UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT

JUNE 1989

by

U.S. Geological Survey

NATIONAL EARTHQUAKE INFORMATION CENTER[1]

Open-File Report 89-606-A

1989

[1]USGS, Denver, Colorado

89-606-A -B

The following description is for New Publications of the U.S. Geological Survey:

Earthquake Data Report for June **, 19**89

The Earthquake Data Report (EDR) is a bulletin produced by the National Earthquake Information Center (NEIC) containing all information used to calculate the locations and magnitudes of events published in the Preliminary Determination of Epicenters (PDE) Monthly Listing for the corresponding month. The EDR is a technical data file intended for users who are familiar with basic seismological practice. Potential users who are unfamiliar with such practice or who desire simply a bulletin of earthquake locations are advised to obtain the PDE Monthly Listing (available from the U.S. Government Printing Office) instead of the EDR. A machine-readable summary of the PDE Monthly Listing is available from the NEIC.

The EDR data are written on 1.2 megabyte, high density, 5 1/4 inch diskettes and are readable by IBM PC or compatible computers running DOS version 2.0 or higher. All files are ASCII and the documentation is given in file AAREADME.DAT on the first disk. Succeeding disks are a continuation of the data file which starts on the first disk. Each disk contains a title page file, named AATPAGEn.DAT, and a data file, OFEDRmmn.DAT, where n is the disk number and mm is a two-character code for the month (JA, FE, MR, etc.).

EDR No. 6-89
Part 1 of 2
P. 1-126

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.

% JUN 01, 1989 00h 13m 43.73± 0.79s
40.133 N ± 6.2km 29.325 E ± 7.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

HRT	0.74	21	iPg	13 58.30	0.1
			iSg	14 11.30	
DST	0.75	226	iPg	13 57.70	-0.8
			iSg	14 08.20	
ISK	0.95	348	iPn	14 01.30	-0.6
BNT	1.10	282	iPn	14 04.80	0.4
EDC	1.14	281	iPn	14 05.50	0.4
ALT	1.24	150	ePn	14 07.10	0.3

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

% JUN 01, 1989 02h 11m 30.59± 1.35s
39.616 N ±11.6km 27.846 E ± 8.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.60	91	iPg	11 42.70	-0.1
			iSg	11 52.20	
EDC	0.73	1	iPg	11 45.00	0.1
			iSg	11 55.00	
BNT	0.74	4	iPg	11 45.80	0.7
EZN	1.19	281	ePn	11 53.00	0.2
MFT	1.25	340	ePn	11 53.00	-0.8

S.D. = 0.8 on 5 of 5 obs.

& JUN 01, 1989 03h 51m 11.34s
63.143 N 150.847 W
DEPTH = 124.2km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.41	355	iP	51 29.37	-0.3
MCK	1.04	55	eP	51 34.31	-0.2
SKT	1.21	195	eP	51 35.07	-1.1
PWA	1.56	163	iP	51 39.50	-0.6
			S	52 01.16	
NEA	1.64	28	eP	51 40.08	-1.0
SUA	1.69	178	eP	51 41.53	-0.2
			S	52 03.92	
PME	1.74	150	eP	51 41.15	-1.1
CGLM	1.92	197	eP	51 43.36	-1.2
CRP	1.98	199	eP	51 44.47	-0.9
CCB	2.02	40	iP	51 45.00	-0.7
SPU	2.05	197	eP	51 44.83	-1.3
RDS	2.07	34	iP	51 45.64	-0.7
HDA	2.14	52	eP	51 46.74	-0.5
			S	52 14.81	
FBA	2.22	36	iP	51 47.57	-0.6
GLM	2.40	38	iP	51 49.85	-0.7
PAX	2.46	92	eP	51 50.81	-0.5
			S	52 20.76	
SLKM	2.66	173	eP	51 52.67	-1.3
SEW	3.12	167	eP	51 58.28	-1.7
ILIM	3.24	199	eP	52 00.10	-1.5
CNPM	3.64	183	eP	52 05.52	-1.4

20 obs. associated

JUN 01, 1989 04h 08m 18.91± 0.18s
10.966 S ± 4.4km 165.449 E ± 4.2km
DEPTH = 33.0km (normal)
5.0mb (7 obs.) 4.8Msz (2 obs.)
SANTA CRUZ ISLANDS (184)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 20C
Centroid Location:
Origin Time 04:08:21.7 0.6
Lat 11.42S 0.11 Lon 165.52E 0.10
Dep 15.0 FIX Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 4.42 0.31 Mtt=-0.89 0.48
Mff=-3.52 0.50 Mrt= 3.78 1.07
Mrf=-8.18 1.26 Mtf= 1.80 0.32
Principal Axes:

	Val=	Plg=	Azm=
T	10.03	58	66
N	0.02	1	335
P	-10.05	32	244

Best Double Couple:Mo=1.0*10**17
NP1:Strike=331 Dip=13 Slip= 86
NP2: 155 77 91

HNR	5.63	285	ePd	09 42.00	-0.5
			eS	10 46.00	
VSG	5.90	286	eP	09 47.00	0.6
			eS	10 55.00	
PVC	7.28	158	iPc	10 34.50	28.8X
			iS	12 12.00	
DZM	11.08	175	iPc	10 57.00	-1.4
			iS	12 58.00	
SVA	14.45	121	eP	11 50.80	7.6X
BRS	20.23	214	iPc	12 54.40	0.3
			iS	16 48.00	
CTA	20.58	242	iPd	12 58.00	0.2
	1.4s	213.95nm		5.3mb	
			i	13 09.60	
			iS	16 49.00	
RMO	22.06	223	iPc	13 14.50	1.8
QIS	26.60	246	eP	13 55.00	-1.3
CMS	27.32	219	eP	14 05.00	2.2
KRP	28.33	163	P	14 12.00	0.2
MNG	30.84	165	P	14 33.40	-0.8
PGZ	31.04	164	P	14 34.80	-1.1
WB2	31.23	250	iPc	14 37.00	-0.8
MRW	31.23	166	eP	14 38.00	0.4
ASPA	32.57	243	iPd	14 48.00	-1.6
	1.1s	21.00nm		4.9mb	
Z	20s	1.65um		4.7Msz	
		LR	26 33.70		
MSZ	33.65	177	e(P)	15 14.00	15.4X
WARB	39.60	242	eP	15 42.60	-6.6X
NJ2	61.76	316	Pd	18 36.40	-0.4
CN2	65.52	329	eP	19 00.50	-0.8
Z	16s	0.70um		5.0MszX	
N	11s	0.30um			
GYA	68.13	304	P	19 18.40	0.0
BJI	68.24	321	eP	19 17.00	-1.5
Z	24s	0.32um		4.5MszX	
		eS	28 16.00		
TIY	69.30	317	eP	19 23.80	-1.5
E	15s	0.50um			
		eS	28 30.00		
KMI	70.83	301	eP	19 37.00	1.9
Z	20s	0.60um		4.8Msz	
		eS	28 54.00		
CHG	71.93	294	eP	19 42.00	0.5
CD2	72.32	307	P	19 44.00	0.3
BTO	72.44	319	eP	19 45.20	1.0
LZH	74.49	312	eP	19 57.50	1.2
	1.5s	0.04nm		2.2mb X	
SVW	78.12	18	eP	20 16.40	0.3
GTA	78.79	314	P	20 20.80	0.5
SPA	79.11	180	ePc	20 22.30	0.7
	1.0s	14.00nm		4.9mb	
		e	20 30.20		
TTA	79.43	17	eP	20 23.50	0.2
PMR	80.58	20	eP	20 26.40	-2.9
TOA	81.95	21	eP	20 37.30	0.7
IMA	82.51	16	eP	20 39.50	0.0
PCC	82.84	50	eP	20 41.50	-0.1
GCC	82.98	50	ePc	20 42.70	0.4
BRK	83.06	49	eP	20 43.10	0.4
BKS	83.08	49	iPd	20 43.60	0.8
	0.8s	66.00nm		5.8mb	
PRS	83.23	51	ePc	20 44.10	0.5
SAO	83.31	51	eP	20 44.50	0.5
FBA	83.34	18	eP	20 42.70	-0.9
	1.0s	18.80nm		5.2mb	
MHC	83.35	50	ePc	20 44.70	0.3
LLA	83.64	51	ePc	20 46.30	0.5
SYP	83.74	53	eP	20 47.00	0.6
WDC	83.77	47	eP	20 46.70	0.4
BCH	83.86	53	P	20 47.40	0.4
LTCM	83.94	47	P	20 47.00	-0.2
ORV	84.18	48	ePc	20 48.30	-0.1
MIN	84.36	47	ePc	20 49.00	-0.5
CMB	84.51	50	ePc	20 50.10	0.0
		e	21 08.50		
FRI	84.70	51	ePc	20 51.10	0.1
MWC	85.17	54	eP	20 54.00	0.3
ISA	85.26	52	eP	20 54.00	0.1
SBB	85.48	54	eP	20 55.00	-0.1
RVR	85.65	54	eP	20 56.00	0.2
BAR	85.85	56	eP	20 57.00	0.1
PLM	85.88	55	eP	20 57.00	-0.3
CLC	85.98	53	eP	20 58.00	0.5
KKN	86.51	299	P	21 01.00	0.5
KVN	86.53	49	P	21 00.50	0.2
TNP	86.91	50	P	21 02.30	0.1
	0.7s	5.56nm		4.9mb	
GLA	87.45	56	eP	21 05.00	0.3
PNT	88.62	39	eP	21 10.00	0.1
DPW	89.07	41	P	21 12.20	0.1
INK	89.92	19	eP	21 14.00	-1.6
LRM	92.33	44	ePc	21 27.70	0.1
PV09	93.19	52	P	21 32.00	0.3
EDM	93.48	37	ePd	21 32.40	0.0
SES	94.25	40	eP	21 35.00	-1.0
ALQ	94.64	55	eP	21 39.00	0.6
	1.0s	3.75nm		4.8mb	
YKA	95.04	27	eP	21 38.50	-0.8
MBC	97.09	13	eP	21 48.00	-0.4
PRY	124.48	226	ePKP	27 16.20	-1.1
	0.7s	7.50nm			
SLR	124.60	228	iPKPc	27 17.50	0.0
BUL	127.47	234	iPKPd	27 23.00	-0.2
	1.0s	10.50nm			
SOB1	147.01	126	ePKP	27 59.30	0.5
		e	28 07.00		
ITR	149.21	129	ePKP	28 07.10	4.8X

S.D. = 0.8 on 73 of 78 obs.

JUN 01, 1989 04h 39m 41.41± 0.51s
37.013 N ± 4.3km 141.703 E ± 4.3km
DEPTH = 64.6 ± 4.2 km
4.9mb (17 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Fukushima; (I JMA) at Onahama, Mito, Shirokawo, Sendai and Utsunomiyo.

ONA	0.64	264	iPd	39 55.50	0.1
			S	40 06.70	
MIT	1.17	238	iPd	40 02.50	0.3
			iS	40 18.10	
SHR	1.19	276	eP	40 00.00	-2.4
FKS	1.23	308	eP	40 03.00	0.1
			S	40 20.40	
SEN	1.40	333	iP+	40 05.60	0.4
			iS	40 24.00	
KAKJ	1.47	237	iPd	40 05.70	-0.5
			S	40 23.50	
UTS	1.54	253	iPd	40 07.60	0.4
			iS	40 28.20	
YAMJ	1.76	312	iPd	40 11.20	1.0
			S	40 34.20	
OFUJ	2.06	359	iP+	40 13.20	-1.2
			eS	40 37.90	
NIIJ	2.17	277	iPd	40 17.20	1.3
			S	40 46.30	
CHJJ	2.38	247	iPd	40 19.10	0.2
			eS	40 47.00	
MAT	2.84	262	iPd	40 27.10	1.7
			(S)	41 03.00	
IIDJ	3.42	245	iPd	40 35.30	1.7
AOMJ	3.69	344	eP	40 37.70	0.5
MRRJ	5.43	355	P	40 59.60	-2.0
			eS	42 00.60	
HOOJ	5.50	12	iP+	40 58.90	-3.7X
			eS	41 58.70	
WKYJ	5.70	243	P	41 05.30	-0.3
SAP	6.04	357	eP	41 09.00	-1.2
KUSJ	6.50	20	P	41 11.10	-5.4X
			S	42 19.80	
YONJ	6.91	257	iPd	41 23.20	0.8
TKSJ	6.94	246	P	41 22.70	0.1
ASAJ	7.13	5	eP	41 21.00	-4.3X
			eS	42 41.20	
SHK	7.74	254	iPd	41 33.80	0.0
	0.7s	82.19nm		5.6mb	
SHNJ	9.10	255	P	41 53.70	1.2
KUMJ	10.00	247	eP	42 04.80	0.1
KAGJ	10.68	240	eP	42 14.70	0.7
MDJ	11.90	313	eP	42 31.50	1.1
CN2	14.11	304	eP	43 03.00	3.6X
DL2	15.95	283	eP	43 22.00	-1.0
SSE	17.98	257	P	43 47.00	-1.4
Z	20s	0.50um			
E	16s	0.50um			
NJ2	19.45	262	eP	44 02.50	-3.0X
Z	16s	0.40um			
TIA	19.74	275	eP	44 06.60	-1.9
BJI	20.18	286	eP	44 11.50	-1.6
			eS	47 50.00	
QZH	23.12	245	P	44 40.50	-1.9
TIY	23.24	281	eP	44 42.00	-1.7

GUMO	23.50	172	eP	45	07.30	21.1X
	1.2s	355.56nm				
GUA	23.55	172	eP	45	07.30	20.5X
	0.8s	83.58nm				
WHN	23.59	262	Pc	44	47.00	0.0
BTO	24.88	288	eP	45	00.30	0.8
XAN	26.77	274	Pc	45	17.00	0.0
LZH	30.30	280	eP	45	49.50	0.7
			sP	46	10.50	
GYA	31.45	261	P	45	58.20	-0.8
			S	51	02.60	
CD2	31.91	270	iPc	46	02.30	-0.6
GTA	32.79	287	P	46	10.20	-0.4
KMI	35.19	262	Pc	46	32.00	0.5
LOE	40.19	252	eP	47	13.40	0.3
WMQ	41.06	297	eP	47	23.60	3.5X
CHG	41.51	256	ePd	47	24.90	1.0
	1.0s	12.50nm			4.7mb	
TTA	45.31	35	eP	47	54.30	0.0
SVW	45.38	37	ePc	47	55.70	0.9
BRW	46.34	23	eP	48	03.10	0.9
IMA	46.59	30	eP	48	04.50	0.1
GUN	47.39	276	P	48	12.50	1.0
	0.7s	29.00nm			5.3mb	
PKI	47.91	276	P	48	14.40	-1.2
KKN	47.92	276	P	48	15.60	0.1
	0.7s	38.00nm			5.5mb	
DMN	48.14	276	P	48	16.30	-0.9
PMR	48.50	37	ePc	48	18.30	-0.9
	0.9s	16.70nm			5.0mb	
FBA	49.00	32	ePc	48	23.00	0.0
TOA	49.87	36	eP	48	29.80	0.0
MTN	50.58	193	ePc	48	34.70	-0.9
PSI	52.06	239	ePc	48	47.00	0.1
INK	54.30	27	iPc	49	02.40	-0.4
			pP	49	27.50	103kmX
MBC	56.48	16	ePc	49	18.30	-0.2
	0.9s	19.00nm			5.2mb	
WB2	57.07	188	eP	49	21.00	-2.2
ALE	60.12	4	eP	49	44.00	0.2
	0.9s	13.00nm			5.1mb	
ASPA	60.80	188	eP	49	48.10	-0.9
GBA	61.44	266	Pc	49	52.70	-0.9
	0.9s	5.20nm			4.7mb	
KEV	63.54	339	eP	50	07.00	0.2
YKA	63.71	30	eP	50	07.80	-0.2
YKC	63.77	30	ePc	50	17.80	9.4X
SOD	65.07	337	iP	50	16.60	-0.2
DAG	65.82	355	iPc	50	20.90	-0.5
	1.0s	9.00nm			4.7mb	
PNT	68.03	44	eP	50	36.00	0.2
SUF	68.11	333	iP	50	36.00	0.0
	0.8s	13.10nm			5.0mb	
Z	18s	47.80um			6.8Msz	
NUR	70.08	332	iP	50	39.60	-8.5X
WDC	70.90	53	e(P)	50	53.50	0.0
MIN	71.63	53	ePc	50	57.30	-0.8
ORV	72.12	54	eP	51	00.00	-0.9
BKS	72.57	56	iPd	51	03.90	0.4
FFC	73.60	33	iPc	51	08.40	-0.8
	1.0s	22.00nm			5.0mb	
CMB	73.69	55	ePc	51	10.20	0.1
LRM	74.00	44	eP	51	12.20	0.2
PRS	74.00	57	ePc	51	11.90	0.0
HFS	74.20	336	eP	51	12.60	0.0
	0.8s	7.10nm			4.6mb	
NB2	74.30	337	P	51	13.50	0.3
	1.0s	12.70nm			4.8mb	
KVN	74.59	53	P	51	15.00	-0.5
FRI	74.73	55	eP	51	15.80	-0.2
HPI	74.90	46	P	51	17.30	0.0
TNP	75.71	53	P	51	22.00	0.1
	0.8s	7.84nm			4.7mb	
FRB	76.74	13	eP	51	27.00	0.1
MSU	78.62	50	P	51	38.50	0.4
PLM	78.75	57	P	51	38.50	-0.3
RSON	79.89	32	P	51	43.00	-1.3
KSP	80.24	328	ePc	51	47.70	1.5
GLA	80.28	56	P	51	47.20	0.3
BRG	81.19	330	e(P)	51	51.60	0.4
CLL	81.23	330	iPd	51	52.30	0.9
	1.7s	26.00nm			4.9mb	
PRU	81.62	329	eP	51	55.00	1.5
KHC	82.68	329	eP	52	00.00	0.9
ALQ	84.43	50	iP	52	10.00	1.6
	1.0s	8.75nm			4.8mb	
		e		52	27.00	
SIO	89.79	44	eP	52	34.60	0.4
LNO	89.95	43	eP	52	34.70	-0.1
TUL	89.95	43	eP	52	35.60	0.7
	0.7s	7.90nm			5.1mb	
RLO	90.18	43	e(P)	52	36.60	0.6
VVO	90.41	44	eP	52	37.50	0.5
UYO	91.98	44	eP	52	44.40	0.1
ZOBO	146.50	60	PKP	59	18.00	1.5
Z	22s	0.24um			4.9Msz	
			LR	06	08.00	
LPB	146.69	60	PKP	59	18.00	1.4
	1.0s	22.00nm				
CCH	148.63	59	ePKP	59	23.00	3.5X
SOB1	152.22	6	e(PKP)	59	32.00	7.3X
	S.D. = 0.9	on	98 of 110 obs.			

? JUN 01, 1989 05h 14m 19.85± 3.37s
6.834 S ±23.6km 147.780 E ±33.6km
DEPTH = 33.0km (normal)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.80	283	eP	14	33.00	-1.6
LMG	2.09	170	eP	14	53.00	-0.4
PMG	2.63	194	eP	15	02.50	1.6
			eS	15	48.00	
MNDI	4.15	279	eP	15	24.00	1.3
JAY	8.25	301	ePc	16	21.00	0.7
QIS	15.78	209	eP	18	06.00	4.7X
WB2	18.43	224	eP	18	34.20	-0.4
ASPA	21.40	217	iPc	19	06.00	-1.1
Z	23s	0.29um			3.6MszX	
			LR	27	32.60	
BAO	152.75	145	e(PKP)	34	03.00	-5.6X
	S.D. = 1.5	on	7 of 9 obs.			

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* JUN 01, 1989 06h 14m 11.97± 2.26s
6.344 S ±23.4km 145.540 E ±13.2km
DEPTH = 10.0km (geophysicist)
PAPUA NEW GUINEA (202)

MNDI	1.88	276	eP	14	44.50	-0.1
PMG	3.44	152	iPd	15	06.00	-0.7
			eS	15	50.00	
LMG	3.63	135	eP	15	10.00	0.4
CTA	13.68	177	iPc	17	29.80	1.3
QIS	15.26	202	eP	17	49.00	-0.2
			e	17	52.00	
MTN	15.60	244	eP	17	55.00	1.3
WB2	17.35	218	eP	18	15.60	-0.3
ASPA	20.54	212	eP	18	51.70	-1.7
GUN	66.85	304	P	25	17.30	10.3X
	0.6s	32.00nm				
PKI	67.11	303	P	25	15.80	7.1X
	0.7s	13.00nm			5.2mb	
KKN	67.30	304	P	25	18.20	8.5X
GKN	67.91	304	P	25	22.40	8.9X
	0.4s	8.00nm			5.3mb	
GBA	70.44	287	Pd	25	34.70	5.7X
	0.9s	5.90nm			4.7mb	
	S.D. = 1.2	on	8 of 13 obs.			

% JUN 01, 1989 06h 18m 03.99± 0.56s
60.703 N ± 4.4km 5.494 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 1.8 (BER).

ASK	0.27	214	iP	18	09.88	0.3
			eSg	18	14.10	
BER	0.33	194	eP	18	10.57	-0.2
			eSg	18	14.95	
SUE	0.50	315	iP	18	14.08	-0.1
			eS	18	21.12	
HYA	0.58	36	iPc	18	14.51	-1.1
			eS	18	22.06	
ODD1	0.97	144	iP	18	21.95	-0.6
			eS	18	34.48	
BLS1	1.48	152	eP	18	30.93	0.2
			eS	18	50.65	
KMY	1.50	185	eP	18	30.89	0.0
			eS	18	50.50	
MOL	2.12	27	eP	18	40.72	0.9
			eS	19	03.29	
NRA0	2.97	87	ePn	18	52.70	0.7
			iPg	18	55.30	
			iS	19	26.50	
			iSg	19	34.10	
	S.D. = 0.7	on	9 of 9 obs.			

JUN 01, 1989 06h 20m 19.08± 0.58s
0.500 N ± 6.3km 100.112 E ± 7.7km
DEPTH = 176.6 ± 5.7 km
5.0mb (12 obs.)
NORTHERN SUMATERA (706)

PPI	0.99	163	ePd	20	46.50	-0.1
			eS	21	06.00	
PSI	2.48	331	iPc	21	00.60	-1.2
KGM	3.54	65	iPd	21	17.60	2.8
	1.0s	942.40nm				
IPM	4.15	13	ePd	21	22.80	0.1
	0.4s	43.90nm				
SNG	6.65	4	eP	21	54.70	-0.8
LOE	16.87	5	eP	24	06.00	-0.6
KKM	16.99	71	eP	24	23.00	15.0X
CHG	18.24	356	eP	24	21.50	-0.3
MKS	20.15	107	iPd	24	50.00	8.5X
KOD	24.51	294	eP	25	24.00	-0.2
MBL	28.90	139	eP	26	02.70	-0.9
MEKA	32.28	148	iPd	26	33.90	0.7
	0.3s	15.00nm			5.2mb	
MTN	33.50	114	eP	26	42.00	-1.9
WARB	36.86	138	eP	27	04.90	-7.3X
	0.3s	3.00nm			4.4mb	
NWAO	36.96	156	eP	27	14.70	1.8
WB2	39.22	123	iPd	27	30.80	-1.1
ASPA	40.67	129	iPc	27	43.00	-0.8
	0.7s	21.00nm			4.8mb	
			iScP	33	15.00	
			iScS	37	29.90	
QIS	43.94	121	eP	28	09.70	-0.7
CTA	49.59	117	iPc	28	54.20	-0.3
	1.0s	18.50nm			4.6mb	
ADE	50.44	138	eP	29	01.00	0.2
	0.5s	50.70nm			5.4mb	
STK	50.74	133	ePc	29	02.70	-0.4
	0.3s	16.00nm			5.1mb	
BRS	57.64	123	iPd	29	53.30	0.0
RMN	68.75	303	eP	31	05.60	-0.5
MAW	72.72	194	eP	31	30.00	0.9
BUL	72.83	249	iPc	31	30.40	-0.5
	0.9s	26.89nm			5.0mb	
VRI	78.11	317	ePd	32	00.00	0.0
MLR	78.58	316	ePd	32	02.50	-0.2
NUR	82.43	331	eP	32	22.00	-0.5
	0.6s	17.00nm			5.0mb	
ZST	84.96	318	iP	32	35.80	0.3
KSP	85.70	321	eP	32	40.00	0.8
VBY	86.03	315	e(P)	32	41.20	0.3
VOY	87.01	316	eP	32	45.60	-0.2
BRG	87.19	321	iPc	32	47.20	0.8
	1.2s	26.00nm			5.0mb	
HFS	87.78	330	eP	32	49.30	0.3
	0.4s	7.30nm			4.9mb	
CLL	87.80	321	iP	32	49.90	0.6
	1.2s	18.00nm			4.9mb	
GRF	B8.90	320	eP	32	56.00	1.4
	0.9s	22.00nm			5.1mb	
SOB1	140.24	256	ePKP	39	31.90	2.3X
BAO	145.11	243	ePKP	39	38.00	-0.1
ATB	152.22	264	PKPd	39	55.60	6.5X
	S.D. = 0.9	on	34 of 39 obs.			

% JUN 01, 1989 07h 23m 59.73± 0.70s
40.818 N ± 6.0km 27.589 E ± 6.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

MFT	0.24	262	iPg	24	05.20	0.4
			iSg	24	07.70	
EDC	0.51	156	iPg	24	09.50	-0.7
			iSg	24	18.00	
BNT	0.53	151	iPg	24	10.70	0.3
CTT	0.72	62	iPg	24	14.20	0.4
			iSg	24	24.20	
DMK	1.01	7	iPg	24	19.20	0.3
			iSg	24	32.50	
ISK	1.14	77	iPn	24	20.20	-0.9
EZN	1.38	225	ePn	24	23.90	-1.1
GBZT	1.41	91	ePg	24	44.00	18.6X
			iSg	24	47.00	
DST	1.45	146	ePn	24	27.90	1.9
HRT	1.58	89	iPn	24	27.20	-0.6
	S.D. = 1.1	on	9 of 10 obs.			

JUN 01, 1989 07h 25m 06.47± 0.34s
52.004 S ± 7.3km 159.679 E ± 5.7km
DEPTH = 10.0km (geophysicist)
5.2mb (12 obs.) 4.8Msz (3 obs.)
MACQUARIE ISLANDS REGION (167)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 25C
Centroid Location:
Origin Time 07:25:14.2 0.5
Lat 52.12S FIX;Lon 158.56E FIX
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 2.54 0.64 Mtt= 1.99 0.89
Mff=-4.53 0.46 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-5.75 0.54
Principal Axes:
T Val= 5.34 Plg= 0 Azm=210
N 2.54 90 180
P -7.88 0 120
Best Double Couple:Mo=6.6*10**16
NP1:Strike=255 Dip=90 Slip= 180
NP2: 345 90 0

CBZ	5.85	99	Pc	26 35.50	0.3
MSZ	9.16	40	P	27 18.40	-3.1X
MHZ	9.42	46	eP	27 21.00	-4.2X
TAU	12.34	313	eP	28 00.00	-4.9X
			i	28 09.60	
			eS	30 10.00	
WEL	14.88	50	eP	28 52.00	13.6X
			eS	31 30.00	
PGZ	16.11	52	P	28 52.50	-1.9
TOO	17.55	320	iPc	29 13.00	0.4
			e	29 16.00	
			e	32 22.00	
WHH	17.59	48	P	29 13.70	0.6
DRV	17.66	206	eP	29 22.20	8.5X
KRP	17.94	45	P	29 20.20	2.7X
CNB	18.24	332	eP	29 23.00	1.7
CAN	18.35	331	eP	29 24.00	1.5
BFD	19.13	314	eP	29 31.00	-1.0
ADE	22.70	310	eP	30 10.70	1.3
	1.0s		54.00nm		5.0mb
CMS	22.88	328	eP	30 12.00	0.9
STK	24.07	320	eP	30 22.00	-0.6
BRS	25.13	345	eP	30 34.00	1.1
SBA	26.08	177	Pd	30 43.20	1.9
RMQ	26.79	338	eP	30 49.00	0.7
			e	30 52.00	
DZM	30.34	12	iPd	31 20.50	0.1
FORR	31.35	300	iPd	31 28.40	-0.7
	0.5s		20.00nm		5.3mb
CTA	33.54	337	iPd	31 47.80	-0.5
	1.3s		67.31nm		5.4mb
			i	31 54.70	
			i	32 04.40	
			iS	37 13.00	
QIS	35.07	326	eP	32 00.00	-1.5
RKG	35.35	283	eP	32 01.00	-2.8X
WARB	35.84	303	eP	32 00.10	-8.0X
NWAO	36.01	285	eP	32 08.60	-0.8
Z	20s		1.00um		4.6Msz
N	20s		0.50um		
E	20s		0.80um		
KLB	36.65	287	eP	32 14.50	-0.3
	0.8s		40.00nm		5.3mb
WB2	37.61	319	eP	32 21.90	-1.1
SPA	38.18	180	ePc	32 38.00	10.4X
	1.4s		60.78nm		
MBL	43.52	300	iPd	33 11.00	-0.7
KNA	43.72	314	eP	33 12.00	-1.3
	0.9s		25.00nm		5.0mb
NANU	44.78	294	iPd	33 21.70	-0.2
MTN	45.31	319	iPc	33 25.40	-0.8
MAW	45.74	212	eP	33 29.00	0.0
AFR	52.39	68	eP	34 21.00	0.1
	1.0s		25.00nm		5.1mb
PAE	52.41	69	eP	34 20.00	-1.1
	1.0s		25.00nm		5.1mb
PPT	52.49	69	eP+	34 22.00	0.3
	1.0s		30.00nm		5.2mb
Z	20s		0.70um		4.7Msz
TVO	52.50	69	eP	34 22.00	0.1
	1.0s		30.00nm		5.2mb
PPN	52.60	69	eP	34 24.00	1.5
	1.0s		15.00nm		4.9mb
SNG	77.42	299	eP	36 46.80	-16.5X
LOE	85.44	306	eP	37 45.00	-0.3
CHG	88.04	304	eP	37 58.80	0.8
	1.1s		22.78nm		5.4mb
SSE	89.36	328	eP	38 02.50	-1.5
MAT	90.15	343	eP	38 09.00	1.4
	1.7s		50.00nm		5.5mb
NJ2	91.02	326	Pd	38 19.00	7.3X
KMI	91.50	311	Pd	38 17.50	3.1X
CD2	95.97	314	eP	38 36.90	2.3
XAN	96.50	320	eP	38 38.00	1.1
KVN	115.34	59	PKP	43 49.00	-0.6
MSU	118.15	63	PKP	43 56.50	1.5
PNT	121.94	50	ePKP	44 10.00	8.4X
LRM	123.08	57	ePKP	44 02.80	-1.4
MEO	123.36	75	ePKP	44 09.20	4.5X
	1.0s		6.90nm		
FBA	123.40	24	PKP	44 01.00	-2.9X
MAIO	123.48	288	ePKP	44 05.00	0.0
UYO	125.42	78	ePKP	44 15.20	6.5X
TUL	125.79	76	ePKP	44 17.30	7.8X
	1.0s		4.30nm		
Z	21s		0.49um		5.2Msz
LNO	125.80	76	ePKP	44 16.70	7.4X
RSSD	126.44	63	PKP	44 09.00	-1.8
SES	126.80	53	ePKP	44 16.00	5.0X
INK	129.73	26	ePKP	44 15.00	-0.9
FFC	133.81	53	ePKP	44 27.00	2.9X
	1.0s		10.00nm		
MBC	137.73	21	ePKP	44 30.00	-1.0
RSNY	143.90	80	PKP	44 45.50	2.7X
GAC	143.92	78	ePKP	44 39.00	-3.8X
IZM	144.47	267	ePKP	44 42.00	-2.1X
BNT	145.25	270	iPKP	44 45.20	-0.1
EDC	145.28	270	ePKP	44 44.00	-1.3
CTT	145.39	271	iPKP	44 44.20	-1.3
MFT	145.89	270	iPKP	44 46.20	-0.3
EZN	145.92	268	ePKP	44 47.00	0.6
BNH	145.92	82	PKP	44 49.00	2.7X
ALE	147.09	9	ePKP	44 50.00	2.9X
	1.3s		31.00nm		
TLB	147.51	276	ePKP	44 53.00	4.3X
KDZ	147.54	270	ePKP	44 51.00	2.0
CFR	147.73	277	ePKP	44 56.00	6.9X
RZN	147.99	269	ePKP	44 54.00	4.1X
PVL	148.45	272	ePKP	44 51.00	0.7
CBM	148.98	80	PKP	44 57.00	5.9X
KKB	149.10	268	ePKP	44 54.00	2.5X
VAY	149.11	267	ePKP	44 56.00	4.6X
MLR	149.24	276	ePKPd	44 57.00	5.3X
CMP	149.69	275	ePKPc	44 56.00	3.7X
OHR	150.08	265	ePKP	44 59.20	6.2X
	1.7s		0.15nm		
SKO	150.18	267	ePKP	44 52.50	-0.6
DEV	151.30	275	ePKPd	45 00.00	5.4X
KEV	151.97	327	ePKP	45 01.00	6.1X
FRB	152.52	46	ePKP	45 09.00	13.2X
SCH	152.56	66	ePKP	45 03.00	6.8X
SOD	152.63	322	iPKP	45 00.80	4.9X
SUF	153.35	312	iPKP	45 01.70	4.7X
SPC	154.33	280	e(PKP)	45 11.10	12.1X
DAG	155.13	359	ePKP	45 15.00	16.0X
KHC	158.39	276	ePKP	45 26.00	21.9X
			e	45 41.50	

S.D. = 1.1 on 51 of 94 obs.

? JUN 01, 1989 07h 35m 07.98± 0.96s
3.243 N ±23.2km 64.524 E ±18.8km
DEPTH = 10.0km (geophysicist)
4.8mb (7 obs.)
CARLSBERG RIDGE (421)

BNG	45.88	273	ePc	43 33.50	0.6
	1.6s		26.00nm		5.0mb
			id	44 09.20	
			id	45 44.00	
BCAO	45.90	273	e(P)	43 32.70	-0.3
	1.0s		1.00nm		3.8mb X
SPC	59.24	328	eP	45 21.90	9.8X
ZST	60.41	325	eP	45 25.80	5.9X
KSP	62.28	328	eP	45 34.50	2.0
BRG	63.57	327	eP	45 41.00	0.0
CLL	64.30	327	e(P)	45 46.00	0.2
SMF	67.82	320	eP	46 08.90	0.4
	1.2s		5.90nm		4.7mb
LBF	67.85	320	eP	46 08.40	-0.3
	1.0s		6.80nm		4.8mb
LOR	68.02	320	eP	46 09.30	-0.4
	1.0s		6.00nm		4.7mb
SSF	68.18	320	eP	46 09.80	-0.9
	1.0s		10.00nm		5.0mb
AVF	68.18	320	eP	46 09.20	-1.5
	1.0s		4.00nm		4.6mb
ASPA	72.54	116	iPd	46 37.70	0.0
	0.6s		9.00nm		5.0mb

S.D. = 1.0 on 11 of 13 obs.

• JUN 01, 1989 07h 57m 42.91± 3.40s
10.518 N ±20.8km 62.216 W ±21.4km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF VENEZUELA (97)
MD 3.6 (TRN).

TCE	0.49	69	eP	57 52.23	-0.6
			eS	57 59.94	
TPP	0.78	105	eP	57 57.29	-0.8
			eS	58 00.54	
TRN	0.81	81	eP	57 57.23	-1.4
			eS	58 00.25	
TBH	1.13	92	eP	58 04.80	0.7
			eS	58 08.36	
PIG	1.49	65	eP	58 11.97	2.2
			eS	58 20.21	
BOT	1.61	66	eP	58 12.07	0.7
			eS	58 20.02	
SVB	2.89	19	eP	58 29.85	-0.1
SLB	3.48	19	eP	58 38.42	0.1
BIM	4.13	16	eP	58 47.13	-0.3
			S	59 35.70	
MVM	4.21	18	eP	58 48.41	-0.3
FDF	4.32	14	eP	58 49.77	-0.4
	0.1s		0.30nm		

S.D. = 1.1 on 11 of 11 obs.

• JUN 01, 1989 08h 00m 49.48± 0.87s
52.115 N ±18.7km 176.157 W ±15.4km
DEPTH = 154.4 ± 8.9 km
4.4mb (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	0.40	235	iPd	01 10.00	0.0
SVW	14.39	43	eP	04 08.20	1.2
KDC	14.68	58	eP	04 08.50	-2.1
TTA	15.23	37	eP	04 18.30	0.8
PMR	17.43	47	eP	04 45.30	1.0
IMA	17.97	30	P	04 50.00	-0.6
	1.0s		23.40nm		4.5mb
FBA	19.36	38	eP	05 04.10	-0.8
BRW	21.13	17	eP	05 22.30	-0.4
MBC	32.31	22	eP	07 05.00	0.0
			pP	07 40.00	166kmX
YKA	33.53	48	eP	07 15.60	-0.1
PNT	35.14	72	iPd	07 30.50	0.9
MAT	35.52	262	eP	07 33.00	0.1
	0.9s		5.88nm		4.3mb
WB2	83.69	226	eP	13 01.70	-0.1

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

JUN 01, 1989 08h 48m 25.42± 0.53s
38.673 N ± 7.9km 71.435 E ± 7.8km
DEPTH = 33.0km (normal)
4.6mb (8 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

KSH	3.62	76	Pn	49 21.00	0.3
			Sn	50 05.00	
QUE	9.24	205	eP	50 39.00	-0.5
			e(S)	52 45.70	
MAIO	9.78	260	eP	50 51.00	4.0X
			eS	52 38.00	
NDI	11.06	153	iP	51 13.50	9.1X
			eS	53 20.00	
WMQ	13.27	62	P	51 32.50	-1.5
GKN	15.31	130	P	52 01.40	0.5
KKN	15.85	129	P	52 06.80	-1.1
	0.6s		18.00nm		4.4mb
DMN	15.88	130	P	52 08.80	0.5
PKI	16.09	129	P	52 11.00	-0.1
GUN	16.14	127	P	52 11.20	-0.5
IR4	16.76	265	eP	52 01.00	-18.4X
HYB	22.07	162	eP	53 28.00	8.7X
GBA	25.53	166	Pd	53 57.50	4.8X
	0.7s		5.90nm		4.3mb

01d 08h

LZH	25.81	86	P	53	57.00	1.6
CD2	27.55	96	eP	54	13.00	1.8
XAN	30.40	87	iPd	54	36.80	0.0
WHN	35.98	90	eP	55	26.00	1.0
SUF	36.28	326	eP	55	29.00	1.8
	0.6s	44.00nm			5.5mb	
HFS	41.59	320	eP	56	11.00	-0.4
	0.5s	4.30nm			4.4mb	
KHC	42.03	304	eP	56	20.00	4.8X
NB2	42.87	322	P	56	21.50	-0.5
	0.9s	4.70nm			4.2mb	
MAT	51.86	70	iPc	57	30.60	-2.1
DAG	52.78	343	eP	57	40.00	1.0
BNG	58.75	248	ePc	58	28.00	5.3X
	0.6s	5.00nm			4.8mb	
MBC	65.15	3	ePc	59	03.40	-1.3
	0.8s	9.00nm			4.9mb	
INK	71.71	10	ePc	59	44.20	-1.3
YKA	79.06	3	eP	00	27.50	0.1
FFC	86.80	356	eP	01	08.00	0.7
	0.8s	6.00nm			4.9mb	

S.D. = 1.2 an 21 af 28 abs.

JUN 01, 1989 09h 06m 18.37± 0.55s
45.748 N ± 3.5km 7.033 E ± 7.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN). MD 2.2 (ROM).

LSD	0.30	163	P	06	24.85	0.1
			S	06	29.46	
EMS	0.33	348	ePc	06	25.30	0.0
DIX	0.42	38	ePd	06	27.10	0.0
RSP	0.62	165	P	06	30.94	0.1
			S	06	39.22	
MMK	0.72	65	eP	06	32.70	0.0
BNI	0.74	200	P	06	33.00	0.0
			eSg	06	43.00	
RRL	0.85	192	P	06	34.73	-0.1
			S	06	46.38	
PZZ	1.24	178	P	06	42.16	0.6
			S	06	58.20	
DOI	1.25	173	P	06	41.50	-0.2
			eSg	06	59.00	
ENR	1.55	170	P	06	45.55	-0.4

S.D. = 0.3 on 10 af 10 obs.

? JUN 01, 1989 09h 25m 57.09± 5.11s
44.538 N ±13.0km 5.359 E ±38.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 2.2 (ROM).

BNI	1.07	61	P	26	16.50	-0.8
RRL	1.09	69	P	26	17.55	-0.1
			S	26	29.23	
PZZ	1.25	91	P	26	20.04	-0.3
			S	26	34.98	
DOI	1.35	91	P	26	23.00	1.0
			eSg	26	38.50	
STV	1.44	101	P	26	22.82	-0.5
RSP	1.48	65	P	26	24.66	0.7
			S	26	40.87	
ENR	1.51	101	P	26	23.84	-0.3
LSD	1.57	54	P	26	25.48	0.2
			S	26	41.91	
FIN	2.07	98	P	26	32.45	0.1

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

& JUN 01, 1989 09h 33m 51.20s
34.010 N 117.170 W
DEPTH = 12.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.5 (PAS). Felt (IV) at Redlands and Yucaipa. Felt (III) at Angelus Oaks, Crestline, Highland, Lakeview, Mentone, Marena Valley, Rialto and San Bernardino.

PEC	0.12	176	iP	33	54.40	0.0
RVR	0.17	264	iPc	33	55.10	-0.2
PLM	0.70	158	iPd	34	04.20	-0.8
MWC	0.77	286	iPc	34	05.20	-0.9
PAS	0.84	280	iPc	34	06.30	-1.0
SBB	0.87	321	iPc	34	07.00	-0.7
CPE	1.13	177	iPd	34	10.90	-1.3
CIS	1.19	240	iPc	34	12.00	-1.2
HAY	1.31	103	iPc	34	14.20	-1.0
GSC	1.32	13	iPd	34	15.20	-0.3
BAR	1.39	162	iPc	34	15.30	-1.1
CLC	1.84	349	iPd	34	22.10	-0.7
ABL	1.89	297	eP	34	23.00	-0.8
GLA	2.18	115	eP	34	26.00	-1.8
BCH	2.67	297	eP	34	34.20	-0.7
BLP	2.73	283	eP	34	33.70	-1.9
TNP	4.06	359	eP	34	54.20	-0.5
CMB	4.79	328	eP	35	06.00	1.1
KVN	5.09	352	eP	35	08.50	-0.7

19 obs. associated

JUN 01, 1989 09h 49m 10.43± 0.59s
44.595 N ± 4.8km 7.383 E ± 5.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 1.9 (ROM).

DOI	0.13	227	P	49	13.50	-0.2
			eSg	49	16.00	
PZZ	0.22	246	P	49	15.30	0.0
STV	0.35	187	P	49	17.04	-0.7
ENR	0.37	176	P	49	18.38	0.4
ROB	0.46	130	P	49	19.40	-0.4
RSP	0.56	351	P	49	21.56	-0.4
BNI	0.68	313	P	49	24.50	0.5
FIN	0.71	123	P	49	24.43	0.0
IMI	0.78	152	P	49	26.38	0.8

S.D. = 0.6 on 9 of 9 obs.

% JUN 01, 1989 11h 29m 57.44± 0.85s
60.642 N ± 6.4km 5.914 E ± 9.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.5 (BER).

ASK	0.39	246	eP	30	05.11	-0.3
			eS	30	10.41	
HYA	0.54	14	eP	30	08.44	0.0
			eS	30	18.54	
ODD1	0.81	154	iP	30	12.81	-0.4
			iS	30	23.56	
BLS1	1.34	160	eP	30	22.15	0.0
			eS	30	39.34	
KMY	1.47	193	iP	30	24.68	0.7
			eS	30	43.44	

S.D. = 0.6 on 5 of 5 abs.

? JUN 01, 1989 12h 18m 50.38± 3.03s
36.786 S ±62.6km 95.835 W ±19.0km
DEPTH = 10.0km (geophysicist)
4.9mb (5 obs.)
WEST CHILE RISE (686)

LPB	31.77	58	(P)	25	17.00	-0.5
ZOBO	31.94	58	P	25	20.00	0.8
	1.0s	20.00nm			5.0mb	
BAO	47.25	77	e(P)	27	12.00	-13.8X
SOB1	56.63	75	e(P)	28	36.00	-0.1
UYO	70.60	1	eP	30	05.80	-1.8
VVO	71.76	0	e(P)	30	16.10	1.6
ALQ	72.04	351	e(P)	30	17.00	0.4
			e	30	23.50	
TUL	72.33	0	eP	30	17.00	-0.9
	1.0s	5.00nm			4.6mb	
LNO	72.33	0	eP	30	18.20	0.4
PLM	72.49	342	P	30	19.00	-0.2
RLO	72.59	1	e(P)	30	20.00	0.6
PV09	75.91	349	P	30	39.00	-0.1
PRS	76.51	339	ePc	30	42.90	0.8
GOL	76.62	352	P	30	40.00	-2.9X
TNP	77.07	343	P	30	45.70	0.2
	0.9s	6.84nm			4.7mb	
CMB	77.83	340	ePc	30	50.10	0.7
KVN	78.21	342	P	30	50.00	-1.7
ORV	79.56	340	e(P)	30	51.00	-7.8X
RSSD	80.87	354	P	31	05.20	-0.7
RSNY	83.23	15	P	31	17.20	-0.7
	0.6s	5.25nm			4.9mb	
RSON	87.29	1	eP	31	39.00	1.1
	0.7s	7.29nm			5.0mb	
WRA	106.35	229	Pdiffd	33	15.00	9.3X
	0.2s	42.40nm			7.1mb	X

S.D. = 1.0 on 18 of 22 obs.

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* JUN 01, 1989 12h 25m 49 17± 1.07s
43.892 N ±13.9km 15.685 E ±21.5km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)

HVAR	0.90	142	iPg	26	06.50	0.0
			iSg	26	20.90	
VBY	1.64	349	ePn	26	18.10	0.0
			iSn	26	39.90	
PTJ	2.02	5	ePn	26	23.30	-0.4
			eSn	26	47.60	
CEY	2.05	335	eP	26	28.00	3.9X
			eSg	26	53.00	
TRI	2.27	324	e(Pn)	26	27.10	-0.2
			e(Sg)	26	58.40	
LJU	2.30	340	ePn	26	29.00	1.3
			eSn	26	56.50	
VOY	2.49	330	e(Pn)	26	29.80	-0.6
			eSg	27	08.60	

S.D. = 0.9 an 6 af 7 obs.

JUN 01, 1989 12h 37m 47.23± 0.55s
35.637 N ± 8.8km 27.733 E ± 4.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.46	259	ePg	37	57.00	0.3
YER	1.56	16	iPn	38	10.90	-4.2X
KSL	1.58	72	ePb	38	16.20	0.9
NPS	1.77	258	ePb	38	17.00	-1.1
ELL	2.08	57	iPn	38	23.00	0.3
VAM	2.89	266	ePb	38	35.00	0.8
BCK	2.93	51	ePn	38	34.10	-0.7
KHL	3.04	28	ePn	38	36.00	-0.3
DSI	7.56	120	eP	39	40.00	-0.1
PRNI	8.07	129	eP	39	47.00	-0.2

S.D. = 0.8 an 9 of 10 obs.

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* JUN 01, 1989 13h 02m 59.11± 0.94s
42.480 N ± 9.4km 24.048 E ±14.9km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)

SRS	1.40	194	ePb	03	24.50	-0.2
			eSb	03	47.00	
KNT	1.57	214	ePb	03	26.50	-0.6
			eSb	03	50.50	
VAY	1.60	224	ePn	03	28.00	0.5
SKO	2.00	256	ePn	03	34.00	0.6
MLR	3.31	24	eP	03	54.00	1.9
BZS	3.59	332	ePc	03	55.00	-0.9
VRI	3.90	29	ePc	03	59.00	-1.3

S.D. = 1.4 an 7 af 7 abs.

? JUN 01, 1989 13h 16m 34.28± 2.17s
12.438 N ±30.6km 87.948 W ±27.1km
DEPTH = 123.3 ± 32.4 km
4.5mb (4 obs.)
NEAR COAST OF NICARAGUA (74)

SRA	4.16	124	ePd	17	35.90	-1.1
SJS	4.56	123	iPc	17	41.70	-0.8
DVD	6.71	126	ePc	18	11.90	0.2
UPA	8.95	112	ePc	18	44.20	2.1
VVO	23.86	344	e(P)	21	37.50	0.1
MEO	24.25	338	eP	21	40.20	-0.9
	0.7s	9.70nm			4.4mb	
FKO	24.28	341	eP	21	41.50	0.1
TUL	24.42	344	eP	21	41.50	-1.2
	0.9s	18.50nm			4.6mb	
LNO	24.42	344	eP	21	42.00	-0.6
			i	21	43.70	
RLO	24.47	346	eP	21	43.80	0.6
RRO	24.78	339	e(P)	21	47.40	1.3
	1.0s	75.50nm			5.1mb	
ALQ	27.99	326	eP	22	17.00	1.3
	1.0s	1.75nm			3.7mb	
LRM	39.23	333	eP	23	53.20	0.8
PNT	45.10	331	eP	24	40.00	0.3
SCH	45.43	17	eP	24	42.00	-0.3
YKA	53.50	345	eP	25	43.20	-0.5
INK	63.07	343	eP	26	49.50	-0.7
MBC	65.96	352	eP	27	08.00	-0.8
TIA	126.13	335	ePdiff	32	20.10	17.0X

S.D. = 1.0 on 18 of 19 obs.

JUN 01, 1989 13h 24m 58.75± 0.29s

2.201 S ± 4.7km 123.046 E ± 6.1km
DEPTH = 30.0km (2 depth phases)
5.1mb (17 obs.) 4.3Msz (5 obs.)
SULAWESI (268)

PCI	3.46	292	iPc	25 52.50	0.7
MNI	4.04	26	ePc	26 02.50	2.4
MKS	4.66	230	iPd	26 09.00	0.1
AAI	5.35	106	eP	26 21.20	2.5
			eS	27 29.00	
DAV	9.57	15	eP+	27 58.00	40.4X
MTN	13.26	143	eP	28 07.00	-0.6
KNA	14.60	158	eP	28 20.00	-5.1X
JAY	17.65	91	ePd	29 10.00	5.8X
BAG	18.65	353	ePc+	29 14.00	-2.8
			eS	32 44.00	
MBL	19.10	189	eP	29 20.10	-1.9
KGM	20.16	282	ePc	29 34.30	0.6
WRA	20.80	149	Pd	29 38.40	-1.9
	1.7s	108.10nm		5.0mb	
WB2	20.81	149	iPc	29 38.50	-1.9
NANU	21.52	199	iPc	29 46.20	-1.3
IPM	23.01	287	ePd	30 02.90	0.5
	0.9s	42.50nm		5.0mb	
ASPA	23.79	155	iPc	30 10.30	0.4
	1.5s	226.00nm		5.5mb	
Z	21s	1.21um		4.3Msz	
		eS	34 27.50		
		LR	39 28.00		
WARB	24.09	172	iPc	30 07.10	-5.7X
	0.5s	28.00nm		5.1mb	
SNG	24.24	293	eP	30 15.80	1.5
QIS	24.37	140	iPc	30 16.10	0.5
		e		30 19.00	
PSI	24.60	281	iPc	30 19.60	1.8
MEKA	24.66	190	eP	30 18.00	-0.3
	0.5s	21.00nm		5.0mb	
QIZ	24.77	329	eP	30 20.40	1.0
		sP		30 37.00	
PMG	25.01	108	eP	30 22.50	0.7
	1.5s	288.89nm		5.7mb	
GUMO	26.73	53	eP	30 37.30	-0.4
GZH	26.85	340	P	30 39.00	0.2
		eS		35 19.00	
QZH	27.33	351	eP	30 42.00	-1.0
		S		35 18.00	
CTA	28.81	130	iPd	31 02.00	5.4X
	1.3s	42.31nm		5.0mb	
FORR	28.89	171	eP	30 55.50	-1.6
	0.5s	10.00nm		4.8mb	
BDT	30.59	310	eP	31 11.00	-1.4
CHG	31.59	312	iPd	31 22.40	1.1
	0.9s	10.50nm		4.7mb	
GYA	32.59	332	Pc	31 30.00	-0.1
N	14s	0.50um			
E	14s	0.60um			
		S		36 46.00	
SSE	33.16	357	P	31 35.50	0.8
Z	20s	0.50um		4.2Msz	
KMI	33.55	325	Pd	31 41.00	2.5
Z	20s	0.70um		4.4Msz	
		sP		31 55.50	
		S		37 00.00	
WHN	33.60	346	P	31 39.50	0.9
N	16s	0.99um			
		eS		37 02.00	
NJ2	34.30	354	Pd	31 44.60	0.0
Z	16s	0.60um		4.4MszX	
STK	34.31	151	ePc	31 45.00	0.3
ADE	35.71	158	eP	31 57.80	1.1
CD2	37.71	332	P	32 13.20	-0.4
BRS	37.91	134	eP	32 22.00	6.7X
XAN	38.42	341	Pd	32 18.20	-1.4
		S		38 10.00	
TSRJ	39.44	17	P	32 27.00	-1.0
TOO	40.80	152	iPc	32 41.20	2.0
CAN	40.82	147	eP	32 40.60	1.2
CHJJ	40.86	20	P	32 37.60	-2.1
TIY	40.91	347	Pd	32 39.50	-0.7
N	15s	0.50um			
		PP		34 24.50	
MAT	41.05	19	eP	32 39.00	-2.2
	0.7s	16.44nm		4.9mb	
		(S)		38 56.00	
LZH	42.10	337	eP	32 50.00	0.0
	2.0s	0.08nm		2.1mb X	
Z	32s	0.30um		4.0MszX	

			S	39 04.00	
BJI	42.51	352	eP	32 52.00	-1.1
Z	20s	0.30um		4.2Msz	
			eS	39 16.00	
HHC	44.11	347	eP	33 06.00	-0.3
BTO	44.23	346	eP	33 05.50	-1.7
N	16s	0.40um			
E	13s	0.30um			
			epP	33 14.50	30km
			eS	39 36.00	
CN2	45.85	2	eP	33 19.00	-0.9
Z	22s	0.60um		4.5Msz	
N	10s	0.20um			
			epP	33 28.00	30km
			SS	43 17.00	
GTA	46.59	335	eP	33 25.20	-0.8
Z	14s	1.20um		5.0MszX	
			S	40 12.00	
			ScS	43 19.00	
GUN	46.61	313	P	33 26.90	0.2
	0.8s	40.00nm		5.4mb	
PKI	46.77	312	P	33 28.40	0.5
KKN	46.99	312	P	33 29.90	0.4
	1.2s	50.00nm		5.4mb	
DMN	47.02	312	P	33 30.20	0.4
	1.1s	44.00nm		5.4mb	
GKN	47.58	312	P	33 34.00	-0.1
GBA	47.87	290	Pc	33 33.80	-2.6
	0.8s	6.40nm		4.7mb	
HYB	47.99	296	eP	33 37.00	-0.4
WMQ	55.69	330	P	34 34.00	-0.8
			eScS	44 20.00	
MAW	76.96	200	eP	36 50.00	0.2
SPA	87.81	180	e(P)	37 46.40	0.1
	0.8s	4.17nm		4.8mb	
KVT	89.17	311	eP	37 54.50	1.4
PRNI	89.41	300	eP	37 56.00	1.5
INK	96.99	21	eP	38 29.50	1.0
MBC	98.50	12	eP	38 37.00	1.9
SLL	101.55	332	ePdiff	38 51.40	2.3X
	0.8s	9.40nm		5.4mb	
N82	102.37	332	Pdiff	38 54.10	1.3
	0.8s	2.50nm		4.9mb	
ALO	123.70	49	e(PKP)	44 02.00	6.0X
	1.0s	3.75nm			
LPB	158.38	150	(PKP)	44 58.00	2.3X
ZOBO	158.58	149	PKP	45 00.50	4.4X
	1.3s	14.20nm			

S.D. = 1.3 on 61 of 71 obs.

? JUN 01, 1989 13h 41m 33.37± 2.83s
20.844 S ±20.0km 178.981 W ±18.7km
DEPTH = 625.2 ± 35.0 km
4.4mb (7 abs.)
FIJI ISLANDS REGION (181)

DZM	13.63	262	iPd	44 27.60	-0.3
CTA	32.54	265	iPd	47 17.80	0.9
	0.7s	27.40nm		5.0mb	
ASPA	43.55	257	iPd	48 46.10	0.2
	0.7s	19.00nm		4.7mb	
WB2	43.63	263	iPd	48 46.20	-0.3
WRA	43.64	263	Pd	48 46.30	-0.3
	0.3s	2.10nm		4.1mb	
MTN	48.25	271	iPc	49 21.70	0.0
	0.8s	40.00nm		4.9mb	
WARB	49.85	253	iPd	49 26.20	-7.2X
MBL	56.79	258	iPd	50 22.10	-0.2
	0.4s	9.00nm		4.4mb	
SPA	69.28	180	e(P)	51 41.10	0.0
	0.9s	2.27nm		3.7mb	
KVN	82.39	43	iP	52 53.10	0.3
FBA	88.78	13	iP	53 22.20	-0.3
	0.9s	2.10nm		4.0mb	
BAO	119.76	123	e(PKP)	59 34.00	17.9X
HFS	139.73	350	ePKP	59 45.50	-7.0X
	0.4s	1.60nm			
KSP	147.74	342	iPKPc	00 11.80	5.5X
CLL	148.18	346	iPKPd	00 12.10	5.1X
	0.9s	13.00nm			
BRG	148.35	344	iPKP	00 12.50	5.2X
	1.0s	10.00nm			
PRU	149.00	343	ePKP	00 14.30	6.0X
KHC	150.04	343	ePKP	00 16.30	6.3X
GRF	150.09	347	ePKP	00 17.70	7.7X

S.D. = 0.5 on 10 of 19 obs.

& JUN 01, 1989 14h 23m 22.30s
34.260 N 117.270 W
DEPTH = 4.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.0 (PAS). Felt (IV) at Crestline and (III) at Highland and Redlands.

RVR	0.28	198	iPc	23 28.00	0.1
PEC	0.38	166	iPc	23 29.90	0.0
SBB	0.63	313	iPc	23 34.00	-0.8
MWC	0.65	267	eP	23 34.70	-0.7
PLM	0.97	159	eP	23 40.30	-1.1
GLA	2.37	120	eP	24 02.00	-0.6
TNP	3.81	1	eP	24 20.00	-3.3
KVN	4.83	352	eP	24 37.00	-0.7
	8 obs. assaciated				

? JUN 01, 1989 15h 37m 45.01± 2.42s
6.445 S ±22.1km 148.053 E ±21.3km
DEPTH = 33.0km (normal)
NEW BRITAIN REGION (192)

LAT	1.07	259	iPd	38 02.00	-1.7
LMG	2.45	178	eP	38 24.00	0.3
PMG	3.08	197	eP	38 33.00	0.6
			eS	39 15.00	
MNDI	4.38	274	eP	38 52.50	1.3
RMO	19.94	178	eP	42 17.00	-0.2
			e	42 21.00	
BRS	21.31	168	iPc	42 30.90	-0.4
PCI	28.68	280	ePd	43 41.30	0.0
S.D. = 1.1		on	7 of	7 abs.	

% JUN 01, 1989 16h 13m 41.75± 0.78s
61.816 N ± 7.2km 7.459 E ± 9.2km
DEPTH = 10.0km (geaphysicist)
SOUTHERN NORWAY (535)
ML 2.3 (BER).

MOL	0.76	3	iP	13 56.70	0.2
			iS	14 06.70	
HYA	0.89	224	iP	13 58.07	-0.8
			eS	14 10.35	
SUE	1.50	241	iP	14 08.16	-0.6
			eS	14 29.09	
ASK	1.73	220	iP	14 12.34	0.3
			eS	14 35.06	
ODD1	1.95	192	iP	14 15.16	-0.2
			eS	14 40.00	
NRA0	2.25	117	iPd	14 19.20	-0.4
			iS	14 50.10	
BLS1	2.45	188	eP	14 22.23	-0.3
			eS	14 51.58	
KMY	2.83	204	eP	14 29.47	1.7
			eS	15 01.08	
S.D. = 0.9		an	8 of	8 abs.	

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* JUN 01, 1989 16h 43m 07.15± 1.15s
31.905 S ± 7.8km 71.732 W ±15.6km
DEPTH = 69.2 ± 11.5 km
4.5mb (2 obs.)
NEAR COAST OF CENTRAL CHILE (135)
Felt (III) in the Valparaiso area.

IHA	1.12	176	iPc	43 27.80	0.4
			iS	43 38.80	
ROCH	1.23	150	iP	43 28.50	-0.5
			iS	43 32.50	
JACH	1.24	129	iP	43 28.60	-0.5
PEL	1.52	145	iP	43 32.80	0.0
LCCH	1.57	175	iPc	43 27.80	-5.7X
			iS	43 38.80	
SAN	1.79	150	iPc	43 36.00	-0.5
			iS	43 55.70	
TACH	1.87	159	iPc	43 37.70	0.2
FCH	1.87	140	iPc	43 37.60	-0.3
PCH	2.00	149	iPc	43 39.10	-0.3
			iS	43 50.40	
LNV	2.06	173	iP	43 40.00	-0.2
CHCH	2.22	156	iPd	43 42.50	0.1
			iS	44 08.00	
ZON	2.63	83	iPc	43 50.80	2.7
ANT	8.25	8	e(P)	45 05.00	-1.5
LPB	15.66	13	P	46 50.00	4.6X
ZOBO	15.91	13	P	46 50.00	1.2

01d 16h

	0.8s	26.34nm		4.4mb		
BMA	26 11	76 eP	48 33.90	-2.5		
BAO	27.00	59 eP	48 44.50	-0.2		
SPA	58.27	180 ePc	52 58.30	1.6		
	1.0s	5.50nm		4.6mb		
KIC	74.18	72 P	54 38.70	0.3		
S.D. = 1.3 on 17 of 19 obs.						

JUN 01, 1989 17h 19m 12.26± 0.84s
30.106 N ± 5.5km 50.821 E ± 8.0km
DEPTH = 33.5 ± 10.9 km
4.1mb (4 obs.)
IRAN (348)

BRF	4.02	183 (Pn)	20 13.70	0.6	
BEE	4.08	184 iPn	20 15.70	1.8	
		(Sn)	21 05.00		
BJA	4.10	183 iPn	20 15.50	1.3	
IR4	5.12	1 eP	20 29.00	0.2	
KER	5.28	324 eP	20 39.00	8.0X	
IR1	5.30	359 eP	20 31.40	0.1	
IR2	5.54	1 eP	20 34.90	0.2	
IR7	5.58	358 eP	20 35.20	-0.1	
TEH	5.64	5 e(P)	20 48.00	12.0X	
BHD	6.33	302 ePnd	21 11.00	25.4X	
		eSn	22 39.00		
		iS*	23 01.00		
RYD	6.54	216 ePd	20 47.00	-1.7	
SLY	7.07	322 ePc	20 57.00	0.9	
		iS	22 16.50		
QASM	7.58	240 ePd	21 00.50	-2.7	
MSL	8.97	316 ePc	21 20.50	-1.9	
		eS	22 57.00		
MAIO	9.53	47 eP	21 30.00	-0.4	
		eS	24 24.00		
KVT	16.23	316 eP	22 59.60	0.2	
VRI	24.53	317 eP	24 31.50	1.7	
MLR	24.81	315 ePc	24 35.50	2.8	
BZS	27.58	312 eP	24 59.00	0.9	
KKN	30.18	86 P	25 19.80	-2.2	
PKI	30.34	86 P	25 22.80	-0.7	
GUN	30.67	85 P	25 27.40	1.0	
KHC	33.96	315 eP	25 54.00	-0.6	
BRG	34.38	318 e(P)	25 59.40	1.3	
	1.4s	14.00nm		4.7mb	
CLL	35.10	318 eP	26 04.00	-0.2	
HFS	38.93	331 eP	26 35.10	-1.3	
	0.7s	5.20nm		4.4mb	
BCAO	39.76	236 e(P)	26 43.90	0.1	
	1.0s	0.90nm		3.5mb	
NB2	40.46	331 P	26 48.30	-0.7	
	0.9s	1.80nm		3.8mb	
INK	81.83	2 eP	31 28.00	-0.8	
YKA	86.98	353 eP	31 58.90	3.9X	
S.D. = 1.4 on 26 of 30 obs.					

? JUN 01, 1989 17h 27m 39.19±11.29s
37.845 N ±49.7km 15.268 E ±74.8km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.7 (ROM).

ATN	0.35	26 P	27 53.50	7.1X	
		eSg	28 03.50		
MNO	0.46	281 P	27 48.20	-0.4	
		eSg	27 54.10		
MEU	0.79	200 P	27 54.50	-0.1	
		eSg	28 03.90		
GIB	0.99	279 P	27 58.30	0.2	
		eSg	28 10.40		
MCT	1.31	261 P	28 03.80	0.2	
FAI	1.39	246 P	28 04.60	0.1	
TDS	1.99	24 P	28 18.50	5.2X	
S.D. = 0.4 on 5 of 7 obs.					

* JUN 01, 1989 17h 33m 14.91± 0.95s
37.696 N ± 7.1km 15.031 E ± 8.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.6 (ROM).

MNO	0.35	311 P	33 21.80	-0.5	
ATN	0.58	36 P	33 26.70	0.1	
		eSg	33 36.70		
MEU	0.60	188 P	33 26.90	-0.2	
GIB	0.85	291 P	33 31.70	0.4	
		eSg	33 44.60		

FAI	1.16	249 P	33 36.70	0.2	
S.D. = 0.5 on 5 of 5 obs.					

JUN 01, 1989 18h 03m 42.75± 1.15s
31.576 N ± 6.3km 109.048 E ± 5.9km
DEPTH = 30.6 ± 9.4 km
4.6mb (9 obs.)
SICHUAN PROVINCE, CHINA (307)

XAN	2.46	358 Pn	04 23.00	1.3	
		Pg	04 26.50		
		Sn	04 52.50		
		Sg	04 58.00		
CD2	4.58	263 Pn	04 53.50	1.7	
		iPg	05 05.60		
		Sn	05 46.90		
		Sg	06 09.40		
WHN	4.66	101 Pn	04 53.50	0.6	
		Pg	05 02.50		
		Sn	05 45.50		
		Sg	06 02.50		
GYA	5.51	203 Pn	05 05.00	0.1	
		Pg	05 27.00		
		Sn	06 08.60		
		Sg	06 39.00		
LZH	6.24	318 Pn	05 16.50	1.1	
		Pg	05 38.00		
		Sn	06 28.00		
		Sg	06 58.00		
TIY	6.73	24 iPd	05 21.10	-0.9	
Z	12s	1.93um			
N	10s	2.00um			
NJ2	8.36	84 Pc	05 45.00	0.2	
KMI	8.50	222 eP	05 45.50	-1.4	
Z	12s	1.70um			
		S	07 19.00		
BTO	9.04	5 eP	05 52.00	-2.2	
N	10s	1.00um			
E	11s	0.40um			
GZH	9.28	155 P	05 52.00	-5.4X	
HHC	9.47	12 P	05 58.50	-1.8	
BJI	10.23	32 eP	06 09.00	-1.6	
GTA	10.85	319 eP	06 16.60	-2.5	
Z	10s	1.30um			
LOE	15.59	207 eP	07 26.40	4.4X	
CHG	15.64	218 iPc	07 28.20	5.6X	
	1.0s	12.25nm		4.1mb	
BDT	16.93	215 eP	07 39.50	0.5	
CN2	17.78	42 Pd	07 51.60	2.2	
Z	10s	0.30um			
GUN	20.44	266 P	08 20.60	-0.1	
	0.6s	24.00nm		4.7mb	
WMQ	20.79	312 P	08 25.00	1.2	
PKI	20.93	265 P	08 25.20	-0.5	
	0.8s	40.00nm		4.9mb	
KKN	20.98	266 P	08 25.80	-0.3	
DMN	21.18	265 P	08 27.80	-0.4	
GKN	21.47	267 P	08 30.80	-0.2	
MAT	24.61	70 (P)	09 03.00	1.4	
WRA	56.68	151 Pc	13 24.10	-1.7	
	0.6s	1.20nm		4.1mb	
WB2	56.69	151 eP	13 23.70	-2.1	
WARB	59.84	162 eP	13 40.00	-7.7X	
HFS	65.72	327 eP	14 25.40	-0.9	
	0.9s	6.50nm		4.7mb	
INK	70.27	21 eP	14 51.00	-3.6X	
LPG	75.96	315 eP	15 27.80	-1.0	
	0.8s	5.90nm		4.6mb	
LOR	76.75	318 eP	15 33.10	0.3	
SSF	77.06	317 eP	15 34.50	0.0	
SMF	77.09	317 eP	15 35.60	0.9	
	1.0s	4.80nm		4.5mb	
AVF	77.30	317 eP	15 36.30	0.5	
	0.8s	2.60nm		4.3mb	
MFF	79.40	319 eP	15 48.60	1.3	
	0.8s	5.30nm		4.6mb	
YKA	79.93	19 eP	15 50.70	0.8	
S.D. = 1.3 on 31 of 36 obs.					

% JUN 01, 1989 18h 07m 37.57± 2.32s
59.069 N ±20.6km 5.887 E ± 7.0km
DEPTH = 13.2 ± 6.4 km
SOUTHERN NORWAY (535)
MD 1.9 (BER).

KMY	0.36	294 iPg	07 45.14	0.0	
		eSg	07 54.20		

BLS1	0.58	56 iP	07 48.84	-0.3	
		eS	07 56.30		
ODD1	0 93	24 iPd	07 55.29	0.3	
		eS	08 07.01		
ASK	1.46	346 eP	08 04.22	0.7	
		eS	08 21.57		
SUE	2.07	345 eP	08 11.96	-0.4	
		eS	08 36.92		
HYA	2.11	4 eP	08 12.38	-0.5	
		eS	08 37.00		
NRA0	3.30	57 iPd	08 30.20	0.3	
		iS	09 08.00		
		iSg	09 17.90		
MOL	3.61	12 iP	08 34.18	0.0	
		eS	09 12.50		
S.D. = 0.5 on 8 of 8 obs.					

& JUN 01, 1989 18h 36m 56.42s
19.345 N 155.043 W
DEPTH = 9.8km
HAWAII (613)
<HVO-P>. MD 4.0 (HVO). Felt at Hilo and in the Puna and Volcano areas.

WHA	0.01	202 iPc	36 58.21	-0.1	
HUL	0.10	40 iPd	36 58.99	-0.1	
		iS	37 00.96		
KAE	0.10	237 iPc	36 59.35	0.2	
MKA	0.12	281 iPd	36 59.25	-0.2	
MVH	0.16	353 iPd	37 00.02	-0.1	
PKL	0.16	46 iPd	36 59.92	-0.2	
PUH	0.17	281 iPd	37 00.05	-0.3	
		iS	37 02.70		
PWH	0.18	250 iPd	37 00.69	0.2	
ESR	0.20	290 iPd	37 00.55	-0.3	
AHA	0.21	278 iPd	37 00.83	-0.2	
POH	0.21	58 iPd	37 01.08	0.1	
RIM	0.23	284 iPd	37 01.01	-0.3	
HBH	0.23	36 iPd	37 01.14	-0.2	
OUT	0.23	281 iPd	37 01.07	-0.3	
KNH	0.23	268 iPd	37 01.22	-0.2	
NPH	0.24	287 iPd	37 01.04	-0.5	
KPO	0.24	51 iPd	37 01.44	-0.2	
UWE	0.25	288 iP	37 02.00	0.2	
		iS	37 06.00		
HLP	0.26	260 iPd	37 01.77	-0.1	
CPK	0.27	281 iPd	37 01.62	-0.6	
MLX	0.31	292 iPd	37 02.28	-0.6	
DES	0.33	269 iPd	37 02.48	-0.7	
NGH	0.36	2 iPc	37 03.87	0.1	
MLH	0.36	295 iPd	37 03.30	-0.6	
KFH	0.36	282 iPd	37 03.54	-0.4	
AIN	0.40	274 iPd	37 03.98	-0.6	
PLL	0.44	295 iPd	37 04.41	-1.0	
PPL	0.44	245 iPc	37 04.88	-0.5	
WOH	0.44	258 iPd	37 04.95	-0.5	
TRH	0.48	278 iPd	37 05.57	-0.8	
HMH	0.49	302 iPd	37 05.60	-0.9	
WIH	0.53	284 iPc	37 06.33	-0.8	
SWH	0.54	282 iPc	37 06.24	-1.3	
MWH	0.54	285 iPc	37 06.51	-1.0	
WOB	0.55	291 iPc	37 06.66	-0.9	
KHU	0.55	260 iPc	37 06.29	-1.5	
HPU	0.58	318 iPc	37 07.25	-1.3	
KKU	0.61	332 iPc	37 07.86	-1.0	
SPT	0.69	239 ePc	37 08.21	-1.9	
KIH	0.70	284 ePc	37 08.37	-2.1	
WKH	0.77	311 iPd	37 09.65	-2.0	
KUH	0.79	264 iPc	37 09.27	-2.5	
HUH	0.82	295 iPc	37 10.64	-1.9	
CPH	0.84	280 ePd	37 10.74	-1.9	
KOH	1.04	318 iPc	37 12.91	-3.3	
45 obs. associated					

& JUN 01, 1989 19h 27m 18.58s
59.896 N 152.525 W
DEPTH = 95.5km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.29	310 iP	27 32.13	-0.7	
		S	27 43.01		
OPT	0.43	236 iP	27 33.14	-0.5	
		S	27 44.68		
RED	0.54	347 iP	27 33.87	-0.7	
		S	27 46.30		

AUI	0.73	220	iP	27	35.26	-0.8
CNPM	0.75	119	iP	27	35.53	-0.8
			S	27	48.92	
BRLK	0.84	98	iP	27	36.48	-0.8
			S	27	50.72	
PDB	0.85	263	eP	27	36.53	-0.8
NKA	1.06	36	iP	27	40.81	1.2
CDD	1.13	211	iP	27	39.21	-1.2
			S	27	55.65	
SLKM	1.30	61	eP	27	41.23	-1.4
SPU	1.31	10	iP	27	42.07	-0.6
			S	28	00.79	
CRP	1.39	7	iP	27	43.31	-0.4
CGLM	1.44	10	iP	27	43.83	-0.5
SEW	1.56	81	iP	27	44.27	-1.4
SUA	1.80	28	iP	27	48.42	-0.6
SVW	1.96	310	iP	27	49.70	-1.3
SKT	2.15	13	iP	27	52.38	-1.1
KDC	2.15	180	iPd	27	51.00	-2.5
PWA	2.19	35	iPc	27	53.10	-0.9
PMR	2.38	43	eP	27	54.80	-1.8
KNIM	2.44	77	iP	27	54.87	-2.5
PME	2.44	43	eP	27	55.59	-1.8
MTU	2.45	86	eP	27	55.44	-2.2
HIN	3.05	78	eP	28	03.09	-2.7
			eS	28	36.28	
VZW	3.18	66	eP	28	04.96	-2.5
CVA	3.44	76	eP	28	08.13	-2.9
TTA	3.48	333	P	28	09.80	-1.8
KLU	3.62	61	iP	28	11.12	-2.5
SGAM	3.70	77	eP	28	11.59	-3.1
TOA	3.80	52	iPc	28	14.30	-1.8
RAGM	3.96	79	eP	28	15.00	-3.2
			eS	28	58.22	
FBA	5.48	22	P	28	36.90	-2.4
IMA	6.22	356	eP	28	47.80	-1.8
HYT	7.51	76	P	29	05.20	-2.0
INK	11.78	36	ePd	30	02.60	-1.9
YKA	18.28	65	eP	31	26.20	-0.8

36 obs. associated

& JUN 01, 1989 20h 07m 34.37s
60.503 N 151.913 W
DEPTH = 77.3km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA	0.41	54	iP	07	48.67	1.4
RED	0.43	259	iP	07	46.97	-0.6
			S	07	57.34	
ILIM	0.67	231	iP	07	49.10	-0.7
SPU	0.68	354	iP	07	49.25	-0.7
			S	08	01.37	
CRP	0.78	351	eP	07	50.46	-0.6
			S	08	03.27	
SLKM	0.84	89	iP	07	51.16	-0.5
			S	08	04.34	
BRLK	0.90	145	eP	07	52.26	-0.1
			S	08	06.17	
CNPM	1.04	161	iP	07	53.84	-0.2
			S	08	08.81	
OPT	1.08	218	iP	07	54.24	-0.3
			S	08	09.95	
SUA	1.12	30	iP	07	54.75	-0.4
			S	08	10.56	
SEW	1.29	107	eP	07	57.04	-0.1
PDB	1.35	239	eP	07	56.78	-1.2
			S	08	14.08	
SKT	1.49	7	eP	07	58.89	-1.0
			S	08	19.92	
PWA	1.52	40	eP	07	59.70	-0.5
			S	08	20.50	
CDD	1.81	210	iP	08	03.51	-0.6
KNIM	2.08	92	iP	08	05.44	-2.4
MTU	2.19	102	eP	08	07.53	-1.8
			S	08	33.67	

17 obs. associated

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* JUN 01, 1989 20h 39m 54.22± 1.20s
36.585 N ± 9.5km 140.474 E ±13.2km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)
MG 3.1 (JMA). Felt (I JMA) at Mito.

MIT	0.21	180	eP	40	03.00	2.1
			iS	40	06.20	
KAKJ	0.45	213	iPd	40	02.60	-1.5
			S	40	10.00	
CHJJ	1.31	246	iPd	40	15.00	-1.3
			S	40	31.70	
NIIJ	1.35	299	iPd	40	17.80	0.9
			S	40	39.80	
YAMJ	1.62	348	eP	40	21.40	0.5
MAT	1.82	269	eP	40	24.00	0.2
			(S)	40	49.00	
MTMJ	2.15	271	iPd	40	29.00	0.5
IIDJ	2.35	243	eP	40	33.50	2.1X
			eS	41	06.20	
OFUJ	2.66	20	eP	40	34.30	-1.4
			eS	41	05.60	

S.D. = 1.5 on 8 of 9 obs.

% JUN 01, 1989 20h 53m 22.95± 0.71s
43.458 N ± 5.3km 5.468 E ± 5.9km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.08	202	Pg	53	25.01	-0.4
TREF	0.18	340	Pg	53	26.75	-0.2
PUYF	0.18	66	Pg	53	26.72	-0.4
BERF	0.22	132	Pg	53	28.32	0.6
PRAF	0.41	328	Pg	53	31.81	0.5
VILF	0.43	24	Pg	53	31.79	0.0
TAVF	0.46	69	Pg	53	32.21	-0.1

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

JUN 01, 1989 20h 56m 00.23± 0.78s
23.887 S ± 6.1km 70.267 W ± 5.6km
DEPTH = 43.6 ± 6.1 km
5.2mb (21 obs.)
NEAR COAST OF NORTHERN CHILE (122)
Felt (IV) at Antofagosta; (II) at Taltal and Mejillones.

ANT	0.23	323	iPc+	56	08.20	0.1
CNCB	7.36	17	P	57	50.00	1.6
			i	57	51.20	
CCH	7.54	32	P	57	50.70	0.0
			i	57	59.10	
LPB	7.59	16	eP	57	52.00	0.4
			LR	00	52.00	
ZON	7.76	170	eP	57	55.00	1.5
ZOBO	7.84	15	Pc	57	55.60	0.5
	Z 24s		2.84um			
			LR	00	36.00	
ITB1	14.50	96	e(P)	59	22.10	-2.4
ITB	14.67	97	e(P)	59	25.80	-0.9
ITB7	14.70	98	e(P)	59	19.00	-8.1X
VAO	21.39	92	eP	00	46.10	-0.3
BAO	22.49	73	eP	00	56.00	-1.5
BMA	24.01	92	iPd	01	12.30	0.2
			ipP	01	26.00	57kmX
SOB1	31.62	67	iPc	02	20.50	-1.0
			e	02	30.20	
			e	02	34.40	
ITR	33.95	69	eP	02	40.90	-0.9
			e	02	53.30	
JSC	58.78	349	P	05	53.90	-2.4
RSCP	60.91	346	P	06	09.30	-1.7
	1.0s		40.00nm			5.5mb
BLA	61.52	351	P	06	14.00	-1.1
VVO	63.65	337	e(P)	06	18.10	-11.1X
RLO	64.15	338	eP	06	31.10	-1.4
			e	06	41.10	
LNO	64.19	337	eP	06	20.70	-11.9X
			e	06	41.10	
TUL	64.19	337	eP	06	31.70	-1.0
	1.2s		22.30nm			5.1mb
SIO	64.22	337	e(P)	06	21.00	-12.0X
FVM	64.39	342	P	06	32.00	-2.0
	0.9s		60.17nm			5.7mb
			pP	06	42.00	32kmX
SPA	66.26	180	ePc	06	44.90	-1.0
	1.0s		16.50nm			5.0mb
ALQ	67.83	328	eP	06	56.50	0.2
	1.0s		6.25nm			4.6mb
			e	07	06.00	
RSNY	68.21	357	P	06	57.20	-1.0
	0.9s		21.85nm			5.2mb
GAC	69.42	356	eP	07	05.00	-0.5
LIC	70.26	74	Pc	07	10.46	-0.9
	1.0s		31.50nm			5.3mb
TIC	70.46	73	Pc	07	11.80	-0.9
	1.0s		39.50nm			5.3mb
CBM	70.51	2	P	07	11.70	-0.5
KIC	70.57	74	Pc	07	12.64	-0.7
	0.9s		45.00nm			5.5mb
GLA	70.78	321	P	07	14.50	0.2
GOL	71.24	332	P	07	16.50	-0.7
BAR	71.58	320	eP	07	20.00	0.9
PV09	71.96	329	P	07	21.80	0.2
			pP	07	31.50	31kmX
PLM	72.17	320	P	07	22.00	-0.8
			pP	07	33.00	36kmX
RVR	72.93	320	eP	07	37.00	10.0X
MWC	73.49	320	eP	07	41.00	10.5X
SBB	73.68	321	eP	07	31.00	-0.4
WEGH	74.13	76	eP	07	34.00	-0.3
LEGH	74.28	76	eP	07	35.00	-0.2
CLC	74.36	322	eP	07	35.00	-0.3
KUK	74.36	76	eP	07	35.00	-0.7
RSSD	74.41	335	P	07	35.10	-0.6
			pP	07	45.00	32kmX
TEGH	74.44	77	eP	07	36.00	-0.1
SHGH	74.53	76	eP	07	35.00	-1.7
ISA	74.75	321	eP	07	38.00	0.4
BCH	75.36	320	P	07	41.00	-0.2
			pP	07	51.50	34kmX
LLA	76.85	320	eP	07	50.30	0.9
			epP	08	00.00	31kmX
PRS	76.90	320	eP	07	50.60	0.9
			epP	08	00.20	31kmX
KVN	76.95	324	P	07	50.00	-0.1
			pP	08	00.00	32kmX
RSON	77.24	345	P	07	49.90	-1.3
	0.7s		37.92nm			5.5mb
CMB	77.50	322	eP	07	53.40	0.4
			epP	08	03.10	31kmX
MHC	77.75	320	eP	07	56.70	2.2
SCH	78.44	2	eP	07	57.00	-0.7
ORV	79.18	322	eP	08	03.10	1.0
			epP	08	12.70	31kmX
LRM	79.25	331	eP	08	03.30	0.6
WDC	80.46	322	eP	08	08.30	-0.7
			epP	08	17.90	30kmX
TIO	81.31	51	iP	08	15.40	1.6
			i	08	30.40	
MAW	82.41	164	eP	08	18.00	-0.8
AVE	82.54	49	iP	08	22.00	2.0
FFC	82.89	342	eP	08	21.00	-0.3
	0.9s		23.00nm			5.2mb
DPW	83.39	330	P	08	24.00	-0.1
			pP	08	34.50	33kmX
IFR	84.25	50	iPd	08	30.50	1.6
PNT	85.08	330	eP	08	33.00	0.5
	0.7s		9.00nm			5.0mb
PLAT	85.26	47	eP	08	36.00	2.3
BFS	85.36	117	eP	08	35.00	0.3
EDM	85.40	336	iPc	08	33.00	-1.0
MOMI	85.40	47	eP	08	37.00	2.6
OJEN	85.40	47	eP	08	41.00	6.5X
EVAL	85.43	46	eP	08	36.00	1.5
GIBL	85.52	46	eP	08	37.50	2.5
EJIF	85.64	47	eP	08	38.00	2.4
ALJ	85.67	47	eP	08	37.50	1.6
PRY	85.91	118	eP	08	46.50	9.0X
LIJA	85.92	47	eP	08	39.00	1.9
SLR	87.07	117	eP	08	52.30	9.2X
FRB	87.35	1	eP	08	43.00	-0.2
BUL	89.71	112	iPd	08	55.30	-0.5
	0.9s		14.71nm			5.3mb
BNG	90.69	85	ePd	09	01.00	0.8
	0.9s		17.00nm			5.4mb
			id	09	02.00	
			ic	12	34.00	
YKC	92.97	341	iP	09	09.30	-0.3
YKA	93.02	341	eP	09	10.00	0.2
MAF	95.87	42	eP	09	23.20	-0.1
	1.0s		6.00nm			5.0mb
BGF	96.20	42	eP	09	24.80	0.0
	0.8s		5.30nm			5.1mb
AVF	96.61	42	eP	09	26.40	-0.2
	0.9s		3.20nm			4.8mb
SSF	96.83	41	eP	09	28.20	0.6
	0.8s		2.60nm			4.8mb
SMF	96.84	42	eP	09	27.70	0.0
	1.0s		8.00nm			5.2mb
LBF	97.08	42	eP	09	28.80	0.0
	0.8s		2.60nm			4.8mb

01d 21h

LOR	97.14	41 eP	09	28.80	-0.2
	0.8s	2.60nm		4.8mb	
INK	102.75	340 ePdiff	09	52.50	-1.2
MBC	104.33	349 ePdiff	10	00.00	-0.7
ASPA	127.23	208 ePKPd	15	01.30	-0.9
WB2	130.26	211 ePKP	15	07.50	-0.6
WRA	130.27	211 PKPd	15	05.00	-3.1X
	0.2s	42.40nm			
MAIO	135.26	62 ePKP	15	17.00	-0.2
POO	146.19	92 ePKP	15	38.00	0.9
KOD	146.40	108 ePKP	15	39.00	1.1
KSH	147.57	53 ePKP	15	39.00	0.1
GBA	147.82	103 PKPd	15	42.60	2.9X
	0.6s	44.50nm			
HYB	150.16	97 iPKPc	15	48.50	5.1X
	1.0s	80.00nm			
		e	15	59.50	
NDI	150.51	74 iPKPc	15	49.20	5.6X
MAT	152.46	304 iPKPc	15	51.50	5.2X
	0.8s	6.72nm			
GKN	157.08	74 PKP	15	53.00	0.1
DMN	157.52	75 PKP	15	53.70	0.1
KKN	157.66	75 PKP	15	53.70	0.0
	1.0s	9.00nm			
PKI	157.79	75 PKP	15	53.70	-0.3
GTA	162.39	26 ePKP	15	59.00	0.7
TIY	166.03	351 ePKP	16	20.50	18.9X
XAN	169.86	4 PKP	16	02.40	-1.8
CD2	171.22	36 PKP	16	06.40	1.4
GYA	176.22	47 PKP	16	07.60	0.7
	S.D. = 1.1	on 96 of 111 obs.			

JUN 01, 1989 21h 14m 09.94± 2.01s
9.604 N ±13.4km 74.270 W ±12.0km
DEPTH = 34.1 ± 17.6 km
4.7mb (12 obs.)
NORTHERN COLOMBIA (99)

BMG	2.78	155 iPd	14	55.00	1.8
BOG	4.95	178 eP	15	21.00	-3.3X
		eS	16	18.00	
UPA	5.23	264 iPc	15	18.10	-9.8X
	0.8s	292.54nm		5.8mb X	
	Z 20s	0.50um			
		iS	16	09.30	
PSO	8.89	200 eP	16	10.50	-9.0X
TCE	12.37	84 eP	17	09.06	2.4X
TPP	12.65	86 eP	17	08.72	-1.6
TRN	12.71	84 eP	17	11.48	0.3
TBH	13.03	85 eP	17	16.35	0.9
FCV	13.25	73 eP	17	17.18	-1.1
SVB	13.27	73 eP	17	17.10	-1.5X
SVV	13.32	73 eP	17	18.07	-1.1
SSV	13.34	73 eP	17	17.97	-1.6X
SLB	13.62	71 eP	17	21.02	-2.2X
HUA	21.53	183 eP	18	52.30	-6.5X
		eS	18	56.50	
ATB	25.43	119 e(P)	19	34.50	-1.8
ZOBO	26.42	167 P	19	38.80	-7.4X
LPB	26.68	167 P	19	40.00	-8.4X
CNCB	26.97	167 Pd	19	44.20	-7.0X
ALQ	38.73	316 e(P)	21	31.50	-1.5
SCH	45.49	6 eP	22	29.00	1.3
YKA	60.28	340 eP	24	15.70	-1.5
LIC	68.57	87 P	25	10.00	-2.1
KIC	68 84	87 P	25	11.60	-2.1X
MBC	70.88	350 eP	25	24.00	-1.1
LPF	71.71	43 eP	25	31.20	0.7
	1.0s	9.60nm		4.8mb	
GRR	71.87	42 eP	25	32.40	0.9
	0.8s	11.80nm		4.9mb	
MFF	72.18	44 eP	25	34.20	0.8
	0.8s	13.40nm		5.0mb	
EPF	72.27	48 eP	25	35.40	1.3
	0.6s	10.20nm		5.0mb	
LDF	72.37	42 eP	25	35.20	0.7
	0.6s	5.40nm		4.7mb	
LFF	72.67	46 eP	25	37.10	0.8
	0.8s	5.30nm		4.6mb	
ALE	73.08	2 eP	25	51.00	12.9X
	0.7s	5.00nm			
MAF	74.03	45 eP	25	45.40	1.2
	0.8s	4.00nm		4.5mb	
BGF	74.23	44 eP	25	46.10	0.7
	0.6s	3.60nm		4.5mb	
AVF	74.59	44 eP	25	48.00	0.5
	0.8s	2.60nm		4.3mb	
SSF	74.71	44 eP	25	48.70	0.6
LOR	74.96	44 eP	25	50.20	0.6
	0.8s	4.00nm		4.5mb	
LBF	75.03	44 eP	25	50.40	0.3
	0.8s	2.60nm		4.3mb	
KHC	81.41	42 eP	26	22.50	-2.5X
BNG	92.04	85 iPd	27	17.00	-0.5
	0.6s	9.00nm		5.4mb	
ASPA	149.68	239 ePKPd	33	52.70	-1.0
	0.6s	14.00nm			
WB2	150.53	246 ePKP	33	50.80	-4.2X
WRA	150.54	246 PKPd	33	50.30	-4.7X
	1.1s	3.90nm			
	S.D. = 1.2	on 26 of 42 obs.			

JUN 01, 1989 21h 57m 06.42± 0.99s
14.195 N ± 3.5km 61.095 W ±16.4km
DEPTH = 30.7 ± 12.8 km
WINDWARD ISLANDS (95)
ML 2.7 (FDF). MD 3.3 (TRN).

BIM	0.32	4 iPc	57	14.09	-0.2
		S	57	19.60	
SLB	0.37	172 iP	57	14.59	-0.4
		eS	57	21.02	
MVM	0.41	28 iPc	57	15.75	0.3
		S	57	22.50	
FDF	0.54	354 iPd	57	17.12	-0.4
		S	57	24.80	
CRM	0.58	17 iPc	57	18.19	0.0
SSV	0.87	186 eP	57	23.20	0.7
SVV	0.88	188 eP	57	22.17	-0.4
		eS	57	33.17	
SVB	0.93	189 eP	57	23.09	-0.2
		eS	57	34.26	
FCV	1.04	188 eP	57	25.27	0.3
		eS	57	36.59	
DSVT	1.06	346 eP	57	25.63	0.4
		eS	57	39.55	
DTMT	1.06	346 eP	57	25.19	-0.1
	S.D. = 0.5	on 11 of 11 obs.			

JUN 01, 1989 22h 29m 05.47± 0.84s
4.443 S ± 5.4km 138.379 E ± 9.8km
DEPTH = 151.2 ± 11.4 km
4.8mb (3 obs.)
WEST IRIAN (201)

JAY	3.01	51 ePd	29	53.70	0.1
MTN	11.00	220 eP	31	40.00	0.3
		eS	33	40.00	
WB2	15.90	194 eP	32	41.70	-0.5
		eS	35	28.00	
WRA	15.90	194 Pd	32	42.40	0.1
QIS	16.06	176 iPc	32	43.60	-0.7
	1.0s	41.00nm		4.7mb	
		e	32	46.00	
		eS	35	36.00	
CTA	17.34	154 iPd	32	59.70	-0.2
		i	33	02.00	
ASPA	19.59	192 iPd	33	25.10	0.8
		e	33	29.10	
		eS	36	54.70	
WARB	24.37	206 eP	34	04.20	-6.8X
BRS	26.63	150 iPd	34	32.20	0.3
GUN	59.91	306 P	38	58.40	0.0
PKI	60.16	305 P	38	59.80	-0.3
KKN	60.35	305 P	39	01.10	-0.1
DMN	60.42	305 P	39	01.80	0.0
	0.6s	7.00nm		4.8mb	
GKN	60.96	305 P	39	05.20	-0.1
	0.5s	13.00nm		5.1mb	
	S.D. = 0.4	on 13 of 14 obs.			

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* JUN 02, 1989 00h 00m 38.34± 1.83s
5.359 S ± 8.8km 153.081 E ±15.1km
DEPTH = 51.7 ± 15.0 km
4.5mb (2 obs.)
NEW IRELAND REGION (190)

RAB	1.47	322 iPc	01	03.10	0.2
		iS	01	40.00	
PMG	7.12	235 eP	02	21.50	-1.0
	1.0s	50.00nm		5.2mb X	
CTA	16.08	204 eP	04	25.00	2.4
QIS	19.99	220 eP	05	07.00	-2.5
DZM	21.05	143 iPc	05	20.00	-0.5
WB2	23.28	230 eP	05	42.50	0.0
WRA	23.29	230 P	05	49.00	6.5X
	0.9s	4.70nm		3.9mb	
ASPA	25.94	224 eP	06	08.30	0.5
GUN	72.65	301 P	12	03.40	0.1
PKI	72.96	301 P	12	05.30	0.2
KKN	73.13	301 P	12	06.00	0.0
	0.8s	16.00nm		5.0mb	
DMN	73.23	301 P	12	07.00	0.4
GKN	73.73	301 P	12	09.50	0.1
INK	88.87	21 eP	13	27.00	-0.9
MBC	94.58	14 eP	13	54.00	-0.2
IFR	145.42	327 iPKP	20	14.00	1.0
		i	20	16.00	
AVE	146.80	329 ePKP	20	19.00	4.0X
TIO	148.56	326 iPKP	20	24.50	6.4X
BAO	150.49	135 ePKP	20	24.00	2.6X
	S.D. = 1.2	on 15 of 19 obs.			

& JUN 02, 1989 00h 06m 29.90s
60.857 N 151.624 W
DEPTH = 71.8km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA	0.22	121 iP	06	42.14	1.2
		S	06	49.78	
SPU	0.39	327 iP	06	41.69	-0.5
		S	06	51.19	
CRP	0.49	328 iP	06	42.87	-0.3
		S	06	53.70	
RED	0.72	233 iP	06	44.89	-0.5
		S	06	57.46	
SUA	0.74	35 iP	06	45.35	-0.4
		S	06	56.88	
SLKM	0.77	116 eP	06	45.38	-0.7
		S	06	58.13	
ILIM	1.02	221 eP	06	48.42	-0.7
		S	07	03.43	
SKT	1.13	2 iP	06	49.81	-0.6
		S	07	05.74	
PWA	1.16	46 eP	06	50.61	-0.2
		S	07	07.36	
SEW	1.32	124 eP	06	51.76	-1.1
CNPM	1.35	172 eP	06	52.41	-0.9
		S	07	12.37	
OPT	1.45	214 eP	06	54.36	-0.3
		S	07	13.87	
PME	1.47	57 eP	06	54.33	-0.6
		S	07	15.73	
	13 obs. associated				

JUN 02, 1989 01h 46m 16.59± 0.66s
46.470 N ± 7.9km 12.995 E ± 6.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 3.0 (LJU), 2.7 (ROM), 2.4 (TRI).

FVI	0.19	310 P	46	20.40	-0.4
		eSg	46	24.00	
RBL	0.40	94 P	46	23.90	-0.8
		eSg	46	30.10	
KBA	0.65	21 iPgc	46	30.60	0.8
		i(Sg)	46	39.00	
VOY	0.76	125 ePg	46	29.50	-2.0
		eSg	46	41.10	
TRI	0.93	145 e(Pg)	46	32.70	-1.6
		iSg	46	46.10	
CTI	1.02	246 P	46	35.40	-0.6
		eSg	46	49.60	
SCE	1.05	303 iPgc	46	36.20	-0.3
CEY	1.24	126 eP	46	41.00	1.4
		eSn	46	59.50	
OGA	1.41	287 eP	46	43.70	1.2
RIY	1.49	139 i(Pn)	46	46.00	2.7
		iSg	47	04.70	
VBY	1.85	121 e(Pn)	46	49.20	0.6
		e(Sn)	47	15.90	
KHC	2.69	8 ePg	47	00.00	-0.8
		Sg	47	42.80	
	S.D. = 1.5	on 12 of 12 obs.			

% JUN 02, 1989 02h 00m 00.54± 0.85s
41.664 N ±13.6km 14.047 E ± 7.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

MD 3.0 (ROM).

SDI	0.18	284	Pc	00 03.40	-1.2
			eSg	00 07.10	
DUI	0.31	90	P	00 06.80	-0.2
AQU	0.84	325	P	00 17.20	0.4
RDP	1.00	276	P	00 20.40	0.9
SGO	1.46	139	P	00 27.00	0.1

S.D. = 1.1 on 5 of 5 obs.

JUN 02, 1989 03h 18m 35.14± 0.98s
24.013 N ± 5.1km 122.363 E ± 7.9km
DEPTH = 39.3 ± 7.9 km
4.9mb (11 obs.) 4.0Msz (1 obs.)
TAIWAN REGION (243)

TWD	0.70	276	ePc	18 48.10	-0.6
			eS	18 59.00	
TWF1	1.18	236	iPd	18 55.30	-0.1
			eS	19 11.10	
TWZ	1.29	327	ePd	18 58.10	1.1
			eS	19 17.30	
ANP	1.40	327	ePc	18 59.20	0.6
	0.7s	1797.26nm			
			eS	19 08.00	
QZH	3.56	286	Pnc	19 28.20	-1.1
Z	16s	1.80um			
			Sn	20 07.20	
SSE	7.13	352	Pc	20 17.20	-2.4
	0.9s	0.06nm		2.5mb X	
Z	20s	0.50um			
N	10s	0.90um			
			pP	20 23.50	
BAG	7.75	193	eP	20 28.10	-0.4
GZH	8.33	265	eP	20 41.00	4.7X
NJ2	8.59	340	eP	20 36.50	-3.4X
N	13s	1.50um			
E	11s	0.70um			
WHN	9.65	314	eP	20 53.50	-1.0
			eS	22 43.00	
GYA	14.42	283	P	21 59.00	0.4
			S	24 36.00	
XAN	15.41	313	eP	22 11.10	-0.4
TIY	16.08	330	eP	22 22.40	2.3
N	13s	0.80um			
BJI	16.81	343	eP	22 31.00	1.9
Z	24s	0.32um			
N	12s	0.34um			
CD2	17.87	297	P	22 42.30	-0.2
HHC	19.08	334	eP	22 58.40	1.2
BTO	19.52	331	eP	23 02.00	-0.2
N	13s	0.80um			
E	13s	0.60um			
			sP	23 11.00	
			eS	26 39.00	
CN2	19.90	7	eP	23 06.20	0.1
Z	13s	0.90um			
N	13s	0.50um			
LZH	20.00	311	eP	23 08.00	0.5
	2.0s	0.05nm		1.5mb X	
Z	18s	0.70um		4.0Msz	
CHG	22.40	261	eP	23 35.10	3.4X
CHTO	22.40	261	eP	23 33.50	1.8
	1.3s	7.76nm		4.0mb	
GTA	24.47	314	eP	23 52.20	0.3
PKI	33.38	284	P	25 12.20	-0.3
KKN	33.49	284	P	25 12.80	-0.5
	0.7s	6.00nm		4.6mb	
DMN	33.65	284	P	25 14.70	0.0
GKN	34.05	285	P	25 17.80	-0.3
QIS	47.38	158	eP	27 08.00	0.5
ASPA	48.70	166	iPc	27 18.90	1.1
	1.1s	10.00nm		4.8mb	
SUF	71.73	331	iP	29 54.30	-0.6
INK	72.98	22	eP	30 01.50	-0.7
MBC	73.19	13	eP	30 02.00	-1.3
SLL	78.24	331	eP	30 31.20	-0.9
	0.6s	5.70nm		4.8mb	
NB2	78.88	332	P	30 34.60	-1.1
	0.7s	2.50nm		4.3mb	
VAY	81.43	311	eP	30 49.30	-0.3
YKA	82.71	23	eP	30 56.60	0.8
PNT	88.58	35	eP	31 26.00	0.8
LPG	89.45	321	eP	31 29.60	-0.2
	1.0s	8.80nm		5.0mb	
SMF	90.43	323	eP	31 33.70	-0.3
	0.8s	8.00nm		5.1mb	
AVF	90.61	323	eP	31 34.50	-0.2
	1.2s	11.90nm		5.1mb	
BGF	91.03	323	eP	31 36.80	0.1
	1.2s	11.90nm		5.2mb	
MAF	91.39	323	eP	31 38.60	0.2
	0.8s	5.30nm		5.0mb	
FFC	92.85	24	eP	31 44.50	-0.4
	0.9s	9.00nm		5.2mb	

S.D. = 1.0 on 39 of 42 obs.

% JUN 02, 1989 03h 20m 11.29± 2.29s
38.440 N ±13.7km 26.485 E ±21.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

IZM	0.61	94	iPg	20 22.80	-0.9
			iSg	20 32.50	
EZN	1.39	355	ePn	20 35.80	-0.9
YER	1.93	132	ePn	20 45.00	0.5
DST	2.04	54	ePn	20 49.00	3.0X
EDC	2.18	29	ePn	20 49.00	0.9
BNT	2.21	30	ePn	20 49.00	0.4

S.D. = 1.1 on 5 of 6 obs.

JUN 02, 1989 04h 07m 42.65± 0.58s
36.315 N ± 8.7km 139.182 E ± 8.7km
DEPTH = 111.9 ± 6.5 km
3.7mb (1 obs.)
HONSHU, JAPAN (227)

CHJJ	0.31	210	iPd	07 58.50	-0.3
			iS	08 09.80	
KAKJ	0.81	97	iP+	08 02.20	-0.2
			iS	08 15.60	
NIIJ	0.93	351	iP+	08 02.70	-0.9
			S	08 17.10	
MTMJ	1.14	284	iP+	08 05.50	-0.4
			S	08 22.00	
IIDJ	1.33	231	iPd	08 08.70	0.8
			S	08 27.20	
YAMJ	1.98	20	P	08 16.20	0.3
TSRJ	2.71	254	P	08 26.00	0.5
			S	08 57.80	
OFUJ	3.39	35	iPd	08 35.50	0.8
			S	09 15.30	
WB2	56.14	185	eP	17 12.20	-0.5
NB2	74.14	336	P	19 08.00	-0.1
	0.7s	0.90nm		3.7mb	

S.D. = 0.7 on 10 of 10 obs.

JUN 02, 1989 04h 21m 28.12± 0.90s
43.111 N ± 6.3km 13.435 E ± 7.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.2 (SSO).

CIO	0.23	291	iPg	21 33.42	0.3
			iSg	21 37.81	
ALP	0.35	163	e(Pg)	21 35.36	0.0
			iSg	21 41.62	
AOI	0.45	15	iPg	21 37.38	0.0
			iSg	21 45.50	
ARV	0.53	317	P	21 38.70	-0.1
			eSg	21 46.70	
ASS	0.57	266	P	21 39.50	-0.2
			eSg	21 48.50	

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

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* JUN 02, 1989 04h 41m 57.57± 0.76s
30.046 N ± 6.4km 50.510 E ±15.6km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
IRAN (348)

SHI	1.80	102	eP	42 27.00	0.1
BRF	3.96	179	(Pn)	42 57.50	0.0
BEE	4.01	180	iPn	42 58.10	-0.2
			(Sn)	43 45.80	
IR4	5.19	4	eP	43 17.00	1.9
IR1	5.36	2	eP	43 17.60	0.2
IR2	5.61	3	eP	43 19.50	-1.5
IR7	5.64	1	eP	43 20.50	-0.9
MLR	24.66	316	eP	47 21.50	4.9X
HFS	38.86	331	eP	49 21.50	0.4
	0.4s	1.60nm		4.1mb	

S.D. = 1.2 on 8 of 9 obs.

& JUN 02, 1989 05h 04m 34.02s
32.934 N 80 166 W
DEPTH = 5.8km
SOUTH CAROLINA (511)
<GLD>. MD 2.0 (GLD). Felt (IV) at Summerville.

MGS	0.04	150	iPc	04 35.43	-0.1
			S	04 37.20	
SVS	0.08	297	iPc	04 36.13	0.2
			S	04 37.21	
BCS	0.10	62	iPd	04 36.37	0.1
			S	04 38.35	
WSS	0.12	226	iPd	04 36.83	0.2
			S	04 39.30	
HBF	0.18	270	iPd	04 37.20	-0.5
TWB	0.19	16	iPd	04 38.03	0.1
			S	04 40.47	
HWD	0.22	207	iPd	04 38.53	0.0
			S	04 42.10	
DRC	0.25	313	eP	04 37.50	-1.7
			S	04 43.75	
VEW	0.29	139	eP	04 39.74	-0.1
			S	04 42.91	
CFS	0.34	360	iPd	04 41.03	0.1
			S	04 45.44	
TRK	0.38	60	iPd	04 41.38	-0.2
			S	04 46.05	
SGS	0.39	312	eP	04 41.81	0.0
			S	04 49.75	
COW	0.63	315	eP	04 46.66	-0.1
			S	05 00.66	
VRN	0.66	279	eP	04 46.45	-0.8
			S	04 55.88	
MTT	1.48	304	eP	05 00.76	-0.4
			S	05 21.55	
JSC	1.62	326	eP	05 02.00	-1.2
			S	05 25.34	
LHS	1.63	341	eP	05 01.69	-1.7
			S	05 24.35	
PRM	2.16	303	eP	05 10.16	-1.0
			S	05 41.04	

18 obs. associated

& JUN 02, 1989 05h 07m 30.53s
61.088 N 149.902 W
DEPTH = 29.7km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.55	313	iP	07 41.62	-0.3
SLKM	0.60	195	eP	07 42.14	-0.5
PME	0.69	37	iP	07 43.19	-0.8
			S	07 53.08	
NKA	0.74	243	iP	07 45.54	0.8
KNK	0.77	64	iP	07 44.64	-0.6
			S	07 55.31	
SEW	1.01	167	eP	07 47.90	-0.8
CGLM	1.04	283	iP	07 48.19	-1.0
SPU	1.05	276	iP	07 48.09	-1.2
			S	08 02.16	
CRP	1.11	280	iP	07 49.34	-0.9
SKT	1.19	320	iP	07 50.53	-0.7
			S	08 07.08	
RED	1.56	246	eP	07 55.60	-1.0
			S	08 16.25	
MTU	1.57	134	eP	07 54.97	-1.7
VZW	1.63	90	eP	07 56.48	-1.1
			S	08 18.41	
CNPM	1.70	204	eP	07 57.55	-1.1
ILIM	1.82	238	eP	07 59.44	-0.9
			S	08 22.55	
KLU	1.96	76	P	08 01.18	-1.3
TOA	2.05	59	eP	08 03.52	-0.2
			S	08 31.94	
OPT	2.19	230	P	08 05.27	-0.4
KTH	2.52	350	eP	08 10.39	0.0
			S	08 42.61	
GLB	2.96	80	eP	08 15.12	-1.5

20 obs. associated

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* JUN 02, 1989 05h 38m 50.78± 1.32s
17.840 N ± 6.7km 146.969 E ±11.5km
DEPTH = 56.0 ± 12.2 km
4.8mb (4 obs.)
MARIANA ISLANDS (216)

02d 05h

GUMO 4.69 206 eP 40 01.00 0.3
0.7s 63.53nm
PJG 4.69 206 eP 40 01.30 0.6
GUA 4.71 205 eP 40 00.50 -0.6
eS 40 55.20
CHJJ 19.46 340 eP 43 15.50 -0.3
TSRJ 20.15 333 eP 43 23.50 0.5
NIIJ 20.56 342 eP 43 26.80 -0.4
OIS 38.84 191 eP 46 12.00 -0.2
WB2 39.54 199 eP 46 17.00 -1.1
CHTO 45.49 279 eP 47 07.10 0.5
0.7s 1.11nm 3.8mb
GUN 56.68 292 P 48 32.00 0.5
PKI 57.12 292 P 48 34.60 0.0
0.8s 13.00nm 5.0mb
KKN 57.22 292 P 48 35.20 0.0
0.8s 16.00nm 5.1mb X
DMN 57.39 292 P 48 36.40 0.0
0.7s 10.00nm 5.0mb
GKN 57.77 292 P 48 39.00 0.0
1.0s 29.00nm 5.3mb X
INK 69.69 23 eP 49 56.00 -0.2
MBC 73.68 14 eP 50 19.00 -0.9
YKA 78.18 28 eP 50 46.20 0.8
SOD 84.57 340 eP 51 19.00 0.1
SUF 87.40 337 eP 51 32.00 -0.9
0.5s 2.30nm 4.6mb
NUR 89.28 335 eP 51 51.00 9.1X
ZOBO 146.44 93 PKP 58 29.00 1.6
LPB 146.50 93 ePKP 58 34.00 6.8X
CNCB 146.65 94 ePKP 58 33.00 5.3X
CCH 148.46 94 (PKP) 58 34.00 3.8X
S.D. = 0.7 on 20 of 24 obs.

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* JUN 02, 1989 05h 40m 06.46± 1.86s
40.440 N ±15.6km 21.208 E ±17.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.7 (SKO). MD 3.2 (ATH).

KZN 0.45 107 ePg 40 15.00 -0.6
eSg 40 30.50
OHR 0.74 335 ePg 40 20.20 -0.8
iSg 40 32.00
LIT 1.04 109 ePd 40 26.00 -0.1
eS 40 47.80
KNT 1.47 60 eP 40 32.80 -0.2
SKO 1.54 6 ePn 40 35.00 1.0
iSn 41 00.20
PLG 1.71 91 ePb 40 39.00 2.5X
NEO 1.92 125 ePb 40 40.20 0.7
S.D. = 0.9 on 6 of 7 obs.

JUN 02, 1989 06h 03m 43.69± 0.48s
11.432 S ± 6.2km 118.226 E ± 8.0km
DEPTH = 33.0km (normal)
4.8mb (4 obs.)
SOUTH OF SUMBAWA ISLAND (291)

MKS 6.30 11 ePc 05 17.50 0.8
e 06 27.00
TRT 6.64 303 ePc 05 20.20 -1.3
iS 06 35.20
MBL 9.79 171 iPd 06 03.70 -1.7
0.3s 47.00nm 6.2mb X
eS 07 45.00
KNA 11.11 114 eP 06 22.00 -1.4
eS 08 18.00
NANU 11.36 193 eP 06 26.00 -0.8
MTN 12.70 98 eP 06 44.00 -0.8
eS 08 55.00
MEKA 15.10 179 iPc 07 17.00 0.6
eS 09 51.60
WARB 16.69 153 eP 07 29.30 -7.4X
0.3s 28.00nm 4.9mb
eS 10 23.00
WB2 17.67 121 eP 07 48.20 -0.9
eS 10 52.30
MRWA 17.82 186 eP 07 50.20 -0.6
0.3s 12.00nm 4.6mb
eS 10 52.00
BAL 19.13 184 eP 08 08.00 1.1
eS 11 27.50
ASPA 19.25 131 eP 08 09.60 1.3
eS 11 33.10
COOL 19.54 172 i(P) 08 12.50 0.8
eS 11 33.00

KLB 20.07 181 eP 08 21.00 3.8X
eS 11 46.00
FORR 21.38 156 eP 08 33.00 2.4
0.4s 17.00nm 4.8mb
NWAO 21.41 182 eP 08 39.00 8.1X
eS 12 19.00
RKG 22.56 183 eP 09 01.00 18.6X
eS 13 56.00
GUN 50.11 322 P 12 38.80 0.5
DMN 50.36 321 P 12 40.00 -0.2
KKN 50.39 321 P 12 41.30 1.0
GKN 50.94 321 P 12 44.20 -0.2
0.4s 4.00nm 4.7mb
POO 52.94 304 eP 12 59.00 -0.5
S.D. = 1.2 on 18 of 22 obs.

& JUN 02, 1989 06h 27m 37.27s
61.464 N 146.727 W
DEPTH = 31.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 4.1 (PMR). Felt (IV) at Valdez and (III) at Anchorage and Palmer.

KLU 0.39 85 iP 27 45.22 -0.9
S 27 52.37
VZW 0.41 168 iP 27 45.28 -1.2
TOA 0.70 22 iPd 27 50.10 -0.8
KNK 0.83 267 eP 27 51.94 -0.8
CVA 1.04 152 iP 27 54.34 -1.3
S 28 09.69
HIN 1.08 174 iP 27 54.84 -1.4
S 28 10.25
PME 1.12 280 iP 27 56.06 -0.7
PMR 1.16 277 iPc 27 56.60 -0.8
SGAM 1.22 142 iP 27 56.21 -2.0
S 28 13.69
GLB 1.40 90 iP 27 59.10 -1.8
RAGM 1.47 136 iP 28 00.12 -1.9
S 28 23.79
PWA 1.52 278 iP 28 01.89 -0.7
MTU 1.55 197 eP 28 01.35 -1.7
PAX 1.62 21 iP 28 03.02 -1.2
SEW 1.91 226 eP 28 06.51 -1.7
SUA 1.93 272 eP 28 06.99 -1.6
SLKM 1.95 242 eP 28 07.25 -1.7
MID 2.05 174 eP 28 10.40 0.1
NKA 2.31 254 eP 28 13.90 0.0
SKT 2.34 285 eP 28 12.76 -1.7
DDM 2.37 9 iP 28 14.46 -0.4
MCK 2.50 337 eP 28 16.03 -0.6
SPU 2.58 266 eP 28 15.67 -2.2
CTGM 2.66 98 iP 28 16.58 -2.4
FBA 3.48 352 ePd 28 28.20 -2.4
DWY 4.24 49 P 28 39.00 -2.3
SVW 4.31 269 iPc 28 38.40 -3.9
HYT 4.52 94 P 28 42.00 -3.4
TTA 4.59 293 eP 28 42.70 -3.7
KDC 4.74 221 eP 28 44.60 -3.7
IMA 5.55 329 eP 28 56.70 -3.3
SIT 7.32 122 eP 29 19.60 -5.1
INK 8.85 34 eP 29 41.00 -4.9
YKA 15.05 72 eP 31 05.40 -3.6
YKC 15.11 72 eP 31 05.00 -4.9
MBC 17.50 21 eP 31 36.00 -4.0
SES 22.54 103 eP 32 32.00 -3.6
RSON 30.51 86 eP 33 45.00 -4.4
38 obs. associated

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* JUN 02, 1989 06h 32m 39.80± 0.69s
13.288 N ±10.7km 123.021 E ±13.7km
DEPTH = 33.0km (normal)
4.2mb (2 obs.) 4.4Msz (1 obs.)
LUZON, PHILIPPINE ISLANDS (249)

QCP 2.32 306 eP 33 14.70 -1.7
BAG 3.90 323 eP 33 37.00 -2.1
eS 34 28.90
DAV 6.65 158 eP 34 26.00 8.2X
QIZ 13.88 296 eP 35 58.00 1.4
N 13s 0.50um
E 14s 0.80um
eS 38 29.00
WHN 18.95 336 eP 37 01.00 0.2
N 14s 0.52um
E 14s 0.82um
eS 40 31.00

NJ2 19.06 349 eP 37 01.50 -0.6
Z 16s 0.50um
LOE 20.93 284 eP 37 22.00 -0.3
PJG 21.25 87 eP 37 03.30 -22.2X
KMI 22.44 305 Pd 37 41.50 3.8X
Z 20s 1.50um 4.4Msz
E 14s 0.50um
sP 37 51.50
CHG 23.77 287 eP 38 01.00 10.6X
CHTO 23.77 287 eP 37 51.70 1.3
0.9s 3.62nm 3.9mb
XAN 24.31 331 eP 37 55.50 0.0
S 42 10.00
CD2 24.95 318 eP 38 03.00 1.2
eS 42 18.00
BJI 27.32 348 eP 38 22.00 -1.5
Z 24s 0.32um 3.8MszX
N 16s 0.63um
eS 43 08.00
BTO 29.50 340 eP 38 45.00 1.7
N 13s 0.30um
E 13s 0.40um
eS 43 28.00
CN2 30.48 3 eP 38 55.50 3.7X
Z 16s 0.80um 4.5MszX
WB2 34.85 161 eP 39 28.80 -1.4
QIS 37.38 154 eP 39 51.00 -0.5
ASPA 38.24 164 iPc 39 58.90 0.2
1.1s 10.00nm 4.6mb
WARB 39.39 175 eP 40 02.00 -6.3X
INK 82.66 21 eP 45 03.00 2.0
MBC 83.47 12 eP 45 05.00 0.0
S.D. = 1.4 on 16 of 22 obs.

% JUN 02, 1989 08h 03m 19.92± 0.55s
39.275 N ± 4.9km 28.293 E ± 5.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.42 38 iPg 03 27.90 -0.6
eSg 03 38.50
BNT 1.12 345 iPn 03 41.40 0.5
EDC 1.12 343 iPn 03 41.00 0.1
IZM 1.19 223 ePn 03 41.50 -0.6
KHL 1.35 134 ePn 03 45.00 0.1
ALT 1.43 98 ePn 03 46.60 0.6
EZN 1.62 290 ePn 03 49.00 0.5
MFT 1.70 333 ePn 03 50.00 0.2
HRT 1.87 34 iPn 03 52.40 0.1
CTT 1.87 3 ePn 03 51.40 -0.9
S.D. = 0.6 on 10 of 10 obs.

% JUN 02, 1989 08h 24m 29.90± 1.06s
39.168 N ± 8.7km 27.603 E ±10.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.81 199 ePg 24 45.20 -0.5
eSg 24 57.50
DST 0.91 61 ePn 24 48.40 1.1
EZN 1.19 304 ePn 24 53.00 1.0
EDC 1.19 10 ePn 24 52.00 -0.2
BNT 1.21 12 ePn 24 51.00 -1.5
S.D. = 1.5 on 5 of 5 obs.

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* JUN 02, 1989 10h 00m 54.95± 1.46s
40.054 N ±11.1km 21.917 E ±12.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.8 (ATH).

KZN 0.28 336 iPbc 01 02.20 1.4
LIT 0.44 84 ePg 01 11.20 7.2X
GRG 0.97 22 ePg 01 12.90 -0.6
PLG 1.21 74 ePg 01 23.50 5.9X
NEO 1.25 126 ePb 01 18.60 0.3
KNT 1.34 34 ePb 01 20.20 0.6
SOH 1.34 55 ePb 01 23.50 3.9X
eSb 01 45.60
OHR 1.36 321 ePn 01 19.00 -0.9
PAIG 1.36 95 ePb 01 27.20 7.3X
VAY 1.36 21 ePn 01 19.00 -0.9
SKO 1.95 349 ePn 01 31.00 2.6X
e 01 53.00
S.D. = 1.2 on 6 of 11 obs.

% JUN 02, 1989 10h 12m 39.31± 0.77s

60.310 N ± 6.4km 5.420 E ± 9.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 1.5 (BER).

BER	0.08	330	iPg	12 41.73	-0.1
			eSg	12 44.08	
ASK	0.21	327	iPg	12 43.67	-0.1
			iSg	12 46.90	
ODD1	0.73	123	iP	12 53.55	0.0
			eS	13 04.35	
SUE	0.82	337	eP	12 55.90	0.8
			eS	13 06.45	
HYA	0.94	23	iP	12 58.15	1.0
			eS	13 11.55	
KMY	1.11	185	iP	13 00.17	0.1
			eS	13 13.70	
BLS1	1.16	142	eP	13 00.70	-0.4
			eS	13 16.70	
MOL	2.49	23	eP	13 17.95	-2.5
			eS	13 47.24	
			eSg	13 57.71	
NRA0	3.06	79	ePn	13 29.70	1.2
			iPg	13 34.20	
			eS	14 06.00	
			iSg	14 14.00	

S.D. = 1.3 on 9 of 9 obs.

? JUN 02, 1989 10h 50m 39.40± 0.83s
7.582 S ±10.4km 152.187 E ±12.0km
DEPTH = 33.0km (normal)
NEW BRITAIN REGION (192)

RAB	3.37	360	e(P)	51 31.00	0.0
LAT	5.23	280	eP	51 53.00	-4.4X
PMG	5.30	250	eP	52 13.00	14.7X
PVC	18.68	124	iP	54 57.20	0.0
BRS	19.71	178	iPc	55 08.90	-0.3
WB2	21.21	233	eP	55 31.80	7.1X
MTN	21.37	254	eP	55 25.00	-1.3
ASPA	23.74	226	iPc	56 00.80	11.1X
	0.5s		6.00nm		
KNA	24.31	248	eP	55 56.30	1.1
WARB	30.54	230	iPd	56 52.80	0.5

S.D. = 1.0 on 6 of 10 obs.

• JUN 02, 1989 10h 53m 36.99± 1.10s
10.974 S ± 8.3km 160.948 E ±19.8km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
SOLOMON ISLANDS (193)

HNR	1.82	327	ePc	54 07.00	0.5
			eS	54 31.00	
VSG	2.10	324	eP	54 11.00	0.5
			eS	54 41.00	
SVO	2.13	328	eP	54 10.00	-0.9
			eS	54 26.00	
DZM	12.22	155	iPc	56 31.90	0.0
			iS	58 41.80	
CTA	16.80	236	iPd	57 35.20	3.8X
	1.0s		21.00nm	4.2mb	
BRS	18.05	204	eP	57 47.00	0.0
RMQ	19.25	215	eP	58 01.60	0.0
WB2	27.11	248	iPd	59 13.70	-5.3X

S.D. = 0.7 on 6 of 8 obs.

JUN 02, 1989 11h 02m 19.83± 0.78s
19.068 S ± 3.7km 168.833 E ± 3.9km
DEPTH = 100.4 ± 6.5 km
5.3mb (18 obs.)
VANUATU ISLANDS (186)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 28C
Centroid Location:
Origin Time 11:02:25.3 0.7
Lat 18.95S 0.06 Lon 168.04E 0.06
Dep 105.1 3.2 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr=-7.85 0.47 Mtt= 0.76 1.14
Mff= 7.08 1.03 Mrt=-7.71 0.54
Mrf=-2.19 0.63 Mtf= 5.41 0.72
Principal Axes:

	Val	Plg	Azm
T	12.05	18	127
N	0.37	25	226
P	-12.41	59	5

Best Double Couple:Mo=1.2*10**17
NP1:Strike=184 Dip=35 Slip=-137
NP2: 57 67 -63

PVC	1.41	339	iPc	02 44.00	-1.4
			iS	03 04.00	
DZM	3.73	216	iPd	03 12.90	-3.6X
			iS	03 52.90	
VUN	9.20	85	eP	04 36.10	4.7X
HNR	12.88	317	eP	05 20.00	-0.3
			e(S)	07 14.00	
VSG	13.16	317	eP	05 25.00	0.9
BRS	16.91	238	iPd	06 14.70	2.9X
KRP	19.68	164	P	06 43.00	-0.4
	0.9s	137.00nm		5.3mb	
RMQ	19.92	245	ePd	06 47.90	1.9
	0.8s	51.00nm		4.9mb	
CTA	21.30	264	iPc	07 01.00	1.0
	0.9s	50.84nm		4.9mb	
			i	07 18.30	
			i	07 31.50	
			iS	10 55.00	
			i	11 27.00	
MNG	22.22	167	P	07 08.10	-0.9
	0.2s	34.00nm		5.3mb	
PGZ	22.41	165	P	07 10.00	-0.8
TCW	22.56	169	P	07 13.50	1.3
MTW	22.75	167	P	07 13.40	-0.7
MOW	22.95	168	eP	07 16.10	0.1
PMG	23.08	292	iPd	07 18.50	1.0
	1.2s	281.25nm		5.5mb	
CNB	23.63	223	eP	07 24.70	1.9
			e	07 42.00	
CAN	23.87	223	eP	07 27.20	2.1
CMS	24.14	235	eP	07 28.00	0.3
			e	07 47.00	
LAT	24.56	297	iPc	07 33.70	1.9
QIS	27.52	262	eP	07 58.00	-1.0
			eTT	21 43.00	
WB2	32.48	263	eP	08 40.80	-2.2
ASPA	32.80	256	iPd	08 44.40	-1.3
	0.7s	168.00nm		6.0mb	
Z	21s	0.78um		4.4Msz	
			i	09 03.00	
			ePcP	11 28.10	
			eS	13 53.50	
			LR	20 14.90	
MTN	36.72	274	eP	09 19.00	-0.2
	0.3s	130.00nm		6.3mb X	
KNA	38.32	269	eP	09 32.00	-0.6
FORR	38.55	244	iPc	09 34.20	-0.2
	0.4s	28.00nm		5.5mb	
PAE	39.43	95	iP	10 00.10	18.3X
	1.0s	25.00nm			
WARB	39.45	252	eP	09 34.30	-7.6X
	0.5s	15.00nm		5.1mb	
TVO	39.72	95	iP	10 02.10	17.8X
	1.0s	25.00nm			
COOL	44.50	245	eP	10 22.00	-1.1
MBL	45.92	259	eP	10 34.00	-0.4
MEKA	46.72	251	iPc	10 40.50	-0.2
	0.9s	103.00nm		5.7mb	
KLB	47.44	244	eP	10 45.00	-1.3
NWAO	47.95	243	iPc	10 50.00	-0.2
BAL	48.31	246	e(P)	10 52.40	-0.6
NANU	49.73	256	iPc	11 04.50	0.5
MKS	50.00	279	ePc	11 06.80	0.6
			e	12 27.00	
PCI	51.28	285	ePd	11 16.70	0.9
TRT	55.62	274	iPd	11 47.50	-0.3
	0.6s	71.70nm		5.9mb	
KAKJ	61.30	334	P	12 26.40	-0.5
CHJJ	61.66	333	P	12 28.60	-0.8
IIDJ	61.67	332	P	12 28.90	-0.6
TSRJ	62.60	330	P	12 35.50	0.0
MTMJ	62.64	332	P	12 35.40	-0.5
NIIJ	62.67	333	P	12 35.70	-0.3
YAMJ	63.04	335	P	12 38.60	0.2
OFUJ	63.19	337	eP	12 39.30	-0.1
SHK	63.43	327	eP	12 40.40	-0.7
AOMJ	64.96	336	eP	12 51.50	0.6
OZH	65.61	310	eP	12 53.60	-1.7
KUSJ	65.72	341	eP	12 54.90	-0.8
MRRJ	66.33	338	eP	12 59.00	-0.6
ASAJ	67.29	340	P	13 06.40	0.7
SSE	67.68	317	Pd	13 07.50	-0.9
	1.0s	0.03nm		2.1mb X	
			PP	15 40.50	
GZH	68.48	305	Pd	13 14.00	0.5
NJ2	69.82	316	Pc	13 21.80	0.3
SPA	71.05	180	e(P)	13 28.40	-0.3
	0.9s	22.73nm		5.0mb	
			i	13 50.10	
WHN	71.95	312	eP	13 34.50	0.1
PSI	71.98	279	ePc	13 34.00	-0.9
	1.0s	29.30nm		5.1mb	
DL2	72.65	323	P	13 38.00	-0.3
MDJ	72.79	332	iPd	13 39.50	0.5
TIA	73.56	319	Pd	13 43.20	-0.5
SNY	73.63	326	iPd	13 43.70	-0.2
CN2	74.11	329	iPd	13 46.80	0.1
			pP	14 09.00	84kmX
LOE	75.24	295	eP	13 54.00	0.2
GYA	75.41	305	P	13 55.00	0.3
BJI	76.56	321	eP	14 01.00	0.3
Z	36s	0.50um		4.6MszX	
			eS	23 42.00	
TIY	77.45	317	iPd	14 06.80	1.0
Z	20s	0.40um		4.7Msz	
			sP	14 36.00	
			S	23 52.00	
			sS	24 31.00	
XAN	77.71	313	Pd	14 08.00	0.7
KMI	77.86	302	Pd	14 10.00	1.5
Z	24s	0.60um		4.8MszX	
CHG	78.23	295	iPd	14 11.40	1.0
	1.0s	44.50nm		5.2mb	
CHTO	78.23	295	iPc	14 11.70	1.3
	1.2s	58.68nm		5.3mb	
MAW	78.45	202	eP	14 12.00	1.3
CD2	79.83	308	P	14 19.50	0.6
HHC	79.84	320	P	14 19.00	0.2
BTO	80.65	319	P	14 24.50	1.4
LZH	82.33	312	P	14 33.50	1.5
	1.5s	0.13nm		2.6mb X	
PRS	85.86	49	ePd	14 50.70	1.1
BKS	85.96	48	e(P)	14 53.80	3.8X
SAO	86.00	49	eP	14 50.30	0.0
MHC	86.13	48	ePd	14 52.00	0.9
BCH	86.28	51	P	14 52.20	0.4
GTA	86.73	314	iPd	14 54.80	0.8
WDC	87.01	45	ePd	14 55.60	0.5
LTCM	87.12	46	P	14 55.90	0.3
ORV	87.24	47	ePd	14 56.90	0.6
PAS	87.25	53	eP	14 57.00	0.6
CMB	87.33	48	ePd	14 57.30	0.5
FRI	87.35	49	ePd	14 57.40	0.6
MWC	87.37	53	eP	14 57.00	-0.2
MIN	87.53	46	ePd	14 57.70	-0.1
ISA	87.67	51	eP	15 00.00	1.5
SBB	87.74	52	eP	14 59.00	0.2
BAR	87.78	54	eP	15 00.00	1.0
RVR	87.79	53	eP	15 00.00	1.0
PLM	87.91	54	eP	15 00.00	0.1
CLC	88.38	51	eP	15 02.00	0.1
GSC	88.76	52	eP	15 04.00	0.3
GLA	89.35	55	eP	15 08.00	1.5
KVN	89.38	48	P	15 07.00	0.3
TNP	89.60	49	P	15 08.00	0.2
	0.9s	8.79nm		4.9mb	
FBA	90.03	17	P	15 07.10	-1.8
	0.9s	10.42nm		5.0mb	
GUN	92.78	298	P	15 22.80	0.0
PNT	92.85	38	ePd	15 22.00	-0.2
	0.9s	14.00nm		5 3mb	
PKI	93.06	298	P	15 24.40	0.3
	1.2s	69.00nm		5.9mb	
KKN	93.24	298	P	15 25.00	0.2
DMN	93.32	298	P	15 25.80	0.6
GKN	93.85	298	P	15 27.40	-0.1
PV09	95.65	51	P	15 35.20	-0.6
INK	96.50	18	eP	15 37.00	-1.5
ALQ	96.52	55	e(P)	15 40.00	0.4
WMQ	96.81	314	P	15 41.00	0.4
YKA	100.69	27	ePdiff	15 58.50	0.9
SUF	129.41	339	iPKP	21 16.60	-1.1
NUR	131.43	337	ePKP	21 21.00	-0.6
	0.7s	21.40nm			
APO	134.89	343	ePKP	21 18.30	-9.9X
	0.3s	2.20nm			
NB2	135.18	345	PKP	21 27.50	-1.3
	0.8s	6.90nm			
SOB1	139.40	131	ePKP	21 29.50	-8.5X
			e	21 35.90	

02d 11h

		e	25	05.00		
MLR	139.58	319	ePKP	21	30.00	-7.6X
SPC	140.77	327	ePKP	21	39.30	-0.4
ITR	141.44	133	ePKP	21	37.50	-4.2X
		e		21	43.50	
KSP	141.55	332	ePKP	21	33.50	-7.3X
		id		21	43.60	
		e		25	12.20	
BZS	142.13	322	ePKPc	21	38.00	-3.9X
BRG	142.55	334	iPKP	21	37.00	-5.5X
	1.4s	24.00nm				
CLL	142.60	335	ePKP	21	38.00	-4.5X
	1.8s	30.00nm				
PRU	142.95	332	PKP	21	39.40	-3.8X
ZST	143.00	328	e(PKP)	21	43.00	-0.3
SRS	143.11	314	ePKP	21	39.40	-4.4X
OUR	143.18	313	ePKP	21	39.50	-4.4X
EKA	143.29	352	PKP	21	40.00	-3.6X
	1.0s	13.20nm				
VKA	143.34	329	iPKPd	21	42.00	-1.9X
	0.7s	26.60nm				
SOH	143.40	314	ePKP	21	40.50	-3.8X
KNT	143.56	315	ePKP	21	41.20	-3.3X
WIT	143.57	342	ePKP	21	43.00	-1.1
VAY	143.71	315	iPKP	21	41.40	-3.4X
	1.0s	0.15nm				
THE	143.75	314	ePKP	21	41.60	-3.2X
HOF	143.82	335	iPKPd	21	42.30	-2.4X
	1.0s	93.00nm				
GRG	143.99	315	ePKP	21	42.40	-2.9X
KHC	144.00	332	iPKPc	21	43.50	-1.6
	1.0s	32.00nm				
		e		22	37.50	
SKO	144.14	317	iPKPd	21	44.00	-1.5
	1.2s	370.00nm				
WTS	144.24	341	iPKP	21	44.00	-1.3
	0.8s	34.00nm				
WET	144.30	333	iPKPd	21	44.30	-1.3
	1.0s	88.00nm				
LIT	144.31	313	ePKP	21	43.50	-2.4X
GRF	144.57	335	iPKPd	21	45.50	-0.5
	0.9s	200.00nm				
	Z 22s	0.10um			4.5Msz	
OHR	144.98	316	iPKPd	21	46.20	-0.8
	0.9s	0.41nm				
DMU	145.08	356	ePKP	21	46.00	-0.7
	0.7s	53.00nm				
PTJ	145.11	326	ePKP	21	46.50	-0.6
TNS	145.20	338	iPKPd	21	46.70	-0.4
BHG	145.36	331	iPKPc	21	46.80	-0.6
	1.1s	356.00nm				
TOD	145.58	337	ePKP	21	47.70	0.0
ENN	145.58	341	iPKPd	21	48.00	0.4
	1.1s	237.00nm				
KBA	145.61	330	ePKP	21	47.00	-1.1
	1.0s	103.00nm				
DLE	145.66	355	ePKP	21	47.60	-0.1
	1.0s	116.00nm				
MEM	145.69	341	PKPd	21	48.40	0.6
FUR	145.74	333	iPKPd	21	48.90	0.8
	1.5s	501.00nm				
VBY	145.74	326	ePKP	21	47.70	-0.4
LJU	145.75	328	ePKP	21	48.00	-0.1
ABH	145.80	338	ePKP	21	48.10	0.0
RBL	145.96	329	PKP	21	47.60	-0.9
CEY	146.02	327	ePKP	21	47.80	-0.8
UCC	146.02	342	PKP	21	48.00	-0 4
KTD	146.08	337	ePKP	21	48.45	-0.2
VOY	146.08	328	ePKP	21	47.70	-1.1
RUP	146.13	339	ePKP	21	48.71	0.0
FVI	146.23	330	PKP	21	47.70	-1.1
SNF	146.30	342	PKPd	21	50.10	1.3
TRI	146.37	328	ePKPd	21	48.30	-0.8
WLF	146.46	340	PKPc	21	49.70	0.6
		i		21	51.10	
		e		22	17.40	
GWF	146.54	337	PKP	21	47.92	-1.4
DOU	146.58	341	PKPd	21	50.80	1.5
		e		22	12.60	
ECP	146.74	355	iPKPd	21	50.70	1.3
	1.1s	322.00nm				
OGA	146.84	332	iPKPc	21	50.40	0.3
	1.1s	263.00nm				
VVI	146.84	329	PKP	21	52.00	2.1X
CDF	147.13	337	PKP	21	49.40	-1.0
CTI	147.16	330	PKP	21	49.60	-0.9
SLE	147.20	335	ePKPd	21	52.30	1.9
SAX	147.27	334	ePKPd	21	53.30	2.4X
FEL	147.30	336	ePKP	21	50.00	-0.7
OSS	147.37	332	ePKPd	21	53.60	2.7X
ZLA	147.47	335	ePKPd	21	53.10	2.2X
BNG	147.56	247	iPKPd	21	56.00	4.0X
	0.5s	90.00nm				
MOF	147.65	337	PKP	21	50.77	-0.5
LLS	147.71	334	ePKPd	21	54.40	2.9X
VITF	147.76	338	PKP	21	51.27	0.1
BSF	147.80	337	PKP	21	51.17	-0.3
VDL	147.81	333	ePKPd	21	54.90	3.2X
BBS	147.83	336	PKP	21	51.20	-0.3
SAL	148.01	331	PKP	21	53.70	2.0
LOMF	148.19	337	PKP	21	52.44	0.3
MDI	148.26	332	PKP	21	54.50	2.4X
RSM	148.28	327	PKP	21	53.10	0.9
ARV	148.32	326	PKP	21	52.10	-0.2
TMA	148.37	333	ePKPd	21	55.80	3.2X
SFI	148.60	327	PKP	21	57.50	4.8X
VAI	148.60	333	PKPd	21	51.50	-1.1
TDS	148.65	317	PKP	21	57.30	4.3X
DUI	148.65	321	PKP	21	56.50	3.5X
PGD	148.69	327	PKP	21	55.40	2.3X
CRE	148.75	327	PKP	21	57.00	3.9X
ASS	148.76	325	PKPc	21	51.90	-1.2
MMK	148.80	334	ePKPd	21	57.60	4.3X
SGO	148.80	319	PKP	21	52.00	-1.1
AQU	148.82	323	PKP	21	56.40	3.2X
MME	148.98	329	PKP	21	58.00	4.3X
SDI	149.00	322	PKPd	21	51.70	-1.8X
DIX	149.00	334	ePKPd	21	58.30	4.6X
AZI	149.04	323	PKP	21	56.70	3.3X
BDI	149.13	329	PKPc	21	56.80	3.1X
ORO	149.13	333	PKPc	21	56.80	3.1X
FLN	149.14	346	ePKP	21	52.40	-1.0
	1.0s	8.00nm				
BOB	149.15	331	PKPc	21	58.30	4.6X
EMS	149.20	335	ePKPd	21	58.50	4.6X
LDF	149.22	346	ePKP	21	53.70	0.1
	1.2s	29.70nm				
LOR	149.30	340	ePKP	21	54.00	0.2
	1.2s	5.90nm				
PII	149.41	328	PKP	21	57.50	3.5X
LBF	149.51	339	ePKP	21	54.30	0.2
RDP	149.60	323	PKP	22	00.00	5.6X
SSF	149.60	340	ePKP	21	54.20	0.0
	1.3s	21.60nm				
LSD	149.61	334	PKP	21	59.81	5.2X
RSP	149.82	334	PKP	21	58.48	3.8X
CKI	149.95	332	PKP	21	59.50	4.7X
ATN	150.03	315	PKP	21	59.50	4.4X
BNI	150.14	334	PKP	22	00.00	4.8X
RRL	150.20	334	PKP	22	01.04	5.6X
ROB	150.23	332	PKP	21	59.91	4.6X
BGF	150.26	340	ePKP	21	55.20	0.0
	1.0s	10.00nm				
DOI	150.34	333	PKP	21	59.00	3.5X
PZZ	150.40	333	PKP	21	59.81	4.2X
ENR	150.48	332	PKP	21	59.81	4.1X
STV	150.51	332	PKP	21	59.71	4.0X
FOUF	150.52	333	ePKP	21	55.28	-0.3
		i		22	02.12	
IMI	150.52	331	PKP	22	00.83	5.1X
SAOF	150.61	332	PKP	21	56.94	1.1
AUTN	150.66	332	PKP	21	56.90	0.7
TCF	150.70	341	ePKP	21	55.00	-0.9
	1.3s	25.20nm				
TOUF	150.73	332	PKP	21	56.96	0.7
AURF	150.79	332	PKP	21	56.88	0.7
MVIF	150.86	332	PKP	21	57.14	0.8
LSF	150.94	342	ePKP	21	54.80	-1.4
	1.0s	12.00nm				
CVF	151.08	328	PKP	21	57.64	1.1
MFF	151.08	344	ePKP	21	55.70	-0.7
	1.2s	26.10nm				
CALN	151.09	332	PKP	21	57.81	1.1

S.D. = 0.9 on 176 of 241 obs.

? JUN 02, 1989 11h 17m 58.27± 2.64s
7.314 S ±17.7km 129.360 E ±19.5km
DEPTH = 149.8 ± 26.7 km
4.6mb (5 obs.)
BANDA SEA (280)

MTN	5.77	163	eP	19	23.20	0.4
	0.8s	477.00nm				5.8mb X
			eS	20	22.00	
KUG	6.37	243	eP	19	32.00	1.1
			eS	20	32.40	
KNA	8.40	184	eP	19	56.70	-1.6
	0.3s	61.00nm				5.8mb X
			iS	21	22.80	
WB2	13.46	159	eP	21	00.70	-3.8X
			iS	23	23.50	
MBL	16.56	213	eP	21	42.00	-1.2
	0.4s	10.00nm				4.5mb
			eS	24	34.00	
ASPA	16.83	165	iPd	21	46.70	0.1
	0.5s	43.00nm				5.0mb
			eS	24	39.00	
WARB	18.94	188	iPd	22	04.30	-6.1X
	0.4s	7.00nm				4.3mb
FORR	23.44	183	eP	22	57.00	1.9
	0.4s	34.00nm				5.2mb
CHG	39.67	311	eP	25	18.40	1.1
CHTO	39.67	311	eP	25	18.60	1.3
	1.0s	5.25nm				4.2mb
GUN	54.68	312	P	27	13.80	-0.8
PKI	54.85	311	P	27	15.20	-0.6
KKN	55.06	311	P	27	16.20	-1.0
DMN	55.10	311	P	27	17.00	-0.5
GKN	55.66	311	P	27	21.20	-0.2
CNCB	150.53	145	PKPc	37	39.00	9.4X

S.D. = 1.3 on 13 of 16 obs.

? JUN 02, 1989 11h 55m 56.97± 4.25s
13.709 S ±32.0km 76.729 W ±41.4km
DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)

PT02	0.81	21	iP	56	11.50	-0.5
			iS	56	24.50	
PT03	0.95	107	iP	56	14.00	0.0
			iS	56	29.00	
PT10	1.64	352	iP	56	24.00	0.1
			iS	56	51.00	
NNA	1.71	356	iPd	56	24.20	-0.8
			iS	56	45.50	
PT08	1.75	6	iP	56	27.00	1.2
			iS	56	51.00	

S.D. = 1.1 on 5 of 5 obs.

? JUN 02, 1989 12h 49m 19.15± 1.65s
42.719 N ±10.8km 19.142 E ±13.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

NKY	0.14	312	ePg	49	22.70	0.1
			iSg	49	26.00	
TTG	0.30	163	iPgc	49	25.40	0.0
			iSg	49	31.00	
BRY	0.48	293	ePg	49	28.70	-0.2
			eSg	49	36.50	
HCY	0.55	241	ePg	49	30.30	0.1
			eSg	49	41.50	

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

? JUN 02, 1989 13h 26m 09.66± 8.30s
38.893 N ±61.5km 23.729 E ±29.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PAIG	1.03	358	ePg	26	29.30	0.1
			eSg	26	39.90	
OUR	1.45	8	ePg	26	36.30	0.4
LIT	1.54	322	ePb	26	37.30	0.1
			eSb	26	52.90	
SOH	1.95	352	ePb	26	43.10	0.0
SRS	2.22	357	ePb	26	46.50	-0.6
GRG	2.30	334	ePn	26	48.30	0.1
KNT	2.35	345	ePn	26	46.00	-3.0X
			eSn	27	11.70	

S.D. = 0.4 on 6 of 7 obs.

? JUN 02, 1989 13h 28m 38.63± 2.64s
3.633 S ±30.6km 102.007 E ±34.8km
DEPTH = 96.4 ± 20.0 km
SOUTHERN SUMATERA (274)

PPI	3.54	333	eP	29	32.50	0.0
			eS	30	27.50	
IPM	8.22	353	ePc	30	37.00	0.0
			e	30	43.20	

GUN	35.00	335	P	35	23.80	-0.4
KKN	35.16	334	P	35	25.60	0.2
WB2	35.46	120	eP	35	27.70	-0.1
GKN	35.63	333	P	35	29.40	0.1
ASPA	36.67	126	eP	35	38.10	0.1

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

JUN 02, 1989 14h 02m 17.34± 1.01s
11.B00 N ± 6.9km 73.147 W ± 6.5km
DEPTH = 60.1 ± 10.4 km
4.5mb (5 obs.) 3.9Msz (1 obs.)
NEAR NORTH COAST OF COLOMBIA (96)

FISA	3.77	98	eP	03	16.00	1.6
			iS	04	08.00	
PLAV	5.87	109	eP	03	45.00	1.0
			eS	04	58.00	
GUAC	5.99	105	eP	03	45.00	-0.6
			eS	04	59.00	
LLAV	6.36	101	eP	03	49.00	-1.7
			iS	04	05.00	
OLLA	6.48	105	eP	03	52.50	0.1
			iS	05	15.50	
UPA	6.88	247	iPc	03	58.20	0.3
	0.5s		29.58nm			5.2mb
GUAN	7.59	103	eP	04	07.00	-0.9
			eS	05	40.00	
HUA	23.78	185	ePd	07	26.30	0.3
NNA	23.92	189	iPd	07	27.00	0.2
ATB	25.64	125	e(P)	07	43.50	0.3
ZOBO	28.33	170	P	08	07.80	-0.5
Z	20s		0.32um			3.9Msz
			LR	17	36.00	
LPB	28.59	170	P	08	11.00	0.5
			Lg	17	18.00	
CNCB	28.88	170	P	08	12.80	-0.5
ALQ	37.99	313	eP	09	30.70	-0.8
	0.7s		0.51nm			3.6mb
			pP	09	42.80	45kmX
SOB1	38.26	122	eP	09	33.20	-0.5
SCH	43.20	5	eP	10	14.00	0.1
SES	49.41	329	eP	11	16.00	13.0X
YKA	58.62	339	eP	12	09.20	-1.1
INK	68.37	340	eP	13	15.00	0.8
MBC	68.93	349	eP	13	17.00	-0.6
	0.7s		10.00nm			4.9mb
EKA	69.01	35	P	13	19.00	0.6
	0.7s		3.60nm			4.4mb
NB2	77.04	30	P	14	06.80	1.4
	0.7s		2.20nm			4.3mb
KHC	79.05	42	P	14	19.40	2.7X
ASPA	151.72	242	iPKPc	22	06.30	5.5X
	1.4s		9.00nm			
WB2	152.37	249	ePKP	22	08.20	6.4X

S.D. = 0.9 on 21 of 25 obs.

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* JUN 02, 1989 15h 06m 57.12± 2.19s
33.278 N ±28.5km 48.101 E ±10.8km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
WESTERN IRAN (347)

KER	1.35	323	eP	07	20.00	0.0
IR1	3.02	44	eP	07	45.00	1.1
IR4	3.03	49	eP	07	43.B0	-0.3
BHD	3.11	271	eP	07	45.00	0.0
			i	08	29.00	
IR7	3.18	40	eP	07	49.00	2.8X
IR2	3.32	43	eP	07	47.20	-0.8
BBTK	13.95	302	eP	10	17.50	2.7X
HFS	35.04	330	eP	13	40.80	-7.7X
	0.3s		0.80nm			4.1mb

S.D. = 1.0 on 5 of 8 obs.

JUN 02, 1989 15h 38m 02.02± 0.42s
44.420 N ± 2.9km 7.399 E ± 4.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

STV	0.18	197	P	38	06.06	-0.1
			S	38	08.60	
ENR	0.19	176	P	38	06.03	-0.3
			S	38	08.03	
PZZ	0.23	292	P	38	07.62	0.6
			S	38	11.46	
ROB	0.36	110	P	38	10.01	0.5
			S	38	15.52	
TOUF	0.42	195	Pg	38	10.74	0.1
			Sg	38	16.97	
AUTN	0.43	177	Pg	38	10.69	-0.1
			Sg	38	16.50	
AURF	0.54	186	Pg	38	12.91	0.0
MVIF	0.55	199	Pg	38	13.36	0.0
IMI	0.62	145	P	38	14.27	-0.3
			S	38	22.50	
RRL	0.67	319	P	38	15.17	-0.2
			S	38	24.50	
RSP	0.74	352	P	38	16.54	0.0
			S	38	27.23	
LSD	1.05	351	P	38	21.73	-0.3
			S	38	35.64	

S.D. = 0.3 on 12 of 12 obs.

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* JUN 02, 1989 15h 57m 22.78± 0.97s
55.145 N ±12.1km 160.592 W ± 8.9km
DEPTH = 58.4 ± 6.2 km
4.8mb (10 obs.)
ALASKA PENINSULA (12)
Felt (IV) ot Sand Point.

SDN	0.20	15	iPd	57	32.00	-0.1
KDC	5.20	57	eP	58	40.00	0.3
SVW	6.53	22	eP	58	59.00	0.5
TTA	8.16	15	eP	59	20.30	-0.7
PWA	8.60	36	eP	59	27.50	0.4
PMR	8.82	38	eP	59	30.50	0.4
ADK	10.12	258	eP	59	48.50	0.6
IMA	11.46	14	eP	00	06.00	-0.1
FBA	11.66	28	eP	00	07.60	-1.0
BRW	16.31	4	eP	01	11.00	2.1
INK	18.17	33	eP	01	29.00	-3.0
YKA	24.44	54	eP	02	38.50	1.8
MBC	26.06	21	eP	02	52.00	0.2
	0.7s		7.00nm			4.3mb
FRB	43.59	40	eP	05	22.00	-0.1
CHJJ	44.81	271	eP	05	31.90	-0.4
MTMJ	45.12	272	eP	05	35.10	0.2
DAG	46.15	11	iPc	05	42.00	-0.4
	0.7s		10.27nm			4.9mb
TSRJ	46.90	273	eP	05	48.40	-0.4
CN2	47.19	288	Pd	05	50.80	-0.2
KEV	55.29	357	eP	06	51.00	-0.7
SOD	57.68	357	iP	07	08.00	-0.8
SUF	62.36	356	eP	07	40.00	-0.8
	0.5s		8.50nm			5.1mb
Z	17s		3.20um			5.5MszX
GTA	63.67	302	P	07	49.00	-1.0
NB2	63.98	4	P	07	51.10	-0.5
	0.8s		4.90nm			4.6mb
NUR	64.62	357	iP	07	55.30	-0.3
	0.6s		14.30nm			5.1mb
HFS	64.98	3	eP	07	56.80	-1.2
	0.6s		4.50nm			4.6mb
CD2	68.29	293	eP	08	19.40	-0.1
EKA	68.34	14	P	08	20.00	0.6
	0.2s		2.60nm			4.9mb
GYA	70.23	288	P	08	31.60	0.1
BRG	74.25	4	eP	08	55.20	0.5
	0.9s		10.00nm			4.7mb
KHC	75.98	4	P	09	05.80	1.1
ZST	77.01	2	e(P)	09	12.00	1.6
KBA	78.02	4	eP	09	17.00	0.8
	0.8s		6.20nm			4.7mb
GUN	79.72	304	P	09	26.40	0.4
KKN	80.11	305	P	09	28.40	0.5
DMN	80.34	305	P	09	29.70	0.5
	0.6s		26.00nm			5.3mb
CHG	80.58	289	eP	09	30.00	-0.2
SKO	83.24	358	eP	09	45.00	1.3
SPA	144.96	180	ePKPd	16	51.90	-1.5
	0.7s		8.98nm			

S.D. = 1.0 on 39 of 39 obs.

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* JUN 02, 1989 18h 32m 06.03± 1.16s
2.760 N ±14.8km 127.125 E ±18.1km
DEPTH = 33.0km (normal)
4.5mb (2 obs.)
MOLUCCA PASSAGE (266)

MNI	2.63	240	ePc	32	47.20	0.1
			eS	33	16.70	
WB2	23.65	163	eP	37	14.00	-1.5
ASPA	27.08	166	eP	37	49.40	1.6
CHTO	31.86	302	iP	38	30.80	0.2
	0.8s		6.04nm			4.5mb
GUN	46.61	307	P	40	34.00	0.4
KKN	47.04	306	P	40	36.80	-0.1
GBA	50.25	285	Pc	41	00.70	-0.8
	0.7s		3.70nm			4.5mb

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

JUN 02, 1989 18h 47m 34.00± 1.05s
13.503 N ± 4.4km 123.018 E ± 6.8km
DEPTH = 46.8 ± 10.4 km
4.7mb (8 obs.) 4.6Msz (6 obs.)
LUZON, PHILIPPINE ISLANDS (249)

OCP	2.19	301	iPc	48	19.90	11.2X
BAG	3.73	321	ePc+	48	29.00	-1.8
	2.0s		2352.94nm			
			eS	49	15.10	
DAV	6.85	158	eP	49	16.00	1.5
ANP	11.70	353	eP	50	21.00	-0.3
MNI	12.12	171	ePd	50	28.70	2.0
OZH	12.12	341	eP	50	24.00	-2.7
Z	14s		2.00um			
N	16s		2.00um			
			eS	52	47.00	
HKC	12.14	317	(P)	50	28.00	1.0
QIZ	13.79	295	eP	50	49.80	1.0
N	13s		0.80um			
E	14s		1.50um			
			eS	53	27.00	
PCI	14.66	193	ePd	51	02.00	1.8
			eS	51	45.50	
SSE	17.59	355	P	51	36.50	-0.9
Z	20s		1.40um			
N	14s		0.70um			
E	13s		0.60um			
			sP	51	47.00	
WHN	18.75	336	P	51	52.70	1.0
Z	16s		1.19um			3.9Msz
NJ2	18.85	349	Pd	51	52.00	-0.9
N	11s		0.50um			
E	12s		0.70um			
GYA	20.03	313	Pd	52	07.00	1.0
N	16s		2.10um			
E	16s		1.40um			
			S	55	52.00	
LOE	20.88	283	eP	52	19.00	4.3X
GUMO	21.24	87	eP	52	20.40	2.0
	1.1s		216.73nm			5.4mb
Z	22s		0.55um			3.9Msz
PJG	21.24	87	eP	52	20.70	2.3
KMI	22.32	304	Pc	52	33.00	3.6X
	5.0s		0.50nm			2.2mb X
Z	19s		3.40um			4.8Msz
N	12s		0.80um			
E	12s		0.80um			
			eS	56	28.00	
NNT	22.70	270	eP	52	21.80	-11.1X
SNG	22.91	256	eP	52	33.10	-1.8
			eS	56	42.50	
TIA	23.22	348	eP	52	37.00	-0.8
N	17s		1.15um			
			S	56	47.00	
IPM	23.44	250	ePc	52	41.00	0.9
	1.2s		52.80nm			4.9mb
TRT	23.46	207	ePc	52	40.50	0 3
CHG	23.71	286	eP	52	43.80	1.1
XAN	24.12	330	Pd	52	46.20	-0.4
N	12s		1.60um			
E	12s		1.60um			
			S	57	00.00	
CD2	24.79	317	eP	52	53.40	0.3
Z	22s		1.90um			4.6Msz
E	13s		0.80um			
			S	57	15.00	
TSRJ	24.86	26	P	52	53.20	-0.4
DL2	25.33	357	eP	52	58.00	0.0
E	12s		1.00um			
TIY	25.89	341	eP	53	03.50	0.1
N	14s		1.10um			
PSI	26.13	248	ePc	53	05.50	-0.2
	0.9s		16.60nm			4.6mb
CHJJ	26.65	30	eP	53	10.00	-0.3
BJI	27.11	348	eP	53	13.50	-0.9
Z	22s		0.75um			4.2Msz
N	10s		0.70um			
			eS	57	52.00	

02d 18h

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MTN    27.39 163 eP     53 15.00   -2 1
SNY    28.22   1 Pd     53 24.00   -0.5
     Z  24s      1.10um            4.4MszX
     E  24s      1.90um
                  S     58 08.00
LZH    28.33 326 eP     53 26.00    0.3
       2.0s       0.11nm          2.2mb X
     Z  24s      2.40um            4.7MszX
     N  13s      0.80um
     E  14s      1.30um
HHC    29.03 342 Pd     53 32.40    0.5
     Z  20s      2.00um            4.7Msz
     N  14s      0.80um
     E  14s      0.60um
                  S     58 22.00
BTO    29.30 340 eP     53 34.00   -0.4
     N  15s      0.70um
     E  15s      0.80um
                 sP     53 45.50
                  S     58 27.00
                 eSS    00 01.00
CN2    30.26   3 eP     53 42.50   -0.2
     Z  19s      1.50um            4.7Msz
     E  14s      0.70um
                 eS     58 37.00
MDJ    31.51   9 eP     53 53.00   -0.7
     E  12s      1.30um
                 eS     59 00.00
GTA    32.93 326 eP     54 07.80    1.5
     Z  16s      4.10um            5.2MszX
     E  14s      0.90um
                  S     59 23.00
MBL    34.59 185 eP     54 18.00   -2.6
WB2    35.06 161 eP     54 20.70   -4.0X
GUN    37.41 298 P      54 46.80    1.8
QIS    37.57 154 ePd    54 43.20   -2.7
       1.1s     45.00nm            5.3mb
KKN    37.90 298 P      54 47.20   -1.7
DMN    38.00 298 P      54 49.20   -0.6
ASPA   38.44 164 iPc    54 51.00   -2.2
       1.4s     17.00nm            4.7mb
                iPP     56 18.90
WARB   39.60 175 eP     54 54.00   -8.8X
MEKA   40.11 186 eP     55 05.50   -1.5
CTA    40.46 145 iPd    55 10.90    1.0
WMO    42.73 322 P      55 31.50    3.1X
     N  15s      1.67um
     E  16s      1.14um
HYB    42.96 281 eP     55 32.50    1.9
NWAO   46.50 187 eP     55 57.50   -1.0
BRS    49.86 145 iPd    56 24.60   -0.2
ADE    50.45 163 eP     56 27.20   -2.0
MAIO   60.85 304 eP     57 44.00   -0.3
KEV    79.51 339 eP     59 38.00    1.0
SOD    80.09 337 iP     59 40.70    0.6
SUF    81.24 332 eP     59 46.00   -0.2
       0.6s     4.10nm             4.6mb
PRNI   81.62 299 e(P)   59 50.00    1.0
MBH    81.83 299 e(P)   59 50.00    0.0
NUR    82.44 330 eP     59 54.00    1.5
     Z  23s      0.80um            5.0MszX
                 LR     38 50.00
INK    82.46  21 eP     59 53.00    0.5
MBC    83.26  12 eP     59 57.00    0.5
VRI    84.75 316 eP     00 05.00    0.4
MLR    85.37 316 eP     00 08.00    0.1
UPP    85.99 331 iP     00 11.10    0.7
HFS    87.72 332 eP     00 17.40   -1.5
       0.4s     0.60nm             4.2mb
NB2    88.46 333 P      00 22.80    0.3
       0.9s     2.30nm             4.5mb
ZOBO  168.88 106 PKP    07 40.00    1.7
     S.D. = 1.3  on  62 of  69 obs.
-----------------------------------------
?  JUN  02, 1989  19h 37m 07.21± 5.28s
    6.681 S ±39.9km  147.811 E ±44.2km
    DEPTH =  47.5 ± 15.2 km
    4.3mb (  1 obs.)  3.6Msz (  1 obs.)
  EAST PAPUA NEW GUINEA REGION      (207)

LAT      0.81 272 iP     37 21.00   -1.4
LMG      2.24 171 eP     37 42.00   -0.7
PMG      2.79 193 eP     37 52.00    1.6
                 eS     38 35.00
MNDI     4.16 277 eP     38 11.50    1.4
WB2     18.56 223 eP     41 21.20   -1.4
KNA     20.72 243 eP     41 43.50   -2.8X

ASPA   21.54 217 iPd    41 54.50    0.0
       0.5s      7.00nm            4.3mb
     Z  20s      0.23um            3.6Msz
                  eS    46 03.20
                  LR    50 32.40
WARB   27.99 224 eP     42 49.00   -6.8X
MBL    30.65 239 eP     43 20.00    0.4
KLB    37.44 225 eP     44 17.80   -0.1
     S.D. = 1.5  on   8 of  10 obs.
-----------------------------------------
&  JUN  02, 1989  19h 57m 13.36s
    61.800 N          150.755 W
    DEPTH =  65.6km
  SOUTHERN ALASKA                 (  2)
       <AGS-P>.

SUA      0.34 179 iP     57 24.41   -0.2
                  S     57 33.17
SKT      0.41 297 iP     57 24.74   -0.4
PWA      0.44 109 iP     57 25.04   -0.3
CGLM     0.78 231 iP     57 28.74   -0.4
                  S     57 40.68
PME      0.84 101 iP     57 29.29   -0.5
CRP      0.86 232 iP     57 29.89   -0.4
GHO      0.87  91 iP     57 29.92   -0.4
                  S     57 43.42
SPU      0.88 226 iP     57 29.96   -0.5
                  S     57 42.64
KNK      1.17 108 iP     57 33.63   -0.5
                  S     57 49.60
RED      1.70 216 eP     57 41.12   -0.3
                  S     58 02.82
KTH      1.76 358 eP     57 42.33    0.1
SEW      1.82 159 eP     57 42.14   -0.8
ILIM     2.03 213 eP     57 45.95   -0.1
                  S     58 11.68
MCK      2.11  23 P      57 47.16    0.1
VZW      2.15 108 iP     57 45.79   -1.9
TOA      2.19  80 iP     57 48.10   -0.1
CNPM     2.29 186 eP     57 49.81    0.2
KLU      2.33  95 iP     57 48.58   -1.6
SVW      2.44 256 iP     57 50.40   -1.3
TTA      2.70 297 iP     57 54.42   -0.9
WRH      2.94  23 eP     57 57.68   -1.0
HDA      3.13  32 eP     58 00.83   -0.6
CCB      3.15  24 P      58 00.43   -1.2
RDS      3.26  20 eP     58 02.18   -1.0
GLB      3.34  93 eP     58 02.57   -1.7
MBC     17.93  24 eP     01 18.00   -1.2
     26 obs. associated
-----------------------------------------
&  JUN  02, 1989  20h 44m 19.75s
    61.457 N          150.048 W
    DEPTH =  39.0km
  SOUTHERN ALASKA                 (  2)
       <AGS-P>.

PWA      0.21  23 iP     44 27.15    0.1
                  S     44 32.97
SUA      0.33 271 P      44 28.38   -0.1
                  S     44 35.37
PME      0.52  70 iP     44 30.25   -0.4
                  S     44 38.95
GHO      0.62  59 eP     44 31.79   -0.5
KNK      0.77  93 iP     44 33.67   -0.5
                  S     44 45.36
SKT      0.88 307 iP     44 35.31   -0.5
CGLM     0.95 262 iP     44 36.40   -0.5
SLKM     0.96 185 eP     44 35.88   -1.0
SPU      1.01 255 iP     44 36.82   -0.8
CRP      1.03 260 eP     44 37.76   -0.3
                  S     44 51.99
SEW      1.39 168 eP     44 43.24    0.3
                  S     45 01.88
RED      1.69 233 iP     44 46.39   -1.0
VZW      1.74 102 eP     44 47.15   -0.8
TOA      1.95  69 eP     44 51.61    0.4
KLU      1.98  87 eP     44 50.45   -1.1
KTH      2.14 349 eP     44 54.35    0.5
     16 obs. associated
-----------------------------------------
?  JUN  02, 1989  20h 56m 10.21± 1.32s
     0.288 N ±17.7km  100.185 E ±15.4km
    DEPTH = 171.6 ± 12.1 km
    4.9mb (  2 obs )
  NORTHERN SUMATERA               (706)

PPI      0.77 164 iPc    56 36.00    0.3
                 e(S)    57 02.80
PSI      2.70 332 iPd    56 56.80    1.5
KGM      3.57  61 ePc    57 05.50   -0.7
IPM      4.34  11 ePd    57 15.70   -0.5
       0.5s     39.30nm
                  e     57 23.10
BSI      7.11 317 ePd    57 51.00   -1.8
CHTO    18.45 356 eP     00 17.20    1.7
       1.0s       1.25nm            3.3mb X
PKI     30.61 334 P      02 11.60    1.0
GUN     30.70 335 P      02 10.80   -0.6
       0.5s     21.00nm             5.1mb
KKN     30.86 334 P      02 11.70   -0.9
       0.6s      9.00nm             4.7mb
     S.D. = 1.5  on   9 of   9 obs.
-----------------------------------------
    JUN  02, 1989  21h 01m 18.21± 0.66s
     4.669 S ± 3.8km  153.014 E ± 4.3km
    DEPTH =  71.8 ±  6.1 km
    5.4mb ( 19 obs.)
  NEW IRELAND REGION                (190)
       CENTROID, MOMENT TENSOR      (HRV)
       Data Used: GDSN
       L.P.B.: 10S, 18C
       Centroid Locotion:
       Origin Time        21:01:21.5 0.9
       Lat  4.59S 0.10 Lon 152.89E 0.11
       Dep  21.8 9.0 Half-durotion  1.5
       Moment Tensor;   Scale 10**16 Nm
         Mrr=-3.75 0.38  Mtt= 1.53 0.48
         Mff= 2.22 0.49  Mrt= 1.38 0.94
         Mrf=-3.73 1.71  Mtf=-2.06 0.39
       Principal Axes:
         T  Val=  5.53  Plg=23  Azm= 55
         N         0.04       10      150
         P        -5.56       65      263
       Best Double Couple:Mo=5.5*10**16
        NP1:Strike=126 Dip=24 Slip=-116
        NP2:        334     68      -79

RAB      0.97 299 iPc    01 36.00   -0.6
LAT      6.30 251 eP     02 53.00    2.4
LMG      6.41 229 eP     02 50.50   -1.7
PMG      7.48 231 eP     03 07.50    0.6
       0.9s     117.65nm            5.6mb
VSG      8.06 125 eP     03 15.00    0.1
SVO      8.09 124 eP     03 16.00    0.7
HNR      8.35 125 eP     03 18.00   -0.9
                 eS     04 52.00
CTA     16.68 203 iPc    05 10.60    1.7
       1.0s     43.00nm             4.6mb
                 iS     08 26.00
GUA     19.80 336 eP     05 46.70    1.1
       1.1s    192.41nm             5.3mb
GUMO    19.86 336 eP     05 47.00    0.8
       1.2s    277.78nm             5.5mb
PJG     19.86 336 eP     05 47.30    1.1
QIS     20.48 218 iPd    05 52.00   -0.7
       0.4s     17.00nm             4.7mb
                  e     05 57.00
DZM     21.65 144 iPd    06 03.20   -1.3
RMO     22.08 190 eP     06 10.00    1.4
                  e     06 12.00
BRS     22.60 181 iPd    06 14.70    0.9
WB2     23.68 229 iPd    06 24.70    0.4
                 eS     10 37.00
COO     25.79 182 eP     06 45.00    0.7
KNA     26.24 243 eP     06 47.80   -0.7
       0.6s    246.00nm             5.9mb
ASPA    26.39 222 iPc    06 49.40   -0.5
       0.6s     53.00nm             5.3mb
     Z  23s      0.57um             4.1MszX
                epP     07 10.60    95kmX
                 eS     11 26.90
                  i     11 33.50
                 LR     16 45.70
CMS     27.52 193 eP     06 59.00   -1.0
ADE     32.93 202 eP     07 48.20    0.2
WARB    33.08 227 eP     07 41.70   -7.7X
PCI     33.34 275 ePc    07 50.50   -1.2
MBL     36.13 240 iPc    08 15.00   -0.5
       0.5s     44.00nm             5.6mb
TAU     38 41 187 eP     08 36.00    1.6
MEKA    39.50 233 iPc    08 43.30   -0.4
       0.8s     90.00nm             5.7mb
COOL    39.73 225 eP     08 45.00   -0.5
```

TRT	40.25	264	ePc	08 48.20	-1.7
NANU	40.36	240	iPc	08 50.20	-0.6
TCW	41.07	155	P	08 56.60	0.3
MNG	41.10	154	P	08 55.80	-0.8
MRW	41.27	155	P	08 58.10	0.2
CAW	41.32	155	P	08 58.60	0.2
WDW	41.42	155	P	08 58.50	-0.7
PGZ	41.45	153	P	08 58.60	-0.8
MTW	41.55	154	P	08 59.20	-1.1
MSZ	41.93	164	P	09 04.20	0.9
	0.4s	67.00nm		5.8mb	
KLB	42.55	227	eP	09 17.50	8.9X
MRWA	42.70	231	eP	09 09.00	-0.9
	0.3s	9.00nm		5.1mb	
BAL	42.82	229	eP	09 10.00	-0.8
QZH	44.56	313	eP	09 23.70	-1.3
SSE	46.77	322	P	09 42.50	0.2
WHN	50.91	316	eP	10 14.50	0.2
MDJ	53.37	339	eP	10 31.00	-1.5
CN2	54.27	336	eP	10 38.40	-0.7
			PcP	11 41.60	
GYA	54.49	307	P	10 41.20	0.0
LOE	55.17	295	eP	10 46.20	0.1
NNT	55.65	289	eP	10 50.20	0.7
BJI	55.90	326	eP	10 47.00	-4.0X
TIY	56.56	322	eP	10 55.70	-0.2
XAN	56.67	316	eP	10 55.40	-1.3
KMI	57.09	304	Pc	11 01.00	1.0
PPN	57.69	108	eP	11 03.00	-1.1
	0.7s	10.00nm		5.1mb	
TVO	57.89	108	eP	11 05.00	-0.5
	0.7s	20.00nm		5.4mb	
CHTO	58.12	295	eP	11 06.60	-0.5
	1.0s	10.00nm		4.9mb	
CD2	58.81	310	P	11 11.20	-0.6
HHC	59.07	324	eP	11 12.60	-0.8
BTO	59.82	323	eP	11 17.50	-1.1
LZH	61.28	316	P	11 29.00	0.3
GTA	65.71	317	P	11 57.40	-0.2
GUN	72.24	301	P	12 38.60	0.2
	0.6s	39.00nm		5.5mb	
KKN	72.72	301	P	12 41.00	-0.1
	0.4s	20.00nm		5.4mb	
DMN	72.82	301	P	12 41.90	0.1
	0.4s	21.00nm		5.4mb	
WMQ	75.79	317	eP	12 58.70	0.4
HYB	76.65	289	eP	13 03.50	-0.1
KOD	76.67	282	eP	13 05.50	1.5
GBA	77.15	285	Pc	13 06.80	0.6
	1.1s	17.40nm		4.9mb	
SPA	85.36	180	iPc	13 50.20	1.5
	1.1s	34.52nm		5.3mb	
MAW	85.77	203	eP	13 46.00	-4.5X
INK	88.26	21	eP	14 02.50	0.0
QUE	88.92	300	eP	14 06.50	-0.2
MBC	93.93	14	eP	14 30.00	1.3
APO	116.27	339	ePKP	19 52.50	-2.3X
	0.3s	2.30nm			
NB2	116.86	340	PKP	19 56.00	0.1
	0.7s	1.20nm			
BRG	122.66	330	ePKP	20 08.60	1.4
	1.0s	11.00nm			
CLL	122.84	331	ePKP	20 09.00	1.5
	0.9s	11.00nm			
SKO	123.17	318	ePKP	20 09.00	0.5
LOR	129.94	333	ePKP	20 22.50	1.1
	1.2s	8.90nm			
SSF	130.26	333	ePKP	20 21.70	-0.3
	1.2s	10.10nm			
GRR	131.05	337	ePKP	20 23.00	-0.4
	1.2s	17.80nm			
LSF	131.76	334	ePKP	20 22.70	-2.1X
	1.2s	8.90nm			
CNCB	134.21	119	ePKP	20 23.00	-8.0X
LPB	134.22	118	(PKP)	20 28.00	-2.9X
ZOBO	134.30	118	ePKP	20 30.00	-1.2
IFR	144.81	327	iPKP	20 49.00	-0.3
AVE	146.17	330	iPKP	20 53.00	1.6
VAO	146.28	145	e(PKP)	20 55.00	3.1X
TIO	147.95	327	iPKP	20 58.40	3.9X
			i	21 11.80	
BAO	151.03	135	e(PKP)	20 52.00	-7.5X

S.D. = 0.9 on 78 of 89 obs.

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* JUN 02, 1989 21h 37m 59.04± 1.12s
37.249 N ± 8.3km 142.030 E ±11.9km
DEPTH = 25.8 ± 7.5 km

4.7mb (3 obs.)

OFF EAST COAST OF HONSHU, JAPAN (229)

KAKJ	1.82	236	P	38 28.60	-0.5
			S	38 48.90	
YAMJ	1.83	301	iPd	38 28.70	-0.6
			S	38 52.10	
OFUJ	1.85	351	iPd	38 29.00	-0.6
NIIJ	2.42	271	iPd	38 37.40	-0.3
			S	39 06.20	
CHJJ	2.72	245	P	38 41.50	-0.5
			S	39 13.80	
MTMJ	3.45	260	eP	38 53.30	0.8
AOMJ	3.55	339	eP	38 55.20	1.4
IIDJ	3.76	243	P	38 58.80	2.0
			eS	39 42.10	
HOOJ	5.22	10	eP	39 16.80	-0.6
			eS	40 15.00	
MRRJ	5.22	352	eP	39 19.40	2.0
			eS	40 17.90	
KUSJ	6.19	19	P	39 28.90	-2.2
			eS	40 35.50	
ASAJ	6.88	4	eP	39 39.80	-1.0
KKN	48.15	276	P	46 38.10	-1.2
INK	53.97	27	eP	47 23.00	0.6
MBC	56.18	17	eP	47 39.00	0.5
WB2	57.34	189	eP	47 46.00	-1.3
ALE	59.87	4	eP	48 05.00	0.7
	0.8s	6.00nm		4.8mb	
YKA	63.38	30	eP	48 29.10	1.1
SOD	64.96	337	eP	48 37.00	-1.3
FFC	73.26	33	eP	49 30.00	0.4
	0.9s	10.00nm		4.8mb	
LRM	73.65	45	ePd	49 34.00	1.7
NAO	74.46	337	P	49 35.40	-1.1
	0.9s	3.90nm		4.4mb	

S.D. = 1.3 on 22 of 22 obs.

JUN 02, 1989 21h 55m 44.92± 0.92s
9.923 S ± 4.8km 74.562 W ± 7.4km
DEPTH = 40.1 ± 8.3 km
5.2mb (36 obs.)

PERU (116)

HUA	2.23	199	iPd	56 21.40	0.7
			iS	56 47.30	
ZOBO	8.89	136	P	57 40.70	-13.8X
Z	20s	0.73um			
			LR	01 16.00	
LPB	9.10	137	eP	57 43.00	-14.2X
CNCB	9.37	138	eP	57 35.00	-26.1X
			e	57 42.00	
			i	00 44.00	
RECU	10.05	336	eP	58 08.70	-1.7
GGP	10.48	337	P	58 17.20	0.8
CAYA	10.50	341	P	58 15.10	-1.5
COTA	10.86	340	P	58 23.00	1.5
PSO	11.38	346	eP	58 27.50	-0.9
BOG	14.46	2	eP	59 20.00	10.8X
BMG	16.95	5	eP	59 46.00	5.1X
SDV	19.09	12	eP	00 09.40	2.0
UPA	19.42	345	e(P)	00 10.00	-1.0
TOV	20.15	14	eP	00 18.70	-0.1
GUAC	21.26	20	iP	00 32.70	2.4
OLLA	21.26	22	eP	00 29.50	-0.7
MORO	21.57	17	eP	00 36.40	3.0X
GUAN	21.65	24	eP	00 34.00	-0.2
FISA	21.68	14	iP	00 34.70	0.3
LLAV	21.68	21	eP	00 35.00	0.5
ATB	23.14	75	Pd	00 48.80	0.1
PEL	23.38	172	eP	00 52.50	1.5
LNV	24.09	174	eP	00 57.50	-0.3
BAO	26.51	105	eP	01 20.50	-0.5
VAO	29.42	120	eP	01 45.50	-1.7
SOB1	33.20	92	eP	02 16.80	-3.6X
UYO	47.74	338	iPd	04 20.20	0.2
MEO	49.95	334	eP	04 35.70	-1.4
ALQ	53.87	327	iPc	05 06.50	-0.2
	1.0s	10.00nm		4.8mb	
			e	05 15.00	
			e	06 23.80	
			e	07 44.00	
GAC	55.37	359	eP	05 17.00	-0.2
CMB	64.08	321	eP	06 25.20	7.9X
SCH	64.83	5	eP	06 21.00	-0.8
LRM	65.08	332	eP	06 23.80	-0.1
ORV	65.70	322	ePc	06 28.10	0.4
			e	06 36.40	
WDC	66.96	322	eP	06 33.60	-2.1
			e	06 41.80	
SES	67.95	336	ePc	06 41.00	-0.8
			pP	06 50.00	29kmX
FFC	68.41	343	eP	06 43.50	-1.1
	0.8s	12.00nm		5.0mb	
LIC	71.09	80	P	06 59.70	-2.0
TIC	71.19	79	P	07 00.40	-1.9
KIC	71.40	80	P	07 01.60	-2.0
	0.6s	14.00nm		5.1mb	
FRB	73.60	3	eP	07 16.00	0.5
KUK	75.61	81	eP	07 27.00	-1.2
TIO	76.16	55	iPd	07 32.00	0.8
AVE	76.89	52	iP	07 35.80	0.8
YKA	78.55	342	eP	07 43.80	0.3
IFR	78.75	53	iPd	07 46.50	1.0
SPA	80.14	180	ePd	07 52.80	0.5
	1.0s	10.00nm		4.7mb	
ECP	84.81	35	eP	08 16.60	0.3
	0.9s	116.00nm		6.0mb	
ETA	85.10	35	eP	08 18.10	0.3
	0.8s	73.00nm		5.9mb	
LPF	86.52	40	eP	08 25.00	0.1
	1.0s	28.00nm		5.4mb	
MFF	86.65	42	eP	08 25.80	0.2
	0.6s	15.10nm		5.4mb	
LFF	86.73	43	eP	08 25.40	-0.7
	0.8s	13.40nm		5.2mb	
GRR	86.75	40	eP	08 26.50	0.4
	0.6s	11.50nm		5.3mb	
LPO	86.96	44	eP	08 26.50	-0.7
	1.0s	13.60nm		5.1mb	
FLN	87.11	40	eP	08 28.40	0.6
	0.8s	14.50nm		5.3mb	
LDF	87.28	40	eP	08 28.60	0.0
	1.0s	16.00nm		5.2mb	
RJF	87.36	43	eP	08 28.30	-0.8
	0.8s	5.30nm		4.8mb	
CAF	87.63	44	eP	08 29.50	-0.9
	0.8s	8.50nm		5.1mb	
LSF	87.65	42	eP	08 30.40	-0.1
	0.8s	9.40nm		5.1mb	
EKA	87.76	33	P	08 31.00	0.2
	1.4s	15.80nm		5.1mb	
TCF	88.11	42	eP	08 32.40	-0.3
	0.8s	10.70nm		5.2mb	
MAF	88.33	43	eP	08 33.50	-0.3
	0.7s	8.80nm		5.2mb	
BGF	88.61	42	eP	08 34.90	-0.2
	0.8s	30.80nm		5.7mb	
AVF	89.01	42	eP	08 36.70	-0.2
	0.6s	9.00nm		5.3mb	
SSF	89.18	42	eP	08 37.30	-0.5
	0.8s	10.70nm		5.2mb	
SMF	89.29	42	eP	08 38.20	-0.1
	0.7s	15.40nm		5.4mb	
LOR	89.47	42	eP	08 38.60	-0.5
	0.8s	17.40nm		5.4mb	
LBF	89.47	42	eP	08 38.80	-0.4
	0.8s	5.30nm		4.9mb	
MBC	89.94	350	eP	08 42.00	1.3
	0.7s	19.00nm		5.5mb	
LMR	90.31	46	eP	08 43.40	0.3
	1.0s	16.00nm		5.3mb	
FRF	90.46	46	eP	08 44.20	0.4
	1.0s	24.00nm		5.5mb	
SNF	90.58	39	P	08 44.60	0.5
DOU	90.66	39	P	08 44.90	0.3
	1.0s	27.80nm		5.6mb	
LPG	90.98	44	eP	08 47.10	0.6
	0.8s	12.60nm		5.4mb	
BSF	91.53	42	eP	08 48.60	-0.2
WLF	91.54	40	Pd	08 49.50	0.9
ENN	91.65	39	eP	08 50.00	0.9
	1.0s	10.00nm		5.2mb	
MEM	91.67	39	P	08 50.40	1.3
CDF	91.98	41	eP	08 50.70	-0.1
DAG	92.24	11	iPd	08 52.00	0.7
	0.7s	7.53nm		5.2mb	
WTS	92.47	38	eP	08 54.00	1.2
	1.5s	46.00nm		5.7mb	
ALE	92.48	2	eP	08 54.00	1.7
	0.4s	1.00nm		4.6mb	
NAO	96.34	29	P	09 11.30	0.9
	0.9s	6.20nm		5.1mb	
SLL	97.51	30	eP	09 16.20	0.5

02d 22h

```
        0.4s      1.10nm            4.7mb
ASPA  136.54 219 ePdiff12 03.40   -7.3X
        0.3s      8.00nm
WB2   138.87 224 ePKP   15 00.50   -9.2X
                  e     15 09.20
SNY   144.44 336 PKPd   15 16.80   -2.0
BJI   148.52 344 ePKP   15 26.00    0.4
HHC   148.73 351 PKP    15 27.80    1.7
BTO   149.18 353 ePKP   15 31.00    4.2X
GTA   150.21   9 PKP    15 33.80    5.4X
TIY   151.62 348 ePKP   15 36.80    6.3X
TIA   151.76 340 ePKP   15 36.60    6.0X
GBA   152.35  80 PKPc   15 38.80    6.8X
        0.7s     13.50nm
KKN   154.00  44 PKP    15 34.60    0.3
        0.8s      9.00nm
      S.D. = 1.0  on  80 of  95 obs.
-----------------------------------------
   JUN 03, 1989  00h 01m 20.97± 0.58s
   42.073 N ± 4.8km  143.499 E ± 6.8km
   DEPTH =  55.2 ±  4.5 km
   4.8mb ( 23 obs.)
 HOKKAIDO, JAPAN REGION            (224)
      Felt (II JMA) at Tomakomai; (I
      JMA) at Hiroo and Urokowa.

HOO     0.25 327 eP    01 00.00 -30.2X
HOOJ    0.35 333 iPd   01 30.30   -0.7
                 S     01 36.10
URA     0.54 279 iPd   01 33.20    0.1
                 iS    01 42.00
KUSJ    1.36  41 P     01 44.80    0.9
                 eS    02 02.30
TMR     1.53 292 eP    01 00.00 -46.2X
MRRJ    1.84 282 iPd   01 50.80    0.2
                 S     02 13.20
SAP     1.88 302 eP    01 51.00   -0.2
                 eS    02 14.00
ASAJ    2.14 343 iPd   01 55.20    0.3
OFUJ    3.30 206 P     02 10.90   -0.4
                 eS    02 48.90
YAMJ    4.71 215 eP    02 31.80    0.6
                 eS    03 24.00
NIIJ    5.94 217 P     02 48.40   -0.1
KAKJ    6.40 205 P     02 52.50   -2.4
                 S     04 02.90
CHJJ    6.96 212 P     03 02.10   -0.6
MTMJ    7.03 221 P     03 05.10    1.3
TSRJ    8.77 224 P     03 30.00    2.2
MDJ    10.45 289 eP    03 51.50    0.8
CN2    13.34 284 eP    04 26.00   -3.3X
BJI    20.68 274 eP    05 55.00   -3.5X
GTA    32.94 280 iPc   07 51.60   -0.7
CD2    33.56 264 P     07 56.60   -1.1
GYA    33.90 255 P     08 00.40   -0.3
WMQ    40.23 292 P     08 53.50   -0.2
CHTO   44.23 252 eP    09 26.80    0.3
        1.0s     3.00nm          4.0mb
GUN    48.42 272 P     09 59.50   -0.4
        0.8s    51.00nm          5.6mb
KKN    48.93 273 P     10 03.50   -0.2
        0.9s    27.00nm          5.3mb
DMN    49.15 272 P     10 05.30   -0.2
INK    49.19  29 eP    10 04.50   -0.4
MBC    51.24  18 eP    10 20.00   -0.5
ALE    54.98   4 eP    10 48 00   -0.2
        1.0s    10.00nm          4.8mb
YKA    58.67  32 eP    11 14.90    0.4
KEV    59.32 339 eP    11 18.00   -1.0
SOD    60.96 337 iP    11 29.20   -1.0
WB2    62.28 190 eP    11 47.00    7.5X
SUF    64.22 333 eP    11 50.00   -1.9
        0.5s     4.10nm          4.7mb
NUR    66.27 332 eP    12 03.00   -2.0
FFC    68.62  35 iPc   12 20.30    0.4
        0.9s    14.00nm          4.9mb
HFS    70.16 336 eP    12 27.70   -1.5
        0.6s     5.80nm          4.7mb
     Z  19s     0.15um           4.3Msz
                LR    45 45.00
NAO    70.45 338 P     12 29.00   -2.0
        0.9s     5.20nm          4.5mb
FRB    71.50  14 eP    12 36.00   -1.2
KSP    76.65 329 eP    13 07.20    0.0
PRU    78.01 329 P     13 15.00    0.3
     Z  16s     0.50um           4.9MszX
KHC    79.07 329 iPd   13 21.50    0.9

GRF    79.49 331 eP    13 23.90    1.1
        0.9s     9.00nm          4.7mb
     Z  21s     0.20um           4.4Msz
KBA    80.84 328 iPd   13 30.70    0.4
        1.0s     9.90nm          4.7mb
VAY    81.32 319 eP    13 33.30    0.7
SKO    81.37 320 eP    13 34.00    1.1
LOR    84.12 334 eP    13 47.00    0.0
        0.8s     5.90nm          4.7mb
LBF    84.33 333 eP    13 48.20    0.1
        0.8s     4.50nm          4.6mb
SSF    84.42 334 eP    13 48.80    0.4
        0.8s     4.00nm          4.5mb
GRR    84.59 337 eP    13 49.50    0.2
        1.0s    12.00nm          4.9mb
LPG    84.66 331 eP    13 50.50    0.5
        1.0s    10.00nm          4.9mb
SMF    84.67 333 eP    13 50.10    0.4
        0.8s     6.70nm          4.8mb
AVF    84.70 334 eP    13 50.30    0.4
        0.8s     6.70nm          4.8mb
MAF    85.46 334 eP    13 54.50    0.8
        0.8s     9.40nm          5.0mb
LSF    85.77 335 eP    13 55.70    0.4
        0.8s     8.50nm          5.0mb
MFF    85.98 336 eP    13 57.00    0.7
        0.8s     8.00nm          5.0mb
CAF    86.77 334 eP    14 01.60    1.4
        0.8s     7.20nm          4.9mb
LFF    87.19 335 eP    14 03.30    1.1
        0.8s     8.00nm          5.0mb
LPO    87.28 334 eP    14 03.80    1.2
        0.8s     5.30nm          4.8mb
BAO   151.85  24 ePKP  21 13.50    8.7X
      S.D. = 1.0  on  54 of  60 obs.
-----------------------------------------
   JUN 03, 1989  00h 20m 18.42± 0.23s
   44.263 N ± 2.0km   6.771 E ± 2.1km
   DEPTH =  11.4 ±  2.5 km
   3.2mb ( 1 obs.)
 FRANCE                            (538)
      ML 2.9 (GEN), 2.8 (LDG). MD 3.0
      (ROM), 2.6 (STR).

FOUF    0.27   2 iPg   20 23.78   -0.3
                eSg   20 27.70
PZZ     0.34  44 P     20 25.69    0.1
                S     20 30.97
STV     0.40  92 P     20 26.65    0.0
                S     20 32.71
DOI     0.42  55 Pc    20 26.90   -0.1
                eSg   20 30.90
TOUF    0.42 126 Pg    20 26.98   -0.2
                Sg    20 34.04
MVIF    0.46 143 Pg    20 27.61   -0.2
                Sg    20 34.76
ENR     0.47  94 P     20 27.83   -0.2
                S     20 35.07
CALN    0.52 170 Pg    20 28.69   -0.3
                Sg    20 36.71
AUTN    0.54 119 Pg    20 29.34   -0.1
                Sg    20 37.36
AURF    0.55 133 Pg    20 29.43   -0.1
                Sg    20 37.62
SBF     0.62 130 Pg    20 30.90    0.0
                Sg    20 39.90
SAOF    0.63 116 Pg    20 30.83   -0.1
                Sg    20 40.24
RRL     0.66   1 P     20 30.73   -0.8
                S     20 40.71
FRF     0.71 187 Pg    20 32.00   -0.2
                Sg    20 41.60
ROB     0.79  87 P     20 34.17    0.5
                S     20 45.65
BNI     0.79 355 P     20 33.50   -0.3
                eSg   20 41.90
TAVF    0.83 219 Pg    20 33.87   -0.4
LRG     0.86 200 Pg    20 34.30   -0.5
                Sg    20 48.40
VILF    0.86 242 Pg    20 35.89    0.9
IMI     0.88 113 P     20 35.39    0.2
                S     20 47.28
LMR     0.95 192 Pg    20 35.90   -0.4
                Sg    20 51.20
RSP     0.95  21 P     20 36.75    0.2
                S     20 50.07
FIN     1.03  92 P     20 38.24    0.4

                S     20 52.28
PUYF    1.06 227 Pg    20 38.58    0.2
                Sg    20 53.67
CKI     1.09  81 P     20 39.30    0.4
                eSg   20 53.30
TREF    1.19 238 Pg    20 41.65    1.2
LSD     1.23  13 P     20 41.13   -0.1
                S     20 57.43
BERF    1.23 220 Pg    20 41.92    0.7
                Sg    20 58.91
LPG     1.24 359 Pg    20 41.70    0.3
PRAF    1.24 249 Pg    20 42.09    0.7
                Sg    20 59.88
LPL     1.25 359 Pg    20 42.00    0.2
GELF    1.31 228 Pg    20 43.22    0.7
                Sg    21 01.60
ORO     1.61  32 P     20 44.50   -2.4
                eSn   21 03.30
EMS     1.81   4 ePd   20 52.60    2.7X
DIX     1.87  14 ePc   20 53.60    2.7X
MMK     1.98  25 ePd   20 55.40    3.0X
CVF     2.28 137 Pn    20 55.58   -1.0
TMA     2.37  38 ePd   20 59.80    1.9
VDL     2.93  40 ePc   21 08.30    2.5
LLS     3.04  30 ePd   21 13.20    5.8X
SMF     3.15 320 Pg    21 17.60    8.8X
CAF     3.43 283 Pn    21 12.20   -0.6
BGF     3.59 311 Pn    21 15.20    0.1
SLE     3.70  18 ePc   21 16.80    0.0
HAU     3.76 356 Pn    21 16.90   -0.6
                Sn    21 59.00
LPO     4.02 278 Pn    21 20.40   -0.7
LFF     4.36 281 Pn    21 25.10   -0.9
SGO     7.32 117 P     22 46.70   39.0X
MGR     7.71 119 P     22 47.50   34.3X
APO    16.86  12 eP    24 10.30   -5.3X
        0.4s     0.80nm          3.2mb
      S.D. = 0.8  on  42 of  50 obs.
-----------------------------------------
   JUN 03, 1989  00h 23m 41.47± 0.59s
   31.740 N ± 4.3km   50.823 E ± 3.3km
   DEPTH =  36.3 ±  6.0 km
   4.8mb ( 27 obs.)  3.9Msz (  2 obs.)
 IRAN                              (348)
      Felt in the Farsan area.

SHI     2.55 144 eP    24 24.00    2.4
IR4     3.49   1 iP+   24 34.50   -0.3
IR1     3.67 358 iP+   24 37.40    0.0
IR2     3.91   1 iP+   24 40.50   -0.3
IR7     3.96 357 iP+   24 41.20   -0.2
TEH     4.01   7 eP    24 42.00   -0.3
KER     4.07 311 eP    24 43.00    0.0
DHR     5.45 186 eP    25 05.50    3.1X
BHD     5.65 287 ePnc  25 05.50    0.3
                iPg   25 31.00
                iSn   26 11.00
                iS*   26 39.00
                iSg   26 44.00
BRF     5.65 182 (Pn)  25 03.00   -2.2
BEE     5.71 183 (Pn)  25 04.50   -1.5
SLY     5.87 312 ePnc  25 08.00   -0.4
                iP*   25 29.00
                iPg   25 53.00
                iSn   26 16.50
                iS*   26 36.50
                iSg   26 54.00
TAB     7.31 331 e(P)  25 34.00    5.3X
MSL     7.87 308 ePn   25 46.00    9.6X
                e     26 07.50
                eSn   27 05.00
                e     28 11.50
RYD     7.92 209 eP    25 38.00    0.9
MAIO    8.51  55 iPnc  25 45.50    0.1
                eSn   27 19.00
QASM    8.51 230 eP    25 44.00   -1.4
MML    13.09 277 iPc   26 47.00   -0.5
PRNI   13.64 268 iPc   26 51.10   -3.7X
MBH    13.85 266 iP    26 55.20   -2.3
QUE    13.93  92 eP    27 04.00    5.3X
                e     30 45.50
                eS    31 18.00
BBTK   16.72 304 iPd   27 35.00    0.4
HLW    16.85 269 eP    27 39.00    2.9
                eS    33 04.00
ELL    17.99 292 eP    27 51.60    1.1
ALT    18.37 299 eP    27 55.60    0.4
```

DST 19.63 300 eP 28 10.60 0.6
ISK 19.79 304 iP 28 13.30 1.8
CTT 20.27 304 eP 28 17.00 0.5
IZM 20.37 296 eP 28 17.00 -0.6
EDC 20.41 301 iP 28 18.00 0.0
MFT 20.97 302 iP 28 24.30 0.4
EZN 21.40 299 eP 28 28.00 -0.1
KSH 21.81 62 eP 28 33.90 1.5
N 12s 1.30um
sS 32 41.00
TLB 21.95 312 eP 28 33.00 -0.5
CFR 22.16 314 eP 28 36.00 0.4
KDZ 22.57 303 iP 28 41.00 1.2
RZN 23.09 303 iP 28 45.00 0.0
BUC 23.11 310 ePd 28 36.00 -9.0X
ISR 23.14 312 eP 28 49.00 3.6X
PVL 23.15 307 eP 28 45.00 -0.4
VRI 23.37 314 ePc 28 50.00 2.5
CLI 23.37 316 eP 28 50.00 2.4
MLR 23.68 313 ePc 28 54.00 3.3X
CMP 24.16 311 ePc 28 56.00 0.8
KKB 24.31 302 iP 28 57.00 0.3
VTS 24.42 304 iP 28 59.00 1.0
VAY 24.54 301 eP 29 01.00 2.1
POO 24.58 117 eP 28 46.50 -13.0X
DEV 25.78 311 ePd 29 15.00 4.5X
OHR 25.80 300 eP 29 08.20 -2.7
SPC 28.80 316 eP 29 38.80 0.6
HYB 28.86 113 eP 29 39.00 0.1
KRA 29.36 318 eP 29 41.50 -1.6
1.0s 62.00nm 5.3mb
e 29 43.00
SRO 29.42 312 e(P) 29 45.00 1.3
MGR 29.61 296 P 29 47.00 1.6
SGO 29.84 297 P 29 50.00 2.6
DMN 30.00 89 Pd 29 49.00 -0.3
1.0s 50.00nm 5.3mb
KKN 30.09 89 P 29 49.80 -0.3
0.9s 58.00nm 5.4mb
ZST 30.32 313 e(P) 29 52.00 0.4
e 35 28.00
LR 35 45.00
GBA 30.34 120 Pd 29 52.50 0.4
0.8s 4.70nm 4.3mb
SOP 30.49 311 eP 29 54.90 1.8
GUN 30.57 88 P 29 54.40 -0.1
1.0s 40.00nm 5.2mb
WMO 31.29 57 P 30 00.00 -0.3
KSP 31.80 317 eP 30 03.80 -0.9
RBL 32.10 308 P 30 08.00 0.6
KBA 32.41 309 ePd 30 09.50 -0.7
1.0s 14.80nm 4.8mb
i 30 15.70
PRU 32.52 315 eP 30 10.00 -0.9
KHC 32.83 313 P 30 12.90 -0.8
e 30 38.00
PGD 32.89 303 P 30 15.50 1.1
BRG 33.19 316 eP 30 16.00 -0.7
1.0s 10.00nm 4.7mb
CTI 33.31 307 P 30 19.00 1.0
NUR 33.56 337 iP 30 18.80 -1.0
Z 19s 0.30um 4.0Msz
LR 46 00.00
CLL 33.90 316 iPc 30 23.00 0.1
1.3s 24.00nm 5.0mb
GRF 34.47 313 eP 30 25.00 -2.8X
MDI 34.59 306 P 30 28.00 -0.9
SUF 34.78 340 eP 30 30.00 -0.3
0.6s 2.80nm 4.4mb
UPP 35.73 332 iP 30 36.70 -1.7
COP 35.94 323 iPc 30 40.20 0.1
1.0s 92.00nm 5.7mb
LPG 36.61 305 eP 30 44.50 -1.9
0.9s 11.40nm 4.8mb
BNI 36.62 304 P 30 45.50 -0.8
HFS 37.51 330 eP 30 52.10 -1.3
0.4s 26.20nm 5.5mb
Z 19s 0.15um 3.8Msz
LR 46 02.00
WTS 37.79 315 eP 30 56.50 0.8
1.1s 18.00nm 4.9mb
SOD 38.42 345 iP 31 01.40 0.5
SMF 38.75 306 eP 31 02.70 -1.3
0.9s 18.00nm 4.9mb
LOR 38.80 307 eP 31 02.80 -1.6
1.0s 4.00nm 4.2mb
SSF 39.02 307 eP 31 04.80 -1.4

0.8s 8.00nm 4.5mb
NAO 39.08 330 P 31 05.00 -1.5
0.9s 12.30nm 4.7mb
AVF 39.10 307 eP 31 05.30 -1.5
1.0s 8.00nm 4.4mb
MAF 39.59 306 eP 31 08.40 -2.6
1.0s 6.00nm 4.3mb
GTA 40.17 65 Pc 31 16.60 0.6
1.4s 0.10nm 2.4mb X
KEV 40.35 347 eP 31 18.00 1.1
BNG 40.67 235 iPd 31 21.60 1.4
0.8s 18.00nm 4.9mb
EBR 41.09 297 eP 31 25.00 1.7
GRR 42.07 309 eP 31 29.60 -1.6
0.9s 13.10nm 4.7mb
LZH 43.77 69 P 31 46.50 1.0
2.0s 0.08nm 2.2mb X
EKA 44.28 319 P 31 48.00 -1.2
0.5s 2.80nm 4.3mb
CD2 44.85 77 eP 31 54.80 0.7
CHG 45.04 95 eP 31 55.90 0.1
CHTO 45.04 95 eP 31 55.90 0.1
1.3s 12.66nm 4.6mb
KMI 45.78 85 Pd 32 02.00 0.2
IFR 46.67 288 iP 32 13.00 4.4X
BMK 46.91 290 iP 32 12.00 1.7
BTO 47.81 62 eP 32 17.00 -0.5
XAN 48.27 71 Pd 32 21.00 -0.1
GYA 48.63 81 P 32 23.40 -0.7
TIO 49.10 285 iP 32 31.00 3.4X
TIY 50.20 65 eP 32 36.20 0.3
N 12s 0.20um
BJI 52.54 62 eP 32 53.00 -0.4
TIA 54.21 66 eP 33 05.60 -0.1
DAG 54.70 345 iPc 33 05.00 -3.9X
0.6s 5.33nm 4.7mb
KIC 57.56 256 P 33 30.20 0.1
0.8s 26.50nm 5.3mb
TIC 57.63 257 P 33 30.20 -0.5
LIC 57.87 256 P 33 32.20 -0.1
0.8s 24.50nm 5.3mb
ALE 61.64 352 eP 33 57.00 -0.4
0.6s 3.00nm 4.6mb
MBC 72.10 358 eP 35 03.00 -0.5
FRB 73.56 336 eP 35 11.00 -1.2
SCH 78.56 328 eP 35 40.00 -0.6
INK 80.21 2 eP 35 48.00 -1.1
YKA 85.37 353 eP 36 17.40 1.6
S.D. = 1.2 on 105 of 119 obs.

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* JUN 03, 1989 00h 50m 29.47± 0.64s
9.979 N ± 5.7km 60.344 W ±15.8km
DEPTH = 88.0 ± 20.4 km
NEAR COAST OF VENEZUELA (97)
MD 3.5 (TRN).

TBH 0.87 305 eP 50 47.66 -0.2
TPP 1.14 287 eP 50 51.86 0.9
eS 51 06.87
BOT 1.24 343 iP 50 52.14 0.0
TRN 1.24 303 eP 50 51.33 -0.8
eS 51 06.56
PIG 1.27 337 iP 50 52.72 0.1
TCE 1.56 297 iP 50 56.09 -0.2
eS 51 12.19
FCV 3.28 344 eP 51 19.94 0.3
SVB 3.39 345 eP 51 21.33 0.1
eS 51 57.98
SVV 3.43 346 eP 51 21.75 0.0
eS 52 00.05
SSV 3.43 346 eP 51 22.32 0.5
eS 51 59.96
SL8 3.88 350 eP 51 27.94 -0.2
eS 52 11.75
BIM 4.57 351 iPc 51 37.56 0.0
MVM 4.58 353 eP 51 37.43 -0.3
FDF 4.79 351 eP 51 40.61 -0.1
0.2s 1.10nm
S 52 32.90
ATB 15.46 148 Pd 54 03.90 0.0
S.D. = 0.4 on 15 of 15 obs.

? JUN 03, 1989 02h 33m 53.83± 7.92s
43.080 N ±59.3km 2.438 E ±61.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 3.0 (LDG).

EPF 1.54 269 Pn 34 21.40 0.0
Sg 34 42.40
CAF 1.86 352 Pn 34 26.80 0.7
Pg 34 29.60
Sg 34 54.70
LFF 2.23 327 Pg 34 37.20 5.9X
Sg 35 06.00
RJF 2.32 344 Pg 34 39.00 6.3X
Sg 35 08.80
MAF 3.14 2 Pn 34 44.40 0.1
Pg 34 53.20
Sg 35 34.60
TCF 3.21 357 Pg 34 55.20 9.9X
Sg 35 37.00
LSF 3.23 349 Pn 34 45.00 -0.6
Pg 34 55.30
Sg 35 36.80
BGF 3.49 5 Pn 34 49.00 -0.2
Pg 35 00.00
Sg 35 45.50
SMF 3.70 15 Pg 35 04.00 11.7X
Sg 35 52.00
S.D. = 0.7 on 5 of 9 obs.

JUN 03, 1989 02h 51m 12.51± 0.50s
44.704 N ± 5.7km 9.915 E ± 4.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.8 (ROM).

BOB 0.34 281 Pc 51 20.10 0.6
eSg 51 26.10
MME 0.76 132 P 51 28.20 0.7
BDI 0.81 142 P 51 28.80 0.6
eSg 51 40.00
PII 1.08 156 P 51 32.60 -0.1
eSg 51 47.20
MDI 1.08 352 Pc 51 33.60 0.8
eSg 51 48.20
CKI 1.20 257 P 51 34.50 -0.4
ORO 1.65 305 P 51 41.90 0.2
CTI 1.82 42 P 51 43.20 -1.0
eSn 52 06.60
CRE 1.82 126 P 51 43.60 -0.6
DOI 1.92 265 P 51 44.90 -0.7
S.D. = 0.7 on 10 of 10 obs.

JUN 03, 1989 02h 56m 52.60± 0.53s
6.826 S ± 3.2km 156.216 E ± 3.1km
DEPTH = 171.3 ± 4.9 km
5.4mb (38 obs.)
SOLOMON ISLANDS (193)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 18S, 31C
Centroid Location:
Origin Time 02:56:56.4 0.6
Lat 6.84S 0.05 Lon 156.00E 0.05
Dep 163.2 1.6 Half-duration 2.2
Moment Tensor; Scale 10**17 Nm
Mrr=-1.64 0.08 Mtt= 0.65 0.10
Mff= 0.98 0.10 Mrt= 0.18 0.08
Mrf= 1.31 0.09 Mtf= 0.82 0.12
Principal Axes:
T Val= 2.02 Plg=18 Azm=303
N 0.16 14 208
P -2.18 67 82
Best Double Couple:Mo=2.1*10**17
NP1:Strike= 55 Dip=30 Slip= -60
NP2: 201 65 -106

VSG 4.22 125 eP 57 56.00 -0.9
eS 58 10.00
SVO 4.25 123 eP 57 57.00 -0.3
eS 58 34.00
HNR 4.51 125 eP 58 00.00 -0.7
eS 58 37.00
RAB 4.80 303 iP+ 58 03.60 -1.0
LMG 8.25 255 eP 58 59.00 8.6X
LAT 9.15 271 eP 59 03.00 0.8
PMG 9.33 253 eP 59 06.00 1.5
1.5s 188.89nm 5.4mb
MNDI 12.50 272 eP 59 46.00 0.0
PVC 16.03 134 iPc 00 37.50 7.5X
CTA 16.35 215 iPd 00 36.00 2.1
0.9s 88.24nm 5.1mb
i 01 44.00

03d 03h

			i	02 21.20	
			iS	03 38.20	
			i	03 41.60	
			i	03 52.70	
DZM	18.09	148	iPc	00 54.00	-0.2
			iS	04 16.60	
BRS	20.71	189	iPc	01 22.00	1.0
			i	01 46.60	
			i	02 24.80	
			iS	05 06.00	
RMQ	20.81	199	iPd	01 23.80	1.9
	0.8s		359.00nm		5.9mb
QIS	21.10	228	iPd	01 25.40	0.5
	1.0s		164.00nm		5.5mb
			e	05 09.00	
GUA	23.14	331	eP	01 45.30	0.6
	0.9s		208.40nm		5.7mb
GUMO	23.20	331	eP	01 45.80	0.5
	1.2s		444.44nm		5.9mb
PJG	23.20	331	eP	01 46.00	0.7
COO	23.97	189	iPd	01 54.00	1.3
	1.1s		341.00nm		5.8mb
WB2	24.90	236	iPd	02 01.00	-0.5
			eS	06 08.70	
MTN	25.42	254	iPd	02 06.20	0.0
	0.9s		127.00nm		5.5mb
			e	03 24.00	
			e	06 19.00	
CMS	26.39	200	iPd	02 14.80	-0.1
	0.8s		158.00nm		5.7mb
ASPA	27.20	230	iPd	02 21.40	-1.0
	0.8s		90.00nm		5.5mb
	Z 21s		0.68um		4.2Msz
			iPcP	05 37.90	
			eS	06 44.70	
			LR	07 59.40	
			iPcS	09 17.70	
			iScS	12 53.30	
AAI	28.07	275	eP	02 29.50	-0.8
KNA	28.31	249	eP	02 31.90	-0.5
	0.3s		24.00nm		5.4mb
STK	28.42	207	iPd	02 32.70	-0.5
			e	02 35.00	
			e	05 40.00	
CNB	29.04	192	eP	02 39.30	0.4
CAN	29.12	192	iPd	02 39.50	0.0
TOO	32.12	196	iPd	03 06.20	0.5
			i	05 50.90	
BFD	32.68	200	iPd	03 10.10	-0.4
	1.0s		120.00nm		5.6mb
DAV	33.55	294	eP	03 12.00	-6.3X
WARB	34.12	232	eP	03 15.30	-7.8X
	0.3s		17.00nm		5.2mb
FORR	35.56	224	iPd	03 34.60	-0.6
	0.3s		102.00nm		6.0mb
TAU	36.78	191	iPd	03 47.00	1.7
			iPcP	06 04.00	
MNG	37.80	156	P	03 53.70	-0.2
MBL	37.95	244	eP	03 54.70	-0.7
	0.4s		23.00nm		5.2mb
CAW	38.05	157	P	03 55.90	-0.1
WDW	38.16	157	P	03 56.80	0.0
MTW	38.27	156	P	03 56.70	-1.1
COOL	40.62	229	iPd	04 17.00	-0.3
BAG	42.15	304	eP	04 28.90	-1.2
KLB	43.52	230	iPd	04 39.90	-1.0
BAL	43.92	232	eP	04 43.20	-0.9
MRWA	43.93	234	iPd	04 43.40	-0.9
	0.3s		7.00nm		4.7mb
MUN	44.88	231	iPd	04 51.10	-0.6
RKG	45.21	228	iPc	04 56.80	2.5
	0.9s		94.00nm		5.3mb
KAKJ	45.38	342	P	04 55.30	-0.2
CHJJ	45.61	340	P	04 57.00	-0.4
TSRJ	46.24	337	P	05 02.60	0.2
NIIJ	46.70	341	P	05 04.80	-1.1
QZH	48.36	312	eP	05 19.00	0.0
			pP	05 53.00	150kmX
			sP	06 09.00	
			S	12 02.00	
NJ2	52.56	320	Pd	05 51.00	0.3
			pP	06 24.00	142kmX
			ScP	10 40.00	
			S	13 08.00	
AFR	53.69	107	eP	05 57.00	-2.2
	1.1s		75.00nm		5.3mb
PPT	53.88	107	eP+	05 58.00	-2.7
	1.1s		55.00nm		5.2mb
	Z 20s		0.60um		4 7Msz
PAE	53.89	107	eP	05 58.00	-2.6
	1.1s		50.00nm		5.2mb
PPN	54.02	107	eP	06 00.00	-1.6
	1.1s		65.00nm		5.3mb
TVO	54.21	107	eP	06 02.00	-1.1
	1.1s		90.00nm		5.4mb
WHN	54.67	315	P	06 06.00	-0.1
			pP	06 40.00	146kmX
			eS	13 28.00	
PMO	55.35	103	iP	06 11.40	0.1
	1.1s		75.00nm		5.4mb
VAH	55.62	104	iP	06 12.90	-0.3
	1.1s		55.00nm		5.3mb
TPT	55.62	103	iP	06 13.00	-0.2
	1.1s		70.00nm		5.4mb
RUV	55.85	104	iP	06 14.50	-0.4
	1.1s		70.00nm		5.4mb
TIA	56.37	322	eP	06 18.00	-0.2
			S	13 53.00	
MDJ	56.54	337	eP	06 18.40	-0.9
			epP	06 55.00	157kmX
			S	14 00.00	
CN2	57.56	334	Pc	06 26.40	0.0
	4.0s		0.30nm		2.5mb X
			pP	07 01.00	147kmX
			S	14 09.00	
GYA	58.32	307	P	06 32.80	0.6
			S	14 23.00	
LOE	58.96	295	iPd	06 31.50	-5.1X
			e	07 11.50	
BJI	59.47	325	eP	06 39.00	-0.7
			eS	14 34.00	
TIY	60.22	321	eP	06 45.50	0.5
			pP	07 21.00	150kmX
			ScS	16 19.50	
XAN	60.43	315	P	06 45.60	-0.8
DRV	60.78	187	iP	06 48.20	0.0
KMI	60.93	304	eP	06 51.00	0.8
			pP	07 25.50	145kmX
CHG	61.92	295	iPd	06 56.20	-0.4
	1.2s		35.16nm		5.1mb
CHTO	61.92	295	eP	06 56.70	0.1
	1.2s		30.90nm		5.1mb
			pP	07 32.80	152kmX
CD2	62.63	310	P	07 00.60	-0.6
			pP	07 37.00	153kmX
			S	15 15.00	
			ScS	16 39.00	
ADK	62.92	18	iPd	07 02.10	-0.5
	0.7s		137.10nm		5.9mb
BTO	63.46	322	eP	07 05.00	-1.5
			pP	07 40.00	146kmX
			S	15 23.00	
LZH	65.05	315	P	07 18.00	1.1
	1.5s		0.07nm		2.3mb X
			pP	07 54.00	150kmX
GTA	69.45	316	Pd	07 44.80	0.4
	1.4s		0.10nm		2.4mb X
SBA	71.20	178	iPd	07 55.90	1.8
GUN	76.07	301	P	08 23.40	-0.2
PKI	76.38	300	P	08 26.60	1.2
KDC	76.51	25	eP	08 24.70	-0.2
KKN	76.55	301	P	08 25.60	-0.5
TTA	78.44	20	ePd	08 36.00	0.3
WMQ	79.53	317	P	08 42.40	0.5
			pP	09 20.00	151kmX
			S	18 30.00	
PMR	80.15	23	ePd	08 44.40	-0.3
	1.0s		77.50nm		5.4mb
			e	09 26.20	
GBA	80.78	285	Pd	08 48.40	-0.4
	1.0s		22.60nm		4.9mb
IMA	81.26	18	iPd	08 50.90	0.3
	1.4s		90.10nm		5.3mb
TOA	81.61	24	ePd	08 53.30	0.9
FBA	82.52	21	ePd	08 56.10	-0.9
			e	09 36.30	
SPA	83.22	180	iPd	09 01.20	0.4
	1.2s		197.18nm		5.8mb
			e	09 26.00	
NDI	83.68	300	iPd	09 03.00	-0.6
	1.5s		88.89nm		5.3mb
BRW	83.89	14	ePd	09 04.20	0.4
SIT	84.24	31	eP	09 06.70	1.0
MAW	85.02	203	iPd	09 10.20	0.7
	1.0s		230.00nm		5.9mb
			i	11 26.00	
WDC	87.79	49	ePKP	09 24.30	0.8
MHC	87.89	52	ePKP	09 25.60	1.3
PRS	87.92	53	ePKP	09 25.80	1.5
LLA	88.31	53	ePKP	09 27.60	1.4
ORV	88.38	50	ePKP	09 26.60	0.2
MIN	88.44	49	ePKP	09 26.80	-0.1
SYP	88.75	55	eP	09 31.00	2.6
BCH	88.77	55	P	09 30.00	1.5
CMB	88.99	52	ePKPd	09 30.20	0.8
INK	89.14	20	ePd	09 29.20	-0.2
	1.3s		91.00nm		5.6mb
			pP	10 11.30	167kmX
FRI	89.35	53	ePKP	09 31.50	0.5
ISA	90.14	54	eP	09 36.00	1.2
PAS	90.17	56	eP	09 36.00	1.1
MWC	90.27	56	eP	09 37.00	1.4
SBB	90.53	55	eP	09 38.00	1.4
RVR	90.80	56	eP	09 38.00	0.2
CLC	90.87	54	eP	09 39.00	0.9
KVN	90.91	51	P	09 39.50	1.1
			pP	10 20.50	162kmX
PLM	91.15	57	eP	09 41.00	1.4
BAR	91.22	57	eP	09 41.00	1.2
GSC	91.44	55	eP	09 42.00	1.2
GLA	92.80	57	eP	09 49.00	1.9
MBC	95.25	14	ePd	09 57.10	-0.3
	0.8s		30.00nm		5.7mb
YKA	95.62	28	eP	10 00.30	1.0
YKC	95.68	28	eP	10 00.00	0.4
LRM	95.77	45	eP	10 04.40	3.7X
SES	96.96	40	eP	10 05.00	-0.7
FFC	102.36	36	ePdiff	10 30.00	0.2
	1.6s		30.00nm		5.8mb
SUF	113.53	337	ePKP	15 10.00	-1.5
NUR	115.38	336	ePKP	15 14.00	-1.1
SLL	119.66	340	ePKP	15 21.10	-2.2X
	0.6s		2.40nm		
BBTK	119.79	312	ePKP	15 44.00	19.7X
NAO	120.22	341	PKP	15 23.70	-0.6
	1.0s		8.80nm		
PRNI	120.28	301	iPKPd	15 25.00	-0.5
MBH	120.49	300	iPKPd	15 26.00	0.2
MLR	122.37	321	ePKPc	15 28.00	-1.1
KRA	123.56	328	ePKP	15 30.90	-0.2
SPC	123.88	327	ePKP	15 32.40	0.4
KSP	124.96	330	ePKPd	15 33.60	-0.2
			e	16 15.00	
BZS	124.99	322	ePKPc	15 33.50	-0.5
SRO	125.72	326	e(PKP)	15 36.00	0.7
BRG	126.08	331	iPKPd	15 36.90	0.9
	1.2s		42.00nm		
			i	16 17.10	
ZST	126.16	327	e(PKP)	15 31.00	-5.2X
CLL	126.23	332	iPKPd	15 35.90	-0.3
	1.2s		24.00nm		
			e	16 17.00	
PRU	126.37	330	PKP	15 36.00	-0.6
SKO	126.89	319	iPKP	15 37.00	-0.8
	1.3s		55.00nm		
KHC	127.41	330	iPKPd	15 38.70	0.1
	1.2s		24.00nm		
			i	16 20.10	
HOF	127.44	332	iPKPc	15 38.60	0.0
OHR	127.72	318	ePKP	15 39.00	-0.5
WET	127.74	330	ePKP	15 39.10	-0.1
	1.3s		38.00nm		
KMR	127.82	329	ePKP	15 39.00	-0.4
WIT	127.84	337	ePKP	15 41.00	1.8
GRF	128.17	332	ePKPd	15 40.00	0.0
	Z 19s		0.08um		4.4Msz
WTS	128.41	336	ePKP	15 41.00	0.7
	1.2s		26.00nm		
			e	16 22.00	
BHG	128.68	329	iPKPc	15 40.50	-0.5
	1.4s		37.00nm		
FUR	129.19	330	ePKP	15 42.40	0.4
	1.5s		48.00nm		
ABH	129.70	334	ePKPd	15 43.00	0.1
ENN	129.71	336	ePKP	15 43.00	0.2
	1.2s		26.00nm		
			e	16 24.00	
MEM	129.80	336	PKP	15 43.70	0.7
RUP	130.04	334	ePKPd	15 43.59	0.0
GWF	130.33	333	PKP	15 33.67	-10.5X
WLF	130.46	335	PKP	15 44.00	-0.3

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SNF    130.56 337 PKP    15 45.10    0.6
DOU    130.77 336 PKP    15 45.70    0.8
CDF    130.90 333 PKP    15 44.59   -0.8
FEL    130.96 332 ePKPd  15 44.79   -0.7
MOF    131.38 333 PKP    15 46.43    0.2
BBS    131.49 332 PKP    15 46.03   -0.4
BSF    131.55 333 PKP    15 46.03   -0.6
HAU    131.62 333 ePKP   15 46.10   -0.5
         1.2s     23.80nm
VITF   131.63 334 PKP    15 45.82   -0.7
CCH    131.73 120 PKP    15 47.90   -0.2
LOMF   131.89 332 PKP    15 46.47   -0.8
LPG    133.27 331 ePKP   15 49.80   -0.4
         1.2s     20.80nm
LOR    133.28 334 ePKP   15 49.50   -0.3
         1.2s     14.80nm
LBF    133.45 334 ePKP   15 49.80   -0.4
         1.2s     14.80nm
SSF    133.59 334 ePKP   15 50.10   -0.3
         1.0s     14.00nm
SMF    133.77 334 ePKP   15 50.10   -0.6
         1.2s     20.80nm
AVF    133.87 334 ePKP   15 50.20   -0.7
         1.2s      7.10nm
BGF    134.27 334 ePKP   15 51.20   -0.5
         1.0s     12.00nm
LPF    134.60 339 ePKP   15 51.60   -0.6
         1.2s     38.00nm
MAF    134.65 334 ePKP   15 51.60   -0.8
         1.0s      8.00nm
TCF    134.75 335 ePKP   15 52.50   -0.1
         1.2s     23.80nm
LSF    135.07 335 ePKP   15 52.80   -0.4
         1.2s     19.00nm
BNG    137.82 269 iPKPd  15 49.00  -10.4X
         1.6s     39.00nm
                   ic     16 40.50
                   id     19 16.00
PPD    140.63 137 ePKP   15 56.80   -7.4X
                   e      16 03.80
TOL    142.62 335 ePKP   16 03.50   -3.7X
ASMO   144.56 332 ePKP   16 09.00   -1.7
                   e      16 50.40
CRT    144.62 332 ePKP   16 09.20   -1.6
AAPN   144.77 332 iPKPd  16 09.70   -1.4
                   i      16 50.60
ACHM   144.80 332 ePKP   16 10.20   -0.9
APHE   144.86 331 ePKP   16 10.20   -1.1
                   e      16 52.50
ALOJ   144.93 332 ePKP   16 10.20   -1.2
ATEJ   145.04 332 ePKP   16 10.50   -1.1
                   e      16 51.50
LIJA   145.69 333 ePKP   16 14.00    1.4
TAF    145.89 328 iPKPd  16 14.00    1.0
ALJ    145.97 333 ePKP   16 15.50    2.4X
GIBL   145.99 334 ePKP   16 15.50    2.5X
MOMI   146.31 333 ePKP   16 16.00    2.4X
OJEN   146.41 333 ePKP   16 11.00   -2.8X
CNIL   146.42 334 ePKP   16 16.00    2.3X
PLAT   146.49 333 ePKP   16 16.00    2.1
BMK    147.51 332 ePKP   16 14.50   -0.9
                   i      16 18.50
                   i      16 59.50
IFR    148.31 329 iPKP   16 18.00    0.9
                   i      16 21.50
                   i      17 03.00
AVE    149.59 332 iPKP   16 24.00    5.2X
ATB    149.88 109 PKPd   16 19.50   -0.3
TIO    151.46 329 iPKPd  16 28.80    6.9X
                   i      17 10.00
SOB1   156.67 133 ePKP   16 27.90   -1.4
                   e      16 39.30
ITR    158.72 136 ePKP   16 32.90    1.2
     S.D. = 0.9  on 184 of 204 obs.
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   JUN  03, 1989  05h 10m 54.64± 0.82s
    6.338 S ± 5.2km  130.329 E ± 6.3km
   DEPTH = 153.5 ±  9.1 km
    4.9mb ( 16 obs.)
 BANDA SEA                          (280)

AAI      3.38 321 eP     11 49.00    1.4
MTN      6.52 173 iPd    12 28.60   -0.7
                   eS     13 35.00
KNA      9.48 189 eP     13 07.00   -1.8
         0.3s     62.00nm          5.7mb
                   eS     14 46.00

PCI     11.78 297 ePd    13 44.70    5.8X
WRA     14.08 164 Pc     14 04.00   -4.5X
          0.6s      5.50nm          4.1mb
WB2     14.08 164 eP     14 03.20   -5.4X
                   iS     16 31.80
KHKI    14.74 261 e(P)   14 16.20   -0.6
QIS     16.76 148 eP     14 41.60   -0.2
          0.3s     35.00nm          5.2mb
                   eS     17 32.00
PMG     16.94 101 eP     14 44.50    0.4
ASPA    17.57 169 iPc    14 51.40   -0.3
          0.6s     55.00nm          5.1mb
                   iS     17 57.70
                   e      18 16.10
MBL     17.90 214 eP     14 55.60    0.2
          0.3s     29.00nm          5.1mb
                   eS     18 01.00
WARB    20.05 190 eP     15 11.50   -6.3X
          0.3s      9.00nm          4.7mb
                   eS     18 52.00
CTA     20.64 133 iPd    15 24.30    0.5
          1.0s     52.00nm          4.9mb
NANU    21.54 220 eP     15 34.00    1.3
FORR    24.47 185 eP     16 01.00    0.1
          0.4s     15.00nm          4.9mb
COOL    25.89 198 iP     16 14.40    0.3
MRWA    26.48 209 eP     16 20.10    0.7
          0.2s      5.00nm          4.8mb
RMQ     26.65 141 eP     16 21.00    0.0
STK     27.51 159 iPd    16 29.10    0.4
          0.4s      9.00nm          4.8mb
KLB     27.74 204 iPc    16 31.50    0.7
          0.4s     13.00nm          5.0mb
MUN     28.72 206 eP     16 40.00    0.4
NWAO    29.13 203 iPc    16 43.90    0.7
BRS     29.89 137 iPd    16 49.30   -0.7
DZM     38.21 118 iPc    18 01.40    0.0
BDT     38.82 308 eP     18 04.20   -2.2
          0.8s     30.10nm          5.1mb
CHG     39.77 310 iPc    18 14.90    0.7
          1.0s     26.00nm          4.9mb
CHTO    39.77 310 iPc    18 15.10    0.9
          0.9s     20.67nm          4.8mb
BJI     47.96 345 eP     19 19.00   -0.5
GTA     53.55 331 Pc     20 02.00    0.1
GUN     54.77 311 P      20 10.80   -0.4
KKN     55.16 310 P      20 13.40   -0.5
          0.6s     23.00nm          5.2mb
GBA     56.12 291 Pc     20 19.50   -1.2
          0.7s      7.70nm          4.7mb
LPB    150.87 141 PKP    30 36.00   10.1X
CCH    151.36 146 ePKP   30 34.00    7.5X
PPD    151.76 177 e(PKP) 30 34.00    7.4X
     S.D. = 0.9  on  28 of  35 obs.
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*  JUN  03, 1989  05h 37m 53.64± 2.16s
    41.918 N ±10.4km   16.100 E ±19.9km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN ITALY                     (390)
      MD 2.8 (ROM).

DUI      1.25 259 P      38 17.20    0.2
SGO      1.48 204 P      38 20.40    0.1
SDI      1.72 264 P      38 23.30   -0.5
MGR      1.83 193 P      38 25.30    0.0
ALP      2.06 296 iP     38 28.94    0.1
ASS      2.79 296 P      38 39.80    0.6
ARV      2.81 305 P      38 39.10   -0.4
     S.D. = 0.5  on   7 of   7 obs.
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*  JUN  03, 1989  08h 03m 51.21± 1.45s
    37.703 N ±12.2km   21.041 E ±13.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN GREECE                    (368)
      MD 3.4 (ATH).

VLS      0.59 323 ePg    04 03.00   -0.2
ITM      0.88 126 iPgd   04 08.00   -0.1
                   eSg    04 24.30
NEO      2.34  46 ePn    04 30.60    0.2
LIT      2.65  25 ePd    04 34.20   -0.5
                   eS     05 10.90
KZN      2.66  12 ePb    04 38.40    3.4X
OHR      3.41 357 iPn    04 46.00    0.5
     S.D. = 0.5  on   5 of   6 obs.
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&  JUN  03, 1989  12h 37m 17.20s

   40.463 N          126.102 W
   DEPTH =   5.0km  (geophysicist)
 OFF COAST OF NORTHERN CALIFORNIA( 34)
      <BRK>. ML 3.7 (BRK).

FHC      1.65  77 iPc    37 44.40   -2.5
                   e      37 51.50
                   eS     38 04.50
WDC      2.72  86 iPd    38 00.00   -2.3
                   iS     38 31.20
LTCM     3.05  93 eP     38 10.00    3.0
NWRM     3.19 128 eP     38 05.40   -3.6
LBFM     3.31  73 eP     38 04.50   -6.5
MIN      3.44  91 iPc    38 09.60   -3.1
                   eS     38 50.00
ORV      3.65 103 eP     38 12.80   -2.7
                   iS     38 54.50
BRK      3.95 130 e(P)   38 17.00   -2.8
PCC      4.14 134 eP     38 18.20   -4.3
MHC      4.67 130 eP     38 26.50   -3.7
ARN      4.73 130 eP     38 27.20   -3.7
CMB      5.06 117 eP     38 34.70   -0.9
KVN      6.33 100 eP     38 50.50   -3.1
TNP      7.29 106 eP     39 05.00   -2.2
MEO     22.47  96 e(P)   42 17.90   -0.8
     15 obs. associated
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    JUN  03, 1989  12h 45m 37.35± 0.52s
    42.798 N ± 4.8km   19.064 E ± 4.2km
    DEPTH =  10.0km  (geophysicist)
 YUGOSLAVIA                         (383)
      ML 2.4 (TTG).

NKY      0.05 287 iPgc   45 40.00    0.4
                   iSg    45 43.40
BRY      0.40 285 iPgd   45 44.60   -0.9
                   iSg    45 51.00
TTG      0.40 158 iPgc   45 45.50    0.0
                   iSg    45 52.50
BDV      0.54 199 ePg    45 48.70    0.4
                   eSg    45 57.10
HCY      0.55 230 iPgc   45 48.10   -0.3
                   eSg    45 57.00
PLE      0.58  24 ePg    45 48.80   -0.4
                   iSg    45 57.50
IVA      0.62  83 iPgd   45 50.00    0.1
                   iSg    45 59.00
PVY      0.70 107 ePg    45 51.50    0.2
                   eSg    46 03.00
ULC      0.85 171 ePg    45 53.00   -0.7
                   eSg    46 08.00
SKO      1.94 114 ePn    46 16.00    5.3X
HVAR     1.96 282 iPn    46 12.20    1.3
                   iSg    46 37.60
     S.D. = 0.7  on  10 of  11 obs.
-------------------------------------
*  JUN  03, 1989  13h 24m 47.73± 2.40s
    0.122 N ±26.6km  121.954 E ±25.6km
   DEPTH = 208.7 ± 19.2 km
    4.7mb (  7 obs.)
 MINAHASSA PENINSULA                (265)

PCI      2.35 244 ePd    25 30.80   -0.1
                   S      26 06.00
KNA     17.15 157 iPd    28 36.30   -0.3
         0.4s     28.00nm          5.0mb
IPM     21.37 282 ePc    29 20.40    0.7
WB5     23.30 149 eP     29 38.50    0.1
WRA     23.34 149 Pd     29 38.70   -0.1
         0.4s     12.10nm          4.9mb
ASPA    26.34 155 iPd    30 06.80    0.4
         0.5s     17.00nm          5.0mb
                   eS     34 24.50
WARB    26.54 171 iPd    30 01.70   -6.5X
         0.3s      4.00nm          4.6mb
QIS     26.84 141 eP     30 11.00    0.0
CHG     29.24 311 eP     30 32.50    0.0
CHTO    29.24 311 eP     30 32.80    0.3
         0.8s      2.20nm          3.9mb
HYB     46.03 294 ePc    32 52.00   -0.6
         1.0s     40.00nm          4.8mb
GBA     46.07 289 Pc     32 52.30   -0.5
         0.4s      5.40nm          4.3mb
     S.D. = 0.5  on  11 of  12 obs.
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*  JUN  03, 1989  14h 13m 41.20± 1.23s
    7.097 S ± 8.8km  129.442 E ±11.6km
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03d 14h

DEPTH = 178.7 ± 14 4 km
4.9mb (12 obs.)
BANDA SEA (280)

AAI	3.61	340	eP	14	39.40	1.5
KNA	8.62	184	iPd	15	43.70	0.0
	0.3s	61.00nm			5.5mb	
			eS	17	15.00	
WB5	13.58	160	iPd	16	45.00	-2.8
			iS	19	06.20	
WRA	13.63	160	Pd	16	45.50	-2.9
	0.6s	22.70nm			4.8mb	
OIS	16.61	145	iPc	17	24.60	-0.8
	0.5s	34.00nm			5.0mb	
			eS	20	21.00	
MBL	16.79	213	eP	17	28.00	0.5
ASPA	17.02	166	iPd	17	30.50	0.2
	0.8s	226.00nm			5.6mb	
			eS	20	34.90	
PMG	17.68	99	eP	17	39.50	1.7
	0.9s	65.55nm			5.0mb	
WARB	19.17	188	eP	17	47.50	-5.9X
			eS	21	16.00	
NANU	20.40	220	iPd	18	07.10	1.3
CTA	20.80	130	iPd	18	11.00	1.1
	1.0s	39.00nm			4.8mb	
MEKA	22.01	207	eP	18	24.00	2.3
FORR	23.66	183	eP	18	39.00	1.4
	0.4s	11.00nm			4.8mb	
RMQ	26.64	139	eP	19	06.00	0.8
STK	27.14	157	eP	19	10.00	0.4
BRS	29.95	135	iPd	19	34.70	-0.1
			i	20	23.00	
			i	20	34.90	
CHG	39.59	311	iPc	20	56.90	0.1
	1.0s	22.50nm			4.8mb	
CHTO	39.59	311	iPc	20	56.80	0.0
	1.1s	22.97nm			4.7mb	
GUN	54.60	312	P	22	52.60	-1.4
	0.6s	21.00nm			5.1mb	
PKI	54.77	311	P	22	53.80	-1.4
	0.5s	7.00nm			4.7mb	
KKN	54.98	311	P	22	55.40	-1.2
DMN	55.02	311	P	22	55.60	-1.3
SPA	82.95	180	e(P)	25	47.80	0.6
	0.4s	7.24nm			4.8mb	
LPB	150.80	144	PKP	33	16.00	6.7X
PPD	151.04	179	e(PKP)	33	15.00	6.0X
S.D. = 1.5 on 22 of 25 obs.						

& JUN 03, 1989 15h 47m 05.21s
59.898 N 150.794 W
DEPTH = 26.0km
KENAI PENINSULA, ALASKA (14)
<AGS-P>. ML 3.2 (PMR). Felt (II) at Homer.

BRLK	0.14	199	iP	47	11.04	0.6
CNPM	0.44	211	iP	47	13.83	-0.6
			S	47	20.81	
SLKM	0.68	25	iP	47	17.59	-0.8
SEW	0.71	72	iP	47	17.38	-1.4
NKA	0.88	346	eP	47	22.09	0.4
RDT	1.05	311	iP	47	22.97	-1.4
ILIM	1.10	280	iP	47	23.27	-1.8
RED	1.12	299	iP	47	23.70	-1.6
			S	47	38.05	
OPT	1.26	260	iP	47	26.18	-1.0
			S	47	43.96	
AUE	1.42	249	iP	47	28.62	-0.8
SPU	1.43	335	eP	47	28.64	-1.1
CRP	1.53	335	eP	47	30.59	-0.6
CGLM	1.54	338	eP	47	30.55	-0.7
SUA	1.57	1	eP	47	31.00	-0.8
MTU	1.58	85	eP	47	31.33	-0.5
CDD	1.75	238	eP	47	33.24	-1.1
			S	47	56.72	
PWA	1.82	14	eP	47	35.50	0.3
PMR	1.89	25	eP	47	36.20	0.0
			eS	47	59.10	
PME	1.94	26	eP	47	35.62	-1.4
GLI	2.08	60	eP	47	35.92	-3.2
SKT	2.12	351	eP	47	38.95	-0.7
FID	2.31	66	eP	47	38.41	-3.9
KDC	2.33	203	eP	47	40.20	-2.3
SVW	2.68	299	eP	47	45.80	-1.8
TOA	3.16	43	eP	47	52.80	-1.6
IMA	6.33	349	eP	48	37.00	-2.4
26 obs. associated						

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* JUN 03, 1989 16h 05m 14.26± 1.27s
16.442 N ±11.1km 61.146 W ±13.2km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.6 (FDF).

DEG	0.15	147	iPd	05	20.20	-0.3
			S	05	23.60	
SFG	0.19	194	iPd	05	20.65	-0.1
SEG	0.35	264	iPd	05	22.18	-0.4
			S	05	26.60	
PAG	0.66	231	eP	05	26.90	-0.2
			S	05	35.30	
BPA	0.91	312	eP	05	31.00	0.3
			S	05	42.00	
BBL	0.97	199	eP	05	32.20	0.7
S.D. = 0.5 on 6 of 6 obs.						

JUN 03, 1989 16h 33m 51.09± 1.27s
6.596 S ± 7.2km 147.767 E ± 8.4km
DEPTH = 41.8 ± 12.8 km
4.2mb (5 obs.) 4.5Msz (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)
ML 4.9 (PMG).

LAT	0.76	266	eP	34	05.00	-0.5
LMG	2.33	171	eP	34	27.00	-0.9
PMG	2.86	192	eP	34	37.50	2.2
			eS	35	23.00	
MNDI	4.11	276	eP	34	56.50	3.3X
VSG	12.12	103	eP	36	44.00	-0.1
HNR	12.39	104	eP	36	40.00	-7.6X
CTA	13.49	186	eP	37	06.00	3.7X
OIS	15.98	209	eP	37	35.00	0.4
			e	37	41.00	
WB5	18.54	223	eP	38	05.80	-0.8
			eS	41	47.90	
WRA	18.60	223	Pd	38	07.70	0.3
	0.3s	1.50nm			3.7mb	
RMQ	19.81	177	eP	38	21.80	0.7
			e	38	25.00	
GUMO	20.26	352	eP	38	24.70	-1.2
KNA	20.72	242	eP	38	29.30	-1.4
BRS	21.22	168	iPd	38	35.10	-0.6
ASPA	21.58	217	iPd	38	39.40	0.0
	0.6s	13.00nm			4.5mb	
Z	22s	0.94um			4.1MszX	
			eS	42	46.80	
			LR	47	08.60	
DZM	23.70	132	iPc	38	59.10	-1.2
COO	24.17	171	eP	39	06.00	1.3
WARB	28.02	224	eP	39	33.00	-7.5X
MBL	30.66	239	eP	40	02.50	-1.6
MEKA	34.21	231	eP	40	35.00	-0.1
KLB	37.47	225	eP	41	01.70	-0.9
CHJJ	43.21	350	P	41	48.10	-1.8
MTMJ	43.96	348	P	41	56.30	0.3
NIIJ	44.37	350	P	41	58.40	-0.8
IPM	47.96	282	ePc	42	27.70	-0.4
CHG	54.34	299	eP	43	30.00	13.8X
CHTO	54.34	299	e(P)	43	16.10	-0.1
	1.0s	0.75nm			3.7mb	
			pP	43	22.90	22kmX
XAN	54.62	320	eP	43	19.00	0.9
TIY	55.02	326	eP	43	23.80	2.8
Z	22s	0.50um			4.5Msz	
GTA	63.68	320	eP	44	23.60	2.8
GBA	72.64	286	Pc	45	22.30	5.5X
	0.9s	5.00nm			4.5mb	
SPA	83.45	180	e(P)	46	16.00	0.5
	1.0s	5.00nm			4.5mb	
BNG	129.43	270	ePKPd	52	56.00	-2.1X
	0.3s	5.00nm				
KIC	152.68	271	PKP	53	46.20	7.7X
BAO	152.95	145	ePKP	53	41.00	2.0X
S.D. = 1.3 on 26 of 35 obs.						

JUN 03, 1989 16h 37m 37.85± 0.53s
41.904 N ± 4.6km 23.186 E ± 5.8km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)
ML 3.3 (SKO).

VAY	0.74	219	iPg	37	52.30	-0.1
			iSg	38	02.50	
KNT	0.77	196	iPgc	37	52.70	-0.2
SRS	0.84	159	ePgc	37	53.80	-0.3
			eSg	38	05.10	
SOH	1.09	173	ePbc	37	58.40	0.0
			eSb	38	13.90	
THE	1.28	188	ePb	38	02.20	0.6
			eSb	38	20.10	
SKO	1.31	274	iPn	38	02.80	0.8
			i	38	04.40	
			iSn	38	21.00	
PLG	1.54	173	eP	38	05.70	0.3
			eS	38	27.80	
OUR	1.68	159	ePb	38	07.50	0.1
			eSb	38	31.10	
LIT	1.88	197	ePn	38	10.10	-0.2
			eSn	38	36.10	
RDO	1.92	112	eP	38	10.00	-0.9
KZN	1.92	214	eP	38	10.90	-0.1
PAIG	2.01	169	ePn	38	12.00	-0.2
			eSn	38	38.10	
DRA	2.88	15	eP	38	36.00	11.4X
EZN	3.16	130	ePn	38	26.90	-1.6
DMK	3.41	90	ePn	38	38.00	5.8X
EDC	3.86	112	ePn	38	41.00	2.5
BZS	3.88	343	ePd	38	37.50	-1.3
MLR	4.11	28	ePd	38	43.50	1.4
VRI	4.72	32	eP	38	50.00	-0.7
S.D. = 1.0 on 17 of 19 obs.						

JUN 03, 1989 17h 23m 09.55± 1.08s
6.693 S ± 6.8km 147.818 E ± 9.1km
DEPTH = 50.5 ± 9.9 km
4.5mb (3 obs.) 3.8Msz (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.81	273	iPc	23	23.60	-1.3
LMG	2.23	172	eP	23	44.50	-0.3
PMG	2.78	194	eP	23	54.00	1.4
			eS	24	35.00	
MNDI	4.17	277	eP	24	13.50	1.0
WB5	18.50	224	eP	27	23.70	-0.4
WRA	18.57	224	Pc	27	24.30	-0.5
	0.5s	2.30nm			3.6mb	
RMQ	19.71	178	eP	27	39.00	1.2
GUMO	20.36	352	eP	27	45.00	0.4
PJG	20.36	352	eP	27	45.00	0.4
BRS	21.12	168	iPd	27	52.50	0.2
ASPA	21.53	217	iPc	27	56.80	0.3
	0.4s	18.00nm			4.8mb	
Z	20s	0.41um			3.8Msz	
			eS	32	01.60	
			LR	36	34.20	
DZM	23.60	132	iPc	28	15.20	-1.7
WARB	27.99	224	eP	28	50.50	-7.3X
PCI	28.49	280	ePd	29	02.50	0.1
MBL	30.65	239	eP	29	21.00	-0.6
MEKA	34.19	231	eP	29	52.00	-0.5
KLB	37.44	225	eP	30	19.50	-0.4
SPA	83.35	180	e(P)	35	33.20	0.7
	0.6s	4.07nm			4.6mb	
S.D. = 0.9 on 17 of 18 obs.						

JUN 03, 1989 17h 29m 58.49± 0.23s
21.835 S ± 7.4km 138.996 W ± 8.0km
DEPTH = 0.0km (geophysicist)
5.3mb (12 obs.)
TUAMOTU ARCHIPELAGO REGION (631)

DZM	50.36	259	iPd	39	00.90	1.1
PLM	58.80	22	eP	40	00.00	-1.3
SVO	59.96	272	eP	39	59.00	-10.5X
PRS	60.20	16	eP	40	11.50	0.8
PCC	61.06	15	eP	40	16.80	0.4
MHC	61.09	16	eP	40	17.80	1.0
FRI	61.27	18	eP	40	18.20	0.3
CMB	62.07	17	eP	40	23.90	0.5
KVN	63.65	18	iPd	40	34.70	0.7
WDC	63.95	14	eP	40	36.00	0.3
ALQ	64.36	29	iPc	40	39.00	0.3
	1.0s	12.00nm			5.1mb	
			e	40	42.20	
			e	41	12.50	
LPB	66.66	99	P	40	55.00	0.8
CNCB	66.69	100	P	40	55.80	1.3
ZOBO	66.71	99	Pc	40	55.00	0.3
	1.0s	25.00nm			5.4mb	

MEO	68.14	35	eP	41 01.70	-1.0
	0.8s	27.50nm		5.5mb	
			e	41 27.20	
GLD	68.91	27	eP	41 08.30	0.8
	1.0s	20.00nm		5.3mb	
CTA	69.15	256	iPc	41 09.30	0.0
	1.2s	57.03nm		5.7mb	
OCO	69.30	35	eP	41 09.40	-0.4
SIO	70.09	36	eP	41 14.00	-0.6
VVO	70.10	37	eP	41 13.90	-0.8
TUL	70.50	36	iPd	41 16.60	-0.5
	1.0s	16.70nm		5.1mb	
			e	41 35.00	
LRM	71.52	19	eP	41 24.20	0.7
RSSD	73.03	26	eP	41 31.30	-1.1
FVM	74.98	38	eP	41 42.80	-0.7
	0.9s	22.03nm		5.2mb	
SES	76.04	18	eP	41 50.00	0.6
EDM	77.98	15	iPc	42 00.00	-0.1
	1.0s	90.00nm		5.9mb	
ASPA	79.01	249	iPc	42 05.90	-0.5
	1.1s	6.00nm		4.5mb	
WB5	79.85	253	eP	42 10.70	-0.3
WRA	79.85	253	Pc	42 10.40	-0.6
	1.0s	4.90nm		4.4mb	
ADK	80.47	337	eP	42 13.80	0.3
RSON	82.63	27	iP	42 23.90	-1.0
	0.8s	13.03nm		5.2mb	
			e	42 51.90	
PMR	83.53	355	eP	42 29.20	0.0
	0.9s	29.20nm		5.5mb	
TTA	85.55	352	eP	42 39.00	-0.4
YKA	86.25	11	eP	42 43.40	0.6
YKC	86.26	11	eP	42 42.70	-0.2
FBA	86.72	356	eP	42 45.00	-0.1
MAW	89.36	188	eP	42 58.00	0.1
INK	89.97	2	eP	42 59.50	-0.9
BRW	93.71	354	eP	43 18.50	0.9
MBC	98.60	5	eP	43 40.00	0.2
CHG	125.85	278	iPKPd	49 05.00	0.2
	1.0s	10.50nm			
CHTO	125.85	278	ePKP	49 04.90	0.1
	1.0s	8.75nm			
NAO	135.72	21	PKP	49 22.50	0.2
	1.1s	3.80nm			
HFS	137.17	20	ePKP	49 13.00	-12.0X
	0.7s	2.00nm			
SUF	137.90	10	ePKP	49 17.00	-9.4X
PKI	139.42	287	PKP	49 22.90	-7.8X
SNF	139.47	36	PKP	49 30.40	0.8
KKN	139.54	288	PKP	49 22.50	-8.2X
DMN	139.69	287	PKP	49 24.10	-6.9X
WTS	139.98	33	ePKP	49 23.00	-7.4X
	1.0s	6.00nm			
			e	49 30.50	
ENN	140.22	35	ePKP	49 24.00	-6.9X
	1.0s	5.00nm			
			e	49 31.00	
RUP	141.42	36	ePKP	49 27.58	-5.6X
ABH	141.58	35	ePKP	49 28.05	-5.4X
TOD	142.40	35	ePKP	49 30.10	-4.8X
FEL	142.95	37	ePKP	49 32.09	-3.9X
CLL	143.40	30	ePKPd	49 34.00	-2.5X
	1.0s	9.00nm			
HOF	143.53	32	iPKPc	49 33.80	-3.0X
BNI	143.58	42	PKP	49 35.00	-2.2X
GRF	143.60	33	iPKPc	49 34.40	-2.5X
	1.1s	34.00nm			
LSD	143.69	41	PKP	49 35.21	-2.3X
RRL	143.71	42	PKP	49 35.32	-2.2X
PZZ	144.11	43	PKP	49 36.14	-2.0X
BRG	144.13	29	iPKP	49 35.50	-2.2X
	0.8s	24.00nm			
DOI	144.20	43	PKP	49 37.50	-0.7
GBA	144.41	263	PKPc	49 37.70	-1.5
	0.4s	1.90nm			
HYB	144.42	270	ePKP	49 37.00	-2.3X
VAI	144.46	40	PKP	49 35.50	-2.9X
FUR	144.57	35	ePKP	49 37.30	-1.3
	1.0s	22.00nm			
ROB	144.69	43	PKP	49 37.78	-1.2
WET	144.78	32	ePKP	49 37.70	-1.3
	1.0s	40.00nm			
IMI	144.89	43	PKP	49 38.08	-1.3
FIN	144.95	43	PKP	49 38.39	-1.0
PRU	145.02	30	iPKPc	49 38.50	-0.8
	1.0s	57.80nm			

			e	50 10.00	
MDI	145.06	39	PKP	49 38.00	-1.4
KHC	145.14	32	iPKPc	49 39.00	-0.6
	1.0s	31.00nm			
KSP	145.19	28	iPKPc	49 39.00	-0.6
	0.9s	55.00nm			
OGA	145.21	37	ePKP	49 40.10	0.1
	0.7s	29.00nm			
BOB	145.44	41	PKP	49 40.50	0.2
SAL	145.63	39	PKP	49 41.50	1.1
BHG	145.69	34	iPKPd	49 40.30	-0.2
	1.0s	86.00nm			
CTI	146.03	38	PKP	49 42.00	0.7
FVI	146.34	36	PKP	49 41.50	-0.1
KBA	146.34	35	iPKPd	49 41.50	-0.4
	0.8s	20.50nm			
			i	49 44.30	
NDI	146.64	289	iPKPc	49 44.20	1.6
	1.0s	45.00nm			
RBL	146.86	36	PKP	49 42.80	0.2
VKA	147.06	31	iPKPd	49 45.30	2.6X
	0.9s	54.60nm			
VOY	147.29	36	ePKP	49 45.30	2.0X
KRA	147.31	25	ePKP	49 44.10	1.1
	1.0s	81.00nm			
			e	49 45.90	
SFI	147.35	41	PKP	49 46.50	3.2X
TRI	147.42	37	PKP	49 46.50	3.2X
ZST	147.48	30	iPKPd	49 46.10	2.7X
			i	49 48.50	
LJU	147.63	35	e(PKP)	49 46.50	2.8X
CEY	147.77	36	e(PKP)	49 47.00	3.0X
SPC	148.11	26	ePKP	49 45.90	1.3
			i	49 48.70	
ARV	148.24	41	PKP	49 47.40	2.6X
ASS	148.30	41	PKP	49 45.20	0.2
SRO	148.31	30	iPKPc	49 49.00	4.3X
			e	49 52.10	
VBY	148.37	36	e(PKP)	49 48.90	4.0X
PTJ	148.48	34	ePKP	49 49.00	3.8X
BUD	148.88	29	ePKP	49 50.00	4.4X
SDI	149.76	43	PKP	49 52.00	4.8X
SGO	151.33	44	PKP	49 55.50	6.0X
MGR	151.72	44	PKP	49 56.00	5.8X
BNG	152.19	125	iPKPc	49 51.50	-0.2
	0.6s	20.00nm			
			i	49 57.60	
TDS	152.48	44	PKP	49 58.00	6.7X
MLR	153.37	24	ePKPd	49 53.50	1.0
OHR	154.30	37	ePKP	49 55.00	1.2
VAY	155.11	34	ePKP	49 55.50	0.7

S.D. = 0.8 on 70 of 108 obs.

JUN 03, 1989 17h 38m 28.58± 0.49s
39.405 N ± 5.8km 20.449 E ± 4.3km
DEPTH = 10.0km (geophysicist)
3.9mb (2 obs.)
GREECE-ALBANIA BORDER REGION (392)
ML 4.0 (ATH).

VLS	1.23	175	eP	38 51.20	-0.3
			eS	39 08.80	
KZN	1.36	48	eP	38 52.60	-1.0
			eS	39 17.00	
LIT	1.72	66	ePnc	38 59.50	0.7
			eSn	39 24.70	
OHR	1.73	9	iPnc	39 01.30	2.5
LCI	2.13	297	P	38 58.90	-5.8X
			eSn	39 37.50	
NEO	2.15	92	eP	39 04.60	-0.4
THE	2.29	57	ePn	39 07.20	0.3
			eSn	39 36.50	
PLG	2.50	66	eP	39 09.10	-0.9
			eS	39 42.00	
ITM	2.51	152	eP	39 12.00	1.9
VAY	2.51	40	iPn	39 10.30	0.3
PAIG	2.55	77	ePn	39 10.20	-0.4
			eSn	39 43.00	
KNT	2.57	46	ePnc	39 11.30	0.4
			eSn	39 45.00	
SOH	2.64	57	ePnd	39 12.90	0.9
			eSn	39 46.20	
SKO	2.67	16	iPn	39 14.50	2.1
			iSn	39 43.00	
OUR	2.87	70	ePnd	39 14.80	-0.4
			eSn	39 51.10	
ATH	2.93	118	eP	39 17.50	1.5

SRS	2.95	54	ePnd	39 16.30	-0.1
			eSn	39 52.20	
TDS	3.19	276	P	39 21.50	1.8
MGR	3.84	283	P	39 29.50	0.5
SGO	4.11	288	P	39 32.10	-0.7
RDO	4.26	64	eP	39 33.90	-1.1
PRK	4.52	90	eP	39 40.20	1.6
EZN	4.56	83	eP	39 39.00	-0.1
DUI	5.09	298	P	39 45.50	-1.3
SDI	5.55	297	P	39 52.40	-0.9
BZS	6.27	8	ePc	40 07.00	3.7X
			e	49 50.00	
BUC1	6.46	38	eP	40 40.00	34.0X
ARV	6.96	308	P	40 05.10	-8.1X
MLR	7.31	32	eP	40 18.00	-0.1
VRI	7.94	34	ePc	40 27.00	0.2
			e	49 50.00	
MME	8.71	306	P	39 56.10	-41.7X
KBA	9.25	328	iP	40 53.50	8.4X
	1.0s	8.80nm		5.1mb	X
			i	40 56.10	
NAO	22.26	348	P	43 25.40	-1.6
	0.7s	1.80nm		3.6mb	
EKA	22.40	323	Pd	43 32.00	3.6X
	1.3s	10.20nm		4.1mb	
IR7	24.14	89	eP	43 43.50	-2.2
IR1	24.29	90	eP	43 45.00	-2.2
IR2	24.38	89	eP	43 48.00	0.0
IR4	24.51	90	eP	43 48.40	-0.9

S.D. = 1.2 on 31 of 38 obs.

JUN 03, 1989 18h 22m 18.10± 0.52s
45.910 N ± 4.7km 6.794 E ± 5.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.7 (LDG).

EMS	0.19	31	ePd	22 20.50	-1.9
LPL	0.40	186	Pg	22 25.60	-0.7
			Sg	22 32.80	
LPG	0.41	184	Pg	22 26.00	-0.6
			Sg	22 33.20	
DIX	0.46	68	ePd	22 26.90	-0.7
LSD	0.52	151	P	22 28.50	-0.2
			S	22 37.22	
MMK	0.83	80	ePd	22 33.50	-0.8
BNI	0.86	186	P	22 38.00	3.2X
			eSg	22 46.50	
RRL	0.99	180	P	22 36.73	-0.3
			S	22 51.55	
PZZ	1.42	171	P	22 45.10	1.0
			S	23 04.63	
TMA	1.46	82	ePc	22 46.70	2.0
LLS	1.80	57	ePd	22 51.80	2.2
ZLA	1.92	34	ePc	22 53.20	2.0
BSF	1.92	360	Pg	22 51.40	0.1
			Sg	23 14.00	
HAU	2.12	352	Pn	22 50.20	-3.8X
			Pg	22 53.80	
			Sn	23 14.40	
			Sg	23 19.20	
FEL	2.14	23	ePn	22 49.90	-4.5X
SMF	2.18	291	Pg	22 54.80	-0.1
			Sg	23 19.20	
SLE	2.19	32	ePc	22 52.20	-2.9
SAX	2.21	52	ePd	22 59.60	3.9X
LBF	2.22	300	Pg	22 55.20	-0.4
			Sg	23 21.00	
LOR	2.44	305	Pg	22 59.00	0.4
			Sg	23 29.00	
CDF	2.52	7	Pg	23 03.20	3.3X
AVF	2.54	292	Pg	23 00.20	0.2
			Sg	23 30.90	
SSF	2.55	298	Pg	23 00.80	0.7
			Sg	23 31.60	
BGF	2.82	285	Pn	22 59.20	-4.8X
			Pg	23 06.60	
			Sg	23 40.60	
MAF	2.96	278	Pg	23 09.20	3.2X
			Sg	23 44.80	
TCF	3.21	278	Pg	23 14.00	4.4X
			Sg	23 52.00	

S.D. = 1.4 on 18 of 26 obs.

? JUN 03, 1989 19h 32m 10.12± 1.70s
36.038 N ± 9.4km 7.645 W ±23.2km
DEPTH = 10.0km (geophysicist)

03d 19h

STRAIT OF GIBRALTAR (385)

PLAT	1.53	86	iP	32 54.00	16.5X
GIBL	1.58	60	iP	32 50.00	11.8X
MOMI	1.58	79	iP	32 48.00	9.7X
EVAL	1.70	25	eP	32 40.50	0.5
			eS	32 57.00	
ALJ	1.77	68	iP	32 41.50	0.5
LIJA	1.99	64	iP	32 47.50	3.2X
EHOR	2.62	47	eP	32 52.20	-0.9
			eS	33 18.00	
AVE	2.74	176	ePn	32 56.00	1.1
			eSn	33 27.00	
IFR	3.26	140	iPn	33 02.50	0.0
			iSn	33 39.00	
			i	33 40.00	
TIO	5.11	176	iPnc	33 27.50	-1.1
			iSn	34 22.00	

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

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* JUN 03, 1989 19h 49m 56.50± 2.02s
41.826 N ±14.7km 23.184 E ±11.3km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)
ML 2.5 (SKO).

VAY	0.68	223	iPg	50 09.70	-0.3
			iSg	50 20.70	
KNT	0.70	198	ePgc	50 10.00	-0.3
			eSg	50 20.60	
SRS	0.77	156	ePgd	50 11.10	-0.5
			eSg	50 22.50	
SOH	1.01	173	ePgd	50 15.70	0.0
			eSg	50 30.90	
THE	1.20	188	ePb	50 19.60	0.7
			eSb	50 36.90	
SKO	1.31	277	ePn	50 20.80	0.1
OUR	1.61	158	ePb	50 25.10	0.1
			eSb	50 48.90	

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

? JUN 03, 1989 20h 37m 22.14± 7.27s
32.450 S ±45.4km 72.027 W ±34.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

ROCH	1.00	122	iPd	37 41.00	-0.3
			iS	37 52.50	
LCCH	1.09	160	iPc	37 42.90	0.2
			iS	37 56.10	
PEL	1.33	122	iPd	37 46.10	-0.5
TACH	1.51	143	iPc	37 49.80	0.6
			iS	38 07.70	
LNV	1.59	161	iP	37 49.50	-0.8
			iS	38 09.00	
FCH	1.70	121	iPc	37 52.50	0.1
			iS	38 13.00	
PCH	1.73	133	iPd	37 52.90	0.4
			iS	38 14.90	
CHCH	1.88	142	iPc	37 55.10	0.5
			iS	38 17.50	

S.D. = 0.6 on 8 of 8 obs.

JUN 03, 1989 21h 52m 01.72± 0.58s
45.265 N ± 3.5km 6.645 E ± 5.8km
DEPTH = 11.8 ± 5.0 km
FRANCE (538)
ML 2.9 (LDG). MD 2.9 (ROM).

BNI	0.21	174	Pc	52 05.10	-1.5
LPG	0.24	18	Pg	52 06.80	-0.4
			Sg	52 12.00	
LPL	0.26	14	Pg	52 07.00	-0.4
RRL	0.36	164	P	52 08.06	-1.2
			S	52 14.76	
LSD	0.41	62	P	52 10.09	-0.2
			S	52 17.60	
FOUF	0.74	172	ePg	52 14.64	-1.4
			eSg	52 22.82	
PZZ	0.83	157	P	52 16.58	-1.1
			S	52 28.80	
EMS	0.83	14	ePc	52 17.30	-0.4
DOI	0.87	150	P	52 17.20	-1.2
			eSg	52 28.30	
DIX	0.98	33	eP	52 20.40	0.1
ORO	1.01	69	P	52 21.10	0.4
			eSg	52 34.20	
STV	1.13	154	P	52 22.19	-0.6
			S	52 37.09	
ENR	1.18	152	P	52 22.90	-0.7
			S	52 38.01	
MMK	1.22	49	eP	52 25.70	1.4
ROB	1.31	138	P	52 25.48	-0.3
			S	52 41.93	
SBF	1.51	158	Pn	52 30.00	1.3
			Pg	52 32.60	
			Sg	52 52.40	
FIN	1.54	133	P	52 29.62	0.6
			S	52 48.21	
IMI	1.62	146	P	52 30.65	0.4
			S	52 50.17	
FRF	1.70	180	Pn	52 32.70	1.3
			Pg	52 34.00	
			Sg	52 56.90	
LRG	1.82	187	Pg	52 35.60	2.5
			Sg	52 59.20	
LMR	1.93	183	Pg	52 37.40	2.7
			Sg	53 01.50	
SMF	2.39	306	Pg	52 44.90	3.5X
			Sg	53 15.60	
LBF	2.53	314	Pn	52 43.40	0.1
			Pg	52 48.40	
			Sg	53 19.60	
HAU	2.75	356	Pg	52 53.60	7.1X
			Sg	53 29.00	
AVF	2.75	305	Pn	52 45.80	-0.7
			Pg	52 53.20	
			Sg	53 26.00	
LOR	2.78	317	Pg	52 53.00	6.1X
			Sg	53 26.60	
SLE	2.81	26	eP	52 54.60	7.3X
SSF	2.83	311	Pg	52 54.80	7.3X
			Sg	53 29.20	
BGF	2.95	297	Pg	52 56.00	6.8X
			Sg	53 33.20	
MAF	3.01	290	Pg	52 57.00	6.9X
			Sg	53 35.00	
CAF	3.26	266	Pn	52 53.00	-0.7
			Sg	53 42.40	
TCF	3.27	290	Pg	53 01.80	8.0X
			Sg	53 42.00	
LSF	3.71	287	Pg	53 09.30	9.2X
			Sg	53 57.00	

S.D. = 1.2 on 24 of 33 obs.

? JUN 03, 1989 22h 19m 15.96± 3.71s
6.377 S ±31.5km 148.081 E ±26.5km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
NEW BRITAIN REGION (192)

LAT	1.11	256	iPc	19 33.50	-1.7
LMG	2.52	178	eP	19 55.00	-0.6
PMG	3.15	197	eP	20 05.50	1.1
MNDI	4.40	273	eP	20 24.00	1.5
WB5	18.91	224	eP	23 35.20	-1.4
WRA	18.97	223	Pc	23 39.40	2.0
	0.4s		2.00nm		3.7mb
BRS	21.37	168	iPd	24 03.20	0.3
ASPA	21.94	217	iPc	24 08.40	-0.2
	0.4s		9.00nm		4.6mb
WARB	28.39	224	eP	25 02.00	-7.6X
KLB	37.85	225	eP	26 30.50	-1.0

S.D. = 1.5 on 9 of 10 obs.

& JUN 03, 1989 22h 25m 08.45s
59.708 N 153.314 W
DEPTH = 108.3km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.07	142	iP	25 23.45	1.4
			S	25 34.63	
ILIM	0.41	25	iP	25 24.23	-0.7
			S	25 38.28	
RED	0.76	21	iP	25 26.69	-0.9
			S	25 41.51	
CDD	0.80	192	iP	25 27.14	-0.7
			S	25 42.23	
RDT	0.98	27	iP	25 28.77	-0.9
			S	25 44.79	
CNPM	1.07	99	iP	25 29.98	-0.6
NKA	1.47	44	eP	25 34.43	-0.7
SPU	1.61	22	eP	25 36.47	-0.4
SEW	1.99	77	iP	25 40.55	-1.1
SUA	2.17	35	iP	25 43.51	-0.7

10 obs. associoted

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* JUN 03, 1989 22h 45m 34.65± 1.19s
30.768 S ± 7.5km 72.504 W ±18.4km
DEPTH = 60.7 ± 16.8 km
OFF COAST OF CENTRAL CHILE (134)

ROCH	2.54	150	iPd	46 14.00	-0.4
			iS	46 49.70	
LCCH	2.81	164	eP	46 18.00	-0.1
			iS	47 05.70	
PEL	2.83	147	iPc	46 18.00	-0.4
FCH	3.17	144	eP	46 23.50	0.0
			i(S)	47 03.50	
PCH	3.31	150	iPd	46 24.80	-0.4
			iS	47 13.00	
LNV	3.31	164	eP	46 25.90	0.8
			iS	47 18.60	
ZON	3.37	104	eP	46 26.00	0.0
CHCH	3.52	154	ePc	46 28.50	0.3
			iS	47 21.00	
ANT	7.28	15	e(P)	47 28.00	7.4X
CNCB	14.49	18	eP	48 59.00	0.5
CCH	14.53	25	P	49 03.90	5.2X
LPB	14.73	17	P	49 02.00	0.6
ZOBO	14.98	16	P	49 03.70	-1.1
	Z	16s		0.42um	
			LR	54 20.00	
PPD	20.85	70	eP	50 15.40	1.7
			epP	50 41.40	138kmX
VAO	24.02	77	eP	50 45.40	0.5
BMA	26.51	79	eP	51 08.10	-0.3
			epP	51 17.10	32kmX
BAO	27.01	62	eP	51 11.30	-1.8

S.D. = 0.9 on 15 of 17 obs.

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* JUN 03, 1989 22h 46m 51.43± 2.13s
35.087 N ±10.1km 28.264 E ±22.7km
DEPTH = 33.0km (normal)
EASTERN MEDITERRANEAN SEA (371)

YER	2.04	0	ePn	47 24.30	0.1
ELL	2.13	38	ePn	47 25.70	0.2
BCK	3.02	38	ePn	47 37.80	-0.4
BURJ	6.88	113	P	48 32.80	0.2
KFNJ	6.98	115	P	48 33.70	-0.2
JARJ	7.01	112	P	48 34.70	0.3
MASJ	7.07	116	P	48 35.10	-0.3
MKRJ	7.11	118	P	48 36.10	0.2
PRNI	7.38	128	eP	48 39.50	-0.2

S.D. = 0.3 on 9 of 9 obs.

JUN 03, 1989 23h 13m 10.42± 0.26s
33.350 N ± 3.1km 136.868 E ± 3.2km
DEPTH = 388.1 ± 2.6 km
4.8mb (42 obs.)
NEAR S. COAST OF SOUTHERN HONSHU(233)
Felt (I JMA) at Utsunomiyo.

WKYJ	1.37	310	iPd	14 03.60	1.4
			S	14 44.10	
IIDJ	2.29	22	iP+	14 08.50	0.8
			S	14 54.00	
TSRJ	2.30	342	P	14 09.10	1.5
			S	14 54.50	
TKSJ	2.43	286	iP+	14 10.40	1.8
			eS	14 56.00	
CHJJ	3.21	32	iPd	14 15.40	0.5
			S	15 06.20	
MTMJ	3.32	13	iP+	14 16.70	0.7
YONJ	3.36	304	iP+	14 17.60	1.3
			eS	15 09.40	
SHK	3.68	290	iPc	14 20.50	1.4
	0.8s		1746.27nm		
KAKJ	3.94	43	iPd	14 19.90	-1.7
			S	15 12.40	
UTS	4.03	37	eP	14 21.00	-1.5
			iS	15 14.40	
NIIJ	4.25	24	iP+	14 23.70	-1.0
			S	15 21.00	
SHNJ	4.86	281	P	14 32.50	1.6
			S	15 36.10	
KUMJ	5	14	263 iPd	14 35.80	1.9
			eS	15 41.60	
YAMJ	5.46	27	iP+	14 36.50	-0.7

03d 23h

			S	15	42.10			CHTO	36.79	256	iPd	19	44.50	0.1		DAG	69.09	354	iPd	23	37.00	0 2
KAGJ	5.51	249	P	14	40.10	2.3			0.9s		72.46nm			5.0mb			0.6s		10.00nm			4.6mb
			eS	15	51.20			BDT	37.56	254	iPd	19	48.20	-2.5		SUF	69.56	333	iP	23	39.30	-0.5
OFUJ	6.91	33	iP+	14	51.90	-1.4		WMQ	39.32	300	iP	20	05.70	0.7		TAB	70.75	303	eP	23	48.00	0.4
			S	16	10.50						PP	21	47.80			TOO	71.01	173	iPd	23	50.10	1.4
AOMJ	7.72	20	P	15	02.40	-0.2					PcP	22	05.00			NUR	71.40	331	iP	23	50.20	-0.5
			eS	16	32.40						ScP	25	16.00			SLY	72.49	301	iPc	23	56.00	-1.5
MRRJ	9.65	19	P	15	23.50	-1.6					S	25	37.00			BRF	73.26	290	(P)	23	55.10	-7.0X
			eS	17	08.00						PcS	25	54.00			BEE	73.34	290	iP	23	55.70	-6 8X
SAP	10.31	19	eP	15	31.00	-1.9					ScS	29	27.50				0.7s		58.00nm			5.3mb
			iS	17	26.30			NNT	39.65	247	iPd	20	08.00	0.1		MSL	73.78	303	ePc	24	05.00	0.0
HOOJ	10.34	27	P	15	32.70	-0.6		MNDI	39.81	169	eP	19	51.50	-17.9X					eS	33	02.00	
			eS	17	22.40			PMG	43.63	165	iPc	20	38.50	-1.3		HFS	75.85	334	eP	24	15.10	-1.0
KUSJ	11.51	30	iP+	15	46.00	-1.2			0.7s		47.95nm			4.9mb			0.4s		3.50nm			4.4mb
			S	17	46.30			GUN	43.86	277	Pd	20	42.20	0.1			Z 16s		0.05um			3.9MszX
ASAJ	11.65	21	P	15	46.60	-2.3		IPM	43.96	237	ePd	20	43.20	0.6					LR	02	22.00	
			S	17	48.20				0.7s		111.70nm			5.3mb		NRA0	76.19	336	P	24	17.00	-0.9
MDJ	12.59	335	iPc	15	58.00	-1.6		PKI	44.37	277	Pd	20	45.70	-0.4		NAO	76.37	336	P	24	18.50	-0.4
			S	18	13.00			KKN	44.40	277	Pd	20	46.00	-0.2			0.7s		5.00nm			4.4mb
SSE	13.47	265	Pc	16	06.50	-2.6		DMN	44.61	277	Pd	20	47.70	-0.2		TAU	76.49	172	iPd	24	21.40	1.7
	1.0s		0.05nm			1.9mb X		MTN	46.26	188	eP	20	59.00	-1.4		FFC	78.78	30	iPc	24	32.40	0.3
DL2	13.50	299	Pd	16	08.70	-0.8			0.5s		100.00nm			5.4mb			0.5s		6.00nm			4.6mb
			iS	18	31.50			KSH	48.58	296	eP	21	19.40	1.2		VRI	79.04	318	ePc	24	35.00	1.3
SNY	13.50	313	Pc	16	08.50	-1.0		KNA	49.43	190	eP	21	24.00	-0.6		LRM	79.37	42	eP	24	37.00	1.2
			sP	17	37.00			TTA	50.55	33	eP	21	33.00	0.3		KRP	79.52	150	P	24	38.00	1.9
			iS	18	32.00			NDI	50.74	282	iPd	21	34.00	-0.4		MLR	79.71	318	ePd	24	38.00	0.6
CN2	13.72	323	iP	16	10.70	-1.1			0.5s		147.89nm			5.6mb		KVN	79.96	50	iP	24	40.30	1.4
	3.0s		0.45nm			2.4mb X					eS	28	18.00			KRA	79.98	324	ePd	24	39.10	0.6
			sP	17	41.00			BRW	51.24	22	iPc	21	38.30	0.8			0.7s		34.00nm			5.2mb
			S	18	36.00			IMA	51.73	29	ePc	21	41.70	0.4		HRI	80.60	304	iPd	24	42.80	0.6
			ScP	24	00.00				1.0s		15.50nm			4.3mb		TNP	81.09	50	P	24	45.90	1.1
NJ2	15.22	270	iPd	16	27.00	-0.9		KDC	52.36	40	eP	21	45.60	-0.3			0.8s		6.13nm			4.4mb
	3.0s		1.10nm			2.7mb X		WB5	52.98	183	iPc	21	50.00	-0.8					pP	26	14.00	386kmX
TIA	16.47	286	Pd	16	40.50	-0.4					eScP	26	13.80			FRB	81.15	11	eP	24	45.00	0.7
			S	19	33.00						eS	28	45.20			KSP	81.19	326	iPd	24	45.50	0.7
			ScP	24	06.80			WRA	53.05	183	Pc	21	50.30	-1.0					e	26	13.50	
QZH	18.01	247	P	16	55.30	-1.1			0.5s		32.50nm			4.9mb		ZNT	81.66	303	iPd	24	48.40	0.8
	4.0s		0.60nm			2.3mb X		QIS	53.67	177	iPc	21	54.70	-1.0		BRG	82.24	328	eP	24	50.90	0.7
			S	20	00.00				0.6s		43.00nm			5.0mb			0.8s		10.00nm			4.6mb
WHN	19.31	268	iPd	17	10.00	0.9		PMR	53.78	35	ePc	21	55.70	-0.4					e	26	18.00	
			S	20	28.00				0.8s		42.80nm			4.8mb		CLL	82.35	328	iPd	24	51.00	0.3
TIY	20.34	289	eP	17	19.20	0.0		CTA	53.89	169	iPc	21	56.10	-1.2			0.9s		18.00nm			4.8mb
	3.0s		0.60nm			2.5mb X			1.0s		55.00nm			4.8mb					epP	26	20.00	389kmX
			S	20	45.00						i	23	40.00			ELL	82.54	309	iP	24	52.20	0.0
GUMO	20.98	158	eP	17	25.20	-0.3		FBA	54.18	31	P	21	59.50	0.5		NOH	82.58	302	iPd	24	53.00	0.6
	1.3s	2352.94nm				6.4mb X		HYB	54.37	268	iPd	22	00.50	-0.6		PRU	82.59	327	Pd	24	52.50	0.5
PJG	20.98	158	eP	17	25.10	-0.4			1.0s		300.00nm			5.6mb		MSZ	82.63	158	P	24	53.00	1.0
GUA	21.04	158	e(P)	17	26.80	0.7		MBL	56.59	199	iPc	22	15.40	-1.0		EZN	82.94	313	eP	24	54.50	0.6
	0.8s	597.02nm				6.0mb X			0.5s		21.00nm			4.8mb		MBH	83.16	301	iPd	24	55.60	0.4
HHC	21.48	298	iPd	17	30.60	0.4		ASPA	56.77	183	iPc	22	16.00	-1.6		IZM	83.24	312	eP	24	55.90	0.4
	3.0s		0.80nm			2.6mb X			0.6s		83.00nm			5.3mb		HOF	83.56	328	eP	24	57.00	0.1
			S	21	01.00						ePP	24	32.60				0.7s		12.00nm			4.8mb
BAG	22.37	225	eP	17	37.00	-1.8					eS	29	37.30			KHC	83.64	326	P	24	57.80	0.5
			eS	21	10.00			GBA	57.20	265	Pc	22	20.60	-0.2		MSU	84.00	47	P	25	01.00	1.4
BTO	22.58	296	iPd	17	40.50	0.0			1.0s		14.20nm			4.4mb		VAY	84.23	316	eP	25	00.60	0.2
			iS	21	20.50			POO	57.78	272	iPc	22	24.20	-0.7		GRF	84.30	328	eP	25	01.60	1.0
GZH	23.07	250	iPd	17	44.80	-0.1			0.7s		56.16nm			5.1mb			1.3s		28.00nm			4.9mb
			eS	21	28.00			INK	59.33	26	iPc	22	34.00	-0.7		SKO	84.46	317	eP	25	01.80	0.3
XAN	23.24	279	iPd	17	46.10	-0.4		WARB	60.00	191	iPc	22	32.20	-7.4X		OHR	85.39	317	eP	25	05.00	-1.2
			S	21	28.40				0.5s		24.00nm			4.9mb		GOL	87.29	43	P	25	16.50	0.9
GYA	27.01	263	Pd	18	19.00	-1.7		RMQ	60.57	168	iPc	22	44.10	0.7		LPG	89.45	327	eP	25	25.40	-0.3
			PP	19	24.00				0.7s		116.00nm			5.5mb			0.8s		6.70nm			4.5mb
			PcP	21	30.80			MBC	61.08	15	ePc	22	46.00	-0.3		ALQ	89.81	47	P	25	29.00	1.6
			S	22	27.00				0.6s		26.00nm			4.9mb		AVF	89.91	330	eP	25	26.90	-0.5
			ScP	24	34.00			MAIO	61.95	297	iPd	22	52.90	0.3			0.8s		2.60nm			4.1mb
			PcS	25	11.60			BRS	62.27	164	iPd	22	54.80	0.2		GRR	90.28	333	eP	25	29.30	0.2
LZH	27.21	285	iPd	18	21.50	-1.0		ALE	63.98	3	ePc	23	06.50	1.5			0.6s		5.40nm			4.6mb
	1.5s		0.18nm			2.2mb X			0.9s		21.00nm			4.8mb		LPF	90.65	333	eP	25	31.10	0.4
QIZ	28.03	246	P	18	29.80	0.2					pP	24	30.00	384kmX			0.8s		8.00nm			4.7mb
			eS	22	47.50			FORR	64.39	188	iPc	23	07.60	-0.5		TCF	90.79	330	eP	25	31.80	0.3
CD2	28.08	274	iPd	18	29.00	-1.0			0.4s		106.00nm			5.8mb X			0.8s		2.60nm			4.2mb
			S	22	43.80			STK	65.03	176	iPc	23	12.60	0.4		LSF	91.10	331	eP	25	33.10	0.2
GTA	30.29	292	iPd	18	48.60	-0.7			0.5s		36.00nm			5.3mb			0.8s		6.70nm			4.6mb
	1.0s		0.10nm			2.1mb X		CMS	65.04	172	iPc	23	13.00	0.7		MFF	91.48	332	eP	25	34.90	0.3
			PP	20	07.80			COO	65.15	166	eP	23	13.00	-0.1			0.6s		9.00nm			4.9mb
			PcP	21	39.00			KEV	65.55	339	iP	23	15.00	-0.1		RJF	91.87	330	eP	25	37.00	0.6
			S	23	17.50				0.6s		10.40nm			4.7mb		CAF	91.94	330	eP	25	37.50	0.7
			S	24	43.60			COOL	65.59	195	eP	23	15.00	-0.8			0.6s		2.70nm			4.4mb
			SS	25	52.00			SOD	66.89	337	iP	23	23.00	-0.5		LFF	92.49	330	eP	25	39.90	0.7
			ScS	28	38.00			KLB	67.07	198	eP	23	24.20	-0.8			0.6s		11.50nm			5 0mb
KMI	30.78	264	iPd	18	53.00	-0.9		ADE	67.98	178	ePc	23	31.10	0.6		ZOBO	151.76	59	ePKP	32	23.00	7.8X
	2.0s		0.50nm			2.5mb X		IR2	68.56	299	iP-	23	34.60	0.2					e	33	53.00	
			PP	20	14.00			IR4	68.75	299	iP-	23	36.40	0.8		LPB	151.95	59	PKP	32	26.00	10.7X
			SS	25	55.00			IR7	68.76	299	iP-	23	36.20	0.6					e	33	58.00	
LOE	35.29	252	iPd	19	31.10	-0.8		IR1	68.82	299	iP-	23	36.80	0.8		CNCB	152.22	60	PKP	32	25.00	9.2X
CHG	36.79	256	iPd	19	44.30	-0.1		YKA	68.83	28	eP	23	35.90	0.5					i	34	03.00	
	1.0s		95.00nm			5.1mb		YKC	68.89	28	ePc	23	35.70	-0.1			S.D. = 1.0		on 149 of 156 obs.			

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* JUN 04, 1989 00h 40m 15.35± 1.74s
46.838 N ±16.0km 14.747 E ±10.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.4 (LJU), ML 2.1 (KBA).

RBL	0.90	244	P	40	32.00	-0.7
			eSg	40	44.50	
KBA	0.99	285	iPgd	40	34.50	0.2
			id	40	35.50	
			iSg	40	48.70	
VOY	1.00	216	ePg	40	34.90	0.5
			eSg	40	46.60	
PTJ	1.26	138	ePg	40	38.70	-0.1
			eSg	40	53.40	
TRI	1.32	211	iP	40	56.10	16.4X
FVI	1.37	260	P	40	40.50	0.0

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

JUN 04, 1989 01h 21m 52.90± 0.44s
29.992 N ± 7.1km 99.370 E ± 5.7km
DEPTH = 10.0km (geophysicist)
4.7mb (12 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	3.90	75	Pn	22	56.20	2.0
			Pg	23	05.80	
			Sg	23	53.00	
KMI	5.70	148	ePn	23	22.00	2.2
			Pg	23	40.50	
			Sn	24	30.00	
			Sg	24	55.00	
LZH	7.14	31	ePn	23	39.00	-1.1
GYA	7.33	117	Pn	23	43.40	0.7
			Sn	25	03.00	
XAN	9.06	61	P	24	04.00	-2.7
GTA	9.40	2	eP	24	13.60	2.1
Z	10s		1.30um			
CHG	11.14	182	eP	24	45.80	10.6X
CHTO	11.14	182	e(P)	24	34.20	-1.0
GUN	12.00	263	P	24	47.40	0.2
PKI	12.48	262	P	24	53.00	-0.7
	0.6s	17.00nm			5.5mb	
KKN	12.54	263	P	24	54.20	-0.2
	0.4s	12.00nm			5.5mb	
DMN	12.73	263	P	24	56.60	-0.4
BTO	13.68	36	eP	25	05.50	-3.9X
N	10s		0.70um			
E	10s		0.40um			
WMO	16.64	329	P	25	50.50	2.8
BJI	17.00	49	eP	25	52.00	-0.2
CN2	24.87	49	Pc	27	17.80	0.9
			pP	27	21.80	14kmX
SOD	56.07	334	eP	31	33.00	-1.0
SUF	56.16	328	iP	31	34.40	-0.3
	0.5s	3.90nm			4.7mb	
NUR	56.95	325	eP	31	40.00	-0.4
VRI	57.55	308	ePc	31	45.50	0.7
MLR	58.16	307	ePc	31	51.00	1.8
WRA	59.99	141	Pc	32	01.30	-0.8
	0.7s	3.30nm			4.6mb	
UPP	60.51	325	iP	32	04.70	-0.4
HFS	62.40	326	eP	32	16.90	-1.0
	0.5s	3.10nm			4.8mb	
KSP	63.20	315	eP	32	23.50	0.2
NAO	63.61	327	P	32	24.50	-1.4
	0.7s	1.60nm			4.3mb	
LPG	70.99	312	eP	33	13.70	0.6
	0.7s	7.70nm			4.9mb	
MBC	71.28	9	eP	33	11.00	-2.9
SMF	72.37	314	eP	33	21.20	0.3
	1.0s	6.00nm			4.6mb	
SSF	72.40	314	eP	33	21.40	0.3
	0.8s	2.60nm			4.4mb	
AVF	72.61	314	eP	33	22.40	0.1
	0.8s	5.30nm			4.7mb	
TCF	73.54	314	eP	33	28.60	0.8
	0.8s	4.50nm			4.6mb	
GRR	74.45	317	eP	33	33.20	0.2
	0.8s	8.00nm			4.8mb	
INK	74.51	18	eP	33	32.00	-0.9
BAO	146.83	288	ePKP	41	39.00	3.2X

S.D. = 1.3 on 32 of 35 obs.

JUN 04, 1989 02h 06m 07.94± 0.92s
23.184 N ± 6.7km 121.609 E ± 7.5km
DEPTH = 39.7 ± 6.7 km
4.5mb (6 obs.) 4.1Msz (1 obs)
TAIWAN (244)

TWF1	0.33	300	iPc	06	15.60	-1.0
			eS	06	20.70	
TWG	0.61	234	iPd	06	20.60	0.4
			eS	06	31.00	
TWD	0.89	359	ePc	06	23.40	-0.7
			eS	06	35.10	
TWK	1.03	275	iPd	06	27.00	0.8
			eS	06	41.60	
TWQ	1.30	327	iPc	06	31.00	1.1
TWZ	1.90	359	ePc	06	38.70	0.1
ANP	1.99	358	ePc	06	41.50	1.6
	0.8s	2626.87nm				
			eS	07	06.50	
QZH	3.27	303	Pnd	06	56.00	-2.0
			iSn	07	31.20	
HKC	6.92	264	P	07	48.50	-1.0
GZH	7.61	271	Pd	07	57.50	-1.6
SSE	7.89	357	eP	08	02.00	-1.0
Z	17s		0.45um			
NJ2	9.16	345	Pc	08	19.60	-1.0
WHN	9.78	320	P	08	26.00	-3.1X
QIZ	11.73	252	eP	08	56.00	0.2
E	15s		0.70um			
GYA	13.96	287	P	09	24.40	-1.0
XAN	15.51	317	eP	09	41.50	-4.0X
TIY	16.49	334	eP	10	02.00	4.1X
N	15s		0.80um			
KMI	17.33	280	eP	10	13.00	4.2X
BJI	17.42	346	eP	10	12.00	2.4
TSRJ	17.54	42	P	10	23.50	12.4X
CD2	17.65	300	P	10	14.80	2.2
MTMJ	19.34	43	P	10	37.50	4.4X
HHC	19.54	337	Pc	10	35.50	0.3
MAT	19.57	43	(P)	10	36.00	0.5
CHJJ	19.78	46	P	10	39.50	1.8
BTO	19.92	333	eP	10	39.00	-0.3
N	15s		0.80um			
E	13s		0.50um			
			pP	10	44.00	19kmX
			eS	14	16.00	
LZH	20.05	314	eP	10	43.00	2.2
	2.0s	0.05nm			1.5mb X	
Z	18s		0.70um		4.1Msz	
CN2	20.81	8	Pc	10	47.20	-1.1
E	15s		0.90um			
CHG	21.60	263	eP	10	57.90	1.4
CHTO	21.60	263	eP	10	57.90	1.4
	1.2s	10.07nm			4.1mb	
			e	11	03.10	
GTA	24.57	316	eP	11	27.00	1.4
Z	14s		1.20um		4.5MszX	
WRA	44.63	163	Pc	14	18.20	-0.3
	0.5s	2.00nm			4.2mb	
QIS	46.88	157	iPd	14	37.10	0.7
WARB	49.32	174	iPd	14	48.00	-7.2X
	0.3s	7.00nm			5.2mb	
MAIO	54.66	299	eP	15	36.00	0.5
SOD	70.73	336	iP	17	20.80	-0.8
SUF	72.12	331	iP	17	28.60	-1.3
	0.4s	7.30nm			5.0mb	
NUR	73.44	329	eP	17	36.00	-1.7
INK	74.00	22	eP	17	40.00	-0.9
MBC	74.15	13	eP	17	40.00	-1.6
VRI	76.98	314	ePc	17	58.50	0.2
MLR	77.62	314	ePc	18	02.00	0.0
HFS	78.62	331	eP	18	05.30	-1.7
	0.5s	2.30nm			4.4mb	
Z	16s		0.12um		4.3MszX	
			LR	55	13.00	
NAO	79.56	332	P	18	10.40	-1.6
	0.9s	6.30nm			4.6mb	
KRA	79.67	320	eP	18	12.60	-0.3
KSP	81.45	322	iP	18	22.00	-0.3
SKO	81.97	312	iP	18	25.20	0.0
BRG	82.76	323	e(P)	18	29.90	0.8
PRU	82.84	322	eP	18	29.00	-0.5
CLL	83.08	323	iPc	18	30.80	0.1
YKA	83.74	23	eP	18	34.40	0.5
KHC	83.80	321	P	18	34.90	0.4
GRF	84.87	322	eP	18	40.00	0.2

S.D. = 1.2 on 46 of 53 obs.

% JUN 04, 1989 02h 20m 36.98± 0.75s
37.888 N ± 6.6km 29.328 E ± 7.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.46	19	iPg	20	45.50	-0.9
			iSg	20	53.00	
BCK	1.09	113	ePn	20	57.80	0.3
YER	1.12	228	iPn	20	56.90	-1.1
ELL	1.23	158	ePn	21	00.20	0.3
IZM	1.71	288	ePn	21	08.00	1.0
DST	1.80	343	ePn	21	08.70	0.4

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

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* JUN 04, 1989 02h 46m 34.59± 0.79s
4.729 S ± 8.6km 133.971 E ±15.2km
DEPTH = 33.0km (normal)
4.4mb (5 obs.)
WEST IRIAN REGION (196)

AAI	5.85	280	eP	48	00.50	-0.9
MTN	8.54	199	eP	48	40.30	1.3
			i	48	41.60	
			e	48	52.00	
KNA	12.09	205	eP	49	27.00	-0.5
			eS	52	49.00	
WB5	15.06	179	eP	50	05.70	-1.2
			i	50	12.20	
			eS	52	54.00	
WRA	15.13	179	Pc	50	13.50	5.8X
	0.5s	5.50nm			4.1mb	
QIS	16.66	161	eP	50	30.00	2.7X
	0.7s	23.00nm			4.4mb	
			eS	53	51.00	
ASPA	18.83	180	iPc	50	54.50	0.2
	1.0s	42.00nm			4.6mb	
Z	17s		0.48um		3.6Msz	
			LR	58	50.00	
CTA	19.39	143	iPc	51	00.30	-0.6
	0.9s	29.41nm			4.6mb	
			i	51	06.10	
WARB	22.46	197	eP	51	29.00	-3.4X
CHG	41.68	305	eP	54	22.80	0.7
CHTO	41.68	305	eP	54	22.60	0.5
	1.1s	3.83nm			4.0mb	
CD2	45.70	323	eP	54	55.60	1.1
TIY	46.74	336	eP	55	01.30	-1.3
GTA	54.05	327	eP	55	56.00	-2.3
WMQ	63.76	324	eP	57	07.20	1.5
CNCB	149.52	135	PKP	06	24.20	5.1X
LPB	149.63	135	PKP	06	21.60	2.5X
			e	06	30.00	
ZOBO	149.78	134	ePKP	06	23.00	3.5X
CCH	150.38	138	PKP	06	21.50	1.4

S.D. = 1.3 on 13 of 19 obs.

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* JUN 04, 1989 02h 49m 55.18± 1.57s
4.663 S ±16.0km 134.023 E ±18.5km
DEPTH = 33.0km (normal)
4.4mb (3 obs.)
WEST IRIAN REGION (196)

AAI	5.89	279	eP	51	21.50	-1.0
MTN	8.62	199	eP	52	02.00	1.3
			e	52	10.00	
			eS	53	42.00	
WB5	15.13	179	eP	53	27.20	-1.1
			eS	56	16.70	
ASPA	18.89	180	iPd	54	15.70	0.0
	1.0s	26.00nm			4.4mb	
CTA	19.41	143	iPd	54	21.50	-0.3
	0.8s	35.82nm			4.7mb	
			i	54	36.80	
CHTO	41.69	305	eP	57	43.70	1.0
	1.0s	4.50nm			4.2mb	
CNCB	149.53	135	PKP	09	45.00	5.3X
LPB	149.64	134	ePKP	09	44.00	4.3X
			LR	27	16.00	
ZOBO	149.79	134	PKP	09	46.60	6.5X
Z	20s		0.41um		5.2MszX	
			LR	25	52.00	
CCH	150.40	138	PKP	09	48.00	7.3X

S.D. = 1.3 on 6 of 10 obs.

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* JUN 04, 1989 02h 59m 18.16± 0.61s
13.355 N ± 9.3km 123.133 E ±11.4km
DEPTH = 33.0km (normal)
4.5mb (2 obs.) 4.0Msz (1 obs.)

LUZON, PHILIPPINE ISLANDS (249)

QCP	2.37	303	eP	59	54.60	-0.9
BAG	3.91	321	eP	00	15.50	-2.1
			eS	01	01.00	
DAV	6.67	159	eP	01	03.20	6.7X
WHN	18.93	336	eP	03	38.50	-0.4
			eS	07	12.00	
GYA	20.21	313	eP	03	55.00	1.7
N	12s	0.40um				
LOE	21.02	284	eP	04	03.00	1.4
KMI	22.50	304	eP	04	15.00	-1.6
TIA	23.39	348	eP	04	25.00	0.1
			eS	08	32.50	
CHG	23.86	286	eP	04	30.00	0.4
CHTO	23.86	286	eP	04	30.00	0.4
CD2	24.98	318	eP	04	39.80	-0.6
TIY	26.07	340	eP	04	53.00	2.5
Z	20s	0.50um			4.0Msz	
E	17s	0.60um				
			sS	09	41.00	
BJI	27.28	348	eP	05	01.50	0.0
SNY	28.37	1	eP	05	09.80	-1.5
LZH	28.51	326	eP	05	18.00	5.1X
Z	27s	0.50um			4.0MszX	
BTO	29.48	339	eP	05	23.00	1.5
N	13s	0.30um				
E	13s	0.30um				
WB5	34.83	161	eP	06	07.20	-1.1
OIS	37.39	154	eP	06	30.00	0.1
PKI	37.90	298	P	06	38.00	3.4X
ASPA	38.27	164	iPc	06	37.40	0.1
	1.3s	8.00nm			4.4mb	
GBA	44.39	276	Pd	07	27.60	-0.1
	1.0s	9.60nm			4.6mb	
INK	82.56	21	eP	11	39.00	0.2
MBC	83.38	12	eP	11	43.00	0.0
S.D. = 1.2 on 20 of 23 obs.						

JUN 04, 1989 04h 07m 06.74± 0.50s
15.619 N ± 8.5km 95.392 W ± 8.8km
DEPTH = 33.0km (normal)
4.8mb (23 obs.) 3.5Msz (1 obs.)
NEAR COAST OF OAXACA, MEXICO (66)

UPA	16.83	111	eP	11	04.00	2.4
Z	20s	0.64um				
UYO	18.49	2	eP	11	21.30	-0.8
VVO	19.64	359	eP	11	34.30	-1.4
FKO	19.64	355	eP	11	37.10	1.4
	2.8s	407.30nm			5.2mb	
RRO	19.93	353	eP	11	40.20	1.4
SIO	20.06	358	eP	11	38.50	-1.6
TUL	20.21	359	eP	11	40.00	-1.7
	0.7s	7.60nm			4.2mb	
Z	19s	0.20um			3.5Msz	
			e	11	44.00	
			e	11	51.00	
			LR	17	32.00	
RLO	20.46	1	e(P)	11	43.50	-0.8
ALQ	21.66	335	eP	11	57.00	0.4
	1.2s	13.67nm			4.2mb	
			e	12	15.00	
			eS	16	18.00	
			eLg	19	02.00	
FVM	22.71	10	eP	12	06.70	-0.1
	1.0s	7.00nm			4.1mb	
GLD	25.53	342	eP	12	35.40	1.1
	1.7s	82.61nm			5.1mb	
PLM	26.24	316	eP	12	41.00	0.1
RVR	26.97	317	eP	12	47.00	-0.4
MWC	27.56	316	eP	12	53.00	0.0
SBB	27.69	317	eP	12	53.00	-1.0
CLC	28.25	320	eP	13	00.00	1.0
ISA	28.70	318	eP	13	05.00	1.9
KVN	30.68	324	eP	13	21.70	0.8
CMB	31.38	320	eP	13	27.00	0.2
	0.9s	0.90nm			3.6mb X	
LRM	33.34	338	eP	13	44.40	0.3
RSON	35.18	2	eP	13	58.60	-0.9
	1.0s	4.50nm			4.4mb	
SES	36.93	343	eP	14	15.00	0.6
FFC	39.36	354	eP	14	34.00	-0.6
	0.5s	6.00nm			4.6mb	
EDM	40.10	343	eP	14	40.00	-0.8
ZOBO	41.57	138	P	14	52.50	-1.4
Z	24s	0.45um			4.3MszX	
			LR	29	52.00	
LPB	41.79	139	eP	14	54.00	-1.5
CNCB	42.07	139	eP	14	55.00	-3.0X
CCH	43.67	137	eP	15	07.00	-3.7X
YKC	48.70	348	eP	15	48.80	-0.9
YKA	48.74	348	eP	15	49.70	-0.3
FRB	51.54	15	eP	16	10.00	-1.3
BAO	56.17	121	eP	16	44.90	-1.3
PPD	57.15	130	eP	16	57.80	4.8X
			e	17	00.30	
INK	57.98	344	eP	16	57.00	-1.2
SOB1	59.34	111	eP	17	07.00	-1.4
VAO	60.97	128	eP	17	25.40	5.9X
MBC	61.93	354	eP	17	25.00	-0.2
ALE	68.20	4	eP	18	06.00	0.4
	0.9s	6.00nm			4.7mb	
DAG	71.84	14	eP	18	27.00	-0.8
EKA	78.57	36	P	19	07.00	0.5
	0.8s	4.40nm			4.5mb	
GRR	81.45	42	eP	19	22.40	0.4
	1.2s	26.10nm			5.1mb	
FLN	81.60	42	eP	19	23.40	0.6
	1.0s	13.60nm			4.9mb	
LDF	81.87	42	eP	19	24.60	0.4
	1.2s	17.80nm			5.0mb	
MFF	82.35	44	eP	19	27.10	0.4
	1.2s	17.80nm			5.0mb	
LSF	83.57	44	eP	19	33.20	0.2
	1.2s	17.80nm			5.1mb	
TCF	84.01	44	eP	19	35.80	0.5
	1.2s	19.00nm			5.1mb	
NAO	84.18	28	P	19	37.10	1.3
	1.1s	6.50nm			4.7mb	
MAF	84.26	44	eP	19	36.80	0.2
	1.4s	21.70nm			5.1mb	
BGF	84.35	43	eP	19	37.30	0.3
	1.2s	17.80nm			5.1mb	
SSF	84.64	43	eP	19	38.80	0.4
	0.8s	4.00nm			4.7mb	
LOR	84.81	42	eP	19	39.70	0.4
	1.2s	16.00nm			5.1mb	
LBF	84.97	43	eP	19	40.50	0.4
	0.8s	2.60nm			4.5mb	
SMF	84.99	43	eP	19	40.40	0.3
	1.0s	4.80nm			4.6mb	
ENN	85.03	39	eP	19	41.00	0.8
	1.0s	11.00nm			5.0mb	
			e	19	47.00	
WLF	85.52	40	P	19	44.00	1.3
GBA	150.11	14	PKPc	26	55.60	4.3X
	1.3s	14.50nm				
S.D. = 1.0 on 51 of 56 obs.						

JUN 04, 1989 04h 49m 03.57± 0.35s
37.784 N ± 3.6km 29.256 E ± 4.6km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
TURKEY (366)
MD 4.1 (ATH). Felt at Denizli.

KHL	0.58	21	iPg	49	15.00	-0.3
YER	1.01	230	iPg	49	21.30	-1.4
BCK	1.11	107	iPn	49	23.80	-0.6
ELL	1.16	153	iPn	49	24.70	-0.6
ALT	1.44	28	iPn	49	30.10	0.4
KSL	1.68	171	ePb	49	33.90	0.8
			eSb	50	00.70	
IZM	1.69	292	ePn	49	33.20	-0.1
DST	1.88	345	iPn	49	36.70	0.6
GPA	2.63	18	ePn	49	48.40	1.6
EDC	2.78	337	iPn	49	48.10	-0.8
KAP	2.79	218	ePb	49	50.10	1.0
EZN	3.07	313	ePn	49	53.00	0.1
ISK	3.28	357	ePn	49	55.00	-1.0
BBTK	3.42	52	iPd	50	03.00	4.8X
PPCY	3.82	138	eP	50	05.50	1.8
NPS	3.87	230	ePb	50	05.30	0.9
DMK	4.19	344	ePn	50	08.00	-1.0
CSS	4.33	129	eP	50	12.50	1.6
RZN	5.24	320	eP	50	24.00	0.0
MMB	5.71	313	ePc	50	30.00	-0.5
VAY	6.26	306	eP	50	38.70	0.5
HRI	6.94	129	iPc	50	47.30	-0.6
JVI	7.69	138	iP	50	57.00	-1.3
MLR	8.09	343	eP	51	04.00	0.0
MBH	9.26	148	iP	51	18.30	-1.8
HFS	24.47	341	(P)	54	24.10	0.7
	0.5s	1 10nm			3.7mb	
S.D. = 1.0 on 25 of 26 obs.						

JUN 04, 1989 05h 24m 19.65± 0.52s
37.447 N ± 5.0km 21.124 E ± 4.2km
DEPTH = 10.0km (geophysicist)
3.6mb (1 obs.)
SOUTHERN GREECE (368)
ML 3.5 (ATH).

ITM	0.69	112	iPgd	24	32.70	-0.7
VLS	0.84	330	iPgc	24	36.10	0.2
ATH	2.12	75	ePg	25	00.00	4.4X
NEO	2.48	41	ePn	25	01.80	1.0
LIT	2.86	22	ePn	25	06.90	0.8
KZN	2.90	10	ePn	25	08.00	1.2
PAIG	3.18	38	ePn	25	11.20	0.5
VAM	3.21	128	ePn	25	11.50	0.4
PLG	3.44	31	ePn	25	14.40	0.0
THE	3.49	24	ePn	25	14.90	-0.1
OUR	3.64	37	ePn	25	17.40	0.1
			eSn	25	58.80	
OHR	3.67	356	iPnc	25	18.70	1.0
LCI	3.80	320	P	25	18.80	-0.6
KNT	3.96	20	ePn	25	22.40	0.7
			eSn	26	09.30	
VAY	4.03	16	ePn	25	22.60	0.0
SRS	4.14	27	ePn	25	24.40	0.2
NPS	4.23	120	ePn	25	27.10	1.5
TDS	4.35	302	P	25	32.10	4.7X
SKO	4.53	3	iPn	25	29.50	-0.3
Z	12s	0.42um				
N	11s	0.43um				
E	11s	0.29um				
			i	25	44.50	
			eSn	26	17.00	
			i	26	32.20	
			LQ	27	17.00	
ATN	4.54	281	P	25	31.60	1.6
MMB	4.60	25	iPc	25	30.00	-0.9
KKB	4.67	18	iPc	25	31.00	-0.8
EZN	4.71	58	eP	25	32.00	-0.5
MEU	4.95	268	P	25	33.30	-2.6
			eSn	26	27.10	
RDO	5.04	41	ePn	25	36.30	-0.7
RZN	5.06	32	iPc	25	38.00	0.4
MGR	5.11	303	P	25	34.10	-4.0X
MNO	5.12	277	P	25	39.10	0.7
KAP	5.23	109	ePn	25	39.50	-0.2
KDZ	5.35	37	eP	25	40.00	-1.5
VTS	5.38	17	iP	25	42.00	-0.1
SGO	5.49	306	P	25	44.70	1.2
NAO	24.29	348	P	29	37.10	-0.7
	0.6s	0.90nm			3.6mb	
SUF	25.49	5	eP	29	47.00	-2.3
S.D. = 1.0 on 31 of 34 obs.						

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* JUN 04, 1989 05h 43m 07.52± 1.50s
38.294 N ±11.0km 26.619 E ±11.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

IZM	0.52	78	iPg	43	17.80	-0.2
			iSg	43	24.50	
PRK	0.99	344	iPd	43	26.40	0.1
EZN	1.55	352	ePn	43	35.00	-0.1
YER	1.76	131	ePn	43	38.20	0.0
DST	2.04	49	ePn	43	43.10	0.7
EDC	2.27	25	ePn	43	45.00	-0.6
RDO	2.97	344	eP	43	48.50	-7.0X
S.D. = 0.6 on 6 of 7 obs.						

? JUN 04, 1989 07h 07m 39.64± 0.84s
51.910 S ±14.2km 160.869 E ±24.9km
DEPTH = 10.0km (geophysicist)
NORTH OF MACQUARIE ISLAND (165)

CBZ	5.14	100	Pd	08	46.50	-11.8X
MSZ	8.63	36	P	09	47.10	-0.3
			S	11	23.50	
TAU	12.84	309	iPc	10	41.90	-2.8X
BRS	25.24	343	eP	13	23.00	15.9X
DZM	30.10	10	iPc	13	52.10	0.6
CTA	33.75	335	eP	14	23.00	-0.4
SPA	38.28	180	e(P)	15	00.90	-0.7
	1.0s	285.00nm			6.0mb X	
MAT	90.29	342	eP	20	40.00	-1

04d 07h

	1.0s	11 00nm		5.1mb		
ALE	146.88	9 ePKP	27 20.50	0.5		
	0.8s	5.00nm				
MLR	149.96	276 ePKP	27 27.50	1.5		
	S.D. = 1.2	on	7 of 10 obs.			

? JUN 04, 1989 08h 47m 55.34± 1.40s
3.353 S ±14.9km 130.423 E ±28.9km
DEPTH = 33.0km (normal)
CERAM (272)

MTN	9.46	176 eP	50 13.00	0.6		
		eS	51 56.00			
WB5	16.87	167 eP	51 49.00	-1.7		
OIS	19.30	153 eP	52 21.00	0.4		
		e	54 25.00			
		eS	55 46.00			
ASPA	20.47	171 iPc	52 34.20	1.0		
	0.8s	77.00nm		5.1mb		
		eS	56 19.90			
		e	56 31.30			
MBL	20.48	209 eP	52 33.00	-0.2		
WARB	22.99	189 eP	52 53.00	-5.3X		
INK	95.34	22 eP	01 17.00	-0.1		
	S.D. = 1.2	on	6 of 7 obs.			

? JUN 04, 1989 09h 48m 33.72± 1.32s
12.867 N ±14.4km 144.692 E ±41.8km
DEPTH = 55.6 ± 11.3 km
SOUTH OF MARIANA ISLANDS (210)

GUA	0.70	18 iP	48 47.90	0.1		
		eS	49 00.40			
GUMO	0.74	13 eP	48 48.30	0.0		
PJG	0.74	13 eP	48 48.20	-0.1		
MAT	24.28	347 eP	53 47.00	0.0		
WB5	34.09	198 eP	55 15.20	0.0		
INK	75.10	22 eP	00 11.00	-0.2		
MBC	79.01	14 eP	00 33.00	0.2		
ZOBO	148.08	100 ePKP	08 17.00	4.0X		
CNCB	148.20	101 ePKP	08 17.00	3.8X		
	S.D. = 0.2	on	7 of 9 obs.			

* JUN 04, 1989 09h 58m 16.94± 1.61s
16.516 S ±14.2km 173.638 W ±12.3km
DEPTH = 58.1 ± 13.7 km
4.5mb (6 obs.)
TONGA ISLANDS (173)

AFI	3.15	35 iPc	59 05.40	0.1		
		S	59 39.00			
		e	00 13.00			
DZM	19.59	250 iPd	02 44.00	0.7		
KRP	23.36	202 P	03 22.70	1.7		
BRS	32.88	245 iPd	04 47.00	-0.7		
COO	34.41	240 iPd	05 00.20	-0.7		
	0.7s	34.00nm		5.4mb		
CTA	38.18	258 eP	05 33.00	0.2		
CMS	39.67	240 iPd	05 44.80	-0.3		
WB5	49.35	258 eP	07 01.00	-1.8		
ASPA	49.56	253 iPc	07 03.40	-0.9		
	0.6s	62.00nm		5.8mb X		
WARB	56 04	249 eP	07 43.40	-9.1X		
	0.3s	4.00nm		4.9mb		
SPA	73.59	180 e(P)	09 44.80	-0.8		
	1.0s	4 00nm		4.3mb		
CMB	73.75	41 eP	09 46.90	0.1		
ORV	73.98	39 eP	09 47.40	-0.7		
MIN	74.40	39 eP	09 50.70	0.0		
KVN	75.80	41 eP	09 58.80	0.0		
TNP	75.81	43 P	09 58.00	-0.9		
	0.8s	5.39nm		4.5mb		
MSU	79.38	45 P	10 19.00	0.3		
PMR	80.25	12 P	10 22.40	-0.1		
ALQ	81.69	50 eP	10 31.00	0.1		
	0.9s	2.10nm		4.1mb		
LRM	83.03	38 eP	10 37.60	-0.1		
FBA	83.53	11 iP	10 40.10	0.6		
	0.7s	2.30nm		4.3mb		
		e	11 14.00			
GOL	84.59	46 P	10 45.10	-0.6		
EDM	86.55	32 eP	10 54.50	-0.3		
CHTO	92.85	289 eP	11 27.80	2.8		
KRA	144.79	345 ePKP	17 49.10	0.3		
KSP	144.84	349 iPKPc	17 48.90	0.0		
CLL	144.89	353 ePKP	17 48.00	-0.9		
	1.3s	14.00nm				
BRG	145.19	352 iPKP	17 49.50	0.1		
	1.1s	12.00nm				
PRU	145.96	351 PKP	17 52.50	1.7		
KHC	146.94	351 PKP	17 55.60	3.1X		
LDF	147.57	8 ePKP	17 57.10	3.7X		
GRR	147.67	9 ePKP	17 56.70	3.1X		
LPF	147.99	9 ePKP	17 57.40	3.3X		
LOR	149.27	3 ePKP	18 01.20	5.0X		
SSF	149.45	4 ePKP	18 01.80	5.4X		
MFF	149.52	9 ePKP	18 01.20	4.7X		
LBF	149.56	3 ePKP	18 01.90	5.3X		
AVF	149.71	4 ePKP	18 01.90	5.1X		
BGF	149.90	5 ePKP	18 02.70	5.6X		
LSF	150.08	7 ePKP	18 02.70	5.3X		
TCF	150.11	6 ePKP	18 03.00	5.5X		
MAF	150.21	5 ePKP	18 03.40	5.8X		
LPG	151.10	359 ePKP	18 06.50	7.1X		
	S.D. = 1.0	on	28 of 43 obs.			

* JUN 04, 1989 10h 28m 18.09± 1.98s
23.804 N ± 8.2km 121.834 E ±17.1km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWD	0.35	322 iPd	28 25.10	-0.2		
TWF1	0.67	228 iPc	28 31.20	-0.2		
		eS	28 41.10			
TWO	1.03	297 ePc	28 37.70	0.2		
TWZ	1.31	350 ePc	28 42.10	-0.2		
TWK	1.35	247 iPc	28 43.00	0.1		
ANP	1.40	348 eP	28 44.00	0.2		
	S.D. = 0.3	on	6 of 6 obs.			

* JUN 04, 1989 10h 39m 08.04± 1.08s
38.759 N ±12.5km 45.315 E ± 9.5km
DEPTH = 33.0km (normal)
3.6mb (1 obs.)
N.W. IRAN-USSR BORDER REGION (344)

TAB	1.05	131 eP	39 26.00	-0.7		
MSL	2.93	217 ePnc	39 52.00	-1.4		
		ePg	39 55.50			
		iSn	40 18.50			
		iSg	40 24.00			
SLY	3.16	177 ePnd	39 58.50	2.0		
		iP*	40 02.60			
		ePg	40 08.50			
		iSn	40 39.50			
		iS*	40 49.00			
IR7	5.21	124 eP	40 25.80	-0.1		
IR2	5.42	123 eP	40 28.70	-0.1		
IR1	5.44	126 eP	40 28.90	-0.2		
BHD	5.53	188 ePd	40 04.00	-26.1X		
		eS	42 02.00			
		i	42 22.00			
		i	42 44.50			
IR4	5.69	126 eP	40 32.50	0.0		
HFS	29.19	327 eP	45 08.70	0.4		
	0.4s	0.50nm		3.6mb		
	S.D. = 1.1	on	8 of 9 obs.			

* JUN 04, 1989 12h 02m 35.94± 0.92s
11.698 N ±13.5km 43.968 E ± 7.8km
DEPTH = 10.0km (geophysicist)
4.9mb (9 obs.)
ETHIOPIA (558)
ML 4 4 (ARO).

OBO	0.72	293 iPd	02 48.20	-1.9		
ATA	0.78	252 ePd	02 52.45	1.3		
MKL	0.80	271 iPd	02 51.02	-0.5		
TDD	1.05	276 ePd	02 54.24	-1.4		
ARO	1.11	261 ePd	02 56.47	-0.4		
		S	03 13.51			
DAF	1.41	266 ePd	03 00.44	-1.3		
GBR	1.57	250 P	03 04.54	0.5		
AAE	5.76	243 ePn	04 07.00	3.1X		
BHD	21.48	1 ePc	07 25.00	-1.8		
		i	13 50.00			
		i	14 22.00			
SLY	23.84	3 ePd	07 47.00	-3.0X		
		e	14 05.50			
		e	15 30.00			
		e	15 43.50			
IR4	24.27	14 eP	07 54.80	0.4		
IR1	24.39	13 eP	07 56.40	0.8		
MSL	24.59	358 ePc	07 57.00	-0.4		
		e	15 28.00			
IR7	24.64	13 eP	07 58.30	0.2		
IR2	24.67	14 eP	07 57.20	-1.1		
BNG	26.17	256 iPc	08 13.50	1.0		
	0.9s	11.00nm		4.5mb		
TAB	26.34	4 eP	08 17.00	2.9X		
MAIO	28.22	27 eP	08 34.00	2.9X		
		eS	13 28.00			
CFR	36.01	341 ePc	09 41.00	1.9		
MLR	37.03	339 eP	09 48.00	0.2		
VRI	37.08	340 ePd	09 51.00	2.9X		
DMN	41.63	62 P	10 27.20	0.8		
KKN	41.82	61 P	10 26.60	-1.4		
	0.8s	42.00nm		5.2mb		
PKI	41.88	62 P	10 27.00	-1.6		
	0.8s	28.00nm		5.0mb		
SRO	41.93	334 eP	10 31.00	2.7		
SPC	42.24	337 eP	10 31.40	0.3		
GUN	42.36	61 P	10 32.00	-0.6		
	0.8s	45.00nm		5.3mb		
ZST	42.75	334 iPc	10 37.80	2.8X		
		e	18 30.00			
KHC	45.02	332 P	10 55.60	2.1		
KSP	45.11	335 eP	10 56.30	2.2		
PRU	45.21	333 eP	10 55.30	0.4		
BRG	46.12	334 iP	11 03.60	1.5		
	0.9s	12.00nm		4.9mb		
CLL	46.84	334 eP	11 08.00	0.2		
	1.3s	15.00nm		4.9mb		
NUR	50.77	348 iP	11 38.40	0.4		
SUF	52.52	350 iP	11 51.30	0.0		
	0.7s	7.50nm		4.7mb		
APO	53.54	342 eP	11 56.00	-2.8		
	0.6s	11.40nm		5.0mb		
NAO	54.72	341 P	12 05.50	-2.1		
	0.8s	6.60nm		4.7mb		
	S.D. = 1.4	on	31 of 37 obs.			

? JUN 04, 1989 13h 33m 32.70± 3.46s
16.547 S ±51.6km 174.171 W ±33.6km
DEPTH = 76.3 ± 22.9 km
4.3mb (5 obs.)
TONGA ISLANDS (173)

AFI	3.50	42 eP	34 26.10	0.2		
		eS	35 00.00			
ASPA	49.06	253 eP	42 13.00	-1.4		
	0.9s	6.00nm		4.6mb		
		e	42 44.90			
KVN	76.16	42 eP	45 14.80	0.3		
TNP	76.18	43 eP	45 14.10	-0.6		
	0.9s	1.56nm		3.9mb		
TTA	80.49	8 P	45 37.00	-0.5		
ALQ	82.10	50 eP	45 46.90	0.3		
	1.0s	1.25nm		3.8mb		
FBA	83.66	11 iP	45 52.90	-0.8		
	0.9s	3.20nm		4.3mb		
IMA	83.80	8 P	45 53.90	-0.7		
CHTO	92.37	289 eP	46 38.80	2.4		
	1.0s	2.25nm		4.5mb		
KSP	144.77	348 ePKP	53 00.80	-1.4		
PRU	145.91	350 PKPc	53 05.10	0.9		
DOU	146.52	1 PKPc	53 06.30	1.2		
	0.6s	7.30nm				
KHC	146.89	351 ePKP	53 07.90	2.1X		
WLF	146.97	360 PKP	53 08.40	2.6X		
GRR	147.78	8 ePKP	53 09.80	2.6X		
	0.6s	5.40nm				
LPF	148.10	9 ePKP	53 10.50	2.8X		
	0.8s	10.70nm				
LOR	149.32	3 ePKP	53 14.80	5.1X		
	0.8s	2.60nm				
CAF	151.53	6 ePKP	53 18.50	5.4X		
	0.8s	6.70nm				
	S.D. = 1.3	on	12 of 18 obs.			

* JUN 04, 1989 15h 00m 26.61± 2.99s
43.765 N ± 8.4km 17.492 E ±26.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.2 (ZAG), 2.5 (LJU). MD 3.1 (TRI). Felt in the Knin oreo.

BLY	1.01	347 Pg	00 53.10	7.4X		
		Sg	01 04.60			
ZAG	2.32	333 iPn	01 09.50	4.1X		
		iSn	01 33.10			

VBY	2.36	318	ePn	01 05.40	-0.6
			iSn	01 27.60	
			iSg	01 28.80	
PTJ	2.40	333	iPnc	01 07.40	0.8
			e(Sn)	01 33.70	
RIY	2.72	307	ePn	01 10.80	-0.4
			i	01 11.50	
			iSn	01 34.20	
			iSg	01 37.00	
AOI	2.83	267	ePn	01 13.57	0.8
			eSn	01 39.55	
CEY	2.94	313	ePn	01 14.50	0.2
			eSn	01 42.50	
DUI	3.07	228	P	01 15.50	-0.6
LJU	3.10	318	e(Pn)	01 16.40	-0.1
			eSn	01 45.00	
TRI	3.29	307	e(Pn)	01 22.20	3.0X
			i(Sg)	01 52.90	
ARV	3.31	267	P	01 18.20	-1.4
SDI	3.40	234	P	01 21.70	0.9
VOY	3.42	313	ePn	01 21.00	-0.1
			eSn	01 55.30	
BZS	3.48	56	ePc	01 51.00	29.2X
ASS	3.59	261	P	01 22.50	-1.0
SGO	3.59	208	P	01 31.50	8.1X
RBL	3.86	315	P	01 26.60	-0.7
			eSn	02 04.50	
CRE	4.02	270	P	01 29.00	-0.6
PGD	4.18	274	P	01 34.00	2.1
FVI	4.37	312	P	01 34.00	-0.5
CTI	4.74	301	P	01 41.00	1.1
OGA	5.52	306	ePn	02 02.80	11.8X
KHC	6.01	335	ePg	02 01.80	4.1X
			Sg	02 58.00	

S.D. = 1.0 on 16 of 23 obs.

JUN 04, 1989 15h 07m 46.35± 0.54s
23.443 N ± 7.5km 99.325 E ± 6.2km
DEPTH = 10.0km (geophysicist)
5.0mb (6 obs.)

BURMA-CHINA BORDER REGION (297)
ML 4.6 (BJI).

KMI	3.54	61	ePn	08 43.00	0.3
			Pgc	08 52.50	
			Sg	09 36.50	
CHG	4.62	184	ePn	08 09.30	-48.6X
			iPg	09 16.20	
CHTO	4.62	184	iPn	08 59.70	1.8
			ePg	09 16.00	
BDT	6.17	183	ePn	09 18.10	-1.7
			ePg	09 43.80	
			eSg	11 03.90	
GYA	7.31	64	Pn	09 34.60	-1.2
			Sn	10 52.60	
			Sg	11 38.40	
CD2	8.42	27	Pg	10 21.20	29.9X
			Sg	12 15.60	
QIZ	10.75	112	eP	10 23.70	0.3
NNT	10.80	178	ePg	11 10.50	46.4X
GUN	12.91	293	P	10 53.60	0.6
	0.8s	21.00nm		5.4mb	
PKI	13.22	291	P	10 56.40	-0.7
	0.6s	10.00nm		5.1mb	
KKN	13.39	292	P	10 58.70	-0.5
	0.9s	27.00nm		5.3mb	
DMN	13.49	291	P	11 00.20	-0.4
	0.6s	10.00nm		5.0mb	
WHN	15.14	59	eP	11 24.50	2.6X
N	12s	0.78um			
E	12s	0.61um			
GTA	15.92	1	eP	11 38.50	6.3X
E	12s	0.70um			
TIY	18.13	35	eP	12 00.50	0.6
N	14s	0.80um			
E	14s	0.60um			
		S		15 12.00	
BTO	19.33	25	eP	12 15.00	0.3
N	10s	0.20um			
E	10s	0.40um			
		ePP		12 31.00	
		eS		15 46.00	
HYB	20.36	257	eP	12 29.00	3.1X
BJI	21.83	37	eP	12 41.50	0.9
		eS		16 44.00	
WMQ	22.47	338	eP	12 50.40	3.3X
CN2	29.55	40	eP	13 52.60	-0.7

HFS	67.82	327	eP	18 48.80	2.3
	0.5s	1.00nm		4.3mb	
NAO	69.10	328	P	18 54.40	0.0
	0.9s	2.70nm		4.4mb	
INK	80.74	17	eP	19 59.00	-1.9

S.D. = 1.2 on 16 of 23 obs.

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* JUN 04, 1989 16h 35m 59.47± 1.13s
7.074 S ± 6.4km 129.813 E ±13.4km
DEPTH = 131.2 ± 13.3 km
5.0mb (12 obs.)

BANDA SEA (280)

AAI	3.73	334	iP	36 58.00	1.5
MTN	5.88	167	eP	37 26.00	0.4
	1.0s	1069.00nm		6.0mb X	
			eS	38 23.00	
KNA	8.68	187	eP	38 01.40	-2.1
	0.2s	70.00nm		6.0mb	
			eS	39 32.00	
WB5	13.48	161	iPc	39 04.20	-2.4
			iS	41 14.30	
QIS	16.42	146	eP	39 45.00	1.3
			eS	42 35.00	
ASPA	16.96	167	eP	39 49.90	-0.4
	0.6s	68.00nm		5.1mb	
			eS	42 44.80	
MBL	17.01	214	eP	39 50.00	-0.9
	0.3s	17.00nm		4.8mb	
			eS	42 48.00	
WARB	19.24	189	eP	40 10.10	-6.1X
	0.4s	19.00nm		4.8mb	
			eS	43 31.00	
CTA	20.53	131	iPc	40 36.70	7.3X
	0.9s	16.81nm		4.4mb	
NANU	20.65	220	iPd	40 31.50	1.0
			eS	44 15.00	
MEKA	22.20	208	eP	40 47.00	1.1
FORR	23.71	184	iPc	41 02.70	2.3
	0.4s	52.00nm		5.3mb	
MRWA	25.59	209	eP	41 20.00	1.9
			e	41 45.00	
PSI	32.32	286	eP	42 18.00	-0.3
CHG	39.85	311	eP	43 22.00	0.1
	0.9s	16.60nm		4.8mb	
CHTO	39.85	311	iPc	43 22.10	0.2
	0.8s	13.36nm		4.8mb	
			pP	43 46.20	104kmX
GYA	40.19	327	P	43 23.60	-1.1
WHN	40.23	339	eP	43 25.50	0.7
MAT	44.09	10	eP	43 56.00	-0.2
	0.9s	9.24nm		4.5mb	
TIY	47.42	341	eP	44 22.60	0.0
CN2	50.79	356	eP	44 48.40	0.2
GTA	53.95	331	eP	45 11.80	-0.1
GUN	54.86	311	P	45 18.20	-0.9
	0.6s	36.00nm		5.5mb	
PKI	55.03	311	P	45 19.20	-1.1
	0.6s	16.00nm		5.1mb	
KKN	55.24	311	P	45 20.60	-1.1
	0.6s	15.00nm		5.1mb	
DMN	55.28	311	P	45 21.20	-0.8
WMQ	63.35	327	P	46 17.40	0.5
UYO	131.12	50	ePKP	55 01.00	3.2X
CNCB	150.46	144	PKP	55 38.00	5.0X
			i	55 43.10	
			i	56 18.00	
LP8	150.60	143	ePKP	55 44.00	10.9X
ZOBO	150.79	143	PKP	55 37.00	3.4X
PPD	151.06	178	ePKP	55 41.50	8.4X

S.D. = 1.2 on 25 of 32 obs.

? JUN 04, 1989 18h 34m 36.41±10.38s
36.790 N ±51.1km 98.523 E ±79.2km
DEPTH = 10.0km (geophysicist)

QINGHAI PROVINCE, CHINA (325)

GTA	2.81	21	ePn	35 22.20	-0.1
			Pg	35 35.60	
LZH	4.35	98	ePn	35 45.00	0.8
BTO	9.76	64	eP	37 01.00	1.1
HHC	10.95	64	Pd	37 16.20	-0.1
TIY	11.13	81	eP	37 16.90	-1.8
N	11s	0.50um			

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

JUN 04, 1989 19h 13m 11.49± 0.50s
39.674 N ± 4.5km 20.013 E ± 3.1km
DEPTH = 20.5 ± 4.6 km
4.1mb (4 obs.)

GREECE-ALBANIA BORDER REGION (392)
ML 4.4 (ATH), 4.0 (TTG).

KZN	1.49	64	ePn	13 35.60	-1.7
			eSn	14 00.80	
OHR	1.56	22	iPnc	13 39.40	1.2
VLS	1.56	163	ePn	13 37.00	-1.3
			eSn	14 05.10	
LCI	1.71	293	P	13 40.80	0.4
			eSn	14 09.30	
LIT	1.95	77	ePn	13 44.40	0.4
			eSn	14 09.70	
ULC	2.36	346	ePn	13 50.50	0.7
			eSn	14 34.00	
THE	2.46	66	ePn	13 51.40	0.3
			eSn	14 21.40	
NEO	2.51	97	ePn	13 53.00	1.0
SKO	2.54	25	iPn	13 54.00	1.7
	1.0s	460.00nm			
			iPb	13 57.50	
			iSn	14 25.00	
			i	14 29.00	
			LQ	14 35.00	
VAY	2.55	49	iPn	13 53.00	0.5
KNT	2.66	55	ePn	13 54.80	0.8
PLG	2.73	74	ePn	13 54.50	-0.5
			eSn	14 28.50	
BDV	2.76	341	ePn	13 55.50	0.1
			eSn	14 42.00	
SOH	2.80	65	ePn	13 56.70	0.6
TTG	2.81	349	ePn	13 57.30	1.2
			eSn	14 45.00	
PAIG	2.84	84	ePn	13 56.40	-0.1
			eSn	14 30.50	
TDS	2.84	271	P	13 57.60	1.1
ITM	2.91	148	ePn	13 57.30	-0.2
PVY	2.92	359	ePn	14 01.00	3.2X
			eSn	14 52.00	
HCY	3.00	338	ePn	13 58.80	0.0
			eSn	14 48.00	
SRS	3.09	61	ePn	14 00.00	-0.2
OUR	3.12	77	ePn	14 00.20	-0.3
IVA	3.20	358	ePn	14 03.50	1.8
			eSn	14 56.00	
KKB	3.20	46	iPc	14 03.00	1.3
ATH	3.35	119	ePn	14 03.20	-0.7
BRY	3.41	342	ePn	14 04.70	-0.1
			eSn	14 58.00	
MMB	3.41	55	iPd	14 05.00	0.2
MGR	3.46	279	P	14 07.30	1.9
SGO	3.71	285	P	14 11.50	2.5
VTS	3.78	39	iPd	14 12.00	1.9
ATN	3.86	248	P	14 13.50	2.5
PLD	4.31	54	eP	14 20.00	2.6
KDZ	4.56	63	eP	14 20.00	-1.1
DUI	4.67	297	P	14 24.80	2.1
MEU	4.75	239	P	14 20.90	-2.9
PRK	4.86	93	ePn	14 25.50	0.2
EZN	4.87	86	ePn	14 25.00	-0.3
SDI	5.13	295	P	14 30.50	1.4
BEO	5.15	4	ePn	14 28.50	-0.9
			iSg	16 04.40	
PVL	5.34	47	eP	14 30.00	-2.0
BLY	5.49	338	eP	15 14.20	40.1X
ALP	5.76	305	iP	14 39.24	1.2
IZM	5.79	100	ePn	14 38.10	-0.3
RDP	5.92	293	Pc	14 41.00	0.7
BZS	6.06	11	ePc	14 42.00	0.0
NPS	6.26	133	ePn	14 45.10	0.0
ASS	6.49	304	P	14 49.30	1.0
ARV	6.53	308	P	14 48.50	-0.4
DEV	6.56	18	ePd	15 09.00	19.8X
DST	6.65	88	ePn	14 49.80	-0.8
CMP	6.71	32	ePc	14 56.00	4.6X
VBY	6.80	331	ePn	14 52.20	-0.4
			eSn	16 08.60	
PTJ	6.90	336	eP	15 52.10	58.1X
KAP	7.02	124	ePn	14 56.40	0.8
CRE	7.21	306	P	14 57.50	-1.0
MLR	7.28	35	eP	15 01.00	1.6
ISR	7.29	39	eP	15 00.00	0.5
CEY	7.32	328	ePn	14 59.00	-0.9
			eSn	16 25.50	
LJU	7.53	329	ePn	15 01.60	-1.2

04d 19h

		eSn	16	27.00		
TRI	7.58	325 e(Pn)	15	01.90	-1.6	
		i(Sn)	16	15.40		
VOY	7.78	327 ePn	15	05.00	-1.4	
		eSn	16	34.50		
VRI	7.92	36 ePd	15	10.00	1.8	
CFR	8.16	45 eP	15	20.00	8.5X	
RBL	8.24	327 P	15	11.40	-1.4	
SOP	8.39	344 eP	15	22.80	8.0X	
FVI	8.70	325 P	15	17.50	-1.6	
CTI	8.84	319 P	15	19.50	-1.7	
KHC	10.51	336 P	15	42.80	-1.2	
PRU	11.02	341 eP	15	49.00	-1.9	
CLL	12.62	339 eP	16	26.00	13.4X	
HFS	20.86	351 eP	17	52.20	-2.1	
	0.5s	4.30nm			4.1mb	
NUR	21.06	6 iP	17	53.60	-2.7	
NAO	21.93	348 P	18	03.70	-1.4	
	0.9s	9.20nm			4.2mb	
EKA	21.99	323 Pc	18	06.10	0.4	
	1.2s	11.00nm			4.2mb	
SUF	23.37	7 iP	18	18.70	-0.5	
	0.6s	3.40nm			4.1mb	
IR7	24.47	90 eP	18	29.60	-0.8	
IR7	24.47	90 eP	18	33.00	2.6	
IR1	24.63	90 eP	18	30.50	-1.4	
IR2	24.71	90 eP	18	31.50	-1.1	
	S.D. = 1.4	on 71 of 79 obs.				

JUN 04, 1989 19h 25m 45.82± 0.57s
37.089 N ± 5.9km 29.014 E ± 5.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.59	275 iPg	25	56.40	-1.3	
		iSg	26	06.40		
ELL	0.79	115 iPg	26	00.80	-0.5	
		iSg	26	13.80		
KSL	1.07	154 eP	26	05.40	-0.6	
KHL	1.30	18 iPn	26	10.30	0.4	
BCK	1.31	73 ePn	26	10.70	0.6	
IZM	1.91	314 iPn	26	19.10	0.4	
KAP	2.14	225 eP	26	22.70	0.7	
DST	2.53	353 ePn	26	27.00	-0.7	
PRK	3.05	316 eP	26	45.40	10.5X	
NPS	3.30	237 eP	26	39.60	1.0	
	S.D. = 0.9	on 9 of 10 obs.				

? JUN 04, 1989 19h 39m 19.19± 0.74s
18.896 S ±16.8km 173.432 W ±16.9km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
TONGA ISLANDS (173)

AFI	5.21	18 iPc	40	36.70	-0.2	
		eS	41	19.50		
DZM	19.11	257 iPc	43	46.90	4.6X	
TVO	22.98	91 iP	44	37.80	15.7X	
	1.4s	85.00nm				
PMO	24.72	85 iP	44	51.40	12.5X	
	0.9s	30.00nm				
VAH	24.92	86 iP	44	53.40	12.5X	
	0.9s	20.00nm				
TPT	24.99	85 iP	44	54.20	12.7X	
	0.9s	30.00nm				
RUV	25.17	86 iP	44	55.80	12 6X	
	0.9s	35.00nm				
BRS	32.12	248 iPd	45	50.80	4.9X	
COO	33.44	243 eP	46	03.00	5.6X	
CTA	37.96	261 iPd	46	36.10	0.3	
CMS	38.72	243 eP	46	48.60	6.5X	
ASPA	49.08	255 iPc	48	06.50	0.8	
	0.8s	51.00nm			5.6mb	
WB5	49.09	260 iPd	48	04.90	-0.8	
WARB	55.42	251 eP	48	46.50	-6.5X	
PCI	67.73	277 ePc	50	15.50	-0.6	
SPA	71.22	180 e(P)	50	36.20	-0.7	
	1.0s	6.50nm			4.6mb	
KVN	77.45	41 eP	51	11.50	-1.7	
ALQ	83.07	50 e(P)	51	45.00	1.7	
		e	52	32.50		
FBA	85.82	11 eP	51	51.00	-5.2X	
	0.7s	0.50nm			3.8mb	
KSP	147.20	349 ePKP	58	58.50	0.3	
		e	59	40.00		
		e	00	04.50		
CLL	147.26	353 e(PKP)	58	59.00	0.8	
		e	00	08.00		
BRG	147.56	351 e(PKP)	58	52.00	-6.7X	
		e	59	44.00		
KHC	149.31	351 PKP	59	05.00	3.4X	
		e	00	12.50		
	S.D. = 1.1	on 10 of 23 obs.				

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* JUN 04, 1989 20h 29m 45.83± 0.69s
52.738 S ±15.5km 160.713 E ±12.0km
DEPTH = 10.0km (geophysicist)
5.2mb (4 obs.) 4.6Msz (1 obs.)
MACQUARIE ISLANDS REGION (167)

CBZ	5.15	91 Pc	31	04.50	-0.2	
MSZ	9.37	33 P	32	10.80	7.1X	
		S	33	56.00		
TAU	13.31	312 iPd	32	53.80	-3.3X	
TOO	18.52	319 eP	34	05.00	1.0	
CAN	19.30	330 eP	34	19.70	6.2X	
COO	23.07	340 eP	34	56.00	3.7X	
SBA	25.31	177 eP	35	15.60	2.1X	
DZM	30.93	10 iPc	36	09.00	4.0X	
ASPA	35.47	315 iPd	36	43.60	-0.7	
	1.2s	49.00nm			5.3mb	
Z	22s	1.14um			4.6Msz	
		i	36	47.40		
		LR	49	22.30		
QIS	36.03	325 iPc	36	49.30	0.3	
WAR8	36.77	303 iPd	36	46.10	-9.2X	
SPA	37.45	180 ePc	37	00.80	0.0	
	1.0s	35.50nm			5.1mb	
WB5	38.63	318 iPc	37	10.20	-0.7	
MBL	44.44	299 iPd	37	57.00	-1.5	
	0.7s	51.00nm			5.5mb	
MTN	46.28	318 ePc	38	12.70	-0.5	
CHG	88.97	303 eP	42	42.80	1.0	
CHTO	88.97	303 eP	42	43.00	1.2	
	1.0s	5.25nm			4.8mb	
		e	42	47.10		
MAT	91.05	342 eP	42	54.00	2.9X	
MAIO	124.30	286 ePKP	48	52.00	6.0X	
INK	130.11	26 ePKP	49	03.00	7.0X	
VRI	149.66	276 ePKP	49	36.00	4.5X	
		e	14	33.00		
VAY	149.69	265 ePKP	49	35.20	3.5X	
MLR	149.94	274 ePKPd	49	36.50	4.4X	
		e	14	35.00		
OHR	150.64	263 iPKP	49	39.20	6.0X	
SKO	150.76	265 iPKP	49	39.00	5.7X	
		i	49	43.00		
CLO	151.63	271 ePKPc	49	41.00	6.5X	
BZS	152.63	271 ePKP	49	43.50	7.7X	
	S.D. = 1.0	on 10 of 27 obs.				

& JUN 04, 1989 21h 33m 59.70s
34.600 N 116.840 W
DEPTH = 2.0km
4.2mb (2 obs.)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 4.5 (PAS), 4.2 (BRK). Felt (V) at Apple Valley; (IV) at Burbonk; (III) at Borstow, Cathedral City, Daggett, Fawnskin, Hesperio, Lucerne Valley, Mentone, Newberry Springs, Palm Desert, Posadeno, Riolto and Wilmington.

GSC	0.70	2 iPd	34	13.30	-0.4	
RVR	0.75	216 iPd	34	13.60	-1.1	
PEC	0.75	201 iPd	34	13.80	-1.0	
SBB	0.82	276 iPc	34	15.00	-1.0	
MWC	1.07	250 iPd	34	19.80	-1.0	
PLM	1.24	181 iPd	34	22.70	-1.0	
HAY	1.34	131 iPc	34	23.20	-1.9	
CLC	1.36	333 iPc	34	24.30	-1.4	
OSM	1.36	359 iPd	34	24.50	-1.1	
CPE	1.73	187 eP	34	29.90	-1.0	
PANV	1.81	353 iPc	34	30.70	-1.6	
ABL	1.98	278 eP	34	32.40	-2.4	
FMT	2.04	1 eP	34	33.80	-1.7	
MCA	2.07	350 eP	34	34.20	-1.8	
SDH	2.08	11 eP	34	34.60	-1.6	
LSM	2.18	12 iPc	34	36.20	-1.5	
YMT3	2.21	9 iP	34	36.60	-1.4	
GLA	2.28	132 iPc	34	36.00	-3.0	
SGV	2.38	356 iPd	34	39.20	-1.4	
BCH	2.73	283 eP	34	42.80	-2 7	
MGM	2.88	350 eP	34	46.60	-1 2	
PHAM	3.16	294 eP	34	48.80	-2 7	
FRI	3.34	316 iPc	34	52.10	-1.8	
		iPgc	34	59.90		
		iS	35	42.00		
TNP	3.49	355 iPd	34	55.20	-1.1	
LLA	3.90	302 iPc	34	59.40	-2.6	
		iPg	35	07.10		
PRS	4.08	296 ePc	35	00.70	-3.8	
		ePg	35	11.10		
SAO	4.33	301 ePd	35	04.60	-3.4	
		iPg	35	14.50		
CMB	4.47	321 ePc	35	08.60	-1.4	
		iSg	36	17.60		
KVN	4.56	348 eP	35	10.20	-1.2	
ARN	4.69	307 eP	35	10.70	-2.5	
MHC	4.76	306 ePc	35	11.22	-3.1	
PCC	5.34	304 ePc	35	19.20	-3.2	
MSU	5.42	43 eP	35	22.00	-1.7	
BKS	5.45	308 ePc	35	20.68	-3.3	
BRK	5.46	308 ePd	35	20.90	-3.2	
ORV	6.19	324 eP	35	32.80	-1.6	
PV09	7.32	56 ePn	35	48.00	-2.6	
PV10	7.33	57 ePn	35	48.50	-2.1	
		eP*	36	06.20		
		ePg	36	12.50		
		eLg	37	50.00		
ALQ	8.55	85 ePn	36	08.00	0.3	
		ePg	36	30.00		
		eLg	38	25.50		
GOL	10.47	58 ePn	36	32.20	-2.0	
		ePg	37	13.50		
		eLg	39	28.00		
GLD	10.60	58 ePn	36	34.00	-1.9	
		eLg	39	32.00		
RSON	23.37	39 eP	39	11.60	1.3	
	0.7s	15.16nm			4.7mb	
IMA	38.24	337 eP	41	24.00	1.3	
	1.0s	1.88nm			3.8mb	
	43 obs. associated					

JUN 04, 1989 21h 36m 15.75± 1.06s
30.087 N ± 5.6km 50.717 E ± 7.3km
DEPTH = 25.8 ± 9.9 km
4.3mb (3 obs.)
IRAN (348)

SHI	1.63	105 eP	36	44.00	0.7	
DHR	3.80	188 ePc	37	18.50	4.5X	
BRF	4.00	182 (Pn)	37	14.00	-2.8X	
BEE	4.06	182 iPn	37	15.70	-2.0	
		(Sn)	38	05.00		
IR4	5.14	2 eP	37	32.80	-0.4	
KER	5.24	325 eP	37	57.00	22.4X	
IR1	5.31	360 eP	37	35.70	0.1	
IR2	5.56	2 eP	37	39.00	-0.1	
IR7	5.60	359 eP	37	39.20	-0.5	
BHD	6.26	302 ePd	38	24.00	35.2X	
		iS	40	02.00		
		iLR	40	36.00		
RYD	6.47	215 eP	37	53.50	1.6	
SLY	7.03	323 eP	38	33.50	33.8X	
		i	39	20.50		
		e	40	34.50		
QASM	7.49	240 eP	38	05.50	-0.6	
TAB	8.75	337 eP	39	04.00	40.2X	
MSL	8.92	317 ePc	38	26.00	0.1	
		eS	40	04.50		
		S	41	24.00		
MAIO	9.61	48 eP	38	35.00	-0.6	
KMSA	11.19	212 eP	38	56.10	-1.1	
QUE	14.05	86 eP	39	40.00	4.5X	
NDI	23.12	87 eP	41	22.00	1.3	
VRI	24.48	317 ePd	41	35.00	1.2	
MLR	24.76	315 ePc	41	40.50	3.9X	
KKN	30.27	86 P	42	28.80	1.6	
PKI	30.43	86 P	42	27.40	-1.4	
KHC	33.91	315 eP	43	00.00	1.4	
NUR	35.05	338 eP	43	07.00	-1.1	
SUF	36.30	341 eP	43	20.00	1.2	
HFS	38.91	331 eP	43	40.20	-0.5	
	0.4s	3.30nm			4.4mb	
BNG	39.66	236 iPd	43	49.00	1 5	
	0.4s	3.00nm			4.4mb	
NAO	40.48	331 P	43	52.20	-1.4	
	0.8s	1.90nm			3.9mb	

MBC 73.74 358 eP 47 48.00 -0.8
S.D. = 1.2 on 22 of 30 obs.

JUN 04, 1989 22h 43m 28.53± 0.96s
27.586 N ± 5.2km 140.882 E ± 5.8km
DEPTH = 37.5 ± 9.2 km
4.7mb (7 obs.) 4.4Msz (3 obs.)
BONIN ISLANDS REGION (212)
Felt (I JMA) on Chichi-shimo.

CBI	1.26	113	eP	43 50.00	0.1
			eS	43 56.00	
CHJJ	8.59	350	P	45 33.00	-0.4
KAKJ	8.61	356	eP	45 32.90	-0.8
TSRJ	8.96	333	P	45 41.80	3.3X
MAT	9.21	346	eP	45 42.00	0.0
			eS	47 33.00	
MTMJ	9.34	345	P	45 44.40	0.5
NIIJ	9.76	351	eP	45 48.60	-0.9
GUMO	14.42	164	eP	46 53.50	1.5
	1.0s	112.00nm		5.4mb X	
GUA	14.47	164	eP	46 52.50	-0.3
	0.9s	100.84nm		5.3mb X	
ANP	17.52	267	eP	47 40.00	8.3X
SSE	17.52	286	eP	47 36.00	4.4X
Z	14s	0.40um			
N	10s	0.90um			
E	10s	0.20um			
NJ2	19.62	288	eP	47 57.50	0.8
Z	18s	0.60um			
SNY	20.05	320	Pc	48 05.20	4.0X
Z	12s	1.00um		4.4MszX	
N	11s	0.50um			
E	13s	1.00um			
		sP	48 21.00		
		S	51 46.00		
OZH	20.16	268	eP	48 03.00	0.5
N	10s	0.20um			
BAG	21.83	244	eP	48 19.50	-0.2
TIA	21.89	299	eP	48 20.30	0.3
		S		52 22.50	
QCP	22.48	239	eP	48 25.30	-0.7
WHN	23.36	284	eP	48 35.00	0.5
N	10s	0.66um			
BJI	23.91	308	eP	48 37.50	-2.2
Z	14s	0.35um		4.0MszX	
		eS	52 58.00		
DAV	25.03	218	eP	48 54.00	3.3X
TIY	25.91	300	P	49 00.70	1.8
N	15s	0.50um			
HHC	27.48	306	eP	49 12.20	-1.1
XAN	28.12	291	P	49 20.30	1.2
		S		54 07.00	
BTO	28.51	305	eP	49 23.00	0.4
N	11s	0.30um			
E	11s	0.30um			
		pP	49 32.00	31kmX	
		S	54 10.00		
		SS	55 36.00		
LZH	32.43	295	P	49 57.50	0.0
	1.0s	0.04nm		2.2mb X	
Z	18s	0.70um		4.4Msz	
E	10s	0.20um			
CD2	32.47	285	P	50 00.40	2.7
GTA	35.93	300	eP	50 27.20	-0.3
Z	18s	1.10um		4.7Msz	
N	12s	0.30um			
		S		56 06.00	
CHTO	39.37	266	eP	50 56.20	-0.2
	0.8s	1.83nm		3.9mb	
WMO	45.35	305	P	51 44.30	-0.7
Z	20s	0.42um		4.4Msz	
		eS		58 30.00	
WB5	47.60	188	eP	52 01.50	-1.3
QIS	47.87	182	eP	52 03.00	-1.9
GUN	48.32	284	P	52 09.80	0.9
PKI	48.80	284	P	52 13.60	1.0
KKN	48.86	284	P	52 13.20	0.3
	1.1s	34.00nm		5.3mb	
DMN	49.05	284	P	52 14.20	-0.2
ASPA	51.40	188	eP	52 30.70	-1.2
BRS	55.84	167	iPc	53 04.50	-0.1
MBC	65.72	15	eP	54 11.00	-0.1
ALE	69.54	3	eP	54 36.00	1.0
	0.9s	19.00nm		5.1mb	
YKA	72.26	28	eP	54 52.80	1.2
YKC	72.32	28	ePc	54 52.10	0.1
DAG	75.13	355	iPc	55 07 00	-1.1
	0.9s	15.13nm		5.0mb	
SUF	76.25	334	iP	55 12.70	-1.9
EDM	77.11	36	eP	55 20.50	0.8
WDC	77.23	51	e(P)	55 19.00	-1.5
ORV	78.39	51	e(P)	55 26.40	-0.6
SES	79.77	38	eP	55 35.00	0.7
CMB	79.85	52	eP	55 36.40	1.4
FRI	80.81	53	e(P)	55 41.30	1.3
LRM	81.30	43	eP	55 44.30	1.6
FFC	81.93	31	eP	55 46.00	0.5
	1.1s	15.00nm		4.9mb	
HFS	82.51	336	eP	55 45.70	-2.7
	0.4s	0.60nm		4.0mb	
NAO	83.01	338	P	55 49.00	-2.0
	0.8s	2.10nm		4.3mb	
ZOBO	150.91	73	PKP	03 15.50	1.3
	1.0s	17.00nm			
LPB	151.05	74	ePKP	03 14.00	-0.2
CNCB	151.27	74	ePKP	03 18.00	3.3X
			i	03 22.40	

S.D. = 1.2 on 50 of 56 obs.

JUN 05, 1989 00h 24m 27.63± 0.80s
30.226 N ± 6.2km 51.012 E ± 7.8km
DEPTH = 37.3 ± 11.4 km
4.0mb (1 obs.)
IRAN (348)

SHI	1.44	113	eP	24 52.00	0.3
			eS	25 13.00	
DHR	3.98	191	ePd	25 27.00	-0.8
BEE	4.22	186	ePn	25 25.00	-6.1X
			(Sn)	26 13.50	
IR4	5.00	359	eP	25 42.00	-0.4
IR1	5.18	357	eP	25 45.00	0.0
KER	5.28	322	eP	26 00.00	13.7X
IR2	5.42	359	eP	25 47.70	-0.6
IR7	5.47	357	eP	25 48.80	-0.2
BHD	6.41	300	ePc	26 33.00	30.9X
			eS	28 07.00	
			e	29 04.00	
QASM	7.78	240	eP	26 22.00	0.6
MAIO	9.33	47	eP	26 44.00	1.2
MLR	24.84	315	eP	29 50.00	2.0
DMN	29.89	86	P	30 34.40	-0.1
PKI	30.16	86	P	30 36.80	-0.2
HFS	38.91	331	eP	31 49.70	-1.4
	0.4s	1.10nm		4.0mb	
MBC	73.62	358	eP	35 58.00	-0.4

S.D. = 1.0 on 13 of 16 obs.

JUN 05, 1989 01h 31m 57.69± 0.53s
30.112 N ±10.1km 99.225 E ± 5.5km
DEPTH = 10.0km (geophysicist)
4.5mb (2 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	3.99	77	ePn	33 02.40	2.1
			Pg	33 11.60	
			Sg	33 59.10	
KMI	5.87	147	Pn	33 27.50	0.5
E	10s	0.70um			
			Pg	33 45.00	
			Sg	34 55.00	
LZH	7.11	32	ePg	34 13.00	28.6X
GYA	7.50	117	Pn	33 48.60	-1.3
XAN	9.11	62	P	34 11.40	-0.8
GTA	9.29	3	eP	34 22.40	7.6X
E	10s	0.30um			
CHG	11.25	181	ePd	35 29.30	47.7X
	0.9s	10.92nm			
GUN	11.89	263	P	34 52.00	1.5
PKI	12.37	262	P	34 56.00	-1.1
KKN	12.43	263	P	34 57.00	-0.7
DMN	12.62	262	P	35 00.40	0.0
TIY	13.33	52	eP	35 08.50	-1.0
TIA	16.17	63	eP	35 50.30	3.8X
SUF	56.00	328	eP	41 39.00	0.7
WB5	60.12	141	eP	42 05.20	-2.6X
UPP	60.34	325	eP	42 09.20	0.5
HFS	62.23	326	eP	42 21.70	0.1
	0.4s	1.40nm		4.5mb	
NAO	63.45	327	P	42 29.00	-0.6
	0.9s	2.80nm		4.5mb	

S.D. = 1.1 on 13 of 18 obs.

JUN 05, 1989 02h 53m 43.50± 0.32s
40.874 N ± 2.4km 22.989 E ± 3.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.7 (SKO). MD 3.2 (ATH).

THE	0.24	184	ePg	53 48.80	0.1
			eSg	53 53.00	
SOH	0.28	101	ePg	53 49.60	0.2
			eS	53 53.60	
KNT	0.30	347	iPgc	53 49.90	0.2
			eSg	53 54.00	
SRS	0.52	62	ePgc	53 53.60	-0.4
			eSg	54 00.80	
VAY	0.55	325	iPg	53 54.40	-0.2
			iSg	54 01.30	
PLG	0.61	145	ePg	53 54.90	-0.9
			eSg	54 02.40	
LIT	0.86	206	ePg	54 00.40	0.3
			eSg	54 13.40	
MMB	0.91	38	iPgc	54 00.00	-0.9
			Sg	54 12.00	
OUR	0.93	125	ePg	54 01.40	0.2
			eSg	54 15.60	
KKB	0.99	4	iPg	54 02.00	-0.3
PAIG	1.08	151	ePg	54 04.50	0.6
			eSg	54 19.70	
KZN	1.09	239	ePb	54 03.40	-0.6
RZN	1.53	57	iPd	54 12.00	0.9
NEO	1.58	173	ePb	54 11.70	0.1
VTS	1.72	5	iPc	54 15.00	1.2
			iPg	54 17.00	
			iSg	54 39.00	
PLD	1.78	46	iP	54 18.00	3.5X
			iS	54 40.00	
RDO	1.95	81	ePb	54 16.50	-0.4
KDZ	1.99	66	eP	54 17.00	-0.5
			iS	54 41.00	
EZN	2.76	111	ePn	54 32.00	3.5X
PVL	2.92	36	eP	54 31.00	0.2
			iS	55 15.00	
CLO	4.20	358	ePc	55 05.00	16.0X
BZS	4.84	349	ePc	54 57.50	-0.6
MLR	5.10	24	eP	55 02.50	0.7
VRI	5.69	27	ePd	55 10.00	0.0

S.D. = 0.6 on 21 of 24 obs.

? JUN 05, 1989 03h 43m 55.19± 1.00s
37.857 N ± 7.4km 29.574 E ±11.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.47	355	iPg	44 04.00	-0.7
			iSg	44 11.00	
BCK	0.90	116	ePn	44 11.00	-1.4
ELL	1.14	166	ePn	44 18.00	1.4
YER	1.26	235	ePn	44 18.00	-0.6
ALT	1.27	19	ePn	44 20.10	1.3
DST	1.90	337	ePn	44 31.00	3.1X

S.D. = 1.8 on 5 of 6 obs.

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* JUN 05, 1989 04h 49m 27.26± 1.64s
43.144 N ± 6.4km 13.941 E ±14.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.8 (SSO), 2.7 (ROM).

ALP	0.45	216	iPg	49 35.91	-0.6
			iSg	49 43.69	
AOI	0.48	329	iPg	49 37.22	0.3
CIO	0.59	275	iPg	49 38.71	-0.5
			iSg	49 49.38	
ARV	0.81	296	P	49 42.90	-0.1
			eSg	49 58.00	
AQU	0.88	207	P	49 45.20	0.9
			eSg	50 01.80	
ASS	0.94	266	P	49 46.00	0.8
SDI	1.44	184	P	49 53.10	-0.3
CRE	1.53	289	P	49 54.20	-0.5
VBY	2.54	21	ePn	50 19.90	10.7X
			e(Sn)	50 41.70	

S.D. = 0.7 on 8 of 9 obs.

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* JUN 05, 1989 07h 00m 03.70± 1.10s
44.899 N ± 7.0km 14.747 E ±11.1km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (38?

05d 07h

MD 2.5 (TRI), 2.5 (LJU).

RIY	0.51	330	iPg	00 13.40	-0.7
			iSg	00 21.20	
VBY	0.71	31	ePg	00 17.20	-0.4
CEY	0.87	345	ePg	00 20.50	0.1
			eSg	00 34.50	
TRI	1.07	320	iPgd	00 23.80	0.0
			iSg	00 38.40	
LJU	1.15	353	ePg	00 26.20	0.9
			eSg	00 43.00	
AOI	1.58	212	ePg	00 31.83	0.0
			iSg	00 53.64	
RBL	1.75	332	P	00 34.40	0.1
			eSg	00 59.00	

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

& JUN 05, 1989 07h 13m 46.05s
61.676 N 150.826 W
DEPTH = 67.3km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.22	169	iP	13 56.73	0.0
PWA	0.45	93	iP	13 58.24	-0.1
			S	14 07.98	
SKT	0.45	313	iP	13 57.96	-0.4
CRP	0.76	238	iP	14 01.46	-0.4
SPU	0.77	231	iP	14 01.14	-0.7
PME	0.86	92	iP	14 02.34	-0.5
			S	14 15.86	
GHO	0.91	83	eP	14 03.35	-0.3
NKA	0.96	192	eP	14 05.19	1.1
KNK	1.17	102	iP	14 06.22	-0.6
SLKM	1.21	166	eP	14 06.20	-1.2
RDT	1.35	215	iP	14 08.37	-1.0
RED	1.58	218	iP	14 11.73	-0.8
			S	14 31.86	
SEW	1.72	156	eP	14 13.78	-0.5
KTH	1.88	359	eP	14 16.39	-0.3
			S	14 40.33	
ILIM	1.91	214	iP	14 16.08	-1.0
			S	14 41.22	
VZW	2.15	105	eP	14 18.73	-1.6
CNPM	2.17	186	eP	14 20.28	-0.3
TOA	2.25	77	eP	14 21.62	-0.1
OPT	2.35	211	eP	14 22.65	-0.5
KLU	2.35	92	eP	14 21.38	-1.8

20 obs. associated

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* JUN 05, 1989 07h 32m 09.04± 0.99s
46.284 N ±11.4km 13.335 E ± 7.3km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
MD 2.9 (LJU), 2.6 (ROM), 2.3 (TRI).

RBL	0.23	46	P	32 14.20	0.3
			eSg	32 18.20	
VOY	0.46	123	ePg	32 18.10	-0.4
			eSg	32 26.10	
FVI	0.49	309	P	32 17.50	-1.5
			eSg	32 23.60	
TRI	0.65	152	i(Pg)c	32 19.00	-3.0X
			iSg	32 30.90	
CEY	0.94	125	eP	32 38.00	11.1X
			e(Sg)	32 45.00	
CTI	1.19	259	P	32 31.60	0.2
			eSg	32 46.90	
SCE	1.35	305	ePg	32 35.50	1.5
VBY	1.55	119	ePn	32 38.70	2.0X
			eSn	33 01.80	
OGA	1.70	291	eP	32 41.10	2.1X

S.D. = 1.5 on 5 of 9 obs.

% JUN 05, 1989 08h 56m 30.26± 0.91s
39.254 N ± 7.5km 27.720 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.79	63	ePn	56 46.10	0.5
IZM	0.93	203	ePn	56 47.70	-0.3
EDC	1.10	6	iPn	56 50.20	-0.7
BNT	1.11	8	iPn	56 51.00	-0.1
EZN	1.22	298	ePn	56 53.50	0.6

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

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* JUN 05, 1989 10h 09m 20.39± 1.05s
37.253 N ± 8.0km 4.535 W ± 9.5km
DEPTH = 10.0km (geophysicist)
SPAIN (377)

MAL	0.53	169	ePg	09 30.80	-0.4
			iSg	09 33.00	
LIJA	0.79	243	iP	09 35.50	-0.2
EHOR	0.80	315	eP	09 35.80	-0.1
			eS	09 47.00	
ALJ	1.03	236	iP	09 42.00	2.0
EBAN	1.09	33	eP	09 41.00	0.2
			eS	09 57.00	
GIBL	1.21	250	iP	09 41.50	-1.5

S.D. = 1.5 on 6 of 6 obs.

% JUN 05, 1989 10h 28m 40.33± 0.54s
60.635 N ± 4.5km 6.225 E ± 5.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

ASK	0.53	254	eP	28 51.00	-0.1
			eS	28 57.90	
HYA	0.53	358	iP	28 50.60	-0.5
			eS	28 59.30	
ODD1	0.75	164	iP	28 54.40	-0.7
			eS	29 04.00	
SUE	0.83	301	eP	28 56.50	0.1
			eS	29 08.30	
BLS1	1.28	166	iP	29 04.00	-0.2
			eS	29 20.70	
KMY	1.51	199	eP	29 08.10	0.7
			eS	29 27.70	
MOL	2.04	17	eP	29 15.34	0.2
			eS	29 42.54	
NRA0	2.62	85	iPnc	29 23.80	0.4
			iPg	29 26.10	
			iSg	30 00.30	

S.D. = 0.6 on 8 of 8 obs.

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* JUN 05, 1989 11h 12m 43.02± 0.89s
18.665 N ± 9.4km 142.692 E ±23.9km
DEPTH = 33.0km (normal)
MARIANA ISLANDS REGION (215)

PJG	5.46	157	eP	14 04.30	0.0
GUMO	5.46	157	eP	14 04.50	0.2
GUA	5.53	157	eP	14 04.90	-0.3
	0.8s	149.25nm			5.6mb X
			eS	14 50.40	
WB5	39.17	192	iPc	20 10.30	0.6
ASPA	42.94	192	eP	20 40.00	-0.7
MBL	45.47	211	eP	21 09.20	8.2X
WARB	47.23	200	iPc	21 10.40	-4.5X
	0.3s	16.00nm			5.5mb X
INK	70.52	23	eP	23 55.50	-0.7
			pP	24 41.00	191kmX
YKA	79.34	27	eP	24 47.50	0.7

S.D. = 0.7 on 7 of 9 obs.

? JUN 05, 1989 13h 37m 32.12± 6.12s
17.694 N ±57.0km 61.986 W ±24.1km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.9 (FDF).

BPA	0.66	169	eP	37 45.94	1.0
			eS	37 48.75	
NEV	0.79	225	eP	38 00.16	13.4X
			eS	38 05.45	
SKI	0.80	244	eP	37 46.97	0.0
			eS	37 50.95	
MGH	0.99	193	eP	37 53.88	4.1X
			eS	37 57.58	
DEG	1.63	147	eP	37 59.00	0.0
			S	38 12.50	
PAG	1.68	170	eP	37 58.95	-0.7
			S	38 12.00	
BBL	2.21	167	eP	38 07.00	-0.3

S.D. = 0.9 on 5 of 7 obs.

? JUN 05, 1989 13h 55m 32.68± 0.90s
13.965 N ±16.3km 121.007 E ±20.8km
DEPTH = 33.0km (normal)
4.6mb (5 obs.)
MINDORO, PHILIPPINE ISLANDS (250)

MNI	13.01	163	eP	58 52.20	14.3X
CHG	21.70	286	iPc	00 23.00	0.0
	1.0s	11.25nm			4.2mb
CHTO	21.70	286	eP	00 23.00	0.1
	0.9s	7.89nm			4.1mb
KUG	24.11	174	eP	00 49.00	2.5
	1.0s	332.80nm			5.8mb X
MBL	34.92	182	eP	02 22.20	-1.4
GUN	35.48	299	Pc	02 28.90	0.1
PKI	35.79	298	Pc	02 31.10	-0.3
KKN	35.96	298	Pc	02 32.40	-0.3
DMN	36.06	298	Pc	02 33.40	-0.2
WB5	36.11	158	eP	02 33.20	-0.5
			e	02 54.30	
ASPA	39.47	161	iPd	03 01.00	-0.9
	0.8s	13.00nm			4.7mb
			e	03 22.70	
WARB	40.28	172	eP	03 00.20	-8.3X
MAIO	58.97	304	eP	05 32.00	0.3
SLL	86.43	332	eP	08 13.70	0.7
	0.5s	12.00nm			5.4mb
NAO	87.42	333	P	08 17.60	-0.2
	0.9s	3.90nm			4.7mb

S.D. = 1.0 on 13 of 15 obs.

JUN 05, 1989 15h 56m 19.06± 0.99s
43.415 N ± 6.6km 5.433 E ± 8.2km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.03	187	Pg	56 20.51	-0.6
TREF	0.21	350	Pg	56 23.41	-0.3
BERF	0.21	118	Pg	56 24.01	0.2
PUYF	0.23	59	Pg	56 23.40	-0.6
PRAF	0.43	334	Pg	56 28.49	0.6
VILF	0.48	25	Pg	56 27.51	-1.4
TAVF	0.50	66	Pg	56 29.01	-0.2
FOUF	1.48	41	e(Pg)	56 47.72	2.0
			e(Sg)	57 05.93	

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

? JUN 05, 1989 15h 59m 24.59± 7.48s
16.138 N ±57.3km 99.696 W ±38.7km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.74	348	iP	59 38.25	-0.4
			iS	59 42.08	
OXX	3.00	71	iP	00 11.22	0.1
			eS	00 47.38	
IIT	3.16	25	iP	00 12.88	-0.5
			eS	00 43.26	
UNM	3.21	9	eP	00 13.50	-0.7
			iS	00 51.00	
CRX	3.25	0	eP	00 18.48	3.7X
JCM	3.58	359	eP	00 21.44	2.4X
			iS	01 00.36	
IISM	3.60	38	iP	00 13.72	-5.6X
			iS	00 59.26	
IIC	3.63	7	iP	00 21.72	1.5
			iS	01 04.64	
SMMM	3.70	14	(P)	00 25.52	4.8X
			eS	01 04.84	
MRX	3.82	338	(P)	00 28.00	5.5X
			iS	01 17.00	
LVVM	4.73	40	(P)	00 42.95	7.5X
			iS	01 38.79	

S.D. = 1.3 on 5 of 11 obs.

JUN 05, 1989 16h 23m 40.40± 0.40s
12.002 S ± 7.0km 14.563 E ± 8.3km
DEPTH = 10.0km (geophysicist)
5.1mb (38 obs.) 4.2Msz (2 obs.)
ANGOLA (575)

LSZ	13.64	105	iPn	26 55.00	-1.5
			iSn	29 41.00	
			iLg	30 54.00	
MZZ	14.05	88	iPn	26 59.00	-2.9
			iSn	29 33.00	
			iLg	31 25.00	
BUL	15.73	123	ePn	27 25.20	1.2
PTZ	16.49	100	ePn	27 32.00	-1.6
			iSn	30 21.00	
			iLg	32 14.50	
BNG	16.80	14	iPd	27 31.50	-6.0X

0.7s 23.00nm 4.4mb
iS 30 28.50
Lg 32 35.00
LWI 17.12 57 iPc 27 42.60 0.9
iS 30 45.30
POF 18.01 165 iPc 27 57.00 4.6X
S 31 29.00
KSR 18.04 142 eP 27 51.40 -1.7
S 31 04.20
BFS 18.75 144 iPc 28 04.50 2.7
0.6s 26.67nm 4.6mb
S 31 19.40
SLR 18.82 138 iPc 28 04.50 1.8
1.2s 125.00nm 5.0mb
PRY 19.17 143 eP 28 06.30 -0.7
S 32 28.00
FRS 20.30 152 iPc 28 19.70 0.5
0.7s 61.64nm 5.1mb
S 31 56.80
TUH 21.61 170 iPc 28 32.00 -0.6
S 32 54.50
KIC 26.48 313 P 29 19.72 -0.1
0.8s 35.00nm 5.1mb
LIC 26.60 312 P 29 20.70 -0.2
0.6s 16.00nm 4.9mb
TIC 26.88 313 P 29 23.50 0.0
OHR 53.16 6 eP 33 03.00 2.2
VAY 53.57 7 eP 33 02.50 -1.1
SKO 54.08 6 iP 33 06.00 -1.4
TOL 54.44 342 eP 33 13.90 3.7X
SOB1 54.51 267 e(P) 33 09.00 -2.2
FIN 56.24 355 P 33 25.39 2.2
EPF 56.29 347 eP 33 23.20 -0.4
0.9s 13.10nm 5.0mb
ENR 56.33 354 P 33 25.90 2.0
ROB 56.35 354 P 33 25.60 1.6
STV 56.36 354 P 33 26.52 2.4
PZZ 56.64 354 P 33 29.29 3.1X
BEO 56.80 5 eP 33 28.00 0.9
VBY 57.24 1 eP 33 32.70 2.5
CEY 57.47 360 e(P) 33 34.50 2.6
LSD 57.58 354 P 33 35.03 2.1
PTJ 57.64 1 eP 33 31.60 -1.6
LPG 57.66 354 eP 33 33.00 -0.6
1.0s 22.00nm 5.1mb
BZS 57.70 6 eP 33 32.00 -1.4
LPO 57.71 349 eP 33 32.10 -1.4
0.8s 13.40nm 5.0mb
VOY 57.76 359 eP 33 35.60 1.6
LJU 57.77 360 e(P) 33 34.50 0.6
CAF 57.78 350 eP 33 33.20 -0.9
0.9s 19.60nm 5.1mb
LFF 58.04 348 eP 33 34.90 -0.9
1.0s 12.00nm 4.9mb
MLR 58.14 9 eP 33 36.00 -0.7
RJF 58.24 349 eP 33 36.20 -1.1
1.0s 8.00nm 4.7mb
VRI 58.64 10 ePd 33 38.00 -2.0
MAF 58.95 350 eP 33 41.50 -0.7
1.0s 8.00nm 4.8mb
TCF 59.07 350 eP 33 42.50 -0.6
1.0s 10.00nm 4.9mb
LSF 59.15 349 eP 33 42.70 -0.9
0.8s 6.70nm 4.8mb
SMF 59.16 351 eP 33 42.70 -1.0
1.0s 30.00nm 5.4mb
BGF 59.23 351 eP 33 43.50 -0.7
0.8s 13.40nm 5.1mb
AVF 59.38 351 eP 33 44.20 -1.0
0.9s 14.70nm 5.1mb
LBF 59.48 352 eP 33 44.40 -1.5
0.9s 14.70nm 5.1mb
SSF 59.62 351 eP 33 45.70 -1.1
0.9s 19.60nm 5.2mb
LOR 59.77 352 eP 33 46.50 -1.4
1.0s 18.00nm 5.2mb
FEL 59.89 355 ePc 33 47.22 -1.6
BSF 59.96 354 eP 33 47.90 -1.4
1.0s 16.00nm 5.1mb
ZST 59.97 2 e(P) 33 51.00 1.8
HAU 60.18 354 eP 33 49.40 -1.3
1.2s 20.20nm 5.1mb
BAO 60.67 259 eP 33 53.90 -0.8
KHC 60.87 359 Pc 33 54.20 -1.1
e 33 57.70
SPC 61.13 4 eP 33 51.10 -6.2X
GRF 61.49 358 eP 33 58.50 -1.1

Z 18s 0.10um 4.0Msz
e 34 01.50
GRR 61.66 348 eP 33 59.50 -1.2
0.8s 13.40nm 5.2mb
LDF 61.71 349 eP 33 59.40 -1.7
0.8s 10.70nm 5.1mb
PRU 61.72 360 eP 34 02.00 0.9
1.0s 14.50nm 5.1mb
WLF 61.84 354 P 34 03.50 1.6
MOX 62.43 358 ePc 34 07.00 1.2
1.3s 15.00nm 5.0mb
DOU 62.45 353 P 34 07.00 1.1
1.0s 36.10nm 5.5mb
KSP 62.60 1 eP 34 09.00 2.1
BRG 62.61 360 iP 34 08.90 1.9
1.0s 16.00nm 5.2mb
MEM 62.79 354 Pc 34 10.20 2.1
ENN 62.96 354 eP 34 11.50 2.3
1.0s 17.00nm 5.2mb
CLL 63.06 359 eP 34 07.00 -2.9
e 34 11.90
WTS 64.08 355 eP 34 19.00 2.4
1.0s 13.00nm 5.1mb
NAO 72.64 358 P 35 08.10 -1.7
1.1s 19.60nm 5.1mb
CCH 77.75 255 P 35 41.30 1.1
SPA 78.08 180 ePd 35 42.20 1.3
1.0s 24.50nm 5.2mb
DMN 78.81 59 P 35 46.40 0.5
1.0s 46.00nm 5.5mb
KKN 79.02 58 P 35 47.40 0.5
0.8s 21.00nm 5.2mb
PKI 79.05 59 P 35 47.60 0.3
1.0s 44.00nm 5.4mb
GUN 79.56 58 P 35 47.00 -3.0X
0.8s 18.00nm 5.1mb
CNCB 79.57 255 P 35 50.20 -0.3
ZOBO 79.80 255 P 35 50.90 -0.8
Z 22s 0.16um 4.3Msz
eLR 01 40.00
CHTO 88.59 71 eP 36 36.00 0.6
1.2s 7.64nm 4.9mb
S.D. = 1.5 on 75 of 81 obs.

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* JUN 05, 1989 17h 50m 13.08± 2.48s
35.228 N ±21.8km 22.249 E ±16.1km
DEPTH = 33.0km (normal)
MEDITERRANEAN SEA (400)
MD 4.2 (ATH).

VAM 1.61 83 ePn 50 40.70 1.2
ITM 1.96 352 ePn 50 47.00 2.3
NPS 2.75 88 ePn 50 52.00 -3.9X
ATH 2.98 23 ePn 51 04.90 5.8X
VLS 3.23 336 ePn 51 03.00 0.3
KAP 4.04 84 ePn 51 13.00 -1.1
NEO 4.14 11 ePn 51 16.20 0.6
LIT 4.87 2 eP 51 26.70 0.8
KZN 5.08 356 ePn 51 28.70 -0.3
PLG 5.22 10 ePn 51 31.50 0.5
KNT 5.95 5 eP 51 39.70 -1.4
OHR 5.98 349 ePn 51 40.50 -1.2
VAY 6.09 2 ePn 51 41.60 -1.5
SKO 6.76 355 ePn 51 48.50 -4.1X
i 51 50.60
KHC 15.29 338 eP 53 57.50 9.4X
DOU 19.66 325 P 54 41.80 -0.1
S.D. = 1.3 on 12 of 16 obs.

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* JUN 05, 1989 17h 54m 36.57± 0.95s
84.823 N ±11.7km 5.990 E ±15.9km
DEPTH = 10.0km (geophysicist)
4.1mb (4 obs.)
NORTH OF SVALBARD (641)

KBS 6.00 169 iP 56 05.00 -2.3
ALE 7.41 289 eP 56 26.00 -1.2
0.3s 78.00nm 6.4mb X
DAG 8.85 219 iPc 56 48.40 1.1
1.1s 20.25nm 5.4mb
TRO 15.46 163 iP 58 15.10 -0.7
KEV 15.61 152 eP 58 12.00 -5.8X
MBC 17.38 319 eP 58 40.00 -0.1
SOD 17.98 154 iP 58 42.30 -5.3X
SUF 22.61 156 eP 59 38.00 0.0
0.7s 5.40nm 4.1mb
NAO 24.15 174 P 59 54.70 1.7

0.7s 3.20nm 4.0mb
NUR 24.77 158 eP 59 59.00 0.0
HFS 24.88 171 eP 00 00.40 0.3
0.6s 1.70nm 3.9mb
INK 26.00 327 eP 00 11.00 0.5
KRA 35.09 164 ePd 01 32.00 0.7
e 01 38.00
S.D. = 1.2 on 11 of 13 obs.

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* JUN 05, 1989 19h 09m 11.09± 0.78s
16.981 N ±11.6km 62.319 W ± 9.0km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
MD 2.6 (TRN).

MGH 0.28 159 eP 09 18.68 0.1
eS 09 25.15
NEV 0.29 303 eP 09 19.17 0.5
eS 09 25.70
ANG 0.50 70 eP 09 21.83 0.2
eS 09 28.08
SKI 0.53 311 eP 09 21.71 -0.5
eS 09 27.80
DEG 1.38 119 eP 09 34.00 -0.2
S.D. = 0.5 on 5 of 5 obs.

JUN 05, 1989 20h 00m 42.30± 2.62s
5.943 S ±12.8km 105.443 E ±11.6km
DEPTH = 104.0 ± 22.4 km
4.8mb (4 obs.)
SUNDA STRAIT (276)

KGM 8.18 345 eP 02 40.00 -0.1
MKS 13.98 88 ePc 03 57.80 0.8
PCI 15.21 71 ePd 04 14.00 1.2
NNT 19.27 343 eP 05 02.70 1.3
DAV 23.90 57 eP 05 46.00 -1.6
QIZ 25.19 10 eP 06 00.00 0.2
N 11s 0.70um
CHG 25.42 346 eP 06 02.80 0.8
CHTO 25.42 346 eP 06 02.20 0.2
0.9s 4.69nm 4.0mb
KMI 30.99 355 eP 06 53.00 0.7
N 12s 1.50um
WB5 31.34 119 eP 06 52.20 -3.0X
GYA 32.23 2 P 07 03.00 0.1
ASPA 32.56 126 iPc 07 03.20 -2.6
1.6s 33.00nm 4.9mb
ePcP 09 50.10
CD2 36.68 358 eP 07 41.60 0.8
PKI 38.54 331 P 07 57.00 0.2
DMN 38.71 330 P 07 56.40 -1.8
KKN 38.78 331 P 07 55.80 -2.9
XAN 39.90 5 P 08 07.50 -0.2
CTA 42.04 113 iPd 08 28.90 3.5X
1.1s 31.01nm 5.0mb
TIY 43.92 8 eP 08 45.00 4.6X
N 12s 0.50um
eS 15 14.50
GTA 45.42 354 eP 08 51.60 -0.9
Z 12s 0.60um 4.8MszX
E 10s 0.30um
BTO 46.50 5 P 09 03.00 2.0
N 13s 0.30um
E 10s 0.20um
WMQ 52.06 344 eP 09 41.50 -2.1
PcP 10 53.50
CN2 52.71 18 eP 09 47.40 -0.9
MAIO 60.13 318 eP 10 40.00 -1.3
IR4 65.59 313 eP 11 16.40 -1.0
IR2 65.79 313 eP 11 17.00 -1.7
IR1 65.82 313 eP 11 18.30 -0.7
IR7 66.01 313 eP 11 19.30 -0.8
TAB 70.13 314 eP 11 45.00 -0.8
BUL 75.63 251 eP 12 19.30 1.0
VRI 86.42 317 ePc 13 16.00 1.6
MLR 86.88 316 ePc 13 17.00 0.2
BNG 87.37 275 iPc 13 21.00 1.3
0.6s 5.00nm 4.7mb
CMP 87.46 316 ePc 13 21.00 1.6
VAY 88.55 312 eP 13 26.00 1.3
CLO 88.99 315 ePc 13 28.00 1.3
BZS 89.90 316 eP 13 32.00 1.1
SUF 90.35 333 iP 13 33.60 1.0
NUR 90.61 331 iP 13 34.20 0.4
FFC 126.58 19 ePKP 19 35.00 0.2
0.9s 10.00nm

05d 20h

SOB1	143.23	246	ePKP	20 06.90	-0.1
BAO	146.06	231	e(PKP)	20 12.00	0.2
ZOBO	157.03	196	PKP	20 33.00	4.6X

S.D. = 1.3 on 39 of 43 obs.

? JUN 05, 1989 20h 12m 44.31± 3.81s
16.538 N ±30.9km 99.592 W ±16.3km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.42	322	iP	12 52.21	-0.6
			iS	12 59.25	
IIT	2.76	26	iP	13 27.75	-1.8
			iS	14 06.30	
OXX	2.80	78	eP	13 30.42	0.2
			iS	14 05.64	
UNM	2.81	8	eP	13 30.50	0.2
			iS	14 06.00	
CRX	2.85	358	iP	13 32.00	1.0
			iS	14 10.00	
IISM	3.22	41	(P)	13 30.14	-5.8X
			iS	14 17.10	
IIC	3.23	6	iP	13 37.47	1.1
			iS	14 18.05	
SMMM	3.29	14	eP	13 36.83	0.0
			eS	14 21.49	
MRX	3.50	334	(P)	13 43.00	3.2X
			iS	14 16.00	
LVVM	4.37	43	eP	13 52.10	-0.1
			eS	14 52.74	

S.D. = 1.1 on 8 of 10 obs.

JUN 05, 1989 20h 38m 48.11± 0.56s
39.628 N ± 5.5km 27.802 E ± 5.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.2 (ATH). Felt at Bandirma.

DST	0.64	92	iPg	38 59.20	-1.8
			eSg	39 08.80	
EDC	0.72	4	iPg	39 01.70	-0.6
			iSg	39 12.70	
BNT	0.73	7	iPn	39 02.00	-0.5
EZN	1.16	280	ePn	39 08.00	-1.7
PRK	1.24	253	ePb	39 11.50	0.3
IZM	1.30	199	iPn	39 11.40	-0.8
CTT	1.59	17	iPn	39 15.50	-0.9
ISK	1.73	33	iPn	39 17.50	-0.8
KHL	1.87	134	ePn	39 20.00	-0.5
ALT	1.88	107	ePn	39 21.10	0.4
GPA	2.04	70	iPn	39 25.20	2.3
DMK	2.19	359	iPn	39 24.70	-0.4
RDO	2.30	312	ePn	39 26.80	0.2
YER	2.52	171	ePn	39 31.00	1.2
PLG	3.43	284	ePn	39 43.50	0.8
BBTK	3.83	85	eP	40 01.00	12.5X
			iS	40 54.00	
VAY	4.33	295	ePn	40 11.00	15.5X
MLR	6.02	347	ePc	40 22.00	2.6

S.D. = 1.3 on 16 of 18 obs.

? JUN 05, 1989 20h 39m 15.03± 3.06s
9.836 S ±41.8km 161.756 E ±31.8km
DEPTH = 117.8 ± 23.2 km
4.1mb (1 obs.)
SOLOMON ISLANDS (193)

HNR	1.83	283	eP	39 46.00	-0.7
			eS	40 08.00	
SVO	2.03	289	eP	39 50.00	0.7
			eS	40 17.00	
VSG	2.10	286	eP	39 50.00	-0.1
			eS	40 12.00	
DZM	12.97	160	iPd	42 16.20	0.0
			iS	44 33.10	
CTA	18.10	234	iPc	43 20.70	0.2
	0.7s		8.22nm		4.1mb
WB5	28.25	246	eP	44 59.00	-0.2
			e	45 21.70	

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

JUN 05, 1989 21h 50m 11.74± 0.70s
37.765 N ± 6.3km 29.242 E ± 7.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.60	22	iPg	50 23.00	-0.9
YER	0.99	231	iPn	50 29.60	-0.9
BCK	1.11	105	iPn	50 31.60	-1.1
ELL	1.15	152	iPn	50 32.90	-0.4
ALT	1.46	28	ePn	50 39.10	0.9
KSL	1.67	170	ePn	50 42.90	1.8
IZM	1.68	293	ePn	50 41.00	-0.4
DST	1.90	346	ePn	50 45.30	0.8
KAP	2.77	218	ePn	51 01.00	4.1X

S.D. = 1.3 on 8 of 9 obs.

JUN 05, 1989 21h 56m 26.22± 0.41s
46.008 N ± 3.7km 6.609 E ± 4.2km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.8 (LDG).

EMS	0.23	74	iPd	56 31.00	-0.3
LPL	0.50	170	Pg	56 36.10	-0.3
			Sg	56 43.20	
LPG	0.52	169	Pg	56 36.40	-0.4
			Sg	56 43.60	
DIX	0.56	82	iPd	56 37.30	-0.5
LSD	0.67	145	P	56 38.95	-0.8
			S	56 47.92	
MMK	0.95	87	ePc	56 44.00	-0.4
BNI	0.96	177	P	56 44.10	-0.4
			eSg	56 55.20	
ORO	1.03	111	P	56 45.60	-0.2
			eSg	56 59.60	
RRL	1.09	173	P	56 47.27	0.3
			S	57 02.43	
PZZ	1.54	167	P	56 55.39	1.5
			S	57 14.99	
TMA	1.58	86	ePd	56 57.20	2.7
BSF	1.83	4	Pn	56 59.00	1.0
			Sg	57 26.00	
LLS	1.86	62	ePc	57 02.30	3.7X
HAU	2.01	355	Pn	57 00.40	-0.1
			Sn	57 24.80	
SMF	2.02	289	Pg	57 04.80	4.1X
			Sg	57 29.60	
LBF	2.06	299	Pn	57 01.60	0.2
			Pg	57 05.60	
			Sg	57 30.90	
FEL	2.10	27	ePn	57 00.85	-1.2
SLE	2.18	36	ePd	57 02.40	-0.7
SAX	2.26	56	ePd	57 10.00	5.6X
LOR	2.28	305	Pn	57 05.00	0.5
			Pg	57 10.10	
			Sg	57 38.00	
AVF	2.39	290	Pg	57 12.20	6.2X
			Sg	57 41.50	
BGF	2.67	283	Pn	57 09.80	-0.2
			Sg	57 50.80	
TCF	3.07	277	Pn	57 15.00	-0.7
			Pg	57 24.00	
			Sg	58 02.80	

S.D. = 1.0 on 19 of 23 obs.

JUN 05, 1989 22h 21m 17.30± 0.27s
60.103 N ± 6.4km 29.525 W ± 3.7km
DEPTH = 10.0km (geophysicist)
4.4mb (23 obs.)
NORTH ATLANTIC OCEAN (402)

REY	5.40	38	iP	22 40.70	0.9
AKU	7.64	38	eP	23 16.20	4.9X
	1.1s		25.32nm		5.3mb
EKA	14.82	97	Pc	24 54.30	5.9X
	1.0s		11.10nm		4.3mb
FRB	18.51	298	eP	25 35.00	-0.1
LPF	20.43	114	eP	25 58.20	1.2
	1.2s		35.70nm		4.6mb
SLL	20.97	70	eP	26 02.10	-0.4
	0.5s		3.40nm		4.0mb
SNF	21.27	102	Pc	26 04.00	-1.6
WTS	21.61	96	eP	26 08.50	-0.4
	1.0s		15.00nm		4.4mb
DOU	21.69	102	Pc	26 09.00	-0.8
			S	30 22.00	
ENN	21.92	99	eP	26 12.00	-0.1
	1.0s		12.00nm		4.3mb
MEM	22.06	100	Pc	26 12.90	-0.6
WLF	22.74	101	Pc	26 25.50	5.3X
LSF	22.93	113	eP	26 22.60	0.4
	1.1s		12.20nm		4.3mb
TCF	23.22	112	eP	26 25.40	0.4
	1.2s		10.10nm		4.2mb
SSF	23.26	109	eP	26 25.50	0.2
	1.0s		12.00nm		4.4mb
LOR	23.27	108	eP	26 25.40	-0.1
	1.0s		12.00nm		4.4mb
BGF	23.31	111	eP	26 26.00	0.1
	1.0s		8.80nm		4.3mb
AVF	23.38	110	eP	26 26.80	0.3
	1.0s		8.80nm		4.3mb
MAF	23.43	112	eP	26 27.20	0.1
	0.8s		9.40nm		4.4mb
LBF	23.53	109	eP	26 28.40	0.3
	0.8s		5.30nm		4.2mb
LFF	23.57	116	eP	26 29.20	0.8
	1.0s		16.00nm		4.5mb
SMF	23.72	110	eP	26 29.40	-0.4
	1.2s		17.80nm		4.5mb
HAU	23.95	104	eP	26 32.50	0.4
	1.2s		11.90nm		4.4mb
LPO	23.97	116	eP	26 32.70	0.4
	1.2s		11.90nm		4.4mb
CDF	24.13	102	eP	26 34.70	0.8
BSF	24.29	104	eP	26 36.20	0.7
MOX	24.82	94	eP	26 40.00	-0.5
EPF	24.90	120	eP	26 40.50	-0.9
	1.0s		8.00nm		4.4mb
SOD	25.04	49	iP	26 41.70	-0.7
CLL	25.11	91	eP	26 44.00	0.8
	1.7s		15.00nm		4.4mb
BRG	25.85	91	eP	26 50.20	0.0
	1.0s		10.00nm		4.5mb
SUF	26.07	60	eP	26 52.00	-0.1
NUR	26.21	65	eP	26 53.00	-0.4
KSP	27.05	89	eP	27 01.00	-0.2
RSON	36.12	285	eP	28 20.20	-0.7
	1.4s		8.84nm		4.4mb
FFC	37.57	295	eP	28 33.00	0.0
	1.5s		32.00nm		4.9mb
YKA	38.14	311	eP	28 39.30	1.6
LRM	48.56	292	eP	30 03.20	0.7
MEO	50.29	272	eP	30 15.10	-0.5
PRNI	51.59	95	eP	30 25.00	-0.5
KVN	56.45	291	eP	31 00.60	-0.8
MAIO	58.87	71	eP	31 18.00	-0.3
SOB1	69.68	192	e(P)	32 29.00	0.1

S.D. = 0.7 on 40 of 43 obs.

? JUN 05, 1989 22h 40m 55.52±10.56s
44.980 N ±93.8km 6.272 E ±24.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

LPG	0.62	33	Pg	41 08.40	0.2
			Sg	41 15.80	
LPL	0.63	31	Pg	41 08.10	-0.2
			Sg	41 15.40	
SMF	2.38	315	Pg	41 36.70	1.5
			Sg	42 02.40	
LBF	2.56	322	Pg	41 37.00	-0.8
			Sg	42 02.00	
LOR	2.84	325	Pg	41 41.60	-0.1
			Sg	42 09.00	
BGF	2.87	305	Pn	41 41.60	-0.6
			Sg	42 25.00	

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

& JUN 05, 1989 22h 42m 54.29s
60.523 N 150.589 W
DEPTH = 35.2km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

SLKM	0.18	95	iP	43 01.42	0.4
NKA	0.39	305	iP	43 04.74	1.4
SEW	0.71	126	iP	43 07.07	-0.7
RDT	0.90	274	iP	43 09.83	-0.8
SUA	0.95	356	eP	43 10.32	-1.0
			S	43 23.47	
SPU	0.98	313	iP	43 10.89	-0.8
			S	43 23.98	
CGLM	1.05	319	iP	43 12.02	-0.8
CNPM	1.05	198	eP	43 12.67	-0.1
			S	43 27.06	
CRP	1.07	315	iP	43 12.54	-0.6
			S	43 27.48	
RED	1.09	265	iP	43 12.60	-0.7

		S	43 27.50		
ILIM	1.26	250 eP	43 15.18	-0.7	7
PME	1.34	34 eP	43 16.21	-0.8	
		S	43 33.50		
MTU	1.56	109 eP	43 18.63	-1.5	
VZW	2.05	73 eP	43 25.34	-1.8	
		S	43 54.62		
KLU	2.47	65 eP	43 31.24	-1.9	
TOA	2.66	51 eP	43 38.41	2.7	

16 obs. assacioted

& JUN 05, 1989 23h 33m 29.97s
62.575 N 149.075 W
DEPTH = 48.5km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.4 (PMR).

GHO	0.81	175 iP	33 44.48	-0.8	
		S	33 56.73		
PME	0.95	179 iP	33 46.34	-0.8	
		S	33 59.55		
PMR	0.99	182 iPc	33 46.70	-0.9	
PWA	1.00	203 iPc	33 47.50	-0.4	
MCK	1.16	3 iP	33 50.03	-0.1	
		S	34 05.97		
KNK	1.20	166 iP	33 50.14	-0.6	
		S	34 06.33		
KTH	1.29	320 iP	33 51.68	-0.3	
		S	34 08.72		
SKT	1.29	244 eP	33 51.11	-0.9	
		S	34 09.11		
SUA	1.36	216 eP	33 52.53	-0.6	
TOA	1.43	108 iPd	33 54.00	0.0	
PAX	1.71	75 eP	33 57.54	-0.3	
		S	34 18.88		
KLU	1.84	125 eP	33 58.60	-1.2	
		S	34 21.51		
CGLM	1.88	229 eP	33 59.70	-0.6	
DDM	1.90	49 P	34 01.34	0.8	
VZW	1.94	141 eP	33 59.55	-1.5	
CRP	1.96	229 eP	34 01.32	-0.2	
		S	34 27.81		
RDS	2.30	10 iP	34 04.91	-1.3	
FBA	2.40	13 Pc	34 06.20	-1.4	
TTA	3.21	279 iPd	34 17.20	-2.0	
SVW	3.43	248 eP	34 19.70	-2.7	
IMA	4.04	332 iPc	34 29.00	-2.0	

21 obs. associated

JUN 05, 1989 23h 54m 26.64± 0.62s
37.773 N ± 5.9km 29.236 E ± 6.8km
DEPTH = 10.0km (geaphysicist)
TURKEY (366)

KHL	0.59	22 iPg	54 38.00	-0.7	
		iSg	54 48.50		
YER	0.99	230 iPn	54 44.00	-1.5	
BCK	1.12	106 iPn	54 47.10	-0.6	
ELL	1.15	152 iPn	54 47.90	-0.4	
ALT	1.45	28 ePn	54 53.60	0.6	
KSL	1.67	170 ePb	54 57.90	1.8	
IZM	1.68	292 ePn	54 57.00	0.8	
DST	1.89	346 ePn	54 59.30	0.0	
PRK	2.75	303 ePn	55 11.60	0.0	

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

? JUN 06, 1989 00h 55m 07.13± 3.66s
16.101 N ±33.8km 99.913 W ±36.1km
DEPTH = 10.0km (geaphysicist)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	0.77	4 iP	55 20.24	-1.8	
		iS	55 27.18		
OXX	3.21	72 eP	56 01.13	2.3X	
		eS	56 37.72		
IIT	3.28	28 eP	55 58.53	-1.4	
		iS	56 36.00		
UNM	3.29	12 eP	56 01.00	1.0	
CRX	3.29	4 (P)	56 01.50	1.4	
		eS	56 37.00		
IIC	3.70	10 eP	56 05.88	0.0	
		eS	56 49.84		
IISM	3.75	40 iP	55 59.54	-6.8X	
		iS	56 50.82		
MRX	3.78	341 (P)	56 11.00	4.2X	
		iS	56 59.00		
SMMM	3.79	17 (P)	56 08.17	1.4	
		iS	56 51 67		
LVVM	4.89	42 (P)	56 08.94	-13.6X	
		iS	57 27.25		
LRM	31.44	343 eP	01 31.20	0.1	
YKA	47.48	351 eP	03 43.10	-0.7	

S.D. = 1.5 on 8 of 12 obs.

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* JUN 06, 1989 01h 17m 44.34± 1.00s
17.502 N ± 7.6km 145.893 E ±15.8km
DEPTH = 170.7 ± 11.4 km
4.8mb (3 obs.)
MARIANA ISLANDS (216)

PJG	4.02	194 iP	18 46.00	0.0	
GUMO	4.02	194 iP	18 45.90	-0.1	
GUA	4.05	194 iP	18 46.90	0.4	
	0.3s	124.68nm			
		eS	19 32.00		
KAKJ	19.31	346 P	21 58.10	-0.3	
		S	25 23.40		
CHJJ	19.46	343 P	21 59.50	-0.5	
		S	25 33.00		
NIIJ	20.58	344 P	22 11.20	-0.1	
WB5	38.83	197 eP	24 53.20	-1.2	
CHG	44.53	279 eP	25 41.90	1.0	
WARB	47.28	204 eP	25 54.00	-8.4X	
	0.3s	5.00nm		4.6mb	
MBC	74.26	14 ePc	29 03.50	-0.3	
	0.6s	26.00nm		5.1mb	
YKA	78.95	28 eP	29 30.40	0.3	
LRM	85.48	43 eP	30 04.90	0.5	
FFC	88.00	33 iPc	30 16.30	0.2	
	0.7s	8.00nm		4.8mb	
ZOBO	147.45	93 PKP	37 08.00	-0.3	
	1.0s	19.50nm			
LPB	147.51	93 ePKP	37 05.00	-3.2X	
CNCB	147.65	94 PKP	37 09.00	0.4	

S.D. = 0.6 on 14 of 16 obs.

JUN 06, 1989 02h 41m 17.78± 0.77s
17.517 S ± 9.1km 178.934 W ± 7.9km
DEPTH = 557.1 ± 9.5 km
5.1mb (14 obs.)
FIJI ISLANDS REGION (181)

SVA	2.56	256 iPd	42 30.90	-0.4	
DZM	14.49	249 iPc	44 22.90	1.1	
KRP	20.90	192 eP	45 24.20	1.4	
PGZ	23.39	189 eP	45 43.10	-2.2	
BRS	27.87	244 iPc	46 25.20	0.1	
MSZ	29.24	199 P	46 35.10	-1.5	
CTA	33.02	260 iPd	47 08.80	-0.1	
	0.8s	21.27nm		4.8mb	
CNB	33.27	232 iPc	47 12.20	1.2	
	0.7s	97.00nm		5.5mb	
CAN	33.55	232 iPd	47 13.90	0.7	
PMG	33.91	279 eP	47 17.50	1.1	
CMS	34.78	240 iPd	47 24.30	0.7	
	0.7s	63.00nm		5.4mb	
TOO	37.03	230 iPd	47 43.50	1.5	
	0.9s	103.00nm		5.5mb	
STK	38.39	241 iPd	47 54.50	1.4	
	0.4s	23.00nm		5.1mb	
BFD	39.08	232 iPc	47 58.70	0.0	
ADE	41.43	237 iPd	48 17.90	0.3	
	0.6s	42.67nm		5.2mb	
WB5	44.19	259 iPd	48 38.50	-1.0	
ASPA	44.42	254 iPd	48 40.80	-0.4	
	0.6s	155.00nm		5 7mb	
		e	54 34.90		
MTN	48.31	268 iPc	49 10.60	-0.4	
	0.9s	155.00nm		5.5mb	
FORR	49.69	244 iPd	49 20.40	-0.5	
	0.4s	30.00nm		5.2mb	
KNA	50.01	264 iPc	49 23.00	-0.5	
WARB	50.94	250 iPd	49 21.30	-9.0X	
	0.6s	44.00nm		5.1mb	
COOL	55.67	244 iPd	50 02.60	-1.3	
	0.4s	6.00nm		4.3mb	
KLB	58.55	243 eP	50 22.50	-1.0	
	0.6s	30.00nm		4.8mb	
NWAO	58.95	242 eP	50 25.50	-0.6	
BAL	59.50	244 eP	50 29 10	-0.7	
MUN	59.85	243 eP	50 31.00	-1.1	
MRWA	60.21	246 eP	50 33.80	-0.7	
NANU	61.36	253 iPc	50 41 80	-0.2	
SPA	72.59	180 ePd	51 51 10	0.9	
	1.0s	10.00nm		4.3mb	
PRS	76.30	45 ePc	52 11.10	0.0	
SAO	76.49	44 ePc	52 11.70	-0.4	
BRK	76.59	43 e(P)	52 12.40	-0.1	
MHC	76.69	44 eP	52 13.80	0.5	
FRI	77.78	45 eP	52 18.70	-0.3	
CMB	77.90	44 eP	52 19.80	0.1	
MIN	78.42	41 eP	52 22.00	-0.5	
KVN	79.96	44 eP	52 31.00	0.4	
MAW	84.06	200 eP	52 52.00	1.4	
ALQ	86.25	52 eP	53 02.50	0.5	
CHTO	88.40	290 eP	53 12.30	0.2	
	1.0s	3.25nm		4.2mb	
YKA	94.19	25 eP	53 38.10	0.3	
FLN	148.81	2 ePKP	00 03.80	4.7X	
	0.4s	4.50nm			
LDF	148.99	2 ePKP	00 03.80	4.4X	
	0.4s	3.40nm			
GRR	149.17	3 ePKP	00 04.70	5.0X	
	0.4s	4.50nm			
LPF	149.52	3 ePKP	00 05.50	5.3X	
	0.4s	5.70nm			
LOR	150.24	356 ePKP	00 07.50	6.1X	
	0.6s	5.40nm			
SSF	150.47	357 ePKP	00 08.20	6.5X	
	0.4s	3.60nm			
LBF	150.52	356 ePKP	00 08.20	6.4X	
	0.4s	1.90nm			
AVF	150.75	357 ePKP	00 08.50	6.4X	
	0.4s	1.10nm			
BGF	151.00	357 ePKP	00 09.20	6.7X	
	0 6s	4.50nm			
MAF	151.35	358 ePKP	00 10.20	7.1X	
	0.5s	2.90nm			

S.D. = 0.9 on 40 of 51 obs.

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* JUN 06, 1989 02h 51m 45.45± 0.65s
4.221 N ±17.4km 82.046 W ±34.8km
DEPTH = 10.0km (geophysicist)
4.7mb (6 obs.) 3.7Msz (1 obs.)
SOUTH OF PANAMA (83)

DVD	4.21	355 iPc	52 52.00	0.9	
UPA	5.35	28 iPd	53 15.00	7.7X	
		iS	54 21.10		
GGP	5.56	142 eP	53 10.70	-0.2	
BUS	5.57	342 iPc	53 09.50	-1.3	
		S	54 15.00		
CAYA	5.78	135 eP	53 07.50	-6.3X	
LCR2	5.82	341 iPc	53 12.80	-1.3	
RECU	5.95	144 eP	53 18.50	2.3X	
SJS	6.02	341 iPc	53 15 60	-1.3	
		S	54 23.00		
AR6	6.80	335 eP	53 28.00	0.1	
ARE	23.05	153 eP	56 52.00	-0.4	
ZOBO	24.58	146 Pc	57 08.30	0.7	
	1.2s	43.92nm		5.0mb	
Z	24s	0.21um		3.6MszX	
		LR	05 44.00		
LPB	24.81	147 eP	57 07.00	-2.6	
	1.0s	90.00nm		5.4mb	
		i	57 13.20		
CNCB	25.10	147 P	57 14.00	1.4	
RLO	33.96	341 e(P)	58 31.60	0.3	
TUL	33.99	340 eP	58 31.60	0.1	
	0.7s	2.40nm		4 2mb	
Z	22s	0.15um		3.7Msz	
		LR	09 00.00		
LNO	33.99	340 e(P)	58 31.70	0.4	
ALQ	38.02	327 iPc	59 06.80	0.9	
	0.9s	9.45nm		4.6mb	
		e	59 13.00		
LRM	49.17	332 eP	00 35.90	0.0	
FFC	52.88	346 eP	01 04.00	0.4	
	0.7s	6.00nm		4.6mb	
YKA	62.93	344 eP	02 14.70	0.6	
MBC	74.88	351 eP	03 29.00	1.3	
	0.6s	5.00nm		4.7mb	

S.D. = 1.1 on 18 of 21 obs.

? JUN 06, 1989 03h 45m 03.94±12.34s
40.348 N ±28.2km 126.790 W ±101.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)
ML 3 4 (BRK).

FHC	2.18	77 ePc	45 40.20	-0 7	

06d 03h

		eS	46 04.80		
WDC	3.25	85 eP	45 55.80	-0.2	
		i	46 32.80		
LBFM	3.85	73 eP	46 06.00	1.3	
MIN	3.96	88 e(P)	46 05.10	-1.1	
ORV	4.14	99 e(P)	46 07.90	-0.7	
PCC	4.46	128 eP	46 13.50	0.4	
GCC	5.00	130 e(P)	46 20.80	0.0	
MHC	5.02	125 eP	46 21.00	-0.1	
ARN	5.08	124 eP	46 21.70	-0.3	
CMB	5.49	113 e(P)	46 30.20	2.5	
SAO	5.51	129 eP	46 27.30	-0.7	
PRS	5.85	132 eP	46 32.50	-0.3	
KVN	6.83	98 eP	46 42.00	-4.8X	

S.D. = 1.1 on 12 of 13 obs.

& JUN 06, 1989 07h 20m 22.10s
51.111 N 124.543 W
DEPTH = 20.0km (geophysicist)
BRITISH COLUMBIA (23)
<PGC-P>. ML 3.6 (PGC).

CBB	1.20	206 iP	20 42.80	-1.0	
		eSg	20 55.00		
WHB	1.41	134 iP	20 46.40	-0.4	
		eSg	21 04.10		
WPB	1.69	149 iP	20 51.00	0.3	
BTB	1.76	201 eP	20 52.30	0.3	
		eSg	21 14.50		
ALB	1.85	186 eP	20 52.90	-0.2	
		eSg	21 16.10		
BIB	1.88	155 eP	20 53.80	0.3	
		eSg	21 16.70		
MCW	2.67	155 eP	21 05.21	0.3	
		eS	21 42.77		
STW	3.02	169 eP	21 10.73	1.0	
		S	21 50.64		
OTR	3.03	177 eP	21 11 54	1.5	
CMW	3.12	149 eP	21 11.57	0.3	
BLN	3.27	161 eP	21 14.89	1.5	
RPW	3.31	142 eP	21 14.64	0.7	
		eS	22 00.12		
OSD	3.34	170 eP	21 15.38	0.9	
JCW	3.38	149 eP	21 15.21	0.3	
OOW	3.39	176 eP	21 15.92	0.9	
HDW	3.60	164 eP	21 19.18	1.0	
BLH	3.66	152 eP	21 19.54	0.6	
GMW	3.75	161 eP	21 20.95	0.8	
HTW	3.77	150 eP	21 21.05	0.5	
OBH	3.81	173 eP	21 21.34	0.3	
SMW	3.88	168 eP	21 22.67	0.7	

21 obs. associated

JUN 06, 1989 07h 24m 56.64± 0.13s
18.457 N ± 2.6km 146.302 E ± 3.6km
DEPTH = 57.5km (5 depth phases)
5.4mb (36 obs.)
MARIANA ISLANDS (216)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 24C
Centroid Location:
Origin Time 07:25: 1.3 0.5
Lat 18.46N 0.06 Lon 146.25E 0.06
Dep 28.7 4.9 Half-duration 1.5
Moment Tensor. Scale 10**16 Nm
Mrr= 6.09 0.34 Mtt=-0.54 0.44
Mff=-5.56 0.42 Mrt= 3.94 1.08
Mrf= 3.92 1.11 Mtf=-0.31 0.33
Principal Axes:

T	Val= 8.77	Plg=64	Azm=327
N	-1.64	16	201
P	-7.12	20	105

Best Double Couple:Mo=7.9*10**16
NP1:Strike=169 Dip=29 Slip= 55
NP2: 28 67 108

PJG	5.03	196 ePd	26 13.40	1.9	
GUMO	5.03	196 ePd	26 13.30	1.8	
	0.6s	255.89nm	5.6mb		
GUA	5.07	195 eP	26 13.70	1.7	
	0.7s	180.82nm	5.4mb		
		eS	27 09.90		
WKYJ	18.38	331 eP	29 08.80	-0.2	
KAKJ	18.49	344 eP	29 08.90	-1.4	
IIDJ	18.52	338 eP	29 10.80	0.1	
CHJJ	18.68	341 P	29 11.50	-1.1	
KAGJ	18.85	315 eP	29 16.20	1.4	
TKSJ	18.94	327 P	29 14.90	-0.9	
TSRJ	19.31	334 P	29 19.80	-0.1	
KUMJ	19.75	318 eP	29 24.50	-0.1	
NIIJ	19.78	343 P	29 24.40	-0.4	
YONJ	20.19	328 eP	29 28.80	-0.3	
YAMJ	20.39	346 P	29 31.50	0.3	
OFUJ	20.94	350 eP	29 36.60	-0.2	
DAV	23.13	243 eP	30 03.30	4.6X	
ANP	23.94	291 eP	30 11.00	4.4X	
HOOJ	23.99	354 eP	30 08.70	2.0	
MRRJ	24.30	351 eP	30 10.40	0.6	
KUSJ	24.60	357 eP	30 14.10	1.4	
BAG	24.62	269 eP	30 14.00	0.7	
LAT	24.96	178 iPd	30 16.90	0.6	
ASAJ	25.77	354 eP	30 24.40	0.7	
SSE	25.97	304 P	30 26.20	0.5	
	Z 20s	0.50um	4.0Msz		
		pP	30 33.20	25kmX	
		sP	30 46.60		
		S	34 28.00		
		sS	35 12.80		
LMG	27.25	176 iP	30 40.00	2.4	
PMG	27.70	178 iPc	30 40.80	-0.7	
	0.8s	253.73nm	5.9mb		
MDJ	29.59	335 eP	30 58.50	0.1	
SNY	30.30	325 Pc	31 05.00	0.4	
CN2	30.76	330 eP	31 11.00	2.3	
TIA	31.20	310 eP	31 12.70	0.0	
KKM	31.82	251 ePd	31 19.80	1.4	
	0.7s	181.20nm	6.0mb		
BJI	33.70	316 eP	31 32.50	-1.9	
	Z 20s	0.61um	4.3Msz		
		ePcP	34 12.00		
		eS	36 46.00		
		eScP	37 49.00		
MTN	34.52	207 eP	31 40.00	-1.6	
TIY	35.24	310 eP	31 51.00	3.3X	
	N 14s	0.40um			
MKS	35.40	231 iPd	31 51.70	2.5	
XAN	36.71	303 P	32 00.00	-0.1	
HHC	37.18	314 P	32 04.40	0.4	
GYA	37.37	290 iP	32 07.40	1.6	
BTO	38.13	313 eP	32 07.60	-4.4X	
CTA	38.31	180 iPc	32 13.10	-0.4	
	1.2s	128.13nm	5.7mb		
		i	32 31.00		
QIS	39.32	190 iPc	32 21.20	-0.8	
		e	32 27.00		
WB5	39.86	198 eP	32 25.20	-1.2	
		ePcP	34 31.00		
		eScP	38 13.80		
		eS	38 19.50		
WRA	39.93	198 Pd	32 26.50	-0.5	
	0.8s	38.00nm	5.3mb		
KHKI	40.34	231 ePc	32 30.50	0.0	
		e	35 56.00		
CD2	40.37	296 eP	32 31.10	0.5	
LZH	41.25	304 eP	32 39.50	1.5	
	Z 36s	1.10um	4.5MszX		
ASPA	43.58	197 iPc	32 55.00	-1.9	
	Z 27s	0.30um	4.1MszX		
		eS	39 20.20		
		LR	49 12.40		
CHG	44.77	278 eP	33 11.20	4.6X	
	0.9s	10.29nm	4.6mb		
CHTO	44.77	278 eP	33 08.10	1.5	
	0.7s	6.99nm	4.6mb		
DZM	44.84	153 iPc	33 08.00	0.9	
		i	34 49.20		
GTA	45.15	308 eP	33 10.00	0.5	
	Z 20s	1.30um	4.9Msz		
		PP	34 48.80		
BRS	46.01	172 iPd	33 16.60	0.4	
		i	34 52.90		
IPM	46.31	258 ePd	33 21.00	2.2	
	0.8s	28.10nm	5.2mb		
KLI	46.96	244 eP	33 23.50	-0.5	
		e	33 35.00		
WARB	48.31	204 eP	33 25.70	-8.6X	
	0.3s	30.00nm	5.8mb		
PSI	48.95	257 iPc	33 43.00	3.6X	
	0.7s	25.80nm	5.4mb		
CMS	49.66	181 iPc	33 43.60	-0.9	
	0.6s	26.00nm	5.4mb		
STK	50.25	185 eP	33 48.00	-1.1	
NANU	50.67	218 iPc	33 52.30	-0.1	
FORR	52.05	200 eP	34 01.60	-1.2	
	0.4s	28 00nm	5.6mb		
MEKA	52.29	212 eP	34 05.50	0.9	
CAN	53.54	177 iPc	34 14.00	0.3	
CNB	53.55	177 iPd	34 14.00	0.1	
ADE	53.62	188 eP	34 11.20	-3.1X	
COOL	54.70	207 eP	34 21.50	-0.8	
WMQ	54.90	311 eP	34 21.90	-1.9	
BFD	55.45	184 iPd	34 26.90	-0.7	
MRWA	55.70	212 eP	34 28.40	-1.2	
TOO	55.73	181 eP	34 29.00	-0.7	
GUN	55.86	292 P	34 31.10	-0.3	
	0.4s	21.00nm	5.5mb		
PKI	56.31	291 P	34 33.90	-0.6	
	0.6s	11.00nm	5.1mb		
KKN	56.40	291 P	34 34.50	-0.6	
	0.8s	14.00nm	5.1mb		
BAL	56.48	211 eP	34 34.00	-1.2	
DMN	56.57	291 P	34 34.60	-1.7	
	0.6s	8.00nm	4.9mb		
KLB	56.80	209 eP	34 37.00	-0.4	
MUN	57.85	210 eP	34 43.00	-1.8	
NWAO	58.16	209 eP	34 46.50	-0.4	
SVW	58.75	29 ePc	34 50.50	-0.3	
TTA	59.21	27 ePc	34 53.10	-0.9	
RKG	59.22	208 eP	34 58.00	3.7X	
IMA	61.26	24 ePc	35 07.20	-0.9	
	1.1s	10.40nm	4.9mb		
PMR	61.88	29 eP	35 10.40	-1.7	
	1.1s	28.10nm	5.3mb		
BRW	62.30	18 P	35 14.90	0.1	
KRP	62.46	154 P	35 15.10	-1.0	
FBA	63.26	26 eP	35 20.00	-1.2	
	0.7s	18.17nm	5.3mb		
		iS	36 15.60		
TOA	63.36	29 ePc	35 21.60	-0.4	
NDI	63.39	293 eP	35 24.00	1.4	
HYB	64.10	281 eP	35 21.00	-6.5X	
PGZ	65.05	155 P	35 31.70	-1.3	
	1.0s	93.00nm	5.7mb		
MSZ	65.85	163 P	35 37.00	-1.1	
MBC	73.24	14 ePc	36 22.90	-0.1	
	1.0s	70.00nm	5.5mb		
BMW	77.17	45 P	36 46.70	0.7	
GMW	77.22	44 P	36 47.10	0.9	
HTW	77.83	44 P	36 49.40	-0.2	
FHC	77.97	51 e(P)	36 51.40	0.9	
YKC	78.00	28 ePc	36 49.70	-0.4	
ALE	78.31	4 ePc	36 52.90	1.3	
	0.7s	17.00nm	5.1mb		
VGB	79.06	46 P	36 56.30	-0.1	
WDC	79.09	51 e(P)c	36 56.80	0.2	
KBS	79.61	352 eP	36 58.70	0.0	
MIN	79.84	51 ePc	37 00.50	-0.3	
BRK	80.01	53 e(P)	37 01.60	0.0	
PCC	80.01	54 e(P)	37 01.40	-0.2	
BKS	80.03	53 e(P)	37 02.10	0.4	
DPW	80.13	43 eP	37 02.00	-0.1	
ORV	80.13	52 ePc	37 02.20	0.0	
GCC	80.44	54 eP	37 03.80	-0.1	
MHC	80.62	54 ePc	37 05.20	0.2	
ARN	80.71	54 P	37 05.80	0.4	
SAO	80.93	54 e(P)	37 07.00	0.5	
PRS	81.11	55 ePc	37 07.80	0.3	
LLA	81.36	54 eP	37 09.00	0.2	
CMB	81.39	53 ePc	37 09.30	0.4	
EDM	81.44	37 iPc	37 09.00	0.2	
FRI	82.20	54 ePc	37 13.20	0.1	
KEV	82.34	342 iP	37 12.20	-1.0	
	0.7s	68.10nm	5.8mb		
BCH	82.44	56 P	37 15.40	0.8	
SYP	82.72	56 eP	37 17.00	1.0	
KVN	82.80	51 P	37 16.60	0.2	
MNA	82.95	52 e(P)	37 16.20	-0.9	
ISA	83.55	55 eP	37 20.00	-0.2	
IR2	83.69	305 eP	37 21.00	0.0	
TNP	83.76	52 P	37 21.70	0.3	
SES	83.76	39 eP	37 20.00	-0.9	
SOD	83.78	340 iP	37 19.80	-0.8	
IR4	83.82	305 eP	37 22.50	0.8	
IR7	83.90	305 eP	37 22.10	0.1	
IR1	83.93	305 eP	37 22.80	0.6	
CLC	84.18	54 eP	37 24.00	0.6	
PAS	84.26	56 eP	37 24.00	0.3	
MWC	84.33	56 eP	37 24.00	-0.3	
SBB	84.36	55 eP	37 25.00	0.7	
LRM	84.52	44 ePc	37 25.20	0.1	

DAG	84.55	357	iPc	37 23.50	-0.8
	0.9s	25.21nm		5.3mb	
TRO	84.66	344	iP+	37 24.20	-0.8
RVR	84.94	56	eP	37 27.00	-0.1
GSC	84.96	55	eP	37 27.00	-0.3
PEC	85.14	56	P	37 28.10	0.0
PLM	85.55	56	eP	37 31.00	0.6
BAR	85.92	57	eP	37 32.00	0.0
DUG	86.27	49	P	37 34.20	0.4
	1.0s	30.00nm		5.4mb	
SUF	86.58	336	iP	37 32.50	-2.1
	0.4s	7.80nm		5.2mb	
FFC	86.99	33	iPc	37 36.80	0.1
	1.0s	73.00nm		5.8mb	
GLA	87.26	56	eP	37 39.00	0.4
DAU	87.30	48	P	37 39.30	0.3
			pP	37 56.40	60km
MSU	87.34	50	P	37 39.80	0.7
NUR	88.45	335	iP	37 41.50	-2.2
Z	22s	0.20um		4.5Msz	
		LR		17 30.00	
PV09	89.55	49	eP	37 50.00	0.2
			epP	38 06.70	58km
PV10	89.67	50	ePc	37 50.10	-0.2
			epP	38 07.20	60km
GOL	91.72	47	P	38 00.50	0.8
	1.0s	67.50nm		6.0mb	
GLD	91.81	47	ePc	38 01.40	1.4
	1.0s	180.00nm		6.4mb X	
			epP	38 18.00	58km
HFS	92.82	338	eP	38 01.60	-2.4
	0.5s	4.30nm		5.1mb	
ALQ	92.96	52	iPc	38 06.00	0.6
	1.2s	29.30nm		5.6mb	
			epP	38 21.00	51km
NAO	93.28	340	P	38 03.80	-2.3
	1.2s	9.40nm		5.1mb	
FRB	93.70	15	ePc	38 07.00	-1.0
AKU	95.28	354	iPc	38 16.20	1.0
	1.0s	24.00nm		5.6mb	
ACO	97.46	48	eP	38 26.40	0.7
	0.9s	15.50nm		5.5mb	
MEO	98.79	49	eP	38 32.00	0.3
	1.2s	17.80nm		5.5mb	
SIO	99.92	47	e(P)	38 36.70	-0.1
TUL	100.19	47	ePdiff	38 38.20	0.2
	1.2s	5.90nm		5.0mb	
Z	22s	0.53um		5.0Msz	
		LR		12 23.00	
LNO	100.19	47	e(Pdif	38 29.70	-8.1X
VVO	100.53	47	e(Pdif	38 39.70	0.2
SPA	108.34	180	e(PKP)	43 19.00	-0.6
	0.7s	5.08nm			
BUL	121.48	257	iPKPd	43 44.40	-1.7
	0.9s	12.18nm			
BNG	123.73	289	iPKPc	43 49.00	-1.5
	0.7s	9.00nm			
LNV	143.04	122	iPKPc	44 25.50	-0.5
TACH	143.50	122	ePKP	44 24.20	-2.7X
ROCH	143.61	121	ePKP	44 25.00	-2.4X
CHCH	143.66	122	ePKP	44 25.00	-2.2X
SAN	143.78	122	ePKPc	44 25.00	-2.4X
PEL	143.84	121	iPKPc	44 25.50	-2.0
PCH	143.85	122	ePKP	44 26.00	-1.6
ARE	143.93	93	ePKP	44 22.00	-6.4X
FCH	144.11	122	ePKP	44 28.00	-0.4
ANT	145.41	105	iPKPc	44 31.80	1.4
ZOBO	147.10	92	PKPc	44 34.60	0.5
	1.0s	75.00nm			
Z	24s	0.13um		4.6MszX	
		eLR		34 20.00	
LPB	147.16	92	PKPc	44 35.70	1.7
	1.0s	44.00nm			
CNCB	147.31	93	iPKPc	44 36.00	1.6
CCH	149.13	93	PKP	44 38.30	1.4
ATB	156.42	52	e(PKP)	44 47.10	0.1
PPD	163.09	105	ePKP	44 54.50	0.5
BAO	166.05	81	ePKP	44 58.00	1.1
SOB1	168.46	38	iPKPc	44 59.00	0.4
ITR	169.33	26	ePKP	45 00.40	1.3
			e	46 15.30	
BMA	169.34	115	ePKP	44 56.70	-2.2X
S.D. = 1.0 on 168 of 185 obs.					

? JUN 06, 1989 07h 33m 25.45± 3.62s
18.509 N ±23.8km 144.389 E ±64.7km
DEPTH = 113.7 ± 29.3 km

MARIANA ISLANDS (216)

PJG	4.91	175	iPc	34 38.90	0.6
GUMO	4.91	175	iPc	34 39.00	0.7
	0.3s	33.18nm			
GUA	4.97	174	eP	34 38.00	-1.1
			eS	35 35.30	
PMG	27.87	174	eP	39 06.00	-0.5
WARB	47.65	202	iPc	41 52.00	-0.2
MBC	73.64	14	eP	44 48.00	0.3
YKA	78.73	28	eP	45 15.40	-1.1
ZOBO	148.91	91	PKP	53 00.00	1.3
CCH	150.95	93	ePKP	53 07.00	5.6X
S.D. = 1.1 on 8 of 9 obs.					

? JUN 06, 1989 07h 56m 50.78± 2.97s
61.879 N ±14.7km 4.295 E ±26.2km
DEPTH = 10.0km (geophysicist)

SOUTHERN NORWAY (535)

MD 2.1 (BER).

SUE	0.85	165	iP	57 08.54	1.3
			eS	57 18.87	
HYA	1.15	127	iPg	57 12.22	-0.1
			eSg	57 22.10	
ASK	1.47	162	eP	57 16.00	-1.2
			eS	57 34.80	
MOL	1.67	64	iP	57 20.46	0.2
			eS	57 40.16	
ODD1	2.28	149	eP	57 28.74	-0.3
			iS	57 49.30	
KMY	2.72	170	eP	57 35.37	0.2
			eS	58 05.19	
BLS1	2.79	152	eP	57 36.34	0.0
			eS	58 01.40	
NRA0	3.68	105	iPgd	57 54.10	5.2X
			iSg	58 30.00	
S.D. = 0.9 on 7 of 8 obs.					

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* JUN 06, 1989 08h 22m 47.63± 3.73s
29.933 N ± 7.7km 138.708 E ±11.8km
DEPTH = 452.5 ± 42.9 km
4.6mb (9 obs.)

SOUTH OF HONSHU, JAPAN (211)

BJI	20.98	305	eP	26 58.00	-0.5
CHG	37.70	262	eP	29 42.80	18.6X
	1.0s	17.75nm			
CHTO	37.70	262	iP	29 24.90	0.7
	0.9s	13.43nm		4.4mb	
GUN	45.95	281	Pd	30 30.90	0.5
	0.5s	52.00nm		5.2mb	
PKI	46.44	281	Pd	30 34.20	0.0
	0.6s	16.00nm		4.6mb	
KKN	46.49	281	Pd	30 34.60	0.1
	0.4s	17.00nm		4.8mb	
DMN	46.69	281	Pd	30 36.10	0.0
	0.4s	21.00nm		4.9mb	
WB5	49.70	185	iPd	30 58.40	-0.1
WRA	49.77	185	Pd	30 58.80	-0.2
	0.4s	4.20nm		4.1mb	
ASPA	53.49	185	eP	31 26.00	-0.2
	0.6s	14.00nm		4.5mb	
FBA	56.34	29	eP	31 46.00	0.2
	0.7s	0.50nm		3.0mb X	
WARB	56.98	193	eP	31 43.00	-7.7X
KEV	69.29	340	eP	33 09.00	-0.3
SOD	70.64	338	iP	33 17.30	-0.1
YKA	71.10	28	eP	33 20.90	0.8
SUF	73.31	334	iP	33 32.60	-0.3
	0.4s	8.00nm		4.7mb	
NUR	75.15	332	iP	33 43.00	-0.2
NAO	80.12	337	P	34 09.60	-0.4
	0.6s	6.70nm		4.4mb	
S.D. = 0.4 on 16 of 18 obs.					

% JUN 06, 1989 08h 28m 31.84± 0.66s
33.740 S ± 7.2km 71.224 W ± 6.0km
DEPTH = 33.0km (normol)

NEAR COAST OF CENTRAL CHILE (135)

TACH	0.25	70	iPc	28 40.00	0.9
			iS	28 47.60	
LNV	0.27	216	iPc	28 39.30	0.2
			iS	28 46.70	
LCCH	0.39	312	iPc	28 40.60	-0.2
			iS	28 48.50	
CHCH	0.51	112	iPc	28 42.50	-0.2
			iS	28 51.00	
SAN	0.55	59	iP	28 43.20	0.0
			iS	28 52.80	
PCH	0.60	79	iPc	28 43.60	-0.4
			iS	28 53.50	
PEL	0.75	37	iP	28 46.40	0.4
			iS	28 57.70	
ROCH	0.79	13	iPd	28 46.60	-0.1
			iS	28 59.00	
FCH	0.88	62	iP	28 47.60	-0.6
			iS	29 00.90	
S.D. = 0.5 on 9 of 9 obs.					

JUN 06, 1989 09h 00m 29.41± 0.51s
37.764 N ± 5.0km 26.712 E ± 5.2km
DEPTH = 10.0km (geophysicist)

DODECANESE ISLANDS (369)

IZM	0.77	34	iPg	00 44.00	-0.4
			iSg	00 54.50	
YER	1.40	116	iPn	00 54.60	-0.4
PRK	1.52	347	ePb	00 57.50	0.9
			eSb	01 21.00	
EZN	2.08	352	ePn	01 04.50	-0.2
KAP	2.24	170	ePn	01 06.00	-1.1
KHL	2.29	75	iPn	01 08.00	0.1
DST	2.37	39	ePn	01 07.60	-1.4
ATH	2.38	276	ePn	01 09.50	0.4
NPS	2.65	200	ePn	01 11.70	-1.2
EDC	2.73	19	iPn	01 14.70	0.6
ELL	2.74	111	iPn	01 15.90	1.5
KSL	2.83	125	ePb	01 17.30	1.9
ALT	2.96	63	ePn	01 17.00	-0.5
BCK	3.09	94	ePn	01 18.00	-1.2
NEO	3.14	300	ePn	01 19.80	-0.1
RDO	3.50	345	ePn	01 24.50	-0.4
CTT	3.63	21	iPn	01 25.40	-1.4
GBZT	3.69	34	ePn	01 37.50	9.8X
ISK	3.76	28	ePn	01 31.00	2.3
GPA	3.77	47	ePn	01 30.00	1.1
ITM	3.85	263	ePn	01 31.00	1.0
DMK	4.13	11	ePn	01 32.40	-1.5
VAY	4.78	319	ePn	02 01.00	17.8X
BBTK	5.16	64	eP	02 11.00	22.4X
			i	03 22.00	
CMP	7.60	351	iPc	03 12.00	49.1X
MLR	7.74	356	ePc	02 31.00	6.1X
BZS	8.72	336	eP	02 51.50	13.1X
S.D. = 1.2 on 21 of 27 obs.					

JUN 06, 1989 09h 11m 34.13± 0.58s
43.711 N ± 5.7km 18.737 E ± 6.6km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

PLE	0.61	128	ePg	11 45.70	-0.8
			eSg	11 58.00	
BRY	0.82	190	iPgd	11 48.50	-1.6
			eSg	12 04.00	
IVA	1.19	134	ePg	11 56.50	0.1
			eSg	12 18.00	
HCY	1.27	188	ePg	11 57.50	-0.3
			eSg	12 20.00	
TTG	1.34	163	ePg	11 58.10	-0.6
			eSg	12 21.50	
BDV	1.43	177	ePn	12 01.00	0.9
			eSn	12 24.50	
PVY	1.44	141	ePn	12 01.00	0.7
			eSn	12 24.00	
BLY	1.52	313	ePn	12 02.20	0.8
			eSn	12 18.70	
BEO	1.66	47	ePn	12 04.50	1.1
			iSg	12 26.50	
HVAR	1.75	253	iPn	12 04.40	-0.3
			iSg	12 28.80	
ULC	1.79	168	ePn	12 07.50	2.2
			eSn	12 34.80	
SKO	2.64	130	ePn	12 27.50	10.0X
BZS	2.80	46	iPc	12 18.00	-1.8
PTJ	2.95	319	e(Pn)	12 28.90	6.9X
			eSn	13 02.30	
OHR	3.01	149	ePn	12 29.00	6.2X
VBY	3.07	307	ePn	12 25.30	1.8
			eSn	12 57.60	
CEY	3.68	305	eP	12 43.00	10.7X
			e(Sn)	13 13.00	

06d 09h

TRI 4.07 301 e(P) 12 36.70 -1.0
e 13 09 00
VOY 4.15 306 ePn 12 37.90 -1.1
eSn 13 24.00
S.D. = 1.3 on 15 of 19 obs.

& JUN 06, 1989 09h 53m 10.08s
59.887 N 153.370 W
DEPTH = 126.3km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT 0.25 163 iP 53 27.64 1.3
S 53 40.78
ILIM 0.28 47 iP 53 27.49 1.1
PDB 0.43 257 eP 53 27.91 -0.7
S 53 41.90
RED 0.61 29 iP 53 29.21 -0.6
S 53 44.57
RDT 0.84 34 iP 53 30.99 -0.6
S 53 46.83
CDD 0.97 188 iP 53 31.98 -0.7
S 53 48.67
CNPM 1.14 108 iP 53 33.64 -0.7
S 53 51.35
SPU 1.45 26 iP 53 37.12 -0.7
SLKM 1.69 67 iP 53 39.84 -0.7
SEW 1.98 82 eP 53 42.91 -1.1
S 54 07.38
SUA 2.04 38 eP 53 44.04 -0.9
S 54 10.14
11 obs. ossocioted

% JUN 06, 1989 10h 41m 43.86± 1.09s
60.842 N ± 6.8km 6.417 E ±14.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)

HYA 0.34 341 iP 41 50.91 0.0
eS 42 05.21
ASK 0.70 240 eP 41 57.57 -0.1
iS 42 05.98
ODD1 0.94 173 eP 42 01.40 -0.4
eS 42 10.91
BLS1 1.47 172 eP 42 10.73 0.2
eS 42 27.19
KMY 1.74 200 eP 42 14.51 0.3
eS 42 34.76
MOL 1.82 17 eP 42 22.36 7.0X
eS 42 48.35
NRA0 2.52 90 iPc 42 32.80 7.4X
iSg 43 06.70
S.D. = 0.4 on 5 of 7 obs.

JUN 06, 1989 11h 29m 48.09± 0.67s
38.375 N ± 9.7km 119.319 W ± 6.3km
DEPTH = 5.0km (geophysicist)
CALIFORNIA-NEVADA BORDER REGION (40)
ML 2.5 (BRK).

CMB 0.91 248 iPc 30 04.50 -1.4
e(S) 30 16.00
MNA 0.92 86 e(P) 30 08.00 1.8
KVN 1.17 54 eP 30 09.00 -1.5
FRI 1.42 193 ePc 30 13.10 -1.4
eS 30 31 00
TNP 1.68 99 eP 30 18.10 -0.4
ARN 2.03 240 eP 30 23.70 0.3
ORV 2.07 305 ePc 30 24.50 0.6
eSg 30 52.50
MHC 2.11 241 ePd 30 25.30 0 7
LLA 2.18 217 ePd 30 26.20 0.7
e 30 55.00
SAO 2.33 227 ePc 30 28.10 0.4
PRS 2.61 219 ePc 30 32.00 0.3
MIN 2.65 319 ePc 30 35.30 3.0X
S.D. = 1.2 on 11 of 12 obs.

JUN 06, 1989 12h 48m 38.87± 1.59s
15.632 N ± 5.4km 60.581 W ±15.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

DEG 0.82 326 eP 48 54.55 -0.2
S 49 04.00
BBL 0.87 263 ePd 48 55.74 0.1

CRM 0.93 200 iPc 48 56.85 0.2
S 49 08.80
FDF 1.05 212 iPd 48 58.73 0.0
0.1s 1.35nm
S 49 12.40
MVM 1.11 196 iPc 48 59.91 0.1
PAG 1.13 291 eP 49 00.00 -0.1
S 49 14.50
BIM 1.21 203 iPd 49 00.93 -0.4
S 49 16.80
SLB 1.85 194 eP 49 32.98 22.0X
eS 49 35.52
BPA 1.86 319 eP 49 11.40 0.3
S.D. = 0.3 on 8 of 9 obs.

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* JUN 06, 1989 13h 17m 55.20± 4.32s
30.585 S ±16.3km 178.337 W ±16.2km
DEPTH = 241.9 ± 39.1 km
5.0mb (5 obs.)
KERMADEC ISLANDS (178)

DZM 16.05 298 iPc 21 29.50 -0.3
BRS 25.44 270 iPd 23 04.00 1.2
CAN 27.74 251 iPd 23 23.90 0.4
CMS 30.64 259 eP 23 49.80 0.8
CTA 33.54 280 iPc 24 14.90 0.7
0.6s 64.00nm 5.4mb
STK 34.16 257 iPc 24 20.00 0.7
0.5s 59.00nm 5.5mb
QIS 39.04 275 iPd 25 00.20 0.0
WRA 43.81 273 Pd 25 38.40 -0.7
0.6s 22.40nm 4.7mb
WB5 43.81 273 iPc 25 38.20 -0.9
FORR 45.67 255 eP 25 53.20 -0.4
0.3s 19.00nm 4.9mb
WARB 48.21 261 eP 26 03.20 -10.3X
COOL 51.43 253 eP 26 36.00 -1.9
SPA 59.58 180 ePc 27 35.00 -0.6
0.9s 8.64nm 4.4mb
i 27 41.20
MAW 72.03 201 eP 28 54.00 0.0
TNP 88.98 44 eP 30 24.20 0.4
KVN 89.10 43 eP 30 24.20 -0.1
SOB1 123.14 127 ePKP 36 25.20 0.2
BUL 123.30 211 iPKPc 36 27.00 1.7
1.0s 5.50nm
SUF 144.19 341 iPKP 37 01.70 -1.1
0.6s 10.80nm
NUR 146.39 340 iPKP 37 08.80 2.3X
NAO 149.15 351 PKP 37 16.20 5.3X
0.6s 9.70nm
HFS 149.37 348 ePKP 37 15.20 3.9X
0.7s 18.20nm
HFS 149.37 348 ePKP 37 15.90 4.6X
0.7s 17.90nm
BNG 149.50 215 iPKPc 37 19.50 6.6X
0.6s 24.00nm
S.D. = 1.0 on 18 of 24 obs.

? JUN 06, 1989 14h 04m 29.09± 1.82s
52.873 S ±30.5km 159.389 E ±36.9km
DEPTH = 10.0km (geophysicist)
4.6mb (3 obs.)
MACQUARIE ISLANDS REGION (167)

TAU 12.82 316 iPd 07 33.90 -0.1
FORR 31.64 302 eP 10 55.00 0.7
CTA 34.27 338 iPd 11 17.90 0.6
ASPA 35.00 317 eP 11 23.70 0.1
1.2s 39.00nm 5.2mb
WARB 36.18 305 eP 11 25.00 -8.5X
WRA 38.16 320 Pc 11 49.60 -0.6
1.1s 9.40nm 4.5mb
WB5 38.21 320 eP 11 50.00 -0.6
CHG 88.38 304 eP 17 22.10 -0.2
CHTO 88.38 304 eP 17 22.20 0.0
1.0s 2.75nm 4.5mb
SKO 149.95 266 ePKP 24 16.00 0.7X
S.D. = 0.6 on 8 of 10 obs.

JUN 06, 1989 14h 09m 17.92± 1.00s
6.628 S ± 9.3km 147.730 E ± 7.1km
DEPTH = 44.6 ± 8.4 km
4.9mb (3 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT 0.73 268 iP 09 32.20 0.3

LMG 2.30 170 eP 09 53.00 -1.3
PMG 2.82 192 iPc 10 03.00 1.4
MNDI 4.07 276 eP 10 24.00 4.4X
RAB 5.04 62 e(P) 10 24.00 -9.0X
JAY 8.11 300 ePd 11 15.50 -0.5
HNR 12.41 104 eP 12 15.00 0.3
QIS 15.93 209 eP 13 01.00 0.3
MTN 17.48 248 eP 13 20.00 -0.2
WB5 18.49 223 eP 13 32.00 -0.7
WRA 18.55 223 Pd 13 33.80 0.4
0.5s 3.80nm 3.8mb X
GUMO 20.28 352 eP 13 55.00 2.3X
KNA 20.68 242 eP 13 55.50 -1.3
0.4s 24.00nm 4.9mb
BRS 21.20 168 iPc 14 01.10 -1.0
ASPA 21.53 217 iPd 14 05.40 -0.1
Z 16s 1.93um 4.6MszX
eS 18 03.20
LR 23 20.00
WARB 27.97 224 eP 14 58.40 -8.2X
0.6s 17.00nm 4.9mb
MEKA 34.16 231 eP 16 01.00 -0.2
NANU 34.84 240 iPd 16 07.90 0.9
MRWA 37.42 229 eP 16 30.00 1.3
KLB 37.42 225 eP 16 28.00 -0.7
NWAO 38.56 223 eP 16 38.50 0.2
MUN 38.73 225 eP 16 39.50 -0.2
SPA 83.42 180 ePc 21 42.60 0.7
0.7s 9.77nm 5.0mb
BAO 152.95 145 e(PKP) 29 12.00 6.5X
S.D. = 0.9 on 19 of 24 obs.

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* JUN 06, 1989 14h 35m 15.88± 1.39s
50.441 N ± 6.3km 6.155 E ±13.4km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 1.9 (UCC).

MEM 0.19 331 iPc 35 20.19 0.1
ENN 0.36 336 iPg 35 23.20 -0.1
0.7s 20.00nm
iSg 35 29.00
WLF 0.78 180 iP 35 31.00 0.0
iS 35 41.40
DOU 1.06 252 iPd 35 35.80 0.0
iS 35 50.00
SNF 1.20 274 P 35 38.20 0.0
S.D. = 0.1 on 5 of 5 obs.

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* JUN 06, 1989 16h 36m 33.79± 1.88s
21.838 N ± 8.8km 143.110 E ± 9.0km
DEPTH = 235.5 ± 17.5 km
4.1mb (4 obs.)
MARIANA ISLANDS REGION (215)

CHJJ 14.61 347 eP 39 50.80 -0.2
TSRJ 15.00 337 P 39 56.20 0.4
MTMJ 15.40 344 eP 40 00.20 -0.6
SSE 21.65 300 e(P) 41 07.00 0.8
CHTO 41.42 274 eP 44 00.30 1.2
1.0s 3.50nm 3.8mb
WB5 42.33 192 eP 44 05.70 -0.7
WRA 42.40 192 Pd 44 06.70 -0.2
0.3s 0.60nm 3.5mb
GUN 51.89 289 P 45 21.40 0.4
PKI 52.34 289 P 45 24.00 -0.3
0.6s 11.00nm 4.5mb
KKN 52.43 289 P 45 24.60 -0.2
DMN 52.60 289 P 45 25.80 -0.3
0.4s 8.00nm 4.6mb
MBC 70.74 15 eP 47 25.00 -0.6
YKA 76.36 28 eP 47 58.10 -0.1
WDC 79.28 51 ePKPc 48 17.40 2.8X
ORV 80.38 51 ePKPc 48 21.20 0.8
CMB 81.73 52 ePKPc 48 28.10 0.5
LLA 81.83 54 ePKPc 48 28.60 0.6
SUF 82.29 336 eP 48 29.00 -0.8
FRI 82.61 53 ePKPc 48 32.40 0.4
NUR 84.13 334 eP 48 38.00 -1.1
S.D. = 0.7 on 19 of 20 obs.

JUN 06, 1989 16h 59m 11.91± 0.49s
45.904 N ± 4.2km 6.768 E ± 4.9km
DEPTH = 5.0km (geophysicist)
FRANCE (538)
ML 2.8 (LDG).

EMS	0.20	34	ePd	59 14.50	-1.6
LPL	0.39	184	Pg	59 19.50	-0.3
			Sg	59 26.00	
LPG	0.41	182	Pg	59 19.80	-0.3
			Sg	59 27.30	
DIX	0.48	68	ePd	59 20.90	-0.7
LSD	0.52	149	P	59 22.51	0.1
			S	59 31.14	
MMK	0.85	80	ePd	59 28.40	-0.5
RRL	0.98	179	P	59 30.90	-0.3
			S	59 45.84	
PZZ	1.42	170	P	59 39.23	0.7
			S	59 58.55	
LLS	1.82	57	ePc	59 46.10	1.8
SMF	2.16	291	Pg	59 48.50	-0.6
			Sg	00 13.60	
SLE	2.21	32	ePc	59 51.20	1.4
LBF	2.21	300	Pg	59 49.20	-0.6
			Sg	00 15.20	
LOR	2.43	305	Pg	59 52.40	-0.5
			Sg	00 20.50	
AVF	2.53	292	Pg	59 55.60	1.3
			Sg	00 24.00	

S.D. = 1.1 on 14 of 14 obs.

? JUN 06, 1989 17h 06m 35.17± 0.94s
61.776 N ± 7.7km 7.432 E ±11.1km
DEPTH = 0.6km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.2 (BER).

MOL	0.80	4	iP	06 51.18	0.1
			eS	07 01.66	
HYA	0.86	225	iP	06 51.80	-0.5
			eS	07 04.40	
ODD1	1.91	192	eP	07 10.00	0.7
			eS	07 34.50	
NRA0	2.24	116	iPnc	07 13.70	-0.3
			iPg	07 15.60	
			eS	07 41.00	
			iSg	07 44.60	

S.D. = 0.9 on 4 of 4 obs.

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* JUN 06, 1989 17h 15m 21.25± 1.06s
31.228 S ± 7.8km 71.041 W ±16.2km
DEPTH = 33.0km (normol)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	1.74	179	iPd	15 49.90	0.1
			iS	16 22.40	
PEL	1.93	171	iP	15 53.10	0.6
			iS	16 15.00	
ZON	2.05	100	eP	15 53.00	-1.1
FCH	2.19	163	iPc	15 58.20	1.9
			iS	16 32.40	
SAN	2.24	172	eP	15 57.00	0.2
			iS	16 15.40	
LCCH	2.28	191	iPd	15 55.60	-1.8
			iS	16 27.60	
TACH	2.42	178	iP	15 58.90	-0.5
			iS	16 35.00	
PCH	2.43	170	eP	16 00.00	0.4
			iS	16 39.00	
CHCH	2.72	173	iP	16 03.30	-0.3
			iS	16 15.40	
ANT	7.51	4	eP	17 11.70	0.4

S.D. = 1.1 on 10 of 10 obs

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* JUN 06, 1989 18h 04m 21.74± 1.22s
37.780 N ± 8.1km 26.714 E ±13.0km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

IZM	0.75	35	iPg	04 35.10	-1.4
			iSg	04 45.60	
YER	1.41	117	iPn	04 46.30	-1.1
PRK	1.50	347	ePb	04 50.00	1.3
EZN	2.06	352	ePn	04 57.00	0.2
KAP	2.26	170	ePb	04 59.00	-0.7
KHL	2.28	75	iPn	05 02.50	2.4
DST	2.36	39	iPn	05 05.90	4.7X
EDC	2.71	19	ePn	05 06.00	-0.2
ELL	2.75	111	ePn	05 08.00	1.2
ALT	2.96	63	ePn	05 09.00	-0.7
CTT	3.62	21	ePn	05 18.00	-0.9

S.D. = 1.4 on 10 of 11 obs.

% JUN 06, 1989 19h 03m 29.71± 0.86s
43.758 N ± 8.7km 12.543 E ±11.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.1 (ROM).

RSM	0.18	339	P	03 34.90	1.1
			eSg	03 39.00	
ARV	0.39	132	P	03 37.70	0.0
			eSg	03 43.30	
SFI	0.53	288	P	03 40.20	-0.2
ASS	0.69	173	P	03 43.60	0.1
			eSg	03 53.20	
CTI	2.38	345	P	04 08.30	-1.1

S.D. = 1.1 on 5 of 5 obs.

& JUN 06, 1989 19h 45m 26.96s
61.878 N 147.722 W
DEPTH = 24.4km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.2 (PMR).

KNK	0.58	217	iP	45 38.18	-0.3
			S	45 46.94	
PME	0.67	249	eP	45 39.04	-0.9
			S	45 48.84	
PMR	0.73	247	ePc	45 40.00	-0.9
TOA	0.77	72	iPd	45 41.50	-0.1
KLU	0.94	113	iP	45 43.04	-1.5
			S	45 55.54	
VZW	1.00	145	iP	45 43.29	-2.1
GLI	1.05	163	iP	45 44.53	-1.6
PWA	1.05	258	eP	45 44.90	-1.2
FID	1.28	152	iP	45 48.07	-1.3
SUA	1.50	255	eP	45 51.64	-1.0
PAX	1.52	43	eP	45 52.08	-0.8
			S	46 11.35	
SKT	1.80	275	eP	45 56.17	-0.8
SLKM	1.83	222	eP	45 56.05	-1.3
MTU	1.90	179	eP	45 56.85	-1.4
			S	46 23.53	
GLB	1.92	101	eP	45 57.64	-1.0
MCK	1.94	344	eP	45 58.38	-0.6
NKA	2.04	238	eP	46 01.31	0.9
DDM	2.10	23	eP	46 02.44	1.2
CGLM	2.13	256	eP	46 00.92	-0.8
SPU	2.19	253	eP	46 01.50	-1.1
KTH	2.24	320	eP	46 02.33	-0.9
			S	46 31.59	
WRH	2.61	356	eP	46 07.46	-1.0
FBA	3.03	359	iPc	46 13.00	-1.5
SVW	3.87	262	eP	46 23.70	-2.6
TTA	4.00	289	eP	46 26.70	-1.5
IMA	4.96	331	iPd	46 39.90	-1.9

26 obs. associated

JUN 06, 1989 20h 02m 34.22± 0.96s
44.789 N ± 6.3km 111.512 W ± 8.9km
DEPTH = 5.0km (geophysicist)
HEBGEN LAKE REGION (458)
CL 2.9 (BUT).

BGMT	0.58	320	ePc	02 46.00	0.1
MEMT	0.90	25	iPc	02 51.60	-0.5
CCMT	0.98	278	ePd	02 53.00	-0.4
LCCM	1.08	346	iPc	02 55.30	0.2
LRM	1.23	328	ePc	02 57.60	-0.1
BUT	1.43	329	ePc	03 03.20	2.2X
			eSn	03 20.80	
			eSg	03 22.10	
HRY	1.94	353	ePnc	03 08.70	0.5
PTI	2.02	198	eP	03 09.60	0.2

S.D. = 0.4 on 7 of 8 obs.

JUN 06, 1989 21h 31m 37.09± 0.39s
52.673 N ±10.2km 34.836 W ± 4.8km
DEPTH = 26.5km (6 depth phases)
4.7mb (24 obs.)
NORTH ATLANTIC OCEAN (402)

EKA	18.72	69	P	35 54.00	-1.6
	1.8s		92.90nm		4.7mb
GDH	18.79	339	iPd	35 56.50	0.2
	1.0s		36.00nm		4.5mb
			e	39 38.00	
			e	40 45.00	

SCH	18.93	289	eP	35 56.00	-2.2
FRB	20.65	316	ePd	36 15.70	-1.1
CBM	22.10	268	P	36 32.10	0.5
UCC	24.15	79	P	36 53.00	1.5
SNF	24.20	79	P	36 54.10	2.1
DOU	24.53	80	P	36 59.20	3.9X
			S	41 22.00	
TOL	24.61	109	eP	37 03.00	6.8X
WIT	24.88	73	eP	37 10.00	11.4X
MAF	24.94	90	eP	36 57.70	-1.6
	1.2s		22.00nm		4.7mb
DAG	24.95	9	eP	36 59.00	-0.1
BGF	24.95	89	eP	36 57.60	-1.8
	1.0s		24.00nm		4.8mb
ENN	25.09	78	eP	37 04.00	3.4X
	0.9s		15.00nm		4.6mb
SSF	25.12	87	eP	36 59.00	-2.0
	0.9s		13.10nm		4.6mb
AVF	25.15	88	eP	36 59.60	-1.7
	0.9s		13.10nm		4.6mb
MEM	25.19	78	P	37 03.80	2.2
WTS	25.21	75	eP	37 03.50	1.8
	0.8s		32.00nm		5.0mb
			e	37 12.00	
			e	37 35.00	
LOR	25.24	87	eP	37 00.30	-1.9
	1.0s		26.00nm		4.8mb
LBF	25.44	87	eP	37 02.60	-1.5
	1.2s		32.70nm		4.8mb
WLF	25.63	80	P	37 10.30	4.6X
NAO	25.85	54	P	37 06.10	-1.6
	1.4s		19.70nm		4.5mb
ABH	26.38	79	eP	37 15.11	2.4
RSNY	27.18	269	P	37 20.00	-0.1
	0.9s		8.40nm		4.4mb
HFS	27.31	55	(P)	37 16.90	-4.2X
	1.4s		14.10nm		4.4mb
FEL	27.49	83	eP	37 21.08	-1.9
MOX	28.50	75	e(P)	37 34.00	2.0
Z	16s		0.30um		4.0MszX
N	16s		0.30um		
CLL	29.07	73	iPc	37 37.90	0.9
	1.4s		15.00nm		4.5mb
			i	37 44.30	
BRG	29.78	74	iP	37 44.50	1.1
	1.4s		14.00nm		4.6mb
KHC	30.28	77	P	37 51.00	3.1X
KSP	31.16	73	eP	37 57.00	1.4
			e	38 04.80	
SOD	32.44	39	eP	38 10.00	3.4X
NUR	32.62	52	iP	38 07.40	-0.8
Z	24s		0.40um		4.0MszX
			LR	48 50.00	
SUF	32.85	48	iP	38 08.60	-1.6
RSON	35.60	291	P	38 32.50	-1.5
	1.1s		11.63nm		4.7mb
			pP	38 40.00	25km
MBC	38.37	337	eP	38 57.00	0.0
	1.0s		17.00nm		4.8mb
FFC	38.43	301	eP	39 06.00	8.2X
	0.9s		15.00nm		4.8mb
FVM	40.71	272	P	39 17.10	0.3
	1.0s		23.00nm		4.9mb
			pP	39 25.10	27km
YKA	41.17	316	eP	39 21.90	1.6
UKO	45 67	271	iPd	39 57.30	0.2
MEO	47 77	274	eP	40 13.20	-0.5
	1.2s		17.80nm		5.0mb
			e	40 21.30	
GLD	48.49	284	P	40 20.00	0.6
PV09	51.61	285	P	40 44.00	0.6
PV10	51.63	285	P	40 44.20	0.6
			pP	40 51.50	24km
FBA	51.97	330	P	40 45.50	0.1
ALQ	52.41	280	eP	40 50.50	1.1
	1.0s		7.00nm		4.6mb
			e	40 58.50	
PRNI	54.53	85	e(P)	41 07.00	2.1
PMR	54.77	328	P	41 06.90	0.7
	1.2s		19.70nm		5.0mb
			pP	41 15.20	27km
MBH	54.87	86	eP	41 15.00	7.7X
KVN	56.41	292	P	41 18.00	-0.6
			pP	41 26.80	29km
TNP	56 57	290	P	41 20.00	0.2
	1.0s		10.25nm		4.8mb
			pP	41 28.30	27km

06d 21h

CMB	58.40	292	ePc	41 41.00		8.6X
SOB1	61.85	187	eP	41 55.50		-0 7
MAIO	64.51	63	eP	42 17.00		3 3X
BAO	68.97	194	eP	42 42.00		0.0
ZOBO	74.45	213	Pd	43 14.70		-0.5
	1.0s		10.00nm		4.8mb	
Z	24s		0.09um		4.0MszX	
			LR	09 50.00		
CCH	74.85	211	P	43 18.20		1 0
BJI	84.30	22	eP	44 18.00		10 5X
WB5	146.21	18	ePKP	51 18.70		3 3X
S.D. = 1.4			on 45 of 59 obs.			

& JUN 06, 1989 23h 27m 05.14s
61.900 N 147.714 W
DEPTH = 24.3km
SOUTHERN ALASKA (2)
<AGS-P>.

TOA	0.76	74	iP	27 19.31		-0.3
VZW	1.01	146	eP	27 21.52		-2.3
			S	27 36.11		
PAX	1.50	43	iP	27 29.82		-1.0
			S	27 48.96		
SUA	1.51	254	P	27 30.01		-1.0
			S	27 49.98		
SKT	1.81	274	eP	27 34.01		-1.2
			S	27 57.59		
SLKM	1.85	222	eP	27 34.35		-1.5
			S	27 58.97		
GL8	1.92	102	iP	27 35.51		-1.3
			S	27 59.84		
SEW	1.99	206	eP	27 36.99		-0.8
			S	28 01.87		
CGLM	2.14	256	eP	27 38.92		-1.1
SPU	2.20	253	eP	27 39.49		-1.4
			S	28 08.11		
KTH	2.22	320	iP	27 40.46		-0.7
			S	28 09.37		
WRH	2.59	356	eP	27 45.56		-0.8
CCB	2.76	359	eP	27 47.76		-0.9
13 obs. associated						

JUN 07, 1989 00h 07m 25.90± 1.07s
37.178 N ± 7.7km 4.451 W ± 9.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

MAL	0.45	176	iPg	07 34.50		-0.6
			iSg	07 40.50		
EPRU	0.66	252	eP	07 38.20		-0.9
LIJA	0.82	250	iP	07 42.50		0.7
EHOR	0.90	316	eP	07 41.90		-1.2
			eS	07 53.10		
ALJ	1.05	242	iP	07 49.50		3.7X
EBAN	1.12	28	eP	07 47.50		0.6
			eS	08 02.70		
GIBL	1.25	254	iP	07 50.50		1.3
S.D. = 1.3			on 6 of 7 obs.			

JUN 07, 1989 00h 12m 49.23± 0.48s
37.252 N ± 5.1km 4.490 W ± 5.0km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.5 (MDD). Felt (III) at
Palencia.

MAL	0.53	173	iPgd	12 57.30		-2.6
			iSg	13 04.00		
EPRU	0.66	244	ePg	13 02 10		-0.3
			eSg	13 09.00		
AFC	0.75	90	ePg	13 04.10		0.0
			eSg	13 16.90		
LIJA	0.82	245	iP	13 05.00		-0.1
EHOR	0.83	313	iPg	13 05.00		-0.2
			eSg	13 15.90		
ALJ	1.06	237	iP	13 11.50		2.2
EBAN	1.07	31	iPg	13 10.20		0.9
			eSg	13 25.00		
EJIF	1.12	225	ePg	13 09.50		-0.7
SRO	1.22	216	eP	13 14.00		2.1
GIBL	1 25	250	iP	13 13.00		0.6
MOMI	1 36	227	eP	13 15 00		0 8
OJEN	1.43	217	eP	13 15.55		0 3
PLAT	1.52	222	eP	13 16.00		-0.5
CNIL	1.53	235	eP	13 21 00		4.4X
EVAL	1.83	281	ePn	13 19.20		-1.7
			eSn	13 41.70		
ENIJ	1.84	98	ePn	13 22.70		1.6
			eSn	13 45.00		
EVIA	2.09	48	ePn	13 24.80		-0.1
			eSn	13 51.70		
BMK	2.55	206	iPd	13 30.50		-0.8
TOL	2.65	7	iPg	13 40.00		7.3X
			iSn	14 01.00		
			eSb	14 08.00		
			iSg	14 17.00		
EPLA	3.07	337	ePn	13 38.00		-0.7
			eSn	14 14.50		
GUD	3.40	4	ePn	13 43.30		-0.1
			eSn	14 21.50		
ECHE	3.62	49	ePn	13 46.00		-0.5
			eSn	14 29.00		
S.D. = 1.2			on 20 of 22 obs.			

JUN 07, 1989 00h 18m 19.25± 0.51s
48.779 N ± 4.0km 19.210 E ± 3.7km
DEPTH = 16.1 ± 5.7 km
CZECHOSLOVAKIA (547)
ML 4.3 (KRA), 3.5 (BRA), 3.4 (VKA), 3.4 (KBA). Felt (V) in the Bansko Bystrica-Brezno-Kremnica area.

SPC	0.80	59	iPd	18 33.50		-0.9
			i	18 35.90		
			iSg	18 43.00		
PSZ	0.97	152	iPg	18 31.90		-5.4X
SRO	1.14	212	iPg	18 41.00		1.0
			LR	19 12.00		
BUD	1.30	186	ePg	18 42.80		0.1
KRA	1.36	20	eP	18 45.50		1.9
			iS	19 04.00		
ZST	1.52	248	iPnc	18 45.80		0.1
			iPg	18 46.90		
			iSg	19 07.10		
VKA	1.99	256	iPnc	18 52.70		0.1
			iPgc	18 54.60		
			i	19 18.60		
			iSg	19 20.20		
SOP	2.08	239	ePg	18 55.20		1.3
CEI	2.43	116	eP	19 40.00		41.1X
KSP	2.80	319	eP	19 05.80		1.6
	0.8s		138.00nm			
			iPn	19 06.20		
			iPg	19 12.40		
			iS	19 50.50		
BMR	3.07	110	iPc	19 11.00		3.0X
PRU	3.28	293	iPn	19 10.80		-0.2
			Pg	19 21.00		
			Sg	20 04.00		
CJR1	3.55	123	eP	19 14.50		-0.3
BZS	3.56	152	iPd	19 14.00		-1.0
PTJ	3.63	219	ePn	19 14.70		-1.3
			eSn	19 50.60		
KHC	3.73	278	iPn	19 17.90		0.5
			Pg	19 32.30		
			Sg	20 14.20		
BRG	4.00	304	iPn	19 21.00		-0.1
			iPg	19 34.00		
			iSg	20 26.00		
BEO	4 05	167	eP	19 41 00		19.2X
WET	4 19	277	ePn	19 24.30		0.4
LJU	4 19	231	ePn	19 25.00		1.1
			e(Sn)	20 11.00		
KBA	4.29	249	ePn	19 24.50		-1.0
			iPg	19 38.30		
			iSn	20 10.90		
			iSg	20 33.10		
VOY	4.54	235	ePn	19 28.80		-0.1
			eSn	20 23.00		
CLL	4.73	305	iPn	19 31.00		-0.6
			iPg	19 54.50		
			iSg	20 53.10		
HOF	5.01	291	ePn	19 35.40		-0.2
MOX	5.27	294	ePn	19 38.00		-1.2
			ePg	20 05.00		
			eSn	20 40.00		
			eSg	21 06.00		
			e	21 11 50		
CMP	5 31	129	ePc	19 45 00		5 2X
GRF	5.31	283	e(Pn)	19 36 40		-3.4X
			eSn	20 38.80		
			e(Sg)	21 02.80		
MLR	5.65	123	eP	19 45.00		0 3
VRI	5.88	117	ePc	19 48.50		0.8
NUR	12.16	13	eP	21 14.00		-0.5
SUF	14.49	13	eP	21 45.00		-0.3
S.D. = 0.9			on 25 of 31 obs.			

JUN 07, 1989 00h 28m 34.50± 0.65s
37.150 N ± 8.5km 4.527 W ± 6.5km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.1 (MDD).

EPRU	0.59	252	eP	28 48.60		2.1
			eS	28 55.70		
LIJA	0.75	251	iP	28 58.00		8.7X
AFC	0.79	82	eP	28 51.00		1.0
			eS	29 03.00		
EHOR	0.88	320	iP	28 51.30		-0.1
			eS	29 03.00		
ALJ	0.99	241	iP	29 00.00		6.7X
SRO	1.12	218	eP	29 00.00		4.5X
EBAN	1.17	30	eP	28 57.00		0.6
			eS	29 12.50		
GIBL	1.19	255	iP	29 00.50		3.9X
MOMI	1.27	230	eP	28 58.00		0.0
PLAT	1.43	224	eP	28 59.50		-1.0
CNIL	1.45	238	eP	29 00.00		-0.7
EVAL	1.82	284	eP	29 05.60		-0.5
			eS	29 27.80		
EVIA	2.18	47	eP	29 11.00		-0.5
			eS	29 38.00		
TOL	2.75	8	ePg	29 27.50		8.0X
			eSg	30 03.50		
ECHE	3.71	48	eP	29 32.20		-0.9
S.D. = 1.1			on 10 of 15 obs.			

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* JUN 07, 1989 01h 35m 20.55± 0.83s
60.126 N ±12.3km 29.367 W ±10.3km
DEPTH = 10.0km (geophysicist)
4.3mb (6 obs.)
NORTH ATLANTIC OCEAN (402)

REY	5.33	38	iP	36 40.90		-1.2
AKU	7.58	38	e(P)	37 19.60		6.0X
	1.0s		16.00nm		5.2mb	
EKA	14.74	97	P	38 58.00		7.4X
	1.1s		15.00nm		4.4mb	
SNF	21.20	102	P	40 07.40		-0.7
MEM	21.98	100	P	40 11.20		-4.8X
SSF	23.19	110	eP	40 27.50		-0.4
BGF	23.25	111	eP	40 29.20		0.7
	1.0s		10.80nm		4.3mb	
MAF	23.37	112	eP	40 30.40		0.7
	1.0s		10.00nm		4.3mb	
SMF	23.65	110	eP	40 30.80		-1.6
	0.8s		5.30nm		4.2mb	
KEV	24.77	44	eP	40 44.00		1.0
SOD	24.97	49	eP	40 45.00		0.0
CLL	25.03	92	eP	40 47.00		1.3
NUR	26.13	65	eP	40 56.00		0.1
KSP	26.97	90	eP	41 04.00		0.3
YKA	38.19	312	eP	42 42.30		1.0
KVN	56.51	291	eP	45 04.00		-1.1
	1.0s		1.70nm		4.0mb	
S D = 1.0			on 13 of 16 obs			

JUN 07, 1989 01h 54m 22.47± 0.58s
37.312 N ± 7.0km 4.534 W ± 6.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.2 (MDD).

EPRU	0.66	238	eP	54 34.30		-1.3
			eS	54 42.20		
EHOR	0.76	312	iP	54 37.50		0.2
			eS	54 49.50		
AFC	0.79	94	eP	54 37.20		-0.8
			eS	54 50.00		
LIJA	0.81	240	iP	54 40.00		1.7
EBAN	1.04	35	eP	54 43.00		0.9
			eS	54 58.20		
ALJ	1.07	234	iP	54 46.00		3.4X
EJIF	1.14	221	eP	54 42.00		-1 8
GIBL	1 23	247	iP	54 40.50		-4.9X
SRO	1.25	213	eP	54 47.00		1 3
MOMI	1.37	224	eP	54 42.50		-5.1X

OJEN	1.45	214	eP	54	50.00	1.2
CNIL	1.54	233	eP	54	53.50	3.6X
EVAL	1.78	279	eP	54	51.90	-1.6
			eS	55	14.00	
ENIJ	1.88	100	eP	54	55.50	0.5
EVIA	2.08	50	iP	54	57.40	-0.5
			eS	55	24.20	
TOL	2.59	8	ePg	55	13.50	8.3X
			eSn	55	33.00	
			eSg	55	49.00	
			eSg	59	04.00	
GUD	3.34	5	eP	55	17.00	1.1
	0.3s		0.02nm			
			eS	55	56.00	
ECHE	3.61	50	eP	55	18.60	-1.0
			eS	56	01.00	

S.D. = 1.3 on 13 of 18 obs.

JUN 07, 1989 01h 57m 40.27± 0.62s
37.279 N ± 7.2km 4.557 W ± 6.3km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

EPRU	0.62	240	eP	57	52.20	-0.6
			eS	57	59.60	
EHOR	0.77	315	eP	57	55.70	0.4
			eS	58	07.00	
LIJA	0.78	241	iP	57	55.50	-0.1
AFC	0.81	91	eP	57	56.60	0.5
			eS	58	08.00	
ALJ	1.03	235	iP	58	02.00	2.1
EBAN	1.07	34	eP	58	01.20	0.7
			eS	58	17.00	
EJIF	1.10	222	eP	58	00.30	-0.7
GIBL	1.20	248	iP	58	03.50	0.8
SRO	1.21	213	eP	58	03.50	0.7
MOMI	1.34	225	eP	58	05.00	0.1
CNIL	1.50	233	eP	58	10.00	2.7X
PLAT	1.51	220	eP	58	05.50	-1.8
EVAL	1.77	281	eP	58	10.00	-1.1
			eS	58	32.50	
EVIA	2.11	50	eP	58	15.20	-1.0
			eS	58	42.50	

S.D. = 1.1 on 13 of 14 obs.

% JUN 07, 1989 02h 33m 38.79± 0.93s
37.337 N ±11.7km 4.558 W ± 7.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.6 (MDD).

EPRU	0.65	236	eP	33	52.50	0.7
			eS	34	00.40	
EHOR	0.73	312	eP	33	54.00	0.9
			eS	34	05.00	
AFC	0.81	96	eP	33	55.00	0.3
EBAN	1.03	36	eP	33	59.00	0.8
			eS	34	15.00	
EVAL	1.76	279	eP	34	08.00	-1.5
			eS	34	30.50	
EVIA	2.08	51	eP	34	13.00	-1.2
			eS	34	40.20	

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

JUN 07, 1989 02h 47m 47.00± 0.72s
43.919 N ± 9.8km 6.470 W ± 8.8km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.3 (MDD).

EMON	0.79	233	iP	48	04.30	1.9
			i	48	11.00	
ERUA	1.60	198	eP	48	13.20	-2.3
			eS	48	30.00	
STS	1.84	236	eP	48	18.60	-0.2
	0.2s		0.02nm			
			eS	48	37.70	
GUD	3.70	152	eP	48	45.20	-0.3
			eS	49	25.00	
EPF	5.03	98	Pn	49	07.10	2.7
			Sn	49	59.30	
MFF	5.21	57	Pn	49	07.20	0.4
			Sn	50	02.40	
LFF	5.26	76	Pn	49	07.50	-0.1
			Sn	50	03.50	
GRR	5.93	39	Pn	49	17.00	0.1
			Sn	50	20.00	
LSF	6.12	65	Pn	49	19.50	-0.2
			Sn	50	22.40	
CAF	6.19	78	Pn	49	20.40	-0.3
			Sn	50	24.50	
FLN	6.37	38	Pn	49	22.60	-0.6
			Sn	50	29.00	
TCF	6.58	66	Pn	49	25.80	-0.4
			Sn	50	33.60	
MAF	6.80	67	Pn	49	28.70	-0.6
			Sn	50	38.80	
BGF	7.09	65	Pn	49	33.20	0.0
			Sn	50	46.00	
LOR	7.98	62	Pn	49	45.70	-0.1
			Sn	51	08.40	

S.D. = 1.2 on 15 of 15 obs.

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* JUN 07, 1989 02h 48m 08.99± 2.01s
7.085 S ±10.3km 129.195 E ±11.3km
DEPTH = 69.2 ± 19.0 km
5.1mb (10 obs.)
BANDA SEA (280)

MTN	6.03	162	iPc	49	39.40	1.7
			e	49	41.00	
			eS	50	23.00	
KUG	6.33	241	ePc	49	47.50	5.7X
			eS	50	51.50	
KNA	8.62	183	iPd	50	14.10	0.6
	0.3s		210.00nm		6.4mb	X
			eS	51	42.00	
WB5	13.67	159	iPd	51	19.00	-2.3
			eS	53	30.20	
QIS	16.77	144	eP	51	59.00	-1.9
			i	52	02.50	
			eS	54	53.60	
ASPA	17.10	165	iPc	52	03.90	-1.1
	0.5s		122.00nm		5.4mb	
			eS	54	58.50	
PMG	17.92	99	eP	52	20.00	4.8X
WARB	19.15	187	iPd	52	20.90	-8.8X
	0.4s		27.00nm		4.8mb	
			eS	55	43.00	
CTA	20.99	130	iPd	52	50.60	1.7
	1.0s		20.00nm		4.4mb	
FORR	23.66	182	eP	53	15.10	0.1
			eS	57	36.00	
MRWA	25.29	208	eP	53	33.00	2.4
			eS	58	20.00	
BAL	26.17	205	eP	53	38.10	-0.6
			eS	58	35.00	
STK	27.25	156	iPd	53	48.70	0.1
			e	53	51.00	
			e	59	08.00	
MUN	27.57	204	eP	53	50.90	-0.6
			eS	59	05.00	
NWAO	28.01	202	eP	53	55.00	-0.5
			eS	59	13.00	
CMS	28.83	150	eP	54	02.70	-0.1
			e	59	44.00	
BRS	30.14	135	iPd	54	14.80	0.2
COO	31.61	141	eP	54	28.00	0.5
	0.5s		18.00nm		5.1mb	
PSI	31.74	287	ePc	54	28.00	-0.8
			e	55	00.00	
BFD	32.33	160	iPd	54	34.10	0.4
CAN	33.48	150	eP	54	44.50	0.8
BDT	38.40	309	eP	55	26.30	0.7
CHG	39.39	311	eP	55	35.00	1.1
	1.0s		11.50nm		4.7mb	
CHTO	39.39	311	eP	55	35.10	1.2
	0.9s		8.53nm		4.7mb	
GUN	54.41	312	Pc	57	31.40	-0.5
	0.6s		57.00nm		5.8mb	
PKI	54.58	311	Pc	57	32.40	-0.7
	0.5s		17.00nm		5.3mb	
KKN	54.79	311	Pc	57	33.80	-0.7
	0.6s		27.00nm		5.5mb	
DMN	54.82	311	Pc	57	34.30	-0.5
	0.6s		24.00nm		5.4mb	
GKN	55.38	311	Pc	57	38.20	-0.5
KHC	111.98	320	ePdiff	02	47.50	6.3X
ZOBO	151.15	144	PKP	07	51.00	-0.4

S.D. = 1.1 on 27 of 31 obs.

JUN 07, 1989 02h 59m 13.68± 0.63s
37.312 N ± 7.7km 4.549 W ± 6.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.3 (MDD).

EPRU	0.65	238	eP	59	26.00	-0.6
			eS	59	34.00	
EHOR	0.75	313	iP	59	29.50	1.1
			eS	59	41.20	
AFC	0.80	94	eP	59	29.00	-0.4
			eS	59	41.40	
EBAN	1.04	35	iP	59	35.00	1.6
			iS	59	50.00	
ALJ	1.06	233	iP	59	35.50	1.8
EJIF	1.13	221	eP	59	34.00	-0.9
GIBL	1.22	247	eP	59	36.50	0.1
CNIL	1.53	232	eP	59	48.00	7.0X
EVAL	1.77	280	eP	59	43.60	-0.9
			eS	00	06.00	
ENIJ	1.89	100	eP	59	47.00	0.6
EVIA	2.09	50	iP	59	49.40	0.1
			i	00	16.00	
TOL	2.60	9	ePn	59	53.50	-2.9
			ePg	00	04.50	
			eSn	00	25.00	
			iSg	00	41.50	
TOL	2.60	9	ePg	00	04.50	8.1X
			eSn	00	25.00	
			iSg	00	41.50	
GUD	3.34	5	eP	00	08.20	1.1
	0.3s		0.03nm			
			eS	00	47.20	
ECHE	3.61	50	eP	00	10.30	-0.6
			eS	00	53.00	

S.D. = 1.4 on 13 of 15 obs.

% JUN 07, 1989 03h 31m 22.27± 0.91s
38.928 N ± 9.3km 27.713 E ± 9.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.64	214	iPg	31	34.70	-0.4
			eSg	31	44.70	
DST	0.98	46	iPn	31	40.30	-0.6
EZN	1.40	310	ePn	31	48.70	0.9
EDC	1.42	5	iPn	31	47.20	-0.9
KHL	1.54	112	iPn	31	49.00	-0.9
ALT	1.87	85	ePn	31	56.60	1.9

S.D. = 1.5 on 6 of 6 obs.

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* JUN 07, 1989 05h 07m 47.69± 1.20s
37.102 N ±11.6km 4.418 W ±11.2km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.9 (MDD).

EPRU	0.66	258	eP	08	01.80	0.9
			e	08	09.00	
LIJA	0.82	256	iP	08	05.00	1.4
EHOR	0.97	318	iP	08	05.10	-1.1
			eS	08	16.20	
ALJ	1.04	246	iP	08	11.00	3.6X
SRO	1.14	223	eP	08	11.00	2.0X
EBAN	1.17	25	eP	08	10.00	0.4
			eS	08	26.20	
GIBL	1.26	258	eP	08	13.00	1.9
MOMI	1.30	234	eP	08	12.00	0.2
PLAT	1.46	228	eP	08	12.00	-2.1
CNIL	1.50	241	eP	08	14.00	-0.7
EVAL	1.92	285	eP	08	19.30	-1.4
			eS	08	42.00	
EVIA	2.15	44	eP	08	24.80	0.6
			eS	08	50.50	
TOL	2.79	6	ePg	08	41.00	7.8X
			eSb	09	13.00	
			iSg	09	18.50	
			eSn	36	45.00	
			eSb	36	53.50	
			eSg	37	01.50	

S.D. = 1.4 on 10 of 13 obs.

? JUN 07, 1989 05h 08m 47.35± 0.88s
57.891 S ±14.4km 26.971 W ±23.5km
DEPTH = 33.0km (normol)
4.4mb (1 obs)
SOUTH SANDWICH ISLANDS REGION (153)

SPA	32.28	180	e(P)	15	14.20	-0.7

07d 05h

1.0s 5.00nm 4.4mb

LNV	38.09	289	eP	16	04.50	0.1
PEL	38.38	291	iPd	16	08.20	1.3
PPD	39.93	323	eP	16	20.10	0.2
BAO	45.03	331	eP	17	02.50	0.9
CCH	49.73	308	eP	17	38.30	-0.3
SOB1	49.74	342	iPc	17	37.50	-0.8
			e	17	42.20	
			e	17	53.20	
ITR	49.81	345	eP	17	38.50	-0.3
ZOBO	51.56	306	P	17	50.80	-2.1
YKC	137.55	317	ePKP	28	01.00	-7.0X
YKA	137.61	317	ePKP	28	01.60	-6.5X
MBC	145.71	335	ePKP	28	17.00	-5.0X
	0.6s	6.00nm				
INK	147.29	319	ePKP	28	21.00	-3.7X
	0.8s	32.00nm				
TOA	150.30	304	ePKP	28	30.60	0.9
	0.9s	62.50nm				
BJI	150.44	111	ePKP	28	18.00	-12.5X
PMR	151.45	302	ePKP	28	31.80	0.5
FBA	151.81	309	ePKP	28	32.30	0.5
IMA	154.44	311	ePKP	28	39.00	3.4X
SDN	154.69	284	ePKP	28	31.40	-4.6X

S.D. = 1.0 on 12 of 19 obs.

JUN 07, 1989 05h 10m 48.62± 0.63s
37.331 N ± 8.3km 4.494 W ± 5.8km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.6 (MDD).

AFC	0.76	95	eP	11	03.40	-0.2
			eS	11	16.40	
EHOR	0.77	309	eP	11	03.30	-0.4
			eS	11	16.00	
LIJA	0.85	240	iP	11	05.00	-0.1
EBAN	1.00	34	eP	11	08.50	0.9
			eS	11	25.00	
ALJ	1.10	234	iP	11	10.00	0.6
GIBL	1.27	247	iP	11	12.00	-0.2
EVIA	2.04	50	eP	11	23.00	-0.5
			eS	11	50.00	

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

? JUN 07, 1989 05h 25m 44.53± 1.45s
16.278 N ± 7.7km 62.512 W ±19.9km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)

MGH	0.52	33	eP	26	02.33	6.8X
			eS	26	15.79	
NEV	0.86	356	eP	26	05.93	5.8X
			eS	26	21.91	
BPA	0.99	39	eP	26	02.44	0.3
			eS	26	18.18	
SKI	1.07	348	eP	26	03.24	0.0
			eS	26	23.36	
ANG	1.09	37	eP	26	03.22	-0.3
			eS	26	18.95	
FDF	2.02	139	eP	26	17.27	0.3
	0.1s	1.15nm				
			S	26	42.80	
BIM	2.24	141	iPc	26	20.46	0.4
			S	26	48.40	
MVM	2.32	137	iPc	26	20.42	-0.8

S.D. = 0.6 on 6 of 8 obs.

JUN 07, 1989 06h 00m 24.52± 0.73s
37.314 N ± 9.6km 4.560 W ± 6.7km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

EPRU	0.64	237	eP	00	35.80	-1.6
			eS	00	43.50	
EHOR	0.74	313	eP	00	39.80	0.7
			eS	00	51.80	
LIJA	0.80	239	iP	00	40.00	-0.1
AFC	0.81	94	eP	00	40.50	0.1
			eS	00	52.00	
EBAN	1.05	36	eP	00	45.00	0.7
			eS	01	01.80	
ALJ	1.05	233	iP	00	46.00	1.6
GIBL	1.22	247	iP	00	48.00	0.8
EVAL	1.76	279	eP	00	53.80	-1.4
			eS	01	16.00	
EVIA	2.09	50	eP	00	59.30	-0.9
			eS	01	26.00	

S.D. = 1.3 on 9 of 9 obs.

JUN 07, 1989 07h 04m 41.02± 0.70s
37.315 N ± 8.9km 4.555 W ± 7.3km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.9 (MDD).

EPRU	0.64	237	eP	04	52.50	-1.4
EHOR	0.75	313	iP	04	56.10	0.5
			eS	05	08.50	
LIJA	0.80	239	iP	04	55.50	-1.1
AFC	0.81	94	eP	04	56.20	-0.6
			eS	05	08.40	
EBAN	1.04	35	eP	05	01.60	0.9
			eS	05	16.60	
ALJ	1.06	233	iP	05	02.00	1.0
GIBL	1.22	247	iP	05	02.50	-1.2
SRQ	1.24	212	eP	05	05.00	0.9
MOMI	1.36	224	eP	05	08.00	2.0
EVIA	2.09	50	eP	05	15.90	-0.7
			eS	05	42.80	

S.D. = 1.3 on 10 of 10 obs.

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* JUN 07, 1989 07h 38m 15.47± 0.78s
37.321 N ± 9.1km 4.546 W ± 6.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

EHOR	0.75	312	eP	38	30.00	-0.1
			eS	38	41.00	
AFC	0.80	94	eP	38	31.00	-0.2
			eS	38	41.50	
LIJA	0.81	239	iP	38	36.00	4.7X
EBAN	1.04	35	eP	38	35.20	0.2
			eS	38	51.50	
ALJ	1.07	233	iP	38	36.00	0.4
GIBL	1.23	247	iP	38	38.00	-0.3

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

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* JUN 07, 1989 09h 58m 16.25± 0.58s
8.956 S ±11.0km 106.549 E ± 9.0km
DEPTH = 33.0km (normal)
5.0mb (9 obs.) 3.5Msz (1 obs.)
SOUTH OF JAVA (282)

KLI	4.40	337	eP	59	21.00	-1.5
			eS	00	11.50	
TRT	6.15	79	ePd	59	47.50	0.3
			iS	00	57.70	
KHKI	8.98	87	ePc	00	26.10	-0.5
			eS	01	52.50	
			e	04	40.00	
MTN	24.44	101	eP	03	35.60	2.2
			i	03	47.80	
WARB	25.63	134	eP	03	35.30	-9.4X
CHTO	28.59	345	eP	04	11.20	-0.5
	0.7s	3.49nm			4.2mb	
WRA	28.99	115	Pd	04	14.40	-1.0
	0.5s	2.50nm			4.2mb	
WB5	29.00	115	eP	04	14.80	-0.6
ASPA	29.97	123	iPd	04	23.20	-0.9
	0.4s	11.00nm			5.0mb	
	Z 21s	0.10nm			3.5Msz	
		LR	16	07.70		
STK	39.70	130	iPc	05	47.70	0.4
PKI	41.69	331	P	06	04.60	0.6
	0.5s	7.00nm			4.6mb	
GUN	41.75	332	P	06	05.50	0.9
	0.6s	45.00nm			5.4mb	
DMN	41.86	331	P	06	05.20	-0.2
	0.6s	17.00nm			5.0mb	
KKN	41.93	331	P	06	06.40	0.5
	0.6s	24.00nm			5.1mb	
GKN	42.42	331	P	06	10.50	0.7
	0.4s	17.00nm			5.1mb	
BJI	49.56	10	eP	07	06.00	0.0
DZM	58.84	110	iPc	07	54.00	-20.5X
BNG	88.71	275	iPc	11	08.60	0.1
	1.0s	10.00nm			5.1mb	
			i	11	20 50	
BAO	144.89	226	ePkP	17	52 10	-0.6
UYO	148.34	34	ePkP	18	01.30	3.6X

S.D = 0.9 on 17 of 20 obs.

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* JUN 07, 1989 10h 03m 19.20± 0.49s
16.311 S ±17.4km 173.487 W ±15.5km
DEPTH = 48.2km (6 depth phases)
5.1mb (5 obs.)
TONGA ISLANDS (173)

AFI	2.90	35	eP	04	02.50	-1.6
			eS	04	31.50	
WB5	49.54	258	eP	12	07.30	-0.3
ASPA	49.76	253	iPc	12	08.40	-0.8
	0.9s	18.00nm			5.1mb	
WARB	56.25	249	eP	12	48.00	-9.4X
LLA	72.30	42	e(P)	14	44.00	2.2
CMB	73.50	41	ePd	14	49.00	0.2
ORV	73.73	39	ePd	14	50.10	0.0
WDC	73.74	38	ePd	14	50.60	0.5
MIN	74.15	39	ePd	14	52.40	-0.3
KVN	75.55	41	P	15	00.00	-0.8
			pP	15	14.00	49km
TNP	75.56	43	P	15	00.00	-0.9
	1.0s	10.00nm			4.7mb	
			pP	15	14.00	49km
PNT	80.82	32	eP	15	29.00	-0.3
PV09	81.19	46	P	15	31.30	-0.5
			pP	15	46.00	51km
PV10	81.20	46	P	15	32.00	0.2
			pP	15	45.30	45km
ALQ	81.45	50	e(P)	15	33.50	0.4
			e	15	46.80	
LRM	82.78	38	eP	15	40.20	0.4
			e	15	53.50	
AIA	83.10	156	e(P)	15	40.00	-0.9
FBA	83.30	11	P	15	41.00	-0.8
	1.0s	16.00nm			5.0mb	
GOL	84.34	46	P	15	48.00	0.1
	1.0s	18.00nm			5.1mb	
			pP	16	01.40	45km
GLD	84.47	46	P	15	48.00	-0.5
	1.0s	40.00nm			5.5mb	
			pP	16	02.50	50km
SES	85.99	35	eP	15	56.00	0.4
			pP	16	06.00	31kmX
INK	89.17	14	eP	16	11.00	0.5
YKA	90.96	23	eP	16	20.60	1.7
KSP	144.67	349	ePKP	22	52.20	0.1
PRU	145.79	351	ePKP	22	55.00	1.0
	1.0s	20.20nm				
			e	23	09.40	
MLR	146.66	335	ePKPc	22	59.00	3.2X
KHC	146.76	352	PKP	22	58.50	2.8X
CDF	147.98	359	ePKP	23	01.70	4.0X
	0.8s	5.30nm				
HAU	148.39	0	ePKP	23	02.70	4.4X
	0.9s	6.50nm				
LOR	149.05	4	ePKP	23	04.20	4.8X
	0.9s	4.90nm				
SSF	149.24	4	ePKP	23	04.90	5.2X
	1.1s	9.70nm				
LBF	149.34	3	ePKP	23	05.00	5.1X
	1.2s	8.90nm				
VBY	149.98	348	e(PKP)	23	06.80	6.0X

S.D. = 0.9 on 24 of 33 obs.

JUN 07, 1989 11h 17m 41.55± 0.55s
60.701 N ± 4.4km 5.509 E ± 6.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 1.7 (BER).

ASK	0.27	215	iPg+	17	47.66	0.5
			eSg	17	52.00	
BER	0.33	195	ePg	17	47.33	-1.1
			eSg	17	52.70	
SUE	0.51	315	iP	17	51.96	0.1
			eS	17	58.72	
HYA	0.57	35	iP+	17	52.26	-0.9
			eS	17	59.33	
ODD1	0.97	144	iP	17	59.70	-0.3
			iS	18	12.21	
BLS1	1.47	153	eP	18	08.74	0.5
			eS	18	28.16	
KMY	1.50	185	eP	18	08.75	0.3
			eS	18	27.24	
MOL	2.11	27	iP	18	17.78	0.4
			eS	18	41.30	
NRA0	2.96	87	ePn	18	29.90	0.4

iPg 18 33.20
iS 19 11.30
S.D. = 0.7 on 9 of 9 obs.

& JUN 07, 1989 11h 50m 00.90s
57.348 N 155.206 W
DEPTH = 54.1km
ALASKA PENINSULA (12)
<AGS-P>.

CDD	1.79	27	eP	50	29.18	-0.7
PDB	2.50	12	iP	50	38.55	-1.4
OPT	2.53	23	eP	50	39.75	-0.6
ILIM	2.98	22	iP	50	45.63	-1.2
CNPM	3.02	42	eP	50	45.81	-1.6
			S	51	21.14	
RED	3.33	21	iP	50	50.79	-1.0
RDT	3.55	23	iP	50	53.41	-1.4
SLKM	4.09	37	eP	50	59.46	-2.9
SPU	4.17	21	eP	51	01.60	-2.0
SUA	4.72	27	iP	51	09.18	-2.1

10 obs. associated

JUN 07, 1989 12h 19m 48.34± 0.37s
14.131 N ± 6.7km 51.745 E ± 4.9km
DEPTH = 10.0km (geophysicist)
4.7mb (17 obs.) 4.5Msz (2 obs.)
EASTERN GULF OF ADEN (415)

BJA	11.85	355	ePn	22	35.50	-4.8X
BEE	11.88	355	(Pn)	22	36.00	-4.8X
			(Sn)	24	41.30	
AAE	13.69	250	eP	23	07.00	1.7
SHI	15.46	3	eP	23	27.00	-1.3
BHD	20.20	342	iP	24	27.00	0.9
			iS	29	11.00	
			i	31	48.00	
KER	20.57	349	eP+	24	30.50	0.4
TEH	21.52	359	ePc	24	57.00	17.2X
MBH	22.02	318	iPd	24	47.60	2.9
SLY	22.10	346	ePc	24	47.00	1.5
			e	32	46.00	
			e	33	16.50	
			e	35	50.00	
RMN	22.67	319	eP	24	55.50	4.3X
MSL	23.46	342	ePd	25	02.00	3.2X
			e	33	19.00	
			e	33	58.00	
TAB	24.32	350	e(P)	25	19.00	11.7X
GBA	24.95	88	Pd	25	13.90	0.5
	1.0s		12.40nm		4.5mb	
HYB	26.00	79	eP	25	24.00	0.7
			eS	30	00.00	
BBTK	30.56	330	eP	26	08.00	3.5X
GKN	33.53	60	P	26	31.10	0.4
	1.0s		26.00nm		5.1mb	
DMN	33.81	61	P	26	33.60	0.4
	0.8s		20.00nm		5.1mb	
KKN	34.01	61	P	26	35.40	0.5
PKI	34.06	61	P	26	35.70	0.2
	0.8s		17.00nm		5.0mb	
BNG	34.10	257	iPc	26	36.00	0.4
	1.0s		5.00nm		4.4mb	
GUN	34.55	61	P	26	40.20	0.4
LIT	36.40	321	eP	26	55.50	0.6
VRI	38.02	331	eP	27	10.50	0.1
MLP	38.11	330	eP	27	13.00	0.2
SKO	38.17	322	eP	27	10.00	0.3
	Z 18s		0.90um		4.6Msz	
	N 20s		1.10um			
	E 21s		0.88um			
			e	33	08.00	
			i	35	50.00	
BUL	40.96	214	iPd	27	33.00	-0.2
	1.0s		5.00nm		4.2mb	
WMO	42.62	39	eP	27	48.60	2.0
	Z 20s		0.50um		4.4Msz	
			eS	34	16.00	
PTJ	43.68	324	eP	27	52.70	-2.4
VBY	43.86	323	e(P)	27	58.00	1.5
LJU	44.58	323	eP	28	03.00	0.6
VOY	44.95	323	eP	28	06.00	0.6
CHG	45.40	77	eP	28	10.70	1.4
CHTO	45.40	77	eP	28	07.90	-1.4
KSP	46.48	330	eP	28	17.00	-0.3
KSR	46.54	211	eP	28	12.70	-5.6X
PRU	46.84	328	eP	28	20.50	0.3
	Z 16s		0.50um		4.6MszX	
	E 16s		0.50um			
KHC	46.85	326	eP	28	20.00	-0.3
PRY	47.13	210	eP	28	23.00	0.1
BRG	47.67	328	e(P)	28	26.50	-0.2
	1.0s		14.00nm		5.0mb	
MOX	48.75	327	eP	28	34.00	-1.1
	Z 16s		0.30um		4.4MszX	
	N 18s		0.50um			
GTA	49.03	50	eP	28	37.00	-0.7
	Z 28s		2.20um		5.0MszX	
			S	35	38.00	
LPG	49.08	319	eP	28	39.10	1.0
	0.8s		5.30nm		4.6mb	
CDF	50.05	322	eP	28	44.30	-0.9
BSF	50.07	322	eP	28	44.10	-1.4
NUR	50.35	343	iP	28	47.60	0.4
	Z 23s		1.20um		4.8MszX	
			LR	50	50.00	
FRS	50.52	210	eP	28	48.40	-0.5
SMF	51.40	319	eP	28	54.90	-0.6
LBF	51.45	320	eP	28	54.70	-1.2
	0.8s		9.40nm		4.8mb	
LOR	51.63	320	eP	28	56.00	-1.2
	0.7s		3.70nm		4.4mb	
AVF	51.76	319	eP	28	56.50	-1.7
	0.8s		4.00nm		4.4mb	
SSF	51.77	320	eP	28	57.00	-1.3
	0.8s		6.70nm		4.6mb	
SUF	51.80	345	iPc	28	58.40	0.2
	0.5s		7.40nm		4.9mb	
BGF	52.00	319	eP	28	58.90	-1.1
	0.8s		6.70nm		4.6mb	
UPP	52.07	339	iP	29	00.20	0.0
DOU	52.37	323	Pc	29	02.80	0.0
GYA	52.60	67	P	29	03.60	-1.4
HFS	53.67	337	eP	29	11.90	-0.3
	0.8s		10.00nm		4.9mb	
	Z 17s		0.45um		4.6MszX	
			LR	53	08.00	
XAN	55.12	58	P	29	22.10	-1.3
NAO	55.20	337	P	29	22.70	-0.7
	1.0s		7.10nm		4.7mb	
SOD	55.69	349	iP	29	27.10	0.2
KEV	57.72	350	eP	29	41.00	-0.2
TIY	58.37	54	eP	29	45.90	-0.6
	Z 26s		1.00um		4.8MszX	
BJI	61.52	52	eP	30	08.00	0.1
	Z 32s		0.47um		4.4MszX	
			eS	38	32.00	
			eSS	42	39.00	
CN2	68.63	48	P	30	54.80	0.9
	N 20s		0.60um			
			eS	39	54.00	
DAG	71.90	347	iPd	31	12.80	-0.4
	0.4s		3.39nm		4.8mb	
WB5	87.98	111	eP	32	39.70	-0.7
	S.D. = 1.1		on 57 of 66 obs.			

• JUN 07, 1989 13h 10m 29.06± 0.58s
33.242 N ± 7.9km 141.372 E ±10.6km
DEPTH = 33.0km (normal)
4.5mb (6 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)

MAT	4	19	323 iPd	11	32 50	0.2
			iS	12	21 50	
CHG	40.46	260	eP	18	16.80	10.4X
CHTO	40.46	260	eP	18	06.60	0.3
	1.0s		5.00nm		4.2mb	
MTN	46.86	194	eP	18	58.00	0.1
GUN	47.61	279	P	19	04.80	0.5
PKI	48.12	279	P	19	08.00	-0.3
KKN	48.15	279	P	19	08.30	0.0
	0.7s		14.00nm		5.1mb	
DMN	48.36	279	P	19	10.00	0.0
GKN	48.60	280	P	19	11.70	-0.1
	1.0s		23.00nm		5.2mb	
WB5	53.24	188	eP	19	46.50	-0.2
WRA	53.31	188	Pd	19	47.20	0.0
	0.6s		1.70nm		4.2mb	
WARB	60.73	195	eP	20	33.00	-6.8X
GBA	60.95	268	Pd	20	41.20	-0.3
	0.9s		5.50nm		4.7mb	
LRM	76.90	44	eP	22	20 30	0.4
NAO	77.95	338	P	22	24.40	-0.7
	0.9s		2.40nm		4.2mb	
ZOBO	148.48	65	PKP	30	15.00	3.5X
	S.D. = 0.4		on 13 of 16 obs.			

• JUN 07, 1989 14h 35m 30.56± 1.55s
51.258 N ±16.8km 15.727 E ± 7.5km
DEPTH = 5.0km (geophysicist)
POLAND (548)
ML 3.6 (VKA), 3.0 (KRA).

KSP	0.55	139	iPd	35	40.00	-1.5
			iS	35	49.50	
BRG	1.19	252	ePn	35	54.20	1.0
			iPg	35	55.10	
			iSg	36	14.40	
PRU	1.48	211	Pn	35	58.20	0.4
			ePg	35	59.80	
			Sn	36	17.00	
			Sg	36	22.50	
CLL	1.71	273	iPn	35	59.50	-1.7
			iPg	36	02.70	
			iSg	36	28.40	
KHC	2.54	214	iPn	36	13.00	-0.1
			Pg	36	19.80	
			Sg	36	57.20	
HOF	2.62	250	iPc	36	05.70	-8.6X
			i	36	13.80	
MOX	2.67	258	ePn	36	15.00	0.0
			iPg	36	22.00	
			e	36	50.00	
			iSg	37	01.50	
WET	2.80	222	iPnc	36	17.40	0.6
KRA	2.94	113	eP	36	20.20	1.4
			eS	36	59.40	
VKA	3.02	172	iPgd	36	28.00	8.1X
			iSg	37	11.50	
GRF	3.28	243	e(Pn)	36	23.50	-0.1
			e(Pg)	36	37.00	
			eSg	37	21.00	
ELL	17.69	140	ePn	39	51.00	11.8X
	S.D. = 1.2		on 9 of 12 obs.			

JUN 07, 1989 15h 08m 25.10± 0.82s
34.596 N ± 9.3km 27.994 E ± 7.7km
DEPTH = 33.0km (normal)
EASTERN MEDITERRANEAN SEA (371)

KAP	1.17	325	eP	08	45.50	0.4
			eS	08	55.00	
KSL	2.00	40	eP	08	55.00	-2.2
NPS	2.07	289	eP	08	57.80	-0.4
YER	2.54	5	ePn	09	06.90	1.9
ELL	2.65	35	ePn	09	08.00	1.4
VAM	3.22	286	eP	09	14.00	-0.5
BCK	3.55	36	ePn	09	18.00	-1.3
GBZT	6.29	10	ePg	09	02.00	-55.9X
			iSg	09	03.00	
DSI	6.89	114	iPc	10	06.80	0.4
MKT	7.04	119	eP	10	08.40	-0.1
			eS	11	26.50	
MBH	7.56	128	iP	10	16.20	0.4
	S.D. = 1.4		on 10 of 11 obs.			

JUN 07, 1989 15h 17m 48.32± 1.04s
6.591 S ± 5.7km 147.836 E ± 7.5km
DEPTH = 47.5 ± 9.8 km
5.0mb (8 obs) 4.5Msz (3 obs)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.83	266	iPc	18	02.90	-1.0
PMG	2.88	194	iPc	18	34.10	1.3
MNDI	4.18	276	eP	18	53.00	1.6
RAB	4.93	61	iPc	19	00.10	-1.7
JAY	8.18	299	ePd	19	47.50	0.2
VSG	12.06	103	eP	20	45.00	4.7X
CTA	13.50	186	iPc	21	01.30	1.9
	0.9s		16.81nm		4.9mb	
			eS	23	41.00	
QIS	16.01	209	eP	21	33.70	1.7
MTN	17.59	248	eP	21	51.00	-0.8
			e	21	54.00	
			e	25	02.00	
WB5	18.59	223	eP	22	02.80	-1.3
			eS	25	31.00	
WRA	18.65	223	Pc	22	02.90	-1.9
	0.5s		4.10nm		3.9mb	X
GUA	20.21	352	eP	22	22.50	0.4
GUMO	20.26	352	eP	22	22.00	-0.6

07d 15h

KNA	20.79	242	eP	22	26	00	-2.0
	0.4s	35.00nm			5.0mb	
BRS	21.21	168	iPd	22	31	80	-0.5
ASPA	21.63	217	iPc	22	36.20		-0.3
	0.5s	57.00nm			5.2mb	
	Z 22s	1.60um			4.4MszX	
		eS		26	36.50		
		LR		31	03.50		
DZM	23.66	132	iPc	22	55.90		-0.6
COO	24.16	171	eP	23	02.30		1.0
KUG	24.25	260	ePc	23	05.00		2.8
MNI	24.30	288	ePd	23	02.50		-0.3
CMS	24.84	184	eP	23	09.00		1.2
STK	25.83	192	eP	23	17.00		0.0
WARB	28.07	224	eP	23	48.70		11.1X
	0.3s	9.00nm					
CAN	28.61	178	eP	23	42.30		-0.1
CNB	28.62	177	eP	23	43.00		0.5
FORR	30.41	215	eP	23	56.00		-2.4
MEKA	34.27	231	eP	24	31.70		-0.5
COOL	34.78	223	eP	24	35.70		-0.9
NANU	34.95	240	iPc	24	38.00		0.0
MRWA	37.52	229	eP	25	00.00		0.3
KLB	37.52	225	eP	24	58.70		-1.0
	0.4s	21.00nm			5.4mb		
NWAO	38.66	223	eP	25	08.50		-0.7
	Z 20s	1.20um			4.7Msz		
MUN	38.83	225	eP	25	11.00		0.4
MAT	43.84	349	(P)	25	51.00		-0.7
	1.3s	34.62nm			4.9mb		
	Z 20s	0.35um			4.3Msz		
		(S)		32	34.00		
NJ2	47.33	326	eP	26	21.00		1.6
	Z 20s	0.50um			4.5Msz		
IPM	48.03	282	ePc	26	24.40		-0.8
	0.7s	17.30nm			5.2mb		
CHG	54.40	299	eP	27	19.20		6.0X
CHTO	54.40	299	eP	27	14.30		1.1
	0.9s	1.92nm			4.1mb		
CD2	56.28	314	eP	27	29.00		2.3
GTA	63.72	320	eP	28	15.60		-2.1
GBA	72.70	286	Pc	29	18.10		4.3X
	0.7s	6.30nm			4.7mb		
WMO	73.78	319	eP	29	19.60		-0.1
SPA	83.45	180	e(P)	30	13.00		0.9
INK	91.90	21	eP	30	55.00		2.6
CLL	121.90	328	ePKP	36	30.00		-8.9X
BNG	129.49	270	ePKPd	36	53.40		-1.3
	1.5s	24.00nm					
		i		40	20.50		
ZOBO	137.78	123	ePKP	37	04.00		-7.0X
		i		37	10.00		
PPD	145.92	147	ePKP	37	25.70		1.2
		e		37	31.10		
		e		37	51.50		
LEGH	148.19	270	ePKP	37	32.00		3.7X
KUK	148.40	271	ePKP	37	32.00		3.4X
KIC	152.75	271	PKP	37	43.00		7.9X
BAO	152.92	145	e(PKP)	37	34.00		-1.4
LIC	153.03	271	PKP	37	42.80		7.3X
TIC	153.04	272	PKP	37	43.20		7.6X
S.D. = 1.4 on 43 of 54 obs.							

& JUN 07, 1989 15h 42m 07.81s
63 605 N 146 213 W
DEPTH = 0.01m
CENTRAL ALASKA (1)
<AGS-P>. ML 3.6 (PMR)

DDM	0.24	40	iP	42	13	12	0.5
PAX	0.72	152	iP	42	21	08	-1.1
		S		42	30.32		
HDA	0.87	338	iP	42	24.95		-0.2
WRH	1.20	317	eP	42	30.78		-0.3
		S		42	47.87		
MCK	1.22	277	eP	42	30.90		-0.6
CCB	1.26	327	eP	42	31.06		-1.0
FBA	1.47	333	iPd	42	35.40		-0.2
GLM	1.48	340	eP	42	34.17		-1.6
		S		42	55.15		
RDS	1.49	326	eP	42	34.80		-1.1
		S		42	55.94		
TOA	1.51	179	iPd	42	35.90		-0.3
NEA	1.59	309	eP	42	35.89		-1.4
KTH	2.11	271	eP	42	44.76		-0.1
KLU	2.12	176	eP	42	45.20		0.1
PME	2.37	215	eP	42	48.52		-0.1
PMR	2.43	215	iPc	42	49.60		0.2
GLB	2.44	152	eP	42	49.13		-0.5
VZW	2.56	184	eP	42	51.53		0.2
PWA	2.59	222	eP	42	52.20		0.5
SKT	2.94	239	eP	42	56.16		-0.5
SUA	3.00	226	eP	42	58.42		0.7
DWY	3.04	78	P	42	56.00		-2.1
BALM	3.15	143	eP	42	58.86		-0.8
SLKM	3.64	213	eP	43	05.28		-1.3
SEW	3.83	205	eP	43	08.79		-0.6
IMA	4.03	311	eP	43	10.30		-2.0
RDT	4.21	227	eP	43	13.01		-1.7
RED	4.45	227	eP	43	15.16		-3.0
TTA	4.48	266	eP	43	18.80		0.2
CNPM	4.74	213	eP	43	21.63		-0.7
HYT	4.94	120	P	43	23.00		-2.2
SVW	5.05	244	eP	43	27.20		0.6
CDD	5.90	221	eP	43	38.45		-0.2
INK	7.00	42	eP	43	49.00		-5.0
33 obs. associated							

JUN 07, 1989 16h 08m 12.34± 0.63s
37.257 N ± 6.9km 4.557 W ± 6.2km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

EPRU	0.61	242	eP	08	23.80		-0.9
			eS	08	30.80		
LIJA	0.77	243	iP	08	28.00		0.5
EHOR	0.78	316	eP	08	27.50		-0.1
			eS	08	38.80		
AFC	0.81	90	eP	08	28.00		-0.1
			eS	08	39.00		
EBAN	1.09	34	eP	08	33.00		0.1
			eS	08	48.00		
SRO	1.19	214	eP	08	34.00		-0.6
GIBL	1.20	249	iP	08	28.00		-6.7X
MOMI	1.32	225	eP	08	37.00		0.3
PLAT	1.49	221	eP	08	40.00		0.8
CNIL	1.49	234	eP	08	30.00		-9.1X
S.D. = 0.7 on 8 of 10 obs.							

JUN 07, 1989 16h 31m 49.32± 0.75s
36.150 N ± 5.1km 120.081 W ± 7.1km
DEPTH = 5.0km (geophysicist)
CENTRAL CALIFORNIA (39)
ML 2.7 (BRK).

PKEM	0.09	194	eP	31	52.00		0.6
PHAM	0.41	219	eP	31	58.00		0.5
PRI	0.47	269	e(P)	32	00.20		1.4
LLA	0.84	304	ePc	32	06.00		0.0
			eS	32	18.50		
FRI	0.89	20	ePc	32	06.40		-0.5
			eS	32	19.50		
BCH	0.96	180	eP	32	06.70		-1.5
PRS	1.06	280	ePc	32	09.30		-0.4
SAO	1.26	300	eP	32	12.50		-0.7
			e	32	13.08		
			eS	32	32.35		
MHC	1.73	314	ePd	32	19.43		-0.9
			i	32	27.50		
CMB	1.90	353	ePc	32	22.30		-0.4
			eS	32	47.30		
TNP	2.99	49	e(P)	32	43.50		5.0X
KVN	3.30	28	eP	32	44.60		1.8
S.D. = 1.1 on 11 of 12 obs.							

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* JUN 07, 1989 17h 40m 04.98± 0.71s
9.202 S ±17.3km 78.940 W ±21.1km
DEPTH = 67.4km (2 depth phases)
5.0mb (5 obs.)
NEAR COAST OF NORTHERN PERU (109)
Felt (IV) at Chimbote.

NNA	3.45	143	iPc	40	56.00		-1.5
HUA	4.54	129	ePd	41	14.50		1.3
			eS	41	44.60		
ARE	10.24	136	e(P)	42	40.00		8.1X
ZOBO	12.67	125	eP	43	00.00		-4.7X
			e	43	03.00		
			LR	48	06.00		
CCH	14.87	124	P	43	33.80		0.6
SOB1	37.54	93	eP	47	13.90		-0.8
VVO	47.05	341	e(P)	48	31.80		0.0
RLO	47.60	342	eP	48	36.80		0.8
LNO	47.60	341	ePd	48	35.70		-0.2
TUL	47.60	341	ePc	48	36.70		0.7
	1.0s	25.00nm			5.1mb		
	Z 18s	0.10um			3.8Msz		
		e		48	52.50	61km	
		e		48	56.60		
ALQ	51.04	331	iP	49	03.00		0.3
	0.8s	5.04nm			4.6mb		
		e		49	21.50	73km	
GAC	54.74	3	eP	49	29.00		-0.7
LRM	62.48	334	eP	50	23.40		-0.5
FFC	66.57	346	iPd	50	48.70		-1.2
	0.8s	10.00nm			4.8mb		
YKA	76.60	344	eP	51	49.70		0.1
MBC	88.53	351	ePd	52	51.30		0.4
	0.7s	17.00nm			5.4mb		
DAG	92.38	12	iPd	53	08.80		0.1
	0.5s	4.23nm			5.1mb		
WMO	143.60	16	ePKP	59	40.40		6.3X
BJI	146.47	339	ePKP	59	38.50		-0.4
BTO	147.74	347	ePKP	59	43.40		2.3X
TIY	149.81	342	PKPd	59	48.60		4.2X
GTA	149.90	2	iPKPd	59	49.20		4.7X
CHG	170.23	12	ePKP	00	08.00		1.2
S.D. = 0.9 on 17 of 23 obs.							

& JUN 07, 1989 18h 03m 40.27s
61.596 N 151.760 W
DEPTH = 76.1km
SOUTHERN ALASKA (2)
<AGS-P>.

CGLM	0.31	202	iP	03	52.25		-0.2
			S	04	01.55		
CRP	0.38	210	iP	03	52.91		-0.1
SKT	0.40	16	iP	03	52.84		-0.2
			S	04	02.99		
SPU	0.44	199	iP	03	53.02		-0.3
SUA	0.50	105	eP	03	53.63		-0.4
			S	04	03.37		
RDT	1.07	197	eP	03	59.70		-0.6
			S	04	15.18		
RED	1.28	203	eP	04	02.56		-0.5
PME	1.30	87	eP	04	01.90		-1.3
SLKM	1.32	145	eP	04	02.85		-0.7
			S	04	21.77		
9 obs. associated							

JUN 07, 1989 18h 26m 19.15± 0.76s
37.035 N ± 8.6km 4.552 W ± 7.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.9 (MDD).

EPRU	0.55	263	eP	26	32.80		2.6
			eS	26	40.20		
LIJA	0.70	259	iP	26	36.00		2.9X
AFC	0.84	75	eP	26	37.00		1.6
			eS	26	49.00		
EJIF	0.94	232	eP	26	41.30		4.2X
EHOR	0.96	325	iP	26	36.70		-0.7
			eS	26	47.80		
SRO	1.02	221	eP	26	43.00		4.6X
GIBL	1.14	260	iP	26	43.60		3.1X
MOMI	1.18	233	eP	26	41.00		-0.2
OJEN	1.22	221	eP	26	41.00		-1.0
EBAN	1.28	28	iP	26	42.20		-0.7
			eS	26	58.20		
PLAT	1.33	227	eP	26	43.00		-0.7
CNIL	1.38	242	eP	26	44.00		-0.3
EVAL	1.83	288	eP	26	50.80		-0.1
			eS	27	12.40		
EVIA	2.28	45	eP	26	57.00		-0.5
			eS	27	22.30		
TOL	2.87	8	ePg	27	11.00		5.2X
			eSg	27	52.00		
S.D. = 1.3 on 10 of 15 obs.							

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* JUN 07, 1989 18h 30m 06.14± 1.21s
21.803 N ±10.4km 121.393 E ± 9.7km
DEPTH = 74.9 ± 10.0 km
3.9mb (1 obs.)
TAIWAN REGION (243)

TWG	1.06	344	ePd	30	25	00	-0.8
			eS	30	35	50	
TWM1	1.36	319	iPc	30	30.80		1.0

TWF1	1.54	357	eP	30	32.10	-0.2
TWK	1.68	330	ePc	30	34.20	0.1
TWD	2.27	5	ePc	30	42.20	0.0
TWQ	2.51	348	ePd	30	45.40	-0.2
TWC	2.82	8	ePc	30	50.30	0.4
ANP	3.37	2	eP	30	58.50	1.0
QZH	4.05	321	ePn	31	05.00	-2.0
HKC	6.72	276	iP	31	44.50	0.3
GZH	7.55	281	eP	31	56.00	0.2
TIY	17.64	336	eP	34	09.50	1.0
BJI	18.72	347	eP	34	20.50	-0.8
GTA	25.45	318	eP	35	29.20	0.4
WB5	43.32	162	eP	38	02.30	-0.2
WARB	47.97	174	eP	38	51.40	12.1X
NAO	80.68	332	P	42	11.80	-0.3
	0.7s		1.10nm			3.9mb
	S.D. = 0.9		on 16 of 17 obs.			

& JUN 07, 1989 18h 42m 33.03s
64.460 N 149.472 W
DEPTH = 16.1km
CENTRAL ALASKA (1)
<AGS-P>.

NEA	0.21	55	iP	42	38.06	0.0
WRH	0.60	88	eP	42	44.57	-0.1
RDS	0.68	57	iP	42	46.24	0.2
CCB	0.74	75	iP	42	47.10	0.0
MCK	0.77	162	iP	42	47.46	-0.1
FBA	0.85	58	iPc	42	49.30	0.4
GLM	1.04	58	iP	42	52.07	-0.2
HDA	1.09	92	iP	42	52.55	-0.6
KTH	1.11	216	eP	42	52.56	-0.9
DDM	1.72	111	eP	43	01.33	-1.2
PAX	2.33	128	eP	43	10.64	-0.7
IMA	2.40	314	eP	43	12.20	-0.1
SKT	2.66	201	iP	43	14.90	-1.1
TOA	2.79	146	eP	43	18.30	0.4
PWA	2.83	184	eP	43	17.23	-1.0
PME	2.85	176	eP	43	17.82	-0.8
PMR	2.88	177	eP	43	18.00	-1.1
SUA	3.06	191	eP	43	20.40	-1.3
KNK	3.09	171	eP	43	21.49	-0.6
TTA	3.29	245	eP	43	22.90	-2.1
CGLM	3.37	201	eP	43	24.82	-1.3
CRP	3.43	202	eP	43	26.04	-1.0
SPU	3.50	201	eP	43	26.44	-1.4
SVW	4.39	223	eP	43	38.50	-2.0
HYT	6.61	118	P	44	03.00	-8.9
INK	7.47	52	eP	44	20.50	-3.3
YKA	15.58	81	eP	46	17.00	3.9
	27 obs. ossociated					

• JUN 07, 1989 18h 53m 12.67± 0.72s
40.048 S ±11.0km 74.623 W ±16.3km
DEPTH = 33.0km (normol)
4.9mb (5 obs.)
OFF COAST OF SOUTHERN CHILE (143)

LNV	6.60	24	eP	54	48.00	-1.9
CHCH	6.88	29	eP	54	53.50	-0.4
			iS	56	14.10	
TACH	7.03	26	eP	54	55.00	-1.0
PCH	7.21	28	eP	55	57.70	59.2X
			iS	56	24.00	
FCH	7.55	29	eP	55	03.70	0.1
ROCH	7.64	23	ePd	55	03.70	-0.9
			iS	56	30.70	
ITB1	22.90	54	eP	58	20.40	5.9X
ITB	22.91	55	e(P)	58	19.80	5.2X
ARE	23.66	8	eP	58	26.00	3.7X
CCH	23.75	20	P	58	27.40	4.2X
CNCB	23.86	16	P	58	29.00	4.4X
LPB	24.11	15	eP	58	39.00	12.2X
ZOBO	24.36	15	Pc	58	32.00	2.6
	1.0s		40.00nm			4.9mb
	Z 23s		0.24um			3.6MszX
			LR	06	00.00	
PPD	26.73	55	eP	58	57.70	6.7X
			e	58	58.90	
BAO	33.62	51	eP	59	53.80	1.5
SOB1	42.93	54	eP	01	14.30	4.2X
ITR	44.82	56	eP	01	30.30	4.9X
			e	01	37.20	
			e	01	42.50	
SPA	50.14	180	e(P)	02	04.50	-2.2
	1.0s		10.00nm			4.8mb

SIO	78.02	342	e(P)	05	08.30	-0.9
TUL	78.06	343	ePd	05	09.60	0.2
	0.7s		15.20nm			5.1mb
			e	05	18.10	
LNO	78.06	343	ePd	05	08.20	-1.0
KIC	78.94	72	P	05	17.00	2.3
ALQ	80.19	334	iPd	05	21.50	0.3
	0.9s		10.50nm			4.8mb
			e	05	24.00	
			e	05	30.00	
KSR	81.96	117	eP	05	27.00	-3.8X
SLR	82.98	118	eP	05	35.50	-0.7
BUL	86.89	114	iPd	05	56.00	0.3
	0.7s		6.85nm			5.0mb
CMB	88.30	326	ePc	06	02.80	0.9
ORV	90.05	326	ePc	06	11.20	1.2
WDC	91.34	326	eP	06	15.60	-0.3
	S.D. = 1.4		on 18 of 29 obs.			

? JUN 07, 1989 19h 15m 12.33± 9.98s
51.700 N ±54.4km 16.443 E ±62.4km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.3 (VKA).

KSP	0.86	186	iP	15	28.80	-0.2
			iS	15	38.10	
			iLR	15	44.50	
BRG	1.77	243	ePn	15	42.80	-0.4
			iPg	15	43.80	
			iSg	16	04.40	
PRU	2.10	216	Pn	15	47.80	-0.1
			Pg	15	49.80	
			Sn	16	06.70	
			Sg	16	10.60	
CLL	2.18	261	iPn	15	49.40	0.2
			ePg	15	53.00	
			eSg	16	18.00	
KHC	3.16	217	iPn	16	03.00	0.0
			Pg	16	08.70	
			Sn	16	33.30	
			Sg	16	47.00	
HOF	3.20	246	eP	16	03.60	0.0
MOX	3.22	253	ePg	16	12.00	8.1X
			eSg	16	51.00	
WET	3.43	223	iPnc	16	07.60	0.8
VKA	3.44	181	iPgc	16	16.70	9.6X
			Sg	17	00.00	
GRF	3.88	241	e(Pn)	16	13.00	-0.3
			e(Pg)	16	27.00	
			e(Sn)	16	56.00	
			eSg	17	11.00	
	S.D. = 0.4		on 8 of 10 obs.			

JUN 07, 1989 19h 45m 53.70± 0.48s
38.057 N ± 3.1km 21.620 E ± 2.0km
DEPTH = 25.0 ± 3.7 km
5.0mb (58 obs.) 4.8Msz (4 obs.)
GREECE (364)
ML 5.0 (TTG), 4.7 (ATH), MD 5.1 (VKA), 4.8 (KBA). Crocks in mony buildings in the Kato Akhoio area. Felt widely in northern Peloponnisos and on Zakinthos and Kefallinia.
CENTROID, MOMENT TENSOR (HRV)
Data Used GDSN
L.P.B., 13S, 24C
Centroid Location:
Origin Time 19:45:58.9 0.9
Lat 38.05N FIX, Lon 21.63E FIX
Dep 25.0 FIX Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr=-1.07 0.42 Mtt= 3.77 0.74
Mff=-2.69 0.49 Mrt= 2.33 0.95
Mrf= 4.65 0.85 Mtf=-3.92 0.39
Principal Axes:

	Val=	Plg=	Azm=
T	5.62	2	25
N	2.66	54	292
P	-8.29	36	116

Best Double Couple:Mo=6.9*10**16
NP1:Strike=154 Dip=64 Slip= -26
NP2: 256 67 -152

VLS	0 82	279	ePg	46	08 70	-0 6
ITM	0.91	164	iPgd	46	08 40	-2.3
ATH	1.66	92	ePb	46	21.70	0 2

NEO	1.77	45	iPbc	46	24.50	1.3
LIT	2.15	18	Pn	46	30.70	2.1
PAIG	2.46	40	Pn	46	33.50	0.5
PLG	2.71	31	iPnc	46	37.00	0.4
THE	2.77	22	Pn	46	39.60	2.2
OUR	2.92	38	Pn	46	40.30	0.8
OHR	3.12	349	iPn	46	45.40	3.0X
KNT	3.25	17	Pn	46	46.90	2.6
VAY	3.34	12	iPnc	46	48.00	2.5
VAM	3.36	141	ePn	46	49.70	3.9X
LCI	3.64	310	P	46	49.68	-0.1
PRK	3.83	71	ePn	46	52.20	-0.2
MMB	3.88	24	iPd	46	54.00	0.8
			i	47	46.00	
SKO	3.91	358	iPnc	46	55.50	1.9
			iPb	47	01.50	
			iPg	47	05.50	
			iSn	47	41.50	
			i	47	53.00	
EZN	4.07	63	ePn	46	55.00	-0.9
GRI	4.15	282	P	46	57.50	0.4
NPS	4.25	130	ePn	46	59.00	0.5
ULC	4.30	336	ePn	47	00.00	0.8
			eSn	47	52.00	
RDO	4.32	43	ePn	46	59.00	-0.4
RZN	4.34	32	iP	47	00.00	0.2
TDS	4.42	293	P	47	01.80	0.9
IZM	4.46	84	iPn	47	01.10	-0.3
GMB	4.54	273	P	47	02.55	-0.2
KDZ	4.63	38	iPd	47	03.00	-0.8
PLD	4.68	29	iP	47	11.00	6.4X
			iS	47	56.00	
VTS	4.69	14	iPc	47	17.00	12.2X
			iS	47	45.00	
			iSg	48	02.00	
PVY	4.70	345	iPnd	47	07.00	2.0
			eSn	48	05.00	
TTG	4.73	338	iPnd	47	06.00	0.9
			eSn	48	02.50	
BDV	4.73	334	iPnd	47	05.50	0.2
			eSn	48	01.50	
MSI	4.78	274	P	47	07.30	1.3
			eSn	47	58.10	
IVA	4.99	345	iPnd	47	10.80	1.9
			eSn	48	11.00	
HCY	4.99	332	ePn	47	08.70	-0.2
			eSn	48	06.40	
KAP	5.11	118	ePn	47	11.00	0.4
NKY	5.15	338	iPnd	47	11.50	0.2
			eSn	48	12.50	
MGR	5.16	296	P	47	12.20	0.9
EDC	5.36	63	iPn	47	17.30	3.1X
YER	5.37	98	iPn	47	14.60	0.2
BRY	5.38	335	iPnd	47	14.00	-0.5
			eSn	48	17.00	
MEU	5.40	262	P	47	12.60	-2.2
			eSn	48	14.40	
BNT	5.40	63	iPn	47	17.00	2.2
PZI	5.43	261	P	47	11.81	-3.3X
MNO	5.47	271	P	47	14.90	-1.0
SGO	5.50	299	P	47	17.20	1.2
PLE	5.53	343	ePn	47	17.50	0.8
			eSn	48	24.00	
DST	5.69	72	ePn	47	19.40	0.6
JMB	5.81	39	iP	47	18.00	-2 5
PVL	5.88	28	iPd	47	20 00	-1 4
BSS	5.94	299	P	47	23 20	0 9
GIB	6.00	272	P	47	23.10	-0 1
CTT	6.10	57	iPn	47	21.50	-3.0X
KHL	6.23	85	iPn	47	27.00	0.5
MCT	6.34	269	P	47	28.80	0 7
FAI	6.35	265	P	47	27.30	-0.8
QRI	6.43	298	P	47	30.31	1.1
HVAR	6.45	324	iPnd	47	27.90	-1.6
			iSn	48	43.00	
ISK	6.48	60	iP	47	29.00	-1.0
KSL	6.65	104	ePn	47	33.50	1.1
USI	6.66	278	P	47	30.90	-1.6
SRE	6.71	10	ePc	47	40.00	6.9X
RFI	6.72	301	P	47	34.24	0.9
ELL	6.73	99	iP	47	36.50	3.0X
ALT	6.73	79	iP	47	33.70	0.2
BEO	6.81	353	ePn	47	33.50	-1 1
			e(Sg)	49	19.00	
DRA	6 91	16	ePd	47	39.00	3 1X
CVT	6 99	270	P	47	36.50	-0.6
SDI	7 02	304	P	47	37.80	0 ?

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CLO	7.07	7	ePc	47	38.00	-0.1			1.0s	107.00nm		6 0mb				i	49	24.80									
GPA	7.11	69	iP	47	38.30	-0.5					iPPP	48	45.70			e	49	34.20									
ERC	7.13	273	P	47	40.10	1.0					i	49	22.20			e	51	44.00									
BCK	7.13	92	eP	47	37.00	-2.1					i	50	16.40		FEL	13.96	319	eP	49	11.55	-0.7					
BUC	7.19	27	eP	47	39.00	-0.8					eS	50	28.00		BBS	13.97	317	P	49	13.40	1.1					
LVI	7.33	272	P	47	41.20	-0.6					LR	53	05.00		STU	13.99	324	eP	49	11.20	-1.2					
GZR	7.38	6	ePd	47	48.00	5.4X	SPC	11.17	355	eP	48	33.70	-1.3			1.0s	84.00nm				5.4mb					
AZI	7.41	305	P	47	44.50	1.6	SAL	11.19	316	P	48	32.20	-2.9		HOF	14.09	334	eP	49	12.50	-1.2					
BLY	7.47	335	eP	47	45.80	2.1	BOB	11.33	310	P	48	37.90	0.8		LOMF	14.28	315	P	49	16.43	0.1					
			eS	49	03.80		KMR	11.39	334	iP-	48	36.00	-1.8		MOF	14.41	317	P	49	17.84	-0.2					
PSN	7.50	39	iPd	47	43.00	-1.2					i	48	49.80		MOX	14.46	334	eP	49	18.00	-0.5					
BZS	7.55	360	ePc	47	42.00	-2.9X					i	49	08.00			1.0s	35.00nm				4.9mb					
AQU	7.61	307	P	47	47.70	1.9					i	49	13.60			Z 19s	3.70um									
CMP	7.64	18	iPd	47	47.00	0.8					i	49	40.20			N 16s	6.90um									
TIM	7.68	358	iPc	47	51.00	4.3X					i	49	57.00			E 16s	7.90um									
ALP	7.74	310	iPn	47	48.10	0.4					i	50	34.40		BSF	14.58	317	P	49	20.59	0.3					
			i(Sn)	49	11.73						i	51	24.30		CLL	14.58	338	eP	49	20.00	-0.1					
RDP	7.78	301	P	47	48.20	0.0	SCE	11.56	324	eP	48	38.90	-1.4			1.5s	20.00nm				4.4mb					
DEV	7.88	7	ePc	47	50.00	0.5	BHG	11.58	329	eP	48	39.10	-1.3				i	49	45.10							
MLR	8.10	22	ePc	47	53.50	0.8		1.2s	112.00nm			6.0mb			CDF	14.69	319	P	49	22.25	0.6					
AOI	8.19	315	iPn	47	54.01	0.1	MDI	11.75	315	P	48	41.10	-1.5		TOD	14.77	326	eP	49	19.31	-3.3X					
			i(Sn)	49	24.52		FIN	11.83	306	P	48	46.43	2.6		GWF	14.88	322	P	49	23.72	-0.4					
CIO	8.24	311	iPn	47	54.19	-0.4	IMI	11.90	304	P	48	46.43	1.5		HAU	14.93	317	eP	49	23.20	-1.5					
ASS	8.46	309	P	47	59.02	1.4	KRA	12.06	355	eP	48	47.90	1.1			0.7s	68.90nm				5.1mb					
BRD	8.48	27	eP	48	13.00	15.1X					e	48	57.70		VITF	15.25	317	P	49	29.75	0.9					
ARV	8.53	312	P	47	58.00	-0.7					e	49	02.10		TNS	15.38	326	eP	49	29.90	-0.7					
VRI	8.68	24	iPd	48	03.00	2.4					e	51	36.00				eS		52	14.10						
ZAG	8.82	333	ePn	48	02.00	-0.5	ROB	12.08	305	P	48	48.27	1.0		BRN	15.52	340	eP	49	37.00	4.7X					
			eSn	49	18.80		OSS	12.09	319	eP	48	46.80	-0.6		ABH	15.54	324	eP	49	32.33	-0.3					
			eSb	49	41.30		SAOF	12.16	304	P	48	48.72	0.5		RUP	15.64	323	eP	49	33.90	-0.1					
CJR1	8.82	9	eP	48	06.00	3.5X	REVF	12.18	302	P	48	42.78	-5.8X		SMF	15.67	309	eP	49	32.90	-1 5					
VBY	8.83	329	ePnc	48	00.90	-1.7	SBF	12.19	303	eP	48	48.20	-0.4			0.7s	32.40nm				4.6mb					
			iSn	49	35.30			1.0s	129.60nm			6.1mb X			LBF	15.74	310	eP	49	33.20	-2.2					
BBTK	8.86	75	iPd	48	08.00	4.7X	CRI	12.20	112	iP	48	45.20	-3.6X		LOR	15.95	311	eP	49	36.30	-1.7					
PTJ	8.90	334	ePn	48	01.40	-2.3	AUTN	12.24	303	P	48	49.97	0.4			0.9s	61.40nm				4.7mb					
RIY	9.07	326	iPn	48	25.30	19.4X	VDL	12.31	317	eP	48	51.20	0.7		AVF	16.04	309	eP	49	37.90	-1.1					
			iSn	50	04.80		ENR	12.34	304	P	48	51.86	1.1			1.3s	108.30nm				4.8mb					
RSM	9.08	313	P	48	06.10	0.0	TOUF	12.37	303	P	48	51.49	0.2		WLF	16.06	321	Pc	49	41.00	1.8					
MAO	9.11	302	P	48	06.70	0.1	MVIF	12.39	303	P	48	49.67	-1.8				i		49	46.40						
CRE	9.20	310	P	48	08.20	0.3	TMA	12.41	314	eP	48	50.90	-0.9		SSF	16.07	310	eP	49	38.90	-0.5					
PPCY	9.20	107	eP	48	10.00	2.2	STV	12.41	304	P	48	52.89	1.2		CAF	16.16	301	eP	49	40.40	-0.3					
PPE	9.29	27	eP	48	04.00	-5.0X	KHC	12.50	335	iP	48	52.50	-0.3		BGF	16.25	307	eP	49	40.30	-1.5					
BIR	9.33	27	eP	48	12.00	2.4					i	49	04.00		MAF	16.29	306	eP	49	41.00	-1.3					
CEY	9.36	327	eP	48	08.50	-1.5	CALN	12.51	302	P	48	50.51	-2.5			1.0s	40.00nm				4.5mb					
			eS	49	52.00		DOI	12.58	305	P	48	55.20	1.3		TCF	16.54	306	eP	49	45.90	0.4					
SFI	9.42	312	P	48	11.70	0.8	FRF	12.60	301	eP	48	51.90	-2.2			0.9s	25.20nm				4.3mb					
CLI	9.46	24	eP	48	15.00	3.6X		1.0s	44.00nm			5.6mb			EBR	16.55	286	eP	49	50.00	4.4X					
PGD	9.47	311	P	48	12.20	0.4	FUR	12.60	327	eP	48	52.90	-1.2				(S)		52	58.00						
			eSn	49	51.00		LMR	12.62	299	eP	48	52.80	-1.5		EROQ	16.61	286	eP	49	49.50	3.1X					
PTT	9.54	20	eP	48	20.00	7.5X		1.0s	36.00nm			5.5mb			RJF	16.65	302	eP	49	47.50	0.7					
LJU	9.56	329	eP	48	10.40	-2.3	ORO	12.66	311	P	48	52.70	-2.3			1.5s	98.10nm				4.7mb					
			eS	49	50.40		PZZ	12.67	305	P	48	53.40	-1.8		LPO	16.68	300	eP	49	47.40	0.1					
BUD	9.61	349	eP	48	13 50	0.1	WET	12.75	333	eP	48	58.58	2.4			1.1s	24.40nm				4.2mb					
TRI	9.63	325	ePnd	48	12.30	-1.4		1.3s	48.00nm			5.5mb			MEM	16.75	323	P	49	49.80	1.7					
			iSn	49	54.30		LRG	12.76	300	eP	48	54.70	-1.5		ENN	16.90	324	iPc	49	52.50	2.6					
FIR	9.70	309	ePn	48	16.00	1.3		1.3s	132.80nm			5.9mb				1.2s	152.00nm				5.0mb					
			eSn	49	53.00		JVI	12.80	114	iPc	48	51.10	-5.7X		EPF	16.91	294	eP	49	49.80	-0.4					
BMR	9.71	8	ePd	48	20 00	5.2X	LLS	12.81	317	eP	48	57.50	0.4		LSF	16.97	305	eP	49	48.30	-2.5					
VOY	9.82	327	iPd	48	14.20	-2.2	SAX	12.87	319	eP	48	59.20	1.2			1.2s	87.40nm				4.8mb					
			eS	49	59.80		MMK	12.90	313	eP	49	00.50	2.1		LFF	17.06	300	eP	49	52.10	0.1					
CSS	9.92	105	eP	48	14.50	-3.3X	BURJ	12.96	113	P	48	54.20	-4.7X			1.5s	156.60nm				4.9mb					
PSZ	9.94	353	eP	49	16.00	58.0X	PRU	12.96	339	eP	48	55.50	-3.3X		DOU	17.11	320	P	49	54.30	1.7					
SRO	10.05	347	iP	48	19 50	0.1		Z 19s	5.70um							0.8s	83.30nm				4.9mb					
			e	48	22 00			N 16s	3.80um								S		53	07.00						
PII	10.12	307	P	48	21 10	0 6		E 14s	7.50um						MSL	17.23	89	ePd	49	56.00	1 8					
BDI	10 26	309	P	48	21 30	-1 1				e	49	12 30					ePP		50	17 00						
MME	10 26	310	P	48	23 30	0 6	RPL	13 06	306	P	48	58 73	-1.7				eS		53	13 50						
RBL	10.28	327	P	48	20 50	-2 2	KFNJ	13.08	114	P	48	56 30	-4.1X				eLO		56	16.50						
SOP	10.31	341	eP	48	22.30	-0.7	LSD	13.08	309	P	48	58.22	-2.5				eLR		57	21.00						
VVI	10.46	322	P	48	23.60	-1.5	RMN	13.13	121	iPc	48	54.80	-6.4X		SNF	17.53	321	P	50	01.70	4 0X					
ZST	10.66	343	eP	48	26 00	-1.8	MASJ	13 18	114	P	48	56.70	-5.2X		ECHE	17.67	282	eP	50	01.40	1 7					
			i	48	49.40		BNI	13.18	307	P	49	02.30	0.3		UCC	17.67	322	P	50	02.50	3.0X					
			e(S)	51	12.00		MKRJ	13.22	115	P	48	58.20	-4.2X				S		53	26.00						
			LR	51	54.00		DIX	13.24	312	eP	49	03.10	0.2		DBN	18.16	326	eP	50	16.00	10.4X					
CVF	10.73	299	eP	48	23.80	-5.0X	KSP	13.33	345	e(P)	48	50.50	-13.2X			Z 16s	2.50um									
	0.7s	42.70nm				5.8mb				e	49	05.00					eS		53	38.00						
FVI	10.74	325	P	48	27.20	-1.7				e	49	07.80		MFF	18.17	305	eP	50	04.50	-1.3					
KBA	10.88	329	ePd	48	28.50	-2.5	LPG	13.34	309	eP	49	02.80	-1.5			1.3s	173.20nm				5.0mb					
	1.0s	124.00nm				6.1mb X	ZLA	13.52	318	eP	49	06.80	0.5		ETOR	18.48	286	iPc	50	11.00	1.2					
			iPP	48	36.50		EMS	13.52	311	eP	49	06.80	0.3		COP	18.69	344	eP	50	09.00	-3.0X					
			i	48	42.30		SLE	13.64	319	eP	49	09.10	1.2				i		51	08.00						
			i	49	19.50		MBH	13.76	123	iPc	49	04.40	-5.0X				i		53	45.00						
			i	50	15.20		GRF	13.82	331	eP	49	08.40	-1.8		EVIA	18.92	279	eP	50	15.00	-0.2					
			iS	50	26.00			Z 17s	3.00um						ECRI	18.93	291	eP	50	16.00	0 8					
			i	51	01.90					e	49	20 00			ENIJ	18.93	274	eP	50	15.00	-0 3					
CTI	10.89	320	P	48	28 50	-2.6	BRG	13 92	339	eP	49	11 40	-0.1		LDF	18.94	311	eP	50	14.50	-0.7					
VKA	10.91	341	e(P)	48	29.50	-1.7		1.4s	24.00nm			4.8mb				0.9s	68.70nm				4 9mb					

07d 19h

BHD 19.09 98 eP 50 06.00 -11 1X
eS 53 38.00
eSS 53 55.00
ePcP 54 43.00
FLN 19.23 311 eP 50 17.80 -0.8
0.8s 60.10nm 4.9mb
SLY 19.26 90 ePd 50 18.50 -0.7
eS 53 51.50
eLQ 56 44.50
LPF 19.27 308 eP 50 18.50 -0.6
0.7s 36.10nm 4.7mb
GRR 19.30 310 eP 50 18.30 -1.2
0.7s 36.10nm 4.7mb
TAB 19.44 82 eP 50 21.00 -0.5
TAF 19.59 268 iP 50 24.00 0.9
i 50 33.00
AFC 19.93 275 eP 50 29.40 2.7X
EBAN 19.98 278 eP 50 27.00 0.0
TOL 20.02 283 iPd 50 27.00 -0.5
1.0s 50.00nm 4.8mb
ePP 50 58.00
iS 54 10.00
GUD 20.08 285 iPc 50 27.90 -0.3
KER 20.87 92 eP 50 36.00 -0.5
EHOR 21.17 278 eP 50 37.90 -1.4
EPRU 21.31 275 e(P) 50 45.00 4.2X
SRO 21.57 274 eP 50 48.00 4.7X
EPLA 21.57 284 iPc 50 43.00 -0.4
OJEN 21.73 273 eP 50 52.00 6.9X
MOMI 21.82 274 eP 50 50.00 4.1X
PLAT 21.90 273 eP 50 50.00 3.3X
UPP 21.97 355 iP 50 45.90 -1.2
i 54 50.00
CNIL 22.08 274 eP 50 50.00 1.6
IFR 22.13 266 iPd 50 51.00 1.8
BMK 22.26 270 iP 50 50.50 0.2
i 50 59.00
EVAL 22.38 278 eP 50 54.30 2.8X
NUR 22.55 4 iP 50 51.80 -1.1
0.6s 32.60nm 5.0mb
eS 55 00.00
IR7 23.27 87 eP 51 01.00 0.7
IR1 23.40 88 eP 51 02.00 0.4
YRH 23.43 318 eP 51 03.00 1.4
IR2 23.51 87 eP 51 03.30 0.7
NRA0 23.57 348 P 51 01.70 -1.2
IR4 23.62 88 eP 51 04.90 1.2
NAO 23.78 347 P 51 04.60 -0.3
0.6s 34.20nm 5.1mb
TEH 23.87 86 eP 51 10.00 3.8X
AVE 24.01 267 iPd 51 09.00 1.7
i 51 18.00
i 52 06.00
EKA 24.03 324 Pd 51 08.30 1.0
0.7s 45.70nm 5.1mb
ESK 24.04 324 ePc 51 09.00 1.6
1.0s 200.00nm 5.6mb
ECP 24.09 315 eP 51 15.60 7.7X
0.8s 71.00nm 5.3mb
ESY 24.13 326 eP 51 07.90 -0.4
0.6s 21.00nm 4.9mb
ETA 24.22 316 eP 51 10.20 1.0
EBL 24.24 325 eP 51 11.40 2.0
0.7s 49.00nm 5.2mb
EDI 24.39 325 ePd 51 13.30 2.5
DLE 24.67 317 eP 51 15.00 1.5
EBH 24.73 325 eP 51 16.10 2.0
0.7s 104.00nm 5.5mb
TIO 24.78 262 iPd 51 16.50 1.5
i 52 30.00
SUF 24.85 5 iP 51 14.50 -0.7
0.6s 16.50nm 4.8mb
ELO 24.96 326 eP 51 17.50 1.2
0.7s 34.00nm 5.1mb
EAB 25.07 325 ePd 51 19.20 1.8
DMU 25.14 318 eP 51 11.41 -6.6X
VAL 26.21 312 eP 51 33.00 5.0X
SOD 29.50 4 iP 51 57.30 -0.4
MAIO 30.09 82 eP 52 03.00 -0.4
TRO 31.67 358 eP 52 16.00 -0.8
KEV 31.89 4 eP 52 17.00 -1.7
0.6s 13.00nm 5.0mb
AKU 35.89 333 eP 52 55.80 2.6
1.0s 20.00nm 5.0mb
REY 36.61 330 eP 53 02.60 3.3X
KUK 37.49 218 eP 53 06.00 -1.2
LEGH 37.87 217 eP 53 09.00 -1.4

TIC 39.51 224 P 53 23.22 -1.0
LIC 39.86 224 Pc 53 24.08 -3.0X
0.6s 23.00nm 5.0mb
NAI 41.57 157 iPd 53 43.60 2.3
DAG 42.62 347 eP 53 49.00 0.0
NDI 46.76 84 iPd 54 22.80 0.0
WMQ 49.06 61 eP 54 38.80 -1.8
Z 18s 0.80um 4.8Msz
eS 01 45.00
ALE 51.72 350 eP 55 01.00 0.6
0.7s 15.00nm 5.0mb
GKN 52.88 81 P 55 06.70 -3.3X
0.6s 29.00nm 5.4mb
DMN 53.44 81 P 55 11.10 -3.1X
0.6s 30.00nm 5.4mb
KKN 53.49 81 P 55 11.00 -3.5X
0.6s 23.00nm 5.3mb
PKI 53.69 81 P 55 12.80 -3.3X
0.6s 9.00nm 4.9mb
GUN 53.90 81 P 55 14.20 -3.4X
0.6s 21.00nm 5.3mb
GBA 54.92 101 Pd 55 19.90 -4.9X
0.8s 5.30nm 4.6mb
BUL 58.26 172 eP 55 46.60 -2.0
SCH 59.11 318 eP 55 53.00 -1.2
GTA 59.12 62 eP 55 51.80 -2.7
Z 22s 1.20um 5.0Msz
CBM 63.29 310 P 56 22.50 0.1
MBC 63.31 350 eP 56 22.00 -0.2
0.7s 15.00nm 5.2mb
LZH 63.48 64 eP 56 22.00 -2.1
Z 20s 0.50um 4.7Msz
SLR 63.76 173 eP 56 26.50 0.7
1.0s 20.00nm 5.2mb
KSR 63.78 175 eP 56 30.50 4.5X
MIM 64.66 309 P 56 33.00 1.6
PRY 64.88 174 eP 56 29.80 -3.3X
0.7s 7.50nm 4.9mb
CD2 66.01 69 eP 56 38.00 -2.4
BNH 66.35 309 P 56 44.00 1.7
HHC 66.39 56 eP 56 41.80 -1.0
FRS 67.54 177 eP 56 39.50 -10.3X
XAN 68.11 63 P 56 51.00 -2.6
GAC 68.31 312 eP 56 44.00 -10.6X
BJI 69.80 55 eP 57 02.00 -1.9
Z 16s 0.47um 4.8MszX
GYA 70.54 71 P 57 11.80 3.0X
BRW 70.94 359 P 57 10.50 0.3
INK 72.33 351 eP 57 18.00 -0.6
ITR 72.74 244 eP 57 23.70 1.8
NNT 73.04 87 eP 57 21.10 -2.6
CN2 73.33 47 eP 57 24.00 -1.0
Z 16s 0.90um 5.1MszX
E 13s 0.30um
esP 57 34.00
SNY 73.40 50 eP 57 25.80 0.4
YKC 73.77 340 eP 57 27.50 0.3
YKA 73.80 340 eP 57 28.90 1.6
SOB1 74.81 245 eP 57 35.60 1.7
RSON 74.88 324 P 57 34.40 0.6
FFC 75.72 330 eP 57 39.00 0.5
0.6s 16.00nm 5.2mb
IMA 76.14 358 P 57 41.00 0.1
1.0s 21.25nm 5.1mb
FBA 77.04 355 P 57 47.70 2.0
0.8s 8.62nm 4.8mb
QIZ 77.17 76 eP 57 49.20 2.0
PSI 78.35 96 eP 57 51.50 -2.2
e 59 31.00
TTA 79.34 359 P 57 59.00 0.6
ATB 79.38 257 e(P) 57 59.40 0.1
PMR 80.41 356 P 58 06.00 1.9
1.0s 22.50nm 5.2mb
EDM 81.08 334 eP 58 10.00 2.1
SES 82.57 332 eP 58 20.00 4.3X
MAT 85.45 46 eP 58 32.00 1.5
1.1s 11.39nm 5.0mb
RLO 85.74 314 eP 58 33.60 1.6
LNO 86.36 314 eP 58 37.00 2.1
TUL 86.36 314 eP 58 37.50 2.5
1.0s 16.00nm 5.2mb
Z 21s 0.41um 4.8Msz
LR 30 00.00
SIO 86.77 314 e(P) 58 41.70 4.7X
UYO 86.82 312 eP 58 39.50 2.2
MEO 88.76 315 e(P) 58 48.60 2.0
KVN 94.80 330 P 59 16.00 1.2

DZM 145.88 72 iPKPd 05 35.60 3.4X
S.D. = 1.4 on 282 of 353 obs

JUN 07, 1989 21h 01m 48.89± 0.57s
39.366 N ± 5.5km 28.140 E ± 6.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.3 (ATH).

DST 0.45 58 iPg 01 58.80 0.8
EDC 1.00 348 iPg 02 08.80 0.9
BNT 1.00 350 iPg 02 08.50 0.6
IZM 1.19 216 ePn 02 09.90 -1.1
PRK 1.45 266 ePb 02 15.00 -0.2
EZN 1.48 289 ePn 02 16.00 0.5
KHL 1.50 134 iPn 02 15.00 -0.9
ALT 1.56 101 iPn 02 16.70 -0.1
GBZT 1.74 35 ePn 02 20.00 0.7
iSg 02 47.00
CTT 1.79 7 iPn 02 18.50 -1.6
ISK 1.84 22 iPn 02 19.00 -1.7
GPA 1.91 60 ePn 02 21.90 0.1
YER 2.23 177 ePn 02 28.40 1.9
RDO 2.67 313 ePn 02 35.70 3.0X
BBTK 3.60 81 iPc+ 02 59.00 13.0X
i 03 49.50
S.D. = 1.2 on 13 of 15 obs.

JUN 07, 1989 21h 47m 35.05± 0.35s
5.632 N ± 3.3km 125.732 E ± 4.7km
DEPTH = 169.8 ± 3.4 km
5.1mb (18 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 21:47:34.2 1.0
Lat 5.55N 0.07 Lon 125.76E 0.11
Dep 158.6 2.2 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 6.40 0.56 Mtt=-5.45 0.64
Mff=-0.94 0.74 Mrt=-1.45 0.54
Mrf= 3.55 0.64 Mtf= 0.62 0.51
Principal Axes:
T Val= 7.92 Plg=67 Azm=257
N -2.03 20 109
P -5.90 11 15
Best Double Couple:Mo=6.9*10**16
NP1:Strike= 82 Dip=38 Slip= 57
NP2: 301 59 113

DAV 1.45 354 iPd- 48 06.00 0.0
iS 48 29.90
MNI 4.26 192 ePd 48 39.60 -0.2
eS 49 10.30
KKM 9.48 273 ePd 49 50.00 1.0
BAG 11.84 335 eP 50 21.00 1.0
MKS 12.46 210 iPc 50 31.20 3.5X
JAY 17.00 118 ePc 51 23.50 -1.0
TRT 18.61 225 ePc 51 43.10 1.0
1.0s 133.00nm 5.3mb
MTN 19.13 164 iPd 51 46.40 -1.1
e 52 02.00
QZH 20.39 341 eP 52 01.00 0.7
pP 52 30.00
sP 52 53.00
S 55 38.00
QIZ 20.42 312 P 52 01.40 0.7
PP 52 31.00
sP 52 50.00
S 55 40.00
GUMO 20.44 66 eP 52 05.50 4.6X
Z 20s 0.36um 3.7Msz
GZH 21.07 327 P 52 08.60 1.5
S 55 50.00
KNA 21.46 172 eP 52 10.50 -0.4
KGM 22.65 262 ePc 52 25.80 3.3X
KLI 23.31 244 ePc 52 31.00 2.0
e 52 56.00
LAT 24.48 120 eP 52 40.50 0.4
IPM 24.63 269 ePd 52 42.00 0.5
0.7s 72.90nm 5.4mb
e 52 55.90
SNG 25.00 275 eP 52 45.20 0.2
SSE 25.69 351 Pc 52 58.80 7.7X
1.2s 35.00nm 4.9mb

07d 21h

	Z 20s	0 50um		4.0Msz		
	N 12s	0 80um				
		sS	57 02.00			
PPI	26.01	257 ePd	52 55.00	0.8		
	0.8s	187.70nm		5.8mb		
PMG	26.06	125 eP	52 54.50	-0.1		
	0.8s	29.85nm		5.0mb		
NNT	26.57	287 eP	53 00.00	0.7		
WB5	26.74	162 iPd	52 59.00	-1.8		
		eS	57 19.00			
PSI	26.89	265 ePc	53 01.60	-0.6		
WHN	27.00	338 eP	53 03.00	0.0		
		PcP	56 20.00			
		S	57 28.00			
NJ2	27.06	347 Pc	53 04.10	0.6		
GYA	27.57	321 P	53 08.80	0.4		
CHG	29.21	299 ePd	53 23.10	0.0		
	1.8s	70.45nm		5.1mb		
CHTO	29.21	299 eP	53 23.20	0.1		
QIS	29.38	153 eP	53 23.00	-1.4		
		e	53 35.00			
NANU	29.75	199 eP	53 27.00	-0.6		
ASPA	30.19	165 iPd	53 30.20	-1.4		
	0.6s	21.00nm		5.0mb		
	Z 20s	0.25um		3.8Msz		
		ipP	53 48.20	77kmX		
		eScP	56 28.10			
		eS	58 15.90			
		LR	07 06.30			
WARB	31 64	178 iPc	53 55.20	11.0X		
	0.3s	12.00nm				
XAN	32.28	333 P	53 47.60	-2.2		
CD2	32.53	323 eP	53 51.00	-1.0		
		eS	58 49.20			
CTA	32.57	142 iPc	53 52.70	0.4		
	0.9s	20.17nm		4.8mb		
MEKA	32.80	192 eP	53 53.40	-0.9		
MAT	32.82	19 (P)	53 52.00	-2.4		
	0.9s	10.08nm		4.5mb		
		eS	59 10.00			
TIY	34.16	341 Pc	54 03.90	-2.0		
	N 10s	0.20um				
		S	59 18.00			
BJI	35.32	347 eP	54 14.50	-1.1		
		esP	55 12.00			
		ePcP	56 43.50			
		eS	59 34.00			
		eScS	04 17.00			
MRWA	35.89	195 eP	54 20.00	-0.5		
	0.3s	6.00nm		4.8mb		
SNY	36.09	357 eP	54 22.00	0.0		
		eS	59 41.00			
FORR	36.35	177 iPd	54 23.60	-0.7		
	0.4s	33.00nm		5.4mb		
LZH	36.37	329 Pc	54 25.00	0.3		
	1.0s	0.21nm		2.8mb X		
		PcP	56 45.00			
COOL	36.57	187 eP	54 25.30	-1.0		
BAL	37.05	193 eP	54 30.00	-0.3		
HHC	37.29	342 iPc	54 33.40	1.0		
KLB	37.79	191 eP	54 37.60	1.1		
	0.3s	7.00nm		4.8mb		
SHL	37.96	305 iP	54 38.50	0.2		
		iS	00 16 00			
CN2	38 01	360 Pd	54 38.50	0.3		
		iPcP	56 51 00			
		S	00 15 00			
		ScP	00 23 00			
		eScS	04 25.00			
MUN	38 49	193 eP	54 42 20	-0.1		
MDJ	38 98	4 eP	54 46 00	-0 2		
NWAO	39 19	191 eP	54 48.30	0.3		
STK	40.25	159 iPd	54 57.20	0.4		
	0.7s	40 00nm		5.2mb		
RKG	40.34	191 eP	55 02.00	4.5X		
GTA	40.96	329 iPc	55 02.30	-0.4		
		PcP	57 00.00			
CMS	41.60	154 eP	55 08.00	0.2		
BRS	41.97	143 iPd	55 10.70	-0.2		
GUN	43.82	305 P	55 26.00	-0.4		
COO	43.86	147 eP	55 27.00	0.7		
		e	57 12.00			
PKI	44.07	304 P	55 28.00	-0.4		
KKN	44 26	305 P	55 28 90	-0.9		
DMN	44.34	304 P	55 29 60	-0 8		
	0.6s	21.00nm		4 9mb		
GKN	44 87	305 P	55 33 60	-0 9		
BFD	45.39	161 iPc	55 38.80	0.6		
CAN	46.25	153 eP	55 46.20	1.1		
CNB	46.40	153 iPd	55 48.80	2.4		
HYB	47.56	288 eP	55 55.00	-0.6		
DZM	48.44	126 iPc	56 02.40	0.0		
WMQ	50.61	325 P	56 18.00	-0.6		
		eS	03 23.50			
		eScS	05 52.50			
MSZ	62.75	147 P	57 44.00	-0.2		
MAIO	67.58	307 eP	58 15.00	-0.6		
SDN	76.18	34 eP	59 06.80	1.0		
SVW	79.61	29 eP	59 25.70	1.1		
BRW	80.70	19 eP	59 32.10	2.0		
KDC	80.87	33 eP	59 31.70	0.5		
IMA	81.06	24 eP	59 33.60	1.4		
PMR	82.76	29 eP	59 41.70	0.8		
	1.1s	162.50nm		5.7mb		
TOA	84.17	28 eP	59 50.00	1.9		
MAW	85.19	200 eP	59 53.00	0.0		
KEV	87.77	340 eP	00 03.00	-2.6		
SOD	88.34	338 iP	00 07.80	-0.5		
INK	88.77	21 eP	00 10.00	-0.3		
		pP	00 50.50	160kmX		
SUF	89.42	333 iP	00 11.40	-2.1		
	0.4s	8.90nm		5.1mb		
MBC	90.32	13 eP	00 18.00	0.5		
NUR	90.57	331 iP	00 18.00	-0.8		
DAG	95.26	352 iPc	00 38.50	-1.7		
	0.6s	31.33nm		5.8mb		
NAO	96.91	333 PKP	00 46.40	-1.5		
	0.7s	8.20nm		5.2mb		
YKA	98.18	24 eP	00 55.10	1.5		
LPG	105.66	320 ePKP	05 52.90	12.7X		
	0.7s	4.40nm				
EKA	106.08	332 Pdiffd	01 43.40	14.5X		
	2.7s	107.90nm				
SSF	106.96	323 ePKP	05 42.30	0.1		
BGF	107.60	323 ePKP	05 43.40	0.0		
	0.5s	3.20nm				
TCF	108.11	323 ePKP	05 44.40	0.0		
	0.8s	5.30nm				
LSF	108.54	323 ePKP	05 44.80	-0.4		
GAC	125.50	18 ePKP	06 18.00	0.4		
KIC	129.15	283 PKPc	06 25.50	0.0		
	0.6s	8.50nm				
TIC	129.36	283 PKP	06 26.20	0.2		
LIC	129.46	283 PKP	06 26.00	-0.1		
CNCB	162.57	131 PKP	07 22.50	3.6X		
LPB	162.65	130 (PKP)	07 02.00	-16.8X		
ZOBO	162.79	129 PKP	07 20.80	1.7		
	1.0s	11.25nm				
PPD	163.45	190 ePKP	07 19.50	0.5		
ITR	163.98	258 e(PKP)	07 22.00	2.3X		
SOB1	166.27	254 ePKP	07 22.60	1.0		
		e	08 25.20			
BAO	168.31	211 ePKP	07 24.50	1.3		
	S.D. = 1.0	on 95 of 106 obs.				

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* JUN 07, 1989 23h 51m 23.48± 0.95s
34.262 N ±14.0km 91.930 E ± 9.9km
DEPTH = 10.0km (geophysicist)
3.5mb (1 obs.)
QINGHAI PROVINCE, CHINA (325)

GTA	8 14	49 ePn	53 25.80	1.1		
	Z 10s	5 30um				
	N 12s	2 30um				
GUN	8.18	221 P	53 26.80	1.4		
	0 8s	32.00nm		5.6mb X		
KKN	8 61	223 P	53 31.60	0.3		
	0.8s	16 00nm		5.4mb X		
SHL	8.67	180 eP	53 32.00	0.0		
		eS	55 14.00			
		iS	56 12.00			
PKI	8.71	222 P	53 32.80	0.1		
	0.6s	19.00nm		5.6mb X		
GKN	8.83	227 P	53 33.80	-0.4		
	0.6s	15.00nm		5.5mb X		
DMN	8.85	223 P	53 34.20	-0.4		
	0.7s	18.00nm		5.5mb X		
LZH	9.92	76 eP	53 47.50	-1.8		
	Z 12s	2.30um				
	E 10s	2.50um				
		Lg	56 30 00			
CD2	10.52	105 eP	53 58 00	0.6		
XAN	14 08	86 P	54 42 60	-2.5		
GYA	14.90	118 P	54 54 40	-1.6		
CHTO	16.61	156 eP	55 20.50	2.5		
	1.0s	4.00nm		3 5mb		
TIY	16.95	72 eP	55 23.70	1.5		
	Z 15s	1.70um				
	N 13s	1.80um				
WHN	19.28	95 eP	55 51.50	0.4		
BJI	20.14	66 eP	56 02.00	1.6		
	Z 12s	1.20um		4.5MszX		
HYB	20.61	219 eP	56 03.00	-2.6		
TIA	20.66	77 eP	56 05.00	-0.9		
NJ2	22.63	88 eP	56 26.50	0.8		
	S.D. = 1.5	on 18 of 18 obs.				

JUN 08, 1989 00h 02m 06.04± 0.71s
47.855 N ± 6.7km 7.187 E ± 5.5km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.5 (LDG). MD 1.6 (STR).

MOF	0.04	265 Pg	02 07.40	-0.8		
		Sg	02 08.17			
BSF	0.27	265 Pg	02 11.68	0.0		
FEL	0.56	88 Pg	02 17.20	-0.2		
LOMF	0.56	206 Pg	02 17.78	0.3		
CDF	0.56	6 Pg	02 16.93	-0.6		
HAU	0.58	285 Pg	02 17.40	-0.5		
		Sg	02 24.90			
VITF	0.89	295 Pg	02 24.01	1.0		
		Sg	02 36.42			
GWF	1.16	14 Pg	02 28.45	0.7		
		Sg	02 44.14			
WLF	1.94	340 P	03 33.40	54.1X		
LOR	2.33	257 Pg	02 50.30	5.3X		
		Sg	03 19.20			
LBF	2.35	249 Pg	02 50.80	5.5X		
		Sg	03 20.20			
SSF	2.62	254 Pg	02 56.00	6.9X		
		Sg	03 28.20			
DOU	2.82	324 P	03 34.90	43.0X		
	S.D. = 0.8	on 8 of 13 obs.				

? JUN 08, 1989 00h 17m 58.31± 6.69s
35.117 N ±49.0km 21.169 E ±43.1km
DEPTH = 33.0km (normal)
MEDITERRANEAN SEA (400)
MD 3.5 (ATH).

ITM	2.15	16 ePn	18 33.90	1.4		
VAM	2.50	82 ePn	18 37.50	0.0		
VLS	3.09	351 ePn	18 46.10	0.2		
NEO	4.49	21 ePn	19 05.00	-0.8		
KZN	5.20	5 ePn	19 15.20	-0.7		
VAY	6.29	10 ePn	19 28.50	-2.7X		
	S.D. = 1.3	on 5 of 6 obs.				

JUN 08, 1989 01h 11m 12.87± 0.86s
37.965 N ± 7.6km 21.491 E ± 8.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.2 (ATH).

VLS	0.74	287 ePg	11 27.20	-0.2		
		eSg	11 41.30			
ITM	0.86	156 ePg	11 29.30	-0.1		
ATH	1.76	89 ePg	11 44.20	0.6		
NEO	1.91	45 ePb	11 43 80	-1 9		
KZN	2.35	5 ePn	11 53.00	0 8		
PLG	2.85	32 ePn	12 00.20	1.0		
OHR	3.19	351 ePn	12 04.00	0.0		
VAY	3.45	14 ePn	12 07.40	-0.3		
	S.D. = 1.1	on 8 of 8 obs.				

JUN 08, 1989 01h 24m 56.70± 1.21s
14.678 S ± 8.6km 167.215 E ± 6.4km
DEPTH = 131.7 ± 10.6 km
5.1mb (13 obs.)
VANUATU ISLANDS (186)

PVC	3.22	161 iPc	25 47.90	1.0		
		iS	26 26.00			
DZM	7.39	186 iPc	26 42.00	-1.4		
		iS	28 03.40			
SVO	9.09	306 eP	27 05 00	-1.1		
BRS	18.46	224 iPd	29 06.20	1.1		
PMG	20.30	283 eP	29 25.50	1.3		
	1.0s	50.00nm		4.9mb		
CTA	20 71	252 iPd	29 29.10	0.8		

	0.9s	58.82nm		5.0mb		
		iS	33	16.00		
COO	21.18	219 iPc	29	34.60	1.5	
	0.8s	28.00nm		4.7mb		
CMS	25.75	226 iPd	30	17.30	0.6	
	0.8s	58.00nm		5.2mb		
CAN	26.28	215 eP	30	21.00	-0.6	
QIS	26.94	253 eP	30	27.00	-0.7	
STK	28.99	229 iPd	30	46.80	0.7	
	0.7s	40.00nm		5.2mb		
WB5	31.76	256 eP	31	08.50	-2.0	
ASPA	32.64	249 iPd	31	16.60	-1.7	
	1.2s	37.00nm		5.0mb		
Z	17s	0.22um		3.9MszX		
		iS	36	20.50		
		LR	43	52.70		
FORR	39.26	239 iPd	32	14.10	0.0	
	0.4s	24.00nm		5.3mb		
WARB	39.55	247 eP	32	07.60	-9.0X	
	0.3s	6.00nm		4.8mb		
PMO	43.33	96 iP	32	48.00	0.5	
	0.8s	50.00nm		5.3mb		
VAH	43.57	97 eP	32	49.00	-0.4	
	0.8s	20.00nm		4.9mb		
TPT	43.60	96 iP	32	50.40	0.7	
	0.8s	45.00nm		5.2mb		
RUV	43.81	97 iP	32	51.70	0.3	
	0.8s	45.00nm		5.2mb		
MEKA	46.83	247 eP	33	15.30	0.1	
SBA	63.19	180 Pc	35	11.80	-0.6	
SPA	75.42	180 e(PKP)	36	26.10	-1.4	
	1.0s	24.00nm		4.9mb		
GUN	89.33	299 P	37	41.20	1.0	
PKI	89.63	299 P	37	42.20	0.6	
KKN	89.80	299 P	37	44.40	2.2	
GKN	90.40	299 P	37	45.00	0.1	
SUF	124.77	339 iPKP	43	41.00	-0.8	
	0.5s	4.00nm				
NUR	126.80	338 iPKP	43	45.60	-0.2	
NAO	130.84	345 PKP	43	54.40	0.8	
	0.7s	1.30nm				
CDF	142.51	338 ePKP	44	12.80	-2.9X	
BSF	143.17	338 ePKP	44	14.20	-2.7X	
SOB1	143.39	129 ePKP	44	10.90	-7.2X	
ARV	143.82	328 PKP	44	17.40	-0.6	
TDS	144.36	320 PKP	44	18.40	-0.6	
MME	144.43	330 PKP	44	18.80	-0.5	
FLN	144.53	346 ePKP	44	17.40	-1.6	
	0.5s	10.20nm				
BOB	144.57	332 PKP	44	18.50	-0.8	
BDI	144.58	330 PKP	44	17.90	-1.4	
LDF	144.60	345 ePKP	44	17.60	-1.5	
	0.6s	4.50nm				
LOR	144.67	340 ePKP	44	17.90	-1.4	
	0.7s	9.35nm				
LBF	144.88	340 ePKP	44	18.60	-1.1	
	0.7s	12.70nm				
SSF	144.97	340 ePKP	44	19.10	-0.7	
	0.7s	23.70nm				
GRR	144.97	346 ePKP	44	18.70	-1.0	
	0.6s	24.35nm				
LSD	145.00	335 PKP	44	20.25	0.0	
LPG	145.13	336 ePKP	44	20.00	-0.5	
	0.7s	18.75nm				
SMF	145.22	340 ePKP	44	19.70	-0.6	
	0.9s	16.40nm				
AVF	145.26	340 ePKP	44	19.80	-0.5	
	0.7s	8.25nm				
LPF	145.35	346 ePKP	44	19.80	-0.6	
	0.6s	22.55nm				
ITR	145.52	131 ePKP	44	20.10	-1.6	
BNI	145.53	335 PKP	44	21.80	0.8	
FIN	145.56	333 PKP	44	20.86	-0.1	
RRL	145.59	335 PKP	44	21.89	0.6	
BGF	145.63	341 ePKP	44	20.80	-0.2	
	0.5s	9.50nm				
ROB	145.64	333 PKP	44	21.27	0.1	
PZZ	145.80	334 PKP	44	20.25	-1.2	
STV	145.92	334 PKP	44	21.79	0.2	
IMI	145.94	333 PKP	44	20.76	-0.9	
MAF	146.01	341 ePKP	44	22.10	0.5	
	0.7s	5.50nm				
TCF	146.07	341 ePKP	44	22.30	0.6	
SBF	146.18	333 ePKP	44	22.90	0.9	
	0.6s	27.95nm				
LSF	146.31	342 ePKP	44	22.70	0.6	
	0.7s	9.35nm				
MFF	146.46	344 ePKP	44	23.00	0.7	
	0.7s	16.55nm				
FRF	146.76	334 ePKP	44	23.90	1.0	
	0.6s	9.00nm				
LRG	146.97	334 ePKP	44	24.30	1.1	
LMR	147.00	334 ePKP	44	24.60	1.4	
	0.7s	11.00nm				
RJF	147.16	341 ePKP	44	25.60	2.1	
CAF	147.33	340 ePKP	44	26.10	2.3	
BNG	147.52	255 iPKPc	44	27.00	2.0	
	0.6s	21.00nm				
LFF	147.73	342 ePKP	44	26.90	2.5X	
	0.5s	9.50nm				
LPO	147.82	341 ePKP	44	27.30	2.8X	
	0.6s	6.30nm				
EPF	149.58	341 ePKP	44	31.90	4.5X	

S.D. = 1.1 on 64 of 71 obs.

JUN 08, 1989 01h 33m 48.26± 0.53s
44.167 N ± 6.0km 10.872 E ± 5.0km
DEPTH = 19.5 ± 5.2 km
NORTHERN ITALY (545)
ML 3.1 (LDG). MD 2.9 (ROM).

MME	0.13	282 P		33	50.20	-2.5
			eSg	33	52.30	
BDI	0.22	242 Pc		33	51.50	-2.3
			eSg	33	54.70	
FIR	0.48	144 iPgd		33	58.00	0.1
			eSg	34	05.00	
PGD	0.68	115 P		34	01.60	0.2
CRE	0.95	124 P		34	06.20	0.2
			eSg	34	19.60	
RSM	1.16	101 P		34	10.20	0.8
BOB	1.18	301 P		34	10.50	0.7
			eSg	34	28.50	
SAL	1.46	350 P		34	15.00	1.4
			eSn	34	35.80	
MDI	1.81	333 P		34	20.00	1.3
CKI	1.88	279 P		34	20.40	0.7
CTI	1.96	16 P		34	22.00	1.0
CVF	2.16	223 Pn		34	25.00	1.1
TMA	2.40	325 ePd		34	27.70	0.4
SBF	2.50	264 Pn		34	28.50	-0.2
			Sn	34	58.40	
ORO	2.52	306 P		34	30.20	1.2
			eSn	35	00.90	
VDL	2.52	337 ePd		34	29.60	0.5
TRI	2.57	52 e(Pn)		34	27.90	-1.7
			i(Sg)	35	00.30	
OSS	2.57	349 ePd		34	31.20	1.4
DOI	2.62	279 P		34	31.20	0.7
MMK	2.79	314 ePd		34	34.90	1.9
VOY	2.84	48 ePn		34	31.90	-1.6
			eSn	35	06.40	
LLS	3.01	335 ePd		34	37.10	1.1
DIX	3.11	309 ePd		34	40.20	2.7
FRF	3.12	260 Pn		34	38.40	1.1
			Sn	35	14.00	
LPL	3.24	296 Pn		34	39.20	-0.1
SAX	3.26	341 ePd		34	41.30	1.6
LMR	3.27	257 Pn		34	41.20	1.7
			Sn	35	18.00	
LRG	3.34	259 Pn		34	42.00	1.5
			Sn	35	20.00	
EMS	3.38	306 ePd		34	43.30	2.1
KBA	3.39	30 i(Pn)		34	47.90	6.5X
	0.6s	12.30nm				
			i	35	09.20	
			i(Sn)	35	21.90	
			i	35	44.70	
VBY	3.39	65 e(Pg)		34	52.10	10.8X
			eSn	35	21.00	
SLE	3.96	336 ePd		34	48.20	-1.2
BSF	4.64	324 Pn		34	57.90	-1.2
			Sn	35	49.00	
CDF	4.92	331 Pn		35	01.40	-1.7
KHC	5.30	20 eP		35	32.40	24.0X
			e	36	05.50	
SMF	5.54	299 Pn		35	09.90	-1.8
			Sn	36	13.80	
LBF	5.60	303 Pn		35	11.20	-1.4
			Sn	36	15.00	
LOR	5.81	305 Pn		35	13.20	-2.3
			Sn	36	18.80	
BGF	6.14	296 Pn		35	18.00	-2.1

S.D. = 1.5 on 36 of 39 obs.

? JUN 08, 1989 01h 37m 25.72±11.22s
14.418 N ±48.7km 59.512 W ±77.3km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)
ML 3.0 (FDF).

MVM	1.35	276 eP		37	50.59	0.1
BIM	1.51	274 eP		37	52.98	0.1
			S	38	06.90	
FDF	1.62	281 iPd		37	54.19	-0.2
	0.1s	0.70nm				
			S	38	09.00	
BBL	2.19	300 eP		38	03.00	0.2
			S	38	24.00	
PAG	2.64	308 eP		38	09.00	-0.1
			S	38	35.00	

S.D. = 0.2 on 5 of 5 obs.

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* JUN 08, 1989 01h 41m 49.82± 0.64s
29.900 N ±10.5km 99.472 E ± 7.0km
DEPTH = 10.0km (geophysicist)
5.3mb (6 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	3.84	74 ePn		42	51.00	0.8
			Pg	43	00.40	
			Sg	43	45.10	
LZH	7.18	30 eP		43	36.00	-1.5
Z	10s	0.50um				
GYA	7.21	117 iPnd		43	38.40	0.4
			Sn	44	52.00	
XAN	9.02	60 P		43	59.50	-3.6X
GTA	9.49	2 eP		44	10.60	0.9
Z	10s	1.00um				
GUN	12.07	264 P		44	45.70	0.5
	0.6s	27.00nm			5.7mb	
PKI	12.56	263 P		44	51.10	-0.6
	0.6s	25.00nm			5.6mb	
KKN	12.62	264 P		44	52.40	0.0
	0.6s	20.00nm			5.5mb	
GKN	13.13	265 P		44	57.20	-1.9
	0.7s	13.00nm			5.2mb	
WMQ	16.76	329 P		45	48.50	2.3
HYB	22.79	242 eP		46	56.50	2.7
CN2	24.86	49 Pc		47	13.50	-0.2
WB5	59.83	141 eP		51	57.20	-0.7
LPG	71.12	312 eP		53	10.70	-0.1
	0.8s	9.40nm			5.0mb	
SMF	72.50	314 eP		53	17.20	-1.4
AVF	72.74	314 eP		53	18.80	-1.2
	0.8s	4.00nm			4.6mb	

S.D. = 1.4 on 15 of 16 obs.

& JUN 08, 1989 02h 22m 33.51s
58.209 N 142.663 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

PNL	2.24	48 eP		23	05.99	-5.2
			S	23	31.77	
PCA	2.26	32 iP		23	06.66	-4.9
HON	2.33	56 iP		23	07.13	-5.3
			S	23	32.81	
BCPM	2.35	40 iP		23	07.51	-5.2
			S	23	33.34	
BALM	2.84	3 iP		23	14.64	-5.2
			S	23	45.33	
CTGM	2.85	13 eP		23	14.45	-5.5
GLB	3.29	350 eP		23	20.52	-5.7
			S	23	57.31	
VZW	3.47	327 eP		23	22.87	-5.9
KLU	3.68	335 eP		23	25.90	-5.8
HYT	3.71	43 P		23	29.00	-3.3
TOA	4.28	337 eP		23	32.31	-8.0
KNK	4.34	320 eP		23	35.48	-5.6
SLKM	4.50	304 eP		23	37.07	-6.2
CNPM	4.64	290 iP		23	40.12	-5.2
YKA	14.47	61 eP		26	03.40	3.4

15 obs. associated

JUN 08, 1989 02h 48m 28.10± 0.41s
53.748 N ±12.4km 162.535 E ± 7.8km
DEPTH = 33.0km (normal)
5.0mb (14 obs.)
OFF EAST COAST OF KAMCHATKA (219)

08d 02h

```
NIIJ    23 17 234 eP      53 35.20    2 8
KAKJ    23.46 231 eP      53 36 60    1 5
MAT     24.11 234 (P)     53 42.00    0 5
        1.8s     86.36nm          5.0mb
CHJJ    24.13 232 eP      53 41.40   -0.3
CN2     26.11 263 eP      53 59.00   -1.4
     Z  17s      0.40um              4.0MszX
INK     32.45  38 ePd     54 57.30    0 5
MBC     35.86  24 eP      55 27.00    0 9
        0.6s      6.00nm          4.7mb
NJ2     37.85 253 Pd      55 42.50   -0 7
YKA     41.68  44 eP      56 17.50    2.9
GTA     43.98 277 eP      56 33.60   -0 2
PNT     46.36  62 eP      56 53.00    0.5
GYA     49.06 259 P       57 13.80   -0.2
FFC     51.51  48 eP      57 32.50    0.3
        0.9s     13.00nm          4.9mb
LRM     52.32  62 eP      57 38.50   -0.3
CLC     56.38  74 eP      58 08.00   -0.4
SBB     57 06  75 eP      58 13.00   -0.2
MWC     57 26  76 eP      58 13.00   -1.7
SUF     58.94 338 iP      58 26.20    0.3
        0.5s     12.40nm          5.3mb
CHG     59.46 260 eP      58 29.90   -0.1
CHTO    59.46 260 eP      58 29.70   -0.3
GUN     60.27 277 P       58 35.10   -0.8
        0.4s     10.00nm          5.3mb
KKN     60.71 278 P       58 38.00   -0.8
        0.6s     23.00nm          5.5mb
PKI     60.80 278 P       58 38.60   -0.9
        0.8s     28.00nm          5.4mb
GKN     60.93 278 P       58 39.60   -0.6
        0.8s     21.00nm          5.3mb
NAO     63.57 345 P       58 56.60   -0.6
        0.7s      7.30nm          4.9mb
SCH     64.41  29 eP      59 02.00   -0.7
MEO     67.58  62 eP      59 22.60   -0.7
        1.0s      6.90nm          4.7mb
TUL     68.15  59 eP      59 26.00   -0.8
        1.3s      7.30nm          4.6mb
VVO     68.62  59 e(P)    59 29.30   -0.4
GAC     69.30  39 eP      59 33.00   -0.7
KSP     72.00 338 eP      59 54.00    4.1X
                  e       00 05.00
CLL     72.24 340 eP      59 56.00    4.6X
        0.9s     10.00nm          4.8mb
                  e       00 04.00
DMU     72.36 353 eP      59 57.00    4.9X
BRG     72.47 340 e(P)    59 57.60    4.9X
PRU     73.18 339 eP      00 02.90    6.0X
KHC     74.20 339 Pc      00 04.00    1.1
MLR     74.44 330 ePd     00 00.00   -4.4X
KBA     76.19 339 eP      00 16.00    1.5
        1.0s     17.60nm          5.0mb
                  i       00 28.70
G8A     76.27 274 P       00 19.00    3.9X
        0.6s      3.00nm          4.5mb
     S.D. = 1.1  on  32 of  39 obs.
-------------------------------------
*  JUN  08, 1989  04h 07m 44.34± 0.53s
   55.550 S ±12.3km   28.029 W ±10 7km
   DEPTH =  25.0km  (  4 depth phases)
   5.2mb (  5 obs )
 SOUTH SANDWICH ISLANDS REGION    (153)

SPA     34 63 180 e(P)    14 33 50    0 2
        1 0s     20 00nm          5 0mb
VAO     35 41 329 eP      14 40 40    0 2
PPD     37.70 323 eP      14 58.90   -0.5
                  epP     15 06 20   25km
SOB1    47.33 343 eP      16 17 50   -0 3
                  e       16 24 80   24km
ITR     47.39 346 eP      16 19.00    0.8
CCH     47.84 307 P       16 21.40   -0.7
PRY     48.85  78 eP      16 38.00    8.3X
CNCB    49.18 306 P       16 33.80    1.1
KSR     49.37  76 eP      16 29.50   -4.2X
LPB     49.47 306 P       16 35.90    1.0
        1.0s     40.00nm          5.4mb
ZOBO    49.71 306 Pd      16 35.20   -1.7
        1.0s     27.50nm          5.2mb
                  LR      31 44.00
SLR     50.23  78 eP      16 40.00   -0.3
BUL     54 88  74 iPc     17 14.80   -0 3
        1.0s     12.00nm          4.9mb
                  ipP     17 22.60   26km
BNG     70 96  50 iPc     19 02.00    0 5
        0.9s     27.00nm          5 4mb
                  i       19 10.00   26km
PNT   129.23 302 ePKP     26 51.00    0.0
YKA   135.48 319 ePKP     27 03.10    0.8
MBC   143.33 336 ePKP     27 13.00   -3.3X
INK   145.11 321 ePKPd    27 18.50   -0.9
TOA   148.45 308 ePKP     27 28.80    3.6X
        1.2s     70.30nm
PMR   149.66 306 ePKP     27 31.00    4.1X
FBA   149.83 313 ePKP     27 31.40    4.3X
KDC   150.11 297 ePKP     27 32.00    4.3X
IMA   152.42 314 ePKP     27 37.90    6.8X
SVW   152.58 303 ePKP     27 37.30    5.9X
TTA   153.08 307 ePKP     27 40.00    7.9X
     S.D. = 0.8  on  15 of  25 obs.
-------------------------------------
   JUN  08, 1989  04h 48m 59.46± 0.44s
   37.269 N ± 4.8km    4.544 W ± 4.7km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                             (377)
      mbLg 3.3 (MDD).

EPRU    0.63 241 iP       49 12.00   -0.1
                  eS      49 19.30
EHOR    0.78 315 iP       49 14.90    0.2
                  eS      49 26.00
LIJA    0.79 242 iP       49 15.00    0.2
AFC     0.80  91 eP       49 14.00   -1.1
                  eS      49 26.30
EBAN    1.08  34 iP       49 20.10    0.4
                  eS      49 35.50
EJIF    1.10 223 eP       49 19.20   -1.0
SRO     1.21 214 eP       49 23.00    1.0
GIBL    1.21 249 iP       49 21.50   -0.5
MOMI    1.34 225 eP       49 28.00    3.9X
OJEN    1.41 215 eP       49 25.00   -0.3
PLAT    1.50 221 eP       49 28.00    1.5
CNIL    1.51 234 eP       49 38.00   11.5X
EVAL    1 78 281 eP       49 29.00   -1.5
                  eS      49 51.20
ENIJ    1.88  98 eP       49 32.70    0.7
EVIA    2.11  49 iP       49 34.50   -0.9
                  eS      50 01.00
BMK     2.55 205 iP       49 38.00   -3.5X
TOL     2.64   8 ePb      49 44.00    1.2
                  ePg     49 50.00
                  eSn     50 10.00
                  eSg     50 26.00
EPLA    3.04 337 eP       49 49.00    0.5
GUD     3.38   5 eP       49 53.20   -0.3
        0.3s      0.03nm
     S.D. = 0.9  on  16 of  19 obs.
-------------------------------------
*  JUN  08, 1989  04h 55m 09.62± 1.43s
   35.438 N ±18.5km   27.504 E ± 7.5km
   DEPTH =  10.0km  (geophysicist)
 DODECANESE ISLANDS                (369)
      MD 3.7 (ATH).

KAP     0.29 293 iPgc     55 15.00   -0.7
NPS     1.56 264 ePb      55 38.00    0.6
YER     1.81  20 iPn      55 40.90   -0.2
KSL     1.82  67 ePb      55 40.80   -0.4
ELL     2.35  55 ePn      55 48.50   -0.4
VAM     2 70 270 ePb      55 58.00    4.2X
FHL     3 30  29 ePn      56 03 60    1.1
     S D  = 0 9  on   6 of   7 obs.
-------------------------------------
   JUN  08, 1989  06h 05m 27.28± 0.54s
   46 465 N ± 6.3km   10.641 E ± 4.2km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                    (545)
      MD 2.7 (ROM).

OSS     0.41 303 iPc      05 35.00   -0.7
OGA     0 48  33 iPgc     05 36.70   -0.4
VDL     0.81 272 ePc      05 41.90   -1.2
CTI     0.82 120 P        05 43.10   -0.1
                  eSg     05 52.70
SCE     0 93  52 iPgc     05 44.20   -1.0
MDI     0.94 224 P        05 44.80   -0.4
                  eSg     05 57.00
LLS     1 20 290 ePd      05 49 30   -0.5
TMA     1 28 254 ePd      05 50 50   -0 6
FVI     1 48  84 P        05 54.80    0 8
                  eSg     06 13.90
MMK     1 90 258 ePd      06 01 20    0 9
SLE     1.96 312 ePc      06 02.50    1 6
ORO     2.03 247 P        06 02.70    0.6
                  eSn     06 27.00
DIX     2.27 261 ePc      06 08.50    2.8X
FEL     2.28 309 ePnd     06 06.76    1.1
VOY     2.30 100 ePnc     06 10.00    4.1X
                  eSn     06 40.80
TRI     2.30 108 e(Pn)    06 10.90    5.1X
                  i(Sg)   06 39.90
     S.D. = 1.0  on  13 of  16 obs.
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&  JUN  08, 1989  06h 20m 40.79s
   57.082 N          149.403 W
   DEPTH =  10.0km  (geophysicist)
 GULF OF ALASKA                    ( 15)
      <AGS-P>. ML 4.0 (PMR).

KDC     1.80 293 iPc      21 07.10   -4.9
CNPM    2.64 339 iP       21 18.89   -5.2
BRLK    2.80 344 eP       21 21.11   -5.4
CDD     2.92 311 eP       21 22.98   -5.2
SEW     3.03 360 eP       21 24.16   -5.5
OPT     3.27 324 eP       21 27.89   -5.3
SLKM    3.46 353 eP       21 30.18   -5.7
ILIM    3.54 330 eP       21 30.90   -6.0
PDB     3.70 319 eP       21 32.18   -7.0
RED     3.78 334 eP       21 33.92   -6.5
RDT     3.83 337 eP       21 34.52   -6.7
VZW     4.25  19 eP       21 42.45   -4.6
SPU     4.33 343 eP       21 41.79   -6.4
KNK     4.37   6 eP       21 44.04   -4.7
CRP     4.43 343 eP       21 43.78   -5.9
PMR     4.53   2 eP       21 45.40   -5.5
PME     4.56   2 eP       21 46.69   -4.7
SKT     5.03 348 eP       21 51.93   -6.1
SVW     5.15 324 eP       21 52.60   -7.2
GLB     5.23  31 eP       21 55.88   -5.0
TOA     5.30  17 eP       21 57.60   -4.3
PCA     5.66  54 eP       22 02.65   -4.3
PNL     5.87  60 eP       22 05.62   -4.2
BCPM    5.87  57 eP       22 05.73   -4.2
HQN     6.04  62 eP       22 07.81   -4.5
PAX     6.23  17 eP       22 09.75   -5.3
SDN     6.43 259 eP       22 13.60   -4.2
TTA     6.73 333 eP       22 14.80   -7.4
SIT     7.68  84 eP       22 28.00   -7.2
FBA     7.88   5 eP       22 33.70   -4.5
IMA     9.24 349 eP       22 50.70   -6.4
INK    13.35  26 eP       23 48.00   -4.6
YKA    18.16  58 eP       24 54.40    0.1
PNT    19.34 101 eP       25 07.00   -1.8
FHC    23.12 124 eP       25 44.60   -3.0
SES    23.40  90 eP       25 50.00   -0.3
WDC    23.96 122 e(P)     25 46.00   -9.7
MIN    24.58 121 eP       26 01.80   -0.1
CMB    26.99 122 e(P)     26 22.50   -1.9
KVN    27.26 118 eP       26 26.00   -1.0
DAG    42.83  15 iPd      28 44.20    4.4
        0.2s     11.11nm          5.2mb X
        41 obs. associated
-------------------------------------
   JUN  08, 1989  06h 24m 09.61± 0.93s
    6.837 N ± 4.9km   37.878 E ± 4.6km
   DEPTH =  18.6 ±  6.5 km
   5.0mb ( 26 obs.)  4.8Msz (  1 obs.)
 ETHIOPIA                          (558)
      Minor injuries to a few people
      and damage at Sodo
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.,  9S, 20C
      Centroid Location:
      Origin Time        06:24:17.5 1.5
      Lat  7.35N 0.16 Lon  38.16E 0.13
      Dep  15.0 FIX Half-durotion  1.5
      Moment Tensor;    Scale 10**16 Nm
        Mrr=-2.42 0.34   Mtt=-0.45 0.60
        Mff= 2.88 0.44   Mrt= 0.00 0.00
        Mrf= 0.00 0.00   Mtf= 1.35 0.39
       Principal Axes:
        T  Val=  3.35  Plg= 0   Azm=110
        N       -0.93       0        20
        P       -2.42      90       180
      Best Double Couple:Mo=2.9*10**16
       NP1:Strike=200 Dip=45 Slip= -90
       NP2:         20     45       -90
```

AAE	2.35	22	iPn	24	48.30	0.1
NAI	8.13	188	iPd	26	08.00	-1.8
			S	28	29.00	
LWI	12.78	225	iPc	27	15.10	1.7
			iS	29	38.10	
BNG	19.38	264	iPd	28	37.10	-0.5
	0.8s	17.00nm			4.4mb	
			iS	30	17.20	
			Lg	32	56.60	
MBH	22.99	353	iPd	29	17.40	3.1X
PRNI	23.54	354	iPd	29	22.70	3.0X
NOH	23.89	354	iP	29	25.26	2.2
SLY	29.47	13	ePc	30	16.00	1.4
			e	41	06.50	
			e	42	14.00	
MSL	29.80	9	ePd	30	19.50	1.9
			e	41	21.00	
TAB	32.02	13	eP	30	36.00	-1.4
MAIO	35.37	31	eP	31	08.00	1.7
VAY	36.95	341	eP	31	19.60	0.2
OHR	37.37	339	eP	31	04.50	-18.6X
SKO	37.91	340	eP	31	28.00	0.5
MLR	39.88	347	ePd	31	43.00	-1.0
VRI	40.07	348	ePc	31	47.00	1.5
KIC	42.33	272	P	32	05.40	0.9
TIC	42.59	272	P	32	07.40	0.8
LIC	42.62	272	P	32	07.80	1.0
PTJ	43.29	338	eP	32	12.70	0.8
VOY	44.20	336	eP	32	20.50	1.2
ZST	44.84	340	iP	32	25.10	0.7
KBA	45.27	336	eP	32	28.00	-0.1
LMR	45.61	328	eP	32	30.00	-0.5
	0.8s	10.70nm			4.8mb	
KRA	45.63	344	ePd	32	30.80	0.3
FRF	45.70	328	eP	32	30.70	-0.5
LRG	45.77	328	eP	32	31.00	-0.8
	0.8s	10.70nm			4.8mb	
OGA	46.06	335	iPc	32	36.30	2.0
	1.2s	24.00nm			5.0mb	
OSS	46.30	334	ePc	32	37.50	1.3
TMA	46.44	332	ePc	32	38.00	0.8
MMK	46.82	332	ePc	32	40.90	0.5
KHC	46.87	338	iPd	32	40.60	0.1
	1.1s	15.00nm			4.9mb	
LLS	46.95	333	ePc	32	41.70	0.4
LPG	47.01	330	eP	32	40.40	-1.5
SAX	47.09	334	ePc	32	43.00	0.5
DIX	47.11	331	ePc	32	42.90	0.3
PRU	47.25	340	P	32	43.50	0.1
EMS	47.33	331	ePc	32	44.20	-0.1
KSP	47.40	342	eP	32	44.80	0.2
SLE	47.86	333	ePc	32	48.10	-0.2
BBS	48.07	333	P	32	49.72	-0.3
FEL	48.15	333	ePd	32	50.30	-0.4
BRG	48.20	340	iP	32	50.60	-0.2
	1.0s	16.00nm			5.0mb	
GRF	48.22	337	iPd	32	50.50	-0.6
	1.5s	37.00nm			5.2mb	
LOMF	48.31	332	P	32	51.92	0.1
MOF	48.53	333	P	32	53.46	-0.1
BSF	48.67	332	P	32	54.53	-0.1
ECH	48.79	333	P	32	55.29	-0.1
MOX	48.84	338	eP	32	56.00	0.2
	2.0s	49.00nm			5.2mb	
CDF	48.88	333	P	32	55.90	-0.3
CLL	48.89	339	ePd	32	55.00	-1.1
	1.3s	15.00nm			4.9mb	
GKN	48.95	59	P	32	57.00	-0.2
HAU	49.00	332	eP	32	56.10	-1.0
GWF	49.15	334	P	32	58.33	0.1
DMN	49.24	59	P	32	59.40	-0.1
	1.0s	87.00nm			5.7mb	
SMF	49.26	329	eP	32	58.50	-0.6
VITF	49.33	332	P	32	59.38	-0.1
LPO	49.39	326	eP	33	00.10	0.0
LBF	49.42	330	eP	32	59.70	-0.7
	1.1s	17.00nm			5.0mb	
KKN	49.44	59	P	33	01.00	0.0
PKI	49.49	59	P	33	01.40	-0.1
	1.0s	43.00nm			5.4mb	
RJF	49.60	327	eP	33	01.60	-0.1
	1.0s	20.00nm			5.1mb	
AVF	49.61	329	eP	33	00.90	-0.8
	1.1s	20.50nm			5.1mb	
MAF	49.63	328	eP	33	02.10	0.1
LOR	49.68	330	eP	33	01.30	-1.0
	1.2s	29.70nm			5.2mb	

BGF	49.71	329	eP	33	02.30	-0.2
SSF	49.71	330	eP	33	01.60	-0.9
LFF	49.80	326	eP	33	03.30	0.1
TCF	49.86	328	eP	33	04.00	0.3
	1.2s	26.70nm			5.1mb	
GUN	49.98	59	P	33	05.20	-0.1
LSF	50.20	328	eP	33	06.20	-0.1
DOU	51.31	333	P	33	14.50	-0.2
MFF	51.32	327	eP	33	14.40	-0.4
SNF	51.75	333	P	33	18.10	0.2
LDF	52.56	329	eP	33	23.10	-1.0
	1.0s	29.60nm			5.2mb	
LPF	52.68	328	eP	33	23.90	-1.1
	1.0s	28.00nm			5.1mb	
GRR	52.81	328	eP	33	25.00	-1.0
	1.0s	21.60nm			5.0mb	
FLN	52.85	329	eP	33	25.30	-1.0
	1.1s	39.00nm			5.2mb	
NUR	54.48	352	eP	33	51.00	13.0X
SUF	56.43	354	eP	33	51.00	-1.2
	0.7s	13.60nm			5.1mb	
WMQ	56.95	41	Pd	33	56.50	0.2
NAO	57.56	345	P	33	58.50	-1.7
	0.9s	18.70nm			5.1mb	
EKA	58.33	334	Pc	34	05.50	-0.2
	0.7s	5.80nm			4.8mb	
CHG	60.46	72	eP	34	20.00	-1.0
CHTO	60.46	72	eP	34	20.00	-1.0
	1.2s	6.60nm			4.6mb	
SOD	60.93	355	iP	34	22.70	-0.7
KEV	63.24	356	eP	34	38.00	-0.8
GTA	64.11	49	eP	34	45.20	0.0
GYA	68.01	64	P	35	09.40	-1.0
HHC	73.22	50	Pc	35	43.40	1.7
DAG	76.07	349	iPd	35	57.00	-0.2
	0.7s	6.85nm			4.8mb	
MAW	76.37	170	eP	36	00.00	1.0
CN2	83.57	47	eP	36	38.40	0.3
	Z 20s	0.40um			4.8Msz	
			eS	47	10.00	
ALE	84.60	353	eP	36	45.00	2.4
WRA	98.35	109	Pc	37	48.70	0.6
	1.0s	3.20nm			4.9mb	
	S.D. = 0.9 on 91 of 95 obs.					

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* JUN 08, 1989 08h 38m 39.27± 1.23s
13.798 N ±16.9km 91.736 W ±13.4km
DEPTH = 33.0km (normal)
4.3mb (9 obs.) 3.4Msz (1 obs.)
NEAR COAST OF GUATEMALA (71)

TPX	1.21	335	iP	39	00.00	0.0
			iS	39	14.00	
SCX	3.05	344	iP	39	30.50	4.2X
			iS	40	05.00	
OXX	5.81	305	iP	40	05.00	-0.7
			iS	41	12.00	
IISM	7.48	314	(P)	40	33.00	4.2X
UYO	20.43	354	eP	43	15.70	-0.8
VVO	21.75	351	e(P)	43	31.30	1.4
MEO	21.79	345	eP	43	28.20	-2.1
	1.0s	30.20nm			4.7mb	
FKO	21.97	348	e(P)	43	31.00	-1.1
TUL	22.32	351	e(P)	43	37.00	1.5
	1.2s	10.00nm			4.1mb	
	Z 21s	0.15um			3.4Msz	
LNO	22.32	351	e(P)	43	48.40	13.0X
RLO	22.47	353	eP	43	38.00	1.0
JSC	22.49	23	P	43	32.50	-4.8X
ACO	23.75	345	eP	43	50.60	1.1
	0.8s	11.10nm			4.4mb	
ALQ	24.90	330	eP	44	02.00	1.1
	0.8s	4.29nm			4.1mb	
			e	44	09.00	
BLA	25.41	21	P	44	00.20	-5.3X
	0.8s	6.79nm			4.3mb	
GLD	28.45	338	P	44	33.00	-0.4
GLA	28.45	316	P	44	33.60	0.2
GOL	28.46	338	P	44	33.00	-0.6
	0.9s	4.55nm			4.2mb	
PV10	28.89	331	P	44	37.10	-0.4
PV09	29.03	331	P	44	39.50	0.6
PLM	30.02	315	P	44	47.50	-0.1
RSSD	32.00	343	P	45	04.00	-1.0
TNP	33.11	322	P	45	15.00	0.3
	0.9s	2.93nm			4.2mb	
PVN	34.26	322	P	45	25.00	0.4

CMB	35.05	319	eP	45	31.30	0.0
LRM	36.40	335	eP	45	43.30	0.5
PNT	42.17	333	eP	46	31.00	0.6
YKA	51.28	347	eP	47	43.20	1.3
SOB1	55.39	112	e(P)	48	16.00	3.0X
INK	60.70	343	eP	48	49.00	-0.5
FBA	63.53	337	P	49	07.50	-0.9
	0.8s	5.17nm			4.7mb	
MBC	64.14	353	eP	49	11.00	-1.3
			pP	49	48.00	155kmX
EKA	77.98	36	P	50	35.00	-0.7
	0.7s	5.90nm			4.7mb	
CHG	145.93	342	ePKP	58	18.10	0.8
	S.D. = 1.0 on 28 of 34 obs.					

& JUN 08, 1989 09h 09m 28.20s
61.779 N 149.690 W
DEPTH = 42.6km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.16	215	iP	09	35.75	0.3
PMR	0.33	125	iPd	09	36.40	-0.5
PME	0.35	115	iP	09	36.70	-0.5
GHO	0.36	91	iP	09	37.11	-0.4
			S	09	45.04	
SUA	0.59	238	eP	09	40.01	-0.4
			S	09	50.47	
KNK	0.70	121	iP	09	41.06	-0.7
			S	09	52.01	
SKT	0.89	284	iP	09	43.91	-0.6
			S	09	56.70	
CGLM	1.21	248	iP	09	48.82	-0.2
			S	10	04.78	
SPU	1.28	243	iP	09	49.73	-0.3
CRP	1.29	248	eP	09	50.18	0.0
SLKM	1.30	192	eP	09	49.41	-0.9
VZW	1.67	114	eP	09	54.24	-1.3
SEW	1.69	176	eP	09	55.22	-0.4
TOA	1.69	77	iPc	09	55.90	0.0
RDT	1.79	229	eP	09	56.30	-0.9
			S	10	19.67	
KLU	1.82	97	eP	09	56.55	-1.2
KTH	1.87	343	iP	09	58.18	-0.2
			S	10	22.42	
MCK	1.99	10	eP	10	00.14	0.1
RED	2.03	229	eP	09	59.74	-0.9
PAX	2.30	57	eP	10	04.66	0.1
ILIM	2.34	225	eP	10	02.89	-2.1
CNPM	2.39	199	eP	10	05.93	0.2
DDM	2.68	39	eP	10	10.40	0.5
SVW	2.93	259	eP	10	11.70	-1.7
CCB	3.00	16	eP	10	12.79	-1.6
TTA	3.17	294	eP	10	14.90	-1.9
FBA	3.25	14	eP	10	16.50	-1.4
IMA	4.65	340	eP	10	36.40	-1.5
	28 obs. associated					

JUN 08, 1989 09h 25m 57.75± 0.57s
30.179 N ± 5.6km 50.991 E ±10.1km
DEPTH = 33.0km (normal)
IRAN (348)

SHI	1.44	111	eP	26	22.00	0.2
			eS	26	44.00	
BRF	4.11	185	(Pn)	27	00.20	0.5
BJA	4.19	185	(Pn)	27	00.70	-0.1
IR4	5.05	359	eP	27	13.60	0.3
IR1	5.23	357	eP	27	15.70	-0.1
KER	5.30	323	eP	27	26.00	9.1X
IR2	5.47	359	eP	27	20.00	0.8
IR7	5.52	357	eP	27	19.40	-0.5
BHD	6.42	300	ePd	28	16.00	43.6X
			eS	29	39.00	
SLY	7.11	321	ePd	28	08.00	25.9X
			eS	29	02.00	
			e	30	12.00	
MAIO	9.38	47	eP	28	14.00	0.3
			eS	30	44.00	
MLR	24.86	315	ePd	31	20.00	1.3
KHC	34.01	314	eP	32	39.90	-0.7
INK	81.76	2	eP	38	12.00	-2.0
	S.D. = 1.0 on 11 of 14 obs.					

% JUN 08, 1989 09h 41m 35.90± 0.67s
59.876 N ± 5.2km 5.736 E ± 6.5km
DEPTH = 10.0km (geophysicist)

08d 09h

SOUTHERN NORWAY (535)
MD 1.8 (BER)

ODD1	0.45	85	iPd	41	45.73	0.6
			eS	41	50.79	
BER	0.55	339	eP	41	44.73	-2.2X
			eS	41	54.38	
ASK	0.67	336	eP	41	49.57	0.4
			eS	41	57.68	
KMY	0.71	201	iP+	41	49.78	-0.1
			eS	41	58.70	
BLS1	0.74	131	iP	41	50.47	0.0
			iS	41	59.66	
SUE	1.28	338	eP	41	59.90	0.3
			eS	42	15.03	
HYA	1.31	10	iP	42	00.21	0.1
			iS	42	17.77	
MOL	2.84	17	iP	42	21.08	-1.0
			eS	42	52.68	
NRA0	3.01	71	eP	42	24.20	-0.3
			iS	42	59.70	
			iSg	43	07.90	

S.D. = 0.6 on 8 of 9 obs.

JUN 08, 1989 09h 51m 56.84± 0.16s
19.531 S ± 5.2km 173.736 W ± 4.0km
DEPTH = 22.8km (11 depth phases)
5.5mb (37 obs.) 5.4Msz (28 obs.)

TONGA ISLANDS (173)
Mo=1.0*10**18 Nm (PPT). Ms 5.4 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 36C
Centroid Location:
Origin Time 09:52: 4.3 0.3
Lat 19.73S 0.03 Lon 173.57W 0.03
Dep 17.7 1.4 Half-duration 3.0
Moment Tensor; Scale 10**17 Nm
Mrr= 4.73 0.10 Mtt= 0.40 0.14
Mff=-5.13 0.14 Mrt= 0.21 0.28
Mrf= 3.31 0.46 Mtf=-1.09 0.10
Principal Axes:
T Val= 5.74 Plg=73 Azm=266
N 0.58 4 9
P -6.32 17 100
Best Double Couple:Mo=6.0*10**17
NP1:Strike=196 Dip=29 Slip= 98
NP2: 6 62 86

AFI	5.90	19	eP	53	20.10	-5.1X
			e(S)	54	19.00	
SVA	7.53	280	eP	53	53.90	5.9X
VUN	7.54	280	ePc	53	53.20	4.9X
RAR	13.20	100	P	54	58.00	-7.6X
			S	57	12.00	
PVC	17.11	273	iP	56	03.50	7.3X
DZM	18.70	259	iPc	56	17.30	1.2
			i	00	22.60	
KRP	20.57	205	P	56	37.50	0.8
PGZ	22.69	200	eP	56	58.00	0.0
	0.7s		65.00nm		5.2mb	
AFR	22.80	89	eP	56	58.00	-1.2
	1.3s		145.00nm		5.3mb	
MNG	22.96	201	eP	57	00.10	-0 5
PAE	22.97	89	eP	57	00 00	-0 8
	1 3s		220 00nm		5 5mb	
PPT	22.98	89	eP	57	00.00	-1 0
	1.3s		260.00nm		5.6mb	
Z	18s		16.00um		5.5Msz	
PPN	23.13	89	eP	57	01.00	-1.4
	1.3s		140.00nm		5.3mb	
TVO	23.26	90	eP	57	03.00	-0.8
	1.3s		330.00nm		5.7mb	
CAW	23.54	202	eP	57	06.90	0.6
BLW	23.63	201	eP	57	09.70	2.5
WEL	23.80	202	P	57	09.00	0.3
			eS	01	26.00	
TCW	23.91	203	P	57	09.70	-0.1
PMO	25.07	84	eP	57	26.00	4.8X
	1.6s		215.00nm		5.5mb	
VAH	25.26	84	eP	57	27.00	3.9X
	1 6s		150.00nm		5.4mb	
TPT	25.33	84	eP	57	28.00	4.3X
	1 6s		255.00nm		5 6mb	
RUV	25 51	84	eP	57	29.00	3.7X
	1 6s		125.00nm		5.3mb	

HNR	27.35	288	eP	57	44.00	1.6
			eS	02	34.00	
MSZ	29.35	207	P	58	04.00	3.8X
BRS	31.63	249	iPc	58	20.60	0.0
			iS	03	54.00	
COO	32.90	244	eP	58	30.00	-1.7
CNB	36.09	236	iPd	58	58.80	-0.3
RKT	36.21	103	iP	58	58.20	-1.9
	1.2s		90.00nm		5.5mb	
CAN	36.38	237	eP	59	00.50	-1.0
CTA	37.58	262	iPc+	59	09.70	-2.0
	0.9s		85.71nm		5.6mb	
Z	18s		7.77um		5.5Msz	
			i	59	21.00	
			iPP	00	48.00	
			iS	05	07.00	
			iSS	07	52.00	
CMS	38.19	244	eP	59	15.00	-1.6
PMG	39.10	279	eP	59	23.00	-1.4
	1.0s		80.00nm		5.4mb	
TOO	39.71	234	eP	59	28.50	-0.8
TAU	40.15	226	eP	59	33.00	0.2
STK	41.82	244	eP	59	46.00	-0.6
			e	59	50.00	
HON	43.42	22	P	59	56.00	-3.7X
Z	22s		2.22um		5.0Msz	
OIS	43.73	260	eP	00	00.00	-2.4
ADE	44.57	240	eP	00	09.30	0.2
	0.8s		28.36nm		5.2mb	
JAY	47.61	285	ePc	00	32.00	-1.4
ASPA	48.64	255	iPc	00	38.80	-2.5
	1.2s		66.00nm		5.5mb	
Z	22s		5.34um		5.5MszX	
			iS	06	12.80	
			LR	19	40.80	
WB5	48.69	260	eP	00	38.70	-3.0X
WRA	48.71	260	Pc	00	38.20	-3.6X
	0.8s		21.70nm		5.2mb	
GUA	52.32	306	eP	01	08.90	-0.4
	1.0s		192.00nm		6.0mb	
GUMO	52.38	306	eP	01	08.20	-1.6
	0.8s		93.70nm		5.8mb	
PJG	52.38	306	eP	01	08.80	-1.0
MTN	53.18	268	ePd	01	13.20	-2.6
FORR	53.31	246	eP	01	14.20	-2.4
	0.4s		17.00nm		5.4mb	
KNA	54.71	264	eP	01	25.00	-2.1
WARB	54.94	251	eP	01	17.10	-11.6X
SBA	59.13	185	Pd	02	01.20	3.6X
COOL	59.28	245	eP	01	58.00	-1.4
KLB	62.08	244	iPc	02	17.10	-1.4
NWAO	62.38	242	eP	02	19.00	-1.4
Z	20s		2.30um		5.3Msz	
N	20s		2.90um			
E	20s		3.00um			
RKG	62.44	241	eP	02	20.00	-0.8
BAL	63.10	245	eP	02	24.00	-1.2
MUN	63.35	243	iPd	02	26.30	-0.5
MRWA	63.91	246	eP	02	29.00	-1.6
DAV	65.32	288	eP	02	37.80	-2.0
PCI	67.52	277	ePd	02	54.00	0.1
	1.0s		10.00nm		4.9mb	
SPA	70.59	180	e(P)	03	13.20	1.0
	0.9s		27 73nm		5.4mb	
Z	18s		2 20um		5.5Msz	
CHJJ	71 10	321	P	03	14 60	-0 9
MAT	71 90	321	iPc	03	19 00	-1 3
	1.0s		75 00nm		5.7mb	
Z	20s		1.77um		5.3Msz	
			eS	12	48.00	
NIIJ	71.91	322	P	03	19.90	-0.4
SYP	74.16	44	eP	03	40.00	6.3X
MRRJ	74.41	327	eP	03	32.30	-2.4
BCH	74.50	43	P	03	35.00	-0.6
BRK	74.83	40	eP	03	36.70	-0.6
			e	03	44.40	
BKS	74.84	40	e(P)	03	36.00	-1.4
	1.1s		51.00nm		5.5mb	
Z	20s		1.70um		5.3Msz	
N	20s		1.40um			
E	20s		1.20um			
			e	03	58.80	
			eS	13	16.80	
			e	13	52 80	
			e	18	04.40	
			eLQ	22	45.60	
			eLR	25	56 00	

			e	29	32.00	
MHC	74.86	41	eP	03	38.50	0 8
Z	20s		1 80um		5.4Msz	
N	20s		1 20um			
E	20s		1.50um			
			e	03	45.20	
			eS	13	13.00	
			i	13	26.00	
			e	13	50.00	
			eSPc	14	09.00	
			iPS	14	15.00	
			e	15	05.00	
			eLQ	22	50.00	
			eLR	25	55.00	
MWC	75.25	45	eP	03	40.00	-0.1
BAR	75.29	47	eP	03	43.00	2.8
PLM	75.55	46	eP	03	41.00	-0.8
			e	03	49.00	
RVR	75.57	46	eP	03	41.00	-0.7
			e	03	48.00	
SBB	75.68	45	eP	03	39.00	-3.4X
			e	03	49.00	
FHC	75.74	37	eP	03	41.80	-0.7
ISA	75.83	44	eP	03	42.00	-1.2
			e	03	50.00	
FRI	75.85	42	eP	03	42.00	-1.2
			e	03	50.00	
CMB	76.07	41	ePc	03	43.60	-0.9
			e	03	51.50	
ORV	76.36	39	eP	03	45.00	-1.0
			e	03	52.80	
WDC	76.42	38	ePc	03	45.80	-0.5
			e	03	53.50	
CLC	76.50	44	eP	03	46.00	-1.0
GSC	76.72	45	eP	03	49.00	0.8
GLA	76.78	48	eP	03	48.00	-0.6
MIN	76.81	38	eP	03	47.50	-1.2
			e	03	55.40	
ANP	77.06	303	e(P)	03	50.00	-0.3
TNP	78.08	42	P	03	55.00	-0.9
	1.2s		47.04nm		5.4mb	
			pP	04	03.00	26km
KVN	78.11	41	P	03	55.00	-1.0
			pP	04	03.00	26km
KDC	79.00	11	eP	03	59.70	-0.4
OZH	79.29	301	Pc	04	02.00	-0.4
N	14s		0.40um			
			S	14	02.00	
BMW	79.96	33	P	04	05.60	-0.1
SSE	80.20	308	P	04	07.80	0.6
Z	20s		0.90um		5.1Msz	
E	20s		1.90um			
			S	14	08.00	
			sS	14	30.00	
LON	80.87	33	P	04	10.00	-0.5
GMW	80.90	32	P	04	11.60	1.0
MSU	81.59	44	P	04	15.40	0.7
SVW	81.67	9	eP	04	13.30	-1.1
MDJ	82.10	323	eP	04	17.80	0.9
Z	22s		4.10um		5.7Msz	
			epP	04	24.00	20km
NJ2	82.41	308	Pc	04	19.00	0.3
Z	20s		1.50um		5.4Msz	
GZH	82.79	297	Pd	04	22.00	1.1
PMR	83.21	12	eP	04	21.30	-0 9
Z	20s		1 50um		5 4Msz	
TTA	83.37	8	eP	04	23 70	0 6
DPW	83.47	34	P	04	23.30	-0.7
			pP	04	31.00	24km
PV09	83.60	46	P	04	25.50	0 3
			pP	04	33.00	24km
PV10	83.60	46	P	04	25.00	-0.2
			pP	04	32.50	24km
PNT	83.66	32	ePc	04	24.00	-0.8
	0.8s		25.00nm		5.5mb	
			pP	04	32.00	25km
ALQ	83.70	50	iPc	04	26.00	0.4
	2.2s		388.46nm		6.2mb	
Z	18s		1.29um		5.3Msz	
			e	04	33.00	
			e	05	27.50	
MAW	83.80	199	eP	04	27.00	1.7
KGM	84.02	274	eP	04	28.00	0.5
CN2	84 04	321	Pc	04	27.00	0.1
	7.0s		1 10nm		3.2mb X	
Z	20s		2 00um		5.5Msz	
E	19s		1 40um			

		sP	04 39.00			
SNY	84.11	318 iPc	04 28.00	0.8		
Z	22s	1.40um		5.3Msz		
N	22s	1.70um				
E	22s	1.00um				
QIZ	84.16	292 P	04 29.00	1.0		
E	16s	0.80um				
		eS	14 57.00			
TOA	84.26	13 eP	04 27.30	-0.4		
WHN	85.15	305 eP	04 34.00	1.3		
Z	20s	0.63um		5.0Msz		
N	18s	0.83um				
LRM	85.45	38 eP	04 34.00	-0.2		
TIA	85.63	311 eP	04 35.70	0.7		
FBA	86.49	11 ePc	04 37.90	-0.7		
IMA	86.68	8 P	04 39.50	-0.2		
GOL	86.74	46 P	04 41.00	0.2		
Z	18s	1.39um		5.4Msz		
		pP	04 48.50	24km		
GLD	86.87	46 P	04 42.00	0.7		
Z	18s	1.84um		5.5Msz		
		pP	04 49.20	23km		
IPM	87.04	276 ePc	04 43.00	0.6		
	0.9s	117.30nm		6.1mb		
BJI	88.07	314 ePc+	04 46.50	-0.2		
Z	18s	1.80um		5.5Msz		
E	18s	0.97um				
		eS	15 14.00			
SNG	88.29	278 eP	04 50.40	2.0		
	1.2s	228.13nm		6.4mb		
		eS	15 26.20			
PSI	88.38	273 ePc	04 49.00	0.1		
	0.6s	22.30nm		5.7mb		
SES	88.76	35 eP	04 49.00	-0.9		
EDM	89.16	32 ePc	04 50.80	-0.9		
MEO	89.41	53 eP	04 52.60	-0.8		
	1.8s	185.40nm		6.1mb		
TIY	89.66	310 Pd	04 56.00	1.5		
N	20s	1.60um				
E	20s	2.60um				
		sP	05 09.00			
		S	15 30.00			
GYA	89.69	298 P	04 55.60	0.6		
	4.0s	1.00nm		3.4mb X		
Z	22s	0.70um		5.0Msz		
E	20s	1.20um				
		sP	05 08.00			
		PP	08 30.00			
		S	15 40.00			
RSSD	89.71	42 P	04 54.70	-0.1		
ACO	89.79	51 e(P)	05 02.50	7.4X		
	2.3s	225.80nm		6.0mb		
FKO	90.51	53 eP	05 05.00	6.6X		
	1.8s	270.60nm		6.2mb		
XAN	90.78	306 P	05 01.00	1.3		
NNT	90.93	283 eP	05 03.20	2.5		
BRW	91.36	5 eP	05 01.20	-0.2		
SIO	91.51	53 e(P)	05 03.30	0.3		
HHC	91.59	313 P	05 04.20	0.8		
Z	30s	2.10um		5.4MszX		
VVO	91.78	53 e(P)	05 04.50	0.3		
TUL	91.96	53 eP	05 06.60	1.6		
	1.0s	5.00nm		4.9mb		
Z	21s	2.30um		5.6Msz		
		e	05 12 00			
		eS	16 10 00			
		LR	34 00 00			
LNO	91.96	53 e(P)	05 04 70	-0 2		
UYO	92.31	55 eP	05 12.30	5.6X		
INK	92.33	14 eP	05 05.00	-1 0		
NNA	92.42	104 eP	05 15.80	8.1X		
KMI	92.52	296 P+	05 10.00	1.9		
Z	23s	3.50um		5.7MszX		
E	20s	2.00um				
		pP	05 21.50	37kmX		
		sP	05 30.50			
		SKS	15 43.00			
BTO	92.56	312 eP	05 08.90	1.1		
RLO	92.63	53 e(P)	05 08.10	0.0		
BDT	93.14	287 eP	05 13.50	2.7		
CD2	93.68	301 eP	05 13.60	0.5		
CHG	93.71	289 eP	05 06.90	-6.6X		
	1.1s	23.73nm		5.5mb		
CHTO	93.71	289 iP	05 14.70	1.3		
	1.1s	26.21nm		5.6mb		
		pP	05 19.60	15km		
YKA	93.99	24 eP	05 15.40	1.6		
YKC	94.03	24 eP	05 12 50	-1.5		
LZH	95.40	306 eP	05 22 50	1.4		
Z	42s	1.60um		5.2MszX		
		PP	08 42.00			
		eS	16 00.50			
FFC	95.71	34 eP	05 20.00	-1.8		
FVM	96.71	52 P	05 27.80	1.0		
CNCB	98.61	111 P	05 46.00	9.5X		
LPB	98.62	111 P	05 46.50	10.1X		
Z	24s	3.49um		5.8MszX		
		LR	38 18.00			
ZOBO	98.70	111 P	05 45.70	8.8X		
	1.1s	6.09nm		5.1mb		
		S	16 20.00			
		LR	38 18.00			
RSON	98.84	39 P	05 36.00	0.0		
	2.0s	66.04nm		5.8mb		
Z	18s	3.48um		5.9Msz		
		pP	05 43.00	22km		
GTA	99.49	308 eP	05 40.20	0.7		
Z	26s	5.00um		5.9MszX		
E	20s	1.50um				
		SKS	16 18.00			
RSCP	99.66	56 P	05 41.00	0.8		
Z	18s	3.48um		5.9Msz		
M8C	101.02	11 ePdiff	05 46.00	0.6		
RSNY	109.89	49 Pdiff	06 26.00	0.3		
Z	18s	2.58um		5.8Msz		
SOB1	125.47	117 e(PKP)	11 01.00	2.3X		
KEV	128.21	351 ePKP	11 09.00	6.7X		
SOD	130.44	350 ePKP	11 08.00	1.4		
MAIO	130.69	301 ePKP	11 09.00	0.8		
		e	13 22.00			
AKU	131.16	13 ePKP	11 18.60	10.6X		
	1.5s	55.56nm				
SUF	134.72	347 ePKP	11 15.00	0.2		
BUL	134.90	210 iPKPc	11 18.10	1.4		
NUR	137.02	347 ePKP	11 15.00	-4.3X		
IR2	137.68	302 ePKP	11 22.00	0.5		
IR4	137.75	301 ePKP	11 22.80	1.1		
IR1	137.89	301 ePKP	11 23.00	1.0		
IR7	137.91	302 ePKP	11 23.50	1.5		
TAB	140.70	307 ePKP	11 22.00	-4.9X		
NAI	143.59	239 iPKPd	11 31.90	-0.9		
DMU	144.23	13 ePKP	11 30.90	-1.4		
DLE	144.88	13 ePKP	11 36.80	3.4X		
BRN	146.73	352 ePKPc	11 38.50	2.0X		
KVT	146.76	317 ePKP	11 40.80	3.7X		
WIT	146.78	360 ePKP	11 40.00	3.4X		
		e	12 11.00			
D8N	147.48	1 ePKP+	11 39.00	1.3		
		i	11 55.00			
		e	13 16.00			
		e(PP)	15 04.00			
WTS	147.60	359 ePKP	11 40.00	2.1X		
	1.0s	61.00nm				
		i	11 49.90			
KRA	147.65	343 ePKP	11 41.80	3.7X		
	1.0s	50.00nm				
		e	11 49.90			
KSP	147.76	348 ePKP	11 39.20	0.9		
	1.0s	80.00nm				
		ic	11 41.70			
CLL	147.85	352 ePKP	11 39.00	0.6		
	1.5s	125.00nm				
Z	19s	0.50um		5.3Msz		
		i	11 41.90			
CLI	148.01	332 ePKP	11 39.00	0.2		
PPE	148.11	331 ePKP	11 44.00	5.0X		
SPC	148.35	342 ePKP	11 40.90	1.4		
BMR	148.62	337 ePKPd	11 41.00	1.3		
CFR	148.64	330 ePKP	11 44.00	4.2X		
MOX	148.66	353 ePKP+	11 44.00	4.2X		
	2.0s	167.00nm				
Z	21s	1.20um		5.7Msz		
N	19s	1.00um				
UCC	148.76	2 PKP	11 40.00	0.2		
		e	11 46.00			
		e	14 10.00			
VRI	148.78	332 ePKPd	11 43.50	3.4X		
VRI	148.78	332 ePKPd	11 31.50	-8.6X		
ENN	148.83	0 ePKP	11 44.00	4.0X		
	1.2s	64.00nm				
PRU	148 90	350 PKP	11 44 50	4 4X		
	2.0s	136 70nm				
Z	21s	1 80um		5 8Msz		
N	21s	1 00um				
		e	12 18.00			
HOF	148.96	353 ePKP	11 40.00	-0.3		
MEM	148.99	0 PKPd	11 45.30	5.1X		
LWI	149.05	228 iPKPc	11 47.00	5.3X		
SNF	149.05	2 PKPd	11 45.70	5.4X		
TNS	149.33	357 ePKPc	11 45.20	4.3X		
CJR1	149.36	336 ePKP	11 47.00	6.1X		
MLR	149.42	332 ePKPd	11 42.00	0.7		
MLR	149.42	332 ePKPd	11 27.50	-13.8X		
DOU	149.48	2 PKP	11 41.00	0.0		
		e	11 45.80			
BBTK	149.54	317 iPKPc	11 48.00	6.4X		
PSZ	149.59	342 ePKP	11 46.00	4.6X		
GRF	149.65	354 iPKPc	11 46.70	5.4X		
Z	20s	0.90um		5.6Msz		
ABH	149.70	358 ePKP	11 41.95	0.6		
KHC	149.89	350 PKPc	11 42.10	0.4		
		i	11 47.30			
RUP	149.89	359 ePKP	11 42.71	1.0		
TOD	149.93	357 ePKP	11 42.25	0.5		
WLF	149.94	0 PKPc	11 46.90	5.3X		
CMP	149.99	333 ePKPc	11 57.00	15.0X		
ZST	150.09	345 e(PKP)	11 44.00	2.0X		
		LR	12 18.50			
SRO	150.14	344 ePKP	11 48.60	6.6X		
BUC	150.18	331 ePKP	11 43.00	0.8		
VKA	150.20	346 ePKP	11 43.00	0.8		
	2.5s	429.00nm				
		e	11 48.00			
		e	13 07.00			
FLN	150.34	9 iPKPc	11 47.50	5.2X		
	1.0s	84.00nm				
LDF	150.55	9 iPKPc	11 48.10	5.5X		
	1.0s	60.00nm				
GWF	150.60	358 PKP	11 43.70	0.9		
GRR	150.64	10 iPKPc	11 48.60	5.8X		
	0.9s	54.05nm				
SOP	150.69	346 ePKP	11 47.00	4.1X		
GPA	150.80	320 ePKP	11 47.00	3.7X		
KMR	150.84	349 ePKP	11 40.00	-3.1X		
		i	11 49.80			
LPF	150.96	10 iPKPc	11 49.20	5.9X		
	1.1s	95.25nm				
BZS	151.05	337 ePKP	11 43.00	-0.5		
TIM	151.09	338 iPKPc	11 43.70	0.2		
FUR	151.15	353 ePKP	11 50.70	7.1X		
CDF	151.18	359 PKP	11 44.88	1.1		
BHG	151.37	351 ePKP	11 51.40	7.5X		
	1.6s	75.00nm				
VITF	151.38	0 PKP	11 45.37	1.5		
HAU	151.60	360 iPKPc	11 50.80	6.5X		
	0.8s	24.20nm				
ALT	151.67	318 ePKP	11 50.50	5.7X		
FEL	151.69	358 ePKP	11 45.64	1.1		
MOF	151.74	359 PKP	11 45.90	1.3		
BSF	151.77	359 PKP	11 45.68	1.0		
KBA	151.92	350 e(PKP)	11 50.00	5.0X		
	1.0s	36.60nm				
		i	12 10.00			
BBS	152.12	358 PKP	11 45.37	0.3		
BEO	152.15	338 ePKP	11 51.00	5.9X		
LOMF	152.25	359 PKP	11 47.25	1.9X		
LOR	152.26	4 iPKPc	11 52.30	7.0X		
	0.8s	20.15nm				
SSF	152.45	4 iPKPc	11 52 90	7 4X		
	0.9s	42.60nm				
KHL	152.47	318 iPKP	11 52 50	6 5X		
FVI	152.48	350 PKP	11 49.70	4 2X		
MFF	152.49	10 ePKP	11 52.40	6.8X		
	1.2s	38.70nm				
RBL	152.50	349 PKP	11 52.80	7.1X		
PTJ	152.51	345 ePKP	11 45.70	-0 1		
LBF	152.55	3 iPKPc	11 53.00	7.3X		
	1.0s	28.00nm				
LJU	152.69	347 ePKP	11 47.00	1.1		
AVF	152.71	4 iPKPc	11 52.90	7.0X		
	0.9s	15.55nm				
VOY	152.83	348 ePKP	11 53.00	6.8X		
SMF	152.88	4 ePKP	11 53.40	7.2X		
BGF	152.90	5 iPKPc	11 53.50	7.3X		
	0.8s	26.85nm				
CEY	153.01	347 e(PKP)	11 54.00	7.6X		
VBY	153.05	346 ePKP	11 47.00	0.6		
LSF	153.07	7 iPKPc	11 53.50	7 1X		
	0 8s	24.20nm				
TCF	153.11	6 iPKPc	11 53.90	7 4X		
	1.0s	25.00nm				

08d 10h

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ELL    153.12 315 ePKP   11 55.00    8.1X
TRI    153.17 348 ePKP   11 52.80    6.3X
CTI    153.18 352 PKP    11 51.00    4.3X
MAF    153.21   6 ePKP   11 54.30    7.7X
         0.9s    21.30nm
EZN    153.41 324 ePKP   11 54.00    6.9X
RJF    154.00   8 ePKP   11 56.10    8.3X
SKO    154.19 333 ePKP   11 48.50    0.4
         9.0s   470.00nm
                   i     11 57.50
                   i     12 09.50
VAY    154.22 331 iPKP   11 48.40    0.3
LFF    154.25   9 ePKP   11 56.30    8.2X
LPO    154.57   8 ePKP   11 57.10    8.6X
OHR    155.17 333 iPKP   11 49.80    0.3
TOL    157.86  21 ePKP   11 55.00    2.0X
                  ePKKP  12 35.00
                  ePP    15 58.00
                  eSS    35 50.00
EBR    158.21  12 ePKP   11 54.00    0.7
     S.D. = 1.1  on 178 of 271 obs.
-------------------------------------
?  JUN  08, 1989  10h 07m 26.41± 2.67s
    9.869 S ±38.6km  124.305 E ±12.6km
   DEPTH =  79.8 ± 20.2 km
   4.4mb (  2 obs.)
 TIMOR                              (289)

KUG      0.76 247 eP     07 43.00    0.1
KNA      7.29 144 eP     09 12.10   -0.2
        0.3s    27.00nm          5.4mb X
                  eS     10 35.00
MTN      7.32 114 iPd    09 12.20   -0.5
        0.3s   150.00nm          6.1mb X
                  eS     10 34.00
WB5     13.91 137 iPd    10 41.50    0.2
                  eS     13 09.70
WRA     13.93 137 Pc     10 48.70    7.1X
        0.3s     5.30nm          4.4mb
WARB    16.38 173 eP     11 05.00   -7.8X
                  eS     14 05.00
ASPA    16.50 147 iPd    11 14.60    0.2
                  eS     14 14.80
QIS     18.17 128 iPc    11 35.60    0.6
        0.4s    11.00nm          4.4mb
                  eS     14 52.00
FORR    21.17 171 eP     12 06.60   -0.4
     S.D. = 0.5  on   7 of   9 obs.
-------------------------------------
   JUN  08, 1989  10h 54m 32.98± 0.66s
   37.751 N ± 6.0km   26.749 E ± 7.3km
   DEPTH =  12.8 ±  4.4 km
 DODECANESE ISLANDS                 (369)
     ML 3.6 (ATH).

IZM      0.76  32 iPg    54 47.50   -0.1
                  iSg    54 57.50
YER      1.37 116 iPn     54 58.40    0.6
PRK      1.54 346 ePb     55 01.90    1.8
                  eSb    55 24.40
EZN      2.10 351 ePn     55 07.50   -0.7
KAP      2.22 171 ePn     55 09.40   -0.7
KHL      2.26  75 iPn     55 10.00   -0.7
DST      2.36  38 ePn     55 10.80   -1.3
ATH      2.41 276 ePn     55 12.60   -0.1
NPS      2.65 201 ePn     55 15.50   -0.6
ELL      2.71 111 iPn     55 20.00    2.8
EDC      2.73  18 iPn     55 17.30    0.0
BNT      2.76  19 iPn     55 18.50    0.8
KSL      2.79 125 ePb     55 22.10    3.9X
ALT      2.94  63 ePn     55 19.50   -0.9
BCK      3.06  94 ePn     55 21.00   -1.0
VAM      3.11 222 ePg     55 32.00    9.3X
CTT      3.63  20 ePn     55 30.00   -0.1
GBZT     3.69  34 ePn     55 43.00   12.2X
VAY      4.81 319 ePn     55 57.70   10.9X
BBTK     5.14  64 iPc     56 15.50   23.9X
                  i      56 50.50
     S.D. = 1.3  on  15 of  20 obs.
-------------------------------------
?  JUN  08, 1989  12h 25m 57.37± 1.21s
    1.293 S ±16.2km  101.422 E ±21.9km
   DEPTH = 167 1 ± 12.4 km
   4 5mb (  4 obs )
 SOUTHERN SUMATERA                  (274)

PPI      1.32 309 iPc    26 26.60   -0 2
                  e(S)   26 57.60
PSI      4.68 328 iPd    27 09.50    1.9
IPM      5.85 356 ePd    27 24.80    1.7
        0.8s    24.50nm          4.5mb
SNG      8.45 355 eP     27 55.20   -2.5
BSI      9.11 318 ePc    28 04.50   -1.9
                  e(S)   29 27.00
CHTO    20.13 353 eP     30 20.70    0.4
        0.5s     0.51nm          3.2mb X
PKI     32.57 333 P      32 14.80   -0.4
GUN     32.65 334 P      32 16.40    0.4
        0.4s    16.00nm          5.1mb
KKN     32.82 333 P      32 17.60    0.4
        0.4s     4.00nm          4.5mb
GKN     33.29 332 P      32 21.70    0.4
WB5     37.14 122 eP     32 52.80   -1.0
WRA     37.15 122 Pc     32 53.80    0.0
        0.4s     1.60nm          4.1mb
FORR    38.77 142 eP     33 08.00    0.8
     S.D. = 1.4  on  13 of  13 obs.
-------------------------------------
*  JUN  08, 1989  13h 29m 16.72± 0.67s
   18.057 N ±10.2km  145.559 E ±14.3km
   DEPTH =  33.0km  (normal)
   4.9mb (  4 obs.)
 MARIANA ISLANDS                    (216)

WB5     39.27 197 eP     36 44.10   -0.1
WRA     39.34 197 Pc     36 44.90    0.1
        0.7s     1.90nm          4.0mb
GUN     55.36 292 P      38 50.70    0.2
PKI     55.79 291 P      38 53.50   -0.1
        0.4s     5.00nm          4.9mb
KKN     55.89 292 P      38 54.00   -0.2
DMN     56.06 291 P      38 55.60    0.1
        0.4s    10.00nm          5.2mb
GKN     56.45 292 P      38 58.20    0.1
        0.4s     6.00nm          5.0mb
INK     70.01  23 eP     40 27.00    0.2
MBC     73.80  14 eP     40 49.00   -0.2
     S.D. = 0.2  on   9 of   9 obs.
-------------------------------------
   JUN  08, 1989  13h 46m 28.07± 0.34s
   23.496 N ± 4.9km  121.493 E ± 5.7km
   DEPTH =  27.4km  (  3 depth phases)
   5.0mb ( 22 obs.)  4.0Msz (  1 obs.)
 TAIWAN                             (244)

TWF1     0.23 231 iPc    46 26.20   -8.2X
                  eS     46 28.10
TWD      0.59   9 ePc    46 37.30   -2.5
                  eS     46 46.80
TWK      0.95 256 eP      46 39.70   -5.9X
TWQ      0.98 322 iPc     46 42.40   -3.6X
                  eS     46 56.40
TWC      1.15  16 eP      46 47.10   -1.3
ANP      1.68   1 eP      46 57.00    0.9
QZH      3.01 299 Pnd     47 15.60    0.5
      Z  12s     15.10um
      N  10s     15.60um
                  Sn     47 49.50
HKC      6.85 261 P       48 07.40   -2.0
                  iS     49 18 40
BAG      7.10 187 eP      48 13.00    0.0
MCO      7 45 261 eP      48 11 00   -6.7X
SSE      7 57 358 Pc      48 19 00   -0.4
        1 0s     51 00nm          5 6mb
                  S      49 49 00
                  Lg     50 36.40
NJ2      8.84 345 Pd      48 34.60   -2.4
      Z  12s     5.80um
                  S      50 10.00
WHN      9.47 319 Pc      48 43.50   -2.3
      Z  12s     5.78um
      N  10s    10.30um
      E  10s     9.84um
                  S      50 24.20
QIZ     11.73 250 P       49 18.20    1.5
      N  13s     1.60um
      E  15s     2.20um
                  SS     51 43.50
GYA     13.77 285 P       49 42.40   -1.5
      Z  10s     6 40um
                  S      52 07 00
XAN     15.21 316 P       50 03 20    0.5
      N  10s     5.10um
      E  11s     3.30um
DL2     15.36   0 eP      50 07.00    2.4
      Z  18s     1.00um
                  SS     53 12.00
TIY     16.16 333 Pc      50 18.00    3.1X
      N  14s     8.90um
                  sS     53 26.00
                  SS     53 39.00
BJI     17.10 346 ePd     50 29.50    2.9X
      Z  14s     2.10um
      N  10s     1.13um
                  eS     53 24.00
                  Lg     55 21.00
KMI     17.17 279 Pc      50 31.50    3.5X
      Z  15s     7.10um
      N  10s     3.60um
                  pP     50 39.00
                  S      53 54.00
                  sS     54 04.00
SNY     18.36   5 Pd      50 41.00   -1.4
      Z  14s     2.90um
      N  18s     1.10um
      E  18s     4.10um
HHC     19.21 337 Pd      50 54.40    1.6
      Z  16s     2.30um
                  S      54 30.00
MAT     19.42  44 (P)     50 58.00    2.8
        1.0s    14.00nm          4.2mb
                  (S)    54 32.00
BTO     19.60 333 eP      50 57.60    0.3
LZH     19.76 313 eP      51 00.50    1.4
        1.5s   132.00nm          5.0mb
      Z  10s    10.30um          4.4Msz
      E  10s     5.80um
                  pP     51 09.00   33km
                  eS     54 44.00
CN2     20.51   8 Pc      51 07.00    0.3
      Z  15s     3.20um          4.8MszX
      N  14s     1.40um
      E  14s     2.20um
                  eS     54 42.00
CHG     21.53 262 eP      51 18.20    0.9
        1.0s    64.25nm          5.0mb
                  e      58 10.70
CHTO    21.53 262 iP      51 18.30    1.0
        1.1s    71.26nm          5.0mb
BDT     21.97 258 eP      51 24.60    3.0X
MDJ     22.09  16 eP      51 24.00    1.4
      Z  15s     2.20um          4.7MszX
      N  14s     1.80um
NNT     23.32 246 eP      51 36.30    1.3
                  e      55 35.80
GUMO    24.22 110 eP      51 45.40    1.7
        1.4s   453.85nm          5.8mb
      Z  18s     0.51um          4.0Msz
PJG     24.22 110 eP      51 46.00    2.3
GTA     24.27 316 Pc      51 44.80    0.6
      Z  12s     9.10um          5.5MszX
      E  10s     2.90um
                  S      56 04.00
                  sS     56 13.00
GUA     24.28 110 eP      51 46.60    2.3
        1.0s   104.00nm          5.3mb
IPM     27.27 230 ePd     52 12.50    0.2
GUN     32.32 285 Pd      52 57.90    0.3
        1.2s   130.00nm          5.7mb
PKI     32 74 285 Pd      53 01 20    0 0
        1 2s    75 00nm          5 5mb
KKN     32.85 285 Pd      53 02 00    0 0
DMN     33.01 285 Pd      53 03.40   -0.1
        1.2s   105.00nm          5.6mb
GKN     33 42 286 P       53 06 70   -0.2
        1.2s   104.00nm          5.6mb
WMQ     34.34 314 P       53 15.00    0.4
      Z  14s     2.30um          5.1MszX
      N  12s     1.40um
      E  13s     1.90um
                  eS     58 32.00
MTN     37.33 164 iPc     53 37.20   -2.8
NDI     39.93 287 ePc     54 02.00    0.3
HYB     40.57 270 eP      54 08.00    0.8
KSH     41.50 304 eP      54 17.00    2.3
      E  10s     0.90um
GBA     42 76 265 Pd      54 25 20    0.1
        1 1s    16.10nm          4.7mb
WB5     44 90 163 eP      54 39 70   -2 6
WRA     44 96 163 Pd      54 40.10   -2 7
        0 7s     2.00nm          4.1mb
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OIS     47.21 157 eP     54 59.00  -1.6
        0 5s      6.00nm          4.9mb
                  e      57 05.00
ASPA    48.41 165 eP     55 09.80  -0.1
CTA     49.59 149 eP     55 21.00   1.9
WARB    49.64 174 eP     55 08.00 -11.3X
MAIO    54.42 299 iPd    55 56.70   1.4
BRS     58.92 147 iPd    56 35.30   8.0X
IR2     61.41 299 eP     56 45.90   1.4
IR4     61.48 299 eP     56 46.80   1.8
IR1     61.62 299 eP     56 47.80   1.8
IR7     61.64 299 eP     56 48.10   2.0
KEV     69.72 338 eP     57 37.00  -0.1
SOD     70.40 336 iP     57 41.40   0.1
SUF     71.79 331 iP     57 48.70  -1.1
        0.4s      2.50nm          4.6mb
NUR     73.12 329 eP     57 58.00   0.4
      Z  17s      0.60um          4.9MszX
                  LR     32 50.00
INK     73.76  22 eP     58 00.50  -0.7
VRI     76.69 314 ePd    58 18.50   0.1
                  e      12 05.00
MLR     77.33 314 ePc    58 21.50  -0.6
NAO     79.23 332 P      58 30.70  -1.3
        0.9s      7.00nm          4.7mb
KRA     79.36 320 eP     58 30.30  -2.7
                  e      58 36.90  21km
CLO     79.55 315 eP     58 34.50   0.4
KSP     81.14 322 eP     58 42.30  -0.1
VAY     81.17 311 eP     58 42.00  -0.8
SKO     81.68 312 eP     58 45.00  -0.4
PRU     82.53 321 eP     58 50.00   0.3
CLL     82.77 323 iPd    58 50.60  -0.3
KHC     83.49 321 iP     58 54.90   0.2
YKA     83.49  23 eP     59 07.60  13.2X
MOX     83.86 323 eP     58 56.00  -0.5
      Z  16s      0.80um          5.2MszX
                  e      59 05.00  28km
DOU     87.95 325 Pc     59 16.60   0.0
LPG     89.34 320 eP     59 23.10  -0.7
        0.7s      5.50nm          5.0mb
LOR     B9.98 323 eP     59 25.10  -1.3
LBF     90.08 323 eP     59 25.80  -1.1
        0.8s      6.70nm          4.9mb
SSF     90.30 323 eP     59 26.90  -1.0
SMF     90.36 322 eP     59 27.50  -0.6
        0.8s      9.90nm          5.1mb
AVF     90.54 323 eP     59 28.10  -0.9
        0.7s      5.50nm          5.0mb
MAF     91.32 323 eP     59 32.00  -0.6
        0.7s      5.50nm          5.0mb
TCF     91.48 323 eP     59 32.70  -0.6
        0.8s      4.50nm          4.9mb
RJF     92.46 322 eP     59 37.80   0.0
ZOBO   168.45  53 PKP    06 33.00  -1.6
      S.D. = 1.4  on  77 of  88 obs.
-------------------------------------
?  JUN  08, 1989  14h 14m 22.91± 1.90s
   42.037 N ± 8.2km   19.311 E ±17.5km
   DEPTH =  10.0km  (geophysicist)
 YUGOSLAVIA                        (383)
      ML 2.1 (TTG).

ULC     0.09 212 iPgc    14 25.50   0.0
                 iSg     14 28.10
TTG     0 39 355 ePg     14 31 00   0.0
                 eSg     14 37 00
8DV     0.44 305 ePg     14 32.00   0.2
                 eSg     14 38.60
HCY     0.73 305 ePg     14 37.00  -0.2
                 eSg     14 49.00
      S.D. = 0.3  on   4 of   4 obs.
-------------------------------------
%  JUN  08, 1989  15h 31m 14.04± 1.94s
   41.084 N ±19.6km   29.207 E ± 9.8km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

ISK     0.11 261 ePg     31 17.20   0.3
                 iSg     31 19.70
GBZT    0.35 148 ePg     31 20.80  -0.4
                 iSg     31 28.00
CTT     0.59 276 iPg     31 25.30  -0.7
GPA     1.15 133 ePn     31 35.80   0 1
BNT     1.22 234 iPn     31 38.00   1 3
EDC     1.26 235 ePn     31 36.00  -1 4
MFT     1.49 259 iPn     31 41.50   0.6
      S.D. = 1.1  on   7 of   7 obs
-------------------------------------
%  JUN  08, 1989  15h 41m 13.05± 1.66s
   45.565 N ± 7.7km   26.281 E ± 7.1km
   DEPTH = 147.5 ± 19.8 km
 ROMANIA                           (358)

MLR     0.25 253 iPc     41 33.50   0.6
VRI     0.44  45 iPc     41 33.50  -0.6
ISR     0.47 156 iPc     41 34.00  -0.3
BRD     0.54  95 iPc     41 35.10   0.5
CMP     0.92 252 iPc     41 36.00  -1.3
BAC     1.09  23 iPc     41 34.00  -4.6X
PPE     1.14  55 iPd     41 40.00   0.9
BUC     1.16 187 iPc     41 40.00   0.7
BIR     1.17  53 iPd     41 40.00   0.6
CLI     1.21  35 iPc     41 39.50  -0.3
BUC1    1.23 188 iPd     41 39.50  -0.5
PTT     1.37   3 iPd     41 42.00   0.6
CFR     1.37 105 iPc     41 39.50  -1.9
TLB     1.58 128 iPc     41 42.00  -1.6
DRA     1.69 239 iPc     41 45.00   0.2
CVD     1.75 134 iPc     41 48.00   2.5
IAS     1.85  28 iPc     41 46.00  -0.7
CJR1    2.25 303 iPd     41 51.70   0.3
GZR     2.47 267 iPc     41 55.00   0.8
BZS     3.28 273 iPc     42 03.50  -0.9
      S.D. = 1.1  on  19 of  20 obs.
-------------------------------------
%  JUN  08, 1989  16h 35m 50.11± 0.77s
   61.779 N ± 8.3km    7.367 E ± 9.7km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                   (535)
      ML 2.1 (BER).

MOL     0.80   6 iP+    36 04.87  -0.7
                 eS     36 14.70
HYA     0.84 223 iP      36 05.80  -0.4
                 iS     36 17.70
SUE     1.45 241 iP      36 16.50   0.2
                 iS     36 34.00
RGS     1.90  48 eP      36 24.00   1.2
                 eS     36 46.00
ODD1    1.91 191 eP      36 23.70   0.7
                 eS     36 45.50
NRA0    2.27 116 iPnc    36 27.30  -1.0
                 iPg    36 29.20
                 iS     36 34.30
                 iSg    36 58.10
      S.D. = 1.1  on   6 of   6 obs.
-------------------------------------
   JUN  08, 1989  17h 17m 41.78± 1.20s
   41.299 N ±10.2km   22.795 E ± 6.1km
   DEPTH =  10.0km  (geophysicist)
 YUGOSLAVIA                        (383)
      ML 1.9 (SKO).

KNT     0.16 150 iPg     17 45.40   0.0
VAY     0.17 278 iPg     17 45.70   0.0
                 iSg     17 48.50
GRG     0.45 221 ePg     17 50.90  -0.1
                 eSg     17 57.10
SRS     0.63 107 ePg     17 54.00  -0.4
                 eSg     18 02.80
THE     0 68 169 ePg     17 54.80  -0.4
                 eSg     18 03 70
LIT     1 22 191 ePb     18 04 30  -0 2
                 eSb     18 22.60
PAIG    1.53 154 ePb     18 10.20   1.1
                 eSb     18 29.90
      S.D. = 0.6  on   7 of   7 obs.
-------------------------------------
   JUN  08, 1989  18h 18m 43.37± 0.43s
   39.165 N ± 5.4km   99.477 W ± 4.4km
   DEPTH =   5.0km  (geophysicist)
 KANSAS                            (480)
      mbLg 4.0 (NEIS), 3.8 (TUL). Felt
      (V) at Domor, Polco and Zurich;
      (III) at Bogue, Ploinville and
      Wokeeney; (II) at Hays, Ogalloh
      and Struttgort. Also felt in the
      Stockton area.

SNK     1.47  98 P       19 11.50   0.9
LCNE    2.18  11 P       19 21 50   0 7
ACO     2.48 174 Pn      19 26.50   1 4
                 Pg      19 28 40

RRO     3.81 166 (Pn)    19 47.80   3.8X
OCO     3.97 156 ePn     19 55.60   9.4X
SIO     4.24 143 ePn     19 49.90  -0.2
TUL     4.37 137 ePn     19 51.70  -0.3
        0.7s     10.30nm
MEO     4.43 170 ePn     19 53.20   0.4
GLD     4.48 279 eP      19 53.80   0.1
GOL     4.59 279 iPn     19 54.70  -0.7
                 iPg     20 05.50
                 iSn     20 48.50
                 eLg     21 02.50
RLO     4.63 129 ePn     19 55.20  -0.4
VVO     4.85 141 ePn     19 58.20  -0.5
RSSD    6.01 327 eP      20 15.40   0.1
UYO     6.41 140 ePn     20 18.90  -1.9X
ALQ     6.99 235 ePn     20 29.00  -0.2
                 eP*     20 38.30
                 ePg     20 52.00
                 eLg     22 20.50
FVM     7.19  97 eP      20 30.70  -1.0
OLY     7.35 117 eP      20 32.20  -1.8X
PV10    7.51 267 eP      20 40.00   3.5X
PV09    7.57 268 eP      20 37.20  -0.1
ELC     8.28 100 eP      20 44.50  -2.5X
MSU     9.93 270 eP      21 07.40  -2.6X
RSDN   12.38  17 eP      21 36.50  -6.6X
FFC    15.66 355 eP      22 19.00  -7.2X
      S.D. = 0.7  on  14 of  23 obs.
-------------------------------------
?  JUN  08, 1989  18h 33m 25.11± 0.88s
   31.814 N ±13.8km   96.607 E ± 8.8km
   DEPTH =  10.0km  (geophysicist)
 TIBET                             (306)

LZH     7.37  53 eP      35 15.50   0.0
        1.5s     66.00nm          5.6mb X
GUN    10.09 250 P       35 55.00   1.5
PKI    10.61 249 P       35 59.80  -0.8
        0.4s     10.00nm          5.6mb X
KKN    10.62 251 P       36 00.80   0.2
        0.6s     16.00nm          5.6mb X
DMN    10.84 250 P       36 03.00  -0.6
        0.6s      6.00nm          5.1mb X
GKN    11.06 253 P       36 06.20  -0.3
        0.4s      9.00nm          5.5mb X
CHTO   13.12 170 e(P)    36 34.10   0.0
      S.D. = 0.9  on   7 of   7 obs.
-------------------------------------
*  JUN  08, 1989  18h 47m 09.59± 1.57s
   12.487 S ±11.1km   77.992 W ±14.1km
   DEPTH =  10.0km  (geophysicist)
 NEAR COAST OF PERU                (115)
      Felt (II) at Lima.

PT10    1.08  68 eP      47 29.00  -0.9
NNA     1.23  66 iPc     47 31.50  -1.0
                 eS      47 48.00
PT08    1.50  70 iP      47 36.70  -0.3
                 iS      47 56.90
PT02    1.58 107 iP      47 37.60  -0.2
                 iS      47 59.20
PT06    2.10 130 iP      47 44.40  -0.8
PT03    2.61 125 iP      47 51.80  -0.8
                 iS      48 29.10
HUA     2.65  81 ePc     47 55 90   2 4
                 eS      48 31 70
ARE     7 43 123 e(P)    49 46.00  44 9X
ZOBO   10.27 113 eP      49 46.00   5.3X
      Z  22s      0.18um
                 LR      54 08.00
LPB    10.39 114 (P)     49 42.00  -0.2
                 LR      53 40.00
CNCB   10.60 115 eP      49 46.00   0.8
BAO    29.26 100 e(P)    53 25.00  10.6X
SOB1   36.56  89 e(P)    54 19.00   1.2
YKA    80.00 344 eP      59 19.90  -0.4
      S.D. = 1.2  on  11 of  14 obs.
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&  JUN  08, 1989  19h 57m 58.02s
   62.953 N          150.941 W
   DEPTH = 109.8km
 CENTRAL ALASKA                    (  1)
      <AGS-P>.

KTH     0 60   1 iP      58 15 78  -0 1
SKT     1 01 196 iP      58 18.87  -0.8
                 S       58 34 65
```

08d 19h

MCK	1.20	48	iP	58 21.44	-0.2
PWA	1.40	159	eP	58 23.60	-0.3
SUA	1.50	176	eP	58 24.75	-0.5
			S	58 46.16	
GHO	1.51	141	iP	58 24.90	-0.5
PME	1.60	145	iP	58 25.53	-0.9
			S	58 47.15	
PMR	1.61	147	iPc	58 25.40	-1.1
CGLM	1.73	197	eP	58 27.16	-0.9
CRP	1.79	199	eP	58 27.87	-1.0
NEA	1.83	26	iP	58 28.75	-0.5
SPU	1.85	197	eP	58 28.47	-1.2
KNK	1.94	142	eP	58 29.41	-1.3
WRH	1.98	39	iP	58 30.69	-0.6
CCB	2.20	38	eP	58 33.42	-0.6
RDS	2.25	32	iP	58 34.17	-0.6
HDA	2.30	49	eP	58 34.57	-0.8
TTA	2.32	272	iPc	58 35.00	-0.7
TOA	2.37	109	iPc	58 35.80	-0.6
FBA	2.40	34	iPd	58 36.00	-0.7
SLKM	2.48	172	eP	58 36.68	-1.1
SVW	2.88	232	iPd	58 42.20	-1.0
IMA	3.34	340	eP	58 48.80	-0.7
KDC	5.28	189	iPc	59 12.50	-3.3

24 obs. associated

& JUN 08, 1989 21h 42m 53.00s
35.260 N 118.590 W
DEPTH = 8.0km
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.0 (PAS).

ISA	0.41	13	iPd	43 00.70	-0.7
ABL	0.66	232	iP	43 05.20	-1.2
SBB	0.85	132	iPd	43 08.60	-1.0
CLC	0.98	55	iPc	43 10.80	-1.1
MWC	1.12	157	iPd	43 13.60	-0.8
BCH	1.23	267	ePc	43 14.50	-1.6
PKEM	1.47	303	eP	43 19.30	-0.5
PEC	1.80	139	eP	43 23.50	-1.1
PLM	2.38	143	eP	43 32.30	-0.8
TNP	3.02	21	eP	43 48.00	5.8
KVN	3.80	6	eP	44 01.50	8.1

11 obs. associated

? JUN 08, 1989 21h 43m 41.68± 1.99s
37.902 N ±34.3km 47.821 E ±12.8km
DEPTH = 10.0km (geophysicist)
NORTHWESTERN IRAN (345)

TAB	1.19	278	iPc	44 04.20	0.2
SLY	2.96	220	iPnc	44 38.00	8.5X
			ePg	44 49.00	
			iSn	45 26.00	
			eSg	45 43.50	
IR7	3.13	134	iP-	44 32.30	0.1
IR2	3.33	131	iP-	44 35.00	0.0
IR1	3.39	136	iP-	44 35.80	0.0
TEH	3.58	126	eP	44 38.00	-0.6
KER	3.59	189	eP	44 47.00	8.3X
IR4	3.63	136	iP-	44 39.80	0.5
MSL	4.03	249	ePd	44 44.50	-0.2
			eS	45 54.00	
			e	46 24.50	

S D = 0 4 on 7 of 9 obs

JUN 08 1989 22h 02m 11 83± 1 32s
18.510 N ± 8.8km 106 159 W ± 7 6km
DEPTH = 72 4 ± 11.7 km
3.9mb (3 obs.)
OFF COAST OF JALISCO, MEXICO (54)

MZX	4.67	357	eP	03 15.00	-6.5X
			iS	04 06.00	
MRX	4.84	75	eP	03 25.00	1.1
			iS	04 35.00	
AGX	4.94	47	eP	03 24.00	-1.1
III	6.35	90	(P)	03 45.00	-0.1
OXX	9.10	98	iP	04 24.00	1.0
ALQ	16.37	359	eP	05 57.90	-0.8
	0.9s		1.26nm		3.1mb
GLA	16.44	333	eP	05 58.00	-1 4
BAR	16.98	328	eP	06 07.00	0.8
RVR	18 39	329	eP	06 24.00	0 6
UYO	18 77	32	eP	06 27 10	-0.8
VVO	19 14	27	eP	06 32.10	0 0
ACO	19.14	17	e(P)	06 32.30	0 1
	1.2s		12.30nm		4 0mb
SBB	19.17	330	eP	06 33.00	0.5
SIO	19.26	25	eP	06 33.00	-0.3
TUL	19.61	26	eP	06 37.30	0.3
	1.2s		15.90nm		4.2mb
Z	19s		0.35um		3.7Msz
			e	06 44.90	
			i	06 51.90	
			eS	10 24.00	
			LR	12 00.00	
LNO	19.61	26	eP	06 36.70	-0.2
CLC	19.99	332	eP	06 40.00	-1.1
RLO	20.15	27	eP	06 42.80	0.1
FRI	21.93	330	e(P)	07 00.90	0.3
KVN	22.95	336	eP	07 11.70	0.9
CMB	23.08	330	e(P)	07 10.80	-1.2
ORV	24.82	331	e(P)	07 28.70	0.0
LRM	27.73	351	eP	07 56.60	0.9
SES	32.05	354	eP	08 34.00	0.3
EDM	35.09	352	eP	09 03.50	3.6X
YKA	44.33	354	eP	10 19.80	3.6X
ZOBO	50.95	130	P	11 15.80	6.8X
Z	24s		0.23um		4.1MszX
			LR	28 56.00	
LPB	51.14	131	(P)	11 09.00	-1.2
CNCB	51.41	131	eP	11 12.00	-0.4
INK	52.68	348	eP	11 21.00	0.4
MBC	58.16	356	eP	12 01.00	1.0

S.D. = 0.8 on 27 of 31 obs.

JUN 09, 1989 00h 24m 38.96± 0.37s
36.423 N ± 8.5km 70.197 E ± 5.1km
DEPTH = 223.4km (2 depth phases)
4.5mb (8 obs.)
HINDU KUSH REGION (718)

KSH	5.48	55	eP	26 02.50	1.7
			S	27 05.00	
MAIO	8.64	272	iPc	26 39.50	-1.9
			eS	28 12.00	
NDI	9.72	141	iPc	26 55.60	0.3
	0.5s		43.66nm		4.9mb
			iS	28 38.00	
GKN	14.82	120	P	27 59.20	-0.1
WMQ	15.27	56	Pd	28 05.00	0.2
			S	30 50.50	
DMN	15.38	121	P	28 06.60	0.2
KKN	15.39	120	P	28 06.20	-0.2
PKI	15.62	120	P	28 09.40	0.1
IR2	15.63	273	eP	28 10.90	1.7
IR4	15.70	271	eP	28 11.50	1.5
GUN	15.75	118	P	28 10.60	-0.2
IR1	15.84	272	eP	28 13.00	1.3
IR7	15.86	273	eP	28 13.60	1.6
TAB	19.07	282	e(P)	28 52.00	5.3X
HYB	20.33	156	ePd	29 02.50	3.2X
	1.0s		50.00nm		5.0mb
GTA	23.51	74	P	29 31 60	1.4
CHG	30.76	117	eP	30 36.00	0.5
CHTO	30.76	117	eP	30 36.00	0.5
	0.8s		3.66nm		4.1mb
			pP	31 20.80	221km
GYA	32.50	97	iPc	30 51.00	0.3
TIY	33.52	75	eP	30 58.50	-0.8
VRI	33.71	300	eP	31 05 00	4 3X
MLP	34 25	299	eP	31 03 00	-2 5
SUF	37 65	326	iP	31 32.30	-1 3
NAO	44 22	323	P	32 26.60	-0 6
	0.4s		0.80nm		3.5mb
MBC	67.44	2	eP	35 12.00	0.2
INK	74.08	9	eP	35 51.50	0.0
			pP	36 45.00	226km
FBA	74.72	16	eP	35 55.00	-0.3
	0.7s		3.70nm		4.2mb
YKA	81.35	2	eP	36 31.80	0.6
WB5	82.48	121	eP	36 36.30	-1.5
WRA	82.50	121	Pc	36 36.30	-1.6
	0.7s		3.90nm		4.2mb
ASPA	84.74	124	iPc	36 48.20	-0.9
	0.7s		9.00nm		4.7mb
FFC	88.97	355	eP	37 09.00	-0.1
	1.0s		12.00nm		4.8mb

S.D. = 1 1 on 29 of 32 obs

? JUN 09, 1989 00h 48m 48 99± 2.30s
30 967 S ±17 5km 68 175 W ±42 7km
DEPTH = 153 3 ± 21 8 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.72	217	iPd	49 12.00	-0.3
			eS	49 24.00	
FCH	2.96	217	iPd	49 48.90	12.1X
			iS	50 11.00	
ROCH	3.13	230	iPd	49 39.00	0.1
			iS	50 13.00	
PCH	3.30	216	eP	49 42.00	1.0
			iS	50 15.50	
TACH	3.56	220	iPd	49 44.10	-0.1
			iS	50 22.00	
CHCH	3.62	215	iPd	49 46.00	0.9
			iS	50 18.10	
LCCH	3.81	228	iPd	49 47.50	0.0
			iS	50 20.00	
LNV	4.04	222	eP	49 48.90	-1.7
			iS	50 22.00	
ANT	7.50	344	e(P)	50 37.30	0.5
CNCB	14.09	1	eP	52 11.00	7.4X
LPB	14.37	0	eP	52 11.00	4.1X
ZOBO	14.63	0	(P)	52 10.00	-0.4

S.D. = 1.0 on 9 of 12 obs.

? JUN 09, 1989 05h 38m 30.89± 1.35s
41.336 N ±10.3km 20.947 E ±13.1km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.5 (SKO).

OHR	0.25	206	iPgc	38 36.00	-0.3
			iSg	38 40.10	
SKO	0.73	30	iPg	38 45.50	0.2
			iSg	38 55.40	
VAY	1.22	90	ePn	38 53.00	-0.6
LIT	1.70	136	eP	39 01.50	0.7
			eS	39 25.30	

S.D. = 1.0 on 4 of 4 obs.

• JUN 09, 1989 06h 23m 22.69± 1.27s
10.141 S ±11.2km 161.154 E ±13.6km
DEPTH = 89.0 ± 11.2 km
4.3mb (6 obs.)
SOLOMON ISLANDS (193)

HNR	1.38	301	eP	23 47.00	-0.3
			eS	24 07.00	
SVO	1.65	307	eP	23 51.00	0.3
			eS	24 00.00	
VSG	1.67	302	eP	23 51.00	-0.1
DZM	12.90	157	iPc	26 23.30	-0.8
			iS	28 39.80	
PMG	13.82	272	eP	26 44.00	8.0X
	1.0s		40.00nm		4.7mb
CTA	17.44	234	iPc	27 23.00	1.2
	1.0s		9.50nm		4.0mb
BRS	18.89	204	iPc	27 46.80	7.8X
RMQ	20.05	214	eP	27 55.00	3.8X
QIS	23.19	241	eP	28 24.00	1.5
			e	28 41.00	
WB5	27.59	246	eP	29 02.80	-0.8
WRA	27.63	246	Pd	29 03.40	-0.6
	0.6s		2.40nm		4.0mb
ASPA	29.27	239	eP	29 35.20	16.4X
	0.9s		13.00nm		
Z	20s		0.28um		3.9Msz
			LR	40 12 20	
CHTO	67.74	295	e(P)	34 11.00	-2.3
	1.0s		4.50nm		4.4mb
SPA	79.93	180	ePc	35 23.20	0.0
	1.0s		10.00nm		4.6mb
FBA	83.93	19	iP	35 44.10	0.4
	0.9s		2.90nm		4.2mb
YKA	96.26	28	eP	36 43.20	1.3

S.D. = 1.3 on 12 of 16 obs.

JUN 09, 1989 06h 24m 38.11± 0.82s
37.960 N ± 7.3km 21.453 E ± 9.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.3 (ATH).

VLS	0.71	288	ePg	24 52.00	-0.2
ITM	0.87	154	ePg	24 54.00	-0.8
ATH	1.79	89	ePn	25 09.00	-0 2
NEO	1.93	45	ePb	25 08.20	-3.1X
LIT	2.29	20	eP	25 17.50	1.0

eS 25 49.00

KZN 2.36 6 ePn 25 16.00 -1.5
PLG 2.87 32 ePn 25 24.00 -0.7
OHR 3.19 351 ePn 25 30.50 1.2
VAM 3.37 138 ePn 25 33.00 1.1
SKO 4.01 360 ePn 25 44.00 3.2X
S.D. = 1.2 on 8 of 10 obs.

? JUN 09, 1989 06h 31m 36.71± 2.47s
37.451 N ±27.9km 4.666 W ±10.3km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.9 (MDD).

EHOR 0.59 309 eP 31 53.50 4.9X
eS 32 04.40
EPRU 0.66 223 eP 31 49.50 -0.4
eS 31 57.50
LIJA 0.81 227 iP 31 52.50 0.0
AFC 0.92 102 eP 31 54.30 0.0
eS 32 05.00
EBAN 1.00 44 eP 31 59.20 3.6X
eS 32 15.00
EJIF 1.19 213 eP 31 58.00 -0.9
GIBL 1.20 239 iP 31 59.50 0.4
SRQ 1.32 206 eP 32 02.00 0.9
MOMI 1.41 217 eP 32 06.00 3.6X
CNIL 1.55 226 eP 32 09.00 4.7X
PLAT 1.59 214 eP 32 09.00 4.0X
TOL 2.47 11 e(Pg) 32 03.00 -14.7X
eSg 33 05.00
S.D. = 0.8 on 6 of 12 obs.

? JUN 09, 1989 06h 40m 22.40± 1.81s
41.370 N ±11.3km 20.886 E ±17.4km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.6 (SKO).

OHR 0.27 194 iPgc 40 27.60 -0.5
iSg 40 31.70
SKO 0.73 34 iPg 40 37.00 0.2
iSg 40 47.10
VAY 1.27 92 ePn 40 45.00 -0.9
eSn 41 01.70
LIT 1.76 136 eP 40 54.20 1.1
eS 41 15.50
S.D. = 1.5 on 4 of 4 obs.

JUN 09, 1989 07h 14m 28.78± 0.78s
5.038 S ± 3.9km 151.278 E ± 4.7km
DEPTH = 157.1 ± 7.1 km
5.1mb (22 obs.)
NEW BRITAIN REGION (192)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 18C
Centroid Locotion:
Origin Time 07:14:30.0 1.2
Lat 5.30S 0.12 Lon 151.27E 0.12
Dep 142.3 4.3 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-3.75 0.52 Mtt= 4.18 0.75
Mff=-0.43 0.79 Mrt=-2.41 0.53
Mrf= 1.42 0.54 Mtf= 0.75 0.74
Principal Axes
T Val= 4.88 Plg=15 Azm=176
N 0.10 19 271
P -4.97 65 51
Best Double Couple:Mo=4.9*10**16
NP1:Strike=241 Dip=34 Slip=-126
NP2: 102 63 -68

LAT 4.55 249 eP 15 37.00 -0.1
LMG 4.94 219 iP 15 40.20 -2.3
PMG 5.97 223 iPd 15 55.20 -0.8
HNR 9.64 117 eP 16 43.00 -2.0
JAY 10.84 283 ePd 17 00.30 -0.5
CTA 15.74 198 iPc 18 04.10 0.8
1.2s 187.50nm 5.3mb
i 18 30.00
iS 21 08.00
QIS 19.15 215 iPc 18 42.50 0.0
0.7s 89.00nm 5.2mb
GUA 19.51 341 ePd 18 47.00 0.8
0.9s 1008.40nm 6.2mb X
GUMO 19.57 341 iPd 18 47.70 0.9
1.2s 1177.78nm 6.2mb X
PJG 19.57 341 eP 18 47.90 1.1
MTN 21.35 247 eP 19 05.00 0.3
e 19 27.00
RMQ 21.47 186 iPc 19 07.60 1.8
1.1s 329.00nm 5.7mb
e 19 34.00
WB5 22.10 227 iPc 19 12.80 0.7
eS 23 05.70
WRA 22.16 227 Pc 19 13.10 0.4
0.4s 11.90nm 4.7mb
BRS 22.28 176 iPd 19 14.40 0.7
i 19 34.80
i 19 43.00
iS 23 15.00
DZM 22.41 140 iPd 19 15.40 0.3
KNA 24.54 243 eP 19 36.40 1.0
ASPA 24.97 220 iPc 19 39.00 -0.5
0.4s 48.00nm 5.4mb
eS 23 52.20
i 24 05.10
COO 25.41 179 iPd 19 44.70 1.2
0.7s 34.00nm 5.0mb
CMS 26.80 190 eP 19 55.00 -1.1
STK 28.21 198 eP 20 09.00 0.2
CNB 30.18 183 iPc 20 27.10 0.8
CAN 30.21 184 eP 20 27.00 0.5
WARB 31.58 226 iPd 20 29.20 -9.4X
0.3s 8.00nm 5.0mb
TOO 32.81 189 eP 20 50.00 0.8
MBL 34.45 239 eP 21 03.00 -0.5
TAU 37.88 185 eP 21 33.00 1.0
MRWA 41.13 230 eP 21 58.70 -0.3
CHJJ 42.46 345 P 22 08.50 -1.3
TSRJ 42.84 342 P 22 12.80 0.0
MAT 43.13 345 eP 22 14.00 -1.2
0.9s 37.82nm 5.0mb
QZH 43.57 315 Pd 22 20.00 1.1
SSE 46.01 323 P 22 40.00 1.9
WHN 49.99 317 Pc 23 10.50 1.5
GYA 53.34 308 iPc 23 36.00 1.7
CN2 53.91 337 Pc 23 37.80 -0.2
BJI 55.26 328 eP 23 48.00 0.1
TIY 55.79 323 Pc 23 52.00 0.1
eS 31 34.00
CHG 56.73 296 iPc 23 59.90 1.2
1.0s 17.00nm 4.9mb
CHTO 56.73 296 iPc 24 00.10 1.4
1.3s 32.27nm 5.1mb
CD2 57.75 311 P 24 05.10 -0.6
HHC 58.37 325 eP 24 10.00 0.1
BTO 59.09 324 P 24 16.00 1.1
LZH 60.35 317 eP 24 24.50 0.8
1.5s 66.00nm 5.3mb
pP 24 57.50 138kmX
ADK 62.94 22 e(P) 24 39.10 -1.3
GTA 64.81 318 P 24 53.80 0.8
SHL 65.12 301 iP 24 51.00 -4.4X
GUN 70.95 302 P 25 32.40 0.7
0.9s 49.00nm 5.3mb
PKI 71.25 301 P 25 33.90 0.4
1.1s 36.00nm 5.1mb
KKN 71.42 301 P 25 34.80 0.4
1.0s 32.00nm 5.1mb
DMN 71.52 301 P 25 35.60 0.5
1.0s 65.00nm 5.4mb
GKN 72.03 301 P 25 38.20 0.3
1.0s 54.00nm 5.2mb
WMQ 74.89 318 Pd 25 54.50 0.4
HYB 75.14 289 eP 25 56.00 0.1
GBA 75.57 285 Pd 25 58.60 0.3
1.1s 10.00nm 4.5mb
KDC 77.10 27 eP 26 05.80 -0.2
TTA 78.55 22 eP 26 13.80 -0.2
PMR 80.53 25 eP 26 23.30 -1.2
0.8s 10.30nm 4.6mb
IMA 81.19 20 eP 26 27.80 -0.2
0.7s 5.50nm 4.4mb
TOA 82.01 25 eP 26 32.30 0.0
FBA 82.67 22 eP 26 33.90 -1.7
BRW 83.38 15 e(P) 26 38.70 -0.3
MAW 84.77 203 eP 26 47.30 1.2
SPA 85.00 180 e(P) 26 48.00 0.5
1.0s 18.50nm 4.9mb
e 27 20.00
INK 89.22 21 eP 27 07.00 -0.6
pP 27 46.00 153kmX
WDC 90 34 49 ePd 27 13.70 0.3
BMW 90.51 44 P 27 14.60 0.5
PRS 90 82 54 eP 27 17.00 1.3
GMW 90.94 43 P 27 16.00 0.0
MIN 91.03 50 eP 27 16.50 -0.2
ORV 91.03 51 eP 27 16.70 0.1
CMB 91.76 52 eP 27 20.50 0.5
SYP 91.79 56 eP 27 22.00 1.7
FRI 92.21 53 eP 27 22.40 0.4
ISA 93.10 55 eP 27 27.00 0.7
PNT 93.20 41 eP 27 26.00 -0.3
PAS 93.25 56 eP 27 28.00 1.1
MWC 93.35 56 eP 27 29.00 1.4
SBB 93.57 56 eP 27 29.00 0.5
KVN 93.62 51 P 27 29.10 0.3
CLC 93.83 55 eP 27 30.00 0.4
RVR 93.90 56 eP 27 31.00 1.1
PEC 94.07 56 P 27 31.30 0.6
TNP 94.26 52 P 27 32.00 0.3
1.0s 17.50nm 5.3mb
PLM 94.29 57 eP 27 33.00 1.1
BAR 94.41 58 eP 27 34.00 1.7
GSC 94.44 55 eP 27 33.00 0.5
MBC 94.71 14 eP 27 32.00 -0.8
GLA 95.98 57 eP 27 42.00 2.5
YKA 96.34 28 eP 27 40.90 0.5
ALQ 102.92 55 Pdiff 28 12.70 1.8
0.8s 3.39nm 5.2mb
NAO 116.90 340 PKP 32 55.70 -0.2
0.9s 6.00nm
SPC 119.66 325 ePKP 33 02.40 0.6
ZST 121.96 326 ePKP 33 06.00 0.1
SKO 122.28 317 ePKP 33 06.60 -0.2
1.2s 52.00nm
CLL 122.32 330 iPKPc 33 06.60 0.1
0.7s 19.00nm
PRU 122.34 328 PKP 33 07.00 0.4
OHR 123.08 317 ePKP 33 08.20 -0.2
KHC 123.35 328 iPKPd 33 08.70 0.0
1.0s 10.00nm
MOX 123.42 330 ePKP 33 09.00 0.3
VBY 124.48 324 e(PKP) 33 11.20 0.3
CEY 124.84 324 e(PKP) 33 11.50 -0.2
TOD 125.47 331 ePKP 33 12.48 -0.3
ABH 125.88 332 ePKPd 33 13.65 0.1
MEM 126.08 333 PKP 33 14.30 0.5
RUP 126.23 332 ePKPd 33 14.49 0.2
WLF 126.68 332 PKP 33 16.20 1.2
SNF 126.91 334 PKP 33 15.90 0.5
FEL 127.01 330 ePKPd 33 15.25 -0.7
CDF 127.02 331 ePKP 33 13.70 -2.2X
DOU 127.08 334 PKP 33 16.20 0.4
BSF 127.65 330 ePKP 33 15.10 -2.0X
1.0s 30.00nm
HAU 127.75 331 ePKP 33 15.30 -1.9X
0.8s 14.80nm
LSD 129.06 328 PKP 33 20.52 0.4
LPG 129.24 328 ePKP 33 18.70 -1.8
0.7s 6.05nm
FIN 129.29 326 PKP 33 19.31 -1.0
ROB 129.43 326 PKP 33 20.03 -0.5
LOR 129.46 332 ePKP 33 18.90 -1.6
1.0s 15.00nm
LBF 129.61 331 ePKP 33 19 40 -1.4
1.0s 8.00nm
RRL 129 61 328 PKP 33 21 77 0 7
IMI 129 66 326 PKP 33 20 84 -0 2
PZZ 129 71 327 PKP 33 21.61 0 4
ENR 129.72 327 PKP 33 20.03 -1 1
STV 129 76 327 PKP 33 19.83 -1 4
SSF 129.78 332 ePKP 33 19 70 -1 3
1.0s 13.00nm
SMF 129.92 331 ePKP 33 19.90 -1 4
1.0s 16.00nm
CVF 129.94 324 ePKP 33 19.70 -1.8
0.8s 14.80nm
SBF 129.94 326 ePKP 33 19.60 -2.0X
1.0s 18.00nm
AVF 130.04 332 ePKP 33 19.70 -1.8
LDF 130.23 335 ePKP 33 20.50 -1.4
FLN 130 25 336 ePKP 33 20.70 -1.2
BGF 130.45 332 ePKP 33 21.00 -1.4
FRF 130 57 326 ePKP 33 21.00 -1 7
1.1s 14 65nm
GRR 130 70 336 ePKP 33 21 60 -1 1
1.0s 10 00nm
LMR 130 80 326 ePKP 33 21 40 -1 7

09d 07h

0.8s 10.75nm
LRG 130 80 326 ePKP 33 21 70 -1 4
0.9s 18 00nm
MAF 130.83 332 ePKP 33 21.80 -1.3
TCF 130.95 332 ePKP 33 22 20 -1.1
0.9s 16.40nm
LPF 131.05 336 ePKP 33 22 00 -1.4
1.0s 28.00nm
MFF 131.79 334 ePKP 33 23.40 -1.5
1.0s 10.00nm
LPO 132.62 331 ePKP 33 24.90 -1.6
BNG 132.90 271 iPKPc 33 28.00 0.0
0.8s 25.00nm
id 36 43.90
EPF 134.25 330 ePKP 33 28.00 -1.8
0.9s 4.90nm
CNCB 135.54 120 PKP 33 19.00 -14.6X
LPB 135.56 120 (PKP) 33 20.00 -13.4X
ZOBO 135.65 119 ePKP 33 22.00 -11.8X
CCH 136.85 122 ePKP 33 24.60 -11.1X
NEV 144.75 67 ePKP 33 48.00 -1.3
PPD 145.17 141 ePKP 33 50.00 0.0
e 33 51.40
e 34 22.80
MGH 145.19 68 ePKP 33 49.50 -0.6
BPA 145.43 67 ePKP 33 49.00 -1.5
VAO 146.92 148 ePKP 33 55.50 2.6X
e 34 28.50
KUK 151.76 274 ePKP 34 07.00 6.5X
BAO 151.97 137 ePKP 34 02.00 1.1
ATB 155.11 109 PKPd 34 06.20 1.1
SOB1 161.36 139 ePKP 34 12.60 0.2
e 34 58.10
S.D. = 1.0 on 144 of 156 obs.

JUN 09, 1989 08h 14m 16.19± 0.36s
71.398 N ± 4.7km 3.855 W ± 6.3km
DEPTH = 10.0km (geophysicist)
4.9mb (32 obs.) 3.3Msz (1 obs.)
JAN MAYEN ISLAND REGION (639)

DAG 6.75 330 iPd 15 52.00 -5.6X
0.4s 18.64nm 5.5mb
E 19s 1.39um
ipP 15 59.80
AKU 7.74 229 iP 16 18.80 7.4X
1.2s 43.75nm 5.5mb
TRO 7.80 92 eP 16 09.70 -2.6
KBS 8.52 21 eP 16 22.20 -0.1
RGS 10.04 140 eP 16 42.00 -1.2
KEV 10.34 84 eP 16 46.00 -1.4
e 16 50.00
SOD 11.38 96 iP 16 59.50 -2.1
i 17 08.60
NAO 12.12 144 P 17 10.50 -1.1
0.7s 3.40nm 4.7mb
SUF 14.39 112 iP 17 40.70 -0.9
0.8s 15.20nm 4.7mb
NUR 15.72 119 eP 18 00.00 1.1
0.7s 18.70nm 4.4mb
Z 20s 1.00um 3.8Msz
i 18 05.20
LR 23 30 00
ALE 16.07 336 eP 18 05 00 1.7
WTS 20.05 161 eP 18 53 00 1 2
0 6s 10 00nm 4 3mb
ENN 21 18 163 iPd 19 04 00 0 5
0 8s 32 00nm 4 8mb
e 19 07.00
SNF 21.29 166 P 19 05.80 1.2
MEM 21 34 163 P 19 05.80 0.7
CLL 21.55 150 eP 19 07.00 -0.3
1.5s 50.00nm 4.7mb
DOU 21.73 165 P 19 08.40 -0.6
0.8s 16.70nm 4.5mb
S 23 17.00
MOX 21 99 153 eP 19 12.00 0.4
e 19 17.50
BRG 22.13 149 eP 19 13.10 0.1
e 19 18.10
WLF 22.29 163 P 19 19.00 4.4X
HOF 22.35 153 eP 19 16.20 0.9
KSP 22 57 145 ePc 19 18 00 0.6
1.2s 86 00nm 5 1mb
rd 19 22 50
FLN 22 76 174 eP 19 18 80 -0 5
1.1s 43 90nm 4 9mb

GRF 22.86 154 eP 19 22.30 2.0
Z 18s 0.10um 3.3Msz
e 19 26.80
LDF 22.95 174 eP 19 20.60 -0.5
1.1s 48.80nm 4.9mb
PRU 23.08 149 eP 19 24.00 1.5
1.0s 28.90nm 4.8mb
GRR 23.13 175 eP 19 22.80 -0.1
1.2s 61.80nm 5.0mb
LPF 23.48 175 eP 19 26.10 -0.2
CDF 23.64 161 eP 19 28.90 0.9
KHC 23.76 151 iPd 19 31.60 2.5
i 19 36.00
HAU 23.95 163 eP 19 31.40 0.5
KRA 24.02 140 eP 19 32.80 1.2
0.9s 54.00nm 5.1mb
e 19 38.50
e 19 42.30
BSF 24.17 162 eP 19 33.40 0.3
LOR 24.48 167 eP 19 35.80 -0.3
0.9s 22.90nm 4.8mb
SSF 24.66 168 eP 19 37.40 -0.4
1.2s 47.60nm 5.0mb
LBF 24.77 167 eP 19 38.60 -0.3
0.9s 41.60nm 5.1mb
SPC 24.91 141 eP 19 41.80 1.4
AVF 24.92 168 eP 19 39.80 -0.5
1.1s 41.50nm 5.0mb
MFF 24.93 174 eP 19 39.70 -0.7
0.8s 18.80nm 4.8mb
SMF 25.10 167 eP 19 42.50 0.5
1.2s 51.70nm 5.1mb
BGF 25.12 169 eP 19 41.40 -0.8
ZST 25.26 146 eP 19 46.40 2.9X
TCF 25.35 170 eP 19 43.60 -0.8
0.9s 33.40nm 5.0mb
LSF 25.36 171 eP 19 43.50 -0.9
0.9s 25.20nm 4.9mb
MAF 25.44 170 eP 19 44.30 -0.9
0.9s 42.50nm 5.1mb
KBA 25.72 152 i(P) 19 49.60 1.5
1.0s 24.60nm 4.9mb
SRO 25.85 144 eP 19 51.70 2 7
RJF 26.30 171 eP 19 51.90 -1.3
1.0s 52.00nm 5.2mb
LFF 26.63 173 eP 19 54.90 -1.3
1.1s 31.20nm 4.9mb
LPO 26.90 172 eP 19 57.50 -1.2
1.0s 16.00nm 4.7mb
EPF 28.52 174 eP 20 11.90 -1.6
0.9s 39.30nm 5.2mb
TOL 31.59 180 eP 20 47.00 6.3X
OHR 32.78 144 e(P) 20 51.00 -0.2
INK 36.58 331 eP 21 19.00 -4.3X
FBA 41.76 338 eP 22 07.00 0.6
1.5s 0.60nm 3.1mb X
FFC 41.83 301 iPd 22 07.00 0.0
1.1s 22.00nm 4.8mb
EDM 46.18 308 eP 22 44.00 1.7
SES 48.16 305 eP 22 57.00 -0.9
pP 24 24.00 443kmX
WMO 49.67 72 eP 23 11.20 1.6
ACO 57.33 288 eP 24 04.20 -2.1
1.0s 61 10nm 5.6mb
UYO 58.22 283 eP 24 10.30 -2.2
CN2 59.60 41 eP 24 21.40 -0 6
BJI 61.08 49 eP 24 32.00 -0 1
e 25 49.00
TIY 62.34 53 P 24 41.80 1.0
BNG 68.37 156 iPd 25 19.30 -0.4
0.6s 8.00nm 5.1mb
GYA 71.41 62 P 25 38.80 0.6
KNA 117.69 53 ePdiff29 30.60 9.5X
S.D. = 1.2 on 60 of 67 obs.

• JUN 09, 1989 09h 06m 46.78± 1.00s
10.137 N ±14.9km 93.346 E ±19.7km
DEPTH = 33.0km (normol)
4.3mb (3 obs.)
ANDAMAN ISLANDS REGION (703)

CHG 10.19 32 eP 09 16.00 2.1X
CHTO 10.19 32 e(P) 09 14.40 0.5
PKI 18.89 338 P 11 08.80 1.4
GUN 19.03 339 P 11 10.00 0.9
DMN 19.03 337 P 11 10 20 1.1
KKN 19 13 338 P 11 11.00 0.8

GKN 19.57 336 P 11 16.00 0.8
LZH 27.54 19 eP 12 30.00 -2.7
WB5 50.21 126 eP 15 42.20 0.3
WRA 50.22 127 Pd 15 43.20 1.2
0.3s 0.80nm 4.2mb
ASPA 51.97 131 eP 15 56.00 0.8
BUL 70.43 244 iPc 18 04.40 4.0X
0.6s 3.67nm 4.6mb
SUF 70.67 333 iP 17 59.30 -1 7
SOD 71.83 338 iP 18 06.60 -1.3
KEV 72.45 340 eP 18 09.00 -2.6X
NAO 77.57 330 P 18 38.90 -2.0
0.7s 1.60nm 4.2mb
S.D. = 1.5 on 13 of 16 obs.

• JUN 09, 1989 09h 46m 15.20± 0.82s
71.575 N ±10.8km 4.378 W ±12.4km
DEPTH = 10.0km (geophysicist)
4.7mb (22 obs.)
JAN MAYEN ISLAND REGION (639)

DAG 6.51 330 iPd 47 53.20 -0.1
0.4s 12.71nm 5.2mb
ipP 49 00.00
HFS 13.57 139 eP 49 27.60 -2.2
0.5s 3.40nm 4.6mb
Z 17s 0.19um
LR 53 17.00
SUF 14.61 112 eP 49 42.00 -1.5
ALE 15.84 336 eP 50 13.00 13.7X
0.7s 4.00nm
NUR 15.96 119 eP 50 00.40 -0.5
Z 19s 0.30um
LR 55 30.00
CLL 21.79 150 iPd 51 13.80 5.1X
1.3s 17.00nm 4.3mb
MOX 22.22 152 eP 51 15.00 2.0
1.9s 39.00nm 4.5mb
BRG 22.37 148 eP 51 16.50 2.1
i 51 20.20
KSP 22.81 145 eP 51 19.00 0.2
FLN 22.96 173 eP 51 20.10 -0.2
1.2s 26.10nm 4.6mb
GRF 23.10 154 eP 51 28.20 6.6X
1.3s 25.00nm 4.6mb
LDF 23.14 173 eP 51 21.10 -0.9
1.0s 13.60nm 4.4mb
GRR 23.32 174 eP 51 24.10 0.3
0.9s 11.10nm 4.4mb
PRU 23.32 148 eP 51 26.50 2.7
e 51 30.50
LPF 23.67 174 eP 51 27.50 0.3
0.9s 32.70nm 4.9mb
CDF 23.86 161 eP 51 30.30 1.1
KHC 24.00 150 P 51 33.00 2.6
HAU 24.17 162 eP 51 32.60 0.5
KRA 24.27 140 eP 51 39.90 7.0X
e 51 43.80
BSF 24.39 162 eP 51 34.60 0.3
LOR 24.69 166 eP 51 37.00 -0.1
0.7s 14.30nm 4.7mb
SSF 24.87 167 eP 51 38.80 0.0
0.8s 9.90nm 4.5mb
LBF 24.98 166 eP 51 39.90 0.0
0.8s 24.70nm 4 9mb
AVF 25.13 167 eP 51 41 00 -0 3
0.9s 13.10nm 4 6mb
MFF 25.13 173 eP 51 40.90 -0 4
0.8s 14.50nm 4.7mb
SMF 25.31 167 eP 51 42.80 -0.2
0.8s 13.40nm 4 7mb
BGF 25.33 168 eP 51 42.80 -0.4
ZST 25.50 145 eP 51 51.00 6.3X
e 05 09.50
LSF 25.56 170 eP 51 44.70 -0.6
0.9s 13.10nm 4.6mb
TCF 25.56 169 eP 51 44.80 -0.6
0.9s 20.30nm 4.8mb
MAF 25.65 169 eP 51 45.60 -0.6
0.9s 22.90nm 4.9mb
KBA 25.96 152 ePd 51 53.00 3.7X
1.0s 12.70nm 4.6mb
SRO 26.09 144 eP 51 56.50 6.3X
RJF 26 50 171 eP 51 53.20 -0 9
0.8s 18 80nm 4.8mb
LFF 26.83 172 eP 51 55.90 -1.1
LPO 27.10 171 eP 51 58.70 -0.9

09d 09h

EPF 28.71 173 eP 52 13.30 -0.9
0.8s 18.80nm 4.9mb
BNG 68.60 155 iPc 57 25.50 5.4X
0.4s 5.00nm 5.1mb
HYB 71.37 91 eP 57 26.50 -10.5X
S.D. = 1.2 on 30 of 39 obs.

% JUN 09, 1989 09h 49m 42.36± 0.87s
39.638 N ± 7.9km 29.491 E ± 9.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.67 268 ePg 49 54.90 -0.8
iSg 50 08.40
ALT 0.75 140 ePg 49 57.00 -0.2
YLV 0.93 354 iPn 49 59.90 -0.3
KHL 1.31 179 ePn 50 07.00 0.3
BNT 1.40 301 iPn 50 09.40 1.4
EDC 1.44 300 ePn 50 08.00 -0.4
S.D. = 1.0 on 6 of 6 obs.

JUN 09, 1989 09h 53m 43.12± 0.34s
10.393 N ± 6.7km 92.774 E ± 4.9km
DEPTH = 33.0km (normal)
4.8mb (14 obs.)
ANDAMAN ISLANDS REGION (703)

NNT 7.16 72 iPc 55 29.00 0.7
NST 8.88 53 eP 55 52.00 -0.2
BDT 9.11 41 eP 55 55.30 0.0
0.5s 49.30nm 5.9mb X
CHG 10.28 35 ePd 56 12.00 0.5
1.0s 12.25nm 5.1mb
CHTO 10.28 35 eP 56 12.10 0.6
SHL 15.12 357 eP 57 18.60 2.4
GBA 15.34 284 P 57 26.00 7.1X
GYA 20.68 38 P 58 22.20 -0.9
CD2 22.82 25 eP 58 45.40 0.9
XAN 27.80 30 P 59 29.00 -2.3
GTA 29.57 11 eP 59 45.80 -1.5
CN2 43.68 34 iPd 01 48.00 1.4
WB5 50.81 126 eP 02 42.70 -0.1
WRA 50.82 126 Pd 02 43.80 0.9
0.4s 1.40nm 4.3mb
ASPA 52.56 131 iPd 02 55.00 -1.0
0.7s 15.00nm 5.1mb
VRI 65.97 316 ePd 04 28.50 0.1
SUF 70.19 333 iP 04 53.40 -1.0
SLR 72.26 239 eP 05 09.50 1.8
BNG 73.72 272 iPd 05 18.00 1.6
0.5s 10.00nm 5.1mb
PRU 74.55 319 eP 05 20.50 0.0
BRG 74.96 320 iP 05 22.50 -0.3
0.6s 10.00nm 5.0mb
KHC 75.15 318 eP 05 24.00 0.0
CLL 75.57 320 eP 05 25.00 -1.3
HFS 75.61 330 eP 05 25.40 -0.9
0.5s 4.00nm 4.7mb
OSS 77.47 316 ePc 05 37.40 0.1
SAX 78.00 316 ePc 05 40.20 -0.1
LLS 78.26 316 ePc 05 41.60 0.0
TMA 78.38 315 ePc 05 41.90 -0.4
FIN 78.96 313 P 05 44.64 -0.6
ROB 79.19 313 P 05 45.97 -0.6
IMI 79.21 313 P 05 45.15 -1.5
ODF 79 33 317 eP 05 46 90 -0 4
DIX 79 39 315 ePc 05 48 60 0 7
STV 79.59 313 P 05 48 12 -0 7
LSD 79.62 314 P 05 49.05 -0.1
BSF 79.70 317 eP 05 49.10 -0.2
EMS 79.73 315 ePc 05 50 10 0.5
LPG 79.90 315 eP 05 50.70 0.0
0.7s 13.20nm 5.0mb
RRL 79.92 314 P 05 51.61 0.9
HAU 79.98 317 eP 05 50.40 -0.3
0.7s 9.70nm 4.9mb
LBF 81.68 316 eP 05 59.80 0.1
0.7s 6.60nm 4.8mb
LOR 81.73 317 eP 05 59.70 -0.2
0.9s 9.80nm 4.8mb
SMF 81.81 316 eP 06 00.50 0.2
0.8s 5.30nm 4.6mb
SSF 81.99 316 eP 06 01.40 0.2
AVF 82 12 316 eP 06 01.90 0.0
0.9s 5 50nm 4.6mb
BGF 82.50 316 eP 06 04.30 0.4
MAF 82.73 316 eP 06 05.50 0.3

0.7s 4.40nm 4.6mb
LPO 83.91 314 eP 06 11.80 0.6
LDF 84.20 318 eP 06 12.80 0.2
FLN 84.41 318 eP 06 13.80 0.2
MFF 84.53 316 eP 06 14.30 0.0
0.7s 5.20nm 4.8mb
LPF 84.90 318 eP 06 16.30 0.3
MBC 91.45 7 eP 06 47.00 0.1
INK 94.95 16 eP 07 03.00 -0.2
ATB 144.57 279 e(PKP)13 18.30 -0.7
S.D. = 0.9 on 54 of 55 obs.

? JUN 09, 1989 10h 27m 37.04± 2.90s
13.735 N ±33.0km 92.451 W ±25.9km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
OFF COAST OF CHIAPAS, MEXICO (68)

TPX 1.18 9 iP 27 57.50 0.2
iS 28 11.50
SCX 2.99 357 eP 28 28.00 4.8X
iS 29 03.00
OXX 5.30 309 eP 29 05.00 8.9X
iS 30 10.00
IISM 7.04 319 (P) 29 20.00 -0.5
MEO 21.68 346 ePd 32 25.70 -1.3
0.8s 15.30nm 4.5mb
LNO 22.29 353 eP 32 45.50 12.6X
RLO 22.45 355 eP 32 35.10 0.4
ALQ 24.62 331 eP 32 59.60 3.7X
0.7s 1.54nm 3.7mb
KVN 33.89 323 eP 34 19.30 0.1
PNT 41.91 333 eP 35 28.00 2.0
0.7s 5.00nm 4.4mb
YKA 51.18 347 eP 36 40.10 1.2
INK 60.57 344 eP 37 46.00 -0.3
MBC 64.12 353 eP 38 08.00 -1.9
S.D. = 1.4 on 9 of 13 obs.

% JUN 09, 1989 10h 28m 33.17± 0.64s
60.636 N ± 5.3km 6.236 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

HYA 0.53 357 iP 28 43.58 -0.3
eS 28 52.22
ASK 0.54 254 eP 28 43.91 -0.1
eS 28 51.62
ODD1 0.75 165 eP 28 47.17 -0.8
eS 28 55.75
SUE 0.84 301 eP 28 49.42 0.1
eS 28 59.92
BLS1 1.28 166 iP 28 56.92 -0.1
iS 29 13.51
KMY 1.51 200 eP 29 01.04 0.8
eS 29 17.75
NRA0 2.61 86 ePn 29 16.60 0.5
iPg 29 19.10
eS 29 43.50
iSg 29 53.30
S.D. = 0.6 on 7 of 7 obs.

& JUN 09, 1989 10h 32m 06.93s
62.572 N 149.757 W
DEPTH = 72 0km
CENTRAL ALASKA (1)
<AGS-P> Felt (II) at Willow.

GHO 0.89 154 iP 32 24.07 -0.5
S 32 37.68
PWA 0.93 184 iPc 32 24.00 -0.8
PME 1.01 160 iP 32 25.04 -0.8
SKT 1.02 235 iP 32 25.24 -0.8
S 32 39.85
PMR 1.03 163 iPc 32 25.00 -1.1
eS 32 39.60
KTH 1.12 332 iP 32 27.38 0.0
S 32 43.57
SUA 1.21 203 iP 32 27.94 -0.6
MCK 1.22 17 eP 32 28.71 0.0
KNK 1.32 152 iP 32 28.90 -1.0
CGLM 1.66 221 iP 32 33 74 -0.8
CRP 1 73 222 eP 32 34.97 -0.7
TOA 1.74 104 iPc 32 35 70 0.0
SPU 1 77 219 eP 32 35 11 -1.0
NKA 1 97 202 eP 32 40.92 2.2

NEA 2.04 8 eP 32 38.90 -0.8
SLKM 2 08 186 eP 32 39.28 -1.1
KLU 2.11 119 iP 32 39.12 -1.6
DDM 2.15 54 eP 32 42.63 1.3
VZW 2.15 134 eP 32 39.38 -1.9
HDA 2.23 33 iP 32 41.81 -0.6
CCB 2.26 22 iP 32 41.97 -0.8
RDT 2.37 213 eP 32 44.06 -0.4
FBA 2.50 20 iPd 32 45.40 -0.6
TTA 2.90 280 iPc 32 50.00 -1.8
SVW 3.14 245 eP 32 53.20 -2.0
DWY 4.89 68 P 33 17.60 -1.9
KDC 5.03 197 e(P) 33 18.00 -3.5
BRW 9.18 346 e(P) 34 15.40 -3.4
28 obs. associated

? JUN 09, 1989 11h 08m 03.48± 2.89s
23.095 N ±21.0km 121.652 E ±24.9km
DEPTH = 33.0km (normal)
TAIWAN (244)

TWF1 0.42 308 iPd 08 12.30 -0.5
eS 08 18.20
TWG 0.60 243 iPd 08 15.40 -0.1
eS 08 25.30
TWD 0.98 357 iPc 08 19.80 -1.1
TWK 1.08 279 ePc 08 22.90 0.5
TWC 1.52 7 iPc 08 28.20 -0.4
TWZ 1.99 358 ePc 08 35.10 -0.4
ANP 2.08 357 eP 08 39.00 2.2
S.D. = 1.3 on 7 of 7 obs.

? JUN 09, 1989 11h 43m 10.98± 9.27s
51.647 N ±53.6km 16.348 E ±58.0km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.9 (KRA).

KSP 0.81 182 iP 43 26.50 -0.1
iS 43 35.50
iLR 43 41.50
BRG 1.70 244 ePn 43 40.40 -0.4
iPg 43 42.20
iSg 44 02.70
PRU 2.02 215 ePn 43 45.50 0.1
Pg 43 47.50
Sn 44 03.70
Sg 44 12.00
CLL 2.12 262 iPn 43 47.00 0.1
iPg 43 50.20
iSg 44 17.40
KRA 2.78 124 eP 44 07.30 11.0X
eS 44 45.30
KHC 3.08 216 Pn 44 00.80 0.2
Pg 44 07.00
Sn 44 30.20
Sg 44 45.50
HOF 3.12 246 iPnc 44 01.20 0.0
MOX 3.14 253 ePg 44 09.50 8.0X
iSg 44 49.00
S.D. = 0.3 on 6 of 8 obs.

JUN 09, 1989 12h 10m 42.18± 0.85s
37.014 N ± 7.7km 27.931 E ± 7.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER 0.31 67 iPg 10 48 00 -0.6
iSg 10 51 00
IZM 1.48 339 ePn 11 09.00 0.1
KAP 1.58 203 ePb 11 10 20 -0.1
KSL 1.60 123 ePb 11 10 00 -0.6
ELL 1.61 99 ePn 11 12.00 1.2
KHL 1.82 44 iPn 11 13 70 -0.1
BCK 2.17 77 ePn 11 19.00 0.1
PRK 2.58 330 ePg 11 34.00 9.3X
DST 2.64 12 ePn 11 36.30 10.6X
EZN 3.08 336 ePn 11 41.00 9.3X
S.D. = 0.7 on 7 of 10 obs.

JUN 09, 1989 12h 19m 35.70± 0.17s
71.432 N ± 2.7km 4.371 W ± 3.7km
DEPTH = 10.0km (geophysicist)
5 6mb (54 obs.) 5.4Msz (19 obs)
JAN MAYEN ISLAND REGION (639)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN

09d 12h

L P.B : 16S, 37C
Centroid Location:
Origin Time 12:19:41.5 0.3
Lat 70.99N 0.05 Lon 3.69W 0.14
Dep 15.0 FIX Half-duration 2.3
Moment Tensor; Scale 10**17 Nm
Mrr=-2.26 0.08 Mtt= 0.86 0.12
Mff= 1.41 0.09 Mrt= 1.27 0.33
Mrf= 0.36 0.36 Mtf= 1.81 0.08
Principal Axes:
T Val= 3.19 Plg=12 Azm=313
N -0.45 19 47
P -2.74 68 192
Best Double Couple:Mo=3.0*10**17
NP1:Strike= 20 Dip=37 Slip=-122
NP2: 238 59 -68

JMI	1.50	252	iP	20	02.50	-0.2
			eS	20	20.00	
DAG	6.64	330	iPc+	21	11.50	-4.1X
	0.3s	240.26nm			6.7mb X	
Z	17s	37.82um				
E	18s	41.10um				
AKU	7.64	228	eP	21	30.70	1.2
	0.9s	104.20nm			6.0mb	
			iS	22	49.00	
TRO	7.96	92	iP	21	29.01	-5.1X
KBS	8.55	21	iP	21	40.00	-2.2
NSS	9.22	131	iP	21	46.38	-5.1X
REY	9.84	231	eP	22	06.20	6.2X
RGS	10.17	139	iP	22	01.00	-3.6X
KEV	10.50	84	iP	22	04.00	-5.1X
	0.5s	46.30nm			6.1mb	
Z	20s	8.90um			3.4Msz	
			i	22	13.40	
			LR	25	20.00	
SUE	11.03	156	eP	22	10.40	-5.9X
HYA	11.12	153	iP	22	12.40	-5.2X
SOD	11.55	95	iP	22	17.80	-5.6X
ASK	11.64	156	eP	22	17.50	-7.1X
BER	11.76	156	eP	22	20.40	-5.8X
NAO	12.24	143	P	22	26.70	-6.1X
	1.0s	43.20nm			5.7mb	
ODD1	12.39	153	eP	22	29.00	-5.8X
NRA0	12.46	141	iPd	22	30.50	-5.2X
			iS	24	41.10	
KMY	12.88	157	eP	22	35.00	-6.3X
BLS1	12.92	154	eP	22	36.42	-5.5X
HFS	13.46	138	eP	22	44.70	-4.2X
	1.2s	326.00nm			6.2mb	
Z	17s	21.41um				
			LR	26	29.00	
SUF	14.56	111	iP	22	59.00	-4.3X
UPP	14.60	131	iP	22	59.40	-4.4X
			iS	25	56.00	
NUR	15.88	119	iP	23	16.70	-3.8X
	1.3s	292.20nm			5.3mb	
Z	20s	16.00um				
			i	23	30.80	
			eS	26	24.00	
			LR	28	40.00	
ALE	15.97	336	eP	23	16.00	-5.5X
	0.5s	9.00nm			4.2mb X	
EKA	16.17	178	Pd	23	22.40	-1.9
	0.6s	21.80nm			4.5mb X	
ESK	16.19	178	eP	23	22.50	-2.0
	1.0s	200.00nm			5.2mb	
GDH	16.31	286	ePc	23	23.00	-2.9X
	0.9s	31.93nm			4.4mb X	
			i	23	32.00	
			i	26	50.00	
COP	17.37	147	iPd+	23	39.00	-0.3
	1.6s	880.00nm			5.6mb	
DMU	17.64	185	eP	23	44.00	1.3
	0.7s	38.00nm			4.6mb	
DLE	18.24	184	eP	23	50.40	0.3
	1.0s	93.00nm			4.9mb	
WIT	19.32	159	eP	24	01.00	-2.3
VAL	19.74	191	eP	24	08.00	-0.1
			S	27	49.00	
DBN	19.87	162	iP+	24	07.00	-2.4
Z	20s	6.20um				
			eS	27	44.00	
WTS	20.14	160	iPc	24	10.70	-1.6
	0.9s	50.00nm			4.9mb	
			e	24	17.00	
8RN	20.63	148	ePc	24	16.50	-0.8

			id	24	20.30	
UCC	21.08	164	iP+	24	22.00	0.0
			i	24	26.00	
			S	28	14.00	
ENN	21.26	162	iPc	24	22.20	-1.6
	0.7s	97.00nm			5.3mb	
			i	24	28.00	
SNF	21.36	165	P	24	22.50	-2.3
MEM	21.43	162	Pc	24	22.40	-3.1X
CLL	21.66	149	iPc	24	26.00	-1.9
	1.7s	410.00nm			5.6mb	
			eS	28	31.00	
DOU	21.80	164	P+	24	27.60	-1.7
	0.8s	56.70nm			5.0mb	
			S	28	23.00	
TNS	22.08	158	eP	24	31.60	-0.5
MOX	22.09	152	iPc+	24	30.50	-1.7
Z	15s	7.30um			5.2MszX	
N	14s	4.70um				
E	16s	2.10um				
BRG	22.24	148	eP	24	31.50	-2.2
	1.0s	12.00nm			4.3mb X	
N	18s	4.50um				
E	18s	6.00um				
			i	24	35.60	
			i	24	40.00	
			eS	28	44.00	
ABH	22.31	159	eP	24	33.76	-0.6
WLF	22.37	162	P	24	28.50	-6.4X
RUP	22.43	160	eP	24	34.85	-0.8
HOF	22.46	152	iPc	24	35.00	-0.8
			eS	28	44.60	
KSP	22.69	145	eP	24	36.50	-1.6
			i	24	39.50	
			e	28	48.50	
			e	31	06.50	
TOD	22.73	157	eP	24	37.65	-0.9
FLN	22.82	173	eP	24	37.90	-1.5
	1.3s	304.60nm			5.7mb	
KTD	22.92	159	eP	24	39.32	-1.1
GRF	22.97	153	iPc	24	41.30	0.5
	1.1s	130.00nm			5.4mb	
Z	15s	5.00um			5.1MszX	
			e	24	49.00	
			eS	28	54.00	
LDF	23.00	173	eP	24	39.90	-1.2
GRR	23.18	174	eP	24	41.40	-1.5
PRU	23.20	148	P	24	43.50	0.4
	1.5s	122.80nm			5.2mb	
Z	22s	8.40um			5.1Msz	
N	21s	6.00um				
E	20s	5.70um				
			e	24	51.00	
			S	29	00.00	
GWF	23.21	160	P	24	43.94	0.7
LPF	23.53	174	eP	24	44.60	-1.7
STU	23.60	157	iP+	24	47.40	0.4
	2.0s	882.35nm			6.0mb	
Z	20s	2.13um			4.6Msz	
CDF	23.73	160	P	24	49.11	0.8
WET	23.75	151	iPd	24	50.10	1.7
	1.6s	560.00nm			5.9mb	
			eS	29	14.50	
VITF	23.79	163	P	24	50.35	1.6
KHC	23.87	150	P	24	52.00	2.4
	1.5s	169.50nm			5.4mb	
ECH	23.91	161	P	24	50.67	0.6
HAU	24.03	162	eP	24	51.40	0.2
	1.9s	463.00nm			5.8mb	
KRA	24.16	140	eP	24	51.90	-0.4
	1.2s	481.00nm			6.0mb	
Z	18s	26.40um			5.8Msz	
N	18s	24.60um				
			i	24	57.20	
			i	24	59.90	
			eS	29	14.00	
BSF	24.25	161	P	24	53.54	0.1
MOF	24.27	161	P	24	54.96	1.4
FEL	24.34	159	P	24	54.26	-0.1
FRB	24.42	284	eP	24	56.00	1.2
FUR	24.47	154	eP	24	56.00	0.6
	2.0s	1273.00nm			6.2mb	
SLE	24.50	159	ePd	24	56.10	0.3
LOR	24.55	166	iPc	24	55.80	-0.5
	1.3s	282.00nm			5.8mb	
BBS	24.69	160	P	25	00.03	2.4
SSF	24.73	167	iPc	24	57.40	-0.6

LOMF	24.73	162	P	24	58.23	0.2
ZLA	24.77	159	ePd	24	58.90	0.5
LBF	24.84	166	iPc	24	58.50	-0.6
MFF	24.99	173	iPc	24	59.60	-0.8
AVF	24.99	167	eP	24	59.70	-0.7
KMR	25.00	150	iP+	25	00.40	-0.2
			iPP	26	08.20	
			iS	29	27.90	
SPC	25.04	140	eP	25	01.80	0.6
SAX	25.11	158	ePd	25	02.40	0.5
BHG	25.13	152	eP	25	02.00	0.2
SMF	25.17	167	eP	25	01.40	-0.8
VKA	25.17	146	ePc	25	01.50	-0.7
	5.0s	2425.00nm			6.1mb X	
Z	13s	5.80um			5.3MszX	
			i	25	13.00	
			e	29	07.00	
			e	29	41.00	
			LR	36	52.00	
BGF	25.19	168	iPc	25	01.40	-0.9
ZST	25.38	145	iP	25	05.90	1.8
Z	14s	11.60um			5.5MszX	
			eS	29	20.00	
			LR	29	36.00	
LSF	25.42	170	eP	25	03.20	-1.3
TCF	25.42	169	iPc	25	03.60	-0.9
LLS	25.44	158	ePd	25	05.40	0.4
MAF	25.50	169	iPc	25	04.20	-1.1
OGA	25.70	155	iPc	25	10.00	2.6
OSS	25.76	157	ePd	25	09.20	1.2
SOP	25.77	146	eP	25	13.80	6.0X
KBA	25.83	151	i(P)	25	09.80	1.2
	1.3s	139.00nm			5.5mb	
			i	25	22.70	
VDL	25.88	158	ePd	25	11.20	2.1
SRO	25.97	144	eP	25	12.70	3.1X
DIX	26.05	161	ePd	25	10.70	0.0
MMK	26.13	160	ePd	25	12.10	0.6
PSZ	26.18	141	eP	25	12.10	0.4
FVI	26.22	153	P	25	12.90	1.0
RJF	26.36	171	iPc	25	12.20	-1.1
BUD	26.43	143	eP	25	17.00	3.2X
RBL	26.49	151	P	25	13.90	-0.6
LPG	26.56	162	eP	25	15.00	-0.4
	1.3s	95.30nm			5.3mb	
CTI	26.59	155	P	25	14.90	-0.6
LSD	26.64	162	P	25	16.32	0.2
LFF	26.68	172	eP	25	15.40	-0.8
CAF	26.77	170	iPc	25	16.00	-1.0
VOY	26.94	151	eP	25	20.20	1.5
LPO	26.96	171	eP	25	17.50	-1.3
	1.3s	118.40nm			5.4mb	
BNI	26.99	163	P	25	19.52	0.3
LJU	27.02	150	eP	25	19.50	0.1
RRL	27.13	162	P	25	21.45	0.8
BMR	27.18	136	ePd	25	15.00	-5.7X
TRI	27.23	152	eP	25	14.50	-6.7X
			eLR	32	44.00	
CEY	27.30	151	eP	25	21.80	-0.1
MBC	27.46	332	eP	25	23.00	0.0
	1.7s	139.00nm			5.4mb	
BOB	27.57	158	P	25	23.80	-0.6
PZZ	27.58	162	P	25	24.52	0.0
VBY	27.66	149	eP	25	25.30	0.1
STV	27.86	162	P	25	26.69	-0.3
ROB	27.86	161	P	25	26.02	-1.0
ENP	27.88	162	P	25	27.39	0.1
FIN	27.98	161	P	25	27.43	-0.7
IMI	28.24	161	P	25	30.25	-0.3
SBF	28.24	162	eP	25	29.70	-0.8
	1.6s	340.70nm			5.9mb	
MME	28.29	157	P	25	29.00	-2.1
BDI	28.40	157	P	25	30.40	-1.6
FRF	28.47	163	eP	25	32.60	0.2
	1.6s	141.70nm			5.5mb	
TIM	28.54	141	iPc	25	33.50	0.5
LRG	28.55	164	eP	25	32.90	-0.2
	1.2s	32.10nm			5.0mb	
EPF	28.57	173	eP	25	32.00	-1.4
	1.1s	228.90nm			5.9mb	
LMR	28.68	163	eP	25	32.90	-1.4
SFI	28.71	155	P	25	34.80	0.3
BZS	28.73	140	eP	25	35.00	0.2
PII	28.73	157	P	25	33.50	-1.3
PGD	28.73	155	P	25	32.40	-2.6
DEV	28.75	138	ePc	25	38.00	3.1X
ERUA	29.15	184	e(P)	25	43.00	4.4X

09d 12h

BEO 29.26 142 eP 25 41.00 1.5
ETER 29.43 169 eP 25 45.00 3.9X
CLO 29.50 139 ePc 25 42.00 0.3
VRI 29.61 133 eP 25 46.00 3.3X
ASS 29.65 154 P 25 41.50 -1.7
CVF 29.68 160 eP 25 41.90 -1.5
0.9s 27.50nm 5.1mb
MLR 29.79 134 ePc 25 46.50 2.0
CFR 30.60 132 eP 25 51.00 -0.4
ETOR 30.71 177 e(P) 25 55.20 2.6
EROQ 30.78 173 e(P) 25 55.00 1.9
EBR 30.78 173 eP 25 52.00 -1.1
eS 31 04.00
BUC 30.85 135 ePd 25 53.00 -0.6
SCH 30.87 271 eP 25 55.00 1.2
BUC1 30.89 135 ePd 25 56.00 2.0
TTG 31.34 145 eP 26 00.00 2.0
e 31 06.00
e 33 20.00
TOL 31.62 180 eP 26 02.00 1.5
ePP 26 55.00
ePcP 28 53.00
iS 31 04.00
ePcS 32 40.00
ESEL 31.95 169 e(P) 26 05.50 2.1
ECHE 31.96 175 eP 26 05.00 1.5
SKO 32.20 142 eP 26 05.00 -0.5
Z 14s 9.93um 5.7MszX
N 14s 9.03um
E 14s 5.44um
i 26 08.00
iPP 27 07.00
i 27 17.00
iS 31 11.00
i 31 28.00
iSS 33 32.00
LR 41 19.00
LIS 32.88 187 iPd 26 14.00 2.6
EVIA 32.88 177 eP 26 13.20 1.6
OHR 32.90 144 iP 26 11.20 -0.5
1.4s 0.28nm 3.0mb X
i 26 17.80
VAY 33.05 141 eP 26 12.30 -0.6
ACU 33.06 174 eP 26 16.00 2.9
EHOR 33.69 181 eP 26 19.80 1.3
ASMO 34.14 179 eP 26 24.50 1.9
AAPN 34.19 180 eP 26 25.50 2.5
CRT 34.31 179 eP 26 28.50 4.5X
ALOJ 34.39 180 eP 26 27.00 2.2
ACHM 34.40 179 eP 26 28.00 3.3X
LPI 34.47 153 P 26 36.97 11.6X
EPRU 34.54 181 eP 26 28.00 2.1
APHE 34.55 179 eP 26 29.00 2.9
ATEJ 34.59 179 eP 26 29.50 3.0X
LIJA 34.61 181 iP 26 29.50 3.0X
GIBL 34.68 182 iP 26 26.50 -0.6
MNO 34.98 153 P 26 30.86 0.9
EJIF 35.05 182 e(P) 26 35.00 4.7X
EZN 35.27 137 eP 26 41.00 8.9X
BRW 36.38 345 eP 26 41.90 0.8
KVT 36.44 124 eP 26 42.80 0.8
INK 36.47 331 eP 26 41.00 -0.9
1.1s 47.00nm 5.2mb
BBTK 36.76 129 ePd 26 51.00 6.2X
KHL 37.43 134 eP 26 49.00 -1.4
[illegible] 38.03 315 eP 26 54.40 -0.6
IMA 41.19 342 eP 27 22.50 1.1
1.9s 116.60nm 5.3mb
GAC 41.54 271 eP 27 27.50 3.2X
FBA 41.66 338 eP 27 25.70 0.6
FFC 41.67 300 eP 27 25.00 -0.2
1.0s 70.00nm 5.3mb
TAB 42.11 114 eP+ 27 31.00 1.7
RSNY 42.27 269 P 27 38.00 7.7X
Z 22s 8.47um 5.6Msz
RSON 42.68 291 P 27 32.60 -1.0
1.5s 194.88nm 5.6mb
MSL 42.77 119 eP 27 37.00 2.5
eS 34 03.00
SLY 44.17 117 ePc 27 47.00 1.2
ePP 29 26.00
ePPP 30 22.00
eS 34 21.50
eSS 37 44.50
eSSS 39 11.00
eLQ 43 46.00
eLR 46 03.00

TTA 44.49 342 P 27 46.30 -2.0
1.8s 92.59nm 5.4mb
PMR 45.02 337 e(P) 27 54.00 1.6
IR7 45.57 111 eP 27 59.00 1.7
IR2 45.70 111 eP 27 51.00 -7.2X
TEH 45.77 110 eP 28 02.00 3.1X
KER 45.80 115 eP 28 01.00 1.9
MKT 45.81 130 e(P) 28 01.00 2.0
IR1 45.86 111 eP 27 50.30 -9.3X
EDM 46.03 308 ePc 28 00.50 -0.1
BHD 46.03 119 ePc 28 02.30 1.6
ePP 29 46.00
eS 34 51.00
MBH 46.87 131 eP 28 07.00 -0.3
MAIO 47.75 102 eP 28 15.00 0.6
eS 35 16.00
SES 48.01 304 eP 28 16.00 -0.2
pP 29 45.00 457kmX
WMO 49.82 71 eP 28 30.00 -0.2
8.0s 0.90nm 2.8mb X
Z 24s 5.20um 5.5MszX
N 13s 2.50um
E 13s 1.80um
KSH 50.12 84 eP 28 32.00 -0.7
N 12s 2.60um
sP 28 41.00
S 35 46.00
PNT 51.18 311 eP 28 43.00 2.5
LRM 52.58 303 eP 28 50.70 -0.7
FVM 53.28 280 P 28 54.40 -1.9
JSC 53.75 270 P 29 00.00 0.2
RSCP 53.92 275 P 29 05.00 3.9X
Z 20s 5.08um 5.6Msz
LON 54.11 311 P 29 00.00 -2.4
GOL 56.25 294 P 29 16.20 -2.2
Z 18s 9.10um 5.9Msz
RLO 56.39 284 eP 29 16.90 -2.1
LNO 56.86 284 eP 29 19.30 -3.0X
TUL 56.86 284 eP+ 29 23.20 0.8
1.5s 52.90nm 5.3mb
Z 18s 4.72um 5.6Msz
e 29 40.80
eS 37 19.00
LR 46 00.00
ACO 57.17 288 ePd 29 23.70 -0.9
1.5s 175.80nm 5.9mb
SIO 57.17 285 e(P) 29 22.60 -2.0
VVO 57.37 284 e(P) 29 24.00 -2.0
GTA 57.44 63 eP 29 25.80 -0.9
1.6s 0.20nm 2.9mb X
Z 22s 5.20um 5.6Msz
E 15s 2.00um
S 37 27.00
OCO 57.74 286 eP 29 26.30 -2.3
UYO 58.05 282 eP 29 29.70 -1.1
MEO 58.76 286 eP 29 33.80 -2.0
2.0s 297.90nm 6.0mb
BTO 59.11 54 iPc 29 39.00 0.7
Z 16s 2.90um 5.5MszX
N 16s 3.00um
E 15s 0.50um
pP 29 46.00 23kmX
PP 31 51.00
eS 37 40.00
HHC 59.28 53 P 29 40.00 0.6
N 16s 2.00um
E 13s 0.60um
sP 29 49.00
CN2 59.68 40 Pd 29 41.00 -1.0
4.5s 1.00nm 3.2mb X
Z 16s 2.20um 5.4MszX
E 10s 0.90um
PP 31 57.00
eS 37 52.00
MDJ 59.72 37 eP 29 41.00 -1.3
Z 20s 2.10um 5.3Msz
esP 29 53.00
S 37 55.00
MIN 60.08 308 eP 29 46.30 1.3
WDC 60.09 309 ePd 29 45.20 0.3
KVN 60.40 305 P 29 46.00 -1.3
NDI 60.43 88 eP 29 49.00 1.7
e(S) 38 06 00
ORV 60.80 308 eP 29 50.30 0.6
ALO 60.99 293 eP 29 50.50 -0.8
2.0s 80.88nm 5.5mb
e 30 36.50

e 32 06.50
eS 38 14.00
TNP 61.07 304 P 29 50.50 -1.4
SNY 61.18 42 Pc 29 51.00 -1.2
Z 18s 1.20um 5.1Msz
N 32s 1.50um
E 30s 2.30um
eS 38 13.00
BJI 61.18 49 eP 29 51.00 -1.3
4.0s 0.82nm 3.2mb X
Z 20s 2.42um 5.3Msz
N 15s 2.12um
e 32 10.00
eS 38 17.00
LZH 61.68 61 Pc 29 57.00 1.0
4.0s 833.00nm 6.3mb X
Z 20s 5.20um 5.7Msz
sP 30 05.00
eS 38 18.00
CMB 61.95 306 ePd 29 58.60 1.0
TIY 62.46 53 eP 30 00.30 -0.7
N 18s 4.00um
S 38 34.00
FRI 62.76 306 e(P) 30 02.60 -0.3
MHC 62.93 307 e(P) 30 04.10 -0.1
CLC 63.31 303 eP 30 09.00 2.4
GKN 63.43 81 P 30 06.80 -0.8
DL2 63.54 45 P 30 08.00 0.0
Z 18s 1.80um 5.3Msz
eS 38 40.00
GSC 63.58 302 eP 30 11.00 2.5
ISA 63.69 304 eP 30 09.00 -0.1
e 30 11.00
PRI 63.81 306 e(P) 30 12.60 2.6
KKN 63.83 81 P 30 09.80 -0.5
1.3s 126.00nm 5.9mb
GUN 63.91 80 P 30 10.50 -0.5
1.2s 202.00nm 6.2mb
DMN 63.94 81 P 30 10.90 -0.2
1.4s 203.00nm 6.1mb
PKI 64.07 81 P 30 11.60 -0.5
1.5s 172.00nm 6.0mb
SBB 64.43 303 eP 30 16.00 2.0
TIC 64.72 181 P 30 14.70 -1.2
0.9s 14.00nm 5.2mb
MWC 64.93 303 eP 30 19.00 1.6
RVR 64.97 302 eP 30 16.00 -1.4
KIC 65.00 180 P 30 15.80 -1.9
0.7s 29.50nm 5.6mb
XAN 65.00 57 P 30 17.00 -0.7
PAS 65.03 303 eP 30 19.00 1.2
TIA 65.05 50 eP 30 16.90 -1.0
Z 22s 1.30um 5.1Msz
E 21s 2.30um
eS 39 03.00
LIC 65.13 181 P 30 16.48 -2.1
0.9s 36.00nm 5.6mb
S 39 10.00
GLA 65.15 300 eP 30 18.00 -0.7
SYP 65.16 305 eP 30 21.00 2.2
PLM 65.43 302 eP 30 23.00 2.4
LEGH 65.76 175 eP 30 23.00 0.5
WEGH 65.81 176 eP 30 22.00 -0.9
BAR 66.01 301 eP 30 26.00 1.8
CD2 66.51 63 eP 30 27.40 0.0
Z 18s 2.60um 5.5Msz
N 17s 3.70um
sP 30 36.50
S 39 20.50
SHL 67.97 76 iP 30 37.40 0.6
BNG 68.47 155 iPd 30 38.20 -1.6
0.7s 35.00nm 5.7mb
NIIJ 68.55 31 P 30 40.90 0.8
MTMJ 68.99 32 P 30 42.10 -0.8
MAT 69.10 32 (P) 30 43.00 -0.5
1.8s 236.36nm 6.1mb
Z 18s 0.69um 4.9Msz
eS 39 53.00
NJ2 69.44 49 Pc 30 45.00 -0.5
Z 18s 1.80um 5.4Msz
TSRJ 69.70 34 eP 30 45.50 -1.6
CHJJ 69.72 31 P 30 48.40 1.2
WHN 69.75 54 P 30 48.00 0.6
Z 24s 1.37um 5.1MszX
KAKJ 69.76 30 P 30 47.50 0.1
SSE 70.91 48 P- 30 53.00 -1.5
1.2s 55.00nm 5.6mb

09d 12h

Z 20s 1 50um 5.2Msz
I 31 00 00
S 40 12 00
sS 41 12.00
SS 44 44.00
HYB 71.37 91 eP 30 57.00 -0.5
GYA 71.54 62 P 30 57.80 -0.7
KMI 71 67 66 Pc 31 00.00 0.5
5.0s 0.50nm 2.9mb X
E 17s 1.40um
PcP 31 13.50
sP 32 10.00
PP 33 53.00
S 40 22.00
SS 45 17.00
GBA 74.59 93 P 31 20.00 3.7X
1.6s 71.20nm 5.4mb
QZH 76.17 52 eP 31 26.00 0.7
CHG 76.48 71 iPc 31 26.70 -0.4
1.0s 41.25nm 5.5mb
CHTO 76.48 71 eP 31 26.00 -1.1
1.5s 95.16nm 5.7mb
BOG 79.24 252 eP 31 46.00 3.2X
NST 79.80 71 eP 31 47.10 1.8
SOB1 84.06 216 eP 32 08.70 1.3
HON 85.71 335 P 32 20.00 4.3X
Z 20s 1.33um 5.3Msz
BUL 94.12 149 eP 32 56.00 0.7
WB5 123.15 48 ePKP 38 33 30 -0.1
WRA 123.21 48 PKP 38 37.00 3.5X
1.1s 8.30nm
ASPA 126.68 50 iPKPd 38 41.20 0.9
1.9s 40.00nm
MAW 145.84 141 ePKP 39 16.00 1.9
TAU 148.20 41 ePKP 39 24.00 5.4X
PGZ 149.11 359 ePKP 39 23.40 3.3X
1.4s 230.00nm
MNG 149.11 0 PKP 39 24.70 4.5X
WEL 149.78 1 ePKP 39 26.00 4.9X
S.D. = 1.3 on 246 of 302 obs.

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* JUN 09, 1989 12h 25m 56.77± 0.89s
71.699 N ±10.2km 3.717 W ±10.9km
DEPTH = 10.0km (geophysicist)
4.4mb (9 obs.)
JAN MAYEN ISLAND REGION (639)

KEV 10.27 86 eP 28 39.00 12.0X
SOD 11.37 97 iP 28 41.90 -0.1
HFS 13.52 140 eP 29 09.90 -0.9
0.4s 9.00nm 5.1mb
SUF 14.47 113 iP 29 24.20 1.0
EKA 16.43 179 P 29 51.00 2.4
0.9s 5.30nm 3.7mb
LPF 23.78 176 eP 31 08.70 -1.0
LOR 24.77 168 eP 31 19.50 0.1
0.7s 7.00nm 4.4mb
SSF 24.95 168 eP 31 21.00 -0.1
LBF 25.06 167 eP 31 22.50 0.3
0.7s 7 00nm 4.5mb
MFF 25.23 174 eP 31 22.70 -1.1
0.7s 5.20nm 4.3mb
BGF 25.41 169 eP 31 25 30 -0.2
0.8s 8 00nm 4.5mb
TCF 25 64 170 eP 31 27 30 -0.4
0 8s 6 70nm 4 4mb
MAF 25 73 170 eP 31 28 00 -0 5
0 8s 5 30nm 4 3mb
RJF 26.59 172 eP 31 36 80 0.3
EPF 28.81 174 eP 31 56 90 0.2
0.7s 5.50nm 4 5mb
FBA 41.49 338 e(P) 33 45.00 0.2
1.0s 0.70nm 3.3mb X
S.D. = 0.9 on 15 of 16 obs.

% JUN 09, 1989 13h 02m 00.57± 0.64s
60.699 N ± 5.1km 5.517 E ± 6.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK 0.27 216 iP+ 02 06.82 0.6
eSg 02 10 12
BER 0.33 196 eP 02 06.26 -1 1
eSg 02 12 07
SUE 0.52 314 iP 02 11.17 0.2
eS 02 18 41
HYA 0.57 35 eP 02 11.50 -0.6
eS 02 19.14
ODD1 0.96 145 eP 02 18 61 -0.3
eS 02 31.45
BLS1 1.47 153 iP 02 27.91 0.7
iS 02 47.58
KMY 1.50 185 eP 02 27.53 0.1
eS 02 47.35
NRA0 2.96 87 iPnd 02 49.00 0.6
iPg 02 52.40
eS 03 21.50
S.D. = 0.8 on 8 of 8 obs.

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* JUN 09, 1989 13h 09m 44.09± 0.57s
10.608 S ± 9.6km 119.517 E ± 9.8km
DEPTH = 33.0km (normal)
4.4mb (7 obs.)
SUMBA ISLAND REGION (287)

KUG 4.03 84 ePd 10 51.40 6.3X
0.5s 168.10nm
KHKI 4.45 300 eP 10 50.00 -1.1
eS 11 43.00
e 16 30.00
MKS 5.36 359 iPc 11 05.20 1.4
i(S) 12 06.60
TRT 7.38 292 ePc 11 34.60 2.3
KNA 10.35 121 eP 12 13.00 -0.5
eS 14 14.00
MBL 10.50 178 eP 12 14.50 -0.9
0.4s 17.00nm 5.6mb X
eS 14 04.00
MTN 11.59 102 iP 12 30.00 -0.3
e 14 34.00
MEKA 15.95 183 eP 13 28.30 0.6
eS 16 15.00
WARB 16.89 157 eP 13 31.20 -8.5X
0.4s 5.00nm 4.0mb
WB5 17.02 125 eP 13 41.20 -0.2
eS 16 41.70
WRA 17.04 125 Pd 13 41.20 -0.4
0.6s 5.80nm 3.9mb
MRWA 18.81 190 eP 14 07.00 3.6X
eS 17 18.00
ASPA 18.89 135 iPc 14 07.90 3.4X
0.6s 26.00nm 4.6mb
Z 17s 0.51um 3.9MszX
eS 17 31.60
LR 22 15.50
QIS 21.71 120 iPc 14 36.90 2.5
CTA 27.41 113 eP 15 36.00 7.1X
0.9s 15.13nm 4.7mb
BRS 35.45 123 iPc 16 44.90 5.3X
CHTO 35.59 325 e(P) 16 40.00 -0.7
1.2s 3.82nm 4.2mb
XAN 45.53 34B P 18 01.00 -1.5
GBA 48.19 299 Pc 18 22.50 -1.2
0.7s 3.10nm 4.4mb
TIY 48.52 352 Pc 18 24.60 -1.4
BJI 50.48 357 eP 18 38.00 -2.9X
GTA 53.03 341 eP 18 58.80 -1.5
WMQ 61.41 334 eP 20 02.40 2.8
MAIO 73.20 313 eP 21 14.00 0.1
BUL 87.25 250 iPc 22 32.80 3.5X
1.0s 5.00nm 4.7mb
CNCB 151 77 165 PKP 29 43 00 11 1X
LPB 152 00 164 (PKP) 29 45 00 12 9X
ZOBO 152 25 164 PKP 29 43.00 10 3X
S.D. = 1.5 on 17 of 28 obs.

JUN 09, 1989 13h 38m 06.97± 0.71s
41.673 N ± 8.5km 19.961 E ± 6.7km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.7 (TTG).

ULC 0.61 299 ePg 38 18.70 -0.5
eSg 38 30.00
OHR 0.84 131 iPn 38 21.50 -1.8
PVY 0.92 1 ePg 38 24.10 -0.6
eSg 38 41.00
BDV 1.04 306 ePg 38 27.00 0.4
eSg 38 46.50
SKO 1 14 74 iPn 38 28.80 0 4
0.7s 260.00nm
iSn 38 44 50
Lg 38 49 50
e 38 51.00
IVA 1.20 358 ePg 38 29.40 0 0
eSg 38 51.00
HCY 1.34 306 ePg 38 31.50 -0.1
eSg 38 54.50
NKY 1.34 328 ePg 38 31.50 -0.3
eSg 38 55.40
BRY 1.62 320 ePn 38 36.50 0.8
eSn 39 01.50
VAY 1.99 99 ePn 38 40.70 -0.3
LIT 2.48 128 eP 38 50.00 2.0
S.D. = 1.0 on 11 of 11 obs.

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* JUN 09, 1989 13h 39m 55.51± 0.54s
10.566 S ± 9.4km 119.460 E ± 9.9km
DEPTH = 33.0km (normal)
4.6mb (8 obs.)
SUMBA ISLAND REGION (287)

KUG 4.08 85 eP 41 02.00 4.8X
0.8s 271.20nm
KHKI 4.38 300 eP 41 02.50 1.0
eS 42 55.50
e 46 58.00
MKS 5.31 0 iPc 41 17.00 2.3
KNA 10.42 121 eP 42 25.50 -0.3
MBL 10.54 178 eP 42 27.00 -0.4
eS 44 17.00
MTN 11.65 102 iPd 42 42.40 -0.2
e 44 45.00
MEKA 15.99 183 eP 43 41.00 1.3
eS 46 27.00
WARB 16.95 157 eP 43 43.00 -8.9X
WB5 17.09 125 eP 43 53.20 -0.5
eS 46 56.50
WRA 17.11 125 Pc 43 52.50 -1.4
1.0s 7.50nm 3.8mb
MRWA 18.84 189 eP 44 19.00 3.8X
eS 47 25.00
ASPA 18.96 135 iPc 44 19.90 3.2X
1.3s 36.00nm 4.4mb
Z 22s 0.59um 5.5Msz
eS 47 40.20
LR 51 11.70
QIS 21.78 120 iPc 44 49.20 2.6
CTA 27.48 113 iPd 45 44.20 3.2X
1.1s 12.66nm 4.5mb
CHTO 35.52 325 e(P) 46 51.10 -0.5
1.0s 3.75nm 4.3mb
GBA 48.12 299 P 48 35.00 0.5
0.4s 2.20nm 4.5mb
GUN 50.20 320 P 48 51.10 0.2
PKI 50.26 320 P 48 50.00 -1.3
0.8s 8.00nm 4.8mb
BJI 50.44 357 eP 48 50.50 -1.5
DMN 50.48 320 P 48 51.70 -1.2
0.8s 15.00nm 5.0mb
GKN 51.05 320 P 48 55.20 -1.9
MAIO 73.13 313 eP 51 26.00 1.0
BUL 87.21 250 iPc 52 44.40 3.9X
1.0s 6.50nm 4.8mb
iPP 55 05.90
CNCB 151.82 165 PKP 59 55.00 11.6X
LPB 152.06 164 (PKP) 59 54.00 10.4X
ZOBO 152.30 164 PKP 59 54 00 9 8X
S.D. = 1 4 on 17 of 26 obs

& JUN 09, 1989 13h 55m 49 33s
60.713 N 151.857 W
DEPTH = 73.2km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

RDT 0.30 243 eP 56 00.84 -0.3
NKA 0.31 84 iP 56 02.37 1.4
SPU 0.48 349 eP 56 01.91 -0.6
RED 0.54 237 eP 56 02.69 -0.4
CRP 0.57 345 iP 56 03.27 -0.3
SLKM 0.83 104 eP 56 05.64 -0.6
ILIM 0.84 221 iP 56 05.86 -0.5
S 56 19.31
SUA 0.93 35 eP 56 07 05 -0.4
CNPM 1.23 165 iP 56 10.52 -0.7
S 56 27.88
OPT 1.27 213 iP 56 11 41 -0 3
S 56 29.16
SPT 1.28 7 eP 56 11.03 -0 9

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                    S      56 28.50
SEW      1.34 116 eP       56 11.92   -0.7
PWA      1.34  45 iP       56 13.02    0.3
KNK      1.80  66 eP       56 17.24   -1.6
        14 obs. associoted
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    JUN  09, 1989  14h 46m 04.90± 0.19s
    29.395 N ± 3.6km  102.302 E ± 3.1km
    DEPTH =  10.0km  (geophysicist)
    5.1mb ( 40 obs.)  4.4Msz (  1 obs.)
  SICHUAN PROVINCE, CHINA              (307)

CD2      1.97  40 iPgc   46 43.30    4.6X
                 iSg     47 10.20
KMI      4.27 175 iPnd    47 13.00    1.3
                 Pg      47 26.00
                 Sn      47 57.00
                 Sg      48 13.00
GYA      4.84 126 iPnd    47 20.00    0.3
                 Sn      48 16.40
                 Sg      48 41.00
LZH      6.80  11 eP      47 51.00    3.7X
                 Lg      49 39.00
XAN      7.29  49 Pn      47 52.50   -1.6
     N  10s      8.20um
     E  10s      6.50um
                 Pg      48 20.00
                 Sn      49 19.40
                 Sg      49 52.60
SHL     10.01 250 eP      48 30.60   -1.3
                 eS      51 48.00
GTA     10.20 349 eP      48 38.00    3.5X
     Z  12s      4.30um
     E  10s      4.30um
WHN     10.51  81 iPd     48 38.50   -0.1
                 S       50 32.00
CHG     10.97 197 iPc     48 47.00    2.0
        1.1s     21.84nm          5.4mb
                 eS      51 54.00
CHTO    10.97 197 iP      48 46.70    1.7
        1.3s     31.86nm          5.5mb
GZH     11.73 120 eP      48 52.40   -2.8
     E  10s      7.30um
                 S       50 56.00
TIY     11.83  43 eP      48 54.50   -2.3
     Z  16s      3.20um
                 S       51 12.00
BTO     12.83  27 eP      49 10.00   -0.2
     Z  10s      1.90um
     N  10s      1.20um
     E  10s      1.90um
                 sP      49 19.00
HHC     13.70  31 eP      49 21.50   -0.1
NST     13.80 189 eP      49 24.40    1.4
TIA     14.19  58 Pd      49 27.90   -0.1
     Z  14s      2.80um
NJ2     14.48  75 Pd      49 31.00   -0.8
     Z  10s      2.10um
                 eS      52 11.00
GUN     14.50 268 P       49 31.40   -1.0
PKI     14.97 267 P       49 36.80   -1.8
        1.1s     58.00nm          5.0mb
KKN     15.04 268 P       49 38.10   -1.3
QZH     15.16 103 eP      49 41.50    0.8
     N  10s      5.40um
DMN     15.23 267 P       49 39.80   -2.0
BJI     15.56  43 eP      49 47.00    1.1
     Z  16s      1.47um
     N  10s      1.13um
     E  10s      1.00um
                 eS      52 59.00
GKN     15.57 269 P       49 45.00   -1.2
        1.1s     61.00nm          4.8mb
SSE     16.41  79 Pd      49 57.00    0.2
        1.0s     27.00nm          4.3mb
     N  14s      8.10um
                 SS      54 31.00
NNT     16.89 189 eP      50 04.00    1.0
WMQ     18.53 325 P       50 23.50    0.2
     Z  11s      2.40um
     N  10s      2.30um
     E  11s      2.10um
DL2     18.57  54 P       50 26.00    2.3
                 eS      53 58 00
SNY     21 22  49 Pc      50 52.80   -0.2
     Z  16s      2 00um           4.6MszX
     E  16s      1.80um

                    S      54 41.00
CN2     23.39  46 Pc      51 15 00    0.5
        3.0s      0.40nm          2.4mb X
     Z  17s      0.60um          4.1MszX
     E  10s      0.50um
                 eS      55 28.00
KSH     23.84 302 eP      51 23.00    3.9X
                 eS      55 40.00
IPM     24.71 183 ePc     51 27.00   -0.6
        0.8s     41.70nm          5.1mb
HYB     24.79 247 eP      51 29.00    0.7
MDJ     26.40  47 eP      51 44.50    1.3
     Z  16s      1.30um          4.6MszX
PSI     26.75 188 iPd     51 46.60    0.0
MAT     30.83  67 (P)     52 23.00   -0.2
MAIO    36.39 292 eP      53 14.00    2.6
KEV     57.66 337 eP      55 57.00   -0.3
SOD     57.73 334 iP      55 57.30   -0.6
PMG     57.92 125 eP      55 59.00   -0.8
WB5     57.93 144 iPd     55 58.00   -1.8
WRA     57.97 144 Pd      55 58.40   -1.6
        0.6s     19.70nm          5.3mb
SUF     58.02 328 iP      55 59.40   -0.5
NUR     58.89 326 eP      56 06.00    0.0
     Z  22s      0.30um          4.4Msz
                 LR      22 50.00
WARB    59.99 155 eP      56 03.00  -11.0X
ASPA    60.88 147 eP      56 18.70   -1.4
        1.0s     16.00nm          5.1mb
QIS     61.31 140 eP      56 21.00   -2.1
UPP     62.46 325 iP      56 28.10   -2.2
KRA     63.38 314 eP      56 35.90   -0.6
SPC     63.41 313 eP      56 38.20    1.2
SKO     64.62 305 e(P)    56 45.00    0.2
CTA     64.93 134 iP      56 47.00    0.0
        0.9s     14.71nm          5.2mb
KSP     65.41 316 eP      56 50.00    0.2
NAO     65.50 327 P       56 48.70   -1.5
        1.3s     13.00nm          5.0mb
ZST     65.68 313 e(P)    56 50.50   -1.0
                 LR      15 27.00
BRW     65.87  20 eP      56 53.00    0.6
PRU     66.74 315 eP      56 51.50   -6.8X
BRG     66.82 316 eP      56 59.50    0.7
        1.0s     12.00nm          5.0mb
CLL     67.24 317 eP      57 01.00   -0.4
KHC     67.61 315 iPc     57 04.50    0.6
WET     68.03 315 eP      57 07.50    1.0
ALE     68.06 358 eP      57 08.00    1.8
        1.2s     16.00nm          5.1mb
HOF     68.25 316 eP      57 08.50    0.7
KBA     68.45 313 eP      57 13.00    3.7X
        1.3s     25.00nm          5.2mb
BHG     68.52 313 iPc     57 10.70    1.1
GRF     68.86 316 eP      57 12.20    0.6
        2.1s     51.00nm          5.3mb
IMA     68.92  25 eP      57 11.70   -0.2
FUR     69.37 314 eP      57 16.00    1.2
OGA     70.01 313 iPc     57 19.20    0.3
        1.0s     14.00nm          5.0mb
RUP     71.36 317 ePc     57 27.94    1.0
MBC     71.45  10 eP      57 28.00    1.1
        0.9s     17.00nm          5.2mb
FEL     71.51 315 ePc     57 28.40    0.5
FBA     71.64  25 ePd     57 28.50    0.2
CDF     71.75 316 eP      57 28.80   -0.5
WLF     71.91 317 P       57 31.30    1.2
BSF     72.28 315 eP      57 31.70   -0.8
        1.1s     19.50nm          5.1mb
HAU     72.48 316 eP      57 33.10   -0.5
PMR     72.78  28 eP      57 34.70   -0.3
        1.2s     35.20nm          5.3mb
FIN     72.87 311 P       57 35.69   -0.3
LSD     73.03 313 P       57 38.05    0.9
ROB     73.06 312 P       57 37.02   -0.1
CVF     73.11 310 eP      57 37.10   -0.3
        1.2s     38.00nm          5.4mb
IMI     73.21 311 P       57 38.46    0.5
LPG     73.28 313 eP      57 38.50   -0.1
        0.9s     29.40nm          5.4mb
ENR     73.38 312 P       57 38.46   -0.5
STV     73.43 312 P       57 38.05   -1.2
RRL     73.50 312 P       57 40.20    0.3
SBF     73 52 311 eP      57 39 40   -0 4
        1.1s     36 10nm          5 3mb
FRF     74 17 311 eP      57 43 10   -0 3
        1.1s     16.60nm          5 0mb

INK     74.27  19 ePc     57 43.60    0.0
LOR     74.32 316 eP      57 43.50   -0.8
LMR     74.36 311 eP      57 44.50    0.0
        1.1s     16.60nm          5.0mb
LBF     74.37 315 eP      57 43.90   -0.7
        1.1s     12.20nm          4.8mb
LRG     74.40 311 eP      57 44.70   -0.1
        1.0s     25.60nm          5.2mb
EKA     74.47 325 P       57 45.00    0.1
        1.6s     19.30nm          4.9mb
SMF     74.61 315 eP      57 45.60   -0.3
        1.2s     35.70nm          5.3mb
SSF     74.62 316 eP      57 45.30   -0.7
        1.0s     12.80nm          4.9mb
AVF     74.84 315 eP      57 46.80   -0.5
        1.1s     25.30nm          5.2mb
BGF     75.26 315 eP      57 49.30   -0.4
MAF     75.58 315 eP      57 51.50   -0.1
        1.2s     26.70nm          5.2mb
TCF     75.77 315 eP      57 52.50   -0.2
        1.1s     32.70nm          5.3mb
LSF     76.21 315 eP      57 54.70   -0.4
CAF     76.50 314 eP      57 57.30    0.5
        1.1s     18.00nm          5.1mb
GRR     76.61 318 eP      57 57.30    0.0
        0.9s      6.50nm          4.7mb
RJF     76.66 315 eP      57 58.20    0.5
        1.0s     17.60nm          5.1mb
LPF     76.89 318 eP      57 58.70   -0.1
MFF     77.06 316 eP      57 59.80    0.0
        1.0s     16.00nm          5.1mb
LPO     77.16 314 eP      58 00.70    0.3
        1.0s     12.00nm          4.9mb
LFF     77.32 315 eP      58 01.50    0.2
        1.1s     29.30nm          5.3mb
BNG     82.41 271 iPc     58 31.50    2.4
        0.3s      5.00nm          5.1mb
TOL     82.94 312 eP      58 33.50    2.0
YKA     83.77  16 eP      58 39.60    4.4X
YKC     83.82  16 eP      58 36.30    0.8
BUL     86.38 245 iPd     58 49.40    0.3
        1.1s     25.32nm          5.3mb
FRB     86.89 356 eP      58 51.00    0.3
EDM     92.08  21 ePc     59 18.00    2.5
PNT     93.19  26 eP      59 22.00    1.4
FFC     93.65  14 eP      59 22.00   -0.6
        1.2s     37.00nm          5.6mb
ATB    144.53 312 PKPd    05 42.20   -1.7
BAO    149.44 290 ePKP    05 56.00    4.0X
ZOBO   164.25 324 PKP     06 10.30   -0.5
LPB    164.45 323 ePKP    06 04.00   -6.8X
CNCB   164.62 322 PKP     06 08.00   -3.1X
     S.D. = 1.1  on 112 of 123 obs.
-------------------------------------------
&  JUN  09, 1989   15h 06m 32.96s
    60.913 N          149.283 W
    DEPTH =  16.6km
  KENAI PENINSULA, ALASKA              ( 14)
      <AGS-P>.

SLKM     0.61 229 iP       06 44.76   -0.1
KNK      0.64  38 iP       06 45.28   -0.1
PME      0.73   9 iP       06 46.43   -0.4
                 S       06 57.21
PWA      0.79 339 eP       06 47.42   -0.5
SEW      0.82 186 iP       06 47.49   -0.8
GHO      0.88  11 iP       06 48.93   -0.5
SUA      0.90 309 eP       06 48.91   -0.9
NKA      0.97 261 eP       06 51.66    0.7
VZW      1.34  83 eP       06 55.38   -1.6
SPU      1.38 283 iP       06 55.84   -1.6
                 S       07 14.69
CGLM     1.38 288 eP       06 56.07   -1.5
CRP      1.44 286 eP       06 57.21   -1.2
SKT      1.52 316 eP       06 58.50   -1.0
RDT      1.57 259 iP       06 58.92   -1.3
CNPM     1.70 216 eP       07 00.46   -1.6
KLU      1.73  69 eP       07 01.45   -1.1
                 S       07 24.83
RED      1.79 255 eP       07 02.11   -1.3
                 S       07 25.32
TOA      1.91  50 eP       07 05.35    0.2
ILIM     2.00 247 eP       07 04.95   -1.5
GLB      2.70  76 eP       07 14 65   -1 9
PAX      2 74  39 eP       07 17 27    0 2
                 S       07 52 06
KTH      2.76 345 eP       07 15.96   -1 4
```

09d 15h

```
                S      07 51.43
MCK     2.83    3 eP    07 17.92   -0 4
BALM    3.38   85 eP    07 23.78   -2.4
      24 obs. assaciated
-----------------------------------------
   JUN 09, 1989  15h 34m 11.64± 0.12s
    7.865 S ± 2.8km  117.517 E ± 3.3km
   DEPTH = 245.2km  (geaphysicist)
   5.8mb ( 37 abs )
 BALI SEA                          (278)
      Felt (III) at Karangasem, Bali.
      Depth fram broadband
      displacement seismagrams.
      FAULT PLANE SOLUTION: P-Waves
       NP1:Strike= 50 Dip=80 Slip=  90
       NP2:       230     10        90
       Principal Axes:
        T              Plg=55  Azm=320
        P                35      140
      Comment: The focal mechanism is
        paarly cantrolled and
        correspands ta reverse
        faulting. The preferred fault
        plane is NP2.
      RADIATED ENERGY
       No. of sta:   5  Facal mech.  M
       Energy       0.4±0.2*10**13 Nm
      MOMENT TENSOR SOLUTION
      Dep 244          No. af sta: 10
      Mament Tensar;   Scale 10**17 Nm
        Mrr= 0.76       Mtt= 0.02
        Mff=-0.78       Mrt= 2.96
        Mrf= 2.22       Mtf=-0.48
       Principal axes:
        T  Val=  3.81  Plg=50  Azm=331
        N       -0.01     8       231
        P       -3.80    39       135
      Best Double Couple:Mo=3.8*10**17
       NP1:Strike=179 Dip=10 Slip=  37
       NP2:       52     84        98
      CENTROID, MOMENT TENSOR    (HRV)
      Data Used: GDSN
      L.P.B.: 17S, 34C
      Centraid Lacatian:
      Origin Time       15:34:13.9 0.4
      Lat  8.05S 0.04 Lan 117.29E 0.04
      Dep 247.6 1.8 Half-duration  2.6
      Mament Tensar;   Scale 10**17 Nm
        Mrr=-0.01 0.08  Mtt=-0.35 0.11
        Mff= 0.36 0.14  Mrt= 3.48 0.11
        Mrf= 1.28 0.09  Mtf= 1.12 0.13
       Principal Axes:
        T  Val=  4.09  Plg=41  Azm=326
        N       -0.42     17       72
        P       -3.67     44      178
      Best Double Couple:Ma=3.9*10**17
       NP1:Strike=346 Dip=17 Slip=-175
       NP2:       252     89       -73

KHKI    1.95 255 iPc   34 54.90   1.3
                i(S)   35 27.90
MKS     3.27  37 iPd   35 10.90   3.7X
TRT     4.84 272 iPc   35 28.50   2.7
                iS     36 15.80
KUG     6.42 111 iPc   35 46.40   0 8
                e(S)   36 54.50
PCI     7 29  19 ePc   36 03 00   6 4X
                e(S)   36 35.50
AAI    11.40  69 ePd   36 56.50   7 5X
MNI    11.78  39 ePc   36 58.50   4.8X
        1.0s   998.10nm      6.0mb
MBL    13.41 171 eP    37 12.40  -1.5
KNA    13.51 126 iPc   37 13.20  -2.0
        0.5s   471.00nm      6.0mb
                eS     39 40.00
KKM    13.88 355 ePc   37 23.50   3.7X
        1.0s   983.40nm      6.1mb
                e      37 40.50
MTN    14.27 111 iPd   37 23.90  -0.7
        0.8s   523.00nm      5.9mb
                eS     39 52.00
                e      49 07.00
DAV    16.89  29 eP    37 56.00   0.8
                eS     41 09.00
KGM    17.23 304 ePd   38 01.20   2 3
        1.4s  1053.00nm      6.1mb
PPI    18.58 293 eP    38 12.50  -0.4

MEKA    18.67 177 iPd   38 14.00    0.1
                eS     41 43.00
WARB    20 18 156 iPd   38 19.40   -9.6X
WB5     20.23 128 iPd   38 29.00   -0.5
                ePcP   41 39.30
                iS     41 56.80
WRA     20.24 128 Pc    38 29.90    0.2
        0.7s   143.60nm      5.6mb
IPM     20.58 306 ePc   38 34.20    1.2
        1.2s   276.90nm      5.7mb
MRWA    21.29 184 iPd   38 40.40    0.6
                eS     42 44.00
PSI     21.31 299 ePd   38 41.50    1.4
ASPA    22.22 137 iPd   38 49.50    0.6
        1.4s  1963.00nm      6.4mb
      Z 23s     1.84um      4.4MszX
                e      39 14.40
                eS     42 33.40
                e      42 51.90
                LR     47 35.70
                iScS   49 32.10
SNG     22.52 311 eP    38 53.10    1.2
        1.3s   607.69nm      6.0mb
                S      42 40.50
BAL     22.64 182 iPc   38 53.30    0.4
                eS     43 20.00
KLB     23.61 179 iPd   39 01.90   -0.2
JAY     23.69  78 ePd   39 04.00    1.0
MUN     24.02 183 iPd   39 05.90    0.0
        1.2s     7.00nm      4.1mb X
BAG     24.31   7 eP    39 08.00   -0.9
QIS     24.81 123 iPd   39 13.20   -0.1
        0.7s   191.00nm      5.7mb
                e      39 55.00
                e      43 10.00
                e      43 47.00
NWAO    24.94 181 eP    39 14.26   -0.1
RKG     26.08 181 iPc   39 30.20    5.4X
NNT     26.93 319 eP    39 34.00    1.5
QIZ     27.77 344 P     39 41.60    1.5
NST     29.04 324 eP    39 53.50    2.2
PMG     29.34  95 eP    39 52.00   -2.0
CTA     30.36 117 iPd-  40 03.10    0.1
        1.0s   405.00nm      6.0mb
                i      40 19.30
                i      40 49.90
                iPP    41 09.00
                i      41 18.10
                iS     44 45.00
                iScP   46 13.20
CTAO    30.36 117 ePd   40 03.15    0.2
                epP    40 50.82  238kmX
                ePP    41 08.64
CHG     32.22 326 iPc   40 20.80    1.6
        1.2s   119.14nm      5.4mb
QZH     32.63   2 P     40 23.50    1.0
STK     32.76 140 iPd   40 23.70    0.0
        0.3s    75.00nm      5.8mb
                e      41 17.00
                i      46 22.40
ADE     33.26 147 iPd   40 27.80   -0.2
        1.1s   379.75nm      5.9mb
GUMO    34.52  52 iP    40 38.70   -0.1
        0.3s    95.39nm      5.9mb
PJG     34.52  52 iP    40 38.90    0.1
GUA     34 53  52 eP    40 38.80   -0 1
        0 3s   259 74nm      6 3mb
RMO     34 97 126 iPd   40 44.40    1.9
        0.9s   302.00nm      5.8mb
                e      46 31.00
CMS     35.33 136 iPc   40 46.60    1.1
        0.9s   124.00nm      5.4mb
                e      46 05.00
                e      46 31.00
GYA     35.71 343 iPc   40 50.80    2.0
        3.0s     1.20nm      2.9mb X
                pP     41 43.00  251kmX
                sP     42 08.00
                PP     42 21.00
                PcP    43 12.00
                S      46 09.40
                ScP    46 32.40
                ScS    50 38.40
BFD     36 98 146 iPd   40 59 80    0 5
        1 1s   480 00nm      5 9mb
                e      41 07 00
WHN     38.31 356 iPc   41 12.00    1 7

                pP     42 06.50  266kmX
                PcP    43 18.50
BRS     38.60 125 iPc   41 14.50    1.6
                i      42 00.00
                iScP   46 43.70
                iS     46 52.20
SSE     38.90   5 Pc    41 16.00    0.9
        4.0s     1.20nm      2.8mb X
      Z 20s      1.00um      4.6Msz
      N 12s      0.80um
                pP     42 12.00  274kmX
                PcP    43 21.00
                sP     43 34.00
                i      44 08.00
                ScP    46 44.00
                S      46 55.00
                sS     47 32.00
                SS     48 52.00
TOO     38.94 144 iPd   41 17.50    1.9
        1.1s   737.00nm      6.1mb
                e      46 45.00
COO     39.28 130 iPd   41 21.10    2.6
        0.9s   433.00nm      6.0mb
                e      42 11.00
                e      42 54.00
                e      46 47.00
NJ2     39.71   2 iPc   41 24.00    2.2
        5.0s     2.10nm      2.9mb X
                pP     42 15.00  245kmX
                sP     42 42.00
                ScP    46 46.50
                S      47 10.00
CAN     39.72 138 iPd   41 23.00    1.0
                e      46 47.20
CNB     39.96 138 iPc   41 25.10    1.1
        1.1s   581.00nm      5.9mb
                e      42 13.00
                e      46 49.00
RIV     40.37 135 iPd   41 29.60    2.4
CD2     40.75 342 iPc   41 31.00    0.6
        4.0s     1.46nm      2.8mb X
                pP     42 26.80  271kmX
                sP     42 51.40
                PP     43 15.00
                iS     47 23.00
KAGJ    40.89  18 P     41 32.00    0.5
SHL     41.55 324 iP    41 37.80    0.6
                iS     47 34.00
VSG     41.73  95 eP    41 38.00   -0.7
KUMJ    42.13  17 iP+   41 42.20    0.6
XAN     42.46 349 iPc   41 44.70    0.3
TAU     43.63 148 iPd   41 54.90    1.3
                i      42 39.30
                e      43 40.00
                i      47 03.80
SHNJ    43.70  16 iP+   41 54.80    0.5
KOD     43.74 294 eP    41 53.40   -1.8
TIA     43.84 360 Pc    41 55.40    0.1
                PcP    43 37.10
                eS     48 03.50
TKSJ    44.47  20 eP    42 01.10    0.7
SHK     44.54  18 iPc   42 01.40    0.5
        0.9s   571.43nm      5.9mb
GBA     45.15 298 Pd    42 01.00   -5.0X
        1.2s    63.20nm      4 8mb
WKYJ    45 22  21 P     42 07 00    0 6
IONJ    45 39  18 P     42 08 40    0 8
LZH     45.57 344 ePc   42 10 60    1 4
        4.0s   833 00nm      5.4mb X
                epPc   43 03.41  249kmX
                esPd   43 29.23
                ePP    44 02.51
                eS     48 31.89
TIY     45.59 354 iPc   42 09.60    0.4
        0.9s     0.20nm      2.5mb X
                pP     43 01.00  241kmX
                S      48 31.00
HYB     45.97 303 eP    42 10.50   -2.0
        1.0s   100.00nm      5.1mb
                e      42 55.50
                e      47 15.00
TSRJ    46.55  21 P     42 16.70    0.0
DL2     46 69   4 Pc    42 18 00    0.3
                eS     48 40 00
GUN     46 91 321 Pc    42 19.80   -0 3
PKI     46 97 320 Pc    42 19.80   -0 7
DMN     47 19 320 Pc    42 21.50   -0.7
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KKN 47.20 320 Pc 42 21.20 -1.0
IIDJ 47.21 23 P 42 22.10 0.2
BJI 47.68 359 ePc 42 25.70 0.4
4.0s 1.20nm 2.6mb X
Z 18s 0.89um 4.8Msz
pP 43 16.00 233kmX
esPd 43 45.99
ePP 44 20.09
ScP 47 19.00
eS 49 01.44
esS 50 37.00
eScS 51 50.00
GKN 47.76 320 Pc 42 25.80 -0.6
CHJJ 48.13 23 P 42 27.90 -1.0
MAT 48.26 22 iPc 42 28.90 -1.0
1.3s 548.08nm 5.8mb
eS 49 02.00
BTO 48.71 352 iPc 42 33.00 -0.5
S 49 09.50
KAKJ 48.74 24 P 42 31.40 -2.1
HHC 48.78 354 iPc 42 34.00 0.0
S 49 17.00
DZM 49.11 112 iPc 42 37.40 0.6
NIIJ 49.17 23 P 42 36.30 -0.5
SNY 49.76 6 iPc 42 40.50 -0.7
PcP 43 58.00
S 49 26.00
GTA 49.82 342 iPc 42 43.00 1.1
1.0s 0.20nm 2.5mb X
pP 43 38.00 255kmX
sP 44 05.00
ScP 47 28.80
S 49 30.00
sS 51 06.00
ScS 52 03.40
PVC 50.36 106 iPc 42 48.00 1.8
YAMJ 50.38 23 iP+ 42 46.20 0.1
OFUJ 51.81 24 P 42 57.00 0.3
CN2 51.92 7 iPc 42 56.50 -0.9
3.0s 0.60nm 2.5mb X
pP 43 50.00 244kmX
PcP 44 03.00
ScP 47 38.00
S 49 54.00
iScS 52 17.00
AOMJ 52.59 22 eP 43 03.40 1.0
NDI 53.20 315 iPc 43 05.00 -2.1
MDJ 53.36 11 ePc 43 08.26 0.2
epPc 44 01.39 241kmX
eS 50 19.09
MRRJ 54.47 21 P 43 15.50 -0.6
HOOJ 55.27 23 eP 43 22.10 0.3
KUSJ 56.43 24 P 43 29.40 -0.6
ASAJ 56.51 22 P 43 30.30 -0.3
MSZ 56.92 139 P 43 32.80 -0.7
e 44 28.00
WMQ 58.11 335 ePc 43 41.59 -0.3
4.0s 1.10nm 2.8mb X
epPc 44 38.20 253kmX
esPd 45 03.20
eS 51 23.26
esS 52 57.32
e 52 59.28
TCW 60.07 133 P 43 54.50 -0.8
KRP 60.12 129 P 43 56.30 0.6
MRW 60.38 133 P 43 56 30 -1 1
SNZO 60.41 133 ePd 43 56 22 -1 3
WEL 60.45 133 P 43 57.00 -0.8
1.2s ********nm 8.3mb X
e 44 49.00
WDW 60.60 133 P 43 57.50 -1.4
CAW 60.61 133 P 43 57.80 -1.2
DRV 60.70 170 eP 43 59.00 -0.1
MNG 60.78 132 P 43 58.90 -1.2
KSH 60.78 324 P 43 59.00 -1.2
S 51 56.00
MOW 60.83 133 P 43 59.20 -1.3
PGZ 61.36 132 P 44 03.50 -0.4
MAW 69.80 199 iPd 44 57.90 0.9
1.0s 180.00nm 5.8mb
MAIO 69.90 313 iPc 44 57.00 -1.3
1.6s 139.76nm 5.4mb
eS 53 44 00
SBA 74.34 170 iPd 45 25.20 1.7
IR2 76.04 310 iP+ 45 34.00 0.0
IR1 76.11 309 iP+ 45 34.70 0.3
IR7 76.27 310 iP+ 45 35.60 0.3

NPA 76.71 256 iP 45 44.10 6.2X
e 46 46.60
ARO 76.72 284 iP+ 45 37.50 -0.5
SMY 77.06 31 P 45 39.50 0.5
0.8s 126.44nm 5.7mb
KER 78.55 307 eP 45 46.00 -1.8
SLY 80.18 308 iPd 45 55.00 -1.3
e 55 02.00
SLY 80.18 308 ePd 45 57.00 0.7X
eS 55 50.00
eScS 55 58.00
TAB 80.29 311 eP 45 57.00 0.0
ADK 81.66 35 P 46 02.50 -1.1
0.8s 37.93nm 5.2mb
SPA 82.19 180 ePd 46 07.00 0.7
1.8s 288.89nm 5.7mb
MSL 82.23 308 eP 46 07.50 0.6
eS 56 01.50
SLR 85.95 245 iPc 46 26.90 0.9
0.9s 58.82nm 5.4mb
i 47 26.00
BUL 86.31 250 iPd 46 28.00 0.2
1.0s 138.00nm 5.7mb
iS 56 28.20
PRY 86.53 243 iPd 46 28.50 -0.3
1.0s 45.00nm 5.3mb
BFS 87.14 243 iPc 46 31.50 -0.2
0.7s 20.55nm 5.1mb
HRI 87.45 304 eP 46 34.00 1.0
MKT 87.50 302 iPc 46 34.00 0.8
MBH 87.52 300 iPc 46 34.00 0.8
SNA 92.24 197 iPd 46 57.50 3.0X
1.0s 38.00nm 5.4mb
TTA 95.34 27 P 47 08.00 -0.8
BRW 96.02 19 P 47 12.80 1.2
VRI 96.13 315 ePc 47 12.00 -0.7
IMA 96.64 24 P 47 14.90 0.2
pP 48 15.00 246kmX
MLR 96.65 315 ePc 47 14.00 -1.2
KEV 97.50 339 eP 47 17.00 -1.3
SOD 97.54 337 eP 47 17.00 -1.5
SUF 97.56 332 iP 47 17.20 -1.5
NUR 98.20 330 iP 47 20.60 -1.0
PMR 98.46 29 P 47 22.30 -0.4
BNG 99.47 273 iPc 47 28.00 -0.5
0.8s 26.00nm 5.7mb
id 48 30.00
ic 51 30.00
iS 57 37.00
SPC 100.65 319 ePdiff47 32.40 -0.9
e 51 22.70
e 52 21.70
KRA 100.84 319 ePdiff47 33.30 -0.5
ZST 102.76 318 ePdiff47 41.10 -1.3
e 50 47.20
e 51 55.30
e 52 55.10
INK 104.23 21 ePdiff47 48.00 -0.4
VOY 105.08 315 e(PKP)52 06.00 -0.3
BSF 109.67 318 ePKP 52 13.60 -1.4
0.7s 7.70nm
HAU 109.94 318 ePKP 52 14.30 -1.1
0.7s 6.60nm
LPG 110.10 316 ePKP 52 15.30 -0.8
LMR 110 62 313 ePKP 52 16.10 -0.6
LRG 110 70 313 ePKP 52 16 50 -0 4
SNF 110 74 321 PKP 52 16 30 -0 4
LOR 111 73 318 ePKP 52 17.90 -0.8
0.5s 2.20nm
BGF 112.57 317 ePKP 52 19.90 -0.4
0.6s 12.65nm
MAF 112.83 317 ePKP 52 20.20 -0.7
TCF 113.06 317 ePKP 52 20.90 -0.5
CAF 113.46 316 ePKP 52 21.80 -0.4
0.7s 6.60nm
LSF 113.52 317 ePKP 52 21.30 -1.0
EKA 113.60 328 PKP 52 22.00 -0.1
0.8s 4.70nm
RJF 113.75 316 ePKP 52 22.40 -0.3
YKA 113.75 24 ePKP 52 22.40 0.2
YKC 113.82 24 iPKP 52 25.70 3.4X
LDF 114.00 320 ePKP 52 22.40 -0.7
LPO 114 13 316 ePKP 52 23.10 -0.4
0 7s 5.50nm
FLN 114 18 320 ePKP 52 22 80 -0.6
0.8s 9.40nm
LFF 114 37 316 ePKP 52 23 40 -0 5

0.6s 12.65nm
GRR 114.53 320 ePKP 52 23.40 -0.7
MFF 114.56 318 ePKP 52 23.30 -0.9
0.6s 6.30nm
LPF 114.75 320 ePKP 52 23.70 -0.8
0.7s 13.25nm
BMW 115.65 42 PKP 52 26.00 -0.4
DMU 116.17 327 ePKP 52 26.80 -0.2
DLE 116.22 326 ePKP 52 26.50 -0.6
LON 116.50 41 PKP 52 27.50 -0.5
PNT 117.04 38 ePKP 52 29.00 0.1
EDM 118.99 32 iPKPd 52 32.50 0.0
0.6s 22.00nm
ASMO 119.46 309 ePKP 52 32.70 -1.3
APHE 119.51 308 ePKP 52 33.90 -0.2
AAPN 119.76 309 ePKP 52 33.00 -1.6
ATEJ 119.77 308 ePKP 52 34.00 -0.7
KVN 121.40 49 ePKP 52 38.50 0.8
SES 121.61 34 ePKPd 52 36.90 -0.7
BMK 121.67 306 iPKPd 52 38.00 -0.1
KIC 122.72 273 PKP 52 40.40 -0.3
0.7s 30.50nm
LRM 122.87 40 ePKP 52 40.80 0.4
LIC 122.99 272 PKP 52 40.90 -0.3
0.7s 38.50nm
TIC 123.02 273 PKP 52 40.92 -0.4
0.8s 42.50nm
PEC 123.50 54 PKP 52 42.40 0.7
FFC 123.66 26 ePKP 52 41.00 -0.3
0.9s 27.00nm
FRB 124.05 3 ePKP 52 42.00 0.2
GLA 125.60 55 PKP 52 47.00 1.1
MSU 125.95 48 PKP 52 47.50 0.8
RSSD 128.92 38 PKP 52 52.00 -0.1
RSON 129.95 25 ePKPc 52 53.00 -0.5
i 55 50.10
GOL 130.28 43 PKP 52 55.00 0.1X
ANMO 131.55 50 ePKP 52 56.99 -0.3
iSKP 55 57.59
ALQ 131.55 50 ePKP 52 58.00 0.6
i 55 57.70
e 57 52.50
SCH 133.05 3 ePKP 52 59.00 -0.3
GAC 140.67 14 ePKP 53 07.00 -6.7X
OLY 141.78 40 ePKP 53 10.10 -6.0X
PWLA 144.23 37 ePKP 53 17.90 -2.4X
SCP 144.46 20 ePKP 53 18.48 -2.0
eSKP 56 33.65
RSCP 145.23 34 PKP 53 21.00 -1.0
TBR 145.26 16 iPKP 53 22.60 0.8
PNJ 145.49 16 iPKPd 53 22.90 0.7
BRAS 145.55 208 iPKPc 53 22.50 -0.6
VAO 145.77 206 ePKP 53 24.50 1.2
e 54 27.10
e 54 39.20
GBTN 145.93 33 ePKP 53 23.60 0.5
TKL 146.16 32 ePKP 53 24.10 0.6
ITB7 146.23 194 ePKP 53 25.30 1.4
NAV 146.30 27 ePKP 53 23.70 0.0
BLA 146.55 26 ePKPd 53 24.30 0.2
ITB 146.55 194 e(PKP)53 24.90 0.5
CVL 146.71 23 ePKP 53 24.00 -0.3
ITB1 146.74 194 PKPc 53 27.30 2.6X
NA2 146.86 22 ePKP 53 24.50 0.0
ANT 147.68 166 ePKP 53 30.70 4.5X
PRM 148.11 32 iPKP 53 31 30 4 6X
PPD 148.33 200 ePKP 53 29 60 2 2X
e 53 31.90
e 53 33.10
e 53 34.70
JSC 148.53 31 PKP 53 27.50 0.2
SGS 149.77 31 iPKP 53 35.40 6.2X
SOB1 152.61 232 ePKP 53 35.10 1.1
e 53 41.80
e 53 52.20
e 54 43.60
ARE 154.24 160 e(PKP)53 44.00 7.5X
CCH 154.66 172 PKP 53 39.80 2.8X
CNCB 154.89 168 PKP 53 40.00 2.4
LPB 155.13 167 PKP 53 36.00 -1.8
1.2s 93.75nm
i 54 06.00
Lg 04 07.00
ZOBO 155.38 167 PKP 53 39 00 0 7
1 0s 12 50nm
Z 24s 0 15um 4.7MszX
i 54 05 40

09d 15h

LR 07 40.00
ATB 164.92 223 PKPc 53 48.60 0.6
S.D. = 1.0 on 216 of 239 obs.

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* JUN 09, 1989 16h 29m 44.95± 1.40s
23.384 N ±12.2km 121.413 E ±16.9km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWF1 0.11 253 iPc 29 48.00 0.2
eS 29 50.10
TWG 0.64 209 iPd 29 57.90 0.1
eS 30 07.90
TWD 0.71 14 ePc 29 58.20 -0.8
TWK 0.86 262 iPc 30 01.00 -0.5
TWC 1.28 18 ePc 30 08.00 -0.7
eS 30 25.70
ANP 1.79 3 eP 30 18.00 1.8
S.D. = 1.2 on 6 of 6 obs.

JUN 09, 1989 16h 38m 13.46± 0.54s
8.112 S ± 8.5km 117.581 E ± 7.7km
DEPTH = 242.0 ± 10.0 km
4.6mb (2 obs.)
SUMBAWA ISLAND REGION (285)

KHKI 1.97 263 iPc 38 55.30 0.0
iS 39 27.20
e 43 17.00
MKS 3.43 33 iPd 39 11.30 0.6
TRT 4.92 274 ePd 39 29.00 0.5
eS 40 21.70
KUG 6.27 109 ePc 39 46.70 1.2
eS 40 53.00
MBL 13.15 171 eP 41 11.50 -1.2
KNA 13.31 126 eP 41 13.00 -1.7
eS 43 42.00
MTN 14.13 111 iPd 41 24.30 -0.4
eS 43 53.00
KKM 14.13 354 ePd 41 23.50 -1.3
MEKA 18.42 177 eP 42 14.00 0.7
eS 45 41.00
WARB 19.93 155 eP 42 19.70 -8.9X
e 42 47.00
WB5 20.03 127 iPd 42 29.20 -0.4
eS 46 19.30
WRA 20.04 128 Pd 42 29.50 -0.3
0.4s 5.20nm 4.4mb
MRWA 21.05 184 eP 42 40.00 0.4
eS 46 45.00
ASPA 22.00 137 iPc 42 49.00 0.2
0.9s 28.00nm 4.8mb
eS 46 31.80
COOL 22.90 172 eP 42 57.00 -0.5
QIS 24.62 122 iPd 43 13.60 -0.1
CTA 30.19 116 iP 44 04.20 0.6
BRS 38.41 124 iPd 45 15.20 1.7
S.D. = 1.0 on 17 of 18 obs.

JUN 09, 1989 16h 52m 12.10± 0.15s
20.260 N ± 2.8km 145.147 E ± 3.4km
DEPTH = 148.8km (3 depth phases)
5.4mb (39 obs)
MARIANA ISLANDS (216)
CENTROID. MOMENT TENSOR (HRV)
Data Used GDSN
L.P.B 135 230
Centroid Location:
Origin Time 16.52:14.6 0 9
Lat 20.16N 0.06 Lon 144.73E 0.09
Dep 149.3 2 7 Half-duration 1 6
Moment Tensor; Scale 10**16 Nm
Mrr=-4.59 0.78 Mtt= 6.53 0.86
Mff=-1.95 0.92 Mrt=-4.97 0.70
Mrf= 5.49 0.74 Mtf= 5.74 1.01
Principal Axes:
T Val= 9.78 Plg=10 Azm=158
N 2.16 43 258
P -11.95 45 58
Best Double Couple:Mo=1.1*10**17
NP1:Strike=209 Dip=51 Slip=-152
NP2: 101 68 -42

GUMO 6 64 182 iPc+ 53 50 00 1.5
PJG 6 64 182 iPc 53 50.20 1.7
GUA 6 69 182 iPc 53 50.30 1.2
1.4s 6809 30nm 6.8mb x

WKYJ 16.28 331 P 55 53.30 -0.3
IIDJ 16.45 339 P 55 54.40 -1.2
KAKJ 16.47 346 P 55 55.10 -0.8
eS 58 54.50
CHJJ 16.63 342 P 55 57.30 -0.5
eS 58 57.20
KAGJ 16.82 313 eP 56 00.30 0.1
TKSJ 16.85 327 P 56 00.40 -0.1
TSRJ 17.22 334 P 56 04.10 -0.9
MAT 17.32 341 eP 56 04.00 -2.3
0.8s 216.42nm 5.5mb
eS 59 18.00
KUMJ 17.70 317 eP 56 10.70 0.0
NIIJ 17.75 344 P 56 10.20 -1.1
eS 59 27.10
SHK 17.99 325 iPd 56 13.50 -0.6
0.7s 328.77nm 5.8mb
YONJ 18.09 328 P 56 13.90 -1.2
YAMJ 18.39 347 iP+ 56 18.50 0.2
SHNJ 18.59 321 P 56 19.10 -1.3
OFUJ 18.99 352 P 56 24.30 -0.4
AOMJ 20.64 350 eP 56 42.80 1.4
HOOJ 22.11 356 P 56 57.20 1.3
MRRJ 22.36 352 P 56 59.30 1.0
KUSJ 22.77 359 eP 57 02.90 0.6
JAY 23.05 191 iPd 57 05.00 -0.3
1.2s 247.20nm 5.5mb
ASAJ 23.88 356 P 57 14.60 1.5
RAB 25.26 163 eP 57 23.90 -2.3
NJ2 26.29 302 Pd 57 37.00 1.5
LAT 26.81 176 eP 57 38.00 -2.3
MNI 27.27 229 eP 57 45.60 1.1
DL2 27.50 318 P 57 47.60 1.2
MDJ 27.51 336 eP 57 46.30 -0.1
epP 58 23.50 183kmX
S 02 17.00
eScP 04 25.70
SNY 28.20 324 Pc 57 50.40 -2.3
CN2 28.66 329 Pc 57 54.80 -2.0
TIA 29.22 309 eP 58 00.90 -1.0
PMG 29.55 176 eP 58 02.00 -2.8
0.7s 49.32nm 5.3mb
KKM 31.44 247 ePd 58 23.00 1.4
BJI 31.66 315 eP 58 21.50 -1.7
eS 03 16.00
eScP 04 39.00
eScS 08 40.00
PCI 32.51 233 ePd 58 31.60 0.7
1.0s 11.50nm 4.6mb
VSG 32.64 153 eP 58 29.00 -3.0
TIY 33.26 309 eP 58 37.00 -0.3
eS 03 36.00
XAN 34.84 301 P 58 49.80 -1.0
HHC 35.15 313 eP 58 53.20 -0.2
MTN 35.67 204 eP 58 57.00 -0.8
MKS 35.75 228 iPc 59 01.30 2.8
GYA 35.77 287 P 59 00.40 1.7
pP 59 34.80 156km
S 04 26.40
ScP 04 53.00
BTO 36.11 312 P 59 01.20 -0.3
CD2 38.61 294 eP 59 23.00 0.5
KNA 39.24 205 eP 59 27.80 0.2
LZH 39.36 303 eP 59 29.00 0.3
SMY 39.39 28 P 59 29.40 0.9
0.7s 56.20nm 5.4mb
CTA 40.11 178 iP 59 33.90 -0.9
1.0s 34.00nm 5.0mb
KHKI 40.66 228 ePd 59 40.30 0.9
e 02 48.00
QIS 40.93 188 eP 59 41.00 -0.4
WB5 41.26 195 iPc 59 44.20 0.0
eS 05 44.80
WRA 41.33 195 Pd 59 45.10 0.3
0.8s 42.90nm 5.1mb
NST 42.96 271 eP 00 01.80 3.6X
GTA 43.20 306 P 00 00.00 0.0
PcP 01 47.20
ScP 05 22.40
ScS 09 43.00
ADK 43.31 34 iPd 00 00.80 0.3
0.8s 119.90nm 5.6mb
CHG 43 46 276 eP 00 04.00 1.8
CHTO 43 46 276 eP 00 03.90 1.7
1.0s 3.50nm 3.9mb X
pP 00 34.20 134kmX
ASPA 45 01 195 iPc 00 13.90 -0.6

0.7s 35.00nm 5.1mb
Z 22s 0.26um 4.1MszX
eS 06 39.00
LR 17 58.90
SNG 45.02 260 eP 00 16.50 1.8
IPM 45.64 256 ePd 00 21.50 1.9
RMQ 46.60 176 eP 00 25.00 -2.0
DZM 46.93 153 iPc 00 28.30 -1.5
BRS 47.94 171 iPd 00 35.90 -1.5
MBL 48.04 212 eP 00 38.30 0.1
SHL 49.08 287 eP 00 47.00 0.5
WARB 49.54 202 eP 00 40.20 -9.5X
0.3s 12.00nm 5.1mb
STK 51.96 184 eP 01 06.00 -1.8
WMQ 52.91 310 P 01 15.00 0.1
pP 01 47.40 139km
PcP 02 21.50
ScP 05 58.50
S 08 32.00
ScS 10 45.00
FORR 53.39 198 eP 01 37.00 18.6X
SDN 53.48 35 eP 01 17.70 -1.1
GUN 54.20 290 P 01 26.00 0.9
PKI 54.65 290 P 01 28.60 0.3
0.4s 10.00nm 5.0mb
KKN 54.74 290 P 01 29.30 0.5
0.6s 23.00nm 5.2mb
DMN 54.92 290 P 01 29.70 -0.4
0.5s 17.00nm 5.1mb
GKN 55.29 291 P 01 33.20 0.5
COOL 55.84 205 eP 01 35.00 -1.2
MRWA 56.66 211 eP 01 41.00 -1.1
KLB 57.86 208 eP 01 49.00 -1.5
TTA 58.11 27 iPc 01 51.80 -0.2
KDC 58.39 34 eP 01 53.00 -0.9
IMA 60.07 24 iPd 02 04.90 -0.6
i 02 48.70
PMR 60.86 30 eP 02 09.20 -1.5
0.8s 94.20nm 5.8mb
i 02 51.80
BRW 60.93 18 iPd 02 11.10 0.0
NDI 61.68 292 iPc 02 17.00 0.2
0.8s 44.78nm 5.5mb
FBA 62.13 26 eP 02 18.00 -1.2
TOA 62.33 30 P 02 20.40 -0.2
SIT 67.57 36 P 02 53.40 -0.8
INK 68.15 23 iPd 02 57.00 -0.7
0.7s 65.00nm 5.6mb
MBC 71.78 15 ePd 03 19.40 -0.1
0.9s 88.00nm 5.5mb
AFR 74.07 116 eP 03 34.00 0.2
0.8s 40.00nm 5.2mb
PPN 74.36 116 eP 03 36.00 0.5
0.8s 30.00nm 5.1mb
PMO 74.54 113 iP 03 37.00 0.5
0.8s 50.00nm 5.3mb
TPT 74.77 113 iP 03 38.40 0.6
0.8s 40.00nm 5.2mb
VAH 74.87 113 iP 03 38.30 -0.1
0.8s 35.00nm 5.1mb
MAIO 74.91 303 iPd 03 39.50 0.9
RUV 75.06 113 iP 03 39.80 0.3
0.8s 30.00nm 5.1mb
PGC 75.97 43 eP 03 45 00 0.9
0.8s 97 00nm 5 6mb
MCW 76 36 43 eP 03 47 50 1 1
ALE 76 59 4 ePd 03 48 50 1 4
0.7s 55 00nm 5 4mb
pP 04 26.00 152km
BMW 76.68 45 iP 03 49.20 0 9
GMW 76.69 44 iP 03 49 60 1 4
YKA 76.86 28 eP 03 49.30 0.5
YKC 76.92 28 iPd 03 48.70 -0.5
0.7s 168.00nm 5.9mb
HTW 77.28 44 iP 03 52.40 0.9
SHW 77.42 45 eP 03 53.70 1.3
LON 77.55 45 iP 03 53.50 0.5
FHC 77.69 51 ePd 03 55.20 1.3
PNT 78.22 42 iPd 03 57.40 0.8
1.0s 122.00nm 5.6mb
VGB 78.59 46 iP 03 59.70 0.9
WDC 78.80 51 iPd 04 00.60 0.6
LBFM 79.05 50 eP 04 17 20 15 6X
LTCM 79.22 51 iP 04 02 50 0.3
DPW 79 55 43 eP 04 04 50 0 6
MIN 79.55 51 ePd 04 04.20 0 0
BRP 79.82 53 eP 04 05.90 0.5

BKS 79.83 53 ePd 04 06 20 0.7
0.8s 116.00nm 5.7mb
PCC 79.84 54 ePd 04 05.70 0.2
ORV 79.87 52 ePd 04 06.00 0.3
GCC 80.27 54 ePd 04 08.10 0.2
KEV 80.30 342 iP 04 07.20 -0.1
0.5s 81.20nm 5.7mb
MHC 80.45 54 ePd 04 09.60 0.6
ARN 80.53 54 iP 04 10.00 0.7
EDM 80.65 37 iPd 04 10.00 0.4
PRS 80.97 55 iPd 04 12.20 0.6
CMB 81.17 53 iPd 04 13.30 0.7
PRI 81.57 55 ePd 04 15.70 0.9
SOD 81.72 340 iP 04 14.40 -0.4
IR2 81.77 305 eP 04 16.50 0.6
IR7 81.98 305 iP- 04 18.80 1.8
IR1 82.01 305 iP- 04 19.20 2.0
FRI 82.02 54 iPd 04 17.40 0.4
BCH 82.33 55 eP 04 19.70 0.9
KVN 82.53 51 iP 04 20.50 0.6
SYP 82.63 56 eP 04 21.00 0.6
DAG 82.69 356 iPd 04 18.70 -1.0
0.9s 11.76nm 4.7mb
SES 83.05 39 ePd 04 22.30 0.2
0.5s 147.00nm 6.1mb
ISA 83.41 55 eP 04 24.00 -0.2
TNP 83.51 52 iPc 04 25.60 0.7
LRM 83.97 43 iPd 04 27.50 0.4
CLC 84.02 54 eP 04 27.00 -0.3
PAS 84.16 56 eP 04 28.00 0.0
MWC 84.22 56 eP 04 29.00 0.5
SBB 84.24 55 eP 04 28.00 -0.4
SUF 84.50 336 iP 04 27.90 -1.2
0.5s 19.00nm 5.2mb
GSC 84.81 54 eP 04 31.00 -0.3
RVR 84.83 56 eP 04 31.00 -0.3
PEC 85.04 56 iP 04 35.60 3.2X
PLM 85.46 56 eP 04 34.00 -0.7
BAR 85.85 57 eP 04 26.00 -10.5X
FFC 86.06 32 iPd 04 37.40 0.4
0.7s 222.00nm 6.1mb
NUR 86.37 335 iP 04 36.70 -1.6
DAU 86.92 48 iP 04 40.60 -1.3
MSU 87.03 50 iP 04 43.30 1.0
GLA 87.16 56 eP 04 43.00 0.2
PV09 89.21 49 iP 04 53.30 0.5
PV10 89.33 49 iP 04 53.50 0.2
UPP 89.51 336 iP 04 51.30 -2.0
RSSD 90.09 42 iP 04 56.50 -0.2
NAO 91.22 339 P 04 59.50 -1.8
1.0s 9.20nm 4.9mb
GOL 91.29 47 iPd 05 03.40 1.0
0.9s 76.70nm 5.8mb
GLD 91.37 47 iPd 05 01.20 -1.4
1.1s 133.80nm 6.0mb
FRB 92.24 14 eP 05 05.00 -0.9
RSON 92.38 33 ePc 05 05.80 -1.0
ALQ 92.70 51 iPd 05 10.10 1.2
1.0s 40.63nm 5.6mb
i 05 38.00
e 05 44.80
e 05 49.30
KSP 96.16 330 eP 05 23.00 -1.1
MBH 96.47 305 eP 05 25.00 -0.9
BRG 97.21 331 e(P) 05 28.00 -0.9
CLL 97.32 332 iP 05 27.40 -1.9
e 06 09.00
EKA 100.02 342 Pdiffd 05 41.20 -0.1
2.1s 33.50nm 5.5mb
BUL 120.79 258 iPKPc 10 47.50 -1.4
0.9s 4.20nm
BNG 122.12 289 ePKPc 10 51.00 -0.4
0.4s 6.00nm
PEL 145.68 119 iPKPc 11 35.40 0.7
ZOBO 148.19 88 PKPd 11 38.90 -0.9
1.0s 145.00nm
LPB 148.27 89 PKP 11 41.00 1.2
1.0s 140.00nm
CNCB 148.43 89 PKP 11 41.50 1.3
CCH 150.27 90 PKP 11 33.70 -9.0X
i 11 49.20
ATB 156.09 47 e(PKP) 11 50.70 0.1
BAO 166.68 72 ePKP 12 02.40 1 0
SOB1 167.56 29 ePKP 12 01.90 -0.1
e 13 08.30
S.D. = 1.1 on 174 of 181 obs.

JUN 09, 1989 18h 04m 05.74± 0.20s
39.671 N ± 5.6km 74 490 E ± 3.4km
DEPTH = 33.0km (normal)
5.2mb (56 obs.) 4.7Msz (1 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH 1.17 100 iPgc 04 28.00 2.0
Sg 04 40.00
WMQ 10.70 63 iPd 06 38.00 -1.9
S 08 38.00
NDI 11.19 168 iPd 06 42.70 -3.7X
0.6s 146.67nm 6.4mb X
eS 08 48.00
eSS 09 00.80
MAIO 12.30 259 eP 06 58.00 -3.5X
0.6s 15.43nm 5.3mb
eS 09 18.00
GKN 14.36 141 P 07 23.00 -5.8X
KKN 14.85 140 P 07 29.40 -5.9X
DMN 14.91 141 P 07 31.20 -5.0X
GUN 15.06 138 P 07 33.00 -5.1X
PKI 15.10 140 P 07 32.80 -5.8X
TEH 18.69 265 eP 08 26.00 2.5
eS 12 10.00
GTA 19.52 83 iPc 08 33.00 -0.4
0.8s 0.10nm 2.1mb X
Z 14s 1.80um 3.6MszX
S 12 12.00
SHL 20.26 129 iP 08 37.40 -3.9X
eS 15 16.00
SHI 20.60 248 eP 08 45.00 0.2
TAB 21.95 275 eP 09 02.00 3.6X
HYB 22.45 170 eP 09 02.50 -0.9
0.8s 85.70nm 5.3mb
i 09 04.50
KER 22.46 265 eP 09 05.00 1.6
SLY 23.27 269 ePc 09 14.00 2.9X
e 17 46.00
LZH 23.40 89 eP 09 13.50 0.9
4.0s 806.00nm 5.6mb X
Z 14s 1.30um 4.5MszX
eS 13 20.00
BRF 24.14 243 (P) 09 20.20 0.6
BJA 24.17 243 (P) 09 20.70 0.8
BEE 24.22 243 iP 09 21.60 1.2
0.5s 84.00nm 5.5mb
MSL 24.84 272 eP 09 23.50 -2.9
BHD 24.96 265 eP 09 29.00 1.5
CD2 25.35 101 P 09 32.40 1.1
BTO 27.07 76 eP 09 46.00 -1.2
Z 12s 0.70um 4.4MszX
N 12s 0.50um
E 12s 0.50um
esP 10 05.00
KMI 27.78 113 Pc 09 53.50 -0.3
Z 12s 1.60um 4.8MszX
E 11s 2.20um
sP 10 07.00
PP 10 59.50
S 14 54.00
XAN 28.01 91 Pd 09 56.20 0.6
KOD 29.44 174 eP 10 08.00 -0.9
TIY 29.54 82 eP 10 09.00 -0.4
Z 14s 1.40um 4.7MszX
E 10s 0.70um
GYA 29.84 106 P 10 12.80 0.5
BJI 31.79 76 eP 10 29.50 0.3
MKT 33.05 267 iPd 10 47.50 7.2X
TIA 33.57 82 Pd 10 44.80 0.1
Z 14s 0.70um 4.5MszX
E 12s 0.50um
WHN 33.63 93 eP 10 45.50 0.3
eS 16 10.00
MBH 33.79 265 eP 10 48.00 1.4
YLV 34.23 286 iP 10 50.90 0.5
NNT 34.99 133 eP 10 56.50 -0.6
DST 35.02 285 eP 10 57.70 0.5
VRI 35.18 296 eP 10 58.50 0.1
MLR 35.77 296 ePc 11 05.50 1.9
NJ2 36.45 88 Pd 11 10.00 0.7
Z 10s 0.60um 4.7MszX
HLW 36 47 268 eP 11 10.00 0.5
EZN 36.67 286 iP 11 12.50 1.4
SUF 36 80 325 iP 11 12.60 0 7
0.6s 8.80nm 4 8mb
NUR 36 98 321 iP 11 14 00 0.6
Z 20s 1.20um 4 7Msz

LR 27 00.00
SOD 38.12 332 iP 11 24.80 1.9
SSE 38.66 88 Pc 11 29.00 1.1
1.0s 49.00nm 5.3mb
BZS 38.75 297 ePc 11 30.00 1.5
KEV 38.96 336 eP 11 31.00 1.1
VAY 39.03 290 eP 11 30.60 -0.3
SPC 39.13 302 iP 11 34.80 3.0X
i 13 11.70
KRA 39.23 304 eP 11 31.50 -0.9
0.8s 42.00nm 5.3mb
N 18s 2.40um
e 11 34.00
e 11 36.00
e 11 55.30
PSZ 39.53 301 eP 11 37.30 2.2
QZH 39.66 98 eP 11 36.50 0.2
SKO 39.68 291 eP 11 38.00 1.7
BEO 39.71 296 eP 11 38.00 1.5
UPP 40.37 319 iP 11 41.90 0.2
SRO 40.60 301 iP 11 47.30 3.6X
e 13 16.70
ZST 41.33 301 eP 11 51.90 2.1
Z 16s 1.10um 4.8MszX
e 13 28.10
LR 18 23.00
KSP 41.44 306 eP 11 51.50 0.9
IPM 42.37 139 ePd 11 58.80 0.2
PTJ 42.57 298 eP 12 00.30 0.3
PRU 42.68 304 P 12 02.00 1.2
Z 12s 1.00um 4.9MszX
N 12s 0.50um
E 12s 1.00um
e 12 04.00
BRG 42.91 306 iP 12 03.40 0.7
0.7s 10.00nm 4.7mb
i 12 05.20
e 13 49.00
PSI 42.98 143 ePd 12 01.50 -2.0
VBY 43.14 298 eP 12 06.00 1.4
COP 43.21 313 iPc 12 07.50 2.5
0.7s 32.88nm 5.2mb
CLL 43.43 307 iP 12 07.40 0.6
1.4s 55.00nm 5.1mb
KHC 43.46 303 iPc 12 08.30 1.1
1.0s 26.50nm 5.0mb
i 12 31.20
LJU 43.50 299 eP 12 08.00 0.5
CEY 43.65 298 eP 12 10.00 1.3
NAO 43.77 321 P 12 09.10 -0.4
0.6s 15.50nm 5.0mb
WET 43.90 304 eP 12 11.70 0.9
1.0s 54.00nm 5.3mb
VOY 43.93 299 eP 12 09.10 -2.0
KBA 44.05 301 i(P) 12 13.90 1.7
1.2s 35.40nm 5.0mb
i 12 15.90
e 13 58.00
RBL 44.05 300 P 12 10.00 -2.1
TRI 44.10 299 ePc 12 14.70 2.4
BHG 44.21 302 iPc 12 15.60 2.4
HOF 44.31 305 eP 12 14.90 0.9
MOX 44.41 306 eP 12 15.50 0.7
Z 12s 1.40um 5.1MszX
N 19s 1.30um
FVI 44.54 300 P 12 14 40 -1 5
GPF 44 85 305 iPc 12 19 90 1.5
e 12 22 00
SDI 45.21 293 P 12 20.00 -1.4
CTI 45.44 300 P 12 20.30 -2.9X
ASS 45.60 295 P 12 25.50 1.0
PGD 46.01 297 eP 12 29.50 1.7
KBS 46.16 346 eP 12 30.50 2.1
OSS 46.27 301 ePc 12 30.20 0.3
TOD 46.40 305 ePd 12 31.35 0.7
PPI 46.43 143 ePd 12 30.60 -0.6
MME 46.61 297 P 12 31.80 -0.9
SAX 46.65 302 ePd 12 33.30 0.3
VDL 46.78 301 ePd 12 34.10 0.2
LLS 46.98 301 ePd 12 35.50 0.0
SLE 47.07 303 ePc 12 36.80 0.9
WTS 47.08 309 eP 12 37.00 1.1
0.6s 10 00nm 5.0mb
ABH 47.12 306 eP 12 37.25 0.9
ZLA 47.21 302 ePc 12 37.40 0 3
TMA 47.28 300 ePd 12 37.40 -0 5
BOB 47.29 298 P 12 37.60 -0 3

09d 18h

GWF	47.31	304	P	12	38.08	0.2
FEL	47.35	303	ePd	12	38 70	0.4
RUP	47.47	306	eP	12	39.90	0.7
CDF	47.68	304	P	12	40.71	-0.1
ECH	47.81	304	P	12	42.39	0.6
MEM	47.90	307	Pc	12	44.30	1.9
ENN	47.91	307	eP	12	43.00	0.5
	0.9s	9.00nm			4.8mb	
MOF	47.92	303	P	12	42.69	-0.1
WLF	48.05	306	P	12	44.30	0.7
BSF	48.15	303	P	12	44.35	-0.2
DIX	48.26	301	ePd	12	45.90	0.3
LOMF	48.27	303	P	12	45.87	0.5
FIN	48.31	298	P	12	45.07	-0.7
HAU	48.39	304	eP	12	44.30	-2.0
	0.7s	22.90nm			5.3mb	
CVF	48.40	296	P	12	47.08	0.6
ROB	48.51	298	P	12	47.22	-0.1
VITF	48.56	304	P	12	47.39	-0.1
EMS	48.58	301	ePd	12	48.30	0.3
LSD	48.62	300	P	12	48.35	-0.1
IMI	48.63	298	P	12	47.53	-0.7
SAOF	48.83	298	P	12	50.18	0.5
ENR	48.84	298	P	12	49.37	-0.5
LPG	48.88	300	eP	12	48.90	-1.5
	0.5s	11.90nm			5.2mb	
STV	48.90	298	P	12	49.37	-1.0
DOU	48.91	307	Pc	12	51.20	1.0
AUTN	48.91	298	P	12	51.48	0.9
SBF	48.95	298	eP	12	49.10	-1.6
	0.9s	60.20nm			5.6mb	
PZZ	48.97	299	P	12	49.78	-1.1
SNF	48.99	307	Pc	12	52.70	1.9
AURF	49.02	298	P	12	51.96	0.7
TOUF	49.03	298	P	12	52.29	0.8
RRL	49.04	299	P	12	51.94	0.3
MVIF	49.13	298	P	12	52.65	0.4
MAT	49.30	72	eP	12	52.00	-1.4
	0.7s	7.53nm			4.8mb	
CALN	49.36	298	P	12	54.32	0.4
FRF	49.59	298	eP	12	53.60	-2.0
	1.1s	39.00nm			5.3mb	
LMR	49.76	298	eP	12	55.20	-1.7
	1.0s	24.00nm			5.2mb	
LRG	49.82	298	eP	12	55.70	-1.6
	1.1s	31.20nm			5.3mb	
LOR	50.21	303	eP	12	57.70	-2.6
	0.9s	13.10nm			4.9mb	
LBF	50.23	303	eP	12	57.90	-2.6
	1.1s	20.50nm			5.1mb	
KKM	50.25	121	ePd	13	02.00	1.0
SMF	50.43	303	eP	12	59.70	-2.2
	1.1s	43.90nm			5.4mb	
SSF	50.51	303	eP	13	00.20	-2.3
	1.1s	24.40nm			5.1mb	
AVF	50.70	303	eP	13	01.70	-2.2
	1.1s	78.10nm			5.6mb	
PLDF	50.80	302	P	13	04.43	-0.4
AGO	51.09	302	P	13	06.84	-0.1
BGF	51.10	303	eP	13	04.80	-2.2
	1.1s	27.80nm			5.1mb	
PYM	51.27	302	P	13	08.28	-0.2
LBL	51.30	301	P	13	08.58	0.1
MAF	51 40	302	eP	13	07.50	-1.8
	1.1s	52.20nm			5.4mb	
TCF	51.61	303	eP	13	09.10	-1.8
	1.1s	34.10nm			5.2mb	
EKA	51.96	315	P	13	13.00	-0.4
	0.9s	11.10nm			4.8mb	
LSF	52.06	303	eP	13	11.90	-2.5
CAF	52.19	301	eP	13	13.70	-1.6
	1.1s	30.20nm			5.2mb	
LDF	52.30	306	eP	13	13.70	-2.4
	0.5s	11.60nm			5.1mb	
RJF	52.41	302	eP	13	15.50	-1.5
	1.2s	38.00nm			5.2mb	
FLN	52.47	306	eP	13	14.70	-2.6
DAG	52.51	343	iPd	13	15.00	-2.3
	0.3s	32.47nm			5.8mb	
GRR	52.84	306	eP	13	17.60	-2.5
	0.8s	26.80nm			5.3mb	
LPO	52.86	301	eP	13	18.30	-2.0
	0.6s	9.70nm			4.9mb	
MFF	53.02	304	eP	13	18 60	-2 9
	0.9s	13 10nm			4 9mb	
LFF	53 06	301	eP	13	19.80	-1 9
	0.6s	18.00nm			5 2mb	

LPF	53.08	306	eP	13	18.80	-3.0X
	0.8s	11.80nm			4.9mb	
EPF	54.06	299	eP	13	26.00	-3.2X
	0.8s	9.40nm			4.9mb	
DMU	54.49	314	eP	13	35.20	3.0X
DLE	54.50	313	eP	13	37.60	5.4X
EBR	54.86	297	eP	13	36.00	1.0
ALE	56.19	354	eP	13	45.00	0.8
	0.4s	2.00nm			4.5mb	
PCI	57.83	123	ePd	13	58.00	1.5
	1.0s	5.50nm			4.6mb	
TOL	58.39	298	eP	14	00.00	-0.3
ASMO	59.36	295	eP	14	06.50	-0.7
APHE	59.52	295	eP	14	07.50	-0.8
ACHM	59.54	295	eP	14	08.70	0.3
AAPN	59.65	295	eP	14	07.50	-1.6
BNG	61.33	250	iPc	14	19.50	-1.2
	0.7s	29.00nm			5.5mb	
		ic		15	14.50	
		id		15	46.50	
BMK	62.03	294	iPd	14	24.50	-0.7
MBC	64.02	4	eP	14	37.00	-0.7
	0.7s	26.00nm			5.4mb	
INK	70.31	11	eP	15	17.00	-0.4
		pP		16	16.50	256kmX
FRB	72.83	344	eP	15	32.00	-0.5
BUL	73.31	225	iPd	15	35.30	-0.7
	1.0s	29.00nm			5.2mb	
MBL	73.85	136	iPd	15	39.20	0.2
	0.6s	28.00nm			5.4mb	
MTN	74.13	122	eP	15	40.00	-0.7
	0.8s	29.00nm			5.3mb	
KNA	74.79	126	eP	15	44.30	-0.2
	0.6s	44.00nm			5.6mb	
KIC	77.68	268	P	16	01.00	0.0
TIC	77.72	268	P	16	01.22	0.0
YKA	77.92	4	eP	16	03.00	1.6
LIC	77.99	268	P	16	02.62	0.0
SLR	78.04	222	iPd	16	03.00	0.2
PRY	79.43	222	eP	16	04.50	-5.9X
	1.0s	18.00nm			5.0mb	
BFS	79.76	222	iPd	16	11.50	-0.6
	1.0s	30.00nm			5.2mb	
SCH	80.21	338	eP	16	14.00	-0.1
WB5	81.40	125	iPc	16	20.50	-0.2
WRA	81.43	125	Pd	16	21.30	0.4
	0.7s	19.70nm			5.2mb	
ASPA	83.90	127	iPc	16	33.40	-0.2
	0.8s	24.00nm			5.4mb	
QIS	85.27	121	eP	16	40.00	-0.5
FFC	85.93	358	iPc	16	43.30	0.0
	1.2s	43.00nm			5.6mb	
FORR	86.02	136	eP	16	44.10	0.1
	0.5s	44.00nm			5.9mb	
EDM	87.23	5	iP	16	50.50	0.7
CTA	89.43	117	iPd	17	01.70	1.1
SES	90.18	4	ePd	17	04.20	0.3
PNT	90.52	9	eP	17	06.00	0.5
	0.7s	12.00nm			5.3mb	
LRM	94.66	5	eP	17	25.50	0.6
ZOBO	140.00	295	PKP	23	32.20	-1.3
	1.0s	6.25nm				
		LR		18	46.00	
LPB	140.16	295	(PKP)	23	37.00	3.4X
CNCB	140.26	294	PKP	23	35.00	1.0
	S.D. = 1.2	on 185 of 205 obs.				

? JUN 09, 1989 18h 08m 19.95± 8.00s
45.949 N ±23.5km 2.721 E ±54.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 1.5 (STR)

PYM	0.28	135	Pg	08	25.62	-0.3
			Sg	08	29.31	
AGO	0.30	70	Pg	08	25.75	-0.6
PLDF	0.63	88	Pg	08	33.36	0.7
LBL	0.81	153	Pg	08	35.69	0.1
			Sg	08	46.36	
	S.D. = 1.0	on 4 of 4 obs.				

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* JUN 09, 1989 18h 43m 43.01± 0.90s
7.968 N ±11.6km 127.211 E ±17.6km
DEPTH = 33 0km (normal)
4 7mb (4 obs.)
PHILIPPINE ISLANDS REGION (248)

MNI	6.90	200	ePd	46	09.50	45 0X
KKM	11.08	261	ePc	46	32.50	10.1X
	0.7s	220.00nm				
PCI	11.48	220	ePd	46	27.50	-0.2
WB5	28.56	166	iPc	49	39.00	0.9
WRA	28.61	166	Pd	49	39.70	1.1
	0.4s	3.60nm			4.4mb	
CHTO	29.49	294	eP	49	46.10	-0.5
QIS	30.86	157	iPc	50	07.40	8.8X
	0.7s	17.00nm			5.0mb	
ASPA	32.11	168	iPc	50	07.90	-1.8
	0.6s	7.00nm			4.7mb	
		eS		54	22.00	
WARB	33.95	181	eP	50	04.00	-21.6X
GUN	43.75	302	P	51	48.80	1.1
PKI	44.04	302	P	51	50.00	-0.1
KKN	44.22	302	P	51	56.40	5.0X
DMN	44.31	302	P	51	52.20	0.1
GKN	44.83	302	P	51	56.40	0.2
SOD	86.76	338	eP	56	24.00	-0.8
SUF	88.01	333	iP	56	37.70	6.8X
	0.5s	1.80nm			4.6mb	
NUR	89.25	331	eP	56	32.00	-4.8X
	S.D. = 1.0	on 10 of 17 obs.				

JUN 09, 1989 19h 27m 46.43± 0.58s
38.284 N ± 5.4km 22.707 E ± 6.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (ATH).

ATH	0.85	111	ePb	28	03.00	0.1
NEO	1.10	21	ePb	28	07.00	-0.1
ITM	1.26	210	ePb	28	09.00	-0.9
VLS	1.67	267	ePb	28	16.50	0.6
LIT	1.82	355	eP	28	18.50	0.4
			eS	28	52.40	
KZN	2.15	341	ePb	28	23.00	0.2
PLG	2.16	15	ePn	28	21.70	-1.3
VAY	3.04	358	ePn	28	35.30	0.0
VAM	3.11	157	ePn	28	37.70	1.3
OHR	3.18	333	ePn	28	39.30	1.8
EZN	3.21	60	iP	28	37.00	-0.9
SKO	3.81	346	ePn	28	47.00	0.6
MGR	5.86	291	P	29	13.60	-1.7
			eSn	30	18.90	
	S.D. = 1.1	on 13 of 13 obs.				

JUN 09, 1989 21h 11m 23.42± 1.14s
25.265 N ± 9.0km 101.976 E ± 7.1km
DEPTH = 37.3 ± 11.2 km
4.5mb (6 obs.)
YUNNAN PROVINCE, CHINA (318)
ML 4.4 (BJI).

KMI	0.71	101	Pgc+	11	36.00	-1.2
			Sg	11	48.00	
GYA	4.39	73	Pn	12	30.40	0.9
			Pg	12	49.80	
			Sn	13	23.00	
			Sg	13	45.60	
CD2	5.84	15	Pn	12	51.40	1.5
			Pg	13	12.20	
			Sn	13	57.80	
CHG	7.01	204	ePd	13	32.70	26.4X
LOE	7.82	182	eP	14	18 00	60 3X
SHL	9 13	274	iP	13	36 00	0 1
			eS	16	33.50	
XAN	10.62	33	P	13	52.60	-3.7X
N	10s	2.20um				
E	10s	17.00um				
LZH	10.91	8	eP	14	00.50	0.3
WHN	12.14	62	eP	14	17.00	0.2
GTA	14.22	353	eP	14	48.40	4.0X
TIY	15.27	33	eP	14	55.40	-2.6X
Z	12s	1.20um				
BTO	16.70	22	eP	15	14.00	-2.3
Z	11s	0.40um				
N	11s	0.80um				
E	11s	0.90um				
TIA	16.97	46	P	15	19.00	-0.6
BJI	18.94	35	eP	15	44.00	0.2
Z	12s	0.60um				
WMQ	21.87	331	eP	16	15.50	0.7
SNY	24.33	42	Pc	16	39.50	0.8
CN2	26.60	40	eP	17	03.00	2.9X
TRT	34.37	161	ePd	18	01.80	-7.3X

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WB5     54.82 142 eP     20 53.20   0.9
SUF     61 39 329 iP     21 37.00  -0.8
        0.6s      3.80nm          4.7mb
NUR     62.15 327 iP     21 42.00  -0.9
NAO     68.83 328 P      22 25.80   0.0
        0.7s      3.00nm          4.4mb
LPG     75.89 314 eP     23 08.70   0.4
        0.7s      9.20nm          4.9mb
SSF     77.37 316 eP     23 16.60   0.5
        0.7s      2.20nm          4.3mb
AVF     77.58 316 eP     23 16.80  -0.4
        0.8s      3.20nm          4.4mb
TCF     78.50 316 eP     23 22.30  -0.1
        0.8s      3.20nm          4.4mb
      S.D. = 1.0  on  19 of  26 obs.
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% JUN 09, 1989  21h 52m 51.75± 0.78s
   39.191 N ± 6.7km   29.547 E ± 7.6km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                          (366)

ALT     0.46 107 iPg     53 01.00  -0.1
                 iSg     53 09.00
DST     0.82 300 ePg     53 07.50  -0.2
KHL     0.87 181 iPg     53 08.60   0.1
                 iSg     53 20.60
GPA     1.24  28 ePn     53 14.80  -0.1
YLV     1.38 354 iPn     53 17.40   0.3
      S.D. = 0.3  on   5 of   5 obs.
-------------------------------------
% JUN 09, 1989  22h 14m 01.33± 1.32s
   37.972 N ±12.7km    0.181 E ± 9.8km
   DEPTH =  10.0km  (geophysicist)
 WESTERN MEDITERRANEAN SEA       (387)
      mbLg 3.0 (MDD).

ACU     0.71 319 iP      14 16.00   0.6
                 eS      14 24.00
EALH    1.27 265 ePn     14 25.50   0.6
ENIJ    2.15 243 ePn     14 37.40  -0.4
                 eSn     15 04.00
EVIA    2.21 288 ePn     14 38.30  -0.5
                 eSn     15 03.00
ESEL    2.78  49 ePn     14 47.20   0.6
                 eSn     15 19.00
EROO    2.85   3 ePn     14 46.80  -0.9
                 eSn     15 18.50
      S.D. = 0.9  on   6 of   6 obs.
-------------------------------------
% JUN 10, 1989  00h 28m 02.22± 1.27s
   38.365 N ±12.5km   27.078 E ±11.7km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                          (366)
      MD 3.0 (ATH).

IZM     0.15  77 iPg     28 05.40  -0.3
PRK     1.08 325 ePb     28 23.00   0.5
YER     1.56 142 ePn     28 29.40  -0.6
EZN     1.57 338 ePn     28 30.00  -0.2
DST     1.73  44 iPn     28 31.60  -1.0
KHL     1.92  90 ePn     28 37.00   1.6
      S.D. = 1.2  on   6 of   6 obs.
-------------------------------------
% JUN 10, 1989  02h 06m 32.36± 0.60s
   37.234 N ± 6.5km    4.533 W ± 5.9km
   DEPTH =   5.0km  (geophysicist)
 SPAIN                           (377)
      mbLg 2.9 (MDD).

MAL     0.51 169 iPg     06 41.50  -1.2
EPRU    0.62 245 eP      06 45.00   0.2
                 eS      06 51.80
AFC     0.79  88 eP      06 49.70   1.4
                 eS      07 00.00
EHOR    0.81 316 iP      06 48.80   0.2
                 eS      06 59.00
EJIF    1.08 224 eP      06 53.20   0.0
EBAN    1.10  32 eP      06 54.20   0.7
                 eS      07 10.00
SRQ     1.19 215 eP      06 56.00   1.1
MOMI    1.32 227 eP      06 58.50   1.3
OJEN    1.39 216 eP      06 58.00  -0.5
PLAT    1.48 222 eP      07 00.00   0.2
CNIL    1 49 235 eP      06 58.00  -1.8
ENIJ    1.87  97 eP      07 05.80   0.5
EVIA    2.13  48 eP      07 07.00  -2.2
                 eS      07 34.00

      S.D. = 1.2  on  13 of  13 obs.
-------------------------------------
   JUN 10, 1989  02h 06m 38.93± 0.33s
   17.121 S ± 7.2km  166.731 E ± 8.1km
   DEPTH =  33.0km  (normal)
   4.7mb (  5 obs.)
 VANUATU ISLANDS                 (186)

PVC     1.63 112 iPc     06 54.00 -11.7X
                 iS      07 08.50
DZM     4.93 183 iPc     07 45.60  -7.2X
                 iS      08 40.50
HNR    10.10 318 eP      09 04.00  -0.8
VSG    10.38 318 eP      09 08.00  -0.7
SVO    10.40 319 eP      09 09.00   0.1
BRS    16.46 229 eP      10 30.00   0.9
COO    19.04 223 eP      11 00.70  -0.4
RMQ    19.10 238 eP      11 03.70   1.9
CTA    19.63 258 iPd     11 09.00   1.1
       0.8s     10.82nm          4.2mb
                 iS      15 05.00
PMG    20.53 289 eP      11 18.50   1.3
       1.0s     34.00nm          4.7mb
CMS    23.76 229 eP      11 49.00  -0.3
CNB    23.83 217 iPc     11 49.90  -0.1
       0.8s    130.00nm          5.5mb
CAN    24.05 218 eP      11 51.50  -0.6
MNG    24.61 164 P       11 51.20  -6.3X
WB5    30.79 260 eP      12 53.00  -1.0
ASPA   31.40 253 iPc     12 57.70  -1.7
       0.6s     13.00nm          4.9mb
     Z  17s      0.50um          4.3MszX
                 LR      25 48.30
SPA    72.99 180 ePd     18 02.90  -4.2X
       1.0s      6.50nm          4.6mb
BJI    73.80 322 eP      18 11.00  -0.9
MAW    79.49 202 eP      18 41.00  -2.4
WLF   143.94 338 PKP     26 21.90   9.4X
GWF   143.97 336 PKP     26 12.21  -0.5
CDF   144.57 336 ePKP    26 10.00  -3.8X
       0.9s      7.80nm
FEL   144.71 335 PKP     26 14.70   0.6
ECH   144.77 336 PKP     26 15.16   1.1
MOF   145.08 336 PKP     26 15.69   1.0
VITF  145.21 337 PKP     26 15.60   0.9
BSF   145.23 336 ePKP    26 11.80  -3.2X
HAU   145.25 337 ePKP    26 12.00  -2.9X
       0.9s      7.80nm
LOMF  145.61 336 PKP     26 17.80   2.2X
FIR   146.29 327 ePKP    26 15.00  -1.7
BNG   146.37 252 iPKPd   26 16.20  -1.6
       0.5s      9.00nm
FLN   146.76 345 ePKP    26 16.20  -1.1
       1.0s     12.00nm
LOR   146.78 339 ePKP    26 16.50  -0.9
       0.8s      5.90nm
LDF   146.83 344 ePKP    26 16.40  -1.0
LBF   146.98 338 ePKP    26 17.20  -0.6
LSD   146.99 333 PKP     26 17.96  -0.2
SSF   147.08 339 ePKP    26 17.60  -0.3
       0.8s      8.50nm
LPG   147.13 334 ePKP    26 18.20  -0.2
       0.8s      6.70nm
GRR   147.21 345 ePKP    26 17.90  -0.1
SMF   147.32 338 ePKP    26 18.00  -0.3
       1.0s      6.80nm
AVF   147.37 339 ePKP    26 17.90  -0.4
FIN   147.48 331 PKP     26 17.86  -0.8
ROB   147.57 331 PKP     26 18.06  -0.8
RRL   147.57 333 PKP     26 18.06  -1.0
LPF   147.58 345 ePKP    26 18.50  -0.1
BGF   147.75 339 ePKP    26 19.20   0.2
       0.7s      5.50nm
PZZ   147.76 332 PKP     26 19.50   0.3
IMI   147.86 331 PKP     26 19.19  -0.1
STV   147.86 332 PKP     26 17.96  -1.4
SBF   148.11 331 ePKP    26 20.10   0.4
       0.9s      9.80nm
MAF   148.13 339 ePKP    26 20.20   0.6
       0.9s      5.50nm
TCF   148.20 339 ePKP    26 20.60   0.9
CVF   148.38 328 ePKP    26 20.80   0.7
       0.8s      8.00nm
LSF   148.46 340 ePKP    26 21.10   1.0
       0.9s      6.50nm
MFF   148.65 342 ePKP    26 21.30   0.9
FRF   148.70 332 ePKP    26 21.60   1.0

LRG   148.92 332 ePKP    26 22.60   1.7
LMR   148.94 331 ePKP    26 22.30   1.3
       0.9s      7.80nm
RJF   149.29 339 ePKP    26 23.40   1.9
CAF   149.43 338 ePKP    26 23.90   2.2X
LFF   149.87 340 ePKP    26 24.70   2.4X
       0.9s     11.10nm
LPO   149.95 339 ePKP    26 24.80   2.3
       0.8s      6.40nm
EPF   151.70 339 ePKP    26 29.30   4.1X
       0.8s      4.00nm
      S.D. = 1.1  on  51 of  63 obs.
-------------------------------------
*  JUN 10, 1989  02h 56m 41.06± 0.56s
   4.770 S ±11.3km  102.496 E ±13.8km
   DEPTH =  33.0km  (normal)
   4.4mb (  5 obs.)
 SOUTHERN SUMATERA               (274)

KGM     6.79   7 eP      58 22.50   1.5
CHG    23.69 352 eP      01 50.30  -0.6
CHTO   23.69 352 eP      01 49.90  -1.0
       1.2s     10.76nm          4.2mb
GBA    30.86 307 Pd      02 58.30   1.6
       0.5s      1.80nm          4.1mb
WB5    34.47 119 eP      03 27.60  -0.6
WRA    34.47 119 Pc      03 28.20   0.0
       0.8s      4.70nm          4.5mb
ASPA   35.62 125 iPd     03 39.50   1.4
                 i       03 45.60
PKI    36.14 334 P       03 42.20  -0.5
GUN    36.23 335 P       03 43.30  -0.2
DMN    36.31 333 P       03 44.00   0.0
KKN    36.38 334 P       03 44.20  -0.4
GKN    36.85 333 P       03 48.40  -0.1
NDI    41.21 325 iPc     04 25.00   0.5
       0.6s     32.00nm          5.2mb
SUF    87.99 333 eP      09 29.00   0.2
       0.5s      1.30nm          4.5mb
NUR    88.16 331 eP      09 29.00  -0.6
BAO   144.44 235 ePKP    16 17.00   0.2
LNO   144.73  26 ePKP    16 14.20  -2.3X
TUL   144.73  26 ePKP    16 14.50  -2.1X
       0.7s      7.90nm
RLO   144.84  25 ePKP    16 14.70  -2.1X
VVO   145.23  27 ePKP    16 16.20  -1.3
      S.D. = 0.9  on  17 of  20 obs.
-------------------------------------
   JUN 10, 1989  04h 53m 21.58± 0.36s
   71.484 N ± 5.0km    3.800 W ± 5.4km
   DEPTH =  10.0km  (geophysicist)
   5.0mb ( 39 obs.)  4.5Msz (  1 obs.)
 JAN MAYEN ISLAND REGION         (639)

DAG     6.69 329 iPc     54 57.50  -4.6X
       0.7s    114.38nm          6.0mb X
                 ipP     56 08.40
TRO     7.78  93 iP+     55 15.70  -1.8
AKU     7.81 229 eP      55 16.20  -1.6
       0.9s     20.17nm          5.3mb
                 iS      56 34.50
RGS    10.09 140 iP      55 47.10  -2.3
KEV    10.31  85 eP      55 52.00  -0.4
SOD    11.37  96 iP      56 04.90  -2.0
NAO    12.18 144 P       56 13 60  -4 2X
       0 9s     14 30nm          5 2mb
NRAO   12 39 143 P       56 17 00  -3 7X
SUF    14.41 112 iP      56 45 80  -1 4
       0.8s     28.30nm          5.0mb
UPP    14.50 133 iP      56 46.70  -1.7
NUR    15.75 120 eP      57 04.00  -0.7
       0.9s     27.00nm          4.5mb
     Z 22s      0.90um          3.6MszX
                 LR      02 20.00
ALE    16.00 336 eP      57 04.00  -3.7X
       0.6s      7.00nm          4.0mb X
EKA    16.22 179 Pc      57 08.40  -2.3
       0.5s      7.50nm          4.1mb
COP    17.31 148 eP      57 25.00   0.5
       1.1s     50.63nm          4 6mb
WIT    19.31 161 eP      57 48.50  -0.6
WTS    20.13 161 iPc     57 56.40  -1.6
       0.8s     25.00nm          4.6mb
UCC    21.09 166 P       58 07 00  -0 9
ENN    21.26 163 iPc     58 09 30  -0 3
       0.8s     75.00nm          5.1mb
SNF    21.37 166 P       58 10 00  -0 f
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10d 04h

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MEM     21 42 163 P      58 10.70   -0 6
CLL     21.62 150 iPc    58 13 00   -0 3
        1.3s     43.00nm          4.7mb
DOU     21.80 165 P      58 14.30   -0.9
        0.9s     57.50nm          5.0mb
MOX     22.06 153 iPc    58 18.00    0.3
        1.7s     99.00nm          5.0mb
TNS     22.06 159 ePd    58 18.20    0.4
BRG     22.19 149 iPd    58 18.80   -0.3
        1.2s     22.00nm          4.5mb
ABH     22.29 160 eP     58 20.70    0.6
WLF     22.37 163 P      58 21.10    0.3
HOF     22.42 153 iPc    58 21.70    0.4
        1.4s     84.00nm          5.0mb
RUP     22.42 161 eP     58 21.79    0.4
KSP     22.63 146 iPc    58 24.00    0.6
        1.5s    176.00nm          5.3mb
TOD     22.71 158 eP     58 23.44   -0.8
FLN     22.85 174 eP     58 24.40   -1.2
        1.0s     60.00nm          5.1mb
GRF     22.93 154 eP     58 29.10    2.7
        1.1s     41.00nm          4.9mb
LDF     23.03 174 eP     58 26.60   -0.7
        1.0s     52.00nm          5.0mb
PRU     23.15 149 P      58 29.50    1.0
        1.0s     28.90nm          4.8mb
GWF     23.20 161 P      58 29.18    0.2
GRR     23.21 175 eP     58 28.30   -0.8
        1.0s     41.60nm          4.9mb
LPF     23.56 175 iPc    58 31.60   -0.9
        0.9s     72.00nm          5.2mb
WET     23.70 152 eP     58 35.60    1.7
        1.4s     54.00nm          4.9mb
CDF     23.72 161 P      58 34.40    0.3
VITF    23.79 164 P      58 34.08   -0.6
KHC     23.83 151 iPc    58 37.50    2.4
ECH     23.90 162 P      58 36.12    0.3
HAU     24.03 163 eP     58 38.30    1.2
KRA     24.08 141 eP     58 38.80    1.3
        1.2s     83.00nm          5.2mb
     Z  18s      1.60um          4.5Msz
     N  18s      1.90um
                 e       58 44.80
BSF     24.24 162 P      58 39.42    0.2
MOF     24 26 162 P      58 38.94   -0.4
FEL     24.33 160 P      58 38.94   -1.1
SLE     24.49 160 ePd    58 43.00    1.5
LOR     24.56 167 iPc    58 42.60    0.4
        0.7s     30.20nm          5.1mb
LOMF    24.72 163 P      58 45.18    1.3
SSF     24.74 168 iPc    58 44.20    0.2
        0.8s     26.80nm          5.0mb
ZLA     24.76 160 ePd    58 45.50    1.3
LBF     24.85 167 iPc    58 45.40    0.3
SPC     24.97 141 iP     58 48.00    1.7
AVF     25.00 168 iPc    58 46.40    0.0
        0.9s     26.20nm          4.9mb
MFF     25.02 174 iPc    58 46.30   -0.3
        0.7s     35.20nm          5.2mb
SAX     25.09 159 ePd    58 49.00    1.4
BHG     25.09 153 iPd    58 49.10    1.8
        1.2s     41.00nm          5.0mb
SMF     25.18 168 iPc    58 48.20    0.0
        0.9s     53.00nm          5.2mb
BGF     25.20 169 iPc    58 48 20   -0.2
ZST     25 32 146 eP     58 50 50    1 1
                 LR      05 09 00
LLS     25 43 159 ePd    58 52.20    1.5
TCF     25 44 170 iPc    58 50.20   -0.4
        0.9s     43 20nm          5 1mb
LSF     25 44 171 iPc    58 50.00   -0.6
        1.0s     44.00nm          5.1mb
MAF     25.52 170 iPc    58 51.00   -0.4
        0.9s     54.00nm          5.2mb
AGO     25.72 169 P      58 53.11   -0 2
OSS     25.74 158 ePd    58 55.00    1.4
KBA     25.79 152 ePc    58 54.00   -0.1
        1.0s     22.50nm          4.8mb
PLDF    25.84 168 P      58 54.09   -0.3
SRO     25.91 144 eP     58 56.10    1.2
PYM     26.02 169 P      58 56.02   -0.1
DIX     26.04 162 ePd    58 58.00    1.5
PSZ     26.11 142 eP     58 58.00    1.1
MMK     26.12 161 ePd    58 59 00    1 7
RJF     26.38 172 iPc    58 59 00   -0 4
        0.8s     48.30nm          5.2mb
LBL     26.55 169 P      59 01 05    0.2
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LPG     26.55 163 iPc    59 01.90    0.6
        1.0s     16 80nm          4 7mb
CTI     26.56 155 P      59 01.20    0.1
LFF     26.71 173 iPc    59 01.90   -0.5
CAF     26.79 171 iPc    59 02.80   -0.3
        0.8s     20.60nm          4.9mb
LPO     26.99 172 eP     59 04.20   -0.7
PTJ     27.35 149 eP     59 05.00   -3.3X
MBC     27.49 332 eP     59 10.00    0.8
SBF     28.24 163 eP     59 16.50    0.2
EPF     28.60 174 iPc    59 18.80   -0.8
        0.8s     36.20nm          5.2mb
MLR     29.70 135 ePc    59 10.00  -19.5X
OHR     32.84 145 eP     59 54.50   -2.6
INK     36.51 331 eP     00 28.00   -0.1
YKA     38.13 315 eP     00 42.80    1.0
FBA     41.68 338 P      01 13.00    1.8
FFC     41.80 301 eP     01 12.00   -0.2
        1.1s     20.00nm          4.8mb
RSON    42.84 291 P      01 19.50   -1.2
        0.9s     13.66nm          4.7mb
SES     48.13 305 eP     02 03.00    0.0
UYO     58.22 283 eP     03 16.50   -1.4
KVN     60.52 305 P      03 33.00   -0.9
BNG     68.44 156 iPc    04 25.00   -0.5
        0.7s     10.00nm          5.1mb
      S.D. = 1.1   on   91 of   97 obs.
-------------------------------------------
&  JUN  10, 1989   06h 52m 12.88s
   61.801 N          150.675 W
   DEPTH =  57.7km
 SOUTHERN ALASKA                    (  2)
      <AGS-P>.

SUA      0.34 186 iP     52 23.18   -0.1
                  S      52 31.48
PWA      0.41 111 iP     52 23.48   -0.3
                  S      52 32.69
SKT      0.44 294 iP     52 23.91   -0.3
GHO      0.83  91 iP     52 28.53   -0.3
                  S      52 41.50
CRP      0.89 234 eP     52 29.35   -0.3
                  S      52 42.62
KNK      1.13 109 eP     52 32.43   -0.3
                  S      52 47.86
      6 obs. ossocioted
-------------------------------------------
%  JUN  10, 1989   07h 15m 06.94± 0.65s
   42.105 N ± 6.9km    7.754 W ± 6.1km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                              (377)
      mbLg 3.3 (MDD).

ERUA     0.54  57 iP     15 18.40    0.6
                  iS     15 25.00
EZAM     0.70 274 iPgc   15 21.20    0.4
                  eSg    15 30.00
STS      0.98 323 eP     15 25.00   -0.5
         0.2s     0.10nm
                  eS     15 37.00
EMON     1.37  13 ePn    15 32.00    0.0
                  eSn    15 49.00
EPLA     2.40 148 ePn    15 47.50    0.6
                  eSn    16 16.30
GUD      3 08 117 iP     15 56.20   -0 4
         0 3s     0 02nm
                  eS     16 32 20
TOL      3 58 127 ePn    16 03.00   -0 6
                  eSn    16 42.00
                  eSb    16 54.50
                  eSg    17 04.00
      S.D. = 0.6   on    7 of    7 obs.
-------------------------------------------
   JUN  10, 1989   08h 44m 55.38± 0.74s
   30.044 S ± 6.2km    71.218 W ±11.4km
   DEPTH = 104.0 ±  9.0 km
   4.3mb (  3 obs.)
 NEAR COAST OF CENTRAL CHILE        (135)

ZON      2.65 125 eP     45 38.00    0.7
                  eS     45 58.00
ROCH     2.92 177 iPd    45 40.90   -0.3
                  iS     46 17.00
PEL      3 12 172 iP     45 44.00    0 3
                  i      46 04.00
                  i(S)   46 22.50
FCH      3.37 167 iP     45 49.00    1.7
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                  iS     46 31.00
SAN      3.43 172 eP     45 48.00    0.1
                  iS     46 21.60
LCCH     3.43 185 iP     45 46.50   -1.4
                  iS     46 27.50
TACH     3.61 176 iPc    45 50.50    0.2
                  iS     46 33.80
PCH      3.62 171 ePd    45 50.50    0.0
                  iS     46 35.00
LNV      3.90 182 iP     45 52.50   -1.8
                  iS     46 38.50
CHCH     3.91 173 iPc    45 54.50    0.1
                  iS     46 40.00
ANT      6.35   7 eP     46 28.80    0.8
CNCB    13.50  13 P      48 01.00   -3.4X
ARE     13.52 359 eP     48 04.00   -0.4
LPB     13.75  13 eP     48 09.00    1.5
ZOBO    14.00  12 P      48 06.20   -4.7X
     Z  24s      0.10um
                  LR     52 38.00
PPD     19.57  71 eP     49 15.40   -2.1
                  e      49 20.60
                  epP    49 37.80  131kmX
VAO     22.78  78 eP     49 48.90   -0.8
                  epP    50 12.00  110kmX
BMA     25.29  80 eP     50 13.00   -0.7
BAO     25.69  61 eP     50 16.90   -0.7
TUL     69.56 339 eP     55 53.10   -1.7
        0.9s     4.60nm           4.3mb
LNO     69.56 339 e(P)   55 51.10   -3.6X
ALQ     72.67 330 eP     56 13.80    0.0
        1.0s     1.50nm           3.8mb
MAW     76.77 164 eP     56 38.50    2.0
KVN     81.43 325 eP     57 02.00   -0.2
BNG     91.99  86 iPc    57 56.30    2.3
        0.5s     4.00nm           5.0mb
MLR    115.47  51 ePKPd  03 26.50   -0.1
GBA    146.77 113 PKPd   04 25.80    0.4
        0.7s     6.30nm
      S.D. = 1.2   on   24 of   27 obs.
-------------------------------------------
?  JUN  10, 1989   09h 09m 53.95± 1.11s
    1.691 S ±20.3km    77.700 W ±20.9km
   DEPTH = 182.9 ±  8.8 km
   3.9mb (  2 obs.)
 ECUADOR                            (107)

RECU     1.36 320 iP+    10 25.00   -0.8
CAYA     1.78 351 iP+    10 30.50    0.6
COTA     2.11 342 iP+    10 33.50    0.1
ZOBO    17.29 147 P      13 47.00    0.4
ATB     25.50  94 Pc     15 05.90   -1.4
ITR     39.71 102 eP     17 11.10    0.8
MEO     41.23 334 eP     17 22.70    0.2
        0.4s     0.90nm           3.7mb
ALQ     45.32 326 iPc    17 57.00    1.4
        0.7s     4.28nm           4.1mb
KVN     54.95 322 e(P)   19 06.70   -1.7
MBC     81.36 351 eP     21 51.00    0.2
      S.D. = 1.2   on   10 of   10 obs.
-------------------------------------------
*  JUN  10, 1989   09h 10m 01.44± 1.01s
   38.899 N ± 6.5km    20.716 E ±14.6km
   DEPTH =  10.0km  (geophysicist)
 GREECE                             (364)
      MD 3 3 (ATH).

VLS      0.73 188 ePg    10 14.50   -1.2
KZN      1.63  30 ePn    10 30.20   -0.1
ITM      1.96 151 ePg    10 37.00    1.9
NEO      1.99  77 ePn    10 35.00   -0.6
OHR      2.21   2 ePn    10 39.00    0.3
PLG      2.57  54 ePn    10 43.00   -0.9
VAY      2.81  30 ePn    10 47.30    0.1
SKO      3.12  10 ePn    10 52.00    0.4
      S.D. = 1.1   on    8 of    8 obs.
-------------------------------------------
   JUN  10, 1989   10h 37m 18.61± 1.08s
   40.596 N ± 6.6km    22.170 E ±10.6km
   DEPTH =  10.0km  (geophysicist)
 GREECE                             (364)
      ML 1.7 (SKO).

GRG      0 40  26 iPgc   37 27.70    0.9
                  eSg    37 32 10
LIT      0 55 154 ePg    37 30.30    0.5
                  eSg    37 36.20
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THE      0.61  86 ePgc   37 30.30   -0.5
                  eS     37 35.70
VAY      0.79  23 iPg    37 33.60   -0.3
                  iSg    37 42.70
PAIG     1.33 120 ePb    37 43.00   -0.2
                  eSb    3B 00.30
EKA     22.30 320 P      42 17.00   -0.4
        1.6s     18.60nm          4.3mb X
      S.D. = 0.7  on   6 of   6 obs.
-----------------------------------------
% JUN 10, 1989  10h 43m 12.48± 0.73s
   37.662 N ± 6.9km   30.006 E ± 8.2km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

BCK      0.51 113 iPg    43 22.70    0.0
                  eSg    43 30.90
KHL      0.76 330 iPn    43 26.10   -1.3
ELL      0.92 185 iPn    43 29.50   -0.6
ALT      1.39   3 iPn    43 38.90    0.9
YER      1.47 250 ePn    43 40.10    1.0
DST      2.22 331 ePn    43 50.40    0.5
IZM      2.29 290 ePn    43 46.00   -4.9X
EZN      3.60 308 ePn    44 09.00   -0.4
      S.D. = 1.0  on   7 of   8 obs.
-----------------------------------------
? JUN 10, 1989  11h 43m 18.40± 3.70s
   61.885 N ±17.7km    3.954 E ±30.0km
   DEPTH =  10.0km  (geophysicist)
 NORWEGIAN SEA                     (642)
      MD 2.0 (BER).

SUE      0.92 155 eP     43 36.86    1.0
                  eS     43 50.05
HYA      1.29 123 iP     43 43.11    0.8
                  eS     43 59.03
ASK      1.53 156 eP     43 46.20    0.5
                  eSg    44 08.76
BER      1.65 155 eP     43 48.09    0.6
                  iSg    44 11.57
MOL      1.82  66 eP     43 51.07    1.2
                  eS     44 13.14
ODD1     2.37 145 iP     43 58.04    0.0
                  iS     44 26.88
KMY      2.76 166 eP     44 02.15   -1.3
                  eS     44 36.13
BLS1     2.88 149 eP     44 04.79   -0.4
                  eS     44 38.29
NRA0     3.84 104 iPd    44 16.30   -2.4
                  eS     45 00.60
                  iSg    45 14.70
      S.D. = 1.4  on   9 of   9 obs.
-----------------------------------------
* JUN 10, 1989  12h 02m 03.09± 0.90s
   6.373 S ±18.4km  154.814 E ± 8.8km
   DEPTH =  65.8 ± 16.2 km
   4.1mb (  2 obs.)
 SOLOMON ISLANDS                   (193)

RAB      3.41 309 eP     02 54.90   -0.1
        0.4s  1593.22nm
                  iS     03 43.00
VSG      5.63 121 eP     03 27.00    0.7
SVO      5.67 119 eP     03 26.00   -0.8
HNR      5.92 121 eP     03 31 00    0.7
                  eS     04 41 00
PMG      8 17 248 eP     04 01 00   -0 4
DZM     19.23 145 iPc    06 24.00   -1.1
WB5     23.97 234 eP     07 13.20    0.6
WRA     24.03 234 Pc     07 13.50    0.4
        0.9s     4 40nm          3.9mb
SPA     83.67 180 e(P)   14 25.80    0.0
        1.0s     3.00nm          4.3mb
      S.D. = 0.8  on   9 of   9 obs.
-----------------------------------------
   JUN 10, 1989  13h 40m 47.82± 1.15s
   16.393 N ± 7.5km   61.277 W ±11.4km
   DEPTH =  75.1 ± 11.6 km
 LEEWARD ISLANDS                   ( 92)

SFG      0.16 151 ePd    40 59.55   -0.4
SEG      0.22 273 iPc    40 59.25    0.0
                  S      41 07.00
DEG      0.22 111 iPc    40 59.63    0.3
PAG      0.53 227 eP     41 02.00    0.4
                  S      41 10.80
BPA      0.85 320 iPd    41 05.00   -0 1

BBL      0.B9 193 eP     41 05.15   -0.3
                  S      41 17.50
ANG      0.92 325 eP     41 06.03    0.1
                  eS     41 17.18
MGH      0.96 290 eP     41 06.30    0.0
                  S      49 19.00
NEV      1.44 301 eP     41 12.50   -0.1
                  S      41 31.00
FDF      1.65 176 iPc    41 15.16   -0.3
        0.1s     0.65nm
                  S      41 34.70
CRM      1.67 168 iPc    41 15.46   -0.1
                  S      41 35.60
SKI      1.68 304 eP     41 06.30   -9.5X
                  eS     41 18.37
MVM      1.B6 169 eP     41 1B.21   -0.1
BIM      1.8B 174 eP     41 19.20    0.7
                  S      41 40.00
      S.D. = 0.4  on  13 of  14 obs.
-----------------------------------------
   JUN 10, 1989  14h 08m 32.93± 0.41s
   38.387 N ± 4.6km   27.140 E ± 5.4km
   DEPTH =   8.8 ±  3.3 km
 TURKEY                            (366)

IZM      0.10  84 iPg    08 35.20   -0.3
PRK      1.09 322 ePb    08 54.00    0.4
                  eSb    09 10.00
YER      1.54 144 iPn    09 00.10   -0.6
EZN      1.57 336 iPn    09 01.00    0.0
DST      1.68  43 iPn    09 02.30   -0.4
KHL      1.87  91 iPn    09 05.20   -0.3
EDC      2.04  16 iPn    09 07.00   -0.8
MFT      2.40   3 ePn    09 13.00   -0.1
ALT      2.42  73 ePn    09 12.80   -0.6
ELL      2.74 126 iPn    09 19.50    1.5
YLV      2.78  38 ePn    09 17.00   -1.5
KAP      2.83 179 ePn    09 19.00   -0.2
BCK      2.88 108 iPn    09 19.80   -0.1
KSL      2.99 139 ePn    09 22.50    1.2
RDO      3.02 336 ePn    09 21.70   -0.1
ISK      3.06  28 ePn    09 27.00    4.7X
GPA      3.11  51 ePn    09 26.00    3.0X
NPS      3.35 202 ePn    09 25.00   -1.6
KDZ      3.52 338 iPd    09 29.00    0.1
RZN      3.79 331 iP     09 33.00    0.1
VAM      3.79 219 ePg    09 45.70   12.8X
MMB      4.13 322 eP     09 37.00   -0.7
                  eS     10 27.00
PLD      4.16 334 eP     09 33.00   -4.9X
                  iS     10 30.00
BBTK     4.61  70 eP     09 10.00  -34.5X
                  i      11 09.00
PVL      5.02 345 eP     09 47.00   -3.1X
VTS      5.16 326 eP     09 53.00    0.7
                  i      11 19.00
      S.D. = 0.8  on  20 of  26 obs.
-----------------------------------------
* JUN 10, 1989  14h 43m 52.39± 2.49s
   4.012 S ±20.6km  139.592 E ±11.5km
   DEPTH =  74.2 ± 17.3 km
   4.7mb (  4 obs.)
 WEST IRIAN                        (201)

MNDI     4.58 118 eP     45 01.00    0.1
LAT      7 83 110 eP     45 05.00  -40.8X
PMG      9.23 126 eP     46 10.00    5.0X
MTN     12.12 223 iPd    46 43.50   -0.5
                  eS     48 57.00
KNA     15.79 222 eP     47 32.00    0.3
                  eS     50 21.00
OIS     16.45 180 iPc    47 40.70    0.7
        0.8s     50.00nm          4.7mb
                  e      47 44.00
                  eS     50 39.00
W85     16.57 197 iPc    47 41.70    0.1
                  iS     50 44.80
WRA     16.64 197 Pc     47 41.50   -1.0
        0.6s     10.50nm          4.2mb
CTA     17.25 158 eP     47 57.00    7.0X
ASPA    20.30 195 iPd    48 24.70   -0.1
        0.5s     39.00nm          5.0mb
      Z  20s      0 16um          3 4Msz
                  ipP    48 45 50 108kmX
                  eS     52 09.70
                  LR     56 40.00
WARB    25 30 208 eP     49 03.00  -10.7X

        0.3s     6.00nm
MBL     25.68 227 eP     49 18.40    1 2
FORR    2B.81 201 eP     49 45.30   -0.3
SPA     86.01 180 e(P)   56 25.80    0.0
        0.6s     3.66nm          4.6mb
KIC    144.41 275 PKP    03 17 90   -4.9X
        0.6s    11.50nm
TIC    144.67 276 PKP    03 18.80   -4.5X
LIC    144.70 275 PKP    03 18.90   -4.4X
CNCB   145.79 128 PKP    03 25 00   -0.8
LPB    145.85 127 ePKP   03 26.00    0.3
ZOBO   145.98 127 PKP    03 23.00   -3.1X
      S.D. = 0.7  on  12 of  20 obs.
-----------------------------------------
& JUN 10, 1989  17h 07m 35.89s
   59.793 N          153.277 W
   DEPTH = 120.6km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

OPT      0.14 170 iP     07 52.40    1.3
                  S      08 04.72
ILIM     0.33  29 iP     07 52.55    0.8
AUE      0.44 186 iP     07 53.49   -0.3
PDB      0.46 270 iP     07 53.32   -0.6
AUI      0.47 189 iP     07 53.64   -0.3
                  S      08 05.86
RED      0.68  22 iP     07 54.83   -0.7
                  S      08 08.85
CDD      0.89 192 iP     07 56.93   -0.3
RDT      0.90  29 iP     07 56.61   -0.7
                  S      08 11.61
CNPM     1.07 104 iP     07 58.35   -0.7
BRLK     1.21  90 eP     07 59.77   -0.7
                  S      08 17.84
SPU      1.52  23 iP     08 03.26   -0.8
CRP      1.58  20 eP     08 04.37   -0.5
CGLM     1.64  22 iP     08 05.07   -0.5
SLKM     1.69  64 eP     08 05.23   -0.8
SVW      1.76 320 iPd    08 05.80   -1.1
SEW      1.95  79 iP     08 08.40   -0.8
                  S      08 32.63
SUA      2.09  36 eP     08 10.68   -0.4
                  S      08 36.74
KDC      2.09 168 eP     08 09.40   -1.5
SKT      2.36  21 eP     08 13.73   -0.7
PMR      2.72  47 eP     08 17.60   -1.6
PME      2.78  47 eP     08 18.12   -1.8
KNK      2.88  54 eP     08 19.41   -1.9
                  S      08 52.18
GHO      2.92  45 eP     08 19.85   -2.0
TTA      3.41 338 ePd    08 26.90   -1.6
TOA      4.17  53 eP     08 37.40   -1.3
      25 obs. ossociated
-----------------------------------------
   JUN 10, 1989  17h 29m 58.18± 0.16s
   22.252 S ± 4.9km  138.734 W ± 5.8km
   DEPTH =   0.0km  (geophysicist)
   5.5mb ( 18 obs.)
 TUAMOTU ARCHIPELAGO REGION        (631)

MSZ     48.82 230 P      38 47.40    0.2
DZM     50.53 259 iPc    39 00.90    0.2
PLM     59.10  21 eP     40 03.00    0.0
BLP     59.12  18 P      40 04.60    1.7
PAS     59.40  20 eP     40 05.00    0 1
PEC     59.49  21 P      40 06 20    0 6
MWC     59.51  20 eP     40 06.00    0.2
RVR     59.51  21 eP     40 05.00   -0.6
GLA     59.54  23 eP     40 06.00    0.1
BCH     59.80  1B P      40 08.90    1.2
SBB     60.01  20 eP     40 09.00   -0 1
PRS     60.53  16 eP     40 13.40    0.8
PRI     60.54  17 eP     40 13.70    0.9
ISA     60.71  19 eP     40 14.00    0 1
GSC     60.90  20 eP     40 16.00    0.8
LLA     60.91  16 ePc    40 16.00    0.8
SAO     60.92  16 eP     40 15.70    0.5
GCC     61.04  15 ePc    40 16.70    0.7
PCC     61.39  15 eP     40 18.80    0.4
MHC     61.42  15 eP     40 19.60    0.8
ARN     61.46  16 P      40 19.30    0 4
FRI     61.60  17 ePc    40 19.90    0.1
BRS     61.69 250 iPd    40 21 20    0 4
CMB     62.40  16 ePc    40 25.50    0 3
ARE     63.26  98 eP     40 33.00    1 3
TNP     63.33  19 P      40 31.80    0 2
```

10d 17h

0 6s 3.40nm 4.8mb
ORV 63.56 15 eP 40 32.80 0 0
KVN 63 97 18 P 40 36.00 0.2
WDC 64.30 14 ePc 40 37.80 0.1
ALQ 64.61 29 iPc 40 40.00 0.0
1.1s 23.73nm 5.3mb
e 41 09.50
LBFM 65.18 14 P 40 43.80 0.2
MSU 65.38 23 P 40 46.20 1.2
RMQ 65.38 250 eP 40 46.00 0.9
LPB 66.35 99 P 40 54.60 2.7
CNCB 66.38 99 iPc 40 54.00 1.8
ZOBO 66.41 99 iPc 40 52.20 -0.3
1.2s 87.84nm 5.9mb
CMS 66.75 244 iPd 40 53.70 -0.1
DAU 67.39 22 P 40 59.00 1.1
SPA 67.88 180 ePc 41 00.70 0.1
1.4s 48.04nm 5.5mb
CCH 67.89 100 P 40 59.00 -2.5
MEO 68.34 35 ePc 41 01.80 -1.8
1.2s 54.30nm 5.7mb
GOL 69.06 27 P 41 08.00 -0.2
0.8s 13.39nm 5.2mb
GLD 69.16 27 P 41 09.00 0.2
1.6s 64.81nm 5.6mb
CTA 69.28 256 iPc 41 09.80 0.0
1.1s 113.92nm 6.0mb
ACO 69.53 33 eP 41 09.80 -1.1
1.2s 58.70nm 5.6mb
BMW 69.83 11 P 41 12.70 0.1
UYO 70.15 38 eP 41 13.20 -1.5
SIO 70.29 36 eP 41 14.60 -0.9
VVO 70.29 36 eP 41 14.30 -1.2
LON 70.36 12 P 41 15.10 -0.7
TUL 70.69 36 eP 41 17.20 -0.7
1.1s 18.30nm 5.1mb
e 41 50.50
LNO 70.69 36 eP 41 16.30 -1.5
RMW 71.04 12 P 41 19.60 -0.4
RLO 71.30 36 eP 41 20.80 -0.8
LRM 71.84 19 eP 41 25.50 0.5
PGC 71.89 11 eP 41 25.00 0.1
QLY 72.82 39 P 41 30.00 -0.7
PNT 73.25 13 iP 41 33.00 0.0
RSSD 73.30 25 P 41 32.80 -0.8
QIS 75.09 254 iPc 41 43.60 -0.7
1.0s 26.00nm 5.2mb
SES 76.36 18 eP 41 51.00 0.1
EDM 78.32 15 iPc 42 01.30 -0.3
ASPA 79.09 249 iPc 42 05.80 -0.8
1.4s 39.00nm 5.2mb
PPD 79.68 110 eP 42 10.00 0.2
WB5 79.95 253 iPc 42 10.70 -0.5
WRA 79.96 253 Pd 42 11.30 0.0
0.9s 20.10nm 5.1mb
KDC 80.52 353 eP 42 13.20 -0.1
ADK 80.95 337 eP 42 15.40 -0.3
1.3s 94.30nm 5.7mb
FFC 82.88 20 eP 42 25.00 -0.8
1.5s 53.00nm 5.5mb
RSON 82.89 27 P 42 24.40 -1.5
0.6s 22.65nm 5.6mb
PMR 83.97 355 eP 42 31.90 0.8
1.3s 108.50nm 5.9mb
TOA 84.27 356 eP 42 33.00 0.3
MTN 85 35 258 iPc 42 39.30 0 2
0 6s 35 00nm 5 7mb
BMA 85 63 113 eP 42 41.60 1.1
e 42 50.30
TTA 85.99 352 eP 42 41.40 0.1
YKA 86.61 11 eP 42 44.80 0.5
YKC 86.62 11 iPc 42 44.00 -0.3
FBA 87.15 356 eP 42 46.30 -0.5
GAC 88.65 39 eP 42 53.50 -0.9
IMA 88.77 354 eP 42 54.40 -0.4
MAW 88.99 188 eP 42 56.00 0.1
INK 90.37 2 eP 43 01.00 -1.0
SOB1 93.72 101 eP 43 19.10 0.4
BRW 94.14 354 eP 43 20.10 0.8
MBC 99.00 5 eP 43 41.00 -0.3
BTO 119.98 305 PKP 48 52.70 0.0
GYA 120.84 288 PKP 48 54.60 -0.1
CD2 124.07 293 ePKP 49 00.80 0.1
CHG 126.15 278 iPKPd 49 05.50 0 4
1.0s 24.75nm
CHTO 126.15 278 iPKP 49 05.30 0.3
1.2s 32.29nm

GTA 127.77 303 PKP 49 07 40 -0.3
KIC 132.92 102 PKP 49 17.50 -0.6
SOD 133.95 8 ePKP 49 10.00 -8.4X
i 49 17.20
NAO 136.02 21 PKP 49 20.70 -1.8
1.4s 12.20nm
BUL 136.09 163 iPKPc 49 23.60 -0.5
1.0s 19.50nm
WMQ 136.22 311 ePKP 49 22.80 -0.8
KUK 136.78 105 ePKP 49 25.00 -0.4
SUF 138.27 10 iPKP 49 15.50 -11.2X
GUN 139.37 287 PKP 49 22.00 -8.3X
SNF 139.66 36 PKP 49 29.50 -0.1
KKN 139.90 287 PKP 49 23.30 -7.7X
NUR 140.03 13 ePKP 49 24.00 -5.9X
0.8s 17.60nm
i 49 30.30
DMN 140.04 287 PKP 49 24.00 -7.4X
DOU 140.05 37 PKP 49 30.80 0.5
WTS 140.19 33 ePKP 49 31.00 0.5
1.1s 19.00nm
ENN 140.42 35 ePKP 49 31.50 0.6
1.0s 12.00nm
WLF 141.13 37 PKPd 49 33.20 1.0
RUP 141.61 36 ePKP 49 27.30 -5.9X
ABH 141.78 35 ePKP 49 27.71 -5.8X
TOD 142.60 35 ePKP 49 21.15 -13.8X
FEL 143.13 38 ePKP 49 28.78 -7.2X
MOX 143.41 32 ePKP 49 33.00 -3.2X
1.4s 31.00nm
CLL 143.64 30 iPKP 49 33.80 -2.8X
1.3s 24.00nm
HOF 143.75 32 ePKP 49 33.60 -3.2X
1.2s 21.00nm
GRF 143.81 33 ePKP 49 34.70 -2.3X
LSD 143.83 42 PKP 49 34.88 -2.6X
RRL 143.85 43 PKP 49 34.68 -2.8X
PZZ 144.24 43 PKP 49 36.32 -1.7
BRG 144.37 30 iPKPd 49 35.40 -2.4X
1.2s 58.00nm
e 50 03.40
STV 144.50 44 PKP 49 35.19 -3.2X
ENR 144.57 44 PKP 49 35.70 -2.8X
GBA 144.60 262 PKPd 49 37.10 -2.1X
1.3s 43.40nm
HYB 144.66 269 ePKPd 49 38.00 -1.3
1.0s 60.00nm
FUR 144.77 35 iPKPc 49 37.60 -1.0
ROB 144.83 43 PKP 49 37.55 -1.4
WET 145.00 33 iPKPc 49 38.10 -0.9
1.4s 182.00nm
IMI 145.02 44 PKP 49 37.76 -1.5
FIN 145.08 43 PKP 49 38.06 -1.3
PRU 145.25 31 iPKPc 49 38.90 -0.5
1.2s 107.30nm
e 50 14.50
KHC 145.36 32 iPKPc 49 39.50 -0.1
1.2s 70.00nm
KSP 145.45 28 iPKPc 49 39.00 -0.7
1.0s 49.00nm
BOB 145.59 42 PKP 49 40.00 -0.2
SAL 145.80 40 PKP 49 38.40 -2.0X
KSH 145.88 308 ePKP 49 41.20 0.2
BHG 145 90 35 iPKPc 49 41.10 0.5
1 2s 140.00nm
CTI 146 21 38 PKP 49 41 10 -0 2
KMP 146 34 34 iPKP+ 49 43 00 1 7
FVI 146 53 37 PKP 49 41.10 -0 4
KBA 146.54 35 iPKPc 49 41.40 -0.4
1.3s 61.30nm
MME 146.65 42 PKP 49 42.50 0.3
BDI 146.65 42 PKP 49 40.10 -1.9
NDI 147.00 289 iPKPc 49 44.90 2.0
1.0s 82.00nm
RBL 147.06 36 PKP 49 42.00 -0.5
VKA 147.28 31 ePKPc 49 44.00 1.2
1.3s 135.00nm
KRA 147.58 26 ePKP 49 42.90 -0.2
1.0s 99.00nm
e 49 45.80
TRI 147.61 37 ePKPc 49 46.00 2.7X
ZST 147 71 31 ePKP 49 43.90 0.5
i 49 46 60
LJU 147 83 36 ePKP 49 43 50 -0 2
i 49 46 90
RSM 147 86 41 PKP 49 46 10 2 3X
CEY 147 96 37 ePKP 49 42 80 -1 2

i 49 45.70
RIY 148.18 37 ePKP 49 49.20 5.0X
SPC 148.37 27 e(PKP) 49 45.90 1.2
ASS 148.45 42 PKP 49 47.40 2.5X
SRO 148.55 30 ePKP 49 45.90 1.1
VBY 148.56 36 ePKP 49 46.40 1.5
i 49 48.80
PTJ 148.69 35 ePKP 49 45.60 0.4
RDP 149.17 44 PKP 49 46.90 0 9
RFI 150.22 44 PKP 49 55.00 7.5X
BZS 151.71 30 ePKPc 49 50.00 0 4
BNG 151.75 126 iPKPc 49 51.00 0.3
0.9s 4.00nm
MGR 151.84 45 PKP 49 49.80 -0.2
VRI 153.62 23 ePKP 49 52.50 0.1
MLR 153.65 25 ePKPd 49 53.00 0.4
SKO 154.25 36 ePKP 49 53.50 0.2
OHR 154.48 38 ePKP 49 54.70 1.0
S.D. = 0.9 on 139 of 165 obs.

JUN 10, 1989 17h 38m 22.54± 0.79s
36.689 N ± 8.5km 22.877 E ± 7.1km
DEPTH = 25.2 ± 9.2 km
4.2mb (3 obs.)
SOUTHERN GREECE (368)
ML 3.3 (ATH).

ITM 0.91 303 iPbc 38 39.50 0.0
ATH 1.45 27 ePb 38 49.00 1.8
eSb 39 08.50
VAM 1.67 140 iPbc 38 49.80 -0.7
VLS 2.35 310 ePg 39 07.70 7.4X
NPS 2.64 122 ePn 39 02.70 -1.7
KAP 3.66 107 ePn 39 18.00 -0.9
PLG 3.71 7 ePn 39 19.20 -0.4
KZN 3.72 347 ePn 39 24.90 5.2X
EZN 4.14 40 iP 39 24.00 -1.7
VAY 4.63 357 ePn 39 30.60 -2.1
OHR 4.70 340 ePn 39 39.50 5.7X
RDO 4.91 24 ePb 39 43.70 7.2X
SKO 5.39 349 ePn 39 51.50 8.1X
i 40 03.20
ELL 5.65 87 eP 39 47.50 0.3
MGR 6.70 303 P 40 01.30 -0.6
SDI 8.63 308 P 40 27.90 -1.0
PRNI 11.92 119 e(P) 41 04.00 -9.9X
MBH 12.18 121 eP 41 12.00 -5.4X
KHC 14.16 334 eP 41 54.50 10.9X
NAO 25.34 346 P 43 47.30 -1.4
0.7s 0.80nm 3.5mb
EKA 25.73 325 P 43 53.00 0.7
0.6s 4.20nm 4.2mb
BNG 32.34 188 iPd 44 52.50 0.4
0.4s 5.00nm 4.8mb
S.D. = 1.2 on 14 of 22 obs.

& JUN 10, 1989 17h 59m 09.28s
58.117 N 153.732 W
DEPTH = 62.3km
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC 0.76 119 eP 59 23.92 -0.5
S 59 36.79
CDD 0.82 3 iP 59 24.78 -0 5
S 59 37 30
OPT 1 56 9 iP 59 34 84 -0 4
PDB 1.69 352 iP 59 36.27 -0 7
S 59 55.80
CNPM 1.92 42 eP 59 39.23 -0.9
S 00 04.67
ILIM 2.01 11 eP 59 40.65 -0.8
RED 2.36 12 eP 59 45.52 -0.9
RDT 2.56 15 eP 59 48.06 -1.1
SPU 3.19 15 eP 59 56.80 -1.3
9 obs. associated

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* JUN 10, 1989 18h 26m 28.76± 1.11s
36.464 N ±15.5km 22.693 E ±13.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.2 (ATH).

ITM 0 94 319 iPgc 26 48.20 1 5
eSg 27 03.00
VAM 1.61 130 ePb 26 58.50 1 1
ATH 1 71 28 ePb 26 58.80 0.0

APE	2.36	74	ePg	27	14.50	6.3X
VLS	2.39	316	ePg	27	17.00	8.4X
NPS	2.66	116	ePn	27	12.20	-0.2
KAP	3.75	103	ePn	27	27.00	-0.9
OHR	4.87	343	e(P)	28	01.50	17.7X
MGR	6.70	305	P	28	08.10	-1.6

S.D. = 1.5 on 6 of 9 obs.

& JUN 10, 1989 18h 35m 00.80s
41.947 N 125.034 W
DEPTH = 5.0km (geophysicist)
4.2mb (3 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.8 (BRK).

FHC	1.39	145	iPd	35	24.50	-2.4
			iS	35	34.70	
			i	35	41.80	
WDC	2.32	125	iPc	35	37.70	-2.6
			iS	35	59.10	
LBFM	2.43	103	eP	35	41.50	-0.5
LTCM	2.80	127	eP	35	44.30	-2.8
MIN	3.04	121	e(P)	35	48.00	-2.7
			iS	36	17.10	
ORV	3.59	131	e(P)	35	54.20	-4.1
			eS	36	30.50	
NWRM	3.85	154	eP	36	00.30	-1.7
BRK	4.59	151	eP	36	10.70	-1.8
PCC	4.89	154	e(P)	36	13.80	-2.9
CMB	5.29	136	eP	36	20.40	-2.1
MHC	5.29	149	eP	36	20.60	-2.0
ARN	5.33	148	eP	36	20.70	-2.3
GCC	5.44	153	eP	36	21.60	-3.0
KVN	6.02	116	eP	36	29.80	-3.1
FFC	19.84	42	eP	39	43.00	7.8
	0.8s	10.00nm			4.2mb	
ACO	20.67	96	eP	39	44.00	0.0
	0.6s	6.10nm			4.1mb	
MEO	21.88	100	eP	39	53.00	-3.4
	1.2s	13.20nm			4.2mb	
UYO	25.20	98	iP	40	30.00	1.3

18 obs. associated

JUN 10, 1989 19h 09m 16.32± 0.61s
36.682 N ± 5.6km 22.924 E ± 4.8km
DEPTH = 14.6 ± 3.2 km
4.2mb (3 obs.)
SOUTHERN GREECE (368)
ML 3.5 (ATH). Felt in the
eastern Lokonikos Kolpos areo.

ITM	0.94	302	iPgc	09	34.50	0.7
			eSg	09	49.00	
ATH	1.43	26	ePg	09	43.50	1.8
VAM	1.64	141	iPbc	09	45.00	0.3
VLS	2.38	309	ePb	09	59.00	3.5X
NPS	2.60	122	ePn	09	58.30	-0.3
NEO	2.63	5	ePn	09	59.00	0.0
PAIG	3.29	10	ePnd	10	07.60	-0.8
			eSn	10	45.80	
LIT	3.43	354	ePn	10	10.20	-0.1
			eSn	10	50.90	
KAP	3.62	107	ePn	10	12.90	-0.2
PRK	3.68	45	ePn	10	13.00	-0.9
PLG	3.71	6	ePn	10	13.50	-0.8
EZN	3.73	346	ePn	10	16.70	2.0
OUR	3.74	12	ePn	10	14.20	-0.5
			eSn	10	44.30	
THE	3.94	0	ePn	10	18.70	1.1
			eSn	10	49.20	
EZN	4.12	39	eP	10	19.00	-1.1
GRG	4.29	355	ePn	10	21.90	-0.6
			eSn	10	55.00	
YER	4.32	82	eP	10	24.00	1.0
SRS	4.46	7	ePn	10	25.60	0.7
			eSn	11	16.40	
KNT	4.47	360	ePn	10	25.40	0.3
			eSn	11	14.90	
VAY	4.64	357	ePn	10	27.70	0.2
OHR	4.72	340	ePn	10	35.00	6.3X
RDO	4.90	24	ePn	10	32.00	0.9
LCI	5.34	315	P	10	36.80	-0.5
KSL	5.40	94	ePn	10	39.40	1.1
SKO	5.41	348	ePn	10	49.50	11.2X
ELL	5.61	87	eP	10	43.50	2.1
TDS	5.98	302	P	10	46.40	0.0
MEU	6.42	276	P	10	49.70	-3.1X
			eSn	12	02.30	
MGR	6.74	303	P	10	57.20	0.1
SGO	7.11	305	P	11	03.00	0.8
BSS	7.55	305	P	11	08.10	-0.4
SDI	8.67	308	P	11	23.90	-0.2
PRNI	11.89	119	iP	12	01.50	-6.8X
MBH	12.15	121	iPd	12	07.50	-4.2X
KHC	14.19	334	eP	12	46.20	7.5X
GRB4	15.22	331	e(P)	13	03.00	10.9X
	1.0s	25.00nm				
DOU	18.83	321	Pc	13	43.20	5.6X
			e	40	52.80	
NAO	25.36	346	P	14	41.80	-2.2
	0.7s	1.00nm			3.6mb	
EKA	25.75	325	Pd	14	48.80	1.1
	0.8s	6.20nm			4.3mb	
BNG	32.34	188	ePc	15	48.00	0.7
	0.6s	3.00nm			4.4mb	
GKN	52.07	81	P	18	25.60	-2.4
DMN	52.62	81	P	18	30.00	-2.3

S.D. = 1.2 on 33 of 42 obs.

? JUN 10, 1989 19h 39m 54.76± 1.40s
51.510 N ±11.5km 6.679 E ±28.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

WTS	0.49	9	iPg	40	04.50	-0.3
	0.5s	13.00nm				
ENN	0.88	213	iPg	40	11.00	-0.7
	0.5s	8.00nm				
			iSg	40	25.20	
MEM	1.00	205	iP	40	12.20	-1.4
			iS	40	27.20	
SNF	1.81	238	P	40	27.20	1.0
			S	40	49.50	
WLF	1.88	191	P	40	28.50	1.4

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

JUN 10, 1989 21h 22m 06.03± 0.63s
37.174 N ± 7.1km 4.566 W ± 5.7km
DEPTH = 20.5 ± 9.0 km
SPAIN (377)
mbLg 2.8 (MDD).

MAL	0.46	164	iPg	22	13.70	-1.7
			iSg	22	20.00	
EPRU	0.57	249	eP	22	17.90	0.6
			eS	22	25.70	
LIJA	0.73	248	iP	22	21.00	1.0
AFC	0.82	84	eP	22	22.20	0.6
			eS	22	33.60	
EHOR	0.84	320	eP	22	21.30	-0.5
			eS	22	32.30	
SRQ	1.12	216	eP	22	28.00	1.5
GIBL	1.16	253	iP	22	28.00	0.8
EBAN	1.17	32	eP	22	27.00	-0.2
			eS	22	42.20	
MOMI	1.26	228	eP	22	29.00	0.5
OJEN	1.33	216	eP	22	30.00	0.5
PLAT	1.42	223	eP	22	30.00	-0.8
CNIL	1.44	237	eP	22	28.50	-2.5
EVAL	1.78	284	eP	22	35.50	-0.5
			eS	22	58.00	
ENIJ	1.89	95	eP	22	38.30	0.7

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

JUN 10, 1989 21h 50m 56.99± 0.31s
36.369 N ± 4.4km 31.965 E ± 4.8km
DEPTH = 112.3 ± 5.0 km
4.0mb (6 obs.)
TURKEY (366)

PPCY	1.51	168	eP	51	24.50	0.1
BCK	1.55	315	iPn	51	24.80	-0.2
ELL	1.70	283	iPn	51	28.50	1.6
CSS	1.79	141	eP	51	26.30	-1.6
KSL	1.94	263	eP	51	30.70	0.9
KHL	2.76	316	iPn	51	40.30	-0.3
YER	3.05	286	iPn	51	45.50	0.9
ALT	3.06	332	ePn	51	44.60	0.0
BBTK	3.52	10	iPc	51	51.00	0.0
			i	52	32.00	
KAP	3 97	260	eP	51	56.50	-0 4
DST	4 17	322	iPn	52	00.20	0 5
IZM	4 26	300	ePn	51	58 30	-2 6
HRI	4 38	134	iP	52	02.50	-0.1
JARJ	5.28	140	P	52	15.70	0.8
NPS	5.28	260	eP	52	14.30	-0.6
SALJ	5.33	144	P	52	16.30	0.7
KFNJ	5.45	145	P	52	17.90	0.8
MASJ	5.58	145	P	52	19.30	0.3
MKRJ	5.69	147	P	52	21.20	0.6
MKT	6.02	153	iPc	52	25.50	0.4
			eS	53	29.00	
QUTJ	6.07	145	P	52	26.30	0.5
VAM	6.38	264	eP	52	30.00	0.1
KOT	6.42	181	ePn	52	29.50	-1.0
			eSn	53	38.00	
HLW	6.51	185	eP	52	32.00	0.2
			eS	53	24.00	
PRNI	6.52	156	iP	52	30.50	-1.4
MBH	7.02	159	iP	52	38.00	-0.7
BRG	19.43	324	e(P)	55	17.00	0.3
			eSg	57	45.00	
LPG	21.05	303	eP	55	33.70	0.0
CDF	21.74	311	eP	55	39.80	-0.5
BSF	21.81	310	eP	55	40.20	-0.8
HAU	22.15	310	eP	55	43.80	-0.4
SMF	23.32	305	eP	55	56.10	0.5
	0.6s	12.90nm			4.5mb	
LBF	23.32	306	eP	55	55.80	0.1
	0.5s	2.10nm			3.8mb	
LOR	23.48	306	eP	55	57.40	0.2
	0.6s	3.90nm			4.0mb	
SSF	23.65	306	eP	55	58.30	-0.5
	0.5s	2.90nm			4.0mb	
AVF	23.68	305	eP	55	59.50	0.5
	0.4s	4.80nm			4.3mb	
MAF	24.06	303	eP	56	03.50	0.7
TCF	24.32	303	eP	56	06.30	1.1
NAO	27.93	338	P	56	37.50	-0.7
	0.5s	0.40nm			3.3mb	

S.D. = 0.8 on 39 of 39 obs.

% JUN 10, 1989 22h 32m 23.13± 0.80s
42.790 N ± 4.4km 12.675 E ±21.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.7 (ROM).

ASS	0.28	358	P	32	29.10	0.0
			eSg	32	33.00	
MNS	0.40	179	P	32	31.10	-0.3
			iSg	32	37.30	
ARV	0.74	15	P	32	37.50	-0.1
			iSg	32	49.40	
RMP	0.98	179	P	32	41.60	-0.1
			eSg	32	56.50	
RDP	1.03	178	P	32	43.10	0.4
			eSn	32	58.10	
SDI	1.37	142	P	32	48.40	0.0
			eSn	33	08.00	

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

& JUN 11, 1989 00h 51m 26.70s
36.250 N 120.300 W
DEPTH = 6.0km (geophysicist)
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.1 (PAS), 2.7
(BRK).

PKEM	0.24	141	iP	51	32 70	1 0
PRI	0.31	250	iPd	51	32.80	-0 3
PHAM	0.42	191	eP	51	34.80	-0.4
LLA	0.63	305	iPd	51	38.80	-0.6
PRS	0.87	276	iPd	51	41.90	-1 9
			eS	51	54.80	
FRI	0.88	33	iPd	51	43.00	-1.0
			eS	51	54.80	
SAO	1.06	299	eP	51	45.40	-1.6
			eS	52	01.70	
BCH	1.08	171	eP	51	45.40	-2.0
ARN	1.48	318	eP	51	51.80	-2.1
MHC	1.53	316	ePd	51	52.50	-2.2
GCC	1.57	300	eP	51	53.70	-1.5
ISA	1.59	111	eP	51	54.00	-1.6
ABL	1.65	147	eP	51	53.30	-3.2
CMB	1.78	358	eP	51	57.20	-1.1
			eS	52	20.90	
TNP	3 07	52	eP	52	15.70	-1.1
KVN	3.30	31	eP	52	20 00	-0.1

16 obs ossociated

11d 01h

* JUN 11, 1989 01h 18m 03 59± 3.91s
43.824 N ±17 4km 8.263 E ±21.0km
DEPTH = 10 0km (geophysicist)
CORSICA (380)
ML 2.4 (GEN).

IMI	0.28	288	P	18 09.41	-0.2
			S	18 13.77	
FIN	0.39	354	P	18 11.74	0.2
			S	18 18.59	
SAOF	0.54	288	Pg	18 15.12	0.7
ROB	0.55	329	P	18 14.43	-0.3
			S	18 22.08	
SBF	0.60	274	Pg	18 15.60	-0.2
			Sg	18 23.40	
AUTN	0.63	286	Pg	18 16.27	-0.1
AURF	0.68	276	Pg	18 17.24	0.1
			Sg	18 27.30	
ENR	0.73	304	P	18 18.05	0.2
			S	18 27.82	
TOUF	0.76	285	Pg	18 18.28	-0.3
			Sg	18 28.77	
STV	0.80	302	P	18 18.84	-0.3
			S	18 29.05	
PZZ	1.08	310	P	18 23.97	0.0
			S	18 39.30	
CVF	1.33	160	Pn	18 39.15	11.0X

S.D. = 0.3 on 11 of 12 obs.

& JUN 11, 1989 01h 46m 44.63s
59.778 N 153.418 W
DEPTH = 130.0km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.16	143	iP	47 02.27	1.2
			S	47 14.90	
ILIM	0.38	37	iP	47 02.65	-0.8
			S	47 16.48	
AUE	0.42	177	iP	47 03.23	-0.3
RED	0.72	26	iP	47 04.87	-0.7
			S	47 19.99	
CDD	0.86	188	iP	47 06.22	-0.4
			S	47 22.92	
RDT	0.95	32	iP	47 06.69	-0.7
			S	47 22.67	
CNPM	1.14	102	iP	47 08.41	-0.8
			S	47 26.23	
BRLK	1.28	90	iP	47 10.14	-0.6
			S	47 28.71	
NKA	1.46	47	iP	47 13.65	1.1
SPU	1.56	25	iP	47 13.13	-0.7
			S	47 35.52	
CRP	1.62	22	iP	47 14.22	-0.4
CGLM	1.69	24	iP	47 14.82	-0.5
			S	47 37.48	
SVW	1.72	322	iPd	47 14.80	-0.9
SLKM	1.76	64	eP	47 15.47	-0.7
SEW	2.02	79	eP	47 18.36	-0.9
			S	47 43.93	
KDC	2.09	166	iPd	47 18.50	-1.6
			iS	47 44.40	
SUA	2.14	37	iP	47 20.33	-0.6
			S	47 46.70	
SKT	2 40	22	iP	47 23.20	-0.8
			S	47 55 54	
PMR	2 79	47	eP	47 27 80	-1.2
PME	2.85	47	eP	47 28.14	-1.7
			S	48 00.42	
KNK	2.95	54	eP	47 29.09	-2.1
			S	48 03.06	
GHO	2.98	46	eP	47 29.50	-2.1
TTA	3.40	340	eP	47 35.70	-1.5
FID	3.59	71	eP	47 37.71	-2.0
TOA	4.23	53	iPc	47 47.00	-1.4
WRH	5.33	26	iP	48 00.75	-2.4
IMA	6.32	359	eP	48 15.50	-1.2

27 obs. associated

JUN 11, 1989 04h 44m 51.60± 0.58s
36.494 N ± 5.3km 71.262 E ± 4.1km
DEPTH = 224.2 ± 7.3 km
4 1mb (18 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

KSH	4 76	50	iPnc	46 04.50	0.2
			Sn	46 59.00	
OUE	7.25	211	eP	46 38.13	2.0
			eS	47 57.70	
NDI	9.27	146	eP	47 02.00	0.0
			eS	48 39.00	
MAIO	9.49	272	iPd	47 04.00	-1.0
			eS	48 40.00	
GKN	14.12	123	P	48 02.70	-0.7
WMQ	14.53	55	P	48 07.50	-0.8
			S	50 44.80	
DMN	14.69	123	P	48 10.40	-0.1
KKN	14.70	122	P	48 09.60	-0.9
PKI	14.92	123	P	48 12.60	-0.8
GUN	15.03	121	P	48 14.30	-0.5
SHL	20.72	116	eP	49 17.00	1.1
			eS	53 07.00	
GTA	22.66	74	eP	49 36.20	1.5
GBA	23.46	165	Pc	49 43.10	0.9
	0.5s		12.00nm	4.7mb	
NUR	37.96	324	iP	51 49.20	0.4
SUF	38.04	328	iP	51 50.10	0.7
	0.4s		2.70nm	4.2mb	
SOD	39.83	335	eP	52 05.00	0.9
BRG	42.79	308	iP	52 29.80	1.3
	0.8s		10.00nm	4.3mb	
CLL	43.36	309	iPd	52 33.90	0.8
BSF	47.81	305	eP	53 08.20	-0.1
	0.6s		4.30nm	4.0mb	
HAU	48.07	305	eP	53 10.00	-0.2
	0.6s		4.30nm	4.0mb	
SBF	48.24	300	eP	53 11.60	0.0
	0.4s		2.20nm	3.9mb	
LPG	48.33	302	eP	53 12.50	0.0
	0.6s		3.90nm	4.0mb	
LBF	49.86	304	eP	53 23.30	-0.6
SMF	50.03	304	eP	53 24.80	-0.3
	0.6s		5.40nm	4.2mb	
AVF	50.32	304	eP	53 26.90	-0.4
	0.6s		6.30nm	4.3mb	
MAF	50.99	304	eP	53 32.30	-0.1
	0.7s		4.80nm	4.1mb	
TCF	51.21	304	eP	53 34.10	0.0
	0.6s		3.60nm	4.0mb	
LSF	51.68	304	eP	53 36.80	-0.7
	0.6s		3.60nm	4.1mb	
CAF	51.68	302	eP	53 37.60	0.0
FLN	52.34	307	eP	53 41.70	-0.6
	0.6s		3.60nm	4.1mb	
LPO	52.35	302	eP	53 42.20	-0.2
LFF	52.58	303	eP	53 44.10	0.0
	0.5s		3.40nm	4.1mb	
GRR	52.68	307	eP	53 44.30	-0.5
MFF	52.70	305	eP	53 44.10	-0.8
EPF	53.43	300	eP	53 50.00	-0.5
	0.6s		1.80nm	3.8mb	
BNG	57.85	250	iPd	54 21.30	-0.9
	0.4s		4.00nm	4.5mb	
MBC	67.33	3	ePc	55 23.80	0.1
	0.4s		3.00nm	4.4mb	
INK	73.88	9	eP	56 03.00	0.1
YKA	81.24	3	eP	56 44.30	1.1
ASPA	84.08	125	iPc	56 57.80	-0.5
	0.6s		5.00nm	4.5mb	
FORR	85.59	134	eP	57 05.40	-0.2

S.D. = 0.8 on 41 of 41 obs.

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* JUN 11, 1989 05h 03m 42.32± 0.89s
36.620 N ±10 3km 27 974 E ± 8 9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

YER	0.57	26	iPg	04 00.80	6.9X
			iSg	04 10.80	
KAP	1.25	211	iPnc	04 05.80	0.3
KSL	1.39	111	ePn	04 06.50	-1.2
ELL	1.56	85	iPn	04 11.50	1.2
IZM	1.86	343	ePn	04 14.30	-0.3
KHL	2.10	35	ePn	04 21.50	3.5X
BCK	2.25	67	ePn	04 27.00	6.7X
NPS	2.35	235	ePn	04 21.50	0.0

S.D. = 1.3 on 5 of 8 obs.

JUN 11, 1989 06h 05m 07.91± 0.53s
47.173 N ± 4.3km 7.492 E ± 6 2km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
MD 2.6 (STR).

ZLA	0.68	63	ePc	05 21.80	0.3
MOF	0.72	340	Pg	05 21.47	-0.7
			Sg	05 33.89	
FEL	0.79	26	ePnd	05 22.20	-1.1
BSF	0.81	324	Pg	05 23.45	-0.3
			Sg	05 35.99	
SLE	0.90	49	ePc	05 24.30	-0.9
ECH	1.07	348	Pg	05 28.98	1.0
LLS	1.07	106	ePc	05 28.50	0.2
DIX	1.09	183	ePd	05 27.10	-1.6
MMK	1.17	164	ePc	05 28.00	-1.9
CDF	1.25	353	Pg	05 31.03	-0.1
TMA	1.43	138	ePd	05 33.30	-0.8
VITF	1.46	316	Pg	05 34.97	0.7
			Sg	05 55.58	
VDL	1.52	116	ePd	05 36.50	1.1
LSD	1.73	188	P	05 39.15	0.7
			S	06 00.22	
OSS	1.88	104	ePd	05 42.20	1.6
RRL	2.31	193	P	05 48.53	1.7
PZZ	2.68	186	P	05 56.84	4.8X

S.D. = 1.2 on 16 of 17 obs.

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* JUN 11, 1989 06h 45m 47.32± 0.73s
6.415 S ± 8.5km 148.081 E ± 9.5km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)
NEW BRITAIN REGION (192)
ML 4.7 (PMG).

LAT	1.10	257	iPd	46 05.30	-1.1
LMG	2.48	178	iP	46 25.80	-0.6
PMG	3.11	197	eP	46 36.00	0.7
			eS	47 17.00	
MNDI	4.40	273	eP	46 56.00	2.1
CTA	13.71	187	iPc	49 05.00	3.2X
	0.9s		14.29nm	4.8mb X	
QIS	16.29	210	eP	49 35.00	-0.3
WB5	18.88	224	eP	50 07.20	-0.5
WRA	18.95	223	Pc	50 07.60	-0.8
	0.3s		3.00nm	4.0mb	
RMQ	19.97	178	eP	50 21.00	1.1
BRS	21.33	168	iPc	50 33.90	0.0
ASPA	21.91	217	eP	50 39.10	-0.6
	0.5s		21.00nm	4.8mb	
	Z 22s		0.42um	3.8MszX	
			eS	54 45.30	
			LR	59 05.30	
WARB	28.37	224	eP	51 30.00	-10.7X
MAT	43.72	348	iPc	53 50.40	-0.8
	1.3s		30.77nm	4.9mb	
SPA	83.63	180	e(P)	58 14.80	1.1
	1.0s		5.50nm	4.7mb	
CNCB	137.53	123	ePKP	05 02.00	-9.4X
LPB	137.57	123	(PKP)	05 03.00	-8.3X
			e	05 14.00	
ZOBO	137.67	123	ePKP	05 03.00	-8.7X
CCH	138.74	125	ePKP	05 14.00	0.7
PPD	145.94	147	ePKP	05 24.50	-0.8
KUK	148.64	271	ePKP	05 34.00	4.1X
BAO	152.92	144	e(PKP)	05 36.00	-0.3

S.D. = 1.0 on 15 of 21 obs.

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* JUN 11, 1989 06h 57m 30.55± 0.91s
30.261 N ± 9.5km 51.643 E ±15.9km
DEPTH = 33.0km (normal)
3 3mb (1 obs)
IRAN (348)
ML 3.7 (BMU).

SHI	0.98	129	eP	57 47.00	-1.2
BRF	4.28	193	(Pn)	58 36.50	1.6
BJA	4.35	192	ePn	58 36.80	0.8
			(Sn)	59 23.30	
IR4	5.00	353	eP	58 51.50	6.0X
IR1	5.20	351	eP	58 51.00	2.7
TEH	5.47	358	eP	59 06.00	14.1X
BHD	6.87	298	eP	59 48.50	37.0X
			eS	01 36.00	
MSL	9.37	313	eP	59 45.00	-1.3
			eS	01 28.00	
			ePcP	06 07.00	
MLR	25.20	314	ePc	02 58 00	3.2X
OHR	27.16	302	e(P)	03 13.30	0 5
KHC	34.36	314	eP	04 16.40	0 0
NAO	40.71	331	P	05 08.10	-1 3
	0.6s		0 40nm	3.3mb	

```
KIC     57.91 258 P      07 21.00   -1 1
LIC     58.22 258 P      07 23.40   -0.8
      S.D. = 1.6  on  10 of  14 obs
-----------------------------------------
*  JUN  11, 1989  06h 59m 50.58± 0.97s
   41.622 N ±13.9km   72.902 E ±20.6km
   DEPTH =  33.0km  (normal)
   4.9mb (  4 obs.)
 KIRGHIZ SSR                        (716)

MAIO    11.71 247 eP     02 38.00   -0.4
                  eS     04 46.00
QUE     12.38 205 eP     02 47.20   -0.4
                  e      02 57.00
NAO     41.50 319 P      07 35.60   -0.2
        0.7s      1.80nm          3.9mb
BNG     60.89 248 iPd    10 03.60    1.1
        0.4s      5.00nm          5.0mb
MBC     62.15   3 eP     10 09.50   -0.7
        0.7s      5.00nm          4.8mb
INK     68.61  10 eP     10 51.00   -0.8
YKA     76.06   4 eP     11 36.50    0.6
FFC     83.93 357 eP     12 19.00    0.9
        0.8s      9.00nm          5.0mb
      S.D. = 0.9  on   8 of   8 obs.
-----------------------------------------
*  JUN  11, 1989  07h 08m 30.83± 0.60s
   59.679 N ±19.5km   29.800 W ±11.6km
   DEPTH =  10.0km  (geophysicist)
   4.3mb (  6 obs.)
 NORTH ATLANTIC OCEAN               (402)

EKA     14.91  95 P      12 09.00    5.9X
        1.2s     13.30nm          4.3mb
LPF     20.39 112 eP     13 09.40   -0.7
        1.2s     20.20nm          4.3mb
SNF     21.33 100 P      13 19.70    0.0
DOU     21.74 101 P      13 23.40   -0.5
MFF     21.85 114 eP     13 24.10   -0.9
        1.1s     11.70nm          4.2mb
MEM     22.13  98 P      13 27.10   -0.6
LSF     22.89 112 eP     13 36.10    0.7
        0.9s      7.20nm          4.2mb
SSF     23.25 108 eP     13 39.10    0.3
LOR     23.28 107 eP     13 39.10    0.0
MAF     23.41 111 eP     13 40.70    0.3
        1.0s      8.00nm          4.2mb
LFF     23.51 115 eP     13 42.80    1.5
        0.8s      8.00nm          4.3mb
ALE     24.44 350 eP     13 50.00    0.0
YKA     38.32 312 eP     15 53.70    1.0
KVN     56.47 291 eP     18 14.70   -0.4
TNP     56.82 290 eP     18 17.00   -0.6
      S.D. = 0.8  on  14 of  15 obs.
-----------------------------------------
&  JUN  11, 1989  09h 29m 18.20s
   38.845 N          122.808 W
   DEPTH =   4.0km
 NORTHERN CALIFORNIA                ( 36)
      <BRK>. ML 3.1 (BRK).

NWRM     0.39 189 eP     29 26.00   -0.1
BRK      1.06 156 e(P)   29 37.90   -0.8
BKS      1.07 155 ePc    29 38.50   -0.3
                  iS     29 54.00
ORV      1.24  55 ePc    29 40 70   -1 1
PCC      1.38 166 eP     29 43 30   -1 0
WDC      1.75   7 eP     29 50.60    1.2
MHC      1.76 148 ePc    29 48.83   -1.0
MIN      1.76  31 ePc    29 48.70   -1.1
ARN      1.80 146 eP     29 48.80   -1.5
CMB      2.07 112 eP     29 52.80   -1.4
LBFM     2.60  15 eP     30 05.00    3.1
KVN      3.68  85 eP     30 16.30   -0.9
        12 obs. associated
-----------------------------------------
*  JUN  11, 1989  09h 53m 30.95± 0.55s
   13.348 N ±12.0km  144.274 E ±10.1km
   DEPTH = 125.6 ±  5.2 km
   4.3mb (  1 obs.)
 MARIANA ISLANDS                    (216)
      Felt (III) on Guam.

GUMO     0.62  67 eP     53 50.80    0.3
PJG      0.62  67 iP     53 50.70    0.2
GUA      0.65  73 iPc+   53 50.40   -0.3
                  eS     54 03 20

DZM     41.37 148 iPc    01 06.10   -0.3
MBL     41.86 215 eP     01 10.30    0.0
GUN     56.07 295 P      02 59.90    0.1
PKI     56.47 294 P      03 02.50   -0.2
GKN     57.17 295 P      03 07.30   -0.1
PNT     83.93  41 eP     05 48.00   -0.1
        0.6s      3.00nm          4.3mb
KVN     87.52  51 eP     06 06.00   -0.2
TNP     88.44  51 eP     06 10.50   -0.2
ZOBO   148.56  99 PKP    13 05.70    3.4X
LPB    148.58 100 (PKP)  13 03.00    0.9
CNCB   148.69 100 PKP    13 07.90    5.5X
      S.D. = 0.4  on  12 of  14 obs.
-----------------------------------------
   JUN  11, 1989  10h 08m 27.29± 0.25s
   59.605 N ± 6.7km   29.815 W ± 3.9km
   DEPTH =  10.0km  (geophysicist)
   4.4mb ( 23 obs.)
 NORTH ATLANTIC OCEAN               (402)

REY      5.89  36 iP     09 52.20   -4.4X
AKU      8.13  36 e(P)   10 29.60    1.5
        1.5s     55.56nm          5.6mb X
EKA     14.91  95 P      12 05.00    5.4X
        1.3s     16.90nm          4.4mb
DAG     17.66   8 eP     12 35.00    0.5
FRB     18.62 299 eP     12 48.00    1.6
FLN     20.13 110 eP     13 02.70   -1.1
        1.2s     20.20nm          4.3mb
GRR     20.21 111 eP     13 04.80    0.1
NRA0    20.37  69 P      13 05.70   -0.5
LPF     20.37 112 eP     13 06.30   -0.1
        1.2s     26.10nm          4.5mb
SNF     21.32 100 Pc     13 14.80   -1.3
DOU     21.74 101 P      13 20.40    0.1
MFF     21.83 113 eP     13 21.40    0.1
        1.1s     19.50nm          4.4mb
MEM     22.13  98 P      13 23.60   -0.5
WLF     22.79 100 Pc     13 22.70   -8.0X
LSF     22.87 112 eP     13 32.30    0.7
        1.0s     14.80nm          4.5mb
TCF     23.17 111 eP     13 34.90    0.4
        1.0s      8.80nm          4.3mb
SSF     23.24 108 eP     13 35.00   -0.2
        1.1s     10.70nm          4.3mb
LOR     23.26 107 eP     13 35.10   -0.3
        1.1s     14.60nm          4.4mb
BGF     23.28 110 eP     13 35.60    0.0
AVF     23.35 109 eP     13 36.10   -0.2
        1.1s     12.20nm          4.4mb
MAF     23.39 110 eP     13 36.30   -0.3
        0.8s      9.40nm          4.4mb
LFF     23.49 115 eP     13 38.60    1.0
        1.0s     28.00nm          4.8mb
LBF     23.52 107 eP     13 37.90    0.0
        0.8s      4.00nm          4.0mb
SMF     23.69 108 eP     13 39.80    0.2
        1.0s      8.00nm          4.2mb
LPO     23.89 115 eP     13 42.20    0.7
        0.9s      7.80nm          4.3mb
HAU     23.98 103 eP     13 42.30   -0.1
ALE     24.51 350 eP     13 47.00   -0.2
EPF     24.79 119 eP     13 50.80    0.5
        1.2s     10.10nm          4.4mb
TOL     25 54 129 eP     14 02.00    4.6X
LPG     25 93 107 eP     14 00 60   -0 7
MBC     33 17 334 eP     15 05 00   -0.3
        1.5s     10.00nm          4.5mb
BZS     33.30  92 eP     15 07.50    0.8
RSON    36.11 285 P      15 28.60   -2.2
        1.2s     10.34nm          4 6mb
FFC     37.65 295 eP     15 43.00   -0.7
        1.5s     35.00nm          4.9mb
FVM     43.54 268 P      16 33.50    1.1
EDM     43.74 300 ePc    16 33.80   -0.2
FBA     47.39 329 P      17 02.00   -0.7
        1.2s     11.36nm          4.8mb
IMA     47.89 333 P      17 05.20   -1.7
        1.0s      3.13nm          4.4mb
LRM     48.62 292 eP     17 13.30    0.4
PNT     49.29 300 eP     17 18.00    0.2
GLD     49.67 282 P      17 22.80    1.8
        1.3s     22.99nm          5.0mb
GOL     49.78 282 P      17 22.40    0.4
MEO     50.17 272 eP     17 25 20    0.5
        1.5s     18.20nm          4.8mb
BMW     53.03 300 P      17 45 60   -0 6

KVN     56.49 291 P      18 11.40   -0.3
TNP     56.83 290 P      18 13.80   -0 4
        1.2s      5.38nm          4.5mb
CMB     58.38 292 P      18 24.60   -0.2
SPA    149.44 180 e(PKP) 28 17.10    5.2X
        1.1s      5.36nm
      S.D. = 0.8  on  43 of  48 obs.
-----------------------------------------
*  JUN  11, 1989  10h 38m 10.89± 0.66s
   60.032 N ±13.1km   29.706 W ± 9.6km
   DEPTH =  10.0km  (geophysicist)
   4.3mb (  4 obs.)
 NORTH ATLANTIC OCEAN               (402)

REY      5.51  38 iP     39 34.80   -0.1
AKU      7.76  38 eP     40 13.90    7.5X
        0.8s     11.94nm          5.2mb
SNF     21.35 101 Pc     43 03.80    3.9X
DOU     21.77 102 P      43 01.60   -2.6
MEM     22.14  99 P      43 08.50    0.7
WLF     22.81 101 P      43 23.30    8.8X
LSF     22.99 113 eP     43 16.10   -0.2
        0.9s      9.80nm          4.3mb
TCF     23.27 112 eP     43 18.60   -0.6
        1.0s      8.80nm          4.3mb
SSF     23.32 109 eP     43 19.90    0.4
LOR     23.34 108 eP     43 20.10    0.3
BGF     23.37 111 eP     43 20.30    0.2
MAF     23.49 112 eP     43 21.50    0.3
        0.8s      5.30nm          4.2mb
LBF     23.60 10B eP     43 21.90   -0.4
LFF     23.62 116 eP     43 23.50    1.0
LPO     24.02 116 eP     43 27.20    0.8
FBA     47.05 329 eP     46 44.80    1.2
KVN     56.39 291 eP     47 54.00   -0.5
TNP     56.74 289 eP     47 56.60   -0.5
      S.D. = 1.0  on  15 of  18 obs.
-----------------------------------------
*  JUN  11, 1989  11h 26m 09.26± 1.25s
   59.103 N ±12.5km   30.212 W ±15.9km
   DEPTH =  10.0km  (geophysicist)
   4.5mb ( 10 obs.)
 NORTH ATLANTIC OCEAN               (402)

REY      6.42  35 eP     27 43.80   -2.2
AKU      8.66  35 eP     28 20.00    2.6
        0.9s     16.81nm          5.4mb
EKA     15.08  93 Pc     29 59.90   16.1X
        0.9s      6.90nm
LPF     20.38 110 eP     30 47.70   -0.8
        1.1s     26.30nm          4.5mb
SNF     21.44  98 P      31 09.80   10.5X
MFF     21.82 112 eP     31 04.20    1.0
DOU     21.85  99 P      30 59.10   -4.3X
                  S      35 17.00
LSF     22.88 110 eP     31 14.00    0.3
        1.1s     24.40nm          4.6mb
TCF     23.19 109 eP     31 17.10    0.4
        1.1s     14.60nm          4.4mb
SSF     23.28 106 eP     31 16.80   -0.8
        1.1s      9.70nm          4.3mb
BGF     23.31 108 eP     31 17.50   -0.3
        0.9s     13.10nm          4.5mb
LOR     23.32 105 eP     31 16.80   -1.1
        0.8s      5.30nm          4.1mb
AVF     23 39 107 eP     31 18 50   -0 1
        1 0s      8.00nm          4.2mb
MAF     23.41 109 eP     31 18.80    0.0
        1.1s     25.30nm          4.7mb
LFF     23.46 113 eP     31 21.60    2.3
        1.1s     16.60nm          4.5mb
LBF     23.57 106 eP     31 19.70   -0.7
BZS     33.49  90 ePd    32 50.00   -0.4
MBC     33.54 334 eP     32 42.50   -8.0X
PNT     49.37 300 eP     35 12.00   11.6X
KVN     56.48 291 eP     35 53.50   -0.1
      S.D. = 1.3  on  15 of  20 obs.
-----------------------------------------
*  JUN  11, 1989  11h 33m 04.35± 0.50s
   11.289 N ± 7.5km  126.123 E ±16.3km
   DEPTH =  33.0km  (normal)
   4.8mb (  6 obs.)
 PHILIPPINE ISLANDS REGION          (248)

SSE     20 23 348 P      37 51.50   12 0X
        1 0s     24.00nm
WHN     22.06 332 eP     38 04.50    6 5X
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11d 11h

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IPM     25.72 257 ePc    38 34.10   0.4
        0.8s     52.10nm          5.2mb X
                  e      38 47.60
BJI     29.96 345 eP     39 10.50  -1.3
MBL     32.83 191 eP     39 36.20  -1.0
QIS     34.31 157 iPc    39 50.00  -0.1
        0.7s     26.00nm          5.3mb
ASPA    35.56 168 iPd    40 00.10  -0.7
        0.4s      8.00nm          5.0mb
GTA     36.47 325 eP     40 09.00   0.6
WARB    37.25 179 eP     40 05.30  -9.6X
MEKA    38.39 191 eP     40 24.20  -0.3
MRWA    41.44 193 iPc    40 49.80   0.2
        0.3s      5.00nm          4.7mb
FORR    41.94 177 eP     40 54.00   0.4
STK     45.41 161 eP     41 23.00   1.2
RKG     45.93 191 iPd    41 30.90   5.0X
WMQ     46.34 322 eP     41 29.50   0.3
SUF     84.59 333 iP     45 35.90   0.5
        0.6s      4.00nm          4.8mb
MBC     84.75  13 eP     45 37.00   0.9
        0.7s      4.00nm          4.7mb
                  pP     45 49.50  41kmX
NUR     85.84 331 eP     45 42.00   0.3
NAO     92.05 334 PKP    46 09.80  -1.4
        1.1s      1.80nm          4.4mb
     S.D. = 0.9  on  15 of  19 abs.
-------------------------------------
&  JUN  11, 1989  11h 34m 49.15s
   57.459 N        142.885 W
   DEPTH =  10.0km  (geophysicist)
   4.5mb ( 11 obs.)
 GULF OF ALASKA                 ( 15)
      <AGS-P>. ML 3.9 (PMR).

YKU     2.67  37 iPd    35 28.40  -4.6
MID     2.68 319 iPc     35 27.70  -5.4
PNL     2.87  38 iP      35 30.44  -5.4
                  S      36 02.76
HQN     2.90  45 iP      35 30.52  -5.7
                  S      36 04.00
HMT     2.97 347 eP      35 31.13  -6.1
PCA     2.98  26 eP      35 32.23  -5.1
WAX     3.00   0 iP      35 32.33  -5.3
BCPM    3.02  33 iP      35 32.56  -5.3
                  S      36 05.78
SGAM    3.28 339 eP      35 36.24  -5.4
                  S      36 14.40
CVA     3.43 336 eP      35 37.64  -6.1
                  S      36 19.33
HIN     3.49 329 eP      35 39.07  -5.5
                  eS     36 19.25
MTU     3.55 318 eP      35 39.28  -6.1
BALM    3.60   4 eP      35 41.04  -5.2
                  S      36 20.93
CTGM    3.61  12 eP      35 41.57  -4.8
FID     3.79 332 eP      35 43.08  -5.7
GLB     4.02 354 eP      35 46.32  -5.8
GLI     4.06 330 eP      35 46.44  -6.1
                  S      36 32.73
SIT     4.13  92 eP      35 45.00  -8.5
SEW     4.32 311 eP      35 49.92  -6.5
                  S      36 37.86
KLU     4.33 340 eP      35 50.18  -6.4
HYT     4.37  37 P       35 51.00  -6 1
CNPM    4 85 299 eP      35 56 19  -7 7
SLHM    4 87 312 eP      35 57 67  -6.6
TOA     4.95 342 eP      36 00 10  -5 2
KDC     5.18 277 eP      36 02.20  -6.2
PME     5.22 326 eP      36 03.72  -5 4
PMR     5.22 325 eP      36 04 20  -4.9
PAX     5.68 348 eP      36 09.58  -6.1
RDT     5.82 306 eP      36 10.51  -7.2
OPT     5.84 296 eP      36 11.48  -6.4
CDD     5.88 289 eP      36 12.37  -6.0
RED     5.92 304 eP      36 12.26  -6.7
SKT     6.30 320 eP      36 14.82  -9.5
DWY     6.83  13 P       36 26.40  -5.3
SVW     7.48 305 eP      36 34.30  -6.6
FBA     7.83 344 eP      36 41.70  -4.1
TTA     8.52 315 eP      36 49.40  -6.1
SDN     9.99 265 eP      37 10.10  -5.5
IMA    10.02 334 eP      37 09.20  -7.0
INK    11.67  17 eP      37 32 50  -6 1
YKC    15.01  59 eP      38 16 20  -6 5
GMW    15.69 121 eP      38 29.50  -2.2
PNT    16.03 111 eP      38 34 00  -2 0

        1.0s     34.00nm          4.4mb
RMW    16.22 119 eP     38 35.20  -3.3
LON    16.73 121 eP     38 44.00  -1.0
EDM    17.25  92 ePc    38 46.00  -5.4
SES    19.90  97 eP     39 18.00  -5.3
ADK    20.18 268 eP     39 22.00  -4.2
        1.0s     20.00nm          4.4mb
FHC    20.64 136 eP     39 29.40  -1.7
        0.9s     53.85nm          4.9mb
MBC    20.69  16 eP     39 27.50  -3.8
        0.8s      9.00nm          4.2mb
LBFM   20.99 131 eP     39 32.40  -2.6
WDC    21.38 133 ePc    39 36.60  -2.1
MIN    21.95 132 ePc    39 42.30  -2.3
LRM    21.98 109 eP     39 41.70  -3.3
ORV    22.67 133 eP     39 50.00  -1.6
FFC    22.74  79 eP     39 48.00  -4.1
        1.0s     42.00nm          4.9mb
KVN    24.50 128 eP     40 07.60  -2.0
PRS    25.54 137 eP     40 17.20  -2.1
FRI    25.59 133 eP     40 17.60  -2.2
TNP    25.68 128 eP     40 18.80  -2.1
        1.0s     13.33nm          4.6mb
RSSD   27.52 102 eP     40 34.50  -3.2
MSU    27.59 120 eP     40 36.00  -2.4
RSON   28.99  82 eP     40 46.70  -3.9
        1.0s     12.50nm          4.7mb
PLM    29.90 133 eP     40 55.50  -3.7
GLA    30.99 130 eP     41 06.00  -2.6
ALQ    33.18 117 eP     41 25.00  -2.9
        0.9s      2.10nm          4.1mb
FRB    35.07  48 eP     41 40.00  -3.7
SIO    37.67 105 e(P)   42 02.40  -3.5
LNO    37.81 104 eP     42 03.20  -3.8
TUL    37.81 104 eP     42 03.90  -3.2
        0.9s      6.80nm          4.4mb
RLO    38.02 103 eP     42 05.30  -3.6
VVO    38.28 105 e(P)   42 07.50  -3.6
FVM    39.12  97 eP     42 13.20  -4.8
UYO    39.85 105 eP     42 21.00  -3.2
KHC    72.01  16 eP     46 11.70  -2.8
LOR    72.04  23 eP     46 09.50  -5.2
        0.7s      2.20nm          4.4mb
SSF    72.17  23 eP     46 09.50  -5.9
LBF    72.34  23 eP     46 11.10  -5.4
AVF    72.39  24 eP     46 10.40  -6.3
BGF    72.50  24 eP     46 09.60  -7.8
        0.7s      4.80nm          4.7mb
MAF    72.76  24 eP     46 10.50  -8.4
SPA   147.28 180 e(PKP)54 29.90  -0.5
        1.0s      5.00nm
SLR   147.68  15 iPKPc 54 31.50  -0.8
FRS   151.10  22 ePKP   54 27.40  -9.9
       84 obs. ossociated
-------------------------------------
*  JUN  11, 1989  12h 00m 32.92± 1.79s
   44.477 N ± 6.1km  124.895 W ±17.5km
   DEPTH =  10.0km  (geophysicist)
   4.1mb (  1 obs.)
 NEAR COAST OF OREGON           ( 31)

NLO     1.91  32 eP     01 06.33   0.5
GT2     1.99  69 eP     01 06.62  -0.4
                  eS     01 31.95
RVW     2.26  41 eP     01 11.25   0.4
VLMM    2.29  61 eP     01 11 06  -0.3
                  eS     01 39.43
BMW     2.32  30 eP     01 11.40  -0 4
LVP     2.37  47 eP     01 13.26   0.7
VBEM    2.43  75 eP     01 12.64  -0.8
MTMW    2.45  50 eP     01 13.76   0.1
                  eS     01 43.12
VLL     2.49  66 eP     01 14.07  -0.1
SHW     2.54  47 eP     01 15.30   0.3
JLK     2.56  48 eP     01 15.67   0.5
ERK     2.57  44 eP     01 15.88   0.6
VFP     2.58  70 eP     01 15.34  -0.2
VGB     3.10  69 eP     01 22.50  -0.3
LON     3.14  43 eP     01 24.20   0.8
GMW     3.40  25 eP     01 26.60  -0.5
LBFM    3.83 144 eP     01 32.00  -1.4
PNT     6.04  35 eP     02 03.00  -1.4
        0.5s      2.00nm          4.1mb
KVN     7.43 135 eP     02 26.00   1 9
     S D  = 0.8  on  19 of  19 abs.
-------------------------------------
?  JUN  11, 1989  12h 21m 49.71± 0.57s

   51.752 S ±16.8km  158.855 E ±20.6km
   DEPTH =  10.0km  (geophysicist)
   5.2mb (  4 obs )  5.1Msz (  2 obs.)
 NORTH OF MACQUARIE ISLAND        (165)
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 26C
      Centraid Location:
      Origin Time        12:21:55.3 0.8
      Lat 51.84S 0.10 Lon 158.13E 0.12
      Dep  15.0 FIX Half-durotion  1.7
      Moment Tensor;    Scale 10**16 Nm
        Mrr=-1.99 0.46  Mtt= 9.22 0.61
        Mff=-7.23 0.38  Mrt=-2.37 1.32
        Mrf= 1.37 1.39  Mtf=-3.19 0.56
      Principal Axes:
        T  Val= 10.36  Plg=12  Azm=191
        N       -2.38      75      332
        P       -7.98       9       99
      Best Double Couple:Mo=9.2*10**16
       NP1:Strike=235 Dip=75 Slip= 178
       NP2:       325     88       15

MSZ     9.31  44 P      24 00.90  -5.9X
                  e      25 44.00
TAU    11.80 314 iPd    24 38.80  -2.1X
TOO    17.03 321 eP     25 53.00   3.7X
                  eS     29 02.00
DRV    17.67 205 eP     26 03.00   5.9X
CNB    17.79 334 eP     26 01.00   2.1
CAN    17.88 333 eP     26 04.80   4.8X
BRS    24.76 347 iPc    27 19.90   7.3X
                  eS     31 43.00
RMQ    26.37 339 eP     27 28.00   0.3
SBA    26.37 176 eP     27 25.70  -1.5
DZM    30.21  14 iPc    27 59.90  -2.6
FORR   30.78 301 eP     28 07.10  -0.3
CTA    33.11 338 iPd    28 28.90   1.1
        1.4s     53.49nm          5.3mb
                  iS     33 51.00
ASPA   33.96 316 iPc    28 34.60  -0.7
        1.2s     38.00nm          5.2mb
      Z 20s      3.22um          5.0Msz
                  iPcP   31 16.30
                  LR     41 11.70
QIS    34.57 327 eP     28 39.00  -1.5X
WARB   35.28 304 eP     28 35.20 -11.3X
WB5    37.14 320 eP     29 00.50  -1.7
                  i      31 26.20
SPA    38.44 180 ePd    29 09.80  -3.2X
        1.0s     14.50nm          4.7mb
      Z 20s      2.79um          5.1Msz
MBL    42.96 300 eP     29 49.50  -0.9
MAW    45.68 212 eP     30 09.00  -2.7X
CHG    87.47 305 eP     34 39.20   0.7
SSE    88.88 328 eP     34 50.00   5.1X
        1.2s     28.00nm          5.4mb
                  e(S)   45 32.00
TNP   115.42  60 PKP    40 36.00   3.0X
KVN   115.65  59 PKP    40 32.50  -0.9
MSU   118.49  63 PKP    40 39.40   0.5
LON   119.32  51 PKP    40 41.40   1.4
TTA   119.73  22 PKP    40 40.20  -0.1
PMR   120.33  26 PKP    40 40.40  -0.9
PNT   122.16  50 ePKP   40 43.00  -2 2
        1.1s     17.00nm
BNG   122.49 229 ePKPd  38 18 80  ******
        0.3s      4.00nm
                  id     40 49.80
MAIO   122.91 288 ePKP   40 47.00  -0.2
IMA    122.94  21 PKP    40 44.40  -1.9
LRM    123.37  57 ePKP   40 47.00  -1.0
FBA    123.38  24 PKP    40 45.10  -2.0
MEO    123.79  75 ePKP   40 51.20   2.3
SIO    125.81  76 e(PKP) 40 55.00   2.2
VVO    125.88  77 e(PKP) 40 55.70   2.8X
TUL    126.23  76 ePKP   40 55.20   1.6
        1.2s     12.30nm
LNO    126.23  76 ePKP   40 55.10   1.7
RSSD   126.79  63 PKP    40 51.00  -3.7X
RLO    126.86  76 e(PKP) 40 55.50   0.7
SES    127.05  53 ePKP   40 56.00   1.3
EDM    127.70  49 ePKP   40 50.50  -5.4X
INK    129.73  27 ePKP   40 57.00  -2.2
PWLA   130.33  82 PKP    40 48 60 -12 8X
FFC    134.07  53 ePKP   41 05.00  -2 8X
        1.0s     11.00nm
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MBC    137.67  21 ePKP  41 14.00   -0.1
         1.0s     12.00nm
IZM    143.97 268 ePKP  41 23.00   -3.5X
GAC    144.37  78 ePKP  41 23.00   -3.8X
EDC    144.76 271 ePKP  41 23.00   -4.7X
MFT    145.38 271 iPKP  41 25.80   -3.0X
EZN    145.42 269 iPKP  41 16.50  -12.3X
ALE    146.92   9 ePKP  41 31.00    0.9X
         1.1s     32.00nm
KDZ    147.03 271 ePKP  41 32.00    0.6X
CFR    147.19 278 ePKP  41 33.00    1.5X
PLD    147.72 271 ePKP  41 34.00    1.5X
PVL    147.93 273 ePKP  41 33.00    0.3X
MMB    148.04 269 ePKP  41 34.00    0.9X
BUC    148.08 276 ePKPd 41 38.00    5.1X
BUC1   148.08 276 ePKPd 41 36.00    3.1
VRI    148.40 279 ePKPd 41 36.50    3.0X
KKB    148.60 269 iPKP  41 35.00    1.1X
VAY    148.61 268 ePKP  41 34.00    0.1X
                  i     41 40.40
MLR    148.70 277 ePKPc 41 35.00    0.9X
CMP    149.15 276 ePKPc 41 37.00    2.3X
OHR    149.59 266 ePKP  41 35.20   -0.3X
         1.4s      0.15nm
                  i     41 44.50
SKO    149.68 268 ePKP  41 36.50    0.9X
         1.3s     90.00nm
                  i     41 44.30
KBS    150.38 348 ePKP  41 45.20    9.7X
KEV    151.48 327 ePKP  41 40.00    2.6X
         0.7s     18.70nm
                  i     41 48.00
SOD    152.12 322 iPKP  41 45.10    6.7X
FRB    152.71  46 ePKP  41 41.00    1.7X
SUF    152.81 312 iPKP  41 46.60    7.1X
         0.8s      5.50nm
SCH    152.91  65 ePKP  41 49.00    9.1X
KRA    154.27 283 ePKP  41 54.70   12.8X
                  e     42 09.20
KSP    156.74 283 ePKP  41 49.00    3.8X
PRU    157.54 280 ePKP  42 23.00   36.8X
KHC    157.86 277 PKP   42 23.00   36.3X
         1.1s      5.00nm
BRG    158.17 282 ePKP  42 25.60   38.7X
         1.0s     12.00nm
CLL    158.86 282 ePKP  42 26.00   38.4X
         1.2s     10.00nm
MOX    159.53 280 e(PKP)42 30.00   41.5X
      S.D. = 1.6  on  29 of  79 obs.
-------------------------------------
   JUN  11, 1989  12h 42m 16.20± 0.40s
   59.606 N ± 9.5km   29.871 W ± 6.3km
   DEPTH =  10.0km  (geophysicist)
   4.3mb ( 14 obs.)
 NORTH ATLANTIC OCEAN              (402)

REY      5.90  36 iP    43 41.40   -4.3X
AKU      8.15  37 eP    44 17.70    0.5
         1.0s     24.00nm          5.4mb X
EKA     14.94  95 Pd    45 55.60    6.7X
         1.0s      7.60nm          4.1mb
FLN     20.15 110 eP    46 53.00    0.0
GRR     20.24 111 eP    46 53.00   -0.9
LPF     20.40 112 eP    46 54.10   -1.5
         1.1s     31.20nm          4.6mb
LDF     20.44 109 eP    46 55 80   -0 2
SNF     21.35 100 Pc    47 03.60   -1 7
                  e     49 42.00
DOU     21.77 101 P     47 09.70    0.2
MFF     21.86 113 eP    47 09.40   -1.0
         1.1s     14.60nm          4.3mb
MEM     22.15  98 P     47 13.40    0.1
WLF     22.82 100 Pc    47 28.30    8.4X
LSF     22.90 112 eP    47 22.20    1.4
         0.7s      9.20nm          4.4mb
TCF     23.20 111 eP    47 24.40    0.7
         0.7s      4.80nm          4.1mb
SSF     23.26 108 eP    47 24.50    0.2
         1.1s      9.70nm          4.3mb
LOR     23.29 107 eP    47 24.50   -0.1
         1.1s      9.70nm          4.3mb
BGF     23.30 109 eP    47 24.80    0.1
         1.1s     20.50nm          4.6mb
AVF     23.38 108 eP    47 25.90    0.5
         0.8s      5.30nm          4.1mb
MAF     23.41 110 eP    47 26.20    0 4
         1.0s     18.00nm          4.6mb
LFF     23.51 115 eP    47 26.90    0.2
         0.9s      9.80nm          4.4mb
LBF     23.55 107 eP    47 27.30    0.2
RJF     23.60 113 eP    47 27.80    0.2
SMF     23.72 108 eP    47 28.70   -0.1
         0.8s      4.50nm          4.1mb
LPO     23.91 115 eP    47 31.60    1.0
CAF     24.14 113 eP    47 33.20    0.4
RSON    36.08 285 P     49 19.60    0.1
FBA     47.37 329 P     50 50.80   -0.7
         0.8s      3.45nm          4.5mb
IMA     47.87 333 P     50 55.60   -0.1
KVN     56.46 291 P     52 00.80    0.4
TNP     56.81 290 P     52 02.80   -0.1
         0.8s      1.47nm          4.1mb
      S.D. = 0.7  on  27 of  30 obs.
-------------------------------------
*  JUN  11, 1989  12h 44m 53.33± 0.48s
   59.400 N ±13.0km   30.159 W ± 7.3km
   DEPTH =  10.0km  (geophysicist)
   4.4mb (  6 obs.)
 NORTH ATLANTIC OCEAN              (402)

REY      6.16  36 iP    46 28.00    1.6
AKU      8.40  36 iP    47 04.90    7.0X
         0.8s     14.93nm          5.3mb
LSF     22.96 111 eP    49 59.30    0.7
TCF     23.26 110 eP    50 01.90    0.4
         0.8s      3.20nm          3.9mb
LOR     23.37 106 eP    50 01.90   -0.6
BGF     23.38 109 eP    50 01.60   -1.0
AVF     23.46 108 eP    50 02.90   -0.4
MAF     23.48 110 eP    50 03.80    0.2
         0.8s      5.30nm          4.2mb
LBF     23.63 107 eP    50 04.90   -0.1
RSON    35.99 285 P     51 55.40   -0.5
         0.8s      3.52nm          4.3mb
FBA     47.47 329 P     53 27.80   -1.7
         0.8s      4.83nm          4.6mb
IMA     47.99 333 P     53 32.00   -1.7
LRM     48.53 292 eP    53 41.70    3.4X
GOL     49.65 282 P     53 48.70    1.7
MEO     50.00 272 eP    53 50.50    1.1
         1.2s     10.10nm          4.7mb
BMW     52.98 300 P     54 12.30    0 4
KVN     56.40 291 P     54 37.20    0.1
TNP     56.74 290 P     54 39.40   -0.2
      S.O. = 1.1  on  16 of  18 obs.
-------------------------------------
*  JUN  11, 1989  12h 53m 25.61± 0.88s
   59.961 N ±11.9km   29.686 W ±11.5km
   DEPTH =  10.0km  (geophysicist)
   4.6mb (  3 obs.)
 NORTH ATLANTIC OCEAN              (402)

REY      5.56  38 iP    54 50.30   -0.1
AKU      7.81  38 iP    55 28.50    6.6X
         0.9s     20.17nm          5.3mb
LPF     20.45 113 eP    58 04.50   -1.0
         1.2s     26.10nm          4.5mb
LSF     22.95 113 eP    58 30.50   -0.2
         1.1s     12.20nm          4.3mb
TCF     23.24 112 eP    58 33.70    0.2
SSF     23.29 109 eP    58 34.50    0.6
LDR     23.31 108 eP    58 34.60    0 4
BGF     23.34 110 eP    58 34 70    0 2
MAF     23.45 111 eP    58 35.50   -0 1
KVN     56.42 291 eP    03 09.50    0 0
      S.D. = 0.5  on   9 of  10 obs.
-------------------------------------
%  JUN  11, 1989  13h 08m 51.79± 0.69s
   42.131 N ± 6.8km    7.769 W ± 5.9km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                             (377)
      mbLg 3.1 (MDD).

ERUA     0.53  60 iPgc  09 02.80    0.2
                  eSg   09 09.90
EZAM     0.69 272 iPgc  09 05.60    0.2
                  eSg   09 15.00
STS      0.95 323 eP    09 09.80   -0.1
         0.2s      0.02nm
                  eS    09 21.30
EMON     1.34  14 ePn   09 16 40   -0 2
                  eSn   09 33 10
EPLA     2.43 148 ePn   09 32 00   -0 1
GUD      3.10 117 ePn   09 41 80    0 0
                  eSn   10 17.20
      S.D. = 0.2  on   6 of   6 obs.
-------------------------------------
   JUN  11, 1989  13h 16m 55.40± 1.01s
   66.936 N ± 6.8km   156.375 W ± 9.9km
   DEPTH =   5.0km  (geophysicist)
 ALASKA                            (676)
      ML 3.7 (PMR).

IMA      1.39 128 iPc   17 21.70    0.2
NEA      3.83 125 eP    17 56.23    0.0
RDS      3.99 118 eP    17 58.16   -0.3
TTA      4.03 178 P     17 58.90   -0.2
FBA      4.07 116 iPd   17 59.20   -0.4
KTH      4.10 143 eP    17 59.95   -0.1
GLM      4.16 114 eP    18 00.46   -0.6
                  S     19 03.42
CCB      4.21 119 iP    18 01.16   -0.4
WRH      4.22 122 eP    18 01.25   -0.6
BRW      4.39 358 eP    18 04.20    0.0
HDA      4.65 119 eP    18 06.81   -1.1
SVW      5.86 176 ePc   18 25.00    0.0
PMR      6.22 146 eP    18 29.70   -0.3
TOA      6.54 133 eP    18 37.30    2.6
DWY      7.61 104 P     18 51.00    1.5
INK      8.81  71 eP    19 06.00   -0.2
      S.D. = 0.9  on  16 of  16 obs.
-------------------------------------
   JUN  11, 1989  13h 24m 32.07± 0.14s
   35.107 N ± 3.4km   35.008 W ± 1.9km
   DEPTH =   9.6km  (geophysicist)
   5.8mb ( 83 obs.)  5.5Msz ( 17 obs.)
 NORTH ATLANTIC RIDGE              (403)
      Ms 5.8 (BRK). Depth from
      broadbond displacement
      seismograms.
      FAULT PLANE SOLUTION: P-Waves
       NP1:Strike=325 Dip=76 Slip= 166
       NP2:          58      76       14
       Principal Axes:
        T                Plg=20  Azm=282
        P                   0        192
      Comment: The focal mechanism is
        moderately well controlled and
        corresponds to strike-slip
        faulting with a small reverse
        component. The preferred fault
        plane is not determined.
      RADIATED ENERGY
       No. of sta:   6  Focal mech.  M
       Energy        0.1±0.1*10**15 Nm
      MOMENT TENSOR SOLUTION
      Dep  23              No. of sta: 10
      Moment Tensor;   Scale 10**18 Nm
        Mrr=-0.10        Mtt=-1.60
        Mff= 1.69        Mrt= 0.19
        Mrf= 0.23        Mtf= 0.93
       Principal axes:
        T  Val=  1.97  Plg= 7  Azm=285
        N       -0.12      82       76
        P       -1.85       4      194
      Best Double Couple:Mo=1.9*10**18
       NP1:Strike=330 Dip=82 Slip= 178
       NP2:         60     88        8
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used  GDSN
      L.P B.  135, 37C
      Centroid Location:
      Origin Time        13:24:39.7 0 3
      Lat 35.10N 0.04 Lon  34.88W 0.04
      Dep  15.0 FIX Half-duration  3 0
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-1.16 0.13  Mtt= 3.18 0.17
        Mff=-2.02 0.14  Mrt=-1.06 0.48
        Mrf=-0.17 0.43  Mtf= 5.65 0.15
       Principal Axes:
        T  Val=  6.92  Plg= 7  Azm=148
        N       -1.24      81       289
        P       -5.68       6        57
      Best Double Couple:Mo=6.3*10**17
       NP1:Strike=192 Dip=81 Slip= 179
       NP2:         282     89         9

HOR      6.15  54 iPd   26 03 10   -2 0
ADH      7.16  58 e(P)  26 17 60   -1 9
PDA      7.98  68 iP    26 27 20   -3.7x
TBT     15.86 109 eP    28 12 00   -5 [illegible]
```

11d 13h

CVVD	16 26 112	iPc	28 17.50	-4.7X		1.8s 258.90nm 5.8mb
		iPP	28 35 00		BGF	30.56 56 eP 30 46.90 -1.0
CTFE	17 24 107	eP	28 33 30	-1.2		1.8s 245.10nm 5.8mb
		iPP	28 55.00		PYM	30.57 58 P 30 48.00 -0.1
		iS	32 03.00		LBL	30.68 59 P 30 48.94 0.0
GGC	17.90 108	eP	28 40.80	-1.9	AGO	30.69 57 P 30 48.66 -0.4
CFTV	18.99 105	iP	28 57.60	1.4	AVF	30.94 56 eP 30 50.20 -1.0
LIS	20.96 72	iPd	29 17.10	-0.5		2.0s 291.50nm 5.8mb
EZAM	21.67 63	iPd	29 25.00	0.2	PLDF	31.02 58 P 30 51.87 -0.2
STS	21.92 61	iPd	29 27.00	-0.3	SSF	31.08 56 eP 30 51.60 -0.9
ERUA	22.85 63	iPd	29 37.80	1.3		2.0s 377.80nm 5.9mb
EVAL	22.87 75	iPd	29 37.50	0.8	SMF	31.25 56 eP 30 53.20 -0.8
EMON	22.91 60	iPd	29 38.00	0.9	LOR	31.35 55 eP 30 53.90 -1.0
EPLA	23.40 69	iPd	29 42.80	0.9		2.0s 314.80nm 5.9mb
PLAT	23.77 79	eP	29 36.00	-9.5X	LBF	31.39 56 eP 30 54.40 -0.9
BMK	23.85 82	iPd	29 47.00	0.7		2.0s 303.20nm 5.9mb
EJIF	23.96 78	iP	29 49.90	2.5	RSNY	31.52 299 P 30 56.00 -0.4
EHOR	24.04 75	eP	29 49.00	0.9		1.2s 52.87nm 5.3mb
SRQ	24.06 79	eP	29 30 00	-18.3X	AKU	32.23 13 iP 31 04.00 1.7
EPRU	24.11 77	iPd	29 50.00	1.2		1.1s 75.95nm 5.5mb
VAL	24.42 39	eP	29 53.00	1.4	SNF	32.25 49 Pd 31 02.10 -0.5
MAL	24.78 77	iPd	29 56.80	1.5	GAC	32.27 302 eP 31 03.00 0.1
		iS	34 42.00		DOU	32.35 50 P- 31 03.00 -0.5
GUD	24.90 68	iPd	29 56.80	0.2		i 31 11.90
TOL	24.95 70	ePd	29 57.16	0.2		e 32 01.00
	1.1s 151.90nm		5.6mb			S 36 21.00
		ePP	30 36.00		UCC	32.36 49 Pd- 31 03.70 0.1
		ePcP	33 22.00			i 31 11.00
		iS	34 22.00			PP 32 07.00
		iSS	35 11.00			S 36 21.00
AAPN	24.97 76	iP	29 57.50	0.3	LRG	32.81 63 eP 31 07.10 -0.5
ALOJ	25.00 76	iP	29 59.90	2.4		1.8s 248.50nm 5.8mb
ATEJ	25.08 77	iP	30 00.00	1.6	VITF	32.91 54 P 31 08.06 -0.4
EBAN	25.18 74	eP	30 00.00	0.9	FRF	33.02 62 eP 31 09.00 -0.5
ACHM	25.21 76	iP	30 02.00	2.5		1.8s 258.90nm 5.9mb
ASMO	25.26 76	iP	30 00.60	0.6	BNI	33.08 60 P 31 11.30 1.1
APHE	25.34 77	iP	30 02.40	1.6	HAU	33.12 54 eP 31 10.00 -0.4
CRT	25.39 76	iP	30 02.70	1.5		1.8s 386.70nm 6.0mb
AFC	25.43 76	eP	30 02.00	0.3	RRL	33.16 60 P 31 11.85 0.9
EVIA	26.17 73	eP	30 08.50	0.1	LPG	33.16 59 eP 31 10.90 -0.1
ECRI	26.27 64	eP	30 11.40	2.0		1.8s 215.70nm 5.8mb
ETOR	26.50 68	iPd	30 11.10	-0.4	DBN	33.18 47 iP- 31 11.00 0.3
ECP	26.59 41	iPd	30 13.80	1.7	Z	20s 5.00um 5.2Msz
	1.8s 819.00nm		6.1mb			ePP 32 16.00
ETA	26.93 40	iPd	30 14.60	-0.6		eS 36 34.00
	1.5s 435.00nm		5.9mb		CALN	33.20 62 P 31 11.19 0.0
DLE	27.05 39	eP	30 16.40	0.1	WLF	33.25 51 Pd 31 11.20 -0.2
	1.0s 116.00nm		5.5mb			e 31 16.70
DMU	27.19 38	eP	30 17.80	0.3	ENN	33.32 49 ePd 31 11.00 -1.0
	0.6s 48.00nm		5.4mb			2.8s 643.00nm 6.1mb
ACU	27.81 73	eP	30 24.50	1.1		i 32 20.20
LPF	28.26 52	eP	30 26.70	-0.6	EMS	33.32 58 ePd 31 12.70 0.4
	1.9s 362.30nm		5.8mb		MEM	33.34 50 Pd 31 11.50 -0.6
EROQ	28.37 68	eP	30 28.30	-0.1	PZZ	33.37 61 P 31 13.59 0.9
EPF	28.40 63	eP	30 28.30	-0.4	LOMF	33.37 56 P 31 12.54 0.0
	1.7s 298.70nm		5.8mb		MVIF	33.39 62 P 31 13.10 0.2
EBR	28.43 68	eP	30 28.00	-0.9	BSF	33.40 55 P 31 12.18 -0.7
		e	35 24.00		LSD	33.44 59 P 31 14.10 0.6
GRR	28.47 52	eP	30 28.90	-0.3	TOUF	33.46 62 P 31 13.88 0.3
	1.7s 249.90nm		5.7mb		DOI	33.47 61 P 31 14.00 0.5
MFF	28.54 56	eP	30 29.00	-0.8	AURF	33.52 62 P 31 13.97 0.0
	1.8s 352.10nm		5.9mb		STV	33.52 61 P 31 14.41 0.5
FLN	28.81 51	eP	30 31.70	-0.5	ENR	33.59 61 P 31 14.62 0.1
	1.8s 328.00nm		5.8mb		SBF	33.60 62 eP 31 14.10 -0.5
LFF	28.88 59	eP	30 32 20	-0 7		2.0s 349.80nm 5.9mb
	1 6s 191 50nm		5 6mb		MOF	33 63 55 P 31 14 22 -0.6
LDF	29 00 52	eP	30 33 30	-0 6	DIX	33 66 58 ePd 31 16.10 0.8
	1 7s 249 90nm		5 7mb		SAOF	33.68 62 P 31 15.18 -0.1
LPO	29.16 60	eP	30 34 60	-0.9	ECH	33.69 54 P 31 15.15 -0.1
	1.6s 203.90nm		5.7mb		CDF	33.79 54 P 31 15.88 -0.4
HRV	29.25 296	ePc	30 38 33	2 0	BBS	33.84 55 P 31 16.43 -0.2
		eS	35 34.22		RUP	33.84 51 ePd 31 16.55 0.0
RJF	29.47 59	eP	30 37.20	-1.1	ROB	33.91 61 P 31 17.39 0.1
	1.8s 207.10nm		5.6mb		IMI	33.92 62 P 31 17.39 0.0
SCH	29.51 322	iPc	30 37.00	-1.5	MMK	34.04 58 ePd 31 19.80 1.2
	1.0s 45.00nm		5.2mb		GWF	34.09 53 P 31 18.38 -0.4
LSF	29.61 57	eP	30 38.80	-0 7	WTS	34.13 47 ePd 31 19.00 0.0
ESK	29.77 37	iPd	30 41.50	0.7		2.0s 445.00nm 6.0mb
	1.0s 140.00nm		5.7mb			i 31 27.40
EKA	29.80 37 P		30 40.00	-1.0		e 32 32.00
	2.0s 564.90nm		6.0mb		STR	34.14 53 P 31 18.50 -0.6
CAF	29.81 59	eP	30 40.20	-1.2	FIN	34.16 61 P 31 19.23 -0.2
	1.8s 233.00nm		5.7mb		ABH	34.18 51 ePd 31 19.88 0.4
TCF	30 09 57	eP	30 43 30	-0 5	FEL	34 22 55 ePd 31 19.24 -0.8
REY	30 15 11	iP	30 47 90	3 9X	WIT	34 24 46 ePd 31 21.00 1.1
ESEL	30.30 70	eP	30 46 40	0 7	ZLA	34 44 55 ePd 31 21.60 -0.2
MAF	30.32 57	eP	30 44 90	-0 9	KTD	34 44 52 ePd 31 21.76 0.0

SLE	34 53 55	ePd	31 22.30	-0.3		
CVF	34.67 64	P	31 23.15	-0.6		
TMA	34.68 58	ePd	31 24.60	0.6		
LLS	34.80 57	ePd	31 25.80	0.7		
TNS	34.81 51	iPd	31 26.40	1.5		
BOB	35.05 60	P	31 28.00	0.9		
SAX	35.06 56	ePd	31 27.90	0.4		
STU	35.10 53	ePd+	31 26.50	-0.9		
	1.9s 452.63nm		6 0mb			
Z	20s 2.55um		5.0Msz			
VDL	35.11 57	ePc	31 28.50	0.8		
FRB	35.24 335	eP	31 28.00	-0.4		
	1.4s 304.00nm		6.0mb			
MDI	35.25 59	P	31 27.90	-0.7		
OSS	35.58 57	ePd	31 32.30	0.6		
GDH	35.71 349	iPc	31 32.30	0.0		
	1.0s 200.00nm		5.9mb			
		i	37 08.00			
		e	39 26.00			
PII	35.83 62	P	31 32.00	-1.6		
MME	35.95 61	P	31 34.30	-0.6		
BER	36.17 33	eP	31 36.00	-0.2		
OGA	36.19 57	iPd	31 37.80	0.9		
	2.0s 313.00nm		5.8mb			
FIR	36.36 62	eP	31 37.00	-1.1		
FUR	36.43 55	eP	31 38.90	0.2		
GRFO	36.51 52	ePd	31 39.80	0.5		
		epPc	31 41.79	7kmX		
		esP	31 44.11			
		ePP	32 47.84			
GRF	36.52 52	iPd	31 39.60	0.2		
	2.1s 519.00nm		6.0mb			
Z	19s 3.40um		5.1Msz			
		eS	37 23.20			
CTI	36.61 58	P	31 40.00	-0.3		
PGD	36.69 62	P	31 40.20	-0.9		
MOX	36.87 50	ePd-	31 42.50	0.2		
	2.1s 322.00nm		5.7mb			
Z	13s 2.70um		5.2MszX			
N	18s 4.40um					
E	13s 3.00um					
		e	32 56.00			
HOF	37.00 51	iPd	31 43.60	0.2		
	2.2s 606.00nm		6.0mb			
RSM	37.22 62	P	31 42.40	-2.9X		
FVI	37.39 57	P	31 46.10	-0.6		
ASS	37.42 63	P	31 45.60	-1.5		
BHG	37.48 55	iPd	31 47.90	0.4		
	2.0s 791.00nm		6.1mb			
MNS	37.49 64	P	31 47.60	-0.1		
WET	37.55 53	eP	31 48.00	-0.1		
	2.0s 300.00nm		5.7mb			
RDP	37.58 65	P	31 48.10	-0.4		
KBA	37.78 56	iPd	31 50.00	-0.3		
	1.8s 249.00nm		5.7mb			
		i	31 59.20			
		i(PP)	33 13.70			
CLL	37.82 50	iPd	31 50.10	-0.1		
	2.6s 410.00nm		5.7mb			
		eS	37 43.00			
LLAV	37.93 237	eP	31 53.00	1.3		
RBL	37.94 58	P	31 49.10	-2.3		
KHC	38.01 53	iPd	31 52.00	0.1		
	1.4s 58.50nm		5.2mb			
		e	37 48.00			
ERC	38.01 71	P	31 49.60	-2 5		
AOU	38.03 64	P	31 50.30	-1 9		
TRI	38.09 59	eP	31 52.40	-0 2		
		e	40 56.00			
		eLR	44 16.00			
AZI	38.09 65	P	31 53.20	0.6		
VOY	38.17 58	iPd	31 53.10	-0.3		
COP	38.20 42	iPd-	31 53.90	0.6		
	1.0s 212.00nm		5.8mb			
Z	17s 4.35um		5.3MszX			
		ePP	33 20.00			
		iS	37 57.00			
OLLA	38.25 237	iPc	31 55.00	0.6		
KMR	38.33 55	eP	31 53.00	-1.7		
		i	31 55.30			
		i	32 03.00			
		iPP	33 29.20			
USI	38.35 70	P	31 52.00	-2.9X		
BRG	38.37 50	iPd	31 54.30	-0.6		
	2.2s 315.00nm		5.7mb			
		e	33 37.40			
		eS	37 52.00			

				e	41	08.00		LEGH		43.47	124	eP	32	35.00	-2.2	ACO		51.09	292	ePc	33	36.20	-0.7
SDI		38.40	65	P	31	54.70	-0.7					e	34	11.00				0.9s		32.70nm			5 3mb
GUAC		38.45	238	eP	31	59.00	2.9	BZS		43.58	58	eP	32	38.00	0.1	ALT		51.11	65	iP	33	36.80	-0.3
RIY		38.53	59	iPc	31	58.50	2.2	OHR		43.68	65	iPd	32	39.90	1.1	MEO		51.29	289	eP	33	36.90	-1.5
CEY		38.55	59	ePd	31	56.90	0.4			2.0s		0.35nm			2.8mb X			0.5s		17.90nm			5.3mb
LJU		38.61	58	iPd	31	57.10	0.1	ITR		43.75	185	eP	32	39.70	0.3	ELL		51.67	68	iP	33	41.50	0.1
				e	33	12.00						epP	32	42.30	9kmX	PSO		51.83	239	eP	33	44.00	0.8
				eS	37	54.00						e	32	44.40		BAO		51.95	196	e(P)	33	42.00	-1.6
PRU		38.68	52	iPd	31	58.20	0.7	SKO		44.00	63	iPd	32	41.50	0.2	BCK		51.95	67	iP	33	43.20	-0.3
		2.4s		616.80nm		5.9mb				1.7s		200.00nm		5.7mb		BBTK		52.83	63	iPd	33	50.00	-0.1
	Z	14s		4.30um		5.4MszX			Z	12s		2.42um		5.3MszX		ANTO		52.85	63	ePd	33	50.03	-0.1
	N	18s		4.20um					N	12s		2.65um								epPc	33	53.67	12kmX
	E	16s		1.80um					E	12s		2.23um				GLD		54.65	297	P	34	03.50	0.0
				e	32	13.50						iPP	34	25.00				1.2s		141.41nm			5.9mb
				S	38	00.00						iPPP	35	15.00		GOL		54.77	297	P	34	02.80	-1.8
MORO		38.71	240	eP	32	00.00	1.8					iS	39	17.00				0.8s		75.89nm			5.8mb
NAO		38.83	34	P	31	58.70	0.0					iSS	42	32.00			Z	20s		3.50um			5.4Msz
		1.2s		113.10nm		5.4mb						LR	52	17.00		YKC		54.79	326	eP	34	03.30	-0.7
MCT		38.90	72	P	32	00.50	0.7	FVM		44.06	291	P	32	40.00	-1.9	KVT		54.83	61	iP	34	04.60	-0.1
FAI		39.01	72	P	31	50.40	-10.0X	VLS		44.15	69	eP	32	43.40	0.8	MBC		54.89	343	eP	34	04.00	-0.6
NRA0		39.13	34	P	32	01.20	0.0	SOB1		44.42	188	eP	32	42.70	-2.2			1.0s		111.00nm			5.8mb
GIB		39.14	71	P	32	00.90	-0.7	DEV		44.44	58	ePd	32	46.00	1.1	HLW		55.30	75	eP	34	08.00	-0.1
VBY		39.14	59	iP	32	01.90	0.5	RSON		44.53	309	P	32	43.70	-1.8					eS	45	00.00	
FISA		39.16	241	eP	32	05.00	3.0X			1.4s		165.09nm		5.7mb		SES		55.49	311	eP	34	08.00	-1.3
BSS		39.26	66	P	31	57.10	-5.4X	KZN		44.57	66	eP	32	46.30	0.3			1.5s		123.00nm			5.7mb
TKL		39.43	285	P	32	04.20	0.2	BMR		44.65	55	ePc	32	31.00	-15.5X	KOT		55.66	75	eP	34	10.50	-0.2
TIC		39.53	129	P	32	03.68	-1.3	CJR1		44.78	56	eP	32	48.30	0.7	EDM		56.15	315	eP	34	12.50	-1.5
PTJ		39.61	58	iPd	32	05.40	-0.1	VAY		44.95	64	iPd	32	40.70	-8.3X			1.6s		218.00nm			5.9mb
ZAG		39.63	58	iPd	32	06.00	0.5					i	32	54.00		ADI		57.06	70	eP	34	20.00	-0.8
SGO		39.67	67	P	32	06.00	0.1	NUR		45.38	37	eP	32	52.00	-0.1	ZNT		57.24	71	eP	34	22.00	-0.1
GBTN		39.78	286	P	32	06.60	-0.2		Z	20s		8.10um		5.7Msz		ANMO		57.27	292	ePc	34	21.98	-0.5
VKA		39.80	55	ePd	32	06.00	-0.9					eS	39	32.00						epPc	34	24.63	9kmX
		3.5s		862.00nm		5.8mb X						LR	50	00.00						esP	34	28.27	
	Z	10s		1.90um		5.2MszX		ITM		45.43	70	eP	32	53.50	0.6	ALQ		57.27	292	eP	34	22.00	-0.5
				e	33	24.00		PLG		45.80	65	eP	32	55.70	-0.1			1.0s		27.50nm			5.2mb
				e	33	38.00		SUF		46.34	34	iP	32	59.40	-0.3		Z	20s		2.87um			5.4Msz
				e	38	11.00				0.8s		20.40nm		5.2mb						eS	42	24.00	
				e	41	16.00		ATH		46.59	68	eP	33	02.00	0.0					eLg	48	00.00	
				LR	51	13.00		MLR		46.61	58	ePc	33	04.50	2.3	LRM		57.73	306	eP	34	25.10	-0.5
KSP		39.85	51	iPd	32	07.00	-0.2	BUC1		46.87	59	iPd	33	04.00	-0.1	BCAO		58.01	109	ePc	34	27.37	-0.3
				e	33	37.00		BUC		46.90	59	ePd	32	48.00	-16.4X	BNG		58.02	109	iPd	34	27.00	-0.7
LIC		39.85	129	Pc	32	06.44	-1.1	VRI		47.09	57	ePd	33	06.00	0.1			1.1s		75.00nm			5.6mb
		0.7s		57.50nm		5.3mb		BOG		47.12	239	eP	33	10.00	3.2X					id	34	36.00	
MGR		39.93	67	P	32	08.10	0.1					eS	40	04.00						id	36	35.00	
KIC		39.93	129	P	32	07.32	-0.9	RDO		47.18	64	iPd	33	06.90	0.3					ic	37	48.00	
		1.0s		84.50nm		5.4mb		SOD		47.26	28	iP	33	06.10	-0.8	MBH		58.13	74	iPd	34	28.50	0.2
SOP		39.97	55	iPd	32	10.30	2.1	VAM		47.69	72	eP	33	11.90	1.1	BMA		58.13	190	iPd	34	30.60	2.3
ZST		40.32	55	eP	32	10.60	-0.6	KEV		47.88	24	ePd	33	10.62	-1.2					ipP	34	36.00	18kmX
	Z	14s		4.20um		5.4MszX				1.0s		38.00nm		5.4mb		BRAS		58.20	192	iPd	34	30.00	1.1
				e	32	19.40						epPc	33	13.43	9kmX	BADA		58.76	75	iP	34	39.30	6.6X
				e	33	46.00						ePcP	34	39.95		VAO		58.89	193	eP	34	33.70	0.0
				eS	38	21.60						ePP	34	58.16						epP	34	35.70	7kmX
				LR	38	47.00						eS	40	09.29		PPD		58.89	198	eP	34	32.80	-0.8
TOV		40.50	240	iP	32	16.90	3.9X	KBS		47.93	11	iP	33	15.40	3.3X	ZOBO		59.99	217	P	34	50.40	8.5X
		1.0s		325.70nm		6.0mb		EZN		48.08	65	iP	33	13.50	-0.2			1.2s		199.32nm			6.1mb
TDS		40.60	68	P	32	07.10	-6.5X	RLO		48.09	290	eP	33	13.40	-0.5		Z	23s		4.66um			5.6MszX
RSCP		40.88	286	P	32	16.00	0.1	PRK		48.19	66	iPc	33	15.60	1.0					S	43	02.00	
		0.8s		84.51nm		5.5mb		CFR		48.20	58	eP	33	13.00	-1.5					LR	56	20.00	
SRO		41.15	55	iPd	32	18.10	0.2	UPA		48.22	248	e(P)	33	16.10	1.0	CCH		59.99	215	P	34	42.50	0.9
ATB		41.47	207	e(P)	32	20.10	-0.7		Z	20s		3.90um		5.4Msz		MSU		60.14	298	P	34	42.00	-0.4
BUD		41.64	56	iPd	32	21.80	-0.2	UYO		48.27	287	ePd	33	14.00	-1.3	LPB		60.20	217	P	34	44.10	0.9
		2.0s		493.80nm		5.9mb		ALE		48.46	355	eP	33	17.00	0.9			1.2s		281.25nm			6.3mb
SDV		41.72	240	iP	32	25.00	1.8			1.0s		21 00nm		5.2mb			Z	22s		4.26um			5.5Msz
		0.7s		157.10nm		5.9mb		MFT		48.54	64	iP	33	17.30	-0.1					S	43	02.00	
UPP		41.81	37	iP	32	22.80	-0.3	LNO		48.76	290	eP	33	17.30	-1.6					e	49	40.00	
				i	32	31 50		TUL		48 76	290	ePd	33	18.00	-1.0					e	56	50 00	
				iS	38	40 00				1.2s		87 70nm		5.7mb		CNCB		60.38	217	Pc	34	44.00	-0 6
KRA		42.16	52	ePd	32	25.80	-0.4		Z	18s		2 83um		5.3Msz		INK		60.90	335	ePd	34	46.60	-0 3
		2.0s		324.00nm		5.7mb						e	33	25.00				1.0s		118.00nm			6.0mb
	Z	14s		3.00um		5.3MszX						e	33	39.80		PNT		61.10	312	ePc	34	49.00	0.5
	N	17s		4.50um								e	33	49.30		NNA		61.34	228	eP	34	49.50	-1.1
				e	32	35.10						e	34	15.10		MSL		61.71	64	ePc	34	52.50	-0.3
				eS	38	52.00						e	35	25.40						epP	35	01.00	28kmX
TTG		42.33	63	eP	32	27.50	-0.1					LR	46	00.00						eS	43	16.50	
				e(S)	38	50.00		NPS		48.84	71	eP	33	20.90	1.3	TAB		63.32	61	eP-	35	03.00	-0.7
SPC		42.38	53	iP	32	29.20	0.9	VVO		48.90	289	e(P)	33	18.30	-1.8	LON		63.44	310	ePc	35	01.20	-3.1X
DAG		42.40	5	iPd	32	28.00	0.2	EDC		49.08	64	iP	33	20.50	-1.0	PGC		63.69	312	eP	35	07.00	1.3
		0.8s		92.54nm		5.6mb		IZM		49.16	67	eP	33	22.00	-0.2	SLY		63.77	64	iPd	35	04.50	-2.0
	Z	18s		8.11um		5.7Msz		SIO		49.21	290	e(P)	33	20.80	-1.7					e	38	29.00	
	N	20s		6.67um				FFC		49.28	315	ePc	33	22.90	0.2					eS	43	41.00	
	E	15s		6.40um						0.9s		85.00nm		5.8mb		BHD		63.96	66	iPc	35	07.60	-0.1
BEO		42.86	60	iP	32	32.00	0.0	DST		49.85	65	iP	33	27.40	0.0					ipP	35	15.50	25kmX
KUK		42.95	124	eP	32	33.00	0.0	KAP		49.96	70	eP	33	27.60	-0.6					isS	35	21.50	
				e	34	16.00		YLV		50.14	63	iP	33	28 30	-1.4					eS	43	48.00	
PWLA		43.00	286	P	32	33.30	0.0	OCO		50.18	290	eP	33	28 40	-1.6	KVN		64.15	301	P	35	08.00	-1 2
ELC		43.31	289	P	32	35.00	-0.7	KHL		50.89	66	iP	33	35.50	0.1	GLA		64.37	294	eP	35	11.00	0.4
WEGH		43.41	124	eP	32	34.00	-2.8	GPA		50.90	64	eP	33	33.30	-2.1	GSC		64.85	297	eP	35	16 00	2.3

11d 13h

PEC 65 74 295 P 35 20 00 0.6
PLM 65.76 295 eP 35 22.00 2.3
LBFM 65.77 304 P 35 19.20 -0.5
RVR 65.85 296 eP 35 22.00 2.0
BAR 65.93 294 eP 35 20.00 -0.5
MIN 66.02 303 eP 35 20.70 -0.5
FRI 66.19 299 eP 35 21.70 -0.4
CMB 66.21 301 ePc 35 21.05 -1.2
BRW 66.25 343 eP 35 23.50 1.5
MWC 66.25 296 eP 35 25.00 2.2
ORV 66.30 303 eP 35 22.30 -0.5
PAS 66.37 296 eP 35 24.00 0.7
WDC 66.56 304 eP 35 22.30 -2.1
PRI 67.27 299 eP 35 31.50 2.3
MHC 67.41 300 e(P) 35 30.80 0.7
FHC 67.43 305 P 35 30.00 -0.1
0.9s 76.92nm 5.9mb
IR7 67.44 61 iP- 35 30.20 -0.1
FBA 67.52 335 eP 35 31.20 1.0
BKS 67.58 301 eP 35 40.00 9.0X
Z 20s 3.60um 5.6Msz
N 20s 5.00um
E 20s 3.00um
eS 44 36.00
IR1 67.63 62 iP- 35 31.50 0.0
IR2 67.67 61 iP- 35 31.40 -0.3
IR4 67.87 62 iP- 35 33.00 0.0
TEH 67.98 61 eP 35 34.00 0.3
TOA 68.53 332 eP 35 38.00 1.4
IMA 68.76 337 eP 35 38.80 0.7
RYD 69.71 74 iPd 35 44.50 0.1
PMR 69.97 332 eP 35 46.20 0.9
1.2s 93.80nm 5.8mb
LWI 70.16 108 ePc 35 48.10 0.7
KMSA 70.23 79 iP 35 48.40 0.8
TTA 71.59 336 P 35 54.80 -0.4
DHR 71.66 70 iPd 35 56.60 0.5
SVW 72.68 334 eP 36 02.00 0.3
MAIO 73.41 57 iPd 36 07.00 0.5
eS 45 42.00
KDC 73.72 330 eP 36 08.50 0.8
NAI 75.92 102 eP 36 29.00 7.7X
SDN 78.58 332 eP 36 37.20 2.1
QUE 81.99 59 eP 36 54.70 0.6
eS 47 13.00
e 51 17.20
KSH 82.24 47 iPd 36 56.00 0.9
Z 18s 7.10um 6.1Msz
E 14s 3.60um
PcP 37 03.00
PP 40 04.00
BFS 84.92 128 iPc 37 07.00 -1.8
0.7s 34.25nm 5.7mb
CER 85.01 137 eP 37 01.80 -7.1X
SLR 85.11 126 iPc 37 09.00 -0.8
0.9s 42.02nm 5.7mb
Z 20s 7.80um 6.1Msz
PRY 85.39 127 eP 37 12.50 1.3
1.1s 27.03nm 5.4mb
WMQ 85.73 38 ePd 37 13.84 1.1
3.0s 0.80nm 3.4mb X
Z 19s 7.20um 6.1Msz
epP 37 17.31 11kmX
esP 37 18.47
PP 40 30 50
eSKS 47 40 75
ePS 48 42 00
FRS 85.97 131 eP 37 17 40 3 6X
1.0s 30.00nm 5 4mb
NDI 89.95 54 eP 37 34 00 0 8
GTA 94.92 33 eP 37 55 80 -0 2
Z 18s 5.30um 6.1Msz
E 15s 1.60um
SKS 48 32 00
GKN 95.23 51 PKP 38 00.10 2.4
KKN 95.79 50 PKP 38 03.00 2.7
DMN 95.80 50 PKP 38 03.40 2.9X
PKI 96.02 50 PKP 38 01.40 -0.2
GUN 96.08 50 PKP 38 03.10 1.3
1.1s 63.00nm 6.0mb
BTO 98.07 26 eP 38 11.50 1.2
Z 15s 1.50um 5.6MszX
N 15s 1.80um
E 17s 1.10um
epP 38 19.00 23kmX
PP 42 05.50
eSKS 48 47.00

S 49 23 50
LZH 99.46 33 PKP 38 18 00 1 3
CN2 99.47 14 eP 38 15.00 -1.5
Z 20s 1.80um 5.6Msz
N 17s 1.20um
epP 38 24.00 28kmX
PP 42 16.00
eSKS 48 54.00
eS 49 48.00
SS 56 36.00
BJI 100.64 22 ePdiff 38 22.00 0.4
KMI 107.96 40 PKPc 43 20.00 17.8X
SPA 124.93 180 e(PKP) 43 31.00 -2.2
1.0s 5.50nm
Z 20s 1.85um 5.7Msz
SVO 150.82 329 ePKP 44 33.00 12.0X
VSG 150.96 329 ePKP 44 16.00 -5.3X
HNR 151.02 328 ePKP 44 36.00 14.7X
NWAO 156.92 93 ePKP 44 27.39 -1.6X
WB5 162.16 35 ePKP 44 43.90 8.9X
e 45 24.20
S.D. = 1.0 on 343 of 375 obs.

JUN 11, 1989 13h 42m 44.14± 0.36s
26.419 N ± 7.4km 90.763 E ± 4.0km
DEPTH = 33.0km (normal)
4.6mb (14 obs.) 4.3Msz (1 obs.)
EASTERN INDIA (317)
Felt at Shillong and Gauhati.

SHL 1.32 130 iP 43 07.20 0.7
iS 43 22.40
PKI 4.91 285 P 43 59.20 1.3
KKN 5.07 287 P 44 01.20 1.1
DMN 5.18 284 P 44 02.30 0.6
GKN 5.68 288 P 44 10.00 1.4
NDI 12.23 284 eP 45 45.00 6.1X
eS 47 45.50
GYA 14.25 86 P 46 05.60 -0.1
HYB 14.43 234 eP 46 16.00 7.9X
LZH 14.75 46 P 46 15.00 2.7
GTA 15.01 28 eP 46 15.80 0.2
XAN 17.42 60 P 46 45.20 -1.1
POO 17.48 247 iPnc 46 55.40 8.3X
GBA 17.85 227 P 46 53.00 1.4
0.7s 4.80nm 3.7mb
WHN 21.13 73 eP 47 29.00 0.6
Z 20s 1.25um 4.3Msz
N 16s 1.98um
E 16s 1.90um
sP 47 41.50
BTO 21.33 44 eP 47 32.00 1.4
TIY 21.49 53 eP 47 32.00 -0.2
Z 23s 2.80um 4.6MszX
N 17s 2.90um
E 17s 2.90um
pP 47 43.00 44kmX
BJI 25.12 51 eP 48 12.00 4.5X
MLR 54.34 308 ePc 52 10.00 0.1
SUF 55.26 330 eP 52 16.00 -0.1
UPP 59.11 326 iP 52 42.90 -0.6
PRU 61.58 315 eP 53 00.00 -0.5
KHC 62.33 314 eP 53 05.70 0.1
NAO 62.45 327 P 53 05.10 -1.0
0.8s 2 30nm 4.4mb
ASPA 64 95 136 iPc 53 22 10 -0 9
0 6s 9 00nm 5.0mb
CDF 66.56 314 eP 53 32.50 -0.7
WLF 66.98 315 P 53 35.70 0.1
HAU 67.26 314 eP 53 36.80 -0.8
LPG 67.64 311 eP 53 39.80 -0.5
0.6s 2.70nm 4.5mb
LBF 69.09 313 eP 53 48.20 -0.7
0.6s 1.80nm 4.3mb
SMF 69.27 313 eP 53 49.30 -0.8
0.8s 6.70nm 4.8mb
SSF 69.37 313 eP 53 50.00 -0.6
0.8s 5.30nm 4.7mb
AVF 69.55 313 eP 53 50.80 -0.9
0.8s 5.30nm 4.7mb
MAF 70.24 312 eP 53 55.60 -0.4
0.6s 1.80nm 4.3mb
TCF 70.46 313 eP 53 57.20 -0.1
0.9s 11.40nm 4 9mb
CAF 70 98 311 eP 54 00 60 0 1
0 6s 1.80nm 4.3mb
RJF 71.23 312 eP 54 02 20 0 2

0.6s 3.60nm 4.6mb
LDF 71.23 315 eP 54 01.50 -0.4
GRR 71.76 315 eP 54 04.80 -0.3
LFF 71.86 312 eP 54 05.70 -0.1
0.6s 3.60nm 4.6mb
BNG 72.12 266 iPd 54 06.50 -1.3
0.4s 6.00nm 4.9mb
S.D. = 0.9 on 36 of 40 obs

JUN 11, 1989 14h 52m 33.70± 0.68s
19.960 S ± 9.2km 133.731 E ± 6.1km
DEPTH = 5.0km (geophysicist)
4.3mb (1 obs.)
NORTHERN TERRITORY, AUSTRALIA (591)

WB5 0.60 83 iPc 52 46.80 1.0
ASPA 3.69 178 iPc 53 38.70 6.0X
0.5s 1776.00nm
eS 54 23.30
QIS 5.55 97 iPd 53 59.50 0.5
0.3s 33.00nm 5.5mb X
e 54 08.00
eS 55 23.00
KNA 6.31 311 eP 54 10.20 0.4
0.2s 18.00nm 5.6mb X
e 54 38.00
eS 55 21.00
MTN 7.50 340 iPd 54 25.30 -1.2
eS 55 45.00
WARB 8.99 225 eP 54 40.00 -7.3X
eS 56 20.00
CTA 11.77 93 eP 55 25.00 -0.4
iS 58 42.40
FORR 11.97 204 eP 55 28.60 0.6
eS 57 41.00
MBL 13.07 262 eP 55 37.00 -5.9X
0.3s 3.00nm 5.0mb X
iS 58 02.40
STK 13.81 151 eP 55 51.00 -1.5
eS 58 13.00
RMQ 15.26 118 eP 56 10.00 -1.6
e 58 51.00
MEKA 15.45 242 eP 56 13.40 -0.7
COOL 15.72 224 eP 56 18.00 0.4
eS 59 03.00
CMS 15.81 139 eP 56 16.00 -2.7
eS 59 04.00
KLB 18.44 228 eP 56 50.00 -1.8
MRWA 18.56 237 eP 56 54.00 0.7
0.3s 6.00nm 4.3mb
eS 00 08.00
BAL 18.67 232 eP 56 50.00 -4.6X
BRS 18.93 117 iPc 56 59.90 2.0
NWAO 19.59 225 iPd 57 06.00 0.3
MUN 19.75 229 eP 57 09.00 1.5
eS 00 36.00
TOO 20.32 152 eP 57 16.00 2.5
S.D. = 1.5 on 17 of 21 obs.

? JUN 11, 1989 14h 55m 26.78± 1.79s
11.798 S ±17.4km 77.728 W ±19.1km
DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)
Felt (IV) at Limo.

PT10 0 79 110 eP 55 42 80 1.3
iS 55 52.10
NNA 0.89 102 iPd 55 43.50 0 6
eS 55 52.70
PT08 1.17 98 iP 55 46.60 -0.6
PT02 1.70 132 iP 55 52.20 -2.4
eS 56 05.60
HUA 2.37 96 iPc 56 08.40 3.9X
iS 56 36.90
PT06 2.44 146 iP 56 06.10 1.0
iS 56 35.00
PT03 2.88 139 iP 56 12.00 0.6
eS 56 45.90
ARE 7.62 128 eP 57 26.00 7.3X
ZOBO 10.32 117 eP 57 55.00 -1.3
LPB 10.46 118 (P) 58 05.00 7.0X
CNCB 10.68 119 eP 58 02.00 0.9
MBC 91 27 351 eP 08 29.50 -0.1
pP 08 44.50 51kmX
S.D = 1.4 on 9 of 12 obs

• JUN 11, 1989 16h 49m 49 20± 0.98s

6.598 S ±11.2km 147.909 E ± 9.5km
DEPTH = 33.0km (normol)
4.3mb (2 obs.) 3.5Msz (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.90	266	iPc	50	04.90	-0.6
LMG	2.31	174	eP	50	25.50	-0.3
PMG	2.89	195	eP	50	35.50	1.5
			eS	51	20.00	
MNDI	4.25	276	eP	50	56.00	2.5
RAB	4.87	61	eP	51	02.20	0.1
QIS	16.04	209	eP	53	35.00	0.9
WB5	18.63	224	eP	54	05.80	-0.7
WRA	18.70	224	P	54	13.00	5.8X
	0.4s		2.90nm			3.8mb
RMQ	19.80	178	eP	54	20.00	0.1
			e	54	25.00	
KNA	20.85	243	eP	54	28.40	-2.4
BRS	21.19	168	iPc	54	34.40	0.1
ASPA	21.66	217	iPd	54	38.90	-0.2
	0.4s		16.00nm			4.8mb
Z	21s		0.23um			3.5Msz
			LR	03	04.80	
WARB	28.12	224	eP	55	29.70	-10.7X
	0.3s		3.00nm			
PCI	28.57	280	ePc	56	06.00	21.5X
	1.0s		6.00nm			
MBL	30.78	239	iPc	56	03.10	-1.1
MLR	116.81	318	iPKPd	08	23.00	-9.4X

S.D. = 1.4 on 12 of 16 obs.

JUN 11, 1989 16h 55m 35.27± 0.63s
37.330 N ± 7.2km 20.735 E ± 5.7km
DEPTH = 10.0km (geophysicist)
4.2mb (3 obs.)
IONIAN SEA (399)
ML 3.7 (ATH).

VLS	0.85	352	ePn	55	53.80	2.1
ITM	0.96	99	ePn	55	54.50	0.9
ATH	2.45	74	ePb	56	20.70	4.8X
NEO	2.78	44	ePn	56	21.10	0.4
KZN	3.08	15	ePn	56	26.50	1.6
VAM	3.39	123	ePn	56	28.20	-1.1
LCI	3.70	325	P	56	34.00	0.3
PLG	3.70	34	ePn	56	33.00	-0.8
OHR	3.78	1	iPn	56	36.10	1.3
TDS	4.16	305	P	56	42.20	2.0
VAY	4.23	19	iPn	56	46.00	4.8X
	1.0s		0.11nm			
			i	57	30.00	
			iSn	57	39.70	
			i	58	27.20	
			LR	58	40.00	
ATN	4.26	283	P	56	42.50	0.8
NPS	4.45	116	ePn	56	46.00	1.7
MEU	4.64	269	P	56	47.00	-0.1
MGR	4.93	306	P	56	51.60	0.5
RDO	5.33	43	ePn	56	54.90	-1.9
FAI	5.63	272	P	57	01.40	0.4
			eSn	58	03.70	
BSS	5.76	309	P	57	01.50	-1.4
VBY	9.14	335	ePn	57	49.60	-0.5
			eSn	59	28.50	
PTJ	9 28	339	eP	57	49.70	-2.4
CEY	9 64	333	eP	58	13 50	16 5X
			e(Sn)	59	40.00	
VRI	9.64	26	eP	58	05.00	8.1X
LJU	9.86	334	eP	58	11.90	11.9X
			eS	58	46.00	
VOY	10.08	332	eP	58	01.70	-1.5
			eS	59	51.40	
KHC	12.89	338	eP	58	52.20	11.1X
CLL	15.02	341	eP	59	17.00	7.9X
EKA	24.22	326	P	00	53.00	0.2
	0.8s		5.70nm			4.2mb
NAO	24.34	348	P	00	52.10	-1.8
	0.6s		1.00nm			3.6mb
BNG	32.80	184	iPc	02	10.00	-0.9
	0.4s		5.00nm			4.8mb

S.D. = 1.4 on 22 of 29 obs.

& JUN 11, 1989 17h 22m 46.50s
32.410 N 115.370 W
DEPTH = 6.0km (geophysicist)
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 3.0 (PAS).

IKP	0.67	291	iPc	22	59.20	-0.7
			eS	23	08.00	
GLA	0.79	35	eP	23	00.30	-1.9
PLM	1.57	307	eP	23	12.50	-2.6
PEC	2.11	315	e(P)	23	25.30	2.5

4 obs. associated

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* JUN 11, 1989 18h 11m 54.05± 0.99s
34.180 N ± 9.3km 24.563 E ± 9.5km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 4.0 (ATH).

VAM	1.26	346	ePn	12	16.00	-1.5
NPS	1.38	38	ePb	12	20.40	1.0
KAP	2.55	57	ePn	12	37.80	1.7
ITM	3.68	325	ePn	12	53.50	1.2
YER	4.23	45	iPn	12	59.20	-0.8
ELL	5.06	58	ePn	13	11.00	-0.9
DSI	9.46	103	e(P)	14	10.00	-3.3X
			eS	15	53.00	
PRNI	9.63	111	eP	14	14.00	-1.6
MBH	9.80	114	eP	14	19.00	1.0
KHC	17.02	335	P	15	53.20	-0.3
DOU	21.62	323	P	17	03.90	17.8X
BNG	30.12	192	iPc	18	06.30	0.1
	0.4s		3.00nm			4.5mb X

S.D. = 1.4 on 10 of 12 obs.

% JUN 11, 1989 18h 22m 22.20± 0.83s
37.332 N ± 6.6km 2.144 W ± 7.7km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.0 (MDD).

ENIJ	0.37	189	iPgd	22	30.00	0.3
			eSg	22	34.20	
EALH	0.78	47	ePg	22	37.00	-0.4
			eSg	22	47.80	
AFC	1.12	266	ePg	22	43.00	-0.3
			eSg	22	59.00	
EVIA	1.33	348	ePn	22	47.30	0.4
			eSn	23	05.00	
EBAN	1.54	303	ePn	22	50.30	0.5
			eSn	23	10.80	
MAL	1.91	252	iPn	23	04.80	9.7X
			iSg	23	25.20	
EHOR	2.51	282	ePn	23	03.20	-0.5
			eSn	23	34.20	
GUD	3.66	335	eP	23	34.70	14.5X
	0.3s		0.01nm			
			eS	24	17.00	

S.D. = 0.6 on 6 of 8 obs.

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* JUN 11, 1989 19h 34m 24.63± 0.38s
59.601 N ±25.6km 30.003 W ± 9.5km
DEPTH = 10.0km (geophysicist)
4.2mb (16 obs.)
NORTH ATLANTIC OCEAN (402)

EKA	15.01	95	P	38	05.00	6.8X
	1.0s		7.30nm			4.1mb
FRB	18.54	299	eP	38	43.00	0.2
LPF	20.46	112	eP	39	05.70	1.1
	1.0s		17.60nm			4.4mb
SNF	21.41	100	P	39	15.50	1.1
WTS	21.80	94	eP	39	17 50	-0.7
	0.9s		9.00nm			4.2mb
DOU	21.83	100	P	39	17.80	-0.8
MFF	21.91	113	eP	39	18.60	-0.9
	1.0s		13.60nm			4.3mb
ENN	22.08	98	eP	39	20.50	-0.5
	1.0s		10.00nm			4.2mb
MEM	22.22	98	P	39	23.40	1.0
LSF	22.96	112	eP	39	30.20	0.4
	1.0s		10.00nm			4.3mb
TCF	23.26	111	eP	39	33.00	0.3
	1.0s		8.00nm			4.2mb
SSF	23.33	108	eP	39	33.40	0.0
	0.8s		2.60nm			3.8mb
LOR	23.35	107	eP	39	33.20	-0.4
	1.0s		6.80nm			4.2mb
BGF	23.37	109	eP	39	33.80	0.0
	0 8s		6.70nm			4.2mb
AVF	23 44	108	eP	39	34.90	0.4
	0.8s		4.50nm			4.1mb
MAF	23 47	110	eP	39	34.80	0.0
	0.8s		6.70nm			4 3mb
LFF	23 57	115	eP	39	35.20	-0 5
	1.0s		12.00nm			4.4mb
LBF	23.61	107	eP	39	36.20	0.0
	0.8s		4.00nm			4.0mb
SMF	23.78	108	eP	39	37.40	-0.4
	0.8s		4.50nm			4.1mb
MEO	50.07	272	eP	43	21.40	0.1
	1.2s		10.90nm			4.7mb
KVN	56.40	291	eP	44	08.20	-0.2
CMB	58.29	292	eP	44	21.40	-0.2
PRI	59.95	291	e(P)	44	09.70	-23.4X

S.D. = 0.6 on 21 of 23 obs.

JUN 11, 1989 20h 03m 51.34± 1.09s
35.183 N ± 8.2km 140.821 E ± 9.7km
DEPTH = 67.0 ± 8.1 km
3.9mb (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (I JMA) at Tateyama,
Yokohama and on Oshima.

TAT	0.81	256	iP+	04	08.30	0.8
			iS	04	17.40	
YOK	0.99	285	iPd	04	10.40	0.7
			iS	04	22.40	
KAKJ	1.15	333	iPd	04	12.10	0.3
			S	04	25.50	
OSH	1.26	251	iP+	04	12.70	-0.6
			iS	04	26.40	
CHJJ	1.72	301	iPd	04	19.10	-0.5
			eS	04	39.30	
IIDJ	2.40	278	P	04	29.20	0.1
			S	04	56.40	
NIIJ	2.53	325	iPd	04	30.80	0.0
MTMJ	2.82	301	iPd	04	34.60	-0.5
YAMJ	3.05	348	P	04	39.40	1.2
OFUJ	3.95	10	P	04	50.90	0.1
			S	05	34.40	
TSRJ	3.97	276	P	04	50.70	-0.4
WKYJ	4.41	259	P	04	56.60	-0.8
AOMJ	5.38	356	eP	05	11.80	0.9
TKSJ	5.71	260	eP	05	15.10	-0.5
YONJ	6.03	272	eP	05	19.90	0.0
KUSJ	8.46	20	eP	05	51.10	-2.4
			eS	07	19.00	
CN2	14.64	311	P	07	17.00	0.8
PKI	47.40	277	P	12	21.00	-0.3
KKN	47.42	277	P	12	21.10	-0.2
GKN	47.86	278	P	12	24.70	0.1
WB5	55.10	187	eP	13	19.90	1.1
NAO	75.99	337	P	15	36.20	3.7X
	0.8s		1.30nm			3.9mb

S.D. = 0.9 on 21 of 22 obs.

JUN 11, 1989 21h 46m 05.44± 0.54s
43.880 N ± 6.5km 12.002 E ± 3.9km
DEPTH = 9.4km (geophysicist)
CENTRAL ITALY (381)
MD 2.4 (ROM).

SFI	0.12	291	Pc	46	08.10	-0.2
			eSg	46	10.80	
PGD	0.20	269	P	46	09.80	-0.1
			eSg	46	13.80	
CRE	0.25	188	P	46	11 10	0 3
			eSg	46	15 10	
RSM	0.33	82	P	46	12.50	0 3
ARV	0.78	119	P	46	20.40	-0.3
			eSg	46	31.30	
ASS	0.94	149	P	46	23 40	-0 1
			eSg	46	37.10	
MME	0.99	289	P	46	24.50	0.1
BDI	1.03	281	P	46	25.10	0.1
			eSg	46	40.20	
PII	1.08	262	P	46	25.90	0.1
TRI	2.22	34	eP	47	09.40	26.6X
VOY	2.54	31	e(Pn)	47	01.40	13.9X
			eSn	47	28.50	

S.D. = 0.2 on 9 of 11 obs.

& JUN 11, 1989 21h 54m 28.35s
60.288 N 140.448 W
DEPTH = 12.8km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

11d 21h

PCA	0.21	153	iP	54	33.67	0 4
			S	54	37.47	
CTGM	0.81	328	iP	54	43 43	-0 4
			S	54	54.94	
BALM	1.20	310	iP	54	48.88	-1.6
			S	55	05.06	
HYT	1.55	68	P	54	57.00	1.2
GLB	2.01	307	eP	55	01.63	-0.8
			S	55	26.90	
KLU	2.94	297	eP	55	14.94	-0.7
FID	3.02	281	eP	55	15.37	-1.3
	7 obs associated					

& JUN 11, 1989 23h 14m 23.07s
61.940 N 150.770 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT	0.36	277	iP	14	31.23	1.0
SUA	0.48	178	eP	14	33.93	1.3
PWA	0.51	124	iP	14	33.77	0.5
CGLM	0.87	223	iP	14	40.53	0.1
			S	14	53.14	
PME	0.88	110	iP	14	40.04	-0.7
GHO	0.89	100	eP	14	39.77	-1.1
CRP	0.95	225	eP	14	41.93	0.0
SPU	0.98	219	iP	14	42.67	0.1
KNK	1.22	115	eP	14	45.86	-0.9
SLKM	1.46	169	iP	14	49.62	-1.1
RDT	1.58	211	eP	14	52.01	-0.5
KTH	1.62	358	eP	14	52.10	-1.0
RED	1.81	213	eP	14	55.94	0.1
			S	15	19.77	
SEW	1 95	160	eP	14	58.26	0.5
			S	15	24.55	
MCK	1.99	24	eP	14	58.30	0.0
GLI	2.06	119	eP	14	59.27	-0.1
			S	15	27.21	
ILIM	2.15	211	eP	15	01.06	0.3
			S	15	30.18	
TOA	2.17	84	eP	15	01.10	0.0
KLU	2.35	99	eP	15	03.11	-0.6
			S	15	34.72	
19 obs. assaciated						

JUN 11, 1989 23h 24m 39.00± 0.87s
6.463 S ± 4.4km 147.857 E ± 5.1km
DEPTH = 49.3 ± 7.8 km
5.1mb (11 obs.) 4.8Msz (6 obs.)
EAST PAPUA NEW GUINEA REGION (207)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 22C
Centroid Location:
Origin Time 23:24:41.5 0.6
Lat 6.64S 0.07 Lon 147.50E 0.08
Dep 47.5 4.5 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr=-3.79 0.37 Mtt= 4.99 0.63
Mff=-1.20 0.60 Mrt= 0.08 0.68
Mrf= 3.06 0.70 Mtf= 5.56 0.45
Principal Axes:

	Val=	Plg=	Azm=
T	8.48	8	328
N	-1 66	47	229
P	-6 82	42	65

Best Double Couple Mo=7.6*10**16
NP1:Strike= 97 Dip=55 Slip= -27
NP2: 204 68 -142

LMG	2.45	173	iP	25	15 30	-2.1
PMG	3.01	193	iPc	25	26.00	0.7
			eS	26	09.00	
RAB	4.85	62	iPd	25	51.50	0.1
			iS	27	02.80	
VSG	12.07	104	eP	27	31.00	0.0
HNR	12.33	105	eP	27	36.00	1.5
CTA	13.63	186	iPd	27	53.00	1.3
	0.9s	32.77nm			5.1mb	
			iS	30	32.00	
QIS	16.14	209	eP	28	25.00	0.9
			e	28	29.00	
MTN	17.66	248	eP	28	44.00	0 8
WB5	18.70	223	eP	28	55.50	-0 4
			eS	32	18.20	
WRA	18.76	223	P	28	55.00	-1 8
	0.7s	8.40nm			4.1mb X	

RMQ	19.93	178	eP	29	10 00	0.3
			e	29	13.50	
GUA	20.08	352	eP	29	11.80	0.5
PJG	20.14	352	eP	29	12.50	0.6
KNA	20.86	242	eP	29	18.00	-1.3
BRS	21.33	168	iPd	29	23.50	-0.6
			iS	33	34.00	
ASPA	21.74	217	ePd	29	26.60	-1.6
	0.8s	78.00nm			5.2mb	
Z	21s		3.75um		4.8Msz	
			eS	33	31.10	
			LR	38	06.00	
DZM	23.73	133	iPc	29	47.30	-0.4
MNI	24.28	288	eP	29	55.80	2.7
COO	24.29	172	eP	29	54.00	1.0
CMS	24.97	184	eP	29	59.00	-0.5
			e	30	05.00	
STK	25.96	192	iPc	30	08.70	0.0
			e	30	11.00	
WARB	28.18	224	eP	30	18.50	-10.6X
PCI	28.49	280	ePd	30	36.50	4.5X
	1.0s	10.00nm			4.4mb	
ADE	29.59	195	iPd	30	41.30	-0.4
MBL	30.80	239	eP	30	52.20	-0.3
	0.5s	11.00nm			4.8mb	
MEKA	34.36	231	eP	31	23.00	-0.5
COOL	34.89	223	eP	31	28.00	0.0
BAG	35.28	310	eP	31	34.50	2.9
			eS	37	08.00	
MRWA	37.62	229	eP	31	50.50	-0.5
KLB	37.63	224	iPd	31	50.80	-0.2
BAL	37.82	227	eP	31	53.00	0.3
MSZ	41.89	158	P	32	30.80	4.7X
IIDJ	42.76	348	P	32	36.00	2.6
CHJJ	43.10	349	P	32	36.20	0.1
TSRJ	43.24	346	P	32	34.90	-2.4
NIIJ	44.26	350	P	32	45.80	0.4
SSE	45.23	327	Pd	32	53.00	-0.3
	0.8s	20.00nm			5.0mb	
Z	20s		0.90um		4.7Msz	
N	14s		0.30um			
			pP	33	04.00	38kmX
			sP	33	10.50	
			e(S)	39	58.00	
KGM	45.25	279	eP	32	55.00	1.2
NJ2	47.24	326	Pc	33	09.00	-0.2
Z	20s		0.70um		4.6Msz	
			eS	40	00.00	
PPI	47.72	275	eP	33	14.00	0.7
IPM	48.02	282	ePc	33	16.80	1.1
	6.0s	19.00nm			4.3mb X	
			e	34	45.00	
WHN	48.83	321	eP	33	19.00	-2.6
PSI	49.69	279	ePc	33	29.50	1.0
SNY	52.93	337	eP	33	50.90	-1.6
Z	20s		1.20um		4.9Msz	
N	20s		1.00um			
E	20s		0.80um			
			S	41	21.00	
MDJ	53.44	344	eP	33	55.50	-0.7
Z	20s		0.90um		4.8Msz	
			S	41	24.00	
CHG	54.35	299	eP	34	05.20	1.8
XAN	54.58	320	P	34	03.50	-1.4
BJI	54.72	330	eP	34	02.50	-3.2X
Z	22s		1.06um		4.9Msz	
TIP	54.96	326	eP	34	05.80	-1.8
Z	28s		1.49um		4.9MszX	
E	13s		0.30um			
			S	41	48.00	
BTO	58.32	327	eP	34	31.00	-0.5
LZH	59.11	319	eP	34	42.00	4.8X
	1.7s	48.00nm			5.4mb	
DRV	60.35	184	eP	34	45.60	0.7
SHL	62.98	303	eP	35	02.30	-1.3
GTA	63.64	320	eP	35	07.00	-0.6
GUN	68.83	303	PKP	35	41.60	0.4
	0.4s	12.00nm			5.2mb	
PKI	69.11	303	PKP	35	43.00	0.1
KKN	69.29	303	PKP	35	43.40	-0.4
	0.8s	21.00nm			5.1mb	
DMN	69.38	303	PKP	35	44.20	-0.2
	0 8s	18.00nm			5.1mb	
GKN	69.90	303	PKP	35	45.60	-1 9
	0 4s	4 00nm			4.7mb	
HYB	72.42	290	eP	36	03.50	0.9
GBA	72.68	286	Pd	36	10.00	5.9X

	0.2s	133.10nm			6 5mb X	
WMQ	73.70	319	eP	36	09.00	-0 7
			pP	36	25.00	58kmX
			eS	45	40.00	
SPA	83.58	180	iPc	37	04.00	0.8
	1.0s	25.00nm			5.2mb	
QUE	85.41	301	eP	37	13.00	-0.1
INK	91.77	21	eP	37	40.00	-2.3
NAO	116.98	338	PKP	43	19.40	-0 3
	0.9s	1.50nm				
FRB	117.12	17	ePKP	43	19.00	-0.8
BRG	121.54	328	ePKP	43	29.10	0.4
PRU	121.70	326	ePKP	43	29.00	0.0
OHR	121.72	315	ePKP	43	30.00	0.6
CLL	121.80	328	iPKP	43	29.00	-0.2
	0.8s	9.00nm				
KHC	122.68	326	iPKP	43	31.40	0.4
GRB2	123.65	327	e(PKP)	43	33.00	0.1
	0.8s	16.00nm				
ABH	125.45	330	ePKP	43	36.50	0.2
MEM	125.74	331	PKP	43	37.50	0.7
GAC	125.89	36	ePKP	43	37.50	0.2
EKA	126.05	340	PKP	43	38.00	0.7
	0.8s	3.40nm				
WLF	126.28	330	PKPc	43	39.50	1.6
FEL	126.44	327	ePKP	43	37.44	-1.1
SNF	126.62	332	PKP	43	39.40	0.9
DOU	126.76	331	PKPc	43	39.80	1.0
BSF	127.12	328	ePKP	43	39.10	-0.6
	0.8s	8.05nm				
HAU	127.24	328	ePKP	43	39.30	-0.6
	0.8s	8.05nm				
LPG	128.57	326	ePKP	43	42.40	-0.4
CVF	129.00	321	ePKP	43	42.70	-0.7
	0.8s	8.05nm				
LOR	129.00	329	ePKP	43	43.10	-0.1
	0.8s	2.70nm				
LBF	129.13	329	ePKP	43	43.30	-0.2
SBF	129.14	324	ePKP	43	43.70	0.0
SSF	129.32	329	ePKP	43	43.90	0.1
	0.8s	5.35nm				
SMF	129.42	328	ePKP	43	43.70	-0.3
	0.8s	5.35nm				
BNG	129.51	270	ePKPd	43	44.50	-0.7
	0.5s	5.00nm				
			ic	47	08.30	
AVF	129.58	329	ePKP	43	44.50	0.2
	0.8s	2.70nm				
BGF	129.99	329	ePKP	43	45.00	-0.1
	0.8s	8.05nm				
LMR	129.99	323	ePKP	43	44.90	-0.3
LRG	130.01	324	ePKP	43	45.20	0.0
FLN	130.05	333	ePKP	43	45.00	-0.1
GRR	130.50	333	ePKP	43	46.10	0.1
TCF	130.50	329	ePKP	43	46.10	0.0
	0.8s	8.75nm				
LPF	130.84	333	ePKP	43	46.60	0.0
	0.8s	5.35nm				
LSF	130.87	329	ePKP	43	46.50	-0.3
	0.8s	4.05nm				
MFF	131.46	331	ePKP	43	47.70	-0.2
	0.8s	5.35nm				
CAF	131.49	328	ePKP	43	48.30	0.3
NNA	131.92	112	ePKP	43	50.80	1.1
LPO	132.12	328	ePKP	43	49.60	0.4
EPF	133 69	327	ePKP	43	52.70	0 4
	0.8s	4 70nm				
CNCB	137.69	124	PKP	43	51.00	-10.3X
LPB	137.73	123	ePKP	43	48.00	-13.2X
			e	43	58.00	
ZOBO	137.84	123	PKP	43	51.00	-10.6X
	1.0s	15.00nm				
			i	44	03.20	
CCH	138.89	126	PKP	44	00.70	-2.4
SDV	141.79	84	ePKP	44	04.80	-3.5X
TOV	142.60	82	ePKP	44	07.00	-2.5
FISA	142.97	80	ePKP	44	07.00	-3.1X
MORO	143.99	80	iPKPd	44	10.00	-1.9
GUAC	145.06	81	ePKP	44	14.00	0.2
LLAV	145.50	81	ePKP	44	14.50	0.0
PPD	146.02	147	ePKP	44	15.90	0.8
			e	44	22.00	
			e	44	29.00	
			e	44	33.80	
LEGH	148.21	270	ePKP	44	21.00	2 2
KUK	148.42	271	ePKP	44	23.00	3.9X
BBL	149.86	70	ePKP	44	24.00	2.7

```
TPP   150 76   80 ePKP   44 30.55    7.9X
TRN   150.78   80 ePKP   44 29.16    6.5X
TBH   151.12   80 ePKP   44 31.78    8.6X
KIC   152.77 271 PKP    44 34.04    8.4X
       0.9s     39.00nm
BAO   153.01 145 ePKP   44 22.80   -3.2X
LIC   153.05 271 PKP    44 34.60    8.6X
       0.8s     26.00nm
TIC   153.05 272 PKP    44 34.62    8.6X
       0.8s     23.50nm
ITR   163.63 157 ePKP   44 41.20    2.8
     S.D. = 1.1  on 108 of 127 obs.
-----------------------------------------
*  JUN 11, 1989  23h 57m 37.70± 1.23s
   12.519 S ±13.9km  129.558 E ±13.7km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN TERRITORY, AUSTRALIA    (591)

MTN     1.57 102 eP     58 07.00    1.4
                eS      59 14.00
KNA     3.30 193 eP     58 39.40    8.9X
       0.3s     26.00nm
WB5     8.65 148 eP     59 45.70   -0.3
                eS      02 16.30
ASPA   11.83 160 iPc    00 29.20   -0.3
       0.4s     27.00nm          5.9mb X
LAT    18.15  73 eP     01 50.50   -1.1
RAB    23.83  72 iPd    03 01.50    9.5X
       0.5s    309.86nm          6.1mb X
GBA    57.82 295 Pc     07 32.40    0.4
       0.9s    724.50nm          6.7mb X
     S.D. = 1.3  on   5 of   7 obs.
-----------------------------------------
   JUN  12, 1989  00h 04m 09.76± 0.11s
   21.861 N ± 2.8km   89.763 E ± 2.0km
   DEPTH =   5.8km  (geophysicist)
   6.1mb ( 61 obs.)  5.1Msz ( 19 obs.)
 BANGLADESH                       (316)
      One person killed, at least 100
      injured and minor damage in the
      Banaripara area. Felt throughout
      eostern Bongladesh from
      Chittogong to Rangpur. Also felt
      in Meghalaya, Indio. Depth from
      broodband displocement
      seismograms.
      FAULT PLANE SOLUTION: P-Waves
       NP1:Strike=350 Dip=78 Slip= 175
       NP2:       81     85      12
       Principal Axes:
        T              Plg=12  Azm=306
        P               5      215
      Comment: The focal mechanism is
        moderotely well controlled and
        corresponds to strike-slip
        faulting with o small reverse
        componenl. The preferred fault
        plane is not determined.
      RADIATED ENERGY
       No. of sto:   7  Focal mech.  C
       Energy       0.5±0.2*10**14 Nm
      MOMENT TENSOR SOLUTION
      Dep  18            No. of sta:  5
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 1.32       Mtt=-1.16
        Mff=-0 16       Mrt= 2 83
        Mrf= 0 46       Mtf= 3.02
       Principal oxes
        T  Vol=  4.29  Plg=40  Azm=322
        N        0.10     43      104
        P       -4.40     20      213
      Best Double Couple:Mo=4.3*10**17
       NP1:Strike=349 Dip=46 Slip= 163
       NP2:       92     78       46
      CENTROID, MOMENT TENSOR     (HRV)
      Doto Used: GDSN
      L.P.B.: 10S, 21C
      Centroid Locotion:
      Origin Time        00:04:16.3 0.4
      Lat 22.13N 0.05 Lon  89.88E 0.05
      Dep  15.0 FIX Holf-duration  3.0
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 1.76 0.18  Mtt=-1.48 0.20
        Mff=-0.28 0.23  Mrt= 1.81 0.54
        Mrf= 0.89 0.66  Mtf= 5.24 0.18
       Principal Axes:
        T  Vol=  5.38  Plg=28  Azm=314
        N        0.85     62      120
        P       -6.23      6      221
      Best Double Couple:Mo=5.8*10**17
       NP1:Strike=354 Dip=67 Slip= 164
       NP2:        90     75       24

SHL     4.17  27 iP     05 14.00   -1.5
                iS     06 02.00
PKI     6.93 326 P      05 56.60    2.0
GUN     6.98 330 P      05 56.90    1.5
DMN     7.12 324 P      05 59.00    1.7
KKN     7.17 326 P      05 59.20    1.2
GKN     7.68 324 P      06 06.30    1.2
LSA     7.91   9 Pc     06 08.80    0.3
                S      07 32.80
CHG     9.13 108 iPnc   06 24.40   -0.7
                iPg    06 44.60
                iSn    07 28.90
                iSg    07 55.50
BDT     9.85 116 iPc    06 33.00   -2.0
                eS     08 14.50
HYB    11.45 249 iP     06 56.00   -1.0
       0.8s   828.60nm          7.1mb X
                e      07 08.00
KBR    12.13 128 iPc    07 12.90    6.7X
KMI    12.34  72 ePd    07 10.08    0.8
       6.0s     1.90nm          3.5mb X
                pP     07 20.09
                sP     07 33.00
                iS     09 21.00
                sS     09 36.00
NDI    13.22 303 iPc    07 18.00   -2.8
       0.8s   373.13nm          6.6mb
                eS     09 35.50
NNT    13.25 132 ePn    07 12.50   -8.6X
                ePg    07 20.00
                eSg    09 39.00
POO    15.30 260 iPc    07 47.20   -0.9
       0.8s   600.00nm          6.0mb
                iS     10 23.00
CD2    15.43  51 iPd    07 47.20   -2.6
     Z  24s     5.00um
     N  12s     6.00um
                pP     07 54.00
                S      10 35.50
                sS     10 51.00
GYA    16.09  70 iPd    07 57.00   -1.4
       3.0s     2.40nm          2.8mb X
     N  12s     8.10um
     E  12s     3.30um
                S      10 48.00
BOM    16.16 263 iPc    07 59.50    0.3
                iS     10 41.70
KOD    16.52 228 eP     08 03.00   -1.1
                eS     10 51.00
SNG    17.97 143 eP     08 22.10    0.1
       1.2s   209.38nm          5.1mb
                eS     11 36.00
QIZ    19.03  95 eP     08 36.10    1.1
     N  12s     6.00um
     E  12s     3.40um
                pP     08 44.00   30kmX
                S      11 58.00
GTA    19.49  24 iPd    08 38 30   -2.3
       5.0s     4.70nm          3.0mb X
     Z  22s    13 00um          4 4MszX
     E  12s     3 60um
                pP     08 46 00   29kmX
                S      12 14.00
                sS     12 24.00
IPM    20.36 146 ePd    08 50.10    0.2
       1.0s   166.20nm          5.3mb
                e      09 03.10
XAN    20.78  50 iPd    08 53.50   -0.8
       4.0s     9.00nm          3.5mb X
                pP     09 05.00   48kmX
                S      12 38.00
PSI    21.03 154 ePc    08 55.50   -1.4
       0.6s    39.70nm          4.9mb X
KSH    21.12 329 iPd    08 59.00    1.2
     N  12s     5.90um
                S      12 47.00
GZH    21.82  82 Pd     09 04.00   -0.8
     Z  12s     3 30um          5.0MszX
     N  10s     4 60um
     E  12s     4 10um
                PP     09 30.00
                iS     13 00.00
WMQ    21.97 356 iPc    09 07.50    1 3
       2.0s     1.70nm          3.1mb X
     Z  24s     5.70um          4.9MszX
     E  13s     9.20um
                pP     09 15.00   27kmX
                S      13 05.00
QUE    22.09 297 iPc+   09 10.70    3.1X
                e      13 03.00
                eS     13 12.00
HKC    22.62  84 P      09 13.00    0.3
                S      13 18.00
WHN    23.66  63 iPd    09 21.00   -1.8
       4.0s     8.40nm          3.7mb X
     Z  24s     3.40um          4.7MszX
                sP     09 40.00
                iS     13 30.00
                sS     13 56.00
KGM    23.73 144 eP     09 25.00    1.4
TIY    25.14  46 iPd    09 37.50    0.3
       5.0s     2.50nm          3.2mb X
     Z  20s     4.40um          5.0Msz
     E  14s     2.50um
                pP     09 47.00   34kmX
                PP     10 10.50
                S      13 57.50
                sS     14 09.00
                SS     14 55.00
BTO    25.37  38 iPd    09 40.60    1.2
     Z  21s    10.40um          5 3Msz
     N  19s     8.60um
     E  21s     7.00um
                pP     09 51.00   39kmX
                PP     10 21.00
                S      14 06.00
                sS     14 18.00
                SS     15 10.50
HHC    26.43  39 iPd    09 50.40    1.2
       4.0s     1.40nm          3.0mb X
     Z  20s     6.70um          5.2Msz
     N  13s     3.00um
     E  11s     1.90um
                S      14 18.00
QZH    26.61  78 eP     09 51.20    0.3
     Z  12s     3.70um          5.2MszX
     N  11s     8.70um
                sP     10 10.50
                S      14 27.00
TIA    27.75  53 Pd     10 00.90   -0.4
     Z  25s     5.90um          5.1MszX
     N  15s     1.70um
     E  11s     1.90um
NJ2    27.77  62 eP     10 01.00   -0.4
       1.0s     0.10nm          2.6mb X
     Z  22s     3.50um          4.9Msz
     N  10s     3.50um
                S      14 33.00
BJI    28.84  45 eP     10 12.00    1.0
       5.0s     0.82nm          2.8mb X
     Z  25s     2.65um          4.7MszX
     N  10s     1.42um
                epP    10 38.00 120kmX
                esP    10 50.00
                eS     15 00.00
SSE    29.51  65 Pc     10 15.80   -1 3
       2.0s     0.64nm          3 1mb Y
     Z  20s     2.30um          4 8Msz
     N  12s     0.60um
     E  14s     1.00um
                S      15 08.00
                sS     15 31.00
                PcS    17 03.00
BAG    29.58  95 eP     10 25.00    6.9X
MAIO   29.96 305 iPc+   10 22.00    0.7
                eS     15 20.00
QCP    30.55  98 eP     10 29.00    2.5
DL2    32.10  51 iPd    10 40.00    0.1
       4.0s     0.90nm          3.1mb X
     Z  22s     2.90um          4.9Msz
                epP    10 55.00   61kmX
                S      15 48.00
                esS    16 14.00
SHI    34.31 291 eP     10 59.00   -0.5
SNY    34.63  47 iPd    11 01.70   -0 2
       3.0s     1.40nm          3 3mb X
     Z  24s     2.60nm          4 9MszX
     N  26s     3.20um
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12d 00h

	E 30s 4.20um					
		pP	11	15.00		51kmX
		PP	12	11.00		
BEE	36.01	285	iP	11	15.00	1.2
	1.0s	767.00nm			6.5mb	
TEH	36.13	301	eP	11	16.00	1.1
DHR	36.35	285	iPc	11	17.80	1.2
IR4	36.41	300	iP+	11	19.20	1.9
IR2	36.50	301	iP+	11	19.60	1.6
IR1	36.62	300	iP+	11	20.70	1.7
CN2	36.71	45	iPd	11	19.50	0.0
	4.0s	1.10nm			3.0mb	X
	N 13s	1.50um				
		sP	11	37.00		
		eS	16	53.00		
		sS	17	20.00		
		eSS	19	18.00		
		ScS	21	22.00		
IR7	36.74	301	iP+	11	21.80	1.8
DAV	37.53	108	eP	11	28.00	1.3
SHK	39.60	62	eP	11	43.70	-0.1
RYD	39.62	283	iPc	11	45.40	1.2
MKS	39.64	129	ePc	11	45.50	1.2
MNI	39.71	116	eP	11	46.00	1.0
MDJ	39.77	46	iPc	11	45.30	0.2
	Z 20s	1.80um			4.9Msz	
		epP	11	54.00		29kmX
		esP	12	00.00		
		ePP	13	20.00		
		S	17	44.00		
		SS	20	28.00		
TAB	40.56	303	iPc+	11	54.30	2.4
SLY	40.83	300	iPd	11	56.00	2.1
		ipP	12	14.00		73kmX
		isP	12	21.00		
		iPP	13	28.50		
		iPPP	14	01.00		
		eS	18	02.50		
		eSS	18	24.50		
		eSSS	21	04.00		
BHD	41.51	296	iPd	12	00.50	1.0
		ipP	13	36.00		524kmX
		iPPP	14	18.50		
		i	15	26.00		
		iS	18	13.00		
KMSA	42.14	277	iPc	12	05.50	0.6
QASM	42.28	285	iPc	12	07.40	1.3
TSRJ	42.40	61	P	12	07.40	0.6
MSL	42.81	300	iPd	12	10.50	0.3
		e	13	19.50		
		eS	18	29.50		
ABHA	44.18	274	iPd	12	32.30	10.5X
NIIJ	45.00	59	P	12	26.60	-1.3
AAI	45.37	119	eP	12	20.00	-11.1X
ARO	45.94	265	iP+	12	38.00	2.3
MRRJ	47.25	52	eP	12	45.00	-0.6
JARJ	48.60	294	P	12	57.90	1.5
ASAJ	48.65	50	eP	12	55.90	-0.7
BURJ	48.76	294	P	12	58.20	0.6
MASJ	48.81	294	P	12	59.70	1.6
SALJ	48.83	294	P	12	59.40	1.2
KFNJ	48.84	294	P	12	59.10	1.0
KVT	48.86	306	iP	12	59.70	1.5
HOOJ	48.87	52	eP	12	59.50	1.3
MKRJ	48.89	293	P	12	59.50	0.9
DSI	49.11	293	ePc	13	01.00	0.8
PRNI	49.50	292	iPc	13	04.00	0.7
MBH	49.65	291	iPc	13	05.00	0.6
KUSJ	50.00	52	eP	13	06.60	-0.3
CSS	50.72	298	eP	13	12.50	-0.1
ANTO	51.24	304	ePc	13	16.50	0.0
		epPd	13	18.90		8kmX
		ePP	15	19.41		
PPCY	51.54	298	eP	13	19.00	0.3
MBL	51.86	144	eP	13	06.00	-15.3X
		e	13	20.00		
		i	13	34.70		
HLW	52.70	292	eP	13	27.00	-0.6
		eS	20	52.00		
BCK	52.92	301	iP	13	27.60	-1.6
GPA	53.16	305	iP	13	28.30	-2.6
ALT	53.29	303	iP	13	31.50	-0.5
ELL	53.47	300	iP	13	33.00	-0.3
HRT	53.66	305	iP	13	34.00	-0.6
KHL	53.75	302	iP	13	34.00	-1.3
KSL	53.75	299	eP	13	33.90	-1.3
YLV	53.88	305	iP	13	35.20	-1.0
ISK	54	13	306	eP	13	38.00	0.1
DST	54	44	304	iP	13	39.90	-0.5
YER	54.76	301	iP	13	41.60	-1.2
PSN	54.86	309	iPc	13	44.00	0.7
BNT	54.99	305	iP	13	44.20	-0.1
PPE	55.41	312	ePd	13	47.00	-0.2
IZM	55.53	302	eP	13	43.40	-4.9X
CLI	55.66	312	ePc	13	50.00	0.9
MEKA	55.66	149	iPd	13	49.30	0.1
	0.5s	63.00nm			5.9mb	
			e	14	02.00	
KAP	55.73	299	eP	13	49.00	-0.8
BRD	55.76	311	eP	13	52.50	2.7
JMB	56.00	307	iPc	13	52.00	0.4
VRI	56.00	311	iPc	13	52.00	0.5
EZN	56.22	304	iP	13	52.50	-0.6
PRK	56.27	303	eP	13	53.50	-0.1
PTT	56.30	313	eP	13	55.00	1.4
BUC	56.39	310	iPc	13	55.00	0.7
BUC1	56.44	309	iPc	14	00.00	5.3X
MLR	56.54	311	iPc	13	56.00	0.5
MRWA	56.73	152	iPd	13	56.60	-0.2
			e	15	01.00	
RDO	56.79	306	iPc	13	56.60	-0.6
KDZ	56.87	306	iPc	13	58.00	0.1
PVL	56.93	308	iPc	14	00.00	1.8
NPS	57.03	299	eP	13	58.40	-0.7
RZN	57.40	306	iPc	14	01.00	-0.8
PLD	57.40	307	iP	13	57.00	-4.5X
MMB	58.14	306	iPc	14	06.00	-0.8
VAM	58.17	299	iPc	14	06.60	-0.4
BAL	58.23	153	eP	14	06.00	-1.4
CJR1	58.23	312	eP	14	08.00	0.7
BMR	58.29	313	ePd	13	51.00	-16.7X
ATH	58.34	302	iPc	14	07.10	-1.1
PLG	58.40	305	iPc	14	08.00	-0.7
KKB	58.61	307	iPc	14	09.00	-1.1
NEO	58.63	304	iPc	14	09.40	-0.9
DEV	58.67	311	ePd	14	11.00	0.6
SUF	58.75	331	iP	14	10.40	-0.2
NUR	58.99	328	iP	14	12.00	-0.4
	0.7s	88.10nm			6.0mb	
	Z 20s	2.50um			5.3Msz	
			eS	22	16.00	
			LR	41	40.00	
VAY	59.02	306	iPc	14	12.20	-0.7
	1.4s	0.48nm			3.4mb	X
MUN	59.22	154	iPc	14	13.50	-0.7
KLB	59.54	152	iPd	14	15.40	-1.1
BZS	59.58	311	eP	14	15.50	-1.2
KZN	59.69	305	iPc	14	16.40	-1.2
SOD	59.75	336	iP	14	17.30	-0.2
ITM	59.82	301	iPc	14	16.90	-1.6
SKO	59.83	307	iPc	14	18.00	-0.5
	1.5s	510.00nm			6.4mb	
	Z 20s	0.88um			4.9Msz	
	E 20s	1.20um				
			iPP	16	30.00	
			iPPP	18	06.00	
			iS	22	22.00	
			iPS	22	45.00	
			iSS	26	20.00	
			LR	43	53.00	
TIM	59.85	311	iPc	14	12.60	-5.9X
WB5	60	18	130	iPc	14	20.30	-0.8
FEV	60	33	339	ePc	14	20.94	-0.5
	0.9s	84.50nm			5.9mb	
			epPd	14	22.93	7kmX
			eS	22	33.14	
OHR	60.37	306	iPc	14	20.70	-1.5
	1.4s	0.42nm			3.4mb	X
KBN	60.39	305	eP	14	21.00	-1.3
BEO	60.42	310	iP	14	22.00	-0.4
NWAO	60.47	154	eP	14	12.00	-10.8X
COOL	60.48	149	eP	14	22.00	-0.9
SPC	60.49	315	iPc	14	23.70	0.6
KKS	60.59	307	eP	14	22.50	-1.1
LSK	60.59	305	eP	14	22.50	-1.3
PHP	60.60	306	eP	14	22.70	-1.0
KRA	60.69	316	iPc	14	23.30	-0.9
	1.5s	195.00nm			6.0mb	
	Z 20s	1.40um			5.1Msz	
	N 18s	3.10um				
			e	14	38.30	
			eS	22	36.00	
BCI	60	83	307	eP	14	24.70	-0.5
IVA	60	92	308	eP	14	26.00	0.0
PUK	60.98	307	eP	14	25.70	-0.6
TIR	61.05	306	eP	14	26.00	-0.8
SRN	61.07	304	eP	14	26.50	-0.4
LACI	61.15	306	eP	14	26.20	-1.2
PLE	61.26	308	eP	14	28.60	0.2
RKG	61.37	154	eP	14	31.00	2.1
TTG	61.42	307	iP	14	28.50	-0.8
			eS	22	45.00	
ULC	61.46	307	eP	14	28.50	-1.2
NKY	61.58	308	eP	14	30.00	-0.6
NPA	61.65	238	eP	14	39.10	7.9X
			e	14	53.40	
BDV	61.75	307	eP	14	31.20	-0.4
SRO	61.79	314	iPc	14	32.10	0.4
	1.6s	669.00nm				6.6mb
BRY	61.91	308	eP	14	32.00	-0.8
HCY	61.98	307	eP	14	32.50	-0.6
ASPA	62.39	134	iPc	14	35.70	-0.3
	0.5s	57.00nm				6.0mb
			e	14	49.90	
UPP	62.39	327	iPc	14	35.30	-0.2
			i	14	50.50	
			iS	22	56.00	
ZST	62.59	314	iPc	14	36.30	-0.8
	Z 18s	1.20um				5.1Msz
			e	14	51.10	
			e	15	15.20	
			LR	00	46.00	
SOP	62.98	313	iPc	14	40.00	0.4
KSP	63.01	317	iPc	14	39.50	-0.3
	1.3s	144.00nm				6.0mb
			e	16	43.00	
TRO	63.03	338	iP	14	39.10	-0.5
VKA	63.11	314	iPc	14	40.30	-0.2
	2.5s	653.00nm				6.4mb
			ePP	17	02.50	
			eS	23	08.00	
			(sS)	23	53.00	
HVAR	63.42	308	iPc	14	41.30	-1.3
ZAG	63.51	311	iPc	14	43.30	0.2
PTJ	63.52	311	iPc	14	43.00	-0.4
TDS	63.90	305	P	14	46.20	0.3
GRI	63.95	304	P	14	46.20	-0.1
VBY	64.04	311	iPc	14	47.10	0.4
LWI	64.14	256	ePc	14	48.20	0.2
PRU	64.17	316	iPc	14	47.50	0.1
	1.8s	240.60nm				6.1mb
	Z 18s	0.80um				4.9Msz
			e	17	07.80	
QIS	64.40	127	eP	14	47.50	-1.8
			e	15	03.00	
GMB	64.48	303	P	14	50.18	0.3
BRG	64.49	317	iPc	14	49.20	-0.3
	1.4s	180.00nm				6.1mb
			i	15	08.20	
			i	16	22.00	
			eS	23	24.00	
			eP'P'	43	50.00	
LJU	64.50	312	iPc	14	50.00	0.3
			epP	17	11.00	760kmX
			eS	23	26.00	
			e(sS)	27	20.00	
KMR	64.58	314	iP+	14	50.00	-0.2
			i	17	11.00	
CEY	64.60	311	iPc	14	50.50	0.1
			e	17	14.50	
ATN	64.79	303	P	14	51.40	-0.3
BRN	64.86	319	iPc	14	54.00	2.2
KHC	64.86	315	iPc	14	52.40	0.4
	1.2s	93.00nm				5.9mb
BSS	64.91	306	P	14	49.90	-2.5
VOY	64.94	312	iPc	14	52.20	-0.4
CLL	65.06	318	iPc	14	52.70	-0.5
	1.7s	170.00nm				6.0mb
	Z 18s	1.50um				5.2Msz
			eS	23	30.00	
TRI	65.06	311	ePc	14	52.70	-0.6
			e	16	14.00	
			e	23	34.00	
			eLR	39	12.00	
COP	65.13	322	iPc	14	53.80	0.3
	1.6s	426.67nm				6.4mb
			eS	23	35.00	
KBA	65.21	313	iPc	14	53.50	-1.0
	1.8s	137.00nm				5.9mb
			e	17	15.00	
			i	17	21.20	

12d 00h

WET 65.31 315 iPc 14 55.00 0.1
1.4s 322.00nm 6.3mb
MEU 65.38 302 P 14 54.90 -0.7
PZI 65.40 302 P 14 55.63 -0.1
NRA0 65.44 328 P 14 54.70 -0.8
BHG 65.46 314 iPc 14 55.50 -0.3
1.6s 411.00nm 6.4mb
RFI 65.46 307 P 14 55.22 -0.7
FVI 65.64 312 P 14 56.10 -0.9
AQU 65.74 308 P 14 56.80 -1.0
AZI 65.77 307 P 14 57.10 -0.8
NAO 65.79 328 P 14 56.70 -1.0
1.1s 194.50nm 6.2mb
HOF 65.85 317 iPc 14 58.20 -0.1
1.5s 210.00nm 6.1mb
ARV 65.92 309 Pc 14 58.60 -0.3
VVI 65.96 312 P 14 58.50 -0.6
MOX 65.99 317 iPc 14 59.00 -0.2
1.3s 194.00nm 6.2mb
Z 19s 1.20um 5.1Msz
E 20s 1.00um
ASS 66.18 309 P 14 58.90 -1.7
RSM 66.21 310 Pc 15 00.80 0.1
MCT 66.30 303 P 15 02.30 0.7
FAI 66.33 302 P 15 02.00 0.4
GRF 66.34 316 iPc 15 02.00 0.6
1.5s 350.00nm 6.3mb
Z 23s 0.70um 4.8MszX
e 17 26.40
GRFO 66.34 316 ePc 15 01.89 0.4
epP 15 04.20 7kmX
esPd 15 05.53
ePP 17 23.92
KBS 66.36 348 iP 15 00.90 -0.2
USI 66.47 304 P 15 00.80 -1.7
FUR 66.48 314 iPc 15 02.20 -0.2
1.8s 393.00nm 6.3mb
CTI 66.49 312 P 15 01.90 -0.7
PGD 66.74 310 P 15 04.90 0.6
OGA 66.81 313 iPc 15 03.90 -0.9
1.2s 210.00nm 6.2mb
CVT 66.95 303 P 15 04.00 -1.5
FIR 67.09 310 iPc 15 06.00 -0.3
eS 24 10.00
SAL 67.33 312 P 15 08.10 0.3
MME 67.42 310 P 15 09.20 0.5
OSS 67.43 313 ePc 15 08.30 -0.4
BDI 67.52 310 Pc 15 08.20 -0.9
PII 67.62 310 P 15 07.20 -2.4
STU 67.77 315 iPc 15 10.20 -0.3
1.2s 159.38nm 6.1mb
MDI 67.87 312 Pc 15 10.30 -0.8
SAX 67.89 314 ePc 15 11.10 -0.6
TOD 67.91 316 ePc 15 11.10 -0.3
VDL 67.92 313 ePc 15 11.40 -0.4
TNS 68.05 317 ePc 15 12.30 0.0
LLS 68.19 313 ePc 15 12.80 -0.6
BOB 68.21 311 Pc 15 14.00 0.5
SLE 68.38 314 ePc 15 13.80 -0.6
TMA 68.39 312 ePc 15 14.10 -0.6
KTD 68.41 316 ePc 15 14.46 -0.1
ZLA 68.50 314 ePc 15 14.50 -0.7
ABH 68.67 317 ePc 15 16.10 -0.1
FEL 68.69 314 ePc 15 15.85 -0 6
STR 68.74 315 P 15 16.39 -0 1
GWF 68 77 316 P 15 16 77 0 0
WIT 68 78 320 ePc 15 17 50 0 8
e 15 44.00
ePP 17 38.00
WTS 68.81 319 iPc 15 17.30 0.4
1.0s 194.00nm 6.3mb
ePP 17 43.00
RUP 69.01 316 ePc 15 18.36 0.1
CVF 69.02 309 P 15 17.96 -0.5
MMK 69.03 312 ePc 15 18.10 -0.6
CDF 69.08 315 P 15 18.27 -0.5
BBS 69.09 314 P 15 18.07 -0.7
CTA 69.17 123 iPc 15 18.90 -0.7
1.2s 97.66nm 5.9mb
i 15 33.90
FIN 69.19 310 P 15 18.55 -0.9
ECH 69.20 315 P 15 19.61 0.2
MOF 69.27 314 P 15 19.54 -0.5
DIX 69 40 313 ePc 15 21.40 0 4
ROB 69 41 311 P 15 20.29 -0.5
IMI 69 47 310 P 15 21.11 -0 1
BSF 69.50 314 P 15 20.71 -0.7

MEM 69.53 317 iPc 15 21.60 0.3
e 17 38.50
ENN 69.56 318 iPc 15 21.50 0.0
1.2s 168.00nm 6.1mb
e 15 41.50
ePP 17 49.00
LOMF 69.57 314 P 15 21.09 -0.7
WLF 69.60 316 iPc 15 22.50 0.7
SAOF 69.69 310 P 15 22.47 0.0
LSD 69.69 312 P 15 22.85 0.1
EMS 69.73 313 ePc 15 23.10 0.2
ENR 69.74 311 P 15 21.93 -1.0
HAU 69.77 315 iPc 15 22.40 -0.5
1.2s 190.40nm 6.1mb
AUTN 69.78 310 P 15 23.46 0.2
DBN 69.79 319 eP+ 15 23.00 0.1
Z 20s 1.00um 5.1Msz
eS 24 30.00
eSSS 32 15.00
SBF 69.80 310 iPc 15 23.30 0.1
STV 69.80 311 P 15 22.03 -1.2
DOI 69.81 311 P 15 21.30 -2.0
AURF 69.87 310 P 15 23.61 -0.1
TOUF 69.90 310 P 15 24.18 0.2
PZZ 69.91 311 P 15 22.14 -1.8
LPG 69.96 312 iPc 15 24.70 0.2
1.0s 125.00nm 6.0mb
VITF 69.97 315 P 15 23.70 -0.3
MVIF 69.99 310 P 15 24.33 -0.2
RRL 70.05 311 P 15 24.50 -0.5
FOUF 70.13 311 iP 15 25.19 0.1
CALN 70.21 310 P 15 25.76 -0.1
FRF 70.42 310 iPc 15 27.00 0.1
DOU 70.51 317 Pc+ 15 27.50 0.1
1.1s 100.00nm 5.9mb
S 24 37.00
UCC 70.53 318 Pc+ 15 27.50 0.1
LMR 70.56 310 iPc 15 27.80 0.0
SNF 70.63 318 Pc 15 28.10 0.1
LRG 70.64 310 iPc 15 28.70 0.4
1.1s 419.70nm 6.5mb
BNG 70.93 267 iPc 15 30.00 -0.6
1.3s 280.00nm 6.2mb
ic 15 38.50
id 15 46.00
id 15 53.00
ic 18 09.00
BCAO 70.94 267 ePc 15 28.71 -1.9
epP 15 30.86 7kmX
esPd 15 33.51
LBF 71.54 314 iPc 15 33.50 -0.2
LOR 71.56 314 iPc 15 33.30 -0.5
1.1s 152.60nm 6.0mb
SMF 71.71 314 iPc 15 34.50 -0.2
SSF 71.84 314 iPc 15 35.50 0.0
AVF 72.01 314 iPc 15 36.10 -0.3
PLDF 72.01 313 P 15 36.68 0.1
AGO 72.32 313 P 15 38.55 0.2
BGF 72.40 314 iPc 15 38.80 0.0
LBL 72.43 312 P 15 39.37 0.4
PYM 72.48 313 P 15 39.49 0.1
MAF 72.66 313 iPc 15 40.70 0.3
TCF 72.89 314 iPc 15 42.20 0.5
STK 72.91 136 iPd 15 41.50 -0.4
0 4s 11.00nm 5.3mb
e 15 56.00
DAG 73.01 347 iPc 15 40.50 -1.3
1.2s 67.19nm 5.6mb
ADE 73.15 140 iPc 15 43.40 0.1
1.0s 120.00nm 5.9mb
CAF 73.32 312 iPc 15 44.70 0.4
LSF 73.36 314 iPc 15 44.50 0.1
ETER 73.42 309 iPc 15 44.90 0.1
ESY 73.49 324 iPc 15 44.90 0.0
1.4s 416.00nm 6.3mb
EDU 73.54 325 iPc 15 44.90 -0.3
1.4s 321.00nm 6.2mb
RJF 73.60 313 iPc 15 46.60 0.8
EBL 73.76 324 iPc 15 46.70 0.2
EDI 73.80 324 iPc 15 46.90 0.2
LDF 73.85 316 iPc 15 47.30 0.1
EBH 73.88 325 iPc 15 46.90 -0.3
1.2s 309.00nm 6.2mb
EKA 73.93 324 Pc 15 47.70 0.2
1.3s 379 00nm 6 3mb
ELO 73.94 325 iPc 15 47 60 0.1
1 1s 185 00nm 6.0mb

EAU 73.96 324 iPc 15 48.00 0 3
ESK 73.96 324 iPc 15 48 30 0 6
1.2s 350.00nm 6.3mb
LPO 73.98 312 iPc 15 48.60 0.5
ESEL 74.04 307 iPc 15 49.90 1.4
FLN 74.04 317 iPc 15 48.50 0.2
1.0s 125.00nm 5.9mb
LFF 74.23 312 iPc 15 50.10 0.7
GRR 74 38 316 iPc 15 50.80 0.5
1.4s 226.50nm 6.0mb
MFF 74.39 314 iPc 15 50.40 0.1
LPF 74.59 316 iPc 15 51.70 0.2
RMQ 74.65 127 eP 15 54.00 1.8
0.3s 22.00nm 5.7mb
i 16 09.40
ALE 74.98 356 eP 15 54.00 0.8
1.0s 14.00nm 4.9mb X
EPF 75.01 311 iPc 15 53.80 -0.3
1.2s 62.40nm 5.5mb
CMS 75.48 133 eP 15 56.60 -0.2
HNR 75.50 107 eP 15 59.00 1.8
EBR 75.52 308 eP 15 57.00 0.0
eS 25 33.00
EROQ 75.58 308 iPc 15 58.00 0.7
DLE 76.42 322 iPc 16 02.40 0.6
1.1s 113.00nm 5.9mb
DMU 76.44 323 iPc 16 02.90 1.0
1.0s 280.00nm 6.3mb
BRW 76.64 18 ePc 16 03.50 0.8
PRY 77.35 234 eP 16 05.60 -2.0
1.1s 33.78nm 5.4mb
ETOR 77.37 309 iPc 16 07.80 0.3
BRS 78.15 126 iPd 16 12.70 0.9
i 16 27.80
EVIA 78.38 307 iPc 16 13.90 0.8
ENIJ 78.70 305 eP 16 15.60 0.8
GUD 78.94 309 iPc 16 17.10 0.9
TOO 79 00 138 iPd 16 17.50 1.2
e 16 32.00
VAL 79.00 322 iP 16 17.00 1.0
TOL 79.11 309 ePc 16 17.73 0.7
1.4s 976.74nm 6.6mb
epPd 16 19.06 4kmX
esPc 16 19.72
ePP 19 15.00
eS 26 13.79
ePS 27 08.00
eSS 30 48.00
COO 79.21 129 eP 16 19.00 1.4
e 16 34.00
EBAN 79.49 307 iPc 16 19.50 0.4
AFC 79.61 306 iPc 16 19.50 -0.4
CAN 79.89 134 eP 16 21.50 0.3
EMON 80.21 313 iPc 16 23.80 1.0
IMA 80.30 22 eP 16 24.40 1.4
1.4s 66.90nm 5.4mb
MAL 80.44 306 iPc 16 23.30 -0.8
ERUA 80.45 312 e(P) 16 24.80 0.7
FRS 80.46 233 iPd 16 25.00 0.8
1.1s 31.65nm 5.2mb
MBC 80.49 7 ePc 16 24.00 0.3
0.7s 10.00nm 4.9mb X
EPLA 80.52 309 iPc 16 25.60 1.1
EHOR 80.69 307 iPc 16 26.00 0.6
EPRU 80.97 306 iPc 16 27.00 0.0
TTA 81.10 25 eP 16 28 90 1.7
LIJA 81.13 306 iP 16 28 00 0 1
STS 81.24 313 eP 16 29.20 1.0
SRQ 81.33 305 iP 16 27.00 -1.8
EJIF 81.33 306 eP 16 29.00 0.1
OJEN 81.51 305 eP 16 30.00 0.1
GIBL 81.56 306 iP 16 30.00 -0.1
EZAM 81.61 312 iPc 16 31.00 0.8
CNIL 81.80 306 eP 16 31.00 -0.3
EVAL 81.88 307 iPc 16 32.60 0.9
BMK 82.15 304 iPc 16 33.00 -0.1
COL 82.98 21 ePc 16 37.30 0.5
epPd 16 38.79 5kmX
esP 16 39.62
eS 26 54.06
FBA 82.98 21 ePc 16 36.90 0.1
e 17 18.00
LIS 83.22 309 iPc 16 39.50 0.9
TAU 83.40 141 eP 16 36 00 -3.2X
PMR 84.51 24 ePc 16 45.30 0.6
0.9s 43.70nm 5.7mb
Z 20s 1.00um 5.2Msz

12d 00h

INK	84 71	15 iPc	16 46.10	0.6		
	0 7s	79.00nm		6 1mb		
		pP	17 02.00	56kmX		
KDC	85.38	28 eP	16 50.00	1.0		
GDH	85.39 348	iPd	16 49.00	0.1		
	1 2s	93.75nm		5.9mb		
		e	27 18.00			
DZM	86.55 115	iPc	16 57.90	2.3		
CER	86.72 232	iPd	17 04.00	7.9X		
	1.0s	140.00nm		6.1mb		
KUK	87.85 276	eP	17 02.00	0.0		
LEGH	87.87 275	eP	16 59.00	-3.1X		
MAW	91.40 190	eP	17 18.00	0.6		
KIC	91.82 278	Pc	17 21.36	0.8		
TIC	91.97 278	Pc	17 21.88	0.6		
LIC	92.14 278	Pc	17 22.60	0.6		
FRB	93.00 351	ePc	17 25.10	0.0		
YKA	93.73 11	eP	17 29.30	0.8		
YKC	93.77 11	eP	17 28.80	0.1		
EDM	102.59 14	ePdiff	18 09.50	0.9		
WDC	110.99 26	e(PKP)	22 44.90	-1.0		
RSSD	113.14 11	PKP	22 50.00	-0.2		
CMB	114.03 26	PKP	22 52.30	0.4		
KVN	114.03 23	PKP	22 52.00	-0.1		
		pP	23 49.20			
GLD	117.13 13	PKP	23 05.40	7.5X		
GOL	117.15 13	PKP	22 57.70	-0.4		
PV09	117.40 17	PKP	22 58.70	0.1		
PV10	117.54 17	PKP	22 59.00	0.1		
BAR	120.17 26	ePKP	23 20.00	16.3X		
FVM	120.48 0	PKP	23 03.00	-1.1		
GLA	120.56 24	ePKP	23 05.00	0.5		
ACO	121.15 8	ePKP	23 05.00	-0.5		
	1.0s	19.00nm				
ALQ	121.45 16	iPKP	23 06.50	0.2		
	Z 20s	0.80um		5.4Msz		
		e	23 20.50			
RLO	122.11	5 ePKP	23 07.90	0.6		
		e	23 23.00			
LNO	122.30	5 ePKPc	23 07.00	-0.5		
TUL	122.31	5 ePKP	23 07.50	-0.1		
	1.3s	26.20nm				
	Z 19s	1.56um		5.7Msz		
		e	23 23.50			
		LR	02 00.00			
SIO	122.42	6 ePKPc	23 07.80	-0.1		
VVO	122.88	5 ePKP	23 08.70	0.0		
MEO	123.11	8 ePKP	23 06.90	-2.3		
	1.2s	20.90nm				
UYO	124.14	4 iPKPd	23 10.50	-0.8		
ITR	128.59 276	ePKP	23 20.70	0.3		
SOB1	131.03 277	e(PKP)	23 24.00	-1.0		
ATB	138.75 291	e(PKP)	23 31.80	-7.8X		
BAO	139.61 271	e(PKP)	23 30.00	-11.2X		
TOV	142.70 325	ePKP	23 46.00	-0.7		
SDV	143.89 326	ePKP	23 46.30	-2.6		
	1.1s	454.50nm				
PPD	143.96 262	ePKP	23 45.20	-3.4X		
		e	23 46.90			
		e	23 51.60			
ITB	146.85 258	ePKP	23 53.80	0.5		
ITB1	147.00 258	ePKP	23 54.50	1.0		
UPA	147.60 340	iPKPd	23 56.50	1.7		
	1.2s	162.50nm				
	Z 22s	0 41um		5 2Msz		
BOG	149.28 327	e(PKP)	24 03 00	5 1X		
PSO	153.85 330	ePKP	24 06 00	1 3		
CCH	156.88 277	PKP	24 09.10	0.6		
ZOBO	158.38 281	PKPc	24 10.50	-0.1		
	1.3s	25.63nm				
		i	24 44.50			
		LR	20 32.00			
CNCB	158.41 280	PKP	24 11.40	0.8		
		i	24 46.00			
LPB	158.44 280	PKP	24 12.00	1.5		
	1.0s	60.00nm				
	Z 24s	0.78um		5.5MszX		
		i	24 46.00			
		LR	21 20.00			
ARE	161.50 284	ePKP	24 15.00	1.5		
NNA	163.87 305	ePKP	24 16.00	0.4		
	S.D. = 0.9	on 412 of 435 obs.				

JUN 12, 1989 00h 07m 46.64± 0 73s
6.492 S ± 9.9km 147.955 E ± 7 1km
DEPTH = 33.0km (normal)
4.1mb (1 obs.) 4.2Msz (1 obs.)

EAST PAPUA NEW GUINEA REGION (207)

LAT	0.96 260	iPc	08 03.60	-0 2		
LMG	2.41 175	iP	08 24.20	-0.5		
PMG	3.00 195	eP	08 34.50	1.5		
		eS	09 17 00			
VSG	11.97 104	e(P)	10 37.00	-1.0		
SVO	12.04 103	e(P)	10 45.00	6.0X		
HNR	12.23 105	eP	10 46.00	4.5X		
CTA	13.62 187	eP	11 04.00	4.1X		
QIS	16.16 209	eP	11 34.00	1.0		
		e	11 38.00			
MTN	17.74 248	eP	11 53.00	0.1		
WB5	18.74 223	eP	12 04.70	-0.5		
WRA	18.80 223	Pc	12 06.00	0.0		
	0.6s	8.20nm		4.1mb		
RMQ	19.90 178	eP	12 18.80	0.4		
		e	12 22.00			
KNA	20.94 242	eP	12 27.30	-1.9		
		i	13 32.20			
BRS	21.28 168	iPc	12 32.30	-0.4		
ASPA	21.78 217	eP	12 37.10	-0.6		
	Z 21s	1.03um		4.2Msz		
		LR	21 14.70			
DZM	23.64 133	iPc	12 55.50	-0.5		
COO	24.24 172	eP	13 03.00	1.2		
STK	25.95 192	eP	13 18.00	0.1		
WARB	28.22 224	eP	13 27.00	-11.8X		
		e	14 26.00			
FORR	30.56 215	eP	13 58.00	-1.5		
		e	14 46.00			
ANP	40.66 322	eP	15 08.00	-17.7X		
SES	101.99 40	ePdiff	21 47.00	8.2X		
KHC	122 76 326	PKP	26 41.00	0.2		
PPD	145.94 147	e(PKP)	27 24.00	-0.7		
LEGH	148.31 270	ePKP	27 30.00	1.3		
KUK	148.52 271	ePKP	27 31.00	2.0		
KIC	152.87 271	PKP	27 42.60	7.1X		
LIC	153.15 271	PKP	27 43.40	7.5X		
TIC	153.15 272	PKP	27 43.20	7.3X		
	S.D. = 1.1	on 20 of 29 obs.				

JUN 12, 1989 05h 47m 35.76± 0.74s
15.283 S ± 5 4km 167.572 E ± 5.7km
DEPTH = 247.1 ± 7.2 km
5.4mb (19 obs.)

VANUATU ISLANDS (186)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 23C
Centroid Location:
Origin Time 05:47:40.8 0.8
Lat 15.31S 0.06 Lon 167.56E 0.07
Dep 252.4 2.9 Half-duration 2.2
Moment Tensor; Scale 10**17 Nm
Mrr= 0.56 0.06 Mtt=-1.21 0.12
Mff= 0.65 0.10 Mrt=-1.47 0.08
Mrf= 0.68 0.09 Mtf=-1.03 0.08
Principal Axes:
T Val= 2.20 Plg=41 Azm=232
N -0.03 39 98
P -2.17 25 346
Best Double Couple:Mo=2.2*10**17
NP1:Strike= 27 Dip=41 Slip= 15
NP2: 286 80 130

PVC	2 54 164	iPd	48 22 00	-1 6		
		iS	48 58.30			
DZM	6.84 189	iPd	49 15.10	0.0		
		iS	50 28.50			
HNR	9.45 307	eP	49 50.00	1.7		
SVO	9.73 308	eP	49 54.00	2.1		
VUN	10.78 106	eP	50 05.70	0.4		
SVA	10.80 107	eP	50 05.10	-0 4		
BRS	18.28 226	iPd-	51 34.90	1.0		
		iS	54 55.00			
PMG	20.77 284	eP	52 00.50	1.7		
RMQ	20.79 235	iPc	52 01.70	2.7		
CTA	20.86 254	iPc+	52 01.10	1.4		
	1.5s	1115.28nm		6.2mb		
		iS	55 40.00			
COO	20.94 221	iPd	52 02.70	2.2		
KRP	23.63 164	P	52 25.50	-0.6		
CMS	25 58 227	eP	52 44 00	-0 2		
		e	53 30.00			
		e	53 36 00			
CNB	25 78 216	iPd	52 46.60	0 6		
	0.6s	73 00nm		5.5mb		
		e	53 31 00			
CAN	25.99 216	eP	52 48 00	0.1		
QIS	27.10 255	iPc	52 57.20	-0.8		
		e	53 05.00			
STK	28.87 231	iPc	53 14.30	0.6		
	0.4s	116.00nm		5.9mb		
MSZ	29.29 179	eP	53 18.40	1.2		
		e	54 13.50			
TOO	29.58 217	iPc	53 20.10	0.1		
	1.0s	186.00nm		5.7mb		
BFD	31.12 221	iPc	53 33.20	-0.2		
		e	53 36.00			
WB5	31.95 257	iPc	53 38.90	-1.9		
		eS	58 20.70			
WRA	31.98 257	Pc	53 39.10	-1.9		
	0.4s	28.50nm		5.3mb		
ADE	32.48 228	iPc	53 45.60	0.4		
	0.5s	154.93nm		5.9mb		
TAU	32.55 208	iPc	53 45.50	-0.2		
ASPA	32.76 250	iPc	53 46.30	-1.4		
	0.6s	366.00nm		6.2mb		
		eS	58 42.60			
MTN	35.41 269	eP	54 10.00	-0.2		
	0.5s	93.00nm		5.6mb		
		e	59 27.00			
KNA	37.36 264	iPc	54 25.80	-0.8		
	0.4s	110.00nm		5.7mb		
FORR	39.25 240	eP	54 42.30	0.2		
WARB	39.63 247	iPc	54 34.80	-10.5X		
	0.3s	30.00nm				
PMO	42.93 96	iP	56 06.10	53.9X		
	1.0s	55.00nm				
VAH	43.16 96	iP	56 07.60	53.5X		
	1.0s	35.00nm				
TPT	43.20 96	iP	56 08.00	53.6X		
	1.0s	30.00nm				
RUV	43.40 96	iP	56 09.70	53.6X		
	1.0s	50.00nm				
COOL	45.11 242	iPc	56 28.30	58.8X		
MBL	45.59 255	iPc	55 33.20	-0.1		
MEKA	46.91 248	iPc	55 43.30	-0.4		
	0.5s	138.00nm		5.5mb		
KLB	48.09 241	iPc	55 51.20	-1.5		
NWAO	48.72 239	iPc	55 56.30	-1.2		
BAL	48.86 243	iPc	55 57.00	-1.6		
RKG	49.08 238	eP	56 00.00	-0.2		
	0.6s	77.00nm		5.3mb		
MRWA	49.34 245	iPc	56 01.30	-1.0		
	0.3s	19.00nm		5.0mb		
MUN	49.45 241	eP	56 02.00	-1.0		
KKM	55.11 289	ePd	56 44.50	-0.7		
KAKJ	57.39 334	P	56 59.20	-1.5		
CHJJ	57.77 333	P	57 02.20	-1.2		
IIDJ	57.78 331	P	57 02.30	-1.3		
TSRJ	58.74 330	P	57 09.30	-0.8		
MTMJ	58.74 332	P	57 08.80	-1.4		
NIIJ	58.76 333	P	57 09.30	-0.9		
YAMJ	59.12 335	eP	57 11.40	-1.2		
OFUJ	59.25 337	P	57 12.40	-1.1		
SBA	62.59 180	Pc	57 35.50	0.2		
WHN	68.53 312	eP	58 11.00	-2.7		
MDJ	68.90 332	Pd	58 15.50	-0.2		
		S	07 00.00			
SNY	69.83 326	Pc	58 21.20	-0.2		
		eS	07 05 00			
SNG	69 98 284	eP	58 23.20	0 3		
CN2	70.27 329	Pd	58 23.50	-0.5		
	3.0s	0.30nm		2.5mb X		
		epP	59 20 00	242kmX		
		sP	59 45.00			
		eS	07 16.00			
GYA	72.27 305	P	58 36.80	0.4		
		S	07 40.00			
BJI	72.88 321	eP	58 39.00	-0.5		
		eS	07 46.00			
		esS	08 24.00			
TIY	73.86 317	eP	58 46.80	1.4		
		pP	59 42.00	234kmX		
		PP	01 37.00			
		S	07 59.00			
XAN	74.28 313	P	58 48.00	0.2		
SPA	74.81 180	iPc	58 49 80	-0.7		
	1 0s	26.00nm		4.9mb		
		e	59 45.50			
CD2	76.58 308	eP	59 01.20	0.4		
BTO	77.03 319	eP	59 05 00	1.9		

S 08 34.00
LZH 78.91 312 eP 59 15.00 1.4
2.5s 79.00nm 5.0mb
MAW 81.48 202 eP 59 26.00 -0.3
TTA 82.97 16 eP 59 33.40 -0.7
GTA 83.26 314 Pc 59 36.60 0.5
PMR 83.92 19 eP 59 37.40 -1.3
1.4s 58.00nm 5.2mb
SHL 84.09 298 eP 59 40.00 -0.6
IMA 86.11 15 eP 59 49.10 -0.6
1.6s 60.50nm 5.2mb
GUN 89.92 299 P 00 10.00 1.2
PKI 90.22 298 P 00 09.40 -0.8
0.8s 13.00nm 4.9mb
KKN 90.39 299 P 00 10.40 -0.4
DMN 90.48 298 P 00 11.20 -0.1
0.7s 12.00nm 4.9mb
GKN 91.00 299 P 00 12.60 -0.9
0.7s 9.00nm 4.8mb
ALQ 95.37 55 eP 01 31.50 57.9X
1.1s 6.01nm
e 01 35.00
GOL 97.38 51 P 01 39.80 57.2X
0.9s 7.58nm
GLD 97.50 51 P 01 41.20 58.2X
YKA 97.90 27 eP 00 44.40 0.4
SUF 125.46 339 iPKP 06 07.40 -1.0
0.5s 4.40nm
BUL 126.46 230 iPKPd 06 10.10 -1.7
0.9s 8.82nm
PPD 126.82 133 e(PKP)07 25.00 72.7X
NUR 127.49 338 ePKP 06 12.00 -0.3
BMA 131.12 140 e(PKP)06 17.00 -3.5X
NAO 131.51 345 PKP 06 18.60 -1.4
0.7s 1.30nm
BRG 138.63 335 e(PKP)06 34.00 0.3
1.2s 11.00nm
CLL 138.67 336 e(PKP)07 38.00 64.2X
KHC 140.11 333 PKP 06 35.80 -0.7
e 07 39.50
SOB1 142.75 129 ePKP 06 35.10 -7.1X
OGA 142.94 333 iPKPd 06 39.90 -1.9
ITR 144.87 131 ePKP 06 43.60 -2.1
epPKP 07 47.70
FLN 145.20 346 iPKPc 06 45.20 -0.1
0.6s 11.70nm
LDF 145.27 346 iPKPc 06 45.60 0.2
0.6s 7.20nm
LOR 145.35 340 iPKPc 06 45.90 0.3
0.6s 8.10nm
LBF 145.57 340 iPKPc 06 47.30 1.3
0.6s 9.45nm
GRR 145.64 346 iPKPc 06 46.90 0.9
0.6s 10.80nm
SSF 145.65 341 iPKPc 06 46.90 0.8
0.5s 16.40nm
LSD 145.69 335 PKP 06 46.21 -0.4
LPG 145.82 336 iPKPc 06 48.00 1.2
0.6s 9.90nm
SMF 145.91 340 iPKPc 06 47.70 1.2
1.0s 18.00nm
AVF 145.94 341 iPKPc 06 47.50 0.9
0.8s 9.40nm
LPF 146.02 346 iPKPc 06 47.70 1.1
0.5s 12.40nm
FIN 146.25 333 PKP 06 47.64 0.4
RRL 146.28 335 PKP 06 48.05 0.5
BGF 146.31 341 iPKPc 06 48.80 1.6
0.6s 18.05nm
ROB 146.33 333 PKP 06 46.82 -0.6
PZZ 146.49 334 PKP 06 50.21 2.5
STV 146.61 334 PKP 06 50.00 2.2
IMI 146.63 333 PKP 06 47.54 -0.3
MAF 146.69 341 iPKPc 06 49.90 2.1
0.6s 5.40nm
TCF 146.75 341 iPKPc 06 50.00 2.1
0.6s 4.95nm
LSF 146.99 342 iPKPc 06 50.50 2.2
0.6s 18.05nm
MFF 147.13 344 iPKPc 06 50.80 2.3
0.5s 13.10nm
BNG 147.69 254 iPKPc 06 49.20 -1.2
0.5s 86.00nm
ic 06 53.00
ic 07 59.00
ic 08 21.00
LPO 148.50 341 iPKPc 06 54.80 4.0X

0.6s 3.60nm
KIC 168.36 221 PKP 08 24.64 70.3X
LIC 168.43 220 PKP 08 24.96 70.5X
TIC 168.75 221 PKP 08 26.44 71.8X
S.D. = 1.2 on 102 of 119 obs.

& JUN 12, 1989 05h 50m 42.62s
63.060 N 150.993 W
DEPTH = 121.6km
CENTRAL ALASKA (1)
<AGS-P>.

KTH 0.50 4 iP 51 00.81 -0.3
S 51 14.74
SKT 1.11 193 iP 51 05.16 -1.1
S 51 22.38
MCK 1.15 53 eP 51 06.53 -0.1
S 51 24.39
PWA 1.51 159 eP 51 10.23 -0.3
SUA 1.61 176 eP 51 11.35 -0.6
GHO 1.61 142 eP 51 11.38 -0.6
S 51 34.47
PME 1.70 147 eP 51 11.83 -1.1
WRH 1.92 41 eP 51 15.05 -0.5
SPU 1.95 195 eP 51 14.80 -1.2
KNK 2.04 143 eP 51 16.02 -1.1
CCB 2.13 40 eP 51 17.49 -0.7
11 obs. associated

& JUN 12, 1989 06h 34m 11.70s
63.391 N 149.818 W
DEPTH = 104.3km
CENTRAL ALASKA (1)
<AGS-P>.

KTH 0.52 289 iP 34 28.43 0.0
MCK 0.52 49 iP 34 28.29 -0.1
NEA 1.24 15 iP 34 34.89 -0.5
WRH 1.33 34 iP 34 36.07 -0.4
CCB 1.54 34 iP 34 38.52 -0.5
RDS 1.62 26 iP 34 39.68 -0.4
SKT 1.62 210 iP 34 38.80 -1.3
HDA 1.63 50 iP 34 39.46 -0.7
S 35 02.06
GHO 1.68 165 eP 34 40.17 -0.7
PWA 1.75 181 iPc 34 41.40 -0.2
FBA 1.76 29 iPd 34 41.40 -0.4
PME 1.81 168 eP 34 41.89 -0.5
PMR 1.83 170 eP 34 42.00 -0.7
GLM 1.92 32 iP 34 43.37 -0.6
SUA 1.98 193 eP 34 43.88 -0.9
PAX 2.02 100 eP 34 44.77 -0.5
KNK 2.08 162 eP 34 45.21 -0.9
TOA 2.12 126 iPc 34 45.70 -0.8
CRP 2.39 208 eP 34 48.92 -1.4
SPU 2.45 206 eP 34 49.87 -1.1
VZW 2.80 145 eP 34 53.41 -2.2
TTA 2.85 263 eP 34 55.10 -1.2
IMA 3.16 330 ePc 34 59.70 -0.9
SEW 3.30 177 eP 35 00.70 -1.7
SVW 3.55 232 eP 35 04.20 -1.6
DWY 4.67 77 P 35 19.50 -1.5
INK 8.29 46 eP 36 09.00 -1.6
27 obs associated

% JUN 12, 1989 08h 13m 36.30± 3.09s
11.006 N ±17.6km 61.671 W ±17.8km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)

TCE 0.32 195 eP 13 43.19 0.3
eS 13 53.84
TRN 0.44 144 eP 13 46.24 0.9
eS 13 58.53
TPP 0.72 162 eP 13 49.69 -0.7
eS 14 02.80
TBH 0.79 131 eP 13 50.94 -0.7
eS 14 09.28
BOT 0.95 80 eP 13 54.54 0.2
eS 14 16.81
S.D. = 1.0 on 5 of 5 obs.

? JUN 12, 1989 08h 57m 48.79± 5.47s
23.504 S ±55.5km 66.626 W ±29.7km
DEPTH = 237.0 ± 36.5 km
4.2mb (1 obs.)
JUJUY PROVINCE, ARGENTINA (128)

CCH 6.11 4 P 59 18.70 -0.3
CNCB 6.78 349 iPd 59 28.10 0.3
S 00 48.00
LPB 7.07 348 P 59 32.00 0.6
0.8s 52.24nm 4.7mb X
ZOBO 7.33 349 P 59 34.00 -0.8
PPD 14.20 87 eP 01 02.00 0.9
i 01 02.90
BAO 19.21 69 eP 01 57.10 -0.1
BMA 20.69 92 eP 02 10.60 -1.1
UYO 63.16 334 eP 07 52.50 -1.1
ALQ 69.33 326 iPc 08 33.00 0.3
0.7s 3.42nm 4.2mb
LRM 80.57 329 eP 09 36.90 0.7
ORV 80.98 320 eP 09 38.40 0.2
WDC 82.25 320 ePd 09 43.10 -1.6
YKA 93.78 340 eP 10 41.40 2.1
S.D. = 1.2 on 13 of 13 obs.

% JUN 12, 1989 12h 09m 55.41± 1.52s
60.553 N ± 7.8km 5.206 E ±16.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.5 (BER).

ASK 0.07 185 iPg+ 09 57.61 -0.1
eSg 09 59.52
BER 0.18 160 iPg+ 09 59.64 0.2
eSg 10 04.21
HYA 0.78 38 iP 10 10.58 0.0
eS 10 22.31
ODD1 0.96 132 eP 10 13.24 -0.4
eS 10 28.65
KMY 1.35 179 iP 10 20.05 -0.1
eS 10 35.87
BLS1 1.42 144 eP 10 21.89 0.5
eS 10 41.88
NRA0 3.13 84 iPg 10 51.40 5.8X
eS 11 24.90
iSg 11 34.20
S.D. = 0.4 on 6 of 7 obs.

JUN 12, 1989 12h 12m 08.90± 1.07s
19.388 N ± 4.9km 145.447 E ± 6.4km
DEPTH = 150.0 ± 10.4 km
4.9mb (14 obs.)
MARIANA ISLANDS (216)

PJG 5.79 186 eP 13 35.30 1.5
GUA 5.84 185 eP 13 34.60 0.2
0.6s 106.67nm 5.2mb
eS 14 43.20
KAKJ 17.38 346 P 16 02.80 -0.9
CHJJ 17.54 342 P 16 04.00 -1.7
TSRJ 18.13 334 P 16 12.90 0.7
NIIJ 18.66 344 P 16 17.60 -0.3
BJI 32.47 316 (P) 18 26.50 -0.5
GYA 36.30 288 P 19 00.80 0.9
BTO 36.91 313 eP 19 04.70 -0.1
CTA 39.24 179 eP 19 23.00 -1.3
WB5 40.51 196 iPd 19 34.00 -0.7
e 21 32.90
WRA 40.58 196 Pd 19 34.50 -0.8
0.6s 20.70nm 5.0mb
CHG 43.84 277 eP 20 03.10 1.1
ASPA 44.25 195 ePd 20 04.00 -1.2
0.5s 16.00nm 4.9mb
KGM 44.67 252 eP 20 10.50 1.9
SNG 45.15 261 eP 20 14.10 1.7
IPM 45.71 257 ePd 20 18.80 1.9
0.9s 49.20nm 5.1mb
DZM 46.04 152 iPc 20 18.60 -0.7
MBL 47.46 213 eP 20 30.10 -0.4
0.4s 10.00nm 4.8mb
PSI 48.38 256 iPd 20 38.70 1.0
0.8s 10.00nm 4.6mb
e 22 30.00
WARB 48.84 203 eP 20 30.10 -11.0X
0.4s 23.00nm
FORR 52.66 199 eP 21 08.30 -1.4
0.4s 20.00nm 5.3mb
MEKA 52.66 211 eP 21 08.30 -1.6
WMQ 53.68 311 P 21 17.40 0.1
PKI 55.22 291 P 21 28.30 -0.8
0.5s 5.00nm 4.6mb
KKN 55.31 291 P 21 30.20 0.6
GKN 55.86 291 P 21 31.60 -1.9

12d 12h

0.5s 10 00nm 5.0mb
MRWA 56.06 211 eP 21 33.00 -1.5
PMR 61.47 30 P 22 10.00 -1.5
0.9s 8.33nm 4.7mb
FBA 62.78 26 P 22 21.00 0.9
INK 68.84 23 eP 22 58.00 -0.5
MBC 72.55 14 ePd 23 20.10 -0.6
0.5s 3.00nm 4.3mb
YKA 77.49 28 eP 23 49.20 0 2
YKC 77.56 28 eP 23 48.80 -0.5
FHC 78.01 51 e(P) 23 53.70 1.3
PNT 78.68 42 eP 23 56.00 0.2
WDC 79.13 51 ePd 23 58.80 0.4
MIN 79.88 51 eP 24 02.20 -0.4
DPW 80.00 43 P 24 03.20 0.2
BRK 80.11 53 ePd 24 03.90 0.3
ORV 80.19 52 ePd 24 04.30 0.2
CMB 81.47 53 ePd 24 11.40 0.5
PRI 81.84 55 e(P)d 24 16.10 3.2X
FRI 82.31 54 ePd 24 15.40 0.3
KVN 82.85 51 P 24 18.80 0.6
LRM 84.41 43 eP 24 26.10 0.1
PLM 85.71 56 P 24 50.00 17.4X
FFC 86.64 32 eP 24 36.00 -0.5
0.9s 16.00nm 4.9mb
PV09 89.56 49 P 24 51.00 -0.2
PV10 89.68 49 P 24 51.60 0.0
GOL 91.68 47 P 25 01.50 0.7
0.8s 8.33nm 4.9mb
GLD 91.76 47 P 25 02.50 1.4
NAO 92.13 340 P 25 00.10 -2.1
0.7s 1.30nm 4.2mb
ALQ 93.02 51 P 25 07.50 0.5
ZOBO 147.92 90 PKP 31 36.00 -0.1
CNCB 148.15 91 PKP 31 38.00 1.6
i 31 40.80
CCH 149.98 91 (PKP) 31 40.00 1.1
S.D. = 1.0 on 54 of 57 obs.

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* JUN 12, 1989 12h 26m 15.28± 2.23s
6.629 S ±14.9km 147.924 E ±17.9km
DEPTH = 46.1 ± 15.8 km
4.2mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT 0.92 268 eP 26 29.50 -2.5
LMG 2.28 174 eP 26 51.00 -0.3
PMG 2.87 195 eP 27 00.50 0.9
eS 27 44.00
MNDI 4.27 276 eP 27 21.00 1.4
JAY 8.27 299 ePc 28 17.00 1.4
CTA 13.48 187 eP 29 31.00 4.9X
WB5 18.62 224 eP 30 30.70 -0.8
WRA 18.68 224 P 30 34.00 1.7
0.7s 3.50nm 3.7mb
RMQ 19.77 178 eP 30 45.00 0.5
e 30 49.00
KNA 20.85 243 eP 30 54.40 -1.3
BRS 21.16 168 iPd 30 58.70 -0.2
ASPA 21.65 217 iPc 31 03.40 -0.4
WARB 28.10 224 eP 31 54 00 -11.0X
SPA 83.42 180 e(P) 38 39.70 0.7
0.6s 5 69nm 4.8mb
ZOBO 137.69 123 ePKP 45 37.00 -1.0
BAO 152.84 145 e(PKP)45 51 00 -11.5X
S D. = 1 4 on 13 of 16 obs

JUN 12, 1989 13h 11m 51 57± 1 02s
30.169 S ± 9.2km 178.918 W ± 7.4km
DEPTH = 82.1 ± 8.7 km
5.6mb (15 obs)
KERMADEC ISLANDS (178)

RAO 1.26 44 iP 12 32.60 18.4X
eS 12 55.70
MNG 11.38 202 eP 14 32.10 -0.8
VUN 12.34 348 ePc 14 55.20 9.5X
DZM 15.41 298 iPc 15 37.10 11.4X
MSZ 17.82 212 P 15 56.00 0.6
e 16 20 10
e 18 56.80
BRS 24.94 269 iPc 17 13.00 4.3X
COO 25.16 262 eP 17 15 00 4.3X
CNB 27.10 251 iPc 17 32 00 3 4X
e 20 45 70
CAN 27.40 251 eP 17 34.50 3.3X
HNR 28 55 312 eP 17 40 00 -1 7

RMQ 28.64 269 iPd 17 46.10 3.6X
0.8s 77 00nm 5.4mb
i 20 51.40
VSG 28.84 312 e(P) 17 40.00 -4.3X
CMS 30.23 258 iPd 17 58.70 2.2
1.0s 127.00nm 5.6mb
TOO 30.33 246 ePc 17 59.40 2.0
e 20 53.00
CTA 32.98 280 iPd 18 22.90 2.2
0.9s 262.18nm 6.1mb
i 19 21.00
i(PcP) 21 01.20
STK 33.76 257 eP 18 30.00 2.6
0.9s 185.00nm 6.0mb
ADE 35.83 251 iPc 18 47.10 2.0
0.9s 30.25nm 5.2mb
QIS 38.50 274 iPd 19 08.70 1.1
0.4s 25.00nm 5.5mb
i 21 17.20
LAT 39.64 299 eP 19 18.50 1.5
ASPA 42.33 267 iPd 19 39.10 0.0
0.6s 108.00nm 5.9mb
WRA 43.29 272 Pc 19 47.30 0.4
0.8s 121.50nm 5.8mb
WB5 43.29 272 iPd 19 47.00 0.0
FORR 45.29 255 iPc 20 02.10 -0.7
0.5s 83.00nm 5.8mb
JAY 47.09 298 ePd 20 17.00 -0.2
WARB 47.78 261 eP 20 10.00 -12.6X
0.4s 7.00nm
SBA 48.21 184 Pd 20 27.60 2.5
MTN 49.16 279 eP 20 32.00 -1.3
0.7s 42.00nm 5.6mb
i 21 53.90
KNA 49.86 275 eP 20 38.90 0.3
MBL 55.37 264 iPc 21 17.10 -2.5
MRWA 55.82 253 eP 21 20.30 -2.4
SPA 60.00 180 iPd 21 52.00 0.3
0.9s 153.64nm 6.1mb
e 22 35.90
MAW 72.24 201 eP 23 06.00 -3.3X
MTMJ 77.83 326 P 23 40.40 -1.2
SNA 79.78 179 iPd 23 52.20 0.7
0.9s 151.26nm 5.9mb
KGM 80.45 278 eP 23 55.00 -1.1
ADK 81.72 1 P 24 01.40 -0.4
IPM 83.72 279 ePd 24 10.50 -2.6
0.5s 18.90nm 5.3mb
QIZ 84.18 296 P 24 16.40 1.2
PRS 85.39 43 eP 24 21.70 0.7
NJ2 85.49 311 Pc 24 20.00 -1.5
GCC 85.50 42 eP 24 22.10 0.7
PCC 85.60 42 ePd 24 22.20 0.3
SAO 85.64 43 eP 24 22.40 0.2
MHC 85.92 42 eP 24 24.20 0.5
BRK 85.93 42 eP 24 24.20 0.7
PLM 86.21 48 eP 24 26.00 0.7
RVR 86.30 47 eP 24 26.00 0.5
ISA 86.70 45 eP 24 28.00 0.5
FRI 86.83 44 ePd 24 28.30 0.4
CM8 87.12 42 ePd 24 29.70 0.2
GLA 87.34 49 eP 24 32.00 1.4
GSC 87.50 46 eP 24 31.00 -0.4
ORV 87.51 41 e(P) 24 31.30 0.1
WHN 87.58 308 eP 24 31.50 -0.2
WDC 87.64 39 ePd 24 32.20 0.4
MDJ 87 99 326 eP 24 33.70 0.4
MIN 87.99 40 e(P) 24 33.70 0.0
KVN 89.14 43 P 24 39.00 -0.3
TIA 89.23 313 eP 24 39.20 -0.3
CN2 89.48 323 iPc 24 40.50 0.0
GYA 90.75 300 P 24 46.20 -0.7
TIY 93.12 312 eP 24 57.50 0.0
XAN 93.34 308 P 24 58.50 -0.1
ALQ 94.05 52 P 25 02.00 0.0
1.0s 3.00nm 4.7mb
PV09 94.31 48 P 25 03.20 -0.1
DPW 94.85 36 P 25 04.50 -0.7
GOL 97.40 48 P 25 20.50 3.3X
FBA 97.82 13 P 25 19.00 0.8
0.9s 6.67nm 5.2mb
GUN 107.60 292 PKP 30 07.30 -4.0X
PKI 107.83 292 PKP 30 09.10 -2.6
0.6s 7 00nm
KKN 108.03 292 PKP 30 08.80 -3.1X
0.7s 8.00nm
DMN 108.09 292 PKP 30 08.60 -3.5X

GKN 108.63 292 PKP 30 09.20 -3 8X
BUL 123.39 211 iPKPc 30 38.50 -2 8
1.0s 29.00nm
SOB1 123.79 127 ePKP 30 39.80 -2.3
ITR 125.79 129 ePKP 30 44.90 -1.1
MAIO 131.39 293 ePKP 30 53.00 -3.2X
KEV 137.72 347 ePKP 31 04.00 -3.0X
BHD 143.23 286 ePKPd 31 14.00 -3.9X
SUF 143.63 341 iPKP 31 12 30 -5.4X
0.8s 65.00nm
MSL 144.50 291 ePKPd 31 17.50 -2.5
NUR 145.B2 339 iPKP 31 19.60 -1.9
0.7s 61.40nm
UPP 148.28 344 iPKP 31 23.50 -1.9
i 31 26.20
i 31 30.70
NAO 148.66 351 PKP 31 23.80 -2.3
0.7s 40.70nm
BNG 149.55 216 iPKPc 31 27.00 -1.9
0.9s 180.00nm
id 31 31.70
ic 31 46.50
ic 32 37.00
KVT 149.75 301 iPKP 31 31.80 3.4X
QUTJ 150.03 281 PKP 31 32.80 3.6X
JARJ 150.18 283 PKP 31 33.30 3.9X
MASJ 150.33 282 PKP 31 33.70 4.1X
MKRJ 150.37 282 PKP 31 33.30 3.6X
KFNJ 150.37 282 PKPc 31 33.60 4.1X
SALJ 150.38 283 PKPd 31 33.60 3.9X
HRI 150.44 285 e(PKP)31 23.00 -6.8X
PRNI 150.77 279 ePKP 31 28.00 -2.2
MBH 150.78 278 iPKPc 31 28.50 -1.7
BBTK 152.44 299 iPKPd-31 38.50 6.0X
COP 153.25 346 iPKPc 31 39.60 6.7X
0.7s 46.58nm
ipP 31 52.10
PPE 153.87 315 ePKPc 31 55.00 20.8X
CFR 154.01 313 ePKPd 31 41.00 6 7X
BRD 154.55 314 ePKPc 31 30.00 -5.1X
VRI 154.58 315 ePKPc 31 42.50 7.4X
EKA 154.67 6 PKPc 31 42.20 7.3X
0.7s 2.60nm
MLR 155.25 315 ePKPc 31 43.50 7.3X
LIC 155.50 165 PKP 31 36.04 -1.2
KRA 155.58 330 ePKP 31 35.00 -1.3
e 32 02.10
KIC 155.69 166 PKP 31 36.42 -1.2
TIC 155.91 165 PKP 31 36.72 -1.2
BRN 156.04 342 ePKPd 31 54.00 17.2X
SPC 156.07 328 ePKP 31 36.20 -1.1
KSP 156.42 335 ePKP 31 36.00 -1.5
e 31 48.00
CLL 157.09 341 ePKP 31 36.00 -2.3
1.2s 47.00nm
i 31 48.30
i 32 08.00
BRG 157.19 339 ePKP 31 37.50 -0.9
1.2s 13.00nm
i 32 09.00
PRU 157.75 337 ePKPd 31 49.00 9.9X
e 32 12.00
ZST 158.21 330 ePKP 31 37.30 -2.4
e 32 13.70
KHC 158.81 337 PKPd 31 39.80 -0.6
e 32 16 50
S.D = 1.4 on 77 of 115 obs.

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* JUN 12, 1989 14h 12m 48.67± 1.08s
50.383 N ± 5.9km 6.059 E ±10.9km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.1 (UCC).

MEM 0.23 352 iPc 12 53.57 0 0
i 15 41.90
ENN 0.39 347 iPgc 12 56.80 0.1
0.5s 14.00nm
iSg 13 02.50
WLF 0.72 175 iP 13 02.80 0.0
DOU 0.98 254 iP 13 07.60 0.3
iS 13 19.80
SNF 1.14 277 iPd 13 09 75 -0.3
S.D. = 0 3 on 5 of 5 obs.

? JUN 12, 1989 14h 51m 23 43± 5.07s
44.665 N ±28.0km 8.131 E ±23.4km

DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

ROB	0.41	207	P	51 31.94	0.0
			S	51 37.94	
FIN	0.46	173	P	51 32.67	-0.1
			S	51 39.03	
ENR	0.67	230	P	51 36.69	-0.1
			S	51 45.93	
STV	0.71	234	P	51 37.49	-0.1
			S	51 46.82	
PZZ	0.75	258	P	51 38.31	0.0
			S	51 48.46	
IMI	0.77	193	P	51 38.77	0.2
			S	51 48.93	

S.D. = 0.1 on 6 of 6 obs.

JUN 12, 1989 14h 57m 43.30± 0.78s
41.518 N ± 6.3km 20.771 E ± 7.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.4 (SKO).

PHP	0.30	305	iPgd	57 49.40	-0.2
OHR	0.41	177	iPg	57 52.00	0.4
			iSg	58 07.00	
KKS	0.62	334	ePg	57 51.00	-4.7X
SKO	0.68	48	iPg	57 56.80	0.1
			i	58 39.00	
			iSg	58 40.70	
TIR	0.70	256	ePn	58 01.70	4.6X
PUK	0.84	309	ePg	57 58.80	-0.7
BCI	1.00	328	ePg	57 55.00	-7.2X
BERA	1.02	218	ePn	58 06.30	3.7X
SDA	1.07	298	ePn	58 04.40	0.9
LSK	1.37	185	ePn	58 08.00	-0.5
VOY	6.72	314	ePg	59 42.80	18.3X
			e	59 46.50	

S.D. = 0.8 on 6 of 11 obs.

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* JUN 12, 1989 16h 36m 59.33± 1.02s
31.689 S ±10.4km 66.857 W ±14.2km
DEPTH = 144.2 ± 17.8 km
LA RIOJA PROVINCE, ARGENTINA (138)

ZON	1.56	275	iPc	37 29.10	-0.4
FCH	3.33	240	iPc	37 52.60	0.9
PEL	3.55	245	iP	38 22.50	28.3X
PCH	3.64	237	iPd	37 56.70	1.3
SAN	3.66	240	ePc	37 56.00	0.3
ROCH	3.74	249	iPc	37 56.40	-0.6
			iS	38 40.50	
CHCH	3.90	234	eP	37 59.30	0.4
TACH	3.96	239	iPd	37 59.60	0.0
LCCH	4.36	245	iPc	38 03.80	-1.1
			iS	38 38.20	
LNV	4.45	238	iP	38 04.70	-1.4
ANT	8.55	338	e(P)	39 03.50	2.2
CCH	14.26	3	P	40 25.90	9.8X
CNCB	14.85	356	P	40 23.00	-0.8
LPB	15.13	355	eP	40 14.00	-13.2X
ZOBO	15.39	355	eP	40 29.00	-1.7
PPD	16.86	59	eP	40 49.10	1.0
BAO	23.48	51	eP	41 56.00	-1.0
SOB1	32.88	53	eP	43 21 60	0 0
UYO	70.48	336	iPd	48 00 90	1 0

S.D. = 1.2 on 16 of 19 obs.

% JUN 12, 1989 16h 40m 41.85± 0.60s
39.647 N ± 5.3km 27.807 E ± 5.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.64	94	iPg	40 53.90	-0.7
			iSg	41 02.90	
EDC	0.70	4	iPg	40 55.60	-0.1
			iSg	41 05.60	
BNT	0.71	7	iPg	40 56.70	0.8
			iSg	41 06.50	
EZN	1.16	279	iPn	41 03.50	0.1
IZM	1.32	199	iPn	41 05.60	-0.6
CTT	1.57	17	ePn	41 10.30	0.5
ISK	1.71	34	ePn	41 10.00	-1 8
HRT	1.85	50	ePn	41 14.00	0.1
KHL	1.88	134	iPn	41 15.40	1 0
ALT	1.88	108	ePn	41 14.80	0 4
GPA	2.03	71	ePn	41 16.80	0.3

S.D. = 0.9 on 11 of 11 obs

& JUN 12, 1989 16h 57m 18.40s
34.030 N 118.180 W
DEPTH = 16.0km
4.3mb (7 obs.)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 4.4 (PAS), 4.5 (BRK). Slight damage (VI) at Bell Gardens and in the downtown Los Angeles area. Felt (V) at Acton, Arcadia, Bell, Bellflower, Burbonk, Commerce, Compton, Covina, Downey, Duarte, El Sereno, Gardena, Glendora, Harbor City, Hawthorne, Highland Park, Inglewood, Lakewood, Long Beach, Los Nietos, Lynwood, Montebello, Mount Wilson, Norwalk, Pasadena, Sierra Madre, South Gate and Whittier. Felt in Los Angeles, Orange, Riverside, San Bernardino and Venturo Counties.

MWC	0.22	28	iPd	57 23.70	0.0
CIS	0.65	197	iPd	57 30.30	-0.6
RVR	0.67	93	iPd	57 30.40	-0.8
PEC	0.86	99	iPd	57 33.70	-0.8
SCI	1.09	196	iPd	57 37.10	-1.3
ABL	1.19	314	e(P)	57 40.00	-0.3
PLM	1.29	121	iPc	57 40.20	-1.7
CPE	1.46	141	ePd	57 42.00	-2.1
SYP	1.57	289	ePc	57 44.90	-0.9
GSC	1.70	41	iPc	57 47.60	-0.1
BAR	1.85	136	ePd	57 47.70	-2.0
BCH	1.95	307	ePc	57 51.00	-0.3
PHAM	2.56	315	eP	57 59.00	-1.0
PKEM	2.57	323	eP	57 59.60	-0.5
PRI	2.93	317	ePc	58 04.00	-1.3
GLA	2.97	108	eP	58 04.30	-1.4
FRI	3.21	338	ePc	58 08.00	-1.1
			i(S)	59 01.70	
LLA	3.43	320	ePc	58 10.60	-1.7
PRS	3.48	312	ePc	58 10.60	-2.3
SAO	3.82	317	ePc	58 15.50	-2.3
			i	58 16.30	
TNP	4.12	11	eP	58 22.50	0.3
ARN	4.29	321	eP	58 23.20	-1.3
GCC	4.32	315	eP	58 22.00	-2.9
MHC	4.34	321	iPc	58 24.25	-1.1
			eS	59 12.05	
			iSg	59 23.80	
CMB	4.38	337	eP	58 24.80	-1.0
			e	59 17.00	
			eS	59 20.00	
PCC	4.86	317	eP	58 29.70	-2.9
KVN	5.01	1	eP	58 34.90	0.0
BKS	5.05	321	eP	58 34.40	-0.9
			eS	59 30.50	
BRK	5.07	320	ePc	58 34.60	-0.8
ZSP	5.12	321	eP	58 35.40	-0.7
ORV	6.12	335	ePc	58 49.60	-0.8
MSU	6.60	46	iP	58 57.40	0.1
DAU	8 43	39	eP	59 25.00	2 0
ALQ	9.72	81	e(P)	59 40.50	-0 2
			eLg	03 25.00	
LRM	12.57	19	eP	00 25.10	5.6
PNT	15.31	356	eP	00 57.00	1.7
MEO	16.19	82	eP	01 09.10	2.3
SES	17.17	16	eP	01 19.00	-0.1
SIO	18.03	78	eP	01 30.60	0.8
TUL	18.44	78	eP	01 35.00	0.1
	1.0s		9.70nm		3.9mb
Z	22s		0.44um		4.8Msz
			LR	08 00.00	
LNO	18.44	78	eP	01 33.90	-0.9
VVO	18.50	80	eP	01 35.90	0.3
EDM	19.49	9	eP	01 45.20	-2.4
UYO	19.64	83	eP	01 46.50	-2.8
FFC	23.60	24	eP	02 23.00	-6.0
	0.9s		20.00nm		4.7mb
RSON	24.51	39	P	02 36 40	-1.5
	0 7s		9 48nm		4.5mb
INK	35.42	350	eP	04 15 00	-0.2
TTA	37.31	332	eP	04 29.90	-1.3
IMA	38 34	338	eP	04 40.00	0 1
	1.0s		4.00nm		4 1mb
MBC	42.30	360	ePc	05 12.80	0 5
	0.8s		12.00nm		4.7mb
FRB	42.43	30	eP	05 13.00	-0.5
NAO	76.74	23	P	09 09.20	-1.0
	0.8s		1.00nm		3.9mb
HFS	78.18	22	eP	09 16.20	-2.0
	0.5s		1.20nm		4 2mb
ITR	86.46	103	e(P)	10 02.00	0.2
MAW	146.38	181	ePKP	16 58.00	0.3
	55 obs. associated				

& JUN 12, 1989 17h 22m 25.50s
34.020 N 118.180 W
DEPTH = 16.0km
4.2mb (5 obs.)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 4.1 (PAS), 3.9 (BRK). Felt in the Los Angeles area.

MWC	0.23	26	iPd	22 30.70	-0.3
CIS	0.64	197	iPd	22 37.30	-0.6
RVR	0.67	92	eP	22 37.40	-0.9
PEC	0.86	98	iPd	22 40.60	-1.0
SCI	1.08	197	iPd	22 44.00	-1.4
ABL	1.19	314	eP	22 46.60	-0.9
PLM	1.28	121	ePc	22 47.20	-1.7
CPE	1.45	141	eP	22 48.60	-2.5
GSC	1.71	41	ePc	22 54.40	-0.5
BAR	1.84	136	ePd	22 54.70	-2.0
BLP	1.92	287	eP	22 56.30	-1.5
BCH	1.95	307	eP	22 57.80	-0.6
PHAM	2.57	315	eP	23 06.20	-1.0
PKEM	2.58	323	eP	23 07.40	0.1
PRI	2.94	317	ePd	23 11.60	-0.9
GLA	2.96	108	eP	23 12.10	-0.6
FRI	3.22	338	ePd	23 15.40	-0.9
LLA	3.44	320	eP	23 17.90	-1.6
PRS	3.49	312	ePd	23 17.90	-2.2
SAO	3.82	317	iPc	23 23.00	-2.0
TNP	4.13	11	eP	23 29.20	-0.2
ARN	4.30	322	eP	23 30.20	-1.5
GCC	4.33	315	eP	23 29.00	-3.1
MHC	4.35	321	ePd	23 30.40	-2.1
			e	24 09.20	
CMB	4.39	337	ePd	23 32.00	-1.0
			eS	24 31.50	
KVN	5.02	1	eP	23 42.20	0.1
BKS	5.06	321	eP	23 41.20	-1.3
BRK	5.07	320	e(P)	23 41.50	-1.1
ZSP	5.12	321	eP	23 41.80	-1.6
ORV	6.13	335	e(P)	23 56.50	-1.1
MSU	6.61	46	iP	24 04.70	0.2
ALQ	9.72	81	e(P)	24 53.00	5.1
			e	25 39.70	
			eLg	28 32.00	
LRM	12.58	19	eP	25 39.30	12.6
PNT	15.32	356	eP	26 05.00	2.5
SES	17.18	16	eP	26 27.00	0.7
EDM	19.50	9	eP	26 55.50	0.7
UYO	19.64	83	eP	26 53.00	-3.4
FFC	23.61	24	eP	27 35.00	-1.2
	0.7s		6.00nm		4.3mb
PMR	33 93	334	eP	29 09 00	-0 6
	0.6s		2.22nm		4 3mb
TTA	37.31	332	eP	29 37.50	-0.9
	0.6s		2.46nm		4.2mb
IMA	38.34	338	eP	29 46.60	-0.5
	1.8s		1.72nm		3 5mb
MBC	42.31	360	eP	30 20.00	0.5
	1.0s		7.00nm		4.3mb
FRB	42.44	30	eP	30 20.00	-0.6
	43 obs. associated				

JUN 12, 1989 18h 21m 03.30± 0.20s
22.554 S ± 6.6km 175.826 W ± 4.2km
DEPTH = 70.5km (7 depth phases)
5.5mb (32 obs.)
TONGA ISLANDS REGION (174)
CENTROID, MOMENT TENSOR (HRV)
Dotо Used. GDSN
L.P B.: 15S, 28C
Centroid Locotion:
Origin Time 18:21: 7 7 0 5
Lot 22 48S 0.06 Lon 175.88W 0 06

12d 18h

Dep 67.7 5 7 Half-duration 1 8
Moment Tensor, Scale 10**17 Nm
Mrr= 0.52 0.04 Mtt=-0.23 0.07
Mff=-0.29 0.07 Mrt= 0.03 0.05
Mrf=-1.15 0.06 Mtf= 0.38 0.05
Principal Axes:
T Val= 1 36 Plg=53 Azm=102
N -0.15 16 349
P -1.22 32 248
Best Double Couple:Mo=1.3*10**17
NP1:Strike=295 Dip=20 Slip= 35
NP2: 172 79 107

SVA	6.95	308	iPd	22 47.00	2.4
VUN	7.01	309	ePd	22 47.70	2.2
AFI	9.42	25	eP	23 10.00	-8.7X
			eS	25 20.00	
PVC	15.64	285	iPc	24 45.50	4.6X
DZM	16.42	268	iPc	24 54.90	4.1X
TBI	24.28	97	iP	26 16.20	1.0
	1.2s	385.00nm		5.7mb	
AFR	24.96	83	iP	26 20.70	-1.0
	1.0s	195.00nm		5.5mb	
PAE	25.11	84	iP	26 22.00	-1.1
	1 0s	120.00nm		5.3mb	
PPT	25.14	83	iP	26 22.40	-1.0
	1.0s	250.00nm		5.6mb	
Z	18s	1.00um		4.4Msz	
PPN	25.28	83	iP	26 23.60	-1.1
	1.0s	105.00nm		5.3mb	
TVO	25.38	84	iP	26 24.70	-1.0
	1.0s	205.00nm		5.6mb	
MSZ	25.79	207	P	26 30.70	1.5
HNR	26.64	295	eP	26 40.00	2.7
SVO	26.90	296	eP	26 48.00	8.3X
VSG	26.93	296	eP	26 39.00	-1.0
PMO	27.45	79	iP	26 43.20	-1.5
	1.0s	40.00nm		5.0mb	
VAH	27.62	80	iP	26 44.00	-2.2
	1.0s	25.00nm		4.8mb	
TPT	27.71	79	iP	26 45.10	-1.9
	1.0s	40.00nm		5.0mb	
RUV	27.86	80	iP	26 46.20	-2.2
	1.0s	40.00nm		5.0mb	
BRS	28.82	254	iPc	26 58.10	1.0
COO	29.88	248	eP	27 05.00	-1.5
RMO	32.40	256	iPd	27 29.60	1.0
	1.1s	171.00nm		5.8mb	
		e		27 44.00	
CNB	32.84	239	eP	27 33.00	0.6
CAN	33.13	240	eP	27 35.50	0.6
CMS	35.15	247	iPd	27 51.70	-0.6
		e		27 54.00	
CTA	35.35	267	iPd	27 53.00	-1.1
	0.7s	149.32nm		6.0mb	
		eS		33 23.00	
		i		36 42.00	
TOO	36.40	237	eP	28 02.00	-0.8
TAU	36.66	228	eP	28 06.00	1.2
RKT	37.57	99	iP	28 12.20	-0.5
	1.2s	125.00nm		5.7mb	
PMG	37.79	284	eP	28 13.00	-1.6
	1.0s	200.00nm		6.0mb	
STK	38.78	247	eP	28 23.00	0.2
QIS	41.39	264	iPc	28 43 20	-1.2
ADE	41 41	242	eP	28 43 90	-0 5
	0 9s	57 14nm		5.4mb	
ASPA	46.06	258	iPd	29 20 40	-1.7
	1.3s	79.00nm		5.5mb	
Z	20s	1.19um		4.8Msz	
		eS		35 57 20	
		iScS		39 12.80	
		LR		48 28.80	
WB5	46.34	264	eP	29 21.80	-2.5
		eS		36 03.00	
WRA	46.35	263	Pc	29 22.30	-2.1
	1.0s	43.40nm		5.3mb	
JAY	46.62	289	ePd	29 24.00	-2.6
	0.6s	18.20nm		5.2mb	
		e		31 27.00	
FORR	50.33	248	iPc	29 53.10	-2.0
	0.4s	99 00nm		6.2mb	
MTN	51.22	271	eP	30 00 00	-2 1
DRV	52 12	201	eP	30 10 80	2.6
WARB	52 17	254	eP	29 56 00	-13.1X
	0 3s	8 00nm			
KNA	52.54	267	eP	30 09 20	-2 7

GUA	52.60	309	eP	30 11 80	-0.5
	0.9s	215.13nm		6.2mb	
COOL	56.27	247	eP	30 36.00	-3.1X
KLB	59.04	246	eP	30 56.00	-2.4
NWAO	59.28	244	eP	31 01.00	0.9
MBL	59.30	258	eP	30 58.00	-2.4
BAL	60.09	247	eP	31 04.00	-1.7
MUN	60.28	245	eP	31 05.00	-1.9
MRWA	60.95	248	eP	31 10.10	-1.4
SPA	67.58	180	iPc	31 56.30	1.9
	0.9s	72.27nm		5.6mb	
KAKJ	71.73	324	P	32 19.70	0.0
CHJJ	72.26	323	P	32 22.20	-0.8
NIIJ	73.12	324	P	32 28.50	0.5
TSRJ	73.62	321	P	32 30.20	-0.7
ADK	74.12	359	ePc	32 32.20	-1.1
	0.8s	34.20nm		5.3mb	
KUSJ	74.74	331	eP	32 35.60	-1.6
SMY	75.47	354	P	32 38.20	-3.0X
	0.8s	45.98nm		5.5mb	
ASAJ	76.47	331	eP	32 47.10	0.1
SYP	77.68	44	eP	32 54.00	-0.1
PRS	77.94	42	ePc	32 55.80	0.5
GCC	78.00	41	iPc	32 55.80	0.2
BCH	78.02	44	eP	32 56.60	0.6
PCC	78.07	41	eP	32 55.80	-0.2
SAO	78.17	42	eP	32 56.40	-0.2
PRI	78.26	43	ePc	32 57.70	0.5
LLA	78.38	42	ePc	32 58.10	0.3
BRK	78.38	41	ePc	32 57.90	0.2
BKS	78.40	41	ePc	32 58.10	0.3
	1.0s	109.00nm		5.7mb	
MHC	78.42	41	ePc	32 58.40	0.3
ARN	78.49	41	iP	32 59.00	0.6
PAS	78.63	46	eP	32 59.00	-0.2
SDN	78.68	9	ePc	32 57.00	-1.9
MWC	78.75	46	eP	33 00.00	-0.1
BAR	78.77	48	eP	33 00.00	0.0
PLM	79.03	47	eP	33 01.00	-0.6
RVR	79.07	46	eP	33 01.00	-0.6
PEC	79.15	46	P	33 01.90	-0.2
FHC	79.32	37	ePc	33 03.20	0.4
ISA	79.35	44	eP	33 03.00	-0.2
FRI	79.39	43	iPc	33 03.20	0.0
			e	33 21.30	
CMB	79.62	41	iPc	33 04.40	-0.2
			e	33 22.70	
ORV	79.93	40	iPc	33 05.90	-0.2
WDC	79.99	38	iPc	33 06.60	0.2
			e	33 24.90	
GSC	80.22	45	eP	33 08.00	0.1
GLA	80.25	48	eP	33 08.00	0.0
MAW	80.32	199	iPc	33 09.40	1.7
MIN	80.38	39	e(P)	33 08.10	-0.5
KVN	81.66	42	P	33 15.30	-0.1
			e	33 35.00	
			e	46 40.00	
KDC	82.34	12	iPc	33 17.70	-0.5
BMW	83.54	34	iP	33 25.40	0.6
			pP	33 45.20	72km
SHW	83.87	34	iP	33 27.40	0.9
VGB	84.19	35	iP	33 28.20	0.1
LON	84.46	34	iP	33 29.60	0.2
			pP	33 48.90	70km
GMW	84.49	33	iP	33 30.00	0.5
PGC	84 90	32	eP	33 32 00	0.6
RMW	84.93	33	iP	33 32 00	0 3
			pP	33 52.00	73km
SVW	84.95	10	ePc	33 30.50	-1.0
MSU	85 10	45	iP	33 34.10	1.1
			pP	33 54.10	73km
CN2	85.15	322	Pd	33 33.00	0.2
			PcP	33 41.00	
MCW	85.23	32	P	33 34.10	1.0
WHN	85.28	306	eP	33 34.50	0.7
			sP	34 06.00	
IPM	85.43	277	ePc	33 34.50	-0.4
	0.9s	29.80nm		5.3mb	
PMR	86.56	12	iPc	33 38.50	-0.9
	1.2s	89.80nm		5.8mb	
TTA	86.63	9	iPc	33 39.60	-0.2
SNG	86.81	279	eP	33 43.60	2.0
ALQ	87.12	50	iP	33 43.50	0.5
	1.0s	56 25nm		5.7mb	
			epP	34 03 00	70km
			eSP	34 11.00	
PNT	87.24	33	iPc	33 43 30	0 3

	0 8s	48.00nm		5 7mb	
SNA	87.28	178	iPd	33 44 80	1.9
	0 9s	19.33nm		5.2mb	
TOA	87.63	13	ePc	33 44.60	-0.1
BJI	88.77	315	eP	33 51.00	0.6
LRM	89.02	39	ePc	33 51.60	-0.3
FBA	89.82	12	iPc	33 53.90	-1.0
IMA	89.94	9	iPc	33 55.00	-0.6
	1.0s	20.00nm		5.3mb	
TIY	90.15	311	Pc	33 58.60	1.5
Z	24s	0.50um		4.9MszX	
GOL	90.23	47	iPc	33 57.60	-0.1
XAN	90.98	307	P	34 01.50	0.5
KMI	92.07	296	eP	34 08.50	2.1
HHC	92.23	314	P	34 08.00	1.3
SES	92.35	35	ePc	34 06.00	-0.9
			pP	34 25.00	68km
EDM	92.74	32	iPc	34 07.90	-0.7
MEO	92.78	53	ePc	34 08.70	-0.5
RSSD	93.24	43	iP	34 11.00	-0.4
VVO	95.13	54	eP	34 20.30	0.3
TUL	95.32	53	eP	34 21.20	0.3
	1.2s	20.50nm		5.5mb	
Z	22s	0.63um		5.0Msz	
		e		34 54.30	
		LR		05 17.00	
LNO	95.33	53	eP	34 13.50	-7.3X
LNO	95.33	53	eP	34 20.20	-0.6
UYO	95.63	55	eP	34 21.50	-0.8
INK	95.73	15	eP	34 21.00	-1.0
			pP	34 40.00	68km
YKA	97.53	24	eP	34 30.70	0.5
CNCB	99.31	112	P	34 42.00	1.9
ZOBO	99.43	112	P	34 43.00	2.4
Z	20s	0.28um		4.8Msz	
		LR		55 20.00	
GTA	99.83	309	eP	34 44.20	2.8
RSON	102.40	40	Pdiff	34 52.00	-0.5
	0 8s	8.80nm		5.5mb	
MBC	104.36	12	ePdiff	34 54.50	-6.1X
SOB1	125.73	121	ePKP	39 55.50	-3.8X
ITR	127.95	122	ePKP	40 02.40	-1.1
			e	40 24.30	
MAIO	130.52	299	ePKP	40 05.00	-2.9
			e	40 27.00	
KEV	130.85	350	ePKP	40 20.00	12.7X
BUL	131.32	211	ePKP	40 08.80	-1.1
			iSKP	43 29.80	
SUF	137.18	345	ePKP	40 08.00	-11.6X
NUR	139.46	345	ePKP	40 13.00	-10.8X
Z	20s	0.20um		4.9Msz	
		e		43 54.00	
		LR		39 00.00	
NAO	141.48	355	PKP	40 19.60	-7.9X
	1.1s	8.40nm			
HFS	141.85	352	ePKP	40 20.30	-7.8X
	0.5s	7.20nm			
LWI	145.58	227	iPKPc	40 37.50	1.3
ELO	145.63	8	iPKPc	40 36.50	1.8
EDU	145.64	7	ePKP	40 36.50	1.8
EAB	145.82	8	ePKPc	40 37.00	2.0
EBH	145.87	8	iPKPc	40 37.20	2.1
EDI	146.23	7	ePKP	40 38.40	2.7
ESY	146.30	7	ePKP	40 38.00	2.2
COP	146.35	352	iPKPc	40 36.00	0.1
	0 7s	32 88nm			
EBL	146 39	7	ePKP	40 38 90	2 9
EKA	146.81	8	PKPd	40 36.70	0.1
	0.8s	18.80nm			
KVT	147.47	312	ePKP	40 40.90	2.7
DMU	147.59	12	iPKPc	40 39.80	1.9
	0.6s	48.00nm			
DLE	148.25	12	iPKPc	40 41.40	2.4
	0.8s	35.00nm			
PPE	149.69	327	ePKPc	40 46.50	5.0X
WIT	149.73	357	ePKP	40 47.00	5.7X
			e	41 05.50	
			e	41 11.00	
KRA	149.88	340	ePKP	40 45.50	3.9X
	1.1s	57.00nm			
			e	41 06.30	
CFR	150.11	325	ePKPc	40 47.00	4.9X
KSP	150.22	344	ePKP	40 42.00	-0.1
	1 2s	77.00nm			
			ic	40 47 20	
HRI	150.24	298	ePKP	40 49.00	6.1X
BBTK	150.27	312	iPKPd	40 48.00	5.3X

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JARJ  150.28 296 PkPd  40 48 60   5.7X
VRI   150.38 327 ePkPc 40 47 00   4.5X
BURJ  150.44 296 PKP   40 48.50   5.4X
BRD   150.46 326 ePKPd 40 49.00   6.3X
CLL   150.49 349 ePKP  40 42.00  -0.5
       1.4s   115.00nm
                i     40 47.30
SPC   150.53 338 ePKP  40 48.90   6.0X
BMR   150.53 333 ePKPd 40 26.00 -16.7X
WTS   150.54 357 iPKPc 40 47.80   5.3X
       1.0s    77.00nm
                e     41 06.00
SALJ  150.54 295 PKPc  40 48.90   5.6X
MASJ  150.56 295 PKP   40 49.00   5.6X
KFNJ  150.57 295 PKPd  40 49.30   6.1X
MKRJ  150.66 295 PKPd  40 49.10   5.6X
BRG   150.72 347 ePKP  40 42.50  -0.4
       1.5s    13.00nm
                i     40 48.20
                i     41 08.20
DSI   150.88 295 ePKPc 40 49.50   5.8X
ISR   150.98 326 ePKPd 40 49.50   6.0X
MLR   151.04 327 ePKPc 40 43.50  -0.2
PSN   151.06 322 iPKP  40 44.00   0.4
PRNI  151.40 292 iPKPc 40 51.00   6.4X
PRU   151.43 346 PKPc  40 50.00   6.0X
       1.1s    30.60nm
                e     41 09.40
HOF   151.64 350 ePKP  40 50.20   5.9X
CMP   151.64 328 ePKPc 40 51.00   6.5X
GPA   151.70 315 ePKP  40 47.80   3.1X
PSZ   151.73 337 ePKP  40 51.00   6.4X
ENN   151.81 358 iPKPc 40 50.60   6.1X
       1.0s    34.00nm
                e     41 09.50
MEM   151.96 358 PKP   40 50.80   6.1X
DEV   152.18 331 ePKPc 40 52.00   6.8X
GRF   152.35 350 ePKP  40 52.30   6.9X
SRO   152.37 339 ePKP  40 51.30   5.9X
                i     41 02.80
                i     41 21.00
ZST   152.41 341 ePKP  40 53.00   7.6X
ALT   152.45 313 ePKP  40 51.30   5.4X
KHC   152.45 347 PKP   40 46.30   0.8
                i     40 53.40
DOU   152.51 359 PKPc  40 52.40   6.9X
       0.9s    47.50nm
                e     41 11.10
VKA   152.57 342 e(PKP)41 03.00  17.3X
ABH   152.60 355 ePKPc 40 52.60   6.9X
TOD   152.76 353 ePKPc 40 52.77   6.8X
RUP   152.81 356 ePKPc 40 53.26   7.2X
WLF   152.90 357 PKPd  40 54.00   8.0X
BZS   152.95 332 ePKP  40 45.00  -1.3
KHL   153.20 312 iPKP  40 53.90   6.9X
FLN   153.59   7 iPKPc 41 06.80  19.7X
       0.8s    37.60nm
ELL   153.64 308 ePKP  40 53.00   5.3X
LDF   153.79   6 ePKP  41 07.30  19.9X
       0.7s    14.35nm
KDZ   153.92 322 ePKP  40 56.00   8.2X
RZN   154.30 323 iPKP  40 56.00   7.5X
KBA   154.44 345 ePKP  40 56.00   7.5X
VTS   154.49 326 ePKP  40 57 00   8.3X
EZN   154.51 318 ePKP  40 59 00  10 5X
MMB   154.91 324 ePKP  40 57 00   7 9X
RBL   154.98 345 PkP   41 05 40  16 3X
LJU   155.10 343 ePKP  40 48 50  -0.7
VOY   155.28 344 ePKP  40 48.60  -1.0
VBY   155.38 341 ePKP  40 49.80   0.2
CEY   155.41 343 ePKP  40 58 50   8.8X
                e     41 15.00
TRI   155.61 344 ePKP  41 09.50  19.6X
VAY   155.72 325 ePKP  40 49.40  -0.8
SKO   155.84 327 ePKP  40 49.00  -1.4
OHR   156.80 327 ePKP  40 48.50  -3.2X
BNG   157.24 220 iPKPd 40 53.00   0.0
       1.2s    14.00nm
                ic    41 11.50
                ic    41 25.50
                id    41 31.00
                ic    41 43.50
                ic    45 08.00
                id    45 27.00
                iS    53 29.00
                ic    53 52.60
TOL   161.37  20 (PKP) 40 59.50   2.8
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                iPkKP 41 41 00
LIC   161.50 150 PKP   40 57.60   0.0
KIC   161.75 151 PKP   40 57.60  -0.2
TIC   161.87 149 PKP   40 58.00   0.1
      S.D. = 1.3  on 159 of 226 obs.
-------------------------------------
*  JUN  12, 1989  18h 34m 55.55± 1.22s
   33.284 N ±12.3km  139.338 E ±10.2km
   DEPTH = 185.2 ±  9.9 km
   4.0mb (  5 obs.)
 SOUTH OF HONSHU, JAPAN            (211)
      Felt (II JMA) at Yonago and (I
      JMA) at Utsunomiya.

IIDJ    2.49 332 iPd   35 40.20   1.3
                S     36 14.70
CHJJ    2.77 354 iPd   35 44.00   1.8
                S     36 19.70
KAKJ    2.99  13 iPd   35 44.70  -0.1
                eS    36 21.60
WKYJ    3.26 288 P     35 48.50   0.4
                eS    36 27.40
UTS     3.28   8 eP    36 26.00  37.7X
MTMJ    3.53 340 P     35 52.50   1.0
TSRJ    3.57 310 P     35 52.70   0.8
NIIJ    3.96 356 iPd   35 57.20   0.4
                S     36 43.50
TKSJ    4.47 280 P     36 03.40   0.0
                eS    36 54.50
YAMJ    4.91   6 P     36 09.30   0.2
                S     37 05.30
YONJ    5.22 293 iPd   36 13.20   0.0
SHK     5.68 285 iPd   36 18.90  -0.2
       0.9s   201.68nm          5.3mb X
OFUJ    6.08  17 P     36 23.50  -0.9
                eS    37 27.90
AOMJ    7.31   6 P     36 40.50  -0.1
MRRJ    9.23   8 eP    37 04.00  -1.7
                eS    38 44.90
HOOJ    9.60  18 P     37 09.60  -1.1
                eS    38 48.60
KUSJ   10.67  22 eP    37 22.40  -2.1
                eS    39 12.50
ASAJ   11.12  12 eP    37 28.30  -2.1
CN2    15.09 318 Pc    38 19.00  -1.6
WHN    21.37 269 eP    39 28.60  -0.5
                sP    40 12.50
GTA    32.23 292 eP    41 13.60   5.3X
WMQ    41.14 300 eP    42 22.80  -0.1
                sP    43 08.00
WB5    53.08 186 eP    43 53.20  -2.6
WRA    53.14 186 P     43 56.00  -0.3
       0.5s     2.00nm          4.1mb
INK    58.50  26 eP    44 35.00   1.1
MBC    60.59  16 eP    44 49.00   0.8
       0.7s     3.00nm          4.2mb
HFS    76.79 335 eP    46 27.30  -0.4
       0.4s     0.80nm          3.8mb
NAO    77.26 337 P     46 29.80  -0.5
       0.8s     1.70nm          3.8mb
CMB    77.46  53 eP    46 34.00   2.1
FFC    77.78  31 eP    46 34.50   1.3
       0.9s    11.00nm          4.6mb
LRM    78.03  43 eP    46 37.20   2.0
MNA    78.72  51 eP    46 39.80   0.9
FRB    80.80  12 eP    46 29 00 -20 2X
ZOBO  149.99  62 PkP   54 28 00   6 7X
LPB   150.18  63 ePKP  54 32.00  10.7X
CNCB  150.44  63 PKP   54 30.00   8.1X
      S.D. = 1.3  on  30 of  36 obs.
-------------------------------------
*  JUN  12, 1989  18h 41m 03.34± 0.83s
    5.053 N ±11.4km   82.575 W ±21.6km
   DEPTH =  33.0km  (normol)
   4.5mb (  2 obs.)  4.2Msz (  1 obs.)
 SOUTH OF PANAMA                  ( 83)

DVD     3.36   2 iPd   41 52.40  -2.4
ACR     3.62 351 ePd   41 57.90  -0.6
JCR     4.80 354 ePc   42 21.10   5.9X
UPA     4.93  38 iPc   42 19.30   2.2
       0.7s   187.67nm
                iS    43 15 40
ICR     5.05 346 eP    42 18.10  -1 1
SJS     5.07 343 iPc   42 19.00  -0 2
                S     43 20.20
SRA     5.33 340 iPc   42 22.00  -0 9
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ZOBO   25.56 146 P     46 30 00  -1 7
                LR    07 44.00
LPB    25.79 147 (P)   46 38.00   4 3X
      Z  20s      0.71um          4.2Msz
                LR    07 40.00
CNCB   26.08 147 P     46 35.50  -1.0
ALQ    37.04 326 eP    48 15.00   2.7
       1.1s     9.49nm          4.6mb
PNT    54.09 331 eP    50 29.00   1.9
INK    71.66 342 eP    52 21.00  -2.5
MBC    73.98 351 eP    52 38.00   1.1
EKA    79.84  35 P     53 13.00   3.0X
       0.7s     3.50nm          4.5mb
MSL   114.69  46 ePKP  00 03.50  20.9X
GKN   144.90  20 PKP   00 40.80   1.2
KKN   145.31  19 PKP   00 40.90   0.5
       0.7s    11.00nm
GUN   145.39  18 PKP   00 41.90   1.2
DMN   145.42  19 PKP   00 40.80   0.1
PKI   145.55  19 PKP   00 40.70  -0.3
      S.D. = 1.6  on  17 of  21 obs.
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    JUN  12, 1989  20h 31m 20.53± 0.75s
    40.916 N ± 5.5km   19.921 E ± 8.6km
    DEPTH =  10.0km  (geophysicist)
 ALBANIA                          (391)
      ML 2.7 (SKO).

BERA    0.21 174 iPgc  31 24.40  -0.8
TIR     0.43 355 iPgd  31 29.20  -0.1
VLO     0.55 216 ePg   31 32.20   0.5
OHR     0.69  73 iPg   31 33.40  -0.9
                iSg   31 45.10
LACI    0.74 348 ePg   31 33.80  -1.2
PHP     0.86  27 ePg   31 36.00  -1.1
PUK     1.13 359 ePg   31 42.90   1.3
SDA     1.14 344 ePg   31 45.80   3.9X
SKO     1.55  47 iPn   31 49.50   1.2
                iSn   32 10.50
VAY     2.04  78 ePn   31 56.30   1.0
      S.D. = 1.2  on   9 of  10 obs.
-------------------------------------
*  JUN  12, 1989  20h 45m 22.06± 1.51s
    5.687 S ± 8.1km  130.979 E ±16.7km
   DEPTH =  64.5 ± 15.4 km
   4.6mb (  6 obs.)
 BANDA SEA                        (280)

AAI     3.41 305 ePc   46 15.50   1.5
                eS    46 58.50
MTN     7.12 179 eP    47 07.00   1.1
                eS    48 22.00
MNI     9.37 319 eP    47 36.30  -0.6
KNA    10.23 192 eP    47 47.50  -1.2
       0.3s    40.00nm          6.0mb X
                eS    49 33.00
WB5    14.49 167 eP    48 42.20  -3.0X
                iS    51 16.90
WRA    14.54 167 Pc    48 43.80  -2.1
OIS    16.99 151 eP    49 17.00   0.0
                e     49 21.00
                eS    52 15.00
ASPA   18.10 171 eP    49 30.60  -0.1
       0.8s    36.00nm          4.6mb
                eS    52 38 80
MBL    18 80 214 eP    49 38 50  -0 7
CTA    20 62 135 iPd   50 02 60   4.0X
       0.9s    29.83nm          4.6mb
WARB   20 80 191 eP    49 51.10  -9.3X
       0.3s     5.00nm          4.3mb
                eS    53 32.00
MEKA   23.96 208 eP    50 32.50   1.0
FORR   25.18 186 eP    50 43.70   0.7
       0.5s    26.00nm          5.0mb
MRWA   27.36 209 iPd   51 02.40  -0.8
       0.3s     4.00nm          4.6mb
STK    27.89 160 eP    51 10 00   2.1
BJI    47.50 345 eP    53 52.00  -0.6
CN2    49.51 355 Pd    54 08.00   0.0
GTA    53.31 330 eP    54 36.00  -0.9
SPA    84.35 180 e(P)  57 49.20   0.9
       0.8s     2.50nm          4.3mb
CNCB  150 83 140 PKP   05 13 00   8 5X
LPB   150 96 140 (PKP) 05 13 00   8 5X
ZOBO  151 13 139 PKP   05 12 80   7 8X
      Z  22s      0.11um          4 6MszX
                LR    41 30.00
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12d 21h

S D = 1 2 on 16 of 22 obs.

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* JUN 12, 1989 22h 30m 35.31± 0.96s
24.753 N ±18.5km 95.154 E ±14.0km
DEPTH = 33.0km (normal)
BURMA (296)

CHG	6.88	148	eP	32	16.50	0.0
GUN	8.89	293	P	32	44.60	-0.3
	0.4s		12.00nm			5.4mb
PKI	9.19	290	P	32	49.40	0.4
KKN	9.36	291	P	32	52.00	0.7
	0.4s		8 00nm			5.3mb
DMN	9.46	290	P	32	53.00	0.3
GKN	9.97	291	P	32	58.40	-1.2
MBC	77.00	8	eP	42	26.00	0.0
	1.0s		4.00nm			4.4mb

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

? JUN 12, 1989 22h 32m 11.07± 9.68s
16.240 N ±56.8km 101.846 W ±60.6km
DEPTH = 33.0km (normal)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX	2.01	72	iP	32	42.80	-0.5
			iS	33	01.80	
III	3.11	47	iP	32	54.20	-5.0X
			iS	33	22.80	
MRX	3 50	10	iPd	33	04.60	0.1
			iS	33	40.70	
CRX	3.76	33	eP	33	07.80	-0.7
			iS	33	43.20	
UNM	3.99	39	(P)	33	10.00	-1.7
			iS	33	46.30	
IIT	4.36	50	iP	33	17.45	0.4
			iS	33	56.75	
SMMM	4.57	40	iP	33	21.62	2.0
			iS	34	06.05	
OXX	4.98	80	iP	33	25.80	0.0
			iS	34	28.70	
IISM	5.06	57	(P)	33	12.00	-14.7X
			iS	34	13.00	
LVVM	6.20	55	(P)	33	54.18	11.4X
			iS	35	00.93	

S.D. = 1.4 on 7 of 10 obs.

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* JUN 13, 1989 00h 36m 09.40± 2.48s
42.376 N ±19.1km 19.906 E ±10.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

BCI	0.12	94	ePg	36	12.00	-0.4
PUK	0.33	182	ePg	36	15.90	-0.4
SDA	0.47	220	ePg	36	18.70	-0.3
KKS	0.48	128	ePg	36	18.50	-0.6
SKO	1.21	109	ePn	36	32.00	0.1
OHR	1.43	152	ePn	36	37.00	1.6

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

& JUN 13, 1989 00h 47m 32.13s
59.643 N 153.124 W
DEPTH = 115.6km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0 05	280	iP	47	47 85	1.2
			S	47	59.94	
AUE	0 31	204	eP	47	48.63	1.4
ILIM	0 45	11	iP	47	48.96	-0.6
			S	48	01.97	
CDD	0.76	201	iP	47	51.49	-0.4
RED	0.80	13	iP	47	51 56	-0.7
			S	48	05.95	
CNPM	0.97	96	iP	47	53.19	-0.6
RDT	1.00	21	eP	47	53.34	-0.8
NKA	1.45	40	eP	48	00.19	1.2
			S	48	19.08	
SLKM	1.69	58	eP	48	00.75	-1.3
CGLM	1.76	18	iP	48	02.26	-0.7
SEW	1.91	74	eP	48	03.37	-1.3
SVW	1.92	321	iPd	48	03.80	-1.1
KDC	1.93	170	iPd	48	03.60	-1.3
SUA	2.17	32	eP	48	07.50	-0.7
			S	48	34 81	
SKT	2.47	18	eP	48	10 80	-1 2
PWA	2.57	37	eP	48	12 10	-1 1
PMR	2.77	43	eP	48	14 80	-1 1
MTU	2 79	81	eP	48	14.89	-1.2
PME	2.83	44	eP	48	15.64	-1.1
KNK	2.91	50	eP	48	17.17	-0.6
GHO	2.97	42	eP	48	17.16	-1.5
GLI	3.25	65	eP	48	19.47	-2.9
FID	3.50	69	eP	48	22.72	-3.0
TTA	3.58	338	iPd	48	25.00	-1.9
KLU	4.01	59	eP	48	30.52	-2.2
TOA	4.20	51	iPc	48	35.40	0.1
FBA	5.83	23	ePc	48	54.80	-2.7
IMA	6.46	358	ePc	49	04.80	-1.4

28 obs. ossociated

& JUN 13, 1989 01h 34m 36.69s
19.433 N 155.589 W
DEPTH = 17.3km
HAWAII (613)
<HVO-P>. MD 3.9 (HVO).

SWH	0.03	325	iPc	34	39.72	-0.7
WIH	0.04	8	iPc	34	39.86	-0.6
TRH	0.04	115	iPc	34	40.00	-0.4
MWH	0.06	350	iPc	34	39.95	-0.2
WOB	0.11	3	iPc	34	40.34	-0.5
AIN	0.13	115	iPd	34	40.72	-0.2
PLL	0.16	50	iPd	34	40.87	-0.5
KFH	0.16	94	iPd	34	40.99	-0.3
KIH	0.18	295	iPc	34	41.37	-0.2
			iS	34	44.81	
KHU	0.19	189	iPc	34	41.20	-0.5
HMH	0.20	30	iPc	34	41.66	-0.2
WOH	0.20	156	iPd	34	41.26	-0.5
MLH	0.20	71	iPd	34	41.49	-0.4
DES	0.21	117	iPd	34	41.46	-0.5
MLX	0.23	83	iPd	34	42.03	-0.3
CPK	0.25	99	iPc	34	42.03	-0.5
HTC	0.26	137	iPc	34	42.29	-0.4
UWE	0.28	92	iPc	34	42.30	-0.7
			iS	34	46.30	
NPH	0.29	94	iPd	34	42.45	-0.7
			eS	34	46.35	
OUT	0.29	98	iPc	34	42.52	-0.7
HLP	0.29	117	iPc	34	42.72	-0.5
PPL	0.30	157	iPc	34	42.59	-0.6
RIM	0.30	97	iPc	34	42.59	-0.7
KNH	0.30	109	iPc	34	42.70	-0.6
AHA	0.31	101	iPc	34	42.83	-0.7
KUH	0.31	238	iPd	34	42.89	-0.6
CPH	0.32	280	iPd	34	42.84	-0.7
ESR	0.33	94	iPd	34	42.93	-1.0
HUH	0.35	317	iPd	34	44.00	-0.2
PUH	0 35	99	iPd	34	43.18	-1.1
HPU	0.37	20	iPc	34	43.98	-0.7
PWH	0.37	113	iPc	34	43.79	-0.7
MKA	0.41	99	ePd	34	43.93	-1.2
WKH	0.43	351	ePc	34	44.90	-0.7
KAE	0.45	108	iPc	34	44.92	-0.9
SPT	0.45	189	iPd	34	44.74	-1.1
MVH	0.50	82	iPd	34	45.58	-1.1
WHA	0.52	101	iPc	34	45.53	-1.4
HIL	0.55	59	iPd	34	46.46	-1.1
			iS	34	53.56	
HUL	0 58	91	iP	34	46.25	-1.7
			iS	34	53.43	
PKL	0 63	88	eP	34	46.87	-2.0
HBH	0 66	81	eP	34	47 58	-1.8
POH	0 69	88	eP	34	48.01	-1.9
KPO	0.71	84	eP	34	48.11	-2.1
HLK	1.47	335	ePc	34	58.76	-3.8

45 obs. ossociated

? JUN 13, 1989 01h 42m 51.11± 3.04s
8.281 N ±52.9km 82.019 W ±10.5km
DEPTH = 33.0km (normol)
PANAMA-COSTA RICA BORDER REGION (80)

DVD	0.45	290	eP	43	01.00	0.0
			iS	43	21.30	
BUS	2.14	307	ePd	43	25 80	0.2
LCR2	2.44	307	ePd	43	29 80	0.1
UPA	2.55	74	iPc	43	31.10	0.0
			(S)	44	10.00	
SJS	2.60	309	eP	43	31 60	-0.3
SRA	2 99	307	eP	43	42 80	5.3X

S D = 0 3 on 5 of 6 obs.

% JUN 13, 1989 01h 49m 16 75± 0.88s
16.056 N ± 6.5km 61.297 W ± 7.3km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.2 (FDF).

SFG	0.22	26	eP	49	21.97	0.5
DEG	0.34	42	ePd	49	23.64	-0.2
PAG	0.37	266	eP	49	24.60	0.2
			S	49	30.30	
SEG	0.40	330	eP	49	25.25	0.3
			S	49	31.10	
BBL	0.56	198	eP	49	28.00	-0.1
BPA	1.12	331	ePd	49	37.00	-0.8
			S	49	50.60	

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

% JUN 13, 1989 03h 31m 43.03± 2.06s
43.899 N ±15.2km 7.505 E ±13.9km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)

SAOF	0.09	23	Pg	31	45.78	0.1
			Sg	31	48.21	
AUTN	0.11	330	Pg	31	46.04	-0.1
			Sg	31	48.77	
AURF	0.13	265	Pg	31	45.98	-0.3
			Sg	31	48.71	
TOUF	0.22	302	Pg	31	47.95	0.1
			Sg	31	51.24	
CALN	0.47	252	Pg	31	52.80	0.2
			Sg	31	59.95	

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

? JUN 13, 1989 03h 49m 10.28± 6.93s
44.132 N ±45.6km 7.237 E ±18.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 1.0 (STR).

TOUF	0.12	176	Pg	49	13.34	-0.1
			Sg	49	15.33	
AUTN	0.19	135	Pg	49	14.83	0.1
			Sg	49	17.46	
MVIF	0.24	195	Pg	49	15.62	0.1
			Sg	49	19.16	
AURF	0.25	165	Pg	49	15.62	-0.1
SAOF	0.27	122	Pg	49	15.96	-0.1
			Sg	49	19.25	

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

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* JUN 13, 1989 05h 45m 28.29± 1.31s
28.999 S ± 7.6km 71.604 W ±24.5km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ZON	3.61	136	eP	46	26.00	2.7
ROCH	4.02	173	iPd	46	29.30	-0.1
			iS	47	08.20	
PEL	4.24	169	iPc	46	32.10	-0.1
			iS	47	18.50	
FCH	4.49	166	iPd	46	36.10	0.0
			iS	47	23.90	
LCCH	4.49	180	iPd	46	35.50	-0.3
			iS	47	20.50	
SAN	4.54	170	iP	46	39.00	2.4
TACH	4 70	173	iPd	46	38.00	-0 8
			iS	47	25.00	
PCH	4.73	169	ePd	46	39.00	-0 2
LNV	4.97	178	iPc	46	41.40	-1.2
			iS	47	27.90	
CHCH	5.01	171	iPd	46	42.50	-0.8
			iS	47	32.50	
ANT	5.35	12	e(P)	47	03.00	15.1X
ARE	12.45	1	eP	48	39.00	12.7X
CNCB	12.55	16	eP	48	29.00	1.1
			e	48	40.00	
CCH	12.58	25	eP	48	39.00	11.0X
LPB	12.79	15	eP	48	32.00	1.0
			e	48	44.00	
ZOBO	13.04	15	P	48	45.20	10.8X
PPD	19.56	74	eP	49	54.10	-2.3
			e	49	56.30	
			i	49	59.50	
			e	50	08.40	
BAO	25.50	64	eP	50	54.00	-1 5

S.D. = 1.5 on 14 of 18 obs.

& JUN 13, 1989 06h 40m 45.50s
37 738 N 122.132 W
DEPTH = 2.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 1.8 (BRK). Felt at
Ookland and San Leandro.

BKS	0.16	330	ePc	40 48.83	0.1
			iS	40 52.05	
BRK	0.17	323	iPd	40 48.90	0.0
			iS	40 52.30	
SP	0.23	335	iPc	40 50.70	0.6
			iS	40 55.00	
PCC	0.31	220	eP	40 52.00	0.3
MHC	0.56	135	ePc	40 56.68	0.1
ARN	0.61	129	eP	40 57.50	-0.3
GCC	0.71	171	eP	40 59.20	-0.6
NWRM	0.93	321	eP	41 03.00	-1.1
SAO	1.12	150	e(P)	41 05.87	-1.3
			i	41 08.35	

9 obs. associated

JUN 13, 1989 08h 52m 42.82± 0.35s
30.935 N ± 3.3km 138.398 E ± 3.3km
DEPTH = 393.8 ± 3.2 km
5.1mb (47 obs.)
SOUTH OF HONSHU, JAPAN (211)

WKYJ	4.04	325	iPd	53 57.30	1.9
			eS	54 54.50	
IIDJ	4.55	355	iP+	54 01.00	0.5
			eS	55 02.50	
TKSJ	4.77	311	iPd	54 04.50	1.8
			eS	55 07.90	
TSRJ	5.02	337	iP+	54 07.10	1.9
			S	55 12.20	
CHJJ	5.12	5	P	54 05.10	-1.3
			S	55 11.20	
KAKJ	5.46	15	P	54 05.50	-4.4X
			S	55 12.20	
MTMJ	5.66	355	P	54 10.80	-1.4
YONJ	5.93	317	iPd	54 16.80	1.8
			eS	55 28.80	
SHK	6.01	308	iPd	54 07.60	-8.3X
	1.0s	1220.00nm			5.9mb
NIIJ	6.31	4	P	54 16.80	-2.4
			eS	55 31.20	
KAGJ	6.45	274	iPd	54 23.30	2.5
			eS	55 42.20	
KUMJ	6.64	286	iPd	54 25.70	2.8
			eS	55 48.00	
SHNJ	6.93	299	iPd	54 28.20	2.1
			eS	55 51.90	
YAMJ	7.35	10	iP+	54 29.00	-1.9
			eS	55 54.60	
OFUJ	8.56	17	iP+	54 43.00	-1.8
			S	56 17.70	
AOMJ	9.74	9	eP	54 58.30	-0.3
			eS	56 47.60	
MRRJ	11.67	10	iP+	55 19.80	-1.5
			eS	57 24.90	
HOOJ	12.08	18	P	55 24.70	-1.5
			eS	57 32.70	
KUSJ	13.14	21	P	55 36.70	-1.0
ASAJ	13.58	13	P	55 41.50	-1.0
SSE	14 76	275	Pc	55 53 00	-2.2
	0.8s	36.00nm			4.8mb
			S	59 22.00	
			sS	59 38.00	
			SS	59 46.00	
MDJ	15.32	336	eP	56 00.00	-0.9
			S	58 40.00	
DL2	15.87	305	Pd	56 05.80	-0.9
			S	58 52.00	
ANP	15.96	253	eP	56 09.00	1.2
SNY	16.12	316	iPd	56 08.50	-0.7
CN2	16.43	325	iPd	56 11.80	-0.7
	2.0s	0.30nm			2.3mb X
			sP	57 42.00	
			S	59 01.00	
			PcP	00 47.40	
			ScP	03 37.60	
			ScS	07 16.00	
NJ2	16.71	279	iPd	56 14.00	-1.4
	0.8s	0.20nm			2.5mb X
			eS	59 10.00	
			ScP	03 39.00	

PJG	18.26	160	eP	56 32.10	1.0
GUA	18.32	159	eP	56 32.60	0.9
	0.8s	465.67nm			5.9mb
QZH	18.48	256	P	56 32.40	-0.7
TIA	18.48	292	Pd	56 32.20	-0.9
BJI	20.21	303	eP	56 49.00	-0.8
			e	57 51.00	
WHN	20.67	275	iPd	56 55.00	0.6
	0.8s	0.20nm			2.6mb X
TIY	22.44	295	Pd	57 11.10	-0.1
	0.8s	0.10nm			2.3mb X
HHC	23.80	302	iPd	57 23.30	-0.4
BTO	24.87	301	P	57 33.00	-0.4
XAN	25.02	285	iPd	57 34.00	-0.7
GYA	28.14	269	iPd	58 01.60	-1.1
	1.0s	0.10nm			2.1mb X
			PP	59 20.00	
			PcP	01 05.40	
			S	02 15.00	
			ScP	04 09.40	
			ScS	08 01.20	
QIZ	28.38	252	eP	58 05.70	1.0
CD2	29.65	279	iPd	58 14.60	-1.1
KMI	31.91	268	Pd	58 34.00	-1.6
GTA	32.46	296	iPd	58 39.20	-0.8
	0.8s	0.10nm			2.2mb X
CHG	37.59	261	eP	59 23.30	0.3
	0.9s	92.44nm			5.1mb
BDT	38.25	258	iPd	59 29.00	0.6
	0.6s	117.90nm			5.4mb
ADK	38.87	44	ePc	59 33.20	0.1
	0.7s	42.90nm			4.9mb
WMQ	41.68	303	P	59 55.50	-0.7
	1.5s	0.10nm			1.9mb X
			PP	01 44.50	
			ScP	04 58.00	
			ScS	09 13.00	
SNG	42.49	244	eP	00 03.90	1.0
MTN	44.08	190	iPd	00 14.50	-0.8
	0.6s	89.00nm			5.3mb
GUN	45.50	280	Pd	00 27.20	0.2
PKI	46.00	280	Pd	00 30.60	-0.2
KKN	46.04	280	Pd	00 30.90	-0.1
DMN	46.24	280	Pd	00 32.60	0.0
GKN	46.52	281	Pd	00 34.60	0.0
KNA	47.33	193	eP	00 39.60	-1.0
	0.3s	19.00nm			4.9mb
KLI	47.89	228	eP	00 44.00	-0.9
SDN	48.93	42	eP	00 51.00	-1.3
WB5	50.67	185	iPc	01 04.50	-1.3
			ePcP	02 55.70	
			eS	07 49.20	
WRA	50.74	185	Pd	01 05.30	-1.0
	0.4s	21.70nm			4.8mb
KSH	50.82	298	eP	01 08.50	1.5
QIS	51.21	179	iPc	01 08.30	-1.4
	0.5s	13.00nm			4.5mb
CTA	51.29	171	iPd	01 09.80	-0.5
	1.0s	12.50nm			4.2mb
TTA	51.88	32	ePc	01 14.30	0.0
NDI	52.54	284	iPd	01 19.00	-0.6
	0.8s	74.63nm			5.1mb
BRW	52.99	21	iPc	01 23.20	0.9
IMA	53.22	28	eP	01 24.20	0.0
	1.3s	16.50nm			4.2mb
KDC	53 41	39	eP	01 24 80	-0.6
ASPA	54 46	185	iPc	01 32 20	-1.2
	0.6s	68.00nm			5.2mb
			eS	08 38.70	
MBL	54.78	201	iPc	01 34.70	-0.9
	0.4s	29.00nm			5.0mb
PMR	55.04	34	eP	01 36.30	-0.7
	1.0s	35.00nm			4.7mb
FBA	55.61	30	eP	01 41.20	0.2
HYB	55.65	271	eP	01 41.00	-1.0
			e	02 34.50	
WARB	57.90	192	iPc	01 46.30	-11.0X
	0.3s	11.00nm			
GBA	58.33	267	Pd	01 59.20	-1.3
	0.8s	32.40nm			4.8mb
DZM	59.18	149	iPc	02 06.80	0.7
POO	59.20	274	iPnc	02 05.70	-0.8
BRS	59.60	165	iPc	02 09.00	0.1
MEKA	60 29	201	eP	02 12.60	-0.9
QUE	60 49	289	iPd	02 14.80	-0.2
INK	60.95	25	iPc	02 17.20	-0.2
FORR	62.22	190	iPd	02 25.20	-0.8

	0.3s	33.00nm			5.4mb
STK	62.55	177	eP	02 28 00	-0.1
MBC	63.06	15	ePc	02 31 40	0.3
	0.5s	9.00nm			4.7mb
MRWA	63.51	202	eP	02 33.90	-0.5
MAIO	64.21	298	iPd	02 39.30	0.2
KEV	68.26	340	iP	03 04.00	0.3
	0.8s	44.00nm			5.2mb
SOD	69.61	337	iP	03 12.30	0.3
YKA	70.34	28	eP	03 16.80	0.4
IR2	70.89	301	iP-	03 20.60	0.3
IR4	71.06	300	iP-	03 22.30	1.0
IR7	71.09	301	iP-	03 21.90	0.5
IR1	71.15	300	iP-	03 22.50	0.7
SUF	72.30	333	iP	03 27.80	0.0
NUR	74.14	332	iP	03 38.70	0.3
	0.5s	70.20nm			5.6mb
BJA	75.36	292	eP	03 44.80	-1.0
BEE	75.42	292	iP	03 45.00	-1.1
	0.5s	93.00nm			5.8mb
FHC	75.73	51	eP	03 49.20	1.5
DPW	75.87	42	P	03 49.50	1.1
MSL	76.19	304	ePc	03 51.00	0.7
WDC	76.80	51	ePc	03 54.50	0.9
UPP	77.31	334	iPd	03 55.80	-0.1
MIN	77.54	50	eP	03 58.00	0.2
ORV	78.00	51	eP	04 00.40	0.3
BRK	78.33	53	ePc	04 02.70	0.8
HFS	78.58	335	eP	04 02.70	-0.1
	1.1s	73.10nm			5.3mb
KVT	78.70	311	iP	04 05.40	1.5
NRA0	78.92	336	P	04 04.40	-0.2
NAO	79.09	337	P	04 05.40	-0.2
	0.9s	28.60nm			5.0mb
CMB	79.52	52	ePc	04 09.20	0.9
PRS	79.72	54	ePc	04 10.50	1.2
FFC	80.20	31	eP	04 12.00	0.6
	0.7s	6.00nm			4.4mb
LRM	80.30	42	eP	04 13.30	0.8
KVN	80.52	50	eP	04 14.50	0.8
FRI	80.52	53	eP	04 14.50	1.1
CLI	80.99	319	ePd	04 16.00	0.2
PPE	81.00	319	ePc	04 16.00	0.2
VRI	81.71	319	ePc	04 20.00	0.5
BRD	81.73	319	ePd	04 21.50	1.9
COP	82.20	332	iPd	04 22.00	0.3
	0.9s	100.84nm			5.6mb
ISR	82.24	318	ePc	04 23.50	1.2
MLR	82.37	319	ePd	04 23.50	0.5
KRA	82.70	325	eP	04 24.40	0.1
	0.8s	57.00nm			5.4mb
CMP	83.02	319	eP	04 09.80	-16.3X
HRI	83.02	305	iP	04 27.50	1.0
YLV	83.23	314	iP	04 27.70	0.4
FRB	83.25	12	eP	04 28.00	1.1
KSP	83.91	327	iPd	04 31.00	0.5
	0.7s	57.00nm			5.4mb
DSI	84.19	303	eP	04 33.00	0.8
MFT	84.39	315	iP	04 33.20	0.1
PLM	84.44	54	P	04 33.80	0.1
BRG	84.97	328	iPd	04 35.40	-0.3
	0.8s	26.00nm			5.1mb
CLL	85.08	329	iPd	04 36.30	0.1
	1.0s	34.00nm			5.1mb
PRU	85.32	327	Pd	04 37.80	0.4
	1.1s	15 30nm			4.7mb
MBH	85.52	302	iPd	04 42 00	3.2X
KHC	86.36	327	P	04 43 30	0.7
PV09	86.59	47	P	04 45.00	0.8
SKO	87.12	318	iP	04 46 60	0.3
EKA	87.98	339	Pc	04 50 80	0.7
	0.8s	4.90nm			4.4mb
OHR	88.04	318	eP	04 50.30	-0.4
VBY	88.09	324	e(P)	04 50.80	0.0
VOY	88.41	325	eP	04 52.60	0.2
SLE	89.67	329	ePd	04 57.90	-0.3
SAX	89.68	328	eP	04 58.50	0.0
CDF	89.72	330	eP	04 58.30	-0.1
	0.8s	13.40nm			4.8mb
OSS	89.73	327	eP	04 58.80	0.2
FEL	89.80	329	eP	04 58.35	-0.5
ZLA	89.93	329	eP	04 59.20	-0.2
LLS	90.12	328	eP	05 00.20	-0.3
VDL	90.19	327	eP	05 01 20	0.4
BSF	90.37	330	eP	05 01 00	-0.5
	0.8s	9.10nm			4.7mb
HAU	90.43	330	eP	05 01 10	-0.1

13d 09h

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ALQ     90 48  48 e(P)   05 04.50   2 2
TMA     90 75 328 eP     05 02.90  -0 4
MMK     91.21 328 eP     05 05 30  -0 2
DIX     91.44 328 eP     05 06.50  -0.1
EMS     91.66 329 eP     05 06.90  -0.6
LSD     92.03 328 P      05 09.41   0 1
LOR     92.06 331 eP     05 08.70  -0.4
        0.8s    13.40nm           4.9mb
LPG     92.18 328 eP     05 09 90  -0 2
        0.7s    23.10nm           5.2mb
LBF     92.23 331 eP     05 09.60  -0.4
        0.8s     8.00nm           4.7mb
SSF     92.37 331 eP     05 10.40  -0.1
        0.9s    18.60nm           5.1mb
FIN     92.48 327 P      05 09.41  -1.8
SMF     92.56 331 eP     05 11.20  -0.2
        0.8s    20.60nm           5.2mb
FLN     92.57 334 eP     05 11.30  -0.1
        0.4s     6.80nm           5.0mb
LDF     92.57 334 eP     05 11.30  -0.1
        0.6s    15.10nm           5.2mb
ROB     92.58 327 P      05 10.23  -1.4
RRL     92.61 328 P      05 11.56  -0.4
AVF     92.65 331 eP     05 11.70  -0.1
        0.8s    26.80nm           5.3mb
GRR     93.02 334 eP     05 13.70   0.2
        0.7s    19.80nm           5.3mb
BGF     93.04 331 eP     05 13.50  -0.2
LPF     93.38 334 eP     05 15.20   0.0
        0.7s    22.00nm           5.3mb
MAF     93.43 331 eP     05 15.70   0.2
TCF     93.52 331 eP     05 16.00   0.1
        0.8s    16.10nm           5.2mb
LSF     93.83 332 eP     05 17.30   0.0
        0.8s    22.00nm           5.3mb
MFF     94.22 333 eP     05 19.00  -0.1
RJF     94.60 331 eP     05 21.30   0.4
        1.0s    12.00nm           5.0mb
CAF     94.68 331 eP     05 21.70   0.4
LFF     95.22 331 eP     05 23.90   0.3
BNG    112.78 290 iPKPd  10 36.40   0.9
        0.4s     4.00nm
                   id    11 29.50
                   ic    13 52.50
                   ic    16 24.00
                   id    31 37.50
TIC    128.80 311 PKPc   11 06.40   0.2
KIC    128.83 310 PKPc   11 07.40   1.2
LIC    129.12 310 PKPc   11 07.10   0.3
     S.D. = 0.9  on 176 of 181 obs.
-----------------------------------------
?  JUN  13, 1989  09h 29m 28.95± 5.75s
   23.890 N ±35.1km  122.499 E ±32.4km
   DEPTH =  10.0km  (geophysicist)
 TAIWAN REGION                    (243)

TWD      0.85 283 iPc    29 44.70  -0.6
                 eS     29 51.90
TWC      0.93 320 iPc    29 46.20  -0.5
                 eS     29 54.10
TWZ      1.47 325 iPc    29 55.70   0.3
                 eS     30 12.00
ANP      1.57 325 iPc    29 58.20   1.3
       0.6s   810.67nm
                 eS     30 14 50
TWQ      1 57 284 ePc    29 57 20   0 3
SSE      7 27 351 e(P)   31 17 00  -0 8
     S.D. = 1.0  on   6 of   6 obs.
-----------------------------------------
   JUN  13, 1989  10h 04m 51.20± 0.50s
   19.398 N ± 6 7km  108.381 W ± 5.8km
   DEPTH =  33.0km  (normal)
   4.8mb ( 11 obs.)
 REVILLA GIGEDO ISLANDS REGION   ( 53)

MZX      4.20  25 eP     05 52.20  -2.3
                 iS     06 47.80
MRX      6.79  86 eP     06 33.00   1.9
CRX      8.21  89 eP     06 52.30   0.9
ACX      8.48 106 eP     06 54.70  -0.1
LVVM    11.25  86 (P)    07 34.80   1.9
OXX     11.31 100 iP     07 33.80  -0.1
GLA     14.77 338 eP     08 20 00   0.5
BAR     15.17 332 eP     08 24.00  -0 7
ALQ     15.58   6 e(P)   08 32.00   1 8
        1 0s    17.50nm           4.2mb
                 eS     11 40.00

PLM     15.83 333 eP     08 34.00   0 6
RVR     16.60 333 eP     08 44.00   1.0
PAS     17.08 331 eP     08 50.00   1.0
MWC     17.09 332 eP     08 50.00   0.6
SBB     17.38 333 eP     08 54.00   1.1
GSC     17.51 337 eP     08 56.00   1.5
MEO     17.62  28 eP     08 55.00  -0.8
ISA     18.49 333 eP     09 06.00  -0.6
BCH     18.83 329 P      09 10.00  -0.8
PV10    18.92 358 P      09 12.00  -0.1
PV09    19.04 358 P      09 13.00  -0.6
TUL     19.84  31 eP     09 21.90  -0.3
        1.1s    13.30nm           4.2mb
      Z 20s     0.70um
                 e(S)   13 17.00
                 LR     15 00.00
LNO     19.84  31 eP     09 20.80  -1.3
PRI     19.88 330 e(P)   09 23.50   0.8
FRI     20.14 333 ePd    09 24.00  -1.3
PRS     20.37 329 eP     09 29.80   2.0
GOL     20.40   7 P      09 28.00  -0.4
GLD     20.47   7 P      09 29.30   0.3
        1.0s    90.00nm           5.1mb
GCC     21.23 329 ePd    09 35.70  -0.8
MHC     21.31 330 eP     09 36.50  -1.0
CMB     21.31 333 ePd    09 36.50  -0.9
                 e      09 53.30
                 e      10 04.10
KVN     21.31 339 iP     09 38.20   0.6
                 e      09 58.90
ORV     23.06 333 eP     09 55.60   0.9
MIN     23.76 334 eP     10 02.30   0.6
LTCM    23.87 333 P      10 04.50   2.0
FVM     24.23  36 P      10 06.70   0.6
        0.8s    22.73nm           4.8mb
WDC     24.35 333 ePd    10 05.90  -1.3
                 e      10 22.50
                 e      10 32.80
RSSD    24.92   7 P      10 14.00   1.1
FHC     25 17 331 eP     10 15.30   0.2
RSCP    25.78  47 P      10 21.00   0.1
        1.0s    23.00nm           4.7mb
LRM     26.57 354 eP     10 28.40   0.1
JSC     28.27  53 P      10 43.00  -0.5
BLA     30.18  48 P      11 00.00  -0.8
        0.6s     4.50nm           4.4mb
SES     31.00 357 ePd    11 07.50  -0.3
PNT     31.18 346 eP     11 09.00  -0.4
FFC     35.60   6 eP     11 46.00  -1.6
        1.3s    25.00nm           5.0mb
YKA     43.27 356 eP     12 51.10   0.0
INK     51.38 348 eP     13 53.00  -1.5
FBA     52.43 340 P      14 01.50  -1.0
        1.0s     6.00nm           4.5mb
ZOBO    53.13 129 Pd     14 08.60  -0.4
        1.0s    12.50nm           4.8mb
      Z 24s     0.15um           4.0MszX
                 LR     30 24.00
LPB     53.32 129 P      14 11.00   0.8
        1.0s    40.00nm           5.4mb
CNCB    53.59 130 Pc     14 12.20  -0.1
CCH     55.30 129 P      14 24.70   0.2
MBC     57.16 357 eP     14 36.00  -0.7
        0.8s    11.00nm           4.9mb
BAO     68 84 116 eP     15 54.30  -0.8
PPD     69 33 124 eP     15 56 40  -1.5
                 epP    16 06.20  31kmX
SOB1    72 28 107 eP     16 15.70  -0.2
     S.D. = 1.0  on  56 of  56 obs.
-----------------------------------------
?  JUN  13, 1989  10h 17m 35.45± 4.23s
   13.607 N ±60.9km  143.476 E ±70.3km
   DEPTH = 104.0km  (  2 depth phases)
 SOUTH OF MARIANA ISLANDS         (210)

HON     56.09  73 eP     27 06.60   0.2
IMA     66.77  23 eP     28 18.00   0.4
PMR     67.42  29 eP     28 21.00  -0.5
BRW     67.72  18 eP     28 24.30   1.0
FBA     68.78  25 eP     28 29.00  -1.0
ARN     85.77  53 eP     30 04.80   0.2
CMB     86.48  52 iPd    30 08.20   0.1
        1 5s    128 95nm          5.7mb X
BCH     87 43  55 eP     30 23 60  10.8X
KVN     87 95  50 iP     30 15 50   0 2
                 pP     30 43.30 105km
PEC     90 11  55 iP     30 25 10  -0 3

                 pP     30 52.50 103km
PLM     90.50  56 P      30 27.10  -0.3
     S.D. = 0.6  on  10 of  11 obs.
-----------------------------------------
   JUN  13, 1989  11h 25m 53.14± 0.75s
    0.059 S ± 8.3km  123.370 E ± 9.6km
   DEPTH = 164.2 ±  9.2 km
   4.8mb (  6 obs.)
 MINAHASSA PENINSULA              (265)

MNI      2.09  45 iPd    26 30.40  -0.2
PCI      3.63 257 ePd    26 49.50  -0.1
                 eS     27 23.00
KNA     16.48 161 eP     29 37.30   0.9
WB5     22.45 152 eP     30 39.30   0.1
WRA     22.50 152 Pc     30 39.90   0.3
        0.6s     3.50nm           4.0mb
WARB    26.16 173 eP     31 03.00 -11.1X
CHG     30.44 309 eP     31 53.60   1.1
FORR    30.95 172 iPc    31 55.30  -1.4
        0.4s    13.00nm           5.0mb
GUN     45.44 311 P      33 57.90   0.0
        0.5s    33.00nm           5.2mb
KKN     45.83 310 P      34 00.60  -0.2
        0.5s    10.00nm           4.6mb
DMN     45.87 310 P      34 01.00  -0.2
        0.6s    12.00nm           4.6mb
GKN     46.43 310 P      34 05.20  -0.3
        0.4s    12.00nm           4.8mb
     S.D. = 0.8  on  11 of  12 obs.
-----------------------------------------
%  JUN  13, 1989  11h 56m 14.38± 0.92s
   60.295 N ± 5.5km    5.099 E ±11.1km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                  (535)
     MD 1.4 (BER).

BER      0.15  53 eP     56 17.98   0.2
                 eSg    56 20.47
ASK      0.19  14 iPg    56 18.90   0.2
                 iSg    56 22.06
SUE      0.78 348 eP     56 29.43  -0.2
                 eS     56 41.05
HYA      1.02  31 iP     56 33.90   0.2
                 eS     56 48.00
KMY      1.09 176 iP     56 34.92   0.1
                 eS     56 49.91
MOL      2.57  26 eP     56 56.40  -0.3
                 eS     57 21.90
NRA0     3.22  79 eP     57 05.60  -0.3
                 iSg    57 52.70
     S.D. = 0.3  on   7 of   7 obs.
-----------------------------------------
*  JUN  13, 1989  12h 17m 38.69± 1.01s
   39.581 N ± 7.9km   20.525 E ±11.1km
   DEPTH =  10.0km  (geophysicist)
 GREECE-ALBANIA BORDER REGION     (392)

LSK      0.57   6 iPgd   17 49.00  -1.3
KBN      1.06  12 ePg    18 03.50   4.8X
VLO      1.19 319 ePg    18 01.70   0.9
KZN      1.20  52 eP     18 01.80   0.7
BERA     1.20 339 iPgd   18 00.50  -0.6
VLS      1.40 178 eP     18 04.00  -0.3
TIR      1.83 344 ePg    18 13.50   3.0X
PHP      2.11 358 iPnc   18 15 00   0 6
VAY      2.34  41 iPn    18 07.40 -10 3X
PLG      2.38  70 eP     18 23.50   5 1X
SKO      2.49  16 ePn    18 14.50  -5.4X
     S.D. = 1.1  on   6 of  11 obs.
-----------------------------------------
&  JUN  13, 1989  12h 20m 32.12s
   61.703 N          151.588 W
   DEPTH =  92.8km
 SOUTHERN ALASKA                  (  2)
     <AGS-P>.

SKT      0.28   6 eP     20 45.68  -0.3
                 S      20 56.02
CGLM     0.44 207 iP     20 46.33  -0.7
                 S      20 57.21
SUA      0.47 120 iP     20 47.27   0.0
                 S      20 57.84
PWA      0.82  93 eP     20 50 19  -0.1
                 S      21 04.34
RDT      1.20 200 eP     20 54.12  -0.6
                 S      21 11.32
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GHO      1.27  86 eP     20 54 67   -0.9
                 S      21 12 51
SLKM     1.37 150 eP     20 56.28   -0.5
RED      1.41 205 iP     20 56.72   -0.6
                 S      21 15.32
KNK      1.53 100 eP     20 57.69   -1.1
                 S      21 17.60
ILIM     1.76 203 iP     21 00.93   -0.9
KTH      1.88   9 eP     21 02.99   -0.5
       11 obs. associated
-----------------------------------------
   JUN 13, 1989  12h 29m 05.39± 0.73s
   42.490 N ± 7.4km   24.260 E ± 9.3km
   DEPTH =  10.0km  (geophysicist)
 BULGARIA                          (359)

RDO      1.65 144 ePn    29 36.00    1.6
                 eSn    29 59.50
VAY      1.72 228 ePn    29 35.00   -0.5
SKO      2.16 257 iPn    29 42.70    0.8
PLG      2.20 196 ePn    29 42.00   -0.5
OHR      2.93 243 ePn    30 02.80    9.9X
EZN      3.08 149 eP     29 54.00   -1.0
MLR      3.24  21 ePd    29 57.50    0.2
BZS      3.66 330 ePc    29 57.00   -6.2X
VRI      3.82  27 ePd    30 05.00   -0.5
     S.D. = 1.1  on   7 of   9 obs.
-----------------------------------------
* JUN 13, 1989  12h 29m 21.22± 1.67s
   3.851 S ± 9.8km  138.517 E ± 8.4km
   DEPTH = 106.2 ± 17.3 km
   4.5mb (  5 obs.)
 WEST IRIAN                        (201)

MNDI     5.61 114 eP     30 45.00    1.1
LAT      8.89 109 eP     31 28.00   -0.6
PMG     10.20 123 eP     31 45.50   -0.6
        1.0s   240.00nm          6.0mb X
MTN     11.54 219 iPc    32 04.20    0.2
                 eS     34 11.00
KNA     15.22 218 eP     32 52.80    1.1
        0.3s    50.00nm          5.2mb
                 eS     35 34.00
WB5     16.44 194 eP     33 05.80   -1.2
                 iS     35 59.00
WRA     16.51 194 Pc     33 06.10   -1.7
        0.2s    3.90nm           4.3mb
QIS     16.64 176 iPd    33 08.60   -0.9
                 eS     36 04.00
CTA     17.81 156 iPc    33 24.80    0.9
        1.5s   211.11nm          5.2mb X
PCI     18.89 278 iPc    33 41.00    4.8X
        1.0s    4.50nm           3.7mb
ASPA    20.20 192 iPd    33 50.80    0.9
        0.6s    48.00nm          5.0mb X
                 eS     37 29.50
VSG     21.72 105 eP     34 03.00   -2.2
HNR     21.99 106 e(P)   34 09.00    1.2
RMQ     24.55 157 eP     34 34.00    1.4
                 e      34 48.00
WARB    24.95 206 eP     34 26.00  -10.3X
        0.3s    7.00nm
                 e      34 50.00
                 eS     39 10.00
MBL     25.02 225 eP     34 40 50    3.6X
        0.4s    12.00nm          4.7mb
BRS     27.08 151 iPc    34 57.10    1.2
FORR    28.60 199 eP     35 09 00   -0.4
CHJJ    39.69   1 P      36 44.20   -0.4
NIIJ    40.88   1 P      36 54.80    0.5
GBA     63.03 287 Pc     39 39.80    0.2
        0.9s    5.20nm           4.5mb
HFS    110.05 334 ePdiff 43 31.80   -8.4X
        0.3s    1.40nm
LPB    146.80 128 PKP    48 51.00   -1.0
                 e      49 44.00
     S.D. = 1.2  on  19 of  23 obs.
-----------------------------------------
   JUN 13, 1989  13h 16m 06.99± 0.69s
   35.599 N ± 8.8km   27.233 E ± 6.6km
   DEPTH =  21.5 ±  7.1 km
 DODECANESE ISLANDS                (369)
     MD 4.0 (ATH).

KAP      0.07 225 ePb    16 11 00    0.0
NPS      1.37 256 ePn    16 30 00   -0.9
YER      1.75  29 iPn    16 35 10   -1.4
KSL      1.98  74 ePn    16 41.60    1.9
ELL      2.45  61 iPn    16 48.10    1.5
VAM      2.48 266 ePn    16 48.00    1.1
IZM      2.79   0 ePn    16 51.80    0.4
BCK      3.28  55 ePn    16 58.20   -0.1
KHL      3.28  33 iPn    16 57.30   -1.0
HRI      7.40 106 ePd    17 55.00   -1.6
DSI      7.90 118 eP     18 03.00   -0.3
                 eS     19 32.00
MBH      8.68 130 iPd    18 14.50    0.3
     S.D. = 1.3  on  12 of  12 obs.
-----------------------------------------
   JUN 13, 1989  13h 44m 01.20± 0.97s
   42.787 N ± 5.3km   12.728 E ±10.3km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                     (381)
     MD 2.5 (SSO), 2.2 (ROM).

ASS      0.29 350 P      44 07.40    0.1
                 eSg    44 11.20
MNS      0.40 185 Pc     44 09.00   -0.5
                 eSg    44 14.60
CIO      0.51  37 iPg    44 11.40   -0.1
                 iSg    44 20.06
ALP      0.62  90 ePg    44 13.08   -0.8
                 eSg    44 22.85
AQU      0.66 131 P      44 15.50    1.1
                 eSg    44 25.00
ARV      0.73  12 P      44 15.70    0.2
                 eSg    44 26.30
     S.D. = 0.8  on   6 of   6 obs.
-----------------------------------------
* JUN 13, 1989  14h 49m 38.03± 0.76s
   47.046 N ± 5.8km    9.154 E ± 8.1km
   DEPTH =  10.0km  (geophysicist)
 GERMANY                           (543)

LLS      0.21 211 iPd    49 42.80    0.1
SAX      0.24  32 iPd    49 43.50    0.1
VDL      0.60 159 iPc    49 50.20   -0.1
OSS      0.77 118 iPc    49 53.10    0.0
SLE      0.85 328 iPc    49 54.30   -0.1
     S.D. = 0.2  on   5 of   5 obs.
-----------------------------------------
? JUN 13, 1989  15h 14m 26.18± 1.97s
   12.779 N ±25.5km   49.294 E ±16.3km
   DEPTH =  10.0km  (geophysicist)
   4.6mb (  4 obs.)
 EASTERN GULF OF ADEN              (415)

IR4     22.41   3 eP     19 26.40   -0.2
IR1     22 57   3 eP     19 27.70   -0.5
IR2     22.83   3 eP     19 31.00    0.3
IR7     22.86   3 eP     19 30.50   -0.4
MAIO    25.16  20 eP     19 54.00    0.8
GKN     36.27  60 PKP    21 32.00    0.1
DMN     36.55  61 PKP    21 34.40    0.0
        0.4s    4.00nm           4.6mb
KKN     36.75  60 PKP    21 36.00   -0.1
        1.0s   29.00nm           5.0mb
PKI     36.80  61 PKP    21 36.40   -0.2
HFS     54.04 339 eP     23 52.60   -0.1
        0.6s    3.20nm           4.5mb
NAO     55.54 338 P      24 04.00    0.3
        0.9s    2.20nm           4.2mb
     S.D  = 0.4  on  11 of  11 obs
-----------------------------------------
& JUN 13, 1989  16h 04m 40.03s
   63.129 N          150.763 W
   DEPTH = 114.0km
 CENTRAL ALASKA                    (  1)
     <AGS-P>.

KTH      0.43 351 iP     04 57.21    0.0
                 S      05 09.89
MCK      1.02  53 iP     05 01.93   -0.2
                 S      05 18.46
SKT      1.21 197 iP     05 03.03   -1.1
                 S      05 21.56
PWA      1.54 164 eP     05 07.50   -0.4
SUA      1.67 180 eP     05 08.98   -0.7
                 S      05 32.98
PME      1.71 151 eP     05 08.91   -1.1
CCB      2 01  39 iP     05 13.03   -0 7
RDS      2 06  33 eP     05 13.72   -0 7
HDA      2 12  51 iP     05 14 35   -0 9
                 S      05 42.73
TOA      2 36 114 eP     05 18.03   -0 4
                 S      05 44.72
GLM      2.38  37 iP     05 18.03   -0 7
TTA      2.40 268 eP     05 17.36   -1.6
PAX      2.42  91 iP     05 18.89   -0.3
                 S      05 48.63
SLKM     2.64 174 eP     05 20.83   -1.3
GLI      2.84 141 eP     05 22.74   -2.0
                 S      05 57.24
VZW      2.87 135 eP     05 23.42   -1.7
FID      3.13 138 eP     05 26.66   -1.9
GLB      3.66 114 eP     05 34.14   -1.7
       18 obs. associated
-----------------------------------------
   JUN 13, 1989  17h 49m 40.57± 0.14s
   3.670 S ± 2.7km  140.139 E ± 3.4km
   DEPTH =  71.2km  (  5 depth phoses)
   5.4mb ( 17 obs.)
 WEST IRIAN                        (201)
     CENTROID, MOMENT TENSOR       (HRV)
     Data Used: GDSN
     L.P.B.: 16S, 27C
     Centroid Location:
     Origin Time        17:49:45.5 0.3
     Lat  3.64S 0.02 Lon 140.10E 0.04
     Dep  65.9 3.8 Half-durotion  2.3
     Moment Tensor;   Scale 10**17 Nm
       Mrr=-2.13 0.06  Mtt= 0.89 0.08
       Mff= 1.24 0.11  Mrt=-0.64 0.09
       Mrf= 1.20 0.09  Mtf=-1.36 0.08
      Principal Axes:
       T  Val=  2.80  Plg=15  Azm=230
       N       -0.27     7      322
       P       -2.53    73       76
     Best Double Couple:Mo=2.7*10**17
      NP1:Strike=310 Dip=31 Slip=-104
      NP2:       146    60      -82

MNDI     4 29 125 eP     50 46.00    0.9
LAT      7.45 114 eP     51 29.00    0.2
PMG      9.00 130 eP     51 48.50   -1.7
        1.0s   600.00nm          6.4mb
LMG      9.51 124 eP     51 58.50    1.2
RAB     12.01  93 iPc    52 31.00    0.1
        0.6s   586.67nm          6.7mb X
                 iS     52 51.80
MTN     12.75 224 eP     52 40.00   -0.6
MNI     16.11 288 ePd    53 26.00    1.8
KNA     16.41 222 eP     53 27.70   -0.2
                 eS     56 20.00
QIS     16.79 182 iPc    53 30.60   -2.1
                 eS     56 34.00
WB5     17.07 199 eP     53 34.80   -1.3
CTA     17.37 160 iPc    53 42.40    2.5
        0.9s   103.78nm          5.0mb
                 i      53 57.40
                 i      54 13.00
                 e      54 30.50
                 iS     56 55.00
GUA     17.74  15 eP     53 47.00    2.6
        0.7s   147.95nm          5.3mb
GUMO    17.78  15 eP     53 46.50    1.6
PJG     17.78  15 eP     53 47.00    2.1
DAV     18.04 306 eP     53 51.00    2.9X
VSG     20.22 107 eP     54 10.00   -2.4
SVO     20 29 107 eP     54 14.00    0 9
PCI     20 47 277 iPc    54 19.60    4 7X
HNR     20.49 107 eP     54 12.00   -3.1X
                 eS     57 56.00
ASPA    20.77 196 iPc    54 18.20    0.1
        0.9s  2058.00nm          6.5mb
      Z 21s     7.06um          5.0Msz
                 eS     58 04.60
                 LR     02 29.80
RMQ     24.14 161 iPc    54 52.40    1.2
                 e      54 54.00
                 e      55 07.00
                 e      58 44.00
KHKI    24.83 258 eP     54 57.50   -0.3
                 e      02 27.20
WARB    25.86 209 iPd    54 57.20  -10.2X
        0.4s    63.00nm
MBL     26.31 227 eP     55 12.00    0.5
BRS     26 50 154 iPc    55 14.00    0.8
                 i      55 30.70
                 i      55 57.00
BAG     27 78 316 eP     55 24.00   -1.2
```

13d 17h

STK 28.10 177 eP 55 28.00 0.4
e 55 42.60
e 56 03.00
CMS 28.18 170 e(P) 55 27.00 -1.4
e 55 52.00
e 56 16.00
e 00 39.00
COO 28.97 159 eP 55 35.00 -0.7
e 55 52.00
FORR 29.33 201 eP 55 38.20 -0.5
0.4s 60.00nm 5.6mb
MEKA 30.80 220 eP 55 52.10 0.3
PVC 30.94 119 iPc 55 54.00 0.8
ADE 31.17 182 eP 55 54.20 -0.8
0.8s 50.75nm 5.3mb
DZM 31.39 128 iPc 55 56.40 -0.8
TPI 32.45 271 ePc 56 08.80 2.4
e 00 00.00
COOL 32.46 211 eP 56 06.00 -0.3
CNB 32.63 166 eP 56 08.00 0.2
e 03 28.00
BFD 33.42 177 eP 56 14.00 -0.5
e 56 58.00
e 57 30.00
ANP 33.90 329 e(P) 56 20.00 1.0
TOO 34.09 172 eP 56 22.00 1.6
e 02 43.00
MRWA 34.21 219 eP 56 21.70 0.2
0.3s 9.00nm 5.2mb
BAL 34.75 217 eP 56 27.00 0.9
KLB 34.85 215 eP 56 27.00 0.1
QZH 35.31 325 eP 56 30.00 -0.9
Z 32s 1.60um 4.6MszX
eS 02 00.00
MUN 36.03 216 eP 56 37.00 0.1
NWAO 36.14 214 eP 56 39.00 1.1
KUMJ 37.07 347 eP 56 45.80 0.2
RKG 37.13 213 eP 56 52.00 5.9X
KGM 37.23 278 ePc 56 50.00 2.7
QIZ 37.39 308 P 56 48.40 0.0
eS 02 30.00
KSI 37.47 269 ePc 56 49.50 0.3
e 59 50.00
SHK 38.64 350 eP 56 58.70 -0.1
SSE 39.01 334 Pc 57 02.00 0.1
0.8s 70.00nm 5.6mb
Z 20s 0.30um 4.1Msz
pP 57 13.50 42kmX
e(S) 02 54.00
TSRJ 39.19 355 P 57 03.60 0.2
CHJJ 39.52 359 P 57 04.90 -1.2
TAU 39.59 172 eP 57 04.00 -2.6
KAKJ 39.67 0 P 57 06.10 -1.1
IPM 39.93 282 ePd 57 10.90 1.1
0.5s 42.00nm 5.6mb
e 57 28.90
MTMJ 40.11 357 P 57 09.80 -1.2
VUN 40.13 114 ePd 57 12.30 1.0
NIIJ 40.71 359 P 57 15.30 -0.5
NJ2 40.88 332 Pd 57 18.00 0.7
Z 22s 0.50um 4.3Msz
pP 57 36.00 73km
sP 57 47.00
S 03 24.00
WHN 42.00 326 eP 57 27.50 1.0
eS 03 40.00
NNT 43.27 293 iPc 57 37.20 0.1
NST 44.00 297 eP 57 44.00 1.0
GYA 44.11 315 P 57 44.60 0.7
PcP 59 28.00
S 04 14.00
TIA 45.13 334 Pc 57 52.10 0.3
Z 32s 1.20um 4.6MszX
N 35s 1.10um
eS 04 23.00
BDT 45.61 298 eP 57 56.40 0.6
DL2 45.68 340 P 57 56.00 -0.1
Z 28s 0.44um 4.3MszX
eS 04 34.00
MRRJ 45.89 1 eP 57 56.70 -0.9
HOOJ 45.93 3 P 57 54.80 -3.1X
KMI 46.22 310 Pd- 58 01.50 0.6
Z 32s 1.60um 4.8MszX
pP 58 11.00 32kmX
S 04 41.00
CHG 46.30 300 iPd 58 01.40 0.1
1.0s 31.50nm 5.2mb

KUSJ 46.73 5 eP 58 03.50 -0.8
KRP 46.98 141 P 58 08.00 1.6
MSZ 47.58 153 (P) 58 12.60 1.6
ASAJ 47.62 2 eP 58 11.10 -0.2
XAN 47.68 324 Pd 58 11.50 -0.5
SNY 47.73 343 iPd 58 12.00 -0.1
Z 27s 1.00um 4.7MszX
N 30s 0.90um
S 05 00.00
TCW 48.32 145 P 58 16.90 0.1
TIY 48.55 331 Pd 58 18.50 -0.1
Z 34s 0.87um 4.5MszX
N 18s 0.60um
sP 58 49.00
S 05 10.00
CAW 48.71 145 eP 58 18.90 -0.9
BJI 48.75 335 eP 58 19.50 -0.5
Z 36s 1.29um 4.7MszX
epP 58 37.00 69km
WDW 48.77 145 eP 58 19.30 -0.9
CD2 48.85 317 P 58 21.40 0.3
MTW 48.99 145 Pc 58 21.40 -0.5
MDJ 48.99 350 eP 58 21.80 -0.1
Z 28s 0.70um 4.5MszX
eS 05 23.00
CN2 49.07 346 iPd 58 22.00 -0.5
4.0s 0.40nm 2.8mb X
Z 20s 0.80um 4.7Msz
pP 58 40.50 74km
sP 58 49.00
PcP 59 43.50
PP 00 14.00
S 05 20.00
sS 05 51.00
SS 08 46.00
PGZ 49.10 144 P 58 22.50 -0.2
HHC 51.43 332 eP 58 40.50 -0.2
Z 30s 1.30um 4.8MszX
E 10s 0.30um
BTO 51.97 331 P 58 44.50 -0.2
sP 59 05.00
S 06 04.00
SHL 55.05 305 iP 59 07.60 -0.2
eS 06 52.00
GTA 56.69 323 iPd 59 18.80 -0.5
LSA 57.42 309 Pd 59 24.20 -0.8
PKI 61.17 304 P 59 50.60 -0.1
KKN 61.35 304 P 59 51.80 -0.1
1.0s 54.00nm 5.6mb
DMN 61.43 304 P 59 52.60 0.2
GKN 61.96 304 P 59 55.20 -0.7
DRV 62.88 180 eP 00 01.20 0.2
SMY 63.07 22 eP 00 02.60 0.1
e 02 23.20
HYB 64.25 291 eP 00 10.00 -0.9
e 00 41.00
GBA 64.52 287 Pd 00 11.30 -1.3
0.6s 19.80nm 5.2mb
ADK 66.35 28 ePd 00 23.40 -0.3
1.0s 135.00nm 5.8mb
WMQ 66.64 321 Pd 00 25.80 -0.1
pP 00 43.90 68km
S 09 06.00
NDI 68.36 303 eP 00 36.00 -0.9
POO 68.86 291 eP 00 38.00 -2.2
PMO 71.64 105 iP 01 16.00 19.0X
0.9s 30.00nm
VAH 71.90 105 iP 01 17.60 19.0X
0.9s 20.00nm
TPT 71.91 104 iP 01 17.60 19.0X
0.9s 30.00nm
RUV 72.14 105 iP 01 18.90 18.9X
0.9s 20.00nm
KSH 72.75 313 eP 01 04.50 1.1
SBA 75.46 174 Pd 01 20.60 2.5
SDN 76.21 30 eP 01 22.40 -0.3
QUE 77.40 302 eP 01 30.90 0.7
eS 11 17.00
KDC 81.24 30 eP 01 51.00 1.0
e 02 10.20
TTA 81.68 25 Pd 01 52.70 0.4
e 02 12.80
IMA 83.90 22 ePd 02 04.10 0.4
1.0s 22.50nm 5.1mb
PMR 84.17 27 iPd 02 04.20 -0.7
0.9s 59.38nm 5.6mb
MAIO 84.63 307 iPd 02 09.00 1.0

i 02 27.00
eS 12 32.00
BRW 85.10 17 ePd 02 10.20 0.7
e 02 29.80
FBA 85.78 24 eP 02 12.00 -1.0
IR4 91.47 305 eP 02 41.50 0.7
IR2 91.50 305 eP 02 41.00 0.1
IR1 91.65 305 eP 02 41.90 0.3
IR7 91.74 305 eP 02 42.20 0.2
INK 92.03 22 eP 02 42.00 -0.4
pP 03 02.00 72km
MBC 96.04 14 eP 03 00.00 -0.8
WDC 97.94 50 iPc 03 10.70 0.7
MIN 98.66 50 ePc 03 21.00 7.5X
PNT 99.45 41 eP 03 36.00 19.2X
CMB 99.72 52 ePc 03 11.40 -6.9X
YKA 100.27 27 ePdiff03 21.70 1.6
DPW 100.53 42 Pdiff 03 30.00 8.3X
ALE 100.61 3 ePdiff03 21.00 -0.3
0.6s 4.00nm 5.2mb
KEV 101.31 341 ePdiff03 22.00 -2.6
KVN 101.44 51 ePdiff03 26.30 0.1
e 19 58.00
SNA 102.03 192 e(Pdif03 24.90 -2.8X
SOD 102.28 339 iPdiff03 27.90 -1.0
SUF 104.09 334 ePdiff03 36.00 -1.1
0.8s 4.00nm 5.4mb
RSSD 110.93 44 iPKP 08 10.00 2.2
ALQ 111.22 54 e(PKP)08 17.50 8.9X
RSON 114.98 34 PKP 08 14.00 -1.1
0.9s 12.60nm
KHC 116.00 324 ePKP 08 17.50 0.4
FRB 116.51 14 ePKP 08 17.00 -0.5
TUL 119.40 51 e(PKP)08 22.80 -1.1
1.0s 4.70nm
BSF 120.57 325 ePKP 08 25.10 -0.8
0.8s 5.30nm
HAU 120.72 326 ePKP 08 25.40 -0.7
0.8s 5.30nm
BNG 121.75 273 iPKPc 08 29.30 0.2
0.6s 7.00nm
LPG 121.83 323 ePKP 08 28.10 -0.5
0.7s 3.30nm
SBF 122.24 321 ePKP 08 28.40 -0.8
LOR 122.53 326 ePKP 08 29.10 -0.4
SSF 122.85 326 ePKP 08 30.00 -0.1
FRF 122.89 321 ePKP 08 29.80 -0.5
0.8s 5.30nm
SMF 122.90 325 ePKP 08 29.80 -0.4
0.9s 6.50nm
LMR 123.09 321 ePKP 08 30.10 -0.6
AVF 123.09 326 ePKP 08 29.90 -0.7
LRG 123.12 321 ePKP 08 30.40 -0.3
BGF 123.51 326 ePKP 08 31.10 -0.4
0.9s 9.80nm
MAF 123.86 326 ePKP 08 31.80 -0.4
FLN 123.92 330 ePKP 08 31.80 -0.4
TCF 124.02 326 ePKP 08 32.20 -0.3
0.8s 6.70nm
LSF 124.43 326 ePKP 08 32.60 -0.7
0.7s 4.40nm
LPF 124.68 329 ePKP 08 33.10 -0.5
0.9s 17.60nm
CAF 124.91 325 ePKP 08 34.00 -0.3
0.9s 4.90nm
RJF 125.00 325 ePKP 08 33.30 -1.1
MFF 125.13 327 ePKP 08 34.00 -0.6
LPO 125.55 325 ePKP 08 34.90 -0.6
0.8s 8.00nm
LFF 125.66 325 ePKP 08 34.80 -0.9
ARE 142.88 123 ePKP 09 07.00 -2.0
KIC 144.92 276 PKP 09 12.06 -0.2
0.8s 65.50nm
TIC 145.18 276 PKP 09 12.78 0.1
LIC 145.21 276 PKP 09 12.86 0.2
CFTV 145.26 318 iPKPd 09 12.60 0.1
CNCB 145.56 127 iPKPd 09 15.90 2.0
LPB 145.62 127 PKP 09 16.40 2.5
1.2s 406.25nm
eLR 19 17.00
ZOBO 145.75 126 PKP 09 15.00 0.7
BOG 145.87 87 e(PKP)09 18.00 3.7X
GGC 146.48 319 ePKP 09 17.50 3.0X
BMG 146.77 83 iPKPc 09 17.00 1.6
ITB7 148.18 155 ePKP 09 21.30 4.0X
ITB1 148.51 154 ePKP 09 22.40 4.7X
SDV 148.99 79 ePKP 09 17.80 -1.3

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TOV    149.68   77 ePKP  09 24.70   4.8X
FISA   149.84   74 ePKP  09 25.00   4.9X
PPD    152.11  157 ePKP  09 29.60   6.3X
                   e     09 31.10
                   epPKP 09 40.40
OLLA   152.53   75 ePKP  09 30.50   6.3X
VAO    152.60  166 ePKP  09 33.20   9.2X
                   e     09 42.70
SOB1   167.16  175 ePKP  09 40.90   0.7
                   e     09 56.00
                   e     10 45.80
ITR    167.57  187 ePKP  09 36.90  -3.5X
                   e     10 49.00
      S.D. = 1.0  on 163 of 189 obs.
-------------------------------------
   JUN 13, 1989  18h 19m 03.02± 0.72s
   42.596 N ± 5.6km   13.078 E ± 6.9km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                    (381)
      MD 2.3 (ROM), 2.3 (SSO).

MNS      0.36  234 Pc     19 10.10  -0.4
                   eSg    19 14.00
ALP      0.41   63 iPgc   19 10.62  -0.8
                   iSg    19 16.96
ASS      0.56  327 P      19 14.00  -0.5
                   eSg    19 22.50
CIO      0.60    5 e(Pg)  19 15.12  -0.1
                   eSg    19 24.08
ARV      0.91  354 P      19 21.50   1.1
                   eSg    19 33.40
AOI      1.03   22 e(Pg)  19 22.55   0.1
                   eSg    19 40.06
SDI      1.05  148 P      19 23.40   0.6
                   eSg    19 37.20
      S.D. = 0.8  on  7 of  7 obs.
-------------------------------------
*  JUN 13, 1989  18h 40m 34.26± 1.04s
   19.815 N ±10.7km   71.140 W ±10.7km
   DEPTH =  10.0km  (geophysicist)
 DOMINICAN REPUBLIC REGION        ( 88)

APR      4.38  107 P      41 43.30   0.9
PNP      4.57  112 P      41 44.50  -0.5
CSB      4.95  107 P      41 50.00  -0.5
OLLA    10.60  156 eP     43 09.50   0.1
SDV     10.88  177 eP     43 13.00  -0.3
UPA     13.49  218 ePc    43 43.30  -4.9X
        0.4s     15.25nm          5.3mb X
     Z  20s      0.21um
ZOBO    35.98  175 eP     47 41.00   3.0X
CNCB    36.53  175 P      47 43.00   0.4
MBC     61.49  348 eP     50 53.00  -0.1
        0.8s      4.00nm          4.6mb
      S.D. = 0.6  on  7 of  9 obs.
-------------------------------------
*  JUN 13, 1989  19h 19m 33.45± 0.69s
   26.533 N ± 8.6km  129.379 E ±10.9km
   DEPTH =  33.0km  (normal)
   4.5mb (  7 obs.)
 RYUKYU ISLANDS                   (238)

KAGJ     4.82   16 eP     20 44.50  -1.1
                   eS     21 36.30
KUMJ     6.11   12 P      21 03 70  -0.2
                   eS     22 08 50
SSE      8.50  304 eP     21 34 70  -2 5
     Z  16s      0.30um
BJI     17.39  324 eP     23 36.00   1.0
     Z  12s      0.30um
GUN     38.56  282 P      26 56.00   0.6
        0.4s      9.00nm          4.9mb
PKI     39.02  282 P      26 59.20   0.0
        0.4s      5.00nm          4.6mb
KKN     39.10  282 P      26 59.80   0.0
        0.8s     18.00nm          4.9mb
DMN     39.28  282 P      27 02.20   0.9
GKN     39.63  283 P      27 04.20   0.1
WB5     46.39  174 eP     27 57.80  -0.8
WRA     46.45  174 Pc     27 58.60  -0.5
        0.5s      1.70nm          4.3mb
MBC     69.29   14 eP     30 40.00   1.0
        0.5s      2.00nm          4 4mb
SUF     72.55  332 eP     31 00.00   1.2
NUR     74.13  330 eP     31 03.00  -5.0X
HFS     79.03  333 eP     31 36.20   0.7
        0.7s      2.90nm          4 4mb

NAO     79.77  334 P      31 39.00  -0.5
        0.7s      1.60nm          4.1mb
FRB     88.92    8 eP     32 33.00   7.5X
      S.D. = 1.1  on  15 of  17 obs.
-------------------------------------
*  JUN 13, 1989  19h 52m 21.95± 1.57s
     9.452 S ± 9.4km  124.256 E ±14.0km
   DEPTH = 117.9 ± 21.1 km
   4.6mb (  2 obs.)
 TIMOR                            (289)

MTN      7.54  117 iPc    54 12.50   1.7
                   eS     55 35.00
KNA      7.65  145 eP     54 11.40  -0.9
                   eS     55 33.00
PCI      9.56  332 ePd    54 39.00   1.0
MBL     12.40  200 eP     55 14.30  -1.2
                   eS     57 23.00
WB5     14.25  138 iPc    55 37.60  -1.9
                   iS     58 08.30
WRA     14.27  138 Pc     55 38.20  -1.7
        0.3s      6.10nm          4.3mb
WARB    16.79  173 eP     56 00.00 -11.5X
        0.3s      5.00nm
                   eS     58 57.00
ASPA    16.88  148 iPd    56 13.60   1.1
        0.6s     58.00nm          5.0mb X
                   eS     59 13.00
MEKA    17.91  197 eP     56 25.30   0.2
                   eS     59 28.00
QIS     18.47  128 eP     56 35.00   3.5X
                   eS     59 48.00
MRWA    21.13  200 eP     57 00.00   1.0
                   eS     00 44.00
FORR    21.59  171 eP     57 06.00   2.6
        0.4s     17.00nm          4.8mb
                   eS     01 00.00
CHG     37.58  318 eP     59 27.30   0.5
GUN     52.52  316 P      01 25.40  -0.3
        0.6s     40.00nm          5.5mb X
PKI     52.63  316 P      01 26.00  -0.5
KKN     52.85  316 P      01 27.40  -0.6
        0.6s     19.00nm          5.2mb X
DMN     52.86  315 P      01 27.70  -0.4
        0.4s     11.00nm          5.2mb X
GKN     53.43  315 P      01 31.60  -0.6
        0.6s     26.00nm          5.4mb X
      S.D. = 1.4  on  16 of  18 obs.
-------------------------------------
   JUN 13, 1989  22h 31m 23.11± 0.71s
   61.822 N ± 7.7km    7.448 E ± 8.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                  (535)
      MD 2.0 (BER).

MOL      0.75    4 iP     31 37.64  -0.2
                   eS     31 47.09
HYA      0.89  223 iP     31 38.61  -1.6
                   eS     31 51.20
SUE      1 50  240 eP     31 50.20   0.2
                   eS     32 09.57
ASK      1 73  220 iP     31 53.11  -0.3
                   eS     32 14.00
BER      1 77  216 iP+    31 54.14   0.2
                   eS     32 15.90
RGS      1 84   48 eP     31 55.70   0.8
                   eS     32 18.50
ODD1     1 96  192 eP     31 56.10  -0.6
                   eS     32 22.02
NRA0     2.26  117 iPg    32 01.90   0.9
                   iS     32 25.80
BLS1     2.46  187 eP     32 05.04   1.1
                   iS     32 34.70
KMY      2.84  204 eP     32 10.90   1.7
                   eS     32 39.11
APO      3.39  109 eP     32 15.10  -2.0
        0.2s      0.70nm
      S.D. = 1.3  on  11 of  11 obs.
-------------------------------------
&  JUN 13, 1989  22h 50m 20.03s
   61.816 N          151.155 W
   DEPTH =  67.8km
 SOUTHERN ALASKA                  (  2)
      <AGS-P>.

SKT      0.24  313 iP     50 30.52  -0.3
SUA      0.40  151 iP     50 31.87  -0.2

PWA      0.63  105 eP     50 33.83  -0.3
                   S      50 44.32
CGLM     0.65  219 eP     50 34.27  -0.3
SPU      0.77  215 iP     50 35.41  -0.5
PME      1.03  100 iP     50 38.77  -0.3
                   S      50 52.75
GHO      1.06   91 eP     50 39.34  -0.2
                   S      50 54.17
KNK      1.35  106 iP     50 42.80  -0.6
                   S      51 00.83
RDT      1.39  206 iP     50 43.44  -0.4
                   S      51 01.63
SLKM     1.39  161 eP     50 42.43  -1.4
                   S      51 02.44
RED      1.61  210 eP     50 46.75  -0.1
      11 obs. associated
-------------------------------------
*  JUN 13, 1989  22h 59m 33.41± 0.55s
   43.342 S ±10.6km   38.969 E ±12.5km
   DEPTH =  10.0km  (geophysicist)
   5.0mb (  9 obs.)  5.0Msz (  1 obs.)
 PRINCE EDWARD ISLANDS REGION     (431)
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 17S, 38C
      Centroid Location:
      Origin Time        22:59:39.0 0.4
      Lat 43.21S 0.04 Lon  39.49E 0.05
      Dep  15.0 FIX Half-duration  2.3
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.21 0.05  Mtt= 1.16 0.07
        Mff=-0.96 0.06  Mrt=-0.38 0.21
        Mrf=-0.26 0.18  Mtf= 2.01 0.06
       Principal Axes:
        T  Val=  2.46  Plg=10  Azm=149
        N       -0.28       80       335
        P       -2.17        1       239
      Best Double Couple:Mo=2.3*10**17
       NP1:Strike=284 Dip=82 Slip=   6
       NP2:       194      84      172

FRS     17.41  317 eP     03 38.70   0.8
        1.0s    100.00nm          4.9mb
                   i      03 42.00
PRY     18.85  327 eP     03 55.50  -0.4
        1.0s     40.00nm          4.6mb
BFS     19.16  325 iPc    03 57.50  -2.1
        1.0s    200.00nm          5.3mb
SLR     19.62  330 iPc    04 04.30  -0.8
        1.2s     89.06nm          4.9mb
     Z  20s      10.99um
BUL     24.71  336 iPd    04 54.70  -1.4
        1.0s     74.00nm          5.3mb
                   ipP    05 05.80  43kmX
SNA     33.98  204 iPc    06 18.30  -0.4
        1.1s     37.97nm          5.2mb
NAI     41.93  357 iPd    07 28.00   2.0
        1.0s      6.00nm          4.3mb
BNG     51.01  333 iPc    08 37.00  -0.6
        0.9s     34.00nm          5.3mb
                   id     10 38.70
                   ic     16 06.00
                   id     17 19.30
                   id     19 05.00
                   ic     23 06.50
SBA     54.99  168 (P)    09 06.40  -0 1
KIC     63 33  310 P      10 05.60   0 7
LIC     63.38  309 P      10 06.00   0.8
     Z  22s      1.25um          5.0Msz
                   S      18 55.00
TIC     63.72  310 P      10 08.30   0.8
GBA     66.70   41 Pd     10 24.80  -1.8
        1.1s      6.90nm          4.8mb
MBH     72.85  356 eP     11 06.00   2.0
PRNI    73.42  356 eP     11 09.00   1.7
QUE     77.54   25 eP     11 32.00   0.9
ASPA    77.56  111 eP     11 41.50  10.2X
        1.5s     31.00nm
     Z  22s      1.20um          5.2MszX
                   LR     38 30.90
WB5     80.41  108 eP     11 56.40   9.6X
TAB     81.30    6 eP     11 52.00   0.9
DMN     82.34   40 PKP    11 57.50   0.6
PKI     82.45   40 PKP    11 56.80  -0.7
GKN     82.45   40 PKP    11 56.80  -0.5
KKN     82.57   40 PKP    11 57.40  -0.6
CHG     82.73   56 eP     12 09.80  11.0X
```

13d 23h

GUN	82 96 41	PKP	11 59 60	-0 6		
HRT	84 20 353	eP	12 03.00	-2 8		
VAY	85 56 348	eP	12 14.00	1 5		
OHR	85.65 346	eP	12 14.30	1.2		
	1.3s	0.05nm		2 5mb X		
SKO	86.38 347	iP	12 17.50	0.9		
MLR	89.20 351	ePc	12 31.00	0.7		
BZS	89.91 348	eP	12 31.00	-2 4		
CNCB	90.41 246	eP	12 37.00	-0.2		
		e	12 43.00			
LPB	90.69 246	(P)	12 47.00	8.7X		
ZOBO	90.89 247	eP	12 44.00	4.6X		
		LR	36 24.00			
SRO	92.58 346	eP	13 03.30	17.7X		
ZST	93.17 346	eP	13 05.50	17.2X		
MBC	145.72 351	ePKP	19 12.50	0.3		
	1.2s	21.00nm				
MEO	146.25 270	ePKP	19 14.00	-0.4		
	1.2s	48.80nm				
ALQ	152.06 264	e(PKP)	19 30.00	6.4X		
FFC	152.34 308	ePKP	19 29.00	5.9X		
	1.0s	12.00nm				
INK	154.66 353	ePKP	19 45.00	19.2X		
	S.D. = 1.3	on 31 of 41 obs.				

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* JUN 14, 1989 00h 16m 51.59± 0.83s
42.544 N ± 6.7km 13.111 E ± 7.0km
DEPTH = 10 0km (geophysicist)
CENTRAL ITALY (381)
MD 2.2 (SSO), 2.1 (ROM).

AQU	0.29 131	P	16 57.50	-0.1	
		eSg	17 02.40		
MNS	0.36 244	P	16 58.50	-0.4	
		eSg	17 02.70		
ALP	0.42 55	iPc	16 59.52	-0.6	
		iSg	17 05.83		
ARV	0.96 353	P	17 10.50	0.6	
		eSg	17 23.40		
SDI	0.99 148	P	17 11.00	0.6	
	S.D. = 0.8	on 5 of 5 obs.			

JUN 14, 1989 00h 17m 08.35± 0.70s
37.082 N ± 7.4km 141.072 E ± 9.0km
DEPTH = 73.5 ± 5.6 km
4.9mb (5 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Mito, Shirakawa, Onahama and Fukushima; (I JMA) at Utsunomiya.

ONA	0.19 224	iP+	17 19.20	-0.1	
		iS	17 26.70		
SHR	0.68 273	eP	17 00.00	-23.5X	
FKS	0.82 325	iPd	17 25.70	0.6	
		iS	17 37.80		
MIT	0.85 215	iP+	17 25.50	0.1	
		iS	17 37.50		
UTS	1.10 241	eP	17 30.00	1.4	
		iS	17 42.00		
KAKJ	1.13 220	P	17 28.10	-0.9	
		S	17 41.90		
YAMJ	1.36 323	iPd	17 32.90	0.9	
		S	17 50.60		
NIIJ	1.66 276	iPd	17 36.30	0.3	
		S	17 53.80		
CHJJ	1 96 239	iPd	17 39.80	-0 4	
		S	18 02.10		
OFUJ	2.05 13	iPd	17 41.90	0.6	
		S	18 05.80		
MTMJ	2.67 260	P	17 50.50	0.5	
IIDJ	3.01 239	P	17 56.20	1.5	
		S	18 30.90		
TSRJ	4.39 251	P	18 14.90	0.9	
MRRJ	5.34 360	P	18 26.50	-0 7	
		S	19 27.60		
HOOJ	5.56 17	P	18 29.50	-0.8	
		eS	19 34.10		
KUSJ	6.62 24	P	18 42.20	-2.9	
		eS	19 54.50		
ASAJ	7.13 9	P	18 50.90	-1.2	
MDJ	11.49 314	eP	19 55.80	4.3X	
TIA	19 23 275	eP	21 28.40	-1.0	
BJI	19 68 286	(P)	21 34 00	0 0	
TIY	22.73 280	Pd	22 02.50	-2.4	
GYA	30 96 260	P	23 18.40	-2 3	

WMQ	40.57 297	iPc	24 42.50	0.4	
GUN	46.88 275	P	25 33.00	-0.5	
	0.4s	17.00nm		5.3mb	
PKI	47.40 275	P	25 38.00	0.4	
KKN	47.41 276	P	25 37.00	-0.5	
	0.4s	7.00nm		4.9mb	
GKN	47.83 276	P	25 40.00	-0.7	
	0.4s	10.00nm		5.1mb	
WB5	57 01 188	eP	26 46.80	-1.9	
WRA	57.07 188	Pc	26 47.30	-1.9	
	0.9s	4.40nm		4.6mb	
SUF	67.82 333	eP	28 00.00	-0.2	
NUR	69.78 332	iP	28 13.40	1.2	
HFS	73.93 336	eP	28 39.50	2.6	
	0.4s	1.00nm		4.1mb	
CMB	74.07 54	ePc	28 39.40	1.2	
LRM	74.30 44	eP	28 40.70	1.0	
ALQ	84.77 50	e(P)	29 38.50	2.5	
ZOBO	146.90 59	PKP	36 45.00	2.1	
LPB	147.10 59	PKP	36 46.00	3.0X	
CNCB	147.37 60	PKP	36 48.00	4.3X	
	S.D. = 1.4	on 34 of 38 obs.			

JUN 14, 1989 00h 29m 00.04± 0.20s
51.488 N ± 4.9km 174.300 W ± 2.4km
DEPTH = 33.0km (normal)
5.2mb (50 obs.) 4.5Msz (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
Felt on Adak.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 00:29: 3.2 2.0
Lat 51.68N 0.18 Lan 174.12W 0.25
Dep 33.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 2.63 0.35 Mtt=-2.38 0.43
Mff=-0.24 0.37 Mrt= 2.10 0.93
Mrf= 0.54 1.06 Mtf=-1.87 0.53
Principal Axes:

T	Val= 3.40	Plg=69	Azm= 6
N	0.72	11	246
P	-4.12	18	152

Best Double Couple:Mo=3.8*10**16
NP1:Strike=225 Dip=29 Slip= 66
NP2: 71 64 102

ADK	1.54 286	iPd	29 26.10	0.7	
SMY	7.25 284	e(P)	30 50.00	3.7X	
SDN	9.10 60	eP	31 11.40	-0.6	
KDC	14.07 55	eP	32 17.80	-1.0	
SVW	14.10 40	eP	32 22.00	2.7	
TTA	15.08 33	eP	32 32.40	0.3	
PMR	17.06 44	eP	32 56.60	-0.6	
IMA	17.96 28	eP	33 09.50	0.9	
	1.1s	48.80nm		4.5mb	
FBA	19.17 35	eP	33 21.50	-1.7	
	1.0s	45.00nm		4.7mb	
BRW	21.41 15	eP	33 46.30	-0.3	
INK	25.77 34	eP	34 34.27	5.3X	
	0.5s	12.00nm		4.7mb	
MBC	32.47 21	ePc	35 28.40	-0.4	
	0.6s	13.00nm		5.0mb	
YKA	33.10 47	eP	35 37.30	2.8	
PNT	34.24 72	eP	35 45.00	0.4	
		pP	35 59.00	55kmX	
KAKJ	35.59 263	P	35 56.00	-0.1	
NIIJ	35.66 265	P	35 56.60	-0.2	
DPW	35.72 73	eP	35 58.00	0.7	
		e	36 11.00		
FHC	35.80 87	e(P)	35 58.90	0.9	
EDM	36.28 63	iPc	36 02.50	0.6	
	0.6s	81.00nm		5.8mb	
		pP	36 17.00	56kmX	
CHJJ	36.42 263	P	36 03.70	0.5	
LBFM	36.80 85	eP	36 07.40	0.8	
WDC	36.83 86	ePc	36 07.40	0.9	
MDJ	37.32 282	eP	36 09.50	-1.1	
ORV	38.07 87	e(P)	36 16.50	-0.5	
BRK	38.61 90	e(P)	36 21.30	-0.2	
PCC	38.76 90	e(P)	36 22.30	-0.5	
SES	38.77 66	ePc	36 22.00	-0.8	
MHC	39.32 90	e(P)	36 27 80	0 1	
ARN	39.38 90	eP	36 28 50	0 4	
		e	36 42 00		
CMB	39.68 88	ePc	36 31 50	1 0	

PRS	40.12 91	e(P)	36 34.10	0.0	
LRM	40.17 73	eP	36 35.80	1 1	
LLA	40.21 90	e(P)	36 35.30	0.4	
CN2	40.28 283	Pd	36 35.00	-0.3	
		sP	36 51.60		
KVN	40.49 85	eP	36 37.50	0.1	
PRI	40.68 91	e(P)	36 39.40	0.5	
FRI	40.75 89	ePc	36 41.00	1.8	
TNP	41.63 86	eP	36 47.00	0.3	
BCH	41.66 91	eP	36 48.50	1.6	
		e	37 01.30		
FFC	41.77 56	eP	36 47.00	-0.4	
	0.9s	24.00nm		4.9mb	
ALE	42.01 10	eP	36 49.00	-0.1	
	0.6s	3.00nm		4.2mb	
SNY	42.52 282	iPc	36 54.20	0.5	
CLC	42.81 89	eP	36 57.00	0.8	
		e	37 10.00		
SBB	43.39 90	eP	37 01.00	0.0	
		e	37 15.00		
MWC	43.55 91	eP	37 03.00	0.6	
		e	37 16.00		
DAU	43.91 79	eP	37 06.30	0.8	
		pP	37 20.10	52kmX	
RVR	44.13 90	eP	37 09.00	2.1	
		e	37 20.00		
MSU	44.50 82	eP	37 10.60	0.5	
		pP	37 24.10	51kmX	
PLM	44.87 91	eP	37 14.00	0.9	
		e	37 26.00		
BAR	45.44 91	eP	37 23.00	5.6X	
		e	37 31.00		
RSSD	46.09 70	eP	37 21.60	-1.1	
		e	37 36.00		
GLA	46.34 89	eP	37 25.00	0.4	
		e	37 39.00		
PV09	46.38 80	eP	37 24.50	-0.6	
		e	37 39.00		
GOL	47.94 76	eP	37 37.00	-0.4	
		e	37 51 00		
GLD	48.00 76	eP	37 37.00	-0.7	
RSON	48.06 57	iP	37 37.40	-0.4	
	0.8s	74.82nm		5.8mb	
		ipP	37 51.80	55kmX	
BJI	48.09 285	eP	37 37.00	-1.1	
	Z 22s	0.94um		4.7Msz	
TIA	49.93 280	Pd	37 51.90	-0.5	
ALQ	50.31 81	e(P)	37 55.50	0.0	
		epP	38 09.50	52kmX	
		e	39 27.00		
HHC	50.35 289	eP	37 56.30	0.6	
SSE	50.81 272	Pc	37 59.50	0.4	
	1.2s	67.00nm		5.5mb	
		i	38 10.00		
BTO	51.42 289	eP	38 04.00	0.2	
FRB	51.43 33	eP	38 02.00	-1.4	
NJ2	51.62 275	Pd	38 04.60	-0.6	
TIY	51.82 285	Pd	38 07.50	0.7	
	Z 30s	0.90um		4.6MszX	
	E 18s	0.80um			
		eS	45 22.00		
MEO	55.24 76	eP	38 30.70	-1.3	
WHN	55.45 277	eP	38 32.50	-1.0	
SIO	55.96 74	e(P)	38 37.00	-0 2	
TUL	56 16 73	e(P)	38 36.50	-2 1	
	1 3s	9 50nm		4 7mb	
		e	38 52 80		
LNO	56 16 73	e(P)	38 38.90	0 4	
RLO	56 45 73	eP	38 39.00	-1.7	
VVO	56.58 74	e(P)	38 39.30	-2 4	
FVM	57.93 68	eP	38 49 00	-2 1	
	1.0s	45.00nm		5 5mb	
KEV	58.07 351	eP	38 50.00	-1.7	
GTA	58.11 294	Pc	38 50.80	-1.8	
SCH	58.16 41	eP	38 51.00	-1.6	
ELC	59.10 68	eP	38 57.60	-1.7	
SOD	60.42 351	eP	39 06.00	-2.0	
DHN	61.34 56	eP	39 14.00	-0.6	
WMO	61.61 305	Pd	39 15.90	-0.6	
CD2	61.69 285	P	39 16.60	-0.5	
PTN	61.74 53	eP	39 15.50	-1.7	
RSNY	61.98 53	eP	39 16.80	-2.1	
	0.6s	14.31nm		5 3mb	
		e	39 32.00		
GYA	63 10 279	iPc	39 26.00	-0 6	
		sP	39 42.00		
GBTN	63.11 66	eP	39 24.90	-1.6	

CBM 63.32 47 eP 39 25.80 -1 9
8NH 63 56 51 eP 39 27.50 -1.8
BLA 64.14 62 eP 39 31.80 -1 4
1.0s 46.00nm 5.5mb
CVL 64.66 60 eP 39 37.00 0.5
SUF 65.00 350 iP 39 36.60 -1.7
0.8s 7.90nm 4.9mb
CBN 65.09 60 eP 39 39.00 -0.3
e 39 53.00
JSC 65.79 65 eP 39 43.30 -0.5
KMI 66.49 281 Pd 39 48.50 -0.2
sP 40 02.00
NUR 67.32 350 iP 39 51.40 -1.8
0.7s 14.70nm 5.2mb
HFS 68.55 356 eP 39 59.10 -1.7
1.1s 24.00nm 5.2mb
Z 18s 0.14um 4.2Msz
LR 05 33.00
UPP 68.59 354 iP 39 59.80 -1.3
EKA 73.29 5 P 40 29.00 -0.4
0.9s 6.80nm 4.6mb
CHG 73.52 280 eP 40 31.00 -0.3
GUN 74.39 295 Pc 40 37.00 0.3
KKN 74.83 295 Pc 40 39.20 0.1
PKI 74.92 295 Pc 40 39.80 0.0
GKN 75.02 296 Pc 40 40.20 0.1
DMN 75.06 295 Pc 40 40.60 0.1
WIT 76.07 359 eP 40 47.00 1.6
WTS 76.89 359 ePc 40 50.00 0.0
0.9s 16.00nm 5.0mb
e 41 05.00
CLL 77.39 355 iP 40 52.00 -0.8
e 41 06.00
KSP 77.65 353 eP 40 53.50 -0.8
BRG 77.78 355 iPc 40 54.00 -0.9
1.0s 28.00nm 5.2mb
i 41 11.50
ENN 78.12 360 ePc 40 57.00 0.2
0.9s 33.00nm 5.4mb
MEM 78.28 360 P 40 57.70 0.1
SNF 78.37 1 P 40 58.20 0.0
HOF 78.44 356 iPd 40 59.00 0.4
PRU 78.62 354 P 41 00.00 0.4
e 41 14.50
DOU 78.79 1 Pc 41 00.50 0.0
1.0s 38.90nm 5.4mb
ABH 79.00 359 ePc 41 01.59 -0.1
GRF 79.09 356 eP 41 02.90 0.7
0.9s 39.00nm 5.4mb
RUP 79.18 359 ePc 41 02.72 0.0
WLF 79.23 360 Pc 41 03.20 0.4
TOD 79.25 358 ePc 41 02.95 -0.1
KHC 79.54 355 iPd 41 05.50 0.9
1.0s 14.00nm 4.9mb
e 41 18.40
KTD 79.55 358 eP 41 04.80 0.1
WET 79.56 355 eP 41 05.20 0.4
MTN 79.57 234 iPd 41 05.00 -0.1
GWF 79.90 359 P 41 06.60 0.0
FLN 79.99 4 eP 41 06.90 -0.1
0.8s 13.40nm 5.0mb
LDF 80.17 4 iPc 41 07.80 -0.2
0.8s 13.40nm 5.0mb
ZST 80.22 352 eP 41 08.50 0.3
GRR 80.35 4 iPc 41 09.20 0.3
0.8s 14 50nm 5 0mb
CDF 80 47 359 P 41 09 78 0 1
SRO 80.49 351 e(P) 41 10.50 0.8
VITF 80.68 360 P 41 10.96 0.4
LPF 80.69 5 iPc 41 10.90 0.2
0.8s 17.10nm 5.1mb
MAIO 80.70 319 eP 41 12.00 0.9
HAU 80.89 360 eP 41 12.10 0.3
0.8s 26.80nm 5.3mb
FEL 81.00 358 ePc 41 12.15 -0.4
MOF 81.03 359 P 41 12.60 -0.1
BSF 81.06 359 P 41 12.78 0.0
SLE 81.10 358 ePd 41 12.90 0.0
VRI 81.34 345 eP 41 16.00 1.8
e 48 12.50
ZLA 81.38 358 ePd 41 14.70 0.2
LOMF 81.54 359 P 41 15.65 0.3
KBA 81.59 355 iPc 41 16.20 0.5
0.9s 26.50nm 5 3mb
i 41 33.50
LOR 81.61 1 iPc 41 16.00 0.4
0.8s 24.10nm 5 3mb

SSF 81.81 2 iPc 41 17 20 0.6
0.8s 28.20nm 5.3mb
MLR 81.83 346 ePd 41 17.50 0.5
LBF 81.90 1 iPc 41 17.40 0.3
0.8s 10.70nm 4.9mb
LLS 81.98 358 ePd 41 18.70 0.9
AVF 82.08 2 iPc 41 18.20 0.2
0.8s 22.80nm 5.3mb
OSS 82.13 357 ePd 41 19.20 0.7
MFF 82.16 4 iPc 41 18.90 0.5
0.8s 27.90nm 5.4mb
SMF 82.23 1 iPc 41 19.20 0.3
0.9s 20.30nm 5.2mb
BGF 82.30 2 iPc 41 19.50 0.3
0.9s 21.20nm 5.2mb
QUE 82.53 310 eP 41 21.00 0.1
TCF 82.56 2 iPc 41 21.00 0.4
0.8s 18.80nm 5.2mb
LSF 82.58 3 iPc 41 21.00 0.4
0.8s 36.80nm 5.5mb
PTJ 82.59 353 eP 41 20.30 -0.5
MAF 82.63 2 iPc 41 21.50 0.6
0.8s 17.40nm 5.2mb
TMA 82.75 358 ePd 41 22.20 0.4
DIX 82.80 359 ePd 41 23.50 1.3
AGO 82.82 2 P 41 22.67 0.8
EMS 82.82 359 ePd 41 23.00 0.9
MMK 82.82 358 ePd 41 23.50 1.3
PLDF 82.91 1 P 41 23.09 0.6
LPG 83.39 359 eP 41 26.50 1.3
0.8s 5.30nm 4.7mb
LSD 83.43 359 P 41 26.36 1.0
LBL 83.64 2 P 41 26.86 0.8
LFF 83.86 4 eP 41 27.90 0.7
1.0s 37.60nm 5.5mb
CAF 83.92 3 iPc 41 28.30 0.7
0.9s 21.20nm 5.3mb
RRL 83.97 359 P 41 29.54 1.4
WB5 84.04 228 eP 41 23.00 -5.4X
WRA 84.11 228 Pd 41 27.80 -0.9
0.5s 1.00nm 4.2mb
LPO 84.13 3 iPc 41 29.20 0.6
0.8s 24.10nm 5.4mb
ROB 84.58 358 P 41 30.46 -0.5
IR2 84.60 325 eP+ 41 31.60 0.4
STV 84.64 359 P 41 29.95 -1.3
ENR 84.66 359 P 41 30.26 -0.9
FIN 84.66 358 P 41 30.57 -0.7
IR7 84.66 325 eP+ 41 31.70 0.1
TOUF 84.87 359 P 41 33.07 0.5
AUTN 84.89 359 P 41 33.07 0.4
IR1 84.89 325 eP+ 41 33.20 0.5
SAOF 84.89 359 P 41 32.69 0.2
IMI 84.96 358 P 41 32.31 -0.6
IR4 84.97 324 eP+ 41 33.90 0.7
MVIF 84.99 359 P 41 33.46 0.4
AURF 85.00 359 P 41 33.46 0.4
SBF 85.02 359 eP 41 33.80 0.7
0.8s 32.20nm 5.6mb
CALN 85.14 359 P 41 34.12 0.3
FRF 85.33 359 eP 41 35.40 0.8
0.8s 16.10nm 5.3mb
LRG 85.44 360 eP 41 36.20 1.1
0 8s 11 80nm 5.2mb
LMR 85.56 359 eP 41 36.60 0.9
0 8s 18 80nm 5.4mb
EPF 85 75 4 eP 41 37 00 0.2
0 8s 9.90nm 5.1mb
SKO 85.92 348 iP 41 37.60 0.0
1.0s 42.00nm 5.6mb
i 41 50.50
CVF 86.28 358 P 41 39.54 0.1
VAY 86.41 347 eP 41 40.30 0.3
HYB 86.78 294 ePc 41 41.00 -1.2
e 41 56.00
OHR 86.84 349 eP 41 42.00 -0.2
1.2s 0.05nm 2.6mb X
MAL 91.71 8 iPd 42 05.50 0.4
BNG 123.22 345 iPKPd 47 54.90 -0.1
0.4s 4.00nm
BUL 143.93 322 iPKPc 48 31.00 -2.7X
0.9s 23.53nm
SLR 149.06 318 iPKPc 48 46 00 4 0X
1.0s 45 00nm
PRY 150.45 318 iPKPc 48 49.20 5 1X
0 8s 21 88nm
i 49 03.00

BFS 150.71 319 iPKPc 48 46.00 1 6X
1.0s 120.00nm
FRS 153.83 319 ePKP 48 57.30 8.7X
0.7s 27.40nm
i 49 10.70
S.D. = 0.9 on 195 of 204 obs.

JUN 14, 1989 00h 35m 58.25± 0.26s
51.547 N ± 6.3km 174.316 W ± 2.9km
DEPTH = 33.0km (normol)
5.3mb (51 obs.) 4.9Msz (3 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
Felt on Adok.

ADK 1.51 284 iPd 36 24.00 0.7
SMY 7.23 284 e(P) 37 39.50 -4.7X
SDN 9.08 60 eP 38 09.50 -0.4
KDC 14.04 55 eP 39 15.70 -1.0
SVW 14.06 40 eP 39 18.70 1.7
TTA 15.04 34 eP 39 33.40 3.6X
PMR 17.02 44 eP 39 55.60 0.6
IMA 17.92 28 eP 40 08.00 1.8
1.2s 71.20nm 4.7mb
FBA 19.13 36 eP 40 18.30 -2.6
0.9s 33.33nm 4.6mb
INK 25.73 34 eP 41 25.00 -1 8
MBC 32.41 21 ePc 42 26.50 -0.1
0.7s 18.00nm 5.1mb
PNT 34.23 72 eP 42 44.00 1.3
0.7s 17.00nm 5.1mb
pP 42 58.00 55kmX
DPW 35.72 73 eP 42 55.80 0.4
EDM 36.26 63 iPc 43 00.50 0.6
0.5s 54.00nm 5.7mb
pP 43 07.50 24kmX
WDC 36.83 87 e(P) 43 04.20 -0.6
MDJ 37.30 282 eP 43 07.50 -1.2
MIN 37.55 86 e(P) 43 12.90 1.9
SES 38.75 66 ePc 43 20.60 -0.3
CMB 39.69 88 e(P) 43 29.40 0.6
PRS 40.13 91 e(P) 43 32.20 -0.2
LRM 40.16 73 eP 43 33.60 0.7
LLA 40.22 90 e(P) 43 33.40 0.2
CN2 40.25 283 Pd 43 32.80 -0.5
pP 43 41.00 28kmX
KVN 40.50 85 eP 43 35.70 0.1
FRI 40.75 89 e(P) 43 37.40 -0.1
TNP 41.63 86 eP 43 45.30 0.3
e 43 59.00
BCH 41.67 91 eP 43 47.00 1.8
FFC 41.74 56 eP 43 45.00 -0.4
0.9s 21.00nm 4.9mb
ALE 41.96 10 eP 43 47.00 0.1
0.6s 3.00nm 4.2mb X
SNY 42.50 282 iPc 43 52.00 0.3
CLC 42.82 89 eP 43 56.00 1.5
SBB 43.40 90 eP 44 01.00 1.7
e 44 13.00
MWC 43.56 91 eP 44 08.00 7.3X
GSC 43.64 B9 eP 44 16.00 14.8X
DAU 43.91 79 eP 44 04.40 0.7
RVR 44.14 91 eP 44 19.00 13.8X
PLM 44.88 91 eP 44 11.00 -0.4
BAR 45.45 91 eP 44 16.00 0.3
RSSD 46.08 70 eP 44 20.00 -0 8
GLA 46.35 90 eP 44 25 00 2 1
PV09 46.38 80 eP 44 22.70 -0 7
PV10 46.52 80 eP 44 24.50 0.1
GOL 47.93 76 eP 44 35.70 0.2
GLD 47.99 76 eP 44 36.00 0.1
RSON 48.03 57 iP 44 35.30 -0.5
BJI 48.06 285 eP 44 36.00 -0.2
TIA 49.91 280 Pc 44 49.50 -0.9
ALQ 50.31 81 e(P) 44 54.00 0.3
epP 45 07.50 50kmX
SSE 50.80 272 Pc 44 57.30 0.1
1.1s 72.00nm 5.6mb
DAG 51.01 7 iP 44 56.60 -1.7
0.7s 4.11nm 4.5mb
ipP 46 12.50 368kmX
FRB 51.38 33 eP 45 00.00 -1.2
BTO 51.39 289 eP 45 02.00 0.2
NJ2 51.60 275 Pd 45 02.00 -1 3
TIY 51 79 285 Pc 45 05.00 0.2
Z 21s 0.89um 4 8Msz
E 20s 1.80um
SIO 55.96 74 e(P) 45 33.50 -1 '

14d 00h

```
TUL    56.16   73 eP     45 35.50  -1 3
       0 8s       4.00nm          4.5mb
                  e      45 49.70
LNO    56.16   73 e(P)   45 34.30  -2.4
RLO    56.44   73 eP     45 38.00  -0.9
VVO    56.58   74 e(P)   45 37.30  -2.5
FVM    57.91   68 eP     45 47.00  -2.2
       1.0s       41.00nm         5.4mb
KEV    58 01 351 eP      45 48 00  -1.5
       0.5s       16.80nm         5.4mb
GTA    58.08 294 iPc     45 49.20  -1.4
     Z  20s       1.30um          5.0Msz
SCH    58.13   41 eP     45 49.00  -1.5
SOD    60.36 351 iP      46 04.30  -1.5
WMQ    61.57 305 Pc      46 13.50  -0.9
CD2    61.67 285 iPc     46 14.60  -0.6
PTN    61.71   53 eP     46 14.00  -1.3
RSNY   61.96   53 eP     46 15.50  -1.4
       0.7s       16.92nm         5.3mb
GYA    63.08 279 P       46 24.00  -0.7
                  sP     46 40.00
CBM    63.29   47 eP     46 24.30  -1.4
BLA    64.12   62 eP     46 30.20  -1.1
       0.6s       13.96nm         5.2mb
SUF    64.94 350 iP      46 34.90  -1.3
       0.5s        5.50nm         4.9mb
JSC    65.78   65 eP     46 40.20  -1.7
KMI    66.46 281 eP      46 46.00  -0.8
NUR    67.26 350 eP      46 48.00  -3.0
       0.6s       18.30nm         5.4mb
     Z  20s       0.70um          4.9Msz
                  LR     14 30.00
HFS    68.49 356 eP      46 57.10  -1.6
       0.5s       16.20nm         5.4mb
UPP    68.53 354 iPc     46 57.70  -1.2
EKA    73.24    5 P      47 27.00  -0.3
       0.9s        6.60nm         4.6mb
CHG    73.50 279 eP      47 29.50   0.1
GUN    74.36 295 Pc      47 34.80   0.1
DMU    74.40    8 eP     47 33.80  -0.3
KKN    74.79 295 Pc      47 37.20   0.1
PKI    74.89 295 Pc      47 37.80   0.0
GKN    74.99 296 Pc      47 38.20   0.1
DMN    75.03 295 Pc      47 38.80   0.3
WIT    76.01 359 eP      47 45.00   1.7
WTS    76.83 359 ePc     47 48.00   0.2
       0.8s       16.00nm         5.1mb
CLL    77.33 355 iP      47 50.00  -0.7
                  e      48 04.00
KSP    77.59 353 eP      47 51.50  -0.6
BRG    77.72 355 iPc     47 52.10  -0.7
       1.0s       30.00nm         5.3mb
                  i      48 07.70
ENN    78.06 360 ePc     47 55.50   0.8
       1.0s       54.00nm         5.5mb
MEM    78.22 360 Pd      47 56.10   0.6
SNF    78.31    1 P      47 56.00  -0.1
HOF    78.38 356 iPc     47 56.50   0.0
NDI    78.51 302 iPd     47 57.00  -0.6
PRU    78.56 354 Pc      47 57.50   0.0
       1.0s       14.50nm         4.9mb
                  e      48 12.50
DOU    78.73    1 P      47 58.50   0.1
       0.9s       45.00nm         5.5mb
ABH    78 94 359 ePc     47 59 69   0.1
GRF    79 03 356 eP      48 00 70   0 6
       0 9s       44 00nm         5 5mb
RUP    79 12 359 ePc     48 00.72   0.1
WLF    79.17 360 Pc      48 01.50   0.8
TOD    79.19 358 ePc     48 01.64   0.7
KHC    79.47 355 iPc     48 03.20   0.7
       1.0s       14.00nm         4.9mb
                  e      48 16.50
KTD    79 49 358 ePc     48 02.90   0.3
WET    79.50 355 eP      48 03.00   0.4
MKS    79 61 248 ePd     48 19.50  15.8X
                  e      49 19.00
GWF    79.84 359 P       48 04.68   0.2
FLN    79.93   4 iPc     48 05.00   0.1
       0.8s       16.10nm         5.1mb
LDF    80.12   4 iPc     48 05.90   0.0
       0.9s       20.90nm         5.1mb
ZST    80.16 352 iP      48 06.20   0 1
GRR    80 29   4 iPc     48 07 30   0 5
       0.8s       18 80nm         5 1mb
CDF    80 41 359 P       48 07 77   0 2
VITF   80.62 360 P       48 08 90   0.4
LPF    80.63    5 iPc    48 09.10   0.5
       0 9s       24 20nm         5.2mb
MAIO   80.65 319 eP      48 10.00   0.9
HAU    80.83 360 iPc     48 10.20   0.5
       0.8s       32.20nm         5.4mb
FEL    80.94 358 ePc     48 10.45   0.0
MOF    80.97 359 P       48 10.32  -0.3
BSF    81.00 359 P       48 10.73   0.0
LOMF   81.48 359 P       48 13.41   0.2
KBA    81.53 355 iPc     48 14.00   0.4
       0.9s       30.30nm         5.3mb
                  i      48 32.00
LOR    81.55    1 iPc    48 14.00   0.5
       0.8s       32.20nm         5.4mb
SSF    81.75    2 iPc    48 15.30   0.8
       0.8s       37.60nm         5.5mb
MLR    81.77 346 ePd     48 16.00   1.1
LBF    81.84    1 iPc    48 15.60   0.6
       0.8s       13.40nm         5.0mb
AVF    82.02    2 iPc    48 16.50   0.6
       0.8s       30.80nm         5.4mb
MFF    82.10    4 iPc    48 16.90   0.5
       0.8s       29.50nm         5.4mb
SMF    82.18    1 iPc    48 17.30   0.5
       1.0s       60 00nm         5.6mb
BZS    82.25 349 eP      48 17.00  -0.1
BGF    82.25    2 iPc    48 17.70   0.6
       0.9s       23.50nm         5.2mb
OUE    82.48 310 eP      48 19.60   0.7
TCF    82.50    2 iPc    48 19.00   0.5
       0.9s       21.20nm         5.2mb
LSF    82.52    3 iPc    48 19.10   0.6
       0.8s       36.20nm         5.5mb
MAF    82.58    2 iPc    48 19.60   0.7
       0.8s       21.40nm         5.3mb
AGO    82.76    2 P      48 20.72   0.9
PLDF   82.85    1 P      48 21.26   0.9
PYM    83.06    2 P      48 21.98   0.5
LPG    83.33 359 eP      48 24.50   1.4
       0.8s        6.70nm         4.8mb
LSD    83.37 359 P       48 24.60   1.3
LBL    83.58    2 P      48 24.91   1.0
LFF    83.80    4 iPc    48 26.10   1.0
       1.0s       37.60nm         5.5mb
CAF    83.86    3 iPc    48 26.40   0.9
       1.0s       26.00nm         5.3mb
RRL    83.91 359 P       48 27.58   1.6
BOB    84.01 357 P       48 27.20   0.9
LPO    84.07    3 iPc    48 27.30   0.8
       1.0s       36.00nm         5.5mb
ROB    84.52 358 P       48 28.50  -0.3
IR2    84.54 325 eP+     48 29.50   0.3
STV    84.58 359 P       48 27.99  -1.2
ENR    84.60 359 P       48 28.09  -1.2
FIN    84.60 358 P       48 28.60  -0.6
IR7    84.61 325 eP+     48 29.70   0.2
TOUF   84.81 359 P       48 30.51   0.0
PGD    84.81 356 P       48 29.80  -0.7
AUTN   84.83 359 P       48 30.90   0.3
SAOF   84.83 359 P       48 30.66   0.3
IR1    84.84 325 eP+     48 31.30   0.6
IMI    84.90 358 P       48 30.96   0.2
IR4    84.92 324 eP+     48 31.80   0.7
MVIF   84.93 359 P       48 31.51   0.5
AURF   84.94 359 P       48 31.51   0.5
SBF    84 96 359 iPc     48 31.90   0.8
       0.8s       27.90nm         5 5mb
CALN   85 08 359 P       48 32.18   0.4
FRF    85.27 359 iPc     48 33.50   1.0
       0.8s       16.10nm         5.3mb
LRG    85.38 360 iPc     48 34.30   1.3
       1.0s       24.00nm         5.4mb
LMR    85.50 359 iPc     48 34.80   1.2
       0.8s       18.80nm         5.4mb
ASS    85.57 355 P       48 34.00  -0.1
EPF    85.69    4 iPc    48 35.00   0.3
       0.8s        9.90nm         5.1mb
SKO    85.86 348 iPc     48 36.00   0.5
       1.2s       63.00nm         5.7mb
                  i      48 49.40
CVF    86.23 358 P       48 37.37   0.0
VAY    86.35 347 eP      48 38.40   0.5
HYB    86 75 294 eP      48 39.50  -0.8
                  e      48 53.50
OHR    86 78 349 eP      48 40 00  -0.2
       1.4s       0 07nm          2.7mb X
POO    88.49 298 eP      49 02.50  13.8X
TOL    88.55    7 eP     48 49.00   0.3
GBA    90.43 293 Pc      48 55.60  -2.1
       1.0s        6.10nm         4.9mb
MAL    91.65    8 iPd    49 03.20   0.1
BNG   123.16 345 iPKPd   54 53.00  -0.1
       0.3s        3.00nm
ITR   124.15   56 e(PKP) 55 06.00  11.0X
BUL   143.88 322 iPKPd   55 29.00  -2.8X
       1.0s       28.50nm
SLR   149.01 318 iPKPc   55 44.00   3.9X
       0.8s       44.78nm
PRY   150.40 318 iPKPc   55 47.40   5.2X
       1.1s       47.30nm
                  i      56 01.00
BFS   150.66 319 iPKPc   55 44.00   1.4X
       0.7s      115.07nm
FRS   153.77 319 ePKP    55 47.50   0.8
       0.7s       41.10nm
                  i      56 08.70
     S.D. = 1.0  on 171 of 183 obs.
-------------------------------------
   JUN 14, 1989  01h 21m 36.23± 0.60s
   44.486 N ± 4.8km   10.479 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                   (545)
     MD 2.3 (ROM).

MME    0.33 151 P        21 43.70   0.5
                  eSg    21 49.00
BDI    0.43 169 P        21 44.90  -0.2
                  eSg    21 52.20
PII    0.76 178 P        21 50.90  -0.2
                  eSg    22 01.10
BOB    0.79 291 P        21 51.80   0.2
                  eSg    22 02.30
SAL    1.12   2 P        21 58.00   0.8
                  eSg    22 14.50
MDI    1.40 337 P        22 01.30  -0.5
                  eSg    22 20.70
CTI    1.77  27 P        22 06.60  -0.6
                  eSn    22 29.70
     S.D. = 0.6  on   7 of   7 obs.
-------------------------------------
   JUN  14, 1989  04h 40m 00.34± 0.35s
   51.583 N ± 8.3km   174.173 W ± 3.5km
   DEPTH =  33.0km  (normal)
   4.9mb ( 36 obs.)  4.3Msz (  1 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (  7)

ADK    1.59 282 iPd      40 25.90  -0.6
SMY    7.31 284 e(P)     41 48.00   0.6
KDC   13.95   55 eP      43 15.70  -1.9
TTA   14.96   34 eP      43 34.80   4.0X
PMR   16.93   44 eP      43 56.00   0.0
IMA   17.84   28 eP      44 08.40   1.0
FBA   19.05   35 eP      44 19.60  -2.4
INK   25.65   34 eP      45 29.00   0.8
MBC   32.35   21 ePc     46 28.00  -0.1
       0.4s        5.00nm         4.8mb
PNT   34.14   72 eP      46 45.00   1.0
       0.6s        8.00nm         4.8mb
                  pP     47 00.00  60kmX
DPW   35.62   73 e(P)    46 57.50   0.8
EDM   36.17   63 iPc     47 01.90   0.7
       0.5s       46.00nm         5.7mb
WDC   36.74   87 e(P)    47 06 00  -0 1
SES   38.66   66 eP      47 22 00  -0 2
CMB   39.60   88 e(P)    47 30.80   0.7
LRM   40.06   73 eP      47 36.40   2.2
KVN   40.40   85 eP      47 37.40   0 4
FFC   41.65   56 iPd     47 47.10   0 4
       0.5s        6.00nm         4.6mb
SNY   42.58  282 eP      47 54.30  -0.2
PLM   44.79   91 eP      48 12.00  -0.8
RSSD  45.99   70 eP      48 21.20  -1.0
PV09  46.29   80 eP      48 24.00  -0.7
PV10  46.42   80 eP      48 25.50  -0.2
GOL   47.84   76 P       48 36.50  -0.4
       0.8s        8.93nm         4.8mb
GLD   47.90   76 e(P)    48 38.00   0.8
       0.9s       42.11nm         5.5mb
RSON  47.94   57 eP      48 36.50  -0.7
       0.9s       29.41nm         5.3mb
ALQ   50.21   82 P       48 55.00  -0.1
       1.0s        2.75nm         4.2mb
SSE   50.89  272 eP      49 07.00   7 0X
FRB   51.31   33 eP      49 02.00  -0.7
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NJ2 51.69 275 eP 49 06.50 0.4
TIY 51.87 285 eP 49 07.90 0.4
Z 22s 0.30um 4.3Msz
XAN 56.44 284 P 49 39.50 -1.5
FVM 57.82 68 eP 49 49.80 -0.9
0.5s 14.00nm 5.3mb
SOD 60.34 351 eP 50 08.00 0.3
CD2 61.74 285 P 50 16.40 -1.4
RSNY 61.86 53 eP 50 15.80 -2.6
GYA 63.16 279 P 50 27.40 0.1
BLA 64.03 62 eP 50 32.50 -0.3
0.7s 6.05nm 4.8mb
SUF 64.92 350 iP 50 36.50 -1.6
0.4s 1.90nm 4.5mb
KMI 66.55 281 Pd 50 49.50 0.1
HFS 68.46 356 eP 50 59.00 -1.6
0.5s 6.90nm 5.0mb
GUN 74.43 295 P 51 36.60 -0.6
0.4s 25.00nm 5.6mb
KKN 74.86 296 P 51 39.00 -0.5
0.4s 10.00nm 5.2mb
PKI 74.95 295 P 51 39.60 -0.6
0.6s 10.00nm 5.0mb
GKN 75.05 296 P 51 40.00 -0.6
0.4s 11.00nm 5.2mb
DMN 75.09 296 P 51 41.20 0.2
CLL 77.30 355 eP 51 52.00 -0.6
BRG 77.69 355 eP 51 54.00 -0.8
DOU 78.69 1 P 52 00.50 0.2
GRF 79.00 356 e(P) 52 03.00 1.0
0.8s 11.00nm 4.9mb
KHC 79.45 355 iP 52 05.20 0.7
LDF 80.07 4 eP 52 08.40 0.6
GRR 80.25 5 eP 52 08.20 -0.5
CDF 80.38 359 eP 52 09.80 0.3
0.8s 8.00nm 4.8mb
HAU 80.79 360 eP 52 11.80 0.2
0.8s 6.40nm 4.7mb
BSF 80.96 359 eP 52 12.60 0.0
0.8s 5.30nm 4.6mb
KBA 81.51 355 iPd 52 16.30 0.7
0.8s 11.70nm 4.9mb
e 18 10.00
LOR 81.52 1 eP 52 15.70 0.3
1.0s 14.00nm 4.9mb
SSF 81.72 2 eP 52 16.80 0.4
0.8s 9.40nm 4.9mb
AVF 81.99 2 eP 52 18.10 0.3
0.8s 5.90nm 4.7mb
MFF 82.06 4 eP 52 18.40 0.2
0.8s 10.70nm 4.9mb
SMF 82.14 1 eP 52 19.00 0.4
0.8s 10.70nm 4.9mb
TCF 82.46 3 eP 52 20.70 0.3
0.8s 5.30nm 4.7mb
LSF 82.48 3 eP 52 20.70 0.3
0.8s 15.30nm 5.1mb
MAF 82.54 2 eP 52 21.10 0.4
0.8s 6.70nm 4.8mb
LSD 83.33 359 P 52 26.28 1.1
LFF 83.76 4 eP 52 27.80 0.8
0.9s 9.80nm 5.0mb
CAF 83.82 3 eP 52 28.30 0.9
1.0s 6.00nm 4.7mb
RRL 83.88 359 P 52 29.05 1.1
LPO 84.03 3 eP 52 29.00 0 6
0 9s 6.50nm 4.8mb
ROB 84.49 359 P 52 30.59 -0.2
FIN 84.57 358 P 52 30.79 -0.3
IMI 84.87 359 P 52 32.94 0.2
SBF 84.93 359 eP 52 34.10 1.1
1.0s 16.00nm 5.2mb
LRG 85.34 360 eP 52 35.80 0.9
1.0s 8.00nm 4.9mb
LMR 85.46 360 eP 52 36.40 0.8
1.0s 8.00nm 4.9mb
CVF 86.19 358 eP 52 39.50 0.2
1.0s 8.00nm 4.9mb
BUL 143.90 322 iPKPc 59 30.90 -3.1X
0.9s 7.56nm
SLR 149.05 318 ePKP 59 42.00 -0.3
0.8s 18.66nm
PRY 150.43 318 ePKP 59 41.80 -2.5X
0.9s 11.54nm
BFS 150.69 319 iPKPc 59 46.00 1.3X
0.7s 41.10nm
FRS 153.81 319 ePKP 59 44.20 -4.7X

0.6s 6.67nm
S.D. = 0.9 on 76 of 82 obs.

& JUN 14, 1989 04h 50m 34.39s
59.543 N 152.995 W
DEPTH = 92.1km
4.0mb (1 obs.)
SOUTHERN ALASKA (2)
<AGS-P>.

OPT 0.16 313 iP 50 47.49 1.3
ILIM 0.54 2 iP 50 49.27 -0.7
S 51 01.14
CDD 0.70 209 iP 50 50.96 -0.4
RED 0.89 7 eP 50 52.55 -0.8
CNPM 0.90 90 iP 50 52.92 -0.5
RDT 1.08 16 iP 50 54.62 -0.9
S 51 10.30
BRLK 1.09 77 iP 50 54.91 -0.7
S 51 11.03
NKA 1.49 35 iP 51 01.71 1.2
SLKM 1.70 54 eP 51 02.23 -1.0
SPU 1.71 15 iP 51 02.55 -0.9
CRP 1.78 13 iP 51 03.81 -0.6
KDC 1.82 171 iPd 51 03.70 -1.1
CGLM 1.84 15 iP 51 04.39 -0.7
S 51 27.41
SEW 1.88 71 eP 51 04.16 -1.4
SVW 2.04 321 iPd 51 06.80 -1.0
SUA 2.23 29 eP 51 09.63 -0.7
SKT 2.55 16 eP 51 13.47 -1.2
PWA 2.61 35 eP 51 14.88 -0.6
PMR 2.80 41 eP 51 16.30 -1.8
PME 2.86 41 eP 51 17.32 -1.6
KNK 2.93 48 eP 51 17.89 -1.9
GHO 3.00 40 eP 51 19.08 -1.8
MID 3.40 89 ePd 51 24.60 -1.6
FID 3.48 67 eP 51 24.17 -3.2
TTA 3.70 338 iPd 51 28.70 -1.8
KLU 4.01 58 eP 51 32.44 -2.3
KTH 4.14 13 iP 51 35.10 -1.5
TOA 4.21 50 eP 51 35.80 -1.8
MCK 4.63 23 iP 51 41.94 -1.3
GLB 4.92 63 eP 51 44.91 -2.5
PAX 5.00 43 eP 51 46.29 -2.2
S 52 41.82
NEA 5.38 18 eP 51 51.14 -2.5
DDM 5.45 36 eP 51 53.58 -1.1
WRH 5.46 23 eP 51 51.83 -2.9
S 52 51.64
BALM 5.51 70 P 51 53.33 -2.2
HDA 5.65 28 eP 51 54.91 -2.5
S 52 56.55
CCB 5.67 23 eP 51 54.72 -3.0
RDS 5.77 21 eP 51 56.42 -2.6
FBA 5.90 22 ePc 51 58.10 -2.8
CTGM 5.98 71 eP 52 00.58 -1.5
GLM 6.06 23 eP 51 59.84 -3.3
IMA 6.56 358 ePd 52 08.20 -1.9
HYT 7.83 74 P 52 25.50 -2.0
INK 12.21 36 eP 53 24.00 -2.1
YKA 18.64 64 eP 54 46.80 -0.4
MBC 20.44 22 eP 55 04.50 -1.4
0.5s 4.00nm 4.0mb
FRB 37.57 47 eP 57 40.00 -0.7
47 obs ossociated

JUN 14, 1989 05h 05m 54.75± 0.40s
51.640 N ± 9.0km 174.236 W ± 3.9km
DEPTH = 33.0km (normal)
4.9mb (38 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 1.54 280 iPd 06 20.20 0.0
SMY 7.25 283 e(P) 07 44.70 3.7X
SDN 8.99 60 eP 08 04.30 -0.8
KDC 13.95 56 eP 09 13.00 1.0
SVW 13.96 40 eP 09 16.00 3.8X
TTA 14.93 34 eP 09 29.00 4.1X
PMR 16.92 44 eP 09 50.80 0.6
IMA 17.81 28 eP 10 02.70 1.3
1.0s 22.10nm 4.2mb
TOA 18.41 44 eP 10 06.70 -2.1
FBA 19.03 36 eP 10 14 00 -2.2
INK 25.63 34 eP 11 22.00 -0.3
MBC 32 31 21 ePc 12 22.40 0.2
0.4s 5 00nm 4 8mb

YKA 32.97 47 eP 12 36.80 8 7X
PNT 34.16 72 eP 12 39.00 0 4
0.8s 11.00nm 4.8mb
EDM 36.18 63 iPc 12 56.30 0.6
0.6s 42.00nm 5.5mb
SES 38.67 66 eP 13 16.00 -0.7
CMB 39.63 88 eP 13 24.90 0.0
0.6s 5.50nm 4.5mb
LRM 40.09 73 eP 13 30.50 1.8
KVN 40.44 85 eP 13 28.00 -3.6X
FFC 41.65 56 eP 13 41.00 -0.1
0.9s 14.00nm 4.7mb
SNY 42.53 282 iPd 13 48.40 -0.1
RSSD 46.00 70 eP 14 16.20 -0.5
GLA 46.30 90 eP 14 20.20 1.2
PV09 46.32 80 eP 14 18.80 -0.5
PV10 46.45 80 eP 14 20.00 -0.3
GOL 47.86 76 eP 14 30.50 -1.0
GLD 47.92 76 eP 14 31.50 -0.3
RSON 47.94 57 eP 14 30.70 -0.9
0.8s 35.21nm 5.4mb
ALQ 50.24 82 e(P) 14 50.50 0.7
1.0s 2.00nm 4.1mb
ALQ 50.24 82 e(P) 14 58.00 8.2X
SSE 50.85 272 e(P) 14 53.60 -0.5
i 15 07.50
FRB 51.28 33 eP 14 55.00 -1.9
TIY 51.82 285 eP 15 01.30 -0.2
SIO 55.88 74 e(P) 15 18.50 -12.9X
TUL 56.08 73 eP 15 46.10 13.3X
1.1s 6.90nm
LNO 56.08 73 e(P) 15 46.10 13.5X
XAN 56.39 284 P 15 33.00 -2.1
VVO 56.50 74 e(P) 15 41.20 5.4X
GTA 58.09 294 eP 15 45.00 -2.1
SOD 60.28 351 eP 16 02.00 0.3
PTN 61.62 53 eP 16 09.50 -1.6
RSNY 61.86 53 eP 16 11.20 -1.6
GYA 63.11 279 eP 16 21.80 0.4
SUF 64.85 350 eP 16 31.00 -1.1
HFS 68.40 356 eP 16 53.00 -1.6
0.7s 5.10nm 4.7mb
GUN 74.37 295 P 17 30.80 -0.5
0.5s 25.00nm 5.5mb
KKN 74.80 295 P 17 33.40 -0.2
PKI 74.89 295 P 17 33.80 -0.5
GKN 74.99 296 P 17 34.20 -0.5
0.6s 17.00nm 5.2mb
WTS 76.74 359 eP 17 44.50 0.7
1.0s 6.00nm 4.6mb
CLL 77.24 355 eP 17 46.00 -0.7
BRG 77.63 355 iP 17 48.60 -0.2
1.0s 14.00nm 4.9mb
e 18 05.40
ENN 77.97 360 eP 17 50.50 -0.2
1.0s 11.00nm 4.8mb
MEM 78.13 360 P 17 51.80 0.3
PRU 78.48 354 ePd 17 53.00 -0.5
DOU 78.64 1 P 17 54.90 0.5
WLF 79.07 360 Pd 17 58.00 1.3
KHC 79.39 355 Pd 17 59.40 0.8
LDF 80.02 4 eP 18 01.90 0.0
0.9s 6.50nm 4.6mb
GRR 80.19 4 eP 18 02.40 -0.4
1.0s 8.00nm 4.7mb
CDF 80.32 359 eP 18 04.00 0 4
0.8s 5.30nm 4 6mb
LPF 80.54 5 eP 18 05.00 0.4
1.0s 12.00nm 4.8mb
HAU 80.73 360 eP 18 06.20 0.5
1.0s 16.00nm 5.0mb
BSF 80.91 359 eP 18 06.90 0.2
0.6s 5.40nm 4.7mb
LOR 81.46 1 eP 18 09.80 0.3
1.0s 16.00nm 5.0mb
SSF 81.66 2 eP 18 11.10 0.6
0.9s 13.70nm 5.0mb
AVF 81.93 2 eP 18 12.30 0.4
0.9s 9.80nm 4.8mb
MFF 82.01 4 eP 18 12.70 0.3
0.8s 10.70nm 4.9mb
SMF 82.08 1 eP 18 13.20 0.4
0.9s 14.70nm 5 0mb
BGF 82 15 2 eP 18 13.50 0 4
1.0s 12.00nm 4 9mb
TCF 82 41 2 eP 18 14.90 0 4
0.8s 6.70nm 4 8mb

14d 05h

```
LSF     82.42    3 eP     18 14.90    0.3
        0 9s    18 00nm          5 1mb
MAF     82.48    2 eP     18 15.40    0.5
        0.8s    12 00nm          5.0mb
LSD     83.28 359 P       18 20.81    1.5
LFF     83 70    4 eP     18 21.80    0.7
        1.0s    16.00nm          5.1mb
CAF     83.76    3 eP     18 22.30    0.8
        0.8s     4.00nm          4 6mb
RRL     83.82 359 P       18 23 80    1.8
LPO     83.98    3 eP     18 23.10    0.6
        0.8s     6.40nm          4.8mb
ROB     84.43 358 P       18 24.71   -0.2
FIN     84.51 358 P       18 24.91   -0.3
IMI     84.81 358 P       18 26.76   -0.1
SBF     84.87 359 eP      18 27.70    0.6
        0.8s     9.10nm          5.0mb
FRF     85.18 359 eP      18 29.40    0.8
        0.9s     6.50nm          4.8mb
LRG     85.29 360 eP      18 29.90    0.8
        1.0s     8.00nm          4.9mb
LMR     85.41 359 eP      18 30.60    0.9
        0.9s     9.80nm          5.0mb
EPF     85.59    4 eP     18 30.70    0.0
        0.8s     5.30nm          4.8mb
SKO     85.78 348 iP      18 32.20    0.6
CVF     86.13 358 eP      18 33.60    0.2
        0.8s     8.00nm          5.0mb
OHR     86.70 349 eP      18 36.00   -0.3
HYB     86.75 294 eP      18 49.00   12.2X
BUL    143.83 322 iPKPd   25 24.70   -3.6X
        1.0s     6.50nm
SLR    148.98 318 ePKP    25 20.50  -16.1X
        0.8s    18.66nm
                   i      25 54.50
PRY    150.37 318 ePKP    25 30.50   -8.1X
        0.9s    15.38nm
                   i      25 57.00
BFS    150.62 319 ePKP    25 40.00    1.0
        0.7s    46.58nm
FRS    153.74 319 ePKP    25 41.60   -1.6X
        0.7s    10.27nm
                   i      26 06.00
     S.D. = 0.9   on  80 of  95 obs.
-----------------------------------------
   JUN  14, 1989  05h 11m 05.29± 0.91s
   17.085 N ± 9.8km   62.251 W ± 6.5km
   DEPTH =  10.0km  (geophysicist)
 LEEWARD ISLANDS                 ( 92)

NEV      0.31 280 eP      11 13.45    1.7
                  S       11 18.80
MGH      0.36 175 eP      11 13.18    0.4
                  eS      11 17.16
BPA      0.38  96 eP      11 13.00   -0.1
                  S       11 18.00
ANG      0.41  80 eP      11 14.29    0.6
                  eS      11 19.49
SKI      0.53 298 eP      11 14.33   -1.7
                  eS      11 19.91
PAG      1.18 152 eP      11 26.40   -1.0
                  S       11 40.50
     S.D. = 1.6   on   6 of   6 obs.
-----------------------------------------
*  JUN  14, 1989  06h 25m 58.24± 0 83s
   41.974 N ± 7 2km   23 159 E ± 9 9km
   DEPTH =  10 0km  (geophysicist)
 GREECE-BULGARIA BORDER REGION   (363)

KKB      0.12 208 iPg     26 02.00    0.7
MMB      0 57 132 iPgc    26 10.00    0.1
VTS      0.62   3 iPg     26 11.00    0.2
VAY      0.79 214 iPg     26 12.80   -0.7
                  iSg     26 22.50
PGB      0.94  52 iPg     26 16.00   -0.3
                  iSg     26 29.00
     S.D. = 0.8   on   5 of   5 obs.
-----------------------------------------
   JUN  14, 1989  07h 15m 41.85± 1.09s
   40.459 N ± 9.7km  120.790 W ± 8.0km
   DEPTH =   5.0km  (geophysicist)
 NORTHERN CALIFORNIA             ( 36)
     ML 2.6 (BRK)

MIN      0.63 260 iPc     15 54 70    0 2
                  eS      16 04.00
LTCM     1.05 257 eP      16 02.20    0 1
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```
ORV      1 05 211 iPc     16 01.20   -1.0
                  eS      16 16.00
LBFM     1.22 317 eP      16 05.40    0.3
WDC      1.34 276 iPc     16 06.70   -0.3
                  eS      16 27.60
CMB      2.44 172 iPc     16 24.70    1.6
                  eS      16 56.10
KVN      2.51 123 eP      16 23.30   -0.8
     S.D. = 1.1   on   7 of   7 obs.
-----------------------------------------
   JUN  14, 1989  10h 17m 35.24± 0.66s
   12.875 N ± 2.6km  143.351 E ± 3.3km
   DEPTH = 126.2 ±  6.1 km
   5.5mb ( 46 obs.)
 SOUTH OF MARIANA ISLANDS        (210)
     Felt (IV) on Guam.
     CENTROID, MOMENT TENSOR     (HRV)
     Data Used: GDSN
     L.P.B.: 15S, 29C
     Centroid Location:
     Origin Time          10:17:39.9 0.2
     Lat 12.41N 0.02 Lon 143.11E 0.03
     Dep 115.3 1.6 Half-duration  2.6
     Moment Tensor;   Scale 10**17 Nm
       Mrr=-2.82 0.09  Mtt= 0.82 0.13
       Mff= 2.00 0.13  Mrt=-1.49 0.10
       Mrf=-0.44 0.09  Mtf=-1.91 0.12
      Principal Axes:
       T  Val=  3.46  Plg= 5   Azm=232
       N        0.12       26       139
       P       -3.58       64       332
     Best Double Couple:Mo=3.5*10**17
      NP1:Strike=347 Dip=46 Slip= -53
      NP2:       120       55      -122

PJG      1.64  64 iPc     18 04.70   -0.3
GUA      1.66  66 iPc+    18 04.70   -0.6
                  eS      18 25.50
JAY     15.51 190 ePd     21 07.50   -1.0
        1.0s    12.80nm          4.2mb X
                   e      25 32.50
MNOI    18.91 179 eP      21 49.00   -0.1
RAB     19.08 152 e(P)    21 51.40    0.7
LAT     19.74 169 eP      21 58.00    0.5
KAGJ    21.54 330 iPd     22 17.30    1.8
QCP     21.71 277 eP      22 13.00   -4.2X
AAI     22.30 223 ePd     22 23.00   -0.1
BAG     22.31 282 eP-     22 24.00    0.7
        1.4s   372.09nm          5.6mb
                  eS      26 27.00
WKYJ    22.39 343 P       22 24.50    0.6
PMG     22.46 170 eP      22 24.00   -0.6
TKSJ    22.65 340 P       22 26.00   -0.4
KUMJ    22.68 332 iPd     22 28.50    1.8
IIDJ    23.04 349 eP      22 30.30    0.2
CHJJ    23.40 351 eP      22 33.20   -0.5
KAKJ    23.40 354 eP      22 32.60   -1.0
TSRJ    23.52 345 eP      22 35.20    0.4
SHK     23.64 338 iP      22 36.40    0.5
        0.5s   492.96nm          6.2mb
SHNJ    23.91 334 P       22 38.80    0.3
YONJ    23.95 340 iPd     22 39.60    0.7
ANP     23.95 304 eP      22 40.00    0.8
MTMJ    24.13 349 eP      22 40.00   -0.8
NIIJ    24 57 352 eP      22 44 20   -0.6
YAMJ    25 37 354 P       22 52 00   -0 2
OFUJ    26 14 357 P       22 58 90   -0 4
QZH     26.27 301 eP      22 59 60   -1.0
     N  10s      0.70um
                  sP      23 37 50
                  eS      27 16.00
SSE     27.31 315 Pc      23 08.50   -1.5
        1.5s   192.00nm          5.5mb
     Z  18s      1.40um          4.6Msz
     E  14s      1.10um
                  pP      23 34.50 121kmX
                  sP      23 44.00
                  S       27 59.00
                  PcS     29 36.00
MTN     28.28 206 eP      23 18.00   -0.9
                  e       26 29.00
HOOJ    29.40 360 eP      23 31.30    2.7
NJ2     29 49 314 Pd      23 29 50    0.0
     Z  20s      1 20um          4.5Msz
                  sP      24 03 50
MRRJ    29 51 357 P       23 28 90   -0.6
MKS     29 77 234 ePc     23 32.60    0.5
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                  e       29 37.00
SAP     30.12 357 eP      23 35 00    0.0
KUSJ    30.14   2 eP      23 34.10   -1.0
GZH     30.24 294 Pd      23 36.00   -0.2
                  sP      24 11.50
ASAJ    31.14 359 eP      23 43 70   -0.2
KNA     31.89 207 eP      23 49.70   -1.0
WHN     32.03 308 Pd      23 52.50    0.7
        4.0s      1.10nm          3.0mb X
     Z  20s      1.25um          4.6Msz
     N  14s      1.55um
     E  14s      0.65um
                  pP      24 16.50 107kmX
                  sP      24 28.00
                  S       28 58.00
DL2     32.29 327 iPd     23 54.00    0.0
        4.0s      1.40nm          3.1mb X
     Z  20s      1.20um          4.6Msz
     N  14s      0.90um
                  sP      24 28.00
QIZ     32.76 285 eP      23 59.00    0.7
                  sP      24 35.00
                  S       29 09.00
CTA     32.88 175 iPd     23 59.10   -0.2
        1.0s    105.00nm          5.6mb
                   i      24 26.80
                  iS      29 08.00
                   i      32 04.00
TIA     33.10 319 Pd      24 01.20    0.1
     N  15s      0.90um
     E  12s      0.60um
                  sP      24 35.50
                  eS      29 11.00
QIS     33.43 186 iPc     24 03.10   -0.9
        1.0s    142.00nm          5.7mb
                   e      24 25.00
                   e      26 42.00
SNY     33.60 333 iPd     24 04.80   -0.5
        5.0s      1.20nm          2.9mb X
     Z  19s      1.10um          4.6Msz
     N  15s      0.80um
     E  19s      0.80um
                  sP      24 40.00
                  PP      25 22.00
                  eS      29 20.00
WB5     33.73 195 iPc     24 05.90   -0.7
                  iPcP    26 44.00
                  eS      29 20.30
MDJ     33.75 342 eP      24 06.80    0.2
                  sP      24 42.00
WRA     33.80 195 Pd      24 06.00   -1.2
        0.5s     36.80nm          5.4mb
CN2     34.45 337 iPd     24 12.00   -0.6
        5.5s      0.80nm          2.7mb X
                  isP     24 47.00
                  iPP     25 33.50
                  ScP     30 16.60
BJI     36.11 323 iPd-    24 27.50    0.9
        4.0s      1.22nm          3.1mb X
     Z  20s      1.70um          4.8Msz
     N  18s      1.76um
                  esP     25 02.00
                  PP      25 56.00
                  eS      29 56.00
                  eScS    34 31.50
GYA     36.95 297 iPd     24 36 00    1 9
        2 0s      1.50nm          3 5mb X
     N  14s      0.70um
     E  14s      0.50um
                  pP      25 00.80 107kmX
                  sP      25 11.00
                  PP      26 04.00
                  PcP     26 53.40
                  S       30 12.00
                  ScS     34 38.00
TIY     37.03 317 iPd     24 35.50    1.0
        4.0s      1.50nm          3.2mb X
     Z  20s      1.13um          4.7Msz
     N  13s      0.80um
                  sP      25 07.50
                  PP      26 06.00
                  S       30 14.00
ASPA    37.47 194 iPc     24 38.00   -0.3
        0.6s     62.00nm          5.6mb
     Z  19s      2.14um          4.9Msz
                  ipP     25 01.00  97kmX
                  iPcP    26 54.80
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                 eS     30 14.80
                 iScS   34 41.40
                 LR     40 01.20
XAN    37.69 310 iPd    24 40.20    0.1
   5.0s   1.10nm               2.9mb X
 N 10s    0.70um
                 sP     25 16.00
                 S      30 23.00
HHC    39.37 321 iPd    24 55.20    1.1
 Z 20s    1.40um               4.8Msz
                 sP     25 33.00
                 PP     26 35.50
                 S      30 51.50
RMQ    39.48 172 eP     24 55.00    0.1
KMI    40.13 294 Pd-    25 02.50    1.8
 Z 21s    1.60um               4.8Msz
                 pP     25 27.00 106kmX
                 sP     25 37.00
                 S      31 00.00
BTO    40.19 320 iPd    25 02.00    1.2
 N 13s    0.40um
 E 13s    0.70um
                 pP     25 25.00  98kmX
                 sP     25 36.00
LOE    40.37 282 eP     25 03.00    0.6
CD2    40.62 303 iPd    25 04.90    0.5
                 sP     25 39.50
                 S      31 04.00
MBL    40.96 215 iPc    25 06.80   -0.3
   0.3s   13.00nm              5.1mb
BRS    41.06 167 iPc    25 08.40    0.5
                 i      25 30.00
                 i      25 35.90
                 iPcP   27 07.00
                 iScP   30 45.90
                 iS     31 13.00
KGM    41.07 258 ePc    25 09.50    1.4
DZM    41.46 147 iPd    25 12.50    1.1
NST    41.93 279 eP     25 17.50    2.3
WARB   42.09 203 eP     25 06.20  -10.2X
   0.4s   45.00nm
LZH    42.33 310 iPd    25 20.00    1.5
   4.0s 1291.00nm              6.0mb X
 Z 20s    1.20um               4.8Msz
 N 10s    0.20um
 E 10s    0.20um
                 pP     25 45.00 108kmX
                 PP     26 58.50
                 eS     31 15.00
SNG    42.42 267 eP     25 21.30    2.0
   0.9s  315.97nm              6.0mb
                 eS     31 35.50
NNT    42.51 275 iPd    25 21.20    1.2
IPM    42.59 263 ePd    25 21.90    1.3
   0.9s  124.60nm              5.6mb
                 e      27 11.20
BDT    42.98 282 eP     25 25.00    1.3
CHG    43.04 284 iPd    25 25.00    0.7
   0.9s   27.10nm              5.0mb
COO    43.98 169 eP     25 32.70    1.1
CMS    44.17 177 iPc    25 32.90   -0.2
   0.8s   39.00nm              5.2mb
                 e      26 01.00
STK    44.53 182 eP     25 35.00   -1.0
   0.5s   33.00nm              5.3mb
FORR   45.88 198 iPd    25 46.70    0.1
   0.5s  126.00nm              5.9mb
MEKA   46 07 211 eP     25 48.00   -0.3
GTA    46.55 313 iPd    25 52.80    0.6
 Z 24s    0.95um              4.7MszX
                 pP     26 20.00 117kmX
                 sP     26 28.00
                 PcP    27 24.60
                 PP     27 46.00
                 ScP    31 06.20
                 S      32 31.00
                 ScS    35 33.80
ADE    47.78 185 eP     26 02.20    0.6
   1.0s  120.00nm              5.6mb
CAN    48.23 174 eP     26 05.50    0.5
CNB    48.26 173 eP     26 06.00    0.7
                 e      26 33.00
COOL   48.46 206 iPd    26 06.20   -0.7
MRWA   49 49 212 eP     26 15.00    0.2
   0.4s   36.00nm              5.6mb
BFD    49.79 181 iPc    26 17.10    0.2
   0.5s   33.00nm              5.5mb
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                 e      26 40.00
TOO    50.22 178 eP     26 20 00   -0.2
                 e      26 44.00
ADK    50.43  31 P      26 22.00    0.4
MUN    51.63 210 iPd    26 30.50   -0.5
NWAO   51.93 208 eP     26 32.00   -1.2
RKG    52.99 207 eP     26 44.30    3.3X
   0.4s   45.00nm              5.7mb
GUN    55.45 295 Pd     26 59.40   -0.2
PKI    55.85 295 Pd     27 01.90   -0.6
KKN    55.97 295 Pd     27 02.50   -0.7
DMN    56.12 295 Pd     27 03.90   -0.4
GKN    56.55 295 Pd     27 06.70   -0.6
WMQ    56.57 314 iPd    27 07.50    0.4
   1.5s    0.20nm              2.9mb X
 Z 22s    1.00um               4.9Msz
 N 13s    0.60um
                 pP     27 32.50 102kmX
                 sP     27 46.50
                 PcP    28 01.20
                 ScP    31 49.40
                 S      34 51.50
                 ScS    36 44.00
KRP    58.86 151 P      27 23.00    0.1
KIW    60.93 153 P      27 36.20   -0.8
TCW    60.93 154 P      27 36.30   -0.7
                 e      28 00.60
MNG    60.98 152 P      27 36.20   -1.2
   0.5s   60.00nm              5.8mb
MRW    61.14 153 P      27 37.20   -1.2
CAW    61.19 153 P      27 37.40   -1.4
WEL    61.21 153 eP     27 37.80   -1.1
WDW    61.29 153 P      27 38.00   -1.4
PGZ    61.34 152 P      27 38.70   -1.1
   0.6s   47.00nm              5.6mb
CCW    61.35 154 eP     27 39.00   -0.8
MTW    61.43 153 P      27 39.40   -1.0
MSZ    61.46 160 P      27 40.40   -0.1
                 e      28 08.00
MOW    61.53 153 P      27 40.10   -1.0
BLW    61.58 153 eP     27 40.80   -0.6
HYB    62.46 283 iPd    27 48.00    0.3
   1.0s  140.00nm              5.9mb
                 e      28 13.50
NDI    63.10 296 iPd    27 50.70   -1.1
GBA    63.98 279 Pc     27 56.60   -1.1
   0.7s   30.20nm              5.3mb
KSH    64.49 308 iPd    28 02.00    1.1
   4.0s    1.10nm              3.1mb X
                 PcP    28 34.00
SVW    64.98  28 eP     28 02.80   -0.7
TTA    65.44  26 eP     28 05.20   -1.2
POO    66.80 285 iPd    28 14.80   -1.0
   0.9s   30.25nm              5.2mb
IMA    67.48  23 ePd    28 18.00   -1.4
   0.8s   13.40nm              4.9mb
PMR    68.11  28 ePd    28 20.80   -2.4
   0.7s  114.30nm              5.9mb
BRW    68.45  17 ePd    28 24.30   -0.8
FBA    69.49  25 ePd    28 29.00   -2.6
   0.6s   27.40nm              5.3mb
TOA    69.59  28 eP     28 31.10   -1.3
AFR    72.59 113 iP     28 53.20    2.2
   1.2s  165.00nm              5.7mb
PPT    72.78 113 iP     28 54.40    2 3
   1.2s  185.00nm              5 7mb
 Z 20s    0 80um               5.0Msz
PAE    72.81 113 iP     28 54.40    2.2
   1.2s  180.00nm              5.7mb
PPN    72.90 113 iP     28 55.00    2.3
   1.2s  140.00nm              5.6mb
TVO    73.15 113 iP     28 57.00    2.7
   1.2s  285.00nm              5.9mb
PMO    73.47 110 iP     28 57.90    1.9
   1.2s  145.00nm              5.6mb
TPT    73.72 110 iP     28 59.20    1.7
   1.2s  105.00nm              5.5mb
VAH    73.78 110 iP     28 58.90    1.0
   1.2s  115.00nm              5.5mb
RUV    74.00 110 iP     29 00.90    1.8
   1.2s  120.00nm              5.5mb
INK    75.59  22 ePd    29 05.70   -1.7
   0.9s   50.00nm              5 3mb
MAIO   77.60 305 iPd-   29 20.20    0 9
                 i      29 47 00
MBC    79.32  14 ePd    29 26 90   -0.9
   0.5s   13.00nm              5.0mb
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PGC    82.55  42 eP     29 45.00   -0.2
BMW    83.12  44 eP     29 48.40    0.1
GMW    83.20  43 eP     29 49.40    0.7
FHC    83.70  50 ePd    29 52.40    1.0
                 i      30 20.00
RMW    83.87  43 eP     29 52.40    0.3
LON    84.02  44 eP     29 52.60   -0.3
ALE    84.03   3 ePd    29 53.20    1.0
   0.7s    9.00nm              4.8mb
                 pP     30 22.00 111kmX
YKA    84.17  27 eP     29 55.00    1.8
YKC    84.23  27 ePd    29 52.80   -0.7
IR2    84.58 305 iP-    29 56.60    0.6
IR4    84.66 305 iP-    29 57.50    1.1
IR1    84.79 305 iP-    29 57.80    0.7
IR7    84.80 305 iP-    29 57.50    0.4
WDC    84.82  50 iPd    29 57.30    0.4
                 i      30 25.00
PNT    84.88  41 eP     29 57.00   -0.1
   0.7s   22.00nm              5.1mb
VGB    84.99  45 eP     29 58.00    0.3
LTCM   85.21  50 P      30 00.00    1.1
MIN    85.57  50 ePd    30 00.40   -0.5
BRK    85.62  52 ePd    30 00.80   -0.2
BKS    85.64  52 ePc    30 02.10    1.0
   1.2s  163.00nm              5.8mb
ORV    85.83  51 ePd    30 01.60   -0.4
GCC    86.02  53 ePd    30 03.10    0.2
DPW    86.14  42 eP     30 03.50    0.1
MHC    86.22  53 iPd    30 04.40    0.3
                 i      30 32.50
SAO    86.51  53 eP     30 04.80   -0.6
PRS    86.67  54 ePd    30 06.50    0.4
KEV    86.74 342 iP     30 05.00   -0.8
   0.5s   21.10nm              5.4mb
                 i      30 34.00
LLA    86.93  53 eP     30 07.90    0.5
CMB    87.03  52 iPd    30 08.20    0.3
                 i      30 35.50
PRI    87.26  54 ePd    30 09.70    0.5
                 i      30 38.00
EDM    87.59  36 ePd    30 10.10   -0.2
FRI    87.81  53 iPd    30 11.70    0.1
BCH    87.95  55 P      30 13.50    1.0
SOD    88.02 340 iP     30 11.20   -0.8
                 i      30 39.00
SYP    88.20  55 eP     30 15.00    1.3
KVN    88.51  50 P      30 15.50    0.3
SLY    88.87 306 ePd    30 12.00   -4.6X
                 eS     40 53.00
TNP    89.43  51 P      30 20.00    0.4
PAS    89.74  55 eP     30 21.00    0.2
                 e      30 48.00
CLC    89.75  53 eP     30 21.00    0.1
                 e      30 48.00
MWC    89.81  55 eP     30 21.00   -0.4
                 e      30 49.00
SES    89.87  38 eP     30 21.00   -0.2
SBB    89.88  55 eP     30 22.00    0.5
                 e      30 49.00
DAG    89.90 356 iPd    30 18.80   -1.9
   1.0s   17.00nm              5.1mb
BHD    90.37 304 iPc    30 22.00   -1.7
                 ePcP   30 51.00
                 eS     41 10.00
RVR    90 42  55 eP     30 24 00    0 1
                 e      30 52 00
MSL    90.50 307 ePc    30 23.00   -1.2
                 ePcP   30 51.50
                 eS     41 10.00
                 e      42 02.50
SUF    90.51 336 iP     30 22.20   -1.6
   0.6s   21.20nm              5.4mb
LRM    90.52  43 eP     30 24.20   -0.3
GSC    90.52  54 eP     30 25.00    0.5
                 e      30 53.00
HPI    90.76  45 eP     30 26.10    0.4
PLM    91.01  56 eP     30 27.00    0.1
BAR    91.35  56 eP     30 28.00   -0.3
                 e      30 56.00
                 e      34 02.00
NUR    92.25 334 eP     30 30.00   -1.8
 Z 20s    0 60um               5.0Msz
                 i      31 03.00
                 LR     15 30.00
GLA    92 73  55 eP     30 35.00    0.4
                 e      31 03.00
```

14d 10h

		e	34	16.00	
MSU	93 09	50 eP	30	36.30	-0.2
DAU	93.13	47 eP	30	37.30	0.6
FFC	93.20	32 eP	30	35.00	-1.3
	0.8s	15.00nm			5.3mb
KVT	94.26	314 eP	30	40.50	-1.0
PV09	95.34	49 P	30	46.40	-0.5
PV10	95.45	49 P	30	46.50	-0.9
RSSD	96.69	42 P	30	51.80	-1.0
HFS	96.88	337 eP	30	51.30	-1.7
	0.6s	7.10nm			5.3mb
NAO	97.47	339 P	30	53.60	-2.1
	0.6s	4.60nm			5.2mb
GOL	97.59	46 P	30	56.60	-0.4
GLD	97.68	46 P	30	57.70	0.4
VRI	98.45	321 eP	30	58.00	-2.4
ALQ	98.64	51 e(P)	31	01.50	-0.2
		ePcP	31	09.00	
		epP	31	35.20	130kmX
MLR	99.11	321 eP	31	02.00	-1.6
FRB	99.78	14 eP	31	07.00	0.9
KRA	100.19	327 ePdiff	31	07.20	-0.9
		e	31	39.90	
KSP	101.62	329 ePdiff	31	12.50	-1.9
		e	31	40.00	
		e	34	14.00	
ZST	102.78	326 ePdiff	31	19.60	-0.1
	Z 18s	1.30um			5.5Msz
		e	31	52.00	
		e	35	37.30	
		LR	11	22.00	
CLL	102.94	331 ePdiff	31	18.00	-2.3
		e	31	52.00	
		i	31	56.60	
PRU	103.03	329 ePdiff	31	20.00	-0.7
		e	31	53.20	
VAY	103.31	318 ePdiff	31	20.50	-1.7
SKO	103 70	319 iPdiff	31	23.00	-0.9
		i	31	50.50	
WTS	105.29	334 ePKP	35	53.00	8.8X
	1.4s	76.00nm			
		e	36	19.50	
VBY	105.41	325 ePdiff	31	31.00	-0.4
		i	32	03.90	
KBA	105.48	327 ePdiff	31	31.00	-0.9
		iPgc	31	33.00	
		iSg	32	02.90	
		e	34	48.00	
		i	35	30.60	
VOY	105.84	326 e(Pdif	31	32.50	-0.9
		e	32	04.80	
EKA	106.44	341 PKPc	35	57.80	11.5X
	1.7s	68.20nm			
ABH	106.47	332 ePKPc	36	02.32	15.7X
ENN	106.56	333 ePKPc	36	01.50	14.8X
	1.5s	101.00nm			
		e	36	27.00	
MEM	106.64	333 PKP	36	02.60	15.8X
RUP	106.82	332 ePKPc	36	04.79	17.5X
UCC	107.21	334 PKP	36	07.00	19.1X
		e	36	45.00	
FEL	107.65	330 ePKP	36	08.92	19.8X
BUL	117.34	254 iPKPc	36	07.90	-0.5
	0.6s	10 00nm			
SLR	117.92	248 iPKPd	36	09 40	0.1
	0 9s	21 01nm			
PRY	118 67	246 iPKPc	36	15 20	4 5X
	0.5s	5 41nm			
BFS	119.28	246 iPKPd	36	07.50	-4.4X
	0.5s	42.25nm			
FRS	120.52	243 iPKPc	36	13.70	-0 2
	0.6s	26.67nm			
NNA	140.77	93 ePKP	36	47.80	-5.0X
LNV	142.09	130 ePKP	36	50.50	-4.0X
HUA	142.25	93 ePKP	36	54.70	-1.2
TACH	142.58	129 ePKP	36	52.30	-3.1X
ROCH	142.81	128 ePKP	36	52.00	-4.1X
PCH	142.91	130 iPKPc	36	53.50	-2.6
KIC	142.98	299 PKP	36	52.90	-3.7X
PEL	142.98	129 iPKPd	36	53.10	-3.1X
TIC	143.07	300 PKP	36	53.24	-3.6X
FCH	143.21	129 ePKP	36	51.50	-5.4X
LIC	143.30	299 PKP	36	53.98	-3.2X
	0.8s	79 50nm			
SVB	144.37	44 ePKP	36	57.11	-1 8
ZON	145 20	127 iPKPd	37	00.50	0.5
TCE	145.80	48 ePKP	37	00.40	-1.0
TRN	146.09	48 ePKP	37	01.60	-0.2
ARE	146.13	100 iPKPd	37	03.70	1 4
	0.9s	67.23nm			
PIG	146.13	46 ePKP	37	04.51	2.6
ANT	146.26	113 iPKP	37	04.00	2.1
TPP	146.27	48 ePKP	37	03.40	1.2
TBH	146.44	47 ePKP	37	04.18	1.7
ZOBO	149.37	100 iPKPd	37	09.00	1.3
	1.3s	240.54nm			
		LR	27	06.00	
LPB	149.38	101 iPKPd	37	10.00	2.4
CNCB	149.48	101 iPKPd	37	10.20	2.3
PPD	163.32	125 ePKP	37	26.20	1.9
		e	38	17.30	
		e	38	49.60	
SOB1	174.46	49 ePKP	37	31.50	0.1
		e	38	02.80	
ITR	175.56	23 ePKP	37	31.30	-0.4
	S.D. = 1.1	on 229 of 252 obs.			

JUN 14, 1989 12h 31m 41.18± 0.63s
39.297 N ± 6.0km 28.992 E ± 6.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.42	318 iPg	31	49.10	-0.6
		iSg	31	56.10	
ALT	0.90	105 iPg	31	58.80	0.3
		eSg	32	10.30	
KHL	1.06	157 ePn	32	00.30	-0.9
BNT	1.34	322 iPn	32	06.10	0.2
EDC	1.36	321 iPn	32	05.70	-0.5
GPA	1.42	45 ePn	32	06.60	-0.4
GBZT	1.53	13 ePn	32	10.20	1.7
		iSg	32	32.50	
IZM	1.62	237 ePn	32	11.00	1.1
ISK	1.77	2 ePn	32	12.00	0.0
CTT	1.90	347 ePn	32	13.00	-0.9
YER	2.23	195 iPn	32	23.20	4.4X
	S.D. = 1.0	on 10 of 11 obs.			

? JUN 14, 1989 12h 35m 24.80± 3.66s
51.264 N ±26.9km 16.029 E ±22.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP	0.45	158 iP	35	34.00	0.0
	0.4s	47.00nm			
		iS	35	43.00	
BRG	1.37	254 iPn	35	49.80	-0.1
		iPg	35	50.40	
		iSg	36	09.60	
PRU	1.59	217 ePn	35	53.00	0.0
		Pg	35	54.80	
		Sn	36	11.70	
		Sg	36	18.00	
CLL	1.90	273 iPg	35	57.60	0.1
		eSg	36	24.00	
KHC	2.65	217 Pn	36	08.50	0.1
		Pg	36	14.50	
		Sg	36	43.20	
	S.D. = 0.1	on 5 of 5 obs.			

% JUN 14, 1989 12h 40m 07.35± 0.86s
39.357 N ± 9.4km 29.056 E ± 8.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.41	307 iPg	40	15.10	-0.7
		eSg	40	26.10	
ALT	0.87	110 ePg	40	25.30	1.1
		eSg	40	36.80	
KHL	1.09	160 ePn	40	27.30	-0.7
BNT	1.33	319 iPn	40	32.10	0.3
GPA	1.34	46 ePn	40	31.00	-1.1
EDC	1.35	317 iPn	40	33.20	1.0
	S.D. = 1.2	on 6 of 6 obs.			

* JUN 14, 1989 12h 54m 41.44± 0.62s
10.359 S ±18.4km 78.618 W ±27.7km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)
NEAR COAST OF PERU (115)

PT10	2.35	137 eP	55	19.30	0.7
NNA	2.38	133 iPc	55	19 20	0.2
		eS	55	46 00	
PT02	3.34	140 iP	55	31.30	-1.4
		iS	56	13.70	
PT06	4.11	147 iP	55	44.10	0.5
		iS	56	37.00	
PT03	4.54	143 iP	55	44.40	-5.4X
		iS	56	37.80	
ARE	9.21	132 eP	57	05.00	9.6X
ZOBO	11.78	121 P	57	35.00	4.2X
	Z 24s	0.25um			
		LR	02	15.00	
VVO	48.25	341 e(P)	03	21.80	0.6
MEO	48.72	338 eP	03	24.40	-0.5
	0.8s	3.10nm			4.4mb
RLO	48.79	342 e(P)	03	24.90	-0.5
TUL	48.79	341 ePd	03	25.90	0.5
	0.9s	10.20nm			4.9mb
		e	03	45.70	
LNO	48.79	341 e(P)	03	25.00	-0.3
ALQ	52.20	331 eP	03	52.00	0.3
	1.1s	6.96nm			4.5mb
FRB	74.29	5 eP	06	16.00	-0.8
YKA	77.79	344 eP	06	37.20	0.5
INK	87.45	342 eP	07	39.00	12.6X
MBC	89.72	351 eP	07	37.50	0.4
	0.8s	6.00nm			4.9mb
		pP	07	50.00	41kmX
WRA	135.73	227 PKPd	14	00.80	-0.5
	0.6s	1.20nm			
	S.D. = 0.7	on 14 of 18 obs.			

JUN 14, 1989 13h 33m 06.61± 0.55s
51.801 N ± 9.9km 174.480 W ± 6.5km
DEPTH = 33.0km (normal)
4.5mb (12 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.37	274 eP	33	32.20	2.6
KDC	13.98	56 eP	36	25.00	0.7
TTA	14.88	34 eP	36	37.50	1.4
IMA	17.74	28 eP	37	14.00	1.6
FBA	18.98	36 eP	37	26.80	-0.7
BRW	21.14	16 eP	37	50.00	-0.5
INK	25.58	34 eP	38	35.00	1.3
MBC	32.22	22 eP	39	33.00	-0.2
WDC	36.92	87 ePd	40	14.90	1.0
ARN	39.49	90 eP	40	35.60	0.0
CMB	39.78	88 ePd	40	38.80	0.9
KVN	40.58	85 eP	40	44.80	0.2
FRI	40.85	89 ePd	40	47.10	0.5
TNP	41.72	86 eP	40	54.00	0.0
	0.7s	2.96nm			4.1mb
MSU	44.56	82 eP	41	17.40	0.2
PLM	44.99	91 eP	41	20.00	-0.6
GOL	47.97	76 eP	41	44.00	-0.2
	0.8s	8.93nm			4.8mb
RSON	47.98	57 eP	41	42.60	-1.2
ALQ	50.37	82 eP	42	02.10	-0.5
	1.0s	3.25nm			4.3mb
SSE	50.69	272 Pc	42	04.00	-0.7
	1.0s	7.00nm			4.6mb
NB2	67.42	357 P	43	58.60	-1.8
	0.9s	2.60nm			4.3mb
LOR	81.30	1 eP	45	20.60	0.0
	0.8s	2.60nm			4.3mb
SSF	81.50	1 eP	45	21.10	-0.5
	0.8s	3.20nm			4.4mb
LBF	81.59	1 eP	45	21.20	-0 9
	0.8s	4.50nm			4.5mb
AVF	81.77	2 eP	45	22.30	-0.7
	0.8s	4.00nm			4.5mb
MFF	81.86	4 eP	45	22.80	-0.6
	0.6s	3.60nm			4.6mb
SMF	81.92	1 eP	45	23.10	-0.7
	0.6s	5.40nm			4.8mb
MAF	82.33	2 eP	45	25.30	-0.6
	0.6s	3.60nm			4.6mb
SLR	148.76	318 iPKPd	52	51.40	3.3X
	1.0s	13.00nm			
PRY	150.14	318 ePKP	52	53.50	3.3X
	0.7s	7.50nm			
FRS	153.52	319 ePKP	52	45.20	-9.5X
	S.D. = 1.0	on 28 of 31 obs.			

* JUN 14, 1989 16h 21m 10 05± 0.99s
22.191 S ±10.3km 68.718 W ±13.7km
DEPTH = 77 4 ± 13.3 km
4.3mb (2 obs.)

NORTHERN CHILE (123)
Felt (III) at Colomo, Tocopilla ond Quillohuo.

ANT	2.17	226	iP	21 44.50	-0.3
			i	21 46.00	
			iS	22 05.50	
CCH	5.36	27	P	22 29.40	-0.2
CNCB	5.40	8	iP	22 30.80	0.5
LPB	5.66	6	P	22 34.00	0.2
ZOBO	5.92	6	P	22 34.00	-3.6X
PEL	11.05	189	eP	24 00.60	13.4X
			iS	26 19.50	
PPD	16.13	93	eP	24 58.00	4.5X
			e	24 58.90	
			e	25 13.70	
VAO	20.10	96	eP	25 41.10	1.0
BAO	20.65	75	eP	25 45.00	-0.9
ATB	24.68	43	e(P)	26 21.60	-3.7X
SOB1	29.66	69	e(P)	27 10.00	-0.8
ALQ	67.17	327	eP	31 52.50	-5.6X
	0.7s		1.88nm	4.1mb	
SPA	67.94	180	e(P)	32 03.20	0.6
	1.0s		5.50nm	4.4mb	
YKA	91.89	341	eP	34 06.80	-3.6X
WRA	132.45	210	PKP	40 17.00	-0.8
	0.5s		2.60nm		
GBA	146.74	99	PKPc	40 44.20	0.6
	0.8s		4.00nm		

S.D. = 0.8 on 10 of 16 obs.

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* JUN 14, 1989 17h 29m 51.41± 1.95s
66.958 N ± 8.3km 20.614 E ±23.7km
DEPTH = 10.0km (geophysicist)
SWEDEN (536)
MD 3.1 (BER).

TRO	2.76	348	eP	30 36.35	-0.1
			eS	31 05.58	
LOF	2.96	297	eP	30 39.43	0.2
			eS	31 12.21	
NSS	4.32	240	eP	30 58.13	-0.4
			eS	31 48.58	
NRA0	7.41	217	iPc	31 42.70	0.5
			eS	33 05.00	
			iSg	33 51.10	
HFS	7.51	207	eP	31 43.30	-0.2
	0.3s		1.20nm	4.6mb X	

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

JUN 14, 1989 18h 06m 38.26± 0.77s
34.289 N ± 3.0km 26.055 E ± 2.0km
DEPTH = 13.8 ± 4.6 km
5.2mb (56 obs.) 5.1Msz (8 obs.)
CRETE (370)
ML 4.8 (ATH).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 24C
Centroid Location:
Origin Time 18:06:40.4 0.6
Lat 34.30N FIX;Lon 26.10E FIX
Dep 15.0 FIX Half-duration 1.8
Moment Tensor; Scale 10**17 Nm
Mrr=-0.46 0.06 Mtt= 0.74 0.09
Mff=-0.27 0.05 Mrt= 2.18 0.12
Mrf= 0.38 0.10 Mtf= 0.05 0.04
Principal Axes:

	Val=	Plg=	Azm=
T	2.42	37	353
N	-0.26	3	261
P	-2.16	52	167

Best Double Couple:Mo=2.3*10**17
NP1:Strike=102 Dip= 8 Slip= -68
NP2: 260 83 -93

NPS	1.04	340	iPnd	07 01.50	4.0X
KAP	1.56	36	iPbc	07 09.40	3.8X
VAM	1.89	307	iPnc	07 15.00	4.6X
YER	3.37	32	iPn	07 33.20	1.7
KSL	3.42	57	iPnc	07 33.00	0.9
ELL	3.99	51	iPn	07 41.60	1.2
ATH	4.13	333	iPnc	07 45.00	2.7
IZM	4.21	13	iPn	07 45.10	1.6
BCK	4.85	48	iPn	07 53.50	0.8
KHL	4.90	34	iPn	07 53.30	0.0
PPCY	5.22	82	eP	07 55.00	-2.8
NEO	5.50	336	ePn	08 03.00	1.3
EZN	5.53	2	iPn	08 03 50	1.4
DST	5.69	20	iPn	08 05.00	0 5
ALT	5.77	33	iP	08 05.30	-0.2
VLS	5.88	313	ePn	08 06.80	-0.2
CSS	6.04	82	eP	08 06.50	-2.7
			eS	09 09.50	
EDC	6.22	13	iP	08 11.80	0.0
BNT	6.24	13	iP	08 12.60	0.6
HLW	6.30	133	ePn	08 11.00	-1.9
			eSn	09 16.00	
PLG	6.42	342	ePn	08 15.50	0.8
KOT	6.55	130	ePn	08 12.00	-4.5X
			eSn	09 22.00	
MFT	6.56	8	iP	08 17.60	0.9
FAM	6.59	82	eP	08 15.00	-2.0
YLV	6.80	22	iP	08 20.10	0.0
RDO	6.86	357	ePn	08 22.50	1.7
GPA	6.88	28	eP	08 22.80	1.6
KZN	6.91	332	ePn	08 23.00	1.4
GBZT	7.02	22	ePn	08 25.00	1.9
HRT	7.12	23	eP	08 25.00	0.4
ISK	7.17	19	eP	08 23.00	-2.2
KDZ	7.37	356	iPc	08 29.00	1.1
SRN	7.38	321	iP	08 28.00	-0.2
RZN	7.46	352	iP	08 36.00	6.5X
MMB	7.52	347	iPc	08 31.00	0.9
VAY	7.54	340	iP	08 32.00	1.6
			i	08 42.00	
KBN	7.57	328	iPd	08 33.30	2.5
BBTK	7.71	42	iPc	08 33.00	0.2
KKB	7.92	344	iP	08 36.00	0.3
OHR	7.98	330	iP	08 35.40	-1.2
BERA	8.03	325	iP	08 36.10	-1.1
JMB	8.18	3	iP	08 39.00	-0.2
PGB	8.38	350	iP	08 24.00	-18.2X
SALJ	8.39	103	P	08 37.70	-4.6X
BURJ	8.39	102	P	08 37.20	-5.1X
KFNJ	8.43	104	P	08 38.40	-4.4X
SKO	8.49	336	eP	08 43.00	-0.6
	1.2s		300.00nm	6.4mb X	
Z	13s		9.94um	4.0MszX	
N	13s		10.69um		
E	13s		13.40um		
			i	08 54.00	
			iS	10 34.00	
			i	11 28.00	
			LR	12 28.00	
MASJ	8.51	105	P	08 39.50	-4.5X
JARJ	8.53	101	P	08 39.70	-4.6X
TIR	8.58	327	eP	08 43.50	-1.3
VTS	8.58	346	iP	08 47.00	1.9
PHP	8.61	331	eP	08 44.60	-0.7
LCI	8.83	315	P	08 44.70	-3.6X
			eSn	10 12.00	
LACI	8.88	328	eP	08 46.10	-2.9X
QUTJ	8.89	107	Pd	08 44.90	-4.4X
GRI	8.97	303	P	08 50.18	-0.2
PUK	9.13	330	eP	08 51.70	-0.8
HQL	9.14	121	eP	08 47.70	-5.0X
SDA	9.28	328	iPd	08 54.00	-0.5
BCI	9.33	332	eP	08 52.80	-2.4
MSI	9.34	298	P	08 55.30	0.0
			eSn	10 28.40	
ULC	9.35	327	ePn	08 53.50	-2.0
			eSn	09 30.00	
ATN	9 39	297	eP	08 54 00	-2.1
			eS	10 28 50	
SRFA	9.44	122	ePc	08 52.30	-4.5X
PSN	9.52	9	iPd	08 59.00	1.1
BADA	9.56	125	eP	09 25.30	26.9X
PVY	9.56	332	ePn	08 57.20	-1.4
			eSn	09 35.50	
TTG	9.72	329	ePn	08 59.00	-1.6
			eSn	09 40.00	
BDV	9.79	327	ePn	09 00.00	-1.6
			eSn	09 40.00	
MNO	9.88	295	iP	09 02.80	-0.3
			eS	10 33.00	
BUC1	10.04	360	ePc	09 04.00	-1.0
AYN	10.05	120	eP	09 02.00	-3.2X
HCY	10.07	326	ePn	09 03 40	-2.1
			eSn	09 50.00	
BUC	10.11	0	ePd	08 46.50	-19.5X
NKY	10.14	329	ePn	09 05 00	-1 5
			eSn	09 52.00	
MGR	10.20	308	P	09 05 20	-2.1
GIB	10.40	294	P	09 10 00	-0.1
			eSn	10 55.10	
BRY	10.41	328	ePn	09 08.00	-2 2
			eSn	09 56.00	
KVT	10.42	46	eP	09 10.50	0.2
FAI	10.49	290	P	09 12.10	0.9
SGO	10.59	309	P	09 11.00	-1.5
ISR	10.84	2	ePc	09 15.50	-0.5
CMP	10.99	356	ePc	09 20.00	1 9
CFR	11.00	8	ePd	09 18.00	-0 1
BSS	11.03	309	P	09 16.40	-2.2
CLO	11.06	348	ePd	09 19.00	0.1
MLR	11.19	360	ePc	09 21.00	0.1
			e	29 00.00	
BRD	11.24	4	eP	09 17.50	-3.9X
USI	11.26	297	P	09 18.70	-3.0X
CVT	11.26	291	P	09 21.00	-0.8
BEO	11.37	339	eP	09 23.00	-0.1
Z	12s		11.20um		
			e	12 43.00	
VRI	11.58	2	ePc	09 28.00	2.0
HVAR	11.61	323	iPn	09 22.00	-4.5X
			iSn	11 25.50	
BZS	11.81	345	ePc	09 27.00	-2.2
DEV	11.83	349	ePd	09 33.50	4.1X
RFI	11.83	310	P	09 28.39	-1.0
PPE	11.97	5	ePd	09 30.00	-1.3
TIM	12.02	344	iPd	09 34.50	2.6
SDI	12.16	311	P	09 31.70	-2.2
CLI	12.28	4	ePc	09 50.00	14.5X
BLY	12.48	329	eP	09 56.00	17.8X
			eS	11 36.00	
AZI	12.55	311	P	09 37.70	-1.4
PTT	12.64	1	eP	09 45.00	4 8X
ALP	12.92	315	ePKP	09 42.79	-1.4
AOI	13.38	317	ePKP	09 48.75	-1.5
CIO	13.43	315	ePKP	09 50.16	-0.7
BMR	13.51	353	ePd	09 54.00	2.2
ASS	13.64	314	P	09 52.60	-1.0
ARV	13.73	316	P	09 51.90	-2.8
ZAG	13.84	329	i(Pn)	10 02.00	5.8X
VBY	13.92	327	eP	09 55.30	-1.9
			eS	12 19.90	
PTJ	13.92	329	ePn	09 52.90	-4.4X
MSL	14.11	77	ePd	10 01.00	1.2
			eS	12 44.00	
RIY	14.21	324	ePn	10 00.10	-0.8
RSM	14.27	316	P	10 01.40	-0.4
CEY	14.48	326	eP	10 02.50	-2.1
			eS	12 36.50	
SFI	14.61	315	P	10 06.50	0.2
LJU	14.66	327	eP	10 05.10	-1.8
			eS	12 42.50	
SRO	14.71	339	eP	10 07.00	-0.5
			i	10 17.10	
TRI	14.77	324	e(Pn)	10 05.20	-3.1X
			e	10 14.40	
			e(Sn)	12 38.10	
			eLQ	14 40.00	
VOY	14.95	325	eP	10 08.90	-1.8
			e	10 16.80	
			e	12 46.90	
SOP	15.16	335	eP	10 14.10	0.6
BHD	15.28	89	iPd	10 16.00	0.9
			iPP	10 23.00	
			iPPP	10 39.00	
			iS	13 16.00	
			iSS	13 23.00	
PII	15.29	313	P	10 16.40	1 3
RBL	15.40	326	P	10 16.30	-0.3
ZST	15.42	337	eP	10 17.40	0.6
Z	14s		10.00um		
			i	10 28.10	
			i	10 44.00	
			e	11 06.40	
			eS	13 38.00	
MME	15.45	314	P	10 18.70	1.2
SPC	15.50	346	eP	10 19.60	1.6
VVI	15.63	322	P	10 17.50	-2.1
VKA	15.74	335	e(P)	10 24.00	3.0X
Z	12s		3.30um		
			i	10 32.50	
			e(S)	13 19.00	
			LR	17 41.00	
CVF	15.78	307	iPc	10 22 10	0 5
	1.2s		95.20nm	4 9mb	
FVI	15.88	325	P	10 21.50	-1 3
KBA	15.98	327	e(P)	10 22.50	-1 7

14d 18h

	0.7s	32 50nm		4.6mb		
		i	10 29 10			
		iPP	10 31 30			
		iS	13 09.70			
SLY	16 00	80 ePc	10 24.00	-0.4		
		i	10 26.50			
		iPP	10 32.50			
		iPPP	10 48.00			
		i	11 12 00			
		iS	13 32 50			
		iSSS	14 21.00			
		iLO	16 31.00			
		eLR	17 46 00			
CTI	16.07 321	P	10 22.40	-2.9X		
KRA	16.39 346	ePd	10 28.60	-0.6		
	1.0s	74.00nm		4.8mb		
Z	18s	4.00um		5.3Msz		
N	18s	5.20um				
		e	10 39.00			
		e	13 45 00			
SAL	16.39 318	P	10 28.50	-0.7		
KMR	16.40 331	eP	10 30 00	0.7		
		iS	13 33.80			
		i	13 41.80			
BOB	16.51 314	P	10 30.60	-0.3		
BHG	16.67 328	eP	10 31.80	-1.0		
TAB	16 79 71	eP	10 35.00	0.4		
MDI	16.94 317	P	10 34.90	-1.3		
FIN	16.97 311	P	10 38.47	1.7		
IMI	17.03 310	P	10 38.16	0.7		
ROB	17.23 311	P	10 40.11	0.2		
OSS	17.28 321	ePc	10 42.10	1.5		
SAOF	17.28 310	P	10 41.10	0.5		
SBF	17.30 309	iPc	10 41.20	0.3		
AUTN	17.37 309	P	10 42.06	0.2		
AURF	17.38 309	P	10 42.36	0.5		
KER	17.39 84	eP-	10 44.00	1.8		
KHC	17.48 332	iPd	10 42.60	-0.4		
		i	10 48.80			
		i	10 57.20			
ENR	17.48 310	P	10 44.11	1.0		
TOUF	17.49 309	P	10 43.94	0.6		
MVIF	17.50 309	P	10 43.51	0.1		
VAI	17.53 316	P	10 42.70	-0.9		
STV	17.55 310	P	10 45.24	1.3		
CALN	17.60 308	P	10 44.83	0.1		
TMA	17.61 317	ePd	10 44.40	-0.4		
LMR	17.68 306	iPc	10 45.50	0.0		
	1.1s	68.30nm		4.7mb		
FRF	17.68 307	iPc	10 45.60	0.1		
	0.9s	58.90nm		4.7mb		
FUR	17.73 326	eP	10 45.70	-0.4		
Z	16s	14.70um				
		i	10 49.20			
WET	17.77 331	iPc	10 46.80	0.2		
		i	10 49.60			
LRG	17.83 307	iPc	10 47.80	0.5		
	1.2s	172.50nm		5.1mb		
PRU	17.83 335	P	10 45.40	-1.9		
	1.4s	60.00nm		4.5mb		
Z	13s	6.10um		5.3MszX		
N	13s	4.50um				
E	12s	1.30um				
		e	14 07 00			
LLS	18 00 319	ePc	10 50 40	0.7		
KSP	18 01 340	eP	10 48 50	-1.1		
	1.1s	115 00nm		4.9mb		
		ic	10 49 80			
		ic	10 51 30			
FOUF	18 02 310	e(P)	10 50 15	0.4		
		i	10 51 80			
SAX	18.06 321	ePd	10 51.10	0.6		
MMK	18.09 316	ePc	10 49.80	-1.1		
RRL	18.21 311	P	10 52.42	0.1		
LSD	18.25 313	P	10 51.39	-1.5		
BNI	18.34 312	P	10 55.30	1.4		
DIX	18.43 315	ePd	10 55.10	0.0		
LPG	18.52 313	eP	10 56.50	0.3		
EMS	18.71 315	ePd	10 57.60	-0.8		
ZLA	18.71 320	ePd	10 58.20	0.0		
BRG	18.78 336	iP	10 58 40	-0.6		
	1.2s	48.00nm		4.6mb		
		i	11 01 20			
		iS	14 42 00			
SLE	18.83 321	ePc	10 59 00	-0.7		
GRF	18.88 329	e(P)	11 01 00	0.8		
	1.5s	247.00nm		5.2mb		
	Z 19s	3.50um				
		e	14 29.60			
HOF	19.09 331	eP	11 02.20	-0.6		
FEL	19.15 321	P	11 02.87	-0.8		
BBS	19.17 319	P	11 02.89	-1.0		
ESEL	19.26 293	eP	11 09.00	3.9X		
CLL	19.47 335	iP	11 06.30	-1.1		
	1.3s	120.00nm		5.0mb		
		eS	14 46.00			
LOMF	19.48 318	P	11 07.78	0.2		
MOF	19.60 319	P	11 07.62	-1.4		
BSF	19.78 319	P	11 09.61	-1.3		
ECH	19.81 320	P	11 10.93	-0.2		
ETER	19.85 301	eP	11 12.00	0.5		
CDF	19.87 321	P	11 11.47	-0.4		
GWF	20.05 323	P	11 13.30	-0.4		
HAU	20.12 319	iPc	11 13.70	-0.7		
	0.8s	62.90nm		5.0mb		
RYD	20.24 113	eP	11 28.30	12.5X		
VITF	20.44 319	P	11 17.41	-0.3		
TNS	20.49 326	ePc	11 17.50	-0.8		
LBL	20.59 309	P	11 19.81	0.6		
PLDF	20.67 311	P	11 19.00	-1.2		
SMF	20.85 313	iPc	11 21.20	-0.7		
	0.8s	34.90nm		4.8mb		
LBF	20.93 314	iPc	11 22.00	-0.8		
PYM	20.96 310	P	11 23.24	0.0		
AGO	21.01 311	P	11 23.58	-0.1		
LOR	21.14 314	iPc	11 24.10	-0.8		
	0.8s	62.90nm		5.1mb		
AVF	21.21 313	iPc	11 24.60	-1.0		
WLF	21.23 322	iPc	11 25.50	-0.3		
CAF	21.24 307	iPc	11 26.00	0.0		
	1.0s	52.00nm		4.9mb		
EBR	21.25 295	eP	11 27.00	1.0		
		eS	15 28.00			
SSF	21.25 314	iPc	11 25.60	-0.4		
EROQ	21.31 295	eP	11 27.50	0.8		
KMSA	21.41 126	eP	11 28.30	0.4		
BGF	21.41 312	eP	11 27.60	-0.1		
MAF	21.44 311	eP	11 27.60	-0.4		
ACU	21.69 289	eP	11 31.00	0.4		
TCF	21.69 311	iPc	11 30.60	0.1		
LPO	21.74 306	iPc	11 31.30	0.3		
RJF	21.74 308	iPc	11 31.40	0.3		
EPF	21.83 301	eP	11 32.00	0.0		
	1.0s	28.00nm		4.6mb		
MEM	21.91 324	iPc	11 32.83	0.3		
ENN	22.05 324	ePc	11 35.00	1.0		
	0.9s	248.00nm		5.6mb		
		i	11 58.30			
LSF	22.10 310	iPc	11 35.80	1.2		
LFF	22.13 306	iPc	11 35.20	0.4		
	0.9s	93.00nm		5.2mb		
ECHE	22.20 292	eP	11 38.40	2.7		
DOU	22.29 322	Pc	11 37.30	0.9		
	0.6s	88.20nm		5.4mb		
Z	18s	11.40um		5.3Msz		
		i	12 08.80			
		S	15 41.00			
WTS	22.47 328	ePc	11 38.50	0.3		
	1.0s	98.00nm		5.2mb		
		i	12 01.50			
BEE	22.67 105	(P)	11 39.60	-0.7		
	1.2s	133.00nm		5.3mb		
SNF	22.70 322	Pc	11 42.40	1.9		
BJA	22.75 105	P)	11 40.30	-0.8		
UCC	22.84 323	P-	11 45.50	3.7X		
		e	12 13.00			
		S	15 52.00			
SHI	22.90 94	eP	11 44.00	1.1		
ENIJ	23.10 285	eP	11 48.00	3.4X		
WIT	23.11 329	eP	11 46.00	1.6		
		e	12 10.00			
ETOR	23.16 295	eP	11 48.00	2.8		
DBN	23.28 326	eP+	11 47.00	0.9		
Z	14s	4.00um		5.0MszX		
		i	11 56.00			
		eS	16 00.00			
		e	16 13.00			
MFF	23.31 310	iPc	11 47.80	1.3		
	0.8s	67.10nm		5.2mb		
EVIA	23.33 289	eP	11 49.50	2.6		
LOF	24 12 314	iPc	11 55 00	0.7		
	0.8s	83.90nm		5.4mb		
AFC	24 15 286	eP	11 59.80	4.9X		
CRT	24 20 285	eP	12 00.00	4.7X		
EBAN	24.33 288	e(P)	11 58.60	2.1		
ACHM	24.39 285	eP	12 00.00	2.9X		
FLN	24.41 314	iPc	11 57.70	0.6		
LPF	24.44 312	iPc	11 57.80	0.4		
GRR	24.47 313	iPc	11 58.40	0.7		
ATEJ	24.54 285	eP	12 00.20	1.5		
ALOJ	24.61 285	eP	12 00.50	1.2		
AAPN	24.61 286	eP	12 00.00	0.7		
GUD	24.73 294	eP	12 02.00	1.6		
MAL	24.87 284	iPc	12 03.30	1.6		
EHOR	25.49 287	eP	12 08.50	1.0		
EPRU	25.51 285	e(P)	12 11.00	3.2X		
LIJA	25.66 285	eP	12 09.50	0.2		
SRO	25.68 283	eP	12 11.00	1.7		
EJIF	25.74 284	e(P)	12 11.50	1.6		
OJEN	25.83 283	eP	12 14.00	3.2X		
ALJ	25.83 284	eP	12 08.00	-2.9		
GIBL	26.10 285	eP	12 13.50	0.2		
EPLA	26.16 292	eP	12 14.20	0.4		
UPP	26.17 350	iP	12 12.10	-1.5		
		iS	16 42.00			
CNIL	26.22 284	eP	12 14.50	0.2		
NUR	26.25 358	iP	12 12.60	-1.7		
	0.6s	40.40nm		5.3mb		
Z	24s	3.60um		4.8MszX		
		eS	16 48.00			
		LR	23 30.00			
HFS	27.09 346	eP	12 19.80	-2.3		
	0.7s	70.10nm		5.5mb		
MAIO	27.29 76	eP	12 23.00	-1.3		
		eS	17 04.00			
NRA0	28.08 345	iP	12 30.00	-1.1		
NB2	28.43 345	P	12 31.50	-2.8		
	1.1s	57.20nm		5.3mb		
SUF	28.45 0	iP	12 32.30	-2.1		
	0.8s	34.80nm		5.2mb		
YRH	28.62 320	eP	12 36.50	0.4		
	1.2s	97.00nm		5.5mb		
EKA	29.18 325	Pd	12 40.60	-0.4		
	0.9s	107.40nm		5.6mb		
ESK	29.19 325	iPd	12 40.80	-0.3		
	1.0s	120.00nm		5.6mb		
ESY	29.26 326	eP	12 41.00	-0.7		
ECP	29.28 318	eP	12 41.20	-0.8		
	1.0s	80.00nm		5.5mb		
EBL	29.37 326	eP	12 41.80	-0.9		
	0.8s	85.00nm		5.6mb		
ETA	29.42 319	eP	12 42.80	-0.4		
EDI	29.52 326	eP	12 43.30	-0.8		
EDU	29.81 327	eP	12 45.30	-1.3		
	1.0s	213.00nm		5.9mb		
EBH	29.86 326	eP	12 46.40	-0.7		
	0.5s	70.00nm		5.7mb		
DLE	29.86 319	eP	12 47.30	0.2		
	1.0s	60.00nm		5.4mb		
ELO	30.08 327	eP	12 48.00	-1.1		
	1.0s	78.00nm		5.5mb		
EAB	30.21 326	eP	12 49.50	-0.7		
DMU	30.33 320	eP	12 52.90	1.6		
BNG	30.51 195	iPd	12 53.00	-0.3		
	0.6s	53.00nm		5.6mb		
		id	14 25.50			
		iS	18 18.30			
		ic	18 54.50			
		ic	22 45.00			
SOD	33.13 0	iP	13 14.30	-1.3		
QUE	34.67 85	eP	13 28.50	-1.1		
KEV	35.52 1	iP	13 35.00	-1.2		
	0.6s	22.20nm		5.2mb		
TRO	35.62 356	eP	13 36.30	-0.7		
LWI	36.42 175	iPd	13 44.40	-0.2		
KUK	37.13 227	eP	13 49.00	-1.3		
KOGH	37.14 227	eP	13 50.00	-0.4		
LEGH	37.45 226	eP	13 53.00	0.0		
TIC	39.74 233	Pd	14 11.80	-0.5		
KIC	39.77 233	Pd	14 12.00	-0.5		
KSH	39.86 68	eP	14 13.50	0.3		
N	18s	1.30um				
LIC	40.06 233	Pd	14 14.56	-0.3		
	0.9s	38.00nm		5.1mb		
Z	20s	1.11um		4.7Msz		
		S	20 30.00			
AKU	40.85 334	iP	14 22.40	1.6		
	1.1s	116 46nm		5.5mb		
		i	14 24.60			
REY	41.66 331	iP	14 29 30	1.9		
		i	14 36 70			

NDI 43.62 83 iPc 14 44.30 0.4
KBS 45.13 356 eP 14 56.90 1.5
DAG 47.08 347 eP 15 09.00 -1.9
WMQ 47.81 59 P 15 17.00 -0.2
1.5s 0.10nm 2.7mb X
N 14s 0.80um
E 18s 1.40um
PcP 16 47.00
S 22 12.00
ScS 25 08.00
HYB 49.60 96 eP 15 29.50 -1.8
GKN 49.94 80 P 15 32.80 -1.1
DMN 50.48 81 P 15 37.00 -1.1
KKN 50.55 80 P 15 37.30 -1.3
GBA 50.69 101 Pc 15 38.60 -0.9
0.8s 12.10nm 4.9mb
PKI 50.74 81 P 15 38.70 -1.5
GUN 50.99 80 P 15 40.90 -1.2
BUL 54.18 177 iPd 16 04.80 -0.8
1.1s 12.66nm 4.9mb
LSA 54.56 76 P 16 08.20 -0.7
GDH 54.74 335 iPc 16 09.20 0.2
0.9s 33.61nm 5.4mb
e 23 49.00
ALE 56.02 351 eP 16 18.00 -0.2
0.6s 13.00nm 5.1mb
GTA 57.73 62 eP 16 29.80 -1.2
Z 18s 1.20um 5.0Msz
SLR 59.73 178 eP 16 44.20 -0.8
1.0s 15.00nm 5.1mb
BFS 60.86 179 iPc 16 47.50 -5.1X
PRY 60.90 179 eP 16 46.00 -6.9X
0.7s 7.50nm 4.9mb
LZH 61.92 64 eP 17 00.00 0.1
2.0s 66.00nm 5.5mb
Z 23s 0.80um 4.8MszX
CD2 64.01 69 P 17 14.20 0.5
SCH 64.31 320 eP 17 15.00 -0.3
BTO 64.54 57 P 17 17.00 -0.1
N 16s 0.50um
E 16s 0.50um
sP 17 24.50
ePP 19 41.00
S 25 55.00
HHC 65.51 56 eP 17 23.00 -0.3
CHG 65.76 83 ePd 17 25.30 0.1
1.1s 15.82nm 5.1mb
KMI 65.82 75 Pd 17 25.00 -0.7
Z 20s 1.00um 5.0Msz
S 26 07.00
XAN 66.56 64 P 17 29.00 -1.1
BDT 66.59 85 eP 17 31.60 1.2
TIY 67.48 59 eP 17 36.60 0.7
Z 24s 0.82um 4.9MszX
N 16s 0.50um
S 26 29.00
GYA 68.31 72 iPd 17 41.60 0.3
S 26 36.00
CBM 68.47 313 iP 17 42.40 0.6
BJI 69.02 55 eP 17 45.00 -0.4
Z 22s 0.63um 4.8Msz
eS 26 44.00
EMM 69.09 310 eP 17 46.50 0.8
NNT 69.60 88 eP 17 47.00 -2.3
MIM 69.82 311 iP 17 51.80 1.6
TIA 71.50 59 eP 18 00.50 -0.1
WHN 72.25 65 eP 18 06.00 0.9
SNY 73.05 51 Pc 18 10.40 0.8
Z 22s 1.00um 5.1Msz
N 24s 1.00um
S 27 30.00
CN2 73.21 48 eP 18 10.00 -0.5
Z 20s 1.10um 5.1Msz
N 11s 0.30um
sP 18 18.00
eS 37 33.00
SNG 73.24 93 eP 18 07.00 -4.1X
RSNY 73.54 313 iP 18 14.00 1.5
QIZ 74.54 77 eP 18 19.70 1.1
NJ2 74.82 61 eP 18 19.50 -0.5
INK 76.58 352 eP 18 28.00 -1.3
SOB1 76.65 249 eP 18 31.40 0.8
YKC 78.48 342 eP 18 40.00 0.0
IMA 79.97 360 eP 18 48.70 0.6
RSON 80.02 326 P 18 48.50 0.0
FFC 80.74 332 iPd 18 52.50 0.2
1.0s 41.00nm 5 4mb

FBA 81.02 357 P 18 55.50 2.0
1.0s 25.00nm 5.2mb
BLA 81.36 309 P 18 57.50 1.6
1.0s 23.00nm 5.2mb
ATB 82.19 261 Pc 19 01.40 1.0
TTA 83.10 1 eP 19 05.40 0.9
PMR 84.38 358 eP 19 12.20 1.3
1.3s 42.50nm 5.5mb
SVW 84.94 1 eP 19 15.10 1.3
MTMJ 85.08 49 P 19 15.70 0.7
NIIJ 85.39 48 P 19 16.60 0.1
EDM 85.98 337 iPd 19 19.80 0.6
BAO 86.04 248 eP 19 20.10 0.1
CHJJ 86.16 48 P 19 20.40 0.1
ELC 86.78 314 eP 19 24.50 1.2
FVM 87.02 315 eP 19 25.90 1.4
SES 87.55 334 eP 19 27.00 0.1
1.3s 98.00nm 5.9mb
RSSD 89.71 327 P 19 38.50 0.9
RLO 90.94 316 e(P) 19 43.50 0.4
PNT 91.34 338 eP 19 46.00 1.3
0.5s 7.00nm 5.3mb
LNO 91.56 316 e(P) 19 48.60 2.8X
TUL 91.56 316 eP 19 47.00 1.1
0.8s 6.20nm 5.0mb
Z 19s 0.75um 5.2Msz
LR 53 40.00
LRM 91.88 332 eP 19 48.30 0.7
DPW 92.17 337 P 19 50.00 1.4
ALQ 98.04 322 eP 20 17.50 1.6
0.9s 1.89nm 4.7mb
e 21 36.50
SPA 124.11 180 e(PKP) 25 36.10 -1.0
1.0s 4.50nm
S.D. = 1.2 on 322 of 366 obs.

JUN 14, 1989 18h 26m 20.88± 0.82s
34.194 N ± 6.9km 26.180 E ± 4.4km
DEPTH = 39.5 ± 8.3 km
4.3mb (37 obs.)
CRETE (370)

NPS 1.16 336 ePn 26 42.60 1.7
KAP 1.58 31 ePb 26 49.30 2.4
VAM 2.03 307 ePn 26 55.80 2.5
KSL 3.39 54 ePn 27 13.00 0.4
YER 3.40 30 iPn 27 14.20 1.4
ELL 3.97 49 iPn 27 22.10 1.1
IZM 4.29 11 ePn 27 26.10 0.7
BCK 4.84 46 ePn 27 34.00 0.7
KHL 4.93 32 iPn 27 33.80 -0.7
PRK 5.04 1 ePn 27 36.80 0.8
EZN 5.62 1 ePn 27 43.50 -0.7
DST 5.75 19 ePn 27 45.50 -0.5
CSS 5.95 81 eP 27 50.00 1.1
VLS 6.02 313 ePn 27 51.00 1.2
HLW 6.16 133 ePn 27 51.00 -0.7
eSn 28 55.00
YLV 6.85 21 eP 28 00.00 -1.5
VAY 7.67 339 ePn 28 16.60 3.8X
HRI 8.02 94 iPc 28 15.00 -2.9
OHR 8.12 330 ePn 28 38.00 18.8X
DSI 8.17 106 eP 28 17.50 -2.3
eS 29 45.00
MBH 8.60 118 iPc 28 25.00 -0.8
SKO 8.62 336 ePn 28 24.00 -2.0
i 28 36.00
MGR 10.34 308 P 28 46.30 -3.5X
eSn 30 25.80
GIB 10.54 295 P 28 51.50 -1.0
FAI 10.62 290 P 28 52.70 -0.8
SGO 10.73 309 P 28 45.60 -9.4X
VOY 15.08 325 eP 29 57.70 4.8X
SAL 16.53 318 P 30 08.90 -2.3
OSS 17.41 321 ePd 30 23.30 0.8
SBF 17.44 309 eP 30 23.50 0.7
0.8s 10.70nm 4.0mb
KHC 17.61 332 P 30 28.30 3.5X
e 33 57.00
ENR 17.62 310 P 30 24.59 -0.3
STV 17.69 310 P 30 26.44 0.6
TMA 17.75 317 ePd 30 26.10 -0.6
LMR 17.82 307 eP 30 26.30 -1.0
1.0s 9.60nm 3 9mb
FRF 17.82 307 eP 30 26 50 -0.9
0.6s 3.60nm 3.7mb
FUR 17.86 326 eP 30 28.40 0.5

PRU 17.96 335 eP 30 26 00 -3 0X
LRG 17.96 307 eP 30 28.40 -0 8
1.0s 16.00nm 4.1mb
KSP 18.14 340 eP 30 29.00 -2 2
LLS 18.14 319 ePc 30 31.60 0 1
SAX 18.20 321 ePc 30 31.80 -0 5
MMK 18.23 316 eP 30 32.90 0.1
RRL 18.35 311 P 30 34.13 0.0
LSD 18.39 313 P 30 36.28 1 6
DIX 18.57 315 ePd 30 36.80 -0.1
ZLA 18.85 320 ePd 30 39.40 -0 6
BRG 18.91 336 eP 30 40.10 -0.6
1.2s 8.00nm 3.8mb
SLE 18.97 321 ePd 30 40.20 -1.3
FEL 19.29 321 ePd 30 44.20 -1.1
CLL 19.60 335 eP 30 47.00 -1.5
1.0s 11.00nm 4.1mb
BSF 19.92 319 eP 30 50.60 -1.5
0.8s 5.30nm 3.9mb
CDF 20.01 321 eP 30 52.40 -0.6
1.0s 28.00nm 4.5mb
HAU 20.26 319 eP 30 54.50 -1 0
0.8s 5.30nm 3.9mb
ABH 20.82 324 ePd 31 00.85 -0.4
RUP 20.94 323 ePd 31 02.51 0.0
SMF 20.99 313 eP 31 04.80 1.8
0.8s 5.90nm 4.0mb
LBF 21.07 314 eP 31 02.60 -1.3
0.8s 6.70nm 4.1mb
LOR 21.28 315 eP 31 04.80 -1.2
0.8s 5.30nm 4.0mb
WLF 21.37 322 P 31 06.60 -0.2
CAF 21.38 307 eP 31 06.80 -0.3
0.8s 5.30nm 4.0mb
SSF 21.39 314 eP 31 06.30 -0.7
1.0s 16.80nm 4.4mb
BGF 21.55 312 eP 31 10.80 2.1
0.8s 20.10nm 4.6mb
TCF 21.83 311 eP 31 12.10 0.6
0.8s 5.30nm 4.0mb
LPO 21.88 306 eP 31 11.90 -0.1
0.8s 16.10nm 4.5mb
RJF 21.88 308 eP 31 12.20 0.2
0.8s 13.40nm 4.4mb
MEM 22.05 324 P 31 13.80 0.3
ENN 22.19 324 ePc 31 16.00 1.1
1.0s 27.00nm 4.6mb
e 31 35.00
e 34 26.00
LSF 22.24 310 eP 31 16.70 1.1
1.0s 22.80nm 4.6mb
LFF 22.27 306 eP 31 15.90 0.1
0.8s 10.70nm 4.3mb
DOU 22.43 322 P 31 19.20 1.8
0.8s 13.30nm 4.4mb
WTS 22.61 328 eP 31 20.00 0.9
1.0s 7.00nm 4.1mb
SNF 22.84 322 Pc 31 24.20 2.8
WIT 23.25 329 eP 31 27.50 2.2
MFF 23.45 310 eP 31 29.30 2.0
0.8s 8.00nm 4.3mb
LDF 24.26 314 eP 31 35.60 0.4
1.0s 12.00nm 4.4mb
FLN 24.55 314 eP 31 38.50 0.5
1.0s 24.00nm 4.7mb
LPF 24.58 312 eP 31 38 50 0 3
0.8s 9.10nm 4 4mb
GRR 24.61 313 eP 31 37.60 -1.0
0.8s 10.70nm 4.5mb
NUR 26.35 358 iP 31 55.50 0.8
0.8s 17.60nm 4.7mb
HFS 27.21 346 eP 32 00.60 -2.0
1.3s 20.50nm 4.6mb
SUF 28.55 360 eP 32 12.40 -2.2
0.6s 2.50nm 4.1mb
NB2 28.55 345 P 32 12.40 -2.4
0.9s 3.20nm 4.0mb
EKA 29.31 325 Pc 32 20.70 -0.9
0.9s 11.30nm 4.6mb
BNG 30.45 195 iPc 32 34.00 1.9
0.5s 4.00nm 4.4mb
GKN 49.86 80 P 35 13.40 0 9
0.7s 19.00nm 5.2mb
DMN 50.39 81 P 35 17 80 1 1
KKN 50.46 80 P 35 18 00 0 8
0.7s 13.00nm 5.0mb
PKI 50.65 81 P 35 19.50 0 7

14d 18h

0.8s 13.00nm 5 0mb
GUN 50 91 80 P 35 22.00 1.3
SCH 64.45 320 eP 36 55 00 -0.3
ALO 98.18 322 eP 40 05.00 9.6X
Z 18s 0.98um 5.3Msz
e 40 39.80
eLg 58 38.00
S.D. = 1.3 on 84 of 92 abs.

JUN 14, 1989 18h 29m 26.07± 0.65s
33.972 N ± 7.7km 26.201 E ± 6.0km
DEPTH = 10.0km (geophysicist)
4.4mb (3 abs.)
EASTERN MEDITERRANEAN SEA (371)
MD 4.3 (ATH).

NPS 1.38 340 ePn 29 51.00 -0.3
KAP 1.77 27 ePn 29 58.70 1.8
VAM 2.18 312 ePn 30 05.00 2.1
YER 3.58 28 iPn 30 23.20 0.3
ELL 4.11 47 iPn 30 31.60 1.3
IZM 4.50 11 ePn 30 35.00 -0.8
BCK 4.99 44 ePn 30 43.50 0.7
KHL 5.11 31 iPn 30 43.80 -0.7
EZN 5.84 1 eP 30 44.00 -10.8X
HLW 5.99 132 ePn 31 04.00 7.1X
eSn 32 08.00
VLS 6.18 314 ePn 30 59.00 -0.6
HRI 7.99 92 eP 31 24.00 -1.1
DSI 8.09 105 eP 31 26.00 -0.4
eS 32 51.00
BURJ 8.21 100 P 31 27.00 -1.1
KFNJ 8.24 102 P 31 38.40 10.0X
MASJ 8.31 103 P 31 29.10 -0.5
JARJ 8.36 99 P 31 29.90 -0.3
MBH 8.49 117 eP 31 33.00 1.1
OUTJ 8.69 105 P 31 35.80 1.0
MGR 10.49 309 P 31 55.10 -4.5X
(Sn) 33 35.10
SGO 10.88 310 P 32 01.40 -3.4X
MEM 22.23 324 P 34 28.30 4.1X
DOU 22.61 322 P 34 28.40 0.4
HFS 27.43 346 eP 35 10.10 -3.5X
0.4s 1.30nm 4.0mb
EKA 29.50 325 P 35 30.00 -2.4
1.1s 7.20nm 4.4mb
BNG 30.24 195 iPd 35 42.50 3.2X
0.5s 8.00nm 4.8mb
KIC 39.68 233 P 37 01.60 1.5
FRB 62.12 330 eP 39 48.00 -1.1
SCH 64.63 320 eP 40 05.00 -0.8
INK 76.91 352 eP 40 57.00 -22.7X
S.D. = 1.2 on 21 of 30 abs.

? JUN 14, 1989 19h 47m 47.07± 0.90s
44.318 N ±15.8km 142.741 E ±20.4km
DEPTH = 225.1 ± 10.6 km
4.6mb (1 abs.)
HOKKAIDO, JAPAN REGION (224)

ASAJ 0.21 200 P 48 15.20 -0.9
S 48 52.10
KUSJ 1.88 130 P 48 26 30 -0.3
eS 48 56.60
HOOJ 1.97 168 P 48 28 70 1.2
MRRJ 2.25 213 P 48 31 30 1.0
AOMJ 4.14 206 eP 48 52 40 0.4
OFUJ 5.30 189 P 49 06 30 -0.1
YAMJ 6.47 199 eP 49 19.80 -1.5
YKA 57.07 33 eP 57 11.10 -0.3
FFC 67.09 35 iPc 58 18.40 0.6
0.6s 8.00nm 4.6mb
FRB 69.47 14 eP 58 39.00 6.8X
S.D. = 1.1 on 9 of 10 abs.

JUN 14, 1989 21h 44m 35.18± 0.15s
40.085 N ± 3.2km 144.609 E ± 2.5km
DEPTH = 33.0km (normal)
5.3mb (63 abs.) 4.6Msz (9 abs.)
OFF EAST COAST OF HONSHU, JAPAN (229)
Felt (II JMA) at Miyako and (I JMA) at Mariaka.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 17C
Centroid Location:
Origin Time 21:44:33 5 0 9
Lat 39.82N 0.14 Lon 144 60E 0.12
Dep 33.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-3.90 0.31 Mtt=-0.71 0.45
Mff= 4.61 0.37 Mrt=-1.15 0.59
Mrf=-0.32 0.80 Mtf=-0.27 0.40
Principal Axes:
T Val= 4.63 Plg= 2 Azm= 87
N -0.35 18 178
P -4.28 72 352
Best Double Couple:Mo=4.5*10**16
NP1:Strike=160 Dip=46 Slip=-115
NP2: 14 49 -66

MIY 2.08 259 eP 45 08.00 -0.4
S 45 31.20
OFUJ 2.48 247 iP+ 45 14.10 -0.1
S 45 42.70
HOOJ 2.50 337 P 45 12.50 -1.9
eS 45 40.70
MRK 2.68 263 P 45 17.40 0.6
S 45 47.00
KUSJ 3.01 1 P 45 18.10 -3.5X
S 45 50.60
AOMJ 3.27 280 P 45 25.20 -0.1
S 46 00.10
MRRJ 3.55 312 eP 45 27.30 -1.9
S 46 05.70
SAP 3.86 321 eP 45 32.00 -1.6
iS 46 13.50
YAMJ 4.04 243 iP+ 45 35.90 -0.3
S 46 20.90
ASAJ 4.29 341 P 45 37.20 -2.5
eS 46 24.00
KAKJ 5.22 223 P 45 50.40 -2.5
S 46 47.80
NIIJ 5.23 239 P 45 52.60 -0.5
CHJJ 5.99 229 P 46 02.40 -1.4
S 47 07.30
MTMJ 6.39 239 P 46 09.50 0.0
IIDJ 7.02 231 P 46 18.40 0.1
S 47 37.80
TSRJ 8.20 239 P 46 35.50 0.8
WKYJ 9.27 234 P 46 47.20 -2.5
YONJ 10.10 245 P 47 00.60 -0.4
TKSJ 10.40 237 eP 47 03.00 -2.1
SHK 11.00 243 iP 47 13.60 0.4
0.7s 49.32nm 5.8mb
MDJ 12.00 297 Pc 47 25.00 -1.7
Z 16s 3.20um
N 16s 1.60um
eSP 47 40.00
S 49 30.00
KUMJ 13.42 240 eP 47 48.10 2.5
CN2 14.73 291 eP 48 02.60 -0.3
Z 20s 1.10um
E 13s 0.60um
pP 48 09.00
eS 50 48.00
SNY 15.98 283 iPd 48 18.00 -1.1
Z 15s 1.80um
N 15s 0.70um
E 15s 1.50um
S 51 16.00
DL2 17 77 274 P 48 41.00 -0.5
Z 30s 1.20um
N 12s 1.00um
S 51 58.00
SSE 21.01 252 Pc 49 18.50 0.4
1.2s 67.00nm 4.9mb
Z 20s 1.00um 4.2Msz
N 14s 0.70um
sP 49 51.00
S 53 20.00
sS 53 56.00
BJI 21.73 279 eP 49 22.00 -3.4X
Z 16s 1.17um 4.4MszX
N 14s 1.08um
eS 53 28.00
TIA 21.92 269 eP 49 26.90 -0.5
Z 16s 2.80um 4.8MszX
E 15s 2.20um
S 53 24.50
sS 53 35.00
NJ2 22 25 257 Pd 49 29.50 -1.2
Z 21s 1.20um 4.3Msz
N 15s 0.80um
E 14s 1.00um
HHC 25.07 283 eP 49 58.20 0.1
Z 22s 1.70um 4.5Msz
TIY 25.08 275 eP 49 59.00 0.8
Z 25s 1.39um 4.4MszX
N 15s 0.70um
S 54 26.00
BTO 26.27 282 P 50 10.00 0.7
N 15s 0.80um
E 15s 0.80um
sP 50 21.50
S 54 43.50
WHN 26.36 258 P 50 10.00 0.0
1.0s 0.70nm 3.2mb X
Z 24s 1.37um 4.4MszX
N 16s 1.98um
E 16s 2.38um
S 54 48.00
QZH 26.50 243 eP 50 13.00 1.6
Z 16s 1.10um 4.5MszX
N 14s 0.80um
XAN 28.98 269 P 50 31.00 -2.8
E 15s 1.30um
LZH 32.13 276 eP 51 02.00 0.1
1.5s 176.00nm 5.7mb
Z 20s 1.00um 4.5Msz
N 14s 0.60um
E 13s 0.30um
GTA 34.17 284 iPd 51 19.80 0.3
Z 18s 2.30um 5.0Msz
E 14s 0.90um
PcP 53 56.40
S 56 38.00
CD2 34.25 267 P 51 19.60 -0.5
GYA 34.25 258 iPd 51 20.00 -0.3
1.2s 0.10nm 2.6mb X
Z 18s 1.10um 4.6Msz
N 15s 1.30um
E 15s 1.50um
S 56 45.00
KMI 37.93 260 Pd 51 52.00 0.4
Z 16s 2.90um 5.2MszX
N 17s 1.90um
S 57 24.00
SVW 41.56 39 eP 52 21.70 0.7
WMO 41.78 294 P 52 23.50 0.5
Z 20s 0.80um 4.6Msz
E 12s 0.40um
PcP 54 20.00
eS 58 38.00
BRW 42.62 24 eP 52 29.70 0.3
IMA 42.79 32 eP 52 30.90 -0.1
1.3s 22.10nm 4.7mb
KDC 43.22 44 eP 52 33.20 -1.2
LSA 44.47 274 Pd 52 45.00 -0.6
CHG 44.48 255 iPd 52 46.30 1.1
PMR 44.68 39 eP 52 45.20 -1.1
BDT 45.42 253 eP 52 54.10 1.5
TOA 46.05 38 eP 52 57.30 0.1
NNT 47.96 248 iPc 53 14.00 1.3
GUN 49.38 275 Pd 53 24.20 0.2
KKN 49.90 275 Pd 53 27.80 0.0
PKI 49.91 275 Pd 53 28.00 0.0
DMN 50.12 275 Pd 53 29.70 0.1
GKN 50.28 276 Pd 53 30.60 -0.1
INK 50 53 28 ePd 53 31 00 -0 7
MKS 50.67 213 ePd 53 34 40 1 0
e 54 36.50
SNG 51.15 242 eP 53 36.10 -1.0
IPM 52.78 240 ePd 53 50.20 0.7
0.8s 22.40nm 5.2mb
MBC 52.88 17 eP 53 49.00 -0.5
1.0s 12.00nm 4.8mb
MTN 54.13 196 iPd 53 59.10 -0.1
0.8s 98.00nm 5.9mb
NDI 55.57 280 iPd 54 09.00 -0.8
0.6s 34.67nm 5.6mb
ALE 56.91 4 eP 54 18.50 -0.2
1.0s 21.00nm 5.1mb
YKA 59.91 32 eP 54 39.60 -0.2
YKC 59.97 32 eP 54 39.00 -1.2
WB5 60.41 191 iPd 54 42.80 -0.8
WRA 60.48 191 Pd 54 43.20 -0.9
0.6s 21 40nm 5 5mb
OIS 60.51 185 iPd 54 43 40 -0.9
0.8s 21.00nm 5.3mb
e 55 38.00

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HYB     60.79 269 iPc    54 46.00  -0.5
        1.0s     60.00nm          5.7mb
KEV     61.48 339 iP     54 50.00  -0.4
        0.7s     13.30nm          5.2mb
QUE     62.43 287 eP     54 56.50  -1.1
DAG     62.95 356 iPd    54 58.00  -2.1
        1.0s     24.00nm          5.3mb
SOD     63.12 337 iP     55 00.40  -1.0
GBA     63.94 266 Pc     55 07.30  -0.1
        1.0s     38.60nm          5.5mb
ASPA    64.20 191 iPd    55 08.80  -0.1
        0.9s     46.00nm          5.6mb
PNT     64.25  46 eP     55 08.00  -1.1
LON     64.36  50 P      55 11.00   1.1
MAIO    64.48 297 iPd    55 10.30  -0.6
MBL     65.16 206 eP     55 14.90  -0.2
EDM     65.40  40 iP     55 15.50  -1.0
FHC     66.22  56 e(P)   55 21.50  -0.4
SUF     66.37 334 iP     55 21.40  -1.1
        0.7s     31.40nm          5.5mb
LBFM    67.24  55 P      55 28.50  -0.2
WDC     67.26  56 ePd    55 28.50   0.0
BRS     67.56 172 iPd    55 31.80   1.5
WARB    68.02 197 eP     55 22.60 -10.6X
        0.6s     27.00nm
NUR     68.42 333 iP     55 34.40  -1.0
        0.6s     24.80nm          5.5mb
      Z 17s      1.00um           5.1MszX
                 LR     29 30.00
ORV     68.50  56 eP     55 35.40  -0.9
BRK     68.97  58 ePd    55 39.00  -0.1
GCC     69.62  58 eP     55 42.80  -0.3
MHC     69.67  58 ePd    55 43.40  -0.3
ARN     69.74  58 P      55 43.50  -0.4
FFC     69.78  35 iPd    55 43.00  -0.8
        0.9s     23.00nm          5.2mb
CMB     70.08  57 ePd    55 46.10   0.1
                   e      55 56.90
LRM     70.22  46 eP     55 46.70  -0.3
PRS     70.43  59 e(P)   55 48.00  -0.2
LLA     70.55  58 ePd    55 48.60  -0.3
IR7     70.79 301 iP-     55 50.50   0.0
IR4     70.87 300 iP-     55 51.40   0.4
IR1     70.90 300 iP-     55 51.40   0.2
KVN     70.94  55 P      55 51.60   0.2
PRI     71.01  59 e(P)   55 51.30  -0.5
IR5     71.09 300 eP     55 52.20  -0.2
FRI     71.13  57 ePd    55 52.10  -0.2
UPP     71.29 335 iP     55 51.80  -1.1
                   i      56 02.30
TNP     72.07  55 P      55 58.00  -0.2
        0.8s     14.71nm          5.0mb
HFS     72.32 337 eP     55 57.90  -1.1
        0.7s     23.50nm          5.3mb
      Z 15s      0.18um           4.5MszX
                 LR     24 53.00
NB2     72.32 338 P      55 57.60  -1.5
        0.7s     23.80nm          5.3mb
ISA     72.72  58 eP     56 01.00  -0.9
CLC     73.20  57 eP     56 04.00  -0.7
FRB     73.21  15 ePd    56 02.90  -1.3
SBB     73.73  58 eP     56 08.00   0.2
MWC     73.86  59 eP     56 09.00   0.2
GSC     74.02  57 eP     56 09.00  -0.5
RVR     74.45  59 eP     56 11 00  -0.9
PLM     75 18  59 eP     56 13 00  -3 4X
BAR     75 73  59 eP     56 20 00   0 7
RSON    76.07  34 P      56 19 60  -1.3
        1.1s     23.26nm          5.1mb
KVT     76.40 312 iP     56 24.00   1.1
GLA     76.70  58 eP     56 25 00   0.2
KRA     77.93 327 eP     56 30 70  -0.5
                   e      56 42.70
VRI     77.99 321 ePc    56 33.00   1.4
GOL     78.15  48 P      56 33.00   0.1
SPC     78.47 326 eP     56 35.30   0.9
MLR     78.64 321 ePc    56 36.00   0.7
KSP     78.79 330 iPd    56 36.30   0.4
        1.0s     31.00nm          5.3mb
                   id     56 48.00
BBTK    79.08 313 iPd    56 38.50   0.7
CMP     79.24 321 ePc    56 42.00   3.5X
CLL     79.66 332 iPd    56 40.90   0.3
        1.0s     39.00nm          5.4mb
                   ipP    56 51 60  34kmX
BRG     79.66 331 iP     56 40.80   0.2
        1.0s     20.00nm          5.1mb

                   i      56 52.20
PRU     80.15 330 Pd     56 43.60   0 4
        1.2s     26.40nm          5.1mb
      Z 16s      0.50um           5.0MszX
                   e      56 54.50
SRO     80.35 327 iP     56 45.60   1.3
JMB     80.52 319 iP     56 46.00   0.7
ZST     80.55 327 eP     56 46.20   0.8
      Z 18s      0.80um           5.1Msz
                 LR     22 37.00
WIT     80.56 336 eP     56 47.00   1.7
BZS     80.58 323 eP     56 45.00  -0.6
PVL     80.60 320 iPc    56 48.00   2.3
ALO     80.73  52 eP     56 47.70   0.9
HOF     80.88 332 iPd    56 47.60   0.4
        1.0s     26.00nm          5.2mb
EKA     81.05 342 Pd     56 48.00   0.1
        0.7s      5.90nm          4.7mb
ALT     81.10 314 eP     56 48.30  -0.3
KHC     81.21 330 iPd    56 49.70   0.8
        1.0s     17.00nm          5.0mb
                   i      57 01.00
WTS     81.22 335 iP     56 49.40   0.6
        0.9s     27.00nm          5.3mb
                   e      57 00.00
WET     81.47 330 eP     56 51.00   0.8
        1.2s     38.00nm          5.3mb
GRF     81.64 332 eP     56 51.90   0.8
        1.1s     45.00nm          5.4mb
      Z 19s      0.30um           4.7Msz
                   e      57 02.70
SCH     81.72  18 eP     56 51.00  -0.4
HRI     81.82 307 iPd    56 54.00   1.6
KHL     81.94 314 eP     56 53.30   0.3
RZN     82.04 319 iP     56 54.00   0.5
VTS     82.11 320 iP     56 55.00   1.1
ENN     82.56 335 eP     56 56.00   0.2
        0.9s     26.00nm          5.3mb
                   e      57 07.50
TOD     82.58 333 eP     56 56.10   0.1
MMB     82.60 320 iPd    56 57.00   0.7
BHG     82.63 329 eP     56 57.80   1.5
        1.0s     23.00nm          5.2mb
MEM     82.67 335 Pc     56 56.70   0.4
KKB     82.71 320 iP     56 58.00   1.2
ABH     82.78 334 ePd    56 57.10   0.1
PTJ     82.85 327 eP     56 57.60   0.0
FUR     82.88 331 iPc    56 58.60   1.0
KBA     82.97 329 i(P)   56 59.10   0.8
        1.0s     26.80nm          5.3mb
                   i      57 12.00
RUP     83.10 334 ePd    56 58.81   0.1
DSI     83.20 306 eP     57 01.00   1.6
DMU     83.23 343 eP     56 59.80   0.6
SNF     83.30 336 P      57 01.20   1.5
                   e      57 10.80
VAY     83.38 320 eP     57 00.50   0.3
WLF     83.43 334 P      57 02.20   1.9
SKO     83.44 321 iPd    57 01.20   0.7
        1.2s     67.00nm          5.6mb
DOU     83.57 335 Pc     57 02.20   1.2
                   e      57 13.60
YRH     83.69 342 eP     57 01.60   0.0
        1.0s     56.00nm          5.7mb
DLE     83.72 343 eP     57 02.30   0.6
        1 0s     46.00nm          5.6mb
OGA     84 05 330 iPc    57 04 90   1.1
CDF     84.12 333 eP     57 03.90  -0.1
        0.8s      6.40nm          4.8mb
ETA     84.19 343 eP     57 04.50   0.4
SLE     84.24 332 ePc    57 04.90   0.4
FEL     84.32 332 ePd    57 05.00   0.0
SAX     84.36 331 ePc    57 06.10   0.6
ZLA     84.52 332 ePc    57 06.50   0.6
OSS     84.54 330 ePc    57 07.20   1.0
ECP     84.71 343 eP     57 07.10   0.4
        0.7s     37.00nm          5.7mb
MBH     84.74 305 iPd    57 08.50   1.2
BSF     84.79 333 eP     57 07.00  -0.4
        0.6s      3.60nm          4.7mb
HAU     84.79 333 eP     57 06.80  -0.5
        0.8s      8.00nm          5.0mb
LLS     84.81 331 ePc    57 08.20   0.6
MEO     85.44  47 eP     57 10 20  -0 6
TMA     85.50 331 ePc    57 11 30   0 2
MMK     85.88 331 ePc    57 13 80   0.7
SIO     86 01  45 e(P)   57 13.80   0.3

DIX     86.06 332 ePc    57 14 80   0 8
LNO     86.17  45 e(P)   57 14.00  -0 2
TUL     86.17  45 eP     57 14.00  -0.3
        1.3s     16.80nm          5.1mb
LOR     86.27 334 eP     57 14.60  -0.1
        0.8s     26.80nm          5.5mb
FLN     86.30 338 eP     57 14.60  -0.1
        0.8s     14.50nm          5.3mb
LDF     86.34 337 eP     57 14.90  -0.1
        1.0s     16.00nm          5.2mb
RLO     86.39  44 eP     57 15.50   0.1
LBF     86.48 334 eP     57 15.50  -0.2
        0.9s     25.20nm          5.4mb
SSF     86.57 335 eP     57 16.30   0.2
        1.0s     24.00nm          5.4mb
VVO     86.62  45 e(P)   57 17.10   0.6
LSD     86.69 332 P      57 17.63   0.6
GRR     86.74 338 eP     57 17.30   0.4
        0.9s     20.90nm          5.4mb
LPG     86.80 332 eP     57 17.70   0.1
        1.0s     50.00nm          5.7mb
SMF     86.82 334 eP     57 17.30  -0.1
        1.0s     42.00nm          5.6mb
AVF     86.86 334 eP     57 17.40  -0.1
        0.8s     42.90nm          5.7mb
LPF     87.12 338 eP     57 19.40   0.7
        0.9s     22.90nm          5.4mb
BGF     87.23 335 eP     57 19.40   0.1
        1.0s     16.80nm          5.2mb
RRL     87.28 331 P      57 20.50   0.6
FIN     87.36 330 P      57 18.96  -1.0
ROB     87.41 330 P      57 18.96  -1.3
PLDF    87.49 334 P      57 21.14   0.5
AGO     87.58 334 P      57 21.75   0.7
MAF     87.62 335 eP     57 21.70   0.5
        0.9s     41.60nm          5.7mb
ENR     87.64 331 P      57 20.29  -1.0
TCF     87.67 335 eP     57 22.00   0.5
        1.0s     18.80nm          5.3mb
IMI     87.73 330 P      57 20.50  -1.4
PYM     87.89 334 P      57 23.22   0.6
LSF     87.93 335 eP     57 22.90   0.2
        1.0s     12.80nm          5.2mb
MFF     88.14 337 eP     57 23.90   0.2
        1.0s     13.60nm          5.2mb
LBL     88.26 334 P      57 25.05   0.8
RJF     88.77 335 eP     57 27.30   0.5
        1.0s      9.60nm          5.1mb
CAF     88.93 334 eP     57 28.30   0.8
        1.2s     35.70nm          5.6mb
LFF     89.35 335 eP     57 30.00   0.5
        1.0s     16.00nm          5.3mb
LPO     89.43 335 eP     57 30.40   0.5
        0.8s      5.30nm          4.9mb
TOL     95.43 336 eP     58 10.00  12.3X
BUL    122.38 270 iPKPd 03 29.00   0.1
        0.8s     4.10nm
TIC    125.72 322 PKP    03 35.20  -0.2
SLR    125.72 265 iPKPd 03 35.90   0.6
        0.9s     15.13nm
KIC    125.83 321 PKP    03 35.10  -0.5
BFS    127.47 264 ePKP   03 35.00  -3.6X
FRS    130.02 262 ePKP   03 42.70  -0.4
ZOBO   142.98  60 ePKP   03 50.00 -18.2X
        1.0s     15.00nm
                   i      04 04.80
LPB    143.19  60 ePKP   04 06.00  -2.4
CNCB   143.46  60 PKP    04 07.20  -1.8
CCH    145.09  59 iPKPc  04 11.60   0.1
SNA    145.22 199 iPKPd 04 11.00   1.3
        1.0s     61.00nm
ITR    148.69   6 ePKP   04 17.90   0.8
SOB1   148.86  11 ePKP   04 21.70   4.3X
     S.D. = 0.9  on 227 of 236 obs.
-------------------------------------
&  JUN  14, 1989  21h 49m 43.40s
   41.042 N          124.218 W
   DEPTH =  23.0km
 NEAR COAST OF NORTHERN CALIF.    ( 35)
      <BRK>. Felt (IV) at Eureka and
      Samoo. Also felt at Arcata,
      Bayside and Trinidad.

FHC      0 30 144 iPd    49 50.10  -0.2
                   iS     49 54.30
                   i      49 55.60
WDC     1.35 109 iPc     50 05.10  -1 9
```

14d 21h

		i	50 07.10		
		i	50 11 00		
		i	50 16.50		
		iS	50 20.00		
LBFM	1.78	79 eP	50 12.10	-1.3	
LTCM	1.80	117 eP	50 11.20	-2.2	
MIN	2.11	108 eP	50 15.40	-2.6	
		i	50 19.90		
		i	50 23.20		
ORV	2.55	125 ePc	50 22.30	-2.0	
MHC	4.20	151 eP	50 46.50	-1.3	
ARN	4.24	150 eP	50 47.00	-1.2	
KVN	5.10	111 eP	50 57.60	-2.9	
	9 obs. assaciated				

JUN 14, 1989 22h 37m 11.36± 0.23s
14.013 S ± 5.6km 65.945 E ± 4.4km
DEPTH = 10.0km (geaphysicist)
5.1mb (32 obs.) 4.9Msz (5 abs.)
MID-INDIAN RISE (429)
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.B.: 9S, 17C
Centroid Location:
Origin Time 22:37:19.5 0.7
Lot 13.74S 0.08 Lon 65.78E 0.08
Dep 15.0 FIX Holf-duration 1.5
Mament Tensor; Scale 10**16 Nm
Mrr= 4.96 0.31 Mtt= 1.27 0.34
Mff=-6.23 0.47 Mrt= 1.01 0.86
Mrf= 2.61 1.19 Mtf= 0.36 0.31
Principal Axes:

	Vol=	Plg=	Azm=
T	5.79	72	317
N	1.02	13	182
P	-6.81	12	89

Best Double Couple:Mo=6.3*10**16
NP1:Strike=162 Dip=35 Slip= 66
NP2: 10 59 105

GBA	29.71	23 Pd	43 20.00	0.1	
	1.3s	18.40nm		4.7mb	
BUL	36.15	255 iPd	44 15.20	-0.9	
	1.0s	16.50nm		4.8mb	
SLR	37.16	246 iPd	44 24.40	-0.2	
	0.8s	22.39nm		5.0mb	
PRY	38.11	244 eP	44 25.70	-6.9X	
BFS	38.70	244 eP	44 32.50	-5.1X	
QUE	43.95	1 eP	45 22.20	1.6	
DMN	45.36	24 Pd	45 33.20	1.2	
	1.2s	75.00nm		5.5mb	
PKI	45.44	25 Pd	45 33.50	0.7	
GKN	45.52	23 Pd	45 34.20	1.0	
KKN	45.59	24 Pd	45 34.70	0.9	
	1.2s	81.00nm		5.6mb	
GUN	45.93	25 Pd	45 38.00	1.3	
CHG	46.06	46 eP	45 38.30	0.9	
MAIO	50.41	353 iPc	46 11.00	-0.1	
BNG	50.46	288 iPc	46 11.10	-0.7	
	0.9s	29.00nm		5.2mb	
		iS	53 10.00		
		id	01 24.50		
IR4	51.02	344 eP+	46 15.60	-0.2	
IR5	51.08	344 eP	46 16.10	-0.2	
IR1	51.24	344 eP+	46 17.10	-0.4	
BHD	51.33	337 ePd	46 17 00	-1.0	
IR2	51 42	344 eP+	46 18.20	-0 6	
IR7	51.53	344 eP+	46 19 00	-0 7	
MBH	52.84	326 iPd	46 31.00	1.5	
KMI	52.92	43 Pd	46 30.00	-0.4	
SLY	53.01	339 ePd	46 30.00	-0.6	
PRNI	53.22	326 eP	46 33.00	0.6	
MKS	53.39	86 ePc	46 34.00	0.2	
		e	46 45.00		
KSH	54.01	10 eP	46 38.00	0.0	
MSL	54.55	337 ePd	46 42.00	0.1	
TAB	54.98	341 eP	46 45.00	-0.3	
HRI	55.15	329 eP	46 46.00	-0.5	
GYA	56.44	45 P	46 55.80	-0.1	
CD2	57.58	39 P	47 02.50	-1.4	
WMQ	60.89	18 Pc	47 26.00	-0.6	
Z	16s	0.40um		4.7MszX	
LZH	61.36	35 P	47 30.00	0.0	
	2.5s	79.00nm		5.4mb	
GTA	61.82	29 Pd	47 32.20	-0.9	
XAN	62.89	39 P	47 41.50	1 3	
IZM	63.48	327 eP	47 38.00	-6.0X	
YLV	64.03	330 iP	47 46.60	-1.0	
HRT	64.08	330 eP	47 47.00	-0.8	
WHN	64.26	46 eP	47 49.00	-0.2	
ASPA	64.53	110 iPc	47 49.80	-1.4	
Z	17s	2.34um		5.4MszX	
		LR	14 10.70		
EZN	65.02	327 iP	47 43.00	-10.9X	
WRA	65.31	106 Pc	47 55.30	-0.9	
	2.1s	121.90nm		5.7mb	
WB5	65.34	106 eP	47 55.60	-0.8	
JMB	66.83	329 eP	48 05.00	-0.5	
RZN	67.21	328 iP	48 07.00	-1.2	
TIY	67.45	39 eP	48 08.80	-0.8	
Z	20s	0.50um		4.7Msz	
		S	57 10.00		
BTO	67.97	35 P	48 12.50	-0.4	
PVL	68.01	329 iPd	48 14.00	1.1	
KKB	68.20	327 eP	48 13.00	-1.1	
NJ2	68.28	47 Pd	48 14.50	-0.3	
VTS	68.64	327 iP	48 17.00	-0.1	
HHC	69.01	36 eP	48 19.30	0.0	
SKO	69.15	326 iP	48 18.50	-1.5	
VRI	69.31	332 ePc	48 21.00	0.1	
MLR	69.39	331 ePc	48 21.00	-0.6	
TIA	69.48	42 eP	48 21.50	-0.7	
CMP	69.65	330 ePd	48 24.00	0.9	
QIS	70.13	107 eP	48 26.00	-0.5	
BJI	71.19	39 eP	48 30.00	-2.4	
BZS	71.58	329 eP	48 34.00	-0.7	
KIC	72.99	281 P	48 42.70	-1.0	
LIC	73.22	281 P	48 44.30	-0.7	
Z	21s	0.70um		4.9Msz	
TIC	73.33	281 P	48 44.80	-0.9	
SPC	74.74	331 eP	48 53.10	-0.3	
SRO	74.74	329 eP	48 53.50	0.3	
VBY	74.85	326 e(P)	48 53.70	-0.1	
CEY	75.45	326 eP	48 56.50	-0.9	
KRA	75.49	331 eP	48 56.60	-0.8	
		e	49 00.90		
LJU	75.58	326 ePc	48 57.50	-0.6	
ZST	75.61	329 eP	48 57.00	-1.1	
VOY	75.92	326 e(P)c	48 59.20	-0.9	
SPA	76.08	180 e(P)	49 01.10	0.3	
	1.8s	51.85nm		5.3mb	
KBA	76.86	326 eP	49 04.00	-1.5	
	1.5s	28.60nm		5.1mb	
KMR	77.05	327 iP-	49 10.40	4.1X	
KSP	77.74	330 eP	49 09.50	-0.5	
		e	52 05.50		
KHC	78.00	328 iPd	49 11.50	0.0	
PRU	78.05	329 Pc	49 11.80	0.1	
	1.8s	46.90nm		5.3mb	
FIN	78.15	322 P	49 12.14	-0.3	
IMI	78.18	321 P	49 12.45	-0.2	
ROB	78.40	322 P	49 13.37	-0.5	
OSS	78.40	324 ePd	49 14.30	0.3	
SBF	78.43	321 eP	49 14.10	0.1	
	1.0s	9.60nm		4.8mb	
ENR	78.63	321 P	49 15.42	0.4	
FUR	78.64	326 eP	49 15.20	0.2	
STV	78.70	321 P	49 15.12	-0.4	
LMR	78.72	320 eP	49 15.70	0.2	
	1.0s	8.00nm		4.7mb	
FRF	78.75	320 eP	49 15.90	0.2	
LRG	78.87	320 eP	49 16.80	0.4	
BRG	78.90	329 iPc	49 16.50	0.1	
CN2	79 01	39 P	49 16.00	-1 1	
SAX	79 17	325 ePd	49 18.30	0.0	
MMK	79 30	323 ePd	49 19.10	0.1	
RRL	79.39	322 P	49 18.96	-0.5	
LSD	79.45	322 P	49 19.11	-0.7	
GRF	79.57	327 eP	49 20.00	-0.1	
	1.5s	47.00nm		5.3mb	
DIX	79.63	323 ePd	49 21.00	0.2	
CLL	79.64	329 iPc	49 20.40	0.0	
	2.0s	79.00nm		5.4mb	
LPG	79.71	322 eP	49 20.40	-0.9	
	1.2s	5.90nm		4.4mb	
ZLA	79.84	324 ePd	49 21.80	0.2	
SLE	79.94	325 ePd	49 22.30	0.2	
FEL	80.27	325 ePc	49 23.55	-0.5	
BSF	80.94	324 eP	49 27.30	-0.2	
CDF	80.98	325 eP	49 27.70	0.0	
NUR	81.27	341 eP	49 29.10	0.3	
	1.1s	18.20nm		5.0mb	
HAU	81.28	324 eP	49 29.20	0.0	
ABH	81.63	326 eP	49 30.94	0.0	
LBL	81.70	321 P	49 27.10	-4.3X	
RUP	81.80	326 ePc	49 31.95	0.1	
PLDF	81.84	321 P	49 26.00	-6.2X	
PYM	82.10	321 P	49 26.60	-7.0X	
LBF	82.13	322 eP	49 34.00	0.3	
	1.0s	10.80nm		4.9mb	
AGO	82.17	321 P	49 26.80	-7.1X	
WLF	82.27	325 P	49 34.40	0.2	
CAF	82.29	320 eP	49 35.40	0.9	
	1.2s	10.10nm		4.8mb	
LOR	82.34	323 eP	49 35.00	0.3	
	1.2s	8.90nm		4.8mb	
AVF	82.40	322 eP	49 35.00	0.0	
	1.0s	4.00nm		4.5mb	
SSF	82.45	322 eP	49 35.60	0.3	
	1.0s	12.00nm		5.0mb	
SUF	82.52	343 eP	49 35.50	0.2	
	1.4s	34.00nm		5.3mb	
BGF	82.59	322 eP	49 36.90	0.9	
	1.2s	29.70nm		5.3mb	
MAF	82.60	321 eP	49 36.50	0.4	
	1.0s	186.00nm		6.2mb X	
LPO	82.72	319 eP	49 37.80	1.1	
	1.2s	20.20nm		5.2mb	
RJF	82.81	320 eP	49 38.10	0.9	
	1.2s	17.80nm		5.1mb	
LFF	83.12	320 eP	49 39.60	0.8	
	1.3s	21.60nm		5.2mb	
LSF	83.24	321 eP	49 40.20	0.8	
	1.1s	14.60nm		5.1mb	
DOU	83.36	325 P	49 42.30	2.4	
SNF	83.74	326 P	49 43.00	1.2	
MFF	84.44	321 eP	49 46.00	0.6	
	1.2s	14.20nm		5.1mb	
LDF	85.33	322 eP	49 50.60	0.8	
	1.4s	26.10nm		5.3mb	
FLN	85.62	323 eP	49 51.90	0.7	
	1.2s	11.90nm		5.0mb	
LPF	85.62	322 eP	49 51.70	0.4	
	1.2s	17.80nm		5.1mb	
SOD	86.06	346 eP	49 53.00	-0.1	
INK	124.31	9 ePKP	56 11.00	-0.5	
CNCB	125.15	238 PKP	56 16.00	0.6	
LPB	125.39	238 (PKP)	56 11.00	-4.7X	
		LR	48 44.00		
ZOBO	125.55	238 PKP	56 15.00	-1.2	
Z	20s	0.29um		4.9Msz	
		LR	48 08.00		
RSON	139.72	340 PKP	56 40.90	-0.3	
EDM	140.88	359 ePKP	56 40.50	-2.8	
BLA	142.19	314 PKP	56 46.60	0.4	
PNT	144.50	6 ePKP	56 48.00	-1.7	
MCW	144.68	10 PKP	56 48.10	-2.0	
TKL	145.31	314 PKP	56 50.90	-0.6	
GBTN	145.61	314 PKP	56 51.70	-0.3	
GMW	145.78	11 PKP	56 53.40	1.5	
UPA	145.83	265 iPKPc	56 53.60	0.7	
	1.4s	260.47nm			
Z	18s	0.17um		4.9Msz	
RMW	146.03	9 PKP	56 53.10	0.7	
DPW	146.07	5 PKP	56 53.80	1.3	
LON	146.72	10 PKP	56 54.60	1.1	
BMW	146.73	12 PKP	56 55.40	1.8	
ELC	147.97	321 PKP	56 58.30	2.6	
VGB	148.09	9 PKP	56 58.20	2.5	
LRM	148.26	358 ePKP	56 56.40	0 1	
RSSD	148.80	346 PKP	56 57.40	0 2	
LBFM	151.92	13 PKP	57 09.10	7 1X	
FHC	151.94	16 ePKPd	57 10.00	8.2X	
RLO	152.11	326 ePKP	57 03.50	1.4	
		e	57 09.00		
WDC	152.51	14 ePKPd	57 10.00	7.5X	
LNO	152.72	326 ePKP	57 03.70	0.9	
TUL	152.72	326 ePKP	57 03.80	0.9	
	1.3s	13.40nm			
Z	21s	0.41um		5.2Msz	
		e	57 10.50		
		LR	53 00.00		
VVO	153.11	325 e(PKP)	57 04.60	1.1	
SIO	153.12	327 e(PKP)	57 03.50	0.0	
GOL	153.30	345 PKP	57 05.00	1.0	
DAU	153.59	355 PKP	57 04.90	0.4	
ORV	153.73	13 e(PKP)	57 12.70	8.4X	
CMB	155.42	12 e(PKP)	57 15.00	8.4X	
ALQ	158.06	343 ePKP	57 11.70	1 4	
	1 5s	13.89nm			
		e	57 29.80		
		e	57 45.00		

S.D. = 0.9 on 150 of 165 obs.

JUN 14, 1989 22h 49m 41.68± 0.89s
10.206 N ± 7.5km 60.021 W ± 8.6km
DEPTH = 10.0km (geophysicist)
TRINIDAD (98)

TBH	1.07	285	eP	50 02.62	0.9
			eS	50 17.22	
BOT	1.18	324	eP	50 04.63	1.0
			eS	50 21.36	
PIG	1.25	320	eP	50 05.71	0.9
			eS	50 22.20	
TPP	1.41	275	eP	50 07.80	0.4
			eS	50 29.04	
TRN	1.43	288	eP	50 06.51	-1.1
			eS	50 26.85	
TCE	1.77	286	eP	50 11.39	-1.2
			eS	50 32.70	
FCV	3.17	338	eP	50 31.52	-1.0
			eS	51 04.35	
BIM	4.41	347	eP	50 50.06	-0.1
			S	51 36.60	
MVM	4.41	349	eP	50 50.00	-0.2
FDF	4.63	346	eP	50 53.52	0.1
	0.1s		0.50nm		
ATB	15.49	150	Pd	53 22.30	0.4

S.D. = 0.9 on 11 of 11 obs.

JUN 15, 1989 01h 27m 57.32± 0.92s
40.851 N ± 8.5km 20.361 E ± 7.0km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
ML 1.4 (SKO).

BERA	0.35	245	ePg	28 04.00	-0.4
KBN	0.41	123	ePg	28 05.70	0.0
OHR	0.42	52	iPgc	28 04.60	-1.3
			eSg	28 10.00	
TIR	0.62	323	ePg	28 10.50	0.7
PHP	0.84	4	ePg	28 12.20	-1.3
SKO	1.38	36	ePn	28 24.50	1.9
VAY	1.73	74	ePn	28 28.20	0.5

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

? JUN 15, 1989 01h 40m 19.41± 4.58s
43.674 N ±21.4km 13.748 E ±32.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.7 (ROM).

ARV	0.61	254	Pd	40 32.90	1.1
			eSg	40 36.90	
ALP	0.90	188	ePg	40 37.20	0.4
			iSg	40 45.00	
RSM	0.97	286	P	40 38.60	0.8
			eSg	40 47.00	
ASS	1.00	233	P	40 37.10	-1.2
			eSg	40 43.40	
PGD	1.48	279	P	40 45.10	-1.2
			eSg	40 57.50	
MNS	1.51	212	P	40 49.20	2.7X
			eSg	41 06.30	

S.D. = 1.6 on 5 of 6 obs.

JUN 15, 1989 01h 59m 51.97± 0.52s
43.035 N ± 4.3km 12.984 E ± 5.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (ROM), 2.4 (SSO).

CIO	0.20	36	iPgd	59 56.30	-0.1
			iSg	59 59.72	
ASS	0.24	279	P	59 57.80	0.7
			eSg	00 01.70	
ARV	0.46	356	Pd	00 01.30	-0.1
			eSg	00 08.20	
ALP	0.50	120	iPg	00 02.48	0.2
			iSg	00 10.56	
AOI	0.68	41	iPg	00 05.67	0.1
			i(Sg)	00 16.55	
MNS	0.69	199	P	00 05.50	-0.1
			eSg	00 15.90	
RSM	0.97	337	P	00 11.00	0.6
PGD	1.25	313	P	00 14.20	-1.0
SDI	1.46	155	P	00 18.20	-0.3
			eSg	00 37.80	

S.D. = 0.6 on 9 of 9 obs.

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* JUN 15, 1989 02h 10m 01.68± 0.70s
2.438 N ±10.6km 128.352 E ±18.2km
DEPTH = 33.0km (normal)
4.9mb (8 obs.)
HALMAHERA (267)

KNA	18.08	179	eP	14 13.20	1.1
WB5	22.95	165	eP	15 04.90	0.6
WRA	23.01	165	Pd	15 05.30	0.4
	0.5s		14.90nm		4.7mb
QIS	25.38	155	iPd	15 27.80	0.1
			e	15 30.00	
ASPA	26.50	169	iPd	15 37.90	-0.3
	0.5s		17.00nm		4.9mb
NANU	27.82	206	eP	15 49.00	-1.1
WARB	28.50	183	eP	15 44.00	-12.2X
CHG	33.07	302	eP	16 37.90	1.1
	1.2s		19.14nm		4.9mb
FORR	33.10	180	eP	16 35.20	-1.6
STK	36.37	161	eP	17 05.00	0.2
BJI	39.03	345	eP	17 26.00	-1.0
GUN	47.79	306	P	18 38.60	0.0
	0.4s		17.00nm		5.4mb
PKI	48.03	306	P	18 40.60	0.2
KKN	48.23	306	P	18 42.00	0.2
	0.4s		5.00nm		4.9mb
DMN	48.29	305	P	18 42.80	0.4
	0.8s		20.00nm		5.2mb
GKN	48.83	306	P	18 46.60	0.2
	0.4s		4.00nm		4.8mb
GBA	51.51	285	Pc	19 06.00	-0.8
	0.6s		4.60nm		4.6mb

S.D. = 0.8 on 16 of 17 obs.

? JUN 15, 1989 03h 00m 10.76± 0.88s
21.838 S ±26.3km 174.201 W ±12.1km
DEPTH = 33.0km (normal)
4.9mb (5 obs.) 4.0Msz (1 obs.)
TONGA ISLANDS (173)

VUN	7.88	298	ePc	02 06.00	0.0
DZM	17.96	266	iPc	04 22.10	2.4
ASPA	47.68	257	iPd	08 44.00	-2.3
	1.1s		16.00nm		5.0mb
WB5	47.92	262	eP	08 46.30	-1.9
WRA	47.93	262	Pd	08 46.10	-2.2
	0.9s		4.10nm		4.5mb
GUMO	53.40	307	eP	09 32.00	2.2
	Z 22s		0.16um		4.0Msz
NANU	64.47	255	eP	10 48.00	1.3
	0.3s		3.00nm		4.9mb
MAT	73.42	322	eP	11 39.00	-2.6
	1.0s		15.00nm		4.9mb
CMB	78.10	41	ePc	12 07.00	-1.1
WDC	78.50	38	e(P)	12 10.00	-0.2
LON	83.03	33	eP	12 33.30	-0.8
RMW	83.51	33	iP	12 36.50	-0.1
MSU	83.54	44	iP	12 38.40	1.2
ALQ	85.51	50	eP	12 48.00	0.9
CN2	85.54	321	iPd	12 46.50	-0.2
			pP	12 54.40	25kmX
PNT	85.83	32	eP	12 48.00	-0.1
	0.6s		6.00nm		5.0mb
BJI	89.35	314	eP	13 04.50	-0.7
XAN	91 77	306	Pc	13 16.70	0.1
KMI	93.12	296	Pd	13 24.50	1.3
CHG	94.03	289	eP	13 28.70	1.4
INK	94.67	14	eP	13 28.00	-1.1
EKA	145.89	9	PKPd	19 47.40	0.0
	0.7s		5.90nm		
DMU	146.56	14	ePKP	19 49.70	1.2
DLE	147.21	14	ePKP	19 51.10	1.5
WTS	149.89	359	ePKP	19 59.00	5.2X
	0.8s		10.00nm		
			e	20 09.00	
KSP	149.91	347	ePKP	19 59.00	5.1X
CLL	150.05	351	iPKP	19 59.20	5.1X
	1.5s		41.00nm		
			i	20 08.90	
BRG	150.33	350	ePKP	20 00.10	5.6X
			i	20 09.90	
SPC	150.39	341	ePKP	20 01.00	6.0X
VRI	150.57	329	ePKP	20 09.00	13.9X
BBTK	150.88	314	iPKPd	20 02.00	6.1X
PRU	151.07	348	PKP	20 02.00	6.3X
			e	20 11.90	
ENN	151.13	360	e(PKP)	19 58.50	2.8X
	1.0s		6.00nm		
			e	20 08.50	
HOF	151.18	352	ePKP	20 02.50	6.6X
MLR	151.21	330	ePKPc	20 01.50	5.3X
MEM	151.28	360	ePKP	20 12.30	16.4X
DOU	151.78	2	PKP	20 04.10	7.4X
ABH	151.98	358	ePKP	20 04.39	7.3X
KHC	152.07	349	iPKP	20 04.70	7.4X
			e	20 13.00	
RUP	152.18	358	ePKP	20 05.10	7.7X
ZST	152.18	344	ePKP	20 04.50	7.1X
SRO	152.20	342	e(PKP)	20 05.00	7.6X
			e	20 13.60	
GRB2	152.23	352	ePKP	20 05.00	7.5X
WLF	152.23	360	PKP	20 07.60	10.2X
PRNI	152.50	294	ePKP	20 07.00	8.6X
FLN	152.67	9	ePKP	20 15.70	17.7X
	0.8s		10.70nm		
MBH	152.71	293	ePKP	20 07.00	8.3X
GRR	152.98	10	ePKP	20 16.60	18.1X
	1.0s		8.00nm		
BZS	152.98	335	ePKP	20 00.00	1.4X
LPF	153.29	10	ePKP	20 16.80	17.9X
	1.1s		19.50nm		
HAU	153.89	359	ePKP	20 18.20	18.4X
LOR	154.58	3	ePKP	20 20.00	19.3X
	1.0s		6.00nm		
SSF	154.77	4	ePKP	20 20.40	19.4X
	1.0s		6.00nm		
LBF	154.87	3	ePKP	20 20.60	19.4X
	1.2s		8.90nm		
MAF	155.53	5	ePKP	20 22.10	20.0X
	1.0s		6.80nm		

S.D. = 1.5 on 24 of 55 obs.

? JUN 15, 1989 04h 11m 18.99± 1.49s
51.254 N ±26.4km 177.958 E ±10.0km
DEPTH = 33.0km (normal)
4.5mb (6 obs.)
RAT ISLANDS, ALEUTIAN ISLANDS (6)

SMY	2.80	303	eP	12 04.80	2.4
ADK	3.40	77	eP	12 12.20	1.2
IMA	20.65	33	eP	15 58.00	0.0
	0.7s		6.00nm		4.1mb
PMR	20.70	47	eP	16 00.30	1.9
BRW	23.14	21	eP	16 22.70	0.0
MBC	34.48	22	eP	18 05.00	-0.3
	0.9s		6.00nm		4.5mb
FRB	54.18	30	eP	20 41.00	-1.7
SOD	59.74	348	eP	21 21.00	-1.3
SUF	64.21	346	eP	21 50.90	-1.3
	0.5s		2.10nm		4.5mb
NB2	67.55	353	P	22 12.90	-0.8
	0.9s		2.80nm		4.4mb
KKN	70.44	290	P	22 32.00	-0.2
	0.6s		7.00nm		4.9mb
PKI	70.53	290	P	22 33.00	0.2
GKN	70.66	291	P	22 33.40	0.0
	0.6s		5.00nm		4.8mb

S.D. = 1.3 on 13 of 13 obs.

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* JUN 15, 1989 07h 13m 08.18± 0.53s
39 964 N ±13.3km 71.032 E ±15.1km
DEPTH = 33.0km (normal)
4.6mb (12 obs.) 4.0Msz (1 obs)
TAJIK SSR (715)
Felt (V) at Isfara, Neftebad, Oftubruy, Shurab and Konibadom, (III) at Fergana, Tashkent and Andizhan; (II) at Namangan.

QUE	10.31	200	eP	15 46.00	9.0X
NDI	12.35	154	eP	16 07.00	2.4
	0.5s		38.73nm		5.8mb X
			eS	18 18.00	
GKN	16.40	133	P	16 56.20	-1.4
KKN	16.93	131	P	17 03.50	-0.8
	0.6s		26.00nm		4.5mb
DMN	16.96	132	P	17 04.40	-0.4
	0.8s		56.00nm		4 7mb
PKI	17.17	132	P	17 06 80	-0 6
GUN	17.19	130	P	17 06.20	-1 5
	0.8s		56.00nm		4.7mb
GBA	26.86	166	Pd	18 48.50	0 9

15d 07h

	0 7s	3 10nm		4.0mb		
SUF	35.04	326 iP	19	59.30	-0.2	
	0.6s	4.80nm		4.6mb		
NUR	35.08	321 eP	19	43.00	-16.9X	
Z	20s	0.30um		4.0Msz		
		LR	35	00.00		
SOD	36.64	333 eP	20	13.00	0.1	
KEV	37.62	337 eP	20	29.00	7.9X	
HFS	40.41	319 eP	20	44 00	-0.4	
	0.4s	17.70nm		5.2mb		
Z	16s	0.22um		4.1MszX		
		LR	37	40.00		
BRG	40.57	305 e(P)	20	45.50	-0.4	
	1.0s	8.00nm		4.4mb		
CLL	41.11	306 eP	20	57.00	6.7X	
NB2	41.67	321 P	20	49.70	-5.2X	
	0.9s	8.70nm		4.5mb		
EKA	49.86	314 P	21	59.00	-0.9	
	0.7s	1.90nm		4.2mb		
BNG	58.95	247 ePd	23	05.90	-0.9	
	0.9s	5.00nm		4.6mb		
MBC	63.88	3 eP	23	40.00	0.8	
	0.9s	12.00nm		5.0mb		
INK	70.49	9 eP	24	22.00	1.1	
YKA	77.79	3 eP	25	13.50	10.4X	
WRA	83.81	122 P	25	38.00	2.4	
	0.9s	2 60nm		4.4mb		
	S.D. = 1.3	on 16 of 22 obs.				

& JUN 15, 1989 08h 42m 55.15s
62.822 N 148.195 W
DEPTH = 54.2km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.97	340 iP	43	12.83	0.0	
		S	43	26.00		
GHO	1.11	198 eP	43	14.33	-0.4	
		S	43	28.98		
TOA	1.18	127 iPc	43	15.60	-0.2	
PAX	1.26	82 eP	43	16.31	-0.5	
		S	43	32.40		
PME	1.26	198 eP	43	16.62	-0.1	
PMR	1.31	200 eP	43	17.40	0.0	
PWA	1.42	215 iPd	43	19.20	0.3	
KNK	1.42	185 iP	43	19.21	0.2	
KTH	1.44	302 iP	43	19.34	0.1	
		S	43	36.86		
WRH	1.66	2 iP	43	21.15	-1.1	
HDA	1.68	19 iP	43	22.10	-0.6	
KLU	1.71	140 eP	43	22.81	-0.3	
		S	43	45.94		
NEA	1.81	348 iP	43	22.93	-1.4	
SUA	1.81	222 eP	43	24.98	0.4	
		S	43	45.83		
CCB	1.84	5 iP	43	23.53	-1.3	
VZW	1.93	156 iP	43	25.51	-0.7	
RDS	2.01	1 iP	43	26.10	-1.2	
		S	43	49.29		
FBA	2.09	5 iPc	43	27.20	-1.2	
GLM	2.20	9 iP	43	28.69	-1.3	
		S	43	53.80		
FID	2.23	158 eP	43	29.77	-0.6	
CRP	2.43	232 eP	43	34.88	1.5	
GLB	2.48	122 eP	43	33.55	-0.4	
SLKM	2.52	203 eP	43	34.53	0.1	
CVA	2.56	152 iP	43	34.18	-0.8	
		eS	44	12.70		
HIN	2.56	161 eP	43	34.16	-0.9	
		eS	44	11.12		
SGAM	2.73	147 eP	43	35.90	-1.5	
		eS	44	16.47		
SEW	2.79	193 eP	43	38.70	0.4	
MTU	2.86	175 eP	43	39.57	0.3	
RAGM	2.97	144 eP	43	40.52	-0.4	
		eS	44	21.11		
RDT	3.02	224 eP	43	41.75	0.1	
RED	3.25	224 eP	43	45.59	0.6	
ILIM	3.58	222 eP	43	49.57	0.1	
TTA	3.58	275 eP	43	48.00	-1.6	
CNPM	3.62	205 eP	43	49.82	-0.2	
SVW	3.90	247 eP	43	53.50	-0.6	
IMA	4.03	326 eP	43	54.30	-1.6	
HYT	5.45	107 P	44	15.00	-0.9	
INK	8.19	41 eP	44	50.00	-3.8	
	38 obs. associated					

& JUN 15, 1989 09h 57m 59.87s
67.346 N 157.398 W
DEPTH = 37.0km
ALASKA (676)
<AGS-P>.

NEA	4.39	125 eP	59	05.36	-0.5	
FBA	4.61	118 eP	59	08.30	-0.6	
KTH	4.67	142 eP	59	09.22	-0.6	
GLM	4.70	116 eP	59	09.75	-0.5	
CCB	4.76	120 eP	59	10.21	-0.9	
WRH	4.78	123 eP	59	10.85	-0.5	
HDA	5.20	120 eP	59	15.87	-1.4	
	7 obs. associated					

JUN 15, 1989 10h 30m 53.98± 0.73s
42.347 N ± 6.3km 20.094 E ± 6.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (TTG).

BCI	0.03	315 iPgd	30	56.20	0.3	
PVY	0.26	340 ePg	30	59.50	-0.1	
		eSg	31	05.00		
PUK	0.34	206 iPg	31	00.70	-0.3	
KKS	0.36	139 iPgc	31	00.40	-1.0	
TTG	0.62	278 ePg	31	05.10	-1.4	
		eSg	31	15.10		
PHP	0.71	158 iPgd	31	05.30	-2.6	
ULC	0.74	239 ePg	31	09.20	0.8	
		eSg	31	21.00		
LACI	0.77	202 ePg	31	08.50	-0.4	
NKY	0.93	300 ePg	31	11.70	-0.2	
		eSg	31	26.00		
BDV	0.94	267 ePg	31	12.00	0.1	
		eSg	31	27.00		
TIR	1.01	190 ePg	31	19.20	6.0X	
SKO	1.07	110 ePg	31	15.00	0.9	
		iSg	31	29.70		
HCY	1.19	275 ePg	31	16.50	0.4	
		eSg	31	34.50		
OHR	1.34	157 ePg	31	19.80	1.1	
		iSg	31	37.00		
BERA	1.65	184 ePn	31	25.50	2.5	
	S.D. = 1.3	on 14 of 15 obs.				

? JUN 15, 1989 11h 10m 17.42± 3.36s
34.362 N ±31.4km 26.403 E ± 9.4km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3 6 (ATH).

NPS	1.11	324 ePb	10	38.00	-0.2	
KAP	1.34	28 ePb	10	43.10	0.9	
VAM	2.09	301 ePb	10	53.10	0.2	
YER	3.16	28 ePn	11	07.50	-0.7	
ELL	3.72	49 ePn	11	16.10	-0.2	
	S.D. = 0.9	on 5 of 5 obs.				

? JUN 15, 1989 12h 10m 17.77± 1.10s
23.836 S ±13.3km 179.789 W ±23.0km
DEPTH = 558.0 ± 10.3 km
4.7mb (4 obs.)
SOUTH OF FIJI ISLANDS (171)

SVA	5 92	344 eP	11	58 00	1.3	
DZM	12.81	275 iPd	13	07 00	2.1	
MNG	17.20	192 eP	13	46.90	-1.1	
	0.2s	10.00nm		5.1mb		
		eS	16	35.10		
MTW	17.72	192 eP	13	52.80	-0.2	
CAW	17.76	193 eP	13	52.50	-0.8	
BLW	17.93	192 eP	13	55.70	0.7	
MRW	17.95	194 eP	13	54.10	-1.0	
TCW	18.03	195 P	13	56.90	1.0	
WB5	42.59	266 eP	17	26.30	-0.5	
WRA	42.60	266 Pc	17	27.40	0.5	
	0.8s	10.30nm		4.4mb		
FORR	46.47	249 iPc	17	56.50	-0.2	
	0.3s	9.00nm		4.8mb		
MBL	55.48	260 eP	19	02.10	-0.4	
SPA	66.31	180 ePc	20	15.70	2.9	
	0.9s	18.18nm		4.6mb		
IR2	134.88	297 ePdiff	25	37 80	-1 8	
IR4	134.89	297 ePdiff	25	43 20	3.6X	
IR1	135.06	297 iPdiff	25	38.60	-1.8	
IR7	135 12	297 ePdiff	25	34.00	-6.7X	
IR5	135.15	297 ePdiff	25	40.00	-0.8	
HFS	142.52	349 ePKP	28	48.30	0.1	
	0.6s	6.10nm				
	S.D. = 1.4	on 17 of 19 obs.				

JUN 15, 1989 12h 11m 54.72± 0.40s
51.625 N ± 8.7km 174.280 W ± 4.3km
DEPTH = 33.0km (normal)
4.9mb (31 obs.) 4.4Msz (3 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.52	281 iPd	12	20.00	0.2	
SDN	9.02	60 eP	14	07.50	2.0	
KDC	13.98	55 eP	15	11.20	-1.1	
SVW	13.99	40 eP	15	16.20	3.7X	
TTA	14.96	34 eP	15	30.90	5.7X	
PMR	16.95	44 eP	15	51.20	0.7	
IMA	17.84	28 eP	16	03.70	2.0	
	0.9s	13.00nm		4.1mb		
TOA	18.44	44 eP	16	08.60	-0.5	
FBA	19.05	36 eP	16	14.50	-2.0	
BRW	21.28	16 eP	16	39.50	-0.5	
INK	25.65	34 eP	17	23.00	0.4	
	0.7s	20.00nm		4.8mb		
MBC	32.33	21 eP	18	22.00	-0.4	
	0.4s	2.00nm		4.4mb		
PNT	34.19	72 iPd	18	40.00	1.2	
	0.6s	11.00nm		5.0mb		
EDM	36.21	63 iPc	18	56.30	0.4	
	0.5s	50.00nm		5.7mb		
MAT	36.62	265 (P)	19	00.00	0.5	
WDC	36.81	87 ePc	19	02.10	1.0	
MIN	37.52	86 eP	18	57.50	-9.8X	
ORV	38.05	87 eP	19	17.00	5.5X	
SES	38.70	66 eP	19	16.00	-0.9	
CMB	39.66	88 e(P)	19	37.70	12.6X	
LRM	40.12	73 eP	19	30.20	1.2	
CN2	40.26	283 Pc	19	29.40	-0.4	
Z	20s	0.60um		4.4Msz		
FFC	41.68	56 eP	19	41.00	-0.4	
	0.7s	8.00nm		4.6mb		
SBB	43.38	90 eP	19	56.00	0.4	
DAU	43.88	79 eP	20	12.00	12.2X	
PLM	44.86	91 eP	20	07.00	-0.7	
BAR	45.43	91 eP	20	21.00	9.0X	
GLA	46.33	90 eP	20	19.00	-0.1	
GOL	47.89	76 eP	20	31.60	-0.1	
RSON	47.97	57 iP	20	30.70	-1.1	
TIY	51.80	285 eP	21	02.00	0.7	
Z	20s	0.50um		4.5Msz		
KEV	57.94	351 eP	21	44.00	-1.4	
SCH	58.05	41 eP	21	45.00	-1.5	
SOD	60.29	351 eP	22	00.00	-1.7	
WMQ	61.54	305 P	22	09.80	-0.9	
PTN	61.65	53 eP	22	09.70	-1.6	
CD2	61.67	285 P	22	12.20	0.5	
RSNY	61.89	53 eP	22	11.00	-2.0	
GYA	63.09	279 P	22	21.80	0.6	
CBM	63.22	48 eP	22	20.50	-1.2	
SUF	64.86	350 iP	22	30.90	-1.3	
	0.5s	3.80nm		4.7mb		
NUR	67.19	350 eP	22	45.60	-1.4	
Z	20s	0.10um		4.0Msz		
		LR	53	20.00		
NB2	67.60	357 P	22	48.60	-1.1	
	0 5s	3.80nm		4.7mb		
UPP	68 46	354 iP	22	54.20	-0.7	
EKA	73.16	5 Pd	23	23.70	0 4	
	0.7s	3.30nm		4.4mb		
GUN	74.35	295 P	23	30.60	-0.5	
KKN	74.78	295 P	23	33.20	-0.3	
PKI	74.87	295 P	23	33.80	-0.4	
	0.5s	15.00nm		5.2mb		
GKN	74.98	296 P	23	34.00	-0.5	
DMN	75.02	295 P	23	34.80	-0.1	
	0.6s	28.00nm		5.4mb		
CLL	77.26	355 iP	23	46.70	0.0	
	1.2s	14.00nm		4.9mb		
BRG	77.64	355 eP	23	49.00	0.1	
	1.2s	11.00nm		4.8mb		
GRF	78.95	356 e(P)	23	57.00	0.9	
	0.7s	19.00nm		5.2mb		
KHC	79.40	355 eP	23	59.00	0.4	
LDF	80.04	4 eP	24	01.80	-0.1	
	0 8s	9.10nm		4.8mb		
GRR	80.21	4 eP	24	03.40	0 5	
	0.8s	6.40nm		4.7mb		

```
CDF     80.33 359 eP     24 03.90   0.2
        0.6s     5.40nm          4.7mb
LPF     80.56   5 eP     24 05.00   0.3
        0.8s    13.40nm          5.0mb
HAU     80.75 360 eP     24 05.90   0.1
        0.6s    10.80nm          5.0mb
BSF     80.92 359 eP     24 06.90   0.1
        0.6s    12.60nm          5.1mb
LOR     81.47   1 eP     24 09.80   0.2
        0.7s    14.70nm          5.1mb
SSF     81.68   2 eP     24 11.00   0.4
        0.7s    17.60nm          5.2mb
LBF     81.76   1 eP     24 11.30   0.2
        0.6s     7.20nm          4.9mb
AVF     81.94   2 eP     24 12.00   0.0
        0.6s     9.90nm          5.0mb
MFF     82.02   4 eP     24 12.80   0.4
        0.8s    13.40nm          5.0mb
SMF     82.10   1 eP     24 13.00   0.2
        0.6s    13.50nm          5.2mb
BGF     82.17   2 eP     24 13.30   0.1
        0.8s     9.40nm          4.9mb
TCF     82.42   2 eP     24 14.70   0.2
        0.6s     5.40nm          4.8mb
MAF     82.50   2 eP     24 15.40   0.5
        0.6s    10.80nm          5.1mb
ORX     83.10 358 P      24 20.34   2.1
LSD     83.29 359 P      24 21.16   1.8
RSP     83.60 359 P      24 22.28   1.6
LFF     83.72   4 eP     24 21.60   0.4
        0.6s     7.20nm          5.0mb
RRL     83.83 359 P      24 23.82   1.7
WB5     84.14 228 eP     24 22.00  -1.5
ROB     84.44 358 P      24 25.05   0.1
STV     84.50 359 P      24 25.05  -0.2
LMR     85.42 359 eP     24 30.70   1.0
        1.2s    26.10nm          5.3mb
SKO     85.79 348 eP     24 32.50   0.9
OHR     86.71 349 eP     24 36.00  -0.3
     S.D. = 1.0  on  73 of  80 obs.
-------------------------------------
*  JUN  15, 1989   12h 36m 18.89± 0.95s
   29.923 S ± 8.1km   70.143 W ±18.2km
   DEPTH =  33.0km  (normal)
 CENTRAL CHILE                    (136)

ZON     2.05 142 iPd     36 51.50  -0.3
                 eS      37 13.00
ROCH    3.13 193 iPd     37 08.20   1.0
                 iS      37 44.80
PEL     3.24 188 iP      37 09.40   0.7
                 iS      37 44.50
FCH     3.40 182 iPc     37 12.70   1.5
                 iS      37 49.70
PCH     3.70 185 iPc     37 15.40   0.2
LCCH    3.74 199 iPd     37 15.60  -0.1
                 iS      37 57.50
TACH    3.78 190 iP      37 15.70  -0.6
                 iS      37 58.00
CHCH    4.02 186 iPd     37 18.50  -1.3
                 iS      38 03.50
LNV     4.16 195 iPc     37 20.50  -1.2
                 iS      38 05.60
ZOBO   13.72   8 P       39 34.00   0.1
     S.D. = 1.0  on  10 of  10 obs.
-------------------------------------
%  JUN  15, 1989   12h 42m 14 20± 0.57s
   60.637 N ± 4.8km    6.207 E ± 6.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                  (535)
      MD 1.8 (BER).

ASK     0.52 253 eP      42 24.27  -0.5
                 eS      42 32.77
HYA     0.53 359 iP      42 24.47  -0.5
                 eS      42 30.68
ODD1    0.76 164 eP      42 28.54  -0.5
                 eS      42 36.67
SUE     0.82 301 eP      42 30.25   0.1
                 eS      42 42.02
BLS1    1.29 166 eP      42 37.78  -0.4
                 eS      42 54.22
KMY     1.51 199 iP      42 42.46   1.2
                 eS      43 01.70
MOL     2.04  18 eP      42 49.51   0.5
                 eS      43 12.41
NRA0    2.63  86 ePn     42 57.30   0.0
                 iPg     42 59.70
                 iSg     43 34.10
     S.D. = 0.7  on   8 of   8 obs.
-------------------------------------
*  JUN  15, 1989   15h 45m 44.30± 1.46s
   45.698 N ±15.2km   11.096 E ± 8.0km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                   (545)
      MD 2.5 (ROM).

CTI     0.52  48 P       45 53.70  -1.2
                 eSg     46 01.40
MDI     0.97 275 P       46 02.30  -0.5
                 eSg     46 15.90
OGA     1.17 358 iPgd    46 07.10   0.8
SCE     1.41  17 iPgc    46 10.50   0.4
FVI     1.47  52 P       46 10.30  -0.5
                 eSg     46 30.70
VOY     1.98  79 ePn     46 19.40   1.1
                 eSn     46 47.50
     S.D. = 1.1  on   6 of   6 obs.
-------------------------------------
   JUN  15, 1989   15h 51m 58.60± 0.13s
    6.800 N ± 2.6km   73.019 W ± 2.1km
   DEPTH = 162.0km  ( 10 depth phases)
   5.1mb ( 46 obs.)
 NORTHERN COLOMBIA                ( 99)
      Felt at Bogota, Bucaromongo,
      Medellin, Cucuto and Tunjo.
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 15S, 25C
      Centroid Location:
      Origin Time          15:52: 2.1 0.8
      Lat  6.87N 0.08 Lon  73.09W 0.08
      Dep 156.8 1.9 Half-duration  1.6
      Moment Tensor;   Scale 10**16 Nm
        Mrr=-0.60 0.51  Mtt= 0.04 0.64
        Mff= 0.56 0.78  Mrt=-2.00 0.50
        Mrf=-9.04 0.57  Mtf=-1.27 0.75
       Principal Axes:
        T  Val=  9.06  Plg=43  Azm= 94
        N        0.58       8       191
        P       -9.64      45       289
      Best Double Couple:Mo=9.4*10**16
       NP1:Strike=109 Dip= 8 Slip=-173
       NP2:         12     89      -82

BMG     0.28 348 iPd     52 21.00  -1.1
BOG     2.40 206 iPd     52 41.00   1.1
                 iS      53 11.00
UAV     2.59  46 iPnd    52 43.30   1.3
        0.2s  1434.40nm
                 iSn     53 15.40
SDV     3.14  49 iPnd    52 50.20   1.2
                 iSn     53 28.00
HOBC    3.94 232 iPd     52 58.20  -1.0
CLMC    4.57 231 eP      53 07.00  -0.5
DIAC    4.71 222 eP      53 09.20  -0.1
HOQC    4.89 228 eP      53 10.20  -1.6
ANCC    5.03 230 eP      53 12.50  -1.0
SALC    5.28 224 eP      53 15.90  -1.0
PURC    5.56 217 eP      53 20.80  -0.1
FISA    5.74  39 iPc     53 21.70  -1.2
                 iS      54 23.00
MORO    6 16  49 iPc     53 27.50  -1 1
                 iS      54 34.00
GUAC    6.61  59 iPc     53 34.00  -0.6
                 eS      54 48.00
UPA     6.81 289 iPc     53 33.40  -3.8X
        0.7s   435.62nm          5.9mb
                 iS      54 45.60
OLLA    6.93  62 iPc     53 38.00  -0.9
                 iS      54 52.00
PSO     7.03 218 eP      53 41.00   0.4
CAR     7.06  58 eP      53 40.00  -0.6
                 iS      54 56.00
LLAV    7.14  59 iPc     53 41.00  -0.8
                 iS      54 56.00
GUAN    7.94  66 eP      53 51.00  -1.4
                 eS      55 16.00
DVD     9.49 280 iPc     54 12.50  -0.2
SJS    11.35 287 iPd     54 38.10   0.8
SRA    11.77 287 iPd     54 36.30  -6.4X
TCE    11 79  70 eP      54 44.06   1 2
                 eS      57 09.33
TPP    11.96  72 eP      54 49.40   4.3X
                 eS      57 20.84
TRN     12.10  71 eP      54 49.15   2.3
                 eS      57 17.18
TBH     12.37  72 eP      54 58.45   8.1X
                 eS      57 22.93
PNP     12.78  28 P       54 52.20  -3.5X
BOT     12.90  69 eP      55 02.90   5.7X
BIM     14.02  56 eP      55 19.50   8.1X
MVM     14.18  56 eP      55 18.44   4.9X
BBL     14.25  52 eP      55 14.00  -0.4
CRM     14.27  55 eP      55 18.55   4.0X
PAG     14.40  49 eP      55 15.00  -1.3
MGH     14.45  46 eP      55 17.00   0.1
NEV     14.48  44 eP      55 16.00  -1.2
SKI     14.50  43 eP      55 24.91   7.4X
                 eS      55 49.93
GCM     14.84 328 P       55 22.40   0.7
BPA     14.92  46 eP      55 23.83   1.1
DEG     15.05  50 eP      55 24.00  -0.3
NNA     19.05 192 iPd     56 10.40  -0.5
ATB     23.05 115 Pc      56 52.10   1.4
ARE     23.16 176 iPd     56 51.50  -0.6
        1.0s     50.00nm          5.0mb
ZOBO    23.43 168 iPc     56 54.90  -0.1
        1.0s    112.50nm          5.3mb
                 LR      10 28.00
CNCB    23.98 168 P       57 00.50   0.3
OXX     25.31 296 eP      57 13.00   0.7
LVVM    26.13 302 (P)     57 18.20  -1.3
HBF     26.89 346 P       57 27.40   1.2
SGS     27.17 346 P       57 29.50   0.8
                 pP      58 03.80 166km
IIT     27.43 299 (P)     57 32.80   1.2
ACX     28.07 293 eP      57 38.30   1.2
III     28.21 297 iPd     57 39.80   1.2
JSC     28.39 346 P       57 40.30   0.6
                 pP      58 13.40 159km
LHS     28.47 346 P       57 40.70   0.2
PRM     28.49 344 P       57 41.10   0.4
IIC     28.55 299 eP      57 42.80   1.0
CRX     28.78 298 eP      57 45.20   1.4
MRX     30.21 298 eP      57 57.30   1.3
TKL     30.37 343 P       57 57.60   0.3
GBTN    30.51 342 P       57 59.10   0.6
BLA     31.01 348 P       58 03.90   0.9
        0.8s     78.07nm          5.5mb
NAV     31.19 348 P       58 05.20   0.7
PWLA    31.28 336 P       58 05.80   0.5
CVL     31.43 352 P       58 07.00   0.5
NA2     31.48 353 P       58 07.20   0.3
OLY     33.22 332 P       58 21.50  -0.6
LST     33.30 335 P       58 22.20  -0.5
BAO     33.34 132 eP      58 23.10  -0.4
ELC     33.74 336 P       58 26.00  -0.6
TBR     34.21 358 P       58 31.80   1.3
FVM     34.83 336 P       58 35.90   0.1
VVO     35.25 327 iPd     58 38.70  -0.7
RLO     35.50 329 iPd     58 40.80  -0.7
LNO     35.71 327 iPd     58 42.30  -0.8
TUL     35.71 327 iPd     58 42.70  -0.5
        1.1s    183.00nm          5.7mb
     Z  18s      0.21um          3.9Msz
                 e       58 48.60
                 e       05 47.00
                 LR      11 00.00
SIO     35.86 327 iPd     58 43.90  -0 7
DHN     36.17 354 P       58 47.90   0 9
MEO     36.47 323 iPd     58 48.40  -1.3
        1.2s    278.40nm          5.8mb
RSNY    37.62 358 P       58 59.60   0.4
        0.8s     37.56nm          5.1mb
PTN     37.66 358 P       59 00.60   1.1
ITR     37.79 114 eP      59 02.00   1.0
                 epP     59 42.10 188kmX
MIM     38.45   5 P       59 07.00   0.9
GAC     38.81 357 ePd     59 10.30   1.2
VAO     39.07 140 eP      59 11.60   0.0
                 e       59 47.30
CBM     40.21   5 P       59 22.00   1.5
BMA     40.71 137 ePc     59 25.50   0.5
                 epP     00 34.70 348kmX
ALQ     41.60 317 iPd     59 33.00   0.6
        1.5s    193.75nm          5.5mb
                 e       59 38.00
                 e       59 41.50
                 e       59 52.50
                 e       00 11.00
```

15d 15h

GLD	43.72	324	P	59	50	00	0.5	DMU	70.56	35	eP	02	57.50	-0.2					
GOL	43.78	323	P	59	50	30	0.2	DLE	70.61	36	eP	02	58.20	0.2	VOY	83.01	44	eP	04 07.30	0.2
RSSD	46 01	329	P	00	06	80	-0.9	KUK	72.12	86	eP	03	05.00	-2.8	PRU	83 27	40	P	04 08 50	0.3
GLA	46.72	310	eP	00	13.00		-0.3	KOGH	72.25	86	eP	03	07.00	-1.6				i	04 49.50	
			e	05	24.00			LEGH	72.35	86	eP	03	08.00	-1.1	CEY	83.40	45	e(P)	04 09.50	0.5
RSON	47.17	342	P	00	15.60		-0.9	LPF	72.94	42	eP	03	11.30	-0.6	LJU	83.46	44	e(P)	04 10.00	0.7
			pP	00	53.20	169km			0.6s	5.40nm			4.5mb		VBY	83.99	45	e(P)	04 11.70	-0.2
MSU	47.39	318	P	00	19.00		0.4	EKA	73.03	34	Pc	03	17.30	5.0X				e	04 53.00	
DAU	47 82	320	P	00	22.00		0.0		0.9s	9.00nm			4.5mb		UPP	84.50	30	iP	04 14.90	0.8
BAR	48.00	308	eP	00	24.00		0.9	INK	73.08	340	iPd	03	12.20	-0.1	ZST	85.07	42	eP	04 17.20	0.0
			e	00	58.00				0.7s	69.00nm			5.5mb					e	05 28 00	
			e	05	29.00			EPF	73.23	47	eP	03	12.60	-1.2	SPC	87.04	41	e(P)	04 27.70	0.6
SCH	48.14	5	eP	00	24.00		0.1		1.0s	20.00nm			4 8mb		KEV	87.13	20	eP	04 27.00	0.1
PLM	48.41	309	eP	00	26.00		-0.5	MFF	73.33	43	eP	03	12.80	-1.4	SOD	87.48	22	iP	04 29.10	0.5
			e	05	31.00				0.8s	18.80nm			4.9mb		NUR	87.90	29	eP	04 31.10	0.4
DUG	48.69	319	P	00	28.70		0.2	FLN	73.42	41	eP	03	13.70	-1.0	SUF	88.20	27	eP	04 32.50	0.4
PEC	48.85	310	P	00	29.60		-0.1		0.8s	16.10nm			4.8mb			0.4s		2.20nm		4.5mb
RVR	49.05	310	eP	00	31.90		0.7	LDF	73.63	41	eP	03	15.70	-0.2	BZS	88.43	44	eP	04 34.00	0.4
GSC	49.15	312	eP	00	32.00		-0.1		0.8s	5.30nm			4.3mb		CMP	90.86	44	ePd	04 45.00	0.0
MWC	49.66	310	eP	00	35.00		-1.1	MBC	73.84	350	iPd	03	17.00	0.4	BNG	91.03	85	iPc	04 46.00	-0.4
			e	05	35.00				0.8s	162.00nm			5.8mb			0.7s		51.00nm		5.7mb
SBB	49.67	310	eP	00	35.00		-1.0				pP	03	57.30	165km				id	05 28.50	
			e	01	19.00			LPO	74.02	46	eP	03	18.10	-0.2	MLR	91.45	44	ePc	04 47.50	-0.3
			e	05	36.00				0.8s	8.00nm			4.5mb		VRI	91.91	44	ePc	04 51.50	1.7
PAS	49.72	310	eP	00	36.00		-0.3	LSF	74.44	44	eP	03	20.50	-0.2	ADK	93.05	323	eP	04 55.00	0.2
PTI	49.89	322	P	00	37.40		-0.2		0.8s	8.00nm			4.5mb		SPA	96.75	180	ePd	05 12.00	0.4
CLC	49.95	312	eP	00	37.00		-1.1	TCF	74.91	44	eP	03	23.20	-0.2		1.0s		15.50nm		5.4mb
			e	05	37.00				0.8s	4.00nm			4.2mb		WMO	126.68	17	PKP	10 45.00	0.4
ISA	50.54	311	eP	00	43.00		0.4	MAF	75.15	44	eP	03	24.50	-0.2				sPKP	11 27.20	
			e	05	40.00				0.8s	4.00nm			4.2mb					SKS	17 35.00	
TNP	50.65	315	P	00	43.60		0.0	BGF	75.38	44	eP	03	25.70	-0.3	CN2	126.93	343	PKPc	10 44.60	-0.3
SYP	51.25	309	eP	00	48.00		-0.1		0.8s	8.00nm			4.5mb		VSG	127.76	264	ePKP	10 36.00	-11.4X
			e	05	43 00			DAG	75.64	11	eP	03	26.00	-0.9	MAT	127.89	328	ePKP	10 46.00	-1.0
BCH	51.57	310	P	00	50.60		0.1		0.7s	17.12nm			4.9mb		HHC	132.40	355	ePKP	10 52.00	-3.6X
BLP	51.58	309	P	00	50.20		-0.2				ipP	04	06.80	167km	BJI	132.63	350	ePKP	10 56.50	0.6
LRM	51.65	326	iPd	00	50.80		-0.3	ALE	75.83	1	ePd	03	28.80	0.9				e	11 38.00	
KVN	51.70	315	P	00	51.20		-0.3		1.0s	38.00nm			5.1mb					e	14 07.50	
FRI	51.98	312	iPd	00	51.70		-1.6				pP	04	08.00	159km	BTO	132.76	357	ePKP	10 57.00	0.7
PRI	52.37	311	eP	00	55.40		-1.0	SSF	75.87	43	eP	03	28.40	-0.4	GTA	133.55	8	PKP	10 59.00	1.1
LLA	52.75	311	iPd	00	58.00		-1.0	LOR	76.13	43	eP	03	29.20	-1.0	TIY	135.43	354	ePKP	11 02.00	0.6
			eScP	05	49.50				0.8s	2.60nm			4.0mb	X	RMO	135.72	239	ePKP	11 05.00	2.8
CMB	52.89	313	iPd	00	59.40		-0.7	TOA	76.16	332	ePd	03	31.20	1.0	TIA	136.17	348	ePKP	10 57.40	-5.4X
			eScP	05	49.10			LBF	76.19	43	eP	03	30.90	0.3	LZH	137.24	4	ePKP	11 06.50	1.5
PRS	52.97	311	ePd	01	00.00		-0.6		0.6s	1.80nm			4.0mb	X		1.2s		24 00nm		
FFC	53.14	339	iPd	01	00.40		-1.2	DOU	76.87	40	Pc	03	39.40	5.2X	GKN	139.22	31	PKP	11 09.20	0.3
	0.6s	55.00nm				5.5mb					SKS	13	15.00			0.9s		50.00nm		
MHC	53.54	312	ePd	01	05.20		0.2				S	14	17.00		KKN	139.72	30	PKP	11 10.00	0.2
GCC	53.69	311	ePd	01	05.70		-0.2	FBA	77.43	335	ePd	03	37.20	0.2		0.8s		29.00nm		
SES	53.77	331	ePd	01	06.00		-0.3	PMR	77.45	332	ePd	03	37.30	0.2	NJ2	139.74	344	ePKP	11 10.50	1.1
	1.2s	511.00nm				6.2mb	X		0.8s	68.50nm			5.4mb		DMN	139.78	31	PKP	11 10.00	0.0
			pP	01	43.00	161km		ENN	77.77	40	eP	03	38.50	-0.6		0.8s		18.00nm		
BKS	54.18	312	ePd	01	09.60		0.1		0.9s	19.00nm			4.8mb		PKI	139.97	30	PKP	11 10.40	0 0
	1.0s	274.00nm				6.0mb					e	03	45.00			1.0s		26.00nm		
BRK	54.20	312	ePd	01	09.60		0.0				e	03	55.00		WHN	142.20	350	ePKP	11 08.50	-5.4X
ORV	54.30	315	iPd	01	10.20		-0.2				e	04	20.50					PP	14 16.50	
MIN	54.70	315	ePd	01	12.10		-1.3	MEM	77.81	40	P	03	34.60	-4.7X	CD2	142.38	5	PKP	11 15.00	0.7
NWRM	54.87	313	P	01	14.40		-0.1	LPG	78.02	45	eP	03	40.50	-0.5	GBA	144.34	55	PKPd	11 12.40	-5.5X
LBFM	55.31	316	P	01	17.20		-0.6		1.0s	4.80nm			4.2mb			0.9s		13.30nm		
WDC	55.44	315	iPd	01	15.80		-2.8	WIT	78.38	38	eP	03	41.00	-1.4	QIS	145.57	243	iPKPd	11 19.70	-0.2
			eScP	05	59.00						e	03	45.00			0.6s		57.00nm		
DPW	56.07	325	P	01	22.60		-0.4	WTS	78.41	38	eP	03	43.00	0.4				e	12 16.00	
			pP	01	59.00	157km			0.9s	30.00nm			5.0mb					e	14 44.00	
FHC	56.54	315	iPd	01	26.70		0.2				e	03	48.50		KOD	146.08	60	ePKP	11 23.00	1.7
EDM	56.69	332	iPc	01	25.80		-1.5				e	04	23.50		GYA	146.94	1	iPKPc	11 23.00	0.9
	0.6s	97	00nm			5.9mb					e	04	28 00		KMI	148 00	7	ePKP	11 25.00	1.0
FRB	56.93	2	ePd	01	27	20	-1.5				e	05	20.00		FORR	148 95	217	ePKP	11 26 00	1 0
	0.8s	58	00nm			5 5mb		KDC	78 66	327	ePd	03	43.60	-0.2	WRA	150 41	241	PKPd	11 27.90	0.4
PNT	57.62	326	iP	01	34	00	0.1	ABH	78 76	41	eP	03	44.22	-0.4		0.7s		8.20nm		
	0.9s	187.00nm				6.0mb		IMA	80.03	336	ePd	03	51.70	0.4	WB5	150.41	241	ePKP	11 29.50	2.0
LON	57.64	322	P	01	33.60		-0.5		0.9s	32.60nm			5.1mb		WARB	153.11	222	ePKP	11 21.00	-10.3X
			pP	02	10.40	157km		TTA	80 79	333	ePd	03	55.00	-0.2				e	11 27.00	
BMW	58.38	321	P	01	38.60		-0.7	NB2	81.30	29	P	03	58.30	0.5	CHG	153.34	17	ePKP	11 33.20	1.4
GMW	58.60	323	P	01	39.60		-1.1		0.9s	19.70nm			4.8mb			1.1s		15.19nm		
			pP	02	17.00	160km		NRA0	81.45	30	P	03	59.80	1.2	MTN	155.47	254	ePKP	11 37.00	2.3
MCW	59.15	324	P	01	43.40		-1.1	BRW	81.59	341	ePd	03	59.70	0.6		S.D. = 0.9		on 218 of 238 obs.		
PGC	59.50	324	eP	01	46.00		-0.8	CLL	82.25	39	e(P)	04	03.00	0.1	----------					
	0.9s	81.00nm				5.6mb					e	04	44.00		? JUN 15, 1989 16h 54m 56.25± 3.52s					
YKC	63.26	340	iPd	02	10.80		-1.0	HFS	82.51	30	eP	04	04.10	0.0	51.038 N ±51.9km 177.898 E ±12.3km					
	0.8s	130.00nm				5.9mb			0.7s	7.10nm			4.5mb		DEPTH = 33.0km (normal)					
YKA	63.32	340	eP	02	12.00		-0.1	KBA	82.59	43	iPc	04	05.70	0.6	4.4mb (2 obs.)					
TIC	67.48	86	Pc	02	38.04		-1.5		1.0s	12.70nm			4.6mb		RAT ISLANDS, ALEUTIAN ISLANDS (6)					
	0.9s	51.00nm				5.3mb		KHC	82.68	41	iPc	04	06.00	0.7						
LIC	67.50	86	Pc	02	38.34		-1.4		1.0s	7.00nm			4 4mb		SMY	2.90	307	eP	55 43.00	1.9
	0.8s	65.00nm				5.5mb					e	06	47.00		ADK	3 49	74	eP	55 51 00	1.5
KIC	67.77	86	Pc	02	40.08		-1.4				Sg	15	44.60		TTA	18.38	40	eP	59 10 50	0.6
	0.9s	108.50nm				5.7mb		BRG	82.86	40	iP	04	06.60	0.5	IMA	20.85	33	eP	59 36 50	-0.9
TOL	69.55	50	eP	02	49.00		-2.9X		0.8s	10.00nm			4 7mb		MBC	34 70	22	eP	01 44.00	-0.4

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SOD     59.95 348 eP     05 00.00  -1.0
SUF     64.41 346 eP     05 30.00  -0.8
        0.3s      1.20nm          4.5mb
NB2     67.77 353 P      05 51.20  -1.1
        0.9s      2.30nm          4.3mb
     S.D. = 1.4  on   8 of   8 obs.
-----------------------------------------
*  JUN 15, 1989  16h 59m 41.01± 1.57s
   33.943 N ±15.1km   26.302 E ±10.3km
   DEPTH =  10.0km  (geophysicist)
 EASTERN MEDITERRANEAN SEA          (371)
      MD 3.9 (ATH).

NPS     1.43 337 ePb    00 06.90  -0.2
KAP     1.76  24 ePb    00 12.50   0.8
VAM     2.27 311 ePb    00 19.20   0.1
YER     3.57  26 ePn    00 36.50  -1.1
ELL     4.06  45 iPn    00 45.10   0.4
BCK     4.95  44 ePn    00 51.00  -6.2X
HRI     7.90  92 e(P)   01 33.00  -5.8X
DSI     8.00 105 eP     01 40.00  -0.1
                eS      33 08.00
     S.D. = 0.8  on   6 of   8 obs.
-----------------------------------------
*  JUN 15, 1989  18h 14m 26.97± 1.76s
   33.053 S ± 8.4km  117.627 E ±17.9km
   DEPTH =  10.0km  (geophysicist)
 WESTERN AUSTRALIA                  (590)

NWAO    0.35 291 iPc    14 34.70   0.4
                eS      14 40.00
RKG     1.14 207 eP     14 48.30   0.0
                iS      15 03.50
MUN     1.61 311 iPd    14 54.50  -1.0
                iS      15 16.50
BAL     2.56 342 eP     15 10.00   0.8
                eS      15 43.00
MRWA    4.07 339 eP     15 30.30  -0.3
                eS      16 20.00
     S.D. = 1.0  on   5 of   5 obs.
-----------------------------------------
   JUN 15, 1989  19h 32m 45.63± 0.30s
    6.824 N ± 5.1km   82.309 W ± 4.4km
   DEPTH =  10.0km  (geophysicist)
   4.9mb ( 24 obs.)  4.9Msz (  2 obs.)
 SOUTH OF PANAMA                    ( 83)
      Ms 5.1 (BRK).
      CENTROID, MOMENT TENSOR       (HRV)
      Data Used: GDSN
      L.P.B.: 15S, 29C
      Centroid Location:
      Origin Time        19:32:53.7 0.4
      Lat  6.78N 0.04 Lon  82.29W 0.05
      Dep  15.0 FIX Half-duration  2.3
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.34 0.07  Mtt= 0.24 0.07
        Mff= 0.11 0.10  Mrt= 0.67 0.19
        Mrf= 0.53 0.26  Mtf= 2.12 0.07
       Principal Axes:
        T  Val=  2.54  Plg=16  Azm=316
        N       -0.59      73       124
        P       -1.95       3       225
      Best Double Couple:Mo=2.3*10**17
       NP1:Strike=  0 Dip=76 Slip= 171
       NP2:         92       81        14

DVD     1.61 355 iPc    33 13 40  -0 7
                (S)     33 33.00
ACR     2.00 335 iPd    33 40.80  20.9X
BUS     3.07 332 iPc    33 34.50  -1.0
JCR     3.11 345 iPc    33 47.00  11.3X
LIO     3.24 347 iPd    33 38.00   0.5
LCR2    3.35 330 iPd    33 38.50  -0.8
ICR     3.48 334 iPd    33 40.80  -0.5
UPA     3.49  52 iPd    33 42.10   1.1
                (S)     34 23.00
VCR     3.53 338 iP     33 55.30  13.6X
SJS     3.54 331 iPd    33 41.60  -0.4
                S       34 21.10
VPS2    3.85 330 iPc    33 45.60  -0.9
PSO     7.48 138 eP     34 36.00  -1.9
CAYA    7.97 147 eP     34 36.30  -8.5X
RECU    8.30 153 eP     34 47.80  -1.7
BOG     8.49 104 eP     34 55.00   3.1X
                eS      36 28.00
BMG     9.17  88 eP     35 03.00   1.9
SDV    11.75  79 eP     35 27.00  -9.5X

TPX    12.64 310 eP     35 47.50  -0.9
TOV    12.73  76 eP     35 52.20   2.6
CAR    15.64  75 eP     36 27.00  -0.9
                eS      39 26.00
OLLA   15.66  77 iPc    36 27.50  -0.7
LLAV   15.75  76 eP     36 29.00  -0.3
IISM   19.00 311 eP     37 12.10   2.1
NNA    19.46 164 iPc    37 14.20  -1.5
IIT    19.73 309 eP     37 23.20   4.3X
III    20.28 306 eP     37 26.80   2.2
CRX    21.01 308 eP     37 35.50   3.2X
NEV    21.84  60 eP     37 42.00   1.7
MGH    21.97  62 eP     37 42.00   0.4
BBL    22.17  65 eP     37 44.00   0.4
PAG    22.17  64 eP     37 44.00   0.3
FDF    22.21  68 eP     37 44.50   0.5
       0.8s      1.10nm          3.4mb X
MRX    22.36 307 eP     37 49.00   3.5X
BPA    22.42  61 eP     37 46.00  -0.1
DEG    22.83  64 eP     37 47.00  -3.2X
ARE    25.49 155 iP     38 17.70   1.5
ZOBO   26.90 149 P      38 28.90  -0.6
       1.2s     27.03nm          4.8mb
     Z 24s      4.15um          4.9MszX
                S       43 20.00
                LR      46 24.00
LPB    27.13 149 eP     38 32.00   0.5
     Z 24s      4.65um          5.0MszX
                S       43 20.00
                LR      47 28.00
JSC    27.34   2 P      38 32.60  -0.1
CNCB   27.43 149 P      38 24.00 -10.3X
PWLA   28.52 350 eP     38 42.70  -0.7
TKL    28.73 358 eP     38 45.10  -0.2
GBTN   28.76 357 eP     38 45.70   0.1
OLY    29.76 345 eP     38 53.40  -1.2
BLA    30.30   3 P      38 59.60   0.2
       0.6s     13.96nm          5.0mb
VVO    30.95 338 eP     39 06.40   1.3
ELC    30.97 349 eP     39 03.70  -1.5
CVL    31.21   6 iP     39 07.90   0.6
RLO    31.44 340 eP     39 07.50  -1.9
TUL    31.48 339 eP     39 07.80  -2.0
       1.0s      9.30nm          4.6mb
     Z 22s      2.22um          4.8Msz
                eS      44 23.00
                LR      47 53.00
LNO    31.48 339 eP     39 07.40  -2.2
MEO    31.61 334 eP     39 08.80  -2.2
       0.9s     13.00nm          4.8mb
ATB    31.67 108 e(P)   39 03.80  -7.8X
FVM    31.88 348 P      39 12.50  -0.8
       0.7s     22.45nm          5.2mb
ALQ    35.74 325 iPc    39 47.50   0.6
       1.1s     30.06nm          5.1mb
                e       39 53.00
                e       39 57.00
                eS      45 30.00
                eLg     50 16.00
RSNY   38.19   9 P      40 06.00  -1.1
       0.8s     15.49nm          4.8mb
GLD    38.71 331 P      40 12.00   0.2
       1.0s     45.00nm          5.1mb
GOL    38.74 331 P      40 12.30   0.1
GAC    39.18   8 eP     40 16.00   0.6
PV10   39 64 326 P      40 20.00   0.3
PV09   39.78 326 P      40 21.00   0.1
GLA    39.89 315 eP     40 23.00   1.5
BAO    40.66 124 e(P)   40 24.00  -4.1X
BAR    41.00 313 eP     40 32.00   1.4
PLM    41.49 314 eP     40 36.00   1.2
MSU    41.52 324 P      40 36.60   1.5
CBM    41.78  15 P      40 37.00   0.2
RVR    42.19 315 eP     40 42.00   1.7
DAU    42.29 327 P      40 42.60   1.1
GSC    42.50 317 eP     40 45.00   2.0
MWC    42.79 315 eP     40 47.00   1.5
SBB    42.87 315 eP     40 47.00   1.0
CLC    43.32 317 eP     40 50.00   0.4
ISA    43.84 316 eP     40 56.00   2.2
SYP    44.31 314 eP     41 02.00   4.2X
TNP    44.35 320 P      40 59.30   1.2
RSON   44.91 350 iP     41 00.70  -1.5
FRI    45.39 317 e(P)   41 15 90   9.7X
KVN    45.47 320 P      41 07 80   0.7
VAO    45.53 132 eP     41 05.60  -2.0
PRS    46.19 315 eP     41 11.40  -1.2

CMB    46.40 318 eP     41 14.60   0.4
ITR    46.40 109 e(P)   41 20.00   5.5X
LRM    46.77 331 eP     41 17.90   0.6
ARN    46.82 316 P      41 18.00   0.4
MHC    46.89 316 eP     41 19.10   0.9
ORV    47.94 319 eP     41 26.80   0.4
WDC    49.16 319 e(P)   41 33.80  -2.0
SCH    49.46  12 eP     41 37.00  -0.8
SES    49.61 336 eP     41 38.00  -1.1
FFC    50.31 345 eP     41 43.00  -1.4
       0.9s     15.00nm          4.9mb
DPW    51.03 329 P      41 49.50  -0.5
LON    52.22 326 P      41 58.80  -0.3
PNT    52.69 330 ePc    42 02.00  -0.5
       1.1s     55.00nm          5.4mb
EDM    52.71 337 iP     42 01.00  -1.6
       0.9s     28.00nm          5.2mb
GMW    53.24 327 P      42 05.60  -0.9
FRB    57.68   7 eP     42 36.00  -2.3
YKA    60.38 343 eP     43 04.70   7.6X
INK    70.07 342 eP     43 59.00  -0.5
TOA    71.95 334 eP     44 11.50   0.4
MBC    72.29 351 ePc    44 12.00  -0.8
       0.8s     13.00nm          5.1mb
PMR    73.11 333 eP     44 17.80   0.0
FBA    73.59 336 P      44 20.00  -0.6
       1.0s     12.50nm          4.9mb
SVW    76.02 331 eP     44 34.00  -0.7
IMA    76.28 337 eP     44 36.20   0.0
       0.8s      5.40nm          4.7mb
AAPN   76.51  53 eP     44 44.50   6.5X
ALOJ   76.52  54 eP     44 45.00   6.9X
TTA    76.56 333 eP     44 37.30  -0.5
TOL    76.65  51 eP     44 47.50   8.8X
                eS      54 35.00
                eSS     59 35.00
ASMO   76.81  53 eP     44 41.50   1.8
APHE   76.84  54 eP     44 48.00   8.0X
DAG    77.48  12 eP     44 41.00  -1.5
EKA    78.25  35 P      44 54.00   6.9X
       1.3s     10.60nm          4.8mb
LPF    79.12  42 eP     44 52.60   0.6
       1.0s      8.00nm          4.7mb
GRR    79.26  42 eP     44 53.80   1.0
       1.2s     14.20nm          4.9mb
FLN    79.52  42 eP     44 55.00   0.8
       0.8s      8.00nm          4.8mb
MFF    79.70  44 eP     44 55.70   0.5
       1.2s     14.20nm          4.8mb
LDF    79.75  42 eP     44 56.00   0.5
       1.2s     11.90nm          4.8mb
EPF    80.01  48 eP     44 56.80  -0.3
       1.4s     21.70nm          4.9mb
LFF    80.30  46 eP     44 57.60  -0.9
NB2    85.79  29 P      45 26.30  -0.1
       1.3s     17.20nm          5.1mb
MOX    87.26  39 e(P)   45 40.00   6.3X
     Z 25s      0.80um          5.0MszX
                e       56 10.00
                eSg     09 58.00
CLL    88.04  39 eP     45 38.00   0.6
       1.4s     14.00nm          5.1mb
                eSg     09 37.00
BRG    88.70  39 e(P)   45 45.00   4.4X
                eSg     09 10.10
KHC    88.73  41 P      45 47 60   6 7X
       1.0s      4.50nm          4.7mb
PRU    89.22  40 eP     45 46.00   2.9X
     Z 22s      0.70um          5.0Msz
     E 22s      0.60um
                e       45 54.50
SUF    92.30  26 eP     45 57.50   0.4
WB5   142.13 246 ePKP    52 23.20   2.3
WRA   142.14 246 PKP     52 20.00  -0.9
       0.9s      2.80nm
MTN   146.54 257 ePKP    52 32.00   3.6X
     S.D. = 1.2  on 103 of 130 obs.
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%  JUN 15, 1989  19h 39m 39.23± 2.80s
   15.944 N ±10.5km   60.966 W ±23.3km
   DEPTH =  23.6 ± 14.2 km
 LEEWARD ISLANDS                    ( 92)
      ML 2.1 (FDF).

DEG     0.38 346 iPc    39 47.27  -0 1
                S       39 54.20
SFG     0.38 324 eP     39 47.57   0.^
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15d 19h

BBL 0.65 230 eP 39 51.85 0.0
S 40 00 60
SEG 0.69 311 eP 39 52.48 0.0
PAG 0.69 277 eP 39 52 50 -0.1
S 40 01 50
BPA 1.39 322 eP 40 03 30 0.0
S.D. = 0.2 on 6 of 6 obs.

% JUN 15, 1989 20h 01m 05 57± 0.58s
60.720 N ± 4.7km 5.524 E ± 5.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.6 (BER).

ASK 0.29 214 iPg 01 11.53 -0.1
eSg 01 15.46
BER 0.35 196 eP 01 12.40 -0.4
eSg 01 17.00
SUE 0.50 313 iP 01 15.92 0.2
eS 01 22.78
HYA 0.55 36 eP 01 16.27 -0.5
eS 01 23.70
ODD1 0.98 145 eP 01 23.84 -0.4
eS 01 36.15
BLS1 1.49 153 iP 01 32.65 0.2
eS 01 50.99
KMY 1.52 185 eP 01 33.15 0.4
eS 01 52.27
NRA0 2.96 87 ePn 01 53.90 0.5
iPg 01 57.00
iSg 02 35.10
S.D. = 0.5 on 8 of 8 obs.

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* JUN 15, 1989 20h 08m 50.31± 0.95s
23.504 N ±20.4km 94.989 E ±11.8km
DEPTH = 33.0km (normal)
BURMA-INDIA BORDER REGION (294)

SHL 3.50 307 iP 09 46.50 2.6
iS 10 32.00
CHG 5.95 141 ePn 10 18.90 0.4
ePg 10 43.80
eSg 12 10.10
KMI 7.25 76 ePg 10 36.50 -0.4
Sg 11 54.00
GUN 9.31 300 P 11 06.60 0.9
0.6s 19.00nm 5.5mb
PKI 9.55 297 P 11 08.20 -0.8
0.6s 13.00nm 5.3mb
KKN 9.74 298 P 11 10.40 -1.1
0.5s 13.00nm 5.4mb
DMN 9.81 297 P 11 12.00 -0.5
0.6s 10.00nm 5.2mb
GKN 10.35 298 P 11 18.60 -1.2
0.0s 10.00nm
S.D. = 1.5 on 8 of 8 obs.

JUN 15, 1989 21h 15m 28.38± 1.27s
34.727 N ± 7.6km 101.442 E ± 6.9km
DEPTH = 18.4 ± 10.9 km
4.7mb (16 obs.) 4.3Msz (1 obs.)
QINGHAI PROVINCE, CHINA (325)

LZH 2.39 55 Pn 16 09.00 1.6
Pg 16 11.00
Sn 16 43 00
Sg 16 48.00
CD2 4.28 152 Pn 16 37.40 3.3X
Pg 16 50.00
GTA 4.85 345 Pn 16 43.00 0 7
Pg 16 54.80
Sg 17 56.60
XAN 6.22 94 Pn 16 59.40 -2.2
Pg 17 19.50
Sg 18 46.50
BTO 8.97 47 eP 17 38.00 -2.1
N 14s 1.70um
E 11s 1.10um
TIY 9.37 68 eP 17 41.00 -4.5X
Z 12s 1.45um
GYA 9.39 150 P 17 47.80 2.0
KMI 9.64 173 Pc 17 46.00 -3.4X
E 12s 1.30um
eS 19 42 00
LSA 10.05 243 P 17 55.20 -0 1
HHC 10.07 50 Pc 17 51.30 -3 9X
WHN 11.65 107 eP 18 14.50 -2 2
eS 20 18.00
BJI 12.86 61 eP 18 30.00 -2.8
Z 16s 1.76um
WMQ 13.98 315 P 18 44.50 -3.2X
Z 12s 1.40um
S 21 16.00
GUN 14.93 247 P 18 58.90 -1.6
0.7s 57.00nm 5.1mb
KKN 15.45 248 P 19 04.70 -2.4
0.7s 24.00nm 4.6mb
PKI 15.46 247 P 19 05.50 -1.9
0.7s 23.00nm 4.6mb
DMN 15.67 248 P 19 08.10 -2.0
0.9s 41.00nm 4.6mb
GKN 15.83 250 P 19 10.40 -1.7
CHG 16.00 189 eP 19 15.70 1.5
CN2 20.62 57 eP 20 04.00 -5.1X
Z 12s 0.90um 4.4MszX
eS 23 55.00
HY8 26.73 236 ePd 21 09.00 0.3
GBA 30.22 232 Pc 21 39.20 -0.9
0.7s 2.60nm 4.2mb
SOD 52.67 332 iP 24 41.70 -1.6
SUF 53.16 326 iP 24 46.10 -0.8
0.6s 3.30nm 4.5mb
NUR 54.13 324 eP 24 54.00 -0.1
HFS 59.53 325 eP 25 30.90 -1.6
0.7s 6.40nm 4.9mb
Z 18s 0.19um 4.3Msz
LR 05 05.00
NB2 60.41 326 P 25 36.30 -2.4
0.6s 4.10nm 4.7mb
PRU 62.49 313 eP 25 53.50 0.7
e 57 35.00
eSg 57 41.50
BRG 62.51 314 iP 25 53.40 0.5
1.0s 10.00nm 4.9mb
WB5 62.68 145 eP 25 53.00 -1.3
GRF 64.59 314 e(P) 26 08.00 1.4
0.9s 14.00nm 5.1mb
LPG 69.16 311 eP 26 37.20 1.2
0.8s 9.40nm 5.0mb
INK 69.48 19 eP 26 35.00 -2.1
EKA 69.71 324 Pc 26 38.90 0.1
1 4s 6.50nm 4.6mb
SMF 70.37 314 eP 26 43.20 0.2
1.0s 10.00nm 4.9mb
AVF 70.59 314 eP 26 44.90 0.6
0.8s 4.00nm 4.6mb
MAF 71.34 314 eP 26 48.80 -0.1
1.0s 6.00nm 4.7mb
TCF 71.52 314 eP 26 50.90 0.9
1.0s 4.00nm 4.5mb
S.D. = 1.5 on 32 of 38 obs.

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* JUN 15, 1989 21h 38m 48.76± 3.08s
34.293 N ±29.1km 26.730 E ± 9.1km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.8 (ATH).

KAP 1.31 16 ePb 39 13.80 0.9
NPS 1.33 317 ePb 39 12.70 -0.7
VAM 2.36 299 ePn 39 28.70 0.6
YER 3.10 24 eP 39 38.10 -0.6
ELL 3.57 46 iP 39 46.10 0.7
BCK 4.45 44 eP 39 57.00 -0.9
S.D. = 1.0 on 6 of 6 obs.

& JUN 15, 1989 22h 00m 56.78s
58.674 N 142.927 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

PCA 1.98 43 iP 01 25.43 -5.3
eS 01 46.70
PNL 2.07 60 eP 01 27.13 -4.9
eS 01 51.36
BCPM 2.12 51 eP 01 27.73 -5.0
eS 01 51.75
HON 2.23 68 eP 01 29.42 -4.9
eS 01 56.60
BALM 2.39 7 eP 01 31.59 -5.1
eS 01 58.45
GLB 2.81 351 eP 01 37.54 -5.1
HYT 3.49 50 P 01 47.00 -5.3

7 obs. associated

% JUN 15, 1989 22h 22m 14.99± 2.73s
32.892 S ±23.2km 71.223 W ±12.7km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.20 114 iPc 22 22.20 0.4
iS 22 28 50
LCCH 0.65 206 iPd 22 27.50 -0.2
iS 22 37.90
SAN 0.73 140 iPd 22 29.00 0.1
iS 22 40.60
TACH 0.80 163 iP 22 29.30 -0.5
iS 22 41.80
FCH 0.90 119 iPd 22 30.90 -0.6
iS 22 44.50
PCH 0.94 141 iPd 22 32.00 0.1
iS 22 45.00
LNV 1.07 188 iPd 22 33.80 0.1
iS 22 48.50
CHCH 1.14 155 iP 22 35.40 0.6
iS 22 51.00
S.D. = 0.5 on 8 of 8 obs.

% JUN 15, 1989 22h 41m 33.95± 2.10s
61.217 N ±13.7km 3.532 E ±14.7km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 1.9 (BER).

SUE 0.62 105 iP 41 48.19 1.8
eS 41 55.63
OSG 0.79 204 eP 41 50.30 1.0
eS 41 59.60
ASK 1.10 131 eP 41 54.69 0.2
eS 42 07.42
BER 1.22 133 eP 41 58.70 2.1
eS 42 09.90
HYA 1.29 91 iP 41 57.88 0.1
eS 42 14.10
ODD1 2.01 129 eP 42 06.72 -1.6
eS 42 28.85
KMY 2.19 156 eP 42 09.27 -1 5
eS 42 31.90
MOL 2.34 53 eP 42 13.45 0.5
eS 42 39.90
BLS1 2.46 137 eP 42 13.91 -0.9
iS 42 40.09
NRA0 3.93 94 iPc 42 34.00 -1.6
eS 43 16.30
S.D. = 1.6 on 10 of 10 obs.

JUN 15, 1989 23h 07m 39.00± 1.02s
15.916 N ± 5.2km 60.959 W ±11.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

SFG 0.41 326 eP 07 48.00 0.7
S 07 56.50
DEG 0.41 346 ePc 07 47.62 0.3
S 07 55.00
BBL 0.63 232 ePd 07 52.70 0.9
S 08 03.00
PAG 0.70 279 ePd 07 52.44 -0 5
S 08 02 50
SEG 0.71 313 eP 07 52 00 -1 1
FDF 1.19 189 eP 08 00.86 -0.4
0.1s 0.40nm
S 08 17.40
MVM 1.36 177 eP 08 03.70 -0.2
S 08 22.30
BIM 1.40 184 eP 08 04.72 0.2
S 08 23.40
BPA 1.42 323 eP 07 59.75 -5.1X
S 08 15.50
S.D. = 0.8 on 8 of 9 obs.

& JUN 16, 1989 01h 33m 57.62s
61.421 N 152.041 W
DEPTH = 105.7km
3.5mb (1 obs.)
SOUTHERN ALASKA (2)
<AGS-P>.

SPU 0.24 182 iP 34 12.16 0.9

SKT	0.61	23	eP	34	14.74	-0.4
SUA	0 63	85	iP	34	15.06	-0.3
NKA	0.78	150	iP	34	17.45	0.9
PWA	1.06	76	eP	34	19.46	0.1
RED	1.07	200	iP	34	18.90	-0.7
			S	34	34.90	
SLKM	1.28	135	eP	34	20.97	-0.9
PME	1.46	80	eP	34	23.03	-1.0
GHO	1.53	75	eP	34	23.89	-1.1
KNK	1.72	89	eP	34	26.12	-1.3
SVW	1.76	261	iP	34	27.10	-0.8
			S	34	49.80	
SEW	1.83	135	eP	34	27.49	-1.2
OPT	1.87	199	eP	34	29.03	-0.2
			S	34	53.91	
CNPM	1.94	168	eP	34	28.86	-1.3
KTH	2.20	13	eP	34	33.13	-0.5
			S	34	58.86	
TTA	2.40	311	eP	34	35.70	-0.6
CDD	2.62	198	eP	34	38.53	-0.7
VZW	2.68	95	eP	34	38.09	-1.9
MCK	2.73	30	iP	34	40.23	-0.4
TOA	2.87	74	iP	34	41.85	-0.7
			S	35	17.03	
KLU	2.94	86	eP	34	41.23	-2.3
PAX	3.45	60	eP	34	49.41	-1.0
WRH	3.55	29	eP	34	50.44	-1.3
HDA	3.79	36	eP	34	53.43	-1.6
GLB	3.95	86	iP	34	57.03	-0.3
			S	35	39.73	
BALM	4.70	90	eP	35	06.14	-1.5
IMA	4.72	352	eP	35	06.63	-1.3
INK	10.43	41	eP	36	24.00	-1.4
MBC	18.53	24	eP	38	06.00	-2.0
	0.7s		2.00nm			3.5mb
	29 obs. associated					

JUN 16, 1989 02h 12m 53.41± 0.33s
10.379 S ± 5.9km 119.530 E ± 7.9km
DEPTH = 33.0km (normal)
5.1mb (14 obs.)
SUMBA ISLAND REGION (287)

KHKI	4.36	297	eP	14	00.30	1.3
			eS	14	53.60	
			e	21	20.00	
PCI	9.42	2	ePd	15	16.00	6.1X
			eS	15	48.20	
KNA	10.46	122	eP	15	22.50	-1.7
MBL	10.72	178	eP	15	23.60	-4.2X
	0.4s		28.00nm			5.8mb
			eS	17	14.00	
MTN	11.63	103	iPd	15	39.70	-0.4
			eS	17	43.00	
NANU	12.71	197	iPd	15	51.00	-3.6X
			eS	18	02.00	
MEKA	16.18	183	eP	16	37.60	-2.4
	0.5s		27.00nm			4.6mb
			eS	19	22.00	
KKM	16.65	348	eP	16	49.50	3.5X
WARB	17.10	158	eP	16	37.70	-13.9X
			e	20	51.00	
WB5	17.14	125	iPc	16	50.80	-1.4
			eS	19	55.30	
MRWA	19.03	190	eP	17	15 00	-0.5
			eS	20	36 00	
ASPA	19 04	136	iPc	17	16 60	1 0
	1.4s		131.00nm			5.0mb
Z	23s		0.77um			3.5Msz
			eS	20	38.20	
			LR	24	08.50	
BAL	20.30	187	eP	17	29.00	-0.3
COOL	20.46	176	eP	17	30.00	-1.0
KLB	21.17	184	eP	17	38.00	-0.3
MUN	21.71	188	eP	17	44.00	0.3
QIS	21.81	120	iPc	17	46.10	1.3
	0.9s		91.00nm			5.2mb
FORR	21.87	160	eP	17	45.80	0.6
NWAO	22.54	185	eP	17	53.00	1.1
RKG	23.69	185	eP	18	10.00	6.9X
CTA	27.49	114	iPd	18	41.40	2.4
	1.0s		20.00nm			4.7mb
			i	21	59.20	
NST	32.23	323	eP	19	22.00	0.9
LOE	32.74	327	eP	19	24.00	-1.5
CHG	35.41	325	iPd	19	48.90	0.3
	1.0s		14.50nm			4.9mb
BRS	35.56	123	iPd	19	54.20	4 4X
			i	20	00.60	
GYA	38.69	341	P	20	17.00	0.8
KMI	38.90	335	eP	20	21.50	3.4X
			pP	20	29.00	25kmX
WHN	40.99	353	eP	20	36.00	1.1
NJ2	42.19	359	eP	20	46.50	1.7
CD2	43.76	340	eP	20	57.60	-0.1
XAN	45.31	348	eP	21	09.80	-0.3
GBA	48.09	299	Pd	21	31.60	-0.6
	0.6s		8.10nm			4.9mb
TIY	48.30	352	eP	21	33.00	-0.6
			eS	28	27.00	
LSA	48.33	326	P	21	35.40	1.0
HYB	49.01	304	eP	21	38.00	-1.4
GUN	50.10	320	P	21	47.10	-0.9
	0.7s		19.00nm			5.2mb
PKI	50.16	320	P	21	47.30	-1.1
	0.6s		10.00nm			5.0mb
BJI	50.26	357	eP	21	48.00	-0.5
			PcP	23	09.00	
DMN	50.38	319	P	21	49.00	-1.0
	0.7s		21.00nm			5.3mb
KKN	50.40	320	P	21	49.10	-1.0
	0.9s		24.00nm			5.2mb
GKN	50.95	319	P	21	53.10	-1.1
	0.8s		24.00nm			5.2mb
BTO	51.48	351	eP	21	57.00	-0.9
SNY	52.08	4	eP	22	00.80	-1.5
GTA	52.82	341	P	22	08.20	0.1
WMQ	61.22	334	P	23	07.00	-0.5
QUE	64.65	310	eP	23	29.60	-1.1
MAIO	73.05	313	iPc	24	23.00	0.6
NAI	82.62	270	iPd	25	19.50	3.7X
	1.0s		6.00nm			4.6mb
PTZ	85.76	256	iP	25	34.00	2.6
	1.4s		25.60nm			5.3mb
			i	25	50.00	
PRY	87.19	243	eP	25	41.50	3.2X
BFS	87.80	243	e(P)	25	39.50	-1.7
LSZ	88.59	255	iP	25	47.00	1.9
			i	26	03.50	
MZZ	88.66	259	iP	25	48.30	2.8
SUF	100.69	332	iPdiff	26	53.80	14.4X
	0.6s		2.10nm			
INK	105.83	22	ePdiff	26	48.00	-14.1X
MBC	107.18	12	ePdiff	26	54.50	-13.5X
	0.8s		3.00nm			
FFC	124.97	28	ePKP	31	54.00	2.4
	1.3s		21.00nm			
MEO	137.63	49	ePKP	32	10.30	-6.2X
	1.0s		4.80nm			
TUL	139.13	46	ePKP	32	23.20	4.1X
	1.1s		6.90nm			
LNO	139.13	46	e(PKP)	32	22.60	3.6X
GBTN	146.85	37	ePKP	32	36.60	4.1X
TBR	147.04	19	iPKP	32	37.30	4.7X
			i	32	44.70	
PNJ	147.28	19	iPKP	32	38.00	5.1X
GMTN	147.29	19	iPKP	32	38.90	5.9X
NAV	147.52	31	ePKP	32	38.30	4.8X
BLA	147.79	31	ePKP	32	39.40	5.4X
PRM	149.04	37	ePKP	32	43.20	7.2X
ITR	150.97	230	ePKP	32	49.30	9.8X
			e	32	56.30	
BAO	151.35	206	ePKP	32	43.50	3.4X
CNCB	151.98	165	ePKP	32	45.00	3.4X
			i	32	52.00	
LPB	152.22	164	PKP	32	49.50	7.8X
			i	32	53.00	
ZOBO	152.46	164	PKP	32	47.00	4.7X
	1.1s		17.98nm			
			i	32	52.60	
	S.D. = 1.3 on 44 of 72 obs.					

JUN 16, 1989 04h 15m 40.16± 0.72s
44.826 N ± 6.8km 9.040 E ± 5.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (GEN). MD 2.2 (ROM).

BOB	0.30	101	Pc	15	46.40	0.0
			eSg	15	52.40	
CKI	0.68	234	P	15	53 70	0.1
			eSg	16	03 70	
FIN	0.86	224	P	15	56 69	0.0
			S	16	06 69	
ROB	0.99	238	P	15	59.70	0.7
			S	16	10.79	
ORX	1.10	318	P	16	01.11	0.2
			S	16	13.74	
IMI	1.23	222	P	16	02.58	-0.6
			S	16	15.92	
ENR	1.30	243	P	16	03.97	-0.4
			S	16	18.48	
RSP	1.31	285	P	16	03.67	-0.7
			S	16	18.10	
DOI	1.32	256	Pc	16	05.30	0.7
			eSg	16	20.50	
STV	1.36	245	P	16	04.78	-0.4
			S	16	20.15	
	S.D. = 0.6 on 10 of 10 obs.					

JUN 16, 1989 04h 19m 45.25± 0.49s
52.407 N ± 8.8km 159.572 E ± 8.9km
DEPTH = 33.0km (normal)
4.9mb (28 obs.) 4.2Msz (2 obs.)
OFF EAST COAST OF KAMCHATKA (219)

ASAJ	13.97	240	eP	23	03.10	0.2
			eS	23	08.10	
NIIJ	20.93	232	P	24	17.90	-9.4X
KAKJ	21.22	228	P	24	30.90	0.6
CHJJ	21.90	230	P	24	37.70	0.7
MTMJ	22.03	233	P	24	44.00	5.5X
IIDJ	22.87	231	P	24	48.70	2.0
TSRJ	23.76	234	P	24	56.90	1.6
CN2	24.17	263	Pd	24	57.50	-1.7
INK	34.61	37	eP	26	32.00	-0.7
MBC	37.80	23	eP	27	00.00	0.5
	0.4s		2.00nm			4.3mb
LZH	42.02	270	eP	27	34.00	-1.1
GTA	42.37	277	eP	27	34.40	-3.5X
ALE	43.64	7	eP	27	49.00	1.4
	0.6s		13.00nm			4.9mb
WMQ	46.90	290	P	28	13.50	-0.6
Z	16s		0.60um			4.6MszX
GYA	47.04	258	P	28	14.20	-1.2
DAG	51.09	360	iPd	28	45.80	-0.1
	0.9s		12.60nm			4.9mb
KEV	53.37	341	eP	29	03.00	0.0
SOD	55.44	340	iP	29	17.60	-0.6
CHG	57.45	258	iPc	29	33.00	-0.2
	0.9s		18.70nm			5.1mb
FRB	58.26	23	eP	29	37.00	-1.3
GUN	58.65	276	P	29	40.00	-1.9
KKN	59.10	276	P	29	43.30	-1.6
	0.5s		26.00nm			5.6mb
PKI	59.18	276	P	29	44.40	-1.2
	0.8s		9.00nm			5.0mb
DMN	59.34	276	P	29	45.20	-1.4
	0.7s		31.00nm			5.5mb
GKN	59.34	277	P	29	45.00	-1.5
	0.9s		25.00nm			5.3mb
SUF	59.51	337	iP	29	46.50	-0.5
	0.6s		22.30nm			5.5mb
NUR	61.79	337	iP	30	01.50	-1.0
	0.6s		15.60nm			5.3mb
Z	20s		0.20um			4.3Msz
			LR	00	40.00	
UPP	63.97	340	iPc	30	16.20	-0.7
NB2	64.11	344	P	30	17.10	-0.8
	0 6s		11.70nm			5.2mb
HFS	64.51	342	eP	30	19 70	-0 7
	0.6s		21.00nm			5.4mb
SNG	65.70	249	eP	30	29.90	1.3
SCH	66.43	27	eP	30	32.00	-0.9
IPM	67.58	247	ePd	30	41.00	0.4
	0.9s		24.30nm			5.3mb
MEO	69.80	59	iP	30	53.00	-1.1
	0.4s		1.70nm			4.5mb
LNO	70.38	56	eP	30	56.40	-1.1
TUL	70.38	57	eP	30	56.50	-1.1
	0.7s		5.20nm			4.7mb
Z	20s		0.12um			4.1Msz
RLO	70.57	56	e(P)	30	57.70	-1.1
KSP	72.55	337	eP	31	10.50	0.1
CLL	72.88	339	eP	31	12.00	-0.3
	1.2s		19.00nm			5.0mb
BRG	73.08	338	e(P)	31	13.50	0.1
DMU	73.47	352	eP	31	13.70	-2 0
WTS	73.48	343	eP	31	17.00	1.3
	0.8s		7.00nm			4.7mb
PRU	73.76	337	P	31	18.20	0 8

16d 04h

DLE 74.04 351 eP 31 19 10 0.1
VRI 74.08 328 ePd 31 19.50 0.2
GBA 74 56 272 Pd 31 21.70 -0 8
0.7s 12.30nm 5.0mb
MLR 74.67 328 ePd 31 23.00 0.1
KHC 74.79 338 Pc 31 24.10 0.6
1.0s 7.00nm 4.6mb
ZST 74.79 335 eP 31 24.50 1.1
ENN 74.82 343 eP 31 24.00 0.5
0.9s 7.00nm 4.7mb
SRO 74.83 334 iP 31 24.20 0.6
MEM 74.95 343 P 31 25.40 1.1
DOU 75.70 344 Pc 31 30.10 1.5
KBA 76.77 337 iPc 31 36.00 1.1
0.8s 17.60nm 5.1mb
i 31 52.90
PTJ 77.21 335 eP 31 37.50 0.3
HAU 77.39 342 eP 31 38.40 0.3
LOR 78.55 343 eP 31 44.80 0.3
1.0s 8.00nm 4.7mb
SSF 78.82 344 eP 31 46.20 0.3
1.0s 6.00nm 4.6mb
AVF 79.10 344 eP 31 47.90 0.4
1.0s 10.00nm 4.8mb
SMF 79.16 343 eP 31 48.40 0.6
0.8s 5.30nm 4.6mb
LPG 79.72 341 eP 31 52 50 1.3
0.8s 9.40nm 4.8mb
TCF 79.79 344 eP 31 52.10 0.9
0.8s 2.60nm 4.3mb
MAF 79.79 344 eP 31 52.20 1.0
0.6s 2.70nm 4.4mb
CAF 81.13 344 eP 31 59.90 1.5
LFF 81.34 345 eP 32 00.70 1.3
LPO 81.51 345 eP 32 00.70 0.4
HRI 81.62 315 e(P) 32 00.00 -1.2
EPF 83.26 345 eP 32 10.40 0.9
PRNI 84.45 314 iP 32 16.00 0.3
MBH 84.99 314 iPd 32 19.00 0.7
S D. = 1.0 on 67 of 70 obs.

& JUN 16, 1989 07h 00m 47.50s
34 830 N 121.010 W
DEPTH = 6.0km (geophysicist)
OFF COAST OF CALIFORNIA (38)
<PAS-P>. ML 3.3 (PAS).

BLP 0.57 118 iPc 00 58.20 -0.7
SYP 0.90 109 ePc 01 03.30 -2.0
PHAM 1.12 26 eP 01 06.70 -2.2
PRI 1.34 12 eP 01 10.20 -2.5
i 01 13.30
eS 01 31.90
PKEM 1.43 31 eP 01 15.50 1.5
PRS 1.53 349 eP 01 12.20 -3.1
i 01 16.50
LLA 1.78 2 eP 01 16.40 -2.7
SAO 1.96 350 eP 01 18.00 -3.7
eS 01 52.75
GCC 2.34 340 eP 01 23.30 -3.7
FRI 2.40 26 eP 01 25.00 -3.0
ARN 2.55 351 eP 01 26.90 -3.2
PCC 2.89 338 eP 01 31.20 -3.6
CMB 3.24 9 ePd 01 37.30 -2.6
PEC 3.32 105 eP 01 36.70 -4.4
PLM 3 74 112 eP 01 42 60 -4 7
TNP 4.46 42 eP 01 55 00 -2 4
KVN 4.81 28 eP 02 03.00 0 5
17 obs. associated

? JUN 16, 1989 07h 08m 28.49± 4.52s
44.342 N ±21.0km 6.667 E ±33.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)

STV 0.48 101 P 08 38.10 -0.2
S 08 46.18
ENR 0.55 102 P 08 38.69 -1.0
S 08 47.07
RRL 0.58 8 P 08 40.08 -0.4
S 08 49.12
ROB 0.86 93 P 08 46.30 1.1
S 08 59.89
RSP 0.91 27 P 08 46.43 0.4
S 09 00 15
IMI 0.98 116 P 08 47.82 0 7
S 09 02.33

FIN 1 11 96 P 08 49.07 -0 4
S D. = 0.9 on 7 of 7 obs

JUN 16, 1989 07h 18m 35.45± 0.38s
13.224 N ± 3.1km 145.154 E ± 3.7km
DEPTH = 67 5 ± 3.3 km
5.5mb (37 obs.)
MARIANA ISLANDS (216)
Felt (IV) on Guam.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 20C
Centroid Location:
Origin Time 07:18:36.3 0.7
Lat 12.89N 0.08 Lon 145.34E 0.07
Dep 55.9 9.6 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 3.63 0.35 Mtt= 2.15 0.62
Mff=-5.78 0.62 Mrt= 3.26 0.84
Mrf= 6.01 0.98 Mtf= 0.23 0.55
Principal Axes:
T Val= 8.11 Plg=55 Azm=321
N 0 73 21 199
P -8.84 27 98
Best Double Couple:Mo=8.5*10**16
NP1:Strike=147 Dip=26 Slip= 36
NP2: 24 75 112

GUA 0.39 323 iPd 18 47.30 0.1
e(S) 19 07.80
GUMO 0.46 322 eP 18 47.40 -0.4
PJG 0.46 322 iPd 18 47.40 -0.4
RAB 18.65 158 iP- 22 50.00 -0.6
iS 25 32.00
LAT 19.83 175 eP 23 03.00 -0.6
DAV 20.21 254 eP 23 09.50 2.1
KAGJ 22.18 326 eP 23 28.30 1.1
LMG 22.19 172 eP 23 25.50 -2.1
PMG 22.57 175 eP 23 29.00 -2.2
WKYJ 22.63 339 P 23 32.10 0.4
TKSJ 23.00 336 P 23 36.50 1.3
IIDJ 23.10 345 P 23 37.10 0.8
KUMJ 23.27 328 P 23 39.20 1.4
MNI 23.27 241 ePc 23 41.00 3.0X
KAKJ 23.32 350 P 23 36.90 -1.3
CHJJ 23.39 347 P 23 37.80 -1.2
TSRJ 23.71 341 P 23 41.50 -0.5
AAI 23.79 226 ePd 23 45.00 2.0
BAG 23.96 281 ePc 23 44.00 -0.9
1.1s 306.33nm 5.7mb
SHK 24.04 334 eP 23 45.30 0.0
YONJ 24.29 336 P 23 48.60 0.9
SHNJ 24.41 331 eP 23 48.00 -0.8
NIIJ 24.54 348 P 23 48.40 -1.7
YAMJ 25.26 351 eP 23 57.70 0.8
OFUJ 25.94 354 eP 24 04.50 1.4
OZH 27.62 299 eP 24 16.00 -2.6
SSE 28.34 313 Pd 24 23.20 -1.8
1.6s 0.02nm 1.5mb X
Z 20s 1.10um 4.5Msz
E 14s 0.40um
sS 29 32.00
KKM 29.39 259 eP 24 36.00 1.2
MTN 29.40 209 eP 24 34.00 -0.7
e 24 37.00
NJ2 30 53 312 Pc 24 44 40 -0 2
Z 24s 1 00um 4.4MszX
PcP 27 43.20
CTA 33.12 178 iPd 25 06.70 -0.6
1.3s 86.54nm 5.4mb
WHN 33.22 306 Pd 25 08.00 -0.2
PcP 27 50.00
MDJ 33.99 340 eP 25 14.70 0.0
Z 24s 1.60um 4.7MszX
QIS 34.01 189 iPd 25 14.00 -1.0
TIA 34.02 317 eP 25 13.90 -1.1
SNY 34.12 331 eP 25 15.00 -0.8
QIZ 34.37 284 eP 25 19.50 1.3
E 20s 1.80um
WB5 34.57 198 eP 25 19.20 -0.6
eS 31 36.10
CN2 34.86 335 eP 25 21.00 -1.1
PP 26 36.00
PcP 27 53 60
eS 30 48 00
KHKI 36.35 235 ePc 25 35.60 0.6
e 28 35.00

BJI 36.90 322 Pc 25 39.00 -0 4
Z 29s 1.45um 4.6MszX
ePcP 28 01.00
eS 31 24.00
TIY 37.98 316 eP 25 47.80 -0.8
Z 20s 2.30um 5.0Msz
E 15s 1.00um
sP 26 13.00
PP 27 20.00
S 31 34.50
ASPA 38.28 197 eP 25 50.80 -0.4
0.7s 14.00nm 5.0mb
Z 22s 1.33um 4.7MszX
iS 32 02.30
LR 40 52.90
GYA 38.37 296 iPc 25 53.00 0.9
XAN 38.84 308 P 25 54.70 -1.1
RMO 39.63 175 iPd 26 02.00 -0.3
e 26 14.70
HHC 40.23 319 Pc 26 07.60 0.3
4.0s 0.30nm 2.5mb X
Z 30s 1.70um 4.7MszX
E 16s 0.40um
pP 26 19.00 41kmX
PcP 28 10.00
S 32 15.00
BRS 41.04 170 iPc 26 14 00 0.1
BTO 41.08 318 P 26 14.00 -0.3
Z 20s 1.70um 4.9Msz
N 18s 1.30um
E 20s 1.10um
KMI 41.61 293 Pc 26 19.50 0.6
CD2 41.92 302 eP 26 20.70 -0.5
LOE 42.02 281 iPc 26 22.00 -0.1
MBL 42.26 216 iPc 26 25.30 1.3
0.5s 20.00nm 5.2mb
KGM 42.86 259 ePd 26 30.00 1.0
WARB 43.11 205 eP 26 21.00 -9.9X
LZH 43.46 309 eP 26 33.50 -0.4
2.5s 0.12nm 2.3mb X
Z 25s 1.00um 4.6MszX
PcP 28 21.50
NST 43.61 279 iPc 26 32.00 -3.0X
COO 44.03 172 eP 26 38.00 -0.3
SNG 44.19 267 eP 26 41.50 1.7
0.9s 75.63nm 5.5mb
e 28 25.50
NNT 44.23 275 iPc 26 41.00 0.9
CMS 44.46 179 eP 26 41.00 -0.6
BDT 44.63 281 eP 26 44.10 0.8
CHG 44.67 283 iPd 26 44.00 0.4
0.9s 12.60nm 4.7mb
STK 44.98 184 iPc 26 45.40 -0.4
VUN 45.20 133 ePd 26 46.40 -1.4
SMY 45.68 24 iPc 26 51.00 -0.1
NANU 45.91 220 eP 26 54.40 1.1
0.5s 17.00nm 5.2mb
FORR 46.79 200 eP 27 01.80 1.7
GTA 47.62 312 iPc 27 06.40 -0.5
Z 20s 1.30um 4.9Msz
PcP 28 36.40
S 33 58.20
ADE 48.31 187 eP 27 11.70 -0.3
CAN 48.41 176 iPc 27 13.00 0.2
ADK 49.23 30 iPc 27 18.10 -0.8
1 7s 629.60nm 6.4mb
BFD 50 19 183 iPc 27 26 60 0 3
TOO 50.52 180 iPc 27 30.30 1.4
LSA 52.41 297 P 27 44.00 0.0
GUN 56.90 295 P 28 15.70 -0.8
PKI 57.30 294 P 28 17.90 -1.4
KKN 57.42 295 P 28 18.70 -1.3
0.7s 35.00nm 5.6mb
DMN 57.57 294 P 28 20.10 -1.0
WMQ 57.59 314 P 28 20.00 -0.8
Z 28s 1.20um 4.9MszX
PcP 29 13.00
S 36 16.00
GKN 58.00 295 P 28 22.80 -1.2
KRP 58.32 152 Pc 28 26.00 0.3
1.0s 162.00nm 6.1mb
SDN 59.28 33 eP 28 30.40 -1.8
TCW 60.49 155 P 28 39.70 -0.9
MNG 60.50 154 P 28 38.70 -2.0
0.6s 28.00nm 5 6mb
MRW 60.68 155 P 28 40.30 -1.6
CAW 60.73 154 P 28 40.50 -1.8

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WEL    60.75 155 eP    28 40.00   -2.4
WDW    60.83 155 P     28 41.10   -1.8
MSZ    61.22 162 P     28 45.00   -0.5
KDC    64.27  32 eP    29 04.30   -1.3
TTA    64.36  26 iPc   29 04.80   -1.5
NDI    64.54 296 eP    29 06.50   -1.4
GBA    65.66 279 Pd    29 13.30   -1.9
       0.7s     18.30nm          5.1mb
KSH    65.68 307 eP    29 18.00    2.8
IMA    66.48  23 eP    29 18.40   -1.5
       1.2s     52.80nm          5.4mb
PMR    66.97  28 iPc   29 21.00   -1.8
       0.8s    188.40nm          6.1mb
POO    68.41 285 iPc   29 32.30   -0.4
FBA    68.44  25 eP    29 29.60   -2.4
TOA    68.46  28 iPc   29 31.70   -0.6
QUE    73.38 298 eP    30 03.00    0.4
INK    74.60  22 iPc   30 06.90   -1.8
       1.2s     88.00nm          5.6mb
                pP      30 22.00   54kmX
MBC    78.56  14 ePc   30 29.60   -1.1
       0.7s     22.00nm          5.2mb
MAIO   78.84 305 eP    30 34.00    0.9
       1.0s     20.00nm          5.0mb
                eSn     40 24.00
PGC    81.12  42 eP    30 45.00    0.2
FHC    82.13  50 eP    30 52.00    1.6
YKA    83.05  27 eP    30 55.10    0.5
YKC    83.12  27 iPc   30 54.70   -0.3
       0.6s     40.00nm          5.6mb
WDC    83.26  50 iPc   30 57.10    1.0
PNT    83.47  41 ePc   30 57.00   -0.1
       0.8s     57.00nm          5.6mb
ALE    83.58   3 eP    30 57.00    0.0
       0.7s     17.00nm          5.2mb
LTCM   83.64  50 P     30 59.00    0.9
MIN    84.00  50 ePc   31 00.30    0.2
PCC    84.00  53 eP    31 00.60    0.6
BRK    84.02  53 eP    31 00.90    0.9
ORV    84.25  51 ePc   31 01.40    0.2
GCC    84.40  53 eP    31 02.70    0.7
MHC    84.61  53 ePc   31 04.20    1.0
DPW    84.71  42 P     31 03.50    0.1
PRS    85.04  54 eP    31 06.30    1.1
LLA    85.32  54 eP    31 07.50    0.9
CMB    85.43  52 iPc   31 07.90    0.7
PRI    85.64  54 eP    31 09.60    1.2
IR2    85.81 305 iPc   31 10.00    0.8
IR4    85.90 305 iPc   31 10.80    1.1
IR7    86.03 306 iPc   31 11.30    1.0
IR1    86.03 305 iPc   31 11.50    1.1
IR5    86.16 305 iP    31 11.90    0.9
FRI    86.20  53 iPc   31 11.30    0.4
EDM    86.28  36 iPc   31 11.10    0.0
       1.0s    175.00nm          6.1mb
BCH    86.32  55 P     31 12.80    1.1
KVN    86.93  51 P     31 15.00    0.3
KEV    86.95 342 iP    31 14.00    0.0
       0.5s     42.10nm          5.9mb
ISA    87.48  54 eP    31 18.00    0.7
TNP    87.84  52 P     31 19.80    0.6
       0.6s     12.50nm          5.2mb
PAS    88.10  56 eP    31 21.00    0.8
CLC    88.13  54 eP    31 21.00    0.6
MWC    88.17  55 eP    31 22.00    1.2
SBB    88.24  55 eP    31 21 00    0.0
SOD    88.30 340 iP    31 29.80    9.3X
SES    88.51  38 ePc   31 21.70   -0.2
       0.9s     64.00nm          5.8mb
RVR    88.78  55 eP    31 24.00    0.5
GSC    88.89  54 eP    31 26.20    2.1
LRM    89.07  43 iPc   31 25.20    0.3
PLM    89.36  56 eP    31 27.00    0.5
DAG    89.68 356 iPc   31 24.80   -2.0
       0.9s     15.97nm          5.3mb
BAR    89.69  57 eP    31 28.00    0.2
SUF    90.91 336 iP    31 31.50   -1.3
       0.9s    101.10nm          6.2mb
GLA    91.08  56 eP    31 35.00    0.8
BHD    91.62 305 ePd   31 36.00   -0.6
MSL    91.68 308 ePd   31 35.50   -1.3
FFC    91.97  32 iPc   31 37.60   -0.2
       1.2s    110.00nm          6.2mb
NUR    92.70 335 eP    31 40.00   -1.0
       0 7s     34.70nm          5.9mb
    Z  20s      0.50um          5.0Msz
                 LR     18 50.00

PV09   93.79  49 P     31 47.50    0.6
PV10   93.90  49 P     31 47.90    0.5
KVT    95.29 314 iP    31 53.60    0.1
GOL    96.08  47 P     31 58.00    0.6
       0.6s      5.97nm          5.3mb
GLD    96.16  47 P     31 58.10    0.4
       0.9s     42.11nm          6.0mb
ALQ    97.05  52 eP    32 02.80    1.0
       0.7s      3.25nm          5.0mb
                  e     32 10.00
                  e     32 22.00
                  e     36 06.00
HFS    97.23 338 eP    31 59.70   -2.1
       0.5s      9.50nm          5.6mb
    Z  18s      0.26um          4.8Msz
                 LR     16 31.00
NB2    97.49 339 P     32 01.40   -1.6
       0.7s     22.30nm          5.8mb
NRA0   97.59 339 iP    32 02.10   -1.3
RSON   98.24  33 iP    32 05.90   -0.6
VRI    99.28 321 ePd   32 11.00   -0.4
MLR    99.95 321 ePd   32 14.00   -0.6
PRNI  100.13 304 iPdiff32 15.00   -0.6
MBH   100.43 304 iPdiff32 17.00    0.1
MEO   103.04  49 ePdiff32 29.70    1.3
       1.4s     11.00nm          5.4mb
BRG   103.33 331 ePdiff32 28.50   -0.8
       1.1s     12.00nm          5.6mb
CLL   103.49 331 ePdiff32 29.00   -0.9
       1.5s     17.00nm          5.6mb
SKO   104.57 320 ePdiff32 34.00   -1.0
EKA   106.68 342 Pdiffd32 44.00    0.0
       0.8s      4.60nm          5.6mb
LPG   110.53 330 ePKP  37 03.00    0.7
       0.8s      8.00nm
SSF   110.87 333 ePKP  37 03.90    1.4
       1.0s      6.00nm
FLN   111.19 336 ePKP  37 03.60    0.5
       0.6s      3.60nm
CVF   111.52 327 ePKP  37 04.00    0.1
       0.8s     16.10nm
GRR   111.64 336 ePKP  37 04.60    0.7
       0.8s      5.30nm
FRF   111.97 329 ePKP  37 05.10    0.4
       0.8s      6.40nm
LPF   112.00 336 ePKP  37 05.00    0.4
       0.8s     10.70nm
LRG   112.20 329 ePKP  37 05.70    0.6
       0.8s      5.30nm
LMR   112.21 329 ePKP  37 05.70    0.6
       0.8s      8.00nm
MFF   112.79 335 ePKP  37 06.30    0.1
       1.0s      8.00nm
LFF   113.73 333 ePKP  37 08.60    0.5
       0.8s      5.30nm
LPO   113.74 333 ePKP  37 09.00    0.9
       0.8s      5.30nm
EPF   115.41 332 ePKP  37 12.80    1.4
       0.8s      6.70nm
PTZ   115.90 260 iPKP  37 15.40    2.2
MZZ   117.82 264 iPKPc 37 19.20    2.3
                  i     37 29.00
GUD   119.32 334 iPKPd 37 20.60    1.5
SLR   119.68 248 iPKPd 37 20.50    0.3
       1.2s     50.00nm
SEK   120.27 245 ePKP  37 22.00    0 7
KSR   120.93 248 iPKPd 37 23.40    0 8
       0.8s      9.38nm
BFS   121.03 246 iPKPc 37 18.00   -4.7X
       0.7s     61.64nm
KMZ   121.10 262 iPKP  37 24.20    1.1
       1.0s      9.40nm
FRS   122.24 243 iPKPd 37 26.20    1.5
       1.0s     40.00nm
BNG   124.16 285 iPKPc 37 30.00    1.0
       0.6s     19.00nm
                 id     37 51.00
CER   127.00 238 iPKPc 37 42.80    8.9X
       0.4s      5.45nm
KOGH  140.64 297 ePKP  37 53.00   -7.1X
KUK   140.70 297 ePKP  37 53.00   -7.2X
KIC   144.32 301 PKP   38 05.40   -1.1
       0.7s    157.50nm
TIC   144.40 302 PKP   38 05.54   -1 1
       0.6s    137.00nm
ARE   144.46 100 ePKP  38 06.00   -1 0
LIC   144 64 301 PKP   38 06.34   -0 6

       0.7s    257.50nm
ZOBO  147.70 100 PKP   38 14.20    1.5
       1.5s     94.09nm
    Z  24s      0.29um          5.0MszX
                 LR     27 16.00
LPB   147.72 100 PKP   38 15.00    2.5
CNCB  147.82 101 PKP   38 14.00    1.2
ATB   160.19  62 PKPc  38 30.40    1.4
VAO   164.93 132 ePKP  38 31.30   -2.2
                  e     38 34.70
      S.D. = 1.1  on 199 of 207 obs.
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&  JUN  16, 1989  08h 38m 43.50s
   37.037 N          121.477 W
   DEPTH =   7.0km
 CENTRAL CALIFORNIA                 ( 39)
      <BRK>. ML 2.8 (BRK).

SAO    0.27 175 iPc   38 49.43    0.3
                iS    38 54.10
ARN    0.31 352 iP    38 50.00    0.1
MHC    0.33 337 iPc   38 50.25    0.0
                eS    38 55.50
GCC    0.42 269 iPc   38 51.50   -0.4
                iS    38 57.40
LLA    0.60 134 iPc   38 54.90   -0.6
PRS    0.71 173 eP    38 56.90   -0.8
PCC    0.86 303 ePc   38 59.20   -1.1
                iS    39 14.50
BKS    1.03 324 iPc   39 02.35   -0.9
                eS    39 17.05
BRK    1.04 323 eP    39 02.40   -1.0
PRI    1.11 144 eP    39 04.60    0.0
CMB    1.32  41 iPd   39 07.30   -0.9
                eS    39 24.90
FRI    1.42  91 eP    39 08.40   -1.3
                eS    39 25.40
BCH    2.17 148 eP    39 18.30   -2.3
KVN    3.34  52 eP    39 36.20   -1.2
      14 obs. associated
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%  JUN  16, 1989  09h 09m 49.94± 1.72s
   41.681 N ±18.3km   13.694 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN ITALY                     (390)
      MD 2.6 (ROM).

SDI    0.09  75 Pc    09 52.50   -0.1
                eSg   09 55.70
AZI    0.36 328 Pd    09 56.10   -1.3
                eSg   10 01.30
RDP    0.74 276 P     10 04.00   -0.4
                eSg   10 14.00
MNS    1.03 313 P     10 10.50    1.0
ASS    1.59 331 P     10 19.00    0.8
                eSn   10 37.50
      S.D. = 1.3  on   5 of   5 obs.
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*  JUN  16, 1989  09h 26m 30.81± 2.57s
   44.310 N ±15.0km    8.189 E ±16.5km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                     (545)
      ML 2.1 (GEN).

FIN    0.10 172 P     26 33.41   -0.2
                S     26 36.58
ROB    0.23 266 P     26 35.35   -0.4
                S     26 39.97
IMI    0.45 208 P     26 40.28    0.2
                S     26 48.17
ENR    0.56 262 P     26 41.61   -0.5
                S     26 49.81
STV    0.62 264 P     26 43.97    0.5
                S     26 52.68
DOI    0.70 286 P     26 45.00    0.2
                eSg   26 56.50
      S.D. = 0.5  on   6 of   6 obs.
-------------------------------------
&  JUN  16, 1989  09h 27m 42.53s
   63.544 N          151.269 W
   DEPTH =  17.6km
 CENTRAL ALASKA                     (  1)
      <AGS-P>. ML 3.7 (PMR).

KTH    0.16  87 iP    27 46.47   -0.5
MCK    1.06  79 eP    28 02.06    0.0
NEA    1.42  42 eP    28 07.50    0
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16d 09h

SKT	1.57	184	iP	28	09.60	-0.1
			S	28	29.22	
WRH	1.68	55	eP	28	11.17	-0.1
RDS	1.88	45	eP	28	14.14	0.0
CCB	1.88	52	iP	28	13.97	-0.2
PWA	2.01	161	iPc	28	15.60	-0.4
FBA	2.04	47	iPc	28	16.40	-0.1
			i	28	21.00	
GHO	2.08	148	eP	28	16.24	-0.9
HDA	2.09	64	eP	28	16.73	-0.5
SUA	2.10	173	eP	28	16.68	-0.8
PME	2.18	151	eP	28	18.30	-0.2
PMR	2.20	152	iPc	28	18.30	-0.4
GLM	2.23	48	eP	28	18.99	-0.3
TTA	2.23	256	eP	28	18.00	-1.3
			ic	28	22.90	
SPU	2.40	189	eP	28	21.02	-0.6
KNK	2.51	147	eP	28	23.10	-0.1
IMA	2.74	339	eP	28	27.90	1.4
TOA	2.75	119	iPc	28	27.60	0.9
SVW	3.18	222	e(P)	28	33.90	1.2
KLU	3.22	127	eP	28	33.81	0.4
DWY	5.27	79	P	29	04.00	1.7
INK	8.66	49	eP	29	48.00	-1.8

24 obs. ossocioted

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* JUN 16, 1989 09h 55m 46.01± 2.57s
44.233 N ±27.2km 7.434 E ±10.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.5 (ROM).

DOI	0.30	333	P	55	52 30	-0.1
			eSg	55	56.90	
FOUF	0.55	303	e(Pg)	55	57.07	-0.2
			e(Sg)	56	04.45	
CKI	0.64	72	P	55	58.10	-0.7
			eSg	56	06.80	
BNI	0.98	327	P	56	04.90	0.1
			eSg	56	19.50	
BOB	1.54	69	P	56	14.30	0.7
			eSg	56	33.60	

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

JUN 16, 1989 10h 27m 56.32± 0.48s
36.907 N ± 5.1km 5.240 W ± 6.8km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.7 (MDD). MD 3.5 (TAF).
Felt (III) in the
Algodonales-Ronda area, Spain.

EPRU	0.06	7	iPgd	27	59.30	0.7
LIJA	0.14	267	iP	27	58.00	-1.7
ALJ	0.37	232	iP	28	05.50	1.5
EJIF	0.49	202	iPgd	28	04.70	-1.6
GIBL	0.58	262	iP	28	09.00	1.0
SRQ	0.66	190	iP	28	08.00	-1.4
MOMI	0.70	214	iP	28	11.00	0.8
OJEN	0.84	197	iP	28	13.00	0.4
CNIL	0.84	231	iP	28	13.00	0.4
PLAT	0.89	208	iP	28	14.00	0.6
EHOR	0.91	360	iP	28	15.00	1.3
			eS	28	27.80	
EVAL	1.38	300	iPnd	28	21.40	-0.2
			iSn	28	39.20	
AFC	1.40	75	iPnd	28	23.90	1.0
			eSn	28	45.00	
EBAN	1.71	42	iPn	28	29.20	2.9
			eSn	28	50.70	
BMK	2.02	194	iPnc	28	32.50	1.7
			eSn	28	58.00	
			iSg	29	07.00	
ENIJ	2.42	88	ePn	28	39.60	3.0X
EVIA	2.77	51	ePn	28	42.60	0.9
			eSn	29	18.00	
TAF	3.10	131	iPn	28	46.00	-0.3
			iSn	29	26.00	
TOL	3.11	17	ePn	28	47.00	0.6
			ePg	28	57.50	
			eSn	29	22.50	
			iSb	29	34.00	
			iSg	29	40.00	
GUD	3.83	12	iP	28	57.10	0.4
	0.3s		0.04nm			
			eS	29	42.20	
AVE	4.02	207	ePn	28	57.50	-1.7
			iSn	29	44.00	
TIO	6.20	196	iPn	29	26.00	-4.2X
			iSn	30	35.50	
EPF	7.47	33	Pn	29	47.60	-0.3
			Sn	31	10.00	
			Sg	31	57.00	
LFF	9.21	28	Pn	30	10.00	-2.1
CAF	9.73	32	Pn	30	17.00	-2.3
MFF	10.41	20	Pn	30	26.00	-2.5
OHR	20.64	70	eP	32	37.50	-1.0

S.D. = 1.5 on 25 of 27 obs.

JUN 16, 1989 10h 35m 16.84± 0.62s
36.926 N ± 6.4km 5.291 W ± 6.9km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.0 (MDD).

EPRU	0.06	50	iPgd	35	18.30	-0.9
ALJ	0.36	225	iP	35	24.50	0.3
EJIF	0.49	197	iPg	35	24.10	-2.8X
GIBL	0.54	260	iP	35	27.50	-0.3
SRQ	0.67	186	iP	35	28.00	-2.2
MOMI	0.70	210	iP	35	36.00	5.4X
MAL	0.73	105	iP	35	39.30	8.1X
			iSg	40	10.80	
CNIL	0.83	228	iP	35	35.00	2.2
OJEN	0.85	194	iP	35	32.50	-0.7
PLAT	0.89	205	iP	35	35.00	1.1
EHOR	0.89	2	eP	35	34.00	0.1
			eS	35	48.00	
EVAL	1.33	300	ePn	35	40.10	-1.3
AFC	1.43	76	ePn	35	43.50	0.5
EBAN	1.72	44	ePn	35	48.50	1.5
			eSn	36	12.50	
EVIA	2.79	51	eP	36	02.20	-0.3
TOL	3.11	18	ePg	36	39.00	32.2X
			eSb	36	58.00	
			iSg	37	08.00	

S.D. = 1.4 on 12 of 16 obs.

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* JUN 16, 1989 10h 36m 59.64± 3.00s
20.713 S ±19.2km 174.428 W ±16.2km
DEPTH = 151.9 ± 25.9 km
4.4mb (4 obs.)
TONGA ISLANDS (173)

VUN	7.23	291	ePd	38	43.00	-0.9
SGE	7.87	292	iPd	38	53.30	0.7
DZM	17.87	262	iPd	41	01.10	1.0
ASPA	47.73	256	iPd	45	23.10	-0.1
	1.3s		23.00nm		4.7mb	
	Z 17s		0.41um		4.5MszX	
			LR	06	12.00	
WB5	47.87	262	eP	45	24.00	-0.3
WRA	47.88	261	Pd	45	23.70	-0.7
	0.8s		3.80nm		4.2mb	
SPA	69.41	180	e(P)	47	52.80	-0.1
	1.0s		6.50nm		4.4mb	
FRI	77.16	42	eP	48	37.60	-0.4
CMB	77.39	41	eP	48	39.00	-0.4
ORV	77.69	39	eP	48	40.50	-0.4
WDC	77.75	38	eP	48	41.50	0.3
ALQ	84.95	50	eP	49	19.50	0.3
	1.1s		6.33nm		4.4mb	
PNT	85.00	32	eP	49	19.00	0.1
SES	90.10	35	eP	49	44.00	0.7
HFS	140.20	354	(PKP)	55	59.90	-11.5X
	0.4s		0.80nm			
KSP	148.77	347	ePKP	56	32.50	6.3X
CLL	148.91	351	iPKPd	56	33.10	6.7X
	1.2s		21.00nm			
			e	56	45.00	
BRG	149.19	350	ePKP	56	33.50	6.7X
	1.2s		15.00nm			
			e	56	46.00	
SPC	149.26	341	ePKP	56	37.70	10.4X
MOX	149.75	352	ePKP	56	35.00	7.3X
			e	56	46.00	
PRU	149.93	348	PKP	56	35.50	7.5X
BBTK	149.94	315	iPKPd	56	37.00	8.5X
MLR	150.14	331	ePKPd	56	36.50	7.9X
			e	59	04.00	
MEM	150.16	359	PKP	56	31.30	3.1X
DOU	150.67	1	PKPd	56	37.40	8.4X
ABH	150.85	357	ePKP	56	37.45	8.1X
KHC	150.93	349	iPKPd	56	38.50	8.9X
	1.1s		12.50nm			
			e	56	46.30	
ZST	151.05	344	e(PKP)	56	39.70	10.0X
			e	56	48.00	
RUP	151.05	358	ePKP	56	38.62	8.9X
TOD	151.06	356	ePKP	56	38.20	8.5X
SRO	151.07	342	ePKP	56	44.30	14.6X
GRB2	151.09	352	ePKP	56	38.30	8.5X
	1.0s		15.00nm			
FLN	151.60	8	ePKP	56	38.60	8.1X
	1.1s		14.60nm			
LDF	151.81	8	ePKP	56	39.20	8.4X
	1.0s		8.00nm			
GRR	151.91	9	ePKP	56	39.60	8.6X
	1.0s		9.60nm			
LPF	152.23	10	ePKP	56	40.10	8.7X
	1.0s		16.00nm			
LOR	153.47	3	ePKP	56	43.30	10.1X
	1.2s		10.10nm			
SSF	153.66	3	ePKP	56	43.90	10.4X
	1.0s		4.00nm			
LBF	153.76	2	ePKP	56	43.90	10.2X
	0.8s		2.60nm			
LSF	154.31	6	ePKP	56	44.70	10.3X
	1.0s		6.00nm			

S.D. = 0.6 on 14 of 40 obs.

% JUN 16, 1989 10h 39m 47.49± 0.95s
36.831 N ± 8.1km 5.301 W ±13.1km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.6 (MDD).

EPRU	0.15	22	iP	39	49.80	-1.1
EJIF	0.40	200	eP	39	55.60	-0.1
EHOR	0.99	2	eP	40	06.30	0.1
			eS	40	18.80	
EVAL	1.38	304	eP	40	13.00	0.3
			eS	40	32.60	
EBAN	1.80	42	eP	40	19.60	0.9

S.D. = 1.0 on 5 of 5 obs.

& JUN 16, 1989 10h 51m 21.56s
57.755 N 153.992 W
DEPTH = 58.2km
5.8mb (81 obs.)
KODIAK ISLAND REGION (13)
<AGS-P>. Slight damage (V) at Kodiak and Larsen Bay. Felt (IV) at Akhiak, Karluk and Port Lions; (III) at Homer, Kenai and Ninilchik. Depth 51.1 kilometers from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=240 Dip=85 Slip= -65
NP2: 341 25 -168
Principal Axes:
T Plg=35 Azm=309
P 44 175
Comment: The focal mechanism is moderately well controlled and corresponds to normal faulting with a small left-lateral strike-slip component. The preferred fault plane is NP1
RADIATED ENERGY
No. of sto: 4 Focal mech. F
Energy 0.3±0.2*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 61 No. of sto: 17
Moment Tensor; Scale 10**17 Nm
Mrr=-1.50 Mtt=-0.51
Mff= 2.01 Mrt= 3.80
Mrf= 2.53 Mtf= 1.23
Principal axes:
T Val= 5.10 Plg=33 Azm=308
N -0.06 18 51
P -5.03 51 164
Best Double Couple:Mo=5.1*10**17
NP1:Strike=350 Dip=20 Slip=-152
NP2: 234 81 -72
CENTROID, MOMENT TENSOR (HRV)
Data Used GDSN
L.P.B.: 18S, 35C
Centroid Locotion:
Origin Time 10:51:24.3 0.3

Lat 57.70N 0.04 Lon 154.64W 0.05
Dep 72.8 4.1 Half-duration 2.6
Moment Tensor; Scale 10**17 Nm
Mrr=-0.25 0.07 Mtt=-1.64 0.12
Mff= 1.89 0.09 Mrt= 2.40 0.08
Mrf= 2.27 0.11 Mtf= 0.08 0.11
Principal Axes:
T Val= 3.72 Plg=37 Azm=290
N 0.05 28 44
P -3.78 40 161
Best Double Couple:Mo=3.8*10**17
NP1:Strike=319 Dip=28 Slip=-176
NP2: 225 88 -62

KDC	0.80	90	iPd	51	36.10	-1.0
CDD	1.19	9	iP	51	41.11	-1.2
SHU	1.23	44	eP	51	42.03	-0.8
AUL	1.66	10	eP	51	48.09	-0.6
OPT	1.94	11	iP	51	52.16	-0.6
CNPM	2.29	38	iP	51	56.22	-1.4
ILIM	2.39	12	iP	51	57.49	-1.6
BRLK	2.58	37	eP	51	59.93	-1.8
RED	2.75	13	iP	52	02.45	-1.7
NKA	3.31	24	eP	52	11.88	-0.2
SEW	3.33	43	iP	52	09.20	-3.1
SLKM	3.38	34	eP	52	10.13	-2.9
SVW	3.47	347	iPd	52	12.20	-2.1
SPU	3.58	15	iP	52	13.82	-2.0
CGLM	3.70	15	iP	52	15.75	-1.9
SUA	4.07	23	eP	52	20.51	-2.3
SDN	4.34	239	ePc	52	24.30	-2.1
MID	4.34	64	iPc	52	23.00	-3.5
SKT	4.42	15	eP	52	25.02	-2.6
PWA	4.43	26	ePd	52	24.90	-2.8
PMR	4.57	31	iP	52	26.00	-3.7
KNK	4.62	35	eP	52	26.82	-3.7
PME	4.63	31	eP	52	27.14	-3.3
GHO	4.77	30	eP	52	28.93	-3.8
VZW	5.04	46	eP	52	32.41	-4.0
TTA	5.29	350	ePd	52	36.90	-3.0
			ic	12	37.20	
KLU	5.55	44	iP	52	39.98	-3.6
TOA	5.87	39	ePd	52	44.60	-3.5
MCK	6.49	20	eP	52	53.07	-3.5
BALM	6.79	56	iP	52	56.88	-4.1
CTGM	7.22	58	iP	53	03.21	-3.8
YKU	7.66	70	eP	53	09.70	-3.1
COL	7.76	20	ePc	53	09.77	-4.5
FBA	7.76	20	eP	53	09.00	-5.3
IMA	8.35	1	iPc	53	18.60	-3.9
ANM	8.76	326	P	53	25.80	-2.2
HYT	8.98	63	P	53	27.00	-4.1
DWY	9.48	42	P	53	33.90	-4.0
SIT	10.10	86	iPc	53	40.10	-6.2
INK	13.98	33	eP	54	34.00	-3.9
ADK	14.30	255	eP	54	38.10	-4.1
SMY	18.76	268	eP	55	33.90	-4.2
YKA	19.94	60	eP	55	48.70	-2.3
YKC	20.01	60	iPd	55	48.50	-3.1
	0.9s	278.00nm			5.6mb	
PGC	20.28	103	eP	55	54.00	-0.4
	1.1s	294.00nm			5.5mb	
MCW	20.58	103	eP	55	57.50	-0.2
GMW	21.32	105	ePd	56	05.40	0.3
BMW	21.80	108	eP	56	10.40	0.4
RMW	21 88	104	iPc	56	11 50	0 6
PNT	21 90	98	iPd	56	11.20	0.3
	1.2s	685.00nm			5.9mb	
MBC	22.30	21	eP	56	10.50	-4.1
	1.0s	378.00nm			5.8mb	
LON	22.35	106	ePd	56	15.70	0 3
EDM	23.21	84	iPd	56	23.00	-0.7
	1.2s	793.00nm			6.0mb	
DPW	23.52	99	iPd	56	27.00	0.2
			ipP	56	41.20	60kmX
VGB	23.71	107	eP	56	30.00	1.4
FHC	25.59	118	ePd	56	47.90	1.3
SES	25.87	88	iPd	56	47.80	-1.4
	1.4s	546.00nm			5.9mb	
			pP	57	05.00	75kmX
WDC	26.45	117	iPd	56	55.20	0.7
			i	56	58.20	
			epP	57	12.10	73kmX
			eScP	03	50.40	
LTCM	26.94	117	iP	56	58.90	0 0
			epP	57	12.60	56kmX
MIN	27.08	116	iPd	57	00.60	0.2

			i	57	05.20	
			epP	57	14 70	58kmX
			ePcP	00	18.00	
			eScP	03	52.00	
ORV	27.75	117	iPd	57	05.80	-0.5
			eScP	03	54.20	
LRM	27.87	97	iPd	57	06.60	-1.0
FFC	28.48	74	iPd	57	10.60	-2.1
	0.7s	22.00nm			4.9mb	
BRK	28.73	120	ePd	57	15.20	0.1
BKS	28.74	120	ePd	57	15.40	0.2
	1.2s	281.00nm			5.8mb	
			epP	57	36.00	91kmX
			eLQ	04	52.00	
PCC	28.98	121	ePd	57	16.80	-0.5
MHC	29.45	120	iPd	57	21.70	-0.1
CMB	29.48	117	ePd	57	21.18	-0.8
			epPd	57	35.26	57kmX
			esPc	57	41.55	
GCC	29.54	121	eP	57	21.70	-0.7
KVN	29.79	113	iPc	57	24.50	-0.4
			ipP	57	38.00	53kmX
PTI	29.90	102	eP	57	25.90	0.1
SAO	30.01	120	eP	57	26.00	-0.6
LLA	30.36	120	iPd	57	30.00	0.3
			eScP	04	03.30	
PRS	30.40	121	iPd	57	30.00	0.0
			ePcP	00	26.30	
			eScP	04	03.30	
FRI	30.64	118	iPd	57	32.10	0.0
			epP	57	46.20	57kmX
			ePcP	00	27.00	
			eScP	04	03.80	
PRI	30.88	120	ePd	57	35.30	0.9
			eScP	04	05.80	
TNP	30.98	113	iPc	57	34.90	-0.5
			epP	57	49.00	57kmX
DUG	31.60	106	eP	57	39.50	-1.2
BCH	31.93	120	iPd	57	44.00	0.4
			epP	57	58.80	60kmX
DAU	32.25	104	eP	57	46.20	-0.4
ISA	32.30	118	eP	57	46.00	-0.7
SYP	32.52	121	eP	57	49.00	0.2
CLC	32.59	116	eP	57	49.00	-0.3
GSC	33.39	116	eP	57	56.00	-0.3
			e	58	10.00	
SBB	33.40	118	eP	57	56.00	-0.3
			e	58	10.00	
ALE	33.40	14	eP	57	52.00	-3.8
	0.9s	60.00nm			5.5mb	
			pP	58	35.00	208kmX
MWC	33.67	119	eP	57	58.00	-0.8
PAS	33.68	119	ePd	57	58.59	-0.1
			epPd	58	12.82	56kmX
			esPc	58	18.95	
			e	59	30.85	
RVR	34.18	118	eP	58	02.00	-1.0
			e	58	16.00	
PV09	34.77	104	iPc	58	07.70	-0.7
			ipP	58	22.30	58kmX
RSON	34.78	75	iPc	58	06.50	-1.5
PV10	34.91	104	iPc	58	09.10	-0.4
			ipP	58	24.00	59kmX
PLM	34.95	118	eP	58	10.00	0.2
CPE	35.23	119	eP	58	13.10	1.2
BAR	35.59	119	eP	58	15 00	-0.1
			e	58	29.00	
GOL	35.86	99	eP	58	17.00	-0.6
Z	20s	3.50um			5 1Msz	
IKP	35.88	118	eP	58	18.80	1.2
GLD	35.90	99	eP	58	17.70	-0.1
GLA	36.17	116	eP	58	20.00	0.1
			e	58	34.00	
HON	36.51	186	ePd	58	18.51	-4.3
			ePP	59	34.49	
ALQ	38.86	105	iPd	58	42.00	-0.7
	1.2s	62.50nm			5.4mb	
Z	18s	1.20um			4.8Msz	
			e	58	56.50	
			e	59	20.00	
			i	00	51.80	
			i	04	34.50	
			eLg	10	18.00	
FRB	39 20	45	ePd	58	42.90	-2.0
	0 8s	88.00nm			5.7mb	
KUSJ	40 25	276	P	58	48.80	-5.0
ASAJ	40.65	279	eP	58	54 10	-3.0

GDH	41.06	32	iPc	59	00.00	-0.1
	0.8s	29.85nm			5.1mb	
			i	59	06.00	
			i	59	17.00	
			i	05	08.00	
			i	08	30.00	
HOOJ	41.50	276	eP	58	56.90	-7.1
MRRJ	42.65	278	eP	59	08.90	-4.6
DAG	42.79	14	iPc	59	09.90	-4.4
	0.4s	63.56nm			5.7mb	
MEO	43.12	98	iPd	59	16.40	-1.1
	1.2s	293.10nm			5.9mb	
			e	59	31.10	
KBS	43.32	4	eP	59	16.40	-2.1
SIO	43.61	95	iPd	59	19.90	-1.5
LNO	43.76	94	iPd	59	20.50	-2.0
RLO	43.98	93	iPd	59	22.60	-1.8
VVO	44.22	94	iPd	59	25.00	-1.3
OFUJ	44.71	274	P	59	26.90	-3.3
FVM	45.10	87	iP	59	31.00	-2.3
SCH	45.29	54	eP	59	32.20	-2.5
YAMJ	46.24	275	eP	59	39.00	-3.4
ELC	46.25	87	iP	59	40.10	-2.3
OLY	46.38	91	iP	59	40.20	-3.3
LST	46.55	88	eP	59	42.40	-2.4
MDJ	47.09	289	ePc	59	44.51	-4.5
Z	24s	1.90um			5.0MszX	
			epPc	59	57.42	48kmX
			esP	00	02.00	
			ePP	01	34.00	
GAC	47.39	69	ePd	59	49.00	-2.3
NIIJ	47.48	275	iP+	59	48.80	-3.4
DHN	48.05	74	eP	59	54.50	-2.1
CHJJ	48.3B	274	iP+	59	55.80	-3.3
PTN	48.44	70	eP	59	56.90	-2.6
PWLA	48.60	88	iP	59	59.30	-1.5
RSNY	48.68	69	eP	59	58.40	-3.0
Z	20s	6.78um			5.6Msz	
SCP	49.69	75	ePd	00	06.73	-2.4
			esPc	00	28.25	
CN2	49.77	291	iPc	00	05.00	-4.7
	3.0s	0.50nm			3.0mb X	
Z	22s	2.30um			5.1Msz	
			pP	00	17.00	43kmX
			sP	00	22.00	
			PP	01	59.00	
			S	07	07.00	
			sS	07	28.00	
			SS	10	34.00	
CBM	50.12	63	eP	00	09.50	-2.9
GBTN	50.14	84	iP	00	10.30	-2.4
TSRJ	50.37	276	iP+	00	10.30	-4.1
TKL	50.38	84	iP	00	12.00	-2.5
NAV	50.72	80	iP	00	14.70	-2.4
BLA	51.00	80	iP	00	16.50	-2.7
CVL	51.45	78	iP	00	21.00	-1.6
PNJ	51.51	72	iP	00	21.10	-1.9
GMTN	51.52	72	iP	00	21.40	-1.6
WKYJ	51.58	275	P	00	19.60	-4.1
AGX	51.58	112	eP	00	23.80	0.1
HRV	51.65	69	ePd	00	22.38	-1.7
			eS	07	40.79	
			e	08	04.88	
NA2	51.72	77	iP	00	22.20	-2.4
YONJ	51.98	277	eP	00	21.80	-4.8
SNY	52.15	290	iPc	00	24 00	-3 8
Z	24s	2.00um			5.1MszX	
N	20s	1.50um				
E	23s	1.80um				
			S	07	40.00	
			ScS	10	10.00	
PRM	52.33	84	iP	00	26.60	-2.7
AKU	52.48	21	iP	00	24.30	-5.6
	0.8s	116.42nm			6.0mb	
TKSJ	52.58	276	eP	00	28.10	-3.0
JSC	52.77	83	iP	00	29.80	-2.7
KEV	52.79	360	ePc	00	26.07	-6.1
			epPc	00	39.64	50kmX
			eS	07	49.43	
			esS	08	13.27	
			e	10	10.88	
TRO	52.81	3	eP	00	28.90	-3.4
LHS	52.86	83	iP	00	30.70	-2 4
SHK	52.89	277	iPd	00	29.90	-3 6
	0.9s	117.65nm			5.9mb	
MRX	53.96	112	eP	00	40.80	-0 6
SGS	54.00	84	iP	00	39.20	-2.3

16d 11h

SHNJ 54 04 278 P 00 38 20 -3.6
HBF 54 27 84 iP 00 41 20 -2.3
IIC 54 88 110 iP 00 46 00 -2.6
CRX 54 97 111 eP 00 47.80 -1.4
SOD 55.19 360 iP 00 45 40 -4.4
KUMJ 55 41 277 P 00 48.20 -3.7
III 55 95 111 eP 00 52.80 -3.3
IIT 55 99 109 (P) 00 54.30 -2.1
KAGJ 56 43 276 P 00 55.30 -3.9
IISM 56 48 109 iP 00 58.60 -1.1
ACX 57 03 112 eP 00 48 20 -15.4
BJI 57.17 294 Pc 01 00 00 -4.4
4 0s 0.49nm 2.9mb X
Z 28s 1.20um 4.8MszX
pP 01 13.00 46kmX
eS 08 49.00
eScS 10 41.00
OXX 58.42 109 iPc 01 12.70 -0.9
HHC 58 77 298 iPc 01 12.30 -3.4
3.0s 1.00nm 3.4mb X
Z 22s 2.00um 5.2Msz
N 12s 0.80um
E 12s 0.60um
pP 01 27.00 54kmX
sP 01 32.00
S 09 13.00
RGS 58 96 8 iP 01 13.20 -3.3
TIA 59 67 290 P 01 17.20 -4.6
N 15s 0 70um
BTO 59 70 299 iPc 01 18.00 -4.1
Z 13s 1.20um 5.2MszX
N 13s 1.30um
E 15s 0.90um
pP 01 32.00 51kmX
S 09 23.50
sS 09 42.50
SUF 59.86 360 eP 01 17.70 -5.0
0 6s 65.30nm 5.9mb
TIY 60 81 295 iPc 01 25.80 -3.9
Z 16s 3.20um 5.6MszX
N 16s 1.80um
pP 01 40 00 51kmX
S 09 39 50
ScS 11 12.50
NB2 60 98 8 P 01 26.30 -4.2
0.8s 66.30nm 5.8mb
BER 61 09 12 iP 01 28.00 -3.1
SSE 61.62 284 iPc 01 30.20 -4.9
4.0s 1 10nm 3 3mb X
Z 20s 0 90um 4.9Msz
E 16s 1.00um
pP 01 43.60 48kmX
S 09 50.00
sS 10 16 00
HFS 62.05 7 eP 01 33.50 -4.1
0.7s 88.50nm 6.0mb
Z 19s 0.24um 4.4Msz
LR 20 53 00
NJ2 62 07 286 iPc 01 33.60 -4.5
4.0s 1.10nm 3.3mb X
Z 18s 1.50um 5.2Msz
N 15s 1.20um
E 15s 0.80um
pP 01 49.00 57kmX
sP 01 57 00
S 09 53 00
NUR 62 07 1 iP 01 33 90 -3.8
0.7s 126.80nm 6.2mb
Z 20s 0 90um 4.9Msz
eS 09 52 00
LR 25 40.00
GUA 63.36 252 eP 01 39.50 -7.3
0.7s 60.27nm 5.8mb
ELO 63.65 18 eP 01 45.10 -3.2
EDU 63.69 17 iPc 01 45.20 -3 3
1.0s 239 00nm 6.2mb
EAB 63 82 18 iPc 01 46.30 -3.0
EDI 64.26 18 eP 01 49.20 -3.0
0.7s 104.00nm 5.9mb
EAU 64.29 18 iPc 01 49.70 -2.7
0.7s 122.00nm 6.0mb
ESY 64 36 17 eP 01 49.90 -3.0
0.7s 53 00nm 5.6mb
EKA 64 83 18 Pc 01 53 10 -2.8
0 7s 85 10nm 5 9mb
ESK 64.84 18 ePc 01 53 40 -2.6
0.5s 114.00nm 6.1mb

GTA 65.30 305 iPc 01 55.00 -4.3
1.2s 0.10nm 2.7mb X
Z 18s 10.00um 6.1Msz
N 16s 2.80um
pP 02 09.50 52kmX
sP 02 17.00
S 10 32.00
ScS 11 45.00
XAN 65.45 295 iPc 01 56.00 -4.3
N 18s 2.30um
E 14s 0.80um
S 10 37.00
DMU 65.54 21 eP 01 58.50 -1.9
0.5s 53.00nm 5.8mb
WHN 65.58 289 iPc 01 57.00 -4.0
0.8s 1.50nm 4.0mb X
N 20s 1.89um
E 20s 2.59um
S 10 39.00
ANP 66.18 280 e(P) 02 12.00 7.0
DLE 66.19 21 eP 02 01.80 -2.8
LZH 66.20 300 ePc 02 01.36 -3.8
4.0s 0.81nm 3.1mb X
Z 20s 3.90um 5.6Msz
epPc 02 15.43 50kmX
esP 02 23.38
eS 10 42.00
eSKS 11 52.45
WMO 66.52 316 ePc 02 04.04 -3.0
1.5s 0.10nm 2.6mb X
Z 20s 2.80um 5.5Msz
epPc 02 18.11 50kmX
esPd 02 24.40
PP 04 27.40
iS 10 51.00
eSKS 11 56.35
VAL 66.72 23 iP 02 05.30 -2.6
ETA 66.81 21 iPc 02 06.20 -2.4
0.6s 110.00nm 6.0mb
YRH 66.97 20 iPc 02 06.60 -3.0
0.8s 67.00nm 5.7mb
ECP 67.27 21 iPc 02 09.10 -2.4
0.6s 90.00nm 5.9mb
WIT 68.67 12 iPc 02 19.30 -0.8
DBN 69.19 14 eP+ 02 22.00 -1.3
Z 20s 0.40um 4.7Msz
iS 11 27.00
e 12 40.00
WTS 69.49 13 iPc 02 23.10 -2.0
0.8s 182.00nm 6.1mb
i 02 47.60
UCC 70.36 14 iP+ 02 28.00 -2.5
CD2 70.51 297 iPc 02 28.40 -3.4
Z 19s 1.00um 5.1Msz
pP 02 43.70 55kmX
eS 11 34.60
ENN 70.59 13 iPc 02 29.70 -2.2
1 0s 179.00nm 6.0mb
i 02 53.30
SNF 70.63 15 iPc 02 30 05 -2.1
MEM 70.75 13 iPc 02 30.95 -1.9
CLL 70.78 9 iPc 02 30.10 -2.9
1.3s 150.00nm 5.8mb
epP 02 53.00 88kmX
eS 11 41.00
P'P' 30 21 00
DOU 71.08 14 Pc+ 02 32 80 -2 1
0.7s 124.40nm 5.9mb
S 11 44.00
ScS 12 34.00
SS 16 17.00
BRG 71.28 8 iPc 02 33.50 -2.6
1.1s 170.00nm 5.9mb
iS 11 48.00
eP'P' 30 23.00
MOX 71.32 10 iPc 02 34.40 -1.9
1.1s 277.00nm 6.1mb
Z 24s 0.90um 5.0MszX
N 22s 0.40um
i 02 46.00
eS 11 48.00
TNS 71.42 12 iPc 02 35.20 -1.8
id 02 56 20
id 03 03 00
KSP 71.47 6 iPc 02 35 00 -2.2
1.0s 172.00nm 5.9mb
FLN 71 61 18 iPc 02 35.90 -2.2

0 9s 39.30nm 5.3mb
ABH 71.65 12 ePc 02 36.29 -2.1
HOF 71.67 9 iPc 02 35.90 -2.6
0.8s 102.00nm 5.8mb
WLF 71.70 13 iPc 02 37.00 -1.6
RUP 71.77 13 ePc 02 36.98 -2.2
LDF 71.84 18 iPc 02 37.10 -2.3
0.9s 37.30nm 5.3mb
GRR 71.91 18 iPc 02 37.90 -2.0
0.8s 41.30nm 5.4mb
TOD 72.07 12 ePc 02 38.95 -1.9
GZH 72.17 285 Pc 02 38.70 -3.1
S 11 58.00
PRU 72.21 8 P 02 39.30 -2.3
0.8s 89.80nm 5.8mb
e 03 20.30
eS 12 00.00
GRFO 72.23 10 ePc 02 39.89 -1.9
epPc 02 53.29 46kmX
esPd 02 59.92
GRF 72.23 10 iPc 02 40.20 -1.6
0.8s 127.00nm 5.9mb
Z 24s 0.70um 4.9MszX
iSc 12 01.00
LPF 72.23 19 iPc 02 39.90 -1.8
1.0s 77.60nm 5.6mb
KTD 72.27 12 ePc 02 40.15 -1.9
GWF 72.55 13 P 02 41.81 -1.9
TPT 72.66 174 iP 02 43.10 -1.4
1.2s 255.00nm 6.0mb
PMO 72.66 174 iP 02 43.00 -1.6
1.2s 135.00nm 5.8mb
GYA 72.78 292 iPc 02 42.20 -3.3
2.0s 1.10nm 3.4mb X
Z 28s 1.00um 4.9MszX
N 18s 1.70um
pP 02 57.00 53kmX
sP 03 04.00
PP 05 24.00
S 12 03.00
ScS 12 43.00
RUV 72.88 173 iP 02 44.40 -1.4
1.2s 260.00nm 6.0mb
VAH 72.91 174 iP 02 44.40 -1.6
1.2s 240.00nm 6.0mb
WET 72.92 9 iPc 02 44.20 -1.6
1.5s 217.00nm 5.9mb
KHC 72.99 9 iPc 02 45.00 -1.3
0.8s 102.00nm 5.8mb
i 03 11.80
CDF 73.07 13 P 02 44.81 -2.0
VITF 73.10 14 P 02 44.93 -1.9
ECH 73.25 13 P 02 46.00 -1.8
SPC 73.32 4 iPc 02 46.00 -2.3
HAU 73.36 14 iPc 02 46.60 -1.8
0.7s 86.10nm 5.8mb
BSF 73.58 13 P 02 47.69 -2.1
MOF 73.60 13 P 02 47.77 -2.2
FEL 73.68 13 ePc 02 48.32 -2.1
LOR 73.74 16 iPc 02 48.80 -1.8
0.7s 68.90nm 5.7mb
FUR 73.74 10 iPc 02 48.80 -1.8
0 7s 189.00nm 6.1mb
MFF 73.76 18 iPc 02 48.90 -1.8
SLE 73.85 12 ePc 02 49.20 -2.1
BAG 73.86 275 ePc+ 02 46 00 -5 9
eS 12 13 00
SSF 73.89 16 iPc 02 49.70 -1.8
BBS 74.03 13 P 02 50.35 -2.0
LBF 74.04 15 iPc 02 50.50 -1.9
VKA 74.04 7 ePc 02 49.00 -3.3
2.5s 280.00nm 5.7mb
LOMF 74.06 13 P 02 50.72 -1.8
KMR 74.10 8 iP+ 02 50.70 -2.0
e 05 13.00
e 12 22.00
ZLA 74.12 12 ePc 02 50.80 -2.1
AVF 74.14 16 iPc 02 50.90 -2.0
ZST 74.16 6 iPc 02 51.50 -1.5
LR 11 35.00
BGF 74.29 16 iPc 02 52.00 -1.8
BHG 74.33 9 iPc 02 51.20 -2.8
0.8s 276.00nm 6.2mb
SMF 74.35 16 iPc 02 52.00 -2.2
LSF 74.38 17 iPc 02 52.40 -2.0
SAX 74.45 12 ePc 02 53.30 -1.8
TCF 74.45 17 iPc 02 53.00 -1.8

KSH 74.50 322 P 02 53.00 -2.3
Z 18s 3.70um 5.7Msz
E 15s 2.60um
pP 03 08.00 53kmX
S 12 26.00
PSZ 74.57 4 iP 02 54.00 -1.5
MAF 74.57 17 iPc 02 53.30 -2.2
SRO 74.61 5 iP 02 53.90 -1.7
LLS 74.79 12 ePc 02 55.50 -1.5
AGO 74.82 16 P 02 55.38 -1.5
BMR 74.92 2 iPd 02 46.00 -11.4
PLDF 74.98 16 P 02 56.40 -1.5
OGA 75.00 11 iPc 02 56.80 -1.4
1.0s 121.00nm 5.8mb
KBA 75.01 9 iPc 02 56.60 -1.6
0.7s 195.00nm 6.1mb
i 03 13.50
i 03 24.70
e(S) 12 29.00
OCP 75.06 274 e(P) 03 06.00 7.4
AFR 75.09 176 iP 02 57.10 -1.5
1.4s 305.00nm 6.0mb
OSS 75.09 11 ePc 02 57.30 -1.4
PPN 75.10 175 iP 02 57.10 -1.5
1.4s 310.00nm 6.0mb
PYM 75.10 16 P 02 56.77 -1.8
PPT 75.13 176 iP 02 57.20 -1.6
1.4s 370.00nm 6.1mb
Z 18s 2.00um 5.5Msz
VDL 75.22 12 ePc 02 58.40 -1.0
PAE 75.22 176 iP 02 57.70 -1.6
1.4s 285.00nm 6.0mb
RJF 75.30 18 iPc 02 57.60 -2.0
0.8s 69.80nm 5.6mb
EMS 75.33 14 ePc 02 58.70 -1.3
TVO 75.35 175 iP 02 58.80 -1.4
1.4s 380.00nm 6.1mb
DIX 75.38 13 ePc 02 59.30 -1.1
EMON 75.40 24 iPd 02 59.10 -1.2
FVI 75.44 9 Pc 02 58.10 -2.2
MMK 75.48 13 ePc 03 00.00 -0.9
LFF 75.53 18 iPc 02 59.40 -1.5
TMA 75.53 12 ePc 02 59.70 -1.5
LBL 75.64 16 P 03 00.00 -1.5
RBL 75.66 9 Pc 02 59.00 -2.7
VAI 75.75 12 P 03 00.60 -1.5
CAF 75.76 17 iPc 03 00.60 -1.7
KMI 75.83 294 ePc 02 59.52 -3.7
3.0s 0.50nm 2.9mb X
PcP 03 09.00
epPc 03 14.09 51kmX
esP 03 20.21
S 12 37.00
LPO 75.85 18 iPc 03 01.00 -1.8
LPG 75.87 14 iPc 03 02.40 -0.9
0.8s 36.20nm 5.4mb
CTI 75.88 10 P 02 59.60 -3.4
ORX 75.89 13 P 03 01.29 -1.8
ORO 75.90 13 P 03 00.80 -2.4
MDI 75.95 12 P 03 00.50 -2.7
LSD 75.96 14 P 03 02.72 -1.0
VOY 76.09 9 eP 03 01.30 -2.9
LJU 76.13 8 eP 03 02.00 -2.3
SAL 76.20 11 P 03 00.50 -4.2
RSP 76.28 14 P 03 04.05 -1.3
BNI 76.30 14 P 03 04.70 -0 8
PTJ 76.37 7 iPc 03 03.40 -2.4
TRI 76.40 9 iPc 03 03.00 -2.8
CEY 76.42 8 ePc 03 03.50 -2.5
ERUA 76.44 25 iPd 03 05.70 -0.4
RRL 76.44 14 P 03 05.90 -0.5
SVO 76.52 227 eP 03 06.00 -0.8
VBY 76.72 8 iP 03 05.50 -2.1
HNR 76.73 227 eP 03 10.00 2.1
VRI 76.74 359 iPc 03 05.00 -2.7
FOUF 76.83 14 iP 03 07.88 -0.3
DOI 76.91 14 P 03 06.50 -2.3
BOB 76.92 12 P 03 07.40 -1.4
BZS 76.93 3 eP 03 06.50 -2.2
CKI 77.12 13 P 03 07.60 -2.2
MLR 77.12 0 ePc 03 07.50 -2.5
STV 77.18 14 P 03 07.44 -2.8
ROB 77.20 13 P 03 07.95 -2.4
ENR 77.21 14 P 03 07.75 -2.7
EPF 77.31 19 iPc 03 08.70 -2.3
0.8s 42.90nm 5.5mb
FIN 77.32 13 P 03 08.36 -2.6

CMP 77.34 1 iPd 03 10.00 -1 1
QIZ 77.34 285 P 03 09 40 -2.0
PP 06 06.00
S 12 55.50
TOUF 77.40 14 P 03 10.31 -1.3
CFR 77.41 358 ePc 03 08.00 -3.4
AUTN 77.44 14 P 03 10.44 -1.4
SAOF 77.46 14 P 03 10.15 -1.6
ISR 77.47 360 ePd 03 08.00 -3.8
MVIF 77.50 14 P 03 10.65 -1.5
AURF 77.53 14 P 03 10.65 -1.6
SBF 77.57 14 iPc 03 11.00 -1.4
IMI 77.58 13 P 03 10.41 -2.0
CALN 77.61 14 P 03 11.04 -1.7
MME 77.62 11 P 03 11.70 -1.2
BEO 77.69 4 iP 03 10.40 -2.5
BDI 77.74 11 P 03 10.70 -2.6
FRF 77.76 14 iPc 03 12.00 -1.4
0.6s 25.20nm 5.4mb
PAG 77.83 79 eP 03 11.00 -3.2
LRG 77.83 15 iPc 03 12.60 -1.1
0.6s 21.60nm 5.3mb
LMR 77.97 14 iPc 03 13.40 -1.1
0.6s 23.40nm 5.4mb
SFI 78.00 10 P 03 13.10 -1.5
PGD 78.04 11 iPc 03 14.20 -0.9
RSM 78.05 10 P 03 13.50 -1.4
PII 78.07 11 P 03 12.00 -3.0
FIR 78.09 11 iPc 03 14.00 -1.1
S 13 02.00
BUC 78.20 360 ePc 03 13.50 -2.2
BUC1 78.27 360 iPc 03 12.00 -4.1
CRE 78.30 10 P 03 15.50 -1.0
BBL 78.36 80 eP 03 14.00 -3.0
ETER 78.44 17 eP 03 16.20 -0.9
ARV 78.52 10 P 03 15.80 -1.8
AOI 78.53 9 eP 03 15.66 -2.0
GUD 78.76 23 iPd 03 18.60 -0.5
CIO 78.84 10 eP 03 17.53 -1.9
PSN 78.91 358 iPc 03 18.00 -1.7
ASS 78.92 10 P 03 18.00 -1.8
DAV 78.94 266 eP 03 18.00 -2.2
CVF 79.02 13 P 03 18.08 -2.2
HVAR 79.12 7 iPc 03 18.50 -2.3
PLE 79.13 5 iPc 03 19.70 -1.3
FDF 79.19 80 eP 03 19.20 -2.4
0.4s 0.60nm 3.9mb X
ALP 79.29 9 eP 03 20.26 -1.7
CRM 79.29 79 eP 03 19.40 -2.7
PVL 79.39 1 iPc 03 20.00 -2.2
BIM 79.41 80 P 03 20.60 -2.2
MVM 79.47 80 eP 03 20.40 -2.7
EBR 79.49 19 eP 03 22.00 -0.8
eS 13 20.00
eSg 23 15.00
e 34 00.00
TOL 79.51 23 ePc 03 23.11 0.1
0.9s 84.03nm 5.7mb
epPc 03 36.18 44kmX
esP 03 42.31
ePP 06 35.00
eS 13 17.00
ePS 14 40.00
BRY 79.52 6 iPc 03 20.70 -2.4
MNS 79.60 10 P 03 21.00 -2.5
IVA 79.61 5 iPc 03 21.50 -2.1
NKY 79.63 5 iPc 03 21.30 -2.4
AQU 79.70 9 P 03 22.30 -1.7
HCY 79.97 6 iPc 03 22.50 -2.9
VTS 79.99 2 iPc 03 23.00 -2.7
TTG 80.02 5 iPc 03 23.20 -2.4
eS 13 22.00
PGB 80.05 1 iPc 03 24.00 -1.9
AZI 80.07 9 P 03 24.30 -1.6
BCI 80.12 4 iP 03 24.90 -1.2
JMB 80.14 360 iPc 03 24.00 -2.3
BDV 80.15 5 iPc 03 23.60 -2.7
RDP 80.23 10 P 03 25.50 -1.4
SDI 80.38 9 P 03 25.30 -2.4
ECHE 80.41 21 iPd 03 27.60 -0.2
SDA 80.45 5 iPc 03 25.90 -2.0
PLD 80.50 1 eP 03 26.00 -2.2
SKO 80.57 3 iPc 03 27.00 -1.6
0.8s 370.00nm 6.4mb
Z 18s 0.41um 4.8Msz
N 19s 0.64um
E 18s 0.63um

i 03 41.00
i 03 51.60
iS 13 28.50
LR 47 04.00
KKB 80.71 2 iPc 03 28.00 -1.4
RFI 80.80 9 P 03 28.36 -1 4
PHP 80.81 4 iPc 03 26.90 -2.9
LACI 80.83 5 iPc 03 28.00 -1.9
TBI 80.88 176 eP 03 30.00 -0.2
1.2s 215.00nm 6 0mb
RZN 80.92 1 iPc 03 29.00 -1.7
KDZ 80.96 0 iPc 03 30.00 -0.6
MMB 81.00 2 iPc 03 29.00 -1.9
EVIA 81.03 22 eP 03 31.00 -0.2
GUN 81.09 309 Pc 03 29.80 -2.2
EVAL 81.11 26 e(P) 03 31.50 0.0
TIR 81.13 5 eP 03 29.50 -2.0
KVT 81.17 352 iP 03 30.70 -1.1
EBAN 81.22 23 eP 03 32.00 -0.1
EHOR 81.23 25 eP 03 32.20 0.1
VAY 81.25 3 iPc 03 30.50 -1.6
0.8s 0.15nm 3.0mb X
OHR 81.40 4 iPc 03 31.20 -1.8
1.0s 0.33nm 3.2mb X
iS 13 32.00
KKN 81.44 310 Pc 03 31.60 -2.1
RDO 81.46 0 eP 03 31.50 -1.7
GKN 81.52 310 Pc 03 32.00 -2.0
PKI 81.58 309 Pc 03 32.30 -2.2
SGO 81.64 8 P 03 32.00 -2.2
DMN 81.67 310 Pc 03 33.00 -1.9
AAPN 81.97 24 iP 03 36.70 0.6
ASMO 82.00 24 iP 03 37.50 1.2
LCI 82.04 6 Pc 03 35.00 -1.3
MGR 82.08 8 Pc 03 34.10 -2.4
AFC 82.14 23 eP 03 38.00 0.9
PMG 82.15 238 eP 03 35.00 -2.1
ALOJ 82.16 24 iP 03 37.00 -0.2
MAIO 82.16 333 iPc+ 03 35.60 -1.5
1.0s 47.50nm 5.4mb
eS 13 36.00
TPE 82.19 5 iPd 03 36.00 -1.0
CRT 82.19 23 iP 03 38.10 0.9
PLG 82.21 2 eP 03 34.80 -2.4
ACHM 82.23 24 iP 03 38.00 0.6
KZN 82.24 3 eP 03 34.90 -2.5
EDC 82.25 359 iP 03 34.90 -2.5
LSK 82.35 4 iPd 03 26.60 -11.4
ATEJ 82.37 24 iP 03 38.20 -0.1
APHE 82.40 24 iP 03 38.70 0.3
MAL 82.46 24 iPc 03 39.30 0.8
iS 13 51.00
ANTO 82.57 355 ePc 03 37.70 -1.5
epPc 03 51.77 48kmX
esP 03 58.56
SRN 82.60 5 iP 03 38.60 -0.6
BBTK 82.60 355 iPc+ 03 38.00 -1.4
EZN 82.78 360 iP 03 37.00 -3.1
LOE 82.83 291 iPc 03 37.00 -3.7
DST 82.98 358 iP 03 38.90 -2.3
CHG 83.02 294 iPc 03 38.80 -2.9
0.9s 67.23nm 5.6mb
CHTO 83.02 294 ePc 03 37.49 -4.2
epPc 03 52.38 52kmX
TAB 83.02 344 eP 03 40.00 -1.6
NEO 83.27 2 eP 03 40.00 -2 7
USI 83 30 10 P 03 40.50 -2.3
GRI 83 45 8 P 03 41.50 -2.2
ALT 83.49 357 iP 03 42.20 -1.7
NDI 83.80 316 iPc 03 43.00 -2.5
0.9s 184.87nm 6.1mb
eS 13 58.00
BMK 83.85 26 i(P)c 03 45.50 -0.1
LVI 83.93 11 P 03 44.60 -1.4
MNI 84.07 263 ePc 03 44.60 -2.4
GIB 84.09 9 P 03 44.00 -3.0
IZM 84.20 359 eP 03 41.00 -6.5
KHL 84.24 357 iP 03 45.30 -2.4
VLS 84.32 4 eP 03 46.00 -2.0
BDT 84.33 293 eP 03 45.00 -3.3
0.8s 52.40nm 5.6mb
FAI 84.76 10 P 03 53.50 3.3
KKM 84.82 273 ePc 03 49.50 -1.4
1.0s 65.10nm 5 7mb
IR1 84.89 340 iPc 03 49 20 -1 9
IR4 85.02 340 iPc 03 50.20 -1.5
AVE 85.04 28 iPc 03 51.20 -0 5

16d 11h

			i	04	10.00	
AVE	85.04	28	i(P)c	03	53.50	1.8
			i	04	10.00	
MEU	85.05	9	P	03	49.80	-2.0
BCK	85.07	356	iP	03	49.60	-2.2
NST	85.10	292	iPc	03	54.00	1.8
PZI	85.11	9	P	03	50.29	-1.8
MSL	85.12	346	ePd	03	50.50	-1.5
			eSKS	14	09.50	
			eS	14	29.50	
YER	85.45	358	iP	03	51.30	-2.5
SLY	85.56	344	iPd	03	52.00	-2.2
			e	04	13.00	
			iSKS	14	11.00	
			ePS	15	12.00	
			e	17	45.00	
ELL	85.80	357	iP	03	53.20	-2.4
OUE	85.89	325	iPc	03	53.90	-2.3
			eS	14	14.70	
DZM	86.10	216	iPc	03	57.20	0.2
VAM	87.18	1	eP	03	59.50	-2.7
TIO	87.34	28	iPc	04	02.70	-0.5
			i	04	19.00	
CSS	87.43	354	eP	04	01.50	-1.9
NNT	87.93	290	iPc	04	03.20	-2.8
BHD	88.01	345	ePd	04	05.00	-1.2
			iS	14	27.00	
			iSKS	14	44.00	
			e	17	03.00	
PCI	88.71	266	ePd	04	06.80	-2.9
	1.0s	4.50nm			4.7mb X	
HRI	88.96	352	iPc	04	10.00	-0.9
PRNI	91.92	352	ePc	04	23.00	-1.6
CTA	91.97	234	iPd	04	23.60	-1.1
	0.9s	53.78nm			6.0mb	
			i	04	50.80	
			iS	15	18.00	
SNG	92.09	287	eP	04	22.80	-2.6
			eS	14	54.10	
MBH	92.50	352	iPc	04	25.00	-2.2
HLW	92.61	355	eP	04	28.00	0.3
MTN	92.87	251	iPd	04	27.30	-1.6
	1.0s	363.00nm			6.8mb	
			e	04	43.70	
IPM	94.08	285	ePd	04	32.80	-1.9
OIS	95.37	240	iPd	04	38.00	-2.3
BRS	95.80	226	iPd	04	59.20	17.1
RMO	96.58	229	eP	04	45.00	-0.7
WRA	97.33	244	Pd	04	46.50	-2.7
	1.0s	5.10nm			5.0mb	
GBA	97.34	310	Pc	04	45.90	-3.6
	0.7s	20.80nm			5.8mb	
ATB	99.05	82	e(P)	04	53.90	-3.2
ZOBO	101.42	102	Pdiff	05	04.00	-4.5
	Z 24s	0.68um			5.1MszX	
			LR	42	08.00	
LPB	101.65	102	Pdiff	05	07.00	-2.3
			PP	09	18.00	
			eLR	42	08.00	
CNCB	101.94	102	ePdiff	05	10.00	-0.8
BNG	117.72	8	iPKPc	10	00.00	-2.6
	0.4s	4.00nm				
			ed	11	16.00	
LWI	124.60	357	iPKPc	10	14.80	-1.2
SBA	137.48	191	e(PKP)	10	32.00	-6.5
LSZ	137.57	357	iPKP	10	27.00	-13 6
			i	13	23 20	
SPA	147.58	180	e(PKP)	10	51.40	-5.0
	1.0s	10.00nm				
			i	10	57.90	
SLR	147.96	356	iPKPd	10	56.50	-1.8
	0.9s	113.45nm				
KSR	148.13	358	ePKP	10	47.60	-11.0
	1.1s	54.05nm				
			i	11	02.70	
BFS	149.16	359	iPKPc	10	52.50	-7.7
	0.6s	180.00nm				
SEK	150.56	357	iPKPc	11	01.00	-1.3
	1.0s	320.00nm				
FRS	152.00	1	ePKP	11	04.40	0.3
	0.9s	226.89nm				
			i	11	09.50	
CER	155.18	13	ePKP	11	23.00	14.6
	0.3s	10.00nm				
			i	11	55.00	
MAW	160.75	224	ePKP	11	14.00	0.1
SNA	162.57	148	ePKP	11	14.30	-1.3

1.0s 10.00nm
511 obs. associoted

JUN 16, 1989 11h 16m 22.20± 0.76s
48.053 N ± 6.4km 6.656 E ± 5.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 1.0 (STR).

BSF	0.24	157	Pg	16	27.07	-0.3
			Sg	16	30.21	
MOF	0.38	122	Pg	16	29.82	-0.2
VITF	0.48	290	Pg	16	31.97	0.0
CDF	0.55	49	Pg	16	33.17	-0.2
LOMF	0.71	171	Pg	16	36.37	0.1
FEL	0.93	100	Pg	16	40.58	0.6
			Sg	16	53.23	

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

% JUN 16, 1989 12h 18m 42.76± 0.86s
61.817 N ± 7.1km 7.433 E ± 9.0km
DEPTH = 14.0 ± 5.8 km
SOUTHERN NORWAY (535)
MD 1.9 (BER).

MOL	0.76	4	iP	18	57.31	0.1
			eS	19	06.92	
HYA	0.89	223	iP	18	58.60	-0.7
			iS	19	11.23	
SUE	1.49	240	iP	19	09.17	0.1
			eS	19	29.59	
ASK	1.72	220	iP	19	12.42	0.0
			eS	19	35.25	
BER	1.76	216	eP	19	12.80	-0.2
			iS	19	37.43	
ODD1	1.95	192	eP	19	17.00	1.2
			eS	19	41.83	
NRA0	2.26	117	iPnc	19	19.80	-0.4
			iPg	19	21.70	
			iSg	19	51.60	
BLS1	2.45	187	iP	19	22.93	-0.1
			eS	19	53.67	

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

JUN 16, 1989 13h 06m 16.37± 0.46s
36.849 N ± 4.5km 5.222 W ± 5.2km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.1 (MDD).

EPRU	0.12	356	iPgd	06	18.90	-0.5
ALJ	0.35	240	iP	06	25.00	1.3
EJIF	0.44	207	iPgd	06	24.90	-0.5
GIBL	0.59	268	iP	06	28.50	0.2
SRO	0.60	192	iP	06	27.50	-1.0
MAL	0.66	100	iPnc	06	28.50	-1.0
			iSg	06	38.50	
MOMI	0.66	217	iP	06	30.50	0.9
OJEN	0.79	199	iP	06	33.00	1.2
CNIL	0.82	235	iP	06	32.50	0.2
PLAT	0.85	211	iP	06	31.00	-1.7
EHOR	0.97	359	ePg	06	34.90	0.1
			eSg	06	47.50	
AFC	1.40	73	ePn	06	43.60	1.5
EVAL	1.42	302	iPnd	06	41.20	-1.0
			eSn	07	00 00	
EBAN	1.74	41	ePn	06	47 00	0.2
			eSn	07	12.10	
EVIA	2.80	50	ePn	07	02.80	0.7
GUD	3.88	12	eP	07	16.80	-0.7
	0.3s	0.01nm				

S.D. = 1.0 on 16 of 16 obs.

& JUN 16, 1989 13h 17m 14.36s
57.683 N 154.157 W
DEPTH = 41.0km
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC	0.90	85	iP	17	30.09	-0.5
			S	17	42.60	
CDD	1.28	12	eP	17	34.98	-1.1
SHU	1.35	45	eP	17	36.74	-0.3
OPT	2.03	13	eP	17	46 30	-0.6
CNPM	2.40	38	eP	17	50.72	-1 3
ILIM	2.48	14	eP	17	52.09	-1.2
RED	2.84	14	eP	17	57.44	-0.9
SEW	3.44	43	eP	18	04.57	-2.2
SLKM	3.49	34	eP	18	05.84	-1.6
SVW	3.52	348	eP	18	06.56	-1.4
SPU	3.67	16	eP	18	08.27	-1.9
SUA	4.17	23	eP	18	16.61	-0.6
SKT	4.51	16	eP	18	19.50	-2.5
PWA	4.53	27	eP	18	21.63	-0.7

14 obs. ossocioted

& JUN 16, 1989 14h 47m 48.61s
58.438 N 142.718 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

YKU	1.91	53	iP	48	17.03	-4.4
PCA	2.09	36	iP	48	19.11	-5.1
			eS	48	41.06	
PNL	2.11	53	iP	48	19.22	-5.3
MID	2.12	299	eP	48	19.37	-5.2
RAGM	2.20	334	iP	48	20.72	-5.0
BCPM	2.20	45	eP	48	20.39	-5.3
HQN	2.24	61	iP	48	20.84	-5.4
SGAM	2.43	330	iP	48	24.17	-4.8
BALM	2.61	4	iP	48	26.49	-5.2
			S	48	57.00	
CVA	2.62	325	iP	48	25.94	-5.7
CTGM	2.63	15	eP	48	26.98	-5.0
HIN	2.76	317	iP	48	28.61	-5.1
			eS	49	00.71	
GLB	3.06	350	iP	48	32.39	-5.6
VZW	3.27	325	iP	48	34.90	-6.0
KLU	3.46	334	iP	48	38.03	-5.7
HYT	3.57	46	P	48	40.20	-5.1
SEW	3.84	299	eP	48	42.45	-6.5
TOA	4.06	336	iP	48	47.12	-5.0
KNK	4.15	318	eP	48	48.14	-5.3
SLKM	4.35	302	eP	48	49.81	-6.5
PME	4.50	318	iP	48	52.87	-5.5
PMR	4.51	317	iP	48	52.90	-5.6
CNPM	4.54	288	eP	48	53.68	-5.3
GHO	4.56	320	eP	48	53.54	-5.8
SUA	5.05	310	eP	48	59.92	-6.3
SPU	5.46	304	eP	49	05.75	-6.2
RED	5.50	295	eP	49	05.17	-7.5
ILIM	5.51	292	eP	49	06.47	-6.2
SKT	5.65	313	eP	49	07.95	-6.7

29 obs. ossocioted

JUN 16, 1989 14h 53m 53.12± 0.46s
39.143 N ± 5.5km 99.457 W ± 4.4km
DEPTH = 5.0km (geophysicist)
KANSAS (480)
mbLg 3.8 (NEIS), 3.6 (TUL). Felt (V) ot Polco ond Zurich.

CNK	1.40	74	P	54	19.00	-0.4
SNK	1.46	97	P	54	21.00	0.9
LCNE	2.20	10	P	54	32.00	1.1
JHN	2.95	63	P	54	41.00	-0.5
SIO	4.22	143	ePn	54	59.60	0.1
TUL	4.35	137	ePn	55	01.50	0.1
LNO	4.35	137	iPn	55	01.40	0.1
MEO	4.41	171	ePn	55	02.80	0.6
GLD	4.50	280	iP	55	04.10	0.3
RLO	4.61	129	ePn	55	05.10	0 1
GOL	4.61	279	iPd	55	04.30	-1.1
	0.7s	28.52nm				
VVO	4.82	141	ePn	55	07.80	-0.3
ALQ	6.99	235	ePn	55	39.00	0.1
			eP*	55	57.50	
			ePg	56	02.00	
			eLg	57	29.60	
FVM	7.17	96	eP	55	40.00	-1.2

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

JUN 16, 1989 15h 35m 28.49± 0.57s
50.841 N ± 5.8km 6.228 E ± 4.6km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 1.9 (JCK).

ENN	0.21	249	iPg	35	32.90	-0.1
	0.3s	29.00nm				
			iSg	35	37.00	
JCK	0.23	33	iPgc	35	33.60	0.1
			iSg	35	37.20	

```
MEM     0.27 211 iPgc  35 34.80   0.6
PLH     0.41  66 iPgc  35 36.90   0.1
                 iSg   35 42.60
WLF     1.18 182 iP    36 06.40  15.9X
RUP     1.26 155 ePn   35 51.99   0.1
ABH     1.28 138 ePn   35 51.89  -0.4
SNF     1.28 256 Pg    35 52.10  -0.1
DOU     1.28 235 iPd   35 52.00  -0.3
                 iS    36 08.80
      S.D. = 0.3  on   8 of   9 obs.
-------------------------------------
* JUN 16, 1989  16h 44m 46.69± 4.04s
  10.250 N ±27.6km   62.407 W ±23.9km
  DEPTH =  33.0km  (normal)
 NEAR COAST OF VENEZUELA          ( 97)
      ML 4.8 (FDF).

TCE     0.78  55 iP    44 58.77  -2.5
TPP     0.94  86 eP    45 03.46  -0.1
TRN     1.06  68 eP    45 03.54  -1.8
TBH     1.34  80 eP    45 10.55   1.3
PIG     1.79  59 eP    45 16.63   0.9
BOT     1.89  61 eP    45 18.43   1.2
SVB     3.21  21 eP    45 36.37   0.4
                 eS    46 14.97
SVV     3.26  21 eP    45 37.08   0.3
                 eS    46 19.15
SSV     3.28  21 eP    45 38.18   1.1
SLB     3.80  20 eP    45 44.51   0.2
                 eS    46 29.69
BIM     4.44  17 iPd   45 53.39  -0.1
MVM     4.53  19 eP    45 54.78   0.0
FDF     4.62  15 iPd   45 56.00  -0.1
      0.2s      1.85nm
                 S     46 44.70
CRM     4.71  18 eP    45 57.82   0.6
DSVT    5.05  11 eP    46 07.54   5.4X
DTMT    5.06  12 eP    46 02.38   0.1
DPMT    5.08  11 eP    46 02.78   0.2
BBL     5.32  10 eP    46 05.50  -0.4
                 S     47 03.00
PAG     5.79   7 eP    46 12.20  -0.4
                 S     47 16.00
DEG     6.17  12 eP    46 17.50  -0.5
MGH     6.43   2 eP    46 22.00   0.3
                 S     47 34.00
BPA     6.78   4 eP    46 26.20  -0.3
NEV     6.85 359 eP    46 27.00  -0.4
      S.D. = 0.9  on  22 of  23 obs.
-------------------------------------
   JUN  16, 1989  20h 12m 31.26± 0.24s
   20.672 N ± 4.2km  102.446 E ± 3.8km
   DEPTH =  33.0km  (normal)
   5.1mb ( 30 obs.)  5.5Msz (  6 obs.)
 SOUTHEAST ASIA                   (299)
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used:  GDSN
      L.P.B.:  13S, 25C
      Centroid Location:
      Origin Time        20:12:32.8 0.3
      Lat 20.61N 0.04 Lon 102.61E 0.06
      Dep  15.0 FIX Half-duration  2.5
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.54 0.10  Mtt=-1.79 0.08
        Mff= 2.32 0.12  Mrt=-1.09 0.31
        Mrf= 0 38 0 21  Mtf=-1 55 0.09
       Principal Axes.
        T  Val=  2.99  Plg=12  Azm=249
        N        -0.28       63      135
        P        -2.71       24      345
      Best Double Couple:Mo=2.9*10**17
       NP1:Strike= 25 Dip=65 Slip=  -9
       NP2:        119       82     -154

CHG     3.78 241 iPc   13 26.50  -2.2
                 iPg   13 35.00
                 iSg   14 18.50
KMI     4.44   3 Pnd   13 38.00  -0.3
                 Pg    13 50.00
                 Sn    14 25.00
BDT     4.72 224 ePn   13 39.30  -2.6
                 ePg   13 54.50
                 eSg   14 29.50
NST     5.44 204 ePn   13 52.80   0.7
                 eSg   14 31.00
GYA     6.94  33 Pn    14 10.80  -2.6
      Z  10s    31.80um
                 Sn    15 35.00
QIZ     7.15 102 ePn   14 12.00  -4.3X
                 Sn    15 31.40
NNT     8.45 198 eP    14 32.00  -2.3
CD2    10.26   6 eP    14 58.00  -1.4
                 S     16 53.60
MCO    10.45  80 eP    15 00.80  -1.2
SHL    10.87 299 eP    15 05.90  -2.0
                 iS    18 09.00
HKC    11.04  79 P     15 10.30   0.3
                 S     17 18.00
SNG    13.53 188 eP    15 37.70  -5.7X
LSA    13.61 314 P     15 45.00   0.2
XAN    14.50  22 P     15 52.50  -3.5X
     E  12s    44.30um
                 S     18 30.00
WHN    14.55  45 eP    15 55.00  -1.6
     Z  14s    10.60um
     E  12s    25.60um
                 S     18 30.00
LZH    15.41   4 Pd    16 08.00   0.0
     4.0s      0.96nm          2.4mb X
     Z  12s    35.80um          4.8Msz
     E  11s    90.30um
                 pP    16 14.00
                 eSS   19 16.00
QZH    15.48  71 eP    16 10.00   1.2
     E  14s    24.90um
IPM    16.05 185 ePc   16 15.60  -0.7
     1.1s      41.80nm          4.5mb
                 e     21 31.90
GUN    16.72 299 P     16 27.10   2.0
PKI    16.99 297 P     16 28.80   0.3
KKN    17.18 298 P     16 30.60   0.0
DMN    17.26 297 P     16 31.90   0.2
BAG    17.71 101 eP+   16 38.00   0.8
                 eS    20 04.00
GKN    17.78 298 P     16 37.10  -1.0
ANP    18.13  72 ePc   16 41.00  -1.3
                 eS    20 20.00
NJ2    18.54  49 Pd    16 51.00   3.8X
     7.0s      1.70nm          2.3mb X
     Z  10s    20.90um          4.3Msz
     N  10s    25.50um
                 S     20 19.00
KGM    18.56 177 eP    16 48.00   0.4
                 e     22 48.50
QCP    18.73 106 eP    16 53.00   3.3X
GTA    18.81 354 iPd   16 50.40  -0.3
     4.5s      2.50nm          2.7mb X
                 pP    16 56.00
TIY    19.07  25 iPd   16 53.00  -0.7
     Z  13s    28.70um          4.4MszX
     N  10s    30.90um
     E  12s    49.10um
                 S     20 30.50
KKM    19.74 136 eP    17 01.50  -0.1
SSE    19.77  55 Pc    17 03.00   1.4
     1.5s      0.10nm          1.9mb X
     Z  12s    10.70um          4.0Msz
                 S     20 44.00
TIA    20.12  37 eP    17 02.80  -2.4
     Z  15s    15.80um          5.5MszX
     N  11s    22.50um
     E  11s    26.20um
                 S     20 51 50
BTO    20.89  16 iPd   17 12.50  -0 7
                 sP    17 22.00
                 PP    17 37.00
                 S     21 04.50
                 sS    21 16.00
HHC    21.56  19 Pc    17 21.00   1.0
     7.0s      1.00nm          2.3mb X
     Z  15s    23.60um          5.7MszX
     E  11s    42.90um
                 pP    17 24.00   11kmX
                 PP    17 50.00
                 S     21 21.00
BJI    22.60  28 eP    17 31.00   0.8
     4.0s      0.82nm          2.6mb X
     Z  12s    16.30um          5.7MszX
     N  12s    17.10um
                 sS    21 44.00
NDI    24.24 294 iPc   17 47.60   1 3
                 eS    22 09 00
DL2    24.56  38 eP    17 52.00   2.8
     N  13s    15.60um
     E  14s    30.90um
                 S     22 14.00
GBA    24.89 258 Pc    17 52.80   0.2
     1.0s      17.50nm          4.6mb
WMQ    26.16 335 Pd    18 05.00   0.6
     2.0s      0.10nm          2.1mb X
                 PP    18 49.00
                 S     22 39.50
POO    27.01 270 eP    18 14.50   2.1
                 eS    22 52.50
PCI    27.38 139 ePc   18 18.60   2.9
SNY    27.63  36 eP    18 18.60   0.8
     Z  14s    14.50um          5.7MszX
     N  14s    12.30um
     E  13s    10.40um
                 S     22 58.00
BOM    27.92 272 eP    18 07.00 -13.6X
                 eS    23 09.50
KSH    29.41 315 P     18 36.00   1.9
     Z  14s    17.50um          5.8MszX
     N  15s    40.10um
MDJ    32.78  37 eP    19 01.50  -1.9
     Z  16s     9.60um          5.6MszX
                 S     24 12.00
QUE    33.31 294 eP    19 09.00   0.5
                 eS    24 30.00
MAIO   40.49 302 iPc   20 10.00   1.1
GUMO   41.05  93 eP    20 01.00 -12.6X
IR4    47.29 299 eP    21 04.00   0.2
IR2    47.32 300 eP    21 03.80  -0.2
IR5    47.55 299 eP    21 05.30  -0.5
IR7    47.56 300 eP    21 04.70  -1.2
KER    50.38 298 eP    21 43.00  15.4X
WB5    51.00 140 eP    21 30.70  -1.5
WRA    51.03 140 Pc    21 31.40  -1.1
     0.6s      2.00nm          4.3mb
TAB    51.13 303 eP    21 34.00   0.7
BHD    52.65 297 ePd   21 45.00   0.3
                 iS    29 12.00
MSL    53.62 300 ePd   21 51.50  -0.3
                 eS    29 26.00
BBTK   61.69 305 eP    23 00.00  11.2X
ALT    63.80 304 eP    23 01.70  -1.1
RMQ    64.91 134 eP    23 11.00   1.1
SUF    65.56 331 iP    23 12.30  -1.3
     0.8s      7.80nm          4.9mb
VRI    65.64 312 ePd   23 14.00  -0.4
SOD    65.65 336 iP    23 14.70   0.7
KEV    65.74 338 eP    23 13.00  -1.6
MLR    66.22 312 ePd   23 18.00  -0.3
BUC    66.23 310 ePd   23 20.50   2.4
NUR    66.24 328 iP    23 17.10  -0.8
     Z  21s    3.60um          5.6Msz
                 e     32 08.00
                 LR    54 30.00
NAI    67.77 260 eP    23 30.00   1.3
DEV    68.29 312 ePc   23 33.00   1.8
VAY    69.22 308 eP    23 36.00  -1.0
SPC    69.62 316 eP    23 38.80  -0.8
UPP    69.78 328 iP    23 40.30   0.3
SRO    71.11 315 eP    23 48.90   0.5
HFS    71.70 328 eP    23 48.20  -3.4X
     0.5s      8.00nm          5.0mb
     Z  20s    1.42um          5.2Msz
                 LR    52 53.00
ZST    71.84 315 e(P)  23 52.20  -0.6
     Z  18s    2.00um          5.4Msz
                 LR    20 59.00
KSP    71.87 318 eP    23 52.50  -0.4
VKA    72.34 316 e(P)  23 56.00   0.2
     Z  18s    1.40um          5.3Msz
                 LR    59 20.00
NB2    72.74 329 P     23 56.70  -1.1
     0.9s      4.40nm          4.5mb
PRU    73.13 318 eP    24 00.80   0.5
     Z  15s    1.70um          5.4MszX
     N  22s    3.80um
     E  20s    1.10um
BRG    73.32 319 eP    24 01.50   0.1
     1.5s      20.00nm          4.9mb
                 eS    33 34.00
CLL    73.81 319 eP    24 03.00  -1.2
     1.9s      34.00nm          5.0mb
     Z  17s    2.00um          5.5MszX
KHC    73.93 317 P     24 05.40   0.3
BRW    74.00  19 eP    24 06.00   1.0
KBA    74.56 315 eP    24 08.00  -0.9
```

16d 20h

	1 0s	11 30nm		4.8mb	
			24 49.50		
MOX	74 81	319 eP	24 10.00	-0.1	
	1.8s	38.00nm		5.1mb	
	Z 16s	2.00um		5.5MszX	
	N 18s	3.40um			
	E 18s	1.50um			
GRF	75.29	318 e(P)	24 14.00	1.1	
	1.7s	67.00nm		5.4mb	
DAG	76.72	348 eP	24 18.00	-2.4	
	1.8s	59.09nm		5.3mb	
	Z 19s	3.19um		5.7Msz	
	N 17s	1.09um			
	E 19s	1.81um			
ALE	76.75	358 eP	24 22.00	1.5	
	0.9s	7.00nm		4.7mb	
IMA	76.77	24 eP	24 21.50	0.4	
ABH	77.53	319 eP	24 23.60	-1.8	
FEL	77.83	317 eP	24 24.80	-2.4	
RUP	77.89	319 eP	24 26.45	-0.9	
CDF	78.14	317 eP	24 28.90	0.0	
WLF	78.46	319 Pc	24 31.80	1.4	
BSF	78.63	317 eP	24 31.70	0.1	
FIN	78.81	313 P	24 32.99	0.4	
HAU	78.86	317 eP	24 32.90	0.2	
	1.8s	34.50nm		5.1mb	
ROB	79.01	313 P	24 32.58	-1.1	
IMI	79.12	313 P	24 33.29	-1.0	
LSD	79.13	314 P	24 34.93	0.3	
RSP	79.16	314 P	24 32.99	-1.6	
ENR	79.34	313 P	24 33.29	-2.1	
LPG	79.39	315 eP	24 36.50	0.5	
	1.6s	37.30nm		5.1mb	
STV	79.40	313 P	24 32.78	-3.1X	
RRL	79.55	314 P	24 35.34	-1.5	
MBC	80.00	9 eP	24 39.00	0.7	
LRG	80.32	313 eP	24 41.30	0.7	
	1.6s	49.70nm		5.3mb	
LOR	80.69	317 eP	24 42.90	0.3	
	1.8s	51.70nm		5.2mb	
LBF	80.71	317 eP	24 42.90	0.2	
	1.6s	58.40nm		5.3mb	
SMF	80.92	316 eP	24 44.00	0.2	
	1.6s	43.50nm		5.2mb	
SSF	80.99	317 eP	24 44.50	0.4	
	1.6s	37.30nm		5.1mb	
AVF	81.18	317 eP	24 45.20	0.1	
	1.8s	51.70nm		5.2mb	
BGF	81.59	317 eP	24 47.90	0.6	
	1.4s	13.00nm		4.8mb	
MAF	81.89	316 eP	24 49.70	0.8	
	1.6s	31.00nm		5.1mb	
TCF	82.10	316 eP	24 50.90	0.9	
	1.6s	43.50nm		5.2mb	
INK	82.48	18 eP	24 52.00	0.6	
LSF	82.55	317 eP	24 52.70	0.4	
	1.6s	24 80nm		5.0mb	
CAF	82.70	315 eP	24 54.50	1.4	
	1.6s	18.60nm		4.9mb	
BNG	82.75	272 iPc	24 34.00	-19.9X	
	0.7s	8.00nm			
		id	24 54.00		
RJF	82.92	316 eP	24 55.70	1.5	
	1.4s	26 10nm		5.1mb	
LPF	83.48	319 eP	24 58.00	1.0	
	1 8s	51 70nm		5.4mb	
MFF	83 49	317 eP	24 57.90	0.8	
	1.4s	17 40nm		5.0mb	
SLR	85.47	241 iPd	25 08.00	0.5	
	1.2s	39.06nm		5.5mb	
	Z 20s	5.32um		5.9Msz	
KSR	86.66	241 eP	25 13.00	-0.4	
TOL	88.88	312 eP	25 25.00	1.2	
		eS	36 15.00		
FRS	89.53	238 eP	25 11.50	-15.3X	
ATB	149.88	302 PKPc	32 21.50	6.0X	
BAO	151.49	275 e(PKP)	32 06.00	-12.0X	
ZOBO	170.04	295 ePKP	32 40.00	2.1	
		LR	41 02.00		
LPB	170.14	293 (PKP)	32 47.00	9.2X	
		eLR	44 20.00		
CNCB	170.15	291 ePKP	32 40.00	2.0	
	S.D. = 1.2	on 117 of 133 obs.			

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* JUN 16, 1989 20h 18m 10 63± 1.71s
34.424 N ±14.3km 22.830 E ±13.0km
DEPTH = 10.0km (geophysicist)

MEDITERRANEAN SEA (400)
ML 3.7 (ATH).

VAM	1.49	49 ePn	18 39.00	1.5	
NPS	2.44	69 ePn	18 55.00	3.9X	
ATH	3.61	11 ePn	19 07.50	-0.3	
KAP	3.74	71 ePn	19 11.50	1.9	
VLS	4.16	335 ePn	19 17.90	2.4	
NEO	4.88	4 ePn	19 26.20	0.3	
YER	5.19	57 ePn	19 31.00	0.7	
KSL	5.78	71 ePn	19 38.90	0.5	
KZN	5.93	352 ePn	19 41.00	0.3	
ELL	6.22	66 iPn	19 44.70	-0.1	
KHL	6.65	52 ePn	19 50.00	-0.9	
OHR	6.87	347 ePn	19 53.80	-0.1	
VAY	6.89	358 ePn	19 52.30	-1.8	
BCK	6.98	62 ePn	19 54.00	-1.5	
SKO	7.62	352 ePn	20 01.80	-2.5	
HRI	10.80	92 eP	20 48.00	-0.4	
DSI	10.92	102 eP	20 50.00	0.1	
		eS	22 41.00		
BZS	11.22	356 ePc	20 50.00	-4.0X	
MBH	11.22	111 eP	20 52.00	-2.0	
		eS	22 43.00		
MLR	11.31	11 eP	20 32.50	-22.9X	
KHC	16.21	338 Pd	22 06.10	6.1X	
PRU	16.70	341 eP	22 10.30	4.2X	
GKN	52.54	79 P	27 27.70	1.0	
KKN	53.15	79 P	27 32.10	0.9	
	S.D. = 1.4	on 19 of 24 obs.			

& JUN 16, 1989 20h 28m 44.72s
57.577 N 154.232 W
DEPTH = 58.2km
3.6mb (1 obs.)
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC	0 95	79 iPc	29 01.70	-0.4	
CDD	1.39	13 iP	29 07.39	-0.9	
SHU	1.45	43 eP	29 08.62	-0.4	
OPT	2.15	14 eP	29 18.22	-0.6	
CNPM	2.51	38 eP	29 22.52	-1.3	
ILIM	2.60	14 eP	29 24.14	-1.0	
RED	2.95	14 eP	29 29.17	-1.0	
SEW	3.55	42 eP	29 37.38	-1.1	
SLKM	3.60	33 eP	29 36.72	-2.5	
SVW	3.61	349 iPc	29 38.50	-1.0	
SPU	3.78	16 eP	29 40.06	-1.8	
CRP	3.85	15 eP	29 40.68	-2.3	
CGLM	3.91	16 eP	29 41.95	-1.8	
SDN	4.14	240 eP	29 46.00	-0.7	
SUA	4.28	23 eP	29 46.41	-2.6	
PWA	4.65	27 eP	29 54.94	1.0	
PMR	4.79	31 e(P)	29 55.50	-0.5	
TTA	5.44	351 eP	30 04.10	-1.2	
TOA	6.09	38 eP	30 13.70	-0.6	
IMA	8.53	2 eP	30 46.20	-1.9	
MBC	22.52	21 eP	33 41.00	1.1	
	0.4s	1.00nm		3.6mb	
KKN	81.46	309 P	40 57.60	0.7	
GKN	81.54	310 P	40 58.00	0.8	
PKI	81.60	309 P	40 58.50	0.7	
DMN	81.69	310 P	40 59.10	0.9	
SPA	147.40	180 e(PKP)	48 23.30	4.0	
	1.0s	3.50nm			
	Z 20s	1.26um		5.7MszX	
	26 obs. ossociated				

JUN 16, 1989 20h 57m 24.11± 0.49s
39.500 N ± 4.8km 26.733 E ± 4.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.5 (ATH).

PRK	0.44	235 ePb	57 33.00	0.0	
EZN	0.45	316 iPg	57 33.50	0.2	
		iSg	57 40.50		
IZM	1.18	159 ePg	57 46.40	0.3	
EDC	1.21	45 iPg	57 46.90	0.2	
BNT	1.25	47 iPg	57 47.10	-0.3	
DST	1.47	85 iPn	57 50.60	-0.1	
RDO	1.88	331 ePn	57 57.20	0.7	
CTT	2.10	38 iPn	57 59.20	-0.5	
ISK	2.37	48 ePn	58 02.00	-1.6	
KDZ	2.37	335 iPd	58 04.00	0.4	
GBZT	2.45	57 ePn	58 06.90	2.2	
KHL	2.47	117 ePn	58 07.30	2.1	
HRT	2 61	59 ePn	58 06.00	-1.1	
YER	2.66	152 iPn	58 06.00	-1.8	
ALT	2.66	99 ePn	58 07 70	-0.2	
RZN	2.67	326 iPd	58 09.00	0.9	
		Sg	58 52.00		
PLD	3.02	330 iPd	58 23.00	10.1X	
		iS	59 02.00		
PGB	3.61	328 eP	58 52.00	30.7X	
		Sg	59 21.00		
KKB	3.64	312 iPc	58 22.00	0.2	
PVL	3.86	345 eP	58 24.00	-0.7	
		iS	59 25.00		
VTS	4.08	320 eP	58 28.00	0.0	
BBTK	4.66	84 eP	58 24.00	-12.4X	
MLR	6.02	355 eP	58 56.00	0.6	
VRI	6.37	360 ePc	59 12.00	11.8X	
BZS	7.18	330 ePc	59 10.00	-1.7	
	S.D. = 1.1	on 21 of 25 obs.			

JUN 16, 1989 21h 13m 30.01± 0.40s
36.859 N ± 4.0km 5.240 W ± 5.1km
DEPTH = 13.2 ± 3.6 km
STRAIT OF GIBRALTAR (385)
mbLg 3.5 (MDD). MD 3.5 (TAF).
Felt at Ronda, Spain.

EPRU	0.11	4 iPd	13 32.90	-0.4	
LIJA	0.14	286 iP	13 32.50	-1.3	
ALJ	0.35	238 iP	13 38.50	1.1	
EJIF	0.45	204 iPd	13 38.50	-0.7	
GIBL	0.57	267 iP	13 42.00	0.6	
SRO	0.61	190 iP	13 40.50	-1.5	
MAL	0.68	101 iPnc	13 42.70	-0.5	
		iSg	13 52.00		
OJEN	0.79	198 iP	13 46.00	0.8	
CNIL	0.82	233 iP	13 46.50	1.0	
PLAT	0.85	210 iP	13 47.50	1.4	
EHOR	0.96	360 eP	13 48.80	0.9	
EVAL	1.40	302 iP	13 55.00	-0.2	
		eS	14 12.60		
AFC	1.41	73 iPd	13 57.30	1.8	
		eS	14 15.50		
EBAN	1.74	41 eP	14 00.60	0.5	
		eS	14 24.00		
BMK	1.98	195 ePn	14 03.50	0.1	
		iSg	14 40.00		
EVIA	2.80	50 eP	14 16.80	1.4	
TAF	3.07	131 ePn	14 20.00	0.9	
		eSn	14 55.00		
TOL	3.16	17 ePn	14 20.50	0.2	
		ePg	14 33.00		
		eSn	14 59.00		
		eSb	15 04.50		
		iSg	15 13.50		
IFR	3.34	178 iPn	14 22.00	-1.0	
		iSn	15 00.50		
GUD	3.87	12 eP	14 30.50	-0.1	
	0.3s	0.03nm			
		eS	15 16.30		
AVE	3.97	207 ePn	14 32.00	0.1	
		iSn	15 17.00		
TIO	6.15	196 ePn	15 01.00	-1.8	
		eSn	16 10.00		
EPF	7.51	33 Pn	15 21.00	-0 8	
		Sn	16 45 80		
		Sg	17 30.30		
LFF	9.25	27 Pn	15 43.40	-2.5	
CAF	9.77	32 Pn	15 50.00	-3.1X	
	S.D. = 1.2	on 24 of 25 obs.			

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* JUN 16, 1989 21h 22m 23.40± 0.97s
36.865 N ± 7.7km 5.335 W ±12.2km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

LIJA	0.07	299 iP	22 25.00	-0.9	
EPRU	0.13	39 iP	22 26.00	-0.6	
		eS	22 29.00		
ALJ	0.29	229 iP	22 30.00	0.5	
EJIF	0.43	195 eP	22 32.00	-0.1	
EHOR	0.96	4 eP	22 42 60	1.0	
		eS	22 58.00		
	S.D. = 1.1	on 5 of 5 obs.			

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* JUN 16, 1989 21h 24m 14.29± 1.53s
36 872 N ± 9 1km 5.242 W ±15.5km

DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPRU	0.09	5	iP	24 16.40	-0.6
			eS	24 19.50	
LIJA	0.14	281	iP	24 16.00	-1.7
ALJ	0.35	236	iP	24 22.00	0.4
EJIF	0.46	204	eP	24 23.40	-0.2
GIBL	0.57	266	iP	24 27.00	1.1
EHOR	0.95	360	eP	24 33.20	0.9
			eS	24 49.00	

S.D. = 1.3 on 6 of 6 obs.

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* JUN 16, 1989 22h 16m 11.59± 0.64s
47.458 S ±12.9km 100.032 E ±14.4km
DEPTH = 10.0km (geophysicist)
4.8mb (4 obs.)
SOUTHEAST INDIAN RISE (435)

ASPA	35.92	61	iPc	23 13.50	-0.5
	1.6s		32.00nm	4.9mb	
	Z 22s		0.60um	4.3MszX	
			LR	35 16.50	
WRA	39.07	57	P	23 41.00	0.6
	1.3s		14.30nm	4.5mb	
WB5	39.14	57	eP	23 40.70	-0.3
SBA	39.23	162	eP	23 42.10	1.0
SPA	42.73	180	ePc	24 08.80	-1.5
	1.0s		26.00nm	4.9mb	
RMQ	43.36	79	eP	24 16.00	0.4
DMN	75.92	346	P	28 01.50	1.3
KKN	76.07	347	P	28 00.00	-1.0
GKN	76.38	346	P	28 01.50	-1.2
BNG	87.49	279	iPc	29 02.00	1.2
	0.6s		3.00nm	4.7mb	
SUF	124.41	328	ePKP	35 15.20	4.1X
ALE	144.40	356	ePKP	35 48.00	0.1
	0.6s		4.00nm		
WDC	148.93	87	ePKP	36 06.80	10.3X
CMB	149.16	93	e(PKP)	36 05.00	8.0X
KVN	151.22	93	ePKP	36 06.60	6.3X

S.D. = 1.1 on 11 of 15 obs.

& JUN 16, 1989 22h 25m 22.80s
45.705 N 111.368 W
DEPTH = 1.3km
MONTANA (456)
<BUT>. ML 3.6 (BUT). Felt (III) at Belgrade, Ennis and Gallatin Goteway. Also felt in the Amsterdam area.

MEMT	0.30	110	iPc	25 28.80	0.1
LCCM	0.38	291	iPc	25 30.50	0.1
BGMT	0.67	225	iPc	25 35.70	-0.4
LRM	0.77	279	iPc	25 37.40	-0.7
BUT	0.89	291	ePc	25 39.70	-0.9
HRY	1.06	342	ePd	25 42.80	-0.8
CCMT	1.32	234	iPc	25 47.40	-0.8
DMMT	1.49	322	eP	25 49.70	-1.2
PTI	2.92	195	e(P)	26 13.50	2.0
SES	4.70	3	eP	26 33.00	-3.5
RSSD	5.44	104	e(P)	26 52.00	4.7
KVN	8.31	219	e(P)	27 21.50	-5.9

12 obs. assaciated

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* JUN 16, 1989 22h 31m 13.43± 0.93s
40.793 N ±16.7km 29.287 W ±12.5km
DEPTH = 10.0km (geophysicist)
4.3mb (8 obs.)
AZORES ISLANDS REGION (404)

TOL	19.25	84	eP	35 40.00	-0.6
EPF	22.11	74	eP	36 10.20	-0.3
	1.6s		24.80nm	4.4mb	
EKA	22.54	41	P	36 16.00	1.4
	1.0s		2.30nm	3.6mb	
LSF	22.92	66	eP	36 19.40	1.0
	1.6s		24.80nm	4.5mb	
CAF	23.27	69	eP	36 22.00	0.1
	1.4s		8.70nm	4.1mb	
BGF	23.84	65	eP	36 27.20	-0.1
	1.4s		14.80nm	4.4mb	
SSF	24.31	64	eP	36 31.90	-0.1
LOR	24.57	64	eP	36 34.50	0.1
	1.5s		10.40nm	4.3mb	
MBC	50.83	342	eP	40 14.00	-1.5
	0.8s		3.00nm	4 3mb	
BNG	56.07	117	iPc	40 54.00	-1 1
	0.4s		3.00nm	4.7mb	
ZOBO	67.24	221	eP	42 12.00	1.1

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

JUN 16, 1989 22h 39m 20.48± 0.35s
47.448 S ± 8.5km 100.080 E ± 8.5km
DEPTH = 10.0km (geophysicist)
5.3mb (16 obs.)
SOUTHEAST INDIAN RISE (435)

MAW	27.69	210	eP	45 08.80	-1.3
WARB	29.80	54	eP	45 17.00	-12.6X
STK	35.08	79	iPc	46 15.80	0.2
	0.9s		36.00nm	5.2mb	
ASPA	35.89	61	iPd	46 21.80	-0.8
	1.1s		44.00nm	5.2mb	
	Z 22s		5.42um	5.3MszX	
			LR	58 23.00	
CMS	38.16	82	eP	46 41.50	0.0
WRA	39.04	57	Pc	46 48.10	-0.9
	0.9s		24.00nm	4.9mb	
WB5	39.10	57	eP	46 48.50	-1.1
SBA	39.23	162	eP	46 50.70	0.7
QIS	41.67	64	eP	47 10.00	-0.7
	0.7s		19.00nm	4.9mb	
SPA	42.74	180	ePc	47 18.20	-1.1
	1.1s		42.86nm	5.1mb	
			e	47 24.30	
RMQ	43.33	79	iPd	47 24.50	0.3
	0.9s		71.00nm	5.4mb	
BRS	45.43	83	iPc	47 41.30	0.1
			eS	54 28.00	
MSZ	45.80	113	eP	47 48.00	4.2X
CTA	46.17	70	iPd	47 46.60	-0.5
	1.0s		71.00nm	5.6mb	
			iS	54 35.00	
			iSS	58 00.00	
SNA	50.09	206	iPc	48 16.50	-0.5
	1.0s		42.00nm	5.4mb	
SEK	58.20	262	eP	49 15.50	-1.7
	1.2s		39.06nm	5.3mb	
DZM	58.21	89	iPc	49 15.70	-1.6
GBA	64.06	335	Pd	50 06.30	9.7X
	1.0s		6.20nm	4.8mb	
CHG	65.96	359	ePc	50 08.40	-0.4
	1.2s		19.53nm	5.2mb	
KMI	72.27	3	Pd	50 49.50	1.5
PKI	75.83	347	P	51 07.90	-0.8
	1.0s		20.00nm	5.2mb	
DMN	75.92	346	P	51 08.60	-0.5
	1.0s		33.00nm	5.4mb	
KKN	76.07	347	P	51 07.60	-2.3
	1.2s		50.00nm	5.5mb	
GUN	76.09	347	P	51 09.80	-0.4
	1.2s		92.00nm	5.7mb	
GKN	76.38	346	P	51 10.90	-0.7
	1.1s		51.00nm	5.5mb	
CD2	78.07	3	eP	51 21.20	0.5
XAN	81.50	7	P	51 40.00	0.9
QUE	82.84	332	eP	51 46.20	-0.1
LZH	83.23	3	Pc	51 48.50	0.4
TIY	85.50	10	eP	51 58.70	-0.7
	Z 23s		1.86um	5.4MszX	
	N 17s		1.60um		
			S	02 30.00	
GTA	86.48	360	eP	52 05.00	0.8
BNG	87.52	279	iPc	52 10.50	0.7
	1.0s		20.00nm	5.4mb X	
BTO	88.11	8	eP	52 12.40	0.3
BJI	88.28	12	eP	52 12.50	-0.2
	Z 24s		1.04um	5.2MszX	
			eSKS	02 46.00	
			eS	03 06.00	
WMO	91.54	351	eP	52 29.00	1.0
	Z 26s		2.00um	5.4MszX	
CNCB	115.15	193	Pdiff	54 02.50	-12.9X
LPB	115.44	193	Pdiff	54 03.00	-13.5X
			eLR	38 42.00	
ZOBO	115.70	193	Pdiff	54 02.00	-15.8X
	0.9s		9.08nm		
	Z 24s		0.81um	5.3MszX	
			eLR	38 36 00	
CLL	123.37	311	ePKP	58 25.00	6 7X
SUF	124.42	328	ePKP	58 21 00	0.9
	0.8s		3.60nm		
ALE	144.39	356	ePKP	58 56.00	-0.8
	0 6s		3.00nm		
INK	146.25	33	ePKP	59 01.00	0.8
MBC	146.98	16	ePKP	59 02.50	1.3
	0.8s		9.00nm		
SYP	147.49	99	ePKP	59 11.00	7.6X
BAR	148.57	105	ePKP	59 08.00	2.9
MWC	148.59	101	ePKP	59 07.00	1.7
PLM	148.86	103	ePKP	59 11.00	5.2X
RVR	148.91	102	ePKP	59 08.00	2.4
SBB	149.02	100	ePKP	59 13.00	7.2X
ISA	149.15	98	ePKP	59 15.00	9.0X
CLC	149.82	99	ePKP	59 11.00	4.0X
GLA	150.01	106	ePKP	59 14.00	6.7X
GSC	150.06	100	ePKP	59 16.00	8.6X
KVN	151.19	93	iPKP	59 12.60	3.5X
TNP	151.30	95	iPKP	59 07.70	-1.6
	0.5s		13.59nm		
			i	01 09.20	
ALQ	156.57	113	e(PKP)	59 32.00	15.3X
MEO	161.14	125	ePKP	59 22.50	1.0
FFC	164.39	54	ePKP	59 15.00	-9.1X
	1.0s		12.00nm		

S.D. = 1.2 on 41 of 58 obs.

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* JUN 16, 1989 22h 51m 08.94± 0.43s
47.492 S ± 9.9km 100.156 E ±11.3km
DEPTH = 10.0km (geophysicist)
5.4mb (9 obs.) 5.4Msz (4 obs.)
SOUTHEAST INDIAN RISE (435)

MAW	27.68	210	eP	56 57.00	-1.5
TAU	33.14	100	eP	57 47.00	-0.2
STK	35.04	79	eP	58 04.00	0.3
ASPA	35.87	60	iPc	58 09.80	-1.1
	Z 22s		8.71um	5.5MszX	
			LR	10 09.90	
WB5	39.08	57	eP	58 35.70	-2.2
SBA	39.17	162	eP	58 40.40	2.4
QIS	41.65	64	eP	58 58.00	-1.0
SPA	42.70	180	e(P)	59 06.00	-1.4
	1.2s		28.87nm	4.9mb	
	Z 20s		11.71um	5.8MszX	
BRS	45.38	83	iPc	59 35.80	6.5X
MSZ	45.73	113	P	59 38.00	6.3X
CTA	46.14	70	iPc	59 34.90	-0.4
	1.1s		37.34nm	5.3mb X	
SNA	50.08	206	eP	00 05.00	-0.3
	1.4s		81.40nm	5.5mb	
SEK	58.24	262	iPd	01 05.50	-0.5
	1.1s		18.99nm	5.1mb	
CHG	66.00	359	eP	01 57.00	-0.6
QIZ	66.78	10	eP	02 03.00	0.5
	N 21s		4.20um		
			S	11 00.00	
KMI	72.31	2	eP	02 37.00	0.3
GYA	73.84	6	P	02 47.00	1.6
	Z 22s		1.80um	5.3Msz	
	N 20s		3.50um		
	E 20s		2.90um		
			pP	02 56.00	29kmX
			S	12 21.00	
			ScS	12 53.00	
PKI	75.89	347	PKP	02 56.80	-0.7
	1.4s		43.00nm	5.3mb	
DMN	75 97	346	PKP	02 56.60	-1 3
	1 2s		46.00nm	5 4mb	
KKN	76.12	346	PKP	02 58.20	-0 5
	1.2s		44.00nm	5.4mb	
GUN	76.15	347	PKP	02 57.30	-1 7
	1.0s		64.00nm	5.7mb	
GKN	76.43	346	PKP	02 58.40	-1.9
	1.2s		59.00nm	5.6mb	
CD2	78.11	3	eP	03 11.30	2.0
	Z 22s		2.80um	5.5Msz	
	N 19s		3.80um		
			eS	13 05.40	
SSE	80.48	18	P	03 27.60	5.4X
	Z 18s		0.45um	4.9Msz	
	N 20s		0.89um		
			eSKS	13 33.00	
XAN	81.54	7	eP	03 25.80	-1.9
	N 19s		4.00um		
			S	13 42 00	
QUE	82.90	331	eP	03 34.00	-1 1
LZH	83.27	3	Pc	03 39.00	2 2
	2 5s		0.08nm	2.5mb X	

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      N  20s      3.90um
      E  20s      2.20um
TIY     85.53  10 eP     03 49.40    1.4
      N  18s      2.30um
                  S      14 14 00
GTA     86.52 360 eP     03 52.80   -0.1
      Z  20s      4.50um          5.9Msz
      N  19s      2.40um
BNG     87.58 279 iPc    03 58.30   -0.3
      1.2s     28.00nm          5.4mb
BTO     88.14   7 eP     04 02.00    1.3
      Z  23s      4.50um          5.8MszX
      N  20s      3.30um
      E  20s      2.40um
BJI     88.31  12 eP     04 02.50    1.2
      Z  24s      1.62um          5.4MszX
                  eSKS   14 32.00
                  eS     14 48.00
MAIO    91.01 328 eP     04 16.00    1.8
WMO     91.59 351 eP     04 17.50    0.8
      Z  24s      2.70um          5.6MszX
                  pP     04 27.50   31kmX
                  SKS    14 46.00
                  S      15 18.00
CFR    111.80 314 ePdiff 05 58.00   10.4X
CLL    123.43 311 ePKP   10 08.00    1.1
ALE    144.44 356 ePKP   10 44.00   -1.4
      1.0s     7.00nm
INK    146.26  33 ePKP   10 47.00   -1.7
MBC    147.01  16 ePKP   10 50.50    0.8
      1.1s    17.00nm
BAR    148.51 105 ePKP   10 58.00    4.5X
MWC    148.53 101 ePKP   10 57.00    3.3X
PLM    148.80 103 ePKP   11 00.50    6.4X
RVR    148.85 102 ePKP   10 58.00    4.1X
WDC    148.85  87 ePKP   10 59.50    5.8X
SBB    148.96 100 ePKP   10 56.00    1.8
FRI    148.99  95 ePKP   11 01.20    7.2X
ORV    149.08  89 e(PKP) 11 00.20    6.1X
CMB    149.08  93 ePKP   11 01.00    6.8X
ISA    149.09  98 ePKP   11 01.00    6.7X
CLC    149.76  99 ePKP   11 01.00    5.7X
GLA    149.95 106 ePKP   11 01.00    5.3X
GSC    150.00 100 ePKP   11 01.00    5.3X
KVN    151.14  93 ePKP   11 04.00    6.5X
TNP    151.24  95 ePKP   11 04.30    6.6X
PNT    153.74  71 ePKP   11 12.00   11.4X
ALQ    156.51 113 e(PKP) 11 08.50    3.4X
                  e      11 34.80
LRM    157.64  82 ePKP   11 13.50    7.3X
EDM    158.01  62 ePKP   11 08.00    1.9
     S.D. = 1.4  on  37 of  58 obs.
-----------------------------------------
&  JUN  16, 1989  23h 30m 52.32s
   62.025 N          150.628 W
   DEPTH =  20.6km
 CENTRAL ALASKA                    (  1)
      <AGS-P>

SKT      0.43 264 iP     31 01.53    0.4
                  S      31 08.55
PWA      0.52 136 iP     31 01 60   -1.0
                  S      31 09 02
SUA      0.57 186 iP     31 03.14   -0.4
                  S      31 11 64
PMR      0 83 121 iP     31 06 30   -1 7
GHO      0 85 107 eP     31 06 45   -1.8
PME      0.86 117 eP     31 08 49    0 1
CGLM     0.98 223 eP     31 09 61   -0.9
SPU      1.09 219 eP     31 10.61   -1.7
KNK      1.20 120 eP     31 12 80   -1.2
KTH      1 54 355 eP     31 18.26   -0.6
     10 obs. ossociated
-----------------------------------------
   JUN  16, 1989  23h 42m 35.12± 0.08s
   31.807 N ± 1.9km  137.982 E ± 2.0km
   DEPTH = 359.9km  (geophysicist)
   5.9mb ( 90 obs.)
 SOUTH OF HONSHU, JAPAN            (211)
      mb 6.2 (BRK). Felt (III JMA) at
      Fukushima, Mito, Tateyama,
      Tokyo, Utsunomiya ond Yokohama;
      (II JMA) at kumagaya and on
      Hachijo-jima, (I JMA) at Kofu,
      Kawaguchi-ko, Mishimo ond on
      Oshima. Depth from broadband
      displacement seismograms

      FAULT PLANE SOLUTION. P-Waves
       NP1 Strike= 15 Dip=85 Slip= -90
       NP2        195      5       -90
       Principal Axes:
        T                Plg=40  Azm=105
        P                  50      285
      Comment: The focal mechanism is
        moderotely well controlled and
        corresponds to normal
        faulting. The preferred fault
        plone is NP1.
      RADIATED ENERGY
       No. of sta:   9  Focal mech.  M
       Energy        0.2±0.0*10**14 Nm
      MOMENT TENSOR SOLUTION
      Dep 354              No. of sta: 12
      Moment Tensor;   Scale 10**18 Nm
        Mrr=-0.35        Mtt=-0.52
        Mff= 0.87        Mrt=-0.67
        Mrf=-4.05        Mtf=-1.43
       Principal oxes:
        T  Vol=  4.45  Plg=39  Azm= 80
        N       -0.07     21      188
        P       -4.38     44      299
      Best Double Couple:Mo=4.4*10**18
       NP1:Strike=106 Dip=21 Slip=-173
       NP2:         9     87      -69
      CENTROID, MOMENT TENSOR     (HRV)
      Dato Used: GDSN
      L.P.B.: 16S, 44C  M.W.: 13S, 25C
      Centroid Locotion:
      Origin Time        23:42:40.2 0.1
      Lat 31.76N 0.01 Lon 138.11E 0.02
      Dep 366.1 0.9 Half-duration  6.0
      Moment Tensor;   Scale 10**18 Nm
        Mrr= 0.06 0.04  Mtt=-0.49 0.06
        Mff= 0.43 0.06  Mrt=-1.20 0.05
        Mrf=-3 90 0.05  Mtf=-0.75 0.06
       Principol Axes:
        T  Vol=  4.17  Plg=44  Azm= 95
        N        0.02     12      197
        P       -4.19     43      299
      Best Double Couple:Mo=4.2*10**18
       NP1:Strike=105 Dip=12 Slip= 178
       NP2:        197     90       78

HJJ      2.00  49 iPd    43 29.70    2.0
                  iS     44 09.70
WKYJ     3.13 321 iP+    43 41.10    4.2X
                  S      44 31.10
OSH      3.17  21 iPd    43 38.50    1.4
                  iS     44 25.50
AJI      3.36  16 iPd    43 40.80    1.9
                  iS     44 29.30
MIS      3.39  13 iPd    43 41.50    2.4
                  iS     44 30.50
TAT      3.54  26 iPd    43 40.50   -0.1
                  iS     44 30.20
IIDJ     3.66 359 iP+    43 44.50    2.6
                  S      44 37.30
FUN      3.74  10 eP     43 36.00   -6.6X
KOF      3.88   7 P      43 46.00    2.1
                  S      44 38.30
YOK      3.88  21 P      43 45.50    1.6
                  iS     44 36.60
TKSJ     3 96 304 iP+    43 49.00    4.3X
                  S      44 46.10
TSRJ     4 08 336 iP+    43 49.60    3.7X
                  S      44 47.10
TOK      4.14  20 iPd    43 47.00    0.4
                  iS     44 40.20
CHJJ     4.31  11 iP+    43 49.60    1.2
KMG      4.48  15 iPd    43 50.70    0.6
                  S      44 46.20
MAT      4.73   2 P      43 56.00    3.2X
KAKJ     4.75  22 P      43 51.70   -1.2
MTMJ     4.77 358 P      43 55.10    1.8
YONJ     5.06 313 iP+    44 00.30    3.9X
                  S      45 06.30
SHK      5.21 303 iPd    44 01.90    3.9X
       0.8s  2388.06nm          6.2mb
NIIJ     5.49   9 iP+    44 00.80   -0.2
                  S      45 06.10
KAGJ     6 09 266 iP+    44 13.20    5.3X
                  eS     45 29.50
KUMJ     6 11 279 iP+    44 13.20    5.1X
                  S      45 31.10

SHNJ     6.22 294 iP+    44 13.60    4.2X
                  eS     45 29.90
YAMJ     6.57  14 iP+    44 12.80   -0.6
                  S      45 25.60
OFUJ     7.85  21 P      44 27.50   -0.9
                  S      45 51.80
AOMJ     8.95  12 eP     44 41.70    0.4
MRRJ    10.88  12 P      45 03.00   -1.5
                  eS     46 58.50
HOOJ    11.37  20 P      45 10.90    0.6
                  eS     47 08.40
SAP     11.54  12 iP     45 12.20   -0.2
                  iS     47 16.80
KUSJ    12.47  23 P      45 23.20   -0.2
ASAJ    12.83  15 P      45 26.80   -0.9
SSE     14.36 272 iPd    45 44.00   -0.8
      6.0s     9.70nm          3.4mb X
    Z 13s     22.90um          4.4MszX
                  S      48 18.20
                  ScP    53 32.00
MDJ     14.38 335 ePd    45 44.40   -0.5
                  sP     47 12.00
                  eS     48 16.16
DL2     15.10 302 iPd    45 53.00    0.4
    N  10s     58.80um
                  eS     48 32.00
SNY     15.25 315 iPd    45 54.00   -0.2
    N  11s     44.20um
    E  11s     21.30um
                  sP     47 22.00
                  S      48 38.00
                  ScS    57 10.00
CN2     15.52 324 iPd    45 57.00   -0.1
      5.0s     20.60nm          3.7mb X
    N  11s     44.20um
    E  11s     21.30um
                  sP     47 22.00
                  S      48 38.00
                  ScS    57 10.00
YSS     15.62  12 P      45 57.00   -1.1
ANP     15.90 250 iP-     46 02.00    0.7
                  eS     48 52.00
TATO    16.02 249 ePd    46 03.36    0.9
NJ2     16.25 276 iPd    46 04.40   -0.4
      6 0s     12.20nm          3.4mb X
                  S      48 50.00
                  ScP    53 35.50
                  ScS    57 14.00
TIA     17.84 290 Pd     46 21.10    0.1
    Z  15s     16.90um          5.0Msz
    N  10s     14.40um
    E  10s     13.10um
                  sP     47 59.00
                  S      49 24.20
OZH     18.37 253 iPd    46 26.00   -0.4
      7.0s      7.60nm          3.1mb X
                  isP    48 01.00
                  iS     49 37.00
GUMO    19.20 159 eP     46 35.00    0.3
PJG     19.20 159 eP     46 35.00    0.3
GUA     19.26 159 ePc    46 35.50    0.2
      0.6s  2272.00nm          6.7mb
BJI     19.45 301 iPd    46 37.54    0.6
                  eS     49 52.15
WHN     20.26 273 iPd    46 46.00    1.1
      6.0s     18.10nm          3.6mb X
    Z  16s     10.10um          5.3MszX
    N  10s     20.70um
                  sP     48 24.00
                  S      50 08.00
                  ScP    53 44 40
TIY     21.77 293 iPd    47 00.40    0.9
      5.0s     19.20nm          3.7mb X
                  sP     48 45.00
                  S      50 35.50
                  PcP    50 43.50
                  ScS    57 33.00
BAG     22.02 230 ePd-   47 01.00   -1.2
HHC     23.05 300 iPd    47 12.00    0.5
      4.0s     12.90nm          3.6mb X
    Z  16s     41.80um          6.0MszX
    N  10s      5.00um
    E  10s     18.20um
                  sP     48 56.00
                  S      50 59.00
HKC     23.18 252 P      47 12.50   -0.2
GZH     23.49 254 iPc    47 15 00   -0.5
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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.

8.0s 4.10nm 2.8mb X
Z 11s 12.20um 5.6MszX
isP 49 00.00
S 51 00.00
BTO 24.13 299 iPd 47 22.00 0.5
3.0s 11.60nm 3.7mb X
Z 12s 26.40um 5.9MszX
E 12s 22.60um
sP 49 11.00
S 51 15.00
XAN 24.46 283 iPd 47 24.40 0.0
6.0s 9.70nm 3.3mb X
GYA 27.81 267 iPd 47 53.80 -0.9
4.0s 3.00nm 3.0mb X
pP 49 02.60 381kmX
PP 49 09.40
PcP 50 57.00
S 52 06.00
PcS 54 43.60
ScS 57 55.80
QIZ 28.33 250 P 48 00.40 1.3
7.5s 2.70nm 2.7mb X
LZH 28.55 288 ePd 48 01.36 0.2
pP 49 09.00 368kmX
sP 49 50.00
eS 52 20.62
e 52 43.79
e 53 12.76
eSS 54 38.43
CD2 29.17 277 iPd 48 06.00 -0.5
6.0s 7.00nm 3.2mb X
KMI 31.59 267 ePd 48 27.21 -0.6
6.0s 7.30nm 3.2mb X
pP 49 35.00 358kmX
esPc 50 17.84
eS 53 08.22
ScP 54 17.00
e 55 38.85
e 55 42.58
GTA 31.76 295 iPd 48 28.60 -0.4
6.0s 7.30nm 3.2mb X
Z 16s 25.80um 6.0MszX
KKM 32.73 223 ePd 48 38.00 0.6
SMY 33.43 41 eP 48 43.40 0.6
AAI 36.50 197 ePd 49 10.90 1.9
0.5s 8.00nm 4.3mb X
PCI 36.80 211 ePc 49 12.50 1.1
1.3s 20.00nm 4.3mb X
CHTO 37.39 259 ePd 49 16.47 0.1
ePP 50 52.48
esPc 51 06.55
epPPP 52 31.81
NST 37.96 254 ePd 49 23.00 2.0
BDT 38.09 257 eP 49 22.80 0.7
0.8s 177.03nm 5.4mb
ADK 38.50 45 iPc 49 24.50 -0.6
1.5s 1444.40nm 6.0mb
LAT 39.20 166 eP 49 31.50 0.4
NNT 39.97 250 iPd 49 38.50 1.0
LSA 40.06 280 Pd 49 40.30 1.5
S 55 19.00
WMO 40.92 302 ePd 49 46.49 1.4
3.0s 12.50nm 3.6mb X
epPd 50 58.50 365kmX
esPc 51 37.40
sS 54 41.00
e 54 51.62
eSS 58 55.17
ScS 59 04.50
PMG 41.91 166 iPc 49 52.80 -0.4
SNG 42.56 243 eP 49 59.80 1.2
1.3s 865.38nm 5.8mb
IPM 43.96 240 ePd 50 10.50 0.8
1.3s 560.80nm 5.7mb
KGM 44.09 235 ePc 50 12.20 1.5
MTN 44.88 189 iPc 50 16.30 -0.5
0.7s 157.00nm 5.4mb
e 52 06.00
e 55 07.00
e 56 23.00
GUN 45.01 279 Pd 50 18.90 0.7
KHKI 45.31 212 ePd 50 20.20 0.0
e 59 12.00
PKI 45.51 279 Pd 50 22.40 0.2
KKN 45.55 279 Pd 50 22.70 0.3
DMN 45.75 279 Pd 50 24.40 0.4
SVO 45.77 149 e(P) 50 22.00 -1.8

VSG 45.81 149 eP 50 23.00 -1.2
GKN 46.02 280 Pd 50 26.50 0.6
HNR 46.08 149 e(P) 50 24.00 -2.2
ANM 47.53 29 eP 50 37.20 0.4
KNA 48.10 192 eP 50 41.40 -0.3
0.3s 34.00nm 5.1mb
SDN 48.52 42 eP 50 42.40 -2.0
KSH 50.10 297 iPd 50 58.50 1.6
Z 10s 7.00um 6.0MszX
E 16s 19.70um
pP 52 14.00 368kmX
TTA 51.33 32 ePc 51 05.20 -0.4
WB5 51.51 184 iPc 51 06.20 -1.0
eS 57 58.00
NDI 51.99 283 iPd 51 10.80 0.0
1.2s 1140.63nm 6.1mb
eS 58 04.20
QIS 52.09 178 iPc 51 10.20 -1.2
0.2s 27.00nm 5.2mb
e 52 31.00
e 58 03.00
CTA 52.20 170 iPc+ 51 11.50 -0.8
1.4s 627.91nm 5.8mb
i 00 20.00
i 00 27.80
i 52 26.00
i 52 51.00
iPP 53 05.00
iS 58 06.00
CTAO 52.20 170 ePc 51 11.47 -0.9
epPc 52 24.58 350kmX
esPd 53 06.24
BRW 52.31 22 iPc 51 13.40 0.8
IMA 52.62 28 iPc 51 14.80 -0.3
1.1s 143.80nm 5.2mb
KDC 52.96 39 iPc 51 16.30 -1.2
PMR 54.52 34 iPc 51 27.30 -1.4
1.2s 332.00nm 5.6mb
COL 55.03 30 ePc 51 31.23 -1.1
COL 55.03 30 ePc 51 31.50 -0.8
esPd 53 26.83
eS 58 44.28
FBA 55.03 30 eP 51 31.50 -0.8
MBL 55.46 201 iPd 51 35.10 -0.7
0.4s 38.00nm 5.2mb
PVC 57.21 145 iPc 51 50.00 2.0
OPA 57.33 83 P 51 49.70 0.7
HON 57.49 84 ePc 51 49.36 -0.7
esP 53 45.24
GBA 58.02 267 Pd 51 53.50 -0.3
1.1s 690.10nm 6.0mb
NANU 58.18 205 iPd 51 54.50 -0.1
WARB 58.67 192 iPc 51 46.30 -11.7X
0.4s 16.00nm
POO 58.79 273 iPc 51 58.80 -0.3
1.2s 559.38nm 5.9mb
iS 59 52.00
RMQ 58.87 169 iPc 51 59.30 0.0
1.2s 588.00nm 5.9mb
BOM 59.51 274 iPd 52 03.30 -0.6
eS 59 40.00
QUE 59.87 289 iPd- 52 06.20 -0.2
eS 59 47.70
INK 60.32 25 iPc 52 07.40 -1.3
0.5s 53.00nm 5.3mb
BRS 60.53 165 iPd 52 09.60 -0.9
i 00 28.00
i 53 31.30
iS 59 56.90
MEKA 60.98 200 eP 52 13.00 -0.5
0.3s 14.00nm 5.0mb
SIT 62.22 38 P 52 20.90 -0.4
1.4s 681.82nm 6.0mb
MBC 62.32 15 ePd 52 21.20 -0.6
0.4s 45.00nm 5.4mb
VUN 62.93 136 iPc 52 27.10 0.7
SVA 63.01 136 ePc 52 28.10 1.2
FORR 63.01 190 iPc 52 26.10 -0.6
0.3s 77.00nm 5.8mb
CMS 63.39 173 iPc 52 29.10 0.0
1.2s 238.00nm 5.7mb
COO 63.43 167 eP 52 29.00 -0.5
STK 63.43 177 iPc 52 29.60 0.2
0.6s 54.00nm 5.4mb
MAIO 63.49 298 iPd- 52 30.70 0.8
2.0s 674.42nm 5.9mb
eS 00 34.00

MRWA 64.19 201 eP 52 34.00 -0.3
0.4s 10.00nm 4.8mb X
COOL 64.36 196 eP 52 35.00 -0.4
BAL 65.27 200 eP 52 41.00 -0.2
ALE 65.48 3 iPd 52 42.80 0.9
1.2s 114.00nm 5.5mb
KLB 65.90 199 eP 52 40.00 -5.1X
AFI 66.20 125 ePc 52 46.60 -0.9
NWAO 67.30 199 eP 52 54.00 0.2
KEV 67.32 339 ePd 52 53.74 0.2
0.9s 118.30nm 5.6mb
esS 01 16.00
ScS 02 08.00
eSS 03 44.00
e 09 00.00
e 10 36.00
esPc 54 50.72
e 57 07.82
CAN 67.57 170 iPc 52 55.90 0.4
CNB 67.62 170 iPd 52 56.10 0.3
1.2s 222.00nm 5.8mb
RKG 68.44 199 eP 53 04.00 3.2X
SOD 68.68 337 iP 53 02.20 0.3
BFO 68.76 176 iPc 53 01.70 -0.9
TOO 69.37 174 iPc 53 07.20 0.8
e 54 30.00
TRO 69.72 341 iPd 53 07.60 -0.6
YKA 69.74 28 eP 53 10.70 2.3
TEH 69.75 300 eP 53 10.00 0.9
YKC 69.80 28 iPc 53 08.00 -0.8
IR2 70.14 300 iPd 53 12.00 0.6
IR4 70.32 300 iPd 53 13.60 1.0
IR7 70.34 300 iPd 53 13.30 0.7
IR1 70.40 300 iPd 53 14.00 1.0
IR5 70.57 300 iP 53 14.60 0.6
DAG 70.72 354 iPd 53 13.40 -0.6
0.6s 266.67nm 6.1mb
SUF 71.36 333 iP 53 17.60 -0.4
0.6s 114.30nm 5.8mb
SHI 71.53 294 eP 53 19.00 -0.8
PGC 72.03 44 eP 53 22.00 -0.1
1.0s 268.00nm 5.9mb
TAB 72.38 304 iPd- 53 25.50 0.9
NUR 73.21 332 iP 53 28.40 -0.3
0.7s 160.20nm 5.8mb
Z 17s 3.90um 5.8MszX
esS 02 24.00
eScS 02 52.00
eSS 04 16.00
LR 26 40.00
esP 54 52.00
ePP 55 24.00
epPP 56 16.00
KER 73.51 300 iP- 53 31.30 0.1
RMW 73.57 44 P 53 31.80 0.6
LON 73.92 45 ePc 53 32.60 -0.6
esPd 55 32.34
PNT 73.92 42 iPc 53 32.90 -0.2
1.4s 421.00nm 6.0mb
SLY 74.10 302 iPc 53 34.50 0.2
iS 02 35.00
iScS 03 07.00
ePS 03 29.50
e 04 18.50
i 53 54.00
epP 54 56.00 361kmX
isP 55 34.50
iPP 56 28.50
iPPP 58 11.50
BEE 74.77 291 iP 53 37.30 -0.9
0.5s 265.00nm 6.2mb
TAU 74.84 173 iPc 53 39.00 0.9
DHR 74.93 292 iPd 53 38.20 -0.9
EDM 75.21 36 iPc 53 40.00 -0.3
MSL 75.41 304 iPc 53 41.50 -0.2
eS 02 47.50
eScS 03 04.50
ePSP 03 45.00
eS 04 12.50
epP 55 09.50 392kmX
esP 55 42.00
FHC 75.46 51 ePc 53 42.90 1.0
DPW 75.47 42 P 53 42.00 0.1
pP 55 03.00 357kmX
BHD 76.02 300 iPc 53 45.00 0.0
iS 02 55.00
iSKS 03 16.00

16d 23h

Sta	Dist	Az	Phase	Time	Res
			ipP	55 07.00	361kmX
			isP	55 45.00	
UPP	76.37	333	iP	53 45.90	-0.6
	1.5s	1900.00nm			6.6mb
			iS	02 57.00	
			iPP	55 12.80	
WDC	76.52	51	iPc	53 48.10	0.4
			eSP	03 04.20	
			epP	55 10.30	362kmX
LBFM	76.56	50	iP	53 48.80	0.6
RGS	76.70	338	iP	53 48.50	0.3
MIN	77.26	50	ePc	53 51.50	-0.5
			epP	55 14.50	365kmX
HFS	77.64	335	eP	53 53.10	-0.4
	1.1s	342.00nm			6.1mb
Z	16s	1.77um			5.5MszX
			LR	26 02.00	
KRP	77.72	150	Pc	53 56.00	1.9
	1.3s	1030.00nm			6.5mb
			pP	55 18.00	359kmX
			PP	56 38.00	
ORV	77.73	51	iPc	53 54.10	-0.3
			eSP	03 13.80	
			epP	55 17.00	364kmX
NB2	77.87	336	P	53 54.20	-0.6
NRA0	77.98	336	P	53 54.50	-0.8
SES	78.00	38	iPc	53 55.50	-0.2
	1.2s	657.00nm			6.3mb
BRK	78.09	53	iPc	53 56.50	0.2
BKS	78.10	53	iPc	53 56.00	-0.4
	1.3s	686.00nm			6.3mb
			ipPc	55 16.00	349kmX
			isPd	55 56.00	
PCC	78.19	53	ePc	53 56.70	-0.2
RYD	78.49	292	iPd	53 58.90	0.1
GCC	78.70	53	ePc	53 59.60	0.0
MHC	78.78	53	iPc	54 00.50	0.3
			epP	55 20.00	346kmX
GDH	78.89	4	iPd	54 02.00	2.0
	0.9s	70.59nm			5.5mb
			iS	03 28.00	
			i	05 54.00	
			i	08 45.00	
CMB	79.27	52	ePc	54 01.97	-0.7
			pP	55 26.00	368kmX
			esPd	56 02.26	
			ePP	57 06.83	
			PP	57 07.00	
PRS	79.49	54	iPc	54 04.30	0.4
			eSP	03 30.60	
IAS	79.57	319	eP	54 04.00	0.0
FFC	79.63	31	iPc	54 03.80	-0.4
	0.7s	75.00nm			5.6mb
LLA	79.64	53	iPc	54 04.80	0.2
BUT	79.72	42	ePc	54 05.70	0.6
HRY	79.72	41	ePc	54 05.60	0.6
LRM	79.89	42	iPc	54 06.60	0.5
KIW	79.96	152	P	54 05.50	-0.5
MNG	79.98	152	eP	54 05.50	-0.6
TCW	80.01	153	eP	54 05.60	-0.6
PRI	80.08	54	iPc	54 07.90	0.8
BIR	80.08	319	eP	54 10.00	3.3X
PPE	80.11	319	ePc	54 07.00	0.1
CCMT	80.17	43	ePc	54 07.60	0.1
MRW	80.19	153	P	54 06.70	-0.4
LCCM	80.21	42	iPc	54 08.00	0.4
OASM	80.21	295	iPd	54 08.10	0.3
CAW	80.23	152	eP	54 06.90	-0.5
KVN	80.23	50	P	54 08.00	0.1
			pP	55 33.00	372kmX
SNZO	80.26	153	ePc	54 06.73	-0.7
			esPd	56 07.02	
WEL	80.26	153	P	54 07.00	-0.5
FRI	80.28	53	iPc	54 08.10	0.2
			eSP	03 40.40	
			epP	55 27.40	343kmX
			ePP	57 14.20	
BER	80.29	338	iP	54 08.00	0.5
PGZ	80.30	151	P	54 07.40	-0.3
	0.9s	108.00nm			5.7mb
WDW	80.34	153	P	54 07.30	-0.6
PTT	80.37	320	eP	54 09.00	0.8
CFR	80.41	318	ePd	54 08.50	0.1
MTW	80.44	152	P	54 07.90	-0.6
CCW	80.45	153	eP	54 08.20	-0.3
BGMT	80.47	42	ePc	54 09.60	0.5
MOW	80.57	153	P	54 08.60	-0.5

Sta	Dist	Az	Phase	Time	Res
ANTO	80.61	311	ePd	54 10.81	1.1
			esPc	56 10.27	
			ePP	57 19.31	
BLW	80.61	152	P	54 08.90	-0.5
BBTK	80.64	311	iPd	54 11.00	1.1
VRI	80.82	319	ePd	54 11.50	0.9
BRD	80.85	318	ePd	54 13.00	2.3
MSZ	80.85	159	P	54 11.20	0.7
			e	55 40.00	
MEMT	80.86	42	ePc	54 11.70	0.6
AKU	81.07	350	eP	54 13.20	1.7
	1.7s	461.54nm			6.0mb
			i	55 33.70	
			e	57 21.70	
COP	81.26	332	iPd-	54 11.70	-0.9
	1.4s	753.49nm			6.3mb
PSN	81.27	316	iPd	54 14.00	1.1
TNP	81.34	51	P	54 13.70	0.0
ISR	81.36	318	iPd	54 15.00	1.5
SYP	81.41	55	eP	54 15.00	0.9
BMR	81.48	322	ePd	54 03.00	-11.0X
MLR	81.49	319	iPd	54 15.00	0.8
ISA	81.83	53	eP	54 15.00	-1.1
CJR1	82.02	321	eP	54 17.90	1.1
CEI	82.02	322	eP	54 23.00	6.3X
BUC	82.05	318	ePd	54 20.00	3.1X
BUC1	82.13	318	iPd	54 28.00	10.7X
CMP	82.13	319	iPd	54 18.00	0.6
SPC	82.19	324	iPd	54 19.10	1.3
			i	54 46.00	
			e	55 46.40	
			i	57 31.70	
GBZT	82.20	313	iPd	54 20.70	2.9X
HRI	82.23	304	iPd	54 19.30	1.0
ISK	82.27	314	eP	54 18.00	-0.1
CLC	82.34	53	eP	54 18.00	-0.7
FRB	82.47	12	ePd	54 18.50	-0.2
	0.4s	26.00nm			5.4mb
FAM	82.50	307	eP	54 19.50	0.1
CTT	82.61	314	iP	54 19.70	-0.2
JARJ	82.65	303	Pd	54 20.90	0.6
ALT	82.78	312	iP	54 21.20	0.3
BURJ	82.79	303	Pd	54 21.40	0.4
SBB	82.81	54	eP	54 21.00	-0.1
PAS	82.87	54	ePc	54 21.07	-0.3
			epPc	55 42.73	353kmX
			ePP	57 36.19	
MWC	82.91	54	eP	54 22.00	0.2
DEV	82.92	320	iPc	54 22.00	0.7
DRA	82.93	319	ePc	54 22.00	0.6
JMB	82.94	316	iPd	54 22.00	0.5
DUG	82.96	47	P	54 22.90	1.1
SALJ	82.96	303	Pd	54 22.70	0.8
CSS	82.97	307	eP	54 22.00	0.1
KSP	82.99	327	iPd	54 21.60	0.0
	1.4s	715.00nm			6.3mb
			i	55 50.00	
			e	58 49.50	
KFNJ	83.04	303	Pd	54 22.90	0.7
REY	83.07	351	iP	54 23.70	2.0
OUTJ	83.11	302	Pd	54 23.10	0.4
GSC	83.17	53	eP	54 23.00	0.1
PSZ	83.20	323	iP	54 24.00	1.2
PVL	83.21	317	iPd	54 24.00	1.2
BRN	83.27	330	iPd	54 23.80	0.9
			eS	04 06.00	
			epP	55 48.50	367kmX
ZNT	83.30	304	iPd	54 24.60	1.1
BCK	83.39	310	iP	54 22.50	-1.5
BNT	83.39	314	iP	54 25.10	1.3
DST	83.39	313	iP	54 24.10	0.2
EDC	83.43	314	iP	54 23.90	-0.1
JER	83.43	303	eP	54 25.00	0.7
			eS	04 11.00	
RVR	83.51	54	eP	54 25.00	0.5
KHL	83.58	311	iP	54 24.80	-0.1
PPCY	83.69	307	eP	54 25.00	-0.4
DAU	83.79	46	P	54 27.30	1.1
BZS	83.79	321	iPc	54 26.00	0.3
MKT	83.92	303	iPd	54 27.50	0.8
TIM	83.92	321	iPd	54 26.70	0.4
BRG	84.04	328	iPd	54 27.00	0.2
	1.8s	480.00nm			6.0mb
			iSKS	04 12.00	
			iS	04 18.00	
			ipP	55 55.50	385kmX
			esP	56 28.00	

Sta	Dist	Az	Phase	Time	Res
SRO	84.07	324	iPd	54 27.60	0.6
			e	04 23.20	
			e	55 32.80	
			i	55 56.70	
SRO	84.07	324	iPd	54 27.60	0.6
			e	04 23.20	
			e	55 32.80	
			i	55 56.70	
KDZ	84.12	316	iP	54 29.00	1.5
CLL	84.15	329	iPd	54 27.10	-0.3
	1.8s	670.00nm			6.2mb
			eSKS	04 12.00	
			iS	04 19.00	
			ipP	55 56.80	391kmX
PLM	84.22	54	eP	54 28.00	-0.3
ELL	84.24	310	iP	54 27.70	-0.6
PLD	84.26	317	eP	54 29.00	0.9
PGB	84.30	317	iPd	54 29.00	0.6
CPE	84.32	55	eP	54 30.00	1.4
TPC	84.35	53	eP	54 28.00	-0.8
RDO	84.36	315	eP	54 28.60	0.0
			ePcP	55 59.00	
PRU	84.39	327	iPd	54 23.80	-4.8X
	1.8s	453.10nm			6.0mb
Z	14s	4.30um			6.0MszX
N	14s	3.00um			
E	14s	3.30um			
			eS	04 22.00	
			e	54 39.80	
ZST	84.41	325	iPd	54 29.10	0.4
Z	14s	8.00um			6.3MszX
			e(S)	03 44.20	
			e(S)	04 14.00	
			i	55 58.00	
			i	56 24.00	
AYN	84.44	300	iPd	54 29.50	0.3
RZN	84.51	316	iPd	54 30.00	0.3
BAR	84.73	55	eP	54 31.00	0.3
VKA	84.75	325	iPd	54 31.00	0.6
	4.0s	2209.00nm			6.3mb X
Z	16s	5.30um			6.0MszX
			eSKS	04 12.00	
			i	04 18.00	
			i	04 29.00	
			LR	36 32.00	
			ipP	56 00.70	390kmX
			i	56 29.40	
			i(sP)	56 41.80	
			iPP	57 55.30	
			ipPP	59 08.00	
MBH	84.76	302	iPd	54 31.30	0.5
AFR	84.80	114	eP	54 30.00	-1.0
	1.0s	220.00nm			5.9mb
KSL	84.82	310	eP	54 30.00	-1.0
			ePcP	56 00.00	
PMO	84.83	111	iP	54 33.00	1.8
	1.3s	240.00nm			5.9mb
VTS	84.83	318	iPd	54 32.00	0.9
HAY	84.86	53	eP	54 32.60	1.3
HQL	84.91	301	iPd	54 32.00	0.4
IZM	84.97	312	eP	54 31.70	-0.1
PPT	84.97	114	eP	54 32.00	0.1
	1.0s	180.00nm			5.9mb
Z	20s	1.00um			5.2Msz
SRFA	85.00	301	iPd	54 32.30	0.3
PAE	85.02	114	eP	54 32.00	-0.1
	1.0s	150.00nm			5.8mb
SOP	85.03	325	ePd	54 32.50	0.7
TPT	85.04	111	iP	54 33.60	1.4
	1.3s	170.00nm			5.7mb
PPN	85.06	114	eP	54 34.00	1.7
	1.0s	95.00nm			5.6mb
PRK	85.07	314	iPd	54 32.30	0.1
YER	85.07	311	iP	54 32.20	-0.1
IKP	85.14	55	eP	54 34.40	1.6
MMB	85.15	317	iPd	54 32.00	-0.6
MOX	85.24	329	iPd-	54 33.00	0.2
	1.8s	331.00nm			5.9mb
Z	14s	7.00um			6.2MszX
N	14s	4.30um			
E	16s	3.50um			
			i	04 15.00	
			ipP	56 02.00	386kmX
RUV	85.34	111	iP	54 35.50	1.8
	1.3s	160.00nm			5.7mb
TVO	85.35	114	eP	54 36.00	2.2
	1.0s	220.00nm			6.0mb

HOF	85.36	329	iPd	54 33.30	-0.2
	1.8s	440.00nm			6.0mb
			eS	04 21.90	
KHC	85.44	327	iPd	54 34.30	0.4
	1.5s	178.50nm			5.7mb
			S	04 20.00	
			e	56 01.80	
RSSD	85.63	40	P	54 35.00	-0.2
			pP	56 00.00	366kmX
WIT	85.66	333	ePd	54 35.50	0.7
			e(S)	04 35.00	
			eSP	05 31.00	
			e	55 11.00	
			epP	56 00.50	366kmX
			ePP	57 59.00	
WET	85.75	327	iPd	54 35.40	0.0
	2.0s	575.00nm			6.1mb
GLA	85.79	54	eP	54 37.00	1.1
RSON	85.92	30	P	54 35.50	-0.6
	0.7s	37.92nm			5.4mb
KMR	85.94	326	iP-	54 36.80	0.5
			i	04 39.40	
			i	05 32.30	
			i	56 00.90	
			i	56 37.70	
PLG	86.08	316	eP	54 36.50	-0.7
			ePcP	56 07.50	
GRF	86.11	329	iPKPd	54 37.40	0.3
	Z 15s	6.60um			6.2MszX
			id	04 40.00	
			e	56 00.60	
			e	56 06.70	
GRFO	86.11	329	ePd	54 37.83	0.8
			epPd	56 00.88	357kmX
			ePP	58 03.38	
WTS	86.24	332	iPd	54 37.30	-0.3
	2.0s	378.00nm			6.0mb
			e(S)	04 36.00	
			eSP	05 34.00	
			epP	56 01.00	359kmX
			ePP	57 59.00	
PTJ	86.55	324	iPd	54 38.70	-0.7
ZAG	86.60	324	iPd	54 39.20	-0.2
			iS	04 30.00	
			i	56 09.60	
KAP	86.73	310	eP	54 39.30	-1.0
BHG	86.77	326	iPd	54 39.80	-0.5
	1.9s	666.00nm			6.2mb
DBN	86.79	333	iP-	54 41.00	0.8
			iPPP	00 01.00	
			iSKS	04 31.00	
			iS	04 44.00	
			iPS	05 41.00	
			isS	07 26.00	
			ipP	56 11.00	390kmX
			esP	56 40.00	
			iPP	58 10.00	
KOT	86.86	303	ePd	54 40.50	-0.5
NEO	86.89	315	eP	54 40.10	-0.9
TNS	86.91	330	iPd	54 41.00	0.0
			id	56 11.20	
			ic	58 09.30	
PHP	86.98	318	iPd	54 45.60	4.2X
KBA	87.01	326	iPd	54 40.60	-1.1
	1.8s	213.00nm			5.8mb
			ipP	56 07.90	376kmX
			iPP	58 12.30	
			i	58 18.00	
EKA	87.04	339	P	54 41.00	-0.4
	1.8s	464.80nm			6.1mb
KZN	87.11	317	eP	54 41.00	-1.2
LJU	87.17	324	iPd	54 41.50	-0.7
			eS	04 29.00	
			e	05 50.00	
			e	56 08.50	
VBY	87.18	324	iPd	54 41.60	-0.7
FUR	87.20	327	iPd	54 42.40	0.1
	2.0s	985.00nm			6.4mb
			iS	04 32.40	
HLW	87.25	304	ePd-	54 43.00	0.1
			eS	04 34.00	
			eSS	06 12.00	
			eSSS	08 11.00	
			ePP	56 08.00	
			ePPP	58 16.00	
SDA	87.30	319	eP	54 42.40	-0.5
RBL	87.36	325	Pd	54 42.00	-1.2
LACI	87.43	319	eP	54 39.20	-4.3X
ATH	87.43	314	eP	54 44.00	0.4
			eScS	04 32.00	
			ePP	56 41.00	
CEY	87.43	324	ePd	54 42.60	-0.9
			e	56 06.50	
VOY	87.49	325	iPd	54 42.50	-1.4
TIR	87.53	318	eP	54 43.20	-0.8
			iS	04 32.00	
ENN	87.54	332	iPd	54 43.70	-0.2
	2.0s	500.00nm			6.1mb
			eSP	05 48.00	
			epP	56 08.00	361kmX
			iPP	58 08.60	
			i	58 16.00	
MEM	87.63	332	iPd	54 43.73	-0.5
			e	56 07.60	
			PP	58 09.30	
FVI	87.63	326	P	54 43.00	-1.4
GOL	87.76	44	P	54 46.00	0.5
	1.0s	266.50nm			6.1mb
			pP	56 10.00	359kmX
TRI	87.78	325	iPd	54 43.60	-1.5
GLD	87.82	44	P	54 47.00	1.3
NPS	87.92	311	eP	54 45.20	-0.8
UCC	88.13	333	iP-	54 47.00	0.3
			iSKS	04 36.00	
			S	04 55.00	
			e	56 11.20	
			iPP	58 16.00	
TPE	88.14	317	eP	54 48.00	1.0
HVAR	88.17	321	iPc	54 46.40	-0.7
GWF	88.21	330	P	54 46.76	-0.4
OGA	88.26	327	iPd	54 47.40	-0.3
	1.5s	251.00nm			5.9mb
WLF	88.30	331	Pd	54 47.50	0.0
			S	04 56.20	
			SP	06 02.20	
			e	56 14.50	
SNF	88.39	332	iPd	54 47.27	-0.6
			e	56 12.40	
			PP	58 19.70	
SRN	88.42	317	iP	54 48.50	0.3
CTI	88.57	326	Pd	54 47.50	-1.5
DOU	88.59	332	Pc-	54 48.90	0.0
			SKS	04 34.00	
			SP	06 03.00	
			e	11 01.00	
			PcP	54 52.40	
			e	56 21.00	
			iPP	58 22.00	
VAM	88.74	312	eP	54 50.00	0.2
SLE	88.75	329	ePd	54 49.00	-0.7
SAX	88.75	328	ePd	54 49.40	-0.7
CDF	88.79	330	P	54 49.33	-0.6
OSS	88.81	327	ePd	54 49.90	-0.3
FEL	88.88	329	P	54 49.53	-0.9
ECH	88.99	330	P	54 49.49	-1.3
ZLA	89.01	328	ePd	54 50.20	-0.7
VLS	89.19	316	eP	54 50.80	-1.1
LLS	89.20	328	ePd	54 51.50	-0.5
VDL	89.27	327	ePd	54 52.10	-0.2
MOF	89.28	329	P	54 51.53	-0.7
LCI	89.29	319	P	54 52.00	-0.3
DMU	89.39	340	iPd	54 52.50	0.0
	0.6s	40.00nm			5.5mb
BBS	89.41	329	P	54 52.17	-0.6
SAL	89.42	326	P	54 52.10	-0.7
BSF	89.44	330	P	54 52.00	-1.0
VITF	89.49	330	P	54 52.45	-0.6
HAU	89.50	330	iPd	54 52.60	-0.6
	1.6s	199.00nm			5.8mb
YRH	89.63	338	eP	54 53.30	-0.3
	1.6s	519.00nm			6.2mb
MDI	89.68	327	P	54 55.20	1.3
ARV	89.77	323	P	54 54.50	0.0
LOMF	89.80	329	P	54 53.83	-0.8
DLE	89.82	340	iPd	54 54.40	-0.1
	0.6s	68.00nm			5.7mb
TMA	89.82	327	ePd	54 54.10	-0.8
ALP	89.96	323	eP	54 55.09	-0.4
SFI	90.01	324	Pc	54 56.60	1.1
VAI	90.05	327	P	54 54.70	-0.9
PGD	90.11	324	P	54 56.90	0.7
ANMO	90.16	48	ePc	54 56.79	0.1
			epPc	56 20.11	354kmX
			esPd	56 57.08	
			ePP	58 26.92	
ALO	90.16	48	iPc	54 57.10	0.4
	1.6s	217.50nm			5.8mb
	Z 18s	1.55um			5.5Msz
			eS	04 56.00	
			e	55 35.20	
			epP	56 21.50	359kmX
			e	56 36.50	
CRE	90.18	324	P	54 55.50	-1.0
ASS	90.22	323	Pc	54 56.60	0.0
ETA	90.23	339	eP	54 56.20	-0.2
	1.6s	502.00nm			6.2mb
MMK	90.28	328	ePd	54 56.90	-0.2
AOU	90.35	322	Pc	54 57.70	0.5
MME	90.38	325	Pc	54 57.80	0.2
FIR	90.41	325	eP	54 57.50	0.1
			iS	04 46.00	
DIX	90.51	328	ePd	54 57.90	-0.3
BDI	90.53	325	P	54 58.00	0.0
BOB	90.56	326	P	54 57.70	-0.5
ORX	90.59	327	P	54 56.69	-1.7
AZI	90.60	322	Pc	54 58.40	0.2
ORO	90.60	327	P	54 57.00	-1.4
SDI	90.60	322	Pd	54 57.60	-0.8
MNS	90.70	323	P	54 57.50	-1.3
ECP	90.73	339	eP	54 58.60	-0.1
	1.5s	493.00nm			6.2mb
EMS	90.73	328	ePd	54 58.50	-0.6
MGR	90.76	320	P	54 56.50	-2.6
PII	90.81	325	P	54 56.50	-2.7
LSD	91.10	328	P	55 00.53	-0.4
LOR	91.12	331	iPd	55 00.30	-0.4
	1.6s	291.50nm			6.0mb
SCH	91.13	14	eP	55 01.00	0.4
			pP	56 30.00	381kmX
RDP	91.13	322	P	55 00.00	-0.9
LPG	91.25	328	iPd	55 01.30	-0.3
RSP	91.29	328	P	54 59.92	-1.7
LBF	91.30	330	iPd	55 01.10	-0.4
CKI	91.37	327	P	54 59.50	-2.3
SSF	91.44	331	iPd	55 01.90	-0.2
FIN	91.56	326	P	55 00.84	-1.9
SMF	91.63	330	iPd	55 02.40	-0.6
BNI	91.63	328	Pc	55 02.90	-0.3
FLN	91.63	334	iPd	55 02.90	0.0
	1.6s	298.50nm			6.0mb
LDF	91.64	334	iPd	55 02.80	-0.1
	1.6s	310.90nm			6.0mb
ROB	91.66	327	P	55 01.46	-1.8
RRL	91.68	328	P	55 02.84	-0.7
AVF	91.72	331	iPd	55 02.90	-0.4
DOI	91.79	327	P	55 01.50	-2.4
ENR	91.92	327	P	55 02.07	-2.4
IMI	91.94	326	P	55 02.99	-1.5
STV	91.95	327	P	55 01.76	-2.8
GMB	91.95	318	P	55 04.65	-0.1
SAOF	92.04	327	P	55 03.77	-1.2
VAL	92.07	341	P	55 05.00	0.1
GRR	92.08	334	iPd	55 05.20	0.2
AUTN	92.09	327	P	55 04.01	-1.4
BGF	92.11	331	iPd	55 05.00	-0.2
TOUF	92.16	327	P	55 04.46	-1.3
ATN	92.18	318	Pc	55 04.40	-1.3
SBF	92.19	327	iPd	55 04.80	-0.9
	1.4s	148.10nm			5.8mb
AURF	92.22	327	P	55 04.60	-1.3
PLDF	92.25	330	P	55 06.00	0.1
MVIF	92.30	327	P	55 04.97	-1.3
AGO	92.40	330	P	55 06.59	0.1
LPF	92.45	334	iPd	55 06.80	0.1
CVF	92.48	325	P	55 05.74	-1.3
CALN	92.53	327	P	55 06.04	-1.3
TCF	92.59	331	iPd	55 07.50	0.1
PYM	92.69	330	P	55 07.94	0.0
MNO	92.78	319	P	55 08.50	-0.2
FRF	92.79	327	iPd	55 07.50	-0.8
	1.6s	116.90nm			5.7mb
LSF	92.90	331	iPd	55 08.70	-0.1
LBL	93.00	330	P	55 09.51	0.3
LRG	93.00	327	iPd	55 08.60	-0.7
	1.3s	137.10nm			5.8mb
LMR	93.03	327	iPd	55 08.60	-0.8
	1.8s	265.80nm			6.0mb
USI	93.07	320	Pd	55 09.20	-0.5
MEU	93.22	318	Pd	55 10.90	0.3
PZI	93.28	318	P	55 10.72	-0.1
MFF	93.28	333	iPd	55 10.60	0.0

16d 23h

RJF	93.67	331	iPd	55	12.70	0.3	
	1.4s	270.10nm			6.2mb		
CAF	93.75	330	iPd	55	13.10	0.3	
FAI	93.81	319	P	55	14.40	1.2	
LVI	94.05	320	Pc	55	13.40	-0.8	
LFF	94.29	331	iPd	55	15.50	0.3	
	1.8s	466.10nm			6.3mb		
LPO	94.31	331	iPd	55	15.50	0.1	
	1.6s	236.30nm			6.1mb		
MEO	95.06	44	ePc	55	18.70	-0.3	
	1.7s	193.50nm			6.0mb		
		e		56	45.50		
PTS	95.09	319	P	55	18.80	-0.2	
SIO	95.69	42	ePc	55	21.70	-0.1	
LNO	95.87	41	ePc	55	22.30	-0.1	
TUL	95.87	41	ePc	55	22.60	0.1	
	0.8s	24.60nm			5.5mb		
EPF	96.01	330	iPd	55	22.70	-0.5	
	1.6s	62.10nm			5.6mb		
RLO	96.11	41	eP	55	23.60	-0.1	
VVO	96.31	42	ePc	55	24.80	0.2	
GAC	97.10	23	eP	55	28.00	0.1	
NAI	100.17	275	iPdiff	55	43.60	1.0	
TOL	100.46	331	ePdiff	55	44.00	0.9	
		iS		05	45.00		
		ePP		59	58.00		
BMK	105.40	330	ePKP	00	19.00	2.1	
TIO	109.45	329	iPKP	00	24.00	-0.9	
		i		00	57.40		
		i		01	20.40		
SBA	110.76	174	e(PKP)	00	30.00	4.2X	
BNG	112.14	290	iPdiff	56	38.00	2.5	
	0.6s	3.00nm					
MAW	113.62	204	ePKP	00	33.00	1.5	
SLR	119.04	256	iPKPd	00	43.50	0.1	
	0.9s	33.61nm					
	Z 18s	5.50um			6.2Msz		
		i		02	08.60		
KSR	120.23	257	ePKP	00	44.00	-1.7	
	0.9s	11.54nm					
		i		02	25.60		
SEK	120.57	254	iPKPc	00	46.00	-0.2	
	1.3s	96.15nm					
		i		03	47.00		
BFS	120.73	256	iPKPd	00	40.50	-6.0X	
	0.6s	60.00nm					
FRS	122.97	253	iPKPc	00	50.40	-0.1	
	1.1s	25.32nm					
		i		02	40.50		
KOGH	125.18	306	ePKP	00	55.00	-0.4	
		e		02	30.00		
KUK	125.20	306	ePKP	00	53.50	-1.9	
		e		02	29.00		
LEGH	125.45	305	ePKP	00	55.50	-0.3	
		e		02	48.00		
TIC	127.97	311	PKPc	01	00.70	0.0	
KIC	128.00	310	iPKPc	01	00.60	-0.1	
LIC	128.29	310	PKP	01	01.20	-0.1	
SNA	135.68	198	ePKP	01	04.20	-9.4X	
		i		04	10.30		
AIA	143.85	164	iPKP	01	28.00	-0.4	
ARE	149.20	67	ePKP	01	40.00	1.1	
ATB	150.05	21	PKPd	01	40.40	0.5	
CCH	153.86	62	PKP	01	54.50	8.8X	
		i		02	08.70		
ROCH	155.52	101	ePKP	01	58.30	10.9X	
		e		02	17.50		
PEL	155.81	101	iPKPd	01	58.20	10.6X	
		i		02	18.20		
SAN	155.85	102	ePKP	01	58.30	10.7X	
		e		02	17.50		
ITR	156.83	351	ePKP	01	50.50	1.2	
SOB1	157.49	357	ePKP	01	54.10	3.9X	
		e		02	23.60		
		e		03	36.10		

S.D. = 0.9 on 484 of 514 obs.

• JUN 17, 1989 00h 13m 25.65± 0.56s
2.902 S ± 6.2km 143.462 E ±12.1km
DEPTH = 33.0km (normal)
5.3mb (6 obs.) 4.7Msz (1 obs.)
PAPUA NEW GUINEA REGION (198)

MNDI	3.24	177	eP	14	17.00	1.5	
LAT	5.13	137	eP	14	40.50	-1.7	
PMG	7.43	151	eP	15	10.00	-4.6X	
MTN	15.70	230	eP	17	06.00	-0.1	
			e	17	10.00		
CTA	17.30	171	iP	17	29.90	3.5X	
OIS	17.95	192	iPc	17	33.70	-0.8	
			e	22	14.00		
WB5	19.07	207	iPc	17	47.10	-1.1	
			eS	21	20.00		
KNA	19.30	228	eP	17	49.50	-1.4	
ASPA	22.62	203	iPd	18	23.80	-1.3	
	1.0s	97.00nm			5.2mb		
	Z 20s	2.65um			4.7Msz		
			eS	22	31.70		
			LR	27	34.90		
PCI	23.69	274	ePd	18	41.00	5.5X	
RMO	24.00	168	eP	18	39.60	1.2	
MBL	29.30	230	eP	19	28.60	1.2	
FORR	31.36	206	eP	19	45.00	-0.6	
	0.4s	43.00nm			5.6mb		
MEKA	33.57	223	eP	20	05.00	0.0	
COOL	34.91	215	eP	20	17.00	0.5	
BAL	37.40	220	eP	20	39.00	1.5	
WHN	43.33	322	eP	21	27.50	1.1	
GYA	46.00	312	P	21	49.20	1.1	
NST	46.66	295	eP	21	54.20	1.0	
SNY	48.05	340	eP	22	02.50	-1.3	
KMI	48.32	308	eP	22	07.50	1.0	
CHG	48.82	298	eP	22	11.00	0.8	
XAN	49.07	321	P	22	11.00	-0.9	
CN2	49.23	343	Pc	22	15.00	2.1	
BJI	49.52	332	eP	22	13.00	-2.2	
TIY	49.60	328	eP	22	14.50	-1.5	
CD2	50.60	315	P	22	23.60	-0.1	
BTO	52.99	328	P	22	40.00	-1.6	
GTA	58.13	321	iPc	23	18.00	-0.7	
GUN	63.23	303	P	23	53.80	-0.1	
PKI	63.51	303	P	23	54.00	-1.8	
KKN	63.69	303	P	23	56.60	-0.2	
	1.1s	35.00nm			5.4mb		
DMN	63.78	303	P	23	57.60	0.2	
GKN	64.30	303	P	24	00.40	-0.3	
	1.0s	42.00nm			5.5mb		
GBA	67.49	286	Pd	24	20.90	-0.2	
	0.9s	14.70nm			5.1mb		
WMO	68.16	320	P	24	23.50	-1.5	
OUE	79.83	301	eP	25	33.20	0.1	
IMA	81.96	22	eP	25	44.20	0.8	
SPA	87.12	180	e(P)	26	07.10	-2.3	
	1.0s	9.00nm			5.0mb		
BNG	125.02	273	ePKPc	32	15.30	-10.0X	
	0.4s	2.00nm					
ZOBO	143.43	122	PKP	32	55.00	-5.3X	
KIC	148.13	277	PKP	33	09.66	2.3	
	1.1s	20.00nm					
TIC	148.38	278	PKP	33	10.42	2.6	
	0.9s	15.50nm					
LIC	148.42	277	PKP	33	10.54	2.7	
	0.9s	19.50nm					

S.D. = 1.4 on 39 of 44 obs.

? JUN 17, 1989 00h 48m 01.77± 2.94s
17.268 N ±28.0km 62.477 W ±21.5km
DEPTH = 31.9 ± 14.2 km
LEEWARD ISLANDS (92)
ML 3.4 (FDF).

NEV	0.16	214	eP	48	07.80	-0.1	
			S	48	23.80		
MGH	0.60	155	eP	48	15.50	1.6	
			S	48	35.00		
ANG	0.63	100	iP	48	14.52	0.2	
BPA	0.63	110	eP	48	14.00	-0.4	
			S	48	33.00		
PAG	1.45	148	eP	48	26.00	-0.1	
			S	48	55.00		
BBL	1.98	151	eP	48	32.00	-1.8	

S.D. = 1.7 on 6 of 6 obs.

JUN 17, 1989 01h 04m 17.38± 0.46s
51.469 N ±10.1km 174.115 W ± 4.7km
DEPTH = 33.0km (normal)
4.8mb (33 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.65	286	iPc	04	44.30	-0.1	
KDC	13.98	55	eP	07	42.00	6.9X	
TTA	15.03	33	eP	07	52.50	3.6X	
IMA	17.93	28	eP	08	26.00	0.5	
FBA	19.12	35	eP	08	37.50	-2.4	
INK	25.73	34	eP	09	45.00	-0.9	
MBC	32.44	21	ePc	10	45.60	-0.4	
	0.4s	1.00nm			4.1mb		
EDM	36.19	63	iPc	11	18.70	0.3	
	0.6s	19.00nm			5.2mb		
			pP	11	33.00	55kmX	
SES	38.67	66	eP	11	39.00	-0.3	
KVN	40.38	85	eP	11	54.10	0.3	
FFC	41.68	56	eP	12	04.00	0.0	
	0.6s	8.00nm			4.6mb		
SNY	42.64	282	Pd	12	11.90	-0.1	
PLM	44.75	91	eP	12	29.20	-0.3	
RSON	47.97	57	eP	12	53.50	-1.0	
TIY	51.94	285	eP	13	24.90	-0.1	
	E 20s	1.30um					
GTA	58.23	295	P	14	09.20	-1.5	
GAC	60.61	53	eP	14	25.50	-1.4	
CD2	61.81	285	eP	14	34.10	-1.2	
SUF	65.04	350	iP	14	54.30	-1.6	
	0.4s	2.50nm			4.7mb		
NUR	67.36	350	iP	15	09.10	-1.6	
NB2	67.76	357	P	15	11.90	-1.5	
	0.9s	4.60nm			4.6mb		
EKA	73.30	5	P	15	47.00	0.2	
	0.9s	2.20nm			4.2mb		
GUN	74.51	295	P	15	54.50	-0.2	
KKN	74.94	296	P	15	56.60	-0.5	
	0.8s	26.00nm			5.3mb		
PKI	75.03	295	P	15	57.20	-0.5	
	1.1s	39.00nm			5.3mb		
GKN	75.14	296	P	15	57.60	-0.5	
	0.8s	29.00nm			5.3mb		
DMN	75.18	296	P	15	58.40	-0.1	
WTS	76.91	359	eP	16	08.00	0.6	
	0.8s	4.00nm			4.5mb		
CLL	77.42	355	eP	16	10.00	-0.3	
	0.9s	9.00nm			4.8mb		
BRG	77.81	355	iPd	16	12.20	-0.2	
	0.8s	12.00nm			5.0mb		
ENN	78.14	360	eP	16	14.50	0.3	
	0.8s	11.00nm			4.9mb		
MEM	78.30	360	P	16	15.80	0.7	
PRU	78.65	354	eP	16	17.00	-0.1	
DOU	78.81	1	P	16	18.40	0.5	
ABH	79.02	359	ePc	16	19.20	0.0	
GRF	79.12	356	eP	16	20.00	0.3	
	0.8s	20.00nm			5.2mb		
RUP	79.20	359	eP	16	20.31	0.1	
WLF	79.25	360	P	16	20.60	0.3	
TOD	79.27	358	eP	16	20.71	0.2	
KHC	79.56	355	Pd	16	22.80	0.7	
LDF	80.19	4	eP	16	25.10	-0.3	
	0.8s	5.30nm			4.6mb		
GRR	80.36	5	eP	16	26.50	0.2	
	0.8s	5.30nm			4.6mb		
CDF	80.49	359	eP	16	27.40	0.2	
LPF	80.70	5	eP	16	28.30	0.2	
	0.8s	8.00nm			4.8mb		
MAIO	80.79	319	eP	16	29.00	0.1	
HAU	80.91	360	eP	16	29.40	0.1	
	0.8s	8.00nm			4.8mb		
FEL	81.02	359	ePc	16	29.84	-0.2	
BSF	81.08	359	eP	16	30.30	0.0	
	0.8s	8.00nm			4.8mb		
LOR	81.63	1	eP	16	33.20	0.2	
	0.8s	11.20nm			4.9mb		
SSF	81.83	2	eP	16	34.40	0.3	
	0.7s	10.30nm			5.0mb		
LBF	81.91	1	eP	16	34.60	0.0	
	0.8s	8.00nm			4.8mb		
AVF	82.10	2	eP	16	35.50	0.1	
	0.8s	9.40nm			4.9mb		
MFF	82.17	4	eP	16	36.10	0.3	
	0.8s	8.00nm			4.8mb		
SMF	82.25	1	eP	16	36.40	0.1	
	0.8s	14.70nm			5.1mb		
BGF	82.32	2	eP	16	36.80	0.2	
	0.8s	6.70nm			4.7mb		
TCF	82.57	3	eP	16	38.20	0.2	
	0.8s	6.70nm			4.8mb		
LSF	82.59	3	eP	16	38.30	0.2	
	0.8s	13.40nm			5.1mb		
AGO	82.83	2	P	16	40.08	0.8	
PLDF	82.92	2	P	16	40.58	0.7	
PYM	83.13	2	P	16	41.38	0.4	
LSD	83.45	359	P	16	44.27	1.5	
LBL	83.65	2	P	16	43.85	0.4	

RSP 83.75 359 P 16 45.40 1.2
LFF 83.87 4 eP 16 45.20 0.6
1.0s 20.00nm 5.2mb
CAF 83.93 3 eP 16 45.60 0.6
0.8s 4.00nm 4.6mb
RRL 83.99 359 P 16 47.25 1.7
LPO 84.14 3 eP 16 46.40 0.4
1.0s 12.00nm 5.0mb
ROB 84.60 359 P 16 48.58 0.2
SBF 85.04 359 eP 16 51.70 1.1
0.8s 14.50nm 5.2mb
EPF 85.76 4 eP 16 54.30 0.1
0.8s 4.00nm 4.7mb
VAY 86.45 347 eP 16 58.40 0.8
SLR 149.15 318 iPKPc 24 02.50 3.0X
0.9s 10.92nm
i 24 18.50
KSR 149.84 320 ePKP 24 02.20 1.7X
BFS 150.80 319 iPKPc 24 01.50 -0.4
FRS 153.92 319 ePKP 24 20.30 14.2X
S.D. = 0.7 on 70 of 75 obs.

JUN 17, 1989 01h 49m 10.63± 0.65s
35.978 N ± 9.8km 27.607 E ± 7.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

KAP 0.55 220 ePg 49 21.80 0.0
YER 1.28 25 iPn 49 39.10 4.7X
KSL 1.61 84 ePg 49 39.10 0.0
NPS 1.77 247 ePn 49 41.50 -0.1
ELL 2.01 67 ePn 49 44.70 -0.4
IZM 2.43 354 ePn 49 51.00 -0.1
KHL 2.80 33 ePn 50 00.00 3.7X
BCK 2.82 57 ePn 49 57.00 0.4
VAM 2.83 259 ePg 50 06.00 9.3X
S.D. = 0.3 on 6 of 9 obs.

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* JUN 17, 1989 04h 00m 49.44± 0.57s
3.109 S ± 8.3km 147.333 E ±11.5km
DEPTH = 33.0km (normal)
4.8mb (5 obs.) 4.9Msz (4 obs.)
BISMARCK SEA (203)

LAT 3.54 185 eP 01 45.50 2.1
RAB 4.95 103 eP 02 02.00 -1.4
iS 03 00.00
GUMO 16.77 352 eP 04 37.00 -6.5X
CTA 16.91 183 iPd 04 55.20 9.9X
1.1s 26.58nm 4.3mb
iS 07 52.00
MTN 18.72 238 eP 05 06.80 -0.9
QIS 18.91 203 eP 05 09.00 -1.1
WB5 20.93 216 eP 05 18.70 -13.2X
ASPA 24.21 211 iPd 06 04.80 0.4
Z 22s 2.47um 4.6MszX
LR 15 00.70
BRS 24.70 168 eP 06 08.00 -1.0
eS 10 50.00
WARB 30.34 219 eP 06 48.00 -12.5X
MAT 40.35 349 eP 08 26.00 0.2
eS 14 28.00
QIZ 42.94 302 eP 08 53.00 5.8X
E 16s 0.68um
CN2 50.67 340 eP 09 44.00 -3.7X
Z 20s 1.30um 4.9Msz
BJI 51.57 330 eP 09 53.00 -1.6
Z 23s 0.95um 4.8MszX
eS 17 08.00
TIY 51.92 325 eP 09 58.00 0.6
Z 23s 1.86um 5.1MszX
N 19s 1.80um
S 17 23.50
CD2 53.54 313 P 10 09.40 -0.1
Z 22s 1.00um 4.8Msz
S 17 48.00
BTO 55.26 326 eP 10 20.00 -2.1
Z 16s 0.90um 4.9MszX
N 16s 0.80um
E 16s 0.60um
ePP 12 31.00
eS 18 12.00
LZH 56.27 318 eP 10 29.00 -0.5
2.0s 0.05nm 2.2mb X
GTA 60.77 319 P 11 00.00 -0.7
Z 20s 1.10um 5.0Msz

GUN 66.60 302 P 11 39.40 -0.1
PKI 66.90 302 P 11 42.00 0.6
1.0s 29.00nm 5.3mb
KKN 67.07 302 P 11 42.00 -0.4
1.0s 29.00nm 5.3mb
GKN 67.67 302 P 11 48.90 2.8
WMO 70.84 319 P 12 05.30 0.1
Z 22s 0.40um 4.6Msz
eS 21 22.00
GBA 71.27 285 Pd 12 07.40 -0.7
0.9s 4.20nm 4.5mb
INK 88.86 21 eP 13 44.00 2.7
MBC 93.79 14 eP 14 05.00 1.0
0.9s 2.00nm 4.5mb
PNT 94.33 41 eP 14 12.00 5.0X
S.D. = 1.4 on 21 of 28 obs.

JUN 17, 1989 04h 38m 25.65± 0.57s
41.807 N ± 7.0km 142.695 E ± 8.6km
DEPTH = 63.3 ± 6.1 km
4.3mb (4 obs.)
HOKKAIDO, JAPAN REGION (224)

HOOJ 0.72 37 P 38 40.00 -0.5
S 38 50.80
MRRJ 1.36 298 P 38 48.10 -0.7
eS 39 03.70
KUSJ 1.97 48 P 38 57.30 0.0
S 39 20.60
AOMJ 2.15 235 P 39 00.20 0.4
S 39 25.30
ASAJ 2.31 359 P 39 03.50 1.4
S 39 29.30
OFUJ 2.83 196 P 39 09.40 -0.1
eS 39 42.90
MAT 6.31 215 eP 39 58.00 -0.2
0.6s 13.33nm 4.6mb X
GUN 47.83 272 P 46 59.80 0.6
KKN 48.34 272 P 47 03.60 0.6
PKI 48.36 272 P 47 03.80 0.5
SUF 64.19 333 eP 48 54.80 -0.6
0.7s 2.00nm 4.2mb
NUR 66.22 331 iP 49 07.40 -1.1
Z 20s 0.40um 4.6Msz
LR 05 30.00
FFC 69.18 34 eP 49 28.00 0.9
0.7s 6.00nm 4.6mb
HFS 70.15 336 eP 49 32.40 -0.5
0.5s 2.30nm 4.4mb
Z 18s 0.26um 4.5Msz
LR 07 16.00
NB2 70.18 337 P 49 32.60 -0.5
0.7s 2.60nm 4.3mb
S.D. = 0.8 on 15 of 15 obs.

% JUN 17, 1989 05h 24m 31.76± 1.78s
34.027 S ±17.0km 70.810 W ± 8.8km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

CHCH 0.16 55 eP 24 38.60 0.5
iS 24 52.00
TACH 0.39 344 iPc 24 42.20 1.5
iS 24 57.00
PCH 0.47 31 iPd 24 42.50 0.4
iS 24 56.70
LNV 0.50 278 iPc 24 42.40 0.0
iS 24 56.00
SAN 0.59 12 iPd 24 43.70 0.1
iS 24 59.30
FCH 0.82 32 iPd 24 46.00 -1.2
iS 25 03.70
LCCH 0.84 311 iP 24 46.60 -0.5
iS 25 03.50
PEL 0.89 7 iPc 24 47.80 -0.1
iS 25 05.30
ROCH 1.07 351 eP 24 50.00 -0.6
iS 25 10.00
S.D. = 0.9 on 9 of 9 obs.

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* JUN 17, 1989 05h 52m 00.33± 3.55s
45.159 N ± 8.8km 6.507 E ±25.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (GEN).

BNI 0.16 132 Pc 52 03.90 -0.2
eSg 52 06.20
RRL 0.31 140 P 52 06.64 -0.2
S 52 11.79
RSP 0.53 90 P 52 11.25 0.1
S 52 18.84
LSD 0.55 57 P 52 11.33 -0.1
S 52 19.23
DOI 0.84 141 P 52 16.50 -0.1
eSg 52 27.50
STV 1.08 147 P 52 21.00 0.2
S 52 35.12
ENR 1.14 145 P 52 21.77 0.2
S 52 36.40
ORX 1.14 65 P 52 22.05 0.3
S 52 36.92
S.D. = 0.2 on 8 of 8 obs.

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* JUN 17, 1989 07h 47m 03.23± 0.49s
3.082 S ± 6.0km 147.176 E ±12.7km
DEPTH = 33.0km (normal)
4.7mb (3 obs.) 4.5Msz (3 obs.)
BISMARCK SEA (203)

LAT 3.55 183 eP 47 58.00 0.6
RAB 5.10 103 e(P) 48 12.00 -7.5X
PMG 6.29 180 eP 48 34.00 -2.1
GUMO 16.72 352 eP 50 45.80 -10.9X
CTA 16.93 183 iPd 51 03.00 3.7X
1.2s 29.69nm 4.3mb
iS 54 24.00
MTN 18.60 238 iPc 51 21.20 1.1
0.9s 127.00nm 5.1mb X
QIS 18.87 202 iPd 51 23.10 -0.3
WB5 20.86 216 iPc 51 45.00 0.0
RMQ 23.32 176 iPc 52 10.40 1.0
ASPA 24.16 211 iPd 52 18.70 1.1
1.2s 63.00nm 5.0mb X
Z 23s 0.75um 4.1MszX
LR 01 38.70
BRS 24.76 168 iPc 52 22.50 -0.9
WARB 30.27 219 eP 53 02.00 -11.6X
CN2 50.59 340 eP 56 02.00 1.1
Z 20s 0.50um 4.5Msz
BJI 51.47 330 eP 56 06.00 -1.6
Z 20s 0.30um 4.3Msz
XAN 51.58 319 P 56 08.00 -0.7
TIY 51.81 325 eP 56 09.80 -0.6
Z 22s 0.80um 4.7Msz
S 03 35.00
CD2 53.41 313 P 56 22.90 0.6
HHC 54.48 327 eP 56 29.50 -0.6
LZH 56.15 318 eP 56 43.00 0.6
1.5s 0.04nm 2.3mb X
GTA 60.64 319 eP 57 12.60 -1.1
INK 88.89 21 eP 59 56.00 0.8
MBC 93.80 14 eP 00 17.00 -0.8
1.1s 3.00nm 4.6mb
CMB 93.80 52 eP 00 20.80 2.2
PNT 94.41 41 eP 00 20.00 -1.2
1.0s 12.00nm 5.3mb
YKA 96.52 28 eP 00 31.30 0.8
S.D. = 1.1 on 21 of 25 obs.

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* JUN 17, 1989 08h 31m 10.07± 0.66s
9.646 S ±11.5km 108.877 E ±10.4km
DEPTH = 28.0km (6 depth phases)
5.0mb (5 obs) 4.5Msz (2 obs.)
SOUTH OF JAVA (282)

KHKI 6.77 80 ePd 32 50.40 0.2
e 38 49.00
NANU 14.34 154 eP 34 23.40 -9.9X
eS 36 53.00
MBL 15.56 139 eP 34 40.00 -9.3X
eS 37 15.00
KKM 17.22 25 eP 35 11.00 0.6
MEKA 19.19 153 eP 35 31.10 -3.5X
eS 38 45.00
MTN 22.05 100 eP 36 12.00 7.5X
WARB 23.53 137 eP 36 05.00 -14.0X
WB5 26.63 115 eP 36 46.60 -1.8
i 40 20.30
ASPA 27.67 123 iPd 36 59.10 1.2
0.9s 12.00nm 4.6mb
e 42 15.90
BAG 28.36 24 eP 37 02.40 -1.9
KMI 35.07 350 Pd 38 05.50 2.3

17d 08h

	E	14s	1.53um			
			pP	38	14.00	29km
GYA		35.95	357 P	38	09.20	-1.3
	Z	20s	0.80um			4.5Msz
	N	16s	1.80um			
	E	16s	1.50um			
ANP		36.74	19 eP	38	25.50	8.3X
GBA		38.82	306 Pc	38	42.10	7.5X
		1.2s	21.50nm			4.8mb
WHN		40.30	7 P	38	47.00	0.3
	E	14s	0.78um			
			pP	38	55.50	29km
CD2		40.62	353 eP	38	50.20	0.8
	Z	14s	0.80um			4.7MszX
	N	12s	1.00um			
			eS	45	03.60	
SSE		42.19	16 eP	39	03.20	1.0
NJ2		42.55	13 Pd	39	06.50	1.4
			pP	39	14.80	28km
PKI		43.42	329 P	39	12.60	-0.1
		1.2s	55.00nm			5.2mb
XAN		43.44	0 P	38	53.20	-19.2X
GUN		43.47	330 P	39	13.00	-0.1
DMN		43.61	329 P	39	14.20	0.1
		1.0s	73.00nm			5.4mb
KKN		43.67	329 P	39	14.40	-0.2
GKN		44.17	329 P	39	18.40	-0.1
LZH		45.73	354 eP	39	31.00	0.1
		1.5s	0.11nm			2.6mb X
	Z	14s	2.40um			5.3MszX
			pP	39	40.00	30km
TIA		46.27	9 eP	39	34.20	-0.7
TIY		47.23	4 eP	39	25.50	-17.1X
	Z	13s	0.60um			4.7MszX
	N	12s	0.70um			
	E	12s	0.60um			
NDI		48.86	322 eP	39	53.00	-2.3
GTA		49.53	351 eP	40	01.20	0.7
	Z	12s	0.70um			4.9MszX
	N	10s	0.30um			
BJI		49.89	7 eP	39	51.50	-11.6X
BTO		50.00	1 P	40	04.00	-0.1
	N	14s	0.40um			
	E	14s	0.50um			
			pP	40	12.50	28km
			eS	47	19.00	
MAT		53.59	29 eP	40	29.00	-2.0
		1.3s	25.00nm			5.0mb
CN2		55.29	15 eP	40	40.00	-3.3X
	Z	15s	0.40um			4.6MszX
			eS	48	30.00	
WMO		56.59	342 P	40	52.50	-0.3
	Z	20s	0.40um			4.5Msz
			pP	41	00.00	25km
			S	48	44.00	
MDJ		57.17	17 eP	41	04.50	7.7X
MAIO		65.14	317 eP	41	50.00	-1.0
MLR		91.89	316 ePc	44	19.00	1.7
YKA		118.66	21 ePKP	50	06.50	9.8X
SOB1		144.55	239 ePKP	50	51.10	4.4X
MEO		144.56	41 ePKP	50	44.50	-1.7
		1.2s	22.50nm			
			e	50	53.40	
SIO		145.36	38 ePKP	50	47.30	-0.2
LNO		145.55	37 ePKP	50	47.60	0.0
TUL		145.55	37 ePKP	50	48.50	0.7
		1.2s	18.20nm			
			e	50	56.80	
RLO		145.82	36 ePKP	50	49.50	1.3
			e	50	57.60	
VVO		145.97	37 ePKP	50	49.80	1.3
BAO		146.00	223 ePKP	50	37.50	-11.7X
CCH		152.70	190 PKP	51	09.10	9.4X
CNCB		153.53	187 PKP	51	11.00	9.8X
LPB		153.82	187 (PKP)	51	07.00	5.6X
ZOBO		154.08	187 ePKP	51	08.00	6.0X
	S.D. = 1.2		on 31 of 50 obs.			

% JUN 17, 1989 10h 06m 31.58± 2.96s
33.626 S ± 7.5km 71.706 W ±23.2km
DEPTH = 18.0 ± 14.9 km
NEAR COAST OF CENTRAL CHILE (135)

LCCH		0.19	37 iPd	06	36.60	0.2
LNV		0.41	143 iPd	06	40.20	0.2
TACH		0.64	93 iPd	06	44.00	0.0
ROCH		0.87	42 iPc	06	47.50	-0.6
CHCH		0.93	110 iP	06	48.20	-0.7
PEL		0.98	61 iPc	06	50.20	0.4
			iS	07	10.50	
PCH		0.99	90 iPd	06	50.40	0.4
FCH		1.22	76 iPd	06	54.20	0.2
	S.D. = 0.6		on 8 of 8 obs.			

% JUN 17, 1989 10h 09m 16.69± 3.28s
33.619 S ± 9.7km 71.785 W ±27.5km
DEPTH = 26.0 ± 7.7 km
NEAR COAST OF CENTRAL CHILE (135)

LCCH		0.23	51 iPd	09	22.70	-0.1
LNV		0.46	137 iPd	09	26.50	0.3
			iS	09	34.00	
TACH		0.71	93 iPd	09	30.00	-0.4
			iS	09	42.00	
ROCH		0.91	45 iPc	09	33.40	-0.6
			iS	09	47.80	
SAN		0.95	80 iPd	09	34.20	-0.1
			iS	09	47.50	
CHCH		0.99	109 iPd	09	34.40	-0.5
PEL		1.03	63 iPd	09	36.50	1.0
			S	09	52.00	
PCH		1.06	90 iPd	09	36.00	0.0
			iS	09	53.00	
FCH		1.28	77 iPd	09	39.80	0.5
			iS	10	01.70	
	S.D. = 0.6		on 9 of 9 obs.			

JUN 17, 1989 10h 14m 39.35± 1.24s
60.879 N ± 9.9km 3.677 E ± 9.4km
DEPTH = 10.0km (geophysicist)
NORTH SEA (534)
MD 2.4 (BER).

OSG		0.55	226 iP	14	51.10	0.6
			eS	14	57.70	
SUE		0.56	71 iP	14	52.11	1.5
			eS	15	00.60	
ASK		0.85	117 iP	14	56.93	1.3
			eS	15	07.16	
			iSg	15	09.09	
BER		0.96	121 iP	14	58.38	0.9
			eS	15	11.27	
HYA		1.26	76 eP	15	02.57	-0.1
			eS	15	18.87	
ODD1		1.76	122 iP	15	09.79	-0.3
			iS	15	31.48	
KMY		1.85	154 iP	15	10.32	-1.0
			iS	15	32.04	
BLS1		2.17	132 iP	15	15.51	-0.6
			iS	15	40.45	
MOL		2.50	46 eP	15	20.43	-0.3
			iS	15	48.19	
NRA0		3.86	89 iPc	15	38.00	-2.0
			iS	16	21.00	
			iSg	16	40.50	
	S.D. = 1.2		on 10 of 10 obs.			

JUN 17, 1989 10h 45m 52.01± 0.59s
42.059 N ± 6.0km 19.671 E ± 4.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.2 (TTG).

SDA		0.14	251 iPgc	45	56.70	1.5
ULC		0.33	253 iPgd	45	58.50	-0.3
			iSg	46	03.50	
BCI		0.43	44 ePg	46	01.30	0.6
TTG		0.48	321 iPgd	46	01.50	-0.2
			iSg	46	09.50	
BDV		0.67	290 ePg	46	05.00	-0.3
			eSg	46	14.00	
PHP		0.68	123 iPgd	46	00.50	-5.0X
IVA		0.83	12 ePg	46	08.20	0.1
			eSg	46	21.50	
HCY		0.95	294 ePg	46	09.50	-0.7
			eSg	46	24.50	
OHR		1.27	138 ePn	46	15.30	-0.3
SKO		1.32	93 ePn	46	16.00	-0.4
ZST		6.40	344 eP	46	53.60	-35.0X
KHC		8.26	331 eP	48	06.50	11.8X
	S.D. = 0.8		on 9 of 12 obs.			

% JUN 17, 1989 11h 26m 09.86± 1.48s
60.904 N ±11.8km 3.445 E ±12.0km
DEPTH = 10.0km (geophysicist)
NORTH SEA (534)
MD 1.6 (BER).

OSG		0.50	215 eP	26	20.40	0.5
			eS	26	27.20	
SUE		0.66	76 iP	26	23.15	0.2
			eS	26	31.57	
ASK		0.96	115 iP	26	28.17	0.1
			iS	26	40.20	
HYA		1.36	78 eP	26	35.42	0.6
			eS	26	49.23	
KMY		1.92	151 eP	26	41.01	-1.9
			eS	27	03.14	
BLS1		2.27	130 eP	26	49.32	1.2
			eS	27	12.40	
MOL		2.57	48 eP	26	51.50	-0.7
			eS	27	19.08	
	S.D. = 1.2		on 7 of 7 obs.			

& JUN 17, 1989 12h 21m 46.21s
61.896 N 152.089 W
DEPTH = 116.9km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT		0.28	72 iP	22	02.10	0.8
SPU		0.72	179 eP	22	04.45	-1.3
SUA		0.77	123 iP	22	05.78	-0.5
			S	22	20.15	
PWA		1.08	102 iP	22	09.09	0.0
			S	22	26.52	
RDT		1.34	187 iP	22	10.97	-1.0
PME		1.48	99 eP	22	12.52	-1.0
GHO		1.51	93 eP	22	13.00	-1.0
RED		1.52	193 iP	22	13.59	-0.5
SLKM		1.66	146 eP	22	15.68	-0.1
KTH		1.75	17 eP	22	16.38	-0.5
			S	22	38.91	
KNK		1.80	104 eP	22	16.34	-1.2
			S	22	40.29	
ILIM		1.87	193 iP	22	17.62	-0.8
	12 obs. associated					

& JUN 17, 1989 13h 16m 35.25s
63.557 N 150.782 W
DEPTH = 0.0km
CENTRAL ALASKA (1)
<AGS-P>.

KTH		0.06	266 iP	16	36.61	0.1
MCK		0.84	77 eP	16	51.07	-1.0
NEA		1.27	35 eP	16	58.17	-1.5
			S	17	16.38	
WRH		1.50	51 eP	17	02.38	-1.1
SKT		1.62	193 eP	17	04.41	-0.8
			S	17	26.00	
CCB		1.70	49 eP	17	05.84	-0.5
RDS		1.72	41 eP	17	06.09	-0.5
FBA		1.88	43 eP	17	08.68	-0.2
			S	17	34.49	
HDA		1.89	62 eP	17	09.52	0.4
PWA		1.96	167 eP	17	08.97	-1.1
GHO		1.99	154 eP	17	09.48	-1.1
			S	17	37.16	
PME		2.10	157 eP	17	11.16	-0.9
SUA		2.10	179 eP	17	10.84	-1.4
KNK		2.41	152 eP	17	16.08	-0.5
PAX		2.47	101 eP	17	17.92	0.3
	15 obs. associated					

• JUN 17, 1989 14h 39m 16.98± 1.07s
12.318 N ± 8.6km 143.735 E ± 9.1km
DEPTH = 12.0 ± 6.0 km
5.0mb (13 obs.) 3.9Msz (1 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUA		1.67	43 iPc	39	46.30	0.2
			eS	40	05.30	
PJG		1.68	41 iPc	39	45.50	-0.7
MAT		24.63	349 eP	44	40.00	1.5
		1.0s	10.00nm			4.4mb
			eS	49	06.00	
WB5		33.30	196 eP	45	57.10	0.3
WRA		33.37	196 P	45	58.00	0.6
		0.8s	6.00nm			4.6mb
BJI		36.78	324 eP	46	26.50	0.2

ASPA	37.03	195	iPc	46	30.10	1.4
	0.6s		14.00nm		4.9mb	
	Z 22s		0.26um		4.0MszX	
			LR	01	29.80	
TIY	37.69	318	Pc	46	35.00	0.9
	Z 19s		0.20um		3.9Msz	
			eS	52	20.00	
BRS	40.44	168	iPd	46	57.10	0.1
CD2	41.23	303	P	47	04.40	0.8
WARB	41.73	203	eP	46	57.50	-10.1X
	0.5s		10.00nm			
LZH	42.97	310	eP	47	19.00	1.0
GTA	47.20	313	eP	47	52.00	0.3
GUN	56.02	295	P	48	58.30	-0.3
	0.8s		40.00nm		5.5mb	
PKI	56.42	295	P	49	00.60	-0.9
	0.9s		14.00nm		5.0mb	
KKN	56.55	295	P	49	01.80	-0.4
	0.8s		16.00nm		5.1mb	
GKN	57.13	295	P	49	05.80	-0.5
	0.9s		29.00nm		5.3mb	
WMQ	57.22	314	P	49	07.00	0.4
			PcP	50	00.00	
INK	75.96	22	eP	51	04.00	-1.1
MAIO	78.22	305	eP	51	20.00	1.5
MBC	79.76	14	ePc	51	25.60	-0.4
	0.6s		8.00nm		4.9mb	
YKA	84.49	27	eP	51	51.30	0.6
ALE	84.56	3	eP	51	53.00	2.2
	0.7s		5.00nm		4.9mb	
WDC	84.89	50	ePd	51	53.70	0.5
PNT	85.05	41	eP	51	54.00	0.1
	0.8s		14.00nm		5.2mb	
MIN	85.64	50	eP	51	57.00	-0.2
ORV	85.89	51	eP	51	58.50	0.3
MHC	86.26	53	eP	52	00.80	0.5
PRS	86.69	54	eP	52	03.20	0.9
CMB	87.08	52	eP	52	04.70	0.5
FRI	87.84	53	eP	52	08.20	0.5
LRM	90.67	43	eP	52	21.40	0.1
SUF	91.17	336	eP	52	21.10	-1.8
	0.6s		2.90nm		4.8mb	
NUR	92.91	334	eP	52	29.90	-1.0
FFC	93.47	32	eP	52	33.00	-0.6
	0.9s		15.00nm		5.4mb	
SLL	97.45	338	(P)	52	51.20	-0.6
	0.6s		0.80nm		4.5mb	
BNG	123.04	284	iPKPc	58	17.00	1.0
	0.4s		3.00nm			
LNV	141.45	130	iPKPd	58	51.00	0.8
LCCH	141.53	129	iPKPd	58	49.50	-0.9
TACH	141.94	130	iPKPd	58	45.30	-5.8X
CHCH	142.03	130	iPKPc	58	46.00	-5.3X
ROCH	142.17	129	iPKPd	58	41.20	-10.6X
PCH	142.27	130	iPKPd	58	41.80	-10.0X
PEL	142.35	129	iPKPd	58	39.70	-12.2X
FCH	142.56	130	iPKPc	58	37.70	-14.9X
KIC	143.58	299	PKP	58	51.48	-2.9
	1.1s		20.50nm			
TIC	143.67	300	PKP	58	51.94	-2.7
	0.9s		12.50nm			
LIC	143.89	299	PKP	58	52.76	-2.2
	0.8s		18.00nm			
ZOBO	148.90	101	PKP	59	01.50	-2.3
	0.9s		11.89nm			
			e	59	06.00	
LPB	148.91	102	(PKP)	59	08.00	4.4X
			LR	07	08.00	
CNCB	149.00	102	ePKP	59	06.00	2.0
			i	59	09.90	

S.D. = 1.2 on 43 of 51 obs.

JUN 17, 1989 14h 57m 48.41± 0.84s
31.419 S ± 4.5km 67.550 W ± 4.4km
DEPTH = 27.9 ± 5.8 km
5.3mb (16 obs.) 4.5Msz (1 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)
Felt (V) ot Coucete ond (IV) ot Son Juon.

ZON	0.97	262	iPd	58	05.50	-0.7
			eS	58	17.00	
SAN	3.32	232	ePd	58	41.70	2.0
			iS	59	21.40	
ITB7	13.35	65	e(P)	00	58.00	-0.5
ITB1	13.43	63	e(P)	01	02.40	2.8
ITB	13.49	64	e(P)	01	04.20	3.8X
CNCB	14.55	358	P	01	15.00	0.1
			i	01	24.50	
LPB	14.83	358	P	01	18.70	0.3
	1.0s		220.00nm		5.5mb	
	Z 16s		1.35um		4.0MszX	
			i	01	28.00	
			LR	07	08.00	
ZOBO	15.09	358	P	01	22.00	0.0
	0.9s		121.11nm		5.2mb	
	Z 23s		1.26um		5.8MszX	
			i	01	30.00	
			LR	07	34.00	
ARE	15.32	346	eP	01	23.00	-1.7
VAO	20.11	70	eP	02	22.60	-0.3
			epP	03	27.00	
NNA	21.16	334	iPc	02	35.00	1.2
BRAS	21.45	71	eP	02	33.60	-3.3X
BAO	23.78	53	eP	03	00.00	0.3
ATB	31.49	30	e(P)	04	10.60	0.5
SOB1	33.19	54	eP	04	24.60	-0.5
ITR	35.24	56	eP	04	42.30	-0.4
SNA	52.45	157	iPd	07	00.10	-0.3
	0.8s		34.33nm		5.3mb	
SPA	58.75	180	iPc	07	45.00	-1.1
	1.0s		28.50nm		5.3mb	
CVL	69.79	351	iP	08	58.40	0.4
LIC	70.35	69	P	09	01.84	-0.1
TIC	70.60	69	P	09	03.54	0.0
KIC	70.66	70	Pc	09	03.78	-0.1
CER	71.14	118	iPd	09	13.00	6.4X
	1.0s		24.00nm		5.2mb	
ELC	71.29	342	iP	09	05.80	-1.4
RLO	72.00	337	e(P)	09	10.70	-0.8
TUL	72.03	336	eP	09	11.50	-0.1
	1.0s		11.70nm		4.9mb	
	Z 21s		0.26um		4.5Msz	
			LR	29	20.00	
LNO	72.03	336	eP	09	11.00	-0.5
MEO	72.04	334	eP	09	10.30	-1.4
	1.0s		12.20nm		4.9mb	
			i	10	30.00	
FVM	72.27	341	iP	09	12.20	-0.8
LEGH	73.94	73	eP	09	23.00	-0.2
KUK	74.09	72	eP	09	23.00	-1.1
KOGH	74.13	73	eP	09	25.00	0.6
MAW	74.53	162	iPc	09	24.90	-0.9
GRM	76.58	121	eP	09	35.40	-2.8X
	0.7s		20.55nm		5.3mb	
GAC	77.09	354	eP	09	41.00	0.5
FRS	77.36	117	iPc	09	42.50	0.0
	0.7s		47.95nm		5.6mb	
BAR	78.87	319	eP	09	51.00	0.4
SEK	79.81	117	iPd	09	56.60	0.4
	1.0s		50.00nm		5.5mb	
BFS	79.88	115	iPc	09	56.00	-0.5
	1.0s		120.00nm		5.9mb	
RVR	80.24	320	eP	09	58.00	0.1
KSR	80.48	114	iPd	09	59.00	-0.8
	1.0s		20.00nm		5.1mb	
MWC	80.79	320	eP	10	01.00	-0.1
SBB	81.00	320	eP	10	02.00	-0.1
SLR	81.62	115	iPc	10	05.50	-0.2
	0.9s		33.61nm		5.4mb	
CLC	81.72	321	eP	10	06.00	0.2
ISA	82.08	320	eP	10	08.00	0.3
PRI	83.64	319	eP	10	16.70	1.0
FRI	83.73	320	eP	10	15.70	-0.3
LLA	84.14	320	eP	10	19.10	1.0
PRS	84.17	319	eP	10	19.40	1.1
CMB	84.86	321	eP	10	22.00	0.3
MHC	85.05	320	eP	10	23.80	1.0
RSON	85.12	344	iP	10	22.70	0.0
ORV	86.56	321	eP	10	30.70	0.6
LRM	86.98	330	ePc	10	32.80	0.5
WDC	87.85	321	eP	10	35.60	-0.7
BNG	88.96	84	iPc	10	43.20	1.0
	0.7s		20.00nm		5.6mb	
SES	90.09	334	eP	10	46.00	-0.7
FFC	90.77	341	iPc	10	49.00	-0.7
	0.8s		15.00nm		5.4mb	
PNT	92.77	329	eP	10	59.00	0.0
	0.6s		5.00nm		5.1mb	
YKA	100.89	340	ePdiff	11	36.00	0.3
EKA	102.39	32	Pdiffd	11	52.90	10.4X
	1.2s		5.20nm			
MBC	112.16	348	ePKP	16	21.50	-0.3
	0.5s		1.00nm			
HFS	112.58	32	ePKP	16	21.20	-1.8
	0.4s		0.70nm			
NUR	117.84	34	ePKP	16	31.80	-1.3
SUF	119.07	32	ePKP	16	34.50	-0.9
	0.6s		4.00nm			
WRA	124.78	205	PKPc	16	46.30	-1.3
	0.7s		9.00nm			
WB5	124.83	205	iPKPc	16	46.20	-1.5
MAIO	136.20	69	ePKP	17	09.00	-0.1
GBA	143.33	111	PKPd	17	22.80	0.4
	0.8s		13.10nm			
HYB	146.29	106	ePKP	17	28.00	0.6
	1.0s		40.00nm			
KSH	149.38	65	ePKP	17	33.00	1.1
NDI	149.46	86	iPKPc	17	36.80	4.7X
	0.6s		53.33nm			
KGM	149.51	162	ePKP	17	36.50	3.9X
IPM	151.22	156	ePKPc	17	40.40	5.2X
	0.7s		73.30nm			
GKN	155.63	91	PKP	17	41.40	0.2
DMN	155.93	92	PKP	17	40.50	-1.2
	0.8s		16.00nm			
KKN	156.12	92	PKP	17	42.00	0.1
	0.8s		14.00nm			
PKI	156.18	92	PKP	17	42.40	0.3
WMQ	156.91	51	ePKP	17	43.00	0.7
			pPKP	17	53.00	
			e	18	13.60	
CHG	162.50	133	ePKP	17	49.90	1.0
GTA	166.98	49	ePKP	17	53.20	0.7
QIZ	167.44	169	PKP	17	54.70	1.5
CD2	172.53	92	PKP	17	56.30	0.7
GYA	172.92	133	PKP	17	56.60	0.6
			pPKP	18	06.60	
			e	19	23.40	
XAN	176.04	48	PKP	17	57.60	1.0
			e	19	37.00	

S.D. = 0.9 on 78 of 86 obs.

• JUN 17, 1989 15h 30m 02.46± 1.30s
31.505 S ± 7.9km 179.951 W ±16.0km
DEPTH = 284.0 ± 11.7 km
4.2mb (2 obs.)
KERMADEC ISLANDS REGION (177)

KRP	7.40	209	P	31	58.00	8.9X
WHH	7.92	201	eP	32	00.70	5.1X
TUTZ	7.92	204	eP	32	00.80	5.2X
HITZ	8.00	205	P	32	01.90	5.3X
HATZ	8.05	203	eP	32	01.60	4.4X
RATZ	8.14	204	eP	32	03.30	5.0X
KETZ	8.39	204	eP	32	05.90	4.4X
PGZ	9.59	198	P	32	17.40	0.9
MNG	9.82	201	P	32	19.30	0.0
KIW	10.22	203	P	32	24.20	-0.1
MTW	10.31	200	eP	32	24.80	-0.6
CAW	10.39	201	P	32	26.20	-0.2
WDW	10.56	201	P	32	27.90	-0.6
MRW	10.62	202	eP	32	28.90	-0.3
MOW	10.62	200	eP	32	29.40	0.1
WEL	10.65	202	eP	32	29.20	-0.4
TCW	10.74	204	eP	32	30.20	-0.6
SVA	13.41	353	eP	33	03.50	-0.1
DZM	15.34	304	iPd	33	28.20	1.2
MSZ	16.22	212	eP	33	38.00	1.8
BRS	24.08	273	iPc	34	55.70	1.6
COO	24.12	265	eP	34	58.00	3.5X
	0.4s		10.00nm		4.6mb	
WRA	42.48	274	Pd	37	30.00	-1.9
	0.5s		2.80nm		3.8mb	
WB5	42.49	275	iPc	37	30.50	-1.4
FORR	44.10	257	iPc	37	44.20	-0.4
	0.5s		49.00nm		5.1mb X	
SBA	46.82	184	ePc	38	07.30	1.9
SPA	58.67	180	iPc	39	31.40	-1.0
	1.0s		84.00nm		5.3mb X	
SUF	144.58	340	ePKP	49	00.30	-5.5X
	0.5s		5.60nm			
NUR	146.74	338	ePKP	49	07.40	-2.0
BNG	147.95	217	iPKPc	49	13.30	0.5
	0.6s		8.00nm			
NB2	149.56	349	PKP	49	14.40	0.5
	0.7s		1.10nm			
HFS	149.95	346	ePKP	49	15.10	0.7
	0.4s		1.50nm			

S.D. = 1.1 on 23 of 32 obs.

17d 15h

* JUN 17, 1989 15h 36m 08.63± 2.27s
39.850 N ±19.5km 21.050 E ±12.8km
DEPTH = 19.4 ± 12.1 km
GREECE (364)
MD 3.1 (ATH).

KZN	0.72	50	ePb	36	22.10	-0.3
KBN	0.79	347	ePn	36	23.10	-0.5
OHR	1.27	351	iPnc	36	31.00	-0.4
TIR	1.75	329	ePn	36	38.50	0.4
NEO	1.76	107	ePn	36	38.20	-0.3
PLG	1.91	73	ePn	36	41.00	0.4
SKO	2.14	8	ePn	36	44.60	0.7
BCI	2.62	344	ePn	36	47.00	-3.7X

S.D. = 0.7 on 7 of 8 obs.

JUN 17, 1989 16h 52m 54.90± 0.29s
29.856 N ± 5.7km 59.706 E ± 3.2km
DEPTH = 33.0km (normal)
4.8mb (42 obs.) 4.6Msz (3 obs.)
SOUTHERN IRAN (353)

SHI	6.25	270	eP	54	28.00	0.6
MAIO	6.43	358	iPnd	54	29.40	-0.4
	0.9s		21.31nm			4.9mb
			eSn	55	55.00	
BRF	8.90	247	eP	55	02.70	-1.5
BJA	8.92	247	iP	55	03.40	-1.0
BEE	8.98	247	iP	55	03.90	-1.3
	0.3s		66.00nm			6.3mb X
TEH	9.13	312	eP	55	07.00	-0.5
DHR	9.16	250	iPc	55	06.80	-1.0
IR4	9.16	308	eP	55	08.30	0.3
IR5	9.37	307	eP	55	10.70	-0.1
IR2	9.41	310	eP	55	10.90	-0.4
IR1	9.41	308	eP	55	10.80	-0.5
IR7	9.62	310	e(P)	55	13.20	-1.1
KER	11.58	296	eP	55	53.00	11.9X
RYD	12.72	249	iPc	55	51.60	-4.6X
SLY	13.26	299	ePd	56	04.00	0.8
			ePP	56	38.00	
			eS	59	36.00	
			eSS	00	04.00	
			ePcP	00	24.00	
			eLQ	01	43.50	
			iLR	02	32.00	
			e	04	09.00	
BHD	13.50	289	ePd	56	20.00	13.5X
			i	59	02.00	
			i	00	36.00	
			i	01	02.00	
			i	01	53.00	
TAB	13.79	310	e(P)	56	13.00	2.6
OASM	14.77	259	ePc	56	18.70	-4.6X
MSL	15.32	299	ePc	56	31.00	0.8
			e	01	03.00	
			e	01	45.00	
			e	02	33.00	
NDI	15.33	90	eP	56	25.50	-5.0X
	0.8s		22.39nm			4.5mb
KSH	16.44	50	P	56	44.00	-0.7
Z	14s		4.40um			
N	10s		6.30um			
			eS	59	36.00	
HRI	20.69	286	iPc	57	38.70	3.9X
DSI	20.98	281	iPc	57	39.60	2.0
HYB	21.21	122	eP	57	39.00	-1.1
	1.0s		50.00nm			4.9mb
			e	57	41.50	
HOL	21.45	275	iPc	57	44.30	1.9
MBH	21.53	276	iPc	57	45.20	1.9
BADA	21.60	273	iPc	57	46.10	2.2
KVT	22.22	307	eP	57	53.90	3.8X
GBA	23.03	131	Pd	57	59.40	1.3
	1.0s		8.90nm			4.2mb
BCK	25.33	295	eP	58	23.00	2.7
ELL	25.77	293	eP	58	22.00	-2.5
ALT	25.98	299	eP	58	25.00	-1.4
WMQ	26.23	50	P	58	28.50	-0.2
E	11s		1.00um			
KHL	26.30	297	eP	58	30.00	0.7
LSA	27.25	82	eP	58	38.40	-0.2
E	14s		0.80um			
VRI	30.29	311	ePc	59	06.00	0.8
MLR	30.68	310	ePc	59	10.00	1.3
CMP	31.21	309	ePd	59	15.00	1.7
VAY	32.07	301	eP	59	21.50	0.7
BZS	33.62	309	eP	59	35.00	0.7
GTA	34.11	63	eP	59	37.80	-1.0
Z	16s		1.40um			4.8MszX
E	10s		0.50um			
SPC	35.53	314	eP	59	42.10	-8.8X
			e	59	51.10	
CHG	37.24	98	eP	00	05.20	-0.2
ZST	37.26	312	e(P)	00	09.70	4.5X
			e	00	46.40	
MGR	37.26	298	P	00	09.00	3.7X
SGO	37.47	299	Pd	00	08.50	1.5
VBY	37.98	307	eP	00	11.80	0.5
KMI	38.30	86	eP	00	13.00	-1.5
KSP	38.45	316	eP	00	16.00	0.8
NUR	38.53	333	iP	00	15.30	-0.4
	0.6s		15.60nm			5.0mb
Z	17s		0.80um			4.6MszX
			LR	19	40.00	
CEY	38.59	307	ePc	00	17.00	0.6
SDI	38.64	301	Pd	00	16.50	-0.5
VOY	39.00	307	eP	00	20.20	0.2
RBL	39.28	308	Pd	00	22.70	0.4
PRU	39.32	314	eP	00	22.50	0.1
Z	19s		0.50um			4.4Msz
E	19s		0.40um			
SUF	39.36	336	iP	00	22.50	-0.1
	0.8s		5.60nm			4.4mb
ARV	39.40	303	P	00	24.00	0.8
MNS	39.52	302	P	00	21.50	-2.8
KBA	39.53	309	i(P)	00	24.70	0.2
	1.0s		22.50nm			4.9mb
ASS	39.57	303	P	00	20.00	-4.7X
KHC	39.74	312	iPd	00	26.50	0.5
	1.0s		7.00nm			4.4mb
FVI	39.84	308	P	00	27.00	0.2
BRG	39.90	315	eP	00	27.00	-0.2
	2.0s		30.00nm			4.7mb
BHG	39.94	310	iPc	00	26.20	-1.5
	0.7s		73.00nm			5.6mb
CRE	40.12	303	P	00	30.00	0.7
SFI	40.22	304	P	00	31.50	1.6
PGD	40.31	304	Pd	00	32.50	1.6
CTI	40.55	307	P	00	33.00	0.2
CLL	40.58	315	iPc	00	33.40	0.6
	1.2s		60.00nm			5.2mb
OGA	41.07	308	iPd	00	37.50	0.3
	0.7s		10.00nm			4.7mb
BDI	41.13	304	P	00	37.00	-0.5
MOX	41.29	314	eP	00	39.00	0.3
SAL	41.29	306	P	00	34.50	-4.2X
GYA	41.32	83	P	00	41.40	2.0
GRF	41.36	313	eP	00	40.00	0.8
	0.9s		15.00nm			4.7mb
XAN	41.65	71	eP	00	43.60	1.7
OSS	41.66	308	ePd	00	42.40	0.5
MDI	41.87	307	P	00	43.50	0.1
BTO	41.97	61	eP	00	45.50	1.0
N	12s		0.30um			
E	14s		0.70um			
BOB	41.99	305	Pd	00	45.40	0.8
SAX	42.26	309	ePd	00	46.80	-0.2
LLS	42.46	308	ePd	00	48.20	-0.3
VAI	42.53	307	P	00	48.00	-0.9
SLE	42.88	309	ePd	00	51.00	-0.8
ZLA	42.93	309	ePd	00	51.50	-0.7
HFS	43.05	328	eP	00	52.50	-0.4
	0.8s		11.80nm			4.7mb
Z	15s		0.25um			4.2MszX
			LR	20	14.00	
MMK	43.11	307	ePd	00	53.60	-0.3
SBF	43.40	304	eP	00	55.70	-0.4
	0.6s		18.70nm			5.0mb
ENR	43.42	304	P	00	55.06	-1.1
STV	43.49	304	P	00	55.58	-1.3
DIX	43.49	307	ePd	00	56.80	-0.3
RSP	43.56	306	P	00	55.06	-2.4
LSD	43.64	306	P	00	57.32	-1.0
RRL	43.89	305	P	00	59.58	-0.7
LPG	43.93	306	eP	01	00.00	-0.6
	1.0s		10.00nm			4.6mb
BNI	43.97	305	Pd	01	00.30	-0.5
TIY	44.03	65	eP	01	01.00	-0.3
Z	18s		0.73um			4.6Msz
N	13s		0.50um			
E	11s		0.50um			
WTS	44.49	315	eP	01	06.00	1.3
	0.8s		13.00nm			4.8mb
			e	01	10.00	
NB2	44.53	329	P	01	04.00	-0.9
	0.9s		8.70nm			4.6mb
WLF	44.62	312	P	01	06.20	0.5
MEM	44.81	313	Pd	01	08.60	1.3
ENN	44.88	313	eP	01	09.00	1.1
	0.7s		10.00nm			4.8mb
DOU	45.66	312	Pc	01	15.00	1.0
	1.2s		50.00nm			5.3mb
			S	08	06.00	
SNF	45.89	313	P	01	16.60	0.7
LBF	45.90	308	eP	01	15.60	-0.4
	1.2s		17.80nm			4.9mb
SMF	45.98	308	eP	01	16.10	-0.6
	1.0s		38.00nm			5.3mb
LOR	45.99	308	eP	01	16.00	-0.7
	1.2s		17.80nm			4.9mb
PLDF	46.13	307	P	01	26.67	8.7X
SSF	46.22	308	eP	01	18.10	-0.4
	1.1s		18.00nm			4.9mb
AVF	46.32	308	eP	01	18.60	-0.7
	0.9s		8.10nm			4.7mb
BNG	46.36	245	iPc	01	20.20	0.2
	0.6s		12.00nm			5.0mb
			iS	07	52.00	
LBL	46.40	306	P	01	28.80	8.9X
AGO	46.47	307	P	01	29.52	9.0X
PYM	46.56	306	P	01	30.09	8.8X
BGF	46.67	307	eP	01	21.50	-0.6
	1.0s		12.00nm			4.8mb
BJI	46.70	62	eP	01	22.00	-0.4
MAF	46.86	307	eP	01	23.30	-0.3
	1.2s		14.80nm			4.8mb
TCF	47.11	307	eP	01	25.40	-0.2
	1.1s		13.10nm			4.8mb
CAF	47.24	305	eP	01	25.50	-1.2
	1.0s		18.00nm			5.0mb
LSF	47.58	307	eP	01	28.50	-0.8
	1.1s		9.70nm			4.7mb
RJF	47.62	306	eP	01	28.60	-1.0
	0.8s		8.00nm			4.8mb
LPO	47.88	305	eP	01	30.10	-1.5
	0.8s		5.30nm			4.6mb
LFF	48.18	305	eP	01	32.50	-1.5
	0.8s		18.80nm			5.2mb
FLN	48.92	310	eP	01	39.00	-0.6
	1.2s		23.80nm			5.1mb
LPF	49.30	309	eP	01	41.80	-0.7
	1.0s		12.00nm			4.9mb
EKA	50.74	319	P	01	53.00	-0.4
	1.3s		12.60nm			4.7mb
YRH	51.54	316	eP	01	59.00	-0.5
	1.2s		60.00nm			5.4mb
ETA	52.50	316	iPc	02	05.80	-1.0
ECP	52.61	315	eP	02	06.90	-0.7
	1.0s		45.00nm			5.4mb
CN2	53.13	56	eP	02	10.00	-1.5
Z	20s		1.30um			5.0Msz
MAT	64.34	61	(P)	03	31.00	1.4
ALE	64.50	353	eP	03	31.00	0.9
	0.7s		4.00nm			4.6mb
MBC	74.16	360	eP	04	28.50	-0.8
	0.7s		4.00nm			4.5mb
IMA	81.01	13	eP	05	07.00	-0.5
INK	81.64	5	eP	05	10.00	-0.5
PMR	85.92	13	eP	05	32.20	-0.3
TOA	86.02	12	eP	05	33.70	0.6
WB5	87.20	115	eP	05	39.20	-0.2
WRA	87.21	115	P	05	41.00	1.6
	1.1s		10.50nm			5.0mb
YKA	87.86	357	eP	05	43.40	1.5

S.D. = 1.1 on 124 of 140 obs.

% JUN 17, 1989 16h 58m 52.38± 0.65s
33.549 S ± 5.9km 71.370 W ± 6.4km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

LCCH	0.18	294	iPd	58	59.20	0.4
TACH	0.38	106	iPc	59	01.70	0.5
LNV	0.41	185	iPc	59	01.20	-0.4
SAN	0.60	81	iPd	59	04.60	0.2
			iS	59	13.80	
ROCH	0.65	28	iPd	59	05.00	-0.3
			iS	59	14.80	
PEL	0.70	55	iPd	59	06.20	0.3
			iS	59	16.10	

CHCH	0.71	123	iPc	59	06.00	0.0
			iS	59	16.40	
PCH	0.72	96	iPc	59	06.00	-0.2
FCH	0.93	77	iPd	59	09.20	-0.2
JACH	1.08	37	iPd	59	11.10	-0.3
			iS	59	26.10	

S.D. = 0.4 on 10 of 10 obs.

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* JUN 17, 1989 17h 49m 48.20± 0.88s
38.849 N ± 7.8km 23.319 E ±12.9km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.3 (ATH).

NEO	0.46	351	ePg	49	58.10	0.5
ATH	0.93	160	ePg	50	06.00	0.1
PLG	1.53	4	ePb	50	15.60	0.0
KZN	1.88	321	ePb	50	21.90	1.1
PRK	2.33	79	ePb	50	33.00	5.8X
EZN	2.53	66	eP	50	34.50	4.6X
VAY	2.54	347	ePn	50	30.60	0.6
RDO	2.86	36	ePn	50	34.50	-0.1
OHR	2.98	320	ePn	50	36.00	-0.4
SKO	3.43	336	ePn	50	41.00	-1.8
CFR	7.28	28	ePd	52	02.00	24.9X

S.D. = 1.0 on 8 of 11 obs.

JUN 17, 1989 18h 17m 22.81± 0.68s
43.430 N ± 6.4km 12.776 E ± 5.9km
DEPTH = 10.3km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (ROM).

ARV	0.14	60	P	17	25.90	-0.2
			eSg	17	29.60	
ASS	0.37	193	P	17	30.10	-0.3
			eSg	17	37.00	
AOI	0.61	78	e(Pg)	17	35.29	0.1
			eSg	17	46.23	
CRE	0.63	289	P	17	35.00	-0.6
			eSg	17	44.00	
PGD	0.89	301	P	17	40.50	0.6
			eSg	17	54.00	
MNS	1.05	184	P	17	43.00	0.4

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

JUN 17, 1989 18h 28m 08.62± 0.22s
40.494 S ± 4.8km 74.674 W ± 6.3km
DEPTH = 33.0km (normol)
5.6mb (20 obs.) 5.0Msz (7 obs.)
OFF COAST OF SOUTHERN CHILE (143)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 25C
Centroid Location:
Origin Time 18:28:14.4 0.5
Lat 41.10S 0.07 Lon 75.21W 0.13
Dep 15.0 FIX Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr=-1.32 0.10 Mtt= 0.53 0.10
Mff= 0.79 0.15 Mrt= 0.80 0.34
Mrf=-2.14 0.33 Mtf= 1.23 0.11
Principal Axes:

	Vol=	Plg=	Azm=
T	2.38	24	115
N	0.76	29	10
P	-3.14	51	237

Best Double Couple:Mo=2.8*10**17
NP1:Strike=247 Dip=34 Slip= -28
NP2: 1 75 -121

LNV	7.03	23	eP	29	50.40	-1.4
			iS	31	11.20	
CHCH	7.29	27	eP	29	55.00	-0.6
			iS	31	17.50	
LCCH	7.43	20	eP	29	56.00	-1.5
			iS	31	18.00	
TACH	7.45	25	ePd	29	56.60	-1.2
			iS	31	20.50	
PCH	7.62	27	iPd	29	59.50	-0.8
			iS	31	27.50	
SAN	7.73	26	eP	30	00.20	-1.4
			iS	31	28.70	
FCH	7.97	28	eP	30	04.50	-0.8
			iS	31	36.50	
PEL	8.00	25	iPd	30	04.00	-1.5
			iS	31	31.70	
ROCH	8.06	23	ePc	30	05.00	-1.5
			iS	31	31.00	
JACH	8.46	24	eP	30	10.00	-1.9
ZON	10.16	30	eP	30	35.00	-0.3
ITB7	22.98	54	e(P)	33	10.90	-0.4
ITB1	23.20	53	eP	33	14.20	0.8
ITB	23.20	54	e(P)	33	12.90	-0.5
ARE	24.10	7	eP	33	26.00	3.4X
CNCB	24.30	16	P	33	28.90	4.1X
LPB	24.55	15	P	33	31.00	4.0X
	1.1s		101.27nm			5.3mb
			LR	38	06.00	
ZOBO	24.80	15	iPd	33	32.20	2.6
	1.2s		68.58nm			5.1mb
Z	20s		1.72um			4.6Msz
			LR	38	18.00	
VAO	29.14	62	eP	34	11.20	2.4
			e	34	12.40	
			epP	34	20.80	33kmX
BRAS	30.39	63	eP	34	21.50	1.3
BAO	33.93	51	eP	34	52.50	1.5
PSO	41.56	356	eP	35	57.00	1.8
ATB	42.22	35	Pd	36	01.70	1.5
SOB1	43.23	53	eP	36	09.50	1.0
			e	36	13.30	
BOG	44.90	1	eP	36	25.00	2.7
ITR	45.11	56	eP	36	26.70	3.1X
			epP	36	38.90	44kmX
SNA	46.61	154	iPd	36	34.70	-0.2
	1.0s		169.00nm			6.0mb
UPA	49.43	354	iPd	36	57.70	0.3
	1.3s		142.31nm			5.8mb
Z	22s		0.59um			4.5Msz
SPA	49.70	180	iPd	36	57.30	-1.9
	1.0s		142.00nm			6.0mb
Z	18s		1.06um			4.9Msz
			i	38	19.00	
MAW	67.55	164	eP	39	01.50	-1.8
CER	71.95	119	iPc	39	37.50	6.7X
	0.9s		41.54nm			5.4mb
RSCP	76.38	351	P	39	55.00	-1.1
	0.8s		39.44nm			5.5mb
GRM	76.76	122	eP	39	56.30	-2.2
	1.0s		40.00nm			5.4mb
BLA	77.51	355	P	40	01.50	-0.8
	0.5s		7.38nm			5.0mb
MEO	78.08	340	iPd	40	04.40	-1.1
	0.8s		60.60nm			5.7mb
FRS	78.22	119	iPc	40	07.50	1.0
	1.1s		101.27nm			5.8mb
LIC	78.81	72	Pd	40	11.78	1.8
	0.7s		48.50nm			5.6mb
Z	20s		1.19um			5.2Msz
			S	50	20.00	
TIC	79.10	72	P	40	13.40	1.8
KIC	79.11	72	P	40	13.20	1.6
	0.8s		30.00nm			5.3mb
FVM	79.42	347	P	40	12.20	-0.5
	1.5s		197.56nm			5.9mb
SEK	80.67	119	iPc	40	20.00	0.0
	1.0s		120.00nm			5.8mb
KSR	81.79	117	iPd	40	25.40	-0.5
	0.8s		28.13nm			5.3mb
LEGH	81.97	76	eP	40	28.50	1.8
KUK	82.19	75	eP	40	28.00	0.1
KOGH	82.22	75	eP	40	30.00	2.0
BAR	82.51	325	eP	40	29.00	-0.1
SLR	82.81	118	iPd	40	31.00	-0.2
	1.1s		79.75nm			5.7mb
Z	20s		3.55um			5.7Msz
PLM	83.17	326	eP	40	34.00	1.3
TPC	83.46	326	eP	40	35.00	1.0
RVR	83.93	325	eP	40	37.00	0.7
MWC	84.43	325	eP	40	40.00	0.9
PV10	84.55	334	P	40	39.00	-0.7
GOL	84.58	337	P	40	39.80	0.0
	1.3s		63.54nm			5.6mb
GLD	84.58	337	P	40	40.00	0.3
RSNY	84.66	0	P	40	40.00	0.3
PV09	84.70	334	P	40	40.20	-0.3
SBB	84.72	326	eP	40	40.00	-0.4
GSC	84.81	327	eP	40	42.00	1.2
SYP	85.53	324	eP	40	46.00	1.5
CLC	85.58	326	eP	40	45.00	0.4
GAC	85.82	359	eP	40	46.00	0.6
ISA	85.83	326	eP	40	47.00	1.1
PRI	87.19	324	eP	40	53.70	1.1
CBM	87.24	4	P	40	52.00	-0.4
TNP	87.36	328	P	40	58.00	4.5X
FRI	87.48	325	eP	40	53.50	-0.3
PRS	87.66	324	eP	40	55.80	1.1
LLA	87.71	324	eP	40	55.90	1.0
KVN	88.54	328	P	40	59.10	0.0
MHC	88.62	324	e(P)	41	00.60	1.2
CMB	88.65	326	eP	41	00.00	0.6
BRK	89.33	324	eP	41	03.60	1.0
ORV	90.39	326	eP	41	08.40	0.9
WDC	91.69	326	ePd	41	13.10	-0.4
LRM	92.34	335	eP	41	17.10	0.4
RSON	92.49	348	P	41	16.20	-0.7
	0.4s		2.97nm			5.1mb
BNG	95.30	89	iPd	41	33.00	2.2
	0.7s		16.00nm			5.6mb
			id	45	22.40	
SES	95.97	338	eP	41	32.00	-1.0
EDM	99.14	338	eP	41	45.50	-1.7
EKA	113.12	36	PKP	46	45.00	1.6
	1.1s		2.70nm			
MOX	117.86	46	ePKP	46	53.00	0.3
	1.2s		18.00nm			
			eSg	18	48.00	
KHC	118.19	48	PKPc	46	53.40	0.0
CLL	118.96	46	iPKP	46	54.80	0.1
	1.5s		20.00nm			
PRU	119.16	48	ePKP	46	55.00	-0.1
Z	19s		0.50um			5.2Msz
BRG	119.26	47	iPKP	46	55.00	-0.3
	1.0s		10.00nm			
MBC	119.88	349	ePKPc	46	55.30	-0.4
	0.8s		8.00nm			
KSP	120.56	47	ePKP	46	57.50	-0.2
BZS	121.29	55	ePKP	46	59.00	-0.3
TTA	121.51	328	ePKP	46	58.90	-0.4
SPC	122.08	50	ePKP	47	00.70	-0.2
IMA	122.09	332	ePKP	47	00.00	-0.4
	1.1s		12.50nm			
NB2	122.58	35	PKP	47	00.80	-0.5
	1.0s		8.60nm			
MLR	123.96	56	ePKPc	47	14.00	9.3X
VRI	124.62	56	ePKPc	47	04.50	-1.2
CFR	125.24	58	ePKPd	47	06.50	-0.4
BRW	125.34	337	ePKP	47	05.70	-0.6
NUR	128.55	39	iPKP	47	11.40	-1.4
	0.7s		18.70nm			
Z	20s		0.40um			5.1Msz
			LR	41	00.00	
SUF	129.80	36	ePKP	47	13.40	-1.7
	0.7s		5.10nm			
SOD	130.87	30	iPKP	47	16.40	-0.6
KEV	131.31	27	ePKP	47	18.00	0.2
	0.8s		14.70nm			
GBA	143.76	130	PKPc	47	37.40	-4.9X
	0.9s		26.40nm			
MAIO	144.15	82	iPKPd	47	41.00	-1.5
	1.0s		59.50nm			
SNG	146.56	171	ePKP	47	44.60	-2.4
	1.4s		241.86nm			
HYB	147.40	127	ePKPd	47	50.00	1.7
	1.0s		160.00nm			
KAKJ	152.45	272	PKP	48	01.10	5.7X
CHJJ	153.29	271	PKP	48	03.30	6.6X
NIIJ	153.67	274	PKP	48	03.90	6.8X
MAT	154.06	272	ePKP	47	55.00	-2.7
	1.4s		27.91nm			
NDI	154.14	108	iPKPd	48	07.00	8.9X
MTMJ	154.38	272	PKP	48	05.30	7.0X
TSRJ	155.41	268	PKP	48	03.80	4.3X
KSH	157.53	83	ePKP	48	05.00	2.6
GKN	158.90	120	PKP	48	04.00	-0.3
DMN	158.95	121	PKP	48	04.40	-0.1
PKI	159.12	122	PKP	48	04.40	-0.4
KKN	159.18	121	PKP	48	03.40	-1.3
GUN	159.65	122	PKP	48	05.40	0.0
LSA	164.19	129	PKP	48	10.80	0.8
KMI	164.52	171	ePKP	48	10.00	-0.1
Z	30s		0.70um			
			pPKP	48	19.00	
			e	49	06.50	
			PP	52	50.00	
CN2	164.72	289	PKPc	48	09.00	-0.4
Z	32s		0.70um			
GYA	165.96	185	PKP	48	10.60	-0.5
NJ2	166.22	237	ePKP	48	11.00	0.0
Z	20s		0.30um			
WMQ	166.50	70	PKP	48	11.00	0.0

17d 18h

	Z 24s	0.40um			
		e	49 14.50		
		PP	53 03.50		
CD2	170.35	172 ePKP	48 13.10	-0.7	
BJI	171.69	270 ePKP	48 13.00	-1.0	
	Z 22s	0.56um			
		e	49 34.00		
		ePP	53 26.00		
		eSKKS	00 12.00		
XAN	172.95	205 PKP	48 14.00	-0.8	
TIY	173.81	246 PKPd	48 15.00	-0.1	
	Z 24s	1.00um			
		e	49 43.50		
		PP	53 36.00		
HHC	175.24	276 ePKP	48 15.20	-0.3	
LZH	175.45	165 ePKP	48 16.00	0.2	
	Z 28s	13.40um			
		ePP	53 40.00		
GTA	175.63	103 ePKP	48 16.00	0.4	
	Z 22s	1.30um		5.0Msz	
		e	49 55.00		
		PP	53 49.00		
		SKKS	00 30.00		
BTO	176.42	273 PKP	48 15.00	-0.7	
	N 10s	0.20um			
	E 10s	0.30um			
		sPKP	48 32.50		
		e	49 56.00		
	S.D. = 1.2	on 117 of 131 obs.			

% JUN 17, 1989 19h 24m 36.08± 1.08s
36.278 N ±17.0km 27.499 E ±12.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

KAP	0.77	200 ePg	24 47.50	-3.6X	
YER	1.06	36 iPn	24 55.40	-0.7	
KSL	1.69	95 ePb	25 04.90	-0.9	
NPS	1.84	237 ePn	25 08.00	0.0	
ELL	2.00	76 ePn	25 10.70	0.3	
BCK	2.74	64 ePn	25 22.30	1.3	
	S.D. = 1.2	on 5 of 6 obs.			

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* JUN 17, 1989 19h 47m 01.05± 0.95s
52.304 S ±13.8km 160.542 E ±17.3km
DEPTH = 10.0km (geophysicist)
4.9mb (3 obs.) 4.5Msz (1 obs.)
MACQUARIE ISLANDS REGION (167)

CBZ	5.28	96 Pd	48 12.00	-9.8X	
MSZ	9.07	36 eP	49 15.00	0.2	
TAU	12.94	311 iPc	50 04.30	-3.2X	
TOO	18.12	318 ePc	51 16.20	1.9	
CAN	18.87	330 eP	51 24.50	1.0	
SBA	25.76	177 Pd	52 33.40	0.5	
CTA	34.03	336 iP	53 51.20	4.1X	
	1.2s	39.06nm		5.2mb	
ASPA	35.09	314 eP	53 55.10	-1.2	
	1.1s	19.00nm		4.9mb	
	Z 21s	0.84um		4.5Msz	
		LR	06 56.60		
WARB	36.45	302 eP	53 54.00	-13.8X	
WRA	38.19	318 Pc	54 21.00	-1.4	
	1.0s	7.50nm		4.4mb	
WB5	38.24	318 eP	54 21.10	-1.7	
PCI	61.46	312 ePc	57 24.50	4.6X	
MAT	90.60	342 (P)	00 05.00	0.8	
INK	129.76	26 ePKP	06 09.00	-1.5	
YKA	132.33	39 ePKP	06 20.70	5.1X	
MBC	137.82	21 ePKP	06 19.00	-6.7X	
	0.8s	2.00nm			
GAC	143.47	77 ePKP	06 31.00	-5.6X	
CFR	148.30	276 ePKP	06 46.00	1.4	
MLR	149.80	275 ePKPc	06 50.00	2.9X	
SKO	150.69	266 iPKP	06 51.50	3.1X	
		i	06 57.50		
SCH	152.19	66 ePKP	07 04.00	13.8X	
KEV	152.51	327 ePKP	06 55.00	4.8X	
SOD	153.20	322 ePKP	07 02.00	10.8X	
SUF	153.95	311 iPKP	07 04.10	11.7X	
	0.7s	4.20nm			
	S.D. = 1.5	on 10 of 24 obs.			

JUN 17, 1989 20h 08m 43.72± 0.87s
60.736 N ± 7.7km 4.267 E ± 7.5km
DEPTH = 22.3 ± 10.5 km

SOUTHERN NORWAY (535)
MD 1.5 (BER).

SUE	0.40	37 iP+	08 52.38	0.2	
		iS	08 58.16		
ASK	0.52	119 iPgd	08 53.74	-0.4	
		eSg	09 00.20		
BER	0.63	123 eP	08 55.71	-0.3	
		eS	09 03.45		
OSG	0.73	251 eP	08 56.90	-0.7	
		eS	09 08.50		
HYA	1.03	64 eP	09 02.69	0.0	
		eS	09 14.37		
ODD1	1.44	124 eP	09 08.00	-0.6	
		eS	09 25.28		
KMY	1.61	162 eP	09 11.79	0.8	
		eS	09 28.41		
		iSg	09 32.05		
BLS1	1.86	135 eP	09 16.22	1.4	
		eS	09 35.40		
MOL	2.42	39 eP	09 23.65	1.0	
		eS	09 52.04		
NRA0	3.57	87 eP	09 37.40	-1.7	
		eS	10 16.70		
		eSg	10 31.00		
	S.D. = 1.1	on 10 of 10 obs.			

JUN 17, 1989 20h 47m 14.62± 0.28s
1.437 S ± 6.1km 24.169 W ± 4.7km
DEPTH = 10.0km (geophysicist)
5.1mb (52 obs.) 4.9Msz (6 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 38C
Centroid Location:
Origin Time 20:47:24.3 0.6
Lat 0.87S 0.05 Lon 23.93W 0.05
Dep 15.0 FIX Half-duration 2.2
Moment Tensor; Scale 10**17 Nm
Mrr=-0.73 0.06 Mtt= 0.82 0.08
Mff=-0.09 0.10 Mrt= 0.12 0.22
Mrf= 0.33 0.25 Mtf=-1.96 0.06
Principal Axes:

T	Val= 2.38	Plg= 2	Azm=219
N	-0.63	72	315
P	-1.76	18	128

Best Double Couple:Mo=2.1*10**17
NP1:Strike=265 Dip=76 Slip=-169
NP2: 172 79 -14

ITR	15.95	242 iPc	51 00.30	-0.5	
		ipP	51 03.60		
		i	51 05.40		
		e	53 44.00		
SOB1	18.35	245 eP	51 31.20	0.2	
LIC	20.57	68 Pc	51 54.90	-1.5	
	0.8s	83.50nm		5.2mb	
TIC	20.73	67 Pc	51 56.30	-1.8	
KIC	20.88	68 Pc	51 58.20	-1.4	
	1.0s	136.00nm		5.3mb	
WEGH	24.81	73 eP	52 39.00	0.5	
KUK	24.94	72 eP	52 38.00	-1.7	
KOGH	25.03	72 eP	52 40.00	-0.6	
SHGH	25.18	73 eP	52 40.00	-1.9	
BAO	27.40	238 eP	53 02.50	-0.2	
ATB	28.09	266 Pc	53 07.50	-1.3	
VAO	30.81	224 eP	53 34.10	1.0	
		e	53 45.10		
TIO	35.98	25 iPd	54 19.00	1.1	
AVE	37.99	23 eP	54 37.00	2.4	
IFR	39.12	26 iPd	54 45.50	1.2	
TAF	41.43	27 iP	55 06.00	2.9	
ATEJ	42.50	24 eP	55 15.50	3.5X	
ALOJ	42.63	24 eP	55 13.00	-0.1	
APHE	42.67	24 eP	55 15.50	2.1	
ACHM	42.74	24 eP	55 14.50	0.6	
AAPN	42.80	24 eP	55 18.20	3.8X	
BNG	43.08	82 iPc	55 18.00	1.1	
	0.8s	31.00nm		5.1mb	
		id	56 47.00		
		iS	01 18.20		
TOL	45.06	22 eP	55 33.30	0.7	
		iS	02 20.00		
		eSS	05 38.00		
ZOBO	45.72	249 P	55 39.80	1.0	
	1.0s	47.50nm		5.4mb	
		S	02 28.00		
		LR	09 12.00		
CNCB	45.72	248 Pc	55 41.20	2.4	
LPB	45.76	248 eP	55 40.00	1.1	
	1.0s	80.00nm		5.6mb	
		i	55 42.00		
		LR	11 36.00		
EBR	47.68	25 eP	56 00.00	6.8X	
		eS	02 56.00		
ARE	48.91	249 eP	56 04.00	0.5	
EPF	49.45	24 eP	56 07.80	0.8	
	1.2s	29.70nm		5.2mb	
LFF	51.21	23 eP	56 20.30	0.0	
	1.0s	16.00nm		4.9mb	
CER	51.62	133 eP	56 33.50	9.9X	
	0.5s	6.49nm		4.8mb	
		i	56 44.00		
CAF	51.72	24 eP	56 23.80	-0.4	
	1.2s	23.80nm		5.0mb	
MFF	52.30	21 eP	56 27.90	-0.6	
	1.0s	8.00nm		4.6mb	
LSF	52.61	22 eP	56 30.80	-0.1	
	1.2s	23.80nm		5.0mb	
TCF	52.91	23 eP	56 33.10	0.0	
	1.2s	11.90nm		4.7mb	
MAF	52.99	23 eP	56 33.60	-0.1	
	1.2s	22.00nm		5.0mb	
LPF	53.23	19 eP	56 34.60	-0.8	
	0.8s	5.30nm		4.5mb	
BGF	53.38	23 eP	56 36.50	0.0	
	1.3s	23.10nm		5.0mb	
STV	53.46	28 P	56 37.76	0.5	
ENR	53.49	28 P	56 37.96	0.4	
GRR	53.60	19 eP	56 37.70	-0.4	
	1.0s	12.00nm		4.8mb	
DOI	53.62	28 P	56 39.00	0.5	
ATN	53.73	39 P	56 40.00	0.8	
RRL	53.73	27 P	56 40.01	0.6	
ROB	53.76	28 P	56 39.40	0.0	
AVF	53.77	23 eP	56 39.20	-0.1	
	1.2s	13.00nm		4.8mb	
BNI	53.78	27 P	56 40.00	0.3	
SMF	53.84	24 eP	56 39.90	0.0	
	1.2s	17.80nm		5.0mb	
FIN	53.85	28 P	56 40.12	0.1	
CKI	54.05	28 P	56 43.50	2.0	
SSF	54.05	23 eP	56 41.50	0.1	
	1.2s	17.80nm		5.0mb	
RSP	54.12	27 P	56 42.47	0.3	
LPG	54.16	26 eP	56 42.90	0.2	
	1.2s	32.70nm		5.2mb	
LBF	54.17	23 eP	56 42.70	0.3	
	1.2s	27.90nm		5.2mb	
LSD	54.31	27 P	56 44.73	1.0	
LOR	54.36	23 eP	56 43.60	-0.1	
	1.0s	16.80nm		5.0mb	
RDP	54.43	34 P	56 47.50	3.1X	
PII	54.63	30 P	56 49.50	3.7X	
FRS	54.76	126 eP	56 46.80	-0.2	
	1.0s	90.00nm		5.8mb	
		i	56 59.80		
KSR	54.77	121 eP	56 44.80	-2.6	
	1.0s	15.00nm		5.0mb	
MNS	54.83	33 P	56 48.00	0.6	
BDI	54.92	30 P	56 47.20	-0.8	
AZI	54.98	34 P	56 51.00	2.7	
SDI	55.01	34 P	56 47.00	-1.7	
MGR	55.01	37 P	56 48.00	-0.6	
SGO	55.13	36 P	56 52.00	2.6	
ASS	55.29	32 P	56 50.00	-0.7	
PGD	55.35	31 P	56 50.50	-0.8	
VAI	55.36	28 P	56 50.00	-1.0	
MDI	55.73	28 P	56 52.00	-1.7	
SLR	55.92	120 iPc	56 56.00	0.3	
	1.0s	15.00nm		5.0mb	
	Z 21s	4.30um		5.5Msz	
HAU	55.95	24 eP	56 54.70	-0.6	
	1.0s	20.00nm		5.1mb	
SAL	56.00	29 P	56 55.00	-0.6	
BSF	56.00	25 eP	56 55.00	-0.8	
	1.0s	9.60nm		4.8mb	
SEK	56.16	123 iPd	56 58.50	1.1	
	0.9s	58.82nm		5.6mb	
DLE	56.49	13 eP	57 00.80	1.8	
FEL	56.55	25 eP	56 59.20	-0.6	
LCI	56.58	38 P	57 08.50	8.6X	
CTI	56.86	29 P	57 01.50	-0.5	

DOU	56.95	22	P	57	01.80	-0.6
			S	04	55.00	
DMU	56.98	12	eP	57	12.00	9.4X
GRM	57.09	129	eP	57	04.00	0.2
	0.7s	47.95nm			5.6mb	
SNF	57.18	21	P	57	03.40	-0.6
WLF	57.19	23	P	57	07.20	3.1X
RUP	57.58	24	eP	57	07.00	0.0
TRI	57.67	31	ePd	57	07.20	-0.4
			e	00	20.10	
FVI	57.80	29	Pd	57	09.00	0.6
ABH	57.92	24	eP	57	08.60	-0.7
VOY	57.96	30	eP	57	10.50	0.8
ENN	57.99	22	eP	57	09.00	-0.7
	0.9s	17.00nm			5.1mb	
CEY	58.03	31	e(P)	57	11.00	0.9
RBL	58.08	30	Pd	57	10.50	0.0
TOD	58.22	25	eP	57	11.55	0.2
LJU	58.30	31	eP	57	12.50	0.6
			eS	05	16.00	
			e	07	12.00	
VBY	58.31	32	eP	57	12.40	0.4
KBA	58.41	29	e(P)	57	14.00	1.0
			i	57	16.00	
BHG	58.64	28	eP	57	12.00	-2.4
PTJ	58.94	32	eP	57	15.10	-1.4
EKA	59.15	14	P	57	17.00	-0.7
	1.4s	11.70nm			4.8mb	
WTS	59.31	22	eP	57	19.00	0.1
	1.0s	8.00nm			4.8mb	
GRF	59.31	26	eP	57	19.00	0.0
	1.4s	26.00nm			5.2mb	
	Z 22s	0.60um			4.7Msz	
WET	59.66	27	eP	57	21.50	0.1
WIT	59.92	21	eP	57	34.50	11.5X
KHC	59.97	28	iPc	57	23.80	0.2
	1.0s	10.50nm			4.9mb	
			e	59	36.00	
MOX	60.19	25	eP	57	24.00	-1.0
	1.3s	22.00nm			5.1mb	
	Z 20s	0.70um			4.8Msz	
			eS	05	36.00	
SOP	60.43	30	eP	57	27.00	0.4
BEO	60.73	35	eP	57	28.00	-0.7
PRU	61.02	27	eP	57	31.00	0.4
	Z 16s	0.80um			5.0MszX	
	N 14s	0.40um				
	E 15s	0.50um				
		PP		59	43.80	
		eS		05	53.00	
ZST	61.04	30	eP	57	30.90	0.1
			e	59	40.80	
			e	01	13.60	
			e	05	59.50	
			LR	21	23.00	
CLL	61.28	26	eP	57	32.00	-0.3
	1.5s	26.00nm			5.2mb	
HLW	61.35	55	eP	57	34.00	0.7
BRG	61.38	26	eP	57	39.00	6.0X
	1.2s	13.00nm			5.0mb	
			e	59	51.00	
SRO	61.41	31	eP	57	32.10	-1.2
CBM	61.64	327	P	57	31.50	-3.4X
YER	61.84	46	iP	57	25.80	-10.7X
BZS	61.87	35	ePc	57	36.00	-0.4
KSP	62.42	28	eP	57	38.50	-1.6
			e	57	43.00	
			e	59	54.00	
ELL	62.85	47	eP	57	47.00	3.6X
DST	63.18	44	iP	57	30.50	-14.9X
KHL	63.24	45	iP	57	38.30	-7.5X
SPC	63.28	31	eP	57	44.80	-1.2
			e	57	52.70	
BCK	63.64	46	eP	57	50.30	1.8
CMP	63.67	37	ePd	57	51.00	2.5
ALT	63.97	45	eP	57	45.20	-5.5X
RSNY	63.99	322	P	57	41.00	-9.5X
MBH	64.23	56	iPc	57	52.20	-0.2
MLR	64.33	37	ePd	57	52.00	-0.9
BLA	64.64	313	P	57	53.80	-1.2
	0.6s	9.46nm			5.2mb	
VRI	64.99	37	ePd	57	55.50	-1.5
ZNT	65.13	53	eP	58	01.00	2.8
GLH	65.78	53	eP	58	05.00	2.7
SCH	66.08	335	eP	58	04.00	0.1
RSCP	67.95	309	P	58	15.00	-1.2
			pP	58	27.20	41kmX

NB2	67.98	18	P	58	14.90	-1.0
	1.1s	10.40nm			4.9mb	
HFS	68.07	19	eP	58	18.30	1.9
	0.4s	1.30nm			4.5mb	
	Z 18s	0.38um			4.7Msz	
		LR		19	57.00	
NUR	72.30	23	eP	58	40.00	-2.1
	Z 20s	0.80um			5.0Msz	
		LR		29	40.00	
FVM	72.38	311	P	58	39.00	-4.0X
	0.7s	37.42nm			5.6mb	
		pP		58	52.80	48kmX
FRB	72.81	341	eP	58	45.00	-0.1
SUF	74.22	22	eP	58	53.70	0.5
	1.0s	11.40nm			4.9mb	
KER	75.43	54	eP	59	05.00	4.0X
TAB	75.63	50	eP	58	49.00	-13.1X
LNO	76.03	307	ePd	59	03.30	-0.8
TUL	76.04	307	eP	59	02.40	-1.8
	1.2s	59.10nm			5.6mb	
	Z 22s	1.09um			5.1Msz	
		LR		22	32.00	
SOD	77.20	18	iP	59	09.90	-0.2
MEO	78.06	306	eP	59	13.40	-2.1
	1.3s	99.20nm			5.7mb	
DAG	78.17	1	iPc	59	14.50	-0.7
	0.9s	10.08nm			4.9mb	
RSON	78.33	323	P	59	14.70	-1.9
		pP		59	27.20	42kmX
KEV	78.77	16	eP	59	22.00	3.3X
RSSD	83.72	314	P	59	45.50	-0.1
		pP		59	57.20	38kmX
GLD	84.03	310	P	59	47.50	0.3
	1.1s	77.15nm			5.8mb	
FFC	84.14	325	eP	59	45.00	-2.1
	1.6s	47.00nm			5.5mb	
GOL	84.14	310	P	59	47.30	-0.5
	0.9s	18.18nm			5.3mb	
ALE	B5.50	355	eP	59	54.00	0.5
	0.9s	14.00nm			5.2mb	
MAIO	85.73	54	eP	59	56.00	0.4
PV10	86.86	308	P	00	01.50	0.1
		pP		00	14.00	41kmX
PV09	86.94	308	P	00	02.00	0.2
		pP		00	14.20	40kmX
SPA	88.57	180	e(P)	00	14.20	5.3X
	1.0s	5.50nm			4.8mb	
SES	89.10	320	eP	00	11.00	-0.6
LRM	89.82	316	eP	00	14.40	-0.9
EDM	90.65	323	iPc	00	19.70	1.0
GLA	91.33	303	P	00	23.00	0.7
YKA	91.47	332	eP	00	22.90	0.7
MBC	92.63	346	ePc	00	27.40	0.0
	1.2s	14.00nm			5.2mb	
PLM	93.04	303	P	00	30.50	0.2
TNP	93.28	308	P	00	31.30	-0.1
	0.8s	5.00nm			5.0mb	
KVN	93.96	309	P	00	35.00	0.5
BCH	95.66	305	P	00	43.00	0.7
ASPA	147.18	141	ePKP	07	01.40	3.1X
	0.9s	36.00nm				
WRA	150.07	136	PKPc	07	11.60	8.7X
	0.8s	5.30nm				
WB5	150.13	136	ePKP	07	08.80	5.8X
RMQ	151.41	167	ePKP	07	13.80	9.1X
			e	07	25.00	

S.D. = 1.1 on 144 of 171 obs.

JUN 17, 1989 20h 56m 10.01± 0.68s
37.997 N ± 7.6km 21.976 E ± 5.2km
DEPTH = 40.2 ± 17.1 km
4.1mb (3 obs.)
SOUTHERN GREECE (368)
ML 3.9 (ATH).

ATH	1.38	90	ePb	56	33.30	0.2
NEO	1.63	36	iPnc	56	37.00	0.2
KZN	2.31	356	ePb	56	49.90	3.3X
PLG	2.63	25	ePn	56	50.50	-0.6
VAM	3.14	145	ePn	56	58.00	-0.3
OHR	3.24	344	ePn	57	02.70	3.0
VAY	3.35	8	ePn	57	03.20	2.0
PRK	3.59	68	ePn	57	03.50	-1.1
EZN	3.85	60	ePn	57	10.00	1.6
SKO	3.99	354	ePn	57	23.20	12.9X
			iSn	57	59.50	
NPS	4.00	132	ePn	57	10.00	-0.5

RDO	4.18	40	ePn	57	11.50	-1.4
IZM	4.18	83	ePn	57	12.30	-0.8
KAP	4.83	119	ePn	57	23.20	1.0
TTG	4.89	336	ePn	57	14.00	-9.0X
			eSn	58	19.00	
ATN	5.14	274	P	57	27.60	1.0
HCY	5.18	330	ePn	57	13.00	-14.1X
			eSn	58	18.00	
MGR	5.43	295	Pc	57	31.40	0.7
			eSn	58	56.30	
MEU	5.67	263	P	57	32.30	-1.8
			eSn	58	57.40	
MNO	5.75	272	P	57	34.90	-0.5
SGO	5.77	298	P	57	36.60	1.2
			eSn	59	05.60	
HVAR	6.67	323	iPnc	57	46.70	-1.3
			iSn	59	01.60	
SDI	7.29	303	P	57	57.60	0.8
			eSn	59	39.70	
AZI	7.67	304	P	58	04.50	2.5
ASS	8.71	308	P	58	18.50	2.0
ARV	8.78	312	P	58	17.00	-0.5
VBY	9.02	328	eP	58	19.40	-1.3
			eS	59	58.00	
RIY	9.28	325	ePn	58	23.80	-0.4
CEY	9.56	326	eP	58	26.80	-1.4
			eS	00	11.60	
PGD	9.73	310	P	58	31.00	0.4
LJU	9.76	328	eP	58	28.80	-2.0
			eS	00	19.00	
VOY	10.03	326	eP	58	32.90	-1.7
			eS	00	23.10	
RBL	10.49	326	P	58	37.60	-3.2X
FVI	10.95	325	P	58	44.60	-2.5
CTI	11.11	320	P	58	48.50	-0.9
DOU	17.34	320	P	00	10.10	-0.3
HFS	22.78	349	eP	01	11.50	1.8
	0.4s	1.80nm			3.9mb	
NB2	24.04	347	P	01	20.90	-1.1
	1.0s	5.30nm			4.0mb	
EKA	24.25	324	Pc	01	25.90	1.9
	0.7s	11.50nm			4.5mb	

S.D. = 1.5 on 34 of 39 obs.

% JUN 17, 1989 21h 28m 21.21± 0.83s
59.859 N ± 6.8km 5.930 E ± 7.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.5 (BER).

ODD1	0.36	81	eP	28	29.31	0.7
			eS	28	33.09	
BLS1	0.65	135	eP	28	34.20	-0.1
			eS	28	42.11	
ASK	0.73	330	eP	28	36.47	1.0
			iS	28	45.46	
KMY	0.74	208	iP	28	35.49	-0.1
			eS	28	44.65	
HYA	1.32	5	eP	28	44.23	-1.3
			eS	29	03.62	
NRA0	2.93	70	iPnd	29	08.40	-0.2
			iPg	29	12.70	
			eS	29	42.90	
			iSg	29	50.60	

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

JUN 17, 1989 22h 13m 37.13± 0.66s
50.331 N ± 5.6km 7.366 E ± 6.0km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.5 (JCK).

ABH	0.46	165	iPgc	13	47.12	0.5
RUP	0.66	197	iPgc	13	50.04	-0.3
TNS	0.70	98	iPgd	13	50.30	-0.8
			eSg	14	01.50	
MEM	0.91	288	iPc	13	53.90	-0.6
			iS	14	06.60	
JCK	0.92	320	ePgc	13	53.80	-0.9
			eSg	14	05.40	
ENN	1.02	296	iPgd	13	55.90	-0.5
	0.5s	22.00nm				
			eSg	14	09.00	
WLF	1.03	230	P	13	56.40	-0.1
WTS	1.70	348	e(Pg)	14	08.50	1.5
			eSg	14	28.50	
DOU	1.80	264	P	14	08.90	0.6

17d 22h

			S	14 31.60		
SNF	1.98	276	iP	14 11.60	0.6	
S.D. = 0.9			on	10 of 10 obs.		

? JUN 17, 1989 23h 02m 51.98± 6.42s
46.621 N ±19.3km 10.011 E ±52.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

OSS	0.11	54	iPc	03 00.60	5.6X	
VDL	0.40	250	iPc	03 00.10	-0.1	
LLS	0.74	290	iPd	03 03.20	-3.4X	
TMA	0.94	237	ePd	03 10.10	0.0	
ZLA	1.40	308	ePd	03 18.10	0.5	
SLE	1.54	318	ePd	03 19.50	-0.1	
FEL	1.85	313	ePn	03 23.82	-0.3	
S.D. = 0.4			on	5 of 7 obs.		

JUN 18, 1989 00h 30m 46.59± 0.86s
35.373 N ± 7.8km 27.424 E ± 6.0km
DEPTH = 13.1 ± 4.9 km
DODECANESE ISLANDS (369)
ML 4.1 (ATH).

KAP	0.27	311	iPgc	30 52.50	0.0	
NPS	1.49	266	ePb	31 14.10	1.1	
YER	1.89	21	iPn	31 19.10	0.2	
KSL	1.91	66	ePn	31 20.90	1.9	
ELL	2.44	55	iPn	31 28.80	2.0	
VAM	2.63	272	ePn	31 30.30	0.8	
IZM	3.02	358	ePn	31 33.00	-2.0	
BCK	3.29	50	iPn	31 40.20	1.3	
KHL	3.39	29	iPn	31 40.90	0.6	
ATH	3.95	312	ePn	31 48.00	-0.1	
PRK	3.97	347	ePn	31 48.50	0.1	
ALT	4.25	29	eP	31 52.70	0.1	
DST	4.33	12	eP	31 52.60	-1.0	
EZN	4.53	349	eP	31 55.50	-0.8	
RDO	5.95	346	ePn	32 15.50	-0.9	
HRI	7.19	105	eP	32 32.00	-2.0	
DSI	7.65	117	eP	32 39.00	-1.3	
MBH	8.41	130	eP	32 51.00	0.0	
			eS	34 20.00		
S.D. = 1.3			on	18 of 18 obs.		

JUN 18, 1989 01h 07m 31.34± 0.30s
44.554 N ± 2.3km 6.883 E ± 3.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (GEN), 2.5 (LDG).

FOUF	0.08	251	iPg	07 32.87	-0.9	
			e(Sg)	07 33.51		
			e	07 33.58		
DOI	0.26	101	Pc	07 36.90	-0.1	
			eSg	07 40.60		
RRL	0.37	349	P	07 39.08	0.0	
			S	07 45.23		
STV	0.44	134	P	07 40.21	-0.2	
			S	07 46.46		
ENR	0.51	130	P	07 41.03	-0.5	
			S	07 48.31		
BNI	0.52	344	P	07 41.60	-0.3	
			eSg	07 49.40		
RSP	0.65	24	P	07 44.62	0.2	
			S	07 53.64		
ROB	0.75	110	P	07 46.05	-0.1	
			S	07 56.31		
SBF	0.80	150	Pg	07 47.10	0.2	
			Sg	07 57.00		
LSD	0.92	12	P	07 49.44	0.3	
			S	08 02.12		
LPG	0.95	354	Pg	07 49.70	0.1	
			Sg	08 02.20		
IMI	0.97	131	P	07 49.85	0.1	
			S	08 03.15		
LPL	0.97	354	Pg	07 50.10	0.2	
			Sg	08 03.00		
CKI	1.01	97	P	07 50.50	0.1	
			eSg	08 04.50		
FRF	1.01	190	Pg	07 50.20	-0.2	
			Sg	08 02.70		
FIN	1.01	109	P	07 50.46	0.0	
			S	08 04.28		
LRG	1.16	199	Pg	07 53.90	0.9	
			Sg	08 08.40		
LMR	1.25	193	Pg	07 54.90	0.4	
			Sg	08 11.00		
S.D. = 0.4			on	18 of 18 obs.		

JUN 18, 1989 01h 58m 30.36± 0.31s
2.502 N ± 5.6km 126.581 E ± 9.6km
DEPTH = 33.0km (normol)
5.0mb (13 obs.)
MOLUCCA PASSAGE (266)

KKM	10.92	289	ePd	01 14.50	6.9X	
MTN	15.90	164	eP	02 13.00	-0.5	
			e	02 20.00		
KNA	18.26	173	eP	02 43.00	-0.1	
WB5	23.52	161	iPc	03 38.00	-0.5	
			eS	07 52.20		
MBL	24.43	195	eP	03 49.00	1.7	
QIS	26.23	151	eP	04 04.00	-0.4	
			e	04 05.60		
ASPA	26.97	165	iPc	04 10.00	-1.1	
	0.8s		31.00nm		5.0mb	
NANU	27.15	203	iPd	04 14.30	1.6	
WARB	28.52	180	eP	04 13.50	-11.6X	
	0.3s		5.00nm			
CTA	29.61	140	iPd	04 40.20	5.2X	
NJ2	30.28	347	eP	04 40.00	-0.8	
BDT	30.79	300	eP	04 46.10	0.6	
CHG	31.54	303	eP	04 52.80	0.7	
	1.0s		15.50nm		4.8mb	
FORR	33.20	178	iPd	05 06.00	-0.3	
	0.4s		32.00nm		5.6mb	
XAN	35.44	334	P	05 25.00	-0.7	
MAT	35.53	16	eP	05 25.00	-1.4	
	1.0s		13.00nm		4.8mb	
CD2	35.55	325	eP	05 26.00	-0.6	
STK	37.05	159	eP	05 39.00	-0.2	
TIY	37.37	341	eP	05 40.70	-1.2	
Z	30s		1.10um		4.5MszX	
BRS	38.99	141	iP	05 53.90	-1.7	
SNY	39.24	356	Pd	05 58.30	0.9	
CN2	41.14	359	eP	06 15.80	2.8	
MDJ	42.02	3	eP	06 21.00	0.7	
CAN	43.09	153	eP	06 30.50	1.3	
GTA	44.07	330	P	06 37.70	0.5	
Z	24s		0.70um		4.5MszX	
GUN	46.33	307	P	06 55.90	0.2	
	0.5s		30.00nm		5.5mb	
PKI	46.56	306	P	06 57.20	-0.3	
KKN	46.76	307	P	06 58.80	-0.1	
DMN	46.82	306	P	06 59.40	-0.1	
	0.9s		31.00nm		5.3mb	
GKN	47.37	307	P	07 03.50	-0.2	
HYB	49.40	291	eP	07 19.00	-0.4	
GBA	49.79	286	Pd	07 22.20	-0.2	
	0.7s		10.50nm		5.0mb	
WMQ	53.64	326	P	07 50.70	-0.3	
MAIO	70.14	308	eP	09 40.00	-2.0	
TTA	82.06	27	eP	10 49.90	1.3	
BRW	83.38	18	eP	10 56.80	1.6	
IMA	83.56	24	eP	10 57.90	1.5	
	0.8s		9.40nm		5.0mb	
PMR	85.09	29	eP	11 04.00	0.1	
	0.8s		12.00nm		5.1mb	
KVT	88.78	311	eP	11 24.40	1.9	
INK	91.35	21	eP	11 33.00	-0.8	
SUF	92.57	333	iP	11 39.00	-0.5	
	0.6s		2.20nm		4.8mb	
MBC	93.17	13	eP	11 42.00	-0.1	
	0.9s		2.00nm		4.5mb	
NUR	93.70	331	eP	11 42.00	-2.7	
VRI	95.08	316	ePc	11 52.50	1.1	
SLL	99.08	333	(P)	12 08.20	-1.0	
	0.8s		4.60nm		5.1mb	
NB2	99.81	333	P	12 11.20	-1.5	
	0.8s		1.50nm		4.6mb	
ALQ	117.95	48	e(PKP)	17 17.00	0.9	
S.D. = 1.2			on	44 of 47 obs.		

* JUN 18, 1989 02h 20m 41.25± 1.49s
23.207 S ± 9.3km 70.003 W ±18.3km
DEPTH = 103.3 ± 16.3 km
4.3mb (1 obs.)
NEAR COAST OF NORTHERN CHILE (122)

CNCB	6.64	17	P	22 19.00	0.5	
			S	23 50.00		
CCH	6.83	33	P	22 25.50	4.7X	
LPB	6.88	15	P	22 22.00	0.4	
	1.0s		80.00nm		5.2mb X	
			i	22 29.00		
ZOBO	7.13	15	P	22 24.00	-1.1	
	0.9s		45.42nm		5.0mb X	
			i	22 32.00		
ZON	8.39	172	eP	22 42.00	0.2	
VAO	21.19	94	eP	25 18.70	-1.4	
			e	25 26.90		
			e	25 31.80		
SOB1	31.14	68	e(P)	26 54.00	1.6	
TUL	63.66	337	eP	31 03.00	-0.6	
	1.0s		4.00nm		4.3mb	
LNO	63.66	337	eP	31 08.50	5.1X	
ALQ	67.38	328	e(P)	31 28.00	0.3	
S.D. = 1.3			on	8 of 10 obs.		

JUN 18, 1989 03h 15m 51.94± 0.64s
38.297 N ± 5.9km 20.437 E ± 3.6km
DEPTH = 31.3 ± 7.9 km
4.0mb (4 obs.)
GREECE (364)
ML 4.0 (ATH), 3.7 (ROM).

VLS	0.17	135	iPgd	15 56.00	-2.1	
SRN	1.62	348	iPg	16 22.90	4.3X	
KZN	2.26	27	ePn	16 29.00	1.1	
KBN	2.34	7	ePn	16 30.80	1.8	
NEO	2.40	64	ePn	16 31.00	1.1	
ATH	2.61	96	ePn	16 34.50	1.7	
LCI	2.80	317	Pc	16 34.90	-0.6	
			eSn	17 11.90		
OHR	2.82	6	iPn	16 37.60	1.7	
TIR	3.08	352	ePn	16 40.50	1.0	
PLG	3.12	47	ePn	16 40.50	0.3	
LACI	3.38	351	ePn	16 44.00	0.2	
VAY	3.44	28	iPn	16 44.00	-0.6	
			i	16 53.00		
SKO	3.75	12	iPn	16 53.00	4.0X	
	1.2s		200.00nm			
			iPg	17 00.10		
			iSn	17 30.40		
			iSg	17 47.50		
ULC	3.77	346	ePn	16 48.20	-1.1	
			eSn	17 28.00		
SDA	3.78	349	ePn	16 50.40	1.0	
ATN	3.92	270	P	16 52.60	1.2	
BCI	4.07	356	ePn	16 54.20	0.6	
KKB	4.10	29	iP	16 54.00	0.0	
MMB	4.15	37	iPd	16 54.00	-0.7	
BDV	4.17	343	ePn	16 53.50	-1.4	
			eSn	17 37.00		
VAM	4.17	133	ePn	16 54.50	-0.6	
MGR	4.21	297	Pc	16 56.70	1.1	
TTG	4.22	348	ePn	16 55.00	-0.7	
			eSn	17 39.50		
PVY	4.31	355	ePn	16 57.00	0.0	
			eSn	17 46.00		
HCY	4.40	341	ePn	16 58.00	-0.3	
			eSn	17 46.00		
MEU	4.53	256	P	16 59.90	-0.3	
			eSn	17 52.40		
SGO	4.57	301	P	17 02.60	2.0	
IVA	4.59	355	ePn	17 01.00	0.0	
			eSn	17 51.00		
PRK	4.66	76	ePb	17 06.00	4.1X	
RZN	4.72	43	iPd	17 03.00	0.1	
VTS	4.78	25	iP	17 04.00	0.2	
EZN	4.83	70	ePn	17 04.20	-0.1	
RDO	4.85	53	ePn	17 04.10	-0.6	
PLE	5.09	351	ePn	17 10.00	1.9	
			eSn	18 03.00		
PGB	5.11	33	eP	17 08.00	-0.4	
FAI	5.45	261	P	17 13.50	0.4	
HVAR	5.74	329	i(Pn)	17 16.50	-0.7	
SDI	6.12	306	P	17 23.00	0.4	
AZI	6.51	307	P	17 29.00	1.0	
MNS	7.19	307	P	17 38.50	0.8	
BZS	7.37	6	ePc	17 43.00	3.0X	
ASS	7.59	311	P	17 44.00	0.8	
ELL	7.68	99	ePn	17 49.00	4.4X	
ARV	7.69	315	P	17 43.70	-0.9	
			eSn	19 09.60		
VBY	8.17	333	ePn	17 50.30	-0.9	
			eSn	19 16.80		
MLR	8.28	28	ePc	17 53.00	0.2	
PTJ	8.29	338	eP	17 51.30	-1.7	
CRE	8.34	312	P	17 54.00	0.3	

RIY	8.36	329	ePn	17 53.60	-0.3
PGD	8.62	313	P	17 58.40	0.7
CEY	8.67	331	ePn	17 56.00	-2.2
			eSn	19 30.00	
VRI	8.89	30	ePc	18 02.50	1.3
TRI	8.91	328	eP	17 49.60	-11.9X
			e	19 34.40	
VOY	9.12	330	ePn	18 02.00	-2.5
			eSn	19 41.00	
RBL	9.59	330	P	18 09.50	-1.4
FVI	10.03	328	P	18 17.00	0.1
CTI	10.12	323	P	18 18.00	-0.2
KHC	11.91	338	eP	19 03.30	20.9X
WLF	15.29	323	P	19 39.20	12.2X
DOU	16.34	321	Pc	19 48.50	8.1X
	1.0s		16.70nm	4.1mb	
SNF	16.76	322	P	19 39.10	-6.6X
NUR	22.39	5	eP	20 47.00	-1.8
EKA	23.29	325	Pd	20 58.60	1.0
	1.3s		5.20nm	3.9mb	
NB2	23.49	349	P	20 59.10	-0.4
	0.6s		1.30nm	3.6mb	
SUF	24.70	6	eP	21 09.90	-1.3
	0.6s		5.50nm	4.3mb	

S.D. = 1.1 on 55 of 65 obs.

JUN 18, 1989 04h 00m 31.12± 0.57s
36.864 N ± 5.3km 5.253 W ± 6.0km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.8 (MDD).

EPRU	0.10	10	iP	00 33.20	-0.7
			eS	00 36.40	
LIJA	0.13	285	iP	00 33.00	-1.4
ALJ	0.34	236	iP	00 39.50	1.3
EJIF	0.45	203	eP	00 39.60	-0.6
			eS	00 46.20	
GIBL	0.56	266	iP	00 43.00	0.4
SRO	0.61	189	iP	00 42.00	-1.5
MOMI	0.66	215	iP	00 43.00	-1.3
MAL	0.69	101	iPnc	00 43.40	-1.3
			iSg	05 54.60	
OJEN	0.80	197	iP	00 47.00	0.4
CNIL	0.81	233	iP	00 48.00	1.2
PLAT	0.85	209	iP	00 49.00	1.5
EHOR	0.95	0	eP	00 49.00	-0.3
			eS	01 02.00	
EVAL	1.39	302	iP	00 55.70	-0.9
			eS	01 13.50	
AFC	1.42	74	eP	00 58.20	1.1
EBAN	1.75	41	eP	01 03.60	2.0
			eS	01 25.00	
TOL	3.16	17	ePg	01 16.00	-5.8X
			eSg	02 14.50	

S.D. = 1.3 on 15 of 16 obs.

& JUN 18, 1989 04h 02m 33.15s
58.479 N 152.699 W
DEPTH = 56.1km
KODIAK ISLAND REGION (13)
<AGS-P>.

SHU	0.24	51	iP	02 42.27	-0.2
CDD	0.67	313	iP	02 46.44	-0.5
KDC	0.74	171	iPc	02 47.50	-0.3
	0.6s		17.73nm		
OPT	1.21	347	eP	02 53.99	-0.1
			S	03 09.88	
CNPM	1.29	35	iP	02 55.04	-0.2
ILIM	1.61	355	eP	02 59.02	-0.7
RED	1.95	359	eP	03 03.75	-0.7
RDT	2.11	4	eP	03 05.96	-0.7
			S	03 30.74	
SEW	2.33	44	eP	03 08.08	-1.6
NKA	2.39	17	iP	03 11.27	0.7
SLKM	2.40	31	eP	03 09.29	-1.4
SPU	2.73	7	eP	03 15.04	-0.4
			S	03 46.32	
MTU	3.00	58	eP	03 17.48	-1.9
			S	03 49.42	
SVW	3.02	332	eP	03 17.90	-1.8
SUA	3.15	17	eP	03 20.32	-1.2
PMR	3.60	28	iP	03 25.20	-2.5
KNK	3.64	34	eP	03 25.81	-2.4
FID	3.89	52	iP	03 28.82	-3.1
VZW	4.04	48	eP	03 31.43	-2.6
KLU	4.55	46	eP	03 38.99	-2.2
TTA	4.75	341	iP	03 41.80	-2.2

21 obs. associated

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* JUN 18, 1989 04h 16m 49.79± 2.53s
10.622 S ±14.0km 165.960 E ±18.4km
DEPTH = 146.4 ± 24.0 km
4.4mb (2 obs.)
SANTA CRUZ ISLANDS (184)

SVO	6.23	283	e(P)	18 16.00	-4.5X
VSG	6.30	282	eP	18 21.00	-0.6
DZM	11.39	178	iPc	19 31.00	1.6
			iS	21 33.10	
BRS	20.79	215	iPc	21 20.90	-0.1
CTA	21.18	241	iPd	21 25.00	0.0
	0.8s		11.19nm	4.3mb	
MNG	31.04	166	eP	22 53.30	-2.5
PGZ	31.24	165	P	22 54.20	-3.2X
SPA	79.45	180	e(P)	28 41.00	-0.1
	0.7s		7.81nm	4.6mb	
CMB	83.91	50	eP	29 04.70	0.1
FRI	84.10	51	eP	29 05.60	0.1
LRM	91.74	44	eP	29 42.10	-0.1
SOB1	146.80	125	ePKP	36 14.60	-0.6
BNG	147.13	262	iPKPd	36 17.90	2.2
	0.5s		24.00nm		
			id	36 53.00	
ITR	149.02	128	ePKP	36 22.80	4.1X

S.D. = 1.4 on 11 of 14 obs.

& JUN 18, 1989 04h 38m 13.94s
63.239 N 150.514 W
DEPTH = 120.7km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.36	330	iP	38 31.43	-0.2
MCK	0.86	54	eP	38 34.88	-0.2
			S	38 50.87	
NEA	1.49	25	eP	38 40.91	-0.7
PWA	1.62	169	eP	38 42.70	-0.5
			S	39 06.15	
GHO	1.65	153	eP	38 42.77	-0.8
PMR	1.77	158	iP	38 45.40	0.4
SUA	1.79	184	eP	38 44.29	-1.1
CCB	1.85	39	iP	38 45.35	-0.7
HDA	1.97	52	iP	38 46.69	-0.8
FBA	2.05	34	iP	38 47.90	-0.6
KNK	2.07	151	iP	38 47.71	-1.1
SPU	2.19	200	eP	38 49.60	-0.7
GLM	2.23	37	iP	38 50.24	-0.6
TOA	2.30	118	eP	38 51.31	-0.5
PAX	2.31	94	eP	38 51.30	-0.6
SLKM	2.74	177	iP	38 56.19	-1.4
RED	3.03	202	eP	38 59.87	-1.5
ILIM	3.38	201	eP	39 04.84	-1.2
MTU	3.54	156	eP	39 05.45	-2.7

19 obs. associated

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* JUN 18, 1989 04h 54m 42.88± 1.14s
18.211 S ±23.6km 177.911 W ±15.7km
DEPTH = 423.5 ± 10.3 km
4.6mb (7 obs.)
FIJI ISLANDS REGION (181)

VUN	3.45	273	ePd	55 54.00	1.9
SGE	4.01	278	iPd	55 59.60	2.3
			eS	57 04.60	
AFI	7.28	55	eP	56 27.00	-4.2
			e(S)	57 47.40	
DZM	15.18	253	iPc	57 58.10	-0.4
BRS	28.47	246	iPc	00 02.60	-0.9
COO	30.03	240	iPd	00 17.20	0.1
	0.5s		25.00nm	4.8mb	
CTA	33.86	261	iPd	00 49.00	-0.8
	0.8s		11.94nm	4.3mb	
CAN	33.90	233	eP	00 49.80	-0.2
STK	38.90	242	eP	01 32.00	0.5
WB5	45.02	260	iPd	02 18.70	-2.0
WRA	45.04	260	Pd	02 18.70	-2.1
	0.5s		3.90nm	4.0mb	
ASPA	45.17	254	iPc	02 20.40	-1.4
	0.5s		83.00nm	5.4mb	
			eS	08 23.80	
WARB	51.63	251	eP	02 56.00	-14.6X
	0.4s		8.00nm		
NANU	62.09	254	eP	04 22.30	-0.7
MAT	68.43	323	eP	05 02.00	-0.6
	1.3s		26.92nm	4.7mb	
SPA	71.90	180	ePc	05 24.30	1.3
	1.0s		31.00nm	4.9mb	
PLM	77.58	49	eP	05 56.40	1.0
FRI	77.59	44	e(P)	05 55.50	0.4
CMB	77.74	43	eP	05 56.60	0.6
WDC	77.87	40	eP	05 57.50	0.9
KVN	79.79	43	eP	06 07.90	0.8
PNT	84.72	34	eP	06 32.00	0.4
	0.6s		4.00nm	4.4mb	
ALQ	85.91	51	eP	06 38.80	0.8
INK	92.05	15	eP	07 05.00	-0.6
DMU	143.71	9	ePKP	13 27.70	-1.9
DLE	144.35	9	ePKP	13 29.50	-1.2
			e	15 06.00	
KSP	145.53	344	ePKP	13 33.50	0.7
CLL	145.86	348	iPKP	13 34.90	1.6
	1.1s		14.00nm		
BRG	146.07	347	ePKP	13 34.00	0.4
	1.0s		10.00nm		
PRU	146.76	345	ePKP	13 37.50	2.8
SRO	147.63	339	ePKP	13 41.30	5.1X
ZST	147.68	341	ePKP	13 40.20	3.9X
KHC	147.79	346	PKP	13 37.00	0.5
			e	15 43.50	
DOU	148.13	357	PKPc	13 41.80	4.9X
WLF	148.45	355	PKP	13 42.40	5.0X
GRR	149.80	4	ePKP	13 45.00	5.5X
	1.0s		12.00nm		
LPF	150.15	4	ePKP	13 45.40	5.3X
	1.0s		12.00nm		
LOR	150.98	358	ePKP	13 47.40	6.0X
	1.0s		6.00nm		
SSF	151.20	358	ePKP	13 48.20	6.5X
	1.0s		6.00nm		
LBF	151.26	357	ePKP	13 48.20	6.3X
	0.8s		3.20nm		
MFF	151.63	3	ePKP	13 48.90	6.6X
	1.0s		8.00nm		
BNG	158.87	232	iPKPc	13 52.50	-0.2
	0.5s		5.00nm		

S.D. = 1.5 on 31 of 42 obs.

JUN 18, 1989 05h 09m 30.20± 0.30s
78.935 N ± 4.8km 3.520 E ± 5.5km
DEPTH = 10.0km (geophysicist)
4.8mb (34 obs.) 4.6Msz (4 obs.)
GREENLAND SEA (640)

KBS	1.62	87	iP	09 56.60	-2.3
			iS	10 11.00	
DAG	5.16	256	iPc	10 45.00	-4.1X
	0.6s		49.33nm	5.3mb	
TRO	10.18	148	eP	11 55.66	-3.5X
ALE	10.57	319	eP	11 59.00	-5.5X
KEV	11.05	134	iP	12 11.00	0.0
	0.7s		26.70nm	5.7mb	
LOF	11.20	160	iP+	12 11.10	-2.0
SOD	13.23	138	iP	12 37.80	-2.5
GDH	17.41	268	iPc	13 26.50	-7.7X
	0.9s		50.42nm	4.6mb	
SUF	17.65	144	iP	13 35.50	-1.7
	0.8s		28.90nm	4.5mb	
NB2	18.14	168	P	13 42.30	-1.1
	0.9s		12.80nm	4.1mb	
NRA0	18.46	167	iPc	13 47.50	0.2
NUR	19.65	148	iP	14 00.80	-0.7
	0.7s		46.70nm	4.9mb	
UPP	19.68	159	eP	14 00.00	-1.8
MBC	21.94	327	eP	14 25.50	0.6
	1.0s		9.00nm	4.2mb	
EKA	23.82	189	Pc	14 45.10	1.6
	0.6s		2.60nm	4.0mb	
FRB	25.14	275	eP	14 56.00	-0.2
DMU	25.40	194	eP	14 59.00	0.3
WTS	27.08	176	eP	15 18.50	4.3X
	0.8s		9.00nm	4.5mb	
CLL	27.94	167	iP	15 22.30	0.2
	1.5s		22.00nm	4.7mb	
			i	15 30.00	
ENN	28.30	177	eP	15 25.50	0.3
	0.8s		5.00nm	4.4mb	
			e	15 33.50	
BRG	28.42	166	eP	15 26.00	-0.4
	1.2s		21.00nm	4.8mb	

18d 05h

		e	15	34.90			
SNF		28.54	179	P	15	20.70	-6.7X
MOX		28.55	169	eP	15	28.00	0.4
		1.2s	28.00nm			4.9mb	
		i	15	36.00			
PRU		29.33	165	Pd	15	35.30	0.7
	Z	20s	0.50um			4.1Msz	
		e	16	14.50			
GRB1		29.81	169	eP	15	39.60	0.7
		1.0s	20.00nm			4.9mb	
WET		30.10	168	iPc	15	42.80	1.3
		1.5s	25.00nm			4.8mb	
SPC		30.48	158	eP	15	45.80	0.8
INK		30.88	330	eP	15	48.00	-0.1
ZST		31.26	162	eP	15	52.50	0.8
BHG		31.52	168	eP	15	53.20	-0.8
LOR		31.79	180	eP	15	56.00	-0.3
		1.2s	7.10nm			4.5mb	
SSF		31.99	180	eP	15	58.00	-0.1
		1.2s	8.90nm			4.6mb	
LBF		32.07	179	eP	15	58.70	-0.2
		1.2s	11.90nm			4.7mb	
AVF		32.26	180	eP	16	00.20	-0.3
		1.6s	31.00nm			5.0mb	
BGF		32.50	181	eP	16	02.50	0.0
		1.2s	32.70nm			5.1mb	
TCF		32.77	182	eP	16	04.80	-0.1
		1.2s	17.80nm			4.9mb	
LSF		32.81	183	eP	16	04.90	-0.4
		1.2s	14.80nm			4.8mb	
MAF		32.84	181	eP	16	05.30	-0.2
		1.0s	8.00nm			4.6mb	
LPG		33.58	176	eP	16	13.20	0.9
		1.2s	13.00nm			4.7mb	
BZS		34.13	157	eP	16	18.00	1.3
YKC		34.23	313	eP	16	17.00	-0.4
YKA		34.24	313	eP	16	17.40	-0.1
VRI		34.31	151	iPd	16	06.50	-11.8X
CMP		34.75	153	ePc	16	25.00	2.9
SBF		35.22	175	eP	16	27.00	0.8
		1.0s	20.00nm			4.9mb	
EPF		36.05	184	eP	16	34.00	0.9
		1.2s	17.80nm			4.8mb	
OHR		38.55	159	eP	16	53.50	-0.7
TOL		39.29	189	eP	17	01.50	1.2
FFC		39.71	299	eP	17	03.50	-0.2
		1.1s	15.00nm			4.6mb	
EDM		42.99	308	eP	17	31.00	0.4
GAC		43.47	271	eP	17	35.00	0.5
SES		45.37	305	ePc	17	49.50	-0.4
			pP		17	57.00	25kmX
WMO		46.28	85	P	17	58.50	1.4
	Z	20s	0.60um			4.5Msz	
	N	12s	0.70um				
KSH		48.24	98	eP	18	20.00	7.3X
LRM		50.04	305	eP	18	26.40	-0.2
			e		18	34.40	
CBN		51.07	270	eP	18	34.00	-0.1
GTA		52.84	75	eP	18	47.60	-0.2
	Z	14s	1.00um			5.0MszX	
CN2		52.93	50	eP	18	56.00	7.8X
BTO		53.54	65	eP	18	51.50	-1.3
	N	19s	2.20um				
	E	19s	0.80um				
BJI		55.14	60	eP	19	07.00	2.6
	Z	14s	0.71um			4.9MszX	
	E	16s	0.50um				
RLO		56.41	286	e(P)	19	15.00	1.3
TIY		56.77	64	eP	19	24.00	7.7X
	Z	20s	1.00um			4.9Msz	
	E	14s	0.80um				
LNO		56.80	287	e(P)	19	22.10	5.8X
TUL		56.80	287	eP	19	22.70	6.2X
		1.0s	5.70nm			4.6mb	
	Z	18s	0.48um			4.6Msz	
			LR		39	00.00	
SIO		57.06	287	e(P)	19	16.70	-1.6
VVO		57.35	287	eP	19	18.70	-1.6
MEO		58.41	289	eP	19	26.00	-1.8
		1.0s	4.80nm			4.5mb	
		e	19	34.20			
ALQ		59.66	297	e(P)	19	35.50	-1.2
GKN		61.01	93	P	19	46.30	0.4
		0.8s	13.00nm			5.1mb	
KKN		61.34	92	P	19	48.80	0.5
		0.8s	18.00nm			5.3mb	
DMN		61.49	93	P	19	49.50	0.2

		0.8s	18.00nm			5.3mb	
PKI		61.58	92	P	19	52.00	2.0
		0.6s	8.00nm			5.1mb	
MAT		61.82	41	(P)	19	59.00	7.8X
GYA		66.71	72	P	20	30.60	7.4X
GBA		73.66	103	Pd	21	18.60	13.3X
		0.7s	2.20nm				
BNG		74.85	164	iPc	21	06.50	-5.8X
		0.4s	3.00nm			4.7mb	
S.D. = 1.1 on 60 of 76 obs.							

JUN 18, 1989 05h 54m 58.89± 0.37s
44.408 N ± 3.8km 14.879 E ± 3.6km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)
ML 3.8 (ROM), 3.7 (TTG), 3.6 (KBA). MD 3.8 (VKA). Felt in the Zadar area, Yugoslavia.

RIY		1.00	340	ePn	55	20.60	2.8
				iSn	55	38.20	
VBY		1.13	14	iPgd	55	20.20	0.2
				iSg	55	38.10	
AOI		1.26	227	iPgd	55	22.93	0.6
				iSg	55	41.85	
CEY		1.37	347	ePnd	55	25.60	1.6
				iSg	55	47.50	
TRI		1.52	329	ePgc	55	27.70	1.6
				eSg	55	51.70	
SSO		1.54	224	e(Pg)	55	27.02	0.7
				e(Sg)	55	50.09	
ZAG		1.61	29	ePnd	55	27.40	0.0
				iSn	55	50.50	
LJU		1.65	352	iPnd	55	30.00	1.9
				eSn	55	53.00	
ARV		1.67	238	P	55	29.40	1.1
HVAR		1.67	137	iPnc	55	24.70	-3.7X
				iSn	55	47.80	
PTJ		1.68	27	iPnd	55	27.80	-0.7
				eSn	55	51.50	
BLY		1.68	78	Pn	55	26.60	-1.9
				Sn	55	47.60	
VOY		1.77	337	iPnc	55	31.40	1.6
				e	55	33.20	
				eSn	55	58.30	
				eSg	56	03.60	
RSM		1.81	255	P	55	32.30	2.0
				eSn	55	56.80	
ALP		1.88	211	ePn	55	30.88	-0.6
				iSn	55	59.07	
ASS		2.09	231	Pd	55	34.40	-0.1
				eSn	56	01.90	
RBL		2.23	336	P	55	38.40	1.9
				eSn	56	08.20	
CRE		2.25	251	P	55	39.50	2.7
PGD		2.34	258	P	55	39.80	1.7
MNS		2.58	219	P	55	40.50	-0.9
				eSn	56	12.50	
FVI		2.64	327	P	55	45.40	3.2X
				eSn	56	18.10	
AZI		2.64	204	P	55	42.50	0.3
FIR		2.69	258	eP	55	45.00	2.1
CTI		2.81	307	P	55	45.70	0.9
				eSn	56	22.30	
SDI		2.81	196	P	55	44.10	-0.7
KBA		2.88	339	iPnc	55	46.60	0.8
				i	55	58.10	
				iSn	56	24.80	
				iSg	56	38.70	
MME		3.01	267	P	55	49.60	1.9
BRY		3.06	118	ePn	55	50.00	1.7
				eSn	56	27.00	
PII		3.21	259	P	55	51.00	0.6
HCY		3.28	125	ePn	55	53.00	1.6
				eSn	56	33.00	
SAL		3.31	293	P	55	55.00	3.2X
NKY		3.39	117	ePn	55	55.00	2.0
				eSn	56	36.00	
PLE		3.44	107	ePn	55	54.70	1.0
				eSn	56	37.00	
BHG		3.59	338	ePn	55	55.10	-0.7
OGA		3.65	314	ePn	55	58.50	1.6
KMR		3.69	352	e(Pn)	56	04.00	6.9X
				ePg	56	14.50	
				eSg	57	02.50	
TTG		3.75	120	ePn	55	59.40	1.3
				eSn	56	44.00	

SGO		3.86	175	P	55	57.20	-2.4
BOB		3.90	277	P	56	01.80	1.6
				eSn	56	47.60	
VKA		3.98	14	ePn	56	01.50	0.2
		0.7s	77.90nm				
				iSn	56	48.40	
				i	56	51.20	
BEO		4.00	82	e(Pn)	56	12.70	11.2X
ZST		4.09	21	iP	56	01.50	-1.3
				i	56	52.30	
SRO		4.16	34	i(P)	56	02.50	-1.2
				i	57	18.00	
VAI		4.56	291	P	56	09.50	0.0
FIN		4.79	270	P	56	11.84	-1.0
KHC		4.81	350	P	56	12.50	-0.6
				e	56	32.00	
				i	57	41.40	
BZS		4.93	73	ePc	56	12.50	-2.2
WET		4.93	345	ePn	56	14.90	0.1
PSZ		4.95	43	ePn	56	12.30	-2.7
ROB		5.03	271	P	56	14.92	-1.3
ORX		5.04	286	P	56	14.15	-2.3
IMI		5.05	267	P	56	12.00	-4.6X
ENR		5.36	271	P	56	19.69	-1.2
SKO		5.38	115	ePn	56	17.60	-3.5X
				e	56	31.80	
				iSn	57	17.50	
SBF		5.39	267	eP	56	20.30	-1.0
		0.8s	13.40nm			4.6mb	X
STV		5.42	271	P	56	20.76	-1.1
OHR		5.46	125	ePn	56	16.00	-6.4X
DOI		5.47	274	P	56	20.50	-1.9
RSP		5.48	280	P	56	16.15	-6.5X
LSD		5.58	284	P	56	20.92	-3.3X
PRU		5.59	358	eP	56	24.00	0.0
				e	56	46.70	
RRL		5.80	278	P	56	25.38	-1.8
LPG		5.87	284	eP	56	28.40	0.1
		0.8s	30.80nm			5.1mb	X
BNI		5.88	279	P	56	28.20	-0.1
FRF		6.00	265	eP	56	28.50	-1.3
		0.8s	16.10nm			4.8mb	X
SPC		6.03	36	eP	56	29.40	-1.1
LMR		6.15	263	eP	56	30.70	-1.2
		0.8s	8.00nm			4.6mb	X
LRG		6.23	264	eP	56	32.00	-1.0
LBF		8.06	292	eP	56	57.20	-1.5
		0.8s	5.90nm			4.9mb	X
SMF		8.07	290	eP	56	57.00	-1.9
		0.8s	2.60nm			4.5mb	X
LOR		8.21	294	eP	56	59.10	-1.8
		0.9s	4.90nm			4.8mb	X
SSF		8.39	292	eP	57	02.40	-0.9
		0.8s	4.00nm			4.7mb	X
S.D. = 1.5 on 62 of 72 obs.							

JUN 18, 1989 06h 09m 39.04± 0.40s
41.241 N ± 4.1km 19.355 E ± 4.0km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 3.7 (ROM). MD 3.6 (ATH), 3.0 (TTG).

TIR		0.40	75	iPgd	09	46.00	-1.2
LACI		0.48	34	iPgd	09	47.60	-1.1
BERA		0.70	140	iPg	09	48.00	-4.9X
ULC		0.73	354	iPgd	09	54.00	0.7
				eSg	10	07.00	
VLO		0.78	172	iPgd	09	56.10	1.9
SDA		0.78	8	ePn	09	56.30	2.1
TPE		1.07	152	ePn	10	01.50	2.3
OHR		1.10	96	iPg	09	58.50	-1.2
				iSg	10	14.30	
BDV		1.11	339	ePg	10	01.20	1.3
				eSg	10	18.50	
KKS		1.15	43	eP	10	09.50	9.0X
TTG		1.19	357	iPgc	10	02.00	0.8
				iSg	10	20.00	
BCI		1.24	25	ePn	10	02.30	0.2
HCY		1.36	332	ePg	10	04.60	0.5
				eSg	10	24.00	
PVY		1.43	19	ePg	10	05.50	0.4
				eSg	10	27.00	
LSK		1.44	139	iPnd	10	05.50	0.2
SRN		1.45	160	ePn	10	06.70	1.5
NKY		1.59	351	ePn	10	08.50	1.1
				eSn	10	30.80	

IVA	1.68	14	ePn	10	11.00	2.4
			eSn	10	36.50	
SKO	1.73	64	iPnd	10	09.60	0.3
			i	10	16.50	
			iSn	10	31.00	
			i	10	43.20	
BRY	1.76	340	ePn	10	11.00	1.1
			eSn	10	38.00	
KZN	2.06	116	ePb	10	14.10	-0.1
PLE	2.09	1	ePn	10	16.20	1.6
			eSn	10	47.00	
VAY	2.42	87	iPn	10	18.00	-1.3
HVAR	2.90	313	i(Pn)	10	34.30	8.2X
MGR	3.09	250	P	10	29.50	0.7
SGO	3.14	259	P	10	30.20	0.7
VLS	3.20	162	ePn	10	28.00	-2.4
PLG	3.22	104	ePn	10	29.50	-1.2
NEO	3.53	122	ePb	10	34.50	-0.6
BEO	3.67	12	eP	10	57.00	20.0X
BLY	3.85	336	eP	11	22.50	42.9X
SDI	4.19	278	Pd	10	44.70	0.3
AZI	4.50	281	P	10	49.00	0.2
RDO	4.67	89	ePn	10	50.90	-0.3
BZS	4.67	20	ePc	10	49.50	-1.7
MNS	5.12	285	P	10	58.50	0.9
VBY	5.20	326	e(P)	11	04.00	5.3X
ARV	5.26	298	Pc	10	57.70	-1.9
PTJ	5.27	333	eP	11	08.60	8.8X
ASS	5.30	292	P	10	59.00	-1.2
CEY	5.75	323	e(Pn)	11	34.50	28.0X
CMP	5.78	44	ePc	12	04.00	57.1X
TRI	6.04	320	eP	11	45.20	34.7X
			e	12	17.10	
VOY	6.21	322	eP	11	11.20	-1.9
PGD	6.22	298	P	11	12.00	-1.3
MLR	6.41	46	eP	11	17.00	1.1
RBL	6.67	323	P	11	18.50	-1.0
FVI	7.15	321	P	11	25.00	-1.1
CTI	7.37	313	Pc	11	26.50	-2.8

S.D. = 1.4 on 39 of 49 obs.

? JUN 18, 1989 07h 28m 44.56± 4.01s
59.972 N ±11.6km 2.786 E ±32.4km
DEPTH = 10.0km (geophysicist)
NORTH SEA (534)
MD 2.1 (BER).

ASK	1.31	66	eP	29	08.88	0.2
			eS	29	31.82	
BER	1.34	71	eP	29	09.37	0.2
			eS	29	30.39	
SUE	1.46	41	eP	29	11.89	0.9
			eS	29	33.68	
KMY	1.47	120	iP	29	10.59	-0.4
			eS	29	31.38	
ODD1	1.93	90	eP	29	17.85	0.0
HYA	2.06	53	eP	29	18.25	-1.4
BLS1	2.13	104	eP	29	21.48	0.7
			eS	29	49.85	
NRA0	4.42	76	iPnc	29	52.80	-0.3
			iPg	30	04.10	
			iSg	31	06.60	

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

% JUN 18, 1989 09h 10m 58.88± 0.66s
60.006 N ± 7.6km 6.623 E ± 7.7km
DEPTH = 19.0 ± 11.1 km
SOUTHERN NORWAY (535)
MD 1.3 (BER).

ODD1	0.09	178	iPg	11	02.84	0.1
			eSg	11	04.93	
BLS1	0.63	170	iPg	11	11.06	0.0
			iSg	11	19.15	
ASK	0.86	305	eP	11	14.77	-0.2
			eS	11	25.38	
KMY	1.06	222	eP	11	18.42	0.0
			eS	11	31.90	
HYA	1.18	350	eP	11	20.56	0.2
			eS	11	35.90	
SUE	1.40	320	eP	11	23.40	0.0
			eS	11	41.42	
NRA0	2.55	71	eP	11	39.90	-0.1
			eS	12	09.70	
			iSg	12	15.50	

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

? JUN 18, 1989 09h 32m 32.33± 1.04s
28.521 S ±11.2km 68.791 W ±38.9km
DEPTH = 69.5 ± 16.8 km
LA RIOJA PROVINCE, ARGENTINA (138)

ZON	3.02	178	eP	33	18.00	-0.8
			eS	33	58.00	
JACH	4.43	200	eP	33	40.00	1.3
ROCH	4.83	203	eP	33	44.50	0.1
PEL	4.89	199	eP	33	45.00	0.0
			iS	34	52.00	
FCH	4.96	195	eP	33	47.50	1.2
SAN	5.17	198	eP	33	49.00	0.0
PCH	5.29	196	ePc	33	51.00	0.2
TACH	5.44	199	eP	33	52.50	-0.2
LCCH	5.48	205	eP	33	52.50	-0.8
CHCH	5.63	196	eP	33	56.00	0.6
LNV	5.86	202	eP	33	57.00	-1.6
CNCB	11.68	4	eP	35	20.00	1.2
LPB	11.95	3	eP	35	21.00	-1.2
ZOBO	12.21	3	eP	35	21.00	-4.8X
VVO	68.42	337	e(P)	43	26.40	-2.3
RLO	68.92	337	eP	43	32.90	1.1
LNO	68.95	337	eP	43	32.30	0.4
TUL	68.95	337	eP	43	32.20	0.2
	0.8s		5.50nm			4.5mb X
SIO	68.98	336	e(P)	43	32.80	0.6

S.D. = 1.1 on 18 of 19 obs.

& JUN 18, 1989 09h 45m 47.86s
58.360 N 142.838 W
DEPTH = 8.6km
GULF OF ALASKA (15)
<AGS-P>.

BALM	2.70	5	iP	46	30.42	-1.9
MTU	2.97	305	iP	46	33.68	-2.3
			S	47	09.77	
FID	3.03	324	eP	46	35.47	-1.4
GLB	3.13	351	iP	46	36.39	-2.0
			S	47	14.49	
VZW	3.30	327	iP	46	38.49	-2.3
KLU	3.50	335	eP	46	41.81	-1.9
HYT	3.67	45	P	46	43.10	-3.0
SEW	3.82	300	eP	46	46.29	-1.8
			S	47	28.77	
TOA	4.11	338	eP	46	50.98	-1.3
KNK	4.17	320	eP	46	51.39	-1.7
SLKM	4.34	303	eP	46	52.85	-2.7
			S	47	43.53	
CNPM	4.50	289	iP	46	55.73	-2.1
PME	4.52	319	eP	46	56.08	-1.9
ILIM	5.48	293	eP	47	09.10	-2.6
YKA	14.47	61	eP	49	19.80	5.2

15 obs. associated

& JUN 18, 1989 10h 47m 37.03s
63.114 N 148.417 W
DEPTH = 80.5km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.66	340	iP	47	52.69	0.1
			S	48	04.03	
KTH	1.21	292	iP	47	59.13	0.0
			S	48	16.52	
DDM	1.33	58	eP	48	01.30	0.7
			S	48	18.97	
PAX	1.35	95	eP	48	00.35	-0.6
			S	48	19.02	
GHO	1.37	190	eP	48	00.29	-0.8
WRH	1.37	6	eP	48	00.78	-0.3
TOA	1.45	133	iP	48	01.67	-0.5
HDA	1.45	26	iP	48	01.92	-0.2
			S	48	20.52	
NEA	1.50	349	iP	48	02.22	-0.5
			S	48	20.85	
CCB	1.56	10	eP	48	03.13	-0.4
			S	48	22.80	
PMR	1.56	193	iP	48	03.00	-0.6
PWA	1.62	206	eP	48	03.90	-0.4
RDS	1.72	4	iP	48	05.49	-0.3
			S	48	26.28	
F8A	1.81	8	iP	48	06.70	-0.3
SKT	1.84	233	iP	48	06.67	-0.6
			S	48	30.01	
GLM	1.93	13	iP	48	08.21	-0.4
			S	48	30.97	
SUA	1.98	214	eP	48	08.82	-0.5
RED	3.41	219	eP	48	28.45	-0.5
TTA	3.47	270	iP	48	28.60	-1.2
IMA	3.73	325	iP	48	32.90	-0.7
DWY	4.12	73	P	48	37.20	-1.7

21 obs. associated

? JUN 18, 1989 11h 34m 04.03± 6.85s
40.263 N ±18.4km 125.009 W ±58.6km
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)
ML 3.1 (BRK).

FHC	0.95	55	iPc	34	22.10	0.0
			i	34	29.70	
			iS	34	35.80	
WDC	1.91	80	eP	34	36.70	-0.2
			eS	35	01.30	
MIN	2.60	87	ePd	34	47.40	0.4
ORV	2.79	104	eP	34	49.50	-0.1
BRK	3.20	137	eP	34	55.00	-0.4
PCC	3.44	143	eP	34	59.00	0.3

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

& JUN 18, 1989 12h 43m 08.79s
63.840 N 148.417 W
DEPTH = 102.2km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.25	245	eP	43	23.46	1.6
WRH	0.65	13	iP	43	26.16	0.0
CCB	0.85	18	iP	43	27.80	-0.3
HDA	0.86	48	iP	43	27.86	-0.3
			S	43	43.15	
RDS	1.00	7	iP	43	29.43	-0.2
FBA	1.10	14	iP	43	30.40	-0.3
			i	43	47.10	
DDM	1.13	92	eP	43	31.09	-0.2
			S	43	48.20	
KTH	1.15	257	iP	43	30.85	-0.6
			S	43	48.10	
GLM	1.24	21	iP	43	31.87	-0.5
			S	43	49.59	
PAX	1.59	122	eP	43	35.72	-1.0
			S	43	58.66	
GHO	2.09	187	eP	43	42.16	-1.0
PMR	2.28	189	iP	43	46.00	0.4
PWA	2.30	198	eP	43	46.05	0.2
SKT	2.35	219	eP	43	45.09	-1.5
			S	44	13.90	
KNK	2.44	180	eP	43	46.99	-0.8
SUA	2.62	205	eP	43	49.97	-0.3
KLU	2.62	153	eP	43	48.22	-2.1
			S	44	20.56	
IMA	3.16	317	iP	43	56.50	-1.2
DWY	3.97	83	P	44	06.40	-2.2

19 obs. associated

? JUN 18, 1989 12h 44m 41.36± 1.70s
20.978 S ±25.8km 178.663 W ±19.6km
DEPTH = 575.4 ± 14.2 km
5.0mb (6 obs.)
FIJI ISLANDS REGION (181)

VUN	4.01	317	eP	46	05.60	0.0
SGE	4.66	316	iPc	46	11.90	1.2
DZM	13.90	263	iPc	47	43.90	4.7X
BRS	26.79	251	iPc	49	38.90	0.7
COO	28.11	244	eP	49	51.00	1.2
CTA	32.83	265	iPd	50	30.30	0.5
	0.9s		21.01nm			4.8mb
PMG	34.85	284	iPd	50	47.80	1.0
	0.9s		53.78nm			5.2mb
ASPA	43.81	257	iPd	51	58.90	0.0
	0.7s		43.00nm			5.1mb
			iPcP	53	31.80	
			iS	57	47.10	
WB5	43.91	263	iPd	51	59.00	-0.6
			eS	57	51.30	
WRA	43.92	263	Pc	51	57.90	-1.9
FORR	48.50	247	iPd	52	34.20	-0.3
	0.4s		41.00nm			5.3mb
KNA	49.99	267	iPd	52	44.80	-0.8
WARB	50.10	253	eP	52	33.00	-13.4X
	0.3s		8.00nm			

18d 12h

COOL	54.47	246	eP	53	17.00	-0.7	
MBL	57.05	258	eP	53	34.00	-1.6	
KLB	57.29	245	eP	53	36.50	-0.6	
BAL	58.30	246	eP	53	43.10	-0.9	
MUN	58.56	245	eP	53	45.60	-0.1	
NANU	60.67	255	iPd	53	59.40	-0.4	
MAT	70.23	324	(P)	54	26.00	-32.7X	
NJ2	79.71	310	eP	55	50.50	-0.7	
CMB	80.23	43	e(P)	55	52.30	-1.6	
WDC	80.44	40	eP	55	53.30	-1.5	
CN2	82.30	323	Pd	56	02.80	-1.3	
TIY	87.13	312	eP	56	27.60	-0.3	
PNT	87.40	34	eP	56	27.00	-1.8	
	0.7s		5.00nm			4.4mb	
XAN	87.93	308	P	56	31.50	-0.2	
ALQ	88.18	52	e(P)	56	31.50	-1.5	
CHG	89.82	290	ePd	56	41.00	0.4	
	0.9s		11.34nm			4.8mb	
SUF	134.97	344	ePKP	02	52.80	-3.6X	
NB2	139.38	353	PKP	02	54.00	-10.7X	
	0.8s		1.90nm				
HFS	139.91	350	ePKP	02	55.70	-9.9X	
	0.6s		4.60nm				
EKA	145.53	5	PKPc	03	14.30	-1.1	
	0.9s		6.40nm				
DMU	146.54	9	ePKP	03	17.30	0.2	
DLE	147.18	9	ePKP	03	18.90	0.8	
VRI	147.62	326	ePKPc	03	21.00	1.9	
WIT	147.96	354	ePKP	03	22.50	3.2X	
KSP	147.96	342	ePKP	03	16.50	-3.0X	
			id	03	21.00		
			i	03	26.00		
SPC	148.06	336	ePKP	03	22.70	2.7	
MLR	148.28	326	ePKPc	03	22.50	2.2	
CLL	148.38	346	iPKPd	03	22.60	2.5	
	0.9s		24.00nm				
			i	03	27.30		
BRG	148.56	345	iPKP	03	23.10	2.7	
	0.8s		14.00nm				
			i	03	28.60		
WTS	148.75	353	ePKP	03	23.50	2.9X	
	0.8s		16.00nm				
PRU	149.22	343	PKPd	03	24.90	3.5X	
			e	03	31.50		
MOX	149.30	347	ePKP	03	25.00	3.4X	
	1.3s		15.00nm				
ZST	150.03	339	e(PKP)	03	27.20	4.5X	
			e	03	34.90		
ENN	150.05	354	ePKP	03	34.50	11.9X	
	0.8s		10.00nm				
KHC	150.26	344	iPKPd	03	27.60	4.5X	
			i	03	37.00		
BZS	150.32	331	ePKP	03	27.50	4.3X	
SNF	150.44	356	PKP	03	27.50	4.3X	
ABH	150.74	352	ePKPd	03	28.50	4.7X	
DOU	150.83	356	PKP	03	27.50	3.7X	
RUP	150.98	352	ePKPd	03	29.10	4.9X	
WLF	151.12	354	PKPc	03	29.80	5.6X	

S.D. = 1.4 on 34 of 54 obs.

& JUN 18, 1989 13h 09m 37.90s
36.577 N 121.223 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

LLA	0.23	80	iPc	09	42.40	-0.3	
SAO	0.26	316	iPc	09	42.85	-0.4	
			eS	09	50.35		
PRS	0.27	206	iPd	09	43.50	0.0	
			iS	09	47.30		
PRI	0.63	134	eP	09	50.30	-0.2	
MHC	0.83	336	iPd	09	54.20	-0.2	
			eS	10	06.75		
FRI	1.28	71	ePc	10	00.30	-1.7	
			eS	10	16.40		
PCC	1.31	315	eP	10	00.20	-2.1	
BKS	1.53	328	eP	10	07.30	1.7	
CMB	1.60	24	eP	10	05.80	-0.9	
			eS	10	26.90		

9 obs. assaciated

JUN 18, 1989 14h 06m 28.83± 0.10s
17.761 N ± 1.9km 68.811 W ± 1.6km
DEPTH = 62.3km (geaphysicist)
5.9mb (69 abs.)
MONA PASSAGE (89)

Ms 5.1 (BRK). Felt in the Dominican Republic and throughout Puerto Rico. Also felt at Caracas and in towns along the central coast of Venezuela. Depth fram broadband displacement seismagrams.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike= 35 Dip=65 Slip= -20
NP2: 134 72 -154
Principal Axes:
T Plg= 5 Azm=263
P 31 356
Comment: The focal mechanism is poarly cantralled and corresponds ta strike-slip faulting with a maderate normal campanent. The preferred fault plane is nat determined.
RADIATED ENERGY
No. of sta: 6 Facal mech. C
Energy 0.7±0.2*10**13 Nm
MOMENT TENSOR SOLUTION
Dep 70 No. af sta: 6
Moment Tensor; Scale 10**17 Nm
Mrr=-0.81 Mtt=-2.36
Mff= 3.17 Mrt=-1.46
Mrf=-0.66 Mtf=-1.00
Principal axes:
T Val= 3.39 Plg= 6 Azm= 82
N 0.06 59 182
P -3.45 31 348
Best Double Couple:Ma=3.4*10**17
NP1:Strike=129 Dip=64 Slip=-161
NP2: 31 73 -27
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 16S, 34C
Centraid Lacation:
Origin Time 14:06:30.8 0.5
Lat 17.28N 0.06 Lan 68.53W 0.05
Dep 73.2 4.0 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.31 0.05 Mtt=-1.22 0.09
Mff= 1.52 0.10 Mrt=-1.08 0.06
Mrf=-0.02 0.06 Mtf=-0.29 0.08
Principal Axes:
T Val= 1.56 Plg= 4 Azm=263
N 0.39 57 167
P -1.95 33 355
Best Double Couple:Ma=1.8*10**17
NP1:Strike= 34 Dip=64 Slip= -22
NP2: 134 70 -153

PNP	2.05	81	iP	07	02.90	1.4	
APR	2.10	70	iP	07	04.00	1.8	
SJG	2.56	82	P	07	09.40	0.7	
CSB	2.58	78	iP	07	10.20	1.2	
NEV	5.99	95	eP	07	55.70	-1.2	
BPA	6.68	95	ePc	08	05.67	-0.9	
MORO	6.86	176	P	08	10.10	0.9	
PAG	7.04	103	ePc	08	10.65	-1.0	
			S	09	22.00		
SEG	7.12	100	eP	08	13.00	0.4	
BBL	7.37	106	ePc	08	15.70	-0.5	
MGG	7.41	103	ePc	08	16.78	0.1	
SFG	7.44	100	ePc	08	16.64	-0.5	
CAR	7.44	166	P	08	17.60	0.4	
DPMT	7.54	108	iP	08	18.52	-0.1	
			eS	09	34.25		
DEG	7.55	100	ePc	08	17.80	-1.0	
DTMT	7.58	108	eP	08	18.81	-0.4	
GUAC	7.67	169	P	08	21.60	1.1	
OLLA	7.94	166	P	08	25.60	1.5	
PLAV	7.94	171	P	08	25.50	1.2	
FDF	7.95	111	eP	08	22.06	-2.2	
			S	09	28.40		
BIM	8.11	112	eP	08	24.27	-2.1	
CRM	8.15	110	eP	08	26.43	-0.5	
MVM	8.25	112	eP	08	27.09	-1.2	
SLB	8.44	117	eP	08	29.21	-1.8	
			eS	09	51.41		
SLW	8.44	115	eP	08	29.79	-1.2	
SVB	8.54	120	eP	08	31.30	-1.1	
SVV	8.55	120	eP	08	31.59	-0.8	
			eS	09	57.48		
SSV	8.56	120	eP	09	31.33	58.6X	
			eS	09	55.86		
FCV	8.61	121	eP	08	31.95	-1.3	
			eS	09	57.48		
CEOS	8.69	177	P	08	35.20	0.7	
TCE	9.80	135	eP	08	50.16	0.5	
PIG	10.13	129	eP	08	39.32	-14.7X	
BOT	10.22	129	eP	08	55.71	0.5	
TPP	10.28	135	eP	08	58.81	2.7	
TBH	10.42	133	eP	09	01.54	3.4X	
BMG	11.41	202	iPc	09	12.00	0.5	
GCM	12.02	279	P	09	19.00	-0.5	
UPA	13.59	231	iPd	09	39.20	-1.1	
	0.7s		224.66nm			5.9mb	
	Z 20s		1.28um			4.9Msz	
BOG	14.03	202	iPd	09	47.00	0.6	
			iS	12	14.00		
BUS	16.65	243	eP	10	19.30	-0.7	
SJS	16.71	244	iPd	10	24.00	3.5X	
SRA	16.98	245	iPd	10	26.40	2.5	
			S	13	22.20		
HBF	18.35	328	P	10	40.70	0.2	
PSO	18.47	208	eP	10	44.50	2.0	
SGS	18.62	328	P	10	43.70	-0.1	
QUR	20.22	209	eP	11	05.30	3.4X	
GGP	20.26	209	P	11	05.60	3.1X	
PRM	20.28	326	P	11	01.70	-0.2	
RECU	20.65	209	P	11	08.90	2.5	
CBN	21.70	342	iPc	11	17.20	1.0	
	1.1s		360.00nm			5.7mb	
NA2	21.75	341	P	11	17.40	0.8	
CVL	21.85	339	P	11	17.30	-0.4	
BLA	21.91	334	P	11	19.20	0.9	
	0.8s		255.26nm			5.7mb	
NAV	22.15	334	P	11	21.60	0.9	
TKL	22.23	326	P	11	22.20	0.7	
GBTN	22.47	326	P	11	24.60	0.8	
PRIN	23.10	348	P	11	35.80	5.9X	
RSCP	23.18	323	P	11	32.60	1.8	
GMTN	23.50	350	iP	11	34.00	0.2	
PNJ	23.52	350	iP	11	35.50	1.5	
TBR	23.76	350	P	11	37.60	1.2	
PWLA	24.25	319	P	11	42.30	1.2	
HRV	24.78	355	ePd	11	47.59	1.5	
DHN	26.23	344	P	11	59.90	0.2	
ELC	26.47	321	P	12	02.10	0.2	
ATB	26.55	140	Pc	12	02.70	-0.1	
OLY	26.77	316	P	12	05.00	0.3	
BNH	26.83	356	P	12	05.80	0.7	
EMM	26.92	2	P	12	06.50	0.6	
IISM	27.13	277	(P)	12	20.30	12.3X	
RSNY	27.14	351	P	12	08.80	0.9	
PTN	27.23	350	P	12	08.80	0.0	
MIM	27.40	360	P	12	11.00	0.7	
FVM	27.64	321	P	12	12.50	-0.1	
	1.0s		134.00nm			5.5mb	
IIC	28.88	279	eP	12	24.80	0.5	
CBM	29.10	1	P	12	26.00	0.4	
CRX	29.29	278	(P)	12	29.30	1.3	
RLO	29.55	314	iPd	12	29.40	-0.4	
VVO	29.63	312	ePd	12	30.40	-0.1	
LNO	29.95	312	iPd	12	33.10	-0.1	
TUL	29.95	312	iPd	12	33.30	-0.1	
	1.3s		269.20nm			5.8mb	
	Z 19s		1.46um			4.6Msz	
			eS	18	16.00		
			LR	21	11.00		
SIO	30.24	312	ePd	12	35.40	-0.5	
NNA	30.60	196	eP	12	38.50	-0.8	
MEO	31.46	308	iPd	12	44.80	-1.9	
	1.1s		248.40nm			5.9mb	
ZOBO	33.82	179	P	13	08.50	0.6	
	1.5s		204.30nm			5.8mb	
	Z 20s		1.34um			4.7Msz	
			S	18	52.00		
			LR	23	02.00		
LPB	34.08	179	eP	13	11.00	1.0	
	1.0s		220.00nm			6.0mb	
	Z 24s		1.94um			4.8MszX	
			LR	23	10.00		
ARE	34.11	185	eP	13	09.00	-1.1	
CNCB	34.36	179	P	13	13.70	1.1	
SCH	37.02	2	iPd	13	34.40	0.3	
	0.7s		107.00nm			5.9mb	
ALQ	37.56	305	iPd	13	38.80	-0.3	
	1.1s		58.54nm			5.4mb	
			e	13	59.50		

				epP	14	05.50	118kmX	CFTV	51.08	68	iPd	15	28.10	0.8	ACU	62.41	55	e(P)	16	48.70	1.0
				e	14	18.00		PCH	51.12	182	eP	15	28.00	0.6	SIT	62.52	326	eP	16	47.60	-0.4
				eS	19	35.20		WDC	51.26	308	iPd	15	25.90	-2.5	FLN	62.60	44	iPd	16	48.80	0.0
				eLg	22	04.00					eScP	20	29.10			0.6s	169.10nm			6.3mb	
GLD	38.34	312	P		13	45.60	0.0	CHCH	51.43	182	eP	15	29.00	-0.8	MFF	62.70	46	iPd	16	49.40	-0.1
	1.2s	672.73nm				6.4mb		PNT	51.44	320	ePd	15	28.00	-1.7	LDF	62.83	44	iPd	16	50.20	-0.1
GOL	38.42	312	P		13	45.50	-0.9	LON	52.09	316	ePc	15	32.55	-2.1	EPF	62.95	50	iPd	16	51.70	0.5
	0.8s	284.23nm				6.2mb					epPc	15	48.27	60kmX		0.7s	241.10nm			6.4mb	
SOB1	38.45	132	eP		13	43.50	-3.1X	FHC	52.38	308	ePd	15	37.40	0.5	EROQ	63.00	53	iPd	16	51.90	0.4
RSON	38.52	335	P		13	46.10	-0.6				eScP	20	37.00		EBR	63.06	53	iPc	16	52.20	0.3
	0.5s	34.38nm				5.5mb		PGC	53.66	318	eP	15	44.00	-2.1	TIC	63.07	92	P	16	51.40	-1.0
BAO	39.02	147	eP		13	52.00	0.7		0.8s	100.00nm			5.9mb		LIC	63.18	92	Pd	16	52.26	-0.9
RSSD	39.56	319	P		13	54.90	-0.8	YKC	54.70	336	iPd	15	51.70	-1.9				S	25	26.00	
			pP		16	02.00		YKA	54.76	336	eP	15	53.10	-1.0	LFF	63.26	48	iPd	16	53.20	0.0
ITR	39.94	129	eP		14	00.40	1.5	REY	56.08	23	iP	16	03.90	0.3	KIC	63.42	92	Pd	16	54.00	-0.7
GLA	43.92	299	P		14	32.00	0.7	EZAM	56.24	51	iPc	16	05.30	0.2		0.7s	35.50nm			5.5mb	
ITB1	44.43	161	e(P)		14	32.70	-2.7	STS	56.43	50	iP	16	06.00	-0.4	LPO	63.58	48	iPd	16	55.00	-0.3
ITB	44.63	161	e(P)		14	27.90	-9.1X	AVE	56.79	62	iPd	16	10.00	0.8	RJF	63.82	48	iPd	16	56.50	-0.4
FFC	44.79	333	iPd		14	36.60	-1.4				i	16	27.00		LSF	63.85	47	iPd	16	56.80	-0.2
	0.9s	62.00nm				5.4mb		VAL	56.92	39	eP	16	09.00	-0.8	MBC	63.94	348	iPd	16	56.40	-0.8
ITB7	44.94	161	e(P)		14	37.20	-2.3	TIO	56.96	64	iPd	16	11.20	0.6		0.9s	139.00nm			5.9mb	
TPC	45.08	301	eP		14	41.00	0.3	EMON	57.38	49	iPd	16	13.00	-0.2	DAG	64.15	11	iPd	16	55.20	-3.3X
			e		16	20.00		EVAL	57.40	56	iPd	16	13.80	0.4		1.2s	348.44nm			6.2mb	
			e		20	06.00		ERUA	57.41	51	eP	16	13.60	0.2	CAF	64.20	48	iPd	16	59.10	-0.3
BGMT	45.16	317	eP		14	42.00	0.7	CNIL	57.92	58	iP	16	18.00	1.0	TCF	64.32	47	iPd	17	00.00	-0.2
LCCM	45.29	318	iPd		14	42.70	0.4	GIBL	58.01	57	iP	16	19.00	1.3	INK	64.35	338	eP	16	56.00	-3.9X
BAR	45.40	299	eP		14	43.00	-0.2	EPLA	58.03	54	iPd	16	17.90	0.1		0.9s	105.00nm			5.8mb	
			e		16	21.00		BMK	58.09	60	iPd	16	19.00	0.8	MAF	64.57	47	iPd	17	01.40	-0.3
			e		20	07.00		PLAT	58.16	58	iP	16	21.00	2.3	BGF	64.76	46	iPd	17	02.60	-0.4
CCMT	45.58	316	eP		14	45.00	0.3	MOMI	58.19	58	iP	16	20.00	1.0	ETER	64.81	51	eP	17	04.00	0.7
HRY	45.62	319	iPd		14	45.00	0.2	AKU	58.27	22	iP	16	20.00	1.0	PYM	64.87	47	P	17	03.58	-0.2
PLM	45.65	299	eP		14	46.00	0.7		1.1s	50.63nm			5.6mb		ESEL	64.93	54	e(P)	17	04.00	-0.2
			e		20	08.00		ALJ	58.29	58	iP	16	21.50	1.7	AGO	64.96	47	P	17	03.58	-0.7
LRM	45.65	318	iPd		14	45.70	0.4	OJEN	58.34	58	iP	16	22.00	1.9	LBL	65.04	48	P	17	04.92	0.2
BUT	45.80	318	ePd		14	47.00	0.7	EJIF	58.40	58	iPd	16	21.80	1.4	AVF	65.11	46	iPd	17	04.50	-0.7
GSC	45.89	302	eP		14	48.00	0.9	LIJA	58.45	57	iP	16	21.00	0.2	SSF	65.22	46	iPd	17	05.20	-0.7
FRB	45.94	0	ePd		14	46.80	-0.1	SRO	58.47	58	iP	16	25.50	4.6X	PLDF	65.30	47	P	17	06.22	-0.3
	1.0s	515.00nm				6.4mb		EPRU	58.59	57	e(P)	16	22.80	1.0	SMF	65.45	46	iPd	17	06.80	-0.6
RVR	46.16	300	eP		14	50.00	0.9	EHOR	58.59	56	iPd	16	21.70	0.0	LOR	65.46	46	iPd	17	06.90	-0.6
			e		16	23.00		IFR	58.70	61	iPd	16	23.50	0.7		0.6s	225.40nm			6.3mb	
			e		20	09.00		MAL	59.25	57	iPd	16	28.50	2.2	LBF	65.54	46	iPd	17	07.40	-0.6
CLC	46.61	303	eP		14	53.00	0.3				eS	24	32.00		SNF	65.78	42	iPd	17	08.82	-0.6
			e		16	25.00		ECP	59.31	39	eP	16	25.40	-1.0	UCC	65.83	42	iPd-	17	09.30	-0.4
			e		20	11.00		DMU	59.34	37	iPd	16	26.00	-0.6	DOU	65.97	43	Pd	17	10.20	-0.4
SBB	46.62	301	eP		14	53.00	0.1		0.7s	216.00nm			6.4mb			0.9s	280.00nm			6.2mb	
			e		20	11.00		DLE	59.42	38	iPd	16	26.50	-0.7				PcP	17	40.90	
MWC	46.75	300	eP		14	55.00	1.0		0.7s	67.00nm			5.9mb					S	25	53.00	
			e		16	26.00		AAPN	59.48	57	iPd	16	28.10	0.0				ScS	27	00.00	
			e		20	12.00		ALOJ	59.49	57	iPd	16	29.00	0.8	DBN	66.37	40	eP	17	13.00	-0.1
SES	46.80	324	iPd		14	54.20	0.2	GUD	59.53	53	iPd	16	28.40	0.0		Z 20s	0.50um			4.7Msz	
	1.0s	418.00nm				6.3mb		ATEJ	59.57	57	iPd	16	29.20	0.5	ENN	66.83	42	iPd	17	16.00	-0.1
PAS	46.83	300	eP		14	54.60	0.2	TOL	59.58	54	ePd	16	28.62	0.0		0.9s	217.00nm			6.1mb	
ISA	47.29	302	eP		14	59.00	0.9		1.1s	8331.90nm			7.8mb X					e	17	44.00	
			e		16	29.00					ePP	18	56.00		MEM	66.88	42	iPd	17	16.27	-0.1
			e		20	15.00					eS	24	35.00		VITF	66.89	45	P	17	16.15	-0.3
KVN	47.61	307	P		15	00.80	0.1				eS	24	35.42		WLF	66.98	43	Pd	17	16.60	-0.4
			pP		15	29.00	122kmX	ACHM	59.71	57	iPd	16	30.60	1.0	HAU	67.14	45	iPd	17	17.60	-0.6
CVVD	47.68	68	iPd		15	02.20	1.0	E8AN	59.75	56	iPd	16	29.80	0.0		0.8s	92.30nm			5.8mb	
TBT	47.71	67	eP		15	03.50	2.1	ASMO	59.78	57	iPc	16	30.70	0.6	WIT	67.30	40	iPd	17	19.80	0.8
SYP	48.36	301	eP		15	07.00	0.4	APHE	59.83	57	iPd	16	31.50	1.0	LRG	67.33	50	iPd	17	19.40	0.0
FRI	48.48	304	iPd		15	06.60	-0.6	CRT	59.90	57	iPd	16	32.40	1.6		0.8s	77.90nm			5.7mb	
PRI	49.12	303	e(P)		15	12.70	0.4	AFC	59.94	57	iPd	16	32.20	0.9	WTS	67.38	40	iPd	17	19.70	0.2
CTFE	49.16	67	iPd		15	13.70	1.1	YRH	60.48	39	iPd	16	33.50	-0.9		1.0s	475.00nm			6.4mb	
CMB	49.18	305	iPd		15	12.90	0.2		1.1s	160.00nm			6.1mb					i	17	34.50	
			eScP		20	21.60		EVIA	60.76	55	iPd	16	37.00	0.2	BSF	67.44	45	P	17	19.27	-0.9
LLA	49.41	303	iPd		15	14.20	-0.2	TAF	60.91	60	iPd	16	37.80	0.0	LMR	67.45	50	iPd	17	20.00	-0.2
EDM	49.41	326	iPd		15	13.50	-0.7	ENIJ	61.01	57	iPd	16	38.30	0.0		0.8s	64.40nm			5.7mb	
GGC	49.71	68	eP		15	17.80	0.9	EA8	61.25	35	ePd	16	38.50	-1.1	BNI	67.47	48	Pd	17	20.90	0.4
PRS	49.71	303	ePd		15	16.40	-0.3		1.1s	158.00nm			6.1mb		LOMF	67.48	45	P	17	19.93	-0.5
SAO	49.83	303	eP		15	17.50	-0.1	EALH	61.62	56	iP	16	43.10	0.6	LPG	67.50	47	iPd	17	21.10	0.2
MHC	50.06	304	ePd		15	20.20	0.7	ELO	61.65	35	ePd	16	41.10	-1.2		0.8s	125.90nm			5.9mb	
DPW	50.08	318	P		15	18.70	-0.7		1.2s	109.00nm			5.9mb		FRF	67.53	50	iPd	17	20.60	-0.1
JACH	50.18	182	eP		15	20.50	0.1	EAU	61.68	36	ePd	16	41.40	-1.1		1.0s	104.00nm			5.8mb	
ORV	50.29	307	ePd		15	20.90	-0.2	EBH	61.72	35	ePd	16	41.70	-1.1	RRL	67.56	48	P	17	21.67	0.5
			eScP		20	26.90		ESK	61.72	36	ePd	16	41.80	-1.0	RUP	67.57	43	eP	17	20.57	-0.3
MIN	50.51	308	ePd		15	21.70	-1.3		1.0s	60.00nm			5.7mb		FOUF	67.58	49	P	17	21.65	0.8
BKS	50.60	305	iPd		15	24.20	0.7	EKA	61.75	36	Pd	16	41.80	-1.2	EMS	67.60	47	ePd	17	21.40	0.1
	1.0s	91.00nm				5.8mb			0.9s	50.30nm			5.6mb		KUK	67.63	91	eP	17	19.00	-2.8
N	20s	1.40um						EDI	61.84	36	eP	16	42.30	-1.3	MOF	67.67	45	P	17	20.77	-0.8
E	20s	0.70um						EBL	61.89	36	eP	16	42.70	-1.3	ECH	67.67	45	P	17	21.45	-0.1
			iSd	22	37.00			ECHE	61.95	54	iP	16	45.10	0.4	CALN	67.70	49	P	17	21.69	-0.2
			iLQ	27	34.00			EDU	62.04	35	ePd	16	44.30	-0.6	CDF	67.74	44	P	17	21.45	-0.6
			eLR	29	16.00				1.1s	185.00nm			6.1mb		KOGH	67.78	91	eP	17	22.00	-0.8
BRK	50.62	305	ePd		15	24.00	0.4	ESY	62.15	36	eP	16	44.60	-1.1	LSD	67.79	48	P	17	23.00	0.4
PEL	50.65	182	eP		15	24.00	0.2		0.1s	71.00nm			6.7mb		WEGH	67.84	91	eP	17	22.50	-0.6
PCC	50.67	304	ePd		15	24.30	0.4	LPF	62.18	45	iPd	16	45.60	-0.4	ABH	67.88	43	eP	17	22.52	-0.3
FCH	50.82	182	eP		15	27.00	1.6	GRR	62.33	44	iPd	16	47.00	0.1	RSP	67.88	48	P	17	23.62	0.6

18d 14h

MVIF	67.88	49	P	17	22.90	-0.2	RSM	71.69	49	P	17	45.10	-1.0	PLG	80.39	51	eP	18	36.30	1.1
DOI	67.91	49	P	17	23.60	0.4	KDC	71.81	326	iPd	17	46.50	0.0	NEO	80.50	52	iPd	18	36.50	0.7
DIX	67.94	47	ePd	17	23.90	0.4	IMA	71.85	335	ePd	17	46.10	-0.7	MLR	80.80	45	iPd	18	38.50	1.1
BBS	67.94	45	P	17	22.56	-0.7		1.0s		150.00nm			5.9mb	PLD	80.85	49	eP	18	39.00	1.5
TOUF	67.94	49	P	17	23.40	-0.1	KHC	71.85	43	iPd	17	47.50	0.5	RZN	80.97	49	iPd	18	39.00	0.5
GWF	67.95	44	P	17	23.13	-0.1		1.0s		125.00nm			5.8mb	PVL	81.00	48	iPd	18	40.00	1.7
LEGH	67.96	91	eP	17	23.00	-0.8				e	18	04.00		VRI	81.22	45	ePd	18	38.50	-0.9
STV	67.98	49	P	17	23.41	-0.2	BRG	71.90	41	iPd	17	47.10	-0.1	ATH	81.23	53	eP	18	40.80	1.2
AURF	68.01	49	P	17	23.66	-0.1		0.9s		170.00nm			6.0mb	ISR	81.30	45	ePd	18	40.00	0.1
ENR	68.05	49	P	17	23.52	-0.5				eS	27	04.00		KDZ	81.48	49	iPd	18	42.00	1.1
STR	68.06	44	P	17	23.92	0.0	KBA	71.93	45	iPd	17	46.70	-1.0	RDO	81.71	50	iPd	18	43.00	1.0
AUTN	68.07	49	P	17	24.07	-0.3		1.0s		167.00nm			5.9mb	JMB	82.09	48	iP	18	45.00	1.0
SBF	68.09	49	iPd	17	24.00	-0.2				i	18	42.50		VAM	82.30	55	eP	18	46.60	1.3
SAOF	68.16	49	P	17	24.51	-0.2				i(S)	27	08.60		CFR	82.38	45	ePd	18	45.50	0.1
KTD	68.24	43	eP	17	24.73	-0.4	ASS	71.95	50	P	17	46.30	-1.5	PSN	82.85	47	iPd	18	49.00	1.1
FEL	68.26	45	eP	17	24.35	-1.0	MNS	72.06	50	Pd	17	48.00	-0.4	NPS	83.45	55	eP	18	52.00	0.8
MMK	68.32	47	ePd	17	26.30	0.4	ARV	72.10	49	P	17	47.30	-1.3	CTT	83.80	49	eP	18	51.00	-1.8
ORO	68.36	47	Pd	17	25.90	-0.1	RBL	72.16	46	Pd	17	48.60	-0.3	ISK	84.28	49	eP	18	53.00	-2.2
ORX	68.36	47	P	17	25.57	-0.4	RDP	72.17	51	P	17	49.00	-0.1	DST	84.42	50	iP	18	56.80	0.7
ROB	68.37	49	P	17	25.57	-0.4	KMR	72.34	44	iP-	17	49.90	0.0	KAP	84.58	55	eP	18	57.40	0.5
IMI	68.41	49	P	17	25.67	-0.6				ipP	18	14.00	93kmX	YER	84.94	53	eP	18	57.00	-1.7
TNS	68.45	42	iPd	17	26.30	0.0	PRU	72.38	42	iPd	17	50.20	0.2	KHL	85.49	51	iP	19	02.30	0.8
ZLA	68.53	45	ePd	17	26.60	-0.3		1.3s		149.80nm			5.8mb	ALT	85.69	50	iP	19	03.10	0.6
MID	68.54	328	eP	17	27.10	0.5	Z	23s		0.70um			4.9MszX	BCAO	86.14	87	eP	19	04.87	-0.2
TOA	68.55	330	ePd	17	26.60	-0.2	E	22s		0.60um							epPc	19	21.42	58kmX
SLE	68.59	45	ePd	17	26.80	-0.4	TRI	72.39	47	iPd	17	50.40	0.2	BNG	86.15	87	iPd	19	05.50	0.4
FIN	68.62	49	P	17	26.80	-0.7	VOY	72.43	46	iPd	17	50.60	0.0		0.8s		81.00nm			5.9mb
CKI	68.65	49	P	17	27.30	-0.4	AQU	72.59	50	(P)	17	52.10	0.6				id	19	30.50	
TOD	68.70	43	eP	17	26.95	-0.9	BRW	72.66	340	ePd	17	50.30	-1.0				iS	29	21.50	
VAI	68.90	47	Pd	17	28.70	-0.4	AZI	72.67	51	P	17	52.00	0.1	KSL	86.26	53	eP	19	05.50	0.3
TMA	68.95	47	ePd	17	29.50	-0.2	TRO	72.71	21	eP	17	52.15	0.5	ELL	86.30	53	iP	19	06.80	1.2
LLS	68.98	46	ePd	17	30.20	0.3	CEY	72.84	47	iPd	17	53.10	0.2	BCK	86.57	52	iP	19	07.00	0.2
STU	69.00	44	iPd	17	29.10	-0.6	RIY	72.87	47	iPd	17	54.90	1.9	BBTK	87.35	49	iPd	19	11.50	0.9
	1.1s	240.51nm				6.0mb	LJU	72.87	46	iPd	17	53.10	0.0	ANTO	87.36	49	ePd	19	11.53	0.9
SAX	69.20	46	ePd	17	31.40	0.1	SDI	72.99	51	Pd	17	53.50	-0.4				esPc	19	35.70	
CVF	69.24	51	iPd	17	30.80	-0.5	UPP	73.05	32	eP	17	53.00	-0.7	KAS	87.51	47	eP	19	12.00	0.7
VDL	69.34	46	ePd	17	32.10	0.0	TTA	73.09	331	ePd	17	52.70	-1.4	KVT	89.21	47	iP	19	20.00	0.6
COL	69.40	333	ePd	17	30.85	-0.9	RFI	73.18	51	(P)	17	55.66	0.8	HLW	89.76	59	eP	19	25.00	2.9
			epP	17	48.89	67kmX	KSP	73.38	41	iPd	17	56.00	0.1	MAT	120.26	335	iPKPc	25	13.40	-1.4
			eS	27	07.40			1.0s		111.00nm			5.7mb		0.8s		17.16nm			
FBA	69.40	333	iPd	17	30.80	-1.0	VBY	73.45	47	iPd	17	56.60	0.2	HHC	121.69	360	PKPd	25	17.20	-0.3
BOB	69.46	48	Pd	17	32.60	-0.1	FAI	73.61	56	P	17	59.30	1.8	BTO	121.93	1	ePKP	25	16.80	-1.1
RGS	69.46	29	eP	17	32.50	0.3	VKA	73.76	44	iPd	17	58.00	-0.2	GTA	122.14	10	PKPd	25	17.30	-1.1
MDI	69.56	47	P	17	32.00	-1.1		1.0s		149.00nm			5.9mb		Z 30s		1.10um			5.3MszX
OSS	69.78	46	ePd	17	34.90	0.2	BSS	73.88	52	Pd	17	59.20	0.2	BJI	122.31	355	ePKP	25	17.50	-1.0
NB2	69.81	31	P	17	34.60	0.2	PTJ	73.88	46	iPd	17	59.40	0.4		Z 40s		0.57um			4.9MszX
	1.3s	138.50nm				5.7mb	SGO	74.29	52	Pd	18	01.50	0.2				PP	26	54.00	
CGL	69.90	54	iPc	17	35.48	0.0	ZST	74.29	44	iPd	18	01.60	0.4	TIY	124.81	359	PKPc	25	23.10	-0.4
PMR	69.95	330	ePd	17	34.50	-0.6		1.2s		194.00nm			5.9mb	LZH	126.00	7	ePKP	25	25.50	-0.6
	1.2s	117.20nm				5.7mb				i	48	15.10			Z 28s		0.50um			5.0MszX
NRA0	69.97	31	P	17	35.50	0.2	MGR	74.55	52	P	18	02.50	-0.4	TIA	126.03	354	PKPc	25	24.70	-1.2
SAL	70.14	47	Pc	17	36.50	-0.2	PZI	74.63	56	(P)	18	04.22	0.7	GKN	127.74	30	PKP	25	28.80	-0.8
GRFO	70.26	43	ePd	17	37.41	0.0	HVAR	74.67	49	iPd	18	03.30	-0.2	DZM	128.10	256	iPKPc	25	30.20	-0.1
GRF	70.27	43	iPd	17	37.40	0.0	SRO	75.16	44	iPd	18	05.50	-0.7	KKN	128.23	30	PKP	25	29.80	-0.8
	1.1s	92.00nm				5.6mb	KEV	75.49	21	ePd	18	07.60	-0.1	DMN	128.30	30	PKP	25	30.10	-0.7
	Z 22s	0.40um				4.6Msz		0.8s		95.30nm			5.8mb		0.7s		26.00nm			
PII	70.33	49	Pd	17	36.90	-0.9	SOD	75.84	23	iP	18	09.90	0.2	GUN	128.40	29	PKP	25	30.40	-0.7
BDI	70.34	49	Pc	17	36.70	-1.4	SPC	76.17	43	iPd	18	13.90	1.7		0.5s		24.00nm			
OGA	70.37	46	iPd	17	38.60	0.2	PSZ	76.18	44	eP	18	13.00	0.9	XAN	128.45	2	PKPd	25	29.70	-0.9
	0.9s	175.00nm				6.0mb	LCI	76.32	52	P	18	13.60	0.7	PKI	128.47	30	PKP	25	30.10	-1.1
MME	70.40	49	P	17	37.90	-0.8	NUR	76.41	31	iP	18	13.30	0.3	LSA	129.01	23	PKP	25	32.60	0.2
FUR	70.43	44	iPd	17	38.40	0.0		1.0s		180.00nm			6.0mb	NJ2	129.93	352	PKPc	25	32.20	-1.2
	1.0s	159.00nm				5.9mb		Z 20s		0.70um			5.0Msz	SSE	130.48	349	PKPd	25	33.40	-1.1
MOX	70.45	42	iPd	17	38.50	0.0				LR	00	49.00		CD2	131.09	8	PKP	25	35.00	-0.7
	1.6s	83.00nm				5 4mb	SDN	76.54	324	eP	18	13.70	-0.1	WHN	131.88	356	ePKP	25	35.50	-1.6
	Z 25s	0.80um				4 9MszX				e	18	42.60		SHL	133.01	24	iPKP	25	38.50	-1.2
COP	70.61	36	iP	17	40.20	0.9	SUF	76.64	28	eP	18	14.50	0.3	GBA	134.39	49	PKPd	25	41.00	-1.3
	1.2s	293.75nm				6.1mb		0.8s		105.70nm			5.9mb		0.6s		6.10nm			
HOF	70.64	42	iPd	17	39.20	-0.5	SDA	77.11	50	iPd	18	18.50	1.2	GYA	135.83	6	iPKPc	25	44.40	-0.6
	0.8s	56.00nm				5.5mb	BEO	77.19	47	eP	18	17.80	0.1	BRS	140.58	248	iPKPd	25	53.30	-0.3
LOF	70.82	23	iP+	17	40.46	0.1	LACI	77.34	50	iPd	18	19.60	1.0				i	29	21.00	
FIR	70.85	49	eP	17	40.00	-1.0	BCI	77.45	49	iP	18	20.40	1.3	CAN	142.20	235	ePKP	25	56.20	-0.1
CTI	70.88	47	Pd	17	40.50	-0.9	TIR	77.52	50	eP	18	21.00	1.4				e	29	26.00	
KBS	70.91	12	iP	17	41.00	0.2	KKS	77.76	50	iP	18	22.60	1.8	BDT	143.21	20	ePKP	25	52.80	-5.5X
HFS	71.05	32	eP	17	41.10	-0.8	BZS	77.82	46	eP	18	22.50	1.4	LAT	143.37	283	ePKP	25	55.50	-3.3X
	0.4s	8.50nm				5.0mb	TPE	77.86	51	eP	18	21.50	0.0	QIZ	143.42	2	PKP	25	58.80	0.1
PGD	71.17	49	ePd	17	41.90	-1.3	OHR	78.26	51	iPd	18	25.30	1.6	TOO	144.05	230	ePKP	25	56.70	-2.6
SFI	71.26	49	P	17	42.60	-0.9		0.7s		0.17nm			3.1mb X	PMG	144.12	279	ePKP	25	57.00	-3.0X
CLL	71.27	41	iPd	17	43.30	-0.1	SKO	78.53	50	iPd	18	25.80	0.7		0.8s		82.09nm			
	1.5s	310.00nm				6.0mb		0.8s		180.00nm			6.1mb	RMO	144.24	249	iPKPd	25	58.20	-1.7
			e	17	57.00		CJR1	78.86	44	eP	18	27.50	0.7		1.0s		111.00nm			
CRE	71.37	49	P	17	43.00	-1.3	KZN	79.17	51	iPd	18	29.80	1.1				i	29	31.70	
WET	71.39	43	iPd	17	44.50	0.2	VAY	79.51	50	iP	18	31.30	0.9	BAG	144.81	344	ePKP	25	58.80	-2.5
	0.9s	182.00nm				6.0mb	VTS	79.65	49	iPd	18	33.00	1.6	NST	145.04	19	ePKP	26	01.00	-0.5
BHG	71.54	45	eP	17	42.40	-2.8	KKB	79.74	49	iPd	18	33.00	1.3	CMS	145.83	240	ePKP	26	02.50	0.0
	1.4s	166.00nm				5.8mb	MMB	80.28	49	iPd	18	36.00	1.4		1.0s		52.00nm			
FVI	71.60	46	Pd	17	44.90	-0.6	PGB	80.35	48	iPd	18	36.00	1.0				e	26	22.00	

		e	29	34.60		
CTA	146.78	260 iPKPc	26	04.20	-0.1	
	1.0s	75.00nm				
		i	29	36.90		
NNT	147.79	21 iPKPd	26	08.20	2.2	
STK	149.16	237 iPKPc	26	07.90	0.1	
		i	26	11.70		
DAV	151.51	329 ePKP	26	16.00	4.2X	
QIS	153.03	259 iPKPc	26	13.40	-0.4	
		i	26	20.00		
SNG	153.11	24 ePKP	26	33.50	19.4X	
	1.0s	86.00nm				
IPM	155.64	25 ePKPd	26	17.30	-0.3	
		e	26	44.00		
ASPA	157.97	251 iPKPd	26	19.50	-0.8	
	1.1s	28.00nm				
		epP	26	53.40		
WRA	157.98	261 PKPc	26	20.00	-0.3	
	0.7s	15.10nm				
MTN	160.16	281 iPKPc	26	22.80	0.0	
		i	27	03.80		
WARB	163.41	237 ePKP	26	12.50	-13.3X	
S.D. = 0.9		on 466 of 485 obs.				

• JUN 18, 1989 14h 51m 56.60± 0.81s
31.776 S ± 4.5km 71.447 W ±18.9km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

JACH	1.16	142 iPd	52	16.90	0.3	
		iS	52	29.60		
ROCH	1.25	163 iPd	52	18.50	0.5	
		iS	52	33.00		
PEL	1.51	155 iPd	52	21.60	0.0	
		iS	52	38.20		
LCCH	1.70	183 iPd	52	24.50	0.2	
		iS	52	41.70		
SAN	1.80	159 eP	52	26.00	0.2	
		iS	52	46.70		
FCH	1.83	148 iPc	52	25.80	-0.8	
		iS	52	45.50		
TACH	1.92	167 iPd	52	27.00	-0.6	
		iS	52	47.50		
PCH	2.00	157 iPd	52	28.50	-0.3	
		iS	52	46.50		
LNV	2.17	179 iP	52	30.70	-0.4	
		iS	52	47.30		
CHCH	2.25	163 iP	52	33.50	1.2	
		iS	52	57.80		
CNCB	15.23	13 eP	55	33.00	1.5	
LPB	15.48	12 eP	55	34.00	-0.6	
ZOBO	15.73	12 eP	55	37.00	-1.0	
CRX	57.64	328 (P)	02	13.80	27.4X	
S.D. = 0.8		on 13 of 14 obs.				

% JUN 18, 1989 15h 07m 22.11± 1.27s
36.847 N ± 8.3km 5.275 W ±12.1km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

LIJA	0.12	295 iP	07	24.00	-1.2	
EPRU	0.12	17 iP	07	24.80	-0.4	
		eS	07	27.90		
ALJ	0.32	237 iP	07	30.00	1.3	
EJIF	0.42	202 eP	07	30.20	-0.6	
GIBL	0.54	268 iP	07	33.00	-0.1	
EHOR	0.97	1 eP	07	41.50	1.0	
		eS	07	56.60		
S.D. = 1.2		on 6 of 6 obs.				

& JUN 18, 1989 15h 40m 45.41s
63.034 N 150.764 W
DEPTH = 117.7km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.53	352 iP	41	03.43	-0.2	
		S	41	16.82		
MCK	1.08	49 eP	41	08.23	-0.2	
		S	41	25.64		
SKT	1.12	199 eP	41	08.00	-0.8	
		S	41	25.29		
PWA	1.45	163 eP	41	11.86	-0.6	
SUA	1.58	180 eP	41	13.26	-0.8	
PME	1.63	149 eP	41	13.47	-1.1	
		S	41	35.41		
PMR	1.64	151 iPn	41	13.40	-1.3	
	0.3s	15.67nm				
		iPg	41	15.30		
		i	41	35.50		
WRH	1.87	38 eP	41	16.93	-0.6	
KNK	1.95	145 eP	41	17.37	-1.3	
		S	41	43.15		
CCB	2.08	38 eP	41	19.49	-0.8	
HDA	2.18	49 eP	41	20.73	-0.9	
TOA	2.32	112 eP	41	22.96	-0.5	
DDM	2.33	69 eP	41	23.37	-0.2	
TTA	2.40	270 iP	41	23.50	-0.9	
PAX	2.42	89 eP	41	23.95	-0.7	
		S	41	53.19		
GLM	2.46	36 iP	41	24.48	-0.7	
SLKM	2.55	174 eP	41	25.14	-1.2	
		S	41	54.24		
RDT	2.59	198 eP	41	26.48	-0.4	
18 obs. associated						

JUN 18, 1989 15h 49m 14.11± 0.26s
12.449 S ± 3.9km 121.520 E ± 6.7km
DEPTH = 33.0km (normal)
5.1mb (18 obs.) 4.2Msz (2 obs.)
SOUTH OF TIMOR (293)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 20C
Centroid Location:
Origin Time 15:49:17.1 1.4
Lat 12.49S FIX;Lon 121.48E FIX
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-4.57 0.59 Mtt= 3.80 0.57
Mff= 0.78 0.79 Mrt= 5.92 2.37
Mrf=-3.68 1.39 Mtf=-0.87 0.55
Principal Axes:
T Val= 7.80 Plg=29 Azm= 24
N 0.76 6 117
P -8.56 60 218
Best Double Couple:Mo=8.2*10**16
NP1:Strike= 97 Dip=17 Slip=-111
NP2: 299 74 -84

KHKI	7.09	304 ePc	50	57.60	-0.7	
		iS	52	17.50		
		e	56	25.00		
MKS	7.46	344 iPc	51	05.00	1.5	
		e	55	13.00		
KNA	7.76	116 eP	51	01.80	-5.8X	
	0.2s	96.00nm			6.5mb X	
		iS	52	21.30		
MBL	8.81	190 iPd	51	21.10	-1.1	
MTN	9.39	93 iPc	51	24.20	-6.0X	
		eS	52	59.00		
NANU	11.56	209 eP	51	59.30	-0.6	
		eS	54	00.00		
PCI	11.59	352 ePc	52	01.50	1.2	
	1.0s	4.50nm			4.6mb	
MEKA	14.37	191 iPd	52	36.30	-0.9	
	0.3s	135.00nm			6.0mb	
		eS	55	07.00		
WB5	14.38	123 iPc	52	29.70	-7.7X	
		iS	54	57.80		
WRA	14.39	123 Pc	52	28.30	-9.2X	
	0.4s	26.70nm			5.2mb	
WARB	14.49	161 eP	52	22.00	-16.8X	
		eS	54	55.00		
ASPA	16.21	135 iPc	52	55.00	-6.1X	
	0.9s	312.00nm			5.4mb	
Z	17s	2.24um			3.5Msz	
		eS	55	43.30		
		LR	59	15.00		
MRWA	17.46	196 eP	53	26.10	9.3X	
	0.3s	60.00nm			5.2mb	
		eS	56	28.00		
COOL	18.35	181 iPd	53	25.80	-2.0	
	0.3s	15.00nm			4.6mb	
		e	56	40.00		
BAL	18.61	193 eP	53	30.00	-1.0	
	0.4s	42.00nm			5.0mb	
		e	56	42.00		
QIS	19.11	117 eP	53	30.00	-7.1X	
		e	53	37.00		
		e	56	51.00		
KKM	19.11	344 ePc	53	35.50	-1.8	
FORR	19.30	163 eP	53	35.40	-3.8X	
	0.4s	39.00nm			5.0mb	
		eS	56	56.00		
KLB	19.36	190 eP	53	41.00	1.0	
	0.3s	33.00nm			5.1mb	
		e	57	03.00		
DAV	19.82	12 eP	53	42.60	-2.5	
MUN	20.04	193 iPd	53	48.50	1.2	
		e	57	20.00		
NWAO	20.76	190 iPc	53	56.20	1.5	
	0.4s	50.00nm			5.2mb	
Z	20s	1.10um			4.2Msz	
		e	57	34.00		
CTA	24.91	111 iPc	54	36.20	0.5	
	1.3s	84.62nm			5.2mb	
		iS	59	08.00		
PMG	25.35	86 eP	54	42.00	2.1	
IPM	26.48	308 ePd	54	52.00	1.6	
STK	26.74	140 eP	54	53.00	0.4	
		e	59	48.00		
RMQ	29.15	123 eP	55	15.00	0.5	
		e	55	46.00		
CMS	29.33	134 eP	55	16.00	-0.1	
		e	55	43.00		
		e	01	12.00		
BRS	32.81	122 iPc	55	47.90	1.1	
TOO	32.94	144 eP	55	47.00	-0.8	
QIZ	33.33	340 eP	55	51.60	0.3	
CAN	33.70	137 eP	55	56.00	1.5	
BDT	36.95	322 eP	56	23.10	0.9	
CHG	38.22	324 ePc	56	34.30	1.4	
	1.2s	19.53nm			4.8mb	
GYA	41.28	340 P	56	59.00	0.7	
KMI	41.59	334 Pc	57	03.00	2.0	
SSE	43.29	360 Pc	57	14.20	-0.3	
Z	28s	0.55um			4.3MszX	
		S	03	32.00		
WHN	43.30	351 eP	57	14.50	0.0	
DZM	43.82	109 iPc	57	19.80	0.7	
NJ2	44.32	357 Pc	57	23.00	0.2	
Z	22s	0.30um			4.2Msz	
CD2	46.37	339 eP	57	39.20	0.0	
XAN	47.76	346 Pc	57	49.20	-1.0	
TIY	50.62	351 eP	58	10.90	-1.2	
Z	28s	0.90um			4.6MszX	
		S	05	26.00		
GBA	50.79	299 Pc	58	14.60	1.0	
	0.9s	3.50nm			4.3mb	
LZH	51.08	342 eP	58	16.00	0.2	
	2.0s	0.08nm			2.3mb X	
LSA	51.12	326 P	58	17.60	1.1	
MAT	51.21	17 eP	58	15.00	-1.5	
	1.5s	44.44nm			5.2mb	
HYB	51.78	304 eP	58	32.00	10.8X	
BJI	52.45	355 eP	58	24.50	-1.3	
		eS	05	40.00		
GUN	52.93	320 P	58	30.30	0.2	
PKI	52.99	319 P	58	30.60	0.1	
	0.8s	36.00nm			5.4mb	
DMN	53.21	319 P	58	32.30	0.3	
	1.0s	76.00nm			5.6mb	
KKN	53.23	319 P	58	32.20	0.1	
	0.9s	29.00nm			5.3mb	
GKN	53.79	319 P	58	36.30	0.2	
HHC	53.82	351 eP	58	35.60	-0.5	
BTO	53.84	349 eP	58	34.80	-1.4	
SNY	54.04	2 Pc	58	35.60	-1.8	
MNG	54.81	131 eP	58	43.30	0.0	
GTA	55.41	340 eP	58	48.30	0.5	
CN2	56.09	3 Pd	58	51.00	-1.4	
		pP	59	02.60	40kmX	
MDJ	57.26	7 eP	59	00.00	-0.8	
WMQ	63.92	333 Pd	59	47.00	0.8	
	1.0s	0.10nm			2.9mb X	
		eS	08	19.00		
MAIO	75.88	313 iPc	01	03.00	3.6X	
SPA	77.63	180 e(P)	01	12.20	3.5X	
	0.7s	4.69nm			4.6mb	
ALQ	131.25	54 e(PKP)	08	29.00	3.7X	
NAV	148.18	35 ePKP	09	00.50	5.2X	
BLA	148.47	35 ePKP	09	00.60	4.9X	
		i	09	11.00		
CVL	148.95	32 ePKP	09	02.70	6.3X	
CCH	149.41	166 ePKP	09	04.00	5.9X	
		e	09	20.00		
CNCB	149.45	162 ePKP	08	58.00	-0.5	
		i	09	07.30		
LPB	149.67	161 ePKP	08	57.00	-1.6	
		e	09	08.00		

18d 16h

```
BAO    150.23 201 e(PKP)08 59.00  -0.1
ITR    150.99 224 ePKP  09 06.90   6.7X
      S.D. = 1.1  on  55 of  73 obs.
-------------------------------------
    JUN  18, 1989  16h 48m 04.02± 0.26s
     2.414 S ± 3.8km  138.772 E ± 6.9km
     DEPTH =  33.0km  (normal)
     4.8mb (  7 obs.)  3.9Msz (  1 obs.)
 WEST IRIAN                          (201)

MTN     12.83 216 iPd   51 07.20   0.3
                  e     53 26.00
KNA     16.52 216 eP    51 55.50   0.6
                  eS    54 54.00
GUMO    17.01  21 eP    52 32.00  30.9X
WB5     17.88 194 eP    52 11.00  -1.1
                  eS    55 21.30
WRA     17.95 194 Pd    52 13.60   0.7
        0.4s     15.50nm          4.5mb
QIS     18.05 177 eP    52 13.00  -1.1
                  e     55 22.00
CTA     19.03 158 iPc   52 28.30   2.2
        0.8s     15.67nm          4.3mb
ASPA    21.65 192 iPd   52 53.20  -0.6
        1.0s     84.00nm          5.1mb
      Z  18s      0.47um          3.9Msz
                  i     52 59.10
                  eS    56 51.90
                  LR    01 45.50
RMO     25.78 159 iPc   53 36.00   2.2
MBL     26.22 223 eP    53 41.00   3.1X
WARB    26.35 205 eP    53 27.00 -12.1X
        0.3s     30.00nm
BRS     28.22 153 iPc   53 55.90  -0.2
FORR    30.03 199 eP    54 12.00  -0.2
NANU    30.17 227 eP    54 13.50  -0.1
COO     30.64 157 iPd   54 18.70   1.0
COOL    32.86 209 eP    54 36.50  -0.6
KLB     35.14 212 eP    54 57.00   0.2
SSE     37.29 335 P     55 15.60   0.7
NNT     41.53 292 eP    55 49.30  -1.0
GYA     42.26 315 P     55 57.40   1.1
CHG     44.49 300 eP    56 14.90   0.5
XAN     45.87 325 P     56 25.50   0.3
TIY     46.79 331 eP    56 32.40  -0.1
BJI     47.05 336 eP    56 34.00  -0.3
CN2     47.54 347 Pd    56 38.40   0.2
BTO     50.22 332 eP    57 00.00   1.0
LZH     50.28 323 eP    57 00.50   0.8
MNG     50.44 144 P     56 59.30  -1.4
GTA     54.87 323 P     57 34.00   0.1
KKN     59.52 304 P     58 06.60  -0.5
DMN     59.60 304 P     58 07.40  -0.3
GKN     60.13 304 P     58 10.60  -0.6
GBA     62.86 287 Pd    58 26.20  -3.3X
        0.9s     3.90nm           4.5mb
WMQ     64.82 322 iPc   58 41.70  -0.3
SDN     75.83  31 eP    59 48.10  -0.4
KDC     80.85  30 eP    00 15.90   0.0
TTA     81.12  25 eP    00 17.70   0.3
MAIO    82.79 307 iPc   00 27.00   0.3
IMA     83.26  22 eP    00 29.00   0.5
        1.1s     7.80nm           4.7mb
PMR     83.68  27 eP    00 29.90  -0.6
        1.0s     22.50nm          5.3mb
BRW     84.31  17 eP    00 34.30   0.8
TOA     85.17  27 eP    00 38.60   0.5
FBA     85.20  24 eP    00 37.20  -0.9
SPA     87.60 180 ePc   00 49.90  -0.2
        0.9s     8.18nm           5.0mb
CNCB   147.41 127 ePKP  07 43.00  -2.2
                  i     07 48.00
LPB    147.46 126 ePKP  07 44.00  -1.1
                  e     07 48.00
ZOBO   147.58 126 ePKP  07 45.00  -0.5
        1.2s     31.08nm
                  i     07 48.00
      S.D. = 0.9  on  43 of  47 obs.
-------------------------------------
*  JUN  18, 1989  17h 00m 04.56± 0.43s
    5.162 N ± 8.2km  125.771 E ±11.0km
    DEPTH =  33.0km  (normal)
    4.8mb ( 16 obs.)
 MINDANAO, PHILIPPINE ISLANDS        (259)

MTN     18.67 163 iPd   04 23.80   1.6
        0.2s     56.00nm          5.4mb
QIZ     20.77 313 eP    04 47.90   2.5
KNA     20.99 172 eP    04 47.70   0.1
IPM     24.66 270 ePc   05 25.80   1.9
        0.5s     15.30nm          4.8mb
SNG     25.09 276 eP    05 30.00   2.1
WB5     26.28 161 eP    05 38.20  -0.8
WRA     26.33 162 Pd    05 38.70  -0.8
        0.3s     1.80nm           4.2mb
QIS     28.95 152 eP    06 02.00  -1.2
CHG     29.48 300 ePc   06 08.90   0.8
        0.8s     22.57nm          5.0mb
ASPA    29.73 165 iPd   06 09.40  -0.8
        0.5s     10.00nm          4.8mb
WARB    31.17 178 eP    06 09.50 -13.4X
CTA     32.17 142 iPc   06 32.80   1.0
        0.8s     8.96nm           4.7mb
                  i     06 42.00
XAN     32.72 334 P     06 35.20  -1.2
MAT     33.25  18 iPd   06 41.80   0.8
        0.9s     8.40nm           4.6mb
BJI     35.79 347 eP    07 02.00  -0.6
FORR    35.88 177 eP    07 02.10  -1.4
        0.3s     16.00nm          5.4mb
STK     39.80 159 eP    07 37.00   0.6
LSA     40.78 311 P     07 47.20   2.1
GTA     41.39 329 eP    07 49.40  -0.1
BRS     41.57 143 iPc   08 00.30   9.3X
GUN     44.12 305 P     08 11.00  -1.3
        0.5s     37.00nm          5.4mb
PKI     44.37 305 P     08 12.80  -1.5
KKN     44.56 305 P     08 14.20  -1.5
DMN     44.63 305 P     08 14.90  -1.4
GKN     45.17 305 P     08 18.80  -1.7
        0.5s     12.00nm          5.1mb
DZM     48.14 126 iPc   08 44.80   0.9
GBA     48.34 284 P     08 45.00  -0.4
        0.5s     3.00nm           4.6mb
TTA     80.07  27 eP    12 13.20   0.8
BRW     81.13  19 eP    12 18.60   0.9
IMA     81.47  24 eP    12 20.80   1.0
        0.8s     5.10nm           4.6mb
PMR     83.15  29 eP    12 28.20  -0.2
        0.8s     5.10nm           4.7mb
SUF     89.85 333 iP    12 58.80  -2.4
        0.3s     1.20nm           4.6mb
NUR     91.00 331 eP    12 49.30 -17.2X
SLL     96.36 333 eP    13 27.80  -3.4X
        0.5s     11.80nm          5.6mb
NB2     97.09 334 P     13 30.20  -4.3X
        0.7s     0.70nm           4.3mb
      S.D. = 1.4  on  30 of  35 obs.
-------------------------------------
&  JUN  18, 1989  17h 08m 33.00s
    37.580 N          118.688 W
    DEPTH =   3.0km
 CALIFORNIA-NEVADA BORDER REGION ( 40)
      <BRK>. ML 3.1 (BRK), 3.1 (PAS).

MNA      0.95  26 iP    08 50.60  -1.3
FRI      1.00 234 iPc   08 51.50  -1.1
                  iS    09 04.10
TNP      1.27  66 iP    08 56.30  -1.0
CMB      1.42 289 iPc   08 58.40  -1.4
                  eS    09 17.50
KVN      1.54  17 iP    09 00.80  -0.8
PKEM     1.90 217 iP    09 07.20   0.6
ISA      1.92 175 eP    09 07.70   0.7
LLA      2.04 243 ePc   09 08.70   0.0
                  eS    09 34.40
                  i     09 35.90
PRI      2.14 228 ePd   09 10.30   0.1
                  i     09 41.00
PHAM     2.22 219 eP    09 11.10  -0.1
ARN      2.28 265 iP    09 12.30   0.2
SAO      2.35 251 iPd   09 13.40   0.3
                  eS    09 40.35
MHC      2.36 265 ePc   09 13.50   0.1
                  e     09 21.60
                  eS    09 44.10
PRS      2.48 241 ePc   09 15.00   0.0
BCH      2.64 206 iP    09 17.20  -0.2
BKS      2.83 277 ePd   09 20.10   0.2
BRK      2.85 277 e(P)  09 19.70  -0.5
PCC      2.94 270 e(P)  09 20.80  -0.6
ORV      2.96 313 ePc   09 25.40   3.6
      19 obs. assocloted
-------------------------------------
*  JUN  18, 1989  17h 38m 20.52± 1.38s
    6.745 S ± 8.8km  147.707 E ±10.8km
    DEPTH =  55.0 ± 11.6 km
    4.9mb (  7 obs.)
 EAST PAPUA NEW GUINEA REGION        (207)

LAT      0.71 277 iPd   38 32.80  -1.9
LMG      2.19 168 eP    38 53.50  -1.8
PMG      2.70 192 eP    39 03.50   1.1
                  eS    39 48.00
MNDI     4.07 278 eP    39 23.50   1.6
CTA     13.34 186 eP    41 31.00   2.0
QIS     15.82 209 eP    42 03.00   1.7
MTN     17.42 248 eP    42 22.00   0.6
WB5     18.39 223 eP    42 33.50   0.2
WRA     18.45 223 Pc    42 34.10   0.0
        0.4s     5.00nm           4.1mb
RMO     19.66 177 iPc   42 47.80  -0.1
                  e     42 52.00
GUMO    20.40 352 eP    42 57.00   1.5
KNA     20.60 243 eP    42 55.50  -2.2
        0.3s     21.00nm          4.9mb
BRS     21.09 167 iPc   43 01.20  -1.4
ASPA    21.43 217 iPd   43 06.20   0.2
        0.3s     35.00nm          5.2mb
      Z  17s      2.44um          4.7MszX
                  eS    47 11.40
                  LR    52 18.30
DZM     23.65 132 iPc   43 29.00   1.1
WARB    27.87 224 eP    43 54.00 -13.3X
PCI     28.39 281 ePd   44 14.50   2.5
FORR    30.21 215 eP    44 28.00  -0.1
MBL     30.53 239 eP    44 30.10  -1.0
        0.5s     12.00nm          4.9mb
MEKA    34.07 231 eP    45 01.60  -0.3
        0.5s     11.00nm          5.0mb
NANU    34.76 240 eP    45 07.50  -0.3
KLB     37.33 225 eP    45 28.30  -1.1
NWAO    38.46 223 eP    45 38.00  -0.9
MAT     43.97 349 eP    46 22.00  -2.1
GBA     72.62 286 P     49 52.00   7.4X
        0.9s     3.40nm           4.3mb
SPA     83.30 180 e(P)  50 42.80   0.2
        0.5s     8.80nm           5.0mb
CNCB   137.65 124 ePKP  57 29.00 -13.0X
LPB    137.70 124 ePKP  57 26.00 -15.9X
ZOBO   137.81 123 ePKP  57 31.00 -11.3X
KIC    152.63 271 PKP   58 13.00   6.8X
BAO    152.87 145 ePKP  58 07.40   0.8
LIC    152.91 270 PKP   58 13.40   6.8X
      S.D. = 1.4  on  25 of  32 obs.
-------------------------------------
%  JUN  18, 1989  18h 20m 58.96± 1.66s
    36.866 N ± 9.6km    5.237 W ±16.6km
    DEPTH =  10.0km  (geophysicist)
 STRAIT OF GIBRALTAR                 (385)

EPRU     0.10   2 iP    21 01.30  -0.4
                  eS    21 04.70
LIJA     0.14 283 iP    21 01.00  -1.4
ALJ      0.35 237 iP    21 08.00   1.7
EJIF     0.45 204 eP    21 07.50  -0.7
GIBL     0.58 266 iP    21 10.50  -0.1
EHOR     0.95 360 eP    21 18.00   0.9
                  eS    21 32.90
      S.D. = 1.5  on   6 of   6 obs.
-------------------------------------
    JUN  18, 1989  18h 32m 29.46± 0.91s
    36.869 N ± 7.0km    5.333 W ± 9.0km
    DEPTH =  10.0km  (geophysicist)
 STRAIT OF GIBRALTAR                 (385)

LIJA     0.07 295 iP    32 31.00  -0.9
EPRU     0.13  40 iP    32 32.00  -0.6
                  eS    32 35.30
ALJ      0.29 228 iP    32 35.50  -0.1
EJIF     0.43 195 eP    32 38.50   0.2
GIBL     0.50 265 iP    32 40.00   0.4
EHOR     0.95   4 eP    32 48.50   1.0
                  eS    33 03.70
      S.D. = 0.9  on   6 of   6 obs.
-------------------------------------
*  JUN  18, 1989  18h 57m 29.54± 1.38s
    35.646 N ±18.9km   24.534 E ±11.1km
    DEPTH =  10.0km  (geophysicist)
 CRETE                               (370)
     MD 3.7 (ATH).
```

VAM	0.36	229	ePb	57	37.00	0.0
NPS	0.96	113	ePb	57	48.20	0.4
KAP	2.15	92	ePn	58	05.30	-0.7
YER	3.37	63	iP	58	26.60	3.3X
ELL	4.48	74	eP	58	38.80	-0.4
BCK	5.20	68	eP	58	50.00	0.7

S.D. = 0.8 on 5 of 6 obs.

? JUN 18, 1989 19h 04m 03.55± 4.54s
34.026 N ±49.0km 23.386 E ±12.2km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.8 (ATH).

VAM	1.53	26	ePb	04	31.50	0.5
NPS	2.21	55	ePb	04	42.20	1.4
KAP	3.47	63	ePn	04	59.50	0.8
YER	5.05	51	iP	05	20.00	-1.2
ELL	5.98	61	iP	05	33.00	-1.3
BCK	6.79	58	eP	05	42.00	-3.7X
MEU	7.54	296	P	06	00.20	3.9X
			eSn	07	19.80	
LCI	7.64	327	P	05	56.60	-1.0
MGR	8.74	317	P	06	13.60	0.8
			eSn	07	44.90	

S.D. = 1.4 on 7 of 9 obs.

JUN 18, 1989 19h 28m 29.17± 0.56s
2.671 S ± 6.7km 139.781 E ±10.8km
DEPTH = 33.0km (normal)
4.5mb (5 obs.) 3.8Msz (1 obs.)
NEAR N. COAST OF WEST IRIAN (197)

MNDI	5.19	132	eP	29	50.00	3.2X
PMG	9.93	133	eP	30	51.00	-1.7
MTN	13.25	220	eP	31	37.00	-0.6
			eS	33	53.70	
GUMO	16.92	17	eP	32	27.00	1.8
KNA	16.93	219	eP	32	26.50	1.2
QIS	17.78	181	eP	32	34.00	-1.9
			e	32	37.00	
			e	35	38.00	
WB5	17.90	197	eP	32	36.70	-0.7
			eS	35	52.00	
WRA	17.97	197	Pd	32	39.70	1.4
	0.2s		5.00nm		4.3mb	
CTA	18.43	160	iPc	32	45.30	1.4
	1.0s		19.00nm		4.2mb	
			iS	38	25.90	
PCI	20.01	275	ePd	33	05.00	2.9
ASPA	21.63	195	iPc	33	18.70	-0.1
	0.9s		22.00nm		4.6mb	
	Z 21s		0.42um		3.8Msz	
			i	33	24.50	
			eS	37	15.70	
			LR	42	12.10	
RMQ	25.20	161	eP	33	55.00	1.5
WARB	26.57	207	eP	33	54.00	-12.2X
	0.4s		8.00nm			
MBL	26.74	225	eP	34	08.00	0.2
BRS	27.55	154	iPd	34	16.60	1.5
FORR	30.12	200	eP	34	38.00	-0.2
NANU	30.73	228	eP	34	43.40	-0.3
COOL	33.13	210	eP	35	03.00	-1.6
GYA	43.15	314	P	36	29.60	0 8
XAN	46.66	324	eP	36	55.50	-1 1
BJI	47.70	335	eP	37	05.00	0.4
BTO	50.93	331	eP	37	24.00	-5.6X
GTA	55.68	323	eP	38	03.50	-1.3
GUN	60.05	304	P	38	36.20	0.2
KKN	60.50	304	P	38	38.80	-0.1
	0.6s		4.00nm		4.7mb	
GKN	61.11	304	P	38	42.20	-0.8
	0.8s		9.00nm		5.0mb	
WMQ	65.65	321	eP	39	10.50	-2.0
SHW	97.45	44	iP	41	45.20	-15.9X
KIC	144.45	277	PKP	48	01.70	-3.2X
LIC	144.75	277	PKP	48	03.20	-2.2
CNCB	146.44	126	PKP	48	10.20	1.3
LPB	146.50	126	ePKP	48	15.00	6.2X

S.D. = 1.4 on 26 of 32 obs.

& JUN 18, 1989 19h 37m 49.80s
58.115 N 154.535 W
DEPTH = 86.0km
ALASKA PENINSULA (12)
<AGS-P>.

CDD	0.94	29	iP	38	08.28	-0.6
KDC	1.15	108	eP	38	10.56	-0.7
OPT	1.68	23	iP	38	17.69	-0.5
			S	38	38.51	
ILIM	2.13	22	iP	38	23.32	-0.9
CNPM	2.22	49	eP	38	24.30	-1.2
			S	38	50.50	
RED	2.48	21	iP	38	28.08	-1.0
RDT	2.70	23	eP	38	30.47	-1.5
			S	39	02.17	
SVW	3.05	350	iP	38	35.14	-1.7
NKA	3.13	31	eP	38	37.78	0.0
			S	39	12.89	
SLKM	3.26	41	eP	38	37.40	-2.4
SEW	3.29	51	eP	38	37.40	-2.7
SPU	3.32	21	eP	38	39.18	-1.4
SUA	3.87	28	iP	38	46.60	-1.6
			S	39	29.59	
MTU	4.02	59	eP	38	47.80	-2.4
SKT	4.16	20	eP	38	50.11	-2.1
PWA	4.25	32	eP	38	51.47	-2.0
GHO	4.63	35	eP	38	55.74	-3.0

17 obs. associated

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* JUN 18, 1989 20h 06m 17.16± 2.74s
43.970 N ±22.0km 12.515 E ±11.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.2 (ROM).

SFI	0.48	264	P	06	26.50	-0.4
			eSg	06	35.50	
CRE	0.53	230	P	06	28.00	0.0
			eSg	06	37.50	
ARV	0.56	147	Pd	06	28.60	0.0
			eSg	06	38.70	
PGD	0.58	261	P	06	29.50	0.4
			eSg	06	38.00	
ASS	0.90	173	P	06	34.50	0.0
			eSg	06	48.50	

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

& JUN 18, 1989 20h 38m 37.39s
47.410 N 122.776 W
DEPTH = 44.8km
4.1mb (6 obs.)
WASHINGTON (29)
<SEA>. ML 4.4 (SEA). Felt (V) at Kingston and Poulsbo. Felt (IV) at Bremerton, Burley, Clinton, Dockton, Gig Harbor, Grahom, Honsville, Indianolo, Lokeboy, Lilliwoup, Littlerock, Longbronch, Manchester, Motlock, Port Ludlow, Seattle, Seabeck, Sultan, Sumner, Suquomish, Tracyton, Voshon ond Wilkeson. Felt as for os Sidney ond Victorio, British Columbia, Canoda.

GMW	0.14	357	iPc	38	44.40	0.3
MEW	0.23	157	iP	38	45.90	0.5
			eS	38	52.06	
HDW	0.30	322	iPc	38	45.88	-0.4
SPW	0.39	68	iPd	38	47.31	0.3
SMW	0.40	257	iP	38	47.13	-0.1
PGW	0.43	16	iPd	38	47.52	0.0
CPW	0.50	210	iPd	38	48.19	-0.3
GHW	0.50	137	iPc	38	48.04	-0.4
BLN	0.61	348	iPc	38	49.60	-0.3
BLH	0.66	49	iPd	38	50.12	-0.4
RMW	0.66	85	iPd	38	50.21	-0.4
GSM	0.70	107	iPd	38	50.85	-0.3
RVC	0.72	130	iPc	38	51.21	-0.2
OBH	0.75	264	iPc	38	50.96	-0.7
OSD	0.75	304	iPc	38	51.53	-0.4
APW	0.76	173	iP	38	51.57	-0.4
HTW	0.79	60	iPd	38	51.77	-0.5
LMW	0.81	156	iPc	38	52.39	-0.3
ONR	0.86	232	iPd	38	52.77	-0.5
FMW	0.89	122	iPc	38	53.45	-0.4
OHW	0.93	10	iPd	38	54.12	0.0
LON	0.93	135	iPc	38	54.10	-0.2
STW	0.96	321	iPc	38	54.08	-0.5
BMW	0.99	198	iPd	38	54.54	-0.5
CZM	0.99	169	iPc	38	54.93	-0.2
OOW	1.01	289	iPc	38	54.44	-1.0
KOSW	1.03	157	iPc	38	55.49	-0.2
OBC	1.08	306	iPc	38	55.47	-0.9
WPW	1.10	130	iPd	38	56.79	0.0
CMW	1.11	23	iPd	38	56.82	0.0
TDL	1.13	160	eP	38	56.88	-0.2
ERK	1.14	165	iPc	38	56.90	-0.5
GLK	1.16	136	iPd	38	57.37	-0.3
OFK	1.20	297	eP	38	56.81	-1.1
STD	1.23	162	eP	38	58.57	0.0
FL2	1.25	166	eP	38	58.68	-0.2
SOSW	1.25	159	iPd	38	58.61	-0.3
OTR	1.25	303	iPc	38	57.75	-1.1
RVW	1.26	179	iPd	38	58.71	-0.2
YEL	1.27	161	iPc	38	59.20	0.1
MCW	1.27	358	iPc	38	58.75	-0.3
SHW	1.27	163	iPc	38	59.24	0.1
ESD	1.29	160	eP	38	59.50	0.1
HSR	1.30	162	iPc	38	59.87	0.2
TWW	1.33	101	iPc	39	00.44	0.5
JLK	1.33	161	iPc	39	00.13	0.1
RPW	1.34	39	iPd	38	59.91	-0.2
CDFW	1.39	159	iPc	39	00.90	0.2
NLO	1.40	200	iPd	39	00.37	-0.6
MTMW	1.44	164	iPc	39	01.58	0.1
NAC	1.49	116	iPc	39	02.25	0.0
MBW	1.50	23	iPd	39	02.11	-0.2
VGB	2.34	143	iPd	39	13.70	-0.6
PNT	2.84	47	eP	39	20.20	-1.2
DPW	3.13	80	eP	39	23.20	-2.3
LNOR	3.46	115	eP	39	28.80	-1.3
LBFM	6.10	174	eP	40	07.00	-0.5
FHC	6.66	188	ePc	40	13.00	-2.3
WDC	6.83	178	eP	40	16.80	-0.8
MIN	7.11	173	e(P)	40	21.60	-0.1
LRM	7.29	99	eP	40	20.70	-3.5
CCMT	7.31	106	ePc	40	21.80	-2.7
HRY	7.51	91	ePc	40	24.00	-3.2
LCCM	7.67	98	ePc	40	25.70	-3.7
ORV	7.91	173	e(P)	40	32.40	-0.2
SES	8.29	65	eP	40	36.00	-1.9
EDM	8.38	43	eP	40	35.80	-3.3
KVN	9.02	156	eP	40	48.00	-0.2
ARN	10.10	174	eP	41	02.50	-0.3
TNP	10.18	154	eP	41	04.00	0.0
DAU	10.85	126	eP	41	14.00	0.7
ISA	12.17	163	eP	41	43.00	12.2
CLC	12.21	160	eP	41	44.00	12.6
GSC	12.90	158	eP	41	51.00	10.5
SBB	13.24	162	eP	41	54.00	9.0
RVR	14.01	161	eP	42	02.00	7.0
PEC	14.15	161	eP	42	03.00	6.0
TPC	14.23	157	eP	42	05.00	7.1
PLM	14.74	160	eP	42	10.00	5.3
GOL	14.77	115	eP	42	05.00	-0.2
FFC	14.95	53	eP	42	01.00	-6.1
	1.1s		2.70nm		3.4mb	
BAR	15.43	160	eP	42	18.00	4.5
GLA	15.56	154	eP	42	19.00	3.8
YKA	15.81	14	eP	42	14.10	-4.0
ALQ	17.45	130	eP	42	38.00	-1.2
	1.5s		17.36nm		4.0mb	
RSON	19.28	69	P	43	10.00	9.0
	0.8s		10.56nm		4.1mb	
PMR	20.67	323	P	43	28.00	12.5
	1.0s		10 00nm			
INK	21.65	349	eP	43	39.00	13.6
MEO	22.06	116	iP	43	29.10	-0.8
	1.0s		12.20nm		4.3mb	
FBA	22.13	331	P	43	41.00	10.8
	0.8s		3.45nm			
SIO	22.86	111	eP	43	34.20	-3.4
TUL	23.08	110	eP	43	36.80	-3.0
	0.9s		8.90nm		4.2mb	
LNO	23.08	110	e(P)	43	37.70	-2.0
RLO	23.42	109	eP	43	41.30	-1.8
TTA	24.14	322	P	44	04.00	14.1
MBC	28.97	2	eP	44	33.00	-1.2
	0.6s		3.00nm		4.1mb	

96 obs. ossociated

? JUN 18, 1989 20h 38m 57.56± 3.14s
45.521 N ±38.7km 9.123 E ±11.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN). MD 1.8 (ROM).

18d 20h

RSP	1.37	255	P	39	31.24	8.5X
			S	39	38.83	
ROB	1.52	216	P	39	33.19	8.4X
			S	39	42.93	
DOI	1.68	233	P	39	24.00	-3.1X
			eSg	39	27.80	
RRL	1.76	251	P	39	27.14	-1.3
			S	39	32.47	
ENR	1.77	224	P	39	29.29	0.7
			S	39	35.65	
BNI	1.79	256	P	39	30.00	1.1
			eSg	39	37.00	
STV	1.81	226	P	39	28.37	-0.7
			S	39	34.52	
FOUF	1.93	240	iPg	39	23.92	-6.8X
			eSg	39	25.98	
ALP	4.22	129	iPg	40	03.38	0.0
			iSg	40	04.67	

S.D. = 1.4 on 5 of 9 obs.

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* JUN 18, 1989 21h 11m 58.87± 0.53s
2.023 N ±11.5km 79.017 W ±19.0km
DEPTH = 33.0km (normol)
4.7mb (5 obs.) 4.2Msz (1 obs.)
SOUTH OF PANAMA (83)

PSO	1.88	116	iPd	12	31.50	1.9
GGP	2.22	169	P	12	34.00	-0.7
			S	13	02.50	
RECU	2.68	170	P	12	42.00	0.9
			S	13	08.50	
BOG	5.58	62	eP	13	36.00	13.9X
			eS	14	48.00	
BMG	7.76	50	eP	14	11.00	18.5X
ARE	19.81	158	eP	16	30.00	-0.1
ZOBO	21.12	150	P	16	42.00	-2.0
	1.4s	46.04nm			4.7mb	
Z	18s	0.90um			4.2Msz	
			LR	25	00.00	
LPB	21.36	150	P	16	41.00	-5.2X
	1.0s	40.00nm			4.8mb	
			SS	23	18.00	
			LR	25	46.00	
CNCB	21.65	150	P	16	49.50	0.2
FVM	37.29	345	P	19	07.80	-1.9
ALQ	41.53	325	eP	19	45.50	0.4
	1.1s	12.66nm			4.6mb	
			e	19	55.50	
GLD	44.47	331	P	20	09.70	0.7
	1.0s	40.00nm			5.2mb	
GOL	44.50	331	P	20	09.90	0.5
PV10	45.43	326	P	20	16.50	-0.3
PV09	45.57	327	P	20	19.90	1.9
PLM	47.18	316	P	20	31.50	0.9
TNP	50.11	321	P	20	53.50	0.2
RSON	50.22	348	P	20	50.20	-3.4X
	0.9s	6.72nm			4.7mb	
KVN	51.24	321	P	21	03.00	1.2
EDM	58.38	337	eP	21	52.00	-1.4
MBC	77.51	351	eP	23	50.00	-2.4

S.D. = 1.4 on 17 of 21 obs.

JUN 18, 1989 21h 16m 51.01± 1.48s
15.900 N ±13.6km 95.431 W ± 7.4km
DEPTH = 38.4 ± 9.9 km
5.0mb (26 obs.)
NEAR COAST OF OAXACA, MEXICO (66)

OXX	1.71	314	iPc	17	17.00	-2.0
			iS	17	41.10	
SCX	2.81	72	eP	17	35.50	0.9
TPX	3.21	108	eP	17	51.00	10.7X
HSM	3.59	329	eP	17	48.00	2.4
HT	4.14	319	iP	17	55.50	1.7
ACX	4.36	283	iP	17	50.00	-6.5X
HI	4.58	303	iPc	17	58.50	-1.4
			eS	19	03.60	
UNM	4.94	314	(P)	18	23.50	18.4X
HC	5.30	317	(P)	18	20.50	10.4X
CRX	5.34	311	(P)	18	19.50	8.7X
MRX	6.66	305	iPd	18	28.50	-0.5
			eS	20	14.00	
MEO	19.02	352	eP	21	12.00	-0.5
	1.5s	115.60nm			4.9mb	
VVO	19.36	359	eP	21	15.60	-0.8
SIO	19.78	358	eP	21	19.70	-1.2
OLY	19.84	10	iP	21	20.40	-1.2
TUL	19.93	359	eP	21	21.50	-1.0
	0.7s	27.50nm			4.7mb	
Z	20s	0.15um			4.8Msz	
LNO	19.93	359	iP	21	21.00	-1.4
RLO	20.19	1	eP	21	21.70	-3.5X
ALQ	21.39	334	eP	21	38.00	0.3
	1.0s	25.00nm			4.6mb	
			e	21	55.50	
			e	22	10.50	
			e	22	25.00	
			eLg	28	54.00	
FVM	22.44	10	P	21	50.00	2.1
GLA	24.49	318	eP	22	09.00	1.0
BLA	25.05	29	P	22	16.50	3.2X
GOL	25.25	342	P	22	16.00	0.5
GLD	25.25	342	P	22	16.00	0.6
PV10	25.39	334	P	22	16.00	-0.8
BAR	25.49	315	eP	22	18.00	0.5
PV09	25.54	334	P	22	19.00	0.8
TPC	25.94	318	eP	22	22.00	0.3
PLM	26.02	316	eP	22	23.00	0.4
RVR	26.74	316	eP	22	29.00	0.0
CLC	28.01	319	eP	22	40.00	-0.6
TNP	29.27	323	P	22	52.00	-0.1
	1.1s	10.06nm			4.4mb	
FRI	30.07	319	ePc	22	58.40	-0.6
KVN	30.44	324	P	23	04.00	1.6
CMB	31.14	320	ePc	23	08.60	0.2
MHC	31.52	318	ePc	23	12.20	0.3
ORV	32.76	321	ePc	23	23.50	0.9
LRM	33.07	338	ePc	23	26.30	0.8
WDC	34.03	322	ePc	23	31.50	-2.0
RSON	34.90	2	P	23	39.90	-1.0
SES	36.65	343	eP	23	56.00	0.3
PNT	38.71	335	iP	24	14.00	0.9
	0.7s	10.00nm			4.7mb	
FFC	39.08	354	eP	24	16.00	0.0
	0.7s	12.00nm			4.8mb	
EDM	39.82	343	iPc	24	22.50	0.3
ATB	46.79	110	e(P)	25	14.50	-4.5X
YKA	48.46	348	eP	25	33.20	1.7
BAO	56.35	122	eP	26	26.50	-4.7X
INK	57.70	344	eP	26	39.00	-0.9
PMR	59.23	333	P	26	50.00	-0.6
	0.6s	7.39nm			5.0mb	
SOB1	59.48	111	eP	26	50.40	-2.6
FBA	60.21	337	P	26	56.00	-1.3
	0.6s	7.64nm			5.0mb	
MBC	61.65	354	eP	27	06.00	-0.9
	1.3s	37.00nm			5.4mb	
DMU	76.46	37	eP	28	37.80	-0.7
DLE	76.77	38	eP	28	39.90	-0.3
EKA	78.37	36	Pc	28	47.90	-1.1
	1.6s	31.20nm			5.1mb	
GUD	80.77	50	eP	29	03.50	1.0
TOL	81.02	51	eP	29	04.00	0.4
FLN	81.42	42	eP	29	03.10	-2.3
	1.1s	29.30nm			5.2mb	
MAL	81.47	54	eP	29	09.50	3.6X
AAPN	81.56	54	eP	29	08.00	1.4
ATEJ	81.74	54	eP	29	09.50	1.9
ACHM	81.83	54	eP	29	11.50	3.5X
ASMO	81.84	54	eP	29	09.50	1.4
APHE	81.98	54	eP	29	10.40	1.6
CRT	81.99	54	eP	29	11.00	2.2
AFC	82.02	54	e(P)	29	10.50	1.5
MFF	82.18	44	eP	29	08.20	-1.2
	1.2s	20.20nm			5.0mb	
LFF	83.21	45	eP	29	13.50	-1.3
	1.0s	20.00nm			5.2mb	
LSF	83.39	44	eP	29	14.60	-1.1
	1.2s	14.80nm			5.0mb	
EPF	83.44	47	eP	29	15.20	-1.0
	1.2s	23.80nm			5.2mb	
TCF	83.83	44	eP	29	17.20	-0.8
SNF	83.92	39	P	29	20.70	2.4
NB2	84.05	28	P	29	18.90	0.1
	1.5s	13.80nm			4.9mb	
MAF	84.09	44	eP	29	18.60	-0.7
	1.2s	20.80nm			5.1mb	
BGF	84.18	43	eP	29	18.80	-0.9
	1.0s	18.00nm			5.2mb	
DOU	84.24	40	P	29	24.00	4.1X
AVF	84.44	43	eP	29	20.00	-1.0
	1.2s	11.90nm			4.9mb	
SSF	84.46	43	eP	29	20.30	-0.8
	1.2s	16.00nm			5.0mb	
LOR	84.63	42	eP	29	21.20	-0.8
	1.2s	26.70nm			5.3mb	
LBF	84.79	43	eP	29	21.80	-1.0
	1.2s	11.90nm			4.9mb	
SMF	84.81	43	eP	29	21.80	-1.1
	1.2s	7.10nm			4.7mb	
ENN	84.84	39	eP	29	22.50	-0.4
	1.0s	16.00nm			5.1mb	
WTS	84.96	37	eP	29	25.50	2.1
	0.9s	6.00nm			4.8mb	
WLF	85.33	40	P	29	26.70	1.3
RUP	85.88	39	eP	29	28.15	0.0
ABH	86.11	39	eP	29	29.35	0.0
FEL	87.09	41	eP	29	33.20	-1.1
LPG	87.09	44	eP	29	34.40	-0.2
	1.3s	25.20nm			5.3mb	
KHC	90.03	38	P	29	49.50	1.3
GBA	149.85	14	PKPc	36	37.20	2.7
	1.0s	6.00nm				

S.D. = 1.2 on 78 of 90 obs.

& JUN 18, 1989 22h 55m 36.30s
38.837 N 122.780 W
DEPTH = 3.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 3.6 (BRK).
Mo=1.2•10••14 Nm (BRK).

NWRM	0.39	193	iP	55	44.20	0.1
ZSP	0.98	155	iPd	55	55.20	-0.4
			iS	56	10.60	
BRK	1.05	157	ePc	55	55.80	-0.9
			i	55	56.30	
			iS	56	10.80	
BKS	1.05	156	iPc	55	55.20	-1.6
			iPbc	55	55.35	
			iPgd	55	56.48	
			e	56	09.30	
			e	56	10.20	
			iS	56	11.50	
ORV	1.23	54	iPc	55	58.80	-1.0
			i	56	05.10	
PCC	1.37	167	eP	56	00.20	-2.0
MHC	1.74	149	e(P)c	56	05.08	-2.7
WDC	1.75	6	e(P)	56	07.50	-0.2
ARN	1.78	146	iP	56	06.60	-1.6
CMB	2.04	112	iPc	56	10.70	-1.4
			eS	56	37.50	
SAO	2.32	153	ePc	56	13.20	-2.9
LLA	2.65	146	ePc	56	18.50	-2.2
PRS	2.74	155	eP	56	19.20	-2.8
FRI	3.05	126	e(P)	56	26.20	-0.1
KVN	3.66	85	eP	56	33.60	-1.6
			i	56	43.40	

15 obs. associated

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* JUN 18, 1989 23h 44m 35.52± 1.80s
40.119 N ±14.5km 123.548 W ±12.8km
DEPTH = 5.0km (geophysicist)
NORTHERN CALIFORNIA (36)
ML 2.6 (BRK).

FHC	0.76	334	ePd	44	51.00	0.2
			eS	45	01.25	
			i	45	07.70	
WDC	0.90	59	ePc	44	53.40	0.2
			i	45	02.00	
			i	45	03.60	
LTCM	1.09	85	eP	44	57.50	1.0
MIN	1.50	81	ePc	45	02.65	-0.7
			eS	45	21.80	
ORV	1.67	109	ePd	45	06.00	0.4
LBFM	1.76	45	eP	45	06.50	-0.5
KVN	4.34	102	eP	45	43.30	-0.6

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

JUN 19, 1989 00h 23m 14.48± 0.51s
40.279 N ± 5.8km 25.132 E ± 4.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.1 (ATH).

RDO	0.92	19	ePg	23	32.50	0.5
			eSg	23	46.50	
PLG	1.29	275	iPnd	23	38.50	0.0
PRK	1.36	139	ePb	23	39.00	-0.4
KDZ	1.39	9	iPd	23	40.00	0.2

			iS	23	58.00	
MMB	1.69	321	iPd	23	44.00	-0.2
			iS	24	16.00	
MFT	1.71	72	ePn	23	45.00	0.4
NEO	1.76	237	ePb	23	44.00	-1.3
PLD	1.85	350	eP	23	50.00	3.5X
			iS	24	17.00	
EDC	2.09	87	iPn	23	50.60	0.6
VAY	2.21	299	ePn	23	52.50	0.8
KKB	2.22	316	iP	23	52.00	0.2
PGB	2.38	343	eP	23	54.00	-0.2
			iS	24	31.00	
JMB	2.44	26	iP	24	01.00	6.0X
IZM	2.50	138	ePn	23	58.00	2.1
CTT	2.65	70	ePn	23	56.00	-2.1
VTS	2.73	329	eP	24	04.00	4.8X
DST	2.77	103	ePn	23	59.00	-0.8
PVL	2.94	3	iPd	24	09.00	7.0X
SKO	3.26	302	ePn	24	02.00	-4.7X
MLR	5.24	6	ePd	24	35.00	0.1

S.D. = 1.0 on 15 of 20 obs.

? JUN 19, 1989 01h 09m 28.24± 0.95s
38.494 N ±15.3km 25.101 E ± 7.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.8 (ATH).

PRK	1.18	50	ePn	09	50.00	-0.3
ATH	1.21	245	ePn	09	50.50	-0.2
NEO	1.67	300	ePn	09	58.00	0.3
IZM	1.70	93	ePn	09	58.40	0.3

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

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* JUN 19, 1989 02h 10m 18.35± 1.90s
2.404 N ± 9.7km 126.592 E ±13.6km
DEPTH = 98.9 ± 18.1 km
4.7mb (5 obs.)
MOLUCCA PASSAGE (266)

MNI	2.00	241	iPd	10	51.80	0.5
KKM	10.96	290	eP	12	54.50	0.7
MTN	15.81	164	eP	13	57.00	0.4
			e	14	02.00	
KNA	18.17	173	eP	14	24.00	-1.7
GUMO	21.21	57	eP	14	32.00	-25.8X
Z	24s		0.48um			3.8MszX
WB5	23.42	161	iPc	15	19.00	-0.5
			eS	19	28.20	
WRA	23.48	161	Pc	15	19.60	-0.4
	0.4s		10.30nm			4.6mb
MBL	24.34	195	eP	15	29.70	1.4
QIS	26.14	151	eP	15	44.00	-1.2
			e	15	48.00	
ASPA	26.87	165	eP	15	51.40	-0.4
			eS	20	36.80	
WARB	28.42	180	eP	15	54.00	-11.7X
CTA	29.53	140	eP	16	18.00	2.2
CHG	31.60	303	eP	16	33.40	-0.7
FORR	33.10	178	eP	16	46.90	0.1
XAN	35.54	334	P	17	05.80	-2.0
CD2	35.63	325	P	17	07.40	-1.3
STK	36.95	159	eP	17	20.00	0.4
TIY	37.47	341	eP	17	30.00	6.0X
N	30s		0.90um			
BJI	38.64	347	eP	17	33.00	-0.7
BRS	38.91	141	iPc	17	34.60	-1.6
LZH	39.57	331	eP	17	41.00	-0.7
Z	24s		0.79um			4.5MszX
CAN	43.00	153	eP	18	09.80	0.2
GUN	46.40	307	P	18	37.30	0.0
	0.5s		12.00nm			5.0mb
PKI	46.63	306	P	18	40.40	1.3
KKN	46.83	307	P	18	40.20	-0.3
DMN	46.89	306	P	18	41.30	0.2
GKN	47.43	307	P	18	45.00	-0.2
GBA	49.83	286	P	19	04.00	0.4
	0.8s		4.90nm			4.6mb
TTA	82.14	27	ePc	22	30.80	1.5
IMA	83.64	24	ePc	22	38.80	1.8
	1.0s		8.80nm			4.6mb
PMR	85.17	29	ePc	22	45.00	0.5
	1.0s		12.50nm			4.8mb

S.D. = 1.1 on 28 of 31 obs.

JUN 19, 1989 04h 17m 45.45± 0.58s
40.366 N ± 6.0km 24.019 E ± 5.1km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.5 (ATH).

PLG	0.44	271	iPbd	17	53.50	-0.9
NEO	1.22	210	ePb	18	04.30	-3.9X
MMB	1.24	350	iPgc	18	09.00	0.5
			Sg	18	26.00	
RDO	1.39	55	ePb	18	10.00	-0.9
RZN	1.42	22	iPc	18	12.00	0.5
			iSg	18	35.00	
VAY	1.46	311	iPn	18	12.70	0.9
KKB	1.66	335	iPc	18	16.00	1.3
KDZ	1.66	39	iPc	18	14.00	-0.8
KZN	1.72	269	ePn	18	14.50	-1.2
PLD	1.81	16	eP	18	19.00	2.1
DIM	2.03	34	iP	18	27.00	6.9X
PRK	2.06	122	ePb	18	21.50	0.9
PGB	2.19	3	eP	18	23.00	0.6
ATH	2.40	186	ePb	18	26.30	0.9
MFT	2.52	79	ePn	18	26.00	-1.2
SKO	2.52	310	ePn	18	31.00	3.9X
OHR	2.56	288	ePn	18	27.30	-0.4
EDC	2.94	89	ePn	18	38.00	5.0X
BNT	2.98	89	iPn	18	38.50	4.9X
PVL	3.01	19	iPd	18	32.00	-2.0
DST	3.62	101	ePn	18	43.00	0.2
MLR	5.31	15	ePc	19	06.00	-0.9

S.D. = 1.2 on 17 of 22 obs.

? JUN 19, 1989 04h 19m 30.47± 2.32s
13.113 N ±31.4km 90.271 W ±15.1km
DEPTH = 33.0km (normol)
4.8mb (8 obs.)
NEAR COAST OF GUATEMALA (71)

SCX	4.27	328	eP	20	49.50	14.8X
			eS	21	22.00	
OXX	7.38	303	iPc	21	33.70	14.9X
			eS	22	42.50	
IIT	9.70	308	iPd	21	03.50	-47.7X
III	10.28	302	iPc	22	12.30	13.2X
IIC	10.86	309	iP	22	18.40	11.2X
MRX	12.36	303	(P)	22	39.50	12.5X
PWLA	21.86	5	eP	24	22.60	0.4
VVO	22.67	348	ePc	24	30.40	0.2
MEO	22.85	342	iPc	24	30.90	-1.1
	1.0s		294.90nm			5.7mb
GBTN	23.11	13	iP	24	36.50	2.0
SIO	23.18	347	eP	24	33.70	-1.5
TKL	23.20	14	iP	24	37.60	2.2
TUL	23.24	349	eP	24	34.70	-1.0
	0.9s		21.60nm			4.7mb
			e	24	52.10	
LNO	23.24	349	iP	24	34.40	-1.2
RLO	23.35	350	eP	24	36.70	-0.1
BLA	25.56	18	eP	24	59.10	0.9
ALQ	26.21	329	eP	25	05.50	1.2
	0.7s		3.42nm			4.1mb
			e	25	08.00	
GOL	29.64	336	iP	25	35.20	-0.3
PRIN	30.39	24	iP	25	56.00	14.2X
TBR	31.25	24	iP	26	00.30	11.0X
DHN	31.40	17	iP	25	50.70	0.1
PTN	33.97	20	iP	26	13.50	0.5
RSNY	34.10	20	iP	26	14.30	0.2
TNP	34.53	321	iP	26	20.70	2.5
GAC	34.82	18	eP	26	20.00	-0.3
KVN	35.68	321	iP	26	30.20	2.3
LRM	37.62	334	ePc	26	44.90	0.6
RSON	37.75	356	iP	26	43.10	-1.8
	1.0s		85.41nm			5.6mb
SES	40.87	340	ePc	27	10.70	-0.2
FFC	42.52	350	iPc	27	23.80	-0.6
	0.5s		17.00nm			5.0mb
PNT	43.43	332	eP	27	32.00	0.1
	0.7s		13.00nm			4.8mb
SCH	45.49	19	iPc	27	48.20	-0.2
	0.4s		76.00nm			6.0mb X
YKA	52.28	346	eP	28	39.60	-1.1
INK	61.76	343	ePd	29	46.30	-1.6
MBC	65.00	353	ePc	30	07.50	-1.5
	0.7s		6.00nm			4.8mb
DAG	73.11	13	eP	30	58.00	-1.0
EKA	77.70	36	Pc	31	25.80	0.4
	0.8s		1.50nm			4.1mb

S.D. = 1.2 on 29 of 37 obs.

? JUN 19, 1989 04h 53m 56.32± 1.27s
2.855 N ±27.0km 72.877 W ±30.8km
DEPTH = 33.0km (normol)
COLOMBIA (103)

ZOBO	19.57	166	eP	58	32.00	6.7X
Z	24s		1.49um			
			i	58	37.00	
			LR	07	08.00	
LPB	19.83	166	P	58	29.00	1.1
Z	18s		1.72um			
			LR	06	46.00	
CNCB	20.13	166	P	58	30.00	-1.2
OXX	27.36	303	iPd	59	46.50	5.6X
ACX	29.94	300	eP	00	04.50	0.5
BAO	30.72	127	eP	00	11.00	0.1
IIC	30.76	305	eP	00	24.50	13.0X
CRX	30.93	304	eP	00	12.50	-0.5

S.D. = 1.2 on 5 of 8 obs.

JUN 19, 1989 06h 03m 52.86± 0.51s
5.584 N ± 6.6km 74.386 W ± 8.4km
DEPTH = 117.4 ± 5.1 km
4.4mb (13 obs.)
COLOMBIA (103)

FUQ	0.65	100	eP	04	14.00	1.8
BOG	1.01	161	iPc	04	13.50	-1.9
			iS	04	29.50	
BMG	1.97	41	eP	04	26.00	-0.4
PSO	5.26	214	eP	05	12.00	1.2
UPA	6.12	304	ePc	05	22.10	-0.2
			i	05	55.60	
			i	06	27.00	
ZOBO	22.58	164	eP	08	43.00	-1.8
LPB	22.84	164	(P)	09	03.00	15.8X
CNCB	23.13	164	eP	08	51.00	0.8
SCH	49.47	6	eP	12	32.00	-0.9
YKA	63.99	341	eP	14	14.90	-0.7
INK	73.77	341	eP	15	15.50	-0.1
LPF	74.74	42	eP	15	21.40	-0.2
	0.4s		2.20nm			4.3mb
MBC	74.79	350	eP	15	21.50	0.1
	0.5s		2.00nm			4.2mb
GRR	74.92	41	eP	15	22.90	0.3
	0.4s		5.00nm			4.7mb
MFF	75.14	43	eP	15	24.00	0.1
	0.5s		4.30nm			4.5mb
FLN	75.22	41	eP	15	24.70	0.4
	0.5s		10.20nm			4.9mb
LDF	75.43	41	eP	15	25.60	0.1
	0.4s		2.70nm			4.4mb
LPO	75.84	45	eP	15	27.80	-0.1
CAF	76.49	45	eP	15	31.70	0.1
	0.5s		1.70nm			4.1mb
MAF	76.96	44	eP	15	34.20	0.0
	0.6s		3.60nm			4.3mb
BGF	77.19	44	eP	15	35.40	0.0
	0.6s		6.30nm			4.6mb
AVF	77.56	43	eP	15	36.90	-0.5
	0.6s		1.80nm			4.0mb
LOR	77.94	43	eP	15	39.50	0.0
	0.6s		5.40nm			4.5mb
LBF	78.00	43	eP	15	40.00	0.1
	0.6s		2.10nm			4.1mb
LMR	79.57	47	eP	15	48.80	0.4
	0.6s		5.40nm			4.5mb
GBA	146.15	56	PKPd	23	22.10	1.4
	1.1s		6.50nm			

S.D. = 0.9 on 25 of 26 obs.

JUN 19, 1989 06h 30m 31.18± 0.91s
37.707 N ± 7.0km 14.979 E ± 7.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.5 (ROM).

MNO	0.32	315	P	30	37.40	-0.4
			eSg	30	43.20	
ATN	0.59	40	Pc	30	43.40	0.2
			eSg	30	53.30	
MEU	0.61	184	P	30	43.20	-0.3
			eSg	30	52.70	
GIB	0.80	291	P	30	46.50	-0.4
			eSg	30	58.30	
MCT	1.07	266	P	30	52.50	1.1

19d 06h

		eSg	31 07.70			
FAI	1.12	248 P	30 52.00	-0.2		
		eSg	31 08.20			
S.D. = 0.7	on	6 of	6 obs.			

• JUN 19, 1989 06h 33m 18.45± 0.92s
37.712 N ± 7.4km 14.975 E ± 7.7km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.7 (ROM).

MNO	0.31	315 P	33 24.60	-0.4		
		eSg	33 29.30			
ATN	0.59	41 Pd	33 30.60	0.2		
		eSg	33 40.90			
MEU	0.61	183 P	33 30.60	-0.2		
		eSg	33 40.40			
GIB	0.80	291 P	33 34.00	-0.1		
		eSg	33 44.60			
MCT	1.07	266 P	33 39.20	0.5		
		eSg	33 53.70			
S.D. = 0.5	on	5 of	5 obs.			

• JUN 19, 1989 06h 35m 12.65± 0.92s
37.719 N ± 7.2km 14.932 E ± 8.0km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.5 (ROM).

MNO	0.28	319 P	35 18.50	-0.2		
		eSg	35 23.00			
ATN	0.61	43 Pc	35 25.20	0.3		
		eSg	35 35.00			
MEU	0.62	180 P	35 24.70	-0.4		
		eSg	35 34.60			
GIB	0.77	291 P	35 27.20	-0.5		
		eSg	35 36.40			
FAI	1.09	247 P	35 34.00	0.8		
S.D. = 0.8	on	5 of	5 obs.			

JUN 19, 1989 06h 41m 47.55± 0.82s
37.750 N ± 7.4km 14.952 E ± 7.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.8 (ROM).

MNO	0.27	312 Pc	41 53.50	0.1		
		iSg	41 59.50			
ATN	0.58	44 Pc	41 59.40	0.2		
		eSg	42 07.50			
MEU	0.65	182 P	42 00.10	-0.5		
		eSg	42 09.50			
MSI	0.66	46 P	42 01.90	1.3		
		eSg	42 10.70			
GIB	0.77	288 P	42 02.90	0.3		
		eSg	42 15.90			
FAI	1.12	245 P	42 09.00	0.5		
		eSg	42 24.90			
MGR	2.43	11 P	42 26.10	-1.8		
		eSn	42 55.40			
S.D. = 1.2	on	7 of	7 obs.			

• JUN 19, 1989 06h 46m 02.16± 0.94s
37.721 N ± 7.4km 14.936 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.7 (ROM).

MNO	0.28	318 P	46 08.50	0.3		
		iSg	46 14.00			
ATN	0.61	43 P	46 14.50	0.1		
		eSg	46 24.00			
MEU	0.62	180 P	46 14.40	-0.3		
		eSg	46 24.20			
GIB	0.77	291 Pc	46 16.30	-0.9		
		eSg	46 29.50			
FAI	1.10	246 P	46 23.50	0.8		
S.D. = 0.9	on	5 of	5 obs.			

• JUN 19, 1989 07h 19m 02.80± 2.21s
6.173 S ±12.1km 130.214 E ±12.6km
DEPTH = 107.6 ± 21.6 km
4.6mb (5 obs.)
BANDA SEA (280)

MTN	6.69	172 iPc	20 40.60	0.5		
		eS	21 37.00			
KNA	9.62	188 eP	21 19.50	-0.5		
	0.3s	77.00nm		6.0mb X		
		eS	22 59.00			
WB5	14.21	164 eP	22 17.20	-3.2X		
		iS	24 46.80			
WRA	14.26	164 Pd	22 18.60	-2.5		
OIS	16.96	148 iPc	22 56.00	1.1		
		eS	25 48.00			
ASPA	17.75	169 iPd	23 05.10	0.5		
	0.9s	67.00nm		4.9mb		
		eS	26 07.80			
MBL	17.97	213 eP	23 07.50	0.2		
	0.4s	7.00nm		4.3mb		
KKM	18.51	311 ePd	23 14.70	1.0		
WARB	20.19	189 eP	23 19.00	-12.2X		
		eS	26 57.00			
CTA	20.83	133 iPc	23 38.80	1.1		
	1.0s	13.00nm		4.2mb		
FORR	24.63	184 eP	24 15.00	0.4		
	0.4s	10.00nm		4.6mb		
MRWA	26.57	209 eP	24 33.00	0.4		
STK	27.70	159 eP	24 42.70	-0.1		
BRS	30.08	137 iPc	25 02.70	-1.5		
CAN	33.77	152 eP	25 37.20	0.9		
GUN	54.57	311 P	28 22.40	-0.4		
	0.6s	41.00nm		5.6mb		
PKI	54.76	310 P	28 23.80	-0.3		
	0.6s	12.00nm		5.1mb X		
KKN	54.97	310 P	28 25.00	-0.5		
	0.6s	17.00nm		5.2mb X		
DMN	55.01	310 P	28 25.70	-0.1		
	0.6s	12.00nm		5.1mb X		
GKN	55.56	310 P	28 29.60	-0.1		
	0.6s	26.00nm		5.4mb X		
ATN	113.20	309 Pdiff	33 51.00	14.9X		
MEU	113.81	308 Pdiff	33 51.10	12.1X		
		eSg	34 01.10			
MNO	113.84	309 Pdiff	33 45.00	5.8X		
		eSg	33 51.00			
GIB	114.34	309 Pdiff	33 53.90	12.6X		
		eSg	34 07.70			
CNCB	150.93	142 PKP	38 47.70	7.7X		
LPB	151.07	141 ePKP	38 47.00	7.0X		
ZOBO	151.25	141 PKP	38 47.00	6.5X		
S.D. = 1.0	on	18 of	27 obs.			

• JUN 19, 1989 11h 29m 00.74± 0.94s
40.160 N ±12.5km 113.026 E ± 9.4km
DEPTH = 10.0km (geophysicist)
NORTHEASTERN CHINA (658)
ML 3.3 (BJI).

BJI	2.42	92 Pn	29 40.50	-0.4		
		Pg	29 43.50			
		Sg	30 16.00			
TIY	2.49	191 ePn	29 42.70	0.7		
		iPgc	29 45.00			
		Sn	30 13.40			
		Sg	30 16.60			
TIA	5.10	139 ePn	30 18.50	-0.4		
		ePg	30 35.20			
GTA	10.20	270 eP	31 29.60	-0.7		
YKA	70.78	21 eP	40 19.70	0.9		
S.D. = 1.1	on	5 of	5 obs.			

• JUN 19, 1989 12h 17m 55.80± 1.25s
13.951 N ± 6.2km 61.317 W ±24.9km
DEPTH = 32.3 ± 8.1 km
WINDWARD ISLANDS (95)
ML 3.0 (FDF).

SLB	0.30	115 eP	18 04.76	1.3		
SOA	0.60	164 eP	18 07.25	-0.6		
		eS	18 19.38			
BIM	0.61	23 iPc	18 09.09	1.0		
		S	18 22.10			
SSV	0.63	169 eP	18 08.06	-0.4		
		eS	18 19.94			
SVV	0.64	171 eP	18 08.64	0.2		
		eS	18 20.50			
SVB	0.68	175 eP	18 08.94	-0.1		
		eS	18 20.86			
MVM	0.73	34 iPc	18 08.03	-1.6		
		S	18 20.20			
FCV	0.79	175 eP	18 10.73	0.1		
		eS	18 22.49			
FDF	0.79	12 iPc	18 12.17	1.5		
	0.1s	1.85nm				
		S	18 27.30			
CRM	0.89	26 iPc	18 10.54	-1.4		
		S	18 24.80			
S.D. = 1.3	on	10 of	10 obs.			

% JUN 19, 1989 12h 40m 16.12± 0.97s
61.315 N ±11.5km 10.280 E ±11.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.3 (BER).

NRA0	0.85	133 iPnc	40 32.30	-0.1		
		iPg	40 34.90			
		iS	40 44.30			
RGS	1.71	2 eP	40 46.60	0.5		
		eS	41 09.50			
MOL	1.80	315 eP	40 46.67	-0.8		
		eS	41 08.96			
HYA	1.98	267 eP	40 50.50	0.4		
		eS	41 14.10			
S.D. = 1.0	on	4 of	4 obs.			

JUN 19, 1989 13h 00m 40.65± 1.51s
13.157 S ± 6.7km 167.128 E ± 8.0km
DEPTH = 239.0 ± 13.3 km
5.0mb (13 obs.)
VANUATU ISLANDS (186)

HNR	7.96	297 eP	02 20.00	-14.1X		
VSG	8.24	297 eP	02 37.00	-0.9		
DZM	8.89	184 iPc	02 47.60	1.3		
		iS	04 28.40			
BRS	19.51	221 iPc	04 52.10	0.3		
CTA	21.14	248 iPd	05 08.60	0.6		
	1.0s	53.00nm		5.0mb		
RMQ	21.75	230 iPc	05 15.90	2.1		
	0.4s	56.00nm		5.4mb		
COO	22.33	217 iPc	05 21.20	1.8		
CMS	26.76	224 eP	06 00.00	-0.4		
MNG	28.32	167 P	06 14.20	-0.2		
	0.3s	15.00nm		5.1mb		
PGZ	28.51	165 P	06 15.60	-0.4		
TCW	28.64	169 P	06 17.40	0.3		
CAW	28.70	167 P	06 17.10	-0.6		
MRW	28.74	168 P	06 17.80	-0.2		
WDW	28.84	168 P	06 18.20	-0.7		
MTW	28.84	167 P	06 18.60	-0.3		
BLW	29.04	167 P	06 20.10	-0.5		
STK	29.93	227 iPd	06 29.00	0.3		
	0.3s	13.00nm		5.1mb		
WB5	32.07	254 iPc	06 45.80	-1.6		
WRA	32.10	253 Pc	06 46.10	-1.6		
	0.7s	5.20nm		4.3mb		
ASPA	33.13	247 iPc	06 55.30	-1.3		
	0.5s	29.00nm		5.2mb		
KNA	37.20	261 eP	07 30.60	-0.3		
FORR	39.99	237 iPc	07 53.90	0.2		
	0.4s	73.00nm		5.5mb		
WARB	40.10	245 eP	07 42.00	-12.8X		
	0.3s	27.00nm				
MBL	45.75	253 iPc	08 40.50	0.2		
COOL	45.78	240 eP	08 39.70	-0.7		
MEKA	47.35	246 iPc	08 52.90	0.2		
	0.4s	27.00nm		5.0mb		
KLB	48.76	239 eP	09 02.30	-1.2		
	0.4s	12.00nm		4.7mb		
NWAO	49.45	238 iPc	09 08.10	-0.6		
	0.5s	20.00nm		4.8mb		
NANU	49.79	252 eP	09 11.80	0.4		
	0.6s	29.00nm		4.9mb		
MRWA	49.90	243 eP	09 11.70	-0.5		
MUN	50.13	239 eP	09 13.30	-0.6		
MAT	56.46	332 eP	09 59.00	-0.9		
SSE	62.30	316 Pc	10 39.40	-0.4		
TIA	68.08	318 eP	11 16.00	-0.7		
CN2	68.24	329 iPc	11 17.80	0.4		
TIY	72.02	317 eP	11 41.50	1.0		
SPA	76.93	180 ePc	12 09.20	1.2		
	0.6s	19.51nm		5.0mb		
GTA	81.49	314 P	12 34.40	1.6		
FBA	84.90	18 iP	12 50.00	0.6		
GUN	88.52	299 P	13 10.50	2.4		
PKI	88.83	299 P	13 10.00	0.4		
KKN	89.00	299 P	13 12.80	2.6		
DMN	89.10	298 P	13 11.30	0.5		
	0.7s	21.00nm		5.2mb		

```
GKN    89.60 299 P      13 12.80  -0.1
SUF   123.33 340 iPKP   19 10.30   0.2
        0.5s    11.70nm
NUR   125.37 338 iPKP   19 14.90   0.8
        0.5s    19.60nm
NB2   129.08 345 PKP    19 21.80   0.5
        0.7s     3.60nm
HFS   129.19 343 ePKP   19 20.10  -1.3
        0.5s     2.40nm
KHC   138.02 334 ePKP   19 40.20   1.6
ORX   143.12 335 PKP    19 45.22  -2.7
LBF   143.43 341 ePKP   19 47.80  -0.5
        0.8s     3.20nm
GRR   143.48 347 ePKP   19 46.90  -1.3
        0.6s     5.40nm
SSF   143.51 341 ePKP   19 48.60   0.3
        0.8s     5.30nm
LSD   143.59 336 PKP    19 47.99  -0.9
LPG   143.72 336 ePKP   19 49.40   0.3
        0.6s     5.40nm
RSP   143.80 336 PKP    19 48.40  -0.7
LPF   143.86 347 ePKP   19 48.20  -0.7
        0.6s    12.60nm
BGF   144.17 341 ePKP   19 49.10  -0.4
        0.8s    12.60nm
FIN   144.17 334 PKP    19 48.50  -1.1
RRL   144.18 336 PKP    19 49.32  -0.6
ROB   144.25 334 PKP    19 48.09  -1.7
SOB1  144.39 127 ePKP   19 49.90  -0.9
ENR   144.49 335 PKP    19 48.60  -1.4
STV   144.52 335 PKP    19 48.50  -1.8
IMI   144.55 334 PKP    19 50.04  -0.3
MAF   144.56 341 ePKP   19 50.60   0.4
        0.8s    12.00nm
TCF   144.60 342 iPKPc  19 50.80   0.5
        0.8s    18.80nm
SBF   144.78 334 iPKPc  19 50.90   0.2
        0.7s    35.20nm
LSF   144.84 343 iPKPc  19 51.30   0.6
        0.8s    21.40nm
MFF   144.98 345 iPKPc  19 51.70   0.9
        0.8s    48.30nm
CVF   145.17 331 ePKP   19 52.00   0.7
        0.6s     9.00nm
FRF   145.36 335 iPKPc  19 52.90   1.3
        0.6s     7.20nm
LRG   145.57 335 iPKPc  19 53.70   1.8
        0.8s    11.80nm
LMR   145.60 335 iPKPc  19 53.70   1.7
        0.8s    24.10nm
LPO   146.36 342 ePKP   19 56.30   3.1X
        0.8s     8.00nm
BNG   147.80 257 iPKPd  19 57.50   1.1
        0.8s     5.00nm
     S.D. = 1.1  on  73 of  76 obs.
-------------------------------------
&  JUN  19, 1989  13h 24m 36.23s
   60.329 N          153.577 W
   DEPTH = 203.5km
 SOUTHERN ALASKA                  (  2)
      <AGS-P>.

ILIM    0.40 129 iP     25 02.91   0.8
RED     0.41  77 iP     25 02.95   0.7
RDT     0.63  67 iP     25 03.86  -0.8
OPT     0.70 165 iP     25 04.27  -0.6
                S      25 24.58
SPU     1.14  40 iP     25 07.03  -0.6
CRP     1.17  36 iP     25 07.82  -0.2
NKA     1.23  69 eP     25 09.23   1.0
CDD     1.40 181 iP     25 08.86  -0.9
                S      25 32.92
CNPM    1.43 123 iP     25 09.79  -0.1
                S      25 34.38
SLKM    1.67  82 eP     25 11.09  -1.1
SUA     1.79  49 eP     25 12.60  -0.8
                S      25 41.20
SKT     1.93  30 eP     25 14.42  -0.2
SEW     2.07  94 eP     25 15.88  -0.2
PWA     2.24  52 eP     25 16.63  -1.2
PMR     2.51  58 iP     25 19.10  -1.7
                i      25 23.00
KDC     2.65 167 iP     25 20.50  -1.8
                i      25 54.60
GHO     2.69  55 eP     25 21.46  -1.5
KNK     2.73  64 eP     25 22.05  -1.3
TTA     2.86 337 iP     25 23.80  -1.1
                i      26 00.50
        19 obs. associated
-------------------------------------
*  JUN  19, 1989  15h 35m 06.04± 1.18s
   19.191 N ±15.3km  107.903 W ±15.0km
   DEPTH =  33.0km  (normal)
   4.4mb (  4 obs.)
 OFF COAST OF JALISCO, MEXICO     ( 54)

GLA    15.13 337 eP     38 39.00  -0.1
BAR    15.57 331 eP     38 42.00  -2.7
ALO    15.74   4 eP     38 48.80   1.6
                e      38 52.00
                e      39 16.00
                e      39 51.50
                eS     42 00.00
                eLg    43 02.00
TPC    16.53 336 eP     38 57.00  -0.1
MEO    17.59  26 eP     39 10.30  -0.1
       1.4s    18.70nm          4.0mb
SBB    17.77 332 eP     39 12.00  -0.6
TUL    19.79  30 eP     39 36.70   0.2
       1.3s    12.30nm          4.1mb
     Z  19s     0.50um          4.2Msz
                eS     43 30.00
                LR     45 28.00
LNO    19.79  30 eP     39 35.80  -0.6
TNP    20.50 339 iP     39 43.00  -1.2
FRI    20.53 332 eP     39 42.50  -1.7
KVN    21.67 338 iP     39 55.60  -0.5
CMB    21.70 333 eP     39 58.00   1.8
MHC    21.71 329 eP     39 59.10   2.7
ORV    23.44 333 eP     40 14.70   1.4
MIN    24.15 334 eP     40 22.30   2.0
SES    31.23 356 eP     41 25.00   0.3
FFC    35.76   6 eP     42 04.00   0.3
       1.0s    11.00nm          4.7mb
YKA    43.51 355 eP     43 16.20   8.4X
INK    51.67 348 eP     44 10.00  -1.5
ZOBO   52.65 129 eP     44 21.00   0.7
MBC    57.39 357 eP     44 52.00  -1.2
       1.0s    13.00nm          4.9mb
BAO    68.35 116 e(P)   46 06.00  -0.9
     S.D. = 1.4  on  21 of  22 obs.
-------------------------------------
   JUN  19, 1989  16h 00m 47.94± 0.19s
   22.113 S ± 4.5km   67.559 W ± 4.0km
   DEPTH = 188.5km  (  8 depth phases)
   5.5mb ( 65 obs.)
 CHILE-BOLIVIA BORDER REGION      (124)
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 17S, 34C
      Centroid Location:
      Origin Time        16:00:52.5 0.2
      Lat 22.05S 0.03 Lon  67.60W 0.04
      Dep 186.0 1.1 Half-duration  2.6
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.59 0.10  Mtt= 0.00 0.13
        Mff= 0.59 0.14  Mrt= 0.28 0.09
        Mrf=-3.66 0.09  Mtf= 0.33 0.13
       Principal Axes:
        T  Val=  3.71  Plg=40  Azm= 91
        N        0.05      6      357
        P       -3.76     49      260
      Best Double Couple:Mo=3.7*10**17
       NP1:Strike=228 Dip= 7 Slip= -38
       NP2:        356    86      -96

ANT     3.07 238 iP+    01 31.60  -6.7X
                iS     02 03.50
CCH     4.89  16 Pc     02 02.50   0.8
       0.6s    35.00nm
                i      02 03.20
                iS     03 00.00
CNCB    5.29 356 Pc     02 08.20   1.1
LPB     5.57 355 P      02 12.00   1.3
ZOBO    5.84 355 iPc    02 14.20  -0.1
     Z  18s     2.49um
                S      02 40.00
                LR     03 08.00
ARE     6.74 326 eP     02 21.00  -4.8X
                i(S)   03 36.00
JACH   10.87 194 iPc    03 15.00  -4.6X
PEL    11.33 193 eP     03 16.50  -9.1X
                i      03 20.40
                i      05 16.60

FCH    11.43 192 eP     03 21.00  -6.1X
TACH   11.88 194 iPd    03 25.50  -7.0X
LNV    12.28 195 eP     03 28.50  -9.1X
ITB1   12.36 104 eP     03 34.90  -3.8X
HUA    12.46 322 eP     03 39.10  -1.4
                eS     03 48.50
ITB    12.54 105 eP     03 35.90  -5.2X
ITB7   12.63 106 eP     03 38.80  -3.4X
VAO    19.04  97 iPd    04 54.60  -3.5X
                ipP    05 08.10  63kmX
BAO    19.60  74 eP     04 59.00  -4.9X
BRAS   20.33  95 iPc    05 04.40  -7.0X
BOG    27.32 346 eP     06 20.00   2.4
                e(S)   10 42.00
SOB1   28.64  68 eP     06 26.70  -2.4
BMG    29.50 349 eP     06 37.00   0.2
ITR    30.99  69 eP     06 46.90  -2.9
TPP    32.78  11 eP     07 08.26   3.0X
TBH    33.01  12 eP     07 08.34   1.1
UPA    33.06 338 iPd    07 09.10   1.5
       1.1s   344.30nm          5.9mb
TRN    33.11  11 eP     07 08.63   0.5
BUS    35.26 332 ePd    07 28.00   1.1
SVB    35.70  11 eP     07 30.73   0.6
SJS    35.73 331 iPd    07 33.20   2.7
SVV    35.76  11 eP     07 32.88   2.3
SSV    35.77  11 eP     07 30.88   0.1
SRA    36.03 331 eP     07 34.10   1.1
SLB    36.28  11 eP     07 35.02   0.0
BIM    36.95  10 eP     07 39.88  -0.8
MVM    37.02  11 eP     07 39.89  -1.3
FDF    37.15  10 eP     07 40.74  -1.6
       0.3s     2.00nm          4.2mb X
PAG    38.34   9 eP     07 50.00  -2.3
DEG    38.72  10 eP     07 52.00  -3.4X
BPA    39.32   9 eP     07 59.18  -1.1
GCM    43.31 341 P      08 33.30   0.5
SGS    56.37 347 P      10 11.10  -0.5
JSC    57.57 347 iP     10 18.80  -1.2
                epP    11 02.00 188km
PRM    57.63 345 P      10 18.40  -2.1
LHS    57.67 347 P      10 20.00  -0.7
TKL    59.47 345 P      10 31.20  -2.0
GBTN   59.59 344 P      10 32.20  -1.8
RSCP   59.89 343 P      10 34.30  -1.7
PWLA   60.02 341 P      10 34.80  -2.1
BLA    60.24 348 P      10 37.40  -1.0
       0.6s   123.87nm          5.9mb
NAV    60.41 348 P      10 38.50  -1.1
CVL    60.65 350 P      10 40.60  -0.5
NA2    60.68 351 P      10 40.80  -0.5
SNA    61.07 159 iPc    10 39.00  -4.6X
       0.9s    68.91nm          5.4mb
RKT    61.71 255 iP     10 48.40  -0.1
       0.8s    65.00nm          5.5mb
VVO    63.07 334 e(P)   10 55.50  -1.8
RLO    63.52 335 iP     10 59.10  -1.1
FVM    63.53 340 P      10 58.00  -2.2
                pP     11 41.00 183km
LNO    63.60 335 iP     10 59.30  -1.2
TUL    63.60 335 iP     11 00.00  -0.7
       1.3s   150.80nm          5.7mb
     Z  21s     0.41um          4.6Msz
SIO    63.66 334 iP     11 00.70  -0.4
MEO    63.80 332 iP     10 59.80  -2.2
       0.3s    25.70nm          5.6mb
                i      11 36.00
DHN    65.35 351 P      11 11.40  -0.5
RSNY   66.64 355 P      11 19.90  -0.1
       0.8s    46.95nm          5.3mb
PTN    66.71 354 P      11 20.00  -0.4
LIC    67.36  73 Pc     11 22.80  -2.3
TIC    67.56  72 Pc     11 24.10  -2.3
KIC    67.68  73 Pc     11 25.02  -2.1
       0.7s   570.00nm          6.4mb
                S      20 10.00
ALQ    67.70 326 P      11 26.00  -1.1
       0.8s    97.00nm          5.6mb
                pP     12 10.00 186km
ALQ    67.70 326 P      11 26.70  -0.4
       0.8s    97.00nm          5.6mb
                pP     12 10.00 182km
GAC    67.87 354 eP     11 28.00   0.4
SPA    68.02 180 ePd    11 26.00  -2.7
       0.8s    55.00nm          5.4mb
                e      11 40.60
CBM    68.72 360 eP     11 32.90   0.1
```

19d 16h

CVVD	69.00	46	iP	11	35.00	0.0
TBT	69.58	46	iPd	11	39.00	0.5
GLD	70.88	330	iP	11	46.80	0.4
GOL	70.91	330	iP	11	45.60	-1.0
	0.7s	224.51nm				6.0mb
GLA	71.01	319	P	11	47.10	0.0
WEGH	71.28	76	eP	11	47.00	-2.0
LEGH	71.43	76	eP	11	48.00	-1.9
	0.5s	9.50nm				4.8mb
KOGH	71.57	75	eP	11	49.00	-1.8
PV09	71.80	327	iP	11	52.00	0.0
BAR	71.89	318	eP	11	52.00	-0.3
			e	12	37.00	
CFTV	72.00	48	iP	11	52.80	-0.3
PLM	72.46	318	eP	11	56.00	0.1
TPC	72.48	319	eP	11	55.00	-0.8
			e	12	41.00	
PEC	73.01	319	P	11	59.30	0.4
RVR	73.21	318	eP	12	01.00	1.1
			e	12	46.00	
MSU	73.40	325	P	12	00.50	-0.7
GSC	73.75	320	eP	12	04.00	0.8
MWC	73.79	318	eP	12	03.00	-0.5
PAS	73.81	318	eP	12	03.00	-0.4
RSSD	73.90	334	iP	12	04.00	0.0
SBB	73.95	319	eP	12	03.00	-1.3
			e	12	50.00	
TBI	74.48	251	iP	12	09.40	1.8
	1.0s	110.00nm				5.5mb
ISA	75.00	319	eP	12	11.00	0.7
			e	12	55.00	
SYP	75.18	317	eP	12	12.80	1.3
RUV	75.19	259	iP	12	12.50	0.8
	1.2s	95.00nm				5.4mb
VAH	75.40	259	iP	12	13.50	0.6
	1.2s	190.00nm				5.7mb
SBA	75.45	190	eP	12	11.70	-0.5
TPT	75.47	260	iP	12	13.80	0.5
	1.2s	195.00nm				5.7mb
BCH	75.67	318	iP	12	14.50	0.3
CER	75.67	120	iPc	12	20.00	5.7X
	1.0s	160.00nm				5.7mb
PMO	75.72	259	iP	12	15.20	0.5
	1.2s	170.00nm				5.7mb
TNP	75.89	322	P	12	15.20	-0.3
TVO	76.04	256	iP	12	17.10	0.5
	1.2s	160.00nm				5.6mb
RSON	76.22	343	eP	12	15.50	-1.3
	0.6s	52.84nm				5.4mb
			epP	13	03.00	197km
PPN	76.28	256	iP	12	18.50	0.7
	1.2s	60.00nm				5.2mb
PAE	76.37	256	iP	12	18.80	0.5
	1.2s	190.00nm				5.7mb
PPT	76.40	256	iP	12	19.00	0.5
	1.2s	250.00nm				5.8mb
AFR	76.59	256	iP	12	19.90	0.4
	1.2s	145.00nm				5.6mb
SCH	76.62	0	iPd	12	18.60	-0.2
	0.7s	71.00nm				5.5mb
FRI	76.62	319	ePd	12	18.20	-1.1
PRI	76.65	318	eP	12	19.90	0.3
KVN	77.05	322	iP	12	21.50	-0.4
LLA	77.13	319	eP	12	22.00	-0.1
PRS	77.21	318	ePd	12	22.80	0.2
POF	77.42	117	iPc	12	23.50	-0.4
	1.0s	157.00nm				5.7mb
SAO	77.53	318	eP	12	24.20	-0.1
CMB	77.71	320	ePd	12	25.00	-0.3
			ePP	15	23.60	
ARN	77.96	319	P	12	26.20	-0.5
MHC	78.02	319	ePd	12	27.20	0.0
TIO	78.26	50	iPc	12	29.50	0.9
PCC	78.58	318	eP	12	29.50	-0.5
BKS	78.73	319	iP	12	30.00	-0.8
	0.9s	185.00nm				5.8mb
BRK	78.74	319	eP	12	31.50	0.6
LRM	78.94	330	eP	12	32.40	0.3
ORV	79.36	321	ePd	12	34.70	0.5
AVE	79.51	48	iP	12	36.00	0.9
			i	13	09.00	
MIN	79.93	321	eP	12	36.80	-0.6
LTCM	80.15	321	eP	12	38.00	-0.4
			epP	13	21.40	177kmX
WDC	80.63	321	ePd	12	39.50	-1.4
			e	12	48.40	
LBFM	80.75	322	P	12	41.40	-0.3
IFR	81.21	49	eP	12	46.00	1.7
BMK	81.51	47	iPd	12	46.50	1.0
FHC	81.62	320	eP	12	46.60	0.5
FRS	81.71	119	iPc	12	47.00	0.2
	1.0s	178.00nm				5.8mb
SES	81.77	334	iPd	12	46.10	-0.6
	0.5s	128.00nm				5.9mb
			pP	13	33.00	192km
FFC	82.02	341	eP	12	47.00	-0.8
	1.0s	94.00nm				5.5mb
EVAL	82.42	44	eP	12	51.00	0.8
EJIF	82.61	46	e(P)	12	53.30	2.1
EPRU	83.06	46	e(P)	12	55.00	1.4
DPW	83.15	328	P	12	54.00	0.2
			pP	13	40.00	187km
MAW	83.38	163	eP	12	53.00	-1.7
	0.9s	53.00nm				5.3mb
EHOR	83.53	45	e(P)	12	57.00	1.2
TAF	83.80	49	eP	12	58.00	0.6
ATEJ	83.84	46	iPd	12	58.50	0.8
ALOJ	83.89	46	iPd	12	59.20	1.3
AAPN	83.99	46	iPd	12	59.50	1.2
ACHM	84.07	46	iP	12	59.80	1.1
APHE	84.08	46	iPd	12	59.50	0.7
LON	84.21	326	P	12	58.30	-0.9
ASMO	84.27	46	iP	13	00.00	0.3
EPLA	84.27	43	eP	13	02.40	2.8
KSR	84.41	116	iPc	12	59.20	-1.7
	0.9s	80.77nm				5.5mb
PNT	84.83	329	eP	13	02.00	-0.1
	0.9s	78.00nm				5.5mb
EDM	84.85	334	iP	13	00.50	-1.7
			pP	13	48.00	193km
ERUA	84.97	40	eP	13	04.30	1.3
TOL	85.45	44	iPc	13	06.40	0.9
	1.2s	218.75nm				5.8mb
			ePP	16	22.00	
			eS	23	20.00	
			ePS	24	46.00	
EMON	85.47	39	eP	13	06.10	0.6
FRB	85.58	360	eP	13	05.00	-0.4
SLR	85.61	116	iPc	13	05.00	-1.8
	0.9s	100.84nm				5.6mb
EVIA	85.78	45	e(P)	13	08.30	1.1
GUD	85.81	43	eP	13	08.20	0.8
PGC	86.29	327	eP	13	10.00	0.8
	0.8s	103.00nm				5.7mb
ECHE	87.30	45	eP	13	15.20	0.8
BNG	88.05	84	iPc	13	18.50	-0.1
	0.7s	60.00nm				5.6mb
			id	14	48.50	
			id	16	32.00	
			iS	23	30.30	
EPF	89.92	43	eP	13	27.10	0.3
	1.0s	14.00nm				4.9mb
ECP	91.13	33	eP	13	23.00	-8.9X
LFF	91.14	41	eP	13	32.60	0.4
	0.8s	32.20nm				5.4mb
LPO	91.29	42	eP	13	33.40	0.5
	1.2s	14.20nm				4.9mb
MFF	91.46	40	eP	13	33.60	-0.1
	1.0s	28.00nm				5.3mb
LPF	91.69	38	eP	13	34.30	-0.3
	1.0s	17.60nm				5.1mb
DLE	91.69	32	eP	13	34.00	-0.5
RJF	91.80	41	eP	13	35.40	0.1
	0.9s	13.10nm				5.0mb
DMU	91.87	31	eP	13	35.40	0.0
CAF	91.95	42	eP	13	36.40	0.4
	1.2s	14.80nm				4.9mb
GRR	91.98	38	eP	13	35.70	-0.3
	1.0s	16.00nm				5.0mb
YKC	92.13	340	eP	13	36.20	-0.2
	0.8s	113.00nm				6.0mb
YKA	92.18	340	eP	13	37.00	0.4
LSF	92.28	40	eP	13	37.30	-0.2
	1.0s	18.00nm				5.1mb
YRH	92.38	33	eP	13	32.00	-5.7X
FLN	92.39	38	eP	13	37.60	-0.3
	1.0s	24.00nm				5.2mb
LDF	92.50	38	eP	13	38.20	-0.2
	0.8s	8.00nm				4.9mb
TCF	92.71	41	eP	13	39.20	-0.3
	0.9s	11.40nm				5.0mb
MAF	92.89	41	eP	13	40.20	-0.1
	1.2s	22.00nm				5.2mb
AVF	93.64	41	eP	13	43.40	-0.3
	1.2s	16.00nm				5.0mb
SSF	93.87	40	eP	13	44.30	-0.4
	1.0s	8.00nm				4.8mb
SMF	93.87	41	eP	13	44.60	-0.2
	1.2s	32.70nm				5.4mb
LRG	93.98	45	eP	13	46.10	0.8
	1.0s	37.60nm				5.5mb
LMR	94.02	45	eP	13	46.10	0.6
	0.8s	25.20nm				5.4mb
LBF	94.11	41	eP	13	45.40	-0.5
	1.1s	12.20nm				5.0mb
LOR	94.18	40	eP	13	45.70	-0.5
	1.0s	10.00nm				4.9mb
FRF	94.22	45	eP	13	46.90	0.5
	1.0s	20.00nm				5.2mb
EKA	94.48	31	P	13	48.00	0.7
	1.1s	10.60nm				5.0mb
SBF	94.86	45	eP	13	50.00	0.5
	1.0s	36.00nm				5.6mb
BNI	94.90	43	P	13	50.80	1.1
RRL	94.91	43	P	13	49.78	-0.1
STV	94.96	44	P	13	49.68	-0.3
ENR	95.01	44	P	13	49.89	-0.3
DDI	95.02	44	P	13	51.50	1.3
LPG	95.14	43	eP	13	51.70	0.7
	1.0s	24.00nm				5.4mb
IMI	95.18	45	P	13	50.91	0.0
RSP	95.31	43	P	13	51.94	0.3
ROB	95.33	44	P	13	51.22	-0.4
LSD	95.38	43	P	13	52.55	0.5
FIN	95.51	44	P	13	51.63	-0.8
CKI	95.65	44	P	13	53.00	0.0
DIX	95.82	43	ePd	13	54.90	0.9
DOU	95.93	38	P	13	54.30	0.2
			e	13	59.90	
			S	24	18.00	
ORX	95.98	43	P	13	51.94	-2.7
MMK	96.15	43	ePd	13	56.50	1.0
BOB	96.55	44	P	13	57.50	0.4
VAI	96.58	43	P	13	57.00	-0.1
WLF	96.63	39	P	13	56.00	-1.2
TMA	96.75	43	ePd	13	58.20	0.1
PII	96.83	46	P	13	59.00	0.7
BDI	97.02	45	P	13	58.50	-0.7
ZLA	97.02	42	ePd	14	00.90	1.7
MDI	97.14	43	P	13	59.50	-0.1
SLE	97.21	41	ePd	14	00.10	0.2
RDP	97.53	48	P	14	03.50	1.9
SAL	97.59	44	P	14	02.00	0.3
PGD	97.69	46	P	14	01.50	-0.9
MNS	97.75	47	P	14	03.50	1.0
OSS	97.79	43	ePd	14	02.30	-0.5
SDI	98.27	48	P	14	05.50	0.6
CTI	98.49	44	P	14	06.50	0.6
MGR	98.92	50	P	14	08.50	0.7
FVI	99.42	44	P	14	10.50	0.6
RBL	99.87	44	P	14	12.50	0.4
KBA	99.96	43	iP	14	12.50	-0.2
			e	18	17.00	
KHC	100.86	41	Pdiff	14	16.80	0.3
			e	18	22.30	
CLL	101.30	39	ePdiff	14	19.00	0.7
PRU	101.75	41	ePdiff	14	20.50	0.1
			e	18	31.00	
			eS	24	45.00	
MBC	103.07	349	ePdiff	14	26.00	0.4
	0.8s	5.00nm				5.3mb
SPC	105.02	43	ePKP	18	56.00	6.9X
FBA	105.75	334	ePdiff	14	37.70	-0.1
	1.0s	15.00nm				6.1mb
MLR	107.81	48	ePdiff	14	59.00	11.4X
VRI	108.43	47	ePdiff	14	56.50	6.3X
NWAO	125.08	185	ePKP	19	25.50	-2.1
KLB	126.36	186	ePKP	19	27.80	-2.4
CTA	126.61	221	iPKPc	19	30.00	-0.9
	0.8s	14.55nm				
			i	21	26.00	
ASPA	129.93	206	iPKPd	19	34.00	-3.2X
			i	22	42.40	
			i	22	57.00	
			e	26	27.70	
MAIO	132.22	61	ePKP	19	42.00	0.7
WRA	133.04	209	PKPd	19	41.70	-1.5
	0.7s	4.90nm				
WB5	133.09	209	ePKP	19	27.20	-16.0X
			i	19	42.00	
			i	22	53.50	

MTN	140.72	210	ePKPd	19	48.60	-8.9X
KSH	144.52	52	PKP	20	03.50	-0.1
GBA	145.69	98	PKPc	20	04.90	-1.2
	0.7s		91.70nm			
KUSJ	146.01	316	ePKP	20	05.00	-0.8
ASAJ	146.81	319	ePKP	20	07.80	0.7
HOOJ	147.27	315	ePKP	20	10.40	2.6
NDI	147.60	71	iPKPc	20	11.50	2.7
	1.2s		1484.38nm			
HYB	147.81	92	iPKPc	20	12.00	2.5
	1.0s		220.00nm			
			i	20	15.50	
			e	20	23.00	
GUA	147.99	260	ePKP	20	11.80	2.0
	0.8s		447.76nm			
GUMO	148.05	260	ePKP	20	11.50	1.6
PJG	148.05	260	ePKP	20	12.00	2.1
MRRJ	148.67	317	ePKP	20	13.50	3.4X
AOMJ	150.07	314	ePKP	20	18.80	6.5X
WMO	150.21	38	PKP	20	16.50	4.0X
			e	20	25.70	
			SKKS	30	29.50	
KAKJ	152.12	306	PKP	20	21.60	6.2X
NIIJ	152.56	309	PKP	20	21.30	5.3X
CHJJ	153.06	307	PKP	20	24.90	8.1X
MAT	153.43	308	ePKP	20	24.00	6.7X
MTMJ	153.71	309	ePKP	20	25.70	7.9X
GKN	154.17	71	PKP	20	18.40	-0.4
	0.6s		22.00nm			
KKN	154.76	72	PKP	20	18.60	-1.0
	0.6s		15.00nm			
GUN	155.27	71	PKP	20	17.60	-2.9X
	0.4s		19.00nm			
CN2	155.83	337	ePKP	20	20.00	-0.3
LSA	159.43	64	PKP	20	26.50	0.9
HHC	161.31	2	PKP	20	28.00	1.2
BTO	161.46	6	ePKP	20	28.20	1.3
BJI	161.85	351	ePKP	20	28.00	0.9
			e	21	04.00	
			sPKP	21	36.00	
			ePP	24	56.00	
TIY	164.45	0	ePKP	20	31.50	1.6
TIA	165.37	345	ePKP	20	31.10	0.4
			sPKP	21	30.00	
CHG	166.93	102	ePKP	20	32.20	-0.2
XAN	167.72	14	PKP	20	33.30	0.7
SSE	168.12	321	PKPd	20	33.40	0.6
CD2	168.29	40	ePKP	20	33.60	0.6
GYA	173.18	49	PKP	20	36.00	0.4
			e	22	05.00	
			PP	25	57.00	

S.D. = 1.1 on 246 of 280 obs.

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* JUN 19, 1989 16h 24m 33.31± 0.97s
37.721 N ± 8.0km 14.909 E ± 9.3km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.6 (ROM).

MNO	0.27	321	Pc	24	40.30	1.2
			eSg	24	45.20	
MEU	0.62	178	P	24	46.30	0.5
			eSg	24	56.00	
ATN	0.62	45	Pc	24	46.00	0.2
			eSg	24	55.30	
MCT	1.02	265	P	24	51.80	-0.9
MGR	2.46	12	P	25	13.10	-1.0

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

JUN 19, 1989 18h 03m 27.07± 0.84s
37.129 N ± 8.3km 27.868 E ± 8.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.33	89	iPg	03	32.10	-1.9
IZM	1.35	339	ePn	03	51.00	-1.0
KAP	1.67	200	ePn	03	55.00	-1.5
ELL	1.68	102	ePn	03	57.90	1.2
KSL	1.71	126	ePn	03	58.00	1.0
KHL	1.77	47	iPn	03	58.30	0.2
BCK	2.19	81	ePn	04	07.00	2.8X
DST	2.54	13	ePn	04	10.00	0.9
NPS	2.61	225	ePn	04	11.00	1.0
ALT	2.61	42	ePn	04	15.10	5.0X

S.D. = 1.5 on 8 of 10 obs.

? JUN 19, 1989 18h 53m 44.70± 1.06s
21.288 S ±11.9km 69.029 W ±23.5km
DEPTH = 176.5 ± 24.1 km
NORTHERN CHILE (123)

ANT	2.73	208	iP	54	30.50	0.2
			iS	54	57.80	
			i	54	58.70	
CNCB	4.56	13	P	54	54.90	0.7
CCH	4.75	36	P	54	55.50	-0.8
LPB	4.81	11	eP	54	58.00	0.7
ZOBO	5.07	10	Pc	55	01.00	0.3
Z	16s		0.16um			
			eS	55	55.00	
			LR	56	38.00	
ARE	5.34	334	eP	55	03.00	-1.0
			iS	56	05.00	
BAO	20.72	78	eP	58	11.00	-1.9
ATB	24.23	45	e(P)	58	49.40	2.6X
SOB1	29.62	70	eP	59	37.50	1.9

S.D. = 1.6 on 8 of 9 obs.

? JUN 19, 1989 19h 10m 42.37± 3.29s
4.164 S ±32.1km 143.466 E ±11.5km
DEPTH = 109.9 ± 17.4 km
4.6mb (4 obs.)
PAPUA NEW GUINEA (202)

MNDI	1.99	174	eP	11	17.50	1.6
LAT	4.30	125	eP	11	46.50	-0.3
PMG	6.37	145	eP	12	13.00	-2.2
MTN	14.93	234	eP	14	10.00	1.0
			e	16	46.00	
CTA	16.06	170	iP	14	25.20	2.0
WB5	17.96	209	iPc	14	45.30	-1.3
			eS	17	56.50	
WRA	18.03	209	Pd	14	45.60	-1.8
	0.7s		12.30nm		4.3mb	
KNA	18.48	230	eP	14	52.00	-0.7
ASPA	21.48	205	iPc	15	23.00	-0.5
			e	15	28.50	
RMQ	22.77	168	iPd	15	38.50	2.4
BRS	24.75	160	iPc	15	54.60	-0.6
WARB	27.19	215	eP	16	04.50	-13.1X
	0.4s		18.00nm			
MBL	28.51	232	iPd	16	29.90	0.3
	0.4s		6.00nm		4.6mb	
FORR	30.24	207	iPc	16	44.10	-0.7
	0.4s		12.00nm		5.0mb	
NANU	32.64	233	eP	17	06.30	0.3
COOL	33.89	216	eP	17	16.20	-0.5
KLB	36.44	219	eP	17	38.00	-0.3
BAL	36.45	221	eP	17	39.30	0.9
MUN	37.67	220	eP	17	49.00	0.4
SPA	85.86	180	e(P)	23	11.10	0.3
	0.7s		5.08nm		4.6mb	
LIC	148.56	275	PKP	30	20.00	4.9X

S.D. = 1.3 on 19 of 21 obs.

JUN 19, 1989 20h 16m 10.53± 0.38s
55.672 S ± 9.6km 28.247 W ± 7.2km
DEPTH = 33.0km (normal)
5.6mb (6 obs.) 5.1Msz (2 obs.)
SOUTH SANDWICH ISLANDS REGION (153)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 15S, 29C
Centroid Location:
Origin Time 20:16:16.9 0.4
Lat 55.64S 0.06 Lon 28.61W 0.11
Dep 49.9 6.5 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.03 0.05 Mtt=-0.49 0.07
Mff= 0.52 0.07 Mrt=-0.84 0.09
Mrf=-1.16 0.11 Mtf= 0.10 0.06
Principal Axes:

T	Val= 1.62	Plg=40	Azm=112
N	-0.22	18	218
P	-1.40	44	327

Best Double Couple:Mo=1.5*10**17
NP1:Strike=136 Dip=19 Slip=-173
NP2: 39 88 -72

AIA	19.89	227	eP	20	45.40	3.9X
SPA	34.51	180	e(P)	22	57.90	0.5
	1.0s		102.00nm		5.7mb	
Z	20s		1.85um		4.8Msz	
			e	24	16.80	
VAO	35.46	329	eP	23	06.80	1.1
PCH	36.49	289	eP	23	13.00	-1.3
FCH	36.60	290	eP	23	15.00	-0.5
TACH	36.69	289	iP	23	14.70	-1.2
SAN	36.70	289	eP	23	15.50	-0.5
LNV	36.72	288	iPc	23	14.60	-1.5
PEL	36.95	290	iPd	23	17.40	-0.7
LCCH	37.17	288	eP	23	19.70	-0.2
ROCH	37.25	289	iPc	23	20.40	-0.5
JACH	37.25	290	eP	23	21.00	0.2
MAW	40.81	144	iPc	23	49.70	-0.1
	1.2s		80.00nm		5.3mb	
BAO	42.74	331	eP	24	08.00	1.7
SBA	46.41	184	iPd	24	36.50	1.5
CCH	47.81	308	P	24	48.10	1.1
CNCB	49.15	306	iPd	24	58.80	1.2
			S	32	02.00	
LPB	49.44	306	P	25	01.00	1.3
	1.2s		468.75nm		6.4mb	
			S	32	06.00	
			LR	40	06.00	
KSR	49.52	76	eP	24	58.70	-1.3
ZOBO	49.68	306	iPd	25	02.30	0.5
			i	30	09.20	
			S	32	08.00	
			LR	40	18.00	
SLR	50.38	78	iPc	25	05.50	-1.0
	1.0s		30.00nm		5.3mb	
Z	18s		2.75um		5.3Msz	
ARE	51.09	302	iPd	25	13.00	0.8
	1.1s		363.29nm		6.3mb	
ATB	55.69	331	Pd	25	45.70	0.0
LIC	64.61	26	Pd	26	46.76	0.0
			S	35	30.00	
KIC	64.81	26	Pd	26	47.70	-0.3
TIC	65.01	26	Pd	26	49.20	-0.2
LEGH	65.36	31	eP	26	53.00	1.4
KOGH	65.76	31	eP	26	55.00	0.8
KUK	65.82	31	eP	26	53.00	-1.5
BNG	71.13	50	iPc	27	28.00	0.4
	0.9s		23.00nm		5.2mb	
			ic	27	44.00	
			ic	30	38.00	
CMB	121.49	292	e(PKP)	35	17.70	16.3X
WDC	124.49	293	e(PKP)	35	05.30	-1.8
YKA	135.49	319	ePKP	35	26.80	-0.5
GTA	142.34	93	ePKP	35	38.60	-2.2
			PKS	39	07.40	
MBC	143.39	336	ePKP	35	38.00	-3.3X
XAN	143.53	108	ePKP	35	42.10	-0.8
			PKS	39	12.60	
INK	145.13	321	ePKPd	35	43.10	-1.3
			pP	35	59.00	
NJ2	147.05	122	PKPd	35	50.00	1.3
SSE	147.35	126	PKP	35	51.00	1.8
TIY	148.16	108	ePKP	35	52.40	1.9
			sPKP	36	10.00	
TOA	148.43	307	ePKP	35	53.70	3.6X
			e	36	09.70	
BTO	148.88	101	PKP	35	55.00	3.4X
TIA	149.51	115	PKPd	35	56.40	3.9X
PMR	149.63	306	ePKP	35	55.80	4.0X
	1.5s		48.60nm			
FBA	149.82	312	ePKP	35	55.80	3.7X
HHC	149.91	102	ePKP	35	57.80	4.7X
KDC	150.05	297	ePKP	35	56.90	4.3X
BJI	151.86	109	ePKP	36	02.00	6.1X
IMA	152.42	314	ePKP	36	02.70	6.6X
	1.6s		32.30nm			
TTA	153.06	307	ePKP	36	04.20	7.2X

S.D. = 1.2 on 37 of 50 obs.

? JUN 19, 1989 20h 28m 28.17± 3.97s
34.177 S ±35.9km 71.159 W ± 9.6km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.30	317	iPd	28	36.40	0.4
			iS	28	54.00	
TACH	0.55	19	iPd	28	40.00	0.4
			iS	29	01.00	
PCH	0.77	44	eP	28	42.50	-0.2
			iS	29	03.00	
LCCH	0.78	334	iPd	28	41.90	-0.8
			iS	29	04.10	
PEL	1.10	21	iPc	28	48.00	0.6
			iS	29	08.00	

19d 20h

FCH 1.11 41 iPc 28 47.60 -0.2
iS 29 14.00
ROCH 1.21 6 iPc 28 49.40 0.4
iS 29 16.20
JACH 1.56 18 eP 28 53.50 -0.6
S.D. = 0.6 on 8 of 8 obs.

& JUN 19, 1989 21h 02m 16.20s
38.835 N 122.785 W
DEPTH = 4.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 3.2 (BRK).

NWRM 0.39 192 eP 02 23.80 -0.1
ZSP 0.98 155 eP 02 34.40 -1.0
iS 02 49.50
BRK 1.05 157 ePc 02 35.70 -0.8
eS 02 50.30
BKS 1.05 156 ePd 02 35.43 -1.1
ePgc 02 35.95
eS 02 51.10
ORV 1.23 54 ePc 02 38.00 -1.6
e 02 45.10
PCC 1.37 166 ePc 02 42.00 0.0
e 03 00.00
MHC 1.74 148 ePc 02 45.80 -1.7
ARN 1.78 146 eP 02 45.50 -2.5
CMB 2.05 112 ePc 02 50.00 -1.9
SAO 2.32 152 eP 02 53.40 -2.4
LLA 2.65 146 ePd 02 58.80 -1.7
FRI 3.05 126 ePc 03 05.70 -0.4
KVN 3.66 85 eP 03 13.00 -2.0
13 obs. ossociated

% JUN 19, 1989 21h 10m 21.72± 0.80s
44.146 N ±12.7km 9.937 E ± 7.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.4 (ROM).

BDI 0.48 100 P 10 31.70 0.2
eSg 10 38.40
PII 0.60 135 Pc 10 33.80 0.0
eSg 10 42.50
BOB 0.71 331 P 10 35.80 0.0
eSg 10 46.30
CKI 1.22 284 P 10 44.50 0.0
eSg 11 00.50
PGD 1.32 101 P 10 46.00 -0.1
eSn 11 04.00
S.D. = 0.2 on 5 of 5 obs.

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* JUN 19, 1989 21h 22m 12.51± 2.67s
37.705 N ±13.7km 16.692 E ±19.9km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
MD 2.6 (ROM).

MSI 1.03 299 P 22 32.10 0.2
ATN 1.07 295 Pc 22 32.70 0.0
eSg 22 42.30
MEU 1.53 247 Pc 22 40.10 0.2
eSg 22 55.60
MNO 1.60 279 P 22 40.70 -0.4
eSg 22 55.80
MGR 2.59 340 Pc 22 55.10 0.0
eSn 23 22.20
SGO 3.05 340 P 23 01.50 0.0
S.D. = 0.3 on 6 of 6 obs.

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* JUN 19, 1989 23h 52m 01.19± 0.98s
38.931 N ± 7.9km 23.217 E ±11.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (ATH).

NEO 0.38 1 ePb 52 09.60 0.7
eSg 52 15.80
ATH 1.03 158 ePn 52 20.00 -0.7
eSn 52 33.90
PLG 1.45 7 ePg 52 29.00 1.5
KZN 1.77 321 ePn 52 31.50 -0.6
VLS 2.19 251 ePb 52 40.10 1.9
VAY 2.44 348 ePn 52 39.70 -1.9
MMB 2.68 8 eP 52 46.00 0.8
OHR 2.86 320 ePn 52 45.70 -2.1
KKB 2.93 358 eP 52 49.00 0.3
RZN 2.98 22 eP 52 51.00 1.4
KDZ 3.19 31 eP 52 51.00 -1.4
S.D. = 1.6 on 11 of 11 obs.

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* JUN 20, 1989 01h 36m 47.03± 0.85s
3.396 S ± 9.4km 129.689 E ±19.2km
DEPTH = 33.0km (normal)
4.4mb (1 obs.)
CERAM (272)

MTN 9.50 171 eP 39 05.00 0.4
eS 40 55.00
WB5 17.01 165 eP 40 44.20 0.1
eS 43 48.80
ASPA 20.56 169 eP 41 25.20 -0.5
0.7s 39.00nm 4.9mb X
eS 45 19.10
GUA 22.61 42 eP 41 46.40 0.0
CTA 23.16 137 iPc 41 58.60 6.9X
1.0s 15.00nm 4.4mb
i 42 05.20
CHG 37.46 307 eP 43 59.50 0.0
LVI 113.48 310 PKPc 55 11.20 -12.6X
eSg 55 21.90
CNCB 153.40 140 PKP 56 46.00 8.8X
ZOBO 153.70 138 ePKP 56 45.00 7.3X
S.D. = 0.5 on 5 of 9 obs.

JUN 20, 1989 03h 52m 57.82± 0.64s
41.302 N ± 5.1km 20.068 E ± 6.4km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 1.8 (SKO).

TIR 0.16 286 iPgc 53 00.90 -0.6
LACI 0.43 321 iPgc 53 07.00 0.4
PHP 0.48 36 iPgd 53 07.30 -0.2
OHR 0.58 109 ePg 53 09.50 -0.2
iSg 53 18.90
BERA 0.61 189 ePg 53 09.20 -0.8
PUK 0.75 350 ePg 53 12.70 0.2
TPE 1.01 182 ePg 53 18.00 1.1
SKO 1.23 56 ePg 53 25.00 4.4X
iSg 53 39.50
S.D. = 0.8 on 7 of 8 obs.

JUN 20, 1989 04h 06m 58.46± 0.68s
40.849 N ± 6.3km 20.373 E ± 6.1km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
ML 2.2 (SKO).

BERA 0.35 246 iPgc 07 05.00 -0.7
KBN 0.40 124 iPgd 07 06.00 -0.7
OHR 0.42 51 iPgc 07 06.40 -0.6
iSg 07 13.00
TPE 0.62 207 iPgc 07 11.60 0.7
TIR 0.63 323 ePg 07 11.70 0.6
PHP 0.84 3 iPgc 07 13.30 -1.3
SKO 1.38 35 ePn 07 25.00 1.3
iSn 07 45.00
VAY 1.73 73 ePn 07 29.40 0.7
S.D. = 1.1 on 8 of 8 obs.

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* JUN 20, 1989 05h 38m 02.37± 2.99s
44.207 N ±29.8km 11.441 E ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.3 (ROM).

PGD 0.39 149 Pd 38 10.00 -0.4
eSg 38 16.70
SFI 0.41 134 P 38 10.30 -0.5
eSg 38 18.20
MME 0.53 269 P 38 12.90 -0.3
eSg 38 20.80
BDI 0.62 257 P 38 15.50 0.5
eSg 38 24.50
CRE 0.69 147 P 38 17.00 1.0
eSg 38 27.00
PII 0.82 234 P 38 18.00 -0.2
eSg 38 29.00
S.D. = 0.8 on 6 of 6 obs.

JUN 20, 1989 05h 41m 43.52± 0.15s
52.334 N ± 3.6km 174.184 E ± 2.4km
DEPTH = 48.4km (41 depth phases)
5.2mb (63 obs.) 4.3Msz (5 obs.)
NEAR ISLANDS, ALEUTIAN ISLANDS (5)
ML 5.2 (PMR). Felt (IV) on Shemya.
CENTROID, MOMENT TENSOR (HRV)
Dotо Used: GDSN
L.P.B.: 12S, 21C
Centroid Locotion:
Origin Time 05:41:45.7 0.6
Lat 52.47N 0.12 Lon 173.72E 0.10
Dep 49.0 8.4 Half-duration 1.8
Moment Tensor; Scale 10**16 Nm
Mrr= 2.20 0.32 Mtt=-1.36 0.47
Mff=-0.85 0.31 Mrt=-5.80 0.77
Mrf=-2.64 0.51 Mtf=-1.46 0.57
Principal Axes:
T Val= 6.72 Plg=55 Azm=162
N 0.20 6 64
P -6.91 35 330
Best Double Couple:Mo=6.8*10**16
NP1:Strike= 35 Dip=11 Slip= 60
NP2: 245 80 96

SMY 0.40 353 iPc 41 55.20 1.7
ADK 5.65 91 ePd 43 08.00 1.0
ANM 16.16 33 P 45 31.80 3.2X
SVW 18.59 50 eP 45 59.80 1.0
TTA 18.97 44 eP 46 04.00 0.7
KDC 19.71 61 eP 46 09.90 -1.5
IMA 21.11 37 eP 46 25.90 -0.1
1.0s 75.00nm 5.0mb
KUSJ 21.74 257 P 46 31.30 -1.0
PMR 21.76 50 eP 46 31.30 -0.9
ASAJ 22.42 261 eP 46 40.30 1.3
HOOJ 23.01 257 eP 46 56.50 11.7X
BRW 23.02 24 eP 46 45.10 0.5
FBA 23.02 42 ePd 46 46.10 1.4
TOA 23.21 50 ePc 46 47.70 1.0
INK 29.25 37 eP 47 44.00 1.5
MAT 29.77 252 (P) 47 47.00 -0.5
1.2s 17.19nm 4.6mb
eS 52 40.00
MDJ 30.14 273 eP 47 49.20 -1.5
Z 18s 0.44um 4.1Msz
eS 52 50.00
CN2 33.11 275 Pd 48 14.70 -2.0
Z 22s 0.80um 4.4Msz
MBC 34.38 23 ePd 48 27.00 -0.3
0.7s 32.00nm 5.4mb
SNY 35.35 273 eP 48 35.40 -0.5
Z 26s 0.80um 4.4MszX
N 22s 0.80um
eS 54 00.00
YKA 37.71 46 eP 48 56.40 0.8
YKC 37.78 46 ePc 48 56.40 0.3
PGC 38.76 70 eP 49 05.00 0.5
MCW 39.10 69 eP 49 08.00 0.5
GMW 39.71 71 eP 49 13.00 0.6
PNT 40.62 67 ePc 49 20.00 0.1
0.8s 99.00nm 5.6mb
pP 49 33.00 49km
LON 40.69 71 eP 49 21.30 0.7
BJI 40.93 276 eP 49 22.50 0.0
Z 24s 0.32um 4.1MszX
eS 55 26.00
EDM 42.09 59 iPc 49 32.30 0.3
0.8s 93.00nm 5.6mb
pP 49 45.30 49km
ALE 42.41 9 ePd 49 35.00 0.8
0.6s 23.00nm 5.1mb
ALE 42.41 9 eP 49 48.00 13.8X
0.7s 16.00nm
TIA 42.75 271 eP 49 37.70 0.1
FHC 42.79 80 ePc 49 40.50 2.7X
ePcP 51 29.30
HHC 43.24 280 Pc 49 42.50 1.0
SSE 43.73 262 Pd 49 46.60 1.1
pP 49 58.00 40km
eS 56 16.00
sS 56 40.00
WDC 43.80 79 ePc 49 45.20 -0.7
ePcP 51 31.80
epPcP 51 46.20
esPcP 51 54.00
eScP 55 18.50
BTO 44.32 281 iPd 49 50.80 0.5
N 15s 0.60um

E 15s 0.40um
pP 50 03.50 47km
ePP 51 36.00
S 56 23.50
NJ2 44.49 265 Pc 49 52.00 0.4
Z 16s 0.30um 4.3MszX
MIN 44.50 79 ePc 49 51.60 -0.3
epP 50 05.50 53km
ePcP 51 34.90
epPcP 51 48.30
eScP 55 21.00
TIY 44.66 276 Pc 49 53.50 0.4
N 15s 0.30um
E 20s 0.60um
S 56 30.00
SES 44.78 61 ePc 49 52.70 -1.1
pP 50 07.00 55km
ORV 45.06 80 ePc 49 55.40 -0.7
epP 50 09.70 54km
ePcP 51 35.80
epPcP 51 50.20
eScP 55 23.20
BRK 45.66 82 eP 50 01.60 0.8
epP 50 13.50 43km
ePcP 51 38.40
epPcP 51 52.50
MHC 46.37 82 e(P) 50 08.70 2.0
ePcP 51 41.00
epPcP 51 55.40
LRM 46.59 67 eP 50 07.80 -0.6
e 50 21.50 51km
CMB 46.69 81 ePc 50 09.10 0.0
ePcP 51 42.10
epPcP 51 56.20
eScP 55 30.70
FFC 47.05 52 eP 50 11.50 -0.2
1.0s 17.00nm 4.9mb
FFC 47.05 52 eP 50 24.00 12.3X
1.1s 35.00nm
KVN 47.42 78 eP 50 14.70 -0.3
HPI 47.48 70 eP 50 15.30 -0.3
e 50 29.00 51km
FRI 47.78 81 ePc 50 18.30 0.7
epP 50 32.60 54km
ePcP 51 45.80
epPcP 52 00.10
eScP 55 34.80
WHN 48.30 268 eP 50 21.50 -0.2
pP 50 33.50 43km
TNP 48.57 78 eP 50 23.60 -0.4
e 50 36.80 49km
KBS 48.58 355 iP 50 23.00 -0.3
XAN 49.22 275 P 50 28.50 -0.3
ISA 49.40 82 eP 50 29.00 -1.2
CLC 49.83 81 eP 50 33.00 -0.5
DUG 49.84 73 eP 50 33.80 0.2
SBB 50.45 82 eP 50 37.00 -1.2
PAS 50.60 83 eP 50 35.00 -4.3X
MWC 50.62 83 eP 50 39.00 -0.7
GSC 50.65 81 eP 50 39.00 -0.8
e 50 53.00 52km
DAG 50.90 4 iPd 50 39.50 -1.5
0.4s 12.71nm 5.3mb
ipP 50 52.90 49km
LZH 50.93 281 eP 50 41.00 -1.0
2.0s 0.11nm 2.5mb X
Z 20s 0.50um 4.5Msz
RVR 51.19 83 eP 50 44.00 0.2
TPC 51.92 82 eP 50 48.00 -1.4
PLM 51.94 83 eP 50 49.00 -0.7
BAR 52.52 83 eP 50 54.00 0.1
GLA 53.38 82 eP 51 03.00 2.8
e 51 14.00 37kmX
RSON 53.39 52 eP 50 59.30 -0.7
0.7s 33.55nm 5.5mb
e 51 12.70 49km
FRB 54.40 29 eP 51 05.00 -2.2
GOL 54.48 69 eP 51 08.50 -0.1
1.0s 27.50nm 5.2mb
CD2 54.53 276 eP 51 08.30 -0.4
GLD 54.54 69 eP 51 09.00 0.2
1.4s 40.40nm 5.3mb
WMQ 55.11 298 iPd 51 11.60 -1.3
1.0s 0.10nm 2.8mb X
Z 24s 1.10um 4.9MszX
pP 51 25.60 51km
S 58 50.00

KEV 55.90 347 eP 51 10.00 -8.0X
GYA 55.93 270 P 51 18.40 -0.6
TRO 57.01 350 iP+ 51 24.50 -1.5
ALQ 57.09 74 eP 51 26.50 -0.8
1.2s 8.59nm 4.7mb
e 51 30.50 13kmX
e 52 21.20
e 52 35.50
e 52 38.50
SOD 58.15 346 iP 51 32.30 -1.7
MEO 61.78 69 ePc 51 58.50 -0.9
1.3s 59.30nm 5.6mb
e 52 13.20 54km
SCH 61.87 35 iPc 51 58.60 -1.1
0.9s 91.00nm 5.9mb
AKU 61.93 6 iP 52 00.10 0.2
1.0s 52.00nm 5.6mb
i 52 13.80 49km
SIO 62.39 67 e(P) 52 02.50 -0.9
SUF 62.56 344 iP 52 02.80 -1.3
0.7s 71.20nm 5.9mb
LNO 62.56 66 iP 52 03.50 -0.9
i 52 17.10 48km
TUL 62.56 66 ePd 52 03.90 -0.6
0.9s 15.40nm 5.1mb
Z 19s 0.25um 4.4Msz
i 52 18.30 52km
LR 13 30.00
HNR 62.72 196 eP 52 03.00 -2.6
RLO 62.80 65 eP 52 05.00 -1.1
e 52 19.00 50km
VVO 63.00 67 eP 52 05.70 -1.7
FVM 64.00 61 eP 52 11.40 -2.6
KSH 64.41 302 eP 52 16.50 -0.3
NUR 64.88 344 iP 52 17.90 -1.4
0.7s 57.40nm 5.7mb
Z 23s 0.50um 4.6MszX
i 52 32.00 50km
LR 21 30.00
SHL 65.60 281 iP 52 23.10 -1.5
PMG 65.73 209 eP 52 25.00 -0.2
NB2 66.16 351 P 52 26.20 -1.4
0.7s 33.30nm 5.5mb
CHG 66.35 270 eP 52 29.00 -0.3
APO 66.37 349 eP 52 25.60 -3.3X
0.9s 39.30nm 5.4mb
UPP 66.58 347 iP 52 28.80 -1.3
i 52 41.20 42km
GUN 67.44 287 Pd 52 36.00 -0.5
KKN 67.88 287 Pd 52 38.60 -0.5
PKI 67.96 287 Pd 52 39.90 0.1
GKN 68.09 288 Pd 52 39.80 -0.6
DMN 68.11 287 Pd 52 40.40 -0.3
0.7s 45.00nm 5.6mb
GBTN 69.03 59 eP 52 44.80 -1.1
TKL 69.27 58 eP 52 46.40 -1.0
JSC 71.64 58 eP 53 01.00 -0.7
e 53 14.50 47km
NDI 71.84 293 eP 53 02.50 -0.5
EKA 72.68 358 Pc 53 07.40 -0.1
0.7s 18.50nm 5.1mb
DMU 74.13 1 eP 53 15.80 -0.2
SNG 74.32 261 eP 53 18.00 0.4
DZM 74.39 187 iPc 53 19.40 1.5
PMO 74.65 142 iP 53 20.70 1.3
1.0s 40.00nm 5.3mb
WIT 74.70 352 eP 53 20.50 1.2
e 53 34.00 47km
TPT 74.74 142 iP 53 21.40 1.5
1.0s 55.00nm 5.4mb
DLE 74.75 0 eP 53 19.40 -0.1
VAH 74.97 142 iP 53 22.40 1.2
1.0s 40.00nm 5.3mb
RUV 75.02 142 iP 53 22.70 1.2
1.0s 35.00nm 5.3mb
MAIO 75.03 311 eP 53 21.00 -0.6
eS 02 06.00
ETA 75.34 0 eP 53 22.00 -0.9
WTS 75.50 352 eP 53 23.50 -0.4
0.7s 14.00nm 5.0mb
e 53 36.50 45km
KSP 75.51 346 iPd 53 23.50 -0.5
i 53 36.50 45km
CLL 75.52 348 iPd 53 23.00 -1.0
1.7s 32.00nm 5.0mb
ipP 53 36.30 46km
ECP 75.86 0 eP 53 25.40 -0.4

0.7s 26.00nm 5.3mb
VAL 76.03 3 eP 53 27.00 0.2
CTA 76.11 207 iPc 53 27.60 -0.1
1.2s 92.19nm 5.6mb
i 53 43.30 56km
QUE 76.25 302 eP 53 28.80 0.0
ePP 53 43.70
SPC 76.45 343 eP 53 29.80 0.2
i 53 43.20 46km
PRU 76.60 347 eP 53 29.70 -0.4
e 53 43.20 47km
HOF 76.64 348 eP 53 30.30 0.0
MEM 76.95 352 Pc 53 32.20 0.2
e 53 45.30 45km
SNF 77.17 353 P 53 33.30 0.1
e 53 46.30 44km
GRF 77.33 349 eP 53 34.40 0.2
1.4s 41.00nm 5.3mb
Z 21s 0.10um 4.1Msz
ABH 77.53 351 ePd 53 34.76 -0.5
DOU 77.57 353 P 53 35.10 -0.3
1.0s 38.90nm 5.4mb
e 53 48.60 46km
KHC 77.57 347 iP 53 35.50 -0.1
1.0s 17.00nm 5.0mb
i 53 49.00 46km
WET 77.65 348 eP 53 36.10 0.1
1.4s 32.00nm 5.2mb
TOD 77.68 350 ePd 53 35.90 -0.2
PSZ 77.74 343 eP 53 37.80 1.3
RUP 77.76 351 ePd 53 36.12 -0.4
WLF 77.87 352 Pc 53 37.40 0.3
ZST 77.96 345 iPd 53 38.40 0.8
i 53 51.80 46km
LR 06 28.00
SRO 78.12 344 iP 53 39.40 0.9
i 53 52.80 46km
VRI 78.26 337 ePd 53 41.50 2.2
CFR 78.56 336 eP 53 41.00 0.1
MLR 78.80 338 ePc 53 43.50 1.0
CDF 79.01 351 eP 53 43.20 -0.3
1.2s 11.90nm 4.7mb
BHG 79.05 347 eP 53 44.00 0.3
FLN 79.18 356 eP 53 43.90 -0.4
1.0s 28.00nm 5.2mb
CMP 79.22 338 ePc 53 50.00 5.4X
LDF 79.33 356 eP 53 44.70 -0.4
0.8s 11.80nm 4.9mb
FEL 79.47 351 ePd 53 45.62 -0.5
HAU 79.50 352 eP 53 45.80 -0.3
1.0s 16.00nm 4.9mb
SLE 79.53 350 ePc 53 46.20 -0.1
GRR 79.57 357 eP 53 46.20 -0.2
0.9s 29.40nm 5.2mb
KBA 79.62 347 i(P) 53 48.10 1.2
0.8s 36.70nm 5.4mb
BZS 79.62 341 eP 53 47.00 0.3
BSF 79.63 351 eP 53 46.40 -0.5
0.8s 10.70nm 4.8mb
HYB 79.78 285 ePc 53 48.50 0.5
i 54 03.00 51km
WB5 79.82 218 iPc 53 47.80 -0.3
ZLA 79.82 350 ePc 53 48.20 0.3
WRA 79.89 218 Pd 53 46.40 -2.0
0.7s 25.20nm 5.3mb
LPF 79.93 357 eP 53 48.20 -0.1
1.2s 29.70nm 5.1mb
OGA 80.13 348 eP 53 50.10 0.4
KVT 80.13 329 eP 53 50.90 1.3
FVI 80.17 347 P 53 49.90 0.3
RBL 80.21 347 P 53 50.00 0.0
LLS 80.36 350 ePc 53 51.40 0.4
PTJ 80.37 345 eP 53 51.00 0.1
OSS 80.41 349 ePc 53 51.90 0.7
LOR 80.43 353 eP 53 50.70 -0.4
1.0s 18.00nm 5.0mb
VOY 80.56 346 e(P) 53 51.50 -0.4
BEO 80.61 341 eP 53 52.00 0.0
SSF 80.66 354 eP 53 52.10 -0.2
1.0s 18.00nm 5 0mb
LBF 80.71 353 eP 53 52.20 -0.4
0.8s 5.90nm 4.6mb
CTI 80.86 348 Pc 53 53.40 0.0
VBY 80.87 345 eP 53 53.70 0.3
TRI 80.90 346 P 53 53.50 0.0
AVF 80.94 354 eP 53 53.30 -0.4
1.2s 26.70nm 5.1mb

20d 05h

SMF 81.05 353 eP 53 53.80 -0.5
1.2s 33.90nm 5.2mb
TMA 81.13 350 ePc 53 55.30 0.3
BGF 81.21 354 eP 53 55.30 0.2
1.0s 12.00nm 4.8mb
MMK 81.28 350 ePc 53 56.70 0.9
DIX 81.31 351 ePc 53 56.90 0.9
MFF 81.32 356 eP 53 55.60 -0.1
1.0s 16.00nm 4.9mb
MDI 81.36 349 P 53 55.00 -0.9
VAI 81.38 350 P 53 56.00 0.0
SAL 81.43 348 P 53 56.00 -0.3
TCF 81.52 354 eP 53 56.80 0.0
0.8s 9.90nm 4.8mb
MAF 81.56 354 eP 53 57.10 0.1
1.0s 18.00nm 5.0mb
BRS 81.57 199 iPc 53 57.90 0.8
i 54 14.50 59kmX
RMQ 81.58 203 eP 53 58.00 0.8
e 54 15.00 61kmX
LSF 81.59 355 eP 53 57.10 0.0
1.2s 26.70nm 5.1mb
ORX 81.69 350 P 53 58.51 0.7
LPG 81.95 351 eP 54 00.30 0.9
1.1s 30.20nm 5.2mb
LSD 81.95 351 P 54 00.25 0.9
RSP 82.24 351 P 54 01.27 0.6
BOB 82.39 349 P 54 02.70 1.3
BNI 82.40 351 P 54 03.00 1.5
RRL 82.52 351 P 54 03.43 1.1
RZN 82.69 337 iP 54 04.00 0.8
MME 82.80 348 P 54 05.10 1.3
RSM 82.83 347 P 54 05.20 1.6
CKI 82.86 350 Pc 54 03.90 0.2
CAF 82.88 354 eP 54 04.40 0.5
0.9s 17.00nm 5.1mb
DOI 82.89 351 P 54 03.50 -0.5
KKB 82.89 339 iP 54 05.00 1.0
SFI 82.92 347 P 53 59.00 -5.0X
LFF 82.94 355 eP 54 04.20 0.1
1.0s 16.00nm 5.0mb
BDI 82.94 348 Pc 54 05.60 1.3
PGD 82.98 347 Pc 54 06.30 1.7
MMB 83.01 338 iP 54 06.00 1.4
ROB 83.03 350 P 54 04.35 -0.4
FIN 83.08 350 P 54 03.84 -1.1
STV 83.14 351 P 54 04.04 -1.3
ENR 83.14 350 P 54 03.84 -1.3
SKO 83.15 340 iP 54 05.50 0.2
i 54 18.50 44km
LPO 83.17 355 eP 54 05.50 0.1
0.8s 11.80nm 5.0mb
ARV 83.18 346 Pd 54 06.40 0.9
CRE 83.19 347 P 54 06.50 0.9
PII 83.29 348 P 54 05.50 -0.4
IMI 83.41 350 P 54 05.99 -0.7
GBA 83.43 284 Pd 54 06.40 -0.6
0.7s 6.60nm 4.8mb
ASPA 83.45 217 eP 54 06.80 -0.1
1.4s 49.00nm 5.4mb
SBF 83.50 350 eP 54 07.20 0.1
0.8s 16.10nm 5.1mb
VAY 83.53 339 eP 54 07.70 0.5
ASS 83.64 346 P 54 10.90 3.0X
EZN 84.06 336 eP 54 09.70 -0.2
OHR 84.11 340 eP 54 18.30 8.1X
1.7s 0.07nm 2.4mb X
LMR 84.12 351 eP 54 10.50 0.3
1.0s 21.60nm 5.2mb
MNS 84.31 346 P 54 11.50 0.3
AZI 84.59 346 P 54 13.50 1.0
CVF 84.63 349 eP 54 12.90 0.1
1.2s 53.50nm 5.5mb
SDI 84.80 345 Pc 54 14.50 0.8
COO 84.84 199 eP 54 16.00 2.2
EPF 84.87 355 eP 54 13.80 -0.2
1.0s 12.00nm 5.0mb
RDP 84.92 346 P 54 17.00 2.7
MGR 86.05 344 P 54 19.00 -0.9
STK 88.58 207 eP 54 33.00 1.1
e 54 49.00 56km
ZOBO 119.59 78 PKP 00 29.60 -0.6
BNG 119.78 332 iPKPd 00 29.50 -0.5
0.8s 14.00nm
ic 00 45.50
id 01 50.50
ic 02 06.30

LPB 119.81 78 PKP 00 31.00 0.6
CNCB 120.09 78 PKP 00 31.50 0.4
BAO 130.51 58 e(PKP)00 31.00 -19.6X
SPA 142.15 180 e(PKP)01 06.50 -4.3X
0.5s 4.63nm
SLR 143.06 303 ePKP 01 10.00 -3.6X
i 04 47.50
KSR 143.88 304 ePKP 01 07.50 -7.5X
MAW 144.57 218 iPKPc 01 12.80 -1.8X
POF 150.20 310 ePKP 01 31.00 6.2X
0.5s 14.08nm
S.D. = 0.9 on 231 of 249 obs.

JUN 20, 1989 06h 19m 46.39± 0.83s
3.564 N ± 4.8km 124.424 E ± 7.2km
DEPTH = 309.8 ± 9.2 km
5.0mb (25 obs.)
CELEBES SEA (262)

DAV 3.68 18 eP 20 50.50 0.3
BAG 13.31 344 eP 22 46.00 0.0
1.1s 75.95nm 5.0mb
eS 25 10.00
MTN 17.61 158 iPc 23 33.60 0.2
eS 26 43.00
KNA 19.67 167 eP 23 53.90 -0.1
QIZ 20.96 318 eP 24 08.00 1.3
eS 27 40.00
QZH 21.98 346 eP 24 18.20 1.7
SNG 23.97 280 eP 24 35.60 0.4
LAT 24.72 114 eP 24 42.00 -0.1
MBL 24.98 190 iPd 24 44.00 -0.4
0.3s 27.00nm 5.1mb
WB5 25.26 158 iPd 24 46.00 -1.0
eS 28 44.50
WRA 25.31 158 Pd 24 46.20 -1.2
0.7s 35.90nm 4.9mb
PMG 26.06 120 eP 24 53.00 -1.2
NANU 27.38 198 iPd 25 05.80 -0.2
QIS 28.22 149 iPc 25 12.60 -0.9
0.4s 9.00nm 4.6mb
e 29 36.00
BDT 28.40 300 eP 25 17.10 2.0
0.9s 36.30nm 4.9mb
GYA 28.42 325 P 25 15.80 0.4
WHN 28.47 342 eP 25 11.00 -4.6X
ASPA 28.60 162 iPd 25 15.80 -1.0
0.5s 39.00nm 5.2mb
eS 29 38.70
CHG 29.16 303 iPd 25 22.10 0.3
WARB 29.65 176 eP 25 12.50 -13.5X
0.3s 29.00nm
MEKA 30.54 190 eP 25 33.10 -0.6
0.5s 79.00nm 5.5mb
CTA 31.82 138 iPc 25 44.80 -0.1
1.0s 42.00nm 4.9mb
i 27 06.80
CD2 33.47 327 eP 25 58.50 -0.5
MRWA 33.58 193 iPd 25 59.80 -0.1
0.3s 19.00nm 5.1mb
COOL 34.40 185 eP 26 06.10 -0.7
0.4s 8.00nm 4.6mb
FORR 34.40 174 iPd 26 06.20 -0.5
BAL 34.77 192 iPd 26 09.40 -0.5
0.3s 23.00nm 5.1mb
KLB 35.53 190 iPd 26 16.10 -0.2
0.3s 37.00nm 5.4mb
MUN 36.20 192 iPd 26 21.70 -0.2
0.6s 76.00nm 5.3mb
NWAO 36.93 190 eP 26 28.00 0.0
0.5s 53.00nm 5.2mb
BJI 37.07 349 eP 26 28.00 -1.0
RMO 38.03 143 eP 26 37.00 -0.2
e 28 16.00
SNY 38.10 359 eP 26 41.10 3.6X
STK 38.85 156 iPd 26 45.00 1.2
0.2s 25.00nm 5.2mb
e 32 19.00
ADE 40.61 162 iPd 26 59.60 1.3
0.6s 98.67nm 5.2mb
MDJ 41.14 6 eP 27 05.50 3.1X
BRS 41.17 140 iPd 27 02.00 -1.0
i 28 44.80
GTA 42.09 331 iPc 27 10.80 0.4
PcP 28 58.40
COO 42.90 144 iPd 27 18.30 1.3
i 29 03.70

BFD 43.90 159 ePc 27 25.20 0.5
GUN 43.98 307 P 27 25.90 0.0
PKI 44.20 307 P 27 27.80 0.1
0.6s 27.00nm 4.7mb
KKN 44.40 307 P 27 28.80 -0.3
DMN 44.46 307 P 27 29.60 -0.1
GKN 45.01 307 P 27 34.00 0.2
CAN 45.03 151 iPd 27 35.30 1.6
TOO 45.37 156 eP 27 38.00 1.6
HYB 47.01 290 iPd 27 50.00 0.6
1.0s 90.00nm 5.0mb
GBA 47.43 285 Pc 27 51.70 -0.9
0.8s 49.20nm 4.9mb
DZM 48.34 124 iPc 27 59.00 -0.6
WMQ 51.56 326 P 28 22.50 -1.1
PcP 29 34.50
ScP 32 56.50
S 35 19.80
MAIO 67.79 308 iPd 30 13.00 -0.6
0.9s 12.79nm 4.7mb
SVW 82.04 29 eP 31 44.20 10.8X
TTA 82.09 27 iP 31 34.10 0.5
MAW 82.81 200 eP 31 37.40 0.3
IMA 83.47 24 iPc 31 41.30 0.7
0.8s 8.60nm 4.6mb
SOD 89.74 337 eP 32 10.00 -0.7
SUF 90.65 333 iP 32 12.90 -2.0
0.6s 6.10nm 4.7mb
NUR 91.73 331 eP 32 17.90 -2.0
MBC 92.61 12 eP 32 23.00 -0.8
0.8s 2.00nm 4.2mb
DAG 97.12 352 eP 32 42.30 -2.0
SLL 97.14 332 eP 32 40.80 -3.9X
0.5s 4.60nm 5.0mb
NB2 97.90 333 P 32 45.60 -2.5
0.7s 2.80nm 4.7mb
ALQ 118.82 47 iPKPc 38 00.50 0.2
0.8s 3.73nm
e 38 03.00
KIC 128.30 281 PKP 38 18.20 -0.6
TIC 128.52 281 PKP 38 18.60 -0.6
LIC 128.60 281 PKP 38 18.90 -0.4
PEL 147.36 156 iPKPd 38 55.00 2.2
CNCB 162.07 138 PKP 39 15.00 1.9
LPB 162.18 137 PKP 39 15.00 2.0
ZOBO 162.35 137 PKP 39 14.70 1.3
LR 41 32.00
CCH 162.80 144 PKP 39 15.70 2.2
S.D. = 1.1 on 66 of 72 obs.

JUN 20, 1989 06h 32m 12.14± 0.78s
40.868 N ± 7.3km 20.352 E ± 6.8km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
ML 2.3 (SKO).

BERA 0.35 242 iPgd 32 19.40 0.1
OHR 0.42 54 iPgc 32 20.80 0.1
iSg 32 27.20
KBN 0.43 125 ePg 32 19.80 -1.1
TIR 0.60 323 ePg 32 23.20 -1.1
TPE 0.63 205 ePg 32 25.50 0.7
SKO 1.37 36 iPn 32 38.50 1.2
iSn 32 57.50
VAY 1.74 74 ePn 32 39.40 -3.1X
S.D. = 1.2 on 6 of 7 obs.

& JUN 20, 1989 11h 57m 25.00s
33.500 N 116.450 W
DEPTH = 6.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.0 (PAS). Felt at Palm Springs.

PLM 0.37 247 iP 57 32.90 0.3
PEC 0.71 304 ePd 57 38.00 -1.2
GLA 1.43 108 eP 57 49.60 -2.0
KVN 5.70 347 eP 58 53.00 0.6
4 obs. associated

& JUN 20, 1989 12h 05m 37.32s
63.305 N 149.591 W
DEPTH = 92.3km
CENTRAL ALASKA (1)
<AGS-P>.

MCK 0.52 34 eP 05 52.95 0.2

KTH	0.65	293	iP	05 53.91	0.0
			S	06 06.42	
WRH	1.35	29	iP	06 01.17	-0.4
CCB	1.56	30	iP	06 03.74	-0.6
SKT	1.60	215	eP	06 03.66	-1.3
HDA	1.61	45	eP	06 04.36	-0.6
			S	06 24.74	
PWA	1.67	185	eP	06 05.26	-0.4
			S	06 26.86	
PME	1.70	171	eP	06 05.66	-0.5
PMR	1.73	173	iP	06 06.60	0.0
			i	06 29.70	
PAX	1.90	98	eP	06 08.66	-0.3
SUA	1.92	197	eP	06 08.63	-0.6
GLM	1.95	29	iP	06 08.87	-0.6

12 obs. ossocioted

? JUN 20, 1989 16h 38m 25.33± 6.78s
18.495 N ±54.1km 61.993 W ±16.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.1 (FDF).

ANG	1.34	173	eP	38 50.81	0.8
			eS	38 59.17	
SKI	1.36	212	eP	38 50.61	0.3
			eS	39 01.29	
BPA	1.45	175	ePc	38 51.20	-0.4
			S	39 00.50	
NEV	1.46	202	ePd	38 52.00	0.3
			S	39 02.00	
DEG	2.35	158	eP	39 05.50	0.9
PAG	2.47	173	eP	39 06.00	-0.3
			S	39 24.70	
MGG	2.64	166	eP	39 08.40	-0.3
BBL	3.00	170	eP	39 13.00	-0.8

S.D. = 0.7 on 8 of 8 obs.

? JUN 20, 1989 17h 35m 23.45± 5.45s
12.657 N ±32.2km 41.930 E ±30.9km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 3.3 (ARO).

DAF	1.20	151	ePd	35 45.60	-0.2
TDD	1.28	131	ePd	35 47.13	0.0
SGH	1.39	150	ePd	35 48.79	-0.2
ARO	1.44	141	ePd	35 49.57	0.0
			S	36 15.14	
OBO	1.49	116	ePd	35 49.93	-0.3
MKL	1.52	128	ePd	35 50.74	0.1
GBR	1.58	161	ePd	35 51.72	0.1
ATA	1.73	133	ePd	35 54.16	0.5

S.D. = 0.3 on 8 of 8 obs.

JUN 20, 1989 18h 07m 43.60± 0.22s
52.527 N ± 5.3km 172.508 E ± 2.5km
DEPTH = 33.0km (normal)
5.2mb (53 obs.) 4.6Msz (12 obs.)
NEAR ISLANDS, ALEUTIAN ISLANDS (5)
ML 4.9 (PMR). Felt (III) on Attu.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 27C
Centroid Locotion:
Origin Time 18:07:46.5 0.7
Lot 52.95N 0.06 Lon 172.38E 0.15
Dep 48.5 5.6 Half-durotion 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 4.13 0.32 Mtt=-6.76 0.47
Mff= 2.62 0.42 Mrt= 4.89 0.65
Mrf= 3.67 0.58 Mtf= 0.45 0.49
Principol Axes:
T Vol= 8.29 Plg=53 Azm=297
N 0.42 28 72
P -8.71 22 175
Best Double Couple:Mo=8.5*10**16
NP1:Strike=305 Dip=34 Slip= 147
NP2: 63 73 61

SMY	0.99	77	eP	08 01.70	0.5
ADK	6.68	91	eP	09 23.90	2.1
SDN	16.10	69	eP	11 31.70	2.9
SVW	19.26	51	eP	12 08.70	0.8
TTA	19.55	46	eP	12 10.60	-0.6
KDC	20.51	61	eP	12 19.70	-1.5
KUSJ	20.80	254	eP	12 22.40	-1.8
ASAJ	21.44	259	eP	12 31.10	0.3
IMA	21.59	38	ePc	12 31.30	-0.9
	1.1s		68.80nm	5.0mb	
HOOJ	22.07	254	eP	12 36.70	-0.3
PMR	22.43	51	eP	12 40.40	0.0
BRW	23.26	25	eP	12 48.30	-0.2
FBA	23.58	43	ePc	12 52.00	0.4
TOA	23.87	50	eP	12 56.00	1.4
MAT	28.86	250	eP	13 41.00	0.0
	1.7s		69.23nm	5.1mb	
Z	20s		0.71um	4.3Msz	
			eS	18 31.00	
MDJ	29.11	272	eP	13 43.00	-0.1
Z	26s		1.00um	4.3MszX	
N	17s		1.20um		
			ePP	14 36.00	
			S	18 30.00	
INK	29.71	37	eP	13 47.00	-1.3
CN2	32.07	273	Pc	14 07.60	-1.7
Z	21s		1.40um	4.6Msz	
N	15s		0.80um		
			pP	14 16.50	31kmX
			PP	15 18.00	
			eS	19 20.00	
SNY	34.31	272	eP	14 28.80	0.1
Z	15s		1.20um	4.8MszX	
N	19s		1.30um		
E	19s		1.00um		
MBC	34.60	23	eP	14 31.00	0.1
DL2	37.26	269	eP	14 54.00	0.3
YKA	38.31	46	eP	15 03.80	1.5
YKC	38.38	46	eP	15 02.80	0.0
BJI	39.89	275	eP	15 16.00	0.3
	4.0s		0.41nm	2.5mb X	
Z	24s		1.30um	4.7MszX	
N	14s		0.54um		
E	14s		0.50um		
			ePP	16 45.00	
			eS	21 20.00	
			eSS	24 14.00	
PNT	41.48	66	eP	15 28.00	-0.7
	0.5s		9.00nm	4.8mb	
LON	41.60	71	eP	15 31.00	1.3
TIA	41.73	270	eP	15 31.20	0.4
Z	32s		0.70um	4.3MszX	
N	15s		0.70um		
E	15s		0.30um		
			eS	21 45.50	
HHC	42.19	279	Pc	15 35.50	0.8
Z	16s		0.98um	4.8MszX	
E	15s		0.70um		
			sP	15 53.00	
			PP	17 15.00	
ALE	42.39	9	eP	15 35.00	-0.7
	0.5s		12.00nm	4.9mb	
SSE	42.74	261	Pc	15 40.60	1.4
Z	20s		0.47um	4.4Msz	
N	16s		0.47um		
			eS	22 05.00	
			esS	22 24.00	
			eScS	25 39.00	
EDM	42.87	58	iPc	15 40.30	0.3
BTO	43.28	280	eP	15 44.00	0.4
Z	15s		1.40um	5.0MszX	
N	15s		0.40um		
E	15s		1.00um		
			pP	15 54.50	36kmX
NJ2	43.48	264	Pd	15 45.80	0.6
Z	20s		0.40um	4.3Msz	
			S	22 10.00	
TIY	43.62	275	iPd	15 47.00	0.7
Z	26s		0.85um	4.5MszX	
N	18s		1.10um		
			PP	17 39.00	
GUMO	44.68	220	eP	16 09.00	14.0X
Z	22s		0.31um	4.2Msz	
WDC	44.77	78	iPd	16 04.70	9.2X
SES	45.58	61	eP	16 01.00	-0.9
WHN	47.28	266	P	16 15.50	0.0
	1.6s		1.50nm	3.7mb X	
N	14s		0.35um		
E	14s		0.33um		
			S	23 06.00	
LRM	47.45	66	eP	16 16.40	-0.6
CMB	47.67	80	iPd	16 17.80	-0.8
FFC	47.74	51	eP	16 18.00	-0.8
	1.2s		36.00nm	5.3mb	
XAN	48.18	274	P	16 22.20	-0.4
HPI	48.37	69	eP	16 24.00	-0.2
KVN	48.38	77	eP	16 24.40	0.1
TNP	49.54	78	eP	16 32.00	-1.2
	1.0s		5.83nm	4.6mb	
LZH	49.89	279	Pd	16 36.50	0.7
	2.0s		0.19nm	2.8mb X	
Z	16s		1.70um	5.1MszX	
GTA	50.11	285	iPd	16 36.80	-0.6
	1.2s		0.10nm	2.7mb X	
Z	16s		2.40um	5.3MszX	
N	13s		0.70um		
ISA	50.38	81	eP	16 39.00	-0.5
DAG	50.78	3	iPc	16 40.00	-1.8
	0.8s		20.15nm	5.1mb	
Z	21s		1.00um	4.8Msz	
N	21s		0.57um		
CLC	50.81	80	eP	16 42.00	-0.7
SBB	51.43	81	eP	16 48.00	0.5
MWC	51.61	82	eP	17 02.00	13.0X
MSU	52.24	74	eP	16 53.50	-0.2
TPC	52.90	80	eP	16 59.00	0.5
PLM	52.93	82	eP	17 06.00	7.1X
PLM	52.93	82	eP	16 59.00	0.1
CD2	53.49	275	P	17 02.10	-0.7
RSON	54.07	51	eP	17 06.10	-0.7
WMQ	54.11	297	P	17 06.50	-0.8
	1.5s		0.10nm	2.6mb X	
Z	24s		1.70um	5.0MszX	
N	14s		1.10um		
			pP	17 17.50	37kmX
			PP	19 08.50	
GLA	54.37	81	eP	17 10.00	0.8
FRB	54.72	28	eP	17 09.00	-2.4
	0.5s		23.00nm	5.5mb	
GYA	54.90	269	P	17 13.00	-0.4
GOL	55.37	68	eP	17 16.30	-0.5
	0.8s		31.25nm	5.4mb	
SOD	57.71	345	iP	17 31.50	-1.2
KMI	58.28	271	Pc	17 37.00	-0.6
			pP	17 44.00	23kmX
			PP	19 46.00	
			eS	25 40.00	
OIZ	58.53	260	eP	17 40.80	1.7
			eS	25 44.00	
LSA	61.96	283	Pc	18 03.10	0.1
SUF	62.08	343	eP	18 01.50	-1.3
SCH	62.29	34	iPc	18 03.00	-1.3
	0.8s		68.00nm	5.8mb	
MEO	62.67	68	ePc	18 05.80	-1.3
	1.2s		34.10nm	5.4mb	
SIO	63.25	66	e(P)	18 09.10	-1.8
LNO	63.41	65	eP	18 11.30	-0.5
TUL	63.41	65	ePd	18 11.40	-0.6
	1.2s		15.90nm	5.0mb	
Z	20s		0.35um	4.5Msz	
KSH	63.43	301	eP	18 12.00	-0.2
E	13s		0.90um		
			pP	18 22.00	32kmX
RLO	63.65	64	e(P)	18 08.20	-5.4X
VVO	63.86	66	eP	18 14.30	-0.6
NUR	64.41	343	iP	18 16.60	-1.5
	0.8s		51.30nm	5.7mb	
Z	19s		1.30um	5.1Msz	
			LR	49 10.00	
SHL	64.55	279	iP	18 18.10	-1.7
CHG	65.32	269	ePc	18 24.00	-0.6
NB2	65.80	350	P	18 25.50	-1.6
	0.7s		28.70nm	5.5mb	
NRA0	66.07	350	P	18 27.20	-1.6
GAC	66.16	45	ePd	18 27.90	-1.6
UPP	66.16	346	iP	18 27.80	-1.5
GUN	66.40	285	P	18 31.20	-0.6
KKN	66.84	286	P	18 33.90	-0.6
PKI	66.93	285	P	18 34.40	-0.8
GKN	67.06	286	P	18 35.00	-0.8
DMN	67.08	286	P	18 35.60	-0.4
	1.2s		109.00nm	5.8mb	
JSC	72.40	57	eP	19 07.20	-0.9
EKA	72.45	357	Pc	19 04.80	-3.2X
	0.8s		27.00nm	5.3mb	
SNG	73.34	260	eP	19 13.70	-0.1
DMU	73.94	360	iPd	19 17.00	0.3
MAIO	74.12	309	eP	19 18.00	-0.2
			eS	29 04.00	
WIT	74.36	351	eP	19 20.00	0.8

20d 18h

DLE 74.56 359 iPd 19 20.20 -0.1
KSP 75.06 345 iPd 19 22.50 -0.8
CLL 75.10 347 iPc 19 22.50 -1.0
1.9s 60.00nm 5.3mb
i 19 33.70
WTS 75.16 351 eP 19 23.50 -0.3
0.8s 10.00nm 4.9mb
QUE 75.27 300 eP 19 24.50 -0.6
SPC 75.96 342 eP 19 28.90 0.2
PRU 76.17 346 P 19 29.20 -0.4
1.1s 24.50nm 5.1mb
Z 18s 0.50um 4.9Msz
ENN 76.46 351 eP 19 30.50 -0.7
1.0s 39.00nm 5.4mb
e 19 37.50
MEM 76.61 351 Pc 19 31.60 -0.4
SNF 76.86 352 P 19 34.30 0.9
GRF 76.93 348 eP 19 34.00 0.1
1.5s 51.00nm 5.3mb
Z 22s 0.30um 4.6Msz
KHC 77.15 346 iP 19 35.50 0.4
1.0s 25.00nm 5.2mb
Z 20s 0.50um 4.8Msz
WET 77.24 346 eP 19 35.50 -0.1
1.2s 36.00nm 5.3mb
DOU 77.24 352 Pd 19 35.20 -0.3
S 29 42.00
ZST 77.49 343 eP 19 37.30 0.4
Z 20s 1.00um 5.1Msz
LR 18 54.00
WLF 77.53 351 P 19 37.60 0.5
VKA 77.56 344 iPc 19 37.70 0.4
2.5s 131.00nm 5.5mb
SRO 77.64 343 eP 19 39.20 1.4
GWF 78.06 350 P 19 39.54 -0.6
SOP 78.08 344 eP 19 40.90 0.7
KMR 78.11 345 iP+ 19 39.80 -0.6
ePP 22 36.00
MLR 78.23 337 ePd 19 42.00 0.8
TAB 78.38 319 eP 19 42.00 -0.2
CMP 78.65 337 ePd 19 49.00 5.6X
CDF 78.66 350 P 19 42.86 -0.6
FLN 78.91 355 eP 19 44.20 -0.5
1.0s 32.00nm 5.3mb
VITF 78.98 351 P 19 44.49 -0.6
LDF 79.06 355 eP 19 45.00 -0.6
1.0s 16.00nm 5.0mb
BZS 79.09 340 eP 19 45.00 -0.8
FEL 79.10 349 P 19 45.26 -0.7
HAU 79.15 351 eP 19 45.80 -0.3
1.0s 20.00nm 5.1mb
SLE 79.16 349 ePd 19 46.10 -0.1
KBA 79.19 346 iPc 19 47.10 0.6
0.8s 37.10nm 5.4mb
MOF 79.22 350 P 19 45.87 -0.7
BSF 79.28 350 P 19 46.14 -0.8
GRR 79.30 356 eP 19 46.70 -0.2
1.0s 36.00nm 5.3mb
KVT 79.43 328 iP 19 48.90 1.2
ZLA 79.45 349 ePd 19 48.10 0.3
SAX 79.56 348 ePd 19 49.20 0.5
BBS 79.57 350 P 19 47.83 -0.6
LPF 79.67 356 eP 19 48.50 -0.3
1.0s 20.00nm 5.1mb
FVI 79.74 346 Pc 19 49.10 -0.1
LOMF 79.75 350 P 19 48 75 -0.7
RBL 79.77 345 Pd 19 49.60 0.1
PTJ 79.91 344 e(P) 19 50.60 0.3
LLS 79.98 349 ePd 19 51.50 0.7
LJU 80.01 345 eP 19 50.80 0.1
OSS 80.02 348 ePd 19 51.90 0.9
LOR 80.11 352 eP 19 50.90 -0.4
1.0s 20.00nm 5.1mb
VOY 80.12 345 e(P) 19 50.90 -0.5
CEY 80.32 345 e(P) 19 52.50 0.1
SSF 80.35 352 eP 19 52.20 -0.3
1.0s 14.00nm 4.9mb
LBF 80.38 352 eP 19 52.60 -0.2
1.0s 6.00nm 4.5mb
VBY 80.41 344 eP 19 52.90 0.0
CTI 80.44 347 Pd 19 53.00 -0.2
AVF 80.63 352 eP 19 53.60 -0.4
1.2s 32.70nm 5.2mb
RIY 80.71 345 eP 19 56.60 2.2
SMF 80.73 352 eP 19 54.10 -0.5
1.2s 29.70nm 5.2mb
TMA 80.75 349 ePd 19 55.30 0.4

BGF 80.90 353 eP 19 55.50 0.1
1.4s 30.40nm 5.1mb
MMK 80.91 349 ePd 19 57.00 1.2
DIX 80.94 350 ePd 19 57.10 1.1
MDI 80.97 348 P 19 55.50 -0.2
VAI 81.00 349 P 19 56.50 0.6
SAL 81.03 347 P 19 57.00 0.9
MFF 81.05 355 eP 19 56.20 0.0
1.2s 23.80nm 5.1mb
MSL 81.09 321 ePd 19 57.50 0.9
TCF 81.21 353 eP 19 57.10 0.0
1.0s 10.80nm 4.8mb
MAF 81.25 353 eP 19 57.60 0.3
1.4s 39.20nm 5.2mb
LSF 81.30 354 eP 19 57.60 0.1
0.9s 16.30nm 5.0mb
ORX 81.32 349 P 19 57.82 0.0
AGO 81.38 353 P 19 58.53 0.6
PLDF 81.42 352 P 19 58.55 0.3
LSD 81.59 350 P 20 00.49 1.1
LPG 81.59 350 eP 20 00.40 1.0
1.3s 46.90nm 5.3mb
BBTK 81.60 330 iPd 20 00.00 0.7
HRT 81.61 332 eP 19 58.00 -1.3
PYM 81.69 353 P 19 59.94 0.3
RSP 81.88 350 P 20 01.21 0.5
BOB 82.00 348 P 20 02.30 1.0
BNI 82.04 350 Pd 20 03.00 1.4
RRL 82.16 350 P 20 03.87 1.5
LBL 82.18 352 P 20 02.44 0.4
RJF 82.24 354 eP 20 02.60 0.1
1.2s 11.90nm 4.8mb
GBA 82.39 282 Pc 20 02.80 -0.8
1.2s 25.60nm 5.2mb
MME 82.39 347 P 20 04.70 1.1
CKI 82.48 349 P 20 03.50 -0.2
SFI 82.49 346 Pd 20 05.40 1.7
DOI 82.52 349 P 20 03.50 -0.5
BDI 82.53 347 Pc 20 05.00 0.9
PGD 82.56 346 P 20 05.00 1.5
CAF 82.58 353 eP 20 04.70 0.4
1.2s 38.60nm 5.3mb
SKO 82.61 339 iP 20 05.00 0.6
1.8s 100.00nm 5.6mb
ROB 82.65 349 P 20 04.28 -0.4
LFF 82.66 354 eP 20 04.80 0.2
1.3s 43.30nm 5.4mb
FIN 82.70 349 P 20 04.59 -0.3
ARV 82.74 345 Pd 20 06.50 1.4
CRE 82.77 346 P 20 06.50 1.2
STV 82.77 349 P 20 04.59 -0.7
ENR 82.77 349 P 20 04.69 -0.5
PII 82.88 347 P 20 05.50 -0.2
LPO 82.88 354 eP 20 06.10 0.3
1.0s 21.60nm 5.2mb
VAY 82.97 338 eP 20 07.00 0.7
SAOF 82.99 349 P 20 06.59 0.2
AUTN 83.00 349 P 20 06.83 0.1
TOUF 83.00 349 P 20 06.98 0.3
IMI 83.03 349 P 20 06.74 0.1
AURF 83.12 349 P 20 08.67 1.5
MVIF 83.13 349 P 20 07.59 0.3
SBF 83.13 349 eP 20 07.60 0.4
1.0s 21.60nm 5.2mb
ASS 83.20 345 Pc 20 07.80 0.2
CALN 83.30 350 P 20 08.65 0.5
BHD 83.32 318 ePd 20 09.00 0.8
FRF 83.52 350 eP 20 09.60 0.5
1.2s 23.80nm 5.2mb
OHR 83.57 339 eP 19 58.00 -11.4X
LRG 83.65 350 eP 20 10.60 0.9
1.2s 23.80nm 5.2mb
LMR 83.76 350 eP 20 11.10 0.8
1.0s 17.60nm 5.2mb
MNS 83.87 345 Pd 20 11.50 0.6
AZI 84.14 344 P 20 14.00 1.8
CVF 84.23 348 eP 20 13.20 0.5
1.0s 48.00nm 5.6mb
SDI 84.35 344 P 20 13.50 0.1
RDP 84.48 345 P 20 15.00 1.0
EPF 84.58 354 eP 20 14.50 0.0
1.4s 26.10nm 5.2mb
HRI 86.60 325 eP 20 20.00 -4.8X
TOL 87.92 357 eP 20 31.00 0.1
BNG 119.11 330 iPKPd 26 31.00 0.3
0.8s 12.00nm
id 27 49.00

SPA 142.34 180 e(PKP)27 11.20 -1.9X
0.8s 4.17nm
MAW 144.09 218 ePKP 27 13.00 -2.8X
S.D. = 0.8 on 211 of 222 obs.

% JUN 20, 1989 19h 41m 18.49± 0.79s
38.844 N ± 7.7km 29.141 E ± 7.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL 0.60 150 iPg 41 30.80 0.1
ALT 0.78 74 iPn 41 33.30 -0.5
DST 0.86 333 iPn 41 34.00 -1.1
IZM 1.54 254 ePn 41 46.00 0.0
EDC 1.80 327 iPn 41 50.20 0.5
HRT 2.02 11 ePn 41 54.00 1.0
CTT 2.36 347 ePn 42 02.00 4.1X
S.D. = 1.0 on 6 of 7 obs.

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* JUN 20, 1989 21h 11m 51.22± 2.49s
12.685 N ±23.1km 41.832 E ± 8.7km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 4.5 (ARO).

DAF 1.27 147 eP+ 12 14.72 -0.1
TDD 1.37 130 eP+ 12 16.06 -0.2
SGH 1.47 148 eP+ 12 17.96 0.2
ARO 1.52 139 eP+ 12 18.67 0.2
S 12 44.35
OBO 1.59 116 ePd 12 19.05 -0.4
MKL 1.61 127 eP+ 12 19.84 0.1
GBR 1.64 158 eP+ 12 19.92 -0.4
ATA 1.82 132 eP+ 12 23.36 0.6
AAE 4.72 220 ePn 13 04.50 0.0
S.D. = 0.4 on 9 of 9 obs.

& JUN 20, 1989 21h 28m 08.14s
58.796 N 143.128 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

PCA 1.96 47 eP 28 36.85 -5.0
PNL 2.11 64 eP 28 38.81 -5.1
eS 29 03.09
BCPM 2.13 56 eP 28 39.53 -4.7
eS 29 01.56
HON 2.29 71 eP 28 41.23 -5.3
eS 29 06.05
4 obs. associated

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* JUN 20, 1989 21h 49m 49.90± 1.19s
36.302 N ± 9.4km 70.674 E ± 8.4km
DEPTH = 145.2 ± 16.0 km
4.5mb (5 obs.)
HINDU KUSH REGION (718)

KSH 5.25 52 P 51 09.50 2.0
S 52 08.30
QUE 6.85 208 eP 51 30.00 0.8
eS 52 42.20
MAIO 9.03 273 eP 51 58.00 -0.3
eS 53 35.00
NDI 9.39 142 iPd 52 03.00 0.0
eS 53 39.50
GKN 14.42 121 P 53 07.80 -0.7
DMN 14.99 121 P 53 14.80 -1.0
0.6s 44.00nm 5.0mb
KKN 15.00 120 P 53 14.00 -1.9
0.5s 25.00nm 4.8mb
WMO 15.03 55 P 53 15.50 -0.5
PKI 15.23 121 P 53 17.50 -1.3
GUN 15.35 119 P 53 19.00 -1.3
LSA 18.38 105 P 53 58.50 1.8
HYB 20.06 158 eP 54 14.50 0.7
i 54 17.00
SHL 21.06 115 iP 54 24.00 0.1
eS 58 10.00
GTA 23.17 73 eP 54 46.00 1.6
GBA 23.40 163 Pd 54 49.00 2.4
0.7s 7.40nm 4.3mb
NUR 37.84 325 eP 57 24.90 31.4X
SUF 37.95 328 iP 57 26.40 31.9X
HFS 43.06 322 eP 57 34.40 -2.0
0.4s 1.00nm 3.8mb
MBC 67.55 3 eP 00 31.00 -0.8

0.7s 4.00nm 4.4mb
INK 74.14 9 eP 01 12.00 0.6
S.D. = 1.5 on 18 of 20 obs.

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* JUN 20, 1989 22h 04m 16.95± 2.16s
41.027 N ±18.4km 22.845 E ± 9.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (SKO).

VAY	0.36	325	iPg	04 23.50	-0.8
			iSg	04 29.20	
KKB	0.86	12	iPgc	04 33.00	-0.5
			Sg	04 45.00	
MMB	0.87	50	iPgc	04 33.00	-0.7
SKO	1.42	312	ePn	04 43.20	0.5
OHR	1.55	274	ePn	04 44.50	-0.2
VTS	1.59	10	iP	04 47.00	1.7

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

% JUN 20, 1989 23h 24m 44.76± 0.80s
42.026 N ± 6.2km 12.839 E ± 6.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (ROM).

RMP	0.24	205	Pd	24 49.90	0.1
			eSg	24 53.60	
RDP	0.28	199	Pc	24 50.70	0.0
			eSg	24 54.60	
MNS	0.38	342	P	24 52.50	0.0
			eSg	24 58.00	
AZI	0.45	95	P	24 54.00	0.2
			eSg	25 02.00	
SDI	0.80	113	P	25 00.10	-0.2
			eSg	25 13.10	

S.D. = 0.2 on 5 of 5 obs.

JUN 20, 1989 23h 40m 38.88± 0.23s
3.867 S ± 5.3km 86.993 E ± 4.3km
DEPTH = 10.0km (geophysicist)
5.2mb (49 obs.) 4.6Msz (3 obs.)
SOUTH INDIAN OCEAN (425)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 22C
Centroid Location:
Origin Time 23:40:44.7 0.8
Lat 3.39S 0.08 Lon 86.89E 0.08
Dep 15.0 FIX Half-duration 1.9
Moment Tensor; Scale 10**16 Nm
Mrr= 7.17 0.58 Mtt=-7.85 0.66
Mff= 0.68 0.93 Mrt= 4.59 3.06
Mrf= 7.21 1.49 Mtf=-1.15 0.56
Principal Axes:

T	Val= 12.37	Plg=58	Azm=288
N	-2.13	23	59
P	-10.24	22	159

Best Double Couple:Mo=1.1*10**17
NP1:Strike=284 Dip=31 Slip= 139
NP2: 51 70 66

PSI	13.59	62	ePd	43 53.50	-0.7
			e	48 40.00	
SNG	17.47	51	eP	44 41.00	-3.3X
			eS	48 06.00	
GBA	19.78	332	Pc	45 14.40	2.1
	2.3s	727.60nm		5.6mb	
HYB	22.73	339	eP	45 46.00	3.6X
			eS	49 47.00	
NST	23.37	34	eP	45 58.00	9.4X
BDT	24.10	29	eP	45 58.00	2.4
CHG	25.42	27	ePc	46 09.30	0.8
	1.2s	27.34nm		4.8mb	
			eS	50 36.00	
POO	25.75	330	eP	46 14.00	2.4
			iS	50 53.00	
SHL	29.64	9	eP	46 47.50	0.4
KKN	31.51	357	P	47 04.70	1.1
	0.6s	10.00nm		4.9mb	
GUN	31.61	358	P	47 05.80	1.2
	0.6s	30.00nm		5.4mb	
GKN	31.77	356	P	47 06.90	1.1
	0.6s	10.00nm		4.9mb	
KMI	32.62	27	Pd	47 15.00	1.6
	N 16s	1.00um			
			pP	47 24.50	33kmX
			sP	47 29.50	
NANU	33.30	126	eP	47 20.00	1.0
LSA	33.61	7	P	47 23.20	1.0
NDI	33.70	344	eP	47 33.00	10.6X
GYA	35.65	31	P	47 40.00	0.6
	Z 20s	0.60um		4.4Msz	
	N 18s	1.50um			
	E 18s	1.30um			
			S	53 14.00	
			sS	53 30.00	
CD2	38.10	24	eP	47 59.20	-0.7
BAG	38.84	58	eP	48 06.90	0.5
QUE	38.92	332	eP	48 08.50	1.6
COOL	41.92	134	eP	48 31.50	0.0
LZH	42.76	20	eP	48 37.00	-1.4
	Z 24s	0.90um		4.6MszX	
XAN	43.01	27	P	48 39.00	-1.3
WHN	43.06	35	eP	48 41.00	0.3
			eS	55 02.00	
WARB	43.97	124	eP	48 35.00	-13.3X
KSH	44.29	348	eP	48 53.00	2.3
	E 12s	0.80um			
GTA	44.66	14	Pc	48 53.40	-0.3
WMQ	47.47	1	P	49 16.00	0.1
	Z 24s	0.50um		4.4MszX	
			pP	49 26.70	37kmX
			eS	56 07.00	
MAIO	47.51	330	eP	49 16.00	-0.3
			i	49 27.00	
			eS	56 10.00	
TIY	47.64	27	eP	49 16.50	-0.8
	Z 22s	1.04um		4.8Msz	
	E 19s	1.30um			
			S	56 10.50	
			sS	56 26.50	
WRA	48.80	113	Pc	49 26.90	0.4
	0.8s	11.20nm		5.0mb	
WB5	48.81	113	eP	49 26.80	0.2
TIA	48.82	33	eP	49 25.50	-0.9
BTO	49.02	23	iPd	49 27.40	-0.6
	N 15s	0.40um			
	E 16s	0.70um			
			pP	49 39.00	41kmX
ASPA	49.33	118	iPc	49 31.20	0.6
	1.2s	16.00nm		4.9mb	
NAI	50.20	272	iPc	49 39.00	1.3
BJI	51.25	29	eP	49 45.00	0.1
	Z 16s	0.59um		4.7MszX	
			eS	57 04.00	
			esS	57 18.00	
QIS	53.76	113	eP	50 04.00	0.0
SNY	56.34	32	Pd	50 21.00	-1.4
			eS	58 08.50	
MSL	57.24	318	ePd	50 27.80	-1.2
LWI	58.12	270	iPc	50 36.00	0.2
CN2	58.70	32	Pc	50 36.50	-2.5
			sP	50 51.50	
BUL	59.04	249	iPd	50 44.30	2.3
	0.9s	13.87nm		5.1mb	
CTA	59.85	111	iPd	50 47.80	0.3
	1.2s	51.56nm		5.5mb	
PRNI	60.17	308	iPc	50 49.50	0.0
SLR	60.24	243	iPc	50 49.00	-1.2
	0.9s	35.29nm		5.5mb	
DSI	60.40	310	eP	50 50.00	-0.9
HRI	60.88	312	eP	50 54.00	-0.4
KSR	61.50	243	iPd	50 58.00	-0.8
	1.0s	20.00nm		5.2mb	
MAT	62.38	45	(P)	51 03.00	-1.3
	1.2s	15.63nm		5.1mb	
			eS	59 42.00	
KVT	64.44	319	eP	51 17.50	-0.4
BBTK	66.03	317	iPc	51 27.00	-1.2
ELL	66.70	313	eP	51 31.50	-1.1
POF	68.14	240	Pd	51 42.00	0.4
BNG	68.88	276	iPc	51 46.00	-0.6
	1.1s	80.00nm		5.8mb	
CFR	71.47	320	ePc	52 01.00	-0.7
RZN	72.35	316	iPc	52 06.00	-1.2
VRI	72.67	321	ePc	52 09.00	0.1
MLR	73.02	320	ePc	52 21.00	10.0X
			e	20 29.00	
CMP	73.51	319	ePc	52 15.00	1.2
VAY	73.72	315	eP	52 13.30	-1.7
SKO	74.74	315	iP	52 19 00	-1.9
DEV	75.13	319	ePd	52 23.00	-0.1
BZS	75.87	319	eP	52 26.50	-0.8
BEO	76.37	318	eP	52 28.50	-1.6
LCI	76.72	313	P	52 30.50	-1.7
SPC	78.00	322	eP	52 38.80	-0.6
MGR	78.43	312	P	52 40.50	-1.2
SGO	78.73	312	P	52 43.00	-0.2
SRO	78.75	320	eP	52 43.50	0.2
DZM	78.79	112	iPc	52 53.00	8.9X
ZST	79.65	320	eP	52 47.20	-0.9
PTJ	79.72	318	eP	52 47.70	-1.0
VBY	80.08	317	eP	52 49.80	-0.7
SDI	80.11	313	P	52 49.50	-1.3
NUR	80.16	334	iP	52 50.00	-0.6
AZI	80.45	314	P	52 52.50	0.0
SUF	80.53	336	eP	52 52.00	-0.5
	0.9s	27.30nm		5.3mb	
AQU	80.56	314	Pd	52 53.70	0.5
CEY	80.70	317	e(P)	52 52.50	-1.4
LJU	80.71	318	eP	52 53.00	-0.9
RDP	80.92	313	P	52 55.00	-0.1
KSP	80.95	323	ePc	52 55.50	0.5
	1.0s	26.00nm		5.2mb	
MNS	81.09	314	Pc	52 55.10	-0.9
VOY	81.14	318	eP	52 55.20	-1.0
ARV	81.17	315	Pc	52 56.50	0.2
ASS	81.26	314	P	52 56.00	-0.9
RBL	81.46	318	Pd	52 57.60	-0.3
PRU	81.78	322	eP	53 00.00	0.7
			e	53 11.20	
FVI	82.03	318	Pc	53 00.60	0.0
SFI	82.03	315	Pc	53 01.70	1.0
PGD	82.12	315	P	53 02.00	0.6
KHC	82.15	321	iP	53 01.50	0.1
	1.0s	18.00nm		5.1mb	
			e	53 10.00	
BHG	82.24	319	eP	53 01.00	-0.8
	1.0s	23.00nm		5.2mb	
SOD	82.58	340	iP	53 03.10	-0.1
WET	82.60	320	eP	53 03.40	-0.3
	1.2s	27.00nm		5.3mb	
CTI	82.66	317	Pc	53 04.50	0.3
BDI	82.95	315	P	53 04.50	-1.2
CLL	83.07	323	iPc	53 06.20	0.2
	1.3s	41.00nm		5.5mb	
			epP	53 15.00	28kmX
UPP	83.13	332	iP	53 05.40	-0.7
SAL	83.33	317	P	53 08.00	0.6
HOF	83.52	321	eP	53 09.20	0.8
KEV	83.63	342	eP	53 09.00	0.5
	0.8s	16.10nm		5.3mb	
GRF	83.78	321	eP	53 10.50	0.8
	1.2s	72.00nm		5.8mb	
OSS	83.82	318	ePc	53 10.50	0.3
CVF	83.88	313	iPc	53 10.40	0.0
	1.0s	32.00nm		5.5mb	
BOB	83.90	316	P	53 10.80	0.3
MDI	83.92	317	P	53 11.00	0.6
SAX	84.47	318	ePc	53 14.00	0.4
TMA	84.56	317	ePc	53 13.60	-0.3
VAI	84.58	317	P	53 11.50	-2.2
LLS	84.63	318	ePc	53 14.10	-0.2
CKI	84.65	315	Pd	53 14.00	-0.2
ORO	85.08	316	P	53 15.00	-1.4
SAOF	85.09	315	P	53 16.16	-0.2
APO	85.10	332	eP	53 13.30	-2.7
	0.5s	2.40nm		4.7mb	
SLE	85.14	318	ePc	53 16.60	0.0
SBF	85.15	314	iPc	53 16.90	0.1
	1.0s	28.00nm		5.4mb	
ZLA	85.15	318	ePc	53 16.70	0.0
MMK	85.17	317	ePc	53 17.60	0.5
AUTN	85.18	315	P	53 17.00	-0.1
AURF	85.23	314	P	53 17.16	0.0
TOD	85.30	320	ePc	53 17.64	0.3
TOUF	85.31	315	P	53 17.84	0.1
MVIF	85.36	314	P	53 17.84	-0.1
DOI	85.40	315	P	53 14.50	-3.5X
FEL	85.48	318	ePc	53 18.15	-0.2
CALN	85.52	314	P	53 18.89	0.2
DIX	85.56	317	ePc	53 19.50	0.5
FRF	85.66	314	iPc	53 19.50	0.3
	1.0s	17.60nm		5.2mb	
LMR	85.72	314	iPc	53 19.90	0.4
	1.0s	12.00nm		5.0mb	
LRG	85.85	314	iPc	53 20.80	0.6
	1.0s	12.00nm		5.0mb	
EMS	85.88	317	ePc	53 21.50	1.0
BNI	85.89	316	Pd	53 20.50	0.0

20d 23h

LPG	85.91	316	eP	53 20.40	-0.4
	1.0s	14.00nm			5.1mb
CDF	86.06	319	eP	53 21.20	0.0
ABH	86.15	320	ePc	53 21.84	0.3
BSF	86.28	318	eP	53 22.00	-0.4
RUP	86.43	320	ePc	53 23.45	0.5
NB2	86.52	332	P	53 22.30	-0.8
	1.0s	11.40nm			5.0mb
HAU	86.60	318	eP	53 23.80	0.0
	1.0s	20.00nm			5.3mb
WLF	87.00	320	Pc	53 26.50	0.9
MEM	87.25	321	P	53 26.90	0.1
LBF	88.04	317	iPc	53 31.00	0.2
	1.0s	16.00nm			5.3mb
DOU	88.07	320	Pd	53 31.30	0.5
	1.0s	22.20nm			5.4mb
		S		04 13.00	
SMF	88.09	317	iPc	53 30.80	-0.2
	1.2s	20.80nm			5.3mb
PLDF	88.15	316	P	53 31.59	0.2
LOR	88.16	317	iPc	53 31.50	0.2
	0.8s	21.40nm			5.5mb
LBL	88.32	315	P	53 33.03	1.0
SNF	88.32	321	Pc	53 32.30	0.3
SSF	88.37	317	iPc	53 32.60	0.3
	1.0s	20.00nm			5.4mb
AVF	88.44	317	iPc	53 32.70	0.1
	1.2s	14.80nm			5.2mb
AGO	88.50	316	P	53 33.49	0.5
PYM	88.55	316	P	53 33.54	0.2
BGF	88.75	317	iPc	53 34.80	0.6
	1.0s	52.00nm			5.8mb
MAF	88.91	316	eP	53 35.10	0.2
	1.0s	10.00nm			5.0mb
CAF	89.11	315	eP	53 36.70	0.7
	1.0s	6.00nm			4.8mb
TCF	89.16	316	eP	53 36.40	0.2
	1.0s	10.00nm			5.0mb
RJF	89.54	315	eP	53 39.00	1.1
	0.8s	13.40nm			5.2mb
LSF	89.63	316	iPc	53 38.50	0.2
	0.8s	10.70nm			5.1mb
LPO	89.71	315	eP	53 39.70	1.0
	1.0s	13.60nm			5.1mb
LFF	90.05	315	eP	53 41.20	0.9
	1.0s	20.00nm			5.3mb
LDF	90.96	318	eP	53 44.80	0.4
	1.0s	12.00nm			5.2mb
FLN	91.21	319	iPc	53 45.90	0.3
	1.0s	20.00nm			5.4mb
GRR	91.43	318	eP	53 47.30	0.7
	0.8s	8.00nm			5.1mb
LPF	91.53	318	eP	53 47.50	0.5
	1.0s	12.00nm			5.2mb
KIC	92.14	276	P	53 51.66	1.1
LIC	92.42	276	P	53 52.92	1.1
TIC	92.44	276	P	53 52.84	0.9
EKA	93.24	325	P	53 55.00	0.3
	0.9s	7.50nm			5.1mb
INK	110.13	15	ePKP	59 23.00	11.0X
SOB1	126.46	256	e(PKP)	59 44.00	-1.0
RSSD	138.75	12	PKP	00 06.00	-1.7
PV09	142.52	21	PKP	00 11.50	-3.2X
PV10	142.67	21	PKP	00 12.80	-2.1
BLA	144.86	342	PKP	00 16.00	-2.4
	0.9s	16.35nm			
FVM	145.96	356	PKP	00 18.20	-1.9
	0.5s	34.99nm			
CCH	146.10	231	PKP	00 21.80	0.5
ALQ	146.66	20	ePKP	00 21.10	-0.5
	1.0s	12.00nm			
		e		00 39.00	
		e		00 58.50	
RSCP	147.69	349	PKP	00 21.00	-2.0
RLO	147.81	3	ePKP	00 25.10	1.9
JSC	147.83	342	PKP	00 20.00	-3.2X
CNCB	147.85	230	PKP	00 25.00	0.5
LNO	148.01	4	ePKP	00 22.70	-0.6
TUL	148.01	4	ePKP	00 23.00	-0.5
	1.0s	21.00nm			
	Z 20s	0.10um			4.6Msz
		e		00 26.00	
		e		00 42.90	
		e		03 50.70	
		e		04 06.00	
LPB	148.11	230	PKP	00 26.00	1.3
SIO	148.13	5	e(PKP)	00 26.30	2.6
ZOBO	148.29	230	PKP	00 20.00	-5.2X
	1.1s	24.65nm			
		i		00 25.00	
VVO	148.58	4	e(PKP)	00 27.20	2.8
MEO	148.81	9	ePKP	00 27.00	2.2
	0.8s	8.00nm			

S.D. = 1.0 on 178 of 190 obs.

? JUN 20, 1989 23h 55m 50.40± 4.50s
18.663 N ±45.1km 67.050 W ±17.6km
DEPTH = 33.0km (normal)
MONA PASSAGE (89)

MCP	0.25	193	iP	55 57.50	0.0
APR	0.37	124	iP	55 58.80	-0.2
PNP	0.69	150	iP	56 04.00	0.3
CSB	0.93	113	iP	56 07.50	0.4
SJG	1.02	123	iP	56 08.00	-0.4

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

JUN 21, 1989 00h 07m 07.67± 1.50s
1.458 N ± 5.1km 126.408 E ± 7.4km
DEPTH = 46.1 ± 13.9 km
5.0mb (22 obs.) 5.0Msz (1 obs.)
MOLUCCA PASSAGE (266)

AAI	5.41	161	eP	08 30.00	2.0
PCI	6.98	250	eP	08 52.00	2.1
	1.0s	13.00nm			4.7mb
MKS	9.59	226	ePd	09 28.00	1.9
KHKI	14.53	228	eP	10 40.10	7.9X
JAY	14.83	105	ePc	10 40.50	4.3X
MTN	14.96	162	eP	10 37.00	-0.9
TRT	16.48	236	ePd	11 02.10	4.8X
KNA	17.26	172	eP	11 06.70	-0.4
	0.7s	88.00nm			5.0mb
WB5	22.60	160	iPc	12 04.30	-1.3
		iS		16 08.20	
WRA	22.65	160	Pc	12 05.20	-0.9
	0.6s	96.50nm			5.4mb
MBL	23.38	196	eP	12 13.00	-0.2
QIZ	23.84	318	eP	12 17.40	-0.3
QZH	24.54	343	eP	12 25.00	0.6
QIS	25.41	150	eP	12 32.50	-0.3
		e		13 27.00	
ASPA	26.02	164	iPc	12 37.40	-1.0
	0.7s	107.00nm			5.5mb
		eS		17 03.10	
NANU	26.13	203	eP	12 39.30	0.0
WARB	27.48	180	eP	12 38.00	-13.7X
PSI	27.49	273	ePd	12 53.50	1.5
	0.8s	23.30nm			4.9mb
MEKA	28.92	195	eP	13 04.20	-0.6
	0.4s	11.00nm			4.9mb
CTA	28.94	139	iPd	13 04.90	0.0
	1.0s	57.00nm			5.2mb
LOE	28.98	305	iPd	13 05.00	-0.3
NJ2	31.25	348	Pd	13 27.60	2.3
GYA	31.28	324	P	13 25.20	-0.6
CHTO	31.97	304	eP	13 30.20	-1.6
	0.8s	5.86nm			4.5mb
MRWA	32.09	197	eP	13 32.00	-0.7
FORR	32.17	177	iPd	13 32.30	-1.0
	0.3s	13.00nm			5.3mb
BAL	33.20	195	eP	13 41.30	-1.0
KLB	33.88	193	eP	13 47.70	-0.5
MUN	34.63	195	eP	13 54.00	-0.7
TSRJ	35.06	14	P	13 58.70	0.4
HNR	35.11	109	eP	13 57.00	-2.0
NWAO	35.28	193	eP	14 00.00	-0.2
IIDJ	35.50	16	eP	13 56.50	-5.6X
STK	36.15	158	eP	14 07.00	-0.6
	0.7s	19.00nm			5.1mb
CD2	36.31	326	eP	14 06.70	-2.3
XAN	36.31	335	P	14 07.50	-1.4
CHJJ	36.34	17	eP	14 08.50	-0.7
MAT	36.58	16	eP	14 10.00	-1.2
	1.0s	19.00nm			5.0mb
DL2	37.52	354	eP	14 19.00	0.0
ADE	38.02	163	iPd	14 23.80	0.4
	0.8s	44.78nm			5.4mb
BRS	38.30	140	iP	14 24.20	-1.5
TIY	38.30	342	Pd	14 26.10	0.4
BJI	39.51	348	eP	14 35.00	-0.7
SHL	41.00	309	eP	14 47.00	-1.3
GTA	44.89	331	eP	15 19.00	-0.7
DZM	45.53	123	iPd	15 24.80	-0.2
GUN	46.83	308	P	15 34.20	-1.3
	0.4s	21.00nm			5.4mb
PKI	47.05	307	P	15 36.20	-1.1
	0.4s	17.00nm			5.3mb
KKN	47.25	307	P	15 37.40	-1.3
	0.4s	11.00nm			5.2mb
DMN	47.30	307	P	15 37.60	-1.6
	0.4s	8.00nm			5.0mb
GBA	49.91	287	Pc	15 57.30	-1.9
	0.8s	16.80nm			5.1mb
NDI	54.12	305	eP	16 30.00	-0.6
WMO	54.40	326	eP	16 32.00	-0.5
		pP		16 45.50	49kmX
QUE	63.10	303	eP	17 33.50	0.2
MAIO	70.64	308	eP	18 32.00	11.2X
MAW	81.53	200	eP	19 22.00	0.6
SBA	82.14	172	Pd	19 26.40	1.9
SVW	82.92	29	eP	19 30.40	1.6
TTA	83.06	27	eP	19 30.90	1.3
BRW	84.42	18	eP	19 37.90	1.7
IMA	84.58	24	eP	19 38.80	1.5
PMR	86.08	28	eP	19 45.80	1.2
	1.0s	12.50nm			5.1mb
KVT	89.33	311	eP	20 02.50	1.7
HRI	89.77	303	e(P)	20 05.00	1.9
PRNI	90.49	300	iPd	20 08.20	1.8
SPA	91.45	180	e(P)	20 11.70	1.5
	1.0s	5.00nm			4.9mb
INK	92.38	21	eP	20 14.00	-0.3
SUF	93.42	333	eP	20 19.80	0.7
	0.4s	1.30nm			4.7mb
MBC	94.22	13	eP	20 23.00	0.4
	1.0s	2.00nm			4.5mb
NUR	94.52	331	eP	20 25.50	1.3
	Z 19s	0.50um			5.0Msz
		LR		32 30.00	
SLL	99.92	332	ePKP	20 46.20	-2.6
	0.4s	1.30nm			4.8mb
CNCB	159.19	138	ePKP	27 05.00	1.4
LPB	159.30	137	ePKP	27 04.00	0.5
ZOBO	159.47	137	PKP	27 05.30	1.4
		eLR		01 02.00	
SOB1	165.21	238	e(PKP)	27 11.00	2.1
		e		28 08.00	

S.D. = 1.3 on 69 of 75 obs.

JUN 21, 1989 00h 43m 47.72± 1.25s
10.076 S ± 7.7km 116.140 E ±11.1km
DEPTH = 55.1 ± 11.9 km
4.9mb (10 obs.)
SOUTH OF SUMBAWA ISLAND (291)

KHKI	1.78	343	iPd	44 19.10	2.5
		iS		44 35.90	
		e		51 29.00	
TRT	4.19	304	ePc	44 51.70	1.1
		iS		45 26.00	
MKS	5.85	35	ePd	45 20.70	6.8X
KUG	7.33	91	eP	45 54.50	19.7X
		eS		46 55.70	
MBL	11.58	163	iPc	46 28.00	-4.9X
	0.3s	42.00nm			6.0mb X
		eS		48 24.00	
NANU	12.43	183	iPd	46 40.50	-3.7X
		eS		48 45.00	
KNA	13.54	116	eP	46 57.50	-1.3
		eS		49 22.00	
KSI	14.89	295	ePc	47 12.00	-4.5X
		e		49 00.00	
MTN	14.95	102	eP	47 24.00	6.7X
		e		49 53.00	
MEKA	16.60	172	iPc	47 36.90	-1.5
	0.4s	105.00nm			5.3mb
		eS		50 26.00	
WARB	18.86	150	eP	47 52.00	-14.2X
	0.3s	21.00nm			
		eS		51 09.00	
MRWA	19.04	180	eP	48 07.60	-0.7
	0.3s	9.00nm			4.6mb
		eS		51 24.00	
WB5	20.11	121	eP	48 20.20	0.4
		eS		51 55.70	
WRA	20.11	121	Pd	48 18.50	-1.3
	0.7s	15.50nm			4.4mb
BAL	20.43	179	eP	48 24.00	0.9
		e		48 27.00	
		eS		51 55.00	

COOL	21.22	168	eP	48	28.50	-2.6
			e	48	37.00	
			eS	52	11.00	
PSI	21.33	306	ePd	48	34.00	1.8
KLB	21.46	176	eP	48	34.10	0.6
			e	48	40.00	
			iS	52	21.70	
MUN	21.80	180	eP	48	33.00	-3.8X
			e	48	45.00	
			eS	52	30.00	
NWAO	22.76	178	eP	48	46.00	-0.3
			i	48	57.20	
			eS	52	50.00	
FORR	23.47	153	iPc	48	54.70	1.5
			eS	53	08.00	
			e	55	10.00	
QIS	24.88	118	eP	49	10.00	3.0X
BSI	25.89	306	eP	49	14.00	-2.4
LOE	30.80	332	eP	50	11.80	11.2X
STK	32.02	136	iPc	50	13.00	1.8
			eS	50	56.00	
CHG	33.34	329	eP	50	22.30	-0.5
CHTO	33.34	329	eP	50	21.80	-1.0
	1.0s		3.25nm			4.1mb
GYA	37.46	346	P	50	58.00	0.1
SHL	42.58	327	iP	51	40.00	-0.3
XAN	44.40	351	eP	51	57.00	2.2
GBA	45.04	301	Pc	51	58.20	-1.9
	0.8s		15.90nm			4.9mb
GUN	47.79	323	P	52	20.80	-1.3
PKI	47.82	322	P	52	20.60	-1.8
	0.8s		14.00nm			5.0mb
DMN	48.03	322	P	52	22.20	-1.7
	0.8s		24.00nm			5.3mb
KKN	48.06	322	P	52	22.60	-1.5
	0.6s		12.00nm			5.1mb
GKN	48.60	322	P	52	26.40	-1.8
GTA	51.52	344	eP	52	49.40	-0.8
NDI	53.83	317	iPd	53	04.60	-2.8X
KSH	61.79	325	eP	54	02.50	-0.9
QUE	61.95	312	eP	54	02.60	-2.1
MAIO	70.43	314	eP	54	58.00	-0.5
NAI	79.28	271	iPd	55	52.50	2.7X
SPA	79.99	180	e(P)	56	15.00	22.5X
	0.7s		5.08nm			
SLR	83.79	245	iPc	56	14.00	1.0
BUL	84.29	251	iPd	56	17.00	1.3
	1.0s		9.00nm			4.8mb
KSR	85.00	245	eP	56	20.00	0.8
PRNI	87.50	301	iPd	56	33.00	1.9
HRI	87.55	304	eP	56	33.00	1.6
BNG	98.23	273	iPd	57	22.00	1.0
	0.5s		6.00nm			5.4mb
CAF	114.06	315	ePKP	02	23.40	0.7
FLN	114.98	319	ePKP	02	24.70	0.5
LFF	114.98	315	ePKP	02	25.20	0.9
MFF	115.25	317	ePKP	02	25.20	0.4
GRR	115.31	319	ePKP	02	25.40	0.5
LPF	115.52	319	ePKP	02	25.60	0.4
	0.5s		2.90nm			
KIC	121.43	271	PKP	02	38.50	1.0
LIC	121.70	271	PKP	02	38.60	0.6
TIC	121.75	272	PKP	02	38.80	0.7
ITR	148.51	234	ePKP	03	31.90	4.7X
			e	04	00.60	
BAO	150.01	212	ePKP	03	36.50	6.9X
SOB1	150.18	231	ePKP	03	38.30	8.5X
			e	03	59.60	

S.D. = 1.4 on 45 of 61 obs.

& JUN 21, 1989 00h 59m 18.00s
37.612 N 119.055 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.1 (BRK), 3.0 (PAS).

FRI	0.81	220	iPd	59	33.00	-1.0
			iS	59	43.60	
PPK	0.93	101	eP	59	34.90	-1.3
CMB	1.13	292	iPc	59	38.60	-1.0
			iS	59	52.90	
LCH	1.18	108	eP	59	39.00	-1.4
SGV	1.73	111	eP	59	49.00	0.2
PKEM	1.76	209	eP	59	50.00	0.9
LLA	1.81	237	iPd	59	50.40	0.6
			iS	00	15.00	
PRI	1.95	222	iPc	59	53.10	1.1
ARN	1.99	263	eP	59	52.50	0.1
ISA	2.00	166	eP	59	54.20	1.6
			iS	00	20.80	
LSM	2.39	111	eP	59	57.50	-0.8
BKS	2.53	277	iPc	00	01.00	0.8
BCH	2.56	199	eP	00	01.30	0.6
PLM	4.61	157	eP	00	30.30	0.4

14 obs. ossociated

& JUN 21, 1989 01h 28m 53.40s
37.383 N 121.737 W
DEPTH = 9.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.5 (BRK).
Mo=2.4*10**14 Nm (BRK). Felt (III) ot San Jose.

MHC	0.09	118	iPc	28	55.63	-0.3
			iS	28	57.59	
ARN	0.17	102	iPc	28	56.80	-0.3
GCC	0.41	211	iPd	29	02.10	0.4
			iS	29	07.70	
PCC	0.53	283	iPc	29	03.20	-0.8
BKS	0.63	321	iPc	29	05.60	-0.5
			iS	29	15.80	
BRK	0.64	320	iPc	29	05.50	-0.8
			iS	29	16.80	
SAO	0.66	159	iPd	29	06.40	-0.2
			iS	29	15.90	
LLA	0.99	140	ePc	29	11.20	-1.2
PRS	1.09	164	ePc	29	12.70	-1.3
CMB	1.25	58	eP	29	15.70	-1.1
NWRM	1.41	320	eP	29	17.00	-2.1
PRI	1.51	145	ePc	29	19.90	-0.8
FRI	1.67	103	iPc	29	22.00	-0.9
ORV	2.18	5	e(P)	29	27.30	-3.0
KVN	3.31	59	eP	29	46.50	-0.2

15 obs. ossociated

? JUN 21, 1989 01h 44m 37.47± 1.11s
40.833 N ±12.8km 14.862 E ±12.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)
MD 2.7 (ROM).

SGO	0.44	129	Pc	44	45.70	-0.7
			eSg	44	52.00	
MGR	0.87	143	P	44	55.10	0.8
			eSg	45	07.70	
SDI	1.18	318	Pc	44	59.50	0.0
			eSg	45	18.20	
USI	2.49	212	P	45	18.40	-0.2
			eSg	45	22.00	

S.D. = 1.1 on 4 of 4 obs.

JUN 21, 1989 02h 09m 59.95± 0.91s
16.834 N ± 7.6km 62.336 W ± 9.7km
DEPTH = 33.0km (normol)
LEEWARD ISLANDS (92)
ML 2.9 (FDF).

NEV	0.38	323	ePc	10	12.87	4.1X
			S	10	21.00	
BPA	0.50	65	ePc	10	10.35	-0.3
			S	10	15.70	
ANG	0.58	56	eP	10	12.27	0.6
SKI	0.63	322	eP	10	12.27	-0.1
SEG	0.90	118	ePc	10	15.35	-0.9
PAG	1.02	142	eP	10	17.60	-0.4
			S	10	30.00	
SFG	1.24	118	eP	10	22.00	1.0
DEG	1.33	113	ePc	10	21.80	-0.6
			S	10	37.00	
MGG	1.34	133	eP	10	22.60	0.2
BBL	1.54	148	eP	10	26.00	0.5

S.D. = 0.7 on 9 of 10 obs.

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* JUN 21, 1989 03h 00m 53.08± 0.75s
44.809 N ±13.9km 146.189 E ± 9.9km
DEPTH = 218.8 ± 9.8 km
4.3mb (19 obs.)
KURIL ISLANDS (221)

KUSJ	2.02	213	iPd	01	32.90	-0.6
			S	02	02.30	
ASAJ	2.63	256	P	01	41.10	1.1
			S	02	17.70	
HOOJ	3.21	222	iPd	01	46.80	0.2
			S	02	26.30	
MRRJ	4.41	239	P	02	01.10	0.0
			eS	02	52.10	
AOMJ	6.03	227	eP	02	21.00	-0.6
OFUJ	6.64	212	P	02	29.00	-0.5
			S	03	42.00	
FBA	40.65	37	iP	08	12.70	-0.1
	1.0s		6.00nm			4.0mb
GUN	50.28	272	P	09	30.00	0.4
	0.4s		8.00nm			4.6mb
PKI	50.81	272	P	09	34.00	0.4
GKN	51.11	273	P	09	36.00	0.4
	0.4s		6.00nm			4.4mb
SUF	62.67	333	iP	10	53.30	-2.7X
	0.6s		2.90nm			4.2mb
KVN	67.32	57	iP	11	27.20	0.8
NB2	68.37	338	P	11	29.80	-2.5
	0.7s		3.50nm			4.2mb
HFS	68.45	337	eP	11	27.70	-5.0X
	0.4s		3.80nm			4.5mb
TNP	68.48	57	iP	11	34.20	0.6
	0.8s		2.65nm			4.0mb
EKA	76.91	343	P	12	21.00	-1.1
	1.3s		9.50nm			4.4mb
KHC	77.70	330	eP	12	26.50	-0.1
CDF	80.43	334	eP	12	40.60	-0.7
FLN	82.35	338	eP	12	50.70	-0.5
	0.4s		2.20nm			4.2mb
LDF	82.41	338	eP	12	50.90	-0.6
LBF	82.72	335	eP	12	54.40	1.2
GRR	82.80	339	eP	12	53.30	-0.2
	0.7s		4.40nm			4.3mb
SMF	83.06	335	eP	12	54.30	-0.6
	0.8s		7.20nm			4.5mb
AVF	83.08	335	eP	12	54.60	-0.3
	0.7s		3.30nm			4.2mb
LPG	83.17	333	eP	12	55.90	0.1
	0.7s		4.80nm			4.3mb
LPF	83.17	339	eP	12	55.20	-0.2
MAF	83.83	336	eP	12	59.10	0.4
	0.7s		8.80nm			4.6mb
TCF	83.87	336	eP	12	59.70	0.7
	0.5s		2.90nm			4.3mb
LSF	84.10	336	eP	13	00.20	0.1
	0.6s		3.60nm			4.3mb
MFF	84.25	337	eP	13	00.90	0.1
	0.4s		2.70nm			4.4mb
RJF	84.97	336	eP	13	04.70	0.2
CAF	85.15	335	eP	13	06.20	0.8
	0.5s		3.20nm			4.4mb
LFF	85.52	336	eP	13	07.70	0.5
	0.6s		6.10nm			4.6mb
LPO	85.63	336	eP	13	08.20	0.5

S.D. = 0.8 on 32 of 34 obs.

JUN 21, 1989 04h 53m 33.27± 0.71s
35.118 N ± 8.9km 45.868 E ± 6.4km
DEPTH = 33.0km (normol)
IRAN-IRAQ BORDER REGION (346)

SLY	0.57	328	iPgc	53	35.00	-9.8X
KER	1.27	126	eP	53	54.00	-1.0
BHD	2.21	214	ePnd	54	09.40	1.1
			ePg	54	13.00	
			iSn	54	35.00	
			iSg	54	39.00	
MSL	2.55	300	ePnc	54	12.00	-1.2
			iSn	54	42.50	
			i	54	55.00	
TAB	2.97	7	eP	54	20.00	0.7
IR5	3.86	87	eP	54	31.20	-0.7
IR7	3.92	80	eP	54	33.40	0.7
IR1	3.96	84	eP	54	33.90	0.6
IR4	4.12	87	eP	54	35.30	-0.4
IR2	4.14	81	eP	54	36.10	0.2

S.D. = 1.0 on 9 of 10 obs.

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* JUN 21, 1989 05h 33m 52.59± 0.63s
21.419 N ±11.8km 144.283 E ±18.5km
DEPTH = 33.0km (normol)
4.3mb (5 obs.)
MARIANA ISLANDS REGION (215)

GUMO	7.81	176	eP	34	10.00	-96.8X
MAT	15.97	342	(P)	37	38.00	1.6
	0.6s		13.33nm			4.3mb

21d 05h

SSE	22.81	300	Pc	38 53.00	-0.7
	0.8s		10.00nm		4.4mb
WB5	42.18	194	eP	41 44.00	0.0
WRA	42.24	194	Pc	41 44.30	-0.2
	0.6s		4.20nm		4.3mb
INK	67.41	24	eP	44 45.00	-1.6
MBC	70.86	15	eP	45 06.00	-1.7
YKA	76.22	28	eP	45 38.90	-0.2
SES	82.65	39	eP	46 14.00	-0.1
SUF	83.12	336	eP	46 19.00	2.8X
FFC	85.52	32	eP	46 28.00	-0.4
	1.0s		11.00nm		5.0mb
HFS	89.38	338	eP	46 38.80	-8.2X
	0.4s		0.60nm		4.3mb
ALQ	92.61	51	e(P)	47 04.50	1.8
ZOBO	148.94	86	ePKP	53 36.00	0.0
			e	53 41.00	
LPB	149.03	87	(PKP)	53 46.00	10.0X
CNCB	149.21	87	ePKP	53 38.00	1.6
	S.D. = 1.3	on	12 of	16 obs.	

JUN 21, 1989 06h 21m 35.98± 0.52s
36.388 N ± 8.8km 69.663 E ± 8.8km
DEPTH = 33.0km (normal)
4.2mb (6 obs.)
HINDU KUSH REGION (718)

QUE	6.59	201	iPd	23 13.30	0.1
			eS	24 28.80	
NDI	9.98	138	eP	24 04.50	4.4X
	0.5s		16.90nm		5.6mb X
			eS	25 41.00	
GKN	15.17	119	P	25 09.60	0.0
	0.6s		10.00nm		4.3mb
DMN	15.74	119	P	25 17.60	0.5
	0.4s		7.00nm		4.2mb
KKN	15.75	119	P	25 17.20	0.0
	0.6s		12.00nm		4.2mb
PKI	15.98	119	P	25 19.60	-0.6
	0.4s		6.00nm		4.1mb
SUF	37.45	329	eP	28 48.60	1.0
APO	42.44	323	eP	29 27.70	-1.2
	0.3s		1.80nm		4.3mb
N82	43.82	323	P	29 40.30	0.1
	0.4s		1.20nm		4.0mb
MBC	67.50	2	eP	32 30.00	-0.2
INK	74.19	9	eP	33 11.00	0.4
	S.D. = 0.7	on	10 of	11 obs.	

? JUN 21, 1989 07h 02m 23.83± 5.59s
18.648 N ±57.2km 67.059 W ±19.1km
DEPTH = 33.0km (normal)
MONA PASSAGE (89)

MCP	0.23	192	iP	02 30.80	0.0
			S	02 53.00	
APR	0.36	121	iP	02 32.20	-0.2
PNP	0.69	149	iP	02 37.00	-0.1
SJG	1.01	122	iP	02 42.00	0.2
	S.D. = 0.3	on	4 of	4 obs.	

JUN 21, 1989 07h 37m 56.82± 0.51s
17.682 S ±12.9km 179.789 W ± 9.4km
DEPTH = 619.7 ± 6.1 km
4.5mb (10 obs.)
FIJI ISLANDS REGION (181)

VUN	1.70	259	ePc	39 12.60	-0.5
SGE	2.18	272	iPc	39 15.00	-0.1
DZM	13.67	249	iPd	40 56.00	4.3X
BRS	27.07	244	iPd	42 54.40	0.3
RMQ	30.37	248	ePd	43 24.80	2.4
	0.8s		32.00nm		5.0mb
CTA	32.19	260	iPd	43 38.30	0.6
	0.7s		24.66nm		4.9mb
CMS	34.00	240	iPd	43 53.50	0.8
TOO	36.30	230	iPc	44 12.80	1.2
TAU	37.54	221	eP	44 21.00	-0.6
ADE	40.66	237	iPd	44 47.50	0.7
	0.8s		17.91nm		4.6mb
WB5	43.36	260	iPd	45 08.00	-0.2
WRA	43.38	259	Pd	45 07.70	-0.7
	0.7s		7.30nm		4.3mb
ASPA	43.59	254	iPd	45 10.20	0.2
	0.6s		125.00nm		5.6mb X
			iS	50 55.70	
FORR	48.89	244	iPd	45 49.50	-0.4
KNA	49.19	264	eP	45 52.00	-0.3
WARB	50.12	250	eP	45 45.00	-14.1X
COOL	54.87	244	eP	46 31.70	-1.2
MBL	56.76	256	iPd	46 45.60	-0.4
KLB	57.75	243	iPd	46 51.90	-0.7
NWAO	58.16	242	eP	46 54.30	-1.0
BAL	58.69	245	eP	46 58.00	-0.9
NANU	60.53	254	eP	47 11.00	0.0
	0.5s		15.00nm		4.5mb
SPA	72.43	180	ePd	48 23.20	0.0
	0.9s		16.36nm		4.6mb
PRS	76.99	45	ePc	48 48.70	0.0
FRI	78.47	45	ePc	48 56.10	-0.3
CMB	78.58	44	iPc	48 56.80	-0.3
WDC	78.63	41	ePc	48 57.30	0.1
MIN	79.08	41	ePc	48 51.60	-8.2X
KVN	80.64	44	P	49 08.30	0.4
TNP	80.73	45	P	49 08.80	0.4
	0.8s		7.06nm		4.2mb
MAW	83.62	200	eP	49 22.00	-0.2
DPW	85.28	36	P	49 30.60	0.0
PNT	85.29	35	eP	49 31.00	0.5
	0.8s		10.00nm		4.5mb
FBA	85.88	13	P	49 30.10	-2.9X
	0.5s		5.37nm		4.5mb
PV09	86.52	48	P	49 37.10	0.1
ALQ	86.99	52	eP	49 39.20	0.0
	1.0s		4.25nm		4.1mb
GOL	89.68	48	P	49 51.20	-0.4
GLD	89.81	48	P	49 53.00	0.9
SES	90.62	37	eP	49 55.00	-0.3
RSSD	92.32	44	P	50 03.50	-0.1
	S.D. = 0.7	on	36 of	40 obs.	

& JUN 21, 1989 08h 52m 43.60s
63.627 N 150.719 W
DEPTH = 5.2km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.0 (PMR).

KTH	0.12	231	iP	52 46.31	0.2
MCK	0.80	82	eP	52 59.68	0.0
NEA	1.20	36	eP	53 06.14	-0.2
WRH	1.43	53	eP	53 09.51	-0.8
RDS	1.65	42	eP	53 12.59	-0.7
SKT	1.69	193	eP	53 12.86	-1.1
FBA	1.81	44	eP	53 14.80	-0.8
GLM	1.99	45	eP	53 17.27	-1.1
PWA	2.02	169	eP	53 17.76	-0.9
GHO	2.04	155	eP	53 17.50	-1.5
PME	2.15	158	eP	53 19.34	-1.2
PMR	2.17	160	eP	53 19.40	-1.4
SUA	2.17	180	eP	53 19.43	-1.6
KNK	2.46	154	eP	53 24.52	-0.5
			S	53 54.36	
PAX	2.46	103	eP	53 25.95	0.9
TTA	2.49	256	eP	53 30.10	4.6
SPU	2.53	195	eP	53 24.86	-1.2
TOA	2.58	124	eP	53 26.80	0.0
IMA	2.76	334	eP	53 29.40	0.0
SVW	3.41	224	eP	53 42.90	4.4
	20 obs. associated				

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* JUN 21, 1989 08h 58m 18.42± 0.71s
52.362 S ±12.3km 160.350 E ± 7.8km
DEPTH = 10.0km (geophysicist)
5.2mb (9 obs.) 4.7Msz (1 obs.)
MACQUARIE ISLANDS REGION (167)

CBZ	5.39	95	P	59 39.50	-1.2
MSZ	9.18	36	P	00 33.30	-0.5
			S	02 16.50	
TAU	12.89	312	iPd	01 19.10	-5.1X
TOO	18.09	319	eP	02 31.00	-0.3
			e	05 38.00	
CNB	18.76	331	eP	02 40.00	0.5
CAN	18.86	330	eP	02 40.30	-0.4
			e	05 54.90	
BFD	19.67	313	eP	02 49.00	-1.4
ADE	23.25	310	e(P)	03 28.10	1.4
	1.0s		26.00nm		4.7mb
STK	24.61	319	eP	03 41.00	1.2
BRS	25.58	344	iPc	03 50.50	1.4
SBA	25.70	177	ePc	04 03.00	13.2X
RMQ	27.28	337	iPc	04 05.00	0.3
	0.8s		50.00nm		5.3mb
			e	04 08.50	
DZM	30.60	11	iPc	04 36.00	1.3
FORR	31.89	300	iPd	04 45.60	-0.2
	0.5s		40.00nm		5.6mb
CTA	34.03	336	iPc	05 04.10	-0.5
	1.2s		116.41nm		5.7mb
ASPA	35.04	315	iPc	05 12.30	-1.0
	0.9s		26.00nm		5.1mb
	Z 21s		1.57um		4.7Msz
			LR	17 52.10	
OIS	35.60	325	iPc	05 16.90	-1.0
COOL	35.71	291	eP	05 18.50	-0.4
WARB	36.38	303	eP	05 09.50	-15.1X
KLB	37.15	287	eP	05 31.00	0.1
MUN	37.79	285	eP	05 37.00	0.7
SPA	37.83	180	e(P)	05 44.00	7.5X
	1.0s		11.00nm		4.6mb
WRA	38.16	318	Pd	05 38.40	-1.1
	0.9s		10.30nm		4.6mb
WB5	38.20	318	eP	05 38.20	-1.7
BAL	38.48	287	eP	05 42.00	-0.2
MBL	44.06	299	eP	06 27.30	-0.7
KNA	44.26	314	eP	06 28.80	-0.9
CHG	88.58	304	iPc	11 14.80	2.3
	1.1s		23.73nm		5.4mb
MAT	90.62	342	(P)	11 24.00	2.3
	1.1s		24.05nm		5.4mb
INK	129.87	26	ePKP	17 29.00	0.9
MBC	137.92	21	ePKP	17 42.00	-1.2
	0.7s		3.00nm		
GAC	143.60	78	ePKP	17 54.50	0.3
ALE	147.38	10	ePKP	18 04.00	4.5X
	0.8s		7.00nm		
VRI	149.40	277	ePKPd	18 11.00	7.3X
MLR	149.69	275	ePKP	18 08.00	3.7X
OHR	150.46	264	ePKP	18 12.00	6.5X
SKO	150.57	266	ePKP	18 13.30	7.7X
SCH	152.33	66	ePKP	18 18.00	10.2X
FRB	152.47	46	ePKP	18 17.00	9.4X
SOD	153.17	322	iPKP	18 28.30	19.8X
SUF	153.90	311	ePKP	18 19.40	9.7X
	S.D. = 1.1	on	28 of	41 obs.	

% JUN 21, 1989 10h 37m 22.53± 0.85s
60.608 N ± 6.2km 6.248 E ± 9.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK	0.54	257	eP	37 33.65	0.3
			eS	37 40.95	
HYA	0.56	357	eP	37 32.93	-0.9
			eS	37 40.80	
SUE	0.86	302	eP	37 38.69	-0.3
			eS	37 50.60	
BLS1	1.26	166	eP	37 45.37	-0.6
			eS	38 02.96	
KMY	1.49	200	eP	37 49.65	0.4
			eS	38 09.27	
MOL	2.06	17	iP	37 58.78	1.2
			eS	38 23.49	
	S.D. = 1.0	on	6 of	6 obs.	

& JUN 21, 1989 11h 12m 03.09s
60.120 N 147.035 W
DEPTH = 5.9km
SOUTHERN ALASKA (2)
<AGS-P>.

MTU	0.34	247	eP	12 09.92	0.0
HIN	0.38	44	iP	12 11.25	0.4
			S	12 18.46	
FID	0.69	23	iP	12 15.88	-1.0
			S	12 25.69	
GLI	0.76	358	eP	12 17.20	-1.1
			S	12 28.56	
CVA	0.77	56	eP	12 17.45	-1.0
			S	12 29.48	
MID	0.78	153	eP	12 18.00	-0.6
VZW	0.97	14	eP	12 20.90	-1.1
			S	12 34.88	
SGAM	0.99	66	iP	12 20.98	-1.2
			S	12 36.48	
RAGM	1.21	76	iP	12 24.20	-1.8
			S	12 42.89	
SEW	1.21	270	eP	12 24.40	-1.6
KNK	1.47	332	eP	12 28.67	-1.5
KLU	1.48	21	eP	12 28.74	-1.7

			S	12 48.92	
SLKM	1.63	285	eP	12 30.44	-2.1
PMR	1.80	326	iP	12 31.30	-3.5
PME	1.80	328	eP	12 33.67	-1.2
			S	12 58.71	
TOA	2.04	12	eP	12 38.33	0.0
GLB	2.06	49	iP	12 36.96	-1.8
PWA	2.07	319	eP	12 37.00	-1.8
CNPM	2.20	256	eP	12 39.12	-1.7
SUA	2.26	308	eP	12 39.44	-2.3
BALM	2.49	66	iP	12 42.52	-2.4
SPU	2.69	295	eP	12 45.04	-2.7
RDT	2.71	282	eP	12 44.97	-3.1
RED	2.87	278	eP	12 47.26	-3.1
PAX	2.96	14	eP	12 50.44	-1.1
ILIM	2.97	272	eP	12 48.54	-3.1
FBA	4.81	356	eP	13 19.20	1.4
IMA	6.69	336	eP	13 46.00	1.7

28 obs. associated

? JUN 21, 1989 11h 31m 43.47± 1.79s
9.129 S ±12.2km 112.401 E ±21.0km
DEPTH = 43.2 ± 28.4 km
SOUTH OF JAVA (282)

TRT	1.43	9	iPd	32 07.30	-0.1
			iS	32 31.20	
KHKI	3.26	77	eP	32 33.50	0.1
			eS	33 09.00	
			e	35 30.00	
NANU	13.69	168	eP	34 57.50	0.3
			eS	37 25.00	
MBL	13.94	150	eP	35 00.00	-0.5
			eS	37 22.00	
MEKA	18.34	162	eP	36 01.50	5.1X
			eS	39 13.00	
WB5	23.77	119	eP	36 53.20	0.1

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

JUN 21, 1989 11h 44m 40.57± 0.68s
46.098 N ± 7.7km 12.949 E ± 5.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.6 (ROM), 2.5 (TRI).

VVI	0.38	253	P	44 48.20	-0.3
			eSg	44 54.10	
FVI	0.51	347	Pc	44 50.00	-0.9
			eSg	44 59.60	
RBL	0.55	51	Pc	44 51.70	-0.1
			eSg	44 59.80	
VOY	0.66	95	iPgc	44 52.70	-1.1
			eSg	45 02.10	
TRI	0.69	124	ePg	44 52.70	-1.5
			iSg	45 01.40	
CTI	0.91	267	P	44 58.00	0.0
			eSg	45 10.30	
CEY	1.09	109	eP	45 09.00	7.9X
			eSg	45 15.00	
LJU	1.10	92	eP	45 03.00	1.7
			e	45 21.00	
			eSg	46 19.00	
RIY	1.26	126	iPg	45 05.00	1.1
			iSg	45 21.10	
SCE	1.27	318	iPgc	45 05.30	1.0
PTJ	2.11	94	ePn	45 18.60	2.2X
			eSn	45 45.40	

S.D. = 1.2 on 9 of 11 obs.

? JUN 21, 1989 12h 24m 36.58± 5.02s
18.140 N ±39.1km 62.058 W ± 9.8km
DEPTH = 8.6 ± 4.1 km
LEEWARD ISLANDS (92)
ML 3.7 (FDF).

ANG	1.00	167	eP	24 55.78	0.1
			eS	25 08.36	
SKI	1.03	219	eP	24 55.75	-0.5
			eS	25 09.06	
BPA	1.10	170	ePc	24 56.55	-0.9
			S	25 09.50	
NEV	1.11	206	ePc	24 57.30	-0.3
SEG	1.81	163	ePc	25 07.40	-0.7
			S	25 30.50	
SFG	2.05	156	eP	25 11.50	-0.1
DEG	2.05	152	eP	25 11.00	-0.8
PAG	2.13	170	ePc	25 12.25	-0.7
			S	25 37.00	
MGG	2.32	162	ePc	25 14.88	-0.7
BBL	2.66	168	eP	25 19.60	-0.9
DSVT	2.97	167	eP	25 25.57	0.8
			eS	26 13.03	
DTMT	2.97	167	eP	25 25.52	0.7
			eS	26 13.03	

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

? JUN 21, 1989 13h 13m 34.34± 8.84s
58.134 N ±66.7km 6.371 E ±18.3km
DEPTH = 0.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.2 (BER). Probable explosion.

KMY	1.23	332	eP	13 58.10	0.0
			eS	14 11.88	
BLS1	1.28	10	iP	13 59.10	0.0
			eS	14 14.40	
ODD1	1.79	4	eP	14 06.86	0.1
			eS	14 27.28	
ASK	2.43	346	eP	14 16.42	0.4
			eS	14 44.50	
HYA	3.04	358	iP	14 24.65	0.0
			eS	14 56.56	
SUE	3.04	345	eP	14 24.20	-0.4
			eS	14 58.14	
MOL	4.49	7	eP	14 45.01	-0.1
			eS	15 33.99	

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

% JUN 21, 1989 13h 30m 36.62± 0.72s
60.713 N ± 5.6km 5.562 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.6 (BER).

ASK	0.29	218	eP	30 42.46	-0.3
			eS	30 46.84	
SUE	0.52	312	iP	30 46.74	-0.4
			eS	30 54.06	
HYA	0.55	34	eP	30 46.85	-0.8
			eS	30 54.80	
ODD1	0.96	146	eP	30 53.77	-1.2
			eS	31 06.89	
BLS1	1.47	154	eP	31 03.80	0.5
			iS	31 23.47	
KMY	1.51	186	eP	31 04.57	0.8
			eS	31 23.60	
MOL	2.09	26	eP	31 13.44	1.3
			eS	31 35.54	

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

& JUN 21, 1989 13h 52m 27.47s
63.029 N 150.677 W
DEPTH = 108.1km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.54	348	iP	52 44.54	-0.2
			S	52 57.72	
MCK	1.06	47	eP	52 49.21	-0.2
			S	53 06.29	
SKT	1.12	201	iP	52 49.27	-0.9
			S	53 06.29	
SUA	1.57	181	eP	52 54.72	-0.8
			S	53 17.04	
PME	1.60	151	eP	52 54.73	-1.0
PMR	1.61	153	iP	52 54.70	-1.2
CGLM	1.84	200	eP	52 57.79	-1.1
WRH	1.85	37	iP	52 58.39	-0.5
KNK	1.93	146	eP	52 58.75	-1.2
SPU	1.96	200	eP	52 59.53	-0.9
CCB	2.06	37	iP	53 01.03	-0.6
RDS	2.12	31	eP	53 01.84	-0.6
HDA	2.16	49	eP	53 02.25	-0.7
FBA	2.27	33	iP	53 04.20	-0.2
PAX	2.38	89	eP	53 05.47	-0.4
			S	53 33.70	
TTA	2.44	270	iP	53 05.40	-1.3
GLM	2.44	35	eP	53 06.11	-0.6
SLKM	2.54	175	eP	53 06.65	-1.3
			S	53 36.28	
RDT	2.60	199	eP	53 08.39	-0.4
KLU	2.71	123	eP	53 08.49	-1.8
RED	2.80	202	eP	53 11.23	-0.3
SEW	2.99	168	eP	53 12.55	-1.5
			S	53 46.07	

22 obs. associated

% JUN 21, 1989 15h 46m 27.82± 1.66s
61.620 N ±11.3km 5.217 E ±16.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

SUE	0.61	201	eP	46 39.36	-0.7
			eS	46 48.08	
HYA	0.65	134	eP	46 40.11	-0.7
			eS	46 48.84	
ASK	1.14	181	eP	46 49.66	0.5
			eS	47 03.76	
MOL	1.45	48	eP	46 54.13	0.1
			eS	47 14.85	
BLS1	2.37	160	eP	47 08.28	0.8
			eS	47 32.70	
NRA0	3.19	103	iPd	47 22.80	3.9X
			iSg	48 04.90	

S.D. = 0.9 on 5 of 6 obs.

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* JUN 21, 1989 15h 48m 53.29± 0.63s
8.106 N ± 8.8km 126.836 E ±14.5km
DEPTH = 33.0km (normal)
4.6mb (3 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MTN	21.25	168	eP	53 40.00	1.0
LOE	26.14	293	eP	54 28.00	1.5
WB5	28.78	165	eP	54 50.70	0.3
QIS	31.13	156	eP	55 10.00	-1.3
WARB	34.08	180	eP	55 22.00	-15.0X
MEKA	35.44	193	eP	55 48.20	-0.4
SHL	37.52	302	iP	56 06.40	0.0
FORR	38.75	178	eP	56 15.80	-0.5
COOL	39.15	188	eP	56 19.70	-0.1
BAL	39.70	194	eP	56 24.20	-0.1
KLB	40.42	192	eP	56 30.20	0.0
MUN	41.13	194	eP	56 36.30	0.3
NWAO	41.82	192	eP	56 42.20	0.6
GUN	43.37	302	P	56 54.40	-0.5
PKI	43.65	302	P	56 56.60	-0.6
	0.5s		3.00nm		4.3mb
KKN	43.83	302	P	56 57.80	-0.7
GKN	44.44	302	P	57 02.40	-0.9
GBA	48.76	281	P	57 38.00	0.7
	0.6s		3.70nm		4.6mb
MBC	87.69	13	eP	01 41.00	1.6
	0.8s		3.00nm		4.6mb
DAG	92.97	353	iPd	02 03.40	-0.7
	0.2s		22.22nm		6.2mb X

S.D. = 0.8 on 19 of 20 obs.

% JUN 21, 1989 16h 46m 21.42± 0.76s
38.294 N ± 8.5km 15.043 E ± 5.5km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.6 (ROM).

ATN	0.36	112	P	46 28.60	-0.2
			eSg	46 33.60	
MSI	0.41	102	Pd	46 30.00	0.1
			eSg	46 36.10	
MNO	0.45	217	P	46 30.20	-0.5
			eSg	46 36.60	
GIB	0.86	250	Pd	46 37.80	-0.2
			eSg	46 52.10	
FAI	1.49	227	P	46 49.00	0.8
MGR	1.88	12	P	46 53.80	-0.1

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

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* JUN 21, 1989 17h 28m 47.94± 0.77s
53.561 S ±13.6km 157.171 E ±14.5km
DEPTH = 10.0km (geophysicist)
4.8mb (2 obs.)
MACQUARIE ISLANDS REGION (167)

CBZ	7.30	87	P	30 36.00	-1.1
MSZ	11.33	43	P	31 38.00	5.2X
	0.3s		41.00nm		6.2mb X
TAU	12.50	325	eP	31 46.00	-2.6X
TOO	17.92	328	eP	33 00.00	1.3
BFD	19.28	322	eP	33 16.00	0.7
ADE	22.69	318	e(P)	33 50.30	-0.4

21d 17h

STK	24.40	326	eP	34 09.00		1.8
SBA	24.64	175	eP	34 11.00		1.8
COOL	34.44	297	eP	35 35.70		-1.9
ASPA	34.63	320	iPd	35 38.80		-0.4
	1.4s	14.00nm			4.7mb	
WARB	35.52	308	eP	35 31.00		-15.8X
KLB	35.74	292	eP	35 46.40		-2.2
SPA	36.62	180	ePc	35 55.20		-0.8
	1.1s	24.40nm			4.9mb	
WB5	37.92	324	eP	36 06.50		-0.5
INK	131.81	28	ePKP	48 12.00		10.7X
MLR	147.89	276	ePKP	48 32.50		1.5
SKO	148.57	267	ePKP	48 36.00		4.0X
ALE	148.88	9	ePKP	48 41.00		9.6X
S.D. = 1.5 on 12 of 18 obs.						

? JUN 21, 1989 19h 06m 21.72± 2.48s
13.780 S ±18.5km 75.323 W ±27.0km
DEPTH = 150.0 ± 37.3 km
PERU (116)

PT03	0.51	245	iP	06 43.40		0.0
			iS	06 57.50		
PT02	1.37	307	iP	06 49.90		-0.4
			iS	07 08.80		
HUA	1.73	360	ePc	06 54.40		-0.2
			eS	07 19.30		
PT08	2.17	326	iP	07 00.10		0.5
			iS	07 25.80		
NNA	2.32	320	iP	06 49.90		-11.2X
			iS	07 08.80		
LPB	7.49	112	(P)	08 10.00		0.0
CNCB	7.70	114	eP	08 19.00		6.2X
S.D. = 0.6 on 5 of 7 obs.						

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* JUN 21, 1989 20h 42m 25.17± 0.46s
22.018 S ±11.2km 170.006 E ± 9.6km
DEPTH = 33.0km (normal)
5.0mb (6 obs.) 4.7Msz (1 obs.)
LOYALTY ISLANDS REGION (189)

DZM	3.30	268	iPd	43 14.00		-1.9
			iS	43 52.50		
SGE	8.66	61	ePd	44 32.00		0.7
HNR	15.81	321	eP	46 08.00		0.9
BRS	16.54	248	eP	46 17.00		0.6
RMQ	19.88	253	eP	46 57.80		1.2
CTA	22.25	271	iPc	47 27.60		6.8X
	1.3s	101.92nm			5.1mb	
			i	47 41.90		
			iS	51 30.00		
CNB	22.38	229	eP	47 24.00		1.9
CMS	23.52	241	iPd	47 34.40		1.2
	1.2s	125.00nm			5.3mb	
TOO	26.21	228	eP	48 00.00		1.2
STK	27.10	243	iPc	48 06.70		-0.2
ASPA	33.26	260	eP	48 57.90		-3.9X
	1.2s	21.00nm			4.9mb	
Z	22s	1.29um			4.6MszX	
			LR	01 12.50		
WB5	33.31	267	eP	48 59.80		-2.4X
FORR	38.36	248	eP	49 44.00		-1.0
WARB	39.67	255	eP	49 40.00		-16.0X
GUMO	43.13	323	eP	50 40.00		15.6X
NWAO	47.64	245	eP	50 58.30		-2.0
Z	20s	0.90um			4.7Msz	
N	20s	0.70um				
E	20s	0.80um				
SBA	55.91	181	eP	52 01.70		0.0
SPA	68.12	180	e(P)	53 22.00		-1.9
	1.0s	11.50nm			4.9mb	
TIA	76.49	318	eP	54 12.00		-1.6
CN2	77.19	329	eP	54 15.60		-1.7
BJI	79.54	321	eP	54 34.50		4.3X
			eS	04 31.00		
KMI	80.35	302	Pc	54 36.50		1.3
TIY	80.35	317	eP	54 35.40		0.6
CMG	80.46	295	ePd	54 43.90		8.2X
	1.1s	17.41nm			5.0mb	
CHTO	80.46	295	eP	54 37.00		1.4
	1.1s	15.02nm			4.9mb	
XAN	80.51	313	Pd	54 35.10		-0.6
HHC	82.79	319	eP	54 46.80		-0.7
LZH	85.11	312	e(P)	55 00.50		1.1
WDC	88.31	45	e(P)	55 31.70		17.0X
CMB	88.47	48	e(P)	55 35.10		19.5X
GTA	89.55	313	eP	55 21.20		0.4
MLR	142.51	317	ePKP	02 00.00		3.4X
SPC	143.83	326	ePKP	01 57.00		-1.8
KDZ	144.45	312	ePKP	01 57.00		-2.8X
KSP	144.66	331	ePKP	01 57.00		-2.9X
RZN	144.92	312	ePKP	01 59.00		-1.9
BZS	145.10	320	ePKP	01 59.00		-1.8
MMB	145.63	312	ePKP	02 01.00		-0.9
SRO	145.69	325	ePKP	02 01.60		-0.1
CLL	145.72	334	iPKPd	02 00.60		-1.1
	1.5s	31.00nm				
KKB	145.96	313	ePKP	02 02.00		-0.4
PRU	146.05	331	PKP	02 02.00		-0.3
			e	02 20.50		
ZST	146.07	327	ePKP	02 02.00		-0.4
			e	02 19.30		
EKA	146.34	353	PKP	02 02.00		-0.6
	0.7s	5.60nm				
VAY	146.54	313	ePKP	02 05.00		1.7
SKO	147.01	314	ePKP	02 02.50		-1.6
			i	02 05.50		
KHC	147.11	331	iPKP	02 05.20		1.1
	1.0s	10.50nm				
BNG	147.29	242	iPKPd	01 49.50		-15.9X
	0.8s	12.00nm				
			ic	02 07.50		
GRA3	147.60	334	e(PKP)	02 07.00		2.2
	1.8s	62.00nm				
DMU	148.08	357	ePKP	02 07.00		1.6
VBY	148.78	325	ePKP	02 11.50		4.7X
LJU	148.81	326	e(PKP)	02 09.00		2.2
MEM	148.83	340	PKP	02 16.10		9.5X
ABH	148.94	338	ePKP	02 07.99		1.0
CEY	149.07	326	e(PKP)	02 15.00		7.7X
VOY	149.15	327	ePKP	02 11.60		4.1X
RUP	149.26	338	ePKP	02 10.86		3.4X
WLF	149.60	339	PKPc	02 14.40		6.6X
DOU	149.71	341	PKP	02 11.60		3.6X
	1.0s	16.70nm				
FEL	150.43	335	ePKP	02 12.95		3.6X
BSF	150.93	336	ePKP	02 22.50		12.4X
HAU	150.95	337	ePKP	02 22.40		12.4X
	0.6s	5.40nm				
FLN	152.26	346	ePKP	02 24.90		13.0X
LOR	152.44	339	ePKP	02 27.80		15.6X
	0.6s	2.10nm				
SSF	152.73	340	ePKP	02 28.90		16.3X
LPG	152.87	334	ePKP	02 27.50		14.3X
	0.7s	5.50nm				
LPF	153.07	347	ePKP	02 28.40		15.4X
S.D. = 1.4 on 39 of 67 obs.						

JUN 21, 1989 21h 34m 48.69± 0.82s
36.078 N ± 9.3km 139.853 E ± 6.0km
DEPTH = 33.0km (normal)
HONSHU, JAPAN (227)
MG 3.6 (JMA). Felt (II JMA) at Mito and Utsunomiya.

KAKJ	0.29	64	iP+	34 56.30		0.0
			S	35 02.10		
UTS	0.46	2	iPd	34 59.30		0.5
			iS	35 07.30		
MIT	0.58	59	eP	35 01.00		0.5
			iS	35 08.90		
CHJJ	0.70	268	iPd	35 01.50		-0.6
			S	35 12.80		
NIIJ	1.35	330	P	35 11.70		0.4
			S	35 33.30		
MAT	1.41	290	eP	35 12.00		-0.2
			eS	35 31.00		
IIDJ	1.69	250	P	35 16.50		0.2
			S	35 38.40		
MTMJ	1.73	288	P	35 17.00		0.0
YAMJ	2.10	4	P	35 22.50		0.3
			eS	35 52.20		
TSRJ	3.19	261	P	35 38.00		0.3
OFUJ	3.33	25	P	35 38.10		-1.5
			S	36 15.80		
S.D. = 0.7 on 11 of 11 obs.						

& JUN 21, 1989 21h 54m 18.59s
41.708 N 112.373 W
DEPTH = 7.8km
UTAH (478)
<SLC-P>. ML 4.1 (SLC). Felt (IV) at Howell and Riverside; (III) at Corinne, Garland and Plymouth. Also felt at Tremonton and at the Thiokol Plant.

PTI	1.16	0	eP	54 40.30		-0.3
DAU	1.55	146	eP	54 47.60		0.8
DUG	1.55	193	eP	54 46.20		-0.5
HPI	2.07	345	eP	54 54.70		0.3
MSU	3.19	177	eP	55 10.50		0.2
CCMT	3.23	354	ePn	55 14.20		3.5
PV09	4.06	141	eP	55 23.00		0.4
LRM	4.11	359	ePn	55 30.20		6.9
PV10	4.20	141	eP	55 26.00		1.4
KVN	5.12	241	e(P)	55 41.50		4.0
TNP	5.20	227	eP	55 40.60		1.9
ALQ	8.20	144	e(P)	56 21.00		0.1
			e	56 51.00		
			e	57 22.00		
			eLg	58 30.00		
SES	8.74	6	eP	56 57.00		28.8
13 obs. associated						

% JUN 21, 1989 21h 57m 28.45± 2.43s
38.821 N ± 8.7km 15.519 E ±11.7km
DEPTH = 176.4 ± 30.3 km
SICILY (398)
MD 2.7 (ROM).

ATN	0.66	184	Pd	57 53.70		-0.2
			eSg	58 14.40		
MGR	1.32	1	Pd	57 59.00		0.3
GIB	1.44	235	P	57 59.50		-0.4
SGO	1.74	355	Pc	58 03.30		0.5
MEU	1.78	195	Pd	58 03.10		-0.3
USI	1.83	267	Pc	58 03.40		-0.4
FAI	2.12	224	P	58 08.00		1.0
LCI	2.41	50	Pd	58 10.10		-0.2
			eSn	58 43.80		
SDI	3.16	336	Pd	58 19.10		-0.4
S.D. = 0.6 on 9 of 9 obs.						

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* JUN 21, 1989 22h 13m 18.17± 1.19s
4.800 S ± 9.8km 102.915 E ±12.3km
DEPTH = 77.2 ± 9.1 km
4.8mb (7 obs.)
SOUTHERN SUMATERA (274)

KSI	1.20	344	iPd	13 39.20		-0.6
			iS	13 51.50		
			e	19 00.00		
PPI	4.99	330	eP	14 31.50		-0.8
			e(S)	15 32.00		
SNG	12.12	349	eP	16 11.60		2.0
			eS	49 06.50		
BSI	12.75	323	eP	16 12.00		-5.9X
PCI	17.33	78	eP	17 23.50		6.9X
	1.0s	6.50nm			3.8mb	
LOE	22.09	357	eP	18 10.10		1.8
CHG	23.79	351	iPc	18 24.40		-0.4
	0.9s	20.59nm			4.6mb	
GYA	31.28	6	P	19 33.20		0.0
SHL	32.03	341	eP	19 38.40		-1.4
			iS	19 55.60		
WB5	34.09	119	eP	19 57.20		-0.4
WRA	34.09	119	Pc	19 57.20		-0.4
ASPA	35.26	125	iPd	20 07.70		0.1
	0.5s	12.00nm			5.1mb	
			epP	20 15.00		25kmX
			eS	25 44.00		
CD2	35.52	1	iPd	20 08.90		-0.7
PKI	36.35	333	P	20 16.80		-0.2
	0.6s	9.00nm			4.9mb	
GUN	36.44	334	P	20 17.80		0.0
	0.4s	27.00nm			5.5mb	
DMN	36.52	333	P	20 18.20		-0.2
KKN	36.60	333	P	20 18.80		-0.2
GKN	37.07	333	P	20 22.80		-0.1
XAN	39.04	8	P	20 38.50		-0.7
TIY	43.21	11	eP	21 13.10		-0.3
GTA	44.08	357	iPc	21 20.20		-0.2
			PcP	23 05.00		
CTA	44.80	114	iPd	21 27.10		0.7
	1.0s	24.00nm			5.0mb	
STK	45.13	131	iP	21 30.00		1.2
HHC	46.11	9	P	21 37.50		1.0
BJI	46.26	14	eP	21 38.00		0.5
WMQ	50.31	346	P	22 09.30		0.3
			PcP	23 27.50		

```
BRS     52.47 121 iPc    22 26.00    0.4
CN2     52.47  20 eP     22 24.00   -1.3
BUL     73.63 251 eP     25 01.80   16.0X
        1.0s      6.00nm
MLR     84.32 316 ePc    25 44.50    1.4
SUF     88.20 333 iP     26 02.50    0.9
NUR     88.39 331 iP     26 03.60    1.1
SOD     89.15 338 iP     26 06.70    0.6
KEV     89.63 340 eP     26 09.00    0.8
HFS     93.74 330 eP     26 25.00   -2.3X
        0.4s      0.70nm          4.4mb
SIO    144.47  27 ePKP   32 46.60   -1.1
LNO    144.57  27 iPKPc  32 46.30   -1.4
TUL    144.57  27 iPKP   32 46.20   -1.6
        0.7s     17.90nm
                  e      33 07.40
RLO    144.69  26 iPKP   32 47.20   -0.9
BAO    144.76 234 ePKP   32 48.90    0.0
VVO    145.07  27 ePKP   32 48.70    0.0
     S.D. = 0.9  on  37 of  41 obs.
-------------------------------------------
   JUN 21, 1989  22h 43m 32.86± 0.41s
    6.974 S ± 6.8km  122.407 E ± 7.6km
   DEPTH =  33.0km  (normal)
    4.6mb (  6 obs.)  4.2Msz (  2 obs.)
 FLORES SEA                          (279)

KUG      3.38 160 eP     44 32.50    7.9X
MKS      3.40 301 iPc    44 23.00   -1.9
PCI      6.55 337 eP     45 09.00   -0.4
        1.0s      9.00nm          4.5mb
AAI      6.62  61 eP     45 10.80    0.3
KHKI     6.88 258 e(P)   45 13.50   -0.5
                  e      51 10.10
TRT      9.72 265 iPd    45 58.70    5.2X
MTN     10.38 125 iPd    46 02.10   -0.6
WB5     17.30 139 eP     47 32.80   -0.8
                  eS     50 59.00
WRA     17.33 139 Pc     47 31.60   -2.4
        0.8s      6.00nm          3.8mb
WARB    19.53 169 eP     47 45.50  -15.2X
ASPA    19.94 148 iPc    48 06.50    1.5
        1.0s     32.00nm          4.6mb
     Z  22s       0.99um          4.6MszX
                  LR     55 45.30
QIS     21.45 131 iPd    48 21.10    0.5
        0.8s     61.00nm          5.1mb
PPI     22.89 286 eP     48 37.00    2.1
BAG     23.30 356 eP     48 26.00  -13.1X
BAL     24.11 192 eP     48 47.00    0.3
FORR    24.34 168 eP     48 50.00    1.1
KLB     24.88 189 eP     48 54.00    0.0
PSI     25.33 292 ePd    49 03.00    4.5X
CTA     26.55 122 iPc    49 14.40    4.6X
        1.0s     23.00nm          4.7mb
NJ2     38.95 355 eP     50 58.40    0.8
     Z  18s       0.30um          4.2Msz
CD2     41.69 336 eP     51 20.40    0.1
XAN     42.74 343 eP     51 29.00    0.1
TIY     45.42 349 eP     51 52.20    1.8
     Z  20s       0.38um          4.3Msz
     E  11s       0.30um
BJI     47.13 353 (P)    52 03.50   -0.3
GBA     49.11 295 P      52 22.00    2.5
        0.9s      6.40nm          4.7mb
GUN     49.47 316 P      52 22.60   -0.1
PKI     49.59 315 P      52 22.30   -1.2
KKN     49.81 316 P      52 24.80   -0.3
DMN     49.82 315 P      52 23.70   -1.6
GKN     50.39 315 P      52 28.40   -1.1
GTA     50.67 337 eP     52 30.60   -0.8
WMQ     59.51 331 eP     53 36.20    0.9
ALQ    127.25  51 e(PKP) 02 39.00    2.5X
CNCB   154.23 157 ePKP   03 35.00   10.8X
     S.D. = 1.2  on  26 of  34 obs.
-------------------------------------------
   JUN 21, 1989  23h 10m 36.18± 0.72s
   44.726 N ± 4.2km    6.800 E ± 8.0km
   DEPTH =   9.6 ±  6.4 km
 FRANCE                              (538)
     ML 2.3 (LDG).

RRL      0.19 357 P      10 40.50   -0.1
                  S      10 44.46
FOUF     0.20 184 ePg    10 39.55   -0.9
                  e(Sg)  10 41.89
DOI      0.39 125 P      10 45.50    1.4
                  eSg    10 52.00
RSP      0.54  37 P      10 47.74    0.7
                  S      10 56.66
STV      0.61 142 P      10 48.15   -0.4
                  S      10 57.48
ENR      0.67 138 P      10 48.66   -0.8
LSD      0.77  19 P      10 50.83   -0.7
ROB      0.88 119 P      10 53.60    0.5
IMI      1.13 136 P      10 56.00   -1.4
FRF      1.17 185 Pg     10 59.00    0.9
                  Sg     11 15.50
LRG      1.31 194 Pg     11 00.80    0.4
                  Sg     11 18.50
LMR      1.41 189 Pg     11 02.40    0.5
                  Sg     11 20.60
     S.D. = 1.0  on  12 of  12 obs.
-------------------------------------------
   JUN 21, 1989  23h 51m 01.98± 0.11s
   21.785 S ± 3.5km  176.493 W ± 2.9km
   DEPTH = 182.3km  ( 28 depth phases)
   5.6mb ( 42 obs.)
 FIJI ISLANDS REGION                 (181)
     CENTROID, MOMENT TENSOR         (HRV)
     Data Used: GDSN
     L.P.B.: 16S, 38C
     Centroid Location:
     Origin Time        23:51: 9.2 0.3
     Lat 21.73S 0.04 Lon 176.74W 0.03
     Dep 190.5 1.3 Half-duration  2.6
     Moment Tensor;   Scale 10**17 Nm
       Mrr=-1.04 0.09  Mtt= 0.76 0.15
       Mff= 0.28 0.14  Mrt=-1.84 0.08
       Mrf=-3.12 0.09  Mtf= 0.83 0.12
      Principal Axes:
       T  Val=  3.89  Plg=36  Azm=129
       N       -0.11     9       33
       P       -3.77    53      291
     Best Double Couple:Mo=3.8*10**17
      NP1:Strike=258 Dip=12 Slip= -44
      NP2:         32    82      -99

SVA      5.99 307 eP     52 31.70    2.1
                  eS     53 42.00
VUN      6.05 307 ePc    52 31.70    1.2
SGE      6.71 307 ePc    52 40.70    1.4
RAD      7.55 190 P      52 58.60    8.4X
                  S      53 22.50
AFI      9.03  31 eP     53 02.00   -7.8X
                  e(S)   54 31.00
RAR     15.57  91 P      54 33.00   -0.2
                  S      57 15.00
DZM     15.84 266 iPc    54 41.90    5.3X
                  ScP    02 40.80
                  iS     57 44.10
TAZ     17.47 199 eP     54 56.50    0.7
KRP     17.49 201 P      54 58.10    2.0
WHH     18.07 198 eP     55 00.80   -1.6
PGZ     19.75 196 eP     55 19.00   -0.7
MNG     19.97 198 eP     55 20.00   -1.9
                  eS     58 47.20
KIW     20.37 199 eP     55 24.40   -1.5
CAW     20.55 198 eP     55 26.70   -1.0
WDW     20.71 198 eP     55 28.50   -0.8
MRW     20.77 199 eP     55 28.20   -1.6
                  eS     59 03.00
MOW     20.78 198 eP     55 29.20   -0.8
WEL     20.80 199 eP     55 28.00   -2.1
                  S      59 08.00
TCW     20.88 200 P      55 28.60   -2.4
TBI     25.00  99 iP     56 11.20    0.6
        1.6s     305.00nm          5.6mb
AFR     25.50  85 iP     56 14.40   -0.8
        1.4s     370.00nm          5.8mb
PAE     25.65  86 iP     56 15.70   -0.9
        1.4s     200.00nm          5.6mb
PPT     25.68  85 iP     56 16.40   -0.5
        1.4s     355.00nm          5.8mb
     Z  20s       1.00um          4.3Msz
HNR     25.75 295 eP     56 16.00   -1.6
PPN     25.82  85 iP     56 17.30   -0.9
        1.4s     175.00nm          5.5mb
TVO     25.93  86 iP     56 18.40   -0.8
        1.4s     170.00nm          5.5mb
VSG     26.04 295 eP     56 20.00   -0.3
MSZ     26.20 206 P      56 22.10    0.8
        0.3s      26.00nm          5.4mb
PMO     27.93  81 iP     56 38.58    1.3
        1.4s     150.00nm          5.5mb
VAH     28.10  82 iP     56 36.90   -1.9
        1.4s      85.00nm          5.3mb
TPT     28.19  81 iP     56 38.10   -1.5
        1.4s     185.00nm          5.6mb
RUV     28.35  82 iP     56 40.40   -0.6
        1.4s     225.00nm          5.7mb
BRS     28.45 252 eP     56 44.00    2.0
RMQ     32.00 255 eP     57 15.70    2.6X
        1.0s     588.00nm          6.2mb
                  e      00 01.00
CAN     33.00 238 iPd    57 23.50    1.8
CTA     34.78 266 iPd-   57 37.70    0.6
        0.8s     287.31nm          6.0mb
                  iPcP   00 07.00
                  iS     02 53.00
                  iScP   03 38.20
                  iSS    05 44.00
                  iPP    59 06.00
CMS     34.89 246 eP     57 39.00    1.1
        1.0s     209.00nm          5.8mb
TOO     36.31 236 iPc    57 51.70    2.0
        0.8s      53.00nm          5.3mb
TAU     36.73 226 eP     57 55.00    1.8
PMG     37.01 284 eP     57 55.00   -0.8
        1.0s     800.00nm          6.3mb
LAT     38.32 288 eP     58 08.00    1.2
BFD     38.50 237 eP     58 09.00    0.9
STK     38.53 246 eP     58 09.00    0.7
QIS     40.86 263 eP     58 27.00   -0.6
                  e      04 01.00
ADE     41.22 241 iPd    58 30.90    0.4
        0.8s      64.18nm          5.2mb
ASPA    45.61 258 iPd    59 05.50   -0.4
        1.2s     367.00nm          5.8mb
JAY     45.78 289 ePd    59 06.20   -1.1
WB5     45.81 263 iPd    59 06.80   -0.7
WRA     45.83 263 Pd     59 06.40   -1.2
        1.1s     156.90nm          5.4mb
FORR    50.05 247 iPc    59 39.50   -0.6
GUA     51.63 309 eP     59 51.60   -0.6
        1.0s    2048.00nm          6.7mb X
PJG     51.70 309 eP     59 51.50   -1.2
WARB    51.80 253 eP     59 38.00  -15.4X
KNA     51.96 267 eP     59 53.20   -1.5
        0.4s      56.00nm          5.6mb
COOL    56.00 247 eP     00 22.80   -1.2
AAI     56.53 280 eP     00 27.00   -0.9
SBA     56.69 184 iPc    00 32.30    4.2X
KLB     58.79 245 eP     00 42.40   -1.0
        0.6s     144.00nm          6.0mb
MEKA    58.91 251 eP     00 43.20   -1.1
        0.4s      31.00nm          5.5mb
NWAO    59.06 244 eP     00 44.80   -0.5
        0.5s      58.00nm          5.6mb
RKG     59.11 243 eP     00 44.50   -1.1
BAL     59.83 246 eP     00 49.50   -1.0
        0.3s      15.00nm          5.3mb
MUN     60.05 245 eP     00 51.00   -1.0
SPA     68.35 180 iPc    01 47.80    2.4
        1.0s     110.00nm          5.6mb
                  i      02 02.00   50kmX
KAKJ    70.74 324 P      01 58.80   -1.3
QCP     71.11 295 eP     02 03.00    0.3
CHJJ    71.28 323 P      02 02.20   -1.1
IIDJ    71.48 322 P      02 03.10   -1.5
OFUJ    72.10 327 P      02 06.70   -1.4
NIIJ    72.14 324 P      02 07.00   -1.3
YAMJ    72.27 325 eP     02 08.30   -0.8
MTMJ    72.33 323 eP     02 08.70   -0.9
BAG     72.40 296 eP     02 08.00   -2.5
TSRJ    72.64 321 P      02 09.80   -1.5
ADK     73.35 360 eP     02 13.00   -2.0
        0.7s     383.72nm          6.2mb
KUSJ    73.78 331 eP     02 15.60   -2.1
AOMJ    73.87 327 eP     02 18.40    0.1
SMY     74.65 354 P      02 20.40   -2.1
ASAJ    75.50 331 eP     02 27.30   -0.3
SYP     77.57  45 eP     02 40.00    0.5
PRS     77.79  43 ePc    02 40.80    0.3
                  epP    03 26.70  189km
PCC     77.90  41 ePc    02 40.90   -0.1
BCH     77.90  44 eP     02 42.10    0.8
                  epP    03 27.00  184km
SAO     78.01  42 ePc    02 41.70    0.0
PRI     78.12  43 ePc    02 42.90    0.5
BRK     78.21  41 ePc    02 42.80    0.1
```

22d 00h

BKS	78.23	41	iPd	02	43.40	0.6			1.0s	21.50nm		5.0mb				e	10	04.80											
	0.8s	72.00nm			5.5mb						epP	04	13.00	178km	NUR	138.55	344	iPKP	09	51.50	-15.6X							
LLA	78.23	43	ePc	02	43.80	0.9	GYA	88.50	299	iPd	03	36.00	0.6		KER	139.83	298	ePKP	09	59.00	-11.4X							
MHC	78.25	42	ePc	02	43.40	0.2		4.0s	0.60nm			2.9mb X			TAB	139.88	304	e(PKP)	10	11.00	0.6							
			epP	03	29.70	191km					pP	04	22.00	185km	NAO	140.66	354	PKP	10	02.70	-8.2X							
OZH	78.29	303	P	02	43.00	-0.4	LRM	88.81	39	eP	03	36.70	0.1			1.1s	20.90nm												
			sP	03	49.00		NNT	88.94	284	eP	03	38.90	1.5		UPP	140.66	349	iPKP	10	02.00	-8.9X							
			eS	12	12.00		TIY	89.18	311	Pc	03	38.50	0.3		NRA0	140.67	354	PKP	10	01.60	-9.3X							
PAS	78.54	46	eP	02	45.00	0.4					pP	04	25.50	189km	SLY	140.97	300	iPKPc	10	11.00	-1.2							
MWC	78.66	46	eP	02	45.00	-0.5	FBA	89.20	12	eP	03	36.20	-1.4					i	13	33.00									
BAR	78.71	48	eP	02	45.00	-0.6		0.5s	39.26nm			5.6mb			HFS	141.01	352	ePKP	10	00.30	-11.2X							
PLM	78.97	47	eP	02	47.00	-0.2					epP	04	24.20	193kmX		0.4s	6.90nm												
			e	03	31.00	180km	IMA	89.28	9	P	03	37.00	-1.1		BHD	142.20	297	ePKP	10	10.00	-4.5X							
RVR	78.99	47	eP	02	47.00	0.0	XAN	90.02	307	P	03	42.00	-0.2					i	13	37.00									
			e	03	30.00	175km	GOL	90.16	47	eP	03	42.50	-0.5					i	14	42.00									
FHC	79.09	38	eP	02	48.20	0.7		0.9s	45.83nm			5.5mb			MSL	142.70	302	ePKPd	10	10.50	-4.7X							
SBB	79.09	46	eP	02	48.00	0.3					epP	04	27.40	179km				e	13	38.00									
			e	03	31.00	175km	GLD	90.28	47	eP	03	42.80	-0.6		OASM	143.27	285	ePKPd	10	13.70	-2.9X							
ISA	79.24	45	eP	02	48.00	-0.5		1.0s	86.00nm			5.7mb			AAE	143.82	255	ePKP	10	18.50	0.3							
			e	03	30.00	171kmX					epP	04	28.20	181km	EDU	144.95	6	iPKPd	10	16.70	-1.7							
FRI	79.25	43	ePc	02	48.40	0.1	HHC	91.25	314	P	03	48.20	0.4					i	11	06.00									
			epP	03	32.30	179km	BDT	91.35	288	iPc	03	51.30	2.8X		ELO	144.95	7	iPKPd	10	16.70	-1.8							
CMB	79.46	42	ePc	02	49.60	0.0		1.0s	7.40nm			4.7mb						e	11	05.90									
			epP	03	33.60	180km	CHTO	92.00	289	iP	03	52.00	0.5		EAB	145.15	8	iPKPd	10	17.50	-1.3							
SSE	79.59	309	P	02	48.00	-2.3		1.0s	32.50nm			5.3mb						i	11	06.30									
	1.2s	51.00nm			5.1mb						epP	04	37.50	182km	EBH	145.19	7	iPKPd	10	17.50	-1.3							
			sP	03	53.00		SES	92.08	36	eP	03	51.00	-0.3		COP	145.50	351	iPKPd	10	19.90	0.6							
			S	12	31.00						pP	04	36.00	179km		0.9s	460.50nm												
			SKS	12	44.00		BTO	92.18	313	P	03	52.00	0.0		EDI	145.55	7	ePKP	10	18.50	-0.9							
			sS	13	42.00						pP	04	39.00	188km	EAU	145.59	7	ePKPd	10	19.30	-0.2							
ORV	79.74	40	eP	02	50.70	-0.2	EDM	92.43	32	iP	03	52.00	-0.8			0.7s	110.00nm												
			epP	03	47.10	235kmX	CD2	92.66	302	eP	03	55.30	0.9					e	11	08.20									
WDC	79.78	39	ePc	02	51.20	0.1	RSSD	93.11	43	eP	03	55.80	-0.6		ESY	145.61	6	iPKPd	10	18.80	-0.8							
			epP	03	35.50	181km					epP	04	40.80	179km		0.7s	76.00nm												
			esP	04	05.30		BRW	93.85	6	P	03	58.00	-0.9		LWI	145.63	229	iPKPd	10	23.60	2.4X							
LTCM	79.78	39	eP	02	52.00	0.9	LZH	94.66	307	eP	04	04.00	0.4		EBL	145.71	7	ePKP	10	15.80	-3.9X							
			epP	03	37.20	185km	SIO	94.92	54	e(P)	04	03.90	-0.7			0.7s	67.00nm												
CLC	79.91	45	eP	02	42.00	-10.0X	INK	95.15	15	iPd	04	03.70	-1.2		EKA	146.13	7	PKPd	10	20.90	0.5							
			e	03	35.00	220kmX		1.1s	59.00nm			5.8mb				0.9s	62.50nm												
TPC	79.95	47	eP	02	52.00	-0.3					pP	04	52.00	194kmX	ESK	146.14	7	ePKP	10	21.00	0.6							
			e	03	37.00	184km	VVO	95.19	54	e(P)	04	07.50	1.7			1.0s	80.00nm												
GSC	80.13	46	eP	02	53.00	-0.2	TUL	95.37	54	eP	04	04.30	-2.4		KVT	146.50	313	ePKP	10	22.50	0.9							
			e	03	37.00	179km		1.0s	6.00nm			4.9mb			DMU	146.97	11	iPKPc	10	23.40	1.6							
MIN	80.17	39	e(P)	02	53.10	-0.3					e	04	52.50	193kmX		0.7s	99.00nm												
GLA	80.20	49	eP	02	54.00	0.4	LNO	95.37	54	eP	04	07.70	1.2		DLE	147.62	11	iPKPc	10	25.20	2.3X							
			e	03	37.00	175km	YKA	97.09	24	eP	04	14.20	0.4			0.9s	171.00nm												
MAW	80.83	200	iPd	02	58.90	2.6X	YKC	97.13	24	eP	04	14.00	0.0		VAL	148.07	16	PKP	10	27.00	3.4X							
	1.0s	95.00nm			5.5mb		GTA	98.87	309	eP	04	22.40	-0.2		CLI	148.65	328	ePKP	10	29.00	4.2X							
			i	03	07.70	28kmX	CNCB	100.17	113	Pdiff	04	34.00	4.4X		PPE	148.71	327	ePKPc	10	30.00	5.1X							
TNP	81.48	43	eP	03	00.80	0.4	LPB	100.19	112	Pdiff	04	35.00	5.5X		PTT	148.82	329	ePKP	10	29.00	4.0X							
	0.8s	19.12nm			4.9mb					i	08	36.00			WIT	148.93	356	iPKP	10	30.50	5.6X							
			epP	03	44.60	178km	ZOBO	100.29	112	ePdiff	04	24.00	-6.1X					epPKP	11	19.00									
KVN	81.50	42	eP	03	00.40	0.0	Z	20s	0.29um			4.8Msz			CFR	149.12	325	ePKP	10	26.00	0.5							
			epP	03	44.00	177km				e	04	34.00			BBTK	149.29	313	iPKPc	10	26.00	-0.1							
GZH	81.57	299	eP	03	01.60	0.8				i	08	34.00			KSP	149.32	344	iPKP	10	26.00	0.4							
			pP	03	48.00	189km				LR	17	32.00				1.1s	450.00nm												
			sP	04	09.00		MBC	103.74	12	ePdiff	04	44.00	0.6					id	10	31.00									
			S	12	58.50		PKI	106.62	293	PKP	09	07.30	-0.4					i	10	35.00									
KDC	81.73	13	P	03	00.00	-0.9		0.9s	19.00nm									i	11	20.00									
	1.0s	137.50nm			5.6mb		KKN	106.79	294	PKP	09	07.50	-0.4		HRI	149.33	299	e(PKP)	10	25.00	-1.4							
NJ2	81.78	309	Pd	03	02.00	0.3		0.8s	14.00nm						JARJ	149.39	297	PKPc	10	31.20	4.8X							
			sP	04	05.00		GKN	107.40	294	PKP	09	08.10	-0.9		VRI	149.40	327	iPKPc	10	31.00	5.1X							
SNY	84.09	319	Pd	03	13.00	-0.3		0.8s	9.00nm						BRD	149.48	326	ePKPc	10	32.50	6.4X							
CN2	84.17	322	iPd	03	13.00	-0.7	GBA	109.66	277	PKPc	09	12.50	-0.8		OUTJ	149.51	295	PKPd	10	31.50	4.8X							
	2.5s	0.60nm			2.9mb X			1.0s	5.30nm						BURJ	149.54	297	PKPc	10	31.20	4.6X							
			PP	06	28.00		SCH	118.84	38	ePKP	09	29.00	-0.7		BMR	149.57	333	ePKPc	10	23.00	-3.1X							
			S	13	23.00		OUE	122.98	293	ePKP	09	39.00	0.4		SPC	149.59	338	ePKP	10	26.70	0.4							
			SS	18	48.00		DAG	123.86	6	iPKPc	09	37.00	-1.7					i	10	32.60									
WHN	84.33	306	P	03	15.00	0.2		0.8s	11.94nm						CLL	149.61	348	ePKP	10	25.00	-1.0							
			sP	04	20.00		SLR	127.00	208	ePKP	09	46.50	0.0			1.7s	400.00nm												
			PP	06	29.80			1.0s	21.00nm									i	10	31.20									
PGC	84.58	32	eP	03	16.00	0.4	KSR	127.48	207	ePKP	09	47.70	0.2					pPKP	11	20.40									
	0.9s	93.08nm			5.5mb		ITR	128.88	122	ePKP	09	50.60	0.4		SALJ	149.65	296	PKPd	10	31.30	4.5X							
TIA	85.17	312	Pd	03	18.60	-0.3	MAIO	129.60	300	ePKP	09	51.00	-0.1		MASJ	149.68	296	PKPd	10	32.10	5.2X							
PMR	85.95	13	eP	03	20.90	-1.2				e	12	58.00			KFNJ	149.69	296	PKPc	10	31.90	5.2X							
	1.2s	159.09nm			5.7mb		KEV	129.99	350	ePKP	09	50.00	-0.6		WTS	149.74	356	iPKPc	10	26.80	0.6							
			epP	04	08.50	193kmX				eSKP	12	59.00			MKRJ	149.78	296	PKPd	10	32.50	5.5X							
TTA	85.97	9	P	03	21.50	-0.8	SOD	132.14	348	iPKP	09	54.20	-0.6		AYN	149.86	290	ePKP	10	28.30	1.2							
DPW	86.78	35	eP	03	26.50	-0.1				iSKP	13	06.50			DSI	149.99	296	e(PKP)	10	27.00	-0.2							
			epP	04	13.00	188km	SUF	136.28	345	ePKP	09	47.00	-15.8X		ISR	150.00	326	iPKPd	10	32.50	5.6X							
PNT	86.94	33	ePd	03	27.10	-0.1	IR2	136.60	299	ePKP	09	50.80	-13.6X		MLR	150.06	327	ePKPc	10	27.50	0.4							
	0.8s	117.00nm			5.8mb					e	10	04.50			FAM	150.25	303	ePKP	10	33.00	5.5X							
PV09	87.02	46	eP	03	28.00	-0.2	IR4	136.63	299	ePKP	09	53.20	-11.3X		PRNI	150.53	293	ePKPc	10	29.00	0.9							
			epP	04	15.00	190km				e	10	04.80			PRU	150.54	345	PKP	10	27.90	0.4							
PV10	87.02	47	eP	03	27.20	-1.0	IR1	136.79	299	ePKP	09	53.40	-11.4X					i	10	33.60									
			epP	04	13.20	185km				e	10	05.20						i	10	40.50									
ALQ	87.11	51	eP	03	28.60	0.0	IR7	136.83	299	ePKP	09	52.20	-12.7X		HOL	150.64	291	ePKP	10	29.60	1.3							

Sta	Dist	Az	Phase	Hr	Time	Res
CMP	150.67	328	iPKPc	10	34.00	6.1X
PLH	150.72	356	ePKPd	10	33.80	6.2X
HOF	150.77	349	iPKPc	10	29.00	1.1
CSS	150.78	303	ePKP	10	33.80	5.4X
PSZ	150.79	337	ePKP	10	29.00	1.0
BUC1	150.81	326	ePKPd	10	32.00	4.0X
HRT	150.85	317	ePKP	10	33.90	5.6X
ENN	151.01	357	iPKPc	10	28.90	0.8
	0.8s	14.00nm				
GBZT	151.01	317	ePKP	10	34.50	6.0X
UCC	151.04	359	PKPd-	10	34.70	6.5X
			i	10	42.00	
			e	11	25.00	
ISK	151.11	318	ePKP	10	31.00	2.4X
MEM	151.17	357	PKPc	10	29.00	0.7
			e	10	34.80	
			i	11	20.50	
			e	14	16.30	
SNF	151.32	359	PKP	10	29.30	0.7
			e	10	35.30	
			e	10	43.70	
			e	11	20.90	
			e	14	16.70	
TNS	151.35	353	iPKPd	10	35.40	6.6X
			ic	10	44.20	
SRO	151.43	339	ePKP	10	29.10	0.2
			i	10	35.70	
			i	11	24.80	
CTT	151.45	318	ePKP	10	28.00	-1.1
BUD	151.47	338	iPKPd	10	35.00	6.1X
ALT	151.47	313	ePKP	10	29.50	0.1
DRA	151.48	328	ePKP	10	36.00	7.0X
ZST	151.48	341	ePKP	10	29.10	0.2
			i	10	35.90	
			i	10	44.60	
GRF	151.49	349	ePKP	10	29.90	1.0
			e	10	35.90	
			e	10	44.60	
KHC	151.56	346	iPKP	10	30.50	1.4
			i	10	37.00	
			i	10	45.50	
PPCY	151.57	304	ePKP	10	35.50	6.0X
VKA	151.65	342	ePKPd	10	29.50	0.3
	2.0s	366.00nm				
			e	10	36.00	
			i	10	45.50	
			e	11	29.50	
WET	151.70	347	iPKPc	10	30.10	0.8
			i	10	36.50	
			i	10	45.40	
DOU	151.73	359	PKPc	10	32.20	2.9X
			e	10	36.00	
			e	10	42.30	
			e	11	25.60	
			e	14	19.60	
ABH	151.78	354	ePKPd	10	29.90	0.5
TOD	151.92	353	ePKP	10	29.89	0.3
BZS	151.99	332	ePKP	10	30.00	0.2
RUP	152.00	355	ePKP	10	30.54	0.8
WLF	152.10	356	PKPc	10	30.90	1.1
			e	10	37.60	
			e	11	26.20	
SOP	152.10	341	ePKP	10	30.80	0.9
DST	152.18	315	iPKP	10	37.50	7.2X
BNT	152.22	317	iPKP	10	36.40	6.1X
KHL	152.23	312	iPKP	10	37.70	7.2X
EDC	152.26	317	iPKP	10	36.30	5.9X
MFT	152.37	319	iPKP	10	37.40	6.8X
KMR	152.43	344	ePKP	10	31.00	0.6
			i	10	38.10	
			i	10	49.00	
ELL	152.68	309	iPKP	10	38.10	6.9X
FLN	152.89	6	ePKP	10	31.10	0.2
FUR	152.95	349	ePKP	10	31.90	0.8
			e	10	39.00	
			i	10	50.40	
BHG	153.04	346	ePKP	10	31.00	-0.2
			e	10	38.30	
			i	10	50.30	
LDF	153.09	5	ePKP	10	31.10	-0.1
BEO	153.12	333	iPKP	10	39.50	8.1X
RDO	153.19	321	ePKP	10	39.20	7.6X
GRR	153.23	6	ePKP	10	31.70	0.3
EZN	153.52	318	ePKP	10	31.00	-1.1
KBA	153.54	345	ePKP	10	31.00	-1.2
	0.9s	70.60nm				
			e	10	38.00	
			i	10	53.50	
LPF	153.56	7	ePKP	10	31.90	0.0
YER	153.66	311	iPKP	10	40.30	7.8X
FEL	153.72	353	ePKP	10	25.81	-6.5X
IZM	153.72	314	ePKP	10	34.00	1.5
HLW	153.73	294	ePKP	10	42.00	9.3X
HAU	153.74	356	ePKP	10	32.20	0.0
BSF	153.88	355	ePKP	10	32.30	-0.2
PTJ	153.88	340	e(PKP)	10	32.20	-0.3
PRK	153.90	317	ePKP	10	41.00	8.4X
ZAG	153.95	340	ePKPc	10	33.50	1.0
RBL	154.08	344	PKP	10	32.70	-0.1
			i	10	54.40	
FVI	154.13	345	PKPc	10	32.60	-0.1
			i	10	54.30	
LJU	154.18	342	ePKP	10	32.50	-0.3
VOY	154.37	343	ePKP	10	33.10	-0.1
			i	10	54.40	
VBY	154.46	341	ePKP	10	34.40	1.2
CEY	154.49	342	ePKP	10	33.50	0.2
			i	10	56.50	
LOR	154.57	359	ePKP	10	33.60	0.3
TRI	154.70	343	PKP	10	33.50	0.0
			i	10	56.50	
VAY	154.74	325	iPKP	10	33.00	-0.7
SSF	154.78	0	ePKP	10	33.90	0.3
LBF	154.86	359	ePKP	10	34.30	0.6
SKO	154.86	327	iPKP	10	34.00	0.2
CTI	154.90	347	PKPc	10	34.00	0.1
			i	10	57.50	
PLG	154.90	322	ePKP	10	42.50	8.5X
AVF	155.05	0	ePKP	10	34.10	0.2
MFF	155.07	6	ePKP	10	33.80	-0.1
SMF	155.20	359	ePKP	10	34.30	0.1
BGF	155.28	1	ePKP	10	34.50	0.2
TCF	155.53	2	ePKP	10	34.90	0.2
MDI	155.54	349	PKP	10	34.00	-0.6
			i	10	59.90	
LSF	155.54	3	ePKP	10	34.70	0.0
SAL	155.55	348	PKP	10	40.00	5.4X
			i	11	01.00	
VAI	155.60	351	PKP	10	35.40	0.7
			i	11	00.80	
MAF	155.61	2	ePKP	10	35.00	0.2
OHR	155.82	327	iPKP	10	35.00	-0.3
ORX	155.93	352	PKP	10	36.42	1.0
ORO	155.94	352	PKP	10	37.00	1.6
			e	11	02.50	
LPG	156.20	354	ePKP	10	36.40	0.4
LSD	156.20	354	PKP	10	36.73	0.8
NPS	156.46	310	ePKP	10	47.30	11.0X
RJF	156.48	4	ePKP	10	36.50	0.5
RSP	156.49	353	PKP	10	35.80	-0.3
BOB	156.56	349	PKP	10	33.90	-2.3
			i	11	05.70	
BNI	156.65	354	PKPc	10	37.60	1.2
			i	11	06.60	
RRL	156.77	354	PKPc	10	37.55	0.9
SFI	156.86	345	PKP	10	37.50	1.1
			i	11	07.50	
CAF	156.89	3	ePKP	10	37.10	0.6
PGD	156.94	345	PKPc	10	39.10	2.3X
			i	11	08.10	
ARV	156.97	342	PKP	10	37.50	0.9
			i	11	07.80	
BDI	157 02	347	PKPc	10	38.60	1.8
			i	11	06.60	
CRE	157.11	344	PKP	10	39.00	2.1
			i	11	08.50	
DOI	157.13	353	PKP	10	36.50	-0.4
			i	11	06.50	
ROB	157.26	352	PKP	10	36.83	-0.2
FIN	157.30	351	PKP	10	37.55	0.5
PII	157.36	347	PKP	10	36.00	-1.0
			i	11	08.00	
STV	157.38	353	PKP	10	38.06	0.9
ENR	157.39	353	PKP	10	37.65	0.4
BNG	157.41	222	iPKPd	10	39.00	0.9
	1.0s	60.00nm				
			ic	11	12.30	
			id	11	58.00	
			ic	14	50.30	
			id	16	08.30	
			id	17	15.00	
IMI	157.64	352	PKPc	10	37.65	0.2
SBF	157.74	352	ePKP	10	37 50	-0.1
MNS	158.07	342	PKP	10	39.50	1.5
			i	11	11.50	
FRF	158.13	354	ePKP	10	38 10	0.1
AZI	158.19	340	PKP	10	39.50	1.5
			i	11	13.00	
LRG	158.26	354	ePKP	10	38.40	0.3
SDI	158.32	339	PKP	10	38.00	-0.3
			i	11	12.50	
LMR	158.37	354	ePKP	10	38.50	0.3
EPF	158.65	6	ePKP	10	38.30	-0.3
SGO	158.77	335	PKP	10	40.00	1.3
			e	11	15.00	
MGR	159.03	333	PKP	10	38.50	-0.6
			i	11	15.50	
TOL	160.85	18	iPKPc	10	43.00	2.0
	1.0s	30.00nm				
			iPKKP	11	25.50	
LIC	162.47	151	PKP	10	43.92	0.6
	1.0s	42.50nm				
KIC	162.72	151	PKP	10	44.22	0.6
	1.0s	42.50nm				
TIC	162.84	150	PKP	10	44.34	0.6
	0.9s	39.00nm				
AAPN	163.18	21	ePKP	10	44.50	0.9
ASMO	163.26	20	ePKP	10	44.50	0.9
CRT	163.46	20	ePKP	10	45.20	1.4
ATEJ	163.57	22	ePKP	10	45.70	1.7
MAL	163.60	23	iPKP	10	45.00	1.2
			i	11	38.00	
APHE	163.65	21	ePKP	10	45.50	1.4
KUK	164.05	166	ePKP	10	35.00	-9.9X
BMK	164.54	30	iPKPc	10	45.80	1.1
			i	11	35.00	
AVE	165.00	38	ePKP	10	47.00	1.8
TAF	166.02	21	iPKP	10	50.00	3.9X
IFR	166.04	31	iPKPc	10	49.00	2.7X
			i	11	48.50	
TIO	166.74	44	iPKPc	10	49.30	2.4X

S.D. = 1.0 on 287 of 366 obs.

% JUN 22, 1989 00h 32m 28.91± 1.10s
32.247 N ±12.3km 132.725 E ± 9.6km
DEPTH = 33.0km (normal)
SHIKOKU, JAPAN (236)

Sta	Dist	Az	Phase	Min	Sec	Res
KUMJ	1.63	281	iP+	32	56.10	0.4
			S	33	16.20	
KAGJ	1.89	236	eP	32	59.20	-0.2
			eS	33	22.00	
TKSJ	2.06	32	P	33	01.80	0.0
SHNJ	2.31	325	P	33	05.10	-0.3
			eS	33	31.70	
YONJ	3.00	12	eP	33	15.20	0.0
WKYJ	3.11	50	eP	33	16.90	0.1

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

& JUN 22, 1989 01h 12m 02.90s
38.035 N 121.860 W
DEPTH = 14.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.6 (BRK).

Sta	Dist	Az	Phase	Min	Sec	Res
ZSP	0.33	254	ePd	12	09.60	-0.3
			iS	12	15.50	
BKS	0.34	242	iPd	12	10.00	-0.1
			iS	12	15.10	
BRK	0.36	243	iPd	12	10.10	-0.3
			eS	12	15.50	
PCC	0.68	218	iPd	12	15.70	-0.2
			iS	12	25.00	
MHC	0.71	166	iPd	12	16.25	-0.4
ARN	0.73	159	eP	12	16.50	-0.4
NWRM	0.91	298	eP	12	18.00	-2.0
CMB	1.16	90	ePc	12	22.80	-1.5
			i	12	28.80	
			i	12	37.50	
SAO	1.31	165	e(P)	12	25.50	-1.2
ORV	1.54	10	e(P)	12	30.20	0.2
			eS	12	45.90	
KVN	3.12	70	eP	12	57.50	4.8

11 obs. associated

& JUN 22, 1989 01h 13m 25.20s
38.037 N 121.862 W
DEPTH = 16.0km
4.0mb (2 obs.)
NORTHERN CALIFORNIA (36)
<BRK>. ML 4 3 (BRK).

22d 01h

Mo=2.6*10**15 Nm (BRK). Felt (V) at Albany, Pittsburg, Rio Vista and Travis Air Force Base. Felt (IV) at Antioch, Benicia, Birds Landing, Byron, Daly City, Isletan, Oakley, Port Costa, San Anselmo, San Pablo and South San Francisco. Felt from San Francisco to Vacaville to Stockton.

ZSP	0.33	254	iPd	13	32.00	-0.2
BKS	0.34	242	iPd	13	32.00	-0.3
			iS	13	37.40	
BRK	0.35	243	iPd	13	32.25	-0.4
PCC	0.68	218	iPd	13	37.80	-0.3
MHC	0.72	166	iPd	13	38.43	-0.5
ARN	0.73	159	iPd	13	38.90	-0.3
NWRM	0.91	298	eP	13	40.00	-2.1
CMB	1.17	90	eP	13	44.60	-2.0
SAO	1.31	165	iPd	13	46.90	-1.9
ORV	1.54	10	eP	13	48.50	-3.6
LLA	1.60	152	iPd	13	51.30	-1.6
PRS	1.75	167	eP	13	52.40	-2.6
FRI	2.01	121	eP	13	57.00	-1.8
			i	13	58.70	
PRI	2.12	153	ePd	13	59.30	-1.3
LTCM	2.18	355	eP	13	58.00	-3.3
MIN	2.31	5	ePc	14	01.45	-1.9
WDC	2.59	349	iPc	14	03.10	-4.1
MNA	2.94	81	eP	14	11.00	-1.3
KVN	3.12	70	iPd	14	12.80	-2.0
BCH	3.19	153	eP	14	13.40	-2.3
FHC	3.21	330	ePgc	14	23.60	7.6
LBFM	3.31	360	eP	14	16.00	-1.5
ISA	3.61	130	eP	14	21.00	-0.6
SYP	3.82	156	eP	14	25.00	0.3
GLC	4.07	122	eP	14	26.00	-2.2
MWC	4.89	140	eP	14	38.00	-2.0
PAS	4.90	141	eP	14	38.00	-1.9
RVR	5.43	137	eP	14	45.00	-2.5
TPC	6.13	128	eP	14	55.00	-2.3
PLM	6.20	137	eP	14	56.00	-2.4
BAR	6.82	140	eP	15	17.00	9.9
GLA	7.59	129	eP	15	17.00	-0.8
SES	14.57	29	eP	16	57.00	4.6
EDM	16.29	18	eP	17	13.50	-1.2
SIO	20.55	89	e(P)	18	13.80	8.2
TUL	20.92	88	eP	18	14.90	5.5
	0.9s		4.30nm			3.8mb
LNO	20.92	88	e(P)	18	14.70	5.4
RLO	21.47	87	eP	18	20.50	5.5
FFC	21.48	33	eP	18	11.50	-3.4
	1.0s		12.00nm			4.3mb
LNK	31.00	352	eP	19	42.00	-1.6
	40 abs. assaciated					

? JUN 22, 1989 01h 29m 23.10± 3.55s
30.719 N ±31.5km 49.851 E ±18.8km
DEPTH = 33.0km (normal)
4.1mb (2 abs.)
WESTERN IRAN (347)

KER	4.30	328	eP	30	28.00	0.0
IR5	4.52	8	eP	30	31.30	0.1
IR4	4.59	11	ePc	30	33.10	0.9
IR1	4.74	8	ePc	30	34.40	0.2
IR2	5.01	10	ePc	30	38.00	-0.1
IR7	5.01	7	ePc	30	37.30	-0.8
TEH	5.17	14	e(P)	30	40.00	-0.3
BHD	5.30	300	eP	30	42.00	0.1
			e	31	47.00	
HFS	38.00	331	eP	36	38.10	-1.3
	0.4s		2.80nm			4.5mb
NAO	39.56	331	P	36	53.70	1.2
	0.7s		1.30nm			3.8mb
	S.D. = 0.8		on 10 of 10 abs.			

JUN 22, 1989 02h 37m 21.77± 0.88s
45.702 N ± 7.0km 26.622 E ± 6.3km
DEPTH = 107.9 ± 11.7 km
ROMANIA (358)

BRD	0.35	122	iPc	37	37.50	-0.2
MLR	0.52	246	iPd	37	38.00	-0.9
ISR	0.57	186	iPd	37	39.00	-0.2
PPE	0.86	53	iPd	37	43.00	1.3
BAC	0.89	12	iPc	37	35.00	-6.9X
CLI	0.96	28	iPc	37	42.00	-0.7
CFR	1.20	115	iPd	37	46.00	0.8
CMP	1.20	249	iPd	37	47.00	1.7
PTT	1.24	353	ePd	37	45.00	-0.8
BUC1	1.42	197	ePd	37	47.00	-0.8
IAS	1.63	23	iPc	38	11.00	20.6X
CVD	1.70	143	iPd	37	42.50	-8.7X
DRA	1.96	239	iPd	38	15.00	20.4X
DEV	2.61	275	ePc	38	04.00	0.8
BMR	2.92	314	ePc	38	03.00	-4.3X
BZS	3.51	270	ePc	38	14.50	-0.9
CTT	4.74	163	ePg	38	31.40	-0.8
VAY	5.28	215	ePn	38	40.00	0.4
GBZT	5.33	156	ePn	38	40.00	-0.2
HRT	5.36	154	ePg	38	40.90	0.1
BNT	5.43	169	iPn	38	41.90	0.2
KAS	6.76	127	ePn	39	04.50	4.5X
			iSg	40	14.00	
	S.D. = 0.9		on 16 af 22 abs.			

JUN 22, 1989 03h 08m 14.54± 0.61s
37.601 N ± 5.6km 141.341 E ± 6.7km
DEPTH = 58.8 ± 5.2 km
4.6mb (12 abs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (I JMA) at Fukushima, Mita, Onahama, Ofunata, Shirakawa and Utsunamiya.

FKS	0.70	283	iPd	08	29.80	1.0
			iS	08	38.80	
ONA	0.74	208	eP	08	28.00	-1.3
			iS	08	38.10	
SHR	1.01	242	eP	08	00.00	-32.8X
YAMJ	1.18	299	iPd	08	36.20	1.1
			S	08	53.30	
MIT	1.41	210	P	08	37.50	-0.7
			iS	08	53.50	
OFUJ	1.50	10	iPd	08	39.90	0.4
			eS	08	59.90	
UTS	1.58	228	eP	08	42.00	1.4
			iS	09	00.40	
KAKJ	1.68	214	iPd	08	40.30	-1.7
			S	08	58.90	
NIIJ	1.90	260	iPd	08	45.60	0.6
CHJJ	2.44	231	iPd	08	52.00	-0.7
			S	09	19.60	
MAT	2.72	248	iPd	08	57.50	0.8
			eS	09	33.00	
MTMJ	3.00	251	iPd	09	01.70	0.9
AOMJ	3.05	346	P	09	03.20	1.9
IIDJ	3.48	234	iPd	09	08.30	0.8
			eS	09	47.80	
TSRJ	4.78	246	iPd	09	27.00	1.3
MRRJ	4.82	358	eP	09	26.90	0.7
			eS	10	24.30	
HOOJ	5.00	17	P	09	28.40	-0.4
			eS	10	24.70	
KUSJ	6.06	24	P	09	41.10	-2.5
			S	10	46.10	
ASAJ	6.58	8	eP	09	48.90	-2.0
TIA	19.41	273	eP	12	38.60	0.0
BJI	19.74	285	eP	12	40.00	-2.1
TIY	22.85	279	eP	13	11.90	-1.7
Z	20s		0.60um			4.0Msz
WHN	23.39	261	eP	13	18.50	-0.2
GYA	31.26	259	iPd	14	29.00	-2.0
GTA	32.35	286	eP	14	38.60	-1.8
WMQ	40.54	296	P	15	50.00	0.5
GUN	47.04	275	P	16	42.40	-0.1
PKI	47.57	275	P	16	46.20	-0.4
KKN	47.57	275	P	16	46.40	-0.1
	0.8s		17.00nm			5.1mb
GKN	47.99	276	P	16	49.60	0.0
	1.0s		48.00nm			5.4mb
FBA	48.66	32	eP	16	54.00	-0.1
	0.9s		2.92nm			4.3mb
INK	53.91	27	eP	17	34.00	0.4
MBC	56.00	17	eP	17	48.50	-0.3
	1.0s		5.00nm			4.5mb
WB5	57.55	188	eP	17	48.10	-12.2X
ALE	59.55	4	eP	18	13.00	-0.6
	0.7s		5.00nm			4.8mb
GBA	61.20	265	Pd	18	22.30	-3.4X
	0.9s		9.20nm			4.9mb
SOD	64.42	337	iP	18	46.30	0.0
SUF	67.45	333	iP	19	05.50	-0.2
	0.5s		5.00nm			4.8mb
FFC	73.26	33	eP	19	40.50	-0.5
	0.9s		11.00nm			4.8mb
SLL	73.41	336	(P)	19	27.30	-14.5X
	0.5s		1.80nm			
HFS	73.55	336	eP	19	42.60	0.0
	0.3s		1.80nm			4.5mb
LRM	73.78	44	eP	19	44.70	0.2
NAO	73.93	337	P	19	43.80	-1.0
	0.8s		5.50nm			4.5mb
KVN	74.46	53	eP	19	49.60	1.1
TNP	75.59	53	eP	19	55.50	0.5
	1.0s		2.75nm			4.1mb
CLL	80.58	330	eP	20	22.00	0.3
PRU	80.97	328	eP	20	24.50	0.6
KHC	82.03	328	iP	20	30.50	1.0
ALO	84.27	50	eP	20	43.10	1.7
	1.0s		2.50nm			4.2mb
ZOBO	146.44	59	PKP	27	51.00	0.8
			i	28	07.00	
LPB	146.65	59	ePKP	27	52.00	1.7
CNCB	146.92	59	PKP	27	52.00	1.0
			i	27	54.00	
CCH	148.57	58	PKP	27	57.30	4.0X
	S.D. = 1.1		an 48 af 53 abs.			

? JUN 22, 1989 06h 51m 54.78± 5.29s
39.597 N ±44.2km 21.693 E ±17.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)

LSK	1.01	304	ePg	52	12.50	-1.4
KBN	1.23	327	ePg	52	18.00	0.4
TPE	1.47	299	ePg	52	22.00	0.7
OHR	1.66	336	iPg	52	21.00	-3.1X
			iSg	52	38.20	
VAY	1.85	21	ePn	52	26.40	-0.3
TIR	2.24	322	ePn	52	33.00	0.6
SKO	2.38	355	ePn	52	37.00	2.5X
	S.D. = 1.3		an 5 af 7 abs.			

JUN 22, 1989 06h 53m 04.42± 0.64s
40.241 N ± 7.1km 21.514 E ± 5.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.6 (ATH).

KZN	0.21	71	ePg	53	09.40	0.4
KBN	0.66	306	iPgd	53	17.00	-0.5
LSK	0.71	263	iPgd	53	15.70	-2.7
OHR	1.03	328	iPg	53	23.30	-0.5
			iSg	53	40.60	
TPE	1.15	273	ePg	53	27.00	1.1
SRN	1.22	253	iPg	53	26.00	-1.0
BERA	1.28	292	ePn	53	28.80	0.7
VAY	1.34	36	ePn	53	29.00	-0.2
PLG	1.48	84	ePb	53	30.00	-1.2
VLO	1.56	279	ePn	53	34.10	1.9
NEO	1.61	125	ePn	53	34.00	0.9
PHP	1.66	331	iPnd	53	33.30	-0.3
TIR	1.67	312	ePn	53	35.70	1.9
SKO	1.73	358	ePn	53	34.00	-0.7
VLS	2.18	199	ePn	53	41.50	0.2
	S.D. = 1.3		on 15 af 15 abs.			

& JUN 22, 1989 08h 23m 17.92s
60.445 N 142.869 W
DEPTH = 2.0km
SOUTHERN ALASKA (2)
<AGS-P>.

BALM	0.65	23	iP	23	31.30	0.5
CTGM	0.92	55	iP	23	36.25	-0.1
GLB	1.10	336	iP	23	37.56	-1.8
			S	23	52.08	
FID	1.81	281	eP	23	49.03	-1.3
			S	24	13.59	
KLU	1.82	307	iP	23	49.54	-1.1
			S	24	14.73	
VZW	1.91	290	eP	23	49.92	-1.9
GLI	2.13	284	eP	23	52.52	-2.4
TOA	2.31	318	iP	23	57.51	-0.1
HYT	2.67	79	P	24	04.00	1.1
PAX	2.82	335	eP	24	04.66	-0.3
KNK	2.90	292	eP	24	05.61	-0.3
PME	3.22	294	eP	24	09.16	-1.4

```
GHO      3.23 297 eP     24 10.84   0.2
PMR      3.26 293 iP     24 13.00   2.0
PWA      3.62 293 eP     24 15.08  -1.0
SLKM     3.64 274 eP     24 12.83  -3.7
DWY      3.96  22 P      24 21.80   0.8
SUA      3.97 288 eP     24 19.51  -1.8
FBA      5.01 335 eP     24 33.80  -2.1
TTA      6.73 297 eP     24 57.40  -2.8
INK      8.86  23 eP     25 30.00   0.2
       21 obs. ossociated
-------------------------------------
*  JUN  22, 1989  08h 27m 04.78± 1.23s
   5.393 S ± 7.5km  152.404 E ±11.0km
   DEPTH =  57.5 ±  9.9 km
   4.8mb ( 12 obs.)  3.9Msz (  1 obs.)
 NEW BRITAIN REGION                (192)

RAB      1.22 349 iPc    27 25.50  -0.3
LMG      5.48 230 eP     28 27.00   1.0
LAT      5.52 257 eP     28 26.00  -0.4
PMG      6.56 232 eP     28 40.50  -0.4
       0.5s     9.86nm          4.6mb
CTA     15.78 202 iPc    30 49.30   4.4X
       1.2s    25.00nm          4.2mb
QIS     19.54 218 iPd    31 29.90  -0.7
       0.5s    37.00nm          4.9mb
DZM     21.44 142 iPc    31 51.20   1.0
MTN     22.26 249 iPd    32 00.90   2.6X
WB5     22.70 229 eP     32 02.80   0.1
                  i      32 04.20
WRA     22.76 229 Pc     32 04.70   1.5
       0.6s    11.20nm          4.5mb
KNA     25.38 244 eP     32 28.80   0.3
       0.5s    29.00nm          5.0mb
ASPA    25.45 223 eP     32 28.60  -0.5
     Z  19s     0.35um          3.9Msz
                  LR     42 25.00
WARB    32.15 227 eP     33 24.00  -5.2X
FORR    34.10 219 eP     33 45.00  -1.1
       0.5s    26.00nm          5.4mb
MBL     35.25 241 eP     33 54.90  -1.1
       0.6s     8.00nm          4.8mb
NANU    39.48 241 eP     34 31.10  -0.4
GUN     72.09 301 PKP    38 25.90   0.1
       0.6s    18.00nm          5.2mb
PKI     72.40 301 PKP    38 29.70   2.1
       0.6s     4.00nm          4.5mb
KKN     72.57 301 PKP    38 28.40   0.0
       0.6s     9.00nm          4.9mb
DMN     72.67 301 PKP    38 29.40   0.3
       0.6s    10.00nm          4.9mb
GKN     73.17 301 PKP    38 32.00   0.1
       0.6s     9.00nm          4.9mb
INK     89.15  21 eP     39 54.00  -0.9
YKA     96.13  28 eP     40 31.10   3.9X
PPD    144.19 140 ePKP   46 35.90  -0.8
BAO    150.94 136 ePKP   46 55.50   7.8X
     S.D. = 1.0  on  20 of  25 obs.
-------------------------------------
&  JUN  22, 1989  08h 39m 27.38s
   58.442 N          142.778 W
   DEPTH =  10.0km  (geophysicist)
 GULF OF ALASKA                    ( 15)
      <AGS-P>.

BALM     2.61   5 eP     40 05.14  -5.3
                  S      40 35.50
CTGM     2.64  16 eP     40 05.65  -5.2
FID      2.98 322 eP     40 10.45  -5.1
GLB      3.05 351 iP     40 11.00  -5.6
KLU      3.44 334 eP     40 16.71  -5.5
TOA      4.04 337 eP     40 25.84  -4.9
SLKM     4.32 302 eP     40 28.24  -6.4
       7 obs. ossociated
-------------------------------------
%  JUN  22, 1989  10h 07m 10.35± 1.89s
   10.654 N ±15.2km   60.840 W ±20.2km
   DEPTH =  33.0km  (normal)
 TRINIDAD                          ( 98)

TBH      0.28 233 eP     07 18.30   0.4
                  eS     07 30.62
PIG      0.50 360 eP     07 21.61   0.6
                  eS     07 35.79
BOT      0.52  13 eP     07 20.73  -0.6
                  eS     07 35.26
TRN      0.55 269 eP     07 21.81   0.1
                  eS     07 37.23
TPP      0.69 241 eP     07 23.24  -0.4
                  eS     07 38.69
TCE      0.90 273 eP     07 26.37  -0.2
                  eS     07 44.52
       S.D. = 0.6  on   6 of   6 obs.
-------------------------------------
&  JUN  22, 1989  10h 44m 08.73s
   62.112 N          151.755 W
   DEPTH =   0.0km
 CENTRAL ALASKA                    (  1)
      <AGS-P>. ML 3.3 (PMR).

SKT      0.17 141 iP     44 14.05   1.9
                  S      44 17.41
SUA      0.81 143 iP     44 24.81  -0.1
CGLM     0.82 189 iP     44 25.16   0.1
CRP      0.87 193 iP     44 26.17   0.1
SPU      0.94 189 iP     44 27.39  -0.2
                  S      44 40.38
PWA      1.00 117 iPd    44 27.70  -0.9
PMR      1.35 112 eP     44 32.90  -1.6
PME      1.38 109 eP     44 34.18  -0.9
GHO      1.38 103 eP     44 33.79  -1.4
NKA      1.40 170 eP     44 36.99   1.6
KTH      1.50  14 eP     44 36.40  -0.6
RDT      1.58 192 eP     44 37.78  -0.3
KNK      1.72 113 eP     44 39.51  -0.6
RED      1.77 197 eP     44 41.09   0.2
SLKM     1.77 155 eP     44 40.06  -0.8
                  S      45 03.46
MCK      2.08  37 eP     44 44.70  -0.6
SVW      2.10 243 eP     44 45.10  -0.6
ILIM     2.12 197 eP     44 46.66   0.7
TTA      2.14 294 eP     44 46.40   0.2
SEW      2.31 150 eP     44 47.93  -0.6
OPT      2.57 197 eP     44 55.38   3.0
CNPM     2.61 174 eP     44 52.05  -0.8
TOA      2.62  88 eP     44 54.30   1.1
VZW      2.70 111 eP     44 53.80  -0.5
PAX      3.04  71 eP     44 58.19  -0.9
FBA      3.31  31 eP     45 01.00  -1.9
IMA      4.06 349 eP     45 11.70  -1.9
BALM     4.63  99 eP     45 20.10  -1.5
DWY      5.93  65 P      45 39.00  -0.9
       29 obs. ossociated
-------------------------------------
?  JUN  22, 1989  10h 46m 35.94± 1.02s
   61.317 N ±12.8km   6.777 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                   (535)
      MD 2.1 (BER).

HYA      0.32 242 iP     46 43.60   1.0
                  iSg    46 48.10
SUE      1.01 256 eP     46 54.00  -1.0
                  iS     47 07.20
MOL      1.31  16 eP     47 00.37   0.2
                  eS     47 15.46
NRA0     2.39 102 eP     47 15.60  -0.2
                  eS     47 45.60
                  iSg    47 53.10
     S.D. = 1.5  on   4 of   4 obs.
-------------------------------------
   JUN  22, 1989  11h 06m 06.80± 0.17s
   28.252 N ± 3.0km  130 644 E ± 3.1km
   DEPTH =  33.3km  ( 12 depth phases)
   5.3mb ( 31 obs.)
 RYUKYU ISLANDS                    (238)
      Felt (I JMA) ot Noze.
      CENTROID, MOMENT TENSOR      (HRV)
      Doto Used: GDSN
      L.P.B.: 12S, 17C
      Centroid Location:
      Origin Time        11:06: 9.6 0.6
      Lat 28.02N 0.11 Lon 130.35E 0.13
      Dep  15.0 FIX Holf-durotion  1.5
      Moment Tensor;   Scale 10**16 Nm
        Mrr=-5.50 0.51  Mtt= 1.77 0.40
        Mff= 3.74 0.77  Mrt=-0.83 1.79
        Mrf=-0.99 1.65  Mtf= 1.93 0.43
       Principol Axes:
        T  Vol=  5.07  Plg= 7  Azm=121
        N        0.59       2      212
        P       -5.66      83      316
      Best Double Couple:Mo=5.4*10**16
       NP1:Strike=209 Dip=38 Slip= -93
       NP2:        33      52      -88

NZJ      1.02 277 iP+    06 26.00   1.3
                  iS     06 40.20
KAGJ     2.93   4 P      06 52.00  -0.1
                  S      07 25.70
KUMJ     4.27   2 iP+    07 10.90  -0.2
                  eS     07 58.20
SHNJ     5.87   4 P      07 32.20  -1.5
                  eS     08 39.70
TKSJ     6.41  26 P      07 39.70  -1.7
                  eS     08 47.30
WKYJ     7.30  34 P      07 51.60  -2.3
                  eS     09 08.60
YONJ     7.32  18 P      07 52.20  -1.9
                  eS     09 10.30
TSRJ     8.56  31 P      08 10.50  -0.9
                  S      09 42.90
SSE      8.70 291 P      08 12.00  -1.3
       1.5s   180.00nm          6.0mb X
     Z 20s     1.40um          4.7Msz
     E 11s     5.50um
                  sP     08 25.00
                  S      10 06.00
                  i      10 13.00
                  Lg     11 07.00
IIDJ     9.49  39 P      08 22.90  -1.4
MTMJ    10.27  34 P      08 35.80   0.7
MAT     10.45  36 iPc    08 35.70  -1.6
       0.8s    13.43nm          5.2mb
                  eS     10 57.00
CHJJ    10.51  40 P      08 38.00  -0.2
NJ2     10.88 293 Pc     08 43.40   0.1
     Z 12s     7.00um
     N 12s     1.20um
     E 11s     7.20um
                  sP     08 55.00
QZH     11.28 256 eP     08 47.00  -1.7
     Z 12s     2.90um
     E 10s     3.40um
                  eSS    11 08.00
KAKJ    11.31  43 P      08 49.80   0.8
NIIJ    11.39  36 P      08 49.20  -0.9
DL2     13.01 327 eP     09 12.00   0.2
     Z 14s     2.30um
     N 12s     2.40um
     E 12s     2.30um
                  eS     11 43.00
TIA     13.92 308 eP     09 23.70  -0.1
     Z 15s     3.50um
     N 12s     1.80um
     E 12s     3.30um
                  esS    12 12.00
WHN     14.39 283 P      09 35.80   5.8X
     Z 12s     2.77um
     N 13s     3.61um
     E 13s     5.03um
                  pP     09 41.00
SNY     14.72 339 Pc     09 34.50   0.2
     Z 11s     3.50um
     N 12s     2.50um
     E 11s     1.90um
                  sS     12 27.00
BAG     15.01 220 eP     09 36.80  -1.6
                  eS     12 32.00
CN2     16.07 346 Pd     09 52.50   0.7
       2.0s     0.30nm          2.1mb X
     Z 12s     4.80um          4.3Msz
     N 11s     2.60um
                  eS     12 53.00
QCP     16.20 215 eP     09 55.00   1.4
MDJ     16.35 357 eP     09 55.00  -0.4
     Z 15s     2.60um
     N 15s     1.70um
                  esS    13 08.00
GZH     16.42 256 P      10 00.40   4.1X
     E 10s     2.60um
BJI     16.76 318 eP     10 01.00   0.5
       8.0s     0.80nm          1.9mb X
     N 13s     3.46um
     E 13s     2.81um
                  eS     13 14.00
TIY     17.93 306 Pd     10 15.50   0.3
       0.8s     0.10nm          2.0mb X
     Z 14s     5.24um          4.5Msz
     N 10s     1.80um
     E 10s     2.60um
```

22d 11h

		pP	10 22.00			
		sS	13 42.50			
XAN	19.45	293 iPc	10 31.50	-2.1		
N	13s	3.40um				
E	10s	0.70um				
		S	14 10.40			
PJG	19.70	135 eP	10 37.50	1.1		
GUA	19.77	135 eP	10 38.00	0.9		
	1.0s	376.00nm		5.7mb		
		pP	10 51.20	63kmX		
HHC	20.07	314 eP	10 38.00	-2.2		
Z	14s	2.90um		4.8MszX		
N	13s	1.90um				
E	14s	2.00um				
		S	14 25.00			
BTO	20.94	311 P	10 47.00	-2.2		
N	14s	0.70um				
E	14s	1.80um				
		S	14 41.50			
QIZ	21.13	249 P	10 51.70	0.6		
N	12s	0.90um				
		sS	14 58.50			
CD2	23.51	283 P	11 12.80	-1.9		
Z	12s	3.40um		5.0MszX		
N	12s	5.20um				
		S	15 25.70			
LZH	23.94	296 eP	11 18.00	-1.0		
	1.5s	88.00nm		5.1mb		
Z	12s	3.90um		5.1MszX		
E	12s	2.40um				
		S	15 36.00			
KMI	25.10	269 Pc+	11 31.00	0.6		
Z	15s	1.60um		4.7MszX		
N	17s	4.20um				
		pP	11 40.50	34km		
		sP	11 46.00			
		PPP	12 18.00			
		eS	15 41.00			
		sS	15 53.00			
MNI	27.23	193 eP	11 48.50	-1.3		
GTA	27.80	302 P	11 52.60	-2.3		
Z	14s	11.90um		5.6MszX		
E	13s	3.40um				
		sS	16 47.00			
LOE	28.68	254 eP	12 02.60	-0.3		
CHG	30.47	259 ePd	12 18.00	-0.9		
	0.8s	15.11nm		4.8mb		
		e	19 17.00			
CHTO	30.47	259 eP	12 16.00	-2.9X		
	0.8s	11.35nm		4.7mb		
NNT	32.76	248 eP	12 42.80	3.8X		
WMQ	37.60	306 eP	13 18.70	-1.4		
Z	15s	1.80um		5.0MszX		
N	13s	1.10um				
E	13s	1.30um				
		PP	14 47.00			
		S	19 08.00			
GUN	39.32	280 P	13 35.20	0.1		
	0.8s	94.00nm		5.6mb		
PKI	39.80	280 P	13 38.50	-0.5		
KKN	39.87	280 P	13 39.10	-0.3		
DMN	40.06	280 P	13 41.70	0.7		
GKN	40.38	281 P	13 43.20	-0.4		
MTN	40.86	179 iPc	13 46.10	-1.1		
		e	13 55.50	32km		
NDI	46.63	284 eP	14 34.00	0.1		
WB5	47.98	175 iPd	14 43.70	-0.8		
		i	14 53.50	33km		
WRA	48.05	175 Pd	14 44.00	-1.0		
	0.5s	18.80nm		5.4mb		
QIS	49.29	169 iPd	14 53.20	-1.4		
	0.9s	38.00nm		5.4mb		
		e	15 03.00	33km		
MBL	50.22	193 eP	15 00.50	-1.2		
CTA	50.37	161 iPd	15 02.30	-0.6		
	1.0s	50.00nm		5.5mb		
		i	15 12.20	33km		
GBA	51.41	265 Pc	15 09.50	-1.4		
	0.8s	11.80nm		4.9mb		
ASPA	51.71	176 iPd	15 12.30	-0.7		
	1.1s	74.00nm		5.6mb		
		e	15 22.70	35km		
NANU	52.58	198 eP	15 18.70	-0.8		
POO	52.62	272 eP	15 29.00	8.9X		
WARB	54.26	184 eP	15 26.50	-5.3X		
RMQ	57.14	161 eP	15 52.00	-0.7		
TTA	57.70	31 eP	15 55.70	-0.6		
SVW	57.88	33 eP	15 57.80	0.2		
BRW	57.94	21 eP	15 57.70	-0.1		
IMA	58.74	28 eP	16 03.70	0.1		
FORR	58.82	183 iPc	16 03.30	-0.9		
BRS	59.26	157 iPc	16 06.80	-0.7		
MAIO	59.48	297 eP	16 11.00	2.0		
		eS	23 04.00			
KDC	59.67	37 eP	16 08.70	-1.2		
DZM	60.80	142 iPd	16 17.50	-0.7		
PMR	60.98	33 eP	16 17.40	-1.4		
	1.2s	43.00nm		5.5mb		
FBA	61.24	29 eP	16 20.00	-0.6		
TOA	62.30	32 eP	16 27.70	-0.1		
ADE	63.34	173 iPc	16 34.30	-0.5		
	1.0s	36.00nm		5.4mb		
INK	66.19	24 iPd	16 52.10	-0.8		
MBC	67.36	14 iPd	17 00.20	-0.1		
	0.9s	46.00nm		5.6mb		
KEV	68.34	339 eP	17 05.00	-1.5		
	0.5s	21.10nm		5.5mb		
ALE	69.27	2 eP	17 12.00	-0.1		
	1.0s	17.00nm		5.1mb		
SOD	69.42	336 iP	17 13.00	-0.2		
SUF	71.57	332 iP	17 25.80	-0.4		
	0.4s	4.20nm		4.8mb		
NUR	73.21	330 iP	17 35.70	-0.2		
Z	15s	0.80um		5.1MszX		
		LR	54 40.00			
DAG	73.54	353 iPd	17 36.60	-1.0		
	1.1s	16.46nm		4.9mb		
KVT	75.24	309 iP	17 49.20	1.0		
YKA	75.79	26 eP	17 52.10	1.3		
YKC	75.84	26 ePd	17 51.30	0.2		
UPP	76.56	331 iP	17 54.90	-0.2		
HFS	78.02	333 eP	18 02.50	-0.7		
	0.4s	4.70nm		4.9mb		
Z	14s	0.19um		4.6MszX		
		LR	55 29.00			
BBTK	78.03	309 iPc	18 05.00	1.1		
NAO	78.72	334 P	18 06.40	-0.7		
	0.8s	B.30nm		4.8mb		
HRI	78.82	302 e(P)	18 09.00	0.7		
VRI	79.13	316 ePc	18 11.50	1.9		
		e	24 37.50			
MLR	79.79	316 ePc	18 14.00	0.6		
DSI	79.85	300 e(P)	18 15.00	1.3		
ALT	80.22	309 eP	18 16.40	0.7		
PRNI	80.70	299 iPc	18 29.50	11.2X		
PNT	80.73	39 ePd	18 18.00	-0.1		
JMB	80.90	313 iP	18 20.00	0.9		
SPC	81.16	322 eP	18 22.10	1.5		
COP	81.26	330 iP	18 21.00	0.3		
EDM	81.74	33 iPd	18 24.00	0.7		
PSZ	82.06	321 eP	18 25.00	-0.1		
KDZ	82.06	313 eP	18 27.00	1.8		
DPW	82.31	39 P	18 27.20	0.7		
		pP	18 37.20	32km		
KSP	82.33	324 ePd	18 27.50	1.1		
IZM	82.48	310 eP	18 28.00	0.5		
RZN	82.49	313 iP	18 29.00	1.3		
VTS	82.97	315 eP	18 32.00	1.9		
KKB	83.44	314 eP	18 33.00	0.7		
ZST	83.44	322 eP	18 34.50	2.3		
Z	14s	1.10um		5.4MszX		
		LR	11 59.00			
BRG	83.50	325 iP	18 33.50	1.1		
	1.1s	21.00nm		5.2mb		
		i	18 44.50	35km		
WDC	83.64	47 ePd	18 34.00	0.6		
CLL	83.70	326 iPd	18 34.70	1.3		
	1.1s	39.00nm		5.5mb		
		e	18 45.00	33km		
PRU	83.74	324 eP	18 34.50	0.9		
	1.0s	14.50nm		5.1mb		
Z	14s	0.50um		5.0MszX		
N	16s	0.40um				
E	14s	0.50um				
VAY	84.05	314 eP	18 35.70	0.3		
LTCM	84.11	47 P	18 36.10	0.4		
MIN	84.37	47 ePd	18 37.00	-0.3		
SKO	84.41	315 iP	18 38.20	1.0		
SES	84.61	34 eP	18 38.50	0.4		
KHC	84.76	324 iPc	18 40.50	1.6		
	1.3s	12.00nm		4.9mb		
ORV	84.86	48 ePd	18 39.40	-0.1		
BRK	85.26	49 eP	18 42.00	0.5		
BKS	85.28	49 iPc	18 42.50	0.9		
	1.0s	43.00nm		5.6mb		
GRF	85.61	325 eP	18 47.00	3.9X		
	1.4s	49.00nm		5.5mb		
FFC	85.82	28 eP	18 44.00	0.0		
	1.0s	27.00nm		5.4mb		
MHC	85.96	50 eP	18 45.40	0.2		
VBY	86.06	320 ePc	18 47.40	2.0		
LJU	86.13	321 e(P)	18 46.00	0.2		
CEY	86.38	321 e(P)	18 48.50	1.5		
CMB	86.42	48 ePd	18 48.00	0.6		
PRS	86.69	50 ePd	18 48.80	0.1		
LRM	86.71	39 eP	18 49.60	0.7		
LLA	86.82	50 ePd	18 50.50	1.2		
FRB	87.07	8 eP	18 50.00	0.1		
PRI	87.27	50 eP	18 52.40	0.8		
KVN	87.34	47 P	18 52.00	0.0		
		pP	19 03.00	35km		
FRI	87.44	49 ePd	18 52.60	0.3		
TNP	88.46	47 P	18 58.10	0.7		
	1.2s	20.56nm		5.3mb		
		pP	19 09.00	34km		
LDF	91.74	330 eP	19 12.20	0.0		
RSON	92.04	26 P	19 13.30	-0.3		
		pP	19 23.60	32km		
GRR	92.22	330 eP	19 14.70	0.3		
	1.0s	17.60nm		5.4mb		
RSSD	92.33	36 P	19 16.20	0.9		
LPF	92.56	330 eP	19 16.10	0.1		
	1.1s	34.10nm		5.7mb		
MFF	93.23	328 eP	19 18.20	-0.9		
PV09	93.24	43 P	19 20.50	0.7		
PV10	93.38	43 P	19 21.90	1.6		
ALO	97.19	44 e(P)	19 38.50	0.8		
	1.0s	2.75nm		4.7mb		
KIC	124.91	302 PKP	25 05.90	0.2		
TIC	124.94	302 PKP	25 06.00	0.2		
LIC	125.22	302 PKP	25 06.40	0.1		
NNA	149.65	63 iPKPd	25 54.80	4.3X		
ZOBO	158.97	59 PKP	26 05.00	1.3		
CNCB	159.40	60 ePKP	25 57.00	-7.1X		

S.D. = 1.0 on 143 of 153 obs.

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* JUN 22, 1989 11h 12m 54.91± 3.91s
34.518 N ±30.1km 140.254 E ±24.8km
DEPTH = 27.8 ± 10.7 km
4.4mb (2 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	1.68	358 P	13 23.70	0.9		
		S	13 44.90			
CHJJ	1.84	326 iPd	13 25.30	0.1		
		S	13 47.30			
IIDJ	2.15	297 iPd	13 29.80	0.2		
		S	13 56.20			
MAT	2.62	321 iPc	13 36.30	0.0		
		iS	14 05.30			
MTMJ	2.87	317 iP+	13 40.00	0.1		
		S	14 14.30			
NIIJ	2.90	340 iP+	13 39.60	-0.6		
		S	14 12.90			
YAMJ	3.65	357 P	13 50.80	-0.1		
		S	14 31.10			
WKYJ	3.87	267 P	13 53.80	-0.2		
		S	14 37.40			
OFUJ	4.69	14 eP	14 04.40	-1.3		
		eS	14 54.20			
TKSJ	5.17	266 eP	14 12.40	0.0		
YONJ	5.62	279 P	14 18.10	-0.7		
SLL	75.86	336 eP	24 41.00	0.9		
	0.4s	3.40nm		4.7mb		
NAO	76.42	337 P	24 36.50	-6.7X		
	0.6s	1.00nm		4.0mb		

S.D. = 0.7 on 12 of 13 obs.

% JUN 22, 1989 12h 04m 55.71± 0.92s
15.674 N ± 5.7km 60.957 W ±10.3km
DEPTH = 23.9 ± 10.2 km
LEEWARD ISLANDS (92)
ML 2.3 (FDF).

MGG	0.42	305 ePc	05 04.80	0.2		
BBL	0.52	253 ePd	05 06.00	-0.3		
		S	05 12.80			
DEG	0.64	351 eP	05 08.10	-0.2		
PAG	0.78	297 eP	05 10.70	0.1		
		S	05 21.50			
CRM	0.92	177 eP	05 12.93	0.1		

FDF	0.95	191	iPc	05 13.27	-0.2
	0.1s		0.50nm		
			S	05 25.90	
MVM	1.11	177	eP	05 15.74	-0.1
BIM	1.16	185	eP	05 16.77	0.3
			S	05 31.80	
	S.D. = 0.3		on	8 of 8 obs.	

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* JUN 22, 1989 12h 05m 58.24± 0.87s
47.899 N ±11.5km 18.299 E ± 9.2km
DEPTH = 12.0 ± 8.0 km
HUNGARY (549)
ML 2.6 (BRA), 2.9 (VKA). Felt at Komarno, Marcelova and Hurbonovo, Czechoslovakia.

SRO	0.09	174	eP	06 01.40	0.4
ZST	0.86	291	iPg	06 14.50	0.0
			i	06 21.60	
			iSg	06 26.90	
			e	32 32.80	
PSZ	1.07	88	iPg	06 19.30	1.0
VKA	1.38	286	iPgc	06 23.10	-0.1
			iSg	06 41.00	
SPC	1.83	44	ePn	06 33.70	3.8X
			i(Pb)	06 38.20	
			i(Pg)	06 39.70	
			i(Sn)	07 03.30	
			i	07 06.50	
PTJ	2.56	220	e(Pn)	06 41.20	0.9
			eSn	07 17.40	
BZS	3.23	134	ePc	06 48.00	-1.7
PRU	3.24	312	ePn	06 46.50	-3.4X
			ePg	07 00.50	
			Sn	07 26.70	
			eSg	07 48.50	
KHC	3.37	293	iPn	06 51.40	-0.4
			Pg	07 01.50	
			Sn	07 22.90	
			Sg	07 44.00	
			e	39 26.30	
	S.D. = 1.3		on	7 of 9 obs.	

? JUN 22, 1989 12h 11m 17.42± 5.81s
31.389 S ±39.7km 70.051 W ±24.6km
DEPTH = 170.3 ± 50.4 km
CHILE-ARGENTINA BORDER REGION (127)

ZON	1.18	98	eP	11 46.00	0.0
			eS	12 02.00	
JACH	1.37	200	iPd	11 47.50	-0.2
			iS	12 06.00	
ROCH	1.78	207	iPd	11 52.10	0.1
			iS	12 13.70	
PEL	1.83	197	iPd	11 52.00	-0.4
			iS	12 14.00	
FCH	1.94	186	iPd	11 54.40	0.5
			iS	12 18.00	
PCH	2.26	190	iP	11 57.50	0.2
TACH	2.38	198	iPd	11 58.50	-0.1
			iS	12 27.00	
LCCH	2.44	211	iP	12 00.00	0.7
			iS	12 28.90	
CHCH	2.59	191	iP	12 01.00	-0.1
			iS	12 30.10	
LNV	2.80	204	iPd	12 03.00	-0.6
			iS	12 33.40	
	S.D. = 0.5		on	10 of 10 obs.	

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* JUN 22, 1989 12h 25m 25.61± 0.80s
20.303 S ±10.9km 71.028 W ±12.4km
DEPTH = 33.0km (normal)
4.5mb (4 obs.)
OFF COAST OF NORTHERN CHILE (121)

ANT	3.43	171	e(P)	26 17.50	-0.6
ARE	3.85	353	eP	26 21.00	-3.2X
			iS	27 02.30	
CNCB	4.52	40	eP	26 34.00	-0.1
			i	26 34.90	
LPB	4.67	37	P	26 36.00	0.0
			S	27 44.00	
ZOBO	4.87	35	P	26 37.30	-1.7
	Z 19s		1.07um		
			S	27 06.00	
			LR	28 20.00	
CCH	5.46	59	P	26 49.00	1.8
	0.5s		6.00nm		4.4mb
			i	27 12.20	
NNA	9.98	325	eP	27 35.00	-14.9X
			e	29 45.00	
BAO	22.39	82	e(P)	30 14.00	-8.9X
VVO	60.10	337	e(P)	35 37.40	5.4X
TUL	60.63	337	eP	35 35.10	-0.5
	1.0s		4.70nm		4.6mb
FVM	60.78	342	eP	35 35.00	-1.6
	1.0s		10.00nm		4.9mb
ALQ	64.43	328	eP	36 02.00	0.8
TNP	72.49	323	eP	36 52.50	1.2
	1.0s		2.00nm		4.1mb
KVN	73.66	324	eP	36 59.50	1.4
EDM	81.85	336	eP	37 42.00	-0.8
VAY	105.74	51	ePKP	43 49.80	2.4X
			i	43 55.40	
			i	44 04.40	
GBA	149.14	97	PKPc	45 11.70	3.1X
	0.6s		3.10nm		
MAT	149.78	309	ePKP	45 15.00	5.9X
	0.7s		6.85nm		
	S.D. = 1.3		on	11 of 18 obs.	

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* JUN 22, 1989 12h 44m 52.99± 0.85s
16.803 N ± 9.0km 62.240 W ±10.0km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

BPA	0.44	57	eP	45 02.63	-0.1
			eS	45 09.11	
NEV	0.46	316	eP	45 05.08	2.1
			eS	45 13.16	
ANG	0.53	48	eP	45 04.32	0.4
			eS	45 11.89	
SKI	0.71	318	eP	45 04.32	-2.3
			eS	45 12.00	
SEG	0.81	119	eP	45 07.50	-0.4
PAG	0.94	145	ePc	45 09.35	-0.5
			S	45 20.70	
DEG	1.23	113	ePc	45 13.90	-0.1
MGG	1.25	135	ePc	45 14.60	0.4
			S	45 31.00	
BBL	1.47	150	ePc	45 18.06	0.6
			S	45 36.00	
	S.D. = 1.3		on	9 of 9 obs.	

& JUN 22, 1989 13h 14m 05.73s
61.801 N 149.464 W
DEPTH = 12.2km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.25	233	eP	14 11.69	0.5
			S	14 15.33	
GHO	0.26	96	eP	14 11.37	0.0
PMR	0.26	143	iP	14 11.50	0.1
PME	0.27	130	iP	14 11.75	0.2
KNK	0.62	129	eP	14 17.73	-0.3
			S	14 25.81	
SUA	0.70	242	iP	14 19.19	-0.2
			S	14 29.10	
SKT	0.99	281	eP	14 23.83	-0.6
			S	14 37.99	
SLKM	1.35	196	eP	14 29.83	-0.5
	8 obs. ossocioted				

JUN 22, 1989 13h 27m 53.83± 0.74s
42.791 N ± 5.0km 12.917 E ± 7.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.6 (SSO), 2.3 (ROM).

ASS	0.34	326	Pc	28 00.90	0.1
			eSg	28 07.00	
CIO	0.44	22	ePg	28 02.51	-0.2
			iSg	28 10.13	
MNS	0.44	203	Pc	28 02.00	-0.9
			eSg	28 08.80	
ALP	0.49	91	ePg	28 02.60	-1.1
			iSg	28 10.25	
SSD	0.62	36	e(Pg)	28 06.93	0.6
			e(Sg)	28 18.33	
ARV	0.71	1	P	28 08.00	0.2
			iSg	28 20.50	
AOI	0.91	33	e(Pg)	28 11.06	-0.2
			e(Sg)	28 27.00	
SDI	1.27	148	P	28 19.00	1.5
			eSn	28 40.00	
	S.D. = 1.0		on	8 of 8 obs.	

? JUN 22, 1989 13h 45m 54.42± 1.89s
36.782 N ±22.4km 29.089 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.66	93	ePg	46 08.00	0.4
			eSg	46 20.10	
YER	0.74	299	ePg	46 08.80	-0.1
			eSg	46 20.30	
BCK	1.38	60	ePn	46 19.00	-0.7
KHL	1.58	13	ePn	46 23.00	0.4
	S.D. = 0.9		on	4 of 4 obs.	

JUN 22, 1989 14h 04m 54.99± 0.60s
47.989 N ± 5.2km 6.659 E ± 4.3km
DEPTH = 11.6 ± 6.2 km
FRANCE (538)
ML 2.9 (LDG).

BSF	0.18	150	Pg	04 59.57	0.3
HAU	0.21	275	Pg	05 00.10	0.4
			Sg	05 03.50	
MOF	0.35	113	P	05 02.10	-0.2
			Sg	05 06.81	
VITF	0.51	297	Pg	05 05.26	-0.1
			Sg	05 12.06	
CDF	0.59	44	Pg	05 05.53	-1.4
LOMF	0.65	170	Pg	05 08.57	0.7
FEL	0.92	97	ePn	05 12.90	0.4
GWF	1.18	33	Pg	05 17.37	0.5
			Sg	05 32.44	
RUP	1.73	9	ePg	05 26.78	1.6
LOR	2.03	250	Pn	05 29.20	-0.2
			Pg	05 34.00	
			Sg	06 00.00	
LBF	2.08	242	Pg	05 35.10	4.9X
			Sg	06 02.70	
SSF	2.33	248	Pn	05 33.50	-0.2
			Pg	05 39.80	
			Sg	06 09.80	
SMF	2.34	236	Pg	05 40.60	6.7X
			Sg	06 10.80	
AVF	2.55	243	Pg	05 44.20	7.4X
			Sg	06 17.80	
	S.D. = 0.9		on	11 of 14 obs.	

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* JUN 22, 1989 14h 34m 58.06± 1.37s
61.596 N ± 9.7km 5.300 E ±12.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

SUE	0.60	206	eP	35 09.75	-0.4
			eS	35 20.72	
HYA	0.61	135	eP	35 09.87	-0.4
			eS	35 17.97	
ASK	1.12	183	eP	35 19.64	0.7
			eS	35 35.24	
MOL	1.44	46	eP	35 24.18	0.0
			eS	35 41.71	
ODD1	1.81	158	eP	35 29.52	0 0
			eS	35 48.03	
			iSg	35 55.28	
NRA0	3.14	103	iPc	35 48.70	0.2
			eS	36 23.40	
			iSg	36 35.00	
HFS	4.36	106	eP	36 22.20	16.4X
	0.3s		0.80nm		
	S.D. = 0.5		on	6 of 7 obs.	

JUN 22, 1989 15h 08m 46.13± 0.32s
6.704 S ± 6.2km 81.593 W ± 6.4km
DEPTH = 32.2km (6 depth phases)
4.9mb (9 obs.)
NEAR COAST OF NORTHERN PERU (109)

RECU	6.74	27	eP	10 25.70	-0.2
GGP	7.14	25	Pd	10 30.70	-1.0
			S	11 52.40	
QUR	7.17	25	Pd	10 31.20	-0.7
			eS	17 54.30	
CAYA	7.64	28	P	10 37.00	-1.6

22d 15h

COTA	7.71	25	P	10	35.20	-4.3X
			S	11	58.00	
HUA	8.15	131	eP	10	44.70	-0.8
			eS	12	29.60	
ZOBO	16.25	127	Pc	12	32.50	-1.9
	1.2s		47.30nm		4.5mb	
	Z 20s		0.58um		4.2Msz	
			LR	18	22.00	
LPB	16.42	128	P	12	36.00	-0.4
			LR	48	16.00	
CNCB	16.67	128	P	12	39.00	-0.7
PPD	32.95	121	eP	15	22.20	1.9
BAO	34.09	108	eP	15	29.10	-1.2
VAO	37.04	120	eP	15	44.60	-10.7X
			e(pP)	15	52.80	28km
SOB1	40.37	96	eP	16	22.60	-0.5
			e	16	31.80	31km
			e	16	41.10	
JSC	40.76	0	eP	16	26.00	0.1
OLY	43.00	348	P	16	44.30	0.1
MEO	44.27	340	iPc	16	54.70	0.1
TUL	44.44	343	eP	16	56.60	0.7
	1.2s		22.30nm		4.9mb	
			e	17	09.50	48kmX
			e	18	42.40	
LNO	44.44	343	eP	16	55.90	0.1
RLO	44.47	344	eP	16	59.30	3.1X
FVM	45.21	350	eP	17	02.00	-0.1
	1.0s		9.00nm		4.6mb	
ALQ	47.61	332	eP	17	21.70	0.4
	0.9s		14.71nm		5.0mb	
			e	17	31.50	33km
GOL	51.14	336	eP	17	48.00	-0.4
	0.9s		32.20nm		5.3mb	
			e	17	58.70	37km
BAR	51.45	322	eP	17	51.00	0.4
PLM	52.03	322	eP	17	55.00	-0.2
TPC	52.06	323	eP	17	55.00	-0.3
RVR	52.78	322	eP	18	03.00	2.4
MSU	53.21	330	P	18	04.00	0.0
MWC	53.35	322	eP	18	05.00	0.0
SBB	53.52	323	eP	18	06.00	-0.1
CLC	54.16	324	eP	18	11.00	0.2
DAU	54.26	332	P	18	12.00	0.2
RSSD	54.50	340	eP	18	13.50	0.1
			e	18	23.40	32km
ISA	54.57	323	eP	18	14.00	0.1
TNP	55.54	326	eP	18	20.50	-0.5
	0.8s		7.35nm		4.8mb	
			e	18	30.60	33km
LLA	56.70	322	ePc	18	28.80	-0.3
KVN	56.71	326	P	18	28.40	-1.0
PRS	56.77	322	eP	18	29.50	-0.1
CMB	57.31	324	e(P)	18	33.20	-0.2
ARN	57.53	323	P	18	35.20	0.2
HPI	57.71	333	P	18	36.30	-0.2
RSON	58.28	351	P	18	38.80	-1.2
ORV	58.97	325	ePc	18	45.30	0.3
LRM	59.11	335	eP	18	45.60	-0.6
MIN	59.56	325	eP	18	48.20	-1.0
WDC	60.25	325	e(P)	18	51.00	-2.7X
LON	64.07	330	P	19	18.80	-0.5
BMW	64.58	329	P	19	22.80	0.2
PNT	64.89	334	ePc	19	25.00	0.5
EDM	65.47	340	eP	19	26.00	-2.2
TIC	77.54	82	P	20	43.60	2.5
KIC	77.77	82	P	20	45.00	2.6
INK	83.10	343	eP	21	10.00	0.3
SPA	83.34	180	e(P)	21	10.50	-0.7
	1.1s		45.24nm		5.5mb	
ATEJ	84.15	52	eP	21	18.00	2.1
AAPN	84.16	51	eP	21	17.50	1.7
APHE	84.42	52	eP	21	19.50	2.3
ASMO	84.46	52	eP	21	22.00	4.6X
MBC	85.68	352	eP	21	23.50	1.0
IMA	88.93	337	P	21	38.00	-0.6
	0.8s		4.31nm		4.8mb	
EKA	88.93	34	Pc	21	41.60	3.0X
	1.2s		15.10nm		5.2mb	
ALE	89.53	2	eP	21	41.00	0.0
WRA	135.83	232	PKPc	28	05.10	-1.2
	0.7s		2.60nm			
WB5	135.84	232	ePKP	28	04.70	-1.6
BJI	143.18	337	(PKP)	28	14.00	-5.0X
BTO	144.69	345	ePKP	28	19.00	-2.7X
MBL	145.23	217	ePKP	28	20.60	-2.4X
TIY	146.60	340	ePKP	28	24.40	-0.6

N 10s 0.20um

GTA	147.41	358	PKPd	28	27.40	1.1
NJ2	148.38	326	ePKP	28	30.60	2.7X
LZH	150.33	351	PKPd	28	36.00	5.0X
	1.5s		66.00nm			
XAN	151.11	342	ePKP	28	31.60	-0.5
WHN	151.96	330	ePKP	28	35.00	1.7

S.D. = 1.1 on 61 of 72 obs.

& JUN 22, 1989 16h 30m 15.27s
60.470 N 142.933 W
DEPTH = 0.1km
SOUTHERN ALASKA (2)
<AGS-P>.

BALM	0.64	27	iP	30	28.35	0.4
			S	30	37.23	
RAGM	0.87	265	eP	30	31.84	-0.8
			S	30	44.71	
CTGM	0.93	57	eP	30	33.45	-0.4
			S	30	47.47	
GLB	1.07	337	iP	30	34.67	-1.6
			S	30	48.58	
SGAM	1.13	273	eP	30	36.10	-1.2
			S	30	53.83	
CVA	1.40	274	eP	30	39.88	-2.0
FID	1.77	281	eP	30	45.11	-2.3
HIN	1.77	269	eP	30	45.84	-1.6
			S	31	10.82	
KLU	1.78	306	eP	30	46.47	-1.1
VZW	1.87	290	eP	30	47.27	-1.6
GLI	2.09	283	eP	30	50.23	-1.7
TOA	2.27	318	eP	30	54.66	0.0
HYT	2.70	80	P	31	01.00	0.2
PAX	2.78	335	eP	31	02.03	0.0
KNK	2.86	292	eP	31	00.75	-2.2

15 obs. associated

% JUN 22, 1989 16h 31m 30.29± 0.83s
38.264 N ± 7.7km 15.043 E ± 6.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.4 (ROM).

ATN	0.35	107	Pc	31	37.40	-0.1
			eSg	31	43.10	
MNO	0.43	220	P	31	38.90	-0.2
			eSg	31	45.40	
GIB	0.85	251	Pc	31	46.80	0.1
			eSg	31	58.40	
MEU	1.16	184	P	31	52.30	0.2
MGR	1.91	12	P	32	03.20	0.0

S.D. = 0.2 on 5 of 5 obs.

& JUN 22, 1989 17h 43m 06.58s
60.233 N 152.430 W
DEPTH = 82.1km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.25	318	iP	43	18.82	-0.3
			S	43	28.59	
ILIM	0.31	240	eP	43	18.81	-0.6
RDT	0.34	2	iP	43	19.18	-0.4
			S	43	29.18	
OPT	0.71	215	iP	43	22.34	-0.4
			S	43	34.13	
NKA	0.78	49	eP	43	24.75	1.3
			S	43	36.50	
CNPM	0.93	139	eP	43	24.62	-0.6
SPU	0.97	11	iP	43	25.31	-0.4
			S	43	39.57	
SLKM	1.13	75	P	43	26.91	-0.8
CDD	1.45	206	eP	43	30.98	-0.7
SUA	1.49	33	eP	43	32.16	-0.2
			S	43	51.75	
SEW	1.50	94	iP	43	32.84	0.6
SKT	1.81	14	eP	43	35.59	-0.9
PWA	1.89	40	eP	43	37.41	-0.2
PMR	2.11	48	iP	43	39.70	-0.9
			i	43	42.00	
			i	44	09.20	
PME	2.17	48	eP	43	40.13	-1.3
KNK	2.28	57	eP	43	41.33	-1.6
GHO	2.30	46	eP	43	41.96	-1.3
FID	2.99	77	eP	43	48.57	-4.1
VZW	3.01	71	eP	43	50.24	-2.8

			S	44	24.75	
KTH	3.41	11	iP	43	58.58	0.0
KLU	3.43	66	eP	43	56.14	-2.7

21 obs. associated

JUN 22, 1989 19h 51m 48.51± 0.40s
27.171 S ± 5.2km 71.369 W ±11.8km
DEPTH = 36.1km (4 depth phases)
5.1mb (6 obs.)
NEAR COAST OF NORTHERN CHILE (122)

ZON	4.95	152	iPd	53	06.50	4.0X
JACH	5.53	173	eP	53	11.50	0.8
ROCH	5.79	177	eP	53	13.50	-1.0
			iS	54	20.70	
PEL	5.98	174	iPd	53	17.00	-0.1
FCH	6.21	172	eP	53	21.00	0.5
LCCH	6.29	182	ePc	53	19.20	-2.1
TACH	6.47	177	iPd	53	23.00	-0.9
			iS	54	34.60	
LNV	6.76	180	iP	53	25.10	-2.8X
CHCH	6.77	175	eP	53	27.00	-1.1
ARE	10.66	359	iPc	54	15.40	-6.8X
			iS	56	09.50	
CNCB	10.78	18	P	54	20.00	-4.1X
			e	57	35.00	
CCH	10.87	27	P	54	22.70	-2.4
			i	54	40.20	
LPB	11.01	17	eP	54	23.00	-4.1X
			e	57	35.00	
ZOBO	11.26	16	P	54	25.60	-5.0X
	Z 24s		0.58um			
			LR	58	08.00	
PPD	18.94	79	eP	56	12.50	3.3X
VAO	22.47	85	eP	56	46.40	0.3
			e	56	50.80	16kmX
			e	56	56.50	
BAO	24.56	67	eP	57	05.50	-1.0
BMA	25.06	86	eP	56	53.00	-18.2X
			e	57	24.70	156kmX
SOB1	33.87	64	eP	58	32.00	1.9
ITR	36.12	66	eP	58	53.40	4.1X
			e	59	01.30	27km
SPA	62.99	180	ePd	02	15.60	1.7
	1.0s		15.50nm		5.1mb	
MEO	66.78	336	e(P)	02	27.30	-11.2X
TUL	66.84	339	eP	02	38.00	-0.8
	0.7s		13.80nm		5.2mb	
			e	02	50.30	42km
LNO	66.84	339	eP	02	37.80	-0.9
FVM	67.23	344	iP	02	40.50	-0.8
	0.8s		15.15nm		5.1mb	
			i	02	52.50	41km
ALQ	70.13	330	eP	03	00.00	0.5
KIC	72.47	73	P	03	14.40	0.7
GOL	73.69	333	eP	03	21.00	0.3
	1.0s		7.50nm		4.6mb	
RSSD	76.99	336	eP	03	40.00	0.6
KVN	79.02	325	eP	03	51.00	0.4
MAW	79.55	164	eP	03	55.00	2.2
RSON	80.16	346	eP	03	56.00	-0.2
	1.0s		20.61nm		5.1mb	
			e	04	07.00	36km
LRM	81.67	332	eP	04	05.70	1.1
EDM	87.98	336	eP	04	35.00	-0.7
BNG	91.92	86	iPc	04	57.70	2.7X
	0.4s		4.00nm		5.2mb	
WB5	126.99	211	ePKP	10	51.70	0.7
GBA	147.90	109	PKPd	11	29.70	0.7
	0.8s		10.60nm			
MAT	153.28	298	ePKP	11	45.00	8.4X
	0.9s		10.92nm			
GKN	158.72	82	PKP	11	45.60	1.6
KKN	159.28	83	PKP	11	43.00	-1.7

S.D. = 1.2 on 28 of 40 obs.

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* JUN 22, 1989 21h 06m 01.84± 2.29s
30.395 N ±22.7km 114.262 W ± 7.0km
DEPTH = 10.0km (geophysicist)
4.6mb (3 obs.)
GULF OF CALIFORNIA (49)

SPX	1.22	302	P	06	23.59	-1.2
ECBX	1.27	328	P	06	25.65	0.3
EMX	1.80	332	P	06	32.66	-0.4
LMX	1.81	341	P	06	39.11	5.9X
RDX	2.11	317	P	06	37.27	-0.5

CPBX	2.20	336	P	06	45.22	6.2X
PBX	2.50	303	P	06	43.10	-0.2
ENX	2.54	306	P	06	43.84	0.1
GLA	2.69	350	eP	06	47.00	1.0
CBX	2.81	314	P	06	46.18	-1.5
PLM	3.69	324	e(P)	07	00.40	0.1
PEC	4.27	326	e(P)	07	10.00	1.6
LSM	6.55	346	P	08	00.60	19.9X
MCA	6.73	339	P	08	12.80	29.7X
BCH	6.84	316	ePn	07	45.00	0.2
			ePg	08	10.50	
			eLg	09	37.50	
LCH	7.38	338	ePn	07	45.00	-7.4X
			eP	08	00.60	
			ePg	08	10.50	
			eLg	09	37.50	
PPK	7.64	338	P	08	30.50	34.5X
ALQ	7.99	53	e(P)	08	00.00	-0.9
FRI	7.99	327	eP	08	25.60	24.9X
TNP	8.05	343	e(P)	08	03.00	1.2
MSU	8.28	11	eP	08	06.00	0.9
PV10	9.05	27	ePn	08	14.00	-1.8
			eLg	10	47.00	
PV09	9.12	26	ePn	08	16.00	-0.8
			ePg	08	48.10	
CMB	9.15	328	eP	08	28.40	11.5X
KVN	9.19	341	eP	08	15.30	-2.3
DUG	9.85	6	P	08	34.20	7.5X
LON	17.35	342	P	10	08.80	3.2X
SES	20.13	6	ePc	10	40.90	2.2
RSON	25.56	31	P	11	32.60	0.3
	1.4s	22.10nm			4.7mb	
FFC	25.87	16	eP	11	35.00	-0.1
	1.2s	21.00nm			4.7mb	
PMR	38.63	334	P	13	28.50	1.8
	1.2s	11.36nm			4.5mb	
INK	39.59	349	eP	13	40.00	5.4X

S.D. = 1.3 on 21 of 32 obs.

& JUN 22, 1989 21h 15m 00.83s
37.283 N 116.412 W
DEPTH = 0.0km
5.3mb (54 obs.) 4.8Msz (1 obs.)
SOUTHERN NEVADA (41)
<DOE>. ML 5.2 (BRK). 37° 16' 58.35" N., 116° 24' 44.30" W., Surfoce Elev. 2007 m., Depth of Buriol 500 m., Shot Time 211500.83, "CONTACT," Nevada Test Site (Dept. of Energy).

YMT5	0.39	185	iPc	15	08.50	0.0
YMT6	0.42	179	iPc	15	09.10	-0.2
YMT3	0.49	180	iPc	15	10.30	-0.4
FMT	0.71	205	iPc	15	14.00	-0.9
MGM	0.88	281	iPc	15	17.40	-1.0
MCA	0.94	228	iPc	15	18.40	-1.2
LCH	0.99	268	iPc	15	19.10	-1.5
MTI	0.99	66	iPc	15	18.90	-1.7
TNP	1.02	322	iPc	15	20.20	-1.1
PANV	1.04	212	iP	15	20.30	-1.3
SVP	1.19	292	iPc	15	23.10	-1.0
PPK	1.20	277	iPc	15	23.40	-0.9
NPN	1.23	72	iPc	15	23.30	-1.5
QSM	1.37	196	eP	15	25.90	-1.1
CLC	1.75	213	iPc	15	31.50	-1.1
MNA	1.80	310	iPc	15	32.40	-1.1
GSC	2.00	189	iPc	15	35.00	-1.4
KVN	2.21	324	iPc	15	38.30	-1.2
ISA	2.32	226	iPc	15	39.80	-1.2
FRI	2.65	265	iPc	15	44.30	-1.3
			i	15	48.70	
SBB	2.83	204	iPc	15	46.70	-1.6
TPC	3.18	175	iPc	15	51.50	-1.7
PKEM	3.21	249	eP	15	53.00	-0.5
CMB	3.24	285	iPc	15	52.60	-1.4
			i	15	59.40	
MWC	3.33	204	ePc	15	54.40	-1.1
PEC	3.44	190	eP	15	55.50	-1.3
PAS	3.44	205	iPc	15	55.80	-1.0
PHAM	3.52	247	eP	15	56.50	-1.5
MSU	3.57	69	iPc	15	57.30	-1.6
PRI	3.60	253	iPc	15	57.70	-1.5
			i	16	04.90	
HAY	3.62	170	ePc	15	57.50	-1.9
BCH	3.63	236	iPc	15	58.30	-1.3
LLA	3.69	261	e(P)	15	58.00	-2.4
PLM	3.94	185	iPc	16	02.80	-1.3
SYP	3.99	228	eP	16	04.00	-0.8
DUG	4.05	43	eP	16	03.80	-1.7
SAO	4.06	264	eP	16	03.90	-1.7
ARN	4.08	272	eP	16	04.40	-1.6
PRS	4.09	258	iPc	16	04.10	-1.9
			i	16	11.30	
MHC	4.17	272	ePc	16	06.00	-1.3
BLP	4.23	231	eP	16	06.60	-1.3
GLA	4.42	162	iPc	16	08.60	-2.1
ORV	4.59	301	iPc	16	11.30	-1.9
SCI	4.64	203	ePc	16	12.30	-1.5
BKS	4.66	279	iPc	16	12.30	-1.9
BRK	4.68	279	eP	16	12.50	-1.9
PCC	4.76	274	eP	16	13.30	-2.2
MIN	5.08	309	eP	16	18.50	-1.7
WDC	5.80	306	iPc	16	28.10	-2.2
PV09	5.88	76	eP	16	31.00	-0.7
PV10	5.94	77	eP	16	31.50	-0.9
TDM	6.62	138	P	16	40.60	-1.4
HPI	6.90	20	eP	16	44.80	-1.2
ALQ	8.39	103	iPc	17	04.50	-2.3
	0.5s	38.73nm			6.0mb	
			eS	18	38.00	
			eLg	19	28.00	
VGB	8.85	340	eP	17	13.50	0.5
GOL	8.99	71	ePc	17	13.80	-1.4
LRM	9.03	18	eP	17	16.20	0.5
GLD	9.11	71	eP	17	15.50	-1.3
SHW	9.91	336	eP	17	28.00	0.4
LON	10.27	339	ePc	17	33.80	1.2
DPW	10.66	353	eP	17	37.70	-0.3
PNT	12.25	350	eP	18	00.00	0.5
PGC	12.47	338	eP	18	05.00	2.7
SES	13.66	15	eP	18	17.00	-1.3
	1.0s	134.00nm			5.9mb	
EDM	16.08	7	eP	18	48.30	-1.5
TUL	16.62	89	eP	18	55.80	-1.0
	1.0s	105.00nm			4.9mb	
Z	19s	0.60um			5.8Msz	
		LR		24	38.00	
LNO	16.62	88	eP	18	55.30	-1.4
VVO	16.78	90	eP	18	57.60	-1.2
RLO	17.18	87	e(P)	19	01.70	-2.2
FFC	20.05	25	iPc	19	35.20	-3.0
	1.0s	309.00nm			5.6mb	
OLY	20.15	88	eP	19	37.40	-2.0
FVM	20.58	80	eP	19	42.00	-1.9
	1.0s	220.00nm			5.4mb	
RSON	21.11	43	eP	19	46.40	-2.9
	0.6s	40.76nm			4.9mb	
PWLA	22.98	87	eP	20	08.00	-0.1
RSCP	24.81	85	eP	20	24.70	-1.2
	0.9s	55.76nm			5.3mb	
YKC	25.25	2	ePc	20	27.50	-2.3
	0.8s	50.00nm			5.3mb	
YKA	25.26	2	eP	20	28.60	-1.3
GBTN	25.88	84	eP	20	34.50	-1.5
TKL	26.23	84	eP	20	37.80	-1.4
OXX	26.57	134	(P)	20	43.50	0.8
PRM	27.75	86	eP	20	51.50	-1.7
BLA	28.55	79	eP	20	58.60	-1.7
	1.0s	95.00nm			5.6mb	
JSC	28.58	85	eP	20	58.50	-2.1
LHS	28.88	85	eP	21	01.20	-2.1
DHN	29.59	67	eP	21	06.80	-2.9
CVL	29.93	77	eP	21	10.80	-1.9
CBN	30.73	76	eP	21	17.00	-2.8
TOA	30.91	333	eP	21	21.00	-0.2
GAC	31.51	61	eP	21	24.00	-2.5
PMR	31.72	331	iP	21	27.90	-0.3
PTN	31.87	64	iP	21	27.00	-2.7
PRIN	32.41	71	eP	21	31.70	-2.8
INK	32.50	348	eP	21	33.00	-2.0
TBR	32.68	70	iP	21	34.90	-2.0
FBA	33.28	336	iP	21	41.20	-0.6
SVW	34.17	327	eP	21	48.00	-1.6
BNH	34.53	63	eP	21	50.80	-2.0
SDN	34.68	316	eP	21	53.40	-0.5
TTA	35.16	330	eP	21	56.80	-1.4
IMA	35.94	335	eP	22	03.60	-1.2
	1.2s	42.70nm			5.2mb	
MIM	36.05	62	eP	22	03.80	-2.0
EMM	37.19	63	eP	22	14.00	-1.3
MBC	39.08	359	ePc	22	29.40	-1.4
	0.9s	35.00nm			5.0mb	
UPA	43.63	121	eP	23	06.70	-2.1
	1.0s	60.00nm			5.3mb	
ALE	48.74	8	eP	23	45.00	-3.6
	1.0s	17.00nm			5.1mb	
ARE	68.16	133	eP	26	04.00	-1.5
	1.0s	81.00nm			5.9mb	
KEV	69.97	13	eP	26	12.00	-3.6
ZOBO	70.01	130	Pc	26	14.40	-2.8
	1.0s	32.50nm			5.4mb	
		eLR		40	44.00	
LPB	70.23	130	P	26	17.00	-1.4
CNCB	70.52	131	P	26	18.00	-2.3
DMU	70.81	36	eP	26	15.30	-5.7
DLE	71.36	37	eP	26	17.50	-6.8
ATB	71.80	109	Pc	26	24.50	-2.9
SOD	71.97	14	iP	26	24.30	-3.4
NAO	73.19	24	P	26	32.00	-3.0
	0.7s	8.30nm			5.0mb	
NRA0	73.48	24	P	26	34.20	-2.5
HFS	74.63	23	eP	26	40.50	-2.9
	0.7s	29.20nm			5.4mb	
Z	16s	0.14um			4.4MszX	
		LR		53	40.00	
SUF	75.91	17	eP	26	47.00	-3.6
	1.0s	13.20nm			5.0mb	
UPP	76.06	22	iP	26	48.60	-2.9
FLN	77.21	38	eP	26	56.20	-1.9
	1.1s	31.20nm			5.4mb	
GRR	77.27	38	eP	26	56.80	-1.7
	1.2s	44.00nm			5.5mb	
LPF	77.43	38	eP	26	57.20	-2.1
	1.0s	36.00nm			5.5mb	
NUR	77.46	19	iP	26	56.80	-2.5
Z	21s	0.50um			4.8Msz	
LDF	77.50	38	eP	26	57.80	-1.9
	1.2s	41.60nm			5.4mb	
SNF	78.21	34	Pc	27	02.30	-1.3
WTS	78.24	32	eP	27	02.50	-1.2
	1.0s	20.00nm			5.2mb	
NIIJ	78.28	308	eP	27	02.40	-1.8
DOU	78.65	34	P	27	04.30	-1.7
	1.1s	73.10nm			5.7mb	
ENN	78.75	33	ePc	27	04.50	-2.1
	1.0s	34.00nm			5.4mb	
		i		27	10.00	
MFF	78.84	39	eP	27	05.10	-2.1
	1.1s	39.00nm			5.4mb	
MEM	78.91	33	Pc	27	05.70	-1.7
CHJJ	79.02	307	eP	27	06.80	-1.5
MAT	79.21	308	eP	27	07.00	-2.4
	1.2s	50.00nm			5.4mb	
MTMJ	79.44	308	eP	27	08.90	-1.8
WLF	79.66	34	Pc	27	10.20	-1.3
LSF	79.92	39	iPc	27	10.70	-2.3
	1.1s	22.90nm			5.0mb	
RUP	80.03	33	eP	27	11.90	-1.7
IIDJ	80.06	307	eP	27	11.90	-2.1
ABH	80.11	33	eP	27	12.00	-2.0
TCF	80.23	38	iPc	27	12.60	-2.1
	1.1s	34.10nm			5.2mb	
SSF	80.32	37	iPc	27	13.10	-2.0
	1.1s	34.10nm			5.2mb	
LOR	80.34	37	iPc	27	13.40	-1.8
	1.1s	73.20nm			5.6mb	
BGF	80.36	38	iPc	27	13.10	-2.2
	0.9s	29.40nm			5.2mb	
AVF	80.44	37	eP	27	13.30	-2.4
	1.2s	42.80nm			5.3mb	
LFF	80.44	40	iPc	27	13.80	-2.0
	1.2s	53.50nm			5.4mb	
MAF	80.46	38	iPc	27	13.70	-2.2
	1.1s	30.20nm			5.2mb	
RJF	80.58	39	eP	27	14.40	-2.1
	1.1s	26.30nm			5.1mb	
LBF	80.60	37	iPc	27	14.60	-2.1
	1.1s	30.20nm			5.2mb	
VITF	80.64	35	P	27	14.71	-2.0
SMF	80.77	37	eP	27	15.30	-2.3
	1.1s	36.60nm			5.3mb	
GWF	80.82	34	P	27	15.99	-1.8
LPO	80.85	40	iPc	27	16.00	-2.0
	1.1s	34.10nm			5.3mb	
TOD	80.86	33	eP	27	16.25	-1.7
HAU	80.96	35	iPc	27	16.60	-1.9
	1.1s	45.90nm			5.4mb	
CDF	81.08	34	P	27	17.16	-2.1
CAF	81.12	39	iPc	27	17.40	-2.0

22d 21h

	1.1s	42.40nm			5.4mb
ECH	81.17	34 P	27	17.99	-1.7
MOX	81.24	30 ePc	27	18.00	-1.9
	1.1s	18.00nm			5.0mb
TSRJ	81.24	308 eP	27	19.20	-1.0
TOL	81.28	46 eP	27	18.50	-1.8
CLL	81.28	29 iP	27	18.00	-2.0
	1.2s	19.00nm			5.0mb
BSF	81.29	35 P	27	18.16	-2.2
MOF	81.43	35 P	27	18.84	-2.2
EPF	81.56	41 iPc	27	19.80	-2.0
	1.1s	19.50nm			5.1mb
LOMF	81.66	35 P	27	19.84	-2.4
CN2	81.74	320 Pd	27	20.40	-2.2
FEL	81.81	34 eP	27	20.90	-2.2
GRF	81.82	31 eP	27	21.70	-1.2
	1.1s	29.00nm			5.3mb
BRG	81.99	29 iP	27	22.00	-1.8
	1.1s	21.00nm			5.2mb
SLE	82.11	34 ePc	27	22.50	-2.0
ZLA	82.27	34 ePc	27	23.70	-1.7
DIX	82.88	36 ePc	27	27.50	-1.4
KSP	82.91	28 eP	27	26.50	-2.1
		e	28	51.00	
PRU	82.92	29 eP	27	26.50	-2.2
	1.5s	20.10nm			5.1mb
AAPN	82.95	48 eP	27	27.40	-1.8
LPG	83.00	36 eP	27	28.20	-1.3
	1.1s	31.70nm			5.5mb
LLS	83.01	34 ePc	27	28.20	-1.2
BAO	83.04	116 eP	27	29.50	-0.4
ALOJ	83.09	48 eP	27	28.50	-1.5
ASMO	83.14	48 eP	27	28.90	-1.3
MMK	83.15	35 ePc	27	29.40	-0.9
MAL	83.16	49 iPd	27	29.00	-1.1
EBR	83.18	43 eP	27	29.00	-1.1
KHC	83.22	30 Pc	27	28.50	-1.8
	1.2s	12.50nm			5.0mb
LSD	83.22	36 P	27	29.55	-1.1
ATEJ	83.27	48 eP	27	30.00	-0.9
APHE	83.44	48 eP	27	30.50	-1.3
RRL	83.44	37 P	27	30.88	-0.9
ORX	83.48	36 P	27	30.37	-1.4
RSP	83.50	36 P	27	30.99	-0.9
TMA	83.53	35 ePc	27	30.70	-1.4
AVE	83.56	53 iP	27	30.50	-1.8
OSS	83.66	34 ePc	27	31.70	-1.1
PZZ	83.90	37 P	27	32.94	-1.0
OGA	83.91	33 iPd	27	33.30	-0.8
	1.2s	19.00nm			5.2mb
SNY	84.11	319 Pc	27	33.60	-1.3
SOB1	84.20	106 eP	27	34.50	-1.2
STV	84.20	37 P	27	33.04	-2.4
ENR	84.26	37 P	27	33.14	-2.4
KMR	84.29	31 eP	27	34.00	-1.7
FRF	84.38	38 eP	27	34.30	-1.9
	0.9s	26.20nm			5.5mb
ROB	84.43	37 P	27	32.63	-3.9
LMR	84.48	38 eP	27	34.80	-1.9
	1.0s	41.60nm			5.6mb
KBA	84.74	32 eP	27	36.00	-2.2
	1.1s	21.90nm			5.3mb
		iSg	46	46.30	
		i	46	50.70	
FR *	84.86	51 iPd	27	39.50	0.5
TIO	85.20	55 iPd	27	37.50	-3.2
ZST	85.36	29 iP	27	39.20	-1.8
		e	46	05.00	
SPC	85.72	27 eP	27	41.70	-1.4
SRO	86.15	29 iP	27	44.20	-0.7
BJI	89.17	322 eP	27	58.00	-1.7
BZS	89.23	28 eP	27	57.00	-2.9
HHC	90.69	326 eP	28	05.50	-1.4
BTO	91.58	327 eP	28	10.20	-0.8
TIA	91.64	319 eP	28	09.20	-2.0
TLY	92.80	323 eP	28	16.60	0.0
SSE	93.25	313 Pc	28	17.40	-1.3
	1.0s	24.00nm			5.6mb
NJ2	93.86	316 eP	28	20.00	-1.5
BNG	121.04	55 iPKPd	33	55.00	-2.5
	0.4s	4.00nm			
KSR	146.92	81 iPKPc	34	43.70	-1.6
	0.7s	12.50nm			
SLR	147.95	79 iPKPd	34	48.00	1.1
	1.0s	45.00nm			
MAW	149.63	179 ePKP	34	51.00	3.0
	221 obs. associated				

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* JUN 22, 1989 21h 28m 51.47± 1.36s
29.786 N ±15.4km 114.204 W ± 9.6km
DEPTH = 10.0km (geophysicist)
4.0mb (1 obs.)
BAJA CALIFORNIA (48)

SPX	1.66	319	P	29	21.00	-0.1
ECBX	1.83	337	P	29	20.95	-2.3
EMX	2.37	338	P	29	28.97	-2.0
LMX	2.40	345	P	29	32.89	1.4
RDX	2.61	325	P	29	33.65	-1.0
CPBX	2.79	341	P	29	40.41	3.5X
PBX	2.92	313	P	29	40.11	1.3
ENX	2.97	315	P	29	40.57	1.0
CBX	3.29	321	P	29	44.28	0.1
GLA	3.30	351	eP	29	44.00	-0.3
PLM	4.22	328	eP	29	57.50	0.1
PEC	4.80	329	eP	30	05.50	-0.1
BCH	7.32	319	eP	30	42.40	1.2
ALQ	8.33	50	eP	30	56.20	0.9
CMB	9.70	330	e(P)	31	25.80	11.7X
			e	34	03.20	
VVO	16.52	66	e(P)	32	54.70	10.0X
TUL	16.62	64	eP	32	52.50	6.4X
	1.2s	13.60nm			4.0mb	
LNO	16.63	64	e(P)	32	53.70	7.7X
RLO	17.29	63	e(P)	32	55.00	0.5
EDM	23.42	1	eP	34	04.50	3.1X
ZOBO	63.80	130	(P)	39	26.00	-0.9
Z	23s	0.23um			4.3MszX	
		LR		22	03.00	

S.D. = 1.2 on 15 of 21 obs.

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* JUN 22, 1989 21h 44m 13.96± 3.70s
51.585 N ±25.8km 16.072 E ±21.0km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 2.9 (VKA).

KSP	0.76	169	iP	44	28.00	-0.7
			iS	44	37.50	
			i	44	45.50	
BRG	1.51	243	iPn	44	41.00	-0.1
			iPg	44	43.00	
			iSg	45	03.00	
PRU	1.87	212	Pn	44	46.10	-0.2
			Pg	44	47.80	
			Sn	45	05.30	
			Sg	45	10.00	
CLL	1.94	263	iPn	44	47.40	0.1
			iPg	44	50.20	
			iSg	45	17.10	
KHC	2.93	214	iPn	45	01.00	-0.5
			Pg	45	07.80	
			Sn	45	37.00	
			Sg	45	45.70	
MOX	2.96	253	iPg	45	10.00	8.1X
			iSg	45	50.00	
WET	3.18	221	iPnc	45	05.30	0.2
VKA	3.33	177	e(Pn)	45	08.00	0.9
			iPgc	45	16.50	
			iSg	45	59.80	
GRF	3.62	240	e(Pn)	45	11.60	0.3
			e(Sg)	46	07.30	
TNS	5.01	257	ePn	45	30.50	-0.5
			eSn	46	56.10	
OGA	5.76	217	iPd	45	42.10	0.4

S.D. = 0.6 on 10 of 11 obs.

& JUN 22, 1989 22h 07m 33.02s
61.224 N 152.413 W
DEPTH = 125.8km
SOUTHERN ALASKA (2)
<AGS-P>.

CRP	0.13	71	eP	07	50.28	1.3
SPU	0.18	104	iP	07	50.17	1.2
CGLM	0.21	67	iP	07	50.09	1.0
RDT	0.65	180	iP	07	52.23	-0.7
			S	08	07.78	
RED	0.83	192	iP	07	53.71	-0.7
SUA	0.84	73	iP	07	54.31	-0.2
			S	08	10.65	
SKT	0.87	29	iP	07	54.07	-0.6
ILIM	1.18	193	eP	07	56.90	-0.8
SLKM	1.29	123	eP	07	58.47	-0.4
OPT	1.63	195	iP	08	02.19	-0.5
KNK	1.92	83	eP	08	04.97	-1.3
KTH	2.44	16	eP	08	11.29	-1.6
12 obs. associated						

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* JUN 22, 1989 22h 15m 45.83± 2.79s
30.333 N ±29.5km 114.252 W ± 7.3km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.)
GULF OF CALIFORNIA (49)

SPX	1.26	305	P	16	09.55	0.0
EMX	1.86	333	P	16	17.07	-0.8
LMX	1.87	341	P	16	24.05	5.9X
RDX	2.16	318	P	16	22.00	-0.5
CPBX	2.26	337	P	16	29.22	5.4X
PBX	2.55	304	P	16	28.32	0.5
ENX	2.58	307	P	16	27.95	-0.4
GLA	2.76	350	eP	16	31.30	0.4
CBX	2.86	314	P	16	31.93	-0.5
TDM	3.26	53	P	16	49.40	11.4X
PLM	3.74	324	eP	16	45.00	-0.1
PEC	4.32	326	e(P)	16	52.80	-0.3
BCH	6.89	316	eP	17	30.00	0.5
ALQ	8.02	53	e(P)	17	44.00	-1.4
	0.7s	1.71nm			4.4mb X	
		eS		19	18.00	
		eLg		20	08.00	
SES	20.19	6	eP	20	25.00	1.7
FFC	25.92	16	eP	21	20.50	0.9
	1.0s	12.00nm			4.5mb	

S.D. = 0.9 on 13 of 16 obs.

% JUN 22, 1989 22h 28m 29.54± 1.07s
37.748 N ± 8.2km 15.079 E ± 8.7km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.7 (ROM).

MNO	0.36	301	Pc	28	36.10	-0.8
			eSg	28	42.80	
ATN	0.51	36	Pc	28	40.20	0.3
			eSg	28	50.30	
MEU	0.66	190	P	28	42.00	-0.7
			eSn	28	49.90	
GIB	0.87	286	P	28	46.30	0.0
FAI	1.21	248	P	28	53.30	1.2

S.D. = 1.2 on 5 of 5 obs.

% JUN 23, 1989 00h 27m 25.27± 0.86s
37.754 N ± 8.9km 14.447 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.4 (ROM).

MNO	0.26	48	Pc	27	31.00	0.1
			eSg	27	36.20	
GIB	0.41	305	P	27	32.70	-0.9
			eSg	27	38.70	
MCT	0.66	260	Pc	27	39.50	1.0
MEU	0.76	149	P	27	39.50	-0.6
			eSg	27	53.80	
ATN	0.90	63	P	27	43.00	0.5

S.D. = 1.1 on 5 of 5 obs.

JUN 23, 1989 00h 32m 14.47± 0.72s
40.697 N ± 7.2km 22.823 E ± 7.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.2 (ATH). ML 3.0 (SKO).

PLG	0.57	124	ePb	32	26.50	0.4
VAY	0.65	343	iPg	32	26.70	-0.8
			iSg	32	35.40	
KZN	0.89	244	ePb	32	31.00	-0.6
NEO	1.42	167	ePb	32	40.00	-0.4
KBN	1.53	268	ePn	32	42.50	0.7
OHR	1.59	286	ePn	32	43.00	0.2
SKO	1.65	321	ePn	32	44.00	0.5
PHP	2.05	300	ePn	32	53.60	4.2X
TPE	2.18	260	ePn	32	57.50	6.2X
TIR	2.33	287	ePn	32	57.50	4.1X
MLR	5.31	24	eP	33	50.00	14.2X

S.D. = 0.7 on 7 of 11 obs.

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* JUN 23, 1989 00h 35m 42.62± 0.32s
17.098 S ±12.0km 172.656 W ± 8.3km

DEPTH = 33.0km (normal)
4.9mb (12 obs.) 5.0Msz (1 obs.)
TONGA ISLANDS REGION (174)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 18C
Centroid Location:
Origin Time 00:35:41.5 1.4
Lat 17.94S 0.17 Lon 172.84W 0.16
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**17 Nm
Mrr= 0.18 0.05 Mtt= 0.02 0.06
Mff=-0.20 0.08 Mrt= 0.29 0.13
Mrf= 1.29 0.12 Mtf=-0.17 0.06
Principal Axes:
T Val= 1.30 Plg=49 Azm=277
N 0.08 5 13
P -1.38 40 107
Best Double Couple:Mo=1.3*10**17
NP1:Strike=237 Dip= 7 Slip= 134
NP2: 12 85 85

VUN	8.52	263	eP	37 45.10	-1.6
SGE	9.01	266	ePd	37 54.10	0.5
PVC	18.17	265	iPc	40 04.50	10.3X
DZM	20.30	253	iPc	40 17.70	-0.9
KRP	23.20	204	P	40 44.50	-2.9
PMO	23.88	89	eP	40 45.00	-9.2X
	1.2s	50.00nm		4.9mb	
VAH	24.10	89	eP	40 48.00	-8.4X
	1.2s	50.00nm		4.9mb	
TPT	24.15	89	eP	40 48.00	-8.8X
	1.2s	60.00nm		5.0mb	
RUV	24.35	89	eP	40 50.00	-8.8X
	1.2s	55.00nm		5.0mb	
CTA	38.99	259	iPc	43 02.90	-5.0X
	1.1s	13.92nm		4.6mb	
ASPA	50.29	253	iPc	44 31.90	-6.4X
	0.8s	36.00nm		5.4mb	
Z	17s	1.24um		5.0MszX	
		eS	51 40.30		
		LR	05 32.40		
WARB	56.72	250	eP	45 14.00	-11.8X
SBA	61.63	185	eP	45 58.10	-0.9
MAT	70.69	320	(P)	46 58.00	0.7
		eS	56 20.00		
SPA	73.01	180	e(P)	47 07.20	-3.7X
	1.0s	5.00nm		4.5mb	
FRI	73.36	42	e(P)	47 12.20	-1.0
CMB	73.57	41	eP	47 13.30	-1.1
WDC	73.87	37	eP	47 15.20	-0.9
TNP	75.60	42	eP	47 25.00	-1.4
	1.0s	9.50nm		4.7mb	
KVN	75.61	41	P	47 25.20	-1.2
RMW	78.75	32	P	47 43.50	0.0
MSU	79.14	44	P	47 46.10	0.1
PMR	80.64	11	eP	47 52.00	-1.2
	1.3s	15.09nm		4.8mb	
PNT	81.06	32	eP	47 57.00	1.3
ALQ	81.35	49	eP	47 57.00	-0.8
CN2	82.84	320	Pc	48 04.50	-0.6
DL2	82.87	314	eP	48 05.00	-0.3
LRM	82.91	38	eP	48 04.50	-1.2
SNY	83.00	318	Pc	48 05.60	-0.3
FBA	83.92	10	eP	48 08.80	-1.4
	1.1s	31.25nm		5.4mb	
IMA	84.14	8	eP	48 10.60	-0.8
GOL	84.32	46	eP	48 11.00	-2.0
	1.0s	12.50nm		5.0mb	
TIA	84.84	310	eP	48 14.90	-0.5
SES	86.19	34	eP	48 21.00	-0.8
EDM	86.56	31	ePc	48 22.70	-0.8
MEO	87.13	52	e(P)	48 24.50	-2.2
BJI	87.15	313	eP	48 26.00	-0.6
		eSKS	58 52.00		
		eS	59 09.00		
TIY	88.88	310	Pd	48 35.00	-0.2
GYA	89.46	298	Pc	48 48.00	9.8X
INK	89.74	14	eP	48 37.00	-1.4
XAN	90.20	306	Pc	48 40.60	-0.7
BTO	91.70	312	P	48 48.00	-0.2
KMI	92.40	295	Pc+	48 52.00	0.1
Z	20s	0.60um		5.0Msz	
		pP	49 13.00	76kmX	
		sP	49 23.00		
		S	59 28.00		
		sS	00 08.00		

CHG	93.92	288	eP	48	58.40	-0.3
CHTO	93.92	288	eP	48	58.40	-0.3
	1.0s	3.25nm			4.7mb	
MBC	98.45	11	eP	49	18.50	0.4
MAIO	130.26	303	ePKP	54	51.00	-0.6
WTS	145.18	1	ePKP	55	20.00	1.8
	1.2s	26.00nm				
			e	55	30.00	
CLL	145.57	354	iPKPd	55	18.50	-0.5
	1.3s	50.00nm				
KRA	145.59	346	ePKP	55	17.80	-1.2
			e	55	30.80	
NAI	145.69	241	iPKPd	55	20.60	0.0
BRG	145.89	353	iPKP	55	19.10	-0.4
	1.6s	48.00nm				
			i	55	31.50	
UCC	146.30	3	PKP	55	21.00	0.8
SPC	146.32	345	ePKP	55	21.00	0.5
MOX	146.36	355	ePKPc	55	20.00	-0.3
	1.8s	50.00nm				
			e	55	26.00	
			e	55	33.00	
			e	55	50.00	
ENN	146.39	2	ePKP	55	22.00	1.7
	1.5s	54.00nm				
			e	55	46.00	
MEM	146.55	2	PKP	55	23.80	3.3X
PRU	146.68	352	ePKPc	55	21.40	0.6
			e	55	26.50	
DOU	147.01	3	PKPc	55	24.20	2.9X
CFR	147.01	333	ePKP	55	24.00	2.5X
VRI	147.08	335	ePKPc	55	22.50	0.9
ABH	147.30	360	ePKP	55	23.26	1.4
GRF	147.34	355	ePKP	55	23.00	1.1
RUP	147.48	0	ePKP	55	23.88	1.7
WLF	147.50	1	PKP	55	26.20	4.1X
TOD	147.55	358	ePKP	55	23.65	1.4
KHC	147.65	352	iPKPc	55	24.20	1.7
	1.2s	26.00nm				
			e	55	37.50	
MLR	147.70	335	ePKPc	55	24.00	1.2
WET	147.72	353	ePKP	55	25.00	2.4X
FLN	147.78	10	ePKP	55	21.30	-1.3
	0.7s	9.90nm				
ZST	147.97	348	e(PKP)	55	25.40	2.5X
LDF	148.00	9	ePKP	55	21.70	-1.3
	1.1s	24.40nm				
VKA	148.06	349	ePKP	55	25.00	1.9
	4.0s	179.00nm				
SRO	148.07	346	ePKP	55	25.20	2.1X
GRR	148.08	10	ePKP	55	22.30	-0.8
	0.8s	53.80nm				
CMP	148.24	336	ePKPc	55	28.00	4.5X
BBTK	148.38	321	iPKPc	55	26.50	2.5X
LPF	148.39	11	ePKP	55	22.80	-0.8
	1.1s	31.75nm				
KMR	148.63	351	iPKP+	55	27.10	3.1X
			i	55	51.00	
			e	57	35.00	
CDF	148.77	0	ePKP	55	24.70	0.3
	1.1s	14.65nm				
BZS	149.17	340	ePKP	55	25.50	0.6
HAU	149.17	1	ePKP	55	25.60	0.7
	1.0s	22.00nm				
FEL	149.30	359	ePKP	55	28.50	3.2X
BSF	149.35	1	ePKP	55	26.10	0.8
LOR	149 78	5	ePKP	55	26.90	1 1
	1.1s	9.65nm				
PVL	149.81	333	ePKP	55	30.00	4.1X
HRI	149.81	308	e(PKP)	55	30.00	3.6X
MFF	149.93	10	ePKP	55	27.00	1.0
	0.9s	11.45nm				
CTT	149.93	327	ePKP	55	20.00	-6.2X
SSF	149.95	5	ePKP	55	27.20	1.1
	1.1s	12.90nm				
LBF	150.07	5	ePKP	55	27.60	1.3
	1.1s	7.05nm				
OGA	150.16	355	ePKP	55	32.40	5.7X
AVF	150.21	6	ePKP	55	27.80	1.4
	1.1s	12.20nm				
BGF	150.39	6	ePKP	55	28.40	1.6
	1.0s	13.00nm				
SMF	150.39	5	ePKP	55	28.40	1.6
	1.0s	8.00nm				
PTJ	150.40	348	ePKP	55	32.60	5.7X
LJU	150.52	350	e(PKP)	55	32.00	5.0X
LSF	150.53	8	ePKP	55	28.30	1.3

	1.1s	5.83nm				
TCF	150.58	7	ePKP	55	28.70	1.6
	1.1s	5.85nm				
MAF	150.69	7	ePKP	55	29.00	1.8
	1.2s	22.30nm				
DSI	150.78	305	e(PKP)	55	33.00	5.2X
KDZ	151.02	331	ePKP	55	27.00	-0.9
VTS	151.21	335	ePKP	55	34.00	5.7X
RJF	151.46	9	ePKP	55	32.30	3.9X
PRNI	151.55	303	iPKP	55	35.00	6.0X
LPG	151.68	1	ePKP	55	32.30	3.2X
	1.1s	9.75nm				
LFF	151.69	10	ePKP	55	32.50	3.8X
CAF	151.90	8	ePKP	55	33.30	4.2X
	1.0s	8.00nm				
EZN	151.99	328	ePKP	55	30.00	0.7
LPO	152.02	9	ePKP	55	33.20	4.0X
SKO	152.42	337	iPKP	55	35.00	5.1X
VAY	152.53	335	ePKP	55	37.50	7.5X
OHR	153.41	337	ePKP	55	40.20	8.8X
BNG	163.30	222	iPKPc	55	44.00	0.4
	0.4s	2.00nm				

S.D. = 1.1 on 76 of 114 obs.

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* JUN 23, 1989 00h 51m 45.99± 1.63s
30.188 N ±17.5km 114.292 W ± 6.6km
DEPTH = 10.0km (geophysicist)
4.5mb (5 obs.)
GULF OF CALIFORNIA (49)

SPX	1.32	310	P	52	09.99	-0.7
ECBX	1.44	333	P	52	10.22	-1.8
EMX	1.97	336	P	52	18.52	-1.2
LMX	2.00	343	P	52	26.74	6.6X
RDX	2.25	321	P	52	22.41	-1.5
CPBX	2.39	339	P	52	34.50	8.8X
PBX	2.60	307	P	52	28.49	-0.3
ENX	2.65	310	P	52	29.51	0.1
GLA	2.89	351	ePn	52	33.20	0.2
			ePg	52	42.80	
CBX	2.93	317	P	52	32.91	-0.7
PLM	3.84	326	ePn	52	47.50	0.9
			iPg	52	56.10	
PEC	4.42	327	eP	52	55.00	0.3
BCH	6.98	317	ePn	53	31.00	0.2
ALQ	8.13	52	e(P)	53	44.00	-3.1
FRI	8.15	328	e(P)	54	02.20	15.1X
TNP	8.24	344	eP	53	48.60	0.0
MSU	8.49	11	eP	53	54.00	1.9
PV10	9.25	27	ePn	54	03.10	0.5
			ePg	54	30.20	
			eLg	56	43.20	
CMB	9.31	329	eP	54	14.30	11.0X
PV09	9.32	26	ePn	54	04.50	0.8
			eLg	56	57.80	
KVN	9.38	342	ePn	54	04.40	0.0
			ePg	54	46.20	
			eLg	56	02.00	
GLD	12.09	35	ePn	54	40.10	-1.3
			eLg	58	18.90	
LRM	15.68	5	eP	55	32.30	3.6X
SIO	16.07	65	eP	55	38.30	4.7X
VVO	16.42	67	eP	55	42.30	4.2X
TUL	16.52	65	eP	55	43.70	4.4X
	1.3s	14.00nm			3.9mb	
Z	22s	0.48um			4.5Msz	
		LR	00 00.00			
LNO	16.52	65	eP	55	42.80	3.6X
LON	17.54	343	eP	55	53.50	1.4
SES	20.33	6	eP	56	25.00	0.0
FVM	21.20	62	P	56	33.00	-1.0
EDM	23.03	1	eP	56	53.50	1.4
RSCP	24.65	70	P	57	09.10	1.1
	1.0s	10.85nm			4.5mb	
RSON	25.75	31	P	57	17.80	-0.4
	1.4s	24.56nm			4.7mb	
FFC	26.07	16	eP	57	21.50	0.3
	1.2s	19.00nm			4.7mb	
PMR	38.81	334	P	59	11.40	-0.9
	1.2s	9.47nm			4.4mb	
IMA	43.13	338	P	59	50.00	2.0
MBC	46.20	358	eP	00	14.00	1.7

S.D. = 1.3 on 28 of 37 obs.

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* JUN 23, 1989 03h 23m 38.91± 2.31s
34.304 N ±13.0km 24.327 E ±18.3km
DEPTH = 33.0km (normal)

23d 03h

4.0mb (1 obs.)
CRETE (370)
MD 4.2 (ATH).

VAM	1.11	355	ePg	23 58.00	-0.1
NPS	1.43	48	ePg	24 01.50	-1.2
KAP	2.65	61	ePn	24 23.00	2.8X
YER	4.28	48	iP	24 44.90	1.4
KSL	4.67	66	ePn	24 50.00	1.1
IZM	4.72	29	eP	24 50.00	0.3
VLS	4.91	323	ePn	24 58.50	6.2X
ELL	5.16	60	eP	24 56.10	0.0
EZN	5.74	16	eP	25 04.00	0.0
KHL	5.80	45	iP	25 04.40	-0.6
BCK	5.98	56	eP	25 07.20	-0.3
VAY	7.14	349	ePn	25 31.40	7.7X
SKO	7.99	344	ePn	25 32.00	-3.5X
HRI	9.56	93	eP	25 56.00	-1.3
DSI	9.68	103	eP	25 59.00	0.1
			eS	27 41.00	
PRNI	9.85	111	eP	26 02.00	0.7
			eS	27 45.00	
KHC	16.82	335	eP	27 43.60	10.2X
SLL	27.15	348	(P)	29 27.30	6.5X

0.5s 1.80nm 4.0mb
S.D. = 0.9 on 12 of 18 obs.

? JUN 23, 1989 04h 22m 04.85± 5.77s
10.141 S ±76.2km 162.779 E ±65.0km
DEPTH = 134.9 ± 31.7 km
SOLOMON ISLANDS (193)

HNR	2.88	284	eP	22 51.00	0.3
			eS	23 23.00	
SVO	3.08	288	eP	22 53.00	-0.3
			eS	23 24.00	
DZM	12.37	164	iPd	24 57.60	0.0
			iS	27 05.10	
CTA	18.75	236	eP	26 16.00	-0.1
WB5	29.06	247	eP	27 54.80	0.1

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

• JUN 23, 1989 05h 35m 51.08± 3.57s
40.130 N ±20.0km 20.789 E ±24.5km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
ML 2.8 (SKO).

LSK	0.15	278	iPgc	35 53.30	-1.3
KBN	0.49	2	ePg	36 00.10	-1.0
TPE	0.62	286	iPgc	36 04.90	1.4
SRN	0.65	248	ePg	36 04.00	-0.1
BERA	0.86	312	ePg	36 07.10	-0.5
OHR	0.98	0	iPg	36 10.70	1.0
			iSg	36 24.20	
VLO	1.05	289	ePn	36 16.20	5.4X
TIR	1.40	330	ePn	36 19.00	2.3X
PHP	1.58	351	ePn	36 21.80	2.7X
LACI	1.71	332	ePn	36 23.50	2.4X
SKO	1.90	15	ePn	36 27.00	3.1X
			i	36 36.00	
SDA	2.12	333	ePn	36 29.50	2.5X
BCI	2.30	347	ePn	36 33.50	3.9X

S.D. = 1.4 on 6 of 13 obs.

• JUN 23, 1989 06h 28m 43.72± 1.06s
39.230 N ± 8.4km 30.413 E ±10.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.29	233	iPg	28 49.40	-0.5
			eSg	28 54.20	
GPA	1.06	356	ePn	29 02.70	-1.0
KHL	1.14	218	iPn	29 04.80	-0.4
MRT	1.69	340	ePn	29 12.00	-1.4
BBTK	1.92	71	ePg	29 17.50	0.7
			iSg	29 42.00	
ISK	2.11	331	ePn	29 20.00	0.6
BNT	2.23	301	iPn	29 26.30	5.1X
EDC	2.26	300	ePn	29 24.00	2.3
EZN	3.22	282	ePn	29 35.00	-0.2

S.D. = 1.4 on 8 of 9 obs.

JUN 23, 1989 07h 08m 24.32± 0.69s
17.144 N ±11.3km 62.290 W ± 6.6km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

NEV	0.27	268	eP	08 31.71	0.0
			eS	08 35.71	
BPA	0.43	103	eP	08 33.65	-0.2
			eS	08 39.39	
ANG	0.44	89	eP	08 34.37	0.4
			eS	08 40.27	
SKI	0.47	294	eP	08 34.45	0.0
PAG	1.25	152	eP	08 45.40	-0.3
			S	09 01.00	
DEG	1.44	125	eP	08 48.00	-0.4
			S	09 00.00	
BBL	1.79	154	eP	08 54.00	0.6

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

• JUN 23, 1989 07h 17m 26.61± 1.71s
37.273 N ±14.1km 20.591 E ± 7.0km
DEPTH = 24.7 ± 7.8 km
3.7mb (1 obs.)
IONIAN SEA (399)
ML 3.6 (ATH), 3.4 (ROM).

VLS	0.90	360	ePg	17 41.30	-2.2
ATH	2.58	73	ePb	18 16.20	8.6X
SRN	2.64	350	ePn	18 09.00	0.5
LSK	2.87	0	ePn	18 12.50	0.7
NEO	2.90	45	ePn	18 14.20	2.0
TPE	3.05	352	ePn	18 17.90	3.6X
KZN	3.17	17	ePn	18 17.30	1.2
VAM	3.46	122	ePn	18 28.70	8.6X
BERA	3.46	352	ePn	18 21.70	1.6
LCI	3.69	327	P	18 22.00	-1.3
PLG	3.82	35	ePn	18 25.70	0.5
OHR	3.84	2	ePn	18 29.00	3.5X
TIR	4.11	352	ePn	18 30.00	0.7
ATN	4.16	284	P	18 30.70	0.6
			eSn	19 15.10	
VAY	4.32	20	ePn	18 32.40	0.0
LACI	4.41	351	ePn	18 34.20	0.6
PHP	4.41	359	ePn	18 34.50	0.9
MEU	4.52	270	Pc	18 34.90	-0.5
			eSn	19 21.40	
SKO	4.74	8	ePn	18 37.00	-1.3
SDA	4.81	350	ePn	18 39.60	0.3
MGR	4.87	308	P	18 40.00	-0.1
MMB	4.95	28	eP	18 41.00	-0.2
KKB	4.98	22	eP	18 41.00	-0.6
BCI	5.10	356	ePn	18 47.00	3.6X
SGO	5.27	310	P	18 46.40	0.7
RZN	5.44	35	eP	18 47.00	-1.4
VTS	5.68	20	eP	18 52.00	0.3
KDZ	5.75	39	eP	18 52.00	-0.6
PVL	6.96	30	eP	19 08.00	-1.5
MLR	9.14	24	eP	19 41.00	1.0
HFS	23.30	351	eP	22 31.60	-1.6

0.5s 1.20nm 3.7mb
S.D. = 1.1 on 26 of 31 obs.

JUN 23, 1989 07h 19m 12.77± 0.30s
45.306 N ± 2.5km 6.573 E ± 3.1km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.8 (LDG).

LPG	0.23	33	Pg	19 17.80	-0.1
			Sg	19 22.20	
LPL	0.24	28	Pg	19 18.00	0.0
BNI	0.26	164	P	19 18.40	0.0
			eSg	19 20.50	
RRL	0.41	159	P	19 21.47	0.2
			S	19 27.56	
LSD	0.44	69	P	19 21.58	-0.2
			S	19 27.69	
RSP	0.51	107	P	19 23.43	0.3
			S	19 30.51	
FOUF	0.79	169	ePg	19 28.34	0.2
			e(Sg)	19 36.03	
PZZ	0.88	155	P	19 29.53	-0.3
			S	19 41.53	
DOI	0.93	149	P	19 30.00	-0.6
			eSg	19 42.50	
ORX	1.04	71	P	19 32.54	0.0
			S	19 46.53	
STV	1.19	153	P	19 34.80	-0.2
			S	19 50.41	
ENR	1.24	150	P	19 36.14	0.4
			S	19 51.66	
ROB	1.37	137	P	19 38.11	0.2
SBF	1.57	157	Pg	19 43.60	2.8X
			Sg	20 05.00	
FRF	1.75	178	Pg	19 47.20	3.9X
			Sg	20 10.40	
SMF	2.33	306	Pg	19 57.60	5.9X
			Sg	20 27.40	
LBF	2.47	314	Pn	19 54.20	0.5
			Pg	19 59.80	
			Sg	20 30.00	
AVF	2.69	305	Pg	20 04.50	7.6X
			Sg	20 38.00	
HAU	2.71	357	Pg	20 03.90	6.8X
			Sg	20 38.60	
LOR	2.72	317	Pn	19 57.20	-0.1
			Sg	20 38.60	
SSF	2.76	311	Pg	20 06.00	8.1X
			Sg	20 39.00	
BGF	2.89	297	Pn	19 59.50	-0.1
			Pg	20 07.60	
			Sg	20 43.40	
TCF	3.21	289	Pn	20 04.00	-0.2
			Pg	20 14.00	
			Sg	20 53.80	

S.D. = 0.3 on 17 of 23 obs.

& JUN 23, 1989 08h 08m 31.67s
58.269 N 143.031 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

BALM	2.80	7	iP	09 12.11	-5.3
CTGM	2.84	17	eP	09 12.47	-5.5
GLB	3.21	353	iP	09 17.56	-5.6
VZW	3.32	329	eP	09 18.87	-5.9
KLU	3.55	337	iP	09 22.43	-5.5
SEW	3.78	302	iP	09 24.90	-6.3
			S	10 07.07	
TOA	4.16	339	eP	09 31.80	-4.8
SLKM	4.31	304	eP	09 32.52	-6.2
CNPM	4.44	290	eP	09 35.16	-5.4
ILIM	5.42	294	eP	09 48.63	-5.9
RED	5.43	298	eP	09 48.66	-6.0

11 obs. associated

JUN 23, 1989 08h 43m 09.07± 0.52s
17.799 N ± 5.6km 65.604 W ± 4.9km
DEPTH = 15.0 ± 4.8 km
4.5mb (6 obs.)
PUERTO RICO REGION (90)

SJG	0.61	301	iP	43 20.60	-0.2
CSB	0.72	313	iP	43 22.50	-0.3
PNP	1.06	284	iP	43 28.50	-0.1
APR	1.26	302	iP	43 32.00	0.1
MGP	1.43	279	iP	43 34.60	0.2
SKI	2.77	99	eP	44 07.45	13.7X
			eS	44 56.30	
NEV	2.97	102	eP	43 57.46	1.0
			eS	44 52.05	
BPA	3.65	101	eP	44 07.26	1.0
			eS	44 49.58	
ANG	3.66	100	eP	44 07.17	0.9
			eS	44 56.30	
DPMT	4.77	121	eP	44 22.06	0.0
DSVT	4.80	122	eP	44 22.20	-0.3
FDF	5.25	125	iPc	44 28.19	-0.8

0.2s 0.75nm 4.0mb

			S	45 21.30	
BIM	5.44	126	eP	44 30.56	-1.1
MVM	5.56	125	eP	44 33.03	-0.2
SLB	5.91	131	eP	44 40.04	1.9
SVV	6.14	136	eP	44 39.89	-1.6
SVB	6.15	136	eP	44 39.94	-1.6
TCE	7.99	152	eP	45 07.06	-0.3
TRN	8.19	150	eP	45 10.13	-0.1
TPP	8.46	151	eP	45 13.75	-0.2
TBH	8.50	148	eP	45 16.48	2.0
JSC	21.57	323	eP	48 00.80	0.7
CBN	22.79	335	eP	48 13.00	0.8
ZOBO	33.94	184	Pc	49 54.00	-0.6
LPB	34.20	184	P	49 57.00	0.3
CNCB	34.47	184	P	50 00.00	0.8
RSON	39.85	332	eP	50 43.10	-0.4

1.0s 10.85nm 4.5mb

ALQ	40.07	303	eP	50 52.00	6.2X
GOL	40.69	311	eP	50 51.10	0.2
	0.9s		3.41nm		4.1mb
RSSD	41.56	318	eP	50 59.20	1.3
PPD	41.98	160	eP	51 01.30	0.0
FRB	45.95	358	eP	51 33.00	0.2
KVN	50.04	306	eP	52 15.00	9.6X
MBC	64.54	348	eP	53 46.00	-1.3
	1.0s		4.00nm		4.5mb
ALE	64.78	0	eP	53 47.00	-1.7
	0.5s		3.00nm		4.7mb
INK	65.47	338	eP	53 50.00	-3.3X
MLR	78.59	46	ePc	55 11.00	-0.9
BNG	83.10	88	iPd	55 36.50	0.3
	0.4s		4.00nm		4.9mb

S.D. = 1.0 on 34 of 38 obs.

JUN 23, 1989 08h 47m 14.46± 0.52s
46.035 N ± 6.1km 14.355 E ± 3.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.9 (LJU), 2.6 (ROM).

LJU	0.12	86	iPg	47 17.50	0.0
			eSg	47 19.50	
CEY	0.30	170	iPgd	47 20.90	0.1
			eSg	47 25.00	
VOY	0.32	269	iPgc	47 21.10	-0.1
			eSg	47 27.40	
TRI	0.53	232	ePgd	47 24.90	-0.2
			iSg	47 32.90	
RBL	0.68	307	P	47 27.50	-0.5
			eSg	47 38.40	
VBY	0.82	130	ePgc	47 30.50	0.1
			iSg	47 40.10	
PTJ	1.13	96	ePg	47 35.50	-0.1
			eSg	47 48.40	
FVI	1.23	298	P	47 38.00	0.8
			eSg	47 54.40	
CTI	1.88	271	P	47 47.00	-0.1
			eSg	48 11.50	
KHC	3.14	351	eP	48 54.80	49.9X

S.D. = 0.4 on 9 of 10 obs.

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* JUN 23, 1989 08h 51m 07.52± 1.04s
17.973 N ±13.7km 65.864 W ±10.5km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.31	297	iP	51 14.00	0.1
			S	51 21.00	
CSB	0.42	319	iP	51 15.90	-0.2
			S	51 25.40	
PNP	0.78	276	iP	51 22.00	-0.8
APR	0.95	300	iP	51 26.10	0.4
MGP	1.17	272	iP	51 29.80	0.5
SLB	6.21	131	eP	52 41.50	0.0

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

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* JUN 23, 1989 08h 54m 40.07± 0.77s
17.812 N ±23.6km 65.608 W ±10.8km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.60	300	iP	54 50.80	-1.3
CSB	0.71	312	iP	54 53.70	-0.3
PNP	1.05	284	iP	55 00.40	0.5
APR	1.25	301	iP	55 03.70	0.5
MGP	1.42	278	iP	55 06.70	0.8
NEV	2.98	103	eP	55 29.00	0.8
BPA	3.66	101	eP	55 39.00	1.0
BBL	4.57	119	eP	55 49.00	-1.8

S.D. = 1.3 on 8 of 8 obs.

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* JUN 23, 1989 09h 02m 51.97± 1.58s
14.251 N ±12.8km 91.177 W ±15.1km
DEPTH = 94.6 ± 15.9 km
4.3mb (8 obs.)
GUATEMALA (70)

TPX	1.23	302	iPd	03 14.48	-0.5
			iS	03 27.50	
SCX	2.84	331	iP	03 39.75	3.5X
			iS	04 13.78	
OXX	6.04	299	eP	04 19.25	-1.4
IISM	7.58	309	iP	04 43.67	2.0
			iS	05 54.95	
III	8.95	298	iPc	04 59.80	-0.8
MEO	21.51	343	iPd	07 33.50	-1.2
JSC	21.87	23	iP	07 40.50	2.3
FVM	23.65	1	eP	07 55.50	0.0
	1.0s		15.00nm		4.3mb
ALQ	24.79	329	eP	08 07.50	0.8
	0.7s		3.42nm		3.9mb
BLA	24.80	21	eP	08 08.00	1.4
GOL	28.25	336	eP	08 39.00	0.5
	1.0s		5.00nm		4.1mb
MSU	30.48	326	eP	08 59.40	1.2
TNP	33.10	321	iP	09 22.00	0.9
	1.0s		2.50nm		4.0mb
GAC	34.04	20	eP	09 29.50	0.7
KVN	34.24	321	iP	09 32.10	1.1
RSON	36.57	357	eP	09 48.10	-2.1
	1.0s		10.85nm		4.7mb
ZOBO	37.93	142	(P)	10 05.00	2.3
			e	12 14.00	
LPB	38.15	143	P	10 03.00	-1.3
			e	12 22.00	
LON	41.30	328	eP	10 30.40	0.8
PNT	42.02	332	eP	10 36.00	0.5
	0.6s		11.00nm		4.9mb
FRB	51.89	13	eP	11 51.00	-1.6
BAO	52.00	123	eP	11 54.01	-0.2
INK	60.43	343	eP	12 52.00	-1.4
MBC	63.76	353	ePc	13 14.10	-1.4
	0.4s		2.00nm		4.4mb
DAG	72.21	13	iPc	14 06.30	-1.8
	0.2s		19.44nm		5.6mb X
EKA	77.30	36	P	14 36.00	-1.5
	0.6s		4.60nm		4.5mb
CHG	145.67	343	ePKP	22 22.40	0.7
BDT	147.13	342	ePKP	22 27.90	3.9X
GBA	150.12	23	PKPc	22 33.60	4.8X
	0.7s		6.90nm		

S.D = 1.4 on 26 of 29 obs.

? JUN 23, 1989 09h 08m 18.50± 2.70s
17.973 S ±21.0km 178.730 W ±22.0km
DEPTH = 650.5 ± 30.9 km
4.8mb (5 obs.)
FIJI ISLANDS REGION (181)

DZM	14.52	251	iPd	11 20.90	-0.5
BRS	27.86	245	iPd	13 21.00	-0.3
RMQ	31.20	248	iPd	13 50.60	1.0
	0.6s		28.00nm		5.1mb
CTA	33.13	261	iPd	14 05.80	0.0
	0.8s		29.10nm		5.0mb
PMG	34.17	280	eP	14 16.00	1.6
	0.9s		84.03nm		5.4mb X
TOO	36.89	231	ePc	14 37.20	0.6
QIS	39.34	259	iPc	14 56.00	-0.5
JAY	42.63	286	ePc	15 22.00	-0.6
WB5	44.30	260	iPd	15 34.70	-0.7
			eS	22 09.50	
ASPA	44.48	254	iPd	15 36.90	0.1
	0.7s		139.00nm		5.5mb X
			e	21 30.10	
MTN	48.49	269	iPc	16 06.90	-0.1
FORR	49.67	245	iPd	16 15.00	-0.5
	0.5s		83.00nm		5.4mb X
KNA	50.16	264	iPd	16 19.00	-0.3
WARB	50.97	251	eP	16 19.50	-5.6X
	0.3s		13.00nm		4.7mb
MBL	57.67	256	iPd	17 11.40	-0.3
	0.4s		14.00nm		4.5mb
MEKA	58.20	249	iPc	17 15.00	-0.2
NANU	61.41	254	iPd	17 37.00	0.7
	0.4s		23.00nm		4.8mb
PNT	84.96	34	eP	19 48.00	0.0

S.D. = 0.7 on 17 of 18 obs.

JUN 23, 1989 09h 54m 21.44± 1.17s
44.409 N ± 3.6km 8.316 E ± 9.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.7 (GEN). MD 2.5 (ROM).

CKI	0.03	301	Pc	54 22.50	-1.0
			iSg	54 23.50	
FIN	0.21	201	P	54 25.72	-0 4
			S	54 29.54	
ROB	0.34	250	P	54 28 29	-0.2
			S	54 33.41	
IMI	0.59	212	P	54 32.80	-0.5
			S	54 41.21	
ENR	0.67	254	P	54 34.44	-0.3
			S	54 43.98	
STV	0.73	257	P	54 35.67	-0.2
			S	54 45.21	
AUTN	0.76	237	Pg	54 36.37	-0.1
DOI	0.77	277	P	54 36.80	0.2
			eSg	54 47.50	
TOUF	0.86	243	Pg	54 38.91	0.7
			Sg	54 52.43	
PZZ	0.88	277	P	54 38.46	0.1
			S	54 49.53	
AURF	0.88	234	Pg	54 39.15	0.7
MVIF	0.98	239	Pg	54 39.72	-0.5
RSP	1.06	315	P	54 41.23	-0.2
			S	54 54.45	
FOUF	1.11	277	ePg	54 42.28	0.1
			e(Sg)	54 56.93	
RRL	1.21	296	P	54 42.54	-1.5
			S	54 59.84	
CALN	1.22	238	Pg	54 45.20	1.0
			Sg	55 05.09	
ORX	1.25	349	P	54 45.53	0.9
			S	55 00.30	
LSD	1.33	322	P	54 45.99	-0.2
			S	55 00.76	
BNI	1.34	299	P	54 46.50	0.3
			eSg	55 03.50	

S.D. = 0.7 on 19 of 19 obs.

? JUN 23, 1989 10h 11m 43.87± 2.75s
44.239 N ±28.2km 7.443 E ±10.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

DOI	0.30	332	P	11 50.10	-0.1
			eSg	11 54.80	
FOUF	0.56	302	ePg	11 55.10	0.0
			e(Sg)	12 02.35	
CKI	0.63	72	P	11 56.50	0.0
			eSg	12 06.50	
BNI	0.98	326	Pc	12 02.70	0.1
			eSg	12 16.00	

S.D. = 0.1 on 4 of 4 obs.

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* JUN 23, 1989 10h 16m 15.84± 0.99s
18.117 N ±10.3km 66.167 W ± 7.0km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.02	108	iP	16 18.00	0.2
			S	16 26.00	
CSB	0.17	3	iP	16 19.20	-0.6
PNP	0.49	263	iP	16 26.00	0.1
APR	0.63	302	iP	16 29.50	1.0
MGP	0.88	263	iP	16 32.00	-0.8

S.D. = 1.0 on 5 of 5 obs.

% JUN 23, 1989 11h 02m 51.70± 0.54s
60.637 N ± 4.5km 6.246 E ± 5.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.0 (BER).

HYA	0.53	357	iP	03 02.10	-0.4
			eS	03 10.95	
ASK	0.54	254	eP	03 02.60	0.0
			eS	03 09.70	
ODD1	0.75	165	eP	03 05.66	-0.8
			eS	03 15.06	
SUE	0.84	301	iP	03 07.99	0.1
			iS	03 19.62	
BLS1	1.28	167	iP	03 15.60	0.0
			iS	03 32.33	
KMY	1.52	200	eP	03 19.41	0.6
			eS	03 39.45	
MOL	2.04	17	eP	03 26.45	0.0
			eS	03 53.44	
NRA0	2.61	86	iPnc	03 35.00	0.4
			iPg	03 37.60	
			iS	04 11.80	

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

? JUN 23, 1989 11h 44m 45.92± 1.78s
0.327 N ±35.7km 125.552 E ±73.7km
DEPTH = 33.0km (normol)

23d 11h

MOLUCCA PASSAGE (266)

MNI	1.32	327	ePc	45 08.10	0.0
			eS	45 39.20	
WB5	21.86	157	eP	49 37.20	-0.6
ASPA	25.19	162	eP	50 10.80	0.6
WARB	26.38	178	eP	50 20.00	-1.2
FORR	31.10	176	eP	51 04.80	1.3

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

JUN 23, 1989 12h 00m 53.27± 0.13s
22.3N ± 3.1km 142.996 E ± 3.2km
DEPTH = 170.1km (7 depth phases)
5.3mb (55 obs.)

VOLCANO ISLANDS REGION (213)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 18C
Centroid Location:
Origin Time 12:00:55.3 1.0
Lat 22.33N 0.11 Lon 143.09E 0.11
Dep 189.7 5.7 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 2.75 0.55 Mtt= 0.34 0.89
Mff=-3.10 0.81 Mrt=-5.37 0.69
Mrf=-3.15 0.69 Mtf=-2.72 0.96
Principal Axes:
T Val= 7.12 Plg=53 Azm=172
N 0.54 20 52
P -7.66 29 310
Best Double Couple:Mo=7.4*10**16
NP1:Strike=356 Dip=24 Slip= 32
NP2: 237 78 111

GUMO	8.86	168	eP	03 04.00	5.1X
PJG	8.86	168	eP	03 04.00	5.1X
GUA	8.91	168	eP	03 04.20	4.5X
	0.5s	73.24nm			5.4mb
			eS	04 50.70	
MAT	14.78	345	iPd	04 12.60	-2.5
	0.8s	216.42nm			5.6mb
			eS	06 41.00	
SHK	15.17	326	iP	04 21.60	1.5
	1.0s	408.00nm			5.8mb
SSE	21.33	299	P-	05 27.00	-0.7
	1.0s	179.00nm			5.5mb
			pP	06 01.00	
			S	09 00.00	
			sS	09 13.00	
			SS	10 12.00	
			ScP	12 45.00	
BAG	21.94	258	eP	05 35.90	1.9
			eS	09 25.50	
OZH	22.51	282	iPd	05 40.50	1.3
	2.0s	1.10nm			3.0mb X
			S	09 38.50	
			SS	10 39.50	
DAV	22.61	231	eP	05 37.90	-2.4
NJ2	23.52	300	Pd	05 49.00	0.0
	5.0s	0.70nm			2.5mb X
			pP	06 24.00	179km
			S	09 56.00	
			ScP	12 51.20	
DL2	24.64	317	eP	05 59.00	-0.5
			S	10 11.00	
SNY	25.38	325	iPd	06 05.00	-1.3
			eS	10 15.50	
CN2	25.89	330	Pd	06 09.40	-1.5
			PcP	09 34.80	
			eS	10 21.00	
			SS	11 40.00	
			ScP	12 54.40	
			ScS	16 44.00	
TIA	26.38	307	Pd	06 15.40	-0.2
			ScP	12 58.00	
WHN	26.88	294	Pd	06 20.00	0.0
MNI	27.24	223	eP	06 24.90	1.4
BJI	28.80	314	eP	06 35.50	-1.8
			eS	11 06.00	
			eScP	13 05.00	
			eScS	16 58.00	
TIY	30.42	307	Pd	06 51.50	-0.2
			S	11 40.00	
QIZ	31.15	270	eP	07 00.60	2.4
PMG	31.79	172	eP	07 03.50	-0.1
	1.0s	80.00nm			5.4mb
XAN	32.09	299	iPd	07 05.60	-0.6
HHC	32.29	312	Pd	07 07.60	-0.4
BTO	33.26	311	P	07 16.00	-0.4
GYA	33.28	285	iPd	07 17.00	0.3
	1.0s	0.10nm			2.5mb X
			sP	08 17.60	
			S	12 23.00	
			ScP	13 20.00	
			ScS	17 19.00	
MKS	35.76	223	iPd	07 40.50	2.8
CD2	35.96	292	iPd	07 39.50	0.1
			S	13 02.40	
LZH	36.58	301	eP	07 45.00	0.3
	1.5s	34.00nm			4.8mb
			pP	09 21.00	527kmX
			eS	13 11.00	
MTN	36.83	200	ePd	07 46.40	-0.2
	0.6s	86.00nm			5.6mb
			e	10 05.00	
KMI	36.87	283	Pc	07 49.00	1.7
LOE	39.03	270	eP	08 05.50	0.4
KNA	40.31	201	eP	08 16.00	0.5
GTA	40.38	305	iPd	08 16.20	0.1
			ScP	13 46.80	
			S	14 09.00	
KHKI	40.62	224	ePc	08 20.00	1.9
			e	10 32.00	
CHG	41.29	273	eP	08 25.00	1.4
CHTO	41.29	273	iP	08 25.00	1.4
	0.8s	10.07nm			4.5mb
			i	09 08.20	202kmX
BDT	41.60	271	eP	08 28.80	2.7X
	0.8s	27.00nm			4.9mb
CTA	42.26	175	iPc	08 31.20	-0.2
	1.1s	101.27nm			5.3mb
			i	09 10.00	178km
			i	10 23.00	
			i	13 55.90	
OIS	42.73	185	iPc	08 35.00	-0.3
	0.6s	71.00nm			5.4mb
WB5	42.77	192	iPc	08 35.10	-0.5
			iPcP	10 24.00	
			eS	14 44.70	
ADK	42.79	36	eP	08 35.10	-0.3
	0.7s	22.90nm			4.9mb
ASPA	46.55	192	iPc	09 04.00	-1.7
	0.5s	37.00nm			5.2mb
			e	14 13.50	
			eS	15 38.90	
LSA	46.86	290	Pd	09 10.40	1.7
PPI	47.26	247	eP	09 12.00	0.6
MBL	48.76	209	iPd	09 23.40	0.6
	0.5s	46.00nm			5.3mb
RMO	48.83	173	ePc	09 23.20	0.0
	0.7s	20.00nm			4.8mb
			e	10 46.00	414kmX
			e	14 23.60	
DZM	49.68	151	iPc	09 29.10	-0.8
WMO	50.06	309	iPd	09 33.00	0.4
	1.0s	0.10nm			2.4mb X
			sP	10 29.50	
			PcP	10 48.50	
			PP	11 32.00	
			ScP	14 28.00	
			S	16 28.70	
			ScS	19 02.00	
BRS	50.31	169	iPc	09 33.20	-1.3
			i	10 50.90	381kmX
			i	14 30.00	
WARB	50.74	199	eP	09 32.50	-5.4X
	0.4s	25.00nm			5.2mb
GUN	51.63	289	Pd	09 45.60	0.5
NANU	52.01	213	iPc	09 48.00	0.6
	0.5s	66.00nm			5.6mb
PKI	52.09	288	Pd	09 48.60	0.1
KKN	52.17	289	Pd	09 49.20	0.2
DMN	52.35	288	Pd	09 50.40	0.1
GKN	52.71	289	Pd	09 52.90	0.1
SDN	53.01	37	eP	09 52.60	-1.7
COO	53.27	170	eP	09 57.00	0.4
			e	10 13.00	61kmX
			e	11 03.00	
CMS	53.56	177	eP	09 58.00	-0.6
STK	53.90	181	eP	10 00.00	-1.1
			e	10 01.00	3kmX
			e	10 10.00	
MEKA	54.10	207	iPd	10 02.20	-0.5
FORR	54.76	196	eP	10 06.40	-0.9
	0.4s	89.00nm			5.9mb
COOL	56.90	202	eP	10 22.00	-0.6
SVW	56.95	31	eP	10 22.30	-0.5
ADE	57.11	184	iPc	10 24.50	0.5
	0.8s	67.16nm			5.5mb
TTA	57.24	28	P	10 23.60	-1.2
MRWA	57.45	208	iPd	10 26.40	-0.1
	0.3s	11.00nm			5.2mb
CAN	57.60	174	eP	10 27.50	0.0
			e	11 19.70	232kmX
KDC	57.84	35	eP	10 27.20	-1.7
BAL	58.36	207	iPd	10 32.80	0.0
	0.4s	34.00nm			5.5mb
KLB	58.80	205	iPd	10 35.30	-0.6
	0.5s	28.00nm			5.4mb
IMA	59.06	25	eP	10 36.80	-0.7
	0.7s	3.60nm			4.3mb
			e	11 22.60	200kmX
NDI	59.07	291	iPd	10 37.50	-0.4
BFD	59.17	180	iPd	10 38.60	0.4
	0.9s	63.00nm			5.5mb
TOO	59.61	178	eP	10 41.00	-0.3
	0.9s	118.00nm			5.7mb
BRW	59.64	19	eP	10 40.70	-0.5
MUN	59.76	206	eP	10 42.00	-0.4
PMR	60.11	31	eP	10 41.30	-3.2X
	0.5s	5.10nm			4.6mb
			e	11 26.00	194kmX
NWAO	60.18	205	eP	10 45.00	-0.3
HYB	60.42	278	iPc	10 47.00	-0.3
			e	11 24.00	157kmX
FBA	61.21	27	eP	10 50.00	-1.9
RKG	61.28	205	iPd	10 56.20	3.5X
	0.5s	27.00nm			5.4mb
GBA	62.56	274	Pc	11 00.60	-1.0
	0.7s	10.00nm			4.8mb
TAU	65.02	176	iPd	11 17.90	1.0
INK	67.08	24	iPd	11 28.90	-0.9
			pP	12 13.00	186kmX
KRP	67.27	153	P	11 32.10	0.7
QUE	67.53	295	iPd	11 33.40	-0.2
			eS	20 14.20	
KIW	69.50	155	P	11 43.80	-1.3
MNG	69.52	154	P	11 43.60	-1.6
	0.5s	18.00nm			5.1mb
TCW	69.55	155	P	11 44.00	-1.3
MRW	69.74	155	P	11 44.80	-1.6
CAW	69.77	155	P	11 45.60	-1.1
WEL	69.81	155	P	11 45.50	-1.4
PGZ	69.85	154	P	11 45.40	-1.7
	0.8s	151.00nm			5.8mb
WDW	69.88	155	P	11 45.70	-1.6
MTW	69.99	154	eP	11 46.50	-1.5
CCW	69.99	156	eP	11 46.70	-1.3
MOW	70.11	155	P	11 47.20	-1.6
BLW	70.15	155	P	11 47.70	-1.3
MBC	70.31	15	iPd	11 48.70	-0.8
	0.6s	71.00nm			5.6mb
MSZ	70.44	161	Pd	11 49.80	-0.9
	0.6s	77.00nm			5.7mb
MAIO	72.11	302	iPd	12 02.00	0.8
	0.5s	6.63nm			4.6mb
KBS	75.37	351	eP	12 18.50	-0.6
YKA	76.00	28	eP	12 22.80	0.0
YKC	76.06	28	iPd	12 22.60	-0.5
	0.5s	85.00nm			5.7mb
GMW	76.61	44	P	12 27.80	1.2
BMW	76.66	45	P	12 27.50	0.6
AFR	76.76	115	iP	12 29.20	1.4
	0.8s	70.00nm			5.4mb
PPT	76.95	115	iP	12 30.10	1.3
	0.8s	40.00nm			5.2mb
PAE	76.99	115	iP	12 30.20	1.2
	0.8s	35.00nm			5.1mb
PPN	77.05	115	iP	12 30.50	1.1
	0.8s	35.00nm			5.1mb
PMO	77.17	112	iP	12 31.00	1.0
	0.9s	60.00nm			5.3mb
TVO	77.32	115	iP	12 32.60	1.7
	0.8s	50.00nm			5.3mb
LON	77.50	45	P	12 31.80	0.3
VAH	77.51	112	iP	12 32.60	0.7
	0.9s	55.00nm			5.3mb
RUV	77.70	112	iP	12 33.80	0.9
	0.9s	45.00nm			5.2mb
FHC	77.96	51	eP	12 35.40	1.3
PNT	78.03	42	iPc	12 34.50	0.2

VGB	78.59	45	P	12	38.40	0.9
WDC	79.07	51	iPc	12	40.70	0.6
LTCM	79.49	51	P	12	43.00	0.6
NWRM	79.54	53	P	12	43.10	0.4
MIN	79.82	51	iPc	12	44.20	-0.1
TRO	80.10	343	iP+	12	44.00	-1.0
ORV	80.17	51	iPc	12	46.20	0.2
BRK	80.20	53	ePc	12	46.60	0.4
EDM	80.20	36	iPc	12	46.10	0.1
	0.5s	30.00nm			5.3mb	
BKS	80.22	53	iPc	12	46.90	0.6
	0.9s	160.00nm			5.7mb	
PCC	80.24	54	eP	12	46.70	0.3
GCC	80.70	54	ePc	12	49.10	0.3
MHC	80.85	53	ePc	12	50.50	0.7
ARN	80.93	53	P	12	50.80	0.7
			pP	13	32.00	167km
SAO	81.21	54	ePc	12	51.70	0.2
PRS	81.42	54	iPc	12	53.30	0.7
CMB	81.53	52	iPc	12	53.80	0.6
LLA	81.63	54	iPc	12	54.50	0.7
SUF	81.82	335	iP	12	52.70	-1.4
	0.4s	8.90nm			4.8mb	
PRI	82.02	54	ePc	12	56.90	1.0
PHAM	82.33	55	P	12	58.80	1.4
FRI	82.42	53	iPc	12	58.30	0.6
SES	82.70	38	iPc	12	59.50	0.5
	0.8s	82.00nm			5.6mb	
			pP	13	40.00	163km
BLP	82.81	56	P	13	00.50	0.7
KVN	82.81	51	P	13	00.50	0.5
BCH	82.81	55	P	13	01.00	1.0
SYP	83.14	56	eP	13	02.00	0.3
TNP	83.82	51	P	13	05.80	0.6
	1.0s	37.50nm			5.1mb	
ISA	83.85	54	eP	13	05.00	-0.2
LRM	83.85	43	eP	13	05.70	0.5
HPI	84.35	45	P	13	08.80	1.0
CLC	84.44	54	eP	13	08.00	-0.1
MSL	84.54	307	ePc	13	08.50	0.0
PAS	84.67	55	eP	13	09.00	-0.2
SBB	84.72	55	eP	13	09.00	-0.5
MWC	84.72	55	eP	13	10.00	0.3
GSC	85.24	54	eP	13	12.00	-0.2
RVR	85.33	55	eP	13	12.00	-0.5
FFC	85.40	32	iPc	13	12.90	0.5
	0.6s	40.00nm			5.4mb	
PEC	85.54	55	P	13	13.60	0.0
PLM	85.98	56	eP	13	15.00	-1.0
DUG	86.06	48	P	13	16.80	0.6
TPC	86.29	55	eP	13	17.00	-0.3
BAR	86.40	56	eP	13	17.00	-0.8
UPP	86.83	336	iP	13	16.80	-2.5
DAU	87.03	47	P	13	21.60	0.5
MSU	87.24	49	P	13	22.80	0.8
			pP	14	05.60	171km
GLA	87.66	55	P	13	25.00	1.1
HFS	88.10	337	eP	13	22.90	-2.5
	0.4s	9.20nm			5.1mb	
NB2	88.31	339	P	13	23.80	-2.7
	0.7s	6.10nm			4.7mb	
FRB	90.74	13	eP	13	37.00	-0.7
GOL	91.33	46	P	13	42.00	0.8
	0.8s	38.69nm			5.5mb	
			pP	14	24.10	167km
GLD	91.41	46	P	13	42.80	1.3
	1.2s	101.01nm			5.8mb	
RKT	91.67	114	iP	13	45.10	2.6
	0.9s	35.00nm			5.4mb	
RSON	91.74	32	P	13	42.30	-0.2
	0.9s	25.56nm			5.3mb	
ALQ	92.97	50	iPc	13	49.20	0.4
	1.1s	22.15nm			5.3mb	
			e	13	56.50	
			epP	14	31.50	167km
BUL	119.24	259	iPKPc	19	23.40	-1.0
	0.8s	6.72nm				
KSR	122.06	253	ePKP	19	27.00	-2.7X
ARE	147.00	86	iPKPc	20	19.00	2.9X
	0.9s	68.07nm				
LCCH	147.63	118	ePKPc	20	19.10	2.8X
LNV	147.66	119	iPKPc	20	19.00	2.7X
TACH	148.11	118	ePKPd	20	20.30	3.2X
PEL	148.42	117	iPKPc	20	18.20	0.6
			i	20	21.20	
JACH	148.58	116	ePKP	20	21.50	3.5X
FCH	148.71	118	ePKP	20	23.50	5.0X
ZOBO	150.06	84	PKP	20	16.00	-5.2X
	1.0s	30.00nm				
			i	20	21.90	
			i	20	27.00	
LPB	150.15	84	PKP	20	22.70	1.5
	1.0s	160.00nm				
			i	20	28.00	
CNCB	150.34	85	PKPc	20	22.30	0.7
			i	20	28.00	
ZON	150.39	115	iPKPd	20	26.50	5.8X
CCH	152.18	85	PKP	20	32.50	8.5X
			i	20	43.80	
PPD	166.74	92	ePKP	20	41.40	1.7
	S.D. = 1.1	on 171 of 188 obs.				

JUN 23, 1989 12h 19m 19.71± 0.76s
37.808 N ± 7.2km 29.228 E ± 8.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.57	24	iPg	19	30.80	-0.4
YER	1.01	229	iPn	19	38.00	-0.8
BCK	1.13	107	ePn	19	41.10	0.1
ELL	1.19	153	iPn	19	40.60	-1.4
ALT	1.43	29	ePn	19	46.70	1.0
IZM	1.66	291	ePn	19	48.00	-1.0
KSL	1.71	170	ePn	19	50.00	0.3
KAP	2.79	217	ePn	20	07.50	2.2
	S.D. = 1.4	on 8 of 8 obs.				

% JUN 23, 1989 12h 27m 58.45± 1.54s
61.626 N ±10.4km 5.279 E ±13.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

SUE	0.62	204	eP	28	10.17	-0.8
			eS	28	18.08	
HYA	0.64	136	eP	28	10.60	-0.6
			eS	28	19.33	
ASK	1.15	182	eP	28	19.72	-0.2
			eS	28	35.11	
BER	1.25	179	eP	28	21.51	-0.1
			eS	28	36.43	
MOL	1.43	47	iP	28	24.68	0.3
			eS	28	44.06	
ODD1	1.84	158	eP	28	31.55	1.1
			eS	28	50.30	
BLS1	2.37	160	eP	28	39.17	1.1
			eS	29	04.50	
NRA0	3.16	104	ePn	28	48.20	-1.0
			iPg	28	56.00	
			eS	29	25.50	
			iSg	29	35.60	
	S.D. = 1.0	on 8 of 8 obs.				

? JUN 23, 1989 12h 39m 05.79± 4.20s
43.375 N ±22.6km 14.350 E ±28.1km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)
MD 2.7 (SSO).

AOI	0.57	288	ePg	39	16.54	-0.9
			iSg	39	25.94	
SSO	0.68	263	e(Pg)	39	18.09	-1.2
ALP	0.82	224	ePg	39	18.81	-3.0X
			i(Sg)	39	30.47	
CIO	0.90	259	iPgc	39	23.70	0.6
			i(Sg)	39	37.44	
ARV	1.03	277	P	39	26.50	1.2
			eSg	39	41.40	
ASS	1.27	257	P	39	29.70	0.3
			eSg	39	46.00	
AZI	1.54	206	P	39	33.50	0.2
MNS	1.58	232	P	39	33.00	-0.9
			eSn	39	57.00	
SDI	1.71	194	P	39	36.00	0.1
			eSn	39	58.50	
	S.D. = 1.0	on 8 of 9 obs.				

? JUN 23, 1989 14h 01m 47.75± 3.20s
21.708 S ±47.1km 175.736 W ±29.2km
DEPTH = 210.7 ± 36.6 km
4.3mb (2 obs.)
TONGA ISLANDS (173)

SVA	6.53	302	ePc	03	22.80	0.1
VUN	6.58	303	iPc	03	23.10	-0.3
DZM	16.54	265	iPc	05	29.90	0.3
CTA	35.49	266	iPc	08	27.20	1.1
ASPA	46.31	258	eP	09	54.60	0.1
	0.4s	6.00nm			4.4mb	
WB5	46.52	263	eP	09	56.00	-0.1
FORR	50.73	247	eP	10	26.80	-1.4
WARB	52.49	253	eP	10	35.00	-6.4X
SPA	68.42	180	e(P)	12	28.90	0.3
	0.9s	5.00nm			4.2mb	
	S.D. = 0.9	on 8 of 9 obs.				

? JUN 23, 1989 14h 09m 13.86± 1.41s
40.634 S ±24.5km 175.447 E ±23.0km
DEPTH = 33.0km (normal)
NORTH ISLAND, NEW ZEALAND (159)

MNG	0.03	60	P	09	19.40	0.0
	0.1s	3.00nm				
KIW	0.47	240	P	09	24.60	0.6
CAW	0.56	211	P	09	25.50	0.2
WDW	0.72	208	eP	09	28.00	0.4
MRW	0.82	223	P	09	27.30	-1.7
WEL	0.83	218	eP	09	29.50	0.4
	S.D. = 1.1	on 6 of 6 obs.				

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* JUN 23, 1989 14h 41m 55.39± 1.78s
50.682 N ±11.0km 6.014 E ±16.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

MEM	0.07	184	iPc	41	56.03	-1.7
			iS	41	57.04	
ENN	0.10	326	iPgd	41	58.10	0.0
	0.5s	58.00nm				
			iSg	42	00.30	
WLF	1.02	175	iP	42	16.00	1.3
DOU	1.08	238	P	42	15.60	-0.1
			i	42	16.30	
SNF	1.12	262	Pc	42	16.30	0.0
	S.D. = 1.5	on 5 of 5 obs.				

? JUN 23, 1989 15h 03m 24.50± 3.23s
8.038 S ±31.1km 129.374 E ±13.5km
DEPTH = 172.5 ± 22.2 km
TIMOR SEA (290)

MTN	5.08	160	iPc	04	39.80	-0.3
	0.3s	124.00nm			5.6mb	X
			eS	05	38.00	
KUG	6.09	249	ePd	04	53.20	-0.2
			eS	05	06.30	
KNA	7.69	184	eP	05	15.50	0.8
	0.3s	35.00nm			5.3mb	X
			eS	06	48.00	
WB5	12.73	158	eP	06	16.80	-3.8X
			eS	08	43.50	
QIS	15.90	143	eP	06	48.00	-12.3X
			eS	09	48.00	
MBL	15.97	214	eP	07	02.00	0.9
ASPA	16.14	165	iPd	07	02.00	-1.2
			eS	10	07.80	
WARB	18.23	188	eP	07	22.00	-5.4X
			eS	10	52.00	
NANU	19.64	221	eP	07	41.40	-0.6
CTA	20.26	128	eP	07	49.00	0.6
	S.D. = 1.1	on 7 of 10 obs.				

JUN 23, 1989 15h 47m 20.68± 0.82s
32.014 N ± 5.3km 54.442 E ±10.1km
DEPTH = 33.0km (normal)
IRAN (348)
ML 4.0 (BMU).

SHI	2.88	215	eP	48	07.00	1.6
IR4	4.37	318	iPc	48	26.50	-0.1
TEH	4.50	326	eP	48	29.00	0.5
IR5	4.53	316	iP	48	28.40	-0.5
IR1	4.61	318	iPc	48	30.10	0.1
IR2	4.68	322	iPc	48	31.00	0.0
IR7	4.87	320	iPc	48	33.50	-0.1
MAIO	5.98	43	iPnc	48	49.40	0.0
	0.4s	10.98nm			4.8mb	
			eSn	50	07.00	
KER	6.58	293	eP	49	28.00	30.3X
BJA	6.88	210	iPn	49	01.00	-0.7
BEE	6.89	211	ePn	49	01.20	-0.8

23d 15h

(Sn) 50 18.00
S.D. = 0.8 on 10 of 11 obs.

? JUN 25, 1989 15h 55m 02.44±13.95s
17.940 N ±27.1km 65.808 W ±87.9km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.37	298	iP	55	10.10	0.1
			S	55	17.60	
CSB	0.48	316	iP	55	12.00	-0.2
PNP	0.84	278	iP	55	18.20	-0.5
APR	1.02	301	iP	55	22.00	0.3
MGP	1.22	273	iP	55	25.40	0.2

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

? JUN 23, 1989 16h 26m 19.19± 0.80s
44.383 N ±12.7km 7.276 E ±21.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

DOI	0.12	350	P	26	22.30	0.0
			iSg	26	24.00	
STV	0.14	166	P	26	22.62	0.0
			S	26	24.75	
PZZ	0.17	314	P	26	23.22	0.0
			S	26	25.85	
ENR	0.19	146	P	26	23.35	0.0
			S	26	25.95	

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

JUN 23, 1989 16h 37m 56.83± 0.26s
57.925 S ± 7.9km 25.382 W ± 9.7km
DEPTH = 33.0km (normal)
5.3mb (7 obs.)
SOUTH SANDWICH ISLANDS REGION (153)

SPA	32.25	180	ePc	44	24.90	0.8
	1.0s		33.00nm			5.2mb
VAO	38.21	327	eP	45	16.70	1.6
ITB1	39.16	316	e(P)	45	21.70	-1.2
PPD	40.48	321	ePc	45	34.40	0.5
SBA	44.27	184	ePc	46	05.90	1.7
BAO	45.48	329	eP	46	14.30	-0.4
KSR	48.62	72	eP	46	48.50	9.2X
CNCB	51.74	304	P	47	03.50	-0.1
LPB	52.03	304	eP	47	04.00	-1.7
ZOBO	52.28	304	P	47	06.20	-1.5
BUL	54.25	69	iPc	47	21.10	-0.7
	1.0s		5.50nm			4.5mb
ATB	58.43	328	Pc	47	51.50	0.0
LIC	66.03	22	Pc	48	42.60	0.5
	0.6s		20.00nm			5.4mb
KIC	66.22	23	Pc	48	43.64	0.3
	0.8s		27.00nm			5.4mb
TIC	66.44	22	Pc	48	45.16	0.4
	0.7s		30.50nm			5.5mb
BNG	71.45	47	iPc	49	16.00	0.2
	0.7s		35.00nm			5.5mb
MSZ	77.17	190	eP	49	47.00	-1.3
BBL	79.01	325	ePd	50	00.00	1.3
MGG	79.33	325	eP	50	01.40	1.0
PAG	79.55	325	ePd	50	03.00	1.3
DEG	79.62	325	eP	50	02.70	0.6
BPA	80.56	325	eP	50	06.80	-0.2
FORR	88.80	157	eP	50	48.50	0.1
ASPA	96.89	161	eP	51	25.40	-0.4
	0.8s		7.00nm			5.2mb
MSU	120.07	295	iPKP	56	45.70	0.5
RSSD	120.74	305	iPKP	56	45.40	-0.9
NB2	122.03	20	PKP	56	47.90	0.0
	0.8s		1.90nm			
DMN	123.75	91	PKP	56	52.00	-0.6
	0.6s		10.00nm			
GKN	123.82	90	PKP	56	51.60	-1.0
	0.5s		11.00nm			
PKI	123.88	91	PKP	56	52.20	-0.8
	0.6s		11.00nm			
KKN	123.99	91	PKP	56	52.40	-0.6
	0.6s		15.00nm			
GUN	124.41	92	PKP	56	53.40	-0.6
NUR	124.43	27	ePKP	56	52.00	-0.5
FRB	125.76	338	ePKP	56	54.00	-1.0
LRM	125.84	301	ePKP	56	56.50	0.4
SUF	126.70	27	ePKP	56	56.00	-0.9
LON	130.93	295	iPKP	57	05.70	0.2
PNT	131.70	299	iPKPd	57	07.30	0.5
	0.6s		6.00nm			
YKC	138.16	316	ePKP	57	17.90	-0.7
YKA	138.22	316	ePKP	57	19.30	0.6
GTA	140.63	94	ePKP	57	17.80	-6.2X
XAN	141.33	108	ePKP	57	18.90	-6.4X
NJ2	144.52	121	PKPd	57	29.80	-1.0
			sPKP	57	44.20	
SSE	144.75	125	ePKP	57	30.00	-1.2
TIY	145.97	108	ePKP	57	33.40	0.2
MBC	146.10	335	ePKPc	57	33.20	1.1
	0.6s		21.00nm			
BTO	146.88	102	ePKP	57	36.50	1.9
TIA	147.12	115	ePKP	57	36.60	1.6
INK	147.87	318	iPKPc	57	37.80	2.7X
BJI	149.63	109	ePKP	57	43.50	4.7X
PMR	152.19	302	ePKPc	57	49.40	7.5X
	7.0s		18.60nm			
KDC	152.44	292	iPKPc	57	49.60	7.3X
FBA	152.49	309	ePKPc	57	49.00	6.7X
			id	58	00.10	
IMA	155.10	310	ePKP	57	55.40	9.4X
	0.9s		8.30nm			
			id	58	11.20	
TTA	155.64	303	ePKP	57	56.90	10.1X

S.D. = 0.9 on 45 of 55 obs.

% JUN 23, 1989 17h 53m 23.29± 0.76s
37.787 N ± 7.0km 29.205 E ± 8.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KML	0.59	25	iPg	53	35.20	-0.1
			iSg	53	45.70	
YER	0.98	229	iPn	53	42.40	0.4
ELL	1.18	151	ePn	53	45.10	-0.3
ALT	1.45	29	ePn	53	50.10	0.4
IZM	1.65	292	ePn	53	52.00	-0.5

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

• JUN 23, 1989 18h 49m 24.04± 0.63s
2.754 S ±13.9km 141.750 E ± 9.4km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
NEAR N COAST OF PAPUA NEW GUINEA(200)

JAY	1.07	283	ePc	49	44.00	-0.2
			eS	50	00.00	
MNDI	3.88	151	eP	50	32.00	6.8X
WB5	16.49	202	eP	53	42.30	0.2
			eS	57	20.70	
HNR	19.26	111	P	53	52.00	0.3
PCI	21.98	274	ePd	54	24.40	4.3X
	1.0s		3.00nm			3.7mb
KKN	62.18	303	P	59	48.80	0.2
DMN	62.27	303	P	59	49.60	0.4
	0.6s		5.00nm			4.9mb X
GKN	62.79	303	P	59	52.80	0.3
	0.6s		8.00nm			5.1mb X
CNCB	144.79	125	ePKP	09	05.00	0.4
LPB	144.84	124	(PKP)	09	03.00	-1.5

S.D. = 0.7 on 8 of 10 obs.

JUN 23, 1989 19h 59m 43.78± 0.45s
38.289 N ± 6.2km 140.845 E ± 6.1km
DEPTH = 19.5 ± 4.1 km
4.5mb (3 obs.)
HONSHU, JAPAN (227)
Felt (III JMA) at Sendai, (II JMA) at Yamagata and (I JMA) at Ishinomaki and Shirokawa.

SEN	0.05	124	iP+	59	46.40	-1.0
			iS	59	47.70	
ISN	0.38	69	eP	59	52.00	0.2
			iS	59	57.50	
YAM	0.39	265	eP	59	52.00	0.1
			iS	59	55.60	
YAMJ	0.65	260	iPd	59	55.70	-0.6
			iS	00	03.70	
OFUJ	1.02	39	iP+	00	02.50	-0.1
			S	00	16.00	
SHR	1.27	203	P	00	00.00	-6.5X
NIIJ	1.80	235	P	00	14.60	0.6
			S	00	39.60	
KAKJ	2.15	195	P	00	19.80	0.7
			S	00	49.60	
AOMJ	2.30	351	P	00	22.20	1.0
			eS	00	51.90	
CHJJ	2.68	214	P	00	26.20	-0.5
			S	01	04.70	
MAT	2.73	231	iPc	00	28.10	0.7
			eS	01	08.00	
MTMJ	2.96	236	P	00	31.90	1.2
			S	01	15.60	
IIDJ	3.66	221	eP	00	44.40	3.7X
			eS	01	32.60	
MRRJ	4.13	2	P	00	49.40	2.1
			eS	01	38.90	
HODJ	4.49	24	P	00	52.70	0.3
			eS	01	46.00	
TSRJ	4.77	236	P	01	01.70	5.4X
KUSJ	5.63	30	P	01	06.80	-1.7
ASAJ	5.98	13	eP	01	12.90	-0.4
GUN	46.60	274	P	08	12.20	-0.6
KKN	47.12	274	P	08	15.40	-1.4
GKN	47.53	275	P	08	18.80	-1.1
	0.6s		6.00nm			4.8mb
INK	53.48	27	eP	09	04.00	-0.4
NB2	72.86	337	P	11	11.50	-1.3
	0.7s		1.90nm			4.3mb
KVN	74.35	53	eP	11	23.00	0.9
ALQ	84.12	50	e(P)	12	16.50	1.5
	1.0s		2.75nm			4.4mb

S.D. = 1.1 on 22 of 25 obs.

JUN 23, 1989 20h 04m 50.44± 0.56s
39.675 N ± 5.1km 20.265 E ± 3.6km
DEPTH = 24.0 ± 4.7 km
3.8mb (3 obs.)
GREECE-ALBANIA BORDER REGION (392)
ML 4.0 (ATH), 3.7 (TTG). Felt (IV) at Karoq, Grave, Grozhdon and Zminic, Albania.

SRN	0.29	315	iPg	04	57.20	0.0
LSK	0.54	28	iPgd	04	58.70	-2.6
TPE	0.65	343	iPgc	05	04.50	1.4
VLO	0.99	324	iPg	05	11.50	2.8X
KBN	1.04	24	ePg	05	08.00	-1.4
BERA	1.05	347	ePg	05	09.20	-0.5
KZN	1.32	61	ePb	05	11.80	-1.7
OHR	1.49	16	iPnd	05	17.20	1.2
VLS	1.52	170	ePb	05	17.50	1.2
TIR	1.70	350	iPn	05	22.20	3.3X
LCI	1.89	291	P	05	22.40	0.7
LACI	2.00	348	ePn	05	25.00	1.7
PHP	2.02	4	iPnc	05	25.10	1.6
NEO	2.32	98	ePn	05	28.40	0.5
PUK	2.38	353	ePn	05	30.70	2.0
KKS	2.40	3	ePn	05	32.30	3.4X
VAY	2.41	46	iPn	05	29.30	0.2
SDA	2.41	346	ePn	05	34.40	5.3X
ULC	2.41	342	ePn	05	31.20	2.0
			eSn	06	02.00	
SKO	2.46	21	iPnc	05	30.70	0.8
			iSn	06	10.50	
PLG	2.54	73	ePn	05	31.10	0.0
BCI	2.69	357	ePn	05	35.40	2.3
BDV	2.82	338	ePn	05	35.50	0.5
			eSn	06	10.00	
TTG	2.86	345	ePn	05	36.40	1.0
			eSn	06	12.00	
PVY	2.93	356	ePn	05	40.00	3.5X
			eSn	06	18.00	
KKB	3.06	43	iPc	05	40.00	1.6
ATH	3.19	121	ePn	05	40.20	0.0
MMB	3.26	53	eP	05	41.00	-0.2
VTS	3.66	36	iP	05	48.00	0.9
SGO	3.90	285	Pc	05	52.60	2.4
RZN	3.94	58	eP	05	51.00	0.0
ATN	4.04	250	P	05	50.50	-1.8
PLD	4.15	53	eP	05	59.00	5.2X
RDO	4.28	68	ePn	05	55.50	-0.2
KDZ	4.39	62	eP	05	59.00	1.8
HVAR	4.53	322	i(Pn)	05	57.80	-1.4
DIM	4.65	58	eP	06	09.00	8.1X
PRK	4.67	93	ePn	06	02.00	0.8
EZN	4.67	86	eP	06	01.00	-0.3
MEU	4.92	240	P	06	04.30	-0.5
BEO	5.15	2	ePn	06	52.00	44.1X
PVL	5.20	45	eP	06	08.00	-0.7
SDI	5.31	295	P	06	11.70	1.4
MFT	5.48	76	eP	06	12.30	-0.5

JMB	5.53	58	eP	06	22.00	8.6X
IZM	5.60	101	eP	06	16.00	1.6
BZS	6.02	9	ePc	06	22.00	1.8
CMP	6.61	31	ePc	06	33.00	4.4X
ASS	6.65	303	P	06	30.30	1.1
ARV	6.69	307	P	06	29.80	0.1
VBY	6.90	329	ePn	06	32.90	0.3
			eSn	07	47.60	
PTJ	6.98	334	e(P)	06	31.60	-2.2
MLR	7.16	34	eP	06	36.00	-0.4
CEY	7.43	327	e(Pn)	06	40.00	0.0
			eSn	08	00.20	
LJU	7.63	328	ePn	06	43.50	0.7
			eSn	08	07.60	
VRI	7.80	35	ePc	06	46.00	0.7
VOY	7.89	326	ePn	06	45.00	-1.6
			eSn	08	12.30	
CTI	8.97	318	P	07	00.10	-1.5
KHC	10.59	335	eP	07	24.50	0.8
HFS	20.89	351	eP	09	31.10	-2.1
	0.5s		1.10nm			3.5mb
NUR	21.04	6	eP	09	28.00	-6.6X
EKA	22.10	323	P	09	45.00	-0.4
	1.0s		5.10nm			3.9mb
NB2	22.11	348	P	09	44.00	-1.5
	0.8s		3.40nm			3.8mb
SUF	23.35	7	eP	09	57.00	-0.5

S.D. = 1.3 on 53 of 64 obs.

JUN 23, 1989 22h 37m 53.28± 1.12s
51.608 N ± 8.9km 16.122 E ± 6.3km
DEPTH = 4.7 ± 2.6 km
POLAND (548)
ML 3.9 (GRF), 3.8 (VKA), 3.5 (KBA).

KSP	0.77	172	iPd	38	08.50	-0.3
	1.7s	1066.00nm				
			iS	38	16.20	
			i	38	25.00	
BRG	1.55	243	iPn	38	21.90	0.3
			iPg	38	24.00	
			iSg	38	43.50	
PRU	1.91	212	Pn	38	27.00	0.2
			Pg	38	29.00	
			Sn	38	45.80	
			Sg	38	53.00	
CLL	1.97	263	iPn	38	27.60	-0.1
			iPg	38	30.80	
			iSg	38	57.50	
KRA	2.88	121	eP	38	48.60	8.0X
			iS	39	28.00	
KHC	2.97	214	iPn	38	42.70	0.7
			Pg	38	50.00	
			Sn	39	18.10	
			Sg	39	31.00	
HOF	2.98	246	ePn	38	42.00	-0.1
MOX	3.00	253	ePn	38	42.00	-0.4
			iPg	38	51.00	
			iSg	39	30.00	
WET	3.22	221	iPnc	38	45.50	-0.1
VKA	3.35	178	i(Pn)	38	48.00	0.6
			iPgd	38	56.30	
			iSg	39	40.20	
ZST	3.47	169	e(P)	38	48.70	-0.4
			e	38	58.50	
			e	39	19.10	
			i	39	44.10	
SPC	3.58	131	eP	38	51.00	0.2
			e	39	06.50	
			i(Sn)	39	52.60	
GRF	3.66	240	ePn	38	51.70	-0.1
			ePg	39	05.00	
			eSg	39	50.90	
KMR	3.78	201	iPn+	38	54.00	0.5
			i(Sn)	39	53.40	
			i	40	13.80	
SRO	4.06	159	eP	39	16.10	18.8X
KBA	4.88	203	iPnd	39	09.20	-0.1
			eSg	40	27.00	
TNS	5.05	257	ePn	39	10.80	-0.7
			eSn	40	36.60	
PTJ	5.71	181	eP	39	20.20	-0.8
WTS	5.79	277	ePn	39	22.50	0.6
	1.0s	8.00nm			4.4mb	
			e(Sn)	41	04.50	
OGA	5.80	217	eP	39	22.50	0.3
DOU	7.45	263	P	39	45.20	-0.1
	0.3s	2.80nm			4.9mb	
			S	41	09.60	

S.D. = 0.5 on 19 of 21 obs.

? JUN 23, 1989 23h 21m 15.71± 3.89s
50.431 S ±46.8km 164.737 E ±19.8km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.) 4.7Msz (1 obs.)
AUCKLAND ISLANDS REGION (166)

MHZ	6.18	31	P	22	47.90	-1.4
			S	23	54.60	
TAU	14.11	296	eP	24	33.00	-4.6X
TOO	18.82	306	eP	25	38.00	0.4
CAN	18.94	317	eP	25	38.30	-0.8
COO	22.05	329	eP	26	12.00	-0.1
BRS	24.75	334	iPd	26	40.00	1.4
RMQ	26.87	327	eP	26	58.00	-0.3
	1.0s	69.00nm			5.3mb	X
DZM	28.34	3	iPc	27	13.50	1.8
CTA	33.63	327	iPc	27	57.30	-1.1
	0.9s	50.42nm			5.4mb	X
ASPA	35.87	307	iPc	28	17.20	-0.4
	0.8s	20.00nm			5.0mb	X
Z	20s	1.29um			4.7Msz	
		LR		40	33.70	
WARB	37.85	295	eP	28	29.00	-5.2X
WRA	38.77	311	P	28	42.00	0.0
	0.7s	6.60nm			4.4mb	
WB5	38.81	311	eP	28	41.70	-0.6
HNR	41.06	353	eP	29	02.00	1.1

S.D. = 1.1 on 12 of 14 obs.

? JUN 24, 1989 00h 15m 53.74± 1.64s
32.900 N ±44.4km 88.523 E ±97.9km
DEPTH = 10.0km (geophysicist)
TIBET (306)

GUN	5.47	205	P	17	18.80	1.2
KKN	5.81	210	P	17	21.00	-1.3
	0.4s	10.00nm			4.9mb	
GKN	5.92	216	P	17	23.80	0.1
	0.6s	10.00nm			4.7mb	
PKI	5.95	208	P	17	23.80	-0.6
	0.4s	5.00nm			4.6mb	
DMN	6.04	210	P	17	26.20	0.6
	0.4s	10.00nm			4.9mb	
MBC	69.70	7	eP	27	06.00	0.9
INK	74.36	15	eP	27	32.00	-0.9

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

% JUN 24, 1989 02h 21m 03.69± 0.81s
37.904 N ± 9.2km 14.665 E ± 7.6km
DEPTH = 17.1 ± 14.5 km
SICILY (398)
MD 2.7 (ROM).

MNO	0.04	41	Pd	21	06.30	-0.8
			eSg	21	08.60	
GIB	0.51	280	P	21	13.50	-0.4
			eSg	21	21.80	
ATN	0.68	68	Pc	21	17.30	0.6
			eSg	21	27.20	
MSI	0.76	67	P	21	18.70	0.6
			eSg	21	29.90	
MEU	0.83	165	Pc	21	17.70	-1.6
			eSg	21	29.20	
FAI	1.01	232	Pd	21	24.30	2.0
			eSn	21	36.90	
USI	1.42	305	Pc	21	27.50	-1.2
MGR	2.34	17	Pc	21	42.00	0.1

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

JUN 24, 1989 02h 34m 18.63± 0.62s
37.882 N ± 7.2km 14.785 E ± 5.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)
MD 2.9 (ROM).

MNO	0.09	304	Pd	34	21.10	-0.3
			eSg	34	23.80	
ATN	0.60	62	P	34	31.60	0.8
			eSg	34	41.10	
GIB	0.61	280	Pc	34	30.30	-0.7
			eSg	34	40.30	
MSI	0.69	62	P	34	33.20	1.0
MEU	0.79	172	Pc	34	32.50	-1.5
			eSg	34	43.20	
MCT	0.95	255	P	34	38.40	1.6
FAI	1.07	236	Pd	34	39.10	0.3
			eSn	34	54.80	
USI	1.51	304	Pc	34	44.60	-1.1
CVT	1.59	263	Pc	34	47.40	0.5
ERC	1.74	276	Pd	34	49.60	0.4
LVI	1.94	274	P	34	52.00	0.1
MGR	2.33	15	Pd	34	56.40	-1.2

S.D. = 1.1 on 12 of 12 obs.

JUN 24, 1989 03h 09m 57.56± 0.39s
36.719 N ± 2.9km 35.943 E ± 2.4km
DEPTH = 41.6 ± 4.2 km
4.9mb (57 obs.) 4.2Msz (2 obs.)
TURKEY (366)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 03:09:58.6 1.1
Lat 36.28N 0.14 Lon 36.13E 0.17
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-4.61 0.45 Mtt= 1.39 0.69
Mff= 3.22 0.45 Mrt=-1.37 1.36
Mrf=-2.46 2.22 Mtf= 1.13 0.40
Principal Axes:

	Val=	Plg=	Azm=
T	4.61	17	115
N	0.86	2	206
P	-5.47	73	301

Best Double Couple:Mo=5.0*10**16
NP1:Strike=203 Dip=28 Slip= -93
NP2: 27 62 -88

FAM	2.33	223	eP	10	35.00	0.7
CSS	2.75	231	eP	10	38.50	-1.8
			eS	11	20.00	
HRI	3.44	183	eP	10	50.00	-0.2
PPCY	3.45	239	eP	10	52.00	1.9
BCK	4.34	281	iP	11	04.00	1.0
KVT	4.36	1	iPn	11	02.10	-1.0
ZNT	4.53	190	eP	11	05.00	-0.5
SALJ	4.70	183	Pc	11	07.90	-0.1
ELL	4.85	272	eP	11	10.70	0.6
KFNJ	4.85	183	Pd	11	10.50	0.6
MKRJ	5.16	183	Pc	11	14.00	-0.4
KSL	5.16	265	eP	11	14.50	0.1
ALT	5.17	299	eP	11	15.00	0.4
KHL	5.35	289	iP	11	17.60	0.5
GPA	5.68	311	eP	11	21.90	0.2
MSL	5.81	91	ePnd	11	20.00	-3.5X
			eP*	11	29.50	
			ePg	11	40.50	
			iSn	12	22.50	
			iS*	12	38.50	
			iLg	12	55.00	
YER	6.15	276	iP	11	28.90	0.5
HRT	6.39	312	eP	11	31.00	-0.7
PRNI	6.41	187	eP	11	31.50	-0.4
ISK	6.90	311	eP	11	34.00	-4.8X
IZM	7.10	286	iP	11	41.90	0.3
KAP	7.19	263	eP	11	41.10	-1.8
BNT	7.26	302	iP	11	42.50	-1.4
EDC	7.29	302	eP	11	42.00	-2.3
CTT	7.34	309	eP	11	44.50	-0.4
BHD	7.73	114	ePnc	11	50.00	-0.4
			iP*	12	10.00	
			iPg	12	30.00	
			iSn	13	24.00	
			iS*	13	53.00	
			iSg	14	17.00	
SLY	7.81	95	ePn	11	49.00	-2.5
			iP*	12	06.50	
			iPg	12	23.50	
			iSn	13	11.00	
			iS*	13	38.00	
			iSg	13	58.50	
HLW	7.85	211	ePnd	11	51.00	-1.1
			P*	12	00.00	
PRK	8.04	291	eP	11	55.70	1.0
EZN	8.18	295	eP	11	57.50	0.9
TAB	8.37	78	eP	12	04.00	4.5X
			e	12	17.00	
NPS	8.50	263	eP	12	00.20	-0.8
JMB	9.22	311	eP	12	12.00	1.0

24d 03h

RDO 9.23 302 eP 12 12.20 1.1
KER 9.40 101 eP 12 13.00 -0.6
KDZ 9.54 304 iP 12 12.00 -3.4X
VAM 9.60 266 eP 12 15.60 -0.6
CFR 10.30 328 eP 12 26.00 0.3
PLG 10.45 294 eP 12 29.20 1.4
BUC 10.73 319 eP 12 31.00 -0.5
ISR 11.01 323 eP 12 36.00 0.6
KKB 11.21 301 iPd 12 40.00 1.8
VAY 11.37 298 iP 12 41.70 1.4
VTS 11.43 305 iP 12 43.00 1.7
VRI 11.47 326 eP 12 41.00 -0.6
MLR 11.55 322 ePc 12 44.00 1.1
KZN 11.67 292 eP 12 46.20 1.8
CMP 11.86 319 ePd 12 52.00 5.1X
SKO 12.39 299 iP 12 55.20 1.2
1.2s 60.00nm 5.5mb
Z 12s 7.46um 4.8Msz
N 12s 5.18um
E 13s 5.14um
iPP 13 05.20
iS 15 26.00
LR 18 04.00
PTT 12.44 328 eP 12 54.00 -0.6
LSK 12.51 291 iPc 12 59.20 3.5X
TEH 12.51 90 ePc 13 03.00 7.2X
OHR 12.58 295 iP 12 58.80 2.1
1.3s 0.10nm 2.7mb X
SRN 12.92 289 eP 13 02.80 1.8
TPE 12.98 291 eP 13 05.00 3.2X
PHP 13.00 297 eP 13 04.20 2.1X
BERA 13.11 293 eP 13 06.80 3.3X
KKS 13.14 299 eP 13 08.30 4.3X
TIR 13.32 295 eP 13 10.00 3.7X
DEV 13.40 317 ePc 13 10.00 2.7X
BCI 13.48 300 eP 13 11.40 3.0X
PUK 13.50 298 eP 13 13.30 4.6X
SDA 13.77 298 eP 13 15.20 3.0X
BZS 13.96 314 eP 13 15.00 0.3
TIM 14.26 314 iPd 13 20.00 1.4
BMR 14.29 324 ePc 13 26.00 7.0X
LCI 14.54 290 Pc 13 21.30 -0.9
PSZ 16.28 318 eP 13 45.00 0.3
ATN 16.33 281 Pd 13 42.80 -2.6X
BEE 16.38 127 (P) 13 45.20 -0.8
0.4s 30.00nm 4.8mb
BUD 16.50 316 eP 13 48.20 0.8
SGO 16.57 290 Pd 13 48.80 0.5
MEU 16.81 278 P 13 52.50 0.9
SPC 16.91 322 iP 13 54.20 1.4
MNO 16.95 281 P 13 56.00 2.7X
SRO 17.08 316 eP 13 55.40 0.7
GIB 17.47 281 P 14 09.00 9.2X
PTJ 17.56 308 e(P) 14 01.80 1.0
KRA 17.64 324 ePd 14 01.50 -0.2
1.0s 62.00nm 4.7mb
Z 16s 1.80um
N 16s 3.00um
e 14 03.70
i 14 12.50
eS 17 22.00
FAI 17.80 278 Pc 14 06.50 2.8X
MCT 17.80 280 Pc 14 05.30 1.3
SDI 17.84 293 P 14 05.70 1.4
VBY 17.85 306 eP 14 05.20 0.9
ZST 17.97 316 iP 14 05.30 -0.4
Z 10s 1.90um
i 14 14.00
e(S) 17 34.00
AZI 18.17 294 Pc 14 09.90 1.7
AQU 18.25 295 P 14 12.90 3.5X
VKA 18.45 315 eP 14 10.00 -1.7
3.0s 336.00nm 5.0mb
Z 11s 0.70um 4.4Msz
i 14 21.80
e(S) 18 00.00
LR 22 42.00
CEY 18.48 306 eP 14 12.00 -0.1
LJU 18.52 307 ePd 14 12.50 -0.1
RDP 18.66 293 Pc 14 14.60 0.2
MNS 18.79 295 Pd 14 15.50 -0.4
LVI 18.80 281 P 14 15.00 -1.1
ARV 18.82 298 Pc 14 16.50 0.2
ASS 18.93 297 Pc 14 17.50 -0.1
MAIO 18.93 84 eP 14 17.00 -0.8
1.0s 37.50nm 4.6mb
eS 18 00.00

RBL 19.30 307 Pc 14 21.50 -0.3
CRE 19.55 298 Pd 14 24.00 -0.7
KMR 19.62 312 iP- 14 25.10 -0.3
i 14 33.30
iPP 15 17.60
i 15 43.80
eS 18 17.00
KBA 19.69 309 iP 14 25.00 -1.2
1.0s 49.30nm 4.8mb
i 14 28.80
SFI 19.69 299 Pc 14 26.50 0.5
PGD 19.77 299 Pd 14 27.60 0.5
FVI 19.86 307 Pc 14 27.40 -0.4
KSP 19.93 321 ePd 14 27.20 -1.3
1.2s 82.00nm 4.9mb
BHG 20.24 310 eP 14 30.10 -1.7
1.0s 88.00nm 5.1mb
PRU 20.35 317 P 14 32.00 -1.0
1.0s 130.10nm 5.2mb
Z 16s 0.80um 4.2MszX
N 20s 1.10um
E 18s 1.10um
e 14 37.50
CTI 20.41 305 Pc 14 33.10 -0.6
KHC 20.45 314 iPd 14 32.80 -1.3
1.0s 86.00nm 5.0mb
i 14 42.30
MME 20.56 299 P 14 34.60 -0.8
PII 20.58 298 P 14 32.00 -3.3X
BDI 20.60 299 P 14 33.60 -2.1
WET 20.86 314 iPd 14 37.00 -1.3
1.3s 181.00nm 5.3mb
OGA 21.08 307 iPc 14 41.00 0.3
1.5s 111.00nm 5.0mb
BRG 21.16 319 iP 14 40.00 -1.2
1.1s 66.00nm 4.9mb
i 14 48.40
eS 18 40.00
BOB 21.56 300 Pc 14 45.50 0.2
CLL 21.89 319 iPd 14 48.40 -0.1
1.4s 42.00nm 4.7mb
HOF 21.99 316 eP 14 49.50 -0.1
1.3s 46.00nm 4.7mb
GRF 22.08 314 eP 14 49.70 -0.7
1.3s 46.00nm 4.8mb
Z 22s 0.20um 3.5Msz
VAI 22.28 303 P 14 52.50 0.1
MOX 22.30 316 ePd 14 52.00 -0.6
1.1s 46.00nm 4.8mb
Z 12s 1.00um 4.5MszX
N 16s 0.70um
E 18s 0.70um
ORO 22.76 302 P 14 58.00 0.7
ORX 22.76 302 P 14 55.15 -2.2
SBF 22.81 297 eP 14 56.30 -1.5
0.9s 47.10nm 4.9mb
ENR 22.88 298 P 15 01.20 2.8X
STV 22.95 298 P 15 00.69 1.6
DOI 23.05 299 P 14 59.00 -1.1
PZZ 23.15 299 P 15 00.07 -1.1
RSP 23.16 300 P 14 59.36 -1.8
LSD 23.29 301 P 15 04.28 1.7
FRF 23.34 296 eP 15 02.30 -0.5
1.1s 41.00nm 4.8mb
FEL 23.35 307 eP 15 02.20 -0.8
LMR 23.41 296 eP 15 03.00 -0.5
1.1s 24.40nm 4.6mb
RRL 23.44 300 P 15 04.28 0.2
TOD 23.47 312 eP 15 03.00 -1.0
LRG 23.53 296 eP 15 04.50 -0.1
1.1s 34.10nm 4.8mb
BNI 23.54 300 Pc 15 06.40 1.5
LPG 23.58 301 eP 15 05.90 0.5
0.9s 44.80nm 5.0mb
KTD 23.80 311 eP 15 06.75 -0.5
MOF 23.91 307 P 15 07.89 -0.5
TNS 23.92 313 ePd 15 08.30 -0.2
GWF 23.96 310 P 15 08.25 -0.5
LOMF 23.96 305 P 15 08.59 -0.3
CDF 23.99 308 P 15 07.61 -1.5
ECH 24.00 308 P 15 09.09 -0.1
BSF 24.12 307 P 15 09.93 -0.5
ABH 24.33 312 eP 15 11.16 -1.2
HAU 24.45 307 eP 15 13.20 -0.4
0.9s 17.60nm 4.6mb
RUP 24.56 311 eP 15 13.71 -0.9
VITF 24.75 307 P 15 16.00 -0.4

COP 24.78 327 iPc 15 18.70 2.1
1.0s 76.00nm 5.2mb
NUR 24.88 347 iP 15 17.70 0.2
0.7s 41.40nm 5.1mb
Z 15s 1.00um 4.4MszX
LR 32 38.00
WLF 25.10 310 P 15 19.00 -0.6
WTS 25.60 316 eP 15 25.00 0.6
1.0s 26.00nm 4.7mb
e 15 34.50
ENN 25.62 313 eP 15 28.00 3.4X
0.9s 7.00nm 4.2mb
e 15 46.00
LBF 25.76 303 eP 15 24.70 -1.3
0.8s 16.60nm 4.7mb
SMF 25.79 303 eP 15 25.30 -0.9
0.9s 24.50nm 4.8mb
LOR 25.90 304 eP 15 25.80 -1.5
0.8s 24.10nm 4.8mb
UPP 25.99 339 iP 15 28.00 0.1
ETER 26.02 293 e(P) 15 30.00 1.6
WIT 26.04 317 eP 15 30.00 1.6
e 15 38.50
ESEL 26.05 287 eP 15 29.00 0.3
SSF 26.09 304 eP 15 27.90 -1.1
1.0s 26.80nm 4.8mb
AVF 26.15 303 eP 15 28.30 -1.2
0.8s 17.90nm 4.7mb
DOU 26.19 311 P 15 32.50 2.7X
0.8s 13.30nm 4.6mb
BGF 26.45 302 eP 15 31.20 -1.1
0.9s 8.80nm 4.4mb
SNF 26.51 311 P 15 31.30 -1.5
DBN 26.56 315 eP 15 32.00 -1.2
Z 16s 0.50um 4.2MszX
eS 20 36.00
MAF 26.58 301 eP 15 32.60 -0.9
0.9s 12.10nm 4.5mb
SUF 26.72 350 iP 15 35.00 0.4
CAF 26.76 298 eP 15 34.20 -1.0
1.1s 12.20nm 4.4mb
TCF 26.84 301 eP 15 35.00 -0.9
1.0s 10.80nm 4.4mb
RJF 27.19 299 eP 15 37.10 -2.0
LSF 27.30 301 eP 15 38.90 -1.2
LFF 27.70 298 eP 15 43.00 -0.7
EBR 27.82 289 (P) 15 46.00 1.2
EROO 27.89 289 eP 15 46.50 1.1
EPF 27.89 294 eP 15 43.80 -1.7
MFF 28.49 302 eP 15 49.20 -1.6
1.1s 19.50nm 4.7mb
NB2 28.93 335 P 15 54.00 -0.6
0.9s 6.60nm 4.3mb
GRR 29.24 305 eP 15 55.50 -2.0
LPF 29.30 304 eP 15 55.90 -2.1
EVIA 30.34 285 eP 16 09.00 1.4
ENIJ 30.41 282 eP 16 08.30 0.3
GUD 31.36 290 eP 16 16.00 -0.5
TOL 31.36 288 eP 16 17.70 1.3
eS 21 18.00
EBAN 31.41 285 eP 16 18.00 1.1
KSH 31.45 73 eP 16 19.50 2.1
N 10s 0.80um
ASMO 31.53 283 eP 16 21.50 3.5X
APHE 31.56 283 eP 16 20.00 1.6
ALOJ 31.86 283 eP 16 18.50 -2.5
MAL 32.18 282 iP 16 23.60 0.1
EKA 32.35 318 Pc 16 24.20 -0.6
0.9s 9.40nm 4.7mb
EHOR 32.61 285 eP 16 27.70 0.4
EVAL 33.82 285 eP 16 38.70 0.8
DMU 34.06 314 eP 16 39.00 -0.7
NDI 35.43 91 eP 16 51.00 -0.7
BNG 35.88 211 iPd 16 56.80 1.1
0.9s 61.00nm 5.5mb
id 20 20.30
iS 26 39.00
ic 29 39.00
WMO 39.58 63 P 17 28.00 1.6
N 16s 0.40um
PP 19 00.00
eS 23 34.00
GKN 41.67 88 P 17 44.40 0.5
HYB 42.12 106 eP 17 48.00 0.4
DMN 42.21 88 P 17 49.20 0.7
KKN 42.27 88 P 17 49.20 0.2
PKI 42.47 88 P 17 51.20 0.5

GUN	42.70	87	P	17	53.00	0.4
KBS	43.44	353	eP	17	59.10	1.5
GBA	43.59	111	Pd	18	02.20	2.8X
	1.6s	44.50nm			5.0mb	
KUK	44.97	236	eP	18	11.00	0.4
TIC	47.84	241	P	18	33.46	0.1
	1.2s	25.00nm			5.1mb	
KIC	47.85	241	P	18	33.52	0.2
	1.3s	59.50nm			5.5mb	
LIC	48.14	241	P	18	35.70	0.1
	1.3s	60.00nm			5.5mb	
GTA	49.42	66	Pd	18	46.00	0.6
LZH	53.56	69	eP	19	17.00	0.3
	1.5s	66.00nm			5.4mb	
Z	16s	2.10um			5.3MszX	
ALE	54.91	351	eP	19	26.00	0.2
	0.7s	5.00nm			4.7mb	
CD2	55.59	75	P	19	31.50	0.1
BTO	56.38	62	eP	19	38.00	1.0
			pP	19	49.50	39kmX
			eS	27	34.00	
BUL	56.97	188	iPc	19	42.10	0.7
	1.0s	25.50nm			5.2mb	
HHC	57.37	61	P	19	45.00	0.9
KMI	57.43	81	Pc	19	44.50	-0.4
CHG	57.56	90	iPd	19	44.90	-0.7
	1.1s	18.99nm			5.1mb	
XAN	58.20	69	Pd	19	49.30	-0.6
TIY	59.24	64	eP	19	56.80	-0.3
Z	18s	0.73um			4.9Msz	
E	11s	0.30um				
GYA	59.89	78	iPd	20	01.00	-0.8
BJI	60.91	60	eP	20	08.00	-0.4
KSR	62.83	189	iPd	20	22.80	1.3
	1.0s	30.00nm			5.4mb	
TIA	63.27	63	Pd	20	23.70	-0.5
FRB	63.66	331	ePd	20	25.80	-0.5
	1.3s	104.00nm			5.8mb	
WHN	63.88	70	eP	20	28.00	-0.3
SNY	65.15	55	eP	20	35.70	-0.7
CN2	65.44	53	eP	20	38.00	-0.2
QIZ	66.19	83	eP	20	43.20	-0.2
MBC	66.22	354	eP	20	43.50	0.8
	0.8s	6.00nm			4.7mb	
NJ2	66.51	67	Pc	20	45.00	-0.2
PSI	66.89	105	iPc	20	47.60	-0.3
SSE	68.71	67	Pd	20	59.00	-0.1
			i	21	02.50	
			i	21	12.00	
INK	74.99	356	iPc	21	36.20	0.4
IMA	77.27	4	eP	21	50.20	1.4
	1.2s	19.50nm			5.0mb	
GAC	77.35	318	eP	21	51.00	1.6
MAT	77.56	54	ePKP	21	52.00	1.2
YKC	78.31	346	eP	21	55.10	0.6
YKA	78.32	347	eP	21	58.40	3.9X
FBA	78.67	2	eP	21	57.70	1.3
TTA	80.23	6	eP	22	06.70	1.8
PMR	81.95	2	eP	22	15.00	1.2
	1.0s	12.50nm			4.9mb	
FFC	82.01	337	eP	22	15.00	0.7
	1.3s	42.00nm			5.3mb	
EDM	86.55	342	iPd	22	38.70	1.4
SES	88.50	340	eP	22	49.00	2.2
PNT	91.64	344	eP	22	58.00	-3.4X
	0.7s	13.00nm			5.5mb	
LRM	93.04	338	eP	23	09.50	1.2
LNO	94.97	323	eP	23	17.40	0.6
TUL	94.97	323	eP	23	17.20	0.3
	1.3s	12.80nm			5.2mb	
MEO	97.22	324	iPc	23	27.80	0.6
SPA	126.53	180	e(PKP)	29	00.50	3.6X
	1.0s	10.00nm				

S.D. = 1.0 on 220 of 251 obs.

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* JUN 24, 1989 03h 38m 22.95± 0.60s
38.985 S ±15.5km 14.713 W ± 8.1km
DEPTH = 10.0km (geophysicist)
5.0mb (20 obs.)
TRISTAN DA CUNHA REGION (411)

KSR	37.17	82	eP	45	34.50	-1.6
BAO	37.29	299	eP	45	36.00	-1.1
SLR	38.30	83	eP	45	44.00	-1.6
BUL	41.65	76	iPd	46	12.20	-1.1
	0.9s	6.72nm			4.4mb	
LIC	45.87	13	P	46	45.10	-2.1
	1.0s	18.00nm			5.0mb	
KIC	46.05	14	P	46	46.58	-2.1
	1.0s	40.00nm			5.4mb	
TIC	46.28	13	P	46	48.20	-2.3
KUK	46.87	20	eP	46	45.00	-10.1X
CNCB	51.20	280	eP	47	28.00	-1.3
SPA	51.20	180	e(P)	47	35.10	6.8X
	1.0s	10.00nm			4.7mb	
LPB	51.46	280	P	47	30.00	-1.1
ZOBO	51.64	280	P	47	31.00	-1.6
BNG	53.01	43	iPd	47	40.50	-1.8
	0.7s	19.00nm			5.1mb	
LWI	53.91	58	ePd	47	48.80	-0.3
ARE	54.11	278	eP	47	51.00	0.3
EPF	82.77	11	eP	50	48.50	0.4
	1.1s	8.30nm			4.8mb	
LPO	84.51	11	eP	50	57.20	0.3
	0.9s	7.80nm			4.9mb	
LFF	84.69	11	eP	50	58.10	0.3
	1.1s	11.70nm			5.0mb	
CAF	84.89	12	eP	50	59.10	0.3
	1.1s	8.30nm			4.9mb	
RJF	85.17	11	eP	51	00.60	0.4
	1.0s	8.00nm			4.9mb	
OHR	86.04	26	eP	51	05.20	0.5
LSF	86.09	11	eP	51	05.40	0.6
	1.3s	25.20nm			5.2mb	
MFF	86.20	10	eP	51	05.80	0.6
MAF	86.23	12	eP	51	06.00	0.6
	1.2s	16.00nm			5.1mb	
TCF	86.24	12	eP	51	06.30	0.8
	1.1s	10.70nm			4.9mb	
LPG	86.29	15	eP	51	06.50	0.4
	1.1s	10.70nm			4.9mb	
SMF	86.85	13	eP	51	08.90	0.4
AVF	86.91	12	eP	51	09.30	0.6
	1.2s	17.80nm			5.2mb	
SSF	87.20	12	eP	51	10.30	0.2
LBF	87.20	13	eP	51	10.30	0.1
	0.7s	3.30nm			4.7mb	
LOR	87.46	13	eP	51	11.50	0.1
LPF	87.49	9	eP	51	12.10	0.7
	1.1s	21.40nm			5.3mb	
GRR	87.86	9	eP	51	13.90	0.7
	0.9s	9.80nm			5.1mb	
LDF	88.15	10	eP	51	15.40	0.8
FLN	88.27	9	eP	51	15.90	0.7
	0.9s	19.60nm			5.4mb	
KHC	91.24	18	P	51	30.00	0.8
SRO	91.28	22	eP	51	30.20	0.9
ZST	91.29	21	i(P)	51	30.60	1.2
MLR	91.69	27	ePd	51	32.00	0.6
PRU	92.27	18	eP	51	35.00	1.2
VRI	92.29	28	ePc	51	35.00	1.0
SPC	93.08	22	eP	51	38.90	1.1
CLL	93.13	17	eP	51	38.00	0.2
	1.5s	13.00nm			5.1mb	
WARB	105.78	144	ePKP	56	49.00	0.5
YKA	128.10	324	ePKP	57	30.60	0.7
MBC	130.96	342	ePKP	57	35.00	0.0
INK	136.16	332	ePKP	57	45.00	0.0

S.D. = 1.0 on 45 of 47 obs.

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* JUN 24, 1989 04h 45m 47.40± 1.24s
41.062 S ±23.7km 88.302 W ± 9.7km
DEPTH = 10.0km (geophysicist)
5.0mb (3 obs.) 4.4Msz (1 obs.)
WEST CHILE RISE (686)

LNV	15.15	68	eP	49	23.00	0.0
LCCH	15.31	66	ePd	49	26.50	1.4
TACH	15.65	67	eP	49	30.00	0.5
SAN	15.95	67	eP	49	34.00	0.6
PEL	16.11	66	iPc	49	35.50	0.0
FCH	16.28	67	eP	49	39.50	1.5
JACH	16.43	65	eP	49	40.00	0.3
ANT	22.89	46	e(P)	50	50.25	-2.0
ARE	28.49	36	eP	51	45.00	-0.2
CNCB	29.86	42	Pc	51	58.00	0.2
LPB	30.03	41	P	52	00.00	0.8
			LR	00	20.00	
ZOBO	30.24	41	P	52	00.00	-1.2
	1.5s	49.46nm			5.1mb	
			S	57	06.00	
			LR	00	42.00	
PPD	36.44	70	eP	52	52.10	-2.1
			e	52	54.70	
VAO	38.97	75	e(P)	53	15.00	-0.6
BAO	43.04	66	eP	53	48.90	-0.2
AT8	49.65	50	Pc	54	39.40	-1.8
TUL	76.91	354	eP	57	40.90	-0.3
	1.5s	20.60nm			5.0mb	
Z	22s	0.21um			4.4Msz	
LNO	76.91	354	eP	57	42.00	0.9
RLO	77.10	354	e(P)	57	43.40	1.1
ALQ	77.45	345	eP	57	44.90	0.4
	1.1s	6.65nm			4.6mb	
			e	57	53.00	
			e	57	56.40	
GBA	149.94	151	PKPd	05	35.30	0.6
	1.0s	6.40nm				

S.D. = 1.1 on 21 of 21 obs.

% JUN 24, 1989 05h 49m 35.48± 0.63s
37.893 N ± 5.7km 14.705 E ± 4.8km
DEPTH = 13.6 ± 4.6 km
SICILY (398)
MD 3.1 (ROM).

MNO	0.04	348	Pd	49	38.10	-0.3
			eSg	49	40.40	
GIB	0.54	280	Pc	49	46.60	0.2
			eSg	49	54.90	
ATN	0.66	66	P	49	48.60	0.4
			eSg	49	59.10	
MSI	0.74	65	P	49	50.90	1.3
			eSg	50	01.50	
MEU	0.81	167	Pc	49	49.50	-1.4
			eSg	50	02.60	
MCT	0.89	253	P	49	52.70	0.4
			eSg	50	05.40	
FAI	1.02	233	P	49	55.80	1.3
			eSn	50	10.10	
USI	1.45	305	Pc	50	01.20	-0.1
CVT	1.53	263	P	50	02.10	-0.3
ERC	1.68	276	P	50	03.70	-0.9
LVI	1.87	274	P	50	08.00	0.6
MGR	2.34	16	P	50	13.50	-0.6
SGO	2.70	10	Pd	50	18.90	-0.4
SDI	3.87	350	P	50	35.50	-0.4

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

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* JUN 24, 1989 06h 09m 17.26± 4.32s
34.002 S ±22.6km 70.133 W ±22.7km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.44	279	iPc	09	26.50	0.3
			iS	09	32.90	
PCH	0.50	320	eP	09	40.70	13.4X
			iS	09	58.60	
FCH	0.69	349	iPc	09	30.60	-0.5
			iS	09	41.40	
SAN	0.70	321	iPc	09	31.20	0.0
			iS	09	41.90	
TACH	0.75	297	iPc	09	32.00	0.0
			iS	09	43.10	
PEL	0.97	332	iPd	09	36.00	0.2
			iS	09	50.50	
LNV	1.06	272	iPc	09	37.00	-0.3
			iS	09	51.50	
ROCH	1.26	324	eP	09	40.70	-0.2
			iS	09	58.60	
LCCH	1.31	293	iPd	09	41.30	-0.1
			iS	09	59.50	
JACH	1.37	344	eP	09	43.00	0.5

S.D. = 0.3 on 9 of 10 obs.

JUN 24, 1989 06h 11m 00.33± 0.82s
39.193 N ± 8.1km 26.505 E ± 7.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.4 (ATH).

PRK	0.19	286	ePg	11	04.70	0.2
EZN	0.65	348	iPg	11	12.00	-1.3
			iSg	11	21.00	
IZM	0.99	143	iPn	11	17.50	-1.6
EDC	1.56	42	iPn	11	26.50	-1.6
BNT	1.59	43	iPn	11	28.00	-0.6
MFT	1.70	20	iPn	11	31.50	1.3
RDO	2.09	340	ePn	11	36.10	0.4
KHL	2.51	109	ePn	11	43.00	1.0
KDZ	2.59	342	iP	11	43.00	0.0

24d 06h

PLG 2.64 298 ePg 11 50.80 7.1X
ALT 2.81 92 ePn 11 48.00 1.8
RZN 2.84 332 iPc 11 47.00 0.3
PVL 4.12 348 eP 12 04.00 -0.6
VTS 4.22 325 eP 12 07.00 0.8
S.D. = 1.2 on 13 of 14 obs.

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* JUN 24, 1989 07h 13m 27.08± 2.27s
3.899 N ±12.5km 126.416 E ±19.6km
DEPTH = 116.3 ± 23.0 km
4.1mb (2 obs.)
TALAUD ISLANDS (263)

MNI 2.82 214 ePc 14 11.50 -0.1
WB5 24.80 162 eP 18 39.70 -0.1
WRA 24.85 162 Pd 18 40.50 0.2
0.5s 2.50nm 3.9mb
LOE 27.72 301 eP 19 07.50 0.9
CHG 30.72 301 eP 19 34.20 0.9
XAN 34.21 334 Pd 20 02.50 -1.1
TIY 36.10 341 eP 20 18.50 -1.0
BJI 37.25 347 eP 20 29.00 0.0
SNY 37.95 357 Pc 20 36.00 1.2
GBA 49.30 285 Pc 22 05.60 -0.8
0.6s 3.10nm 4.4mb
S.D. = 1.0 on 10 of 10 obs.

? JUN 24, 1989 08h 27m 18.74± 3.12s
34.748 N ±30.4km 139.328 E ±12.8km
DEPTH = 26.6 ± 13.1 km
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.1 (JMA). Felt (I JMA) on Oshimo.

OSH 0.04 71 iPd 27 23.30 0.0
S 27 26.00
CHJJ 1.33 348 iPd 27 40.90 -0.7
S 27 56.50
IIDJ 1.37 303 iPd 27 42.30 0.0
S 27 59.50
KAKJ 1.61 25 P 27 45.80 0.1
S 28 06.40
MAT 2.01 333 iPd 27 51.90 0.4
iS 28 16.40
NIIJ 2.50 354 P 27 58.80 0.3
TSRJ 2.85 287 P 28 12.50 9.1X
S 28 48.80
S.D. = 0.6 on 6 of 7 obs.

JUN 24, 1989 09h 24m 49.80± 0.26s
43.504 N ± 2.0km 110.758 W ± 2.7km
DEPTH = 5.0km (geophysicist)
WYOMING (460)
ML 3.8 (NEIS). Felt strongly at Jackson. Felt (III) at Kelly.

SNOW 0.04 177 iPd 24 51.43 0.1
AVOW 0.11 339 iPc 24 51.97 -0.4
TPAW 0.14 264 iPc 24 52.90 0.0
LOHW 0.16 46 iPc 24 52.66 -0.5
REDW 0.16 206 iPd 24 53.49 0.3
MOOW 0.24 2 iPd 24 54.18 -0.7
MUDI 0.26 296 iPc 24 54.92 -0.2
TRXW 0.28 30 iPc 24 55.20 -0.4
TARW 0.31 327 iPc 24 55.57 -0.5
CHOI 0.38 240 ePc 24 57.37 -0.2
ALPW 0.39 206 ePd 24 57.38 -0.4
RAMW 0.41 340 iPc 24 57.40 -0.7
PINI 0.43 271 iPc 24 58.08 -0.3
PACW 0.44 26 iPc 24 58.31 -0.4
S 25 04.42
COLW 0.45 6 iPd 24 58.15 -0.7
S 25 04.78
STEW 0.55 6 ePd 24 59.92 -0.9
BW06 1.14 129 iPc 25 11.20 -0.6
PTI 1.34 242 eP 25 14.70 -0.4
HPI 1.71 278 eP 25 20.00 -0.7
BGMT 1.96 332 ePnc 25 24.90 0.7
CCMT 2.07 314 iPnc 25 26.90 1.0
MEMT 2.11 356 ePnd 25 27.50 1.2
LCCM 2.47 341 ePn 25 32.80 1.3
LRM 2.61 333 ePn 25 35.10 1.5
BUT 2.62 333 ePg 25 41.40 4.9X
eSg 26 17.90
DAU 3.11 187 eP 25 40.50 -0.3
HRY 3.30 347 ePn 25 43.90 0.7
DUG 3.65 206 eP 25 48.00 -0.2
RSSD 4.90 80 eP 26 05.60 -0.6
GOL 5.54 131 eP 26 16.00 0.7
GLD 5.59 130 eP 26 17.00 1.1
SES 6.90 358 eP 26 35.00 0.9
KVN 7.10 234 eP 26 37.40 0.4
TNP 7.30 224 eP 26 39.00 -0.9
ALQ 9.18 157 e(P) 27 03.50 -2.5X
S.D. = 0.7 on 33 of 35 obs.

JUN 24, 1989 10h 04m 10.43± 2.61s
33.527 S ± 8.1km 71.012 W ± 7.8km
DEPTH = 67.3 ± 27.7 km
NEAR COAST OF CENTRAL CHILE (135)

TACH 0.14 154 iPd 04 20.50 -0.2
iS 04 28.00
SAN 0.30 76 iPc 04 21.60 0.1
iS 04 30.00
PCH 0.43 103 iPc 04 22.70 0.1
iS 04 31.80
LCCH 0.47 276 iPc 04 23.00 0.1
iS 04 32.40
PEL 0.47 36 iP 04 23.00 0.1
iS 04 32.50
CHCH 0.50 144 iPc 04 23.30 0.0
iS 04 33.30
LNV 0.54 218 iPd 04 23.50 0.0
iS 04 32.00
ROCH 0.55 0 iPc 04 24.00 0.0
iS 04 34.00
FCH 0.64 72 iPc 04 25.00 0.0
iS 04 35.50
JACH 0.91 23 iPc 04 27.90 -0.2
iS 04 41.00
S.D. = 0.1 on 10 of 10 obs.

JUN 24, 1989 10h 25m 06.05± 0.26s
43.515 N ± 2.1km 110.772 W ± 2.8km
DEPTH = 5.0km (geophysicist)
WYOMING (460)
ML 3.7 (NEIS). Felt strongly at Jackson.

SNOW 0.05 167 iPd 25 07.48 -0.3
AVOW 0.10 342 iPc 25 08.02 -0.4
TPAW 0.13 259 iPc 25 08.95 0.0
LOHW 0.16 51 iPc 25 08.69 -0.7
REDW 0.16 201 iPd 25 09.51 0.0
MOOW 0.23 5 ePd 25 10.21 -0.7
S 25 13.42
MUDI 0.24 295 iPc 25 10.96 -0.1
TRXW 0.28 33 iPc 25 11.18 -0.6
TARW 0.30 328 iPc 25 11.62 -0.4
CHOI 0.38 238 ePc 25 13.39 -0.3
RAMW 0.40 341 iPc 25 13.42 -0.6
ALPW 0.40 204 ePd 25 13.42 -0.7
PINI 0.42 269 ePc 25 14.13 -0.3
PACW 0.44 28 ePc 25 14.32 -0.6
S 25 20.24
COLW 0.44 7 P 25 14.24 -0.7
STEW 0.54 7 P 25 15.97 -0.9
S 25 22.84
BW06 1.16 129 iPc 25 27.20 -1.1
PTI 1.33 242 eP 25 30.70 -0.6
HPI 1.70 277 eP 25 36.20 -0.6
BGMT 1.94 333 iPnc 25 40.90 0.6
CCMT 2.06 314 iPnc 25 42.90 1.0
MEMT 2.09 356 ePnd 25 43.50 1.1
LCCM 2.45 342 ePnc 25 49.00 1.5
LRM 2.60 333 ePn 25 51.20 1.5
BUT 2.81 334 ePg 25 57.50 4.9X
eSg 26 33.00
DAU 3.12 187 eP 25 56.70 -0.4
HRY 3.28 347 ePn 26 00.20 0.9
DUG 3.65 205 eP 26 04.00 -0.5
RSSD 4.91 81 eP 26 23.50 1.0
GOL 5.56 131 eP 26 32.30 0.6
GLD 5.61 130 eP 26 33.00 0.7
SES 6.89 359 eP 26 50.00 -0.1
KVN 7.09 234 eP 26 54.00 0.8
ALQ 9.19 157 e(P) 27 23.70 1.3
S.D. = 0.8 on 33 of 34 obs.

? JUN 24, 1989 10h 33m 41.95± 9.90s
17.864 N ±29.7km 65.721 W ±60.4km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)
SJG 0.48 301 iP 33 51.60 -0.1
S 33 59.10
CSB 0.59 316 iP 33 53.90 -0.1
PNP 0.94 282 iP 34 00.00 0.2
APR 1.13 302 iP 34 03.20 0.1
S 34 19.40
MGP 1.31 276 iP 34 06.00 -0.2
S.D. = 0.2 on 5 of 5 obs.

JUN 24, 1989 10h 59m 35.70± 0.79s
41.902 N ± 8.1km 20.237 E ± 6.0km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)

KKS 0.22 37 ePg 59 41.00 0.6
PHP 0.26 144 iPgc 59 40.90 -0.3
LACI 0.48 236 ePg 59 46.80 1.5
SDA 0.56 282 ePg 59 45.00 -2.1
SDA 0.56 282 ePg 59 47.80 0.7
OHR 0.90 152 ePg 59 52.50 -0.4
eSg 00 07.20
SKO 0.90 85 ePg 59 53.00 0.0
eSg 00 06.80
S.D. = 1.4 on 7 of 7 obs.

& JUN 24, 1989 11h 02m 09.12s
61.778 N 149.884 W
DEPTH = 37.7km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA 0.13 179 iP 02 16.16 0.5
PME 0.43 110 eP 02 18.11 -0.7
SUA 0.52 233 eP 02 19.71 -0.4
S 02 28.68
SKT 0.81 285 iP 02 23.32 -0.8
S 02 35.00
CGLM 1.12 246 iP 02 28.19 -0.5
S 02 43.11
SPU 1.20 241 iP 02 29.06 -0.7
S 02 45.20
CRP 1.20 246 iP 02 29.42 -0.5
NKA 1.23 213 eP 02 31.30 1.3
SLKM 1.29 187 eP 02 29.63 -1.3
S 02 47.56
SEW 1.69 173 eP 02 35.69 -1.0
RDT 1.72 226 eP 02 36.25 -0.9
VZW 1.76 113 iP 02 36.54 -1.2
TOA 1.79 78 iP 02 38.29 0.2
KTH 1.85 345 eP 02 38.86 -0.1
KLU 1.91 97 iP 02 38.74 -1.3
S 03 03.27
RED 1.96 227 eP 02 39.88 -0.7
S 03 04.95
MCK 2.01 12 P 02 41.35 0.0
ILIM 2.27 223 eP 02 44.17 -0.9
CNPM 2.36 197 eP 02 45.49 -0.7
PAX 2.38 58 eP 02 46.68 0.0
OPT 2.69 219 eP 02 51.59 0.6
NEA 2.83 7 eP 02 51.64 -1.4
GLB 2.92 94 eP 02 52.31 -2.0
TTA 3.08 295 iP 02 55.06 -1.5
FBA 3.27 16 eP 02 58.01 -1.2
BALM 3.70 98 eP 03 03.49 -1.9
INK 9.50 39 eP 04 35.00 8.7
27 obs. associated

? JUN 24, 1989 11h 14m 44.65± 2.29s
20.539 S ±17.5km 179.100 W ±16.6km
DEPTH = 685.9 ± 28.9 km
4.2mb (5 obs.)
FIJI ISLANDS REGION (181)

DZM 13.56 261 iPc 17 38.90 0.6
CTA 32.46 265 iPd 20 24.90 0.1
0.7s 13.70nm 4.7mb
JAY 43.08 289 ePc 21 49.50 -0.7
0.6s 68.10nm 5.3mb X
ASPA 43.51 257 iPd 21 53.10 -0.4
WB5 43.56 262 iPc 21 53.50 -0.3
FORR 48.30 247 eP 22 29.00 -0.4
WARB 49.83 253 eP 22 34.00 -6.9X
MBL 56.74 258 eP 23 29.10 -0.2
0.4s 5.00nm 4.1mb
NANU 60.39 255 iPc 23 54.20 0.9
SPA 69.59 180 e(P) 24 49.20 -0.4
0.9s 10.91nm 4.3mb

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PNT     87.27  34 eP     26 22.00   -0.2
        0.7s      4.00nm          4.2mb
ALQ     88.23  52 e(P)   26 27.20    0.0
        1.0s      3.00nm          3.9mb
SES     92.51  36 eP     26 46.00   -0.3
INK     94.58  15 eP     26 55.00   -0.2
HFS    139.41 350 ePKP   32 50.10   -7.5X
        0.4s      1.50nm
EKA    145.13   4 PKPc   33 08.90    1.3
        0.8s      4.60nm
DMU    146.16   8 ePKP   33 12.00    2.7X
DLE    146.81   8 ePKP   33 13.80    3.5X
KSP    147.41 342 iPKP   33 16.50    5.1X
CLL    147.85 346 iPKP   33 17.20    5.1X
        0.8s     19.00nm
                  i      33 22.10
BRG    148.03 344 iPKP   33 17.50    5.1X
        0.8s     10.00nm
                  i      33 23.00
PRU    148.68 343 ePKP   33 19.50    6.1X
KHC    149.72 343 PKPc   33 22.50    7.4X
MEM    149.72 354 PKP    33 21.80    6.9X
SNF    149.97 356 PKP    33 21.60    6.3X
DOU    150.36 355 PKPc   33 23.20    7.3X
      S.D. = 0.6  on  14 of  26 obs.
-------------------------------------
*  JUN  24, 1989  11h 17m 26.19± 1.96s
   35.038 N ±17.9km   24.289 E ±10.0km
   DEPTH =  10.0km  (geophysicist)
   4.0mb (  1 obs.)
 CRETE                              (370)
      MD 3.9 (ATH).

VAM     0.38 349 ePg    17 32.00   -1.9
NPS     1.11  78 ePg    17 46.00   -1.0
KAP     2.42  77 ePn    18 06.00   -0.4
ITM     2.87 319 ePn    18 13.10    0.3
YER     3.85  56 ePn    18 28.10    1.3
IZM     4.12  35 ePn    18 31.00    0.5
KSL     4.45  74 ePn    18 35.60    0.4
ELL     4.87  68 ePn    18 40.70   -0.7
EZN     5.05  18 ePn    18 43.00   -0.6
VAY     6.42 348 eP     19 04.00    1.0
MLR    10.52   6 eP     20 02.00    1.9
KHC    16.15 334 eP     21 17.50    2.8X
DOU    20.81 322 P      22 09.20   -0.8
SLL    26.43 348 eP     23 00.90   -3.7X
        0.4s      1.50nm          4.0mb
      S.D. = 1.2  on  12 of  14 obs.
-------------------------------------
?  JUN  24, 1989  11h 37m 10.47± 2.69s
   26.567 N ±19.1km  142.304 E ±146.km
   DEPTH =  33.0km  (normal)
   4.5mb (  4 obs.)
 BONIN ISLANDS REGION               (212)

MAT    10.54 342 (P)    39 42.00   -0.3
WB5    46.81 190 eP     45 38.20   -0.8
WRA    46.87 190 Pd     45 40.10    0.6
        0.4s      2.40nm          4.5mb
SUF    77.71 335 eP     49 06.00    0.8
        0.6s      3.10nm          4.5mb
NUR    79.58 334 eP     49 16.00    0.6
HFS    83.95 337 eP     49 37.50   -0.8
        0.6s      1.80nm          4.4mb
NB2    84.14 338 P      49 39.10   -0.2
        0.7s      1.00nm          4.1mb
ZOBO  149.95  76 ePKP   57 00.00    4.7X
LPB   150.08  77 ePKP   56 58.00    2.7X
CNCB  150.30  77 ePKP   56 59.00    3.2X
      S.D. = 0.8  on   7 of  10 obs.
-------------------------------------
%  JUN  24, 1989  12h 13m 35.19± 0.70s
   61.758 N ± 7.6km    7.487 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                    (535)
      MD 2.1 (BER).

MOL     0.82   2 iP     13 49.92   -1.0
                eS     14 00.22
HYA     0.86 227 iP     13 51.04   -0.7
                eS     14 03.18
SUE     1.49 243 iP     14 01.96    0.0
                eS     14 19.06
ASK     1.70 222 eP     14 05.45    0.5
                eS     14 26.85
BER     1.73 218 eP     14 07.54    2.1

RGS     1.87  46 eP     14 08.60    1.2
                eS     14 33.00
ODD1    1.90 193 eP     14 08.03    0.1
                eS     14 32.40
NRA0    2.21 116 iPc    14 12.30   -0.2
                iS     14 43.20
BLS1    2.40 188 eP     14 13.78   -1.4
                eS     14 43.50
KMY     2.78 204 eP     14 20.02   -0.6
                eS     14 52.09
      S.D. = 1.2  on  10 of  10 obs.
-------------------------------------
*  JUN  24, 1989  12h 40m 04.39± 1.05s
   29.739 S ± 5.5km  179.147 W ±16.3km
   DEPTH = 284.1 ± 10.5 km
   3.9mb (  2 obs.)
 KERMADEC ISLANDS REGION            (177)

PGZ    11.48 198 eP     42 43.30    1.5
MNG    11.71 201 P      42 43.10   -1.6
        0.2s     73.00nm          5.6mb X
SVA    11.77 349 iPc    42 45.90    0.4
VUN    11.88 349 ePc    42 46.10   -0.7
KIW    12.11 202 eP     42 49.70    0.1
MTW    12.20 199 eP     42 51.00    0.3
CAW    12.28 201 P      42 50.10   -1.6
WDW    12.45 201 P      42 53.20   -0.5
MRW    12.51 202 P      42 55.70    1.3
                S      45 10.00
MOW    12.51 200 eP     42 54.00   -0.5
WEL    12.54 202 P      42 55.20    0.4
TCW    12.64 203 P      42 56.10    0.1
DZM    15.04 297 iPc    43 26.40    1.2
WRA    43.08 272 Pc     47 38.40   -0.2
        0.3s      1.80nm          3.8mb
WB5    43.08 272 eP     47 37.80   -0.8
                e      48 16.20
SPA    60.43 180 e(P)   49 47.50    1.2
        1.0s      5.50nm          4.1mb
MBC   111.99  13 ePKP   58 03.00   -3.1X
SOD   139.30 345 ePKP   58 58.00   -0.4
SUF   143.16 341 iPKP   58 59.30   -6.0X
NUR   145.35 339 iPKP   59 06.80   -2.3X
        0.7s     24.00nm
UPP   147.81 344 iPKP   59 12.90   -0.2
NB2   147.94 351 PKP    59 13.40    0.0
        0.7s      5.60nm
HFS   148.39 348 ePKP   59 14.10    0.1
        0.4s      5.40nm
BNG   149.77 217 iPKPd  59 21.70    4.1X
        0.4s     13.00nm
      S.D. = 0.9  on  20 of  24 obs.
-------------------------------------
   JUN  24, 1989  12h 58m 39.08± 0.14s
   28.336 S ± 3.0km   66.312 W ± 3.7km
   DEPTH =  21.7km  (  5 depth phases)
   5.4mb ( 35 obs.)  5.2Msz (  3 obs.)
 CATAMARCA PROVINCE, ARGENTINA      (130)
      Felt in Catamarca, Cordobo, La
      Rioja, Sontiago del Estero and
      Tucuman Provinces.
      CENTROID, MOMENT TENSOR       (HRV)
      Doto Used: GDSN
      L.P.8.: 17S, 35C
      Centroid Location:
      Origin Time          12:58:47.1 0.4
      Lot 28.53S 0.05 Lon  66.20W 0.05
      Dep  21.0 FIX Half-durotion  2.2
      Moment Tensor:   Scole 10**17 Nm
        Mrr=-0.13 0.07  Mtt= 0.24 0.08
        Mff=-0.10 0.11  Mrt=-0.25 0.14
        Mrf=-0.45 0.18  Mtf=-1.96 0.07
       Principal Axes:
        T  Val=  2.04  Plg= 3  Azm= 43
        N       -0.01       75      145
        P       -2.04       15      312
       Best Double Couple:Mo=2.0*10**17
        NP1:Strike= 88 Dip=77 Slip=-172
        NP2:       357      82      -13

ZON     3.80 212 iPc    59 39.00    1.2
                eS     00 34.00
JACH    5.69 219 iPd    00 05.00    0.4
FCH     6.04 214 iPc    00 10.50    0.8
PEL     6.09 217 iPc    00 09.90   -0.3
ROCH    6.14 220 iPc    00 10.00   -1.0
SAN     6.32 215 eP     00 13.50    0.1

                iS     01 53.70
PCH     6.38 213 ePc    00 14.50    0.1
TACH    6.62 216 iPc    00 16.50   -1.1
CHCH    6.71 213 iPc    00 18.00   -0.8
LCCH    6.83 220 iPd    00 19.00   -1.5
LNV     7.10 217 iPc    00 21.70   -2.6
CCH    10.90   1 P      01 20.80    3.5X
ITB1   11.29  74 e(P)   01 22.30    0.1
ITB7   11.31  76 eP     01 21.40   -1.1
ITB    11.39  75 e(P)   01 23.80    0.2
CNCB   11.57 352 P      01 27.50    0.9
LPB    11.86 352 eP     01 30.00   -0.4
                i      01 33.00
                LR     05 53.00
ZOBO   12.13 352 P      01 34.90    0.8
        1.2s    131.76nm          6.0mb X
      Z  20s      7.59um          4.6Msz
                LR     05 23.00
ARE    12.75 337 eP     01 41.00   -1.2
PPD    14.95  69 eP     02 05.60   -5.3X
                ipP    02 16.50
                esP    02 19.30
VAO    18.22  77 eP     02 53.70    1.3
                ipP    02 55.80
                isP    02 57.80
NNA    19.01 327 iPd    03 02.50    0.4
BRAS   19.58  78 iPd    03 10.10    1.1
BAO    21.14  57 eP     03 26.00    0.9
ATB    28.30  31 e(P)   04 30.50   -2.7
SVB    41.65   7 eP     06 26.13   -1.5
SJS    41.74 333 eP     06 30.20    1.7
SRA    42.03 333 iPd    06 33.00    2.1
BIM    42.90   7 eP     06 36.44   -1.4
MVM    42.96   8 eP     06 36.65   -1.7
FDF    43.10   7 iPc    06 37.91   -1.6
        0.4s      0.75nm          3.8mb X
OXX    53.89 323 iPc    08 04.80    1.4
SPA    61.82 180 ePc    08 58.50   -0.2
        1.0s     80.50nm          5.8mb
HBF    62.38 347 P      09 02.00   -0.4
SGS    62.66 347 P      09 03.60   -0.6
JSC    63.86 346 P      09 11.40   -0.8
PRM    63.91 345 P      09 11.70   -0.8
LHS    63.96 347 P      09 12.40   -0.4
TKL    65.75 344 P      09 22.90   -1.5
GBTN   65.86 344 P      09 23.10   -2.0
RSCP   66.14 343 P      09 25.20   -1.7
PWLA   66.24 341 P      09 25.80   -1.7
BLA    66.53 348 P      09 29.10   -0.3
        1.3s    138.89nm          5.9mb
CVL    66.94 350 P      09 31.80   -0.1
NA2    66.98 350 P      09 32.00   -0.1
CBN    67.00 351 eP     09 32.00   -0.3
OLY    67.79 338 P      09 35.80   -1.6
LIC    68.27  70 Pc     09 38.54   -2.3
        0.9s     22.00nm          5.3mb
      Z  20s      1.23um          5.1Msz
                S      19 10.00
KIC    68.58  70 Pc     09 40.60   -2.2
        1.0s     29.50nm          5.4mb
PRIN   68.80 353 P      09 46.30    2.8X
TBR    69.51 354 P      09 47.80   -0.1
SBA    69.56 190 eP     09 48.90    1.1
RLO    69.62 336 ePc    09 48.10   -0.6
                i      09 55.50   24km
LNO    69.68 335 iPc    09 47.90   -1.0
                i      09 55.30   24km
TUL    69.68 335 iPc    09 48.00   -1.0
        1.2s    147.70nm          6.0mb
      Z  20s      1.25um          5.2Msz
                e      09 55.70   25km
                e      10 01.80
                e      19 00.00
                LR     24 00.00
SIO    69.73 334 iPc    09 48.70   -0.7
                i      09 54.20   18km
FVM    69.73 340 P      09 48.20   -1.1
MEO    69.80 332 iPc    09 48.80   -1.0
DHN    71.65 351 P      10 00.70   -0.2
KUK    72.14  73 eP     10 02.00   -2.4
BNH    72.71 356 P      10 07.80    0.7
EMM    72.73 359 P      10 08.00    0.9
PTN    72.99 354 P      10 08.60   -0.1
MIM    73.27 358 P      10 10.70    0.4
ALQ    73.48 326 iPc    10 12.50    0.4
        1.5s     97.22nm          5.6mb
                epP    10 18.40   19km
```

24d 13h

e 10 26.50
GAC 74.16 353 ePc 10 15.60 0.2
CBM 74.93 359 P 10 20.70 0.8
GLA 76.46 320 eP 10 30.00 1.0
GLD 76.81 330 P 10 31.80 0.8
1.5s 109.38nm 5.7mb
GOL 76.84 330 P 10 31.20 0.0
1.3s 114.58nm 5.8mb
MAW 77.13 162 iPc 10 32.30 0.1
BAR 77.26 318 eP 10 34.00 0.6
PLM 77.85 319 eP 10 38.00 1.1
TPC 77.92 320 eP 10 37.00 -0.1
PEC 78.41 319 P 10 40.50 0.7
RVR 78.61 319 eP 10 41.00 0.2
MSU 79.12 325 P 10 44.80 1.0
MWC 79.17 319 eP 10 44.00 -0.1
PAS 79.18 318 eP 10 44.00 0.1
GSC 79.22 320 eP 10 45.00 0.8
SBB 79.36 319 eP 10 45.00 0.0
RSSD 79.94 333 P 10 48.40 0.3
ISA 80.43 319 eP 10 51.00 0.3
DUG 80.72 326 P 10 53.00 0.8
KSR 80.77 114 iPd 10 51.40 -1.5
1.0s 20.00nm 5.1mb
TNP 81.45 322 P 10 56.80 0.6
1.6s 141.98nm 5.8mb
SLR 81.94 115 iPc 10 57.50 -1.5
1.0s 35.00nm 5.4mb
RSON 82.48 343 P 11 04.00 3.0X
1.1s 102.48nm 5.8mb
PTI 82.55 328 P 11 02.60 0.9
KVN 82.63 322 P 11 02.80 0.6
SCH 82.81 360 eP 11 03.00 0.5
CMB 83.18 320 eP 11 04.90 0.0
DRV 83.20 190 eP 11 05.40 0.8
ARN 83.37 319 P 11 07.10 1.2
BUL 84.81 110 iPd 11 12.90 -0.8
1.0s 30.00nm 5.5mb
LRM 84.86 330 iPc 11 14.30 0.8
ORV 84.86 320 eP 11 13.90 0.6
WDC 86.14 321 eP 11 18.80 -0.8
AAPN 87.54 45 eP 11 27.00 0.3
BNG 87.56 84 iPd 11 27.50 0.3
0.7s 11.00nm 5.3mb
id 16 50.80
id 22 12.00
id 27 13.00
ic 36 16.00
APHE 87.59 45 eP 11 27.20 0.3
SES 87.82 333 ePc 11 27.20 -0.4
FFC 88.23 340 eP 11 29.00 -0.4
1.2s 44.00nm 5.7mb
DPW 89.02 328 P 11 33.60 0.2
TOL 89.19 43 eP 11 35.00 0.6
ePP 14 42.00
LON 89.97 325 P 11 37.80 -0.1
BMW 90.50 325 P 11 40.80 0.4
PNT 90.71 328 eP 11 41.00 -0.2
0.7s 9.00nm 5.2mb
EDM 90.92 334 iPc 11 41.30 -0.8
0.9s 59.00nm 5.9mb
FRB 91.79 359 eP 11 45.00 -0.7
EPF 93.72 42 eP 11 56.00 0.8
LFF 95.07 41 iPc 12 01.80 0.5
0.7s 15.40nm 5.5mb
LPO 95.18 41 eP 12 02.20 0.4
MFF 95.53 39 iPc 12 03.50 0.1
1.0s 17.60nm 5.5mb
RJF 95.72 41 eP 12 04.40 0.0
CAF 95.83 42 eP 12 05.20 0.3
LPF 95.88 38 eP 12 04.60 -0.4
1.0s 12.00nm 5.3mb
GRR 96.19 38 eP 12 06.20 -0.2
0.8s 8.00nm 5.2mb
LSF 96.27 40 eP 12 06.90 0.1
0.9s 11.40nm 5.3mb
FLN 96.61 37 eP 12 08.20 -0.1
1.2s 23.80nm 5.6mb
TCF 96.68 41 eP 12 08.80 0.1
0.8s 5.30nm 5.1mb
LDF 96.71 38 eP 12 08.50 -0.2
0.8s 5.30nm 5.1mb
MAF 96.85 41 eP 12 09.50 0.1
0.9s 6.50nm 5.2mb
BGF 97.20 41 eP 12 11.10 0.1
1.0s 12.80nm 5.4mb
LRG 97.61 45 eP 12 13.80 1.0
0.7s 7.40nm 5.3mb
AVF 97.62 41 eP 12 12.90 0.1
1.1s 10.70nm 5.3mb
SMF 97.82 41 eP 12 14.20 0.4
1.0s 22.00nm 5.7mb
SSF 97.85 40 eP 12 13.70 -0.2
0.9s 9.80nm 5.4mb
LBF 98.08 41 eP 12 15.10 0.1
0.9s 8.80nm 5.3mb
LOR 98.17 40 eP 12 15.20 -0.1
0.8s 8.50nm 5.4mb
YKC 98.34 340 eP 12 15.50 -0.2
LPG 98.92 43 eP 12 20.10 1.0
0.8s 8.50nm 5.4mb
EKA 99.21 31 Pd 12 19.80 0.0
1.0s 9.00nm 5.3mb
HAU 99.99 41 eP 12 23.30 -0.3
DOU 100.11 38 Pdiffc12 24.80 0.6
BSF 100.15 41 ePdiff12 24.30 -0.3
SNF 100.16 38 Pdiff 12 25.50 1.1
CDF 100.73 41 ePdiff12 26.80 -0.3
WLF 100.74 39 Pdiffd12 28.00 1.1
INK 108.14 339 ePdiff13 03.00 3.5X
INK 108.14 339 ePKP 17 25.00 18.9X
MBC 109.37 348 ePKP 17 08.00 -0.2
1.1s 15.00nm
pP 17 38.00
FBA 111.80 333 PKP 17 12.40 -0.7
IMA 114.49 333 PKP 17 19.20 0.7
NUR 114.69 33 ePKP 17 18.00 -0.8
Z 21s 0.80um 5.3Msz
LR 04 00.00
SUF 115.88 31 ePKP 17 20.00 -1.0
0.6s 2.80nm
SOD 116.93 26 ePKP 17 12.00 -10.9X
CTA 122.48 217 ePKP 17 34.00 -0.9
ADK 124.11 315 PKP 17 37.20 0.1
OIS 125.32 210 iPKPc 17 39.80 -0.6
WRA 128.02 205 PKPc 17 44.70 -0.9
0.6s 13.60nm
WB5 128.07 205 iPKPc 17 44.50 -1.2
i 17 52.30
MAIO 134.02 66 ePKP 17 57.00 0.3
e 20 25.00
GBA 143.28 106 PKPd 18 14.30 0.3
0.7s 13.80nm
TRT 144.16 178 iPKPd 18 14.20 -1.4
1.1s 88.40nm
AAI 145.24 206 ePKPd 18 15.60 -1.8
HYB 145.97 101 iPKPc 18 17.50 -1.1
1.0s 140.00nm
e 18 23.50
MKS 146.18 190 iPKPd 18 21.00 2.0
KSH 147.01 60 PKP 18 21.50 1.7
GUA 147.46 250 ePKP 18 23.00 2.0
PJG 147.52 250 ePKP 18 23.30 2.2
NDI 148.03 81 iPKPd 18 22.80 1.2
0.7s 75.34nm
PSI 150.87 148 ePKPc 18 32.00 5.7X
WMQ 154.07 47 PKP 18 31.00 0.8
pPKP 18 39.50
e 18 52.00
GKN 154.41 84 PKP 18 32.00 0.8
DMN 154.77 85 PKP 18 32.80 1.0
1.0s 16.00nm
KKN 154.95 84 PKP 18 32.80 0.8
1.0s 20.00nm
PKI 155.03 85 PKP 18 33.00 0.8
GUN 155.49 84 PKP 18 32.80 -0.1
CN2 161.91 332 ePKP 18 38.50 -0.8
e 19 24.60
pPKP 19 30.40
CHG 163.51 122 ePKP 18 42.90 1.3
CHTO 163.51 122 ePKP 18 42.90 1.3
1.2s 13.89nm
GTA 164.06 43 iPKP 18 43.20 1.5
e 19 36.00
HHC 167.40 7 PKP 18 46.00 1.6
BJI 168.15 351 ePKP 18 45.00 0.3
LZH 168.64 45 ePKP 18 46.50 1.1
1.5s 44.00nm
TIY 170.59 6 ePKP 18 47.50 1.1
SSE 172.92 295 PKPc 18 48.00 0.6
1.0s 168.00nm
Z 20s 0.40um
N 12s 0.20um
pPKP 18 56.20
XAN 173.00 34 PKP 18 48.50 1.1
WHN 177.73 345 ePKP 18 47.50 -1.1
e 20 35.00
S.D. = 1.0 on 172 of 180 obs.

JUN 24, 1989 14h 03m 56.03± 0.93s
5.635 N ± 3.5km 124.982 E ± 5.7km
DEPTH = 66.8 ± 9.3 km
4.9mb (16 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV 1.56 22 iPc 04 23.50 1.4
OCP 9.74 337 eP 05 15.00 -60.8X
AAI 9.80 161 ePc 06 15.00 -1.7
BAG 11.55 338 eP 06 40.00 -0.5
JAY 17.67 117 ePc 07 51.00 -8.3X
TRT 18.09 223 ePd 08 05.70 1.3
0.9s 78.90nm 4.9mb
MTN 19.35 162 eP 08 18.00 -1.1
OIZ 19.87 313 eP 08 23.00 -1.6
eS 12 06.00
OZH 20.15 343 eP 08 27.00 -0.5
Z 20s 1.30um 4.3Msz
E 20s 1.30um
sS 12 24.00
GZH 20.67 328 eP 08 32.00 -0.7
KNA 21.57 170 eP 08 41.00 -0.9
SNG 24.26 275 eP 09 09.50 1.2
LOE 25.57 299 eP 09 21.00 0.3
SSE 25.58 352 Pc 09 20.50 0.0
1.0s 35.00nm 4.8mb
Z 20s 0.40um 3.9Msz
N 12s 0.20um
sP 09 36.00
S 14 04.00
sS 14 17.00
NST 26.35 294 eP 09 29.00 1.2
WHN 26.72 339 P 09 32.00 0.9
Z 20s 0.63um 4.2Msz
NJ2 26.90 348 Pc 09 32.40 -0.3
Z 20s 0.60um 4.2Msz
WB5 26.98 160 iPc 09 33.00 -0.6
eS 14 27.80
WRA 27.03 160 Pc 09 33.30 -0.7
1.0s 19.50nm 4.6mb
GYA 27.10 322 P 09 35.40 0.6
Z 15s 0.60um 4.3MszX
sS 14 22.00
BDT 27.91 297 eP 09 47.00 5.0X
CHG 28.56 300 ePc 09 47.60 -0.3
CHTO 28.56 300 iP 09 47.00 -0.9
1.0s 9.75nm 4.4mb
KMI 28.81 315 Pd 09 51.50 1.2
Z 16s 0.90um 4.5MszX
eS 14 36.00
OIS 29.73 152 eP 09 56.50 -1.8
ASPA 30.40 164 iPc 10 03.90 -0.3
0.8s 12.00nm 4.7mb
TIA 31.27 348 Pc 10 10.40 -1.4
WARB 31.67 177 eP 10 09.50 -5.8X
XAN 31.95 334 iPc 10 17.70 -0.1
CD2 32.09 324 P 10 18.20 -0.8
CTA 33.03 141 eP 10 28.00 0.7
MAT 33.06 20 (P) 10 26.00 -1.4
DL2 33.26 355 eP 10 29.00 0.0
TIY 33.92 342 eP 10 34.50 -0.3
Z 23s 0.93um 4.4MszX
E 15s 0.50um
BJI 35.16 348 Pc 10 45.00 -0.3
LZH 35.99 330 Pd 10 54.00 1.4
3.0s 401.00nm 5.8mb
SNY 36.06 358 Pc 10 52.00 -0.9
FORR 36.40 175 iPc 10 55.60 -0.2
0.4s 19.00nm 5.4mb
HHC 37.07 343 P 11 02.20 0.6
Z 25s 0.70um 4.3MszX
BTO 37.31 341 eP 11 03.40 -0.2
KLB 37.65 190 eP 11 06.00 -0.4
CN2 38.01 1 eP 11 08.40 -0.9
Z 22s 0.70um 4.4Msz
PP 12 42.80
MUN 38.33 192 eP 11 12.00 -0.1
MDJ 39.04 5 eP 11 18.40 0.5
NWAO 39.05 190 eP 11 18.00 -0.1
STK 40.53 158 eP 11 31.60 1.3
GTA 40.58 330 Pc 11 31.80 1.0
Z 18s 1.20um 4.8Msz

ADE	42.41	163	iPc	11	47.90	2.2
	0.8s	40.30nm			5.3mb	
BRS	42.42	142	iP	11	47.90	1.9
GUN	43.21	305	P	11	53.20	0.4
PKI	43.46	305	P	11	54.90	0.1
KKN	43.65	305	P	11	56.60	0.4
	1.1s	43.00nm			5.2mb	
DMN	43.72	305	P	11	57.30	0.5
GKN	44.25	305	P	12	01.00	0.0
	1.1s	31.00nm			5.0mb	
CAN	46.59	153	eP	12	19.80	0.6
HYB	46.85	289	eP	12	20.00	-1.6
TOO	47.04	158	eP	12	23.00	0.2
GBA	47.47	283	Pd	12	26.30	-0.2
	0.5s	6.30nm			4.8mb	
DZM	49.05	126	iPc	12	39.50	0.8
WMO	50.18	325	P	12	47.00	0.0
Z	24s	0.70um			4.6MszX	
		PcP		14	08.00	
MAIO	66.98	307	iPc	14	44.00	-0.2
TTA	80.01	27	eP	16	00.20	0.7
BRW	80.93	19	eP	16	05.10	0.9
IMA	81.36	24	eP	16	07.30	0.6
	1.2s	13.70nm			4.8mb	
PMR	83.12	29	eP	16	15.50	-0.1
	1.3s	37.70nm			5.2mb	
INK	89.04	21	eP	16	44.00	-0.7
SUF	89.07	333	eP	16	43.00	-1.9
MBC	90.48	12	eP	16	52.00	0.7
	1.1s	9.00nm			5.0mb	
SLL	95.58	332	(P)	17	12.10	-2.9X
	0.5s	1.10nm			4.6mb	
NB2	96.32	333	P	17	16.00	-2.4X
	0.9s	2.30nm			4.7mb	
S.D. = 1.0 on 64 of 70 obs.						

& JUN 24, 1989 14h 10m 32.22s
61.684 N 150.012 W
DEPTH = 46.3km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.07	118	eP	10	39.54	1.7
SUA	0.41	238	eP	10	42.12	-0.3
		S		10	50.16	
PME	0.47	96	iP	10	42.63	-0.3
		S		10	51.64	
SKT	0.78	293	iP	10	46.37	-0.7
SPU	1.10	244	eP	10	51.01	-0.6
		S		11	05.86	
CRP	1.11	249	eP	10	51.69	-0.1
SLKM	1.18	185	eP	10	51.87	-0.8
		S		11	07.69	
RDT	1.61	227	eP	10	58.09	-0.6
8 obs. associated						

JUN 24, 1989 15h 01m 26.82± 0.38s
37.082 N ± 3.7km 28.084 E ± 3.1km
DEPTH = 33.9 ± 4.8 km
4.3mb (23 obs.)
TURKEY (366)
ML 4.2 (ATH).

YER	0.17	72	iPg	01	30.50	-2.8
IZM	1.47	334	iPn	01	51.60	0.3
ELL	1.50	102	iPn	01	53.70	1.8
KSL	1.54	128	ePn	01	54.20	1.8
KHL	1.68	42	iPn	01	56.00	1.5
BCK	2.03	79	iPn	02	02.80	3.3X
ALT	2.54	38	iPn	02	08.50	1.9
PRK	2.59	327	ePn	02	07.10	-0.1
NPS	2.70	228	ePn	02	08.50	-0.3
EZN	3.07	334	iPn	02	12.80	-1.2
EDC	3.26	357	iPn	02	16.10	-0.8
VAM	3.56	243	ePn	02	22.10	1.1
ATH	3.58	286	ePn	02	21.10	-0.3
GPA	3.64	28	ePn	02	24.00	1.7
MFT	3.75	351	iPn	02	23.10	-0.7
GBZT	3.85	16	ePn	02	27.00	1.8
HRT	3.93	18	ePn	02	26.60	0.2
ISK	4.05	11	ePn	02	25.00	-3.0
CTT	4.07	4	ePn	02	27.00	-1.3
PPCY	4.09	121	eP	02	29.00	0.4
NEO	4.43	302	ePn	02	33.00	-0.4
RDO	4.52	335	ePn	02	33.90	-0.7
BBTK	4.59	52	iPd-	02	38.00	2.2
CSS	4.75	115	eP	02	38.00	0.1
PLG	4.89	314	ePn	02	39.20	-0.8
ITM	4.92	273	ePn	02	41.50	1.1
KDZ	5.01	336	iPc	02	41.00	-0.6
RZN	5.29	331	iPc	02	46.00	0.3
JMB	5.50	348	iP	02	48.00	-0.5
MMB	5.63	324	iPc	02	50.00	-0.3
PLD	5.65	334	eP	02	51.00	0.3
KZN	5.89	305	ePn	02	54.40	0.2
KKB	6.15	323	iPc	02	58.00	0.3
PVL	6.48	342	iPd	03	02.00	-0.3
LSK	6.61	300	eP	03	07.40	3.1X
VTS	6.66	327	iP	03	05.00	0.0
SRN	6.93	296	eP	03	10.70	2.1
TPE	7.08	299	eP	03	15.50	4.7X
HRI	7.33	119	iPc	03	12.50	-1.9
			e(S)	04	31.00	
KVT	7.37	55	eP	03	21.20	6.4X
PHP	7.49	310	eP	03	18.00	1.5
TIR	7.67	306	eP	03	18.70	-0.3
HLW	7.70	158	ePnd	03	19.00	-0.4
			eSn	04	40.00	
BURJ	7.97	125	P	03	23.10	-0.2
SALJ	8.06	127	P	03	21.90	-2.6
ISR	8.13	352	eP	03	25.00	-0.5
KFNJ	8.15	128	P	03	21.10	-4.6X
MASJ	8.26	128	P	03	23.70	-3.7X
MLR	8.55	350	ePd	03	31.00	-0.4
VRI	8.84	354	ePc	03	34.50	-0.7
MBH	9.24	140	iP	03	33.00	-7.7X
BZS	9.81	332	ePc	03	47.00	-1.6
			e	15	36.00	
MGR	10.27	291	P	03	53.50	-1.4
SGO	10.55	293	P	03	59.50	0.7
RBL	14.29	315	P	04	56.50	7.8X
KBA	14.79	317	eP	05	04.50	9.1X
	1.3s	31.30nm			4.5mb	
KHC	16.00	323	P	05	15.50	4.6X
	1.0s	10.50nm			3.9mb	
PRU	16.18	327	eP	05	21.00	8.0X
BRG	17.09	328	iP	05	31.50	6.9X
	1.0s	16.00nm			4.1mb	
GRF	17.53	321	eP	05	32.00	2.0
	1.2s	19.00nm			4.1mb	
CLL	17.81	328	iPc	05	39.10	5.6X
	1.0s	19.00nm			4.2mb	
MOX	17.97	324	eP	05	39.00	3.5X
	1.7s	34.00nm			4.2mb	
LPG	18.06	304	eP	05	38.00	1.0
	1.3s	28.80nm			4.3mb	
CDF	18.95	313	eP	05	49.10	1.4
HAU	19.31	311	eP	05	52.20	0.3
	1.0s	12.00nm			4.1mb	
SMF	20.36	306	eP	06	01.90	-1.1
	1.1s	52.20nm			4.8mb	
LBF	20.38	307	eP	06	02.30	-1.0
	0.8s	8.50nm			4.2mb	
LOR	20.56	307	eP	06	03.90	-1.2
	1.1s	19.50nm			4.4mb	
SSF	20.71	306	eP	06	05.70	-0.9
	1.1s	24.40nm			4.5mb	
AVF	20.72	306	eP	06	05.60	-1.1
	1.1s	31.70nm			4.6mb	
BGF	20.98	305	eP	06	08.80	-0.6
	1.3s	44.70nm			4.7mb	
MAF	21.07	304	eP	06	11.50	1.2
	1.3s	21.60nm			4.4mb	
CAF	21.08	300	eP	06	10.70	0.3
DOU	21.31	315	P	06	13.70	1.1
TCF	21.32	304	eP	06	13.50	0.6
	1.0s	14.00nm			4.3mb	
RJF	21.54	301	eP	06	16.90	1.8
LSF	21.77	303	eP	06	17.60	0.3
MFF	22.98	303	eP	06	30.10	0.9
	1.3s	31.70nm			4.7mb	
LDF	23.53	308	eP	06	34.50	-0.1
NUR	23.55	356	eP	06	34.00	-0.6
FLN	23.81	308	eP	06	37.10	-0.2
GRR	23.93	307	eP	06	38.50	0.0
	0.9s	22.90nm			4.7mb	
LPF	23.94	306	eP	06	38.20	-0.4
	0.9s	22.90nm			4.7mb	
SLL	25.23	343	eP	06	49.30	-1.6
	0.5s	1.10nm			3.7mb	
SUF	25.69	358	eP	06	51.00	-4.1X
NB2	26.24	341	P	06	59.80	-0.5
	1.0s	2.90nm			3.8mb	
EKA	27.94	321	P	07	15.00	-0.8
	1.0s	5.30nm			4.2mb	
BNG	33.65	197	iPd	08	05.50	-1.1
	0.7s	7.00nm			4.7mb	
		iS		13	22.00	
		ic		15	40.50	
WMO	45.00	62	P	09	41.50	0.7
GKN	47.92	84	P	10	04.10	0.0
DMN	48.47	84	P	10	08.80	0.3
KKN	48.53	84	P	10	08.60	-0.3
PKI	48.72	84	P	10	10.50	0.0
GTA	54.98	64	eP	10	57.00	-0.1
FRB	60.22	329	eP	11	32.00	-1.5
TIY	64.65	61	eP	12	04.30	0.8
BJI	66.10	57	eP	12	13.00	0.4
S.D. = 1.1 on 82 of 97 obs.						

JUN 24, 1989 15h 02m 07.74± 0.21s
1.974 N ± 4.1km 79.066 W ± 3.8km
DEPTH = 25.2km (6 depth phases)
5.3mb (43 obs.) 4.6Msz (2 obs.)
NEAR COAST OF ECUADOR (105)
Felt in southwestern Colombia.

PSO	1.91	114	iPc	02	41.50	2.0
CAYA	2.17	150	iPd	02	44.30	0.9
		eS		03	17.20	
SALC	2.57	67	iPc	02	48.52	-0.3
RECU	2.64	169	(P)	02	51.70	1.5
ANCC	2.68	55	iPc	02	49.58	-0.6
PURC	2.72	83	iPc	02	53.14	1.9
HOOC	2.85	59	iPc	02	52.29	-0.5
CLMC	3.14	53	iPc	02	55.44	-1.4
DIAC	3.15	65	iPc	02	58.05	1.0
HOBC	3.76	51	iPc	03	04.04	-1.6
BDG	5.64	62	eP	03	38.00	5.5X
		iS		04	47.00	
FUQ	6.35	57	eP	03	50.00	7.5X
BMG	7.83	50	eP	04	10.00	7.0X
NNA	14.04	171	iPc	05	25.30	-2.2
HUA	14.41	165	eP	05	13.60	-19.0X
		eS		05	50.70	
		e		06	04.40	
TCE	19.25	63	eP	06	32.41	-1.0
TPP	19.36	64	eP	06	35.80	1.2
TRN	19.54	63	eP	06	35.80	-0.9
TBH	19.77	64	eP	06	40.25	1.1
ARE	19.79	158	eP	06	38.00	-1.6
	1.0s	79.00nm			5.0mb	
BOT	20.37	63	eP	06	44.46	-0.9
SVB	20.90	57	eP	06	49.54	-1.3
ZOBO	21.10	150	P	06	52.00	-1.6
Z	18s	3.34um			4.8Msz	
		i		06	52.60	2kmX
		S		10	56.00	
		LR		14	38.00	
LPB	21.34	150	P	06	55.60	-0.2
	1.0s	200.00nm			5.5mb	
Z	16s	4.71um			5.0MszX	
		LR		15	48.00	
SLB	21.36	56	eP	06	54.81	-0.8
CNCB	21.63	150	Pc	06	58.20	-0.7
		S		13	39.00	
BIM	21.71	54	eP	06	59.00	-0.1
	0.4s	0.60nm			3.4mb X	
MVM	21.87	54	eP	06	59.74	-1.0
PAG	22.10	50	eP	07	04.00	1.0
OXX	22.95	312	(P)	07	14.00	2.4
CCH	23.07	147	P	07	13.50	0.6
IISM	24.65	315	(P)	07	31.00	3.2X
ATB	27.33	101	Pd	07	51.30	-1.6
JSC	32.20	357	P	08	36.00	0.0
		pP		08	43.80	27km
BAO	35.36	121	eP	09	01.70	-2.0
PPD	36.11	133	eP	09	06.30	-3.6X
		epP		09	15.70	32km
VVO	36.63	337	e(P)	09	10.00	-4.1X
RLO	37.09	338	e(P)	09	17.50	-0.4
LNO	37.16	337	eP	09	16.70	-1.7
TUL	37.16	337	eP	09	17.00	-1.5
	0.9s	10.50nm			4.7mb	
Z	21s	0.61um			4.4Msz	
SIO	37.22	337	e(P)	09	19.30	0.3
FVM	37.32	345	P	09	17.80	-2.1
MEO	37.37	333	iPd	09	19.30	-1.0
VAO	39.93	130	eP	09	37.50	-4.4X
		e		29	47.80	
ALQ	41.54	325	iPc	09	56.00	0.9

24d 15h

1.0s 40.00nm 5.1mb
epP 10 03.00 24km
e 10 12.00
e 10 24.00
eS 16 14.00
GAC 43.66 4 eP 10 12.50 0.5
GLD 44.49 331 P 10 20.80 1.7
1.5s 101.56nm 5.5mb
pP 10 28.10 24km
GOL 44.52 331 P 10 20.60 1.1
1.6s 109.56nm 5.5mb
GLA 45.60 317 eP 10 30.00 2.1
BAR 46.68 315 eP 10 38.00 1.6
TPC 47.04 317 eP 10 40.00 0.7
PLM 47.18 316 eP 10 42.00 1.5
MSU 47.32 324 P 10 43.60 2.0
RVR 47.89 316 eP 10 54.00 8.1X
DAU 48.10 327 P 10 47.90 0.1
MWC 48.49 316 eP 10 47.00 -3.8X
SBB 48.58 317 eP 10 47.00 -4.3X
DUG 48.81 326 P 10 55.70 2.6X
BW06 48.91 330 P 10 51.80 -2.1
ISA 49.56 317 eP 11 07.00 8.1X
TNP 50.12 321 P 11 04.00 0.7
1.2s 8.06nm 4.6mb
KVN 51.25 321 P 11 11.80 0.0
HPI 51.38 329 P 11 13.30 0.4
CMB 52.14 319 eP 11 19.50 1.0
LRM 52.55 331 eP 11 21.20 -0.5
SCH 53.62 9 eP 11 28.00 -1.1
ORV 53.70 320 ePd 11 30.20 0.3
WDC 54.93 320 eP 11 36.20 -2.7
SES 55.33 336 eP 11 40.00 -1.7
FFC 55.81 344 eP 11 43.00 -2.1
1.4s 43.00nm 5.3mb
LON 58.03 327 P 11 59.80 -1.2
EDM 58.41 337 iP 12 02.00 -1.5
PNT 58.48 330 ePd 12 04.00 0.0
1.0s 29.00nm 5.3mb
FRB 62.12 5 eP 12 26.00 -2.6
YKC 65.88 343 ePc 12 51.00 -2.2
YKA 65.93 343 eP 12 59.50 6.0X
LIC 73.92 84 Pc 13 41.78 -1.5
0.9s 29.00nm 5.3mb
TIC 73.93 84 Pc 13 41.76 -1.6
1.0s 19.50nm 5.1mb
KIC 74.21 84 Pc 13 43.62 -1.3
0.9s 37.50nm 5.4mb
INK 75.65 342 eP 13 51.00 -1.2
MAL 76.53 53 iPc 13 58.50 0.7
AAPN 76.84 52 eP 14 00.50 0.8
APHE 77.14 53 eP 14 01.90 0.5
ASMO 77.15 52 eP 14 02.00 0.6
TOL 77.25 50 eP 14 02.00 0.2
MBC 77.55 351 ePc 14 01.40 -1.2
1.0s 26.00nm 5.2mb
KOGH 78.68 84 eP 14 09.00 -1.1
LEGH 78.75 85 eP 14 08.00 -2.5
FBA 79.30 336 eP 14 11.20 -1.3
EKA 80.38 34 Pc 14 17.80 -0.6
2.2s 91.20nm 5.4mb
LPF 80.53 42 iPc 14 18.90 -0.4
GRR 80.70 41 iPc 14 20.30 0.1
1.1s 24.40nm 5.1mb
ALE 80.81 2 eP 14 19.00 -1.3
EPF 80.91 47 iPc 14 22.00 0.4
1.5s 52.20nm 5.3mb
MFF 80.96 43 iPc 14 21.50 -0.1
0.8s 10.70nm 4.9mb
FLN 80.99 41 iPc 14 22.00 0.2
1.0s 20.00nm 5.1mb
LDF 81.21 41 iPc 14 22.90 0.0
1.1s 24.40nm 5.1mb
LFF 81.39 45 iPc 14 23.90 0.0
0.9s 13.10nm 5.0mb
LPO 81.68 45 iPc 14 25.60 0.1
1.1s 26.30nm 5.2mb
RJF 81.97 45 eP 14 27.20 0.2
1.3s 28.80nm 5.1mb
IMA 81.99 337 e(P) 14 25.80 -1.0
1.5s 10.40nm 4.6mb
LSF 82.07 44 eP 14 27.40 -0.1
TTA 82.32 333 e(P) 14 27.20 -1.3
CAF 82.33 45 eP 14 29.10 0.2
1.3s 25.20nm 5.1mb
TCF 82.54 44 iPc 14 29.90 -0.1
1.0s 8.80nm 4.8mb

MAF 82.78 44 iPc 14 31.00 -0.2
1.1s 14.60nm 5.0mb
BGF 83.00 43 eP 14 32.30 0.0
1.1s 22.90nm 5.2mb
AVF 83.37 43 eP 14 33.90 -0.3
SSF 83.49 43 eP 14 34.40 -0.4
1.5s 17.70nm 5.0mb
SMF 83.70 43 iPc 14 35.80 -0.1
1.5s 36.50nm 5.4mb
LOR 83.75 43 eP 14 35.60 -0.5
1.5s 26.10nm 5.2mb
LBF 83.81 43 eP 14 36.20 -0.3
BRW 84.20 342 e(P) 14 37.20 -0.7
DOU 84.42 40 P 14 39.70 0.3
e 14 48.00 26km
VITF 85.23 42 P 14 43.53 0.1
ENN 85.30 39 ePc 14 44.00 0.2
1.3s 53.00nm 5.6mb
LRG 85.33 47 eP 14 44.50 0.5
1.4s 55.70nm 5.6mb
WLF 85.40 41 iPc 14 45.00 0.7
LMR 85.43 47 eP 14 44.90 0.3
1.1s 31.20nm 5.5mb
HAU 85.47 42 eP 14 44.80 0.1
FRF 85.54 47 eP 14 45.40 0.3
1.1s 43.90nm 5.6mb
BNI 85.60 45 P 14 46.50 0.9
LPG 85.67 45 iPc 14 47.00 0.9
1.3s 33.90nm 5.4mb
RRL 85.67 45 P 14 47.28 1.2
BSF 85.76 42 P 14 45.83 -0.5
LOMF 85.77 43 P 14 46.15 -0.2
WIT 85.85 37 eP 14 48.50 2.0
PZZ 85.89 46 P 14 47.49 0.4
WTS 85.91 38 ePc 14 48.00 1.2
1.0s 44.00nm 5.6mb
e 14 54.00 19km
LSD 85.95 45 P 14 48.51 1.0
DOI 85.99 46 P 14 48.00 0.5
MOF 85.99 42 P 14 47.02 -0.4
RUP 85.99 40 iPc 14 48.12 0.8
RSP 86.01 45 P 14 47.69 0.1
ECH 86.02 42 P 14 46.67 -0.8
STV 86.04 46 P 14 48.51 0.8
CDF 86.10 42 P 14 47.77 -0.2
ENR 86.11 46 P 14 48.51 0.6
SBF 86.12 46 iPc 14 48.20 0.1
1.1s 31.20nm 5.5mb
DIX 86.14 44 ePc 14 49.20 0.8
BBS 86.24 43 P 14 48.25 -0.3
ABH 86.31 40 iPc 14 49.50 0.6
GWF 86.34 41 P 14 49.50 0.4
IMI 86.44 46 P 14 47.18 -2.5
MMK 86.53 44 ePc 14 51.60 1.3
FEL 86.58 42 iPc 14 50.31 -0.1
FIN 86.68 46 P 14 47.79 -3.0X
ZLA 86.83 43 ePc 14 51.90 0.4
TNS 86.90 40 ePc 14 52.00 0.2
SLE 86.91 42 ePc 14 51.90 0.1
VAI 87.09 44 Pd 14 53.50 0.9
TMA 87.16 44 ePc 14 53.50 0.2
SAX 87.48 43 ePc 14 55.70 0.7
BOB 87.57 45 Pd 14 55.70 0.6
OSS 88.03 44 ePc 14 58.20 0.7
SAL 88.32 45 P 15 01.50 2.9X
NB2 88.42 29 P 14 59.00 0.1
1.4s 34.00nm 5.5mb
OGA 88.64 43 eP 15 01.30 0.9
GRF 88.70 41 eP 15 01.30 0.9
1.6s 35.00nm 5.4mb
MOX 88.92 40 eP 15 02.00 0.6
CTI 89.09 44 Pc 15 03.20 0.7
PGD 89.22 46 P 15 02.50 -0.7
CLL 89.77 39 e(P) 15 06.00 0.6
WET 89.80 41 eP 15 06.50 0.9
1.6s 50.00nm 5.5mb
FVI 89.85 44 Pc 15 07.00 1.2
ASS 89.93 47 P 15 11.50 5.1X
KHC 90.26 41 iPc 15 08.50 0.8
1.5s 17.00nm 5.1mb
BRG 90.39 39 eP 15 09.00 0.8
1.8s 30.00nm 5.3mb
e 15 38.00 110kmX
RBL 90.40 44 Pd 15 09.30 0.8
VOY 90.65 44 eP 15 10.10 0.4
PRU 90.83 40 P 15 11.00 0.7
SDI 90.86 48 Pc 15 10.50 -0.2

CEY 91.04 44 e(P) 15 12.50 1.1
LJU 91.10 44 e(P) 15 12.50 0.9
KSP 91.88 39 eP 15 16.50 1.4
SPA 91.96 180 e(P) 15 15.80 0.4
1.1s 22.62nm 5.5mb
MGR 92.28 50 P 15 17.50 0.3
ZST 92.66 42 eP 15 19.50 0.7
SRO 93.51 42 eP 15 23.40 0.7
LCI 94.09 50 P 15 16.50 -9.0X
SPC 94.60 41 eP 15 29.70 1.8
SUF 95.19 27 iP 15 29.50 -0.6
MLR 99.08 43 ePc 15 49.00 0.8
WMO 132.89 13 PKP 21 22.00 -0.8
Z 16s 0.30um 5.1MszX
GTA 138.81 1 ePKP 21 33.40 -0.8
TIY 139.10 346 ePKP 21 31.50 -3.2X
E 15s 0.30um
ASPA 141.49 233 iPKPd 21 31.70 -7.6X
1.0s 8.00nm
XAN 143.40 349 PKP 21 37.20 -5.2X
WHN 145.23 339 ePKP 21 43.00 -2.5X
pPKP 21 51.50
COOL 145.47 212 ePKP 21 44.00 -2.0
NWAO 145.61 205 ePKP 21 45.00 -1.1
GKN 146.33 27 PKP 21 47.10 -0.6
KLB 146.53 207 ePKP 21 46.00 -1.7
KKN 146.80 26 PKP 21 48.80 0.3
MUN 146.86 204 ePKP 21 47.00 -1.2
DMN 146.88 26 PKP 21 51.00 2.3
GUN 146.95 25 PKP 21 49.80 0.9
PKI 147.04 26 PKP 21 49.20 0.2
CD2 147.19 356 iPKPd 21 50.60 1.8
BAL 147.84 206 ePKP 21 51.00 1.2
MTN 148.21 249 iPKPc 21 53.00 2.3
0.6s 67.00nm
KNA 149.35 242 ePKP 21 55.20 2.7X
HYB 150.71 48 ePKP 21 58.00 3.4X
GBA 152.03 56 PKPc 22 01.60 5.1X
1.2s 28.80nm
KMI 153.01 356 PKPd 21 58.00 0.0
S.D. = 1.1 on 180 of 205 obs.

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* JUN 24, 1989 15h 12m 33.46± 0.69s
26.605 N ± 8.7km 142.365 E ±13.6km
DEPTH = 33.0km (normal)
4.7mb (6 obs.) 3.9Msz (1 obs.)
BONIN ISLANDS REGION (212)

MAT 10.52 341 (P) 15 05.00 0.0
0.6s 8.67nm 5.2mb
SNY 21.65 319 eP 17 23.80 0.9
CN2 21.96 326 eP 17 25.00 -1.0
Z 20s 0.50um 3.9Msz
TIA 23.52 300 eP 17 41.10 -0.3
XAN 29.71 293 P 18 37.50 -1.3
KMI 35.59 277 eP 19 31.50 1.2
GTA 37.57 301 eP 19 46.00 -0.7
CHG 40.65 268 iPc 20 12.80 0.4
0.9s 10.92nm 4.6mb
WB5 46.85 190 eP 21 02.00 -0.3
e 21 07.00
WRA 46.92 190 Pc 21 02.70 -0.2
0.5s 10.00nm 5.1mb
WMO 46.99 306 eP 21 03.00 -0.4
Z 16s 0.30um 4.3MszX
sP 21 22.00
INK 63.41 24 eP 23 01.00 -0.7
SOD 74.91 339 eP 24 13.00 0.5
SUF 77.70 335 eP 24 29.00 0.9
0.7s 6.80nm 4.8mb
NUR 79.57 334 eP 24 40.00 1.6
HFS 83.94 337 eP 25 00.20 -1.0
0.6s 2.70nm 4.6mb
NB2 84.12 338 P 25 02.40 0.2
0.7s 2.50nm 4.5mb
ZOBO 149.89 76 PKP 32 26.00 7.8X
S.D. = 0.9 on 17 of 18 obs.

JUN 24, 1989 17h 47m 09.26± 0.80s
43.480 N ± 3.9km 126.863 W ± 7.9km
DEPTH = 10.0km (geophysicist)
4.0mb (2 obs.)
OFF COAST OF OREGON (30)

GROR 2.96 50 eP 47 56.96 -0.3
KMOR 3.23 47 eP 48 00.90 -0.2
NLO 3.56 42 eP 48 05.96 0.2

GT2	3.70	61	eP	48	07.84	0.1
PGO	3.73	56	eP	48	09.76	1.6
TCO	3.86	79	eP	48	09.73	-0.5
BMW	3.95	39	eP	48	10.86	-0.4
RVW	3.96	46	eP	48	11.49	0.1
VLMM	4.02	58	eP	48	12.52	0.3
ONR	4.04	32	eP	48	12.26	-0.2
TDH	4.06	62	eP	48	13.18	0.3
LVP	4.09	49	eP	48	13.59	0.3
VBEM	4.11	66	eP	48	13.75	0.2
MTMW	4.18	51	eP	48	14.57	0.0
FL2	4.20	48	eP	48	15.47	0.5
VLL	4.21	60	eP	48	15.32	0.4
SHW	4.26	49	eP	48	16.63	0.8
CZM	4.28	45	eP	48	16.22	0.3
HSR	4.28	49	eP	48	16.66	0.5
JLK	4.28	50	eP	48	16.37	0.3
VFP	4.28	63	eP	48	15.94	-0.2
STD	4.30	48	eP	48	16.66	0.4
VGB	4.81	63	iP	48	23.10	-0.3
LON	4.85	46	iP	48	24.50	0.5
MCW	5.91	27	eP	48	38.70	-0.2
PNT	7.69	38	iPd	49	03.00	-0.9
	0.6s		15.00nm			5.4mb X
ISA	10.14	138	eP	49	38.00	0.1
LRM	10.53	72	eP	49	42.10	-1.5
SBB	11.23	138	eP	49	52.00	-0.9
TPC	12.59	134	eP	50	12.00	0.8
SES	12.82	52	eP	50	13.00	-1.3
ALQ	17.93	112	e(P)	51	20.50	0.1
	1.2s		5.86nm			3.6mb
			eLg	56	46.00	
FFC	19.68	46	eP	51	40.00	-1.3
	1.2s		28.00nm			4.4mb
MEO	23.50	102	iPd	52	21.00	1.0
INK	25.13	354	eP	52	36.00	0.6
MBC	33.02	3	eP	53	46.00	-0.1
	S.D. = 0.7		on 36 of 36 obs.			

JUN 24, 1989 17h 53m 08.37± 0.25s
43.522 N ± 1.8km 110.752 W ± 2.5km
DEPTH = 5.0km (geophysicist)
WYOMING (460)
ML 3.0 (NEIS).

SNOW	0.06	182	iPc	53	10.28	0.1
AVOW	0.10	333	iPc	53	10.76	0.1
			S	53	12.46	
LOHW	0.14	50	iPc	53	11.54	0.1
TPAW	0.15	258	iPc	53	11.72	0.1
REDW	0.18	204	iPd	53	12.38	0.3
MOOW	0.23	1	iPd	53	13.00	-0.1
			S	53	16.07	
MUDI	0.26	292	iPc	53	13.74	0.1
TRXW	0.27	32	iPc	53	14.04	0.2
			S	53	18.15	
TARW	0.30	324	iPc	53	14.37	-0.1
			S	53	18.58	
RAMW	0.39	339	iPc	53	16.21	-0.1
			S	53	21.25	
CHOI	0.40	238	ePc	53	16.17	-0.2
			S	53	21.92	
ALPW	0.41	206	(P)	53	16.21	-0.5
			S	53	21.88	
PACW	0.43	27	iPc	53	17.16	0.2
			S	53	23.07	
PINI	0.43	268	iPc	53	16.92	-0.2
			S	53	22.94	
COLW	0.43	5	(P)	53	17.01	-0.1
			S	53	22.64	
STEW	0.53	6	iPd	53	18.77	-0.2
			S	53	25.80	
BW06	1.15	130	iP	53	30.00	-0.5
PTI	1.35	242	eP	53	34.00	0.0
			i	53	52.00	
HPI	1.71	277	ePn	53	39.20	-0.1
			iPg	53	40.30	
DAU	3.13	187	eP	53	59.70	0.1
DUG	3.66	206	eP	54	07.50	0.4
	S.D. = 0.2		on 21 of 21 obs.			

& JUN 24, 1989 18h 07m 15.81s
61.736 N 150.967 W
DEPTH = 65.9km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.29	159	eP	07	26.73	-0.1
SKT	0.36	313	eP	07	26.79	-0.4
PWA	0.53	99	eP	07	28.35	-0.3
CGLM	0.66	230	eP	07	29.99	-0.3
PME	0.93	96	eP	07	32.84	-0.6
RDT	1.36	212	eP	07	38.09	-1.1
	6 obs. associated					

% JUN 24, 1989 18h 20m 12.60± 0.99s
36.888 N ± 6.1km 5.273 W ±10.8km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPRU	0.08	23	iP	20	14.30	-0.9
			eS	20	17.30	
LIJA	0.11	275	iP	20	14.00	-1.6
ALJ	0.34	231	iP	20	20.50	0.8
EJIF	0.46	200	eP	20	19.00	-3.0
			eS	20	36.80	
GIBL	0.55	264	iP	20	24.00	0.3
SRO	0.63	187	eP	20	26.00	0.7
MOMI	0.67	213	eP	20	26.00	0.1
OJEN	0.81	195	eP	20	30.00	1.6
PLAT	0.86	207	eP	20	30.00	0.8
EHOR	0.93	1	eP	20	31.20	0.9
			eS	20	46.00	
EVAL	1.37	301	eP	20	38.00	0.3
			eS	20	58.00	
	S.D. = 1.5		on 11 of 11 obs.			

% JUN 24, 1989 18h 25m 21.11± 1.08s
36.839 N ± 5.0km 5.202 W ±10.8km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.6 (MDD).

EPRU	0.13	350	iP	25	24.50	0.2
			eS	25	27.70	
LIJA	0.18	290	iP	25	24.00	-1.2
ALJ	0.36	243	iP	25	30.00	1.4
EJIF	0.44	209	eP	25	29.60	-0.5
			eS	25	37.30	
SRO	0.60	193	iP	25	33.00	-0.2
GIBL	0.60	269	iP	25	34.00	0.7
MOMI	0.66	219	iP	25	31.00	-3.3X
OJEN	0.79	200	iP	25	37.50	1.1
CNIL	0.83	236	iP	25	32.00	-5.1X
PLAT	0.85	212	iP	25	36.00	-1.4
EHOR	0.98	358	eP	25	40.10	0.4
			eS	25	55.30	
EVAL	1.44	302	eP	25	46.50	-0.7
			eS	26	04.00	
EBAN	1.74	40	eP	25	55.20	3.7X
			eS	26	18.70	
	S.D. = 1.1		on 10 of 13 obs.			

% JUN 24, 1989 18h 46m 41.24± 0.93s
36.827 N ± 8.7km 5.287 W ± 9.6km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPRU	0.15	18	iP	46	43.20	-1.5
			eS	46	46.40	
EJIF	0.40	201	eP	46	49.00	-0.5
MAL	0.71	98	ePn	46	54.50	-0.7
			iSg	47	08.50	
EVAL	1.39	303	eP	47	07.00	0.4
			eS	47	25.00	
EBAN	1.79	41	eP	47	13.60	1.2
			eS	47	38.00	
	S.D. = 1.4		on 5 of 5 obs.			

% JUN 24, 1989 18h 49m 20.88± 2.40s
36.807 N ± 9.9km 5.189 W ±29.4km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPRU	0.16	348	iP	49	24.00	-0.6
			eS	49	27.00	
EJIF	0.42	212	eP	49	29.40	-0.1
			eS	49	37.00	
EHOR	1.01	357	eP	49	40.50	0.5
			eS	49	55.00	
EVAL	1.46	302	eP	49	47.50	0.2
			eS	50	07.00	
	S.D. = 0.8		on 4 of 4 obs.			

? JUN 24, 1989 19h 13m 55.04± 1.80s
47.509 N ±21.7km 155.341 E ±35.8km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
KURIL ISLANDS REGION (222)

MAT	16.76	235	(P)	17	50.00	1.3
KKN	56.92	276	P	23	38.60	-1.0
GKN	57.22	277	P	23	40.40	-1.2
	0.7s		11.00nm			5.0mb
SUF	62.93	336	eP	24	19.00	-0.9
NB2	67.99	342	P	24	52.90	0.4
	0.9s		5.50nm			4.7mb
HFS	68.26	340	eP	24	53.90	-0.3
	0.4s		2.20nm			4.6mb
WRA	69.75	201	P	25	03.00	-0.7
	0.6s		1.60nm			4.3mb
PRU	77.15	335	eP	25	49.00	2.4
KHC	78.20	335	eP	25	55.90	3.5X
	S.D. = 1.5		on 8 of 9 obs.			

& JUN 24, 1989 19h 14m 16.88s
63.140 N 149.565 W
DEPTH = 89.2km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.66	25	eP	14	33.48	0.3
			S	14	45.95	
KTH	0.74	305	iP	14	34.10	0.1
			S	14	47.09	
SKT	1.48	219	eP	14	41.45	-1.3
PWA	1.50	186	iP	14	42.16	-0.8
PME	1.54	170	eP	14	42.95	-0.5
CCB	1.70	26	iP	14	45.05	-0.5
HDA	1.72	41	eP	14	45.32	-0.6
			S	15	07.36	
SUA	1.77	199	eP	14	45.93	-0.7
PAX	1.87	93	eP	14	47.40	-0.6
			S	15	11.40	
TOA	1.88	122	iP	14	47.54	-0.5
			S	15	15.30	
FBA	1.93	23	eP	14	48.44	-0.2
GLM	2.09	26	eP	14	50.25	-0.6
SPU	2.29	212	eP	14	52.80	-0.7
			S	15	21.77	
VZW	2.52	145	eP	14	55.47	-1.3
SLKM	2.66	187	eP	14	57.66	-0.9
TTA	2.95	269	eP	15	01.39	-1.1
GLB	3.18	120	eP	15	03.95	-1.8
	17 obs. associated					

? JUN 24, 1989 19h 36m 30.60± 2.49s
36.797 N ±10.1km 5.183 W ±29.9km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPRU	0.17	347	iP	36	34.00	-0.5
			eS	36	37.00	
EJIF	0.41	214	eP	36	39.00	-0.1
EHOR	1.02	357	eP	36	50.30	0.4
			eS	37	05.00	
EVAL	1.47	303	eP	36	57.40	0.2
			eS	37	17.00	
	S.D. = 0.7		on 4 of 4 obs.			

JUN 24, 1989 20h 32m 51.79± 0.29s
43.515 N ± 2.0km 110.753 W ± 2.6km
DEPTH = 5.0km (geophysicist)
WYOMING (460)
ML 3.0 (NEIS).

SNOW	0.05	181	iPd	32	53.74	0.3
AVOW	0.11	335	iPc	32	54.35	0.1
LOHW	0.15	48	iPc	32	55.04	0.1
TPAW	0.15	260	iPc	32	55.24	0.3
REDW	0.17	205	iPd	32	55.80	0.4
MOOW	0.23	2	iPc	32	56.58	0.0
MUDI	0.26	294	iPc	32	57.28	0.2
TRXW	0.27	31	iPc	32	57.53	0.2
TARW	0.30	325	iPc	32	57.95	0.0
CHOI	0.39	239	eP	32	59.60	-0.1
RAMW	0.40	339	iPc	32	59.77	-0.1
ALPW	0.41	206	eP	32	59.56	-0.4
PINI	0.43	269	ePc	33	00.42	-0.1
PACW	0.43	27	iPc	33	00.67	0.2
COLW	0.44	5	eP	33	00.52	-0.1

24d 20h

STEW 0.54 6 iPc 33 02.28 -0.3
BW06 1.15 130 iP 33 13.60 -0.3
PTI 1.35 242 eP 33 17.00 -0.2
HPI 1.71 277 eP 33 22.50 -0.2
S.D. = 0.2 on 19 of 19 obs.

? JUN 24, 1989 20h 39m 40.27± 2.04s
16.807 S ±21.3km 173.871 W ±17.5km
DEPTH = 70.3 ± 17.1 km
4.4mb (4 obs.)
TONGA ISLANDS (173)

AFI 3.52 35 eP 40 34.00 0.2
e(S) 41 00.00
DZM 19.28 251 iPc 44 06.90 4.5X
CMS 39.34 241 eP 47 05.00 0.6
WB5 49.08 258 eP 48 22.00 -0.7
WRA 49.09 258 Pc 48 22.60 -0.2
0.4s 1.10nm 4.2mb
FORR 54.35 244 eP 49 01.40 -0.8
WARB 55.73 250 eP 49 05.00 -7.3X
MBL 62.45 255 eP 49 58.00 -0.7
NANU 66.19 252 eP 50 23.60 0.6
0.4s 7.00nm 5.0mb
SPA 73.30 180 e(P) 51 06.00 0.1
0.7s 3.91nm 4.4mb
PNT 81.44 32 eP 51 49.00 -1.9
0.6s 3.00nm 4.4mb
BJI 86.11 314 eP 52 16.00 1.3
NAI 144.81 242 iPKPd 59 13.00 1.0
1.0s 5.00nm
KSP 145.08 349 iPKPc 59 10.60 -0.5
CLL 145.14 352 iPKPc 59 10.00 -1.1
1.3s 13.00nm
BRG 145.44 351 iPKP 59 11.50 -0.2
1.0s 12.00nm
MOX 145.96 354 ePKPc 59 12.50 -0.1
1.0s 28.00nm
PRU 146.21 350 PKP 59 14.20 1.2
1.0s 14.50nm
DOU 146.77 2 PKP 59 15.20 1.3
0.7s 11.10nm
GRF 146.94 354 ePKP 59 16.00 1.8X
ABH 146.99 358 ePKPc 59 16.35 2.1X
RUP 147.18 359 ePKPc 59 17.06 2.4X
KHC 147.20 351 iPKP 59 17.40 2.7X
1.0s 7.00nm
TOD 147.21 357 ePKP 59 16.94 2.3X
WLF 147.23 360 PKP 59 18.00 3.4X
ZST 147.43 346 e(PKP) 59 17.80 2.8X
SRO 147.49 345 ePKP 59 18.30 3.2X
FLN 147.68 8 ePKP 59 17.80 2.4X
0.7s 7.70nm
LDF 147.89 8 ePKP 59 18.30 2.6X
GRR 147.99 9 ePKP 59 18.90 3.0X
0.7s 6.60nm
CDF 148.47 359 ePKP 59 20.50 3.7X
HAU 148.89 360 ePKP 59 21.50 4.1X
FEL 148.98 358 ePKPc 59 21.45 3.8X
LOR 149.57 3 ePKP 59 23.10 4.7X
0.8s 6.05nm
SSF 149.75 4 ePKP 59 23.80 5.1X
0.9s 8.20nm
MFF 149.84 9 ePKP 59 23.40 4.6X
LBF 149.86 3 ePKP 59 23.80 4.9X
0.7s 3.85nm
AVF 150.01 4 ePKP 59 23.90 4.8X
0.8s 4.05nm
LJU 150.02 348 e(PKP) 59 24.50 5.4X
VOY 150.15 349 ePKP 59 23.70 4.3X
SMF 150.19 3 ePKP 59 24.50 5.1X
BGF 150.21 5 ePKP 59 24.70 5.3X
0.8s 9.40nm
VBY 150.38 347 e(PKP) 59 26.00 6.3X
LSF 150.39 6 iPKPc 59 24.70 5.0X
0.8s 11.40nm
TCF 150.42 6 ePKP 59 25.10 5.3X
0.7s 3.85nm
MAF 150.52 5 ePKP 59 25.50 5.6X
0.9s 9.85nm
LPG 151.39 359 ePKP 59 28.60 7.0X
LFF 151.59 8 ePKP 59 27.90 6.4X
CAF 151.76 6 ePKP 59 28.30 6.5X
LPO 151.90 7 ePKP 59 28.30 6.3X
S.D. = 1.0 on 17 of 50 obs.

JUN 24, 1989 21h 00m 44.78± 0.72s
41.958 N ± 6.2km 20.365 E ± 7.6km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.3 (SKO).

KKS 0.12 16 ePg 00 47.80 0.0
PHP 0.28 168 iPgc 00 50.00 -0.6
BCI 0.46 332 iPgc 00 53.30 -0.9
SDA 0.65 275 ePg 00 58.70 1.0
SKO 0.80 89 ePg 01 01.00 0.7
iSg 01 13.00
OHR 0.91 159 ePg 01 02.00 -0.2
eSg 01 16.00
S.D. = 0.9 on 6 of 6 obs.

& JUN 24, 1989 21h 21m 01.12s
61.067 N 149.720 W
DEPTH = 46.7km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA 0.59 353 eP 21 13.17 -0.2
S 21 22.32
PMR 0.60 28 iP 21 13.00 -0.5
SLKM 0.61 204 iP 21 13.28 -0.4
S 21 22.29
SUA 0.63 309 iP 21 13.68 -0.4
PME 0.65 30 eP 21 13.93 -0.3
NKA 0.81 247 eP 21 17.43 1.1
SEW 0.98 172 eP 21 17.90 -0.7
SPU 1.14 277 eP 21 20.22 -0.7
SKT 1.26 317 iP 21 22.26 -0.4
S 21 39.84
RDT 1.41 251 eP 21 24.04 -0.7
S 21 42.13
RED 1.63 248 eP 21 27.28 -0.7
CNPM 1.72 207 eP 21 28.57 -0.6
ILIM 1.88 240 eP 21 30.74 -0.7
GLB 2.88 80 eP 21 44.60 -1.1
TTA 3.51 305 iP 21 52.40 -2.1
15 obs. associated

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* JUN 25, 1989 00h 36m 25.13± 1.01s
51.880 N ±21.6km 170.356 W ±12.1km
DEPTH = 33.0km (normal)
4.7mb (17 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK 3.92 273 eP 37 26.30 1.8
TTA 13.46 29 eP 39 37.50 1.4
INK 24.09 33 eP 41 38.00 -0.1
MBC 31.21 21 eP 42 42.50 -0.5
0.4s 1.00nm 4.0mb
EDM 33.91 65 eP 43 08.50 1.8X
SES 36.35 68 eP 43 30.00 2.4X
CN2 42.56 285 eP 44 18.00 -1.1
FRB 49.73 35 eP 45 15.00 -0.5
SSE 53.24 275 Pd 45 43.00 0.6
1.2s 34.00nm 5.2mb
NJ2 54.01 278 Pd 45 47.40 -0.7
TIY 54.07 287 eP 45 48.70 0.1
SCH 56.24 43 eP 46 04.00 -0.1
WHN 57.82 280 eP 46 15.00 -0.5
XAN 58.65 286 Pd 46 20.70 -0.7
QZH 59.22 272 Pc 46 26.00 0.7
GTA 60.16 297 P 46 30.20 -1.6
CD2 63.94 287 eP 46 57.00 -0.1
SUF 65.00 352 eP 47 01.00 -2.5X
GYA 65.44 282 P 47 06.80 -0.1
NB2 67.43 359 P 47 17.00 -2.0
0.8s 3.60nm 4.5mb
HFS 68.29 358 eP 47 22.40 -1.9
0.3s 5.10nm 5.1mb
Z 18s 0.04um 3.7MszX
LR 11 45.00
LOE 75.24 279 eP 48 06.60 0.3
CHG 75.86 282 eP 48 10.60 0.7
CHTO 75.86 282 iP 48 10.50 0.7
0.9s 5.33nm 4.5mb
GUN 76.42 298 P 48 12.20 -1.2
PKI 76.94 298 P 48 16.20 -0.1
GKN 77.02 299 P 48 12.60 -3.9X
0.4s 5.00nm 4.9mb
BRG 77.56 357 eP 48 18.20 -0.6
1.0s 10.00nm 4.8mb
MOX 77.84 359 eP 48 20.00 -0.4
PRU 78.42 357 eP 48 23.50 -0.1
GRF 78.80 359 eP 48 26.50 0.8
1.0s 11.00nm 4.8mb
KHC 79.31 357 Pd 48 29.50 1.0
1.0s 4.00nm 4.4mb
HAU 80.45 2 eP 48 34.70 0.1
BSF 80.64 2 eP 48 35.60 -0.1
LOR 81.11 4 eP 48 38.20 0.1
0.8s 4.50nm 4.5mb
SSF 81.30 4 eP 48 39.20 0.2
0.8s 4.00nm 4.5mb
KBA 81.37 357 iP 48 40.10 0.4
1.0s 22.50nm 5.1mb
LBF 81.40 4 eP 48 39.60 0.0
MFF 81.54 7 eP 48 40.50 0.2
AVF 81.56 4 eP 48 40.50 0.1
0.8s 3.20nm 4.4mb
SMF 81.73 4 eP 48 41.50 0.2
0.9s 8.10nm 4.7mb
BGF 81.77 5 eP 48 41.50 0.0
0.8s 4.00nm 4.5mb
LSF 82.00 6 eP 48 42.90 0.2
1.1s 10.70nm 4.8mb
TCF 82.00 5 eP 48 42.80 0.0
MAF 82.09 5 eP 48 43.40 0.2
SBF 84.62 2 eP 48 56.90 0.7
FRF 84.90 2 eP 48 58.50 0.9
LMR 85.13 2 eP 48 59.60 0.9
CVF 85.93 1 eP 49 03.10 0.3
0.9s 11.10nm 5.1mb
BUL 145.03 328 iPKPc 56 00.20 -0.5
KSR 150.91 327 ePKP 56 08.00 -1.9X
S.D. = 0.8 on 46 of 51 obs.

& JUN 25, 1989 00h 42m 20.20s
40.448 N 124.700 W
DEPTH = 22.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.1 (BRK).

FHC 0.65 57 iPc 42 32.00 -0.8
iS 42 40.20
WDC 1.65 85 iPc 42 46.00 -2.2
LTCM 1.98 96 eP 42 51.00 -2.0
LBFM 2.31 66 eP 42 56.20 -1.7
MIN 2.37 91 iPc 42 56.00 -2.6
eS 43 26.60
ORV 2.61 109 eP 42 59.10 -2.9
BRK 3.19 143 eP 43 07.50 -2.7
BKS 3.20 142 iPc 43 07.80 -2.6
PCC 3.45 148 eP 43 10.50 -3.4
ARN 3.96 140 eP 43 18.30 -2.8
GCC 4.01 147 eP 43 18.10 -3.7
KVN 5.27 103 eP 43 36.50 -3.4
12 obs. associated

JUN 25, 1989 01h 08m 27.73± 0.59s
40.637 N ± 5.6km 22.672 E ± 5.6km
DEPTH = 8.9 ± 5.0 km
GREECE (364)
MD 3.2 (ATH).

PLG 0.65 114 ePg 08 41.00 0.3
VAY 0.69 354 iPnc 08 40.00 -1.4
i 08 47.00
KZN 0.76 245 ePg 08 42.00 -0.8
MMB 1.24 40 iPgd 08 50.00 -0.9
Sg 09 07.00
KKB 1.27 14 iP 08 51.00 -0.4
NEO 1.39 162 ePg 08 53.70 0.3
OHR 1.50 289 ePn 08 55.00 0.2
SKO 1.63 326 ePn 08 57.30 0.7
RZN 1.87 55 iP 09 01.00 0.7
Sg 09 27.00
VTS 1.99 11 iP 09 03.00 0.9
RDO 2.23 76 ePb 09 11.00 5.6X
EZN 2.91 105 ePn 09 14.00 -1.1
S.D. = 1.0 on 11 of 12 obs.

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* JUN 25, 1989 01h 52m 23.59± 1.36s
37.176 N ± 9.9km 142.054 E ±10.6km
DEPTH = 38.5 ± 9.3 km
4.8mb (9 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)

KAKJ 1.80 238 P 52 51.50 -1.2
YAMJ 1.88 302 P 52 55.50 1.5
S 53 23.30

OFUJ	1.92	351	P	52	53.70	-0.8
			S	53	19.70	
NIIJ	2.44	272	P	53	03.00	1.2
			eS	53	35.60	
CHJJ	2.71	246	iPd	53	05.20	-0.5
			eS	53	39.30	
MAT	3.15	260	iPc	53	14.10	2.2
			eS	53	58.00	
MTMJ	3.46	261	P	53	18.40	2.0
AOMJ	3.62	339	eP	53	19.30	0.6
WKYJ	6.03	243	eP	53	53.30	0.6
KUSJ	6.26	18	P	53	51.40	-4.4X
			eS	54	59.70	
ASAJ	6.95	4	P	54	02.90	-2.6
YONJ	7.22	257	eP	54	09.60	0.2
TKSJ	7.26	246	eP	54	08.70	-1.2
MDJ	12.00	312	eP	55	19.70	4.8X
CN2	14.25	303	eP	55	52.40	7.7X
SNY	15.00	294	eP	55	58.00	3.6X
NJ2	19.75	262	Pd	56	51.00	-2.1
TIA	20.00	275	eP	56	53.60	-2.1
BJI	20.40	286	(P)	56	56.50	-3.3X
Z	12s		0.60um			4.2MszX
N	12s		0.34um			
E	10s		0.31um			
OZH	23.44	245	Pc	57	28.00	-2.2
TIY	23.48	280	eP	57	30.00	-0.7
Z	13s		0.96um			4.4MszX
E	12s		0.40um			
WHN	23.89	262	eP	57	34.00	-0.5
XAN	27.04	273	P	58	03.60	-0.6
LZH	30.55	280	eP	58	35.00	-0.8
GYA	31.75	261	P	58	45.00	-1.4
CD2	32.19	270	eP	58	49.20	-0.9
GTA	33.01	287	eP	58	58.00	0.7
WMQ	41.23	297	P	00	07.50	1.1
CHG	41.82	256	eP	00	12.50	1.1
GUN	47.65	276	P	01	00.00	1.5
	0.8s		51.00nm			5.6mb
PKI	48.17	276	P	01	02.80	0.2
KKN	48.18	276	P	01	03.00	0.5
	0.8s		20.00nm			5.2mb
GKN	48.60	277	P	01	06.00	0.4
	1.0s		41.00nm			5.4mb
MBC	56.24	17	eP	02	01.50	-0.3
HYB	58.72	269	eP	02	17.50	-2.6X
ALE	59.94	4	eP	02	27.00	-0.7
	0.5s		2.00nm			4.5mb
GBA	61.74	266	Pc	02	39.50	-1.2
	0.8s		8.80nm			4.9mb
SOD	65.03	337	eP	03	00.00	-1.6
SUF	68.09	333	eP	03	20.00	-1.1
	0.7s		4.00nm			4.6mb
NUR	70.06	332	eP	03	41.00	7.8X
NB2	74.25	338	P	03	58.40	0.2
	1.1s		6.60nm			4.5mb
KVN	74.27	53	eP	04	00.00	1.2
TNP	75.39	53	eP	04	05.50	0.2
	1.0s		2.25nm			4.1mb
BW06	77.20	46	eP	04	20.00	4.6X
KSP	80.25	329	eP	04	33.00	1.5
			e	04	40.70	
PV10	80.30	49	eP	04	31.00	-1.4
CLL	81.23	330	eP	04	37.00	0.4
	1.0s		8.00nm			4.7mb
			e	04	45.00	
PRU	81.63	329	eP	04	40.50	1.7
KHC	82.69	329	P	04	46.00	1.6
ALQ	84.11	50	e(P)	04	53.00	0.9
CVF	89.90	327	P	05	04.63	-15.3X
ZOBO	146.17	60	ePKP	12	02.00	0.5
CNCB	146.64	61	PKP	12	04.00	1.8

S.D. = 1.3 on 44 of 53 obs.

JUN 25, 1989 02h 22m 49.75± 0.60s
40.812 N ± 8.2km 19.803 E ± 4.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 3.1 (ATH), 2.8 (ROM). ML 2.7 (SKO).

BERA	0.16	134	iPgc	22	52.90	-0.5
VLO	0.42	214	iPg	22	58.60	0.4
OHR	0.81	68	ePg	23	04.20	-1.3
			iSg	23	18.40	
LCI	1.49	252	P	23	15.60	-0.9
			eSg	23	35.10	
KZN	1.58	108	eP	23	18.90	0.9
			eS	23	42.90	
SKO	1.69	46	iPn	23	20.50	1.0
MGR	3.31	260	P	23	42.60	0.0
SGO	3.43	267	P	23	44.90	0.7
SDI	4.60	283	P	24	00.70	-0.3

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

& JUN 25, 1989 02h 36m 28.84s
63.367 N 149.632 W
DEPTH = 103.4km
3.8mb (1 obs.)
CENTRAL ALASKA (1)
<AGS-P>. Felt (II) ot Contwell.

MCK	0.48	40	iP	36	45.06	-0.1
			S	36	56.79	
KTH	0.61	288	iP	36	45.97	-0.2
			S	36	59.14	
NEA	1.24	11	iP	36	52.07	-0.4
WRH	1.30	31	iP	36	52.82	-0.4
CCB	1.52	31	iP	36	55.30	-0.5
HDA	1.58	47	iP	36	56.13	-0.5
			S	37	18.20	
RDS	1.60	23	iP	36	56.65	-0.3
PWA	1.73	184	iPd	36	57.70	-0.8
FBA	1.74	27	iPd	36	58.00	-0.6
DDM	1.74	74	eP	36	58.43	-0.3
			S	37	21.93	
PME	1.77	171	eP	36	58.06	-0.9
PMR	1.80	172	eP	36	58.50	-0.9
GLM	1.90	30	iP	37	00.26	-0.5
PAX	1.93	100	eP	37	00.76	-0.5
			S	37	25.79	
SUA	1.98	196	eP	37	00.78	-1.1
			S	37	26.38	
TOA	2.04	127	iPc	37	02.00	-0.6
PMS	2.13	179	eP	37	03.00	-0.8
CGLM	2.35	209	eP	37	05.17	-1.5
CRP	2.41	210	eP	37	06.55	-1.1
KLU	2.55	136	eP	37	07.46	-2.0
VZW	2.73	147	eP	37	09.37	-2.4
			S	37	41.42	
NKA	2.74	197	eP	37	13.31	1.5
SLKM	2.88	186	eP	37	12.85	-1.0
			S	37	43.48	
TTA	2.93	264	iPd	37	13.30	-1.2
RDT	3.09	206	eP	37	15.85	-0.9
IMA	3.22	329	iPc	37	17.80	-0.7
SEW	3.28	178	eP	37	17.79	-1.3
RED	3.31	208	eP	37	19.30	-0.4
GLB	3.33	123	eP	37	18.21	-1.7
			S	37	57.73	
SVW	3.60	234	iPd	37	21.80	-1.9
ILIM	3.66	207	eP	37	23.74	-0.7
CNPM	3.93	192	eP	37	26.23	-1.9
BALM	4.14	121	eP	37	28.94	-2.1
MID	4.26	157	eP	37	31.20	-1.4
DWY	4.59	77	P	37	35.30	-1.8
KDC	5.81	195	eP	37	51.70	-2.3
HYT	6.24	109	P	37	58.00	-2.0
INK	8.24	46	eP	38	25.00	-2.2
BRW	8.42	344	ePd	38	27.40	-2.3
SIT	9.51	125	ePc	38	41.00	-3.3
SDN	9.76	219	e(P)	38	49.30	1.6
YKA	15.85	77	eP	40	08.10	1.2
MBC	16.28	25	eP	40	11.50	-0.7
	0.5s		3.00nm			3.8mb
EDM	21.29	102	ePc	41	07.50	-0.6
SUF	54.19	2	eP	45	43.00	-1.9

45 obs. ossocioted

JUN 25, 1989 03h 00m 47.64± 0.86s
39.716 N ± 7.6km 26.141 E ± 8.9km
DEPTH = 9.4 ± 7.1 km
TURKEY (366)
MD 2.9 (ATH).

EZN	0.18	52	iPg	00	50.80	-0.8
			iSg	00	53.80	
PRK	0.48	168	iPbc	00	56.50	-0.9
MFT	1.38	39	iPn	01	12.70	-0.4
EDC	1.47	64	iPn	01	14.70	0.5
RDO	1.50	342	ePb	01	13.00	-1.6
BNT	1.51	64	iPn	01	15.70	0.9
IZM	1.58	146	ePn	01	16.00	0.1
PLG	2.17	288	ePn	01	25.70	1.3
CTT	2.26	50	ePn	01	26.20	0.5

S.D. = 1.2 on 9 of 9 obs.

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* JUN 25, 1989 03h 33m 09.69± 0.81s
43.168 N ±11.8km 145.022 E ±11.2km
DEPTH = 103.6 ± 6.6 km
4.1mb (1 obs.)
HOKKAIDO, JAPAN REGION (224)
Felt (I JMA) ot Nemuro ond Kushiro.

KUSJ	0.24	253	iPd	33	23.70	-0.4
			S	33	31.10	
NEM	0.44	69	iPd	33	26.10	0.5
			S	33	36.20	
KUS	0.50	248	P	33	25.30	-0.7
			S	33	35.20	
HOOJ	1.50	239	P	33	37.00	0.5
			S	33	55.50	
ASAJ	1.97	300	iP+	33	43.00	0.5
			eS	34	06.00	
MRRJ	3.00	257	P	33	56.00	-0.2
			eS	34	29.30	
YAMJ	6.26	219	eP	34	41.30	0.2
SUF	63.76	333	eP	43	32.00	-0.1
NB2	69.57	338	P	44	08.70	-0.2
	0.9s		2.80nm			4.1mb

S.D. = 0.6 on 9 of 9 obs.

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* JUN 25, 1989 04h 48m 01.87± 1.13s
18.940 S ±15.2km 169.345 E ±14.1km
DEPTH = 255.4 ± 8.7 km
4.8mb (2 obs.)
VANUATU ISLANDS (186)

PVC	1.55	320	iP	48	41.50	0.2
			iS	49	11.00	
DZM	4.13	221	iPc	49	07.70	-0.4
			iS	50	15.00	
RMQ	20.41	245	eP	52	23.00	2.3
MNG	22.24	168	P	52	39.00	0.6
	0.6s		64.00nm			5.3mb
PGZ	22.41	166	P	52	40.00	0.0
TCW	22.60	170	P	52	42.80	1.0
CAW	22.63	169	P	52	42.00	-0.2
MTW	22.76	168	P	52	43.00	-0.4
WDW	22.77	169	P	52	43.30	-0.2
BLW	22.96	168	P	52	44.90	-0.4
MOW	22.97	169	P	52	44.80	-0.6
WB5	32.97	262	eP	54	13.50	-1.4
ASPA	33.30	256	iPc	54	16.90	-0.9
	0.5s		80.00nm			5.6mb X
WARB	39.95	252	eP	55	07.00	-6.2X
MBL	46.42	259	iPd	56	05.10	-0.1
	0.4s		7.00nm			4.3mb
MEKA	47.22	251	eP	56	11.00	-0.4
NAI	129.25	252	iPdiff	03	31.00	0.9

S.D. = 1.0 on 16 of 17 obs.

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* JUN 25, 1989 05h 17m 15.87± 1.20s
10.751 N ±15.7km 85.851 W ±14.4km
DEPTH = 58.7 ± 13.1 km
4.3mb (3 obs.) 3.7Msz (1 obs.)
COSTA RICA (78)

SRA	1.53	116	iPd	17	41.50	0.1
SJS	1.94	114	iPc	17	47.30	0.1
			S	18	24.80	
LCR2	2.08	119	eP	17	48.70	-0.4
ICR	2.13	111	eP	17	50.00	-0.1
LIO	2.87	105	eP	18	01.60	1.5
ACR	3.37	128	eP	18	06.00	-1.2
UPA	6.47	105	eP	18	54.50	3.8X
OXX	12.28	302	(P)	20	10.70	0.2
MEO	26.59	336	iPd	22	52.40	1.9
LNO	26.62	342	eP	22	49.60	-1.0
TUL	26.62	342	ePc	22	50.30	-0.4
	1.2s		15.00nm			4.4mb
Z	22s		0.26um			3.7Msz
			e	22	56.50	
			LR	32	00.00	
ALQ	30.53	325	eP	23	26.60	0.4
	1.0s		5.00nm			4.2mb
			e	23	33.50	
			e	23	45.80	
ZOBO	32.07	147	eP	23	39.00	-1.2
			LR	36	44.00	

25d 05h

KVN	40.23	320	eP	24	49.80	1.0
LRM	41.67	332	eP	25	01.20	0.7
BAO	45.74	124	eP	25	35.30	1.7
SCH	46.47	15	eP	25	38.00	-0.8
PNT	47.57	330	eP	25	47.00	-0.5
EDM	47.76	338	eP	25	47.00	-2.0
MBC	67.91	352	eP	28	09.00	-1.0
	0.8s		3.00nm			4.3mb
GBA	150.67	35	PKPd	36	59.00	1.0
	0.6s		1.70nm			

S.D. = 1.1 on 20 of 21 obs.

JUN 25, 1989 06h 18m 21.28± 0.37s
42.797 N ± 3.1km 13.047 E ± 4.6km
DEPTH = 7.4 ± 4.2 km
CENTRAL ITALY (381)
MD 3.0 (SSO), 2.9 (ROM).

ALP	0.39	92	iPgc	18	29.65	0.4
			iSg	18	36.91	
ASS	0.39	314	P	18	28.20	-1.1
			eSg	18	35.70	
CIO	0.40	10	iPgc	18	28.90	-0.6
			iSg	18	35.07	
MNS	0.49	213	Pc	18	30.20	-1.0
			iSg	18	38.00	
AQU	0.52	149	P	18	31.90	0.2
			eSg	18	40.70	
SSO	0.57	29	ePgc	18	33.52	0.9
			iSg	18	44.54	
ARV	0.70	354	Pc	18	34.10	-1.3
			eSg	18	45.10	
AOI	0.85	28	iPg	18	37.91	-0.1
			iSg	18	52.43	
AZI	0.86	160	P	18	38.00	0.0
			eSg	18	49.50	
RMP	1.02	195	P	18	40.50	-0.3
			eSg	18	57.70	
RDP	1.07	193	P	18	40.30	-1.4
			eSg	18	57.50	
CRE	1.15	316	P	18	43.00	-0.2
			eSn	18	59.50	
RSM	1.21	339	P	18	45.70	1.7
			eSn	19	01.40	
SDI	1.23	152	P	18	45.30	0.9
			eSg	19	01.50	
SFI	1.42	323	P	18	48.40	1.0
PGD	1.45	319	P	18	49.50	1.5
MAO	1.45	255	P	18	49.20	1.3
BDI	2.19	306	P	18	59.00	0.4
			eSn	19	24.30	
TRI	2.96	10	eP	19	08.50	-0.9
			e	19	43.70	
CEY	3.10	18	eP	19	22.00	10.5X
			eSn	19	50.00	
VBY	3.14	30	eP	19	20.40	8.4X
VOY	3.29	10	ePn	19	13.60	-0.7
			eSn	19	56.20	
CTI	3.40	343	P	19	15.80	-0.1
			eSn	19	54.20	
LJU	3.42	18	eP	19	10.00	-6.0X
			e	19	17.00	
			e	19	25.00	
			eSn	19	57.00	
RBL	3.66	6	P	19	18.70	-0.9
PTJ	3.74	33	e(P)	19	32.80	12.1X
FVI	3.80	357	P	19	21.00	-0.4

S.D. = 1.0 on 23 of 27 obs.

JUN 25, 1989 06h 22m 38.45± 0.56s
12.464 N ± 4.5km 143.333 E ± 3.8km
DEPTH = 20.3 ± 3.7 km
5.0mb (17 obs.) 4.5Msz (2 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUMO	1.87	53	eP	23	10.00	0.3
PJG	1.87	53	ePc	23	09.20	-0.5
GUA	1.87	55	ePc	23	09.80	0.0
			eS	23	32.30	
DAV	18.29	255	eP	26	58.00	5.1X
BAG	22.38	283	eP	27	38.00	0.8
			eS	31	46.00	
MAT	24.41	350	(P)	27	56.00	-0.8
	1.3s		30.77nm			4.7mb
CTA	32.47	175	iPd	29	09.80	-0.1
	1.1s		29.75nm			5.1mb
QIS	33.02	186	iPd	29	14.10	-0.5
			e	29	21.00	
WB5	33.33	195	iPd	29	17.00	-0.3
WRA	33.40	195	Pd	29	16.20	-1.7
	0.7s		11.60nm			4.9mb
BJI	36.43	324	eP	29	43.50	-0.1
ASPA	37.07	194	ePd	29	49.30	0.0
	0.6s		20.00nm			5.1mb
GYA	37.12	297	P	29	51.00	1.2
			PcP	32	10.00	
TIY	37.32	318	Pc	29	52.20	0.9
Z	20s		0.75um			4.5Msz
N	12s		0.20um			
			sS	35	53.00	
XAN	37.94	310	P	29	56.50	0.0
KMI	40.28	294	Pd	30	17.50	1.1
BTO	40.49	320	eP	30	18.00	0.3
BRS	40.66	167	iPd	30	19.20	0.1
CD2	40.83	303	P	30	20.80	0.3
DZM	41.13	146	iPc	30	23.90	0.8
WARB	41.71	203	eP	30	22.00	-5.7X
LZH	42.58	310	eP	30	35.00	0.0
	1.5s		44.00nm			5.0mb
Z	18s		0.50um			4.4Msz
CHTO	43.12	284	eP	30	39.50	0.0
	1.1s		3.83nm			4.1mb
GTA	46.82	313	iPd	31	09.40	0.5
GUN	55.61	295	Pc	32	15.50	-0.4
	1.0s		76.00nm			5.7mb
PKI	56.00	295	Pc	32	17.80	-0.9
	1.1s		34.00nm			5.3mb
KKN	56.13	295	Pc	32	18.60	-0.8
	1.0s		30.00nm			5.3mb
DMN	56.27	295	Pc	32	19.90	-0.6
	1.1s		51.00nm			5.5mb
GKN	56.71	295	Pc	32	22.80	-0.8
	1.2s		74.00nm			5.6mb
WMQ	56.84	314	P	32	24.00	-0.1
			pP	32	32.00	26kmX
			PcP	33	18.50	
PMR	68.48	28	P	33	39.90	-1.2
	0.7s		8.14nm			5.0mb
FBA	69.87	25	P	33	48.60	-1.0
	0.5s		2.27nm			4.6mb
INK	75.97	22	eP	34	24.00	-1.4
MAIO	77.81	305	eP	34	37.00	0.6
MBC	79.72	14	eP	34	45.50	-0.4
	0.5s		1.00nm			4.1mb
YKA	84.54	27	eP	35	11.50	0.4
WDC	85.10	50	ePd	35	14.70	0.3
PNT	85.20	41	eP	35	15.00	0.2
MIN	85.85	50	eP	35	17.80	-0.6
PCC	85.87	53	eP	35	18.30	0.0
BKS	85.91	52	e(P)	35	18.20	-0.3
			eS	36	33.95	
ORV	86.10	51	eP	35	19.30	-0.1
GCC	86.28	53	eP	35	21.10	0.8
DPW	86.46	42	P	35	21.20	0.1
PRS	86.92	54	eP	35	24.00	0.5
LLA	87.19	53	eP	35	25.30	0.4
CMB	87.30	52	ePd	35	25.50	0.1
PRI	87.52	54	eP	35	27.50	0.9
EDM	87.93	36	iPc	35	28.00	-0.1
FRI	88.07	53	ePd	35	29.30	0.3
BCH	88.21	55	P	35	30.50	0.6
SYP	88.45	55	eP	35	31.00	-0.1
KVN	88.78	50	P	35	33.10	0.4
ISA	89.36	54	eP	35	35.00	-0.3
TNP	89.70	51	P	35	37.20	0.1
	1.0s		2.50nm			4.4mb
PAS	89.99	55	eP	35	39.00	0.8
MWC	90.06	55	eP	35	39.00	0.2
SBB	90.13	55	eP	35	39.00	0.1
SES	90.21	38	eP	35	38.00	-0.9
RVR	90.67	55	eP	35	41.00	-0.3
GSC	90.77	54	eP	35	42.00	0.1
LRM	90.83	43	eP	35	42.20	0.0
PLM	91.25	56	eP	35	44.00	-0.3
BAR	91.59	56	eP	35	46.00	0.4
TPC	91.70	55	eP	35	46.00	-0.1
GLA	92.98	55	eP	35	53.00	1.0
FFC	93.55	32	eP	35	53.50	-0.7
	1.0s		14.00nm			5.3mb
BW06	93.81	45	P	35	53.50	-2.4
PV10	95.73	49	P	36	04.50	-0.4
GOL	97.89	47	P	36	14.00	-0.6
ALQ	98.91	51	eP	36	20.10	0.9
	0.8s		1.87nm			4.7mb
BNG	122.62	284	iPKPc	41	35.30	0.0
	0.6s		6.00nm			
KIC	143.16	299	PKP	42	09.70	-4.1X
LIC	143.48	299	PKP	42	10.50	-3.9X
ARE	146.07	101	ePKP	42	21.00	1.9
ZOBO	149.31	101	ePKP	42	24.00	-0.6
	1.2s		14.19nm			
LPB	149.32	101	PKP	42	27.00	2.6X
CNCB	149.42	102	PKP	42	27.00	2.3X
CCH	151.12	103	PKP	42	28.90	2.0

S.D. = 0.8 on 73 of 79 obs.

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* JUN 25, 1989 06h 26m 10.98± 0.81s
42.798 N ± 5.9km 12.977 E ± 7.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.2 (SSO), 2.1 (ROM).

ASS	0.36	320	P	26	18.50	0.1
			eSg	26	23.70	
CIO	0.42	17	e(Pg)	26	19.70	0.2
			iSg	26	25.19	
ALP	0.44	92	ePg	26	20.03	0.0
			iSg	26	26.90	
MNS	0.47	208	P	26	20.50	0.0
			eSg	26	27.30	
ARV	0.70	358	P	26	24.50	-0.3
			eSg	26	35.50	

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

JUN 25, 1989 06h 35m 53.14± 0.49s
18.633 S ± 7.5km 178.167 W ± 6.6km
DEPTH = 487.3 ± 5.2 km
4.8mb (19 obs.)
FIJI ISLANDS REGION (181)

SVA	3.25	279	ePc	37	04.00	-1.5
			eS	38	05.90	
VUN	3.26	280	ePc	37	06.40	0.8
DZM	14.83	254	iPd	39	02.50	0.0
KRP	19.99	195	P	39	52.20	-0.8
BRS	28.0B	247	iPc	41	06.40	0.3
			i	42	38.60	
COO	29.61	241	eP	41	20.00	0.6
	0.6s		24.00nm			4.9mb
RMQ	31.46	250	iPc	41	36.20	0.9
	0.5s		22.00nm			4.9mb
CAN	33.45	234	iPc	41	52.60	0.6
CTA	33.56	262	iPc	41	53.40	0.4
	1.0s		26.00nm			4.7mb
CMS	34.87	241	iPc	42	04.70	0.8
	0.8s		34.00nm			4.9mb
TOO	36.90	232	iPc	42	21.50	0.9
	0.7s		67.00nm			5.3mb
STK	38.49	242	iPc	42	35.00	1.3
	0.3s		16.00nm			5.0mb
BFO	38.99	234	iPc	42	38.30	0.6
WB5	44.71	260	iPc	43	22.70	-0.9
WRA	44.73	260	Pd	43	21.50	-2.3
ASPA	44.82	255	iPc	43	24.50	0.0
	0.6s		144.00nm			5.7mb
			eS	49	25.90	
FORR	49.88	245	iPc	44	02.30	-0.4
	0.5s		93.00nm			5.4mb
WARB	51.26	251	eP	44	06.00	-7.0X
	0.4s		23.00nm			4.9mb
DRV	55.06	199	eP	44	39.00	-0.6
			e	14	37.00	
COOL	55.85	245	iPc	44	44.40	-1.4
MBL	58.03	256	iPc	45	00.30	-0.5
	0.4s		13.00nm			4.6mb
MEKA	58.47	250	iPc	45	03.10	-0.7
	0.4s		8.00nm			4.5mb
KLB	58.71	244	iPc	45	04.60	-0.7
	0.5s		23.00nm			4.8mb
NWAO	59.08	242	eP	45	07.50	-0.3
BAL	59.68	245	iPc	45	11.10	-0.8
SBA	59.71	184	Pd	45	12.80	1.5
MUN	60.00	243	iPd	45	14.00	0.1
MRWA	60.43	246	eP	45	16.30	-0.5
NANU	61.74	254	iPc	45	26.00	0.5
	0.4s		21.00nm			5.0mb
MAT	68.62	323	eP	46	08.00	-0.3
	1.0s		23.00nm			4.8mb
SPA	71.48	180	ePc	46	25.00	0.0
	0.9s		30.91nm			4.9mb
PRS	76.59	44	eP	46	54.50	0.5

PRI	76.94	44	e(P)	46	56.70	0.6
RVR	78.01	48	eP	47	01.00	-0.8
PLM	78.04	49	eP	47	02.00	-0.2
SBB	78.07	47	eP	47	02.00	-0.2
ISA	78.15	46	eP	47	03.00	0.4
CMB	78.21	43	eP	47	02.70	-0.1
WDC	78.35	40	eP	47	03.70	0.3
ORV	78.38	41	eP	47	03.30	-0.3
MIN	78.78	41	eP	47	05.70	-0.2
TPC	79.01	48	eP	47	07.00	-0.1
GLA	79.34	50	eP	47	09.00	0.1
KVN	80.26	43	iP	47	13.50	-0.2
TNP	80.31	44	iP	47	14.20	0.2
	0.8s	3.24nm			3.9mb	
CN2	80.73	322	eP	47	17.40	1.6
TTA	83.14	10	eP	47	28.10	0.4
PMR	83.25	14	eP	47	27.70	-0.4
MAW	83.26	200	eP	47	28.50	0.3
BJI	84.46	315	eP	47	37.00	2.4
PNT	85.20	34	eP	47	39.00	0.9
	0.8s	13.00nm			4.7mb	
TIY	85.92	312	eP	47	45.20	3.3X
ALQ	86.36	51	eP	47	44.50	0.3
	1.0s	4.75nm			4.2mb	
FBA	86.46	12	eP	47	43.00	-0.8
XAN	86.88	307	P	47	50.00	3.5X
BW06	87.72	43	iP	47	50.00	-0.6
	0.9s	2.54nm			4.0mb	
GOL	89.18	47	eP	47	57.00	-0.4
SES	90.46	36	eP	48	02.00	-0.8
EDM	90.64	33	ePd	48	03.00	-0.5
INK	92.52	15	eP	48	11.00	-0.8
YKA	94.89	25	eP	48	23.20	0.5
MBC	101.00	12	ePdiff	48	50.50	0.5
DMU	144.16	9	iPKP	54	32.80	-1.0
WIT	145.68	355	ePKP	54	39.50	3.1X
KSP	145.87	344	iPKP	54	39.60	2.8X
VRI	145.91	328	ePKPc	54	40.00	3.0X
CLL	146.21	347	iPKP	54	40.00	2.7X
	0.7s	39.00nm				
BRG	146.42	346	iPKPd	54	40.60	2.9X
	0.8s	18.00nm				
MLR	146.57	329	ePKPc	54	41.00	2.7X
PRU	147.10	345	PKPd	54	42.60	3.8X
			e	54	45.50	
MOX	147.12	349	ePKP	54	40.00	1.2
			e	54	43.00	
ENN	147.77	355	ePKP	54	44.50	4.7X
	0.8s	9.00nm				
			e	54	48.00	
SRO	147.94	339	ePKP	54	50.20	10.0X
ZST	148.00	341	ePKP	54	44.60	4.3X
KHC	148.13	345	iPKPd	54	46.00	5.5X
			i	54	51.00	
DOU	148.53	357	iPKPc	54	46.30	5.3X
GRB5	148.57	348	ePKP	54	46.80	5.6X
	0.8s	23.00nm				
WLF	148.85	355	PKP	54	48.00	6.5X
FLN	149.89	3	ePKP	54	49.10	6.0X
CDF	149.97	353	ePKP	54	49.70	6.3X
LDF	150.07	3	ePKP	54	49.20	5.8X
GRR	150.24	4	ePKP	54	50.10	6.4X
HAU	150.47	354	ePKP	54	50.70	6.6X
	0.5s	3.65nm				
LPF	150.58	4	ePKP	54	50.70	6.5X
BSF	150.60	353	ePKP	54	51.00	6.6X
LOR	151.39	357	ePKP	54	52.70	7.2X
	0.4s	2.60nm				
SSF	151.61	358	ePKP	54	53.20	7.4X
	0.5s	2.20nm				
LBF	151.67	357	ePKP	54	53.50	7.6X
MFF	152.06	3	ePKP	54	53.90	7.5X
BGF	152.14	359	ePKP	54	54.30	7.8X
OHR	152.33	328	ePKP	54	54.80	7.7X
TCF	152.42	359	ePKP	54	54.90	7.9X
MAF	152.48	359	ePKP	54	54.50	7.5X

S.D. = 0.8 on 61 of 93 obs.

JUN 25, 1989 06h 41m 16.12± 0.74s
33.269 S ± 8.8km 68.492 W ± 7.6km
DEPTH = 10.0km (geophysicist)
4.5mb (4 obs.)
MENDOZA PROVINCE, ARGENTINA (139)
Felt (IV) ot Mendozo.

FCH	1.51	267	iPd	41	42.00	-1.5
			iS	42	00.10	
ZON	1.73	355	iPd	41	48.00	1.6
PCH	1.73	258	iPd	41	46.00	-0.4
			iS	42	10.00	
SAN	1.83	264	iPd	41	47.50	-0.3
			iS	42	09.00	
PEL	1.84	273	iPd	41	47.40	-0.7
JACH	1.86	288	iPd	41	47.60	-0.8
			iS	42	10.50	
CHCH	1.92	249	iPc	41	50.00	0.8
			iS	42	12.20	
TACH	2.08	259	iPd	41	52.50	1.0
			iS	42	19.50	
ROCH	2.13	277	iPd	41	52.70	0.2
			iS	42	19.70	
LNV	2.53	253	iPc	41	58.10	0.2
			iS	42	31.70	
LCCH	2.58	265	iPd	41	59.50	0.8
			iS	42	34.50	
CCH	15.96	8	P	45	08.70	6.0X
CNCB	16.40	2	P	45	09.00	0.5
LPB	16.67	1	(P)	45	10.00	-1.8
			e	45	16.00	
ZOBO	16.93	1	P	45	16.00	0.7
	0.9s	8.65nm			3.9mb	
ARE	16.95	350	eP	45	28.00	12.7X
BAO	25.54	52	eP	46	45.50	-1.3
SPA	56.91	180	e(P)	51	04.00	0.5
	0.7s	3.91nm			4.5mb	
RSCP	70.36	345	eP	52	34.00	2.0
	1.0s	32.54nm			5.4mb	
ALQ	76.62	329	eP	53	08.50	-0.3
GOL	80.23	332	eP	53	28.20	-0.4
	1.0s	6.00nm			4.5mb	
MSU	82.14	327	eP	53	29.60	-8.9X
DAU	83.28	329	eP	53	47.30	2.8X
			i	55	19.80	
RSSD	83.56	335	iP	53	45.50	-0.2
BW06	84.51	331	eP	53	50.00	-0.6
LRM	88.20	331	eP	54	08.60	0.0
HYT	109.20	331	Pdiff	55	40.00	-3.4X
INK	112.05	339	ePdiff	56	11.00	15.4X

S.D. = 1.0 on 22 of 28 obs.

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* JUN 25, 1989 06h 50m 05.19± 0.80s
42.816 N ± 5.9km 12.989 E ± 7.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.1 (SSO).

ASS	0.35	317	P	50	12.70	0.3
			eSg	50	18.40	
CIO	0.40	17	e(Pg)	50	13.27	-0.1
			iSg	50	19.80	
ALP	0.43	94	e(Pg)	50	14.22	0.1
			iSg	50	21.11	
MNS	0.49	208	P	50	15.00	-0.1
			eSg	50	22.50	
ARV	0.68	357	P	50	18.50	-0.2
			eSg	50	29.00	

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

JUN 25, 1989 06h 52m 12.71± 0.52s
38.426 N ± 6.1km 118.404 W ± 4.7km
DEPTH = 5.0km (geophysicist)
3.7mb (1 obs.)
CALIFORNIA-NEVADA BORDER REGION (40)
ML 3.7 (NEIS), 3.0 (PAS).

MNA	0.19	88	iP	52	16.70	-0.1
KVN	0.67	21	iP	52	24.90	-1.2
TNP	0.99	110	iP	52	31.30	-0.9
CMB	1.61	257	eP	52	41.50	-0.4
ORV	2.66	296	iP	52	56.50	-0.6
CLC	2.68	166	eP	52	57.10	-0.3
ARN	2.70	247	eP	52	57.50	-0.1
MIN	3.13	309	eP	53	03.60	-0.2
LTCM	3.39	303	iP	53	08.70	1.3
BCH	3.50	203	eP	53	08.90	-0.2
LBFM	3.96	319	iP	53	16.10	0.4
SIO	17.83	92	e(P)	56	26.60	3.5X
TUL	18.19	91	eP	56	30.90	3.3X
	1.2s	7.70nm			3.7mb	
	Z 22s	0.28um			4.1MszX	
		LR		12	44.00	
LNO	18.19	91	eP	56	29.70	2.2
VVO	18.39	93	e(P)	56	34.00	4.0X
YKA	24.21	4	eP	57	50.40	19.6X

S.D. = 1.0 on 12 of 16 obs.

& JUN 25, 1989 06h 54m 07.24s
62.992 N 150.499 W
DEPTH = 97.7km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.59	341	iP	54	23.84	0.0
MCK	1.02	43	iP	54	27.97	-0.1
SKT	1.12	206	iP	54	28.27	-0.9
PWA	1.38	168	iP	54	31.40	-0.8
PME	1.53	153	iP	54	33.06	-1.1
SUA	1.54	184	eP	54	33.32	-1.0
PMR	1.54	155	iPd	54	33.00	-1.3
NEA	1.71	21	iP	54	35.99	-0.5
			S	54	57.03	
PMS	1.81	165	ePd	54	36.50	-1.3
WRH	1.83	35	iP	54	37.45	-0.6
CCB	2.05	35	iP	54	40.08	-0.7
RDS	2.12	28	iP	54	41.24	-0.5
HDA	2.12	46	iP	54	41.16	-0.7
TOA	2.19	112	iPc	54	42.40	-0.5
DDM	2.24	67	eP	54	43.03	-0.4
FBA	2.26	31	iPd	54	43.20	-0.4
NKA	2.28	189	eP	54	45.95	2.0
PAX	2.30	88	eP	54	43.93	-0.4
GLM	2.43	33	iP	54	45.40	-0.6
SLKM	2.50	177	eP	54	45.88	-1.0
TTA	2.52	271	iPd	54	46.20	-1.1
KLU	2.62	123	eP	54	46.37	-2.2
VZW	2.69	134	eP	54	47.21	-2.3
RED	2.80	204	eP	54	50.51	-0.6
SEW	2.94	170	eP	54	50.95	-1.9
SVW	3.06	234	eP	54	53.10	-1.5
ILIM	3.15	203	iP	54	55.47	-0.4
IMA	3.38	337	iPd	54	58.20	-0.8
CNPM	3.50	186	iP	54	59.09	-1.4
			S	55	37.36	
BALM	4.31	113	eP	55	09.30	-2.6
DWY	5.07	73	P	55	20.10	-2.1
KDC	5.35	192	iPc	55	22.50	-3.6
BRW	8.69	347	eP	56	09.20	-2.6
EDM	21.61	100	eP	58	49.00	-1.2

34 obs. ossocioted

JUN 25, 1989 08h 09m 49.14± 0.81s
42.803 N ± 5.9km 13.000 E ± 7.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (ROM), 2.3 (SSO).

ASS	0.37	317	P	09	56.90	0.2
			eSg	10	02.50	
CIO	0.41	15	iPg	09	57.32	-0.1
			iSg	10	03.64	
ALP	0.42	93	ePg	09	57.99	0.1
			iSg	10	04.94	
MNS	0.48	210	Pc	09	58.80	-0.1
			eSg	10	06.50	
ARV	0.70	357	Pd	10	02.80	-0.1
			eSg	10	13.60	

S.D. = 0.2 on 5 of 5 obs.

? JUN 25, 1989 08h 47m 45.71± 6.29s
39.534 N ±11.6km 26.052 E ±66.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EZN	0.36	36	iPg	47	52.00	-1.1
			iSg	47	56.50	
IZM	1.48	140	ePn	48	12.00	-0.4
MFT	1.57	37	iPn	48	14.30	0.6
EDC	1.61	59	iPn	48	15.70	1.4
BNT	1.65	60	iPn	48	14.30	-0.6

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

JUN 25, 1989 09h 06m 38.26± 0.21s
32.968 N ± 5.1km 39.668 W ± 2.2km
DEPTH = 10.0km (geophysicist)
4.9mb (34 obs.) 4.3Msz (1 obs.)
NORTH ATLANTIC RIDGE (403)

SCH	28.99	327	eP	12	39.00	-0.9
MAL	29.08	73	iPd	12	41.00	0.1
TOL	29.34	66	eP	12	43.00	-0.3
CBN	30.96	291	eP	12	59.00	1.4

25d 09h

LPF	32.62	51 eP	13	11.60	-0.5
EPF	32.82	60 eP	13	13.60	-0.4
	1.5s	36.50nm			5.1mb
MFF	32.93	54 eP	13	14.50	-0.3
	1.1s	21.40nm			5.0mb
LFF	33.29	57 eP	13	17.00	-1.0
	1.2s	20.20nm			4.9mb
LPO	33.58	58 eP	13	19.50	-1.0
	1.2s	23.80nm			5.0mb
EKA	33.85	38 P	13	22.00	-0.6
	1.2s	15.30nm			4.8mb
RJF	33.88	56 eP	13	22.10	-1.0
LSF	34.01	55 eP	13	23.70	-0.6
	1.3s	33.90nm			5.1mb
CAF	34.23	57 eP	13	24.90	-1.2
	0.9s	8.10nm			4.6mb
TCF	34.49	55 eP	13	27.80	-0.6
	0.7s	8.80nm			4.8mb
MAF	34.72	55 eP	13	29.70	-0.7
BGF	34.96	54 eP	13	31.60	-0.8
SSF	35.47	54 eP	13	36.30	-0.5
SMF	35.65	54 eP	13	37.90	-0.4
	1.3s	25.20nm			4.9mb
FRB	35.66	338 eP	13	38.00	-0.1
LOR	35.74	53 eP	13	38.50	-0.5
	1.1s	7.30nm			4.5mb
LBF	35.78	54 eP	13	38.90	-0.5
LRG	37.23	60 eP	13	51.80	0.2
FRF	37.44	60 eP	13	53.10	-0.2
	1.2s	20.20nm			4.8mb
BNI	37.50	57 P	13	54.50	0.5
HAU	37.50	53 eP	13	53.60	-0.2
RRL	37.57	58 P	13	56.02	1.3
LPG	37.57	57 eP	13	55.00	0.2
PZZ	37.78	58 P	13	56.70	0.3
LSD	37.85	57 P	13	58.18	1.1
DOI	37.89	58 P	13	58.00	0.8
RSP	37.91	57 P	13	57.97	0.5
STV	37.94	59 P	13	58.31	0.7
ENR	38.01	59 P	13	59.61	1.6
SBF	38.01	59 eP	13	57.90	-0.3
CDF	38.16	52 eP	13	59.50	0.0
ROB	38.33	59 P	14	01.25	0.3
IMI	38.34	59 P	14	01.66	0.6
FIN	38.57	59 P	14	02.66	-0.2
VAI	39.00	56 P	14	07.50	1.1
CVF	39.08	61 eP	14	06.70	-0.5
BOB	39.46	58 P	14	11.50	1.1
PII	40.25	60 P	14	17.00	0.2
GRF	40.87	50 eP	14	24.00	2.2
	2.0s	58.00nm			5.0mb
CTI	41.01	56 P	14	22.50	-0.7
CRE	41.29	60 P	14	21.50	-4.0X
LIC	41.76	122 P	14	28.20	-1.2
FVI	41.80	55 P	14	30.00	0.6
ASS	41.84	60 P	14	30.00	0.1
KIC	41.87	122 P	14	28.90	-1.5
ARV	42.02	60 P	14	31.00	-0.3
CLL	42.13	48 eP	14	33.00	0.9
	1.7s	24.00nm			4.6mb
RBL	42.34	55 Pc	14	34.10	0.1
KHC	42.37	51 Pc	14	34.20	0.0
	1.2s	10.00nm			4.4mb
VOY	42.58	56 eP	14	36.50	0.5
BRG	42.70	49 eP	14	37.50	0.8
	1.6s	25.00nm			4.7mb
		e	14	52.00	
SDI	42.82	62 P	14	36.50	-1.4
CEY	42.96	56 e(P)	14	39.00	0.0
RSON	42.96	311 P	14	38.90	0.0
	1.6s	13.12nm			4.4mb
NB2	43.01	34 P	14	40.00	0.8
	1.1s	14.50nm			4.6mb
LJU	43.02	56 e(P)	14	39.00	-0.5
PRU	43.03	50 eP	14	40.00	0.5
VBY	43.55	57 eP	14	44.10	0.3
SGO	44.08	64 P	14	48.70	0.6
KSP	44.18	49 eP	14	48.50	-0.3
MGR	44.33	64 P	14	50.50	0.3
ZST	44.71	53 eP	14	52.60	-0.5
DAG	44.94	7 iPd	14	55.00	0.5
	0.8s	7.46nm			4.7mb
RLO	45.18	290 eP	14	57.30	0.3
SRO	45.53	53 eP	15	03.50	3.8X
		e	22	45.00	
LNO	45.84	290 eP	15	02.00	-0.1
TUL	45.84	290 ePc	15	02.50	0.2
	1.1s	24.80nm			5.1mb
	Z 20s	0.35um			4.3Msz
		LR	28	30.00	
VVO	45.93	289 e(P)	15	03.30	0.3
SIO	46.29	290 e(P)	15	05.50	-0.3
KRA	46.51	50 eP	15	08.30	0.9
SPC	46.75	51 eP	15	19.80	10.3X
BZS	47.99	56 eP	15	19.50	0.4
OHR	48.10	62 eP	15	21.00	0.9
	1.2s	0.04nm			2.4mb X
FFC	48.11	316 eP	15	20.00	0.1
	1.3s	31.00nm			5.2mb
SKO	48.42	61 eP	15	21.00	-1.5
SUF	50.26	33 eP	15	36.00	-0.3
	0.6s	2.20nm			4.3mb
ALE	50.30	356 eP	15	36.00	-0.4
	1.1s	19.00nm			5.0mb
RSSD	50.38	303 P	15	37.80	0.0
SOD	50.94	27 iP	15	41.20	-0.2
MLR	51.02	56 ePc	15	43.50	1.0
VRI	51.49	55 eP	15	45.00	-0.9
GLD	52.18	297 P	15	52.10	0.6
GOL	52.31	297 P	15	52.10	-0.4
SES	53.99	311 eP	16	04.00	-0.5
YKC	54.41	327 eP	16	06.80	-0.6
ALQ	54.48	292 eP	16	09.00	0.5
	1.1s	6.96nm			4.6mb
BW06	54.60	302 P	16	08.80	-0.5
	1.1s	47.71nm			5.4mb
EDM	54.92	315 eP	16	10.00	-1.3
MBC	55.82	343 ePd	16	17.40	0.0
	1.0s	55.00nm			5.5mb
LRM	55.87	306 eP	16	18.00	-0.5
ZOBO	56.01	214 P	16	19.00	-1.1
	1.8s	42.09nm			5.2mb
VAO	56.09	188 eP	16	20.40	0.4
		e	16	22.20	
CCH	56.10	211 P	16	21.20	0.8
LPB	56.23	213 P	16	21.20	-0.3
	1.5s	166.67nm			5.8mb
CNCB	56.41	213 eP	16	30.00	7.0X
DAU	56.46	300 P	16	22.50	-0.4
HPI	56.85	304 P	16	25.70	0.0
DUG	57.67	300 P	16	31.40	0.2
	1.1s	13.16nm			4.9mb
MSU	57.72	298 P	16	32.10	0.4
PNT	59.63	312 eP	16	44.00	-0.7
INK	61.20	335 iPd	16	54.40	-0.7
	1.1s	51.00nm			5.6mb
GLA	61.65	293 eP	17	00.00	1.3
KVN	61.90	300 P	16	59.90	-0.5
TPC	62.19	294 eP	17	03.00	0.7
GSC	62.31	296 eP	17	04.00	0.9
PLM	63.11	294 eP	17	08.00	-0.5
BAR	63.23	293 eP	17	10.00	0.9
RVR	63.25	295 eP	17	08.00	-1.2
SBB	63.32	295 eP	17	10.00	0.2
ISA	63.43	297 eP	17	12.00	1.5
MWC	63.68	295 eP	17	13.00	0.7
CMB	63.94	300 eP	17	13.60	-0.2
MIN	63.94	303 eP	17	13.10	-0.8
ORV	64.16	302 eP	17	14.40	-0.8
MSL	66.13	61 ePc	17	28.00	0.1
BRW	67.09	342 P	17	31.20	-2.3
FBA	67.77	334 eP	17	38.60	0.7
BHD	68.37	64 ePc	17	42.00	-0.1
IMA	69.21	337 e(P)	17	47.40	0.4
	1.0s	8.80nm			4.9mb
		e	18	01.30	
PMR	70.02	331 eP	17	52.60	0.9
	1.0s	35.00nm			5.4mb
		e	18	07.70	
MAIO	77.81	55 eP	18	39.00	1.4
KSR	86.20	124 eP	19	21.50	0.1
SLR	87.09	123 iPc	19	27.00	1.3
	1.2s	50.00nm			5.6mb
GKN	99.56	48 Pc	20	24.00	0.5
	0.6s	34.00nm			6.1mb X
KKN	100.11	48 Pdiffc20		23.00	-3.0X
DMN	100.13	48 Pdiffc20		24.50	-1.6
	0.6s	36.00nm			6.1mb X
PKI	100.34	48 Pdiffc20		22.90	-4.3X
	0.6s	18.00nm			5.8mb
GUN	100.39	47 Pdiffc20		18.90	-8.5X
	0.6s	21.00nm			5.9mb

S.D. = 0.8 on 125 of 132 obs.

JUN 25, 1989 09h 10m 46.18± 0.70s
46.357 N ±13.3km 153.391 E ± 9.5km
DEPTH = 33.0km (normal)
4.9mb (21 obs.)

KURIL ISLANDS (221)

KUSJ	6.99	245 P	12	26.00	-2.8
		eS	13	39.80	
ASAJ	7.91	257 P	12	43.50	1.8
HOOJ	8.26	245 eP	12	45.50	-1.0
		eS	14	15.30	
MRRJ	9.65	250 eP	13	03.90	-1.9
MTMJ	15.20	236 P	14	06.10	-14.0X
MDJ	16.77	273 eP	14	40.50	0.6
CN2	19.86	273 eP	15	13.00	-4.1X
Z	16s	0.60um			
SNY	21.82	269 eP	15	36.60	-0.6
BJI	27.67	270 eP	16	35.00	2.2
HHC	30.52	275 Pd	16	58.80	0.3
TIY	31.33	269 Pd	17	06.80	1.2
WHN	34.02	256 eP	17	28.60	-0.4
XAN	35.68	266 P	17	48.50	5.3X
LZH	38.09	273 Pd	18	04.50	0.8
	1.0s	57.00nm			5.4mb
		PP	19	26.00	
GTA	39.22	280 iPd	18	14.00	1.0
GYA	41.82	258 P	18	35.00	0.5
MBC	44.90	20 eP	19	00.50	1.7
	0.5s	1.00nm			4.0mb
ALE	50.12	6 eP	19	38.00	-1.4
	0.5s	3.00nm			4.6mb
YKA	51.13	37 eP	19	47.80	0.5
CHG	52.22	257 ePc	19	57.10	1.0
	1.0s	20.75nm			5.0mb
SHL	52.55	269 iP	19	59.50	0.6
EDM	56.45	46 eP	20	26.00	-0.8
SOD	59.69	339 eP	20	46.00	-3.2X
NDI	60.67	282 iPd	20	56.30	-0.1
	0.6s	16.00nm			5.3mb
KVN	62.18	62 eP	21	08.00	1.2
TNP	63.33	62 eP	21	14.00	-0.4
	1.0s	2.00nm			4.2mb
BW06	64.82	54 e(P)	21	30.00	5.9X
	1.0s	2.00nm			4.2mb
NUR	65.65	335 iP	21	26.90	-1.8
UPP	68.14	338 iP	21	42.50	-2.0
NB2	68.66	341 P	21	46.40	-1.5
	0.7s	9.80nm			5.0mb
NRA0	68.86	341 P	21	47.40	-1.6
HFS	68.89	340 eP	21	47.40	-1.8
	0.5s	7.60nm			5.0mb
Z	16s	0.08um			4.0MszX
		LR	53	51.00	
KSP	76.34	334 eP	22	33.00	-0.2
MSL	76.55	309 ePd	22	35.50	0.8
VRI	76.88	325 ePd	22	37.50	1.2
CLL	76.90	336 iPd	22	35.70	-0.6
	0.8s	19.00nm			5.2mb
BRG	77.02	335 eP	22	37.20	0.2
	0.8s	10.00nm			4.9mb
MLR	77.50	325 ePc	22	40.00	0.1
PRU	77.63	334 eP	22	40.30	-0.1
MOX	77.89	336 eP	22	42.00	0.2
WTS	77.91	340 eP	22	42.00	0.2
	0.9s	13.00nm			5.0mb
ZST	78.40	332 iP	22	45.20	0.6
KHC	78.68	334 iPc	22	46.50	0.3
	0.9s	4.00nm			4.4mb
GRF	78.86	336 eP	22	47.60	0.4
	0.8s	17.00nm			5.1mb
ENN	79.26	340 eP	22	48.50	-0.8
	1.0s	17.00nm			5.0mb
TOD	79.60	337 iPd	22	51.36	0.2
ABH	79.67	338 iPd	22	51.70	0.1
RUP	79.96	339 iPd	22	53.89	0.7
CDF	81.09	338 eP	22	59.10	-0.2
FEL	81.39	337 iPd	23	00.92	0.1
HAU	81.71	338 eP	23	02.30	-0.1
BSF	81.75	338 eP	23	02.50	-0.2
FLN	82.57	343 eP	23	06.90	0.1
LDF	82.65	343 eP	23	07.10	-0.1
GRR	83.00	343 eP	23	09.30	0.3
	0.8s	6.40nm			4.8mb
LOR	83.01	340 iPc	23	09.00	-0.2
	0.8s	4.50nm			4.6mb
LBF	83.25	339 eP	23	10.10	-0.3
SSF	83.29	340 eP	23	10.60	0.0

LPF	83.38	343	eP	23 11.10	0.1
AVF	83.58	340	iPc	23 12.10	0.1
	0.9s	9.80nm		4.9mb	
SMF	83.60	339	eP	23 12.50	0.3
	1.0s	18.80nm		5.2mb	
BGF	83.92	340	eP	23 13.90	0.1
LPG	83.92	337	eP	23 14.80	0.6
MAF	84.30	340	eP	23 16.30	0.6
	0.9s	10.60nm		5.0mb	
TCF	84.32	340	eP	23 16.20	0.3
	0.9s	3.90nm		4.6mb	
LSF	84.52	341	eP	23 16.80	0.0
MFF	84.55	342	eP	23 17.10	0.2

S.D. = 1.0 on 62 of 67 obs.

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* JUN 25, 1989 09h 13m 21.16± 1.06s
37.786 N ± 8.4km 141.128 E ±12.7km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)

YAMJ	0.95	294	iP+	13 38.10	0.0
			S	13 51.30	
OFUJ	1.36	18	iPd	13 44.00	0.0
			S	14 00.80	
KAKJ	1.75	206	P	13 49.50	-0.2
			S	14 10.20	
NIIJ	1.78	253	iPd	13 49.80	-0.2
			S	14 11.10	
CHJJ	2.44	225	iPd	13 59.30	-0.2
			S	14 27.70	
MAT	2.64	243	iPd	14 02.40	0.0
			eS	14 43.00	
IIDJ	3.46	229	P	14 14.70	0.6
			S	14 55.50	

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

& JUN 25, 1989 09h 31m 24.55s
61.937 N 150.406 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.6 (PMR). Felt (IV) at Willow.

PWA	0.38	139	iPc	31 33.00	0.8
SUA	0.50	199	iP	31 35.47	0.9
SKT	0.53	275	iP	31 36.03	0.8
PMR	0.70	119	iPd	31 38.20	-0.3
PME	0.72	115	iP	31 38.70	-0.3
PMS	0.80	149	iPc	31 40.10	-0.5
NKA	1.26	199	eP	31 50.32	1.4
SLKM	1.44	176	eP	31 50.43	-1.4
KTH	1.64	352	eP	31 54.02	-0.8
RDT	1.68	216	eP	31 54.65	-0.7
SEW	1.90	165	eP	31 58.42	0.0
RED	1.91	218	eP	31 58.30	-0.4
MCK	1.92	20	eP	31 58.01	-0.9
TOA	2.00	83	iPc	32 00.10	0.0
VZW	2.05	114	eP	32 00.51	-0.2
PAX	2.52	63	eP	32 07.15	-0.4
SVW	2.63	254	eP	32 08.20	-0.9
			i	32 12.80	
TTA	2.79	293	eP	32 10.20	-1.2
CCB	2.96	22	eP	32 11.49	-2.2
RDS	3.07	18	eP	32 13.23	-2.1
FBA	3.20	20	ePc	32 15.00	-2.0
BALM	3.97	100	eP	32 27.13	-1.0
KDC	4.33	195	e(P)	32 33.80	0.7
IMA	4.39	342	eP	32 31.70	-2.4

24 obs. associoted

& JUN 25, 1989 09h 36m 27.70s
38.018 N 122.308 W
DEPTH = 8.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.9 (BRK). Mo=1.6*10**14 Nm (BRK). Felt (IV) at Hercules and San Pablo. Also felt at Pinole and Richmond.

ZSP	0.08	151	iPc	36 29.90	0.0
BRK	0.15	165	iPd	36 31.00	0.0
			iS	36 33.50	
PCC	0.52	186	iPd	36 37.80	-0.4
			eS	36 46.90	
NWRM	0.63	314	eP	36 39.60	-0.8
ARN	0.91	137	eP	36 44.30	-1.0
GCC	1.02	166	eP	36 45.80	-1.3
CMB	1.52	89	ePc	36 53.40	-1.8
			iS	37 15.50	
ORV	1.66	22	eP	36 54.60	-2.6
KVN	3.46	71	eP	37 18.50	-4.6

9 obs. associoted

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* JUN 25, 1989 09h 50m 01.91± 1.10s
21.454 N ±25.2km 93.492 E ±20.6km
DEPTH = 59.5 ± 15.8 km
4.5mb (2 obs.)
BURMA (296)

SHL	4.35	340	iP	51 07.80	0.6
			eS	51 56.00	
CHG	5.76	116	ePn	51 26.30	-0.5
			eSg	52 45.30	
CHTO	5.76	116	ePn	51 26.20	-0.6
			eSg	52 40.00	
BDT	6.68	128	eP	51 40.70	1.1
GUN	9.44	314	P	52 16.40	-1.8
PKI	9.55	311	P	52 20.80	1.2
	0.4s	6.00nm		5.0mb X	
KKN	9.77	312	P	52 22.60	0.0
GKN	10.35	311	P	52 30.40	-0.1
SUF	60.79	331	iP	00 10.10	0.4
	0.4s	2.30nm		4.7mb	
MFS	66.58	328	eP	00 47.50	-0.2
	0.4s	1.40nm		4.3mb	

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

& JUN 25, 1989 10h 44m 52.05s
59.883 N 153.324 W
DEPTH = 119.4km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.24	168	iP	45 08.73	1.3
			S	45 22.03	
ILIM	0.27	43	iP	45 08.44	0.9
RED	0.60	27	eP	45 10.32	-0.7
RDT	0.83	33	iP	45 12.11	-0.7
CDD	0.97	190	iP	45 13.26	-0.8
CNPM	1.12	108	iP	45 14.98	-0.6
CGLM	1.57	24	eP	45 19.93	-0.8
SLKM	1.67	67	eP	45 20.84	-1.1
			S	45 43.01	
SEW	1.96	82	eP	45 24.35	-1.0
SUA	2.03	38	eP	45 25.77	-0.7
KDC	2.19	168	eP	45 26.10	-2.1
			i	45 54.80	
SKT	2.28	22	eP	45 27.83	-1.7
PWA	2.45	42	eP	45 30.97	-0.7
PMR	2.68	48	eP	45 33.40	-1.3
			i	46 05.70	
VZW	3.55	68	eP	45 43.92	-2.5
FBA	5.65	25	eP	46 12.00	-2.9

16 obs. associoted

JUN 25, 1989 11h 15m 59.39± 0.15s
32.912 N ± 3.6km 39.609 W ± 1.5km
DEPTH = 10.0km (geophysicist)
5.2mb (52 obs.) 4.6Msz (3 obs.)
NORTH ATLANTIC RIDGE (403)

TBT	19.10	97	iPd	20 25.00	0.2
CVVD	19.37	99	iP	20 27.50	-0.6
CTFE	20.54	96	iPd	20 41.00	0.3
GGC	21.18	97	iP	20 47.60	0.3
CFTV	22.39	95	iPd	21 00.00	0.6
EMM	24.60	307	P	21 22.00	1.3
LIS	25.30	68	iPc	21 27.80	0.3
CBM	25.79	311	P	21 32.00	0.0
EVAL	27.16	71	eP	21 44.80	0.1
ERUA	27.25	60	eP	21 46.00	0.5
BMK	28.02	76	iPd	21 52.00	-0.5
EJIF	28.21	73	eP	21 55.00	0.7
EHOR	28.35	70	eP	21 55.10	-0.3
EPRU	28.38	72	e(P)	21 56.10	0.3
MAL	29.05	73	iPd	22 02.50	0.8
SCH	29.06	327	eP	22 01.00	-0.7
AAPN	29.25	71	eP	22 03.50	-0.3
ALOJ	29.27	72	eP	22 04.50	0.5
GUD	29.28	64	eP	22 03.50	-0.5
TOL	29.32	66	eP	22 04.50	0.3
ATEJ	29.35	72	eP	22 05.00	0.2
ASMO	29.55	71	eP	22 06.20	-0.3
APHE	29.61	72	eP	22 07.00	-0.1
CRT	29.67	72	eP	22 08.00	0.5
GAC	30.29	306	eP	22 12.00	-0.8
EVIA	30.50	69	eP	22 14.60	-0.3
ETOR	30.88	64	eP	22 17.90	-0.3
NA2	31.32	290	P	22 22.00	0.1
ECHE	31.68	67	eP	22 25.20	0.0
CVL	31.89	290	P	22 27.70	0.7
ACU	32.14	69	eP	22 30.00	0.8
LPF	32.62	51	eP	22 32.90	-0.3
	1.0s	24.00nm		5.1mb	
EPF	32.80	60	eP	22 35.00	0.1
	1.5s	67.90nm		5.4mb	
EBR	32.81	64	eP	22 36.00	1.0
GRR	32.82	50	eP	22 34.90	0.0
MFF	32.92	54	eP	22 35.80	0.0
FLN	33.15	50	eP	22 37.50	-0.3
LFF	33.28	57	iPc	22 38.60	-0.4
	1.3s	64.90nm		5.4mb	
LDF	33.34	50	eP	22 39.00	-0.5
BLA	33.50	289	P	22 41.80	0.8
	1.2s	45.45nm		5.3mb	
LPO	33.57	57	iPc	22 41.10	-0.4
	1.4s	78.40nm		5.4mb	
EKA	33.86	38	P	22 43.00	-0.9
	1.3s	35.30nm		5.1mb	
RJF	33.87	56	eP	22 43.50	-0.7
	1.5s	62.60nm		5.3mb	
LSF	34.01	55	eP	22 45.00	-0.3
	1.3s	62.80nm		5.4mb	
SGS	34.13	282	P	22 47.40	0.9
LHS	34.15	284	P	22 47.20	0.6
CAF	34.21	57	iPc	22 46.70	-0.5
	1.4s	47.90nm		5.2mb	
TCF	34.48	55	iPc	22 49.20	-0.2
	1.2s	56.50nm		5.3mb	
JSC	34.55	284	P	22 50.70	0.6
ESEL	34.66	66	eP	22 51.50	0.5
MAF	34.71	55	eP	22 51.00	-0.4
BGF	34.95	54	eP	22 52.90	-0.5
	1.2s	20.80nm		4.9mb	
PYM	34.96	56	P	22 53.10	-0.5
LBL	35.08	57	P	22 54.22	-0.3
AGO	35.08	55	P	22 54.22	-0.4
AVF	35.33	54	eP	22 56.30	-0.3
PLDF	35.41	56	P	22 57.17	-0.3
SSF	35.47	54	eP	22 57.40	-0.4
	1.3s	25.20nm		4.9mb	
SMF	35.64	54	eP	22 59.30	0.0
	1.2s	44.60nm		5.2mb	
FRB	35.73	338	ePd	22 58.70	-1.1
	1.2s	133.00nm		5.7mb	
LOR	35.73	53	iPc	22 59.50	-0.6
	1.3s	48.30nm		5.2mb	
LBF	35.78	54	eP	22 59.90	-0.6
	1.3s	41.10nm		5.1mb	
TKL	36.37	287	P	23 06.30	0.7
DOU	36.67	49	P	23 08.20	0.3
GBTN	36.72	287	P	23 09.00	0.5
LRG	37.22	60	iPc	23 13.10	0.5
	1.5s	66.80nm		5.2mb	
LMR	37.32	60	iPc	23 13.90	0.4
	1.5s	62.60nm		5.2mb	
FRF	37.43	60	eP	23 14.70	0.4
	1.4s	52.20nm		5.1mb	
BNI	37.49	57	Pd	23 16.50	1.5
HAU	37.50	52	eP	23 14.60	-0.3
	1.2s	38.00nm		5.0mb	
RRL	37.56	58	P	23 17.18	1.4
LPG	37.56	57	eP	23 16.60	0.8
WLF	37.59	50	P	23 16.00	0.4
PZZ	37.77	58	P	23 18.61	1.2
BSF	37.77	53	eP	23 17.10	-0.3
	1.0s	12.00nm		4.6mb	
LSD	37.84	57	P	23 19.44	1.3
DOI	37.87	58	Pc	23 19.50	1.3
RSP	37.90	57	P	23 19.85	1.4
STV	37.92	59	P	23 19.64	1.0
ENR	37.99	59	P	23 19.95	0.9
SBF	38.00	59	eP	23 19.70	0.4
CDF	38.16	52	eP	23 20.20	-0.4
	0.9s	16.30nm		4.8mb	
RUP	38.18	50	eP	23 20.50	-0.2
ROB	38.32	59	P	23 22.41	0.5
IMI	38.33	59	P	23 22.31	0.3
WTS	38.41	46	eP	23 23.00	0.5
	2.0s	78.00nm		5.1mb	

25d 11h

ORO 38.43 56 P 23 24.00 1.1
ORX 38.43 56 P 23 23.74 0.8
WIT 38.50 45 eP 23 24.00 0.8
ABH 38.52 50 ePc 23 23.62 0.1
FIN 38.56 59 P 23 24.05 0.1
FEL 38.60 53 ePc 23 23.54 -0.8
CKI 38.61 58 P 23 24.50 0.2
VAI 38.99 56 P 23 28.50 1.1
CVF 39.07 61 eP 23 27.80 -0.4
TOD 39.29 50 eP 23 29.55 -0.4
BOB 39.45 58 P 23 32.70 1.3
SAL 40.22 57 P 23 37.50 -0.1
PII 40.24 59 Pd 23 37.50 -0.3
BDI 40.28 59 P 23 39.00 0.7
MME 40.35 59 Pc 23 40.00 0.9
CTI 41.00 56 Pc 23 44.00 -0.2
PGD 41.10 59 P 23 47.50 2.4
GRB2 41.13 51 eP 23 44.90 -0.2
1.2s 45.00nm 5.1mb
MOX 41.20 49 eP 23 45.00 -0.6
2.5s 126.00nm 5.2mb
Z 19s 0.50um 4.4Msz
CRE 41.28 60 P 23 46.00 -0.5
FVM 41.29 292 P 23 46.90 0.4
HOF 41.34 49 eP 23 46.90 0.1
TIC 41.40 121 P 23 46.92 -0.7
LIC 41.69 122 Pc 23 49.52 -0.5
0.9s 44.50nm 5.2mb
FVI 41.79 55 Pc 23 50.00 -0.4
KIC 41.80 122 Pc 23 50.36 -0.5
0.9s 39.00nm 5.1mb
ASS 41.83 60 Pc 23 51.20 0.3
MNS 41.89 61 P 23 51.50 0.0
WET 41.91 51 eP 23 51.70 0.2
ARV 42.00 60 Pd 23 52.00 -0.3
CLL 42.13 48 eP 23 53.00 -0.3
2.6s 120.00nm 5.2mb
KBA 42.17 54 ePc 23 53.00 -0.9
2.0s 44.00nm 4.8mb
RBL 42.33 55 Pc 23 54.60 -0.5
KHC 42.37 51 Pd 23 55.60 0.3
1.2s 13.00nm 4.5mb
AQU 42.43 61 P 23 56.40 0.5
TRI 42.48 56 P 23 56.00 -0.2
AZI 42.49 62 P 23 56.50 0.3
OLY 42.57 288 P 23 56.80 -0.2
VOY 42.57 56 eP 23 56.50 -0.5
BRG 42.69 49 iPd 23 58.00 0.1
2.4s 110.00nm 5.2mb
SDI 42.80 62 Pd 23 58.80 -0.1
CEY 42.95 56 e(P) 24 00.20 0.1
LJU 43.01 56 e(P) 24 00.00 -0.5
NB2 43.03 34 P 24 00.30 -0.2
1.5s 45.90nm 5.0mb
PRU 43.03 50 P 24 00.00 -0.6
2.5s 196.10nm 5.4mb
RSON 43.03 311 P 23 59.70 -0.9
1.6s 78.74nm 5.2mb
NRA0 43.09 34 P 24 00.60 -0.4
VBY 43.54 57 eP 24 05.30 0.5
HFS 43.97 35 eP 24 09.20 1.2
0.5s 1.20nm 4.0mb X
Z 17s 0.10um 3.8MszX
LR 37 58.00
PTJ 44.01 56 eP 24 08.30 -0.4
ZAG 44.03 56 eP 24 09.20 0.4
SGO 44.06 64 Pc 24 09.50 0.5
KSP 44.18 49 eP 24 09.50 -0.4
MGR 44.31 64 Pc 24 11.50 0.4
ZST 44.70 53 eP 24 13.10 -1.1
DAG 44.98 7 iPd 24 16.00 -0.1
0.5s 8.45nm 4.9mb
ipP 25 52.00 516kmX
KUK 45.12 117 eP 24 17.00 -0.9
RLO 45.24 290 ePc 24 18.70 0.0
KOGH 45.28 117 eP 24 19.00 -0.2
SRO 45.53 53 iP 24 20.20 -0.6
LEGH 45.61 118 eP 24 21.00 -0.8
UPP 45.85 36 iP 24 22.30 -0.8
LNO 45.91 290 ePd 24 23.50 -0.3
TUL 45.91 290 ePd 24 23.50 -0.4
1.2s 75.00nm 5.6mb
Z 21s 1.18um 4.8Msz
e 24 31.90
e 24 39.50
e 24 45.50
e 24 59.00
LR 37 45.00
VVO 46.00 289 ePd 24 24.50 -0.1
BUD 46.03 54 eP 24 23.00 -1.7
SIO 46.35 290 ePd 24 26.90 -0.6
KRA 46.51 50 eP 24 27.60 -0.9
SPC 46.74 51 eP 24 31.10 0.5
OHR 48.08 62 eP 24 35.70 -5.4X
2.5s 0.27nm 2.9mb X
i 24 41.80
FFC 48.18 316 eP 24 41.00 -0.6
1.2s 55.00nm 5.5mb
SKO 48.40 61 iP 24 43.00 -0.5
i 31 48.00
i 34 43.00
VAY 49.35 61 eP 24 50.40 -0.4
NUR 49.41 36 eP 24 49.00 -1.9
SUF 50.28 33 eP 24 57.00 -0.5
0.6s 3.40nm 4.5mb
ALE 50.36 356 eP 24 57.00 -1.0
0.7s 7.00nm 4.7mb
RSSD 50.46 303 P 24 58.70 -0.8
SOD 50.96 27 iP 25 02.00 -0.7
MLR 51.01 55 ePc 25 02.50 -1.0
VRI 51.48 55 ePd 25 07.00 0.0
GLD 52.25 297 P 25 13.70 0.6
0.9s 60.53nm 5.5mb
EZN 52.47 62 eP 25 13.00 -1.5
IZM 53.55 64 eP 25 22.00 -0.6
SES 54.06 311 ePd 25 25.00 -1.1
YKC 54.49 327 ePd 25 28.40 -0.6
YKA 54.55 327 eP 25 30.90 1.4
ALQ 54.55 292 iPd 25 30.30 0.2
1.0s 17.50nm 5.0mb
Z 20s 0.59um 4.6Msz
eS 33 18.00
EDM 54.99 315 iPd 25 31.70 -1.3
MBC 55.88 343 ePd 25 38.80 -0.2
1.0s 110.00nm 5.8mb
LRM 55.94 306 ePd 25 39.70 -0.4
ZOBO 55.99 214 P 25 40.00 -1.1
1.5s 40.32nm 5.2mb
VAO 56.04 188 eP 25 40.70 -0.1
LPB 56.21 213 P 25 43.00 0.5
1.4s 93.02nm 5.6mb
CNCB 56.39 213 eP 25 43.00 -1.0
DAU 56.53 300 P 25 44.20 -0.4
PTI 56.64 303 P 25 44.80 -0.3
HPI 56.93 304 P 25 47.20 -0.1
DUG 57.74 300 P 25 52.80 0.0
MSU 57.79 298 P 25 53.60 0.3
DPW 59.21 310 P 26 01.70 -1.3
PNT 59.71 312 eP 26 05.00 -1.3
1.3s 33.00nm 5.3mb
BNG 61.05 105 iPc 26 14.60 -1.3
0.9s 62.00nm 5.7mb
id 28 29.00
id 34 26.20
ic 45 29.00
INK 61.27 335 iPd 26 16.00 -0.7
1.2s 111.00nm 5.9mb
VGB 61.62 308 P 26 19.40 0.0
TNP 61.67 299 P 26 19.20 -0.8
GLA 61.72 293 eP 26 21.00 0.7
HRI 61.74 67 iPc 26 20.00 -0.4
KVN 61.97 300 P 26 22.40 0.4
DSI 62.12 69 eP 26 22.60 -0.2
PRNI 62.30 70 iPc 26 23.80 -0.4
GSC 62.38 296 eP 26 26.00 1.3
PLM 63.17 294 eP 26 30.00 -0.1
PEC 63.19 294 P 26 30.90 0.9
BAR 63.29 293 eP 26 31.00 0.3
RVR 63.32 295 eP 26 31.00 0.2
SBB 63.39 296 eP 26 32.00 0.6
ISA 63.50 297 eP 26 33.00 0.9
MWC 63.75 295 eP 26 34.00 0.1
LBFM 63.84 304 P 26 34.40 0.0
PAS 63.87 295 eP 26 35.00 0.6
FRI 63.91 299 eP 26 34.20 -0.4
CMB 64.01 300 ePd 26 35.30 -0.1
MIN 64.01 303 ePd 26 34.80 -0.7
ORV 64.23 302 ePd 26 35.90 -0.9
WDC 64.58 303 ePd 26 36.90 -2.1
SYP 65.08 296 eP 26 44.00 1.5
ARN 65.11 300 P 26 43.80 1.3
MHC 65.19 300 eP 26 44.10 0.9
PRS 65.40 298 eP 26 44.90 0.6
FHC 65.51 304 ePd 26 45.40 0.4
BRW 67.16 342 eP 26 55.20 0.1
FBA 67.84 334 eP 26 59.80 0.3
IMA 69.28 337 iPd 27 09.20 0.7
1.0s 18.80nm 5.2mb
PMR 70.09 331 ePd 27 14.00 0.7
0.8s 63.40nm 5.8mb
TTA 71.96 334 P 27 30.60 5.9X
KDC 73.68 329 eP 27 35.20 0.5
MAIO 77.81 55 eP 28 01.00 2.3
BUL 83.79 119 iPd 28 30.10 -0.5
1.0s 5.50nm 4.7mb
KSR 86.13 124 iPd 28 43.00 0.8
1.0s 20.00nm 5.2mb
SLR 87.02 123 iPc 28 47.00 0.5
1.3s 76.92nm 5.8mb
S.D. = 0.7 on 224 of 226 obs.

JUN 25, 1989 12h 30m 05.91± 1.05s
6.113 S ± 4.0km 149.062 E ± 6.1km
DEPTH = 72.4 ± 9.5 km
5.2mb (24 obs.)
NEW BRITAIN REGION (192)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 31C
Centroid Location:
Origin Time 12:30:10.0 0.5
Lat 6.40S 0.04 Lon 148.92E 0.06
Dep 52.0 5.2 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 6.56 0.38 Mtt=-9.13 0.57
Mff= 2.57 0.62 Mrt= 1.64 0.76
Mrf= 1.79 0.60 Mtf= 0.42 0.47
Principal Axes:
T Val= 7.42 Plg=68 Azm=286
N 1.89 21 89
P -9.31 6 181
Best Double Couple:Mo=8.4*10**16
NP1:Strike=293 Dip=43 Slip= 121
NP2: 73 54 64

LAT 2.12 255 eP 30 40.00 0.2
LMG 2.92 198 eP 30 49.00 -2.1
PMG 3.78 210 iPd- 31 04.00 1.0
eS 31 45.00
MNDI 5.37 269 eP 31 33.00 7.4X
JAY 9.07 293 ePc 32 18.20 1.8
CTA 14.16 191 iPd 33 23.90 -0.5
1.3s 217.31nm 5.3mb
iS 36 11.00
QIS 17.04 212 iPd 33 59.90 -1.1
0.9s 75.00nm 4.9mb
MTN 18.90 248 iPd 34 22.80 -0.9
WB5 19.78 225 iPc 34 31.70 -1.4
eS 38 05.00
GUA 19.95 348 eP 34 36.20 1.3
1.0s 264.00nm 5.5mb
PJG 20.01 348 eP 34 36.50 1.0
RMQ 20.26 181 iPd 34 38.60 0.5
0.8s 157.00nm 5.4mb
e 34 46.00
BRS 21.45 171 iPc 34 49.40 -0.7
i 35 08.20
i 38 48.00
KNA 22.09 243 eP 34 56.10 -0.3
ASPA 22.75 218 iPc 35 04.60 1.7
0.8s 78.00nm 5.2mb
Z 23s 1.24um 4.3MszX
e 35 15.40
eS 39 07.80
LR 43 29.70
e 46 14.10
DZM 23.11 135 iPc 35 06.20 -0.3
COO 24.48 174 eP 35 20.00 0.3
CMS 25.42 186 eP 35 28.80 0.3
e 35 33.00
KUG 25.53 259 eP 35 31.50 1.9
0.8s 83.50nm 5.3mb
STK 26.57 194 eP 35 40.00 1.0
CAN 29.07 180 eP 36 07.80 6.2X
WARB 29.26 225 eP 35 57.00 -6.5X
0.6s 17.00nm 4.9mb
ADE 30.26 197 e(P) 36 13.20 0.9
VUN 31.03 115 eP 36 18.30 -0.8
TOO 31.48 185 eP 36 23.00 0.1
e 36 29.00
FORR 31.51 216 eP 36 22.80 -0.4

0.5s 26.00nm 5.3mb
MBL 32.01 239 iPc 36 27.30 -0.4
0.6s 26.00nm 5.2mb
MEKA 35.52 232 eP 36 58.10 0.2
COOL 35.96 223 eP 37 00.00 -1.6
NANU 36.24 240 iPc 37 05.20 1.2
TAU 36.68 182 eP 37 08.00 0.6
KLB 38.72 225 iPc 37 24.40 -0.3
0.4s 10.00nm 5.1mb
MRWA 38.75 230 eP 37 25.00 -0.1
BAL 38.94 227 eP 37 26.00 -0.6
NWAO 39.84 224 eP 37 34.00 0.0
MUN 40.03 226 eP 37 35.80 0.2
MNG 41.71 149 eP 37 48.80 -0.5
IIDJ 42.68 347 P 37 57.80 0.5
QZH 42.80 317 eP 37 59.50 1.2
CHJJ 42.99 348 eP 37 58.80 -0.9
TSRJ 43.22 344 P 38 01.90 0.4
MAT 43.63 347 (P) 38 04.00 -0.9
1.2s 65.63nm 5.3mb
eS 44 34.00
MTMJ 43.76 347 P 38 06.10 0.0
NIIJ 44.14 348 eP 38 07.90 -1.1
SSE 45.60 326 Pc 38 22.00 1.3
0.8s 19.00nm 5.0mb
Z 20s 0.50um 4.5Msz
i 38 32.00
e(S) 45 34.00
NJ2 47.63 325 eP 38 36.50 -0.2
Z 25s 0.90um 4.6MszX
WHN 49.33 320 eP 38 50.80 1.0
TIA 51.67 327 eP 39 05.60 -2.0
GYA 52.31 310 eP 39 14.00 1.3
SNY 53.09 336 eP 39 18.50 0.5
MDJ 53.45 343 eP 39 21.70 1.0
CN2 54.07 339 eP 39 29.00 3.7X
BJI 55.02 329 eP 39 31.00 -1.2
XAN 55.09 319 P 39 30.80 -2.2
CHG 55.25 298 eP 39 51.70 17.4X
CHTO 55.25 298 eP 39 36.00 1.7
1.0s 3.75nm 4.4mb
TIY 55.36 325 eP 39 32.50 -2.3
Z 26s 1.40um 4.9MszX
CD2 56.83 313 eP 39 45.30 -0.2
BTO 58.70 326 eP 39 57.50 -1.0
LZH 59.65 318 eP 40 06.50 1.3
1.5s 48.00nm 5.4mb
Z 24s 0.80um 4.8MszX
DRV 60.78 184 eP 40 12.80 0.6
PMO 62.43 104 iP 40 25.00 0.9
1.0s 55.00nm 5.6mb
VAH 62.69 104 iP 40 26.20 0.4
1.0s 40.00nm 5.4mb
TPT 62.70 104 iP 40 26.40 0.6
1.0s 30.00nm 5.3mb
RUV 62.93 104 iP 40 28.00 0.6
1.0s 35.00nm 5.4mb
SHL 63.81 302 iP 40 30.00 -3.3X
GTA 64.15 319 eP 40 33.20 -2.0
GUN 69.65 303 P 41 10.40 0.0
0.4s 12.00nm 5.2mb
PKI 69.94 302 P 41 08.60 -3.6X
KKN 70.11 302 P 41 10.60 -2.5
0.8s 18.00nm 5.1mb
DMN 70.20 302 P 41 09.00 -4.7X
GKN 70.72 302 P 41 14.20 -2.5
0.6s 10.00nm 4.9mb
GBA 73.74 286 P 41 37.00 2.5
MAW 82.93 203 eP 42 24.00 0.2
IMA 82.95 20 eP 42 24.60 0.5
1.3s 7.10nm 4.4mb
SPA 83.93 180 ePc 42 29.90 0.8
0.9s 30.45nm 5.3mb
FBA 84.50 22 eP 42 30.90 -0.8
BRW 84.98 15 eP 42 34.30 0.3
INK 91.01 21 eP 43 02.00 -0.9
MBC 96.27 14 eP 43 27.00 0.0
0.7s 1.00nm 4.5mb
BUL 115.93 244 iPKPc 48 42.00 -1.1
0.9s 4.62nm
KHC 123.06 327 ePKP 48 56.40 0.7
BNG 130.71 271 iPKPc 49 11.50 0.1
0.5s 11.00nm
ic 49 43.50
ic 52 32.00
CNCB 136.87 122 ePKP 49 12.00 -11.7X
i 49 25.30
LPB 136.90 122 ePKP 49 16.00 -7.6X
1.0s 40.00nm
i 49 20.00
ZOBO 137.01 122 ePKP 49 11.00 -13.0X
1.1s 15.95nm
i 49 24.30
PPD 145.64 145 ePKP 49 38.50 0.1
VAO 147.09 152 ePKP 49 41.00 0.2
KUK 149.61 272 ePKP 49 40.00 -4.9X
KIC 153.96 272 PKP 49 59.40 8.1X
ATB 156.78 113 PKPc 49 55.90 0.9
S.D. = 1.1 on 78 of 91 obs.

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* JUN 25, 1989 12h 37m 41.37± 1.03s
38.798 N ±10.0km 31.712 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT 1.28 282 iPn 38 06.10 1.0
BBTK 1.32 38 iP 38 06.00 0.1
iS 38 27.50
BCK 1.60 214 iPn 38 09.60 -0.3
KHL 1.78 255 ePn 38 12.70 0.2
ELL 2.50 215 ePn 38 23.00 0.2
EZN 4.30 285 ePn 38 47.00 -1.3
S.D. = 1.0 on 6 of 6 obs.

? JUN 25, 1989 12h 48m 05.08± 3.17s
10.579 S ±28.5km 120.879 E ±20.6km
DEPTH = 33.0km (normal)
5.1mb (1 obs.)
SUMBA ISLAND REGION (287)

KUG 2.70 81 eP 48 47.50 0.4
KHKI 5.65 292 eP 49 08.00 -20.9X
eS 50 02.50
e 52 10.00
KNA 9.24 125 eP 50 19.00 -0.1
i 52 05.50
MTN 10.29 104 eP 50 30.00 -3.6X
eS 52 22.00
MBL 10.57 185 eP 50 38.70 1.3
0.3s 10.00nm 5.6mb X
eS 52 41.00
NANU 12.97 203 eP 51 08.80 -0.9
0.3s 5.00nm 5.1mb
eS 53 32.00
WB5 15.95 127 eP 51 47.70 -1.2
eS 54 45.50
MEKA 16.10 188 eP 51 53.50 2.8X
eS 54 51.00
WARB 16.45 161 eP 51 51.00 -4.1X
eS 54 58.00
ASPA 17.99 138 eP 52 14.90 0.5
eS 55 36.10
MRWA 19.10 193 eP 52 32.00 4.1X
eS 55 56.00
MUN 21.73 191 eP 53 07.50 12.0X
S.D. = 1.2 on 6 of 12 obs.

? JUN 25, 1989 12h 54m 27.38± 3.74s
17.067 N ±28.8km 101.441 W ±23.8km
DEPTH = 33.0km (normal)
3.8mb (2 obs.)
NEAR COAST OF GUERRERO, MEXICO (58)

III 2 29 55 iP 55 02.95 -0.8
eS 55 22.03
MRX 2.63 5 eP 55 15.70 7.2X
eS 55 39.87
CRX 2.87 35 (P) 55 18.25 6.2X
eS 55 50.61
UNM 3.11 43 eP 55 17.00 1.5
eS 55 48.50
IIC 3.39 37 eP 55 19.70 0.1
eS 56 00.97
IIT 3.56 56 eP 55 17.66 -4.3X
eS 56 03.29
IISM 4.31 63 eP 55 31.38 -1.0
eS 56 30.50
OXX 4.51 89 eP 55 36.00 0.6
eS 56 33.50
MZX 7.69 323 (P) 56 02.50 -17.4X
ALQ 18.36 347 e(P) 58 48.00 6.6X
1.0s 3.75nm 3.5mb
TUL 19.43 14 eP 58 53.90 -0.1
1.2s 13.20nm 4.1mb
Z 23s 0.61um 3.7Msz
e 59 07.00
LR 23 15.00
LNO 19.43 14 eP 58 53.70 -0.2
S.D. = 1.0 on 7 of 12 obs.

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* JUN 25, 1989 14h 13m 03.58± 1.63s
35.517 N ±24.3km 27.486 E ±11.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.7 (ATH).

KAP 0.26 278 iPgc 13 08.70 -0.3
eSg 13 15.70
NPS 1.55 261 ePb 13 31.70 0.4
YER 1.74 21 iPn 13 34.30 0.3
ELL 2.31 57 iPn 13 42.20 -0.3
VAM 2.68 269 ePn 13 47.50 -0.1
KHL 3.24 30 ePn 13 57.70 2.1X
S.D. = 0.5 on 5 of 6 obs.

JUN 25, 1989 14h 13m 40.64± 0.65s
44.500 N ± 5.8km 7.115 E ± 5.6km
DEPTH = 10.3 ± 7.6 km
NORTHERN ITALY (545)

PZZ 0.01 298 P 13 42.50 -0.2
S 13 43.32
DOI 0.09 88 P 13 43.50 0.1
iSg 13 45.00
FOUF 0.24 277 iPg 13 45.93 0.2
e(Sg) 13 48.64
STV 0.30 150 P 13 46.91 0.0
S 13 50.91
ENR 0.35 141 P 13 47.84 0.0
S 13 52.45
RRL 0.48 331 P 13 50.55 0.1
S 13 57.27
ROB 0.58 110 P 13 52.33 -0.1
S 13 59.34
RSP 0.66 9 P 13 53.78 -0.1
S.D. = 0.2 on 8 of 8 obs.

? JUN 25, 1989 14h 32m 36.17± 2.82s
38.320 N ± 9.8km 24.025 E ±29.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.7 (ATH).

ATH 0.42 215 iPgd 32 44.70 -0.1
eSg 32 50.00
NEO 1.17 328 ePg 32 57.70 -0.3
PLG 2.10 348 ePn 33 12.00 0.2
VLS 2.71 268 ePn 33 20.80 0.2
VAM 2.91 177 ePb 33 27.50 4.1X
S.D. = 0.4 on 4 of 5 obs.

% JUN 25, 1989 15h 03m 17.91± 1.21s
32.046 N ± 7.4km 35.857 E ±13.6km
DEPTH = 10.0km (geophysicist)
DEAD SEA REGION (373)

SALJ 0.15 256 P 03 22.00 0.5
BURJ 0.18 334 P 03 21.20 -0.9
JARJ 0.20 22 P 03 23.00 0.6
KFNJ 0.24 220 P 03 23.60 0.6
MASJ 0.34 201 P 03 24.10 -0.8
S.D. = 1.1 on 5 of 5 obs.

JUN 25, 1989 16h 11m 54.11± 0.53s
40.679 N ± 5.4km 22.687 E ± 4.7km
DEPTH = 5.0 ± 4.2 km
GREECE (364)
MD 3.4 (ATH).

VAY 0.65 352 iPc 12 07.00 0.0
iSg 12 14.20
PLG 0.65 118 ePg 12 07.60 0.4
eSg 12 18.20
KZN 0.79 242 ePg 12 08.20 -1.8
MMB 1.20 41 iPgc 12 17.00 0.0
KKB 1.22 14 iP 12 17.00 -0.3
NEO 1.43 163 ePb 12 20.00 -0.8
OHR 1.49 287 iPn 12 21.90 0.2
SKO 1.60 324 iPn 12 23.30 0.2
LSK 1.68 252 ePn 12 24.00 -0.3
VTS 1.95 11 iP 12 29.00 0.7

25d 16h

PHP	1.97	301	ePn	12 30.00	1.5
BERA	2.08	272	ePn	12 31.80	1.7
PLD	2.08	46	ePg	12 38.00	7.9X
SRN	2.20	250	ePn	12 34.30	2.4X
RDO	2.21	77	ePn	12 34.60	2.6X
TIR	2.24	288	ePn	12 36.00	3.7X
KDZ	2.28	64	eP	12 34.00	1.0
LACI	2.44	294	ePn	12 41.10	5.8X
SDA	2.75	300	ePn	12 42.40	2.8X
EZN	2.91	106	eP	12 43.00	1.0
VLS	2.98	214	ePg	12 47.60	4.7X
JMB	3.43	57	eP	12 49.00	-0.3
BZS	5.00	351	ePc	13 10.50	-1.0
MLR	5.37	25	eP	13 20.00	3.1X
VRI	5.97	28	ePc	13 23.00	-2.2

S.D. = 1.2 on 17 of 25 obs.

JUN 25, 1989 16h 13m 03.08± 0.69s
42.819 N ± 5.0km 12.992 E ± 6.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (SSO), 2.4 (ROM).

ASS	0.35	316	Pd	13 11.10	0.8
			eSg	13 16.00	
CIO	0.39	16	iPg	13 10.53	-0.6
			iSg	13 17.21	
ALP	0.43	95	iPg	13 11.68	-0.2
			iSg	13 18.70	
MNS	0.49	208	Pc	13 12.30	-0.8
			eSg	13 20.10	
ARV	0.68	357	Pc	13 16.10	-0.5
			eSg	13 26.80	
AOI	0.86	31	iPg	13 20.10	0.5
			iSg	13 34.42	
SDI	1.27	151	P	13 27.50	0.8
			eSn	13 44.40	

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

JUN 25, 1989 17h 52m 34.70± 0.74s
40.422 N ± 7.0km 27.640 E ± 6.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.19	114	iPg	52 38.30	-0.6
BNT	0.22	107	iPg	52 40.20	0.7
MFT	0.46	323	iPg	52 44.80	0.8
CTT	0.94	39	ePg	52 52.90	0.3
			eSg	53 06.90	
EZN	1.17	240	ePn	52 55.00	-1.6
ISK	1.25	59	ePn	52 56.90	-1.1
GBZT	1.42	74	ePn	53 02.10	1.5X
			iSg	53 24.40	
IZM	2.04	188	ePn	53 11.00	1.4
ALT	2.34	125	ePn	53 14.00	0.0
KHL	2.55	145	ePn	53 21.70	4.8X

S.D. = 1.2 on 8 of 10 obs.

& JUN 25, 1989 18h 16m 33.88s
59.962 N 153.496 W
DEPTH = 143.1km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.29	66	iP	16 53.19	0.9
			S	17 09.20	
AUL	0.58	177	eP	16 54.62	-0.5
RED	0.58	38	eP	16 54.72	-0.5
			S	17 11.38	
RDT	0.82	41	iP	16 56.18	-0.7
CNPM	1.23	110	iP	16 59.72	-0.7
			S	17 19.91	
NKA	1.37	54	eP	17 02.70	0.9
SLKM	1.72	70	eP	17 04.62	-1.2
SEW	2.04	84	eP	17 08.48	-0.9

8 obs. associated

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* JUN 25, 1989 19h 34m 30.17± 0.58s
28.034 S ± 6.8km 67.207 W ±13.0km
DEPTH = 258.7 ± 14.8 km
4.7mb (1 obs.)
LA RIOJA PROVINCE, ARGENTINA (138)

ZON	3.73	200	iPc	35 30.30	-1.4
			eS	36 16.00	
FCH	5.91	206	iPc	36 00.20	1.9
			iS	37 09.50	
PEL	5.91	210	iPd	35 58.70	0.7
			iS	37 07.00	
ROCH	5.91	213	iPd	35 58.20	-0.1
SAN	6.17	208	eP	36 00.50	-0.7
PCH	6.25	206	iPc	36 03.70	1.4
TACH	6.45	209	iPd	36 05.10	0.4
			iS	37 18.70	
CHCH	6.58	206	iPd	36 03.10	-3.3X
LCCH	6.60	214	eP	36 05.00	-1.5
LNV	6.92	210	iP	36 10.00	-0.5
CCH	10.65	6	P	36 57.00	-1.0
CNCB	11.19	356	P	37 05.80	0.7
LPB	11.48	356	eP	37 08.00	-0.5
ZOBO	11.74	356	P	37 13.00	1.1
PPD	15.59	71	eP	37 57.20	-1.3
			e(pP)	38 18.20	
VAO	18.94	79	eP	38 34.20	0.1
			e	39 23.70	
BAO	21.65	59	eP	39 03.00	2.1
SPA	62.13	180	e(P)	44 35.30	9.4X
	1.0s		19.00nm	4.7mb	
ALQ	72.79	327	e(P)	45 31.50	-0.9
MAW	77.66	163	eP	46 08.50	9.5X
KSR	81.61	115	eP	46 20.50	-0.6
SLR	82.78	115	eP	46 35.00	8.0X
	Z 20s		29.08um	6.6MszX	
BUL	85.65	110	iPd	46 59.70	18.3X
	1.7s		34.62nm		

S.D. = 1.2 on 18 of 23 obs.

? JUN 25, 1989 19h 50m 05.02± 3.78s
37.731 S ±20.9km 176.129 E ±28.7km
DEPTH = 333.6 ± 27.5 km
NORTH ISLAND, NEW ZEALAND (159)

KRP	0.51	247	Pc	50 48.00	0.4
TUTZ	0.99	186	Pc	50 49.20	0.1
HITZ	1.02	196	P	50 49.40	0.1
HATZ	1.16	181	P	50 49.60	-0.5
RATZ	1.17	194	Pd	50 50.00	-0.1
WHH	1.19	166	iPd	50 49.60	-0.7
KETZ	1.42	195	P	50 51.40	-0.1
TTH	1.89	163	P	50 54.80	0.5
PGZ	2.89	178	iPd	51 02.80	0.4
MNG	2.93	190	iPd	51 02.90	0.0
			S	51 45.70	
KIW	3.27	196	Pc	51 06.10	0.0
MTW	3.46	188	iPc	51 07.80	-0.1
CAW	3.47	193	Pc	51 08.00	-0.1
WDW	3.64	194	Pd	51 09.30	-0.5
MRW	3.67	197	P	51 10.00	0.0
			S	51 59.20	
WEL	3.70	196	P	51 10.60	0.2
MOW	3.75	190	P	51 10.90	0.0
CCW	4.28	200	P	51 16.90	0.5
MHZ	8.95	213	P	52 11.00	-0.2
MSZ	9.29	219	P	52 15.10	0.0
			S	53 56.00	

S.D. = 0.3 on 20 of 20 obs.

JUN 25, 1989 20h 37m 32.46± 0.13s
1.134 N ± 2.5km 79.616 W ± 2.6km
DEPTH = 15.1km (geophysicist)
5.9mb (77 obs.) 6.1Msz (33 obs.)
NEAR COAST OF ECUADOR (105)
Ms 6.0 (BRK), 6.0 (PAS). Thirty people injured and 12 homes damaged (VII) in the Esmeraldas area. Felt (III) at Guayaquil and (II) at Quito. Felt throughout Ecuador and southwestern Colombia. Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=193 Dip=73 Slip= 90
NP2: 13 17 90
Principal Axes:
T Plg=62 Azm=103
P 28 283
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sta: 5 Focal mech. F
Energy 0.3±0.1*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 13 No. of sta: 15
Moment Tensor; Scale 10**18 Nm
Mrr= 2.00 Mtt=-0.76
Mff=-1.24 Mrt=-1.25
Mrf=-2.72 Mtf=-1.06
Principal axes:
T Val= 3.63 Plg=61 Azm=107
N 0.00 7 209
P -3.62 28 303
Best Double Couple:Mo=3.6*10**18
NP1:Strike= 50 Dip=18 Slip= 112
NP2: 207 73 83
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 45C
Centroid Location:
Origin Time 20:37:43.2 0.2
Lat 0.81N 0.03 Lon 79.92W 0.03
Dep 16.0 1.6 Half-duration 5.2
Moment Tensor; Scale 10**18 Nm
Mrr= 2.21 0.05 Mtt= 0.14 0.05
Mff=-2.35 0.07 Mrt= 0.51 0.13
Mrf=-2.40 0.32 Mtf=-0.48 0.05
Principal Axes:
T Val= 3.38 Plg=64 Azm= 63
N 0.02 12 179
P -3.40 23 274
Best Double Couple:Mo=3.4*10**18
NP1:Strike= 27 Dip=25 Slip= 120
NP2: 174 69 77

COTA	1.50	122	iP+	38 00.00	0.7
GGP	1.65	142	iP+	38 02.40	0.9
OUR	1.69	140	P+	38 02.80	0.8
RECU	2.05	149	iP+	38 10.50	3.3X
PSO	2.29	89	iPd	38 13.50	2.9X
SALC	3.44	58	iPc	38 26.50	-0.2
PURC	3.46	70	iPc	38 29.00	1.7
ANCC	3.62	49	iPc	38 27.50	-1.8
HOQC	3.78	52	iPc	38 30.25	-1.4
DIAC	4.03	58	iPc	38 35.60	0.5
CLMC	4.09	48	iPc	38 33.60	-2.4X
HOBC	4.72	47	iPc	38 42.50	-2.5X
BOG	6.54	58	iPc	39 11.00	0.2
			e(S)	40 37.00	
FUQ	7.28	54	iP	39 24.50	3.4X
UPA	7.80	1	iPc	39 29.30	1.2
	1.0s	310	.00nm	6.5mb X	
			pP	39 39.30	
			(S)	41 03.00	
BMG	8.79	48	eP	39 43.00	0.9
LCR2	9.60	333	eP	39 56.70	3.4X
ICR	9.74	335	iPc	39 58.50	3.1X
SJS	9.80	333	iPc	39 57.20	1.2
SRA	10.11	332	iPd	40 01.80	1.6
NNA	13.32	168	iPc	40 43.20	-0.5
			eS	43 10.50	
			eS	56 05.60	
HUA	13.76	162	iPc	40 50.80	1.0
			i	41 27.20	
			iS	43 31.30	
GCM	18.13	355	eP	41 48.30	3.0X
TPX	18.53	318	iP	41 52.00	1.7
ARE	19.24	156	iP	42 00.00	0.7
TCE	20.13	61	eP	42 09.15	0.3
TPP	20.23	63	eP	42 12.55	2.7X
			eS	46 09.03	
TRN	20.42	62	eP	42 11.65	-0.2
TBH	20.64	63	eP	42 15.64	1.5
ZOBO	20.68	147	iPc	42 14.00	-1.2
			LR	49 02.00	
MGP	20.80	36	eP	42 16.00	0.2
LPB	20.91	148	P	42 17.40	-0.1
			i	42 18.00	
			S	46 14.00	
			LR	50 34.00	
CNCB	21.20	148	iPc	42 20.00	-0.6
			eS	46 22.00	
BOT	21.25	61	eP	42 19.62	-0.8
SJG	21.44	37	eP	42 23.00	0.7
CSB	21.57	37	eP	42 25.00	1.3
SVB	21.82	56	eP	42 24.76	-1.4
BIM	22.64	53	eP	42 33.70	-0.7
CCH	22.69	145	iPc	42 35.80	0.7
FDF	22.70	53	eP	42 34.70	-0.3

	0.5s		2.30nm			3.9mb X					epPd	45 30.50	17kmX			1.3s	255.00nm			6.2mb		
			S	43 29.50							esPc	45 32.49			HTW	59.06	328 P	47 33.00	-1.3		
MVM	22.81	53 eP	42 34.92	-1.1		ITR	42.21	104 ePc	45 22.90	-3.9X		FRB	63.00	5 eP	47 58.00	-2.6X							
DPMT	22.82	51 eP	42 38.77	2.7X					e	45 27.60			1.1s	101.00nm	5.9mb							
DTMT	22.83	51 eP	42 38.64	2.4					e	45 34.70			YKC	66.51	343 eP	48 21.00	-2.5X					
CRM	22.90	53 eP	42 37.05	0.2		PTN	43.45	5 P	45 35.70	-0.7			YKA	66.56	343 eP	48 22.80	-1.0						
BBL	22.91	50 eP	42 35.00	-2.0		BNH	43.90	9 P	45 40.70	0.6			RUV	68.89	253 iP	48 40.40	1.2						
PAG	23.06	49 eP	42 38.00	-0.5		GAC	44.53	4 eP	45 45.00	-0.2				1.7s	505.00nm	6.4mb							
NEV	23.11	46 eP	42 42.96	4.0X		EMM	44.73	12 P	45 46.80	0.0			TPT	69.09	254 iP	48 42.10	1.7						
SKI	23.12	45 eP	42 43.08	4.0X		GLD	44.96	332 P	45 50.50	1.5				1.7s	485.00nm	6.4mb							
BPA	23.57	47 eP	42 43.46	0.1		Z	16s	9.27um		5.8MszX			VAH	69.14	253 iP	48 41.90	1.2						
ANG	23.66	47 eP	42 43.46	-0.7		GOL	44.99	332 P	45 48.90	-0.4				1.7s	455.00nm	6.4mb							
DEG	23.70	49 eP	42 44.00	-0.7		Z	16s	7.60um		5.7MszX			PMO	69.36	254 iP	48 43.60	1.5						
LVVM	24.77	319 iPd	42 56.50	1.6		GLA	45.84	318 eP	45 57.00	1.1				1.7s	535.00nm	6.4mb							
ACX	25.33	309 (P)	43 04.00	3.6X		CBM	46.70	11 P	46 03.00	0.6			GDH	70.22	10 ePc	48 44.00	-2.4						
IIT	25.53	315 (P)	43 07.00	4.5X		BAR	46.89	316 eP	46 04.00	-0.1				1.2s	34.38nm	5.4mb							
III	25.95	313 eP	43 07.50	1.1		TPC	47.28	318 eP	46 07.00	-0.3					i	57 55.00							
ANT	26.26	161 eP	43 10.00	1.1		PLM	47.40	317 eP	46 09.00	0.6			TVO	71.00	251 eP	48 56.00	3.8X						
UNM	26.35	315 iPd	43 14.00	3.8X		MSU	47.68	325 P	46 13.20	2.6X				1.5s	310.00nm	6.2mb							
IIC	26.69	315 eP	43 17.00	3.6X		PEC	47.91	317 P	46 13.50	1.3			PPN	71.14	251 eP	48 58.00	5.1X						
CRX	26.76	314 (P)	43 21.00	7.0X		RSSD	47.99	336 P	46 12.60	-0.3				1.5s	195.00nm	6.0mb							
ATB	27.73	99 Pc	43 20.80	-1.7		RVR	48.11	317 eP	46 14.00	0.2			PPT	71.28	251 eP+	49 00.00	6.2X						
MRX	28.05	313 eP	43 26.50	1.2		GSC	48.49	319 eP	46 18.00	1.3				1.5s	660.00nm	6.5mb							
HBF	31.64	359 P	43 58.60	1.5		DAU	48.50	328 P	46 18.50	1.5				Z	18s	40.00um	6.7Msz						
PRM	32.88	356 P	44 07.00	-1.0		MWC	48.71	317 eP	46 19.00	0.4			PAE	71.30	251 eP	48 59.00	5.2X						
JSC	33.01	358 P	44 08.50	-0.6		PAS	48.75	317 ePd	46 21.06	2.4				1.5s	595.00nm	6.5mb							
MZX	34.03	312 eP	44 20.00	1.9					epPd	46 24.87	13kmX		AFR	71.47	251 eP	49 01.00	6.1X						
ZON	34.12	163 ePd	44 14.00	-4.9X					esPc	46 28.18				1.5s	310.00nm	6.2mb							
TKL	34.57	354 P	44 21.20	-1.4					ePcP	47 20.00			TBI	72.01	245 eP	49 09.00	11.0X						
GBTN	34.62	353 P	44 21.30	-1.8					ePP	48 16.00				1.3s	235.00nm								
JACH	34.70	167 eP	44 24.50	0.6					iS	53 25.00			LIS	74.11	50 iPc	49 09.80	-0.3						
ROCH	34.88	167 eP	44 25.50	-0.1					eScS	56 06.00			LIC	74.56	84 Pc	49 11.84	-1.3						
PEL	35.12	167 ePd	44 28.00	0.6					eLg	58 34.00				1.2s	113.00nm	5.8mb							
FCH	35.39	166 eP	44 31.00	0.9					eLR	01 03.00			TIC	74.57	83 P	49 11.82	-1.4						
SAN	35.42	167 eP	44 30.00	0.0		SBB	48.81	317 eP	46 19.00	-0.2				1.2s	96.50nm	5.7mb							
ITB1	35.43	138 e(P)	44 28.20	-1.9		CLC	49.31	319 eP	46 23.00	0.0			KIC	74.84	84 Pc	49 13.54	-1.3						
TACH	35.55	167 ePd	44 31.60	0.5		BW06	49.37	331 P	46 22.00	-1.6			EZAM	75.16	47 eP	49 16.60	0.5						
PCH	35.62	167 eP	44 32.50	0.8		ISA	49.80	318 eP	46 27.00	0.1			REY	75.41	23 iP	49 18.70	1.6						
ITB	35.65	138 e(P)	44 30.10	-1.9		SYP	50.20	316 eP	46 32.00	2.0			EVAL	75.77	52 eP	49 19.20	-0.5						
LNV	35.75	168 eP	44 32.00	-0.6		TNP	50.42	321 P	46 31.20	-0.5			BMK	76.07	54 iPd	49 22.50	1.1						
CHCH	35.89	167 eP	44 34.00	0.1			1.1s	68.18nm		5.5mb			INK	76.28	342 eP	49 17.00	-4.9X						
ITB7	35.89	138 e(P)	44 32.00	-2.1		BCH	50.63	317 P	46 33.50	0.3			ERUA	76.33	47 e(P)	49 23.20	0.4						
BLA	35.91	359 P	44 33.50	-0.6		RSON	50.96	349 P	46 32.50	-2.8X			EMON	76.40	46 eP	49 23.90	0.7						
	1.1s	106.25nm		5.6mb		Z	20s	9.04um		5.8Msz			VAL	76.50	37 P	49 24.00	0.6						
OLY	35.93	343 P	44 32.40	-1.8		FRI	51.38	319 eP	46 37.30	-1.4			EPRU	76.86	52 e(P)	49 27.00	1.1						
PPD	35.96	131 eP	44 32.00	-2.7X		PRI	51.55	317 eP	46 39.20	-1.0			EHOR	76.98	52 eP	49 26.50	0.1						
		e	44 35.40			KVN	51.56	322 eP	46 39.60	-0.7			AKU	77.56	22 iP	49 30.00	0.9						
CVL	36.68	2 P	44 40.50	0.0					ePcP	46 47.00				1.2s	100.00nm	5.8mb							
NA2	36.85	2 P	44 42.10	0.2					e	46 52.50			ALOJ	77.77	52 iPd	49 33.00	2.0						
CBN	36.95	3 iPc	44 44.20	1.5					e	46 59.90			AAPN	77.79	52 iPd	49 31.50	0.4						
	1.3s	96.00nm		5.4mb					e	47 46.50			ATEJ	77.82	53 iP	49 32.50	1.2						
		e	44 52.00						e	47 51.80			ACHM	77.99	52 eP	49 33.50	1.4						
VVO	37.19	338 eP	44 47.30	2.5X		LLA	51.99	318 eP	46 42.10	-1.3			APHE	78.08	53 iPd	49 33.50	0.8						
LNO	37.72	338 e(P)	44 48.50	-0.7		PRS	52.13	317 eP	46 43.70	-0.7			ASMO	78.09	52 iPd	49 33.20	0.4						
TUL	37.72	338 eP-	44 47.70	-1.6		CM8	52.41	319 ePd	46 45.93	-0.7			EBAN	78.17	51 eP	49 33.00	0.0						
	0.9s	9.90nm		4.6mb X					epPd	46 51.39	18kmX		TOA	78.20	334 eP	49 33.00	0.2						
	Z 19s	17.06um		5.9Msz		SAO	52.41	317 ePd	46 46.80	0.2			TOL	78.21	50 ePc	49 33.35	0.1						
		e	44 51.90			ARN	52.79	318 P	46 49.40	0.0					epP	49 38.15	15kmX						
		e	45 11.50			MHC	52.86	318 ePd	46 50.30	0.3					esP	49 40.31							
		e	46 22.00			GCC	52.93	317 eP	46 49.60	-0.8					iPP	52 25.00							
		e	53 39.00			LRM	53.02	332 eP	46 50.20	-1.1					eS	59 30.42							
		LR	55 00.00			PCC	53.44	318 ePd	46 53.50	-0.6					eSKS	59 41.01							
SIO	37.77	338 e(P)	44 48.50	-1.2		BKS	53.54	318 iPd	46 56.00	1.1					esS	59 41.18							
MEO	37.87	334 iPc	44 48.70	-1.9			1.6s	250.00nm		5.9mb					iPS	00 10.00							
FVM	37.99	346 P	44 49.60	-2.0		Z	20s	9.00um		5.8Msz					iSS	04 28.00							
VAO	39.82	129 eP	45 05.40	-1.7		N	20s	9.00um							eSSS	07 40.00							
		e(pP)	45 09.30	13kmX		E	20s	10.00um					GUD	78.24	49 eP	49 33.90	0.3						
GMTN	39.87	6 eP	45 07.40	0.2					e	47 46.00			MBC	78.28	351 ePc	49 31.10	-1.8						
PNJ	39.90	6 eP	45 07.70	0.3					ePP	49 13.00				1.0s	114.00nm	5.9mb							
		i	45 08.60						eS	54 26.00			DMU	78.95	35 eP	49 36.40	-0.5						
		i	45 27.10						eScS	56 44.00				0.7s	37.00nm	5.5mb						
TBR	40.12	6 P	45 09.20	-0.1					eSS	58 30.00			DLE	79.02	36 eP	49 37.00	-0.3						
BRAS	40.66	127 iPc	45 03.90	-10.3X					eLQ	00 51.00			KUK	79.19	84 eP	49 37.00	-2.1						
DHN	41.53	2 P	45 20.00	-0.8					eLR	04 01.00			EVIA	79.23	51 eP	49 40.00	1.0						
HRV	41.82	9 ePc	45 23.76	0.6		BRK	53.56	318 eP	46 54.50	-0.5			WEGH	79.23	85 eP	49 38.50	-0.8						
		epPd	45 28.06	14kmX		ORV	53.99	320 ePd	46 57.90	-0.2			ENIJ	79.25	53 eP	49 39.00	0.0						
		esPd	45 29.22			SCH	54.53	9 eP	47 00.00	-1.9			KOGH	79.31	84 eP	49 39.00	-0.8						
		eS	51 43.26				1.1s	129.00nm		5.9mb			PMR	79.36	333 eP	49 38.00	-1.0						
ALQ	41.92	326 eP	45 24.50	0.2		WDC	55.22	321 eP	47 04.10	-3.1X				1.2s	50.80nm	5.4mb							
	1.2s	85.94nm		5.4mb		SES	55.86	336 eP	47 10.00	-1.7			LEGH	79.38	85 eP	49 39.00	-1.1						
	Z 18s	4.98um		5.4Msz			1.4s	307.00nm		6.1mb			ECRI	79.75	47 e(P)	49 42.80	1.2						
		e	45 33.50			FHC	56.26	320 eP	47 14.20	-0.5			COL	79.85	336 ePc	49 39.82	-1.8						
		e	45 50.50			FFC	56.47	345 eP	47 12.00	-3.9X					epPd	49 45.12	17kmX						
		e	46 37.50				1.3s	93.00nm		5.7mb					esPd	49 46.61							
		eS	51 38.00			EDM	58.96	337 eP	47 30.50	-3.0X					eS	59 42.21							
		eLg	55 08.00				1.0s	166.00nm		6.1mb					eSKS	59 54.79							
ANMO	41.92	326 ePd	45 25.37	1.0		RKT	58.96	242 iP	47 39.10	5.1X			FBA	79.85	336 eP	49 40.40	-1.2						

25d 20h

ETOR	79.85	49 eP	49	43.20	1.0	HAU	86.46	42 eP	50	15.50	-0.3		Z	18s	4.50um		5.9Msz
KDC	79.95	329 P	49	41.50	-0.7		1.3s	158.80nm			6.1mb				e	50	55.60	
ECHE	80.53	50 eP	49	47.00	1.2	FRF	86.51	47 eP	50	16.00	-0.2				e(S)	01	24.00	
ACU	80.84	51 eP	49	48.20	0.7		1.3s	108.30nm			5.9mb	WET	90.79	41 eP	50	36.90	0.5
EA8	80.89	33 eP	49	46.20	-1.1	BER	86.52	30 eP	50	20.00	4.2X		1.6s	143.00nm			6.0mb
	1.2s	125.00nm			5.8mb	BNI	86.58	45 Pc	50	17.80	1.2		Z	18s	5.70um		6.1Msz
ESK	81.35	34 ePc	49	50.00	0.3	LPG	86.64	45 eP	50	17.40	0.2				eS	01	36.00	
	1.5s	250.00nm			6.0mb	RRL	86.65	45 P	50	17.75	0.6	BRN	90.84	38 ePc	50	38.00	1.6
EBH	81.36	33 iP	49	49.10	-0.6	CALN	86.69	46 P	50	17.39	0.2	FVI	90.84	44 Pd	50	37.60	1.0
	1.3s	204.00nm			6.0mb	BSF	86.75	42 P	50	16.57	-0.8	BHG	90.85	42 eP	50	34.50	-2.2
EKA	81.38	34 Pc	49	49.70	-0.1	LOMF	86.76	43 P	50	17.00	-0.4		1.7s	122.00nm			5.9mb
	1.1s	107.50nm			5.8mb	EMS	86.79	44 ePd	50	18.40	0.7	ASS	90.90	47 Pd	50	36.60	-0.5
LPF	81.52	42 eP	49	50.10	-0.6	WIT	86.85	37 eP	50	19.00	1.4	MNS	90.94	48 P	50	37.50	0.2
	1.3s	125.60nm			5.8mb			e	50	23.50		RDP	91.00	48 P	50	39.00	1.5
ALE	81.67	2 eP	49	49.00	-1.9	MVIF	86.89	46 P	50	18.30	0.1	ARV	91.09	47 P	50	38.50	0.6
	1.2s	70.00nm			5.6mb	WTS	86.91	38 ePc	50	18.00	0.2	SPA	91.13	180 e(P)	50	37.80	0.1
EDU	81.68	33 iPd	49	51.10	-0.3		1.1s	282.00nm			6.4mb		1.0s	69.50nm			5.9mb
	1.3s	305.00nm			6.2mb			i	50	23.00			Z	18s	9.37um		6.3Msz
GRR	81.69	41 eP	49	51.30	-0.3	LSD	86.93	45 P	50	19.50	1.0	KBA	91.20	43 ePc	50	37.60	-0.9
	1.3s	183.30nm			6.0mb	TOUF	86.96	46 P	50	18.54	-0.1		1.2s	57.30nm			5.8mb
EROQ	81.71	49 eP	49	52.50	0.6	DOI	86.97	46 Pc	50	18.50	0.0				i	50	42.50	
EBR	81.77	49 eP	49	53.00	0.8	MOF	86.98	42 P	50	17.68	-0.8				e(sS)	01	33.00	
ESY	81.79	34 eP	49	51.20	-0.8	RUP	86.99	40 eP	50	18.58	0.2				eSP	02	09.00	
	1.4s	286.00nm			6.1mb	RSP	86.99	45 P	50	19.50	0.9	KHC	91.25	41 iPc	50	39.70	1.2
EPF	81.88	47 iPc	49	53.00	0.2	ECH	87.01	42 P	50	18.50	0.0		1.2s	30.00nm			5.5mb
MFF	81.94	43 eP	49	52.50	-0.5	AURF	87.01	46 P	50	18.59	-0.1				e	54	17.30	
	1.3s	115.50nm			5.8mb	STV	87.02	46 P	50	18.99	0.3	BRG	91.38	39 iP	50	39.50	0.5
FLN	81.98	41 eP	49	52.90	-0.2	REVF	87.04	46 P	50	19.15	0.4		2.1s	110.00nm			5.8mb
	1.2s	196.30nm			6.1mb	AUTN	87.09	46 P	50	19.50	0.2				ipP	50	58.10	66kmX
LDF	82.20	41 eP	49	53.90	-0.4	ENR	87.09	46 P	50	18.88	-0.2	RBL	91.39	44 Pd	50	39.60	0.3
	1.2s	184.40nm			6.0mb	CDF	87.09	42 P	50	18.48	-0.5	AZI	91.52	48 P	50	41.00	1.2
LFF	82.37	45 iPc	49	55.00	-0.2	SBF	87.09	46 eP	50	18.50	-0.6	TRI	91.56	44 ePc	50	40.50	0.5
	1.3s	111.10nm			5.8mb		1.2s	73.70nm			5.8mb	VOY	91.63	44 eP	50	40.50	0.1
DAG	82.45	12 iPc	49	54.10	-1.0	DIX	87.12	44 ePd	50	20.30	0.9	PRU	91.82	40 P	50	41.60	0.5
	1.2s	73.44nm			5.7mb	BBS	87.22	43 P	50	19.16	-0.4		1.5s	42.40nm			5.6mb
Z	21s	6.88um			6.0Msz	ABH	87.31	40 ePc	50	20.00	0.1		Z	19s	5.70um		6.0Msz
N	19s	5.69um				GWF	87.33	41 P	50	20.05	0.0		N	20s	1.90um		
E	18s	7.56um				ROB	87.41	46 P	50	20.11	-0.5		E	19s	5.30um		
IMA	82.53	337 eP	49	54.20	-1.7	IMI	87.42	46 P	50	20.11	-0.5				e	53	50.00	
	7.0s	92.60nm			5.0mb X	STR	87.42	42 P	50	20.60	0.2	SDI	91.82	48 Pd	50	41.80	0.5
LPO	82.66	45 eP	49	56.40	-0.4	MMK	87.51	44 ePd	50	22.20	0.9	MCT	91.89	52 P	50	43.70	1.8
	1.4s	156.80nm			6.0mb	ORO	87.51	45 P	50	21.50	0.4	FAI	91.94	53 P	50	44.50	2.6X
TTA	82.82	333 P	49	55.60	-1.7	ORX	87.51	45 P	50	20.63	-0.5	RFI	91.97	49 P	50	44.95	3.0X
	1.3s	47.17nm			5.5mb	FEL	87.57	42 eP	50	20.79	-0.6	CEY	92.02	44 eP	50	42.00	-0.2
RJF	82.95	45 eP	49	58.00	-0.3	FIN	87.65	46 P	50	21.04	-0.7	LJU	92.08	44 ePc	50	42.50	0.1
	1.4s	151.60nm			6.0mb	CKI	87.71	46 P	50	22.50	0.6				eS	01	15.00	
LSF	83.05	44 eP	49	58.40	-0.4	ZLA	87.82	43 ePd	50	22.90	0.4	VBY	92.62	45 eP	50	46.30	1.4
	1.4s	130.60nm			5.9mb	SLE	87.89	42 ePd	50	23.20	0.4	UPP	92.67	30 iP	50	44.90	0.2
CAF	83.30	45 eP	49	59.80	-0.3	TNS	87.89	40 ePc	50	23.40	0.6				iS	01	46.00	
ESEL	83.51	50 eP	50	02.20	0.9	VAI	88.07	44 Pd	50	24.20	0.6	KSP	92.87	39 ePc	50	46.50	0.6
TCF	83.53	44 eP	50	00.70	-0.5	CVF	88.12	48 eP	50	24.10	0.1				e	54	35.00	
	1.5s	109.60nm			5.8mb		1.0s	20.00nm			5.4mb	PTJ	93.08	44 eP	50	48.10	1.0
ETER	83.66	48 eP	50	02.80	0.8	TMA	88.14	44 ePd	50	24.40	0.2	ZAG	93.11	44 eP	50	48.10	1.0
MAF	83.77	44 iPc	50	01.90	-0.5	LLS	88.23	43 ePd	50	25.40	0.8	VKA	93.12	42 eP	50	46.00	-1.1
	1.4s	148.10nm			6.0mb	STU	88.37	41 iPc+	50	25.10	0.1		6.0s	1030.00nm			6.4mb X
SDN	83.88	325 eP	50	03.50	0.8		1.0s	80.00nm			6.0mb		Z	21s	4.30um		5.9Msz
BGF	83.99	43 iPc	50	03.20	-0.3	Z	20s	8.51um			6.2Msz				i(pP)	51	18.40	124kmX
AVF	84.35	43 eP	50	04.50	-0.8	SAX	88.47	43 ePd	50	26.40	0.5				e	54	28.00	
	1.3s	124.10nm			6.0mb	BOB	88.54	45 Pd	50	26.80	0.8				eSP	02	19.00	
SSF	84.48	43 eP	50	05.30	-0.7	OSS	89.02	44 ePd	50	28.90	0.5				LR	31	12.00	
	1.3s	101.00nm			5.9mb	KBS	89.19	11 eP	50	28.00	-0.4	MGR	93.24	50 P	50	48.00	0.2
SMF	84.68	43 eP	50	06.40	-0.6	SAL	89.30	45 Pc	50	30.80	1.3	ZST	93.65	42 eP	50	50.40	0.9
LOR	84.73	43 eP	50	06.70	-0.6	PII	89.33	46 Pc	50	29.40	-0.2		Z	20s	4.80um		6.0Msz
	1.4s	115.00nm			5.9mb	BDI	89.37	46 P	50	29.00	-1.0				e	54	32.00	
LBF	84.80	43 eP	50	06.80	-0.8	NB2	89.42	29 P	50	29.00	-0.8	SRO	94.50	42 iP	50	54.90	1.5
	1.3s	55.50nm			5.6mb		1.4s	42.90nm			5.5mb	KEV	94.65	20 eP	50	47.00	-6.7X
BRW	84.81	342 P	50	03.40	-3.8X	MME	89.44	46 P	50	31.29	0.7		0.8s	19.10nm			5.6mb
UCC	85.31	39 iP+	50	14.00	4.0X	GRF	89.69	40 ePc	50	32.00	0.7		Z	24s	2.40um		5.6MszX
DOU	85.41	40 P+	50	11.00	0.4		1.4s	60.00nm			5.7mb				i	51	04.00	
	1.1s	223.10nm			6.3mb	Z	19s	8.20um			6.2Msz				ePP	54	44.00	
Z	19s	5.50um			6.0Msz			e	51	00.40					eSKS	01	28.00	
		S	00	36.00				e	51	20.20					eS	02	08.00	
DBN	85.90	38 iP+	50	14.00	1.1	FIR	89.86	46 eP	50	33.00	0.9				ePPS	04	12.00	
Z	20s	5.70um			6.0Msz			iS	01	15.00					LR	29	20.00	
		ePP	53	44.00		MOX	89.92	40 eP	50	32.50	0.2	SOD	95.17	22 iP	50	54.50	-1.7
		eS	00	35.00			2.4s	120.00nm			5.7mb	KRA	95.28	40 eP	50	58.00	1.0
		eSP	01	36.00		Z	16s	4.00um			5.9MszX		1.3s	67.00nm			5.9mb
VITF	86.22	42 P	50	14.29	-0.3	N	19s	3.00um					Z	24s	6.90um		6.0MszX
ENN	86.30	39 ePc	50	14.00	-0.9	E	20s	2.70um					N	24s	4.80um		
	1.0s	175.00nm			6.2mb	CTI	90.07	44 P	50	33.20	-0.1				e	51	24.00	
		i	50	19.00		PGD	90.19	46 P	50	33.50	-0.4				e	02	18.00	
LRG	86.30	47 eP	50	15.20	0.1	COP	90.23	34 iP+	50	35.00	1.4	PSZ	95.54	42 eP	50	59.90	1.5
	1.5s	135.80nm			5.9mb	CRE	90.36	47 P	50	33.50	-1.2	SPC	95.60	41 iP	51	00.70	2.0
MEM	86.34	40 Pc	50	15.10	0.0	SLL	90.47	30 eP	50	33.40	-1.3	SBA	95.98	191 (P)	51	05.50	5.8X
WLF	86.39	40 Pc	50	16.00	0.6		0.6s	2.30nm			4.6mb X	NUR	96.02	29 eP	51	01.00	0.9
LMR	86.40	47 eP	50	15.50	-0.1	CLL	90.77	39 ePc	50	36.00	-0.2		0.7s	17.40nm			5.6mb
	1.5s	146.20nm			6.0mb		2.3s	110.00nm			5.8mb		Z	22s	4.90um		5.9Msz

			ePP	54	48.00		
			eSKS	01	32.00		
			eS	02	20.00		
			ePS	03	40.00		
			LR	31	00.00		
SUF	96.18	26	eP	51	01.00	0.1	
TIM	96.76	44	iPc	51	06.50	2.7X	
BZS	97.05	44	iPc	51	07.00	1.9	
OHR	97.11	48	eP	51	07.00	1.4	
	1.3s		0.06nm			3.0mb X	
			eSKS	01	43.80		
SKO	97.46	48	iP	51	07.00	-0.1	
	1.4s		30.00nm			5.7mb	
	Z 20s		2.48um			5.7Msz	
	N 19s		1.93um				
	E 20s		3.38um				
			i	51	31.20		
			iPP	55	05.00		
			iPPP	57	02.00		
			iSKS	01	43.00		
			i	02	33.00		
			iPS	03	52.00		
			iSS	09	08.00		
			iSSS	13	00.10		
			LR	34	45.00		
BMR	97.98	42	ePd	51	13.00	3.7X	
BNG	98.05	85	iPc	51	10.00	-0.3	
	1.0s		27.00nm			5.8mb	
			id	55	12.00		
VAY	98.40	48	eP	51	10.40	-0.9	
VTS	98.66	47	eP	51	04.00	-8.7X	
KKB	98.69	47	eP	51	14.00	1.4	
CMP	99.48	44	ePc	51	20.00	3.8X	
ATH	99.80	51	eP	51	20.00	2.3	
MLR	100.06	43	ePdiff	51	20.00	1.0	
PVL	100.09	46	ePdiff	51	19.00	0.1	
BUC1	100.36	45	ePdiff	51	20.00	-0.1	
BUC	100.39	45	ePdiff	51	20.00	-0.2	
BUL	107.49	111	ePKP	56	19.50	18.2X	
HLW	107.51	58	e(Pdif	51	56.00	3.7X	
			eS	02	56.00		
NAI	116.43	91	iPKPc	56	20.00	1.3	
	1.0s		5.00nm				
BRS	123.47	238	iPKPc	56	40.50	9.0X	
MAIO	126.80	41	iPKPd	56	38.00	0.2	
			e	58	33.00		
MDJ	127.55	334	ePKP	56	42.00	3.2X	
	Z 22s		5.90um			6.2Msz	
			ePP	58	41.00		
			eSKKS	05	34.00		
			SS	15	43.00		
MAT	128.63	321	(PKP)	56	39.00	-2.2	
	Z 20s		3.55um			6.1Msz	
CN2	129.96	336	ePKP	56	40.00	-3.4X	
	Z 22s		6.00um			6.2Msz	
	N 16s		1.80um				
			PP	58	52.00		
ADE	130.95	222	e(PKP)	56	44.90	-0.8	
CTA	131.38	244	iPKPd	56	52.70	5.9X	
			iPP	00	08.00		
			i	03	55.00		
			i	06	02.00		
			i	09	02.00		
			i	09	20.00		
			i	13	08.00		
			i	17	06.00		
			i	17	18.00		
SNY	132.36	337	PKPc	56	44.00	-4.0X	
	Z 30s		4.20um			6.0MszX	
	N 27s		4.70um				
	E 28s		3.60um				
			PP	59	11.00		
GUMO	133.55	290	ePKP	56	53.00	2.0	
WMO	133.82	13	PKP	56	50.00	-0.9	
	Z 24s		4.60um			6.1MszX	
	N 18s		2.90um				
	E 18s		2.20um				
			PP	59	20.00		
			SS	17	04.00		
KSH	133.83	26	PKP	56	51.00	-0.1	
	E 16s		3.60um				
			sPKP	59	04.00		
QUE	135.45	43	ePKP	56	53.80	-0.7	
			eS	00	28.00		
DL2	135.63	336	ePKP	56	54.00	-0.3	
	Z 22s		2.70um			5.9Msz	
	N 20s		3.00um				
	E 18s		2.70um				
			ePP	59	32.00		
			PKS	00	24.00		
			SKKS	06	16.00		
BJI	136.55	342	ePKP	56	52.50	-3.5X	
	Z 19s		5.69um			6.3Msz	
	N 18s		3.51um				
			ePP	59	24.00		
			PKS	00	29.00		
			eSS	17	12.00		
HHC	136.99	348	PKP	56	55.00	-2.0	
	Z 32s		6.30um			6.1MszX	
	N 18s		4.00um				
	E 15s		1.20um				
			sPKP	57	09.40		
			PP	59	40.00		
QIS	137.11	241	ePKP	56	48.00	-9.7X	
TIA	139.71	339	ePKP	56	56.10	-5.9X	
	N 18s		4.10um				
	E 18s		2.60um				
			PKS	00	35.00		
TIY	139.77	345	ePKP	56	56.50	-5.7X	
	Z 20s		7.01um			6.4Msz	
	N 20s		5.70um				
			sPKP	57	12.00		
			PP	59	57.50		
			SKKS	06	48.50		
			SS	18	10.00		
FORR	140.47	219	ePKP	57	00.00	-3.5X	
ASPA	140.55	233	ePKP	56	55.10	-8.8X	
SSE	142.34	330	PKP	57	00.00	-6.8X	
	8.0s		0.60nm				
	Z 20s		4.70um			6.2Msz	
	N 20s		9.00um				
	E 20s		1.90um				
			PP	00	16.00		
			iSS	18	40.00		
NJ2	142.65	334	PKPd	57	00.00	-7.3X	
	Z 20s		4.60um			6.2Msz	
			sPKP	57	16.00		
			PP	00	19.00		
LZH	142.83	355	ePKP	57	02.00	-5.8X	
	Z 20s		7.40um			6.4Msz	
	N 18s		4.30um				
			PP	00	11.00		
			eSS	18	08.00		
NDI	142.96	35	ePKP	57	03.50	-4.5X	
			ePP	00	18.00		
			SKS	07	24.00		
			SSP	19	04.00		
XAN	144.10	348	PKP	57	06.00	-3.8X	
	N 22s		6.30um				
	E 20s		3.50um				
			PP	00	16.00		
COOL	144.47	212	ePKP	57	06.60	-3.9X	
	0.7s		27.00nm				
WARB	144.52	223	ePKP	57	00.00	-10.7X	
NWAO	144.63	205	ePKP	57	07.50	-3.2X	
	Z 20s		3.80um			6.2Msz	
	N 20s		1.80um				
	E 20s		3.40um				
KLB	145.54	207	ePKP	57	10.00	-2.3	
	0.6s		42.00nm				
WHN	145.81	338	PKP	57	10.00	-2.7X	
	Z 20s		6.27um			6.4Msz	
	N 22s		4.10um				
	E 18s		3.58um				
			pPKP	57	19.00		
			PP	00	36.00		
			SKKS	07	29.00		
MUN	145.88	204	ePKP	57	11.40	-1.5	
	0.7s		78.00nm				
BOM	146.39	52	ePKP	57	14.00	0.0	
			ePP	01	25.00		
ANP	146.79	323	ePKP	57	16.00	1.4	
BAL	146.85	206	ePKP	57	13.00	-1.5	
GKN	147.32	26	PKP	57	14.60	-0.9	
MTN	147.39	248	iPKPd	57	16.00	0.3	
			e	57	42.00		
POO	147.40	52	iPKPc	57	19.40	3.7X	
			iS	07	52.00		
KKN	147.79	26	PKP	57	16.20	-0.1	
DMN	147.87	26	PKP	57	15.40	-1.1	
GUN	147.94	25	PKP	57	16.80	0.0	
CD2	147.97	355	ePKP	57	16.00	-0.3	
	Z 18s		3.90um			6.2Msz	
	N 16s		2.80um				
			e	57	42.60		
			SKKS	07	34.00		
PKI	148.03	26	PKP	57	14.80	-2.1	
LSA	148.10	15	PKP	57	17.60	0.5	
	E 19s		2.28um				
			pPKP	57	24.00		
KNA	148.47	241	ePKP	57	18.00	0.6	
OZH	148.64	327	PKPc	57	16.00	-1.5	
	Z 21s		2.90um			6.0Msz	
	N 18s		3.40um				
			SKKS	07	38.00		
MEKA	149.24	213	ePKP	57	20.50	2.1	
HYB	151.67	48	ePKP	57	15.00	-7.3X	
			e	57	25.50		
			e	01	12.00		
GYA	151.91	348	PKP	57	21.00	-1.5	
	Z 22s		4.10um			6.2Msz	
	N 20s		4.00um				
	E 20s		3.20um				
			PP	01	06.00		
			SKKS	07	55.00		
			SS	20	28.00		
SHL	152.21	17	iPKP	57	22.10	-1.0	
MBL	152.50	222	ePKP	57	24.00	0.7	
GZH	152.82	333	ePKP	57	22.00	-1.7	
	Z 20s		4.20um			6.2Msz	
	E 18s		3.70um				
			ipPKP	57	34.00		
			PKS	00	56.00		
GBA	152.95	56	PKPc	57	23.20	-0.9	
	0.9s		10.40nm				
HKC	153.10	331	ePKP	57	24.00	-0.1	
BAG	153.52	312	ePKP	57	24.00	-1.1	
DAV	153.57	288	ePKP	57	26.00	1.0	
KMI	153.80	355	PKP+	57	24.50	-0.9	
	E 22s		3.80um				
			pPKP	57	32.00		
			sPKP	57	37.00		
			e	57	44.00		
			PP	01	16.50		
			SKKS	08	07.50		
			SS	20	47.00		
NANU	154.11	214	ePKP	57	33.00	7.5X	
QCP	154.21	308	ePKP	57	30.50	4.7X	
QIZ	157.91	336	ePKP	57	26.00	-4.6X	
	N 21s		4.20um				
	E 19s		3.30um				
			e	57	55.00		
			PP	01	40.50		
			SKKS	08	32.00		
CHG	160.13	4	ePKP	57	32.70	-0.4	
CHTO	160.13	4	ePKP	57	31.17	-1.9	
LOE	161.53	356	ePKP	57	35.00	0.6	
TRT	166.16	242	ePKPd	57	38.80	0.0	
SNG	171.74	358	ePKP	57	35.80	-6.4X	
			eS	23	47.00		
PPI	179.33	359	ePKP	57	41.50	-2.6X	
	S.D. = 1.0		on 364 of 441 obs.				

JUN 25, 1989 20h 43m 34.56± 0.80s
42.821 N ± 5.7km 12.963 E ± 7.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (ROM), 2.3 (SSO).

ASS	0.33	319	P	43	41.90	0.4	
			eSg	43	46.90		
CIO	0.40	20	iPg	43	42.27	-0.4	
			iSg	43	48.71		
ALP	0.45	95	iPgd	43	42.69	-1.1	
			iSg	43	49.45		
MNS	0.48	206	Pc	43	43.40	-1.0	
			eSg	43	50.80		
ARV	0.68	359	P	43	47.70	-0.3	
			eSg	43	58.20		
AOI	0.87	32	ePg	43	52.09	0.9	
			i(Sg)	44	06.37		
SDI	1.28	150	P	44	00.00	1.6	
			eSn	44	18.20		
	S.D. = 1.2		on 7 of 7 obs.				

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* JUN 25, 1989 21h 00m 23.75± 2.59s
37.155 N ±21.3km 72.075 E ±11.6km
DEPTH = 243.1 ± 35.7 km
4.1mb (4 obs.)
TAJIK SSR (715)

25d 21h

QUE	8.15	213	eP	02 19.50	-0.4
			eS	03 49.50	
GKN	13.97	127	P	03 32.20	-0.8
KKN	14.53	126	P	03 40.60	0.7
DMN	14.54	127	P	03 41.80	1.7
PKI	14.76	127	P	03 42.80	-0.1
GUN	14.84	124	P	03 43.00	-0.8
GBA	23.94	167	Pc	05 16.90	-0.4
	0.6s		4.20nm	4.2mb	
MLR	35.22	298	ePc	06 59.00	2.3
HFS	43.09	321	eP	08 00.10	-1.1
	0.4s		3.40nm	4.1mb	
Z	18s		2.83um	5.2Msz	
			LR	23 47.00	
NB2	44.38	323	P	08 10.60	-0.9
	0.5s		1.50nm	3.6mb	
MBC	66.64	3	eP	10 49.50	-0.1
	0.4s		2.00nm	4.2mb	
S.D. = 1.3 on 11 of 11 obs.					

JUN 25, 1989 21h 57m 38.21± 0.71s
42.824 N ± 5.2km 12.985 E ± 7.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (ROM), 2.5 (SSO).

ASS	0.34	316	P	57 45.90	0.6
			eSg	57 51.00	
CIO	0.39	17	iPgc	57 45.96	-0.2
			iSg	57 52.61	
ALP	0.44	96	iPgc	57 46.93	-0.2
			iSg	57 54.03	
MNS	0.49	207	Pc	57 47.50	-0.7
			eSg	57 55.00	
ARV	0.67	357	Pc	57 51.40	-0.2
			eSg	58 02.40	
SDI	1.28	151	P	58 02.80	0.9
			eSn	58 22.50	
S.D. = 0.8 on 6 of 6 obs.					

JUN 25, 1989 22h 55m 06.76± 0.59s
41.065 N ± 4.5km 20.068 E ± 6.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.4 (ROM).

TIR	0.32	332	iPgd	55 13.20	-0.2
BERA	0.37	194	iPgc	55 12.90	-1.5
OHR	0.55	85	iPgd	55 18.40	0.3
			iSg	55 28.60	
LACI	0.63	335	ePg	55 18.90	-0.5
PHP	0.68	24	iPgd	55 19.80	-0.5
LSK	1.00	156	ePg	55 26.60	0.8
SDA	1.04	336	ePg	55 27.70	1.3
SRN	1.18	183	ePg	55 29.80	1.0
BCI	1.30	360	ePn	55 35.50	4.7X
SKO	1.37	48	iPn	55 32.00	0.1
VAY	1.91	81	ePn	55 38.70	-0.9
S.D. = 1.0 on 10 of 11 obs.					

& JUN 25, 1989 23h 56m 39.56s
58.284 N 142.768 W
DEPTH = 10.0km (geophysicist)
4.1mb (2 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 4.1 (PMR).

MID	2.18	303	eP	57 11.40	-5.0
BALM	2.77	4	iP	57 19.62	-5.3
			S	57 49.65	
CTGM	2.79	15	eP	57 20.04	-5.1
GLB	3.21	351	iP	57 25.31	-5.8
VZW	3.38	327	eP	57 27.33	-6.2
KLU	3.59	335	iP	57 30.53	-5.9
HYT	3.70	44	P	57 33.20	-4.9
SEW	3.89	301	eP	57 34.02	-6.6
SIT	4.18	104	eP	57 40.10	-4.6
TOA	4.19	338	eP	57 40.70	-4.3
SLKM	4.41	303	eP	57 41.75	-6.4
CNPM	4.56	289	eP	57 45.14	-5.1
PME	4.60	319	eP	57 45.11	-5.6
			S	58 36.66	
PMR	4.61	319	eP	57 45.00	-5.8
PAX	4.89	345	eP	57 48.23	-6.7
PWA	4.91	316	eP	57 49.75	-5.4
SUA	5.13	312	eP	57 51.69	-6.6
KDC	5.20	268	eP	57 56.30	-2.8
RDT	5.43	299	eP	57 55.68	-6.9
SPU	5.52	306	eP	57 57.51	-6.3
ILIM	5.54	293	eP	57 58.11	-6.0
RED	5.55	297	eP	57 57.01	-7.2
OPT	5.58	289	eP	58 00.56	-4.1
CDD	5.72	281	eP	58 02.05	-4.6
DWY	6.01	14	P	58 05.00	-5.6
MCK	6.23	334	eP	58 08.03	-5.7
KTH	6.61	327	eP	58 12.57	-6.6
CCB	6.82	341	eP	58 14.13	-7.9
NEA	7.00	337	eP	58 16.56	-8.0
FBA	7.06	342	eP	58 18.80	-6.5
TTA	8.00	311	eP	58 33.10	-5.6
IMA	9.31	332	eP	58 48.60	-8.3
YKA	14.48	61	eP	00 10.50	4.3
MBC	19.88	16	eP	01 08.00	-5.3
	0.8s		4.00nm	3.8mb	
FFC	22.54	81	eP	01 37.50	-3.0
	0.9s		14.00nm	4.4mb	
35 obs. associated					

JUN 26, 1989 00h 25m 44.05± 0.38s
44.480 N ± 3.0km 7.437 E ± 4.7km
DEPTH = 33.0km (normal)
NORTHERN ITALY (545)
ML 3.0 (LDG), 3.0 (ROM).

DOI	0.14	280	Pd	25 48.80	-1.4
			iSg	25 52.00	
FOUF	0.47	276	ePg	25 53.37	-0.9
			eSg	25 58.02	
AUTN	0.48	181	Pg	25 54.12	-0.5
TOUF	0.49	196	Pg	25 54.14	-0.5
AURF	0.60	188	Pg	25 55.92	-0.2
			Sg	26 04.09	
CKI	0.61	95	P	25 55.50	-0.7
			eSg	26 04.00	
SBF	0.62	180	Pg	25 56.40	0.0
			Sg	26 04.80	
MVIF	0.62	199	Pg	25 56.20	-0.3
			Sg	26 04.80	
REVF	0.74	184	Pg	25 59.00	0.9
			Sg	26 09.09	
BNI	0.79	317	Pc	25 58.50	-0.4
CALN	0.83	209	Pg	26 00.25	0.8
			Sg	26 13.45	
FRF	1.08	212	Pg	26 03.90	1.0
			Sg	26 18.00	
LPL	1.15	334	Pg	26 04.60	0.5
			Sg	26 18.00	
ORO	1.21	18	P	26 06.50	1.7
			eSg	26 20.80	
LRG	1.29	218	Pg	26 06.60	0.8
			Sg	26 24.20	
LMR	1.33	211	Pg	26 07.00	0.6
			Sg	26 24.80	
CVF	2.18	151	Pn	26 18.04	-0.7
SMF	3.33	312	Pn	26 35.40	0.4
HAU	3.61	348	Pn	26 38.60	-0.4
			Sn	27 19.00	
AVF	3.68	310	Pn	26 40.00	0.0
LOR	3.74	319	Pn	26 40.80	-0.1
BGF	3.84	304	Pn	26 41.80	-0.4
CAF	3.86	279	Pn	26 42.00	-0.5
TCF	4.10	298	Pn	26 46.40	0.4
LSF	4.52	295	Pn	26 52.00	0.0
S.D. = 0.7 on 25 of 25 obs.					

? JUN 26, 1989 00h 52m 11.68± 4.41s
32.728 S ±24.8km 70.901 W ±11.4km
DEPTH = 70.8 ± 34.4 km
CHILE-ARGENTINA BORDER REGION (127)

ROCH	0.26	201	iPd	52 23.10	0.0
			iS	52 32.80	
JACH	0.26	80	ePd	52 23.00	0.0
			iS	52 31.60	
PEL	0.45	156	iPd	52 24.50	0.1
SAN	0.75	165	iPd	52 27.70	0.2
			iS	52 39.70	
FCH	0.79	140	iPd	52 28.00	-0.2
			iS	52 41.30	
TACH	0.92	182	iPd	52 29.00	-0.5
			iS	52 42.50	
LCCH	0.93	217	iPd	52 29.80	0.2
			iS	52 41.40	
PCH	0.95	160	iPd	52 29.80	-0.1
			iS	52 43.80	
CHCH	1.22	170	iPd	52 33.90	0.5
			iS	52 50.60	
LNV	1.30	199	iPd	52 34.10	-0.2
			iS	52 51.50	
S.D. = 0.4 on 10 of 10 obs.					

• JUN 26, 1989 02h 27m 17.43± 1.37s
38.049 N ±13.2km 16.738 E ±10.7km
DEPTH = 33.0km (normal)
SOUTHERN ITALY (390)

ATN	1.01	277	P	27 35.50	0.2
			iS	27 49.50	
MNO	1.62	266	P	27 44.50	0.3
GIB	2.14	269	P	27 51.00	-0.6
MGR	2.28	337	P	27 53.50	0.0
			eS	28 19.00	
FAI	2.55	253	P	27 57.50	0.1
SGO	2.74	337	P	28 00.00	0.0
			eS	28 30.00	
OHR	4.38	44	iPn	28 23.40	0.0
S.D. = 0.4 on 7 of 7 obs.					

• JUN 26, 1989 02h 28m 50.15± 0.68s
17.739 N ±19.0km 65.646 W ±10.4km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.61	308	iP	29 02.00	-0.4
			S	29 09.00	
CSB	0.73	319	iP	29 04.10	-0.5
APR	1.26	305	iP	29 14.00	0.5
MGP	1.40	281	iP	29 16.00	0.3
NEV	3.00	101	eP	29 39.50	0.9
BPA	3.68	100	eP	29 48.50	0.1
PAG	4.16	114	eP	29 55.00	-0.2
BBL	4.56	118	eP	30 00.00	-0.9
S.D. = 0.7 on 8 of 8 obs.					

& JUN 26, 1989 03h 27m 03.96s
19.362 N 155.083 W
DEPTH = 9.4km
5.8mb (35 obs.) 6.1Msz (18 obs.)
HAWAII (613)
<HVO-P>. MD 6.2 (HVO). Ms 6.2 (BRK), 6.2 (PAS). Five people injured slightly, 5 homes destroyed and about 100 homes domaged in the Puna District. Landslides occurred in several places and blocked a road at Honomu. Slight domage (VI) at Hawaii National Park, Hilo, Honomu and Keaau. Felt (V) at Honokaa, Kopaau, Kurtistown, Ninole, Ookala, Paauhau and Volcano; (IV) at Hakalau, Hawi, Holualoa, Honaunau, Laupahoehae and Pahala. Felt throughout the island of Hawaii. Also felt on Maui and Oahu. A small tsunami was generated with maximum wave heights (peak-to-trough) of 57 cm. at Hanuapo, 21 cm. at Kapaha and 14 cm. at Hilo. Two events about 5 seconds apart, observed on broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike= 42 Dip=86 Slip= 115
NP2: 141 25 9
Principal Axes:
T Plg=44 Azm=336
P 36 110
Comment: The focal mechanism is moderately well controlled and corresponds to reverse faulting with a moderate strike-slip component. The preferred fault plane is not determined.
RADIATED ENERGY
No. of sta: 7 Focal mech. C
Energy 0.4±0.1*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 11 No. of sta: 19

Moment Tensor; Scale 10**18 Nm
Mrr=-0.29 Mtt= 0.70
Mff=-0.41 Mrt= 4.45
Mrf= 3.07 Mtf=-0.05
Principal axes:
T Val= 5.45 Plg=43 Azm=331
N -0.01 6 236
P -5.44 46 140
Best Double Couple:Mo=5.4*10**18
NP1:Strike=130 Dip= 6 Slip= -15
NP2: 236 88 -96
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 38C M.W.: 14S, 25C
Centroid Location:
Origin Time 03:27:16.6 0.2
Lat 19.47N 0.02 Lon 155.06W 0.02
Dep 15.0 FIX Half-duration 5.7
Moment Tensor; Scale 10**18 Nm
Mrr= 1.36 0.04 Mtt=-0.86 0.04
Mff=-0.50 0.04 Mrt= 3.77 0.09
Mrf= 3.33 0.09 Mtf=-0.57 0.03
Principal Axes:
T Val= 5.25 Plg=52 Azm=317
N -0.09 1 49
P -5.16 38 140
Best Double Couple:Mo=5.2*10**18
NP1:Strike=238 Dip= 7 Slip= 99
NP2: 49 83 89

WHA	0.04	133	iPc	27	05.82	-0.1
MKA	0.08	274	iPd	27	06.24	-0.1
KAE	0.09	213	iPc	27	06.48	0.1
HUL	0.11	60	iPd	27	06.80	0.0
PUH	0.13	277	iPd	27	07.00	-0.1
ESR	0.16	288	iPd	27	07.50	-0.1
AHA	0.17	274	iPd	27	07.77	-0.1
PKL	0.18	58	iPd	27	07.73	-0.2
RIM	0.19	281	iPd	27	07.96	-0.2
OUT	0.19	278	iPd	27	08.02	-0.2
NPH	0.20	286	iPd	27	07.99	-0.3
KNH	0.20	262	iPd	27	08.16	-0.1
HLP	0.22	254	iPd	27	08.72	-0.1
CPK	0.23	278	iPd	27	08.57	-0.4
POH	0.24	66	iPc	27	09.07	0.1
HBH	0.24	46	iPd	27	08.95	-0.1
MLX	0.27	292	iPd	27	09.22	-0.4
DES	0.29	265	iPd	27	09.42	-0.6
MLH	0.32	295	iPd	27	10.26	-0.4
KFH	0.32	281	iPd	27	10.45	-0.2
HTC	0.32	248	iPd	27	10.55	-0.1
NGH	0.34	9	iPc	27	11.41	0.4
AIN	0.36	272	iPd	27	10.90	-0.4
PLL	0.40	296	iPd	27	11.40	-0.7
WOH	0.41	255	iPd	27	11.84	-0.5
PPL	0.41	241	iPc	27	11.98	-0.4
TRH	0.44	277	iPd	27	12.51	-0.6
HMH	0.45	303	iPd	27	12.53	-0.6
WIH	0.48	283	iPd	27	13.12	-0.8
SWH	0.50	281	iPd	27	13.15	-1.1
MWH	0.50	285	iPd	27	13.36	-0.8
WOB	0.50	290	iPd	27	13.34	-0.9
KHU	0.52	257	iPc	27	13.38	-1.1
HPU	0.55	320	iPd	27	14.31	-0.8
DAH	0.55	270	iPd	27	13.77	-1.4
KKU	0.58	335	iPc	27	15.15	-0.6
KIH	0.66	283	iPc	27	15.46	-1.8
SPT	0.67	236	iPc	27	15.20	-2.1
WKH	0.74	312	iPc	27	16.64	-1.9
KUH	0.75	263	iPc	27	16.32	-2.4
HUH	0.78	295	iPc	27	17.71	-1.7
CPH	0.80	279	iPc	27	17.08	-2.5
KOH	1.01	319	iPc	27	20.15	-3.0
HON	3.37	306	eP	27	54.20	-3.5
OPA	3.59	311	eP	27	57.00	-3.9
GCC	33.83	52	ePc	33	50.90	2.2
BRK	33.97	50	iPc	33	51.70	1.9
	Z 17s	28.00um			6.1MszX
		iS	39	20.00	
		eLR	41	24.00	
BKS	33.99	50	iPc	33	51.00	1.0
	0.9s	73.00nm			5.6mb
	Z 20s	11.00um			5.6Msz
	N 20s	42.00um			
	E 20s	13.00um			
		e	34	51.00	
		e	35	26.00	

			iS	39	16.00	
			e	39	24.00	
			i	39	26.05	
			i	39	49.60	
			eLQ	41	04.00	
			eLR	41	23.85	
			e(SS)	41	25.00	
ZSP	34.00	50	ePc	33	51.30	1.2
PRS	34.05	53	iPc	33	51.40	0.8
FHC	34.08	44	iPc	33	52.70	1.8
MHC	34.21	51	iPc	33	53.20	1.0
	Z 19s	11.00um			5.6Msz
	N 19s	39.00um			
	E 19s	23.00um			
		iS	39	31.10	
		eLQ	41	11.75	
		eLR	41	34.90	
ARN	34.30	51	eP	33	53.70	0.9
LLA	34.47	53	ePc	33	55.30	1.1
PRI	34.52	54	iPc	33	55.90	1.1
SYP	34.55	57	eP	33	56.00	0.9
			e	36	35.00	
BCH	34.66	56	eP	33	57.30	1.3
PMO	34.87	168	iP	33	58.80	1.1
	1.4s	175.00nm			5.7mb	
TPT	34.91	167	iP	33	59.10	1.0
	1.4s	200.00nm			5.8mb	
WDC	34.94	46	iPc	33	59.50	1.3
VAH	35.16	167	iP	34	01.00	0.9
	1.4s	150.00nm			5.7mb	
RUV	35.16	167	iP	34	01.30	1.1
	1.4s	160.00nm			5.7mb	
ORV	35.20	48	iPc	34	01.40	0.9
CMB	35.40	51	ePc	34	02.59	0.4
			ec	34	06.90	
MIN	35.47	47	iPc	34	03.70	0.8
FRI	35.53	53	iPc	34	04.00	0.8
PAS	35.88	58	eP	34	07.00	0.7
			epP	34	10.00	10kmX
			esPS	34	46.00	
			ePP	35	23.00	
			ePcP	35	42.00	
			ePcS	40	20.00	
			eLg	41	56.00	
			eSS	42	28.00	
			eLR	42	57.00	
MWC	35.99	58	eP	34	08.00	0.5
			e	36	39.00	
ISA	36.06	56	eP	34	09.00	1.2
SDN	36.15	355	e(P)	34	24.60	16.4
	Z 18s	33.00um			6.1Msz	
SBB	36.30	57	eP	34	10.00	0.1
			e	36	34.00	
RVR	36.49	59	eP	34	12.00	0.6
			e	36	39.00	
ADK	36.61	338	eP	34	13.00	0.9
	1.3s	122.60nm			5.6mb	
PLM	36.76	60	eP	34	15.00	1.1
BAR	36.77	61	eP	34	15.00	1.2
CLC	36.78	56	eP	34	15.00	1.1
AFI	36.92	208	ePc	34	15.04	-0.2
			ec	34	18.19	
			S	40	00.00	
			LR	42	00.00	
AFR	37.04	172	iP	34	16.90	0.9
	0.1s	150.00nm			6.7mb	
PPN	37.08	171	iP	34	16.10	-0.3
	1.1s	110.00nm			5.5mb	
PPT	37.10	171	iP+	34	17.10	0.6
	1.1s	120.00nm			5.6mb	
	Z 18s	71.00um			6.5Msz	
PAE	37.19	171	iP	34	18.00	0.7
	1.1s	130.00nm			5.6mb	
GSC	37.27	57	eP	34	20.00	2.0
TVO	37.35	171	iP	34	20.10	1.3
	1.1s	140.00nm			5.6mb	
KVN	37.44	50	eP	34	20.50	1.0
TPC	37.58	59	eP	34	22.00	1.3
BMW	37.59	37	eP	34	22.00	1.5
TNP	37.76	52	eP	34	23.50	1.2
GLA	38.37	61	eP	34	29.00	1.7
			e	36	12.00	
KDC	38.38	2	ePc	34	28.90	2.0
GMW	38.46	36	eP	34	30.00	2.2
VGB	38.49	40	eP	34	29.80	1.7
LON	38.55	37	ePc	34	30.30	1.7
PGC	38.76	34	eP	34	33.00	2.8

RMW	38.95	36	eP	34	33.20	1.2
SIT	40.40	17	eP	34	45.70	2.0
	Z 22s	27.00um			6.1Msz	
RAR	40.58	187	P	34	52.00	6.4
			S	41	04.00	
SMY	41.00	332	eP	34	50.20	1.6
	Z 20s	25.00um			6.1Msz	
MSU	41.68	53	eP	34	56.70	1.9
SVW	41.70	360	ePc	34	55.80	1.4
PMR	42.40	4	ePc	35	01.00	1.0
	1.1s	140.60nm			5.6mb	
	Z 19s	24.00um			6.1Msz	
HPI	42.62	46	eP	35	04.00	1.5
TBI	42.80	172	eP	35	10.00	6.3
	1.6s	585.00nm			6.1mb	
DAU	42.87	51	eP	35	06.00	1.3
TOA	43.15	6	iPc	35	07.90	1.6
TTA	43.54	359	iPc	35	10.00	0.6
LRM	43.84	43	ePc	35	13.40	1.1
VUN	45.32	217	eP	35	28.90	4.7
MZX	45.34	76	eP	35	30.00	5.6
SVA	45.41	217	eP	35	31.50	6.6
ALQ	45.53	60	eP	35	27.00	1.0
	2.0s	330.88nm			6.0mb	
		eS	42	14.00		
		eLg	45	46.00		
ANMO	45.53	60	ePc	35	26.54	0.5
		ec	35	30.85		
COL	45.77	4	ePc	35	27.53	0.3
		ec	35	32.50		
		e	35	38.62		
		eS	42	11.44		
FBA	45.77	4	eP	35	26.30	-0.9
	1.6s	393.44nm			6.1mb	
SES	46.56	38	ePc	35	33.20	-0.5
	1.7s	311.00nm			6.1mb	
RKT	46.56	154	eP	35	35.00	1.1
	1.6s	355.00nm			6.2mb	
EDM	46.61	33	eP	35	33.50	-0.6
	1.0s	231.00nm			6.2mb	
IMA	46.69	1	ePc	35	34.40	-0.2
	1.9s	138.20nm			5.7mb	
GOL	47.10	53	eP	35	39.30	0.8
	Z 16s	8.80um			5.8MszX	
GLD	47.23	53	eP	35	40.00	0.6
	Z 16s	16.22um			6.1MszX	
PET	48.93	325	eP	35	53.00	0.9
		eS	43	12.00		
MRX	50.60	80	eP	36	08.50	3.1
ILT	50.77	349	iPd	36	06.50	0.5
		S	43	34.00		
INK	50.77	10	eP	36	05.00	-1.0
	1.4s	259.00nm			6.0mb	
YKA	51.29	23	eP	36	11.30	1.2
YKC	51.33	23	ePc	36	10.00	-0.4
PVC	51.50	227	iPc	36	19.50	7.3
BRW	51.95	359	ePc	36	15.70	0.8
CRX	52.06	80	eP	36	15.00	-1.9
ACX	52.36	83	eP	36	21.50	2.6
IIC	52.39	80	eP	36	22.00	2.6
III	52.44	81	eP	36	23.00	3.4
UNM	52.53	80	iPd	36	30.00	9.6
HNR	52.74	241	eP	36	24.00	2.3
		eS	43	56.00		
FFC	53.33	35	eP	36	24.00	-1.5
	1.2s	17.00nm			4.9mb	
IIT	53.40	80	(P)	36	30.00	3.1
SIO	53.86	59	ePd	36	20.20	-9.5
TUL	54.28	59	ePd-	36	33.00	0.2
	1.4s	160.00nm			5.9mb	
	Z 18s	13.98um			6.1Msz	
		e	50	00.00		
		LR	52	54.00		
LNO	54.28	59	ePc	36	32.10	-0.5
VVO	54.32	60	eP	36	22.30	-10.7
RLO	54.91	59	ePd	36	37.80	0.4
LVVM	55.00	79	eP	36	41.00	2.7
OXX	55.26	82	eP	36	43.00	2.6
KUSJ	55.39	309	eP	36	41.80	1.0
DZM	55.77	224	iPc	36	43.90	0.1
RAB	56.90	251	e(P)	36	56.00	4.0
			e(S)	45	56.00	
ASAJ	56.98	311	eP	36	53.50	1.3
YSS	57.21	314	iPc	36	54.00	0.3
			iS	44	53.00	
RSON	57.21	41	eP	36	53.60	-0.1
	1.5s	230.41nm			6.0mb	

26d 03h

	Z 16s		7.74um		5.9MszX
GUA	57.61	274	eP	36 57.70	0.7
	1.2s		500.00nm		6.4mb
PJG	57.64	274	eP	36 57.90	0.7
OLY	57.80	60	eP	36 57.50	-0.6
FVM	58.58	57	eP	37 02.60	-0.9
KAKJ	58.69	301	eP	37 09.10	4.8
NIIJ	59.60	302	P	37 11.80	1.2
CHJJ	59.65	301	P	37 10.40	-0.6
MBC	59.77	9	eP	37 09.00	-2.2
	1.1s		210.00nm		6.2mb
TPX	59.92	84	eP	37 19.00	5.9
MAT	60.26	302	iPc	37 15.70	0.5
	1.5s		291.67nm		6.2mb
	Z 20s		6.74um		5.8Msz
			eS	45 30.00	
IIDJ	60.56	300	P	37 18.30	1.0
MTMJ	60.59	302	eP	37 18.30	0.8
TSRJ	62.13	301	P	37 28.70	0.8
WKYJ	62.57	299	eP	37 31.80	0.9
TKSJ	63.87	299	eP	37 39.90	0.5
YONJ	64.21	300	eP	37 41.30	-0.3
SHK	64.93	300	eP	37 47.00	0.7
PRM	65.38	61	eP	37 49.20	0.0
JSC	66.26	60	eP	37 54.50	-0.3
SHNJ	66.27	300	eP	37 55.70	0.8
MDJ	66.33	311	ePc	37 55.42	0.4
	Z 34s		27.00um		6.2MszX
	N 16s		7.10um		
			ec	38 00.39	
			e	38 06.02	
SNZO	66.55	204	iP-	38 04.00	7.7
			S	46 58.00	
BLA	66.56	57	eP	37 56.80	0.1
KUMJ	66.73	298	eP	37 59.30	1.4
KAGJ	66.89	296	eP	38 00.30	1.4
TIK	67.37	341	iPc	38 01.50	0.3
			eS	47 05.00	
DHN	67.62	51	eP	38 02.60	-0.7
BRS	68.63	229	iPc	38 14.80	5.0
GCM	68.99	76	eP	38 17.65	5.5
GAC	69.24	47	eP	38 13.00	-0.3
CN2	69.38	310	Pc	38 13.00	-1.2
	5.0s		1.30nm		3.4mb X
	Z 28s		25.80um		6.3MszX
	N 18s		6.80um		
			sP	38 24.00	
			PP	40 54.00	
CTA	69.57	239	iPc	38 23.20	7.5
	1.8s		288.64nm		6.1mb
			i	39 36.00	
			iS	47 28.00	
			i	51 50.00	
			i	55 30.00	
TBR	70.78	52	eP	38 22.80	0.0
GMTN	70.85	52	eP	38 23.60	0.4
PNJ	70.86	52	iP	38 24.50	1.2
			i	38 28.00	
RMO	71.04	232	e(P)	38 26.00	1.5
COO	71.16	227	eP	38 29.00	3.8
			e	38 36.50	
ALE	71.29	8	eP	38 24.00	-1.2
	0.9s		37.00nm		5.5mb
FRB	71.30	28	eP	38 25.00	-0.5
	1.2s		156.00nm		6.0mb
MSZ	72.11	207	P	38 30.80	0.3
HIA	72.48	317	ePc	38 32.82	0.0
			ec	38 37.95	
			e	38 43.91	
			ePP	41 18.51	
HRV	72.51	50	ePc	38 33.09	0.0
			ec	38 37.22	
DL2	73.01	306	P	38 37.00	0.9
	Z 38s		18.30um		6.1MszX
	E 16s		6.30um		
SCH	73.44	37	eP	38 39.00	0.6
UPA	73.51	86	eP	38 41.20	1.8
	Z 20s		16.63um		6.3Msz
MIM	73.78	47	eP	38 41.00	0.5
CBM	74.08	45	eP	38 42.00	-0.2
SSE	75.06	298	P+	38 48.00	-0.1
	4.0s		1.00nm		3.2mb X
	Z 24s		10.60um		6.1MszX
	E 21s		9.70um		
			pP	38 58.20	33kmX
			sP	39 04.00	
			PP	41 40.00	
			PPP	43 48.00	
			iS	48 40.00	
			SKS	49 16.00	
			PS	49 40.00	
OIS	75.26	242	eP	38 51.00	1.6
CNB	75.69	224	eP	38 56.00	4.3
CMS	75.93	229	e(P)	38 56.50	3.5
CAN	75.94	224	eP	38 57.80	4.8
GDH	76.08	21	iPc	38 44.20	-9.0
	1.0s		24.00nm		5.2mb
			i	48 40.00	
ANP	76.24	292	eP-	39 03.00	7.9
			eS	48 56.00	
NJ2	76.76	300	Pc	38 58.50	0.8
	6.0s		1.40nm		3.2mb X
	Z 24s		10.80um		6.1MszX
	N 18s		3.30um		
	E 17s		5.70um		
			sP	39 08.40	
BJI	76.87	308	ePc	38 58.00	-0.2
	Z 36s		20.60um		6.2MszX
	N 13s		1.92um		
			ec	39 02.97	
			e	39 09.26	
			eS	48 49.77	
			eSKS	49 12.28	
TIA	77.10	304	eP	39 00.00	0.4
	Z 43s		22.60um		6.2MszX
	N 14s		3.10um		
	E 14s		2.70um		
			S	48 52.20	
DAV	77.66	273	eP	39 10.10	7.1
PSO	78.06	93	eP	39 08.50	2.8
QZH	78.86	293	Pc	39 10.50	1.1
	4.0s		1.90nm		3.5mb X
	Z 40s		13.10um		6.0MszX
	N 20s		4.70um		
	E 20s		7.10um		
			S	49 13.00	
STK	79.20	231	eP	39 15.00	3.9
			e	39 22.00	
WB5	79.37	245	eP	39 12.00	-0.2
			e	42 22.50	
BAG	79.52	284	eP	39 14.00	0.7
			eS	49 20.00	
TOO	79.54	224	eP	39 18.00	5.1
			e	39 23.00	
BOG	80.02	89	eP	39 20.00	3.6
HHC	80.05	310	P	39 16.40	0.7
	Z 40s		26.60um		6.3MszX
	N 14s		4.60um		
	E 20s		6.60um		
			eSKS	49 30.00	
BMG	80.18	86	eP	39 21.00	4.1
TIY	80.31	307	Pc	39 18.00	0.8
	N 13s		2.92um		
DAG	80.59	9	iPc-	39 17.90	0.1
	1.1s		103.80nm		5.7mb
	Z 19s		7.64um		6.1Msz
WHN	80.88	299	P	39 21.00	0.8
	Z 24s		10.90um		6.1MszX
	N 20s		3.77um		
	E 18s		5.38um		
			sP	39 32.00	
			iS	49 32.00	
			SKS	49 35.00	
BTO	81.24	310	iPc	39 23.50	1.4
	N 15s		3.20um		
	E 15s		3.90um		
			PP	42 35.00	
			SS	54 49.00	
BFD	81.29	226	eP	39 26.00	3.9
			e	39 31.50	
TAU	81.48	219	eP	39 29.00	6.1
			eS	49 54.00	
KBS	81.64	3	eP	39 25.40	2.1
MGP	82.37	74	iP	39 29.00	0.9
PNP	82.73	73	e(P)	39 30.00	0.0
ADE	82.83	229	eP	39 34.40	4.2
	1.0s		72.00nm		5.8mb
NNA	83.09	105	eP	39 28.00	-3.9
GZH	83.99	292	Pc	39 38.00	1.6
	Z 14s		4.20um		6.0MszX
XAN	84.16	304	P	39 37.80	0.6
	N 18s		4.10um		
	E 18s		9.50um		
ENH	84.95	300	ePc	39 41.77	0.7
			ec	39 46.41	
			e	39 52.53	
SKI	86.52	73	eP	39 54.96	5.9
NEV	86.74	73	eP	39 51.20	1.1
LZH	87.34	307	eP	39 53.00	0.0
	4.0s		1626.00nm		6.6mb X
	Z 46s		2.40um		5.2MszX
	E 17s		5.90um		
			pP	40 07.00	47kmX
			sP	40 16.00	
			PP	43 22.00	
			SKS	50 26.00	
			S	50 36.00	
			sS	50 49.00	
			PS	51 42.00	
			SS	56 24.00	
ANG	87.40	73	eP	39 55.11	1.8
BPA	87.41	73	eP	39 53.46	0.1
PAG	87.91	74	eP	39 59.00	3.2
BBL	88.26	74	eP	39 59.00	1.5
QIZ	88.41	289	eP	40 00.50	2.4
	E 20s		4.40um		
			S	50 41.00	
			sS	50 58.00	
			SS	56 37.00	
WARB	88.41	242	eP	39 54.00	-4.0
GYA	88.59	297	Pd	40 00.60	1.5
			sP	40 13.00	
			PP	43 34.00	
			SKS	50 30.00	
			S	50 50.00	
FDF	88.82	75	eP	40 06.00	5.8
			S	50 42.00	
GTA	88.98	312	Pc	40 02.00	1.2
	1.2s		0.10nm		3.0mb X
	Z 22s		9.30um		6.2Msz
	N 16s		5.10um		
			PP	43 37.00	
			SKS	50 29.00	
			sS	51 02.00	
FORR	89.02	237	eP	39 41.80	-19.0
CD2	89.35	303	eP	40 04.00	1.5
	N 16s		7.16um		
			SKS	50 34.00	
			S	50 45.00	
			sS	51 05.00	
ARE	89.52	108	eP	40 10.00	6.2
KEV	91.12	359	ePc	40 13.56	3.7
	1.0s		40.00nm		5.7mb
			e	40 20.18	
			ePP	43 53.10	
			eSKS	50 52.00	
			ePS	52 24.00	
			eSS	57 36.00	
KMI	92.37	298	ePc	40 18.01	1.2
	Z 30s		18.20um		6.3MszX
	N 20s		4.90um		
			ec	40 22.97	
			e	40 29.26	
			ePP	44 03.62	
			eS	50 10.00	
ZOBO	92.50	106	P	40 19.80	1.9
	1.0s		27.50nm		5.6mb
			S	51 16.00	
LPB	92.61	106	eP	40 22.00	3.8
			e	40 28.00	
			S	51 09.00	
			LR	10 48.00	
CNCB	92.81	107	Pc	40 21.80	2.5
SOD	93.52	359	iP	40 21.20	0.2
CCH	94.66	107	P	40 28.60	1.2
LOE	96.18	291	eP	40 35.00	0.9
CMG	98.07	293	eP	40 53.40	10.7
SUF	98.19	359	eP	40 44.00	1.6
NB2	99.12	7	P	40 53.30	6.6
	1.2s		7.20nm		5.2mb
SLL	99.89	6	(P)	40 51.40	1.1
	0.5s		1.20nm		4.7mb X
NUR	100.42	0	ePdiff	41 01.00	8.7
	Z 21s		5.20um		6.0Msz
			ePP	45 12.00	
			eSKS	51 40.00	
			ePS	54 00.00	
			eSS	59 40.00	
			LR	26 10.00	
UPP	100.84	4	iPdiff	40 54.20	0.0
			iS	51 36.00	

SHL	101.08	302	iPdiff	40	57.60	1.2
			eS	51	48.00	
OBN	105.11	353	ePdiff	41	22.00	8.7
	Z 20s		7.00um			6.2Msz
			iS	53	12.00	
DOU	108.55	14	Pdiff	41	42.00	13.2
			PP	46	04.00	
			SKS	52	17.00	
			PS	55	22.00	
CLL	108.86	8	ePdiff	41	35.00	4.9
	Z 17s		2.50um			5.8MszX
			eSKS	52	26.00	
			eS	53	48.00	
			PKKP	57	04.00	
SPA	109.24	180	e(PKP)	45	44.60	9.1
	1.0s		3.50nm			
	Z 20s		6.85um			6.2Msz
MOX	109.32	9	Pdiff	41	40.00	7.8
MOX	109.32	9	ePKP	45	50.00	14.0
BRG	109.41	7	e(Pdif	41	33.50	0.9
			eSKS	52	28.00	
KSP	109.69	6	ePdiff	41	34.50	0.6
			e	45	30.00	
			e	46	02.00	
PRU	110.35	7	ePdiff	41	35.50	-1.3
	Z 18s		4.60um			6.1Msz
	N 18s		2.90um			
	E 17s		4.10um			
			PP	46	00.00	
			SKS	52	32.00	
			PS	55	36.00	
			ePKKP	56	54.00	
			SS	01	50.00	
KRA	110.75	3	ePdiff	41	42.90	4.3
	Z 22s		4.80um			6.0Msz
	N 22s		4.70um			
			e	46	15.20	
			e	52	26.00	
			e	55	50.00	
KHC	111.07	8	Pdiff	41	40.50	0.4
			e	45	39.70	
SPC	111.63	3	ePdiff	41	44.00	1.2
			e	46	26.60	
ZST	112.39	6	ePdiff	41	52.80	6.9
	Z 20s		5.00um			6.1Msz
			e(PP)	46	22.00	
			e	56	48.50	
KBA	113.05	9	ePKP	45	48.00	4.6
	2.0s		48.00nm			
			i	46	22.50	
			e	46	39.00	
VOY	114.16	8	e(PKP)	45	51.50	5.9
			e	46	41.60	
VBY	114.85	7	e(PKP)	45	48.20	1.4
BZS	115.27	3	ePKP	45	51.50	4.0
MLR	115.45	359	ePKP	45	45.00	-3.1
SIM	115.45	353	ePdiff	42	12.00	12.4
QUE	116.25	320	ePKP	46	01.50	11.3
BMK	118.60	29	ePKP	46	04.50	10.3
SKO	118.89	3	ePdiff	42	30.00	15.0
SKO	118.89	3	ePKP	45	58.50	3.9
	N 20s		3.06um			
	E 18s		3.61um			
			iPP	46	20.00	
			iSKS	53	00.10	
			iSKKS	54	14.00	
			i	55	14.00	
			iPS	57	04.00	
			iSS	03	35.00	
			iSSS	07	38.00	
TAB	119.44	341	ePKP	46	13.00	17.1
			e	47	15.00	
BOM	119.55	306	ePKP	46	08.50	12.1
			ePP	47	23.50	
VAY	119.59	2	ePKP	45	55.00	-0.9
OHR	119.72	4	ePKP	46	01.80	5.6
			e	47	10.50	
SLY	121.96	340	ePKPd	46	04.50	4.0
HRI	126.65	349	ePKP	46	11.00	1.1
RMN	129.56	349	ePKP	46	17.00	1.6
LIC	141.06	52	PKP	46	35.72	-1.7
KIC	141.19	52	PKP	46	35.56	-2.0
KUK	144.44	47	ePKP	46	42.00	-1.2
ARO	144.58	329	ePKP+	46	48.00	4.5
WEGH	144.89	48	ePKP	46	47.50	3.5
LEGH	144.95	47	ePKP	46	43.50	-0.6
AAE	148.66	333	ePKP	46	56.00	5.5
BCAO	155.54	16	ePKP	46	59.82	-0.2
			ePP	51	02.04	
BNG	155.54	15	iPKPd	47	02.00	1.9
	1.0s		65.00nm			
			ic	47	29.00	
			ic	51	03.00	
NAI	158.58	326	ePKP	47	12.00	7.9
NPA	165.66	285	ePKP	47	20.50	9.8
			e	48	16.80	
			e	52	03.10	
SLR	172.94	206	ePKP	47	23.00	8.1
	Z 21s		14.70um			
KSR	173.27	195	ePKP	47	13.00	-2.1
	0.7s		15.00nm			
	302 obs. associated					

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* JUN 26, 1989 03h 41m 03.26± 0.79s
41.883 N ± 9.3km 22.090 E ± 5.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 1.9 (SKO).

SKO	0.49	281	iPg	41	12.80	-0.5
			iSg	41	19.70	
VAY	0.67	147	iPg	41	16.00	-0.5
			iSg	41	25.70	
KKB	0.74	91	iPg	41	18.00	0.2
VTS	1.09	49	iPg	41	24.00	0.1
			iSg	41	37.00	
OHR	1.24	232	ePg	41	27.00	0.7
			iSg	41	44.50	
S.D. = 0.7 on 5 of 5 obs.						

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* JUN 26, 1989 03h 44m 00.13± 1.82s
37.587 N ±14.7km 31.427 E ±15.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BCK	0.68	260	iPg	44	12.20	-1.4
			eSg	44	24.20	
ELL	1.47	236	ePn	44	27.20	0.4
KHL	1.67	297	iPn	44	30.10	0.4
ALT	1.79	325	ePn	44	31.60	0.2
BBTK	2.48	24	eP	44	41.00	-0.3
			e	47	04.00	
YER	2.55	261	ePn	44	43.00	0.8
S.D. = 1.0 on 6 of 6 obs.						

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* JUN 26, 1989 04h 37m 52.83± 1.19s
17.839 N ±24.5km 65.626 W ± 9.9km
DEPTH = 12.3 ± 8.3 km
PUERTO RICO REGION (90)

SJG	0.57	299	iP	38	04.00	-0.2
			S	38	12.00	
CSB	0.68	312	iP	38	06.00	0.0
			S	38	15.00	
PNP	1.03	282	iP	38	12.20	0.1
APR	1.22	301	iP	38	15.50	0.2
MGP	1.40	277	iP	38	18.00	-0.1
NEV	3.00	103	eP	38	41.00	0.0
S.D. = 0.3 on 6 of 6 obs.						

? JUN 26, 1989 05h 42m 09.39± 6.84s
43.498 N ±49.4km 19.266 E ±12.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.2 (TTG).

NKY	0.71	196	ePg	42	22.80	-0.7
			eSg	42	32.00	
IVA	0.78	143	ePg	42	24.60	0.0
			eSg	42	33.30	
BRY	0.80	222	ePg	42	25.00	0.0
			eSg	42	35.00	
TTG	1.07	180	ePg	42	29.50	0.0
			eSg	42	42.50	
BDV	1.26	195	ePg	42	33.40	0.7
			eSg	42	51.00	
S.D. = 0.7 on 5 of 5 obs.						

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* JUN 26, 1989 05h 58m 50.45± 0.97s
38.756 N ±12.5km 31.859 E ±11.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BBTK	1.29	33	iPc+	59	16.00	1.6
ALT	1.40	283	ePn	59	16.50	0.4
BCK	1.64	218	iPn	59	19.90	0.5
KHL	1.88	257	iPn	59	22.60	-0.4
ELL	2.53	218	ePn	59	33.80	1.4
YER	3.26	241	ePn	59	41.00	-1.6
KVT	3.97	53	ePn	59	51.00	-1.7
EZN	4.42	286	ePn	59	59.00	-0.1
S.D. = 1.5 on 8 of 8 obs.						

& JUN 26, 1989 06h 06m 10.61s
19.368 N 154.974 W
DEPTH = 3.8km
HAWAII (613)
<HVO-P>. MD 4.4 (HVO).

HUL	0.05	355	iPd	06	12.30	0.3
WHA	0.08	243	iP	06	12.70	0.3
PKL	0.10	29	iPd	06	13.10	0.3
MVH	0.16	328	iPd	06	14.00	0.1
KAE	0.17	242	iPd	06	14.45	0.4
MKA	0.18	270	iPd	06	14.45	0.2
KPO	0.18	43	ePc	06	14.35	0.1
PUH	0.23	272	iPd	06	15.30	0.0
PWH	0.25	251	ePd	06	15.85	0.2
ESR	0.25	280	ePc	06	15.55	-0.2
AHA	0.27	271	iPd	06	16.25	0.1
NPH	0.30	279	ePc	06	16.50	-0.1
KNH	0.30	264	ePd	06	16.50	-0.2
UWE	0.31	280	ePc	06	16.60	-0.2
			iS	06	21.00	
HLP	0.33	258	ePc	06	17.20	0.0
NGH	0.34	351	iPc	06	17.95	0.6
HIL	0.37	343	iPc	06	18.46	0.5
			iS	06	26.06	
DES	0.39	266	ePc	06	17.90	-0.6
MLH	0.41	288	ePd	06	18.60	-0.3
AIN	0.46	271	iPd	06	19.60	-0.2
PLL	0.49	290	ePd	06	19.80	-0.6
PPL	0.51	246	ePc	06	20.35	-0.4
HMH	0.54	296	ePc	06	20.95	-0.4
WIH	0.58	280	ePd	06	21.70	-0.6
MWH	0.60	282	ePd	06	21.80	-0.9
SWH	0.60	278	iPd	06	21.80	-0.9
HPU	0.61	312	iPd	06	22.45	-0.5
KHU	0.62	259	ePd	06	21.85	-1.2
KKU	0.62	326	eP	06	22.80	-0.3
DAH	0.65	269	ePd	06	22.20	-1.5
SPT	0.76	240	eP	06	24.45	-1.3
KIH	0.76	281	eP	06	24.20	-1.6
KUH	0.85	263	eP	06	25.10	-2.5
HUH	0.88	291	eP	06	26.15	-2.0
34 obs. associated						

? JUN 26, 1989 06h 52m 28.14± 2.35s
32.762 S ±18.2km 68.854 W ±26.0km
DEPTH = 33.0km (normal)
MENDOZA PROVINCE, ARGENTINA (139)

ZON	1.22	7	iPc	52	49.00	0.0
			eS	53	05.00	
FCH	1.33	245	iPc	52	52.50	1.6
			iS	53	16.00	
JACH	1.47	273	iPd	52	53.50	0.8
			iS	53	16.10	
PEL	1.59	256	iPc	52	54.50	0.2
			iS	53	18.00	
PCH	1.63	238	iPd	52	55.70	0.6
			iS	53	20.20	
SAN	1.67	245	iPc	52	55.80	0.3
			iS	53	19.70	
ROCH	1.83	263	iPc	52	56.70	-1.3
			iS	53	22.70	
CHCH	1.91	232	iPc	52	59.50	0.5
			iS	53	27.00	
TACH	1.96	242	iPc	52	59.00	-0.7
			iS	53	26.10	
LNV	2.45	240	eP	53	04.50	-2.1
			iS	53	34.90	
S.D. = 1.2 on 10 of 10 obs.						

JUN 26, 1989 07h 29m 07.01± 0.35s
44.666 N ± 2.8km 7.224 E ± 4.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

DOI	0.16	175	Pd	29	10.90	0.1
			iSg	29	13.50	

26d 07h

FOUF	0.34	247	iPg	29 14.03	-0.1
			eSg	29 17.13	
RRL	0.40	309	P	29 15.43	0.1
			S	29 20.46	
STV	0.43	170	P	29 15.84	0.1
			S	29 21.28	
ENR	0.46	162	P	29 16.25	-0.1
			S	29 22.20	
RSP	0.49	3	P	29 16.87	0.0
			S	29 23.74	
BNI	0.55	315	P	29 18.00	-0.1
			iSg	29 25.00	
ROB	0.59	128	P	29 18.81	-0.3
			S	29 26.61	
TOUF	0.65	178	Pg	29 20.08	-0.1
			Sg	29 28.62	
AURF	0.78	174	Pg	29 22.53	0.2
			Sg	29 33.01	
LSD	0.79	357	P	29 22.71	0.1
			S	29 32.97	
FIN	0.84	123	P	29 23.43	0.2
			S	29 35.12	
IMI	0.89	147	P	29 24.15	-0.1
			S	29 36.15	

S.D. = 0.2 on 13 of 13 obs.

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* JUN 26, 1989 07h 52m 03.46± 0.93s
38.825 N ±10.2km 31.663 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	1.23	281	ePn	52 26.50	0.1
BBTK	1.33	40	iPc	52 28.00	0.0
BCK	1.60	212	ePn	52 31.60	-0.4
KHL	1.75	254	ePn	52 34.00	-0.1
ELL	2.50	214	ePn	52 45.30	0.4

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

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* JUN 26, 1989 08h 38m 30.45± 2.23s
37.653 N ±14.9km 20.674 E ±22.4km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
ML 3.5 (ATH).

VLS	0.53	353	ePg	38 40.00	-1.1
ITM	1.10	115	ePg	38 50.20	-1.0
SRN	2.29	347	ePn	39 11.20	2.5X
ATH	2.43	82	ePb	39 10.70	-0.1
			eSn	39 39.20	
NEO	2.59	50	ePn	39 09.70	-3.5X
TPE	2.69	349	ePn	39 14.50	0.0
KZN	2.78	18	ePn	39 16.80	0.9
OHR	3.46	2	ePn	39 28.30	2.9X
VAM	3.62	127	ePn	39 28.40	0.7
TIR	3.74	351	ePn	39 39.20	9.7X
VAY	3.95	21	ePn	39 33.00	0.7
PHP	4.03	358	ePn	39 42.00	8.5X
SKO	4.35	8	ePn	39 34.00	-4.1X

S.D. = 1.0 on 7 of 13 obs.

? JUN 26, 1989 08h 51m 25.75± 1.64s
52.237 N ±23.2km 159.517 E ±28.1km
DEPTH = 33.0km (normal)
4.7mb (9 obs.)
OFF EAST COAST OF KAMCHATKA (219)

MAT	21.74	232	(P)	56 16.00	0.0
	1.0s		13.00nm		4.3mb
MBC	37.97	23	eP	58 41.50	0.1
	0.5s		1.00nm		3.9mb
KKN	59.09	276	P	01 25.00	-0.3
	0.5s		8.00nm		5.1mb
PKI	59.17	276	P	01 26.30	0.3
	0.4s		2.00nm		4.6mb
DMN	59.33	276	P	01 27.10	0.1
	0.6s		10.00nm		5.1mb
GKN	59.33	277	P	01 26.70	-0.2
SUF	59.65	337	iP	01 28.90	0.4
	0.6s		4.70nm		4.8mb
NB2	64.27	344	P	01 59.20	-0.2
	0.5s		2.60nm		4.6mb
HFS	64.66	342	eP	02 01.00	-0.9
	0.4s		5.00nm		5.0mb
GBA	74.53	272	Pd	03 02.90	0.0
	0.5s		2.90nm		4.5mb
MLR	74.79	328	ePd	03 05.00	0.8
			e	19 41.00	

S.D. = 0.5 on 11 of 11 obs.

JUN 26, 1989 09h 10m 37.26± 0.25s
32.947 N ± 5.7km 39.559 W ± 3.6km
DEPTH = 10.0km (geophysicist)
4.9mb (15 obs.) 4.2Msz (1 obs.)
NORTH ATLANTIC RIDGE (403)

TOL	29.26	66	eP	16 42.00	0.4
EPF	32.75	60	eP	17 12.50	0.2
	1.5s		31.30nm		5.0mb
MFF	32.86	54	eP	17 13.30	0.1
LFF	33.23	57	eP	17 16.20	-0.2
LPO	33.51	57	eP	17 18.50	-0.4
RJF	33.82	56	eP	17 21.20	-0.4
LSF	33.95	55	eP	17 22.70	0.0
CAF	34.16	57	eP	17 24.00	-0.6
	1.3s		18.00nm		4.8mb
TCF	34.42	55	eP	17 26.70	-0.1
	0.6s		45.00nm		5.5mb
LBF	35.72	54	eP	17 37.40	-0.5
FVM	41.32	292	P	18 24.80	0.2
	0.6s		7.15nm		4.6mb
KHC	42.31	51	eP	18 33.60	0.9
NB2	42.98	34	P	18 38.50	0.6
	1.2s		16.50nm		4.6mb
RLO	45.27	290	eP	18 57.00	0.2
LNO	45.93	290	eP	19 02.30	0.4
TUL	45.94	290	eP	19 02.30	0.3
	1.0s		7.70nm		4.6mb
Z	19s		0.25um		4.2Msz
			LR	32 20.00	
VVO	46.03	289	eP	19 03.90	1.2
SIO	46.38	290	e(P)	19 05.30	-0.2
FFC	48.18	316	eP	19 20.00	0.5
	0.9s		10.00nm		4.9mb
BAO	48.97	191	eP	19 27.00	1.0
GLD	52.27	297	P	19 50.00	-1.2
	1.4s		54.05nm		5.3mb
GOL	52.40	297	P	19 51.60	-0.6
	0.7s		7.28nm		4.7mb
ALO	54.57	292	e(P)	20 09.00	0.8
BW06	54.69	302	P	20 08.20	-0.8
	1.0s		16.27nm		5.0mb
EDM	55.00	315	eP	20 09.50	-1.4
PV09	55.54	297	P	20 15.80	0.5
MBC	55.86	343	ePc	20 16.70	-0.1
	1.0s		45.00nm		5.5mb
ZOBO	56.04	214	P	20 19.00	-0.4
CCH	56.13	211	P	20 20.00	0.3
LPB	56.26	213	P	20 20.00	-0.8
CNCB	56.45	213	P	20 22.00	-0.3
DPW	59.22	310	P	20 40.00	-0.9
BNG	61.02	105	iPd	20 53.50	-0.1
	0.9s		19.00nm		5.2mb
INK	61.26	335	eP	20 54.00	-0.4
TNP	61.69	299	P	20 57.70	-0.3
	0.6s		1.94nm		4.5mb
KVN	61.98	300	P	20 59.50	-0.5
CMB	64.03	300	P	21 13.50	0.2
FBA	67.83	334	P	21 38.00	0.7
	1.2s		8.33nm		4.8mb
IMA	69.27	337	eP	21 47.20	0.9
PMR	70.08	331	eP	21 52.10	1.0
	0.9s		16.00nm		5.1mb

S.D. = 0.6 on 40 of 40 obs.

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* JUN 26, 1989 09h 39m 43.98± 0.92s
38.762 N ±10.3km 31.880 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BBTK	1.28	32	iPc	40 09.00	1.2
			i	40 30.00	
ALT	1.41	283	iPn	40 09.00	-0.8
BCK	1.65	218	ePn	40 12.30	-0.9
KHL	1.90	257	ePn	40 18.00	1.2
GPA	1.95	322	ePn	40 17.00	-0.5
ELL	2.55	218	ePn	40 26.80	0.7
EDC	3.48	298	ePn	40 51.00	11.7X
KVT	3.95	53	ePn	40 45.00	-1.0

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

? JUN 26, 1989 09h 58m 29.54± 2.93s
44.222 N ±29.6km 7.456 E ±10.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

MD 2.4 (ROM).

DOI	0.32	332	P	58 36.00	-0.2
			eSg	58 41.50	
FOUF	0.57	303	ePg	58 41.04	-0.1
			eSg	58 46.42	
CKI	0.62	71	P	58 42.10	0.0
			eSg	58 51.00	
BNI	1.00	326	P	58 48.90	0.3
			eSg	59 03.70	

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

JUN 26, 1989 10h 38m 39.46± 0.13s
39.112 N ± 3.2km 28.242 W ± 1.6km
DEPTH = 11.3km (geophysicist)
5.7mb (59 obs.) 5.7Msz (13 obs.)
AZORES ISLANDS (405)
Ms 5.4 (BRK). Several people injured slightly and minor damoge (VI) on Graciosa. Felt (V) on Terceira and (IV) on Faial, Pico and Sao Jorge. Depth from broadbond displocement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=187 Dip=83 Slip= 175
NP2: 278 85 7
Principal Axes:
T Plg= 8 Azm=142
P 1 52
Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a small normal component. The preferred fault plane is not determined.
RADIATED ENERGY
No. of sto: 7 Focal mech. M
Energy 0.6±0.2*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 33 No. of sta: 13
Moment Tensor; Scale 10**17 Nm
Mrr= 0.63 Mtt=-1.91
Mff= 1.28 Mrt= 1.51
Mrf=-1.01 Mtf=-6.27
Principal axes:
T Val= 6.65 Plg=16 Azm= 51
N 0.18 73 248
P -6.83 5 143
Best Double Couple:Mo=6.7*10**17
NP1:Strike=188 Dip=75 Slip= 8
NP2: 96 82 165
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 44C
Centroid Location:
Origin Time 10:38:45.7 0.3
Lat 39.11N 0.03 Lon 28.32W 0.06
Dep 15.0 FIX Half-duration 3.0
Moment Tensor; Scale 10**17 Nm
Mrr=-4.45 0.13 Mtt= 3.82 0.19
Mff= 0.63 0.14 Mrt= 1.77 0.52
Mrf=-2.04 0.42 Mtf=-2.19 0.15
Principal Axes:
T Val= 5.57 Plg=14 Azm= 29
N -0.29 11 122
P -5.28 72 248
Best Double Couple:Mo=5.4*10**17
NP1:Strike=105 Dip=32 Slip=-110
NP2: 308 60 -78

CALA	0.64	214	iPc	38 50.70	-1.5
HOR	0.66	208	iPc	38 50.20	-2.2
ADH	0.91	120	iP	38 53.80	-2.9X
PDA	2.44	123	eP	39 17.00	-2.8X
			iS	39 44.50	
TBT	13.47	137	iP	41 47.20	-5.8X
CVVD	14.16	140	iP	41 58.60	-3.4X
CTFE	14.53	133	eP	42 04.20	-2.7
			iS	42 43.50	
LIS	14.87	85	eP	42 09.80	-1.5
GGC	15.16	133	eP	42 12.80	-2.4
CFTV	15.87	128	iP	42 26.20	1.9
EMON	16.30	68	eP	42 28.00	-1.7
ERUA	16.32	72	eP	42 27.50	-2.5
EVAL	16.93	88	eP	42 37.00	-0.8
VAL	17.92	38	eP	42 53.00	3.0X

26d 10h

			S	46	21.00		LRG	26.24	69	eP	44	15.60	-0.5		E	18s	14.40um						
EHOR	18.05	87	eP	42	51.00	-0.7		1.5s	326.40nm			5.8mb		HOF		30.28	55	eP	44	51.90	-0.6		
EPRU	18.25	90	eP	42	55.50	1.3	LMR	26.36	70	eP	44	16.30	-0.8		Z	17s	15.40um				5.7MszX		
BMK	18.35	96	eP	42	55.00	-0.4		1.8s	448.80nm			5.9mb					i		44	54.00			
			i	42	57.00		HAU	26.41	59	eP	44	16.10	-1.5	CRE		30.29	68	P	44	52.50	-0.3		
			i	43	00.00			1.5s	326.40nm			5.8mb		FVI		30.71	62	P	44	54.70	-1.6		
GUD	18.54	78	eP	42	57.50	-0.4	BNI	26.45	66	P	44	20.50	2.4X	WET		30.83	57	iPc	44	57.90	0.5		
TOL	18.68	80	ePc	42	57.74	-1.7	FRF	26.45	69	eP	44	16.50	-1.5	ASS		30.86	69	P	44	56.60	-1.2		
MAL	18.94	90	iPd	43	04.50	1.8		1.7s	411.70nm			5.8mb		MNS		30.96	71	P	44	57.50	-1.1		
			iS	46	45.00		DBN	26.48	50	iP+	44	20.00	1.8	ARV		31.02	68	P	44	59.00	-0.1		
			iSg	09	43.60		Z	20s	24.50um			5.8Msz		RDP		31.08	72	P	44	58.00	-1.7		
AAPN	19.03	88	eP	43	03.50	-0.4			eS		48	57.00		CLL		31.10	53	eP	44	59.00	-0.7		
ALOJ	19.09	88	eP	43	05.50	0.9	LPG	26.51	65	eP	44	18.40	-0.4			1.8s	125.00nm			5.5mb			
EBAN	19.12	85	eP	43	05.80	0.9		1.6s	186.50nm			5.5mb					eS		50	02.00			
ATEJ	19.21	89	eP	43	06.50	0.4	RRL	26.52	66	P	44	19.31	0.4	RBL		31.26	63	Pc	44	59.70	-1.5		
ACHM	19.30	88	eP	43	10.20	2.9X	WLF	26.53	55	iPc	44	19.00	0.4	KHC		31.29	57	P	45	00.60	-0.8		
ASMO	19.31	87	eP	43	07.00	-0.4	ENN	26.60	53	eP	44	19.50	0.2				i		45	02.50			
APHE	19.45	89	eP	43	09.00	0.0		1.1s	295.00nm			5.9mb		TRI		31.43	64	ePc	45	03.00	0.4		
CRT	19.46	88	eP	43	12.00	2.9X	CALN	26.62	69	P	44	21.12	1.4	AQU		31.50	71	Pc	45	04.50	1.2		
AFC	19.49	88	eP	43	09.50	0.0	MEM	26.62	53	P	44	19.50	0.1	VOY		31.50	63	eP	45	03.70	0.3		
ECRI	19.75	72	eP	43	12.10	-0.1	EMS	26.65	63	ePc	44	20.10	0.1	COP		31.57	45	iP	45	04.30	0.6		
EVIA	20.03	83	eP	43	14.00	-1.2	LOMF	26.67	61	P	44	20.06	0.0			0.9s	67.23nm			5.6mb			
DLE	20.54	39	eP	43	21.60	1.4	BSF	26.69	59	P	44	19.79	-0.5	LVI		31.57	79	P	45	04.00	0.0		
	1.6s	536.00nm				5.6mb	LSD	26.79	65	P	44	21.36	0.0	AZI		31.58	71	P	45	04.80	0.9		
DMU	20.72	37	eP	43	21.10	-1.0	MVIF	26.80	68	P	44	22.64	1.3	KMR		31.63	60	iP-	45	03.00	-1.3		
	1.1s	182.00nm				5.4mb	DOI	26.85	67	P	44	22.00	0.2				iPP		46	01.80			
ECHE	21.07	80	eP	43	25.60	-0.3	RSP	26.86	65	P	44	22.28	0.4	BRG		31.65	54	iP	45	03.50	-1.0		
LPF	21.54	57	eP	43	29.50	-1.0	TOUF	26.87	68	P	44	23.48	1.4			1.9s	170.00nm			5.6mb			
ACU	21.67	83	e(P)	43	33.80	1.8	STV	26.92	67	P	44	21.77	-0.6				eS		50	18.00			
GRR	21.75	56	eP	43	31.90	-0.7	MOF	26.92	59	P	44	22.17	-0.2	RIY		31.88	65	eP	45	09.00	2.4		
MFF	21.83	61	eP	43	32.10	-1.4	AURF	26.93	68	P	44	23.61	1.1	CEY		31.89	64	eP	45	06.00	-0.7		
EPF	21.85	70	eP	43	33.10	-0.7	REVF	26.96	69	P	44	24.50	1.8	SDI		31.90	72	P	45	05.90	-1.0		
	1.5s	652.90nm				5.8mb	ENR	26.98	67	P	44	22.49	-0.5	LJU		31.94	63	ePc	45	07.50	0.3		
EROQ	21.99	76	e(P)	43	36.50	1.4	DIX	26.99	63	ePc	44	23.30	0.1				eS		50	20.00			
EBR	22.05	76	eP	43	36.00	0.3	AUTN	27.00	68	P	44	24.61	1.4	PRU		31.96	56	ePd	45	07.20	-0.1		
			eS	47	40.00		SBF	27.01	68	eP	44	22.40	-0.8			2.0s	214.80nm			5.7mb			
FLN	22.09	55	eP	43	35.20	-0.8	CDF	27.08	58	P	44	22.54	-1.2		Z	16s	9.70um			5.6MszX			
	1.5s	408.00nm				5.6mb	RUP	27.12	55	eP	44	23.50	-0.6		N	14s	5.40um						
LFF	22.23	65	eP	43	36.00	-1.5	BBS	27.14	60	P	44	24.79	0.5		E	15s	10.00um						
LDF	22.27	56	eP	43	37.10	-0.8	AKU	27.25	9	eP	44	27.20	2.1				e		45	24.50			
LPO	22.53	66	eP	43	39.10	-1.4		2.0s	164.71nm			5.4mb					eS		50	20.00			
RJF	22.81	65	eP	43	43.20	0.0	ROB	27.31	67	P	44	24.95	-0.9	USI		32.04	77	P	45	08.00	0.0		
	1.6s	353.20nm				5.6mb	IMI	27.33	68	P	44	25.15	-1.0	RFI		32.10	72	P	45	08.96	0.5		
LSF	22.93	62	eP	43	43.10	-1.2	MMK	27.37	63	ePc	44	27.40	0.7	DUI		32.38	72	P	45	11.00	-0.1		
CAF	23.17	66	eP	43	45.10	-1.7	GWF	27.37	57	P	44	26.82	0.4	VBY		32.48	64	ePc	45	11.20	-0.7		
EAB	23.28	35	ePd	43	49.30	1.6	ORO	27.37	64	P	44	31.00	4.5X	MCT		32.66	79	P	45	15.00	1.3		
	1.5s	375.00nm				5.7mb	ORX	27.37	64	P	44	25.77	-0.8	HRV		32.70	290	ePd	45	14.24	0.5		
ESK	23.30	38	eP	43	48.50	0.6	STR	27.42	58	P	44	28.03	1.3					epPc	45	16.89	9kmX		
	1.0s	80.00nm				5.2mb	WTS	27.43	50	eP	44	27.00	0.2					esP	45	18.88			
EKA	23.33	38	Pc	43	48.70	0.5		1.5s	523.00nm			6.0mb						eS	50	39.20			
	1.4s	128.80nm				5.3mb				e	44	39.00		NB2		32.73	35	P	45	13.70	-0.2		
TCF	23.40	62	eP	43	48.30	-0.7	ABH	27.46	55	eP	44	26.28	-0.9			1.8s	137.00nm			5.6mb			
EAU	23.48	36	ePc	43	54.50	4.9X	FEL	27.51	60	eP	44	26.00	-1.8	NRA0		32.76	36	P	45	13.60	-0.5		
	1.8s	787.00nm				6.0mb	FIN	27.55	67	P	44	26.69	-1.4	FAI		32.79	80	P	45	16.70	2.1		
MAF	23.64	62	eP	43	50.50	-0.8	WIT	27.56	49	eP	44	29.00	1.1	GIB		32.86	78	P	45	15.00	-0.4		
EBH	23.69	36	ePd	43	53.20	1.5	CKI	27.60	67	P	44	28.00	-0.4	PTJ		32.94	64	eP	45	14.80	-1.2		
	1.1s	172.00nm				5.5mb	KTD	27.72	56	eP	44	28.82	-0.7	ZAG		32.97	64	eP	45	17.00	1.0		
ETER	23.72	72	e(P)	43	58.00	5.9X	ZLA	27.73	60	ePc	44	28.50	-1.2	VKA		33.09	59	ePc	45	17.50	0.4		
BGF	23.87	62	eP	43	52.90	-0.6	SLE	27.82	60	ePc	44	29.60	-0.9			4.0s	657.00nm			5.9mb X			
PYM	23.90	64	P	43	54.34	0.5	VAI	27.93	64	P	44	32.30	0.9		Z	12s	4.90um			5.4MszX			
ESY	23.91	37	ePc	43	54.50	0.7	TMA	28.00	63	ePc	44	32.50	0.2				e		46	22.00			
ESEL	24.00	78	eP	43	57.00	2.2	TNS	28.09	55	ePc	44	33.90	1.0				e		47	54.00			
AGO	24.01	63	P	43	55.18	0.3	LLS	28.11	62	ePc	44	33.30	0.0				LR		59	27.00			
LBL	24.03	65	P	43	55.14	0.2	CVF	28.14	71	eP	44	31.60	-1.8	GDH		33.10	344	iPd	45	28.00	11.1X		
EDU	24.09	35	ePc	43	56.80	1.3		1.6s	203.90nm			5.7mb				1.4s	186.05nm						
AVF	24.24	61	eP	43	56.30	-0.8	SAX	28.37	61	ePc	44	35.20	-0.5				i		50	38.00			
PLDF	24.34	63	P	43	57.92	-0.3	BOB	28.42	66	P	44	36.00	0.0	KSP		33.13	54	eP	45	16.40	-1.0		
SSF	24.38	61	eP	43	57.70	-0.8	VDL	28.43	63	ePc	44	36.10	-0.1			1.7s	166.00nm			5.7mb			
SMF	24.56	62	eP	43	59.70	-0.5	CGL	28.94	77	P	44	40.59	-0.2				ic		45	18.50			
LOR	24.65	60	eP	44	00.60	-0.5	SAL	29.16	64	P	44	43.70	1.2	SGO		33.22	73	Pc	45	17.90	-0.4		
	1.6s	485.90nm				5.9mb	PII	29.25	68	P	44	44.00	0.7	MNO		33.39	78	P	45	22.00	1.9		
LBF	24.69	61	eP	44	00.30	-1.2	BDI	29.28	68	Pc	44	45.70	2.0	MGR		33.50	74	P	45	20.50	-0.2		
TREF	25.53	69	P	44	11.76	2.3	MME	29.34	67	P	44	45.00	0.5	HVAR		33.60	68	iPc	45	21.50	-0.1		
SNF	25.53	53	Pc	44	08.70	-0.6	OGA	29.50	62	eP	44	45.90	0.0	ZST		33.61	59	eP	45	20.80	-0.9		
GELF	25.57	69	P	44	10.15	0.3		1.6s	185.00nm			5.6mb			Z	14s	7.10um			5.5MszX			
DOU	25.63	54	Pc+	44	09.70	-0.6	FIR	29.77	68	eP	44	47.00	-1.0				eS		50	48.80			
	1.1s	165.40nm				5.6mb	GRF	29.79	56	eP	44	47.90	-0.3	ATN		33.91	78	P	45	27.00	2.6X		
Z	20s	17.40um				5.6Msz		1.4s	133.00nm			5.6mb		FRB		34.25	329	eP	45	27.00	0.1		
			S	48	45.00		Z	19s	15.90um			5.7Msz				1.7s	412.00nm			6.1mb			
UCC	25.65	52	iP	44	12.00	1.6	MAO	29.84	71	P	44	49.43	0.8	SRO		34.44	60	iP	45	27.60	-1.2		
			S	48	51.00		CBM	29.92	298	P	44	49.40	0.1	GRI		34.46	76	P	45	27.55	-1.6		
PUYF	25.76	69	P	44	12.26	0.6	CTI	29.94	64	Pc	44	48.40	-1.2	PTN		34.87	294	P	45	33.80	1.3		
BERF	25.76	70	P	44	12.28	0.5	PGD	30.10	68	Pc	44	51.10	-0.1	TBR		34.90	288	P	45	33.00	0.1		
VILF	25.76	68	P	44	13.90	2.2	MOX	30.15	54	ePc+	44	51.00	-0.4	GAC		35.08	296	ePc	45	35.50	1.2		
GANF	25.90	68	P	44	13.86	0.9		1.3s	36.00nm			5.1mb		UPP		35.34	39	iP	45	37.40	1.1		
TAVF	26.02	69	P	44	14.69	0.6	Z	18s	20.10um			5.8Msz		KRA		35.44	56	eP	45	36.70	-0.6		
VITF	26.19	58	P	44	14.43	-1.1	N	12s	5.50um							1.3s	164.00nm			5.7mb			

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Z	16s		8.50um		5.6MszX
N	16s		7.30um		
			e	45 38.60	
			i	45 41.40	
			eS	50 58.00	
PSZ	35.50	60	eP	45 38.10	0.1
SPC	35.66	57	eP	45 39.10	-0.4
			e	47 04.10	
SDA	36.02	70	eP	45 42.00	-0.3
BEO	36.21	65	eP	45 45.30	1.4
			e(S)	51 25.80	
LACI	36.25	70	eP	45 43.50	-0.7
TIR	36.43	71	eP	45 47.20	1.4
BPA	36.60	243	eP	45 48.63	1.2
TIM	36.62	63	iPc	45 50.00	2.7X
PHP	36.77	70	eP	45 49.00	0.4
TPE	36.78	72	eP	45 50.00	1.3
SRN	36.88	73	eP	45 52.70	3.2X
BZS	36.91	63	eP	45 50.00	0.2
OHR	37.17	71	iP	45 51.70	-0.4
	1.7s		0.35nm		2.9mb X
			i	46 02.40	
			iPcP	48 12.00	
SKO	37.44	69	iP	45 53.70	-0.6
	1.6s		140.00nm		5.5mb
Z	14s		5.57um		5.5MszX
N	13s		3.65um		
E	13s		4.52um		
			i	45 55.10	
			iPP	47 26.00	
			iPcP	48 22.00	
			iS	51 35.00	
			iPcS	52 13.00	
			iSS	54 00.10	
			iSSS	54 29.00	
			LR	04 38.00	
VLS	37.78	76	eP	45 57.20	0.0
CBN	38.00	285	eP	45 59.00	0.0
KZN	38.08	72	eP	45 59.20	-0.6
NA2	38.30	285	P	46 03.00	1.5
VAY	38.42	70	iP	46 01.60	-0.9
TIC	38.52	141	P	46 04.00	0.5
VTS	38.59	68	iP	46 04.00	-0.1
KKB	38.66	69	iPc	46 05.00	0.5
LIC	38.88	141	P	46 06.28	-0.3
Z	20s		3.75um		5.2Msz
			S	52 12.00	
CVL	38.89	285	P	46 07.80	1.4
KIC	38.90	141	P	46 07.00	0.3
NUR	38.90	39	eP	46 08.00	1.7
	0.9s		40.60nm		5.1mb
Z	17s		10.30um		5.7MszX
			ePP	47 32.00	
			eS	51 48.00	
			esS	52 08.00	
			LR	01 30.00	
ITM	39.10	77	eP	46 09.50	1.2
PGB	39.29	68	iP	46 10.00	0.2
PLG	39.30	71	eP	46 10.00	0.1
CMP	39.35	63	iPc	46 08.00	-2.3
NEO	39.43	73	eP	46 12.20	1.2
PLD	39.78	68	eP	46 15.00	1.2
MLR	39.93	63	ePc	46 15.00	-0.2
SUF	39.98	36	iP	46 15.30	0.1
	0.9s		32.70nm		5.0mb
ATH	40.20	75	eP	46 21.60	4.3X
			eS	52 26.00	
			eSS	55 29.20	
BUC1	40.22	64	ePd	46 18.00	0.6
BUC	40.25	64	eP	46 19.00	1.3
VRI	40.40	62	ePc	46 18.50	-0.4
KDZ	40.41	69	eP	46 19.00	0.0
ISR	40.42	63	ePc	46 19.00	-0.1
BLA	40.61	284	P	46 22.40	1.6
	1.8s		363.64nm		5.8mb
RDO	40.62	69	eP	46 20.50	-0.3
CLI	40.66	61	eP	46 22.00	0.9
BRD	40.69	62	ePc	46 22.00	0.7
TBH	40.84	235	eP	46 26.15	3.4X
TRN	40.93	235	eP	46 26.01	2.5X
PPE	40.95	61	ePc	46 25.50	2.1
TCE	41.11	236	eP	46 27.90	2.9X
SOD	41.19	29	eP	46 25.00	0.0
TPP	41.21	235	eP	46 29.09	3.3X
KUK	41.32	135	ePd	46 27.00	0.3
VAM	41.43	78	eP	46 29.50	2.1
KOGH	41.47	135	eP	46 29.00	1.0

CFR	41.52	63	ePd	46 27.00	-1.0
EZN	41.57	71	eP	46 27.00	-1.5
PRK	41.71	72	eP	46 31.50	1.8
WEGH	41.84	136	eP	46 32.00	1.1
LHS	41.87	281	P	46 32.00	1.0
LEGH	41.87	135	eP	46 31.00	-0.2
PSN	41.88	65	eP	46 30.00	-1.0
KEV	41.98	25	ePd	46 32.82	1.3
	1.0s		36.00nm		5.1mb
			esPc	46 36.80	
			eS	52 51.60	
			eSS	56 07.33	
SGS	42.14	279	P	46 35.20	1.9
JSC	42.29	281	P	46 35.50	1.0
EDC	42.54	70	iP	46 36.40	-0.1
NPS	42.56	78	eP	46 36.50	-0.2
IZM	42.71	73	eP	46 39.00	1.0
CTT	42.72	68	eP	46 36.00	-2.0
KBS	42.99	11	iP	46 43.20	3.5X
ITU	43.16	68	eP	46 44.00	2.5
ISK	43.20	68	eP	46 41.00	-0.9
KAP	43.63	77	eP	46 44.50	-1.0
TKL	43.68	284	P	46 46.80	0.9
YER	43.90	74	eP	46 44.30	-3.3X
GBTN	44.01	284	P	46 49.60	1.1
KHL	44.41	72	iP	46 51.00	-0.8
ALT	44.60	71	eP	46 52.50	-0.9
ALE	44.97	354	eP	46 55.00	-0.8
	0.6s		11.00nm		5.0mb
ELL	45.25	74	eP	46 58.30	-0.4
ANTO	46.28	69	ePc	47 06.79	0.1
			esP	47 12.09	
RSON	46.31	307	P	47 05.20	-1.5
Z	20s		3.39um		5.3Msz
PWLA	47.18	285	P	47 14.80	1.1
ATB	47.63	213	Pd	47 17.00	-0.4
FVM	47.78	289	P	47 18.80	0.3
KVT	48.21	66	iP	47 21.90	0.1
ITR	48.56	193	eP	47 23.20	-1.5
			e	47 27.80	
			e	47 33.00	
FFC	50.35	314	eP	47 37.00	-1.0
	2.1s		441.00nm		6.1mb
HRI	51.03	76	eP	47 44.00	0.4
PRNI	51.78	79	e(P)	47 50.00	0.7
RLO	51.88	289	ePc	47 49.60	-0.3
MBH	51.96	80	eP	47 52.00	1.4
LNO	52.55	289	ePc	47 52.30	-2.5X
TUL	52.55	289	eP+	47 52.70	-2.3
	1.3s		108.90nm		5.6mb
Z	20s		3.80um		5.4Msz
			e	55 22.00	
			LR	03 14.00	
MBC	52.67	342	eP	47 54.00	-1.3
	1.6s		510.00nm		6.2mb
VVO	52.76	288	eP	47 55.90	-0.6
SIO	53.00	289	e(P)	47 56.50	-1.8
BOG	53.79	242	eP	48 06.00	1.3
			eS	55 52.00	
YKC	54.54	325	eP	48 08.20	-1.0
BCAO	54.59	117	ePc	48 08.66	-1.5
			epPc	48 12.14	11kmX
			esPd	48 14.46	
BNG	54.59	117	iPd	48 08.50	-1.7
	1.4s		218.00nm		6.0mb
			iS	55 59.00	
			id	57 28.00	
			ic	58 13.00	
			id	59 11.00	
			ic	01 21.00	
			ic	03 12.00	
UPA	54.68	251	eP	48 11.00	0.1
RSSD	55.01	302	P	48 13.00	-0.3
MSL	55.15	69	ePc	48 12.50	-1.6
			ePcP	49 22.00	
			eS	56 01.00	
TAB	56.69	66	eP	48 24.00	-1.3
SES	56.97	311	eP	48 26.00	-1.0
	1.7s		372.00nm		6.1mb
			pP	50 32.00	690kmX
EDM	57.19	315	eP	48 27.50	-1.1
	1.8s		537.00nm		6.3mb
SLY	57.21	69	ePc	48 27.00	-1.8
			ePPP	52 05.00	
			ePcS	53 12.00	
			eS	56 27.00	
			e	57 27.00	

			eSS	59 35.00	
BHD	57.47	71	ePc	48 19.50	-11.2X
			ePcP	49 25.50	
			iS	56 25.00	
BAO	57.51	203	eP	48 31.80	0.6
GLD	57.64	297	P	48 32.30	0.2
	1.8s		435.90nm		6.2mb
Z	16s		2.22um		5.4MszX
GOL	57.76	297	P	48 32.80	-0.2
	1.8s		297.62nm		6.0mb
Z	16s		1.20um		5.1MszX
PSO	58.50	242	eP	48 38.00	-0.6
BW06	59.23	302	eP	48 41.30	-1.9
			e	50 52.50	
INK	59.53	335	eP	48 43.00	-1.6
LRM	59.73	306	eP	48 45.30	-1.4
ANMO	60.74	293	eP	48 53.05	-0.5
			esP	48 58.51	
ALQ	60.74	293	eP	48 53.80	0.2
	1.8s		233.27nm		6.0mb
			ePcP	48 59.80	
HPI	61.10	304	P	48 56.00	-0.1
LVVM	61.12	273	iPc	48 56.00	-0.1
DAU	61.45	300	P	48 58.00	-0.5
DPW	62.30	310	ePd	49 02.80	-1.0
			ePcP	49 07.80	
			ePP	49 18.80	
DUG	62.60	301	P	49 06.50	0.5
	1.7s		204.55nm		6.0mb
OXX	62.85	270	eP	49 09.00	1.0
IIC	63.28	274	iPc	49 12.00	1.0
BRAS	63.43	198	eP	49 03.30	-8.3X
RYD	63.50	79	ePd	49 11.00	-1.0
CRX	63.81	274	(P)	49 17.00	2.5X
BRW	63.99	344	eP	49 14.70	0.2
ABHA	64.13	87	eP	49 16.00	-0.5
VAO	64.23	199	eP	49 17.50	0.9
			epP	49 22.00	14kmX
III	64.24	273	(P)	49 17.00	-0.1
KMSA	64.28	84	eP	49 16.60	-0.6
PPD	64.54	204	eP	49 18.80	0.2
			e	49 24.20	
MRX	64.82	276	iPc	49 21.50	0.9
LON	64.98	311	eP	49 21.09	-0.3
			epPc	49 24.24	10kmX
DHR	65.32	75	ePd	49 24.30	0.6
BEE	65.76	75	(P)	49 29.10	2.5X
	0.8s		85.00nm		6.0mb
BRF	65.78	75	(P)	49 26.90	0.2
BJA	65.84	75	(P)	49 27.10	0.0
COL	66.14	336	eP	49 28.34	-0.1
			epP	49 31.65	11kmX
			esP	49 33.97	
FBA	66.14	336	eP	49 27.90	-0.5
CCH	66.44	220	P	49 29.20	-2.1
LWI	66.51	114	eP-	49 31.50	-0.3
ZOBO	66.52	222	P	49 31.00	-1.1
	1.9s		374.51nm		6.2mb
			PS	58 32.00	
			SS	02 48.00	
			LR	10 30.00	
AAE	66.54	98	eP	49 34.00	1.9
TNP	66.62	301	P	49 30.50	-1.7
KVN	66.69	302	eP	49 30.50	-2.1
			ePcP	49 33.30	
			ePP	49 48.80	
			e	51 58.00	
LPB	66.72	222	P	49 36.00	2.8X
	1.1s		81.01nm		5.8mb
			LR	10 30.00	
MAIO	66.73	61	iPc	49 42.80	10.0X
	1.5s		73.20nm		
			eS	58 30.00	
MZX	66.88	282	iPc	49 34.50	0.8
CNCB	66.89	222	Pd	49 34.90	0.4
IMA	67.07	339	eP	49 33.70	-0.9
	1.7s		277.80nm		6.2mb
TOA	67.48	333	eP	49 38.20	1.1
GLA	67.67	295	eP	49 39.00	0.3
GSC	67.83	298	eP	49 41.00	1.2
TPC	67.95	297	eP	49 41.00	0.5
NNA	68.05	232	iPc	49 41.50	0.3
CLC	68.09	299	eP	49 41.00	-0.4
ARO	68.17	93	iPd	49 44.00	1.9
MIN	68.27	305	ePd	49 40.60	-1.9
ARE	68.48	225	eP	49 40.00	-4.2X
ORV	68.63	304	ePd	49 42.60	-2.0

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CMB 68.75 302 eP 49 43.94 -1.4
esP 49 49.90
ISA 68.77 299 eP 49 46.00 0.4
PEC 68.84 297 P 49 45.50 -0.5
PMR 68.85 334 eP 49 44.60 -0.9
1.5s 277.80nm 6.2mb
Z 20s 2.00um 5.4Msz
e 17 58.60
SBB 68.86 298 eP 49 46.00 -0.2
FRI 68.87 301 eP 49 44.60 -1.5
PLM 68.93 296 eP 49 47.00 0.2
RVR 68.94 297 eP 49 47.00 0.5
BAR 69.17 296 eP 49 47.00 -1.0
MWC 69.28 298 eP 49 49.00 0.1
PAS 69.40 298 ePd 49 49.93 0.5
epP 49 53.08 10kmX
FHC 69.52 306 P 49 50.50 0.4
1.8s 477.78nm 6.4mb
ARN 69.88 302 P 49 53.80 1.5
LLA 69.90 301 eP 49 51.80 -0.6
PRI 69.98 301 ePd 49 52.60 -0.5
BKS 70.05 303 eP 49 52.00 -1.3
1.5s 86.00nm 5.7mb
Z 20s 1.60um 5.3Msz
N 20s 2.00um
E 20s 1.10um
eLR 11 40.00
BRK 70.07 303 eP 49 52.50 -0.8
TTA 70.08 337 eP 49 52.60 -0.6
SAO 70.15 302 eP 49 52.60 -1.3
PRS 70.35 301 eP 49 54.20 -0.9
GCC 70.37 302 eP 49 54.30 -0.9
SYP 70.43 299 eP 49 56.00 0.2
SVW 71.35 336 eP 50 01.10 0.3
NAI 71.68 107 iPd 50 06.00 2.3
1.5s 27.78nm 5.1mb
KDC 72.81 332 eP 50 10.80 1.4
QUE 75.32 63 eP 50 25.00 0.2
eS 00 12.00
KSH 75.54 51 P 50 28.00 2.2
E 15s 7.80um
esP 50 35.00
S 00 14.00
SDN 77.48 334 eP 50 37.20 1.1
WMQ 79.21 42 ePc 50 47.15 1.2
Z 18s 18.20um 6.5Msz
N 16s 13.00um
E 17s 15.80um
epP 50 50.79 12kmX
eS 00 53.51
PEL 81.96 215 iPc 51 01.80 1.3
NPA 82.81 116 eP 51 10.00 4.8X
LNV 82.97 215 eP 51 07.40 1.8
NDI 83.24 59 eP 51 09.00 1.7
eS 01 32.00
SLR 83.35 131 iPc 51 10.10 2.2
0.9s 33.61nm 5.5mb
GKN 88.51 55 P 51 33.80 0.2
GTA 88.53 38 P 51 33.00 -0.4
Z 16s 5.50um 6.1MszX
E 15s 4.10um
SKS 02 04.00
S 02 24.00
KKN 89.07 54 P 51 36.70 0.4
DMN 89.08 55 P 51 37.00 0.5
1.4s 203.00nm 6.2mb
PKI 89.30 54 P 51 37.80 0.2
GUN 89.36 54 P 51 37.40 -0.5
LSA 91.29 49 eP 51 47.90 1.0
N 18s 2.10um
HYB 91.59 66 eP 51 48.30 0.4
BTO 91.99 30 P 51 51.00 1.5
N 20s 5.80um
E 17s 3.10um
PP 55 31.00
eSKS 02 18.00
S 02 45.00
HHC 92.38 29 eP 51 52.00 0.7
N 15s 4.20um
E 16s 4.80um
SKS 02 30.00
LZH 93.09 37 eP 51 55.00 0.3
Z 24s 5.80um 6.0MszX
E 16s 2.70um
PP 55 39.00
e(S) 02 30.00
PS 04 12.00

SS 09 10.00
GBA 93.30 70 Pc 51 56.60 0.9
1.2s 32.30nm 5.6mb
CN2 94.11 19 P 52 00.00 0.9
Z 20s 5.00um 6.0Msz
N 18s 1.80um
epP 52 05.00 16kmX
PP 55 47.00
SKS 02 34.00
eS 03 08.00
iSS 09 36.00
MDJ 94.29 16 eP 52 00.00 0.1
Z 28s 2.40um 5.5MszX
ePP 55 48.00
SKS 02 36.00
S 03 12.00
SHL 94.76 52 eP 52 00.00 -2.6X
eS 02 40.00
BJI 94.77 27 eP 52 03.00 0.9
Z 24s 7.10um 6.1MszX
N 19s 3.30um
ePP 55 51.00
eS 02 40.00
ePS 04 28.00
eSS 09 40.00
TIY 95.43 30 eP 52 06.70 1.3
Z 18s 7.79um 6.2Msz
N 17s 4.17um
PP 55 53.00
SS 09 44.00
SNY 95.46 21 Pc 52 06.00 0.7
Z 36s 2.70um 5.5MszX
N 35s 1.80um
E 35s 2.70um
WHN 102.44 32 ePdiff 52 37.00 0.2
Z 20s 6.90um 6.2Msz
N 18s 4.17um
E 18s 2.56um
PP 56 52.00
SKS 03 22.00
MAT 103.69 11 ePdiff 52 48.00 5.7X
SPA 128.92 180 ePKPd 57 49.10 1.3
1.2s 28.17nm
SBA 140.64 185 ePKPd 58 11.10 1.7
NANU 145.06 73 ePKP 58 17.50 -1.1
MBL 147.33 66 iPKPc 58 25.50 3.1X
1.4s 7.00nm
MEKA 149.61 76 ePKP 58 30.50 4.6X
BAL 150.16 84 ePKP 58 30.70 4.1X
MUN 150.35 87 ePKP 58 33.10 6.3X
KLB 151.40 85 ePKP 58 33.70 5.3X
NWAO 151.52 88 ePKP 58 35.50 7.0X
COOL 153.71 81 ePKP 58 32.00 0.2
WB5 155.66 43 ePKP 58 35.20 0.6
WRA 155.70 43 PKP 58 47.00 12.3X
1.2s 8.80nm
QIS 158.75 33 ePKP 58 38.00 -0.4
S.D. = 1.1 on 390 of 430 obs.

JUN 26, 1989 11h 18m 13.56± 0.62s
31.466 S ± 8.0km 138.368 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTH AUSTRALIA (592)

STK 2.78 99 eP 19 00.00 1.1
e 19 05.00
CMS 6.37 92 eP 19 50.00 0.2
eS 20 58.00
e 21 41.00
BFD 6.66 150 iPc 19 54.10 0.2
e 21 07.00
e 21 49.00
TOO 8.46 138 eP 20 18.00 -1.1
e 20 21.00
eS 21 51.00
FORR 8.82 271 eP 20 26.20 2.2
0.4s 23.00nm 5.9mb X
eS 22 04.00
CAN 9.68 116 eP 20 34.50 -1.5
RMQ 10.36 64 e(P) 20 45.50 0.3
e 22 36.00
QIS 10.92 6 eP 20 52.00 -0.9
eS 22 51.00
WARB 11.55 294 eP 20 54.00 -7.5X
0.3s 3.00nm 5.2mb X
eS 22 59.00
WRA 12.03 342 Pd 21 08.00 -0.1

0.4s 2.90nm 4.9mb
WB5 12.09 342 eP 21 07.70 -1.1
BRS 13.20 76 eP 21 25.00 1.4
CTA 13.37 34 eP 21 26.00 0.1
COOL 14.76 268 eP 21 42.00 -2.2
KLB 17.57 264 eP 22 25.00 4.9X
MEKA 18.00 281 eP 22 26.70 1.2
MUN 18.86 263 eP 22 39.00 3.0X
S.D. = 1.3 on 14 of 17 obs.

* JUN 26, 1989 12h 21m 07.61± 0.73s
6.833 N ± 8.1km 73.009 W ±12.0km
DEPTH = 163.4 ± 8.4 km
4.7mb (6 obs.)
NORTHERN COLOMBIA (99)

BMG 0.25 344 eP 21 31.50 0.3
BOG 2.43 206 iPd 21 50.00 0.6
iS 22 21.00
UPA 6.81 289 eP 22 44.10 -2.0
PSO 7.07 218 eP 22 50.50 0.5
ZOBO 23.46 168 P 26 04.00 -0.1
1.0s 16.25nm 4.5mb
i 26 38.00
LPB 23.72 168 (P) 26 06.00 -0.5
CNCB 24.01 168 eP 26 10.00 0.6
SCH 48.11 5 eP 29 33.00 0.5
YKA 63.29 340 eP 31 21.70 0.9
TIC 67.46 86 P 31 47.00 -1.4
LIC 67.49 86 P 31 47.50 -1.0
0.6s 11.00nm 4.8mb
KIC 67.76 86 P 31 49.40 -0.8
0.7s 15.50nm 4.9mb
MBC 73.81 350 ePc 32 26.20 0.9
0.6s 9.00nm 4.7mb
NB2 81.26 29 P 33 07.80 1.3
0.8s 2.90nm 4.1mb
BNG 91.02 85 iPd 33 55.40 0.2
0.5s 7.00nm 5.0mb
WRA 150.44 241 PKPc 40 46.80 10.4X
0.4s 3.00nm
S.D. = 1.1 on 15 of 16 obs.

* JUN 26, 1989 13h 07m 06.33± 0.77s
11.836 S ± 8.3km 117.321 E ±13.8km
DEPTH = 33.0km (normal)
3.9mb (1 obs.)
SOUTH OF SUMBAWA ISLAND (291)

KHKI 3.84 334 ePd 08 03.60 -0.9
eS 08 33.00
TRT 6.18 311 iPc 08 38.60 0.9
MBL 9.58 166 eP 09 24.60 -0.5
0.2s 10.00nm 5.7mb X
eS 11 02.00
NANU 10.80 189 eP 09 41.70 -0.1
0.3s 12.00nm 5.7mb X
eS 11 32.00
MEKA 14.75 176 eP 10 34.00 -0.4
0.3s 8.00nm 4.6mb X
eS 13 08.00
WARB 16.76 150 eP 10 53.00 -7.3X
0.3s 3.00nm 3.9mb
MRWA 17.34 184 eP 11 08.00 0.5
eS 13 11.00
WB5 18.23 118 eP 11 19.20 0.5
eS 14 30.30
S.D. = 0.8 on 7 of 8 obs.

* JUN 26, 1989 13h 59m 42.98± 1.09s
30.691 N ± 8.4km 142.499 E ±23.7km
DEPTH = 10.0km (geophysicist)
4.7mb (1 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ 5.83 341 P 01 12.00 0.5
S 02 16.60
CHJJ 6.09 332 P 01 15.30 0.0
S 02 23.30
IIDJ 6.13 322 eP 01 16.80 0.9
MAT 6.84 330 iPc 01 26.30 0.4
0.6s 30.67nm 5.6mb X
eS 02 41.00
MTMJ 7.06 328 P 01 29.80 0 8
NIIJ 7.15 337 P 01 29.70 -0.4
YAMJ 7.74 345 P 01 38.40 0.1
S 03 00.40

26d 14h

OFUJ 8.40 356 P 01 46.70 -0.9
S 03 16.10
BJI 23.34 301 eP 04 50.00 -2.1
WB5 50.88 190 iPc 08 46.50 0.3
WRA 50.95 190 Pc 08 47.10 0.4
0.5s 4.50nm 4.7mb
S.D. = 1.0 on 11 of 11 abs.

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* JUN 26, 1989 14h 01m 14.56± 1.60s
2.322 S ±11.6km 79.329 W ±19.3km
DEPTH = 114.4 ± 13.7 km
4.8mb (4 obs.)
NEAR COAST OF ECUADOR (105)

RECU 1.84 24 eP 01 47.50 0.8
eS 02 17.50
GGP 2.25 19 P+ 01 51.80 -0.3
OUR 2.28 21 eP 01 52.10 -0.2
e 02 23.20
CAYA 2.74 29 eP 01 58.50 0.1
NNA 9.91 166 iPc 03 33.20 -2.3X
iS 05 18.30
ZOBO 17.71 142 P 05 14.00 -2.1
LPB 17.93 143 P 05 22.00 3.3X
CNCB 18.22 143 P 05 23.00 0.9
i 05 23.80
CCH 19.79 140 P 05 40.00 1.3
ATB 27.09 93 e(P) 06 48.30 -0.3
MEO 41.10 336 iPd 08 49.00 0.3
FVM 41.40 347 iP 08 50.50 -0.6
1.0s 20.00nm 4.8mb
GOL 48.16 333 eP 09 45.20 -0.2
0.8s 10.42nm 4.7mb
RSSD 51.26 337 eP 10 10.00 1.1
BW06 52.52 332 eP 10 17.70 -0.7
TNP 53.30 323 iP 10 24.50 0.3
0.8s 4.12nm 4.5mb
RSON 54.39 349 iP 10 30.00 -1.7
KVN 54.45 323 iP 10 32.00 -0.6
LRM 56.19 333 eP 10 44.80 -0.3
SES 59.13 337 ePd 11 04.80 -0.5
PNT 62.07 331 eP 11 26.00 0.8
0.6s 7.00nm 4.8mb
YKA 69.93 343 eP 12 15.10 0.1
INK 79.63 342 eP 13 11.00 0.7
pP 13 34.00 87kmX
MBC 81.72 351 ePd 13 21.90 0.8
0.8s 25.00nm 5.1mb X
SSE 145.43 328 PKPd 20 41.50 0.3
1.0s 12.00nm
GKN 150.22 29 PKP 20 55.60 6.5X
0.8s 34.00nm
KKN 150.71 29 PKP 20 56.60 6.7X
0.7s 19.00nm
DMN 150.78 29 PKP 20 57.00 6.9X
S.D. = 0.9 on 23 of 28 abs.

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* JUN 26, 1989 14h 20m 45.87± 0.70s
10.263 N ±10.7km 122.326 E ±10.9km
DEPTH = 33.0km (normal)
4.7mb (2 abs.)
PANAY, PHILIPPINE ISLANDS (254)

SSE 20.76 357 P 25 26.50 0.1
LOE 21.21 292 eP 25 31.00 -0.2
CHG 24.15 293 eP 26 00.40 0.2
CHTO 24.15 293 iP 26 00.50 0.3
1.0s 10.00nm 4.3mb
WB5 32.21 158 eP 26 54.20 -19.2X
e 27 10.20
WARB 36.47 173 eP 27 42.50 -7.4X
MEKA 36.84 186 eP 27 53.00 0.0
GUN 38.46 302 P 28 07.20 0.1
0.5s 18.00nm 5.1mb
KKN 38.92 302 P 28 10.30 -0.5
DMN 39.00 301 P 28 11.00 -0.5
GKN 39.52 302 P 28 16.20 0.5
INK 85.71 21 eP 33 22.00 -0.5
MBC 86.55 12 eP 33 27.00 0.5
S.D. = 0.4 on 11 of 13 abs.

JUN 26, 1989 14h 59m 41.80± 0.89s
35.681 N ± 5.2km 70.543 E ± 3.6km
DEPTH = 118.4 ± 9.3 km
4.9mb (41 obs.)
HINDU KUSH REGION (718)
Felt (II) at Kharag and Dushanbe, USSR. Felt at Peshawar, Pakistan.

KSH 5.73 47 eP 01 07.00 1.1
S 02 08.00
QUE 6.25 210 iPd 01 12.00 -1.2
eS 02 21.50
MAIO 8.98 277 iPc 01 48.80 -1.2
0.4s 23.18nm 5.3mb
eS 03 24.00
NDI 8.98 139 iPc 01 48.00 -2.0
0.5s 204.23nm 6.1mb X
iS 03 20.00
GKN 14.21 119 P 02 54.50 -4.4X
DMN 14.77 119 P 03 01.60 -4.6X
KKN 14.79 118 P 03 01.40 -5.0X
PKI 15.01 118 P 03 04.20 -5.1X
GUN 15.16 116 P 03 07.90 -3.2X
TEH 15.57 276 eP 03 19.00 3.0X
BOM 16.84 173 eP 03 28.50 -3.2X
eS 06 25.00
POO 17.33 169 eP 03 40.50 2.7X
iS 06 41.20
LSA 18.33 103 P 03 50.20 0.1
S 07 12.00
KER 19.24 273 eP 04 01.00 1.6
TAB 19.51 284 eP 04 07.00 4.8X
HYB 19.54 157 ePd 04 02.50 0.0
0.8s 57.10nm 5.0mb
eS 07 25.50
BJA 19.62 246 eP 04 02.10 -1.1
BEE 19.67 246 iP 04 02.50 -1.3
0.4s 67.00nm 5.3mb
DHR 19.80 247 ePc 04 04.10 -1.0
SLY 20.34 277 iPd 04 12.50 1.9
i 04 16.00
i 04 48.00
SHL 20.91 113 iP 04 16.30 -0.3
iS 07 56.50
BHD 21.68 271 ePd 04 24.00 0.0
ePP 05 04.00
e 07 20.00
eS 08 18.00
MSL 22.14 280 ePd 04 31.50 3.0X
GBA 22.84 163 Pd 04 36.40 1.0
0.5s 34.60nm 5.0mb
RYD 23.33 249 ePc 04 41.10 0.9
GTA 23.46 72 Pd 04 43.60 2.2
LZH 26.91 79 eP 05 16.50 2.8X
HRI 28.70 275 eP 05 32.00 2.2
PRNI 30.17 270 iPc 05 45.00 2.2
CHG 30.18 116 eP 05 43.60 0.7
MBH 30.46 269 iP 05 47.00 1.7
BDT 31.23 119 eP 05 54.00 1.9
BTO 31.25 69 eP 05 48.60 -3.6X
XAN 31.40 82 P 05 55.80 2.2X
ELL 32.63 284 eP 06 04.00 -0.3
KHL 32.68 287 iP 06 04.90 0.2
TIY 33.45 74 eP 06 14.00 2.6X
VRI 34.32 301 ePc 06 20.00 1.3
ISR 34.44 300 ePc 06 22.00 2.3
MLR 34.87 300 ePc 06 25.50 2.0
EZN 34.94 290 eP 06 24.00 0.1
RZN 35.94 294 iP 06 34.00 1.4
PGB 36.26 295 iPc 06 37.00 1.8
MMB 36.68 294 iP 06 37.00 -1.7
VTS 36.97 295 iP 06 43.00 1.8
KKB 37.13 294 iPc 06 44.00 1.6
VAY 37.58 293 eP 06 47.00 0.8
BZS 37.90 301 eP 06 50.50 1.7
NUR 38.28 325 iP 06 52.20 0.4
SKO 38.34 295 iP 06 53.50 1.0
SUF 38.42 329 iP 06 53.30 0.4
0.4s 19.30nm 5.3mb
SOD 40.32 335 eP 07 10.00 1.5
KEV 41.43 339 eP 07 17.00 -0.6
UPP 41.49 323 iP 07 18.10 -0.1
VBY 42.36 301 eP 07 26.40 0.8
LJU 42.80 302 eP 07 30.00 0.8
e 08 13.00
BRG 42.84 309 iP 07 30.50 1.1
0.8s 20.00nm 4.9mb
e 08 06.00
CEY 42.91 301 eP 07 31.00 0.9
VOY 43.25 302 eP 07 33.20 0.3
CLL 43.42 310 iPd 07 34.20 0.1
eSg 08 07.00
HFS 43.49 322 eP 07 34.00 -0.5
0.3s 8.30nm 5.0mb
Z 16s 0.09um 3.7MszX
LR 16 50.00
MOX 44.33 309 eP 07 42.00 0.5
1.9s 35.00nm 4.8mb
GRF 44.66 307 eP 07 43.50 -0.6
1.3s 43.00nm 5.0mb
NB2 44.81 324 P 07 44.60 -0.6
0.5s 9.10nm 4.8mb
OGA 45.11 303 iPd 07 47.70 -0.2
0.4s 18.00nm 5.2mb
FEL 46.98 305 eP 08 02.04 -0.6
ABH 47.00 308 eP 08 03.04 0.4
RUP 47.34 308 eP 08 06.32 1.0
CVF 47.41 298 eP 08 05.20 -0.7
0.9s 23.30nm 5.0mb
FIN 47.52 300 P 08 05.17 -1.6
ROB 47.74 300 P 08 07.73 -0.7
BSF 47.80 305 eP 08 08.40 -0.6
0.7s 11.00nm 4.8mb
IMI 47.81 300 P 08 08.17 -0.8
LSD 48.00 302 P 08 10.81 0.1
HAU 48.07 306 eP 08 10.30 -0.6
ENR 48.07 300 P 08 10.70 -0.2
STV 48.13 301 P 08 10.70 -0.8
SBF 48.14 300 eP 08 11.30 -0.2
0.9s 21.00nm 4.9mb
LPG 48.27 302 eP 08 12.60 -0.2
0.5s 10.90nm 4.9mb
RRL 48.36 302 P 08 12.65 -0.8
FOUF 48.45 301 eP 08 14.44 0.7
FRF 48.76 300 eP 08 15.80 -0.5
0.9s 20.90nm 5.0mb
DOU 48.86 309 P 08 16.90 0.0
0.7s 7.80nm 4.7mb
LRG 48.99 300 eP 08 17.70 -0.3
1.1s 16.60nm 4.8mb
LBF 49.84 305 eP 08 23.60 -0.9
0.7s 5.50nm 4.6mb
LOR 49.86 305 eP 08 24.10 -0.5
SMF 50.00 304 eP 08 25.30 -0.4
0.6s 18.90nm 5.2mb
SSF 50.14 305 eP 08 26.10 -0.6
0.7s 6.60nm 4.7mb
AVF 50.30 305 eP 08 27.30 -0.6
0.6s 10.80nm 4.9mb
BGF 50.69 304 eP 08 30.40 -0.6
0.6s 4.50nm 4.6mb
MAF 50.96 304 eP 08 32.70 -0.3
0.8s 16.10nm 5.0mb
TCF 51.18 304 eP 08 34.50 -0.2
0.6s 13.50nm 5.0mb
CAF 51.62 303 eP 08 38.00 -0.1
0.7s 13.20nm 5.0mb
LSF 51.65 304 eP 08 37.50 -0.7
RJF 51.90 303 eP 08 40.10 0.0
LDF 52.18 308 eP 08 41.00 -1.1
0.5s 8.70nm 4.9mb
LPO 52.29 302 eP 08 42.40 -0.6
0.5s 7.20nm 4.9mb
FLN 52.37 308 eP 08 42.40 -1.1
0.6s 9.70nm 4.9mb
LFF 52.52 303 eP 08 44.50 -0.2
0.6s 19.80nm 5.2mb
EKA 52.62 316 Pc 08 45.10 -0.2
0.8s 9.50nm 4.8mb
MFF 52.68 305 eP 08 44.50 -1.4
0.5s 8.70nm 5.0mb
GRR 52.70 307 eP 08 45.00 -1.0
0.6s 7.90nm 4.8mb
LPF 52.91 307 eP 08 46.30 -1.2
0.4s 3.80nm 4.7mb
EPF 53.34 301 eP 08 49.40 -1.4
0.5s 3.60nm 4.6mb
MAT 53.60 68 iPd 08 51.40 -1.3
0.7s 5.48nm 4.6mb
DAG 55.44 344 iPc 09 04.10 -1.5
0.6s 12.00nm 5.0mb
BNG 57.02 249 iPd 09 17.30 -0.3
0.8s 49.00nm 5.6mb
id 09 58.30
TOL 57.50 298 eP 09 21.00 0.3
ASMO 58.23 296 eP 09 25.90 0.0
APHE 58.34 295 eP 09 26.50 -0.3
AAPN 58.52 296 eP 09 26.60 -1.4
ALOJ 58.59 295 eP 09 28.00 -0.5

ATEJ	58.60	295	eP	09	27.50	-1.1
MBC	68.17	3	eP	10	30.50	-0.1
	0.5s	35.00nm			5.5mb	
			pP	11	00.00	119kmX
BRW	68.19	15	eP	10	30.90	0.2
KOGH	70.88	264	eP	10	48.00	-0.1
IMA	73.01	17	eP	10	59.30	-0.7
	0.8s	10.30nm			4.7mb	
KIC	74.37	267	P	11	08.46	-0.1
TIC	74.43	267	P	11	08.76	-0.2
LIC	74.68	267	P	11	10.16	-0.1
INK	74.77	9	iPc	11	09.20	-0.7
			pP	11	40.00	122kmX
TTA	74.92	20	eP	11	10.90	-0.1
FBA	75.36	16	eP	11	12.90	-0.5
FRB	75.73	343	eP	11	15.00	-0.5
PMR	77.86	18	eP	11	26.30	-1.0
	0.8s	6.80nm			4.5mb	
TOA	78.14	17	eP	11	29.70	0.7
KDC	80.15	22	eP	11	38.50	-1.2
WB5	81.85	121	iPd	11	49.50	0.3
YKA	82.08	2	eP	11	50.50	0.8
FORR	85.45	133	eP	12	08.00	0.9

S.D. = 1.0 on 116 of 130 obs.

& JUN 26, 1989 16h 27m 25.92s
61.969 N 151.003 W
DEPTH = 74.8km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT	0.25	273	iP	27	37.15	-0.4
			S	27	45.78	
SUA	0.52	166	iP	27	39.21	-0.5
			S	27	49.37	
PWA	0.62	120	iP	27	40.13	-0.4
			S	27	51.25	
CGLM	0.82	216	eP	27	42.49	-0.3
SPU	0.94	213	eP	27	43.69	-0.5
PME	1.00	109	eP	27	44.08	-0.8
NKA	1.24	185	eP	27	48.62	0.7
SLKM	1.51	165	eP	27	51.06	-0.6
RDT	1.56	206	eP	27	51.61	-0.7
			S	28	12.71	
KTH	1.59	1	iP	27	52.90	0.2
SEW	2.02	157	eP	28	00.08	1.6
TOA	2.28	84	eP	28	01.84	-0.3
VZW	2.32	111	eP	28	00.92	-1.8
SVW	2.37	251	eP	28	02.30	-1.2
KLU	2.47	99	eP	28	03.03	-1.7
TTA	2.52	295	eP	28	04.64	-0.9
WRH	2.84	26	eP	28	08.92	-0.9

17 obs. ossocioted

% JUN 26, 1989 16h 52m 46.18± 2.15s
43.214 N ± 9.4km 0.169 E ±27.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 3.3 (LDG).

EPF	0.22	146	Pg	52	51.00	0.0
			Sg	52	54.00	
LPO	1.64	26	Pn	53	16.40	1.2
			Pg	53	21.00	
			Sg	53	44.40	
LFF	1.77	13	Pg	53	23.60	6.5X
			Sg	53	48.80	
CAF	2.19	38	Pn	53	23.20	0.0
			Pg	53	30.40	
			Sg	54	01.60	
RJF	2.30	24	Pn	53	24.50	-0.3
			Pg	53	33.20	
			Sg	54	04.60	
EBR	2.40	174	ePn	53	31.00	4.8X
			eSg	53	59.00	
LSF	3.19	17	Pg	53	49.00	11.7X
			Sg	54	31.60	
MFF	3.40	356	Pn	53	40.20	0.0
			Pg	53	53.40	
			Sg	54	38.00	
TCF	3.40	25	Pg	53	54.00	13.7X
			Sg	54	39.20	
MAF	3.46	29	Pn	53	40.20	-0.9
			Pg	53	54.40	
			Sg	54	41.00	
BGF	3.85	29	Pg	54	01.20	14.5X
			Sg	54	53.60	

S.D. = 0.9 on 6 of 11 obs.

JUN 26, 1989 16h 57m 20.92± 1.06s
46.274 N ± 6.7km 7.333 E ±10.4km
DEPTH = 14.2 ± 6.1 km
SWITZERLAND (544)

DIX	0.20	164	ePc	57	25.50	-0.4
MMK	0.49	117	ePd	57	30.10	-0.9
LPG	0.88	208	Pg	57	38.00	0.4
			Sg	57	50.40	
TMA	1.08	98	ePd	57	40.70	-0.3
LLS	1.29	62	ePd	57	43.90	-0.7
ZLA	1.41	31	ePd	57	46.20	0.1
VDL	1.49	81	ePd	57	48.20	0.7
FEL	1.67	16	ePn	57	48.64	-1.3
SLE	1.69	28	ePd	57	49.40	-0.7
SAX	1.69	54	ePc	57	52.60	2.2

S.D. = 1.2 on 10 of 10 obs.

JUN 26, 1989 18h 13m 47.89± 0.58s
20.031 S ± 8.5km 133.743 E ± 5.8km
DEPTH = 5.0km (geophysicist)
NORTHERN TERRITORY, AUSTRALIA (591)
ML 4.2 (QIS).

WB5	0.61	76	iPd	14	00.70	0.7
QIS	5.53	96	iPc	15	13.70	0.8
			eS	16	14.00	
KNA	6.37	311	eP	15	25.00	0.2
			eS	16	36.00	
MTN	7.57	340	eP	15	41.00	-0.6
			eS	17	02.00	
WARB	8.95	226	eP	15	57.00	-3.9X
	0.2s	13.00nm			6.0mb X	
			eS	17	35.00	
CTA	11.76	92	eP	16	38.00	-1.4
FORR	11.91	204	eP	16	42.80	1.4
	0.3s	20.00nm			5.9mb X	
			eS	18	53.00	
MBL	13.08	263	eP	16	57.00	-0.1
	0.3s	3.00nm			4.9mb X	
			eS	19	15.00	
MEKA	15.42	242	eP	17	28.00	0.0
	0.3s	8.00nm			4.5mb X	
			eS	20	11.00	
COOL	15.68	224	eP	17	30.00	-1.2
NANU	17.16	258	eP	17	52.20	2.1
			eS	20	52.00	
KLB	18.40	228	eP	18	04.00	-1.5
MRWA	18.53	237	eP	18	07.70	0.6
			eS	21	27.00	
BAL	18.63	232	eP	18	06.50	-1.9
NWAO	19.55	226	eP	18	20.00	0.6
MUN	19.71	229	eP	18	21.80	0.5

S.D. = 1.2 on 15 of 16 obs.

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* JUN 26, 1989 18h 39m 42.96± 1.79s
36.556 N ±17.9km 70.113 E ± 9.5km
DEPTH = 187.7 ± 25.2 km
4.5mb (7 obs.)
HINDU KUSH REGION (718)

QUE	6.88	204	iPd	41	24.50	2.0
			eS	42	41.50	
MAIO	8.56	271	eP	41	43.00	-1.6
			eS	43	10.00	
NDI	9.87	141	iPd	42	01.00	-0.6
			eS	43	41.50	
GKN	14.94	121	P	43	06.40	0.1
	0.4s	16.00nm			4.8mb	
DMN	15.51	121	P	43	13.70	0.3
	0.4s	8.00nm			4.5mb	
KKN	15.52	120	P	43	12.80	-0.6
	0.5s	22.00nm			4.8mb	
PKI	15.74	120	P	43	16.20	-0.1
SHL	21.58	114	eP	44	18.00	-0.6
NUR	37.37	324	eP	46	37.00	-1.6
SUF	37.50	328	iP	46	41.20	1.5
	0.6s	3.80nm			4.2mb	
SOD	39.39	335	eP	46	57.00	1.7
NB2	43.91	323	P	47	32.00	-0.3
	0.5s	2.10nm			3.9mb	
BNG	57.00	249	iPd	49	10.50	-0.9
	0.4s	3.00nm			4.4mb	
MBC	67.31	2	ePc	50	18.80	0.0
	0.5s	7.00nm			4.7mb	
			pP	51	10.00	219kmX
INK	73.96	9	eP	50	59.00	0.3

S.D. = 1.2 on 15 of 15 obs.

? JUN 26, 1989 18h 39m 59.81± 4.02s
36.056 N ±21.2km 21.068 E ±32.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
MD 3.5 (ATH).

ITM	1.32	31	ePg	40	23.30	-0.9
VLS	2.15	350	ePb	40	41.40	5.2X
VAM	2.63	103	ePn	40	42.00	-1.0
ATH	2.86	47	ePn	40	46.00	-0.2
NEO	3.67	27	ePn	40	58.90	1.1
NPS	3.78	101	ePb	41	04.00	4.5X
KZN	4.28	7	ePn	41	07.00	0.5
PLG	4.70	23	ePn	41	13.30	0.8
KAP	4.99	94	ePn	41	17.50	1.0
VAY	5.39	12	ePn	41	20.60	-1.5

S.D. = 1.2 on 8 of 10 obs.

& JUN 26, 1989 18h 52m 27.82s
19.339 N 154.956 W
DEPTH = 1.9km
HAWAII (613)
<HVO-P>. MD 4.2 (HVO).

HUL	0.08	345	iPd	52	30.40	0.9
WHA	0.09	265	iPd	52	30.50	0.9
PKL	0.12	16	iPc	52	31.00	0.7
KAE	0.17	253	iPd	52	32.10	0.8
KPO	0.19	34	iPc	52	32.30	0.6
MVH	0.19	329	iPd	52	32.35	0.7
MKA	0.20	278	iPd	52	32.25	0.4
PUH	0.25	279	iPd	52	33.00	0.2
PWH	0.26	258	iPd	52	33.60	0.6
ESR	0.28	285	iPd	52	33.60	0.2
AHA	0.29	277	iPd	52	33.85	0.1
KNH	0.32	269	iPd	52	34.20	0.1
NPH	0.32	284	iPd	52	34.10	-0.1
UWE	0.33	285	ePc	52	34.40	0.0
			iS	52	39.60	
HLP	0.34	263	ePd	52	34.65	0.1
NGH	0.37	349	iPc	52	35.95	0.8
HIL	0.40	342	iPc	52	36.36	0.6
			eS	52	42.00	
DES	0.41	270	ePd	52	35.50	-0.5
MLH	0.44	291	iPd	52	36.35	-0.2
AIN	0.48	274	iPd	52	37.60	0.2
PPL	0.51	250	ePd	52	37.65	-0.4
PLL	0.51	292	iPd	52	37.85	-0.3
HMH	0.57	298	iPd	52	38.90	-0.2
WIH	0.61	282	iPd	52	39.40	-0.6
SWH	0.62	281	iPd	52	39.40	-0.9
MWH	0.63	284	iPd	52	39.55	-0.8
KHU	0.63	262	iPd	52	39.30	-1.2
HPU	0.65	313	iPd	52	40.30	-0.4
KKU	0.66	326	iP	52	40.45	-0.5
DAH	0.67	272	iP	52	39.75	-1.5
KIH	0.78	283	ePd	52	42.50	-1.0
KUH	0.87	265	iP	52	43.50	-1.7
HUH	0.90	293	ePc	52	44.15	-1.9
KOH	1.10	315	eP	52	46.00	-3.4

34 obs. ossocioted

? JUN 26, 1989 19h 03m 45.16± 3.07s
38.005 N ±27.5km 21.243 E ±17.9km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.5 (ATH).

ATH	1.95	90	ePn	04	19.00	0.3
			eSn	04	50.00	
NEO	2.02	49	ePn	04	18.80	-0.9
LSK	2.20	347	ePn	04	21.80	-0.5
KZN	2.33	10	ePn	04	25.00	0.7
TPE	2.48	338	ePn	04	27.00	0.8
BERA	2.87	340	ePn	04	30.40	-1.4
PLG	2.92	35	ePb	04	40.00	7.5X
VAY	3.47	17	ePn	04	45.70	5.5X
TIR	3.50	343	ePn	04	41.00	0.3
SKO	3.97	2	ePn	04	48.00	0.7
PUK	4.16	346	ePn	04	46.00	-4.1X

S.D. = 1.0 on 8 of 11 obs.

JUN 26, 1989 21h 40m 30.67± 1.58s

26d 21h

39.023 N ± 5.9km 75.274 E ± 6.3km
DEPTH = 22.1 ± 13.2 km
4.2mb (5 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	0.70	52	Pgc	40 45.00	0.8	
			Sg	40 57.00		
NDI	10.44	171	eP	43 04.00	1.9	
			eS	44 53.00		
WMQ	10.48	59	P	43 02.00	-0.8	
OUE	11.16	220	eP	43 13.00	0.8	
			eS	45 14.10		
MAIO	12.80	263	eP	43 32.00	-2.1	
			eS	46 17.00		
GKN	13.47	142	P	43 41.90	-1.2	
KKN	13.96	140	P	43 48.40	-1.3	
	0.6s	25.00nm		5.1mb X		
DMN	14.03	141	P	43 49.70	-0.9	
	0.6s	36.00nm		5.3mb X		
GUN	14.17	138	P	43 52.60	0.1	
	0.4s	14.00nm		5.0mb X		
PKI	14.21	140	P	43 51.80	-1.2	
GTA	19.01	81	eP	44 53.80	0.2	
	0.8s	0.10nm		2.1mb X		
SHL	19.38	129	eP	44 59.00	0.9	
			eS	48 18.80		
HYB	21.72	172	eP	45 25.70	3.4X	
CD2	24.63	100	eP	45 53.70	2.9X	
GBA	25.39	175	Pc	46 00.30	2.3	
	1.0s	7.20nm		4.3mb		
BTO	26.64	75	eP	46 10.00	0.4	
N	13s	0.20um				
E	13s	0.30um				
XAN	27.39	90	P	46 16.00	-0.5	
CHG	28.74	128	eP	46 39.80	11.1X	
GYA	29.08	106	P	46 37.40	5.6X	
MLR	36.60	297	eP	47 37.00	0.0	
SUF	37.68	325	eP	47 47.00	1.3	
HFS	43.24	320	eP	48 31.20	-0.4	
	0.4s	1.90nm		4.2mb		
KHC	44.32	304	P	48 41.90	1.3	
NB2	44.47	321	P	48 40.70	-0.9	
	0.7s	2.70nm		4.2mb		
EKA	52.85	315	P	49 46.00	-0.5	
	1.0s	3.50nm		4.2mb		
BNG	61.69	251	iPc	50 49.00	-0.6	
	0.7s	7.00nm		4.9mb		
MBC	64.63	4	ePc	51 08.60	0.4	
	0.6s	18.00nm		5.4mb X		
INK	70.83	11	eP	51 47.00	-0.1	
S.D. = 1.2 on 24 of 28 obs.						

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* JUN 26, 1989 22h 53m 41.79± 0.78s
28.452 N ± 7.6km 51.426 E ±12.4km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
SOUTHERN IRAN (353)

SHI	1.53	39	eP	54 07.00	-0.3	
DHR	2.43	208	eP	54 22.30	2.3	
BEE	2.56	199	iPn	54 20.60	-1.2	
			(Sn)	54 59.10		
RYD	5.69	230	iPc	55 05.50	-0.8	
KER	6.94	329	e(P)	55 29.00	5.0X	
OASM	7.41	253	ePd	55 29.50	-0.9	
BHD	7.73	310	eP	56 26.00	51.2X	
			eS	58 18.00		
			e	58 48.00		
MSL	10.55	321	eP	56 13.00	-0.8	
MBH	14.53	279	eP	57 16.00	9.2X	
VRI	26.10	318	eP	59 16.00	1.8	
MLR	26.36	317	eP	59 20.00	3.2X	
KHC	35.50	316	eP	00 38.40	1.0	
SUF	38.04	341	eP	00 58.00	-0.5	
LPG	38.98	308	eP	01 06.90	-0.1	
	0.7s	3.30nm		4.2mb		
HFS	40.64	332	eP	01 19.80	-0.2	
	0.5s	6.00nm		4.6mb		
SOD	41.72	346	eP	01 30.00	1.1	
NB2	42.16	332	P	01 32.30	-0.3	
	0.7s	3.20nm		4.2mb		
TIC	57.46	259	P	03 29.20	-1.0	
TIC	57.46	259	P	03 31.00	0.8	
MBC	75.40	358	eP	05 22.00	-1.3	
	0.5s	2.00nm		4.4mb		
SCH	81.63	329	eP	05 58.00	0.3	
S.D. = 1.1 on 17 of 21 obs.						

& JUN 26, 1989 23h 09m 06.70s
37.128 N 121.517 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.7 (BRK).

ARN	0.22	357	iPd	09 11.30	0.0	
MHC	0.24	335	iPc	09 11.58	0.0	
			eS	09 15.50		
SAO	0.37	171	iPc	09 14.50	0.4	
			iS	09 20.50		
GCC	0.40	256	iPc	09 14.40	-0.3	
			iS	09 20.30		
LLA	0.69	138	iPc	09 19.70	-0.8	
			iS	09 30.90		
PCC	0.78	299	ePc	09 20.80	-1.4	
			eS	09 33.20		
BKS	0.94	323	iPd	09 24.20	-0.7	
BRK	0.95	322	ePd	09 24.60	-0.5	
			eS	09 38.50		
FRI	1.45	95	iPd	09 32.30	-1.1	
KVN	3.31	54	e(P)	10 01.00	0.8	
10 obs. associated						

JUN 26, 1989 23h 23m 57.32± 1.14s
14.637 N ± 3.8km 60.360 W ±18.4km
DEPTH = 43.3 ± 35.8 km
WINDWARD ISLANDS (95)
Felt (II) on Martinique.

MVM	0.52	261	iPc	24 09.12	0.6	
			S	24 18.40		
BIM	0.70	260	iPc	24 11.01	0.1	
			S	24 21.80		
FDF	0.77	277	iPc	24 11.91	0.0	
	0.1s	37.00nm				
			S	24 22.90		
SLW	0.83	222	eP	24 12.29	-0.4	
SLB	1.04	219	eP	24 15.37	-0.4	
BBL	1.39	309	ePc	24 20.80	0.1	
			S	24 38.40		
SOA	1.47	211	eP	24 12.30	-9.4X	
			eS	24 33.71		
SVV	1.55	212	eP	24 22.36	-0.6	
			eS	24 40.49		
MGG	1.57	324	ePd	24 22.90	-0.3	
SVB	1.61	213	eP	24 23.09	-0.7	
DEG	1.80	338	ePd	24 25.65	-0.8	
			S	24 47.50		
SFG	1.80	333	eP	24 26.20	-0.2	
PAG	1.88	318	eP	24 27.75	0.1	
			S	24 50.00		
SEG	2.07	328	ePd	24 30.78	0.5	
			S	24 55.50		
BPA	2.80	329	eP	24 40.42	-0.3	
ANG	2.88	331	eP	24 41.53	-0.2	
			eS	25 13.38		
NEV	3.27	320	eP	24 48.10	0.7	
			S	25 28.00		
SKI	3.52	320	eP	24 41.71	-9.3X	
			eS	25 13.38		
TRN	4.09	195	eP	24 58.76	-0.3	
			eS	25 45.11		
TCE	4.15	199	eP	24 59.40	-0.4	
			eS	25 13.53		
TBH	4.18	190	eP	25 02.02	1.6	
			eS	25 48.36		
S.D. = 0.6 on 19 of 21 obs.						

JUN 26, 1989 23h 55m 57.05± 0.32s
34.305 N ± 8.4km 70.775 E ± 5.9km
DEPTH = 33.0km (normal)
4.5mb (12 obs.)
AFGHANISTAN (709)

QUE	5.23	219	eP	57 15.00	-0.2	
			eS	58 16.00		
NDI	7.85	134	iPc	57 54.00	2.2	
			eS	59 19.50		
MAIO	9.43	285	eP	58 13.00	-0.8	
			eS	59 53.00		
GKN	13.42	114	P	59 07.50	-0.3	
DMN	13.98	115	P	59 14.10	-1.2	
	0.5s	20.00nm		5.1mb		
KKN	14.02	114	P	59 15.00	-0.7	
PKI	14.23	114	P	59 16.50	-2.1	
GUN	14.42	112	P	59 22.60	1.6	
	0.4s	20.00nm		5.0mb		
GBA	21.48	162	P	00 49.00	4.1X	
	0.6s	1.90nm		3.7mb		
MLR	35.74	302	eP	02 56.50	1.8	
NUR	39.52	326	eP	03 26.00	0.0	
SUF	39.70	330	iP	03 27.80	0.3	
SOD	41.65	336	eP	03 43.00	-0.5	
HFS	44.70	323	eP	04 07.70	-0.6	
	0.4s	1.30nm		4.1mb		
NB2	46.04	324	P	04 18.60	-0.4	
	0.5s	1.50nm		4.2mb		
BSF	48.76	306	eP	04 40.50	-0.1	
HAU	49.03	307	eP	04 42.50	-0.1	
LPG	49.17	303	eP	04 44.00	-0.1	
	0.7s	2.60nm		4.4mb		
LBF	50.79	306	eP	04 55.80	-0.3	
	0.7s	3.30nm		4.4mb		
LOR	50.81	306	eP	04 55.80	-0.4	
SMF	50.94	305	eP	04 57.30	0.1	
	0.8s	14.70nm		5.0mb		
AVF	51.25	306	eP	04 59.40	-0.1	
	0.7s	5.50nm		4.6mb		
BGF	51.63	305	eP	05 02.30	-0.2	
MAF	51.89	305	eP	05 04.70	0.2	
TCF	52.12	305	eP	05 06.40	0.2	
	0.8s	4.50nm		4.5mb		
CAF	52.53	303	eP	05 09.50	0.2	
LSF	52.59	305	eP	05 09.40	-0.3	
	0.7s	4.80nm		4.6mb		
LFF	53.44	304	eP	05 15.90	0.0	
BNG	56.73	251	iPd	05 40.00	-0.2	
	0.5s	3.00nm		4.6mb		
YKA	83.44	3	eP	08 24.00	1.9	
S.D. = 0.9 on 29 of 30 obs.						

& JUN 27, 1989 02h 25m 59.93s
62.742 N 150.721 W
DEPTH = 88.8km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.82	354	iP	26 18.17	0.3	
			S	26 31.51		
SKT	0.85	207	iP	26 17.40	-0.8	
PWA	1.16	160	iPc	26 21.20	-0.6	
MCK	1.28	38	iP	26 23.26	0.0	
SUA	1.28	180	eP	26 22.60	-0.8	
			S	26 41.07		
GHO	1.29	138	iP	26 22.98	-0.4	
			S	26 41.92		
PME	1.37	144	eP	26 23.64	-0.7	
			S	26 44.64		
PMR	1.37	146	iPc	26 23.50	-0.9	
CGLM	1.56	203	eP	26 25.89	-1.0	
PMS	1.60	159	ePc	26 26.30	-1.1	
SPU	1.69	203	eP	26 27.54	-1.0	
			S	26 51.23		
KNK	1.71	140	eP	26 27.70	-1.1	
			S	26 52.60		
NEA	1.98	21	eP	26 31.81	-0.6	
			S	26 54.74		
NKA	2.02	187	eP	26 35.08	2.2	
WRH	2.10	33	iP	26 33.34	-0.6	
TOA	2.21	105	iPc	26 35.00	-0.5	
SLKM	2.26	174	eP	26 35.00	-1.1	
CCB	2.31	33	iP	26 36.09	-0.7	
RDT	2.32	201	eP	26 35.90	-1.1	
HDA	2.37	44	eP	26 37.10	-0.6	
RDS	2.39	28	iP	26 37.33	-0.5	
PAX	2.42	82	eP	26 38.07	-0.3	
TTA	2.43	277	iPc	26 38.00	-0.6	
FBA	2.53	30	ePd	26 39.10	-0.6	
RED	2.53	204	eP	26 39.09	-0.8	
KLU	2.58	117	eP	26 38.47	-2.1	
VZW	2.60	129	eP	26 38.54	-2.2	
GLM	2.69	32	eP	26 41.36	-0.7	
SEW	2.72	166	eP	26 41.20	-1.1	
SVW	2.84	237	eP	26 43.00	-1.1	
OPT	3.33	203	eP	26 50.87	0.0	
GLB	3.50	109	eP	26 51.05	-2.2	
IMA	3.58	340	eP	26 50.70	-3.7	
AUL	3.62	203	eP	26 56.55	1.7	
DWY	5.24	70	P	27 15.70	-1.6	
INK	9.04	44	eP	28 10.00	0.6	
36 obs. associated						

& JUN 27, 1989 02h 45m 49.44s
61.463 N 151.523 W
DEPTH = 82.3km
SOUTHERN ALASKA (2)
<AGS-P>.

CRP	0.36	237	eP	46 02.23	-0.5
			S	46 12.17	
SUA	0.37	90	iP	46 02.81	0.0
			S	46 12.49	
SPU	0.38	222	iP	46 02.19	-0.6
			S	46 11.93	
SKT	0.52	360	eP	46 03.21	-0.6
			S	46 14.05	
NKA	0.74	169	eP	46 07.54	1.7
PWA	0.81	76	eP	46 06.76	0.1
RDT	0.99	206	eP	46 08.34	-0.5
			S	46 23.61	
SLKM	1.15	146	eP	46 08.68	-2.1
PME	1.20	81	eP	46 10.99	-0.4
RED	1.21	211	eP	46 11.29	-0.3
GHO	1.28	75	eP	46 11.78	-0.7
KNK	1.47	91	eP	46 14.53	-0.4
			S	46 33.37	
ILIM	1.56	208	eP	46 15.45	-0.6
KTH	2.12	7	eP	46 23.24	-0.4

14 obs. associated

JUN 27, 1989 06h 37m 55.58± 1.93s
18.529 S ±12.2km 174.832 W ±12.8km
DEPTH = 188.2 ± 17.6 km
4.7mb (9 obs.)
TONGA ISLANDS (173)

AFI	5.45	33	eP	39 08.40	-7.9X
			e	40 00.00	
SVA	6.39	273	iPd	39 29.10	0.6
VUN	6.39	274	iPd	39 29.00	0.4
DZM	17.91	256	iPc	41 54.90	0.9
PGZ	23.31	197	P	42 48.00	0.3
	0.6s	24.00nm		5.0mb	
MNG	23.54	199	eP	42 48.40	-1.6
BRS	31.03	248	iPd	43 56.70	-1.1
CTA	36.70	261	iPc	44 46.00	-0.3
	0.7s	24.66nm		5.0mb	
WB5	47.84	260	eP	46 14.20	-2.2X
ASPA	47.90	255	iPd	46 15.30	-1.6
	0.7s	60.00nm		5.2mb	
			eS	52 57.20	
KNA	53.79	264	eP	46 59.50	-1.7
NANU	64.81	253	iPd	48 16.00	-0.5
	0.4s	24.00nm		5.4mb	
SPA	71.59	180	e(P)	48 59.80	1.9
	1.0s	6.00nm		4.3mb	
CMB	76.01	41	P	49 22.10	-1.6
	1.0s	11.00nm		4.5mb	
KVN	78.05	42	P	49 34.50	-0.6
TNP	78.05	43	P	49 34.80	-0.4
RMW	81.07	33	eP	49 50.70	-0.2
PNT	83.37	33	eP	50 02.00	-0.6
	0.6s	5.00nm		4.4mb	
PV09	83.65	46	P	50 05.10	0.5
PV10	83.66	46	P	50 04.50	-0.1
ALQ	83.85	50	eP	50 06.40	0.9
BW06	85.50	42	P	50 12.60	-1.1
	0.7s	2.26nm		4.1mb	
FBA	85.71	11	P	50 13.30	-0.6
GOL	86.80	46	P	50 20.00	-0.1
	0.6s	5.76nm		4.6mb	
SES	88.54	35	ePd	50 27.80	-0.1
RSSD	89.68	43	P	50 33.70	0.1
INK	91.62	14	eP	50 41.00	-0.7
CHG	92.41	289	eP	50 47.90	1.5
CLL	146.71	351	iPKP	57 15.90	1.5
	1.2s	16.00nm			
BRG	146.98	350	iPKP	57 17.00	2.1
	1.1s	12.00nm			
MOX	147.55	352	ePKP	57 19.00	3.2X
PRU	147.73	349	ePKP	57 18.00	1.9
KHC	148.73	349	PKP	57 22.80	5.0X
FLN	149.50	7	ePKP	57 23.80	4.9X
	0.9s	13.10nm			
LPF	150.14	8	ePKP	57 25.10	5.2X
	0.7s	9.70nm			
LOR	151.32	2	ePKP	57 28.30	6.6X
	0.9s	6.50nm			
SSF	151.51	2	ePKP	57 28.80	6.8X
	0.8s	5.90nm			
LBF	151.60	2	ePKP	57 28.80	6.6X
	0.8s	5.30nm			
VBY	151.82	345	e(PKP)	57 29.40	6.9X
LSF	152.19	5	ePKP	57 29.90	6.9X
TCF	152.21	4	ePKP	57 30.10	7.0X
	0.8s	4.50nm			
MAF	152.30	4	ePKP	57 31.30	8.1X
	0.6s	4.50nm			

S.D. = 1.1 on 29 of 42 obs.

JUN 27, 1989 07h 10m 22.62± 0.24s
51.568 N ± 6.0km 174.339 W ± 3.1km
DEPTH = 33.0km (normal)
5.2mb (53 obs.) 5.0Msz (18 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 4.5 (PMR). Felt (IV) on Adak.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 25C
Centroid Location:
Origin Time 07:10:27.5 0.7
Lat 51.93N 0.07 Lon 174.61W 0.09
Dep 23.9 3.5 Half-duration 1.9
Moment Tensor; Scale 10**16 Nm
Mrr= 7.98 0.38 Mtt=-6.22 0.51
Mff=-1.76 0.36 Mrt= 7.79 1.47
Mrf= 1.98 0.81 Mtf=-3.60 0.50
Principal Axes:
T Val= 11.43 Plg=66 Azm=356
N -0.04 8 248
P -11.40 22 155
Best Double Couple:Mo=1.1*10**17
NP1:Strike=231 Dip=24 Slip= 71
NP2: 71 68 98

ADK	1.49	283	iPd	10 48.10	0.7
SMY	7.21	284	eP	12 11.00	2.7
SDN	9.08	60	eP	12 33.20	-1.1
KDC	14.04	55	eP	13 37.50	-3.6X
SVW	14.05	40	eP	13 44.20	2.9
TTA	15.03	34	eP	13 59.00	5.0X
PMR	17.02	44	eP	14 18.50	-0.8
IMA	17.90	28	eP	14 31.50	1.0
TOA	18.51	44	eP	14 37.00	-0.8
FBA	19.12	36	eP	14 42.30	-2.9
INK	25.72	34	eP	15 50.00	-1.1
	0.6s	23.00nm		5.0mb	
			pP	16 12.00	101kmX
MBC	32.40	21	ePc	16 50.30	-0.6
	0.6s	19.00nm		5.2mb	
YKA	33.07	47	eP	16 57.70	0.9
YKC	33.13	47	eP	16 58.50	1.2
LON	34.07	77	eP	17 07.80	2.1
PNT	34.24	72	eP	17 09.00	1.8
	0.7s	34.00nm		5.4mb	
KAKJ	35.57	262	P	17 18.60	0.0
NIIJ	35.64	265	eP	17 19.50	0.3
DPW	35.72	73	eP	17 22.50	2.6
EDM	36.27	63	iPc	17 24.00	-0.3
	0.5s	61.00nm		5.8mb	
CHJJ	36.40	263	eP	17 25.60	0.0
MAT	36.58	265	eP	17 28.00	0.9
	1.0s	21.00nm		5.0mb	
Z	20s	1.42um		4.7Msz	
			eS	23 09.00	
MDJ	37.28	282	eP	17 32.00	-0.9
Z	20s	3.10um		5.1Msz	
E	20s	2.00um			
			epP	17 45.00	48kmX
IIDJ	37.44	264	eP	17 35.20	0.8
TSRJ	38.60	265	eP	17 44.30	0.2
SES	38.76	66	ePd	17 45.50	0.2
CMB	39.70	88	eP	17 55.00	1.7
	1.0s	13.50nm		4.7mb	
LRM	40.17	73	eP	17 59.00	1.7
CN2	40.24	283	Pc	17 57.00	-0.5
	4.0s	0.40nm		2.5mb X	
Z	20s	4.80um		5.3Msz	
			pP	18 10.00	49kmX
			ePP	19 34.00	
KVN	40.51	85	eP	18 00.00	-0.1
TNP	41.65	86	eP	18 09.80	0.4
	0.8s	6.91nm		4.4mb	
BCH	41.68	91	eP	18 09.50	-0.2
FFC	41.74	56	eP	18 09.00	-0.8
	0.6s	12.00nm		4.8mb	

ALE	41.94	10	eP	18 11.00	-0.1
	0.5s	4.00nm		4.4mb	
ISA	42.38	90	eP	18 27.00	11.7X
SNY	42.48	282	Pc	18 16.00	0.1
	3.0s	0.80nm		2.9mb X	
Z	20s	1.70um		4.9Msz	
N	20s	1.70um			
E	20s	1.20um			
			pP	18 29.00	48kmX
SHNJ	42.56	268	P	18 16.90	0.2
SBB	43.42	90	eP	18 24.00	0.2
BW06	43.57	75	eP	18 25.00	-0.2
	0.5s	24.01nm		5.2mb	
MWC	43.57	91	eP	18 29.00	3.8X
GSC	43.65	89	eP	18 38.00	12.3X
RVR	44.15	91	eP	18 33.00	3.4X
PLM	44.89	91	eP	18 35.20	-0.7
TPC	44.90	89	eP	18 47.00	11.2X
DL2	45.42	280	eP	18 39.00	-0.7
Z	16s	0.40um		4.4MszX	
			pP	18 52.00	48kmX
			eS	25 20.00	
RSSD	46.09	70	eP	18 44.70	-0.5
GLA	46.37	90	eP	18 47.00	-0.3
PV09	46.39	80	eP	18 47.20	-0.6
PV10	46.53	80	eP	18 49.00	0.2
GOL	47.94	76	eP	18 59.50	-0.5
	0.6s	54.12nm		5.8mb	
GLD	48.00	76	eP	19 00.50	0.2
	1.2s	115.15nm		5.8mb	
RSON	48.03	57	eP	18 59.00	-1.2
	0.7s	66.78nm		5.8mb	
BJI	48.04	285	eP	19 01.00	0.6
Z	20s	2.61um		5.2Msz	
N	19s	1.85um			
			esP	19 14.00	
			eS	26 04.00	
TIA	49.89	280	eP	19 14.10	-0.6
Z	20s	0.90um		4.8Msz	
			epP	19 26.50	45kmX
			S	26 22.50	
			sS	26 41.00	
GUMO	50.07	236	eP	19 15.00	-1.2
Z	20s	0.42um		4.4Msz	
GUA	50.09	236	eP	19 14.50	-1.9
	0.7s	38.36nm		5.5mb	
HHC	50.30	289	eP	19 18.00	0.1
E	13s	0.20um			
ALQ	50.32	81	e(P)	19 18.30	0.1
			e	19 31.80	
			e	19 45.10	
SSE	50.78	272	P	19 20.00	-1.5
	3.0s	0.50nm		3.0mb X	
Z	20s	0.50um		4.5Msz	
N	14s	0.30um			
E	14s	0.40um			
			sP	19 35.00	
			eS	26 20.00	
			sS	26 40.00	
DAG	50.99	7	eP	19 22.00	-0.5
BTO	51.37	289	P	19 26.00	0.0
N	17s	0.80um			
E	19s	0.90um			
			pP	19 40.00	52kmX
			eS	26 43.00	
FRB	51.37	33	eP	19 23.00	-2.5
NJ2	51.58	275	Pd	19 27.00	-0.6
Z	22s	0.60um		4.6Msz	
			S	26 44.00	
TIY	51.77	285	Pd	19 29.50	0.4
Z	22s	2.22um		5.1Msz	
N	22s	2.77um			
			sP	19 43.50	
			PP	21 32.00	
WHN	55.42	277	eP	19 55.00	-0.9
Z	18s	0.73um		4.8Msz	
			pP	20 05.50	35kmX
			esP	20 08.00	
SIO	55.97	74	e(P)	20 03.20	3.4X
LNO	56.16	73	eP	20 02.60	1.5
TUL	56.16	73	eP	20 00.50	-0.7
	0.8s	3.70nm		4.5mb	
Z	21s	1.01um		4.9Msz	
			LR	38 00.00	
FVM	57.92	68	eP	20 11.80	-1.8
	0.7s	34.01nm		5.5mb	
LZH	57.99	289	Pd	20 13.50	-0.8

27d 07h

	2.5s	18.00nm		4.7mb			
Z	20s	17.20um		6.2MszX			
E	18s	1.30um					
KEV	57.99	351 eP	20	12.00	-1.7		
	0.5s	14.00nm		5.3mb			
GTA	58.06	294 P	20	13.20	-1.6		
Z	16s	1.20um		5.1MszX			
N	15s	1.20um					
SCH	58.12	41 eP	20	13.00	-1.9		
TRO	58.72	355 eP	20	17.50	-1.3		
SOD	60.34	351 iP	20	29.30	-0.7		
GAC	60.66	53 ePd	20	30.90	-1.5		
WMQ	61.54	305 P	20	37.50	-1.1		
Z	18s	1.40um		5.2Msz			
CD2	61.65	285 eP	20	39.00	-0.4		
GYA	63.06	279 P	20	48.00	-0.9		
		pP	21	03.00	55kmX		
BLA	64.12	62 eP	20	55.50	-0.2		
	0.8s	26.85nm		5.4mb			
SUF	64.91	350 eP	20	58.70	-1.7		
	0.6s	8.40nm		5.0mb			
JSC	65.78	65 eP	21	05.50	-0.8		
KMI	66.45	281 P+	21	10.00	-1.0		
Z	18s	0.90um		5.0Msz			
		sP	21	24.00			
		eS	30	06.00			
		S	30	15.00			
OIZ	66.55	271 eP	21	13.70	2.2		
		eS	29	56.50			
NUR	67.24	350 eP	21	13.50	-1.7		
Z	20s	0.90um		5.0Msz			
		LR	52	00.00			
NB2	67.66	357 P	21	15.80	-2.1		
	0.8s	6.90nm		4.8mb			
HFS	68.46	356 eP	21	20.50	-2.4		
	0.5s	11.60nm		5.2mb			
Z	17s	0.38um		4.7MszX			
		LR	45	46.00			
UPP	68.51	354 iP	21	22.20	-0.9		
KSH	70.62	309 P	21	36.00	-0.6		
E	18s	2.00um					
		sP	21	49.00			
EKA	73.22	5 P	21	52.00	0.4		
	0.8s	5.30nm		4.6mb			
CHG	73.48	279 eP	21	55.60	1.9		
CHTO	73.48	279 iP	21	55.20	1.5		
	1.0s	11.25nm		4.8mb			
GUN	74.34	295 P	21	58.80	-0.2		
DMU	74.38	8 eP	22	00.00	1.7		
BDT	74.64	278 eP	22	01.00	0.7		
KKN	74.77	295 P	22	00.80	-0.5		
PKI	74.86	295 P	22	01.70	-0.3		
GKN	74.97	296 P	22	02.00	-0.4		
DMN	75.01	295 P	22	02.60	-0.1		
	0.8s	56.00nm		5.6mb			
DLE	75.02	8 eP	22	09.00	7.0X		
CLL	77.31	355 iPd	22	15.60	0.7		
KSP	77.57	353 eP	22	16.00	-0.4		
BRG	77.69	355 iP	22	26.80	9.7X		
	1.1s	21.00nm		5.1mb			
MOX	78.04	356 eP	22	19.00	0.0		
	1.0s	17.00nm		5.0mb			
ENN	78.04	360 eP	22	19.00	0.1		
	1.0s	42.00nm		5.4mb			
MEM	78.20	360 P	22	19.70	-0.1		
SNF	78.29	1 P	22	20.30	0 0		
PRU	78.54	354 eP	22	20.00	-1.7		
Z	20s	0.70um		5.0Msz			
		e	22	22.10			
TNS	78.56	358 eP	22	22.10	0.2		
DOU	78.71	1 iPc	22	23.70	1.1		
	0.8s	25.00nm		5.3mb			
SPC	78.85	350 eP	22	23.40	-0.3		
ABH	78.92	359 eP	22	23.39	-0.4		
RUP	79.10	359 eP	22	24.32	-0.5		
TOD	79.17	358 eP	22	25.41	0.2		
KHC	79.45	355 iPd	22	27.30	0.5		
	1.0s	9.00nm		4.7mb			
GWF	79.82	359 P	22	30.21	1.5		
FLN	79.91	4 eP	22	29.30	0.1		
	0.8s	22.50nm		5.2mb			
LDF	80.10	4 eP	22	29.50	-0.7		
	0.9s	26.20nm		5.2mb			
ZST	80.13	352 eP	22	30.80	0.4		
Z	18s	0.80um		5.1Msz			
		e	22	46.60			
		e	34	02.40			

GRR	80.27	4 eP	22	30.90	-0.2		
	0.7s	15.40nm		5.1mb			
CDF	80.39	359 P	22	32.11	0.3		
ECH	80.59	359 P	22	32.89	0.1		
VITF	80.60	360 P	22	32.83	0.1		
LPF	80.61	5 eP	22	32.60	-0.3		
	0.7s	15.40nm		5.1mb			
MAIO	80.62	319 eP	22	35.00	1.7		
		eS	33	00.00			
HAU	80.81	360 eP	22	33.90	-0.1		
	0.7s	22.00nm		5.3mb			
FEL	80.92	358 eP	22	34.78	0.1		
MOF	80.95	359 P	22	35.16	0.3		
BSF	80.98	359 P	22	34.51	-0.5		
SNG	81.35	271 eP	22	38.50	1.2		
LOMF	81.46	359 P	22	38.19	0.7		
KBA	81.51	355 iPc	22	38.20	0.3		
	1.0s	33.10nm		5.3mb			
LOR	81.53	1 eP	22	37.90	0.1		
	0.6s	18.00nm		5.3mb			
SSF	81.73	1 eP	22	38.90	0.1		
	0.7s	26.80nm		5.4mb			
MLR	81.75	346 ePd	22	41.00	1.9		
		e	29	04.00			
LBF	81.82	1 eP	22	39.20	-0.1		
	0.7s	11.40nm		5.0mb			
MFF	82.08	4 eP	22	40.60	0.0		
	0.6s	18.00nm		5.3mb			
QUE	82.46	310 eP	22	44.00	0.9		
LSF	82.50	3 eP	22	43.00	0.2		
	0.7s	23.50nm		5.4mb			
MAF	82.56	2 eP	22	43.40	0.3		
	0.6s	15.30nm		5.2mb			
AGO	82.74	2 P	22	45.67	1.6		
PLDF	82.83	1 P	22	45.36	0.7		
PYM	83.04	2 P	22	46.09	0.4		
LPG	83.31	359 eP	22	48.50	1.1		
LSD	83.35	359 P	22	48.87	1.3		
RJF	83.44	3 eP	22	48.10	0.4		
	0.6s	5.40nm		4.9mb			
LBL	83.56	2 P	22	49.44	1.2		
LFF	83.78	4 eP	22	49.60	0.2		
	0.7s	14.10nm		5.2mb			
CAF	83.84	3 eP	22	50.00	0.3		
	1.1s	20.50nm		5.2mb			
RRL	83.89	359 P	22	51.85	1.6		
LPO	84.05	3 eP	22	50.90	0.1		
	1.0s	28.00nm		5.4mb			
WB5	84.07	228 eP	22	48.80	-2.3		
		e	23	07.50			
WRA	84.14	228 Pd	22	50.20	-1.3		
	0.7s	2.00nm		4.4mb			
ROB	84.50	358 P	22	53.18	0.1		
STV	84.56	359 P	22	53.18	-0.3		
ENR	84.57	359 P	22	53.59	0.2		
FIN	84.58	358 P	22	53.79	0.3		
IMI	84.88	358 P	22	55.84	0.8		
SBF	84.94	359 eP	22	55.80	0.5		
	1.0s	33.60nm		5.5mb			
FRF	85.25	359 eP	22	57.30	0.5		
	1.1s	24.40nm		5.3mb			
LRG	85.36	359 eP	22	58.00	0.7		
EPF	85.67	4 eP	22	58.80	-0.2		
	0.7s	6.60nm		5.0mb			
SKO	85.83	348 iP	23	01.00	1.2		
Z	18s	0.55um		5.0Msz			
N	18s	0.63um					
E	17s	0.34um					
		iS	33	34.00			
		LR	08	41.00			
PSI	85.87	269 ePd	23	04.50	4.2X		
BBTK	85.94	339 eP	23	00.00	-0.5		
CVF	86.20	358 eP	23	01.60	0.0		
	0.9s	16.30nm		5.3mb			
HYB	86.72	294 eP	23	05.10	0.6		
OHR	86.76	349 eP	23	05.80	1.4		
ASPA	87.57	226 iPd	23	08.20	-0.1		
	0.8s	27.00nm		5.6mb			
		e	23	18.10			
POO	88.46	298 eP	23	13.50	0.6		
GBA	90.41	293 Pd	23	21.00	-1.0		
	0.7s	4.40nm		4.9mb			
BNG	123.14	345 iPKPc	29	17.80	0.4		
	1.6s	13.00nm					
		id	33	09.00			
		ic	36	26.00			
		id	41	22.50			

PPD	127.37	78 ePKP	29	36.30	10 9X		
MAW	148.34	218 ePKP	30	05.00	3.1X		
	S.D. = 1.1	on 161 of 174 obs.					
	JUN 27, 1989	07h 16m 46.15± 0.64s					
	51.522 N ±13.9km	174.391 W ± 6.0km					
	DEPTH = 33.0km	(normal)					
	4.8mb (13 obs.)	4.6Msz (1 obs.)					
	ANDREANOF ISLANDS, ALEUTIAN IS. (7)						
ADK	1.47	285 iPd	17	11.00	0.4		
KDC	14.09	55 eP	20	02.70	-2.6X		
SVW	14.11	40 eP	20	12.40	6.8X		
TTA	15.08	34 eP	20	21.00	2.7X		
PMS	16.74	45 eP	20	41.30	1.9		
IMA	17.96	28 eP	20	53.50	-1.2		
TOA	18.56	44 eP	21	02.40	0.3		
INK	25.78	34 eP	22	15.00	-0.1		
MBC	32.46	21 eP	23	14.00	-0.9		
	0.9s	7.00nm		4.6mb			
PNT	34.29	72 eP	23	42.00	10.9X		
EDM	36.32	63 iP	23	48.50	0.2		
CN2	40.21	283 eP	24	21.00	0.1		
BW06	43.62	75 eP	24	49.00	0.0		
BJI	48.02	285 eP	25	23.00	-0.8		
RSON	48.09	57 eP	25	23.00	-1.1		
	0.8s	28.04nm		5.3mb			
ALQ	50.36	81 e(P)	25	56.00	14.0X		
Z	18s	0.50um		4.6Msz			
		e	26	32.00			
		e	26	47.00			
TIY	51.76	285 eP	25	52.80	0.3		
XAN	56.32	284 P	26	25.00	-1.0		
GAC	60.71	53 eP	26	55.00	-1.3		
		pP	27	32.00	157kmX		
CD2	61.63	285 eP	27	02.30	-0.5		
GYA	63.04	279 P	27	12.00	-0.3		
SUF	64.95	350 eP	27	23.30	-0.9		
NUR	67.28	350 eP	27	24.00	-15.0X		
NB2	67.70	357 P	27	40.50	-1.2		
	0.8s	3.30nm		4.5mb			
HFS	68.51	356 eP	27	44.70	-2.0		
	0.4s	2.40nm		4.6mb			
GUN	74.33	295 P	28	22.60	0.1		
KKN	74.76	295 P	28	25.00	0.2		
PKI	74.86	295 P	28	25.60	0.1		
GKN	74.96	296 P	28	25.80	-0.1		
DMN	75.00	295 P	28	26.60	0.4		
MOX	78.08	356 e(P)	28	43.00	0.3		
		e	29	20.00			
KHC	79.50	355 P	28	51.50	1.0		
LDF	80.14	4 eP	28	53.80	-0.1		
CDF	80.44	359 eP	28	55.90	0.3		
LPF	80.66	5 eP	28	56.90	0.2		
HAU	80.85	359 eP	28	57.90	0.2		
	0.7s	7.40nm		4.8mb			
BSF	81.02	359 eP	28	59.00	0.2		
LOR	81.58	1 eP	29	01.80	0.2		
	0.8s	8.00nm		4.8mb			
SSF	81.78	1 eP	29	02.80	0.2		
	0.7s	9.20nm		4.9mb			
LBF	81.86	1 eP	29	03.20	0.1		
	0.9s	8.80nm		4.8mb			
AVF	82.05	2 eP	29	04.20	0.2		
	0.8s	8.50nm		4.8mb			
MFF	82.13	4 eP	29	04.90	0.5		
	1.0s	20.00nm		5.1mb			
SMF	82.20	1 eP	29	05.10	0.3		
	0.9s	10.40nm		4.9mb			
QUE	82.46	310 eP	29	07.40	0.7		
TCF	82.53	2 eP	29	06.80	0.3		
LSF	82.55	3 eP	29	07.00	0.4		
MAF	82.60	2 eP	29	07.30	0.4		
	0.8s	8.00nm		4.8mb			
CAF	83.89	3 eP	29	14.20	0.7		
	0.8s	4.50nm		4.7mb			
LPO	84.10	3 eP	29	15.00	0.4		
SKO	85.87	348 iP	29	24.30	0.8		
	S.D. = 0.7	on 44 of 50 obs.					
•	JUN 27, 1989	07h 17m 24.59± 0.62s					
	51.834 N ±13.2km	174.326 W ±10.8km					
	DEPTH = 33.0km	(normal)					
	4.9mb (19 obs.)						
	ANDREANOF ISLANDS, ALEUTIAN IS. (7)						
MBC	32.15	22 eP	23	51.50	0.9		

	0.6s	6.00nm		4.7mb		
EDM	36.14	63 iPc	24 25.20	0.0		
	0.5s	26.00nm		5.4mb		
FFC	41.59	56 eP	25 10.50	0.0		
	0.6s	8.00nm		4.6mb		
RSON	47.88	57 eP	26 00.20	-0.8		
	0.6s	25.66nm		5.4mb		
SUF	64.65	350 eP	27 59.90	-0.8		
NUR	66.98	350 eP	28 14.00	-1.5		
CTA	79.47	217 iPc	29 29.10	0.0		
FLN	79.65	4 eP	29 29.50	-0.2		
	0.9s	14.40nm		5.0mb		
LDF	79.83	4 eP	29 30.30	-0.4		
	0.9s	16.30nm		5.0mb		
GRR	80.00	4 eP	29 31.00	-0.6		
CDF	80.12	359 eP	29 32.50	0.1		
LPF	80.35	5 eP	29 32.90	-0.6		
	0.8s	9.10nm		4.8mb		
HAU	80.54	360 eP	29 34.70	0.2		
	0.6s	7.90nm		4.9mb		
BSF	80.71	359 eP	29 35.70	0.2		
	0.6s	5.40nm		4.7mb		
LOR	81.27	1 eP	29 38.50	0.1		
	0.7s	8.80nm		4.9mb		
SSF	81.47	1 eP	29 39.60	0.2		
	0.6s	8.10nm		4.9mb		
LBF	81.55	1 eP	29 40.00	0.1		
	0.6s	5.40nm		4.7mb		
AVF	81.74	2 eP	29 41.10	0.3		
	0.6s	6.60nm		4.8mb		
MFF	81.82	4 eP	29 41.50	0.3		
	0.8s	11.80nm		5.0mb		
SMF	81.89	1 eP	29 42.00	0.4		
	0.6s	9.00nm		5.0mb		
TCF	82.21	2 eP	29 43.50	0.2		
LSF	82.23	3 eP	29 43.70	0.3		
	0.8s	14.70nm		5.1mb		
MAF	82.29	2 eP	29 44.20	0.5		
	0.8s	9.40nm		4.9mb		
CAF	83.57	3 eP	29 50.90	0.5		
	0.8s	4.00nm		4.6mb		
LPO	83.79	3 eP	29 51.80	0.4		
	0.7s	7.40nm		4.9mb		
	S.D. = 0.5	on 25 of 25 obs.				

JUN 27, 1989 08h 10m 17.04± 0.98s
15.940 S ±10.7km 75.086 W ± 9.4km
DEPTH = 34.0 ± 7.1 km
4.8mb (11 obs.) 4.2Msz (1 obs.)
NEAR COAST OF PERU (115)

PT06	2.42	330 iP	10 54.30	-0.8		
PT02	3.25	336 iP	11 06.30	-0.7		
ARE	3.49	99 iPc	11 10.50	-0.2		
		i(S)	11 58.50			
PT08	4.20	340 iP	11 19.30	-1.5		
		iS	12 12.50			
PT10	4.25	334 iP	11 23.00	1.8		
		eS	12 19.00			
NNA	4.28	336 iPc	11 22.50	0.8		
		i	11 27.00			
		eS	12 17.50			
ZOBO	6.70	94 P	11 57.30	1.1		
Z	16s	9.12um				
		S	12 08.00			
		LR	14 20.00			
LPB	6.74	96 P	12 03.00	6.4X		
	1.1s	683.54nm		6.4mb X		
		S	13 26.00			
		LR	14 31.00			
CNCB	6.88	98 P	12 02.00	3.3X		
CCH	8.69	101 P	12 24.50	0.7		
ANT	8.89	151 eP	12 25.00	-1.1		
PSO	17.17	352 eP	14 21.50	5.0X		
BOG	20.46	3 eP	15 06.00	11.1X		
		eS	18 44.00			
ITB1	21.24	117 eP	15 02.80	0.3		
ITB7	21.58	118 e(P)	15 05.20	-0.8		
PPD	23.27	109 eP	15 23.00	0.3		
		epP	15 34.30	44kmX		
ATB	25.77	63 Pc	15 45.20	-1.4		
BAO	26.07	93 eP	15 51.00	1.4		
VAO	27.39	109 eP	16 01.30	-0.3		
SOB1	34.00	83 eP	16 58.70	-1.4		
JSC	50.28	353 eP	19 11.10	-1.2		
TUL	55.17	340 eP	19 48.10	-0.6		
	1.0s	16.70nm		5.0mb		
Z	21s	0.20um		4.2Msz		
		e	19 55.90			
		e	20 06.00			
		e	20 15.60			
		LR	40 00.00			
LNO	55.17	340 eP	19 47.20	-1.4		
SIO	55.19	339 e(P)	19 49.50	0.6		
FVM	55.54	345 eP	19 50.00	-1.3		
	1.0s	8.00nm		4.7mb		
ALQ	58.72	330 eP	20 14.50	0.3		
	1.0s	5.00nm		4.6mb		
		e	20 21.90			
GLD	62.12	334 eP	20 38.00	0.7		
	1.1s	23.14nm		5.2mb		
GOL	62.14	334 eP	20 37.20	-0.3		
RSSD	65.36	337 eP	20 58.20	-0.3		
BW06	66.47	333 eP	21 05.50	-0.1		
	1.0s	3.00nm		4.3mb		
TNP	66.71	325 eP	21 09.00	1.8		
	1.0s	3.00nm		4.3mb		
KVN	67.88	325 e(P)	21 15.50	0.9		
	1.1s	2.00nm		4.1mb		
CMB	68.48	323 e(P)	21 26.00	7.9X		
RSON	68.49	347 iP	21 17.10	-0.8		
ORV	70.14	323 ePc	21 31.80	3.6X		
SCH	70.83	5 eP	21 32.00	-0.1		
LIC	72.73	78 Pc	21 43.86	-0.4		
	1.2s	39.00nm		5.3mb		
TIC	72.88	78 P	21 44.70	-0.4		
KIC	73.05	78 Pc	21 45.82	-0.3		
	1.1s	41.00nm		5.3mb		
SES	73.22	337 ePd	21 47.00	0.5		
SPA	74.16	180 e(P)	21 54.90	3.0X		
	0.9s	2.27nm		4.2mb		
EDM	76.34	337 eP	22 04.00	-0.3		
YKA	84.10	343 eP	22 46.90	1.5		
INK	93.79	341 eP	23 31.00	-0.4		
BNG	94.69	87 iPc	23 38.50	1.8		
	0.6s	5.00nm		5.1mb		
MBC	95.75	350 eP	23 41.50	1.3		
WRA	134.09	220 PKP	29 38.00	4.5X		
	0.7s	1.50nm				
WB5	134.12	220 iPKP	29 36.20	2.6X		
MAT	144.04	311 ePKP	29 50.00	-1.2		
	1.1s	12.66nm				
GBA	153.34	91 PKPd	30 14.90	8.7X		
	1.0s	5.90nm				
BJI	154.06	340 ePKP	30 09.00	2.5X		
KMI	170.64	12 ePKP	30 09.00	-14.3X		
	S.D. = 1.0	on 40 of 52 obs.				

% JUN 27, 1989 08h 23m 54.73± 1.08s
17.586 N ±18.9km 94.510 W ±11.3km
DEPTH = 33.0km (normal)
CHIAPAS, MEXICO (61)

SCX	1.98	115 eP	24 26.50	-0.1		
		iS	24 52.00			
OXX	2.17	257 iP	24 30.50	1.0		
		iS	25 02.00			
LVVM	2.82	320 eP	24 39.00	0.6		
IISM	3.06	298 iP	24 42.00	0.1		
		iS	25 18.00			
III	4.78	280 iP	25 05.00	-1.6		
		iS	25 55.00			
	S.D. = 1.4	on 5 of 5 obs.				

% JUN 27, 1989 08h 47m 24.14± 0.64s
60.692 N ± 5.1km 5.510 E ± 6.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK	0.26	217 iP	47 30.46	0.8		
		iSg	47 34.70			
BER	0.32	196 eP	47 29.26	-1.5		
		eS	47 35.75			
SUE	0.52	315 iP	47 34.71	0.1		
		eS	47 41.92			
HYA	0.58	35 eP	47 35.11	-0.7		
		eS	47 42.29			
ODD1	0.96	144 eP	47 42.39	-0.1		
		eS	47 55.09			
BLS1	1.46	153 iP	47 51.61	0.9		
		eS	48 10.11			
MOL	2.12	26 eP	48 00.39	0.3		
		eS	48 27.58			
NRA0	2.97	87 iPc	48 12.20	0.1		
		iSg	48 54.00			
	S.D. = 1.0	on 8 of 8 obs.				

& JUN 27, 1989 09h 05m 48.16s
62.153 N 149.614 W
DEPTH = 44.0km
CENTRAL ALASKA (1)
<AGS-P>.

GHO	0.50	139 iP	05 58.93	-0.3		
PWA	0.52	194 iP	05 59.13	-0.2		
		S	06 07.70			
PME	0.59	152 eP	05 59.79	-0.5		
SUA	0.88	218 eP	06 04.00	-0.3		
SKT	0.92	260 eP	06 04.06	-0.8		
		S	06 17.52			
KNK	0.92	143 iP	06 04.25	-0.7		
		S	06 17.49			
CGLM	1.42	234 eP	06 11.41	-0.6		
SPU	1.52	231 eP	06 13.16	-0.2		
KTH	1.53	337 iP	06 13.18	-0.3		
		S	06 32.34			
MCK	1.62	11 eP	06 14.82	0.1		
TOA	1.62	90 iP	06 15.01	0.3		
SLKM	1.68	190 eP	06 14.44	-1.1		
KLU	1.87	109 eP	06 17.30	-1.1		
RDT	2.08	222 eP	06 20.32	-1.0		
		S	06 46.94			
PAX	2.09	65 eP	06 21.45	0.0		
		S	06 47.61			
WRH	2.43	16 eP	06 25.53	-0.7		
NEA	2.45	5 eP	06 25.59	-0.9		
CCB	2.63	17 eP	06 27.74	-1.4		
ILIM	2.64	219 eP	06 28.43	-0.9		
GLB	2.85	102 eP	06 30.64	-1.6		
	20 obs. associated					

? JUN 27, 1989 09h 07m 29.15± 7.20s
17.849 N ±22.3km 65.657 W ±49.4km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.54	299 iP	07 40.00	0.0		
		S	07 48.00			
CSB	0.65	313 iP	07 42.00	-0.1		
PNP	1.00	282 iP	07 48.00	-0.1		
		S	08 02.00			
APR	1.19	301 iP	07 51.50	0.2		
		S	08 08.50			
MGP	1.37	277 iP	07 54.30	0.0		
	S.D. = 0.2	on 5 of 5 obs.				

JUN 27, 1989 09h 18m 04.56± 0.71s
42.902 N ± 5.6km 13.035 E ± 6.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.4 (ROM), 2.4 (SSO).

CIO	0.30	15 iPg	18 11.00	0.1		
		iSg	18 15.84			
ASS	0.32	302 P	18 11.40	0.1		
		eSg	18 16.30			
ALP	0.42	107 ePg	18 13.09	0.0		
		iSg	18 19.54			
MNS	0.58	207 Pd	18 16.30	0.0		
		eSg	18 25.10			
ARV	0.60	354 P	18 16.40	-0.3		
		eSg	18 25.90			
AOI	0.77	32 ePg	18 19.72	0.1		
		iSg	18 32.49			
	S.D. = 0.2	on 6 of 6 obs.				

• JUN 27, 1989 09h 24m 22.35± 1.56s
37.413 N ±10.8km 142.078 E ±15.7km
DEPTH = 33.0km (normal)
OFF EAST COAST OF HONSHU, JAPAN (229)

OFUJ	1.70	349 iPd	24 50.10	0.1		
		eS	25 08.20			
YAMJ	1.79	296 eP	24 50.40	-1.0		
		eS	25 09.10			
KAKJ	1.95	232 iPd	24 53.20	-0.5		
		eS	25 13.50			
NIIJ	2.46	267 iPd	25 00.10	-0.9		
		eS	25 28.20			
CHJJ	2.83	242 P	25 05.50	-0.7		

27d 09h

MAT	3.22	255	eP	25	12.00	0.2
			iS	25	51.10	
AOMJ	3.41	338	eP	25	15.70	1.2
MTMJ	3.52	258	eP	25	16.40	0.2
IIDJ	3.87	241	P	25	22.30	1.2
TSRJ	5.26	251	P	25	41.20	0.6
KUSJ	6.02	19	P	25	50.90	-0.6
			S	26	55.00	

S.D. = 0.9 on 11 of 11 obs.

% JUN 27, 1989 10h 08m 56.97± 1.49s
61.611 N ±10.0km 5.217 E ±12.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.1 (BER).

SUE	0.60	202	iP	09	09.03	0.0
			eS	09	16.36	
HYA	0.65	133	eP	09	09.52	-0.4
			eS	09	17.76	
ASK	1.13	181	iP	09	18.48	0.3
			eS	09	34.38	
BER	1.23	177	eP	09	18.78	-1.1
			eS	09	36.88	
MOL	1.46	48	iP	09	23.39	0.1
			eS	09	40.28	
			eSg	09	43.85	
ODD1	1.84	157	eP	09	29.71	0.8
			eS	09	50.40	
BLS1	2.37	160	eP	09	37.87	1.3
			eS	10	03.06	
			eSg	10	11.29	
KMY	2.41	180	eP	09	36.32	-0.7
			eS	10	04.65	
NRA0	3.19	103	iPc	09	47.60	-0.5
			iPg	09	54.60	
			eS	10	25.70	
			iSg	10	34.40	

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

JUN 27, 1989 10h 59m 34.10± 0.33s
51.522 N ± 7.8km 174.342 W ± 3.3km
DEPTH = 33.0km (normal)
4.9mb (31 obs.) 4.3Msz (1 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.50	285	iPd	59	59.60	0.6
SDN	9.11	60	eP	01	45.40	-0.7
KDC	14.07	55	eP	02	53.80	0.9
TTA	15.07	34	eP	03	11.30	5.3X
PMR	17.05	44	eP	03	31.70	0.5
IMA	17.95	28	eP	03	43.30	0.8
	1.3s		16.50nm		4.0mb	
TOA	18.54	44	eP	03	50.00	0.3
FBA	19.16	36	eP	03	56.40	-0.7
INK	25.76	34	eP	05	03.00	0.1
MBC	32.44	21	eP	06	02.50	-0.2
	0.8s		4.00nm		4.4mb	
PNT	34.26	72	eP	06	20.00	1.2
DPW	35.74	73	eP	06	30.50	-1.0
EDM	36.29	63	iPc	06	36.40	0.4
	0.7s		18.00nm		5.1mb	
MAT	36.57	265	eP	06	38.00	-0.5
	0.8s		7.46nm		4.6mb	
SES	38.78	66	ePd	06	56.70	-0.2
CN2	40.24	283	Pc	07	05.00	-4.1X
Z	20s		0.40um		4.3Msz	
			ePP	08	48.00	
KVN	40.51	85	eP	07	12.00	0.4
TNP	41.65	86	eP	07	20.90	-0.1
SNY	42.49	282	Pc	07	28.00	0.5
BW06	43.59	75	eP	07	37.00	0.2
	0.5s		4.17nm		4.5mb	
RSSD	46.11	70	eP	07	57.00	0.1
PV10	46.54	80	eP	08	01.00	0.6
GOL	47.95	76	eP	08	11.00	-0.5
	0.5s		8.45nm		5.0mb	
GLD	48.01	76	eP	08	11.00	-0.9
	1.0s		28.00nm		5.2mb	
BJI	48.05	285	eP	08	11.50	-0.4
RSON	48.06	57	eP	08	11.00	-0.9
ALQ	50.33	81	e(P)	08	29.00	-0.7
SSE	50.78	272	P	08	32.00	-1.0
	1.0s		12.00nm		4.8mb	
FRB	51.41	33	eP	08	37.00	-0.3
NJ2	51.59	275	eP	08	39.00	-0.1
TIY	51.78	285	eP	08	41.00	0.4
TUL	56.18	73	e(P)	09	17.80	5.0X
	0.9s		3.10nm		4.3mb	
XAN	56.35	284	P	09	12.30	-1.9
GTA	58.08	294	P	09	25.00	-1.4
GYA	63.07	279	P	10	02.60	2.1
SUF	64.96	350	eP	10	10.60	-1.6
	0.6s		2.10nm		4.4mb	
NUR	67.28	350	eP	10	25.60	-1.4
NAO	67.93	357	P	10	29.40	-1.7
	0.8s		3.40nm		4.5mb	
HFS	68.51	356	eP	10	32.30	-2.4
	0.4s		2.00nm		4.6mb	
SHL	72.66	289	iP	11	00.10	-0.4
GUN	74.36	295	P	11	10.90	0.3
KKN	74.79	295	P	11	13.20	0.3
	0.8s		36.00nm		5.4mb	
PKI	74.88	295	P	11	13.90	0.3
	1.0s		50.00nm		5.5mb	
GKN	74.99	296	P	11	14.20	0.2
DMN	75.02	295	P	11	14.70	0.4
	0.8s		37.00nm		5.4mb	
BRG	77.74	355	e(P)	11	28.60	-0.2
	1.0s		10.00nm		4.8mb	
			iSg	33	24.20	
MOX	78.08	356	eP	11	30.00	-0.7
FLN	79.96	4	eP	11	40.70	-0.2
LDF	80.14	4	eP	11	41.70	-0.2
GRR	80.31	4	eP	11	42.90	0.1
CDF	80.44	359	eP	11	43.80	0.2
LPF	80.66	5	eP	11	44.80	0.2
	1.1s		24.40nm		5.1mb	
HAU	80.85	360	eP	11	45.90	0.2
	0.7s		8.80nm		4.9mb	
BSF	81.02	359	eP	11	46.70	0.0
LOR	81.58	1	eP	11	49.80	0.3
	0.7s		8.10nm		4.8mb	
SSF	81.78	1	eP	11	50.90	0.4
	0.8s		11.20nm		4.9mb	
LBF	81.86	1	eP	11	51.30	0.3
	0.9s		6.50nm		4.7mb	
AVF	82.05	2	eP	11	52.30	0.4
	0.8s		7.20nm		4.8mb	
MFF	82.13	4	eP	11	52.70	0.4
	0.9s		19.60nm		5.1mb	
SMF	82.20	1	eP	11	53.10	0.4
	0.8s		12.00nm		5.0mb	
BGF	82.27	2	eP	11	53.30	0.2
OUE	82.48	310	eP	11	55.50	0.8
TCF	82.53	2	eP	11	54.70	0.2
	0.8s		8.00nm		4.8mb	
LSF	82.54	3	eP	11	54.80	0.3
	0.7s		11.00nm		5.0mb	
MAF	82.60	2	eP	11	55.30	0.5
	0.7s		7.70nm		4.9mb	
LFF	83.83	4	eP	12	01.80	0.7
	0.8s		9.10nm		5.0mb	
CAF	83.88	3	eP	12	02.10	0.6
	0.8s		4.00nm		4.6mb	
LPO	84.10	3	eP	12	03.00	0.5
	1.0s		12.00nm		5.0mb	
SBF	84.98	359	eP	12	07.60	0.6
	0.8s		8.00nm		5.0mb	
FRF	85.30	359	eP	12	09.10	0.6
LRG	85.40	359	eP	12	09.70	0.7
SKO	85.88	348	iP	12	12.00	0.5
CVF	86.25	358	eP	12	13.40	0.1
OHR	86.81	349	eP	12	16.20	0.1
GBA	90.43	293	P	12	34.00	0.4
MAW	148.30	218	ePKP	19	16.00	2.7X

S.D. = 0.8 on 72 of 76 obs.

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* JUN 27, 1989 11h 26m 46.21± 3.29s
22.594 S ±16.0km 175.448 W ±15.5km
DEPTH = 117.4 ± 26.9 km
4.9mb (10 obs.)
TONGA ISLANDS REGION (174)

VUN	7.31	308	eP	28	30.90	-1.0
DZM	16.76	268	iPc	30	37.80	2.4
RMQ	32.73	256	eP	33	10.00	0.2
CTA	35.70	267	iPd	33	35.60	0.4
	0.6s		12.33nm		4.9mb	
ASPA	46.39	258	eP	35	02.40	-0.4
	0.8s		33.00nm		5.1mb	
Z	19s		0.50um		4.5Msz	
			LR	53	55.70	
WB5	46.68	264	iPd	35	04.50	-0.6
WRA	46.69	263	Pd	35	04.40	-0.8
	0.7s		6.50nm		4.5mb	
FORR	50.64	248	eP	35	34.00	-1.4
	0.5s		30.00nm		5.5mb	
COOL	56.58	247	eP	36	18.00	-1.1
KLB	59.34	246	eP	36	38.00	-0.3
	0.6s		19.00nm		5.3mb	
MBL	59.64	258	iPd	36	39.70	-0.7
	0.5s		7.00nm		5.0mb	
BAL	60.40	247	eP	36	45.00	-0.5
MUN	60.58	245	eP	36	46.70	0.0
NANU	63.16	255	iPd	37	04.40	0.4
SPA	67.54	180	e(P)	37	31.80	0.1
	1.0s		5.00nm		4.4mb	
MAT	73.30	323	iPc	38	07.10	0.5
	0.7s		6.85nm		4.6mb	
CMB	79.42	41	ePd	38	40.80	-0.1
WDC	79.81	38	ePd	38	32.30	-10.5X
MAW	80.40	199	eP	38	47.00	1.4
ALQ	86.88	50	eP	39	19.00	-0.2
	1.0s		2.50nm		4.2mb	
			e	39	32.00	43kmX
PNT	87.09	33	eP	39	20.00	0.4
BJI	89.04	314	eP	39	31.50	2.4
KMH	92.41	296	eP	39	31.50	-13.8X
CHG	93.18	289	ePc	39	52.10	3.4X
	0.9s		10.92nm		5.2mb	
INK	95.68	14	eP	39	58.00	-1.1
KRA	150.04	340	ePKP	46	25.90	7.0X
			e	46	46.90	
KSP	150.35	345	ePKP	46	26.50	7.1X
			e	46	39.20	
CLL	150.59	349	iPKP	46	27.00	7.3X
	1.3s		22.00nm			
			i	46	38.90	
VRI	150.60	328	ePKPc	46	26.00	6.1X
SPC	150.69	339	ePKP	46	27.80	7.6X
BRG	150.84	348	iPKP	46	27.50	7.4X
	1.2s		17.00nm			
			i	46	34.00	
MLR	151.26	328	ePKPd	46	29.00	7.9X
MOX	151.46	351	ePKP	46	30.00	9.0X
PRU	151.55	346	PKP	46	28.80	7.6X
SRO	152.53	340	ePKP	46	42.10	19.5X
ZST	152.56	342	ePKP	46	43.90	21.2X
KHC	152.57	347	PKP	46	31.60	8.9X
			e	46	42.80	

S.D. = 1.1 on 22 of 37 obs.

? JUN 27, 1989 11h 57m 48.94±16.49s
17.903 N ±39.3km 65.820 W ±101.km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

SJG	0.38	304	iP	57	56.70	0.0
			S	58	03.80	
CSB	0.50	320	P	57	59.00	-0.1
			S	58	08.00	
PNP	0.84	281	P	58	05.00	-0.1
APR	1.03	303	P	58	08.50	0.2

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

% JUN 27, 1989 12h 29m 01.85± 0.92s
42.727 N ± 6.6km 19.127 E ± 8.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (TTG).

NKY	0.13	312	iPd	29	05.00	-0.1
			eSg	29	08.50	
TTG	0.31	162	iPgc	29	08.00	-0.3
			eSg	29	14.00	
BRY	0.46	292	ePg	29	10.70	-0.6
			Sg	29	18.80	
HCY	0.54	239	ePg	29	13.50	0.7
			eSg	29	23.10	
PLE	0.63	18	ePg	29	15.00	0.4
			eSg	29	26.00	

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

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* JUN 27, 1989 14h 12m 26.18± 1.34s
32.056 N ±13.4km 96.633 E ±17.0km
DEPTH = 33.0km (normol)
4.2mb (1 obs.)
QINGHAI PROVINCE, CHINA (325)

LZH	7.21	54	eP	14	19.00	6.9X

2.0s 55.00nm 5.2mb X
PKI 10.72 248 P 15 00.20 -0.6
KKN 10.73 250 P 15 01.40 0.6
0.4s 5.00nm 5.1mb X
CHG 13.35 170 eP 15 35.90 0.0
SUF 53.17 327 eP 21 44.00 1.2
NB2 60.37 326 P 22 32.90 -1.2
0.9s 1.90nm 4.2mb
S.D. = 1.4 on 5 of 6 obs.

& JUN 27, 1989 14h 47m 03.20s
60.128 N 152.819 W
DEPTH = 112.8km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM 0.09 236 iP 47 18.46 1.1
RED 0.29 5 iP 47 19.02 1.0
S 47 30.77
RDT 0.49 24 iP 47 20.03 -0.6
S 47 32.76
OPT 0.52 204 iP 47 20.40 -0.4
S 47 32.98
AUL 0.81 203 eP 47 22.96 -0.1
NKA 1.00 51 iP 47 26.02 1.2
S 47 41.04
CNPM 1.00 126 eP 47 24.46 -0.5
SPU 1.12 19 eP 47 25.81 -0.5
S 47 42.78
CGLM 1.25 18 iP 47 27.33 -0.4
S 47 45.56
SLKM 1.35 72 eP 47 27.68 -1.1
SUA 1.68 36 eP 47 32.35 -0.6
S 47 55.14
SEW 1.69 89 eP 47 31.28 -1.5
SVW 1.70 307 iP 47 31.94 -1.1
SKT 1.96 18 iP 47 35.46 -0.9
14 obs. associated

& JUN 27, 1989 15h 30m 00.02s
37.275 N 116.354 W
DEPTH = 0.0km
4.9mb (25 obs.)
SOUTHERN NEVADA (41)
<DOE>. ML 4.8 (BRK). 37° 16' 31.65" N., 116° 21' 12.81" W., Surface Elev. 2046 m., Depth of Burial 600 m., Shot Time 153000.020, "AMARILLO," Nevada Test Site (Dept. of Energy).

GLR 0.28 106 iPc 30 05.90 0.3
GMR 0.47 83 iPc 30 09.60 0.2
LSM 0.54 173 iP 30 10.40 -0.4
SGV 0.62 242 iPc 30 12.20 -0.1
MGM 0.93 281 iPc 30 18.20 -0.3
TNP 1.06 320 iPc 30 20.70 -0.3
CLC 1.77 215 iPc 30 31.80 -0.3
MNA 1.84 310 iPc 30 32.90 -0.3
GSC 2.00 191 iPc 30 35.10 -0.5
KVN 2.24 323 iPc 30 38.60 -0.6
ISA 2.35 227 iPc 30 40.20 -0.4
FRI 2.70 265 iPc 30 45.00 -0.4
e 30 47.40
SBB 2.84 205 iPc 30 46.80 -0.8
TPC 3.17 175 iPc 30 51.40 -0.8
CMB 3.29 285 iPc 30 53.10 -0.8
i 31 00.20
PEC 3.44 191 iPc 30 55.80 -0.2
MSU 3.53 68 iPc 30 56.70 -0.8
HAY 3.61 170 iPc 30 57.40 -1.0
PRI 3.64 253 ePc 30 58.10 -0.9
i 31 05.60
BCH 3.67 236 eP 30 58.70 -0.6
LLA 3.73 261 eP 31 00.20 0.0
i 31 07.00
PLM 3.93 186 iPc 31 02.70 -0.5
DUG 4.02 42 eP 31 03.50 -0.9
SAO 4.11 264 eP 31 04.10 -1.3
i 31 12.50
ARN 4.13 273 eP 31 04.90 -0.9
PRS 4.13 258 ePc 31 04.70 -1.1
MHC 4.22 272 iPc 31 06.60 -0.5
i 31 17.30
BLP 4.26 232 eP 31 07.20 -0.4
GLA 4.39 163 iPc 31 08.30 -1.3
ORV 4.64 301 eP 31 11.60 -1.4
BKS 4.71 279 eP 31 13.80 -0.2
i 31 23.20
BW06 7.58 41 ePc 31 54.00 -0.6
ALQ 8.34 103 iPc 32 03.60 -1.7
i 32 35.50
eLg 34 23.00
VGB 8.88 339 eP 32 14.00 1.4
LRM 9.03 18 eP 32 16.30 1.5
GLD 9.07 71 eP 32 16.00 0.6
SHW 9.93 336 eP 32 30.00 2.8
BMW 10.52 333 eP 32 39.00 3.8
DPW 10.68 353 eP 32 38.00 0.7
PNT 12.27 350 eP 33 02.00 3.1
SES 13.66 15 eP 33 18.00 0.6
EDM 16.08 7 eP 33 48.60 -0.5
SIO 16.19 89 e(P) 33 50.40 -0.2
TUL 16.57 89 eP 33 55.60 0.2
1.0s 20.00nm 4.2mb
Z 17s 0.11um 4.9Msz
LR 40 00.00
VVO 16.73 90 e(P) 33 56.50 -0.9
RLO 17.14 87 e(P) 34 02.00 -0.5
e 34 05.00
FFC 20.04 25 iPd 34 35.50 -1.8
0.7s 73.00nm 5.1mb
QLY 20.10 88 eP 34 36.80 -1.3
FVM 20.53 80 eP 34 41.00 -1.6
RSON 21.09 43 eP 34 46.00 -2.2
0.8s 48.08nm 4.9mb
YKC 25.26 2 eP 35 28.00 -1.0
YKA 25.27 2 eP 35 32.50 3.4
BLA 28.50 79 eP 35 58.20 -0.9
TOA 30.94 333 eP 36 21.50 0.9
PMR 31.75 331 eP 36 27.80 0.2
0.8s 6.90nm 4.6mb
INK 32.52 348 eP 36 33.00 -1.3
FBA 33.31 336 eP 36 41.20 0.0
SVW 34.20 327 ePc 36 48.30 -0.8
IMA 35.97 335 ePc 37 03.70 -0.5
2.0s 9.80nm 4.3mb
SCH 37.70 46 eP 37 17.00 -1.8
FRB 38.89 32 eP 37 28.00 -0.5
ZOBO 69.97 130 P 41 14.00 -2.2
LPB 70.19 130 eP 41 20.00 2.7
CNCB 70.48 131 P 41 18.00 -1.2
NB2 73.14 24 P 41 31.70 -2.2
0.6s 2.30nm 4.5mb
HFS 74.62 23 eP 41 39.90 -2.6
0.5s 5.10nm 4.8mb
SUF 75.90 17 iP 41 47.70 -2.1
0.6s 1.70nm 4.3mb
FLN 77.18 38 eP 41 56.20 -1.0
1.0s 17.60nm 5.1mb
LPF 77.40 38 eP 41 57.20 -1.2
1.2s 32.10nm 5.3mb
MFF 78.82 39 eP 42 05.00 -1.2
1.3s 28.80nm 5.2mb
MAT 79.25 308 eP 42 08.00 -0.8
1.0s 12.00nm 4.9mb
WLF 79.64 34 P 42 10.50 -0.1
TCF 80.21 38 eP 42 12.30 -1.5
SSF 80.30 37 eP 42 12.80 -1.4
1.3s 14.40nm 4.8mb
LOR 80.32 37 eP 42 13.10 -1.2
1.2s 30.90nm 5.1mb
BGF 80.33 38 eP 42 12.90 -1.5
AVF 80.41 37 eP 42 13.10 -1.7
1.2s 20.80nm 5.0mb
MAF 80.43 38 eP 42 13.50 -1.5
1.2s 20.80nm 5.0mb
LBF 80.58 37 eP 42 14.40 -1.3
1.1s 12.20nm 4.8mb
SMF 80.75 37 eP 42 15.30 -1.3
1.1s 10.70nm 4.8mb
HAU 80.94 35 eP 42 16.60 -1.0
1.1s 14.60nm 4.9mb
CDF 81.06 34 eP 42 17.20 -1.1
CAF 81.10 39 eP 42 17.30 -1.2
1.1s 14.60nm 4.9mb
CLL 81.26 29 eP 42 18.00 -1.2
1.2s 10.00nm 4.7mb
BSF 81.27 35 eP 42 18.30 -1.2
1.1s 14.60nm 5.0mb
GRF 81.80 31 eP 42 22.00 0.0
1.0s 14.00nm 5.0mb
PRU 82.91 29 P 42 26.50 -1.3
LSD 83.20 36 P 42 29.05 -0.7
KHC 83.20 30 P 42 29.50 0.1
RRL 83.42 37 P 42 30.59 -0.2
SOB1 84.15 106 eP 42 34.00 -0.7
STV 84.18 37 P 42 32.75 -1.8
ENR 84.24 37 P 42 33.36 -1.3
LRG 84.30 38 eP 42 34.10 -0.9
1.2s 20.20nm 5.2mb
FRF 84.36 38 eP 42 34.20 -1.1
1.2s 14.20nm 5.1mb
ROB 84.40 37 P 42 34.49 -1.1
LMR 84.46 38 eP 42 34.70 -1.1
FIN 84.63 37 P 42 34.90 -1.8
KRA 84.87 27 eP 42 36.80 -0.9
ZST 85.35 29 e(P) 42 39.60 -0.5
Z 18s 1.30um 5.4MszX
SPC 85.71 27 eP 42 41.30 -0.9
MAW 149.62 179 ePKP 49 50.00 2.8
102 obs. associated

& JUN 27, 1989 15h 51m 49.68s
41.795 N 112.734 W
DEPTH = 5.6km
UTAH (478)
<SLC-P>. ML 3.0 (SLC).

PTI 1.11 14 eP 52 10.30 -0.7
DUG 1.60 182 eP 52 17.60 -1.2
DAU 1.78 141 eP 52 21.30 -0.2
HPI 1.93 352 eP 52 23.60 -0.1
BW06 2.55 66 eP 52 33.20 0.6
MSU 3.31 172 eP 52 42.70 -0.6
6 obs. associated

& JUN 27, 1989 16h 28m 29.23s
41.795 N 112.729 W
DEPTH = 5.5km
UTAH (478)
<SLC-P>. ML 2.9 (SLC).

PTI 1.11 14 iP 28 50.00 -0.5
DUG 1.60 182 eP 28 57.30 -1.0
DAU 1.77 141 eP 29 00.50 -0.5
HPI 1.93 352 eP 29 03.00 -0.3
BW06 2.55 66 eP 29 13.20 1.1
MSU 3.31 172 eP 29 22.50 -0.4
6 obs. associated

& JUN 27, 1989 16h 37m 47.57s
59.265 N 153.037 W
DEPTH = 78.6km
SOUTHERN ALASKA (2)
<AGS-P>.

AUL 0.24 300 iP 37 59.50 0.0
OPT 0.40 346 iP 38 00.47 -0.1
CDD 0.46 223 iP 38 00.69 -0.4
S 38 10.20
SHU 0.73 151 eP 38 03.29 -0.3
ILIM 0.82 3 iP 38 04.07 -0.6
S 38 16.82
CNPM 0.96 73 iP 38 05.74 -0.6
S 38 20.20
RED 1.17 6 eP 38 08.34 -0.6
S 38 24.34
RDT 1.35 13 eP 38 10.66 -0.7
S 38 28.48
SLKM 1.89 48 eP 38 17.61 -0.9
SPU 1.98 14 eP 38 19.55 -0.3
SEW 2.00 64 eP 38 19.42 -0.6
SUA 2.48 26 eP 38 26.50 -0.2
VZW 3.71 58 eP 38 41.69 -2.0
13 obs. associated

JUN 27, 1989 17h 01m 36.73± 0.51s
42.063 N ± 7.1km 142.633 E ± 9.4km
DEPTH = 63.4 ± 7.3 km
4.0mb (2 obs.)
HOKKAIDO, JAPAN REGION (224)
Felt (II JMA) at Urakawa and Hiroo.

URA 0.15 49 iP+ 01 45.50 -0.5
iS 01 52.30
HOO 0.55 66 P 01 00.00 -49.7X
HOOJ 0.58 56 iPd 01 49.30 -0.7
S 01 58.30
MRRJ 1.21 288 P 01 58.20 0.2

27d 17h

			iS	02	14.10	
KUSJ	1.85	55	iPd	02	06.50	-0.2
			S	02	29.00	
ASAJ	2.05	0	P	02	10.50	0.9
			S	02	37.10	
AOMJ	2.27	229	P	02	13.80	1.2
			eS	02	42.20	
OFUJ	3.07	194	P	02	24.40	0.6
			S	03	00.90	
YAMJ	4.36	208	P	02	42.90	0.8
NIIJ	5.57	211	P	02	59.10	0.1
KAKJ	6.15	199	P	03	05.20	-1.9
			S	04	13.30	
MAT	6.49	213	eP	03	13.00	1.1
			eS	04	11.00	
CHJJ	6.64	206	P	03	12.60	-1.3
			S	04	37.40	
IIDJ	7.54	211	eP	03	26.90	0.6
TSRJ	8.33	221	eP	03	40.80	3.6X
BJI	20.03	273	eP	06	05.00	-1.9
FBA	44.39	35	eP	09	44.00	1.7
	0.9s	4.58nm			4.3mb	
INK	49.51	29	eP	10	21.00	-1.3
NB2	69.92	337	P	12	42.00	-0.6
	0.7s	0.90nm			3.8mb	
KVN	71.01	54	eP	12	51.00	1.2
SLR	124.41	265	ePKP	20	20.00	-10.4X
S.D. = 1.2 on 18 of 21 abs.						

? JUN 27, 1989 17h 09m 21.29± 5.16s
10.558 N ±13.2km 61.836 W ±35.1km
DEPTH = 10.0km (geophysicist)
TRINIDAD (98)

TCE	0.16	31	eP	09	24.73	-0.3
			eS	09	33.20	
TRN	0.43	78	eP	09	29.61	-0.5
			eS	09	38.87	
TPP	0.45	122	eP	09	30.03	-0.4
			eS	09	45.06	
TBH	0.76	96	eP	09	36.93	0.8
			eS	09	53.97	
BOT	1.25	61	eP	09	44.88	0.3
S.D. = 0.8 an 5 of 5 obs.						

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* JUN 27, 1989 17h 26m 33.66± 0.62s
36.916 N ±11.5km 71.448 E ± 9.3km
DEPTH = 33.0km (normal)
4.5mb (8 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

QUE	7.69	211	eP	28	27.50	1.2
			eS	29	50.40	
NDI	9.54	148	eP	29	10.00	18.3X
			eS	30	35.00	
MAIO	9.63	270	iPd	28	51.00	-2.1
	0.8s	14.64nm			5.3mb	
			eS	30	30.00	
GKN	14.23	125	P	29	55.40	0.3
	0.4s	12.00nm			4.9mb	
KKN	14.80	124	P	30	01.00	-1.5
	0.4s	8.00nm			4.5mb	
DMN	14.81	125	P	30	03.40	0.8
	0.6s	12.00nm			4.5mb	
PKI	15.03	124	P	30	05.20	-0.4
MLR	34.90	299	ePc	33	26.00	1.9
			e	03	10.00	
NUR	37.70	324	eP	33	29.90	-17.5X
SUF	37.76	328	eP	33	48.50	0.6
	0.3s	1.70nm			4.4mb	
HFS	42.96	322	eP	34	30.50	-0.4
	0.3s	2.20nm			4.4mb	
NB2	44.27	323	P	34	40.90	-0.6
	0.3s	1.30nm			4.2mb	
MBC	66.91	3	ePd	37	24.60	0.4
	0.4s	3.00nm			4.7mb	
S.D. = 1.3 an 11 of 13 obs.						

? JUN 27, 1989 17h 43m 09.01± 0.47s
63.723 S ±25.8km 156.105 W ±11.1km
DEPTH = 10.0km (geophysicist)
5.4mb (4 obs.) 5.5Msz (3 obs.)
SOUTH PACIFIC CORDILLERA (691)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 32C
Centraid Lacatian:
Origin Time 17:43:14.3 0.4
Lat 63.78S FIX;Lon 156.15W FIX
Dep 15.0 FIX Half-duration 2.9
Moment Tensor; Scale 10**17 Nm
Mrr= 2.56 0.13 Mtt=-0.51 0.15
Mff=-2.05 0.15 Mrt= 4.26 0.34
Mrf= 2.82 0.39 Mtf= 1.53 0.18
Principol Axes:

T	Val= 6.72	Plg=51	Azm=327
N	-2.98	4	232
P	-3.74	39	138

Best Double Couple:Mo=5.2*10**17
NP1:Strike=196 Dip= 8 Slip= 54
NP2: 52 84 94

SPA	26.43	180	e(P)	49	00.40	13.0X
	1.7s	50.00nm				
TAU	38.04	276	eP	50	30.00	1.3
			eS	56	30.00	
MAW	46.01	200	eP	51	33.00	-0.5
CMS	48.20	283	eP	51	50.00	-1.2
ADE	48.37	274	iPc	51	53.90	1.3
DZM	48.52	311	iPc	51	47.20	-6.7X
BRS	48.84	293	eP	51	56.00	-0.2
CTA	58.02	291	iPc	53	05.30	1.2
	1.2s	51.56nm			5.4mb	
			iS	01	08.00	
ASPA	60.19	277	iPd	53	17.40	-1.8
	1.4s	33.00nm			5.3mb	
WRA	63.26	279	Pc	53	37.80	-2.0
	1.1s	13.00nm			5.0mb	
WB5	63.31	279	eP	53	36.80	-3.3X
ARE	73.01	93	e(P)	54	40.00	-0.9
CNCB	74.26	96	P	54	49.20	0.7
LPB	74.45	96	eP	54	50.00	0.6
Z	22s	2.59um			5.5Msz	
			LR	18	14.00	
CCH	74.56	98	P	54	51.80	1.8
ZOBO	74.67	96	P	54	50.00	-0.9
	1.8s	122.05nm			5.6mb	
			LR	18	16.00	
BAO	83.89	113	eP	55	37.50	-2.7
GUA	89.15	304	eP	56	05.00	-0.7
GUMO	89.22	304	eP	56	06.00	0.0
SOB1	92.57	117	eP	56	25.40	3.7X
MAT	112.54	307	(PKP)	01	28.00	-18.2X
KMI	117.14	272	ePKP	02	08.00	12.4X
Z	24s	0.97um			5.3MszX	
			ePP	03	48.00	
			eSS	20	32.00	
GBA	117.81	242	PKPd	02	05.30	8.5X
	0.8s	1.50nm				
TIY	123.67	288	ePKP	02	08.00	0.4
BJI	124.07	292	ePKP	02	08.00	-0.1
Z	24s	0.97um			5.4MszX	
			ePP	03	48.00	
			eSS	20	32.00	
FFC	125.32	35	ePKP	02	06.50	-3.6X
	1.2s	16.00nm				
LZH	126.02	280	e(PKP)	02	20.00	7.7X
Z	24s	0.50um			5.1MszX	
PKI	126.92	257	PKP	02	14.60	0.1
DMN	127.09	257	PKP	02	18.30	3.6X
GKN	127.63	257	PKP	02	17.00	1.4
GTA	130.55	279	ePKP	02	19.80	-1.0
Z	22s	0.60um			5.2Msz	
			PP	04	35.70	
INK	132.73	11	ePKP	02	21.00	-2.8X
MBC	141.64	13	ePKP	02	31.00	-9.2X
	0.9s	6.00nm				
FRB	142.52	47	ePKP	02	31.00	-11.0X
MAIO	145.10	235	iPKPc	02	49.40	2.0
MBH	145.31	197	ePKP	02	52.00	4.2X
HLW	145.79	192	ePKP	02	56.00	7.3X
PRNI	145.86	197	ePKP	02	50.00	1.2
APHE	148.43	135	ePKP	03	00.50	7.6X
ALOJ	148.45	134	ePKP	03	02.50	9.6X
AAPN	148.62	134	ePKP	03	00.50	7.3X
HRI	148.64	199	ePKP	03	02.00	8.7X
ASMO	148.79	134	ePKP	03	05.50	12.1X
SLY	148.89	216	ePKPd	02	59.50	6.0X
			e	03	07.50	
			e	05	39.50	
TOL	150.98	132	ePKP	03	06.00	9.5X
			ePP	06	36.00	
TAB	150.99	218	ePKP	03	08.00	11.2X
ALE	153.07	17	ePKP	03	03.00	4.6X
VAY	157.55	177	ePKP	03	12.00	6.6X
SKO	158.16	175	ePKP	03	09.00	2.8X
Z	20s	1.44um			5.8Msz	
N	20s	1.40um				
E	19s	1.34um				
S.D. = 1.3 an 23 of 49 abs.						

% JUN 27, 1989 18h 06m 44.14± 2.48s
15.216 N ± 5.4km 60.497 W ±23.2km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.6 (FDF).

MVM	0.76	210	iPd	06	59.38	0.3
			S	07	09.00	
FDF	0.79	233	iPd	06	59.54	-0.1
	0.1s	1.20nm				
			S	07	09.50	
BIM	0.89	219	iPd	07	00.95	-0.3
			S	07	12.10	
BBL	0.99	288	eP	07	03.10	0.1
MGG	1.05	312	eP	07	04.40	0.4
DEG	1.22	334	ePd	07	06.85	0.0
PAG	1.40	306	eP	07	09.20	-0.5
			S	07	25.50	
S.D. = 0.4 an 7 of 7 abs.						

& JUN 27, 1989 18h 20m 00.51s
59.571 N 153.025 W
DEPTH = 96.2km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.13	308	eP	20	13.91	1.2
AUL	0.28	228	iP	20	14.68	-0.1
			S	20	26.29	
ILIM	0.51	4	eP	20	15.75	-0.5
CDD	0.72	207	iP	20	17.50	-0.5
RED	0.86	8	iP	20	18.77	-0.8
CNPM	0.91	92	iP	20	19.20	-0.8
SHU	1.01	159	eP	20	20.56	-0.4
RDT	1.05	17	eP	20	20.85	-0.8
			S	20	36.84	
NKA	1.48	36	eP	20	28.01	1.4
SPU	1.69	16	eP	20	28.65	-0.8
			S	20	50.08	
SLKM	1.69	55	eP	20	28.53	-0.9
SEW	1.88	72	eP	20	30.69	-1.2
			S	20	52.52	
SVW	2.01	321	eP	20	32.71	-0.9
SUA	2.21	30	eP	20	35.66	-0.7
			S	21	03.03	
SKT	2.53	16	eP	20	39.29	-1.2
PME	2.85	42	eP	20	44.01	-0.9
KNK	2.92	49	eP	20	44.35	-1.5
GHO	2.99	41	eP	20	45.25	-1.7
VZW	3.55	62	eP	20	52.26	-2.3
			S	21	32.74	
BALM	5.51	70	eP	21	19.06	-2.7
20 obs. associated						

? JUN 27, 1989 18h 40m 26.35± 3.18s
32.141 S ±18.5km 71.643 W ±24.2km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.99	147	iPd	40	43.10	-1.0
			iS	40	56.80	
JACH	1.04	122	iPd	40	53.10	8.4X
			iS	40	57.10	
PEL	1.29	141	iPc	40	48.10	-0.1
			iS	41	04.00	
LCCH	1.33	177	iPd	40	49.00	0.2
			iS	41	07.50	
SAN	1.55	148	eP	40	52.50	0.5
			iS	41	13.00	
TACH	1.62	159	iPc	40	53.50	0.5
			iS	41	16.20	
FCH	1.64	136	iPc	40	53.10	-0.5
			iS	41	15.00	
PCH	1.76	148	eP	40	55.20	0.2
			iS	41	19.10	
LNV	1.82	174	eP	40	55.00	-0.8
			iS	41	23.50	
CHCH	1.97	155	eP	40	59.00	0.9
			iS	41	25.70	
ZON	2.59	78	eP	41	07.00	0.1

S.D. = 0.7 on 10 of 11 obs.

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* JUN 27, 1989 18h 40m 46.00± 1.15s
42.554 N ±10.5km 145.746 E ±13.3km
DEPTH = 33.0km (normal)
4.5mb (3 obs.)
HOKKAIDO, JAPAN REGION (224)

KUSJ	0.94	306	iPd	41 01.40	-1.4
			S	41 09.60	
HOOJ	1.83	265	P	41 17.00	1.4
			S	41 37.80	
ASAJ	2.75	306	P	41 29.40	0.7
			S	42 01.00	
MRRJ	3.46	269	P	41 40.30	1.5
			S	42 16.10	
OFUJ	4.65	223	eP	41 55.50	-0.2
			S	42 46.20	
YAMJ	6.18	227	eP	42 17.50	0.2
			eS	43 24.50	
MAT	8.36	227	eP	42 47.00	-0.8
BJI	22.31	274	(P)	45 41.00	-0.9
INK	47.95	30	eP	49 25.00	2.2
SUF	64.54	334	eP	51 20.30	-1.2
	0.6s	2.20nm		4.4mb	
NB2	70.34	338	P	51 57.50	-0.5
	0.4s	1.60nm		4.4mb	
HFS	70.39	337	eP	51 57.30	-0.9
	0.4s	3.90nm		4.8mb	

S.D. = 1.3 on 12 of 12 obs.

% JUN 27, 1989 19h 52m 59.10± 1.31s
10.684 N ±13.5km 61.712 W ±13.3km
DEPTH = 33.0km (normal)
TRINIDAD (98)

TCE	0.04	287	eP	53 04.92	0.3
			eS	53 14.60	
TRN	0.31	97	eP	53 08.70	1.8X
			eS	53 20.68	
TPP	0.45	145	eP	53 08.08	-0.8
			eS	53 19.13	
TBH	0.66	107	eP	53 13.42	1.4
PIG	0.98	61	eP	53 16.44	-0.1
BOT	1.09	64	eP	53 17.32	-0.7

S.D. = 1.3 on 5 of 6 obs.

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* JUN 27, 1989 20h 26m 45.77± 1.24s
3.368 S ±14.4km 132.146 E ±17.0km
DEPTH = 33.0km (normal)
3.5mb (1 obs.)
WEST IRIAN REGION (196)

AAI	3.96	265	eP	27 45.40	-0.3
MTN	9.47	186	iPd	28 59.00	-4.0X
			eS	30 38.00	
KNA	12.75	195	eP	29 42.00	-5.5X
			eS	31 56.00	
WB5	16.55	173	eP	30 32.00	-5.2X
			eS	33 30.10	
WRA	16.61	173	P	30 39.00	1.1
	0.3s	1.20nm		3.5mb	
QIS	18.57	158	eP	31 01.00	-1.2
			eS	34 17.00	
ASPA	20.25	175	eP	31 21.50	0.2
	0.5s	48.00nm		5.1mb X	
			eS	34 56.20	
CTA	21.58	141	eP	31 44.00	9.2X
BJI	45.62	343	eP	35 05.00	0.2

S.D. = 1.2 on 5 of 9 obs.

& JUN 27, 1989 21h 48m 49.08s
61.265 N 152.039 W
DEPTH = 109.2km
SOUTHERN ALASKA (2)
<AGS-P>.

SPU	0.08	185	iP	49 03.68	0.9
NKA	0.65	143	iP	49 08.40	1.2
			S	49 21.11	
SUA	0.66	72	iP	49 07.34	0.0
			S	49 20.51	
RDT	0.72	195	eP	49 06.98	-0.9
SKT	0.76	18	iP	49 07.69	-0.5
RED	0.92	203	iP	49 09.01	-0.8
PWA	1.11	69	eP	49 11.87	0.3
SLKM	1.17	130	iP	49 11.64	-0.7
ILIM	1.27	201	iP	49 12.57	-1.0
PME	1.49	75	eP	49 15.30	-0.8
			S	49 35.24	
GHO	1.58	70	eP	49 16.39	-0.9
OPT	1.72	201	eP	49 18.45	-0.5
			S	49 40.73	
SEW	1.73	131	eP	49 17.82	-1.2
KNK	1.73	84	eP	49 17.95	-1.2
			S	49 40.71	
CNPM	1.79	167	eP	49 18.81	-1.0
			S	49 41.88	
KTH	2.35	12	iP	49 26.20	-1.0
CDD	2.48	200	eP	49 27.61	-1.2
VZW	2.67	92	eP	49 29.30	-2.1
			S	50 02.32	
MCK	2.86	29	eP	49 33.27	-0.7
TOA	2.92	71	eP	49 34.49	-0.3
KLU	2.95	83	eP	49 33.24	-2.0
PAX	3.53	58	eP	49 42.04	-1.0
WRH	3.69	28	eP	49 43.22	-1.9
DDM	3.82	46	eP	49 47.47	0.5
CCB	3.91	28	eP	49 46.18	-1.9
HDA	3.92	34	eP	49 46.49	-1.8
GLB	3.97	84	eP	49 46.90	-2.1
FBA	4.13	26	eP	49 49.87	-1.2
GLM	4.29	27	eP	49 51.92	-1.5
BALM	4.70	89	eP	49 56.88	-2.2

30 obs. associated

? JUN 27, 1989 22h 15m 20.78±21.94s
41.672 N ±150.km 12.697 E ±136.km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)
MD 2.2 (ROM).

RDP	0.09	10	Pc	15 23.30	-0.1
			eSg	15 25.80	
RMP	0.14	2	Pc	15 24.10	0.0
			eSg	15 27.30	
MNS	0.71	359	P	15 35.70	0.9
			eSg	15 45.00	
SDI	0.84	87	Pc	15 37.10	0.1
			eSg	15 50.20	

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

& JUN 27, 1989 23h 12m 23.34s
58.217 N 142.715 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

MID	2.24	304	iP	12 55.69	-5.3
BALM	2.83	4	eP	13 04.18	-5.4
			S	13 36.71	
GLB	3.28	351	eP	13 10.18	-5.7
VZW	3.45	327	eP	13 12.21	-6.1
KLU	3.66	335	iP	13 15.50	-5.8
HYT	3.73	43	P	13 16.70	-5.6
SEW	3.95	301	eP	13 20.24	-5.0
TOA	4.27	338	eP	13 24.65	-5.2
KNK	4.32	320	iP	13 25.21	-5.4
SLKM	4.47	304	eP	13 26.68	-6.1
			S	14 16.96	
CNPM	4.61	290	eP	13 29.34	-5.4
PME	4.67	320	eP	13 29.63	-5.9
GHO	4.74	321	eP	13 30.11	-6.4
PAX	4.96	345	eP	13 32.69	-7.0
SUA	5.19	312	eP	13 36.03	-7.0
RDT	5.49	300	eP	13 40.69	-6.4
ILIM	5.59	294	eP	13 43.25	-5.4
OPT	5.63	289	eP	13 43.88	-5.3
			S	14 45.38	
CDD	5.76	282	eP	13 46.91	-4.0
KTH	6.68	327	eP	13 58.79	-5.2

20 obs. associated

& JUN 27, 1989 23h 24m 01.52s
57.986 N 143.795 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

BALM	3.15	13	iP	24 46.76	-5.4
			S	25 21.60	
VZW	3.39	337	eP	24 49.63	-5.9
			S	25 27.77	
GLB	3.47	360	iP	24 50.88	-5.8
			S	25 29.63	
KLU	3.68	344	eP	24 53.75	-6.0
			S	25 34.37	
SLKM	4.16	310	eP	25 00.44	-6.0
CNPM	4.17	295	eP	25 00.97	-5.6
RDT	5.12	304	eP	25 14.49	-5.6
ILIM	5.18	298	eP	25 15.34	-5.6
OPT	5.18	293	eP	25 16.15	-4.8
RED	5.22	302	eP	25 15.83	-5.7
AUL	5.22	290	eP	25 17.39	-4.1

11 obs. associated

? JUN 28, 1989 00h 01m 55.12± 4.28s
11.510 N ±11.7km 60.071 W ±49.3km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)

TBH	1.41	224	eP	02 20.92	0.1
			eS	02 39.57	
TRN	1.56	237	eP	02 22.59	-0.4
			eS	02 40.18	
TPP	1.80	229	eP	02 26.59	0.2
			eS	02 45.89	
TCE	1.84	244	eP	02 27.14	0.1
			eS	02 47.97	
SVB	2.10	327	eP	02 30.91	0.2
			eS	02 56.61	
SVV	2.12	328	eP	02 30.95	-0.1
			eS	02 58.42	
SLB	2.49	338	eP	02 36.29	-0.1
			eS	03 06.35	

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

? JUN 28, 1989 00h 14m 58.64± 2.33s
45.995 N ±41.2km 150.633 E ±27.2km
DEPTH = 33.0km (normal)
4.8mb (12 obs.) 4.0Msz (1 obs.)
KURIL ISLANDS (221)

CN2	17.96	272	Pc	19 07.00	-0.2
Z	16s	0.90um			
E	14s	0.50um			
			PP	19 18.00	
SNY	19.89	268	Pc	19 28.40	-1.5
BJI	25.75	269	eP	20 27.00	-0.7
Z	18s	0.42um		4.0Msz	
E	16s	0.69um			
			eS	25 08.00	
HHC	28.63	274	eP	20 54.80	0.7
BTO	29.81	274	eP	21 03.00	-1.7
N	15s	0.40um			
E	15s	0.50um			
			pP	21 08.50	19kmX
LZH	36.19	271	eP	22 00.50	0.4
GTA	37.39	279	eP	22 10.60	0.5
INK	43.20	32	eP	22 55.00	-2.6
WMQ	43.59	291	eP	23 03.00	1.8
ALE	50.66	5	eP	23 55.00	-1.1
	0.7s	6.00nm		4.7mb	
GUN	53.35	274	P	24 18.30	1.0
KKN	53.84	274	P	24 21.00	0.2
PKI	53.88	274	P	24 20.60	-0.6
DMN	54.07	274	P	24 22.00	-0.5
GKN	54.15	275	P	24 22.20	-0.8
NDI	58.86	280	eP	24 56.00	-0.4
SUF	62.97	335	iP	25 22.70	-1.1
NB2	68.37	340	P	25 56.90	-1.6
	1.0s	9.00nm		4.8mb	
HFS	68.55	338	eP	25 58.00	-1.5
	0.4s	3.20nm		4.8mb	
KRA	75.22	330	eP	26 38.70	-0.6
KSP	75.79	332	eP	26 43.00	0.4
SPC	75.84	329	eP	26 43.20	0.1
CLL	76.42	334	iP	26 45.00	-1.1
	1.3s	21.00nm		5.0mb	
MLR	76.67	324	ePc	26 49.00	1.2
PRU	77.09	333	ePc	26 49.50	-0.4
MOX	77.42	335	eP	26 52.00	0.3
SRO	77.69	329	eP	26 53.00	-0.2
ZST	77.79	330	eP	26 54.30	0.6
KHC	78.15	333	iPd	26 56.50	0.7
	1.3s	18.00nm		4.9mb	
SKO	81.42	324	iP	27 13.50	0.1
VAY	81.50	323	eP	27 13.70	-0.1
OHR	82.41	324	eP	27 18.50	-0.1
LOR	82.66	338	eP	27 20.80	1.0
	1.2s	11.90nm		4.8mb	

28d 00h

SSF 82.94 338 eP 27 22.50 1.3
0.8s 2.60nm 4.4mb
AVF 83.23 338 eP 27 24.00 1.3
1.1s 9.70nm 4.8mb
LPG 83.48 335 eP 27 25.20 0.8
1.2s 8.90nm 4.8mb
MAF 83.96 338 eP 27 27.60 1.1
1.0s 10.00nm 4.9mb
RJF 85.08 339 eP 27 33.40 1.3
1.0s 8.00nm 4.9mb
LFF 85.62 339 eP 27 37.10 2.3
1.0s 12.00nm 5.1mb
S.D. = 1.1 on 39 of 39 obs.

JUN 28, 1989 01h 41m 13.47± 0.31s
25.662 N ± 5.7km 140.677 E ± 8.6km
DEPTH = 195.2km (7 depth phases)
4.7mb (14 obs.)
VOLCANO ISLANDS REGION (213)

MAT 11.05 350 (P) 43 45.00 -2.3
0.7s 17.12nm 4.6mb
eS 45 45.00
GUA 12.70 161 eP 44 10.50 2.1
0.8s 71.64nm 5.2mb
SSE 17.98 292 P 45 11.50 -0.4
i 45 19.50
SNY 21.43 323 iPd 45 48.60 1.8
CN2 21.94 329 eP 45 54.00 2.3
TIA 22.72 303 eP 46 02.70 3.3X
WB5 45.68 188 iPc 49 16.20 -0.3
WRA 45.75 188 Pc 49 16.90 -0.1
0.5s 30.50nm 5.0mb
CTA 45.80 173 iPc 49 17.00 -0.4
0.7s 37.33nm 4.9mb
QIS 45.95 181 eP 49 18.00 -0.6
ASPA 49.47 188 eP 49 45.40 -0.5
0.4s 13.00nm 4.8mb
DZM 53.63 150 iPc 50 15.70 -1.3
STK 57.23 179 iPd 50 41.80 -0.6
0.5s 17.00nm 5.1mb
GBA 60.28 271 Pc 51 04.80 0.9
0.5s 3.20nm 4.3mb
MBC 67.62 15 eP 51 50.50 -0.1
0.5s 2.00nm 4.1mb
PNT 76.93 41 eP 52 45.00 -0.7
SUF 77.90 335 eP 52 50.00 -0.7
DPW 78.39 42 P 52 54.00 0.2
ORV 79.73 51 eP 53 01.00 -0.1
CMB 81.17 52 ePc 53 09.00 0.3
e 53 56.40 194km
PRS 81.19 54 eP 53 09.10 0.3
e 53 56.50 194km
FRI 82.11 53 eP 53 13.60 0.1
e 54 01.20 194km
KVN 82.33 50 P 53 15.00 0.1
pP 54 02.50 194km
LRM 82.84 42 eP 53 18.00 0.6
TNP 83.39 51 P 53 21.00 0.7
1.2s 8.06nm 4.3mb
ISA 83.59 54 eP 53 20.00 -1.2
FFC 83.67 31 iPc 53 21.20 0.1
0.7s 14.00nm 4.8mb
CLC 84.15 53 eP 53 24.00 0.0
NB2 84.43 338 P 53 22.60 -2.3
0.6s 1.00nm 3.7mb
SBB 84.51 54 eP 53 26.00 0.2
GSC 84.96 53 eP 53 28.00 -0.1
TPC 86.08 54 eP 53 33.00 -0.6
BW06 86.17 44 P 53 34.10 0.0
1.0s 8.68nm 4.5mb
pP 54 23.00 199km
GLA 87.47 54 eP 53 41.00 0.7
RSSD 88.79 41 P 53 46.50 -0.1
RSON 90.00 31 P 53 51.00 -0.8
1.0s 8.13nm 4.6mb
pP 54 40.00 197km
GOL 90.50 45 P 53 55.10 0.4
GLD 90.56 45 P 53 56.10 1.2
ALQ 92.44 49 iPd 54 04.70 1.1
1.0s 7.75nm 4.7mb
e 54 48.60
epP 54 53.00 194km
LPB 151.71 77 ePKP 00 52.00 11.4X
S.D. = 1.0 on 38 of 40 obs.

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* JUN 28, 1989 02h 04m 26.95± 0.61s
12.214 N ±11.5km 125.632 E ± 9.0km
DEPTH = 33.0km (normal)
5.0mb (11 obs.)
SAMAR, PHILIPPINE ISLANDS (251)

QCP 5.04 299 eP 05 40.00 -2.3
DAV 5.09 181 eP 06 00.50 17.5X
BAG 6.43 311 eP 06 01.90 -0.2
GUMO 18.80 84 eP 08 45.00 -1.2
SSE 19.23 348 Pd 08 52.50 1.2
1.0s 14.00nm 4.2mb
E 14s 0.40um
S 12 24.00
WHN 21.02 332 eP 09 11.20 1.0
XAN 26.53 328 Pd 10 03.20 -0.4
GTA 35.44 324 eP 11 22.80 0.5
WARB 38.18 179 eP 11 46.10 0.8
GUN 40.27 299 Pd 12 03.80 0.7
0.8s 59.00nm 5.4mb
PKI 40.59 298 Pd 12 05.90 0.1
1.0s 37.00nm 5.1mb
KKN 40.75 299 Pd 12 07.10 0.1
1.0s 52.00nm 5.2mb
DMN 40.86 298 Pd 12 08.20 0.3
1.0s 56.00nm 5.3mb
GKN 41.35 299 Pd 12 11.90 0.1
1.0s 46.00nm 5.2mb
SOD 82.26 337 eP 16 46.00 -0.1
SUF 83.55 333 eP 16 52.70 -0.1
0.9s 7.90nm 4.8mb
MBC 83.96 13 eP 16 55.00 0.3
0.9s 4.00nm 4.6mb
NUR 84.81 331 iP 16 59.80 0.7
0.7s 16.00nm 5.3mb
HFS 90.05 332 eP 17 24.70 0.2
0.4s 1.00nm 4.4mb
NB2 90.75 334 P 17 26.20 -1.6
1.0s 2.90nm 4.6mb
S.D. = 0.9 on 19 of 20 obs.

JUN 28, 1989 03h 00m 28.92± 0.23s
45.096 N ± 4.9km 151.292 E ± 3.5km
DEPTH = 44.4km (32 depth phases)
5.6mb (61 obs.) 5.1Msz (10 obs.)
KURIL ISLANDS (221)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 27C
Centroid Location:
Origin Time 03:00:30.6 0.8
Lat 45.28N 0.05 Lon 151.61E 0.09
Dep 15.0 FIX Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr= 1.06 0.04 Mtt=-0.28 0.05
Mff=-0.78 0.05 Mrt=-0.02 0.14
Mrf= 0.92 0.17 Mtf=-0.67 0.05
Principal Axes:
T Val= 1.49 Plg=64 Azm=248
N -0.01 19 23
P -1.48 17 119
Best Double Couple:Mo=1.5*10**17
NP1:Strike=236 Dip=32 Slip= 128
NP2: 13 65 69

KUSJ 5.14 249 P 01 43.40 -2.0
eS 02 41.40
ASAJ 6.25 264 P 02 02.80 1.8
YSS 6.27 291 P 02 00.00 -1.2
HOOJ 6.40 248 P 02 02.40 -0.6
S 03 16.10
SAP 7.46 258 eP 02 18.00 0.2
eS 03 43.00
MRRJ 7.86 254 eP 02 23.90 0.4
S 03 52.60
AOMJ 9.21 244 P 02 41.40 -0.7
YAMJ 10.89 234 P 03 02.70 -2.4
eS 04 58.90
NIIJ 12.13 234 iPd 03 19.50 -2.2
eS 05 28.40
KAKJ 12.24 227 P 03 20.40 -2.8X
S 05 28.40
CHJJ 12.99 230 P 03 30.40 -2.8X
S 05 46.30
MAT 13.07 234 iPd+ 03 32.00 -2.3
1.3s 101.92nm 5.6mb
eS 05 42.00
MTMJ 13.27 235 eP 03 33.90 -3.1X

IIDJ 14.00 231 P 03 44.80 -1.7
TSRJ 15.06 236 iPd 03 59.70 -0.6
MDJ 15.40 276 eP 04 03.00 -1.6
Z 18s 12.80um
SHK 17.73 240 eP 04 37.00 3.0X
CN2 18.48 275 Pc 04 40.00 -3.1X
6.0s 0.80nm 2.1mb X
Z 16s 10.50um 4.6Msz
E 13s 6.60um
PP 05 00.00
SHNJ 18.97 242 eP 04 49.10 -0.1
KUMJ 20.22 239 eP 05 03.80 1.1
SNY 20.34 271 iPc 05 03.00 -0.9
Z 16s 6.90um 5.1MszX
N 15s 1.60um
E 15s 3.30um
KAGJ 21.14 236 eP 05 14.30 2.1
DL2 22.82 265 Pc 05 29.00 0.2
Z 13s 1.60um 4.6MszX
N 13s 1.20um
BJI 26.22 271 eP 06 01.00 -0.2
6.0s 0.82nm 2.5mb X
Z 16s 4.69um 5.1MszX
E 16s 4.86um
eS 10 40.00
TIA 27.23 263 P 06 10.40 -0.1
Z 20s 1.80um 4.6Msz
E 13s 1.90um
S 10 46.00
SSE 27.32 250 P+ 06 12.00 0.6
1.0s 83.00nm 5.3mb
N 16s 0.90um
E 16s 3.40um
sP 06 26.00
S 10 52.50
sS 11 08.00
NJ2 28.31 254 Pc 06 20.00 -0.2
Z 18s 5.10um 5.2Msz
N 16s 3.00um
E 16s 5.90um
pP 06 35.00 62kmX
HHC 29.17 276 Pc 06 28.50 0.4
Z 16s 9.60um 5.5MszX
N 14s 1.60um
E 15s 5.80um
S 11 09.00
TIY 29.84 269 Pc 06 34.60 0.5
BTO 30.35 276 iPc 06 39.00 0.4
N 13s 2.70um
E 15s 4.20um
PP 07 39.00
S 11 38.00
sS 11 47.00
ANP 31.16 240 eP 06 52.00 6.2X
WHN 32.29 256 eP 06 55.50 0.0
N 20s 4.53um
E 18s 3.33um
pP 07 09.00 53km
QZH 33.16 244 Pc 07 04.00 0.8
Z 16s 1.20um 4.7MszX
N 16s 1.50um
E 16s 2.10um
pP 07 18.00 55kmX
XAN 34.12 266 P 07 11.80 0.3
N 13s 0.90um
E 14s 0.90um
pP 07 24.00 46km
S 12 40.00
TTA 34.50 40 eP 07 13.60 -0.9
SVW 34.55 43 eP 07 14.70 -0.2
IMA 35.89 35 eP 07 25.50 -0.9
1.0s 10.40nm 4.7mb
BRW 36.01 26 eP 07 26.10 -1.0
KDC 36.19 49 eP 07 27.40 -1.4
LZH 36.68 273 Pd 07 34.50 1.1
1.5s 44.00nm 5.2mb
N 14s 1.50um
E 20s 3.20um
pP 07 47.50 49km
eS 13 14.00
PMR 37.68 42 eP 07 40.80 -0.4
GZH 37.85 247 Pc 07 43 20 0.1
Z 16s 2.60um 5.1MszX
N 14s 0.90um
E 14s 2.30um
GTA 37.99 280 iPc 07 45.00 0.7
1.2s 0.20nm 2.9mb X

Z 14s 3.40um 5.3MszX
E 12s 2.30um
sP 07 57.50
S 13 37.00
sS 13 51.00
FBA 38.25 37 eP 07 45.50 -0.5
BAG 38.49 232 eP 07 49.20 0.5
TOA 39.05 41 eP 07 52.90 0.1
GYA 40.12 258 Pc 08 02.60 0.5
N 17s 2.20um
E 17s 3.60um
PP 09 39.00
S 14 07.00
KMI 43.69 260 Pc+ 08 32.00 0.6
Z 20s 2.50um 5.1Msz
N 18s 2.20um
pP 08 46.00 53km
PP 10 21.00
S 15 01.00
sS 15 25.00
INK 43.73 31 eP 08 30.00 -0.9
WMQ 44.35 292 iPc 08 37.00 0.6
N 16s 3.80um
E 13s 1.60um
pP 08 47.80 37km
eS 15 12.00
MBC 46.58 19 eP 08 53.00 -0.6
0.8s 9.00nm 4.8mb
LSA 49.10 273 P 09 16.20 1.8
CHTO 50.50 256 iP 09 25.00 0.4
1.1s 21.20nm 5.1mb
ALE 51.51 5 eP 09 29.00 -2.6X
0.6s 4.00nm 4.6mb
YKC 53.07 35 eP 09 42.70 -0.8
GUN 53.88 275 Pc 09 50.80 0.5
KBS 53.94 351 eP 09 47.50 -2.2
KSH 54.14 292 Pc 09 52.00 0.2
N 16s 3.10um
eS 17 30.00
KKN 54.37 275 Pc 09 54.40 0.6
PKI 54.41 275 Pc 09 54.40 0.2
DMN 54.61 275 Pc 09 56.20 0.7
GKN 54.70 276 Pc 09 56.60 0.5
PNT 57.24 51 eP 10 17.00 3.1X
DAG 58.25 357 iPc 10 17.40 -3.1X
1.3s 111.54nm 5.8mb
EDM 58.38 45 eP 10 21.00 -0.9
DPW 58.82 52 P 10 25.00 0.0
pP 10 37.00 42km
NDI 59.48 281 iPc 10 29.70 0.0
eS 18 37.00
SOD 60.33 339 eP 10 32.00 -3.0X
WDC 60.43 61 eP 10 35.40 -0.7
MIN 61.15 61 eP 10 44.70 3.5X
SES 61.19 46 eP 10 41.00 -0.2
ORV 61.68 61 eP 10 48.20 3.6X
FFC 62.82 39 eP 10 52.50 0.5
1.5s 44.00nm 5.4mb
LRM 63.22 51 eP 10 58.60 3.6X
CMB 63.29 62 eP 10 54.90 -0.5
SUF 63.98 335 eP 10 57.90 -1.6
0.4s 2.60nm 4.6mb
KVN 64.08 60 iP 11 00.00 -0.7
ipP 11 05.10 16kmX
i 11 14.20
FRI 64.35 63 eP 11 06.30 4.1X
TNP 65.23 60 P 11 08.00 -0.2
pP 11 21.00 45km
QUE 65.57 289 eP 11 10.40 0.0
HYB 65.75 271 eP 11 11.00 -0.5
e 11 23.50 43km
ISA 65.96 63 eP 11 15.00 2.3
NUR 66.15 334 iP 11 11.80 -1.6
Z 20s 1.40um 5.2Msz
LR 42 30.00
CLC 66.42 62 eP 11 15.00 -0.6
WB5 66.48 197 eP 11 22.80 6.9X
MAIO 66.54 298 iPc 11 16.80 0.4
eS 20 08.00
WRA 66.54 197 Pc 11 24.36 8.0X
BW06 66.75 52 P 11 18.00 0.1
1.1s 10.18nm 4.8mb
pP 11 30.00 41km
SBB 66.99 64 eP 11 22.00 2.7X
FRB 67.02 18 eP 11 16.00 -2.9X
RVR 67.72 64 eP 11 37.00 13.2X
TPC 68.49 63 eP 11 32.00 3.4X

UPP 68.74 337 iP 11 27.90 -1.8
i 11 41.70 48km
RSSD 68.87 48 eP 11 30.50 -0.6
GBA 69.12 268 Pc 11 31.40 -1.2
1.4s 59.20nm 5.4mb
RSON 69.13 38 P 11 29.80 -2.4
1.1s 25.47nm 5.1mb
pP 11 43.20 47km
AKU 69.25 355 iP 11 33.80 1.1
1.3s 61.54nm 5.4mb
NB2 69.37 341 P 11 29.80 -3.8X
1.2s 101.90nm 5.7mb
NRA0 69.56 340 P 11 32.40 -2.3
PV10 69.95 56 P 11 38.30 0.5
pP 11 50.80 43km
GLA 69.95 63 eP 11 42.00 4.4X
GOL 71.15 52 P 11 44.50 -0.6
2.1s 98.04nm 5.4mb
pP 11 58.00 47km
GLD 71.20 52 P 11 46.00 0.7
1.1s 38.57nm 5.3mb
pP 11 59.00 45km
KOD 71.41 266 eP 11 47.00 0.0
TEH 71.86 303 eP 11 52.00 2.8
TAB 73.20 307 eP 11 57.00 -0.1
ALQ 73.80 57 eP 12 02.00 1.3
1.8s 22.73nm 4.8mb
Z 20s 0.44um 4.7Msz
epP 12 14.30 42km
eS 21 37.00
SCH 75.35 22 eP 12 08.00 -1.0
SLY 75.40 306 iPd 12 10.00 0.4
iPcP 12 23.00
ePP 12 55.00
eS 21 49.00
MSL 76.18 308 ePd 12 14.50 0.5
e 12 27.50 45km
KRA 76.23 330 ePc 12 13.20 -0.8
1.3s 192.00nm 5.9mb
Z 18s 1.70um 5.4Msz
N 22s 2.50um
e 12 19.30 20kmX
e 12 26.70
PTT 76.33 325 eP 12 14.50 -0.2
KVT 76.48 315 iP 12 17.00 1.3
KSP 76.80 333 iPc 12 16.70 -0.5
1.2s 106.00nm 5.7mb
i 12 29.60 44km
SPC 76.85 329 eP 12 17.30 -0.4
BMR 76.88 327 ePd 12 19.00 1.3
CFR 76.98 323 eP 12 17.00 -1.3
VRI 77.04 324 ePc 12 18.00 -0.7
CLL 77.43 335 iPc 12 19.60 -1.1
1.4s 205.00nm 6.0mb
Z 18s 1.00um 5.2Msz
i 12 25.40 19kmX
i 12 33.60
BRG 77.52 334 iPc 12 20.60 -0.6
1.4s 90.00nm 5.6mb
i 12 33.00 42km
EKA 77.63 345 Pd 12 21.90 0.2
1.5s 66.30nm 5.4mb
MLR 77.67 324 ePc 12 22.50 0.2
BHD 77.71 305 iPd 12 23.00 0.5
ePcP 12 37.00
eS 22 12.00
ePS 22 39.00
WIT 77.85 339 eP 12 23.50 0.6
PRU 78.10 333 Pc 12 24.40 0.0
1.5s 109.40nm 5.7mb
Z 13s 1.60um 5.5MszX
N 18s 1.00um
E 18s 2.00um
e 12 37.50 45km
PSN 78.16 322 iPd 12 26.00 1.2
CMP 78.23 324 ePc 12 25.00 -0.2
MOX 78.43 335 iPc+ 12 26.00 -0.2
1.5s 140.00nm 5.7mb
Z 17s 1.00um 5.2MszX
N 18s 1.30um
E 17s 1.80um
i 12 39.00 44km
BUC 78.48 323 eP 12 26.00 -0.5
BUC1 78.56 323 eP 12 26.00 -1.0
WTS 78.56 339 ePc 12 26.50 -0.3
1.2s 137.00nm 5.8mb
e 12 38.00 38km

HOF 78.65 335 iPc 12 27.20 -0.2
1.4s 130.00nm 5.7mb
SRO 78.70 330 iP 12 28.30 0.6
i 12 42.20 48km
BUD 78.72 329 iP 12 28.80 1.0
1.3s 180.40nm 5.9mb
ZST 78.80 331 iPc 12 28.60 0.4
Z 16s 2.10um 5.6MszX
i 12 41.60 44km
SIO 78.99 50 e(P) 12 33.80 4.3X
VKA 79.01 331 ePc 12 29.00 -0.4
1.5s 168.00nm 5.8mb
Z 17s 0.80um 5.1MszX
LR 56 00.00
BBTK 79.05 316 iPc 12 30.00 0.1
TUL 79.15 50 eP 12 34.10 3.7X
1.2s 7.70nm 4.5mb X
Z 21s 1.28um 5.2Msz
LR 40 20.00
KHC 79.16 333 iPc 12 30.50 0.2
1.3s 120.50nm 5.7mb
i 12 43.50 44km
BZS 79.31 327 eP 12 31.00 -0.1
WET 79.37 334 iPc 12 31.60 0.2
1.4s 245.00nm 6.0mb
RLO 79.37 49 e(P) 12 31.60 0.0
GRF 79.39 335 eP 12 31.80 0.3
1.4s 179.00nm 5.8mb
Z 21s 0.30um 4.6Msz
e 12 44.40 42km
VVO 79.60 50 e(P) 12 37.30 4.4X
TNS 79.72 337 ePc 12 33.00 -0.3
PVL 79.77 323 iPc 12 35.00 1.4
JMB 79.84 322 iPc 12 34.00 0.0
ENN 79.91 338 ePc 12 34.00 -0.2
1.3s 222.00nm 6.0mb
e 12 45.50 38km
KMR 79.92 332 iP+ 12 34.60 0.3
ipP 12 48.00 46km
MEM 80.03 338 Pc 12 34.70 -0.1
e 12 47.80 45km
TOD 80.18 336 ePc 12 35.41 -0.3
UCC 80.28 339 P+ 12 36.80 0.7
ABH 80.28 337 eP 12 36.50 0.2
FVM 80.36 45 P 12 39.00 2.1
1.0s 10.00nm 4.7mb
BEO 80.43 327 eP 12 36.00 -1.0
SNF 80.56 339 Pc 12 37.40 -0.3
e 12 51.00 47km
RUP 80.58 337 eP 12 37.80 -0.1
BHG 80.62 333 eP 12 34.10 -4.0X
1.5s 114.00nm 5.6mb
FUR 80.73 334 eP 12 38.50 -0.2
1.5s 144.00nm 5.7mb
PGB 80.81 323 iP 12 40.00 0.8
WLF 80.86 338 P 12 39.60 0.4
DOU 80.87 339 iPc+ 12 40.10 0.8
1.3s 128.60nm 5.7mb
Z 22s 1.20um 5.2Msz
e 12 52.30 41km
ALT 80.94 318 eP 12 40.50 0.5
KDZ 81.01 322 iPd 12 41.00 0.8
KBA 81.03 332 iPc 12 30.60 -9.9X
1.5s 100.00nm 5.5mb
GWF 81.08 337 P 12 40.32 -0.2
PTJ 81.17 330 eP 12 40.60 -0.5
VTS 81.18 324 iP 12 42.00 0.7
RZN 81.28 323 iPc 12 32.00 -9.9X
LJU 81.54 331 eP 12 43.00 0.1
FVI 81.65 332 P 12 43.00 -0.4
CDF 81.69 337 P 12 43.57 -0.2
VBY 81.76 330 ePc 12 43.50 -0.5
VOY 81.77 332 eP 12 43.00 -1.2
MMB 81.79 323 iPc 12 45.00 0.7
KHL 81.80 317 eP 12 43.50 -1.0
KKB 81.83 324 iPc 12 45.00 0.5
CEY 81.84 331 eP 12 44.00 -0.5
ECH 81.90 337 P 12 44.89 0.1
SLE 81.93 336 ePd 12 45.10 0.2
OGA 81.96 334 eP 12 45.80 0.4
1.5s 108.00nm 5.7mb
FEL 81.97 336 iPc 12 44.94 -0.3
EZN 82.09 320 eP 12 45.00 -0.8
TRI 82.09 331 eP 12 44.90 -0.8
SAX 82.14 335 ePd 12 46.90 0.6
RIY 82.20 331 eP 12 42.40 -3.9X
ZLA 82.21 336 ePd 12 47.10 0.7

28d 03h

VITF	82.22	337	P	12 46.44	0.1
MOF	82.24	337	P	12 46.28	-0.3
HAU	82.32	337	eP	12 46.80	-0.1
	1.4s	47.00nm		5.3mb	
BSF	82.35	337	P	12 46.25	-1.0
OSS	82.40	334	ePd	12 48.40	0.8
SKO	82.42	325	iP	12 47.50	-0.1
	1.6s	180.00nm		5.9mb	
Z	17s	1.29um		5.4MszX	
N	16s	1.37um			
E	16s	1.76um			
		i		13 01.00	46km
		eS		22 59.00	
		LR		53 10.00	
BBS	82.48	336	P	12 47.82	0.0
VAY	82.50	324	eP	12 48.20	0.3
LLS	82.59	335	ePd	12 49.20	0.6
LOMF	82.78	337	P	12 49.32	-0.1
IZM	82.81	319	eP	12 48.00	-1.7
TMA	83.31	335	ePd	12 52.60	0.3
FLN	83.32	342	eP	12 52.00	-0.1
	1.4s	69.70nm		5.5mb	
LDF	83.40	341	eP	12 52.30	-0.2
	1.4s	52.20nm		5.4mb	
OHR	83.41	325	iP	12 52.00	-0.7
	1.9s	0.13nm		2.7mb	X
		i		13 05.50	46km
		eS		23 10.00	
VAI	83.56	335	Pc	12 53.20	-0.1
MMK	83.63	335	ePd	12 55.30	1.3
LOR	83.66	338	eP	12 53.70	-0.2
	1.5s	135.80nm		5.8mb	
GRR	83.76	342	eP	12 54.20	-0.1
	1.2s	59.50nm		5.5mb	
DIX	83.77	336	ePd	12 56.00	1.2
LBF	83.89	338	eP	12 55.00	-0.1
	1.6s	120.60nm		5.7mb	
EMS	83.92	336	ePd	12 56.40	1.0
SSF	83.95	338	eP	12 55.30	0.0
	1.4s	47.90nm		5.4mb	
RSM	84.11	331	Pd	12 57.40	1.3
LPF	84.13	342	eP	12 56.30	0.1
	1.2s	77.30nm		5.7mb	
AVF	84.24	338	eP	12 56.90	0.2
	1.4s	117.60nm		5.8mb	
SMF	84.24	338	eP	12 57.00	0.2
BOB	84.34	334	Pd	12 58.00	0.6
LSD	84.41	336	P	12 59.19	1.2
MME	84.45	333	Pc	12 59.30	1.1
LPG	84.49	336	eP	12 59.10	0.7
	1.4s	123.70nm		5.8mb	
BGF	84.58	339	eP	12 58.70	0.2
	1.6s	68.40nm		5.5mb	
MAF	84.97	339	eP	13 00.10	-0.3
	1.2s	75.50nm		5.7mb	
TCF	85.00	339	eP	13 01.00	0.4
RRL	85.01	336	P	13 01.76	0.8
LSF	85.20	339	eP	13 02.50	0.9
FIN	85.22	334	P	13 01.86	0.1
ROB	85.25	335	P	13 01.65	-0.3
MFF	85.28	341	eP	13 02.90	0.9
	1.2s	65.40nm		5.7mb	
ENR	85.45	335	P	13 02.06	-0.7
STV	85.46	335	P	13 01.76	-1.3
IMI	85.59	334	P	13 02.78	-0.9
MBH	85.71	309	iPc	13 05.00	0.6
SBF	85.77	335	eP	13 04.70	0.1
	1.4s	69.70nm		5.7mb	
RJF	86.09	339	eP	13 07.00	1.0
	1.2s	47.60nm		5.6mb	
CBN	86.20	36	eP	13 07.00	0.3
FRF	86.29	335	eP	13 07.20	0.2
	1.4s	52.20nm		5.6mb	
LRG	86.47	335	eP	13 08.40	0.5
	1.2s	53.50nm		5.6mb	
LMR	86.53	335	eP	13 08.20	0.0
	1.4s	95.80nm		5.8mb	
LFF	86.62	340	eP	13 08.50	-0.1
	1.3s	64.90nm		5.7mb	
LPO	86.75	339	eP	13 08.50	-0.8
	1.3s	68.50nm		5.7mb	
EPF	88.51	339	eP	13 17.00	-0.9
	1.4s	43.50nm		5.6mb	
TOL	92.55	341	eP	13 37.00	0.4
BNG	115.16	306	iPKPd	19 21.30	14.0X
	0.6s	6.00nm			
SLR	130.76	273	ePKP	19 45.00	8.0X
ZOBO	136.23	62	ePKP	19 54.00	5.9X
	1.7s	21.80nm			
Z	24s	0.25um		4.9MszX	
		SS		40 44.00	
		LR		46 04.00	
LPB	136.44	62	(PKP)	19 50.00	1.7
CNCB	136.73	62	ePKP	19 49.00	-0.1
		i		20 04.80	
BAO	146.43	35	ePKP	20 08.00	2.4
PPD	150.46	46	e(PKP)	20 13.30	1.7
		e		20 17.90	
		e		20 32.10	

S.D. = 0.9 on 216 of 248 obs.

? JUN 28, 1989 03h 04m 58.21± 1.16s
37.908 N ±25.4km 26.485 W ±12.5km
DEPTH = 10.0km (geophysicist)
AZORES ISLANDS (405)

PDA	0.67	104	iPc	05 11.50	0.0
			iS	05 20.00	
ADH	0.95	322	iP	05 16.30	0.0
			iS	05 28.50	
HOR	1.80	291	eP	05 29.20	-0.3
CALA	1.87	292	iPd	05 30.90	0.3

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

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* JUN 28, 1989 03h 16m 33.69± 1.02s
44.345 N ± 8.2km 112.365 W ±11.5km
DEPTH = 5.0km (geophysicist)
EASTERN IDAHO (457)
ML 3.1 (BUT).

CCMT	0.68	328	iPc	16 47.50	0.3
HPI	0.83	220	e(P)	16 50.20	-0.2
BGMT	0.92	14	iPc	16 50.60	-1.3
LRM	1.48	358	ePc	17 01.40	0.2
LCCM	1.53	13	ePc	17 01.90	0.0
MEMT	1.60	38	eP	17 03.60	0.7
BUT	1.67	355	ePg	17 09.00	5.1X
			eSn	17 23.70	
HRY	2.40	9	ePn	17 14.60	0.3
BW06	2.57	127	e(P)	17 24.00	7.0X

S.D. = 0.8 on 7 of 9 obs.

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* JUN 28, 1989 03h 47m 06.98± 1.09s
17.376 N ±19.3km 95.020 W ±10.4km
DEPTH = 116.1 ± 18.4 km
3.9mb (2 obs.)
OAXACA, MEXICO (60)

OXX	1.65	260	iP	47 35.35	-1.3
			iS	47 57.64	
SCX	2.37	105	iP	47 45.97	0.5
			iS	48 13.31	
LVVM	2.71	330	iP	47 49.34	-0.6
			iS	48 21.73	
IISM	2.75	306	iP	47 51.23	0.7
			iS	48 26.15	
IIT	3.53	298	iP	48 03.85	2.6X
TPX	3.61	132	(P)	48 28.50	26.3X
III	4.35	284	iP	48 12.60	0.2
ACX	4.65	264	(P)	48 12.00	-4.3X
IIC	4.67	301	eP	48 18.00	1.1
TUL	18.47	358	eP	51 15.40	-1.2
	0.7s	10.30nm		4.2mb	
ALQ	20.25	332	eP	51 36.00	0.6
	0.9s	2.31nm		3.5mb	
		e		51 39.00	
		e		52 13.00	

S.D. = 1.2 on 8 of 11 obs.

JUN 28, 1989 04h 56m 51.71± 0.30s
63.243 N ± 3.1km 150.490 W ± 4.1km
DEPTH = 121.7 ± 3.3 km
4.6mb (11 obs.)
CENTRAL ALASKA (1)
Felt (IV) ot Nenono; (III) ot Skwentno ond Tolkeetno.

KTH	0.37	328	iP	57 10.46	1.0
MCK	0.85	54	iP	57 13.72	0.9
PWA	1.62	170	iPd	57 21.30	0.3
PMR	1.77	158	iPd	57 22.60	-0.3
RDS	1.90	32	iP	57 25.90	1.5
FBA	2.04	34	iP	57 26.90	0.7
PMS	2.05	167	eP	57 26.30	-0.1
CGLM	2.07	201	eP	57 27.03	0.4
KNK	2.07	152	eP	57 26.33	-0.3
CRP	2.13	202	eP	57 28.19	0.7
DDM	2.15	73	eP	57 28.13	0.5
SPU	2.19	200	eP	57 28.16	-0.1
GLM	2.22	36	iP	57 29.12	0.6
TOA	2.30	118	iPc	57 30.00	0.5
PAX	2.30	95	iP	57 29.87	0.3
TTA	2.53	265	iP	57 33.10	0.5
NKA	2.53	188	eP	57 34.81	2.3
SLKM	2.75	177	eP	57 35.19	-0.2
KLU	2.76	127	iP	57 34.53	-1.1
RDT	2.83	200	eP	57 36.52	0.0
VZW	2.87	138	iP	57 35.68	-1.3
RED	3.03	202	eP	57 39.07	-0.2
IMA	3.15	336	iPd	57 41.30	0.5
SEW	3.19	171	eP	57 40.48	-0.7
SVW	3.22	231	eP	57 41.10	-0.6
ILIM	3.39	201	eP	57 43.37	-0.5
GLB	3.60	117	iP	57 46.21	-0.6
CNPM	3.75	186	eP	57 48.30	-0.5
OPT	3.84	201	eP	57 49.78	-0.2
AUL	4.13	201	eP	57 54.51	0.7
MID	4.32	151	eP	57 56.00	-0.4
BALM	4.42	116	eP	57 56.55	-1.3
DWY	5.00	76	P	58 04.90	-0.7
KDC	5.60	191	eP	58 11.20	-2.7
HYT	6.57	106	P	58 26.10	-1.2
BRW	8.44	346	eP	58 50.40	-2.1
INK	8.61	46	eP	58 54.00	-0.7
YKA	16.26	76	eP	00 34.90	1.1
YKC	16.32	76	eP	00 32.20	-2.4
MBC	16.56	26	eP	00 38.00	0.5
	0.6s	3.00nm		3.7mb	
EDM	21.65	100	iPd	01 33.50	0.5
	0.8s	41.00nm		4.9mb	
PNT	21.80	115	eP	01 36.00	1.5
	0.8s	22.00nm		4.6mb	
DPW	23.52	116	eP	01 51.80	0.6
SES	24.65	103	eP	02 03.00	1.0
FFC	25.81	87	eP	02 12.50	-0.1
	0.7s	8.00nm		4.4mb	
WDC	28.07	131	eP	02 34.00	0.8
MIN	28.61	130	eP	02 38.40	0.2
ORV	29.35	130	eP	02 44.20	-0.5
KVN	31.01	126	eP	03 00.00	0.5
CMB	31.09	130	eP	03 00.10	0.0
BW06	31.22	111	iPc	03 02.10	0.7
	1.0s	38.75nm		5.1mb	
ARN	31.32	132	eP	03 02.50	0.4
RSON	32.13	86	eP	03 08.40	-0.5
TNP	32.19	126	eP	03 10.00	0.2
	0.6s	4.17nm		4.4mb	
RSSD	32.52	104	eP	03 12.80	0.1
PRI	32.71	132	eP	03 15.50	1.3
MSU	33.74	119	iP	03 24.50	1.2
FRB	34.22	52	eP	03 25.00	-1.8
PV09	34.98	115	eP	03 34.00	0.0
PV10	35.12	115	eP	03 35.50	0.4
GOL	35.54	110	eP	03 39.00	0.4
	0.7s	9.71nm		4.8mb	
GLD	35.56	110	P	03 39.80	1.1
	0.9s	33.68nm		5.2mb	
PLM	36.54	129	eP	03 47.50	0.5
GLA	37.54	127	eP	03 56.00	0.8
ALQ	39.13	115	eP	04 09.10	0.5
	0.9s	4.41nm		4.2mb	
		e		06 11.30	
FVM	43.53	96	eP	04 43.30	-1.1
	0.4s	12.80nm		5.0mb	
BLA	48.69	88	eP	05 24.50	-0.5
JSC	50.74	91	eP	05 40.00	-0.6
NB2	55.26	11	P	06 11.70	-2.1
	0.9s	2.00nm		4.1mb	
SPA	153.09	180	e(PKP)	16 34.00	7.3X
	1.0s	5.00nm			

S.D. = 1.0 on 69 of 70 obs.

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* JUN 28, 1989 08h 15m 16.91± 1.82s
38.258 N ±12.2km 20.489 E ±27.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.5 (ATH).

VLS	0.11	136	iPgd	15 19.00	-0.8
ITM	1.57	133	ePb	15 45.70	0.8
SRN	1.66	347	ePn	15 46.50	0.3

LSK	1.89	3	ePn	15 50.10	0.5
TPE	2.07	350	ePn	15 54.50	2.4X
KZN	2.27	26	ePg	16 01.00	5.8X
NEO	2.38	63	ePb	16 01.20	4.6X
OHR	2.86	5	ePn	16 02.80	-0.6
TIR	3.12	351	ePn	16 02.50	-4.5X
PHP	3.43	359	ePn	16 08.00	-3.4X
LACI	3.43	350	ePn	16 04.50	-6.9X
VAY	3.45	27	e(Pn)	16 12.00	0.2
SKO	3.78	11	ePn	16 16.00	-0.5
SDA	3.83	349	e(Pn)	16 14.50	-2.6X

S.D. = 0.8 on 7 of 14 obs.

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* JUN 28, 1989 09h 22m 40.08± 0.96s
36.571 N ± 7.9km 140.441 E ±11.1km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)
MG 3.3 (JMA). Felt (I JMA) at Mito.

MIT	0.19	173	eP	22 48.00	1.4
			iS	22 53.30	
KAKJ	0.42	211	iPd	22 48.50	-1.0
			S	22 55.80	
CHJJ	1.28	246	iPd	23 00.60	-1.1
			S	23 16.80	
NIIJ	1.33	301	iPd	23 03.20	0.7
YAMJ	1.63	349	eP	23 07.20	0.3
MAT	1.80	270	iPc	23 09.70	0.4
			eS	23 33.00	
IIDJ	2.32	243	P	23 17.10	0.3
OFUJ	2.69	21	eP	23 20.90	-1.0

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

& JUN 28, 1989 10h 19m 48.94s
56.173 N 150.850 W
DEPTH = 0.1km
4.2mb (1 obs.)
GULF OF ALASKA (15)
<AGS-P>. ML 3.6 (PMR).

KDC	1.82	331	eP	20 18.80	-2.9
CDD	3.15	333	eP	20 39.30	-1.4
CNPM	3.37	357	iP	20 42.61	-1.3
AUI	3.46	338	eP	20 43.96	-1.2
AUL	3.50	338	eP	20 44.78	-1.0
OPT	3.71	341	eP	20 47.33	-1.5
SEW	4.01	10	eP	20 51.18	-1.8
ILIM	4.07	345	eP	20 51.69	-2.2
SLKM	4.36	4	eP	20 55.99	-2.0
RED	4.38	347	eP	20 55.44	-2.9
RDT	4.49	350	iP	20 56.87	-3.0
SPU	5.06	353	eP	21 05.59	-2.4
SUA	5.31	1	eP	21 08.81	-2.7
VZW	5.39	23	eP	21 12.07	-0.5
PMR	5.51	9	eP	21 12.00	-2.2
SVW	5.54	335	eP	21 10.50	-4.2
GHO	5.70	9	eP	21 15.62	-1.4
TTA	7.27	341	eP	21 34.50	-4.5
FBA	8.88	8	eP	21 59.00	-2.5
INK	14.52	26	eP	23 26.00	8.6
MBC	23.22	18	eP	25 01.00	3.1
	0.6s		5.00nm		4.2mb

21 obs. associated

% JUN 28, 1989 10h 46m 57.73± 1.32s
61.608 N ± 9.2km 5.302 E ±11.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

SUE	0.61	206	ePn	47 09.37	-0.7
			eSg	47 18.00	
HYA	0.61	136	iPg	47 09.67	-0.4
			eSg	47 17.78	
ASK	1.13	183	eP	47 19.14	0.3
			eS	47 34.56	
BER	1.23	179	eP	47 21.01	0.5
			eS	47 38.65	
MOL	1.43	47	iP	47 23.83	0.1
			eS	47 43.00	
ODD1	1.82	158	eP	47 29.63	0.2
			eS	47 50.50	
NRA0	3.15	103	ePn	47 48.10	-0.1
			ePg	47 52.90	
			iSg	48 34.40	

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

? JUN 28, 1989 12h 05m 29.73± 2.08s
51.437 N ±36.0km 174.180 W ±15.9km
DEPTH = 33.0km (normal)
4.5mb (7 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.62	287	iPc	05 56.30	-0.1
KDC	14.03	55	eP	08 55.00	6.9X
TTA	15.08	33	eP	09 04.50	2.7
IMA	17.97	28	eP	09 39.00	0.6
FBA	19.17	35	eP	09 49.50	-3.3
EDM	36.24	63	iPc	12 31.40	0.2
FFC	41.74	56	eP	13 16.50	-0.3
	0.9s		10.00nm		4.5mb
HFS	68.60	356	eP	16 28.50	-2.4
	0.4s		1.60nm		4.5mb
LOR	81.66	1	eP	17 46.60	1.0
	0.6s		3.00nm		4.5mb
SSF	81.86	2	eP	17 47.10	0.5
	0.6s		3.00nm		4.5mb
LBF	81.95	1	eP	17 47.40	0.3
	0.5s		2.10nm		4.4mb
AVF	82.13	2	eP	17 48.30	0.3
	0.8s		5.90nm		4.7mb
SMF	82.28	1	eP	17 49.30	0.5
	1.0s		12.00nm		4.9mb

S.D. = 1.7 on 12 of 13 obs.

JUN 28, 1989 12h 08m 32.42± 0.15s
23.851 N ± 3.3km 94.387 E ± 2.9km
DEPTH = 75.6km (3 depth phases)
5.0mb (39 obs.)
BURMA-INDIA BORDER REGION (294)

LSA	6.50	334	Pn	10 07.90	0.0
			Sg	11 59.00	
CHTO	6.57	139	iP	10 08.00	-0.4
KMI	7.71	79	iPc+	10 28.50	4.0X
	3.0s		2.80nm		3.4mb X
	Z 20s		5.80um		
			pP	10 36.00	
			sP	10 41.00	
			S	11 58.00	
CD2	10.89	48	eP	11 07.20	-0.4
GYA	11.42	74	Pc	11 15.40	0.6
	N 10s		1.90um		
	E 10s		1.20um		
			S	13 22.00	
			ScP	20 26.60	
			ScS	24 01.20	
LZH	14.68	32	eP	11 55.50	-2.0
	Z 26s		1.60um		
			eS	14 48.00	
QIZ	15.17	105	eP	12 03.50	-0.2
	N 11s		0.90um		
	E 10s		0.70um		
			pP	12 09.00	
NDI	16.13	291	iPc	12 13.60	-2.3
	0.6s		33.33nm		4.7mb
			iS	14 56.50	
HYB	16.14	250	eP	12 13.00	-3.1X
	0.8s		71.00nm		4.9mb
			i	12 49.00	
			eS	15 01.00	
GTA	16.18	15	eP	12 13.80	-2.8
XAN	16.26	48	Pc	12 18.50	1.0
			S	15 19.00	
BSI	18.27	177	iPc	12 41.00	-1.5
	0.8s		208.60nm		5.4mb
WHN	18.95	65	P	12 52.00	1.6
			S	16 13.00	
			sS	16 28.00	
GBA	19.00	241	Pc	12 50.20	-0.7
	1.0s		26.30nm		4.4mb
POO	19.86	258	iPc	13 00.00	-0.1
			iSd	16 29.50	
WMQ	20.67	346	iPd	13 09.00	0.7
	2.0s		0.60nm		2.6mb X
	E 13s		0.60um		
			S	16 53.00	
BOM	20.68	260	eP	13 11.00	2.6X
			eS	16 38.00	
TIY	20.72	44	eP	13 06.70	-2.1
	N 11s		0.60um		
			S	16 48.50	
KOD	21.06	233	eP	13 13.00	0.3
			eS	17 11.00	
BTO	21.24	34	eP	13 13.50	-0.6
	E 12s		0.80um		
			sP	13 28.00	
			S	17 02.50	
			SS	17 35.00	
PSI	21.48	168	iPc	13 18.50	1.9
	0.9s		67.30nm		5.0mb
KSH	22.01	319	eP	13 24.50	2.6X
			S	17 19.00	
QZH	22.07	82	eP	13 23.50	1.2
			S	17 24.00	
HHC	22.24	36	eP	13 26.20	2.1
	E 10s		0.60um		
			S	17 26.00	
NJ2	23.07	64	Pd	13 32.60	0.5
	N 10s		0.70um		
	E 10s		0.50um		
			S	17 44.00	
TIA	23.16	53	eP	13 32.90	0.0
			S	17 34.00	
BJI	24.44	44	eP	13 48.00	2.7X
			eS	18 00.00	
			eScP	20 53.50	
			eScS	24 41.00	
SSE	24.81	67	Pc	13 48.10	-0.7
	1.0s		142.00nm		5.4mb
	Z 20s		0.50um		4.0Msz
	N 10s		0.90um		
			S	18 14.00	
			sS	18 34.00	
			i	18 50.00	
			ScP	20 53.70	
PPI	24.86	166	eP	13 49.50	0.1
QUE	25.21	290	eP	13 53.80	0.9
			eS	14 10.00	
			e(S)	18 27.00	
DL2	27.54	51	eP	14 16.00	2.0
			S	18 48.00	
			ScS	24 53.00	
SNY	30.17	46	eP	14 36.60	-0.8
CN2	32.30	44	Pd	14 53.90	-2.2
			PcP	17 42.40	
			SS	22 06.00	
MAIO	32.47	301	eP	14 58.00	0.2
			eS	20 58.00	
MNI	36.95	123	ePd	15 37.00	0.8
TSRJ	37.71	62	iPd	15 42.40	0.1
MKS	37.86	137	iPd	15 45.50	1.8
MAT	39.61	61	iPc	15 56.90	-1.3
	1.1s		37.97nm		5.2mb
			eS	21 51.00	
CHJJ	40.20	62	P	16 04.90	1.9
NIIJ	40.32	60	P	16 02.50	-1.5
BHD	44.55	294	eP	16 39.00	0.5
MSL	45.57	298	eP	16 43.50	-3.1X
			e	17 06.80	98kmX
NANU	50.51	154	iPc	17 25.20	0.3
	0.5s		15.00nm		5.3mb
MBL	51.14	149	iPc	17 29.70	-0.1
	0.5s		31.00nm		5.6mb
KVT	51.21	304	iP	17 32.10	1.9
PRNI	52.76	291	iPd	17 43.00	1.0
KAS	52.93	305	eP	17 44.50	1.3
MBH	52.94	290	eP	17 45.00	1.7
BBTK	53.73	303	eP	17 50.00	0.9
MEKA	55.33	154	eP	18 00.60	-0.1
	0.6s		51.00nm		5.7mb
ALT	55.83	302	eP	18 03.90	-0.5
ELL	56.19	299	iP	18 06.90	-0.2
KHL	56.34	301	iP	18 07.00	-1.1
CFR	56.96	309	eP	18 12.00	-0.2
PSN	56.99	308	eP	18 13.00	0.5
YER	57.45	300	eP	18 15.40	-0.4
EDC	57.45	304	eP	18 15.60	-0.1
VRI	57.94	310	ePd	18 20.00	0.9
BAL	58.23	157	eP	18 20.70	-0.5
JMB	58.24	306	iP	18 22.00	0.8
WB5	58.37	135	iPc	18 21.70	-0.7
WRA	58.40	135	Pc	18 20.10	-2.5
	0.7s		33.80nm		5.6mb
MLR	58.50	310	ePd	18 23.80	0.6
KAP	58.54	298	ePn	18 23.20	-0.2
EZN	58.67	303	eP	18 24.00	-0.3
WARB	58.71	146	iPc	18 24.70	0.0
	0.4s		20.00nm		5.6mb
SUF	59.12	330	iP	18 26.90	-0.1

28d 12h

0.6s 14.20nm 5.3mb
KDZ 59.17 305 iPc 18 28.00 0.2
MUN 59.31 158 iPc 18 27.70 -0.9
KLB 59.49 157 iPd 18 29.10 -0.8
NUR 59.58 327 eP 18 30.20 0.0
Z 18s 0.30um 4.5Msz
LR 45 40.00
PLD 59.66 306 eP 18 31.00 0.0
SOD 59.68 335 iP 18 31.10 0.3
RZN 59.69 306 iPd 18 31.00 -0.5
NPS 59.84 298 ePn 18 32.50 0.1
KEV 60.03 338 iP 18 33.90 0.7
0.7s 14.70nm 5.2mb
COOL 60.16 153 eP 18 33.50 -1.1
MMB 60.44 306 iP 18 35.00 -1.4
NWAO 60.52 158 eP 18 35.70 -1.2
0.5s 13.00nm 5.3mb
DEV 60.60 311 ePd 18 38.00 0.6
VTS 60.71 307 iPc 18 39.00 0.6
PLG 60.80 304 ePn 18 38.70 -0.2
ASPA 60.85 138 iPc 18 38.90 -0.4
0.6s 67.00nm 5.9mb
KKB 60.89 306 iP 18 39.00 -0.4
VAM 60.96 298 ePn 18 40.20 0.2
NEO 61.12 303 ePb 18 40.00 -1.1
PMG 61.23 116 eP 18 42.00 0.0
VAY 61.34 305 eP 18 41.40 -1.1
KZN 62.08 304 ePn 18 46.70 -0.9
SKO 62.09 306 iP 18 47.00 -0.5
SPC 62.12 314 e(P) 18 48.30 0.4
QIS 62.35 131 iPc 18 48.90 -0.6
ITM 62.46 301 ePn 18 49.70 -0.4
UPP 63.07 327 iP 18 53.30 -0.4
FORR 63.27 148 iPd 18 54.90 -0.4
0.5s 20.00nm 5.4mb
VLS 63.33 302 ePn 18 54.50 -1.3
SRO 63.54 313 eP 19 13.00 16.0X
e 19 32.90 77km
i 19 44.90
ZST 64.30 314 eP 19 20.20 18.2X
e 19 48.60 115kmX
KSP 64.49 317 eP 19 03.50 0.3
HFS 65.03 327 eP 19 05.60 -0.8
0.5s 6.70nm 4.8mb
Z 22s 1.08um 5.0Msz
LR 45 00.00
HVAR 65.54 308 iPc 19 08.90 -1.1
PRU 65.71 316 eP 19 10.50 -0.5
e 19 29.10 70km
BRG 65.96 317 e(P) 19 12.00 -0.6
VBY 65.97 311 e(P) 19 24.30 11.6X
NB2 66.16 328 P 19 12.90 -0.8
0.7s 6.00nm 4.6mb
KHC 66.47 315 P 19 16.50 0.5
e 19 37.40 80km
CLL 66.48 317 e(P) 19 14.00 -1.9
CEY 66.50 311 e(P) 19 17.00 0.8
CTA 66.79 126 iPc 19 18.00 -0.3
0.8s 34.33nm 5.3mb
VOY 66.81 312 e(P) 19 19.20 1.0
TRI 66.96 311 ePc 19 19.60 0.6
MOX 67.45 317 e(P) 19 30.00 7.9X
Z 36s 0.40um 4.4MszX
i 19 45.00 54kmX
e 22 20.00
STK 71.47 139 eP 19 46.50 -0.3
LPG 71.80 312 eP 19 49.20 0.1
0.8s 9.40nm 4.8mb
ADE 72.03 143 iPc 19 50.10 -0.1
0.7s 32.88nm 5.4mb
DAG 72.04 347 eP 19 49.00 -0.6
RMQ 72.56 130 iPc 19 55.00 1.5
0.8s 109.00nm 5.8mb
LOR 73.22 315 eP 19 56.70 -0.4
0.8s 4.50nm 4.4mb
LBF 73.23 314 eP 19 56.90 -0.3
0.8s 6.70nm 4.6mb
ALE 73.25 357 eP 19 57.00 0.3
0.3s 4.00nm 4.8mb
SMF 73.42 314 eP 19 58.20 0.0
0.8s 12.00nm 4.9mb
BRW 73.43 19 eP 19 58.30 0.5
SSF 73.51 315 eP 19 58.60 -0.1
0.8s 11.20nm 4.8mb
AVF 73.69 314 eP 19 59.80 0.0
0.8s 5.30nm 4.5mb
MAF 74.39 314 eP 20 04.20 0.3

0.8s 6.70nm 4.6mb
TCF 74.60 314 eP 20 05.80 0.7
0.8s 10.70nm 4.8mb
EKA 74.85 324 P 20 07.00 0.7
0.7s 8.30nm 4.8mb
BNG 75.27 268 iPd 20 10.00 0.5
0.7s 12.00nm 4.9mb
i 22 22.20 648kmX
iS 28 27.00
e 38 16.00
RJF 75.37 313 eP 20 10.40 0.9
0.6s 3.60nm 4.5mb
LPO 75.80 313 eP 20 12.40 0.5
0.8s 6.40nm 4.6mb
BRS 75.95 129 iPd 20 13.00 0.0
LFF 76.01 313 eP 20 13.90 0.8
0.6s 3.60nm 4.5mb
LPF 76.12 317 eP 20 13.80 0.2
0.8s 10.70nm 4.8mb
IMA 76.84 23 eP 20 26.80 9.2X
COO 77.25 132 iPd 20 21.50 1.3
TOO 77.72 141 iPd 20 23.70 1.1
MBC 77.98 8 eP 20 24.50 1.0
0.6s 12.00nm 5.0mb
CAN 78.33 137 eP 20 26.40 0.3
CNB 78.56 137 iPc 20 27.70 0.4
FBA 79.55 23 eP 20 32.50 0.3
1.0s 10.00nm 4.7mb
PMR 80.92 26 eP 20 46.50 7.1X
TOL 81.17 310 eP 20 55.00 13.7X
INK 81.66 16 eP 20 44.00 0.8
FRB 91.67 352 eP 21 34.00 1.9
SPA 113.71 180 e(PKP) 27 02.90 -0.4
1.0s 6.00nm
ALQ 118.28 19 iPKPd 27 14.00 0.9
1.0s 7.50nm
e 27 20.50
e 30 41.70
RLO 119.65 9 ePKP 27 14.90 -0.5
TUL 119.79 10 ePKP 27 15.50 -0.1
0.8s 5.90nm
Z 21s 0.16um 4.6Msz
LR 17 00.00
SOB1 134.93 281 ePKP 27 45.50 0.2
ATB 141.83 297 e(PKP) 27 54.80 -3.1X
BAO 143.75 276 ePKP 28 05.00 3.7X
PPD 148.40 266 ePKP 28 14.10 5.4X
ZOBO 161.93 291 PKP 28 28.80 1.7
LPB 162.03 291 (PKP) 28 26.00 -1.0
CNCB 162.05 290 PKP 28 29.80 2.6X
S.D. = 1.0 on 138 of 155 obs.

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* JUN 28, 1989 12h 36m 28.74± 0.95s
23.730 N ±19.6km 91.234 E ±10.9km
DEPTH = 33.0km (normal)
INDIA-BANGLADESH BORDER REGION (315)

LSA 5.95 359 Pn 38 34.80 37.6X
Sn 39 46.00
GUN 6.37 312 P 38 02.30 -0.8
PKI 6.50 307 P 38 06.00 1.1
KKN 6.72 308 P 38 08.00 0.1
DMN 6.74 306 P 38 08.50 0.2
0.4s 25.00nm 5.4mb
GKN 7.31 307 P 38 15.40 -0.7
CHTO 8.69 123 iP 38 36.10 0.9
KMI 10.58 80 Pd 38 56.50 -4.9X
pP 39 05.50
GTA 17.24 23 eP 40 42.00 13.3X
QIZ 17.95 102 eP 40 36.10 -1.4
XAN 18.56 52 P 40 45.60 0.6
WMQ 20.25 353 P 41 36.00 31.9X
BTO 23.07 39 eP 41 48.40 16.0X
SSE 27.52 68 P 42 18.00 3.6X
WB5 60.39 132 eP 46 48.30 11.0X
MBC 78.48 7 eP 48 52.00 24.5X
S.D. = 1.0 on 8 of 16 obs.

? JUN 28, 1989 12h 42m 26.53± 2.78s
42.763 N ±17.6km 19.171 E ±21.1km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

NKY 0.14 291 iPgc 42 30.00 0.1
iSg 42 33.20
TTG 0.34 169 ePg 42 33.50 0.0
iSg 42 39.10
BRY 0.48 287 ePg 42 36.20 -0.1
eSg 42 44.20
HCY 0.59 238 ePg 42 38.50 0.1
eSg 42 48.00
S.D. = 0.2 on 4 of 4 obs.

? JUN 28, 1989 13h 35m 10.31± 2.06s
5.793 S ±27.4km 145.640 E ±11.5km
DEPTH = 85.4 ± 12.1 km
4.5mb (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT 1.60 122 iPc 35 38.00 0.5
MNDI 2.00 260 eP 35 43.00 -0.2
PMG 3.89 157 eP 36 08.50 -0.5
LMG 3.97 141 eP 37 02.00 51.8X
WB5 17.78 217 eP 39 13.30 -0.5
ASPA 21.06 211 eP 39 50.50 1.1
WARB 27.21 220 eP 40 48.70 0.6
SPA 84.25 180 e(P) 47 32.70 -0.9
0.6s 3.66nm 4.5mb
S.D. = 1.0 on 7 of 8 obs.

JUN 28, 1989 13h 39m 10.78± 0.56s
44.522 N ± 4.3km 26.028 E ± 7.5km
DEPTH = 20.6 ± 5.4 km
ROMANIA (358)

BUC1 0.18 180 ePc 39 16.00 0.3
MLR 0.97 356 iPd 39 28.50 -0.4
CMP 1.03 317 iPc 39 55.00 25.3X
PVL 1.40 201 eP 39 40.00 4.8X
VRI 1.43 20 iPc 39 36.50 0.8
JMB 2.09 169 iP 39 46.00 0.7
PGB 2.39 215 eP 39 50.00 0.5
VTS 2.82 228 eP 39 56.00 0.3
KDZ 2.91 189 eP 39 56.00 -0.8
RZN 2.99 199 iP 39 58.00 -0.2
BZS 3.31 291 ePd 40 02.00 -0.5
MMB 3.38 211 eP 40 04.00 0.4
KKB 3.42 220 iP 40 04.00 -0.1
VAY 4.08 220 e(Pn) 40 13.30 -0.2
GBZT 4.50 145 ePg 40 18.50 -1.0
S.D. = 0.7 on 13 of 15 obs.

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* JUN 28, 1989 14h 53m 16.88± 1.53s
9.841 S ±15.6km 121.757 E ±17.0km
DEPTH = 71.2 ± 20.8 km
4.5mb (3 obs.)
SAVU SEA (288)

MKS 5.12 334 iPd 54 33.00 0.2
KNA 9.01 131 eP 55 27.00 0.4
eS 57 05.00
MTN 9.66 109 eP 55 35.00 -0.6
eS 57 20.00
WB5 15.74 131 eP 56 54.80 -1.0
iS 59 42.00
WRA 15.76 131 Pd 56 54.60 -1.4
0.7s 7.10nm 3.9mb
WARB 16.90 165 eP 57 11.00 0.7
eS 00 12.00
ASPA 17.99 141 eP 57 25.40 1.6
1.0s 53.00nm 4.7mb
eS 00 36.10
QIS 20.23 124 iPc 57 49.20 0.4
eS 01 26.00
FORR 21.72 165 eP 58 03.00 -0.7
STK 28.61 143 iPd 59 08.90 0.3
BRS 34.04 125 iPd 59 57.90 1.5
SPA 80.22 180 e(P) 05 19.80 -1.2
0.6s 4.07nm 4.5mb
S.D. = 1.2 on 12 of 12 obs.

% JUN 28, 1989 15h 11m 27.10± 1.30s
61.613 N ± 9.2km 5.295 E ±11.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.1 (BER).

SUE 0.61 205 eP 11 38.86 -0.6
eS 11 47.28
HYA 0.62 136 iP 11 39.27 -0.3
iS 11 48.03
ASK 1.14 183 eP 11 48.49 0.2
eS 12 03.82

BER	1.23	179	eP	11 50.21	0.2
			eS	12 07.04	
MOL	1.43	47	iP	11 53.29	0.2
			eS	12 12.82	
ODD1	1.83	158	eP	11 59.76	0.9
			eS	12 20.00	
KMY	2.41	181	eP	12 07.01	-0.1
			eS	12 34.90	
NRA0	3.15	103	iPnd	12 17.10	-0.6
			iPg	12 22.70	
			eS	12 52.70	
			iSg	13 04.30	

S.D. = 0.6 on 8 of 8 obs.

JUN 28, 1989 15h 16m 18.41± 0.51s
4.535 N ± 6.5km 76.066 W ± 8.3km
DEPTH = 129.4 ± 5.6 km
4.7mb (7 obs.)
COLOMBIA (103)
Felt in Choco and Valle del Cauca Departments.

HOBC	0.19	201	iPd	16 38.25	0.5
CLMC	0.82	217	iPc	16 40.18	0.1
HOQC	1.20	208	iPd	16 43.18	-0.7
DIAC	1.24	186	iPd	16 44.70	0.5
ANCC	1.29	218	iPc	16 43.27	-1.3
SALC	1.67	202	iPd	16 48.60	-0.4
BOG	2.00	87	iP	17 00.00	6.9X
			iS	17 30.00	
PURC	2.22	188	iPd	16 57.13	1.1
PSO	3.55	201	eP	17 15.00	1.6X
BMG	3.90	50	eP	17 25.00	7.3X
CAYA	4.82	203	eP	17 30.20	-0.4
			eS	18 04.80	
ARE	21.35	168	iPd	20 58.90	1.9
ZOBO	22.11	159	P	21 03.00	-1.8
	0.9s		30.71nm	4.7mb	
LPB	22.37	160	P	21 09.00	1.9
			Lg	28 19.00	
CNCB	22.66	160	P	21 09.90	-0.2
ATB	25.06	108	Pc	21 32.80	0.4
OLY	33.94	337	P	22 50.50	-0.7
BAO	34.27	126	eP	22 55.00	0.6
FVM	35.78	340	P	23 07.00	0.2
PPD	35.84	138	eP	23 06.10	-1.3
			e	23 34.30	
MEO	36.62	328	iPc	23 14.00	0.1
SOB1	37.62	111	eP	23 22.80	0.2
ALQ	41.30	321	iPd	23 54.40	1.4
	1.0s		14.50nm	4.6mb	
			e	24 26.00	
GOL	43.89	327	P	24 14.80	0.8
	0.8s		11.90nm	4.7mb	
RSSD	46.48	332	P	24 34.80	0.3
DAU	47.72	324	P	24 44.80	0.5
BW06	48.29	327	P	24 49.00	0.4
TNP	50.16	317	P	25 03.40	0.4
	0.8s		3.43nm	4.3mb	
HPI	50.86	326	P	25 08.80	0.5
KVN	51.26	318	P	25 11.00	-0.3
FFC	54.26	342	eP	25 32.00	-1.0
	0.9s		11.00nm	4.8mb	
LON	57.63	324	P	25 57.00	-0.2
PNT	57.84	328	eP	25 59.00	0.4
YKA	64.43	341	eP	26 42.50	-0.2
TIC	70.69	85	P	27 23.00	0.3
LIC	70.70	85	P	27 23.00	0.3
KIC	70.98	85	P	27 24.80	0.4
	0.8s		13.50nm	4.8mb	
MBC	75.53	350	eP	27 50.00	0.3
	0.9s		10.00nm	4.6mb	
ZLA	82.93	43	eP	28 29.30	-0.9
SLE	83.01	43	eP	28 28.20	-2.3
TMA	83.25	44	eP	28 38.00	6.0X
SAX	83.58	43	eP	28 15.50	-18.3X
ASPA	145.41	234	ePKP	35 41.90	-1.5
	1.0s		9.00nm		
WRA	146.67	240	PKPc	35 46.00	0.5
	1.0s		4.50nm		
WB5	146.67	240	ePKP	35 45.00	-0.5

S.D. = 0.9 on 40 of 45 obs.

JUN 28, 1989 15h 40m 47.85± 0.71s
17.165 N ±10.8km 62.287 W ± 5.5km
DEPTH = 18.9 ± 8.8 km
LEEWARD ISLANDS (92)

ML 3.3 (FDF).

NEV	0.27	264	eP	40 54.13	0.1
			eS	40 58.06	
BPA	0.43	106	eP	40 56.39	-0.2
			eS	41 02.06	
ANG	0.44	91	eP	40 56.87	0.1
			eS	41 01.46	
SKI	0.46	291	eP	40 56.87	-0.4
			eS	41 03.77	
SEG	1.07	135	eP	41 06.68	-0.8
PAG	1.27	153	ePd	41 10.49	-0.2
			S	41 26.30	
SFG	1.38	131	eP	41 12.00	-0.2
DEG	1.45	126	ePd	41 12.40	-0.8
			S	41 31.40	
MGG	1.55	143	ePd	40 45.00	-29.6X
BBL	1.81	154	eP	41 18.65	0.3

S.D. = 0.5 on 9 of 10 obs.

& JUN 28, 1989 16h 00m 41.40s
40.655 N 122.120 W
DEPTH = 12.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 3.0 (BRK). Felt (IV) at Bello Vista, Central Valley, Millville, Oak Run, Polo Cedro, Project City and Whitmore; (III) at Anderson, Cottonwood, Manton, Montgomery Creek, Round Mountain and Summit City. Also felt at Redding and Shingletown.

WDC	0.33	257	iPc	00 48.00	-0.3
			eS	00 57.00	
LTCM	0.45	180	iPc	00 50.20	-0.4
MIN	0.50	128	iPd	00 50.40	-1.3
LBFM	0.71	14	iPd	00 55.20	-0.2
ORV	1.20	156	iPc	01 01.80	-1.7
			eS	01 17.00	
FHC	1.42	277	iPc	01 07.20	0.1
			iS	01 30.60	
CMB	2.94	152	eP	01 31.10	2.3
			iS	02 10.50	
MHC	3.33	173	eP	01 33.80	-0.6
ARN	3.33	172	eP	01 34.20	-0.2
KVN	3.48	116	eP	01 35.70	-1.0
TNP	4.59	122	e(P)	01 52.00	-0.4

11 obs. ossociated

% JUN 28, 1989 16h 03m 58.53± 1.40s
43.929 N ±11.6km 7.795 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.0 (GEN).

IMI	0.07	105	P	04 00.97	0.0
			S	04 02.62	
ROB	0.37	8	P	04 06.13	0.0
			S	06 10.82	
ENR	0.40	318	P	04 06.82	0.1
			S	04 12.36	
FIN	0.41	47	P	04 06.91	0.0
.			S	04 12.01	
STV	0.46	313	P	04 07.90	-0.1
			S	04 13.80	

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

? JUN 28, 1989 16h 50m 03.15± 3.43s
1.805 N ±17.9km 126.226 E ±46.6km
DEPTH = 104.5 ± 37.6 km
4.5mb (1 obs.)
MOLUCCA PASSAGE (266)

MNI	1.43	255	ePd	50 29.20	0.0
			eS	50 39.00	
WB5	22.98	160	eP	54 58.90	-0.6
WRA	23.03	160	Pd	54 59.80	-0.2
	0.6s		13.70nm	4.5mb	
QIS	25.80	150	eP	55 27.00	0.7
ASPA	26.40	164	iPd	55 31.50	-0.3
WARB	27.83	179	eP	55 45.00	0.3
KMI	32.41	318	eP	57 22.00	56.5X
STK	36.54	158	eP	57 00.50	0.1
BJI	39.14	348	eP	57 22.00	-0.1

S.D. = 0.5 on 8 of 9 obs.

? JUN 28, 1989 17h 11m 42.15± 2.02s
32.953 S ±27.5km 122.300 E ±10.0km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

COOL	2.28	334	eP	12 21.10	0.6
			eS	12 43.00	
MUN	5.24	279	eP	13 03.00	0.6
			eS	14 01.00	
FORR	5.36	69	eP	13 04.00	-0.1
			eS	14 01.00	
MRWA	6.56	303	eP	13 20.00	-1.1
			eS	14 29.00	
WARB	7.73	30	eP	13 34.50	-3.0X
	0.2s		1.00nm	4.7mb X	
			iS	14 54.80	
MBL	11.95	349	eP	14 28.50	-7.0X
	0.3s		1.00nm	4.6mb X	
			eS	16 28.00	
MTN	21.58	24	eP	16 48.50	14.4X
			eS	17 55.00	

S.D. = 1.4 on 4 of 7 obs.

& JUN 28, 1989 19h 35m 31.14s
61.624 N 146.566 W
DEPTH = 24.3km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.34	113	iP	35 39.01	0.3
TOA	0.52	21	iP	35 41.64	0.0
			S	35 51.08	
VZW	0.57	179	iP	35 41.45	-1.0
KNK	0.93	258	eP	35 47.11	-1.4
			S	35 59.53	
GHO	1.13	279	eP	35 49.60	-2.0
			S	36 05.79	
PME	1.18	271	eP	35 50.80	-1.3
			S	36 06.71	
GLB	1.33	97	eP	35 52.98	-1.4
			S	36 11.21	
PAX	1.45	20	eP	35 54.65	-1.4
			S	36 13.29	
SUA	2.01	267	eP	36 03.22	-1.0
SEW	2.08	224	eP	36 04.57	-0.5
			S	36 31.33	
SLKM	2.10	239	eP	36 04.39	-1.1
			S	36 31.52	
BALM	2.12	104	eP	36 04.57	-1.2
SKT	2.38	281	eP	36 08.38	-1.1
			S	36 39.69	
SPU	2.68	263	eP	36 11.91	-1.7
KTH	2.79	316	eP	36 14.79	-0.5
HDA	2.80	357	eP	36 16.10	0.8
CNPM	3.12	230	eP	36 18.39	-1.5
ILIM	3.49	246	eP	36 22.91	-2.3

18 obs. associated

? JUN 28, 1989 19h 51m 51.73± 0.85s
6.843 S ±27.9km 13.091 W ±19.1km
DEPTH = 10.0km (geophysicist)
4.8mb (4 obs.)
ASCENSION ISLAND REGION (408)

LIC	15.27	32	P	55 36.24	7.1X
			S	58 42.00	
KOGH	18.15	45	eP	56 06.50	0.8
SOB1	27.63	263	eP	57 41.10	-0.6
BNG	33.51	71	iPc	58 32.50	-1.4
	0.4s		2.00nm	4.4mb	
CNCB	54.48	254	eP	01 23.00	0.2
LPB	54.57	255	(P)	01 25.00	1.6
			eLR	06 14.00	
ZOBO	54.58	255	P	01 21.50	-2.1
			LR	06 24.00	
SKO	57.92	30	eP	01 45.00	-1.4
			i	01 54.70	
MOX	61.12	18	eP	02 15.00	6.6X
	1.8s		23.00nm	5.0mb	
BRG	62.04	19	e(P)	02 22.00	7.4X
	1.5s		18.00nm	5.0mb	
MLR	62.72	30	eP	02 20.00	0.7
			e	31 55.00	
SUF	75.56	18	eP	03 40.20	2.1
MAIO	80.19	51	eP	04 03.00	-1.3
SPA	83.20	180	e(P)	04 20.90	1.4
	0.9s		3.18nm	4.5mb	

S.D. = 1.6 on 11 of 14 obs.

? JUN 28, 1989 19h 57m 02.04± 1.81s
35.353 N ±39.1km 24.449 E ±10.1km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.8 (ATH).

VAM	0.21	285	iPgd	57	05.80	-0.8
NPS	0.96	95	ePb	57	21.00	0.8
KAP	2.23	84	ePn	57	40.00	0.4
ITM	2.73	313	ePn	57	48.00	1.2
ELL	4.64	71	ePn	58	12.40	-1.5

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

JUN 28, 1989 20h 24m 18.94± 0.49s
39.020 N ± 6.6km 28.383 W ± 7.1km
DEPTH = 10.0km (geophysicist)
4.6mb (14 obs.) 4.2Msz (1 obs.)
AZORES ISLANDS (405)
Felt (IV) on Gracioso and (II) on Faial and Pica.

CALA	0.50	210	iPc	24	30.30	1.1
			eS	24	38.80	
HOR	0.53	201	eP	24	30.80	1.1
			iS	24	39.50	
ADH	0.97	112	eP	24	34.80	-2.5
			iS	24	46.00	
PDA	2.49	120	eP	24	57.80	-2.3
LPF	21.68	57	eP	29	11.20	-0.4
	1.4s	38.30nm			4.6mb	
MFF	21.97	61	eP	29	15.30	0.7
	1.0s	17.60nm			4.4mb	
LSF	23.07	62	eP	29	25.20	-0.2
	1.3s	43.30nm			4.8mb	
CAF	23.31	65	eP	29	27.00	-0.8
	1.3s	15.80nm			4.4mb	
TCF	23.54	62	eP	29	30.10	0.1
	1.3s	57.70nm			5.0mb	
MAF	23.78	62	eP	29	32.30	0.0
	1.2s	35.70nm			4.8mb	
PYM	24.04	64	P	29	36.58	1.7
AGO	24.15	63	P	29	36.81	0.9
PLDF	24.48	63	P	29	37.56	-1.7
SSF	24.52	60	eP	29	40.60	1.1
	1.0s	14.80nm			4.6mb	
SMF	24.70	62	eP	29	41.30	0.1
	1.2s	32.70nm			4.9mb	
LOR	24.79	60	eP	29	42.30	0.2
	1.0s	14.00nm			4.6mb	
SNF	25.67	53	P	29	54.00	3.6X
DOU	25.77	54	P	29	52.30	1.0
HAU	26.55	59	eP	29	59.10	0.5
	0.8s	5.30nm			4.3mb	
WLF	26.67	55	Pc	30	00.40	0.8
MEM	26.76	53	P	30	02.30	1.9
BSF	26.83	59	eP	30	01.90	0.7
	1.0s	12.00nm			4.5mb	
CDF	27.22	58	eP	30	06.10	1.4
	1.0s	9.60nm			4.5mb	
MOX	30.29	54	e(P)	30	33.00	0.7
Z	18s	0.50um			4.2Msz	
KHC	31.43	57	eP	30	47.80	5.4X
PRU	32.10	56	eP	30	45.00	-3.2X
FRB	34.27	329	eP	31	05.00	-1.8
BZS	37.05	63	eP	31	30.50	-0.1
SUF	40.11	36	eP	31	57.30	1.3
MBC	52.73	342	eP	33	34.00	-1.4
YKA	54.61	325	eP	33	48.50	-0.9
BNG	54.65	117	ePd	33	50.50	0.1
	0.6s	3.00nm			4.5mb	
BAO	57.38	203	e(P)	35	10.00	60.0X
INK	59.57	335	eP	34	20.00	-4.6X
MAIO	66.87	61	eP	35	12.00	-1.4
IMA	67.12	339	eP	35	13.20	-1.4
TOA	67.51	333	eP	35	21.10	4.1X
PMR	68.89	334	eP	35	24.80	-0.6
GBA	93.44	70	Pc	37	39.70	3.7X
	0.9s	3.50nm			4.8mb	

S.D. = 1.2 on 32 of 39 obs.

& JUN 28, 1989 20h 58m 14.28s
63.084 N 150.914 W
DEPTH = 127.4km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.47	360	iP	58	33.00	-0.2
			S	58	46.75	
MCK	1.10	53	eP	58	38.39	0.1
			S	58	55.51	
SKT	1.14	195	iP	58	37.74	-1.0
PWA	1.52	161	eP	58	42.01	-0.7
GHO	1.61	144	iP	58	43.20	-0.7
SUA	1.63	177	eP	58	43.53	-0.6
			S	59	05.50	
PME	1.70	148	eP	58	45.07	0.1
WRH	1.87	41	iP	58	46.38	-0.6
SPU	1.98	196	eP	58	47.13	-1.3
			S	59	12.43	
KNK	2.03	144	eP	58	47.89	-1.1
CCB	2.09	40	iP	58	48.87	-0.7
HDA	2.20	51	eP	58	50.23	-0.9
GLM	2.46	37	iP	58	53.74	-0.7
PAX	2.48	90	iP	58	54.12	-0.7
			S	59	23.63	
SLKM	2.61	172	eP	58	54.87	-1.4
			S	59	26.59	
KLU	2.83	122	eP	58	57.49	-1.8
VZW	2.89	133	eP	58	58.02	-2.0
ILIM	3.17	199	iP	59	02.36	-1.4

18 obs. associated

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* JUN 28, 1989 21h 24m 12.45± 0.26s
57.788 S ±15.3km 147.449 W ± 6.7km
DEPTH = 10.0km (geophysicist)
5.5mb (8 obs.) 5.7Msz (3 obs.)
SOUTH PACIFIC CORDILLERA (691)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 33C
Centroid Locotion:
Origin Time 21:24:19.0 0.3
Lat 58.14S 0.04 Lon 147.18W 0.07
Dep 15.0 FIX Half-durotion 3.0
Moment Tensor; Scale 10**17 Nm
Mrr=-0.14 0.13 Mtt= 4.81 0.15
Mff=-4.66 0.13 Mrt= 0.65 0.45
Mrf=-0.46 0.54 Mtf= 3.13 0.18
Principol Axes:

	Val=	Plg=	Azm=
T	5.79	5	344
N	-0.11	82	109
P	-5.68	6	253

Best Double Couple:Mo=5.7*10**17
NP1:Strike= 28 Dip=82 Slip=-179
NP2: 298 89 -8

SBA	25.26	201	Pc-	29	44.00	4.4X
	1.4s	193.02nm			5.6mb	
SNZO	29.08	288	(P)	30	20.00	5.3X
			S	35	20.00	
MSZ	30.28	276	P	30	33.90	8.5X
SPA	32.39	180	e(P)	30	44.50	0.4
	2.0s	50.00nm			5.1mb	
Z	21s	28.38um			5.9Msz	
CNB	46.88	270	ePc	32	46.10	1.7
CAN	47.07	270	eP	32	46.90	1.0
TOO	47.27	265	eP	32	49.00	1.6
DZM	48.70	297	iPc	33	03.10	4.3X
SNA	49.79	165	iPc	33	04.90	-1.6
	0.9s	182.35nm			6.1mb	
BRS	51.23	280	iPd	33	18.10	0.1
			iS	40	44.00	
ADE	52.83	262	iPd	33	31.30	1.3
	1.0s	44.00nm			5.3mb	
MAW	52.93	194	eP	33	31.50	1.3
STK	53.66	267	eP	33	36.00	-0.1
PEL	55.78	99	ePc	33	49.90	-1.7
CTA	60.61	279	iPd	34	26.00	0.5
	1.0s	75.00nm			5.8mb	
Z	20s	2.93um			5.4Msz	
		i		34	30.30	
		iS		42	48.00	
		iSSS		49	45.00	
FORR	61.61	257	eP	34	32.00	-0.2
QIS	63.77	273	eP	34	45.00	-1.6
ASPA	64.30	266	eP	34	48.10	-2.0
	1.1s	69.00nm			5.8mb	
Z	17s	6.51um			5.9MszX	
		e		34	52.50	
		LR		00	40.40	
COOL	65.16	251	eP	34	55.80	0.2
NWAO	65.47	247	eP	34	57.00	-0.6
Z	20s	5.40um			5.7Msz	
N	20s	6.70um				
E	20s	3.80um				

WARB	66.11	259	eP	35	01.00	-0.7
KLB	66.29	248	eP	35	02.20	-0.6
MUN	66.75	247	eP	35	05.50	-0.2
WRA	67.09	269	Pc	35	05.60	-2.4
	1.0s	30.30nm			5.4mb	
WB5	67.13	269	eP	35	06.10	-2.2
BAL	67.62	248	eP	35	11.50	0.3
ARE	68.74	87	eP	35	18.00	-0.8
NNA	69.62	80	iPc	35	22.70	-1.1
CNCB	70.34	90	eP	35	09.00	-19.8X
			i	35	28.80	
LPB	70.50	90	P	35	23.00	-6.7X
			e	44	48.00	
			LR	57	22.00	
ZOBO	70.71	90	eP	35	04.00	-27.1X
	1.5s	72.58nm				
			i	35	29.00	
			PS	44	52.00	
			LR	57	44.00	
CCH	70.85	92	P	35	31.40	-0.2
MBL	73.78	256	eP	35	48.00	-0.5
	0.8s	15.00nm			5.1mb	
PPD	74.82	107	eP	35	52.80	-1.8
BAO	81.87	106	eP	36	31.50	-1.8
SOB1	90.94	109	eP	37	16.40	-1.3
CHTO	118.29	260	ePKP	43	01.00	-0.3
			e	44	16.00	
GYA	120.37	272	PKP	43	00.40	-4.8X
KMI	121.41	268	(PKP)	43	19.00	11.6X
Z	28s	1.41um			5.5MszX	
CN2	124.25	299	ePKP	43	10.50	-1.5
Z	25s	1.70um			5.6MszX	
N	20s	0.70um				
		sPKP		43	15.00	
		ePP		45	02.00	
BNG	125.66	163	iPKPd	43	15.00	-0.7
	0.6s	7.00nm				
BJI	125.93	290	(PKP)	43	19.00	3.6X
Z	28s	1.41um			5.5MszX	
TIY	126.09	285	PKP	43	15.40	-0.5
INK	126.20	6	ePKP	42	52.00	-23.0X
HYB	127.33	240	ePKP	43	23.00	4.3X
LZH	129.37	277	ePKP	43	20.50	-1.8
	2.5s	19.00nm				
Z	25s	1.60um			5.6MszX	
		eS		46	37.00	
GTA	133.97	277	ePKP	43	30.40	-0.5
Z	24s	1.00um			5.5MszX	
		PP		46	00.00	
MBC	134.98	9	ePKP	43	31.00	-0.5
	1.1s	7.00nm				
FRB	135.28	38	ePKP	43	33.00	0.6
WMQ	143.54	272	PKP	43	45.50	-2.6X
Z	26s	1.40um			5.6MszX	
QUE	143.63	236	ePKP	43	46.70	-2.2
BMK	145.72	115	iPKPd	43	52.80	0.8
ALE	146.22	14	ePKP	43	51.00	-0.5
	0.8s	7.00nm				
KSH	146.68	256	iPKPd	43	56.50	2.9X
EVAL	147.37	111	ePKP	43	57.30	2.7X
EPRU	147.64	114	ePKP	43	58.40	3.3X
MAL	147.85	115	iPKPc	43	57.20	1.8X
ATEJ	148.19	115	iPKP	43	58.70	2.5X
EHOR	148.30	113	e(PKP)	43	59.30	3.2X
ALOJ	148.30	115	iPKPc	43	58.60	2.3
APHE	148.38	115	iPKPc	43	58.20	1.8
ACHM	148.43	115	iPKP	43	59.20	2.8X
AAPN	148.45	114	iPKPc	43	58.50	2.0
CRT	148.61	115	iPKP	43	59.50	2.8X
ASMO	148.67	115	iPKPc	43	59.00	2.1
EALH	150.19	117	e(PKP)	44	04.00	5.0X
EVIA	150.28	115	ePKP	44	04.00	4.7X
TOL	150.48	111	ePKP	44	05.00	5.6X
	1.2s	156.25nm				
		ePP		47	43.00	
		eSS		07	05.00	
		iSSS		12	50.00	
GUD	151.01	110	ePKP	44	05.60	5.3X
ECHE	151.77	116	ePKP	44	07.20	5.8X
MBH	151.94	184	iPKPd	44	09.00	7.2X
MAIO	152.06	231	ePKP	44	03.00	1.0
	1.2s	27.78nm				
HLW	152.07	178	ePKP	44	16.00	14.0X
ETOR	152.18	113	ePKP	44	08.80	6.8X
PRNI	152.51	185	iPKPd	44	10.00	7.3X

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BHD   154.20 203 ePKP   44 09.00    4.1X
EPF   155.02 112 ePKP   44 04.30   -1.5
        1.2s     19.00nm
SLY   156.18 207 ePKPc  44 15.00    7.5X
                   e    44 41.00
MSL   157.45 203 ePKPd  44 13.50    4.4X
TAB   158.30 211 ePKP   44 16.00    5.8X
BGF   158.78 109 ePKP   44 11.10    0.8
        0.8s      5.90nm
SSF   159.46 109 ePKP   44 11.30    0.3
        1.0s      8.00nm
LBF   159.64 110 ePKP   44 12.10    0.8
        1.0s      8.80nm
LOR   159.78 109 ePKP   44 12.10    0.7
        1.0s      6.00nm
LPG   159.96 117 ePKP   44 13.60    1.6
        1.2s     26.70nm
IZM   160.29 168 ePKP   44 14.00    1.7
KHL   160.42 173 ePKP   44 12.00   -0.4
LOMF  161.32 113 PKP    44 12.88   -0.2
VITF  161.48 110 PKP    44 14.29    1.3
HAU   161.52 111 ePKP   44 14.30    1.2
        1.0s      8.00nm
EZN   161.58 165 ePKP   44 17.00    3.6X
BSF   161.63 112 PKP    44 12.51   -0.9
OHR   161.69 151 ePKP   44 10.80   -2.8X
        1.6s      0.08nm
BBS   161.73 114 PKP    44 14.57    1.2
MOF   161.81 112 PKP    44 14.57    1.0
CDF   162.26 111 PKP    44 14.55    0.6
FEL   162.26 113 PKP    44 13.91   -0.1
VAY   162.32 155 ePKP   44 10.50   -3.6X
WLF   162.48 106 PKPc   44 19.30    5.4X
SKO   162.66 151 ePKP   44 13.50   -0.9
    Z  19s      2.14um
    N  20s      2.19um
    E  19s      2.12um
                   i    44 23.00
                  LR    01 05.00
GWF   162.80 110 PKP    44 15.51    1.1
RUP   162.97 107 ePKP   44 16.92    2.4X
CTT   163.13 169 ePKP   44 13.00   -1.9
ABH   163.33 108 ePKPc  44 15.90    1.0
KBA   164.18 124 e(PKP) 44 19.00    3.0X
        2.0s     88.00nm
PTJ   164.35 132 iPKP   44 17.00    0.9
BHG   164.46 122 iPKPc  44 12.70   -3.3X
WET   165.48 118 ePKP   44 17.60    0.7
KHC   165.80 119 PKP    44 18.50    1.4
                   e    45 22.10
MOX   165.86 111 ePKP   44 18.00    0.9
        2.1s     56.00nm
    Z  20s      1.20um
    N  20s      1.30um
    E  21s      0.70um
BZS   166.08 146 ePKPc  44 18.50    1.1
                   e    13 45.00
ZST   166.66 129 ePKP   44 26.10    8.3X
                   e    45 28.70
                   e    49 23.70
                   e    11 27.20
SRO   166.84 133 ePKP   44 25.70    7.8X
                   i    45 30.10
                   i    49 12.60
PRU   166.85 119 ePKP   44 21.50    3.6X
    Z  19s      1.60um
    N  20s      1.00um
    E  21s      1.10um
                   e    45 20.50
CLL   166.96 111 ePKP   44 17.00   -0.9
        1.5s     21.00nm
                   e    45 23.00
MLR   167.03 159 ePKPc  44 18.00   -0.4
BRG   167.15 115 ePKP   44 17.50   -0.6
        1.4s     12.00nm
                   e    44 22.40
VRI   167.54 161 ePKPc  44 18.00   -0.6
KSP   168.25 119 ePKP   44 21.00    2.1X
                   e    45 27.50
KRA   169.28 131 ePKP   44 20.40    0.9
    S.D. = 1.2  on  75 of 120 obs.
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% JUN 28, 1989  21h 36m 30.56± 0.92s
  37.681 N ± 7.1km   15.185 E ± 7.6km
  DEPTH =  10.0km  (geophysicist)
 SICILY                          (398)
      MD 2.8 (ROM).

MNO     0.46 303 Pd    36 39.90   -0.1
                eSg    36 47.00
ATN     0.53  25 P     36 41.60    0.4
                eSg    36 50.50
MSI     0.60  29 Pd    36 43.30    0.7
                eSg    36 53.60
MEU     0.61 199 Pc    36 42.60   -0.4
                eSg    36 51.50
GIB     0.97 289 Pc    36 49.80    0.8
                eSg    37 04.10
FAI     1.27 252 Pd    36 54.80    0.7
                eSn    37 12.10
USI     1.88 304 Pc    37 01.90   -1.2
MGR     2.47   7 Pc    37 10.50   -1.0
                eSn    37 42.20
      S.D. = 0.9  on   8 of   8 obs.
-------------------------------------------
% JUN 28, 1989  21h 52m 16.83± 0.82s
  61.816 N ± 7.7km    7.381 E ± 9.8km
  DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                 (535)
      MD 1.8 (BER).

MOL     0.76   6 iP    52 31.92    0.2
                iS    52 41.74
HYA     0.87 222 iP    52 32.95   -0.5
                iS    52 45.56
SUE     1.47 240 iP    52 43.65    0.3
                eS    53 01.93
ASK     1.71 219 eP    52 46.00   -0.7
                eS    53 10.74
ODD1    1.95 191 iP    52 51.42    1.1
                eS    53 15.49
NRA0    2.28 117 iPnc  52 54.40   -0.7
                iPg   52 56.30
                eS    53 21.80
BLS1    2.45 187 eP    52 58.98    1.4
                iS    53 27.20
KMY     2.82 203 eP    53 01.90   -0.8
                eS    53 35.20
      S.D. = 1.0  on   8 of   8 obs.
-------------------------------------------
?  JUN 28, 1989  22h 03m 39.76± 1.07s
  37.655 N ± 7.7km   15.176 E ±11.7km
  DEPTH =  10.0km  (geophysicist)
 SICILY                          (398)
      MD 2.5 (ROM).

MNO     0.47 306 Pd    03 49.40    0.0
                eSg    03 58.00
ATN     0.55  24 Pc    03 51.10    0.1
                eSg    04 00.10
MEU     0.59 200 Pc    03 51.70    0.0
                eSg    04 00.50
MGR     2.50   7 P     04 20.90   -0.1
                eSn    04 50.60
      S.D. = 0.2  on   4 of   4 obs.
-------------------------------------------
    JUN 28, 1989  22h 11m 58.90± 0.18s
   6.223 S ± 3.1km  148.814 E ± 4.6km
   DEPTH =  50.4km  (  3 depth phases)
   5.4mb ( 22 obs.)
 NEW BRITAIN REGION              (192)
      CENTROID, MOMENT TENSOR    (HRV)
      Data Used: GDSN
      L.P.B.:  8S, 18C
      Centroid Location:
      Origin Time        22:12: 4.2 0.5
      Lat  6.81S 0.07 Lon 148.85E 0.07
      Dep  15.0 FIX Half-duration  2.4
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 1.99 0.13  Mtt=-2.16 0.13
        Mff= 0.17 0.14  Mrt= 0.63 0.60
        Mrf=-0.46 0.37  Mtf=-0.25 0.14
       Principal Axes:
        T  Val=  2.21  Plg=74  Azm= 57
        N        0.06      14      268
        P       -2.27       8      176
      Best Double Couple:Mo=2.2*10**17
       NP1:Strike=250 Dip=39 Slip=  67
       NP2:         98     54      107

LAT     1.85 257 iPd   12 31.10    2.3
LMG     2.75 194 eP    12 30.50  -11 1X
PMG     3.57 207 iPd   12 54.00    0.9
                eS    13 34.00
RAB     3.90  59 eP    12 56.50   -1.4
                iS    13 58.00
MNDI    5.13 270 eP    13 18.50    3.1X
CTA    14.00 190 iPd   15 15.50   -0.9
        1.0s    100.00nm          5.5mb
     Z  20s      3.90um
                iS    18 11.00
QIS    16.82 211 iPd   15 51.30   -1.2
        0.9s     63.00nm          4.7mb
MTN    18.63 248 iPc   16 15.50    0.5
        0.6s    108.00nm          5.2mb
WB5    19.53 225 eP    16 23.80   -1.5
                eS    19 56.50
WRA    19.59 225 Pc    16 25.20   -0.7
        0.7s     53.30nm          4.9mb
GUA    20.01 349 eP    16 31.30    0.9
        1.2s    812.50nm          5.9mb
PJG    20.07 349 eP    16 31.60    0.7
RMQ    20.15 180 iPd   16 31.10   -0.7
BRS    21.39 170 iPd   16 42.90   -1.5
                eS    20 43.00
KNA    21.82 243 eP    16 48.50   -0.2
                eS    20 47.00
PVC    22.21 123 iPc   17 06.00   13.3X
ASPA   22.51 218 ePd   16 56.00    0.4
        1.0s     84.00nm          5.1mb
     Z  21s      4.95um          4.9Msz
                   e    17 08.30   50km
                eS    20 57.60
                LR    25 28.10
                   e    28 07.90
DZM    23.20 135 iPc   17 00.90   -1.5
COO    24.40 174 eP    17 14.50    0.6
CMS    25.29 186 eP    17 22.00   -0.3
                   e    24 33.00
STK    26.41 194 eP    17 33.00    0.4
CNB    28.96 179 eP    17 56.00    0.2
CAN    28.96 180 eP    17 58.20    2.4
WARB   29.01 224 iPd   17 57.00    0.6
        0.5s     23.00nm          5.1mb
MKS    29.21 270 e(P)  18 05.00    6.7X
ADE    30.08 197 iPc   18 10.20    4.3X
        0.9s     45.38nm          5.2mb
FORR   31.27 216 iPd   18 15.80   -0.5
        0.5s     29.00nm          5.3mb
BFD    31.34 190 eP    18 17.00    0.2
TOO    31.35 185 eP    18 16.00   -1.0
                   e    18 19.00   10kmX
                   e    18 31.00
MBL    31.74 239 iPc   18 20.50   -0.1
        0.6s     53.00nm          5.5mb
MEKA   35.25 231 iPc   18 51.30    0.4
        0.6s     56.00nm          5.7mb
COOL   35.71 223 eP    18 54.20   -0.5
NANU   35.97 240 iPc   18 57.40    0.4
        0.6s     75.00nm          5.8mb
TAU    36.56 182 eP    18 55.00   -6.6X
KLB    38.47 225 iPc   19 17.60   -0.3
        0.6s     40.00nm          5.5mb
MRWA   38.49 230 eP    19 18.50    0.4
BAL    38.68 227 eP    19 20.00    0.3
MUN    39.78 226 iP    19 29.20    0.4
MSZ    41.78 159 P     19 44.30   -0.6
KUMJ   42.17 337 eP    19 48.40    0.0
IIDJ   42.73 347 eP    19 53.50    0.6
CHJJ   43.05 348 eP    19 55.30   -0.1
TSRJ   43.26 345 eP    19 57.00   -0.1
SHK    43.31 340 eP    19 57.50   -0.1
SHNJ   43.49 338 eP    19 58.60   -0.4
MAT    43.68 348 iPc   20 00.00   -0.6
        1.1s     50.63nm          5.2mb
     Z  19s      1.39um          4.9Msz
                eS    26 22.00
MTMJ   43.81 347 eP    20 02.00    0.2
NIIJ   44.20 349 eP    20 04.50   -0.2
SSE    45.55 326 Pc    20 15.00   -0.6
        1.0s     24.00nm          5.0mb
     Z  20s      1.90um          5.0Msz
     N  24s      3.10um
     E  24s      3.20um
                   pP   20 28.00   48km
QIZ    45.87 304 eP    20 17.40   -0.9
NJ2    47.58 325 Pc    20 31.00   -0.7
     Z  22s      2.40um          5.1Msz
PPI    48.65 275 ePc   20 40.00   -0.3
WHN    49.25 320 eP    20 44.00   -0.6
     N  18s      1.39um
                eS    27 52.00
```

28d 22h

PSI		50.60	279	eP	20 55.00	-0.2
TIA		51.62	327	eP	21 00.80	-1.8
SNY		53.09	337	eP	21 12.00	-1.4
MDJ		53.48	343	eP	21 15.00	-1.3
CN2		54.09	339	Pc	21 23.00	2.3
KMI		54.57	307	eP	21 26.00	1.1
	Z	20s		1.82um		5.1Msz
	N	21s		1.67um		
BJI		54.99	330	eP	21 26.00	-1.4
	Z	20s		1.82um		5.1Msz
	N	21s		1.67um		
XAN		55.01	319	Pd	21 25.60	-2.2
CHTO		55.08	298	eP	21 30.20	1.7
		1.1s		3.53nm		4.3mb X
CD2		56.73	313	eP	21 37.60	-2.6X
HHC		57.98	327	eP	21 44.00	-4.9X
	Z	21s		2.60um		5.3Msz
BTO		58.65	326	P	21 53.50	-0.1
	N	20s		1.60um		
	E	18s		0.80um		
				pP	22 08.00	53km
DRV		60.65	184	eP	22 06.60	-0.1
PMO		62.64	104	iP	22 21.00	0.0
		1.2s		85.00nm		5.7mb
VAH		62.90	104	iP	22 22.30	-0.4
		1.2s		50.00nm		5.5mb
TPT		62.91	104	iP	22 22.60	-0.1
		1.2s		75.00nm		5.7mb
RUV		63.14	104	iP	22 24.20	0.0
		1.2s		60.00nm		5.6mb
GTA		64.07	319	eP	22 30.00	-0.2
ADK		64.95	23	P	22 37.80	2.3
SBA		72.21	176	ePc	23 21.30	1.3
KOD		72.90	283	eP	23 27.00	1.4
WMQ		74.14	319	eP	23 30.50	-1.5
NDI		77.03	301	eP	23 47.00	-1.7
KDC		79.27	28	P	24 00.40	0.1
TTA		80.56	22	P	24 07.80	0.6
		1.2s		24.62nm		5.0mb
PMR		82.63	25	P	24 17.60	-0.3
		1.2s		30.30nm		5.2mb
MAW		82.74	203	eP	24 18.00	-0.4
SPA		83.82	180	e(P)	24 24.20	0.0
		1.0s		45.50nm		5.5mb
				e	24 34.00	31kmX
BRW		85.15	15	P	24 32.30	1.8
QUE		86.10	301	eP	24 35.50	-0.9
INK		91.20	21	eP	25 01.00	1.5
KVN		96.27	51	eP	25 41.00	17.3X
ALE		102.62	4	ePdiff	25 51.00	-0.1
ALQ		105.61	56	e(PKP)	30 10.30	-8.6X
SLR		114.14	238	iPKPc	30 35.00	-0.4
NB2		116.83	338	PKP	30 38.20	-1.0
		1.0s		4.00nm		
BRG		121.85	328	iPKP	30 49.00	0.0
		0.9s		16.00nm		
PRU		122.02	327	PKP	30 49.00	-0.4
				e	59 08.50	
				e	59 52.00	
				eSg	59 59.50	
CLL		122.09	329	iPKPd	30 49.00	-0.5
		0.9s		11.00nm		
KHC		123.01	327	iPKPd	30 49.00	-2.4
MOX		123.19	329	ePKP	30 52.00	0.4
VBY		123.94	322	e(PKP)	30 53.00	-0.3
EKA		126.14	341	PKP	30 58.00	0.8
		2.3s		157.30nm		
BSF		127.42	329	ePKP	30 59.50	-0.6
		0.8s		6.70nm		
HAU		127.53	329	ePKP	30 59.50	-0.7
		0.8s		5.35nm		
LPG		128.90	326	ePKP	31 03.60	0.4
		0.8s		6.05nm		
LOR		129.28	330	ePKP	31 04.00	0.5
		0.8s		6.05nm		
SMF		129.71	329	ePKP	31 05.10	0.8
		0.9s		8.20nm		
BGF		130.28	330	ePKP	31 05.40	0.0
		0.6s		4.50nm		
MAF		130.65	329	ePKP	31 05.90	-0.2
		0.8s		5.35nm		
TCF		130.78	330	ePKP	31 06.50	0.1
		0.8s		9.40nm		
LPF		131.06	333	ePKP	31 06.90	0.1
		1.0s		16.00nm		
LPO		132.41	329	ePKP	31 10.10	0.6
		1.0s		8.00nm		
EPF		134.00	328	ePKP	31 13.70	1.0
		1.0s		12.00nm		
ARE		134.20	120	e(PKP)	31 06.00	-8.1X
LPB		137.06	122	ePKP	31 03.00	-16.7X
		1.0s		50.00nm		
				i	31 20.00	
ZOBO		137.16	122	PKP	31 07.50	-12.6X
		1.2s		40.54nm		
	Z	20s		0.23um		4.9Msz
				i	31 20.80	
				PKS	34 52.00	
				LR	17 20.00	
CCH		138.25	125	PKP	31 11.40	-10.4X
BMK		143.09	324	ePKP	31 26.00	-3.4X
PPD		145.69	146	ePKP	31 34.10	-0.2
				epPKP	31 48.20	
VAO		147.11	153	ePKP	31 37.60	1.0
				e	31 52.90	
NEV		147.46	68	ePKP	31 39.00	1.8
BRAS		148.13	154	ePKP	31 34.80	-3.7X
BPA		148.15	68	ePKP	31 40.00	1.7
PAG		148.58	69	ePKP	31 41.70	2.6X
MGG		148.94	69	ePKP	31 40.00	0.4
DEG		149.08	69	ePKP	31 42.00	2.1
LEGH		149.16	271	ePKP	31 45.00	5.0X
KOGH		149.24	271	ePKP	31 44.00	3.8X
WEGH		149.30	270	ePKP	31 45.50	5.2X
KUK		149.37	272	ePKP	31 45.00	4.6X
TCE		149.45	80	ePKP	31 45.00	4.5X
TRN		149.80	80	ePKP	31 45.00	4.1X
TBH		150.14	80	ePKP	31 48.00	6.5X
BAO		152.64	143	ePKP	31 42.70	-2.6X
KIC		153.71	272	PKP	31 55.14	8.4X
		0.9s		17.50nm		
LIC		154.00	271	PKP	31 55.60	8.5X
		1.0s		28.50nm		
TIC		154.00	272	PKP	31 55.52	8.4X
ATB		156.97	114	PKPc	31 51.30	0.3
SOB1		161.87	148	ePKP	31 56.60	0.2

S.D. = 1.0 on 105 of 133 obs.

JUN 28, 1989 22h 57m 54.20± 0.60s
49.341 N ± 6.2km 8.429 E ± 5.6km
DEPTH = 9.8 ± 4.8 km
GERMANY (543)
MD 2.7 (UCC), 2.6 (STR). ML 2.5 (GRF).

KTD		0.23	265	iPc	58 01.00	1.9
TOD		0.36	43	iPc	57 59.80	-1.8
				iS	58 03.20	
GWF		0.64	236	Pg	58 08.50	1.4
STU		0.76	138	iPgd	58 10.10	1.0
		0.7s		93.15nm		
ABH		0.79	314	ePc	58 09.60	0.0
TNS		0.88	1	iPgd	58 09.50	-1.7
				iSg	58 20.90	
RUP		0.96	293	ePc	58 13.40	0.8
CDF		1.20	220	Pn	58 16.80	0.1
				Pg	58 19.50	
				Sg	58 36.20	
FEL		1.49	191	Pg	58 21.00	-0.2
				Sg	58 45.00	
WLF		1.52	283	iP	58 23.40	2.0
				iS	58 43.00	
MOF		1.72	210	Pg	58 29.50	5.0X
				Sg	58 53.04	
GRF		1.85	78	e(Pg)	58 28.30	2.0
				eSg	58 50.30	
BSF		1.86	216	Pg	58 31.60	5.1X
				Sg	58 57.20	
HAU		1.92	227	Pn	58 26.00	-1.3
				Pg	58 32.20	
				Sg	58 59.20	
VITF		1.97	236	Pg	58 27.00	-1.0
				Sg	58 58.32	
MEM		2.01	310	eP	58 31.40	2.8X
LOMF		2.26	209	Pg	58 40.00	7.7X
				Sg	59 10.50	
HOF		2.44	65	ePn	58 37.60	2.9X
MOX		2.44	56	ePg	58 38.00	3.3X
				iSg	59 08.00	
DOU		2.60	288	iP	58 37.40	0.4
				iS	59 06.70	
KHC		3.38	92	Pn	58 49.00	0.9
				Pg	58 58.50	
				Sn	59 22.90	
				Sg	59 38.80	
CLL		3.53	54	ePg	58 59.00	8.8X
				eSg	59 42.00	
LOR		3.69	238	Pn	58 51.00	-1.5
				Pg	59 05.60	
				Sg	59 53.00	
LBF		3.80	233	Pn	58 53.60	-0.5
				Pg	59 08.40	
				Sg	59 56.50	
BRG		3.87	65	ePg	59 06.00	11.0X
				eSg	59 54.00	
SSF		4.01	237	Pg	59 11.20	14.3X
				Sg	00 01.80	
LPG		4.01	197	Pn	58 56.40	-0.9
SMF		4.09	231	Pg	59 13.60	15.4X
				Sg	00 07.20	
AVF		4.25	235	Pg	59 16.20	15.7X
				Sg	00 10.70	
BGF		4.67	236	Pn	59 04.40	-2.0
				Pg	59 23.00	
				Sg	00 23.60	

S.D. = 1.5 on 19 of 30 obs.

JUN 28, 1989 23h 44m 51.39± 0.09s
7.604 S ± 2.5km 127.342 E ± 3.4km
DEPTH = 173.4km (3 depth phases)
5.3mb (29 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 26C
Centroid Locotion:
Origin Time 23:44:54.7 1.2
Lat 7.53S 0.09 Lon 127.15E 0.09
Dep 177.9 2.5 Half-durotion 2.2
Moment Tensor; Scale 10**17 Nm
Mrr= 1.72 0.12 Mtt=-0.37 0.16
Mff=-1.35 0.20 Mrt= 1.05 0.12
Mrf= 1.23 0.14 Mtf= 1.11 0.16
Principal Axes:

T	Val= 2.76	Plg=57	Azm=318
N	-0.61	32	158
P	-2.14	9	62

Best Double Couple:Mo=2.4*10**17
NP1:Strike=121 Dip=45 Slip= 43
NP2: 358 61 127

AAI		3.98	12	iPd	45 56.00	3.3X
MTN		6.41	145	iPc	46 21.50	-3.0X
		0.3s		232.00nm		5.9mb X
MKS		8.17	286	iPc	46 53.00	5.0X
KNA		8.22	170	iPc	46 45.50	-3.0X
				eS	48 09.00	
MNI		9.33	344	ePd	47 08.50	5.3X
		1.0s		1597.00nm		6.5mb X
WRA		14.02	152	Pd	47 59.10	-4.7X
		0.6s		112.60nm		5.4mb
DAV		14.70	353	eP	48 17.00	4.7X
		1.5s		1733.33nm		6.2mb X
MBL		15.31	208	iPd	48 18.00	-1.8
MNDI		16.26	86	eP	48 31.00	-0.8
ASPA		17.17	159	iPc	48 40.40	-2.1
				eS	51 42.70	
QIS		17.51	139	iPc	48 44.50	-2.0
		0.5s		73.00nm		5.3mb
WARB		18.49	182	iPd	48 56.10	-0 9
NANU		18.72	216	iPd	48 59.10	-0 2
LAT		19.53	88	eP	49 07.00	-0.7
PMG		19.68	97	eP	49 08.00	-1.2
		1.0s		360.00nm		5.8mb
MEKA		20.68	203	iPc	49 20.00	0.7
		0.5s		240.00nm		5.9mb
				eS	53 06.00	
CTA		22.13	126	iPd	49 34.10	0.5
		1.0s		60.50nm		5.0mb
				i	50 07.20	
				i	50 45.70	
				i	51 03.90	
				iS	53 26.00	
QCP		22.95	344	eP	49 42.00	0.5
FORR		23.14	178	eP	49 42.50	-0.7
COOL		23.88	193	iPd	49 50.00	-0.4
		0.4s		31.00nm		5.2mb
				eS	54 21.00	
MRWA		24.01	205	eP	49 52.00	0.4
				eS	54 25.00	
BAG		24.78	344	eP	49 59.00	-0.1

Sta	Delta	Az	Phase	Time	Resid / Notes
			eS	54 05.90	
BAL	24.96	202	eP	50 00.40	0.0
	0.3s	29.00nm			5.3mb
			e	50 29.00	139kmX
			eS	54 42.00	
KLB	25.49	199	iPd	50 05.30	0.0
	0.3s	27.00nm			5.3mb
			eS	54 55.00	
MUN	26.38	202	iPd	50 13.30	-0.1
			e	50 46.00	159kmX
			eS	55 17.00	
NWAO	26.89	199	iPd	50 18.00	0.0
	0.6s	65.00nm			5.5mb
			e	50 53.00	171km
			eS	55 22.00	
PJG	27.31	40	eP	50 46.70	24.7X
STK	27.56	153	eP	50 23.00	-1.1
			e	50 59.00	176km
			e	55 50.00	
RMQ	27.70	135	eP	50 25.00	-0.4
			e	50 56.00	148kmX
			i	51 03.10	
			i	59 23.90	
PPI	27.78	284	eP	50 26.00	-0.3
	0.8s	239.90nm			6.0mb
ADE	29.17	161	iPd	50 38.70	0.2
	0.6s	41.33nm			5.3mb
CMS	29.36	146	iPc	50 39.90	-0.3
			e	51 23.00	214kmX
			e	51 31.00	
PSI	30.14	289	ePc	50 47.60	0.4
	1.0s	29.30nm			5.0mb
BRS	31.11	132	iPc	50 54.80	-0.9
QIZ	31.59	327	P	51 00.00	0.2
BFD	32.52	157	iPc	51 08.50	0.7
			e	51 45.00	173km
			e	57 43.00	
GZH	33.43	336	Pc	51 15.30	-0.5
			S	56 15.00	
QZH	33.45	345	Pc	51 16.00	0.1
			S	56 22.00	
CAN	33.99	147	iPc	51 21.20	0.7
TOO	34.08	154	ePc	51 22.50	1.3
			e	58 13.00	
CNB	34.19	147	eP	51 23.00	0.8
			e	58 29.00	
CHTO	38.38	313	iP	51 58.10	0.5
	1.0s	95.00nm			5.4mb
			e	52 41.00	202kmX
SSE	38.93	352	P+	52 01.50	-0.4
	1.0s	83.00nm			5.4mb
	Z 19s	0.50um			4.4Msz
	E 15s	0.50um			
			SS	00 45.00	
			sP	52 54.00	
			S	57 44.00	
			PcS	57 56.00	
			sS	58 40.50	
TAU	39.32	157	eP	52 05.00	0.0
GYA	39.36	330	Pc	52 07.00	1.3
			ScS	01 55.00	
			PcP	54 12.00	
			ScP	57 44.00	
			S	57 54.00	
WHN	39.92	342	iPd	52 11.80	1.7
			PP	53 48.00	
			ScP	57 44.80	
KUMJ	40.05	5	eP	52 11.00	-0.1
NJ2	40.26	349	iPc	52 13.00	0.2
	5.0s	0.90nm			2.6mb X
			ScP	57 46.40	
			iS	58 06.00	
DZM	40.30	115	iPd	52 13.70	0.3
KMI	40.40	324	iPc+	52 16.00	1.7
	4.0s	1.00nm			2.8mb X
			pP	53 11.00	267kmX
			sP	53 47.00	
			PP	54 00.00	
			PcP	54 05.00	
			S	58 13.00	
TSRJ	43.67	10	eP	52 39.70	-0.9
CD2	44.46	331	iPc	52 47.00	0.0
			iS	59 05.50	
TIA	44.63	348	P	52 47.90	-0.3
			ScS	02 27.00	
			PcP	54 28.80	
			S	59 07.00	

Sta	Delta	Az	Phase	Time	Resid / Notes
CHJJ	44.78	13	eP	52 47.70	-1.7
XAN	44.95	338	iPd	52 50.00	-0.8
			PcP	54 30.00	
MAT	45.08	12	eP	52 50.00	-1.8
	0.9s	24.37nm			4.7mb
			eS	59 11.00	
KAKJ	45.21	15	eP	52 50.70	-2.1
NIIJ	45.92	13	eP	52 58.10	-0.3
DL2	46.57	354	Pc	53 03.00	-0.5
			S	59 36.00	
TIY	47.18	344	iPd	53 08.50	0.1
			S	59 41.00	
BJI	48.51	349	Pc+	53 18.00	-0.5
			eS	00 00.00	
			eScS	02 53.00	
			ePcP	54 42.00	
			eScP	58 20.00	
LZH	48.75	335	iPd	53 21.00	0.3
	4.0s	1219.00nm			5.8mb X
	Z 25s	0.60um			4.5MszX
	E 17s	0.40um			
			eS	00 07.00	
			sP	54 14.00	
			ePP	55 14.00	
			ScP	58 22.50	
SNY	49.31	356	iPc	53 23.80	-0.8
			S	00 15.00	
HHC	50.35	344	P	53 33.30	0.6
BTO	50.55	343	P	53 33.50	-0.7
LSA	50.85	319	Pd	53 38.20	1.1
			S	00 40.50	
MSZ	51.00	143	e(P)	53 38.00	0.6
CN2	51.19	358	Pc	53 37.60	-1.2
	5.0s	0.50nm			2.4mb X
			eS	00 34.00	
			iScS	03 08.00	
			SS	04 12.00	
			pP	54 21.00	194kmX
			PcP	54 52.00	
			iScP	58 31.50	
MDJ	52.02	2	eP	53 44.50	-0.5
KOD	52.73	289	eP	53 50.00	-1.1
KRP	52.91	132	P	53 53.10	1.4
GTA	53.28	333	iPc	53 54.40	-0.2
TCW	53.35	137	P	53 53.80	-1.1
CCW	53.54	137	eP	53 55.90	-0.4
KIW	53.63	136	eP	53 56.30	-0.8
MRW	53.65	136	P	53 56.00	-1.1
WEL	53.71	136	eP	53 57.20	-0.4
GBA	53.84	293	Pc	53 58.00	-0.9
	1.2s	105.20nm			5.4mb
WDW	53.86	136	eP	53 57.20	-1.5
MNG	53.93	135	P	53 57.60	-1.7
MOW	54.10	136	eP	53 59.20	-1.3
MTW	54.16	136	eP	53 59.60	-1.3
HYB	54.24	298	iPc	54 00.40	-1.4
	1.2s	272.70nm			5.9mb
			e	54 46.00	203kmX
PGZ	54.48	135	eP	54 02.50	-0.7
POO	58.80	297	iPc	54 32.50	-1.6
	1.1s	63.29nm			5.4mb
NDI	60.29	309	iPc	54 42.30	-1.7
			eS	02 42.00	
WMQ	62.50	329	iPc	54 59.00	0.4
			S	03 11.50	
			ScS	04 32.50	
			PcP	55 36.70	
KSH	66.67	319	Pc	55 25.00	-0.7
QUE	69.00	306	iPc	55 39.50	-1.0
			eS	04 28.20	
SBA	73.10	172	iPd	56 05.90	2.0
MAW	73.43	201	eP	56 06.00	0.1
MAIO	77.03	310	iPc	56 27.50	0.5
	1.2s	155.56nm			5.6mb
			eS	06 06.00	
BEE	81.60	298	iP	56 51.40	-0.1
	0.5s	62.00nm			5.6mb
PMO	83.03	104	eP	57 00.00	0.9
	1.2s	35.00nm			5.0mb
TEH	83.15	307	eP	57 01.00	1.5
VAH	83.26	104	eP	57 01.00	0.8
	1.2s	40.00nm			5.1mb
TPT	83.30	104	eP	57 02.00	1.6
	1.2s	30.00nm			5.0mb
RUV	83.51	104	eP	57 03.00	1.5
	1.2s	30.00nm			5.0mb
ARO	86.15	282	eP+	57 16.00	1.2

Sta	Delta	Az	Phase	Time	Resid / Notes
TAB	87.62	309	eP	57 22.00	0.5
BHD	88.28	304	ePd	57 24.50	-0.1
			e	07 54.00	
MSL	89.81	307	ePd	57 31.50	-0.2
NAI	90.37	269	iPd	57 40.00	4.9X
	1.0s	10.00nm			4.8mb
TTA	90.70	26	P	57 35.40	0.1
	1.0s	25.00nm			5.2mb
			pP	58 30.50	224kmX
KDC	91.16	32	P	57 37.50	0.1
IMA	92.45	24	P	57 43.30	-0.1
	0.9s	10.94nm			5.0mb
BRW	92.67	18	P	57 44.40	0.3
PMR	93.55	28	P	57 47.60	-0.7
	0.7s	20.35nm			5.4mb
SLR	94.82	243	iPc	57 55.00	-0.2
SNA	95.21	195	eP	57 58.00	2.0
INK	100.40	22	iPdiff	58 18.30	-1.0
SOD	101.10	337	ePdiff	58 21.00	-1.4
SUF	101.85	332	ePdiff	58 24.70	-1.2
VRI	102.81	315	ePdiff	58 31.00	0.4
MLR	103.37	315	ePdiff	58 33.00	-0.2
			e	15 17.50	
BZS	106.39	315	ePKP	02 57.50	0.5
SKO	106.87	311	iPKP	02 58.00	0.0
SPC	106.88	319	ePKP	02 58.90	0.8
KRA	106.95	320	ePKP	02 54.30	-3.6X
SLL	108.30	332	(Pdiff	58 54.10	-0.5
	0.3s	1.20nm			5.6mb
NRA0	109.06	332	PKP	03 01.20	-0.4
ZST	109.10	318	iPKP	03 02.20	0.2
NB2	109.10	332	PKP	03 01.40	-0.3
	0.9s	11.40nm			
KSP	109.11	321	iPKP	03 02.50	0.5
			e	03 38.00	
BNG	109.18	272	iPKPd	03 04.00	0.7
	0.5s	10.00nm			
YKA	109.44	26	ePdiff	59 02.50	2.9X
YKA	109.44	26	ePKP	03 02.10	-0.1
YKC	109.51	26	ePKP	03 02.00	-0.3
VKA	109.60	319	ePKPd	03 03.00	0.0
	0.9s	32.80nm			
LON	109.76	43	PKP	03 03.80	0.4
WDC	110.17	50	ePKP	03 04.60	0.3
PTJ	110.27	316	iPKPd	03 04.60	0.1
PRU	110.39	321	PKP	03 04.50	0.1
	0.9s	14.00nm			
			e	03 50.50	
BRG	110.55	322	iPKP	03 05.00	0.3
	1.0s	16.00nm			
			e	03 48.00	
PNT	110.69	40	ePKP	03 06.00	0.9
	0.7s	8.00nm			
VBY	110.83	316	ePKP	03 05.80	0.4
GCC	111.02	53	ePKP	03 06.40	0.4
CLL	111.02	322	iPKPd	03 05.80	0.2
	1.0s	19.00nm			
ORV	111.10	51	ePKP	03 06.10	0.0
KHC	111.19	320	iPKPd	03 06.50	0.5
	1.0s	11.00nm			
MHC	111.27	53	ePKP	03 07.70	1.0
ARN	111.35	53	PKP	03 08.20	1.5
PRS	111.60	54	ePKP	03 08.10	0.9
WET	111.63	320	iPKPd	03 07.30	0.5
	1.0s	21.00nm			
KBA	111.81	318	ePKPd	03 06.00	-1.4
	1.0s	14.10nm			
DPW	111.93	41	PKP	03 07.50	0.0
BHG	111.97	318	ePKP	03 02.90	-4.6X
	0.9s	37.00nm			
HOF	111.97	321	iPKPd	03 07.60	0.2
MOX	112.04	322	ePKP	03 08.00	0.5
CMB	112.17	52	ePKP	03 08.50	0.2
PRI	112.19	54	ePKP	03 09.80	1.4
GRF	112.54	321	ePKP	03 09.20	0.6
BCH	112.78	55	PKP	03 10.70	1.1
FRI	112.85	53	ePKP	03 10.30	0.8
FUR	112.91	319	ePKP	03 09.30	0.0
	0.9s	55.00nm			
OGA	113.40	318	iPKPd	03 10.60	0.0
	1.0s	29.00nm			
KVN	113.78	51	PKP	03 12.20	0.6
ISA	114.02	54	ePKP	03 12.00	0.0
OSS	114.03	318	ePKPd	03 11.70	-0.1
TOD	114.08	321	iPKPd	03 11.40	-0.2
SAX	114.41	319	ePKPd	03 12.50	-0.1
PAS	114.47	56	ePKP	03 14.00	1.2

29d 00h

WTS	114.50	324	ePKP	03	12.00	-0.2
	1.0s		16.00nm			
MWC	114.55	56	ePKP	03	14.00	0.8
TNP	114.63	52	PKP	03	13.60	0.3
	0.7s		6.78nm			
SBB	114.68	55	ePKP	03	14.00	0.7
CLC	114.70	54	ePKP	03	14.00	0.7
LLS	114.74	318	ePKPd	03	13.00	-0.2
ABH	114.76	322	iPKPd	03	13.18	0.3
ZLA	114.97	319	ePKPd	03	12.80	-0.6
GWF	115.00	321	PKP	03	13.17	-0.2
TMA	115.04	318	ePKPd	03	13.20	-0.5
FEL	115.09	320	PKP	03	12.77	-0.9
RUP	115.12	322	iPKPd	03	13.80	0.2
RVR	115.15	56	ePKP	03	15.00	0.9
PEC	115.34	56	PKP	03	15.50	1.0
CDF	115.40	320	PKP	03	13.25	-1.0
GSC	115.42	55	ePKP	03	16.00	1.3
ENN	115.45	323	ePKP	03	14.00	-0.1
	1.0s		30.00nm			
MEM	115.45	323	PKP	03	15.00	0.9
ECH	115.54	320	PKP	03	13.39	-1.0
BBS	115.54	319	PKP	03	13.37	-1.1
MMK	115.66	318	ePKPd	03	15.40	0.4
PLM	115.66	57	ePKP	03	16.00	0.7
MOF	115.66	320	PKP	03	13.82	-0.9
WLF	115.69	322	PKP	03	15.70	1.2
SES	115.70	37	ePKPd	03	14.50	-0.2
BSF	115.89	320	PKP	03	14.50	-0.7
CVF	115.96	314	ePKP	03	14.80	-0.6
	0.8s		34.90nm			
FIN	116.00	316	PKP	03	14.45	-1.0
LOMF	116.02	319	PKP	03	14.73	-0.7
DIX	116.02	318	ePKPd	03	16.00	0.3
HAU	116.12	320	ePKP	03	14.80	-0.7
ROB	116.21	316	PKP	03	15.47	-0.4
TPC	116.22	56	ePKP	03	17.00	0.8
LRM	116.28	42	ePKP	03	16.50	0.3
VITF	116.28	320	PKP	03	15.33	-0.4
IMI	116.30	315	PKP	03	15.37	-0.7
LSD	116.37	317	PKP	03	16.40	0.0
DOU	116.48	323	PKPc	03	16.90	0.8
SNF	116.51	323	PKP	03	17.20	1.1
ENR	116.54	316	PKP	03	14.76	-1.6
STV	116.60	316	PKP	03	15.47	-1.2
LPG	116.63	317	ePKP	03	15.00	-1.9
	0.8s		22.85nm			
SBF	116.63	315	ePKP	03	16.10	-0.6
	0.8s		21.50nm			
RRL	116.78	317	PKP	03	16.81	-0.3
AKU	117.24	345	iPKP	03	19.00	2.0X
	0.9s		20.17nm			
FRF	117.27	315	ePKP	03	17.00	-0.8
	1.1s		53.70nm			
GLA	117.39	57	ePKP	03	20.00	1.6
LMR	117.43	315	ePKP	03	17.50	-0.6
	0.8s		21.50nm			
LRG	117.50	315	ePKP	03	18.20	0.0
	0.8s		24.20nm			
DUG	117.54	49	PKP	03	19.60	1.0
LOR	117.95	320	ePKP	03	18.40	-0.6
	1.0s		35.50nm			
LBF	117.97	320	ePKP	03	18.40	-0.7
	0.9s		24.55nm			
SMF	118.18	319	ePKP	03	18.90	-0.6
	1.1s		29.30nm			
SSF	118.25	320	ePKP	03	19.00	-0.6
EKA	118.41	330	PKP	03	20.00	0.4
	1.3s		37.00nm			
MSU	118.43	50	PKP	03	21.60	1.1
AVF	118.44	320	ePKP	03	19.10	-0.8
	0.8s		31.55nm			
PLDF	118.56	319	PKP	03	20.14	-0.1
FFC	118.81	30	ePKP	03	20.00	-0.4
	0.5s		27.00nm			
AGO	118.85	319	PKP	03	20.66	-0.1
BGF	118.85	320	ePKP	03	20.30	-0.4
PYM	119.03	319	PKP	03	21.34	0.1
LBL	119.06	318	PKP	03	21.63	0.5
MAF	119.15	319	ePKP	03	20.60	-0.7
	0.8s		12.10nm			
TCF	119.36	319	ePKP	03	21.30	-0.4
	1.0s		44.00nm			
LSF	119.81	320	ePKP	03	21.30	-1.3
	0.8s		16.10nm			
LDF	119.91	323	ePKP	03	22.10	-0.5
	1.0s		24.00nm			

CAF	119.95	318	ePKP	03	22.90	0.0
	1.0s		36.00nm			
FLN	120.05	323	ePKP	03	22.50	-0.4
	0.9s		31.10nm			
RJF	120.17	319	ePKP	03	23.20	-0.1
	1.2s		32.75nm			
GRR	120.44	323	ePKP	03	23.30	-0.3
	0.9s		26.20nm			
LPO	120.62	318	ePKP	03	23.90	-0.2
	1.0s		52.00nm			
LPF	120.70	322	ePKP	03	23.60	-0.6
	0.8s		40.30nm			
PV09	120.74	50	PKP	03	25.50	0.5
MFF	120.74	320	ePKP	03	23.70	-0.6
	0.8s		40.30nm			
LFF	120.82	318	ePKP	03	24.30	-0.2
	1.0s		60.00nm			
PV10	120.84	50	PKP	03	25.60	0.5
EPF	121.79	316	ePKP	03	26.00	-0.5
	1.0s		36.00nm			
FRB	122.80	8	ePKP	03	27.00	-0.6
	1.1s		87.00nm			
GOL	123.16	47	PKP	03	29.30	-0.2
GLD	123.25	47	PKP	03	30.00	0.4
ALQ	123.78	53	iPKPd	03	32.10	1.3
	1.0s		44.00nm			
			e	03	43.00	
			e	03	58.00	
ECRI	123.89	317	ePKP	03	31.80	1.2
ECHE	123.94	313	ePKP	03	31.80	1.0
ETOR	124.27	315	iPKPd	03	32.30	0.9
EVIA	125.39	312	iPKPd	03	34.50	0.8
GUD	125.81	315	iPKPd	03	35.70	1.2
TOL	126.04	314	iPKPd	03	35.50	0.7
	1.0s		50.00nm			
EMON	126.71	320	e(PKP)	03	37.00	1.0
CRT	126.72	311	ePKP	03	37.00	0.8
ASMO	126.76	311	iPKP	03	36.00	-0.4
APHE	126.87	311	iPKP	03	37.00	0.3
AAPN	127.06	312	iPKP	03	36.70	-0.3
ALOJ	127.12	311	iPKP	03	37.00	-0.1
ATEJ	127.13	311	iPKP	03	37.20	0.0
MAL	127.49	311	iPKP	03	37.00	-0.6
EHOR	127.70	313	e(PKP)	03	38.60	0.6
EPRU	128.01	312	ePKP	03	39.60	0.9
KUK	128.09	272	ePKP	03	40.00	0.6
BMK	129.22	309	iPKPd	03	41.00	0.1
MEO	129.96	50	iPKPd	03	42.70	0.3
SCH	131.58	11	iPKPd	03	45.00	0.1
	0.4s		18.00nm			
KIC	132.44	272	PKP	03	47.18	-0.5
LIC	132.71	271	PKP	03	47.76	-0.4
TIC	132.74	272	PKP	03	47.82	-0.4
FVM	134.41	43	PKP	03	50.00	-0.8
CBM	138.63	16	PKP	03	52.00	-6.4X
TKL	140.12	41	PKP	04	01.80	0.3
BLA	141.21	36	PKP	04	04.00	0.6
TBR	141.49	26	PKP	04	05.00	1.3
CBN	142.22	33	(PKP)	04	05.00	-0.1
JSC	142.60	41	PKP	04	02.00	-3.8X
ANT	144.37	151	iPKPd	04	09.30	0.2
ITB7	147.44	177	ePKP	04	16.20	2.0
ITB	147.76	177	ePKP	04	17.60	2.9X
ITB1	147.90	177	ePKP	04	18.10	3.2X
SRA	148.50	83	ePKP	04	21.60	5.3X
SJS	148.89	83	ePKP	04	19.00	2.0
NNA	149.06	129	iPKPd	04	18.50	1.4
VAO	149.08	190	ePKP	04	22.00	5.1X
			e	05	05.50	
BRAS	149.26	193	iPKPc	04	21.60	4.2X
GCM	149.80	64	PKP	04	23.45	5.5X
PPD	150.52	183	ePKP	04	19.50	0.4
			i	04	24.80	
			i	05	16.40	
BAO	156.45	191	ePKP	04	29.50	1.9
SOB1	159.60	215	ePKP	04	32.20	1.0
ATB	169.17	182	PKPd	04	40.20	0.7

S.D. = 0.8 on 267 of 288 obs.

JUN 29, 1989 00h 18m 39.81± 0.32s
22.960 S ±10.7km 175.319 W ± 7.2km
DEPTH = 34.6km (8 depth phases)
5.2mb (11 obs.) 5.1Msz (7 obs.)
TONGA ISLANDS REGION (174)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 23C

Centroid Location.
Origin Time 00:18:42.3 1.1
Lat 23.02S 0.06 Lon 174.79W 0.09
Dep 24.3 4.2 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 0.88 0.07 Mtt= 0.38 0.13
Mff=-1.26 0.09 Mrt= 0.20 0.11
Mrf= 0.35 0.16 Mtf=-0.35 0.06
Principal Axes:
T Val= 0.98 Plg=74 Azm=337
N 0.42 13 194
P -1.39 10 102
Best Double Couple:Mo=1.2*10**17
NP1:Strike=177 Dip=37 Slip= 68
NP2: 23 56 106

RAR	14.52	86	P	21	51.00	-13.7X
			S	24	10.00	
PVC	16.20	286	iPc	22	33.00	6.5X
DZM	16.88	269	iPc	22	41.30	6.1X
RMQ	32.76	256	eP	25	12.50	0.7
PMG	38.35	284	eP	25	59.00	-0.5
QIS	41.81	264	eP	26	15.00	-13.1X
ASPA	46.43	259	iPd	27	04.70	-0.7
	0.9s		46.00nm			5.4mb
Z	18s		4.20um			5.4Msz
			eS	33	50.40	
			LR	46	22.70	
WB5	46.76	264	iPc	27	06.20	-1.8
WRA	46.77	264	Pd	27	06.80	-1.2
	1.1s		27.20nm			5.1mb
WARB	52.51	254	eP	27	50.20	-1.9
	0.4s		6.00nm			4.9mb
KNA	52.98	267	eP	27	54.50	-1.2
SBA	55.61	185	eP	28	15.80	1.8
MBL	59.68	258	eP	28	42.20	-1.3
SPA	67.18	180	e(P)	29	32.40	0.0
	1.5s		38.64nm			5.3mb
MAT	73.66	323	(P)	30	11.00	-0.9
	1.6s		53.33nm			5.3mb
Z	20s		0.35um			4.6Msz
			eS	39	46.00	
BCH	77.99	43	P	30	37.50	1.0
PLM	78.97	47	eP	30	43.00	1.0
RVR	79.01	46	eP	30	46.00	4.0X
SBB	79.14	45	eP	30	43.00	0.2
ISA	79.32	44	eP	30	42.00	-1.7
FRI	79.37	42	eP	30	44.40	0.5
CMB	79.62	41	eP	30	44.80	-0.5
			e	30	54.20	30km
TPC	79.96	46	eP	30	47.00	-0.2
CLC	79.97	44	eP	30	47.00	-0.3
WDC	80.02	38	eP	30	47.20	-0.1
			e	30	56.00	28km
MAW	80.09	199	eP	30	48.00	0.7
GLA	80.17	48	eP	30	49.00	0.7
SSE	81.17	309	P	30	52.00	-1.5
Z	20s		0.50um			4.9Msz
N	14s		0.30um			
			pP	31	16.00	91kmX
			S	41	16.00	
TNP	81.60	43	P	30	55.00	-0.9
	1.5s		30.30nm			5.1mb
KVN	81.65	41	P	30	56.00	-0.2
			pP	31	06.00	32km
MDJ	83.96	324	eP	31	10.00	2.4
QIZ	84.12	293	eP	31	09.50	0.5
DL2	85.22	316	eP	31	14.00	-0.1
SNY	85.69	319	Pc	31	16.00	-0.3
			eS	41	42.00	
CN2	85.76	321	Pc	31	17.00	0.3
Z	20s		0.70um			5.1Msz
			pP	31	29.00	39km
			sP	31	34.00	
			PP	34	39.00	
			eSKS	41	38.00	
WHN	85.90	305	P	31	19.00	1.4
			S	41	46.00	
TIA	86.76	312	P	31	22.00	0.2
PMR	86.85	12	eP	31	20.50	-1.1
TTA	86.96	9	eP	31	22.00	-0.2
ALQ	87.02	50	eP	31	24.00	0.6
	1.3s		19.71nm			5.2mb
Z	20s		1.24um			5.3Msz
			epP	31	34.10	32km
			eS	42	04.00	
			eLg	01	24.00	

PV10	87.04	46	P	31	24.00	0.6
PV09	87.04	46	P	31	24.00	0 5
DPW	87.13	34	P	31	23.50	0.1
PNT	87.33	33	eP	31	23.00	-1.2
SNG	87.34	279	eP	31	27.50	2.5
TOA	87.92	13	eP	31	26.80	-0.1
LRM	89.04	38	eP	31	34.30	1.4
BW06	89.08	42	P	31	32.00	-1.1
	1.2s	7.19nm			4.9mb	
BJI	89.38	314	eP	31	34.00	-0.2
	4.0s	0.82nm			3.4mb	X
		eSKS		42	06.00	
		eS		42	36.00	
GYA	90.02	299	P	31	39.00	1.3
		S		42	12.00	
FBA	90.12	11	eP	31	35.60	-1.6
GOL	90.17	46	P	31	40.00	1.7
	0.6s	4.12nm			4.9mb	
IMA	90.27	9	eP	31	37.10	-0.9
GLD	90.29	46	P	31	39.50	0.8
TIY	90.77	311	eP	31	41.50	0.7
N	15s	0.54um				
		pP		31	54.00	41km
XAN	91.59	306	P	31	46.00	1.3
SES	92.41	35	eP	31	47.00	-1.0
		pP		31	59.00	39km
MEO	92.65	53	eP	31	49.00	-0.5
KMI	92.67	296	eP	31	34.00	-16.0X
	4.0s	0.82nm				
		eSKS		42	06.00	
		eS		42	36.00	
KMI	92.67	296	Pd-	31	52.00	2.0
		S		42	30.00	
		sS		43	04.00	
BDT	92.74	287	eP	31	52.90	2.8X
RSSD	93.21	43	P	31	50.80	-1.3
		pP		32	02.30	37km
CHG	93.41	289	ePc	31	55.00	1.8
	1.6s	68.33nm			5.8mb	
CHTO	93.41	289	eP	31	54.50	1.3
	1.2s	24.65nm			5.5mb	
BTO	93.77	313	eP	31	56.00	1.4
INK	96.00	14	eP	32	03.00	-1.1
YKA	97.71	24	eP	32	12.90	1.0
GTA	100.45	308	ePdiff	32	25.60	0.5X
Z	18s	0.40um			5.0Msz	
SOB1	125.12	120	ePKP	37	38.10	-1.0
		e		37	46.80	
SLR	126.46	207	ePKP	37	40.00	-1.7
MAIO	131.12	299	ePKP	37	50.00	-0.1
BHD	143.69	295	ePKPd	38	10.00	-3.2X
MSL	144.24	301	ePKPd	38	11.00	-3.0X
		e		38	22.50	
LWI	145.65	226	ePKPc	38	18.10	0.7
EKA	147.15	8	PKP	38	22.00	3.7X
	2.7s	664.60nm				
KVT	148.09	312	ePKP	38	23.10	2.8X
CLI	150.22	328	ePKP	38	28.00	4.6X
KRA	150.43	340	ePKP	38	28.30	4.8X
		e		38	47.30	
CFR	150.71	325	ePKP	38	30.00	5.9X
KSP	150.73	345	iPKP	38	29.70	5.7X
BBTK	150.88	312	iPKPd	38	30.00	5.3X
WTS	150.97	357	ePKP	38	30.00	5.8X
	1.0s	18.00nm				
CLL	150.97	349	iPKPd	38	29.90	5.6X
	1.5s	41.00nm				
VRI	150.98	327	ePKP	38	30.00	5.5X
SPC	151.08	339	ePKP	38	30.90	6.1X
BRG	151.22	348	iPKP	38	30.00	5.3X
	1.4s	30.00nm				
		i		38	41.50	
DSI	151.47	294	ePKP	38	32.00	6.3X
ISR	151.58	326	ePKP	38	34.00	8.5X
MLR	151.63	328	ePKP	38	24.00	-1.7
MOX	151.84	351	ePKP	38	33.00	7.3X
	1.8s	46.00nm				
		e		38	43.00	
PRU	151.93	346	PKP	38	32.00	6.2X
Z	22s	0.60um			5.4Msz	
		e		38	43.80	
PRNI	151.98	292	iPKPd	38	33.50	7.0X
MBH	152.16	291	ePKP	38	34.00	7.3X
ENN	152.23	358	ePKP	38	44.00	17.8X
	1.0s	12.00nm				
GRF	152.83	351	e(PKP)	38	47.00	19.9X
SRO	152.91	340	iPKP	38	46.30	19.1X
ZST	152.94	342	ePKP	38	26.70	-0.6
			e	38	34.00	
			e	38	45.20	
KHC	152.95	347	PKP	38	28.00	0.7
			i	38	34.90	
CTT	153.05	318	ePKP	38	34.00	6.3X
BZS	153.53	333	ePKPc	38	28.00	-0.2
SKO	156.43	327	ePKP	38	31.00	-1.2
BNG	157.22	218	iPKPc	38	31.00	-3.1X
	0.4s	3.00nm				
OHR	157.39	327	ePKP	38	26.00	-7.5X
	S.D. = 1.1	on	69 of 103 obs.			

? JUN 29, 1989 01h 21m 09.33± 4.11s
17.395 N ±25.7km 61.045 W ±21.5km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.3 (FDF).

ANG	0.79	252	eP	21	24.94	0.3
			eS	21	43.80	
BPA	0.85	246	eP	21	25.79	0.0
			eS	21	44.97	
SEG	1.08	204	eP	21	29.32	-0.3
MGH	1.31	239	eP	21	33.45	-0.1
			eS	21	53.83	
NEV	1.48	260	eP	21	35.70	-0.3
			eS	21	58.26	
MGG	1.49	190	eP	21	36.41	0.3
SKI	1.62	268	eP	21	25.95	-12.1X
			eS	21	49.40	
BBL	1.91	193	eP	21	42.20	0.0
	S.D. = 0.3	on	7 of 8 obs.			

JUN 29, 1989 02h 41m 37.50± 0.37s
39.401 N ± 3.7km 19.654 E ± 3.1km
DEPTH = 46.5 ± 9.3 km
3.9mb (2 obs.)
GREECE-ALBANIA BORDER REGION (392)
Felt (IV) at Vrine and Konispol, Albonio.

SRN	0.55	29	iPgc	41	46.50	-2.7
TPE	0.93	17	iPgc	41	53.80	-0.6
LSK	1.04	44	iPgd	41	53.10	-2.9X
BERA	1.32	10	iPgd	42	00.90	1.1
VLS	1.42	149	ePb	42	01.00	-0.3
KBN	1.51	36	iPn	42	04.30	1.8
LCI	1.61	306	Pc	42	04.10	0.3
			eSn	42	29.70	
KZN	1.86	60	ePn	42	08.50	0.9
OHR	1.92	27	iPnc	42	10.20	1.8
TIR	1.95	5	iPnd	42	10.50	1.8
LACI	2.23	1	iPnd	42	13.60	0.9
PHP	2.36	14	iPnc	42	14.50	0.0
ULC	2.58	353	iPnd	42	17.20	-0.5
			eSn	42	47.00	
GRI	2.58	258	P	42	19.12	1.3
SDA	2.61	357	iPnd	42	19.00	0.8
PUK	2.64	4	iPn	42	19.30	0.7
KKS	2.73	12	iPn	42	21.00	1.1
NEO	2.77	91	ePn	42	20.20	-0.3
ITM	2.85	140	ePn	42	21.80	0.2
SKO	2.90	27	iPn	42	22.40	0.0
E	10s	2.10um				
			iPg	42	30 00	
			iSn	42	55 60	
			iSg	43	04.60	
VAY	2.94	48	iPn	42	22.70	-0.2
TTG	3.04	355	iPnd	42	24.00	-0.2
			eSn	42	58.50	
PLG	3.07	70	ePn	42	23.50	-1.3
HCY	3.17	344	ePn	42	25.20	-0.8
			eSn	43	00.00	
PVY	3.20	4	ePn	42	27.30	0.7
			eSn	43	04.00	
GMB	3.21	249	P	42	27.84	1.1
MGR	3.24	284	Pc	42	29.20	2.1
NKY	3.44	352	ePn	42	29.80	-0.3
			eSn	43	09.20	
IVA	3.47	3	iPnd	42	31.30	0.9
			eSn	43	12.00	
ATH	3.48	113	ePn	42	30.50	0.0
ATN	3.50	251	P	42	31.70	0.9
			eSn	43	13 60	
SGO	3.53	290	P	42	34.30	3.1X
KKB	3.59	46	iP	42	32.00	0.0
BRY	3.60	347	ePn	42	31.20	-1.0
			eSn	43	12.50	
LPI	3.79	258	P	42	35.59	0.6
MMB	3.80	54	ePc	42	35.00	-0.1
PLE	3.93	357	iPnd	42	37.50	0.5
			eSn	43	22.00	
MNO	4.15	251	Pc	42	40.60	0.4
VTS	4.17	39	eP	42	41.00	0.6
MEU	4.37	240	P	42	41.90	-1.3
			eSn	43	33.40	
PZI	4.42	239	P	42	41.41	-2.4
HVAR	4.48	328	iPnd	42	43.80	-0.8
RZN	4.48	58	iP	42	45.00	0.2
PGB	4.64	46	iP	42	47.00	0.0
RFI	4.73	295	P	42	51.52	3.4X
KDZ	4.93	61	eP	42	48.00	-3.0X
SDI	5.01	299	P	42	54.40	2.3
PRK	5.13	90	ePn	42	55.70	1.9
VAM	5.38	136	ePn	42	55.20	-2.2
BEO	5.45	6	eP	43	16.00	17.8X
AOU	5.58	304	P	43	00.80	0.6
ALP	5.70	308	ePn	43	02.55	0.6
			eSn	44	09.91	
AOI	6.15	314	ePn	43	07.50	-0.6
			eSn	44	16.30	
CIO	6.20	310	e(Pn)	43	09.02	0.2
			e(Sn)	44	20.55	
NPS	6.29	129	ePn	43	07.20	-2.9X
BZS	6.38	12	ePc	43	09.00	-2.3
ARV	6.49	311	P	43	12.80	-0.1
VBY	6.91	333	iPnd	43	17.70	-1.0
			eSn	43	32.70	
PTJ	7.04	338	iPnd	43	18.50	-2.1
			iSn	44	37.50	
RIY	7.10	328	iPnd	43	22.20	0.8
CRE	7.16	309	P	43	23.02	0.7
SFI	7.38	310	P	43	26.40	1.1
CEY	7.41	330	ePn	43	24.40	-1.4
			e(Sn)	44	48.00	
LJU	7.63	332	ePn	43	27.00	-1.8
			eSn	44	50.50	
TRI	7.65	327	eP	43	27.10	-2.0
MLR	7.66	35	eP	43	30.00	0.7
VOY	7.86	329	ePn	43	30.10	-2.0
			eSn	44	56.70	
MME	8.22	308	P	43	36.80	-0.5
VRI	8.30	37	ePd	43	17.00	-21.1X
VVI	8.46	323	P	43	40.10	-0.1
FVI	8.77	327	P	43	43.30	-1.2
BOB	9.29	309	P	43	52.50	0.7
KHC	10.65	338	iP	44	08.50	-1.8
PRU	11.19	343	P	44	15.00	-2.6X
HFS	21.09	352	eP	46	18.60	-1.3
	0.4s	3.90nm			4.1mb	
NUR	21.36	7	eP	46	23.00	0.4
EKA	22.04	324	P	46	31.00	1.6
NB2	22.29	349	P	46	32.20	0.3
	0.5s	1.60nm			3.7mb	
SUF	23.68	7	eP	46	46.10	0.7
	S.D. = 1.2	on	71 of 79 obs.			

? JUN 29, 1989 02h 58m 54.75± 7.45s
35.095 N ±36.4km 3.742 W ±54.3km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

MAL	1.72	342	ePn	59	24.80	0.0
			iSg	59	48.00	
BMK	1.73	265	iPn	59	25.00	0.0
			eSn	59	45.50	
			iSg	59	50.00	
SRO	1.76	312	iP	59	26.00	0.5
OJEN	1.77	305	iP	59	26.50	0.8
MOMI	2.02	308	iP	59	28.00	-1.3
ALJ	2.18	317	iP	59	35.00	3.3X
LIJA	2.25	324	iP	59	35.00	2.3X
GIBL	2.49	315	iP	59	40.00	4.0X
	S.D. = 1.1	on	5 of 8 obs.			

JUN 29, 1989 03h 57m 33.13± 1.11s
6.289 S ± 4.2km 154.817 E ± 4.3km
DEPTH = 81.9 ± 9.9 km
5.3mb (20 obs.)
SOLOMON ISLANDS (193)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 17C

29d 03h

Centroid Location:
Origin Time 03:57:40.2 0.7
Lat 6.13S 0.12 Lon 154.24E 0.11
Dep 68.5 7.7 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 4.20 0.38 Mtt=-3.73 0.97
Mff=-0.47 0.80 Mrt=-1.27 0.51
Mrf=-0.20 0.57 Mtf= 2.12 0.38
Principal Axes:
T Val= 4.46 Plg=77 Azm=147
N 0.44 11 295
P -4.90 7 26
Best Double Couple:Mo=4.7*10**16
NP1:Strike=128 Dip=40 Slip= 107
NP2: 287 52 77

HNR	5.96	122	eP	59	01.00	0.3
			eS	00	04.00	
LMG	7.10	248	eP	59	16.00	-0.6
LAT	7.78	267	eP	59	25.00	-0.7
PMG	8.20	247	eP	59	32.00	0.5
CTA	16.04	210	iP	01	20.70	5.5X
	1.2s	39.06nm			4.4mb	
			iS	04	20.00	
DZM	19.30	146	iPc	01	52.20	-2.3
QIS	20.47	225	eP	02	07.00	0.4
			i	02	10.00	
RMQ	20.90	195	eP	02	12.00	1.0
BRS	21.08	185	iPc	02	12.90	0.2
GUA	22.02	333	eP	02	17.20	-4.9X
	0.7s	82.19nm			5.2mb	
PJG	22.08	333	eP	02	17.10	-5.6X
WB5	24.02	234	iPc	02	42.70	1.0
			i	06	22.20	
WRA	24.08	234	Pc	02	43.30	1.1
	0.7s	53.20nm			5.1mb	
MTN	24.24	253	iPd	02	45.10	1.4
COO	24.32	186	iPd	02	45.80	1.3
CMS	26.44	197	iPd	03	04.00	-0.2
ASPA	26.52	227	iPd	03	05.20	0.2
Z	22s	0.66um			4.1MszX	
			e	03	14.40	
			LR	12	23.90	
KNA	27.21	248	eP	03	11.80	0.5
	0.6s	36.00nm			5.1mb	
STK	28.30	204	eP	03	20.50	-0.5
CNB	29.32	189	eP	03	30.00	-0.2
CAN	29.38	190	eP	03	32.00	1.2
ADE	32.17	205	iPc	03	54.90	-0.4
	0.8s	31.34nm			5.2mb	
TOO	32.28	194	ePd	03	56.50	0.3
WARB	33.37	230	eP	04	05.60	-0.2
	0.4s	16.00nm			5.2mb	
FORR	35.00	222	eP	04	19.20	-0.5
	0.5s	29.00nm			5.5mb	
			e	04	28.00	
KRP	36.69	152	P	04	34.20	0.4
	0.5s	46.00nm			5.7mb	
MBL	36.94	243	eP	04	35.70	-0.5
	0.5s	15.00nm			5.2mb	
			e	04	43.00	
TAU	37.07	189	iPd	04	38.30	1.4
MNG	38.87	155	P	04	51.10	-1.0
TCW	38.87	156	eP	04	51.40	-0.7
MRW	39.06	156	eP	04	53.10	-0.5
WDW	39.21	156	P	04	53 80	-1.1
PGZ	39.21	154	eP	04	53 30	-1.6
	0.4s	38 00nm			5.7mb	
MTW	39.33	155	P	04	54.80	-1.1
MOW	39.44	156	eP	04	54.00	-2.9
BLW	39.49	155	eP	04	52.80	-4.4X
COOL	39.93	228	eP	05	01.00	-0.1
MEKA	40.02	235	iPd	05	02.20	0.4
	0.6s	38.00nm			5.5mb	
NANU	41.17	243	eP	05	10.80	-0.5
			e	05	18.00	
KLB	42.80	229	iPd	05	24.10	-0.5
BAL	43.16	231	iPd	05	27.30	-0.1
NWAO	43.83	228	eP	05	33.00	0.1
MUN	44.15	230	iPd	05	35.30	-0.2
RKG	44.55	226	iPd	05	41.50	2.8
MAT	45.36	341	(P)	05	45.00	0.0
QZH	46.97	313	Pd	05	58.00	0.1
QIZ	50.95	301	Pc	06	29.30	0.7
WHN	53.31	316	Pc	06	46.00	-0.1
CN2	56.48	335	eP	07	07.00	-1.9
GYA	56.89	307	Pc	07	12.40	0.1
BJI	58.24	326	eP	07	19.50	-1.8
NST	58.38	293	iPc	07	24 80	2.2
TIY	58.93	321	eP	07	25.30	-1.0
XAN	59.08	316	Pc	07	26.00	-1.3
KMI	59.48	304	eP	07	19.50	-11.0X
BDT	59.89	294	eP	07	33.70	0.7
	0.6s	37.20nm			5.7mb	
CHG	60.44	296	iPc	07	36.90	0.1
	0.8s	57.84nm			5.7mb	
			e	09	04.80	
CD2	61.22	310	iPc	07	41.30	-0.8
ADK	62.86	19	eP	07	52.20	-0.3
	0.8s	80.60nm			5.8mb	
LZH	63.69	315	eP	07	58.00	-0.5
	1.0s	32.00nm			5.2mb	
GTA	68.11	317	Pc	08	26.20	-0.4
SHL	68.79	300	iP	08	30.50	-0.6
SBA	71.80	177	eP	08	50.00	1.8
KDC	76.63	26	eP	09	16.30	0.0
SVW	77.41	22	eP	09	21.40	0.7
SVW	77.41	22	eP	09	26.50	5.8X
WMQ	78.19	317	P	09	25.60	0.2
KOD	78.75	282	eP	09	30.00	0.7
GBA	79.30	285	Pd	09	30.00	-1.8
	0.2s	133.10nm			6.5mb X	
PMR	80.22	24	eP	09	35.30	-0.5
	0.9s	16.70nm			4.9mb	
IMA	81.20	19	eP	09	41.30	0.2
	0.9s	14.40nm			4.9mb	
TOA	81.68	24	eP	09	44.30	0.7
FBA	82.53	21	eP	09	46.50	-1.4
BRW	83.70	14	eP	09	52.70	-1.0
SPA	83.75	180	ePc	09	54.90	0.6
	1.0s	95.00nm			5.7mb	
MAW	84.98	203	iPc	10	00.80	0.6
GCC	88.33	53	eP	10	18.40	1.2
PRS	88.72	53	eP	10	20.60	1.5
ORV	89.11	50	eP	10	21.40	0.6
PRI	89.26	54	e(P)	10	23.20	1.4
BCH	89.59	55	P	10	25.50	2.2
CMB	89.75	52	eP	10	24.30	0.4
FRI	90.14	53	eP	10	26.80	1.1
ISA	90.96	54	eP	10	30.00	0.4
MWC	91.12	56	eP	10	32.00	1.5
SBB	91.37	55	eP	10	32.00	0.5
KVN	91.66	51	P	10	33.50	0.6
RVR	91.66	56	eP	10	34.00	1.3
CLC	91.68	54	eP	10	34.00	1.1
PNT	91.83	41	eP	10	33.00	-0.2
	0.7s	9.00nm			5.3mb	
PLM	92.02	57	eP	10	36.00	1.3
TNP	92.23	52	P	10	36.20	0.6
	0.9s	19.34nm			5.5mb	
TPC	92.77	56	eP	10	39.00	1.1
GLA	93.68	57	eP	10	44.00	1.8
YKA	95.80	28	eP	10	51.90	0.8
YKC	95.86	28	ePc	10	51.50	0.1
SES	97.44	40	ePc	10	58.60	-0.3
BW06	98.36	48	P	11	02.50	-1.0
PV10	98.68	52	P	11	05.90	0.9
RSSD	102.35	46	Pdiff	11	20.50	-0.9
SUF	112.51	337	ePKP	15	57.40	-3.6X
NUR	114.32	335	ePKP	16	03.70	-0.9
FRB	114.76	20	ePKP	16	04.00	-1.4
PRM	120.52	54	ePKP	16	16.70	-0.6
NAV	120.89	50	ePKP	16	16.90	-1.1
BUL	120.96	242	iPKPc	16	18.00	-0.7
	0.7s	14.38nm				
BLA	121.20	50	iPKP	16	17.70	-0.9
JSC	121.36	54	iPKP	16	18.70	-0.2
LHS	121.67	53	iPKP	16	18.90	-0.5
CVL	122.44	49	iPKP	16	20.00	-0.8
NA2	122.92	48	ePKP	16	20.80	-0.9
BRG	124.94	331	e(PKP)	16	24.50	-0.8
CLL	125.11	332	ePKP	16	25.00	-0.6
	0.9s	8.00nm				
KHC	126.24	329	PKP	16	28.00	0.0
CNCB	131.86	119	ePKP	16	21.00	-19.2X
			e	16	41.00	
LPB	131.88	119	(PKP)	16	22.00	-18.1X
			e	16	43.00	
ZOBO	131.96	118	ePKP	16	25.00	-15.4X
			i	16	40.00	
			eLR	19	28.00	
BNG	136 43	270	ePKPd	16	34.00	-14.3X
	0.5s	8 00nm				
			e	19	18.30	
PPD	141.95	138	ePKP	16	51.50	-6.7X
VAO	143.93	144	ePKP	16	58.80	-2.8
BAO	148.62	134	ePKP	17	10.00	0.5
ATB	151.37	109	PKPc	17	13.20	-0.4
SOB1	158.04	134	ePKP	17	22.50	-0.1
			e	17	55.20	

S.D. = 1.0 on 111 of 123 abs.

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* JUN 29, 1989 03h 59m 55.42± 1.56s
14.071 N ±15.4km 93.166 W ±11.0km
DEPTH = 53.6 ± 12.7 km
4.8mb (2 abs.)
NEAR COAST OF CHIAPAS, MEXICO (69)

TPX	1.21	46	iP	00	15.00	-1.3
			iS	00	31.00	
SCX	2.70	11	iP	00	39.00	1.8
			iS	01	11.50	
OXX	4.55	312	iP	01	10.00	6.4X
			iS	02	09.00	
LVVM	6.45	331	(P)	01	30.00	-0.1
IIT	6.97	316	(P)	02	28.00	50.4X
ACX	7.03	294	(P)	02	15.00	36.8X
III	7.41	306	(P)	01	42.00	-1.8
CRX	8.19	311	(P)	01	39.00	-15.6X
SRA	9.40	114	eP	02	17.00	5.9X
MRX	9.51	307	(P)	02	14.00	1.6
SJS	9.81	114	eP	02	17.20	0.4
MEO	21.20	348	iPc	04	37.70	-0.9
ALQ	23.99	332	eP	05	09.10	2.8X
			e	05	13.00	
			e	05	19.30	
LRM	35.59	337	eP	06	51.20	1.2
FFC	41.15	352	eP	07	35.00	-0.8
	1.2s	16.00nm			4.6mb	
YKC	50.66	347	ePc	08	50.70	-0.4
YKA	50.70	347	eP	08	36.10	-15.3X
SOB1	56.78	111	eP	09	36.90	0.0
INK	60.05	344	eP	09	59.00	0.1
MBC	63.71	353	eP	10	23.50	0.3
	0.7s	11.00nm			5.0mb	
			pP	10	47.50	95kmX

S.D. = 1.2 on 13 of 20 obs.

JUN 29, 1989 04h 18m 44.32± 0.60s
43.616 N ± 4.2km 7.646 E ± 3.9km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.6 (LDG), 2.1 (GEN).

REVF	0.24	302	Pg	18	49.45	0.0
SBF	0.29	328	Pg	18	50.30	-0.1
IMI	0.34	31	P	18	51.84	0.4
AURF	0.36	320	Pg	18	50.75	-0.9
SAOF	0.38	350	Pg	18	53.30	1.2
AUTN	0.41	337	Pg	18	52.22	-0.6
MVIF	0.45	308	Pg	18	55.51	1.9
TOUF	0.49	324	Pg	18	54.67	0.3
CALN	0.57	284	Pg	18	57.38	1.5
ENR	0.63	345	P	18	56.15	-0.8
			S	19	04.59	
STV	0.67	340	P	18	56.73	-1.0
ROB	0.70	13	P	18	57.86	-0.3
FIN	0.72	34	P	18	58.74	0.3
FRF	0.73	266	Pg	18	58.10	-0.5
			Sg	19	07.60	
LMR	0.87	252	Pg	19	00.40	-0.7
			Sg	19	11.00	
CKI	0.93	29	P	19	01.60	-0.5
			eSg	19	15.40	
DOI	0.93	342	Pc	19	02.20	0.0
			eSg	19	15.20	
LRG	0.95	261	Pg	19	02.00	-0.4
			Sg	19	14.40	
FOUF	1.11	326	e(Pg)	19	04.64	-0.4
CVF	1.38	139	Pn	19	10.00	0.4
			Sn	19	25.80	
RRL	1.44	335	P	19	10.67	0.0
BNI	1.60	334	Pc	19	13.00	0.2
			eSg	19	33.50	
LSD	1.87	349	P	19	16.97	0.0
LPG	1.99	342	Pg	19	21.60	3.0X
LPL	2.01	341	Pg	19	21.60	2.7X

S.D. = 0.8 on 23 of 25 obs.

JUN 29, 1989 04h 18m 46.76± 0.95s
43.631 N ± 7.4km 7.587 E ± 6.5km

DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 3.1 (LDG), 2.8 (GEN).

SBF	0.26	335	Pg	18 52.70	0.5
IMI	0.35	38	Pd	18 54.38	0.3
			S	18 59.75	
ENR	0.61	349	P	18 58.71	-0.3
			S	19 06.22	
STV	0.64	343	P	18 59.31	-0.4
			S	19 07.25	
FRF	0.69	264	Pg	19 00.50	0.1
			Sg	19 09.80	
ROB	0.69	17	P	19 00.49	0.0
			S	19 09.40	
FIN	0.73	38	P	19 01.04	-0.1
			S	19 10.63	
LMR	0.84	250	Pg	19 02.80	-0.2
			Sg	19 13.60	
LRG	0.91	259	Pg	19 04.20	0.1
			Sg	19 16.60	
RRL	1.41	336	P	19 12.78	0.1
LSD	1.85	351	P	19 18.94	-0.1
LPG	1.96	343	Pg	19 23.80	3.2X
LPL	1.98	342	Pg	19 24.00	3.1X

S.D. = 0.3 on 11 of 13 obs.

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* JUN 29, 1989 04h 56m 34.28± 0.85s
49.923 N ±13.2km 18.628 E ± 7.9km
DEPTH = 10.0km (geophysicist)
CZECHOSLOVAKIA (547)
ML 2.6 (KRA).

KRA	0.86	81	ePg	56 51.20	0.4
			iSg	57 05.20	
SPC	1.28	124	ePn	56 58.00	-0.2
			i(Sg)	57 17.80	
KSP	1.76	303	eP	57 04.00	-0.9
	0.8s		45.00nm		
			iS	57 28.80	
ZST	2.00	211	iP	57 15.70	7.3X
			i	57 30.10	
SRO	2.12	186	eP	58 09.60	59.4X
PSZ	2.17	157	eP	57 10.80	-0.3
PRU	2.64	273	Pg	57 18.60	1.0
			Sg	57 54.50	
BRG	3.14	289	ePg	57 29.00	4.3X
			eSg	58 12.00	

S.D. = 1.0 on 5 of 8 obs.

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* JUN 29, 1989 04h 58m 41.92± 0.85s
31.364 S ± 8.1km 71.624 W ±12.9km
DEPTH = 97.5 ± 14.7 km
NEAR COAST OF CENTRAL CHILE (135)

JACH	1.58	147	iPd	59 08.80	-0.7
			iS	59 29.00	
ROCH	1.69	162	iPd	59 10.50	-0.5
			iS	59 32.00	
PEL	1.94	156	iPd	59 14.10	-0.1
			iS	59 28.10	
LCCH	2.11	179	iP	59 16.10	-0.2
			iS	59 49.10	
SAN	2.24	159	eP	59 19.00	0.9
			iS	59 49.20	
FCH	2.26	150	iPc	59 19.30	0.6
			iS	59 47.30	
TACH	2.36	166	iP	59 20.00	0.3
			iS	59 48.00	
PCH	2.44	158	iPd	59 21.10	0.2
			iS	59 50.00	
ZON	2.52	95	iPd	59 22.00	0.0
LNV	2.59	176	iP	59 22.00	-0.8
			iS	59 52.20	
CHCH	2.69	163	iPd	59 24.70	0.5
			iS	59 56.20	
ANT	7.70	8	eP	00 44.50	11.4X
CNCB	14.86	14	eP	02 09.00	0.2
LPB	15.11	13	(P)	02 07.00	-4.8X
			e	02 22.00	
ZOBO	15.36	13	P	02 15.30	0.2
PPD	20.36	68	eP	03 11.50	-1.3
VAO	23.42	75	eP	03 43.90	0.8

S.D. = 0.7 on 15 of 17 obs.

JUN 29, 1989 05h 25m 51.52± 0.17s
4.497 S ± 4.1km 102.018 E ± 4.4km

DEPTH = 42.4km (20 depth phases)
5.3mb (22 obs.) 5.0Msz (10 obs.)
SOUTHERN SUMATERA (274)
Felt at Bengkulu.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 29C
Centroid Location:
Origin Time 05:25:53.8 0.8
Lat 4.93S 0.05 Lon 101.77E 0.07
Dep 44.5 3.6 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.01 0.06 Mtt=-0.97 0.07
Mff=-0.04 0.11 Mrt= 0.66 0.12
Mrf=-0.50 0.10 Mtf= 0.76 0.07
Principal Axes:

	Val=	Plg=	Azm=
T	1.28	71	52
N	0.37	6	302
P	-1.65	17	210

Best Double Couple:Mo=1.5*10**17
NP1:Strike=290 Dip=28 Slip= 77
NP2: 126 63 97

KLI	2.85	97	ePc	26 38.50	2.8
			e(S)	27 16.00	
			e	27 38.00	
SNG	11.68	353	eP	28 35.50	-3.1X
			eS	30 46.90	
NNT	17.13	352	eP	29 50.00	0.5
MKS	17.40	93	iPd	29 55.00	2.0
PCI	18.15	79	ePc	30 05.30	3.1X
			eS	30 19.50	
NST	20.13	355	eP	30 25.00	0.1
LOE	21.76	359	eP	30 40.50	-1.1
BDT	21.81	352	eP	30 39.40	-2.5
NANU	22.21	145	eP	30 46.50	0.5
			eS	34 41.00	
CHG	23.36	353	ePd	30 56.80	-0.5
	0.9s		24.79nm		4.7mb
MBL	23.95	135	eP	31 03.20	0.2
	0.6s		39.00nm		5.1mb
			e	31 14.00	41km
			eS	35 28.00	
DAV	26.18	64	eP	31 26.00	1.9
OCP	26.80	45	eP	31 25.00	-4.8X
BAG	27.72	41	eP	31 38.00	-0.4
KOD	28.50	301	eP	31 45.50	-0.1
KNA	28.56	115	eP	31 44.00	-1.8
KMI	29.45	1	Pd-	31 55.00	1.1
Z	16s		6.70um		5.4MszX
N	16s		4.20um		
			pP	32 06.00	41km
			S	36 47.00	
MTN	29.92	108	eP	31 56.00	-2.0
GBA	30.31	307	Pd	32 00.70	-0.7
	0.8s		10.10nm		4.6mb
GYA	31.10	8	Pc	32 08.40	0.0
N	15s		4.50um		
E	15s		2.60um		
			pP	32 14.00	20kmX
			S	37 13.00	
SHL	31.46	342	iP	32 11.00	-0.7
			eS	37 16.50	
HYB	31.79	314	eP	32 22.00	7.5X
WARB	31.95	135	eP	32 14.80	-1.0
OZH	33.41	28	eP	32 28.00	-0.4
Z	16s		2.10um		4.9MszX
E	16s		2.40um		
WB5	35.02	119	iPc	32 41.20	-1.2
			eS	38 13.00	
WRA	35.02	119	Pd	32 40.40	-2.0
	0.5s		8.60nm		4.9mb
CD2	35.25	3	P	32 43.40	-0.8
E	15s		4.88um		
			pP	32 54.00	37km
			S	38 14.50	
LSA	35.56	344	P	32 47.80	0.4
PKI	35.68	334	P	32 34.30	-14.0X
GUN	35.78	335	P	32 35.30	-13.9X
DMN	35.85	334	P	32 35.50	-14.2X
KKN	35.93	334	P	32 36.20	-14.1X
ASPA	36.17	125	ePc	32 51.80	-0.4
	0.6s		55.00nm		5.7mb
Z	22s		2.55um		4.9MszX
			e	33 00.20	28kmX
			eS	38 28.20	
			LR	47 48.40	

GKN	36.40	334	P	32 40.30	-13.8X
WHN	36.78	18	P	32 57.50	0.4
N	16s		3.96um		
E	14s		1.63um		
			pP	33 09.00	41km
			PP	34 26.00	
			eS	38 41.00	
XAN	38.88	9	P	33 14.50	-0.3
N	16s		4.90um		
E	14s		3.10um		
			pP	33 26.50	44km
			S	39 08.50	
SSE	39.84	26	P+	33 23.00	0.3
Z	20s		1.40um		4.8Msz
N	14s		3.40um		
			pP	33 34.00	39km
			S	39 26.00	
			sS	39 46.00	
QIS	39.87	117	iPc	33 22.30	-0.8
LZH	40.41	2	Pd	33 27.50	0.0
	2.0s		165.00nm		5.5mb
Z	16s		5.90um		5.5MszX
N	15s		39.00um		
			pP	33 39.50	44km
			eS	39 21.00	
NDI	40.71	326	iPc	33 30.00	0.1
	0.9s		50.42nm		5.3mb
			eS	39 40.00	
TIA	42.89	18	eP	33 46.20	-1.5
Z	20s		3.50um		5.3Msz
N	17s		3.20um		
			PcP	35 38.80	
			S	40 12.00	
TIY	43.10	12	Pc	33 49.80	0.4
N	14s		2.23um		
E	14s		1.65um		
			pP	34 02.00	44km
			ScS	43 36.50	
GTA	43.73	358	iPc	33 55.00	0.4
	1.4s		0.10nm		2.4mb X
Z	16s		3.80um		5.4MszX
N	15s		2.80um		
			sP	34 06.50	
			S	40 21.00	
BTO	45.47	9	P	34 09.00	0.5
N	14s		3.30um		
E	15s		1.60um		
			pP	34 20.00	38km
			eS	40 46.00	
			SS	44 05.50	
ADE	45.49	137	e(P)	34 04.00	-4.7X
	0.9s		62.18nm		5.5mb
ADE	45.49	137	e(P)	34 08.40	-0.3
	0.9s		62.18nm		5.5mb
CTA	45.74	114	iPd	34 08.80	-2.0
	1.0s		92.50nm		5.6mb
			i	34 23.00	54kmX
			i	34 34.10	
			iS	40 53.00	
			iSS	44 20.00	
HHC	45.97	10	iPc	34 13.60	1.2
Z	15s		3.90um		5.5MszX
N	15s		3.70um		
E	14s		1.70um		
			sP	34 24.00	
			S	40 56.00	
STK	46.00	131	eP	34 12.50	-0.2
			e	34 25.00	46km
GUMO	46.17	66	eP	34 09.00	-5.2X
Z	22s		0.52um		4.4Msz
PJG	46.17	66	eP	34 09.50	-4.7X
BJI	46.19	15	Pc+	34 15.00	1.0
Z	16s		5.27um		5.6MszX
N	16s		3.77um		
			epP	34 26.00	38km
			eS	41 00.00	
GUA	46.19	67	eP	34 08.80	-5.6X
DL2	46.84	21	eP	34 19.00	-0.2
Z	17s		3.10um		5.3MszX
			S	41 08.00	
QUE	48.12	318	eP	34 29.00	-0.7
SHK	48.39	34	eP	34 30.50	-0.9
CMS	49.07	128	eP	34 37.00	0.2
BFD	49.30	137	eP	34 39.00	0.6
RMO	49.69	121	eP	34 42.50	0.8
WMO	49.80	346	iPc	34 42.50	0.3
	2.0s		0.80nm		3.4mb X

29d 05h

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      Z  22s      1.40um          4.9Msz
      N  18s      1.20um
                  pP      34 51.00   28kmX
                  S       41 49.00
KSH     49.89 334 iPd     34 44.00    0.9
      E  14s      1.10um
                  sP      34 57.00
                  eS      41 52.00
                  sS      42 10.00
SNY     50.12  21 Pc      34 43.50   -1.0
      Z  19s      3.00um          5.3Msz
      N  18s      1.60um
      E  18s      2.50um
                  S       41 49.50
TOO     51.53 136 eP      34 55.00   -0.5
                  e       36 52.00 652kmX
CN2     52.51  21 iPc     35 01.80   -0.9
        3.0s      0.40nm          2.9mb X
      Z  18s      2.60um          5.3Msz
      N  17s      2.70um
                  ipP     35 13.00   39km
                  iPcP    36 12.40
                  PP      37 00.00
                  S       42 24.00
                  eSS     46 08.00
MAT     53.00  37 eP      35 05.00   -1.5
        0.8s     26.12nm          5.3mb
      Z  20s      0.71um          4.7Msz
                  eS      42 32.00
CAN     53.06 132 iPc     35 06.90   -0.1
BRS     53.39 121 iPd     35 09.80    0.3
                  i       35 22.00   43km
COO     53.59 125 eP      35 12.00    1.0
MDJ     54.79  24 eP      35 19.20   -0.2
TAU     55.39 141 iPc     35 25.40    1.6
MAIO    56.79 319 iPc     35 33.00   -1.2
        1.8s     54.58nm          5.3mb
                  eS      43 30.00
BHD     66.13 309 ePd     36 36.00   -0.9
                  epP     36 51.00   54kmX
                  ePcP    37 18.00
                  eS      45 21.50
                  e       46 05.00
TAB     66.69 315 eP      36 32.00   -8.6X
MSL     68.29 312 ePd     36 49.00   -1.5
MAW     68.39 195 eP      36 59.00    8.4X
MSZ     69.82 136 P       37 01.00    1.3
MBH     72.64 303 eP      37 17.00    0.0
PRNI    72.70 304 ePc     37 17.00   -0.5
BUL     72.89 250 eP      37 17.80   -1.1
SLR     73.41 245 eP      37 04.50  -17.3X
PRY     74.20 243 eP      37 06.00  -20.4X
BBTK    77.16 312 iPc     37 42.00   -0.9
IZM     80.92 310 eP      38 03.50    0.3
EZN     81.95 311 eP      38 08.00   -0.4
JMB     82.35 314 iPc     38 11.00    0.5
ISR     82.99 316 eP      38 15.00    1.2
DIM     83.02 313 eP      38 14.00    0.1
VRI     83.04 317 ePc     38 15.00    1.0
PVL     83.41 314 iPc     38 17.00    1.1
MLR     83.49 317 ePc     38 17.00    0.5
RZN     83.54 313 iPc     38 17.00    0.1
PLD     83.63 313 eP      38 17.00   -0.1
BNG     83.86 275 iPc     38 18.50   -0.3
        0.8s     24.00nm          5.3mb
PGB     84.11 313 iP      38 20.00    0.4
KKB     84.77 313 iPc     38 22.00   -0.8
VTS     84.82 313 iPc     38 23.00   -0.2
VAY     85.05 312 eP      38 23.40   -0.8
SPA     85.53 180 e(P)    38 26.00   -0.4
        1.3s     20.00nm          5.2mb
DEV     85.65 317 eP      38 28.50    1.4
SKO     86.00 312 iP      38 28.00   -0.9
                  i       38 41.00   43km
OHR     86.33 312 e(P)    38 25.70   -5.0X
SUF     87.53 333 iP      38 36.40    0.5
        0.6s      8.10nm          5.1mb
NUR     87.70 331 iP      38 37.20    0.5
      Z  20s      0.90um          5.2Msz
                  LR      22 00.00
SPC     88.00 319 iP      38 39.50    0.8
KRA     88.34 320 eP      38 40.20    0.2
        1.7s    158.00nm          6.0mb
                  e       38 53.90   46km
SOD     88.54 338 iP      38 41.60    0.9
KEV     89.04 340 eP      38 43.00    0.0
        0.9s     20.30nm          5.5mb

SRO     89.07 318 iP      38 45.40    1.8
ZST     89.93 318 eP      38 48.00    0.4
                  i       39 01.50   45km
PTJ     90.45 316 iPc     38 50.90    0.7
VKA     90.46 318 i(P)    38 50.70    0.6
KSP     90.75 321 iP      38 52.70    1.3
VBY     90.90 315 ePc     38 52.60    0.4
PRU     91.78 320 P       38 57.00    0.9
                  e       39 09.50   41km
BRG     92.23 321 iPc     38 58.50    0.3
        2.0s     30.00nm          5.4mb
                  i       39 12.00   45km
KHC     92.34 319 P       38 59.80    1.0
                  e       39 13.50   46km
CLL     92.86 321 eP      39 01.00    0.0
        1.3s     18.00nm          5.3mb
HFS     93.03 330 eP      39 01.80    0.2
        0.5s      1.70nm          4.7mb
      Z  18s      0.30um          4.8Msz
                  LR      23 34.00
MOX     93.70 320 ePKP    39 05.00    0.0
        1.6s     31.00nm          5.5mb
                  e       39 19.00   47km
GRF     93.91 319 e(P)    39 08.00    2.0
      Z  26s      0.05um          3.9MszX
                  e(PP)   42 49.00
                  e       51 28.00
NB2     94.29 331 P       39 07.20   -0.3
        1.3s     13.00nm          5.2mb
INK    106.38  19 ePKP    44 12.00   -0.7
FRB    120.47 355 ePKP    44 39.00   -0.6
PNT    123.13  31 ePKP    44 46.00    0.8
EDM    123.44  25 ePKP    44 45.50   -0.2
DPW    124.76  32 PKP     44 48.50    0.0
WDC    126.27  42 e(PKP)  44 51.40   -0.2
FFC    126.28  17 ePKP    44 50.50   -0.7
        1.8s     59.00nm
SES    126.49  26 ePKP    44 51.00   -0.8
CMB    128.98  43 ePKP    44 57.20    0.3
                  e       45 04.50
SCH    129.02 352 ePKP    44 56.00   -0.4
LRM    129.08  31 ePKP    44 57.40    0.2
KVN    129.98  41 PKP     45 00.00    1.0
BCH    130.58  46 PKP     45 01.00    0.8
TNP    131.09  41 PKP     45 01.50    0.3
ISA    131.50  45 ePKP    45 02.00    0.2
RSON   131.95  13 PKP     45 02.00   -0.1
CLC    132.03  44 ePKP    45 04.00    1.2
SBB    132.45  46 ePKP    45 05.00    1.3
BW06   132.69  32 PKP     45 04.00   -0.1
        1.2s     13.70nm
GSC    132.85  44 ePKP    45 17.00   12.6X
RSSD   134.35  26 PKP     45 04.50   -2.7X
GLA    135.43  46 ePKP    45 11.00    1.7
PV09   135.87  36 PKP     45 09.00   -1.4
PV10   136.01  36 PKP     45 10.00   -0.6
GOL    137.10  31 PKP     45 11.00   -1.6
GLD    137.14  31 PKP     45 11.00   -1.6
VAO    139.20 227 e(PKP)  45 18.00    1.3
ALQ    139.85  37 PKP     45 18.50    0.8
SOB1   140.61 250 e(PKP)  45 19.00   -0.4
PPD    142.90 224 ePKP    45 22.40   -0.8
BAO    144.20 235 ePKP    45 24.50   -1.2
MEO    144.33  30 iPKPc   45 23.00   -2.3
FVM    144.79  17 PKP     45 24.00   -1.9
CBN    146.44 359 ePKP    45 30.00    1.3
BLA    147.36   4 PKP     45 31.00    0.7
JSC    150.21   5 PKP     45 35.00    0.3
CCH    155.32 208 PKP     45 43.80    1.0
ZOBO   157.18 205 PKP     45 43.00   -2.6X
        1.5s     13.44nm
      Z  20s      0.50um          5.3Msz
                  LR      41 52.00
      S.D. = 1.0  on 138 of 159 obs.
-----------------------------------------
    JUN  29, 1989   06h 51m 38.72± 0.54s
    15.772 N ± 3.6km   89.966 W ± 4.6km
    DEPTH =   6.7 ±  3.6 km
    4.9mb ( 19 obs.)  4.0Msz (  1 obs.)
  GUATEMALA                          ( 70)

RDG     0.90 213 iPc      51 55.00   -1.5
SLP     1.07 197 iPc      51 58.75   -0.5
BVA     1.28 211 iPd      52 05.30    2 4
GCG     1.30 205 iPd      52 03.00   -0.2
MMG     1.41 209 ePc      52 05.00   -0.1
REC     1.43 202 iPd      52 05.30    0.0

ITG     1.44 216 iP       52 05.50   -0.1
PCG     1.53 206 iPc      52 07.00    0.2
FUG     1.56 213 iPc      52 06.50   -0.7
IXG     1.66 197 iPd      52 09.60    1.1
MYT     1.72 183 eP       52 09.00   -0.4
LHG     1.77 222 iPd      52 15.00    5.0X
SOG     1.85 238 iPd      52 13.00    1.5
PSG2    1.99 205 ePd      52 08.50   -4.6X
TPX     2.38 249 iP       52 20.50    1.7
                 iS       52 59.00
SCX     2.74 291 iP       52 25.00    1.1
                 iS       53 09.00
OXX     6.61 282 iP       53 19.00   -0.1
                 iS       54 29.00
LVVM    7.33 304 (P)      53 26.00   -2.8X
IISM    7.76 295 (P)      53 34.00   -0.9
SRA     7.80 136 iPd      53 38.60    3.0X
SJS     8.17 134 iPd      53 44.50    3.7X
IIT     8.59 293 (P)      54 03.00   16.2X
III     9.45 287 (P)      53 57.00   -1.6
ACX     9.56 278 (P)      53 58.00   -1.9
CRX     9.94 293 (P)      54 11.00    5.5X
MRX    11.39 292 (P)      54 31.00    6.1X
JSC    20.03  21 P       56 14.80   -0.3
MEO    20.45 339 iPd      56 18.70   -1.0
FVM    22.13 359 P        56 36.80    0.2
        0.8s     18.94nm          4.6mb
BLA    22.97  20 P        56 45.50    0.5
        1.0s     30.00nm          4.8mb
ALQ    24.15 325 iPc      56 58.50    1.8
        1.0s     22.50nm          4.7mb
                 e        57 04.50
CBN    24.95  24 eP       57 07.00    2.9X
GLD    27.36 334 P        57 26.90    0.2
        1.2s     60.61nm          5.2mb
GOL    27.38 334 P        57 27.00    0.0
        0.8s      7.44nm          4.5mb
PV10   28.09 327 P        57 32.50   -0.9
PV09   28.23 327 P        57 35.70    0.9
GLA    28.32 312 P        57 35.60    0.3
RSSD   30.68 340 P        57 56.70    0.2
BW06   31.72 332 P        58 04.70   -1.0
TNP    32.71 318 P        58 15.10    0.7
        0.7s      2.78nm          4.3mb
KVN    33.84 319 P        58 25.00    0.8
CMB    34.78 315 eP       58 32.70    0.6
RSON   35.13 356 P        58 34.00   -0.8
        0.8s     48.08nm          5.4mb
LRM    35.39 332 eP       58 37.60    0.1
ZOBO   38.45 145 P        59 03.00   -0.8
        1.2s     12.84nm          4.5mb
SES    38.50 338 eP       59 03.00   -0.4
LPB    38.68 145 P        59 07.00    1.4
CNCB   38.97 145 P        59 09.00    0.8
DPW    39.57 330 P        59 12.60    0.3
FFC    39.98 349 eP       59 16.50    1.0
        1.0s     24.00nm          4.8mb
PNT    41.25 331 eP       59 27.00    0.9
EDM    41.65 339 iPc      59 29.90    0.6
        0.8s     46.00nm          5.3mb
ATB    41.86 114 e(P)     59 30.60   -0.8
SCH    42.90  20 eP       59 38.00   -1.5
YKC    49.75 345 eP       00 33.60    0.1
YKA    49.79 345 eP       00 34.10    0.2
FRB    50.17  12 eP       00 35.00   -1.7
PPD    53.35 134 eP       00 58.50   -2.8X
                 epP      01 00.40    6kmX
SOB1   54.56 114 eP       01 09.40   -0.9
VAO    57.05 132 eP       01 26.40   -1.8
                 epP      01 28.00    5kmX
INK    59.32 343 eP       01 43.00   -0.4
PMR    61.76 332 P        02 00.00   -0.1
        1.2s     18.18nm          5.1mb
MBC    62.42 352 ePc      02 03.50   -0.8
        0.9s     34.00nm          5.6mb
FBA    62.42 336 P        02 04.30   -0.2
        0.7s      3.49nm          4.7mb
ALE    67.68   4 eP       02 37.00   -1.3
        0.7s      8.00nm          5.0mb
DAG    70.47  13 eP       02 55.00   -0.5
EKA    75.39  36 Pc       03 23.60   -1.2
        0.7s     10.00nm          5.0mb
NB2    81.66  29 P        03 59.20    0.3
        0.8s      6.90nm          4.8mb
HFS    83.11  29 eP       04 07.00    0.6
        0.6s      1.90nm          4.5mb
      Z  19s      0.07um          4.0Msz
```

			LR	35 40.00		
TIC	83.38	85	P	04 09.40	0.7	
LIC	83.48	85	P	04 10.00	0.8	
KIC	83.72	85	P	04 11.10	0.7	
KEV	84.19	18	iP	04 13.00	1.2	
	0.7s	17.40nm		5.4mb		
SOD	85.28	20	iP	04 18.00	0.7	
KHC	86.82	40	iP	04 26.50	1.2	
SUF	87.45	24	iP	04 28.30	0.3	
	0.7s	18.60nm		5.5mb		
HYB	145.13	19	ePKP	11 18.50	-1.1	
BDT	146.02	345	ePKP	11 21.00	0.0	
	0.6s	27.90nm				
GBA	148.27	24	PKPc	11 27.10	2.4	
	0.7s	8.20nm				

S.D. = 1.0 on 69 of 79 obs.

JUN 29, 1989 07h 52m 36.42± 0.83s
38.625 N ± 9.1km 25.158 E ± 6.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.0 (ATH).

PRK	1.07	54	ePb	52 55.70	-0.8	
ATH	1.31	241	ePb	53 00.50	-0.1	
EZN	1.50	37	iPn	53 01.80	-1.6	
NEO	1.65	295	ePb	53 05.70	0.1	
IZM	1.67	97	ePn	53 05.00	-0.8	
PLG	2.19	323	ePn	53 12.80	-0.6	
RDO	2.54	6	ePb	53 21.00	2.8	
EDC	2.71	50	ePn	53 22.00	1.2	
BNT	2.75	50	ePn	53 23.00	1.6	
ITM	2.93	242	ePn	53 24.50	0.5	
KDZ	3.03	4	eP	53 24.00	-1.3	
VAY	3.35	324	ePn	53 40.00	10.2X	
KKB	3.61	335	eP	53 33.00	-0.5	
JMB	3.99	15	eP	53 25.00	-13.9X	
PVL	4.59	2	eP	53 47.00	-0.4	

S.D. = 1.4 on 13 of 15 obs.

% JUN 29, 1989 10h 32m 54.66± 1.01s
60.524 N ± 5.0km 4.840 E ±10.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK	0.18	103	iPg+	32 58.67	0.0	
			eSg	33 01.59		
SUE	0.54	356	iP	33 05.39	-0.1	
			eS	33 12.65		
HYA	0.92	45	iP	33 12.09	-0.2	
			iS	33 25.11		
ODD1	1.08	124	iP	33 15.05	0.0	
			eS	33 31.21		
KMY	1.33	171	eP	33 19.18	0.0	
			eS	33 36.45		
BLS1	1.51	138	eP	33 21.92	0.0	
			eS	33 42.20		
MOL	2.43	31	iP	33 35.24	0.3	
			eS	34 03.00		

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

JUN 29, 1989 10h 40m 02.70± 0.31s
44.411 N ± 2.2km 7.242 E ± 2.9km
DEPTH = 11.0 ± 3.3 km
NORTHERN ITALY (545)
ML 3.2 (LDG), 2.8 (GEN), 3.2 (ROM).

DOI	0.09	2	P	40 06.30	0.8	
			eSg	40 08.30		
STV	0.18	160	Pd	40 07.31	0.5	
			S	40 09.80		
ENR	0.22	145	Pc	40 08.05	0.5	
			S	40 11.14		
FOUF	0.35	290	iPg	40 09.92	0.0	
			eSg	40 14.36		
TOUF	0.40	179	Pg	40 11.00	0.0	
AUTN	0.44	162	Pg	40 11.60	-0.1	
			Sg	40 17.59		
ROB	0.47	104	Pc	40 12.39	0.2	
			S	40 18.93		
SAOF	0.48	152	Pg	40 12.20	-0.3	
			Sg	40 18.80		
MVIF	0.52	187	Pg	40 13.00	-0.3	
			Sg	40 20.00		
AURF	0.53	173	Pg	40 13.20	-0.2	
			Sg	40 20.80		
SBF	0.57	166	Pg	40 14.50	0.3	
RRL	0.60	327	P	40 14.56	-0.4	
			S	40 22.83		
IMI	0.68	137	P	40 15.99	-0.2	
			S	40 25.18		
CALN	0.71	201	Pg	40 16.80	0.2	
FIN	0.72	106	P	40 16.70	-0.1	
			S	40 26.29		
CKI	0.74	89	P	40 17.10	-0.1	
			eSg	40 27.30		
BNI	0.76	328	Pc	40 17.60	0.1	
			eSg	40 28.50		
FRF	0.95	207	Pg	40 21.80	1.1	
LSD	1.05	357	P	40 22.47	-0.1	
			S	40 35.71		
LRG	1.15	214	Pn	40 24.40	0.3	
			Pg	40 25.00		
			Sg	40 39.40		
LMR	1.20	206	Pn	40 24.00	-1.0	
			Sg	40 40.20		
BGF	3.76	306	Pn	41 02.20	0.3	

S.D. = 0.5 on 22 of 22 obs.

JUN 29, 1989 10h 55m 39.80± 1.97s
0.405 S ± 7.0km 124.388 E ±10.6km
DEPTH = 82.2 ± 19.4 km
4.7mb (6 obs.)
MOLUCCA SEA (269)

PCI	4.58	264	ePd	56 48.50	0.4	
			eS	57 08.80		
MKS	6.85	226	iPc	57 19.00	-0.6	
KLI	20.00	257	eP	00 10.50	2.1	
			e	01 02.00		
WB5	21.68	154	iPd	00 24.00	-1.5	
			i	00 29.00		
			eS	04 26.20		
WRA	21.73	154	Pc	00 23.80	-2.1	
	0.7s	3.90nm		3.9mb		
NANU	23.65	201	eP	00 46.30	1.7	
QIZ	24.02	324	eP	00 49.80	1.6	
ASPA	24.90	159	iPd	00 57.00	0.3	
	0.9s	23.00nm		4.6mb		
Z	22s	0.20um		3.6MszX		
		LR		10 03.30		
QIS	24.95	144	iPd	00 58.20	1.1	
	0.5s	22.00nm		4.8mb		
WARB	25.72	175	eP	01 05.00	0.7	
FORR	30.48	174	eP	01 46.70	-0.3	
CHG	31.45	309	eP	01 55.70	-0.1	
	1.0s	12.00nm		4.6mb		
GYA	31.70	329	P	01 58.60	0.6	
CD2	36.80	330	eP	02 41.60	0.1	
XAN	37.21	339	P	02 44.80	-0.2	
TSRJ	37.36	16	P	02 47.00	0.9	
CHJJ	38.73	19	P	02 57.40	-0.3	
MAT	38.94	18	eP	02 59.00	-0.4	
	0.9s	17.65nm		5.0mb		
TIY	39.50	345	iPc	03 05.00	0.9	
BJI	40.95	350	eP	03 15.00	-0.8	
CAN	41.63	149	eP	03 26.00	4.5X	
MDJ	45.06	5	eP	03 49.50	0.3	
GTA	45.57	333	eP	03 53.60	0.2	
GUN	46.43	310	P	04 00.50	-0.2	
KKN	46.83	310	P	04 01.30	-2.4	
DMN	46.87	310	P	04 03.90	-0.2	
GKN	47.43	310	P	04 07.20	-1.2	
HYB	48.46	294	eP	04 14.00	-2.4	
WMQ	54.86	328	P	05 03.00	-1.0	
NAI	87.58	269	iPc	08 25.50	4.5X	
	1.0s	9.00nm		4.8mb		
INK	94.84	21	eP	08 54.00	0.7	
BUL	95.29	250	eP	08 57.00	0.5	
MBC	96.47	12	eP	09 02.50	1.8	
ZOBO	159.34	144	PKP	15 48.00	16.7X	

S.D. = 1.2 on 31 of 34 obs.

% JUN 29, 1989 11h 43m 57.58± 0.92s
36.588 N ± 7.2km 5.788 W ± 9.0km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

ALJ	0.17	60	iP	44 03.00	1.5	
MOMI	0.27	168	iP	44 03.00	-0.3	
GIBL	0.27	331	iP	44 03.50	0.2	
CNIL	0.30	224	iP	44 04.00	0.1	
LIJA	0.43	44	iP	44 05.00	-1.4	
SRQ	0.47	135	iP	44 09.00	1.9X	

S.D. = 1.5 on 5 of 6 obs.

JUN 29, 1989 12h 29m 04.57± 0.74s
39.953 N ± 7.4km 28.256 E ± 7.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT	0.48	327	iPg	29 15.60	1.3	
			iSg	29 22.10		
EDC	0.50	323	iPg	29 14.70	0.1	
			iSg	29 21.20		
GBZT	1.23	47	ePn	29 26.60	-0.9	
EZN	1.49	266	iPn	29 31.80	0.4	
GPA	1.61	77	ePn	29 21.00	-12.1X	
ALT	1.69	121	iPn	29 34.00	-0.4	
IZM	1.73	207	ePn	29 34.00	-1.0	
KHL	1.90	148	iPn	29 39.20	1.8	
VAY	4.54	289	ePn	30 13.50	-1.3	
SKO	5.54	294	ePn	30 06.50	-22.6X	
MLR	5.79	344	ePd	30 36.50	3.8X	

S.D. = 1.3 on 8 of 11 obs.

& JUN 29, 1989 12h 32m 31.91s
59.404 N 156.196 W
DEPTH = 14.6km
SOUTHERN ALASKA (2)
<AGS-P>.

CDD	1.40	109	eP	32 55.34	-1.5	
OPT	1.53	79	eP	32 57.39	-1.4	
			S	33 16.75		
SVW	1.73	9	eP	33 01.53	-0.2	
			S	33 24.46		
ILIM	1.77	66	eP	33 00.43	-1.9	
RED	2.00	58	eP	33 04.59	-1.1	
			S	33 29.76		
RDT	2.24	57	eP	33 07.26	-1.8	
			S	33 35.43		
SPU	2.73	47	eP	33 14.93	-1.1	
	7 obs. ossocioted					

JUN 29, 1989 12h 38m 37.17± 0.41s
14.040 N ± 6.7km 91.564 W ± 4.6km
DEPTH = 62.4km (16 depth phases)
5.1mb (11 obs.)
GUATEMALA (70)
Felt strongly in southwestern Guatemala. Felt (III) at Guatemala City. Also felt at Puerto Borrios.

JAT	0.29	346	iP	38 49.00	1.5	
SOG2	0.67	360	eP	38 52.40	0.9	
PSG2	0.73	97	P	38 43.90	-8.1X	
SOG	0.73	358	eP	38 53.50	1.1	
OC2	0.79	311	iP	38 54.00	1.2	
FUG	0.81	60	iPd	38 54.50	1.3	
ITG	0.89	51	iPc	38 56.00	1.7	
TER	0.89	73	iP	38 55.20	1.1	
MMG	0.99	60	iPd	38 57.00	1.4	
REC	1.08	69	iPd	38 58.00	1.3	
BVA	1.09	55	iP	38 59.50	2.5X	
TPX	1.09	322	iP	38 57.00	0.3	
			iS	39 13.00		
GCG	1.14	61	eP	39 00.00	2.5X	
			S	39 15.00		
SLP	1.42	60	iP	39 04.00	2.6X	
RDG	1.43	48	iP	39 04.00	2.5X	
MYT	1.46	90	iPd	39 03.80	2.0	
YUP	1.72	84	iP	39 06.80	1.4	
SCX	2.87	339	iP	39 25.00	3.5X	
			iS	40 05.00		
OXX	5.82	302	iP	40 04.50	1.4	
			iS	41 15.00		
LVVM	7.35	321	(P)	40 21.00	-3.1X	
IISM	7.43	312	eP	40 25.50	0.1	
			iS	41 48.00		
SRA	7.99	119	iPd	40 33.90	0.7	
IIT	8.14	308	(P)	40 41.50	6.1X	
SJS	8.40	118	eP	40 38.50	-0.4	
ACX	8.48	290	iP	40 40.00	0.2	
LCR2	8.54	119	iPc	40 41.00	0.1	
ICR	8.57	117	eP	40 42.30	0.8	
III	8.73	301	eP	40 44.00	0.5	
			iS	42 29.00		

29d 12h

IIC	9.31	309	(P)	40	58.00	6.5X
CRX	9.43	306	(P)	41	07.50	14.4X
MRX	10.80	303	iP	41	14.00	2.5
GCM	11.06	60	P	41	17.15	2.1X
OLY	21.37	0	P	43	18.80	-2.5
			pP	43	36.00	79kmX
MEO	21.61	344	iPc	43	21.50	-2.2
PRM	21.63	21	P	43	23.00	-0.9
JSC	22.21	23	P	43	28.00	-1.6
			pP	43	45.20	78kmX
GBTN	22.53	16	P	43	31.80	-1.0
			pP	43	51.00	88kmX
LHS	22.56	24	P	43	32.20	-0.8
TKL	22.64	17	P	43	33.30	-0.5
			pP	43	51.00	80kmX
FVM	23.87	2	P	43	43.20	-2.6
			pP	44	00.00	73kmX
ALQ	24.77	330	iPd	43	55.90	1.1
	0.9s		10.08nm			4.3mb
			epP	44	11.30	66km
			e	51	06.80	
GOL	28.30	337	P	44	26.50	-0.6
	0.7s		9.10nm			4.5mb
GLA	28.40	316	eP	44	32.00	4.2X
			e	44	44.00	46kmX
TPC	29.84	316	eP	44	42.00	1.2
			e	44	57.00	61km
PLM	29.97	314	eP	44	43.00	0.9
			e	44	57.00	56km
MSU	30.44	327	P	44	46.80	0.5
RVR	30.68	315	eP	45	03.00	14.9X
TBR	30.94	26	P	44	47.40	-2.9X
GSC	31.05	317	eP	45	01.00	9.5X
			e	45	09.00	28kmX
SBB	31.38	316	eP	44	55.00	0.7
			e	45	10.00	61km
CLC	31.87	318	eP	45	00.00	1.3
			e	45	15.00	61km
ISA	32.37	316	eP	45	07.00	4.0X
			e	45	19.00	46kmX
TNP	33.02	321	P	45	09.80	1.0
			pP	45	25.00	61km
PTN	33.55	22	P	45	10.00	-3.0X
KVN	34.17	322	P	45	19.30	0.5
			pP	45	35.70	67km
CMB	34.98	318	eP	45	26.00	0.5
			e	45	41.40	62km
			e	47	56.60	
			e	48	14.00	
ARN	35.35	317	P	45	31.00	2.4X
			pP	45	45.50	56km
LRM	36.25	335	eP	45	35.80	-0.6
			e	48	00.90	
MIM	36.49	27	P	45	35.60	-2.4
RSON	36.76	358	P	45	36.20	-4.1X
	0.8s		48.08nm			5.5mb
			pP	45	53.60	70km
ZOBO	37.99	142	P	45	50.00	-1.6
			LR	58	04.00	
LPB	38.21	142	(P)	45	47.00	-6.3X
			eLR	58	10.00	
CNCB	38.50	142	P	45	55.00	-0.9
			i	48	08.20	
FHC	38.85	320	P	45	59.00	1.0
	0.8s		47.06nm			5.4mb
			pP	46	15.50	66km
LON	41.28	328	P	46	18.40	0.5
			pP	46	34.40	63km
FFC	41.40	351	eP	46	18.00	-0.8
	0.6s		5.00nm			4.5mb
PNT	42.03	333	iPd	46	24.50	0.5
	0.7s		40.00nm			5.3mb
			pP	46	40.00	61km
EDM	42.73	341	ePc	46	27.50	-2.3
PGC	43.37	329	eP	46	35.00	0.1
SCH	45.04	20	iPc	46	45.00	-3.4X
	0.6s		49.00nm			5.5mb
YKA	51.08	346	eP	47	33.30	-1.8
FRB	52.18	13	eP	47	39.00	-4.4X
BAO	52.20	123	e(P)	47	27.00	-17.3X
PPD	53.32	132	eP	47	49.20	-3.2X
			epP	48	08.70	77kmX
SOB1	55.32	112	eP	48	04.40	-2.8X
			e	48	21.00	63km
VAO	57.10	130	e(P)	48	18.00	-1.9
			e(pP)	48	38.00	79kmX
INK	60.52	343	ePc	48	39.80	-3.0X
			pP	48	56.00	61km
TOA	61.50	334	eP	48	49.20	-0.5
PMR	62.57	333	eP	48	55.20	-1.4
	0.7s		14.30nm			5.2mb
KDC	62.85	328	eP	48	57.90	-0.6
FBA	63.37	337	eP	49	00.00	-1.9
MBC	63.93	353	ePc	49	02.40	-3.0X
	0.9s		17.00nm			5.0mb
SVW	65.36	331	eP	49	13.30	-1.6
TTA	66.05	333	P	49	17.00	-2.4X
	0.9s		26.67nm			5.2mb
			pP	49	34.20	64km
ALE	69.50	4	eP	49	37.00	-3.5X
DAG	72.50	13	eP	49	55.00	-3.7X
HFS	85.36	29	eP	51	05.90	-2.7X
	0.4s		2.30nm			4.6mb
	Z 22s		0.11um			4.2Msz
			LR	20	07.00	
KHC	89.13	39	eP	51	27.50	0.3
ITM	99.43	48	eP	52	18.40	3.8X
WB5	135.79	256	ePKP	57	53.30	0.0
WRA	135.81	256	PKP	57	54.00	0.7
	0.8s		2.20nm			
CHG	145.75	342	iPKPd	58	10.10	-1.0
	1.0s		19.00nm			
LOE	146.11	337	ePKP	58	12.00	0.3
BDT	147.21	341	ePKP	58	13.20	-0.2
	0.6s		60.70nm			
HYB	147.26	18	ePKP	58	13.50	-0.1
NST	148.29	338	ePKP	58	20.00	4.8X
GBA	150.45	22	PKPc	58	21.80	3.3X
	0.8s		10.70nm			

S.D. = 1.3 on 63 of 97 obs.

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* JUN 29, 1989 12h 51m 20.66± 0.89s
36.620 N ±10.5km 26.819 E ± 9.2km
DEPTH = 33.0km (normol)
DODECANESE ISLANDS (369)

KAP	1.11	165	eP	51	41.80	1.9
YER	1.28	66	iPn	51	45.70	3.3X
NPS	1.67	216	eP	51	47.50	-0.5
			eS	52	08.50	
IZM	1.81	11	iPn	51	51.30	1.2
KSL	2.29	102	eP	51	56.30	-0.5
VAM	2.44	241	eP	51	58.30	-0.8
ELL	2.49	86	iPn	51	59.40	-0.4
KHL	2.74	51	ePn	52	00.17	-3.2X
BCK	3.13	73	ePn	52	08.00	-0.9

S.D. = 1.4 on 7 of 9 obs.

JUN 29, 1989 13h 19m 24.62± 0.78s
46.472 N ± 7.2km 9.227 E ± 6.5km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)

VDL	0.17	85	iPc	19	28.80	0.2
LLS	0.43	338	iPc	19	31.50	-1.9
TMA	0.44	214	iPd	19	33.90	0.2
OSS	0.67	71	iPd	19	37.70	-0.3
MMK	0.97	245	iPc	19	42.70	-0.5
ZLA	1.16	331	ePc	19	48.50	2.1
DIX	1.32	253	ePc	19	49.10	-0.1
SLE	1.39	339	iPd	19	50.30	0.3

S.D. = 1.3 on 8 of 8 obs.

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* JUN 29, 1989 13h 26m 34.77± 0.92s
37.985 N ± 8.1km 26.924 E ±13.6km
DEPTH = 33.0km (normol)
DODECANESE ISLANDS (369)
MD 3.3 (ATH).

IZM	0.49	33	iPg	26	45.60	0.3
			eSg	26	57.60	
PRK	1.36	338	ePb	26	56.20	-1.4
YER	1.37	128	ePn	26	57.50	-0.4
EZN	1.90	346	ePn	27	06.50	1.1
KHL	2.08	80	ePn	27	14.00	5.9X
NPS	2.91	202	ePb	27	20.20	0.3

S.D. = 1.3 on 5 of 6 obs.

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* JUN 29, 1989 13h 42m 41.85± 0.76s
62.664 S ± 8.8km 165.105 E ±27.7km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.) 4.5Msz (1 obs.)
BALLENY ISLANDS REGION (702)

SBA	15.27	179	Pd	46	19.40	0.7
MSZ	18.10	6	P	46	54.30	-0.3
SNZO	22.14	19	eP	47	40.00	1.1
			S	51	48.00	
SPA	27.49	180	e(P)	48	30.00	0.0
	1.0s		10.00nm			4.5mb
ASPA	44.27	317	eP	50	52.80	-0.2
	Z 20s		0.55um			4.5Msz
			LR	06	21.50	
ZOBO	91.06	130	P	55	47.00	-1.3
	Z 24s		0.20um			4.5MszX
			LR	26	20.00	
MBC	146.48	25	ePKP	02	24.00	2.7X
OHR	149.81	241	ePKP	02	48.50	20.9X
SKO	150.27	243	ePKP	02	29.50	1.3X

S.D. = 1.1 on 6 of 9 obs.

% JUN 29, 1989 16h 21m 17.24± 0.95s
60.543 N ± 5.2km 5.037 E ±11.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.6 (BER).

ASK	0.10	127	iPg+	21	20.35	0.4
			eSg	21	22.27	
BER	0.22	137	eP	21	21.17	-0.8
			eSg	21	25.69	
SUE	0.53	345	iP	21	27.75	-0.3
			eS	21	35.50	
HYA	0.84	41	iP	21	33.27	-0.2
			eS	21	45.05	
ODD1	1.02	128	eP	21	36.58	0.1
			eS	21	51.43	
KMY	1.34	175	eP	21	42.04	0.2
			eS	21	59.37	
MOL	2.36	29	eP	21	57.08	0.4
			eS	22	24.89	

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

JUN 29, 1989 17h 21m 08.12± 0.38s
13.590 N ± 2.5km 58.592 W ± 2.3km
DEPTH = 12.7 ± 2.1 km
5.0mb (41 obs.)
NORTH ATLANTIC OCEAN (402)
ML 4.7 (FDF).

SLW	2.32	281	iP	21	46.04	-0.6
MVM	2.43	293	iPc	21	47.91	-0.3
			S	22	17.40	
CRM	2.53	297	iPc	21	49.80	0.2
SSV	2.54	264	iP	21	49.85	0.0
SVV	2.57	264	iP	21	50.10	0.0
BIM	2.58	291	iPc	21	50.06	-0.2
SVB	2.61	263	iP	21	50.59	-0.1
FDF	2.73	295	iPc	21	52.45	0.0
	0.2s		18.50nm			
			S	22	23.60	
DTMT	3.13	302	eP	21	58.25	0.1
DPMT	3.17	302	eP	21	59.13	0.4
BOT	3.18	221	iP	21	59.13	0.3
TPR	3.20	222	eP	21	59.95	0.8
PIG	3.26	223	eP	22	00.84	0.8
			iS	22	33.24	
BBL	3.39	305	ePd	22	02.07	0.2
			S	22	39.90	
MGG	3.51	312	eP	22	03.11	-0.3
DEG	3.61	319	ePc	22	04.31	-0.6
			S	22	39.60	
SFG	3.65	317	eP	22	05.20	-0.4
PAG	3.85	309	eP	22	08.22	-0.2
			S	22	50.00	
TBH	3.92	218	iP	22	10.41	1.0
			eS	22	49.95	
TRN	4.01	224	iP	22	11.15	0.5
			iS	22	52.27	
TCE	4.22	227	eP	22	14.39	0.7
			eS	22	57.25	
TPP	4.29	221	eP	22	15.37	0.8
BPA	4.66	318	ePc	22	18.94	-1.0
			S	23	08.50	
MGH	4.68	312	ePc	22	20.09	-0.1
ANG	4.72	319	eP	22	20.27	-0.5
CPB	5.09	323	iP	22	13.12	-12.8X
NEV	5.21	313	eP	22	27.00	-0.7
BMG	15.65	247	eP	24	49.00	-1.1
BOG	17.67	241	eP	25	23.50	7.4X
			eS	28	34.00	

ATB	17.92	159	Pc	25	10.00	-8.8X	PNT	61.00	319	eP	31	24.00	0.4	MLR	76.64	46	ePc	33	01.00	0.4
PSO	22.26	238	eP	26	05.00	-2.0	AVF	61.06	44	iPd	31	24.10	0.1				e	36	02.00	
SOB1	28.66	141	eP	27	05.90	-1.1		0.8s		8.00nm			4.9mb	JMB	77.43	49	iPd	33	05.00	0.1
			e	27	16.90		SSF	61.22	44	iPd	31	24.80	-0.3	FBA	77.47	334	P	33	04.80	0.2
JSC	29.09	319	P	27	11.40	0.8		0.8s		15.30nm			5.2mb		0.8s		16.38nm			5.2mb
BAO	30.87	160	eP	27	26.50	-0.2	SMF	61.36	44	iPd	31	26.20	0.1	PMR	78.42	331	P	33	09.90	0.0
ZOBO	31.13	198	iPd	27	29.00	-0.5		0.8s		12.00nm			5.1mb		0.8s		5.17nm			4.6mb
	0.9s		65.96nm			5.5mb	LOR	61.49	43	iPd	31	26.70	-0.3	IMA	79.75	336	ePd	33	17.80	0.5
Z	20s		0.32um			4.0MszX		0.8s		16.10nm			5.2mb		0.8s		13.70nm			5.0mb
			S	33	16.00		LBF	61.52	44	iPd	31	26.80	-0.4	KDC	80.70	327	eP	33	22.80	0.6
			SS	36	44.00			1.0s		16.80nm			5.2mb	SVW	81.59	331	ePd	33	27.30	0.4
			LR	38	30.00		WDC	61.54	309	eP	31	25.10	-2.3	BUL	92.03	110	iPd	34	18.90	0.2
NNA	31.20	216	iPd	27	28.20	-1.3	LON	61.91	316	P	31	29.40	-0.5		0.9s		8.40nm			5.1mb
LPB	31.37	198	P	27	32.10	0.6	SNF	62.44	40	eP	31	44.20	11.0X	GKN	125.43	41	PKP	40	10.60	-0.8
	1.0s		160.00nm			5.9mb	DOU	62.54	40	Pc	31	33.80	-0.1		1.0s		25.00nm			
TKL	31.56	319	P	27	34.60	2.1				e	31	45.10		KKN	125.98	40	PKP	40	11.60	-1.0
CNCB	31.60	197	iPd	27	33.50	-0.1	YKC	62.60	334	ePd	31	33.00	-1.1	PKI	126.22	40	PKP	40	12.00	-1.2
GBTN	31.85	318	P	27	35.20	0.1	FHC	62.66	309	P	31	35.00	0.1	MAT	127.68	343	ePKP	40	14.00	-1.3
ARE	32.47	204	eP	27	38.00	-2.9X		0.6s		19.23nm			5.5mb		0.7s		5.48nm			
PWLA	34.07	314	P	27	56.60	2.2	YKA	62.67	334	eP	31	34.10	-0.4	GBA	128.74	60	PKPd	40	16.50	-1.3
CBM	34.19	348	P	27	55.70	0.5	LPG	63.17	46	eP	31	39.30	0.7		0.4s		3.00nm			
PPD	36.11	168	eP	28	10.90	-1.0		0.8s		6.70nm			4.9mb	NNT	146.26	40	ePKP	40	45.00	-4.9X
FVM	37.26	316	P	28	22.30	0.8	HAU	63.28	43	eP	31	38.80	-0.1	CNB	146.80	224	ePKP	40	52.00	1.7
SCH	41.63	353	eP	28	59.00	1.5		0.8s		5.30nm			4.8mb	CAN	147.05	224	ePKP	40	52.80	2.1
MEO	41.77	307	iPd	28	59.00	0.0	WLF	63.45	41	Pc	31	40.20	0.3	TOO	147.90	218	iPKPc	40	55.00	3.0X
RSON	46.78	330	P	29	38.60	-0.5				e	31	51.10		RMQ	151.36	239	ePKP	40	58.00	0.5
	0.6s		13.59nm			5.2mb	SBF	63.45	48	eP	31	40.20	0.1				i	41	05.00	
ALQ	48.01	305	iPd	29	50.00	0.8		0.8s		8.00nm			4.9mb	ASPA	164.50	228	ePKP	41	12.00	-1.3
	1.0s		15.25nm			5.0mb	ENN	63.51	40	eP	31	40.00	-0.3		0.9s		12.00nm			
			e	29	57.90			0.8s		6.00nm			4.8mb	WRA	166.10	241	PKPc	41	14.60	0.0
			e	31	17.60					i	31	51.80			0.8s		6.20nm			
GOL	48.53	311	P	29	53.80	0.6	MEM	63.53	40	eP	31	51.80	11.4X	WB5	166.11	242	ePKP	41	12.70	-2.0
	0.8s		10.42nm			4.9mb	BSF	63.55	43	eP	31	40.20	-0.6		S.D. = 0.8		on 153 of 167 obs.			
FRB	50.58	354	eP	30	08.00	-0.2	CDF	63.96	43	eP	31	43.20	-0.3	---						
BW06	52.49	314	P	30	23.40	0.0	WTS	64.29	39	eP	31	45.50	0.1		JUN 29, 1989 17h 33m 50.97± 0.43s					
	0.7s		27.78nm			5.3mb		0.9s		10.00nm			5.0mb		51.438 N ± 2.9km			16.120 E ± 2.8km		
DAU	53.05	311	P	30	28.80	1.1				e	31	56.50			DEPTH = 14.3 ± 2.6 km					
FFC	53.12	330	eP	30	26.50	-1.1	FEL	64.37	43	ePd	31	45.59	-0.6		4.7mb (4 obs.)					
	0.6s		7.00nm			4.8mb	WIT	64.37	38	eP	31	58.00	12.1X	POLAND						(548)
MSU	53.30	308	P	30	30.60	1.2	A8H	64.37	41	eP	31	46.04	0.0		ML 4.7 (GRF), 4.7 (VKA), 4.6					
IMW	53.79	315	P	30	32.80	-0.2	TNS	65.00	41	ePc	31	50.50	0.3		(KBA).					
VAL	54.31	35	eP	30	36.00	-0.3	GRF	66.71	42	eP	32	00.80	-0.2							
GLA	54.51	301	eP	30	39.00	0.8				e	32	12.50		KSP	0.61	170	iP	34	02.60	-0.2
HPI	55.24	314	P	30	44.00	0.3				e	32	19.50					iS	34	10.50	
LRM	55.39	317	eP	30	45.10	0.4	BHG	67.61	44	iPd	32	12.80	6.0X				i	34	16.20	
TPC	55.64	302	eP	30	47.00	0.5	WET	67.73	42	iPc	32	07.50	0.0	BRG	1.48	248	ePn	34	17.30	0.2
SES	56.03	322	ePd	30	48.70	-0.3	CLL	68.01	40	eP	32	09.00	-0.2				iPg	34	19.70	
PLM	56.23	301	eP	30	51.00	0.1				e	32	20.00					iSg	34	38.40	
GSC	56.41	303	eP	30	52.00	0.0	KHC	68.18	42	iP	32	10.50	0.1	PRU	1.76	215	iPnd	34	22.10	0.9
DLE	56.92	34	eP	30	55.40	0.2				i	32	21.80					ePg	34	23.50	
DMU	56.97	34	eP	30	55.70	0.1	NB2	68.45	29	P	32	12.20	0.4				Sg	34	45.20	
CLC	57.11	304	eP	30	56.00	-1.0		0.9s		7.00nm			4.8mb	CLL	1.96	267	iPnd	34	24.80	0.8
SBB	57.17	303	eP	30	58.00	0.6	CEY	68.56	46	e(P)	32	16.50	3.7X		1.1s		210.00nm			
ISA	57.80	304	eP	31	02.00	0.2	LJU	68.65	46	e(P)	32	13.00	-0.3				iPg	34	28.60	
KVN	57.95	308	P	31	02.20	-0.8	PRU	68.87	41	eP	32	14.50	-0.1				iSg	34	55.80	
EPF	58.22	48	eP	31	05.30	0.7		1.5s		22.30nm			5.1mb	BRN	2.06	300	eP	34	26.00	0.6
	0.8s		8.00nm			4.8mb				e	32	25.00		KRA	2.79	118	eP	34	34.20	-1.8
EDM	58.40	325	iP	31	04.50	-1.2	ALE	68.97	359	eP	32	14.00	-0.6				i	34	43.70	
LPF	58.45	42	eP	31	06.00	0.0		0.7s		15.00nm			5.3mb				iS	35	20.70	
	1.0s		16.00nm			5.0mb	VBY	69.13	46	e(P)	32	16.60	0.4	KHC	2.83	216	iPn	34	37.20	0.7
GRR	58.66	41	eP	31	07.70	0.2	HFS	69.50	31	eP	32	17.30	-0.9				Pg	34	43.80	
	0.9s		29.40nm			5.4mb		0.5s		3.80nm			4.8mb				Sn	35	16.00	
FRI	58.94	305	eP	31	08.60	-1.0	MBC	70.10	347	ePd	32	22.20	0.6				Sg	35	33.50	
FLN	59.00	41	eP	31	10.20	0.3		0.7s		29.00nm			5.5mb	HOF	2.91	249	ePn	34	38.50	0.8
	0.8s		17.10nm			5.2mb				pP	32	32.50	33kmX	MOX	2.95	256	iPn	34	39.20	1.0
BCH	59.06	303	P	31	12.10	1.4	ZST	70.47	43	eP	32	24.60	0.2				iPg	34	47.00	
LPO	59.15	46	eP	31	11.10	0.1	SRO	71.28	44	eP	32	28.70	-0.6				e	34	59.00	
	1.0s		16.00nm			5.1mb				i	32	40.70					iSg	35	26.00	
RJF	59.51	45	eP	31	13.50	0.0	INK	71.90	338	iPd	32	31.70	-0.9	WET	3.10	223	iPnd	34	40.90	0.7
	0.8s		5.30nm			4.7mb				pP	32	43.00	37kmX	VKA	3.18	178	iPnc	34	42.20	0.7
CMB	59.59	306	eP	31	14.10	-0.1	KRA	72.35	42	eP	32	35.80	0.2				iPg	34	50.70	
PRI	59.62	304	e(P)	31	06.90	-7.7X				e	32	47.20					i	35	15.90	
LSF	59.72	44	eP	31	15.00	0.1	SPC	72.56	42	e(P)	32	40.60	3.5X				i	35	27.00	
	0.8s		10.70nm			5.0mb	VAY	74.57	51	eP	32	49.30	0.6				iSg	35	34.10	
CAF	59.81	46	eP	31	15.80	0.2	KKB	74.91	50	iPd	32	52.00	1.3	ZST	3.31	169	iPn	34	43.30	0.0
	0.8s		9.40nm			5.0mb	VTS	74.94	49	eP	32	52.00	0.9				i	34	52.40	
LLA	59.89	305	eP	31	16.00	-0.3	NUR	74.96	31	iP	32	50.20	-0.3				i	35	00.60	
TCF	60.19	44	eP	31	18.30	0.1		0.7s		14.70nm			5.1mb				i	35	11.60	
	0.8s		5.30nm			4.7mb	MMB	75.41	50	iPc	32	55.00	1.4				iSn	35	35.00	
PRS	60.20	304	eP	31	18.30	-0.1	SUF	75.62	28	iP	32	53.70	-0.6	SPC	3.47	129	ePn	34	46.20	0.4
MAF	60.42	44	eP	31	19.50	-0.2		0.9s		10.20nm			4.9mb				i	34	55.50	
	0.8s		5.30nm			4.7mb	PGB	75.65	49	eP	33	00.00	5.0X				i	35	03.00	
ARN	60.43	305	P	31	21.10	1.2	SOD	75.72	23	iP	32	54.80	0.0				i	35	29.60	
MHC	60.51	305	eP	31	21.50	0.9	KEV	75.83	21	eP	32	55.00	-0.4				i(Sn)	35	37.30	
ORV	60.63	308	eP	31	21.10	-0.2	RZN	76.14	50	iPd	32	59.00	1.0				i	35	40.70	
BGF	60.67	44	iPd	31	21.30	-0.1	BNG	76.48	89	iPc	33	00.00	-0.2				i	35	45.40	
	0.9s		9.80nm			4.9mb		0.8s		40.00nm			5.5mb	GRF	3.58	243	iPnd	34	48.00	0.9

29d 17h

			ePg	35	00.50	
			e(Sn)	35	31.00	
			eSg	35	47.50	
KMR	3.62	202	iPn-	34	48.90	1.2
			iPg	34	59.80	
			iSg	35	49.00	
SOP	3.77	175	iPc	34	49.20	-0.6
SRO	3.90	158	ePn	34	01.30	-50.3X
			i	34	09.50	
			i	34	20.70	
			iSn	35	08.50	
BHG	4.28	211	iPnc	34	52.70	-4.3X
PSZ	4.29	144	eP	34	57.30	0.0
FUR	4.54	226	iPnc	35	01.00	0.3
KBA	4.73	204	iPnd	35	03.50	-0.1
	1.0s	91.50nm				
			i	36	03.60	
			i	36	16.50	
			iSg	36	25.00	
COP	4.79	334	iPc	35	18.80	14.6X
	1.7s	2615.39nm				
			i	35	29.00	
TNS	5.01	259	iPc	35	07.40	-0.1
			eS	36	38.00	
TOD	5.01	251	eP	35	06.74	-0.7
STU	5.19	242	ePn	35	19.00	9.0X
	1.0s	80.00nm			5.3mb X	
SCE	5.27	215	ePn	35	11.60	0.4
FVI	5.32	206	Pc	35	12.30	0.5
LJU	5.50	192	ePn	35	14.00	-0.4
			e(Sn)	36	32.00	
PTJ	5.54	181	iPc	35	15.00	-0.1
VOY	5.61	196	ePn	35	16.20	0.2
			e(Sn)	36	31.00	
OGA	5.66	218	iPnc	35	17.30	0.5
ABH	5.67	257	eP	35	16.38	-0.4
CEY	5.81	192	ePn	35	18.90	0.1
			e(Sn)	36	36.00	
WTS	5.81	279	ePnc	35	19.00	0.3
	1.0s	38.00nm			5.1mb X	
			e(Pb)	35	27.50	
			ePg	35	41.00	
			eSg	36	56.00	
VBY	5.97	186	ePnc	35	21.10	0.2
			eSn	36	47.70	
VVI	5.98	206	Pd	35	21.70	0.6
WIT	5.98	287	ePn	35	25.00	4.0X
GWF	5.99	249	Pn	35	20.00	-1.1
			Sg	37	09.00	
RUP	6.03	257	eP	35	20.90	-0.9
SAX	6.09	229	ePc	35	21.80	-1.1
BMR	6.10	125	iPd	35	25.00	2.3X
OSS	6.17	222	ePd	35	24.50	0.7
SLE	6.17	236	ePd	35	22.70	-1.1
FEL	6.36	239	Pn	35	27.50	1.0
			Sg	37	16.00	
ZLA	6.41	235	ePd	35	26.20	-1.0
MEM	6.44	267	iPd	35	27.50	0.0
ENN	6.46	268	ePn	35	28.50	0.7
	1.0s	19.00nm			5.0mb X	
			i(Pb)	35	36.00	
LLS	6.54	228	ePd	35	27.70	-1.4
WLF	6.60	258	Pn	35	29.40	-0.3
DEV	7.14	138	ePc	35	37.00	-0.4
TMA	7.17	225	ePd	35	39.30	1.4
BEO	7.23	155	eP	36	13.50	34.9X
VITF	7.31	248	Pn	35	29.00	-10.6X
			Sg	37	46.50	
LOMF	7.31	240	Pn	35	40.00	0.1
			Sg	37	44.00	
UCC	7.43	270	eP	36	06.00	24.6X
DOU	7.43	264	P	35	41.10	-0.4
	0.6s	14.50nm			5.3mb X	
			S	37	38.80	
SNF	7.53	268	Pd	35	42.70	-0.1
MMK	7.62	228	ePd	35	43.70	-0.6
BOB	8.03	216	Pc	35	50.10	0.2
LSD	8.44	228	P	35	55.79	0.0
UPP	8.48	5	iP	35	53.60	-2.5
			i	36	03.80	
CMP	8.56	133	ePc	36	03.00	5.7X
CLI	8.82	119	eP	36	06.00	5.2X
HFS	8.82	352	eP	35	57.60	-3.2X
	0.3s	3.50nm			5.1mb X	
VRI	8.96	124	eP	36	09.00	6.3X
FIN	8.98	219	P	36	02.25	-0.7
RRL	9.02	227	P	36	02.76	-1.0
ROB	9.04	221	P	36	03.28	-0.6
ENR	9.28	222	P	36	05.22	-2.1
STV	9.31	223	P	36	05.22	-2.4X
IMI	9.35	220	P	36	06.46	-1.7
NAO	9.86	345	P	36	11.60	-3.5X
	0.7s	4.30nm			5.0mb X	
NUR	10.26	24	iP	36	17.60	-3.0X
	1.0s	92.00nm			6.1mb X	
			eS	38	07.60	
SUF	12.53	22	eP	36	47.20	-4.2X
	0.3s	6.00nm			5.3mb X	
			eS	39	00.90	
SOD	16.81	14	iP	37	41.10	-5.9X
KEV	19.08	12	iP	38	13.00	-2.0
	0.8s	33.70nm			4.6mb	
WMQ	47.06	70	P	42	25.00	1.4
			PP	44	13.00	
MBC	49.43	347	eP	42	43.00	1.5
GTA	56.88	67	eP	43	38.00	0.5
INK	58.45	347	eP	43	47.00	-1.0
YKC	59.91	336	eP	43	58.40	0.3
YKA	59.93	336	eP	43	59.90	1.6
FFC	62.34	325	eP	44	15.00	0.3
	1.3s	23.00nm			5.2mb	
XAN	65.85	65	P	44	38.10	0.2
CN2	67.18	48	eP	44	46.70	0.5
CHG	71.09	83	eP	45	11.30	0.7
CHTO	71.09	83	iP	45	11.00	0.4
	1.0s	6.75nm			4.7mb	
PNT	72.76	331	eP	45	21.00	0.9
ALQ	80.34	315	eP	46	05.70	2.6X
	1.1s	5.70nm			4.5mb	

S.D. = 0.9 on 70 of 89 obs.

% JUN 29, 1989 17h 46m 42.58± 0.98s
16.878 N ±12.2km 61.897 W ±11.4km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)

BPA	0.17	13	eP	46	50.00	1.1
			S	46	57.50	
MGH	0.34	243	eP	46	51.50	0.6
			S	47	03.00	
NEV	0.69	292	eP	46	54.80	-1.1
			S	47	07.50	
PAG	0.87	166	eP	46	59.20	0.7
DEG	0.98	125	eP	46	58.90	-1.2

S.D. = 1.5 on 5 of 5 obs.

& JUN 29, 1989 18h 36m 28.59s
59.086 N 152.890 W
DEPTH = 74.9km
3.6mb (1 obs.)
SOUTHERN ALASKA (2)
<AGS-P>.

KDC	1.36	171	eP	36	51.10	-1.1
SVW	2.45	327	iPc	37	05.50	-1.6
PMS	2.73	36	iPd	37	09.40	-1.7
PWA	2.98	29	eP	37	12.90	-1.5
PMR	3.13	35	P	37	14.00	-2.6
TTA	4.15	340	eP	37	29.00	-1.9
TOA	4.49	45	eP	37	33.00	-2.6
PCA	6.50	76	eP	38	00.11	-3.5
BCPM	6.80	77	eP	38	04.09	-3.6
PNL	6.92	79	iP	38	05.49	-3.9
HON	7.19	81	eP	38	08.74	-4.4
HYT	7.92	71	P	38	20.50	-2.8
INK	12.55	35	eP	39	22.00	-3.5
MBC	20.85	22	eP	41	02.50	-3.2
	0.6s	2.00nm			3.6mb	
	14 obs. ossocioted					

JUN 29, 1989 19h 45m 38.41± 1.20s
25.251 N ± 6.2km 124.412 E ±11.3km
DEPTH = 122.2 ± 10.2 km
4.2mb (8 obs.)
NORTHEAST OF TAIWAN (245)

TWC	2.41	255	iPc	46	16.40	-1.3
			eS	46	49.70	
TWZ	2.57	267	iPc	46	19.30	-0.5
ANP	2.62	269	eP	46	20.50	0.0
TWO	3.39	254	ePc	46	30.60	-0.1
SSE	6.48	335	Pc	47	13.00	0.3
	0.6s	37.00nm			4.9mb	
			i	48	24.00	
			eS	49	48.00	
NJ2	8.35	326	eP	47	38.50	0.5
WHN	10.34	303	P	48	05.10	0.4
XAN	16.05	307	P	49	20.00	1.6
BJI	16.28	337	eP	49	22.50	1.3
CN2	18.53	2	Pd	49	47.80	-0.2
HHC	18.89	329	Pc	49	52.10	0.1
BTO	19.46	325	eP	50	02.00	4.0X
LZH	20.69	306	eP	50	10.00	-0.6
CHG	24.44	260	eP	50	47.80	0.6
CHTO	24.44	260	eP	50	47.50	0.3
	1.1s	3.53nm			3.8mb	
GTA	25.02	310	eP	50	51.20	-1.5
PKI	34.91	283	P	52	08.00	-12.6X
	0.4s	3.00nm				
KKN	35.01	283	P	52	07.70	-13.6X
	0.5s	5.00nm				
DMN	35.18	283	P	52	09.60	-13.2X
GKN	35.56	283	P	52	12.80	-13.1X
	0.4s	4.00nm				
WRA	45.95	167	Pd	53	51.10	0.3
	0.8s	4.30nm			4.2mb	
ASPA	49.49	169	iPd	54	18.90	0.6
	0.6s	10.00nm			4.9mb	
WARB	51.18	177	eP	54	31.90	0.8
MAIO	55.93	298	eP	55	07.00	0.9
INK	71.13	23	eP	56	44.00	-1.0
SUF	71.55	331	iP	56	46.80	-0.8
	0.5s	1.90nm			4.2mb	
MBC	71.57	13	eP	56	46.00	-1.5
	0.5s	1.00nm			3.9mb	
SLL	78.05	332	eP	57	23.80	-0.9
	0.4s	3.60nm			4.5mb	
NB2	78.64	333	P	57	27.00	-1.0
	0.4s	1.00nm			4.0mb	
YKA	80.83	24	eP	57	41.10	1.5

S.D. = 1.0 on 25 of 30 obs.

? JUN 29, 1989 20h 11m 09.93± 3.92s
43.259 N ±14.9km 5.623 E ±30.0km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.9 (STR).

CALN	1.05	61	Pg	11	30.09	0.3
MVIF	1.28	60	Pn	11	33.32	-0.5
			Sg	11	52.39	
REVF	1.36	69	Pn	11	35.66	0.7
AURF	1.39	63	Pn	11	35.12	-0.3
			Sg	11	55.90	
TOUF	1.40	57	Pn	11	35.26	-0.4
			Sg	11	54.75	
AUTN	1.50	60	Pn	11	37.57	0.4
			Sg	11	59.48	
FOUF	1.52	33	e(Pg)	11	37.28	0.1
			e(Sg)	11	56.67	
SAOF	1.58	62	Pn	11	37.72	-0.4
CVF	2.48	105	Pn	11	50.98	-0.1

S.D. = 0.5 on 9 of 9 obs.

& JUN 29, 1989 23h 14m 08.10s
61.733 N 150.798 W
DEPTH = 59.6km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.27	174	iP	14	18.12	-0.1
			S	14	26.10	
SKT	0.43	306	iP	14	18.95	-0.5
			S	14	27.48	
PWA	0.45	100	iP	14	19.42	-0.1
CGLM	0.72	234	iP	14	22.36	-0.4
			S	14	33.35	
SPU	0.82	228	eP	14	23.51	-0.5
			S	14	35.16	
PME	0.85	96	eP	14	23.84	-0.4
GHO	0.89	87	iP	14	24.72	-0.2
			S	14	38.96	
NKA	1.02	192	eP	14	28.11	1.7
KNK	1.17	105	iP	14	28.35	-0.2
			S	14	44.36	
SLKM	1.26	167	eP	14	28.77	-1.1
RDT	1.40	215	eP	14	31.07	-0.7
			S	14	48.94	
NNL	1.71	188	eP	14	36.42	0.3
SEW	1.76	157	eP	14	37.83	1.1
KTH	1.83	358	eP	14	37.92	0.2

ILIM	1.97	213	eP	14	39.41	-0.2
			S	15	04.37	
GLI	1.98	114	eP	14	37.84	-2.0
TOA	2.22	78	eP	14	43.32	0.1
FID	2.31	113	eP	14	42.02	-2.4
KLU	2.34	94	iP	14	43.28	-1.7
SVW	2.40	257	eP	14	44.20	-1.6
OPT	2.41	211	iP	14	46.00	0.2
			S	15	15.31	
TTA	2.71	299	eP	14	49.04	-1.1
PAX	2.78	61	eP	14	50.63	-0.5
WRH	3.01	23	eP	14	53.25	-1.1
HDA	3.20	31	eP	14	56.83	-0.2
CCB	3.22	24	eP	14	56.43	-0.9

26 obs. associoted

JUN 29, 1989 23h 18m 15.25± 0.85s
11.517 N ± 5.1km 59.846 W ± 9.5km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.)
NORTH ATLANTIC OCEAN (402)

BOT	0.92	248	eP	18	33.16	0.3
			eS	18	36.48	
TPR	0.97	250	eP	18	33.83	0.1
			eS	18	36.65	
T8H	1.58	230	eP	18	44.92	1.6
TRN	1.75	241	eP	18	45.53	-0.4
			eS	18	50.35	
TPP	1.98	233	eP	18	55.59	6.5X
			eS	19	00.20	
TCE	2.04	247	eP	18	49.37	-0.7
			eS	18	58.15	
SVB	2.22	322	eP	18	51.20	-1.5
			eS	18	53.03	
SSV	2.23	324	eP	18	51.47	-1.4
			eS	18	52.11	
SVV	2.23	323	eP	18	51.41	-1.5
			eS	18	52.36	
SOA	2.24	326	eP	18	58.78	5.8X
			eS	19	19.04	
SLB	2.57	333	eP	18	57.20	-0.5
MVM	3.19	341	eP	19	07.32	0.9
BIM	3.21	338	iPd	19	06.77	0.0
			S	19	40.30	
CRM	3.38	342	iPc	19	09.25	0.1
			S	19	44.20	
BBL	4.29	338	eP	19	21.61	-0.4
			S	20	07.00	
PAG	4.83	339	eP	19	29.80	0.0
			S	20	20.00	
DEG	4.91	346	eP	19	31.21	0.3
MGH	5.66	336	eP	19	43.00	1.5
BPA	5.83	341	eP	19	43.80	-0.1
NEV	6.18	335	eP	19	51.20	2.4
ATB	16.55	152	e(P)	22	08.40	-0.7
MBC	71.84	347	eP	29	39.50	-0.3
	0.5s		2.00nm			4.5mb

S.D. = 1.1 on 20 of 22 obs.

JUN 30, 1989 00h 08m 21.36± 0.61s
39.326 N ± 5.8km 23.572 E ± 6.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.0 (ATH).

NEO	0.27	266	ePg	08	26.70	-0.4
PLG	1.05	355	ePb	08	41.80	0.6
			eSb	08	56.30	
ATH	1.36	175	ePb	08	44.50	-1.8
KZN	1.70	306	ePb	08	51.50	0.2
PRK	2.10	91	ePn	08	58.20	1.3
VAY	2.13	339	ePn	08	57.60	0.1
EZN	2.19	76	ePn	09	00.00	1.8
MMB	2.26	3	iPc	08	59.00	-0.4
RDO	2.36	39	ePn	08	59.20	-1.5
ITM	2.50	212	ePb	09	03.50	0.7
RZN	2.52	20	iPc	09	03.00	-0.1
KKB	2.56	352	iPc	09	04.00	0.4
KDZ	2.71	31	iP	09	05.00	-0.8
OHR	2.77	311	ePn	09	08.00	1.3
SKO	3.10	329	ePn	09	16.00	4.8X
PGB	3.25	8	eP	09	12.00	-1.5
VTS	3.27	355	eP	09	05.00	-8.9X
PVL	4.11	18	iPc	09	22.00	-3.5X

S.D. = 1.2 on 15 of 18 obs.

JUN 30, 1989 01h 16m 07.75± 0.18s
18.910 S ± 5.5km 175.801 W ± 4.9km
DEPTH = 272.7km (5 depth phases)
5.0mb (12 obs.)
TONGA ISLANDS (173)

SVA	5.50	277	eP	17	32.20	1.3
VUN	5.52	278	iPd	17	32.30	1.2
SGE	6.11	281	iPd	17	14.00	-24.4X
SGE	6.11	281	iPd	17	40.10	1.7
AFI	6.29	38	eP	17	38.00	-2.7
			eS	18	44.00	
PVC	15.13	272	iPc	19	31.40	1.3
DZM	16.93	256	iPd	19	51.00	0.9
KRP	20.40	200	P	20	27.20	2.1
PGZ	22.68	196	P	20	46.90	-0.3
MNG	22.89	197	P	20	47.20	-2.0
KIW	23.29	198	eP	20	52.00	-0.9
MTW	23.39	197	P	20	53.80	-0.1
CAW	23.47	198	P	20	53.00	-1.6
BLW	23.60	197	P	20	54.80	-1.0
MRW	23.69	198	P	20	55.60	-1.0
BRS	30.04	248	iPd	21	54.10	0.2
COO	31.45	242	eP	22	06.50	0.4
			i	22	07.40	3kmX
RMO	33.48	250	iPd	22	25.00	1.4
	0.7s		41.00nm			5.1mb
CAN	35.11	235	eP	22	38.20	0.8
BWA	35.30	237	eP	22	37.90	-1.0
PMG	37.07	280	eP	22	53.00	-0.9
	0.9s		85.71nm			5.2mb
WB5	46.87	260	eP	24	11.00	-2.0
			eS	30	38.70	
ASPA	46.92	255	iPd	24	12.30	-1.1
	0.5s		87.00nm			5.3mb
			eS	30	39.80	
GUA	50.38	307	eP	24	38.60	-1.2
	0.6s		64.00nm			5.2mb
PJG	50.45	307	eP	24	38.60	-1.7
MTN	51.25	269	iPc	24	44.40	-2.0
FORR	51.79	245	eP	24	50.00	-0.2
WARB	53.29	251	eP	25	00.00	-1.4
SBA	59.59	184	Pc	25	47.80	3.0
MBL	60.14	256	eP	25	47.60	-1.8
NANU	63.82	254	eP	26	12.70	-0.9
MAT	70.20	322	eP	26	52.00	-1.1
	0.9s		23.53nm			4.9mb
SPA	71.21	180	ePc	27	00.10	1.2
			e	28	01.80	266km
PRS	75.25	43	eP	27	22.90	0.4
BCH	75.40	44	P	27	23.80	0.3
SAO	75.46	42	eP	27	23.50	-0.1
PRI	75.59	43	eP	27	25.00	0.5
BRK	75.62	41	iPd	27	24.50	0.0
MHC	75.69	42	eP	27	25.30	0.3
PAS	76.09	46	eP	27	27.00	-0.2
MWC	76.21	46	eP	27	28.00	-0.1
RVR	76.55	47	eP	27	30.00	0.3
PLM	76.55	47	eP	27	30.00	0.0
SBB	76.63	46	eP	27	30.00	-0.3
FRI	76.71	43	eP	27	30.70	0.2
ISA	76.75	45	eP	27	30.00	-0.9
CMB	76.90	42	eP	27	31.70	0.1
ORV	77.13	40	eP	27	32.60	-0.2
WDC	77.14	39	eP	27	33.00	0.2
CLC	77.42	45	eP	27	34.00	-0.6
TPC	77.53	47	eP	27	35.00	-0.2
GSC	77.67	46	eP	27	37.00	1.0
GLA	77.82	49	eP	27	38.00	1.2
KVN	78.94	42	P	27	43.00	0.0
			pP	28	47.00	271km
TNP	78.96	43	P	27	43.40	0.3
	0.9s		18.55nm			4.9mb
			pP	28	47.80	273km
MAW	83.75	199	eP	28	08.00	0.9
DPW	84.07	35	P	28	09.00	0.0
PNT	84.19	33	ePc	28	10.00	0.5
	0.9s		21.00nm			5.0mb
PV09	84.58	46	P	28	12.50	0.4
PV10	84.58	47	P	28	12.30	0.2
ALO	84.80	51	iPc	28	14.00	0.9
	1.0s		13.75nm			4.7mb
			epP	29	20.00	277km
BJI	86.24	314	eP	28	21.00	1.2
FBA	86.26	12	P	28	18.70	-0.7
	0.5s		9.30nm			4.9mb
			pP	29	25.00	277km

BW06	86.40	42	P	28	20.10	-0.8
	0.5s		2.68nm			4.3mb
GOL	87.72	47	P	28	27.20	-0.1
	0.7s		12.14nm			4.9mb
GLD	87.85	47	P	28	28.50	0.7
	0.7s		56.00nm			5.5mb
SES	89.38	35	eP	28	35.00	0.5
EDM	89.66	32	eP	28	35.00	-0.8
KMI	90.49	296	eP	28	21.00	-19.4X
RSSD	90.58	43	P	28	40.00	-0.4
MEO	90.60	53	iPc	28	40.70	0.2
INK	92.21	14	iPc	28	46.20	-0.9
YKA	94.22	24	eP	28	57.60	1.1
SOB1	127.49	118	ePKP	34	42.10	-0.6
SUF	133.67	346	ePKP	34	51.80	-1.1
	0.7s		4.10nm			
NUR	135.96	346	ePKP	34	56.80	-0.5
NAO	137.87	355	PKP	34	50.40	-10.6X
	0.7s		3.30nm			
SLL	137.97	353	ePKP	34	48.60	-12.6X
	0.3s		1.20nm			
DMU	144.04	11	ePKP	35	10.10	-1.9
DLE	144.69	11	ePKP	35	11.70	-1.5
WIT	146.11	357	iPKP	35	18.50	3.0X
KRA	146.47	342	ePKP	35	17.60	1.4
CLI	146.53	331	ePKPc	35	18.00	1.5
KSP	146.72	346	iPKP	35	19.20	2.6X
			e	36	25.50	
WTS	146.92	357	ePKP	35	19.00	2.2
	1.0s		49.00nm			
			e	35	31.00	
			e	36	33.00	
CLL	146.93	350	iPKP	35	19.40	2.5X
	1.1s		68.00nm			
			i	36	25.10	
SPC	147.14	340	ePKP	35	20.80	3.2X
BRG	147.18	349	iPKPc	35	19.80	2.5X
	1.0s		34.00nm			
			i	36	27.00	
BBTK	147.75	316	ePKP	35	19.00	0.2
MOX	147.79	351	ePKP	35	21.50	3.1X
	1.0s		30.00nm			
			e	36	33.00	
PRU	147.91	347	PKPc	35	22.00	3.5X
	1.0s		20.20nm			
MLR	147.94	331	ePKP	35	18.00	-0.9
ENN	148.18	358	iPKPc	35	22.90	4.0X
	0.7s		17.00nm			
			e	36	39.50	
MEM	148.34	358	PKP	35	23.20	4.1X
HRI	148.41	303	ePKP	35	24.00	4.0X
SNF	148.47	360	PKP	35	23.40	4.0X
TNS	148.57	355	ePKPc	35	24.10	4.4X
GRF	148.78	351	ePKP	35	24.70	4.7X
DOU	148.88	360	iPKPc	35	24.40	4.3X
	0.9s		105.00nm			
KHC	148.92	348	ePKP	35	21.00	0.8
			i	35	25.40	
SRO	148.96	341	iPKP	35	24.80	4.6X
ZST	148.96	343	iPKP	35	25.10	4.9X
ABH	148.98	356	iPKPc	35	25.00	4.7X
RUP	149.19	356	iPKPc	35	25.62	5.0X
DSI	149.22	300	ePKP	35	26.00	4.9X
WLF	149.28	358	PKPc	35	26.00	5.4X
PRNI	149.87	298	iPKPc	35	28.00	5.8X
FLN	149.98	6	ePKP	35	22.00	0.2
	0.8s		9.10nm			
LDF	150.18	6	ePKP	35	22.10	0.0
	0.8s		5.30nm			
FUR	150.26	350	iPKPd	35	28.40	6.2X
	0.6s		28.00nm			
GRR	150.31	7	ePKP	35	22.80	0.5
	0.9s		6.50nm			
BHG	150.40	348	ePKP	35	23.30	0.8
CDF	150.47	356	PKP	35	28.16	5.5X
LPF	150.64	7	ePKP	35	22.90	0.1
	1.0s		12.00nm			
ECH	150.67	356	PKP	35	28.63	5.8X
KHL	150.69	317	iPKP	35	28.70	5.4X
VITF	150.73	358	PKP	35	28.80	5.9X
FEL	150.94	355	PKP	35	29.18	5.8X
KDZ	151.01	326	ePKP	35	30.00	6.4X
MOF	151.03	356	PKP	35	29.18	5.7X
BSF	151.07	356	PKP	35	29.62	6.0X
PTJ	151.38	343	ePKP	35	24.20	0.1
VTS	151.42	330	iPKPc	35	31.00	6.7X
LOMF	151.55	356	PKP	35	30.47	6.2X

30d 01h

LJU	151.62	345	ePKP	35 24.60	0.3
			i	35 30.90	
LOR	151.71	0	ePKP	35 25.00	0.6
	1.0s		6.00nm		
EZN	151.75	322	ePKP	35 31.00	6.3X
VOY	151.79	346	ePKP	35 24.30	-0.4
			i	35 30.80	
SSF	151.92	1	ePKP	35 25.20	0.5
	0.8s		6.70nm		
MMB	151.92	328	iPKPc	35 31.00	6.0X
CEY	151.93	345	e(PKP)	35 25.00	0.2
			e	35 31.50	
VBY	151.94	343	ePKP	35 25.50	0.7
			i	35 32.30	
LBF	152.00	0	ePKP	35 25.30	0.4
	1.2s		8.90nm		
BGF	152.40	2	ePKP	35 25.90	0.5
	0.8s		5.90nm		
TCF	152.65	3	ePKP	35 26.30	0.5
	1.0s		6.00nm		
VAY	152.70	329	ePKP	35 32.50	6.5X
AGO	152.92	2	PKP	35 33.98	7.8X
PLDF	153.01	1	PKP	35 34.26	7.9X
PYM	153.22	2	PKP	35 34.93	8.2X
OHR	153.71	331	ePKP	35 27.00	-0.5
LBL	153.74	2	PKP	35 36.19	8.9X
BNG	159.92	226	iPKPc	35 35.50	-0.4
	0.9s		14.00nm		
			i	36 17.10	

S.D. = 1.0 on 99 of 142 obs.

JUN 30, 1989 01h 34m 31.90± 0.80s
6.759 S ± 3.4km 130.517 E ± 4.5km
DEPTH = 107.4 ± 7.8 km
5.1mb (22 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 21C
Centroid Locotion:
Origin Time 01:34:36.9 0.8
Lat 6.78S 0.08 Lon 130.31E 0.14
Dep 103.7 4.8 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 3.23 0.43 Mtt=-2.51 0.73
Mff=-0.71 0.91 Mrt= 1.15 0.45
Mrf= 0.93 0.43 Mtf= 5.85 0.57
Principal Axes:
T Val= 5.31 Plg=35 Azm=311
N 2.22 55 128
P -7.54 1 220
Best Double Couple:Mo=6.4*10**16
NP1:Strike=350 Dip=65 Slip= 155
NP2: 91 67 27

AAI	3.83	323	iPd	35 31.70	1.8
			eS	36 12.50	
MTN	6.08	174	iPd	35 57.10	-3.7X
KUG	7.64	243	ePc	36 23.50	1.3
			eS	37 45.00	
KNA	9.10	191	eP	36 37.50	-4.5X
			iS	38 10.50	
MNDI	13.07	88	eP	37 32.50	-2.4
WB5	13.57	164	iPc	37 33.30	-7.9X
WRA	13.62	165	Pc	37 33.10	-8.8X
	0.4s		27.30nm	5.0mb	
DAV	14.61	340	eP	38 04.60	10.0X
QIS	16.30	148	iPd	38 10.00	-5.9X
	0.8s		115.00nm	5.2mb	
			eS	40 58.00	
PMG	16.68	100	eP	38 20.00	-0.6
	1.0s		56.00nm	4.8mb	
ASPA	17.12	169	eP	38 21.10	-5.0X
	Z 22s		0.38um		
			eS	41 12.40	
			LR	44 45.00	
MBL	17.66	215	eP	38 29.00	-3.6X
	0.3s		48.00nm	5.2mb	
			eS	41 32.00	
TRT	17.77	266	iPd	38 34.00	0.1
WARB	19.67	190	eP	38 53.70	-1.3
			eS	42 19.00	
CTA	20.22	132	iPd	39 00.70	0.1
	0.9s		77.31nm	5.0mb	
			iS	42 42.00	
NANU	21.35	221	eP	39 11.50	-0.4
	0.4s		36.00nm	5.1mb	

			eS	43 02.00	
MEKA	22.81	209	eP	39 28.00	1.7
	0.6s		55.00nm	5.1mb	
			eS	43 36.00	
FORR	24.07	185	eP	39 38.30	-0.2
	0.7s		92.00nm	5.3mb	
GUA	24.72	35	eP	39 45.50	0.8
	0.8s		35.82nm	4.9mb	
PJG	24.73	35	eP	39 45.60	0.8
COOL	25.56	199	iPc	39 51.60	-0.9
	0.5s		11.00nm	4.6mb	
			eS	44 31.00	
RMO	26.20	141	eP	40 03.00	4.6X
			i	40 24.60	
BAL	27.03	207	eP	40 06.00	0.1
			eS	45 12.00	
STK	27.05	159	eP	40 06.50	0.4
			e	40 27.00	
			e	45 13.00	
KLB	27.43	204	iPc	40 09.30	-0.3
	0.4s		8.00nm	4.7mb	
			eS	45 16.00	
MUN	28.42	206	eP	40 18.00	-0.5
			e	40 54.00	
			eS	45 42.00	
NWAO	28.82	204	iPc	40 21.70	-0.3
			e	40 46.00	
			eS	45 53.00	
ADE	29.07	166	e(P)	40 24.00	-0.3
	0.8s		16.42nm	4.7mb	
BRS	29.45	137	iP	40 28.10	0.3
RKG	29.91	203	eP	40 34.00	2.3X
BWA	32.11	151	eP	40 52.00	1.0
OIZ	32.74	322	eP	40 55.70	-0.9
PSI	32.91	286	eP	40 55.90	-2.2
CAN	33.12	152	eP	40 59.50	-0.3
NNT	36.13	302	eP	41 22.00	-3.6X
SSE	38.68	347	Pc	41 47.00	0.2
	1.0s		40.00nm	5.2mb	
	Z 20s		0.50um	4.3Msz	
BDT	39.23	308	iPc	41 52.00	0.5
	0.9s		54.50nm	5.4mb	
NJ2	40.16	345	Pc	41 59.00	0.0
CHG	40.18	310	iPc	41 59.50	0.1
	0.8s		44.22nm	5.3mb	
			e	47 43.60	
WHN	40.20	338	Pc	41 59.50	0.2
GYA	40.32	326	P	42 00.60	0.1
KMI	41.65	321	Pc	42 12.50	0.8
MAT	43.67	9	eP	42 27.00	-0.6
	0.8s		20.15nm	5.0mb	
CD2	45.38	327	eP	42 40.60	-0.8
XAN	45.44	335	P	42 44.00	2.2
TIY	47.35	340	eP	42 56.50	-0.4
BJI	48.41	345	Pc	43 05.00	0.1
			e	44 30.50	
SNY	48.77	353	Pc	43 07.20	-0.4
SHL	49.42	312	iP	43 12.00	-1.2
LZH	49.44	331	Pd	43 13.50	0.4
	1.5s		66.00nm	5.4mb	
HHC	50.48	341	eP	43 21.00	0.1
CN2	50.53	355	Pd	43 21.00	-0.1
			PcP	44 36.00	
BTO	50.76	340	eP	43 22.60	-0.5
MDJ	51.14	359	eP	43 26.00	0.3
GTA	54.01	331	iPc	43 47.20	-0.1
GUN	55.18	311	Pc	43 55.60	-0.7
KKN	55.57	310	Pc	43 58.20	-0.8
DMN	55.61	310	Pc	43 58.80	-0.5
	0.8s		51.00nm	5.6mb	
GKN	56.17	310	Pc	43 56.70	-6.5X
GKN	56.17	310	Pc	44 02.30	-0.9
GBA	56.45	291	Pc	44 02.00	-3.1X
	1.2s		19.50nm	5.0mb	
HYB	56.67	296	eP	44 05.50	-1.3
	1.0s		50.00nm	5.5mb	
NDI	62.25	307	iPc	44 43.00	-1.8
	0.7s		41.10nm	5.5mb	
WMO	63.47	327	iPc	44 52.70	0.0
			PcP	45 29.30	
			S	53 17.70	
OUE	71.08	305	eP	45 40.60	-0.3
MAW	75.36	201	eP	46 05.00	0.1
MAIO	78.93	309	iPc	46 26.00	0.6
SPA	83.29	180	ePc	46 48.10	0.3
	0.9s		7.27nm	4.6mb	
			e	47 17.10	

INK	98.45	22	eP	47 47.00	-11.7X
HAU	117.46	321	ePKP	53 06.80	0.1
LPG	118.12	318	ePKP	53 08.50	0.1
	0.8s		2.60nm		
LOR	119.30	321	ePKP	53 10.20	0.0
	1.0s		4.80nm		
LBF	119.34	321	ePKP	53 10.50	0.2
	1.0s		6.00nm		
SSF	119.61	321	ePKP	53 11.10	0.4
AVF	119.81	321	ePKP	53 11.20	0.1
	1.0s		4.00nm		
BGF	120.23	321	ePKP	53 12.40	0.4
	0.8s		6.70nm		
TCF	120.74	321	ePKP	53 13.40	0.4
	1.0s		4.00nm		
ALQ	120.75	53	e(PKP)	53 14.80	1.2
MFF	122.06	322	ePKP	53 15.80	0.4
	0.8s		5.30nm		
ARE	148.27	137	ePKP	54 10.00	5.3X
BMA	150.27	190	e(PKP)	54 08.00	0.7
CNCB	150.28	142	PKP	54 10.00	1.8
			i	54 16.00	
VAO	150.32	185	ePKP	54 13.80	6.3X
LPB	150.42	142	ePKP	54 14.00	5.8X
	1.0s		40.00nm		
			i	54 19.00	
ZOBO	150.61	141	PKP	54 10.00	1.3
	1.0s		25.00nm		
			i	54 16.00	
PPD	151.33	176	ePKP	54 15.50	6.6X

S.D. = 0.9 on 68 of 86 obs.

& JUN 30, 1989 01h 58m 11.63s
60.283 N 151.626 W
DEPTH = 56.9km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL	0.29	146	iP	58 22.38	0.9
			S	58 30.47	
RDT	0.48	307	iP	58 22.83	-0.5
			S	58 32.10	
NKA	0.50	22	iP	58 24.81	1.4
RED	0.59	284	iP	58 23.96	-0.6
			S	58 34.40	
BRLK	0.64	144	eP	58 23.87	-1.2
ILIM	0.70	254	eP	58 25.14	-0.7
SLKM	0.73	71	eP	58 25.62	-0.6
			S	58 37.32	
CNPM	0.78	165	iP	58 26.50	-0.4
			S	58 38.76	
SPU	0.93	347	eP	58 28.16	-0.6
			S	58 41.45	
OPT	1.02	233	eP	58 29.66	-0.4
			S	58 44.46	
SEW	1.10	98	eP	58 30.56	-0.5
SUA	1.26	20	eP	58 32.97	-0.4
			S	58 51.09	
CDD	1.70	218	iP	58 39.02	-0.4
			S	59 02.12	
SKT	1.70	2	eP	58 39.09	-0.4

14 obs. associated

? JUN 30, 1989 02h 05m 06.93±23.18s
0.413 N ±137.km 78.848 W ±145.km
DEPTH = 33.0km (normal)
COLOMBIA-ECUADOR BORDER REGION (106)

COTA	0.52	99	iP+	05 17.20	-1.0
GGP	0.64	157	Pd	05 19.10	-0.9
OUR	0.66	151	eP	05 19.70	-0.5
CAYA	0.93	111	eP	05 25.20	1.1
RECU	1.08	165	iP+	05 27.10	0.8

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

JUN 30, 1989 02h 30m 23.58± 0.51s
40.637 N ± 4.8km 22.619 E ± 4.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.5 (ATH).

PLG	0.68	112	ePg	30 36.70	-0.4
			eSg	30 46.50	
VAY	0.68	357	iPgc	30 35.60	-1.5
			iSg	30 43.30	
KZN	0.73	243	ePg	30 37.50	-0.4
MMB	1.27	41	iPgc	30 47.00	-0.1

			Sg	31	04.00	
KKB	1.28	16	iP	30	46.00	-1.3
			iSg	31	04.00	
NEO	1.41	161	ePb	30	49.00	-0.3
OHR	1.46	290	iPn	30	50.60	0.6
SKO	1.60	327	iPn	30	53.00	1.0
			iSn	31	14.30	
			i	31	17.70	
RZN	1.90	56	iPc	30	57.00	0.5
			iS	31	22.00	
VTS	2.00	13	iP	30	59.00	1.0
PLD	2.15	46	eP	31	00.00	0.1
			iS	31	27.00	
PGB	2.24	31	iP	31	01.00	-0.3
			eSg	31	32.00	
RDO	2.27	76	ePn	31	02.00	0.3
KDZ	2.34	63	iP	31	04.00	1.2
VLS	2.92	213	ePg	31	18.00	7.1X
EZN	2.95	105	ePn	31	11.00	-0.3
ITM	3.49	189	ePb	31	24.50	5.4X
MLR	5.43	26	eP	31	46.50	-0.1

S.D. = 0.8 on 16 of 18 obs.

& JUN 30, 1989 02h 50m 11.54s
64.897 N 147.707 W
DEPTH = 21.3km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.6 (PMR).

FBA	0.04	275	iPd	50	15.30	0.0
GLM	0.16	56	iP	50	16.71	0.3
RDS	0.20	249	iP	50	16.63	-0.2
CCB	0.25	190	iP	50	17.49	-0.1
WRH	0.46	201	iP	50	20.83	-0.1
HDA	0.59	146	iP	50	23.37	0.3
NEA	0.67	242	iP	50	24.38	-0.1
MCK	1.29	205	eP	50	34.04	-0.3
DDM	1.37	143	iP	50	35.25	-0.3
			S	50	54.07	
KTH	1.95	228	eP	50	42.58	-1.3
			S	51	09.78	
PAX	2.17	152	eP	50	46.69	-0.5
IMA	2.75	298	eP	50	55.20	-0.3
TOA	2.89	166	eP	50	55.16	-2.1
PMR	3.38	192	eP	51	06.20	2.0
DWY	3.68	100	P	51	08.00	-0.5
SUA	3.71	203	eP	51	08.85	-0.2
TTA	4.16	245	eP	51	15.12	-0.3
SVW	5.24	227	e(P)	51	37.00	6.4
HYT	6.20	127	P	51	43.40	-0.8
INK	6.60	52	eP	51	47.00	-2.7

20 obs. associated

& JUN 30, 1989 03h 50m 03.62s
66.872 N 156.247 W
DEPTH = 34.0km
ALASKA (676)
<AGS-P>.

IMA	1.31	127	eP	50	27.00	1.1
RDS	3.91	118	eP	51	02.19	-0.7
TTA	3.96	178	eP	51	03.50	-0.1
FBA	3.99	116	eP	51	04.10	0.1
KTH	4.02	144	eP	51	04.56	0.2
GLM	4.09	113	eP	51	04.94	-0.5
CCB	4.14	119	eP	51	05.41	-0.6
WRH	4.15	122	eP	51	05.90	-0.2
HDA	4.58	118	eP	51	11.80	-0.4
SVW	5.79	177	iPd	51	29.70	0.2

10 obs. associated

JUN 30, 1989 05h 24m 14.75± 0.36s
44.810 N ± 2.5km 6.786 E ± 5.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.7 (LDG), 2.4 (GEN).

RRL	0.11	360	P	24	18.11	0.3
			S	24	20.98	
BNI	0.25	342	P	24	20.00	-0.2
			eSg	24	24.60	
FOUF	0.28	181	iPg	24	19.46	-1.2
			eSg	24	22.89	
DOI	0.45	133	Pd	24	23.80	-0.1
			eSg	24	30.40	
STV	0.68	146	P	24	28.37	0.0
			S	24	38.01	
LPG	0.69	358	Pg	24	28.40	-0.2
			Sg	24	38.90	
LSD	0.70	22	P	24	28.88	0.2
			S	24	39.03	
LPL	0.71	357	Pg	24	28.80	-0.1
ENR	0.74	142	P	24	29.19	0.0
			S	24	39.75	
TOUF	0.86	157	Pg	24	30.85	-0.6
ROB	0.93	123	P	24	32.88	0.3
			S	24	46.41	
AUTN	0.94	150	Pg	24	33.21	0.4
MVIF	0.95	164	Pg	24	33.01	0.0
SAOF	0.99	146	Pg	24	33.32	-0.3
			Sg	24	48.04	
AURF	1.00	157	Pg	24	33.54	-0.2
SBF	1.06	154	Pg	24	35.80	1.1
			Sg	24	50.60	
CALN	1.06	176	Pg	24	36.31	1.5
			Sg	24	53.47	
FIN	1.18	120	P	24	36.98	0.2
			S	24	52.46	
IMI	1.20	138	P	24	35.95	-1.2
FRF	1.25	185	Pg	24	38.40	0.3
			Sg	24	55.20	
LRG	1.39	193	Pg	24	40.00	-0.1
			Sg	24	58.80	
LMR	1.49	188	Pg	24	41.40	-0.1
			Sg	25	01.80	

S.D. = 0.6 on 22 of 22 obs.

? JUN 30, 1989 06h 02m 46.86± 9.34s
17.262 N ±49.5km 60.842 W ±59.9km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)

DEG	0.97	192	eP	03	05.20	-0.1
BPA	0.99	258	eP	03	05.60	-0.1
			S	03	15.70	
MGH	1.42	248	eP	03	13.00	0.3
NEV	1.66	266	eP	03	16.00	-0.1
			S	03	35.50	

S.D. = 0.3 on 4 of 4 obs.

• JUN 30, 1989 06h 15m 08.00± 0.90s
17.149 N ±10.6km 62.433 W ± 8.4km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)

NEV	0.13	264	eP	15	17.31	6.1X
			eS	15	22.22	
SKI	0.35	302	eP	15	15.09	0.0
			eS	15	21.35	
MGH	0.47	154	eP	15	17.66	0.0
			eS	15	22.54	
BPA	0.56	101	eP	15	19.27	-0.1
			eS	15	24.96	
ANG	0.58	89	eP	15	20.33	0.7
			eS	15	29.94	
DEG	1.56	122	eP	15	34.50	-1.3
			S	15	53.00	
BBL	1.86	150	eP	15	41.00	0.8

S.D. = 1.0 on 6 of 7 obs.

? JUN 30, 1989 07h 00m 55.58± 0.60s
48.859 S ±17.0km 113.559 W ±19.3km
DEPTH = 10.0km (geophysicist)
4.9mb (1 obs.) 5.0Msz (1 obs.)
EASTER ISLAND CORDILLERA (684)

CNCB	48.81	65	eP	09	45.00	1.5
LPB	48.95	65	P	09	45.00	0.6
Z	20s		1.42um		5.0Msz	
			LR	24	06.00	
ZOBO	49.14	65	P	09	44.00	-2.1
	1.5s		21.51nm		4.9mb	
Z	24s		0.76um		4.6MszX	
			S	17	00.00	
			LR	24	20.00	
MAW	63.83	178	eP	11	30.00	0.3
DEG	79.84	51	eP	13	06.00	0.3
ALQ	83.67	6	e(P)	13	25.90	0.4
PRI	84.86	354	eP	13	32.00	0.7
PRS	85.10	354	eP	13	32.40	0.0
FRI	85.65	355	eP	13	34.80	-0.3
CMB	86.73	355	e(P)	13	40.40	-0.1
WDC	89.41	353	e(P)	13	52.60	-0.6
GRF	144.65	67	ePKP	20	32.50	-0.7
VOY	144.93	74	ePKP	20	32.80	-1.1
KBA	145.00	72	iPKPd	20	32.70	-1.4
	1.0s		14.10nm			
CEY	145.15	75	ePKP	20	32.00	-2.2
MOX	145.21	66	iPKPc	20	34.00	-0.1
	1.5s		51.00nm			
LJU	145.34	75	ePKP	20	34.00	-0.5
VBY	145.58	76	ePKP	20	35.60	0.7
KHC	145.90	69	PKPc	20	36.50	1.1
CLL	146.25	65	iPKPd	20	37.10	1.3
	1.4s		25.00nm			
BRG	146.69	66	ePKP	20	38.40	1.9
	1.1s		21.00nm			
			e	20	46.00	
PRU	146.78	68	ePKP	20	39.00	2.3X
OHR	147.22	86	e(PKP)	20	40.50	2.8X
ZST	147.78	72	ePKP	20	40.40	2.1X
SKO	148.05	85	e(PKP)	20	42.20	3.2X
KSP	148.10	67	ePKP	20	42.50	3.7X
SHL	149.42	230	ePKP	20	48.50	6.6X
BZS	149.73	79	ePKP	20	47.00	5.6X
LZH	149.92	259	e(PKP)	20	48.00	5.7X
SPC	150.07	72	ePKP	20	47.90	5.8X
KRA	150.12	70	ePKP	20	48.10	6.2X
			e	20	54.40	
MLR	152.50	82	ePKPc	20	52.50	6.7X

S.D. = 1.1 on 21 of 32 obs.

JUN 30, 1989 07h 13m 00.75± 0.50s
41.630 N ± 5.7km 142.607 E ± 8.7km
DEPTH = 55.6 ± 6.6 km
4.1mb (3 obs.)
HOKKAIDO, JAPAN REGION (224)
Felt (II JMA) at Urakawa and (I JMA) at Hiroo.

URA	0.54	14	iP+	13	12.30	-0.6
			iS	13	21.90	
HOO	0.84	39	P	13	00.00	-16.6X
HOOJ	0.91	34	iP+	13	16.90	-0.6
			S	13	29.70	
MRRJ	1.39	305	P	13	24.40	0.2
			S	13	42.40	
AOMJ	2.00	238	eP	13	32.90	0.3
KUSJ	2.14	46	P	13	33.80	-0.8
			S	13	58.60	
ASAJ	2.49	1	P	13	41.40	1.9
			S	14	10.10	
OFUJ	2.65	196	P	13	41.20	-0.6
			S	14	14.00	
YAMJ	3.98	211	P	14	00.70	0.0
NIIJ	5.20	214	eP	14	18.00	0.2
KAKJ	5.74	200	eP	14	21.40	-4.0X
MAT	6.12	215	(P)	14	31.00	0.2
			eS	16	55.00	
CHJJ	6.25	208	eP	14	32.30	-0.2
IIDJ	7.16	212	eP	14	46.50	1.2
BJI	20.04	274	eP	17	30.00	-1.7
INK	49.90	29	eP	21	51.00	0.9
MBC	51.87	18	eP	22	05.00	0.0
YKA	59.40	32	eP	23	00.40	1.1
SUF	64.31	333	eP	23	32.00	-0.2
	0.5s		0.70nm		3.9mb	
HFS	70.29	336	eP	24	08.70	-1.0
	0.4s		1.60nm		4.3mb	
NAO	70.60	337	P	24	11.40	-0.2
	0.6s		1.70nm		4.2mb	

S.D. = 0.9 on 19 of 21 obs.

JUN 30, 1989 07h 15m 22.39± 0.49s
41.558 N ± 5.2km 142.647 E ± 7.4km
DEPTH = 47.8 ± 5.5 km
4.6mb (8 obs.)
HOKKAIDO, JAPAN REGION (224)
Felt (I JMA) at Tomokomoi and Urakawa. Felt (I JMA) at Hachinohe, Honshu.

URA	0.61	9	iP+	15	34.50	-0.4
			S	15	44.30	
HOOJ	0.95	30	iP+	15	39.20	-0.4
			S	15	52.50	
HAC	1.34	220	eP	15	45.00	0.1
			S	16	03.30	
TMR	1.34	324	eP	15	00.00	-44.9X
MRRJ	1.46	307	P	15	46.30	-0.4
AOMJ	1.99	241	P	15	55.10	1

30d 07h

KUSJ	2.17	44	P	15 56.20	-0.5
ASAJ	2.56	360	P	16 04.20	1.9
			S	16 33.40	
OFUJ	2.59	197	P	16 02.80	0.1
			S	16 34.50	
YAMJ	3.93	212	P	16 22.40	0.6
NIIJ	5.15	214	P	16 39.50	0.5
KAKJ	5.68	201	P	16 44.70	-1.7
CHJJ	6.20	209	eP	16 52.90	-0.7
GUN	47.80	272	P	23 58.30	0.9
	0.5s		20.00nm		5.4mb
KKN	48.31	272	P	24 01.60	0.4
	0.5s		5.00nm		4.8mb
PKI	48.33	272	P	24 01.40	-0.1
	0.6s		5.00nm		4.7mb
GKN	48.68	273	P	24 04.40	0.4
	0.4s		4.00nm		4.8mb
INK	49.95	29	eP	24 13.00	0.1
MBC	51.93	18	eP	24 27.00	-0.9
	0.7s		2.00nm		4.2mb
YKA	59.44	32	eP	25 22.40	0.3
KEV	59.57	339	eP	25 22.00	-0.9
SOD	61.19	337	iP	25 32.80	-1.2
SUF	64.39	333	iP	25 54.10	-1.1
	0.6s		1.60nm		4.2mb
FFC	69.41	34	eP	26 21.50	-5.5X
	0.9s		10.00nm		4.8mb
NAO	70.68	337	P	26 33.80	-0.9
	0.6s		1.80nm		4.2mb
KVN	71.30	54	iP	26 39.80	0.8
TNP	72.44	55	iP	26 46.80	0.9
ALQ	80.97	51	e(P)	27 35.00	1.4
	S.D. = 0.9		on	26 of 28 obs.	

& JUN 30, 1989 08h 59m 41.91s
62.529 N 151.362 W
DEPTH = 88.4km
CENTRAL ALASKA (1)
<AGS-P>.

SKT	0.56	188	iP	59 56.90	-0.3
			S	00 08.31	
KTH	1.05	11	iP	00 02.48	0.1
			S	00 17.29	
SUA	1.11	164	eP	00 02.72	-0.5
			S	00 19.16	
PWA	1.12	141	iP	00 02.86	-0.4
			S	00 17.42	
GHO	1.37	122	eP	00 06.05	-0.4
			S	00 25.36	
SPU	1.39	194	eP	00 05.58	-1.1
			S	00 24.53	
PME	1.42	128	eP	00 06.25	-0.7
MCK	1.64	41	eP	00 09.58	-0.2
KNK	1.77	128	eP	00 10.69	-0.9
TTA	2.18	283	iP	00 16.59	-0.5
WRH	2.44	36	iP	00 19.59	-1.0
TOA	2.46	98	eP	00 20.14	-0.8
CCB	2.65	35	iP	00 22.50	-1.0
RDS	2.72	30	eP	00 23.44	-0.9
VZW	2.72	121	eP	00 22.79	-1.6
PAX	2.75	78	eP	00 24.37	-0.5
			S	00 56.94	
KLU	2.77	110	eP	00 22.97	-2.2
DDM	2.80	61	eP	00 25.69	0.2
	18 obs. ossocioted				

% JUN 30, 1989 10h 07m 57.79± 1.32s
35.294 N ±13.6km 3.711 W ± 7.6km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.0 (MDD).

EMEL	0.62	89	iPgc	08 11.20	1.0
			eSg	08 22.20	
MAL	1.54	339	ePn	08 24.50	-0.8
			iSg	08 44.50	
OJEN	1.69	299	iP	08 30.00	2.4
BMK	1.78	259	iPn	08 27.00	-1.8
			iPg	08 31.50	
			iSn	08 50.50	
			iSg	08 55.00	
EJIF	1.84	309	ePn	08 28.60	-1.0
MOMI	1.93	303	iP	08 35.00	4.0X
ALJ	2.06	312	iP	08 35.00	2.0
ENIJ	2.06	35	ePn	08 32.00	-0.9
			eSn	08 58.50	
EPRU	2.07	324	ePn	08 33.50	0.4
LIJA	2.11	320	iP	08 34.50	0.8
CNIL	2.18	300	iP	08 33.50	-1.1
GIBL	2.37	311	iP	08 39.00	1.6
EHOR	2.81	334	ePn	08 42.80	-0.7
			eSn	09 18.00	
EBAN	2.87	359	ePn	08 44.80	0.4
			eSn	09 19.50	
EVAL	3.35	314	ePn	08 50.20	-1.0
			eSn	09 26.80	
TOL	4.59	357	ePg	09 56.00	47.2X
			eSg	10 29.00	
GUD	5.35	356	ePn	09 18.50	-1.3
	S.D. = 1.4		on	15 of 17 obs.	

% JUN 30, 1989 10h 31m 56.97± 1.37s
61.604 N ± 9.4km 5.234 E ±13.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.1 (BER).

SUE	0.59	203	eP	32 08.87	-0.1
			eS	32 16.96	
HYA	0.64	133	iP	32 09.27	-0.4
			eS	32 17.77	
ASK	1.13	181	iP	32 18.21	0.2
			eS	32 34.83	
BER	1.23	178	eP	32 19.66	-0.1
			eS	32 37.12	
MOL	1.46	47	iP	32 23.31	0.0
			eS	32 42.25	
ODD1	1.83	157	eP	32 29.61	0.9
			eS	32 52.01	
KMY	2.40	180	eP	32 36.42	-0.5
			eS	33 03.60	
	S.D. = 0.5		on	7 of 7 obs.	

JUN 30, 1989 11h 29m 50.59± 0.82s
38.312 N ± 7.3km 22.661 E ± 9.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.1 (ATH).

ATH	0.90	112	ePn	30 08.50	0.7
			eSn	30 22.00	
NEO	1.09	24	ePn	30 11.50	0.5
ITM	1.27	207	ePn	30 13.00	-1.2
VLS	1.64	266	ePn	30 21.00	1.5
KZN	2.11	341	ePn	30 27.00	0.6
PLG	2.15	16	ePn	30 26.00	-0.9
OHR	3.14	333	iPn	30 51.60	10.5X
VAM	3.15	156	ePb	30 44.00	2.8X
EZN	3.23	61	ePn	30 50.00	7.7X
SKO	3.77	346	ePn	30 49.00	-1.1
	S.D. = 1.3		on	7 of 10 obs.	

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* JUN 30, 1989 12h 52m 50.80± 0.91s
40.104 N ± 9.6km 107.866 W ± 8.8km
DEPTH = 5.0km (geophysicist)
COLORADO (479)
ML 2.2 (NEIS). Felt at Meeker.

PV09	1.88	212	eP	53 23.00	-1.2
			eS	53 47.00	
PV10	1.95	208	eP	53 25.30	0.1
			eS	53 51.00	
GOL	1.96	101	ePn	53 25.80	0.5
			ePg	53 27.50	
			eSn	53 51.80	
EMUT	2.29	264	P	53 31.00	1.0
DAU	2.61	278	eP	53 35.10	0.4
BW06	2.96	335	ePn	53 38.70	-0.8
			ePg	53 44.70	
			(Sn)	54 15.00	
	S.D. = 1.1		on	6 of 6 obs.	

? JUN 30, 1989 13h 24m 18.00± 3.44s
6.173 S ±40.1km 146.520 E ±26.5km
DEPTH = 124.5 ± 22.6 km
3.5mb (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.67	135	iPd	24 37.50	-0.3
			eS	24 52.00	
MNDI	2.85	270	eP	25 03.50	0.2
LMG	3.16	149	eP	25 08.00	0.6
PMG	3.28	169	iPc	25 08.50	-0.3
			eS	25 47.00	
WB5	18.03	220	eP	28 18.70	-3.5X
WRA	18.09	220	P	28 23.00	0.1
	0.2s		0.50nm		3.5mb
ASPA	21.21	214	eP	28 55.00	-0.3
	S.D. = 0.6		on	6 of 7 obs.	

JUN 30, 1989 14h 55m 47.81± 0.63s
43.435 N ± 4.4km 5.455 E ± 5.1km
DEPTH = 8.1 ± 4.4 km
NEAR SOUTH COAST OF FRANCE (379)
MD 2.6 (STR).

GELF	0.05	202	Pg	55 49.87	0.1
TREF	0.20	345	Pg	55 51.66	-0.4
PUYF	0.20	61	Pg	55 51.57	-0.6
BERF	0.21	125	Pg	55 52.70	0.4
PRAF	0.42	331	Pg	55 56.65	0.2
VILF	0.46	24	Pg	55 56.50	-0.6
TAVF	0.47	67	Pg	55 57.13	-0.3
GANF	0.65	30	Pg	56 01.53	0.6
CALN	1.09	73	Pg	56 09.20	0.6
MVIF	1.32	69	Pn	56 12.67	0.3
			Sg	56 31.13	
TOUF	1.42	65	Pn	56 14.49	0.4
			Sg	56 35.25	
AURF	1.43	71	Pn	56 13.91	-0.2
			Sg	56 34.83	
AUTN	1.54	68	Pn	56 16.53	0.8
			Sg	56 37.74	
SAOF	1.62	69	Pn	56 16.79	0.0
CVF	2.65	108	Pn	56 30.20	-1.4
	S.D. = 0.7		on	15 of 15 obs.	

JUN 30, 1989 16h 24m 03.37± 0.37s
35.426 N ± 4.5km 139.010 E ± 4.1km
DEPTH = 41.4 ± 4.1 km
4.6mb (8 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (III JMA) at Kawaguchi-ko, (II JMA) at Kofu, Tokyo and (I JMA) at Ajiro, Moeboshi, Mishima, Utsunomiya, Yokohama and on Oshima.

FUN	0.21	290	eP	24 07.00	-4.0X
			S	24 11.00	
MIS	0.32	192	iPd	24 11.10	-0.8
			iS	24 16.80	
AJI	0.39	169	iPd	24 12.30	-0.4
			S	24 18.50	
KOF	0.44	303	iPd	24 11.00	-2.4
			iS	24 17.10	
YOK	0.53	89	iPd	24 15.10	0.6
			iS	24 24.60	
CHJJ	0.62	359	iPd	24 13.60	-2.2
TOK	0.66	67	P	24 17.00	0.6
			iS	24 27.20	
OSH	0.73	155	iPd	24 17.80	0.5
			iS	24 28.70	
IIDJ	0.90	274	iPd	24 19.30	-0.4
			S	24 31.50	
MAE	0.97	3	eP	24 21.00	0.3
			S	24 32.90	
KAKJ	1.22	50	P	24 24.20	-0.1
			S	24 38.90	
MAT	1.29	330	iPd	24 25.00	-0.2
			iS	24 40.50	
UTS	1.32	32	iP+	24 25.90	0.3
			iS	24 42.90	
MTMJ	1.51	320	iPd	24 29.30	0.8
			S	24 49.30	
NIIJ	1.81	360	P	24 33.30	0.7
			iS	24 56.40	
TSRJ	2.47	273	P	24 43.80	1.7
YAMJ	2.86	16	P	24 48.60	1.0
WKYJ	3.06	248	iPd	24 51.50	1.0
OFUJ	4.22	29	P	25 07.00	0.2
			S	25 57.00	
TKSJ	4.33	252	P	25 09.20	0.7
YONJ	4.54	269	P	25 11.80	0.3
AOMJ	5.24	11	eP	25 23.70	2.5X
TIA	17.77	279	eP	28 10.80	1.6
BJI	18.62	291	eP	28 18.50	-1.2
TIY	21.44	284	eP	28 51.90	1.8
KKN	45.92	276	P	32 24.20	0.0
GKN	46.36	277	P	32 27.60	0.1

WB5	55.18	185	eP	33 32.70	-1.5
WRA	55.24	185	Pd	33 33.40	-1.3
	0.5s		0.90nm		4.1mb
INK	56.70	26	eP	33 44.00	-0.6
MBC	58.61	16	eP	33 57.50	-0.5
	0.6s		3.00nm		4.6mb
ALE	61.83	3	eP	34 19.00	-0.9
	0.6s		3.00nm		4.6mb
SUF	68.53	333	eP	35 02.00	-1.3
	0.6s		6.50nm		4.8mb
NUR	70.44	331	eP	35 14.10	-0.9
HFS	74.73	335	eP	35 39.10	-1.2
	0.4s		2.00nm		4.4mb
NAO	75.19	337	P	35 42.30	-0.7
	0.9s		10.60nm		4.8mb
FFC	76.10	32	eP	35 48.00	-0.2
	0.8s		9.00nm		4.8mb
LRM	76.65	43	eP	35 52.90	1.1
KVN	77.28	51	iP	35 56.70	1.4
TNP	78.40	51	P	36 02.50	0.9
	0.8s		3.43nm		4.4mb
BW06	80.17	44	P	36 11.00	-0.1
MSU	81.30	49	iP	36 23.20	6.1X
			i	37 58.30	
PLM	81.44	55	P	36 22.60	4.8X
CLL	81.50	329	eP	36 18.00	0.5
RSSD	82.32	40	P	36 23.00	0.7
KHC	82.87	327	eP	36 18.30	-6.5X
ZOBO	149.18	59	PKP	43 51.00	5.3X
LPB	149.37	59	PKP	43 52.00	6.2X
CNCB	149.64	59	PKP	43 53.00	6.6X
S.D. = 1.1 on 41 of 49 obs.					

? JUN 30, 1989 16h 37m 23.71± 4.63s
12.252 S ±16.2km 166.945 E ±29.4km
DEPTH = 114.9 ± 31.5 km
4.7mb (7 obs.)
SANTA CRUZ ISLANDS (184)

HNR	7.42	291	eP	39 11.00	0.1
			eS	40 30.00	
CTA	21.33	246	iPd	42 03.80	0.8
	1.0s		33.00nm		4.6mb
WB5	32.17	252	eP	43 41.20	-1.5
WRA	32.20	252	Pd	43 39.00	-4.0X
	0.3s		1.30nm		4.2mb
ASPA	33.34	245	eP	43 51.60	-1.3
	0.8s		14.00nm		4.8mb
WARB	40.32	244	eP	44 52.00	0.4
FORR	40.33	236	eP	44 52.00	0.5
MBL	45.84	252	eP	45 36.30	0.1
MEKA	47.56	245	eP	45 50.00	0.3
NANU	49.91	251	iPc	46 08.20	0.4
SSE	61.53	316	e(P)	47 30.50	-0.4
PKI	88.24	299	P	50 04.20	0.2
	0.6s		4.00nm		4.6mb
KKN	88.41	299	P	50 04.40	-0.3
	0.6s		5.00nm		4.7mb
DMN	88.51	299	P	50 06.30	1.1
	0.6s		5.00nm		4.8mb
GKN	89.01	299	P	50 07.40	-0.1
	0.5s		5.00nm		4.9mb
SOB1	145.07	126	ePKP	56 49.80	-0.3
BNG	147.81	259	iPKPc	56 58.50	3.9X
	0.5s		14.00nm		
S.D. = 0.8 on 15 of 17 obs.					

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* JUN 30, 1989 16h 39m 20.86± 1.86s
35.466 N ±15.6km 139.017 E ± 8.7km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.2 (JMA). Felt (I JMA) at Kawaguchi-ko.

FUN	0.21	279	eP	39 00.00	-25.5X
CHJJ	0.58	358	P	39 32.40	-0.2
			S	39 39.70	
IIDJ	0.90	271	iPd	39 38.10	-0.1
			S	39 50.30	
KAKJ	1.19	52	P	39 42.90	-0.2
			S	39 58.40	
MAT	1.26	329	iPd	39 43.80	-0.4
			iS	39 59.40	
MTMJ	1.49	319	iPd	39 48.00	0.3
			S	40 08.00	
NIIJ	1.77	360	P	39 52.40	0.7
			eS	40 15.00	
TSRJ	2.48	273	eP	40 04.80	2.9X
S.D. = 0.5 on 6 of 8 obs.					

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* JUN 30, 1989 17h 08m 46.05± 1.72s
39.533 N ±20.9km 119.817 W ± 9.1km
DEPTH = 5.0km (geophysicist)
NEVADA (37)
ML 2.6 (BRK).

ORV	1.30	272	iPc	09 10.60	0.0
			eS	09 27.60	
KVN	1.42	109	eP	09 11.70	-1.0
			eS	09 30.00	
CMB	1.56	197	eP	09 13.20	-1.4
			iS	09 31.80	
TNP	2.49	125	eP	09 29.50	1.3
FRI	2.54	178	eP	09 34.60	6.0X
			eS	10 02.00	
ARN	2.56	212	eP	09 30.00	1.0
S.D. = 1.7 on 5 of 6 obs.					

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* JUN 30, 1989 18h 52m 54.41± 0.54s
8.952 N ± 9.0km 126.254 E ±14.5km
DEPTH = 33.0km (normal)
4.6mb (7 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MTN	22.19	167	eP	57 50.00	0.5
SSE	22.53	349	P	57 53.50	0.7
	0.6s		19.00nm		4.7mb
KNA	24.67	174	eP	58 13.30	-0.4
CHG	28.23	293	eP	58 47.60	1.0
CHTO	28.23	293	eP	58 47.10	0.5
	0.9s		1.92nm		3.8mb
BJI	32.24	345	eP	59 20.50	-1.4
WARB	34.93	179	eP	59 45.40	0.0
FORR	39.61	178	iPd	00 24.00	-0.6
	0.4s		11.00nm		5.0mb
PKI	42.72	301	P	00 50.80	0.0
	0.7s		7.00nm		4.5mb
KKN	42.90	301	P	00 52.20	0.1
BWA	47.98	155	eP	01 32.50	0.3
GBA	48.04	280	Pd	01 33.00	0.1
	0.7s		3.50nm		4.5mb
MAIO	66.04	306	eP	03 40.00	-0.5
MBC	86.99	13	ePc	05 37.30	0.1
	0.8s		8.00nm		5.0mb
HFS	93.20	332	eP	06 04.10	-2.4
	0.4s		0.60nm		4.4mb
YKA	94.96	24	eP	06 16.60	2.0
S.D. = 1.1 on 16 of 16 obs.					

JUN 30, 1989 19h 04m 09.48± 0.65s
28.036 N ± 6.3km 55.302 E ± 3.5km
DEPTH = 54.3 ± 7.2 km
4.4mb (13 obs.)
SOUTHERN IRAN (353)

SHI	2.92	304	eP	04 55.00	0.4
BJA	4.66	245	iPn	05 18.60	-0.3
BEE	4.71	246	iPn	05 19.60	-0.2
			(Sn)	06 14.60	
DHR	4.91	251	eP	05 23.00	0.4
TEH	8.37	338	e(P)	06 11.00	0.1
RYD	8.46	249	eP	06 12.00	-0.2
MAIO	8.97	22	ePn	06 20.00	0.8
			eSn	07 41.00	
KER	9.43	314	eP	06 28.00	2.5X
QUE	10.41	75	eP	06 37.70	-1.3
QASM	10.67	262	eP	06 37.50	-4.8X
KMSA	12.46	235	eP	07 01.30	-5.2X
AYN	17.00	277	eP	08 05.30	0.3
HRI	17.61	292	iPd	08 12.00	-0.7
PRNI	17.88	282	eP	08 15.00	-0.9
MBH	17.97	280	eP	08 18.00	1.1
HLW	21.04	281	eP	08 51.00	0.1
BBTK	22.03	308	eP	09 01.00	0.0
ELL	23.08	299	eP	09 13.00	1.7
GKN	25.87	83	P	09 41.50	3.4X
KKN	26.46	83	P	09 43.70	0.1
	0.8s		12.00nm		4.5mb
PKI	26.61	84	P	09 44.70	-0.3
	0.8s		20.00nm		4.7mb
WMQ	30.36	50	eP	10 18.20	-0.1
OHR	31.05	304	eP	10 24.00	-0.4
KHC	38.19	315	iPd	11 25.50	0.0
	1.2s		10.00nm		4.6mb
GTA	38.37	61	eP	11 28.00	0.8
CLL	39.25	318	iPd	11 34.30	0.1
	1.2s		10.00nm		4.5mb
UPP	40.82	332	iP	11 46.70	-0.2
CHG	40.90	93	eP	11 49.40	1.2
CHTO	40.90	93	eP	11 49.20	1.0
	1.0s		7.50nm		4.4mb
LPG	41.93	308	eP	11 57.90	1.2
	1.0s		6.00nm		4.3mb
HFS	42.64	331	eP	12 01.40	-0.5
	0.7s		15.40nm		4.9mb
DOU	44.09	314	P	12 14.40	0.6
			e	20 53.20	
NAO	44.22	331	P	12 14.20	-0.5
	0.9s		10.90nm		4.6mb
SSF	44.36	310	eP	12 15.60	-0.5
	0.8s		4.50nm		4.3mb
MAF	44.92	309	eP	12 19.40	-1.2
	1.0s		6.00nm		4.4mb
TCF	45.17	309	eP	12 21.60	-1.0
	0.6s		1.80nm		4.1mb
CAF	45.18	307	eP	12 22.40	-0.3
	0.8s		4.00nm		4.3mb
XAN	45.90	69	P	12 27.40	-1.1
TIY	48.30	63	eP	12 47.20	-0.2
CN2	57.33	54	P	13 57.00	2.9X
MBC	75.92	359	eP	15 52.00	0.5
	0.8s		2.00nm		4.1mb
S.D. = 0.8 on 36 of 41 obs.					

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* JUN 30, 1989 20h 45m 40.06± 1.77s
46.208 N ±15.9km 14.758 E ± 6.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.6 (LJU).

LJU	0.23	223	iPgc	45 45.00	0.0
			iSg	45 48.00	
CEY	0.52	206	ePg	45 50.90	0.2
			eSg	45 55.40	
VOY	0.63	254	ePgd	45 52.60	-0.1
			eSg	46 01.70	
VBY	0.79	153	e(Pg)	45 55.00	-0.3
			e	46 00.00	
			iSg	46 04.60	
			i	46 07.90	
PTJ	0.89	110	iPg	45 57.40	0.2
			iSg	46 08.20	
S.D. = 0.3 on 5 of 5 obs.					

JUN 30, 1989 20h 48m 24.34± 0.32s
50.515 N ± 3.5km 18.936 E ± 3.3km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 4.2 (KRA).

KRA	0.79	125	iPgd	48 40.00	0.3
			iSg	48 50.00	
SPC	1.57	147	iPn	48 52.80	0.3
			i(Pg)	48 54.90	
			i(Sg)	49 12.50	
			Lg	49 18.60	
KSP	1.71	282	iPn	48 55.50	1.1
	0.7s		162.00nm		
			iPg	48 58.30	
			iS	49 21.30	
ZST	2.61	208	ePn	49 06.40	-0.9
			i	49 12.00	
			i	49 18.60	
			i	49 25.80	
			i(Sn)	49 32.90	
			e	14 12.60	
PSZ	2.67	166	ePn	49 07.80	-0.5
SRO	2.73	189	iPn	49 16.40	7.3X
			i	49 46.10	
			i	50 01.50	
VKA	2.83	218	iPnc	49 15.90	5.5X
			i	49 19.50	
			i	49 46.60	
			iSn	49 57.60	
PRU	2.87	261	iPn	49 10.50	-0.4
			i	49 18.60	
			Sg	49 54.00	
BRG	3.19	278	ePn	49 15.00	-0.5
			iPg	49 27.00	
			i	50 07.00	
			iSg	50 10.00	

30d 20h

```
KHC      3 74 250 Pn     49 23.50    0.2
                  Pg     49 30.20
                  Sn     50 09.00
                  Sg     50 21.50
CLL      3.84 284 ePg    49 38.00   13.3X
                  eSg    50 33.90
KMR      3.99 234 iPn-   49 27.40    0.5
                  iPg    49 40.00
                  iSn    50 13.00
                  i      50 25.60
                  iSg    50 34.60
BMR      4.13 132 ePd    49 30.00    1.2
WET      4.15 253 ePn    49 29.50    0.3
HOF      4.52 270 ePn    49 35.10    0.7
MOX      4.67 274 ePn    49 37.00    0.5
                  ePg    49 49.00
                  eSn    50 32.00
                  eSg    50 52.50
BHG      4.86 237 ePn    49 33.10   -6.1X
PTJ      5.03 204 e(Pn)  49 39.70   -1.9
GRF      5.03 264 ePn    49 41.50   -0.1
                  ePg    49 58.00
                  e(Sn)  50 51.00
                  eSg    51 04.00
K8A      5.05 229 iP     49 42.40    0.4
                  e      49 51.00
                  i      49 53.90
                  i      50 01.10
                  i      50 32.10
                  iSg    50 58.10
BZS      5.22 159 eP     49 43.50   -0.8
LJU      5.35 215 ePn    49 46.50    0.3
                  e(Sn)  51 24.00
VOY      5.61 219 ePn    49 52.90    3.0X
                  eSn    51 31.30
TRI      5.92 218 eP     50 35.70   41.5X
CMP      6.66 140 ePc    50 06.00    1.4
TNS      6.72 272 eP     50 05.40    0.0
                  eS     51 58.30
MLR      6.88 134 ePd    50 07.00   -0.8
VRI      6.98 129 ePd    50 09.00    0.0
UPP      9.39 356 iP     50 43.00    0.4
                  i      52 26.90
                  i      53 42.20
HFS     10.09 345 eP     50 52.60    0.4
        0.4s      1.20nm          4.7mb X
NUR     10.52  16 iP     50 57.70   -0.4
        0.7s     20.00nm          5.6mb X
                  eS     52 54.80
NAO     11.29 339 P      51 07.00   -1.6
        1.1s      5.60nm          4.8mb X
SUF     12.85  15 eP     51 29.30   -0.3
        0.5s      3.50nm          4.8mb X
                  eS     53 52.60
SOD     17.34  10 iP     52 32.20    4.6X
     S.D. = 0.8  on  27 of  34 obs.
-------------------------------------------
?  JUN  30, 1989  21h 17m 53.23± 1.00s
   35.794 N ±15.4km   26.308 E ± 8.7km
   DEPTH =  10.0km  (geophysicist)
 CRETE                              (370)
      MD 3.3 (ATH).

KAP      0.75 109 ePn    18 07.50   -0.3
                  eSn    18 15.00
NPS      0.78 227 ePn    18 09.00    0.6
                  eSn    18 18.50
VAM      1.76 258 ePn    18 23.30   -0.7
YER      2.08  49 ePn    18 29.00    0.4
     S.D. = 1.0  on   4 of   4 obs.
-------------------------------------------
*  JUN  30, 1989  21h 48m 07.90± 0.64s
   52.540 N ±12.7km  155.888 E ±10.8km
   DEPTH =  33.0km  (normal)
   4.6mb ( 20 obs.)
 NORTHWEST OF KURIL ISLANDS         (220)

MAT     20.27 225 eP     52 42.00   -1.2
        0.7s     20.55nm          4.6mb
FBA     30.61  44 eP     54 22.80    2.2
        1.0s     11.00nm          4.6mb
MBC     38.54  22 eP     55 22.50   -5.9X
        0.5s      2.00nm          4.2mb
ALE     43.79   7 eP     56 10.00   -1.4
        0.7s      7.00nm          4.6mb
CHTO    55.29 255 eP     57 42.50    2.1
        0.8s      1.28nm          4.0mb
KVN     58.00  66 eP     57 59.00   -0.7
SUF     58.48 335 iP     58 03.20    0.7
TNP     59.17  67 iP     58 07.20   -0.7
        1.0s      5.00nm          4.6mb
BW06    60.00  58 eP     58 14.00    0.4
        1.0s      3.25nm          4.4mb
NAO     63.58 342 P      58 35.90   -1.2
        0.7s      1.00nm          4.0mb
HFS     63.64 340 eP     58 36.50   -0.9
        0.9s      6.40nm          4.7mb
CLL     71.90 337 iP     59 28.80   -0.4
                  eSg    22 02.00
WTS     72.64 341 eP     59 33.50    0.0
KHC     73.77 335 eP     59 41.00    0.8
ENN     73.99 341 eP     59 41.00   -0.3
        0.8s      9.00nm          4.8mb
KBA     75.72 335 iPc    59 52.00    0.3
        0.9s     17.60nm          5.1mb
                  i      59 55.00
LOR     77.74 341 eP     00 02.30   -0.4
        1.0s      8.00nm          4.7mb
LBF     77.98 341 eP     00 03.70   -0.4
        0.8s      2.60nm          4.3mb
SSF     78.00 341 eP     00 03.80   -0.3
        0.8s      3.20nm          4.4mb
AVF     78.29 341 eP     00 05.40   -0.3
        0.8s      6.70nm          4.7mb
LPG     78.81 338 eP     00 09.60    0.7
        0.8s      5.30nm          4.6mb
MAF     78.99 341 eP     00 09.70    0.1
        0.8s      8.50nm          4.8mb
TCF     79.00 342 eP     00 09.70    0.1
        0.8s      4.50nm          4.5mb
LSF     79.16 342 eP     00 10.50    0.0
        0.7s      4.40nm          4.6mb
CAF     80.34 341 eP     00 17.20    0.4
        0.8s      3.20nm          4.4mb
LPO     80.74 342 eP     00 19.20    0.3
     S.D. = 0.9  on  25 of  26 obs.
-------------------------------------------
&  JUN  30, 1989  22h 17m 34.16s
   62.408 N          151.080 W
   DEPTH =  69.0km
 CENTRAL ALASKA                     (  1)
      <AGS-P>.

PWA      0.95 143 iP     17 51.90   -0.3
PMR      1.23 131 iPc    17 54.70   -1.1
PMS      1.37 148 iPc    17 56.80   -1.0
TOA      2.32  95 iPc    18 09.70   -1.1
TTA      2.34 285 iPc    18 09.60   -1.5
SVW      2.52 241 iPd    18 12.00   -1.7
FBA      2.90  29 iPd    18 16.80   -2.1
IMA      3.85 344 ePc    18 30.10   -2.2
KDC      4.73 189 eP     18 42.50   -2.0
         9 obs. associated
-------------------------------------------
?  JUN  30, 1989  22h 58m 27.88±23.22s
     0.422 N ±139.km    78.851 W ±143.km
   DEPTH =  33.0km  (normal)
 COLOMBIA-ECUADOR BORDER REGION     (106)

COTA     0.52 100 eP     58 38.50   -0.7
GGP      0.65 157 eP     58 41.20    0.1
OUR      0.67 151 eP     58 40.50   -0.8
CAYA     0.93 111 eP     58 46.20    1.1
RECU     1.09 165 eP     58 48.20    0.8
     S.D. = 1.2  on   5 of   5 obs.
-------------------------------------------
*  JUN  30, 1989  23h 18m 36.56± 0.46s
   10.964 S ±10.7km  162.011 E ± 9.7km
   DEPTH =  70.0km  (geophysicist)
   5.0mb (  6 obs.)
 SOLOMON ISLANDS                    (193)

CTA     17.67 237 iPc    22 40.10    0.4
        1.0s    182.00nm          5.2mb
RMQ     19.87 217 iPd    23 05.00    0.2
        0.9s    238.00nm          5.5mb
COO     21.66 204 iPc    23 22.60   -0.4
QIS     23.55 243 eP     23 42.00    0.4
CMS     25.32 214 iPd    23 58.00   -0.4
BWA     26.45 206 eP     24 08.20   -0.6
CAN     26.98 204 eP     24 15.20    1.5
WB5     28.05 248 eP     24 22.20   -1.3
STK     28.09 219 eP     24 23.00   -0.7
WRA     28.09 248 Pd     24 23.30   -0.5
        1.4s     23.80nm          4.6mb
ASPA    29.59 241 iPc    24 36.30   -1.1
        1.1s     17.00nm          4.6mb
     Z  23s      0.83um          4.3MszX
                  LR     34 48.20
MTN     30.27 263 eP     24 43.00   -0.3
KNA     32.67 258 eP     25 04.30    0.0
WARB    36.63 241 eP     25 38.00   -0.2
MBL     41.66 251 eP     26 20.00    0.0
MEKA    43.77 243 eP     26 38.00    0.9
NANU    45.80 249 iPc    26 54.90    1.5
SPA     79.11 180 e(P)   30 35.00    0.1
        1.0s     65.00nm          5.5mb
PKI     83.40 300 P      30 59.00    0.7
        0.8s      8.00nm          4.8mb
MAW     83.41 202 eP     30 58.00    0.8
PRS     85.87  52 eP     31 10.80    0.7
CMB     87.10  51 eP     31 16.40    0.2
FRI     87.34  52 e(P)   31 15.20   -2.0
KVN     89.10  50 eP     31 26.10    0.2
KHC    133.79 332 ePKP   37 48.50    1.3
BNG    143.24 263 iPKPc  38 04.00   -1.5
       0.8s     13.00nm
SOB1   149.66 130 ePKP   38 19.80    3.9X
                  e      38 24.00
     S.D. = 0.9  on  26 of  27 obs.
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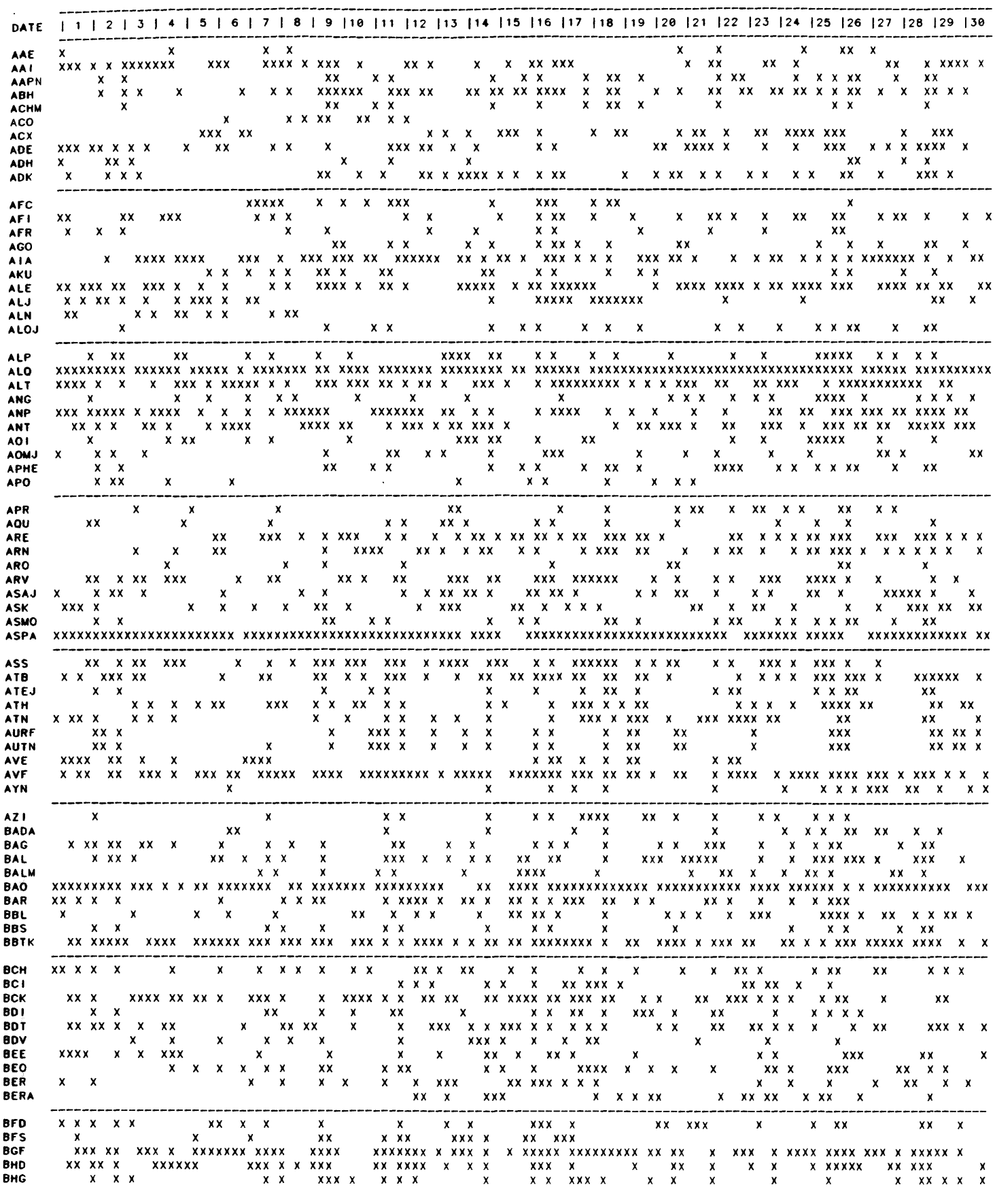
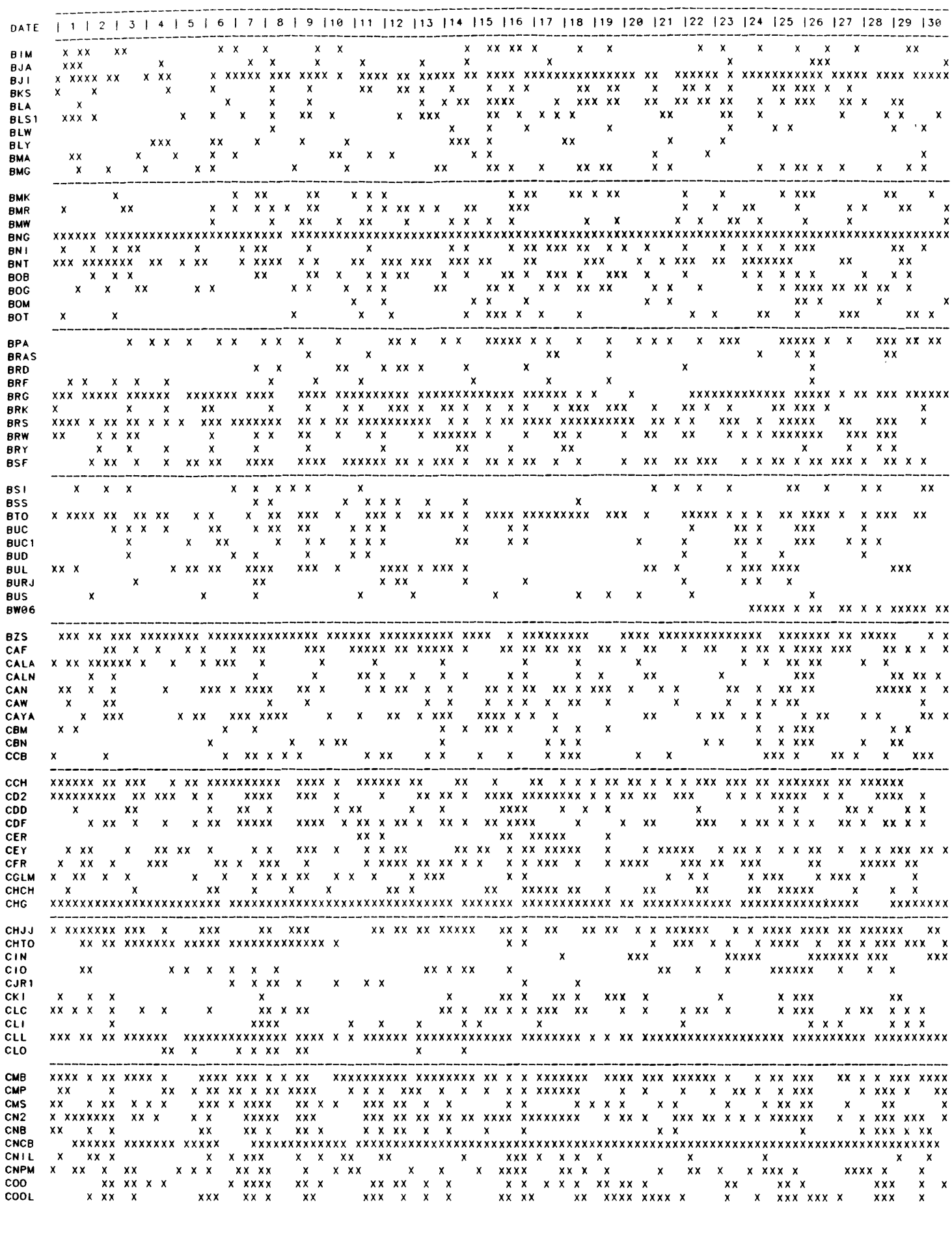
STATION DATA REPORT FOR JUNE, 1989

1295 stations reported 54086 reoding orrival groups

X = data received for this 6-hour time period

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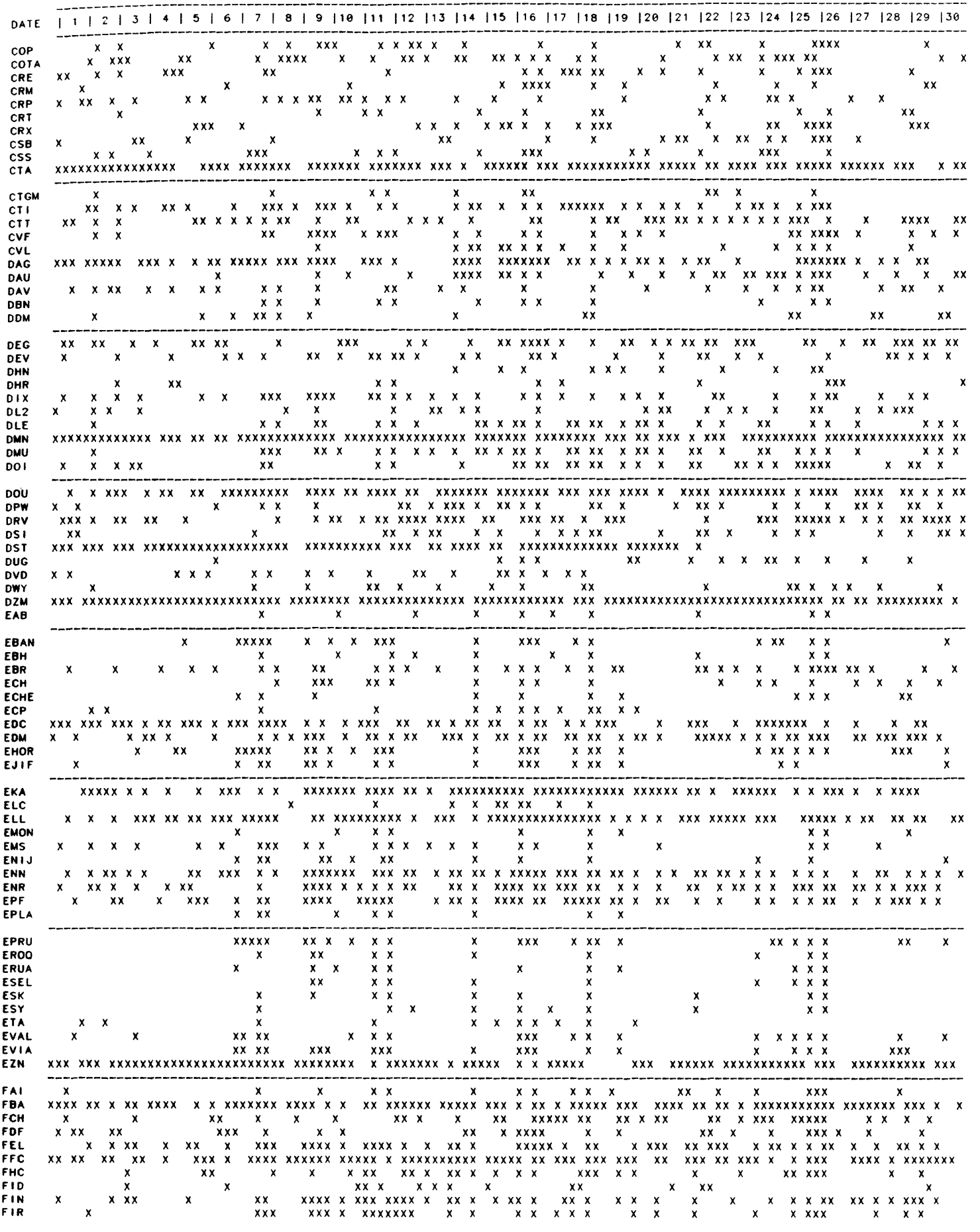
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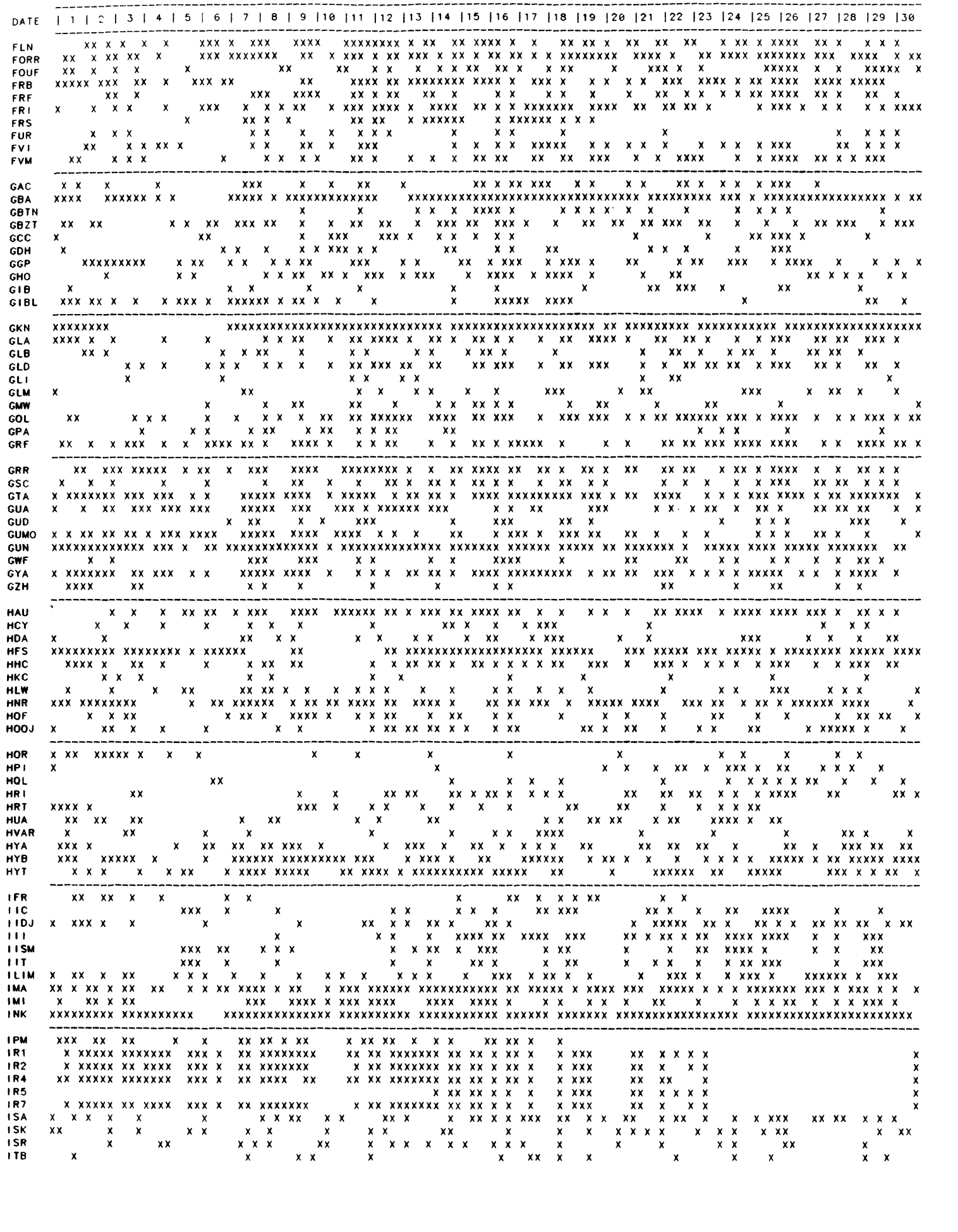
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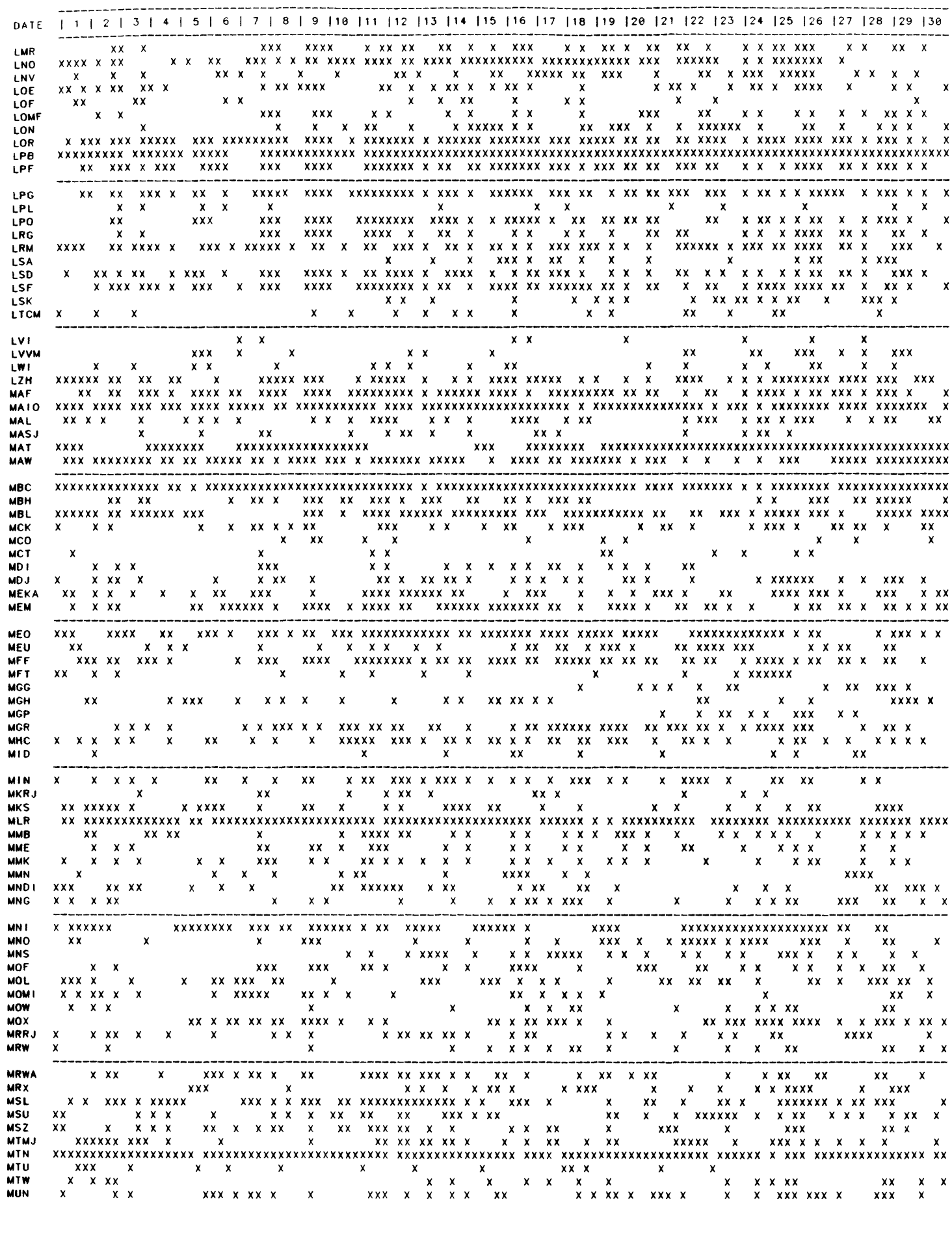
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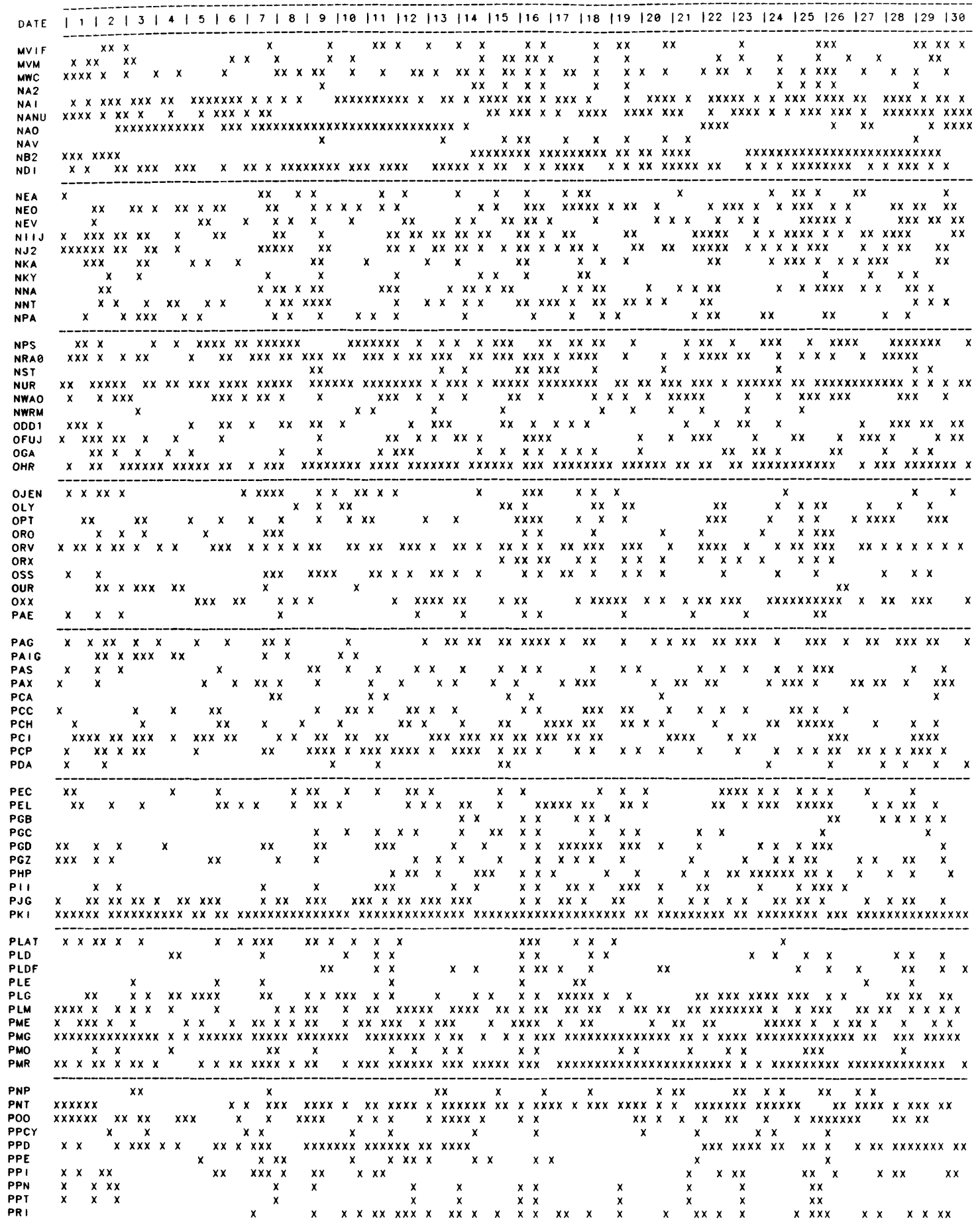
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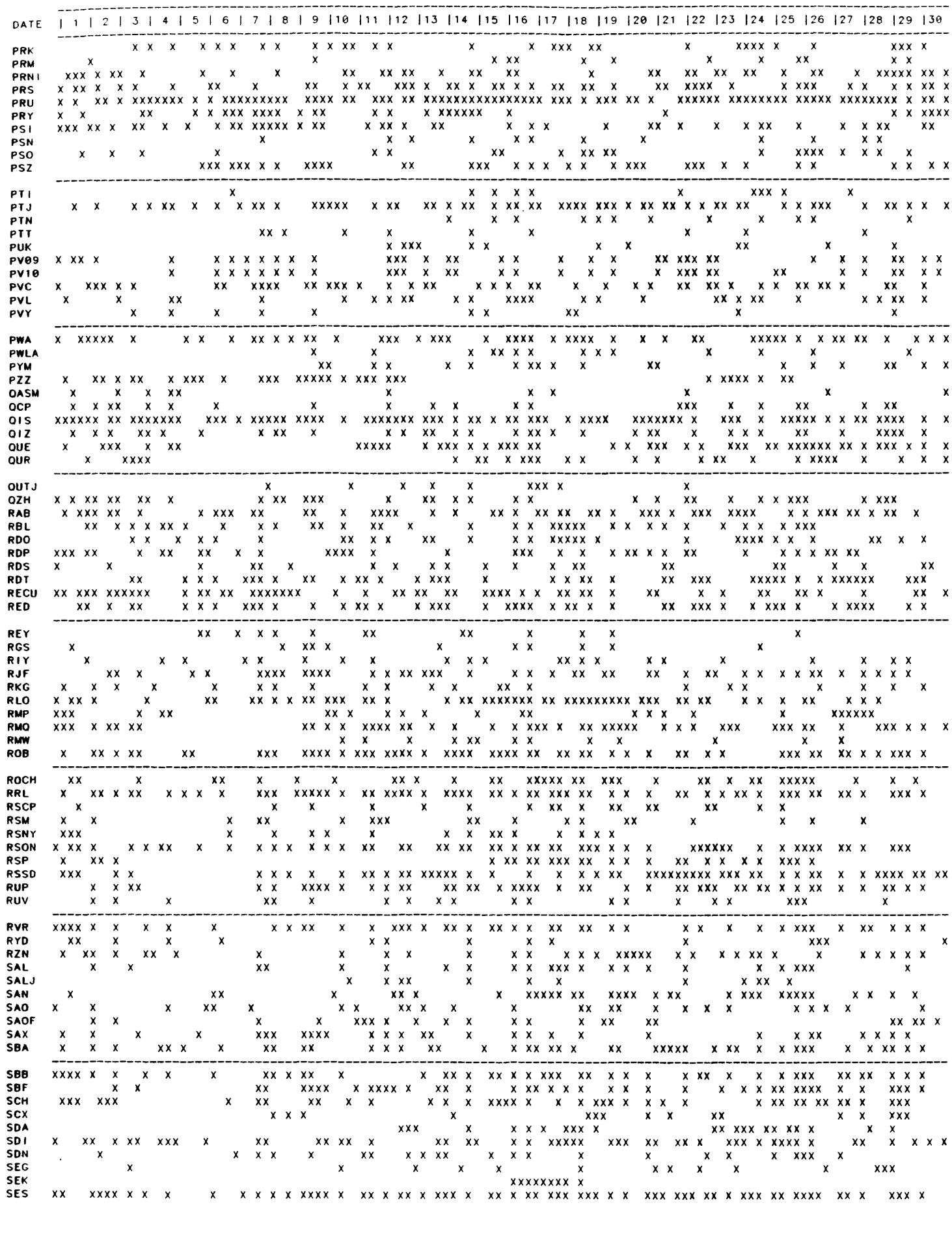
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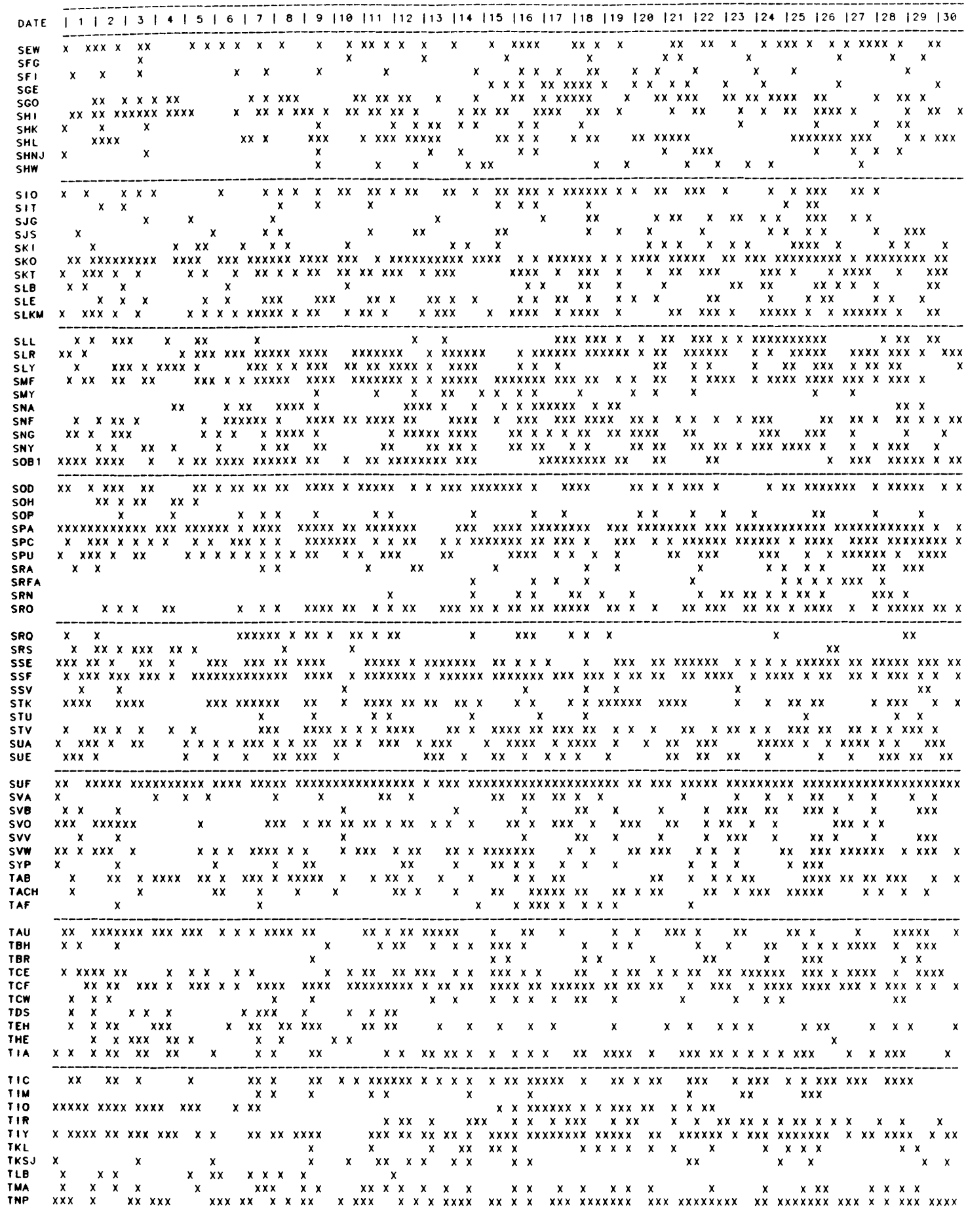
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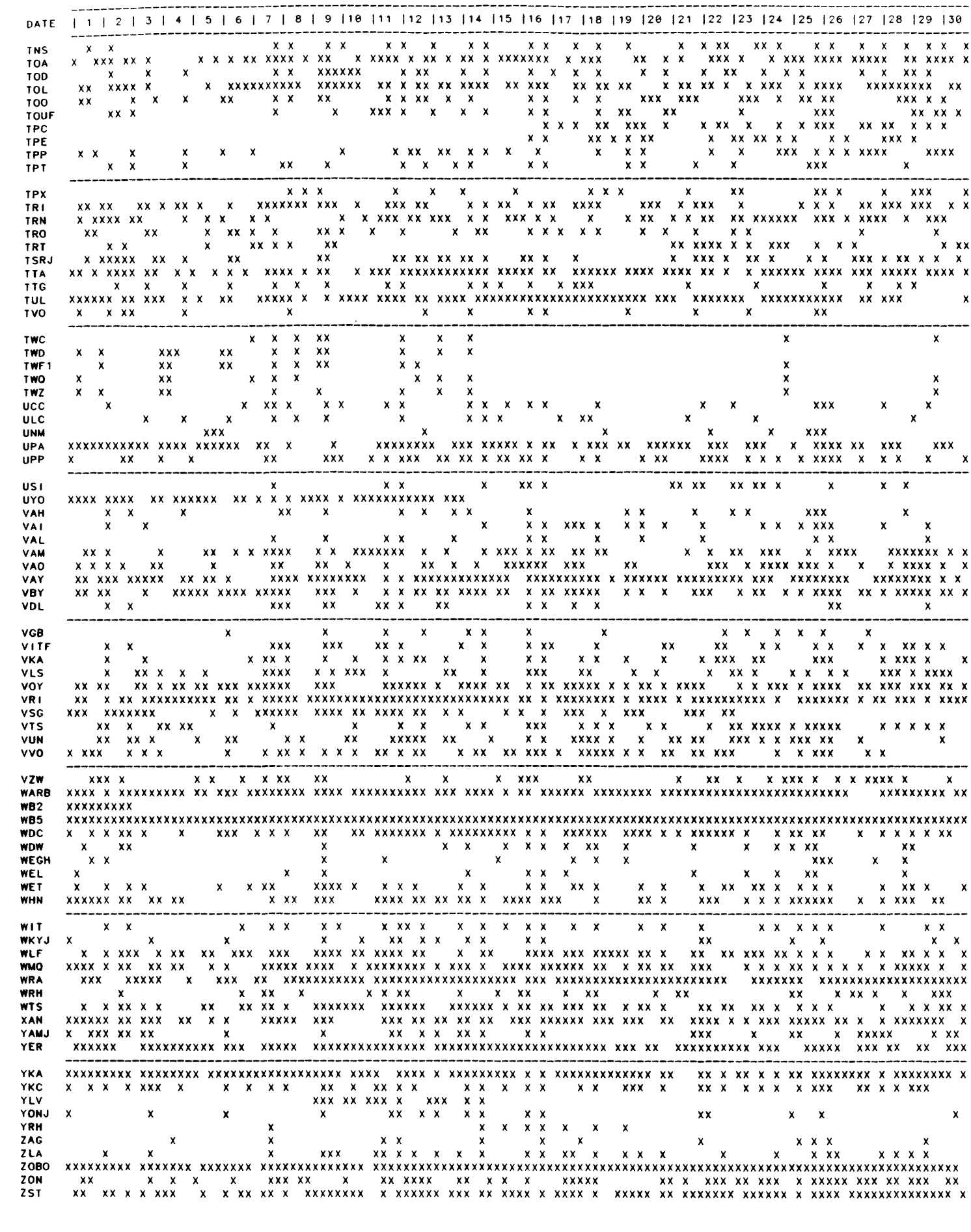
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TPC
TPE
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TPT
TPX
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TSRJ
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TWF1
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UCC
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UNM
UPA
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USI
UYO
VAH
VAI
VAL
VAM
VAO
VAY
VBY
VDL
VGB
VITF
VKA
VLS
VOY
VRI
VSG
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VUN
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VZW
WARB
WB2
WB5
WDC
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WEGH
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WHN
WIT
WKYJ
WLF
WMQ
WRA
WRH
WTS
XAN
YAMJ
YER
YKA
YKC
YLV
YONJ
YRH
ZAG
ZLA
ZOBO
ZON
ZST

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

The following stations each reported less than 10 readings:

ABHA	ABL	ACR	ACU	ADI	AGX	AHA	AIN	AJI	ALB	ALPW	ANCC	ANM	ANMO	ANTO	APE	APW	AR6
ATA	AUE	AUI	AUL	AVN	AVOW	BAC	BCAO	BCPM	BCS	BENE	BERF	BGMT	BIB	BIR	BLH	BLN	BLP
BNH	BRLK	BRN	BTB	BUT	BVA	BWA	CAL	CAR	CBB	CBI	CBX	CBZ	CCMT	CCW	CDFW	CEI	CEOS
CFS	CFTV	CGL	CHB	CHOI	CIS	CLMC	CMW	CNBA	CNK	COL	COLW	COW	COY	COZ	CPB	CPBX	CPE
CPH	CPK	CPW	CRI	CTAO	CTFE	CVA	CVD	CVT	CVVD	CZM	DAF	DAH	DES	DIAC	DIM	DLG	DMK
DMMT	DPMT	DRA	DRC	DSVT	DTMT	DUI	EALH	EAU	EBL	ECBX	ECRI	EDI	EDU	ELO	EMEL	EMM	EMUT
EMX	ENH	ENX	ERC	ERK	ESD	ESR	ETER	ETOR	EZAM	FAM	FCV	FISA	FKO	FKS	FL2	FMT	FMW
FUG	FUN	FUQ	GANF	GBR	GCG	GCM	GELF	GGC	GHC	GHW	GIN	GLH	GLK	GLR	GMB	GMR	GMTN
GRA3	GRB1	GRB2	GRB4	GRB5	GRFO	GRG	GRI	GRM	GROR	GSH	GSM	GT2	GUAC	GUAN	GZR	HAC	HATZ
HAY	HBF	HBH	HDW	HIA	HIL	HIN	HITZ	HJJ	HLK	HLP	HMH	HMT	HOBC	HON	HOO	HOQC	HPU
HQN	HRV	HRY	HSR	HTC	HTW	HUH	HUL	HWD	IAS	ICR	IHA	IKP	ILT	IMW	ISN	ITG	ITU
IVF	IXG	JAT	JCK	JCM	JCR	JCW	JER	JHN	JIZN	JLK	JMI	JVI	KAE	KBR	KETZ	KFH	KHU
KIH	KKU	KLM	KMG	KMOR	KMZ	KNH	KNIM	KOF	KOH	KOSW	KOT	KPO	KSI	KUH	KUS	LCCM	LCH
LCNE	LHG	LIO	LIS	LLAV	LMW	LMX	LNOR	LOHW	LPI	LSM	LST	LSZ	LVP	MAE	MAO	MBW	MCA
MCP	MCW	MDB	MDL	MEMT	MEW	MGM	MGS	MHZ	MIM	MIS	MIT	MIY	MKA	MKL	MKT	MLH	MLK
MLS	MLX	MMG	MML	MNA	MOOW	MORO	MRK	MSI	MTI	MTMW	MTR	MTT	MUDI	MVH	MWH	MYT	MZX
MZZ	NAC	NEM	NGH	NGI	NLO	NNL	NOH	NPH	NPN	NSS	NZJ	OBC	OBH	OBN	OBO	OC2	OCO
OFK	OHW	OLLA	ONA	ONR	OOW	OPA	OSD	OSG	OSH	OTR	OUT	PACW	PANV	PBX	PCG	PDB	PET
PGO	PGW	PHAM	PIG	PINI	PKEM	PKL	PLAV	PLH	PLL	PMS	PNJ	PNL	POF	POH	PPK	PPL	PRAF
PRIN	PS4	PSG2	PSR	PT02	PT03	PT06	PT08	PT10	PTS	PTZ	PUH	PURC	PUYF	PVV	PWH	PZI	QCR
QRI	QSM	RAGM	RAMW	RAO	RAR	RATZ	RDG	RDX	REC	REDW	REVF	RFI	RIM	RIV	RKT	RMN	RPW
RRO	RTB	RVC	RVW	SALC	SAP	SASA	SCE	SCI	SCP	SDH	SDV	SEN	SGAM	SGB	SGH	SGS	SGV
SHGH	SHR	SHU	SIM	SLP	SLW	SMMM	SMW	SNK	SNOW	SNZO	SOA	SOG	SOG2	SONG	SOSW	SPT	SPW
SPX	SRE	SSO	STD	STEW	STR	STS	STW	SVP	SVS	SWH	TARW	TAT	TATO	TAVF	TAZ	TBI	TBT
TCO	TDD	TDH	TDL	TDM	TEGH	TER	THI	TIK	TMR	TOK	TOV	TPAW	TPI	TPR	TREF	TRH	TRK
TRXW	TSI	TTH	TUH	TUTZ	TWB	TWG	TWK	TWM1	TWW	UAV	URA	UTS	UWE	UZH	VBEM	VCR	VEW
VFP	VILF	VLL	VLMM	VLO	VPS2	VRN	VVI	WAX	WHA	WHB	WHH	WIH	WIN	WKH	WKY	WOB	WOH
WPB	WPW	WSS	YAM	YEL	YKU	YMT3	YMT5	YMT6	YOK	YSS	YUP	ZNT	ZSP				