00nm			5.8mb	
	Z 16s	7.50um			6.2MszX	
	E 16s	9.20um				
			e	46	15.40	31km
			e	56	37.00	
SPC	84.97	319	eP	46	07.40	1.3
BZS	85.07	316	eP	46	13.00	6.6X
HFS	85.10	331	eP	46	05.20	-1.0
	1.6s	157.70nm			6.0mb	
	Z 17s	0.02um			3.5MszX	

			LR	23	06.00	
PLG	85.16	310	eP	46	06.50	-0.5
VAY	85.55	311	iP	46	08.30	-0.6
	1.3s	0.10nm			2.9mb X	
PSZ	85.56	318	eP	46	08.70	-0.2
VAM	85.85	305	eP	46	11.20	0.7
NB2	85.90	332	P	46	09.50	-0.8
	1.8s	152.90nm			5.9mb	
SKO	86.19	312	eP	46	11.70	-0.4
	1.6s	115.00nm			5.9mb	
	Z 13s	4.25um			6.0MszX	
	N 14s	5.13um				
	E 14s	3.06um				
			i	46	17.30	18km
			iPP	49	48.00	
			iPPP	51	53.00	
			iSKS	56	42.50	
			i	57	56.00	
			iPS	58	15.00	
			i	59	22.00	
			i	01	30.00	
			iSS	02	38.00	
			iSSS	06	50.00	
			LR	34	23.80	
BUD	86.25	318	e(P)	46	10.00	-2.2
KZN	86.41	311	eP	46	12.20	-1.1
SRO	86.61	319	iP	46	14.60	0.6
OHR	86.89	312	eP	46	14.00	-1.6
	1.7s	0.08nm			2.7mb X	
KSP	86.89	322	ePc	46	15.70	0.4
	1.4s	62.00nm			5.6mb	
ITM	87.15	308	eP	46	16.00	-0.9
ZST	87.26	319	eP	46	16.70	-0.4
VKA	87.73	319	e(P)	46	19.00	-0.4
	Z 15s	7.30um			6.2MszX	
			LR	31	30.00	
PRU	88.24	321	Pc	46	22.00	0.2
	2.3s	80.50nm			5.6mb	
	Z 14s	11.50um			6.4MszX	
	N 11s	3.90um				
	E 15s	7.40um				
			e	46	29.50	23km
BRG	88.28	322	iP	46	22.10	0.1
	2.0s	85.00nm			5.7mb	
CLL	88.67	323	iPc	46	23.60	-0.3
	2.0s	74.00nm			5.7mb	
KHC	89.13	321	iPc	46	26.50	0.3
	Z 14s	8.50um			6.3MszX	
	N 13s	4.50um				
	E 14s	6.30um				
MOX	89.74	323	eP	46	29.00	0.1
	2.5s	108.00nm			5.7mb	
	Z 15s	10.70um			6.4MszX	
	N 16s	7.40um				
	E 17s	8.40um				
KBA	90.03	319	eP	46	32.00	1.4
			e	46	45.00	43kmX
GRF	90.34	322	ePc	46	32.40	0.6
	Z 18s	8.00um			6.2Msz	
TDS	90.58	311	P	46	33.80	0.8
CZI	90.88	311	P	46	33.50	-0.9
LWI	91.17	268	ePd	46	36.80	0.3
ABH	92.43	323	eP	46	42.72	1.3
RUP	92.79	323	eP	46	40.41	-2.7
FEL	93.03	321	eP	46	44.70	0.4
CDF	93.24	322	eP	46	44.40	-0.8
	1.5s	41.70nm			5.6mb	
BSF	93.79	321	eP	46	46.50	-1.3
HAU	93.97	322	eP	46	47.70	-0.8
LPG	94.85	319	eP	46	52.10	-0.9
LOR	95.81	322	eP	46	56.50	-0.5
	1.7s	44.10nm			5.6mb	
LBF	95.87	322	eP	46	57.10	-0.2
	1.7s	44.10nm			5.6mb	
SSF	96.12	322	eP	46	57.90	-0.5
SLR	97.23	245	iPc	47	02.50	-1.3
	Z 18s	7.56um			6.2Msz	
PRY	98.19	244	eP	47	04.00	-4.2X
EDM	98.74	29	eP	47	11.50	1.4
HVD	100.62	241	ePdiff	47	05.00	-14.2X
KVN	104.33	43	Pdiff	47	43.40	7.8X
RSON	108.66	21	Pdiff	48	10.00	15.7X
	Z 22s	2.01um			5.6Msz	
GOL	111.75	36	PKP	52	30.00	23.7X
	Z 20s	1.90um			5.7Msz	
GLD	111.80	36	PKP	52	30.00	23.7X
	Z 20s	2.50um			5.8Msz	

ANMO	114.25	40	PKP	52	40.00	28.8X
	Z 21s	1.40um			5.5Msz	
ALQ	114.25	40	ePKP	52	09.50	-1.8
	Z 19s	4.25um			6.1Msz	
KIC	120.86	287	PKP	52	23.60	-0.5
UPA	149.95	40	ePKP+	53	16.00	-1.0
	Z 20s	1.77um			5.9Msz	
CAR	154.27	15	iPKP	53	24.00	0.6
BOG	156.67	36	ePKP	53	28.00	1.0
PSO	157.16	48	ePKP	53	30.50	2.8X
NNA	163.94	83	ePKP	53	38.00	3.7X
	1.0s	11.00nm				
	Z 20s	0.53um			5.3Msz	
LPB	172.49	106	ePKP	53	42.00	1.7
	Z 20s	3.55um			5.8MszX	
			ePP	59	02.00	
			LR	53	20.00	
ZOBO	172.52	104	PKPc	53	42.00	1.5
	1.6s	22.56nm				
	Z 24s	1.94um				
			LR	54	20.00	
CNCB	172.53	108	PKP	53	43.00	2.5X
	S.D. = 1.0	on 137 of 163 obs.				

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* JAN 24, 1990 19h 51m 22.40± 1.24s
39.103 N ± 8.5km 17.031 E ±13.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

TDS	0.77	316	P	51	37.10	-0.4
			eSg	51	49.00	
SOI	1.28	217	P	51	46.90	0.7
LCI	1.42	30	P	51	48.80	0.6
			eSn	52	09.00	
MGR	1.54	313	P	51	49.80	-0.1
			eSn	52	09.50	
ATN	1.55	233	P	51	48.90	-1.1
			eSn	52	10.30	
BRT	1.78	4	P	51	52.20	-1.2
SGO	1.97	318	P	51	57.50	1.4
OHR	3.52	54	e(Pn)	52	23.50	5.2X
	S.D. = 1.2	on 7 of 8 obs.				

? JAN 24, 1990 19h 51m 57.10± 1.12s
7.242 S ±18.5km 145.955 E ±30.8km
DEPTH = 182.8 ± 22.4 km
NEAR S COAST OF PAPUA NEW GUINEA(206)

LAT	1.19	61	iPc	52	27.00	0.2
			eS	52	44.00	
PMG	2.46	151	iPd	52	39.50	-0.4
			eS	53	13.00	
WB5	16.86	221	eP	55	44.40	0.3
QLP	19.30	185	eP	56	11.00	0.6
MRWA	35.69	228	eP	58	40.50	0.8
KLB	35.76	224	eP	58	39.40	-0.9
MUN	37.06	224	eP	58	50.50	-0.7
KIC	150.89	270	PKP	11	30.70	6.3X
LIC	151.17	270	PKP	11	31.20	6.4X
TIC	151.18	271	PKP	11	31.40	6.6X
LKO	151.76	277	PKPc	11	33.82	8.1X
	0.5s	8.00nm				
	S.D. = 0.9	on 7 of 11 obs.				

JAN 24, 1990 20h 11m 33.20± 0.98s
39.116 N ± 5.9km 16.966 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.55	326	P	11	45.00	0.7
ACI	0.64	292	P	11	44.50	-1.5
CZI	0.65	279	P	11	45.90	-0.3
TDS	0.73	318	P	11	47.60	0.1
			eSn	11	57.80	
CSI	0.84	322	P	11	49.80	0.3
MMN	1.08	316	P	11	54.60	1.1
SOI	1.26	215	P	11	57.40	0.8
			eSn	12	14.50	
LCI	1.44	32	P	11	59.60	0.4
			eSn	12	19.90	
MGR	1.49	314	P	12	00.00	0.0
			eSn	12	19.20	
ATN	1.51	231	P	12	00.00	-0.4
			eSn	12	20.60	
BRT	1.77	6	P	12	02.70	-1.4
			eSn	12	24.40	
SGO	1.92	319	P	12	06.50	0.2

OHR 3.55 55 e(Pn) 12 45.00 15.5X
S.D. = 0.9 on 12 of 13 obs.

JAN 24, 1990 20h 47m 08.87± 0.46s
42.350 N ± 2.9km 126.301 W ± 5.1km
DEPTH = 10.0km (geophysicist)
4.9mb (12 obs.) 5.0Msz (1 obs.)
OFF COAST OF OREGON (30)
ML 4.4 (BRK).

FHC	2.33	131	eP	47 46.00	-1.8
WDC	3.33	121	eP	48 01.80	-0.3
			eS	48 59.80	
LBFM	3.44	105	eP	48 04.00	0.1
GROR	3.56	32	eP	48 06.27	1.0
			eS	48 46.98	
LTCM	3.81	123	eP	48 08.50	-0.3
KMOR	3.86	31	eP	48 09.74	0.1
			eS	48 54.50	
GT2	4.05	45	eP	48 12.37	0.1
MIN	4.06	118	e(P)	48 09.40	-3.1X
			eS	49 02.50	
PGO	4.18	40	eP	48 15.22	1.2
NLO	4.26	28	eP	48 14.66	-0.7
VBEM	4.36	50	eP	48 16.47	-0.4
TDH	4.39	46	eP	48 17.08	-0.2
GMO	4.42	60	eP	48 17.82	0.2
VLMM	4.43	43	eP	48 18.06	0.3
RVW	4.58	33	eP	48 20.71	1.0
ORV	4.58	126	eP	48 18.50	-1.3
			eS	49 14.00	
VFP	4.59	48	eP	48 19.92	-0.1
LVP	4.65	36	eP	48 20.88	0.0
CROR	4.67	54	eP	48 20.29	-0.8
VIPM	4.67	61	eP	48 20.66	-0.6
BMW	4.67	27	eP	48 20.33	-0.9
MTMW	4.71	37	eP	48 21.72	0.0
APM	4.75	43	eP	48 22.62	0.4
SHW	4.82	36	eP	48 24.16	0.8
JLK	4.83	37	eP	48 24.12	0.8
			eS	49 20.31	
HSR	4.83	36	eP	48 23.92	0.4
CDFW	4.85	38	eP	48 23.52	-0.1
VGB	5.09	50	eP	48 26.50	-0.5
LON	5.44	35	eP	48 32.30	0.2
BKS	5.45	144	eP	48 30.50	-1.6
			iS	49 31.00	
			iLQ	49 50.00	
			iLR	50 02.00	
MHC	6.15	143	e(P)	48 51.80	9.7X
ARN	6.20	142	eP	48 41.50	-1.1
CMB	6.25	132	e(P)	48 44.30	0.9
KVN	7.05	115	eP	48 53.00	-1.8
LLA	7.07	142	eP	48 57.10	2.2
FRI	7.38	134	eP	49 01.20	2.0
TNP	8.15	119	e(P)	49 10.00	-0.2
PNT	8.38	32	iPc	49 13.80	0.6
	0.5s		14.00nm	5.5mb	
ISA	9.04	135	eP	49 24.00	1.6
CLC	9.40	131	eP	49 21.00	-6.3X
SBB	10.13	136	eP	49 38.00	0.6
MWC	10.38	139	eP	49 42.00	1.0
DUG	10.38	97	eP	49 41.00	0.0
PAS	10.38	139	eP	49 46.00	5.2X
LRM	10.55	66	eP	49 43.50	0.1
RVR	10.90	137	eP	49 56.00	8.1X
IMW	11.34	77	eP	49 54.50	0.3
MSU	11.43	105	P	49 56.00	0.6
DAU	11.47	95	eP	49 56.00	0.0
BW06	12.36	82	eP	50 07.50	-0.4
SES	13.24	47	ePd	50 18.00	-1.4
			pP	50 49.00	
EDM	13.91	34	ePd	50 28.50	0.4
	1.1s		56.00nm	5.3mb	
GOL	16.01	92	eP	50 54.50	-1.5
	1.1s		76.92nm	4.7mb	
RSSD	16.32	76	eP	50 56.50	-3.3X
ANMO	17.15	109	eP	51 11.00	0.7
	1.2s		48.83nm	4.5mb	
ALQ	17.15	109	eP	51 09.50	-0.8
	1.2s		50.78nm	4.5mb	
Z	17s		7.06um	5.7Msz	
			pP	56 45.20	
FFC	20.19	44	ePc	51 45.40	-0.8
	1.3s		87.00nm	4.9mb	
KDC	22.60	322	e(P)	52 17.70	7.2X
PMR	23.62	332	eP	52 20.00	-0.5
	2.0s		156.30nm	5.2mb	
RSON	23.80	58	eP	52 22.50	0.2
	1.0s		44.74nm	5.0mb	
SIO	24.13	96	eP	52 25.50	-0.2
TUL	24.44	95	eP	52 30.80	2.1
	1.5s		132.80nm	5.4mb	
Z	21s		5.83um	5.0Msz	
			LR	35 49.00	
FBA	25.67	339	eP	52 39.00	-1.2
	1.0s		6.25nm	4.3mb	
INK	26.30	354	eP	52 46.00	0.1
TTA	26.95	330	eP	52 50.90	-1.2
	1.0s		11.25nm	4.5mb	
IMA	28.20	337	e(P)	53 02.70	-0.7
RSCP	32.13	88	eP	53 37.50	-1.0
BLA	35.30	83	eP	54 06.60	0.7
	1.3s		27.78nm	5.0mb	
JSC	35.90	88	eP	54 10.50	-0.5
FRB	39.01	37	eP	54 42.00	5.3X
ZOBO	79.13	124	P	59 15.00	-1.0
BRG	80.90	24	eP	59 24.10	-0.2
			e	59 50.50	
KHC	82.31	25	P	59 33.00	1.2
ZST	84.23	24	eP	59 41.90	0.3
SRO	84.93	23	eP	00 04.30	19.3X
LZH	89.50	322	eP	00 09.60	1.9
S.D. = 0.9 on 67 of 76 obs.					

JAN 24, 1990 20h 55m 33.56± 0.36s
43.599 N ± 2.8km 127.440 W ± 3.7km
DEPTH = 10.0km (geophysicist)
4.5mb (6 obs.)
OFF COAST OF OREGON (30)
ML 4.5 (BRK).

GROR	3.22	56	eP	56 25.02	-0.2
KMOR	3.48	53	eP	56 28.27	-0.6
			eS	57 12.56	
NLO	3.77	47	eP	56 33.38	0.3
FHC	3.79	136	e(P)	56 29.50	-3.9X
GT2	4.02	65	eP	56 36.91	0.4
PGO	4.02	61	eP	56 37.14	0.6
BMW	4.14	45	ePc	56 37.95	-0.4
ONR	4.18	37	eP	56 38.71	0.0
			eS	57 30.21	
RVW	4.20	51	eP	56 39.20	0.1
VLMM	4.32	61	eP	56 41.34	0.5
LVP	4.35	54	ePc	56 41.69	0.4
TDH	4.38	65	ePc	56 42.16	0.3
MTMW	4.44	55	eP	56 42.98	0.4
VBEM	4.45	69	eP	56 42.69	0.0
OBH	4.50	33	eP	56 43.13	-0.1
SHW	4.52	53	eP	56 44.38	0.7
VLL	4.52	64	eP	56 44.34	0.6
HSR	4.54	54	eP	56 44.85	0.9
CPW	4.54	40	eP	56 43.37	-0.5
JLK	4.54	54	eP	56 44.47	0.5
APW	4.56	46	eP	56 44.01	-0.2
			eS	57 39.80	
LBFM	4.68	117	eP	56 48.70	2.6X
WDC	4.73	128	eP	56 48.90	2.2X
LON	5.08	50	ePc	56 51.70	0.2
VGB	5.13	66	eP	56 51.80	-0.5
MIN	5.43	125	eP	56 53.00	-3.7X
RMW	5.53	44	eP	56 57.80	-0.2
MCW	6.00	31	eP	57 04.40	-0.2
ORV	6.01	130	eP	57 06.00	1.3
ARN	7.70	142	eP	57 26.50	-1.9
CMB	7.71	134	eP	57 29.00	0.4
PNT	7.86	41	iPd	57 30.70	0.0
	0.5s		30.00nm	5.8mb X	
KVN	8.37	120	eP	57 38.50	0.6
LLA	8.57	142	eP	57 40.40	-0.1
FRI	8.85	136	eP	57 44.90	0.5
ISA	10.51	136	eP	58 08.00	0.6
CLC	10.85	132	eP	58 13.00	1.0
LRM	10.90	73	eP	58 12.20	-0.6
SBB	11.61	137	eP	58 22.00	-0.3
MWC	11.87	139	eP	58 25.00	-0.9
IMW	11.94	83	eP	58 28.40	1.3
RVR	12.38	137	eP	58 33.00	0.3
BW06	13.08	87	eP	58 41.80	-0.4
SES	13.08	53	eP	58 39.50	-2.5
PLM	13.15	138	eP	58 38.00	-5.1X
EDM	13.40	39	iPd	58 45.30	-0.9
RSSD	16.88	80	eP	59 31.50	-0.1
GOL	16.94	96	eP	59 31.50	-0.9
	1.0s		25.00nm	4.3mb	
ANMO	18.36	111	eP	59 50.00	-0.1
FFC	19.91	47	ePc	00 07.50	-0.4
	1.1s		68.00nm	4.9mb	
KDC	21.10	321	eP	00 19.70	-0.5
TOA	21.56	336	e(P)	00 26.00	1.0
PMR	22.13	332	eP	00 30.20	-0.3
	1.3s		23.60nm	4.5mb	
RSON	23.87	60	eP	00 47.80	0.1
	1.0s		13.56nm	4.5mb	
FBA	24.21	339	eP	00 52.80	2.0
SVW	24.26	326	eP	00 52.40	1.0
INK	24.97	355	eP	00 57.50	-0.7
TTA	25.45	329	eP	01 02.20	-0.7
IMA	26.72	336	eP	01 14.00	-0.7
MBC	32.93	4	eP	02 10.00	0.4
	1.0s		6.00nm	4.5mb	
JSC	36.70	89	eP	02 41.50	-0.9
FRB	38.52	38	eP	02 58.00	0.7
BRG	80.10	24	eP	07 53.70	9.0X
	1.5s		18.00nm	4.8mb	
ZOBO	80.52	123	P	07 47.00	-1.1
S.D. = 0.8 on 58 of 64 obs.					

* JAN 24, 1990 21h 09m 40.70± 1.44s
40.087 N ±11.8km 123.080 W ±10.0km
DEPTH = 5.0km (geophysicist)
NORTHERN CALIFORNIA (36)
ML 2.7 (BRK).

WDC	0.64	40	iPc	09 54.60	1.0
			iS	10 02.60	
FHC	0.99	316	eP	10 00.30	0.3
			eS	10 12.40	
MIN	1.16	77	eP	10 02.70	-0.2
			eS	10 16.70	
ORV	1.33	113	eP	10 06.40	0.7
			iS	10 22.90	
LBFM	1.55	35	eP	10 07.90	-1.3
KVN	3.98	103	e(P)	10 43.50	-0.5
S.D. = 1.1 on 6 of 6 obs.					

% JAN 24, 1990 22h 23m 38.69± 0.63s
42.503 N ± 4.6km 13.254 E ± 6.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

AQU	0.19	143	Pd	23 42.70	-0.2
			eSg	23 45.60	
MNS	0.44	255	Pc	23 47.50	-0.2
			eSg	23 54.20	
AZI	0.53	165	P	23 49.70	0.2
			eSn	23 57.50	
ASS	0.72	323	P	23 52.80	0.0
			eSg	24 03.00	
RMP	0.80	211	P	23 54.30	0.0
			eSg	24 06.30	
RDP	0.84	208	P	23 55.20	0.2
			eSn	24 07.10	
SDI	0.90	152	P	23 55.80	-0.2
			eSn	24 08.60	
ARV	1.02	347	P	23 58.10	0.1
			eSn	24 13.50	
S.D. = 0.2 on 8 of 8 obs.					

% JAN 24, 1990 22h 24m 22.07± 2.20s
11.933 N ±11.8km 43.430 E ±17.6km
DEPTH = 26.8 ± 6.2 km
ETHIOPIA (558)
ML 3.9 (ARO).

OBO	0.15	292	iPd	24 27.27	0.0
MKL	0.35	232	iP+	24 29.77	-0.2
ATA	0.52	205	iP+	24 32.78	0.1
TDD	0.53	256	iP+	24 32.94	0.1
			S	24 40.05	
ARO	0.70	235	iP+	24 35.56	-0.1
			S	24 44.71	
SGH	0.92	238	iP+	24 39.07	-0.2
DAF	0.94	250	iP+	24 39.46	0.0
HLD	1.03	251	P	24 40.98	0.2
KSU	1.05	247	P	24 40.89	-0.1
GBR	1.23	231	ePc	24 43.69	0.1
S.D. = 0.2 on 10 of 10 obs.					

* JAN 24, 1990 23h 22m 32.86± 1.23s
12.239 N ±13.8km 141.126 E ±10.5km

24d 23h

DEPTH = 154.1 ± 11.0 km
4.7mb (3 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUMO	3.89	69	eP	23	32.80	0.4
PJG	3.89	69	eP	23	32.30	-0.1
GUA	3.91	70	eP	23	32.50	-0.3
			eS	24	16.00	
BJI	35.37	326	eP	29	15.00	-0.3
	1.0s	21.00nm			4.8mb	
ASPA	36.38	191	iPd	29	23.70	-0.3
	0.5s	8.00nm			4.7mb	
CHTO	41.09	285	iP	30	03.20	0.0
	0.8s	1.10nm			3.5mb	X
LZH	41.10	312	eP	30	04.00	0.7
	1.5s	19.00nm			4.5mb	
INK	77.00	22	eP	34	08.00	-1.7
WDC	86.89	49	eP	35	01.70	0.2
ORV	87.90	50	eP	35	06.40	0.0
PRS	88.79	53	e(P)	35	11.90	1.2
CMB	89.12	51	eP	35	12.30	0.0
FRI	89.91	52	eP	35	16.00	0.1
ZOBO	151.38	102	PKP	42	11.50	6.6X
	0.9s	7.57nm				
LPB	151.39	102	PKP	42	12.70	8.0X
CNCB	151.48	103	PKP	42	12.80	7.7X
	S.D. = 0.8	on	13 of	16	obs.	

? JAN 24, 1990 23h 24m 49.35± 6.27s
30.046 S ±22.4km 174.249 W ±76.8km
DEPTH = 30.4km (2 depth phases)
4.3mb (1 obs.)
KERMADEC ISLANDS REGION (177)

KRP	11.55	224	eP	27	35.60	0.4
DZM	19.06	290	iPc	29	12.10	0.1
BRS	28.99	267	iPd	30	47.00	-1.6
	1.1s	7.00nm			4.3mb	
			e	30	56.00	31km
COO	29.17	260	eP	30	49.00	-1.2
RMQ	32.69	267	iPc	31	22.90	1.7
CTA	36.97	276	iPc	31	59.00	1.1
	1.2s	103.13nm			5.6mb	X
			i	32	07.80	30km
ASPA	46.37	265	iPc	33	13.90	-1.0
	1.0s	26.00nm			5.1mb	X
Z	23s	0.29um			4.2MszX	
			LR	49	11.60	
WB5	47.34	270	iP	33	22.90	0.4
QUE	127.66	287	ePKP	44	13.50	19.7X
SUF	144.75	344	iPKP	44	47.50	23.5X
	0.7s	39.50nm				
	S.D. = 1.4	on	8 of	10	obs.	

• JAN 24, 1990 23h 25m 15.29± 0.98s
36.732 N ±12.6km 26.692 E ± 7.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	1.24	162	eP	25	38.50	0.1
ARG	1.27	114	iPd	25	39.60	0.8
YER	1.34	72	iPn	25	41.90	1.9
CIN	1.41	52	eP	25	47.00	6.0X
NPS	1.71	211	eP	25	44.20	-1.1
VAM	2.41	238	eP	25	56.50	1.1
ELL	2.58	89	ePn	25	56.70	-1.3
VLI	3.02	271	eP	26	03.70	-0.3
BCK	3.20	76	ePn	26	05.00	-1.7
	S.D. = 1.5	on	8 of	9	obs.	

? JAN 25, 1990 00h 10m 06.79± 3.75s
36.500 N ±19.5km 26.990 E ±17.3km
DEPTH = 153.9 ± 45.9 km
DODECANESE ISLANDS (369)
MD 3.0 (ATH).

KAP	0.96	171	ePb	10	32.00	0.2
ARG	0.96	107	iPbd	10	31.70	-0.1
CIN	1.41	38	eP	10	36.00	0.0
NPS	1.67	223	ePn	10	38.70	-0.1
ELL	2.36	83	ePn	10	47.00	0.0
	S.D. = 0.2	on	5 of	5	obs.	

? JAN 25, 1990 02h 25m 57.81± 0.92s
30.773 S ±38.4km 179.311 W ±15.2km
DEPTH = 330.0km (geophysicist)
4.4mb (2 obs.)
KERMADEC ISLANDS REGION (177)

DZM	15.41	301	iPc	29	21.10	0.6
BRS	24.60	271	eP	30	50.50	-0.2
RMQ	28.30	271	eP	31	25.00	1.2
CTA	32.75	281	iPd	32	03.30	0.7
	0.8s	27.61nm			4.7mb	
WRA	42.98	273	Pc	33	25.60	-1.6
	0.8s	11.60nm			4.2mb	
W85	42.99	273	eP	33	26.20	-1.0
			i	34	20.80	
SUF	144.09	340	ePKP	44	50.70	-4.3X
	0.7s	33.50nm				
NUR	146.26	339	iPKP	44	57.50	-1.2
	1.0s	34.00nm				
BCAO	148.87	216	ePKPc	45	05.70	1.4
	0.7s	12.00nm				
			i	45	07.10	
			i	45	16.10	
N82	148.94	350	PKP	45	03.00	0.0
	1.0s	6.50nm				
SLL	149.12	348	ePKP	45	03.50	0.2
	0.6s	1.10nm				
HFS	149.37	347	ePKP	45	03.50	-0.1
	0.6s	1.10nm				
MBH	150.52	277	ePKP	45	11.00	4.7X
KIC	155.19	167	PKP	45	34.80	21.5X
	S.D. = 1.1	on	11 of	14	obs.	

& JAN 25, 1990 02h 34m 00.97s
58.809 N 149.576 W
DEPTH = 55.8km
3.7mb (1 obs.)
GULF OF ALASKA (15)
<AGS-P>.

CNPM	1.12	311	iP	34	19.85	-0.8
			eS	34	35.34	
XLV	1.28	301	eP	34	21.85	-1.0
			eS	34	37.98	
SEW	1.30	3	iP	34	22.20	-0.9
			eS	34	38.04	
NNL	1.52	325	eP	34	26.24	0.1
			eS	34	48.38	
SLKM	1.74	349	iP	34	28.49	-0.8
			eS	34	49.71	
KDC	1.87	237	eP	34	30.40	-0.7
NKA	2.11	337	eP	34	35.32	0.8
CDD	2.12	275	eP	34	34.90	0.3
HIN	2.23	43	eP	34	35.68	-0.5
			eS	35	01.93	
RDT	2.28	322	iP	34	35.80	-1.1
			eS	35	03.18	
RED	2.29	316	eP	34	36.06	-1.0
			eS	35	05.60	
GLI	2.43	30	eP	34	38.19	-0.7
PMS	2.44	0	iP	34	38.56	-0.6
PDB	2.56	294	eP	34	40.95	0.1
CVA	2.61	46	eP	34	40.77	-0.7
			eS	35	10.52	
SPU	2.69	333	iP	34	41.72	-0.9
VZW	2.72	33	iP	34	42.72	-0.4
			eS	35	13.35	
SUA	2.73	348	iP	34	42.31	-1.0
CKL	2.77	331	iP	34	42.87	-1.0
CRP	2.79	333	eP	34	43.43	-0.8
SGAM	2.79	51	eP	34	43.56	-0.6
			eS	35	14.21	
PLRM	2.80	4	eP	34	43.40	-0.8
PMR	2.80	4	ePd	34	43.50	-0.7
BGL	2.84	331	eP	34	44.05	-0.9
PME	2.84	5	eP	34	44.26	-0.6
PWA	2.86	357	eP	34	44.00	-1.0
NCG	2.91	335	eP	34	45.09	-0.8
RAGM	2.95	55	eP	34	45.87	-0.6
			eS	35	19.93	
GHO	2.99	6	eP	34	46.36	-0.7
KLU	3.25	33	eP	34	50.19	-0.6
SNH	3.70	65	eP	34	57.02	0.0
			eS	35	37.93	
SVW	3.82	310	eP	34	56.40	-2.2
CYK	3.84	68	eP	34	58.69	-0.2
GLB	3.91	45	eP	34	59.24	-0.7
BALM	4.27	55	eP	35	03.92	-1.2
RND	4.63	4	eP	35	09.26	-0.8
PCA	4.93	71	eP	35	13.48	-0.9
TTA	5.19	325	eP	35	16.00	-2.1
FBA	6.17	7	eP	35	29.80	-1.8
IMA	7.53	347	eP	35	47.80	-2.9
INK	11.87	30	eP	36	57.00	7.4X
MBC	20.49	20	eP	38	39.00	2.9
	1.0s	4.00nm			3.7mb	
	42 obs.	ossociated				

& JAN 25, 1990 02h 37m 56.66s
58.959 N 149.602 W
DEPTH = 49.8km
GULF OF ALASKA (15)
<AGS-P>.

CNPM	1.01	305	iP	38	13.50	-1.3
			eS	38	29.17	
SEW	1.15	4	eP	38	15.83	-0.8
			eS	38	30.88	
XLV	1.20	295	eP	38	16.79	-0.6
			eS	38	33.05	
NNL	1.39	322	eP	38	19.84	-0.2
SLKM	1.59	349	iP	38	22.13	-0.7
			eS	38	42.89	
NKA	1.97	336	eP	38	28.93	0.7
AUE	1.98	283	eP	38	29.68	1.3
CDD	2.09	271	eP	38	28.28	-1.7
RDT	2.15	320	eP	38	29.41	-1.5
RED	2.17	314	eP	38	29.82	-1.4
PMS	2.29	1	eP	38	32.35	-0.5
PDB	2.49	291	eP	38	34.68	-0.9
SPU	2.55	332	iP	38	35.08	-1.3
VZW	2.60	35	eP	38	36.32	-0.9
CKL	2.63	330	eP	38	36.52	-1.1
CRP	2.64	332	eP	38	37.02	-0.9
BGL	2.70	330	eP	38	37.86	-0.8
NCG	2.76	334	eP	38	38.91	-0.7
GHO	2.84	7	eP	38	40.19	-0.5
	19 obs.	ossociated				

% JAN 25, 1990 02h 56m 58.29± 1.17s
39.238 N ± 9.4km 28.302 E ±10.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.45	34	iPg	57	07.00	-0.4
			eSg	57	14.00	
BNT	1.16	345	iPn	57	19.50	-0.4
EDC	1.16	343	iPn	57	19.50	-0.4
IZM	1.17	224	ePn	57	19.70	-0.4
KHL	1.32	133	ePn	57	28.00	5.3X
YLV	1.56	31	iPn	57	27.00	0.8
EZN	1.64	292	ePn	57	28.00	0.8
ISK	1.92	17	ePn	57	35.00	3.8X
	S.D. = 0.8	on	6 of	8	obs.	

• JAN 25, 1990 03h 28m 45.11± 0.87s
35.912 N ±17.0km 31.872 E ±15.7km
DEPTH = 10.0km (geophysicist)
CYPRUS (372)

PPCY	1.10	159	e(P)	29	06.00	0.3
LFK	1.49	115	iPn	29	13.60	1.6
CSS	1.52	128	eP	29	10.50	-1.9
ELL	1.79	298	ePn	29	17.00	0.6
BCK	1.86	327	ePn	29	17.00	-0.3
CIN	3.48	300	eP	29	40.00	-0.3
	S.D. = 1.5	on	6 of	6	obs.	

JAN 25, 1990 04h 01m 05.61± 0.34s
44.535 N ± 2.8km 7.294 E ± 3.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (LDG), 2.2 (GEN).

DOI	0.05	228	Pc	01	08.50	0.7
			iSg	01	09.90	
PZZ	0.14	258	Pc	01	09.12	0.1
			S	01	10.96	
STV	0.29	176	Pc	01	11.61	-0.1
			S	01	15.23	
ENR	0.32	164	Pc	01	12.11	-0.2
			S	01	15.93	
FOUF	0.37	269	iPgc	01	12.70	-0.4
			iSg	01	16.45	
ROB	0.48	120	Pd	01	15.62	0.3
			S	01	21.98	
RRL	0.53	317	Pc	01	16.18	-0.2
			S	01	22.90	

RSP	0.62	358	P	01	17.99	-0.1
			S	01	26.80	
SBF	0.68	171	Pg	01	18.50	-0.6
			Sg	01	27.40	
FIN	0.73	116	P	01	20.03	0.0
			S	01	29.59	
IMI	0.76	145	P	01	19.94	-0.5
			S	01	29.77	
PCP	0.89	89	P	01	23.12	0.3
			S	01	35.07	
LSD	0.93	354	P	01	23.72	0.2
			S	01	36.03	
FRF	1.08	206	Pg	01	26.60	0.7
			Sg	01	40.00	
LRG	1.27	212	Pg	01	29.50	0.3
			Sg	01	46.00	
LMR	1.33	206	Pg	01	30.00	-0.1
			Sg	01	46.60	

S.D. = 0.4 on 16 of 16 obs.

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* JAN 25, 1990 04h 13m 30.11± 1.75s
32.430 S ±13.8km 177.816 W ±12.1km
DEPTH = 244.4 ± 17.0 km
4.2mb (2 obs.)
SOUTH OF KERMADEC ISLANDS (179)

KRP	7.72	223	eP	15	20.40	-0.1
SVA	14.64	346	eP	16	47.60	0.1
DZM	17.37	303	iPc	17	06.10	-12.7X
COO	25.86	266	eP	18	44.50	3.3X
BRS	25.94	273	iPc	18	42.60	0.6
	0.9s		5.20nm			4.2mb
			e	18	52.00	
			eS	23	12.00	
RMQ	29.62	273	eP	19	17.00	2.1
CTA	34.33	282	iPd	19	54.00	-1.5
	1.2s		90.63nm			5.2mb X
WRA	44.36	274	Pd	21	17.40	-0.7
	0.6s		8.10nm			4.2mb
WB5	44.37	274	eP	21	17.30	-0.9
ARN	87.04	42	eP	26	00.20	11.3X
PEC	87.22	47	e(P)	25	50.00	0.1
FRI	87.82	43	eP	25	52.50	-0.1
CMB	88.16	42	eP	25	54.20	-0.1
WDC	88.79	39	eP	25	56.90	-0.3
TNP	90.01	43	eP	26	03.40	0.3
	1.4s		22.40nm			4.9mb X
KVN	90.16	42	eP	26	03.50	-0.3
MAIO	133.12	291	ePKP	32	22.00	3.8X
SUF	146.07	340	iPKP	32	41.30	0.8
	0.5s		28.00nm			
MSL	146.15	288	ePKPc	32	48.50	7.0X
			e	33	15.00	
BCAO	148.22	212	iPKPd	32	56.30	10.8X
	0.9s		27.00nm			
			i	33	07.00	
NUR	148.26	339	iPKP	32	48.80	4.7X
	1.0s		48.00nm			
			i	32	57.40	
NB2	150.78	351	PKP	32	54.80	6.8X
	1.3s		26.20nm			
SLL	151.00	349	ePKP	32	55.10	6.8X
	0.5s		1.10nm			
HFS	151.26	348	ePKP	32	55.10	6.5X
	0.5s		1.10nm			
KIC	153.27	165	PKP	33	12.00	19.1X
BBTK	154.31	295	ePKP	33	06.00	12.2X

S.D. = 1.0 on 14 of 26 obs.

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* JAN 25, 1990 04h 14m 34.41± 1.29s
23.165 S ±15.1km 67.263 W ±20.5km
DEPTH = 187.2 ± 11.9 km
4.4mb (3 obs.)
CHILE-ARGENTINA BORDER REGION (127)

YJA	1.90	59	iPd	15	10.80	-1.0
SLA	2.25	134	iPd	15	15.50	0.3
			(S)	15	46.60	
ANT	2.94	259	iPc	15	32.10	8.9X
CCH	5.85	11	P	16	00.40	-0.2
LPB	6.64	353	P	16	13.80	2.7X
	1.0s		60.00nm			4.8mb
			PP	17	28.00	
ZOBO	6.91	353	PKPc	16	15.00	0.3
	0.8s		18.81nm			4.4mb
			LR	58	52.00	
ARE	7.76	328	eP	16	27.00	1.1
			eS	17	51.00	
KIC	67.73	72	P	25	24.70	10.7X
LKO	68.51	69	P	25	20.40	1.5
ANMO	68.72	326	eP	25	19.00	-0.9
	0.8s		2.75nm			4.1mb
LBFM	81.74	322	eP	26	32.40	-1.1
GBA	145.26	100	PKPc	33	46.00	-5.9X
	0.8s		3.40nm			
GUMO	148.12	258	ePKP	34	15.00	18.4X

S.D. = 1.3 on 8 of 13 obs.

JAN 25, 1990 04h 54m 44.31± 1.50s
42.306 N ± 5.2km 126.418 W ±14.3km
DEPTH = 10.0km (geophysicist)
4.0mb (3 obs.)
OFF COAST OF OREGON (30)

FHC	2.37	129	eP	55	22.70	-1.1
LBFM	3.52	104	eP	55	40.70	0.4
MIN	4.12	117	eP	55	48.20	-0.6
GT2	4.14	45	eP	55	49.11	0.1
PGO	4.27	41	eP	55	51.78	1.0
NLO	4.34	28	eP	55	51.38	-0.5
VBEM	4.46	50	eP	55	53.97	0.4
TDH	4.48	47	eP	55	53.90	-0.1
			eS	56	46.23	
VLMM	4.52	43	eP	55	54.68	0.2
ORV	4.63	125	e(P)	55	54.00	-1.9
VFP	4.68	48	eP	55	58.69	1.9
LVP	4.74	36	eP	55	57.27	-0.3
BMW	4.75	28	eP	55	56.44	-1.3
CROR	4.76	54	eP	55	57.18	-0.7
MTMW	4.79	38	eP	55	57.94	-0.4
			eS	56	51.60	
APM	4.84	43	eP	55	59.21	0.2
SHW	4.91	36	eP	56	01.09	1.1
HSR	4.92	37	eP	56	01.27	1.1
CDFW	4.94	38	eP	56	00.16	-0.1
YEL	4.95	36	eP	56	01.40	0.9
ESD	4.95	37	eP	56	00.72	0.1
VGB	5.19	50	eP	56	03.50	-0.3
LON	5.53	35	eP	56	08.00	-0.7
CMB	6.29	131	e(P)	56	22.00	2.6
KVN	7.11	114	eP	56	31.00	-0.1
TNP	8.21	118	e(P)	56	47.00	0.5
PNT	8.47	32	eP	56	48.00	-1.8
	0.7s		13.00nm			5.3mb X
DUG	10.46	97	eP	57	18.50	1.0
LRM	10.65	66	eP	57	19.40	-0.8
IMW	11.43	77	eP	57	31.50	0.6
MSU	11.50	104	eP	57	31.80	0.0
DAU	11.55	94	eP	57	33.00	0.4
BW06	12.45	82	eP	57	44.30	-0.3
SES	13.33	47	eP	57	55.00	-1.1
PV09	13.71	100	eP	58	01.70	0.3
EDM	13.99	34	eP	58	13.50	8.8X
GOL	16.10	92	eP	58	32.00	-0.5
	0.7s		5.34nm			3.8mb
ALQ	17.22	109	eP	58	45.50	-1.1
FFC	20.28	44	iPc	59	22.70	0.1
	1.0s		21.00nm			4.4mb
INK	26.33	354	eP	00	30.00	8.3X
MBC	34.18	3	eP	01	32.00	0.8
	1.0s		2.00nm			4.0mb

S.D. = 1.0 on 39 of 41 obs.

JAN 25, 1990 05h 25m 09.70± 0.71s
36.167 N ± 7.0km 27.164 E ± 7.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP	0.61	179	ePn	25	22.20	0.1
ARG	0.78	86	ePn	25	24.00	-0.9
YER	1.32	43	iPn	25	32.80	-1.3
NPS	1.55	235	ePn	25	37.00	-0.4
SMG	1.56	350	ePn	25	37.30	-0.2
APE	1.59	305	ePn	25	38.10	0.1
IZM	2.23	2	ePn	25	48.00	0.8
ELL	2.29	74	ePn	25	50.00	1.8
BCK	3.04	64	ePn	26	02.00	3.3X

S.D. = 1.1 on 8 of 9 obs.

? JAN 25, 1990 05h 48m 30.58± 6.00s
31.032 S ±26.6km 179.081 W ±30.1km
DEPTH = 258.7 ± 50.9 km
4.4mb (4 obs.)
KERMADEC ISLANDS REGION (177)

DZM	15.72	301	iPc	52	00.50	0.1
BRS	24.80	271	iPc	53	31.50	0.6
	0.9s		4.00nm			3.9mb
RMQ	28.50	271	ePd	54	06.20	2.0
CTA	32.99	281	iPd	54	43.00	-0.4
	1.0s		50.00nm			5.1mb
WRA	43.20	273	Pd	56	06.60	-1.4
	1.0s		13.40nm			4.2mb
WB5	43.20	274	eP	56	07.00	-1.1
SPA	59.14	180	eP	58	05.70	-0.6
	1.3s		17.50nm			4.5mb
SUF	144.40	340	iPKP	07	31.10	-5.4X
	0.7s		38.80nm			
NUR	146.57	339	iPKP	07	38.70	-1.5
	0.7s		20.00nm			
BCAO	148.77	216	ePKPd	07	46.60	1.4
	0.6s		10.00nm			
			i	07	53.50	
			i	08	11.60	
NB2	149.22	350	PKP	07	44.80	0.3
	0.9s		6.30nm			
HFS	149.67	347	ePKP	07	45.80	0.7
	0.5s		1.30nm			

* S.D. = 1.3 on 11 of 12 obs.

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* JAN 25, 1990 06h 29m 21.36± 0.44s
31.554 S ±14.9km 177.580 W ± 8.2km
DEPTH = 33.0km (normal)
5.2mb (9 obs.) 5.1Msz (2 obs.)
KERMADEC ISLANDS REGION (177)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 17C
Centroid Location:
Origin Time 06:29:41.1 0.7
Lat 31.28S FIX;Lon 178.00W FIX
Dep 143.0 2.8 Half-duration 1.7
Moment Tensor; Scale 10**17 Nm
Mrr=-0.34 0.10 Mtt= 0.04 0.15
Mff= 0.30 0.14 Mrt= 0.40 0.10
Mrf= 1.43 0.10 Mtf=-0.06 0.13
Principal Axes:

	Val=	Plg=	Azm=
T	1.48	39	281
N	0.09	4	14
P	-1.56	50	110

Best Double Couple:Mo=1.5*10**17
NP1:Strike=336 Dip= 7 Slip=-128
NP2: 195 84 -86

KRP	8.51	220	eP	31	29.20	4.0X
MRW	11.48	211	P	32	16.00	10.1X
			S	34	06.00	
SVA	13.85	344	eP	32	45.00	7.4X
DZM	17.09	300	iPc	33	19.60	0.2
MSZ	17.33	217	P	33	20.00	-2.2
BRS	26.10	272	iPc	34	54.00	0.0
			eS	39	20.00	
CAN	28.07	253	eP	35	12.90	1.0
BWA	28.59	255	eP	35	14.70	-1.9
RMQ	29.79	271	eP	35	29.00	1.5
			e	35	30.40	
			e	42	16.00	
PMO	31.71	66	iP	35	43.90	-0.5
	1.1s		40.00nm			5.2mb
VAH	31.78	66	iP	35	44.30	-0.7
	1.1s		55.00nm			5.3mb
TPT	31.94	66	iP	35	45.80	-0.6
	1.1s		45.00nm			5.3mb
RUV	32.00	66	iP	35	46.40	-0.5
	1.1s		35.00nm			5.2mb
CTA	34.35	281	iPd	36	06.80	-0.5
	1.1s		125.32nm			5.8mb
			iS	41	28.00	
ADE	36.50	253	iPc	36	27.60	2.1
QIS	39.77	275	eP	36	53.00	0.0
WRA	44.51	273	Pc	37	28.50	-3.2
	0.9s		26.10nm			5.1mb
WB5	44.51	273	eP	37	29.20	-2.5
FORR	46.06	256	eP	37	41.00	-2.8
SPA	58.62	180	eP	39	19.60	2.2
	1.2s		30.28nm			5.3mb
BCH	85.58	44	P	41	54.00	-3.7
GCC	85.76	41	eP	41	58.30	-0.1
MHC	86.18	41	eP	42	00.60	0.0
PLM	86.30	47	P	42	01.00	-0.4

25d 06h

FRI	87.05	43	eP	42	04.20	-0.5
CMB	87.38	42	eP	42	05.80	-0.5
GLA	87.39	48	P	42	07.50	1.0
WDC	87.98	39	e(P)	42	08.50	-0.6
MIN	88.32	39	eP	42	11.10	0.2
TNP	89.24	43	P	42	14.50	-0.9
	1.1s	16.23nm			5.3mb	
KVN	89.38	42	P	42	14.80	-1.3
TIA	91.02	313	eP	42	27.00	3.6X
CN2	91.27	323	eP	42	25.00	0.6
Z	22s	0.60um			5.0Msz	
		eS		53	06.00	
BJI	93.99	315	eP	42	37.00	0.0
Z	32s	0.76um			5.0MszX	
ALQ	94.01	51	eP	42	28.80	-8.7X
	1.0s	2.50nm			4.6mb	
PV09	94.40	47	P	42	40.00	0.6
TIY	94.90	312	eP	42	44.60	3.2X
Z	20s	0.80um			5.2Msz	
BW06	96.73	43	P	42	50.00	0.2
ZOBO	97.36	114	P	42	58.00	4.3X
RSSD	100.78	45	Pdiff	43	06.50	-1.7
FRB	126.17	31	ePKP	48	18.00	-3.2X
MAIO	132.98	292	ePKP	48	37.00	1.8
		e		52	07.00	
SOD	141.40	345	ePKP	48	50.00	0.3
BHD	144.70	284	ePKPd	49	04.50	8.1X
SUF	145.31	341	iPKP	48	53.30	-3.2X
	0.5s	27.70nm				
MSL	146.06	289	ePKPc	49	02.00	3.3X
NUR	147.52	340	iPKP	49	01.80	1.6
	1.0s	110.00nm				
		i		49	09.20	
BCAO	149.06	213	iPKPd	49	09.50	5.4X
	0.6s	28.00nm				
		i		49	21.60	
		i		50	33.20	
NB2	149.94	351	PKP	49	06.80	2.7
	1.4s	57.50nm				
HFS	150.44	349	ePKP	49	06.60	1.8
	0.5s	1.60nm				
HRI	151.88	282	e(PKP)	49	15.00	7.1X
MBH	152.07	275	ePKP	49	14.00	5.9X
PRNI	152.09	276	ePKP	49	14.00	5.8X
KIC	154.06	164	PKP	49	15.22	3.9X
BBTK	154.10	297	ePKP	49	19.00	8.2X
KHC	160.53	338	ePKP	49	27.20	9.0X
		i		50	04.50	

S.D. = 1.4 on 36 of 56 obs.

? JAN 25, 1990 06h 42m 16.44± 5.61s
43.836 N ±37.8km 7.939 E ±13.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 1.7 (GEN).

IMI	0.08	334	P	42	18.80	-0.2
			S	42	22.60	
FIN	0.42	27	P	42	25.20	0.2
			S	42	32.94	
ROB	0.46	354	P	42	25.60	-0.2
			S	42	35.20	
ENR	0.54	316	P	42	27.70	0.3
			S	42	37.25	
STV	0.60	313	P	42	28.20	-0.5
			S	42	38.38	
PZZ	0.90	318	P	42	34.28	0.5
			S	42	47.20	

S.D. = 0.5 on 6 of 6 obs.

? JAN 25, 1990 07h 34m 25.94±13.88s
33.918 S ±84.5km 70.545 W ±81.5km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

RTBS	2.43	23	ePd	35	05.10	0.9
			S	35	29.20	
RTCV	2.66	40	ePc	35	07.20	-0.2
RTLL	3.12	35	ePd	35	13.80	-0.2
RTRS	3.85	14	iPd	35	23.70	-0.5
			S	36	03.50	
MRA	4.33	71	ePc	35	31.10	0.0
GBA	144.62	117	PKPc	54	09.80	8.5X
	0.5s	2.30nm				

S.D. = 0.8 on 5 of 6 obs.

? JAN 25, 1990 08h 28m 08.77± 3.81s
29.060 N ±53.7km 57.064 E ±38.6km
DEPTH = 33.0km (normal)
3.9mb (2 obs.)
SOUTHERN IRAN (353)

IR4	8.08	321	eP	30	08.00	1.2
IR5	8.24	320	eP	30	10.00	1.0
IR1	8.32	321	eP	30	10.00	-0.2
IR7	8.58	322	eP	30	12.00	-1.8
KER	9.99	304	eP	30	33.00	-0.2
HFS	42.53	329	eP	36	02.50	-0.1
	0.4s	1.20nm			4.0mb	
NB2	44.03	330	P	36	14.90	0.1
	0.7s	1.50nm			3.9mb	

S.D. = 1.2 on 7 of 7 obs.

• JAN 25, 1990 09h 25m 48.57± 2.42s
41.937 N ± 8.3km 126.433 W ±23.1km
DEPTH = 10.0km (geophysicist)
4.2mb (1 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)

FHC	2.16	121	eP	26	24.50	-0.7
LBFM	3.45	98	eP	26	45.00	1.3
KMOR	4.27	29	eP	26	54.74	-0.4
GT2	4.42	42	eP	26	57.34	0.1
ORV	4.44	121	eP	26	57.00	-0.5
PGO	4.56	38	eP	26	59.63	0.5
			eS	27	51.32	
NLO	4.67	26	eP	27	01.35	0.5
TDH	4.75	44	eP	27	01.60	-0.5
VLMM	4.81	40	eP	27	02.76	0.0
VLL	4.93	43	eP	27	04.51	0.0
VIPM	4.97	57	eP	27	04.28	-0.8
RVW	4.98	31	eP	27	05.60	0.5
LVP	5.05	34	eP	27	05.95	-0.2
BMW	5.09	26	eP	27	04.93	-1.8
MTMW	5.10	35	eP	27	06.21	-0.7
APM	5.12	41	eP	27	07.30	0.1
JLK	5.22	35	eP	27	07.79	-0.8
SHW	5.22	34	eP	27	08.82	0.2
HSR	5.23	34	eP	27	08.75	0.0
CDFW	5.24	36	eP	27	08.43	-0.4
YEL	5.25	34	eP	27	09.08	-0.1
ESD	5.26	34	eP	27	09.24	0.0
ERK	5.27	33	eP	27	09.23	-0.1
SOSW	5.30	34	eP	27	09.98	0.3
GULW	5.30	40	eP	27	10.38	0.6
VTHM	5.36	51	eP	27	10.33	-0.2
APW	5.44	29	eP	27	11.95	0.3
KOSW	5.45	33	eP	27	12.16	0.3
ASR	5.47	38	eP	27	11.70	-0.5
CPW	5.56	24	eP	27	12.31	-1.1
LMW	5.59	31	eP	27	13.94	0.1
LON	5.84	33	eP	27	17.50	0.2
KVN	6.97	112	eP	27	33.50	0.1
PNT	8.79	31	eP	28	01.00	2.5
	0.8s	10.00nm			5.2mb X	
FFC	20.56	43	eP	30	31.00	1.3
	0.9s	12.00nm			4.2mb	

S.D. = 0.8 on 35 of 35 obs.

% JAN 25, 1990 09h 37m 53.75± 4.78s
13.099 S ±11.1km 75.347 W ±51.8km
DEPTH = 33.0km (normal)
PERU (116)

PT03	0.99	206	iPd	38	11.30	-0.1
			iS	38	26.70	
PT06	1.20	233	iPd	38	14.40	0.1
			iS	38	32.00	
PT08	1.63	314	iP	38	21.00	0.1
			iS	38	43.60	
NNA	1.83	307	eP	38	23.50	0.0
			iS	38	47.50	
PT10	1.88	303	iP	38	24.00	-0.2
			iS	38	48.50	

S.D. = 0.2 on 5 of 5 obs.

? JAN 25, 1990 09h 55m 50.80± 1.06s
39.070 N ± 9.7km 27.594 E ±18.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.72	201	ePg	56	05.00	0.0
			eSg	56	16.00	
DST	0.96	56	iPn	56	09.20	0.0
EDC	1.29	9	iPn	56	15.50	0.8
BNT	1.31	11	ePn	56	14.20	-0.8

S.D. = 1.1 on 4 of 4 obs.

? JAN 25, 1990 10h 44m 59.46± 1.52s
44.104 N ± 9.3km 8.149 E ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

FIN	0.11	22	P	45	02.40	0.0
			S	45	04.86	
IMI	0.27	224	P	45	05.17	0.0
			S	45	09.17	
ROB	0.28	314	P	45	05.27	0.0
			S	45	09.37	
PZZ	0.85	298	P	45	16.04	0.0
			S	45	27.22	

S.D. = 0.1 on 4 of 4 obs.

? JAN 25, 1990 11h 18m 54.50± 1.71s
44.545 N ±12.8km 7.261 E ±18.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ	0.12	251	P	18	57.71	0.1
			S	18	59.55	
STV	0.30	171	P	19	00.68	-0.2
			S	19	04.88	
ENR	0.34	160	P	19	01.71	0.2
			S	19	06.63	
RRL	0.51	318	P	19	04.78	0.0
			S	19	11.04	

S.D. = 0.3 on 4 of 4 obs.

? JAN 25, 1990 11h 39m 26.04±21.61s
35.544 N ±13.1km 51.717 E ±148.km
DEPTH = 10.0km (geophysicist)
IRAN (348)

TEH	0.33	306	eP	39	33.00	0.0
IR4	0.73	246	eP	39	41.00	0.5
IR1	0.85	262	eP	39	43.00	0.5
IR7	0.92	280	eP	39	43.50	-0.2
IR5	0.99	251	eP	39	44.00	-0.8

S.D. = 0.8 on 5 of 5 obs.

JAN 25, 1990 12h 44m 33.00± 1.16s
15.236 N ± 4.4km 60.811 W ±17.3km
DEPTH = 128.2 ± 11.4 km
LEEWARD ISLANDS (92)

CRM	0.49	192	iPd	44	51.85	-0.2
			S	45	04.30	
DTMT	0.52	270	eP	44	52.04	-0.2
			eS	45	04.50	
DPMT	0.55	272	eP	44	52.45	0.1
			eS	45	05.74	
FDF	0.60	213	iPd	44	52.71	0.0
	0.1s	9.25nm				
			S	45	05.00	
MVM	0.68	187	iPd	44	53.22	-0.1
			S	45	07.10	
BBL	0.70	294	iPc	44	53.64	0.2
			S	45	08.00	
BIM	0.76	199	iPd	44	53.88	0.0
			S	45	08.70	
MGG	0.84	324	iPc	44	54.56	0.1
			S	45	09.00	
SFG	1.08	340	ePc	44	56.96	0.2
DEG	1.10	347	ePc	44	57.15	0.1
			S	45	12.80	
DOG	1.11	316	iPc	44	57.15	0.0
PAG	1.15	313	ePc	44	57.62	0.0
			S	45	14.40	
SEG	1.34	330	iP	44	59.88	0.4
			S	45	17.50	
SLB	1.42	189	eP	45	00.31	-0.2
			eS	45	19.55	
SSV	1.93	191	eP	45	06.67	0.1
			eS	45	31.60	
SVB	2.00	192	eP	45	07.63	0.3
			eS	45	32.78	
BPA	2.06	331	eP	45	07.73	-0.4
			eS	45	32.95	
ANG	2.14	333	eP	45	08.79	-0.3

eS 45 33.29
S.D. = 0.2 on 18 of 18 obs.

JAN 25, 1990 13h 07m 08.01± 0.61s
36.105 N ± 7.0km 27.197 E ± 6.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.2 (ATH).

KAP	0.55	182	ePb	07	20.00	0.7
ARG	0.76	81	ePn	07	22.70	-0.1
YER	1.35	40	iPn	07	31.20	-1.7
NPS	1.54	237	ePn	07	35.10	-0.4
SMG	1.63	350	ePn	07	36.60	-0.1
APE	1.65	306	ePn	07	38.30	1.1
CIN	1.65	25	eP	07	39.00	1.8
ELL	2.28	73	ePn	07	47.50	1.1
IZM	2.29	1	ePn	07	42.00	-4.4X
VAM	2.54	255	ePb	07	53.00	3.1X
KHL	2.89	39	ePn	07	54.00	-1.0
BCK	3.04	63	ePn	08	04.60	7.5X
PRK	3.22	347	ePb	08	06.20	6.6X
ATH	3.35	305	ePb	08	10.30	8.9X
VLI	3.49	281	ePn	08	01.90	-1.5
ITM	4.37	286	ePn	08	16.90	0.9
KBA	15.06	321	eP	10	48.00	5.4X
BCAO	32.51	196	ePc	13	40.40	-0.8
	0.4s		4.00nm			4.7mb X

S.D. = 1.3 on 12 of 18 obs.

& JAN 25, 1990 13h 51m 25.10s
36.673 N 121.345 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.7 (BRK).

SAO	0.12	319	eP	51	27.50	-0.1
LLA	0.33	100	iPc	51	31.70	0.0
PRS	0.34	183	ePd	51	31.90	-0.1
GCC	0.63	304	eP	51	36.80	-0.9
			eS	51	47.50	
ARN	0.69	348	iPd	51	38.80	-0.1
MHC	0.71	341	ePd	51	39.00	-0.3
			eS	51	50.20	
PRI	0.76	134	eP	51	39.60	-0.8
PKEM	1.17	121	eP	51	47.70	0.2
PCC	1.17	315	eP	51	46.00	-1.5
FRI	1.35	76	ePd	51	49.00	-1.6
			iS	52	07.10	
BKS	1.40	330	iPc	51	51.50	0.2
			eS	52	12.20	
CMB	1.56	29	eP	51	52.20	-1.5
			eS	52	11.70	
BCH	1.80	145	eP	51	55.60	-1.7
KVN	3.50	46	eP	52	22.70	1.1

14 obs. associated

& JAN 25, 1990 14h 04m 31.80s
36.672 N 121.347 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.9 (BRK). Felt (III) at Chualar and Hollister.

SAO	0.12	320	iPc	04	34.23	-0.1
LLA	0.33	100	iPc	04	38.40	0.0
PRS	0.34	183	iPd	04	38.50	-0.2
GCC	0.63	305	iPc	04	43.40	-1.0
ARN	0.69	348	iPd	04	45.40	-0.2
MHC	0.71	341	iPd	04	45.77	-0.2
			iS	04	56.95	
PRI	0.76	134	iPd	04	46.50	-0.7
			iSg	05	06.40	
PCC	1.17	315	iPd	04	52.70	-1.4
PKEM	1.17	121	eP	04	54.30	0.2
FRI	1.35	76	iPc	04	55.70	-1.5
BKS	1.40	330	iPd	04	55.50	-2.4
			eS	05	08.00	
			i	05	19.20	
BRK	1.40	329	ePd	04	55.60	-2.4
ZSP	1.46	331	iPd	04	57.10	-1.7
			i	05	24.80	
BCH	1.80	145	eP	05	01.50	-2.4
NWRM	2.16	326	eP	05	06.00	-2.9
BLP	2.24	160	eP	05	07.30	-2.8
ABL	2.51	136	eP	05	11.50	-2.6
ORV	2.88	358	eP	05	18.00	-1.2
KVN	3.50	46	eP	05	27.00	-1.2
TNP	3.58	66	eP	05	29.00	-0.3
MIN	3.67	357	ePd	05	31.30	0.7

21 obs. associated

% JAN 25, 1990 18h 39m 45.29± 1.59s
39.173 N ± 8.0km 16.770 E ±13.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.43	339	P	39	52.70	-1.3
CZI	0.50	275	P	39	54.30	-1.1
TDS	0.59	326	P	39	59.60	2.4X
			eSg	40	11.30	
CSI	0.71	328	P	39	59.70	0.4
MMN	0.94	320	P	40	03.80	0.7
SOI	1.23	207	P	40	08.20	0.0
MGR	1.34	316	P	40	11.80	1.8
			eSn	40	32.40	
BRT	1.73	11	P	40	15.10	-0.5
			eSn	40	36.90	

S.D. = 1.3 on 7 of 8 obs.

JAN 25, 1990 20h 29m 48.18± 0.58s
36.085 N ± 6.6km 27.287 E ± 5.7km
DEPTH = 37.2 ± 14.7 km
4.0mb (1 obs.)
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

KAP	0.54	190	ePb	29	59.10	-0.3
ARG	0.69	79	ePn	30	03.00	1.5
YER	1.32	37	iPn	30	10.00	-0.5
NPS	1.59	239	ePn	30	13.90	-0.5
CIN	1.64	23	eP	30	16.00	0.9
SMG	1.66	348	ePn	30	15.10	-0.2
APE	1.72	305	ePn	30	17.00	0.7
ELL	2.22	72	ePn	30	26.70	3.3X
IZM	2.31	360	ePn	30	23.00	-1.7
VAM	2.60	256	ePn	30	30.50	1.7
KHL	2.86	38	ePn	30	33.00	0.5
BCK	2.99	62	ePn	30	42.20	7.9X
PRK	3.26	346	ePb	30	45.00	7.0X
ATH	3.42	304	ePb	30	48.00	7.6X
VLI	3.57	281	ePn	30	40.70	-1.8
DST	3.67	16	ePn	30	51.00	7.0X
ITM	4.45	286	ePn	30	55.60	0.6
HRI	7.51	110	e(P)	31	38.00	-0.1
PRNI	8.63	129	eP	31	52.00	-1.6
MBH	8.96	132	eP	31	52.00	-6.2X
			eS	33	35.00	
KBA	15.12	321	eP	33	24.50	3.6X
	1.3s		11.20nm			4.0mb
BCAO	32.51	196	ePc	36	19.20	1.5
	0.5s		4.00nm			4.6mb X
KIC	41.66	232	P	37	34.00	-0.8

S.D. = 1.3 on 16 of 23 obs.

? JAN 25, 1990 20h 47m 29.89± 2.94s
18.548 N ±30.6km 66.231 W ± 9.8km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

LPR	0.42	125	P	47	39.60	0.3
SJG	0.44	170	iP	47	40.30	0.6
			S	47	51.90	
CPD	0.59	149	P	47	41.00	-0.8
			S	47	55.00	
PORP	0.63	218	P	47	42.10	-0.2
LRS	0.64	247	P	47	42.50	0.1

S.D. = 0.8 on 5 of 5 obs.

JAN 25, 1990 21h 34m 33.50± 0.75s
20.116 N ± 3.7km 121.493 E ± 5.7km
DEPTH = 34.4 ± 6.9 km
4.8mb (8 obs.) 4.3Msz (2 obs.)
PHILIPPINE ISLANDS REGION (248)

TWG	2.72	352	ePd	35	14.70	-1.1
TWM1	2.87	340	eP	35	18.70	0.7
BAG	3.79	193	eP	35	31.80	0.7
			eS	36	14.00	
TWD	3.95	1	eP	35	33.20	0.0
TWQ	4.18	352	ePc	35	35.80	-0.8
ANP	5.04	0	eP	36	44.00	55.1X
QCP	5.46	184	eP	35	30.00	-24.7X
QZH	5.50	331	P	35	51.70	-3.5X
	Z	24s		2.70um		
	N	16s		2.40um		
				S	36	49.30
HKC	7.17	289	iP	36	13.10	-5.6X
MCO	7.67	286	iP	36	20.40	-5.4X
			eS	37	40.90	
GZH	8.14	293	eP	36	26.50	-5.8X
	N	15s		2.80um		
	E	16s		3.20um		
QIZ	11.04	266	eP	37	07.60	-4.5X
	E	14s		3.90um		
			eS	39	05.00	
WHN	12.22	330	Pc	37	29.00	0.9
	Z	14s		1.78um		
DAV	13.54	162	eP	37	53.30	7.6X
GYA	15.01	298	P	38	01.80	-3.3X
TIA	16.49	347	eP	38	23.50	-0.3
XAN	17.80	324	P	38	39.50	-0.8
	1.3s		0.04nm			1.4mb X
	N	14s		1.71um		
KMI	18.01	290	Pd	38	44.50	1.3
	Z	16s		2.10um		
	E	16s		1.50um		
				pP	38	52.00
LOE	18.91	265	eP	38	54.50	0.5
TIY	19.22	338	Pc	38	57.80	0.1
	Z	15s		1.89um		
	N	13s		1.30um		
CD2	19.25	307	P	38	56.00	-2.1
	Z	16s		1.80um		
				PP	39	13.00
				eS	42	27.00
BJI	20.38	348	Pc	39	09.00	-0.9
	1.0s		0.05nm			1.8mb X
	Z	20s		1.08um		4.2Msz
	N	13s		0.74um		
				eS	42	46.00
CHG	21.30	270	ePd	39	18.00	-1.6
	1.4s		54.07nm			4.8mb
BDT	21.49	266	eP	39	20.80	-0.7
SNY	21.72	4	Pc	39	24.40	0.9
	Z	16s		0.82um		4.2MszX
MAT	21.95	38	eP	39	33.00	7.0X
	1.3s		50.00nm			4.8mb
				eS	43	42.00
NNT	22.16	254	eP	39	28.00	-0.2
LZH	22.20	319	Pd	39	29.00	0.3
	1.5s		0.08nm			1.9mb X
	Z	16s		1.20um		4.4MszX
	N	13s		0.90um		
HHC	22.34	340	eP	39	30.20	0.3
BTO	22.65	337	eP	39	33.00	0.0
	N	14s		1.10um		
	E	14s		0.70um		
				sP	39	45.00
CN2	23.85	7	eP	39	44.50	0.0
	Z	18s		1.00um		4.3Msz
				eS	44	04.00
IPM	25.21	235	ePc	39	59.10	1.2
MDJ	25.34	14	eP	40	00.70	1.9
GTA	26.78	321	Pd	40	11.60	-0.8
	E	11s		0.50um		
LSA	29.05	295	P	40	34.40	1.0
WMO	36.76	318	P	41	40.00	0.3
	Z	12s		0.90um		4.8MszX
HYB	40.67	274	ePd	42	12.00	-0.5
WB5	41.70	162	iPd	42	20.30	-0.6
WRA	41.75	162	Pd	42	20.50	-0.8
	0.7s		17.80nm			4.9mb
GBA	42.56	268	P	42	27.00	-1.0
KSH	43.43	307	eP	42	37.00	2.0
KOD	43.50	264	eP	42	35.80	-0.2
OIS	44.14	155	iPd	42	39.80	-0.9
WARB	46.29	174	iPc	42	58.60	0.8
	0.3s		18.00nm			5.5mb
QUE	49.98	293	eP	43	26.70	-0.1
FORR	51.07	173	iPd	43	33.80	-0.8
	0.5s		47.00nm			5.7mb X
NWAO	52.90	184	iPd	43	48.00	-0.4
	0.5s		7.00nm			4.9mb
RMO	53.35	149	eP	43	53.00	1.2
MAIO	56.09	301	eP	44	12.00	0.0
				eS	51	34.00
BRS	56.11	146	eP	44	12.00	0.0
TAB	66.43	304	eP	45	23.00	1.1
SOD	73.48	336	iP	46	04.30	0.2
SUF	74.75	332	eP	46	11.30	-0.2

25d 21h

0.5s 2.20nm 4.4mb
NUR 76.01 330 eP 46 18.00 -0.7
INK 76.88 22 eP 46 22.50 -1.0
MLR 79.68 315 ePc 46 40.00 0.5
HFS 81.24 331 eP 46 46.00 -1.2
0.5s 1.70nm 4.3mb
Z 16s 0.41um 4.9MszX
LR 23 55.00
NB2 81.94 333 P 46 50.10 -0.8
1.2s 13.80nm 4.9mb
KRA 81.95 320 eP 46 51.90 0.8
VAY 83.39 311 eP 46 58.40 -0.4
KSP 83.79 322 iP 47 01.20 0.6
SKO 83.95 312 eP 47 01.80 0.2
OHR 84.71 312 eP 47 04.70 -0.8
BRG 85.12 323 iP 47 08.20 0.9
ZOBO 170.09 69 PKP 54 41.00 1.0
S.D. = 0.9 on 55 of 65 obs.

& JAN 26, 1990 00h 27m 11.28s
60.194 N 151.814 W
DEPTH = 64.8km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL 0.30 120 iP 27 22.90 0.8
RDT 0.48 323 iP 27 23.13 -0.6
eS 27 32.98
RED 0.53 296 iP 27 23.60 -0.6
NKA 0.62 27 iP 27 26.57 1.5
BRLK 0.64 132 eP 27 24.81 -0.5
eS 27 36.15
CNPM 0.73 156 iP 27 25.94 -0.5
eS 27 37.80
XLV 0.74 176 iP 27 25.80 -0.8
eS 27 37.83
SLKM 0.85 68 eP 27 27.02 -0.9
eS 27 40.92
SPU 1.00 353 iP 27 29.12 -0.7
eS 27 43.37
CKL 1.04 346 iP 27 29.78 -0.6
CRP 1.09 351 iP 27 30.78 -0.4
BGL 1.11 345 iP 27 30.73 -0.6
AUE 1.15 224 eP 27 30.80 -0.9
SEW 1.19 93 eP 27 30.62 -1.6
NCG 1.23 352 iP 27 32.41 -0.5
PDB 1.26 252 iP 27 31.61 -1.7
eS 27 48.24
SUA 1.38 22 eP 27 34.62 -0.3
eS 27 53.15
PMS 1.53 45 eP 27 35.97 -1.0
CDD 1.57 217 eP 27 36.22 -1.3
eS 27 56.48
PWA 1.74 32 eP 27 39.32 -0.5
PLRM 1.92 42 iP 27 40.96 -1.3
PME 1.98 42 eP 27 42.09 -1.0
SVW 2.09 298 iP 27 42.14 -2.5
GHO 2.12 40 iP 27 43.77 -1.4
CUT 2.34 18 eP 27 47.22 -0.9
GLI 2.43 72 eP 27 46.46 -3.0
VZW 2.73 69 eP 27 50.96 -2.8
NCA 3.02 51 eP 27 55.90 -1.9
KLU 3.17 63 iP 27 57.37 -2.5
TOA 3.34 53 eP 28 00.76 -1.5
RND 3.52 22 eP 28 02.96 -1.8
GLB 4.11 69 eP 28 09.76 -3.4
PAX 4.12 45 eP 28 10.83 -2.4
DDM 4.57 35 eP 28 19.24 -0.3
34 obs. associated

& JAN 26, 1990 01h 10m 23.21s
63.094 N 150.828 W
DEPTH = 131.4km
CENTRAL ALASKA (1)
<AGS-P>.

HUR 0.56 102 eP 10 42.64 -0.4
eS 10 57.54
CUT 0.74 159 iP 10 43.90 -0.3
RND 0.95 70 eP 10 45.53 -0.6
eS 11 02.87
MCK 1.07 52 eP 10 46.81 -0.4
eS 11 05.87
PWA 1.51 163 eP 10 52.01 0.1
eS 11 13.82
GHO 1.60 145 eP 10 52.98 0.0
SUA 1.64 179 eP 10 53.12 -0.3
NEA 1.68 27 eP 10 52.54 -1.3
PLRM 1.70 152 eP 10 53.48 -0.6
eS 11 16.54
WRH 1.84 40 iP 10 54.82 -0.9
CRP 1.94 199 eP 10 56.54 -0.5
BGL 1.98 202 eP 10 57.22 -0.3
CKL 2.03 201 eP 10 57.67 -0.5
CCB 2.05 39 eP 10 57.28 -1.0
RDS 2.10 33 iP 10 57.92 -1.1
FBA 2.25 35 iP 10 59.84 -1.0
GLM 2.43 37 eP 11 02.19 -0.9
KLU 2.80 123 eP 11 06.59 -1.4
CNPM 3.59 183 iP 11 17.57 -0.7
GLB 3.68 114 eP 11 18.66 -0.8
20 obs. associated

JAN 26, 1990 01h 23m 34.36± 0.76s
39.364 N ± 6.6km 28.235 E ± 8.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.39 51 ePg 23 41.60 -0.7
eSg 23 49.60
BNT 1.02 346 iPn 23 53.60 0.0
EDC 1.02 344 iPn 23 54.50 0.8
IZM 1.23 218 iPn 23 55.00 -2.2
KHL 1.45 136 ePn 24 01.00 0.3
YLV 1.49 36 iPn 24 00.70 -0.5
EZN 1.55 288 iPn 24 02.40 0.5
CIN 1.77 184 eP 24 07.00 1.9
HRT 1.82 37 ePn 24 10.00 4.0X
GPA 1.85 59 ePn 24 10.00 3.6X
S.D. = 1.4 on 8 of 10 obs.

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* JAN 26, 1990 01h 42m 28.32± 1.06s
31.216 S ±10.0km 68.196 W ± 9.2km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.26 244 iPc 42 32.70 -1.2
CFA 0.39 185 iPc 42 37.20 0.8
ZON 0.53 231 iPd 42 42.00 3.0X
eS 42 52.00
RTCV 0.71 204 iPd 42 43.60 1.3
RTRS 1.51 313 ePd 43 00.50 5.1X
MRA 2.43 120 ePd 43 08.10 -0.6
TCA 3.09 93 ePc 43 17.20 -0.9
CYA 3.46 38 e(P) 43 24.50 1.1
RFA 3.55 184 ePc 43 24.00 -0.7
S.D. = 1.3 on 7 of 9 obs.

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* JAN 26, 1990 01h 43m 17.69± 1.44s
35.275 N ±14.1km 27.133 E ± 6.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

ARG 1.24 40 ePb 43 41.80 1.1
NPS 1.24 270 ePb 43 39.90 -0.9
YER 2.08 26 iPn 43 53.50 0.5
APE 2.21 325 ePn 43 54.70 -0.3
VAM 2.40 274 ePb 43 59.50 1.8
SMG 2.44 354 ePb 44 00.00 1.8
CIN 2.44 18 iPd 44 01.00 2.8X
ELL 2.69 56 ePn 44 01.50 -0.4
IZM 3.12 2 iPn 44 04.00 -3.8X
BCK 3.54 51 iPn 44 13.80 -0.1
KHL 3.60 32 ePn 44 14.50 -0.2
VLI 3.69 294 ePn 44 15.10 -1.0
ATH 3.85 315 ePb 44 21.10 2.9X
PRK 4.02 350 ePn 44 19.90 -0.7
DST 4.48 15 eP 44 26.60 -0.6
ITM 4.62 296 ePn 44 30.10 0.9
NEO 5.09 323 ePn 44 35.90 0.1
EDC 5.10 6 eP 44 36.50 0.6
BNT 5.11 7 iP 44 34.70 -1.4
BBTK 6.38 43 eP 44 53.00 -1.2
VAY 7.02 331 eP 45 05.50 2.5X
OHR 7.67 321 eP 45 12.00 -0.1
DSI 7.82 116 eP 45 09.00 -5.2X
e(S) 46 33.00
SKO 8.03 328 eP 45 15.00 -2.2
PRNI 8.24 124 e(P) 45 12.00 -8.2X
MBH 8.54 128 eP 45 31.00 6.8X
MLR 10.25 355 eP 45 50.00 2.1
S.D. = 1.2 on 20 of 27 obs.

JAN 26, 1990 02h 13m 12.20± 1.01s
20.236 N ± 4.8km 145.461 E ±10.1km
DEPTH = 110.0 ± 9.5 km
4.7mb (7 obs.)
MARIANA ISLANDS (216)

GUMO 6.64 185 ePd 14 49.00 0.3
1.1s 1469.96nm 6.3mb X
PJG 6.64 185 eP 14 48.90 0.2
GUA 6.68 185 ePd 14 49.40 0.0
1.2s 1650.00nm 6.3mb X
e(S) 16 03.90
KAKJ 16.57 345 eP 16 57.60 -1.6
IIDJ 16.58 338 eP 17 01.10 1.7
CHJJ 16.75 342 P 17 00.60 -0.8
KAGJ 17.05 313 eP 17 07.50 2.3
MTMJ 17.61 339 P 17 11.20 -0.9
NIIJ 17.85 343 eP 17 15.10 0.1
KUMJ 17.92 316 eP 17 16.20 0.4
SHNJ 18.80 320 eP 17 25.00 -0.7
SSE 24.35 301 P 18 20.00 -1.2
1.2s 39.00nm 4.7mb
i 18 40.50
BJI 31.89 315 eP 19 27.00 -2.0
eS 23 14.00
MTN 35.77 204 eP 20 02.00 -0.5
CTA 40.08 179 eP 20 38.00 -0.5
QIS 40.94 188 eP 20 44.00 -1.5
WB5 41.32 196 eP 20 48.50 -0.1
WRA 41.39 196 Pd 20 48.90 -0.3
0.6s 6.40nm 4.6mb
CHG 43.75 276 eP 21 09.00 0.4
DZM 46.78 153 iPc 21 31.00 -1.6
PPI 48.66 251 eP 21 48.60 1.4
SHL 49.37 287 eP 21 52.00 -0.8
WARB 49.63 202 eP 21 56.00 1.5
NDI 61.97 292 iPc 23 22.60 -0.4
HYB 63.00 280 eP 23 30.00 0.0
GBA 65.04 276 P 23 44.00 0.8
INK 68.06 23 eP 24 02.00 0.5
QUE 70.49 296 eP 24 17.70 0.4
MBC 71.73 15 ePd 24 24.50 0.8
0.6s 8.00nm 4.7mb
MAIO 75.17 304 iPd 24 46.00 1.5
EDM 80.49 37 eP 25 14.50 1.2
SOD 81.85 340 iP 25 20.30 0.3
SUF 84.64 336 eP 25 33.80 -0.6
0.5s 11.40nm 5.0mb
FFC 85.92 32 iPd 25 42.10 1.2
1.0s 18.00nm 5.0mb
NUR 86.51 335 eP 25 43.20 -0.5
HFS 90.88 330 eP 26 02.50 -1.9
0.6s 2.00nm 4.5mb
Z 16s 0.40um 4.9MszX
LR 06 02.00
NB2 91.06 340 P 26 04.20 -1.1
0.8s 4.30nm 4.7mb
LKO 138.92 313 PKP 32 30.82 2.5X
KIC 140.54 309 PKP 32 22.90 -8.3X
TIC 140.55 310 PKP 32 22.80 -8.4X
LIC 140.84 309 PKP 32 23.90 -7.8X
Z 20s 0.32um 5.1Msz
ARE 144.77 90 ePKP 32 39.00 0.2
ZOBO 147.90 89 PKP 32 44.00 -0.3
Z 20s 0.26um 5.0Msz
LR 50 46.00
LPB 147.97 89 ePKP 32 49.00 4.8X
CNCB 148.14 89 PKP 32 46.50 1.9
CCH 149.97 90 PKP 32 53.90 6.8X
S.D. = 1.1 on 40 of 46 obs.

JAN 26, 1990 02h 20m 17.44± 0.54s
26.083 N ± 7.5km 110.123 W ± 7.4km
DEPTH = 10.0km (geophysicist)
4.8mb (9 obs.)
GULF OF CALIFORNIA (49)

MZX 4.42 130 eP 21 24.50 -1.6
iS 22 28.00
GLA 8.06 331 eP 22 17.00 -0.4
VNM 8.58 90 eP 23 02.00 37.4X
(S) 24 48.00
BAR 8.71 321 eP 22 32.00 5.6X
PLM 9.31 323 eP 22 34.00 -0.9
ALQ 9.38 19 iPc 22 36.10 0.3
1.0s 14.00nm 5.3mb
pP 25 21.00

ANMO 9.38 19 eP 22 35.80 0.0
RVR 10.08 323 eP 22 47.00 1.7
MWC 10.62 322 eP 22 55.00 2.1
PAS 10.63 321 eP 22 56.00 3.1X
SBB 10.85 324 eP 22 56.00 0.1
CRX 11.70 122 (P) 23 10.00 2.2
ABL 11.74 320 eP 23 07.50 -0.7
ISA 11.94 325 eP 23 11.00 0.3
BCH 12.48 319 eP 23 18.00 0.0
PPM 12.70 121 eP 23 22.50 1.0
ACX 13.23 132 eP 23 26.00 -2.0
TNP 13.38 335 eP 23 30.00 -0.1
PRI 13.48 321 eP 23 32.60 1.2
FRI 13.59 325 eP 23 32.70 0.0
LLA 13.98 321 e(P) 23 39.30 1.5
PRS 14.02 319 e(P) 23 32.50 -5.9X
GOL 14.15 15 eP 23 40.00 -0.3
KVN 14.57 335 eP 23 45.50 -0.1
CMB 14.74 326 eP 23 48.00 0.2
ARN 14.83 322 eP 23 49.00 0.0
MHC 14.89 322 e(P) 23 45.50 -4.3X
OXX 15.34 123 eP 23 58.00 2.2
BKS 15.60 322 eP 24 03.70 4.8X
e(LQ) 27 00.00
iLR 29 00.00
BRK 15.61 322 e(P) 24 00.40 1.4
TUL 15.70 48 eP 24 04.20 4.0X
0.9s 14.80nm 4.2mb
Z 20s 8.80um 6.1MszX
LR 28 00.00
eLg 28 39.60
BW06 16.66 1 eP 24 12.40 -0.4
IMW 17.79 358 eP 24 27.30 0.4
LBFM 18.07 330 eP 24 32.00 1.6
OLY 18.55 55 eP 24 34.70 -1.4
LRM 19.79 355 eP 24 50.20 -0.8
FVM 20.44 50 eP 24 55.60 -2.0
PWLA 20.94 60 eP 25 04.20 1.5
LON 22.62 339 ePd 25 19.00 -0.6
RSCP 23.05 60 eP 25 26.20 2.2
0.8s 100.16nm 5.4mb
SES 24.29 359 eP 25 27.00 -8.8X
PRM 25.25 65 eP 25 49.00 3.8X
JSC 26.19 65 eP 25 58.90 5.0X
EDM 27.21 356 ePc 26 01.30 -1.9
RSON 27.75 23 eP 26 09.50 1.4
1.2s 16.40nm 4.7mb
SCH 42.68 36 eP 28 19.00 3.2X
PMR 44.09 334 eP 28 30.00 2.9X
1.0s 12.50nm 4.7mb
INK 44.54 348 eP 28 29.00 -1.7
FBA 45.64 339 eP 28 37.70 -1.9
0.8s 6.90nm 4.7mb
FRB 46.30 24 eP 28 46.00 1.3
TTA 47.53 334 eP 28 52.30 -2.3
1.0s 10.00nm 4.9mb
IMA 48.31 338 eP 28 58.80 -1.9
1.0s 6.25nm 4.6mb
MBC 50.43 357 eP 29 16.00 -0.6
0.6s 13.00nm 5.1mb
ZOBO 58.66 131 P 30 19.00 0.8
LPB 58.86 131 eP 30 20.00 0.6
CNCB 59.14 132 P 30 20.20 -1.3
WRA 120.86 261 PKP 39 11.00 -1.2
0.9s 1.70nm
S.D. = 1.3 on 45 of 57 obs.

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* JAN 26, 1990 02h 38m 14.50± 2.24s
36.455 N ±15.7km 70.962 E ±14.9km
DEPTH = 148.2 ± 25.5 km
4.1mb (5 obs.)
HINDU KUSH REGION (718)

QUE 7.09 209 eP 39 56.00 -1.1
eS 41 15.50
MAIO 9.25 272 eP 40 27.00 1.2
eS 42 04.00
NDI 9.37 144 eP 40 26.50 -0.8
eS 42 02.50
HYB 20.12 158 eP 42 39.50 0.8
SHL 20.92 115 iP 42 48.20 1.4
GBA 23.48 164 Pd 43 12.50 0.8
0.5s 1.40nm 3.7mb
HFS 43.08 322 eP 46 00.90 0.0
0.3s 3.00nm 4.4mb
NB2 44.40 323 P 46 10.80 -0.8
0.5s 2.30nm 4.1mb
MBC 67.38 3 ePd 48 55.00 -0.1
0.4s 5.00nm 4.7mb
INK 73.96 9 eP 49 34.50 -0.1
WRA 81.99 122 Pc 50 17.90 -1.3
0.5s 1.20nm 3.9mb
S.D. = 1.1 on 11 of 11 obs.

& JAN 26, 1990 02h 47m 46.80s
36.682 N 121.357 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK).

SAO 0.11 320 iPc 47 48.93 -0.2
e 47 50.20
iS 47 50.35
LLA 0.34 101 iPc 47 53.60 0.0
PRS 0.35 182 iPd 47 53.70 -0.1
GCC 0.62 304 ePc 47 58.00 -1.2
ARN 0.68 348 iPd 48 00.30 -0.1
MHC 0.70 341 iPd 48 00.52 -0.2
eS 48 11.75
PRI 0.78 134 iPd 48 01.60 -0.7
PCC 1.16 315 iPd 48 07.40 -1.6
PKEM 1.18 121 eP 48 09.30 -0.1
FRI 1.36 76 eP 48 10.70 -1.7
iS 48 27.90
BKS 1.38 330 ePc 48 10.20 -2.6
eS 48 34.10
BRK 1.39 329 eP 48 11.30 -1.6
CMB 1.56 30 ePd 48 13.70 -1.7
iS 48 33.30
BCH 1.82 145 eP 48 16.70 -2.5
ABL 2.52 136 eP 48 27.30 -2.1
KVN 3.50 46 eP 48 43.30 0.0
16 obs. associated

? JAN 26, 1990 03h 10m 39.40±13.57s
33.750 N ±110.km 15.100 E ±19.8km
DEPTH = 10.0km (geophysicist)
MEDITERRANEAN SEA (400)

MEU 3.35 358 P 11 31.50 -1.4
eSn 11 59.40
FAI 3.70 342 P 11 39.60 1.7
MNO 4.19 356 P 11 45.20 0.3
GIB 4.32 349 P 11 46.80 0.1
SOI 4.38 10 P 11 46.70 -0.8
ATN 4.41 4 Pd 11 47.40 -0.5
eSn 12 20.80
ERC 4.74 335 P 11 51.60 -1.0
TDS 5.98 9 P 12 12.30 2.2
MGR 6.39 3 P 12 14.40 -1.4
LCI 6.96 18 P 12 24.00 0.2
BRT 7.31 13 P 12 31.80 3.0X
OHR 8.63 30 ePn 12 47.00 -0.3
S.D. = 1.3 on 11 of 12 obs.

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* JAN 26, 1990 03h 26m 25.65± 1.01s
26.662 S ±11.4km 176.337 W ±15.3km
DEPTH = 33.0km (normal)
5.0mb (2 obs.)
SOUTH OF FIJI ISLANDS (171)

SVA 9.77 329 ePd 28 46.70 -0.3
SGE 10.48 328 eP 28 58.00 1.2
MBU 10.68 334 eP 28 58.00 -1.4
DZM 16.34 283 iPc 30 15.50 1.2
BRS 27.49 261 eP 32 15.00 3.9X
CTA 34.87 273 iPd 33 16.00 -0.1
0.8s 35.82nm 5.4mb X
i 33 38.40
QIS 40.67 269 eP 34 04.00 -0.8
ASPA 44.91 262 iPc 34 39.70 0.4
0.5s 10.00nm 5.0mb
ePP 35 06.00
WB5 45.56 268 eP 34 44.20 -0.3
WRA 45.57 268 Pc 34 42.90 -1.6
0.5s 12.60nm 5.1mb
CHG 93.73 289 eP 39 42.00 1.3
NB2 145.25 354 PKP 46 01.00 0.0
0.8s 20.90nm
UPP 145.45 348 iPKP 46 01.90 0.7
HFS 145.84 351 ePKP 46 01.60 -0.3
0.5s 10.60nm
BCAO 153.72 215 ePKPd 46 27.80 12.4X
0.4s 3.00nm
i 46 43.10
KSP 154.00 342 iPKPc 46 25.80 11.2X
S.D. = 1.0 on 13 of 16 obs.

? JAN 26, 1990 03h 59m 03.91± 9.63s
0.917 S ±19.9km 79.478 W ±84.1km
DEPTH = 33.0km (normal)
ECUADOR (107)

VC1 1.11 76 iPd 59 24.00 0.3
TUNG 1.15 116 iP+ 59 24.00 0.0
S 59 40.00
GGP 1.15 50 iP+ 59 25.20 0.9
S 59 41.50
QUR 1.20 52 P 59 25.20 0.3
S 59 43.00
COTA 1.69 43 P 59 31.30 -0.7
S 59 54.10
CAYA 1.79 56 P 59 32.20 -1.3
S.D. = 1.0 on 6 of 6 obs.

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* JAN 26, 1990 05h 02m 30.91± 1.07s
9.490 S ± 8.2km 117.697 E ±10.0km
DEPTH = 101.5 ± 14.5 km
*4.3mb (2 obs.)
SUMBAWA ISLAND REGION (285)

KHKI 2.35 298 ePd 03 08.50 -0.1
eS 03 41.50
e 08 35.00
MKS 4.59 23 iPd 03 40.00 0.7
eS 04 50.50
TRT 5.31 289 eP 03 49.50 0.2
iS 04 56.00
KNA 12.46 121 eP 05 10.80 -15.1X
eS 07 32.00
MTN 13.59 105 eP 05 35.00 -5.7X
eS 07 56.00
MEKA 17.05 177 eP 06 22.00 -2.5
eS 09 12.00
WARB 18.64 154 eP 06 43.00 -0.7
eS 09 55.00
WB5 19.13 125 eP 06 47.30 -1.6
e 10 04.90
WRA 19.14 125 Pd 06 49.70 0.7
0.8s 8.30nm 4.1mb
MRWA 19.69 184 eP 06 55.50 0.9
eS 10 14.00
ASPA 20.94 134 iPc 07 07.60 0.1
0.5s 14.00nm 4.6mb
eS 10 50.50
BAL 21.03 182 eP 07 10.00 1.7
i 07 16.70
eS 10 48.00
MUN 22.42 183 eP 07 28.00 6.0X
i 07 34.40
eS 11 19.00
NWAO 23.33 181 eP 07 32.00 1.2
i 07 46.00
eS 11 39.00
FORR 23.36 157 eP 07 31.50 0.4
e 07 43.00
BRS 37.55 123 iPc 09 40.00 2.9X
SHL 42.96 325 iP 10 21.00 -0.9
GBA 46.08 299 P 10 46.00 -0.7
e 12 24.00
BJI 49.30 358 eP 11 11.50 0.2
S.D. = 1.2 on 15 of 19 obs.

& JAN 26, 1990 05h 54m 30.03s
61.245 N 140.279 W
DEPTH = 0.0km
SOUTHERN YUKON TERRITORY, CANADA(18)
<AGS-P>.

BALM 1.02 259 iP 54 48.34 -2.1
eS 55 05.73
PCA 1.15 179 iP 54 51.23 -1.3
eS 55 10.08
HYT 1.42 106 P 54 50.70 -6.4
GLB 1.71 278 eP 54 59.53 -1.8
eS 55 24.04
YKU 1.72 171 eP 55 02.15 0.8
RAGM 2.32 250 eP 55 11.15 1.0
eS 55 44.57
SGAM 2.52 255 eP 55 13.12 0.1
eS 55 48.65

26d 05h

KLU	2.73	278	iP	55	15.70	-0.3
CVA	2.76	258	eP	55	17.14	0.7
DWY	2.85	8	P	55	10.50	-7.1
TOA	2.94	290	eP	55	18.87	-0.1
DOT	2.99	326	eP	55	14.69	-4.9
PAX	2.99	308	eP	55	18.11	-1.6
VZW	3.05	269	eP	55	19.64	-0.8
HIN	3.16	257	eP	55	21.94	-0.1
NCA	3.21	286	eP	55	21.61	-1.2
GLI	3.33	267	eP	55	24.56	0.1
DDM	3.63	317	eP	55	30.11	1.3
GHO	4.18	281	eP	55	34.74	-1.7
PLRM	4.27	279	eP	55	38.49	0.8
HDA	4.41	319	eP	55	33.33	-6.4
PMS	4.48	274	eP	55	39.71	-1.1
RND	4.55	302	eP	55	40.91	-0.9
PWA	4.63	279	eP	55	42.53	-0.2
INK	7.65	19	eP	56	16.00	-9.4

25 obs. associated

? JAN 26, 1990 06h 40m 51.75± 1.54s
52.473 S ±11.9km 160.016 E ±39.0km
DEPTH = 10.0km (geophysicist)
4.4mb (2 obs.)
MACQUARIE ISLANDS REGION (167)

MCQ	2.13	197	iPc	41	27.70	0.0
			eS	41	54.00	
CAN	18.86	331	eP	45	18.60	4.6X
VNDA	25.15	179	P	46	18.00	0.1
BRS	25.63	345	e(P)	46	13.50	-9.4X
ASPA	34.98	315	eP	47	46.30	0.3
Z	17s	0.39um				4.2MszX
			LR	02	04.20	
SPA	37.71	180	iPd	48	08.90	0.0
	1.0s	14.50nm				4.7mb
WRA	38.10	319	Pc	48	12.30	-0.1
	0.8s	3.50nm				4.2mb
WB5	38.15	319	eP	48	12.60	-0.2

S.D. = 0.2 on 6 of 8 obs.

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* JAN 26, 1990 08h 54m 26.44± 1.48s
41.364 N ±11.0km 29.248 E ± 9.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ISK	0.33	206	ePn	54	33.00	-0.3
GBZT	0.59	165	ePn	54	38.00	-0.4
CTT	0.65	251	ePn	54	39.50	0.0
YLV	0.80	173	iPn	54	41.40	-0.7
DMK	1.21	293	ePn	54	48.50	-0.4
GPA	1.34	143	ePn	54	51.80	0.6
BNT	1.42	225	iPn	54	52.90	0.6
EDC	1.46	226	ePn	54	53.50	0.7
DST	1.82	195	ePn	55	00.80	2.7X

S.D. = 0.6 on 8 of 9 obs.

JAN 26, 1990 09h 40m 14.25± 0.63s
36.071 N ± 6.8km 27.044 E ± 6.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

KAP	0.53	168	ePg	40	24.90	-0.1
NPS	1.42	236	ePb	40	41.00	0.9
YER	1.46	43	iPn	40	39.40	-1.2
APE	1.57	310	ePb	40	41.60	-0.7
SMG	1.64	354	ePb	40	45.50	2.3
IZM	2.33	4	ePn	40	50.00	-3.3X
VAM	2.41	255	ePn	40	53.30	-1.0
ELL	2.41	73	ePn	40	55.20	0.8
KHL	3.00	41	ePn	41	02.00	-0.7
BCK	3.17	63	ePn	41	05.90	0.8
ATH	3.27	306	ePg	41	17.50	11.0X
DST	3.74	19	ePn	41	13.00	-0.4
BBTK	5.88	48	eP	41	43.00	-0.6
MBH	9.10	131	eP	42	25.00	-3.5X

S.D. = 1.2 on 11 of 14 obs.

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* JAN 26, 1990 10h 06m 14.82± 1.05s
14.576 S ±15.2km 75.815 W ±14.4km
DEPTH = 33.0km (normal)
4.6mb (1 obs.)
NEAR COAST OF PERU (115)

PT03	0.58	2	iPc	06	26.30	-0.3
PT08	2.70	345	iPd	06	57.90	0.7
PT10	2.73	336	eP	06	57.00	-0.3
			e(S)	07	32.00	
			e	07	40.00	
NNA	2.76	339	iP	06	57.20	-0.6
			eS	07	33.50	
ARE	4.57	115	eP	07	23.00	-0.8
			eS	08	27.00	
ZOBO	7.61	104	Pc	08	07.50	0.8
	0.9s	69.20nm				5.7mb X
			S	10	22.00	
			LR	11	08.00	
LPB	7.69	106	eP	08	03.00	-4.7X
	1.0s	60.00nm				5.6mb X
			i	08	11.00	
CNCB	7.87	107	P	08	11.00	0.6
CCH	9.71	108	P	08	35.80	0.1
TUL	53.65	340	e(P)	15	36.20	0.7
	1.0s	6.00nm				4.6mb
ALQ	57.20	330	eP	16	02.20	0.8
SES	71.70	337	eP	17	35.00	-0.4
KIC	73.46	79	P	17	45.00	-1.4
EDM	74.82	338	eP	17	53.50	-0.1

S.D. = 0.8 on 13 of 14 obs.

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* JAN 26, 1990 11h 08m 30.00± 1.43s
14.839 S ±16.0km 76.112 W ±16.1km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
NEAR COAST OF PERU (115)

PT03	0.90	20	iPc	08	45.90	-0.3
PT10	2.87	343	iPd	09	14.50	0.0
			eS	09	53.00	
PT08	2.89	352	iP	09	15.60	0.5
NNA	2.92	346	iPc	09	15.00	-0.3
			eS	09	50.50	
ARE	4.74	111	eP	09	40.00	-1.2
			iS	10	38.00	
ZOBO	7.83	102	Pc	10	25.20	0.1
	1.0s	117.50nm				5.9mb X
			S	12	38.00	
			LR	13	26.00	
LPB	7.90	103	P	10	28.00	2.1
	1.0s	106.00nm				5.9mb X
CNCB	8.07	105	P	10	29.00	0.6
			S	12	08.00	
CCH	9.91	106	P	10	53.20	-0.4
BAO	27.14	95	eP	14	11.00	-1.4
TUL	53.80	340	e(P)	17	51.20	-0.5
	0.8s	4.00nm				4.5mb
ALQ	57.28	330	eP	18	18.00	0.8
	1.0s	2.50nm				4.2mb

S.D. = 1.0 on 12 of 12 obs.

JAN 26, 1990 11h 42m 55.60± 0.79s
36.047 N ± 8.3km 27.148 E ± 7.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.50	178	ePn	43	05.50	-0.1
YER	1.42	40	iPn	43	20.40	-1.1
NPS	1.48	238	ePn	43	21.50	-0.7
APE	1.65	309	ePn	43	24.00	-0.8
SMG	1.68	352	ePn	43	19.50	-5.6X
ELL	2.33	72	ePn	43	35.80	1.0
IZM	2.35	2	ePn	43	31.00	-3.9X
KHL	2.96	39	ePn	43	51.00	7.4X
BCK	3.10	62	ePn	43	48.90	3.3X
VLI	3.46	282	ePn	43	50.50	-0.1
ITM	4.35	287	ePn	44	05.00	1.7

S.D. = 1.3 on 7 of 11 obs.

% JAN 26, 1990 11h 47m 21.29± 0.85s
45.383 N ±15.1km 25.406 E ± 6.5km
DEPTH = 5.0km (geophysicist)
ROMANIA (358)

CMP	0.28	246	iPc	47	25.00	-2.0
MLR	0.39	74	iPc	47	28.50	-0.7
ISR	0.84	107	ePc	47	38.00	-0.1
VRI	1.05	62	ePd	47	41.50	0.0
DRA	1.08	230	eP	47	43.00	1.0
CFR	1.95	95	eP	47	58.00	2.7X
TLB	2.03	112	ePd	47	57.00	0.6
BZS	2.68	276	ePc	48	07.00	1.2

S.D. = 1.4 on 7 of 8 obs.

? JAN 26, 1990 13h 42m 31.58± 4.36s
56.090 N ±19.0km 6.277 W ±32.9km
DEPTH = 10.0km (geophysicist)
UNITED KINGDOM (533)
ML 3.0 (BGS). Felt (IV) on Colonsay and (II) on Iona.

EAB	1.09	84	iPbd	42	52.70	0.7
			eS	43	07.40	
KPL	1.30	15	ePb	42	56.10	0.5
ELO	1.48	74	ePn	42	58.40	0.1
			eSn	43	19.50	
EBH	1.56	83	ePnd	42	59.40	0.1
			eSn	43	21.80	
EAU	1.61	98	ePnc	43	00.00	0.0
			eSn	43	22.30	
EDI	1.74	94	ePn	43	02.20	0.2
			eSn	43	24.50	
EBL	1.85	99	ePn	43	03.50	-0.1
			eSn	43	31.10	
EDU	1.87	74	ePn	43	03.60	-0.3
			eSn	43	32.00	
ESY	2.06	93	ePn	43	06.40	-0.3
MCD	2.24	47	ePnc	43	08.30	-0.9
			eSn	43	36.50	

S.D. = 0.5 on 10 of 10 obs.

? JAN 26, 1990 14h 51m 42.42± 4.30s
41.210 N ±39.5km 28.513 E ±11.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT	0.09	225	iPg	51	45.20	0.2
ISK	0.44	109	ePg	51	50.00	-1.3
GBZT	0.82	121	ePg	51	59.20	0.9
			iSg	52	12.50	
YLV	0.92	134	iPg	51	59.60	-0.4
			iSg	52	13.10	
HRT	0.96	114	iPg	51	59.40	-1.3
			eSg	52	13.90	
BNT	0.96	208	iPg	51	59.20	-1.6
EDC	0.99	210	iPg	52	01.50	0.2
DST	1.61	177	ePn	52	11.90	1.0
GPA	1.65	123	ePn	52	13.80	2.3

S.D. = 1.5 on 9 of 9 obs.

JAN 26, 1990 16h 12m 39.47± 0.62s
39.016 N ± 5.3km 26.955 E ± 6.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.4 (ATH).

PRK	0.58	294	ePb	12	51.50	0.3
IZM	0.66	159	iPg	12	51.90	-0.8
			iSg	13	01.90	
EZN	0.94	329	iPg	12	58.10	0.7
			iSg	13	12.10	
SMG	1.31	184	ePb	13	03.00	-0.6
DST	1.43	65	iPn	13	05.00	-0.4
EDC	1.50	28	iPn	13	06.00	-0.5
BNT	1.53	29	iPn	13	07.60	0.7
MFT	1.79	8	iPn	13	09.60	-1.0
KHL	2.13	108	ePn	13	18.00	2.4
RDO	2.39	333	ePn	13	20.00	0.8
CTT	2.41	28	ePn	13	18.20	-1.4
YLV	2.42	49	iPn	13	20.10	0.3
ISK	2.61	38	ePn	13	28.00	5.7X
HRT	2.76	48	ePn	13	29.00	4.4X
DMK	2.87	12	iPn	13	25.70	-0.4

S.D. = 1.1 on 13 of 15 obs.

JAN 26, 1990 20h 13m 36.58± 0.41s
53.879 N ± 3.8km 132.186 W ± 5.2km
DEPTH = 10.0km (geophysicist)
4.0mb (3 obs.)
QUEEN CHARLOTTE ISLANDS REGION (22)
Felt (IV) at Masset and Port Clements, British Columbia. Also felt at Skidegate, British Columbia.

MSTB	0.13	18	Pd	13	40.80	1.1
PCB	0.29	233	Pd	13	43.50	0.9
			S	13	47.50	
NDB	0.45	280	Pc	13	46.00	0.2
LIB	0.64	307	Pc	13	48.50	-0.9
SKB	0.64	170	Pc	13	49.70	0.3

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CWB      0.73 171 Pc     13 51.20   0.2
BNAB     1.00 112 P      13 54.70  -0.8
                  S      14 08.20
BNB      1.33 169 Pc     14 00.90  -0.3
BBB      2.99 123 P      14 22.90  -1.9X
SIT      3.65 332 eP     14 32.00  -2.3X
PHC      4.31 136 P      14 42.00  -1.7X
EDB      5.09 140 P      14 54.15  -0.5
BTB      6.06 134 P      15 06.95  -1.5X
HYT      7.53 340 P      15 29.00  -0.2
PNT      9.06 115 eP     15 58.00   7.8X
DWY     10.86 343 P      16 15.10   0.1
TOA     11.07 324 e(P)   16 20.00   2.1X
EDM     11.23  86 eP     16 18.50  -1.5X
PMR     11.87 317 eP     16 26.50  -2.2X
SES     13.44  96 eP     16 48.00  -1.6X
FBA     13.56 331 eP     16 56.00   4.8X
SVW     14.47 309 eP     17 10.70   7.5X
INK     14.49 358 eP     17 03.00  -0.3
TTA     15.34 316 eP     17 13.00  -1.5
IMA     16.16 328 eP     17 25.00  -0.1
        0.9s     6.90nm            3.8mb
FFC     17.59  75 eP     17 40.00  -3.1X
        1.0s    18.00nm            4.2mb
BRW     20.53 338 eP     18 17.10  -0.1
MBC     22.98   8 eP     18 43.50   1.7
        0.9s     5.00nm            4.0mb
     S.D. = 0.8  on  16 of  28 obs.
-----------------------------------------
   JAN  26, 1990  20h 49m 53.86± 0.48s
   40.289 N ± 5.4km   27.344 E ± 4.3km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)
      MD 3.2 (ATH).

EDC      0.40  82 iPg    50 02.50   0.4
                  iSg    50 08.50
BNT      0.45  81 iPg    50 03.50   0.6
EZN      0.91 240 iPg    50 10.80  -0.4
                  iSg    50 23.80
CTT      1.19  44 ePn    50 16.50   0.4
DST      1.20 124 iPn    50 16.50   0.2
PRK      1.33 219 ePb    50 19.00   0.6
ISK      1.52  59 ePn    50 20.50  -0.6
DMK      1.56  11 iPn    50 21.30  -0.4
YLV      1.57  79 iPn    50 21.00  -0.9
RDO      1.62 303 ePb    50 23.00   0.5
                  Sn     50 47.00
IZM      1.89 182 ePn    50 26.00  -0.5
     S.D. = 0.6  on  11 of  11 obs.
-----------------------------------------
   JAN  26, 1990  22h 46m 19.89± 0.41s
   23.347 N ± 5.5km   100.242 E ± 6.1km
   DEPTH =  33.0km  (normal)
   4.6mb (  5 obs.)
 YUNNAN PROVINCE, CHINA            (318)

KMI      2.89  52 Pnc    47 07.00   2.2
                  Pgd    47 16.00
                  Sn     47 38.00
                  Sg     47 58.00
CHG      4.67 195 ePn    47 29.00  -1.0
                  ePg    47 47.00
                  eSg    48 45.50
LOE      6.07 166 ePn    47 51.00   1.2
                  ePg    48 15.00
                  eSg    49 43.00
BDT      6.18 191 ePn    47 50.80  -0.5
                  e      48 15.50
GYA      6.60  61 Pn     47 56.60  -0.7
                  Sn     49 07.00
                  Sg     49 46.00
NST      7.63 181 ePn    48 11.50  -0.1
                  ePg    48 44.00
                  eSg    50 28.20
SHL      7.93 288 iP     48 11.00  -5.0X
                  eS     50 15.00
CD2      8.16  22 eP     48 17.20  -1.8
QIZ      9.93 114 P      48 42.80  -0.7
                  eS     50 33.80
LSA     10.31 310 eP     48 48.00  -1.0
     N  10s     1.60um
NNT     10.71 183 ePn    48 50.00  -4.1X
GZH     12.05  89 eP     49 10.60  -1.7
LZH     13.07  13 eP     49 32.50   6.5X
        1.5s    19.80nm            4.9mb
     Z  20s     1.20um             5.3MszX

                  eLg    53 34.00
XAN     13.09  34 P      49 22.00  -4.1X
     N  11s     4.60um
     E  10s     3.30um
                  pP     49 28.00
WHN     14.47  57 eP     49 44.50   0.2
     Z  18s     1.20um
     E  11s     1.50um
GTA     16.02 359 eP     50 03.60  -0.8
        1.2s     0.10nm          1.8mb X
     Z  12s     1.10um          6.3MszX
     E  12s     1.20um
TIY     17.73  33 P      50 24.80  -1.1
     Z  13s     3.00um
     N  10s     4.10um
NJ2     18.60  58 Pd     50 42.00   5.4X
     Z  16s     1.20um
BTD     19.07  23 eP     50 41.50  -0.9
TIA     19.43  45 eP     50 48.00   1.5
     Z  11s     1.30um
     N  14s     1.60um
     E  14s     2.70um
HHC     19.88  26 eP     50 50.00  -1.4
     Z  14s     1.40um
     N  10s     1.70um
SSE     20.14  63 eP     51 01.50   7.5X
     Z  15s     1.30um          4.4MszX
     N  13s     2.10um
     E  13s     0.90um
                  eS     54 46.00
HYB     21.16 258 ePc    51 02.00  -2.7
                  eS     55 00.00
NDI     21.35 289 iPd    51 03.50  -3.0X
BJI     21.41  35 eP     51 08.00   1.0
        1.1s     0.03nm          1.6mb X
     Z  14s     1.76um          4.6MszX
     N  12s     0.97um
     E  12s     1.12um
WMQ     22.89 336 P      51 23.00   1.3
                  eS     55 32.00
GBA     23.67 250 P      51 30.00   0.6
BOM     25.95 265 iPd    51 51.80   0.7
                  eS     56 33.50
KSH     26.09 314 eP     51 56.50   4.0X
SNY     26.81  41 eP     52 01.50   2.6X
     Z  16s     1.20um          4.5MszX
     N  16s     1.40um
     E  16s     1.30um
                  eS     56 35.00
CN2     29.08  39 eP     52 24.50   5.0X
     Z  10s     1.30um          4.8MszX
                  epP    52 30.00  19kmX
                  eS     57 14.00
QUE     30.42 290 eP     52 29.40  -2.4
MAIO    37.37 300 eP     53 32.00   0.6
                  eS     59 24.00
WRA     54.38 140 Pd     55 46.80   0.7
        0.9s     5.00nm            4.5mb
ASPA    57.03 143 eP     56 08.20   3.0X
SUF     62.24 330 eP     56 42.30   1.8
CTA     62.26 130 eP     56 44.00   2.8X
SOD     62.37 335 iP     56 42.70   1.4
NUR     62.90 327 eP     56 46.00   1.2
MLR     62.93 310 eP     56 48.00   2.5X
HFS     68.35 327 eP     57 20.40   0.5
        0.5s     3.10nm            4.6mb
NB2     69.40 329 P      57 26.20  -0.2
        0.7s     3.30nm            4.5mb
INK     80.57  18 eP     58 30.00  -0.1
BCAO    80.65 271 ePc    58 33.60   2.0
        0.4s     3.00nm            4.6mb
SLR     85.03 239 eP     59 04.20  10.3X
KSR     86.19 240 eP     59 05.00   5.3X
PRY     86.24 239 eP     59 04.00   4.1X
     S.D. = 1.3  on  31 of  47 obs.
-----------------------------------------
   JAN  26, 1990  23h 27m 40.35± 0.39s
   23.338 N ± 4.9km   100.191 E ± 5.9km
   DEPTH =  33.0km  (normal)
   4.5mb (  3 obs.)
 YUNNAN PROVINCE, CHINA            (318)

KMI      2.93  52 Pnc    28 27.50   1.6
                  Pgc    28 37.00
                  Sg     29 12.50
CHG      4.65 195 ePn    28 50.50   0.4
                  ePg    29 07.80

                  eSg    30 05.30
LOE      6.08 166 ePn    29 12.20   1.9
                  ePg    29 35.00
                  eSg    31 03.10
BDT      6.16 191 ePn    29 11.00  -0.5
                  e      29 36.10
GYA      6.65  61 Pn     29 17.00  -1.4
                  Sg     31 07.00
NST      7.63 180 ePn    29 32.50   0.5
                  ePg    29 55.00
                  eSg    31 56.00
SHL      7.89 288 iP     29 31.90  -4.0X
                  eS     31 25.00
CD2      8.18  22 P      29 38.00  -1.8
QIZ      9.97 114 eP     30 03.60  -0.9
     E  11s     2.90um
                  eS     32 02.60
LSA     10.28 310 eP     30 08.80  -0.3
     N  10s     1.40um
NNT     10.70 182 ePn    30 12.50  -1.9
LZH     13.09  13 eP     30 54.50   7.8X
        1.2s    17.00nm            5.0mb
     Z  18s     1.20um             4.9MszX
     N  10s     0.90um
                  eLg    34 52.00
XAN     13.12  34 P      30 42.50  -4.5X
     N  12s     4.60um
     E  11s     2.90um
WHN     14.52  57 eP     31 05.00  -0.3
     Z  22s     2.00um
GTA     16.03 359 eP     31 24.60  -0.4
     Z  10s     1.00um
     E  11s     0.70um
TIY     17.77  33 eP     31 45.70  -1.1
     Z  14s     2.02um
     N  10s     3.46um
NJ2     18.65  58 Pc     32 00.80   3.2X
     Z  11s     1.40um
BTO     19.10  23 eP     32 03.00  -0.1
     E  10s     0.60um
TIA     19.47  45 eP     32 08.20   0.8
     Z  11s     1.00um
     N  14s     1.30um
     E  14s     2.10um
HHC     19.91  26 eP     32 12.00  -0.1
     Z  12s     1.20um
     N  10s     1.40um
SSE     20.19  63 eP     32 25.00  10.0X
     Z  14s     0.90um          4.3MszX
                  eS     36 08.00
HYB     21.11 258 eP     32 23.00  -1.6
                  eS     36 24.00
NDI     21.31 289 eP     32 25.00  -1.5
BJI     21.44  35 eP     32 29.50   1.7
        1.1s     0.04nm          1.7mb X
     Z  12s     1.51um          4.6MszX
     N  11s     0.93um
     E  11s     1.01um
WMQ     22.88 336 P      32 44.00   1.9
     Z  10s     0.80um          4.5MszX
GBA     23.62 250 P      32 51.00   1.6
POO     25.05 264 eP     33 03.00  -0.2
KSH     26.06 314 eP     33 14.50   1.8
SNY     26.85  41 eP     33 25.40   5.7X
     Z  16s     1.00um          4.5MszX
     N  16s     1.20um
     E  16s     1.10um
CN2     29.12  39 eP     33 39.80  -0.5
QUE     30.38 290 eP     33 51.00  -0.9
MAIO    37.33 300 eP     34 52.00   0.4
                  eS     40 56.00
HFS     68.34 327 eP     38 39.70  -0.5
        0.5s     1.50nm            4.3mb
NB2     69.38 329 P      38 46.80   0.1
        1.0s     4.10nm            4.4mb
BRG     69.95 318 e(P)   38 54.20   3.9X
INK     80.59  18 eP     39 52.00   1.3
     S.D. = 1.2  on  29 of  36 obs.
-----------------------------------------
   JAN  27, 1990  00h 30m 41.45± 0.94s
   39.923 N ± 6.1km   23.817 E ± 7.8km
   DEPTH =  10.0km  (geophysicist)
 AEGEAN SEA                        (365)
      MD 3.0 (ATH). ML 2.7 (THE).

PAIG     0.11 272 ePg    30 43.80  -0.4
OUR      0.43  17 iPgc   30 50.50   0.3
```

27d 00h

PLG	0.53	328	ePb	30	50.50	-1.7
NEO	0.77	217	ePb	30	57.00	0.5
THE	0.96	318	ePg	31	00.20	0.5
			eSg	31	14.40	
SOH	0.96	339	ePg	30	59.50	-0.3
LIT	1.03	280	ePb	31	00.60	-0.4
			eSb	31	15.90	
SRS	1.21	352	ePb	31	03.50	-0.4
			eSb	31	20.40	
KNT	1.42	331	ePb	31	07.70	0.4
			eSb	31	26.10	
AGG	1.46	232	ePb	31	07.20	-0.7
			eSb	31	24.80	
GRG	1.49	314	ePb	31	09.00	0.6
			eSb	31	29.60	
KZN	1.61	284	ePb	31	10.00	-0.1
VAY	1.69	326	ePn	31	13.40	2.3
RDO	1.79	46	ePn	31	12.00	-0.6

S.D. = 1.0 on 14 of 14 obs.

JAN 27, 1990 00h 34m 55.04± 0.96s
6.913 S ± 5.8km 130.257 E ± 8.0km
DEPTH = 109.0 ± 10.1 km
5.1mb (15 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 14C
Centroid Location:
Origin Time 00:35: 2.0 1.4
Lat 6.04S 0.12 Lon 129.83E 0.15
Dep 75.0 9.4 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 1.74 0.68 Mtt=-2.52 0.75
Mff= 0.78 1.24 Mrt=-1.12 0.66
Mrf= 2.86 0.51 Mtf= 5.05 0.70
Principal Axes:
T Val= 5.35 Plg=29 Azm=299
N 1.63 56 155
P -6.98 17 38
Best Double Couple:Mo=6.2*10**16
NP1:Strike= 82 Dip=57 Slip= 9
NP2: 347 82 147

TLE	2.78	63	iPd	35	27.20	-11.6X
			iS	36	25.00	
AAI	3.81	327	ePd	35	55.00	2.3
			eS	36	41.50	
MTN	5.96	172	iPd	36	20.80	-1.5
KNA	8.90	189	iPd	37	01.10	-1.3
			iS	38	34.90	
MNI	9.91	327	eP	37	17.00	1.0
JAY	11.29	68	ePd	37	30.50	-3.9X
	0.8s	12.20nm			4.7mb	
			e	44	31.00	
PCI	11.98	299	ePc	37	51.00	7.5X
	1.0s	20.00nm			4.8mb	
MNDI	13.34	88	eP	38	02.00	0.6
WB5	13.49	163	iP	37	57.80	-5.5X
WRA	13.55	163	Pd	37	59.10	-4.9X
	0.6s	49.60nm			5.1mb	
QIS	16.31	147	iPc	38	34.60	-4.4X
			eS	41	22.00	
TSM	16.44	312	ePc	38	44.90	4.2X
PMG	16.91	100	eP	38	45.00	-1.4
ASPA	17.02	169	iPc	38	45.60	-2.3
	0.5s	264.00nm			5.7mb	
Z	21s	0.44um			4.3Msz	
			eS	41	35.70	
			LR	45	16.50	
KKM	19.03	312	ePc	39	10.90	-0.5
	0.9s	147.00nm			5.3mb	
WARB	19.47	190	eP	39	16.50	0.6
	0.3s	18.00nm			4.9mb	
CTA	20.31	132	iPc	39	24.10	-0.4
	1.0s	60.00nm			4.9mb	
			i	39	31.20	
			i	39	41.90	
			eS	43	12.00	
MEKA	22.55	208	iPc	39	40.70	-6.1X
OLP	23.66	147	e(P)	40	00.00	2.5X
			e	40	09.00	
			e	40	14.00	
			e	44	16.00	
FORR	23.90	185	eP	40	00.50	0.7
	0.4s	129.00nm			5.7mb	
			eS	44	24.00	

MRWA	25.95	209	eP	40	18.00	-1.0
			eS	45	11.00	
RMQ	26.25	140	eP	40	28.00	6.1X
			e	40	50.70	
			e	44	57.00	
BAL	26.78	207	eP	40	28.00	1.4
			e	40	48.00	
			e	40	59.00	
KLB	27.19	204	eP	40	32.00	1.7
MUN	28.17	206	eP	40	42.00	2.8X
			e	41	19.00	
			eS	46	06.00	
KGM	28.31	287	eP	40	45.50	4.9X
NWAO	28.57	203	eP	40	44.00	1.2
			e	41	02.00	
			e	41	24.00	
ADE	28.98	166	eP	40	47.70	1.2
BRS	29.52	136	eP	40	49.50	-1.9
			i	41	16.50	
			e	41	53.00	
			e	44	08.00	
			e	52	05.00	
RKG	29.67	203	eP	41	00.00	7.4X
COO	31.08	142	e(P)	41	13.00	7.9X
			e	41	32.00	
			e	47	23.00	
BWA	32.10	151	eP	41	16.00	2.1
			e	41	27.80	
BFD	32.14	161	eP	41	15.00	0.8
			e	41	31.00	
			e	47	38.00	
PSI	32.70	286	eP	41	18.40	-0.9
	1.0s	17.50nm			4.8mb	
			e	44	30.00	
CAN	33.11	151	eP	41	23.50	0.8
			e	41	37.60	
TOO	33.51	158	e(P)	41	28.00	1.8
			e	48	14.00	
LOE	37.13	311	eP	41	57.00	0.1
DZM	38.01	117	iPc	42	17.10	12.7X
SSE	38.78	348	Pc	42	10.50	-0.1
	1.0s	28.00nm			5.0mb	
BDT	39.12	308	eP	42	13.30	-0.3
	0.9s	79.90nm			5.5mb	
CHG	40.08	310	iPc	42	22.00	0.4
	0.9s	39.92nm			5.2mb	
KMI	41.61	321	eP	42	34.50	0.2
BJI	48.49	346	eP	43	28.00	-0.5
	0.8s	25.00nm			5.1mb	
LZH	49.45	332	Pc	43	35.50	-0.7
	1.0s	33.00nm			5.2mb	
			i	44	02.50	
			i	44	43.00	
GBA	56.26	291	P	44	25.00	-1.8
HYB	56.51	296	iPc	44	27.60	-1.0
	1.0s	45.00nm			5.4mb	
			i	44	32.50	
POO	61.09	295	iP	44	59.30	-1.0
NDI	62.13	307	iP	45	05.40	-1.6
BOM	62.14	295	eP	45	05.90	-1.2
QUE	70.95	305	eP	46	03.70	0.6
VNDA	72.50	173	iPd	46	07.90	-3.3X
MAIO	78.83	309	iPc	46	49.00	1.2
KER	88.23	305	eP	47	39.00	3.3X
FRB	121.67	10	ePKP	53	34.00	-3.0X
KIC	135.31	272	PKP	54	05.10	0.4
LIC	135.58	272	PKP	54	05.40	0.2
TIC	135.60	272	PKP	54	05.70	0.4
LKO	136.24	277	PKP	54	04.92	-1.6
ARE	148.34	137	ePKP	54	33.00	5.2X
CNCB	150.32	143	PKP	54	34.60	3.5X
			i	54	39.50	
LPB	150.46	142	PKP	54	39.00	7.8X
	1.0s	40.00nm				
ZOBO	150.65	142	PKP	54	32.80	1.1
	1.0s	50.75nm				
			i	54	37.50	
CCH	150.93	146	PKP	54	41.00	9.3X

S.D. = 1.2 on 41 of 63 obs.

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* JAN 27, 1990 01h 19m 00.32± 1.28s
37.624 N ± 9.5km 21.388 E ±12.7km
DEPTH = 9.8 ± 5.7 km
SOUTHERN GREECE (368)
ML 3.4 (ATH), 3.3 (THE).

ITM	0.62	136	ePg	19	12.50	-0.3
VLS	0.84	311	ePg	19	15.00	-1.5
VLI	1.53	126	ePb	19	28.50	0.7
AGG	1.58	28	ePb	19	27.20	-1.3
			eSb	19	48.30	
ATH	1.88	79	ePn	19	33.00	0.3
NEO	2.21	40	ePn	19	35.50	-2.2
LIT	2.62	19	ePn	19	43.30	-0.1
			eSn	19	49.40	
KZN	2.70	6	ePb	19	46.00	1.4
GRG	3.42	13	ePn	19	54.20	-0.6
OHR	3.51	353	ePn	19	58.30	2.2
KNT	3.72	18	ePn	19	58.80	-0.3
VAY	3.80	14	ePn	20	01.80	1.6
SRS	3.88	25	ePn	20	01.20	-0.2
SKO	4.34	1	ePn	20	17.00	9.1X

S.D. = 1.5 on 13 of 14 obs.

? JAN 27, 1990 01h 37m 17.06± 2.94s
37.053 S ±32.0km 177.904 E ±29.9km
DEPTH = 191.0 ± 23.2 km
4.0mb (1 obs.)
OFF E. COAST OF N. ISLAND, N.Z. (160)

KRP	2.07	244	Pd	37	56.00	0.0
MRW	4.86	210	eP	38	30.00	0.0
			S	40	10.00	
WRA	41.51	282	Pd	44	47.00	-0.1
	0.6s	3.10nm			4.0mb	
WB5	41.53	282	eP	44	47.30	0.1
SUF	149.01	335	ePKP	56	34.30	-4.1X
	0.5s	5.50nm				
NUR	151.03	333	ePKP	56	40.10	-1.3
NB2	154.56	345	PKP	56	47.30	0.8
	0.6s	1.90nm				
HFS	154.78	341	ePKP	56	47.20	0.5
	0.5s	0.90nm				

S.D. = 1.0 on 7 of 8 obs.

JAN 27, 1990 01h 38m 59.17± 0.35s
43.790 N ± 4.1km 16.478 E ± 4.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.4 (ZAG), 3.2 (KBA). Felt (V) at Potravlje and Otavice.

HVAR	0.61	182	iPgc	39	11.10	-0.4
			iSg	39	21.30	
VBY	1.92	333	iPnc	39	32.50	0.3
			iSn	39	55.60	
ZAG	2.06	350	iPn	39	33.40	-0.8
			iSn	40	01.90	
			iSg	40	07.20	
PTJ	2.14	350	ePn	39	34.40	-1.1
			e(Sn)	40	01.00	
RIY	2.16	317	iPn	39	36.70	1.1
			iSn	40	04.50	
CEY	2.44	324	ePn	39	40.40	0.8
			eSn	40	12.50	
			e	40	16.00	
ARV	2.58	265	P	39	42.00	0.3
DUI	2.60	216	P	39	43.10	1.1
LJU	2.64	329	ePn	39	42.00	-0.6
			e(Sn)	40	18.00	
TRI	2.72	316	e(Pn)	39	43.70	0.0
			e(Sn)	40	14.00	
			i(Sg)	40	24.00	
ASS	2.87	257	P	39	47.00	1.1
VOY	2.90	322	ePn	39	45.20	-1.1
			e(Sn)	40	27.50	
BRT	2.96	169	P	39	45.00	-2.1
MNS	3.12	245	Pd	39	49.50	0.2
FVI	3.83	318	P	39	59.50	0.1
KBA	3.96	327	iPnc	40	03.10	1.7
			e(Sn)	40	48.00	
			iSg	41	06.30	
SKO	4.07	115	ePn	40	04.50	1.7
BZS	4.09	62	ePc	40	04.50	1.4
			e	09	18.00	
CTI	4.11	305	P	40	02.00	-1.4
			eSn	40	48.50	
OHR	4.17	128	ePn	40	08.20	3.9X
SRO	4.22	17	eP	40	03.40	-1.6
			e	41	12.20	
ZST	4.43	5	eP	40	08.10	0.2
			e	40	46.90	
			e	41	26.00	
			e	11	49.20	

BHG	4.67	329	iPc	40 11.10	-0.3
OGA	4.92	311	eP	40 13.50	-1.7
VAY	5.13	117	ePn	40 16.40	-1.4
GRG	5.22	121	ePn	40 19.50	0.3
KNT	5.42	117	ePn	40 22.30	0.2
KHC	5.71	340	eP	40 28.00	2.0
			e	41 29.30	
THE	5.76	121	ePn	40 26.70	0.0
LIT	5.80	127	ePn	40 26.90	-0.4
SRS	5.90	114	ePn	40 29.20	0.5

S.D. = 1.1 on 30 of 31 obs.

JAN 27, 1990 02h 08m 18.88± 0.39s
42.198 N ± 3.9km 15.579 E ± 4.4km
DEPTH = 12.8 ± 3.1 km
ADRIATIC SEA (382)
MD 3.9 (TRI). ML 3.3 (KBA).

DUI	0.99	238	P	08 37.30	-0.2
			eSg	08 54.40	
HVAR	1.17	33	iPg	08 41.60	1.1
			iSg	08 59.60	
SDI	1.40	250	P	08 43.90	-0.3
			eSg	09 04.00	
BAI	1.45	138	P	08 45.00	0.3
			eSg	09 05.00	
AZI	1.61	263	P	08 48.40	1.4
			eSn	09 09.30	
AQU	1.62	276	P	08 48.50	1.2
			eSn	09 09.70	
SGO	1.65	187	P	08 46.50	-1.1
BRT	1.80	137	Pc	08 47.90	-1.9
			eSn	09 12.30	
MGR	2.06	181	P	08 53.10	-0.5
			eSn	09 19.10	
MNS	2.16	276	P	08 56.70	1.6
RDP	2.18	259	P	08 56.50	1.1
			eSn	09 22.50	
ASS	2.32	293	P	08 59.60	2.1
			eSn	09 25.80	
MMN	2.33	172	P	08 57.40	0.0
ARV	2.33	305	P	08 57.80	0.2
			eSn	09 26.20	
CSI	2.48	167	P	08 59.80	0.2
LCI	2.58	135	P	09 02.00	1.0
TDS	2.60	167	P	09 01.40	0.1
			eSn	09 32.80	
SDA	2.92	92	ePn	09 20.00	14.2X
CZI	3.01	172	P	09 05.90	-1.1
CRE	3.02	299	P	09 07.00	-0.4
PUK	3.21	91	ePn	09 10.00	0.0
VBY	3.31	356	e(Pn)	09 21.50	10.1X
			eSn	09 43.10	
TIR	3.32	103	ePn	09 13.50	2.0
BERA	3.61	113	ePn	09 17.00	1.4
ZAG	3.63	4	e(Pn)	09 18.00	2.1
CEY	3.64	347	eP	09 24.50	8.4X
			e(Sn)	10 10.50	
PHP	3.66	96	ePn	09 15.60	-0.8
PTJ	3.71	4	ePn	09 17.40	0.2
			eSn	10 02.10	
TRI	3.75	340	e(Pn)	09 16.40	-1.2
			e(Sn)	10 03.00	
			i(Sg)	10 23.50	
LJU	3.92	349	eP	09 20.00	0.0
			e	09 27.00	
			eSn	10 08.00	
VOY	4.02	343	ePn	09 19.40	-2.1
OHR	4.06	104	ePn	09 16.80	-5.2X
SOI	4.14	175	P	09 22.00	-1.1
LSK	4.31	117	ePn	09 26.10	0.5
SKO	4.37	91	ePn	09 29.50	3.1X
CTI	4.78	325	Pc	09 30.40	-1.9
			eSn	10 23.30	
FVI	4.83	336	P	09 31.30	-1.6
KBA	5.13	343	iPnc	09 36.30	-1.1
			iSn	10 36.20	
			i	11 03.60	
			i	11 11.00	
VAY	5.30	97	ePn	09 30.00	-9.6X
KHC	7.07	349	eP	10 09.90	5.3X

S.D. = 1.3 on 33 of 40 obs.

& JAN 27, 1990 02h 45m 09.20s
61.590 N 147.769 W
DEPTH = 10.2km
SOUTHERN ALASKA (2)
<AGS-P>.

GHO	0.58	289	iP	45 20.51	-0.5
			iS	45 29.28	
NCA	0.60	48	iP	45 20.81	-0.6
			eS	45 30.13	
PME	0.60	274	eP	45 20.97	-0.4
			eS	45 29.68	
PLRM	0.65	271	iP	45 21.57	-0.6
			eS	45 30.76	
GLI	0.78	155	eP	45 23.54	-0.9
			eS	45 35.52	
VZW	0.79	132	iP	45 23.43	-1.2
			eS	45 35.18	
KLU	0.89	95	iP	45 24.88	-1.4
			eS	45 37.08	
TOA	0.92	55	iP	45 26.13	-0.6
			iS	45 39.65	
PMS	0.93	249	eP	45 26.16	-0.8
			eS	45 38.99	
PWA	1.01	274	eP	45 26.90	-1.4
HIN	1.35	152	eP	45 32.82	-1.2
			eS	45 51.56	
SUA	1.43	266	eP	45 33.58	-1.7
CUT	1.44	306	iP	45 33.57	-1.6
CVA	1.44	136	eP	45 34.12	-1.1
			eS	45 54.63	
SLKM	1.61	229	eP	45 36.10	-1.7
HUR	1.64	329	iP	45 36.80	-1.4
			iS	45 58.16	
SGAM	1.66	130	eP	45 37.04	-1.4
			eS	45 59.66	
SEW	1.70	210	eP	45 37.82	-1.2
PAX	1.75	37	eP	45 38.24	-1.7
NKA	1.88	245	eP	45 42.77	1.1
RND	1.89	345	iP	45 40.27	-1.6
GLB	1.90	93	eP	45 40.19	-1.8
			iS	46 05.49	
RAGM	1.93	127	eP	45 42.43	0.0
			eS	46 07.57	
SPU	2.10	261	iP	45 43.26	-1.7
			eS	46 10.01	
CRP	2.13	263	eP	45 44.51	-0.9
MCK	2.22	346	eP	45 45.43	-1.1
CKL	2.23	262	eP	45 45.05	-1.8
NNL	2.32	230	eP	45 47.29	-0.8
RDT	2.47	248	eP	45 47.94	-2.3
HDA	2.85	7	eP	45 54.25	-1.3
WRH	2.90	357	eP	45 53.89	-2.3
NEA	3.06	349	eP	45 56.48	-1.9
RDS	3.25	357	eP	45 59.01	-2.2
GLM	3.42	3	eP	46 01.15	-2.4

34 obs. associated

& JAN 27, 1990 03h 36m 03.60s
36.668 N 121.343 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.3 (BRK).

SAO	0.13	320	iP	36 06.20	-0.1
LLA	0.33	99	iPc	36 10.20	0.0
			iS	36 15.30	
PRS	0.34	184	iPd	36 10.40	0.0
GCC	0.64	305	eP	36 15.50	-0.9
ARN	0.70	347	iPd	36 17.40	-0.2
MHC	0.71	341	eP	36 17.70	-0.2
PRI	0.76	134	eP	36 18.20	-0.6
PKEM	1.17	121	eP	36 26.00	0.3
PCC	1.17	315	eP	36 24.50	-1.4
FRI	1.35	76	eP	36 27.50	-1.4
BKS	1.40	330	ePd	36 30.70	1.0
CMB	1.56	29	eP	36 31.00	-1.0
KVN	3.50	46	eP	37 06.50	6.7

13 obs. associated

JAN 27, 1990 03h 39m 24.40± 1.39s
6.431 S ± 8.2km 154.993 E ± 8.1km
DEPTH = 101.6 ± 13.5 km
4.6mb (4 obs.)
SOLOMON ISLANDS (193)

RAB	3.59	308	e(P)	40 20.00	1.0
			iS	41 08.00	
HNR	5.74	122	eP	40 47.00	-1.7
			eS	41 54.00	
PMG	8.31	249	eP	41 20.00	-3.9X

CTA	16.01	211	eP	43 07.00	2.0
DZM	19.08	146	iPc	43 41.00	-0.9
QIS	20.49	225	eP	43 54.00	-2.4
			e	43 57.00	
RMQ	20.81	196	eP	44 01.00	1.4
BRS	20.95	186	eP	44 03.50	2.5
WB5	24.08	234	iP	44 31.70	0.0
WRA	24.14	234	Pc	44 31.70	-0.6
	0.7s		12.90nm		4.5mb
MTN	24.36	253	eP	44 34.00	-0.4
ASPA	26.55	228	iPd	44 53.40	-1.3
	0.3s		6.00nm		4.6mb
Z	23s		0.67um		4.1MszX
			LR	54 01.10	
PCI	35.50	277	ePd	46 15.00	1.6
KRP	36.48	152	eP	46 22.00	0.6
NGZ	37.53	153	P	46 31.00	0.6
COB	37.97	158	eP	46 35.00	1.1
GNZ	38.24	150	P	46 35.00	-1.1
TCW	38.67	157	P	46 39.70	0.0
WDW	39.01	156	P	46 41.60	-0.9
MTW	39.12	155	eP	46 42.30	-1.2
LOE	57.69	295	eP	49 07.00	0.0
BJI	58.46	326	eP	49 10.00	-1.9
KMI	59.70	304	eP	49 20.00	-1.1
BDT	60.11	294	eP	49 23.00	-0.6
CHG	60.66	296	iPc	49 27.00	-0.4
	1.0s		37.25nm		5.4mb X
HYB	79.08	289	ePc	51 19.00	-0.7
GBA	79.50	285	P	51 22.00	0.1
FBA	82.59	21	eP	51 37.00	-0.2
	1.0s		10.00nm		4.7mb
KVN	91.61	51	iP	52 23.50	1.9
TNP	92.18	52	eP	52 25.50	1.2
	1.0s		8.75nm		5.0mb
SES	97.44	40	eP	52 49.00	1.2

S.D. = 1.3 on 30 of 31 obs.

& JAN 27, 1990 04h 48m 57.01s
61.731 N 149.974 W
DEPTH = 38.4km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.7 (PMR).

PWA	0.09	150	iP	49 03.80	0.4
PLRM	0.43	109	iP	49 05.86	-0.8
			eS	49 13.71	
PMR	0.43	109	iPd	49 06.00	-0.7
SUA	0.46	234	iP	49 06.96	-0.3
			eS	49 15.51	
PME	0.46	102	iP	49 06.56	-0.6
GHO	0.50	85	iP	49 07.05	-0.8
			eS	49 16.02	
PMS	0.53	158	iP	49 07.60	-0.5
CUT	0.69	349	iP	49 09.43	-0.9
NCG	1.10	254	iP	49 15.40	-0.8
SPU	1.14	242	iP	49 16.09	-0.7
			eS	49 32.51	
CRP	1.15	247	iP	49 16.43	-0.5
NKA	1.16	212	eP	49 17.96	0.9
SLKM	1.23	186	iP	49 16.92	-1.2
			iS	49 33.77	
BGL	1.25	249	iP	49 17.79	-0.6
CKL	1.26	246	iP	49 17.73	-0.7
HUR	1.26	7	iP	49 17.92	-0.5
			eS	49 34.49	
NCA	1.52	79	iP	49 21.71	-0.4
			eS	49 42.02	
GLI	1.63	120	iP	49 22.44	-1.3
			eS	49 43.45	
SEW	1.65	171	eP	49 22.91	-1.1
RDT	1.66	227	iP	49 23.55	-0.6
RND	1.76	17	iP	49 24.83	-0.8
VZW	1.78	111	eP	49 24.96	-0.9
NNL	1.81	201	eP	49 26.53	0.2
TOA	1.84	77	iPc	49 26.80	0.0
RED	1.89	227	eP	49 26.93	-0.7
KLU	1.95	95	iP	49 27.21	-1.2
MCK	2.07	13	eP	49 29.34	-0.7
SDG	2.23	67	eP	49 32.03	-0.3
CNPM	2.30	198	eP	49 31.87	-1.4
PAX	2.44	57	eP	49 34.74	-0.7
SVW	2.79	260	iPc	49 38.50	-1.8
DDM	2.80	41	eP	49 40.77	0.3
PDB	2.84	229	iP	49 39.44	-1.6
NEA	2.89	8	eP	49 39.78	-1.9
GLB	2.96	93	eP	49 40.62	-2.1

27d 04h

HDA 3.02 26 eP 49 42.02 -1.5
TTA 3.06 296 iPd 49 42.40 -1.8
RDS 3.22 14 eP 49 44.73 -1.6
FBA 3.33 16 iP 49 46.20 -1.7
GLM 3.47 18 eP 49 48.03 -2.0
KDC 4.19 199 eP 49 58.50 -1.6
IMA 4.65 341 eP 50 04.80 -2.0
HYT 6.08 93 P 50 24.00 -3.0
INK 9.56 39 eP 51 14.00 -1.1
44 obs. associated

& JAN 27, 1990 05h 07m 22.30s
36.842 N 121.587 W
DEPTH = 3.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK).

SAO 0.14 124 iPd 07 24.82 -0.2
eS 07 27.00
GCC 0.38 300 iPc 07 29.30 -0.6
MHC 0.50 355 iPc 07 32.58 0.3
eS 07 41.25
ARN 0.51 5 iPd 07 32.60 0.1
PRS 0.54 161 iPd 07 32.40 -0.7
LLA 0.56 113 iPd 07 33.30 -0.3
PCC 0.91 316 eP 07 39.10 -1.3
PRI 1.02 133 eP 07 41.70 -0.6
BKS 1.15 334 iPd 07 43.20 -1.3
eS 08 00.80
BRK 1.16 333 e(P) 07 42.80 -1.8
PKEM 1.42 123 e(P) 07 48.00 -1.1
FRI 1.51 84 eP 07 49.30 -1.0
CMB 1.53 38 eP 07 48.60 -2.0
eS 08 08.00
NWRM 1.91 328 eP 07 59.30 3.2
14 obs. associated

? JAN 27, 1990 05h 48m 01.77± 3.05s
15.676 S ±32.6km 167.477 E ±37.9km
DEPTH = 136.3 ± 44.2 km
4.6mb (5 obs.)
VANUATU ISLANDS (186)

PVC 2.20 159 iP 48 38.80 -0.2
iS 49 05.90
DZM 6.44 189 iPc 49 35.80 0.3
iS 50 46.20
CTA 20.66 255 iPc 52 37.70 5.1X
0.8s 22.39nm 4.6mb
WB5 31.77 258 eP 54 15.30 0.0
WRA 31.80 257 Pc 54 15.40 -0.1
0.5s 2.20nm 4.2mb
ASPA 32.54 251 iPd 54 22.10 0.1
0.6s 28.00nm 5.2mb
FORR 38.98 240 iPc 55 17.10 0.8
0.4s 15.00nm 5.1mb
NWAO 48.44 240 eP 56 31.00 -1.3
BJI 73.12 321 eP 59 19.00 0.0
GBA 93.64 283 Pc 01 04.60 0.4
0.6s 0.80nm 4.2mb
S.D. = 0.7 on 9 of 10 obs.

? JAN 27, 1990 06h 28m 52.07± 3.37s
30.121 N ±35.8km 113.730 W ±10.0km
DEPTH = 10.0km (geophysicist)
4.2mb (1 obs.)
GULF OF CALIFORNIA (49)

GLA 3.07 343 eP 29 43.00 1.5
BAR 3.58 316 eP 29 49.00 0.2
PLM 4.18 321 eP 29 56.00 -1.5
PEC 4.76 323 e(P) 30 06.00 0.4
RVR 4.95 322 eP 30 22.00 13.8X
MWC 5.49 319 eP 30 36.00 19.9X
SBB 5.72 324 eP 30 26.00 6.8X
CLC 6.54 331 eP 31 02.00 31.2X
ALQ 7.80 50 eP 30 49.10 0.6
1.0s 5.00nm 4.7mb X
pP 33 19.20
ANMO 7.80 50 eP 30 47.00 -1.5
TNP 8.45 341 e(P) 30 57.00 -0.6
MSU 8.47 8 e(P) 31 02.00 4.1X
KVN 9.61 339 eP 31 13.00 -0.6
SIO 15.66 64 e(P) 32 39.60 5.2X
TUL 16.11 64 eP 32 44.50 4.4X
1.2s 21.80nm 4.2mb
Z 19s 0.55um 4.8Msz

LR 37 25.00
SES 20.35 5 eP 33 32.00 0.7
RSON 25.56 30 eP 34 23.00 0.5
PMR 39.08 334 eP 36 21.00 0.3
S.D. = 1.1 on 11 of 18 obs.

• JAN 27, 1990 06h 37m 01.46± 1.39s
31.230 S ± 8.7km 68.618 W ±12.2km
DEPTH = 116.2 ± 15.0 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.16 128 iPc 37 17.10 -1.0
ZON 0.32 189 iPd 37 18.90 0.3
eS 37 31.00
CFA 0.50 139 iPd 37 19.40 0.1
RTCV 0.63 174 iPc 37 20.30 0.1
RTRS 1.28 325 iPc 37 27.20 0.8
MRA 2.74 116 iPc 37 45.70 0.8
TCA 3.45 93 iPc 37 54.80 0.3
RFA 3.53 178 e(P) 37 55.00 -0.6
CYA 3.70 42 e(P) 37 57.00 -0.9
S.D. = 0.8 on 9 of 9 obs.

• JAN 27, 1990 07h 31m 48.37± 0.67s
52.098 N ±13.9km 169.579 W ± 7.6km
DEPTH = 33.0km (normal)
4.7mb (6 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK 4.40 270 eP 32 53.70 -0.8
TTA 13.04 28 e(P) 34 58.80 5.0X
PMR 14.62 41 e(P) 35 14.00 -0.3
IMA 16.14 24 eP 35 38.50 4.4X
FBA 17.02 33 eP 35 44.00 -1.1
MBC 30.84 21 eP 38 03.00 0.1
0.5s 2.00nm 4.2mb
EDM 33.38 65 eP 38 26.00 0.6
SES 35.83 69 eP 38 46.00 -0.4
KVN 37.53 89 eP 39 05.50 4.4X
FFC 38.97 59 eP 39 13.00 0.3
0.7s 6.00nm 4.5mb
BW06 40.58 79 eP 39 26.00 -0.4
FRB 49.28 35 eP 40 35.00 -0.3
BJI 50.74 287 eP 40 47.00 0.3
SCH 55.75 43 eP 41 24.00 0.2
SOD 60.23 353 iP 41 55.10 0.1
SUF 64.86 352 eP 42 26.00 0.2
0.3s 3.50nm 4.9mb
NB2 67.21 360 P 42 40.60 -0.3
0.8s 4.00nm 4.6mb
HFS 68.09 358 eP 42 45.30 -1.0
0.5s 4.10nm 4.8mb
KHC 79.11 358 P 43 53.00 2.3
KBA 81.17 358 iPc 44 02.70 0.8
0.6s 8.30nm 4.9mb
ASPA 90.12 230 eP 44 45.80 -0.4
S.D. = 0.8 on 18 of 21 obs.

& JAN 27, 1990 07h 51m 31.98s
60.218 N 152.144 W
DEPTH = 82.4km
SOUTHERN ALASKA (2)
<AGS-P>.

RED 0.37 303 iP 51 44.78 -0.5
iS 51 55.37
RDT 0.38 340 iP 51 44.77 -0.5
NNL 0.46 112 iP 51 46.35 0.5
NKA 0.69 40 iP 51 49.33 1.4
XLV 0.80 164 eP 51 48.37 -0.7
CNPM 0.83 146 iP 51 49.03 -0.5
eS 52 02.67
SPU 0.97 3 iP 51 50.44 -0.7
eS 52 04.87
CKL 0.99 355 iP 51 50.62 -0.8
SLKM 1.00 72 iP 51 50.45 -1.0
eS 52 05.52
CRP 1.05 360 iP 51 51.69 -0.6
iS 52 07.32
BGL 1.06 354 iP 51 51.52 -0.7
eS 52 06.48
PDB 1.12 248 iP 51 51.51 -1.3
eS 52 06.97
NCG 1.19 360 eP 51 53.13 -0.8
SEW 1.35 94 eP 51 54.20 -1.6
SUA 1.43 28 iP 51 56.42 -0.5
eS 52 16.01

PMS 1.63 50 eP 51 58.84 -0.8
eS 52 19.44
PWA 1.81 37 eP 52 01.22 -0.7
SVW 1.93 299 iP 52 01.44 -2.2
PLRM 2.02 46 eP 52 03.23 -1.5
PME 2.08 46 eP 52 04.24 -1.3
eS 52 29.15
GLI 2.58 73 eP 52 10.61 -1.8
VZW 2.88 71 eP 52 14.00 -2.6
NCA 3.14 53 eP 52 18.21 -2.0
KLU 3.30 65 eP 52 19.81 -2.7
24 obs. associated

% JAN 27, 1990 08h 27m 01.02± 0.92s
39.190 N ± 7.5km 27.790 E ± 9.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.77 57 ePg 27 16.40 0.3
eSg 27 27.00
IZM 0.89 208 ePn 27 18.00 -0.2
EDC 1.16 3 iPn 27 22.50 -0.1
BNT 1.17 5 iPn 27 22.50 -0.3
EZN 1.30 300 ePn 27 25.40 0.4
S.D. = 0.4 on 5 of 5 obs.

JAN 27, 1990 08h 49m 20.78± 1.06s
33.425 N ±10.0km 14.804 E ± 6.9km
DEPTH = 33.0km (normal)
4.1mb (10 obs.)
MEDITERRANEAN SEA (400)
MD 3.8 (ATH).

MNO 4.50 359 P 50 29.40 0.8
GIB 4.60 352 P 50 29.00 -0.9
SOI 4.75 12 P 50 32.80 1.0
CZI 5.88 10 P 50 47.80 -0.1
ROI 6.30 13 P 50 47.10 -6.7X
VLS 6.68 43 ePn 50 58.00 -1.1
ITM 6.92 55 ePn 51 03.00 0.4
VLI 7.43 61 ePn 51 10.50 0.8
IGT 7.55 35 ePg 51 11.10 -0.2
AGG 8.25 45 ePb 51 23.50 2.3
KZN 8.85 37 ePn 51 30.00 0.6
OHR 9.04 30 ePn 51 29.50 -2.5
LIT 9.07 41 ePb 51 32.70 0.2
GRG 9.65 37 ePn 51 39.40 -1.1
PLG 9.79 42 ePn 51 41.00 -1.4
VAY 10.01 36 ePn 51 44.60 -0.7
SKO 10.02 30 ePn 51 46.00 0.6
e(Sn) 53 33.00
OUR 10.07 44 ePn 51 47.90 1.7
LPG 13.56 335 eP 52 41.00 7.7X
0.8s 12.60nm 4.8mb
MLR 14.79 32 ePc 52 59.50 10.2X
LPO 15.41 321 eP 52 41.10 -16.2X
0.6s 3.90nm
VRI 15.43 33 ePd 53 03.00 5.5X
BSF 15.61 340 eP 53 00.60 0.6
0.8s 21.40nm 4.4mb
SMF 15.63 331 eP 53 00.90 0.8
1.0s 14.80nm 4.1mb
KHC 15.72 357 P 53 05.00 3.7X
BBTK 15.76 61 eP 53 09.00 7.0X
HAU 15.90 339 eP 53 04.30 0.7
1.0s 24.00nm 4.3mb
AVF 15.94 330 eP 53 03.90 -0.2
1.0s 12.00nm 4.0mb
CDF 16.00 342 eP 53 05.60 0.6
0.6s 3.60nm 3.7mb
SSF 16.10 331 eP 53 06.50 0.4
1.0s 14.00nm 4.0mb
KRA 17.05 11 eP 52 52.20 -25.8X
CLL 17.92 356 eP 53 27.00 -1.9
HFS 26.73 359 eP 54 56.30 -2.5X
0.5s 1.20nm 3.8mb
NB2 27.73 356 P 55 06.30 -1.6
0.8s 3.00nm 4.0mb
BCAO 29.05 172 ePc 55 20.00 -0.2
0.4s 3.00nm 4.3mb
SCH 58.81 318 eP 59 13.00 -5.0X
S.D. = 1.2 on 26 of 36 obs.

JAN 27, 1990 09h 10m 52.92± 0.50s
16.521 S ±10.5km 69.915 W ± 6.9km
DEPTH = 191.7 ± 5.6 km
4.8mb (11 obs.)

PERU-BOLIVIA BORDER REGION (118)

ARE	1.51	272	iPc	11	27.40	0.7
			eS	11	53.00	
ZOBO	1.74	82	iPd	11	28.00	-1.1
LPB	1.74	91	Pd	11	30.00	1.0
CNCB	1.88	99	iPd	11	32.00	1.5
CCH	3.71	104	iPd	11	52.90	1.2
PT03	6.21	293	iPc	12	22.20	-1.4
			iS	13	27.60	
PT06	6.75	293	iPc	12	30.00	-0.6
			eS	13	38.60	
ANT	7.16	184	iP	12	35.00	-1.0
PT08	7.87	304	iPd	12	46.40	0.5
			iS	14	11.00	
NNA	8.09	303	iPd	12	47.50	-1.0
	0.6s		62.00nm			5.1mb
			e	12	51.50	
			iS	14	10.50	
SLA	9.15	154	e(P)	13	01.50	-0.8
BAO	21.08	91	iPc	15	22.30	-1.2
FVM	57.54	341	iP	20	22.00	-2.5
	1.0s		15.00nm			4.7mb
ALQ	61.84	326	iPd	20	54.90	0.8
LIC	68.02	76	Pc	21	31.96	-1.9
	0.5s		24.00nm			5.2mb
TIC	68.17	76	Pc	21	32.88	-2.0
	0.6s		7.50nm			4.6mb
KIC	68.33	76	Pc	21	34.10	-1.8
	0.4s		63.00nm			5.7mb
LKO	68.69	73	Pc	21	37.20	-0.9
	0.5s		45.00nm			5.5mb
BW06	69.35	330	eP	21	41.00	-0.8
TNP	70.14	322	iP	21	48.20	1.5
	0.8s		3.24nm			4.1mb
SCH	71.10	2	eP	21	55.00	3.1X
KVN	71.30	322	iP	21	55.50	1.9
SPA	73.58	180	eP	22	08.00	1.4
	1.1s		10.71nm			4.5mb
SES	75.80	334	eP	22	20.00	0.8
FFC	76.03	341	eP	22	20.00	-0.4
	0.8s		10.00nm			4.6mb
EDM	78.87	335	eP	22	36.00	0.0
PNT	78.91	329	eP	22	38.00	1.7
	0.6s		7.00nm			4.6mb
ALOJ	81.69	47	iPc	22	51.50	0.1
AAPN	81.78	47	iPc	22	52.50	0.7
APHE	81.92	48	iPc	22	53.00	0.5
ASMO	82.07	47	eP	22	54.00	0.7
BCAO	89.76	85	iPc	23	32.50	1.2
	0.5s		5.00nm			4.7mb
			id	24	21.10	
WRA	136.63	214	PKP	29	57.00	2.3X
	0.7s		1.90nm			
MAT	148.09	314	ePKP	30	19.00	4.9X
	0.8s		11.19nm			
GBA	148.36	91	PKP	30	16.40	1.4
HYB	149.84	84	ePKP	30	28.00	10.7X

S.D. = 1.3 on 32 of 36 obs.

? JAN 27, 1990 09h 16m 06.55± 0.98s
39.071 N ± 9.2km 27.641 E ±16.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.73	204	ePg	16	21.00	0.0
			eSg	16	34.00	
DST	0.93	55	iPn	16	24.40	0.0
EDC	1.29	8	iPn	16	30.50	0.1
BNT	1.30	9	iPn	16	30.50	-0.1

S.D. = 0.2 on 4 of 4 obs.

JAN 27, 1990 09h 29m 11.17± 0.45s
39.149 N ± 4.0km 24.341 E ± 5.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.2 (ATH), 3.0 (THE).

ATH	1.27	203	ePn	29	35.00	0.2
PLG	1.40	331	ePn	29	36.50	-0.3
PRK	1.50	86	ePn	29	38.50	0.4
EZN	1.68	66	iPn	29	30.40	-10.3X
LIT	1.72	304	ePb	29	41.10	-0.2
			eSb	30	02.30	
THE	1.82	325	ePb	29	41.40	-1.3
SOH	1.84	336	ePb	29	43.20	0.2
SRS	2.05	344	ePb	29	45.70	-0.4
			eSb	30	09.80	
ALN	2.18	36	ePn	29	48.20	0.2
APE	2.28	155	ePn	29	49.00	-0.5
KNT	2.29	332	ePn	29	50.10	0.5
KZN	2.29	301	ePn	29	50.00	0.3
GRG	2.34	321	ePn	29	51.10	0.8
			eSn	30	19.60	
IZM	2.40	107	ePn	29	57.00	5.8X
VAY	2.56	329	ePn	30	00.50	7.2X
VLI	2.67	205	ePn	29	54.00	-1.0
ITM	2.74	225	ePn	29	57.00	1.0
MFT	2.79	53	ePn	29	52.00	-4.8X
BNT	3.01	65	ePn	29	53.00	-6.8X
DST	3.35	81	eP	30	19.00	14.3X

S.D. = 0.7 on 14 of 20 obs.

? JAN 27, 1990 10h 52m 45.13± 7.44s
40.270 N ±39.2km 27.243 E ±39.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.48	81	iPg	52	54.50	-0.4
			iSg	53	00.50	
MFT	0.52	3	ePg	52	54.90	-0.7
BNT	0.52	80	iPg	52	55.40	-0.4
			iSg	53	01.40	
CTT	1.26	45	ePg	53	10.00	1.5
YLV	1.65	79	iPn	53	15.40	1.0

S.D. = 1.4 on 5 of 5 obs.

JAN 27, 1990 11h 30m 51.78± 0.26s
43.618 N ± 2.8km 12.440 E ± 2.4km
DEPTH = 11.2 ± 1.9 km
CENTRAL ITALY (381)
MD 3.7 (TRI). ML 3.4 (LDG), 3.8 (KBA).

CRE	0.35	272	Pc	30	59.10	-0.1
ARV	0.38	108	Pd	30	58.90	-0.8
			eSg	31	04.60	
SFI	0.52	306	Pd	31	02.20	-0.2
			iSg	31	12.80	
ASS	0.57	164	P	31	02.10	-1.2
			eSg	31	11.70	
PGD	0.58	296	Pc	31	03.50	-0.1
			eSg	31	13.80	
FIR	0.87	281	iPgd	31	09.00	0.6
			iSg	31	23.00	
MNS	1.25	172	P	31	14.30	-0.5
			eSn	31	32.20	
PII	1.39	275	P	31	17.40	0.3
			eSn	31	36.90	
BDI	1.41	289	P	31	17.80	0.5
			eSn	31	37.00	
AZI	1.79	155	P	31	23.70	1.0
RMP	1.82	174	P	31	22.90	-0.3
RDP	1.87	174	P	31	24.00	0.0
			eSn	31	48.20	
SDI	2.16	152	P	31	29.30	1.0
			eSn	31	55.60	
RIY	2.22	38	iPn	31	28.70	-0.2
			iSn	31	55.80	
TRI	2.29	24	iPnc	31	29.30	-0.7
			i	31	35.70	
			iSn	31	58.00	
			iSg	32	07.30	
SAL	2.41	326	P	31	32.00	0.3
BOB	2.44	299	P	31	34.10	1.9
DUI	2.46	142	P	31	34.10	1.6
CTI	2.49	347	P	31	33.40	0.4
			eSn	32	02.90	
CEY	2.55	33	iPnc	31	33.40	-0.3
			eSn	32	12.00	
VOY	2.63	23	iPn	31	34.30	-0.6
			eSn	32	14.30	
PGF	2.74	248	Pn	31	37.00	0.5
VBY	2.76	46	e(Pb)	31	43.60	6.9X
			iSn	32	20.00	
LJU	2.85	31	ePnc	31	37.90	0.0
			iPg	31	47.00	
			eSn	32	14.00	
HVAR	2.95	97	iPn	31	38.80	-0.6
PCP	2.95	290	P	31	39.16	-0.3
FVI	2.98	5	Pd	31	40.40	0.6
CKI	3.11	286	P	31	41.00	-0.6
FIN	3.11	282	P	31	40.66	-1.1
IMI	3.31	277	P	31	46.66	2.1
ZAG	3.35	48	e(Pn)	31	56.00	11.0X
ROB	3.37	283	P	31	44.16	-1.2
PTJ	3.39	46	ePn	31	09.00	-36.7X
			eSn	32	29.70	
OGA	3.40	343	ePn	31	46.80	0.9
VAI	3.45	312	P	31	47.00	0.6
SCE	3.46	352	ePn	31	48.00	1.3
KBA	3.52	10	iPnc	31	47.20	-0.4
			i	32	08.70	
			iSn	32	31.30	
			iSg	32	49.40	
SBF	3.64	276	Pn	31	49.00	-0.2
			Sn	32	32.00	
ENR	3.68	281	P	31	49.32	-0.5
STV	3.75	281	P	31	50.32	-0.5
ORO	3.76	304	P	31	51.80	0.7
ORX	3.77	304	P	31	51.32	0.2
DOI	3.85	285	P	31	52.30	0.1
PZZ	3.95	285	P	31	52.32	-1.4
RSP	4.02	294	P	31	54.49	-0.2
BHG	4.11	4	eP	31	56.90	1.0
LSD	4.20	298	P	31	56.15	-1.2
FRF	4.21	271	Pn	31	57.60	0.3
			Sn	32	45.20	
RRL	4.27	290	P	32	00.15	1.8
LMR	4.33	268	Pn	31	58.80	-0.1
LRG	4.42	270	Pn	32	00.00	-0.3
			Sn	32	51.00	
LPG	4.48	297	Pn	32	02.30	1.0
LPL	4.50	297	Pn	32	02.40	0.8
WET	5.54	3	iPnd	32	14.60	-1.5
KHC	5.57	8	Pg	32	15.40	-1.2
			Sg	33	20.00	
BSF	5.78	319	Pn	32	19.00	-0.5
			Sn	33	22.00	
CDF	5.99	325	Pn	32	22.00	-0.5
			Sn	33	28.00	
HAU	6.11	318	Pn	32	23.80	-0.4
			Sn	33	29.80	
PRU	6.53	12	ePg	32	32.50	2.4
			Sn	33	47.00	
			Sg	34	33.00	
SMF	6.79	299	Pn	32	33.60	-0.2
			Sn	33	47.40	
LBF	6.85	302	Pn	32	33.60	-1.0
			Sn	33	48.40	
LOR	7.05	304	Pn	32	37.00	-0.4
			Sn	33	54.00	
AVF	7.16	299	Pn	32	38.00	-0.9
SSF	7.17	302	Pn	32	38.60	-0.5
BGF	7.40	297	Pn	32	41.00	-1.2

S.D. = 0.9 on 62 of 65 obs.

JAN 27, 1990 11h 45m 32.62± 0.54s
49.155 N ± 4.1km 6.878 E ± 9.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.6 (UCC), 2.3 (STR).

RUP	0.56	12	ePgd	45	43.50	-0.5
WLS	0.81	157	Pg	45	48.20	-0.1
			Sg	45	58.76	
ABH	0.85	31	ePn	45	48.60	-0.4
ECH	0.96	169	Pg	45	50.57	-0.3
			Sg	46	03.40	
MOF	1.32	173	Pg	45	57.32	0.3
			Sg	46	15.49	
BSF	1.33	183	Pg	45	57.29	0.1
			Sg	46	15.04	
FEL	1.49	149	Pg	46	00.61	1.1
			Sg	46	20.32	
MEM	1.56	339	Pc	46	01.70	1.3
DOU	1.76	303	P	46	02.90	-0.4
			i	46	05.10	
			iS	46	27.60	
LOMF	1.81	181	Pn	46	03.12	-1.0
			Sg	46	30.63	

S.D. = 0.8 on 10 of 10 obs.

? JAN 27, 1990 12h 36m 00.14± 4.11s
16.712 N ±31.3km 99.860 W ±28.0km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.16	1	iP	36	06.35	0.0
			iS	36	10.71	
III	1.70	13	iP	36	27.66	-0.4

27d 12h

			iS	36 48.79		
PPM	2.62	26	eP	36 41.84	0.3	
			(S)	37 17.65		
CRX	2.69	4	(P)	36 49.00	6.7X	
IIJ	3.01	2	(P)	36 47.17	0.1	
			(S)	37 32.42		
OXX	3.03	83	iP	36 47.00	-0.1	
			iS	37 25.00		

S.D. = 0.4 on 5 of 6 obs.

? JAN 27, 1990 12h 39m 24.05± 6.98s
13.123 N ±55.9km 89.175 W ±17.5km
DEPTH = 33.0km (normal)
EL SALVADOR (73)
Felt (II) at San Salvador.

OZA	0.43	23	iPd	39 33.60	-0.1	
SJAS	0.54	1	iPd	39 35.20	-0.2	
SSS	0.56	358	iPd	39 41.40	5.9X	
			eS	39 51.30		
VSS	0.62	354	iPc	39 36.80	0.3	
LFU	0.62	5	iPd	39 36.70	0.2	
TME	0.91	349	iPd	39 40.20	-0.3	
CUSS	1.08	316	iPd	39 43.00	0.0	
YPE	1.11	334	iPd	39 43.50	0.0	

S.D. = 0.2 on 7 of 8 obs.

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* JAN 27, 1990 12h 57m 41.79± 2.08s
32.081 S ±10.8km 69.646 W ±19.5km
DEPTH = 129.6 ± 24.4 km
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.97	77	iPc	58 04.80	0.1	
ZON	0.98	57	eP	58 05.00	0.2	
			eS	58 22.00		
RTLL	1.25	54	iPc	58 07.20	-0.3	
			S	58 27.00		
RTRS	1.91	5	iPc	58 15.10	0.1	
			S	58 40.00		
RFA	2.86	160	ePc	58 27.20	0.0	
TCA	4.37	82	ePc	58 47.50	0.1	

S.D. = 0.3 on 6 of 6 obs.

JAN 27, 1990 14h 05m 50.32± 0.56s
38.119 N ± 5.4km 86.438 W ± 5.0km
DEPTH = 5.0km (geophysicist)
3.8mb (1 obs.)
SOUTHERN INDIANA (489)
mbLg 3.5 (NEIS). Felt (IV) at Derby, Grantsburg, Magnet, Rome and Saint Croix, Indiana. Also felt (IV) at Battletown and West Point, Kentucky. Felt in Crawford, Harrison and Perry Counties, Indiana and in Breckinridge and Meade Counties, Kentucky.

HAKY	1.02	187	iP	06 09.30	-0.7	
BLO	1.05	356	P	06 10.80	0.2	
			S	06 25.20		
FDKY	1.42	159	iPc	06 16.00	-0.8	
MOTN	1.94	220	iPc	06 24.90	0.6	
ABTN	2.24	173	iPc	06 29.80	1.1	
ONTN	2.28	135	eP	06 29.50	0.2	
TCT	2.29	203	iP	06 29.90	0.5	
RSCP	2.61	165	iP	06 34.60	0.8	
GBTN	3.03	143	iPc	06 40.40	0.6	
FVM	3.15	269	eP	06 41.80	0.3	
PWLA	3.39	203	eP	06 44.60	-0.4	
DEK	4.21	336	Pg	07 10.00	13.5X	
			Sg	08 03.00		
NAV	4.55	98	eP	07 02.10	0.7	
OLY	4.81	239	eP	07 04.00	-1.1	
BLA	4.86	99	eP	07 04.80	-1.1	
CLE	5.06	47	iP	07 22.60	14.0X	
PRM	5.20	139	eP	07 10.00	-0.7	
JSC	5.68	131	eP	07 15.20	-2.2X	
CBN	7.14	87	eP	07 24.00	-14.0X	
			e	09 29.00		
TUL	7.80	256	eP	07 54.00	6.8X	
	1.1s		6.90nm		4.8mb X	
			eLg	09 52.80		
PNJ	9.89	70	iP	08 23.70	7.5X	
			LR	10 57.20		
RSON	13.74	340	eP	09 03.00	-5.1X	
GLD	14.71	282	e(P)	09 20.00	-1.1X	
GOL	14.83	282	eP	09 18.00	-4.7X	
FFC	19.69	333	eP	10 20.00	-3.2X	
	0.6s		3.00nm		3.8mb	

S.D. = 0.8 on 15 of 25 obs.

? JAN 27, 1990 14h 53m 26.66± 3.89s
3.720 S ±39.6km 149.863 E ±27.9km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
BISMARCK SEA (203)

PMG	6.26	205	iPc	54 59.00	-0.2	
			eS	55 50.00		
CTA	16.64	192	iPd	57 20.10	0.9	
	1.0s		23.00nm		4.3mb	
QIS	19.49	210	eP	57 52.00	-2.1	
WB5	22.05	222	eP	58 20.60	0.1	
WRA	22.12	222	Pd	58 21.50	0.4	
	0.5s		2.30nm		3.9mb	
RMQ	22.66	183	iPc	58 26.90	0.4	
BRS	23.70	174	iPd	58 36.00	-0.6	
			i	59 04.20		
ASPA	25.12	216	iPc	58 51.20	0.9	
	0.3s		9.00nm		4.8mb	

S.D. = 1.2 on 8 of 8 obs.

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* JAN 27, 1990 15h 11m 22.24± 1.13s
12.873 S ±18.8km 73.891 W ± 8.8km
DEPTH = 33.0km (normal)
PERU (116)

PT03	2.16	239	iPd	11 56.70	0.0	
			e(S)	12 20.70		
PT06	2.56	248	eP	12 01.40	-0.9	
			eS	12 32.00		
PT08	2.75	289	iPc	12 06.30	1.0	
			eS	12 40.00		
NNA	3.01	287	iPc	12 08.50	-0.3	
			eS	12 33.50		
ARE	4.26	147	eP	12 28.00	1.3	
ZOBO	6.52	122	P	12 57.00	-2.0	
	Z 18s		0.21um			
			S	13 30.00		
			LR	15 34.00		
LPB	6.68	124	P	13 12.00	10.9X	
CNCB	6.93	125	P	13 05.00	0.4	
			S	14 19.00		
CCH	8.72	122	(P)	13 30.00	0.6	
GBA	152.09	85	PKP	31 13.00	3.2X	
	0.5s		0.60nm			

S.D. = 1.3 on 8 of 10 obs.

JAN 27, 1990 16h 24m 41.96± 0.54s
37.506 N ± 8.6km 76.686 E ± 8.3km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	2.02	344	iPnd	25 17.40	2.9	
			Sn	25 46.70		
NDI	8.81	177	iPd	26 50.50	0.5	
			eS	28 28.00		
WMQ	10.47	50	P	27 09.20	-3.7X	
			S	29 03.00		
QUE	10.89	231	eP	27 19.00	0.2	
			eS	29 19.00		
MAIO	13.81	270	eP	27 56.00	-1.8	
GTA	18.21	77	eP	28 53.00	-0.9	
HYB	20.08	175	eP	29 15.00	-0.5	
			eS	33 53.00		
LZH	21.77	85	eP	29 31.50	-1.4	
GBA	23.81	178	P	29 54.00	1.3	
			S	33 40.00		
XAN	26.31	88	eP	30 16.00	-0.5	
TIY	28.22	79	eP	30 39.30	5.5X	
SUF	39.56	326	eP	32 16.30	5.1X	
HFS	45.12	321	eP	32 55.50	-1.1	
	0.4s		2.00nm		4.4mb	
NB2	46.35	322	P	33 05.20	-1.2	
	0.7s		2.40nm		4.3mb	
LKO	78.15	273	P	36 40.40	0.6	
WRA	78.77	126	P	36 45.00	2.0	
	0.6s		1.10nm		4.0mb	
KIC	79.37	270	P	36 46.50	0.0	
TIC	79.42	270	P	36 46.70	-0.1	
LIC	79.67	270	P	36 48.00	-0.1	
FFC	88.13	359	eP	37 40.00	9.7X	
	1.0s		11.00nm		5.1mb	

S.D. = 1.3 on 16 of 20 obs.

? JAN 27, 1990 16h 48m 26.47± 10.23s
70.972 N ±61.1km 11.084 W ±70.7km
DEPTH = 10.0km (geophysicist)
3.9mb (1 obs.)
JAN MAYEN ISLAND REGION (639)
MD 2.4 (BER).

JMI	0.77	92	iPgd	48 42.37	0.8	
			iSg	48 56.78		
JNW	0.87	85	iPgc	48 42.87	-0.3	
			iSg	48 58.80		
JNE	0.91	88	iPgc	48 43.28	-0.6	
			iSg	48 59.80		
NRA0	13.70	127	Pn	51 42.60	-0.3	
			Lg	54 12.40		
SOD	13.71	87	eP	51 48.00	5.0X	
APO	14.51	123	eP	52 00.20	6.8X	
	0.6s		1.80nm		3.9mb	
SUF	16.52	101	eP	52 19.90	0.6	
NUR	17.70	108	eP	52 34.00	-0.1	

S.D. = 0.7 on 6 of 8 obs.

JAN 27, 1990 16h 55m 10.70± 0.70s
31.538 S ± 9.6km 67.762 W ± 5.7km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.41	260	iPd	55 19.50	0.3	
ZON	0.78	269	iPd	55 26.00	0.0	
MRA	1.95	117	iPd	55 45.00	0.9	
TCA	2.72	87	eP	55 55.00	-0.3	
RFA	3.28	190	ePc	56 02.50	-0.7	
CYA	3.52	29	iPc	56 06.40	-0.2	

S.D. = 0.7 on 6 of 6 obs.

JAN 27, 1990 18h 36m 06.93± 0.96s
48.010 N ± 9.5km 9.343 E ± 6.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.6 (FUR), 2.8 (LDG).

SLE	0.62	247	ePc	36 18.20	-1.3	
SAX	0.76	180	ePc	36 21.90	-0.1	
ZLA	0.83	231	ePc	36 22.90	-0.2	
FEL	0.90	262	ePn	36 23.22	-1.1	
LLS	1.17	192	eP	36 29.70	0.9	
FUR	1.31	82	ePg	36 30.70	-0.4	
CDF	1.44	287	Pg	36 33.20	0.1	
			Sg	36 51.10		
BSF	1.72	265	Pn	36 37.20	0.0	
			Sg	37 00.50		
HAU	2.01	271	Pg	36 43.50	2.2	
KBA	2.87	107	ePg	36 59.00	5.3X	
			iSg	37 34.60		
KHC	3.03	67	eP	37 42.00	46.2X	

S.D. = 1.2 on 9 of 11 obs.

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* JAN 27, 1990 18h 38m 14.63± 2.09s
19.006 N ±12.3km 144.954 E ±21.4km
DEPTH = 613.4 ± 43.0 km
4.3mb (6 obs.)
MARIANA ISLANDS (216)

MAT	18.45	343	eP	41 55.00	0.0	
	0.8s		7.46nm		4.2mb	
CTA	38.87	178	iP	44 50.90	0.2	
QIS	39.67	188	iPd	44 57.00	-0.1	
	0.4s		5.00nm		4.4mb	
WB5	40.01	196	eP	44 59.90	0.0	
WRA	40.08	196	Pd	45 00.70	0.2	
	0.3s		3.60nm		4.4mb	
ASPA	43.76	195	iPd	45 29.30	-0.1	
	0.3s		11.00nm		4.8mb	
			eS	51 18.40		
DZM	45.92	152	iPc	45 45.90	-0.1	
BRS	46.74	170	iP	45 52.20	0.1	
			e	46 16.00		
FORR	52.15	198	eP	46 32.00	0.2	
COOL	54.63	205	eP	46 49.00	-0.3	
BAL	56.31	209	eP	47 01.00	0.1	
	0.4s		4.00nm		4.1mb	
MUN	57.70	209	eP	47 10.00	-0.3	
GBA	64.69	276	Pd	47 56.20	0.2	
	0.5s		1.90nm		3.8mb	

S.D. = 0.2 on 13 of 13 obs.

JAN 27, 1990 19h 52m 40.27± 0.32s
38.532 N ± 3.2km 23.550 E ± 2.6km
DEPTH = 21.1 ± 3.0 km
4.4mb (4 obs.)
GREECE (364)
ML 4.2 (ATH), 3.9 (THE).

ATH	0.57	167	ePn	52 51.50	0.0
NEO	0.81	342	ePn	52 54.70	-0.9
AGG	1.07	298	ePg	52 59.50	-0.5
			eSg	53 14.70	
PAIG	1.40	4	ePb	53 04.50	-0.1
LIT	1.77	333	ePb	53 10.00	0.0
OUR	1.83	10	ePb	53 10.50	-0.4
PLG	1.84	358	ePn	53 10.70	-0.4
ITM	1.86	224	ePn	53 12.20	0.8
VLI	1.87	195	ePn	53 11.70	0.2
APE	2.14	132	ePn	53 16.30	0.8
THE	2.15	348	ePn	53 15.40	0.0
PRK	2.24	71	ePn	53 16.20	-0.6
KZN	2.24	323	ePn	53 16.50	-0.5
SOH	2.29	356	ePn	53 17.60	0.0
VLS	2.35	262	ePn	53 20.00	1.6
EZN	2.51	58	ePn	53 21.00	0.3
GRG	2.58	340	ePn	53 21.50	-0.2
SRS	2.58	1	ePn	53 21.50	-0.2
KNT	2.67	349	ePn	53 23.10	0.1
			eSn	53 54.30	
SMG	2.72	107	ePn	53 24.00	0.4
LSK	2.80	306	iPnd	53 26.30	1.5
VAY	2.89	345	iPn	53 26.20	0.3
IZM	2.92	91	ePn	53 24.60	-1.8
KBN	2.97	316	ePn	53 29.00	1.9
RDO	3.03	30	ePn	53 26.50	-1.4
ALN	3.05	38	ePn	53 28.20	0.0
KEK	3.15	293	ePn	53 31.00	1.3
VAM	3.16	170	ePn	53 30.50	0.6
OHR	3.34	321	iPn	53 32.60	0.2
BERA	3.53	309	ePn	53 37.40	2.4
SKO	3.80	336	ePn	53 39.00	0.1
			i	53 43.50	
			i	53 46.50	
			i	53 54.50	
			i	54 10.50	
			i	54 42.00	
EDC	3.80	60	ePn	53 41.00	2.0
BNT	3.84	60	iPn	53 39.10	-0.5
PHP	3.95	324	iPnd	53 41.30	0.3
TIR	3.99	316	ePn	53 45.00	3.4X
DST	4.10	73	ePn	53 44.00	0.8
KKS	4.28	327	ePn	53 47.00	1.4
LACI	4.28	318	ePn	53 48.90	3.2
PUK	4.48	323	ePn	53 49.70	1.1
CTT	4.58	54	ePn	53 48.60	-1.4
DMK	4.60	43	ePn	53 49.20	-1.2
SDA	4.66	320	ePn	53 52.40	1.3
BCI	4.66	326	ePn	53 51.60	0.5
LCI	4.69	294	P	53 50.10	-1.5
YLV	4.94	64	iPn	53 54.10	-1.1
ISK	4.94	57	ePn	53 56.00	0.9
ELL	5.35	107	ePn	54 01.00	-0.1
BRT	5.43	298	P	54 01.60	-0.4
			eSn	54 54.10	
ROI	5.53	283	P	54 03.10	-0.4
BCK	5.66	99	eP	54 08.00	2.6
TDS	5.72	284	P	54 06.10	-0.1
CSI	5.78	285	P	54 05.70	-1.3
CZI	5.83	279	P	54 07.60	0.0
SOI	5.91	268	P	54 07.90	-0.9
			eSn	55 04.10	
MMN	6.03	285	P	54 10.40	0.0
ATN	6.37	269	P	54 13.90	-1.4
			eSn	55 13.60	
MGR	6.40	287	P	54 15.10	-0.7
SGO	6.68	290	P	54 18.90	-0.8
			eSn	55 22.80	
MEU	6.97	261	P	54 21.40	-2.4
			eSn	55 29.00	
HVAR	7.11	313	ePn	54 24.60	-1.0
MLR	7.18	14	ePd	54 28.50	1.8
BZS	7.22	349	eP	54 26.00	-1.2
BBTK	7.27	77	eP	55 09.00	40.9X
VRI	7.70	17	ePc	54 33.00	-0.9
SDI	8.10	296	P	54 39.70	0.0
PTJ	9.27	325	eP	54 52.30	-3.4X
VBY	9.30	321	eP	55 07.20	11.1X
CEY	9.88	320	e(P)	55 04.50	0.3
			e(Sn)	56 49.00	
LJU	10.04	321	e(P)	55 06.50	0.2
			e(S)	56 55.50	
VOY	10.35	319	eP	55 07.00	-3.7X
			eS	57 02.90	
KBA	11.35	322	eP	55 20.50	-3.9X
	1.1s		10.50nm	5.0mb	
			e	55 26.00	
			i	55 32.70	
KHC	12.80	329	eP	55 46.40	2.8X
UPP	21.68	352	iP	57 26.00	-5.2X
HFS	22.51	347	eP	57 38.50	-1.0
	0.7s		2.30nm	3.8mb	
NB2	23.82	345	P	57 51.20	-1.1
	0.9s		5.80nm	4.1mb	
SUF	24.27	3	eP	57 59.90	3.2X
SOD	28.94	2	eP	58 35.00	-4.7X
BCAO	34.25	189	ePc	59 30.20	3.4X
	0.5s		5.00nm	4.7mb	
LKO	38.93	230	P	00 06.34	-0.1
KIC	41.00	226	P	00 23.00	-0.5
LIC	41.27	226	P	00 25.20	-0.5

S.D. = 1.1 on 70 of 81 obs.

? JAN 27, 1990 19h 59m 02.97± 4.39s
7.200 N ±27.9km 126.438 E ±21.6km
DEPTH = 98.9 ± 30.7 km
4.3mb (2 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MNI	5.94	196	eP	00 30.00	0.0
WB5	28.02	164	eP	04 49.70	2.9X
CTA	33.40	145	iPd	05 34.00	-0.2
	0.9s		8.40nm	4.6mb	
COOL	38.20	187	eP	06 14.00	-0.8
MUN	40.16	194	iPd	06 31.30	0.3
NWAO	40.85	192	eP	06 37.00	0.4
BRS	42.80	145	eP	06 53.00	0.3
GBA	48.55	282	Pc	07 38.30	0.0
	0.9s		2.20nm	4.0mb	

S.D. = 0.6 on 7 of 8 obs.

& JAN 27, 1990 21h 21m 53.70s
36.678 N 121.350 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.4 (BRK).

SAO	0.12	319	iPc	21 56.10	-0.1
			iS	21 57.60	
LLA	0.33	100	iPc	22 00.50	0.1
PRS	0.35	183	iPd	22 00.70	0.0
GCC	0.63	304	iPc	22 05.30	-0.9
ARN	0.69	348	iPd	22 07.30	-0.1
MHC	0.70	341	iPd	22 07.72	0.0
			eS	22 18.10	
PRI	0.77	134	eP	22 08.50	-0.7
PCC	1.16	315	iPd	22 14.60	-1.3
PKEM	1.18	121	eP	22 16.50	0.4
FRI	1.35	76	eP	22 17.20	-1.9
			eS	22 36.20	
BKS	1.39	330	iPd	22 17.10	-2.6
			eS	22 24.50	
BRK	1.40	329	e(P)	22 17.60	-2.2
CMB	1.56	29	eP	22 20.80	-1.3
			iS	22 40.60	
BCH	1.81	145	eP	22 25.00	-0.9
ABL	2.51	136	eP	22 34.50	-1.6
ORV	2.88	358	eP	22 40.20	-0.8
KVN	3.50	46	eP	22 50.00	0.0
TNP	3.58	66	e(P)	22 52.00	0.8

18 obs. associated

& JAN 27, 1990 21h 42m 55.70s
36.673 N 121.367 W
DEPTH = 2.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.0 (BRK).

SAO	0.11	326	iPc	42 58.05	0.1
			iS	42 59.30	
PRS	0.34	180	iPd	43 02.70	0.2
LLA	0.35	99	iPc	43 02.60	0.0
GCC	0.62	305	ePc	43 07.30	-0.7
ARN	0.69	349	iPd	43 09.30	-0.1
MHC	0.70	342	iPd	43 09.70	0.0
			iS	43 20.90	
PRI	0.78	133	ePc	43 10.50	-0.7
PCC	1.16	316	ePd	43 16.60	-1.5
PKEM	1.18	121	eP	43 18.40	-0.1
FRI	1.37	76	eP	43 19.50	-2.2
			iS	43 38.10	
BKS	1.39	330	iPd	43 19.50	-2.5
			eS	43 41.50	
CMB	1.57	30	eP	43 22.70	-2.0
BCH	1.81	145	eP	43 26.20	-2.1
ABL	2.52	136	eP	43 36.30	-2.3
ORV	2.88	358	eP	43 41.50	-2.0
KVN	3.51	46	eP	43 51.20	-1.4
TNP	3.59	66	e(P)	43 52.50	-1.3

17 obs. associated

& JAN 27, 1990 22h 06m 08.90s
38.788 N 122.742 W
DEPTH = 7.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 4.4 (BRK).
Mo=1.2*10**15 Nm (BRK). Felt (IV) at Cobb. Felt (III) at Loch Lomond and Middletown.

NWRM	0.35	199	iPd	06 16.30	0.3
BRK	0.99	157	eP	06 27.00	-0.9
			eS	06 41.00	
BKS	0.99	156	iPd	06 27.10	-0.9
			eS	06 41.10	
ORV	1.23	51	eP	06 30.20	-1.9
PCC	1.32	167	eP	06 31.60	-1.9
LTCM	1.50	18	eP	06 35.00	-1.2
MHC	1.68	149	eP	06 37.40	-1.6
ARN	1.72	146	eP	06 38.20	-1.3
WDC	1.80	5	eP	06 40.80	0.3
GCC	1.85	161	eP	06 39.30	-2.0
CMB	2.00	111	iPc	06 43.00	-0.5
FHC	2.23	335	eP	06 54.50	7.7
LBFM	2.64	14	eP	06 49.50	-3.3
KVN	3.63	84	ePc	07 05.50	-1.4
TNP	4.39	98	e(P)	07 17.00	-0.8

15 obs. associated

JAN 27, 1990 22h 50m 12.82± 1.11s
41.632 N ± 8.9km 22.764 E ± 7.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.1 (SKO).

VAY	0.34	205	iPg	50 20.70	0.8
			iSg	50 28.40	
KNT	0.48	168	ePg	50 22.20	-0.4
			eSg	50 31.00	
GRG	0.73	202	ePg	50 27.80	0.6
			eSg	50 40.80	
SOH	0.92	151	ePg	50 29.20	-1.3
THE	1.01	171	ePg	50 31.70	-0.2
SKO	1.05	289	ePn	50 32.00	-0.6
OHR	1.57	251	ePn	50 34.50	-6.3X
OUR	1.59	144	ePb	50 41.00	-0.1
ALN	2.58	105	ePn	50 56.40	1.1

S.D. = 0.9 on 8 of 9 obs.

• JAN 27, 1990 23h 14m 46.47± 1.57s
12.963 N ± 8.6km 143.034 E ±23.9km
DEPTH = 140.0 ± 18.9 km
4.6mb (5 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUMO	1.89	71	eP	15 20.20	0.1
PJG	1.89	71	eP	15 20.00	-0.1
GUA	1.92	72	eP	15 20.20	-0.2
			eS	15 43.50	
MAT	23.88	350	iPc	19 48.30	0.0
	0.9s		13.45nm	4.4mb	
WB5	33.73	195	iPc	21 16.50	-0.1
WRA	33.80	195	Pd	21 16.50	-0.7
	0.6s		14.00nm	4.9mb	
BJI	35.86	324	eP	21 35.50	1.1
ASPA	37.48	194	iPd	21 48.50	0.2
	0.6s		15.00nm	4.9mb	
DZM	41.71	146	iPc	22 24.10	0.9
SOD	87.84	340	eP	27 20.00	-0.8
SUF	90.30	336	eP	27 31.80	-0.6
	0.6s		3.20nm	4.6mb	

27d 23h

HFS 96.68 337 ePKP 27 58.50 -3.2X
0.8s 1.40nm 4.5mb
LIC 142.98 299 PKP 34 02.90 -3.3X
ZOBO 149.69 100 PKP 34 22.00 4.3X
S.D. = 0.7 on 11 of 14 obs.

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* JAN 27, 1990 23h 18m 18.23± 1.02s
38.321 S ±12.3km 74.425 W ±18.5km
DEPTH = 33.0km (normal)
5.0mb (4 obs.) 4.1Msz (2 obs.)
OFF COAST OF CENTRAL CHILE (134)

RFA 5.96 55 eP 19 48.10 1.5
RTCV 8.05 39 e(P) 20 14.50 -1.3
CFA 8.40 39 eP 20 19.00 -1.7
RTLL 8.52 37 iPd 20 20.00 -2.3
RTRS 9.11 28 ePd 20 29.70 -0.7
MRA 9.24 53 e(P) 20 32.50 0.3
ARE 21.93 8 eP 23 13.00 2.1
CCH 22.09 21 P 23 15.50 3.0X
CNCB 22.16 17 P 23 13.80 0.2
i 23 18.00
LPB 22.41 16 P 23 20.00 4.2X
1.2s 109.38nm 5.2mb
S 27 50.00
LR 32 40.00
ZOBO 22.66 16 P 23 19.50 1.0
1.3s 31.55nm 4.6mb
Z 24s 0.78um 4.1MszX
S 27 28.00
LR 32 50.00
BAO 32.44 53 eP 24 48.00 0.3
SPA 51.87 180 iPc 27 22.80 -2.5
1.2s 35.21nm 5.2mb
TUL 76.46 342 eP 30 05.40 -0.8
1.2s 10.50nm 4.7mb
Z 22s 0.11um 4.1Msz
LR 56 00.00
LIC 77.96 72 P 30 15.34 0.5
Z 20s 0.10um 4.1Msz
TIC 78.24 72 P 30 16.94 0.5
KIC 78.26 72 P 30 16.90 0.3
ALQ 78.71 334 eP 30 01.40 -17.5X
1.0s 2.50nm
LKO 79.72 69 P 30 26.08 1.5
BFS 81.88 118 eP 30 37.00 1.0
MAIO 143.58 79 ePKP 37 48.00 -3.2X
GBA 144.96 127 PKP 37 51.00 -3.0X
QUE 147.25 93 ePKP 38 10.00 12.3X
HYB 148.50 124 ePKP 38 12.00 12.2X
S.D. = 1.4 on 17 of 24 obs.

% JAN 27, 1990 23h 29m 37.92± 0.86s
39.486 N ± 7.3km 28.980 E ± 9.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.30 294 iPg 29 43.70 -0.4
iSg 29 48.70
YLV 1.12 15 iPn 29 58.50 -0.5
BNT 1.19 317 iPn 30 00.00 -0.1
EDC 1.21 315 ePn 30 01.00 0.5
KHL 1.24 160 ePn 30 01.00 0.0
CTT 1.71 346 ePn 30 08.50 0.6
S.D. = 0.6 on 6 of 6 obs.

JAN 27, 1990 23h 53m 02.42± 0.30s
18.545 N ± 7.1km 68.930 W ± 5.4km
DEPTH = 154.3km (10 depth phases)
4.5mb (10 obs.)
MONA PASSAGE (89)
Felt in the Dominican Republic.
Also felt slightly at Aguos
Buenos, Puerto Rico.

LRS 1.99 97 P 53 39.20 1.0
PORP 2.23 102 P 53 41.80 0.9
SJG 2.68 99 iP 53 46.00 -0.4
CPD 2.91 100 P 53 49.10 -0.2
LPR 2.91 94 P 53 49.00 -0.5
BPA 6.90 101 eP 54 41.00 -1.3
eS 55 59.00
PAG 7.36 109 eP 54 47.90 -0.6
S 56 10.00
SEG 7.40 106 eP 54 48.90 0.0
MGG 7.73 109 eP 54 53.30 0.0
BBL 7.74 112 eP 54 53.20 -0.3
DEG 7.83 105 eP 54 54.80 0.0
DPMT 7.93 113 eP 54 56.05 0.1
FDF 8.36 116 eP 55 01.87 0.0
0.2s 0.75nm 3.9mb
S 56 29.20
BIM 8.53 117 eP 55 02.95 -1.2
MVM 8.67 116 eP 55 04.65 -1.2
SLB 8.91 121 eP 55 10.12 1.0
eS 56 46.38
SVB 9.06 124 eP 55 11.60 0.6
eS 56 48.27
SVV 9.06 124 eP 55 12.39 1.4
eTT 01 45.00
SSV 9.07 124 eP 55 12.10 0.8
eS 56 48.20
TRN 10.71 136 eP 55 34.46 1.7
eS 57 26.00
TBH 11.05 135 eP 55 38.64 1.4
SGS 17.90 327 P 57 02.40 -0.6
JSC 19.14 327 P 57 15.00 -1.1
PRM 19.58 325 P 57 20.00 -0.6
CBN 20.93 341 eP 57 35.00 0.8
1.1s 19.00nm 4.4mb
NA2 20.97 340 P 57 35.50 0.9
BLA 21.16 334 P 57 37.00 0.5
0.9s 18.59nm 4.5mb
GBTN 21.76 325 P 57 43.10 0.6
RSCP 22.49 322 P 57 50.50 0.9
PWLA 23.59 318 P 58 01.70 1.5
OLY 26.14 315 P 58 27.40 3.5X
TUL 29.35 312 iPc 58 52.50 -0.3
1.2s 34.10nm 5.0mb
i 59 25.40 157km
e 59 43.00
ZOBO 34.60 179 P 59 34.00 -5.2X
LPB 34.87 179 P 59 40.00 -1.3
CNCB 35.14 178 P 59 42.50 -1.3
SCH 36.24 2 eP 59 53.00 1.0
ANMO 37.03 304 P 59 59.80 0.7
1.1s 9.49nm 4.4mb
pP 00 33.40 151km
RSON 37.77 334 P 00 06.00 1.1
pP 00 39.00 150km
GOL 37.82 312 P 00 05.80 0.0
1.0s 15.00nm 4.7mb
pP 00 39.00 151km
BW06 41.92 314 P 00 39.00 -0.5
pP 01 13.20 154km
DAU 42.29 310 P 00 43.00 0.3
GLA 43.44 299 P 00 52.40 0.7
FFC 44.04 333 eP 00 55.00 -1.3
1.1s 15.00nm 4.5mb
LRM 45.00 317 eP 01 04.80 0.5
FRB 45.16 0 eP 01 05.00 0.1
SES 46.10 323 eP 01 13.00 0.3
pP 01 48.00 156km
TNP 46.19 305 P 01 14.40 0.7
1.0s 9.17nm 4.3mb
pP 01 49.50 157km
KVN 47.05 306 P 01 20.50 0.0
pP 01 54.80 152km
EDM 48.70 326 eP 01 31.50 -1.3
ATEJ 59.24 58 iPc 02 56.00 5.9X
APHE 59.50 58 iPc 02 53.50 1.7
LKO 61.84 89 Pc 03 07.80 0.0
MBC 63.15 348 eP 03 13.00 -2.5
TIC 63.20 92 P 03 15.34 -1.5
LIC 63.32 92 P 03 16.26 -1.3
KIC 63.55 92 Pc 03 17.92 -1.1
FBA 68.65 333 P 03 50.20 -0.3
pP 04 27.60 155km
NB2 69.19 31 P 03 54.50 0.5
0.8s 2.10nm 4.0mb
IMA 71.09 335 eP 04 04.00 -1.5
OHR 77.85 51 eP 04 40.00 -4.5X
BCAO 86.21 87 iPc 05 29.30 1.1
0.7s 31.00nm 5.3mb
ic 06 09.50 160km
S.D. = 1.0 on 57 of 61 obs.

? JAN 28, 1990 01h 10m 53.55± 6.02s
39.856 N ±36.6km 23.849 E ±28.9km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG 0.15 299 ePg 10 56.00 -1.0
OUR 0.49 12 iPgc 11 02.70 -0.8
eSg 11 08.00
THE 1.03 319 ePg 11 12.50 -0.5
SOH 1.04 339 ePg 11 12.80 -0.3
LIT 1.07 284 ePg 11 13.00 -0.8
eSg 11 27.40
SRS 1.28 351 ePb 11 16.80 -0.4
eSb 11 32.50
KNT 1.49 331 ePb 11 21.30 0.9
eSb 11 41.40
GRG 1.56 315 ePb 11 22.00 0.6
eSb 11 42.00
S.D. = 0.8 on 8 of 8 obs.

? JAN 28, 1990 01h 23m 56.51± 3.30s
4.170 S ±43.4km 152.957 E ±31.7km
DEPTH = 115.9 ± 18.4 km
4.3mb (1 obs.)
NEW BRITAIN REGION (192)

RAB 0.79 268 iPc 24 16.50 0.1
iS 24 32.00
PMG 7.76 228 eP 25 48.00 -0.4
RMQ 22.56 190 eP 28 49.00 1.3
BRS 23.09 180 iP 28 52.20 -0.7
i 30 10.00
WB5 23.92 228 iP 29 01.80 0.8
WRA 23.98 228 Pd 29 02.20 0.6
0.4s 4.50nm 4.3mb
FORR 35.40 219 iPd 30 41.30 -1.7
S.D. = 1.5 on 7 of 7 obs.

? JAN 28, 1990 01h 25m 28.97± 1.50s
17.520 S ±71.9km 178.971 E ±38.6km
DEPTH = 622.1 ± 12.5 km
4.4mb (5 obs.)
FIJI ISLANDS (182)

SGE 1.00 266 iP 26 43.30 -0.4
DZM 12.63 247 iPc 28 15.10 1.3
CTA 31.05 260 iPd 31 01.30 1.2
0.6s 12.33nm 4.7mb
WB5 42.22 260 iP 32 30.20 -1.2
WRA 42.24 259 Pc 32 30.20 -1.3
0.8s 6.40nm 4.2mb
ASPA 42.50 254 iPd 32 29.60 -3.9X
0.7s 15.00nm 4.6mb
FBA 86.00 14 iP 37 06.20 0.7
1.1s 9.38nm 4.4mb
CHTO 86.52 291 iP 37 09.00 0.0
0.8s 1.83nm 3.9mb
NB2 135.66 352 PKP 43 29.00 -12.1X
0.7s 1.10nm
HFS 136.13 349 ePKP 43 29.20 -12.7X
0.4s 1.20nm
CLL 144.49 345 iPKPc 43 56.20 -0.8
BRG 144.64 344 ePKP 43 56.10 -1.2
PRU 145.27 342 ePKP 43 58.00 -0.4
KHC 146.32 343 PKP 44 01.50 1.4
GRF 146.42 346 ePKP 44 01.00 0.7
e 44 13.00
S.D. = 1.2 on 12 of 15 obs.

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* JAN 28, 1990 02h 52m 44.28± 1.40s
40.115 N ± 9.4km 21.561 E ±11.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)

LIT 0.71 91 ePg 52 57.00 -1.3
eSg 53 07.80
GRG 1.06 37 ePg 53 03.90 -0.3
eSg 53 20.20
OHR 1.15 330 ePn 53 05.10 -0.8
THE 1.19 64 ePb 53 06.60 0.1
AGG 1.24 151 ePb 53 07.90 0.5
eSb 53 26.40
VAY 1.43 32 ePn 53 12.00 1.8
SKO 1.86 357 ePn 53 20.50 4.1X
i 53 46.50
S.D. = 1.4 on 6 of 7 obs.

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* JAN 28, 1990 03h 58m 49.29± 1.71s
5.883 S ±11.7km 105.670 E ±11.0km
DEPTH = 104.7 ± 14.6 km
5.3mb (11 obs.)
SUNDA STRAIT (276)

TRT 7.15 105 ePd 00 34.10 1.2

	1.0s	109.40nm		5.3mb			
KGM	8.19	343 ePd	00	48.10	1.0		
		e	03	16.20			
IPM	11.38	336 ePd	01	31.00	1.0		
PCI	14.98	71 iPc	02	26.00	9.2X		
	2.0s	7.00nm		3.6mb	X		
LOE	23.47	351 eP	03	51.50	1.2		
BDT	23.90	344 eP	03	54.00	-0.6		
CHG	25.42	345 eP	04	06.60	-2.3		
		e	07	42.00			
MTN	26.04	107 eP	04	13.00	-1.6		
KMI	30.95	355 eP	05	03.50	4.7X		
WB5	31.17	119 eP	04	59.00	-1.6		
WRA	31.17	119 Pc	04	58.60	-2.0		
	0.9s	54.00nm		5.3mb			
ASPA	32.41	126 iPc	05	09.50	-1.9		
	1.2s	73.00nm		5.3mb			
		ePcP	07	59.50			
		ePcS	11	42.30			
GBA	34.07	305 P	05	22.60	-3.2X		
		e	08	33.60			
HYB	35.41	311 eP	05	35.00	-2.2		
QIS	36.00	117 iPc	05	40.60	-1.6		
POO	39.66	308 eP	06	14.00	1.2		
BOM	40.67	308 eP	06	12.00	-9.0X		
PMG	41.25	98 eP	06	25.00	-0.8		
LZH	41.78	358 eP	06	29.50	-0.6		
Z	14s	0.70um		4.7MszX			
E	10s	1.00um					
		PcP	08	27.00			
CTA	41.85	114 iPd	06	30.90	0.1		
	1.0s	80.00nm		5.5mb			
ADE	42.01	138 ePd	06	31.60	-0.3		
	0.9s	82.35nm		5.5mb			
NDI	43.96	323 eP	06	45.00	-2.7		
RMQ	45.87	121 eP	07	05.00	2.0		
BJI	46.71	11 eP	07	09.00	-0.4		
Z	14s	0.59um		4.7MszX			
E	10s	0.31um					
BWA	48.61	132 eP	07	26.10	1.7		
CAN	49.43	132 eP	07	31.20	0.5		
COO	49.82	125 eP	07	35.00	1.2		
MAIO	60.23	318 eP	08	46.00	-2.9X		
DZM	60.75	112 iPc	08	53.00	0.3		
BHD	69.83	308 ePc	09	50.00	-0.7		
SLY	69.86	311 ePc	09	50.00	-0.8		
TAB	70.25	314 eP	09	51.00	-2.4		
MSL	71.92	311 ePc	10	07.50	4.2X		
MBH	76.45	302 eP	10	29.00	-0.4		
PRNI	76.50	303 eP	10	32.00	2.2		
KSR	77.37	245 eP	10	34.50	-0.4		
BFS	77.46	244 eP	10	31.00	-4.3X		
KAS	80.47	313 iPd	10	52.20	1.0		
BBTK	80.79	312 iPc	10	52.00	-1.0		
ELL	82.19	308 eP	11	01.00	0.6		
GPA	82.72	312 eP	11	02.00	-0.9		
YLV	83.48	312 iP	11	05.80	-1.0		
SPA	84.16	180 eP	11	09.70	-0.1		
	1.0s	20.50nm		5.0mb			
CTT	84.31	312 iP	11	10.50	-0.4		
VRI	86.54	317 ePc	11	21.50	-0.3		
MLR	86.99	316 ePd	11	24.50	0.3		
BCAO	87.61	275 iPc	11	27.20	-0.5		
	1.1s	40.00nm		5.4mb			
		ic	11	48.90			
VAY	88.68	312 eP	11	50.40	18.2X		
SKO	89.61	312 eP	11	38.00	1.4		
OHR	89.97	311 eP	11	36.80	-1.5		
	1.1s	0.09nm		2.8mb	X		
LSK	89.99	310 eP	11	38.80	0.3		
BZS	90.01	316 eP	11	38.00	-0.3		
PHP	90.31	312 eP	11	40.40	0.6		
SUF	90.40	333 eP	11	41.30	1.6		
	0.8s	10.30nm		5.0mb			
SRN	90.41	310 eP	11	40.00	-0.3		
NUR	90.67	331 iP	11	42.10	1.1		
	0.9s	22.00nm		5.3mb			
SDA	91.05	312 eP	11	43.00	-0.2		
SOD	91.19	338 eP	11	42.00	-1.3		
KRA	91.73	320 eP	11	46.00	-0.1		
SRO	92.54	318 eP	11	49.80	-0.1		
ZST	93.38	318 e(P)	11	57.70	3.9X		
UPP	94.06	330 iP	11	57.80	1.2		
KSP	94.12	321 eP	11	59.00	1.8		
VBY	94.44	315 e(P)	12	03.50	4.8X		
LJU	94.98	316 e(P)	12	03.50	2.3X		
PRU	95.19	320 eP	12	03.80	1.7		
HFS	96.04	330 eP	12	04.10	-1.6		
	0.9s	22.10nm		5.7mb			
NB2	97.27	331 P	12	12.10	0.8		
	1.1s	9.00nm		5.2mb			
PNT	122.34	33 ePKP	17	35.00	1.4		
	0.9s	14.00nm					
SES	126.06	28 ePKP	17	42.00	1.1		
FFC	126.45	20 ePKP	17	42.00	0.6		
	0.8s	16.00nm					
CMB	127.42	46 ePKP	17	47.10	3.2X		
FRI	128.35	47 ePKP	17	49.50	3.9X		
KVN	128.55	44 PKP	17	47.00	0.8		
TNP	129.62	44 PKP	17	49.50	1.2		
RSON	132.34	17 PKP	17	53.00	0.3		
MSU	132.80	41 PKP	17	57.00	2.7X		
RSSD	133.86	30 PKP	17	56.00	-0.2		
GOL	136.25	35 PKP	18	03.70	2.8X		
ANMO	138.60	41 PKP	18	02.50	-2.8X		
ALQ	138.60	41 ePKP	18	03.20	-2.2		
	1.0s	6.75nm					
SIO	144.06	31 e(PKP)	18	15.20	0.5		
TUL	144.20	31 iPKP	18	16.80	1.9		
	0.7s	17.90nm					
PRIN	145.67	1 PKP	18	16.50	-0.7		
BAO	146.27	230 ePKP	18	20.00	0.9		
OLY	146.56	26 PKP	18	18.00	-0.9		
NA2	147.75	5 PKP	18	23.30	2.7X		
CVL	147.83	6 PKP	18	23.00	2.2X		
NAV	148.16	10 PKP	18	23.50	2.1		
RSCP	148.66	18 PKP	18	25.50	3.2X		
CCH	155.51	199 PKP	18	36.90	4.0X		
CNC8	156.60	195 ePKP	18	30.00	-4.7X		
LP8	156.89	195 PKP	18	39.00	4.1X		
	S.D. = 1.3	on 71 of 93 obs.					

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* JAN 28, 1990 04h 20m 51.25± 2.51s
36.451 N ±22.8km 2.589 E ± 9.5km
DEPTH = 10.0km (geophysicist)
ALGERIA (396)
mbLg 3.6 (MDD). Felt ot Algiers.

ACU	3.15	312 eP	21	41.30	-0.6		
		eS	22	12.70			
ESEL	3.32	4 ePn	21	44.50	0.2		
		eSn	22	20.20			
ENIJ	3.90	279 ePn	21	53.00	0.5		
		eSn	22	32.00			
ECHE	4.21	319 ePn	21	57.00	0.1		
		eSn	22	38.00			
EBR	4.66	340 ePn	22	07.00	3.7X		
		esS	22	52.00			
		eSg	22	59.00			
EROQ	4.69	339 ePn	22	03.00	-0.7		
		eSn	22	52.00			
GUD	6.74	310 eP	22	32.30	-0.5		
EPF	6.80	346 Pn	22	34.60	1.1		
		Sn	23	43.00			
LMR	7.50	22 Pn	22	42.80	-0.5		
LRG	7.57	21 Pn	22	43.00	-1.2		
FRF	7.75	22 Pn	22	46.40	-0.4		
PGF	7.85	37 Pn	22	47.60	-0.7		
SBF	8.28	25 Pn	22	53.60	-0.6		
CAF	8.48	357 Pn	22	56.40	-0.5		
LPG	9.57	18 Pn	23	14.20	1.9		
LPL	9.58	18 Pn	23	14.40	2.0		
MAF	9.76	360 Pn	23	14.20	-0.5		
	S.D. = 1.0	on 16 of 17 obs.					

JAN 28, 1990 04h 41m 42.96± 0.80s
38.186 N ± 5.1km 23.028 E ± 6.1km
DEPTH = 125.0 ± 13.8 km
GREECE (364)

ATH	0.58	111 eP	42	02.50	0.3		
AGG	1.00	327 iPgd	42	05.90	0.2		
		eSg	42	15.90			
VLI	1.47	183 eP	42	10.50	-0.2		
VLS	1.92	271 eP	42	16.00	-0.2		
LIT	1.96	348 ePb	42	16.70	0.1		
PLG	2.21	8 eP	42	19.50	-0.3		
OUR	2.27	19 ePb	42	20.90	0.4		
KZN	2.33	336 eP	42	21.50	-0.1		
THE	2.44	359 ePb	42	22.60	-0.1		
SOH	2.64	5 ePn	42	26.00	0.6		
LSK	2.72	317 ePn	42	27.00	0.5		
SRN	2.90	307 ePn	42	28.50	-0.2		
VAM	2.93	161 eP	42	28.50	-0.6		
KEK	2.94	302 eP	42	29.00	-0.3		
SRS	2.96	8 ePn	42	29.80	0.3		
KNT	2.97	358 ePn	42	30.10	0.4		
TPE	3.15	313 ePn	42	35.50	3.5X		
VAY	3.15	354 ePn	42	31.40	-0.6		
OHR	3.39	330 ePn	42	32.80	-2.5		
ALN	3.57	40 ePn	42	38.20	0.5		
SKO	3.97	343 ePg	42	30.00	-13.1X		
		eSn	42	43.00			
LCI	4.48	300 P	43	29.50	39.5X		
PUK	4.54	329 ePn	42	50.00	-0.7		
SDA	4.69	326 ePn	42	48.00	-4.7X		
TDS	5.42	288 P	43	05.00	2.3		
CSI	5.49	289 P	43	02.80	-0.8		
CZI	5.49	283 P	43	05.20	1.6		
		eS	43	57.50			
SOI	5.50	271 P	43	03.30	-0.4		
MGR	6.13	291 P	43	11.70	-0.7		
SDI	7.90	299 P	43	36.90	0.3		
	S.D. = 0.9	on 26 of 30 obs.					

JAN 28, 1990 04h 59m 59.19± 0.52s
43.313 N ± 5.2km 102.504 W ± 5.4km
DEPTH = 5.0km (geophysicist)
SOUTH DAKOTA (462)
mbLg 3.9 (NEIS), 4.0 (TUL). Felt (V) ot Oglolo; (IV) ot Monderson; (III) ot Edgemont, Hot Springs, Pine Ridge ond Rapid City. Felt (III) ot Gordon ond (II) ot Chodron, Nebrosko.

RSSD	1.37	307 eP	00	26.30	1.1		
GLD	4.10	211 e(P)	01	04.50	0.4		
		e(S)	02	09.00			
GOL	4.20	212 eP	01	05.40	-0.2		
BW06	5.20	266 eP	01	19.70	0.0		
SXM	6.82	298 eP	01	42.20	-0.3		
BGMT	7.11	289 eP	01	51.00	4.4X		
DAU	7.15	249 eP	01	47.80	0.6		
LCCM	7.15	294 eP	01	48.40	1.2		
HRY	7.43	300 eP	01	51.20	0.2		
LRM	7.53	293 eP	01	52.00	-0.6		
ANMO	8.90	201 e(P)	02	09.70	-1.9		
		e	02	43.30			
SIO	8.94	146 e(P)	02	13.90	1.9X		
TUL	9.02	143 eP	02	13.20	0.1		
	0.6s	15.90nm		5.6mb	X		
		e	02	52.30			
		e	02	58.70			
		i	04	22.50			
		eLg	04	50.00			
SES	9.18	323 eP	02	14.00	-1.3		
RSON	9.64	35 eP	02	21.50	0.0		
FVM	10.61	116 eP	02	30.00	-4.9X		
FFC	11.43	2 eP	02	45.00	-1.0		
	0.5s	5.00nm		5.1mb	X		
EDM	12.25	328 eP	03	01.00	3.8X		
KVN	12.50	255 eP	03	01.00	0.3		
RSCP	15.15	115 eP	03	43.00	7.4X		
BLA	17.90	102 eP	04	11.70	1.2		
	S.D. = 0.9	on 16 of 21 obs.					

& JAN 28, 1990 06h 07m 04.72s
55.809 N 155.014 W
DEPTH = 98.4km
SOUTH OF ALASKA (17)
<AGS-P>.

PDB	4.01	6 eP	08	02.81	-2.3		
XLV	4.06	24 eP	08	03.89	-1.9		
CNPM	4.24	27 eP	08	06.05	-2.2		
NNL	4.68	23 eP	08	12.16	-2.2		
RED	4.77	13 eP	08	12.61	-3.0		
RDT	4.97	15 eP	08	14.90	-3.5		
		eS	08	49.97			
SEW	5.23	32 eP	08	18.83	-3.0		
SLKM	5.35	26 eP	08	20.00	-3.6		
		eS	08	55.16			
CKL	5.58	13 eP	08	23.58	-3.3		
SPU	5.61	15 eP	08	23.64	-3.5		
BGL	5.64	13 eP	08	24.61	-3.1		
CRP	5.67	14 eP	08	25.17	-3.0		
SUA	6.09	20 eP	08	30.36	-3.6		
PMS	6.15	25 eP	08	31.14	-3.5		
VZW	6.88	37 eP	08	42.20	-2.5		
	15 obs. ossociated						

? JAN 28, 1990 06h 08m 19.17± 8.30s
51.505 N ±53.7km 16.215 E ±52.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.2 (VKA).

KSP	0.66	176	iP	08 32.20	-0.2
			iS	08 41.60	
			eLR	08 47.50	
BRG	1.56	247	iPg	08 46.20	-0.8
			iSg	09 06.00	
PRU	1.85	216	Pn	08 51.80	0.6
			Pg	08 53.80	
			Sn	09 08.60	
			Sg	09 13.00	
CLL	2.02	266	e(Pg)	08 54.00	0.4
			iSg	09 20.20	
KHC	2.92	216	Pn	09 10.00	3.5X
			Pg	09 14.80	
			Sn	09 38.50	
			Sg	09 50.50	
MOX	3.03	255	ePg	09 14.00	6.0X
			iSg	09 53.00	
VKA	3.24	179	ePg	09 19.80	8.7X
			eSg	10 03.30	

S.D. = 1.1 on 4 of 7 obs.

? JAN 28, 1990 07h 28m 41.04± 5.68s
31.085 S ±26.7km 179.104 W ±29.4km
DEPTH = 260.5 ± 48.8 km
4.3mb (4 obs.)
KERMADEC ISLANDS REGION (177)

DZM	15.73	301	iPc	32 10.60	-0.3
BRS	24.79	271	iP	33 42.50	1.4
CTA	32.98	281	iPc	34 54.90	1.3
	1.0s	16.50nm		4.6mb	
ASPA	42.13	268	iPc	36 08.40	-1.3
	0.6s	8.00nm		4.3mb	
WRA	43.18	273	Pc	36 17.00	-1.2
	0.7s	9.40nm		4.2mb	
WB5	43.18	274	eP	36 18.20	0.0
SPA	59.09	180	iPc	38 16.20	0.0
	0.9s	8.18nm		4.3mb	
SUF	144.44	340	iPKP	47 43.30	-3.5X
	0.7s	6.60nm			
NUR	146.62	339	ePKP	47 49.90	-0.6
BCAO	148.72	216	ePKPc	47 58.70	3.4X
	0.5s	3.00nm			
			ic	48 05.00	
NB2	149.27	350	PKP	47 58.40	3.6X
	1.0s	3.80nm			
SLL	149.46	348	ePKP	47 55.80	0.7
	0.7s	2.60nm			

S.D. = 1.2 on 9 of 12 obs.

JAN 28, 1990 07h 36m 08.62± 0.50s
49.165 N ± 4.0km 6.810 E ± 6.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.8 (STR), 2.9 (UCC). ML 3.0 (KBA).

RUP	0.56	17	ePg	36 20.30	0.3
GWF	0.57	109	Pg	36 19.37	-0.8
			Sg	36 27.42	
WLF	0.66	320	iP	36 19.20	-2.5
CDF	0.81	158	Pg	36 23.74	-0.7
			Sg	36 36.35	
WLS	0.83	154	Pg	36 24.21	-0.6
ABH	0.86	34	ePg	36 25.51	0.3
ECH	0.98	166	Pg	36 27.49	0.3
			Sg	36 41.18	
VITF	1.10	210	Pg	36 29.62	0.4
			Sg	36 44.79	
MOF	1.33	171	Pg	36 33.79	0.5
			Sg	36 52.22	
BSF	1.33	181	Pg	36 33.91	0.6
			Sg	36 52.07	
TNS	1.50	45	iPn	36 37.60	1.9
			eSn	36 56.30	
FEL	1.52	148	Pg	36 36.82	0.9
MEM	1.54	341	P	36 36.50	0.5
			i	36 38.60	
DOU	1.72	304	iP	36 39.70	1.0
			i	36 42.10	
			iS	36 59.00	
LOMF	1.82	180	Pn	36 39.62	-0.6
			Sg	37 07.30	
SNF	2.12	310	iP	36 49.50	5.0X
GRF	2.93	78	ePg	37 08.50	12.4X
			eSg	37 40.00	
KHC	4.44	88	ePg	37 16.00	-1.6
			Sg	38 07.80	
KBA	4.85	113	iPnc	37 23.70	0.2
			iSn	38 18.80	
			i	38 51.40	

S.D. = 1.1 on 17 of 19 obs.

% JAN 28, 1990 09h 14m 47.05± 1.21s
41.132 N ±13.7km 28.649 E ± 5.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT	0.17	275	iPg	14 50.70	-0.2
ISK	0.32	102	ePg	14 53.20	-0.4
			eSg	14 57.70	
YLV	0.79	136	iPg	15 01.70	-0.7
HRT	0.83	112	ePg	15 04.20	1.0
BNT	0.95	216	iPn	15 05.70	0.5
EDC	0.99	218	ePn	15 05.50	-0.2

S.D. = 0.8 on 6 of 6 obs.

? JAN 28, 1990 09h 34m 14.13± 0.99s
39.108 N ± 8.9km 27.607 E ±16.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.76	201	ePg	34 29.00	0.0
			eSg	34 41.00	
DST	0.93	58	iPn	34 32.00	0.0
EDC	1.25	9	iPn	34 37.50	0.1
BNT	1.27	11	iPn	34 37.60	-0.1

S.D. = 0.1 on 4 of 4 obs.

? JAN 28, 1990 10h 01m 33.15± 4.15s
5.231 S ±25.4km 152.940 E ±47.9km
DEPTH = 112.7 ± 20.5 km
3.5mb (1 obs.)
NEW BRITAIN REGION (192)

RAB	1.29	323	iP	01 58.00	0.0
			iS	02 15.50	
LAT	6.07	256	eP	03 02.00	0.0
PMG	7.08	234	eP	03 12.00	-3.8X
WB5	23.21	230	eP	06 30.60	-0.4
WRA	23.27	229	P	06 32.00	0.4
	0.5s	1.20nm		3.5mb	
CHG	58.30	296	eP	11 18.80	0.0

S.D. = 0.6 on 5 of 6 obs.

% JAN 28, 1990 10h 06m 32.65± 0.79s
37.741 N ± 7.3km 15.022 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.32	306	P	06 39.60	0.2
			eSg	06 44.40	
ATN	0.54	40	P	06 43.50	-0.2
			eSg	06 51.60	
MEU	0.64	187	Pc	06 45.60	0.0
			eSg	06 54.70	
GIB	0.83	288	P	06 48.50	-0.2
			eSg	07 01.00	
SOI	0.88	68	Pd	06 49.70	0.2
			eSg	07 02.20	
CZI	1.71	30	P	06 51.90	-10.7X

S.D. = 0.3 on 5 of 6 obs.

? JAN 28, 1990 10h 07m 12.35± 1.92s
37.861 N ±29.8km 15.029 E ± 7.0km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.27	285	P	07 18.20	0.0
			eSg	07 23.40	
ATN	0.45	49	P	07 21.60	0.0
			eSg	07 30.20	
GIB	0.80	279	P	07 28.00	0.0
			eSg	07 40.20	
SOI	0.84	75	P	07 28.50	0.0

S.D. = 0.0 on 4 of 4 obs.

% JAN 28, 1990 10h 09m 25.53± 0.69s
37.796 N ± 7.7km 14.977 E ± 7.0km
DEPTH = 10.0km (geophysicist)
SICILY (398)

ATN	0.53	46	Pd	09 36.70	0.5
			eSg	09 44.80	
MSI	0.61	48	P	09 39.30	1.5
MEU	0.69	183	Pc	09 38.70	-0.6
			eSg	09 47.50	
GIB	0.78	285	P	09 41.50	0.8
			iSg	09 53.50	
SOI	0.90	72	Pd	09 42.90	0.2
			eSg	09 56.50	
FAI	1.16	244	P	09 47.50	0.3
CZI	1.69	32	P	09 47.70	-7.4X
TDS	2.14	29	P	10 00.90	-0.9
CSI	2.23	27	P	10 02.90	-0.2
MGR	2.38	11	P	10 03.60	-1.6
			eSn	10 33.50	

S.D. = 1.1 on 9 of 10 obs.

% JAN 28, 1990 10h 14m 51.25± 0.82s
37.787 N ± 7.1km 14.970 E ± 7.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.26	304	P	14 57.50	0.6
			eSg	15 03.00	
ATN	0.54	46	Pd	15 02.80	0.6
			eSn	15 11.70	
MEU	0.69	183	Pd	15 04.70	-0.2
			eSg	15 14.50	
SOI	0.90	71	P	15 09.10	0.6
			eSg	15 22.80	
CZI	1.70	32	P	15 20.10	-0.9
TDS	2.15	29	P	15 27.00	-0.7
CSI	2.24	27	P	15 29.90	1.0
MGR	2.39	11	P	15 30.00	-1.1

S.D. = 0.9 on 8 of 8 obs.

JAN 28, 1990 10h 21m 31.65± 0.68s
42.615 N ± 6.8km 26.242 E ± 4.5km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)

JMB	0.29	120	iPgc	21 36.00	-1.8
DIM	0.77	223	Pg	21 46.00	-0.7
PVL	0.90	312	iP	21 50.00	1.2
KDZ	1.14	213	iPg	21 54.00	1.0
PLD	1.25	246	iPgd	21 54.00	-0.8
DMK	1.38	125	iPn	21 56.10	-0.8
RZN	1.46	231	iPgd	21 59.00	0.7
RDO	1.56	200	ePb	21 59.10	-0.3
			eSb	22 20.30	
ALN	1.72	185	ePb	22 03.80	2.0
			eSb	22 24.00	
MMB	2.13	242	eP	22 08.00	0.2
CTT	2.20	131	iPn	22 08.60	-0.1
VTS	2.24	270	iPgc	22 10.00	0.5
			iSg	23 56.00	
SRS	2.48	234	ePn	22 12.40	-0.3
			eSn	22 44.70	
ISR	2.53	5	eP	22 19.00	5.5X
EDC	2.57	151	ePn	22 17.50	3.5X
BNT	2.58	150	ePn	22 14.00	-0.2
ISK	2.61	125	ePn	22 17.00	2.4
CMP	2.79	342	ePc	22 27.00	9.8X
MLR	2.88	356	ePd	22 27.50	8.9X
KNT	2.89	241	ePn	22 18.60	8.1
			eSn	22 53.50	
VAY	3.03	246	ePn	22 27.60	7.1X
			e	23 49.00	
PLG	3.07	224	ePn	22 20.00	-1.1
THE	3.16	232	ePn	22 22.20	-0.1
VRI	3.27	6	ePc	22 34.00	10.0X
SKO	3.62	261	ePn	22 29.00	0.1
LIT	3.78	230	ePn	22 30.60	-0.6
BZS	4.48	314	ePc	22 40.00	-1.1

S.D. = 1.1 on 21 of 27 obs.

• JAN 28, 1990 10h 22m 44.53± 1.73s
42.678 N ±18.9km 26.299 E ± 6.4km
DEPTH = 10.0km (geophysicist)
BULGARIA (359

JMB	0.30	135	iPgc	22 50.00	-0.7

KDZ 1.22 213 iPg 23 08.00 0.8
PLD 1.31 245 ePg 23 08.00 -0.8
DMK 1.38 128 ePn 23 10.10 0.3
RZN 1.54 230 iPg 23 12.00 -0.2
PGB 1.58 266 iPg 23 13.00 0.3
CTT 2.21 133 ePn 23 22.10 0.4
S.D. = 0.7 on 7 of 7 obs.

? JAN 28, 1990 10h 24m 32.07± 1.07s
37.758 N ± 9.0km 15.071 E ±11.8km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.34 300 P 24 39.20 -0.1
eSg 24 44.30
MEU 0.67 190 P 24 45.40 0.0
eSg 24 53.60
CZI 1.68 29 P 25 00.50 -1.1
CSI 2.23 25 P 25 10.70 1.1
S.D. = 1.5 on 4 of 4 obs.

% JAN 28, 1990 10h 25m 14.39± 2.02s
41.698 N ±20.4km 12.808 E ± 9.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP 0.09 311 Pd 25 17.10 0.0
eSg 25 18.90
RMP 0.14 325 Pd 25 17.90 0.2
iSg 25 20.70
AZI 0.55 58 P 25 26.00 0.4
MNS 0.69 352 P 25 27.70 -0.4
eSg 25 38.60
SDI 0.75 89 P 25 28.90 -0.3
eSg 25 40.20
S.D. = 0.5 on 5 of 5 obs.

% JAN 28, 1990 11h 00m 33.10± 0.60s
37.782 N ± 6.2km 15.030 E ± 5.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.30 299 P 00 40.10 0.6
eSg 00 45.00
ATN 0.51 42 Pc 00 44.20 0.8
eSg 00 51.70
MSI 0.59 44 P 00 45.70 0.7
eSg 00 54.60
MEU 0.68 187 Pd 00 46.30 -0.4
eSg 00 55.30
GIB 0.82 285 Pc 00 49.20 0.2
eSg 01 01.00
SOI 0.86 70 P 00 50.50 0.9
eSg 01 03.80
FAI 1.19 245 Pd 00 55.50 0.2
CZI 1.68 31 P 01 01.30 -1.2
TDS 2.14 28 P 01 08.20 -1.0
eSn 01 35.10
CSI 2.22 26 P 01 10.70 0.2
MGR 2.39 10 P 01 12.20 -0.7
(Sn) 01 40.00
S.D. = 0.8 on 11 of 11 obs.

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* JAN 28, 1990 11h 15m 30.32± 0.41s
16.733 S ±12.5km 167.656 E ±10.8km
DEPTH = 26.7km (3 depth phases)
5.1mb (4 obs.)
VANUATU ISLANDS (186)

PVC 1.18 148 iPc 15 50.30 -0.8
iS 16 04.00
DZM 5.43 192 iPc 16 47.60 -4.1X
iS 17 43.10
COO 19.93 223 eP 20 04.00 0.9
RMO 20.05 238 ePc 20 06.10 1.6
CTA 20.58 257 iPc 20 10.10 0.2
0.8s 14.93nm 4.4mb
OIS 26.83 257 eP 21 10.00 -0.6
WRA 31.75 259 P 21 54.00 -0.7
0.7s 1.20nm 3.9mb X
ASPA 32.36 252 iPd 21 57.90 -2.1
0.5s 42.00nm 5.6mb
Z 23s 0.51um 4.1MszX
LR 33 34.30
MAT 59.84 333 eP 25 35.00 -0.9
1.2s 17.19nm 5.1mb
CHG 76.24 295 eP 27 19.10 0.4

LZH 79.94 312 eP 27 40.00 1.1
1.5s 37.00nm 5.2mb
sP 27 51.60
ORV 86.47 47 eP 28 12.30 0.3
e 28 22.30 31km
CMB 86.63 49 eP 28 13.30 0.4
e 28 21.30 25km
FRI 86.70 50 eP 28 13.50 0.3
e 28 21.10 24km
SOD 123.51 343 ePKP 34 36.00 9.8X
SUF 126.84 339 ePKP 34 31.90 -0.9
0.5s 3.00nm
NUR 128.85 338 ePKP 34 36.40 -0.3
OGA 144.26 332 ePKP 35 04.70 -1.1
WLS 144.53 337 PKP 35 04.30 -1.7
CDF 144.56 337 PKP 35 04.30 -1.8
FEL 144.72 336 PKP 35 04.82 -1.7
ECH 144.77 337 PKP 35 04.60 -1.8
MOF 145.08 337 PKP 35 05.97 -1.1
VITF 145.19 338 PKP 35 06.57 -0.5
BSF 145.22 337 PKP 35 06.51 -0.8
HAU 145.24 338 ePKP 35 07.00 -0.2
BBS 145.26 336 PKP 35 06.65 -0.6
LOMF 145.61 337 PKP 35 07.75 -0.2
VAI 146.02 333 PKP 35 08.50 0.0
SGO 146.30 320 PKP 35 20.00 10.8X
SDI 146.48 323 PKP 35 10.50 1.0
LOR 146.74 340 ePKP 35 11.60 1.9
LBF 146.95 339 ePKP 35 12.00 1.9
SSF 147.03 340 ePKP 35 12.40 2.2
GRR 147.06 346 ePKP 35 11.90 1.8
LPG 147.17 335 ePKP 35 13.50 2.7X
SMF 147.29 339 ePKP 35 13.00 2.4
AVF 147.32 340 ePKP 35 13.60 3.0X
BCAO 147.34 251 iPKPc 35 13.50 1.8
0.8s 23.00nm
id 35 23.10
LPF 147.43 346 ePKP 35 13.30 2.6X
BNI 147.56 334 PKP 35 14.00 2.7X
BGF 147.69 340 ePKP 35 13.80 2.6X
MAF 148.08 340 ePKP 35 15.20 3.3X
TCF 148.14 341 ePKP 35 15.10 3.1X
LSF 148.38 341 ePKP 35 15.70 3.3X
MFF 148.54 344 ePKP 35 16.00 3.4X
LPO 149.89 341 ePKP 35 19.90 5.2X
S.D. = 1.3 on 34 of 47 obs.

% JAN 28, 1990 11h 40m 11.33± 0.97s
39.356 N ± 8.0km 28.336 E ± 9.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.34 42 iPg 40 18.50 0.2
iSg 40 22.50
BNT 1.05 342 iPg 40 31.10 0.0
iSg 40 44.60
EDC 1.05 340 iPg 40 31.50 0.3
eSg 49 44.50
IZM 1.27 222 ePn 40 35.00 0.0
YLV 1.45 33 iPn 40 37.60 0.0
CTT 1.79 2 ePn 40 42.00 -0.5
S.D. = 0.4 on 6 of 6 obs.

? JAN 28, 1990 12h 26m 03.43± 1.09s
37.990 N ±21.1km 14.970 E ± 9.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.23 255 P 26 08.50 0.1
eSg 26 13.50
ATN 0.42 66 P 26 12.80 0.7
iSg 26 22.50
SOI 0.86 84 P 26 19.50 -0.5
eSg 26 33.70
TDS 1.98 32 P 26 37.00 -0.3
S.D. = 0.9 on 4 of 4 obs.

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* JAN 28, 1990 12h 49m 12.59± 1.54s
40.607 N ±12.8km 21.376 E ± 9.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.7 (SKO), 2.4 (THE).

OHR 0.67 319 iPg 49 25.10 -0.8
iSg 49 36.90
GRG 0.85 65 ePg 49 28.80 -0.3
eSg 49 41.20

LIT 0.99 120 ePg 49 31.70 0.3
eSg 49 46.10
VAY 1.15 51 ePn 49 34.00 -0.1
KNT 1.28 64 ePb 49 35.80 -0.6
SKO 1.36 2 ePg 49 39.00 1.4
iSg 49 54.00
S.D. = 1.0 on 6 of 6 obs.

? JAN 28, 1990 13h 54m 28.04±21.61s
35.544 N ±13.1km 51.717 E ±148.km
DEPTH = 10.0km (geophysicist)
IRAN (348)

TEH 0.33 306 eP 54 35.00 0.0
IR4 0.73 246 eP 54 43.00 0.5
IR1 0.85 262 eP 54 45.00 0.5
IR7 0.92 280 eP 54 45.50 -0.2
IR5 0.99 251 eP 54 46.00 -0.8
S.D. = 0.8 on 5 of 5 obs.

& JAN 28, 1990 17h 10m 52.36s
63.603 N 149.877 W
DEPTH = 145.9km
CENTRAL ALASKA (1)
<AGS-P>.

MCK 0.44 72 eP 11 12.91 -0.3
eS 11 28.44
RND 0.50 113 eP 11 13.01 -0.6
eS 11 28.39
HUR 0.64 170 eP 11 13.73 -0.6
eS 11 29.13
NEA 1.04 19 eP 11 16.52 -0.8
CUT 1.22 189 eP 11 18.53 -0.5
CCB 1.39 40 eP 11 20.12 -0.6
RDS 1.44 31 eP 11 20.92 -0.4
eS 11 40.71
HDA 1.52 57 eP 11 21.54 -0.6
FBA 1.59 34 eP 11 22.44 -0.5
GLM 1.76 37 eP 11 24.38 -0.5
DDM 1.80 82 eP 11 25.25 -0.1
eS 11 48.90
GHO 1.89 166 eP 11 25.96 -0.5
DMW 1.89 74 eP 11 25.95 -0.4
PWA 1.96 180 eP 11 26.75 -0.4
PLRM 2.05 170 eP 11 27.48 -0.7
PAX 2.09 106 eP 11 28.41 -0.4
SUA 2.18 191 eP 11 29.68 -0.3
PMS 2.37 176 eP 11 31.72 -0.5
eS 12 00.00
DOT 2.60 86 eP 11 34.25 -0.7
19 obs. associated

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* JAN 28, 1990 17h 34m 11.93± 0.98s
7.024 S ±13.4km 150.027 E ±13.5km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
NEW BRITAIN REGION (192)

LAT 3.03 277 eP 34 58.00 -0.7
RAB 3.53 37 e(P) 35 06.00 0.2
PMG 3.70 230 eP 35 11.00 2.8X
QIS 16.82 216 eP 38 11.00 4.3X
WB5 19.85 228 iPc 38 43.20 -0.1
BRS 20.42 173 iPc 38 48.20 -1.0
ASPA 22.66 221 iPc 39 13.30 1.5
0.5s 5.00nm 4.2mb
S.D. = 1.4 on 5 of 7 obs.

JAN 28, 1990 17h 51m 30.66± 0.41s
36.120 N ± 5.0km 27.119 E ± 4.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 4.0 (ATH).

KAP 0.57 175 ePb 51 42.50 0.3
YER 1.38 42 iPn 51 55.20 -0.8
NPS 1.49 236 ePn 51 58.00 0.4
APE 1.59 307 ePn 51 57.80 -1.2
SMG 1.60 352 ePn 51 59.20 0.2
KSL 2.00 89 iPnd 52 04.40 -0.4
IZM 2.28 3 ePn 52 10.00 1.1
ELL 2.34 74 ePn 52 10.60 0.8
VAM 2.48 254 ePn 52 12.00 0.3
KHL 2.92 40 ePn 52 17.00 -1.1
BCK 3.09 63 ePn 52 21.90 1.4
PRK 3.19 348 ePb 52 29.00 7.2X

28d 17h

ATH	3.29	305	ePb	52 30.00	6.8X
VLI	3.43	281	ePn	52 25.30	0.1
PPCY	4.44	105	eP	52 38.50	-1.0
CSS	5.20	101	eP	52 50.50	0.2
BBTK	5.80	48	iPc	52 59.00	0.1
BCAO	32.51	196	ePc	58 03.20	-0.6
	0.5s		3.00nm		4.5mb X

S.D. = 0.8 on 16 of 18 obs.

JAN 28, 1990 18h 36m 24.22± 0.48s
36.060 N ± 5.6km 27.190 E ± 5.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 3.9 (ATH), 4.2 (CSS).

KAP	0.51	181	iPgc	36 36.70	2.2
YER	1.39	39	iPn	36 49.20	-0.4
NPS	1.51	239	iPbc	36 52.40	1.1
SMG	1.67	350	ePb	36 51.50	-2.1
APE	1.67	307	ePb	36 52.00	-1.7
KSL	1.94	88	ePn	36 59.00	1.5
ELL	2.30	72	ePn	37 05.00	2.1
IZM	2.33	1	ePn	37 02.00	-1.3
KHL	2.93	39	ePn	37 13.00	1.3
BCK	3.07	62	ePn	37 16.70	3.0X
PRK	3.26	347	ePn	37 16.50	0.1
ATH	3.37	306	ePb	37 19.50	1.5
VLI	3.49	282	ePn	37 19.30	-0.4
DST	3.72	17	ePn	37 29.00	6.0X
PPCY	4.37	104	eP	37 32.00	-0.1
CSS	5.13	101	eP	37 42.50	-0.4
			eSn	38 43.50	
LFK	5.22	97	ePn	37 49.00	4.7X
BBTK	5.80	48	eP	37 53.00	0.6
VAY	6.37	327	eP	38 24.00	23.5X
HLW	7.10	149	eP	38 10.00	-0.7
			e	39 28.00	
OHR	7.10	317	eP	38 11.30	0.5
HRI	7.57	109	eP	38 16.00	-1.4
DSI	8.15	121	eP	38 25.00	-0.4
			e(S)	39 54.00	
MBH	9.00	132	eP	38 35.00	-2.2
KHC	16.43	327	P	40 18.50	2.2
BCAO	32.47	196	iPc	42 57.90	0.9
	0.5s		7.00nm		4.8mb X
TIC	41.55	233	P	44 12.40	-1.2
KIC	41.58	232	P	44 12.10	-1.8

S.D. = 1.5 on 24 of 28 obs.

JAN 28, 1990 19h 36m 09.60± 0.61s
36.156 N ± 6.5km 27.166 E ± 6.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 3.9 (ATH).

KAP	0.60	179	iPgc	36 21.00	-0.8
YER	1.33	42	iPn	36 33.10	-1.0
NPS	1.55	235	ePb	36 37.50	0.3
SMG	1.57	350	ePb	36 38.00	0.5
KSL	1.96	90	ePb	36 43.00	-0.2
IZM	2.24	2	ePn	36 46.00	-1.3
ELL	2.29	74	ePn	36 49.60	1.5
VAM	2.53	254	ePb	36 56.60	5.3X
KHL	2.87	40	ePn	36 57.00	0.7
PRK	3.17	347	ePg	37 08.50	8.1X
ATH	3.30	304	ePg	37 11.50	9.2X
VLI	3.46	281	ePn	37 05.00	0.5
DST	3.63	18	ePn	37 12.00	4.9X
BBTK	5.75	49	eP	37 37.00	-0.2

S.D. = 1.0 on 10 of 14 obs.

% JAN 28, 1990 20h 24m 55.77± 1.67s
13.120 S ± 9.5km 75.892 W ±27.5km
DEPTH = 33.0km (normal)
PERU (116)

PT06	0.82	211	iPd	25 10.90	0.0
			iS	25 23.10	
PT03	0.87	174	iPc	25 11.70	0.0
			eS	25 24.50	
PT08	1.32	331	iP	25 18.30	-0.1
			eS	25 35.40	
NNA	1.46	320	iPd	25 20.00	-0.1
			iS	25 38.50	
PT10	1.48	315	e(P)	25 20.50	0.2

S.D. = 0.1 on 5 of 5 obs.

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* JAN 28, 1990 20h 40m 42.38± 0.71s
16.084 S ±13.5km 72.233 W ± 9.6km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF PERU (115)

ARE	0.81	118	iPc	40 57.60	-0.6
			iS	41 09.20	
ZOBO	3.95	93	P	41 44.00	-0.9
	1.0s		79.00nm		
			S	42 56.00	
LPB	4.00	97	eP	41 47.00	1.6
	1.0s		180.00nm		
			i	41 57.00	
PT03	4.02	301	eP	41 46.10	0.7
CNCB	4.14	101	P	41 50.00	2.4X
PT06	4.55	299	iPc	41 57.10	4.2X
			iS	42 53.20	
PT08	5.86	314	eP	42 12.10	0.3
			e(S)	43 33.70	
CCH	5.98	103	(P)	42 19.00	5.7X
NNA	6.05	312	eP	42 12.50	-1.6
	0.7s		20.55nm		5.0mb
			e	42 20.50	
			eS	43 15.00	
PT10	6.08	310	e(P)	42 15.00	0.5
			e(S)	49 20.00	
ANT	7.77	168	iPd	42 38.30	0.0

S.D. = 1.2 on 8 of 11 obs.

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* JAN 28, 1990 21h 41m 38.91± 0.52s
30.733 N ±16.3km 41.663 W ±10.4km
DEPTH = 10.0km (geophysicist)
4.6mb (3 obs.) 3.9Msz (2 obs.)
NORTH ATLANTIC RIDGE (403)

FVM	40.52	294	P	49 20.00	0.2
	0.7s		10.20nm		4.6mb
			pP	49 26.30	21kmX
OLY	41.63	290	eP	49 30.00	1.1
LIC	42.12	118	P	49 33.10	0.0
KIC	42.25	117	P	49 34.20	0.0
RSON	43.20	313	P	49 40.00	-1.5
TUL	45.05	292	eP	49 57.50	0.8
	1.2s		15.50nm		4.8mb
	Z 20s		0.20um		4.0Msz
			LR	03 00.00	
ZOBO	53.22	212	P	51 00.00	-0.4
	Z 22s		0.11um		3.8Msz
			LR	05 46.00	
MLR	53.69	54	ePd	51 03.50	0.4
ALQ	53.76	293	eP	51 04.00	0.1
	1.5s		8.33nm		4.5mb
BW06	54.36	303	eP	51 08.00	-0.2
DAU	56.11	300	eP	51 21.00	0.0
MSU	57.27	298	eP	51 30.00	0.8
DUG	57.32	301	eP	51 30.00	0.6
KVN	61.56	301	P	51 57.00	-1.8

S.D. = 0.9 on 14 of 14 obs.

JAN 28, 1990 22h 43m 16.96± 0.29s
30.902 N ± 6.9km 41.537 W ± 3.7km
DEPTH = 18.4km (13 depth phases)
4.8mb (26 obs.) 4.1Msz (3 obs.)
NORTH ATLANTIC RIDGE (403)

CBM	25.98	316	P	48 48.80	-1.3
			pP	48 55.20	23km
BLA	32.66	292	P	49 50.90	0.8
	0.9s		12.40nm		4.8mb
			pP	49 55.50	16km
PRM	34.42	286	P	50 05.80	0.4
			pP	50 10.30	15km
LSF	36.51	53	eP	50 23.30	0.3
	1.4s		60.90nm		5.3mb
RSCP	36.90	289	P	50 27.80	1.4
			pP	50 32.50	16km
TCF	36.98	53	eP	50 27.10	0.1
	1.2s		14.80nm		4.7mb
FRB	37.03	340	eP	50 26.00	-1.1
SSF	37.99	52	eP	50 35.60	0.3
	1.4s		14.80nm		4.6mb
SMF	38.15	53	eP	50 36.80	0.0
	1.2s		23.80nm		4.9mb
LOR	38.25	52	eP	50 37.50	-0.1
	1.6s		43.50nm		5.0mb
LBF	38.29	52	eP	50 37.90	-0.1
	1.4s		21.70nm		4.7mb
DOU	39.23	47	P	51 03.10	17.4X
WLF	40.14	48	Pc	51 04.80	11.6X
BSF	40.30	51	eP	50 55.00	0.3
	1.2s		11.90nm		4.5mb
FVM	40.55	294	P	50 57.20	0.4
	0.6s		22.11nm		5.1mb
			pP	51 02.60	18km
CDF	40.69	50	eP	50 58.10	0.2
	1.2s		14.20nm		4.6mb
OLY	41.68	290	P	51 07.10	1.1
TIC	41.84	118	P	51 06.76	-0.8
LIC	42.11	118	P	51 09.16	-0.6
KIC	42.24	118	P	51 10.28	-0.5
	1.0s		18.50nm		4.8mb
RSON	43.16	313	P	51 16.50	-1.5
	0.6s		8.45nm		4.7mb
			pP	51 21.90	18km
GRF	43.41	49	eP	51 20.00	-0.1
	Z 19s		0.20um		4.0Msz
			e	51 30.00	34kmX
MOX	43.76	47	e(P)	51 23.00	0.2
CLL	44.70	47	eP	51 29.00	-1.4
	1.5s		18.00nm		4.7mb
			e	51 40.00	38kmX
KHC	44.91	50	Pc	51 32.50	0.3
	1.3s		11.50nm		4.6mb
TUL	45.09	292	eP	51 34.00	0.2
	1.2s		27.30nm		5.1mb
	Z 21s		0.46um		4.4Msz
			i	51 39.50	18km
			LR	04 00.00	
BRG	45.25	47	eP	51 35.80	0.9
	1.8s		38.00nm		5.0mb
			e	51 44.10	28km
SIO	45.53	291	e(P)	51 37.50	0.3
PRU	45.58	49	eP	51 38.20	0.8
	1.3s		18.10nm		4.9mb
			e	52 10.50	143kmX
ZST	47.23	51	eP	51 49.30	-1.2
SRO	48.05	52	eP	51 56.60	-0.3
SPC	49.28	50	eP	52 06.50	-0.2
BZS	50.47	54	eP	52 16.00	0.4
GOL	51.86	298	P	52 26.00	-0.6
	1.1s		12.18nm		4.7mb
			pP	52 30.70	16km
ZOBO	53.42	212	P	52 36.60	-2.0
	1.0s		7.50nm		4.6mb
	Z 22s		0.18um		4.1Msz
			LR	07 28.00	
MLR	53.50	54	ePd	52 39.00	0.5
LPB	53.63	212	P	52 41.00	1.0
	1.1s		81.01nm		5.6mb
ALQ	53.79	293	eP	52 40.80	-0.1
	1.0s		3.25nm		4.3mb
CNCB	53.82	212	P	52 42.00	0.4
BW06	54.36	303	P	52 43.00	-2.0
	0.7s		29.24nm		5.4mb
			pP	52 49.20	20km
PV09	54.98	298	P	52 50.00	0.3
EDM	55.28	316	ePc	52 50.00	-1.3
MBC	57.35	344	eP	53 06.00	0.2
	1.5s		16.00nm		4.8mb
GLA	60.99	293	P	53 32.50	1.0
			pP	53 36.70	14km
TNP	61.21	299	P	53 31.80	-1.3
	0.7s		5.00nm		4.8mb
			pP	53 38.20	21km
KVN	61.56	301	P	53 34.50	-1.0
			pP	53 39.90	18km
BCAO	62.17	102	ePc	53 39.90	0.1
	0.5s		3.00nm		4.7mb
INK	62.40	335	eP	53 40.00	-0.5
BAR	62.58	293	eP	53 42.00	-0.2
SBB	62.78	296	eP	53 45.00	1.4
ISA	62.95	297	eP	53 46.00	1.4
FRI	63.43	299	eP	53 47.60	-0.1
CMB	63.59	300	eP	53 49.30	0.5
FBA	68.93	334	P	54 23.00	0.5
	1.3s		26.42nm		5.2mb
MAIO	80.31	54	iPc	55 30.00	1.5
QUE	88.87	55	eP	56 12.80	1.0

S.D. = 0.9 on 54 of 56 obs.

JAN 29, 1990 00h 11m 43.57± 0.44s
41.759 N ± 4.5km 24.361 E ± 3.9km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

RZN 0.27 105 iPgd 11 50.00 0.6
PLD 0.43 36 ePg 11 53.00 0.7
MM8 0.50 250 ePgd 11 53.00 -0.8
KDZ 0.80 98 iPg 11 58.00 -1.1
PG8 0.80 350 iPg 11 59.00 -0.2
SRS 0.86 222 eP 12 00.00 -0.2
KKB 0.96 277 iPg 12 01.00 -0.9
VTS 1.19 315 iPg 12 06.00 0.1
SOH 1.21 219 eP 12 06.00 -0.1
KNT 1.25 242 eP 12 07.00 0.2
VAY 1.41 253 ePn 12 11.00 1.7
OUR 1.45 192 eP 12 09.50 -0.3
ALN 1.53 124 eP 12 32.80 21.8X
THE 1.54 224 eP 12 11.80 0.7
PVL 1.62 26 iP 12 12.00 -0.3
S.D. = 0.8 on 14 of 15 obs.

JAN 29, 1990 00h 16m 43.96± 0.80s
51.676 N ± 5.6km 175.303 W ± 3.3km
DEPTH = 55.7 ± 6.6 km
5.0mb (45 obs.) 4.5Msz (3 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 0.88 284 iPd 17 00.10 -0.3
SMY 6.60 283 eP 18 19.30 -1.3
SDN 9.55 62 eP 19 02.00 0.7
SVW 14.36 41 eP 20 07.80 2.3
KDC 14.48 56 eP 20 05.60 -1.3
TTA 15.28 35 ePc 20 19.80 2.4
TTA 15.28 35 eP 20 16.50 -0.9
PMS 17.03 46 eP 20 39.60 0.1
PMR 17.36 45 eP 20 44.00 0.5
IMA 18.09 29 eP 20 54.30 1.6
TOA 18.85 45 eP 21 00.30 -1.6
F8A 19.39 36 eP 21 05.50 -2.2
BRW 21.40 16 ePc 21 29.20 0.8
INK 25.97 34 eP 22 12.00 -0.5
0.6s 15.00nm 4.7mb
MBC 32.52 22 eP 23 11.50 0.6
0.6s 16.00nm 5.0mb
LON 34.63 77 eP 23 30.00 0.5
MAT 35.99 264 iPc 23 40.60 -0.5
1.0s 50.00nm 5.4mb
EDM 36.75 62 iPc 23 47.80 0.4
0.8s 91.00nm 5.8mb
SES 39.26 66 iPc 24 09.00 0.6
0.4s 21.00nm 5.3mb
pP 24 24.00 59kmX
CMB 40.30 88 eP 24 18.00 0.9
LRM 40.71 73 eP 24 21.50 0.8
KVN 41.10 85 eP 24 24.50 0.6
TNP 42.24 85 eP 24 33.00 -0.2
0.7s 7.04nm 4.5mb
CLC 43.43 88 eP 24 43.00 0.2
DUG 43.67 80 eP 24 45.00 0.2
0.8s 5.56nm 4.4mb
SBB 44.02 89 eP 24 48.00 0.4
BW06 44.13 75 eP 24 49.00 0.4
PLM 45.50 90 eP 25 00.00 0.5
BAR 46.07 91 eP 24 55.00 -8.8X
GLA 46.96 89 eP 25 12.00 1.0
BJI 47.43 284 eP 25 14.50 0.0
Z 22s 0.62um 4.5Msz
RSON 48.48 57 eP 25 21.40 -1.1
0.6s 27.17nm 5.4mb
GOL 48.50 75 eP 25 23.40 0.3
0.6s 43.21nm 5.6mb
KBS 49.60 358 iP 25 31.00 0.3
ANMO 50.89 81 eP 25 41.00 -0.4
0.8s 3.73nm 4.5mb
ALQ 50.89 81 eP 25 36.70 -4.7X
1.0s 4.25nm 4.4mb
pP 26 58.20 402kmX
FRB 51.61 33 ePc 25 44.90 -1.3
0.5s 26.00nm 5.5mb
SIO 56.51 73 eP 26 22.10 -0.5
TUL 56.71 73 eP 26 23.30 -0.6
0.7s 16.20nm 5.2mb
Z 19s 0.15um 4.1Msz
LR 45 43.00
LZH 57.38 288 eP 26 28.50 -0.4
1.0s 30.00nm 5.3mb
Z 22s 0.60um 4.7Msz
KEV 57.79 351 eP 26 31.00 -0.1
FVM 58.43 67 eP 26 35.50 -0.5
OLY 59.54 70 eP 26 41.80 -1.9
SOD 60.13 350 iP 26 46.40 -1.0

CLE 60.95 59 iP 26 53.30 0.1
PWLA 61.89 68 eP 26 56.80 -2.9
PTN 62.12 53 eP 27 04.20 3.1X
RSCP 62.87 66 eP 27 05.00 -1.2
0.6s 42.27nm 5.7mb
GBTN 63.61 65 eP 27 10.40 -0.6
CBM 63.65 47 eP 27 09.50 -1.7
BLA 64.60 62 eP 27 17.30 -0.3
0.8s 30.20nm 5.4mb
SUF 64.70 349 eP 27 17.20 -0.5
0.5s 4.90nm 4.8mb
CVL 65.11 60 eP 27 20.00 -0.7
CBN 65.53 59 eP 27 23.00 -0.4
PRM 65.80 65 eP 27 24.80 -0.4
KMI 65.84 280 Pc 27 25.00 -0.8
JSC 66.28 64 eP 27 28.10 -0.1
NUR 67.02 349 iP 27 32.40 -0.2
0.7s 16.00nm 5.1mb
NB2 67.51 357 P 27 34.40 -1.3
0.6s 6.90nm 4.8mb
HFS 68.31 355 eP 27 39.00 -1.6
0.4s 19.70nm 5.4mb
LOE 72.22 276 eP 28 05.50 0.6
CHG 72.87 279 ePc 28 08.50 -0.3
1.0s 27.50nm 5.1mb
EKA 73.16 5 P 28 10.00 0.1
2.9s 787.90nm 6.1mb X
BDT 74.03 278 eP 28 15.00 -0.4
0.9s 30.30nm 5.2mb
PCI 75.39 249 ePc 28 24.50 1.2
CLL 77.15 355 iPd 28 30.50 -2.2
0.6s 10.00nm 5.0mb
KSP 77.39 352 eP 28 34.00 0.0
8RG 77.53 354 iPd 28 34.50 -0.3
0.7s 18.00nm 5.2mb
MOX 77.89 356 e(P) 28 37.00 0.2
MEM 78.09 359 Pd 28 38.00 0.2
SNF 78.19 0 P 28 38.80 0.4
PRU 78.37 354 P 28 39.50 0.1
DOU 78.61 0 Pc 28 40.20 -0.5
SPC 78.64 350 eP 28 38.50 -2.7
GRF 78.86 356 eP 28 42.90 0.8
0.7s 22.00nm 5.2mb
Z 23s 0.10um 4.1MszX
CTA 78.98 217 iPc 28 43.00 -0.1
1.0s 17.00nm 4.9mb
MTN 79.18 233 iPc 28 44.70 0.5
KHC 79.29 354 Pd 28 45.40 0.9
ZST 79.94 352 eP 28 48.50 0.5
MAIO 80.14 318 eP 28 53.00 3.6X
GRR 80.20 4 eP 28 49.30 0.0
0.8s 13.40nm 4.9mb
CDF 80.27 358 eP 28 49.90 0.1
0.4s 3.40nm 4.6mb
LPF 80.55 4 eP 28 51.60 0.4
0.8s 8.00nm 4.7mb
HAU 80.69 359 eP 28 52.10 0.1
0.6s 5.40nm 4.7mb
BSF 80.86 359 eP 28 52.80 -0.2
0.6s 7.20nm 4.8mb
KBA 81.35 354 iPd 28 55.40 -0.2
0.6s 15.30nm 5.1mb
LOR 81.43 1 eP 28 56.10 0.2
0.8s 7.20nm 4.7mb
MLR 81.49 345 ePd 28 57.50 1.1
SSF 81.64 1 eP 28 57.20 0.3
0.8s 5.30nm 4.6mb
LBF 81.72 0 eP 28 57.40 0.0
1.0s 8.00nm 4.7mb
AVF 81.91 1 eP 28 58.60 0.3
0.8s 6.70nm 4.7mb
QUE 81.92 309 eP 28 59.00 0.1
MFF 82.01 3 eP 28 59.20 0.3
0.8s 10.70nm 4.9mb
QIS 82.02 222 iPc 28 58.80 -0.4
SMF 82.06 1 eP 28 59.30 0.2
0.8s 11.20nm 4.9mb
TCF 82.39 2 eP 29 01.20 0.3
0.8s 6.70nm 4.7mb
LSF 82.42 2 eP 29 01.20 0.2
0.8s 10.70nm 4.9mb
MAF 82.47 1 eP 29 01.70 0.4
0.6s 3.90nm 4.6mb
IPM 82.50 268 ePd 29 03.70 1.8
LSD 83.22 358 P 29 06.99 1.5
RSP 83.53 358 P 29 08.11 1.2
WB5 83.71 227 iPc 29 07.60 -0.3

RRL 83.77 359 P 29 09.86 1.6
WRA 83.78 227 Pd 29 08.40 0.2
1.0s 16.60nm 5.0mb
RMO 83.99 212 iPd 29 12.70 3.6X
PZZ 84.18 358 P 29 10.68 0.5
RO8 84.37 358 P 29 11.29 0.2
SKO 85.60 348 eP 29 18.20 1.0
VAY 86.08 347 eP 29 20.60 1.0
HY8 86.13 293 iPc 29 20.00 -0.2
1.0s 45.00nm 5.6mb
OHR 86.53 348 eP 29 23.00 1.1
ASPA 87.22 225 iPc 29 25.80 0.6
0.9s 30.00nm 5.5mb
POO 87.88 297 eP 29 29.40 0.7
BOM 88.16 298 iPd 29 29.30 -0.6
G8A 89.82 292 Pc 29 37.00 -0.8
0.7s 9.10nm 5.2mb
WARB 92.71 230 iPd 29 51.90 1.1
TIC 121.31 11 PKPc 35 32.26 -0.1
KIC 121.63 11 PKPc 35 32.82 -0.1
0.5s 4.00nm
LIC 121.73 11 PKPc 35 33.02 -0.1
0.4s 3.00nm
8CAO 122.87 344 iPKPc 35 36.20 0.9
•• 0.6s 26.00nm
ic 35 44.10
LWI 126.75 329 iPKPd 35 44.50 1.3X
8UL 143.39 320 PKPc 36 10.10 -3.7X
0.9s 12.60nm
MAW 148.06 218 iPKPd 36 24.60 4.7X
SLR 148.50 316 iPKPd 36 20.50 -1.6
0.6s 86.67nm
i 36 26.30
8FS 150.15 318 iPKPc 36 25.00 0.4
0.7s 294.52nm
8LF 152.34 316 iPKPd 36 35.50 7.7X
0.8s 75.00nm
S.D. = 0.9 on 117 of 126 obs.

? JAN 29, 1990 01h 07m 50.04± 3.00s
41.709 N ±30.4km 24.288 E ± 9.0km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)
ML 2.3 (THE).

SRS 0.79 222 ePg 08 05.10 -0.3
eSg 08 16.40
SOH 1.13 219 ePb 08 11.00 -0.3
KNT 1.18 243 ePb 08 12.30 0.2
eSb 08 28.90
OUR 1.39 190 ePb 08 15.90 0.4
ALN 1.55 121 ePb 08 17.60 -0.1
eSb 08 37.70
S.D. = 0.5 on 5 of 5 obs.

JAN 29, 1990 02h 09m 08.88± 0.55s
50.411 N ± 4.5km 5.957 E ± 5.7km
DEPTH = 10.0km (geophysicist)
BELGIUM (541)
MD 2.3 (UCC). ML 2.6 (LDG).

MEM 0.20 9 iP 09 12.76 -0.5
iS 09 14.90
ENN 0.36 357 iPgc 09 15.90 -0.3
0.5s 51.00nm
i 09 18.40
iSg 09 20.20
WLF 0.76 170 iP 09 25.20 1.5
DOU 0.93 251 iPd 09 28.20 1.6
iS 09 40.90
RUP 1.00 135 ePg 09 28.96 1.0
SNF 1.07 276 iP 09 30.35 1.3
ABH 1.15 117 ePg 09 30.74 0.3
WTS 1.68 18 e(Pn) 09 43.00 4.7X
e(Pg) 09 49.00
e(Sg) 10 04.00
CDF 2.18 156 Pg 09 49.20 3.4X
Sg 10 17.60
HAU 2.42 174 Pg 09 55.80 6.6X
Sg 10 25.60
BSF 2.64 168 Pn 09 52.00 -0.3
Sg 10 33.50
LOR 3.44 205 Pn 10 03.40 -0.1
Sg 11 00.00
LBF 3.67 202 Pn 10 06.40 -0.5
SSF 3.72 207 Pn 10 07.20 -0.4
AVF 4.01 206 Pn 10 11.00 -0.7

29d 02h

SMF	4.02	201	Pn	10	10.80	-1.0
BGF	4.38	209	Pn	10	16.10	-0.8
			Sg	11	31.00	
MAF	4.76	210	Pn	10	21.40	-1.0
S.D. = 1.0 on 15 of 18 obs.						

% JAN 29, 1990 02h 21m 07.59± 1.55s
39.173 N ±10.5km 28.337 E ±16.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.49	27	iPg	21	17.40	-0.1
			eSg	21	25.40	
KCT	1.07	1	iPg	21	28.10	0.3
IZM	1.14	228	ePn	21	29.00	0.0
BNT	1.22	345	iPn	21	30.10	-0.3
EDC	1.23	343	iPn	21	30.50	0.1
S.D. = 0.3 on 5 of 5 obs.						

? JAN 29, 1990 02h 29m 50.87± 6.57s
9.907 S ±56.2km 123.386 E ±32.5km
DEPTH = 33.0km (normal)
3.9mb (2 obs.)
TIMOR (289)

KNA	7.83	138	eP	31	46.00	0.7
			eS	33	08.00	
MTN	8.13	112	iPd	31	49.50	-0.1
			eS	33	14.00	
WB5	14.51	134	eP	33	08.90	-7.0X
			e	35	44.80	
WRA	14.54	135	Pc	33	12.20	-4.0X
	0.5s		1.10nm		3.6mb	
WARB	16.48	170	eP	33	41.00	-0.3
			eS	36	36.00	
ASPA	16.97	145	eP	33	46.90	-0.6
	0.4s		9.00nm		4.3mb	
			iS	36	44.40	
FORR	21.29	169	eP	34	37.30	0.4
S.D. = 0.7 on 5 of 7 obs.						

JAN 29, 1990 02h 41m 23.97± 0.32s
18.271 N ± 5.5km 102.547 W ± 4.0km
DEPTH = 39.1km (10 depth phases)
5.4mb (36 obs.) 4.4Msz (2 obs.)
MICHOACAN, MEXICO (57)

MRX	1.92	42	iP	41	57.52	2.7
			iS	42	22.20	
ACX	2.92	118	iP	42	10.30	1.2
			(S)	42	56.50	
III	2.93	87	iP	42	09.30	-0.1
			(S)	42	54.50	
CRX	2.94	67	iP	42	11.30	1.6
			(S)	42	42.00	
IIJ	3.03	61	(P)	42	58.29	47.1X
UNM	3.36	71	iP	42	16.50	0.9
			(S)	43	10.00	
IIC	3.45	64	iP	42	19.49	2.5
AGX	3.60	4	(P)	42	21.50	2.9
PPM	3.80	77	iP	42	22.00	-0.1
			(S)	43	10.93	
OXX	5.68	101	iP	42	49.00	0.7
			(S)	44	03.61	
LVVM	5.95	75	(P)	42	51.50	-0.5
MZX	6.10	324	(P)	42	55.30	1.2
ALQ	16.97	349	iPd	45	22.50	2.3
	1.3s		93.75nm		4.8mb	
ANMO	16.97	349	P	45	22.20	1.9
	1.0s		43.75nm		4.5mb	
SIO	18.26	16	eP	45	34.40	-1.7
GLA	18.39	326	eP	45	40.00	2.2
TUL	18.56	17	ePc+	45	37.50	-2.3
	1.1s		167.80nm		5.1mb	
Z	20s		5.01um		4.6MszX	
			eS	49	13.00	
			LR	50	47.00	
BAR	19.16	321	eP	45	47.00	-0.1
PLM	19.76	322	eP	45	54.00	0.2
OLY	19.78	28	P	45	50.50	-3.3X
PEC	20.32	323	P	45	59.30	-0.2
RVR	20.51	323	eP	46	02.00	0.5
PWLA	21.04	35	P	46	03.50	-3.4X
MWC	21.07	322	eP	46	08.00	0.6
PAS	21.09	322	eP	46	11.00	3.6X
SBB	21.27	323	eP	46	10.00	0.7
GOL	21.49	354	P	46	10.00	-1.7
	0.8s		41.67nm		4.9mb	
GLD	21.53	354	P	46	10.50	-1.5
MSU	21.85	339	P	46	15.00	-0.2
CLC	21.97	326	eP	46	17.00	0.7
ABL	22.20	321	P	46	19.50	0.8
FVM	22.32	26	P	46	16.10	-3.6X
ISA	22.34	324	eP	46	21.00	1.0
SYP	22.43	320	eP	46	19.00	-2.0
RSCP	22.89	38	P	46	22.00	-3.3X
	1.0s		173.54nm		5.5mb	
BCH	22.94	321	P	46	27.50	1.6
DAU	23.31	343	P	46	30.00	0.3
TNP	23.54	330	P	46	32.50	0.7
	1.0s		55.00nm		5.0mb	
			pP	46	44.00	45km
DUG	23.58	340	P	46	32.80	0.7
	0.8s		5.56nm		4.1mb X	
GBTN	23.75	40	P	46	30.00	-3.6X
PRM	23.93	45	P	46	32.00	-3.4X
FRI	23.99	324	eP	46	36.00	0.1
LLA	24.43	322	eP	46	41.10	0.9
PRS	24.48	321	eP	46	41.00	0.2
KVN	24.73	330	P	46	44.60	1.3
			pP	46	55.00	39km
JSC	24.79	46	P	46	40.00	-3.7X
CMB	25.12	325	ePd	46	47.30	0.5
BW06	25.14	348	P	46	45.20	-2.1
LHS	25.21	46	P	46	44.00	-3.7X
ARN	25.27	323	P	46	49.00	0.7
GCC	25.33	321	e(P)	46	49.50	0.8
RSSD	25.80	358	P	46	51.50	-1.9
ORV	26.82	326	eP	47	03.50	1.0
NAV	26.91	41	P	46	59.00	-4.5X
BLA	27.08	41	P	47	01.00	-4.0X
	1.0s		25.00nm		4.8mb	
LRM	28.68	345	ePd	47	18.80	-0.8
			e	47	29.70	41km
LON	32.53	335	P	47	53.00	-0.5
SES	32.76	350	ePd	47	53.60	-1.8
RSON	33.27	10	P	47	55.80	-3.9X
	1.0s		62.36nm		5.5mb	
EDM	35.88	349	iPd	48	20.50	-1.6
ZOBO	48.24	133	ePc	49	48.00	-15.9X
	1.0s		11.25nm			
Z	20s		0.32um		4.3Msz	
			i	50	00.20	44km
			LR	06	38.00	
LPB	48.44	134	eP	49	53.00	-12.2X
	1.0s		50.00nm			
			i	50	04.00	38km
CNCB	48.71	134	P	49	48.20	-19.3X
			i	50	06.60	74kmX
CCH	50.37	133	P	50	18.90	-1.1
FRB	50.99	19	eP	50	20.00	-3.7X
TOA	53.24	336	ePd	50	41.20	0.5
INK	53.69	346	iPd	50	42.20	-1.6
	0.7s		37.00nm		5.5mb	
			pP	50	52.50	34km
KDC	53.78	329	eP	50	45.00	0.5
PMR	54.13	335	eP	50	46.80	-0.3
RUV	55.29	236	iP	50	57.10	0.9
	1.2s		50.00nm		5.4mb	
TPT	55.36	236	iP	50	57.30	0.6
	1.2s		40.00nm		5.3mb	
FBA	55.44	338	ePd	50	55.50	-1.2
VAH	55.51	236	iP	50	58.60	0.8
	1.2s		45.00nm		5.4mb	
PMO	55.59	236	iP	50	59.10	0.8
	1.2s		25.00nm		5.1mb	
SVW	56.66	332	ePd	51	04.00	-1.6
TTA	57.60	334	ePd	51	10.30	-1.9
IMA	58.15	338	ePd	51	14.10	-2.0
TVO	58.25	235	iP	51	18.10	0.8
	1.2s		45.00nm		5.4mb	
MBC	58.65	355	ePd	51	17.50	-1.8
	0.8s		38.00nm		5.6mb	
BRW	61.69	343	ePd	51	38.00	-2.2
BAO	63.42	119	eP	51	51.00	-1.5
EKA	80.38	35	P	53	32.00	-0.7
	1.3s		44.70nm		5.3mb	
GRR	84.03	41	eP	53	51.40	-0.4
	1.2s		95.20nm		5.8mb	
LPF	84.04	41	eP	53	51.40	-0.4
	1.2s		83.30nm		5.7mb	
AVE	84.31	57	iP	54	04.50	11.0X
GUD	84.45	49	eP	53	54.00	-0.3
TOL	84.78	50	eP	53	56.40	0.6
EJIF	84.84	53	eP	53	57.50	1.4
ECRI	84.95	47	eP	53	56.80	0.2
NB2	85.07	27	P	53	57.00	0.2
	1.1s		15.90nm		5.1mb	
MFF	85.12	43	eP	53	56.90	-0.4
	1.2s		59.50nm		5.6mb	
TIO	85.17	59	iP	53	56.00	-2.1
			i	54	08.80	43km
KEV	85.33	16	eP	54	07.00	9.1X
EBAN	85.55	51	e(P)	54	00.40	0.8
AAPN	85.58	52	iPc	54	00.00	0.1
ALOJ	85.66	52	iPc	54	01.00	0.6
ATEJ	85.79	53	iPc	54	02.00	0.9
ASMO	85.85	52	iPc	54	02.00	0.7
ETOR	85.89	48	eP	54	02.00	0.6
APHE	86.03	53	iPc	54	03.00	0.8
AFC	86.03	52	eP	54	02.50	0.3
IFR	86.06	56	iPc	54	01.00	-1.5
			i	54	13.50	41km
LFF	86.32	44	eP	54	03.20	0.0
	1.0s		45.60nm		5.7mb	
EVIA	86.33	51	eP	54	03.80	0.2
LSF	86.33	42	eP	54	03.00	-0.3
	1.0s		30.00nm		5.5mb	
RJF	86.69	43	eP	54	04.80	-0.3
	1.0s		45.60nm		5.7mb	
LPO	86.71	44	eP	54	04.80	-0.4
	1.1s		14.60nm		5.1mb	
TCF	86.75	42	eP	54	05.00	-0.4
	1.0s		30.80nm		5.5mb	
EPF	86.76	46	eP	54	06.00	0.4
	1.2s		50.50nm		5.6mb	
MAF	87.00	42	eP	54	06.30	-0.3
	1.0s		20.80nm		5.3mb	
BGF	87.05	42	eP	54	06.20	-0.6
	1.0s		20.00nm		5.3mb	
SSF	87.26	41	eP	54	07.20	-0.6
	1.0s		22.00nm		5.4mb	
AVF	87.28	41	eP	54	07.10	-0.8
	1.2s		11.90nm		5.0mb	
LOR	87.40	41	eP	54	07.90	-0.6
	1.2s		41.60nm		5.6mb	
LBF	87.59	41	eP	54	08.60	-0.9
	1.2s		30.90nm		5.4mb	
HAU	88.61	39	eP	54	13.20	-1.1
	1.3s		21.60nm		5.3mb	
SUF	89.84	21	eP	54	18.90	-0.9
	0.4s		7.20nm		5.3mb	
MOX	90.42	36	eP	54	22.00	-0.7
GRF	90.67	36	eP	54	24.00	0.1
	1.6s		55.00nm		5.7mb	
Z	22s		0.20um		4.5Msz	
			e	54	35.00	35km
			e	54	45.00	
BRG	91.57	35	eP	54	27.30	-0.7
KHC	92.28	36	Pc	54	31.90	0.5
PRU	92.37	35	eP	54	31.50	-0.2
	1.5s		15.60nm		5.2mb	
			e	54	41.50	31km
ZST	94.76	36	eP	54	42.50	-0.2
TIC	95.04	81	P	54	44.86	0.3
LIC	95.17	82	P	54	45.90	0.7
KIC	95.39	82	P	54	46.78	0.6
SRO	95.64	36	eP	54	47.40	0.6
WRA	126.44	258	PKPd	00	24.60	-0.7X
	0.7s		3.20nm			
CHG	137.53	329	ePKP	00	49.50	3.1X
HYB	144.52	358	iPKPc	00	56.00	-2.8X
	1.0s		35.00nm			
			i	01	07.00	
SNG	145.91	316	ePKP	01	13.50	12.3X
IPM	147.51	312	ePKPd	01	07.50	3.7X
GBA	148.33	0	PKPc	01	07.80	2.8X
	1.0s		23.10nm			
S.D. = 1.1 on 108 of 133 obs.						

& JAN 29, 1990 02h 50m 22.57s
59.051 N 145.122 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

RAGM	1.36	9	eP	50	43.24	-4.3
			eS	50	59.43	
SGAM	1.46	358	iP	50	44.62	-4.3
			eS	51	02.68	
HIN	1.52	333	eP	50	45.15	-4.7

		eS	51	03.09	
CVA	1.53 348	iP	50	45.23	-4.7
		eS	51	03.58	
SNH	1.62 45	eP	50	48.58	-2.7
GLI	2.09 332	eP	50	53.72	-4.3
		eS	51	17.42	
VZW	2.14 341	eP	50	53.83	-5.0
		eS	51	19.01	
BALM	2.43 34	eP	50	59.42	-3.6
		eS	51	26.44	
KLU	2.48 351	eP	50	58.83	-4.9
GLB	2.49 15	eP	50	59.44	-4.3

10 obs. ossocioted

JAN 29, 1990 03h 51m 41.25± 0.70s
43.970 N ± 7.1km 7.435 E ± 6.7km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 1.0 (STR).

AUTN	0.03 348	Pg	51	43.43	0.0
		Sg	51	44.90	
SAOF	0.09 79	Pg	51	43.75	-0.1
		Sg	51	45.48	
SBF	0.11 180	Pg	51	44.40	0.3
		Sg	51	46.00	
AURF	0.11 223	Pg	51	43.98	-0.3
TOUF	0.14 288	Pg	51	44.95	0.2
MVIF	0.22 250	Pg	51	45.96	-0.1
		Sg	51	49.61	

S.D. = 0.3 on 6 of 6 obs.

JAN 29, 1990 03h 51m 56.69± 0.42s
40.844 N ± 4.2km 23.221 E ± 4.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.7 (THE), 3.5 (ATH), 3.7 (SKO).

THE	0.29 223	ePg	52	03.20	0.5
		eSg	52	06.50	
SRS	0.39 46	ePg	52	06.50	1.8
KNT	0.40 323	ePg	52	08.00	3.1X
PLG	0.50 160	iPgc	52	01.20	-5.6X
GRG	0.63 281	ePg	52	11.00	1.6
		eSg	52	21.50	
VAY	0.68 314	iPgd	52	09.60	-0.6
		i	52	13.60	
		iSg	52	21.00	
OUR	0.77 131	ePg	52	10.20	-1.5
MMB	0.84 27	ePgc	52	11.00	-1.9
LIT	0.93 217	ePg	52	15.00	0.6
		eSg	52	27.40	
KKB	1.03 354	iPgc	52	15.00	-1.1
KZN	1.23 245	ePb	52	18.00	-1.6
RZN	1.41 53	iP	52	21.00	-1.5
VTS	1.75 360	iP	52	27.00	-0.3
SKO	1.75 311	ePn	52	32.30	5.0X
		ePg	52	34.00	
		eSn	52	56.50	
		eSg	52	58.00	
		LR	53	02.50	
RDO	1.78 79	ePb	52	27.50	-0.2
KDZ	1.84 63	iP	52	25.00	-3.6X
PGB	1.85 22	iP	52	29.00	0.3
OHR	1.85 279	ePn	52	27.80	-1.0
AGG	1.94 201	ePb	52	30.10	0.0
		eSb	52	54.10	
ALN	2.14 88	ePn	52	32.80	-0.1
EZN	2.58 112	ePn	52	40.30	1.1
PRK	2.83 123	ePg	52	46.50	3.7X
ATH	2.89 172	ePn	52	43.50	-0.1
VLS	3.35 218	ePb	52	54.00	3.8X
DMK	3.55 73	ePn	53	01.40	8.4X
EDC	3.57 96	ePn	52	54.00	0.8
BNT	3.61 96	ePn	52	53.00	-0.8
DRA	3.91 11	eP	53	16.00	18.0X
VLI	4.13 183	ePn	53	02.00	0.9
CMP	4.62 16	ePc	53	26.00	17.9X
BZS	4.91 347	ePc	53	13.50	1.3
MLR	5.05 22	ePc	53	16.50	2.1
VRI	5.64 26	ePd	53	25.00	2.5X

S.D. = 1.2 on 23 of 33 obs.

% JAN 29, 1990 04h 47m 01.08± 1.30s
31.336 S ±11.7km 67.935 W ±10.8km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.46 271	iPc	47	10.00	-0.4
RTCV	0.73 224	ePd	47	15.70	0.2
RTBS	1.34 256	ePd	47	25.60	-0.1
		S	47	44.60	
RTRS	1.75 311	iPc	47	32.10	0.4
		S	47	55.30	
CYA	3.43 33	e(P)	47	55.50	-0.2

S.D. = 0.5 on 5 of 5 obs.

% JAN 29, 1990 05h 28m 13.23± 0.75s
23.568 N ± 5.8km 120.940 E ± 7.3km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWF1	0.39 123	iPd	28	21.40	0.1
		eS	28	27.00	
TWK	0.51 234	iPc	28	23.60	0.0
TWQ	0.71 352	ePc	28	27.40	0.2
TWG	0.75 171	iPc	28	27.90	-0.1
TWC	1.33 39	ePc	28	37.50	-0.2
		eS	28	56.10	

S.D. = 0.2 on 5 of 5 obs.

JAN 29, 1990 06h 08m 43.09± 0.60s
40.732 N ± 5.0km 23.311 E ± 4.9km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.3 (THE), 2.1 (SKO).

SOH	0.10 20	ePg	08	46.40	0.6
THE	0.28 249	ePg	08	49.00	0.0
		eSg	08	52.70	
SRS	0.44 29	ePg	08	51.80	-0.3
		eSg	08	57.70	
KNT	0.53 324	ePg	08	53.50	-0.4
		eSg	09	00.50	
OUR	0.65 128	ePg	08	55.80	-0.2
		eSg	09	05.70	
GRG	0.73 288	ePg	08	57.30	-0.1
		eSg	09	07.60	
VAY	0.81 317	iPg	08	59.00	0.2
		iSg	09	10.50	
LIT	0.89 225	ePg	09	00.30	0.1

S.D. = 0.4 on 8 of 8 obs.

% JAN 29, 1990 06h 11m 33.90± 0.61s
23.571 N ± 4.8km 120.954 E ± 6.4km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWF1	0.38 125	iPd	11	41.90	0.1
		eS	11	48.10	
TWK	0.52 235	ePc	11	44.30	-0.2
		eS	11	52.10	
TWQ	0.71 351	ePc	11	48.10	0.2
		eS	11	58.40	
TWG	0.75 172	ePc	11	48.80	0.1
TWD	0.78 49	iPd	11	48.50	-0.5
TWC	1.32 38	ePc	11	58.10	-0.1
		eS	12	16.80	
TWZ	1.62 20	ePc	12	03.00	0.4

S.D. = 0.4 on 7 of 7 obs.

% JAN 29, 1990 06h 23m 32.69± 1.81s
44.624 N ±21.3km 8.235 E ± 7.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

PCP	0.24 110	P	23	37.78	0.0
		S	23	40.75	
ROB	0.42 219	P	23	41.98	0.7
		S	23	47.32	
ENR	0.71 236	P	23	45.88	-0.8
STV	0.75 240	P	23	47.01	-0.5
PZZ	0.82 262	P	23	49.27	0.6

S.D. = 0.9 on 5 of 5 obs.

? JAN 29, 1990 06h 48m 37.71± 1.24s
31.229 N ±20.5km 39.573 W ±19.4km
DEPTH = 19.5km (3 depth phases)
4.4mb (3 obs.)
NORTH ATLANTIC RIDGE (403)

FVM	41.97 294	P	56	27.50	-1.5
OLY	43.15 290	P	56	38.00	-0.7
TUL	46.53 292	eP	57	04.80	-1.0
	1.0s	5.70nm			4.5mb
SUF	51.67 32	iP	57	44.50	-0.5
ZOBO	54.61 214	P	58	08.00	0.0
BW06	55.60 303	P	58	14.50	-0.1
	0.8s	3.21nm			4.4mb
		pP	58	20.80	21km
DUG	58.61 301	P	58	37.00	1.2
TNP	62.51 300	P	59	04.00	1.5
	0.7s	1.80nm			4.3mb
		pP	59	09.80	19km
INK	62.81 335	eP	59	10.00	6.2X
KVN	62.85 301	P	59	05.00	0.3
		pP	59	11.00	19km
PLM	63.89 295	P	59	08.70	-3.0X
CMB	64.88 301	P	59	18.00	0.1
ORV	65.15 302	P	59	20.20	0.7

S.D. = 1.0 on 11 of 13 obs.

? JAN 29, 1990 08h 16m 00.65± 1.00s
39.199 N ± 8.9km 27.804 E ±14.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.76 57	iPg	16	15.50	0.0
		eSg	16	25.50	
IZM	0.90 208	ePn	16	18.00	0.0
EDC	1.15 2	ePn	16	22.50	0.4
BNT	1.16 4	iPn	16	21.90	-0.4

S.D. = 0.6 on 4 of 4 obs.

? JAN 29, 1990 09h 56m 36.29± 1.01s
39.058 N ± 9.0km 27.528 E ±17.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.69 198	ePg	56	50.00	0.0
		eSg	57	03.00	
DST	1.01 57	ePn	56	55.50	0.0
EDC	1.31 11	ePn	57	00.50	-0.1
BNT	1.33 13	iPn	57	00.90	0.1

S.D. = 0.1 on 4 of 4 obs.

JAN 29, 1990 10h 29m 45.12± 0.55s
44.766 N ± 3.7km 7.167 E ± 5.3km
DEPTH = 13.0 ± 7.0 km
NORTHERN ITALY (545)
ML 2.3 (GEN).

PZZ	0.27 190	P	29	51.20	0.2
		S	29	54.78	
DOI	0.27 168	Pd	29	51.30	0.3
		eSg	29	55.00	
RRL	0.31 300	P	29	52.10	0.2
		S	29	56.36	
FOUF	0.36 229	ePgc	29	53.14	0.4
		e(Sg)	29	57.62	
RSP	0.39 9	P	29	53.09	-0.2
		S	29	58.06	
STV	0.53 168	P	29	55.67	-0.2
		S	30	03.04	
ENR	0.57 161	P	29	55.88	-0.6
		S	30	03.35	
ROB	0.69 133	P	29	58.29	-0.2
		S	30	07.29	
LSD	0.69 359	P	29	58.36	-0.3
		S	30	07.66	
FIN	0.93 126	P	30	02.79	0.2
IMI	1.00 149	P	30	03.12	-0.7
PCP	1.01 102	P	30	05.33	1.3

S.D. = 0.6 on 12 of 12 obs.

• JAN 29, 1990 10h 37m 10.36± 0.58s
40.190 N ±10.7km 142.324 E ±11.5km
DEPTH = 47.6km (2 depth phases)
4.8mb (14 obs.) 4.0Msz (2 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

MAT	4.87 223	iPc	38	24.80	1.8
	0.8s	151.49nm			
		eS	39	28.00	
BJI	19.98 278	eP	41	39.00	-2.4
	Z 20s	0.30um			
LZH	30.38 275	eP	43	21.40	1.2
	Z 20s	0.30um			3.9Msz
KMI	36.24 258	Pc	44	12.00	1.0

29d 10h

CHG	42.82	253	eP	45	06.00	0.6
IMA	43.63	32	eP	45	12.60	1.1
	1.0s	11.30nm			4.6mb	
SHL	44.23	267	eP	45	16.50	-0.4
PMR	45.69	38	eP	45	27.50	-0.4
INK	51.27	28	eP	46	11.00	0.0
MBC	53.30	17	eP	46	26.00	-0.1
	0.9s	5.00nm			4.5mb	
WB5	60.22	189	eP	47	15.70	-0.1
WRA	60.28	189	Pc	47	13.50	-2.8
	0.8s	3.70nm			4.6mb	
GBA	62.20	264	Pc	47	28.20	-1.3
	0.6s	4.40nm			4.8mb	
SOD	62.34	337	iP	47	28.00	-1.8
SUF	65.50	333	iP	47	50.20	-0.1
	0.6s	5.70nm			4.8mb	
HFS	71.51	336	eP	48	26.70	-1.0
	0.7s	4.10nm			4.5mb	
Z	18s	0.09um			4.1Msz	
		LR		19	02.00	
NB2	71.56	337	P	48	27.30	-0.7
	0.8s	8.40nm			4.7mb	
FRB	73.54	14	eP	48	38.00	-1.5
KSP	77.80	328	eP	49	04.00	0.1
		e		49	18.00	49km
PRU	79.16	329	eP	49	12.00	0.6
		e		49	21.50	30kmX
KHC	80.23	329	iPc	49	18.10	0.9
		e		49	31.70	47km
ALQ	82.03	51	eP	49	28.40	1.3
VAI	84.78	329	Pd	49	40.60	0.0
LOR	85.40	333	eP	49	43.80	0.0
	0.8s	6.70nm			4.9mb	
LBF	85.61	333	eP	49	44.80	0.0
	1.0s	8.00nm			4.9mb	
SSF	85.70	333	eP	49	45.70	0.5
	0.8s	8.00nm			5.0mb	
LPG	85.86	330	eP	49	47.20	0.8
	0.8s	6.70nm			4.9mb	
AVF	85.99	333	eP	49	47.20	0.5
	0.8s	13.40nm			5.2mb	
BGF	86.37	333	eP	49	49.80	1.3
	0.8s	11.20nm			5.1mb	
MAF	86.75	333	eP	49	51.40	0.9
	0.8s	6.70nm			4.9mb	
LPO	88.57	333	eP	49	46.90	-12.3X
	0.8s	8.00nm				

S.D. = 1.2 on 30 of 31 obs.

% JAN 29, 1990 11h 09m 07.99± 1.73s
1.061 S ± 8.5km 78.183 W ±20.6km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)

TUNG	0.44	216	iPd	09	17.00	-0.1
			S	09	24.00	
VC1	0.47	333	iP+	09	17.40	-0.3
			S	09	21.00	
GGP	0.97	335	eP	09	26.90	0.0
			S	09	40.00	
CAYA	1.15	10	P	09	29.20	-0.7
COTA	1.39	354	eP	09	35.00	1.0

S.D. = 0.9 on 5 of 5 obs.

? JAN 29, 1990 12h 19m 16.45±12.76s
43.541 N ±87.2km 7.567 E ±12.5km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.5 (GEN).

IMI	0.44	32	P	19	25.45	0.1
			S	19	31.09	
ENR	0.69	351	P	19	30.27	0.0
			S	19	38.06	
STV	0.72	346	P	19	30.57	-0.2
			S	19	38.57	
ROB	0.78	16	P	19	31.70	-0.1
			S	19	40.62	
FIN	0.81	35	P	19	32.21	0.0
			S	19	42.06	
PZZ	1.02	341	P	19	36.01	0.2
			S	19	48.31	

S.D. = 0.2 on 6 of 6 obs.

% JAN 29, 1990 12h 54m 43.91± 1.25s
44.592 N ±11.9km 8.245 E ± 5.8km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 2.1 (GEN).

PCP	0.22	103	P	54	48.69	0.0
			S	54	51.56	
FIN	0.38	184	P	54	51.87	0.1
			S	54	57.10	
ROB	0.40	222	P	54	52.38	0.3
			S	54	57.72	
ENR	0.69	239	P	54	57.20	-0.5
STV	0.75	243	P	54	58.43	-0.1
PZZ	0.82	264	P	55	00.28	0.4
			S	55	11.97	

S.D. = 0.4 on 6 of 6 obs.

JAN 29, 1990 13h 01m 45.16± 0.21s
39.964 N ± 2.4km 23.936 E ± 2.1km
DEPTH = 10.0km (geophysicist)
4.3mb (3 obs.)
AEGEAN SEA (365)
ML 4.0 (THE), 4.1 (ATH).

PAIG	0.20	260	iPgd	01	49.80	0.3
			eSg	01	52.60	
OUR	0.37	5	iPgc	01	54.50	1.7
			eSg	02	00.70	
PLG	0.56	318	iPbc	01	55.80	-0.7
NEO	0.86	220	ePb	02	01.50	-0.2
SOH	0.97	333	ePg	02	04.40	0.9
THE	1.00	312	ePb	02	04.70	0.6
			eSb	02	19.00	
LIT	1.12	277	ePb	02	06.50	0.4
			eSb	02	22.30	
SRS	1.18	347	ePb	02	08.10	0.9
			eSb	02	24.60	
KNT	1.43	327	ePb	02	12.00	0.8
			eSb	02	32.40	
AGG	1.56	233	ePb	02	12.70	-0.3
			eSb	02	32.80	
KZN	1.69	282	ePb	02	15.00	0.0
RDO	1.70	45	ePn	02	15.00	0.0
VAY	1.71	323	iPn	02	15.30	0.2
			iSn	02	37.00	
EZN	1.84	94	iPn	02	17.60	0.5
ALN	1.86	59	ePb	02	17.30	0.0
PRK	1.94	111	ePb	02	19.00	0.5
ATH	2.00	185	ePn	02	18.70	-0.6
OHR	2.65	297	ePn	02	28.80	0.0
SKO	2.76	318	iPnc	02	30.50	0.3
			i	02	32.70	
IZM	3.02	120	ePn	02	31.00	-3.0X
EDC	3.03	82	ePn	02	35.50	1.4
BNT	3.08	81	iPn	02	34.30	-0.4
APE	3.15	156	ePn	02	34.70	-1.1
VLS	3.16	237	ePn	02	37.00	1.1
SMG	3.19	134	ePn	02	36.20	-0.1
ITM	3.19	210	ePn	02	36.70	0.3
KEK	3.19	267	ePb	02	40.00	3.6X
VLI	3.33	194	ePn	02	37.00	-1.4
DMK	3.44	56	iPn	02	39.60	-0.3
CTT	3.62	70	ePn	02	42.00	-0.5
DST	3.63	94	ePn	02	48.00	5.3X
ISK	4.06	73	ePn	02	48.00	-0.6
YLV	4.20	80	ePn	02	50.30	-0.5
GBZT	4.29	77	ePn	03	11.00	19.1X
HRT	4.46	77	ePn	03	01.30	6.9X
KHL	4.64	109	ePn	02	59.00	1.9
BUC1	4.65	19	eP	03	24.00	27.0X
DRA	4.72	3	eP	02	58.00	0.0
BUC	4.73	19	eP	03	20.00	21.9X
NPS	4.88	164	ePn	03	02.20	1.9
GPA	4.90	84	ePn	03	00.00	-0.6
CMP	5.36	8	iPd	03	05.00	-2.2
BEO	5.50	333	eP	03	29.00	20.0X
			i	04	47.50	
TLB	5.53	32	ePd	03	09.00	-0.5
ELL	5.69	122	ePn	03	13.00	1.1
ROI	5.69	268	P	03	12.20	0.4
MLR	5.72	14	ePc	03	12.50	0.2
BCK	5.77	114	eP	03	13.90	0.9
TDS	5.86	269	P	03	14.90	0.8
			eSn	04	21.30	
CSI	5.89	271	P	03	17.50	3.0X
BZS	5.90	344	ePc	03	13.00	-1.6
DEV	5.96	353	ePd	03	15.00	-0.6
BRD	6.00	21	eP	03	20.00	3.9X
CZI	6.07	265	P	03	17.90	0.8
CFR	6.08	29	eP	03	16.50	-0.6
MDB	6.18	3	iPd	03	18.00	-0.7
VRI	6.25	18	iPc	03	20.50	0.9
SOI	6.42	255	P	03	19.90	-2.2
			eSn	04	30.80	
MGR	6.43	274	P	03	22.20	-0.1
			eSn	04	35.50	
SGO	6.63	278	P	03	25.70	0.7
BBTK	6.79	88	eP	03	27.00	-0.3
			e	07	27.00	
ATN	6.83	257	P	03	26.50	-1.4
CLI	7.02	19	iPd	03	30.50	0.0
BMR	7.71	358	ePd	03	59.00	18.9X
SDI	7.87	286	P	03	43.10	0.7
			eSn	05	10.30	
BUD	8.31	336	e(P)	04	05.00	16.5X
PTJ	8.33	318	eP	03	50.10	1.2
VBY	8.45	314	e(P)	03	55.00	4.5X
SRO	8.83	335	eP	04	48.00	52.3X
			e	06	39.30	
VOY	9.53	313	eP	04	02.90	-2.6X
ZST	9.58	331	eP	04	11.60	5.6X
			e	05	05.40	
SPC	9.59	345	eP	04	10.50	4.2X
KBA	10.47	316	e(P)	04	18.00	-0.4
	1.2s	21.40nm			5.4mb	X
KHC	11.76	325	P	04	36.00	0.1
NUR	20.57	1	eP	06	27.00	0.6
HFS	21.19	346	eP	06	31.20	-1.5
	0.4s	1.40nm			3.7mb	
NB2	22.52	344	P	06	45.80	-0.3
	1.2s	16.90nm			4.4mb	
BCAO	35.71	189	iPc	08	45.60	-0.2
	0.5s	5.00nm			4.6mb	
KIC	42.22	225	P	09	39.00	-1.0
SHL	57.64	82	eP	11	36.50	-1.7
BAO	86.65	247	e(P)	14	31.00	0.5

S.D. = 0.9 on 64 of 81 obs.

JAN 29, 1990 13h 08m 36.76± 1.03s
39.953 N ± 7.8km 23.820 E ± 7.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.7 (THE).

PAIG	0.11	256	ePg	08	39.70	0.1
			eSg	08	42.10	
OUR	0.40	18	ePg	08	44.30	-0.6
SOH	0.94	338	ePg	08	54.10	-0.6
THE	0.94	316	ePg	08	54.90	0.2
			eSg	09	08.90	
LIT	1.03	279	ePg	08	56.40	0.1
			eSg	09	12.10	
SRS	1.18	352	ePb	08	58.00	-0.7
			eSb	09	14.50	
KNT	1.40	330	ePb	09	01.90	-0.4
			eSb	09	20.70	
AGG	1.48	232	ePb	09	02.70	-0.8
			eSb	09	22.30	
VAY	1.66	326	ePn	09	08.00	1.9
ALN	1.94	60	ePb	09	10.80	0.7

S.D. = 0.9 on 10 of 10 obs.

% JAN 29, 1990 13h 11m 36.64± 1.01s
44.543 N ±10.9km 8.275 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

PCP	0.19	90	P	11	40.93	0.0
			S	11	43.80	
FIN	0.34	188	P	11	43.70	0.1
			S	11	49.14	
ROB	0.38	230	P	11	44.52	0.0
			S	11	49.96	
ENR	0.69	243	P	11	50.16	-0.2
			S	11	59.60	
STV	0.74	247	P	11	51.19	-0.1
			S	12	01.03	
PZZ	0.84	268	P	11	53.14	0.2
			S	12	04.21	

S.D. = 0.2 on 6 of 6 obs.

% JAN 29, 1990 13h 13m 21.86± 1.06s
44.551 N ±11.3km 8.281 E ± 5.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545

ML 2.1 (GEN).

PCP	0.19	93	P	13 26.10	0.0
			S	13 28.97	
FIN	0.35	189	P	13 28.97	0.0
			S	13 34.09	
ROB	0.39	229	P	13 29.68	-0.2
			S	13 35.02	
ENR	0.70	243	P	13 36.25	0.5
			S	13 44.86	
STV	0.75	246	P	13 36.45	-0.2
PZZ	0.84	267	P	13 38.09	-0.2
			S	13 49.78	

S.D. = 0.4 on 6 of 6 obs.

% JAN 29, 1990 13h 15m 42.62± 1.07s
44.560 N ±11.1km 8.273 E ± 5.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

PCP	0.20	95	P	15 46.96	0.0
			S	15 49.83	
FIN	0.35	188	P	15 49.94	0.0
			S	15 55.27	
ROB	0.39	228	P	15 50.65	0.0
			S	15 56.40	
ENR	0.70	242	P	15 56.60	0.1
			S	16 05.52	
STV	0.75	245	P	15 57.22	-0.1
			S	16 06.96	
PZZ	0.84	267	P	15 58.96	0.0
			S	16 10.34	

S.D. = 0.1 on 6 of 6 obs.

& JAN 29, 1990 13h 16m 10.68s
34.463 N 106.879 W
DEPTH = 12.0km
4.5mb (6 obs.)
NEW MEXICO (496)
<SNM>. mbLg 4.8 (TUL). Slight damage (VI) at Jorales. Felt (V) at Albuquerque and Bosque; (IV) at Belen, Los Lunos, Mogdoleno and Tome; (III) at Mountoinoir; (II) at Isleta, Peralto and Socorro.

LAZ	0.22	254	P	16 15.30	-0.5
LPM	0.25	126	P	16 16.00	-0.3
BMNM	0.37	239	P	16 18.40	0.0
BNM	0.38	147	P	16 18.00	-0.7
SNM	0.40	188	P	16 18.70	-0.2
CRNM	0.52	167	P	16 20.75	-0.6
SBM	0.55	207	P	16 21.25	-0.6
ALQ	0.59	36	iP	16 22.20	-0.4
	0.5s	202.46nm			
ANMO	0.59	36	iPd	16 22.10	-0.6
PV09	4.42	336	iPc	17 19.10	-0.2
GOL	5.36	13	eP	17 31.20	-1.5
MSU	5.88	315	eP	17 39.60	-0.3
GLA	6.77	260	eP	17 51.00	-1.3
			e	18 19.00	
BAR	8.36	260	eP	18 18.00	3.4
PLM	8.37	265	eP	18 15.30	0.4
PEC	8.54	269	eP	18 14.00	-3.1
BW06	8.56	347	eP	18 12.60	-4.9
RVR	8.71	270	eP	18 22.00	2.7
SIO	8.76	79	(Pn)	18 17.50	-2.5
CLC	8.88	282	eP	18 30.00	8.2
			e	18 57.00	
SBB	9.03	275	eP	18 26.00	2.1
			e	18 59.00	
TNP	9.10	296	e(P)	18 25.00	0.1
TUL	9.19	78	(Pn)	18 24.40	-1.6
	0.9s	5.50nm		4.9mb	
	Z 19s	1.85um		5.6Msz	
		ePg		18 57.50	
		LR		20 52.00	
		eLg		20 59.20	
MWC	9.25	272	eP	18 28.00	1.0
PAS	9.35	271	eP	18 46.00	17.8
ISA	9.58	280	eP	18 36.00	4.6
			e	19 17.00	
KVN	10.10	300	eP	18 37.60	-1.1
FRI	10.73	287	e(P)	18 58.40	11.3
			e	22 04.30	
CMB	11.47	292	e(P)	18 56.00	-1.3
			e	22 08.00	
LRM	12.12	341	eP	19 25.60	19.4
DEK	16.06	57	Pn	20 01.00	3.2
			Pg	21 07.00	
			Sg	23 42.00	
SES	16.21	350	eP	20 05.00	5.3
RSCP	17.48	80	eP	20 18.00	2.2
RSON	18.99	26	eP	20 32.30	-1.9
	0.8s	16.03nm		4.3mb	
EDM	19.31	348	ePd	20 38.00	-0.3
JSC	21.14	83	eP	20 57.70	0.0
BLA	21.60	75	eP	21 03.00	0.6
PNJ	26.58	66	iP	21 45.60	-4.7
			eLR	30 07.20	
INK	37.11	344	eP	23 23.00	0.7
PMR	38.08	329	eP	23 31.00	0.5
	0.8s	7.93nm		4.5mb	
FBA	39.12	334	eP	23 40.50	1.3
	0.8s	12.07nm		4.8mb	
TTA	41.56	329	eP	24 00.00	0.5
	0.8s	4.31nm		4.2mb	
MBC	42.27	356	eP	24 06.50	1.5
	1.0s	8.00nm		4.4mb	
ZOBO	62.48	137	eP	26 35.00	-2.0
LPB	62.71	137	(P)	26 44.00	5.7
CNCB	63.00	138	P	26 39.70	-0.7
	46 obs. ossocioted				

? JAN 29, 1990 14h 30m 14.77± 3.24s
31.805 S ±32.5km 179.723 W ±40.1km
DEPTH = 500.6 ± 30.6 km
3.9mb (1 obs.)
KERMADEC ISLANDS REGION (177)

HBZ	6.00	195	P	31 50.10	-1.9
KRP	7.24	211	Pc	32 07.00	2.6
HITZ	7.81	207	P	32 10.50	0.2
HATZ	7.85	205	P	32 10.40	-0.4
RATZ	7.95	206	eP	32 12.80	1.0
PGZ	9.37	199	eP	32 27.10	0.4
KIW	10.02	204	P	32 33.10	-0.4
MTW	10.09	201	P	32 34.10	-0.2
CAW	10.19	203	eP	32 35.20	0.0
WDW	10.35	203	eP	32 36.80	-0.1
MOW	10.41	201	eP	32 36.50	-1.1
MRW	10.42	204	eP	32 36.60	-1.0
			eS	34 36.30	
TCW	10.55	206	P	32 38.10	-0.9
			eS	34 38.50	
KHZ	11.87	205	P	32 54.40	1.4
WRA	42.70	275	Pc	37 27.30	-1.0
	0.6s	2.50nm		3.9mb	
SOD	141.15	344	ePKP	48 41.00	-7.2X
SUF	144.93	340	ePKP	48 55.50	0.7
	0.5s	6.90nm			
NB2	149.89	349	PKP	49 09.40	6.7X
	0.7s	1.30nm			
HFS	150.29	346	ePKP	49 09.90	6.6X
	0.5s	2.20nm			

S.D. = 1.2 on 16 of 19 obs.

JAN 29, 1990 14h 54m 07.11± 0.61s
38.342 N ± 5.0km 21.883 E ± 7.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (THE). MD 3.2 (ATH).

AGG	0.76	27	ePg	54 20.60	-1.5
			eSg	54 31.40	
VLS	1.03	261	ePn	54 25.40	-1.2
			eSn	54 42.70	
ITM	1.16	178	ePn	54 28.50	-0.3
NEO	1.42	47	ePn	54 32.30	-0.7
ATH	1.49	104	ePb	54 35.00	1.1
LIT	1.82	15	ePb	54 38.50	-0.2
			eSb	55 03.70	
VLI	1.82	152	ePn	54 39.00	0.2
KZN	1.96	357	ePn	54 41.50	0.6
OUR	2.57	39	ePn	54 48.40	-1.0
OHR	2.89	344	ePn	54 56.50	2.4
KNT	2.92	15	ePn	54 54.10	-0.4
			eSn	55 29.40	
VAY	3.02	10	ePn	54 56.40	0.6
VAM	3.47	147	ePn	55 02.50	0.3

S.D. = 1.2 on 13 of 13 obs.

? JAN 29, 1990 15h 05m 50.07± 0.68s
2.443 S ±76.1km 27.802 W ±31.0km
DEPTH = 10.0km (geophysicist)
4.5mb (3 obs.) 4.1Msz (1 obs.)
SOUTH ATLANTIC OCEAN (409)

BAO	23.82	235	eP	10 59.70	-4.7X
LIC	24.32	69	Pc	11 08.80	-0.3
TIC	24.47	68	P	11 10.20	-0.4
KIC	24.63	69	Pc	11 11.60	-0.5
	0.8s	8.00nm		4.4mb	
LKO	25.13	61	P	11 17.66	0.7
ZOBO	41.98	248	P	13 44.00	0.1
	1.1s	5.80nm		4.2mb	
	Z 18s	0.24um		4.1Msz	
		LR		28 28.00	
CNCB	41.99	247	eP	13 40.00	-4.0X
LPB	42.02	248	eP	13 44.00	-0.1
BCAO	46.80	82	iPd	14 22.70	0.5
	0.4s	8.00nm		5.1mb	
SLR	58.59	119	eP	15 35.00	-15.0X
WRA	151.68	143	PKP	25 45.00	4.3X
	0.6s	1.50nm			

S.D. = 0.5 on 7 of 11 obs.

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* JAN 29, 1990 15h 35m 31.89± 1.19s
39.991 N ± 9.3km 23.770 E ± 9.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG	0.09	227	ePg	35 33.70	-0.8
OUR	0.38	25	ePg	35 38.50	-1.2
SOH	0.89	339	ePg	35 48.80	-0.2
LIT	0.99	277	ePg	35 50.80	0.1
			eSg	36 05.70	
SRS	1.13	353	ePb	35 52.70	-0.4
			eSb	36 09.00	
KNT	1.34	331	ePb	35 55.90	-0.7
			eSb	36 14.50	
VAY	1.61	326	ePn	36 02.40	2.0
ALN	1.96	62	ePb	36 06.60	1.1
			eSb	36 32.80	

S.D. = 1.3 on 8 of 8 obs.

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* JAN 29, 1990 15h 48m 18.67± 1.04s
41.948 N ±13.4km 141.650 E ±19.7km
DEPTH = 33.0km (normol)
4.4mb (3 obs.)
HOKKAIDO, JAPAN REGION (224)

MAT	6.02	207	eP	49 48.00	0.2
BJI	19.31	273	eP	52 44.00	0.3
INK	49.97	29	eP	57 11.00	0.0
GBA	61.89	263	Pd	58 36.60	-0.7
	0.5s	2.00nm		4.5mb	
HFS	69.70	335	eP	59 26.50	-0.2
	0.4s	1.50nm		4.4mb	
NB2	69.74	337	P	59 27.40	0.4
	0.6s	2.00nm		4.4mb	

S.D. = 0.5 on 6 of 6 obs.

JAN 29, 1990 16h 05m 38.42± 0.5Bs
39.980 N ± 4.8km 23.694 E ± 5.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.2 (ATH).

PAIG	0.05	192	ePg	05 40.40	-0.2
OUR	0.42	32	iPg	05 45.30	-1.6
			eSg	05 51.30	
PLG	0.44	334	ePb	05 46.50	-0.8
			eSb	05 53.00	
NEO	0.76	209	ePn	05 52.50	-0.9
			eSn	06 04.50	
THE	0.86	320	ePg	05 55.90	1.0
			eSg	06 09.30	
SOH	0.88	343	ePg	05 55.40	0.0
			eSg	06 08.00	
LIT	0.93	278	ePg	05 57.50	1.3
			eSg	06 13.00	
SRS	1.14	356	ePb	05 58.90	-0.8
			eSb	06 15.60	
KNT	1.33	333	ePb	06 03.50	0.6
			eSb	06 22.80	
AGG	1.42	228	ePb	06 03.70	-0.7
			eSb	06 23.40	
KZN	1.51	283	ePn	06 05.00	-0.6

29d 16h

VAY	1.59	328	ePn	06 09.30		2.7X
ALN	2.01	62	ePb	06 12.40		-0.4
PRK	2.12	109	ePn	06 16.00		1.6
MLR	5.75	16	eP	07 07.50		1.5

S.D. = 1.1 on 14 of 15 obs.

% JAN 29, 1990 16h 56m 43.44± 0.90s
44.343 N ±11.2km 8.260 E ± 8.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

FIN	0.14	195	P	56 46.75		0.0
			S	56 49.83		
ROB	0.28	260	P	56 49.11		-0.3
			S	56 53.62		
PCP	0.28	46	P	56 49.42		0.0
			S	56 54.24		
ENR	0.61	259	P	56 55.98		0.1
STV	0.68	262	P	56 57.21		0.2

S.D. = 0.3 on 5 of 5 obs.

JAN 29, 1990 18h 34m 41.17± 0.88s
39.955 N ± 7.3km 23.771 E ± 8.2km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG	0.08	248	ePg	34 43.80		0.2
OUR	0.41	23	ePg	34 48.60		-1.0
			eSg	34 51.10		
PLG	0.49	329	ePb	34 49.90		-1.2
NEO	0.77	213	ePb	34 55.50		-0.8
LIT	0.99	279	ePg	35 04.10		4.1X
			eSg	35 16.40		
SRS	1.17	353	ePb	35 02.70		-0.3
			eSb	35 19.10		
KNT	1.38	331	ePb	35 06.40		0.0
			eSb	35 26.50		
VAY	1.64	327	ePn	35 12.40		2.3
RDO	1.80	48	ePn	35 12.50		0.1
ALN	1.97	61	ePb	35 15.60		0.6
			eSb	35 39.00		

S.D. = 1.2 on 9 of 10 obs.

JAN 29, 1990 19h 41m 47.48± 0.61s
38.117 N ± 5.7km 86.424 W ± 6.2km
DEPTH = 5.0km (geophysicist)
SOUTHERN INDIANA (489)
mbLg 2.9 (NEIS). Felt (III) at Magnet and (II) at Leavenworth. Also felt in Meade County, Kentucky.

BLO	1.06	356	iP	42 08.20		0.4
			iS	42 31.50		
FDKY	1.42	159	iP	42 12.85		-1.1
MOTN	1.95	220	iP	42 21.60		0.1
ANTN	2.16	153	eP	42 25.25		0.5
			eS	42 54.25		
ABTN	2.24	173	ePd	42 26.75		0.9
			eS	42 57.15		
ONTN	2.27	135	eP	42 26.35		0.1
			eS	42 56.60		
TCT	2.29	204	eP	42 26.70		0.1
RSCP	2.60	165	iPc	42 32.00		1.1
GBTN	3.02	143	eP	42 36.80		-0.1
FVM	3.16	269	eP	42 38.70		-0.2
PWLA	3.40	203	eP	42 41.10		-1.1
BLA	4.85	99	eP	43 02.20		-0.7

S.D. = 0.8 on 12 of 12 obs.

JAN 29, 1990 19h 50m 57.51± 0.53s
27.188 N ± 8.7km 129.417 E ± 7.8km
DEPTH = 29.0km (2 depth phases)
5.1mb (11 obs.)
RYUKYU ISLANDS (238)

SSE	8.18	300	eP	52 57.00		-0.2
Z	12s		2.00um			
N	10s		1.60um			
E	11s		1.10um			
			pP	53 03.50		
NJ2	10.39	300	Pc	53 28.50		0.9
Z	10s		2.10um			
MAT	11.94	37	eP	53 48.80		-0.8
TIA	13.79	314	eP	54 20.70		7.4X
SNY	15.37	343	iPd	54 35.60		1.7
N	11s		1.70um			
E	11s		0.70um			
BJI	16.88	323	eP	54 55.50		2.3
Z	12s		1.21um			
N	10s		0.82um			
CN2	16.88	350	eP	54 56.00		2.8X
Z	14s		2.10um		3.8Msz	
N	12s		1.10um			
E	12s		0.80um			
			epP	55 02.00		
XAN	18.90	296	iPc	55 18.50		0.2
HHC	20.06	317	eP	55 29.60		-1.8
Z	14s		2.40um		4.7MszX	
N	13s		1.60um			
GYA	20.32	273	P	55 37.80		3.6X
BTO	20.87	315	eP	55 39.00		-0.8
N	13s		1.00um			
E	13s		0.70um			
			eS	55 26.00		
CD2	22.72	285	eP	55 56.60		-1.7
Z	12s		0.60um		4.3MszX	
LZH	23.46	299	eP	56 06.70		1.2
Z	16s		1.40um		4.5MszX	
E	13s		0.90um			
			pP	56 14.50	28km	
			sP	56 21.00		
KMI	24.02	271	Pd	56 12.50		1.3
Z	15s		1.10um		4.5MszX	
GTA	27.45	304	eP	56 41.20		-1.9
Z	14s		1.20um		4.6MszX	
E	13s		0.90um			
CHG	29.20	260	eP	57 00.20		1.3
NNT	31.36	248	eP	57 17.60		-0.4
SHL	33.59	276	iP	57 35.90		-1.7
LSA	33.64	283	eP	57 39.00		0.6
WMQ	37.36	307	eP	58 06.50		-2.9X
NDI	45.84	285	eP	59 19.00		0.1
WB5	47.03	174	eP	59 29.40		1.1
WRA	47.09	174	Pd	59 28.40		-0.4
	0.6s		2.50nm		4.4mb	
GBA	50.23	265	Pc	59 52.30		-1.0
	0.7s		34.00nm		5.5mb	
INK	67.59	24	eP	01 53.00		-0.2
MBC	68.65	14	eP	01 59.50		-0.2
	0.8s		12.00nm		5.0mb	
KEV	68.94	339	eP	02 00.00		-1.5
SOD	69.95	336	iP	02 07.70		0.0
SUF	71.99	332	eP	02 19.00		-1.1
	0.6s		7.00nm		4.9mb	
NUR	73.58	330	iP	02 28.30		-1.1
	0.5s		11.20nm		5.1mb	
HFS	78.46	333	eP	02 55.40		-1.6
	0.6s		8.80nm		5.0mb	
Z	17s		0.29um		4.7MszX	
			LR	38 44.00		
NB2	78.92	334	P	02 57.80		-1.8
	0.7s		9.60nm		4.9mb	
MLR	79.80	316	ePc	03 03.50		-1.3
KRA	81.02	322	eP	03 12.10		1.2
	0.3s		40.00nm		5.9mb	
			e	03 14.10	6kmX	
KSP	82.55	324	eP	03 19.60		0.7
BRG	83.75	325	iP	03 26.30		1.3
PRU	83.96	324	Pd	03 27.80		1.7
CLL	83.97	326	iP	03 26.80		0.7
	1.4s		25.00nm		5.2mb	
VAY	84.00	314	eP	03 26.00		-0.5
KHC	84.97	324	Pc	03 33.00		1.7
GRF	85.86	325	eP	03 39.00		3.3X
			e	03 48.60	30km	
SES	86.10	34	eP	03 38.00		1.1
KBA	86.32	322	e(P)	03 38.50		0.3
	1.2s		14.30nm		5.1mb	
			e	03 42.00	11kmX	
			e	03 47.00		
FFC	87.26	27	eP	03 43.00		0.6
	0.7s		10.00nm		5.2mb	
FRB	88.27	B	eP	03 47.00		-0.1

S.D. = 1.2 on 40 of 45 obs.

? JAN 29, 1990 20h 01m 38.67±11.04s
13.911 N ±36.9km 95.568 E ±96.1km
DEPTH = 33.0km (normal)
ANDAMAN ISLANDS REGION (703)

NNT	4.26	107	ePn	02 42.80		-0.1
			ePg	03 01.60		
			eSg	03 24.80		
BDT	4.68	45	ePn	02 47.00		-1.9
			ePg	02 59.90		
			eSg	03 43.40		
NST	4.75	68	ePn	02 53.00		3.2X
			ePg	03 06.50		
			eSg	03 55.00		
CHG	5.85	33	eP	03 05.80		0.3
CHTO	5.85	33	eP	03 06.00		0.5
LOE	6.88	59	eP	03 21.00		1.1

S.D. = 1.6 on 5 of 6 obs.

% JAN 29, 1990 20h 18m 29.97± 1.49s
40.831 N ±11.0km 28.066 E ±14.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT	0.42	41	ePg	18 38.60		0.1
			eSg	18 45.10		
BNT	0.49	193	iPg	18 39.60		-0.3
			iSg	18 47.60		
EDC	0.51	198	iPg	18 40.50		0.2
ISK	0.79	72	ePg	18 45.10		-0.2
			eSg	18 55.60		
YLV	1.03	104	iPn	18 49.60		0.1

S.D. = 0.3 on 5 of 5 obs.

JAN 29, 1990 20h 34m 20.23± 0.17s
6.104 N ± 3.4km 94.683 E ± 3.3km
DEPTH = 98.2km (9 depth phases)
5.0mb (35 obs.)
NICOBAR ISLANDS REGION (704)

SNG	5.99	79	eP	35 48.70		0.7
	1.2s		346.88nm			5.5mb X
			eS	36 47.10		
IPM	6.49	103	ePd	35 55.20		0.3
	0.4s		220.50nm			5.9mb X
			e	36 44.50		
NNT	8.15	37	iPc	36 17.50		0.0
KGM	9.52	115	ePc	36 37.60		1.3
	0.7s		303.80nm			6.3mb X
			e	36 40.10		
NST	10.91	29	iPc	36 56.00		1.1
BDT	11.85	21	eP	37 07.30		0.0
	0.9s		204.00nm			5.9mb
LOE	13.16	31	iPc	37 27.00		2.2
CHG	13.30	18	iPc	37 27.50		1.1
	1.1s		47.47nm			4.9mb
TPI	15.66	124	ePd	37 56.50		-0.2
			e	40 00.30		
KOD	17.53	285	eP	38 24.00		3.8X
			eS	41 26.30		
GBA	18.54	295	Pd	38 33.70		1.6
	1.2s		93.10nm			4.9mb
HYB	19.36	307	iPd	38 42.80		1.9
	1.0s		70.00nm			4.9mb
			e	39 12.50		
			eS	42 09.00		
SHL	19.54	352	eP	38 38.00		-4.9X
			eS	42 08.20		
QIZ	19.57	48	Pc	38 43.50		0.5
KMI	20.43	21	Pc	38 53.00		0.9
GYA	23.25	28	P	39 20.60		0.8
			ScP	46 31.20		
TSM	23.37	93	ePd	39 20.10		-0.8
LSA	23.71	352	P	39 25.00		0.4
POO	23.77	303	eP	39 30.00		5.1X
KHKI	25.34	124	ePd	39 39.30		-0.4
			e	42 28.20		
PCI	26.06	105	ePd	39 48.70		2.3
CD2	26.11	18	iPc	39 45.30		-1.4
			eS	44 06.80		
MKS	27.18	114	ePc	39 58.50		1.9
			e	41 05.00	368kmX	
NDI	27.89	326	iPc	40 02.50		-0.3
	0.5s		18.31nm			5.0mb
			iS	45 29.50		
WHN	30.54	35	iPc	40 26.00		-0.5
XAN	30.77	24	iPc	40 27.00		-1.5
			pP	40 52.50	116kmX	
			S	45 18.50		
LZH	31.00	15	iPc	40 29.20		-1.5
	1.0s		0.08nm			2.4mb X
GTA	33.48	7	iPc	40 51.50		-0.7
	1.0s		0.10nm			2.6mb X
NJ2	34.29	38	Pc	40 59.00		-0.1

AAI	34.85	105	eP	41	03.10	-1.0				i	46	35.30	98km	SES	35.84	69	eP	04	23.00	-0.5
QUE	35.42	316	eP	41	10.10	1.1	VBY	78.26	315	iPd	46	11.60	0.7	KVN	37.49	89	eP	04	38.00	0.3
TIA	36.35	31	Pc	41	16.30	-0.2	LJU	78.80	316	eP	46	14.00	0.2	TNP	38.63	90	P	04	48.00	0.7
BTO	36.99	20	eP	41	21.00	-1.0	CEY	78.86	315	e(P)	46	14.50	0.3		0.6s	1.51nm			4.0mb	X
KSH	37.24	336	eP	41	24.00	-0.1	PRU	79.01	320	P	46	15.00	0.1	FFC	39.01	58	iPd	04	50.00	0.0
HHC	37.75	21	Pc	41	28.30	0.0	VOY	79.24	316	ePc	46	16.30	0.0		0.5s	7.00nm			4.7mb	
WMO	38.06	352	P	41	30.50	-0.4	TRI	79.32	315	P	46	04.00	-12.6X	IMW	39.10	78	eP	04	51.80	0.5
			pP	41	55.00	106km	BRG	79.45	320	eP	46	15.80	-1.4	MAT	39.60	268	eP	04	55.00	-0.2
			S	47	13.00					i	46	42.00	101km		1.2s	31.25nm			4.9mb	
BJI	38.92	27	Pc	41	38.50	0.6	KHC	79.59	319	iP	46	18.40	0.3	BW06	40.56	79	eP	05	02.40	-0.9
	1.0s	0.09nm			2.6mb	X				e	46	43.90	97km		0.8s	5.71nm			4.4mb	
KNA	40.13	123	eP	41	46.00	-2.2	KBA	79.66	317	iPc	46	16.80	-1.9	RSSD	43.11	73	eP	05	23.50	-0.6
MTN	40.82	118	iPc	41	52.10	-1.8		0.5s	4.90nm			4.6mb		GOL	44.92	79	eP	05	38.30	-0.6
BAL	42.16	151	eP	42	05.00	0.3				i	46	42.20	97km		0.7s	17.60nm			5.1mb	
MUN	43.07	153	eP	42	13.00	0.9	FVI	80.03	316	Pc	46	20.30	-0.1	GLD	44.98	79	e(P)	05	40.00	0.8
KLB	43.48	151	iPd	42	16.00	0.6	HFS	80.25	330	eP	46	20.70	-0.5		1.4s	20.27nm			4.8mb	
	0.5s	11.00nm			4.9mb			0.5s	19.70nm			5.2mb		RSON	45.27	60	eP	05	40.50	-0.7
SNY	43.87	31	iPc	42	18.00	-0.5	CTI	80.80	316	P	46	25.00	0.4	ANMO	47.29	85	eP	05	56.50	-1.0
MAIO	44.05	318	eP	42	21.00	0.9	GRF	81.15	319	iPc	46	26.90	0.7		1.2s	8.79nm			4.6mb	
NWAO	44.34	153	iPc	42	23.00	0.7				i(pP)d	46	52.50	97km	ALQ	47.29	85	eP	05	54.70	-2.8
	0.5s	26.00nm			5.3mb		OGA	81.24	316	iPc	46	27.00	-0.1		1.5s	10.42nm			4.6mb	
WARB	44.62	137	iPd	42	25.00	0.2		0.7s	15.00nm			4.9mb		FR8	49.37	35	eP	06	12.00	-1.0
	0.3s	14.00nm			5.3mb		NB2	81.53	331	P	46	27.20	-0.8	BJI	50.83	288	eP	06	23.50	-0.9
COOL	44.65	147	iPd	42	25.00	0.1		0.8s	7.80nm			4.6mb		SCH	55.84	43	eP	07	01.00	-0.4
	0.3s	8.00nm			5.0mb		PCP	83.01	314	P	46	35.90	-0.2	KEV	58.02	353	eP	07	15.00	-1.6
RKG	45.20	154	iPd	42	33.50	4.4X	FIN	83.26	314	P	46	37.34	0.0	PTN	59.04	56	eP	07	26.90	2.8
CN2	46.25	31	iPc	42	36.60	-0.7	ROB	83.50	314	P	46	38.47	-0.1				e	07	41.00	
WB5	46.80	124	iPd	42	41.20	-0.9	ENR	83.83	314	P	46	41.23	1.0	SOD	60.39	353	iP	07	31.40	-1.7
WRA	46.81	125	Pd	42	41.00	-1.2	SBF	83.83	313	eP	46	40.50	0.2	LZH	60.67	292	P	07	35.00	-0.6
	0.5s	15.90nm			5.1mb			0.7s	17.60nm			5.1mb			1.4s	58.00nm			5.5mb	
ASPA	48.38	129	iPd	42	53.00	-1.3	RSP	83.90	315	P	46	39.49	-1.2	Z	16s	0.40um			4.7MszX	
	0.4s	269.00nm			6.5mb	X	LSD	83.96	315	P	46	41.13	0.0	SUF	65.02	352	iP	08	02.30	-1.5
			iS	49	42.00		LPG	84.24	315	eP	46	43.00	0.4		0.7s	20.90nm			5.3mb	
FORR	48.70	141	iPd	42	56.30	-0.3		0.7s	9.90nm			4.9mb		NUR	67.33	352	iP	08	17.10	-1.4
	0.4s	47.00nm			5.7mb		RRL	84.25	314	P	46	41.95	-0.6		0.7s	26.70nm			5.4mb	
MDJ	48.98	33	eP	42	59.00	0.4	HAU	84.40	318	eP	46	43.10	0.2	NB2	67.37	360	P	08	17.40	-1.4
MAT	49.96	46	eP	43	06.00	-0.3		0.8s	11.80nm			4.9mb			0.8s	7.90nm			4.9mb	
	0.8s	9.70nm			4.9mb		FRF	84.42	313	eP	46	43.50	0.4	HFS	68.25	358	eP	08	22.20	-2.1
QIS	51.47	122	iPd	43	16.60	-1.4		0.6s	7.20nm			4.8mb			0.4s	8.80nm			5.2mb	
	0.2s	19.00nm			5.8mb		LRG	84.63	313	eP	46	45.10	1.0	KMI	69.30	284	eP	08	30.00	-1.6
KDB	54.53	106	eP	43	40.00	-0.7		0.6s	5.40nm			4.7mb		CHG	76.36	283	eP	09	12.10	-0.8
CTA	56.99	119	iPc	43	57.20	-1.0	LBF	86.07	317	eP	46	51.20	-0.1	CLL	77.10	358	eP	09	14.00	-2.5
	0.9s	34.87nm			5.4mb			0.6s	5.40nm			4.8mb		KSP	77.47	356	eP	09	18.50	-0.1
QLP	57.95	126	iPd	44	04.90	0.1	LOR	86.12	317	eP	46	51.70	0.1	BRG	77.52	358	iP	09	18.20	-0.6
ADE	58.20	138	iPd	44	07.00	0.5		0.8s	9.90nm			4.9mb		MOX	77.78	359	e(P)	09	21.00	0.7
	0.7s	157.53nm			6.2mb	X	SMF	86.19	316	eP	46	51.80	-0.1	PRU	78.39	357	P	09	24.00	0.4
CMS	61.44	131	iPd	44	28.50	-0.3		0.8s	10.70nm			4.9mb		GRF	78.74	360	ePc	09	26.50	0.9
	0.7s	45.00nm			5.6mb		AVF	86.51	317	eP	46	53.50	0.1	SPC	78.91	354	eP	09	27.00	0.3
RMQ	61.57	124	iPd	44	31.90	2.2		0.8s	4.00nm			4.5mb		KHC	79.27	358	Pc	09	29.10	0.6
	0.6s	87.00nm			6.0mb		MAF	87.10	316	eP	46	56.80	0.5		1.2s	12.00nm			4.8mb	
BFD	62.01	138	iPd	44	33.70	1.3		0.7s	5.50nm			4.7mb		ZST	80.08	356	iP	09	33.60	0.8
TOO	64.20	137	iPc	44	48.40	1.5	LPO	88.24	315	eP	46	43.00	-18.8X	HAU	80.37	3	eP	09	35.00	0.6
	0.7s	43.00nm			5.5mb			0.6s	11.70nm						0.6s	3.60nm			4.5mb	
BWA	64.74	133	eP	44	49.70	-0.7	EKA	89.48	326	Pc	47	07.70	0.3	SRO	80.40	355	eP	09	35.50	1.0
BRS	65.23	124	iPc	44	53.60	-0.1		0.7s	6.60nm			4.9mb		BSF	80.56	3	eP	09	35.80	0.3
CAN	65.57	133	eP	44	56.00	0.2	MBC	95.43	8	ePc	47	34.20	-0.3		1.2s	20.20nm			5.0mb	
BCK	65.82	308	eP	44	56.40	-1.0		0.5s	5.00nm			5.2mb		NDI	80.79	305	eP	09	36.50	-0.4
ELL	66.21	307	iP	44	59.70	-0.3	INK	98.53	16	eP	47	47.50	-1.1	LOR	81.01	5	eP	09	38.20	0.4
VRI	70.35	317	iPc	45	25.00	-0.3	ZOBO	160.36	238	PKP	54	16.00	5.2X		0.8s	8.00nm			4.8mb	
MLR	70.81	316	ePc	45	28.00	-0.3				i	54	41.20		SSF	81.19	5	eP	09	39.40	0.7
SLR	71.73	241	iPd	45	33.20	-1.0		S.D. = 0.9		on 118 of 127 obs.					1.0s	22.00nm			5.1mb	
SRS	71.78	311	eP	45	33.30	-0.8	----------							LBF	81.29	5	eP	09	39.70	0.4
KNT	72.30	311	eP	45	36.30	-0.9		JAN 29, 1990 20h 57m 25.35± 0.41s							0.6s	5.40nm			4.7mb	
LIT	72.48	310	eP	45	37.00	-1.2		51.942 N ± 8.8km 169.500 W ± 5.4km						KBA	81.33	358	iPKPc	09	39.60	-0.1
VAY	72.57	311	eP	45	37.40	-1.3		DEPTH = 33.0km (normol)							0.6s	21.30nm			5.3mb	
BZS	73.83	316	eP	45	46.00	0.1		5.0mb (42 obs.)									i	09	50.30	
BLF	74.46	238	eP	45	53.00	2.9X		FOX ISLANDS, ALEUTIAN ISLANDS					(9)	AVF	81.46	5	eP	09	40.50	0.4
SUF	74.84	334	iP	45	50.80	-0.6		ML 4.6 (PMR).							0.8s	10.70nm			4.9mb	
	0.5s	12.60nm			5.0mb									SMF	81.63	5	eP	09	41.30	0.3
NUR	74.94	331	iP	45	51.30	-0.7	ADK	4.45	272	iPd	58	31.50	-0.7		0.8s	17.40nm			5.1mb	
SPC	75.24	319	eP	45	59.50	5.3X	SDN	6.34	54	eP	58	59.60	0.7	BGF	81.66	5	eP	09	41.60	0.4
KRA	75.56	320	iPd	45	55.60	-0.1	SVW	11.93	34	eP	00	18.20	2.2		1.0s	28.80nm			5.2mb	
			e	46	30.70	141kmX	TTA	13.16	28	eP	00	33.00	0.7	FVI	81.83	358	P	09	42.70	0.8
DZM	75.57	115	iPc	45	57.00	0.6		1.1s	28.91nm			5.2mb		TCF	81.89	6	eP	09	42.90	0.5
BCAO	75.79	273	iPc	46	00.20	2.4	PMS	14.34	42	eP	00	44.50	-3.3X		1.0s	14.00nm			4.9mb	
	0.6s	10.00nm			4.8mb		PMR	14.70	41	eP	00	50.50	-1.9	MAF	81.98	6	eP	09	43.60	0.8
			id	46	25.30	96km		0.7s	11.26nm			4.4mb			1.0s	12.00nm			4.9mb	
SOD	76.04	338	iP	45	57.80	-0.4	IMA	16.26	23	eP	01	12.40	-0.2	MLR	82.04	349	ePc	09	44.50	1.2
SRO	76.35	318	eP	46	01.70	1.5		1.2s	15.63nm			4.0mb		MAIO	82.25	322	eP	09	46.00	1.5
			e	46	34.00	128kmX	FBA	17.13	32	P	01	20.90	-2.5	PTJ	82.43	356	eP	09	45.20	-0.1
KEV	76.67	341	iP	46	01.60	0.0		0.6s	9.24nm			4.1mb		ORX	82.78	2	P	09	48.95	1.8
ZST	77.20	318	iP	46	05.50	0.6	BRW	20.26	12	eP	01	58.20	-2.0	LPG	82.89	3	eP	09	49.60	1.7
			i	46	30.20	94km	INK	23.75	33	eP	02	32.50	-2.5		1.0s	10.80nm			4.9mb	
			i	46	40.70		MBC	30.96	21	ePc	03	40.00	-1.0	LSD	82.94	2	P	09	50.08	1.9
KSP	77.96	321	iPd	46	09.50	0.4		0.4s	3.00nm			4.4mb		LFF	83.13	7	eP	09	49.70	0.9
			e	46	35.00	98km	EDM	33.40	65	iPc	04	02.60	0.0		0.6s	9.00nm			5.1mb	
UPP	78.25	330	iP	46	09.80	-0.6		0.6s	30.00nm			5.4mb		RSP	83.25	2	P	09	50.90	1.3

29d 21h

BNI	83.33	3 Pc	09 51.90	1.9	
LPO	83.42	7 eP	09 49.40	-0.9	
	0.8s	5.30nm		4.7mb	
RRL	83.47	3 P	09 53.05	2.2	
BOB	83.67	1 P	09 51.90	0.2	
ROB	84.12	2 P	09 54.18	0.3	
STV	84.15	2 P	09 53.46	-0.7	
ENR	84.17	2 P	09 53.87	-0.4	
FIN	84.21	2 P	09 54.28	-0.1	
QUE	84.45	314 eP	09 56.50	0.5	
IMI	84.50	2 P	09 56.44	0.6	
SBF	84.54	2 eP	09 56.80	0.8	
	0.9s	26.20nm		5.4mb	
FIR	84.66	359 eP	09 58.00	1.5	
FRF	84.82	3 eP	09 58.20	0.8	
	0.8s	10.70nm		5.1mb	
LRG	84.92	3 eP	09 59.20	1.4	
	0.6s	7.90nm		5.1mb	
LMR	85.04	3 eP	09 59.60	1.1	
	1.0s	16.00nm		5.2mb	
PGF	85.88	1 eP	10 03.80	1.0	
	0.8s	26.80nm		5.5mb	
WRA	86.67	232 Pd	10 06.20	-0.6	
	1.1s	9.80nm		4.9mb	
HYB	89.27	298 iPd	10 19.00	-0.5	
	0.8s	29.20nm		5.6mb	
ASPA	90.06	230 eP	10 22.90	0.0	
	0.9s	22.00nm		5.4mb	
GBA	92.99	296 Pc	10 35.00	-1.6	
	1.1s	7.40nm		5.0mb	
BUL	145.25	329 iPKPd	17 00.80	-0.5	
	0.9s	27.31nm			
SLR	150.55	326 iPKPc	17 11.00	1.5X	
	1.0s	25.00nm			
KSR	151.14	328 ePKP	17 14.50	4.1X	
PRY	151.93	326 ePKP	17 18.20	6.6X	
BFS	152.13	328 iPKPd	17 14.00	2.2X	
	S.D. = 1.2	on 89 of 94 obs.			

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* JAN 29, 1990 21h 13m 08.49± 1.01s
36.782 N ±12.4km 26.581 E ± 6.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.1 (ATH).

KAP	1.32	158 ePb	13 33.50	0.6	
NPS	1.71	208 iPnd	13 37.90	-0.6	
VAM	2.37	235 ePn	13 47.80	-0.2	
KSL	2.51	104 iPnc	13 49.40	-0.6	
ELL	2.67	90 ePn	13 52.70	0.2	
VLI	2.93	270 ePn	13 56.30	0.4	
	S.D. = 0.7	on 6 of 6 obs.			

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* JAN 29, 1990 21h 41m 43.58± 1.84s
8.669 N ±10.5km 127.426 E ± 7.8km
DEPTH = 33.0 ± 19.1 km
4.7mb (7 obs.) 4.4Msz (1 obs.)
PHILIPPINE ISLANDS REGION (248)

DAV	2.42	230 eP	42 21.20	-0.4	
BAG	10.19	320 eP	44 18.00	7.1X	
TSM	10.29	245 eP	44 14.00	1.9	
GUMO	17.79	72 eP	45 49.50	-1.0	
	Z 18s	0.63um			
		eS	49 36.00		
PJG	17.79	72 eP	45 49.50	-1.0	
KHKI	20.61	215 eP	47 01.60	38.8X	
		eS	51 07.60		
		e	51 42.00		
MTN	21.69	170 eP	46 35.00	1.3	
KLI	26.21	240 eP	47 16.00	-1.4	
		e	47 50.00		
LOE	26.47	292 eP	47 20.00	0.2	
IPM	26.53	263 ePc	47 20.90	0.5	
NNT	27.49	281 eP	47 28.60	-0.5	
NST	27.55	287 eP	47 30.00	0.4	
BDT	28.95	290 eP	47 41.20	-1.0	
WB5	29.18	167 eP	47 50.50	6.2X	
WRA	29.24	167 P	47 50.00	5.2X	
	0.9s	6.70nm		4.4mb	
CHG	29.40	293 ePd	47 46.00	-0.4	
	1.1s	15.51nm		4.7mb	
QIS	31.42	158 eP	48 05.50	1.4	
BJI	32.81	344 eP	48 18.50	2.4	
	1.0s	18.00nm		4.9mb	
	Z 12s	0.48um		4.4MszX	
LZH	34.73	325 eP	48 34.30	1.3	
	Z 18s	0.60um		4.4Msz	
	N 11s	0.40um			
SHL	37.73	301 eP	48 57.80	-0.7	
		S	54 46.00		
FORR	39.30	179 eP	49 10.00	-1.2	
HYB	48.29	286 eP	50 23.00	-1.0	
GBA	49.23	280 Pc	50 29.60	-1.6	
	1.0s	4.50nm		4.5mb	
NDI	51.14	300 eP	50 43.50	-2.2	
MAIO	67.15	306 iPd	52 37.60	0.9	
INK	85.34	22 eP	54 24.00	5.6X	
SOD	86.19	338 eP	54 28.00	5.4X	
MBC	87.01	13 eP	54 32.50	6.0X	
	1.0s	9.00nm		5.0mb	
SUF	87.49	333 eP	54 30.60	1.6	
	0.7s	3.40nm		4.7mb	
NUR	88.74	331 eP	54 54.00	19.0X	
SLL	94.01	333 eP	54 59.90	0.4	
	0.8s	3.80nm		4.9mb	
ZOBO	163.05	118 ePKP	02 07.00	21.9X	
	S.D. = 1.3	on 23 of 32 obs.			

% JAN 29, 1990 23h 24m 04.87± 1.20s
36.574 N ±12.6km 23.011 E ± 9.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.0 (ATH).

VLI	0.16	337 iPgc	24 08.60	0.1	
ITM	1.06	305 ePg	24 24.70	-0.1	
ATH	1.50	22 ePb	24 32.00	0.1	
APE	2.08	76 ePb	24 40.00	-0.3	
NPS	2.48	121 ePg	24 46.20	0.2	
	S.D. = 0.3	on 5 of 5 obs.			

JAN 30, 1990 02h 38m 08.56± 0.59s
36.070 N ± 6.3km 26.910 E ± 5.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP	0.56	157 ePn	38 20.00	0.1	
NPS	1.33	233 ePb	38 33.50	0.4	
APE	1.49	312 ePn	38 34.50	-0.9	
YER	1.53	46 ePn	38 35.00	-1.0	
SMG	1.64	358 ePb	38 38.80	1.4	
KSL	2.17	88 ePn	38 44.80	-0.3	
IZM	2.34	7 ePn	38 48.00	0.3	
ELL	2.51	73 ePn	38 50.70	0.5	
BCK	3.26	64 ePn	39 07.10	6.2X	
VLI	3.27	283 ePn	39 00.60	-0.3	
	S.D. = 0.9	on 9 of 10 obs.			

& JAN 30, 1990 02h 54m 12.64s
60.245 N 152.582 W
DEPTH = 100.8km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.20	332 iP	54 26.57	0.9	
RDT	0.34	15 iP	54 27.25	-0.6	
NNL	0.67	107 iP	54 30.45	0.3	
NKA	0.83	53 eP	54 32.78	1.2	
PDB	0.93	241 iP	54 31.58	-1.1	
		iS	54 46.53		
CKL	0.96	7 iP	54 32.30	-0.8	
		iS	54 48.44		
SPU	0.98	15 iP	54 32.28	-0.9	
		iS	54 47.91		
CNPM	0.99	136 iP	54 32.73	-0.6	
BGL	1.03	5 iP	54 33.14	-0.7	
CRP	1.05	11 iP	54 33.38	-0.7	
		iS	54 49.87		
NCG	1.18	10 eP	54 34.73	-0.9	
SLKM	1.20	76 iP	54 34.86	-0.9	
CDD	1.43	203 iP	54 37.00	-1.4	
SUA	1.52	36 eP	54 38.93	-0.7	
		iS	54 59.76		
SEW	1.57	94 eP	54 38.53	-1.6	
		eS	55 00.21		
PMS	1.79	55 eP	54 42.02	-1.0	
		eS	55 04.72		
SKT	1.81	16 iP	54 41.94	-1.4	
		eS	55 05.31		
PWA	1.93	42 eP	54 44.13	-0.7	
		eS	55 08.18		
GHO	2.35	48 eP	54 48.35	-2.1	
CUT	2.44	26 eP	54 50.19	-1.3	
RND	3.63	28 eP	55 06.13	-1.7	
	21 obs. ossocioted				

JAN 30, 1990 03h 15m 02.20± 0.15s
43.008 N ± 3.6km 145.460 E ± 2.4km
DEPTH = 40.9km (29 depth phases)
5.5mb (67 obs.) 4.3Msz (3 obs.)
HOKKAIDO, JAPAN REGION (224)

KUSJ	0.56	280 iPd	15 14.80	1.1	
		S	15 22.10		
HOOJ	1.72	249 iPd	15 32.10	2.0	
		S	15 53.40		
ASAJ	2.33	299 iPd	15 42.30	3.4X	
MRRJ	3.29	261 P	15 53.50	1.1	
		eS	16 29.90		
MDJ	11.58	283 ePd	17 48.50	0.7	
	Z 20s	2.20um			
		eSP	17 58.00		
		S	19 56.00		
SHK	13.07	234 eP	18 06.00	-1.7	
CN2	14.57	280 Pd	18 27.00	-0.3	
	1.0s	0.10nm		2.2mb X	
•	Z 17s	1.80um		4.2MszX	
	N 12s	0.40um			
	E 12s	0.80um			
		sP	18 42.00		
SNY	16.20	273 Pc	18 48.00	-0.3	
	Z 20s	1.10um			
	E 24s	1.00um			
DL2	18.44	265 eP	19 15.20	-1.1	
	1.0s	0.90nm		2.9mb X	
BJI	22.08	272 Pc	19 54.00	-1.1	
	1.0s	0.14nm		2.3mb X	
	Z 24s	0.96um		4.1MszX	
		eS	23 52.00		
SSE	22.64	246 Pc	20 01.50	0.8	
	1.3s	0.09nm		2.1mb X	
	Z 20s	1.00um		4.2Msz	
		pP	20 15.00	57kmX	
TIA	22.79	262 Pc	20 01.30	-0.9	
		pP	20 14.00	52kmX	
NJ2	23.67	251 Pc	20 10.50	-0.2	
HHC	25.21	277 Pc	20 26.00	0.3	
		S	24 50.00		
TIY	25.61	269 eP	20 29.00	-0.4	
	1.2s	0.09nm		2.2mb X	
	Z 30s	0.94um		4.1MszX	
		pP	20 38.00	32km	
		sP	20 46.00		
		sS	25 03.00		
BTO	26.41	277 P	20 37.00	0.2	
		sP	20 49.50		
		eS	25 09.00		
WHN	27.69	254 iPc	20 48.50	0.2	
		pP	21 00.00	44km	
QZH	28.47	239 eP	20 56.50	1.1	
XAN	29.76	265 iPc	21 06.50	-0.6	
	1.0s	0.10nm		2.5mb X	
		pP	21 11.20	16kmX	
LZH	32.57	272 P	21 31.20	-0.6	
	1.5s	0.09nm		2.4mb X	
	Z 20s	0.60um		4.3Msz	
	E 12s	0.30um			
		sP	21 42.00		
GTA	34.20	280 iPc	21 45.40	-0.5	
		PcP	24 22.20		
CD2	35.10	264 iPc	21 53.00	-0.6	
GYA	35.54	255 iPc	21 57.00	-0.5	
	1.2s	0.10nm		2.6mb X	
QIZ	38.33	243 eP	22 23.00	2.1	
TTA	38.78	39 ePc	22 25.00	0.8	
SVW	38.92	41 eP	22 26.90	1.5	
KMI	39.15	257 Pc	22 28.00	0.1	
		sP	22 45.00		
BRW	39.70	25 eP	22 31.00	-0.6	
IMA	39.98	34 ePc	22 34.80	0.6	
	0.8s	115.60nm		5.7mb	
KDC	40.71	47 eP	22 40.20	0.2	
WMO	41.22	292 P	22 44.70	0.1	
	Z 16s	1.40um		4.9MszX	
		PcP	24 42.00		
PMR	42.02	41 eP	22 51.00	0.2	
	1.1s	43.80nm		5.1mb	
FBA	42.42	36 iPc	22 54.60	0.6	
CHG	45.89	253 iPc	23 23.00	0.5	

	1.0s	59.25nm		5.5mb			0.8s	46.00nm		5.5mb		HOF	78.62	332	iPc	27	01.00	0.0
		e	27	07.00		ISA	70.65	59	eP	26	15.00	-0.6		1.0s	55.00nm		5.5mb	
BDT	46.91	252	eP	23	30.90	0.4			e	26	27.00		VKA	78.68	328	ePc	27	02.00	0.6
	1.0s	34.50nm		5.3mb		HYA	71.04	340	iP	26	17.00	-0.4		1.0s	32.90nm		5.3mb	
		e	26	45.00		DUG	71.17	52	P	26	18.90	0.1	SCH	78.75	18	eP	27	01.00	-0.6
NST	47.21	249	eP	23	33.80	0.9		1.1s	18.09nm		5.0mb		WTS	78.83	335	iPc	27	02.10	0.0
INK	47.66	30	eP	23	35.50	-0.4				pP	26	31.20	42km		0.7s	38.00nm		5.5mb	
	0.4s	23.00nm		5.5mb		BW06	71.32	49	P	26	19.10	-0.7				e	27	14.00	
PCI	49.41	215	ePc	23	49.40	-0.5				pP	26	31.60	43km			e	27	18.50	
NNT	49.68	246	eP	23	53.60	1.6	SUE	71.48	341	iP	26	20.00	0.0	KHC	79.00	330	iPc	27	04.00	0.9
MBC	49.91	18	eP	23	52.50	-0.6	SBB	71.68	60	eP	26	22.00	0.2		1.0s	50.00nm		5.4mb	
	0.6s	4.00nm		4.6mb					e	26	34.00					i	27	15.20	
KSH	51.01	291	P	24	02.00	-0.1	MWC	71.83	60	eP	26	23.00	0.1	SOP	79.06	328	iPc	27	05.20	1.8
SNG	53.10	241	eP	24	16.40	-1.5				e	26	35.00		GRF	79.37	332	iPc	27	05.90	0.8
		e	30	11.50		ASK	71.87	341	eP	26	21.50	-0.9		1.0s	78.00nm		5.6mb	
IPM	54.83	239	ePc	24	32.10	1.5	BER	71.93	340	eP	26	22.00	-0.7				e	27	17.00	
	1.0s	41.50nm		5.4mb		DAU	71.93	51	P	26	23.80	0.3				e	27	23.00	
KGM	55.44	235	ePd	24	36.80	1.8	RVR	72.41	60	eP	26	26.00	-0.1				e	27	29.00	
MTN	57.11	197	iPc	24	45.90	-1.0				e	26	38.00		BNT	79.68	316	iP	27	07.40	0.5
KHKI	57.91	216	eP	24	51.00	-1.4	PEC	72.61	60	P	26	27.00	-0.3	EDC	79.71	316	iP	27	07.50	0.4
		e	26	34.10					pP	26	39.00	40km	TNS	79.85	334	ePd	27	07.90	0.2
KEV	58.97	339	iP	24	58.20	-1.2	MSU	72.65	53	P	26	28.30	0.6	ENN	80.18	335	ePc	27	09.00	-0.3
	0.7s	24.00nm		5.4mb					pP	26	40.50	41km		0.9s	38.00nm		5.4mb	
SOD	60.67	337	iP	25	09.70	-1.4	KER	72.93	301	eP	26	29.00	-0.3			e	27	25.00	
TRO	61.07	341	eP	25	12.50	-1.2	SLY	73.11	303	iPd	26	30.00	-0.1	RDO	80.26	318	iPc	27	11.00	1.0
HYB	61.52	268	iPc	25	16.00	-1.5				e	26	46.00		MEM	80.29	335	Pc	27	09.80	-0.1
	0.8s	46.20nm		5.7mb		PLM	73.15	60	P	26	30.30	-0.3	KHL	80.37	314	iP	27	11.10	0.4
PNT	61.79	48	eP	25	18.00	-1.0				pP	26	42.80	43km	LFK	80.41	310	iP	27	11.90	0.9
QUE	62.19	286	eP	25	21.00	-1.1	RSON	73.30	35	P	26	30.20	-0.7	BHG	80.43	330	iPc	27	11.50	0.7
EDM	62.78	42	eP	25	24.50	-1.0				pP	26	42.10	40km		0.8s	79.00nm		5.7mb	
WB5	63.40	192	eP	25	28.30	-1.4	RSSD	73.35	45	eP	26	30.90	-0.8	ABH	80.44	334	ePc	27	11.08	0.3
WRA	63.47	192	Pd	25	28.90	-1.3				epP	26	43.80	44km	BCK	80.44	313	eP	27	11.10	0.0
	0.9s	11.80nm		5.0mb					esP	26	50.00		DMU	80.61	344	eP	27	12.30	0.7
MAIO	63.75	296	iPc	25	32.00	-0.2	BAR	73.71	61	eP	26	34.00	0.3	FUR	80.64	331	iPc	27	12.50	0.6
	0.8s	8.78nm		4.9mb					e	26	46.00			0.8s	46.00nm		5.5mb	
SUF	64.04	333	iP	25	32.30	-1.2	MSL	74.03	305	ePd	26	40.50	5.1X	PTJ	80.76	327	iPc	27	12.50	-0.1
	0.6s	62.70nm		5.9mb					e	26	58.00		KBA	80.80	329	e(P)	27	09.30	-3.7X
POO	64.26	272	iPc	25	37.30	1.7	GLA	74.63	59	eP	26	40.00	0.9		0.7s	51.70nm		5.6mb	
	0.8s	43.28nm		5.6mb					e	26	51.00					id	27	12.80	
GBA	64.80	265	Pc	25	37.70	-1.4	FORR	75.21	195	eP	26	42.00	0.0				i	27	14.50	
	0.9s	43.40nm		5.5mb		BHD	75.34	302	ePd	26	45.00	2.0				i	27	18.30	
LBFM	65.06	56	P	25	41.00	0.3	GOL	75.73	49	P	26	45.50	0.0	SNF	80.90	336	P	27	12.20	-1.0
WDC	65.11	57	eP	25	41.10	0.3		0.9s	12.31nm		4.9mb		WLF	81.07	335	Pc	27	12.30	-1.8
		epP	25	53.10	41km				pP	26	58.50	45km	DLE	81.10	343	iPc	27	14.60	0.4
SES	65.63	43	ePc	25	43.60	-0.5	KRA	75.82	327	iPc	26	45.20	-0.3		0.8s	73.00nm		5.7mb	
		pP	25	55.00	38km		0.9s	269.00nm		6.2mb		DOU	81.17	336	P	27	11.90	-2.7
MIN	65.82	57	eP	25	45.20	-0.4				e	26	57.20					e	27	14.80	
		epP	25	57.30	41km	KAS	75.91	314	iPc	26	47.30	1.0	GWF	81.20	333	P	27	14.80	0.0
NUR	66.13	332	iP	25	45.70	-1.3	CFR	75.96	320	ePc	26	46.00	-0.3	DCN	81.20	344	iPc	27	15.40	0.7
	0.9s	9.80nm		4.9mb		VRI	76.12	321	ePc	26	48.00	0.7		0.8s	54.00nm		5.6mb	
ORV	66.36	57	eP	25	48.40	-0.4	BMR	76.20	324	ePd	26	46.00	-1.7	LJU	81.20	328	e(P)	27	14.50	-0.4
		epP	26	00.70	42km	SPC	76.39	327	eP	26	49.40	0.5	SRS	81.22	320	eP	27	15.50	0.4
FFC	67.02	36	iPc	25	52.20	-0.6	TLB	76.46	319	ePc	26	39.50	-9.6X	ELL	81.33	313	eP	27	15.90	0.0
	0.8s	37.00nm		5.5mb		KSP	76.59	330	iPc	26	50.00	0.2	PRK	81.35	317	eP	27	15.00	-0.7
ASPA	67.19	191	iPd	25	53.90	-0.2		1.0s	69.00nm		5.6mb		VBY	81.36	327	ePc	27	15.80	0.1
	0.9s	16.00nm		5.1mb		ISR	76.76	320	ePc	26	52.00	1.1	FVI	81.42	329	P	27	16.00	0.1
LRM	67.77	48	ePc	25	58.00	0.0	MLR	76.77	321	ePc	26	51.00	-0.1	VOY	81.46	328	eP	27	15.40	-0.9
CMB	67.97	58	eP	25	59.20	0.1	CLL	77.39	332	iPc	26	54.00	-0.2	CEY	81.50	328	ePc	27	16.40	0.0
		epP	26	11.60	42km		1.1s	120.00nm		5.8mb		KNT	81.52	320	eP	27	17.00	0.4
RGS	68.40	340	eP	26	00.50	-0.8				i	27	10.40		VAY	81.55	320	iPc	27	17.20	0.5
PRS	68.40	60	eP	26	01.80	0.1	BRG	77.42	331	iPc	26	54.30	-0.1		0.9s	0.10nm		2.8mb	X
		epP	26	14.00	41km		1.1s	32.00nm		5.3mb		SKO	81.56	321	iPc	27	17.70	0.9
LLA	68.49	60	e(P)	26	02.40	0.1				i	27	06.00			0.8s	152.00nm		6.1mb	
		epP	26	14.70	42km					i	27	11.60					i	27	29.50	
KVN	68.75	56	eP	26	04.30	0.2				i	27	17.70					i	27	34.50	
		esP	26	21.70		PSZ	77.53	326	eP	26	56.00	0.9	WLS	81.78	333	P	27	17.66	-0.2
UPP	68.92	335	iPc	26	03.30	-1.2	BBTK	77.54	313	ePc	26	56.00	0.6	TRI	81.78	328	iPc	27	17.20	-0.6
		i	26	19.90		PRU	77.94	330	Pc	26	57.60	0.4	CDF	81.80	333	P	27	17.86	-0.2
FRI	69.04	59	eP	26	07.70	2.1		0.9s	41.90nm		5.5mb		OGA	81.83	330	iPc	27	19.00	0.6
		epP	26	17.80	32km				e	27	09.30			1.1s	98.00nm		5.7mb	
PTI	69.69	50	P	26	10.80	1.0	WIT	78.16	336	eP	27	00.00	1.6	RIY	81.84	328	iPc	27	17.50	-0.6
NB2	69.84	338	P	26	09.40	-0.8	BUD	78.23	326	e(P)	26	59.00	0.1	PLG	81.87	319	iPc	27	18.00	-0.5
	0.6s	49.10nm		5.7mb		SRO	78.26	327	eP	26	58.40	-0.6	SLE	81.96	332	ePc	27	18.70	-0.1
HFS	69.89	337	eP	26	09.00	-1.4	MOX	78.43	332	ePc	27	00.00	0.1	KSL	81.97	313	eP	27	18.00	-1.0
	0.5s	85.10nm		6.0mb			1.2s	35.00nm		5.2mb		ECH	82.01	333	P	27	18.87	-0.2
Z	21s	0.32um		4.5Msz					e	27	06.00		ECB	82.02	343	eP	27	31.70	12.7)
		e	26	21.50					e	27	12.00			1.0s	142.00nm				
		e	26	25.90		ZST	78.43	328	iP	27	00.50	0.5	FEL	82.02	333	P	27	18.84	-0.4
		ePcP	26	32.90		ANMO	78.43	53	P	27	01.40	0.9	SAX	82.11	332	ePc	27	20.00	0.1
		LR	51	20.00			1.3s	13.22nm		4.8mb		ECP	82.11	343	eP	27	32.00	12.6)
TNP	69.90	56	P	26	11.80	0.6	ALQ	78.44	53	eP	27	02.10	1.6		0.7s	83.00nm			
	0.7s	15.00nm		5.1mb			1.0s	5.00nm		4.5mb		ZLA	82.24	332	ePc	27	20.40	0.1
		pP	26	23.50	39km	HRT	78.44	316	eP	27	01.00	0.8	CTI	82.30	330	Pc	27	19.90	-0.8
BCH	69.93	60	P	26	23.70	12.4X	EKA	78.47	342	Pd	27	00.60	0.6	OSS	82.31	331	ePc	27	21.10	0.3
BLP	70.12	61	P	26	16.00	3.7X		0.5s	20.00nm		5.4mb		MOF	82.34	333	P	27	20.43	-0.5
		pP	26	28.50	43km	ISK	78.57	316	eP	27	01.00	0.1	VITF	82.40	334	P	27	20.87	-0.1
FRB	70.23	15	ePc	26	10.70	-1.7	BZS	78.62	324	eP	27	01.00	0.0	BSF	82.47	333	P	27	21.11	-0.5

30d 03h

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OHR    82.53 321 iPc   27 22.30   0.3
       1.0s      0.16nm          3.0mb X
                 i     27 34.10
                 i     27 39.50
LIT    82.54 320 eP    27 21.50  -0.5
BBS    82.55 333 P     27 21.84  -0.1
LLS    82.56 332 ePc   27 22.40   0.2
VDL    82.72 331 ePc   27 23.50   0.5
KZN    82.72 320 iPc   27 22.00  -1.0
HVAR   82.78 325 iP    27 22.20  -0.9
NEO    82.81 319 eP    27 23.00  -0.4
SAL    83.09 330 Pd    27 24.70   0.1
TMA    83.26 331 ePc   27 25.50  -0.3
APE    83.39 316 eP    27 34.00   7.6X
VAI    83.50 331 Pc    27 26.50  -0.2
SIO    83.51  46 e(P)  27 41.70  14.7X
MMK    83.62 332 ePc   27 28.20   0.5
TUL    83.66  46 iP    27 28.40   0.6
       0.7s     23.40nm          5.4mb
KAP    83.69 314 eP    27 28.00   0.1
RSM    83.78 328 P     27 29.50   1.3
DIX    83.79 332 ePc   27 29.10   0.5
LOR    83.91 335 iPc   27 29.00   0.2
       0.8s     26.80nm          5.4mb
EMS    83.96 332 ePc   27 29.50   0.1
ORX    83.98 332 P     27 29.14  -0.2
ORO    83.99 332 P     27 29.50   0.1
PGD    84.11 328 Pd    27 31.20   1.1
LBF    84.12 335 iPc   27 29.90  -0.1
       0.8s     24.10nm          5.4mb
SSF    84.20 335 iPc   27 30.60   0.3
       0.8s     22.80nm          5.3mb
BOB    84.20 330 Pd    27 31.00   0.6
MME    84.23 329 Pd    27 31.80   1.0
CRE    84.23 328 Pd    27 31.20   0.6
GRR    84.28 338 eP    27 31.20   0.6
       1.0s     28.00nm          5.3mb
BRT    84.34 323 Pc    27 31.50   0.4
FIR    84.37 329 iPd   27 32.50   1.4
BDI    84.38 329 Pc    27 30.90  -0.4
ASS    84.42 327 Pd    27 32.10   0.6
LPG    84.52 332 iPc   27 33.00   0.7
       0.6s     18.90nm          5.4mb
RSP    84.65 332 P     27 33.65   0.9
LPF    84.65 338 eP    27 33.20   0.7
       1.0s     24.00nm          5.3mb
PII    84.70 329 Pd    27 32.30  -0.5
PCP    84.72 331 P     27 33.86   0.8
AQU    84.72 326 Pd    27 34.10   1.0
NPS    84.73 315 eP    27 32.00  -1.2
FVM    84.75  41 P     27 33.00  -0.2
                pP     27 45.50  41km
BGF    84.85 335 eP    27 34.00   0.4
       0.6s     15.30nm          5.3mb
CKI    84.92 331 Pd    27 33.80  -0.1
BNI    84.94 332 Pd    27 35.10   0.9
VLS    84.96 320 eP    27 34.00  -0.3
VLI    84.97 317 eP    27 32.00  -2.3
MNS    84.99 327 Pd    27 34.20  -0.2
RRL    85.01 332 P     27 35.09   0.4
SDI    85.10 326 Pc    27 34.60  -0.3
ITM    85.11 318 eP    27 35.00   0.0
FIN    85.13 331 P     27 34.47  -0.6
ROB    85.18 331 P     27 34.99  -0.3
DOI    85.22 331 P     27 34.00  -1.5
MAF    85.24 335 iPc   27 36.40   0.9
       0.6s     27.00nm          5.6mb
PZZ    85.27 332 P     27 34.68  -1.2
TCF    85.29 335 iPc   27 36.30   0.5
       0.8s     15.30nm          5.2mb
VAM    85.35 316 eP    27 36.00  -0.3
ENR    85.40 331 P     27 34.99  -1.5
STV    85.42 331 P     27 34.99  -1.6
SGO    85.42 324 Pd    27 36.40  -0.1
IMI    85.51 331 P     27 36.83  -0.1
LSF    85.53 336 iPc   27 37.40   0.4
SAOF   85.56 331 P     27 36.82  -0.4
CBM    85.63  22 P     27 37.50   0.0
CSI    85.64 323 P     27 38.60   0.9
TOUF   85.64 331 P     27 37.51  -0.3
ROI    85.68 323 P     27 39.00   1.1
MFF    85.70 337 iPc   27 38.60   0.8
       0.8s     45.60nm          5.7mb
SBF    85.71 331 iPc   27 37.70  -0.3
       0.8s     61.70nm          5.9mb
TDS    85.71 323 Pd    27 38.80   0.8
AURF   85.73 331 P     27 37.81  -0.3

MVIF   85.78 331 P     27 38.18  -0.3
RSNY   85.80  27 P     27 37.90  -0.4
       0.8s     15.36nm          5.3mb
                pP     27 50.50  42km
REVF   85.84 331 P     27 38.26  -0.4
CALN   86.00 331 P     27 39.42  -0.1
CZI    86.17 323 P     27 39.60  -0.6
OLY    86.20  43 P     27 40.10  -0.4
                pP     27 52.50  41km
FRF    86.25 331 iPc   27 40.50  -0.1
       0.8s     14.50nm          5.3mb
PGF    86.28 329 iPc   27 40.80  -0.1
       0.8s     26.80nm          5.5mb
RJF    86.39 335 iPc   27 42.00   0.7
       0.8s     34.90nm          5.6mb
LRG    86.44 331 iPc   27 42.00   0.5
       0.7s     69.20nm          6.0mb
LMR    86.50 331 iPc   27 41.80   0.0
       0.7s     66.10nm          6.0mb
CAF    86.56 335 iPc   27 43.30   1.2
BNH    86.83  25 P     27 43.90   0.5
LFF    86.95 336 eP    27 45.00   1.0
       0.8s     42.90nm          5.7mb
LPO    87.05 335 iPc   27 45.60   1.1
       0.8s     38.60nm          5.7mb
SOI    87.14 322 Pc    27 44.80  -0.2
EMM    87.82  23 P     27 48.50   0.4
PWLA   88.29  41 P     27 50.30  -0.3
                pP     28 02.80  41km
EPF    88.81 335 eP    27 53.20   0.2
       0.8s     12.00nm          5.3mb
TBR    88.91  29 P     27 53.40   0.0
RSCP   88.97  39 P     27 53.60  -0.3
       1.0s     75.92nm          6.0mb
GBTN   89.55  38 P     27 55.20  -1.4
                pP     28 09.10  47km
NAV    89.66  35 P     27 57.20   0.1
                pP     28 09.80  41km
TKL    89.75  38 P     27 57.40  -0.1
                pP     28 09.90  41km
NA2    90.22  33 P     28 00.00   0.4
                pP     28 12.20  40km
PRM    91.70  38 P     28 07.20   0.7
                pP     28 19.50  40km
LKO   121.41 326 PKP   33 52.78  -0.2
TIC   123.78 324 PKP   33 56.70  -0.8
KIC   123.91 323 PKP   33 56.80  -1.0
LIC   124.16 324 PKP   33 57.20  -1.1
ZOBO  140.91  57 PKP   34 25.00  -5.5X
CCH   142.98  56 PKP   34 30.50  -3.3X
ANT   144.74  69 iPKPc 34 36.20   0.0
                i      34 48.00
YJA   146.94  61 ePKPc 34 42.00   1.5
BAO   150.39  27 ePKP  34 46.00   0.4
      S.D. = 0.8  on 284 of 296 obs.
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%  JAN  30, 1990  03h 42m 16.91± 2.59s
   60.778 N ± 8.6km     4.690 E ±25.4km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                 (535)
      MD 2.1 (BER).

SUE    0.28   7 iPgc  42 22.45  -0.4
                iSg    42 26.83
ASK    0.39 140 iP     42 25.10   0.3
                iS     42 31.69
HYA    0.83  61 iP     42 32.62  -0.3
                eS     42 43.88
ODD1   1.30 131 iP     42 40.57  -0.4
                iS     42 56.84
MOL    2.26  36 eP     42 55.53   0.7
                eS     43 20.36
      S.D. = 0.7  on   5 of   5 obs.
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&  JAN  30, 1990  04h 10m 31.35s
   61.376 N          149.991 W
   DEPTH =  33.6km
 SOUTHERN ALASKA                 ( 2)
      <AGS-P>. ML 3.4 (PMR). Felt (IV)
      at Fort Richardson, (III) at
      Anchorage and (II) at Palmer.

PMS    0.25 122 iPc   10 38.70   0.1
PWA    0.28  11 iPd   10 38.80  -0.1
SUA    0.37 284 iP    10 40.04  -0.2
                iS     10 47.61
PLRM   0.47  62 iP    10 40.49  -0.9

                eS     10 48.04
PMR    0.47  62 iPd   10 40.50  -0.9
GHO    0.65  52 iP    10 43.12  -1.0
                eS     10 52.78
NKA    0.88 224 eP    10 48.01   0.7
SLKM   0.88 187 iP    10 45.96  -1.4
SKT    0.95 310 iP    10 47.52  -0.9
SPU    1.02 260 iP    10 48.30  -1.1
                eS     11 02.74
CUT    1.04 353 iP    10 48.90  -0.7
NCG    1.04 272 iP    10 49.22  -0.6
CRP    1.05 265 iP    10 49.46  -0.5
CKL    1.15 262 iP    10 50.57  -0.7
BGL    1.16 265 iP    10 50.84  -0.7
SEW    1.30 168 eP    10 51.75  -1.6
RDT    1.43 237 iP    10 54.21  -1.1
                iS     11 13.08
NNL    1.48 206 iP    10 55.89  -0.1
GLI    1.49 108 iP    10 54.75  -1.4
                eS     11 13.62
HUR    1.62   6 iP    10 57.90  -0.1
                iS     11 19.03
NCA    1.63  66 eP    10 57.37  -0.9
                eS     11 18.53
RED    1.66 236 iP    10 57.78  -1.0
                iS     11 19.78
VZW    1.69  99 iP    10 57.87  -1.3
                eS     11 19.55
CNPM   1.96 199 iP    11 01.32  -1.5
TOA    1.96  66 iPc   11 02.60  -0.3
KLU    1.96  85 iP    11 01.42  -1.5
                eS     11 26.52
RND    2.11  14 eP    11 04.98   0.0
CVA    2.23 110 eP    11 07.10   0.4
                eS     11 32.29
SDG    2.40  59 eP    11 09.71   0.6
                eS     11 39.40
MCK    2.42  11 eP    11 09.27  -0.1
SGAM   2.49 108 eP    11 07.95  -2.5
                eS     11 41.88
PDB    2.61 234 iP    11 10.45  -1.7
                iS     11 42.10
PAX    2.66  51 eP    11 12.99   0.2
MID    2.67 136 eP    11 15.10   2.3
SVW    2.74 267 iPc   11 12.50  -1.4
RAGM   2.78 109 eP    11 12.04  -2.5
                eS     11 50.11
GLB    2.97  86 eP    11 15.14  -2.2
DDM    3.08  36 eP    11 20.85   2.0
TTA    3.23 302 iPc   11 19.30  -1.6
NEA    3.24   7 eP    11 20.34  -0.7
HDA    3.34  23 eP    11 22.01  -0.5
RDS    3.56  13 eP    11 24.67  -1.0
WAX    3.61 102 eP    11 23.11  -3.2
FBA    3.68  15 eP    11 26.40  -0.8
SNH    3.71 106 eP    11 25.26  -2.4
BALM   3.72  92 eP    11 25.06  -2.8
GLM    3.81  17 eP    11 28.30  -0.9
KDC    3.86 200 eP    11 29.00  -0.7
IMA    4.99 342 eP    11 43.30  -2.7
INK    9.84  38 eP    12 55.00   1.5
      50 obs. associated
-------------------------------------
•  JAN  30, 1990  04h 46m 47.21± 0.61s
   20.634 S ±13.9km  178.657 W ± 8.6km
   DEPTH = 612.9 ± 12.7 km
   4.7mb (  6 obs.)
 FIJI ISLANDS REGION             (181)

MBU    4.41 325 iPd   48 16.80  -0.1
SGE    4.43 313 iP    48 17.30   0.1
DZM   13.96 261 iPc   49 45.00   0.0
                iS     52 11.00
HBZ   17.11 188 eP    50 17.20   2.1
KHZ   22.69 195 P     51 04.30  -1.8
AFR   27.45  88 iP    51 47.80  -0.3
      0.8s     20.00nm          4.8mb
TVO   27.90  89 iP    51 51.70  -0.4
      0.8s     15.00nm          4.7mb
TPT   30.05  84 iP    52 10.40   0.0
      0.8s     15.00nm          4.7mb
RUV   30.22  85 iP    52 11.60  -0.2
      0.8s     15.00nm          4.7mb
ASPA  43.89 257 eP    54 03.10   0.0
      0.3s     13.00nm          4.9mb
WRA   43.97 262 Pc    54 03.50  -0.2
      0.4s      2.30nm          4.0mb
```

```
FORR    48.64 247 eP     54 38.70   -0.2
PNT     87.11  34 eP     58 31.00    0.9
NB2    139.04 353 PKP    04 58.80   -7.5X
         0.7s      1.30nm
HFS    139.57 350 ePKP   04 58.50   -8.8X
         0.4s      1.80nm
                  e      05 07.30
                  e      05 49.80
BRG    148.23 345 i(PKP)05 27.00    4.9X
      S.D. = 1.0  on  13 of  16 obs.
-------------------------------------
%  JAN  30, 1990  05h 03m 34.76± 2.40s
   39.154 N ± 8.3km    16.771 E ±22.1km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN ITALY                    (390)

ROI     0.45 340 P      03 43.10   -0.7
CZI     0.50 278 P      03 44.60   -0.3
TDS     0.61 327 P      03 48.70    1.7
                eSg     03 57.20
CSI     0.72 329 P      03 48.20   -0.8
SOI     1.22 208 P      03 57.40    0.0
                eSg     04 12.10
      S.D. = 1.5  on   5 of   5 obs.
-------------------------------------
&  JAN  30, 1990  05h 07m 18.60s
   36.543 N          121.177 W
   DEPTH =   4.0km
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 2.8 (BRK).

LLA     0.20  69 iPc    07 22.70    0.0
PRS     0.26 216 iPd    07 24.00    0.1
SAO     0.31 316 iPc    07 24.10   -0.7
PRI     0.58 134 eP     07 30.00   -0.1
GCC     0.82 307 eP     07 33.20   -1.7
ARN     0.85 341 iPc    07 35.10   -0.5
PHAM    0.95 138 eP     07 36.50   -0.7
PKEM    0.99 119 eP     07 38.10    0.2
FRI     1.26  69 iPc    07 40.80   -1.8
                iS      07 57.50
PCC     1.36 315 eP     07 42.20   -2.0
BKS     1.58 328 ePd    07 45.50   -1.9
CMB     1.62  23 eP     07 46.80   -1.2
BCH     1.62 146 eP     07 46.20   -1.9
BLP     2.08 162 eP     07 52.60   -2.0
ABL     2.32 136 eP     07 54.70   -3.7
KVN     3.49  43 eP     08 19.50    4.5
      16 obs. associated
-------------------------------------
?  JAN  30, 1990  05h 47m 56.28± 1.17s
   18.994 S ±13.1km  168.261 E ±24.7km
   DEPTH = 149.3 ±  8.0 km
   4.7mb (  3 obs.)
 VANUATU ISLANDS                   (186)

PVC     1.25   2 iPc    48 23.50    0.0
                iS      48 46.50
DZM     3.50 209 iPc    48 50.80    0.0
                iS      49 34.00
RMO    19.46 244 eP     52 24.50   10.7X
CTA    20.77 263 iPc    52 31.20    4.2X
         0.7s     32.19nm          4.9mb
WB5    31.94 263 eP     54 10.00   -0.1
WRA    31.97 263 Pd     54 09.50   -0.7
         0.9s     11.70nm          4.7mb
ASPA   32.29 256 iPd    54 13.60    0.5
         0.5s    116.00nm          5.9mb X
                iPcP    54 49.60
FORR   38.09 244 eP     55 02.30    0.1
CHG    77.71 295 eP     59 38.80    0.4
GBA    95.10 283 P      01 04.00    0.1
         0.3s      1.00nm          4.6mb
BCAO  147.10 248 iPKPc 07 21.40   -0.3
         0.5s      6.00nm
      S.D. = 0.5  on   9 of  11 obs.
-------------------------------------
&  JAN  30, 1990  07h 12m 37.86s
   61.410 N          150.024 W
   DEPTH =  35.2km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>. ML 3.3 (PMR). Felt (II)
      at Anchorage and Palmer.

PWA     0.25  16 iPd    12 45.00   -0.2
PMS     0.28 126 iPd    12 45.80    0.2
SUA     0.35 279 iP     12 46.34   -0.2
PLRM    0.47  66 iP     12 47.11   -0.8
                iS      12 55.02
PMR     0.47  66 iPc    12 47.20   -0.7
GHO     0.64  55 iP     12 49.59   -0.9
                iS      12 59.41
NKA     0.89 222 eP     12 54.99    1.0
SLKM    0.91 186 eP     12 53.20   -1.1
                eS      13 07.10
SKT     0.92 309 iP     12 53.32   -1.1
                iS      13 06.00
CUT     1.01 353 iP     12 54.75   -0.9
                iS      13 07.80
SPU     1.01 258 iP     12 54.80   -0.9
                iS      13 08.80
NCG     1.03 271 iP     12 55.38   -0.7
CRP     1.04 263 iP     12 55.63   -0.6
CKL     1.14 260 iP     12 56.87   -0.8
BGL     1.15 264 iP     12 57.02   -0.8
SEW     1.34 168 eP     12 59.07   -1.4
RDT     1.43 235 iP     13 00.83   -1.1
NNL     1.51 205 iP     13 03.00    0.0
                iS      13 23.58
GLI     1.52 109 eP     13 01.46   -1.6
HUR     1.58   6 iP     13 03.83   -0.2
                eS      13 24.10
NCA     1.63  68 eP     13 04.04   -0.7
                iS      13 26.35
RED     1.67 235 iP     13 04.41   -0.9
                eS      13 25.80
VZW     1.71 100 eP     13 04.74   -1.2
TOA     1.96  67 iPc    13 09.20   -0.2
KLU     1.97  86 iP     13 08.12   -1.5
CNPM    1.98 198 eP     13 08.45   -1.3
HIN     2.00 119 eP     13 08.07   -1.9
                eS      13 39.25
RND     2.08  15 eP     13 10.23   -0.9
CVA     2.26 111 eP     13 12.59   -1.0
                eS      13 45.67
MCK     2.39  12 eP     13 15.72    0.3
SDG     2.39  60 eP     13 15.91    0.4
SGAM    2.52 109 eP     13 14.84   -2.5
PDB     2.62 233 eP     13 17.18   -1.6
PAX     2.65  52 eP     13 19.26    0.0
SVW     2.72 266 iPc    13 18.70   -1.5
RAGM    2.81 109 eP     13 20.98   -0.5
                eS      14 01.95
GLB     2.99  87 eP     13 21.64   -2.3
DDM     3.07  37 eP     13 26.74    1.6
TTA     3.20 301 ePc    13 25.10   -1.9
HDA     3.32  24 eP     13 29.33    0.6
CCB     3.40  16 eP     13 28.57   -1.2
RDS     3.53  13 eP     13 30.67   -1.0
FBA     3.65  15 eP     13 32.60   -0.7
BALM    3.73  92 eP     13 32.14   -2.5
GLM     3.78  17 eP     13 34.68   -0.6
KDC     3.88 200 eP     13 35.00   -1.6
IMA     4.95 342 eP     13 49.50   -2.4
INK     9.82  38 eP     15 03.00    3.3
      48 obs. associated
-------------------------------------
%  JAN  30, 1990  08h 12m 12.91± 0.80s
   43.393 N ± 5.0km     5.427 E ± 5.9km
   DEPTH =  10.0km  (geophysicist)
 NEAR SOUTH COAST OF FRANCE        (379)
      MD 2.8 (STR).

GELF    0.01 177 Pg     12 14.36   -0.5
BERF    0.21 113 Pg     12 17.41   -0.1
TREF    0.23 352 Pg     12 17.31   -0.6
PUYF    0.24  55 Pg     12 17.08   -1.0
PRAF    0.45 336 Pg     12 22.39    0.3
VILF    0.50  24 Pg     12 22.61   -0.5
TAVF    0.51  64 Pg     12 22.63   -0.6
GANF    0.70  30 Pg     12 26.80    0.1
CALN    1.12  71 Pg     12 34.56    0.5
                Sg      12 50.55
MVIF    1.35  68 Pn     12 37.60   -0.3
                Sg      12 57.58
REVF    1.45  76 Pn     12 39.40    0.2
                Sg      13 00.06
TOUF    1.46  64 Pn     12 40.12    0.6
                Sg      13 01.30
AURF    1.47  70 Pn     12 39.50    0.0
                Sg      13 00.50
FOUF    1.50  40 ePd    12 41.60    1.8
                e(Sg)   13 00.39
SAOF    1.65  68 Pn     12 42.15    0.0
      S.D. = 0.7  on  15 of  15 obs.
-------------------------------------
   JAN  30, 1990  08h 34m 05.94± 0.49s
   38.203 N ± 4.4km    28.844 E ± 5.2km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

KHL     0.55  77 iPg    34 16.00   -1.0
YER     1.16 203 iPn    34 26.60   -1.0
IZM     1.26 279 iPn    34 29.00   -0.4
DST     1.41 353 iPn    34 32.00    0.3
BCK     1.57 118 ePn    34 34.70    0.8
ELL     1.68 149 iPn    34 36.70    1.1
KCT     2.08 350 iPn    34 41.80    0.5
BNT     2.27 342 iPn    34 44.30    0.3
EDC     2.27 341 ePn    34 44.50    0.4
GPA     2.37  28 ePn    34 45.20   -0.3
YLV     2.40  10 iPn    34 45.30   -0.6
GBZT    2.62  10 ePn    34 56.50    7.5X
                iSg     35 31.50
HRT     2.69  13 ePn    34 49.80   -0.3
ISK     2.86   3 ePn    34 56.00    3.6X
CTT     2.96 354 ePn    34 54.00    0.2
BBTK    3.46  61 eP     35 13.00   11.9X
      S.D. = 0.7  on  13 of  16 obs.
-------------------------------------
?  JAN  30, 1990  09h 16m 07.36± 1.11s
   39.113 N ±10.4km    27.539 E ±19.2km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

IZM     0.75 197 ePg    16 22.00    0.0
                eSg     16 34.00
DST     0.98  59 iPn    16 26.10    0.2
BNT     1.28  13 iPn    16 31.30    0.3
KCT     1.30  29 ePn    16 31.00   -0.4
      S.D. = 0.5  on   4 of   4 obs.
-------------------------------------
%  JAN  30, 1990  10h 16m 48.15± 0.76s
   38.277 N ± 9.2km    29.242 E ± 7.3km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

KHL     0.23  78 iPg    16 52.90   -0.2
BCK     1.34 127 ePn    17 13.20    0.3
IZM     1.56 275 ePn    17 16.00    0.0
ELL     1.62 161 ePn    17 16.70   -0.2
BNT     2.32 334 ePn    17 27.00    0.1
      S.D. = 0.3  on   5 of   5 obs.
-------------------------------------
%  JAN  30, 1990  11h 10m 46.77± 0.95s
   35.763 N ±30.6km    52.276 E ± 8.6km
   DEPTH =  10.0km  (geophysicist)
 IRAN                              (348)
      Felt at Firuzkuh.

TEH     0.73 268 eP     11 01.00   -0.1
IR4     1.24 245 eP     11 09.50   -0.4
IR1     1.34 255 eP     11 12.50    1.0
IR7     1.36 268 eP     11 11.50   -0.3
IR5     1.49 249 eP     11 13.50   -0.2
MAIO    5.87  83 eP     12 16.00    0.0
      S.D. = 0.6  on   6 of   6 obs.
-------------------------------------
&  JAN  30, 1990  11h 16m 24.54s
   60.117 N          152.968 W
   DEPTH = 116.7km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

RED     0.32  18 iP     16 40.71    0.8
                iS      16 54.26
RDT     0.54  31 iP     16 41.92   -0.8
                iS      16 55.77
PDB     0.70 242 iP     16 42.64   -1.2
                eS      16 57.14
AUL     0.77 198 iP     16 43.68   -0.8
                eS      16 58.86
AUE     0.79 195 iP     16 43.75   -0.8
                iS      16 59.31
NNL     0.84  94 iP     16 45.22    0.2
                iS      17 00.44
CNPM    1.06 123 eP     16 46.50   -0.7
CKL     1.13  16 iP     16 47.37   -0.7
                eS      17 05.52
SPU     1.16  22 eP     16 47.30   -1.0
                iS      17 05.52
```

30d 11h

BGL	1.19	14	iP	16	48.13	-0.5
CRP	1.22	19	eP	16	48.50	-0.6
			iS	17	07.85	
NCG	1.35	17	eP	16	49.72	-0.8
SLKM	1.42	73	eP	16	49.85	-1.4
SUA	1.74	38	iP	16	54.39	-0.7
			iS	17	18.17	
SEW	1.76	89	eP	16	53.79	-1.5
			eS	17	17.76	
SKT	2.00	20	eP	16	57.04	-1.2
PMS	2.02	55	eP	16	57.39	-1.3
			iS	17	22.48	
PWA	2.16	43	eP	16	59.75	-0.5
GHO	2.58	48	iP	17	03.65	-2.3
			eS	17	34.15	
CUT	2.64	28	iP	17	05.13	-1.5
GLI	3.01	73	eP	17	10.10	-1.4
VZW	3.30	71	eP	17	12.76	-2.8
NCA	3.53	55	eP	17	16.46	-2.1
KLU	3.72	65	eP	17	18.25	-2.9
RND	3.84	29	eP	17	20.32	-2.4
MCK	4.10	26	eP	17	24.58	-1.7
GLB	4.68	70	iP	17	31.51	-2.7
NEA	4.83	20	iP	17	33.78	-2.4
WRH	4.93	25	iP	17	34.84	-2.7
DDM	4.98	39	eP	17	37.21	-1.1
CCB	5.14	26	iP	17	37.56	-2.9
RDS	5.23	23	eP	17	38.42	-3.2
BALM	5.32	75	eP	17	40.65	-2.4
FBA	5.36	24	eP	17	40.43	-3.1
GLM	5.53	25	eP	17	42.73	-3.0

35 obs. associated

& JAN 30, 1990 12h 43m 58.23s
62.138 N 147.906 W
DEPTH = 9.3km
CENTRAL ALASKA (1)
<AGS-P>. ML 2.7 (PMR).

NCA	0.53	105	iP	44	08.91	0.0
			eS	44	17.41	
GHO	0.61	233	iP	44	10.21	-0.2
			eS	44	19.84	
PLRM	0.80	227	iP	44	12.64	-1.1
PMR	0.80	227	iPd	44	12.70	-1.1
TOA	0.82	92	iPd	44	13.30	-0.8
PWA	1.05	243	iPd	44	17.20	-0.9
CUT	1.14	285	iP	44	18.39	-1.2
			eS	44	33.13	
KLU	1.14	124	iP	44	17.20	-2.6
HUR	1.16	317	iP	44	18.56	-1.5
			iS	44	34.82	
SDG	1.17	69	iP	44	18.19	-2.0
			eS	44	33.59	
PMS	1.19	222	iPd	44	19.40	-1.2
GLI	1.32	163	iP	44	20.38	-2.3
			iS	44	38.65	
RND	1.35	342	iP	44	21.24	-1.9
PAX	1.40	52	eP	44	21.58	-2.5
			eS	44	40.19	
SUA	1.51	245	eP	44	24.07	-1.4
			eS	44	44.68	
MCK	1.67	344	eP	44	26.36	-1.4
SKT	1.71	266	eP	44	26.75	-1.6
HIN	1.87	158	eP	44	28.54	-2.2
			eS	44	53.94	
DDM	1.90	29	eP	44	30.84	-0.3
CVA	1.91	146	eP	44	29.22	-1.9
			eS	44	56.01	
SLKM	1.98	215	iP	44	30.63	-1.6
GLB	2.07	108	eP	44	31.01	-2.5
SGAM	2.10	140	eP	44	31.10	-2.8
			eS	45	00.25	
NKA	2.13	230	eP	44	34.77	0.5
NCG	2.15	252	iP	44	33.66	-1.1
DMW	2.16	26	iP	44	33.99	-0.9
SEW	2.17	201	eP	44	33.77	-1.2
SPU	2.20	246	iP	44	34.03	-1.4
			eS	45	03.45	
CRP	2.21	249	eP	44	34.87	-0.8
BGL	2.31	250	eP	44	36.14	-1.0
CKL	2.32	248	iP	44	35.68	-1.5
HDA	2.32	10	eP	44	35.77	-1.3
DOT	2.32	48	eP	44	35.26	-2.0
WRH	2.34	358	eP	44	35.78	-1.7
RAGM	2.35	137	eP	44	35.05	-2.6
			eS	45	06.14	
CCB	2.52	1	eP	44	37.31	-2.6
RDT	2.68	236	eP	44	40.18	-2.1
RDS	2.70	358	eP	44	39.98	-2.6
FBA	2.77	1	eP	44	40.10	-3.5
GLM	2.87	4	eP	44	42.96	-2.0
BALM	2.88	110	eP	44	42.16	-3.0
RED	2.91	236	eP	44	43.53	-2.1
CNPM	3.09	213	eP	44	46.01	-2.0
SNH	3.14	126	eP	44	45.88	-3.0
			eS	45	24.76	
SVW	3.83	258	eP	44	55.60	-3.0
TTA	3.84	286	eP	44	56.20	-2.6
PDB	3.87	235	eP	44	56.17	-2.9
DWY	4.30	60	P	45	02.20	-3.1
IMA	4.69	330	iPd	45	07.90	-3.0
INK	8.63	38	eP	46	01.50	-4.5

50 obs. associated

% JAN 30, 1990 14h 01m 37.89± 0.88s
40.442 N ± 7.3km 23.485 E ± 7.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)

SOH	0.39	345	ePg	01	46.10	0.2
OUR	0.39	106	ePg	01	46.00	0.0
SRS	0.68	7	ePg	01	51.20	-0.2
			eSg	02	01.60	
LIT	0.83	246	ePg	01	54.00	0.0
			eSg	02	06.60	
KNT	0.85	328	ePg	01	54.20	0.0
			eSg	02	06.00	

S.D. = 0.2 on 5 of 5 obs.

% JAN 30, 1990 14h 19m 31.50± 1.27s
44.319 N ±10.1km 8.371 E ±10.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

FIN	0.16	227	P	19	34.11	-1.1
			S	19	37.29	
PCP	0.26	29	P	19	36.88	-0.1
			S	19	41.51	
ROB	0.36	266	P	19	38.41	-0.5
			S	19	44.16	
IMI	0.54	220	P	19	43.34	1.0
			S	19	52.05	
ENR	0.69	263	P	19	45.49	0.3
			S	19	55.64	
PZZ	0.93	282	P	19	49.80	0.5

S.D. = 1.0 on 6 of 6 obs.

JAN 30, 1990 15h 06m 26.08± 1.48s
28.599 N ±10.1km 85.714 E ± 7.6km
DEPTH = 52.4 ± 17.7 km
4.5mb (3 obs.)
NEPAL (310)

LSA	4.88	76	ePn	07	41.00	1.8
SHL	6.27	117	iPn	07	58.70	0.2
			eS	09	04.00	
HYB	12.93	212	eP	09	28.00	-1.3
			eS	11	47.00	
POO	14.78	230	eP	09	55.00	1.5
			iS	12	32.50	
WMO	15.27	5	eP	09	59.90	0.0
CHG	15.53	126	eP	10	08.30	5.0X
GTA	15.88	44	Pd	10	08.60	0.8
QUE	16.43	280	eP	10	13.50	-1.3
			eS	13	03.00	
GBA	16.79	209	P	10	17.80	-1.3
			S	13	37.80	
LZH	17.03	59	eP	10	22.00	-0.2
	1.0s		0.03nm			1.4mb X
GYA	18.70	92	P	10	42.80	0.0
XAN	20.54	69	P	11	00.60	-2.0
BTO	23.23	53	eP	11	29.50	0.0
MAIO	23.37	296	eP	11	33.00	2.1
TIY	24.08	61	eP	11	37.20	-0.5
HHC	24.41	53	eP	11	46.40	5.5X
WHN	24.96	79	eP	11	44.00	-2.0
MLR	49.47	307	ePc	15	13.50	0.4
HFS	56.76	325	eP	16	04.70	-2.1
	0.4s		2.20nm			4.5mb
			e	16	10.00	
			ePcP	16	42.50	
NB2	57.97	326	P	16	14.10	-1.2
	0.9s		5.30nm			4.7mb
WB5	67.31	130	eP	17	20.00	2.2
MBC	74.23	6	eP	17	59.00	0.3
	0.6s		3.00nm			4.4mb
INK	79.12	14	eP	18	26.50	0.4
KIC	87.39	276	P	19	11.80	2.4
ZOBO	152.95	291	ePKP	26	20.00	7.2X

S.D. = 1.5 on 22 of 25 obs.

? JAN 30, 1990 16h 33m 26.22± 9.97s
45.818 N ±20.8km 16.129 E ±74.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (ZAG), 2.0 (KBA).

ZAG	0.10	270	iPg	33	28.50	-0.4
			iSg	33	31.60	
PTJ	0.15	305	iPgc	33	28.00	-1.7
			eSg	33	31.00	
VBY	0.69	243	ePg	33	39.30	-0.5
			iSg	33	50.50	
LJU	1.14	282	e(Pg)	33	47.50	0.0
			eSn	34	04.40	
CEY	1.19	267	eP	33	52.00	3.5X
			eSn	34	08.50	
VOY	1.57	279	ePn	33	55.20	0.9
			eSn	34	18.10	
KBA	2.30	304	iPgc	34	09.70	4.7X
			iSg	34	41.10	

S.D. = 1.3 on 5 of 7 obs.

% JAN 30, 1990 17h 21m 58.34± 1.23s
18.314 N ±20.1km 66.461 W ± 7.1km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

PORP	0.31	213	P	22	06.20	0.0
SJG	0.36	124	iP	22	07.40	0.5
			S	22	17.40	
LRS	0.36	267	P	22	07.00	0.0
LPR	0.56	90	P	22	10.00	0.1
CPD	0.59	118	P	22	09.60	-0.6

S.D. = 0.6 on 5 of 5 obs.

? JAN 30, 1990 17h 41m 44.59± 8.60s
33.116 S ±19.8km 72.417 W ±72.2km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

RTBS	2.90	61	ePd	42	30.50	1.1
RTCV	3.51	70	ePd	42	40.90	2.7X
			S	43	20.40	
ZON	3.53	65	eP	42	39.00	0.5
RFA	3.68	118	e(P)	42	41.00	0.4
RTLL	3.79	63	ePc	42	42.80	0.7
			S	43	31.20	
CFA	3.84	68	e(P)	42	43.80	0.9
RTRS	3.87	41	ePc	42	42.40	-0.8
			S	43	34.20	
MRA	5.69	85	ePc	43	08.80	-0.2
TCA	6.86	77	e(P)	43	23.00	-2.6

S.D. = 1.4 on 8 of 9 obs.

JAN 30, 1990 18h 14m 12.85± 0.34s
23.398 S ± 4.0km 179.094 E ± 4.3km
DEPTH = 548.4 ± 4.3 km
5.3mb (22 obs.)
SOUTH OF FIJI ISLANDS (171)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 22C
Centroid Location:
Origin Time 18:14:22.9 0.6
Lat 23.49S 0.09 Lon 178.67E 0.06
Dep 558.6 3.2 Half-duration 2.5
Moment Tensor; Scale 10**17 Nm
Mrr=-2.12 0.14 Mtt=-0.23 0.27
Mff= 2.36 0.21 Mrt= 1.51 0.18
Mrf= 0.31 0.20 Mtf=-1.70 0.18
Principal Axes:

	Val=	Plg=	Azm=
T	3.23	5	62
N	-0.03	35	329
P	-3.20	55	159

Best Double Couple:Mo=3.2*10**17
NP1:Strike=184 Dip=51 Slip= -42
NP2: 304 59 -132

30d 18h

SVA	5.29	353	iPd	15	44.90	-0.8	KLB	54.41	247	eP	22	49.70	-0.9				i	33	01.20				
			eS	16	47.10		NWAO	54.69	245	eP	22	51.50	-1.0				e	35	06.40				
VUN	5.40	354	iPd	15	45.10	-1.6	VNDA	54.81	185	P	22	54.20	1.4	KSP	149.52	338	ePKP	32	55.30	-0.6			
NDF	5.82	344	iP	15	49.30	-1.2	BAL	55.45	248	eP	22	56.50	-1.4		0.7s		95.00nm						
SGE	5.88	349	iP	15	51.10	-0.1		0.4s		19.00nm			4.8mb				id	33	00.90				
			eS	16	55.00		MUN	55.67	246	iPd	22	58.30	-1.1				ec	35	08.30				
MBU	6.40	357	iP	15	51.10	-4.8X	MRWA	56.28	250	iPd	23	02.50	-1.2	CMP	149.65	322	ePKPd	33	06.00	9.6X			
			eS	16	55.00		PCI	61.59	282	ePc	23	39.60	0.3	DCN	149.71	8	iPKPd	33	00.80	4.7X			
MBU	6.40	357	iPc	15	56.00	0.1	SPA	66.74	180	iPd	24	11.70	0.4		0.6s		82.00nm						
PVC	11.56	297	iP	16	50.00	2.6		1.0s		180.00nm			5.6mb	CTT	149.73	313	iPKP	33	01.50	4.9X			
DZM	11.75	274	iPd	16	50.50	1.0				i	24	31.90		DLE	149.85	7	iPKPd	33	01.30	5.0X			
			iS	19	03.10		MAW	77.93	201	iPd	25	16.90	1.9		0.8s		73.00nm						
HBZ	14.17	183	P	17	13.40	-0.2	AIA	79.35	157	eP	25	23.60	1.1	WIT	150.07	351	ePKP	33	03.00	6.4X			
WHH	15.60	188	eP	17	27.60	-0.3	PRS	81.77	45	ePd	25	36.10	0.7	KHL	150.10	307	ePKP	33	02.70	5.4X			
PGZ	17.33	187	P	17	44.40	-0.2	BCH	81.93	46	P	25	37.00	0.6	CLL	150.13	342	ePKP	32	57.00	0.2			
	0.4s		98.00nm			5.8mb	PRI	82.11	45	ePd	25	38.10	0.8	BRG	150.24	341	iPKPd	33	02.60	5.6X			
MNG	17.44	189	P	17	44.30	-1.4	MHC	82.20	44	ePd	25	38.50	0.8		1.0s		3.50nm						
KIW	17.77	190	P	17	48.70	-0.1	PLM	83.08	49	eP	25	40.00	-2.3				i	33	10.00				
CAW	17.98	190	P	17	50.80	-0.1	RVR	83.08	49	eP	25	53.00	11.0X				i	35	15.20				
WDW	18.15	190	eP	17	52.00	-0.5	SBB	83.16	48	eP	25	43.00	0.5	ELL	150.34	304	ePKP	33	03.30	5.5X			
MRW	18.16	191	P	17	52.50	-0.1	FRI	83.23	45	ePd	25	43.00	0.3	BNT	150.43	312	iPKP	33	03.10	5.4X			
			S	20	46.80		ISA	83.28	47	eP	25	43.00	-0.1	PRU	150.83	339	PKPd	33	03.70	5.8X			
BLW	18.17	189	eP	17	52.80	0.0	CMB	83.41	44	iPd	25	43.90	0.2		0.8s		48.30nm						
			S	20	48.90		WDC	83.62	41	ePd	25	45.80	1.2	WTS	150.84	350	iPKPc	33	04.10	6.3X			
WEL	18.20	190	P	17	53.60	0.6	ORV	83.62	42	ePd	25	44.90	0.3		0.7s		96.00nm						
			S	20	50.70		CLC	83.95	47	eP	25	47.00	0.6				e	35	17.50				
TCW	18.22	192	P	17	52.30	-0.9	GSC	84.20	48	eP	25	49.00	1.3	SRO	151.21	333	ePKP	33	04.60	6.1X			
			eS	20	48.80		GLA	84.35	50	eP	25	49.00	0.6				e	34	19.80				
MOW	18.26	189	P	17	53.50	-0.1	KVN	85.46	44	P	25	53.50	-0.4				e	35	11.40				
CCW	18.75	191	eP	17	58.20	0.0	BJI	86.10	317	ePKP	25	56.50	-0.1	ZST	151.41	334	ePKP	32	57.10	-1.7			
KHZ	19.52	192	P	18	04.40	-1.1		2.0s		83.00nm			5.1mb				i	33	05.50				
MHZ	23.05	198	P	18	36.50	-1.3				e	27	54.00					e	35	11.00				
BRS	24.09	255	iPd	18	48.00	0.8				e	29	15.00		KHC	151.89	340	ePKP	33	00.90	1.3			
			i	18	56.00		PMR	88.47	15	P	26	06.00	-1.3				i	33	06.80				
			eS	21	16.00		CHG	88.72	291	eP	26	10.20	0.8				i	33	19.30				
COO	25.23	248	iPd	18	59.10	1.7				e	28	09.00		SOP	152.04	334	ePKP	32	59.00	-0.7			
RMQ	27.65	257	iPc	19	27.00	8.4X	PNT	90.56	35	iPc	26	17.40	0.2	GRF	152.08	343	ePKP	33	07.30	7.5X			
	0.7s		275.00nm			6.0mb		0.7s		13.00nm			5.0mb				e	33	20.00				
			e	19	41.00		FBA	91.66	13	P	26	20.00	-1.9	ENN	152.17	351	ePKP	33	07.00	7.2X			
			e	22	26.00			0.7s		7.56nm			4.8mb		1.0s		45.00nm						
CNB	28.39	239	iPc	19	27.00	2.0	LZH	92.41	308	P	26	27.00	0.8				e	33	19.00				
	0.8s		312.00nm			6.0mb	BW06	92.92	44	P	26	27.10	-1.4				e	35	17.00				
			e	20	17.00			0.7s		5.56nm			4.8mb	MEM	152.31	351	PKPc	33	02.30	2.3			
BWA	28.91	241	eP	19	28.70	-0.8	GOL	94.25	49	P	26	35.00	0.3				e	33	07.30				
AFR	29.70	85	eP	19	36.00	-0.3	INK	97.77	16	eP	26	48.00	-1.6				e	35	21.20				
	1.2s		90.00nm			5.3mb	ZOBO	103.40	114	Pdiff	27	20.00	3.3X	DOU	153.01	352	PKP	33	08.60	7.6X			
TVO	30.12	85	eP	19	40.00	0.0	GBA	105.83	278	PKP	31	37.00	0.7				e	33	22.20				
	1.2s		100.00nm			5.3mb		0.3s		1.30nm							e	35	22.60				
CMS	30.51	247	eP	19	44.00	0.8	BAO	119.80	126	ePKP	32	02.00	-1.0	BCAO	153.40	228	iPKPc	33	03.00	0.3			
CTA	30.64	270	iPc	19	44.60	0.2	FRB	120.60	29	ePKP	32	01.00	-1.9		0.7s		14.00nm						
	0.8s		391.79nm			6.1mb	BLF	121.64	208	ePKP	32	06.00	-0.2				ic	33	11.70				
			i	20	33.00		PRY	122.94	210	iPKPd	32	08.70	-0.2				ic	33	26.50				
			iScP	22	25.30		BFS	123.29	210	iPKPd	32	02.00	-7.5X				ic	35	19.50				
			iS	24	04.00			0.7s		13.70nm				VAY	153.44	318	ePKP	33	08.40	6.5X			
			iScP	25	19.00		SLR	123.57	212	iPKPc	32	09.50	-0.6	PTJ	153.72	333	ePKP	33	01.70	-0.5			
			iSS	26	56.00		KSR	124.12	211	iPKPd	32	12.10	0.9	SKO	153.73	320	ePKP	33	03.50	1.2			
QLP	31.70	257	eP	19	54.00	0.8	MAIO	126.82	299	ePKP	32	12.00	-4.0X				i	33	27.70				
TOO	32.03	236	iPd	19	57.40	1.4				e	34	24.00					i	33	32.80				
	1.0s		275.00nm			5.8mb	KEV	130.75	348	iPKP	32	21.00	-1.3				i	35	17.70				
PMO	32.21	81	iP	19	58.40	0.8		0.7s		10.70nm				KBA	153.75	338	e(PKP)	33	08.50	6.1X			
	1.2s		60.00nm			5.1mb				eSKP	34	44.00			0.7s		9.30nm						
VAH	32.37	82	iP	19	59.60	0.7	SUF	136.67	342	ePKP	32	21.40	-12.3X				i	33	12.80				
	1.2s		45.00nm			5.0mb		0.6s		19.00nm				LJU	154.18	335	e(PKP)	33	03.50	0.7			
TPT	32.47	81	iP	20	00.70	0.9	NUR	138.87	341	iPKP	32	28.70	-9.1X				e	33	11.00				
	1.2s		75.00nm			5.2mb		0.7s		24.00nm				CDF	154.20	347	ePKP	33	11.80	9.0X			
RUV	32.61	82	iP	20	01.90	0.9				i	32	39.20			0.8s		8.00nm						
	1.2s		80.00nm			5.2mb				iSKP	35	20.80		VBY	154.33	333	e(PKP)	33	03.00	0.1			
PMG	33.55	289	eP	20	09.00	0.1	UPP	141.31	345	iPKP	32	36.90	-5.3X				e	33	11.50				
BFD	34.20	238	eP	20	15.00	0.9	LWI	141.45	233	iPKPc	32	41.50	-2.7X	VOY	154.44	336	e(PKP)	33	03.20	0.0			
LAT	35.05	293	eP	20	23.00	1.6	NB2	141.46	351	PKP	32	36.80	-5.7X				i	33	11.40				
ADE	36.87	242	iPc	20	37.20	1.0		0.7s		13.30nm				CEY	154.47	335	e(PKP)	33	03.00	-0.2			
	0.7s		49.32nm			5.2mb	HFS	141.89	348	ePKP	32	37.00	-6.2X				e	33	11.50				
ASPA	41.30	260	iPc	21	12.00	-0.3		0.8s		28.40nm				OHR	154.64	319	ePKP	33	05.00	1.4			
	0.6s		151.00nm			5.7mb				e	32	44.00			1.1s		0.05nm						
Z	20s		0.42um			4.3Msz				e	33	26.90					i	33	30.20				
			iScP	25	58.30		KAS	145.96	310	ePKP	32	50.50	-0.3				i	35	23.00				
			iS	26	46.60		BBTK	147.21	308	ePKP	32	51.00	-1.9	FLN	154.68	359	ePKP	33	11.90	8.6X			
			iScS	30	14.70		BADA	147.39	287	iPKPd	32	56.67	3.4X		0.6s		9.00nm						
			LR	37	04.30		LFK	147.88	300	iPKP	32	58.70	4.7X	HAU	154.77	349	ePKP	33	13.00	9.5X			
WB5	41.60	266	iPc	21	13.90	-0.8	EKA	148.06	2	PKPc	32	56.80	3.2X	LDF	154.85	359	ePKP	33	12.60	9.0X			
FORR	45.67	249	iPd	21	45.50	-0.8		1.0s		46.40nm					0.8s		13.40nm						
	0.4s		112.00nm			5.7mb	VRI	148.34	322	ePKPc	32	58.00	3.7X	BSF	154.85	348	ePKP	33	12.50	8.7X			
MTN	46.59	274	eP	21	52.00	-1.5	KRA	148.80	334	ePKP	32	58.60	3.7X	MAF	157.06	354	ePKP	33	22.90	16.4X			
KNA	47.83	270	eP	22	02.20	-0.7	GPA	148.80	310	ePKP	32	59.00	3.8X		0.8s		8.00nm						
	0.3s		76.00nm			5.7mb	MLR	149.01	322	ePKPc	32	55.00	-0.5	LIC	162.47	166	PKPc	33	12.92	-0.2			
COOL	51.62	248	eP	22	29.20	-1.6	DMU	149.21	7	ePKP	32	59.70	4.3X		0.9s		29.50nm						
	0.4s		16.00nm			4.8mb	SPC	149.34	332	ePKP	32	56.20	0.2	KIC	162.66	167	PKPc	33	13.12	-0.2			

30d 18h

	0.9s	29.50nm				
TIC	162.88	166	PKPc	33	13.26	-0.3
	0.8s	31.50nm				
LKO	165.51	161	PKP	33	16.40	0.4
	0.9s	29.00nm				

S.D. = 1.0 on 110 of 152 obs.

? JAN 30, 1990 18h 37m 45.10± 1.91s
5.033 S ±28.4km 139.578 E ±14.4km
DEPTH = 33.0km (normal)
4.4mb (1 obs.)
WEST IRIAN (201)

MNDI	4.21	106	eP	38	49.00	0.2
PMG	8.68	120	iPc	39	48.00	-3.4X
MTN	11.39	226	eP	40	29.00	0.3
			eS	42	32.00	
WB5	15.61	199	eP	41	24.10	-0.3
			e	46	07.80	
CTA	16.31	157	eP	41	38.00	4.6X
ASPA	19.32	196	iPc	42	13.30	2.7X
	0.9s	21.00nm			4.4mb	
			eS	45	40.00	
ZOBO	145.37	128	PKP	57	22.80	-0.2

S.D. = 0.5 on 4 of 7 obs.

JAN 30, 1990 19h 58m 45.79± 0.28s
34.396 N ± 4.4km 136.306 E ± 3.9km
DEPTH = 369.9 ± 2.8 km
4.9mb (27 obs.)
SOUTHERN HONSHU, JAPAN (232)

WKYJ	0.62	254	iP+	59	33.50	0.5
			S	00	09.20	
TSRJ	1.17	347	iP+	59	34.80	0.1
			S	00	12.70	
IIDJ	1.71	50	iPd	59	36.40	-1.1
TKSJ	1.92	258	iP+	59	39.80	1.1
			S	00	21.80	
YONJ	2.47	289	iP+	59	43.50	0.8
			S	00	28.20	
MTMJ	2.50	29	iPd	59	42.50	-0.6
CHJJ	2.75	52	iPd	59	44.10	-0.8
			S	00	30.60	
SHK	3.00	274	iPc	59	48.10	1.0
	0.9s	1478.99nm				
SSE	13.15	260	P	01	40.80	-1.1
	0.8s	45.00nm			5.0mb	
BJI	16.98	295	Pd	02	21.50	-0.9
GUMO	22.12	157	e(P)	03	13.00	0.1
	0.8s	374.82nm			5.8mb	
PJG	22.12	157	e(P)	03	12.70	-0.2
LZH	26.50	283	P	03	52.50	-0.4
	1.5s	95.00nm			4.9mb	
			pP	04	07.50	63kmX
			i	04	12.00	
			sP	04	15.50	
			PPP	05	14.00	
			PP	06	06.00	
KMI	30.46	261	Pd	04	27.00	-0.8
			sP	04	32.50	
TSM	34.47	213	eP	05	03.00	.1.3
LOE	35.19	250	eP	05	09.00	1.2
CHG	36.60	255	ePd	05	20.00	0.3
	0.9s	13.87nm			4.3mb	
BDT	37.42	252	eP	05	26.00	-0.3
	1.0s	41.40nm			4.7mb	
NST	37.44	249	eP	05	27.20	0.6
SHL	39.22	269	iP	05	41.00	-0.3
NNT	39.63	246	eP	05	33.40	-11.2X
IPM	44.15	236	ePd	06	22.20	1.3
	0.9s	54.10nm			4.8mb	
MTN	47.24	187	iPc	06	44.10	-0.7
TTA	49.93	34	ePc	07	04.60	-0.4
SVW	50.09	36	ePc	07	06.50	0.3
BRW	50.45	23	ePc	07	08.90	0.2
IMA	51.05	30	ePc	07	13.20	-0.1
	1.1s	62.50nm			4.9mb	
KDC	51.87	40	ePc	07	18.20	-1.0
PMR	53.19	35	ePc	07	27.70	-1.2
	1.0s	50.00nm			4.8mb	
FBA	53.52	31	ePc	07	30.70	-0.5
HYB	53.95	267	iPd	07	34.80	-0.2
	0.8s	38.50nm			4.8mb	
WB5	54.00	182	iP	07	34.00	-1.1
TOA	54.53	34	ePc	07	38.80	0.2
QIS	54.74	176	iPc	07	39.20	-1.2
	0.2s	19.00nm			5.1mb	
CTA	55.00	169	iPd	07	41.60	-0.7
	1.0s	34.00nm			4.7mb	
GBA	56.83	264	Pd	07	53.50	-1.8
	0.8s	23.50nm			4.7mb	
POO	57.29	271	iPd	07	59.30	0.8
	0.7s	28.77nm			4.8mb	
QUE	57.74	287	eP	07	59.50	-2.1
INK	58.60	26	iPc	08	06.20	-0.5
	0.6s	31.00nm			4.9mb	
MBC	60.20	15	iPc	08	16.60	-0.9
	0.5s	21.00nm			4.9mb	
MAIO	61.06	296	iPd	08	24.50	0.7
			e	09	44.00	
RMO	61.69	167	iPc	08	35.20	7.4X
DZM	63.04	149	iPc	08	37.20	0.4
BRS	63.40	164	iPc	08	38.00	-1.0
KEV	64.40	339	eP	08	45.00	0.1
FORR	65.36	188	iPd	08	50.60	-0.7
	0.4s	26.00nm			5.3mb	
SUF	68.42	332	eP	09	09.50	-0.5
	0.3s	1.70nm			4.2mb	
NUR	70.27	331	iP	09	20.70	-0.5
PNT	72.93	42	eP	09	37.00	0.0
	0.8s	24.00nm			4.9mb	
EDM	73.95	36	iPc	09	42.50	-0.4
	0.7s	27.00nm			5.0mb	
HFS	74.71	334	eP	09	46.00	-0.9
	0.5s	4.90nm			4.5mb	
			epP	09	51.20	17kmX
			esP	09	53.00	
			ePcP	09	57.50	
FHC	74.92	51	ePc	09	49.80	1.3
NB2	74.94	336	P	09	48.00	-0.3
	0.6s	3.00nm			4.2mb	
WDC	75.96	50	ePc	09	54.80	0.5
SES	76.81	37	ePc	09	58.80	0.0
ORV	77.20	51	ePc	10	00.90	-0.2
FFC	78.12	30	iPc	10	06.80	1.0
	0.7s	32.00nm			5.2mb	
CMB	78.77	52	iPc	10	10.00	0.3
LRM	78.91	42	ePc	10	11.10	0.6
PRS	79.10	53	ePc	10	11.60	0.2
KVN	79.65	50	P	10	14.60	0.1
FRI	79.81	52	iPc	10	15.10	0.0
KSP	80.06	326	eP	10	17.00	0.9
			e	11	40.80	
FRB	80.22	11	ePc	10	16.30	-0.3
	0.5s	22.00nm			5.2mb	
BCH	80.61	54	P	10	17.70	-1.7
KRP	80.65	150	P	10	21.00	1.8
TNP	80.78	50	P	10	20.80	0.4
SYP	81.06	54	eP	10	23.00	1.2
ISA	81.40	53	eP	10	35.00	11.5X
CLC	81.88	52	eP	10	25.00	-0.9
SBB	82.40	53	eP	10	29.00	0.4
BW06	82.44	43	P	10	28.40	-0.5
KHC	82.51	326	P	10	31.00	2.1
GSC	82.70	52	eP	10	31.00	0.8
GRF	83.17	328	eP	10	33.00	0.9
PLM	83.84	54	eP	10	36.00	0.0
BAR	84.38	54	eP	10	39.00	0.5
RSSD	84.53	39	P	10	39.00	-0.3
GLA	85.37	53	eP	10	44.00	0.5
PV09	85.48	46	P	10	45.00	0.8
GOL	86.84	43	P	10	51.60	0.9
	0.7s	5.10nm			4.5mb	
GLD	86.89	43	P	10	52.00	1.2
	1.0s	60.00nm			5.4mb	
LPG	88.32	327	eP	10	57.90	0.2
	0.6s	3.60nm			4.4mb	
ALQ	89.44	47	iPc	11	03.90	0.9
	1.0s	25.00nm			5.1mb	
LPO	91.37	330	eP	10	57.80	-13.6X
	0.8s	5.30nm				
LKO	123.31	313	PKPc	17	01.30	0.1
	0.6s	7.50nm				
TIC	125.22	311	PKP	17	04.60	-0.3
KIC	125.26	310	PKP	17	04.60	-0.3
LIC	125.55	310	PKP	17	05.00	-0.5
NNA	142.51	62	iPKPd	17	32.50	-4.7X
	0.8s	29.10nm				
ZOBO	151.60	57	PKP	17	52.00	-0.3
	1.0s	20.00nm				
			i	17	59.00	
LPB	151.80	57	PKP	18	01.00	8.6X

S.D. = 0.8 on 86 of 92 obs.

? JAN 30, 1990 21h 03m 54.71± 6.52s
44.772 N ±48.7km 15.059 E ±13.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.8 (LJU), 2.5 (TRI).

V8Y	0.75	11	ePg	04	09.50	0.2
			iSg	04	16.40	
PTJ	1.29	29	eP	04	18.58	-0.2
TRI	1.31	316	iPgc	04	18.80	-0.1
			iSg	04	35.60	
LJU	1.32	344	e(Pg)	04	19.00	-0.2
			e(Sg)	04	35.60	
VOY	1.50	327	e(Pn)	04	21.60	-0.2
			eSn	04	42.30	
KBA	2.60	333	iP	04	38.10	0.5
	0.3s	1.30nm				
			eSg	05	15.00	

S.D. = 0.3 on 6 of 6 obs.

% JAN 30, 1990 21h 30m 42.53± 1.74s
37.898 N ± 9.0km 16.070 E ±12.8km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)

SOI	0.17	356	Pc	30	46.60	0.1
			eSg	30	49.60	
MSI	0.51	307	P	30	53.10	0.3
ATN	0.55	299	P	30	53.30	-0.3
			eSg	31	01.00	
MEU	1.21	229	P	31	05.10	0.0
			eSn	31	21.40	
CZI	1.32	2	P	31	06.70	-0.2

S.D. = 0.3 on 5 of 5 obs.

% JAN 30, 1990 21h 46m 15.23± 3.62s
39.760 N ±21.9km 29.459 E ±23.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.66	257	iPg	46	28.30	-0.1
YLV	0.81	355	iPg	46	29.90	-1.1
HRT	1.07	9	ePg	46	36.00	0.6
BNT	1.32	297	ePn	46	39.90	0.2
ISK	1.34	347	ePn	46	40.40	0.5
			eSg	46	55.40	
CTT	1.59	331	ePn	46	43.40	-0.1

S.D. = 0.8 on 6 of 6 obs.

• JAN 30, 1990 22h 59m 33.61± 1.75s
71.134 N ±36.4km 6.012 W ± 6.7km
DEPTH = 10.0km (geophysicist)
JAN MAYEN ISLAND REGION (639)
MD 2.0 (BER).

JNE	0.76	260	iPgd	59	48.55	0.1
			iSg	59	57.04	
JNW	0.80	263	iPgc	59	49.00	0.0
			iSg	59	57.49	
JMI	0.91	258	iPgc	59	50.97	-0.1
			iSg	00	00.80	
NRA0	12.58	137	Pn	02	35.20	0.0
SUF	14.95	108	eP	03	06.30	-0.1
NUR	16.22	115	eP	03	22.80	0.1

S.D. = 0.1 on 6 of 6 obs.

& JAN 31, 1990 00h 35m 49.26s
61.536 N 146.523 W
DEPTH = 29.5km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.29	98	iP	35	55.97	-0.7
			eS	36	01.74	
VZW	0.48	182	eP	35	57.96	-1.4
NCA	0.48	343	eP	35	58.31	-1.1
			eS	36	06.47	
TOA	0.59	16	iP	36	00.24	-1.0
GLI	0.71	203	iP	36	01.40	-1.8
			eS	36	12.30	
KNK	0.94	263	iP	36	05.10	-1.3
			eS	36	18.00	
CVA	1.06	159	eP	36	06.97	-1.2
			eS	36	22.66	
SDG	1.10	24	iP	36	07.20	-1.5
			eS	36	21.56	

HIN	1.14	179	iP	36	08.37	-1.0
			iS	36	25.20	
GHO	1.17	283	iP	36	08.15	-1.6
			eS	36	25.44	
SGAM	1.22	148	eP	36	09.28	-1.1
			iS	36	26.60	
PLRM	1.25	274	iP	36	09.71	-1.1
			eS	36	27.35	
GL8	1.30	93	iP	36	09.75	-1.9
			eS	36	27.33	
RAGM	1.46	141	eP	36	13.38	-0.6
			eS	36	31.75	
PMS	1.49	260	iP	36	13.69	-0.6
			eS	36	33.99	
PAX	1.52	18	iP	36	13.32	-1.5
			eS	36	32.71	
PWA	1.61	276	iP	36	15.12	-0.8
CUT	1.97	298	eP	36	20.75	-0.5
SUA	2.03	270	eP	36	21.17	-1.0
SEW	2.03	226	eP	36	20.54	-1.5
HUR	2.05	316	eP	36	21.79	-0.7
SLKM	2.08	242	eP	36	22.16	-0.6
BALM	2.08	102	iP	36	21.05	-1.9
			iS	36	46.80	
WAX	2.09	120	eP	36	21.84	-1.3
			eS	36	48.59	
RND	2.17	331	eP	36	23.43	-0.7
SNH	2.26	125	eP	36	25.59	0.2
DDM	2.28	7	eP	36	25.69	0.0
NKA	2.42	253	eP	36	29.39	1.8
SKT	2.42	283	eP	36	26.18	-1.5
MCK	2.47	334	eP	36	28.16	-0.2
SPU	2.69	265	eP	36	29.69	-1.8
NCG	2.71	270	eP	36	30.53	-1.3
NNL	2.78	239	eP	36	32.31	-0.4
CKL	2.82	266	eP	36	32.26	-1.1
BGL	2.84	267	eP	36	32.31	-1.3
RDT	3.02	254	eP	36	34.32	-1.9
CNPM	3.08	231	eP	36	35.18	-1.9
PCA	3.39	112	eP	36	39.75	-1.8

38 obs. associated

JAN 31, 1990 00h 37m 44.26± 0.58s
48.064 N ± 6.0km 9.291 E ± 4.3km
DEPTH = 5.0km (geophysicist)
GERMANY (543)
ML 2.5 (FUR), 2.8 (LDG), 2.2 (KBA).

SLE	0.61	241	iPc	37	56.30	-0.3
SAX	0.82	177	iPc	38	00.00	-0.7
ZLA	0.84	227	iPc	38	01.10	0.0
FEL	0.88	258	Pg	38	01.00	-0.7
LLS	1.21	190	ePc	38	07.90	0.4
FUR	1.33	85	ePg	38	08.60	-0.8
CDF	1.39	285	Pg	38	11.10	0.7
			Sg	38	29.20	
OSS	1.50	157	iP	38	12.10	0.1
VDL	1.58	176	ePd	38	14.10	0.9
BSF	1.70	263	Pn	38	14.60	-0.2
			Sg	38	38.80	
GRC1	1.75	57	ePg	38	15.90	0.4
			eSg	38	36.90	
HAU	1.98	269	Pg	38	21.80	3.0X
			Sg	38	46.80	
MMK	2.21	205	ePd	38	25.80	3.5X
DIX	2.36	214	ePc	38	28.30	3.7X
KBA	2.92	108	ePn	38	37.00	4.7X
			iSg	39	12 70	
LPG	3.10	215	Pg	38	42.40	7.3X
LOR	3.76	260	Pg	38	55.00	10.9X
			Sg	39	43.00	

S.D. = 0.6 on 11 of 17 obs.

? JAN 31, 1990 00h 46m 13.00± 2.72s
32.402 S ±15.4km 70.991 W ±26.9km
DEPTH = 118.5 ± 14.7 km
4.2mb (2 obs.)
CHILE-ARGENTINA BORDER REGION (127)

RTBS	1.50	61	ePd	46	41.30	0.6
MDZ	1.87	105	e(P)	46	44.70	-0.6
			i(S)	47	19.30	
ZON	2.14	67	eP	46	49.00	0.3
RTCV	2.15	76	e(P)	46	50.10	1.3
RTLL	2.40	64	ePd	46	52.20	0.2
CFA	2.47	72	ePc	46	53.50	0.6
RTRS	2.58	31	iPc	46	54.60	0.3
MRA	4.47	92	ePd	47	18.20	-1.5
			S	48	18.00	
CYA	5.97	50	iPd	47	38.50	-1.9
			S	49	06.00	
ANT	8.68	4	e(P)	48	29.50	12.4X
CCH	15.58	17	eP	49	36.00	-11.7X
LPB	16.02	10	eP	49	54.00	0.8
ZOBO	16.27	10	P	49	55.00	-1.5
	1.0s		10.00nm			4.0mb
	Z 18s		0.41um			5.3MszX
			LR	56	36.00	
BAO	26.74	57	eP	51	44.30	0.9
LIC	73.43	71	P	57	34.60	0.3
TIC	73.69	71	P	57	36.20	0.4
KIC	73.74	71	Pc	57	36.60	0.5
	0.6s		4.00nm			4.4mb
GBA	145.63	116	PKP	05	37.00	-2.3
HYB	148.74	111	ePKP	05	46.00	1.7

S.D. = 1.3 on 17 of 19 obs.

? JAN 31, 1990 00h 58m 33.43± 1.07s
44.892 N ±14.5km 11.321 E ±22.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (KBA).

MME	0.83	213	P	58	49.60	0.0
			eSn	59	04.00	
CTI	1.18	11	P	58	54.90	-0.6
			eSn	59	14.50	
FVI	1.98	30	P	59	08.50	1.1
			eSn	59	36.40	
VOY	2.14	57	e(Pn)	59	09.20	-0.5
			eSn	59	37.40	
KBA	2.60	32	ePn	59	19.00	2.6X
			eSg	59	53.50	

S.D. = 1.4 on 4 of 5 obs.

JAN 31, 1990 01h 08m 19.29± 0.39s
34.445 N ± 3.3km 106.860 W ± 3.8km
DEPTH = 10.0km (geophysicist)
NEW MEXICO (496)
mbLg 4.0 (TUL). Felt (V) at Belen and Bosque, (IV) at Jorales and (II) at Socorro. Also felt at Bernardo and Los Lunas.

LPM	0.23	125	P	08	24.40	0.1
LAZ	0.24	259	P	08	24.50	0.1
BNM	0.36	148	P	08	26.70	0.0
BMNM	0.37	243	P	08	27.00	0.0
SNM	0.38	191	P	08	27.20	0.0
CRNM	0.50	168	P	08	29.60	0.1
SBM	0.54	210	P	08	30.00	-0.3
ALQ	0.60	34	iPd	08	30.50	-1.0
	0.5s		205.99nm			
ANMO	0.60	33	iPd	08	30.90	-0.6
SMNM	0.68	191	P	08	32.70	-0.2
FLAG	4.00	282	P	09	23.00	0.8
PV09	4.44	336	eP	09	28.00	-0.5
GOL	5.38	12	e(P)	09	45.50	3.7X
MSU	5.90	315	e(P)	09	52.70	3.6X
GLA	6.78	260	eP	10	00.50	-0.8
GSC	8.22	279	eP	10	53.00	31.5X
PLM	8.39	265	eP	10	46.00	22.1X
BW06	8.58	347	eP	10	28.00	1.3
SIO	8.75	78	(Pn)	10	33.00	4.3X
CLC	8.90	282	eP	11	06.00	35.1X
SBB	9.05	275	eP	11	01.00	28.0X
TNP	9.12	296	e(P)	10	30.80	-3.3X
TUL	9.18	78	(Pn)	10	35.70	1.0
	1.0s		4.00nm			4.7mb X
			ePg	11	06.80	
			eLg	13	08.60	
KVN	10.12	300	eP	10	40.50	-7.4X

S.D. = 0.7 on 15 of 24 obs.

% JAN 31, 1990 02h 04m 06.63± 0.97s
39.158 N ± 6.5km 16.736 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

ROI	0.43	343	P	04	14.70	-0.8
CZI	0.47	278	P	04	16.60	0.4
TDS	0.59	328	Pd	04	18.30	-0.2
			eSg	04	27.10	
CSI	0.71	331	P	04	20.70	0.1
SOI	1.21	206	P	04	28.70	-0.4
			eSg	04	45.10	
MGR	1.34	317	P	04	32.00	0.7
LCI	1.50	38	P	04	34.60	1.0
			eSg	04	54.00	
BRT	1.76	12	P	04	36.50	-0.8

S.D. = 0.8 on 8 of 8 obs.

? JAN 31, 1990 02h 18m 19.60± 2.86s
26.385 N ±62.6km 129.289 E ±40.3km
DEPTH = 33.0km (normal)
4.6mb (6 obs.)
RYUKYU ISLANDS (238)

BJI	17.46	325	eP	22	22.50	0.4
MBC	69.45	14	eP	29	25.00	-1.1
	0.8s		5.00nm			4.6mb
KEV	69.64	339	eP	29	15.00	-12.3X
SUF	72.64	332	eP	29	44.50	-1.0
	0.5s		1.20nm			4.1mb
NUR	74.22	330	iP	29	55.80	1.2
	0.6s		7.80nm			4.9mb
HFS$_e$	79.12	333	eP	30	21.40	-0.7
	0.7s		3.10nm			4.4mb
NB2	79.59	334	P	30	24.60	-0.1
	0.7s		4.50nm			4.6mb
VRI	79.64	316	ePc	30	28.50	3.3X
FFC	88.03	27	eP	31	09.00	1.4
	0.8s		8.00nm			5.1mb

S.D. = 1.2 on 7 of 9 obs.

JAN 31, 1990 02h 46m 08.39± 0.46s
38.377 N ± 4.4km 20.291 E ± 2.8km
DEPTH = 49.8 ± 7.7 km
4.1mb (4 obs.)
GREECE (364)

VLS	0.31	130	ePg	46	01.90	-15.7X
IGT	1.15	2	ePb	46	29.40	0.9
KEK	1.39	344	ePd	46	32.60	0.9
AGG	1.72	67	ePb	46	37.90	1.4
			eSb	47	00.80	
ITM	1.76	132	ePb	46	36.40	-0.6
KZN	2.24	30	ePn	46	45.20	1.3
LIT	2.42	44	ePn	46	47.40	1.0
			eSn	47	19.80	
LCI	2.67	318	P	46	49.30	-0.4
			eSn	47	20.60	
VLI	2.68	127	ePg	46	54.00	4.1X
ATH	2.73	97	ePn	46	50.00	-0.7
OHR	2.76	8	iPnc	46	52.90	1.7
THE	3.06	42	ePn	46	55.80	0.4
			eSn	47	33.40	
ROI	3.14	294	P	46	58.40	1.8
PLG	3.15	50	ePn	46	57.00	0.1
TDS	3.33	294	P	47	00.10	0.7
SOI	3.35	266	Pc	46	59.20	-0.3
			eSn	47	36.50	
			eTT	50	11.50	
CZI	3.36	286	P	47	01.10	1.5
			eSn	47	39.50	
SOH	3.40	43	ePn	47	00.70	0.4
			e	47	41.90	
CSI	3.41	295	P	47	03.10	2.6X
VAY	3.42	30	iPn	47	00.50	-0.1
KNT	3.43	35	eP	47	01.00	0.3
			eSn	47	44.40	
BRT	3.45	317	P	47	01.70	0.7
			eSg	47	41.50	
OUR	3.46	55	ePn	47	01.70	0.5
			eSn	47	45.60	
SKO	3.70	13	ePn	47	04.50	0.1
			i	47	16.50	
			i	47	57.20	
SRS	3.74	42	ePn	47	04.60	-0.4
BAI	3.80	317	P	47	06.00	0.1
MGR	4.08	297	P	47	11.20	1.4
			eSn	47	54.70	
KKB	4.09	31	iP	47	20.00	10.0X
MMB	4.15	38	iPd	47	11.00	0.1
VAM	4.31	132	ePn	47	11.70	-1.4
APE	4.35	106	ePd	47	20.10	6.4X
SGO	4.43	301	P	47	16.10	1.4
			eSn	48	02.50	
MEU	4.44	255	P	47	13.20	-1.7

31d 02h

			eSn	48	02.20	
RZN	4.74	44	iP	47	18.00	-1.3
VTS	4.76	27	iP	47	20.00	0.4
RDO	4.90	54	ePn	47	20.00	-1.4
GIB	4.95	267	P	47	21.30	-0.9
ALN	5.11	59	ePn	47	24.00	-0.3
			eSn	48	22.30	
KDZ	5.12	49	eP	47	24.00	-0.5
DUI	5.55	308	P	47	31.70	1.1
			eSn	48	29.80	
HVAR	5.61	330	iPn	47	29.70	-1.7
			iSn	48	34.70	
SDI	5.98	306	P	47	37.00	0.4
PVL	6.16	37	eP	47	38.00	-1.1
AZI	6.37	307	P	47	42.00	0.0
BEO	6.44	1	eP	47	56.00	13.0X
AQU	6.59	309	P	47	46.60	1.4
BZS	7.30	7	eP	47	54.00	-1.0
ASS	7.45	311	P	47	58.80	1.6
ARV	7.56	315	P	47	57.80	-0.8
VBY	8.05	334	iPn	48	04.70	-0.6
			e(Sn)	49	33.30	
RSM	8.10	316	P	48	06.20	0.1
PTJ	8.18	338	ePn	48	03.70	-3.5X
			eSn	49	05.30	
CRE	8.20	312	P	48	07.00	-0.6
RIY	8.24	330	ePn	48	06.30	-1.6
MLR	8.26	29	eP	48	09.00	0.6
SFI	8.44	314	P	48	07.00	-3.7X
PGD	8.48	313	P	48	12.50	1.0
CEY	8.55	331	ePn	48	10.00	-2.3
			eSn	49	43.00	
LJU	8.77	333	ePn	48	13.60	-1.7
			eSn	49	49.50	
TRI	8.79	329	iPnc	48	13.70	-1.8
			iSn	49	48.50	
VRI	8.88	30	ePc	48	17.50	0.7
VOY	9.00	330	ePn	48	16.00	-2.6X
			eSn	49	54.40	
BDI	9.25	311	P	48	22.00	0.0
MME	9.26	312	P	48	23.20	0.8
FVI	9.90	328	P	48	28.50	-2.3
CTI	9.99	323	P	48	29.90	-2.2
KBA	10.08	332	ePn	48	31.00	-2.5X
			i	48	46.60	
			i	48	50.30	
			i	50	18.90	
SAL	10.24	318	Pd	48	34.00	-1.5
BOB	10.33	312	P	48	38.10	1.3
BHG	10.79	332	iPc	48	43.10	0.1
VAI	11.36	315	Pc	48	48.70	-1.9
ORO	11.67	312	P	48	54.90	0.0
KHC	11.79	338	eP	48	55.50	-1.0
			e	49	07.00	
HFS	22.18	351	eP	51	01.50	0.2
	0.6s		4.40nm			4.1mb
NUR	22.32	6	eP	51	03.30	0.5
NB2	23.39	349	P	51	15.20	2.0
	0.7s		1.60nm			3.6mb
SUF	24.63	6	iP	51	26.40	1.2
	0.8s		6.00nm			4.2mb
BCAO	33.82	183	ePd	52	48.90	0.9
	0.4s		4.00nm			4.7mb X
TIC	39.02	222	P	53	32.20	0.2
KIC	39.12	222	P	53	33.00	0.3
	0.7s		4.00nm			4.4mb
LIC	39.38	222	P	53	35.40	0.5
	S.D. = 1.1		on	71	of 81	obs.

? JAN 31, 1990 02h 51m 26.17± 4.19s
44.460 N ±13.0km 6.525 E ±28.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

FOUF	0.20	69	ePgd	51	30.39	-0.1
			eSg	51	30.98	
PZZ	0.41	84	P	51	34.77	0.1
			S	51	38.77	
RRL	0.50	22	P	51	36.31	0.0
			S	51	41.54	
STV	0.61	110	P	51	38.46	-0.1
			S	51	44.92	
ENR	0.68	110	P	51	39.90	0.1
	S.D. = 0.1		on	5	of 5	obs.

• JAN 31, 1990 03h 33m 36.16± 1.21s
19.177 S ±13.7km 69.406 W ±12.9km
DEPTH = 116.9 ± 16.5 km
NORTHERN CHILE (123)

LPB	2.91	26	Pd	34	23.00	0.7
	1.1s		430.38nm			
			eS	34	59.00	
ZOBO	3.14	23	iPd	34	25.00	-0.5
	0.8s		48.91nm			
ARE	3.35	323	iPc	34	27.30	-0.8
			iS	35	09.80	
CCH	3.58	61	P	34	38.20	7.1X
			iS	34	45.00	
YJA	4.71	130	ePc	34	46.80	0.1
PT03	8.01	309	eP	36	26.90	55.6X
NNA	10.12	314	eP	36	00.50	0.8
	0.8s		5.97nm			4.5mb X
			e	38	24.00	
KIC	68.53	75	(P)	44	28.20	-0.2
	S.D. = 1.0		on	6	of 8	obs.

& JAN 31, 1990 04h 09m 24.50s
32.470 N 115.240 W
DEPTH = 6.0km (geophysicist)
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 3.0 (PAS).

GLA	0.68	31	eP	09	36.70	-1.4
PLM	1.62	303	eP	09	51.70	-2.2
PEC	2.15	312	eP	10	01.50	0.1
	3 obs. associated					

% JAN 31, 1990 05h 04m 57.83± 0.57s
46.073 N ± 7.0km 8.038 E ± 5.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)

MMK	0.05	247	iPc	05	00.50	0.2
DIX	0.44	271	ePc	05	06.20	-0.6
ORO	0.45	185	Pd	05	07.60	0.6
			eSg	05	14.00	
TMA	0.58	86	ePd	05	09.00	-0.8
EMS	0.77	270	ePd	05	12.50	-0.5
LLS	1.04	39	ePc	05	16.30	-1.2
VDL	1.08	67	ePc	05	17.70	-0.5
SAX	1.48	37	ePc	05	26.00	1.2
OSS	1.58	66	ePc	05	26.50	0.4
SLE	1.72	10	ePd	05	29.30	1.3
	S.D. = 1.0		an	10	of 10	obs.

? JAN 31, 1990 07h 53m 45.61± 8.30s
31.734 S ±33.5km 71.025 W ±63.0km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

RTBS	1.34	87	e(P)	54	10.50	0.2
			e	54	11.80	
ZON	2.01	85	eP	54	19.00	-1.0
RTRS	2.06	41	eP	54	20.70	0.1
RTCV	2.12	94	e(P)	54	23.00	1.4
RTLL	2.22	80	ePd	54	25.70	2.7X
MRA	4.56	100	e(P)	54	55.60	-0.6
	S.D. = 1.3		an	5	of 6	obs.

? JAN 31, 1990 08h 59m 29.89± 2.69s
35.447 N ±30.9km 23.735 E ±17.8km
DEPTH = 5.0km (geophysicist)
CRETE (370)

VAM	0.38	96	ePg	59	37.20	-0.4
VLI	1.42	333	ePb	59	54.50	-1.9
NPS	1.55	96	ePd	59	58.20	0.1
APE	2.17	41	ePd	00	08.00	0.7
ITM	2.26	320	ePb	00	10.00	1.5
	S.D. = 1.8		on	5	of 5	obs.

• JAN 31, 1990 09h 15m 43.04± 0.88s
43.483 N ± 9.7km 16.233 E ±12.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

HVAR	0.34	153	iPgd	15	50.10	0.0
			iSg	15	59.90	
VBY	2.14	341	e(Pn)	16	18.90	-0.3
			iSn	16	48.50	
PTJ	2.42	355	e(Pn)	16	18.30	-5.1X
			e(Sn)	16	46.60	
CEY	2.60	331	e(Pn)	16	26.00	0.2
			eSn	17	02.50	
TRI	2.84	322	eP	17	06.40	37.2X
			i	17	20.70	
VOY	3.04	328	e(Pn)	16	32.30	0.1
			e(Sn)	17	14.10	
CMP	6.56	71	iPc	17	22.00	0.1
	S.D. = 0.3		on	5	of 7	obs.

? JAN 31, 1990 09h 17m 51.39± 6.93s
29.868 S ±29.0km 178.545 W ±31.0km
DEPTH = 193.5 ± 57.0 km
4.7mb (5 obs.)
KERMADEC ISLANDS (178)

DZM	15.56	296	iPc	21	22.00	-0.1
BRS	25.27	269	iPd	23	02.70	1.2
	0.6s		10.00nm			4.6mb
			i	23	10.00	
COO	25.53	261	eP	23	05.00	1.2
RMQ	28.97	269	ePd	23	35.90	1.0
CTA	33.25	279	iPc	24	12.80	0.5
	0.9s		28.57nm			4.9mb
ASPA	42.67	267	iPd	25	29.50	-1.2
	0.7s		13.00nm			4.6mb
	Z 17s		0.44um			4.4MszX
			LR	43	08.80	
WRA	43.60	272	Pd	25	36.50	-1.8
	0.8s		17.20nm			4.6mb
WB5	43.61	272	eP	25	36.70	-1.6
SPA	60.30	180	iPc	27	40.70	-0.9
	1.1s		25.00nm			4.9mb
SUF	143.46	341	ePKP	36	58.50	-5.0X
	0.6s		6.70nm			
NUR	145.65	340	iPKP	37	05.60	-1.7
	0.8s		30.80nm			
NB2	148.16	351	PKP	37	12.70	1.3
	0.7s		6.40nm			
HFS	148.63	348	ePKP	37	11.80	-0.3
	0.5s		3.40nm			
BCAO	149.99	216	iPKPc	37	17.90	2.3
	0.5s		15.00nm			
			id	37	23.30	
GRF	158.86	342	e(PKP)	37	43.00	16.6X
	S.D. = 1.6		on	13	of 15	obs.

JAN 31, 1990 10h 16m 14.58± 0.25s
41.415 N ± 2.2km 22.662 E ± 1.7km
DEPTH = 15.9 ± 2.9 km
4.6mb (16 obs.)
YUGOSLAVIA (383)
ML 4.5 (THE), 4.3 (ATH). Felt (VI) in the Valandovo area.

VAY	0.12	216	iPgc	16	18.30	0.1
			iSg	16	20.60	
KNT	0.31	145	iPgc	16	20.50	-0.8
			eSg	16	24.60	
KKB	0.55	35	iPgd	16	25.00	-0.4
			iSg	16	32.00	
SRS	0.76	113	iPgc	16	28.10	-0.9
			eSg	16	37.70	
SOH	0.79	138	iPgc	16	28.70	-0.8
THE	0.82	164	iPgd	16	29.40	-0.5
			eSg	16	41.40	
MMB	0.82	77	ePgd	16	30.00	0.0
			Sg	16	40.00	
SKO	1.07	302	iPgc	16	34.70	0.4
PLG	1.20	150	iPnc	16	36.00	-0.5
VTS	1.24	19	iPg	16	38.00	0.7
KZN	1.30	212	iPnd	16	38.20	0.1
LIT	1.32	186	iPbc	16	38.40	0.1
			eSb	16	56.80	
OHR	1.44	258	iPnd	16	41.90	1.9
			iSn	17	04.00	
OUR	1.47	137	iPbc	16	40.70	0.3
RZN	1.57	79	iPd	16	43.00	1.0
PGB	1.59	44	iPd	16	43.00	0.7
			iSg	17	04.00	
PLD	1.67	65	iPd	16	45.00	1.6
PAIG	1.68	152	iPbc	16	43.80	0.4
KDZ	2.08	83	iPd	16	49.00	-0.3
NEO	2.15	168	ePn	16	50.10	-0.2
RDO	2.18	96	iPnc	16	51.00	0.3
DIM	2.24	73	iP	16	52.00	0.4
PVY	2.32	301	iPn	16	55.00	2.1
			iSn	17	28.00	

31d 10h

AGG	2.40	186	iPnc	16	54.50	0.6	GIB	7.48	246	P	18	05.00	-0.8	MEM	14.75	314	P	19	48.30	4.2X
IVA	2.52	306	iPn	16	57.80	2.2	LJU	7.49	311	iPnc	18	06.20	0.5	SSF	14.83	299	eP	19	43.30	-2.0
			iSn	17	32.00					eSn	19	32.50			0.9s	26.20nm				4.7mb
ALN	2.61	100	iPnc	16	56.90	0.1				eSg	19	55.00		AVF	14.87	298	eP	19	45.00	-0.7
ULC	2.61	283	iPn	17	00.00	3.1X	MNS	7.51	281	P	18	06.80	0.7		0.8s	24.10nm				4.7mb
			iSn	17	34.00		ASS	7.60	286	P	18	07.30	-0.1	BGF	15.15	296	eP	19	47.40	-2.0
PVL	2.68	47	iPd	16	56.00	-1.8	SOP	7.63	327	iP	18	08.70	1.0		0.9s	29.40nm				4.6mb
TTG	2.73	293	iPn	17	01.00	2.4	TRI	7.76	307	iPnd	18	09.20	-0.3	MAF	15.27	295	eP	19	50.60	-0.4
			iSn	17	36.10					iSn	19	34.50			0.7s	33.00nm				4.8mb
KEK	2.77	233	ePn	17	01.00	2.0				i	20	31.50		DOU	15.28	311	Pd	19	56.00	5.0X
NKY	3.06	298	iPn	17	05.90	2.6	BBTK	7.84	98	eP	18	08.50	-2.3		0.7s	7.80nm				4.1mb
JMB	3.11	69	eP	17	03.00	-0.8				eS	19	35.00					i	20	07.00	
EZN	3.21	118	iPn	17	04.60	-0.7	ZST	7.85	332	iP	18	10.00	-0.7	TCF	15.53	295	eP	19	54.30	0.0
HCY	3.27	290	iPn	17	08.50	2.3				i	18	12.10			0.7s	33.00nm				4.7mb
BRY	3.40	297	iPn	17	11.00	2.8X				e	21	34.90		LDF	17.60	302	eP	20	20.40	-0.1
DRA	3.46	19	iPd	17	10.00	1.1	VOY	7.85	309	iPnc	18	10.90	0.0		0.7s	20.70nm				4.4mb
PRK	3.51	127	ePn	17	09.60	0.1				eSn	19	37.40		FLN	17.87	302	eP	20	23.30	-0.6
ATH	3.53	166	ePn	17	10.50	0.6	RSM	7.93	292	P	18	12.50	0.6		0.8s	18.80nm				4.3mb
VLS	3.61	207	ePn	17	13.00	2.0	SPC	7.96	348	eP	18	17.40	5.0X	NUR	19.16	3	eP	20	40.00	0.4
LCI	3.73	255	P	17	11.50	-1.2	VKA	8.20	329	i(P)	18	16.80	1.2	HFS	19.55	347	eP	20	44.60	0.4
BEO	3.77	335	ePn	17	13.00	-0.2		0.6s		130.00nm			6.4mb X		0.5s	4.30nm				4.0mb
			i	17	23.20		CRE	8.21	289	P	18	15.50	-0.5	ASMO	20.78	267	iPd	20	57.00	-0.4
DMK	3.84	82	iPn	17	14.60	0.3	KAS	8.35	87	eP	18	21.00	3.1	NB2	20.86	344	P	20	59.00	1.0
EDC	4.08	103	iPn	17	17.50	-0.2	SFI	8.35	291	P	18	19.30	1.5		0.6s	6.10nm				4.2mb
BNT	4.12	103	iPn	17	17.50	-0.8	PGD	8.43	291	P	18	19.00	-0.1	APHE	20.87	266	iPc	20	59.00	0.5
BRT	4.16	264	P	17	19.40	0.6	MAO	8.64	280	P	18	20.10	-1.8	AAPN	21.08	268	iPc	21	00.50	0.0
BZS	4.27	350	iPd	17	19.00	-1.3	FIR	8.74	289	e(Pn)	18	25.00	1.8	ATEJ	21.13	266	iPd	21	00.50	-0.6
ITM	4.27	188	ePn	17	21.20	0.8	K8A	8.76	313	iPnc	18	22.70	-0.9	ALOJ	21.13	267	eP	20	59.50	-1.6
CTT	4.35	92	ePn	17	20.00	-1.6				i	18	36.00		SUF	21.44	4	eP	21	01.70	-2.1
BAI	4.38	268	P	17	22.00	0.1				iSn	19	51.80			0.5s	11.10nm				4.5mb
TIM	4.44	347	eP	17	37.00	14.2X				i	20	21.20		SOD	26.10	3	eP	21	50.00	1.1
DEV	4.47	2	iPd	17	23.50	0.3				i	21	20.80		TIO	26.21	256	iPd	21	51.40	1.0
KCT	4.47	103	ePn	17	15.00	-8.3X	FVI	8.80	309	P	18	23.90	-0.1	BCAO	37.01	187	iPd	23	26.50	1.3
IZM	4.65	129	iPn	17	25.90	0.1	KRA	8.85	349	eP	19	06.70	42.1X		0.5s	6.00nm				4.6mb
PSN	4.67	59	eP	17	26.00	0.0				e	19	24.80					ic	23	42.90	
ISR	4.68	36	ePc	17	27.50	1.3	CTI	9.22	304	P	18	28.60	-1.3	LIC	42.85	223	(P)	24	19.80	6.2X
VLI	4.70	177	ePn	17	25.50	-1.0	MME	9.22	292	P	18	30.30	0.2	FRB	54.33	327	eP	25	44.00	2.1
MLR	4.72	29	ePc	17	28.50	1.6	BDI	9.26	291	P	18	32.30	1.8	MBC	60.14	350	eP	26	26.50	3.5X
ITU	4.80	92	iPnc	17	43.00	15.1X	BHG	9.40	315	iPc	18	34.00	1.7		1.0s	2.00nm				4.2mb
			iSg	18	45.00		SAL	9.76	299	P	18	35.50	-1.7	LRM	84.35	330	eP	28	52.40	5.1X
ISK	4.84	92	ePn	17	28.00	-0.4	OGA	9.98	307	eP	18	39.90	-0.6		S.D. = 1.1		on 167 of 185 obs.			
APE	4.88	152	ePn	17	28.50	-0.5	KHC	10.02	323	P	18	40.00	-0.8	---						
DST	4.89	110	iPn	17	29.60	0.3				i	18	42.60		• JAN 31, 1990 10h 33m 45.48± 1.47s						
CVD	4.91	52	eP	17	45.50	16.1X	BOB	10.23	294	P	18	43.80	0.0	41.329 N ±16.9km 22.686 E ± 8.4km						
SMG	4.91	138	ePn	17	29.50	0.1	PGF	10.24	281	eP	18	43.40	-0.6	DEPTH = 10.0km (geophysicist)						
HVAR	4.93	293	iPnd	17	30.90	1.1		0.8s		18.80nm			5.5mb X	YUGOSLAVIA						(383)
			iSn	18	26.90		PRU	10.28	329	eP	18	45.00	0.7	ML 2.1 (SKO).						
TLB	5.06	49	ePd	17	31.50	0.0	KSP	10.41	337	iPd	18	47.70	1.6							
CSI	5.12	253	P	17	32.10	-0.3		0.8s		20.00nm			5.5mb X	VAY	0.09	265	iPg	33	48.00	0.0
TDS	5.13	252	P	17	34.10	1.6				i	18	56.00					iSg	33	49.70	
YLV	5.15	97	iPn	17	32.00	-0.9	OSS	10.43	305	ePc	18	46.40	-0.3	KNT	0.23	136	iPgc	33	50.40	0.0
GBZT	5.16	95	ePn	17	31.70	-1.3	FUR	10.53	314	eP	18	49.00	1.2				eSg	33	54.20	
			iSg	18	56.00		VDL	10.77	302	ePc	18	50.90	-0.5	SOH	0.72	135	ePg	33	59.40	-0.2
CZI	5.45	248	P	17	38.50	1.4	CKI	10.97	291	P	18	52.50	-1.3				eSg	34	10.00	
CFR	5.50	45	ePc	17	55.00	17.3X	VAI	11.00	298	Pd	18	52.70	-1.6	SRS	0.72	107	ePg	33	59.70	0.1
MGR	5.54	259	P	17	38.80	0.4	TMA	11.02	300	ePc	18	53.60	-1.1				eSg	34	07.90	
SGO	5.63	264	P	17	39.80	0.2	BRG	11.22	330	e(P)	19	06.00	8.9X	THE	0.73	163	ePg	33	59.90	0.1
GPA	5.91	98	ePn	17	46.00	2.5	LLS	11.23	304	ePc	18	57.80	0.3		S.D. = 0.2		on 5 of 5 obs.			
SOI	6.09	239	P	17	45.00	-1.0	ORO	11.46	296	P	18	59.00	-1.6	---						
KHL	6.11	118	ePn	17	46.00	-0.5	SBF	11.48	287	eP	19	00.20	-0.7	% JAN 31, 1990 11h 35m 09.03± 2.62s						
CLI	6.12	31	ePc	17	47.00	0.5		0.6s		21.60nm			5.6mb X	0.181 S ± 7.3km 77.763 W ±21.3km						
VAM	6.12	168	ePn	17	47.50	.1.0	GRF	11.51	320	e(P)	19	00.00	-1.2	DEPTH = 10.0km (geophysicist)						
DUI	6.16	275	P	17	47.20	0.0	MMK	11.60	298	ePc	19	03.00	0.4	ECUADOR						(107)
CEI	6.27	359	eP	18	33.00	44.4X	SLE	11.92	307	ePc	19	05.50	-1.3							
BMR	6.28	5	ePd	17	53.00	4.2X	CLL	11.92	329	(Pg)	19	07.00	0.3	CAYA	0.34	320	iPd	35	16.00	-0.3
ATN	6.43	242	P	17	50.20	-0.7				eSg	23	09.00		OUR	0.77	271	iP+	35	24.30	0.0
ZAG	6.54	314	iPn	17	52.50	0.0	DIX	11.97	298	ePc	19	07.90	0.2				S	35	35.00	
NPS	6.57	158	ePn	17	53.50	0.7	FRF	12.02	286	eP	19	08.00	-0.1	COTA	0.77	312	iPd	35	24.70	0.3
BUD	6.60	338	eP	17	51.00	-2.3		0.8s		18.80nm			5.4mb X				eS	35	37.90	
PTJ	6.61	315	ePn	17	52.40	-1.2	LMR	12.10	284	eP	19	09.70	0.5	VC1	0.78	234	iP+	35	24.60	0.0
SDI	6.64	275	P	17	54.20	0.2	BNI	12.21	293	P	19	09.20	-1.6				S	35	35.90	
IAS	6.76	30	eP	18	21.00	25.5X	LRG	12.22	285	eP	19	10.90	0.1	GGP	0.83	270	iP+	35	25.50	0.0
VBY	6.76	310	iPnc	17	56.30	0.7		0.8s		21.40nm			5.4mb X				S	35	37.80	
			e(Sn)	19	25.30		LPG	12.26	295	eP	19	10.90	-0.7	TUNG	1.41	209	iP+	35	35.00	0.0
PSZ	6.80	344	iPn	17	54.30	-1.8		0.5s		18.90nm			5.6mb X				eS	35	51.50	
AZI	6.93	278	P	17	58.50	0.6	EMS	12.29	298	ePc	19	12.00	0.1		S.D. = 0.2		on 6 of 6 obs.			
AQU	6.97	281	P	17	58.80	0.2	CDF	12.94	308	eP	19	19.80	-0.7	---						
SRO	7.11	336	eP	18	01.50	1.1	BSF	12.99	305	eP	19	19.70	-1.4	• JAN 31, 1990 13h 09m 10.06± 0.59s						
RIY	7.19	306	iPnd	18	02.00	0.4		0.8s		13.40nm			5.2mb X	29.693 N ±12.3km 67.950 E ±10.5km						
BCK	7.29	120	iP	18	04.00	0.9	HAU	13.33	305	eP	19	23.60	-2.0	DEPTH = 33.0km (normal)						
ELL	7.31	127	eP	18	03.00	-0.4		0.6s		9.00nm			5.0mb X	4.5mb (5 obs.)						
CEY	7.38	309	ePn	18	04.90	0.7	LBF	14.50	299	eP	19	40.30	-0.7	PAKISTAN						(710)
			eSn	19	29.50			0.7s		16.50nm			4.7mb							
MEU	7.38	237	P	18	01.40	-3.0	SMF	14.50	297	eP	19	38.60	-2.4	QUE	1.00	300	eP	09	26.90	-1.1
RDP	7.46	276	P	18	05.50	0.0		0.6s		14.40nm			4.7mb	NDI	8.16	95	iPnd	11	07.50	-1.7
RMP	7.48	276	P	18	06.50	0.9	LOR	14.66	300	eP	19	40.70	-2.3		0.6s	33.33nm				5.6mb X
ARV	7.48	289	P	18	04.80	-0.9		0.5s		9.70nm			4.6mb				iSn	12	32.90	

31d 13h

MAIO	9.68	315	eP	11	32.00	1.8
			eS	14	22.00	
POO	12.34	153	eP	12	07.00	0.6
			iS	14	20.00	
HYB	15.60	139	ePc	12	48.20	-1.0
			eS	16	20.50	
GBA	18.26	149	Pd	13	21.50	-1.1
	0.7s		9.70nm			4.1mb
SHL	21.59	95	iP	14	01.00	1.8
			eS	17	50.00	
CHG	30.17	104	eP	15	22.00	2.4
LZH	30.69	69	eP	15	23.50	-0.6
MLR	36.38	307	ePc	16	15.00	1.8
BZS	39.40	307	eP	16	39.00	0.7
BJI	40.46	62	eP	16	48.00	0.9
NUR	42.13	330	eP	16	57.00	-3.5X
SUF	42.58	333	eP	17	03.30	-0.9
ZST	42.79	310	eP	17	16.30	10.2X
SOD	44.98	339	iP	17	23.00	-0.6
KEV	46.31	342	eP	17	33.00	-1.0
PGD	46.36	304	P	17	36.00	1.0
HFS	47.07	326	eP	17	38.50	-1.7
	0.4s		2.10nm			4.5mb
NB2	48.49	327	P	17	49.60	-1.7
	0.7s		4.40nm			4.6mb
BCAO	52.97	252	ePc	18	33.00	7.1X
	0.8s		5.00nm			4.5mb
			ic	18	43.00	
MBC	74.22	2	eP	20	45.50	0.7
	0.6s		4.00nm			4.6mb
FRB	B0.75	342	eP	21	16.00	-5.2X
	S.D. = 1.4		on	19	of 23	obs.

& JAN 31, 1990 13h 12m 13.20s
37.172 N 121.948 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK). Felt at San Jose and Santa Cruz.

GCC	0.15	195	iP	12	16.40	0.2
			eS	12	19.00	
ARN	0.38	62	iPd	12	20.80	0.0
PCC	0.48	314	iPc	12	22.20	-0.5
SAO	0.57	135	iPc	12	23.60	-1.1
BKS	0.74	342	iPc	12	27.40	-0.6
			iS	12	38.90	
BRK	0.74	341	iPc	12	27.10	-0.9
			eS	12	38.90	
ZSP	0.81	342	iPc	12	29.10	-0.3
			iS	12	41.50	
PRS	0.96	151	eP	12	30.60	-1.3
LLA	0.98	124	iPc	12	31.40	-0.9
NWRM	1.48	330	e(P)	12	37.00	-3.5
CMB	1.51	55	eP	12	39.70	-1.3
KVN	3.57	57	eP	13	10.70	0.2
TNP	3.86	75	eP	13	20.20	5.4
	13 obs. associated					

& JAN 31, 1990 13h 12m 49.80s
37.173 N 121.952 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK). Felt at San Jose and Sonto Cruz.

GCC	0.15	194	eP	12	52.70	-0.2
			eS	12	55.00	
MHC	0.30	56	ePd	12	55.70	-0.2
ARN	0.38	62	iPc	12	57.20	-0.2
PCC	0.47	314	eP	12	59.00	-0.3
BRK	0.74	341	eP	13	02.90	-1.7
	5 obs. associated					

• JAN 31, 1990 14h 56m 30.52± 0.82s
41.633 N ±12.6km 82.088 E ±14.6km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)
SOUTHERN XINJIANG, CHINA (321)

NDI	13.52	199	eP	59	42.00	-0.3
LZH	17.81	101	eP	00	38.00	0.5
SUF	38.66	322	eP	03	53.30	1.0
	0.5s		1.70nm			4.1mb
NUR	39.21	319	eP	03	52.20	-4.7X
SOD	39.22	330	eP	03	55.00	-1.8
HFS	44.67	319	eP	04	42.40	0.9
	0.4s		2.30nm			4.4mb
NB2	45.76	320	P	04	51.00	0.8
	0.7s		3.60nm			4.4mb
MBC	61.60	6	eP	06	45.50	-1.0
	0.8s		5.00nm			4.7mb
	S.D. = 1.3		on	7	of 8	obs.

JAN 31, 1990 15h 00m 31.86± 0.28s
39.475 N ± 3.0km 26.095 E ± 2.9km
DEPTH = 14.5 ± 2.0 km
4.3mb (2 obs.)
TURKEY (366)
ML 3.7 (ATH), 4.0 (THE).

PRK	0.27	149	iPnc	00	38.20	0.4
EZN	0.39	27	iPn	00	38.80	-1.2
IZM	1.41	139	iPn	00	56.70	-0.3
ALN	1.42	358	ePb	00	57.20	0.1
			eSb	01	12.70	
EDC	1.62	57	iPn	00	58.50	-1.4
BNT	1.66	57	iPn	01	00.40	-0.1
RDO	1.72	346	iPnd	01	01.30	-0.1
OUR	1.84	299	ePb	01	03.00	-0.1
			e	01	26.30	
SMG	1.86	162	ePn	01	02.60	-0.8
KCT	1.90	65	iPn	01	04.40	0.3
DST	1.96	85	iPn	01	04.70	-0.3
PLG	2.23	295	ePn	01	08.50	-0.3
NEO	2.23	267	ePn	01	08.00	-0.9
KDZ	2.23	347	iPd	01	09.00	0.1
			iS	01	35.00	
ATH	2.39	232	ePd	01	15.50	4.4X
APE	2.44	191	ePn	01	10.50	-1.4
CTT	2.44	46	ePn	01	10.80	-1.1
RZN	2.45	335	iPd	01	12.00	-0.1
SOH	2.49	304	ePn	01	12.50	-0.1
SRS	2.52	311	ePn	01	12.60	-0.4
DMK	2.66	28	iPn	01	14.20	-0.8
YLV	2.74	66	iPn	01	14.90	-1.3
ITU	2.76	53	ePn	01	21.50	5.1X
			iSg	01	55.00	
ISK	2.77	54	ePn	01	15.00	-1.5
MMB	2.78	320	ePd	01	16.00	-0.6
PLD	2.83	339	eP	01	19.00	1.7
LIT	2.85	284	ePn	01	17.40	-0.2
GBZT	2.88	62	ePn	01	23.50	5.4X
			iSg	02	02.00	
YER	2.90	143	ePn	01	17.00	-1.4
KHL	2.91	112	ePn	01	20.60	2.0
AGG	2.96	262	ePn	01	19.10	-0.1
KNT	2.97	306	ePn	01	19.40	0.1
JMB	3.01	7	eP	01	23.00	3.1
VAY	3.26	306	iPn	01	23.80	0.3
KKB	3.31	317	eP	01	24.00	-0.2
GPA	3.34	75	ePn	01	24.50	-0.2
PGB	3.40	335	iP	01	25.00	-0.5
			iSg	02	17.00	
KZN	3.43	285	ePn	01	26.10	0.2
VLI	3.71	223	ePn	01	29.00	-0.9
PVL	3.78	352	eP	01	30.00	-0.8
VTS	3.80	326	iP	01	31.00	-0.3
ITM	4.00	236	ePn	01	35.00	1.1
ELL	4.06	131	ePn	01	35.80	1.0
BCK	4.06	118	ePn	01	35.10	0.3
NPS	4.22	185	ePn	01	35.20	-1.9
SKO	4.33	307	iPn	01	38.50	-0.1
			i	02	00.50	
			eSn	02	29.00	
			iSg	02	51.00	
OHR	4.37	294	iPn	01	39.70	0.5
PSN	4.49	20	eP	01	40.00	-0.8
BUC1	4.87	359	eP	02	44.00	57.8X
BBTK	5.16	84	ePn	01	54.00	3.5X
			ePg	02	09.00	
			eSg	03	17.00	
DRA	5.38	346	eP	01	57.00	3.6X
ISR	5.67	3	eP	02	02.00	4.4X
CMP	5.84	353	ePc	02	05.00	5.0X
MLR	6.01	359	ePc	02	02.50	0.0
KAS	6.15	70	ePn	02	06.50	2.0
			iSg	03	49.00	
VRI	6.41	4	iPd	02	07.00	-1.0
BZS	6.97	333	ePc	02	13.50	-2.3
CZI	7.72	271	P	02	27.90	1.5
SGO	8.35	281	P	02	34.50	-0.7
VBY	10.01	310	e(P)	03	03.50	5.3X
VOY	11.10	310	e(P)	03	12.80	-0.3
NB2	23.40	342	P	05	39.90	-1.6
	0.8s		3.30nm			3.9mb
BCAO	35.55	193	ePc	07	32.20	1.8
	0.4s		4.00nm			4.7mb
	S.D. = 1.1		on	54	of 63	obs.

? JAN 31, 1990 15h 25m 29.72± 1.49s
49.670 N ±17.5km 5.996 E ± 9.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)

WLF	0.10	93	iPc	25	32.40	0.0
MEM	0.94	0	iP	25	47.50	-0.1
DOU	1.00	296	iP	25	48.20	-0.5
			iS	26	01.60	
SNF	1.39	308	P	25	55.70	0.6
	S.D. = 0.8		on	4	of 4	obs.

? JAN 31, 1990 15h 57m 43.02± 3.07s
16.093 N ±29.5km 98.208 W ±11.8km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

OXX	1.73	55	iP	58	12.00	0.6
			iS	58	32.00	
ACX	1.76	296	iP	58	11.50	-0.2
			iS	58	35.00	
III	2.57	332	eP	58	27.00	3.6X
			(S)	58	59.00	
IIT	2.91	358	(P)	58	29.00	0.7
PPM	2.98	352	eP	58	30.00	0.4
			(S)	59	08.00	
LVVM	3.99	25	eP	58	42.00	-1.4
	S.D. = 1.2		on	5	of 6	obs.

• JAN 31, 1990 16h 01m 17.32± 1.09s
41.240 N ±11.3km 22.632 E ±12.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 1.8 (SKO).

VAY	0.09	330	iPg	01	20.00	0.1
			iSg	01	22.30	
KNT	0.22	111	iPgc	01	22.50	0.5
			eSg	01	26.50	
THE	0.66	157	ePg	01	30.20	-0.2
			eSg	01	43.00	
SOH	0.69	127	ePg	01	31.20	0.2
SRS	0.74	99	ePg	01	31.20	-0.6
	S.D. = 0.6		on	5	of 5	obs.

JAN 31, 1990 16h 23m 14.01± 1.20s
37.151 N ±10.5km 21.171 E ± 7.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
MD 3.6 (ATH).

ITM	0.60	87	ePg	23	24.70	-1.5
VLS	1.12	336	ePb	23	34.00	-1.1
VLI	1.48	106	ePb	23	41.50	0.8
AGG	2.08	26	eP	23	52.70	3.3X
ATH	2.18	67	ePn	23	51.00	0.2
IGT	2.47	345	eP	23	59.20	4.3X
NEO	2.69	36	ePn	23	58.20	0.0
KEK	2.78	338	ePg	24	08.00	8.7X
VAM	3.00	125	ePn	24	06.00	3.5X
LIT	3.12	19	eP	24	12.40	8.2X
KZN	3.19	8	ePb	24	10.00	4.8X
PLG	3.68	28	ePn	24	12.00	-0.1
OUR	3.86	34	eP	24	14.50	-0.2
OHR	3.97	356	ePn	24	15.80	-0.4
SOH	4.04	24	eP	24	18.40	1.1
KNT	4.22	18	eP	24	20.20	0.3
CZI	4.47	299	P	24	23.50	0.1
SKO	4.82	2	ePn	24	29.00	0.7
	S.D. = 0.8		on	12	of 18	obs.

& JAN 31, 1990 17h 46m 38.05s
64.026 N 148.190 W
DEPTH = 108.7km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.44	229	iP	46	54.54	-0.1
			eS	47	07.33	
WRH	0.45	6	iP	46	54.54	-0.1
CCB	0.65	15	iP	46	55.69	-0.4

			eS	47	08.66	
HDA	0.66	54	iP	46	55.93	-0.3
			eS	47	09.14	
NEA	0.68	325	eP	46	55.73	-0.6
RND	0.69	206	eP	46	56.08	-0.5
			eS	47	09.46	
RDS	0.80	1	iP	46	57.20	-0.3
FBA	0.89	11	iP	46	57.98	-0.4
			eS	47	12.74	
GLM	1.03	19	iP	46	59.22	-0.5
DDM	1.06	102	eP	46	59.66	-0.5
HUR	1.24	212	iP	47	01.71	-0.3
			eS	47	19.93	
PAX	1.62	130	eP	47	06.24	-0.5
			eS	47	28.21	
CUT	1.88	211	eP	47	09.25	-0.6
NCA	2.13	162	eP	47	13.10	-0.1
TOA	2.14	154	eP	47	12.81	-0.5
GHO	2.29	189	eP	47	15.39	0.1
PWA	2.51	199	eP	47	18.28	0.2
KLU	2.75	157	eP	47	21.85	0.4
VZW	3.07	165	eP	47	25.98	0.2
GLI	3.20	170	eP	47	26.19	-1.2
NCG	3.20	217	eP	47	26.85	-0.7
GL8	3.28	140	eP	47	28.24	-0.4
SPU	3.37	214	eP	47	29.91	0.2
NKA	3.59	205	eP	47	35.33	2.7
SLKM	3.66	196	eP	47	33.19	-0.5
RDT	3.98	211	eP	47	38.06	-0.1

26 obs. associated

JAN 31, 1990 19h 12m 25.40± 0.67s
37.953 N ± 7.6km 24.394 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 2.7 (ATH).

ATH	0.54	272	ePg	12	36.50	0.3
APE	1.26	134	ePb	12	48.70	-0.2
NEO	1.63	326	ePb	12	53.70	-0.6
VLI	1.69	224	ePb	12	54.70	-0.5
PRK	1.96	48	ePn	13	01.00	2.1
ITM	2.11	249	ePb	13	02.00	0.8
IZM	2.30	78	ePn	13	03.00	-1.0
PLG	2.53	343	ePn	13	06.00	-1.2
NPS	2.86	160	ePg	13	21.00	9.1X
KZN	3.11	320	ePn	13	15.80	0.3
VAY	3.65	338	ePg	14	04.70	41.7X
			eSg	14	07.00	
OHR	4.20	320	ePn	13	34.00	3.0X

S.D. = 1.2 on 9 of 12 obs.

? JAN 31, 1990 19h 28m 59.44± 7.13s
41.240 N ±40.4km 24.128 E ±36.0km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

SRS	0.42	253	ePg	29	08.20	0.1
			eSg	29	14.60	
SOH	0.72	235	ePg	29	13.50	-0.1
			eSg	29	23.30	
OUR	0.91	187	ePg	29	16.90	0.0
KNT	0.93	266	ePg	29	17.20	0.0
			eSg	29	30.40	

S.D. = 0.2 on 4 of 4 obs.

JAN 31, 1990 19h 40m 25.85± 0.33s
41.411 N ± 2.6km 22.715 E ± 3.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (SKO), 3.0 (THE). Felt (III) in the Valandovo area.

VAY	0.14	231	iPg	40	29.40	0.2
			iSg	40	31.60	
KNT	0.28	151	iPgc	40	31.80	0.0
			eSg	40	49.20	
KKB	0.53	31	iPgd	40	36.00	-0.6
SOH	0.76	140	ePg	40	40.70	-0.1
			eSg	40	51.40	
MMB	0.78	76	ePgd	40	41.00	-0.1
THE	0.80	166	ePg	40	41.10	-0.3
SKO	1.11	301	ePg	40	47.00	0.4
			iSg	41	02.40	
PLG	1.17	152	ePn	40	47.50	-0.3
VTS	1.24	17	iPg	40	49.00	0.1
KZN	1.32	213	ePn	40	50.50	0.3
LIT	1.32	188	ePb	40	49.80	-0.4
OUR	1.44	138	ePb	40	52.40	0.4
RZN	1.53	79	iPd	40	54.00	0.6
PGB	1.57	43	eP	40	55.00	1.1
KDZ	2.04	82	eP	41	00.00	-0.7
			iS	41	28.00	
NEO	2.14	169	ePn	41	01.80	-0.3
RDO	2.14	96	ePn	41	01.80	-0.3
AGG	2.40	187	ePn	41	06.20	0.3
ALN	2.57	100	ePn	41	08.40	0.3
BZS	4.28	350	ePc	41	31.00	-1.4
MLR	4.71	29	ePd	41	41.00	2.3X
VRI	5.32	32	ePd	41	48.00	0.7

S.D. = 0.6 on 21 of 22 obs.

JAN 31, 1990 19h 58m 31.01± 0.28s
39.101 N ± 2.8km 25.929 E ± 2.7km
DEPTH = 27.7 ± 3.0 km
3.7mb (1 obs.)
AEGEAN SEA (365)
ML 3.8 (ATH), 3.9 (THE).

PRK	0.30	61	ePb	58	36.00	-2.3
EZN	0.79	23	iPn	58	44.50	-1.5
IZM	1.26	124	iPn	58	52.80	-0.1
SMG	1.56	153	ePb	58	56.80	-0.4
ALN	1.80	3	ePn	59	00.70	0.1
			eSn	59	25.70	
OUR	1.94	310	ePn	59	02.30	-0.4
EDC	1.94	50	iPn	59	03.00	0.3
BNT	1.98	50	iPn	59	03.20	-0.1
APE	2.05	189	ePn	59	02.70	-1.7
RDO	2.07	352	ePn	59	03.60	-0.9
ATH	2.07	238	ePb	59	07.80	3.3X
NEO	2.11	276	ePn	59	07.00	1.8
DST	2.15	76	iPn	59	05.80	0.0
KCT	2.20	58	iPn	59	07.20	0.8
PLG	2.30	304	ePn	59	10.00	2.2
KDZ	2.58	351	iPc	59	11.00	-0.8
			iS	59	41.00	
SOH	2.62	312	ePn	59	12.10	-0.4
SRS	2.70	319	ePn	59	12.90	-0.6
YER	2.70	136	ePn	59	13.20	-0.4
RZN	2.75	341	iPc	59	14.00	-0.3
THE	2.75	305	ePn	59	14.10	0.0
AGG	2.80	270	ePn	59	15.20	0.2
CTT	2.80	42	ePn	59	15.00	0.1
LIT	2.84	292	ePn	59	15.50	0.0
			eSn	59	50.90	
KHL	2.92	104	ePn	59	17.20	0.6
DIM	2.96	354	iP	59	17.00	-0.2
MMB	3.00	327	ePc	59	17.00	-0.8
YLV	3.03	60	iPn	59	18.20	-0.1
DMK	3.06	27	iPn	59	18.30	-0.2
ISK	3.10	50	ePn	59	19.00	-0.2
ITU	3.10	49	ePn	59	27.00	7.8X
			iSg	59	56.00	
KNT	3.10	313	ePn	59	19.20	-0.1
PLD	3.14	343	eP	59	20.00	0.2
GBZT	3.19	57	ePn	59	27.50	7.1X
			iSg	00	12.00	
VLI	3.35	226	ePn	59	21.30	-1.5
VAY	3.40	312	iPn	59	23.40	0.0
JMB	3.40	8	eP	59	26.00	2.6X
KZN	3.43	292	ePn	59	25.00	1.1
KKB	3.51	323	iPg	59	24.00	-1.1
GPA	3.58	69	ePn	59	27.20	1.1
KAP	3.68	164	ePn	59	26.00	-1.4
ITM	3.69	240	ePn	59	27.00	-0.6
PGB	3.70	339	iP	59	27.00	-0.7
NPS	3.84	184	ePn	59	28.20	-1.5
ELL	3.93	125	ePn	59	32.30	1.3
VAM	3.94	201	ePn	59	30.00	-1.0
BCK	4.02	113	iPn	59	33.20	0.9
PVL	4.14	354	iPd	59	32.00	-1.9
VLS	4.28	259	ePn	59	36.50	0.5
OHR	4.42	299	ePn	59	39.50	1.5
SKO	4.46	311	ePn	59	38.50	-0.1
PSN	4.88	20	eP	59	43.00	-1.4
BBTK	5.34	80	eP	00	05.00	13.9X
			eS	01	03.00	
CMP	6.20	354	ePd	00	07.00	3.9X
MLR	6.39	0	ePc	00	05.00	-0.8
KAS	6.41	67	ePn	00	09.00	2.9X
			lSg	01	58.50	
VRI	6.79	5	ePd	00	11.00	-0.3
BZS	7.25	335	ePc	00	15.50	-2.2
TDS	7.45	277	P	00	25.50	4.9X
CZI	7.61	274	P	00	27.60	4.7X
MGR	8.07	281	P	00	30.00	0.6
SGO	8.30	283	P	00	33.00	0.5
KBA	12.16	315	eP	01	25.00	-0.5
			i	01	48.50	
SLL	22.81	344	eP	03	30.70	-1.8
	0.4s		1.20nm			3.7mb
BCAO	35.15	193	ePc	05	25.00	0.5
	0.4s		3.00nm			4.6mb X
			ic	05	35.00	

S.D. = 1.0 on 56 of 65 obs.

JAN 31, 1990 20h 03m 09.47± 0.90s
41.347 N ± 6.4km 22.731 E ± 8.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 1.8 (SKO).

VAY	0.12	258	iPg	03	13.30	0.8
			iSg	03	15.60	
KNT	0.22	146	ePg	03	14.90	0.6
KKB	0.58	27	iP	03	20.00	-1.3
SRS	0.69	109	ePg	03	23.80	0.7
SOH	0.71	138	ePg	03	24.10	0.7
			eSg	03	35.80	
THE	0.74	166	ePg	03	21.70	-2.2
			eSg	03	36.20	
MM8	0.79	72	ePgc	03	25.00	0.2
			Sg	03	36.00	
VTS	1.29	16	iPg	03	34.00	0.5
			lSg	03	50.00	
KDZ	2.04	81	eP	03	47.00	2.7X
			iS	04	13.00	

S.D. = 1.3 on 8 of 9 obs.

JAN 31, 1990 20h 22m 13.69± 0.29s
42.172 N ± 3.1km 15.664 E ± 3.2km
DEPTH = 31.9 ± 3.5 km
ADRIATIC SEA (382)
ML 4.0 (LDG), 3.5 (KBA).

DUI	1.03	241	P	22	30.50	-1.6
			eSg	22	47.60	
HVAR	1.16	30	iPgc	22	34.60	0.9
			iSg	22	53.80	
BAI	1.38	139	P	22	37.00	0.1
			eSg	22	57.00	
SDI	1.46	252	P	22	37.70	-0.4
			eSn	22	58.60	
SGO	1.63	190	P	22	39.90	-0.7
			eSn	23	01.50	
AZI	1.67	264	P	22	42.00	0.9
			eSn	23	04.40	
AQU	1.69	277	P	22	42.50	1.1
			eSn	23	04.40	
BRT	1.73	138	Pd	22	41.20	-0.9
			eSn	23	03.10	
MGR	2.03	182	P	22	45.30	-1.1
MNS	2.22	276	P	22	49.60	0.5
RDP	2.24	260	P	22	50.70	1.4
RMP	2.24	262	P	22	50.00	0.7
MMN	2.29	174	P	22	50.20	0.2
ASS	2.39	293	P	22	53.60	2.1
ARV	2.40	304	P	22	51.30	-0.3
			eSn	23	22.50	
CSI	2.44	169	P	22	54.30	2.1
LCI	2.52	136	P	22	53.60	0.3
			eSn	23	23.10	
TDS	2.56	168	P	22	54.40	0.5
ROI	2.69	165	P	22	57.30	1.6
RSM	2.94	308	P	22	59.30	0.2
CZI	2.97	173	P	22	58.10	-1.6
CRE	3.09	299	P	23	01.80	0.3
SFI	3.30	303	P	23	04.50	0.3
RIY	3.30	344	ePn	23	03.90	-0.4
			iSn	23	45.50	
VBY	3.34	355	ePnd	23	07.00	2.0
			iPg	23	15.80	
			iSn	23	43.80	
			iSg	23	55.60	
PGD	3.35	302	P	23	06.00	0.7
MAO	3.36	276	P	23	05.00	-0.2
ZAG	3.65	4	iPn	23	09.00	-0.3
CEY	3.68	346	e(Pn)	23	10.00	0.3
			e	23	15.50	
			eSn	23	54.00	

31d 20h

PTJ	3.73	3	iPn	23	10.70	0.2
			Sn	23	53.10	
TRI	3.79	339	P	23	11.50	0.2
LJU	3.95	349	ePn	23	14.40	0.8
			ePb	23	23.00	
			eSn	24	00.00	
			e	24	17.00	
ATN	4.01	182	P	23	13.80	-0.7
VOY	4.06	342	ePn	23	14.90	-0.4
			e(Sn)	23	55.50	
			eSg	24	28.50	
SOI	4.11	176	P	23	16.50	0.7
MME	4.15	301	P	23	17.90	1.2
BDI	4.16	299	P	23	17.00	0.3
SKO	4.30	91	ePn	23	19.00	0.4
			i	23	33.00	
BEO	4.38	51	ePn	23	36.00	16.4X
			eSg	24	40.50	
CTI	4.83	325	P	23	24.20	-2.0
FVI	4.88	336	P	23	25.60	-1.1
PGF	4.95	277	Pn	23	27.00	-0.9
SAL	5.06	315	P	23	24.50	-4.8X
KBA	5.18	342	ePn	23	29.00	-2.1
			iPgc	23	41.10	
			iSn	24	10.10	
			iSg	24	29.30	
BOB	5.21	302	P	23	31.30	-0.3
VAY	5.24	97	ePn	23	30.70	-1.1
BZS	5.51	49	ePc	23	38.00	2.4
KNT	5.51	98	eP	23	34.80	-0.9
SOP	5.55	6	eP	23	31.00	-5.1X
LIT	5.55	110	eP	23	35.00	-1.3
CKI	5.84	295	P	23	39.20	-1.1
BHG	5.89	341	iPc	23	41.00	0.0
SRO	5.95	18	eP	24	05.40	23.6X
			i	25	52.00	
AGG	5.97	120	eP	23	42.40	0.2
SRS	6.03	97	eP	23	41.90	-1.2
VKA	6.11	4	iP	24	14.20	30.1X
			i	25	22.70	
VAI	6.19	309	Pc	23	42.80	-2.4
SBF	6.26	288	Pn	23	43.50	-2.9X
ORO	6.54	304	P	23	47.50	-2.7X
KHC	7.11	349	P	23	56.50	-1.7
			e	24	11.90	
PRU	7.86	355	eP	24	08.00	-0.6
			e	25	50.00	
GRF	8.13	339	e(P)	24	13.00	0.6
			e(S)	25	25.00	
MLR	8.14	62	ePc	24	14.50	1.8
HAU	8.80	315	Pn	24	17.00	-4.6X
			Sn	25	52.00	
LBF	9.62	304	Pn	24	28.00	-5.1X
			Sn	26	12.00	

S.D. = 1.2 on 56 of 65 obs.

JAN 31, 1990 20h 29m 54.02± 0.87s
42.119 N ± 8.6km 15.545 E ± 7.9km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)

DUI	0.93	241	P	30	12.20	0.3
			eSg	30	26.50	
HVAR	1.25	32	iPg	30	17.30	0.0
			iSg	30	34.90	
SDI	1.36	253	P	30	18.60	-0.4
			eSg	30	36.10	
BAI	1.41	135	P	30	21.00	1.4
SGO	1.57	187	P	30	22.50	0.6
			eSg	30	42.50	
BRT	1.76	134	P	30	23.20	-1.5
			eSn	30	47.20	
MGR	1.98	180	P	30	27.50	-0.4
			eSn	30	53.00	

S.D. = 1.1 on 7 of 7 obs.

& JAN 31, 1990 20h 30m 41.29s
64.026 N 148.147 W
DEPTH = 103.1km
CENTRAL ALASKA (1)
<AGS-P>.

WRH	0.45	3	iP	30	57.27	0.0
MCK	0.46	230	eP	30	57.48	0.1
			eS	31	09.55	
CCB	0.64	13	eP	30	58.43	-0.3
			eS	31	11.42	
HDA	0.65	53	eP	30	58.67	-0.1
			eS	31	11.91	
NEA	0.69	324	eP	30	58.74	-0.4
RND	0.70	207	eP	30	58.70	-0.6
RDS	0.80	0	eP	30	59.93	-0.3
			eS	31	14.46	
FBA	0.89	10	eP	31	00.72	-0.3
GLM	1.02	18	eP	31	01.97	-0.5
			eS	31	17.75	
DDM	1.04	102	eP	31	02.38	-0.3
DMW	1.06	87	eP	31	02.36	-0.6
HUR	1.25	213	eP	31	04.48	-0.6
PAX	1.60	130	eP	31	09.15	-0.3
			eS	31	30.86	
CUT	1.89	212	eP	31	12.17	-0.9
NCA	2.13	163	eP	31	15.96	-0.2
TOA	2.13	154	eP	31	17.35	1.1
GHO	2.29	189	eP	31	18.00	-0.4
PLRM	2.48	191	eP	31	20.68	-0.2
PWA	2.51	199	eP	31	21.05	-0.2
SKT	2.57	218	eP	31	20.59	-1.5
KLU	2.74	157	eP	31	24.79	0.4
SUA	2.84	206	eP	31	25.77	0.0
PMS	2.87	194	eP	31	25.62	-0.5
GLB	3.27	140	eP	31	31.26	-0.4
DWY	3.83	86	P	31	37.00	-2.2

25 obs. associated

? JAN 31, 1990 20h 32m 14.31± 5.70s
41.788 N ±37.3km 23.740 E ±21.1km
DEPTH = 5.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

SRS	0.68	189	ePg	32	28.00	0.1
			eSg	32	37.00	
KNT	0.89	226	ePg	32	31.90	0.1
			eSg	32	43.20	
SOH	1.01	197	ePg	32	33.70	-0.2
OUR	1.46	173	ePb	32	41.40	0.0
OHR	2.31	254	iPn	33	14.30	20.6X

S.D. = 0.2 on 4 of 5 obs.

? JAN 31, 1990 20h 37m 36.86± 6.47s
22.455 N ±49.6km 121.542 E ±17.0km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWG	0.57	310	iPd	37	48.80	0.4
			eS	37	54.60	
TWF1	0.92	346	ePc	37	54.30	-0.2
TWK	1.26	310	iPd	38	00.20	-0.2
			eS	38	12.80	
TWC	2.16	7	eP	38	14.00	0.6
TWZ	2.63	1	eP	38	20.00	-0.1
BJI	18.11	347	eP	41	49.50	-0.6

S.D. = 0.6 on 6 of 6 obs.

JAN 31, 1990 21h 00m 46.12± 0.60s
16.014 N ± 9.4km 92.608 W ± 6.3km
DEPTH = 191.6 ± 6.1 km
4.7mb (8 obs.)
CHIAPAS, MEXICO (61)

SCX	0.72	358	iP	01	13.50	0.0
			iS	01	32.00	
TPX	1.15	163	iP	01	16.50	0.1
PSM	2.43	287	iP	01	28.50	-0.7
			iS	01	58.00	
OXX	4.09	286	iP	01	49.00	-0.5
			iS	02	36.00	
LVVM	5.20	316	eP	02	01.00	-2.6X
IIT	6.21	300	iP	02	18.00	1.0
PPM	6.49	299	iP	02	22.00	1.0
			(S)	03	12.00	
III	6.96	291	iP	02	27.00	0.1
ACX	7.01	278	(P)	02	26.00	-1.3
PWLA	19.32	11	P	05	02.00	3.2X
OLY	19.43	3	P	04	58.20	-1.8
SIO	19.93	351	e(P)	05	03.30	-1.7
TUL	20.02	352	eP	05	05.80	-0.1
	0.7s		34.40nm			5.0mb
			e	05	19.40	
PRM	20.22	25	P	05	08.00	0.1
RSCP	20.49	17	P	05	11.00	0.4
JSC	20.86	27	P	05	14.00	-0.2
GBTN	20.96	19	P	05	16.50	1.3
TKL	21.10	20	P	05	17.00	0.4
LHS	21.23	28	P	05	18.30	0.5
FVM	21.97	5	P	05	26.50	1.4
ALQ	22.57	329	iPd	05	32.00	0.8
	1.0s		20.00nm			4.6mb
ANMO	22.57	329	P	05	32.00	0.8
	0.8s		14.46nm			4.6mb
GOL	26.10	337	P	06	03.00	-1.2
	0.9s		20.83nm			4.8mb
GLA	26.30	314	P	06	06.40	0.6
PLM	27.88	313	P	06	21.20	0.9
MSU	28.25	326	P	06	23.00	-0.6
DAU	29.22	330	P	06	32.20	-0.1
KVN	32.01	321	P	06	57.00	0.4
CMB	32.85	317	P	07	04.20	0.5
	0.7s		5.76nm			4.3mb
ARN	33.24	315	P	07	07.80	0.7
RSON	34.77	359	P	07	16.80	-3.1X
	0.8s		14.02nm			4.7mb
SES	37.38	341	eP	07	41.00	-0.9
LON	39.08	328	P	07	57.00	1.0
FFC	39.31	351	iPd	07	56.20	-1.6
	0.4s		23.00nm			5.2mb
ZOBO	40.16	142	Pc	08	05.90	0.1
FRB	50.50	14	eP	09	23.00	-3.3X
MBC	61.85	353	ePd	10	45.00	-1.6
	0.5s		9.00nm			4.9mb

S.D. = 1.0 on 33 of 37 obs.

JAN 31, 1990 21h 48m 57.00± 0.60s
42.162 N ± 6.7km 15.535 E ± 5.5km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)

DUI	0.95	238	P	49	15.60	0.5
			eSn	49	27.50	
HVAR	1.22	33	ePg	49	19.20	-0.5
			i(Sg)	49	37.50	
			i	49	39.50	
SDI	1.36	251	P	49	21.00	-1.1
			eSn	49	41.50	
BAI	1.44	136	P	49	23.00	-0.1
AQU	1.59	278	P	49	29.70	4.3X
			eSn	49	50.20	
SGO	1.61	186	P	49	25.70	0.2
			eSn	49	41.90	
BRT	1.79	135	P	49	27.50	-0.7
			eSn	49	48.60	
MGR	2.02	180	P	49	31.00	-0.5
MNS	2.13	277	P	49	34.50	1.4
			eSn	50	01.80	
ASS	2.31	294	P	49	39.10	3.4X
			eSn	50	06.60	
ARV	2.33	306	P	49	35.40	-0.6
			eSn	50	09.60	
VBY	3.35	357	eP	50	29.20	38.8X
			e(Sn)	50	44.00	
CEY	3.66	348	eP	50	38.00	43.1X
PTJ	3.75	5	eP	50	03.00	6.8X
TRI	3.77	341	eP	50	38.70	42.3X
VOY	4.05	344	e(Pn)	50	05.50	5.2X
			eSn	50	56.60	
OHR	4.08	103	ePn	50	02.20	1.4

S.D. = 1.0 on 10 of 17 obs.

% JAN 31, 1990 22h 15m 01.33± 1.69s
10.360 N ±16.4km 61.170 W ±12.3km
DEPTH = 33.0km (normal)
TRINIDAD (98)
MD 2.6 (TRN).

TBH	0.16	39	eP	15	07.51	-0.1
			eS	15	13.68	
TPP	0.28	261	eP	15	08.90	0.1
			eS	15	16.33	
TRN	0.37	321	eP	15	09.99	0.0
			eS	15	18.56	
TCE	0.66	300	eP	15	14.10	-0.2
			eS	15	24.28	
GRW	1.85	345	eP	15	31.51	0.1
			eS	15	46.61	

S.D. = 0.2 on 5 of 5 obs.

& JAN 31, 1990 22h 47m 12.80s
59.768 N 152.027 W
DEPTH = 64.2km
SOUTHERN ALASKA (2)
<AGS-P>.

XLV	0.35	154	iP	47	22.95	-1.0
			eS	47	31.50	
NNL	0.46	53	iP	47	25.24	0.4
CNPM	0.47	121	iP	47	24.47	-0.5
			eS	47	33.86	
BRLK	0.58	90	eP	47	25.70	-0.5
			eS	47	35.90	
RED	0.75	331	iP	47	27.65	-0.6
			eS	47	39.50	
RDT	0.83	347	iP	47	28.47	-0.7
NKA	1.05	22	eP	47	33.22	1.3
PDB	1.10	272	iP	47	31.57	-1.0
			eS	47	46.22	
SLKM	1.17	50	eP	47	32.56	-1.0
SEW	1.34	74	eP	47	35.36	-0.4
SPU	1.42	359	eP	47	36.47	-0.5
			eS	47	55.56	
CKL	1.44	354	eP	47	37.07	-0.3
			iS	47	56.52	
CRP	1.51	358	eP	47	38.19	-0.1
BGL	1.51	353	eP	47	38.37	0.1
NCG	1.64	358	eP	47	40.18	0.1
SUA	1.82	20	eP	47	42.38	-0.1
PMS	1.92	38	eP	47	43.56	-0.3
SKT	2.23	6	eP	47	48.29	0.1
KNK	2.41	45	eP	47	49.47	-1.3
GHO	2.52	36	eP	47	51.16	-1.1
CUT	2.78	17	eP	47	55.42	-0.4
KLU	3.47	57	eP	48	03.32	-2.3

22 obs. associated

JAN 31, 1990 22h 58m 18.63± 0.30s
42.154 N ± 3.3km 15.609 E ± 3.3km
DEPTH = 24.3 ± 3.4 km
ADRIATIC SEA (382)
MD 4.1 (TRI). ML 4.1 (LDG).

DUI	0.99	241	P	58	36.20	-0.8
			eSn	58	51.20	
HVAR	1.20	31	iPgc	58	40.50	0.7
			iSg	58	59.50	
BAI	1.40	137	P	58	42.50	-0.2
			eSg	59	03.50	
SDI	1.41	252	P	58	42.70	-0.3
			eSn	59	02.30	
SGO	1.61	188	P	58	45.30	-0.5
			eSn	59	06.60	
AZI	1.63	265	P	58	47.10	1.1
			eSn	59	06.50	
AQU	1.65	278	P	58	47.20	0.8
			eSn	59	09.10	
BRT	1.75	136	P	58	47.00	-0.8
			eSn	59	10.00	
MGR	2.02	181	P	58	51.00	-0.7
			eSn	59	17.00	
MNS	2.19	277	P	58	54.80	0.6
RDP	2.19	261	P	58	55.40	1.1
ASS	2.36	294	P	58	57.70	1.0
			eSn	59	24.40	
ARV	2.38	305	P	58	57.00	0.1
			eSn	59	27.70	
CSI	2.43	168	P	58	59.50	-1.9
LCI	2.54	135	P	58	59.70	0.6
			eSn	59	31.00	
TDS	2.55	167	P	59	00.70	1.3
ROI	2.68	164	P	59	02.10	0.9
RSM	2.91	309	P	59	06.00	1.6
CZI	2.96	172	P	59	04.40	-0.6
CRE	3.06	300	P	59	07.50	0.8
SFI	3.27	304	P	59	10.80	1.3
RIY	3.31	345	iPn	59	09.80	-0.2
			iSn	59	50.10	
MAO	3.32	276	P	59	09.90	-0.3
PGD	3.33	302	P	59	11.30	0.8
VBY	3.36	356	ePnc	59	12.50	1.8
			iSn	59	51.20	
			iSg	00	04.70	
CEY	3.68	347	ePn	59	16.10	0.7
			eSn	00	00.00	
PTJ	3.75	4	iPn	59	16.80	0.4
			Sn	59	59.40	
TRI	3.79	340	ePn	59	16.00	-0.9
			iPg	59	26.50	
			iSn	59	59.30	
			iSg	00	18.30	
LJU	3.96	349	ePn	59	20.50	1.2
			e	59	29.00	
			eSn	00	06.50	
OHR	4.03	103	iPn	59	20.70	0.4
VOY	4.07	343	ePn	59	20.60	-0.3
			eSn	00	10.00	
SOI	4.09	175	P	59	22.10	0.9
MME	4.13	301	P	59	22.20	0.2
BDI	4.14	299	P	59	21.50	-0.4
SKO	4.34	90	ePn	59	24.70	-0.1
			i	59	37.50	
BEO	4.42	51	ePn	59	42.50	16.7X
IGT	4.44	125	eP	59	25.50	-0.6
CTI	4.82	325	P	59	29.90	-1.7
FVI	4.88	336	P	59	30.80	-1.4
PGF	4.91	277	Pn	59	33.80	0.9
SAL	5.04	315	P	59	33.00	-1.6
KBA	5.18	343	ePn	59	34.50	-2.3
			ic	59	34.80	
			iSn	00	16.60	
			iSg	00	33.50	
			i	00	38.50	
BOB	5.19	302	Pc	59	36.80	0.0
VAY	5.27	97	ePn	59	36.80	-1.1
KNT	5.55	98	eP	59	40.80	-1.0
8ZS	5.55	49	eP	59	46.00	4.2X
SOP	5.57	7	eP	59	44.00	2.0
LIT	5.59	109	eP	59	40.70	-1.7
CKI	5.81	295	P	59	43.50	-2.0
BHG	5.89	342	iPnd	59	47.20	0.6
AGG	6.00	119	eP	59	47.60	-0.5
VKA	6.13	4	eP	00	03.00	13.0X
			i	00	46.30	
			i	01	15.50	
ZST	6.13	9	e(P)	59	53.40	3.4X
VAI	6.17	309	P	59	48.20	-2.3
SBF	6.23	289	Pn	59	51.00	-0.5
ORO	6.51	305	P	59	52.50	-3.0X
KHC	7.12	349	P	00	03.50	-0.4
			e	02	21.70	
LPG	7.22	301	Pn	00	02.20	-3.4X
LPL	7.24	301	Pn	00	02.20	-3.7X
			Sn	01	22.40	
PRU	7.87	355	P	00	30.00	15.7X
			S	01	56.00	
MLR	8.18	62	ePc	00	21.00	2.1
BSF	8.44	315	Pn	00	18.00	-4.4X
HAU	8.78	315	Pn	00	23.20	-3.8X
			Sn	01	58.00	
SMF	9.54	302	Pn	00	33.20	-4.4X
			Sn	02	16.00	
LBF	9.60	304	Pn	00	34.00	-4.4X
			Sn	02	18.00	
LOR	9.80	305	Pn	00	36.60	-4.5X
			Sn	02	22.60	
BGF	10.14	300	Pn	00	42.00	-3.8X

S.D. = 1.1 on 53 of 67 obs.

? JAN 31, 1990 23h 27m 43.86± 8.53s
45.041 N ±13.9km 5.572 E ±60.1km
DEPTH = 10.0km (geophysicist)
FRANCE (538)

RRL	0.87	98	P	28	00.83	0.1
			S	28	10.82	
LPG	0.95	61	Pg	28	02.20	0.0
			Sg	28	15.50	
LSD	1.19	69	P	28	06.15	-0.1
			S	28	21.43	
RSP	1.20	84	P	28	06.32	0.0
PZZ	1.21	116	P	28	06.49	-0.1
			S	28	21.65	
ORX	1.80	70	P	28	15.32	0.1

S.D. = 0.1 on 6 of 6 obs.

STATION DATA REPORT FOR JANUARY, 1990

1260 stations reported 58053 reading arrival groups

X = data received for this 6-hour time period

DATE	1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31
AAI	XX XXX X XXX X XX XXX XXXX XXXXX XXXXXXXX XXXXXXX XXXX X XX X X XXX XX X XXXX
AAPN	X X X XXX XX X X XX XX X X X X X XX X X X X X
ABH	XX X X X XXX X XX XX XXXXX X XX X XX XXX X X X XXX XX XX X X X X X X X X X
ABL	X X X X XX X X X X XX X X XXXXX X X X X X X X X
ACHM	X XX X X X X XX XX X X XX X X X X X
ACX	X X XX X XX X XX X X X XX X X X X X XXX XXXX XX X X XXX X X X X XXXXX X X XXXX
ADE	XX XXXXX X X X X XX XX X XX XXX X X XXXXX X XX X X XX X X XXX X X X X X X
ADK	XX X X X XX X XXX X X XX X X X X X X X X X X X X XX
AFC	X X X XX X X X X X X X XXX XXXX X X
AFI	XX XX XX X X X XX XXX XXXXX XXX X XX XXX XXX X X X X XX XX X XX XXX X X X X X
AFR	X X X XX X X X X X X
AGG	X X X XX XX XX XXX X X XX XX XXX XX X XX XXXX X X X X XX X X XX XXX X X XXXX
AGMR	X X XX X X X X X
AGO	X X X XX X XX XXXX X X X X X X X XX X X X X
AIA	XXXXXX X XXXXX XXXXXXXXXXXX X XX XXX XX XXXXX X XXXXXXXXXXX X XXX XX XXXXX XX XXXXXXX XX XXXXXX XXX XXXXXX XXXXXXXXX
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ANP	X X X X XXXX XX X XX XXXXXXXX X X X XX X X X X XX X X XX X XXXX X X X X
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ARG	XXXXXXXXX X XX XXXXXX X XX X XXX XXX X X
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ARV	X X X XX X X X X X XX XXXXX XXXXX XXXXXXXX X X X XXX XX XXX X X XXX X X XX X XX X XXXX
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ASK	X X XX X X X X X X X X X X X
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ASW	X X X X X X X X X X X X
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ATEJ	X XX XXX XX X X X X XX XX X X XXX X X XX X X X X X
ATH	X X XXXX X X X X X XXX XXXXX XX XX XX X X X X XX X XXXXX XX XX XXX XX XXXX
ATN	X X X X XXX X XX X XX XX X X XXX X X X XX X XXXX XX XXXX X X
AUE	X X X X X X XXX X X X
AUL	X X X X XX X XX X X XX X X X X X XXX X
AURF	X X X XX X X XXX X XX X XXX X X XX
AUTN	X X X XX X X XXX X X XX X XXX X X X
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AVF	X X X XX X XXXXX X XXXX XX XX XXXXX X XXXX XXXXXX X XXXXX XX XXXXX XX XXX XX XXX XX X X XX X X
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BDI	XX X X X X X X XXXX X XX XX XXXXXXX XXXXX X X X X XXXX X XX X XX XX X X X XXXX
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BERA	X XX XX X XX XX XX X XX X X
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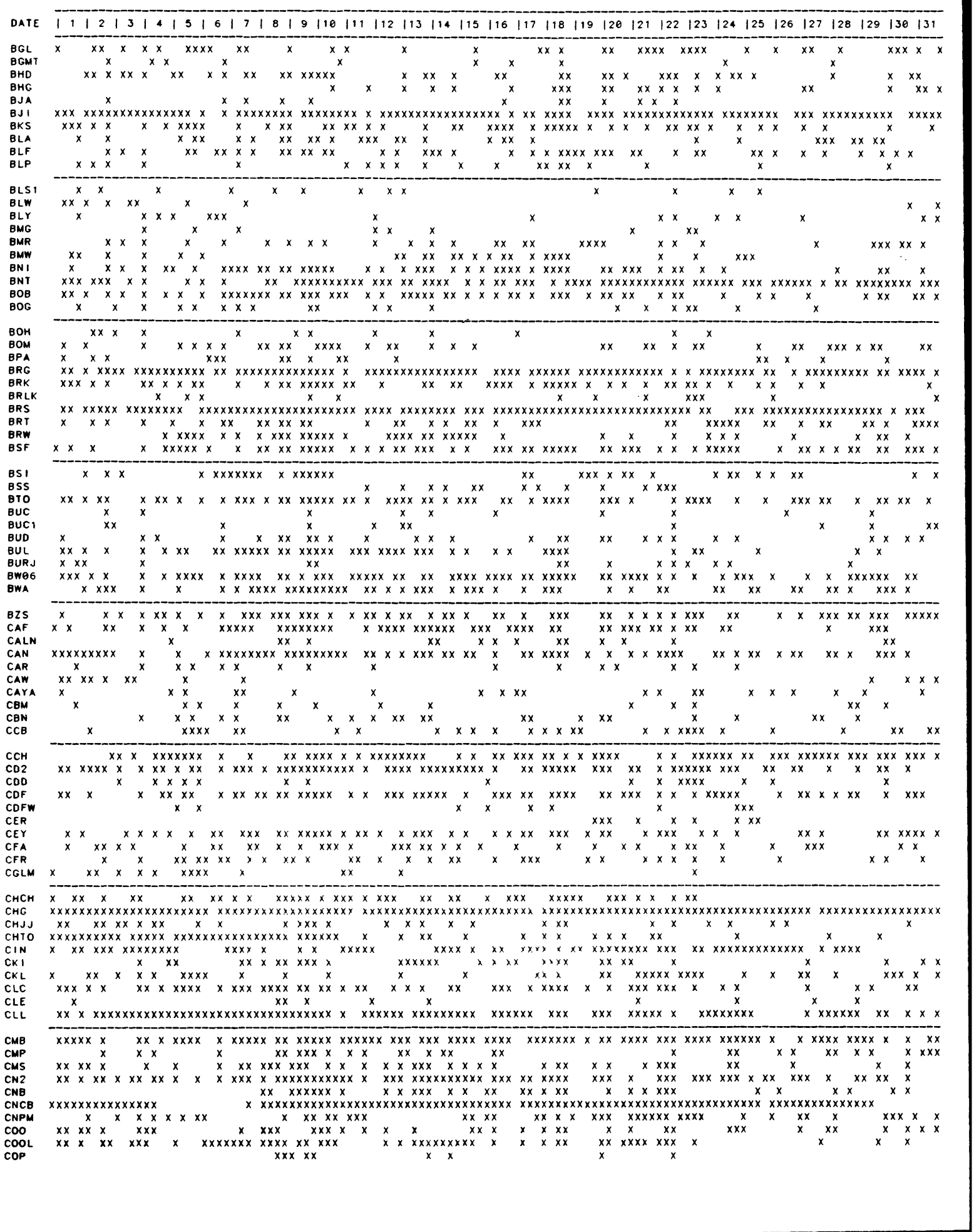
BFS	X XXXX X X X X XX XX XX X X X XXX X X X XX XXX X X X X X XX XX X XX X X
BGF	X X X XX XX X XXX XX XXXXXXX X XXXX XXXXXXXXXXXXXXXXX XXXXX XX XXX X X X XX X X X XX XX X X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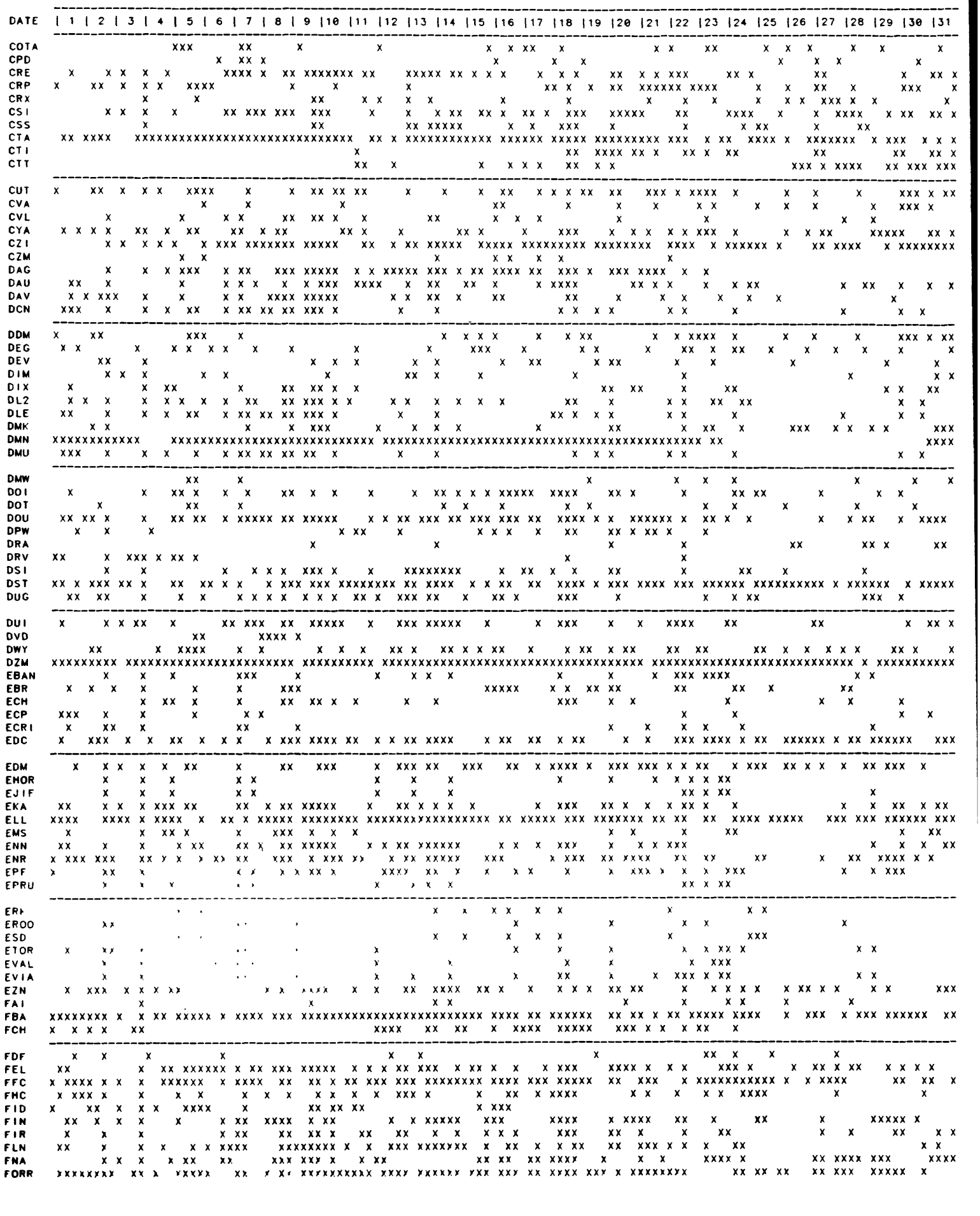
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DDM
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DIX
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DLE
DMK
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DMU
DMW
DOI
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DSI
DST
DUG
DUI
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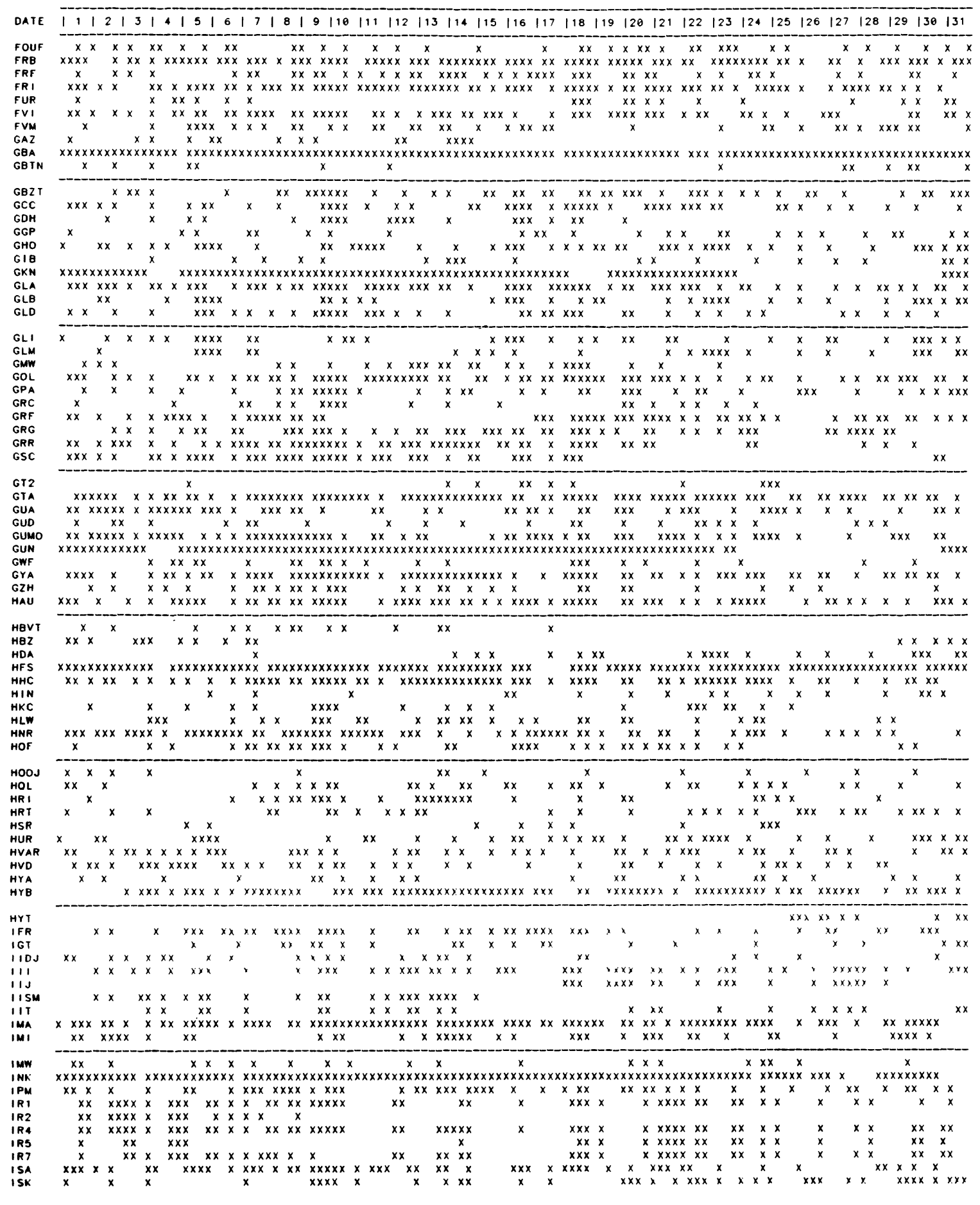
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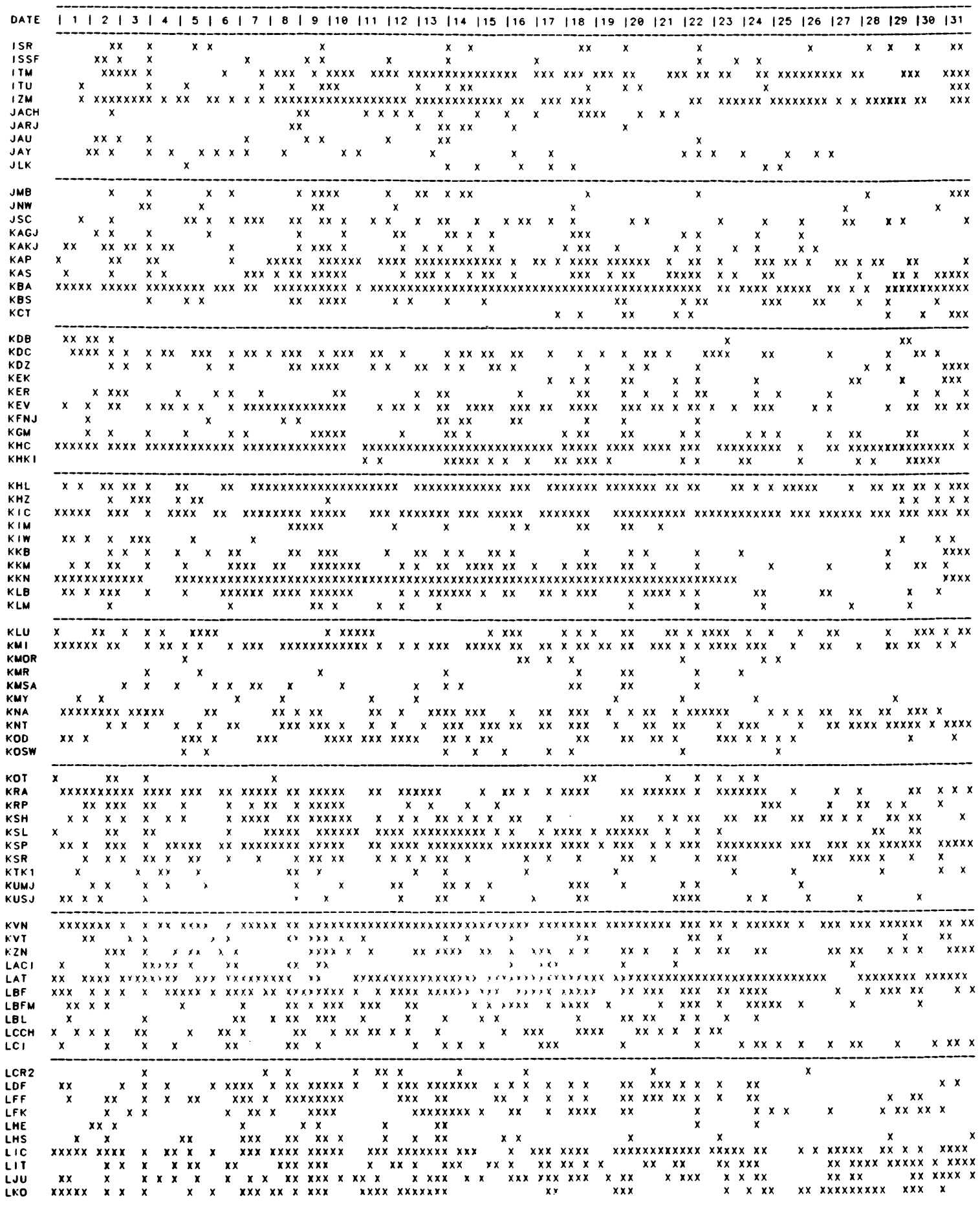
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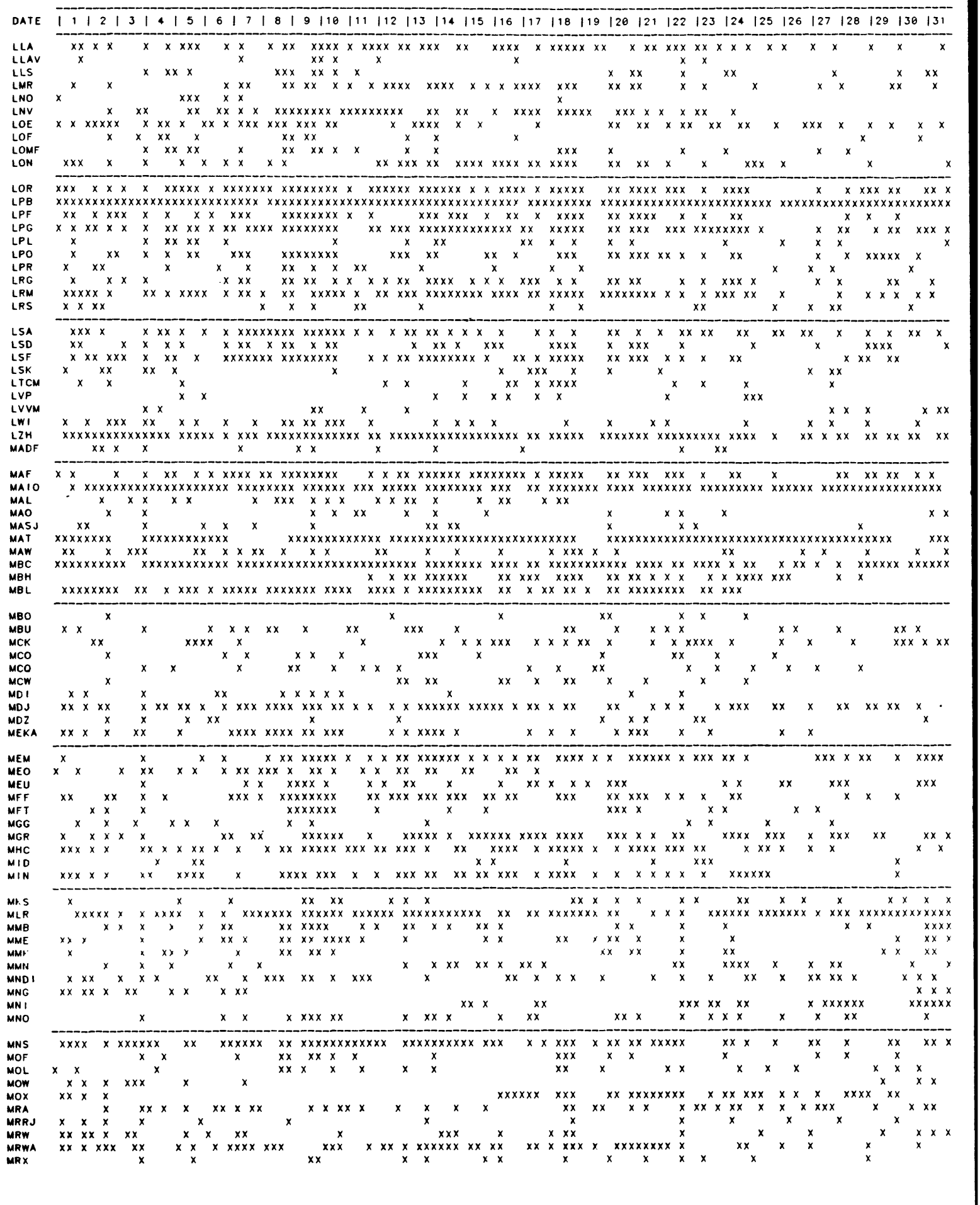
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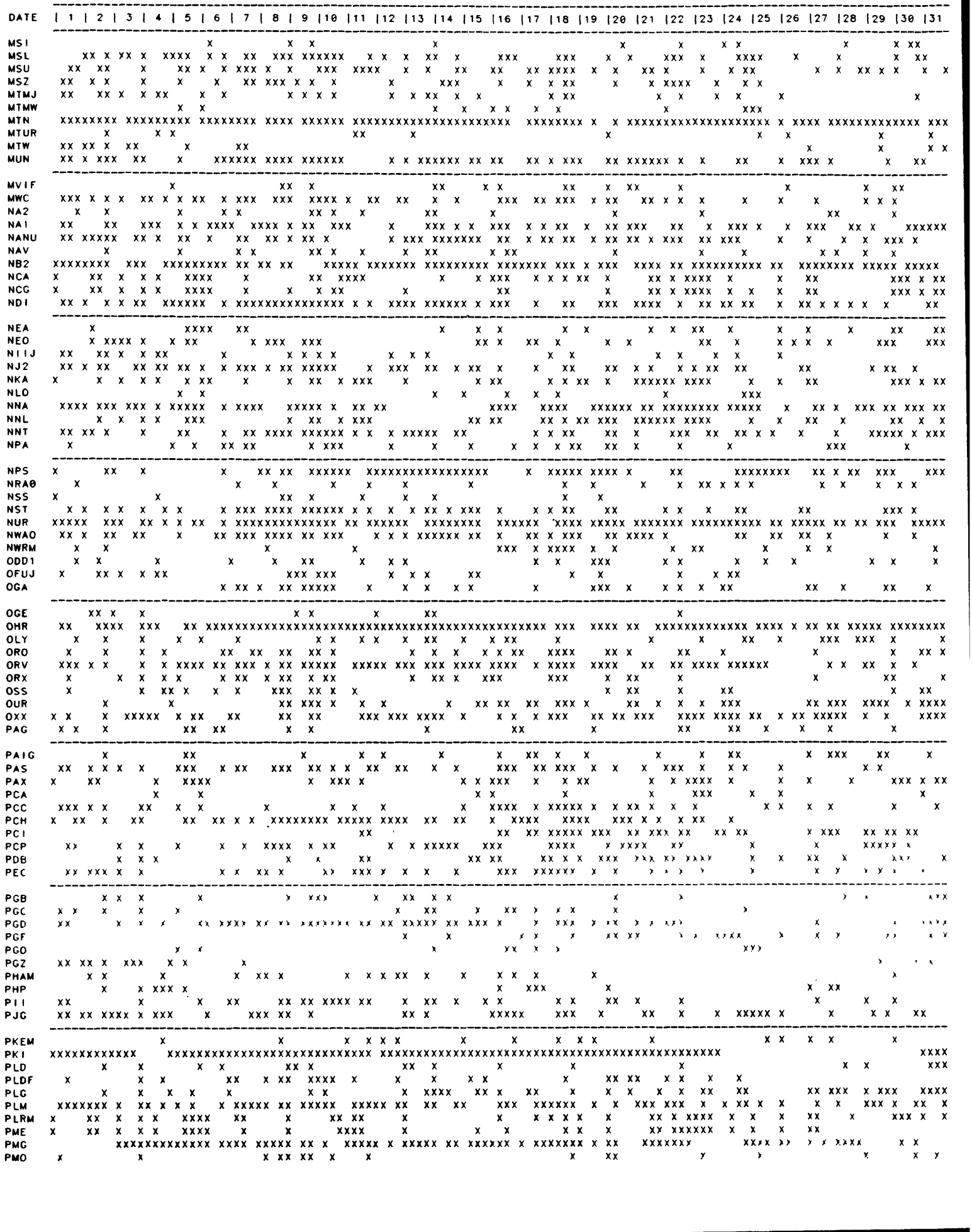
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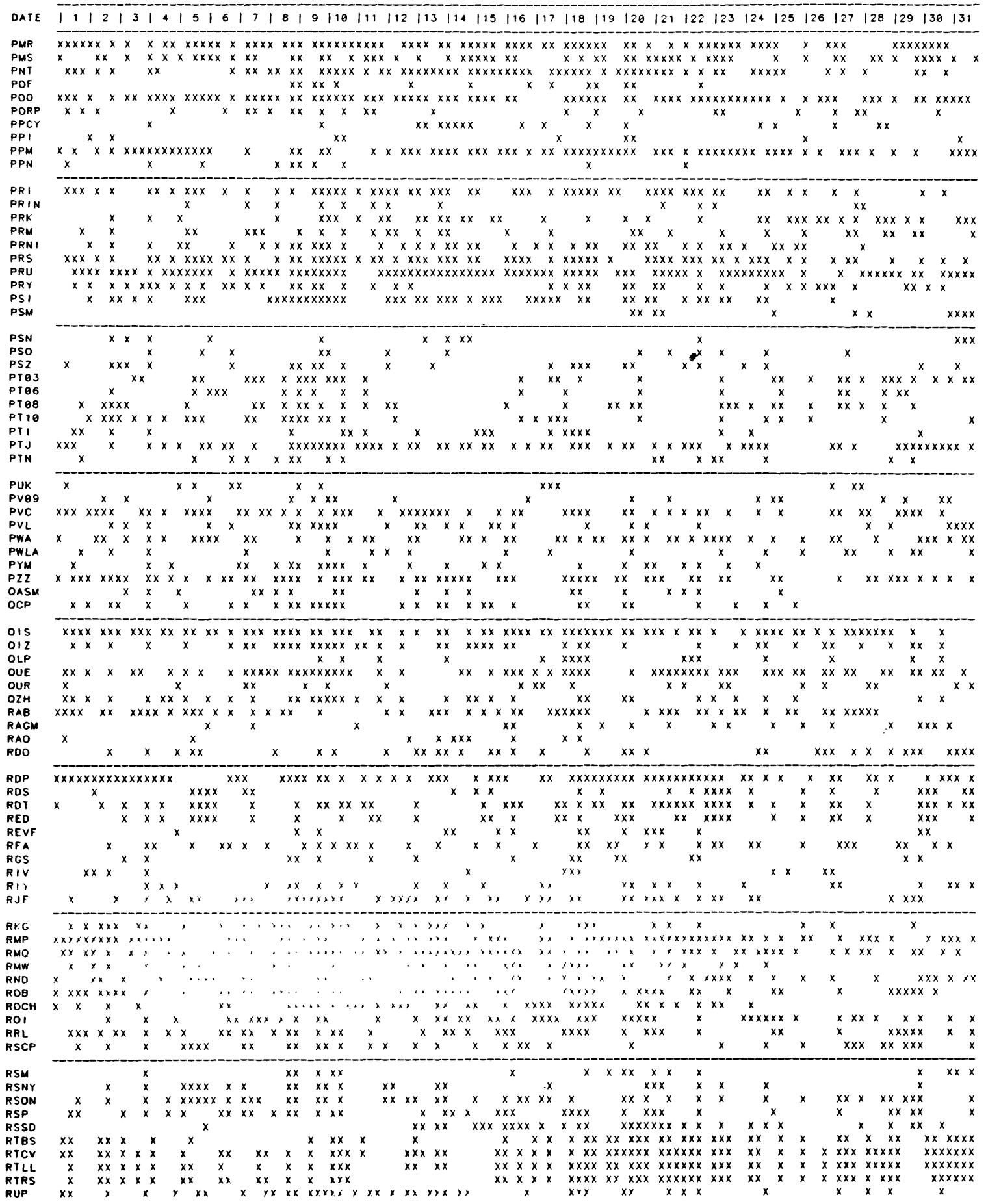
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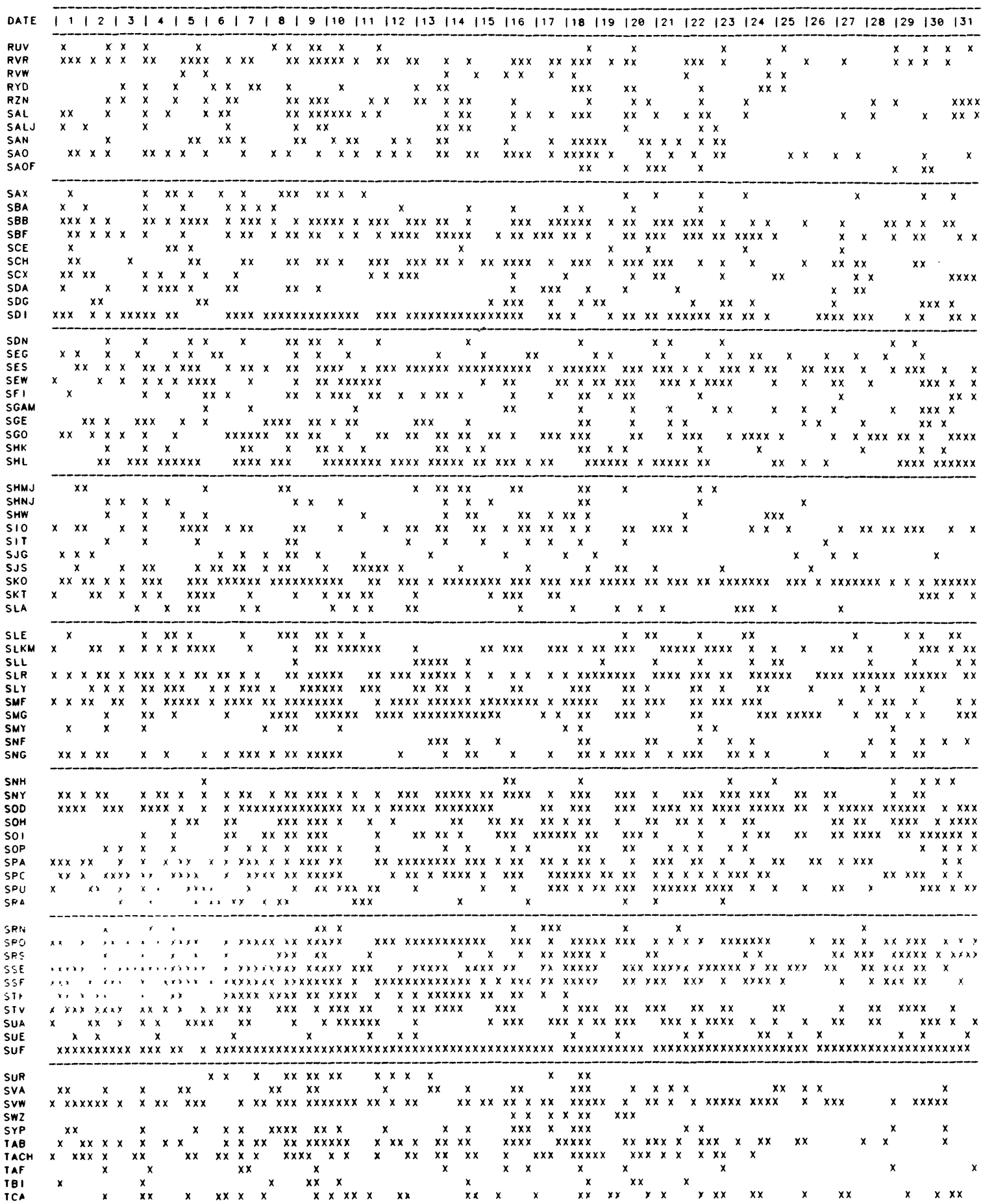
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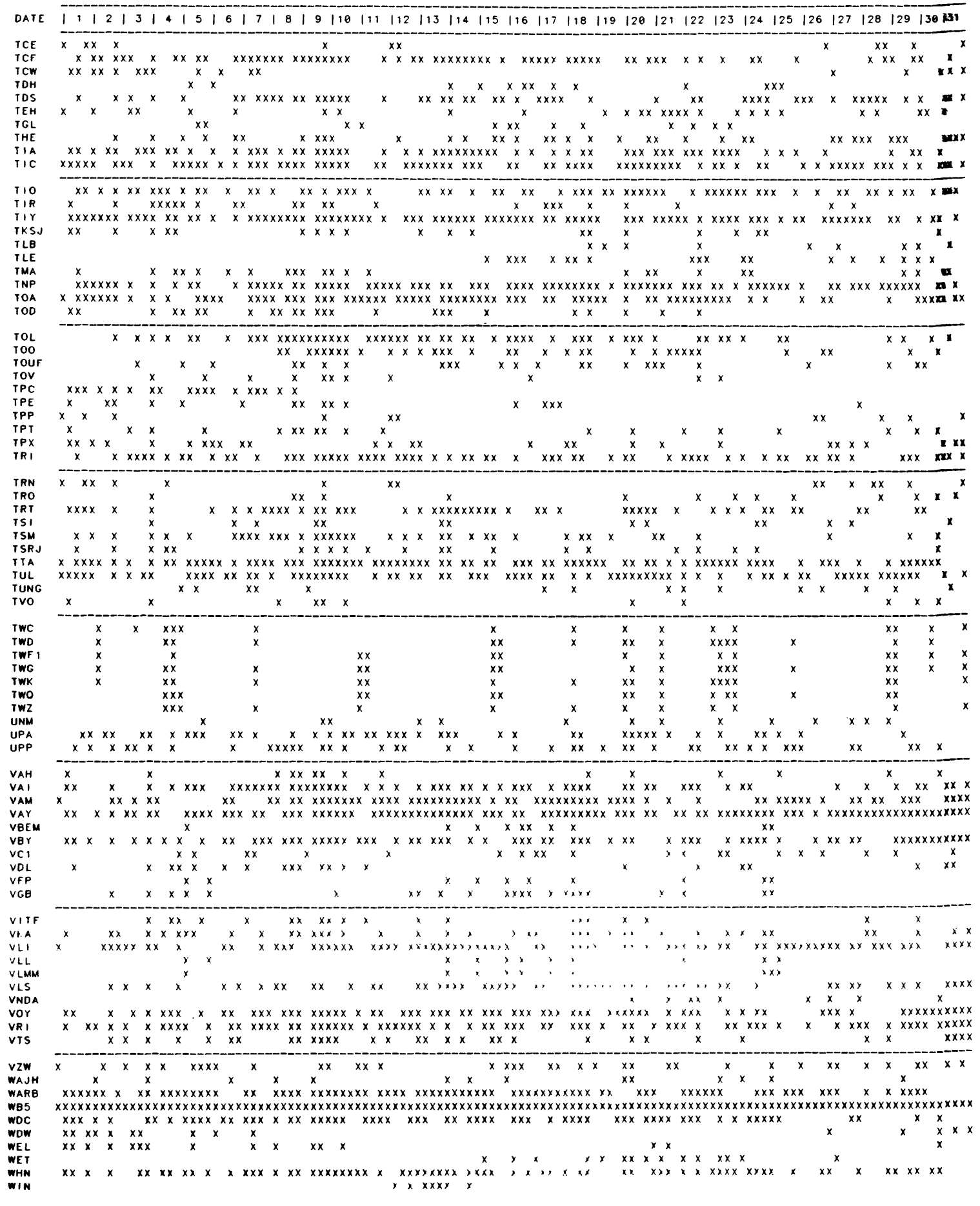
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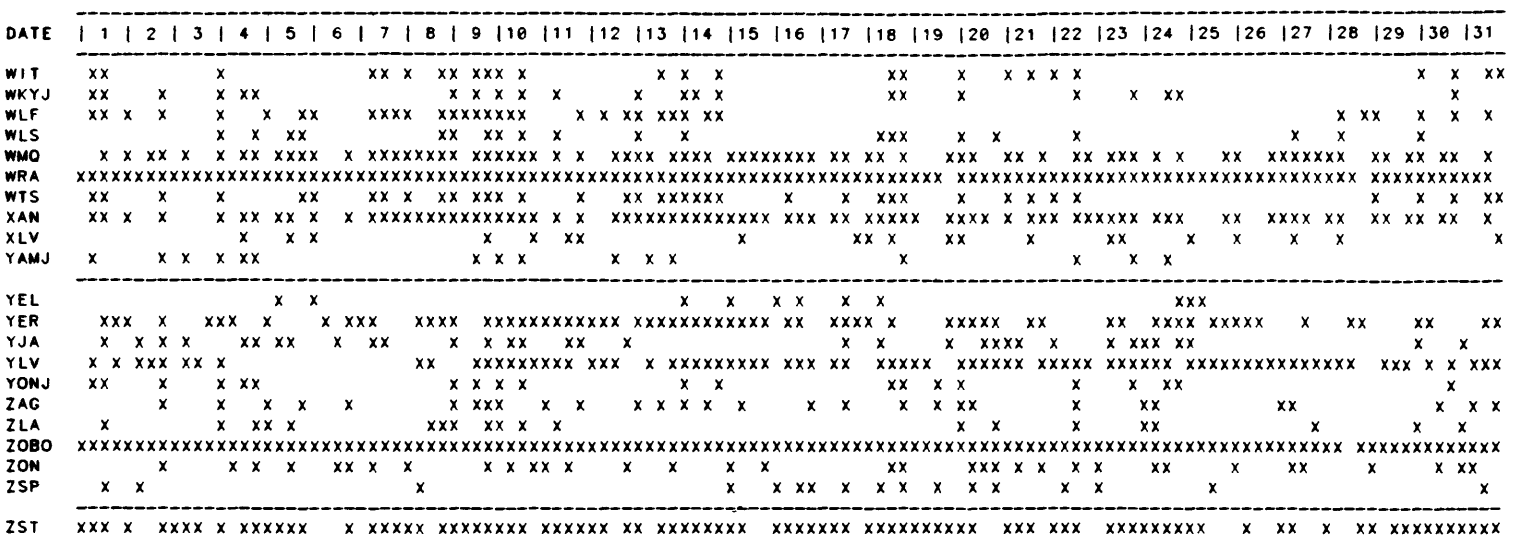

The following stations each reported less than 10 readings:

AAE	ABTN	ACI	ACU	ADH	AGAL	AGRW	AGX	AKSR	AKU	AKUR	AMAN	ANCC	ANM	ANMR	ANR	ANTN	AOMJ
APA	AQBJ	AR6	ARO	ARS	ASR	ATA	BBB	BBD	BCPM	BCS	BDF	BDN	BER	BERF	BIM	BIR	BKB2
BKR	BLO	BLS	BLS2	BMA	BMNM	BNAB	BNB	BNH	BNM	BOT	BPIL	BRD	BRL	BRY	BST	BTB	BTH
BUS	BUT	BVD	BVW	BWD	CALA	CBB	CBZ	CCW	CEI	CEOS	CFTV	CHIE	CHP8	CIS	CLI	CLMC	CMW
CNV	COB	COL	COW	CPE	CPI	CPW	CRF	CRM	CRNM	CROR	CRT	CSIL	CTAO	CTFE	CUS	CUSS	CVD
CVT	CWB	CYK	DAF	DBN	DEK	DHN	DHR	DIAC	DLA	DLG	DMMT	DOG	DON	DPMT	DRC	DRRA	DSH
DSVT	DTMT	EAB	EALH	EAU	EBG	EBH	EBI	EBL	ECB	ECHE	EDB	EDI	EDR	EDU	ELF	ELO	ELYF
EMM	EMON	ENIJ	EPLA	ERC	ERUA	ESCF	ESEL	ESY	ETA	ETER	EZAM	FAM	FDKY	FG2	FISA	FL2	FLAG
FLR	FMW	FRU	FSB	GAL	GANF	GBL	GBR	GBZ	GELF	GGC	GHV	GL2	GLH	GLK	GMB	GMN	GMO
GNZ	GRA3	GRB1	GRB2	GRB3	GRB5	GRC1	GRI	GROR	GRT	GRW	GSM	GULW	GUM2	HAKY	HATZ	HAY	HBF
HCY	HDW	HIA	HITJ	HITZ	HLBJ	HLD	HNH	HOBC	HON	HOQC	HOR	HPI	HON	HRV	HRY	HSHJ	HTW
IAS	ICR	IIC	IIS	IKP	ILT	IRK	ITB	ITB1	ITB7	IVA	IVF	JBO	JCW	JMI	JNE	KBN	KBR
KETZ	KIP	KKS	KLI	KNK	KPL	KSI	KSU	KTH	LAZ	LCCM	LCH	LDN	LFU	LIB	LIO	LIS	LMW
LNOR	LPI	LPM	LSM	LST	LTMT	LVI	LVV	MBW	MCA	MCD	MCMT	MCT	MD2	MDB	MDN	MDSJ	MDW
MEMT	MEX	MFTN	MGM	MGS	MHI	MHZ	MIM	MKL	MKRJ	MKT	MLS	MOH	MORO	MOTN	MSTB	MVL	MVM
MXC	MZP	MZX	NA12	NAO	NBO	NDB	NDF	NED	NEW	NGZ	NHIL	NKM	NKY	NOH	NOP	OBC	OBH
OBN	OBO	OLLA	ONR	ONTN	OOW	OPA	OSD	OTR	PAE	PATW	PBC	PCB	PCT	PDA	PEL	PET	PFH
PFO	PHC	PICO	PIG	PLAV	PLY	PNJ	POW	PPK	PPT	PRAF	PT02	PTS	PTT	PUL	PURC	PUYF	PVV
PVY	PYN	PZI	QCR	QUTJ	QZA	RAR	RATZ	RBL	RDG	REY	RFI	RKT	RMN	RPW	RSW	RUB	RUWJ
RVC	SALC	SAP	SASA	SAW	SBG	SBM	SCI	SCP	SDV	SEK	SFG	SGB	SGH	SGS	SHBJ	SIM	SJAS
SKB	SKI	SLB	SLKI	SMNM	SMW	SNKA	SNM	SNZO	SONG	SOSW	SSB	SSS	SSV	STD	STR	STS	STU
STW	SVB	SVP	SVS	SVV	SXM	TAIF	TATO	TAU	TAVF	TAZ	TBH	TBM	TBR	TBT	TCT	TDD	TDL
TIK	TIM	TKL	TLG	TME	TNR	TNS	TPI	TREF	TRM	TTG	TUTZ	TWB	TWM1	UCC	ULC	UTU	UZH
VAL	VAN	VAO	VIB	VILF	VIPM	VLO	VNM	VPS2	VSS	VTG	VTHM	VUN	WAX	WDIN	WES	WHC	WHH
WIW	WPI	WPW	WRH	WSS	WTV	YAH	YKU	YMT5	YPE	YRH	YSS						

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
AAHD		Abu Hadid Egypt opened 1982? HLW code AHD.	23 44 46.8 N (23.7463)	32 45 10.2 E (32.7528)	...	HLW
AAPN		Arroyo Pinares Spain	37 18 27.6 N (37.3077)	4 07 15.6 W (4.1210)	1160.0	CRT
AAT	R	Alma-Ata Kazakh S.S.R., U.S.S.R.	...	...	...	
ABH		Alteburg Rheinland-Pfalz, Fed. Rep. of Germany	49 52 54.0 N (49.8817)	7 32 51.0 E (7.5475)	620.0	KRW
ABHA		Abha Saudi Arabia opened 198811.	18 15 .. N (18.2500)	42 45 .. E (42.7500)	2200.0	RYD
ABR	R	El Abra Veracruz, Mexico	19 48 25.2 N (19.8070)	96 32 02.4 W (96.5340)	520.0	IIM
ACHM		Chimeneas Spain	37 06 18.0 N (37.1050)	3 49 46.8 W (3.8297)	862.0	CRT
ACP	R	Acatlan Puebla, Mexico	18 12 28.2 N (18.2078)	98 03 34.8 W (98.0597)	1250.0	UNM
AECU		Ecuador Network Ecuador	0 16 13.8 S (0.2705)	78 24 25.2 W (78.4070)	3000.0	QUI
AFAR		Ash Flat Arkansas, U.S.A.	36 08 00.0 N (36.1333)	91 31 52.2 W (91.5312)	239.0	TEIC
AFH	RD	Ashford Hill England, United Kingdom	51 20 38.0 N (51.3439)	1 13 11.0 W (1.2197)	91.0	BKN
AFL	R	Alpe Faloria Veneto, Italy	...	...	...	TRI
AGAL		Gebel Alisa Egypt opened 1982? HLW code GAL.	23 25 42.6 N (23.4285)	32 49 31.8 E (32.8255)	...	HLW
AGD	D	Arta Grotte Djibouti opened 19850509.	11 31 48.0 N (11.5300)	42 49 12.0 E (42.8200)	450.0	ARO GEOS
AGG		Agias Georgios Greece	39 01 20.0 N (39.0222)	22 19 49.0 E (22.3303)	540.0	THE
AGMR		Gebel Marawa Egypt opened 1982? HLW code GMR.	23 32 15.6 N (23.5377)	32 32 25.8 E (32.5405)	...	HLW
AGO		Saint Agoulin Auvergne, France opened 1984?	46 03 08.6 N (46.0524)	3 07 51.8 E (3.1311)	523.0	CFF
AGRW		Gebel Rewraw Egypt opened 1982? HLW code GRW.	23 38 42.0 N (23.6450)	32 48 34.8 E (32.8097)	...	HLW
AGX	D	Aguascalientes Aguascalientes, Mexico opened 1988.	21 52 43.2 N (21.8787)	102 18 03.6 W (102.3010)	...	UNM
AKGH		Akosombo Ghana opened 1987.	6 14 36.0 N (6.2433)	0 02 25.0 E (0.0403)	377.0	KUK
AKL		Akola Maharashtra, India	20 07 .. N (20.1167)	77 07 .. E (77.1167)	310.0	NDI
AKRL		Khor El Rami Egypt opened 1982? HLW code KRL.	23 39 36.0 N (23.6600)	32 42 36.0 E (32.7100)	...	HLW
AKSR		Khor Sakr Egypt opened 1982? HLW code KSR.	23 38 13.8 N (23.6372)	33 01 15.0 E (33.0208)	...	HLW
AKUR		Kurkur Egypt opened 1982? HLW code KUR.	23 53 38.4 N (23.8940)	32 46 33.6 E (32.7760)	...	HLW
ALBI	R	Allahabad Uttar Pradesh, India	25 29 .. N (25.4833)	81 50 .. E (81.8333)	107.0	NDI
ALJ		Aljibe Spain	36 40 25.2 N (36.6737)	5 36 14.4 W (5.6040)	1091.0	SFS
ALME	R	Alemaya Ethiopia	9 25 48.0 N (9.4300)	42 02 24.0 E (42.0400)	2133.0	
ALN		Alexandraupolis Greece opened 198986.	40 53 50.0 N (40 8972)	26 02 44.0 E (26.0456)	110.0	THE
ALOJ		Loja Spain	37 06 32.4 N (37.1090)	4 06 18.0 W (4.1050)	1340.0	CRT
ALPW		Alpine Wyoming, U.S.A. opened 198601.	43 09 02.3 N (43.1506)	110 59 52.1 W (110.9978)	1792.0	USBR
AMAN		Manam Egypt opened 1982? HLW code MAN.	23 56 00.0 N (23.9333)	32 56 02.4 E (32.9340)	...	HLW
AMRP	R	Almeirim Portugal opened 1990027	39 09 30.0 N (39.1583)	8 34 30.0 W (8.5750)	160.0	INMG
ANAL		New Aliso Egypt opened 1982? HLW code NAL.	23 24 36.0 N (23.4100)	32 40 40.8 E (32.6780)	...	HLW
ANCC		Alto Anchicaya Colombia opened 1987.	3 30 55.2 N (3.5153)	76 52 00.0 W (76.8667)	540.0	UVC
ANGC	R	Angol Malleco, Chile	37 47 00.0 S (37.7833)	72 42 30.0 W (72.7083)	...	

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
ANGV	R	Angostura	9 42 18.0 N	69 31 18.1 W	680.0	CAR
		Venezuela	(9.7050)	(69.5217)		
		opened 1984.				
ANMR		North Movawo	23 40 37.2 N	32 32 32.4 E	...	HLW
		Egypt	(23.6770)	(32.5423)		
		opened 1982? HLW code NMR.				
AOI		Ancona (Monte Conero)	43 33 00.0 N	13 36 07.2 E	530.0	SSO
		Marche, Italy	(43.5500)	(13.6020)		
APHE		Pico Herrero	36 57 07.2 N	3 41 16.8 W	1360.0	CRT
		Spain	(36.9520)	(3.6880)		
APKP	F	(phase code designation)				
APM		Augspurger Mountain	45 44 10.0 N	121 40 50.0 W	865.0	SEA
		Washington, U.S.A.	(45.7361)	(121.6806)		
		opened 198110.				
APW		Alpha Peak	46 39 06.0 N	122 38 51.0 W	457.0	SEA
		Washington, U.S.A.	(46.6517)	(122.6475)		
AQBJ		'Aqaba	29 43 40.8 N	35 03 00.0 E	170.0	JSO
		Jordan	(29.7280)	(35.0500)		
		opened 1989.				
ARL		.....	17 24 43.2 N	93 07 04.8 W	...	UNM
		Chiapas, Mexico	(17.4120)	(93.1180)		
ARNI	R	Argonne North	43 40 15.0 N	112 37 04.8 W	1552.0	USGS
		Idaho, U.S.A.	(43.6708)	(112.6180)		
ARTJ		Al Aritein	32 14 48.0 N	36 49 42.0 E	1058.0	JSO
		Jordan	(32.2467)	(36.8283)		
		opened 1987.				
AS01	R	Alice Springs Array	23 39 53.0 S	133 57 03.0 E	550.0	AUST
		Northern Territory, Australia	(23.6647)	(133.9508)		
		AUST opened 1986.				
AS02	R	Alice Springs Array	23 40 45.0 S	133 56 13.0 E	550.0	AUST
		Northern Territory, Australia	(23.6792)	(133.9369)		
		AUST opened 1986.				
AS03	R	Alice Springs Array	23 40 28.0 S	133 55 11.0 E	550.0	AUST
		Northern Territory, Australia	(23.6744)	(133.9197)		
		AUST opened 1986.				
AS04	R	Alice Springs Array	23 39 35.0 S	133 55 45.0 E	550.0	AUST
		Northern Territory, Australia	(23.6597)	(133.9292)		
		AUST opened 1986.				
AS05	R	Alice Springs Array	23 38 57.0 S	133 56 51.0 E	550.0	AUST
		Northern Territory, Australia	(23.6492)	(133.9475)		
		AUST opened 1986.				
AS06	R	Alice Springs Array	23 38 51.0 S	133 58 17.0 E	550.0	AUST
		Northern Territory, Australia	(23.6475)	(133.9714)		
		AUST opened 1986.				
AS07	R	Alice Springs Array	23 39 56.0 S	133 58 11.0 E	550.0	AUST
		Northern Territory, Australia	(23.6656)	(133.9697)		
		AUST opened 1986.				
AS08	R	Alice Springs Array	23 40 53.0 S	133 57 36.0 E	550.0	AUST
		Northern Territory, Australia	(23.6814)	(133.9600)		
		AUST opened 1986.				
AS09	R	Alice Springs Array	23 41 58.0 S	133 56 29.0 E	550.0	AUST
		Northern Territory, Australia	(23.6994)	(133.9414)		
		AUST opened 1986.				
AS10	R	Alice Springs Array	23 41 49.0 S	133 54 50.0 E	550.0	AUST
		Northern Territory, Australia	(23.6969)	(133.9139)		
		AUST opened 1986.				
AS11	R	Alice Springs Array	23 40 42.0 S	133 53 52.0 E	550.0	AUST
		Northern Territory, Australia	(23.6783)	(133.8978)		
		AUST opened 1986.				
AS12	R	Alice Springs Array	23 39 59.0 S	133 54 16.0 E	550.0	AUST
		Northern Territory, Australia	(23.6664)	(133.9044)		
		AUST opened 1986.				
AS13	R	Alice Springs Array	23 39 07.0 S	133 53 40.0 E	550.0	AUST
		Northern Territory, Australia	(23.6519)	(133.8944)		
		AUST opened 1986.				
AS14	R	Alice Springs Array	23 39 06.0 S	133 54 37.0 E	550.0	AUST
		Northern Territory, Australia	(23.6517)	(133.9103)		
		AUST opened 1986.				
AS15	R	Alice Springs Array	23 38 08.0 S	133 54 44.0 E	550.0	AUST
		Northern Territory, Australia	(23.6356)	(133.9122)		
		AUST opened 1986.				
AS16	R	Alice Springs Array	23 38 13.0 S	133 55 48.0 E	550.0	AUST
		Northern Territory, Australia	(23.6369)	(133.9300)		
		AUST opened 1986.				
AS17	R	Alice Springs Array	23 39 52.0 S	133 59 30.0 E	550.0	AUST
		Northern Territory, Australia	(23.6644)	(133.9917)		
		AUST opened 1986.				
AS18	R	Alice Springs Array	23 41 24.0 S	133 58 51.0 E	550.0	AUST
		Northern Territory, Australia	(23.6900)	(133.9808)		
		AUST opened 1986.				
AS19	R	Alice Springs Array	23 42 16.0 S	133 57 45.0 E	550.0	AUST
		Northern Territory, Australia	(23.7044)	(133.9625)		
		AUST opened 1986.				
ASAR	R	.....	...	...	...	AUST
		Northern Territory, Australia				
ASKD		Sinn el Kaddab	23 39 34.8 N	32 23 04.8 E	...	HLW
		Egypt	(23.6597)	(32.3847)		
		opened 1982? HLW code SKD.				
ASME	R	Asmera	15 21 00.0 N	38 55 48.0 E	2420.0	
		Ethiopia	(15.3500)	(38.9300)		

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
ASMO		Sierra Morrones	37 21 28.8 N	3 44 34.8 W	1170.0	CRT
		Spain	(37.3580)	(3.7430)		
ASPF		Aspremont	43 46 05.4 N	7 15 29.9 E	850.0	STR
		Provence-Cote d'Azur, France	(43.7682)	(7.2583)		
ASR		Mount Adams--Stagmon Ridge	46 09 02.4 N	121 35 33.6 W	1280.0	SEA
		Washington, U.S.A.	(46.1507)	(121.5927)		
ATEJ		Tejedo	36 54 54.0 N	4 00 50.4 W	1480.0	CRT
		Spain	(36.9150)	(4.0140)		
ATN		Antennamore (Messina)	38 09 38.0 N	15 27 46.0 E	350.0	ERC
		Sicilia, Italy	(38.1606)	(15.4628)		
ATZ		Mount Atzmon	32 49 17.8 N	35 16 11.0 E	500.0	JER
		Israel	(32.8216)	(35.2697)		
		opened 1986.				
AURF		Auriere	43 53 14.4 N	7 19 39.0 E	1040.0	STR
		Provence-Cote d'Azur, France	(43.8873)	(7.3275)		
AUW		Augustine West	59 22 12.3 N	153 28 14.9 W	276.0	GIA
		Western Alaska, Alaska, U.S.A.	(59.3701)	(153.4708)		
		opened 198607.				
AVN		Avellanes	41 53 01.2 N	0 45 06.6 E	630.0	MRB
		Spain	(41.8837)	(0.7518)		
		Sent to NEIS by MDD.				
AVOW		Apres Vouz Peak	43 36 39.8 N	110 48 50.3 W	2036.0	USBR
		Wyoming, U.S.A.	(43.6111)	(110.8140)		
		opened 198601.				
AWAL		West Aliso	23 22 45.0 N	32 34 57.0 E	...	HLW
		Egypt	(23.3792)	(32.5825)		
		opened 1982? HLW code WAL.				
AWDO		Awoonga Dam No. 3	24 02 52.1 S	151 18 56.5 E	110.0	ODM
		Queensland, Australia	(24.0478)	(151.3157)		
		opened 19870701. ODM code AWD.				
AWKL		West Kolobsho	23 25 30.6 N	32 26 49.2 E	...	HLW
		Egypt	(23.4252)	(32.4470)		
		opened 1982? HLW code WKL.				
AYK	R	Aydincik	36 09 08.0 N	33 19 37.0 E	50.0	ISK
		Turkey	(36.1522)	(33.3269)		
		opened 198801.				
AYN		Al 'Uyaynah	28 52 12.0 N	36 00 00.0 E	...	RYD
		Saudi Arabia	(28.8700)	(36.0000)		
		opened 1986.				
AZI		Avezzano	41 59 18.4 N	13 26 08.4 E	...	ROM
		Abruzzo, Italy	(41.9884)	(13.4357)		
		opened 1987.				
AZO	R	.....	15 57 57.6 N	97 24 28.8 W	...	UNM
		Oaxaca, Mexico	(15.9660)	(97.4080)		
BADA		Al Bad'	28 31 22.8 N	35 00 07.2 E	...	RYD
		Saudi Arabia	(28.5230)	(35.0020)		
		opened 1986.				
BAE1	RD	Brasilia Array Site E1	15 39 00.0 S	47 56 49.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6500)	(47.9469)		
		opened 1971101?				
BAE2	RD	Brasilia Array Site E2	15 39 00.0 S	47 56 49.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6500)	(47.9469)		
		opened 1971101?				
BAE3	RD	Brasilia Array Site E3	15 39 25.0 S	47 55 35.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6569)	(47.9264)		
		opened 1971101?				
BAE4	D	Brasilia Array Site E4	15 39 51.0 S	47 54 11.0 W	1260.0	BDF
		Distrito Federal, Brazil	(15.6642)	(47.9031)		
		opened 1971101?				
BAE5	RD	Brasilia Array Site E5	15 40 21.0 S	47 52 51.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6725)	(47.8808)		
		opened 1971101?				
BAEE	RD	Brasilia Array Site EE	15 44 19.0 S	47 37 12.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.7386)	(47.6200)		
		opened 1971101?				
BALA		Baldy Mountain	55 11 35.6 N	162 47 12.5 W	360.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.1932)	(162.7868)		
		PAL code BAL.				
BAS1	RD	Brasilia Array Site S1	15 39 22.0 S	47 59 59.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6561)	(47.9997)		
		opened 1971101?				
BAS2	RD	Brasilia Array Site S2	15 40 41.0 S	48 00 25.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6781)	(48.0069)		
		opened 1971101?				
BAS3	RD	Brasilia Array Site S3	15 41 55.0 S	48 00 53.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6986)	(48.0147)		
		opened 1971101?				
BAS4	RD	Brasilia Array Site S4	15 43 09.0 S	48 01 20.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.7192)	(48.0222)		
		opened 1971101?				
BAS5	RD	Brasilia Array Site S5	15 44 31.0 S	48 01 50.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.7419)	(48.0306)		
		opened 1971101?				
BASE	RD	Brasilia Array Site SE	15 57 26.0 S	48 04 14.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.9572)	(48.0706)		
		opened 1971101?				
BAUT		Boutismo	10 30 23.4 N	66 28 55.2 W	1976.0	CAR
		Venezuela	(10.5065)	(66.4820)		
		opened 1984.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
BAW1	D	Brasilia Array Site W1	15 37 42.0 S	48 00 46.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6283)	(48.0128)		
		opened 1971101?				
BAW2	RD	Brasilia Array Site W2	15 37 17.0 S	48 01 07.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6214)	(48.0186)		
		opened 1971101?				
BAW3	RD	Brasilia Array Site W3	15 36 46.0 S	48 03 27.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6128)	(48.0575)		
		opened 1971101?				
BAW4	RD	Brasilia Array Site W4	15 36 19.0 S	48 04 46.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.6053)	(48.0794)		
		opened 1971101?				
BAWE	D	Brasilia Array Site WE	15 35 28.0 S	48 04 50.0 W	1200.0	BDF
		Distrito Federal, Brazil	(15.5911)	(48.0806)		
		opened 1971101?				
BBB		Bella Bella	52 11 04.9 N	128 06 47.9 W	14.0	OTTR
		British Columbia, Canada	(52.1847)	(128.1133)		
		opened 19861205.				
BBTK		Belbasi	39 50 32.0 N	32 45 37.0 E	1200.0	
		Turkey	(39.8422)	(32.7603)		
BBU		Al Budayyi'	26 12 54.0 N	50 27 24.0 E	...	BMU
		Bahrain	(26.2150)	(50.4567)		
		opened 1986.				
BCI		Bajram Curri	42 21 59.8 N	20 04 03.0 E	...	TIR
		Albania	(42.3666)	(20.0675)		
BCZ	R	Broida Crags	...	...	...	WEL
		New Zealand				
BDBC		Bennett Dam	56 10 27.0 N	122 16 57.0 W	700.0	
		British Columbia, Canada	(56.1742)	(122.2825)		
BDMQ		Boondooma Dam	26 06 44.3 S	151 26 39.8 E	320.0	QDM
		Queensland, Australia	(26.1123)	(151.4444)		
		opened 19800729. QDM code BDM.				
BDNM		Bernardo	34 29 26.4 N	106 55 03.6 W	...	SNM
		New Mexico, U.S.A.	(34.4907)	(106.9177)		
		opened 1990. SNM code BDO.				
BEB		Belem	1 27 00.0 S	48 26 42.0 W	15.0	
		Para, Brazil	(1.4500)	(48.4450)		
		opened 1987.				
BECU		Ecuador Network	0 28 28.8 S	78 35 46.2 W	3320.0	QUI
		Ecuador	(0.4747)	(78.5962)		
BEE		Al Areen	26 01 00.0 N	50 31 18.0 E	...	BMU
		Bahrain	(26.0167)	(50.5217)		
		opened 1986.				
BERA		Berat	40 42 09.7 N	19 56 57.8 E	...	TIR
		Albania	(40.7027)	(19.9494)		
BERF		Bertagne	43 18 46.8 N	5 41 26.5 E	1030.0	STR
		Provence-Cote d'Azur, France	(43.3130)	(5.6907)		
BEVG		Clark Hill Reservoir	34 05 21.5 N	82 44 00.0 W	158.0	ATL
		Georgia, U.S.A.	(34.0893)	(82.7333)		
BFO	R	Black Forest Observatory (Schiltach)	48 19 52.0 N	8 19 49.0 E	589.0	KRW
		Rheinland-Pfalz, Fed. Rep. of Germany	(48.3311)	(8.3303)		
		opened before 197410.				
BFT		Belfast	25 41 12.0 S	30 02 36.0 E	1868.0	PRE
		Transvaal, South Africa	(25.6867)	(30.0433)		
		opened 1986.				
BGL		Barrier Glacier	61 15 48.6 N	152 23 25.8 W	1173.0	AGS
		Western Alaska, Alaska, U.S.A.	(61.2635)	(152.3905)		
		opened 1989.				
BGMT		Barton Gulch	45 14 00.0 N	112 02 25.8 W	2172.0	BUT
		Montana, U.S.A.	(45.2333)	(112.0405)		
		opened 19871021.				
BGRO	R	Glenroy	20 32 57.1 S	147 06 18.7 E	160.0	QDM
		Queensland, Australia	(20.5492)	(147.1052)		
		opened 19810216. QDM code BGR.				
BHM	D	Barham	51 12 46.0 N	1 10 27.0 W	100.0	BKN
		England, United Kingdom	(51.2128)	(1.1742)		
BIAC		(Alternate Abbreviation for DIAC)				
BJA		Jaww	25 59 30.0 N	50 36 30.0 E	...	BMU
		Bahrain	(25.9917)	(50.6083)		
		opened 1986.				
BJU	R		16 52 36.5 N	93 10 44.8 W	...	IIM
		Chiapas, Mexico	(16.8768)	(93.1791)		
BKE		Bekescsaba	46 36 45.0 N	17 53 34.8 E	95.0	BUD
		Hungary	(46.6125)	(17.8930)		
		opened 1987.				
BKJ		Big Koniuji Island	55 09 24.0 N	159 33 31.9 W	146.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.1567)	(159.5589)		
BKO		Bokosso	4 25 04.8 N	9 08 27.6 E	380.0	YND
		Cameroon	(4.4180)	(9.1410)		
		opened 19850213.				
BKOA			25 59 .. N	91 16 .. E	50.0	JHI
		Assam, India	(25.9833)	(91.2667)		
BLH		Bold Hill	47 50 12.6 N	122 01 55.8 W	198.0	SEA
		Washington, U.S.A.	(47.8368)	(122.0322)		
		SEA code BHW.				
BLHA		Black Hill	55 42 09.0 N	162 03 57.0 W	390.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.7025)	(162.0658)		
		PAL code BLH.				

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BLLO		Bulolo	7 12 07.2 S (7.2020)	146 37 12.0 E (146.6200)	700.0	PMG
		New Guinea, Papua New Guinea opened 19880610.				
BLPI		Bilaspur	22 05 .. N (22.0833)	82 25 .. E (82.4167)	85.0	NDI
		Madhya Pradesh, India NDI code BLP.				
BLS		Blasjo	59 23 24.0 N (59.3900)	6 26 56.4 E (6.4490)	1170.0	BER
		Norway opened 1985.				
BLS1		Blasjo	59 23 27.6 N (59.3910)	6 49 37.2 E (6.8270)	1160.0	BER
		Norway opened 198610.				
BLS2		Blasjo	59 17 38.4 N (59.2940)	6 55 37.2 E (6.9270)	1190.0	BER
		Norway opened 198610.				
BLS3		Blasjo	59 25 30.0 N (59.4250)	6 30 54.0 E (6.5150)	1130.0	BER
		Norway opened 198610.				
BMNM		Bear Mountains	34 16 30.0 N (34.2750)	107 15 36.6 W (107.2602)	1972.0	SNM
		New Mexico, U.S.A. SNM code BMT.				
BMU	R	Al Muharraq	26 14 06.0 N (26.2350)	50 39 36.0 E (50.6600)	...	BMU
		Bahrain opened 1986.				
BMW		Boistfort Mountain	46 28 30.0 N (46.4750)	123 13 41.0 W (123.2281)	870.0	SEA USTN
		Washington, U.S.A. SEA code BOW. USTN opened 1988.				
BNAB		Bonilla	53 29 36.0 N (53.4933)	130 38 14.0 W (130.6372)	16.0	OTTR
		British Columbia, Canada opened 19871204.				
BNI		Bordonecchia	45 03 09.7 N (45.0527)	6 40 30.7 E (6.6752)	1395.0	ROM
		Piemonte, Italy				
BNM		Borrego Site	34 08 31.2 N (34.1420)	106 37 40.8 W (106.6280)	2120.0	SNM
		New Mexico, U.S.A. SNM code BAR.				
BOB	D	Bobbio (Coli)	44 46 01.2 N (44.7670)	9 26 53.5 E (9.4482)	930.0	ROM
		Emilia-Romagna, Italy				
BRCI		Bahraich	27 34 .. N (27.5667)	81 35 .. E (81.5833)	123.0	NDI
		Uttar Pradesh, India NDI code BRC.				
BRF		Ar Rifa'	26 04 24.0 N (26.0733)	50 35 00.0 E (50.5833)	...	BMU
		Bahrain opened 1986.				
BRTN		Brown Mountain	36 21 24.0 N (36.3567)	82 52 04.2 W (82.8678)	630.0	TVA
		Tennessee, U.S.A. opened 19860605.				
BRVW		Black Rock Valley	46 29 07.2 N (46.4853)	119 59 29.4 W (119.9915)	925.0	SEA
		Washington, U.S.A. SEA code BRV.				
BS01	R	Boso O.B.S. 1	34 39 12.0 N (34.6533)	140 58 42.0 E (140.9783)	-4011.0	JMA
		Honshu, Japan				
BS02	R	Boso O.B.S. 2	34 45 06.0 N (34.7517)	140 45 18.0 E (140.7550)	-2090.0	JMA
		Honshu, Japan				
BS03	R	Boso O.B.S. 3	34 48 06.0 N (34.8017)	140 30 36.0 E (140.5100)	-1898.0	JMA
		Honshu, Japan				
BS04	R	Boso O.B.S. 4	34 59 24.0 N (34.9900)	140 20 18.0 E (140.3383)	-658.0	JMA
		Honshu, Japan				
BSLQ	RD	Bruslee	20 52 01.2 S (20.8670)	146 33 50.4 E (146.5640)	185.0	QDM
		Queensland, Australia opened 19840302. QDM code BSL.				
BSZ	RD	Bushy Park	39 47 55.4 S (39.7987)	174 55 52.4 E (174.9312)	250.0	WEL
		North Island, New Zealand opened 199003.				
BTA	R	Bajo Talamanca	...	...	...	HDC
		Costa Rica				
BTE	R	Batoke	4 02 52.8 N (4.0480)	9 05 13.2 E (9.0870)	90.0	YND
		Cameroon opened 19850301.				
BTH		Betharram	43 07 23.0 N (43.1231)	0 12 25.0 W (0.2069)	300.0	
		Aquitaine, France opened 198608.				
BUE	R	Buenavista	19 26 16.8 N (19.4380)	96 33 32.4 W (96.5590)	200.0	IIM
		Veracruz, Mexico				
BUGC		Bugo	3 53 35.8 N (3.8933)	76 15 24.7 W (76.2569)	1200.0	UVC
		Colombia				
BUW	D	Bucklebury West	51 24 34.0 N (51.4094)	1 13 28.0 W (1.2244)	125.0	BKN
		England, United Kingdom				
BUWY		Burn	53 44 34.4 N (53.7429)	1 03 59.4 W (1.0665)	5.0	QMB
		England, United Kingdom				
BVTM	R		18 53 36.0 N (18.8933)	102 15 54.0 W (102.2650)	...	UNM
		Michoacan, Mexico UNM code BVT.				
BVW		Beverly	46 48 37.8 N (46.8105)	119 52 54.1 W (119.8817)	707.0	SEA
		Washington, U.S.A. opened 198609.				
BW01	R	Boulder Array	42 47 09.1 N (42.7859)	109 34 49.7 W (109.5805)	2200.0	NEIS
		Wyoming, U.S.A.				
BW02	R	Boulder Array	42 47 19.8 N (42.7888)	109 33 49.6 W (109.5638)	2200.0	NEIS
		Wyoming, U.S.A.				

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BW03	R	Boulder Array	42 47 12.7 N	109 32 46.8 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7869)	(109.5463)		
BW04	R	Boulder Array	42 46 44.8 N	109 34 18.3 W	2190.0	NEIS
		Wyoming, U.S.A.	(42.7791)	(109.5717)		
BW05	R	Boulder Array	42 46 52.0 N	109 33 50.0 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7811)	(109.5639)		
BW06		Boulder Array	42 46 40.0 N	109 33 20.0 W	2200.0	NEIS USTN
		Wyoming, U.S.A.	(42.7778)	(109.5556)		
		opened 19860718.				
BW07	R	Boulder Array	42 46 51.0 N	109 32 30.5 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7808)	(109.5418)		
BW08	R	Boulder Array	42 46 10.4 N	109 34 51.9 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7696)	(109.5811)		
BW09	R	Boulder Array	42 46 20.2 N	109 33 50.9 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7723)	(109.5641)		
BW10	R	Boulder Array	42 46 10.8 N	109 33 13.8 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7697)	(109.5538)		
BW11	R	Boulder Array	42 45 45.8 N	109 34 26.7 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7627)	(109.5741)		
BW12	R	Boulder Array	42 45 55.5 N	109 33 36.3 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7654)	(109.5601)		
BW13	R	Boulder Array	42 45 55.5 N	109 32 46.8 W	2200.0	NEIS
		Wyoming, U.S.A.	(42.7654)	(109.5463)		
CABA		Caballo Blanco	7 51 20.9 N	71 30 07.9 W	1600.0	CAR
		Venezuela	(7.8558)	(71.5022)		
		opened 1984.				
CAE	D	Conevo	46 00 24.0 N	12 26 12.0 E	870.0	TRI
		Friuli-Venezia Giulio, Italy	(46.0067)	(12.4367)		
		opened 19830423.				
CAMM	R		19 35 16.8 N	96 27 36.0 W	190.0	IIM
		Veracruz, Mexico	(19.5880)	(96.4600)		
		IIM code CAM.				
CAY	RD	Coyenne	4 57 00.0 N	52 19 12.0 W	25.0	GEOS
		French Guiana	(4.9500)	(52.3200)		
		opened 19850722.				
CAYA		Coyombe	0 04 48.0 N	77 59 00.0 W	4000.0	QUI
		Ecuador	(0.0800)	(77.9833)		
		opened 198904.				
CBD		Cypress Bend	36 19 01.2 N	89 39 03.6 W	84.0	SLM
		Missouri, U.S.A.	(36.3170)	(89.6510)		
		opened 19850621. SLM code CBMO.				
CBTI		Cedar Butte	43 23 15.0 N	112 54 41.4 W	1754.0	USGS
		Idaho, U.S.A.	(43.3875)	(112.9115)		
		opened 19860711.				
CBZM	R		18 00 54.0 N	102 24 18.0 W	...	UNM
		Michoacon, Mexico	(18.0150)	(102.4050)		
		UNM code CBZ.				
CC5	R	Presa El Corocol No. 5	17 32 24.0 N	99 16 40.8 W	...	IIM
		Guerrero, Mexico	(17.5400)	(99.2780)		
CCMX		Caleta de Compas	18 03 12.0 N	102 45 00.0 W	...	LJC
		Michoacon, Mexico	(18.0533)	(102.7500)		
		Strong-motion station.				
CDAM	R	Ciudad Altamirano	18 21 .. N	100 39 .. W	300.0	UNM
		Guerrero, Mexico	(18.3500)	(100.6500)		
		UNM code CDA.				
CDFW		Cedar Flats	46 06 58.2 N	122 02 51.0 W	780.0	SEA
		Washington, U.S.A.	(46.1162)	(122.0475)		
		SEA code CDF.				
CDZ	RD	Cobb Dam	41 05 43.8 S	172 42 46.8 E	780.0	WEL
		South Island, New Zealand	(41.0955)	(172.7130)		
		opened 19891201.				
CECU		Ecuador Network	0 28 34.2 S	77 52 13.2 W	2220.0	QUI
		Ecuador	(0.4762)	(77.8703)		
CEDI		Cerro Diablo	7 39 14.4 N	71 53 06.0 W	900.0	CAR
		Venezuela	(7.6540)	(71.8850)		
		opened 1984.				
CENE		Cerro Negro	7 45 50.4 N	71 19 22.1 W	400.0	CAR
		Venezuela	(7.7640)	(71.3228)		
		opened 1984.				
CEO	R	Cerro Encantada	16 14 00.0 N	97 01 06.0 W	3000.0	UNM
		Oaxaca, Mexico	(16.2333)	(97.0183)		
CEOS		Cerro El Oso	9 01 50.5 N	68 20 02.8 W	800.0	CAR
		Venezuela	(9.0307)	(68.3341)		
		opened 198612.				
CFC	R	Cairnmuir Flats	45 11 03.0 S	169 17 32.0 E	576.0	WELC
		South Island, New Zealand	(45.1842)	(169.2922)		
CFS		Cross Fire Station	33 16 43.3 N	80 10 09.5 W	26.0	USGS
		South Carolina, U.S.A.	(33.2787)	(80.1693)		
		opened 19880530.				
CFTV		Fuerteventura	28 24 49.8 N	14 05 00.0 W	540.0	MDD
		Canary Islands, Spain	(28.4138)	(14.0833)		
		opened 198512.				
CGG			16 40 30.0 N	98 27 27.0 W	400.0	UNM
		Guerrero, Mexico	(16.6750)	(98.4575)		
CGY		Coligny	26 20 54.0 S	26 22 30.0 E	...	PRE
		Transvaal, South Africa	(26.3483)	(26.3750)		
		opened 1986.				
CHIE		El Hierro Las Playas	27 43 37.2 N	17 57 38.5 W	170.0	MDD
		Canary Islands, Spain	(27.7270)	(17.9607)		
		opened 198906.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks	
CHMZ		Choma	16 50 .. S	27 04 .. E	1278.0	LSZ	
		Zambia	(16.8333)	(27.0667)			
		opened 1987.					
CHOI		Coyote Hollow	43 18 45.0 N	111 12 45.9 W	2103.0	USBR	
		Idaho, U.S.A.	(43.3125)	(111.2127)			
		opened 198601.					
CHOR		Cobbage Hill	45 35 27.0 N	118 34 45.0 W	1076.0	SEA	
		Oregon, U.S.A.	(45.5908)	(118.5792)			
		opened 19860B. SEA code CHO.					
CHPM		Chioutla de Topio	18 17 55.0 N	98 36 47.6 W	1030.0	UNM	
		Puebla, Mexico	(18.2986)	(98.6132)			
		UNM code CHP.					
CIO		Comerino (Monte d'Ario)	43 11 42.0 N	13 08 38.4 E	956.0	SSO	
		Marche, Italy	(43.1950)	(13.1440)			
CIPM			17 57 43.2 N	97 51 14.4 W	...	UNM	
		Puebla, Mexico	(17.9620)	(97.8540)			
		UNM code CIP.					
CJR1		Cluj	46 45 58.0 N	23 33 05.0 E	345.0	BUC	
		Romania	(46.7661)	(23.5514)			
		opened 19851201.					
CKL		Chakachamna Lake	61 11 47.4 N	152 20 16.2 W	1265.0	AGS	
		Western Alaska, Alaska, U.S.A.	(61.1965)	(152.3378)			
		opened 1989.					
CLMC		Lago Calima	3 52 52.9 N	76 33 46.8 W	1480.0	UVC	
		Colombia	(3.8814)	(76.5630)			
CLN6		Carlsbad	32 31 15.0 N	103 52 45.0 W	1100.0	SNM	
		New Mexico, U.S.A.	(32.5208)	(103.8792)			
		SNM code CL6.					
CLNB		Carlsbad	32 15 51.6 N	103 52 42.6 W	1045.0	SNM	
		New Mexico, U.S.A.	(32.2643)	(103.8785)			
		SNM code CL2B.					
CMB	D	Columbia College	38 02 06.0 N	120 23 06.0 W	719.0	BRK	DWSS USTN
		Tuolumne County, California, U.S.A.	(38.0350)	(120.3850)			
		opened 19861106. MNLO code CMBB.					
CMCZ	R	Cairnmuir Mts.	45 08 57.0 S	169 16 30.0 E	1039.0	WELC	
		South Island, New Zealand	(45.1492)	(169.2750)			
CMG2		La Cumbre 2	14 39 39.0 N	89 47 12.0 W	1710.0	GCG	
		Guatemala	(14.6608)	(89.7867)			
		opened 1988. GCG code CM2.					
CMX		(Alternate Abbreviation for COLM)					
CNBA		Chernabura Island	54 49 13.2 N	159 35 18.0 W	90.0	PAL	
		Alaska Peninsula, Alaska, U.S.A.	(54.8203)	(159.5883)			
		PAL code CNB.					
CNIL		Conil	36 22 10.2 N	6 03 06.6 W	80.0	SFS	
		Spain	(36.3695)	(6.0518)			
		Also sent to NEIS by MDD.					
CNS		Constantine	36 22 12.0 N	6 36 45.0 E	670.0	ALG	
		Algeria	(36.3700)	(6.6125)			
		opened 19870907.					
COAS		Coatepeque	13 53 12.0 N	89 34 19.0 W	1260.0	SSS	
		El Salvador	(13.8867)	(89.5719)			
		SSS code COA.					
COLM		Colima	19 10 51.0 N	103 41 27.5 W	779.3	UNM	
		Colima, Mexico	(19.1808)	(103.6910)			
		opened 1986. UNM code COL.					
COLW		Colter Canyon	43 57 14.2 N	110 41 45.6 W	2079.0	USBR	
		Wyoming, U.S.A.	(43.9539)	(110.6960)			
		opened 198601.					
COM2	R	Comitan 2	16 14 30.0 N	92 08 13.8 W	...	UNM	
		Chiapas, Mexico	(16.2417)	(92.1372)			
COOL		Coolgardie	30 53 01.8 S	121 08 40.8 E	500.0	AUST	
		Western Australia, Australia	(30.8838)	(121.1447)			
		opened 198808.					
COTA		Cotacachi	0 20 06.0 N	78 20 16.2 W	4020.0	QUI	
		Ecuador	(0.3350)	(78.3378)			
		opened 198809.					
CPO5		(Alternate Abbreviation for CPOT)					
CRNM		Carthage	33 57 09.0 N	106 44 04.2 W	1662.0	SNM	
		New Mexico, U.S.A.	(33.9525)	(106.7345)			
		SNM code CAR.					
CROR		Criterion Ridge	44 58 58.2 N	120 59 17.4 W	1015.0	SEA	
		Oregon, U.S.A.	(44.9828)	(120.9882)			
		opened 19870B. SEA code VCR.					
CRZF	D	Crozet Islands	46 25 46.7 S	51 51 40.4 E	140.0	STR	GEOS
		Crozet Islands	(46.4296)	(51.8612)			
		opened 19860201.					
CSO	D	Casso	46 16 24.0 N	12 19 26.0 E	1070.0	TRI	
		Friuli-Venezia Giulia, Italy	(46.2733)	(12.3239)			
		opened 19880101.					
CSZ	D	Casera Razzo	46 28 23.0 N	12 37 02.0 E	1825.0	TRI	
		Friuli-Venezia Giulia, Italy	(46.4731)	(12.6172)			
		opened 19880101.					
CTAS	R	Couta	13 44 56.0 N	89 51 55.0 W	355.0	SSS	
		El Salvador	(13.7489)	(89.8653)			
		SSS code CTA.					
CTFE		Tenerife—Las Mesas	28 28 46.4 N	16 15 43.7 W	270.0	MDD	
		Canary Islands, Spain	(28.4796)	(16.2621)			
		opened 198301.					

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
CUMC		Nevado de Cumbal Colombia opened 1989.	0 57 38.4 N (0.9607)	77 52 20.4 W (77.8723)	3950.0	UVC
CUPM		Cuyaaca Puebla, Mexico UNM code CUP.	19 36 13.0 N (19.6036)	97 37 07.0 W (97.6186)	2450.0	UNM
CUSS		Cusmapa El Salvador SSS code CUS.	13 54 33.0 N (13.9092)	86 56 50.0 W (86.9472)	678.0	SSS
CUT		Chulitna Central Alaska, Alaska, U.S.A. opened 19860718.	62 24 16.8 N (62.4047)	150 16 10.2 W (150.2695)	168.0	GIA
CVLO	R	Collinsville Queensland, Australia opened 19850430. ODM code CVL.	20 35 24.0 S (20.5900)	147 36 32.4 E (147.6090)	102.0	ODM
CVM	R	Colonia del Valle Distrito Federal, Mexico	19 22 55.7 N (19.3821)	99 10 42.5 W (99.1785)	...	UNM
CVT		Castelvetrano Sicilia, Italy	37 40 40.8 N (37.6780)	12 47 31.2 E (12.7920)	...	ERC
CVVD		Valverde--Aguarijo Canary Islands, Spain opened 198502.	27 49 15.0 N (27.8208)	17 56 10.0 W (17.9361)	450.0	MDD
CWZ		Cowlitz River Washington, U.S.A. SEA code COW.	46 29 27.6 N (46.4910)	122 00 43.6 W (122.0121)	305.0	SEA
CXP		... Puebla, Mexico	18 16 31.4 N (18.2754)	97 08 30.3 W (97.1418)	...	UNM
CYK		Cape Yakataga Central Alaska, Alaska, U.S.A. opened 1989.	60 04 58.8 N (60.0830)	142 29 04.8 W (142.4847)	3.0	AGS
CZM		Crazy Man Mountain Washington, U.S.A. opened 198004. SEA code CMM.	46 26 07.0 N (46.4353)	122 30 21.0 W (122.5058)	620.0	SEA
DBCT		Belle View Chopil Dominica opened 198912.	15 16 10.6 N (15.2696)	61 21 12.2 W (61.3534)	527.0	TRN
DBY	C	Dabravo Slovenija, Yugoslavia 19890814-19890817.	45 59 56.4 N (45.9990)	13 31 40.8 E (13.5280)	100.0	LJU
DCZ	RD	Deep Cove South Island, New Zealand opened 199006.	45 28 04.2 S (45.4678)	167 09 13.2 E (167.1537)	10.0	WEL
DEG		La Desirade Guadeloupe opened 198803.	16 18 47.5 N (16.3132)	61 03 35.3 W (61.0598)	575.0	FDF
DEK		DeKalb Illinois, U.S.A. opened 198701.	41 55 59.2 N (41.9331)	88 45 54.0 W (88.7650)	259.0	
DGBT		Grand Bay Dominica	15 14 20.4 N (15.2390)	61 19 44.4 W (61.3290)	70.0	TRN
DHW2		Dyer Hill 2 Washington, U.S.A. SEA code DY2.	47 59 06.9 N (47.9853)	119 46 13.0 W (119.7703)	884.0	SEA
DIAC		La Diana Colombia opened 1987.	3 17 28.8 N (3.2913)	76 11 50.4 W (76.1973)	1520.0	UVC
DIW	RD	D'Urville Islands South Island, New Zealand opened 199006.	... 	... 	... 	WELW
DLBQ	RD	Dalbeg Queensland, Australia opened 19840409. QDM code DLB.	20 09 03.6 S (20.1510)	147 15 50.4 E (147.2640)	70.0	QDM
DLG		Dalgai Island Alaska Peninsula, Alaska, U.S.A.	55 08 27.6 N (55.1410)	161 50 09.0 W (161.8358)	367.0	PAL
DMMT		Dalton Mountain Montana, U.S.A. opened 19871119.	46 51 44.4 N (46.8623)	112 42 52.8 W (112.7147)	2039.0	BUT
DMW		Delta Microwave Central Alaska, Alaska, U.S.A. opened 1986.	64 03 22.8 N (64.0563)	145 43 52.2 W (145.7312)	346.0	GIA
DNGQ	RD	Daangara Queensland, Australia opened 19840229. QDM code DNG.	20 33 18.0 S (20.5550)	146 28 30.0 E (146.4750)	280.0	QDM
DOI	D	San Damiano Macra Piemonte, Italy	44 30 12.8 N (44.5036)	7 14 43.4 E (7.2454)	1015.0	ROM
DOT		Dot Lake Central Alaska, Alaska, U.S.A. opened 1986.	63 38 55.2 N (63.6487)	144 03 45.0 W (144.0625)	671.0	GIA
DPI		Dunn Peak Idaho, U.S.A. opened 198710.	47 17 19.2 N (47.2887)	116 53 55.8 W (116.8988)	1709.0	
DPMT		Pointe Michel Dominica	15 15 32.4 N (15.2590)	61 23 06.0 W (61.3850)	50.0	TRN
DPQ		Saint-Jean-des-Piles Quebec, Canada	46 40 49.8 N (46.6805)	72 46 38.4 W (72.7773)	167.0	ECTN
DPW		Davenport Washington, U.S.A. opened 198611. USTN opened 1988.	47 52 14.3 N (47.8706)	118 12 10.2 W (118.2028)	892.0	SEA USTN
DR01		Juana Nunez Dominican Republic	19 18 36.6 N (19.3102)	70 41 48.6 W (70.6968)	...	SDD

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
DR02	R	Jonico	19 21 06.6 N	70 46 31.2 W	...	SDD
		Dominican Republic	(19.3518)	(70.7753)		
		SDD code DR2.				
DR03		Pinotito	19 16 21.0 N	70 46 07.8 W	...	SDD
		Dominican Republic	(19.2725)	(70.7688)		
DR04		Monte Llono	19 27 55.8 N	70 21 28.2 W	...	SDD
		Dominican Republic	(19.4655)	(70.3578)		
DR05		Lo Lomoto	19 37 59.4 N	70 51 34.8 W	...	SDD
		Dominican Republic	(19.6332)	(70.8597)		
DR06		Lo Diferencio	19 13 58.2 N	70 59 29.4 W	...	SDD
		Dominican Republic	(19.2328)	(70.9915)		
DR07	R	Jorobocoo	19 04 59.4 N	70 36 18.6 W	...	SDD
		Dominican Republic	(19.0832)	(70.6052)		
		SDD code DR7.				
DR08		Lomo Lo Novizo	18 57 28.8 N	70 01 50.4 W	...	SDD
		Dominican Republic	(18.9580)	(70.0307)		
		SDD code NAVI.				
DR09	R	Piedro Blanco	18 48 40.8 N	70 24 59.6 W	...	SDD
		Dominican Republic	(18.8113)	(70.4166)		
		SDD code DR9.				
DR1		(Alternate Abbreviation for DR01)				
DR10	R	Alto de lo Bondero	18 48 29.4 N	70 41 16.2 W	...	SDD
		Dominican Republic	(18.8082)	(70.6878)		
DR11	R	Lo Yoyitas	18 28 13.8 N	70 14 04.2 W	...	SDD
		Dominican Republic	(18.4705)	(70.2345)		
DR12		Lomo Yerbo Bueno	18 47 15.0 N	69 22 52.2 W	...	SDD
		Dominican Republic	(18.7875)	(69.3812)		
DR13	R	Sonchez	19 14 25.8 N	69 35 19.2 W	...	SDD
		Dominican Republic	(19.2405)	(69.5887)		
DR14	R	Sierro Prieto	18 38 40.8 N	70 00 28.2 W	...	SDD
		Dominican Republic	(18.6447)	(70.0078)		
DR15	R	Siete Picos	18 45 01.2 N	70 10 38.4 W	...	SDD
		Dominican Republic	(18.7503)	(70.1773)		
DR3		(Alternate Abbreviation for DR03)				
DR4		(Alternate Abbreviation for DR04)				
DR5		(Alternate Abbreviation for DR05)				
DR6		(Alternate Abbreviation for DR06)				
DR8		(Alternate Abbreviation for DR08)				
DRE	D	Drenchio	46 10 24.0 N	13 38 36.0 E	810.0	TRI
		Friuli-Venezio Giulio, Italy	(46.1733)	(13.6433)		
		opened 19821220.				
DRRA		Deer Island	54 55 24.6 N	162 16 59.4 W	380.0	PAL
		Alasko Peninsulo, Alasko, U.S.A.	(54.9235)	(162.2832)		
		PAL code DRR.				
DSC		Scotts Head	15 12 30.3 N	61 21 54.6 W	50.0	TRN
		Dominico	(15.2084)	(61.3652)		
DSI		Dead Sea--Mitzpe Sholem	31 34 12.0 N	35 22 48.0 E	...	JER
		Israel	(31.5700)	(35.3800)		
DSIT	F	DSI--State Water Works Division, Ankara, Turkey				
DSVT		Soufriere Village	15 13 44.4 N	61 22 12.0 W	5.0	TRN
		Dominica	(15.2290)	(61.3700)		
DTMT		Tete Morne	15 13 58.8 N	61 21 07.2 W	496.0	TRN
		Dominica	(15.2330)	(61.3520)		
DUT		Dutch Harbor	53 53 54.0 N	166 32 12.0 W	60.0	GIA
		Aleution Islands, Alasko, U.S.A.	(53.8983)	(166.5367)		
DVD		Dovid	8 26 09.0 N	82 27 02.0 W	20.0	
		Panamo	(8.4358)	(82.4506)		
		opened 198606.				
DWK			25 11 12.0 N	92 01 21.6 E	...	JHI
		Meghaloya, India	(25.1867)	(92.0227)		
EALH		Alhamo de Murcio	37 51 25.8 N	1 25 13.8 W	260.0	MDD
		Spain	(37.8572)	(1.4205)		
		opened 198601.				
EAP	F	(phase code designation)				
EAPC	F	(phase code designation)				
EAPD	F	(phase code designation)				
EBAN		Bonos de lo Encino	38 09 51.6 N	3 47 08.4 W	460.0	MDD
		Spain	(38.1643)	(3.7857)		
		opened 198611.				
EBG		Ellensburg	46 54 35.0 N	120 34 06.0 W	805.0	SEA
		Washington, U.S.A.	(46.9097)	(120.5683)		
		SEA code ELL.				
EBI		Elk Butte	46 50 15.0 N	116 07 06.0 W	1765.0	
		Idoho, U.S.A.	(46.8375)	(116.1183)		
		opened 1987.				
ECHE		Chero	39 35 22.2 N	0 58 12.0 W	643.0	MDD
		Spain	(39.5895)	(0.9700)		
		opened 198611.				
ECRI		Cripan	42 36 36.0 N	2 30 40.0 W	807.0	MDD
		Spain	(42.6100)	(2.5111)		
		opened 198610.				
EDR	D	Drumtochty	56 55 08.2 N	2 32 20.9 W	388.0	BGS
		Scotland, United Kingdom	(56.9189)	(2.5391)		
		opened 19890112.				
EJC	R	Estacion Juarez	17 36 16.0 N	93 11 44.0 W	...	UNM
		Chiapas, Mexico	(17.6044)	(93.1956)		
EJIF		Jimena de la Frontera	36 27 04.8 N	5 28 07.8 W	260.0	MDD
		Spain	(36.4513)	(5.4688)		
		opened 19880520.				

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EJIM	C	Jimena de la Frontera Spain 19870404-19880519.	36 26 09.0 N (36.4358)	5 27 15.0 W (5.4542)	203.0	MDD
EKB	RD	Eskdalemuir Scotland, United Kingdom	55 20 15.0 N (55.3375)	3 10 38.0 W (3.1772)	356.0	BKN
EKC		Ekono Cameroon opened 19841201.	4 12 36.0 N (4.2100)	9 19 37.2 E (9.3270)	450.0	YND
EKR		Elk River Humboldt County, California, U.S.A. opened 19740620; BRK opened 1986. MNLO code EKRT.	40 41 43.2 N (40.6953)	124 08 22.2 W (124.1395)	49.0	BRK
ELMO		Cerro Morro Venezuela opened 1984.	8 00 46.8 N (8.0130)	71 43 00.8 W (71.7169)	2100.0	CAR
ELPA		Fila Paraiso Venezuela opened 1984.	7 47 30.1 N (7.7917)	71 43 31.1 W (71.7253)	1285.0	CAR
ELYF		Elaudy Aquitaine, France opened 198502?	43 10 12.0 N (43.1700)	0 59 30.0 W (0.9917)	700.0	PAR
EMEL		Melilla Ceuta and Melilla, Spain opened 198802.	35 18 00.0 N (35.3000)	2 57 24.0 W (2.9567)	85.0	MDD
EMN		Eldorado Mountains Nevada, U.S.A. opened 19880811.	35 55 17.9 N (35.9216)	114 45 15.2 W (114.7542)	789.5	USGS
EMON		Mondanedo Spain opened 198807.	43 26 10.0 N (43.4361)	7 19 47.4 W (7.3298)	615.0	MDD
EMUT		Emma Park Carbon County, Utah, U.S.A.	39 48 50.4 N (39.8140)	110 48 55.2 W (110.8153)	2268.0	SLC
ENH	D	Enshi Hubei, China (Mainland) opened 1987.	30 16 18.5 N (30.2718)	109 29 12.5 E (109.4868)	...	BJI
ENR		Entrocque Piemonte, Italy	44 13 35.8 N (44.2266)	7 25 13.1 E (7.4203)	1040.0	GEN
EPBC	F	(phase code designation)				
EPBD	F	(phase code designation)				
EPCP	F	(phase code designation)				
EPCR	F	(phase code designation)				
EPCS	F	(phase code designation)				
EPCU	F	(phase code designation)				
EPDR	F	(phase code designation)				
EPDU	F	(phase code designation)				
EPGC	F	(phase code designation)				
EPGD	F	(phase code designation)				
EPH		Ephrata Washington, U.S.A. opened 198303.	47 21 12.8 N (47.3536)	119 35 46.2 W (119.5962)	628.0	SEA
EPKP	F	(phase code designation)				
EPKS	F	(phase code designation)				
EPNC	F	(phase code designation)				
EPND	F	(phase code designation)				
EPP	F	(phase code designation)				
EPPP	F	(phase code designation)				
EPPS	F	(phase code designation)				
EPRU		Pruno Spain opened 198611.	36 57 57.6 N (36.9660)	5 13 52.8 W (5.2313)	560.0	MDD
EPS	F	(phase code designation)				
EPSS	F	(phase code designation)				
ERK		Elk Rock Washington, U.S.A. SEA code ELK.	46 18 20.0 N (46.3056)	122 20 27.0 W (122.3408)	1270.0	SEA
EROQ		Roquetas del Mar Spain opened 198702.	40 49 23.4 N (40.8232)	0 24 31.8 E (0.4088)	284.0	MDD
ERT	C	Erto Friuli-Venezia Giulia, Italy 19821124-19880101.	46 16 36.0 N (46.2767)	12 22 36.0 E (12.3767)	775.0	TRI
ERUA		La Rua Spain opened 198705.	42 23 33.6 N (42.3927)	7 08 33.0 W (7.1425)	431.0	MDD
ERZT		Erzurum Turkey	39 54 24.1 N (39.9067)	41 15 11.9 E (41.2533)	1955.0	MTAT
ESCP	F	(phase code designation)				
ESCS	F	(phase code designation)				
ESD		East Dome Washington, U.S.A. SEA code EDM.	46 11 50.4 N (46.1973)	122 09 00.0 W (122.1500)	1609.0	SEA
ESEL		Selva Balearic Islands, Spain opened 198807.	39 46 05.4 N (39.7682)	2 53 39.6 E (2.8943)	231.0	MDD
ESKP	F	(phase code designation)				
ESKS	F	(phase code designation)				
ESPP	F	(phase code designation)				
ESSP	F	(phase code designation)				
ESSS	F	(phase code designation)				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
ETER		Terrodos	42 18 05.4 N	2 51 19.8 E	238.0	MDD
		Spain	(42.3015)	(2.8555)		
		opened 198803.				
ETOR		Torete	40 49 10.0 N	2 03 18.6 W	1018.0	MDD
		Spain	(40.8194)	(2.0552)		
		opened 198803.				
ETW		Entiat	47 36 16.2 N	120 19 51.6 W	1475.0	SEA
		Washington, U.S.A.	(47.6045)	(120.3310)		
		opened 198610.				
EVIA		Vionos	38 38 13.2 N	2 30 15.0 W	1110.0	MDD
		Spain	(38.6370)	(2.5042)		
		opened 198511.				
EVR		Evritonio	38 55 00.0 N	21 48 31.2 E	1050.0	ATH
		Greece	(38.9167)	(21.8087)		
		opened 198906.				
EVV		El Vigio	18 27 23.4 N	95 20 57.6 W	...	UNM
		Veracruz, Mexico	(18.4565)	(95.3493)		
		opened 1988.				
EXP	F	(phase code designation)				
EXPC	F	(phase code designation)				
EXPD	F	(phase code designation)				
EXS	F	(phase code designation)				
EZAM		Zamans	42 08 56.4 N	8 41 42.0 W	398.0	MDD
		Spain	(42.1490)	(8.6950)		
		opened 198612.				
FAM		Famagusto	34 59 46.0 N	34 00 07.0 E	68.0	CSS
		Cyprus	(34.9961)	(34.0019)		
		opened 198702.				
FARM	R	.....	19 37 33.6 N	96 23 34.8 W	...	IIM
		Veracruz, Mexico	(19.6260)	(96.3930)		
		IIM code FAR.				
FAU	R	Forcello Aurine	...	...	...	TRI
		Veneto, Italy				
FDKY		Freedom	36 47 24.0 N	85 47 39.0 W	306.0	TVA
		Kentucky, U.S.A.	(36.7900)	(85.7942)		
		opened 19870327.				
FG2		Serracapriolo	41 48 13.0 N	15 10 17.0 E	200.0	FOG
		Puglio, Italy	(41.8036)	(15.1714)		
		Sent to NEIS by ROM.				
FG3		Monte Sont'Angelo	41 42 02.5 N	15 57 01.0 E	830.0	FOG
		Puglia, Italy	(41.7007)	(15.9503)		
		Sent to NEIS by ROM.				
FG4		Condelo	41 08 05.0 N	15 31 14.0 E	450.0	FOG
		Puglio, Italy	(41.1347)	(15.5206)		
		Sent to NEIS by ROM.				
FG5		Orsoro di Puglia	41 16 56.0 N	15 16 09.0 E	...	FOG
		Puglio, Italy	(41.2822)	(15.2692)		
		Sent to NEIS by ROM.				
FGO2		Fuego 2	14 26 19.2 N	90 50 09.0 W	1335.0	GCG
		Guatemala	(14.4387)	(90.8358)		
		opened 1986117 GCG code FG2.				
FGTQ	R	Fig Tree	20 58 12.4 S	147 46 35.4 E	220.0	QDM
		Queensland, Australia	(20.9701)	(147.7765)		
		opened 19870803. QDM code FGT.				
FIG		Monte Figo	37 06 02.0 N	7 49 42.0 W	310.0	INMG
		Portugal	(37.1006)	(7.8283)		
		opened 19840330.				
FIN		Finale Ligure	44 12 33.0 N	8 12 30.0 E	590.0	GEN
		Liguria, Italy	(44.2092)	(8.2083)		
FIPE		Filo de Piedro	7 58 10.9 N	71 15 04.0 W	600.0	CAR
		Venezuela	(7.9697)	(71.2511)		
		opened 1984.				
FISA		Fila de Sacuroguo	11 15 53.3 N	69 20 00.0 W	600.0	CAR
		Venezuela	(11.2648)	(69.3333)		
		opened 198612.				
FKO		Franklin	35 15 40.7 N	97 23 10.0 W	351.0	TUL
		Oklahoma, U.S.A.	(35.2613)	(97.3861)		
		opened 1987.				
FL2		Flat Top 2	46 11 47.0 N	122 21 01.0 W	1378.0	SEA
		Washington, U.S.A.	(46.1964)	(122.3503)		
FLKY		Flemingsburg	38 25 33.6 N	83 45 03.6 W	280.0	BHKY
		Kentucky, U.S.A.	(38.4260)	(83.7510)		
		opened 1989.				
FMKY		Fulghom (Clinton)	36 39 50.4 N	88 54 32.4 W	152.0	BHKY
		Kentucky, U.S.A.	(36.6640)	(88.9090)		
		opened 19861030.				
FNA		Florina	40 47 01.8 N	21 22 34.2 E	750.0	THE
		Greece	(40.7838)	(21.3762)		
		opened 198912.				
FONT		Fontmartina	41 45 42.0 N	2 26 00.0 E	...	
		Spain	(41.7617)	(2.4333)		
		Sent to NEIS by MDD.				
FORR		Forrest	30 51 .. S	128 06 .. E	...	AUST
		Western Australia, Australia	(30.8500)	(128.1000)		
		opened 1988.				
FOXC	R	Fox Airport	34 43 58.8 N	118 13 50.4 W	716.0	PAS
		Los Angeles County, California, U.S.A.	(34.7330)	(118.2307)		
		opened 198103. PAS code FOX.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
FRS		Fouresmith	29 45 00.0 S (29.7500)	25 19 18.0 E (25.3217)	...	PRE
		Orange Free State, South Africa				
		opened 1985.				
FSI		Fosdinova	44 07 34.0 N (44.1261)	10 01 31.0 E (10.0253)	...	ROM
		Toscana, Italy				
FSP		False Pass	54 57 12.0 N (54.9533)	163 27 24.0 W (163.4567)	200.0	PAL
		Alaska Peninsula, Alaska, U.S.A.				
FST	C	Fort Simpson	61 50 24.0 N (61.8400)	121 16 30.0 W (121.2750)	175.0	OTTR
		Northwest Territories, Canada				
		19860109-19870331.				
FST1	C	Fort Simpson	61 47 09.0 N (61.7858)	121 15 32.0 W (121.2589)	175.0	OTTR
		Northwest Territories, Canada				
		19851006-19860109. Temporary station,				
		replaced by FST.				
FUG		Fuego 3	14 26 52.2 N (14.4478)	90 50 31.2 W (90.8420)	1505.0	GCG
		Guatemala				
		opened 198703.				
FVI	D	Farni Avoltri	46 35 35.7 N (46.5932)	12 46 51.3 E (12.7809)	...	ROM
		Friuli-Venezia Giulia, Italy				
GAM	R	Garm	...	...	...	
		Tajik S.S.R., U.S.S.R.				
GANF		Ganagobie	43 59 51.3 N (43.9976)	5 54 31.2 E (5.9087)	650.0	STR
		Provence-Cote d'Azur, France				
GAZ		Gaziantep	37 10 19.7 N (37.1721)	37 12 40.8 E (37.2113)	100.0	ISK
		Turkey				
		opened 198907.				
GBZT		Gebze	40 47 20.0 N (40.7889)	29 26 42.0 E (29.4450)	184.0	
		Turkey				
GCAZ		Grand Canyon	36 02 38.4 N (36.0440)	112 07 40.8 W (112.1280)	...	FLAG
		Arizona, U.S.A.				
		opened 1987.				
GECU		Ecuador Network	0 19 01.8 S (0.3172)	78 11 22.8 W (78.1897)	4350.0	QUI
		Ecuador				
GELF		Grande-Etaile	43 23 00.9 N (43.3836)	5 25 39.0 E (5.4275)	550.0	STR
		Provence-Cote d'Azur, France				
GGP		Guaguo Pichincha	0 10 28.2 S (0.1745)	78 35 45.6 W (78.5960)	4600.0	QUI
		Ecuador				
		opened 198809.				
GIBL		Gibalbin	36 49 35.4 N (36.8265)	5 57 10.2 W (5.9528)	412.0	SFS
		Spain				
GIO	R	Monte San Gregorio	37 34 00.0 N (37.5667)	15 06 30.0 E (15.1083)	330.0	ERC
		Sicilia, Italy				
		opened 198902.				
GKN		Garkha	28 00 10.8 N (28.0030)	84 38 13.2 E (84.6370)	1478.0	DMN
		Nepal				
		opened 198307.				
GL2		New Goldendale	45 57 35.0 N (45.9597)	120 49 22.5 W (120.8229)	1000.0	SEA
		Washington, U.S.A.				
GLH		Golan--Tel Qazir	32 42 36.0 N (32.7100)	35 39 36.0 E (35.6600)	...	JER
		Israel				
		opened 1986.				
GLK		Glacier Lake	46 33 50.2 N (46.5639)	121 36 30.7 W (121.6085)	1320.0	SEA
		Washington, U.S.A.				
GMB		Gamborie d'Aspromonte	38 10 03.0 N (38.1675)	15 51 48.0 E (15.8633)	1350.0	ERC
		Calabria, Italy				
GMG		Grassy Mountain	34 51 45.6 N (34.8627)	84 40 13.2 W (84.6703)	1097.0	TEIC
		Georgia, U.S.A.				
		opened 198511.				
GMO		Grizzlie Mountain	44 26 20.8 N (44.4391)	120 57 22.3 W (120.9562)	1689.0	SEA
		Oregon, U.S.A.				
GOGC	R	Isla Gorgona	...	...	...	UVC
		Colombia				
GRI	D	Girifalco	38 49 01.7 N (38.8171)	16 25 12.5 E (16.4201)	480.0	ROM
		Calabria, Italy				
GRI*		(Alternate Abbreviation for GR1TX)				
GROR		Grindstone Mountain	45 21 04.5 N (45.3512)	123 39 43.0 W (123.6619)	945.0	SEA
		Oregon, U.S.A.				
		opened 198605. SEA code GRO.				
GT2		Goat Mountain	45 09 20.0 N (45.1556)	122 16 15.0 W (122.2708)	823.0	SEA
		Oregon, U.S.A.				
		opened 198509. SEA code VG2.				
GUAC		Guacamaya	10 11 31.2 N (10.1920)	67 16 16.0 W (67.2711)	1330.0	CAR
		Venezuela				
		opened 198706.				
GUAN		Valle Guanape	9 57 27.0 N (9.9575)	65 38 52.1 W (65.6478)	1107.0	CAR
		Venezuela				
		opened 1984.				
GUAY	R	Guayacanes	18 26 24.0 N (18.4400)	69 26 00.0 W (69.4333)	...	SDD
		Dominican Republic				
		opened 19860710.				
GUB	R	Guba	10 40 .. S (10.6667)	26 26 .. E (26.4333)	...	
GULW		Guler Mountain	45 55 27.0 N (45.9242)	121 35 44.0 W (121.5956)	1189.0	SEA
		Washington, U.S.A.				
		opened 19860731. SEA code GUL.				
GUM2		Guadalajara 2	20 40 .. N (20.6667)	103 18 .. W (103.3000)	1543.0	UNM
		Jalisco, Mexico				
GUN		Gumba	27 54 38.2 N (27.9106)	85 52 45.8 E (85.8794)	2900.0	DMN
		Nepal				
		opened 198503.				

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GUO	R	.....	16 05 55.2 N	97 03 39.6 W	244.0	UNM
		Oaxaca, Mexico	(16.0987)	(97.0610)		
GWY		Greenwater Valley	36 11 06.6 N	116 40 10.8 W	1540.0	USGS
		Inyo County, California, U.S.A.	(36.1852)	(116.6697)		
		opened 19880401.				
HAKY		Hadley Quad	37 06 20.5 N	86 35 05.8 W	169.0	TVA
		Kentucky, U.S.A.	(37.1057)	(86.5849)		
		opened 19870626.				
HAT		Hottorf	50 49 46.9 N	9 56 39.1 E	-592.0	
		Hessen, Fed. Rep. of Germany	(50.8297)	(9.9442)		
		opened before 1981.				
HDW		Hoodsport	47 38 54.6 N	123 03 15.2 W	1006.0	SEA
		Washington, U.S.A.	(47.6485)	(123.0542)		
HEA	D	Headley	51 21 30.0 N	1 15 50.0 W	114.0	BKN
		England, United Kingdom	(51.3583)	(1.2639)		
HHH		Horse Heaven Hills	46 10 18.0 N	119 23 01.0 W	490.0	SEA
		Washington, U.S.A.	(46.1717)	(119.3836)		
		opened 198703. SEA code HH2.				
HHWY	R	High Hoyland	53 35 12.1 N	1 35 50.6 W	205.0	QMB
		England, United Kingdom	(53.5867)	(1.5974)		
HIA	D	Hailar	49 16 00.0 N	119 44 30.0 E	610.0	BJI
		Heilangjiang, China (Mainland)	(49.2667)	(119.7417)		
		opened 198703.				
HIRJ	R	Hiroshima 2	34 25 42.0 N	132 33 54.0 E	412.0	JMA
		Hiroshima, Honshu, Japan	(34.4283)	(132.5650)		
HITJ		.....	29 44 34.8 N	35 50 27.6 E	1235.0	JSO
		Jordon	(29.7430)	(35.8410)		
		opened 1989.				
HLBJ		Hallobat	32 04 39.0 N	36 18 09.0 E	827.0	JSO
		Jordon	(32.0775)	(36.3025)		
		1987-19871024; reopened 1989.				
HLGA	R	Haflong	25 09 36.0 N	93 01 00.0 E	662.0	JHI
		Assam, India	(25.1600)	(93.0167)		
		opened 198408.				
HMCY		Holy Mount Cemetery	40 57 53.4 N	73 48 11.4 W	245.0	PAL
		New York, U.S.A.	(40.9648)	(73.8032)		
		opened 198512. PAL code HMC.				
HMNA	R	Hamren	25 55 24.0 N	92 36 30.0 E	...	JHI
		Assam, India	(25.9233)	(92.6083)		
		opened 198501.				
HOBC		El Hobo	4 21 17.4 N	76 08 07.8 W	1180.0	UVC
		Colombia	(4.3548)	(76.1355)		
		opened 1987.				
HOGH		Ho	6 36 33.0 N	0 26 42.0 E	372.0	KUK
		Ghana	(6.6092)	(0.4450)		
		opened 1987.				
HONU		Honeyville	41 36 36.0 N	111 55 01.2 W	1515.0	SLC
		Cache County, Utah, U.S.A.	(41.6100)	(111.9170)		
		opened 19890613.				
HOQC		La Horqueta	3 28 04.8 N	76 38 01.2 W	2220.0	UVC
		Colombia	(3.4680)	(76.6337)		
		opened 1987.				
HQL		Haql	29 16 12.0 N	35 03 00.0 E	75.0	RYD
		Saudi Arabia	(29.2700)	(35.0500)		
		opened 1986.				
HSHJ		.....	29 42 06.0 N	35 40 00.0 E	1100.0	JSO
		Jordan	(29.7017)	(35.6667)		
		opened 198909.				
HSR		South Ridge	46 10 22.2 N	122 10 58.2 W	1774.0	SEA
		Washington, U.S.A.	(46.1728)	(122.1828)		
HUG		Huitzitzil	14 01 14.4 N	91 19 24.0 W	...	GCG
		Guatemala	(14.0207)	(91.3233)		
		opened 198712.				
HUO	R	Hudson	50 04 50.0 N	92 05 53.0 W	367.0	OTTR
		Ontario, Canada	(50.0806)	(92.0981)		
		opened 19861002.				
HVAR		Hvar	43 10 40.8 N	16 26 52.8 E	250.0	ZAG
		Hrvatska (Croatia), Yugoslavia	(43.1780)	(16.4480)		
		opened 19861001.				
IAP	F	(phase code designation)				
IAPC	F	(phase code designation)				
IAPD	F	(phase code designation)				
IECU		Ecuador Network	0 28 30.0 S	78 18 24.0 W	3720.0	QUI
		Ecuador	(0.4750)	(78.3067)		
IGT		Igoumenitso	39 31 57.0 N	20 19 57.0 E	320.0	THE
		Greece	(39.5325)	(20.3325)		
		opened 198906.				
IHA		Instituto Hidrografico de la Armada	33 01 32.7 S	71 38 27.9 W	88.5	
		Valparaiso, Chile	(33.0257)	(71.6411)		
		opened 198801.				
IHC	R	Ixhuatan	17 17 26.0 N	93 00 30.0 W	...	IIM
		Mexico	(17.2906)	(93.0083)		
IIA		Altzomoni	19 08 58.2 N	98 39 30.0 W	...	IIM
		Mexico, Mexico	(19.1495)	(98.6583)		
		Sent to NEIS by UNM.				
IIJ		Jocotitlan	19 44 02.4 N	99 44 02.4 W	3900.0	IIM
		Mexico, Mexico	(19.7340)	(99.7340)		
		Also sent to NEIS by UNM.				
IIO	R	.....	19 35 31.2 N	98 43 26.4 W	...	IIM
		Tlaxcala, Mexico	(19.5920)	(98.7240)		

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IISM		Ciudad Serdan	18 59 16.8 N (18.9880)	97 22 36.6 W (97.3768)	...	IIM
		Puebla, Mexico				
		Also sent to NEIS by UNM. IIM and UNM code IIS.				
IKL		Isikli	36 14 19.0 N (36.2386)	33 41 07.0 E (33.6853)	120.0	ISK
		Turkey				
		opened 198801.				
ILIM		Iliamna	60 04 48.6 N (60.0802)	152 57 34.2 W (152.9595)	823.0	AGS
		Western Alaska, Alaska, U.S.A.				
		AGS code ILI.				
IMI		Imperia	43 54 36.6 N (43.9102)	7 53 21.6 E (7.8893)	860.0	GEN
		Liguria, Italy				
IMM	R	Islas Marias	...	...	...	UNM
		Nayarit, Mexico				
IMU		Iron Mountain	38 37 59.2 N (38.6331)	113 09 30.2 W (113.1584)	1832.0	SLC
		Millard County, Utah, U.S.A.				
		opened 19880929.				
IPA		Iporanga	5 41 45.0 S (5.6958)	36 51 22.0 W (36.8561)	65.0	
		Rio Grande do Norte, Brazil				
		opened 198708.				
IPBC	F	(phase code designation)				
IPBD	F	(phase code designation)				
IPCP	F	(phase code designation)				
IPCR	F	(phase code designation)				
IPCS	F	(phase code designation)				
IPCU	F	(phase code designation)				
IPDR	F	(phase code designation)				
IPDU	F	(phase code designation)				
IPGC	F	(phase code designation)				
IPGD	F	(phase code designation)				
IPKP	F	(phase code designation)				
IPKS	F	(phase code designation)				
IPNC	F	(phase code designation)				
IPND	F	(phase code designation)				
IPP	F	(phase code designation)				
IPPP	F	(phase code designation)				
IPPS	F	(phase code designation)				
IPS	F	(phase code designation)				
IPSS	F	(phase code designation)				
ISCP	F	(phase code designation)				
ISCS	F	(phase code designation)				
ISKP	F	(phase code designation)				
ISKS	F	(phase code designation)				
ISPP	F	(phase code designation)				
ISSP	F	(phase code designation)				
ISSS	F	(phase code designation)				
ITU		Istanbul	41 06 22.2 N (41.1062)	29 00 53.4 E (29.0148)	98.0	IST WWSS
		Turkey				
		opened 19890102.				
IVAG		Clark Hill Reservoir	34 16 19.6 N (34.2721)	82 44 45.6 W (82.7460)	168.0	ATL
		Georgia, U.S.A.				
IVF		Ivanof Bay	55 53 45.0 N (55.8958)	159 31 48.0 W (159.5300)	275.0	PAL
		Alaska Peninsula, Alaska, U.S.A.				
IXC	R	Ixtacamitan	17 25 38.0 N (17.4272)	93 06 03.0 W (93.1008)	...	UNM
		Chiapas, Mexico				
IXP	F	(phase code designation)				
IXPC	F	(phase code designation)				
IXPD	F	(phase code designation)				
IXS	F	(phase code designation)				
JARJ		Jerash	32 14 15.0 N (32.2375)	35 56 46.8 E (35.9463)	840.0	JSO
		Jordan				
JBO		Jordan Butte	45 27 41.7 N (45.4616)	119 50 13.2 W (119.8370)	645.0	SEA
		Oregon, U.S.A.				
		opened 198209.				
JCM		Jacotitlan	19 44 03.0 N (19.7342)	99 45 40.0 W (99.7611)	...	UNM
		Mexico, Mexico				
		opened 1988.				
JDN	R	Jordin	17 09 54.0 N (17.1650)	92 30 00.0 W (92.5000)	920.0	IIM
		Chiapas, Mexico				
JHNI	R	Jhansi	25 27 .. N (25.4500)	78 37 .. E (78.6167)	250.0	NDI
		Uttar Pradesh, India				
JIL	R	Jilotepec	19 37 50.4 N (19.6307)	96 56 00.0 W (96.9333)	1330.0	IIM
		Veracruz, Mexico				
JIZN		Jizan	16 57 32.4 N (16.9590)	42 49 30.0 E (42.8250)	100.0	RYD
		Saudi Arabia				
		opened 198902.				
JLK		June Lake	46 08 48.0 N (46.1467)	122 09 10.8 W (122.1530)	1049.0	SEA
		Washington, U.S.A.				
		SEA code JUN.				
JMU		Jammu	32 43 .. N (32.7167)	74 54 .. E (74.9000)	...	NDI
		Jammu and Kashmir, India				
JTS		Juntas de Abongares	10 17 27.0 N (10.2908)	84 57 09.0 W (84.9525)	340.0	HDC
		Costa Rica				
		opened 198806.				
JVI		Jordan Valley--Mount Mosuo	31 55 48.0 N (31.9300)	35 21 00.0 E (35.3500)	...	JER
		Israel				
KAP		Karpathos	35 33 03.0 N (35.5508)	27 10 28.8 E (27.1747)	250.0	ATH
		Greece				
		opened 1988.				

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KBB		Kelsey Boy British Columbia, Canada opened 19860823.	50 23 05.0 N (50.3847)	126 01 39.0 W (126.0275)	1310.0	OTTR
KBC		Kumbo Cameroon opened 19841116; moved slightly 19850317. Old position 4.652N, 9.412E, 375m.	4 39 10.8 N (4.6530)	9 24 46.8 E (9.4130)	375.0	YND
KBR		Konchanaburi Thailand opened 198807.	14 01 .. N (14.0167)	99 32 .. E (99.5333)	28.0	CHG
KEK		Kerkira Greece opened 198903.	39 42 46.8 N (39.7130)	19 47 55.2 E (19.7987)	280.0	ATH
KHL		Koroholli Turkey opened 198808.	38 19 23.5 N (38.3232)	29 31 23.5 E (29.5232)	940.0	ISK
KHZ	D	Kahutara South Island, New Zealand opened 198811.	42 25 04.8 S (42.4180)	173 32 25.2 E (173.5403)	50.0	WEL
KIV	D	Kislovodsk Stavropolskiy Kray, R.S.F.S.R., U.S.S.R. IDA opened 1988.	43 57 .. N (43.9500)	42 41 .. E (42.6833)	1200.0	MOS IDA IRIS
KKB		Krupnik Bulgaria opened 1988.	41 52 00.1 N (41.8667)	23 04 59.9 E (23.0833)	434.0	SOF
KLP	R	Kalpa Himachal Pradesh, India	31 32 .. N (31.5333)	78 15 .. E (78.2500)	2724.0	NDI
KMC		Kompina Cameroon opened 19841214.	4 23 09.6 N (4.3860)	9 34 40.8 E (9.5780)	85.0	YND
KMOR		Kings Mountain Oregon, U.S.A. opened 198209. SEA code KMO.	45 38 07.8 N (45.6355)	123 29 22.2 W (123.4895)	975.0	SEA
KOGH		Koforidua Ghana opened 1987.	6 05 10.0 N (6.0861)	0 14 38.0 W (0.2439)	483.0	KUK
KOSW		Kosmos Washington, U.S.A. SEA code KOS.	46 27 40.8 N (46.4613)	122 11 25.8 W (122.1905)	828.0	SEA
KOT		Kottomio Egypt	29 55 48.0 N (29.9300)	31 49 48.0 E (31.8300)	...	HLW
KPL		Plockton Scotland, United Kingdom opened 19860418.	57 20 20.8 N (57.3391)	5 39 09.7 W (5.6527)	36.0	BGS
KSL		Kostellorizon Greece opened 1988.	36 07 08.4 N (36.1190)	29 35 00.0 E (29.5833)	100.0	ATH
KSZ	R	Kasomo Zambia	...	...	...	
KTD		Kalmit Rheinland-Pfalz, Fed. Rep. of Germany opened before 197410.	49 19 12.6 N (49.3202)	8 05 01.2 E (8.0837)	670.0	KRW
KTH		Kantishna Hills Central Alaska, Alaska, U.S.A. opened 1989?	63 33 10.8 N (63.5530)	150 55 18.0 W (150.9217)	975.0	GIA
KTK1		Kautokeino Norway opened 1989.	69 00 42.1 N (69.0117)	23 14 13.7 E (23.2371)	340.0	BER
KTK2		Kautokeino Norway opened 1989.	69 00 27.0 N (69.0075)	23 14 14.5 E (23.2374)	...	BER
KTK3		Kautokeino Norway opened 1989.	69 00 24.0 N (69.0067)	23 14 06.7 E (23.2352)	...	BER
KTK4	R	Kautokeino Norway	69 00 29.0 N (69.0081)	23 14 05.1 E (23.2347)	...	BER
KTK5	R	Kautokeino Norway	69 00 34.5 N (69.0096)	23 13 38.3 E (23.2273)	...	BER
KTK6		Kautokeino Norway	69 00 36.0 N (69.0100)	23 14 09.6 E (23.2360)	340.0	BER
KUZ	RD	Kuootunu North Island, New Zealand opened 199004.	36 44 49.5 S (36.7471)	175 43 11.6 E (175.7199)	40.0	WEL
KYR	R	Koyrak Turkey opened 198801.	36 21 06.0 N (36.3517)	33 31 31.0 E (33.5253)	1210.0	ISK
LACI		Loci Greece opened 198704.	41 38 10.7 N (41.6363)	19 42 33.8 E (19.7094)	40.0	TIR
LACU	R	La Cuchilla Venezuela opened 1984.	7 52 36.1 N (7.8767)	71 23 26.2 W (71.3906)	800.0	CAR
LADA	R	La Danta Venezuela opened 1984.	7 56 20.4 N (7.9390)	71 36 46.8 W (71.6130)	1200.0	CAR
LAGM	R	 Oaxaca, Mexico UNM code LAG.	16 06 15.0 N (16.1042)	97 04 40.2 W (97.0778)	201.0	UNM
LAGU	R	Laguneta Venezuela	9 46 12.0 N (9.7700)	69 45 54.0 W (69.7650)	800.0	CAR

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
LAL		Leola	34 26 12.0 N	87 20 13.8 W	320.0	TVA
		Alabama, U.S.A.	(34.4367)	(87.3372)		
		opened 19890328.				
LAPE	R	Lo Pedrero	7 33 28.8 N	71 34 32.2 W	327.0	CAR
		Venezuela	(7.5580)	(71.5756)		
		opened 1984.				
LAZ		Ladron	34 24 07.2 N	107 08 21.6 W	1853.0	SNM
		New Mexico, U.S.A.	(34.4020)	(107.1393)		
LAZM	R	Lazaro Cardenas	18 02 09.6 N	102 12 18.0 W	...	UNM
		Michoacan, Mexico	(18.0360)	(102.2050)		
		UNM code LAZ.				
LBL		Loubilhac	45 13 57.0 N	3 14 49.0 E	...	STR
		Auvergne, France	(45.2325)	(3.2469)		
LCCH		Los Cruces	33 28 31.2 S	71 34 10.8 W	180.0	SAN
		Santiago, Chile	(33.4753)	(71.5697)		
		opened 19871117.				
LDVG		Clark Hill Reservoir	34 08 52.1 N	82 41 00.0 W	162.0	ATL
		Georgia, U.S.A.	(34.1478)	(82.6833)		
LEGH		Legon	5 38 54.0 N	0 10 53.0 W	91.0	KUK
		Ghana	(5.6483)	(0.1814)		
		opened 1987?				
LENM		Lemitar	34 09 55.8 N	106 58 27.0 W	1698.0	SNM
		New Mexico, U.S.A.	(34.1655)	(106.9742)		
		SNM code LEM.				
LFK		Lefkose	35 16 45.1 N	33 31 57.0 E	690.0	ISK
		Cyprus	(35.2792)	(33.5325)		
		opened 19870101.				
LFU		Lo Fuente	13 44 55.2 N	89 06 49.8 W	732.0	SSS
		El Salvador	(13.7487)	(89.1138)		
LHIS		Lihir Island	3 07 01.2 S	152 37 58.8 E	10.0	PMG
		New Ireland, Popua New Guinea	(3.1170)	(152.6330)		
		opened 19870622.				
LIBM		.....	17 17 38.4 N	93 00 43.2 W	...	UNM
		Chiapas, Mexico	(17.2940)	(93.0120)		
		UNM code LIB.				
LIJA		Lijar	36 53 54.0 N	5 24 42.0 W	970.0	SFS
		Spain	(36.8983)	(5.4117)		
		opened 198711.				
LIMM	R	.....	19 40 49.2 N	96 31 41.3 W	200.0	IIM
		Verocruz, Mexico	(19.6803)	(96.5281)		
		IIM code LIM.				
LJI	R	Lemhi Junction	43 49 26.4 N	112 50 33.6 W	1634.0	USGS
		Idaho, U.S.A.	(43.8240)	(112.8427)		
LJS	R	.....	17 59 34.8 N	93 29 16.8 W	...	IIM
		Mexico	(17.9930)	(93.4880)		
LJY		Lo Joyo	34 20 11.4 N	106 53 45.0 W	1532.0	SNM
		New Mexico, U.S.A.	(34.3365)	(106.8958)		
LKGA		Lookout Mountain	34 37 24.0 N	85 28 19.8 W	655.0	TVA
		Georgia, U.S.A.	(34.6233)	(85.4722)		
		opened 19851205.				
LKO		Korhogo	9 32 39.8 N	5 35 20.0 W	435.0	LIC
		Ivory Coast	(9.5444)	(5.5889)		
		opened 198906.				
LLAV		El Llanito	10 28 30.0 N	66 48 28.8 W	907.0	CAR
		Venezuela	(10.4750)	(66.8080)		
		opened 1988.				
LLJ		.....	16 33 51.0 N	98 53 04.8 W	...	UNM
		Guerrero, Mexico	(16.5642)	(98.8847)		
LLRI	R	Little Lost River	43 43 21.6 N	112 55 57.6 W	1469.0	USGS
		Idaho, U.S.A.	(43.7227)	(112.9327)		
LMX		Lo Meso de Andrade	32 06 31.2 N	114 57 37.8 W	...	ECX
		Sonora, Mexico	(32.1087)	(114.9605)		
		opened 1988.				
LNO	D	Leonord	35 54 45.0 N	95 47 21.1 W	-506.0	TUL
		Oklahoma, U.S.A.	(35.9125)	(95.7892)		
		opened 19881207.				
LNOR		Lincton Mountain	45 52 15.8 N	118 17 06.0 W	768.0	SEA USTN
		Oregon, U.S.A.	(45.8711)	(118.2850)		
		opened 198608. SEA code LNO. USTN opened 1988.				
LOF		Lofoten	68 07 51.6 N	13 32 31.2 E	80.0	BER
		Norway	(68.1310)	(13.5420)		
		opened 198701.				
LOHW		Long Hollow	43 36 44.7 N	110 36 13.5 W	2121.0	USBR
		Wyoming, U.S.A.	(43.6124)	(110.6037)		
		opened 198601.				
LOMF		Lomont du Chamesol	47 21 03.0 N	6 49 39.0 E	1000.0	STR
		Franche Comte, France	(47.3508)	(6.8275)		
LOMO	R	Loma en Medio	18 52 36.0 N	68 51 40.8 W	...	SDD
		Dominican Republic	(18.8767)	(68.8613)		
LORO		Los Roques	11 57 28.1 N	66 40 27.1 W	20.0	CAR
		Venezuela	(11.9578)	(66.6742)		
		opened 1984.				
LPD		Lampedusa	35 30 41.0 N	12 35 42.2 E	20.0	ERC
		Italy	(35.5114)	(12.5951)		
		opened 198905.				
LPI		Lipari	38 29 22.0 N	14 56 00.0 E	594.0	ERC
		Lipari Islands, Italy	(38.4894)	(14.9333)		
		opened 19871211.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
LPL		Lo Plogne Rhone-Alpes, France opened 198608.	45 30 59.2 N (45.5164)	6 43 56.6 E (6.7324)	2070.0	LDG
LRCZ	R	Leoning Rock South Island, New Zealand	45 03 55.0 S (45.0653)	169 20 46.0 E (169.3461)	1533.0	WELC
LRDO		Laredo Arkansas, U.S.A. opened 198812.	35 58 09.0 N (35.9692)	90 41 43.2 W (90.6953)	137.0	TEIC
LSCZ	R	Lilico Spur South Island, New Zealand	45 06 59.0 S (45.1164)	169 22 09.0 E (169.3692)	759.0	WELC
LSD		Ceresole Reole Piemonte, Italy	45 27 27.6 N (45.4577)	7 09 20.4 E (7.1557)	2284.0	GEN
LSK		Leskovik Albonio	40 09 .. N (40.1500)	20 36 .. E (20.6000)	920.0	TIR
LSO	R	Little Silver Creek Oklahoma, U.S.A.	...	...	...	TUL
LSR	D	Lussari Friuli-Venezia Giulia, Italy opened 19880101.	46 28 33.0 N (46.4758)	13 31 40.0 E (13.5278)	1750.0	TRI
LTMT		Little Table Mountain Montana, U.S.A. opened 19890914.	44 31 33.0 N (44.5258)	112 06 36.0 W (112.1100)	2603.0	BUT
LTZ	D	Lake Taylor South Island, New Zealand opened 19891010.	42 46 58.2 S (42.7828)	172 16 07.8 E (172.2688)	640.0	WEL
LVGX		La Villita Guerrero, Mexico Strong-motion station.	18 02 42.0 N (18.0450)	102 10 30.0 W (102.1750)	...	LJC
LVI		Isola di Levonzo Sicilia, Italy	37 59 08.1 N (37.9856)	12 20 14.7 E (12.3374)	20.0	ERC
LVMM		... Veracruz, Mexico UNM code LVM.	19 36 05.2 N (19.6014)	96 23 43.8 W (96.3955)	160.0	UNM
LVP		Lakeview Peak Washington, U.S.A.	46 04 06.0 N (46.0683)	122 24 30.0 W (122.4083)	1170.0	SEA
LVVM		Laguna Verde Veracruz, Mexico opened 1988. UNM code LVV.	19 44 16.8 N (19.7380)	96 26 55.8 W (96.4488)	...	UNM
LXO	R	Lo Grande 3 Quebec, Canada opened 19861216.	53 43 20.4 N (53.7223)	76 01 20.0 W (76.0222)	195.0	OTTR
MAF		Mazirat Auvergne, France opened 19850711.	46 13 17.3 N (46.2215)	2 33 59.2 E (2.5664)	470.0	LDG
MAHZ	R	Mahia North Island, New Zealand	39 11 18.0 S (39.1883)	177 52 51.0 E (177.8808)	336.0	WELH
MANM	R	... Veracruz, Mexico IIM code MAN.	19 35 24.0 N (19.5900)	96 25 00.0 W (96.4167)	2.0	IIM
MARA		Maracay Venezuela opened 1984.	10 19 26.0 N (10.3239)	67 36 24.8 W (67.6069)	1200.0	CAR
MARM	R	... Chiapas, Mexico IIM code MAR.	17 13 04.8 N (17.2180)	92 41 34.8 W (92.6930)	...	IIM
MAVI		Loma El Jaboban Dominican Republic opened 19860907.	19 14 44.4 N (19.2457)	69 54 42.0 W (69.9117)	...	SDD
MBET		Bethel Montserrat opened 198907.	16 44 29.0 N (16.7414)	62 09 47.2 W (62.1631)	350.0	TRN
MBH		Mount Berech Israel	29 46 12.0 N (29.7700)	34 52 48.0 E (34.8800)	...	JER
MCMT		McKenzie Canyon Montana, U.S.A. opened 19890914.	44 49 39.6 N (44.8277)	112 50 55.8 W (112.8488)	2323.0	BUT
MCPO	RD	Mount Cooper Queensland, Australia opened 19840223. ODM code MCP.	20 33 07.2 S (20.5520)	146 48 21.6 E (146.8060)	300.0	ODM
MCT		Monte Cammorata Sicilia, Italy	37 37 52.0 N (37.6311)	13 38 01.0 E (13.6336)	1565.0	ERC
MDI		Monti di Nese Lambordia, Italy	45 46 38.0 N (45.7772)	9 42 41.0 E (9.7114)	...	ROM
MDL		Mandileni Cape Province, South Africa opened 1988.	30 42 36.0 S (30.7100)	28 48 00.0 E (28.8000)	1320.0	PRE
MDSJ		Mudaysisot Jordan	31 37 55.2 N (31.6320)	36 15 07.2 E (36.2520)	970.0	JSO
MECU		Ecuador Network (Micatambo) Ecuador	0 32 15.0 S (0.5375)	78 14 39.0 W (78.2442)	4090.0	QUI
MEKA		Meekatharra Western Australia, Australia opened 19860501.	26 36 51.1 S (26.6142)	118 32 01.0 E (118.5336)	390.0	AUST
MEMT		Mount Ellis Montana, U.S.A. opened 19871015.	45 36 14.4 N (45.6040)	110 58 10.8 W (110.9697)	1951.0	BUT
MEU		Monte Laura Sicilia, Italy	37 06 04.0 N (37.1011)	14 55 48.0 E (14.9300)	985.0	ERC

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
MEW		McNeil Island Washington, U.S.A. opened 198503.	47 12 07.0 N (47.2019)	122 38 45.0 W (122.6458)	98.0	SEA
MFTN		Millsfield Tennessee, U.S.A.	36 09 39.6 N (36.1610)	89 23 34.8 W (89.3930)	113.0	SLM
MGR	D	Morigerati Campanio, Italy	40 08 15.4 N (40.1376)	15 33 17.4 E (15.5548)	260.0	ROM
MGRP	R	Monte Grappa Veneto, Italy	... 	... 	...	TRI
MHPQ	RD	Mount Hope Queensland, Australia opened 19840410. QDM code MHP.	21 23 45.6 S (21.3960)	146 48 07.2 E (146.8020)	200.0	QDM
MILT		Milan Tennessee, U.S.A. opened 198511.	35 50 56.0 N (35.8489)	88 43 58.4 W (88.7329)	146.0	TEIC
MIO	R	Morion Island Prince Edward Islands	46 57 30.0 S (46.9583)	37 54 00.0 E (37.9000)	10.0	PRE
MIV		Mineville/Witherbee New York, U.S.A. opened 198506.	44 04 27.0 N (44.0742)	73 31 48.0 W (73.5300)	...	PAL
MMCZ		Mount Michael South Island, New Zealand	45 00 13.0 S (45.0036)	169 07 52.7 E (169.1313)	1163.0	WELC
MME		Monte Cimone Emilio-Romagna, Italy	44 11 37.0 N (44.1936)	10 42 00.0 E (10.7000)	2160.0	ERC
MMI	F	(Mercalli intensity descriptor)				
MML		Mount Malkishua Israel opened 19860501.	32 26 06.3 N (32.4351)	35 24 47.9 E (35.4133)	475.0	JER
MNCI	R	Minicoy Laccadive Islands, India	7 18 .. N (7.3000)	73 06 .. E (73.1000)	...	NDI
MNGI	R	Mangalore Karnataka, India	12 52 .. N (12.8667)	74 52 .. E (74.8667)	...	NDI
MNO		Monte Soro Sicilia, Italy	37 55 52.0 N (37.9311)	14 41 42.0 E (14.6950)	1840.0	ERC
MOC		Mount Cameroon Cameroon opened 19851123.	4 17 13.2 N (4.2870)	9 13 01.2 E (9.2170)	2475.0	YND
MOE		Montemor-o-Novo Portugal opened 19830219.	38 31 21.9 N (38.5228)	8 21 02.1 W (8.3506)	263.0	INMG
MOH	D	Mohaka North Island, New Zealand opened 19870319.	39 07 57.0 S (39.1325)	177 08 52.2 E (177.1478)	245.0	WELH
MOKY		Morganfield Kentucky, U.S.A. opened 1989.	37 28 49.2 N (37.4803)	87 54 03.6 W (87.9010)	204.0	BHKY
MOL		Molde Norway opened 198702.	62 34 12.0 N (62.5700)	7 32 52.8 E (7.5480)	98.0	BER
MOLL		Mollejon Venezuela opened 1984.	7 44 06.0 N (7.7350)	71 37 44.4 W (71.6290)	900.0	CAR
MOMI		Momias Spain Also sent to NEIS by MDD.	36 19 18.0 N (36.3217)	5 43 14.4 W (5.7207)	344.0	SFS
MOOW		Moose Ponds Wyoming, U.S.A. opened 198601.	43 44 54.9 N (43.7486)	110 44 41.4 W (110.7448)	2128.0	USBR
MOPM		Molcaxac Puebla, Mexico UNM code MOP.	18 44 .. N (18.7333)	97 55 .. W (97.9167)	1840.0	UNM
MOR1		Mo i Rana Norway opened 1989.	66 14 14.8 N (66.2374)	14 46 19.5 E (14.7721)	650.0	BER
MOR2		Mo i Rana Norway opened 1989.	66 14 11.6 N (66.2366)	14 46 26.6 E (14.7741)	...	BER
MOR3	R	Mo i Rana Norway	66 14 08.7 N (66.2357)	14 46 20.6 E (14.7724)	...	BER
MOR4		Mo i Rana Norway opened 1989.	66 14 12.1 N (66.2367)	14 46 00.6 E (14.7668)	...	BER
MOR5	R	Mo i Rana Norway	66 14 15.8 N (66.2377)	14 45 59.0 E (14.7664)	...	BER
MOR6		Mo i Rana Norway opened 198602.	66 14 13.2 N (66.2370)	14 46 01.2 E (14.7670)	650.0	BER
MORO		Morrocoy Venezuela opened 1984.	10 52 19.9 N (10.8722)	68 18 57.6 W (68.3160)	920.0	CAR
MOTA	R	Moosalm Austria opened 1989.	... 	... 	...	VIE
MOZ	RD	Mohoenui North Island, New Zealand opened 199005.	38 30 21.0 S (38.5058)	174 48 10.8 E (174.8030)	160.0	WEL
MQZ	D	McQueen's Valley South Island, New Zealand opened 19891011.	43 42 28.2 S (43.7078)	172 39 07.8 E (172.6522)	60.0	WEL

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MRB		Montserrat	41 35 41.4 N (41.5948)	1 50 13.8 E (1.8372)	890.0	MRB
		Spain				
MRH	D	Marewa	39 29 57.0 S (39.4992)	176 53 18.0 E (176.8883)	4.0	WELH
		North Island, New Zealand				
		opened 19870319.				
MRX	D	Morelia	19 42 16.2 N (19.7045)	101 11 30.0 W (101.1917)	...	UNM
		Michoacan, Mexico				
		opened 1988.				
MSCZ	R	Moutere Station	45 05 35.0 S (45.0931)	169 24 42.0 E (169.4117)	701.0	WELC
		South Island, New Zealand				
MSTB		Masset	54 00 12.0 N (54.0033)	132 07 05.0 W (132.1181)	91.0	OTTR
		British Columbia, Canada				
		opened 19871204.				
MTAT	F	MTA--Mineral Reseorch and Exploration Inst, Ankara				
MTLO	R	Montello	...	...	...	TRI
		Veneto, Italy				
		opened 1987.				
MTMW		Mount Mitchell	46 01 31.8 N (46.0255)	122 12 42.0 W (122.2117)	1121.0	SEA
		Washington, U.S.A.				
		SEA code MTM.				
MTO	R	Montecristo	14 23 23.0 N (14.3897)	89 24 18.0 W (89.4050)	1380.0	SSS
		El Salvador				
MTUR		Matau	45 13 34.0 N (45.2261)	25 03 47.0 E (25.0631)	1018.0	BUC
		Romania				
		opened 198808.				
MUDI		Mud Lake	43 37 07.9 N (43.6189)	111 04 37.4 W (111.0771)	2124.0	USBR
		Idaho, U.S.A.				
		opened 198601.				
MUX		Union Juarez	15 04 44.4 N (15.0790)	92 04 26.4 W (92.0740)	...	UNM
		Chiapas, Mexico				
MVIF		Mont Vial	43 53 46.8 N (43.8963)	7 09 09.0 E (7.1525)	1480.0	STR
		Provence-Cote d'Azur, France				
MVO		Moncorvo	41 09 52.0 N (41.1644)	7 01 43.9 W (7.0289)	860.0	INMG
		Portugal				
		opened 19800801.				
MXC		Moxie City	46 34 38.0 N (46.5772)	120 17 35.0 W (120.2931)	540.0	SEA
		Washington, U.S.A.				
		SEA code MOX.				
NAC		Naches	46 44 03.8 N (46.7344)	120 49 33.2 W (120.8259)	738.0	SEA
		Washington, U.S.A.				
NAIN	C	Natchez Trace State Park	35 51 21.6 N (35.8560)	88 14 24.0 W (88.2400)	198.0	TVA
		Tennessee, U.S.A.				
		19850327-19870306.				
NANS		Nanahuazin	13 42 54.0 N (13.7150)	89 30 33.0 W (89.5092)	1160.0	SSS
		El Salvador				
		SSS code NAN.				
NANU		Nanutarra	22 33 43.2 S (22.5620)	115 31 44.4 E (115.5290)	80.0	AUST
		Western Australia, Australia				
		opened 19871022.				
NCA		Nelchina	61 59 37.2 N (61.9937)	146 49 27.0 W (146.8242)	741.0	GIA
		Central Alaska, Alaska, U.S.A.				
		opened 19860717.				
NCG		North Capps Glacier	61 24 13.2 N (61.4037)	152 09 24.0 W (152.1567)	1244.0	AGS
		Western Alaska, Alaska, U.S.A.				
		opened 1989.				
NDB		Naden	53 57 18.0 N (53.9550)	132 56 30.0 W (132.9417)	686.0	OTTR
		British Columbia, Canada				
NE01	CD	Goteborg	57 48 03.6 N (57.8010)	12 07 55.2 E (12.1320)	55.0	NARS
		Sweden				
		198302-198601.				
NE02	D	Monsted	56 27 32.4 N (56.4590)	9 10 12.0 E (9.1700)	60.0	NARS
		Denmark				
		opened 198302.				
NE03	D	Logumkloster	55 02 42.0 N (55.0450)	9 09 10.8 E (9.1530)	25.0	NARS
		Denmark				
		opened 198302.				
NE04	D	Witteveen	52 48 48.0 N (52.8133)	6 40 06.0 E (6.66B3)	17.0	NARS
		Netherlands				
		opened 198207.				
NE05	D	Utrecht	52 05 16.8 N (52.0880)	5 10 19.2 E (5.1720)	2.0	NARS
		Netherlands				
		198203-198406; reopened 198601.				
NE06	D	Dourbes	50 05 49.2 N (50.0970)	4 35 42.0 E (4.5950)	225.0	NARS
		Belgium				
		opened 198207.				
NE07	D	Villiers-Adam	49 04 27.8 N (49.0744)	2 13 54.8 E (2.2319)	70.0	NARS
		Ile-de-France, France				
		opened 198311.				
NE08	CD	Aigurande	46 25 12.0 N (46.4200)	1 43 48.0 E (1.7300)	360.0	NARS
		Centre, France				
		19B211-198412.				
NE09	CD	Les Eyzies	44 51 07.2 N (44.8520)	0 58 51.6 E (0.9810)	160.0	NARS
		Aquitaine, France				
		198211-198602.				
NE10	D	Arette	43 05 09.6 N (43.0860)	0 41 56.4 W (0.6990)	480.0	NARS
		Aquitaine, France				
		opened 198211.				
NE11	D	Ainzan	41 48 50.4 N (41.8140)	1 31 01.2 W (1.5170)	440.0	NARS
		Spain				
		opened 1983.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
NE11*	CD	La Almunia Spain 198305-198311.	41 28 37.2 N (41.4770)	1 22 19.2 W (1.3720)	370.0	NARS
NE12	CD	Valle de los Caidos Spain 198305-198502.	40 38 31.2 N (40.6420)	4 09 18.0 W (4.1550)	1280.0	NARS
NE13	D	Puertollano Spain opened 198305.	38 41 06.0 N (38.6850)	4 05 27.6 W (4.0910)	700.0	NARS
NE14	D	Granada Spain opened 198305.	37 11 24.0 N (37.1900)	3 35 42.0 W (3.5950)	774.0	NARS
NE15	D	Valkenburg Netherlands opened 198406.	50 52 01.2 N (50.8670)	5 47 06.0 E (5.7850)	100.0	NARS
NE16	D	Clermont Ferrand Auvergne, France opened 198411.	45 45 46.0 N (45.7628)	3 06 09.0 E (3.1025)	80.0	NARS
NE17	D	Toledo Spain opened 198502.	39 52 53.0 N (39.8814)	4 02 55.0 W (4.0486)	480.0	NARS
NE18	D	Les Rejaudoux Limousin, France opened 198602.	45 18 16.0 N (45.3044)	1 30 59.0 E (1.5164)	410.0	NARS
NECR	R	Nordeste de Costa Rica Costa Rica	...	...	...	HDC
NEO		Neokhori Greece opened 1988.	39 18 24.0 N (39.3067)	23 13 24.6 E (23.2235)	500.0	ATH
NGI		Nagai Island Alaska Peninsula, Alaska, U.S.A.	55 02 21.6 N (55.0393)	160 04 09.0 W (160.0692)	240.0	PAL
NGJA		... Assam, India	26 42 24.0 N (26.7067)	91 40 30.0 E (91.6750)	60.0	JHI
NGNA		Nangstoin Meghalaya, India	25 31 18.0 N (25.5217)	91 16 19.2 E (91.2720)	...	JHI
NGP	R	Nagpur Maharashtra, India	21 09 .. N (21.1500)	79 03 .. E (79.0500)	311.0	NDI
NJJJ	R	Nii-shima 2 Bonin Islands, Japan	34 24 .. N (34.4000)	139 17 .. E (139.2833)	180.0	JMA
NLO		Nicolai Mountain Oregon, U.S.A.	46 05 18.0 N (46.0883)	123 27 00.0 W (123.4500)	900.0	SEA
NLW		Nelson Butte Washington, U.S.A. opened 198505. SEA code NEL.	48 04 41.8 N (48.0783)	120 20 17.7 W (120.3383)	1490.0	SEA
NMMO		New Madrid Missouri, U.S.A.	36 35 16.8 N (36.5880)	89 33 07.2 W (89.5520)	90.0	SLM
NOC	RD	Noumea New Caledonia opened 19851209.	22 10 12.0 S (22.1700)	166 15 00.0 E (166.2500)	5.0	NOU GEOS
NOZ	D	North Gisborne North Island, New Zealand opened 199002.	38 37 04.8 S (38.6180)	178 02 12.0 E (178.0367)	60.0	WEL
NPRI	R	New Production Reactor Idaho, U.S.A.	43 35 51.0 N (43.5975)	112 49 37.8 W (112.8272)	1513.0	USGS
NRZ	RD	Ngariki Road North Island, New Zealand opened 199006.	39 20 12.0 S (39.3367)	173 56 06.0 E (173.9350)	300.0	WEL
NSS		Namsos Norway opened 198702.	64 31 48.0 N (64.5300)	11 58 01.2 E (11.9670)	102.0	BER
NWC		North Woods Club New York, U.S.A. opened 198610.	43 50 42.0 N (43.8450)	74 09 00.6 W (74.1502)	...	PAL
OBC		Olympics--Bonidu Creek Washington, U.S.A. opened 198007.	48 02 07.1 N (48.0353)	124 04 39.0 W (124.0775)	938.0	SEA
OBH		Olympics--Burnt Hill Washington, U.S.A.	47 19 34.5 N (47.3262)	123 51 57.0 W (123.8658)	383.0	SEA
OC2		Ocos 2 Guatemala opened 1988.	14 33 37.8 N (14.5605)	92 11 09.6 W (92.1860)	5.0	GCG
OCM		Ochomogo Costa Rica	9 53 41.4 N (9.8948)	83 57 39.0 W (83.9608)	1660.0	HDC
ODD1		Odda Norway opened 19871203.	59 54 43.2 N (59.9120)	6 37 40.8 E (6.6280)	684.0	BER
OFK		Olympics--Forks Washington, U.S.A. opened 198007.	47 57 00.0 N (47.9500)	124 21 28.1 W (124.3578)	134.0	SEA
OHTN		Owl Hoot Tennessee, U.S.A.	36 09 00.0 N (36.1500)	89 31 12.0 W (89.5200)	82.0	SLM
OJEN		Ojen Spain Also sent to NEIS by MDD.	36 06 00.0 N (36.1000)	5 32 13.2 W (5.5370)	804.0	SFS
OLLA		Las Ollas Venezuela opened 1984.	10 01 08.4 N (10.0190)	66 48 14.4 W (66.8040)	947.0	CAR
OLQ		Olympics--Lake Quinalt Washington, U.S.A.	47 39 58.1 N (47.6661)	123 48 31.5 W (123.8087)	121.0	

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
OLT		Olot	42 08 39.6 N (42.1443)	2 28 27.6 E (2.4743)	700.0	MRB
		Spain				
		opened 1986. Sent to NEIS by MDD.				
OLW		Olympia	47 04 22.0 N (47.0728)	122 55 21.0 W (122.9225)	37.0	
		Washington, U.S.A.				
		opened 19860802				
OMWY	R	Oxenhope Moor	53 47 27.2 N (53.7909)	1 58 47.6 W (1.9799)	438.0	QMB
		England, United Kingdom				
ONF		Office National des Forets	43 05 42.0 N (43.0950)	0 42 57.6 W (0.7160)	30.0	PAR
		Aquitoine, France				
		opened 198502?				
ONR		Olympics--North River	46 52 37.5 N (46.8771)	123 46 16.5 W (123.7713)	257.0	SEA
		Washington, U.S.A.				
		opened 198007.				
OOW		Octopus West	47 44 12.0 N (47.7367)	124 11 22.0 W (124.1894)	743.0	SEA
		Washington, U.S.A.				
OR1		(Alternate Abbreviation for ORI)				
ORGA			49 33 14.0 N (49.5539)	114 06 02.9 W (114.1008)	1257.0	
		Alberta, Canada				
		Sent to NEIS by PGC.				
ORX		Orapa	45 37 57.0 N (45.6325)	7 58 54.0 E (7.9817)	1250.0	GEN
		Piemonte, Italy				
OSCM		Ostuacan	17 24 20.0 N (17.4056)	93 20 05.0 W (93.3347)	...	UNM
		Chiapas, Mexico				
		UNM code OSC.				
OSD		Olympics--Snow Dome	47 49 15.0 N (47.8208)	123 42 06.0 W (123.7017)	2010.0	SEA
		Washington, U.S.A.				
OSG		Oseberg A Platform	60 29 49.2 N (60.4970)	2 52 33.6 E (2.8760)	-100.0	BER
		Norway				
		opened 1988.				
OSM	R	Ostula	18 29 50.0 N (18.4972)	103 28 19.0 W (103.4719)	...	UNM
		Michoacan, Mexico				
OSP		Olympics--Sooes Peak	48 17 05.5 N (48.2849)	124 35 23.3 W (124.5898)	...	SEA
		Washington, U.S.A.				
		opened 198310.				
OTR		Olympics--Tyee Ridge	48 05 00.0 N (48.0833)	124 20 39.0 W (124.3442)	712.0	SEA
		Washington, U.S.A.				
OXFB	R	Oxford Borehole	34 28 30.4 N (34.4751)	89 20 36.0 W (89.3433)	-390.0	
		Mississippi, U.S.A.				
PAB		San Pablo de los Montes	9 32 45.0 N (9.5458)	4 20 54.0 W (4.3483)	...	MDD
		Spain				
PACW		Pacific Creek	43 54 08.3 N (43.9023)	110 29 07.0 W (110.4853)	2140.0	USBR
		Wyoming, U.S.A.				
		opened 198601.				
PAHZ	R	Panekirikiri	38 51 33.0 S (38.8592)	177 03 15.0 E (177.0542)	563.0	WELH
		North Island, New Zealand				
PALM	R	Palmichal	10 12 16.6 N (10.2046)	64 26 19.7 W (64.4388)	1100.0	CAR
		Venezuela				
		opened 1984.				
PALR		Palma Real	11 00 00.0 N (11.0000)	63 54 39.6 W (63.9110)	920.0	CAR
		Venezuela				
		opened 1984.				
PANV		Panamint Range	36 23 54.0 N (36.3983)	117 05 57.0 W (117.0992)	1830.0	USGS
		Inyo County, California, U.S.A.				
		opened 19880401.				
PATW		Paterson	45 52 50.1 N (45.8806)	119 45 40.1 W (119.7611)	300.0	SEA
		Washington, U.S.A.				
		SEA code PAT.				
PATZ	R	Pteroa	38 22 53.0 S (38.3814)	176 15 30.0 E (176.2583)	940.0	WELH
		North Island, New Zealand				
PAY			17 28 18.0 N (17.4717)	93 29 28.8 W (93.4913)	...	UNM
		Mexico				
PCB		Port Clements	53 42 22.0 N (53.7061)	132 34 03.0 W (132.5675)	634.0	OTTR
		British Columbia, Canada				
PCG		Pacaya	14 23 .. N (14.3833)	90 39 .. W (90.6500)	2550.0	GCG
		Guatemala				
		opened 198705?				
PCP		Pian Costagno-Ponzone	44 32 30.6 N (44.5418)	8 32 42.6 E (8.5452)	770.0	GEN
		Piemonte, Italy				
		opened 19890315.				
PDCR		Pedra do Cavalo Reservoir	12 31 52.8 S (12.5313)	39 07 21.0 W (39.1225)	220.0	VAO
		Bahia, Brazil				
		opened 19870101.				
PDUI		Pindiu	6 26 49.2 S (6.4470)	147 30 39.6 E (147.5110)	950.0	PMG
		New Guinea, Popuo New Guineo				
		opened 19880616.				
PECU		Ecuador Network	0 23 42.0 S (0.3950)	78 36 09.0 W (78.6025)	3550.0	QUI
		Ecuador				
PENM	R		17 26 09.6 N (17.4360)	93 31 40.8 W (93.5280)	...	IIM
		Chiapas, Mexico				
		IIM code PEN.				
PEO	R	Puerto Escondido	15 51 04.2 N (15.8512)	97 03 19.8 W (97.0555)	3.0	UNM
		Oaxaca, Mexico				
PFH		Pahoa Fire House	19 29 48.8 N (19.4969)	154 56 55.8 W (154.9486)	201.0	HON
		Hawaii, Hawaii, U.S.A.				
		opened 1986.				
PGB		Panagyurishte	42 33 00.0 N (42.5500)	24 10 00.1 E (24.1667)	775.0	SOF
		Bulgaria				
		opened 1988.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
PGD		Poggio Sodo	43 52 31.0 N (43.8753)	11 43 17.0 E (11.7214)	1600.0	ERC
		Emilio-Romagno, Italy Also sent to NEIS by ROM.				
PGF		Pioggiola	42 32 54.0 N (42.5483)	8 59 58.0 E (8.9994)	1130.0	LDG
		Corse, France opened 19891115.				
PGO		Gresham	45 28 00.0 N (45.4667)	122 27 10.0 W (122.4528)	237.0	SEA
		Oregon, U.S.A. opened 198206.				
PGW		Port Gamble	47 49 18.8 N (47.8219)	122 35 57.7 W (122.5994)	122.0	SEA
		Washington, U.S.A.				
PGY		Peter Gray Mountain	43 42 27.6 N (43.7077)	74 02 42.6 W (74.0452)	...	PAL
		New York, U.S.A. opened 198611.				
PGZ	D	Pongaroo	40 37 07.8 S (40.6188)	176 16 25.2 E (176.2737)	60.0	WEL
		North Island, New Zealand opened 198804.				
PICO		Pico	38 30 03.0 N (38.5008)	28 25 32.0 W (28.4256)	775.0	PDA
		Azores, Portugal opened 19880526.				
PII	D	Piso	43 43 16.3 N (43.7212)	10 31 25.8 E (10.5238)	50.0	ROM
		Toscano, Italy				
PINI		Pine Creek	43 30 27.4 N (43.5076)	111 20 44.6 W (111.3457)	1932.0	USBR
		Idaho, U.S.A. opened 198601.				
PINR		Pinor	36 29 56.4 N (36.4990)	6 07 06.0 W (6.1183)	10.0	SFS
		Spain				
PKO		Pickens	34 23 50.3 N (34.3973)	95 01 51.8 W (95.0311)	264.0	TUL
		Oklahoma, U.S.A. opened 19871016.				
PLAT		Plato	36 07 15.6 N (36.1210)	5 45 30.6 W (5.7585)	460.0	SFS
		Spain Also sent to NEIS by MDD.				
PLAV		Platillon	9 52 26.4 N (9.8740)	67 30 08.6 W (67.5024)	1830.0	CAR
		Venezuela opened 1984. CAR code PLAT.				
PLR		Palermo	38 08 38.4 N (38.1440)	13 20 51.6 E (13.3477)	60.0	
		Sicilia, Italy				
PLRO	RD	Pouloro	46 32 59.0 N (46.5497)	13 08 53.0 E (13.1481)	1420.0	TRI
		Friuli-Venezia Giulia, Italy opened 19880101.				
PN1	R	Presa Penitas No. 1	17 28 08.4 N (17.4690)	93 29 16.8 W (93.4880)	...	IIM
		Chiapas, Mexico				
PN2	R	Presa Penitas No. 2	17 26 16.8 N (17.4380)	93 27 01.8 W (93.4505)	...	IIM
		Chiapas, Mexico				
PN3	R	Presa Penitas No. 3	17 21 14.4 N (17.3540)	93 36 28.8 W (93.6080)	...	IIM
		Chiapas, Mexico				
PN4	R	Presa Penitas No. 4	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	IIM
		Chiapas, Mexico				
PN6		Pavlof North-6	55 27 07.1 N (55.4520)	161 54 53.3 W (161.9148)	814.0	PAL
		Alaska Peninsula, Alaska, U.S.A.				
POA2		Poas 2	10 10 37.8 N (10.1772)	84 15 03.0 W (84.2508)	2500.0	HDC
		Costa Rica opened 19860506.				
POBI	C	Pontebba	46 30 48.0 N (46.5133)	13 16 36.0 E (13.2767)	860.0	TRI
		Friuli-Venezia Giulia, Italy 19830130-19880101.				
POF		Pofadder	29 22 54.0 S (29.3817)	19 57 00.0 E (19.9500)	...	PRE
		Cape Province, South Africa opened 1986.				
PORM	R	...	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	UNM
		Chiapas, Mexico UNM code POR.				
PORP		Portuguez	18 03 13.7 N (18.0538)	66 38 13.2 W (66.6370)	218.0	MPR
		Puerto Rico opened 198908.				
PPCY		Paphos	34 53 05.0 N (34.8847)	32 20 42.0 E (32.3450)	60.0	CSS
		Cyprus opened 198702.				
PPD		Presidente Prudente	22 01 53.0 S (22.0314)	51 18 43.0 W (51.3119)	406.0	VAO
		Sao Paulo, Brazil opened 198802.				
PS4		Pavlof South-4	55 21 14.3 N (55.3540)	161 52 05.5 W (161.8682)	520.0	PAL
		Alaska Peninsula, Alaska, U.S.A.				
PSG2		Puerto de San Jose 2	13 57 07.8 N (13.9522)	90 48 55.8 W (90.8155)	5.0	GCG
		Guatemala opened 1988. GCG code PS2.				
PSM		Palmasola	16 42 17.4 N (16.7048)	95 02 27.6 W (95.0410)	750.0	UNM
		Oaxaca, Mexico opened 199001.				
PSR		Paul Sauer Dam	33 40 48.0 S (33.6800)	24 24 36.0 E (24.4100)	360.0	PRE
		Cape Province, South Africa opened 1988.				
PTH		Pithoragarh	29 33 .. N (29.5500)	80 13 .. E (80.2167)	1669.0	NDI
		Uttar Pradesh, India				
PTS		Isola di Pantelleria	36 48 25.9 N (36.8072)	11 59 34.4 E (11.9929)	150.0	ERC
		Italy				
PTT		Piatra Neamt	46 56 05.0 N (46.9347)	26 23 10.0 E (26.3861)	350.0	BUC
		Romania opened 19870115.				

CODES

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
PUCA	R	Punto Cono	18 35 16.8 N	68 24 10.2 W	...	SDD
		Dominican Republic	(18.5880)	(68.4028)		
PURC		Volcan Purace	2 19 19.8 N	76 21 42.0 W	3950.0	UVC
		Colombia	(2.3222)	(76.3617)		
		opened 1987.				
PUYF		Puyloubier	43 31 56.3 N	5 42 01.1 E	460.0	STR
		Provence-Cote d'Azur, France	(43.5323)	(5.7003)		
PUZ	D	Puketiti	38 04 24.0 S	178 15 25.8 E	420.0	WEL
		North Island, New Zealand	(38.0733)	(178.2572)		
		opened 19891211.				
PVV		Pavlof Volcano	55 22 27.1 N	161 47 23.9 W	164.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.3742)	(161.7900)		
PXO	R	.....	15 44 52.2 N	96 18 10.8 W	25.0	UNM
		Oaxaca, Mexico	(15.7478)	(96.3030)		
PZZ		Prazzo (Stroppo)	44 30 18.0 N	7 06 04.8 E	1420.0	GEN
		Piemonte, Italy	(44.5050)	(7.1013)		
QAP	F	(phase code designation)				
QASM		Qassim	26 05 24.0 N	43 31 58.8 E	675.0	RYD
		Saudi Arabia	(26.0900)	(43.5330)		
		opened 198801.				
QDM	F	Queensland Dept. of Mines, Australia				
QHW	R	Quartz Hill	41 15 07.0 S	174 41 26.0 E	190.0	WELW
		North Island, New Zealand	(41.2519)	(174.6906)		
		opened 19851015.				
QIS		Mount Isa	20 33 27.7 S	139 36 18.7 E	330.0	AUST
		Queensland, Australia	(20.5577)	(139.6052)		
		opened 19870615.				
QLP		Quilpie	26 35 01.3 S	144 14 05.3 E	210.0	AUST
		Queensland, Australia	(26.5837)	(144.2348)		
		opened 19890812.				
QPCP	F	(phase code designation)				
QPCS	F	(phase code designation)				
QPKP	F	(phase code designation)				
QPP	F	(phase code designation)				
QPPP	F	(phase code designation)				
QPPS	F	(phase code designation)				
QPSS	F	(phase code designation)				
QRI		Querto	40 52 40.8 N	14 08 44.9 E	...	ROM
		Campania, Italy	(40.8780)	(14.1458)		
QRZ	R	Quartz Range	...	...	...	WEL
		New Zealand				
QSCP	F	(phase code designation)				
QSCS	F	(phase code designation)				
QSKP	F	(phase code designation)				
QSKS	F	(phase code designation)				
QSPP	F	(phase code designation)				
QSSP	F	(phase code designation)				
QSSS	F	(phase code designation)				
QUES	R	Lamo Quito Espuelo	19 21 10.8 N	70 08 52.8 W	...	SDD
		Dominican Republic	(19.3530)	(70.1480)		
		opened 19860902.				
QUTJ		Qutrano	31 17 55.2 N	36 00 36.0 E	876.0	JSO
		Jordan	(31.2987)	(36.0100)		
		opened 1987.				
QXP	F	(phase code designation)				
QXS	F	(phase code designation)				
QZA		Quezalapa	13 31 26.0 N	88 59 49.0 W	250.0	SSS
		El Salvador	(13.5239)	(88.9969)		
RAMW		Rammel Mountain	43 53 20.3 N	110 57 00.8 W	2512.0	USBR
		Wyoming, U.S.A.	(43.8890)	(110.9502)		
		opened 198601.				
RDO		Rodhopi	41 08 46.2 N	25 32 15.0 E	100.0	ATH
		Greece	(41.1462)	(25.5375)		
		opened 1988.				
RDX		Rancho Dowling	31 55 56.4 N	115 56 51.0 W	1680.0	ECX
		Baja California, Mexico	(31.9323)	(115.9475)		
		opened 19880929.				
RE1		(Alternate Abbreviation for RCL)				
RECU		Ecuador Network	0 38 19.2 S	78 34 03.0 W	4060.0	QUI
		Ecuador	(0.6387)	(78.5675)		
REDW		Red Top Meadow	43 21 44.6 N	110 51 06.4 W	2192.0	USBR
		Wyoming, U.S.A.	(43.3624)	(110.8518)		
		opened 198601.				
REVF		Revere	43 44 24.0 N	7 22 03.0 E	700.0	STR
		Provence-Cote d'Azur, France	(43.7400)	(7.3675)		
RFI		Roccamonfina	41 18 01.6 N	13 59 05.2 E	...	ROM
		Campania, Italy	(41.3004)	(13.9848)		
RGS		Ragnes	63 01 15.6 N	10 26 06.0 E	120.0	BER
		Norway	(63.0210)	(10.4350)		
		opened 19851222.				
RIN2	C	Rincon de la Vieja 2	10 49 06.6 N	85 20 58.2 W	1400.0	HDC
		Costa Rica	(10.8185)	(85.3495)		
		19870520-19880826. Replaced by RIN3.				
RIN3		Rincon de la Vieja 3	10 47 27.0 N	85 22 43.2 W	900.0	HDC
		Costa Rica	(10.7908)	(85.3787)		
		opened 19880826.				
RIY		Rijeka	45 20 38.4 N	14 23 09.6 E	75.0	ZAG
		Hrvatska (Croatia), Yugoslavia	(45.3440)	(14.3860)		
		opened 19890504.				

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
RND		Reindeer Central Alaska, Alaska, U.S.A. opened 1986.	63 24 22.2 N (63.4062)	148 51 10.2 W (148.8528)	991.0	GIA
ROBI	R	Boca de Chavan Dominican Republic opened 19860923.	18 24 36.0 N (18.4100)	68 50 24.0 W (68.8400)	...	SDD
ROKY	R	Rotten Point Kentucky, U.S.A.	37 54 32.4 N (37.9090)	83 55 33.6 W (83.9260)	433.0	BHKY
RPN	D	Rapa Nui Easter Island, Valparaiso, Chile opened 198707.	27 07 36.0 S (27.1267)	109 20 04.0 W (109.3344)	110.0	SAN IDA IRIS
RPW		Rockport Washington, U.S.A.	48 26 54.0 N (48.4483)	121 30 49.0 W (121.5136)	850.0	SEA
RRI2		Red Ridge Idaho, U.S.A. opened 19860702.	43 21 50.4 N (43.3640)	111 19 08.4 W (111.3190)	2566.0	REX USTN
RRL		Cesana Torinese Piemonte, Italy	44 55 12.6 N (44.9202)	6 47 04.2 E (6.7845)	2131.0	GEN
RSM		Repubblica di San Marino San Marino opened 1988.	43 55 39.7 N (43.9277)	12 27 08.4 E (12.4523)	...	ROM
RSP		Reno Superiare Piemonte, Italy	45 09 06.0 N (45.1517)	7 15 25.8 E (7.2572)	1250.0	GEN
RUP		Ruppelstein Rheinland-Pfalz, Fed. Rep. of Germany	49 42 06.0 N (49.7017)	7 03 37.0 E (7.0603)	750.0	KRW
RUWJ		... Jordan opened 1989.	32 28 30.0 N (32.4750)	38 49 40.8 E (38.8280)	960.0	JSO
RVC		Mount Rainier--Voight Creek Washington, U.S.A.	46 56 34.5 N (46.9429)	121 58 17.3 W (121.9715)	1000.0	SEA
RVW		Rose Valley Washington, U.S.A. opened 198102.	46 08 58.2 N (46.1495)	122 44 37.2 W (122.7437)	460.0	SEA
RYD		Riyadh Saudi Arabia opened 1986.	24 43 12.0 N (24.7200)	46 36 36.0 E (46.6100)	650.0	RYD
RZN		Rozhen Bulgaria opened 1988.	41 41 16.8 N (41.6880)	24 42 57.6 E (24.7160)	1730.0	SOF
SACA		Lama Carmona Dominican Republic opened 19860712.	18 58 39.0 N (18.9775)	69 40 49.2 W (69.6803)	...	SDD
SADC	RD	Saddle Peak Los Angeles County, Califarnia, U.S.A. opened 197308. PAS cade SAD.	34 04 51.6 N (34.0810)	118 39 54.0 W (118.6650)	732.0	PAS
SAE		Statte Puglia, Italy	40 33 43.0 N (40.5619)	17 12 22.0 E (17.2061)	...	ROM
SAIU		Southern Antelope Island Davis County, Utah, U.S.A. opened 19900510.	40 51 17.4 N (40.8548)	112 10 53.4 W (112.1815)	1384.0	SLC
SALC		Salvajina Calombia	2 58 22.5 N (2.9729)	76 41 42.6 W (76.6952)	1430.0	UVC
SAOF		Saarge Pravence-Cote d'Azur, France	43 59 11.0 N (43.9864)	7 33 19.0 E (7.5553)	600.0	STR
SAON	R	Isla Saona Daminican Republic	18 11 .. N (18.1833)	68 46 .. W (68.7667)	...	SDD
SASA		Sand Point Alaska Peninsula, Alaska, U.S.A. PAL cade SAS.	55 20 24.0 N (55.3400)	160 29 49.8 W (160.4972)	23.0	PAL
SBCZ	R	Sonara Basin South Island, New Zealand	45 05 32.0 S (45.0922)	169 18 40.0 E (169.3111)	801.0	WELC
SBG		Sibinal Guatemala opened 198603.	15 07 55.2 N (15.1320)	92 03 12.6 W (92.0535)	2860.0	GCG
SBM		South Baldy New Mexico, U.S.A. SNM cade SB.	33 58 30.6 N (33.9752)	107 10 50.4 W (107.1807)	3230.0	SNM
SCSP	F	(phose cade designatian)				
SCX		San Cristobal de las Casas Chiapas, Mexica apened 1987.	16 44 09.0 N (16.7358)	92 38 04.2 W (92.6345)	...	UNM
SDG		Sourdough Central Alaska, Alaska, U.S.A. opened 1986.	62 31 37.2 N (62.5270)	145 32 36.0 W (145.5433)	625.0	GIA
SDI		San Donata Val di Camino Lazia, Italy	41 42 21.0 N (41.7058)	13 48 55.5 E (13.8154)	720.0	ROM
SEJ	R	Sejang Statian South Shetland Islands, Antarctica	62 13 15.0 S (62.2208)	58 45 10.0 W (58.7528)	18.0	
SFI		Santa Safia Emilia-Romagna, Italy opened 1987.	43 55 15.6 N (43.9210)	11 51 07.2 E (11.8520)	...	ROM
SGB		San Diego Bay Alaska Peninsula, Alaska, U.S.A.	55 32 45.0 N (55.5458)	160 27 13.8 W (160.4538)	275.0	
SGI	C	San Gemini Italy	...	...	...	
SHBJ		Al Shahba Jardan 19871024-19890326.	32 18 09.0 N (32.3025)	37 34 30.0 E (37.5750)	960.0	JSO

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
SHGH		Shai Hills	5 55 42.0 N	0 02 31.0 W	84.0	KUK
		Ghana	(5.9283)	(0.0419)		
		opened 1987.				
SHMJ		.....	32 43 37.2 N	35 45 50.4 E	363.0	JSO
		Jordan	(32.7270)	(35.7640)		
		opened 198909.				
SILC		Silvia	2 41 16.8 N	76 20 22.8 W	3150.0	UVC
		Colombia	(2.6880)	(76.3397)		
		opened 1990.				
SIPM	R	.....	17 13 22.8 N	93 09 25.2 W	...	UNM
		Chiapas, Mexico	(17.2230)	(93.1570)		
		UNM code SIP.				
SIV		San Ignacio de Velasco	15 59 28.7 S	61 04 19.9 W	520.0	LPZ
		Bolivia	(15.9913)	(61.0722)		
		opened 199003.				
SJAS		San Jacinto	13 40 .. N	89 10 .. W	1100.0	SSS
		El Salvador	(13.6667)	(89.1667)		
		SSS code SJA.				
SJID		St. Joe	47 21 50.4 N	116 24 40.2 W	1775.0	
		Idaho, U.S.A.	(47.3640)	(116.4112)		
		opened 198710.				
SJX	R	San Joaquin	31 45 46.2 N	115 57 31.2 W	...	ECX
		Baja California, Mexico	(31.7628)	(115.9587)		
		opened 1986.				
SKDB		.....	17 23 48.8 N	62 48 30.0 W	...	TRN
		Saint Christopher, Saint Christopher-Nevis	(17.3969)	(62.8083)		
SKSP	F	(phase code designation)				
SLKY		Flemingsburg	38 25 33.6 N	83 45 03.6 W	280.0	BHKY
		Kentucky, U.S.A.	(38.4260)	(83.7510)		
		opened 19890215.				
SLZ	R	Solwezi	...	...	...	
		Zambia				
SMAM	R	San Marcos	16 47 07.8 N	99 23 53.4 W	...	UNM
		Guerrero, Mexico	(16.7855)	(99.3982)		
		UNM code SMA.				
SMCN		San Marcos	11 54 24.0 N	86 12 07.0 W	...	APY
		Nicaragua	(11.9067)	(86.2019)		
		opened 1990. APY code SMC.				
SMG		Samos	37 42 31.2 N	26 50 13.2 E	...	ATH
		Greece	(37.7087)	(26.8370)		
		opened 198906.				
SMJM	R	Simojovel	17 08 02.4 N	92 42 54.0 W	...	IIM
		Chiapas, Mexico	(17.1340)	(92.7150)		
		IIM code SMJ.				
SMMM		San Miguel Ometusco	19 44 23.4 N	98 44 25.8 W	...	UNM
		Mexico, Mexico	(19.7398)	(98.7405)		
		opened 1988. UNM code SMM.				
SMNM		San Marcial	33 46 43.2 N	107 01 09.6 W	1560.0	SNM
		New Mexico, U.S.A.	(33.7787)	(107.0193)		
		SNM code SMC.				
SNKA		Sanak Island	54 28 26.4 N	162 46 31.2 W	159.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(54.4740)	(162.7753)		
		PAL code SNK.				
SNOW		Snow King Mountain	43 27 44.9 N	110 45 18.8 W	2390.0	USBR
		Wyoming, U.S.A.	(43.4625)	(110.7552)		
		opened 198601.				
SOG		Santiaguito	14 46 34.8 N	91 35 15.6 W	2950.0	GCG
		Guatemala	(14.7763)	(91.5877)		
		opened 198602? GCG code STG.				
SOG2		Santiaguito 2	14 43 01.8 N	91 34 13.2 W	1560.0	GCG
		Guatemala	(14.7172)	(91.5703)		
		opened 198612? GCG code ST2.				
SOI	D	Samo	38 04 19.5 N	16 03 17.7 E	...	ROM
		Calabria, Italy	(38.0721)	(16.0549)		
SONG		Songo	15 36 12.0 S	32 46 42.0 E	900.0	LMM
		Mozambique	(15.6033)	(32.7783)		
		opened 198511.				
SOO	R	Sioux Lookout	50 04 34.2 N	91 53 16.8 W	358.0	OTTR
		Ontario, Canada	(50.0762)	(91.8880)		
		opened 19870607.				
SOSW		Source of Smith Creek	46 14 12.0 N	122 08 12.0 W	1270.0	SEA
		Washington, U.S.A.	(46.2367)	(122.1367)		
		SEA code SOS.				
SOF		Squaw Harbor	55 13 12.0 N	160 33 44.4 W	360.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.2200)	(160.5623)		
SQTA		Sankt Quirin	47 13 13.8 N	11 12 31.4 E	1307.0	VIE
		Austria	(47.2205)	(11.2087)		
		opened 19890501.				
SRFA		Sharaf	28 55 48.0 N	35 11 16.8 E	...	RYD
		Saudi Arabia	(28.9300)	(35.1880)		
		opened 1986.				
SRNI		Srinagar	33 57 .. N	74 45 .. E	...	NDI
		Jammu and Kashmir, India	(33.9500)	(74.7500)		
		NDI code SRN.				
SRP		Santa Rosa	18 53 48.0 N	97 46 48.0 W	...	UNM
		Puebla, Mexico	(18.8967)	(97.7800)		
SRQ		San Raque	36 15 27.0 N	5 22 27.0 W	202.0	SFS
		Spain	(36.2575)	(5.3742)		
		Also sent to NEIS by MDD.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
SSO		Sasso d'Italia (Macerata)	43 17 34.8 N	13 25 12.0 E	302.0	SSO
		Marche, Italy	(43.2930)	(13.4200)		
		opened 198705.				
STD		Studebaker Ridge	46 14 16.0 N	122 13 21.9 W	1268.0	SEA
		Washington, U.S.A.	(46.2378)	(122.2227)		
STEW		Steamboat Mountain	44 02 59.0 N	110 40 54.0 W	2316.0	USBR
		Wyoming, U.S.A.	(44.0497)	(110.6817)		
		opened 198601.				
STF		Statfjord A Platform	61 15 21.6 N	1 49 01.2 E	-148.0	BER
		Norway	(61.2560)	(1.8170)		
SULJ	R	Sultana	31 05 12.0 N	36 04 36.0 E	951.0	JSO
		Jordan	(31.0867)	(36.0767)		
SWO	RD	Sudbury	46 43 58.0 N	80 59 58.0 W	372.0	ECTN
		Ontario, Canada	(46.7328)	(80.9994)		
		opened 198705.				
SXG		Sacranix	15 30 21.0 N	90 25 10.8 W	1904.0	GCG
		Guatemala	(15.5058)	(90.4197)		
		opened 1986. GCG code SCG.				
SXT		Sachs Harbour	71 59 21.0 N	125 14 23.0 W	77.0	OTTR
		Northwest Territories, Canada	(71.9892)	(125.2397)		
		opened 19860813.				
SZH		Strazhitsa	43 16 .. N	25 56 .. E	310.0	SOF
		Bulgaria	(43.2667)	(25.9333)		
		opened 1988.				
SZO	RD	Sudbury	46 26 17.0 N	81 29 46.0 W	312.0	ECTN
		Ontario, Canada	(46.4381)	(81.4961)		
		opened 19870124.				
TAHZ	R	Taraponui	39 08 09.0 S	176 44 25.0 E	1297.0	WELH
		North Island, New Zealand	(39.1358)	(176.7403)		
TAIF		At Ta'if	21 17 31.2 N	40 21 14.4 E	1680.0	RYD
		Saudi Arabia	(21.2920)	(40.3540)		
		opened 198902.				
TANM	R	.....	16 55 08.4 N	93 06 54.0 W	...	UNM
		Chiapas, Mexico	(16.9190)	(93.1150)		
		UNM code TAN.				
TARW		Grand Torghee Resort	43 45 49.7 N	110 59 26.9 W	2091.0	USBR
		Wyoming, U.S.A.	(43.7638)	(110.9908)		
		opened 198601.				
TBC	R	Trig B	45 08 47.0 S	169 19 49.0 E	619.0	WELC
		South Island, New Zealand	(45.1464)	(169.3303)		
TBM		Table Mountain	47 10 10.1 N	120 35 54.0 W	1064.0	SEA
		Washington, U.S.A.	(47.1695)	(120.5983)		
TBO	R	Thunder Bay	48 38 50.4 N	89 24 30.0 W	468.0	OTTR
		Ontario, Canada	(48.6473)	(89.4083)		
		opened 19870123.				
TCG		Tacana	15 07 22.2 N	92 05 09.0 W	3100.0	GCG
		Guatemala	(15.1228)	(92.0858)		
		opened 198607.				
TCO		Three Creek Meadows	44 06 27.0 N	121 36 00.0 W	1975.0	SEA
		Oregon, U.S.A.	(44.1075)	(121.6000)		
		opened 19870827.				
TCPM	R	Tecamachalco	18 53 24.0 N	97 41 22.0 W	...	UNM
		Puebla, Mexico	(18.8900)	(97.6894)		
		UNM code TCP.				
TCT		Tennessee City	36 00 19.2 N	87 33 10.2 W	245.0	TVA
		Tennessee, U.S.A.	(36.0053)	(87.5528)		
		opened 19880310.				
TCUT		Taane Canyon	41 07 05.4 N	111 24 38.4 W	2316.0	SLC
		Morgan County, Utah, U.S.A.	(41.1182)	(111.4107)		
		opened 198908.				
TDH		Tam, Dick, Harry Mountain	45 17 23.4 N	121 47 25.2 W	1541.0	SEA
		Oregon, U.S.A.	(45.2898)	(121.7903)		
		opened 198209.				
TDL		Tradedollar Lake	46 21 03.0 N	122 12 57.0 W	1400.0	SEA
		Washington, U.S.A.	(46.3508)	(122.2158)		
TDS	D	Terranova di Sibari	39 39 31.8 N	16 20 16.3 E	273.0	ROM
		Calabria, Italy	(39.6588)	(16.3379)		
TEGH		Tema	5 38 12.0 N	0 00 05.0 W	14.0	KUK
		Ghana	(5.6367)	(0.0014)		
		opened 1987.				
TEHZ	R	Te Atua	39 59 22.0 S	176 48 40.0 E	407.0	WELH
		North Island, New Zealand	(39.9894)	(176.8111)		
TEO	R	Teotitlan	18 08 17.6 N	97 04 30.6 W	1060.0	UNM
		Oaxaca, Mexico	(18.1382)	(97.0752)		
TGL		Tana Glacier	60 45 21.0 N	142 49 46.8 W	1234.0	GIA
		Central Alaska, Alaska, U.S.A.	(60.7558)	(142.8297)		
		opened 19880701.				
THZ	D	Taphouse	41 45 49.8 S	172 54 13.2 E	760.0	WEL
		South Island, New Zealand	(41.7638)	(172.9037)		
		opened 19891130.				
TIH		Tihany	46 54 00.0 N	17 53 34.8 E	187.0	BUD
		Hungary	(46.9000)	(17.8930)		
		opened 1987.				
TLA		Tapachula	15 01 44.0 N	92 12 00.0 W	...	UNM
		Chiapas, Mexico	(15.0289)	(92.2000)		
TLC		Trig L	45 11 28.7 S	169 04 16.7 E	1393.0	WELC
		South Island, New Zealand	(45.1913)	(169.0713)		
TLI	D	Talmassons	45 55 18.0 N	13 06 07.0 E	25.0	TRI
		Friuli-Venezia Giulia, Italy	(45.9217)	(13.1019)		
		opened 19851127.				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
TMDA		Turtle Mountain	49 34 52.0 N	114 23 57.1 W	1541.0	
		Alberto, Canada	(49.5811)	(114.3992)		
		Sent to NEIS by PGC.				
TME		Tecomasuche	14 01 01.0 N	89 21 20.0 W	516.0	SSS
		El Salvador	(14.0169)	(89.3556)		
TMM2	R	Technologico de Monterrey 2	25 41 57.0 N	100 15 58.8 W	...	UNM
		Nuevo Leon, Mexico	(25.6992)	(100.2663)		
TMW		Tok Microwave	63 19 28.2 N	142 59 48.0 W	495.0	GIA
		Central Alaska, Alaska, U.S.A.	(63.3245)	(142.9967)		
		opened 1986.				
TNRJ	R	Tenryu	34 54 28.1 N	137 53 06.7 E	66.0	CDPJ
		Shizuoka, Honshu, Japan	(34.9078)	(137.8852)		
TOD		Tromm	49 36 20.4 N	8 48 13.8 E	570.0	KRW
		Hessen, Fed. Rep. of Germany	(49.6057)	(8.8038)		
		opened before 197410.				
TORT	R	La Tortuga	10 54 30.2 N	65 18 50.0 W	40.0	CAR
		Venezuela	(10.9084)	(65.3139)		
		opened 1984.				
TOUF		Mont Tourneroit	44 00 48.6 N	7 14 53.9 E	1830.0	STR
		Provence-Cote d'Azur, France	(44.0135)	(7.2483)		
TPAW		Teton Pass	43 29 24.3 N	110 57 02.3 W	2512.0	USBR
		Wyoming, U.S.A.	(43.4901)	(110.9506)		
		opened 198601.				
TPE		Tepelena	40 17 42.7 N	20 00 39.2 E	240.0	TIR
		Albania	(40.2952)	(20.0109)		
		opened 198404.				
TPG	R	Tlapa	17 33 38.4 N	98 33 19.8 W	1100.0	UNM
		Guerrero, Mexico	(17.5607)	(98.5555)		
TQTN		Tranquillity	35 30 57.6 N	84 43 33.0 W	260.0	TVA
		Tennessee, U.S.A.	(35.5160)	(84.7258)		
		opened 19860716.				
TREF		Trevaresse	43 37 26.8 N	5 23 02.0 E	460.0	STR
		Provence-Cote d'Azur, France	(43.6241)	(5.3839)		
TRXW		Triangle-X Ranch	43 44 57.3 N	110 33 36.5 W	2256.0	USBR
		Wyoming, U.S.A.	(43.7493)	(110.5601)		
		opened 198601.				
TSUJ	R	Tsu 2	34 42 36.0 N	136 25 12.0 E	30.0	JMA
		Mie, Honshu, Japan	(34.7100)	(136.4200)		
TTH	D	Toradole Trig	39 32 28.8 S	176 49 34.2 E	120.0	WELH
		North Island, New Zealand	(39.5413)	(176.8262)		
		opened 19870319.				
TU1		Tusconia	42 25 07.0 N	11 52 28.0 E	166.0	ROM
		Lazio, Italy	(42.4186)	(11.8744)		
TULC	R	Monteloro	...	...	...	UVC
		Colombia				
TUNG		Tungurahua	1 25 05.4 S	78 26 43.8 W	2774.0	QUI
		Ecuador	(1.4182)	(78.4455)		
		opened 198906.				
TUU	R	Turnu Rosu	45 39 09.0 N	24 16 23.0 E	519.0	BUC
		Romania	(45.6525)	(24.2731)		
		opened 19880615.				
TVGG		Rocky Mountain Net	34 22 37.9 N	85 18 08.3 W	323.0	ATL
		Georgia, U.S.A.	(34.3772)	(85.3023)		
TWB		Tillmans-Whites Boy	33 06 54.0 N	80 06 09.0 W	9.0	USGS
		South Carolina, U.S.A.	(33.1150)	(80.1025)		
		opened 19880301.				
TWW		Teanaway	47 08 17.2 N	120 52 04.5 W	1046.0	SEA
		Washington, U.S.A.	(47.1381)	(120.8679)		
		opened 198610.				
TXNY		Tuxedo	41 10 39.0 N	74 11 19.4 W	143.0	
		New York, U.S.A.	(41.1775)	(74.1887)		
		opened 1990.				
TZR		Tezpur	26 38 .. N	92 48 .. E	...	JHI
		Assam, India	(26.6333)	(92.8000)		
UJZ	R		15 04 30.0 N	92 05 00.0 W	...	UNM
		Chiapas, Mexico	(15.0750)	(92.0833)		
UKAO	RD	Ukalundo	20 53 56.4 S	147 07 37.2 E	200.0	QDM
		Queensland, Australia	(20.8990)	(147.1270)		
		opened 19840328. QDM code UKA.				
UMI			25 31 .. N	92 44 .. E	...	JHI
		India	(25.5167)	(92.7333)		
UMT		Umtata	31 35 00.0 S	28 45 18.0 E	800.0	PRE
		Cape Province, South Africa	(31.5833)	(28.7550)		
		opened 198808.				
UON	R	La Union	17 58 12.0 N	101 48 54.0 W	...	UNM
		Guerrero, Mexico	(17.9700)	(101.8150)		
URZ	R	Matahi (Uruwero)	...	...	...	WEL
		New Zealand				
USBR	F	U.S. Bureau of Reclamation, Denver				
USH	RD	Wushi	41 12 .. N	78 36 .. E	...	
		Xinjiang, China (Mainland)	(41.2000)	(78.6000)		
UTMA		University of Tennessee at Martin	36 17 34.8 N	88 58 33.6 W	108.0	
		Tennessee, U.S.A.	(36.2930)	(88.9760)		
		opened 198511. Station moved from UTM.				
UTSU	R	Utsunomiya	36 32 49.3 N	139 55 01.4 E	110.0	UTSU
		Tochigi, Honshu, Japan	(36.5470)	(139.9171)		
		opened 196202. UTSU code UTU.				
UVC	F	Universidad del Valle, Cali				

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Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
UYO		Union Valley Oklahoma, U.S.A. opened 19890415.	34 10 00.0 N (34.1667)	94 27 31.7 W (94.4588)	231.0	TUL
UZD		Uzd Hungary opened 1987.	46 35 33.0 N (46.5925)	18 34 54.5 E (18.5818)	207.0	BUD
VACR		Volcan Arenal Costa Rica opened 19860429.	10 28 22.8 N (10.4730)	84 40 39.0 W (84.6775)	360.0	HDC
VASS		Vassouras Rio de Janeiro, Brazil opened 1988.	22 23 58.0 S (22.3994)	43 39 08.0 W (43.6522)	448.0	RDJ
VBY		Vinica-Bojanci Slovenija, Yugoslavia opened 19861030.	45 30 16.2 N (45.5045)	15 15 23.8 E (15.2566)	259.0	LJU
VC1		Cotopaxi 1 Ecuador opened 198809.	0 38 20.2 S (0.6389)	78 24 02.4 W (78.4007)	4064.0	QUI
VCT		Victoria Romania opened 198904.	45 43 30.0 N (45.7250)	24 42 03.6 E (24.7010)	565.0	BUC
VDF	R	Valdeflores Oaxaca, Mexico	16 45 39.6 N (16.7610)	96 49 19.2 W (96.8220)	...	UNM
VEA		Veona Emilio-Romagno, Italy	44 53 21.5 N (44.8893)	9 37 08.4 E (9.6190)	...	GEN
VFP		Flag Point Oregon, U.S.A. opened 198010.	45 19 05.0 N (45.3181)	121 27 54.3 W (121.4651)	1716.0	SEA
VGP		 Mexico	17 21 25.8 N (17.3572)	93 36 50.4 W (93.6140)	...	UNM
VHTN	C	Von Hill Tennessee, U.S.A. 19860114-19860323.	36 23 56.4 N (36.3990)	82 48 07.2 W (82.8020)	658.0	TVA
VIH		Vielho (Viello) Spain opened 1986.	42 37 43.8 N (42.6288)	0 46 12.0 E (0.7700)	1700.0	MRB
VILF		Villemus Provence-Cote d'Azur, France	43 51 09.0 N (43.8525)	5 42 55.1 E (5.7153)	770.0	STR
VLI		Velial Greece opened 198906.	36 43 05.4 N (36.7182)	22 56 13.2 E (22.9370)	220.0	ATH
VLL		Laurance Lake Oregon, U.S.A. opened 198010.	45 27 48.0 N (45.4633)	121 40 45.0 W (121.6792)	1195.0	SEA
VMO	R	Villa Marinero Oaxoco, Mexico	15 51 04.2 N (15.8512)	97 03 49.8 W (97.0638)	3.0	UNM
VNM		Villa de Garcia Nuevo Leon, Mexico opened 198912.	25 50 36.0 N (25.8433)	100 35 39.0 W (100.5942)	...	UNM
VNV	R	Volcan Villarrica Coutin, Chile	39 22 09.0 S (39.3692)	71 57 10.0 W (71.9528)	...	
VPT	R	Volcan Platonar Costa Rica	...	...	...	HDC
VRAC	R	Vronov Czechoslovakia opened 198912.	...	...	...	
VSM		Volcan San Miguel El Salvador	13 25 41.0 N (13.4281)	88 16 27.0 W (88.2742)	2129.0	SSS
VSS		Volcan San Salvador El Salvador	13 44 30.0 N (13.7417)	89 14 30.0 W (89.2417)	1250.0	SSS
VTU		Volcan Turrialbo Costa Rica	10 01 15.6 N (10.0210)	83 45 30.0 W (83.7583)	3329.0	HDC
VVI		Villa di Villa Veneto, Italy opened 19870610.	45 58 58.4 N (45.9829)	12 25 25.0 E (12.4236)	515.0	ERC
WA4		Burakin Western Australia, Australia opened 19860422.	30 36 07.2 S (30.6020)	117 13 30.0 E (117.2250)	320.0	AUST
WAH2		Wahluke Slope Washington, U.S.A. SEA code WA2.	46 45 24.2 N (46.7567)	119 33 45.5 W (119.5626)	230.0	SEA
WAHZ	R	Wakarara North Island, New Zealand	39 41 57.0 S (39.6992)	176 21 19.0 E (176.3553)	657.0	WELH
WAJH		Al Wajh Saudi Arabia opened 19880620.	26 10 30.0 N (26.1750)	36 33 43.2 E (36.5620)	75.0	RYD
WARB		Warburton Western Australia, Australia opened 19870628.	26 11 01.7 S (26.1838)	126 38 34.8 E (126.6430)	460.0	AUST
WATA		Walderalm Austria opened 198910.	47 20 08.7 N (47.3357)	11 34 34.7 E (11.5763)	1492.0	VIE
WBAO		Buorabo No. 3 Queensland, Australia opened 19840706. ODM code WBA.	27 21 09.7 S (27.3527)	152 18 29.5 E (152.3082)	...	ODM
WCBC		Windy Craggy British Columbia, Canada opened 19880610.	59 37 40.1 N (59.6278)	137 42 57.6 W (137.7160)	750.0	OTTR

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WEGH		Weija	5 35 36.0 N (5.5933)	0 19 37.0 W (0.3269)	180.0	KUK
		Ghana opened 1987.				
WELH	F	DSIR Hawkes Bay Network, Wellington, NZ				
WEN		Wenatchee	47 31 46.2 N (47.5295)	120 11 39.0 W (120.1942)	1061.0	SEA
		Washington, U.S.A.				
WG2		Wallula Gap	46 01 50.2 N (46.0306)	118 51 20.0 W (118.8556)	511.0	SEA
		Washington, U.S.A. opened 198704.				
WHH	D	Whakatau	38 53 04.2 S (38.8845)	176 29 42.0 E (176.4950)	921.0	WELH
		North Island, New Zealand opened 19870301.				
WIGH		Winneba	5 21 49.0 N (5.3636)	0 37 08.0 W (0.6189)	64.0	KUK
		Ghana opened 1987.				
WLZ	D	Whitehall	37 50 27.9 S (37.8411)	175 35 15.7 E (175.5877)	180.0	WEL
		North Island, New Zealand opened 19891217.				
WMBQ		Mount Brisbane	27 06 55.8 S (27.1155)	152 33 00.7 E (152.5502)	160.0	QDM
		Queensland, Australia opened 19770318. QDM code WMB.				
WMZ		Williams	35 09 29.0 N (35.1581)	112 19 13.0 W (112.3203)	2018.0	FLAG
		Arizona, U.S.A. opened 19860131.				
WNS		Wenas	46 42 37.0 N (46.7103)	120 34 30.0 W (120.5750)	1000.0	SEA
		Washington, U.S.A.				
WON	RD	Wolverton North	51 19 39.0 N (51.3275)	1 12 03.0 W (1.2008)	104.0	BKN
		England, United Kingdom				
WPMQ	R	Pine Mountain	27 32 08.5 S (27.5357)	152 44 07.8 E (152.7355)	35.0	QDM
		Queensland, Australia opened 19770318. QDM code WPM.				
WPO		West Portland	45 34 24.0 N (45.5733)	122 47 22.4 W (122.7896)	334.0	SEA
		Oregon, U.S.A. opened 198610.				
WPW		White Pass	46 41 53.4 N (46.6982)	121 32 48.0 W (121.5467)	1250.0	SEA
		Washington, U.S.A.				
WRCQ		Reedy Creek No. 5	27 11 14.6 S (27.1874)	152 39 47.2 E (152.6631)	...	QDM
		Queensland, Australia opened 19840711. QDM code WRC.				
WSSR		Wesser Bold	35 16 40.2 N (35.2778)	83 34 40.8 W (83.5780)	1390.0	TEIC
		North Carolina, U.S.A. opened 198511.				
WTGQ	R	Taogoolawah	27 08 44.9 S (27.1458)	152 19 59.9 E (152.3333)	130.0	QDM
		Queensland, Australia opened 19770318. QDM code WTG.				
WTRQ		Thallon Road	27 31 43.0 S (27.5286)	152 27 52.2 E (152.4645)	...	QDM
		Queensland, Australia opened 19840523. QDM code WTR.				
WTV		Waterville	47 41 55.0 N (47.6986)	119 57 15.0 W (119.9542)	900.0	SEA
		Washington, U.S.A. SEA code WAT.				
WTX		Workman Tunnel	34 04 19.8 N (34.0722)	106 56 45.0 W (106.9458)	1555.0	SNM
		New Mexico, U.S.A.				
WWHQ		Wivenhoe Hill No. 3	27 22 12.7 S (27.3702)	152 35 13.9 E (152.5872)	...	QDM
		Queensland, Australia opened 19840712. QDM code WWH.				
XLV		Seldovia	59 27 16.8 N (59.4547)	151 43 18.0 W (151.7217)	380.0	GIA
		Kenai Peninsula, Alaska, U.S.A. opened 1989?				
XPKP	F	(phase code designation)				
XPP	F	(phase code designation)				
XSCS	F	(phase code designation)				
XSS	F	(phase code designation)				
YAKW		Yakima	46 31 15.8 N (46.5211)	120 31 45.2 W (120.5292)	619.0	SEA
		Washington, U.S.A. SEA code YAK.				
YEL		Yellow Rock	46 12 35.0 N (46.2097)	122 11 16.0 W (122.1878)	1750.0	SEA
		Washington, U.S.A.				
YERD	R	Yerdanie Rock	31 11 08.6 S (31.1857)	120 37 41.2 E (120.6281)	...	
		Western Australia, Australia				
YKB0		Yellowknife Array	62 36 21.4 N (62.6059)	114 36 18.1 W (114.6050)	221.6	OTTR
		Northwest Territories, Canada opened 1962.				
YKB1	R	Yellowknife Array	62 24 08.6 N (62.4024)	114 36 19.6 W (114.6054)	172.5	OTTR
		Northwest Territaries, Canada opened 1962.				
YKB2	R	Yellawknife Array	62 25 29.2 N (62.4248)	114 36 19.5 W (114.6054)	180.0	OTTR
		Northwest Territaries, Canada opened 1962.				
YKB3	R	Yellawknife Array	62 26 55.0 N (62.4486)	114 36 18.7 W (114.6052)	187.6	OTTR
		Northwest Territaries, Canada opened 1962.				
YKB4	R	Yellowknife Array	62 28 15.9 N (62.4711)	114 36 17.8 W (114.6049)	192.9	OTTR
		Northwest Territaries, Canada opened 1962.				
YKB5	R	Yellowknife Array	62 29 35.6 N (62.4932)	114 36 19.1 W (114.6053)	196.7	OTTR
		Northwest Territaries, Canada opened 1962.				

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YKB6	R	Yellowknife Array	62 30 59.5 N	114 36 18.0 W	202.6	OTTR
		Northwest Territories, Canada	(62.5165)	(114.6050)		
		opened 1962.				
YKB7	R	Yellowknife Array	62 32 20.4 N	114 36 19.0 W	204.4	OTTR
		Northwest Territories, Canada	(62.5390)	(114.6053)		
		opened 1962.				
YKB8	R	Yellowknife Array	62 33 41.6 N	114 36 16.9 W	197.9	OTTR
		Northwest Territories, Canada	(62.5616)	(114.6047)		
		opened 1962.				
YKB9	R	Yellowknife Array	62 34 58.6 N	114 36 13.9 W	213.1	OTTR
		Northwest Territories, Canada	(62.5829)	(114.6039)		
		opened 1962.				
YKR0	U	Yellowknife Array	62 29 35.2 N	114 30 30.8 W	204.9	OTTR
		Northwest Territories, Canada	(62.4931)	(114.5086)		
		1962-197605.				
YKR1	R	Yellowknife Array	62 29 33.8 N	114 56 44.1 W	170.0	OTTR
		Northwest Territories, Canada	(62.4927)	(114.9456)		
		opened 1962.				
YKR2	R	Yellowknife Array	62 29 34.0 N	114 53 47.1 W	175.0	OTTR
		Northwest Territories, Canada	(62.4928)	(114.8964)		
		opened 1962.				
YKR3	R	Yellowknife Array	62 29 34.7 N	114 50 51.8 W	176.8	OTTR
		Northwest Territories, Canada	(62.4930)	(114.8477)		
		opened 1962.				
YKR4	R	Yellowknife Array	62 29 33.9 N	114 47 58.2 W	173.4	OTTR
		Northwest Territories, Canada	(62.4927)	(114.7995)		
		opened 1962.				
YKR5	R	Yellowknife Array	62 29 35.8 N	114 44 59.8 W	182.9	OTTR
		Northwest Territories, Canada	(62.4933)	(114.7499)		
		opened 1962.				
YKR6	R	Yellowknife Array	62 29 36.0 N	114 42 04.9 W	192.2	OTTR
		Northwest Territories, Canada	(62.4933)	(114.7014)		
		opened 1962.				
YKR7	R	Yellowknife Array	62 29 36.1 N	114 39 13.2 W	198.9	OTTR
		Northwest Territories, Canada	(62.4934)	(114.6537)		
		opened 1962.				
YKR8		(Alternate Abbreviation for YKB5)				
YKR9	R	Yellowknife Array	62 29 35.6 N	114 33 20.7 W	201.1	OTTR
		Northwest Territories, Canada	(62.4932)	(114.5558)		
		opened 1962.				
YOO	R	.....	17 45 00.0 N	97 49 30.0 W	1600.0	UNM
		Oaxaca, Mexico	(17.7500)	(97.8250)		
YPE		Yupe	14 07 18.0 N	89 40 50.0 W	1581.0	SSS
		El Salvador	(14.1217)	(89.6806)		
YRH		Rhiw	52 50 00.6 N	4 37 44.0 W	300.0	BGS
		Wales, United Kingdom	(52.8335)	(4.6289)		
		opened 1984.				
YYYY		Yonkie	6 14 31.2 S	145 57 57.6 E	1200.0	PMG
		New Guinea, Papua New Guinea	(6.2420)	(145.9660)		
		opened 19880602.				
ZA1		Zafferana	37 41 07.0 N	15 05 24.0 E	875.0	
		Sicilia, Italy	(37.6853)	(15.0900)		
ZAC	R	Zacaltic	17 15 00.0 N	92 45 39.6 W	380.0	IIM
		Chiapas, Mexico	(17.2500)	(92.7610)		
ZHGX		Zihuatenejo	17 36 30.0 N	101 27 54.0 W	...	LJC
		Guerrero, Mexico	(17.6083)	(101.4650)		
		Strong-motion station.				
ZLA		Zurich--Lagern	47 28 55.6 N	8 23 21.3 E	780.0	ZUR
		Switzerland	(47.4821)	(8.3892)		
		opened 198607.				
ZOU	D	Zaufplan	46 33 24.0 N	12 58 24.0 E	1896.0	TRI
		Friuli-Venezia Giulia, Italy	(46.5567)	(12.9733)		
		opened 19821017.				
ZZA	R	.....	15 08 .. N	92 19 .. W	...	UNM
		Chiapas, Mexico	(15.1333)	(92.3167)		

Listing generated 10 JUL 1990.