UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT

JULY 1989

by

U.S. Geological Survey

NATIONAL EARTHQUAKE INFORMATION CENTER[1]

Open-File Report 89-607

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1989

[1]USGS, Denver, Colorado

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

Earthquake Data Report for July, 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.).

ANNOUNCEMENT

A machine-readable version of this Earthquake Data Report (EDR) is now available on floppy disk from the U.S. Geological Survey's Books and Open-File Reports Section, beginning with the EDR for January 1989. The disks are 1.2 megabyte, 5 1/4-inch diskettes and most months use 3 disks. [redacted]

We will continue to supply this paper copy of the EDR to you free-of-charge, or we will supply the data on floppy disks in lieu of this paper copy, also free-of-charge. Users who wish to receive BOTH a paper copy and data on floppy disk will need to buy the disks from Books and Open-File Services.

If you would like additional information or wish to receive the EDR on floppy disk instead of this paper copy, call Jan Jacobs, Waverly Person or Bruce Presgrave at 303-236-1500, or write your request to them at:

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National Earthquake Information Center
Stop 967, Box 25046 DFC
Denver CO 80225, USA

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EDR No. 7-89
Part 1 of 2
P. 1-132

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.

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* JUL 01, 1989 00h 33m 12.30± 1.50s
34.655 S ±11.5km 72.170 W ±17.3km
DEPTH = 12.7 ± 4.3 km
4.4mb (1 obs.)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.94	42	iPd	33	30.40	0.5
LCCH	1.28	23	eP	33	33.80	-1.9
			iS	33	49.00	
TACH	1.43	46	iPd	33	37.50	-0.4
			iS	33	56.00	
CHCH	1.45	61	iPd	33	39.10	0.9
PCH	1.72	54	iPd	33	43.10	0.9
			iS	34	04.90	
SAN	1.73	47	iPc	33	42.30	0.0
			iS	34	08.10	
ROCH	1.94	30	iPd	33	44.50	-1.0
			iS	34	11.30	
PEL	1.95	40	iPc	33	45.30	-0.2
FCH	2.05	50	iP	33	47.10	-0.1
			iS	34	13.70	
JACH	2.37	34	eP	33	50.20	-1.3
			iS	34	22.10	
ZON	4.27	44	eP	34	19.00	0.5
CNCB	18.16	13	P	37	27.40	0.9
LPB	18.41	12	P	37	31.00	1.6
ZOBO	18.66	12	eP	37	28.00	-4.7X
Z	18s		0.14um			
			LR	44	28.00	
PPD	22.20	61	eP	38	09.00	-1.0
SPA	55.53	180	e(P)	42	49.80	0.5
	1.0s		4.00nm			4.4mb
KIC	75.39	72	P	44	56.40	-1.3

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

& JUL 01, 1989 00h 55m 21.10s
40.368 N 125.072 W
DEPTH = 8.0km
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.4 (BRK).

FHC	0.93	62	iPc	55	38.20	-0.9
			e(S)	55	50.60	
WDC	1.94	83	iPc	55	52.40	-2.3
			eS	56	16.10	
LTCM	2.26	93	eP	55	57.00	-2.3
LBFM	2.60	67	eP	56	03.00	-1.4
MIN	2.65	89	eP	56	02.40	-2.6
ORV	2.86	105	ePd	56	05.50	-2.4
			iS	56	37.60	
BRK	3.31	138	eP	56	11.50	-2.8
BKS	3.33	138	eP	56	12.00	-2.5
PCC	3.55	143	eP	56	14.50	-3.1
ARN	4.09	136	eP	56	22.00	-3.3
GCC	4.11	143	eP	56	22.30	-3.2
KVN	5.54	102	eP	56	41.50	-4.5
FFC	21.06	39	eP	00	05.00	-2.7
	0.7s		7.00nm			4.1mb

13 obs. associated

& JUL 01, 1989 01h 08m 08.39s
67.071 N 156.231 W
DEPTH = 9.7km
ALASKA (676)
<AGS-P>.

IMA	1.43	133	eP	08	35.10	0.5
NEA	3.86	127	eP	09	09.37	0.2
FBA	4.08	118	eP	09	10.29	-1.8
TTA	4.16	179	eP	09	13.10	-0.3
GLM	4.17	116	eP	09	13.53	0.0
KTH	4.18	145	eP	09	13.23	-0.4
CCB	4.23	121	eP	09	14.08	-0.2
WRH	4.25	124	eP	09	14.48	-0.1
SVW	5.99	177	eP	09	38.30	-1.0

9 obs. associated

JUL 01, 1989 01h 09m 24.91± 0.50s
44.303 N ± 3.1km 6.742 E ± 5.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.7 (LDG).

FOUF	0.23	7	e(Pg)	09	29.15	-0.6
			i	09	29.68	
DOI	0.41	61	P	09	34.00	0.6
			eSg	09	39.40	
TOUF	0.47	128	Pg	09	34.48	0.1
MVIF	0.50	144	Pg	09	35.28	0.1
CALN	0.56	169	Pg	09	36.25	-0.1
AUTN	0.58	122	Pg	09	36.37	-0.5
			Sg	09	46.00	
AURF	0.59	134	Pg	09	37.03	0.1
SAOF	0.67	118	Pg	09	38.16	0.0
			Sg	09	47.80	
SBF	0.67	131	Pg	09	38.60	0.4
FRF	0.75	185	Pg	09	40.60	1.1
			Sg	09	53.00	
BNI	0.75	356	P	09	40.60	0.9
			eSg	09	48.60	
LRG	0.89	198	Pg	09	41.30	-0.7
			Sg	09	56.60	
LMR	0.98	190	Pg	09	43.80	0.2
			Sg	09	58.40	
LPL	1.21	360	Pg	09	47.20	-0.5
CVF	2.33	137	Pn	10	02.80	-1.1
			Sn	10	30.00	

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

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* JUL 01, 1989 02h 12m 19.02± 0.79s
51.564 S ±12.0km 159.668 E ±16.2km
DEPTH = 10.0km (geophysicist)
5.1mb (6 obs.) 4.8Msz (2 obs.)
NORTH OF MACQUARIE ISLAND (165)

CBZ	5.94	103	iPd	13	42.50	-6.5X
MSZ	8.83	42	P	14	28.50	-1.0
			S	16	08.00	
TAU	12.04	311	eP	15	08.00	-5.5X
			eS	17	17.00	
CAN	17.96	331	eP	16	32.00	1.7
			eTT	31	00.00	
DRV	18.06	206	eP	16	36.40	5.3X
BFD	18.82	313	eP	16	41.00	0.2
BWA	18.96	330	eP	16	42.30	-0.3
			eTT	31	30.00	
COO	21.75	342	eP	17	15.00	2.6X
ADE	22.41	310	iPd	17	24.60	5.5X
	1.1s		55.70nm			4.9mb
CMS	22.51	328	e(P)	17	20.00	0.1
STK	23.73	319	eP	17	33.00	1.1
RMQ	26.38	338	eP	17	57.00	-0.1
CTA	33.13	336	iPd	18	58.40	1.1
ASPA	34.18	315	eP	19	05.20	-1.3
	1.2s		71.00nm			5.5mb
Z	20s		1.82um			4.8Msz
			LR	31	35.00	
QIS	34.70	326	iPc	19	09.70	-1.2
WRA	37.28	318	Pc	19	30.90	-1.8
	1.1s		25.40nm			4.9mb
WB5	37.33	318	eP	19	31.20	-1.9
SPA	38.62	180	ePd	19	41.80	-2.1
	1.0s		12.00nm			4.6mb
Z	18s		1.14um			4.7Msz
AIA	58.71	160	e(P)	22	21.00	2.5
CHG	87.78	304	eP	25	10.90	1.6
	1.2s		23.44nm			5.4mb
CHTO	87.78	304	eP	25	10.20	0.9
	1.2s		18.06nm			5.3mb
MAT	89.73	343	(P)	25	20.00	1.8
IZM	144.49	267	ePKP	31	55.00	-1.7
EZN	145.93	268	ePKP	31	59.30	0.4
CFR	147.67	278	ePKP	32	04.00	2.4X
CLI	148.84	280	ePKP	32	07.50	4.0X
VRI	148.88	278	iPKPc	32	08.00	4.5X
VAY	149.13	268	ePKP	32	06.70	2.7X
MLR	149.18	277	ePKPd	32	08.00	3.8X

S.D. = 1.5 on 19 of 29 obs.

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* JUL 01, 1989 02h 43m 29.20± 1.29s
8.668 S ±13.1km 108.716 E ±11.0km
DEPTH = 54.2 ± 15.1 km
4.1mb (4 obs.)
JAVA (277)

TRT	4.00	76	ePd	44	29.30	-0.1
			iS	45	13.50	
KLI	5.38	314	eP	44	49.10	0.2
			e(S)	45	50.50	
			e	46	48.00	
NANU	15.29	155	eP	47	03.00	-0.1
	0.3s		12.00nm			4.6mb
			eS	49	38.00	
MBL	16.41	140	eP	47	17.00	-0.4
	0.3s		2.00nm			3.8mb
			eS	50	03.00	
KNA	20.81	112	eP	48	07.30	-1.2
MRWA	21.56	162	eP	48	20.00	4.0X
			eS	52	12.00	
MTN	22.40	103	iPc	48	25.40	0.9
WARB	24.36	138	eP	48	45.00	1.5
			eS	53	15.00	
WRA	27.20	117	Pc	49	10.00	0.0
	0.6s		1.60nm			3.8mb
WB5	27.20	117	eP	49	10.00	0.0
GBA	38.13	305	Pd	50	40.20	-4.8X
	0.6s		2.80nm			4.4mb
STK	38.27	132	eP	50	47.00	0.9
CAN	45.33	132	eP	51	42.80	-1.1
SOB1	144.91	240	ePKP	03	02.40	-0.6

S.D. = 1.0 on 12 of 14 obs.

% JUL 01, 1989 02h 45m 47.05± 0.77s
16.101 N ± 5.5km 61.265 W ± 7.7km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.2 (FDF).

SFG	0.17	23	eP	45	51.35	0.5
			S	45	55.00	
MGG	0.19	195	iPc	45	51.99	0.8
DEG	0.29	43	ePd	45	53.08	0.0
			S	45	57.50	
SEG	0.38	323	ePd	45	55.25	0.4
			S	45	59.40	
PAG	0.41	260	eP	45	55.90	0.5
			S	46	01.00	
BBL	0.61	200	eP	45	58.30	-1.1
			S	46	06.40	
BPA	1.10	329	eP	46	06.51	-1.2
			S	46	21.40	

S.D. = 1.0 on 7 of 7 obs.

JUL 01, 1989 03h 05m 31.64± 0.61s
36.164 N ± 7.3km 28.034 E ± 6.2km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

KAP	0.93	229	ePb	05	49.00	-0.4
			eSb	06	05.00	
YER	0.99	12	iPn	05	49.50	-0.9
KSL	1.26	92	ePb	05	54.70	-0.3
ELL	1.62	68	ePn	06	01.00	0.6
NPS	2.17	246	ePn	06	08.50	0.2
			eSn	06	36.00	
IZM	2.31	345	ePn	06	11.00	0.6
BCK	2.43	57	ePn	06	12.00	0.0
KHL	2.46	28	ePn	06	12.70	0.2
VAM	3.21	258	ePb	06	29.00	6.0X

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

JUL 01, 1989 03h 59m 14.42± 0.88s
6.447 S ± 4.3km 147.861 E ± 5.3km
DEPTH = 44.4 ± 8.3 km
5.3mb (22 obs.) 5.0Msz (11 obs.)
EAST PAPUA NEW GUINEA REGION (207)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 31C
Centroid Location:
Origin Time 03:59:18.4 0.4
Lat 6.79S 0.06 Lon 147.82E 0.06
Dep 17.9 4.9 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr=-9.05 0.65 Mtt= 2.03 0.55
Mff= 7.02 0.68 Mrt=-0.47 1.45
Mrf= 7.77 2.87 Mtf= 3.86 0.62
Principal Axes:

	Val=	Plg=	Azm=
T	11.41	19	291
N	1.03	14	196
P	-12.45	66	71

Best Double Couple:Mo=1.2*10**17
NP1:Strike= 44 Dip=29 Slip= -59
NP2: 189 66 -106

LAT	0.88	256	iPc	59	29.60	- 9
LMG	2.46	173	eP	59	51.00	
PMG	3.02	193	iPc+	00	02.00	
	0.9s		72.27nm			

01d 04h

		eS	00 43.00			
MNDI	4.19	274 eP	00 20.50	2.8		
RAB	4.84	63 iPd-	00 27.00	0.3		
	0.5s	1408.45nm				
		iS	01 34.00			
JAY	8.13	298 ePc	00 15.80	-57.1X		
HNR	12.33	105 eP	02 11.00	0.9		
		eS	04 18.00			
CTA	13.65	186 iPc	02 28.90	1.3		
	1.2s	43.75nm	5.1mb			
		iS	05 07.00			
QIS	16.15	209 eP	02 59.00	-1.0		
MTN	17.67	248 eP	03 19.00	-0.1		
WB5	18.71	223 eP	03 30.80	-1.1		
WRA	18.77	223 Pc	03 32.20	-0.5		
	0.4s	7.60nm	4.3mb X			
AAI	19.78	277 eP	03 45.00	1.1		
RMQ	19.95	178 eP	03 45.00	-0.7		
GUA	20.07	352 eP	03 48.30	1.3		
	1.5s	377.78nm	5.5mb			
GUMO	20.12	352 eP	03 48.50	0.9		
PJG	20.13	352 eP	03 48.60	1.0		
KNA	20.87	242 eP	03 53.80	-1.5		
BRS	21.35	168 iPd	03 59.10	-1.0		
		eS	08 08.00			
ASPA	21.76	217 eP	04 03.30	-0.9		
	0.7s	35.00nm	4.9mb			
Z	16s	16.94um	5.5MszX			
		eS	08 04.40			
		LR	13 30.20			
		e	15 39.60			
DZM	23.74	133 iPd	04 22.90	-0.8		
COO	24.30	172 ePc	04 30.00	0.9		
CMS	24.98	184 eP	04 35.00	-0.5		
STK	25.97	192 eP	04 44.00	-0.8		
BWA	27.85	179 iPc	05 01.50	-0.4		
WARB	28.19	223 eP	05 05.00	-0.1		
MKS	28.27	271 ePc	05 22.00	16.1X		
CAN	28.75	178 iPc	05 09.80	-0.3		
CN8	28.76	177 iPd	05 10.20	0.0		
MBL	30.82	239 eP	05 28.70	0.1		
OCP	33.83	308 eP	06 02.00	7.1X		
MEKA	34.38	231 eP	05 59.30	-0.3		
COOL	34.90	222 eP	06 05.00	1.0		
	0.4s	8.00nm	5.0mb			
NANU	35.04	239 eP	06 05.00	-0.2		
	0.8s	66.00nm	5.6mb			
BAG	35.28	310 eP	06 06.00	-1.5		
TAU	36.32	181 eP	06 17.00	1.3		
KLB	37.64	224 iPc	06 26.40	-0.7		
	0.5s	44.00nm	5.6mb			
BAL	37.84	227 eP	06 29.00	0.3		
NWAO	38.78	223 eP	06 38.00	1.4		
	0.6s	15.00nm	5.0mb			
N	20s	4.90um				
E	20s	5.60um				
MUN	38.95	225 iPd	06 38.60	0.6		
	1.0s	48.00nm	5.3mb			
RKG	39.61	222 eP	06 47.00	3.5X		
MSZ	41.91	159 P	07 06.20	4.0X		
MNG	42.05	148 eP	07 03.00	-0.4		
OZH	42.25	319 eP	07 05.00	-0.2		
Z	28s	1.20um	4.6MszX			
E	18s	1.30um				
		S	13 23.00			
IIDJ	42.74	348 P	07 09.40	0.2		
CHJJ	43.08	349 P	07 12.20	0.3		
MAT	43.71	349 (P)	07 17.00	0.0		
	1.5s	66.67nm	5.2mb			
Z	20s	1.06um	4.7Msz			
		eS	13 49.00			
NIIJ	44.24	350 P	07 21.40	0.2		
QIZ	45.21	305 eP	07 31.70	2.4		
N	12s	0.40um				
SSE	45.22	327 eP	07 28.50	-0.6		
Z	20s	1.40um	4.9Msz			
N	14s	0.90um				
E	14s	0.70um				
		esP	07 47.20			
		i	07 50.00			
		S	14 08.00			
		sS	14 28.00			
		SS	17 27.00			
NJ2	47.23	326 Pd	07 49.00	4.0X		
Z	20s	1.50um	5.0Msz			
		S	14 39.00			
WHN	48.82	321 eP	08 01.50	4.1X		

N	12s	0.31um				
E	12s	0.29um				
		eS	14 59.00			
SNG	49.04	285 eP	07 52.80	-6.6X		
		eS	15 07.50			
TIA	51.30	328 Pc	08 15.10	-1.3		
LOE	51.36	298 eP	08 22.60	5.5X		
GYA	51.62	311 P	08 18.00	-1.1		
N	14s	0.70um				
E	14s	0.50um				
		S	15 42.00			
SNY	52.92	337 Pd	08 26.00	-2.4		
N	27s	1.90um				
E	27s	2.20um				
		S	15 51.00			
MDJ	53.42	344 eP	08 31.00	-1.1		
Z	20s	1.10um	4.9Msz			
KMI	53.95	307 eP	08 42.00	5.5X		
Z	22s	1.50um	5.0Msz			
N	18s	1.00um				
		pP	09 01.00	75kmX		
		sP	09 10.00			
		S	16 04.00			
		sS	16 40.00			
CHG	54.35	299 eP	08 41.00	1.7		
XAN	54.57	320 P	08 39.50	-1.2		
BJI	54.71	330 eP	08 40.50	-1.0		
Z	21s	1.54um	5.1Msz			
N	17s	0.74um				
		eScP	13 51.50			
		eS	16 20.00			
TIY	54.95	326 eP	08 42.50	-1.0		
Z	22s	2.09um	5.2Msz			
N	19s	1.60um				
		S	16 17.00			
CD2	56.20	314 eP	08 52.10	-0.5		
		S	16 43.00			
HHC	57.66	328 eP	09 02.40	-0.4		
Z	22s	2.00um	5.2Msz			
BTO	58.31	327 P	09 07.00	-0.4		
N	21s	2.10um				
E	21s	1.30um				
		sP	09 32.00			
		S	17 04.50			
LZH	59.10	319 eP	09 13.50	0.4		
	2.5s	63.00nm	5.3mb			
Z	26s	0.90um	4.8MszX			
DRV	60.36	184 eP	09 22.40	1.4		
PPT	61.95	106 eP	09 35.00	2.4		
	1.1s	75.00nm	5.7mb			
Z	18s	0.60um	4.8Msz			
PPN	62.08	106 eP	09 36.00	2.5		
	1.1s	40.00nm	5.5mb			
TVO	62.27	107 eP	09 37.00	2.3		
	1.1s	75.00nm	5.7mb			
PMO	63.51	103 eP	09 41.00	-1.9		
	1.2s	85.00nm	5.7mb			
GTA	63.63	320 eP	09 41.00	-2.5		
Z	20s	0.60um	4.8Msz			
		S	18 19.00			
VAH	63.77	104 eP	09 42.00	-2.6		
	1.2s	40.00nm	5.4mb			
TPT	63.78	103 eP	09 42.00	-2.7		
	1.2s	45.00nm	5.4mb			
RUV	64.01	104 eP	09 43.00	-3.2X		
	1.2s	45.00nm	5.4mb			
GUN	68.83	303 PKP	10 23.70	6.6X		
	0.6s	21.00nm	5.3mb			
PKI	69.11	303 PKP	10 24.40	5.6X		
	0.9s	15.00nm	5.0mb			
KKN	69.29	303 PKP	10 23.70	3.9X		
	0.9s	18.00nm	5.0mb			
DMN	69.37	303 PKP	10 24.80	4.4X		
GKN	69.89	303 PKP	10 28.10	4.7X		
GBA	72.68	286 Pc	10 42.80	2.7		
	0.9s	8.00nm	4.7mb			
WMQ	73.69	319 eP	10 44.50	-1.1		
Z	40s	0.80um	4.7MszX			
MAW	82.17	203 eP	11 32.00	0.3		
SPA	83.60	180 ePd	11 40.00	0.7		
	1.0s	16.00nm	5.0mb			
Z	18s	1.33um	5.4Msz			
FBA	85.26	23 eP	11 46.50	-0.9		
INK	91.76	21 eP	12 32.00	13.7X		
BUL	114.71	244 ePKP	17 53.40	0.5		
ZST	121.13	324 ePKP	18 05.40	1.4		
BRG	121.53	328 e(PKP)	18 05.30	0.6		

CLL	121.79	328 ePKP	18 04.00	-1.2		
KHC	122.67	326 PKP	18 07.50	0.5		
BNG	129.52	270 iPKPc	18 22.30	1.1		
	0.9s	15.00nm				
		i	21 49.00			
CNCB	137.69	124 PKP	18 28.00	-9.3X		
		i	18 39.80			
LPB	137.73	123 PKP	18 31.00	-6.2X		
		i	18 42.00			
ZOBO	137.84	123 PKP	18 28.60	-9.0X		
	1.0s	10.00nm				
		i	18 39.20			
		PKS	22 16.00			
		LR	05 00.00			
BMK	142.71	323 ePKP	18 47.00	1.9X		
		i	19 01.00			
IFR	143.22	321 ePKP	18 50.00	3.7X		
AVE	144.78	323 ePKP	18 48.00	-0.7		
PPD	146.03	147 ePKP	18 52.20	1.1		
TIO	146.28	319 iPKP	18 53.00	1.5		
VAO	147.34	154 ePKP	18 55.80	2.5X		
TCE	150.42	80 ePKP	19 03.50	5.3X		
TPP	150.76	80 ePKP	19 06.90	8.2X		
TRN	150.77	80 ePKP	19 05.65	7.0X		
TBH	151.12	80 ePKP	19 07.99	8.8X		
KIC	152.77	271 PKP	19 09.52	7.9X		
BAO	153.02	145 ePKP	19 04.50	2.4X		
LIC	153.05	271 PKP	19 10.10	8.1X		
TIC	153.06	272 PKP	19 10.94	8.9X		
S.D. = 1.3		on 79 of 110 obs.				

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* JUL 01, 1989 04h 15m 02.47± 1.28s
38.532 N ±10.3km 26.618 E ±12.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.3 (ATH).

IZM	0.52	105 iPg	15 12.70	-0.4		
		iSg	15 18.20			
PRK	0.76	339 ePb	15 18.10	0.8		
		eSg	15 30.00			
EZN	1.31	350 iPn	15 26.00	-0.7		
YER	1.92	136 ePn	15 35.40	-0.2		
EDC	2.05	28 iPn	15 37.50	0.1		
BNT	2.08	29 iPn	15 37.80	0.0		
KHL	2.29	94 ePn	15 41.70	0.7		
MFT	2.31	13 iPn	15 45.80	4.6X		
RDO	2.74	343 ePn	15 47.00	-0.2		
VAY	4.18	313 eP	16 23.50	15.9X		
S.D. = 0.6		on 8 of 10 obs.				

? JUL 01, 1989 05h 23m 06.15± 8.43s
8.158 S ±73.2km 129.241 E ±16.3km
DEPTH = 182.3 ± 44.6 km
4.5mb (2 obs.)
TIMOR SEA (290)

MTN	5.02	158 iPd	24 22.00	0.9		
		eS	25 26.00			
KNA	7.56	183 eP	24 54.50	-0.1		
	0.2s	24.00nm	5.2mb X			
		eS	26 24.00			
WB5	12.67	157 iPc	25 59.00	-2.1X		
		iS	28 25.20			
WRA	12.72	158 Pc	25 59.90	-1.8		
	0.4s	4.00nm	4.2mb			
MBL	15.80	214 eP	26 40.50	0.3		
		eS	29 33.00			
QIS	15.89	1'2 eP	26 41.00	-0.3		
		eS	29 34.50			
ASPA	16.06	164 eP	26 46.00	2.6X		
	0.6s	22.00nm	4.7mb			
		eS	29 41.60			
LAT	17.67	86 eP	26 39.00	-23.5X		
PMG	17.75	95 eP	27 13.00	9.8X		
WARB	18.10	188 eP	27 08.60	1.7		
NANU	19.47	221 eP	27 20.00	-1.1		
CTA	20.29	128 eP	27 30.00	0.5		
S.D. = 1.5		on 8 of 12 obs.				

JUL 01, 1989 05h 45m 43.03± 0.22s
28.696 N ± 4.1km 142.348 E ± 3.8km
DEPTH = 33.0km (normol)
5.0mb (12 obs.) 4.3Msz (2 obs.)
BONIN ISLANDS REGION (212)

MAT	8.57	337 iPd	47 47.40	-0.3		

```
        0.8s     36.57nm          5.6mb
                   (S)    49 21.00
SSE    18.50 283 eP     49 58.00   -0.5
     Z  16s       0.50um
     E  16s       0.50um
                  pP     50 04.50
                  e      50 12.00
                  eS     53 32.00
MDJ    18.86 331 eP     50 01.50   -1.3
     Z  20s       0.70um
                  sS     53 37.00
ANP    18.90 264 eP     50 05.00    1.6
DL2    19.96 306 eP     50 15.00   -0.2
SNY    20.11 316 eP     50 14.60   -2.1
CN2    20.26 323 eP     50 17.50   -0.8
     N  14s       0.60um
     E  14s       0.40um
                  epP    50 25.00   28kmX
                  eS     53 51.00
NJ2    20.54 285 Pc     50 20.60   -0.6
     Z  18s       0.60um          4.0Msz
                  S      54 12.00
OZH    21.52 266 eP     50 30.00   -1.3
     Z  16s       0.60um          4.1MszX
     E  16s       0.50um
                  eS     54 28.00
BAG    23.48 243 eP     50 51.00    0.1
8JI    24.30 305 eP     50 57.50   -1.0
     Z  16s       1.17um          4.5MszX
     E  16s       0.83um
                  eS     55 20.00
WHN    24.39 281 eP     51 00.00    0.6
TIY    26.51 298 Pc     51 20.00    0.6
     E  15s       0.60um
HHC    27.90 304 eP     51 31.60   -0.5
     Z  16s       1.80um          4.8MszX
     N  15s       1.00um
XAN    28.95 289 P      51 40.50   -1.1
BTO    28.97 303 eP     51 41.50   -0.2
     N  15s       0.70um
     E  15s       1.20um
                  eS     56 25.50
GYA    31.64 275 iPc    52 05.60    0.1
CD2    33.45 283 iPc    52 20.50   -0.7
KMI    35.39 274 Pd     52 39.00    0.9
     Z  18s       1.00um          4.6Msz
                  eS     57 42.00
GTA    36.53 298 eP     52 46.40   -1.1
     Z  14s       0.60um          4.5MszX
     E  12s       0.40um
LOE    38.86 262 iPc    53 07.20    0.1
CHG    40.74 266 iPc    53 23.20    0.6
       1.0s     45.50nm          5.2mb
                  e      05 01.60
BDT    41.30 264 eP     53 28.20    1.0
       0.6s     31.10nm          5.2mb
MTN    42.70 196 iPc    53 37.70   -0.9
       0.6s     67.00nm          5.5mb
NNT    42.72 257 iPd    53 39.90    1.0
SNG    44.78 250 eP     53 56.50    0.9
WMQ    45.78 305 P      54 03.50    0.2
     Z  32s       0.50um          4.3MszX
CTA    48.64 175 eP     54 26.00    0.2
WRA    48.97 190 Pc     54 27.20   -1.2
       0.7s     20.40nm          5.3mb
QIS    49.04 183 iPc    54 27.50   -1.3
GUN    49.32 283 Pd     54 32.20    0.7
PKI    49.81 283 Pd     54 35.30    0.0
       1.1s     69.00nm          5.6mb
KKN    49.86 283 Pd     54 35.80    0.3
DMN    50.06 283 Pd     54 37.40    0.3
GKN    50.35 284 Pd     54 39.60    0.4
ASPA   52.69 190 eP     54 56.20   -0.4
PMR    55.02  33 iP     55 12.20   -1.1
                  i      55 15.60
NDI    56.45 287 iPc    55 23.80   -0.3
BRS    56.66 169 iPc    55 24.70   -0.8
INK    61.52  25 eP     55 58.00   -0.7
GBA    61.72 271 Pd     55 59.70   -1.1
       0.7s     7.90nm           5.0mb
BWA    63.04 174 eP     56 09.30    0.2
KOD    63.17 267 eP     56 11.00    0.2
CAN    63.98 174 eP     56 14.70   -0.6
MBC    64.31  15 eP     56 17.00   -0.1
       0.7s     4.00nm           4.6mb
TOO    65.98 177 eP     56 28.00   -0.2
MAIO   68.29 300 eP     56 45.00    1.8
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ALE    68.36   3 eP     56 43.00    0.2
YKA    70.67  29 P      56 57.10    0.0
YKC    70.73  29 eP     56 57.00   -0.5
KEV    71.52 341 eP     57 02.00   -0.2
SOD    72.97 339 iP     57 11.60    0.9
EDM    75.45  37 eP     57 25.50    0.1
SUF    75.81 335 iP     57 27.40    0.3
       0.6s     5.70nm           4.7mb
ORV    76.69  52 e(P)   57 32.10   -0.5
NUR    77.70 333 eP     57 39.10    1.4
SES    78.10  39 eP     57 40.00   -0.2
CMB    78.15  53 ePd    57 41.00    0.3
KVN    79.27  51 iP     57 47.60    0.6
LRM    79.61  43 ePc    57 49.30    0.5
FFC    80.31  32 eP     57 52.00    0.0
       0.7s     8.00nm           4.8mb
UPP    80.80 335 iP     57 54.40   -0.1
HFS    82.02 337 ePKP   58 00.40   -0.4
       0.4s     1.30nm           4.3mb
NAO    82.47 338 P      58 03.30    0.1
       0.7s     6.20nm           4.8mb
VRI    85.63 321 ePd    58 21.50    2.0
RSON   86.65  32 eP     58 24.60    0.2
ALQ    89.35  50 e(P)   58 39.00    1.0
KHC    90.07 329 P      58 41.80    0.9
ZOBO  149.34  73 ePKP   05 27.00    0.1
       1.0s    10.00nm
                  i      05 32.00
LPB   149.49  73 ePKP   05 27.00    0.1
                  e      05 37.00
CNCB  149.72  74 ePKP   05 29.00    1.6
                  i      05 34.00
      S.D. = 0.8   on  71 of  71 obs.
-------------------------------------
?  JUL  01, 1989  05h 59m 56.90± 1.41s
    3.981 S ±42.2km  103.689 E ±42.4km
    DEPTH =  72.2 ± 15.0 km
    4.9mb (  4 obs.)
 SOUTHERN SUMATERA                (274)

KLI      1.46 127 eP     00 21.10   -0.6
                  eS     00 31.40
                  e      01 05.00
PPI      4.80 317 eP     01 09.20    0.8
                  eS     02 13.50
CHTO    23.13 348 e(P)   04 58.50    0.9
        0.9s     6.61nm           4.1mb
ASPA    35.12 127 eP     06 46.70    1.1
        0.6s    14.00nm           5.1mb
      Z  23s       0.21um          3.8MszX
                   LR    14 26.70
PKI     35.99 332 P      06 53.00   -0.2
GUN     36.06 333 P      06 53.50   -0.3
        0.4s     9.00nm           5.1mb
DMN     36.16 331 P      06 54.90    0.3
KKN     36.23 332 P      06 53.50   -1.6
        0.5s     6.00nm           4.8mb
GKN     36.72 331 P      06 58.80   -0.3
      S.D. = 1.1   on   9 of   9 obs.
-------------------------------------
*  JUL  01, 1989  06h 21m 23.64± 0.82s
    35.615 N ±13.8km   26.870 E ± 6.3km
    DEPTH =  10.0km  (geophysicist)
 CRETE                            (370)
      MD 4.0 (ATH).

KAP      0.26 104 ePg    21 29.20    0.1
NPS      1.09 251 iPgc   21 42.00   -2.1
                  eSg    21 57.00
YER      1.90  37 iPn    21 56.20   -0.2
VAM      2.19 265 ePb    22 02.00    1.4
KSL      2.26  76 ePn    22 02.50    0.9
ELL      2.71  64 iPn    22 09.00    0.9
IZM      2.80   6 ePn    22 06.00   -3.3X
KHL      3.44  37 ePn    22 17.20   -1.2
BCK      3.52  57 ePn    22 18.50   -1.0
PRK      3.66 353 ePn    22 27.00    5.6X
ITM      4.28 293 ePn    22 31.50    1.1
      S.D. = 1.4   on   9 of  11 obs.
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*  JUL  01, 1989  07h 06m 22.21± 1.72s
    50.663 N ±14.4km    7.919 E ± 9.6km
    DEPTH =  10.0km  (geophysicist)
 GERMANY                          (543)

TNS      0.56 142 iPg    06 33.50    0.0
                  iSg    06 40.20
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ABH      0.82 197 ePg    06 38.20    0.1
GSH      0.98 275 ePg    06 41.20    0.3
                  eSg    06 54.60
RUP      1.11 210 ePn    06 43.00   -0.1
TOD      1.20 151 ePg    06 44.59    0.0
MEM      1.22 268 Pc     06 44.50   -0.4
                  S      07 02.00
WLF      1.51 229 eP     07 10.30   21.0X
DOU      2.20 256 P      07 04.10    4.8X
      S.D. = 0.3   on   6 of   8 obs.
-------------------------------------
&  JUL  01, 1989  10h 04m 15.04s
    63.550 N          150.706 W
    DEPTH =  15.2km
 CENTRAL ALASKA                   (  1)
      <AGS-P>. ML 4.0 (PMR).

KTH      0.10 272 iP     04 18.39   -0.1
HUR      0.75 139 iP     04 29.14   -0.1
MCK      0.81  76 iP     04 30.91    0.6
                  S      04 42.13
RND      0.84  99 iP     04 31.25    0.3
CUT      1.17 170 iP     04 36.36    0.0
NEA      1.26  34 eP     04 37.62   -0.2
                  S      04 54.62
WRH      1.48  50 eP     04 40.79   -0.2
SKT      1.62 194 iP     04 42.90   -0.2
                  S      05 04.32
CCB      1.68  48 eP     04 43.67   -0.3
RDS      1.70  40 eP     04 43.30   -1.0
FBA      1.86  42 eP     04 46.29   -0.3
HDA      1.86  61 eP     04 46.34   -0.3
PWA      1.94 168 eP     04 47.10   -0.7
GHO      1.97 154 eP     04 47.44   -0.7
GLM      2.04  44 eP     04 48.88   -0.4
SUA      2.09 180 eP     04 49.72   -0.4
PMR      2.10 159 eP     04 49.50   -0.5
PMS      2.37 167 eP     04 54.20    0.2
KNK      2.39 153 eP     04 53.90   -0.3
                  S      05 23.75
PAX      2.44 101 eP     04 55.69    0.7
SPU      2.46 195 eP     04 54.75   -0.5
TOA      2.54 123 iPd    04 57.00    0.7
SDG      2.57 111 eP     04 57.78    1.0
NKA      2.83 185 eP     05 02.60    2.2
IMA      2.83 335 eP     05 01.10    0.5
DOT      2.97  85 eP     05 03.47    1.0
KLU      3.03 131 eP     05 03.45    0.1
SLKM     3.06 176 eP     05 03.74    0.0
RDT      3.09 196 eP     05 03.71   -0.5
VZW      3.16 140 eP     05 05.65    0.4
RED      3.29 198 eP     05 07.69    0.6
ILIM     3.64 198 eP     05 10.99   -1.1
GLB      3.83 120 iP     05 15.82    1.1
AUL      4.38 199 eP     05 22.18   -0.3
BALM     4.65 119 eP     05 26.44    0.1
DWY      5.02  79 P      05 33.00    1.5
HYT      6.75 108 P      05 57.30    1.2
INK      8.47  48 eP     06 18.00   -1.9
SIT     10.01 124 eP     06 39.10   -2.0
       0.5s    16.40nm           5.7mb X
YKA     16.28  77 P      08 07.30    3.1
MBC     16.33  26 eP     08 12.50    7.8
EDM     21.80 101 eP     09 07.50   -0.4
       42 obs. ossocioted
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%  JUL  01, 1989  11h 29m 04.52± 0.60s
    60.744 N ± 4.7km     5.554 E ± 6.9km
    DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                  (535)
      MD 1.9 (BER).

ASK      0.32 214 iPg    29 10.70   -0.4
                  eSg    29 14.16
SUE      0.50 309 iP     29 14.68    0.0
                  eS     29 23.30
HYA      0.52  36 eP     29 15.44    0.3
                  eS     29 23.22
ODD1     0.99 147 eP     29 22.81   -0.5
                  eS     29 35.22
BLS1     1.50 154 eP     29 31.87    0.3
                  eS     29 51.12
KMY      1.54 186 eP     29 32.72    0.7
                  eS     29 51.99
MOL      2.07  27 eP     29 39.18   -0.4
                  eS     30 07.15
      S.D. = 0.6   on   7 of   7 obs
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% JUL 01, 1989 11h 34m 03.86± 2.09s
  31.524 S ±14.7km   68.631 W ±14.1km
  DEPTH = 105.8 ± 22.1 km
 SAN JUAN PROVINCE, ARGENTINA      (137)

RTCB    0.15 285 iP     34 19.00   -0.2
                S       34 33.00
RTLL    0.24  36 iPd    34 19.50    0.1
RTCV    0.34 167 iP     34 19.80    0.2
RTBS    0.71 259 iP     34 21.50   -0.6
RTRS    1.53 332 iPc    34 32.00    0.9
MRA     2.64 110 ePc    34 46.00    0.4
CYA     3.93  39 ePd    35 02.50   -0.8
      S.D. = 0.8  on   7 of   7 obs.
---------------------------------------
  JUL 01, 1989 11h 45m 39.51± 0.46s
  19.113 N ± 4.3km   68.111 W ± 3.4km
  DEPTH = 23.6 ± 3.7 km
  5.0mb ( 37 obs.)
 NORTH ATLANTIC OCEAN              (402)
      Felt at Caba Rojo, Puerto Rico.

APR     1.46 116 P      46 05.00    0.4
MGP     1.47 138 P      46 03.40   -1.2
PNP     1.71 128 P      46 07.40   -0.8
CSB     2.03 114 P      46 13.10    0.3
SJG     2.11 118 P      46 14.40    0.4
                S       46 41.90
NEV     5.62 110 eP     47 07.50    3.6X
MGH     6.10 112 eP     47 10.50    0.0
ANG     6.28 107 eP     47 15.25    2.1
BPA     6.29 108 eP     47 13.00   -0.3
PAG     6.86 116 eP     47 20.00   -1.3
BBL     7.27 118 eP     47 26.00   -1.1
DEG     7.27 111 eP     47 28.00    0.9
SVB     8.78 130 eP     47 41.36   -6.7X
TCE    10.38 143 eP     48 11.98    1.9
               eS       50 04.86
TRN    10.62 141 eP     48 14.68    1.3
               eS       50 07.98
TPP    10.86 143 eP     48 17.44    0.8
               eS       50 27.55
TBH    10.95 141 eP     48 22.29    4.4X
               eS       50 23.54
SGS    17.88 324 P      49 49.00    0.7
LHS    19.02 326 P      50 03.00    0.7
JSC    19.10 325 P      50 03.00   -0.3
PRM    19.58 322 P      50 07.50   -1.4
NA2    20.72 338 P      50 20.00   -0.8
CVL    20.85 336 P      50 21.00   -1.2
BLA    21.01 332 P      50 24.00    0.2
TKL    21.52 323 P      50 28.70   -0.2
GBTN   21.77 322 P      50 31.50    0.0
RLO    29.13 311 e(P)   51 40.70   -0.2
VVO    29.27 309 e(P)   51 47.60    5.5X
TUL    29.57 310 ePc    51 45.30    0.5
       1.0s    46.70nm          5.2mb
     Z 21s     0.02um           2.7Msz
               e       51 53.20
               LR      00 00.00
MEO    31.17 306 iPd    51 58.50   -0.6
ZOBO   35.16 180 P      52 31.60   -2.8
     Z 24s     0.10um           3.5MszX
               S       58 16.00
               LR      06 24.00
LPB    35.42 180 eP     52 35.00   -1.4
SCH    35.66   1 eP     52 38.00    0.4
CNCB   35.70 180 P      52 38.00   -0.9
ALQ    37.36 303 e(P)   52 53.20    0.7
       1.0s     2.75nm          4.0mb
               e       52 56.00
               e       53 34.50
               e       55 11.80
RSON   37.60 333 P      52 53.70   -0.3
       0.8s    37.46nm          5.3mb
GLD    37.94 311 P      52 58.00    0.7
GOL    38.03 311 P      52 58.00   -0.1
       0.8s    10.42nm          4.7mb
RSSD   38.99 318 P      53 06.00    0.0
BW06   42.09 313 P      53 31.80    0.2
MSU    42.70 306 P      53 37.80    1.1
IMW    43.43 314 P      53 42.60    0.0
GLA    43.85 298 P      53 47.30    1.5
FFC    43.90 332 eP     53 45.00   -0.8
       0.9s    15.00nm          4.8mb
FRB    44.60 360 eP     53 51.00   -0.3
LRM    45.12 316 eP     53 57.10    0.9
PLM    45.58 298 P      54 01.80    1.9
SES    46.12 323 iPd    54 04.70    1.0
TNP    46.50 305 P      54 08.00    0.9
       0.9s     3.26nm          4.3mb
KVN    47.35 306 P      54 14.00    0.2
EDM    48.67 325 ePd    54 23.20   -0.5
       0.5s    16.00nm          5.3mb
YKC    53.75 335 eP     55 01.00   -0.8
YKA    53.81 335 P      55 01.70   -0.6
LPF    60.76  45 eP     55 51.40   -0.3
       1.0s    13.60nm          5.0mb
GRR    60.90  45 eP     55 52.80    0.1
       0.8s    13.40nm          5.1mb
FLN    61.17  44 eP     55 54.70    0.2
       0.8s    10.70nm          5.0mb
MFF    61.29  47 eP     55 55.60    0.2
       0.8s     8.00nm          4.9mb
LDF    61.40  45 eP     55 56.10    0.0
       0.8s     9.10nm          5.0mb
EPF    61.58  51 eP     55 57.90    0.4
       1.0s    20.00nm          5.2mb
LFF    61.87  49 eP     55 59.40    0.0
       1.0s     8.00nm          4.8mb
LPO    62.19  49 eP     56 01.40   -0.1
       0.8s     5.30nm          4.7mb
RJF    62.43  48 eP     56 02.70   -0.4
       1.0s     8.00nm          4.8mb
DAG    62.70  11 iPd    56 03.80   -0.6
       0.8s    17.91nm          5.3mb
MBC    62.76 348 ePd    56 04.40   -0.4
       1.0s    16.00nm          5.1mb
KIC    62.80  93 P      56 04.90   -1.1
CAF    62.82  49 eP     56 05.40   -0.3
       0.9s     9.80nm          4.9mb
TCF    62.92  47 eP     56 06.10   -0.2
       1.0s    12.80nm          5.0mb
BGF    63.36  47 eP     56 08.80   -0.4
       1.0s    14.00nm          5.1mb
INK    63.36 338 eP     56 08.00   -0.8
ALE    63.50   1 eP     56 09.00   -0.6
       0.7s    13.00nm          5.2mb
AVF    63.70  47 eP     56 11.00   -0.4
       1.0s    12.00nm          5.0mb
SSF    63.81  46 eP     56 11.50   -0.6
       1.0s    10.00nm          4.9mb
SMF    64.04  47 eP     56 13.50   -0.2
       1.0s    10.00nm          4.9mb
LOR    64.05  46 eP     56 13.00   -0.7
       1.0s    14.00nm          5.1mb
LBF    64.13  46 eP     56 13.50   -0.8
       1.2s    11.90nm          4.9mb
DOU    64.53  43 Pc     56 16.50   -0.3
ENN    65.38  42 eP     56 22.00   -0.2
       1.0s    25.00nm          5.3mb
MEM    65.44  42 P      56 22.60    0.0
WTS    65.93  41 eP     56 26.00    0.3
       0.8s    15.00nm          5.2mb
LPG    66.11  48 eP     56 27.70    0.3
       1.0s    10.80nm          4.9mb
SBF    66.71  50 eP     56 31.10    0.1
       0.8s     8.00nm          4.9mb
NAO    68.13  31 P      56 39.30   -0.2
FBA    68.49 333 eP     56 41.00   -0.7
GRF    68.83  43 e(P)   56 45.00    0.9
HFS    69.56  32 eP     56 47.90   -0.4
       0.5s     0.80nm          4.1mb
CLL    69.82  41 iPc    56 50.40    0.4
KHC    70.42  44 iPc    56 54.50    0.7
       1.0s     5.00nm          4.6mb
BRG    70.45  42 eP     56 54.10    0.1
       1.0s    12.00nm          5.0mb
IMA    70.92 335 eP     56 56.40   -0.3
       0.9s     6.20nm          4.7mb
PRU    70.94  43 P      56 57.50    0.6
ZST    72.86  44 e(P)   57 08.30   -0.1
KEV    73.99  21 eP     57 11.00   -3.6X
SOD    74.34  24 P      57 17.30    0.6
NUR    74.91  31 eP     57 20.50    0.5
SUF    75.14  28 iP     57 22.00    0.7
       0.5s     3.10nm          4.6mb
MLR    79.38  46 ePd    57 46.50    1.1
BNG    85.41  87 iPd    58 17.70    0.7
       0.7s    15.00nm          5.3mb
               iS      08 43.70
GKN   126.25  30 PKP    04 42.50   -0.1
KKN   126.73  30 PKP    04 42.60   -1.0
PKI   126.98  30 PKP    04 43.70   -0.5
BWA   144.22 237 ePKP   05 11.10   -4.5X
CTA   147.64 262 ePKP   05 23.00    1.4
      S.D. = 0.8  on  96 of 102 obs.
---------------------------------------
   JUL 01, 1989 12h 04m 34.69± 0.49s
   51.573 N ± 4.3km   16.183 E ± 5.0km
   DEPTH = 10.0km  (geophysicist)
 POLAND                            (548)
      ML 4.2 (VKA), 4.2 (GRF), 3.2
      (KRA).

KSP     0.73 175 iPd    04 48.60   -0.5
      0.5s   258.00nm
               iS      04 57.40
BRG     1.57 244 iPn    05 02.80    0.1
               iPg     05 04.00
               iSg     05 24.10
PRU     1.90 214 iPnd   05 07.50    0.1
               iPg     05 09.40
               eSg     05 30.60
CLL     2.01 264 iPn    05 09.20    0.2
      1.3s    44.00nm
               iPg     05 12.80
               iSn     05 31.80
               eSg     05 38.00
BRN     2.03 296 eP     05 15.00    5.8X
KRA     2.83 121 eP     05 27.90    7.2X
               iS      06 07.70
KHC     2.96 215 iPn    05 22.50   -0.1
               iPg     05 29.10
               Sn      05 53.20
               Sg      06 08.60
HOF     3.00 247 iPnc   05 23.80    0.6
MOX     3.02 254 ePn    05 24.00    0.5
               iPg     05 31.30
               e       06 08.00
               iSg     06 11.50
WET     3.22 222 ePn    05 26.10   -0.2
VKA     3.31 178 iPnc   05 28.60    1.0
               iPg     05 36.30
               iSg     06 20.60
VIE     3.33 178 e(Pn)  05 35.50    7.6X
               eSg     06 19.00
ZST     3.43 170 ePn    05 30.70    1.4
               i       05 40.30
               i       05 57.80
               i       06 07.60
               i(Sn)   06 22.70
SPC     3.53 131 e(Pn)  05 30.40   -0.4
               i       05 43.10
               e       06 21.80
GRF     3.68 241 ePnd   05 32.90    0.1
               ePg     05 46.00
               e(Sn)   06 16.00
               eSg     06 31.00
KMR     3.76 201 iPn-   05 34.40    0.4
               iPg     05 45.20
               iSn     06 16.30
               i       06 32.70
               iSg     06 35.40
SOP     3.90 176 eP     05 37.00    1.0
SRO     4.01 159 iP     05 57.00   19.6X
BHG     4.41 210 iPnd   05 38.00   -5.2X
FUR     4.66 225 iPnd   05 46.60   -0.1
TNS     5.08 258 ePc    05 53.50    0.8
               eS      07 19.70
LJU     5.64 192 e(Pn)  06 00.80    0.2
               e(Sn)   07 19.00
PTJ     5.68 182 eP     06 00.50   -0.8
VOY     5.75 196 e(Pn)  06 22.90   20.7X
               eSn     07 32.70
OGA     5.79 218 iPnd   06 03.40    0.5
WTS     5.83 278 ePn    06 16.50   13.3X
               eSn     07 44.00
               eSg     08 05.00
CEY     5.95 192 eP     06 28.00   23.0X
               e(Sn)   07 22.50
MEM     6.48 265 eP     06 09.70   -2.7
ENN     6.50 267 ePn    06 14.00    1.3
               eSg     08 07.00
WLF     6.66 257 eP     06 16.20    1.3
DOU     7.49 263 P      06 27.60    1.1
SNF     7.58 267 eP     06 48.40   20.7X
HFS     8.69 352 eP     06 41.80   -1.5
      0.4s     1.20nm          4.6mb X
PCP     8.69 219 P      06 42.42   -1.0
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FIN      9.10 219 P      06 48.17   -0.9
RRL      9.14 227 P      06 48.88   -0.8
ROB      9.17 221 P      06 48.47   -1.5
ENR      9.41 222 P      06 49.60   -3.7X
IMI      9.48 219 P      06 52.58   -1.7
NUR     10.12  24 eP     07 02.80   -0.2
SUF     12.39  22 eP     07 33.80    0.0
YKA     59.82 336 P      14 43.70    1.7
      S.D. = 1.0  on  32 of  42 obs.
-------------------------------------
   JUL  01, 1989  13h 21m 51.27± 0.69s
   17.031 N ± 7.2km   62.252 W ± 5.6km
   DEPTH =  10.0km  (geophysicist)
 LEEWARD ISLANDS                ( 92)
      ML 3.1 (FDF).

MGH      0.31 174 ePc    21 58.26   0.5
                  S      21 59.10
NEV      0.32 289 ePd    21 59.66   1.7
                  S      22 05.00
BPA      0.38  88 iPd    21 59.53   0.5
                  S      22 04.40
ANG      0.42  73 eP     22 00.68   0.8
SKI      0.55 303 eP     22 00.50  -2.0
                  eS     22 04.13
SEG      0.95 131 eP     22 09.09  -0.3
                  S      22 20.60
PAG      1.14 151 eP     22 12.70   0.1
SFG      1.27 127 eP     22 14.42  -0.5
                  S      22 31.30
DEG      1.35 122 eP     22 14.99  -1.1
                  S      22 32.10
MGG      1.43 141 ePd    22 17.28   0.1
BBL      1.67 154 eP     22 20.99   0.2
      S.D. = 1.1  on  11 of  11 obs.
-------------------------------------
   JUL  01, 1989  13h 35m 04.78± 0.95s
   37.977 N ± 9.3km   27.544 E ±10.4km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                         (366)
      MD 3.3 (ATH).

IZM      0.48 332 iPg    35 12.70  -1.7
YER      1.03 145 iPn    35 24.00  -0.2
KHL      1.60  77 ePn    35 32.60  -0.6
PRK      1.61 322 ePn    35 34.00   0.7
                  eSn    35 56.00
EZN      2.08 333 ePn    35 40.00  -0.1
ELL      2.25 122 ePn    35 43.00   0.3
ALT      2.28  61 ePn    35 43.00  -0.2
EDC      2.38   6 ePn    35 45.00   0.6
MFT      2.81 356 ePn    35 52.00   1.3
      S.D. = 1.0  on   9 of   9 obs.
-------------------------------------
?  JUL  01, 1989  14h 04m 33.15± 2.98s
   31.775 N ± 6.4km   35.474 E ±24.5km
   DEPTH =  10.0km  (geophysicist)
 DEAD SEA REGION                (373)

KFNJ     0.19  63 Pc     04 37.60   0.2
MASJ     0.21 102 P      04 37.80   0.0
MKRJ     0.26 147 Pc     04 38.80   0.0
SALJ     0.29  37 Pc     04 39.70   0.4
BURJ     0.50  29 Pc     04 43.60   0.3
JARJ     0.61  41 Pc     04 44.60  -0.9
      S.D. = 0.6  on   6 of   6 obs.
-------------------------------------
*  JUL  01, 1989  14h 10m 17.57± 0.98s
    0.934 N ±13.1km  126.976 E ±17.3km
   DEPTH =  33.0km  (normal)
   4.8mb (  3 obs.)
 MOLUCCA PASSAGE                (266)

TSM      9.47 290 eP     12 37.00   2.1
KNA     16.67 174 eP     14 10.60   0.2
WB5     21.92 161 iPc    15 39.00  29.0X
                  eS     19 50.00
MEKA    28.57 196 eP     16 35.80  23.0X
        0.4s     8.00nm
CHG     32.73 305 eP     16 49.90   0.2
CHTO    32.73 305 eP     16 48.80  -0.9
        1.1s     3.24nm          4.1mb
MAT     36.93  15 iPd    17 27.40   2.1
BJI     40.15 347 eP     17 51.00  -1.1
GUN     47.59 308 P      18 52.40  -0.5
        0.7s    50.00nm          5.6mb
PKI     47.81 307 P      18 54.00  -0.6
KKN     48.01 308 P      18 55.20  -0.8
DMN     48.07 307 P      18 56.30  -0.2
GKN     48.62 307 P      19 00.20  -0.4
SUF     94.14 333 eP     23 37.00   3.1X
SLL    100.64 333 ePdiff24 05.90   2.4X
        0.4s     1.00nm          4.7mb
      S.D. = 1.3  on  11 of  15 obs.
-------------------------------------
?  JUL  01, 1989  14h 26m 53.06± 3.28s
    7.197 S ±23.6km  129.479 E ±30.2km
   DEPTH = 158.4 ± 37.2 km
   4.3mb (  4 obs.)
 BANDA SEA                      (280)

MTN      5.84 164 iPc    28 20.00   1.3
        0.5s    160.00nm          5.5mb X
                  eS     29 19.00
KNA      8.53 185 eP     28 53.30  -1.3
                  eS     30 20.00
WB5     13.47 160 eP     29 56.50  -2.6X
                  eS     32 17.30
WRA     13.52 160 Pc     29 57.60  -2.1
        1.0s     6.10nm          3.9mb
QIS     16.51 145 eP     30 37.00   0.0
                  eS     33 30.00
ASPA    16.92 166 eP     30 43.40   1.4
        0.5s    15.00nm          4.6mb
                  e      33 27.80
                  e      33 29.90
WARB    19.07 188 eP     31 06.70   0.8
CHTO    39.68 311 eP     34 13.00   1.6
        1.0s     3.25nm          4.0mb
PKI     54.86 311 P      36 09.20  -0.6
KKN     55.07 311 P      36 11.00  -0.2
DMN     55.11 311 P      36 11.10  -0.4
GKN     55.67 311 P      36 14.70  -0.7
        0.6s     6.00nm          4.6mb
      S.D. = 1.4  on  11 of  12 obs.
-------------------------------------
*  JUL  01, 1989  14h 27m 30.01± 1.23s
   46.612 N ±14.5km   10.573 E ± 6.8km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                 (545)

OSS      0.30 284 iPc    27 35.60  -0.8
OGA      0.40  50 iPgc   27 38.20  -0.1
VDL      0.77 261 ePd    27 44.50  -0.7
SCE      0.89  61 iPgc   27 46.90  -0.3
SAX      1.06 308 ePc    27 49.50  -0.6
LLS      1.11 284 ePd    27 50.00  -1.0
TMA      1.28 247 ePc    27 54.70   0.8
ZLA      1.73 301 ePd    28 02.60   2.3
SLE      1.83 310 ePc    28 02.30   0.5
KHC      3.23  38 eP     29 13.00  51.2X
      S.D. = 1.2  on   9 of  10 obs.
-------------------------------------
   JUL  01, 1989  14h 57m 47.82± 0.88s
   43.236 N ± 7.3km   12.359 E ± 7.9km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                  (381)
      MD 2.8 (TRI).

CRE      0.49 323 Pd     57 59.40   1.6
                  eSg    58 07.20
ARV      0.50  58 Pc     57 57.60  -0.4
                  eSg    58 05.60
RSM      0.70   6 P      58 01.70   0.2
                  eSg    58 13.30
SFI      0.78 332 P      58 02.60  -0.3
                  eSg    58 15.10
PGD      0.79 324 P      58 03.00  -0.3
                  eSg    58 14.80
MNS      0.88 164 Pd     58 05.30   0.5
                  eSg    58 18.80
PII      1.42 291 P      58 12.40  -1.2
                  eSn    58 31.20
TRI      2.67  22 iPnd   58 23.60  -8.0X
                  iSn    58 47.50
                  iSg    58 51.10
VOY      3.00  21 e(Pg)  58 51.00  14.6X
                  eSg    59 00.10
VBY      3.08  41 eP     58 56.70  19.4X
                  iSg    59 03.20
SCE      3.83 353 iPnc   58 42.50  -5.8X
      S.D. = 1.1  on   7 of  11 obs.
-------------------------------------
&  JUL  01, 1989  15h 10m 49.29s
   61.880 N          149.661 W
   DEPTH =   4.8km
   3.2mb (  1 obs.)
 SOUTHERN ALASKA                (  2)
      <AGS-P>. ML 4.0 (PMR). Felt
      (III) at Palmer and Willow.

PWA      0.25 204 iPc    10 55.50   1.1
GHO      0.37 107 iP     10 56.90   0.2
PMR      0.38 139 iPd    10 57.30   0.3
CUT      0.60 332 eP     11 01.01  -0.3
PMS      0.64 176 iPc    11 01.50  -0.6
SUA      0.66 232 iP     11 02.14  -0.4
KNK      0.74 129 iP     11 03.30  -0.8
SKT      0.89 277 iP     11 05.76  -1.1
HUR      1.10   1 iP     11 09.63  -0.8
CGLM     1.26 244 eP     11 12.41  -0.8
SPU      1.34 240 iP     11 13.66  -1.0
NKA      1.37 214 eP     11 16.02   1.0
SLKM     1.40 191 eP     11 13.78  -1.8
RND      1.58  13 iP     11 17.01  -1.1
                  S      11 38.03
TOA      1.66  81 iPd    11 18.70  -0.6
RDT      1.87 227 eP     11 21.66  -0.6
RED      2.10 227 eP     11 25.25  -0.5
                  S      11 52.80
SVW      2.96 257 eP     11 37.70  -0.2
TTA      3.14 292 eP     11 39.40  -1.0
FBA      3.15  15 iPc    11 38.70  -1.7
KDC      4.38 200 eP     12 00.20   2.2
IMA      4.56 339 iPd    11 58.50  -2.2
DWY      5.15  60 P      12 08.60  -0.3
SIT      8.75 117 e(P)   12 55.50  -3.8
INK      9.35  40 eP     13 06.00  -1.6
YKA     16.25  72 P      14 43.10   3.5
MBC     17.65  23 eP     14 54.00  -3.0
        0.5s     1.00nm          3.2mb
        27 obs. associated
-------------------------------------
?  JUL  01, 1989  15h 27m 53.81±10.59s
   42.077 N ±98.1km  120.587 W ±15.6km
   DEPTH =   5.0km  (geophysicist)
 OREGON                         ( 32)
      ML 3.1 (BRK).

LBFM     1.22 234 eP     28 16.40  -0.7
MIN      1.89 204 iPc    28 26.30  -0.9
                  iS     28 52.60
WDC      2.10 225 eP     28 30.30   0.3
                  iS     28 59.10
LTCM     2.20 212 eP     28 33.00   1.5
ORV      2.61 196 eP     28 39.20   1.8X
                  eS     29 15.00
FHC      2.85 245 eP     28 45.60   4.7X
VGB      3.44 358 eP     28 55.00   5.8X
KVN      3.57 147 eP     28 51.00  -0.1
CMB      4.04 178 eP     29 06.70   9.0X
                  eS     29 58.80
      S.D. = 1.4  on   5 of   9 obs.
-------------------------------------
   JUL  01, 1989  15h 35m 38.74± 1.06s
   36.547 N ± 7.7km  141.380 E ± 9.2km
   DEPTH =  50.0 ±  6.6 km
   4.7mb (  4 obs.)  4.1Msz (  1 obs.)
 NEAR EAST COAST OF HONSHU, JAPAN(228)
      Felt (III JMA) at Mito; (I JMA)
      at Onohama, Utsunomiya,
      Fukushima and Kumagaya.

ONA      0.55 316 iPd    35 50.40  -0.2
                  iS     35 58.20
MIT      0.75 257 iPd    35 53.00  -0.2
                  iS     36 02.20
KAKJ     1.03 251 iPd    35 56.30  -0.8
                  S      36 08.30
UTS      1.21 270 eP     35 59.00  -0.6
                  S      36 13.70
FKS      1.41 329 iPd    36 02.90   0.6
                  S      36 19.90
KMG      1.66 257 eP     36 06.00   0.1
                  iS     36 25.70
YAMJ     1.94 327 P      36 10.40   0.5
                  S      36 34.20
CHJJ     1.99 256 iPd    36 10.00  -0.6
NIIJ     2.03 291 P      36 11.30   0.?
                  S      36 37.30
OFUJ     2.54   5 P      36 18.30   0
```

01d 15h

S 36 47.90
MAT 2.55 271 iPd 36 18.90 0.3
eS 36 51.00
MTMJ 2.88 272 iPd 36 24.10 0.8
IIDJ 3.01 250 P 36 26.20 1.1
S 37 01.70
AOMJ 4.08 349 eP 36 41.30 1.1
TSRJ 4.49 259 P 36 47.00 1.1
WKYJ 5.27 246 P 36 57.10 0.1
TKSJ 6.52 249 P 37 14.00 -0.5
YONJ 6.57 260 eP 37 16.00 0.8
KUSJ 7.03 20 P 37 19.40 -2.1
S 38 33.50
ASAJ 7.62 7 eP 37 28.00 -1.8
eS 38 52.10
MDJ 12.04 316 eP 38 32.00 1.8
CN2 14.16 306 eP 39 03.00 4.9X
SNY 14.77 296 eP 39 06.40 0.3
TIA 19.53 276 eP 40 01.00 -3.9X
BJI 20.07 288 eP 40 08.00 -2.5
TIY 23.07 282 eP 40 38.80 -2.0
Z 20s 0.75um 4.1Msz
E 14s 0.40um
WHN 23.27 263 eP 40 43.20 0.6
XAN 26.55 274 eP 41 13.00 -0.7
GYA 31.12 261 P 41 53.60 -1.2
CD2 31.65 271 eP 41 57.90 -1.5
GTA 32.68 288 eP 42 07.40 -1.0
CHG 41.15 256 eP 43 19.80 0.0
NNT 44.28 248 eP 43 46.00 0.6
GUN 47.18 276 P 44 09.60 0.9
PKI 47.70 276 P 44 13.20 0.4
KKN 47.71 276 P 44 13.20 0.5
0.6s 13.00nm 5.1mb
GKN 48.13 277 P 44 16.50 0.5
0.7s 29.00nm 5.4mb
WB5 56.51 188 eP 45 17.70 -0.5
YKA 64.24 30 eP 46 12.20 1.8
SUF 68.41 333 eP 46 36.70 -0.2
0.6s 2.20nm 4.3mb
NUR 70.37 332 eP 46 45.00 -3.9X
LRM 74.51 44 eP 47 16.10 2.1
HFS 74.52 336 eP 47 13.50 0.0
0.4s 0.70nm 3.9mb
NAO 74.91 337 P 47 16.10 0.4
CLL 81.50 330 eP 48 04.00 12.1X
PRU 81.88 329 eP 48 07.80 13.9X
KHC 82.94 328 eP 48 13.00 13.5X
ZOBO 146.95 60 PKP 55 20.20 3.8X
LPB 147.15 60 ePKP 55 23.00 6.5X
CNCB 147.42 61 PKP 55 22.40 5.3X
S.D. = 1.1 on 41 of 50 obs.

JUL 01, 1989 16h 33m 04.93± 0.36s
19.122 N ± 6.0km 68.155 W ± 6.1km
DEPTH = 10.0km (geophysicist)
4.8mb (16 obs.) 2.9Msz (1 obs.)
NORTH ATLANTIC OCEAN (402)

MGP 1.50 137 P 33 31.30 -0.6
APR 1.50 116 P 33 32.20 0.3
PNP 1.75 127 P 33 34.70 -0.8
CSB 2.07 113 P 33 40.80 0.7
SJG 2.15 118 P 33 41.80 0.4
S 34 09.40
NEV 5.67 110 eP 34 37.50 6.2X
MGH 6.14 112 eP 34 39.00 1.1
BPA 6.34 108 eP 34 41.50 0.8
PAG 6.90 115 eP 34 48.00 -0.7
BBL 7.31 118 eP 34 53.00 -1.4
DEG 7.32 111 eP 34 55.00 0.5
TRN 10.65 141 eP 35 42.88 2.2
TPP 10.89 143 eP 35 51.37 7.4X
TBH 10.98 140 eP 35 59.10 13.9X
ATB 27.23 143 e(P) 38 48.50 -2.7
TUL 29.53 310 eP 39 10.20 -1.6
0.5s 107.10nm 5.9mb X
Z 22s 0.03um 2.9Msz
LR 47 26.00
MEO 31.13 306 iPd 39 26.30 0.2
ZOBO 35.17 180 P 40 03.00 1.2
LPB 35.43 180 eP 40 03.00 -0.9
e 40 06.00
SCH 35.65 1 eP 40 06.00 1.1
CNCB 35.71 180 eP 40 00.00 -6.4X
e 40 07.00
ALQ 37.32 303 e(P) 40 21.10 1.6
1.0s 3.50nm 4.1mb
RSON 37.58 333 iPc 40 21.50 0.3
0.7s 15.57nm 4.9mb
FFC 43.87 332 eP 41 12.50 -0.5
0.8s 10.00nm 4.7mb
LRM 45.09 316 eP 41 24.80 1.5
EDM 48.64 325 iPd 41 51.00 0.1
YKA 53.78 335 P 42 28.90 -0.6
GRR 60.92 45 eP 43 20.50 0.2
1.0s 8.00nm 4.8mb
FLN 61.20 44 eP 43 22.20 0.0
0.8s 5.30nm 4.7mb
MFF 61.32 47 eP 43 23.10 0.0
LDF 61.42 45 eP 43 23.50 -0.2
EPF 61.60 51 eP 43 25.40 0.2
1.0s 12.00nm 5.0mb
DAG 62.70 11 iPd 43 31.00 -0.9
0.7s 7.53nm 5.0mb
MBC 62.75 348 eP 43 32.00 -0.2
1.0s 7.00nm 4.8mb
TCF 62.94 47 eP 43 33.70 -0.2
0.8s 4.00nm 4.7mb
ALE 63.49 1 eP 43 36.00 -1.0
0.6s 8.00nm 5.1mb
AVF 63.73 47 eP 43 38.70 -0.4
1.0s 10.00nm 5.0mb
SSF 63.83 46 eP 43 39.40 -0.4
1.0s 6.00nm 4.7mb
SMF 64.07 47 eP 43 41.20 -0.1
1.0s 4.00nm 4.6mb
LOR 64.07 46 eP 43 40.80 -0.6
1.0s 10.00nm 5.0mb
LPG 66.13 48 eP 43 55.30 0.3
0.8s 4.50nm 4.7mb
NAO 68.14 31 P 44 07.20 0.1
KHC 70.44 44 eP 44 22.50 1.0
ZST 72.88 44 eP 44 35.40 -0.7
SOD 74.35 24 P 44 44.30 0.1
SUF 75.15 28 eP 44 49.40 0.5
0.9s 5.10nm 4.6mb
S.D. = 0.9 on 42 of 46 obs.

JUL 01, 1989 17h 11m 35.57± 0.64s
38.940 N ± 5.9km 26.995 E ± 7.3km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.5 (ATH).

IZM 0.58 159 iPg 11 47.50 0.1
iSg 11 56.20
PRK 0.64 299 iPbc 11 47.70 -0.7
eSb 12 00.00
EZN 1.03 330 iPn 11 55.30 0.4
EDC 1.56 25 iPn 12 03.00 -0.3
BNT 1.58 27 iPn 12 03.40 -0.3
MFT 1.86 7 iPn 12 08.90 1.1
YER 2.07 150 ePn 12 11.00 0.2
KHL 2.07 106 ePn 12 11.50 0.6
ALT 2.43 86 ePn 12 15.00 -1.0
S.D. = 0.8 on 9 of 9 obs.

JUL 01, 1989 18h 27m 08.95± 0.25s
39.118 N ± 6.8km 71.650 E ± 4.6km
DEPTH = 10.0km (geophysicist)
4.9mb (37 obs.) 3.8Msz (1 obs.)
TAJIK SSR (715)
Felt (III) at Dzhirgatal.

KSH 3.38 83 Pn 28 08.00 5.1X
MAIO 10.03 258 eP 29 30.00 -6.2X
eS 31 14.00
NDI 11.38 154 iPd 29 56.00 1.4
0.4s 33.90nm 6.0mb X
eS 32 05.00
KHI 11.57 249 eP 29 54.00 -3.3X
WMQ 12.91 64 P 30 14.60 -0.7
Z 17s 0.70um
GKN 15.48 132 P 30 47.20 -1.8
KKN 16.01 131 P 30 55.00 -1.0
DMN 16.04 132 P 30 55.00 -1.5
PKI 16.25 131 P 30 56.90 -2.3
LSA 18.60 114 P 31 30.00 1.3
N 11s 0.30um
TAB 19.81 275 eP 31 47.00 4.4X
GTA 21.78 80 Pc 32 04.40 1.5
1.0s 0.02nm 1.5mb X
HYB 22.44 163 eP 32 13.00 3.5X
e 32 52.00
LZH 25.61 87 eP 32 42.50 2.3
1.5s 44.00nm 4.9mb
GBA 25.92 167 P 32 44.00 1.0
1.0s 17.20nm 4.7mb
CD2 27.43 97 eP 32 58.40 1.5
CHG 31.10 123 eP 33 10.80 -18.9X
CHTO 31.10 123 eP 33 10.20 -19.5X
0.9s 2.77nm
CFR 32.51 295 eP 33 42.00 0.3
JMB 33.98 290 iPd 33 56.00 1.4
MLR 34.03 296 ePd 33 56.50 1.3
BJI 34.06 74 eP 33 55.00 -0.3
PVL 34.76 292 eP 34 00.00 -1.3
PGB 35.72 291 iP 34 10.00 0.4
SUF 36.01 326 eP 33 53.30 -18.4X
0.8s 2.90nm
NUR 36.04 322 eP 34 01.10 -10.9X
Z 17s 0.40um 4.3MszX
LR 38 30.00
VTS 36.41 291 iP 34 17.00 1.5
KKB 36.65 290 eP 34 16.00 -1.4
BZS 37.03 297 ePc 34 21.50 1.0
VAY 37.14 290 eP 34 21.60 0.1
SOD 37.61 333 eP 34 24.00 -1.1
KRA 37.71 304 eP 34 25.50 -0.6
e 34 27.80
SKO 37.82 291 eP 34 28.70 1.5
KEV 38.58 337 eP 34 33.00 -0.2
SRO 38.99 301 e(P) 34 38.60 1.7
KSP 39.98 306 eP 34 45.20 0.1
e 36 15.20
CN2 40.00 65 eP 34 50.00 4.7X
PRU 41.18 305 eP 34 55.50 0.5
e 36 24.50
HFS 41.36 320 eP 34 55.50 -0.8
0.4s 0.80nm 3.8mb X
Z 17s 0.24um 4.1MszX
LR 51 49.00
VBY 41.45 298 e(P) 34 58.70 1.5
BRG 41.45 306 iP 34 57.60 0.4
1.0s 14.00nm 4.6mb
e 36 31.00
LJU 41.84 299 e(P) 35 01.00 0.6
KHC 41.92 303 iPc 35 01.60 0.5
1.0s 12.50nm 4.6mb
CLL 41.99 307 iPd 35 01.50 -0.1
1.0s 17.00nm 4.7mb
KBA 42.44 300 eP 35 03.00 -2.5
1.1s 15.80nm 4.7mb
e 36 48.00
NAO 42.81 321 P 35 06.70 -1.5
GRF 43.35 305 eP 35 13.00 0.2
Z 18s 0.10um 3.8Msz
WTS 45.71 309 eP 35 31.00 -0.6
0.9s 13.00nm 4.9mb
CDF 46.15 304 eP 35 34.80 -0.5
0.8s 5.30nm 4.6mb
MEM 46.47 307 Pc 35 39.30 1.7
ENN 46.49 307 eP 35 40.00 2.2
0.8s 6.00nm 4.7mb
WLF 46.59 306 P 35 39.60 1.1
BSF 46.61 303 eP 35 38.20 -0.7
1.0s 16.00nm 5.0mb
FIN 46.63 298 P 35 39.63 0.6
ROB 46.83 298 P 35 43.33 2.6
HAU 46.85 303 eP 35 40.10 -0.7
0.8s 8.00nm 4.8mb
IMI 46.93 297 P 35 41.27 -0.2
LSD 46.99 300 P 35 41.68 -0.5
ENR 47.16 298 P 35 44.45 1.1
STV 47.22 298 P 35 44.66 0.9
LPG 47.25 300 eP 35 43.60 -0.7
0.8s 14.70nm 5.1mb
DOU 47.47 306 Pc 35 48.20 2.7
SNF 47.56 307 P 35 46.40 0.1
LOR 48.67 303 eP 35 53.60 -1.4
1.0s 12.00nm 4.9mb
LBF 48.68 303 eP 35 54.00 -1.0
1.0s 8.80nm 4.8mb
SMF 48.86 302 eP 35 56.00 -0.4
1.0s 16.00nm 5.0mb
SSF 48.96 303 eP 35 56.00 -1.2
0.8s 5.30nm 4.6mb
AVF 49.14 302 eP 35 57.80 -0.7
1.0s 30.00nm 5.3mb
BGF 49.54 302 eP 36 00.60 -1.1

	0.9s	18.00nm			5.1mb	
TCF	50.05	302 eP	36	04.90	-0.7	
	0.8s	16.60nm			5.1mb	
LSF	50.51	302 eP	36	08.10	-0.9	
	0.8s	9.90nm			4.8mb	
CAF	50.58	300 eP	36	09.40	-0.3	
	1.0s	12.80nm			4.8mb	
RJF	50.82	301 eP	36	11.10	-0.3	
	0.8s	5.30nm			4.5mb	
LDF	50.84	306 eP	36	10.60	-0.9	
	0.9s	22.90nm			5.1mb	
FLN	51.02	306 eP	36	11.70	-1.2	
	0.8s	13.40nm			4.9mb	
GRR	51.37	306 eP	36	14.50	-1.1	
	0.8s	21.40nm			5.1mb	
LFF	51.46	301 eP	36	15.70	-0.6	
	0.8s	16.10nm			5.0mb	
MFF	51.49	303 eP	36	15.10	-1.4	
	0.9s	7.80nm			4.6mb	
MAT	51.56	71 eP	36	17.00	-0.2	
	1.0s	10.00nm			4.7mb	
LPF	51.60	305 eP	36	16.30	-1.0	
	0.8s	8.00nm			4.7mb	
DAG	52.40	343 iPc	36	21.20	-1.8	
	0.7s	12.33nm			4.9mb	
BNG	59.07	248 iPd	37	11.00	-0.9	
	0.6s	8.00nm			5.0mb	
MBC	64.70	3 eP	37	49.00	0.2	
	1.0s	47.00nm			5.6mb	
IMA	69.48	18 eP	38	18.50	-0.7	
	1.0s	7.50nm			4.8mb	
INK	71.24	10 ePc	38	29.80	0.1	
	0.4s	11.00nm			5.3mb	
FBA	71.82	17 e(P)	38	33.10	-0.1	
PMR	74.33	19 eP	38	47.30	-0.6	
	1.0s	12.50nm			4.9mb	
TOA	74.60	17 eP	38	50.20	0.5	
KDC	76.64	23 eP	39	01.20	0.0	
YKA	78.61	3 P	39	13.00	1.1	
YKC	78.63	3 ePc	39	12.20	0.2	
WB5	82.92	123 eP	39	35.80	0.4	
WRA	82.95	123 Pc	39	35.30	-0.3	
	0.7s	2.40nm			4.5mb	
FFC	86.37	356 eP	39	52.00	-0.2	
	1.1s	19.00nm			5.2mb	
EDM	87.93	3 eP	40	00.00	0.1	
PNT	91.38	7 eP	40	17.00	0.8	
LPB	138.35	291 ePKP	46	38.00	0.7	
CNCB	138.44	291 PKP	46	33.00	-4.6X	
S.D. = 1.1 on 87 of 98 obs.						

? JUL 01, 1989 18h 43m 23.65± 2.61s
35.167 N ±44.3km 25.971 E ± 7.8km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.9 (ATH).

NPS	0.31	288 iPgd	43	29.20	-0.9	
		eSg	43	36.50		
KAP	1.06	68 ePb	43	43.00	-0.5	
VAM	1.47	280 ePb	43	51.00	0.8	
YER	2.71	43 ePn	44	08.90	0.8	
ELL	3.56	63 ePn	44	20.00	-0.2	
S.D. = 1.1 on 5 of 5 obs.						

JUL 01, 1989 18h 51m 30.37± 0.46s
37.780 N ± 4.3km 29.358 E ± 5.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.7 (ATH).

KHL	0.56	13 iPg	51	41.00	-0.8	
		iSg	51	51.00		
BCK	1.03	108 ePn	51	49.20	-0.6	
YER	1.07	233 iPn	51	49.90	-0.7	
ELL	1.12	157 iPn	51	50.50	-0.9	
ALT	1.40	25 iPn	51	56.40	0.3	
KSL	1.67	174 ePn	52	01.10	1.4	
IZM	1.76	291 ePn	52	01.20	0.0	
GPA	2.61	16 ePn	52	18.00	4.6X	
BNT	2.81	337 ePn	52	16.40	0.3	
EDC	2.81	336 ePn	52	16.00	-0.2	
PRK	2.83	302 ePn	52	16.30	-0.1	
KAP	2.83	219 ePn	52	17.00	0.5	
EZN	3.13	312 ePn	52	10.00	-10.6X	
ISK	3.29	356 ePn	52	28.00	5.1X	
BBTK	3.36	51 iPd	52	25.00	0.9	
		eS	53	24.00		
KAS	4.95	42 eP	53	04.00	17.5X	
S.D. = 0.8 on 12 of 16 obs.						

% JUL 01, 1989 19h 09m 59.18± 0.97s
37.745 N ± 7.9km 29.320 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.60	16 iPg	10	10.00	-1.3	
		iSg	10	20.00		
YER	1.03	234 iPn	10	18.80	0.2	
BCK	1.05	105 ePn	10	19.20	0.2	
ELL	1.10	155 ePn	10	19.50	-0.4	
ALT	1.45	25 ePn	10	26.90	1.4	
S.D. = 1.4 on 5 of 5 obs.						

JUL 01, 1989 20h 52m 35.43± 0.77s
26.164 S ± 4.5km 70.600 W ± 8.7km
DEPTH = 46.2 ± 8.1 km
5.0mb (6 obs.)
NEAR COAST OF NORTHERN CHILE (122)

ANT	2.45	4 iPc	53	13.50	-0.3	
		iS	53	51.30		
RTRS	4.12	166 ePd	53	39.20	1.8	
SLA	4.83	74 ePc	53	52.60	4.9X	
CYA	4.84	119 ePd	53	49.20	1.5	
RTLL	5.48	161 ePd	53	56.40	-0.3	
RTCB	5.53	164 ePd	53	57.70	0.2	
		S	55	10.00		
RTBS	5.57	170 e(P)	53	59.00	1.1	
ZON	5.62	163 eP	53	59.00	0.3	
RTCV	5.96	163 e(P)	54	04.00	0.6	
JACH	6.50	180 eP	54	09.00	-2.0	
PEL	6.96	181 eP	54	10.00	-7.4X	
FCH	7.14	178 eP	54	18.00	-2.3	
LCCH	7.34	186 eP	54	35.50	12.8X	
MRA	7.55	147 e(P)	54	25.00	-0.6	
LNV	7.80	185 eP	54	34.00	5.0X	
CNCB	9.62	15 P	54	54.00	-0.8	
ARE	9.69	355 eP	54	51.00	-4.5X	
		eS	57	36.00		
LPB	9.86	14 eP	55	00.00	2.0	
Z	16s	1.35um				
		i	55	16.50		
		LR	58	45.00		
ZOBO	10.11	14 P	55	00.00	-1.5	
	1.0s	32.50nm			5.4mb	
Z	22s	0.53um				
		LR	58	32.00		
PPD	18.08	81 eP	56	46.20	1.3	
VAO	21.71	87 eP	57	24.30	-0.3	
		e	57	28.80		
		e	57	37.60		
BAO	23.54	68 eP	57	41.00	-1.6	
BMA	24.31	88 eP	57	50.60	0.6	
		e	58	02.90		
ATB	28.78	41 Pd	58	30.60	-0.5	
SOB1	32.82	65 eP	59	06.40	-0.5	
ITR	35.09	66 eP	59	24.90	-1.5	
SPA	63.99	180 e(P)	03	05.90	-0.3	
	1.0s	9.00nm			4.8mb	
		e	03	15.40		
TUL	66.17	338 eP	03	19.70	-0.6	
	0.8s	28.30nm			5.4mb	
		e	03	29.70		
ALQ	69.61	329 eP	03	42.80	0.7	
	0.8s	3.73nm			4.4mb	
		e	03	52.10		
LIC	71.20	73 P	03	51.80	-0.2	
KIC	71.51	73 P	03	53.70	-0.2	
MSU	75.20	327 eP	04	16.40	1.2	
		e	04	25.70		
KVN	78.60	324 eP	04	34.60	0.5	
RSON	79.36	345 eP	04	37.50	-0.2	
	0.9s	11.62nm			4.8mb	
		e	04	46.80		
MAW	80.32	164 eP	04	43.00	0.3	
LRM	81.10	332 eP	04	48.70	1.3	
KSR	85.14	116 eP	05	07.50	-1.0	
BNG	91.17	86 iPd	05	38.50	1.2	
	1.0s	10.00nm			5.2mb	
HYB	150.12	101 ePKP	12	24.00	5.9X	
S.D. = 1.2 on 33 of 39 obs.						

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* JUL 01, 1989 21h 06m 36.40± 0.96s
10.858 S ±12.7km 164.235 E ±13.6km
DEPTH = 33.0km (normal)
4.9mb (2 obs.)
SANTA CRUZ ISLANDS REGION (183)

HNR	4.45	288 iPc	07	44.50	1.1	
		iS	08	38.00		
DZM	11.35	170 iPc	09	19.10	-0.4	
		iS	11	21.10		
CTA	19.59	240 iPd	11	05.60	0.6	
	0.9s	130.25nm			5.2mb	
		eS	14	57.00		
RMQ	21.34	221 ePd	11	25.50	2.6	
COO	22.73	209 iPd	11	40.00	3.2X	
QIS	25.56	245 iPc	12	04.00	-0.2	
CMS	26.68	217 iPc	12	16.00	1.7	
WB5	30.12	249 iPd	12	44.50	-1.1	
		eS	17	41.70		
WRA	30.16	249 Pd	12	44.70	-1.2	
	0.5s	6.30nm			4.7mb	
ASPA	31.56	242 eP	12	55.70	-2.6	
Z	17s	0.44um			4.2MszX	
		LR	24	57.00		
MTN	32.45	263 eP	13	04.60	-1.4	
KNA	34.83	258 eP	13	25.50	-1.1	
WARB	38.60	241 eP	13	58.70	0.3	
MBL	43.76	251 eP	14	40.50	-0.3	
MEKA	45.77	243 eP	14	57.00	0.1	
NANU	47.88	249 eP	15	14.00	0.4	
MAT	53.13	334 (P)	15	53.00	-0.3	
KMI	69.76	302 Pc	17	48.00	2.0	
RTBS	113.47	131 iPKPd	25	12.00	-1.3	
RTCV	114.04	132 iPKPd	25	15.00	0.4	
RTRS	114.21	130 iPKPd	25	29.80	15.0X	
RTLL	114.36	132 iPKPd	25	20.40	5.2X	
CFA	114.39	132 iPKPd	25	19.00	3.8X	
MRA	115.78	134 ePKPd	25	37.10	19.4X	
BNG	145.42	262 iPKPd	26	14.50	0.7	
	1.2s	11.00nm				
		i	28	49.00		
		i	31	50.00		
		i	37	46.00		
SOB1	148.03	128 ePKP	26	22.20	4.2X	
		e	26	30.80		
S.D. = 1.3 on 20 of 26 obs.						

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* JUL 01, 1989 21h 24m 30.01± 1.77s
33.895 S ±18.3km 70.802 W ±12.7km
DEPTH = 86.0 ± 8.7 km
CHILE-ARGENTINA BORDER REGION (127)

TACH	0.27	335 iPc	24	43.50	0.5	
PCH	0.36	41 iPc	24	43.40	-0.2	
SAN	0.46	15 iPc	24	43.90	-0.3	
		iS	24	54.20		
LNV	0.51	263 ePc	24	44.50	-0.1	
FCH	0.71	37 iPd	24	47.00	0.2	
PEL	0.76	7 iPc	24	47.00	0.0	
LCCH	0.77	303 iP	24	47.00	0.0	
		iS	24	58.70		
ROCH	0.94	349 iPc	24	49.00	-0.2	
		iS	25	02.20		
JACH	1.22	8 iP	24	52.70	0.2	
		iS	25	08.20		
CNCB	17.20	9 P	28	27.80	1.0	
LPB	17.46	9 eP	28	30.00	0.2	
ZOBO	17.72	8 P	28	32.00	-1.1	
S.D. = 0.6 on 12 of 12 obs.						

% JUL 01, 1989 23h 57m 17.21± 1.00s
32.031 S ±25.8km 67.245 W ±11.7km
DEPTH = 33.0km (normal)
MENDOZA PROVINCE, ARGENTINA (139)

CFA	0.95	296 e(P)	57	26.50	-7.7X	
		S	57	53.50		
RTCV	1.11	278 iPc	57	37.00	0.4	
		S	57	55.50		
RTLL	1.26	303 iPd	57	39.50	0.9	
		S	58	00.00		
MRA	1.36	107 iPc	57	40.00	0.0	
RTCB	1.43	292 iPd	57	41.70	0.5	
		S	58	03.00		
RTBS	1.91	281 e(P)	57	47.00	-1.1	
RTRS	2.66	314 ePd	57	57.80	-0.8	
S.D. = 1.0 on 6 of 7 obs.						

02d 00h

? JUL 02, 1989 00h 29m 45.35± 3.11s
36.864 N ±16.5km 141.943 E ±27.6km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	1.57	246	P	30 10.30	-0.9
			eS	30 26.40	
YAMJ	2.00	311	P	30 17.20	-0.3
			S	30 39.80	
OFUJ	2.22	354	P	30 20.70	0.1
			eS	30 47.10	
NIIJ	2.38	280	P	30 22.70	-0.2
			eS	30 50.80	
CHJJ	2.51	252	P	30 24.00	-0.8
			eS	30 50.10	
MAT	3.02	265	iPd	30 32.00	0.0
			eS	31 05.00	
MTMJ	3.34	266	P	30 37.40	0.9
IIDJ	3.54	248	P	30 40.60	1.2
TSRJ	5.00	256	P	31 02.50	2.5X
			eS	32 00.90	

S.D. = 0.9 on 8 of 9 obs.

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* JUL 02, 1989 00h 32m 45.97± 3.35s
51.294 N ±25.7km 15.952 E ±18.1km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP	0.50	154	iP	32 56.00	-0.1
	0.3s		49.00nm		
			i	32 58.30	
			iS	33 06.30	
			iS	33 09.00	
BRG	1.33	252	iPg	33 10.40	-0.2
			iSg	33 30.50	
PRU	1.59	215	Pn	33 15.00	0.8
			ePg	33 17.00	
			i	33 32.50	
			Sg	33 40.00	
			i	33 47.00	
CLL	1.85	272	iPg	33 18.20	0.2
			eSg	33 44.00	
KHC	2.65	216	Pn	33 29.10	-0.4
			Pg	33 35.80	
			Sn	34 01.10	
			Sg	34 14.20	
MOX	2.82	258	ePg	33 37.50	5.6X
			eSg	34 17.50	
GRF	3.42	244	ePn	33 40.00	-0.4
			ePg	33 52.80	
			eSg	34 38.00	
SPC	3.47	126	eP	33 53.80	12.6X

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

JUL 02, 1989 00h 40m 20.57± 0.65s
38.602 N ± 5.7km 14.378 E ± 6.8km
DEPTH = 10.0km (geophysicist)
SICILY (398)

GIB	0.67	204	P	40 33.60	-0.4
			eSg	40 41.80	
MNO	0.71	159	Pc	40 34.10	-0.7
			eSg	40 46.40	
USI	0.95	277	P	40 38.20	-0.4
			eSg	40 52.00	
ATN	0.96	117	P	40 39.40	0.6
			eSn	40 53.80	
MCT	1.13	211	P	40 43.30	1.4
MEU	1.56	164	P	40 47.90	-0.6
			eSn	41 08.00	
MGR	1.78	30	P	40 52.10	0.5
SGO	2.08	20	P	40 55.50	-0.4

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

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* JUL 02, 1989 02h 07m 18.73± 1.14s
31.519 S ±13.8km 69.218 W ±10.3km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS	0.25	235	iPd	07 26.40	0.6
RTCB	0.36	85	iPd	07 29.00	1.6
			S	07 43.00	
ZON	0.46	93	iP-	07 30.00	1.2
			eS	07 45.00	
RTLL	0.67	74	iPd	07 32.00	0.2
			S	07 49.00	
RTCV	0.67	121	iPc	07 30.30	-1.5
			S	07 40.00	
CFA	0.84	96	iPd	07 32.80	-1.4
			S	07 50.00	
RTRS	1.36	351	iPd	07 40.70	-0.8

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

? JUL 02, 1989 03h 52m 10.07± 6.45s
32.343 S ±50.8km 71.139 W ±18.8km
DEPTH = 31.9 ± 6.5 km
NEAR COAST OF CENTRAL CHILE (135)

JACH	0.57	126	iPd	52 21.90	0.0
			iS	52 33.50	
ROCH	0.64	170	iPd	52 23.30	0.4
			iS	52 37.70	
SAN	1.18	160	ePd	52 30.50	0.1
			iS	52 51.00	
LCCH	1.19	198	iPc	52 30.60	0.1
			iS	52 53.50	
FCH	1.21	144	iPd	52 31.10	-0.1
			iS	52 52.00	
TACH	1.32	173	iPd	52 32.60	0.2
			iS	52 54.00	
PCH	1.38	158	iPc	52 33.50	0.1
			iS	52 56.80	
LNV	1.62	188	ePd	52 36.50	-0.3
			iS	52 56.00	
CHCH	1.64	166	iP	52 36.50	-0.6
			iS	53 03.00	

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

? JUL 02, 1989 04h 07m 06.82± 4.30s
36.431 N ±30.9km 27.802 E ±24.1km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

YER	0.80	29	iPn	07 21.40	-1.0
ELL	1.72	79	iPn	07 36.50	-0.6
IZM	2.01	348	ePn	07 41.00	-0.2
KHL	2.33	35	ePn	07 47.40	1.5
BCK	2.46	64	ePn	07 48.00	0.4

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

JUL 02, 1989 04h 33m 01.95± 0.71s
43.839 N ± 7.4km 11.938 E ± 6.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI	0.10	323	P	33 04.30	-0.4
			eSg	33 05.80	
PGD	0.16	283	Pc	33 06.00	0.2
			eSg	33 08.40	
CRE	0.21	177	P	33 06.80	0.2
			eSg	33 10.00	
RSM	0.38	76	P	33 10.40	0.6
			eSg	33 18.50	
ARV	0.80	115	P	33 16.80	-0.8
			eSg	33 30.20	
ASS	0.93	145	P	33 19.90	0.1
			eSg	33 32.20	
TRI	2.28	34	eP	34 17.70	37.6X

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

% JUL 02, 1989 05h 27m 03.93± 1.06s
15.769 N ± 5.8km 60.835 W ±14.9km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.5 (FDF).

DEG	0.58	338	eP	27 16.48	0.7
			S	27 26.70	
SFG	0.59	324	eP	27 16.20	0.4
BBL	0.67	248	eP	27 17.10	0.2
			S	27 28.00	
PAG	0.85	288	eP	27 19.80	0.2
			S	27 31.50	
SEG	0.90	314	eP	27 20.18	0.0
			S	27 31.70	
CRM	1.01	184	eP	27 21.90	0.1
			S	27 35.40	
FDF	1.07	196	eP	27 22.47	-0.3
	0.1s		0.45nm		
			S	27 36.80	
MVM	1.21	183	eP	27 24.58	0.0
BIM	1.27	190	eP	27 25.26	-0.2
			S	27 41.70	
BPA	1.60	322	eP	27 28.70	-1.6
			S	27 46.90	

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

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* JUL 02, 1989 05h 28m 29.28± 0.87s
13.415 S ± 8.6km 166.421 E ±18.7km
DEPTH = 33.0km (normal)
4.5mb (7 obs.) 5.2Msz (1 obs.)
VANUATU ISLANDS (186)

DZM	8.61	180	iPc	30 36.00	1.3
			iS	32 07.00	
CTA	20.41	248	iPc	33 11.20	4.8X
	0.9s		12.60nm		4.3mb
COO	21.71	216	e(P)	33 21.00	1.4
CMS	26.10	223	eP	34 02.50	0.5
BWA	26.53	215	eP	34 04.60	-1.3
WB5	31.34	254	eP	34 48.70	-0.5
WRA	31.37	254	Pc	34 49.00	-0.5
	0.5s		1.80nm		4.2mb
ASPA	32.40	247	iPc	34 57.70	-0.8
	0.8s		7.00nm		4.6mb
BJI	70.73	321	eP	39 44.00	-0.2
TIY	71.74	318	eP	39 50.50	0.1
CHG	73.79	294	eP	40 03.90	1.2
CHTO	73.79	294	eP	40 03.50	0.8
	0.8s		3.48nm		4.4mb
SPA	76.67	180	e(P)	40 16.20	-2.4
	1.0s		4.00nm		4.4mb
	Z 20s		1.26um		5.2Msz
GTA	81.17	314	P	40 44.00	0.6
GUN	88.04	299	P	41 18.20	-0.2
PKI	88.35	299	P	41 19.80	-0.1
	0.6s		13.00nm		5.4mb
KKN	88.52	299	P	41 20.40	-0.1
	0.6s		12.00nm		5.4mb
DMN	88.62	299	P	41 21.20	0.1
GKN	89.12	299	P	41 22.80	-0.5
BNG	147.07	257	iPKPc	48 09.80	0.5
	0.6s		61.00nm		

S.D. = 1.0 on 19 of 20 obs.

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* JUL 02, 1989 05h 31m 05.90± 0.78s
14.837 S ±12.8km 71.310 W ± 9.7km
DEPTH = 33.0km (normal)
PERU (116)

ARE	1.63	186	eP	31 33.00	0.1
			iS	32 56.20	
ZOBO	3.39	115	P	31 57.50	-0.8
	1.0s		107.50nm		
	Z 16s		0.18um		
			S	32 41.00	
			LR	33 20.00	
LPB	3.52	119	eP	32 00.00	-0.1
	1.1s		177.22nm		
			i	32 06.80	
CNCB	3.76	122	P	32 04.00	0.5
NNA	6.08	297	eP	32 35.50	-0.5
	0.8s		7.46nm		4.4mb X
YKA	84.18	341	P	43 35.50	0.7

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

? JUL 02, 1989 06h 18m 25.28± 3.02s
22.819 N ±25.7km 121.285 E ±22.9km
DEPTH = 33.0km (normal)
TAIWAN REGION (243)

TWG	0.20	271	iPc	18 31.50	-0.4
			eS	18 36.00	
TWF1	0.53	1	iPc	18 35.90	-0.5
			eS	18 44.80	
TWM1	0.79	271	ePc	18 40.10	0.1
			eS	18 51.80	
TWK	0.86	301	ePc	18 41.00	0.0
			eS	18 53.70	
TWC	1.86	16	ePd	18 55.60	0.3
ANP	2.36	5	eP	19 07.00	4.4X

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

? JUL 02, 1989 06h 41m 12.38± 1.42s
53.311 N ±16.0km 107.916 E ±19.4km
DEPTH = 33.0km (normal)
4.3mb (5 obs.)
LAKE BAIKAL REGION (327)

HHC	12.71	167	eP	44 15.00	1.5
BTO	12.80	173	eP	44 11.50	-3.2X

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BJI     14.42 154 (P)    44 33.50   -2.4
     Z  10s      0.70um
                 Lg      48 36.50
GTA     14.97 205 eP     44 42.20   -1.0
CN2     14.97 122 eP     44 47.50    4.4X
TIY     15.91 167 eP     45 01.40    6.1X
     E  10s      0.20um
WMQ     16.36 243 P      45 03.50    2.5X
     Z  12s      0.30um
CD2     22.59 189 eP     46 12.90    1.8
KKN     30.50 222 P      47 24.60    0.0
        0.8s     26.00nm          5.1mb
GKN     30.57 223 P      47 25.20    0.0
PKI     30.64 222 P      47 25.40   -0.6
CHTO    35.13 195 e(P)   48 05.00    0.3
        1.0s      1.50nm          3.9mb
HFS     47.90 318 eP     49 48.50   -0.2
        0.5s      0.50nm          3.8mb
WRA     76.45 154 Pd     53 01.00    0.8
        0.8s      1.90nm          4.2mb
BNG     86.10 272 ePc    53 54.50    3.3X
        0.5s      3.00nm          4.8mb
     S.D. = 1.4  on  10 of  15 obs.
-------------------------------------
   JUL  02, 1989  07h 14m 11.83± 0.57s
   43.838 N ± 6.5km   11.950 E ± 4.4km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                  (381)

PGD     0.17 283 P       14 15.50   -0.3
                 eSg     14 17.90
CRE     0.21 180 Pc      14 16.40   -0.1
                 eSg     14 19.10
RSM     0.37  76 P       14 19.90    0.4
ARV     0.80 115 P       14 26.10   -1.2
                 eSg     14 40.10
ASS     0.92 146 P       14 30.40    0.9
                 eSg     14 43.60
BDI     1.00 283 P       14 31.00    0.1
                 eSg     14 45.80
PII     1.04 264 P       14 31.50    0.1
                 eSg     14 45.50
TRI     2.27  34 eP      14 54.60    4.6X
                 i       15 16.70
                 i       15 26.00
VOY     2.59  31 ePn     14 54.70    0.1
                 eSn     15 27.00
                 eSg     15 36.70
LJU     2.87  39 eP      14 49.50   -8.9X
                 eSg     15 33.00
VBY     2.89  54 e(Pn)   15 05.30    6.6X
                 e       15 32.30
                 e(Sb)   15 45.10
                 eSg     15 50.80
KBA     3.39  16 iP      15 21.70   15.8X
                 i       15 28.00
PTJ     3.52  53 e(P)    15 15.20    7.5X
KHC     5.41  11 eP      16 21.30   46.7X
                 e       16 34.60
     S.D. = 0.7  on   8 of  14 obs.
-------------------------------------
   JUL  02, 1989  07h 34m 06.08± 0.91s
   17.002 N ± 8.1km   62.258 W ± 7.3km
   DEPTH =  10.0km  (geophysicist)
 LEEWARD ISLANDS                ( 92)
     ML 2.5 (FDF).

MGH     0.28 172 eP      34 12.30    0.3
                 S       34 16.50
NEV     0.33 294 ePd     34 12.65   -0.2
                 S       34 17.00
BPA     0.39  83 eP      34 19.50    5.5X
ANG     0.44  70 eP      34 15.57    0.6
PAG     1.11 150 eP      34 27.00    0.0
                 S       34 42.00
DEG     1.34 121 eP      34 29.40   -1.4
                 S       34 47.00
BBL     1.65 153 eP      34 36.00    0.8
     S.D. = 1.0  on   6 of   7 obs.
-------------------------------------
%  JUL  02, 1989  07h 48m 49.19± 1.12s
   43.870 N ±11.8km   11.995 E ± 7.9km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                  (381)

SFI     0.12 296 P       48 51.90   -0.2
                 eSg     48 53.50
PGD     0.20 271 P       48 53.50   -0.2
                 eSg     48 55.70
CRE     0.24 187 P       48 54.30   -0.2
                 eSg     48 58.20
ARV     0.78 118 P       49 04.50    0.1
PII     1.08 263 P       49 09.80    0.4
     S.D. = 0.3  on   5 of   5 obs.
-------------------------------------
   JUL  02, 1989  07h 53m 22.28± 0.65s
   43.821 N ± 7.7km   11.927 E ± 5.1km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                  (381)

SFI     0.11 332 Pc      53 24.70   -0.5
                 eSg     53 26.80
PGD     0.16 290 P       53 26.30    0.2
                 eSg     53 28.50
CRE     0.19 175 Pc      53 27.00    0.4
                 eSg     53 30.70
RSM     0.39  74 P       53 31.30    0.9
ARV     0.80 113 P       53 36.80   -1.1
BDI     0.99 285 P       53 40.90   -0.2
PII     1.02 265 P       53 41.80    0.2
TRI     2.30  34 eP      54 38.70   37.9X
     S.D. = 0.8  on   7 of   8 obs.
-------------------------------------
   JUL  02, 1989  07h 55m 16.08± 0.43s
   24.569 N ± 7.4km   95.896 E ± 7.3km
   DEPTH =  33.0km  (normal)
   4.9mb (  4 obs.)
 BURMA                          (296)

KMI     6.24  84 Pd      57 13.00   24.4X
CHG     6.39 153 eP      56 49.70   -0.7
CHTO    6.39 153 ePn     56 49.90   -0.5
                 ePg     57 13.00
BDT     7.84 158 ePn     57 10.50   -0.3
                 ePg     57 41.00
                 eS      59 20.00
GUN     9.59 292 P       57 36.60    1.4
        0.4s     41.00nm          6.0mb X
PKI     9.89 290 P       57 39.40    0.0
        0.5s     23.00nm          5.7mb X
KKN    10.06 291 P       57 41.50   -0.1
DMN    10.16 290 P       57 42.70   -0.3
        0.4s      5.00nm          5.1mb
GKN    10.66 291 P       57 49.90    0.1
GTA    15.16  12 eP      58 57.00    7.4X
TIY    19.25  43 eP      59 41.00    0.4
     N  14s      0.50um
WMQ    20.35 343 eP      59 51.50   -0.9
GBA    20.55 241 Pc      59 58.70    4.2X
        0.3s      1.00nm          3.7mb X
BJI    22.98  43 eP      00 23.00    4.3X
WB5    57.92 136 eP      05 07.20   -0.4
                 e       07 14.20
WRA    57.95 136 Pd      05 10.50    2.7
        0.8s      2.80nm          4.4mb
SUF    59.19 330 iP      05 15.90    0.0
        0.5s      4.40nm          4.8mb
NUR    59.72 327 eP      05 19.60    0.0
UPP    63.23 326 iP      05 43.10   -0.1
HFS    65.18 327 eP      05 55.70   -0.2
        0.6s      7.80nm          5.0mb
NAO    66.49 328 P       06 03.40   -1.0
     S.D. = 0.9  on  17 of  21 obs.
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   JUL  02, 1989  08h 49m 05.28± 0.46s
   18.858 N ± 4.5km  145.203 E ± 5.4km
   DEPTH = 598.1 ±  6.5 km
   4.5mb ( 24 obs.)
 MARIANA ISLANDS                (216)

GUMO    5.25 184 eP      50 40.50    0.0
                 eS      51 54.00
PJG     5.25 184 eP      50 40.20   -0.3
GUA     5.30 183 eP      50 40.70   -0.2
        0.6s    229.33nm          5.3mb
IIDJ   17.77 340 P       52 40.60    0.7
CHJJ   17.98 344 P       52 42.30    0.5
MAT    18.66 342 iPd     52 47.60   -0.6
        1.2s     28.13nm          4.7mb
                 (S)     55 30.00
MTMJ   18.82 341 P       52 50.00    0.3
NIIJ   19.10 345 P       52 52.70    0.5
OZH    25.40 289 eP      53 48.70   -0.2
MTN    34.42 205 iPc     55 06.20    0.4
        0.6s    121.00nm          5.7mb X
GYA    36.26 289 iPc     55 23.00    2.0
                 S       00 24.00
KNA    38.01 206 eP      55 35.40    0.2
CTA    38.72 178 iPc     55 41.20    0.3
        0.8s     15.67nm          4.6mb
WB5    39.94 196 iPc     55 54.50    3.7X
                 i       56 39.70
                 eScP    00 33.20
                 eS      01 14.00
WRA    40.01 196 Pc      55 51.30   -0.1
        0.3s      3.80nm          4.4mb
ASPA   43.68 195 eP      56 19.90   -0.4
        0.4s     12.00nm          4.8mb
CHTO   43.68 278 eP      56 21.10    0.6
        1.0s      5.75nm          4.1mb
BRS    46.56 171 iPc     56 42.40    0.1
MBL    46.89 213 eP      56 44.30   -0.6
        0.3s      7.00nm          4.7mb
WARB   48.27 203 iPc     56 55.20    0.0
        0.3s      9.00nm          4.8mb
NANU   50.36 216 eP      57 10.00   -0.6
MEKA   52.09 211 eP      57 15.50   -7.6X
WMQ    53.85 311 P       57 36.80    1.2
                 S       04 27.50
SDN    54.59  35 eP      57 39.20   -1.2
GUN    54.75 291 Pd      57 43.00    0.5
        0.4s     12.00nm          4.6mb
PKI    55.19 291 Pd      57 45.80    0.3
        0.4s     12.00nm          4.6mb
KKN    55.29 291 Pd      57 46.40    0.4
        0.6s      8.00nm          4.2mb
DMN    55.46 291 Pd      57 47.70    0.4
        0.4s     12.00nm          4.6mb
MRWA   55.49 211 iPd     57 46.00   -1.0
        0.2s      3.00nm          4.3mb
GKN    55.84 291 Pd      57 50.20    0.4
        0.4s      7.00nm          4.3mb
TTA    59.32  27 eP      58 09.90   -2.7
KDC    59.52  33 e(P)    58 13.20   -0.7
IMA    61.32  24 eP      58 25.30   -0.5
        1.0s     10.90nm          4.1mb
PMR    62.05  30 ePd     58 28.80   -1.4
        1.0s     30.00nm          4.6mb
BRW    62.24  18 eP      58 31.50    0.1
FBA    63.36  26 eP      58 37.00   -1.6
INK    69.41  23 eP      59 16.00    0.4
MBC    73.11  14 ePd     59 36.80   -0.1
        0.5s     20.00nm          4.9mb
BMW    77.63  45 iP      00 03.20    0.9
GMW    77.65  44 iP      00 03.60    1.3
YKA    78.07  28 P       00 05.20    1.1
RMW    78.32  44 iP      00 06.80    0.9
PNT    79.22  42 eP      00 11.00    0.5
WDC    79.64  51 iPd     00 13.40    0.5
MIN    80.39  51 eP      00 16.80   -0.2
DPW    80.54  43 eP      00 17.80    0.4
ORV    80.70  51 ePd     00 18.40    0.1
MHC    81.23  54 ePd     00 21.50    0.2
ARN    81.31  54 eP      00 22.20    0.7
KEV    81.64 342 eP      00 21.00   -1.5
PRS    81.73  55 eP      00 24.10    0.4
EDM    81.74  37 ePd     00 23.50    0.1
CM8    81.98  53 iPd     00 25.70    0.8
FRI    82.81  53 ePd     00 29.00    0.0
SOD    83.05 340 iP      00 29.40   -0.2
BCH    83.08  55 P       00 31.00    0.5
KVN    83.36  51 iP      00 32.60    0.6
SES    84.10  39 iPd     00 35.40    0.2
ISA    84.17  54 eP      00 34.00   -1.9
TNP    84.33  52 iPc     00 37.40    0.6
        1.0s     12.50nm          4.5mb
CLC    84.80  54 eP      00 39.00    0.1
LRM    84.95  43 ePd     00 39.80    0.1
SBB    84.99  55 eP      00 40.00    0.1
GSC    85.58  54 eP      00 33.00   -9.7X
SUF    85.80 336 eP      00 41.50   -1.6
        0.5s      4.10nm          4.4mb
TPC    86.57  55 eP      00 47.00   -0.4
BAR    86.57  57 eP      00 47.00   -0.5
FFC    87.21  32 iPd     00 49.70   -0.3
        0.9s     27.00nm          5.0mb
NUR    87.65 335 eP      00 50.50   -1.4
MSU    87.89  50 eP      00 54.60    0.8
GLA    87.90  56 eP      00 54.00    0.3
BW06   88.05  45 P       00 53.90   -0
        0.9s      1.91nm          3.9m
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02d 09h

PV09	90.08	49	P	01	04.50	0.5
PV10	90.20	49	P	01	05.00	0.6
RSSD	91.08	42	P	01	08.00	-0.3
HFS	92.06	338	eP	01	10.30	-1.8
	0.5s		3.10nm			4.6mb
GOL	92.21	47	eP	01	14.20	0.5
GLD	92.29	47	P	01	15.50	1.5
	1.1s		23.14nm			5.1mb
NAO	92.55	339	P	01	12.60	-1.9
ALQ	93.53	51	e(P)	01	20.30	0.5
	1.0s		2.75nm			4.3mb
BUL	120.55	257	iPKPd	06	50.80	-1.3
ZOBO	148.15	91	PKP	07	43.90	0.6
	1.0s		18.00nm			
LPB	148.22	91	ePKP	07	47.00	3.8X
CNCB	148.37	92	PKP	07	45.00	1.4
S.D. = 0.9 on 80 of 84 obs.						

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* JUL 02, 1989 09h 14m 02.62± 1.08s
18.994 S ±19.9km 177.793 W ±13.9km
DEPTH = 561.5 ± 12.0 km
4.1mb (6 obs.)
FIJI ISLANDS REGION (181)

VUN	3.69	285	ePc	15	23.50	-0.1
BRS	28.26	247	iPd	19	14.00	1.0
CTA	33.86	262	iPc	20	01.20	0.6
	0.7s		15.41nm			4.7mb
WB5	45.00	261	eP	21	29.70	-0.5
WRA	45.02	261	Pc	21	29.50	-0.9
	0.4s		2.60nm			4.1mb
ASPA	45.07	255	eP	21	30.70	-0.1
SPA	71.12	180	ePd	24	25.90	-0.2
	0.8s		5.83nm			4.2mb
Z	20s		0.95um			5.0Msz
PLM	78.01	48	eP	25	04.90	-0.1
KVN	80.28	43	iP	25	16.70	-0.1
TNP	80.32	44	eP	25	17.20	0.2
	1.0s		2.50nm			3.6mb
RMW	83.02	35	eP	25	30.60	0.3
PNT	85.30	34	eP	25	41.00	-0.3
	0.7s		5.00nm			4.3mb
ALQ	86.31	51	eP	25	46.90	0.1
	0.9s		0.63nm			3.3mb
NAO	137.77	354	Pdiff	29	52.10	15.9X
FLN	150.22	4	ePKP	32	50.10	4.5X
	0.6s		7.90nm			
LDF	150.41	3	ePKP	32	51.20	5.3X
	0.4s		2.20nm			
GRR	150.57	4	ePKP	32	52.00	5.8X
	0.6s		4.30nm			
HAU	150.87	354	ePKP	32	53.70	7.0X
LPF	150.92	4	ePKP	32	52.60	5.9X
	0.4s		6.80nm			
LOR	151.77	358	ePKP	32	54.90	6.9X
	0.8s		5.30nm			
SSF	151.99	358	ePKP	32	55.30	7.0X
LBF	152.05	357	ePKP	32	55.80	7.4X
S.D. = 0.6 on 13 of 22 obs.						

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* JUL 02, 1989 09h 19m 00.83± 0.96s
17.446 N ±17.2km 94.643 W ± 8.9km
DEPTH = 130.6 ± 13.7 km
4.1mb (2 obs.)
CHIAPAS, MEXICO (61)

OXX	2.02	260	iP	19	33.92	-1.8
			iS	19	59.61	
SCX	2.05	110	eP	19	36.58	0.8
			iS	20	02.08	
LVVM	2.85	323	(P)	19	45.00	-1.1
IISM	3.02	301	iP	19	48.38	0.1
			iS	20	24.10	
TPX	3.41	137	(P)	20	03.00	9.5X
			iS	20	22.00	
IIT	3.82	295	iP	20	00.93	1.7
III	4.69	282	iP	20	10.33	-0.6
			iS	20	47.71	
IIC	4.95	299	(P)	20	15.00	0.4
CRX	5.16	293	(P)	20	31.00	13.5X
MRX	6.60	291	(P)	20	38.00	1.2
OLY	18.21	8	eP	23	06.50	0.0
SIO	18.29	356	eP	23	07.00	-0.3
TUL	18.42	357	eP	23	08.40	-0.3
	1.0s		33.30nm			4.6mb
RLO	18.65	359	e(P)	23	10.30	-0.9
ALQ	20.37	331	e(P)	23	30.20	1.0
	0.7s		2.05nm			3.6mb
			e	25	47.00	
GOL	24.05	339	eP	24	06.50	1.1
INK	56.43	344	eP	28	29.50	-1.2
S.D. = 1.1 on 15 of 17 obs.						

% JUL 02, 1989 10h 18m 33.05± 1.12s
31.540 S ±16.2km 68.066 W ± 9.5km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.16	246	iPd	18	38.50	-0.9
			S	18	41.80	
RTLL	0.40	301	iPd	18	41.90	-0.4
RTCV	0.51	231	iPd	18	44.00	0.1
RTCB	0.63	275	ePc	18	46.60	1.0
			(S)	18	57.20	
RTRS	1.82	318	iPd	19	06.00	3.5X
MRA	2.18	114	ePd	19	07.90	0.2
S.D. = 1.0 on 5 of 6 obs.						

? JUL 02, 1989 11h 03m 44.36± 3.07s
31.452 S ±18.4km 69.252 W ±20.5km
DEPTH = 112.6 ± 26.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS	0.27	219	iPd	04	00.20	-0.5
RTCB	0.39	95	iPd	04	01.30	0.1
RTLL	0.68	80	iPd	04	02.40	-0.7
RTCV	0.73	124	iPc	04	04.60	1.0
CFA	0.88	100	iPd	04	05.00	0.1
			S	04	20.00	
RTRS	1.29	352	iPc	04	09.50	0.3
MRA	3.16	109	ePc	04	33.00	-0.3
S.D. = 0.8 on 7 of 7 obs.						

% JUL 02, 1989 12h 07m 38.09± 0.77s
43.876 N ± 8.8km 11.886 E ± 6.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI	0.05	331	P	07	39.80	-0.4
			eSg	07	42.00	
PGD	0.12	270	P	07	41.40	0.2
			eSg	07	43.30	
CRE	0.25	169	Pd	07	42.50	-1.0
			eSg	07	46.50	
RSM	0.41	83	P	07	46.00	-0.5
ARV	0.85	116	P	07	55.90	1.3
PII	1.00	262	P	07	57.40	0.4
S.D. = 1.1 on 6 of 6 obs.						

JUL 02, 1989 12h 15m 46.35± 0.81s
42.855 N ± 6.4km 13.115 E ± 9.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ASS	0.40	303	Pd	15	54.90	0.4
			eSg	16	00.90	
AQU	0.54	157	P	15	56.00	-1.4
			eSg	16	07.00	
MNS	0.57	214	Pc	15	57.30	-0.6
			eSg	16	06.10	
ARV	0.66	349	P	15	59.40	0.0
			eSg	16	09.50	
AZI	0.90	165	P	16	03.60	0.1
			eSn	16	17.00	
RMP	1.09	196	P	16	09.00	2.2
			eSn	16	24.00	
RDP	1.14	195	P	16	06.60	-1.0
			eSn	16	25.10	
SDI	1.26	155	P	16	10.00	0.2
			eSn	16	29.00	
DUI	1.56	140	P	16	15.00	0.8
BDI	2.19	304	P	16	22.80	-0.7
VBY	3.06	29	eP	16	53.30	17.6X
			e(Sn)	17	25.80	
S.D. = 1.2 on 10 of 11 obs.						

? JUL 02, 1989 12h 45m 47.14± 1.89s
22.579 N ±26.9km 123.136 E ±11.8km
DEPTH = 33.0km (normal)
3.9mb (1 obs.)
SOUTHEAST OF TAIWAN (247)

TWF1	1.86	295	ePc	46	16.70	-0.6
TWZ	2.88	331	ePc	46	32.20	0.4
ANP	2.99	331	eP	46	38.00	4.7X
MAT	19.08	40	(P)	50	09.00	-0.7
MBC	74.42	13	eP	57	24.00	0.8
HFS	79.83	331	eP	57	53.50	0.0
	0.5s		0.70nm			3.9mb
NAO	80.74	333	P	57	58.50	0.1
S.D. = 0.7 on 6 of 7 obs.						

? JUL 02, 1989 13h 53m 37.58± 1.02s
19.739 S ± 8.7km 68.882 W ±25.9km
DEPTH = 84.5 ± 31.6 km
CHILE-BOLIVIA BORDER REGION (124)

CNCB	3.04	17	eP	54	25.00	0.1
			i	54	45.20	
LPB	3.27	13	eP	54	28.00	-0.1
			i	54	50.00	
ZOBO	3.52	12	P	54	51.00	19.3X
	0.8s		19.19nm			
ANT	4.20	200	eP	54	40.50	0.0
SLA	5.87	148	ePc	55	04.00	0.0
PPD	16.58	101	eP	57	30.00	3.8X
			e	57	31.30	
VAO	20.66	103	ePd	58	12.80	0.0
			e	58	18.90	
S.D. = 0.1 on 5 of 7 obs.						

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* JUL 02, 1989 14h 07m 27.33± 0.49s
1.385 S ± 9.3km 77.977 W ±18.9km
DEPTH = 190.4 ± 4.7 km
4.5mb (5 obs.)
ECUADOR (107)

RECU	0.95	321	iP+	07	56.50	-0.1
GGP	1.35	333	eP	08	00.00	0.1
UPA	10.41	351	iPc	09	53.10	0.0
	0.8s		31.34nm			4.8mb
			i	10	48.80	
NNA	10.59	174	eP	09	55.00	-0.5
	0.7s		5.48nm			4.1mb
			eS	11	43.50	
ZOBO	17.69	147	eP	11	24.00	0.1
LPB	17.92	148	eP	11	34.00	7.8X
CNCB	18.21	148	P	11	30.00	0.6
ALQ	44.91	326	iPd	15	25.90	0.9
	0.7s		16.27nm			4.6mb
			e	15	27.90	
GOL	47.97	331	eP	15	48.80	-0.2
	0.6s		5.66nm			4.2mb
MSU	50.67	325	eP	16	10.30	0.7
DAU	51.49	328	eP	16	16.20	0.3
TNP	53.40	322	eP	16	30.00	0.2
IMW	53.86	331	eP	16	32.50	-0.7
KVN	54.54	322	eP	16	37.90	-0.2
HPI	54.80	329	eP	16	40.70	0.7
ORV	56.96	321	eP	16	55.70	0.6
LON	61.41	327	eP	17	25.00	-0.6
PNT	61.92	330	iP	17	28.00	-0.8
	0.5s		7.00nm			4.8mb
LIC	73.21	83	P	18	36.00	-3.7X
KIC	73.50	83	P	18	37.70	-3.7X
INK	79.16	342	eP	19	11.50	-0.5
MBC	81.01	351	eP	19	21.00	-0.6
WRA	141.87	235	PKPc	26	33.50	-5.4X
	0.5s		0.80nm			
WB5	141.88	235	ePKP	26	33.70	-5.3X
WARB	143.72	219	ePKP	26	39.80	-2.9X
MTN	147.84	243	iPKPc	26	52.60	3.6X
	0.6s		32.00nm			
GKN	148.74	31	PKP	26	52.80	2.5X
KKN	149.24	30	PKP	26	54.50	3.3X
	0.6s		7.00nm			
S.D. = 0.6 on 19 of 28 obs.						

? JUL 02, 1989 14h 11m 04.69± 1.33s
52.306 N ±25.7km 171.219 W ±13.6km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK	3.40	265	eP	11	57.30	0.7
			e(S)	12	37.00	
INK	24.03	34	eP	16	18.00	1.0
MBC	31.01	21	eP	17	22.00	1.3
	0.5s		2.00nm			4.2mb
KVN	38.54	88	eP	18	25.70	-0.1
SUF	64.50	351	eP	21	39.00	-0.8

NUR 66.82 352 eP 21 51.00 -3.6X
NAO 67.21 359 P 21 56.40 -0.7
HFS 67.84 357 eP 21 59.80 -1.3
0.4s 1.50nm 4.4mb
S.D. = 1.2 on 7 of 8 obs.

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* JUL 02, 1989 14h 37m 45.97± 2.61s
21.987 S ±16.1km 177.212 W ±13.6km
DEPTH = 199.4 ± 23.0 km
4.6mb (7 obs.)
FIJI ISLANDS REGION (181)

VUN 5.68 313 ePc 39 09.60 -0.1
SGE 6.33 313 ePc 39 25.10 6.7X
e 45 01.10
DZM 15.16 267 iPc 41 16.20 4.7X
RMQ 31.30 255 iPc 43 51.70 2.3
0.8s 29.00nm 5.0mb
e 44 05.00
CAN 32.32 238 eP 43 59.00 0.7
BWA 32.57 240 eP 43 58.80 -1.7
CTA 34.10 266 iPc 44 15.30 1.6
0.7s 22.60nm 4.9mb
STK 37.83 246 eP 44 45.00 0.0
ASPA 44.92 258 eP 45 42.90 0.2
1.1s 10.00nm 4.2mb
WB5 45.13 263 eP 45 43.00 -1.4
WRA 45.14 263 Pc 45 44.30 -0.2
0.8s 4.30nm 3.9mb
FORR 49.36 248 eP 46 15.70 -1.4
KNA 51.28 267 eP 46 31.50 -0.4
SPA 68.15 180 ePd 48 25.10 -1.2
1.0s 16.00nm 4.7mb
FRI 79.85 43 e(P) 49 33.50 -0.1
CMB 80.06 42 eP 49 34.80 0.0
ORV 80.32 40 eP 49 35.70 -0.4
WDC 80.35 39 eP 49 36.20 0.0
MAW 80.42 200 eP 49 36.00 -0.2
PNT 87.48 34 ePd 50 12.00 0.2
0.9s 16.00nm 4.9mb
ALQ 87.76 51 eP 50 13.00 -0.8
1.0s 4.75nm 4.3mb
LRM 89.39 39 eP 50 21.60 0.3
CHTO 91.43 290 eP 50 32.20 1.3
CYA 97.01 124 ePc 50 59.00 2.5
SOB1 127.12 121 ePKP 56 26.40 -2.4X
SUF 136.30 345 ePKP 56 44.40 -0.3
0.6s 2.10nm
NUR 138.56 344 iPKP 56 47.70 -1.3
0.6s 10.40nm
NAO 140.79 354 PKP 56 45.20 -7.9X
HFS 141.11 351 ePKP 56 46.10 -7.5X
0.4s 1.80nm
LWI 144.99 230 iPKPc 57 02.40 0.4
DMU 147.30 11 ePKP 57 06.20 1.9X
WIT 149.08 355 ePKP 57 13.00 5.9X
VRI 149.21 326 ePKPd 57 11.00 3.4X
KSP 149.32 343 iPKPd 57 12.40 4.8X
SPC 149.52 337 ePKP 57 13.50 5.3X
CLL 149.67 347 iPKP 57 12.60 4.6X
1.2s 51.00nm
MLR 149.87 327 ePKPd 57 13.00 4.3X
BRG 149.87 346 iPKPd 57 13.50 5.1X
1.0s 34.00nm
i 57 20.10
WTS 149.88 355 ePKP 57 13.50 5.2X
0.9s 25.00nm
PRU 150.56 344 iPKPd 57 15.20 5.8X
0.9s 20.90nm
MOX 150.57 349 iPKP 57 15.00 5.5X
0.8s 25.00nm
HOF 150.84 348 ePKP 57 15.50 5.6X
1.0s 16.00nm
ENN 151.17 356 ePKP 57 16.00 5.7X
1.0s 17.00nm
MEM 151.32 356 PKPc 57 17.00 6.5X
SRO 151.37 338 iPKP 57 16.60 5.9X
ZST 151.44 340 ePKP 57 17.30 6.5X
GRF 151.56 348 ePKP 57 18.00 7.0X
KHC 151.59 345 iPKPd 57 17.90 6.8X
1.0s 11.00nm
S.D. = 1.1 on 25 of 48 obs.

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* JUL 02, 1989 14h 50m 24.71± 0.73s
27.920 S ± 5.5km 67.281 W ±25.7km
DEPTH = 33.0km (normol)
CATAMARCA PROVINCE, ARGENTINA (130)

RTLL 3.55 197 eP 51 19.00 0.1
S 51 57.00
SLA 3.56 27 ePd 51 31.80 12.6X
e 51 46.50
CFA 3.77 193 iPc 51 22.00 0.1
S 52 00.10
RTCV 4.08 195 e(P) 51 26.20 -0.2
RTBS 4.18 206 ePc 51 22.20 -5.5X
MRA 4.68 163 ePc 51 34.80 0.0
ANT 5.06 325 eP 51 47.50 7.2X
PEL 5.98 209 iPd 52 38.50 45.2X
CNCB 11.08 357 eP 53 09.00 4.6X
LPB 11.36 356 eP 53 08.00 -0.1
ZOBO 11.62 356 eP 53 12.00 0.1
S.D. = 0.2 on 6 of 11 obs.

? JUL 02, 1989 16h 46m 17.90± 1.28s
23.973 S ±13.0km 178.935 E ±26.0km
DEPTH = 529.8 ± 18.4 km
4.4mb (6 obs.)
SOUTH OF FIJI ISLANDS (171)

VUN 5.95 356 ePc 47 56.00 0.1
PGZ 16.75 187 eP 49 44.40 -0.2
CAN 28.26 240 eP 51 31.50 1.6
BWA 28.50 242 eP 51 31.30 -0.7
ASPA 41.06 261 iPd 53 17.20 0.5
eS 58 49.60
WB5 41.42 267 iPd 53 19.50 0.0
eS 58 53.70
WRA 41.43 267 Pd 53 19.40 -0.1
0.6s 7.50nm 4.4mb
FORR 45.33 250 eP 53 49.60 -0.3
0.4s 26.00nm 5.1mb
WARB 47.15 256 iPd 54 03.70 -0.3
0.3s 3.00nm 4.3mb
MBL 54.31 260 eP 54 55.40 -1.1
NANU 57.81 258 iPd 55 20.30 -0.3
0.4s 10.00nm 4.5mb
MAT 71.41 326 eP 56 45.00 -0.8
1.0s 14.00nm 4.4mb
CHTO 88.79 291 eP 58 18.10 1.7
1.0s 2.25nm 4.0mb
NAO 142.26 351 PKP 04 46.90 -3.8X
HFS 142.42 348 ePKP 04 45.80 -5.2X
0.4s 6.00nm
EKA 148.64 2 PKP 05 06.00 4.7X
1.4s 15.00nm
KSP 150.00 338 iPKP 05 09.50 5.9X
CLL 150.63 342 ePKP 05 09.00 4.5X
1.0s 20.00nm
e 07 22.00
BRG 150.74 340 iPKP 05 10.60 5.9X
i 05 21.10
PRU 151.31 339 ePKP 05 17.50 12.0X
KHC 152.37 339 ePKP 05 16.00 8.9X
BNG 152.90 227 iPKPc 05 17.00 8.1X
0.5s 5.00nm
S.D. = 1.0 on 13 of 22 obs.

JUL 02, 1989 17h 17m 18.25± 0.90s
43.035 N ± 7.9km 18.469 E ± 6.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (TTG).

BRY 0.14 158 iPgc 17 22.60 0.8
iSg 17 26.60
NKY 0.45 120 ePg 17 27.00 -0.4
iSg 17 34.40
HCY 0.59 178 iPgd 17 29.30 -0.8
iSg 17 39.10
PLE 0.74 66 ePg 17 32.50 -0.3
eSg 17 43.60
TTG 0.84 136 ePg 17 34.00 -0.4
eSg 17 47.10
PVY 1.19 111 ePg 17 41.20 0.7
eSg 18 00.00
ULC 1.22 151 ePg 17 41.30 0.4
eSg 18 00.00
HVAR 1.49 276 iPn 17 45.10 0.1
iSn 18 05.10
BZS 3.43 40 ePc 18 24.00 11.2X
S.D. = 0.7 on 8 of 9 obs.

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* JUL 02, 1989 17h 36m 17.15± 1.06s
35.605 N ±18.3km 26.756 E ± 9.1km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.6 (ATH).

KAP 0.35 99 iPbc 36 23.30 -1.0
NPS 0.99 250 iPbc 36 36.00 0.0
YER 1.96 38 iPn 36 49.80 -1.0
VAM 2.10 265 ePb 36 56.20 3.5X
KSL 2.35 77 ePn 36 57.70 1.3
ELL 2.79 65 ePn 37 03.60 0.8
S.D. = 1.5 on 5 of 6 obs.

% JUL 02, 1989 18h 39m 34.84± 0.61s
43.835 N ± 7.5km 11.962 E ± 4.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI 0.12 317 P 39 37.20 -0.6
eSg 39 38.40
PGD 0.18 283 P 39 38.70 -0.3
eSg 39 40.90
CRE 0.21 182 Pd 39 39.40 0.0
eSg 39 44.50
RSM 0.37 75 P 39 42.80 0.4
ARV 0.79 115 P 39 49.80 -0.4
BDI 1.01 283 P 39 54.60 0.6
PII 1.05 264 P 39 54.80 0.2
S.D. = 0.5 on 7 of 7 obs.

% JUL 02, 1989 19h 15m 24.00± 1.31s
31.339 S ±11.3km 69.384 W ±13.2km
DEPTH = 33.0km (normol)
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS 0.33 190 iPd 15 32.00 -0.1
S 15 50.30
RTCB 0.52 107 ePd 15 37.00 2.0
S 15 50.00
RTLL 0.78 90 iPd 15 38.00 -0.6
S 15 51.80
RTCV 0.89 126 iPc 15 40.00 -0.2
CFA 1.01 106 iPc 15 40.50 -1.5
S 15 51.50
RTRS 1.17 357 eP 15 44.10 0.1
S.D. = 1.5 on 6 of 6 obs.

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* JUL 02, 1989 19h 27m 56.53± 2.13s
31.943 S ±18.0km 67.886 W ±11.2km
DEPTH = 108.1 ± 25.5 km
SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.45 318 iPd 28 13.50 0.4
S 28 27.00
RTCV 0.56 278 iPc 28 13.50 -0.4
ZON 0.78 300 iP+ 28 15.80 0.0
eS 28 32.00
RTLL 0.79 321 iPd 28 10.00 -5.8X
RTCB 0.90 300 iPd 28 16.70 -0.3
RTBS 1.36 281 iPc 28 21.50 -0.4
MRA 1.90 105 ePc 28 29.00 0.3
RTRS 2.22 322 iPc 28 33.80 1.0
CYA 3.93 28 ePc 28 55.20 -0.7
S.D. = 0.7 on 8 of 9 obs.

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* JUL 02, 1989 21h 25m 33.34± 1.18s
9.613 S ±13.5km 118.964 E ±10.4km
DEPTH = 33.0km (normol)
4.8mb (1 obs.)
SUMBAWA ISLAND REGION (285)

KHKI 3.54 290 eP 26 27.40 0.1
eS 27 07.50
e 29 59.00
TRT 6.54 286 ePd 27 18.60 8.9X
iS 28 21.60
MBL 11.51 176 eP 28 17.00 -1.5
eS 30 15.00
MTN 12.36 106 eP 28 29.00 -0.9
eS 30 44.00
NANU 13.29 194 eP 28 42.00 -0.3
0.3s 3.00nm 4.8mb
eS 30 53.00
MEKA 16.91 181 eP 29 30.00 0.8
eS 32 23.00
WARB 18.02 157 eP 29 44.00 1.0
WB5 18.04 126 eP 29 44.20 0.^
eS 32 55.70

02d 21h

MRWA 19.70 188 eP 30 06.00 3.0X
eS 33 25.00
S.D. = 1.2 on 7 of 9 obs.

% JUL 02, 1989 22h 15m 47.96± 1.08s
41.979 N ±10.2km 14.013 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

SDI 0.31 208 Pc 15 54.30 -0.1
eSg 16 00.00
AZI 0.43 271 P 15 56.90 0.2
eSg 16 02.60
DUI 0.46 134 Pc 15 57.10 -0.3
eSg 16 03.40
AQU 0.59 310 P 15 58.70 -1.2
RDP 0.99 258 P 16 06.20 -0.6
MNS 1.07 293 P 16 09.70 1.6
SGO 1.72 145 P 16 18.60 0.5
S.D. = 1.1 on 7 of 7 obs.

* JUL 02, 1989 23h 00m 49.83± 1.99s
25.151 N ±13.9km 98.561 E ±23.2km
DEPTH = 10.0km (geophysicist)
BURMA-CHINA BORDER REGION (297)

KMI 3.79 90 ePn 01 50.50 0.7
Pg 01 55.00
Sg 02 26.00
CHG 6.32 177 iPd 02 26.00 0.7
iPg 02 44.10
iSg 03 50.00
CHTO 6.32 177 iPn 02 25.80 0.5
iPg 02 44.00
CD2 7.35 37 Pn 02 40.00 0.2
Pg 03 01.60
GYA 7.42 78 Pn 02 40.00 -0.9
Pg 03 01.60
BDT 7.88 177 ePn 02 46.00 -1.2
ePg 03 14.20
eS 04 43.00
LOE 8.25 158 eP 03 07.00 14.5X
XAN 12.63 43 eP 04 12.50 20.1X
S.D. = 1.1 on 6 of 8 obs.

* JUL 02, 1989 23h 40m 14.67± 0.70s
37.466 N ±16.2km 43.737 W ± 4.8km
DEPTH = 10.0km (geophysicist)
4.5mb (19 obs.)
NORTH ATLANTIC OCEAN (402)

SCH 23.40 325 eP 45 23.00 -1.3
FRB 30.26 338 eP 46 26.00 -1.6
EKA 32.60 44 Pd 46 47.90 -0.3
0.6s 2.60nm 4.3mb
LPF 32.70 57 eP 46 49.30 0.2
0.8s 5.30nm 4.5mb
LPO 34.27 63 eP 47 02.70 -0.1
LSF 34.44 61 eP 47 04.60 0.3
0.6s 3.60nm 4.5mb
TCF 34.91 61 eP 47 08.80 0.5
0.6s 3.60nm 4.4mb
BGF 35.34 60 eP 47 12.10 0.1
0.6s 3.60nm 4.4mb
SSF 35.77 59 eP 47 15.50 -0.1
LOR 36.01 59 eP 47 17.60 0.0
0.8s 4.00nm 4.3mb
FVM 36.63 285 P 47 23.90 0.9
0.9s 10.17nm 4.6mb
HAU 37.66 57 eP 47 32.00 0.5
0.6s 4.50nm 4.4mb
RLO 40.66 284 eP 47 57.60 1.0
TUL 41.33 284 eP 48 02.70 0.6
1.2s 37.30nm 5.0mb
NRA0 41.39 38 P 48 02.90 0.7
CLL 41.80 52 eP 48 06.00 0.2
1.0s 10.00nm 4.5mb
KHC 42.36 55 iPd 48 12.00 1.6
HFS 42.37 39 eP 48 10.30 0.0
0.6s 5.00nm 4.4mb
BRG 42.43 53 eP 48 11.40 0.5
1.0s 10.00nm 4.5mb
FFC 42.58 313 eP 48 12.50 0.4
0.5s 7.00nm 4.6mb
PRU 42.89 54 eP 48 16.00 1.3
MEO 43.86 284 iPc 48 22.70 -0.1
GOL 47.39 293 P 48 50.70 -0.4
0.8s 2.98nm 4.4mb
NUR 47.83 38 eP 48 53.70 -0.2
SUF 48.42 35 eP 48 58.30 -0.2
0.6s 5.10nm 4.8mb
YKA 48.89 324 eP 49 03.50 1.4
BW06 49.47 298 iPc 49 04.60 -2.6
0.8s 8.71nm 4.8mb
ALQ 49.84 287 eP 49 11.10 1.0
IMW 50.10 300 iP 49 12.50 0.4
LCCM 50.19 302 ePc 49 12.60 0.0
PV10 50.52 292 P 49 17.10 1.8
MBC 50.55 343 eP 49 14.50 -0.2
0.7s 4.00nm 4.5mb
MLR 51.33 58 eP 49 20.00 -1.2
INK 55.71 333 eP 49 52.00 -1.1
KVN 56.84 296 eP 50 01.10 -0.8
CMB 58.89 296 eP 50 16.10 0.0
ORV 59.03 298 eP 50 17.00 0.0
FBA 62.26 332 P 50 38.60 -0.1
0.9s 3.33nm 4.5mb
BNG 65.45 104 ePc 50 57.50 -2.7
0.3s 3.00nm 5.0mb
S.D. = 1.0 on 39 of 39 obs.

? JUL 03, 1989 00h 37m 47.26± 3.98s
34.947 N ±32.6km 139.181 E ±12.4km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 2.7 (JMA). Felt (I JMA) at
Ajiro.

AJI 0.12 324 iPd 37 50.40 0.2
S 37 51.60
CHJJ 1.11 352 P 38 08.10 0.0
S 38 21.60
IIDJ 1.17 297 iPd 38 09.10 0.0
KAKJ 1.49 33 P 38 14.10 0.0
S 38 34.20
MAT 1.78 334 (P) 38 18.00 -0.2
eS 38 41.00
S.D. = 0.2 on 5 of 5 obs.

* JUL 03, 1989 00h 45m 57.18± 0.90s
38.930 N ± 8.3km 20.256 E ± 8.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.4 (ATH).

VLS 0.80 161 ePb 46 13.50 0.8
eSg 46 25.80
SRN 0.97 348 ePg 46 16.30 0.7
LSK 1.25 12 ePg 46 20.30 -0.1
KBN 1.75 14 ePn 46 29.00 1.4
BERA 1.79 352 ePn 46 30.70 2.5X
KZN 1.81 40 ePb 46 28.50 -0.1
ITM 2.19 142 ePg 46 40.50 6.3X
LCI 2.26 309 P 46 37.00 1.8
eSn 46 58.60
NEO 2.34 80 ePb 46 39.10 2.8X
PLG 2.85 59 ePn 46 42.60 -1.0
VAY 2.97 36 ePn 46 44.30 -0.9
SKO 3.17 16 ePn 46 55.00 7.0X
MGR 3.83 290 P 46 55.10 -2.4
eSn 47 32.80
SGO 4.15 295 P 47 01.60 -0.3
S.D. = 1.4 on 10 of 14 obs.

% JUL 03, 1989 01h 52m 57.47± 0.84s
42.696 N ± 7.7km 11.973 E ± 7.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

MNS 0.61 121 P 53 09.00 -0.8
eSg 53 18.60
MAO 0.67 246 P 53 10.80 0.0
eSg 53 18.90
CRE 0.93 359 P 53 15.00 -0.3
eSg 53 29.00
ARV 1.07 41 P 53 18.00 0.4
SDI 1.69 125 P 53 27.90 0.7
S.D. = 0.8 on 5 of 5 obs.

* JUL 03, 1989 05h 13m 18.58± 1.09s
19.292 S ± 9.9km 168.911 E ±14.5km
DEPTH = 21.4 ± 6.6 km
4.4mb (3 obs.) 3.8Msz (1 obs.)
VANUATU ISLANDS (186)

PVC 1.64 340 iP 13 47.00 0.5
iS 14 06.50
DZM 3.60 219 iPc 14 14.10 -0.5
iS 14 55.50
RMQ 19.89 245 eP 17 52.00 0.4
CTA 21.35 264 iPc 18 10.70 4.0X
0.8s 10.45nm 4.3mb
BWA 23.63 226 eP 18 28.70 -0.5
CAN 23.76 224 eP 18 31.90 1.5
WB5 32.52 263 eP 19 37.70 -12.6X
ASPA 32.82 256 eP 19 51.90 -1.0
Z 21s 0.20um 3.8Msz
LR 31 56.40
SPA 70.83 180 e(P) 24 35.10 -0.5
1.0s 6.00nm 4.7mb
BJI 76.78 321 eP 25 09.00 -1.3
CHTO 78.39 295 eP 25 19.10 -0.5
1.0s 4.00nm 4.4mb
PRS 85.95 49 eP 25 46.20 -12.4X
WDC 87.12 45 eP 26 03.80 -0.4
CMB 87.42 48 eP 26 05.20 -0.6
MIN 87.64 46 e(P) 26 06.70 -0.2
KHC 144.24 332 ePKP 32 51.50 -3.0X
SKO 144.36 317 iPKP 32 50.00 -4.9X
i 33 02.00
DMU 145.31 356 ePKP 32 53.70 -2.4X
ENN 145.82 341 ePKP 32 56.00 -1.1
0.6s 11.00nm
DLE 145.89 355 ePKP 32 55.60 -1.5
MEM 145.93 340 PKP 32 50.60 -6.6X
e 32 55.90
LJU 145.98 327 e(PKP) 32 55.00 -2.6X
WLF 146.70 339 PKP 32 59.00 0.5
DOU 146.81 341 PKPc 32 59.00 0.3
0.7s 11.10nm
CDF 147.37 337 ePKP 33 01.40 1.6
BNG 147.54 247 iPKPc 33 02.00 1.0
0.8s 10.00nm
BSF 148.03 337 ePKP 33 02.00 1.1
HAU 148.05 338 ePKP 33 02.00 1.2
1.0s 8.00nm
FLN 149.38 346 ePKP 33 05.20 2.4X
1.0s 16.00nm
LDF 149.45 346 ePKP 33 05.10 2.1X
0.8s 5.35nm
LOR 149.54 340 ePKP 33 05.90 2.7X
0.8s 10.75nm
LBF 149.75 339 ePKP 33 06.50 3.0X
0.8s 3.35nm
SSF 149.83 340 ePKP 33 06.60 3.0X
0.9s 16.40nm
LPG 149.98 334 ePKP 33 07.50 3.2X
1.0s 12.00nm
AVF 150.12 340 ePKP 33 07.70 3.7X
LPF 150.19 346 ePKP 33 07.30 3.2X
0.8s 16.10nm
BGF 150.49 340 ePKP 33 08.00 3.4X
0.8s 14.80nm
TCF 150.93 341 ePKP 33 09.30 4.0X
0.8s 7.40nm
LSF 151.17 342 ePKP 33 09.40 3.8X
1.0s 13.00nm
S.D. = 1.0 on 20 of 39 obs.

* JUL 03, 1989 06h 09m 11.72± 0.63s
31.754 N ± 4.1km 35.746 E ± 9.8km
DEPTH = 10.0km (geophysicist)
DEAD SEA REGION (373)

MASJ 0.03 223 P 09 13.10 -0.7
KFNJ 0.12 331 Pc 09 15.40 0.7
MKRJ 0.22 204 Pc 09 16.50 0.0
SALJ 0.26 348 Pc 09 17.10 -0.1
BURJ 0.46 2 Pc 09 21.10 0.0
QUTJ 0.51 154 Pd 09 22.20 0.2
JARJ 0.51 19 Pd 09 21.70 -0.4
S.D. = 0.6 on 7 of 7 obs.

% JUL 03, 1989 07h 11m 27.08± 0.84s
37.824 N ± 6.4km 29.280 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL 0.53 21 iPg 11 37.50 -0.4
iSg 11 47.50
YER 1.05 229 ePn 11 47.00 0.1
BCK 1.10 109 ePn 11 48.00 0.2

ELL	1.19	155	ePn	11 49.00	-0.3
ALT	1.39	28	ePn	11 53.00	0.4

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

JUL 03, 1989 08h 10m 14.05± 0.35s
57.571 N ± 5.5km 156.199 W ± 6.0km
DEPTH = 103.6 ± 7.1 km
4.3mb (4 obs.)
ALASKA PENINSULA (12)

KDC	2.00	83	iP	10 46.70	-0.5
IVF	2.49	229	iPd	10 54.39	0.7
			eS	11 22.86	
BKJ	3.06	219	ePd	11 00.94	-0.4
			eS	11 34.37	
SGB	3.11	231	ePd	11 02.72	0.6
			eS	11 37.18	
SDN	3.27	229	eP	11 04.40	0.2
SASA	3.27	229	ePd	11 04.38	0.1
			eS	11 40.52	
NGI	3.33	222	eP	11 04.74	-0.4
			eS	11 40.80	
CNBA	3.34	216	eP	11 04.59	-0.7
SQF	3.38	228	eP	11 05.82	0.0
			eS	11 42.98	
SVW	3.56	5	iP	11 10.00	1.7
PS4	3.85	237	eP	11 11.97	-0.3
			eS	11 54.66	
DLG	3.97	235	eP	11 14.15	0.3
DRRA	4.31	235	eP	11 18.43	-0.1
SNKA	4.82	233	eP	11 24.84	-0.7
PMS	5.01	40	eP	11 27.80	-0.4
TTA	5.38	1	iP	11 34.90	1.6
PMR	5.40	39	eP	11 32.00	-1.5
MID	5.50	66	eP	11 35.20	0.4
TOA	6.79	44	eP	11 52.10	-0.7
FBA	8.39	25	eP	12 12.30	-2.1
IMA	8.61	7	eP	12 18.70	1.1
INK	14.79	34	eP	13 39.00	0.3
MBC	22.91	22	eP	15 09.00	0.1
	0.4s		1.00nm		3.5mb
PNT	23.05	95	eP	15 12.00	1.4
	0.6s		5.00nm		4.0mb
LON	23.45	103	eP	15 16.30	1.7
BW06	32.60	97	eP	16 37.50	-0.1
RSSD	34.67	90	eP	16 55.20	-0.1
NAO	61.51	7	P	20 20.60	-0.9
HFS	62.37	6	eP	20 25.50	-1.7
	0.4s		2.20nm		4.5mb
EKA	65.36	17	P	20 47.00	0.3
	2.0s		27.60nm		4.8mb

S.D. = 1.0 on 30 of 30 obs.

? JUL 03, 1989 08h 34m 23.43± 5.48s
31.452 S ±22.3km 69.059 W ±15.5km
DEPTH = 101.8 ± 53.5 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTCB	0.22	99	ePd	34 38.70	0.2
			S	34 50.50	
RTBS	0.40	238	iPc	34 38.80	-0.1
			S	34 51.00	
RTLL	0.52	77	ePc	34 39.60	-0.2
			S	34 52.70	
RTCV	0.60	133	ePd	34 40.50	0.0
CFA	0.72	103	iPd	34 41.50	0.0
			S	34 56.00	
RTRS	1.32	345	ePc	34 48.00	0.0

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

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* JUL 03, 1989 08h 36m 58.31± 0.65s
18.075 S ±16.9km 178.621 W ±12.8km
DEPTH = 637.4 ± 6.8 km
4.6mb (12 obs.)
FIJI ISLANDS REGION (181)

VUN	2.78	271	ePc	38 19.50	-0.2
SVA	2.78	269	eP	38 19.80	0.1
SGE	3.33	278	iPc	38 23.00	0.2
PVC	12.44	270	iPc	39 43.00	1.7
DZM	14.58	252	iPc	40 02.70	0.8
BRS	27.91	245	iPd	42 02.50	0.4
COO	29.52	240	eP	42 16.00	0.2
CAN	33.44	233	eP	42 49.10	0.4
BWA	33.56	234	eP	42 48.20	-1.5
STK	38.38	241	iPd	43 30.00	0.9
WB5	44.38	260	iPd	44 15.70	-0.9
WRA	44.40	260	Pd	44 14.80	-1.9
	0.4s		9.60nm		4.6mb
ASPA	44.55	254	iPd	44 17.50	-0.4
	0.5s		109.00nm		5.6mb
			eS	50 08.10	
FORR	49.72	245	eP	44 55.00	-1.5
	0.5s		56.00nm		5.2mb
WARB	51.04	251	iPd	45 05.30	-0.9
	0.3s		6.00nm		4.4mb
SPA	72.04	180	e(P)	47 21.20	0.1
	0.8s		11.67nm		4.5mb
PRS	76.49	44	e(P)	47 46.10	0.1
SAO	76.69	44	e(P)	47 46.00	-1.1
FRI	77.96	45	eP	47 53.70	-0.1
CMB	78.10	43	ePc	47 54.50	-0.1
WDC	78.20	40	ePc	47 55.00	0.0
MIN	78.64	41	e(P)	47 57.00	-0.5
TNP	80.22	45	P	48 06.10	0.2
	1.5s		21.21nm		4.4mb
PMR	82.81	14	P	48 16.80	-1.3
	1.0s		9.00nm		4.3mb
PNT	84.99	34	eP	48 29.00	0.0
FBA	86.01	13	P	48 32.70	-0.9
	1.1s		18.75nm		4.7mb
ALQ	86.36	52	eP	48 36.10	-0.1
	1.1s		6.65nm		4.3mb
LRM	87.23	40	eP	48 39.60	-0.5
BW06	87.62	43	P	48 41.80	-0.2
	1.0s		10.50nm		4.5mb
GOL	89.12	48	P	48 49.90	0.9
	1.3s		20.83nm		4.8mb
GLD	89.25	48	P	48 50.00	0.5
	1.5s		46.88nm		5.1mb
SES	90.27	36	eP	48 53.00	-0.7
RSSD	91.82	44	P	49 01.00	-0.3
DMU	143.67	8	ePKP	55 22.00	-1.4
DLE	144.32	8	ePKP	55 24.50	0.0
KRA	144.79	339	ePKP	55 25.30	-0.1
WIT	145.09	354	ePKP	55 28.00	2.2X
KSP	145.21	343	iPKP	55 27.70	1.6
SPC	145.42	338	ePKP	55 28.50	1.7
CLL	145.58	347	ePKP	55 28.00	1.3
	1.3s		55.00nm		
BRG	145.78	346	iPKP	55 28.40	1.4
	1.1s		19.00nm		
WTS	145.88	354	ePKP	55 29.50	2.4X
	0.9s		21.00nm		
PRU	146.45	345	PKPc	55 31.00	2.9X
MOX	146.49	348	ePKP	55 29.00	0.8
SRO	147.26	339	ePKP	55 33.50	4.0X
ZST	147.33	340	ePKP	55 33.10	3.5X
KHC	147.49	345	PKP	55 30.80	0.9
			i	55 33.70	
FLN	149.35	2	ePKP	55 37.90	5.2X
	0.9s		26.20nm		
CDF	149.36	352	ePKP	55 38.50	5.6X
	1.1s		9.75nm		
LDF	149.54	2	ePKP	55 38.30	5.3X
	0.9s		19.65nm		
GRR	149.71	3	ePKP	55 39.10	5.9X
	0.8s		17.45nm		
HAU	149.87	353	ePKP	55 39.40	5.8X
	1.0s		8.00nm		
BSF	149.99	353	ePKP	55 39.70	5.8X
	1.1s		12.20nm		
LJU	150.05	341	e(PKP)	55 34.50	0.6
			e	55 40.00	
LPF	150.06	3	ePKP	55 39.50	5.7X
	1.0s		38.00nm		
VOY	150.25	342	e(PKP)	55 38.70	4.4X
VBY	150.31	340	ePKP	55 40.30	6.1X
SKO	150.67	329	iPKP	55 40.00	5.1X
LOR	150.81	357	ePKP	55 41.70	6.7X
	1.0s		24.00nm		
SSF	151.04	357	ePKP	55 42.20	6.9X
	1.0s		21.00nm		
LBF	151.09	356	ePKP	55 42.40	7.0X
	1.0s		10.00nm		
MFF	151.52	2	ePKP	55 42.90	6.9X
	0.9s		9.85nm		
BGF	151.57	358	ePKP	55 43.20	7.1X
	0.8s		9.40nm		
TCF	151.86	359	ePKP	55 43.80	7.3X
	1.0s		14.00nm		
LSF	151.90	360	ePKP	55 43.60	7.0X
	0.9s		11.45nm		

S.D. = 0.9 on 43 of 65 obs.

JUL 03, 1989 11h 04m 41.08± 0.65s
37.651 N ± 7.0km 22.857 E ± 8.1km
DEPTH = 91.3 ± 12.9 km
3.7mb (1 obs.)
SOUTHERN GREECE (368)

ATH	0.75	65	eP	04 57.00	-1.4
ITM	0.88	238	iPc	05 00.00	0.2
NEO	1.68	10	eP	05 09.60	0.0
VLS	1.87	287	eP	05 11.00	-1.1
VAM	2.49	154	eP	05 20.00	-0.4
PLG	2.76	9	eP	05 23.70	-0.5
KZN	2.78	343	eP	05 25.80	1.2
KEK	3.16	312	eP	05 31.00	1.4
NPS	3.26	136	eP	05 31.40	0.4
VAY	3.67	357	ePn	05 37.00	0.3
KAP	4.06	120	eP	05 43.20	1.1
SKO	4.45	346	ePn	05 19.00	-28.5X
			i	05 49.00	
EKA	24.94	324	Pc	09 55.70	-1.2
	1.1s		3.90nm		3.7mb

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

JUL 03, 1989 11h 14m 06.22± 0.26s
31.498 S ± 3.9km 71.489 W ± 6.3km
DEPTH = 62.9km (2 depth phases)
4.9mb (10 obs.)
NEAR COAST OF CENTRAL CHILE (135)
Felt (II) at Santiago.

JACH	1.40	147	iPc	14 30.90	0.7
ROCH	1.52	165	iPd	14 31.60	-0.4
PEL	1.78	158	iPc	14 35.40	0.1
			i(S)	14 47.50	
LCCH	1.97	182	iPd	14 36.70	-1.2
			iS	14 58.30	
SAN	2.07	160	iPd	14 39.10	-0.3
			iS	15 02.20	
FCH	2.09	151	iPd	14 42.60	2.7
TACH	2.20	168	iPd	14 42.60	1.5
PCH	2.27	159	iPd	14 42.40	0.2
ZON	2.40	92	iP+	14 48.50	4.5X
			eS	15 22.00	
LNV	2.45	178	iPd	14 42.50	-2.1
CHCH	2.53	164	eP	14 40.20	-5.6X
MRA	5.00	102	ePc	15 20.90	0.5
CYA	5.80	60	ePd	15 31.80	0.0
ANT	7.82	7	eP	15 55.30	-4.4X
SLA	8.57	40	ePc	16 09.00	-1.3
CCH	14.87	20	P	17 34.60	0.0
CNCB	14.97	13	P	17 38.50	2.4
ARE	14.97	360	iPd	17 38.00	2.1
LPB	15.21	12	eP	17 41.00	1.8
	1.0s		100.00nm		5.0mb
ZOBO	15.47	12	eP	17 40.00	-2.6
	1.0s		97.50nm		4.9mb
Z	24s		0.13um		5.5MszX
			i	17 44.00	
			LR	22 54.00	
PPD	20.31	67	ePc	18 38.50	-1.0
			epP	18 51.00	55km
ITR	38.16	61	eP	21 20.00	-1.3
SPA	58.67	180	e(P)	24 14.20	14.9X
	1.0s		7.00nm		
			i	25 05.30	
TUL	70.83	339	eP	25 17.00	-1.0
	1.2s		70.40nm		5.5mb
RLO	70.83	340	e(P)	25 16.70	-1.4
FVM	71.35	344	P	25 20.00	-1.1
	1.1s		14.63nm		4.8mb
LIC	73.55	72	P	25 34.20	-0.4
ALQ	73.82	331	eP	25 36.00	0.0
	0.9s		4.20nm		4.4mb
			e	25 39.50	
			e	25 43.00	
KIC	73.86	72	P	25 36.00	-0.4
BAR	76.80	322	eP	25 53.00	0.2
PLM	77.42	322	eP	25 56.00	-0.4
GLD	77.49	334	P	25 57.00	0.4
	1.1s		23.14nm		5.1mb
GOL	77.51	334	iP	25 56.70	-0.1
TPC	77.59	323	eP	25 58.00	0.9
MWC	78.72	322	eP	26 04.00	0.5
GSC	78.92	324	eP	26 05.00	0
SBB	78.96	323	eP	26 05.00	0
MSU	79.29	329	eP	26 06.80	0

03d 11h

CLC	79.72	323	eP	26	09.00	0.3
ISA	80.05	323	eP	26	11.00	0.5
RSSD	80.91	337	eP	26	15.00	-0.1
TNP	81.30	325	iP	26	17.50	0.3
	0.9s		8.79nm			4.7mb
			ePP	28	32.70	
FRI	81.71	323	e(P)	26	18.00	-1.0
BW06	81.76	333	P	26	18.50	-1.0
	1.0s		2.50nm			4.1mb
LLA	82.07	322	eP	26	21.30	0.3
KVN	82.49	325	iP	26	23.50	0.1
			epP	26	42.80	70km
			esP	26	48.00	
			ePP	28	33.40	
CMB	82.85	323	eP	26	25.10	0.0
GCC	82.93	322	e(P)	26	26.00	0.6
MHC	82.98	322	eP	26	28.30	2.5
IMW	83.25	332	eP	26	27.30	0.0
HPI	83.96	331	eP	26	31.10	0.2
RSON	84.31	346	P	26	31.00	-1.1
	1.0s		21.15nm			5.1mb
ORV	84.57	323	e(P)	26	34.20	0.6
LRM	85.44	333	eP	26	38.30	0.1
WDC	85.86	324	eP	26	38.90	-1.2
SES	88.73	336	eP	26	53.00	-0.8
VGB	88.74	328	eP	26	54.30	0.4
PNT	91.15	331	eP	27	04.00	-1.0
	0.6s		7.00nm			5.2mb

S.D. = 1.1 on 54 of 58 obs.

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* JUL 03, 1989 13h 11m 02.47± 0.92s
37.728 N ± 7.8km 22.335 E ±11.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
MD 3.1 (ATH).

ITM	0.64	211	iPgc	11	15.00	-0.3
ATH	1.12	77	ePb	11	23.00	-0.5
VLS	1.45	289	ePg	11	34.00	5.3X
NEO	1.72	24	ePb	11	33.20	0.5
KZN	2.61	350	ePb	11	52.00	6.5X
VAM	2.76	146	ePn	11	48.00	0.4
PLG	2.78	18	ePn	11	47.60	-0.3

S.D. = 0.6 on 5 of 7 obs.

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* JUL 03, 1989 13h 15m 09.60± 0.71s
53.926 N ±13.9km 156.889 E ±16.5km
DEPTH = 180.0km (geophysicist)
4.5mb (6 obs.)
KAMCHATKA (217)

KUSJ	13.49	221	eP	18	13.30	-1.4
			eS	20	31.00	
ASAJ	13.53	229	eP	18	20.70	5.4X
HOOJ	14.66	224	eP	18	28.70	-0.6
			eS	20	57.40	
MRRJ	15.57	229	eP	18	42.90	2.3
			eS	21	29.90	
NIIJ	20.76	224	P	19	37.80	0.5
MAT	21.68	224	iPc	19	47.30	0.8
	0.7s		17.12nm			4.6mb
IIDJ	22.72	223	P	19	59.10	2.6X
TSRJ	23.48	227	P	20	04.40	0.6
INK	34.39	38	iPd	21	41.20	0.5
MBC	37.03	23	ePd	22	04.60	1.8
	0.6s		5.00nm			4.4mb
YKA	43.84	42	P	22	59.70	0.9
CHG	56.23	255	eP	24	32.50	-0.6
CHTO	56.23	255	eP	24	32.50	-0.6
			pP	25	14.00	181kmX
KKN	57.36	273	P	24	41.00	-0.2
PKI	57.45	273	P	24	41.70	-0.3
GKN	57.59	274	P	24	42.40	-0.3
	0.4s		5.00nm			4.7mb
DMN	57.60	273	P	24	42.80	-0.1
NAO	62.45	342	P	25	14.20	-0.9
HFS	62.54	340	eP	25	15.70	0.0
	0.4s		2.10nm			4.4mb
EKA	69.87	348	Pd	26	02.40	0.4
	0.6s		1.90nm			4.0mb
TUL	70.86	55	eP	26	03.00	-5.3X
	0.8s		16.00nm			4.8mb
RLO	71.03	54	eP	26	06.50	-2.8

S.D. = 1.2 on 19 of 22 obs.

? JUL 03, 1989 14h 18m 17.99± 3.30s
4.709 S ±12.0km 153.879 E ±34.1km
DEPTH = 140.1 ± 18.1 km
4.0mb (1 obs.)
NEW IRELAND REGION (190)

RAB	1.78	287	iPd	18	50.00	-0.3
	0.5s		845.07nm			
			iS	19	27.50	
LAT	7.11	254	eP	20	01.00	0.2
PMG	8.14	235	eP	20	16.00	1.4
CTA	16.99	205	eP	22	07.00	-1.8
RMQ	22.20	192	eP	23	05.00	1.3
			i	23	14.20	
BRS	22.58	183	iPd	23	13.90	6.6X
WB5	24.26	230	eP	23	22.70	-0.9
			i	23	35.30	
WRA	24.32	230	Pc	23	35.60	11.5X
	0.6s		5.40nm			
ASPA	26.95	224	eP	24	00.00	11.6X
CHTO	58.92	295	eP	28	03.90	-1.1
	1.0s		1.75nm			4.0mb
PKI	73.31	300	P	29	37.00	0.3
KKN	73.48	301	P	29	37.80	0.3
DMN	73.58	300	P	29	38.80	0.6
GKN	74.08	301	P	29	41.00	0.0

S.D. = 1.2 on 11 of 14 obs.

JUL 03, 1989 14h 43m 52.23± 5.22s
55.797 N ±27.3km 161.381 W ±12.1km
DEPTH = 167.2 ± 42.6 km
ALASKA PENINSULA (12)

PS4	0.52	212	eP	44	16.00	0.1
			eS	44	33.58	
SGB	0.58	115	ePc	44	16.00	-0.2
			eS	44	33.97	
SASA	0.68	132	iPc	44	16.65	0.0
			eS	44	34.82	
DLG	0.71	202	eP	44	16.96	0.1
SQF	0.74	141	eP	44	17.06	0.0
DRRA	1.02	211	iPc	44	19.04	0.0
			eS	44	39.05	
IVF	1.05	84	eP	44	19.31	0.0
NGI	1.07	135	eP	44	19.51	0.1
			eS	44	39.21	
BKJ	1.22	121	iPc	44	20.98	0.2
			eS	44	41.44	
CNBA	1.42	133	eP	44	22.45	-0.1
SNKA	1.55	212	eP	44	23.87	0.0
			eS	44	46.66	

S.D. = 0.1 on 11 of 11 obs.

JUL 03, 1989 14h 54m 04.89± 0.85s
40.476 N ± 7.9km 12.807 E ± 4.5km
DEPTH = 10.0km (geophysicist)
TYRRHENIAN SEA (389)

RDP	1.28	357	Pd	54	28.90	0.2
			eSg	54	45.40	
RMP	1.34	357	Pd	54	29.60	0.1
			eSn	54	46.00	
SDI	1.45	31	Pd	54	30.60	-0.5
			eSn	54	48.80	
AZI	1.58	17	Pd	54	32.40	-0.6
			eSn	54	52.50	
DUI	1.72	46	Pd	54	35.20	0.1
SGO	1.91	87	P	54	38.50	0.8
MNS	1.91	357	P	54	37.40	-0.4
AQU	1.93	13	Pd	54	38.40	0.3
MGR	2.13	98	P	54	42.00	1.1
MAO	2.30	328	P	54	44.20	0.7
ASS	2.60	358	P	54	48.20	0.5
CVF	3.62	307	Pn	55	03.20	1.0
			Sn	55	44.60	
HVAR	3.83	44	iP	55	04.20	-1.0
SBF	5.23	312	Pn	55	24.60	-0.5
			Sg	56	22.60	
TRI	5.28	7	eP	55	48.30	22.7X
			e	56	39.90	
VBY	5.34	19	ePn	55	27.70	1.2
			eSn	56	09.40	
LMR	5.50	303	Pn	55	28.60	-0.2
			Sn	56	28.00	
FRF	5.53	306	Pn	55	28.20	-1.0
			Sn	56	28.40	
VOY	5.61	8	ePn	55	30.70	0.3
			eSn	56	33.70	
LJU	5.71	12	ePn	55	33.00	1.3
			e(Sn)	56	29.00	
ZAG	5.82	22	eP	55	39.00	5.7X
PTJ	5.89	22	eP	55	34.00	-0.3
SKO	6.68	74	ePn	55	44.00	-1.5
LPL	6.72	321	Pn	55	46.60	0.3
			Sn	57	02.00	
KHC	8.67	3	P	56	13.20	-0.1
			e	57	44.70	
NAO	20.41	357	P	58	42.90	-1.6

S.D. = 0.8 on 24 of 26 obs.

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* JUL 03, 1989 15h 12m 39.53± 0.96s
45.603 N ±17.0km 150.996 E ±12.3km
DEPTH = 49.4km (3 depth phases)
4.9mb (28 obs.)
KURIL ISLANDS (221)

KUSJ	5.16	243	iP+	13	51.60	-4.5X
			eS	14	49.40	
ASAJ	6.12	259	eP	14	10.80	1.1
HOOJ	6.42	243	P	14	10.90	-3.0X
			S	15	21.70	
MRRJ	7.83	250	eP	14	31.50	-1.9X
			eS	15	59.80	
OFUJ	9.49	230	P	14	48.80	-7.6X
			S	16	29.30	
YAMJ	11.03	232	eP	15	11.30	-6.1X
MAT	13.21	231	eP	15	40.00	-6.5X
MDJ	15.14	274	eP	16	12.70	1.0
CN2	18.23	273	eP	16	50.20	-0.2
SNY	20.13	269	Pc	17	11.00	-0.9
BJI	26.00	270	eP	18	10.00	0.7
Z	24s		0.32um			3.8MszX
			eS	22	52.00	
TIA	27.09	262	eP	18	19.40	0.0
HHC	28.92	275	P	18	31.60	-4.3X
TIY	29.64	268	Pc	18	42.40	0.0
Z	23s		0.90um			4.3MszX
E	17s		0.60um			
BTO	30.09	275	eP	18	45.60	-0.9
XAN	33.95	265	P	19	19.50	-0.6
LZH	36.45	272	eP	19	42.00	0.4
	1.5s		44.00nm			5.2mb
GTA	37.70	279	iPc	19	52.40	0.5
CD2	39.31	265	eP	20	05.10	-0.3
GYA	40.03	257	P	20	10.60	-0.8
			pP	20	18.60	27kmX
INK	43.40	32	eP	20	38.00	-0.4
			pP	20	51.00	48km
WMQ	43.97	291	P	20	44.50	1.1
N	18s		0.28um			
			S	27	21.00	
CHG	50.42	256	eP	21	35.80	1.7
CHTO	50.42	256	eP	21	32.90	-1.2
	1.0s		3.00nm			4.3mb
			pP	21	46.50	50km
ALE	51.03	5	eP	21	36.00	-2.0
	0.6s		6.00nm			4.8mb
YKA	52.72	36	P	21	52.70	1.8
GUN	53.63	274	P	21	58.60	0.1
	0.4s		17.00nm			5.4mb
KKN	54.12	275	P	22	02.40	0.4
	0.8s		37.00nm			5.5mb
PKI	54.17	274	P	22	02.40	0.0
DMN	54.35	275	P	22	04.00	0.3
GKN	54.44	275	P	22	04.40	0.1
	0.8s		32.00nm			5.4mb
NDI	59.18	281	iPd	22	37.00	-0.7
	0.5s		26.06nm			5.6mb
LRM	63.06	51	eP	23	14.80	10.8X
SUF	63.44	335	iP	23	04.80	-1.1
	0.6s		4.70nm			4.8mb
HYB	65.54	270	eP	23	19.20	-1.0
NUR	65.61	334	iP	23	18.80	-1.2
			i	26	01.90	
WB5	66.90	197	eP	23	24.20	-4.4X
			e	23	38.20	49km
UPP	68.19	337	iP	23	35.20	-1.1
GBA	68.92	268	Pc	23	38.80	-2.7
	0.7s		5.00nm			4.6mb
HFS	69.00	339	eP	23	39.90	-1.4
	0.6s		16.70nm			5.1mb
NAO	69.11	340	P	23	40.60	-1.4
KRA	75.69	330	eP	24	20.90	-0.1
	0.6s		33.00nm			5.4mb
			e	24	28.40	24kmX
KSP	76.25	332	eP	24	24.00	-0.2

```
SPC     76.30 329 eP     24 24.80    0.1
VRI     76.51 324 ePc    24 27.00    1.3
CLL     76.88 334 iP     24 27.20   -0.5
        1.4s     22.00nm          5.0mb
BRG     76.97 334 e(P)   24 28.10   -0.1
        1.3s     11.00nm          4.7mb
EKA     77.09 345 P      24 29.00    0.2
        0.5s      2.30nm          4.5mb
MLR     77.14 324 ePd    24 30.00    0.6
PRU     77.56 333 eP     24 31.50    0.1
MOX     77.88 335 eP     24 33.00   -0.2
WTS     78.01 338 eP     24 34.50    0.7
        0.9s     10.00nm          4.8mb
SRO     78.16 330 iP     24 35.20    0.5
ZST     78.25 330 iP     24 36.30    1.0
KHC     78.61 333 iPc    24 37.40    0.1
        1.2s     12.50nm          4.8mb
BZS     78.78 326 eP     24 48.00    9.8X
GRF     78.85 335 eP     24 39.10    0.6
        1.2s     21.00nm          5.0mb
ENN     79.36 338 eP     24 41.00   -0.2
        1.0s     14.00nm          4.8mb
HAU     81.77 337 eP     24 54.20    0.1
        0.8s      5.30nm          4.6mb
SKO     81.89 324 eP     24 55.00    0.2
LOR     83.12 338 eP     25 01.20    0.1
        0.8s     10.70nm          4.9mb
GRR     83.21 342 eP     25 01.90    0.4
        0.8s     16.10nm          5.1mb
LBF     83.35 338 eP     25 02.50    0.2
        0.8s      5.30nm          4.6mb
SSF     83.40 338 eP     25 02.60    0.1
        0.7s      3.30nm          4.5mb
AVF     83.69 338 eP     25 04.40    0.4
        0.8s      5.30nm          4.6mb
SMF     83.70 338 eP     25 04.60    0.5
        1.2s     23.80nm          5.1mb
LPG     83.94 336 eP     25 06.40    0.7
        0.8s      8.00nm          4.8mb
TCF     84.45 339 eP     25 08.50    0.6
        0.8s      4.00nm          4.5mb
LSF     84.66 339 eP     25 09.50    0.6
CAF     85.76 338 eP     25 14.90    0.5
        0.9s      6.50nm          4.8mb
     S.D. = 0.9  on  60 of  70 obs.
-------------------------------------
%  JUL  03, 1989  15h 37m 55.20± 1.46s
   61.644 N ± 9.2km    5.198 E ±12.7km
   DEPTH =   0.0km  (geophysicist)
 SOUTHERN NORWAY                  (535)
     MD 2.2 (BER).

SUE     0.63 200 iP      38 08.55    0.9
                 eS      38 17.12
HYA     0.68 135 iP      38 08.89    0.2
                 eS      38 17.39
ASK     1.17 180 eP      38 17.75   -0.1
                 eS      38 33.92
BER     1.27 177 iP      38 19.68    0.1
                 eS      38 36.93
MOL     1.44  49 iP      38 22.70    0.1
                 eS      38 42.35
ODD1    1.87 157 eP      38 28.86    0.0
                 eS      38 51.10
BLS1    2.40 160 eP      38 36.82    0.3
                 eS      39 01.99
KMY     2.44 179 iP      38 35.50   -1.5
                 eS      39 04.60
     S.D. = 0.8  on   8 of   8 obs.
-------------------------------------
   JUL  03, 1989  16h 06m 41.29± 0.87s
   23.887 N ±10.7km  122.861 E ±12.5km
   DEPTH =  33.0km  (normal)
   4.2mb (  2 obs.)
 TAIWAN REGION                    (243)

TWC     1.17 308 ePc     07 00.50   -0.9
                 eS      07 15.20
TWD     1.17 280 iPc     07 00.10   -1.3
TWZ     1.68 316 eP      07 09.10    0.4
ANP     1.78 317 ePc     07 12.00    1.7
        0.7s  1358.90nm
                 eS      07 34.00
QZH     4.03 286 eP      07 40.00   -2.3
SSE     7.33 349 eP      08 27.50   -1.2
     Z  12s      0.80um
     N  10s      0.80um
                      sP     08 44.50
                      eLg    10 25.70
NJ2     8.87 337 eP      08 46.50   -3.6X
     Z  16s      0.40um
WHN    10.06 313 eP      09 13.50    6.9X
     N  12s      1.00um
     E  12s      0.98um
                      sS     11 16.50
GYA    14.89 283 P       10 18.20    6.9X
                      S      12 52.00
XAN    15.83 313 eP      10 25.00    1.6
TIY    16.42 329 eP      10 35.00    4.2X
     Z  13s      1.31um          3.8MszX
     N  12s      0.60um
     E  14s      1.20um
                      sS     13 45.00
BJI    17.06 342 eP      10 42.00    3.1X
CD2    18.34 297 eP      10 53.00   -1.8
KMI    18.35 278 eP      11 00.00    4.8X
HHC    19.39 333 eP      11 09.30    1.8
BTO    19.85 330 eP      11 10.20   -2.3
CN2    19.98   5 eP      11 19.00    5.4X
LZH    20.43 311 e(P)    11 20.00    1.4
LOE    20.79 256 eP      11 25.00    2.8
CHG    22.83 262 eP      11 46.60    3.9X
CHTO   22.83 262 eP      11 43.90    1.3
       1.0s     8.00nm          4.2mb
GTA    24.89 314 eP      12 02.20   -0.4
WB5    44.92 165 eP      14 54.20   -0.7
WRA    44.98 165 Pd      14 54.40   -1.0
       1.2s     4.80nm          4.3mb
WARB   49.91 176 iPd     15 34.00    0.1
INK    72.92  22 eP      18 08.00   -0.7
YKA    82.64  23 P       19 03.90    1.5
     S.D. = 1.6  on  19 of  27 obs.
-------------------------------------
?  JUL  03, 1989  16h 09m 19.27± 2.84s
   36.682 N ±17.4km  141.383 E ±26.6km
   DEPTH =  33.0km  (normal)
 NEAR EAST COAST OF HONSHU, JAPAN(228)
     MG 3.6 (JMA). Felt (I JMA) at
     Mito.

MIT     0.79 248 P       09 35.50    1.5
                 S       09 42.90
KAKJ    1.09 244 P       09 36.40   -1.8
                 S       09 48.40
YAMJ    1.83 325 P       09 48.70   -0.3
                 S       10 10.80
NIIJ    1.99 287 P       09 50.70   -0.5
                 S       10 14.50
CHJJ    2.03 253 P       09 50.00   -1.8
                 S       10 12.00
OFUJ    2.40   5 P       09 56.60   -0.5
                 S       10 26.40
MAT     2.56 268 iPc     09 58.60   -0.7
                 iS      10 27.70
IIDJ    3.06 248 P       10 06.70    0.2
                 S       10 41.50
     S.D. = 1.3  on   8 of   8 obs.
-------------------------------------
*  JUL  03, 1989  17h 02m 32.78± 0.59s
   53.187 S ±12.1km  160.168 E ±14.4km
   DEPTH =  33.0km  (normal)
   4.9mb (  5 obs.)  6.4Msz (  1 obs.)
 MACQUARIE ISLANDS REGION         (167)

CBZ     5.48  87 P       03 53.50   -0.7
TAU    13.38 315 eP      05 37.00   -5.6X
TOO    18.65 321 eP      06 50.00    0.1
CNB    19.43 333 iPc     07 00.60    1.4
CAN    19.53 332 eP      07 01.50    1.2
                 eS      10 37.80
                 eTT     24 02.00
BWA    20.53 331 eP      07 10.10   -0.7
                 eTT     24 30.00
COO    23.39 342 eP      07 41.00    1.7
STK    25.17 320 eP      07 57.00    0.6
BRS    26.35 345 eP      08 22.00   14.6X
RMQ    28.00 338 eP      08 23.00    0.6
CTA    34.74 337 iPc     09 21.90    0.1
       1.1s     46.84nm          5.3mb
ASPA   35.55 316 eP      09 27.00   -1.7
       1.1s     23.00nm          5.0mb
     Z  22s      0.82um          4.4MszX
                 LR      22 40.00
OIS    36.22 326 eP      09 33.50   -0.8
SPA    37.00 180 e(P)    09 41.00    0.3
       1.4s     26.47nm          4.9mb
WRA    38.70 319 Pd      09 53.60   -1.6
       1.0s      7.40nm          4.4mb
WB5    38.75 319 eP      09 53.20   -2.4
AIA    57.08 159 eP      12 18.50    1.0
CHG    88.95 304 eP      15 29.00    3.9X
CHTO   88.95 304 eP      15 27.30    2.2
       1.0s      3.50nm          4.6mb
KSH   117.28 300 PKPc    21 07.00   -8.8X
       6.0s      1.40nm
     Z  22s     11.10um          6.4Msz
     N  18s      8.60um
ITU    145.32 270 iPKPc  22 08.00    0.1
TTG    151.96 263 ePKP   22 31.30   13.0X
DUI    154.35 257 PKP    22 40.10   18.3X
SDI    154.75 257 PKP    22 37.00   14.8X
AZI    155.15 257 PKP    22 37.40   14.8X
ZAG    155.80 267 ePKP   22 18.00   -5.5X
MNS    155.84 257 PKP    22 34.00   10.3X
PTJ    155.86 267 ePKP   22 15.30   -8.4X
VBY    156.08 266 ePKP   22 17.60   -6.3X
                 e       22 20.30
ASS    156.26 258 PKP    22 33.00    8.7X
ARV    156.35 259 PKP    22 31.00    6.7X
CEY    156.70 265 ePKP   22 19.30   -5.4X
CRE    157.01 258 PKP    22 30.00    4.7X
SFI    157.24 259 PKP    22 30.10    4.7X
PGD    157.29 259 PKPc   22 28.80    3.1X
PII    157.90 257 PKP    22 30.00    3.8X
BDI    158.06 258 PKP    22 31.50    5.0X
MME    158.07 258 PKP    22 27.60    0.9
FVI    158.12 266 PKP    22 16.50   -9.8X
CTI    158.52 263 PKP    22 19.00   -8.0X
BOB    159.14 258 PKPc   22 23.90   -3.8X
MDI    159.53 261 PKP    22 20.00   -7.9X
PCP    159.54 256 PKP    22 24.91   -3.2X
FIN    159.54 255 PKP    22 26.04   -2.0X
IMI    159.55 254 PKP    22 26.55   -1.6
CKI    159.63 256 PKP    22 26.50   -1.6
REVF   159.75 253 PKP    22 29.40    1.1
ROB    159.79 255 PKP    22 25.73   -2.6X
AURF   159.86 253 PKP    22 26.37   -2.1X
AUTN   159.87 254 PKP    22 25.59   -3.1X
MVIF   159.97 253 PKP    22 25.91   -2.8X
TOUF   159.98 254 PKP    22 26.22   -2.6X
ENR    160.01 254 PKP    22 26.14   -2.5X
STV    160.08 254 PKP    22 26.24   -2.5X
VAI    160.14 260 PKP    22 20.50   -8.0X
DOI    160.27 255 PKP    22 25.00   -3.9X
PZZ    160.36 255 PKP    22 25.52   -3.6X
ORX    160.48 258 PKP    22 21.01   -8.1X
RSP    160.64 256 PKP    22 22.34   -7.0X
RRL    160.78 255 PKP    22 24.91   -4.7X
LSD    160.87 257 PKP    22 21.83   -7.9X
BNI    160.92 255 PKP    22 23.50   -6.1X
CDF    162.26 265 PKP    22 34.21    3.4X
LBL    163.00 251 PKP    22 19.32  -12.1X
PLDF   163.21 254 PKP    22 18.32  -13.5X
PYM    163.44 252 PKP    22 19.28  -12.7X
AGO    163.54 254 PKP    22 17.68  -14.4X
     S.D. = 1.4  on  21 of  67 obs.
-------------------------------------
   JUL  03, 1989  17h 09m 55.84± 0.12s
   51.617 N ± 3.3km  175.208 W ± 2.1km
   DEPTH =  33.0km  (normal)
   5.7mb ( 73 obs.)  5.7Msz ( 32 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (  7)
     Ms 5.7 (BRK). Felt (V) on Adok.
     Also felt strongly on Atko.
     CENTROID, MOMENT TENSOR     (HRV)
     Data Used: GDSN
     L.P.B.: 14S, 34C
     Centroid Locotion:
     Origin Time        17:09:57.2 0.2
     Lat 51.68N 0.02 Lon 174.82W 0.04
     Dep  31.2 1.7 Half-durotion  3.7
     Moment Tensor;   Scale 10**17 Nm
       Mrr= 9.82 0.20  Mtt=-8.48 0.24
       Mff=-1.34 0.27  Mrt= 8.42 0.74
       Mrf= 4.76 0.54  Mtf=-4.28 0.31
      Principal Axes:
       T  Val= 13.71  Plg=68  Azm=327
       N       0.63       2       63
       P      -14.34      22      154
     Best Double Couple:Mo=1.4*10*
      NP1:Strike=249 Dip=23 Slip=
```

03d 17h

NP2: 62 67 87
ADK 0.96 287 iPd 10 15.00 2.1
SMY 6.67 284 eP 11 34.20 0.2
KDC 14.46 56 eP 13 18.00 -1.8
TTA 15.29 35 eP 13 31.50 0.8
PMR 17.36 45 iP 13 57.50 0.7
eScP 22 10.00
IMA 18.12 29 eP 14 07.80 1.5
FBA 19.40 36 eP 14 19.30 -2.3
BRW 21.44 16 eP 14 43.00 0.3
DWY 22.39 42 P 14 53.00 0.8
SIT 23.62 61 eP 15 05.50 1.2
INK 25.99 34 iPc 15 25.80 -1.0
0.9s 80.00nm 5.3mb
KUSJ 28.15 268 eP 15 45.00 -1.7
ASAJ 28.92 272 eP 15 54.00 0.4
HOOJ 29.42 268 eP 15 58.40 0.2
MRRJ 30.78 270 eP 16 08.70 -1.5
MBC 32.55 22 ePc 16 25.80 0.4
0.6s 39.00nm 5.5mb
PGC 32.74 74 eP 16 29.00 1.7
HON 33.08 150 eP 16 32.00 1.6
Z 20s 26.06um 5.9Msz
MCW 33.10 74 eP 16 31.00 0.5
YKA 33.43 47 P 16 35.30 2.1
YKC 33.49 47 eP 16 32.70 -1.0
GMW 33.63 76 eP 16 36.00 0.9
BMW 33.85 78 eP 16 36.70 -0.4
RMW 34.26 75 eP 16 40.00 -0.6
LON 34.58 77 eP 16 44.00 0.6
PNT 34.74 71 iPc 16 45.70 1.0
1.0s 288.00nm 6.2mb
KAKJ 35.04 262 P 16 47.30 0.0
NIIJ 35.11 264 P 16 48.20 0.3
CHJJ 35.87 263 P 16 54.60 0.2
MAT 36.04 264 iPc+ 16 56.30 0.5
1.5s 272.22nm 6.0mb
Z 20s 10.99um 5.6Msz
eS 22 32.00
FHC 36.36 87 e(P) 17 02.00 3.5X
EDM 36.72 62 iPc 17 02.30 0.9
0.7s 400.00nm 6.4mb
pP 17 22.50 84kmX
MDJ 36.74 281 eP 17 00.00 -1.5
Z 20s 19.60um 5.9Msz
PP 18 28.00
IIDJ 36.91 263 P 17 04.00 0.8
WDC 37.38 86 ePc 17 08.40 1.4
i 17 25.20
eScP 23 09.00
TSRJ 38.07 264 P 17 12.90 0.1
BRK 39.17 89 eP 17 26.00 4.0X
Z 20s 11.00um 5.7Msz
eScP 23 21.00
eLR 28 10.00
WKYJ 39.17 263 eP 17 23.30 1.1
BKS 39.18 89 eP 17 24.00 1.8
1.0s 43.00nm 5.2mb
Z 20s 11.00um 5.7Msz
N 20s 6.00um
E 20s 10.00um
e 17 36.60
e 18 05.00
eS 23 23.00
eLO 26 24.00
eLR 28 06.00
SES 39.23 66 ePc 17 22.80 0.3
1.0s 211.00nm 5.9mb
pP 17 40.00 70kmX
CN2 39.70 283 iPc 17 25.50 -0.8
5.0s 1.50nm 3.0mb X
Z 20s 27.20um 6.1Msz
N 17s 9.00um
E 17s 3.70um
pP 17 41.50 64kmX
iPP 19 00.00
eS 23 26.00
eSS 26 20.00
YONJ 39.86 266 eP 17 29.60 1.8
MHC 39.89 89 e(P) 17 29.10 1.0
Z 20s 9.00um 5.6Msz
N 20s 3.90um
E 20s 10.00um
i 17 44.10
eS 23 29.00
i 23 37.00

eLQ 26 41.00
eLR 28 22.00
CMB 40.24 88 ePc 17 32.00 1.0
i 17 47.00
ePP 19 18.00
eScP 23 20.20
eS 26 46.00
eLR 28 42.00
TKSJ 40.29 264 eP 17 32.60 1.3
SAO 40.37 90 eP 17 38.00 6.0X
Z 20s 9.00um 5.6Msz
N 20s 2.60um
E 20s 10.00um
ePP 19 19.00
LRM 40.67 73 eP 17 35.00 0.4
SHK 40.78 266 eP 17 36.00 0.7
KVN 41.04 85 eP 17 37.70 0.0
PRI 41.25 90 ePc 17 47.60 8.3X
e 17 55.50
e(ScP)23 26.50
SNY 41.94 281 iPc 17 45.00 0.3
Z 22s 14.30um 5.8Msz
N 21s 7.70um
E 21s 4.40um
pP 17 58.00 49kmX
PP 19 25.50
PcS 23 32.00
ALE 41.99 10 eP 17 45.00 0.3
0.6s 10.00nm 4.7mb
SHNJ 42.02 267 P 17 46.50 1.0
FFC 42.17 56 ePc 17 46.00 -0.5
0.7s 22.00nm 5.0mb
TNP 42.18 85 eP 17 47.00 -0.1
0.7s 22.59nm 5.0mb
IMW 42.62 74 eP 17 51.00 0.3
SYP 42.72 91 eP 18 00.00 8.6X
ISA 42.92 89 eP 17 53.00 0.0
KUMJ 43.26 265 P 17 56.30 0.7
CLC 43.37 88 eP 17 57.00 0.4
e 18 10.00
SBB 43.96 90 eP 18 02.00 0.6
BW06 44.08 75 eP 18 02.80 0.3
1.0s 255.00nm 6.0mb
MWC 44.12 90 eP 18 03.00 0.2
KAGJ 44.14 264 eP 18 03.70 0.9
GSC 44.19 88 eP 18 04.00 0.7
e 18 12.00
DAU 44.45 78 P 18 06.20 0.6
RVR 44.69 90 eP 18 06.00 -1.3
DL2 44.88 279 Pc 18 08.00 -0.6
Z 42s 6.60um 5.2MszX
N 20s 6.20um
E 18s 3.20um
pP 18 25.00 68kmX
eS 24 40.00
PLM 45.44 90 eP 18 13.00 -0.4
TPC 45.45 89 eP 18 12.00 -1.3
e 18 21.00
BAR 46.01 91 eP 18 18.00 0.3
RSSD 46.58 70 eP 18 21.70 -0.7
GLA 46.91 89 eP 18 25.00 0.2
e 18 33.00
BJI 47.51 284 eP 18 29.00 -0.4
Z 24s 17.85um 6.0MszX
N 19s 11.30um
E 19s 5.69um
epP 18 42.00 48kmX
ePP 20 21.00
eS 25 21.00
ScS 28 19.00
GOL 48.45 75 eP 18 37.50 0.4
1.0s 525.00nm 6.5mb
Z 20s 9.50um 5.8Msz
RSON 48.46 57 eP 18 35.80 -0.9
eScP 23 51.25
GLD 48.51 75 eP 18 37.50 0.0
Z 20s 11.00um 5.8Msz
TIA 49.35 280 Pc 18 43.50 -0.2
Z 22s 6.10um 5.6Msz
N 19s 3.20um
E 20s 4.10um
S 25 44.00
PJG 49.65 235 eP 18 44.00 -2.2
KBS 49.66 358 iP 18 46.00 0.5
GUA 49.67 235 eP 18 43.50 -2.9
Z 22s 2.67um 5.2Msz
HHC 49.77 288 iPc 18 47.00 0.0

6.0s 1.30nm 3.1mb X
Z 23s 8.00um 5.7MszX
N 18s 7.60um
E 18s 4.70um
pP 19 04.50 69kmX
PcP 20 02.00
PP 20 48.00
S 25 55.00
SSE 50.24 272 iP+ 18 50.00 -0.6
Z 20s 2.80um 5.3Msz
N 17s 2.20um
E 17s 1.70um
pP 19 02.00 43kmX
sP 19 08.00
PP 20 46.00
S 26 00.00
sS 26 20.00
eSS 29 36.00
BTO 50.84 289 iPc 18 56.00 0.8
6.0s 1.60nm 3.2mb X
N 19s 12.50um
E 19s 7.70um
pP 19 12.00 62kmX
PP 20 49.00
ALQ 50.85 81 iPc 18 55.50 0.1
1.5s 47.92nm 5.2mb
Z 22s 5.37um 5.5Msz
e 19 01.80
e 19 08.00
eS 26 12.00
eLg 32 42.00
DAG 51.01 7 eP 18 54.00 -1.9
Z 19s 10.00um 5.9Msz
N 19s 8.06um
E 20s 7.09um
NJ2 51.04 274 Pc 18 55.30 -1.3
6.0s 1.80nm 3.2mb X
Z 25s 7.00um 5.6MszX
N 18s 2.80um
E 20s 2.90um
PP 20 48.00
S 26 09.00
TIY 51.24 284 iPd 18 58.00 -0.2
N 19s 5.80um
E 18s 7.40um
pP 19 15.50 69kmX
PP 20 59.00
S 26 16.00
sS 26 41.00
FRB 51.63 33 ePc 18 59.60 -1.1
0.6s 38.00nm 5.5mb
ANP 54.20 266 eP 19 21.00 0.6
WHN 54.87 276 iPc 19 24.00 -1.2
Z 28s 4.50um 5.4MszX
E 19s 5.61um
pP 19 41.50 68kmX
S 27 02.00
MEO 55.76 76 iPc 19 31.60 0.0
XAN 55.81 283 iPc 19 31.00 -1.0
N 20s 7.50um
E 18s 4.40um
pP 19 48.00 65kmX
PP 21 38.00
S 27 16.00
QZH 56.20 268 Pc 19 34.00 -0.8
5.0s 1.80nm 3.4mb X
Z 22s 2.10um 5.2Msz
N 20s 2.80um
pP 19 52.00 70kmX
S 27 23.00
SIO 56.47 73 ePc 19 35.70 -1.0
TUL 56.67 73 iPc+ 19 37.10 -1.0
1.4s 270.20nm 6.1mb
Z 19s 4.71um 5.6Msz
e 19 41.90
e 19 45.50
e 19 52.30
eS 27 34.00
LR 37 56.00
RLO 56.95 72 ePc 19 38.80 -1.3
LZH 57.46 288 eP 19 43.50 -0.4
6.0s 1397.00nm 6.2mb X
Z 22s 18.20um 6.1Msz
N 20s 9.80um
E 22s 8.10um
i 20 23.00
PPP 23 12.00

			eS	27	40.00					LR	49	30.00			SNF	78.25	0	Pd	21	53.80	0.5
GTA	57.54	294	Pc	19	42.60	-1.8	NAO	67.81	357	P	20	50.30	-1.7		PRU	78.43	354	iPc	21	54.00	-0.4
	6.5s		0.90nm			3.0mb X	NRA0	67.87	356	P	20	51.40	-1.0			1.3s		27.10nm			5.1mb
	Z 18s		9.40um			5.9Msz	HFS	68.37	355	eP	20	54.00	-1.5			Z 20s		3.30um			5.7Msz
	N 16s		6.20um					1.1s		63.20nm			5.6mb			N 18s		2.60um			
			S	27	35.00			Z 23s		3.36um			5.5MszX			E 18s		2.90um			
KEV	57.86	351	iP	19	46.60	0.6				LR	45	57.00						e	22	10.00	
	0.7s		18.70nm			5.3mb	LSA	69.45	292	iPc	21	04.00	0.7		TNS	78.49	358	ePc	21	54.50	-0.2
			e	20	56.00			E 15s		2.00um					DOU	78.67	0	P	21	55.10	-0.5
FVM	58.40	68	eP	19	48.30	-1.9				sP	21	23.00				1.1s		115.40nm			5.8mb
	1.0s		150.00nm			6.0mb				S	30	07.00				Z 20s		4.20um			5.8Msz
SCH	58.43	40	iPc	19	48.00	-2.3	OXX	69.68	88	(P)	21	05.50	1.0					S	31	51.00	
	0.7s		26.00nm			5.4mb	PMO	70.48	152	eP	21	08.00	-0.9					e	33	09.00	
TRO	58.62	354	eP	19	52.00	0.7		1.3s		95.00nm			5.7mb		SPC	78.71	350	eP	21	56.20	0.0
SOD	60.20	350	eP	20	02.00	-0.3	TPT	70.54	152	eP	21	08.00	-1.3		GRF	78.92	356	iPc	21	57.60	0.5
GZH	60.82	271	eP	20	06.00	-1.0		1.3s		160.00nm			5.9mb			1.2s		108.00nm			5.7mb
	Z 22s		2.30um			5.3Msz	MNI	70.63	247	ePd	21	10.00	0.0			Z 21s		1.00um			5.1Msz
	N 19s		2.90um				VAH	70.78	152	eP	21	09.00	-1.7					e	21	59.80	
	E 18s		1.70um					1.3s		145.00nm			5.9mb					e	22	38.00	
			pP	20	19.00	46kmX	RUV	70.80	151	eP	21	10.00	-0.9		CTA	78.96	217	iPc	21	57.10	-0.5
			S	28	20.00			1.3s		195.00nm			6.0mb			1.2s		39.06nm			5.3mb
HKC	60.88	270	P	20	07.70	0.3	LOE	72.28	276	iPc	21	19.00	-0.9					i	22	11.60	
WMQ	61.07	305	P	20	07.50	-1.1	TSM	72.37	254	ePc	21	22.70	2.3					iS	31	54.00	
	8.0s		0.90nm			3.0mb X	CHG	72.94	279	iPc	21	23.90	0.1		WLF	79.09	359	P	21	58.40	0.5
	N 18s		7.80um					1.1s		74.68nm			5.6mb		MTN	79.19	233	iPc	21	59.60	0.7
			pP	20	24.00	62kmX				eS	31	00.00			KHC	79.35	354	iPc	21	59.50	0.1
			PP	22	24.30		EKA	73.21	5	Pc	21	24.50	-0.3			1.0s		35.00nm			5.3mb
			S	28	21.00			1.2s		83.70nm			5.6mb			Z 24s		2.70um			5.5MszX
			SS	32	21.60		GUN	73.83	294	P	21	29.20	0.0					i	22	02.20	
CD2	61.11	284	iPc	20	08.60	-0.4	BDT	74.09	278	eP	21	30.00	-0.4		GWF	79.76	358	P	22	01.47	-0.1
	Z 22s		4.80um			5.6Msz		0.9s		66.00nm			5.6mb		FLN	79.90	4	eP	22	02.20	-0.1
	E 18s		5.40um				KKN	74.26	295	P	21	31.60	0.0			1.2s		115.40nm			5.8mb
			pP	20	24.50	59kmX	PKI	74.35	295	P	21	32.20	-0.1		ZST	80.01	352	eP	22	02.80	-0.1
BAG	61.32	260	ePc+	20	09.00	-1.7	DMU	74.40	7	eP	21	32.00	0.3			Z 23s		6.80um			5.9MszX
			eS	28	28.00		GKN	74.46	295	P	21	32.60	0.0					i	22	06.10	
AKU	61.71	11	iP	20	13.00	0.5	DMN	74.49	295	P	21	33.20	0.2					e	22	15.90	
	1.1s		45.57nm			5.5mb	NST	74.59	276	P	21	35.00	1.7					i	22	42.70	
			i	20	15.40		DLE	75.04	7	eP	21	35.00	-0.3					e	31	34.00	
DHN	61.74	56	iP	20	12.60	-0.5	DZM	75.12	198	iPc	21	36.10	-0.1					e	32	42.00	
PTN	62.11	53	eP	20	14.50	-1.0	YRH	75.62	6	iPc	21	38.10	-0.6					e	33	12.80	
QCP	62.38	258	eP	20	24.00	6.4X		1.3s		200.00nm			6.0mb		VKA	80.01	352	eP	22	02.00	-1.0
GYA	62.52	279	iPc	20	18.20	-0.4	ETA	75.65	7	iPc	21	38.60	-0.2			5.5s		410.00nm			5.6mb X
	4.0s		2.00nm			3.6mb X		1.2s		362.00nm			6.2mb			Z 24s		1.80um			5.3MszX
	N 20s		4.40um				WIT	75.93	359	eP	21	44.00	3.6X					e	33	10.00	
	E 20s		5.50um				ECB	75.93	7	eP	21	40.00	-0.4					LR	54	40.00	
			pP	20	35.00	63kmX		1.2s		221.00nm			6.0mb		LDF	80.08	3	eP	22	03.10	-0.2
			S	28	41.00		VAL	76.04	10	eP	21	41.00	0.0			1.1s		87.90nm			5.7mb
CBM	63.65	47	eP	20	24.40	-1.2				S	31	24.00			MAIO	80.22	318	eP	22	05.00	0.6
BNH	63.92	51	eP	20	26.50	-1.0	ECP	76.15	7	eP	21	41.20	-0.5					eS	32	31.00	
MIM	64.49	49	iP	20	30.50	-0.6		1.2s		259.00nm			6.1mb		GRR	80.26	4	eP	22	04.70	0.5
BLA	64.58	62	eP	20	31.90	0.0	DBN	76.66	360	eP+	21	44.00	-0.5			1.2s		101.10nm			5.7mb
	1.0s		200.00nm			6.2mb		Z 20s		2.60um			5.5Msz		SRO	80.27	351	eP	22	04.00	-0.3
SUF	64.77	349	eP	20	31.50	-1.2				eS	31	32.00						e	23	46.60	
	1.0s		37.30nm			5.4mb				ePS	32	28.00			CLI	80.32	344	ePd	22	05.00	0.4
MRX	64.93	90	(P)	20	35.00	0.8				eSS	36	50.00			CDF	80.33	358	P	22	04.59	-0.2
CVL	65.09	60	iP	20	35.80	0.7	WTS	76.75	359	eP	21	46.50	1.5		KMR	80.38	354	iP+	21	59.90	-5.0X
PNJ	65.20	55	iP	20	35.50	-0.3		1.0s		39.00nm			5.4mb		VITF	80.54	359	P	22	05.81	0.1
PRIN	65.31	56	iP	20	34.00	-2.5	NNT	77.19	274	eP	21	49.00	1.0		SOP	80.57	352	eP	22	08.10	2.2
CBN	65.51	59	iPd	20	37.60	-0.2	CLL	77.21	355	iPc	21	47.20	-0.4		LPF	80.61	4	eP	22	06.40	0.3
	1.1s		117.60nm			5.9mb		1.4s		59.00nm			5.4mb			1.2s		83.30nm			5.6mb
			e	20	55.00			Z 18s		2.50um			5.6Msz		HAU	80.75	359	eP	22	07.10	0.2
EMM	65.59	48	eP	20	37.40	-0.8				i	22	02.60				1.0s		64.00nm			5.6mb
RGS	65.62	357	eP	20	37.50	-0.6				eS	31	34.00			SNG	80.80	270	eP	22	07.40	-0.2
DAV	65.64	249	eP	20	39.00	0.2				P'P'	49	13.00						eS	32	14.80	
PRM	65.77	65	eP	20	38.70	-0.8	KSP	77.45	353	eP	21	48.50	-0.5		FEL	80.85	358	P	22	07.09	-0.5
KMI	65.90	280	iPc	20	41.00	0.2	BRG	77.59	354	iPc	21	49.20	-0.5		MOF	80.89	358	P	22	07.63	-0.1
	5.0s		1.90nm			3 4mb X		0.9s		24.00nm			5.2mb		BSF	80.92	359	P	22	07.52	-0.4
	Z 28s		13.30um			6.0MszX		N 20s		2.00um					VRI	81.07	345	ePd	22	08.00	-0.6
	N 18s		3.40um					E 20s		1.50um					BRD	81.36	344	eP	22	12.50	2.4
	E 18s		2.90um							i	21	51.60			LOMF	81.40	359	P	22	10.43	0.1
			pP	20	53.00	41kmX	KRA	77.89	350	eP	21	50.40	-1.0		KBA	81.41	354	iPc	22	10.80	0.2
			sP	20	57.00			Z 24s		5.90um			5.8MszX			1.0s		58.50nm			5.5mb
			PcP	21	11.00			N 24s		5.10um								iPP	25	18.00	
			PP	23	10.00					e	21	52.10			CFR	81.49	344	ePd	22	11.50	0.8
			S	29	22.00					eS	32	12.00			LOR	81.49	1	eP	22	11.00	0.2
			SS	33	32.00					e	37	56.00				1.2s		111.50nm			5.8mb
QIZ	66.01	271	eP	20	41.50	0.3	MOX	77.95	356	eP+	21	51.00	-0.7		MLR	81.56	345	ePd	22	12.50	1.1
	7.0s		1.70nm			3.3mb X		1.2s		67.00nm			5.5mb		SSF	81.70	1	eP	22	12.10	0.3
	E 20s		3.10um					Z 20s		3.40um			5.7Msz		LBF	81.78	1	eP	22	12.50	0.2
			PP	23	06.50			N 21s		3.30um						1.0s		46.00nm			5.5mb
			eS	29	30.00			E 18s		1.30um					ISR	81.81	345	eP	22	13.00	0.5
			sS	29	53.00		UCC	77.96	0	P+	21	52.00	0.3		AVF	81.97	1	eP	22	13.60	0.4
JSC	66.25	64	eP	20	42.30	-0.3	ENN	77.99	359	eP	21	52.00	0.1		QIS	82.02	222	iPc	22	12.70	-1.0
NUR	67.09	349	iP	20	46.20	-1.3		1.0s		82.00nm			5.7mb					e	22	17.50	
	1.0s		48.00nm			5.5mb	NDI	78.00	301	eP	21	52.00	-0.3		MFF	82.07	3	eP	22	14.40	0.6
	Z 22s		5.60um			5.7Msz		1.1s		56.96nm			5.5mb			1.0s		72.00nm			5.7r
			eS	25	00.00		MEM	78.15	359	iPd	21	52.61	-0.1		TLB	82.09	343	ePd	22	14.00	0

03d 17h

SMF	82.12	1	eP	22	14.80	0.8	POO	87.96	298	iPc	22	44.40	0.7	ANG	0.76	172	eP	16	34.72	0.0
BGF	82.19	1	eP	22	14.90	0.5				iS	33	24.00					eS	16	48.10	
	1.0s	64.80nm			5.6mb		MGR	88.14	352	P	22	43.40	-0.8	BPA	0.86	175	eP	16	35.68	-0.6
TCF	82.45	2	eP	22	16.10	0.3	TOL	88.55	7	iPd	22	47.00	0.8				S	16	47.40	
	1.2s	62.40nm			5.5mb					ePP	26	12.00		SKI	0.96	233	eP	16	37.57	0.0
LSF	82.47	2	eP	22	16.20	0.3				eSKS	33	12.00					eS	16	49.14	
MAF	82.52	2	eP	22	16.60	0.4				iS	33	40.00		NEV	0.98	218	eP	16	37.80	-0.1
	1.0s	48.00nm			5.5mb					iPS	34	48.00					S	16	50.00	
BUC	82.59	345	ePc	22	15.00	-1.5				eSS	39	55.00		MGH	1.21	193	eP	16	41.33	0.1
BUC1	82.67	345	ePc	22	16.00	-0.9	BHD	88.60	328	ePc	22	42.00	-4.5X				S	16	58.50	
BEO	82.99	349	eP	22	18.00	-0.6				eS	33	06.00		SEG	1.56	164	eP	16	46.52	0.4
Z	21s	3.73um			5.7Msz		KRP	89.53	187	P	22	51.10	0.6				S	17	06.00	
		eS		32	35.00		GBA	89.89	292	P	22	52.00	-0.8	DEG	1.80	152	eP	16	49.50	-0.2
KGM	83.12	265	ePc	22	20.10	0.4		1.1s		87.50nm			5.9mb				S	17	12.80	
LPG	83.25	359	eP	22	21.70	1.4	STK	91.39	216	eP	23	00.00	0.8	PAG	1.89	172	eP	16	51.26	0.2
	1.2s	29.70nm			5.3mb		BWA	91.43	209	ePKP	23	00.00	0.6				S	17	15.50	
RJF	83.42	2	eP	22	21.20	0.4				e	23	15.10		MGG	2.07	163	eP	16	53.74	0.2
	1.0s	32.00nm			5.4mb		MAL	91.66	7	iPd	23	02.00	1.3	BBL	2.42	169	eP	16	58.42	-0.1
BRS	83.55	208	iPc	22	33.30	11.7X				iPP	26	38.00			S.D. = 0.3		on 10 of 10 obs.			
		iS		32	48.00		MBL	91.96	238	eP	23	02.20	0.1	----------					
TAB	83.59	328	iP+	22	23.00	1.0	SNZO	92.96	188	eP	23	18.40	12.2X	% JUL 03, 1989 18h 37m 01.54± 0.77s					
WB5	83.71	227	iPKP	22	21.80	-0.7				SKS	33	40.00		43.848 N ± 7.8km 11.902 E ± 7.1km					
		i		22	37.00					PS	35	28.00		DEPTH = 10.0km (geophysicist)					
KVT	83.75	337	iP	22	24.00	1.4				SS	40	16.00		CENTRAL ITALY (381)					
LFF	83.76	3	eP	22	23.10	0.6				SSS	44	08.00							
	1.2s	95.20nm			5.8mb		NANU	95.40	240	eP	23	18.30	0.4	SFI	0.08	333	Pc	37	04.00	0.0
WRA	83.78	227	Pc	22	22.20	-0.6	ZOBO	113.18	87	PKP	28	32.00	-0.2				eSg	37	05.80	
	1.3s	20.80nm			5.1mb					LR	39	04.00		PGD	0.13	282	P	37	04.80	-0.1
CAF	83.81	2	eP	22	23.40	0.6	LPB	113.39	87	(PKP)	28	38.00	5.6X				eSg	37	08.40	
	1.0s	44.00nm			5.6mb		CNCB	113.68	87	PKP	28	33.70	0.5	CRE	0.22	171	Pc	37	06.50	0.1
KHKI	83.90	248	eP	22	21.40	-2.2	TIC	121.36	11	PKP	28	47.20	0.0				eSg	37	10.20	
		e		25	30.50		KIC	121.67	11	PKP	28	47.30	-0.5	RSM	0.41	79	P	37	10.40	0.6
RMQ	83.97	212	eP	22	25.00	1.3	LIC	121.77	12	PKP	28	47.40	-0.6	ARV	0.83	114	P	37	16.40	-1.2
KAS	84.02	338	eP	22	27.00	3.0X	KUK	122.25	6	ePKP	28	49.00	0.1				eSg	37	30.70	
LPO	84.03	3	eP	22	24.30	0.4	LEGH	122.80	6	ePKP	28	50.00	0.1	ASS	0.95	144	P	37	20.40	0.7
	1.2s	103.50nm			5.9mb		BNG	122.94	344	iPKPc	28	50.50	0.2	S.D. = 0.9		on 6 of 6 obs.			
SBF	84.87	358	eP	22	28.80	0.6		0.6s		38.00nm				----------					
	1.0s	60.00nm			5.7mb					i	29	07.00		? JUL 03, 1989 18h 58m 54.66± 3.05s					
FRF	85.19	359	eP	22	30.60	0.9				i	30	16.50		25.365 S ±21.9km 178.811 E ±20.4km					
	1.0s	76.00nm			5.9mb					i	38	56.00		DEPTH = 643.6 ± 36.1 km					
LRG	85.30	359	eP	22	31.00	0.8				i	42	28.00		4.9mb (7 obs.)					
	1.0s	72.00nm			5.8mb		NAI	123.08	321	iPKPd	28	53.50	2.7	SOUTH OF FIJI ISLANDS (171)					
LMR	85.42	359	eP	22	31.50	0.7	SOB1	123.66	58	ePKP	28	51.10	-0.6						
	1.1s	68.30nm			5.8mb					e	30	34.10		BRS	23.40	259	iPc	03	19.00	0.2
BCI	85.46	349	eP	22	31.70	0.6	BAO	124.94	69	e(PKP)	28	40.00	-14.2X	COO	24.31	252	iPc	03	26.80	0.0
EPF	85.65	3	eP	22	32.10	0.0	LWI	126.83	329	iPKPc	28	59.80	1.7		0.5s		18.00nm			5.0mb
	1.1s	21.90nm			5.3mb		PPD	127.89	77	ePKP	28	59.50	-0.1	RMQ	27.03	261	iPc	03	51.40	0.9
SKO	85.67	348	eP	22	17.50	-14.7X	SBA	129.68	185	(PKP)	29	02.00	0.6	CAN	27.49	242	eP	03	54.70	0.2
	1.2s	160.00nm					MZZ	135.13	325	ePKP	29	15.00	1.3	BWA	27.77	244	eP	03	54.90	-2.0
Z	19s	3.25um			5.7Msz			1.0s		3.00nm				CTA	30.44	273	iPc	04	19.40	-0.2
N	19s	3.58um								i	29	33.00			0.8s		22.76nm			4.9mb
E	19s	3.18um								i	32	48.00		TAU	31.15	228	iPc	04	25.80	0.4
		i		22	32.00		CLK	136.81	315	iPKPd	29	10.60	-6.2X	STK	33.19	250	iPc	04	43.10	0.5
		iS		32	51.00		PTZ	137.06	320	iPKP	29	18.00	0.7	ASPA	40.75	263	iPc	05	44.50	0.3
		LR		05	18.00			1.0s		1.50nm					0.5s		60.00nm			5.3mb
BBTK	85.70	339	eP	22	33.00	0.5				i	32	49.00		WB5	41.24	268	iPc	05	47.70	-0.4
BBTK	85.70	339	iP	22	36.00	3.5X	KMZ	138.32	328	ePKP	29	21.00	1.3	WRA	41.25	268	Pc	05	47.60	-0.5
SDA	85.87	349	eP	22	31.00	-2.1				e	32	11.00			0.5s		16.40nm			4.7mb
PHP	86.08	348	eP	22	33.00	-1.2	LSZ	139.20	324	ePKP	29	14.00	-7.2X	FORR	44.76	251	iPc	06	16.00	0.8
SLY	86.10	328	ePd	22	34.00	-0.4				e	33	06.00			0.5s		93.00nm			5.5mb
		epP		22	51.00	60kmX	KRI	140.08	321	ePKP	29	17.60	-5.2X	WARB	46.72	257	iPc	06	30.00	-0.2
		e		23	34.00		SPA	141.43	180	e(PKP)	29	17.30	-6.5X		0.3s		13.00nm			4.8mb
		ePP		25	51.00			0.6s		2.44nm				KNA	47.59	272	iPc	06	37.10	0.2
		eS		32	56.50		BUL	143.47	320	iPKPd	29	25.10	-3.6X		0.4s		17.00nm			4.8mb
		esP		34	03.50			1.0s		73.00nm				COOL	50.68	250	eP	06	58.90	-0.6
		e		34	18.50		MAW	148.05	218	iPKPc	29	38.20	3.6X	KLB	53.43	248	eP	07	18.70	-0.3
CVF	86.13	357	eP	22	35.20	0.7		0.9s		100.00nm				MBL	53.98	261	eP	07	22.50	-0.4
	1.0s	52.00nm			5.7mb		SLR	148.58	316	iPKPd	29	37.50	0.5	MUN	54.67	248	eP	07	28.00	0.4
MSL	86.15	330	ePd	22	35.00	0.4		1.3s		576.92nm				NANU	57.42	258	iPc	07	47.40	0.9
		eS		33	01.00					i	29	56.50		KVN	87.05	44	e(P)	10	35.20	0.2
VAY	86.15	347	eP	22	22.40	-12.2X	KSR	149.28	318	ePKP	29	36.00	-2.2	HFS	143.75	347	ePKP	17	18.60	-0.3
		i		22	35.00			0.9s		92.31nm					0.4s		1.50nm			
HYB	86.21	293	eP	22	35.70	0.5				i	29	42.40			S.D. = 0.7		on 21 of 21 obs.			
	1.0s	260.00nm			6.4mb		PRY	149.97	317	ePKP	29	39.30	0.2	----------					
LACI	86.22	349	eP	22	35.10	0.2		1.0s		175.00nm				JUL 03, 1989 19h 04m 37.48± 0.43s					
TIR	86.49	349	eP	22	26.50	-9.7X				i	29	43.70		3.026 S ± 6.8km 129.536 E ±11.3km					
UPA	86.54	80	ePc+	22	36.20	-0.6	SNA	160.95	173	e(PKP)	29	51.90	0.1	DEPTH = 33.0km (normal)					
	1.2s	59.38nm			5.7mb			1.1s		184.81nm				4.9mb (14 obs.) 4.0Msz (1 obs.)					
Z	21s	2.72um			5.6Msz					i	30	50.00		CERAM (272)					
		LR		33	15.00			S.D. = 0.9		on 276 of 303 obs.									
KER	86.69	326	eP	22	32.00	-5.5X	----------												
BERA	87.11	349	eP	22	30.00	-9.2X	? JUL 03, 1989 18h 16m 20.46± 5.06s							AAI	1.49	244	ePd	05	08.50	6.3X
ASPA	87.22	225	iPc	22	40.00	0.2	17.912 N ±43.0km 61.939 W ±13.3km										eS	05	40.80	
		e		22	50.30		DEPTH = 33.0km (normal)							MNI	6.46	313	ePc	06	12.00	-0.8
		e		33	01.90		LEEWARD ISLANDS (92)							MTN	9.88	171	eP	07	01.00	0.6
LSK	87.58	348	eP	22	22.60	-19.0X	ML 3.6 (FDF).										e	07	04.00	
EBR	87.87	3	eP	22	42.00	-0.8											eS	08	49.00	
														WB5	17.40	165	eP	08	37.30	-2.2

```
                eS     11 46.00
WRA    17.46 165 Pc    08 37.80   -2.4
       0.4s     5.90nm            4.1mb
QIS    20.00 151 iPc   09 09.20   -1.1
                eS     13 53.00
MBL    20.35 207 eP    09 14.00    0.0
ASPA   20.95 169 eP    09 19.40   -0.8
       0.8s   163.00nm            5.5mb
     Z  21s     0.67um            4.0Msz
                eS     13 12.20
                LR     38 05.90
WARB   23.19 187 eP    09 44.00    1.6
       0.4s     7.00nm            4.5mb
CTA    23.53 137 iPc   09 46.60    0.8
       1.0s    48.50nm            5.0mb
NANU   23.70 214 eP    09 47.70    0.4
FORR   27.71 183 eP    10 26.00    1.2
COOL   28.82 195 eP    10 34.50   -0.4
KLB    30.50 200 eP    10 49.00   -0.9
STK    30.86 160 eP    10 53.00    0.0
BRS    32.87 140 iPc   11 10.00   -0.7
ADE    32.90 166 iPd   11 12.20    1.3
       0.9s    28.57nm            5.2mb
BWA    35.85 153 eP    11 38.30    2.1
BDT    36.24 305 eP    11 40.80    1.1
GYA    36.72 324 eP    11 45.60    1.9
CAN    36.86 153 eP    11 46.10    1.4
CHG    37.11 307 iPd   11 48.20    1.2
       1.0s    19.00nm            4.9mb
CHTO   37.11 307 iP    11 47.90    0.9
       0.9s    11.94nm            4.8mb
MAT    40.19  11 eP    12 11.00   -1.5
TIY    43.53 340 eP    12 41.60    1.7
     Z  11s     1.00um            5.0MszX
GTA    50.30 330 P     13 32.80   -0.4
GUN    52.05 309 P     13 46.20   -0.7
       0.6s    19.00nm            5.2mb
PKI    52.25 309 P     13 47.80   -0.7
KKN    52.46 309 P     13 49.20   -0.6
       0.6s     8.00nm            4.9mb
DMN    52.51 308 P     13 49.80   -0.5
       0.8s    18.00nm            5.1mb
GKN    53.06 309 P     13 53.80   -0.4
       0.8s    18.00nm            5.1mb
HYB    54.22 294 eP    14 02.40   -0.3
GBA    54.25 289 Pd    14 01.20   -1.7
       0.6s     2.80nm            4.5mb
WMQ    59.85 326 P     14 42.00   -0.3
     Z  24s     0.40um            4.5MszX
SPA    86.99 180 e(P)  17 21.80    1.2
       1.0s     5.00nm            4.7mb
MBC    97.87  13 eP    18 10.00   -0.6
       0.9s     3.00nm            4.8mb
CNCB  153.77 139 ePKP  24 38.00    9.8X
LPB   153.90 139 ePKP  24 37.00    8.8X
ZOBO  154.07 138 PKP   24 38.00    9.4X
     S.D. = 1.2  on  35 of  39 obs.
-------------------------------------
% JUL 03, 1989  21h 08m 30.48± 0.90s
  45.205 N ± 7.5km     7.492 E ± 8.6km
  DEPTH = 16.0km  (geophysicist)
 NORTHERN ITALY                  (545)
     ML 2.3 (GEN).

RSP     0.17 252 P     08 35.18    0.1
                S     08 41.85
LSD     0.35 317 P     08 37.85   -0.2
                S     08 41.85
ORX     0.55  39 P     08 41.44    0.1
                S     08 48.51
RRL     0.58 241 P     08 41.95    0.0
                S     08 49.54
BNI     0.60 256 P     08 42.30    0.1
               eSg    08 49.00
PZZ     0.75 202 P     08 44.72   -0.1
                S     08 54.36
     S.D. = 0.1  on   6 of   6 obs.
-------------------------------------
& JUL 03, 1989  21h 52m 19.86s
  59.917 N          153.193 W
  DEPTH = 83.2km
  3.9mb (  1 obs.)
 SOUTHERN ALASKA                 (  2)
     <AGS-P>.

SVW     1.69 316 iP    52 47.60   -0.7
KDC     2.21 170 iPd   52 53.60   -1.5
       0.3s   111.94nm
PMS     2.23  52 iP    52 54.60   -1.0
PMR     2.61  48 eP    52 57.50   -3.2
TTA     3.31 337 iPd   53 07.60   -2.9
       0.6s    60.96nm
MID     3.51  95 eP    53 11.20   -1.9
TOA     4.06  54 iP    53 18.20   -2.7
FBA     5.59  24 iP    53 37.70   -4.5
IMA     6.18 358 eP    53 46.00   -4.4
HYT     7.83  77 P     54 10.00   -3.2
INK    11.96  37 eP    55 05.00   -3.7
MBC    20.14  23 eP    56 45.00   -4.0
       0.5s     3.00nm           3.9mb
       12 obs. ossocioted
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% JUL 03, 1989  22h 42m 42.84± 0.80s
  28.029 S ± 8.7km   67.210 W ±15.1km
  DEPTH = 33.0km  (normal)
 LA RIOJA PROVINCE, ARGENTINA    (138)

RTRS    2.90 222 iPc   43 28.40    0.7
RTLL    3.47 198 iPc   43 36.00    0.1
                S     44 17.70
SLA     3.63  25 ePc   43 38.20    0.0
CFA     3.68 194 iPc   43 39.00    0.2
                S     44 22.50
RTCB    3.71 201 iPc   43 39.00   -0.3
RTCV    3.99 196 iPd   43 43.00   -0.3
                S     44 31.00
RTBS    4.11 208 e(P)  43 44.30   -0.6
                S     44 32.70
MRA     4.56 164 ePc   43 51.50    0.3
     S.D. = 0.5  on   8 of   8 obs.
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& JUL 03, 1989  22h 44m 28.64s
  41.706 N          112.373 W
  DEPTH =  7.4km
  4.5mb (  5 obs.)
 UTAH                            (478)
     <SLC-P>. ML 4.8 (SLC). Felt (V)
     at Garland and Tremonton; (IV)
     at Beor River City, Corinne,
     Fielding and Plymouth; (III) at
     Howell, Newton, Portoge and
     Snowville. Also felt (III) at
     Stone, Idoho.

PTI     1.16   0 iPc   44 50.20   -0.5
DAU     1.54 146 iPd   44 57.40    0.5
DUG     1.55 193 iPd   44 56.30   -0.4
BW06    2.35  62 eP    45 08.70    0.2
IMW     2.43  25 iPc   45 09.70    0.1
MSU     3.19 177 eP    45 19.70   -0.7
CCMT    3.23 354 ePnd  45 21.60    0.7
BGMT    3.53   4 ePn   45 25.40    0.2
MEMT    4.03  14 ePn   45 34.90    2.7
PV09    4.05 141 eP    45 32.40   -0.3
LRM     4.12 359 ePn   45 35.50    2.0
LCCM    4.15   5 ePn   45 33.70   -0.1
PV10    4.20 141 eP    45 35.10    0.4
BUT     4.31 358 ePg   45 44.10    7.9
                eSg    46 44.70
HRY     5.02   4 ePn   45 48.50    2.3
KVN     5.11 241 eP    45 47.00   -0.6
DMMT    5.16 357 ePn   45 50.40    2.1
TNP     5.19 227 eP    45 48.50   -0.3
GOL     5.69 108 eP    45 55.00   -0.8
GLD     5.77 107 eP    45 56.50   -0.4
RSSD    6.58  66 eP    46 05.80   -2.6
CLC     7.16 216 eP    46 17.00    0.7
CMB     7.17 242 ePc   46 16.30   -0.1
                e     46 41.60
               e(S)   47 10.90
ORV     7.27 256 e(P)  46 23.00    5.2
                e     46 44.30
GSC     7.28 210 eP    46 26.00    8.0
FRI     7.38 233 ePc   46 21.00    1.7
                e     46 45.80
ISA     7.69 220 eP    46 25.00    1.3
WDC     7.76 265 e(P)  47 24.10   59.5
                e     47 45.90
TPC     8.12 202 eP    46 29.00   -0.8
ALQ     8.20 144 ePn   46 29.00   -2.0
                eP*    46 55.20
                ePg    47 02.90
                eS     48 36.00
                eLg    48 56.00
SBB     8.21 213 eP    46 32.00    0.9
LLA     8.37 235 e(P)  46 35.20    1.9
                e     47 02.20
LON     8.44 310 eP    46 35.00    0.7
RVR     8.65 209 eP    46 25.00  -12.1
MWC     8.71 213 eP    46 33.00   -5.1
SES     8.74   6 eP    46 39.00    0.7
GLA     8.86 194 eP    46 39.00   -1.0
PLM     9.07 205 eP    46 43.00    0.0
PNT     9.15 329 eP    46 48.00    4.1
BAR     9.64 202 eP    46 51.00    0.3
EDM    11.54 357 eP    47 18.00    1.3
MEO    12.85 118 eP    47 29.50   -4.8
SIO    13.87 110 eP    47 45.20   -2.7
TUL    14.16 109 ePc   47 48.80   -2.8
       1.0s    19.00nm            4.8mb
     Z  19s     1.20um
                e     48 53.90
                LR    51 28.00
                eLg   52 09.30
FFC    14.73  24 eP    47 55.50   -3.5
       1.4s     2.30nm            3.5mb
RSON   15.79  48 eP    48 07.50   -5.3
       0.8s    50.08nm            4.8mb
FVM    17.25  95 eP    48 27.50   -4.0
YKA    20.86 357 P     49 12.30   -1.0
JSC    25.52  97 eP    49 57.80   -1.4
INK    28.96 344 eP    50 29.00   -1.2
FBA    30.71 331 eP    50 46.00    0.1
       0.8s     4.31nm            4.4mb
TTA    33.14 325 eP    51 07.70    0.4
       0.8s     3.45nm            4.3mb
MBC    34.77 357 eP    51 21.50    0.4
       53 obs. ossociated
-------------------------------------
   JUL 03, 1989  23h 44m 28.90± 0.81s
  42.507 N ± 8.3km   19.296 E ± 5.9km
  DEPTH = 10.0km  (geophysicist)
 YUGOSLAVIA                      (383)
     ML 2.3 (TTG).

TTG     0.08 198 iPgc  44 32.20    0.8
                iSg    44 35.70
NKY     0.38 324 ePg   44 37.50    0.8
PVY     0.51  80 ePg   44 38.50   -0.7
                eSg    44 48.00
!VA     0.57  50 iPgd  44 41.00    0.4
                iSg    44 51.50
HCY     0.59 264 ePg   44 40.00   -0.9
                eSg    44 49.50
BRY     0.68 306 ePg   44 42.00   -0.5
                eSg    44 53.00
SKO     1.68 108 ePn   45 05.00    6.5X
     S.D. = 1.0  on   6 of   7 obs.
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? JUL 04, 1989  00h 09m 17.21± 6.29s
  44.386 N ±19.0km     6.345 E ±43.8km
  DEPTH = 10.0km  (geophysicist)
 FRANCE                          (538)
     ML 2.4 (GEN).

FOUF    0.34  65 ePg   09 33.71    9.4X
               e(Sg)   09 36.42
PZZ     0.55  77 P     09 29.77    1.2
                S     09 31.65
RRL     0.62  30 P     09 29.77   -0.1
                S     09 45.94
DOI     0.66  79 P     09 29.40   -0.9
                eSg    09 30.60
STV     0.72 101 P     09 31.28   -0.1
                S     09 33.74
ENR     0.79 101 P     09 32.18   -0.4
                S     09 35.44
RSP     1.00  40 P     09 41.07    4.8X
                S     09 50.40
ROB     1.10  94 P     09 37.07   -0.8
                S     09 44.15
IMI     1.21 113 P     09 40.92    1.1
                S     09 49.99
FIN     1.35  97 P     09 41.79   -0.3
                S     09 51.24
PCP     1.58  84 P     09 49.79    4.4X
     S.D. = 1.0  on   8 of  11 obs.
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• JUL 04, 1989  00h 20m 07.04± 1.06s
  31.244 S ±11.0km   69.126 W ±10
  DEPTH = 33.0km  (normal)
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04d 00h

SAN JUAN PROVINCE, ARGENTINA (137)

RTCB	0.37	131	iPd	20 17.30	1.5
			S	20 30.50	
RTBS	0.50	214	iPd	20 17.40	-0.3
RTLL	0.57	99	iPc	20 18.80	0.1
			S	20 33.00	
CFA	0.84	116	iP	20 21.00	-1.5
			S	20 36.50	
RTRS	1.11	345	iPd	20 26.40	0.1

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

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* JUL 04, 1989 00h 42m 36.45± 1.26s
41.054 N ±10.1km 20.055 E ± 8.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MG 2.5 (TIR).

TIR	0.32	334	iPgc	42 42.70	-0.5
LACI	0.64	336	ePg	42 49.50	0.3
PHP	0.70	25	iPgd	42 48.20	-2.0
PUK	1.00	353	ePg	42 55.60	0.3
SDA	1.05	337	ePg	42 56.60	0.4
BCI	1.31	0	ePn	43 02.30	1.6
SKO	1.39	48	iPn	43 00.50	-1.3
			iSn	43 19.00	
LCI	1.75	246	P	43 06.50	-0.5
			eSn	43 29.00	
VAY	1.92	81	ePn	43 11.00	1.6

S.D. = 1.4 on 9 of 9 obs.

JUL 04, 1989 01h 03m 24.22± 1.86s
44.097 N ± 7.3km 8.554 E ±12.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.4 (GEN).

FIN	0.27	294	P	03 30.08	0.1
			S	03 34.70	
CKI	0.38	329	P	03 32.40	0.3
			eSg	03 38.40	
PCP	0.45	359	P	03 33.06	-0.2
IMI	0.51	249	P	03 33.98	-0.7
			S	03 41.26	
ROB	0.53	292	P	03 34.49	-0.5
			S	03 41.88	
SAOF	0.73	262	Pg	03 38.35	-0.2
AUTN	0.82	263	Pg	03 40.41	0.2
ENR	0.83	279	P	03 40.24	0.0
			S	03 51.00	
SBF	0.84	254	Pn	03 40.80	0.3
			Sn	03 54.00	
STV	0.90	280	P	03 41.57	0.1
			S	03 52.75	
AURF	0.91	257	Pg	03 41.63	-0.1
			Sg	03 56.01	
TQUF	0.95	265	Pg	03 42.47	0.1
MVIF	1.03	259	Pg	03 44.42	0.6
PZZ	1.12	292	P	03 45.36	0.0
			S	03 59.56	

S.D. = 0.4 on 14 of 14 obs.

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* JUL 04, 1989 01h 14m 16.07± 1.22s
5.843 S ± 8.2km 147.130 E ±14.5km
DEPTH = 86.4 ± 11.5 km
4.9mb (6 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.82	189	iPd	14 33.00	-0.7
MNDI	3.47	265	eP	15 12.00	2.9
PMG	3.54	180	iPd-	15 08.00	-1.9
	1.1s	354.43nm			
			eS	15 54.00	
CTA	14.19	183	iPc	17 36.00	1.7
	1.0s	21.50nm			4.4mb
MTN	17.25	245	eP	18 12.00	-0.9
			eS	21 03.00	
WB5	18.67	220	eP	18 28.10	-2.1
			eS	21 51.30	
WRA	18.74	220	Pc	18 29.90	-1.0
	0.7s	13.20nm			4.3mb
GUA	19.38	353	eP	18 38.50	0.6
GUMO	19.43	353	eP	18 38.00	-0.4
PJG	19.43	353	eP	18 38.50	0.1
RMQ	20.59	176	eP	18 53.00	2.7
ASPA	21.82	214	eP	19 03.90	1.2
	0.4s	26.00nm			5.0mb
	Z 18s	0.21um			3.6Msz
			eS	22 59.90	
			LR	28 08.00	
WARB	28.14	222	eP	20 02.30	0.1
COOL	34.86	221	eP	21 00.30	-0.8
MRWA	37.48	228	eP	21 23.00	-0.1
KLB	37.57	223	eP	21 23.00	-0.9
	0.4s	10.00nm			5.1mb
MAT	42.98	349	eP	22 07.00	-1.4
	1.2s	37.50nm			5.1mb
SPA	84.20	180	e(P)	26 39.10	0.1
	1.0s	14.00nm			4.9mb
INK	91.46	21	eP	27 13.00	-0.5
PPD	146.93	147	ePKP	33 50.30	1.4

S.D. = 1.5 on 20 of 20 obs.

JUL 04, 1989 01h 31m 31.40± 1.41s
31.438 S ± 9.5km 70.592 W ±11.4km
DEPTH = 162.5 ± 17.1 km
CHILE-ARGENTINA BORDER REGION (127)

RTBS	1.00	103	iPc	31 57.30	-0.3
RTCB	1.53	92	iPc	32 02.40	-0.3
			S	32 23.20	
RQCH	1.57	193	iPd	32 18.00	14.8X
			iS	32 23.20	
RTRS	1.60	38	iPd	32 04.00	0.8
PEL	1.70	183	iPd	32 03.90	-0.5
			iS	32 26.40	
RTCV	1.80	104	iPc	32 05.30	-0.2
RTLL	1.82	87	iPc	32 05.40	-0.3
			S	32 29.00	
FCH	1.90	172	iPd	32 07.80	0.9
			iS	32 32.50	
CFA	2.02	95	iPc	32 03.20	-4.7X
			S	32 33.00	
PCH	2.18	178	iPd	32 10.50	0.7
			iS	32 37.40	
LCCH	2.19	202	iPc	32 09.70	-0.2
TACH	2.23	187	iPd	32 10.20	-0.1
			iS	32 37.80	
CHCH	2.49	181	iP	32 13.60	0.1
			iS	32 43.80	
LNV	2.60	195	iP	32 14.30	-0.5
			iS	32 41.10	
MRA	4.26	104	ePc	32 36.50	0.5
CYA	5.12	56	ePd	32 47.00	-0.4

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

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* JUL 04, 1989 02h 26m 45.69± 0.94s
44.063 N ±18.5km 149.623 E ±12.3km
DEPTH = 33.0km (normal)
4.6mb (2 obs.)
KURIL ISLANDS (221)

KUSJ	3.70	257	eP	27 39.20	-2.7X
			eS	28 11.00	
HOOJ	4.93	252	P	27 59.70	0.4
			eS	28 46.70	
ASAJ	5.03	273	eP	28 00.40	-0.4
MRRJ	6.46	258	eP	28 21.30	0.4
			eS	29 23.30	
QFUJ	7.77	233	eP	28 39.40	0.2
			eS	29 55.10	
CHTO	49.09	256	eP	35 32.00	0.1
	1.0s	2.50nm			4.2mb
KKN	53.28	275	P	36 04.20	0.4
PKI	53.31	275	P	36 03.30	-0.9
DMN	53.51	275	P	36 05.10	-0.4
	0.6s	10.00nm			5.0mb
GKN	53.61	276	P	36 05.20	-0.9
KVN	65.64	59	eP	37 28.60	-0.3
NAO	70.22	340	P	37 58.10	1.2

S.D. = 0.7 on 11 of 12 obs.

JUL 04, 1989 02h 28m 24.66± 0.33s
52.187 N ± 7.1km 174.302 E ± 4.2km
DEPTH = 33.0km (normal)
4.7mb (20 obs.) 4.2Msz (2 obs.)
NEAR ISLANDS, ALEUTIAN ISLANDS (5)
ML 4.6 (PMR). Felt on Shemya.

SMY	0.56	347	iPd	28 37.60	1.5
ADK	5.57	90	ePc	29 48.70	1.3
SVW	18.63	50	eP	32 42.30	0.9
TTA	19.02	44	eP	32 46.50	0.4
KDC	19.72	61	eP	32 52.10	-1.9
IMA	21.19	37	ePc	33 09.00	-0.2
PMR	21.79	50	eP	33 15.90	0.7
FBA	23.08	42	eP	33 28.30	0.4
BRW	23.13	23	ePd	33 29.00	0.8
TOA	23.25	49	eP	33 31.70	2.0
INK	29.32	37	eP	34 30.00	4.2X
MBC	34.49	23	ePc	35 10.30	-0.7
	0.7s	6.00nm			4.6mb
YKA	37.76	46	P	35 39.60	0.8
PNT	40.61	67	eP	36 03.00	0.4
	0.6s	6.00nm			4.5mb
LON	40.67	71	eP	36 04.00	0.8
BJI	41.02	277	eP	36 07.00	1.0
ALE	42.55	9	eP	36 18.00	-0.1
	0.6s	5.00nm			4.4mb
TIA	42.83	271	eP	36 21.30	0.4
BTO	44.42	281	P	36 35.00	1.1
NJ2	44.55	266	Pc	36 35.50	0.6
TIY	44.75	277	iPd	36 38.00	1.5
	Z 22s	0.50um			4.4Msz
KVN	47.38	78	eP	36 57.00	-0.5
WHN	48.36	268	P	37 05.50	0.5
XAN	49.30	275	P	37 12.50	0.2
LZH	51.03	281	P	37 26.50	0.9
	1.8s	74.00nm			5.3mb
GTA	51.26	287	iPc	37 27.00	-0.2
RSON	53.42	52	eP	37 42.00	-1.1
CD2	54.62	276	eP	37 51.80	-0.4
WMQ	55.24	298	iPc	37 56.20	-0.5
			eS	45 38.00	
GYA	56.00	270	iPc	38 02.00	-0.4
ALQ	57.06	74	e(P)	38 19.50	9.5X
MEQ	61.77	69	eP	38 41.80	-0.4
SCH	61.95	35	eP	38 41.00	-2.1
SUF	62.72	344	eP	38 46.70	-1.4
	0.8s	15.40nm			5.2mb
NUR	65.05	344	iP	39 01.90	-1.4
	0.8s	16.10nm			5.2mb
	Z 24s	0.20um			4.2MszX
			LR	08 00.00	
CHG	66.42	271	ePc	39 12.70	0.0
	1.7s	62.50nm			5.4mb
NAO	66.57	351	P	39 11.50	-1.5
UPP	66.74	347	iP	39 12.40	-1.7
HFS	66.95	350	eP	39 13.80	-1.7
	0.5s	8.40nm			5.1mb
	Z 20s	0.08um			3.9Msz
			LR	04 16.00	
GUN	67.55	287	P	39 20.20	0.0
KKN	67.99	287	P	39 23.00	0.2
PKI	68.08	287	P	39 23.30	-0.2
GKN	68.21	288	P	39 23.90	-0.2
DMN	68.23	287	P	39 24.40	0.1
EKA	72.83	358	Pc	39 49.60	-1.7
	0.5s	3.20nm			4.6mb
MAIO	75.18	311	eP	40 06.00	0.6
KSP	75.67	346	eP	40 07.50	-0.4
CLL	75.68	348	eP	40 07.00	-0.8
KRA	75.84	343	ePd	40 08.30	-0.5
			e	40 19.30	
BRG	75.98	347	eP	40 09.20	-0.4
	1.1s	12.00nm			4.8mb
			e	40 20.30	
SPC	76.62	343	eP	40 14.00	0.6
PRU	76.76	347	eP	40 14.20	0.2
SNF	77.33	353	P	40 16.80	-0.3
DOU	77.72	353	P	40 19.60	0.4
KHC	77.73	347	iP	40 19.70	0.3
ZST	78.12	345	eP	40 21.60	0.1
SRQ	78.29	344	iP	40 23.20	0.8
			i	40 38.90	
HAU	79.66	352	eP	40 30.20	0.3
WB5	79.75	218	eP	40 30.50	-0.2
KBA	79.78	347	iPc	40 31.40	0.6
	0.9s	25.30nm			5.2mb
			i	41 10.70	
BZS	79.78	341	eP	40 31.00	0.4
WRA	79.82	218	Pc	40 31.00	0.0
	0.6s	1.80nm			4.2mb
LOR	80.59	353	eP	40 35.00	0.1
	1.0s	6.00nm			4.5mb
SSF	80.82	354	eP	40 35.50	-0.6
	0.8s	4.00nm			4.5mb
LBF	80.86	353	eP	40 35.70	-0.7
	0.8s	2.60nm			4.3mb
AVF	81.10	354	eP	40 37.80	0.3
	1.2s	5.90nm			4.5mb

SMF 81.21 353 eP 40 38.10 0.0
1.2s 11.90nm 4.8mb
AGO 81.85 354 P 40 42.07 0.6
PLDF 81.90 353 P 40 42.32 0.5
LPG 82.11 351 eP 40 43.90 0.7
1.2s 14.80nm 4.9mb
LBL 82.66 354 P 40 45.53 -0.1
CAF 83.04 354 eP 40 48.60 0.9
1.0s 6.00nm 4.6mb
SKO 83.31 340 eP 40 49.00 -0.1
LPO 83.33 355 eP 40 49.70 0.6
GBA 83.53 284 Pc 40 49.00 -1.6
0.8s 5.60nm 4.7mb
MAW 144.49 218 ePKP 47 56.00 -1.6
S.D. = 0.9 on 74 of 76 obs.

? JUL 04, 1989 02h 32m 20.80± 5.22s
31.476 S ±19.3km 68.438 W ±25.2km
DEPTH = 92.6 ± 45.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.15 349 iPd 32 34.40 0.0
S 32 44.70
CFA 0.21 128 iPd 32 34.50 -0.1
S 32 44.00
RTCB 0.31 268 iPd 32 35.00 0.1
S 32 46.00
RTCV 0.39 192 iPc 32 35.50 0.2
S 32 46.80
RTBS 0.89 258 ePc 32 39.50 -0.2
RTRS 1.57 326 ePc 32 48.00 0.1
S 33 08.20
S.D. = 0.2 on 6 of 6 obs.

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* JUL 04, 1989 03h 36m 24.02± 1.38s
49.160 N ±14.4km 6.849 E ±24.6km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.2 (STR).

WLF 0.68 318 iP 36 37.40 -0.1
CDF 0.80 159 Pg 36 38.64 -1.0
Sg 36 51.84
MOF 1.32 172 Pg 36 48.74 0.2
Sg 37 06.94
BSF 1.33 182 Pg 36 48.84 0.2
Sg 37 06.73
FEL 1.50 149 Pg 36 51.73 0.6
DOU 1.74 303 iPc 36 58.10 3.7X
S 37 16.00
S.D. = 0.9 on 5 of 6 obs.

& JUL 04, 1989 04h 07m 06.99s
41.707 N 112.377 W
DEPTH = 6.2km
UTAH (478)
<SLC-P>. ML 2.7 (SLC).

PTI 1.16 0 eP 07 28.80 -0.4
DAU 1.55 146 eP 07 35.30 -0.1
DUG 1.55 192 eP 07 34.30 -0.9
BW06 2.35 62 eP 07 47.70 0.7
IMW 2.43 25 eP 07 49.20 1.1
MSU 3.19 177 eP 07 58.70 -0.2
KVN 5.11 241 eP 08 26.00 -0.1
i 08 47.40
7 obs. associated

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* JUL 04, 1989 04h 09m 38.11± 1.15s
18.029 N ±11.3km 105.886 W ±13.9km
DEPTH = 33.0km (normal)
4.2mb (2 obs.) 4.0Msz (1 obs.)
OFF COAST OF JALISCO, MEXICO (54)

MRX 4.75 69 (P) 10 49.00 -0.2
CRX 6.04 76 (P) 11 08.00 0.2
ALQ 16.85 358 eP 13 31.30 -2.1
1.1s 6.65nm 3.7mb
e 13 39.50
e 13 46.70
eS 17 58.00
eLg 19 08.00
MEO 17.91 20 iP 13 47.50 1.1
SIO 19.59 24 e(P) 14 05.10 -1.3
TUL 19.93 25 ePd 14 10.00 -0.1
1.3s 49.10nm 4.7mb
Z 19s 0.55um
eS 18 00.00
LR 19 36.00
RLO 20.46 26 eP 14 14.90 -0.7
OLY 21.60 33 eP 14 28.00 0.8
FVM 24.05 31 eP 14 52.50 1.3
LRM 28.25 350 eP 15 34.50 4.0X
ZOBO 50.44 130 eP 18 35.00 -0.6
Z 22s 0.17um 4.0Msz
eLR 36 04.00
LPB 50.63 131 eP 18 43.00 6.1X
CNCB 50.90 131 eP 18 39.00 -0.1
INK 53.20 348 eP 18 56.00 0.9
M8C 58.66 356 eP 19 35.00 0.9
S.D. = 1.1 on 13 of 15 obs.

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* JUL 04, 1989 04h 56m 29.22± 1.70s
24.736 S ±10.5km 70.942 W ±22.4km
DEPTH = 89.9 ± 24.7 km
NEAR COAST OF NORTHERN CHILE (122)

ANT 1.13 25 iPc 56 50.80 0.1
i 56 52.90
SLA 4.95 91 ePd 57 42.50 -0.3
CYA 5.91 130 e(P) 57 56.10 0.2
ARE 8.25 356 eP 58 28.00 -0.4
CNCB 8.36 20 P 58 37.00 6.9X
LPB 8.58 19 (P) 58 45.00 11.9X
ZOBO 8.83 18 P 58 37.00 0.5
MRA 8.92 150 e(P) 58 37.20 0.0
S.D. = 0.5 on 6 of 8 obs.

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* JUL 04, 1989 05h 22m 18.45± 0.85s
35.035 N ± 8.0km 139.152 E ± 9.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.5 (JMA). Felt (I JMA) on Oshimo.

OSH 0.33 146 iPd 22 25.20 0.1
iS 22 29.80
CHJJ 1.02 353 eP 22 38.40 0.2
S 22 52.70
IIDJ 1.11 294 P 22 39.50 -0.2
S 22 54.70
KAKJ 1.43 35 P 22 44.80 -0.3
MAT 1.69 333 eP 22 49.00 0.3
iS 23 12.10
S.D. = 0.4 on 5 of 5 obs.

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* JUL 04, 1989 05h 42m 27.07± 2.88s
35.015 N ±23.5km 139.206 E ±13.4km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 1.05 351 P 42 47.10 -0.1
S 43 01.10
IIDJ 1.16 294 P 42 48.00 -1.2
S 43 03.10
KAKJ 1.43 33 P 42 53.30 -0.3
MAT 1.73 332 eP 42 58.00 0.1
iS 43 20.30
MTMJ 1.94 324 P 43 02.00 0.9
S 43 27.30
NIIJ 2.23 356 eP 43 10.20 5.1X
TSRJ 2.69 282 eP 43 12.30 0.6
S.D. = 1.0 on 6 of 7 obs.

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* JUL 04, 1989 06h 19m 25.85± 1.18s
31.311 N ±17.3km 140.197 E ±15.6km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
SOUTH OF HONSHU, JAPAN (211)

MAT 5.47 343 eP 20 48.00 0.8
1.0s 34.00nm 4.8mb X
eS 21 52.00
BJI 21.32 301 eP 24 11.00 -1.0
CHG 39.17 261 eP 26 53.40 0.9
CHTO 39.17 261 eP 26 52.20 -0.3
0.7s 3.65nm 4.2mb
INK 59.95 25 eP 29 30.00 -0.8
M8C 62.29 15 eP 29 46.00 -0.6
1.0s 2.00nm 4.2mb
LRM 78.98 43 eP 31 29.10 0.9
ZOBO 150.19 66 PKP 39 19.00 8.1X
LPB 150.36 67 ePKP 39 23.00 12.0X
S.D. = 1.0 on 7 of 9 obs.

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* JUL 04, 1989 07h 16m 39.89± 1.37s
11.160 N ± 6.2km 62.060 W ±15.7km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)
MG 4.3 (FDF).

TCE 0.55 147 eP 16 51.56 0.3
eS 16 57.77
TRN 0.82 128 eP 16 54.56 -0.5
eS 17 02.34
eS 17 06.87
TPP 1.03 144 eP 16 58.98 1.0
TBH 1.18 124 eP 16 58.75 -1.5
eS 17 15.26
PIG 1.20 90 eP 17 00.86 0.5
eS 17 21.99
TPR 1.26 89 eP 17 01.63 0.3
8OT 1.32 90 eP 17 01.90 -0.2
eS 17 22.03
SVB 2.24 21 eP 17 16.12 0.7
eS 17 51.87
SVV 2.30 21 eP 17 16.96 0.7
eS 17 52.52
SLB 2.83 20 eP 17 24.57 0.7
eS 18 07.36
BIM 3.47 16 eP 17 32.19 -0.8
S 18 14.40
MVM 3.56 18 eP 17 33.66 -0.6
FDF 3.66 14 iPc 17 34.87 -0.8
S 18 18.90
S.D. = 0.8 on 13 of 13 obs.

JUL 04, 1989 07h 32m 42.92± 0.75s
35.043 N ± 7.0km 139.204 E ± 8.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.3 (JMA). Felt (I JMA) on Oshimo.

OSH 0.32 153 iPd 32 49.30 0.0
iS 32 54.20
CHJJ 1.02 350 P 33 02.40 -0.2
S 33 16.70
IIDJ 1.14 293 iPd 33 03.70 -1.1
S 33 18.70
KAKJ 1.40 34 P 33 08.80 -0.3
S 33 29.10
MAT 1.70 332 eP 33 14.00 0.6
iS 33 35.90
MTMJ 1.91 324 P 33 17.10 0.5
TSRJ 2.68 282 P 33 28.00 0.5
S.D. = 0.8 on 7 of 7 obs.

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* JUL 04, 1989 08h 49m 56.91± 0.56s
87.161 N ± 6.6km 40.213 E ±11.3km
DEPTH = 10.0km (geophysicist)
4.2mb (7 obs.) 3.9Msz (2 obs.)
NORTH OF FRANZ JOSEF LAND (644)

ALE 8.63 301 eP 52 03.00 -1.6
DAG 12.09 250 eP 52 54.00 2.2
MBC 16.56 343 ePc 53 50.00 -0.1
0.5s 8.00nm 4.1mb
INK 24.67 354 eP 55 18.00 -0.3
SUF 24.68 196 eP 55 19.00 0.6
0.6s 2.00nm 4.0mb
NAO 26.88 212 P 55 37.60 -1.5
NUR 26.91 197 eP 55 38.00 -1.3
Z 22s 0.30um 3.8Msz
LR 05 30.00
FBA 28.08 7 eP 55 49.00 -0.9
MOX 37.06 210 eP 57 08.00 -0.2
EDM 39.54 335 eP 57 33.00 4.0X
HAU 39.84 216 eP 57 32.10 0.6
BSF 40.00 215 eP 57 33.20 0.3
0.8s 5.30nm 4.3mb
SSF 40.87 219 eP 57 39.40 -0.5
1.0s 6.00nm 4.3mb
LBF 40.93 218 eP 57 40.10 -0.4
0.8s 4.00nm 4.2mb
LRM 46.92 334 eP 58 31.10 2.0
KVN 53.80 339 eP 59 21.70 0.2
TNP 54.75 338 eP 59 28.30 -0.3
TUL 56.35 317 eP 59 48.00 8.1X
1.3s 5.00nm 4.4m
Z 21s 0.16um 4.1M

04d 08h

		LR	16 22.00		
GKN	60.14	134 P	59 58.20	-8.4X	
	0.6s	4.00nm		4.7mb	
KKN	60.37	134 P	59 55.60	-12.7X	
CHTO	69.84	120 e(P)	01 09.20	0.0	
WRA	110.00	87 Pdiffc04	28.70	1.2	
	0.3s	3.60nm			

S.D. = 1.1 on 18 of 22 obs.

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* JUL 04, 1989 09h 16m 11.59± 2.75s
35.111 N ±22.4km 139.192 E ±13.3km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.95	350 P	16 29.90	-0.2	
IIDJ	1.11	290 P	16 31.30	-1.6	
KAKJ	1.35	36 P	16 36.50	-0.5	
MAT	1.64	331 iPc	16 41.10	0.0	
		iS	17 03.40		
MTMJ	1.85	323 P	16 45.20	0.8	
		S	17 10.80		
NIIJ	2.13	356 P	16 48.70	0.4	
TSRJ	2.66	280 P	16 56.80	1.0	

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

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* JUL 04, 1989 09h 48m 57.66± 1.14s
40.462 N ± 6.6km 21.740 E ±12.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.9 (ATH).

KZN	0.16	171 iPgc	49 01.00	-0.4	
VAY	1.06	36 ePn	49 17.70	0.0	
PLG	1.31	93 ePb	49 21.50	-0.3	
SKO	1.53	352 ePn	49 25.00	0.0	
NEO	1.62	135 ePg	49 27.00	0.6	

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

JUL 04, 1989 09h 53m 57.82± 0.75s
35.040 N ± 7.1km 139.203 E ± 8.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (II JMA) on Oshimo.

OSH	0.31	153 iPd	54 04.60	0.5	
		iS	54 09.20		
CHJJ	1.02	350 iP+	54 17.80	0.2	
IIDJ	1.14	293 iPd	54 19.00	-0.7	
		S	54 34.00		
KAKJ	1.41	34 P	54 23.90	-0.2	
MAT	1.70	332 iPc	54 28.90	0.6	
		eS	54 51.00		
MTMJ	1.92	324 P	54 32.90	1.4	
		S	54 58.70		
NIIJ	2.20	356 iPd	54 36.40	0.9	
TSRJ	2.68	282 P	54 41.60	-0.8	
		S	55 16.60		
YAMJ	3.20	12 P	54 50.30	0.6	
OFUJ	4.49	25 P	55 06.80	-1.2	
WB5	54.81	186 eP	03 26.30	-4.8X	
MBC	58.94	16 eP	03 57.50	-2.4	
ZOBO	149.24	60 PKP	13 47.00	1.1	

S.D. = 1.2 on 12 of 13 obs.

? JUL 04, 1989 10h 13m 23.19± 3.83s
4.563 S ±44.3km 143.598 E ±14.4km
DEPTH = 130.2 ± 16.1 km
4.4mb (5 obs.)
PAPUA NEW GUINEA (202)

MNDI	1.58	178 eP	13 53.50	0.7	
LAT	3.97	122 eP	14 23.00	-0.4	
MTN	14.81	235 eP	16 47.00	-0.4	
WB5	17.68	210 eP	17 22.10	-0.8	
WRA	17.75	210 Pc	17 23.00	-0.7	
	0.5s	5.70nm		4.1mb	
ASPA	21.17	205 iPc	17 59.80	0.2	
	0.5s	9.00nm		4.4mb	
		e	18 06.20		
WARB	26.94	215 eP	18 55.00	0.7	
	0.3s	4.00nm		4.5mb	
FORR	29.95	207 eP	19 22.00	0.9	
	0.5s	12.00nm		4.9mb	
SPA	85.47	180 e(P)	25 47.10	-0.2	
	0.7s	4.30nm		4.4mb	

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

JUL 04, 1989 10h 14m 06.38± 1.27s
23.979 N ± 6.5km 122.560 E ± 8.5km
DEPTH = 34.7 ± 9.0 km
5.0mb (17 obs.) 4.3Msz (2 obs.)
TAIWAN REGION (243)

TWD	0.89	277 iPc	14 21.80	-0.7	
		eS	14 32.70		
TWC	0.90	314 iPd	14 22.90	0.2	
		eS	14 36.10		
TWF1	1.32	242 ePc	14 28.00	-0.7	
		eS	14 44.90		
TWZ	1.43	321 iPc	14 32.40	2.1	
		eS	14 52.00		
ANP	1.53	322 iPc	14 32.90	1.0	
	0.7s	4602.74nm			
		eS	14 50.40		
QZH	3.74	286 iPc	15 01.80	-1.4	
	Z 14s	2.40um			
		iS	15 42.40		
SSE	7.19	351 iPd	15 50.70	-1.1	
	0.5s	321.00nm		6.5mb X	
	Z 14s	1.30um		5.0Msz	
	N 12s	1.00um			
		pP	15 56.00		
		eS	17 12.50		
MCO	8.49	259 eP	16 09.60	-0.4	
NJ2	8.68	339 Pc	16 10.00	-2.6	
	Z 15s	1.80um			
	N 13s	1.50um			
	E 13s	1.10um			
		S	17 46.00		
WHN	9.80	314 eP	16 27.50	-0.5	
	N 12s	1.05um			
	E 12s	0.90um			
		sP	16 42.50		
		eS	18 15.00		
QIZ	12.82	250 eP	17 15.20	6.2X	
	N 15s	0.60um			
		eS	19 27.80		
GYA	14.60	283 P	17 32.60	0.1	
	N 10s	0.30um			
	E 10s	0.60um			
		S	20 05.60		
XAN	15.57	313 P	17 50.00	5.0X	
TIY	16.20	330 eP	17 55.20	2.1	
	Z 16s	1.79um			
	N 13s	1.30um			
BJI	16.90	343 eP	18 03.00	1.3	
	Z 14s	0.59um			
	N 12s	0.40um			
SNY	17.82	2 iPc	18 14.60	1.3	
	Z 16s	0.80um			
	N 14s	0.70um			
	E 15s	0.50um			
		eS	21 34.00		
CD2	18.05	297 P	18 16.10	-0.2	
HHC	19.18	334 P	18 30.60	0.6	
BTO	19.64	331 eP	18 35.00	-0.1	
	N 14s	1.20um			
	E 14s	0.90um			
		sS	22 25.00		
CN2	19.91	6 eP	18 36.00	-1.9	
	Z 13s	1.20um		6.4Msz	
	N 13s	0.60um			
	E 13s	0.30um			
		pP	18 46.00	42kmX	
		eS	22 12.00		
LZH	20.16	311 eP	18 41.50	0.7	
	1.5s	66.00nm		4.8mb	
	Z 16s	0.80um		4.2MszX	
		i	18 54.00		
		(S)	25 05.00		
CHG	22.57	261 eP	19 07.80	2.7	
CHTO	22.57	261 eP	19 05.00	0.0	
	0.9s	3.62nm		3.8mb X	
GTA	24.63	314 P	19 24.80	-0.2	
	Z 14s	0.60um		4.2MszX	
	E 11s	0.60um			
GUN	33.14	285 P	20 42.70	0.6	
	0.5s	11.00nm		5.0mb	
PKI	33.57	284 P	20 45.40	-0.4	
KKN	33.67	285 P	20 46.20	-0.4	
GKN	34.23	285 P	20 50.80	-0.6	
	0.5s	10.00nm		5.0mb	
WMQ	34.71	313 iPd	20 55.50	0.3	
	Z 20s	0.40um		4.2Msz	

		pP	21 05.00	32kmX	
GBA	43.78	265 Pd	22 10.30	-0.4	
	0.9s	3.00nm		4.1mb	
ASPA	48.62	166 eP	22 49.40	0.5	
WARB	50.02	175 eP	23 00.00	0.4	
MAIO	55.05	299 iPc	23 38.00	0.8	
SOD	70.36	336 iP	25 18.10	-0.3	
SUF	71.84	331 eP	25 25.80	-1.5	
	0.6s	7.50nm		4.9mb	
INK	72.94	22 eP	25 34.00	0.3	
MBC	73.18	13 eP	25 33.50	-1.6	
	0.4s	3.00nm		4.6mb	
NUR	73.21	329 eP	25 35.20	-0.2	
	Z 18s	0.20um		4.4Msz	
		LR	00 50.00		
HFS	78.36	331 eP	26 03.10	-1.4	
	1.0s	11.60nm		4.9mb	
	Z 17s	0.22um		4.6MszX	
		LR	02 29.00		
NAO	79.26	332 P	26 08.50	-1.0	
YKA	82.67	23 P	26 27.90	0.5	
KHC	83.73	321 eP	26 33.50	0.3	
GRF	84.77	323 eP	26 40.00	1.6	
EKA	88.48	332 Pc	26 56.90	0.5	
	0.6s	1.40nm		4.4mb	
EDM	89.16	30 iP	27 01.00	1.3	
LPG	89.59	321 eP	27 01.80	-0.4	
	1.1s	14.60nm		5.2mb	
LBF	90.29	323 eP	27 03.80	-1.3	
	1.0s	8.00nm		5.0mb	
SSF	90.50	323 eP	27 05.40	-0.6	
	1.0s	6.80nm		4.9mb	
SMF	90.57	323 eP	27 06.10	-0.3	
	1.1s	20.50nm		5.4mb	
AVF	90.75	323 eP	27 06.60	-0.6	
	1.2s	11.90nm		5.1mb	
MAF	91.53	323 eP	27 10.60	-0.2	
	1.0s	8.80nm		5.1mb	
SES	92.11	31 eP	27 14.00	0.5	
CAF	92.60	322 eP	27 16.20	0.4	
	1.0s	10.80nm		5.2mb	
RJF	92.67	323 eP	27 16.60	0.5	
	1.0s	12.00nm		5.3mb	
FFC	92.81	24 iPd	27 16.80	0.3	
	0.8s	17.00nm		5.5mb	
ZOBO	167.38	55 ePKP	34 02.00	-9.1X	

S.D. = 1.1 on 53 of 56 obs.

JUL 04, 1989 11h 06m 01.15± 0.40s
37.103 N ± 8.7km 71.451 E ± 8.7km
DEPTH = 33.0km (normal)
4.8mb (9 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

QUE	7.85	210 eP	08 06.40	10.3X	
		eS	09 25.80		
MAIO	9.64	269 iPc	08 19.50	-1.2	
		eS	09 59.00		
NDI	9.69	148 eP	08 23.50	2.1	
	0.7s	17.12nm		5.4mb	
		eS	10 06.50		
GKN	14.34	125 P	09 23.50	-0.4	
KKN	14.90	125 P	09 29.80	-1.6	
DMN	14.91	125 P	09 30.70	-0.8	
	0.5s	32.00nm		4.9mb	
PKI	15.13	125 P	09 33.60	-0.9	
GUN	15.22	123 P	09 35.80	0.2	
	0.4s	17.00nm		4.7mb	
HYB	20.59	160 iPd	10 41.00	1.0	
	1.0s	40.00nm		4.7mb	
GBA	24.01	166 Pc	11 14.00	0.2	
	0.8s	8.10nm		4.3mb	
CHTO	30.19	120 e(P)	12 10.50	-0.3	
NUR	37.55	324 eP	13 14.50	0.8	
SUF	37.61	328 eP	13 13.10	-1.0	
	0.6s	5.50nm		4.6mb	
UPP	40.82	321 iP	13 40.80	0.0	
HFS	42.82	321 eP	13 57.30	0.1	
	0.5s	12.10nm		4.9mb	
NAO	44.29	322 P	14 08.70	-0.4	
BNG	58.20	249 iPc	16 09.50	14.9X	
	0.4s	5.00nm			
MBC	66.72	3 ePc	16 50.60	0.1	
	0.5s	5.00nm		4.9mb	
INK	73.25	9 iPc	17 30.80	0.5	
FBA	73.79	16 iP	17 34.20	0.6	
	0.9s	1.30nm		3.9mb	

```
YKA     80.63    3 P      18 12.50    1.0
     S.D. = 1.0   on  19 of  21 obs.
-------------------------------------------
?  JUL  04, 1989  12h 17m 15.61±13.77s
   67.062 N ±102.km  156.461 W ±60.6km
   DEPTH =   5.0km  (geophysicist)
 ALASKA                              (676)
      ML 3.2 (PMR).

IMA      1.49 131 eP      17 43.40    0.2
FBA      4.15 117 eP      18 21.00    0.0
TTA      4.15 177 eP      18 21.80    0.7
                  e       27 25.50
SVW      5.99 176 eP      18 46.40   -0.7
PMR      6.34 146 eP      18 51.90   -0.1
     S.D. = 0.7   on   5 of   5 obs.
-------------------------------------------
   JUL  04, 1989  12h 44m 11.19± 0.89s
   35.022 N ± 7.8km  139.183 E ± 9.2km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN      (230)
      Felt (I JMA) on Oshima.

OSH      0.31 148 iPd     44 17.50    0.1
                  iS      44 21.90
CHJJ     1.04 352 P       44 30.70   -0.5
IIDJ     1.14 294 P       44 32.00   -1.0
                  S       44 46.90
KAKJ     1.43  34 P       44 36.80   -1.0
MAT      1.71 333 iPd     44 41.70   -0.1
                  iS      45 03.70
MTMJ     1.92 325 P       44 46.40    1.5
YAMJ     3.22  12 eP      45 04.70    1.3
OFUJ     4.51  25 eP      45 21.30   -0.4
     S.D. = 1.1   on   8 of   8 obs.
-------------------------------------------
   JUL  04, 1989  12h 46m 12.81± 0.70s
   34.991 N ± 6.5km  139.200 E ± 7.9km
   DEPTH =   5.0km  (geophysicist)
   4.0mb (  1 obs.)
 NEAR S. COAST OF HONSHU, JAPAN      (230)
      Felt (I JMA) on Oshima.

OSH      0.27 147 iPd     46 19.70    1.4
                  iS      46 24.50
CHJJ     1.07 351 P       46 33.40    0.0
IIDJ     1.16 295 iPd     46 34.10   -0.9
                  S       46 49.20
KAKJ     1.45  33 P       46 39.10   -0.6
                  eS      46 59.10
MAT      1.74 333 eP      46 45.00    1.1
                  eS      47 06.00
MTMJ     1.95 325 P       46 47.90    0.9
                  eS      47 13.50
NIIJ     2.25 356 eP      46 51.80    0.6
                  eS      47 18.10
TSRJ     2.69 283 eP      46 57.90    0.4
                  eS      47 31.50
YAMJ     3.25  12 P       47 05.50    0.1
OFUJ     4.53  25 P       47 22.70   -0.9
WRA     54.82 186 Pd      55 44.20   -2.0
      0.5s      0.80nm          4.0mb
     S.D. = 1.1   on  11 of  11 obs.
-------------------------------------------
%  JUL  04, 1989  12h 57m 29.65± 1.45s
   60.861 N ±14.6km    3.626 E ±10.5km
   DEPTH =  10.0km  (geophysicist)
 NORTH SEA                           (534)
      MD 1.8 (BER).

OSG      0.52 226 iP      57 39.98   -0.2
                  iS      57 45.83
SUE      0.59  70 eP      57 42.00    0.5
                  eS      57 50.01
ASK      0.86 115 eP      57 45.72   -0.5
                  iS      57 57.83
                  eS      58 33.34
HYA      1.28  75 eP      57 53.66    0.2
                  eS      58 10.06
KMY      1.84 153 eP      58 02.25    0.7
                  eS      58 22.00
NRA0     3.88  88 eP      58 29.80   -0.8
                  eS      59 11.30
                  iSg     59 27.30
     S.D. = 0.8   on   6 of   6 obs.
-------------------------------------------
*  JUL  04, 1989  13h 02m 52.55± 1.03s
   17.658 S ± 9.2km  179.060 W ±12.4km
   DEPTH = 545.6 ± 10.6 km
   4.8mb (  8 obs.)
 FIJI ISLANDS REGION                 (181)

VUN      2.38 261 ePd     04 04.40    0.2
DZM     14.32 250 iPc     05 55.10   -0.1
KRP     20.74 192 P       06 57.70    1.1
MHZ     29.01 197 P       08 07.60   -2.6
MSZ     29.07 199 P       08 11.60    1.1
COO     29.37 239 iPc     08 14.30    0.9
      0.4s     27.00nm          5.2mb
RMQ     31.02 248 iPd     08 28.50    1.0
CAN     33.37 232 eP      08 47.70    0.6
BWA     33.46 234 eP      08 46.60   -1.4
TOO     36.85 230 iPd     09 17.00    1.1
TAU     38.01 221 iPd     09 25.90    0.6
STK     38.21 241 iPd     09 28.10    1.0
ADE     41.25 237 iPd     09 51.10   -0.6
      0.6s     16.00nm          4.7mb
ASPA    44.26 254 iPc     10 14.60   -0.9
      0.5s     31.00nm          5.1mb
                  eS      16 08.40
                  e       19 15.10
MTN     48.19 268 ePd     10 45.00   -0.6
FORR    49.52 244 iPd     10 55.00   -0.3
      0.3s     32.00nm          5.3mb
WARB    50.78 250 iPd     11 04.20   -0.5
      0.3s      4.00nm          4.3mb
COOL    55.50 244 eP      11 36.00   -2.3
KLB     58.38 243 eP      11 56.50   -1.5
MAT     67.34 324 eP      12 54.00   -1.0
      0.8s     18.66nm          4.7mb
SPA     72.45 180 ePd     13 25.70    0.6
      1.0s     20.00nm          4.6mb
NJ2     77.30 310 eP      13 52.00   -0.3
MDJ     77.63 325 eP      13 54.50    0.8
KDC     78.30  14 eP      14 17.20   20.2X
      0.8s     24.14nm
CN2     79.45 323 Pc      14 03.50    0.2
KVN     80.14  44 eP      14 07.00   -0.3
PMR     82.51  14 eP      14 18.00   -0.6
BJI     83.17 316 eP      14 23.00    0.6
MAW     83.88 200 eP      14 21.00   -4.5X
TIY     84.64 312 eP      14 31.00    1.2
XAN     85.62 308 Pc      14 35.70    1.1
FBA     85.70  13 eP      14 32.50   -1.8
CHTO    88.33 290 eP      14 49.00    1.4
      0.9s      2.77nm          4.1mb
GTA     94.40 310 eP      15 15.20   -0.1
KRA    144.25 339 ePKP    21 27.00   -0.6
KSP    144.69 343 iPKPc   21 28.30   -0.1
CLL    145.08 347 iPKPc   21 28.90   -0.1
      0.8s     24.00nm
BRG    145.27 346 iPKP    21 29.70    0.4
      0.8s     18.00nm
MLR    145.30 329 ePKPc   21 30.00    0.2
PRU    145.94 344 PKP     21 32.00    1.5
ZST    146.80 340 e(PKP)  21 33.90    2.0X
MEM    146.88 354 PKP     21 35.20    3.3X
KHC    146.98 345 PKP     21 35.50    3.3X
      1.2s     10.00nm
DOU    147.51 356 PKPc    21 36.20    3.3X
      0.8s     13.30nm
WLF    147.80 354 iPKPd   21 37.70    4.3X
CDF    148.89 352 ePKP    21 40.00    4.7X
      0.4s      2.30nm
LDF    149.13   1 ePKP    21 39.80    4.3X
GRR    149.32   2 ePKP    21 40.70    4.9X
      0.4s      2.30nm
HAU    149.41 353 ePKP    21 41.00    5.0X
      0.6s      3.60nm
LPF    149.66   3 ePKP    21 41.40    5.1X
      0.6s      7.20nm
LOR    150.37 356 ePKP    21 43.40    5.9X
      0.4s      4.60nm
SSF    150.60 356 ePKP    21 44.00    6.2X
      0.4s      4.00nm
LBF    150.65 356 ePKP    21 43.90    6.0X
      0.4s      3.45nm
MFF    151.12   2 ePKP    21 44.80    6.2X
BGF    151.14 357 ePKP    21 45.00    6.4X
      0.6s      5.40nm
MAF    151.49 358 ePKP    21 46.00    6.8X
      0.7s      4.40nm
     S.D. = 1.1   on  38 of  56 obs.
-------------------------------------------
   JUL  04, 1989  13h 18m 44.21± 0.63s
   34.904 N ± 5.5km  139.169 E ± 5.2km
   DEPTH =  26.8 ±  4.5 km
   4.7mb (  6 obs.)  4.3Msz (  1 obs.)
 NEAR S. COAST OF HONSHU, JAPAN      (230)
      Felt (III JMA) on Oshima.

OSH      0.22 129 iPd     18 50.30   -0.1
                  S       18 55.10
CHJJ     1.15 353 iPd     19 03.50   -1.1
IIDJ     1.18 300 iPd     19 04.80   -0.2
KAKJ     1.54  32 iP+     19 09.90   -0.2
MAT      1.81 335 iPd     19 14.70    0.6
                  iS      19 36.90
MTMJ     2.01 327 iPd     19 18.30    1.2
                  S       19 45.20
NIIJ     2.34 357 P       19 21.80    0.2
TSRJ     2.68 285 P       19 27.40    0.9
                  S       20 04.10
YAMJ     3.34  12 P       19 36.10    0.3
OFUJ     4.62  25 P       19 53.00   -1.1
SHK      5.36 268 eP      20 04.50    0.0
AOMJ     5.73   9 eP      20 11.20    1.6
KUMJ     7.34 254 P       20 33.20    0.9
KAGJ     7.88 244 P       20 40.80    0.9
HOOJ     8.13  22 P       20 41.60   -1.8
                  eS      22 11.30
MDJ     12.17 326 eP      21 43.50    4.8X
CN2     13.83 314 eP      22 05.40    4.7X
SNY     14.04 304 eP      22 09.00    5.6X
     Z  17s      1.40um
     N  14s      1.20um
     E  18s      0.80um
                  eS      24 52.00
DL2     14.59 291 eP      22 19.00    8.3X
     N  13s      1.20um
     E  10s      0.80um
                  sS      25 20.00
SSE     15.56 261 e(P)    22 32.00    8.7X
     Z  16s      0.90um
     N  15s      2.30um
                  S       25 40.00
TIA     17.98 281 eP      22 57.40    3.5X
     N  11s      0.80um
     E  12s      0.80um
BJI     18.94 292 eP      23 05.00   -0.6
     Z  18s      0.59um
     N  10s      0.57um
     E  10s      0.31um
                  eS      26 44.00
WHN     21.31 265 eP      23 33.00    2.0
     N  14s      1.41um
                  S       27 34.00
TIY     21.70 285 eP      23 39.00    3.9X
     N  13s      0.80um
     E  13s      0.70um
                  S       27 43.00
HHC     22.53 293 eP      23 41.80   -1.5
BTO     23.68 293 eP      23 53.00   -1.5
     N  16s      1.20um
     E  16s      0.90um
                  eS      28 03.50
XAN     24.91 277 P       24 10.00    3.6X
     N  14s      1.40um
LZH     28.69 283 e(P)    24 40.00   -1.3
     Z  18s      0.70um          4.3Msz
CD2     29.90 272 eP      24 55.20    3.2X
GTA     31.51 290 eP      25 05.20   -1.0
     Z  12s      0.60um          4.5MszX
     N  10s      0.40um
WMQ     40.22 299 eP      26 18.70   -1.5
     Z  16s      3.00um          5.2MszX
PMR     51.42  36 eP      27 48.70    0.1
      1.3s     14.20nm          4.7mb
FBA     51.87  31 ePd     27 53.10    1.1
      0.8s      9.40nm          4.8mb
WB5     54.67 186 eP      28 12.20   -0.9
WRA     54.74 186 Pd      28 13.00   -0.6
      0.4s      1.60nm          4.4mb
INK     57.10  26 eP      28 30.00   -0.2
ASPA    58.46 186 eP      28 39.30   -0.9
      1.0s      6.00nm          4.6mb
MBC     59.07  16 eP      28 44.00    0.1
      1.0s      6.00nm          4.7mb
SUF     69.06 333 eP      29 50.00    0.
FFC     76.47  32 eP      30 33.00   -0
      1.0s     14.00nm          4.9m
```

04d 13h

CMB 76.60 53 e(P) 30 35.30 1.2
KVN 77.51 51 eP 30 40.80 1.5
e 32 10.30
CLL 82.01 329 e(P) 31 08.00 5.0X
KHC 83.38 327 P 31 11.90 1.7
LPB 149.52 60 ePKP 38 34.00 5.1X
CNCB 149.79 60 PKP 38 36.00 6.5X
S.D. = 1.1 on 34 of 46 obs.

• JUL 04, 1989 13h 35m 03.20± 1.28s
50.438 N ± 6.1km 6.125 E ±12.6km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 1.9 (UCC).

MEM 0.19 336 iP 35 07.30 0.0
ENN 0.35 339 iPgc 35 10.50 0.0
0.5s 20.00nm
eSg 35 15.50
e 35 21.00
WLF 0.77 179 iP 35 18.30 0.0
DOU 1.04 251 iPc 35 22.70 -0.1
SNF 1.18 274 iP 35 25.30 0.1
S.D. = 0.1 on 5 of 5 obs.

JUL 04, 1989 14h 50m 22.38± 0.78s
22.466 S ± 7.8km 68.805 W ± 8.8km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

ANT 1.93 230 iPc 50 53.50 0.0
i 50 54.50
iS 51 16.70
SLA 3.78 127 ePc 51 19.80 -0.1
CNCB 5.68 8 eP 51 48.00 0.8
LPB 5.94 7 eP 51 50.00 -0.8
ZOBO 6.20 6 P 51 58.50 3.9X
ARE 6.49 337 eP 52 09.00 10.6X
ITB1 13.40 102 eP 53 32.90 0.2
ITB 13.58 103 e(P) 53 35.00 -0.1
PPD 16.20 92 eP 54 05.20 -4.1X
S.D. = 0.7 on 6 of 9 obs.

• JUL 04, 1989 15h 11m 36.75± 1.34s
34.804 N ±13.3km 139.225 E ± 9.7km
DEPTH = 33.0km (normal)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (I JMA) on Oshimo.

OSH 0.13 109 iPd 11 43.00 0.2
iS 11 47.80
IIDJ 1.27 302 iPd 11 57.60 -0.7
iS 12 12.20
KAKJ 1.60 29 P 12 02.50 -0.5
S 12 22.80
MAT 1.92 335 iPd 12 07.60 -0.2
eS 12 30.00
MTMJ 2.12 327 P 12 11.60 1.0
S 12 37.40
YAMJ 3.43 11 P 12 29.60 0.5
OFUJ 4.69 24 eP 12 46.80 -0.3
S.D. = 0.7 on 7 of 7 obs.

? JUL 04, 1989 16h 00m 33.70± 1.47s
37.028 N ±18.4km 2.759 W ± 8.3km
DEPTH = 5.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

ENIJ 0.44 97 iP 00 42.50 0.0
eS 00 48.00
AFC 0.67 290 ePg 00 47.00 -0.1
eSg 00 56.00
EBAN 1.40 325 ePn 01 00.00 0.1
eSn 01 17.30
EVIA 1.62 7 ePn 01 03.00 -0.1
eSn 01 24.10
S.D. = 0.2 on 4 of 4 obs.

JUL 04, 1989 16h 57m 46.32± 0.34s
30.260 S ±10.8km 177.119 W ± 8.4km
DEPTH = 33.0km (normal)
4.7mb (6 obs.)
KERMADEC ISLANDS (178)

DZM 16.85 295 iPc 01 45.90 4.6X
MSZ 18.61 215 P 02 02.00 -0.9

BRS 26.49 269 iPc 03 25.20 2.6
CTA 34.53 278 eP 04 34.00 0.2
ASPA 43.88 266 iPd 05 50.30 -1.3
0.9s 9.00nm 4.6mb
Z 17s 1.35um 4.9MszX
LR 24 12.70
WRA 44.85 272 P 06 00.00 0.5
0.9s 3.80nm 4.3mb
WB5 44.85 272 eP 05 57.70 -1.8
SPA 59.91 180 e(P) 07 52.30 1.0
1.1s 5.95nm 4.6mb
MAW 72.70 200 eP 09 13.00 0.6
MAT 78.56 325 eP 09 45.00 -1.1
1.0s 10.00nm 4.8mb
RVR 85.23 46 eP 10 21.00 0.2
SBB 85.41 45 eP 10 21.00 -0.8
ISA 85.67 44 eP 10 23.00 0.0
FRI 85.83 43 e(P) 10 23.70 0.0
TPC 86.13 47 eP 10 25.00 -0.4
CMB 86.15 41 eP 10 25.30 -0.1
GLA 86.23 48 eP 10 26.00 0.1
CLC 86.30 45 eP 10 26.00 -0.1
ORV 86.58 40 e(P) 10 27.40 0.0
WDC 86.73 38 eP 10 28.10 0.0
TNP 88.03 43 iP 10 34.80 0.2
0.9s 6.18nm 4.9mb
KVN 88.16 42 iP 10 35.60 0.4
MDJ 88.94 325 eP 10 39.50 0.9
CN2 90.49 322 P 10 46.00 0.2
ALQ 92.89 51 eP 10 57.50 0.1
1.0s 3.00nm 4.7mb
e 11 00.00
SUF 144.22 342 iPKP 17 16.40 -3.3X
1.1s 22.80nm
BHD 144.75 286 ePKPc 17 20.50 -1.0
MSL 145.98 291 ePKPc 17 24.50 1.0
NUR 146.44 341 ePKP 17 24.00 0.5
0.7s 18.70nm
UPP 148.77 346 iPKP 17 23.50 -3.7X
NAO 148.98 352 PKP 17 30.70 3.1X
HFS 149.25 349 ePKP 17 30.60 2.6X
0.9s 6.90nm
BNG 150.36 213 iPKPd 17 30.00 -1.1
0.4s 5.00nm
S.D. = 0.9 on 28 of 33 obs.

JUL 04, 1989 17h 28m 22.96± 0.78s
35.038 N ± 6.2km 139.184 E ± 4.9km
DEPTH = 32.2 ± 4.9 km
4.6mb (10 obs.) 4.2Msz (1 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (IV JMA) at Ajiro and (I JMA) at Nagatsuro.

NGT 0.52 212 eP 28 35.00 1.2
CHJJ 1.02 351 iP+ 28 40.30 -0.7
KAKJ 1.42 34 iP+ 28 46.60 0.0
MAT 1.70 332 iPc 28 51.40 0.6
eS 29 14.00
MTMJ 1.91 324 P 28 55.40 1.5
S 29 21.60
NIIJ 2.20 356 iP+ 28 58.50 0.5
S 29 29.00
TSRJ 2.66 282 P 29 04.00 -0.6
S 29 39.80
YAMJ 3.20 12 P 29 12.80 0.6
OFUJ 4.50 25 P 29 29.50 -1.1
eS 30 23.20
SHK 5.38 266 eP 29 41.00 -2.0
AOMJ 5.59 9 P 29 47.50 1.5
SHNJ 6.72 265 eP 30 01.20 -0.8
KUMJ 7.39 253 P 30 10.10 -1.2
MRRJ 7.52 11 eP 30 12.30 -0.8
KAGJ 7.95 243 P 30 17.70 -1.4
HOOJ 8.00 22 P 30 17.20 -2.6
eS 31 48.70
KUSJ 9.12 26 P 30 30.00 -5.3X
S 32 09.20
ASAJ 9.45 15 eP 30 37.20 -2.7
MDJ 12.07 325 eP 31 18.00 2.5
CN2 13.74 314 eP 31 39.00 1.2
Z 16s 0.70um
N 13s 0.60um
E 13s 0.30um
epP 31 42.00
eS 34 18.00
SNY 13.97 304 eP 31 44.80 4.0X

Z 17s 1.10um
N 12s 0.90um
E 17s 0.80um
sS 34 33.00
DL2 14.55 291 P 31 55.00 6.6X
N 11s 0.50um
E 10s 0.60um
SS 34 53.00
TIA 17.97 280 eP 32 34.70 2.8
N 13s 0.60um
E 13s 0.70um
sS 36 05.50
BJI 18.90 292 eP 32 44.00 0.7
Z 32s 0.39um 4.2MszX
N 12s 0.34um
E 12s 0.37um
eS 36 20.00
WHN 21.33 265 eP 33 10.00 0.6
N 12s 0.63um
S 37 10.00
TIY 21.68 285 eP 33 12.40 -0.5
Z 16s 0.95um 4.3MszX
N 14s 0.80um
sS 37 18.00
HHC 22.49 293 eP 33 20.00 -1.0
BTO 23.64 292 eP 33 32.00 -0.2
N 14s 0.80um
E 14s 0.60um
eS 37 46.00
XAN 24.91 276 eP 33 43.70 -0.8
LZH 28.67 282 (P) 34 19.00 -0.1
Z 16s 0.50um 4.2MszX
GYA 29.13 262 P 34 24.00 0.7
N 14s 0.70um
E 14s 0.50um
CD2 29.91 272 eP 34 30.50 0.4
GTA 31.48 290 eP 34 42.80 -1.2
Z 12s 0.60um 4.5MszX
N 10s 0.30um
CHTO 39.06 256 eP 35 49.20 0.5
0.9s 1.28nm 3.7mb
WMQ 40.17 299 eP 35 57.70 0.0
Z 24s 0.30um 4.1MszX
eS 42 04.70
PKI 46.08 276 P 36 46.20 0.0
0.6s 4.00nm 4.5mb
KKN 46.10 277 P 36 47.40 1.2
DMN 46.32 276 P 36 47.00 -0.9
GKN 46.54 277 P 36 48.80 -0.8
SVW 48.18 36 eP 37 03.10 1.2
IMA 49.32 30 ePd 37 08.10 -2.6
KDC 49.84 41 eP 37 14.20 -0.4
PMR 51.30 36 eP 37 25.20 -0.5
0.1s 21.90nm 6.1mb X
TOA 52.66 35 eP 37 37.00 1.0
WRA 54.87 186 Pd 37 52.00 -0.6
0.4s 3.40nm 4.7mb
INK 56.98 26 eP 38 06.00 -1.3
ASPA 58.60 186 eP 38 16.70 -2.4
0.8s 11.00nm 5.0mb
MBC 58.94 16 eP 38 20.50 -0.5
0.8s 5.00nm 4.7mb
ALE 62.20 3 eP 38 42.00 -1.1
0.5s 3.00nm 4.7mb
SOD 66.10 337 eP 39 08.00 -0.6
YKA 66.43 29 P 39 14.00 3.2X
SUF 68.94 333 eP 39 30.00 3.5X
BWA 69.64 172 eP 39 32.00 0.9
PNT 70.86 43 eP 39 39.00 0.5
WDC 73.72 52 e(P) 39 58.90 3.4X
HFS 75.15 335 eP 40 02.50 -0.9
0.5s 3.70nm 4.6mb
Z 20s 0.12um 4.2Msz
LR 12 53.00
NAO 75.60 337 P 40 04.40 -1.6
FFC 76.35 32 eP 40 10.00 -0.3
0.6s 9.00nm 5.0mb
CMB 76.51 53 ePc 40 12.00 0.4
LRM 76.84 43 eP 40 14.00 0.4
KVN 77.41 51 iP 40 17.70 0.9
TNP 78.53 52 iP 40 23.90 0.9
0.8s 4.66nm 4.5mb
BW06 80.35 44 P 40 32.10 -0.6
0.5s 1.07nm 4.1mb
CLL 81.90 329 i(P)d 40 40.20 -0.1
1.2s 0.70nm 3.6mb X
RSSD 82.52 40 P 40 44.80 0.8

```
GLA     83.09  54 P      40 47.80   0.9
KHC     83.27 327 P      40 48.50   0.9
PV09    83.32  47 P      40 50.10   1.7
PV10    83.45  47 P      40 50.10   1.1
GRF     83.87 329 eP     40 52.00   1.4
GOL     84.74  44 P      40 55.00  -0.5
ALQ     87.26  49 e(P)   41 09.50   1.6
SPA    124.86 180 e(PKP)47 20.70   0.4
        0.9s      3.64nm
ZOBO   149.25  60 ePKP   48 12.00   5.4X
        0.9s     10.81nm
                 i       48 14.00
LPB    149.45  60 (PKP)  48 10.00   3.3X
CNCB   149.72  60 ePKP   48 09.00   1.7
      S.D. = 1.2  on  68 of  76 obs.
-----------------------------------------
?  JUL  04, 1989  17h 30m 13.16± 2.46s
   67.032 N ±11.0km   20.434 E ±28.3km
    DEPTH =  10.0km  (geophysicist)
 SWEDEN                              (536)
      MD 2.7 (BER).

TRO      2.67 349 iP     30 56.82  -0.1
                  eS     31 26.34
LOF      2.86 296 iP     30 59.91   0.3
                  eS     31 37.84
NSS      4.30 238 eP     31 19.49  -0.5
                  eS     32 07.40
NRA0     7.43 216 iPc    32 04.50   0.3
                  eS     33 24.50
                  iSg    34 08.40
      S.D. = 0.7  on   4 of   4 obs.
-----------------------------------------
    JUL  04, 1989  18h 13m 03.53± 0.99s
   43.300 N ± 7.8km   18.936 E ± 7.0km
    DEPTH =  10.0km  (geophysicist)
 YUGOSLAVIA                          (383)
      ML 2.5 (TTG).

PLE      0.34  85 iPgc   13 09.00  -1.5
                  iSg    13 14.00
NKY      0.49 175 iPgc   13 13.10  -0.4
                  iSg    13 22.50
8RY      0.49 216 iPgd   13 11.80  -1.7
                  iSg    13 21.00
IVA      0.82 121 ePg    13 18.60  -0.9
                  eSg    18 32.50
TTG      0.90 165 ePg    13 20.10  -0.7
                  eSg    13 34.50
HCY      0.91 201 ePg    13 20.50  -0.4
                  eSg    13 36.00
PVY      1.04 132 ePg    13 22.40  -0.8
                  eSg    13 40.00
SDA      1.35 162 ePn    13 29.30   1.0
PUK      1.44 150 iPn    13 30.60   1.0
KKS      1.64 138 iPn    13 34.50   2.1
LACI     1.76 161 ePn    13 36.50   2.3
HVAR     1.82 267 iPn    13 35.50   0.4
                  iSg    14 01.30
BEO      1.87  35 ePn    13 36.50   0.6
                  eSg    14 03.20
PHP      1.96 145 ePn    13 40.60   3.5X
TIR      2.07 160 ePn    13 42.00   3.3X
SKO      2.27 125 ePn    13 41.00  -0.7
BZS      3.01  39 ePc    13 56.00   3.9X
VAY      3.34 125 ePn    14 04.60   7.7X
PTJ      3.36 322 eP     14 03.10   5.9X
VBY      3.44 311 ePn    14 03.70   5.5X
                  eSn    14 38.60
                  i      15 00.70
LJU      4.17 313 e(Pn)  14 19.00  10.4X
                  e      15 16.00
VOY      4.52 309 ePn    14 11.40  -2.2X
                  eSn    15 37.10
      S.D. = 1.4  on  14 of  22 obs.
-----------------------------------------
*  JUL  04, 1989  18h 14m 38.69± 1.99s
   32.125 S ±10.0km   71.552 W ±18.5km
    DEPTH =  10.0km  (geophysicist)
 NEAR COAST OF CENTRAL CHILE         (135)

ROCH     0.96 152 iPc    14 57.50   0.4
                  iS     15 11.00
LCCH     1.35 181 iPc    15 02.50  -1.0
                  iS     15 21.40
SAN      1.52 151 eP     15 06.10   0.1
                  iS     15 26.30

FCH      1.60 139 iPd    15 07.00  -0.4
                  iS     15 28.50
TACH     1.61 161 iPd    15 07.60   0.4
                  iS     15 29.60
PCH      1.73 150 eP     15 08.50  -0.5
                  iS     15 32.40
LNV      1.83 176 eP     15 11.00   0.6
                  iS     15 35.40
RTBS     1.84  76 e(P)   15 11.30   0.7
CHCH     1.96 158 eP     15 13.00   0.7
                  iS     15 38.80
RTCB     2.43  76 ePd    15 29.70  10.6X
RTCV     2.58  85 e(P)   15 22.00   0.8
RTRS     2.65  43 e(P)   15 21.50  -0.7
RTLL     2.74  74 e(P)   15 25.00   1.4
CFA      2.87  80 ePc    15 25.00  -0.3
MRA      4.96  95 eP     15 52.50  -2.4
CYA      6.18  55 e(P)   16 08.00  -4.3X
      S.D. = 1.0  on  14 of  16 obs.
-----------------------------------------
    JUL  04, 1989  19h 42m 41.43± 0.94s
   5.877 N ± 3.5km  125.621 E ± 5.1km
    DEPTH =  80.4 ±  9.1 km
    4.9mb ( 19 obs.)
 MINDANAO, PHILIPPINE ISLANDS        (259)
      CENTROID, MOMENT TENSOR        (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 21C
      Centroid Location:
      Origin Time        19:42:41.0 0.7
      Lat  5.65N 0.07 Lon 125.48E 0.09
      Dep  77.1 6.0 Half-duration  1.5
      Moment Tensor;   Scale 10**16 Nm
        Mrr= 2.88 0.45  Mtt= 1.60 0.58
        Mff=-4.48 0.90  Mrt= 4.06 0.44
        Mrf= 0.80 0.39  Mtf= 5.23 0.54
       Principal Axes:
        T  Val=  7.81  Plg=39  Azm=334
        N       -0.13      50       138
        P       -7.68       8       237
      Best Double Couple:Mo=7.7*10**16
       NP1:Strike=  8 Dip=57 Slip= 156
       NP2:       112     70       36

DAV      1.20 358 iPc    43 03.00  -0.3
TSM      7.70 258 ePd    44 35.00   2.1
KKM      9.36 272 ePc    45 51.00  55.2X
        1.0s   117.70nm
OCP      9.78 333 eP     45 24.00  22.5X
AAI      9.84 165 eP     45 00.00  -2.3
                  eS     46 42.50
BAG     11.58 335 eP     45 26.00   0.2
KHKI    17.32 215 ePc    46 41.00   1.5
                  e      48 47.00
MTN     19.39 164 eP     47 02.00  -1.8
HKC     19.72 327 iP     47 08.00   0.7
OZH     20.12 341 P      47 10.00  -1.4
      Z  24s      1.40um          4.2MszX
                  sP     47 25.00
QIZ     20.18 312 Pc     47 12.50   0.5
      N  11s      0.70um
                  eS     50 53.00
                  sS     51 06.00
PJG     20.44  67 eP     47 14.80   0.0
GZH     20.81 327 iPc    47 17.60  -0.8
                  S      51 07.00
KNA     21.71 172 eP     47 27.00  -0.5
        0.5s    70.00nm          5.3mb
KGM     22.57 261 ePc    47 37.40   1.4
IPM     24.53 268 ePd    47 56.20   1.2
        1.0s    84.50nm          5.1mb
LAT     24.70 120 eP     47 57.00   0.4
SNG     24.88 274 eP     47 58.80   0.6
                  eS     52 18.00
SSE     25.43 351 eP     48 02.00  -1.3
        1.5s    33.00nm          4.6mb
      Z  20s      0.50um          4.0Msz
      E  10s      0.20um
                  pP     48 15.70  57kmX
                  sP     48 22.00
                  eS     52 37.00
                  eSS    53 58.00
KAGJ    25.66  10 P      48 04.90  -0.5
LOE     26.01 298 iPc    48 09.00   0.1
PMG     26.29 125 eP     48 11.00  -0.3
WHN     26.73 338 eP     48 15.20   0.0
      N  12s      0.31um
                  eS     52 41.00
NJ2     26.80 347 Pd     48 19.00   3.2X
      Z  20s      0.30um          3.8Msz
                  sS     53 04.00
NST     26.83 293 eP     48 18.40   2.1
KUMJ    26.96  10 P      48 16.00  -1.4
WB5     27.00 162 eP     48 17.00  -0.8
                  eS     52 45.80
WRA     27.05 162 Pd     48 17.80  -0.5
        0.3s     2.50nm          4.2mb
GYA     27.31 321 iPc    48 22.00   1.2
      N  16s      0.50um
      E  16s      0.50um
                  sS     53 12.00
MBL     27.46 192 eP     48 20.80  -1.2
BDT     28.37 296 eP     48 31.00   0.8
        0.8s    41.50nm          5.1mb
SHNJ    28.56  10 eP     48 30.80  -1.0
CHG     29.00 299 iPc    48 36.20   0.2
        0.9s    15.13nm          4.6mb
CHTO    29.00 299 iPc    48 36.20   0.3
        0.8s    12.63nm          4.6mb
KMI     29.10 314 iPc+   48 38.50   1.5
      Z  28s      0.90um          4.2MszX
                  pP     48 52.00  54kmX
                  sP     49 03.00
                  eS     53 22.00
SHK     29.25  12 eP     48 36.80  -1.2
NANU    29.94 199 eP     48 43.00  -1.2
ASPA    30.46 165 iPc    48 48.10  -0.7
        0.4s    8.00nm           4.8mb
TIA     31.18 347 eP     48 53.30  -1.7
                  ScP    55 24.00
WARB    31.88 178 iPc    49 01.10  -0.2
XAN     32.01 333 P      49 01.00  -1.4
CD2     32.27 323 eP     49 04.00  -0.7
                  eS     54 14.50
CTA     32.83 142 iPc    49 11.00   1.5
        1.0s    16.00nm          4.8mb
MEKA    33.02 192 eP     49 10.00  -1.1
TIY     33.89 341 eP     49 15.00  -3.7X
      N  14s      0.30um
                  pP     49 27.00  45kmX
BJI     35.06 347 eP     49 27.00  -1.5
                  eScP   55 37.00
SNY     35.84 357 Pc     49 34.00  -1.1
MRWA    36.10 194 eP     49 36.50  -0.9
LZH     36.10 329 eP     49 38.00   0.4
        1.5s    53.00nm          5.2mb
      Z  20s      0.50um          4.3Msz
                  i      49 56.50
                  i      51 04.50
FORR    36.59 176 eP     49 41.00  -0.5
COOL    36.80 186 eP     49 42.00  -1.3
HHC     37.03 342 P      49 45.00  -0.3
BAL     37.27 193 eP     49 46.30  -0.9
BTO     37.30 340 eP     49 47.00  -0.5
                  PP     51 12.00
                  eS     55 30.00
CN2     37.77 360 eP     49 50.00  -1.3
                  sP     50 09.00
                  PcP    52 05.00
                  eS     55 37.00
                  ScP    55 46.00
KLB     38.01 191 eP     49 52.00  -1.4
MUN     38.70 193 iPc    49 58.70  -0.5
MDJ     38.74   5 eP     49 59.50   0.1
MRRJ    38.89  18 eP     50 01.70   1.0
NWAO    39.40 191 iPc    50 05.00  -0.1
SAP     39.55  18 eP     50 07.00   0.9
HOOJ    39.59  21 P      50 08.20   1.7
LSA     40.21 310 iPd    50 14.40   2.1
STK     40.52 159 eP     50 15.00   0.8
RKG     40.56 191 eP     50 19.00   4.5X
GTA     40.70 329 Pc     50 15.40  -0.4
      Z  18s      0.70um          4.6Msz
KUSJ    40.72  22 eP     50 17.50   1.7
ASAJ    40.91  19 eP     50 18.70   1.4
BRS     42.23 143 eP     50 29.00   0.6
ADE     42.46 164 iPc    50 24.60  -5.6X
        0.8s    55.22nm          5.4mb
GUN     43.59 305 Pc     50 40.20   0.3
PKI     43.84 304 Pc     50 42.00   0.1
KKN     44.03 304 Pc     50 43.30   0.0
DMN     44.11 304 Pc     50 44.00   0.0
GKN     44.64 304 Pc     50 40.10  -f
BWA     45.50 153 eP     50 57.50   2
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04d 19h

BFD 45.65 161 eP 50 56.50 0.7
CAN 46.51 153 eP 51 04.70 2.1
HYB 47.38 288 eP 51 10.30 0.6
1.0s 80.00nm 5.6mb
KOD 47.84 278 eP 51 14.00 0.3
DZM 48.68 126 iPc 51 20.80 1.0
WMQ 50.34 325 Pd 51 31.50 -0.7
Z 28s 0.40um 4.3MszX
NDI 51.04 302 iPc 51 36.00 -1.6
POO 51.96 289 iPc 51 45.60 0.8
KSH 55.73 314 eP 52 12.60 0.3
QUE 60.08 301 iPd 52 42.60 -0.4
MSZ 63.01 147 P 53 04.90 2.8
ADK 65.84 35 eP 53 20.40 0.1
MAIO 67.34 307 iPc 53 29.80 -0.6
1.0s 10.00nm 4.7mb
eS 02 06.00
SDN 76.04 34 eP 54 21.80 0.2
TAB 77.98 308 eP 54 32.00 -0.9
SVW 79.45 29 ePc 54 41.80 1.5
TTA 79.50 27 eP 54 41.70 1.1
KDC 80.73 33 ePc 54 48.20 1.1
IMA 80.88 24 ePc 54 49.20 1.2
0.9s 25.00nm 5.1mb
PMR 82.60 29 ePc 54 57.20 0.4
1.0s 2.50nm 4.1mb
TOA 84.01 28 ePc 55 05.60 1.5
SOD 88.07 338 eP 55 24.00 0.1
INK 88.58 21 ePc 55 25.50 -0.8
SUF 89.15 333 iP 55 27.20 -1.8
0.9s 2.50nm 4.4mb
MBC 90.11 13 eP 55 34.50 1.2
1.0s 7.00nm 4.8mb
NUR 90.30 331 iP 55 33.00 -1.4
0.8s 16.10nm 5.3mb
UPP 93.86 331 iP 55 48.60 -2.2
HFS 95.62 332 eP 55 56.30 -2.6
1.2s 15.80nm 5.4mb
Z 20s 0.08um 4.2Msz
LR 38 12.00
NAO 96.65 333 P 56 01.20 -2.4
YKA 98.01 24 P 56 11.10 1.4
CNCB 162.81 130 ePKP 02 35.00 -1.6
LPB 162.89 129 (PKP) 02 38.00 1.5
ZOBO 163.03 129 PKP 02 41.00 4.1X
Z 20s 0.09um
eLR 20 36.00
S.D. = 1.2 on 101 of 109 obs.

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* JUL 04, 1989 19h 53m 51.40± 0.99s
38.881 N ±12.5km 24.770 E ± 8.9km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.0 (ATH).

PRK 1.22 72 ePb 54 14.50 0.3
ATH 1.23 223 ePn 54 13.70 -0.5
NEO 1.28 290 ePn 54 16.00 0.9
EZN 1.53 51 ePn 54 19.50 0.7
PLG 1.81 326 ePb 54 27.00 4.2X
RDO 2.34 14 ePn 54 29.00 -1.4
S.D. = 1.4 on 5 of 6 obs.

% JUL 04, 1989 20h 10m 11.72± 0.98s
61.145 N ±11.1km 10.131 E ± 8.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.1 (BER).

NRA0 0.80 120 iPd 10 27.10 -0.2
iPg 10 29.70
iS 10 39.30
MOL 1.88 321 iP 10 44.59 0.4
eS 11 08.30
HYA 1.91 272 iP 10 44.36 -0.2
eS 11 09.29
ODD1 2.13 236 iP 10 48.30 0.5
eS 11 14.02
BLS1 2.41 225 eP 10 52.43 0.5
eS 11 19.40
ASK 2.51 257 eP 10 52.11 -1.0
eS 11 23.98
S.D. = 0.8 on 6 of 6 obs.

? JUL 04, 1989 20h 34m 02.98± 0.82s
37.656 N ±10.7km 73.887 E ±11.0km
DEPTH = 33.0km (normal)
4.6mb (2 obs.)
TAJIK SSR (715)

NDI 9.37 162 eP 36 20.00 1.2
QUE 9.41 220 eP- 36 19.30 -0.3
ed 39 25.00
MAIO 11.59 268 eP 36 44.00 -5.3X
eS 38 43.00
GKN 13.19 134 P 37 10.40 -0.3
0.5s 9.00nm 5.0mb X
KKN 13.73 132 P 37 16.90 -0.9
0.6s 9.00nm 4.8mb X
DMN 13.76 133 P 37 17.70 -0.6
0.6s 9.00nm 4.8mb X
PKI 13.97 133 P 37 21.60 0.6
HFS 43.60 321 eP 42 04.60 -0.8
0.4s 2.40nm 4.3mb
MBC 66.06 3 ePd 44 49.20 1.1
0.6s 7.00nm 4.9mb
S.D. = 1.0 on 8 of 9 obs.

JUL 04, 1989 21h 09m 49.21± 0.68s
40.827 N ± 6.8km 28.107 E ± 5.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT 0.40 37 ePg 09 58.00 0.6
eSg 10 04.00
BNT 0.49 197 iPg 09 59.50 0.3
EDC 0.51 201 iPg 09 59.80 0.2
iSg 10 05.80
MFT 0.63 267 iPg 10 01.50 -0.4
iSg 10 11.50
ISK 0.76 71 ePg 10 04.00 0.0
eSg 10 15.30
GBZT 1.02 92 ePg 10 08.20 -0.2
iSg 10 23.00
HRT 1.18 90 ePn 10 11.00 -0.3
EZN 1.69 234 ePn 10 21.00 2.1X
KDZ 2.19 293 iPd 10 32.00 5.8X
S.D. = 0.4 on 7 of 9 obs.

JUL 04, 1989 21h 19m 43.43± 2.48s
35.421 N ±21.8km 22.444 E ±17.7km
DEPTH = 10.0km (geophysicist)
MEDITERRANEAN SEA (400)
ML 3.8 (ATH).

VAM 1.43 90 ePn 20 10.00 0.5
ITM 1.80 347 ePb 20 19.00 4.2X
NPS 2.60 93 ePn 20 26.50 0.3
ATH 2.74 22 ePn 20 30.40 2.1
VLS 3.13 332 ePn 20 34.00 0.3
KAP 3.86 87 ePn 20 43.00 -1.2
NEO 3.93 9 ePn 20 45.00 -0.1
KEK 4.77 335 ePn 20 57.50 0.4
KZN 4.91 354 ePn 20 59.00 0.0
PLG 5.01 9 ePn 20 59.50 -0.9
VAY 5.89 1 ePn 21 11.20 -1.6
SKO 6.59 353 ePn 21 16.00 -6.7X
S.D. = 1.2 on 10 of 12 obs.

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* JUL 04, 1989 21h 45m 27.40± 1.59s
51.619 N ± 9.8km 7.390 E ±14.3km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

WTS 0.52 317 ePg 45 38.00 0.0
0.5s 8.00nm
ENN 1.26 228 iPgc 45 50.20 -0.5
0.4s 10.00nm
eSg 46 09.00
MEM 1.33 221 Pc 45 51.50 -0.5
S 46 11.20
TNS 1.55 154 ePn 45 54.60 -0.5
eSn 46 12.30
WLF 2.11 202 iP 46 04.60 1.5
iS 46 32.00
DOU 2.34 230 eP 46 40.30 33.9X
S.D. = 1.2 on 5 of 6 obs.

JUL 04, 1989 22h 19m 39.40± 0.34s
43.479 N ± 4.1km 19.014 E ± 4.1km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.4 (LJU), 2.9 (TTG). MD 3.8 (ATH).

PLE 0.31 118 iPgc 19 45.40 -0.6
iSg 19 51.00
NKY 0.67 181 ePg 19 49.40 -3.3X
eSg 19 58.80
BRY 0.67 211 iPgd 19 48.40 -4.5X
eSg 19 57.00
IVA 0.89 133 iPgc 19 55.00 -1.5
iSg 20 09.00
TTG 1.06 170 ePg 19 57.10 -2.3
eSg 20 12.50
PVY 1.13 141 ePg 19 59.00 -1.6
eSg 20 16.20
SDA 1.51 166 ePn 20 05.40 -1.0
PUK 1.57 155 iPn 20 07.20 -0.2
BEO 1.70 37 iPn 20 09.20 0.0
iPg 20 12.70
iSg 20 35.50
KKS 1.74 143 iPn 20 11.00 1.2
HVAR 1.90 262 iPn 20 11.20 -0.9
iSg 20 37.80
LACI 1.91 164 ePn 20 12.70 0.4
PHP 2.08 149 iPnd 20 15.20 0.5
TIR 2.22 163 ePn 20 18.50 1.7
SKO 2.34 129 ePn 20 19.00 0.5
i 20 24.50
BZS 2.83 40 iPc 20 25.00 -0.5
ZAG 3.18 318 ePb 20 39.50 9.1X
VTS 3.20 105 eP 20 35.00 4.1X
PTJ 3.26 319 ePn 20 31.80 0.2
eSn 21 18.50
VBY 3.37 308 ePn 20 33.30 0.2
e(Sn) 21 12.70
eSg 21 32.20
VAY 3.40 128 ePn 20 33.40 -0.2
KKB 3.41 117 eP 20 34.00 0.4
KZN 3.78 146 ePb 20 40.00 1.0
RIY 3.80 301 e(Pn) 20 40.00 0.7
KEK 3.81 171 ePb 20 42.00 2.6
DUI 3.82 243 P 20 40.00 0.3
MMB 3.96 117 eP 20 55.00 13.4X
CEY 3.98 306 e(Pn) 20 43.50 1.7
e 20 55.00
eSn 21 47.50
LJU 4.09 310 ePn 20 43.00 -0.3
e 20 54.10
e(Sn) 21 52.00
MGR 4.22 219 P 20 44.30 -0.9
eSn 21 32.10
SDI 4.23 247 Pc 20 44.60 -0.7
eSn 21 34.40
SRO 4.36 354 eP 20 57.00 9.8X
TRI 4.36 303 i(Pn)d20 46.50 -0.7
i(Sn) 21 51.00
i(Sg) 22 22.00
VOY 4.45 307 ePn 20 48.10 -0.4
e(Sn) 22 03.30
PSZ 4.48 8 eP 20 47.20 -1.8
PLG 4.53 132 ePn 20 51.00 1.3
RZN 4.57 111 eP 21 05.00 14.6X
PVL 4.62 91 eP 21 00.00 9.2X
ASS 4.66 267 P 20 50.30 -1.2
eSn 21 46.00
ZST 4.90 345 eP 21 09.70 14.9X
e 21 51.30
e 22 03.40
CRE 5.14 274 P 20 58.60 0.3
MLR 5.35 66 eP 21 10.00 8.6X
KBA 5.38 314 iPnc 21 03.00 1.2
i 21 21.20
i 21 22.60
iSn 22 01.80
i 22 35.70
VRI 6.00 64 eP 21 34.00 23.7X
KHC 6.79 328 P 21 22.00 0.5
PRU 7.20 336 eP 22 24.00 56.8X
S.D. = 1.1 on 34 of 46 obs.

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* JUL 05, 1989 00h 03m 36.11± 1.40s
51.024 N ±13.9km 15.435 E ± 8.7km
DEPTH = 10.0km (geophysicist)
POLAND (548)

BRG 0.95 262 iPg 03 55.20 0.9
iSg 04 14.80
PRU 1.18 209 ePn 03 58.50 0.3
ePg 04 00.00
Sn 04 17.30

		Sg	04	25.00	
CLL	1.56 282	ePg	04	04.00	0.1
		eSg	04	29.00	
KHC	2.24 213	iPn	04	14.00	0.2
		Pg	04	19.80	
		eSn	04	43.20	
		Sg	05	01.90	
MOX	2.45 263	ePg	04	23.00	6.2X
		iSg	05	03.00	
WET	2.50 222	eP	04	17.60	0.1
GRF	3.01 245	ePn	04	23.00	-1.7
		e(Pg)	04	38.00	
		eSg	05	21.00	
ZST	3.03 158	eP	05	15.10	50.1X
SPC	3.60 119	eP	04	33.30	0.0

S.D. = 1.0 on 7 of 9 obs.

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* JUL 05, 1989 00h 13m 37.50± 0.74s
10.407 S ± 8.6km 77.519 W ±12.9km
DEPTH = 102.8 ± 10.5 km
4.7mb (3 obs.)
NEAR COAST OF PERU (115)

NNA	1.71 157	iPd	14	07.30	0.4
	0.7s 61.64nm				
		eS	14	27.00	
PT10	1.74 162	eP	14	07.20	-0.2
		eS	14	31.30	
PT02	2.73 157	eP	14	20.10	-0.4
PT06	3.59 161	eP	14	32.50	0.3
PT03	3.94 155	eP	14	35.50	-1.5
		eS	15	24.20	
ARE	8.40 136	eP	15	40.00	1.5
RECU	9.76 354	eP	15	57.00	-0.2
GGP	10.22 354	eP	16	04.20	0.8
COTA	10.70 356	eP	16	09.50	-0.3
ZOBO	10.84 124	P	16	13.00	1.4
		LR	18	50.00	
LPB	11.00 125	eP	16	11.00	-2.6
CNCB	11.24 126	P	16	18.60	1.6
		i	20	06.00	
CCH	13.04 123	P	16	40.50	0.2
		i	16	49.50	
ATB	26.07 76	Pc	19	02.10	-1.2
PPD	27.64 118	eP	19	47.30	29.7X
SOB1	36.10 91	e(P)	20	11.00	-20.5X
		e	20	31.30	
TUL	49.19 340	eP	22	16.10	-1.0
	0.7s 17.20nm			5.1mb	
ALQ	52.77 330	eP	22	44.50	0.0
	0.9s 5.88nm			4.6mb	
		e	23	17.90	
ORV	64.31 323	eP	24	04.90	0.6
EDM	70.35 338	ePc	24	41.00	-1.0
YKA	78.15 343	P	25	27.40	0.9
MBC	89.93 351	eP	26	26.50	0.7
	0.6s 2.00nm			4.4mb	

S.D. = 1.2 on 20 of 22 obs.

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* JUL 05, 1989 00h 28m 30.17± 0.95s
66.515 N ± 8.5km 12.753 E ±12.6km
DEPTH = 10.0km (geophysicist)
NORTHERN NORWAY (646)
MD 3.4 (BER).

LOF	1.65 10	iP	28	59.65	0.4
		eS	29	18.50	
NSS	2.02 190	eP	29	07.11	2.5
		eS	29	29.83	
RGS	3.65 197	eP	29	27.70	-0.1
		eS	30	09.00	
TRO	3.89 34	iP	29	31.98	0.7
		eS	30	12.21	
MOL	4.55 212	eP	29	38.17	-2.4
		eS	30	27.00	
SOD	5.52 75	eP	29	55.00	0.7
NRA0	5.83 186	iPd	29	59.30	0.7
		eS	30	59.80	
KEV	6.23 52	eP	30	03.00	-1.3
SUF	6.90 117	iP	30	13.00	-0.7
NUR	8.03 133	eP	30	29.00	-0.5
		eS	31	57.00	

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

JUL 05, 1989 00h 37m 48.78± 0.48s
39.616 N ± 4.7km 20.167 E ± 4.0km
DEPTH = 30.9 ± 3.9 km

3.7mb (2 obs.)
GREECE-ALBANIA BORDER REGION (392)
ML 4.0 (ATH), 3.4 (TTG). Felt (IV) in the Konispol area, Albania.

SRN	0.29 334	iPgc	37	55.90	-0.3
KEK	0.30 289	iPgd	37	56.00	-0.3
VLO	1.00 329	iPg	38	09.10	2.5X
BERA	1.10 351	iPgd	38	08.70	0.7
KBN	1.12 26	iPgc	38	08.00	-0.4
KZN	1.41 60	iPgd	38	12.00	-0.6
VLS	1.47 167	iPbd	38	14.00	0.5
		eSb	38	36.00	
TIR	1.74 353	iPnc	38	20.50	3.2X
PHP	2.08 6	iPnc	38	23.70	1.5
NEO	2.39 96	ePn	38	26.60	0.0
PUK	2.43 355	ePn	38	28.70	1.5
ULC	2.45 344	ePn	38	28.00	0.6
		eSn	38	58.20	
SDA	2.45 348	ePn	38	30.00	2.6X
VAY	2.50 46	iPn	38	29.00	0.8
SKO	2.54 22	iPn	38	29.70	0.9
	1.1s 550.00nm				
		i	38	33.60	
		i	39	05.00	
		Lg	39	16.50	
PLG	2.63 72	ePn	38	30.00	-0.1
BCI	2.75 358	iPn	38	33.70	2.1
ITM	2.80 150	ePn	38	34.20	1.8
TTG	2.89 347	ePn	38	34.20	0.5
		eSn	39	09.00	
PVY	2.98 357	ePn	38	37.00	1.9
		eSn	39	13.50	
ATH	3.22 119	ePn	38	39.00	0.6
IVA	3.26 357	ePn	38	40.80	1.8
		eSn	39	19.00	
NKY	3.31 345	ePn	38	40.00	0.2
		eSn	39	18.00	
MMB	3.35 53	eP	38	40.00	-0.3
BRY	3.50 340	ePn	38	42.50	0.0
		eSn	39	24.00	
MGR	3.59 280	P	38	46.20	2.6X
PLE	3.76 351	ePn	38	47.00	1.0
		eSn	39	30.00	
VTS	3.76 37	iP	38	47.00	0.9
SGO	3.84 286	P	38	49.70	2.5X
ATN	3.95 250	P	38	50.00	1.3
PLD	4.24 53	eP	39	00.00	7.1X
RDO	4.38 68	ePn	38	53.70	-1.1
KDZ	4.48 61	eP	38	55.00	-1.4
HVAR	4.53 323	iPn	38	59.00	2.1
PRK	4.74 93	ePn	39	00.20	0.2
EZN	4.75 86	eP	38	53.90	-6.2X
DUI	4.80 297	P	39	02.30	1.4
MEU	4.82 240	Pd	38	59.80	-1.4
BEO	5.21 2	e(Pn)	39	10.00	3.5X
SDI	5.26 295	P	39	09.20	1.8
VAM	5.28 141	ePn	39	01.20	-6.5X
PVL	5.29 46	eP	39	06.00	-1.7
DRA	5.90 30	eP	40	03.00	46.7X
BZS	6.09 10	eP	39	18.00	-1.0
NPS	6.14 133	ePn	39	22.00	2.3X
BUC	6.52 41	eP	39	12.00	-13.0X
ARV	6.66 308	P	39	26.30	-0.8
KAP	6.89 124	ePn	39	33.00	2.8X
VBY	6.91 330	ePn	39	29.30	-1.2
		eSn	40	46.30	
ZAG	6.92 335	e(P)	39	24.30	-6.3X
MLR	7.26 34	ePc	39	36.50	1.0
ISR	7.26 38	eP	39	36.00	0.5
CEY	7.44 327	ePn	39	36.50	-1.4
		eSn	40	59.00	
LJU	7.64 329	e(Pn)	39	39.00	-1.7
		e(Sn)	41	03.50	
TRI	7.70 324	eP	39	39.50	-2.0
		i	41	02.00	
		i	41	24.00	
VRI	7.89 36	ePd	39	44.50	0.2
VOY	7.89 326	ePn	39	42.90	-1.5
		eSn	41	11.40	
KHC	10.61 336	eP	40	27.20	5.5X
HFS	20.94 351	eP	42	28.30	-2.8X
	0.4s 1.50nm			3.7mb	
NAO	22.01 348	P	42	40.80	-1.1
EKA	22.10 323	Pc	42	41.90	-0.9
	0.9s 2.10nm			3.6mb	
SUF	23.42 7	eP	42	54.00	-1.6

S.D. = 1.2 on 46 of 62 obs.

& JUL 05, 1989 01h 20m 08.58s
41.708 N 112.370 W
DEPTH = 9.7km
UTAH (478)
<SLC-P>. ML 2.7 (SLC).

PTI	1.16 360	eP	20	29.50	-0.9
DAU	1.54 147	iP	20	37.20	0.7
		iS	20	57.30	
DUG	1.55 193	iP	20	36.20	-0.2
	0.4s 14.36nm				
BW06	2.35 62	eP	20	49.20	1.1
IMW	2.43 25	eP	20	50.00	0.8
MSU	3.19 177	eP	21	00.40	0.3
KVN	5.12 241	eP	21	35.20	7.9
		i	22	50.50	

7 obs. associated

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* JUL 05, 1989 01h 29m 41.30± 0.79s
66.468 N ± 7.1km 13.292 E ±12.2km
DEPTH = 10.0km (geophysicist)
NORTHERN NORWAY (646)
MD 3.3 (BER).

LOF	1.67 3	eP	30	11.17	0.4
		eS	30	27.89	
NSS	2.02 196	iP	30	16.13	0.3
		eS	30	40.96	
RGS	3.67 201	eP	30	39.50	0.2
		eS	31	19.00	
TRO	3.82 31	iP	30	41.13	-0.2
		eS	31	25.27	
MOL	4.63 215	eP	30	48.80	-4.1X
		eS	31	38.30	
SOD	5.33 74	eP	31	02.00	-0.7
NRA0	5.81 189	iPc	31	08.30	-1.2
		iS	32	41.90	
SUF	6.68 118	iP	31	26.00	4.2X
NUR	7.84 134	eP	31	39.00	1.1
		eS	33	05.00	

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

? JUL 05, 1989 01h 36m 10.40± 3.94s
31.446 S ±16.5km 68.603 W ±18.0km
DEPTH = 82.6 ± 37.8 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.16 45	iPc	36	22.80	-0.1
		S	36	32.50	
RTCB	0.17 256	iPc	36	23.00	0.1
		S	36	33.90	
CFA	0.35 117	iPd	36	23.50	0.0
		S	36	35.00	
RTCV	0.42 172	iPc	36	24.00	0.0
RTBS	0.76 253	iPc	36	27.00	0.0
		S	36	41.50	
RTRS	1.47 330	iPc	36	35.80	0.0
		S	36	55.50	

S.D. = 0.1 on 6 of 6 obs.

JUL 05, 1989 02h 46m 14.76± 0.61s
47.673 N ± 6.1km 14.721 E ± 5.9km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.2 (GRF), 2.7 (KBA). Felt (IV) ot Londl.

KMR	0.55 314	iPg+	46	24.60	-1.4
		iSg	46	34.80	
KBA	1.11 238	i(Pg)	46	32.30	-3.4X
		i	46	36.90	
		i	46	45.40	
		i	46	47.70	
		i(Sg)	46	49.10	
VKA	1.23 61	ePn	46	37.50	-0.1
		iPg	46	39.50	
		iSg	46	58.30	
BHG	1.25 273	iPgc	46	38.30	0.4
LJU	1.64 185	e(Pg)	46	44.50	0.8
		iSg	47	07.10	
KHC	1.65 333	iPn	46	44.20	0.3
		Sg	47	06.20	
ZST	1.68 71	ePn	46	44.60	0
		e	46	55.00	

05d 02h

		e(Sn)	47	07.40	
		i(Sg)	47	10.50	
VOY	1.74	199 ePn	46	43.50	-1.7
		eSn	47	07.10	
WET	1.92	321 eP	46	48.40	0.6
TRI	2.07	199 eP	47	19.50	29.5X
SCE	2.14	254 ePn	46	52.30	1.1
PRU	2.32	357 ePg	46	58.30	4.7X
		Sn	47	15.00	
		Sg	47	22.00	
FUR	2.37	283 eP	46	57.50	3.2X
SRO	2.43	85 eP	47	40.20	45.1X
OGA	2.64	254 ePn	47	01.40	3.0X
GRF	3.08	312 ePn	47	03.80	-0.5
		ePg	47	12.30	
		eSg	47	51.70	
BRG	3.24	351 ePg	47	15.00	8.3X
		eSn	47	43.00	
		eSg	47	58.00	
KSP	3.34	17 eP	47	16.00	8.0X
		eS	47	58.30	
MOX	3.61	327 ePn	47	12.00	0.2
		ePg	47	22.00	
		iSg	48	08.00	

S.D. = 1.0 on 11 of 19 obs.

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* JUL 05, 1989 02h 51m 15.76± 0.67s
29.204 N ±11.9km 141.158 E ±17.8km
DEPTH = 80.0km (geophysicist)
4.8mb (3 obs.)
SOUTH OF HONSHU, JAPAN (211)

PJG	15.92	167 eP	55	00.00	3.7X
GUA	15.97	167 eP	54	59.80	2.8
	1.2s	287.50nm			5.3mb
CHG	39.74	265 eP	58	43.00	0.7
CHTO	39.74	265 iP	58	43.00	0.7
	0.8s	4.94nm			4.5mb
		pP	59	03.00	83kmX
WB5	49.23	188 eP	59	56.20	-1.9
WRA	49.30	188 Pc	59	56.90	-1.7
	0.5s	5.30nm			4.8mb
ASPA	53.03	188 eP	00	25.60	-1.1
BWA	63.66	173 eP	01	40.50	-0.1
MBC	64.10	15 eP	01	42.00	-1.1
SUF	74.90	334 eP	02	50.00	0.8
KVN	79.77	51 eP	03	17.20	0.3
LRM	79.95	43 eP	03	17.80	0.0
NAO	81.61	338 P	03	43.90	18.0X
ZOBO	150.18	71 PKP	11	03.00	8.1X
LPB	150.33	71 ePKP	10	58.00	3.1X
CNCB	150.57	72 ePKP	10	56.00	0.6

S.D. = 1.4 on 12 of 16 obs.

JUL 05, 1989 02h 51m 22.95± 0.45s
38.794 N ± 4.8km 27.881 E ± 4.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.7 (ATH).

IZM	0.63	231 iPg	51	34.40	-1.2
		iSg	51	44.70	
PRK	1.33	290 ePb	51	48.00	0.5
		eSb	52	08.30	
KHL	1.37	110 iPn	51	48.40	0.2
EDC	1.55	360 iPn	51	50.30	-0.3
BNT	1.56	1 iPn	51	51.00	0.2
EZN	1.59	311 iPn	51	51.60	0.5
YER	1.69	169 iPn	51	52.30	-0.4
ALT	1.76	81 ePn	51	54.80	1.0
MFT	2.04	347 iPn	52	00.50	2.7
GBZT	2.33	31 ePn	52	05.50	3.6X
		ePg	52	07.50	
		iSg	52	37.20	
CTT	2.39	10 ePn	52	01.10	-1.6
GPA	2.40	51 iPn	52	07.50	4.6X
ISK	2.44	21 ePn	52	04.00	0.5
HRT	2.45	34 iPn	52	02.10	-1.5
BCK	2.52	121 ePn	52	03.80	-0.8
ELL	2.60	141 ePn	52	07.20	1.4
RDO	2.96	323 ePn	52	11.00	0.2
KDZ	3.42	327 iPc	52	18.00	0.6
RZN	3.77	321 eP	52	23.00	0.4
PLG	3.77	296 ePg	52	34.00	11.5X
BBTK	3.93	73 eP	52	37.00	12.3X
		eS	53	33.00	
PLD	4.10	325 eP	52	26.00	-1.0
MMB	4.23	313 eP	52	29.00	0.1
PGB	4.70	324 eP	52	35.00	-0.6
KKB	4.78	311 eP	52	38.00	1.2
VAY	4.79	303 ePn	52	36.60	-0.3
PVL	4.82	337 eP	52	36.00	-1.2
PSN	4.89	3 eP	53	32.00	53.8X
VTS	5.20	318 eP	52	50.00	7.3X
VRI	7.12	353 ePd	53	09.00	-0.7

S.D. = 1.1 on 24 of 30 obs.

JUL 05, 1989 03h 21m 10.71± 0.53s
47.637 N ± 4.9km 14.677 E ± 5.9km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.5 (GRF), 3.1 (KBA). Felt
(IV) ot Landl.

KMR	0.56	319 iPg+	21	20.60	-1.4
		iSg	21	30.80	
KBA	1.06	239 iPgc	21	27.50	-3.4X
		i	21	33.10	
		i	21	41.30	
		iSg	21	43.20	
BHG	1.22	275 iPgd	21	34.20	0.8
VKA	1.27	60 ePn	21	33.50	-0.8
		iPg	21	35.70	
		iSn	21	51.90	
		iSg	21	54.70	
LJU	1.60	184 e(Pg)	21	39.90	0.8
		iSg	22	03.20	
FVI	1.66	232 P	21	38.90	-1.1
		eSg	22	02.10	
KHC	1.66	334 iPn	21	40.10	0.0
		Sg	22	02.50	
VOY	1.69	199 ePn	21	39.80	-0.8
		eSn	22	03.30	
ZST	1.72	70 iPn	21	40.70	-0.2
		iPg	21	44.80	
		e	21	50.90	
		eSn	22	03.40	
		i(Sg)	22	06.90	
CEY	1.91	185 e(Pn)	21	46.80	3.2X
		eSn	22	11.00	
WET	1.93	322 eP	21	43.30	-0.6
PTJ	1.95	153 ePn	21	45.20	1.0
		eSn	22	10.50	
TRI	2.03	198 eP	21	44.00	-1.3
		e	22	13.10	
ZAG	2.03	153 ePn	21	49.00	3.7X
		iSn	22	14.80	
SCE	2.10	255 ePn	21	48.20	1.6
FUR	2.35	284 eP	21	53.60	3.6X
PRU	2.36	358 ePn	21	52.00	2.0
		Pg	21	54.50	
		Sn	22	11.00	
		Sg	22	17.50	
SRO	2.46	85 eP	22	01.80	10.3X
OGA	2.60	254 iPnd	21	57.20	3.4X
CTI	2.62	234 P	21	58.00	4.2X
		eSn	22	34.00	
GRF	3.08	313 ePn	22	00.00	-0.3
		ePg	22	07.50	
		eSg	22	47.80	
BRG	3.28	352 ePg	22	11.00	7.9X
		eSn	22	39.00	
		eSg	22	54.00	
KSP	3.38	18 ePn	22	08.00	3.4X
		iPg	22	12.70	
		iS	22	55.00	
MOX	3.62	327 ePn	22	08.00	0.0
		ePg	22	18.00	
		iSg	23	03.00	

S.D. = 1.1 on 15 of 24 obs.

% JUL 05, 1989 03h 25m 35.83± 1.54s
31.374 S ±11.4km 69.513 W ±17.2km
DEPTH = 33.0km (normol)
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS	0.29	170 iPd	25	43.80	0.4
		S	25	58.40	
RTCB	0.62	101 ePd	25	49.50	1.3
		S	26	10.00	
RTLL	0.89	87 iPd	25	55.20	3.1X
		S	26	11.40	
RTCV	0.96	120 iPd	25	51.80	-1.3
		S	26	13.80	
CFA	1.11	102 iPd	25	55.00	-0.2
		S	26	19.50	
RTRS	1.20	2 iPd	25	56.20	-0.1

S.D. = 1.3 on 5 of 6 obs.

? JUL 05, 1989 03h 37m 36.69± 1.00s
34.759 N ±21.3km 139.384 E ±12.9km
DEPTH = 5.0km (geophysicist)
4.8mb (1 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)

SHK	5.53	270 eP	39	02.70	0.9
BJI	19.16	293 eP	42	02.50	-0.9
WB5	54.54	186 eP	47	07.50	-0.5
ZOBO	149.25	60 PKP	57	33.00	8.2X
LPB	149.44	61 PKP	57	31.60	6.7X
CNCB	149.71	61 PKP	57	32.00	6.6X
CCH	151.40	59 ePKP	57	34.80	7.2X

S.D. = 1.3 on 5 of 10 obs.

% JUL 05, 1989 03h 53m 04.13± 0.92s
31.576 S ±10.6km 67.935 W ± 6.7km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.26	263 iPd	53	10.50	0.8
		S	53	15.50	
RTLL	0.52	298 iPd	53	14.00	-0.6
		S	53	20.00	
RTCV	0.59	241 iPc	53	15.80	-0.2
RTCB	0.74	277 ePd	53	18.50	-0.3
		S	53	29.00	
RTBS	1.30	266 ePd	53	28.00	-0.1
		S	54	45.70	
RTRS	1.92	317 iPc	53	37.70	0.6
		S	54	02.20	
MRA	2.07	114 eP	53	39.20	-0.1

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

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* JUL 05, 1989 05h 24m 17.36± 0.94s
16.240 N ±11.3km 105.207 W ±20.0km
DEPTH = 10.0km (geophysicist)
4.3mb (5 obs.) 3.8Msz (1 obs.)
OFF COAST OF MICHOACAN, MEXICO (64)

MRX	5.15	47 (P)	25	46.00	9.7X
OXX	8.17	83 (P)	26	43.50	24.4X
ALQ	18.66	357 e(P)	28	33.50	-4.2X
	1.0s	6.25nm			3.8mb
		e	28	41.00	
		e	28	48.80	
		eLg	41	57.00	
SIO	20.99	21 e(P)	29	02.90	-0.4
TUL	21.31	21 eP	29	06.30	-0.3
	1.4s	49.10nm			4.7mb
RLO	21.82	23 eP	29	11.90	0.2
TNP	24.19	336 eP	29	35.10	-0.1
	0.8s	1.32nm			3.6mb
KVN	25.38	336 eP	29	46.30	-0.2
LRM	30.11	350 eP	30	32.60	3.0X
FFC	38.49	3 eP	31	42.00	0.8
	1 0s	11.00nm			4.5mb
ZOBO	48.80	130 eP	33	06.00	0.4
	Z 20s	0.10um			3.8Msz
		e	33	37.00	
		eLR	50	12.00	
LPB	48.99	130 P	33	07.50	0.6
		e	33	35.00	
CNCB	49.25	130 eP	33	08.00	-1.1
		e	33	39.00	
MBC	60.48	356 eP	34	32.50	3.2X
	1.0s	4.00nm			4.5mb

S.D. = 0.7 on 9 of 14 obs.

& JUL 05, 1989 05h 42m 05.75s
60.239 N 153.755 W
DEPTH = 178.1km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.43	111 iP	42	29.57	0.8
		S	42	48.41	
RED	0.52	69 iP	42	30.02	0.8

OPT	0.64	156	iP	42 30.64	-0.7
			S	42 49.33	
RDT	0.75	63	iP	42 31.17	-0.8
MCNL	1.10	196	iP	42 33.20	-1.1
HOM	1.21	118	eP	42 34.51	-0.7
NNL	1.25	98	iP	42 35.11	-0.4
SPU	1.26	41	iP	42 35.03	-0.7
SVW	1.27	314	eP	42 34.70	-1.1
XLV	1.29	127	eP	42 34.49	-1.5
			S	42 56.65	
CDD	1.31	177	iP	42 34.80	-1.4
			S	42 57.30	
NKA	1.34	67	eP	42 36.69	0.3
CNPM	1.46	118	iP	42 36.29	-1.2
BRLK	1.52	107	eP	42 37.09	-1.0
SLKM	1.78	80	eP	42 38.63	-2.1
SUA	1.92	49	eP	42 40.90	-1.4
			S	43 09.63	
SKT	2.05	31	iP	42 43.20	-0.5
PMS	2.29	62	eP	42 44.40	-2.0
PWA	2.36	51	eP	42 45.10	-2.0
KDC	2.58	165	eP	42 46.30	-3.4
PMR	2.64	57	eP	42 48.30	-2.0
CUT	2.75	36	eP	42 50.45	-1.2
GHO	2.81	55	iP	42 49.93	-2.6
KNK	2.85	63	iP	42 50.41	-2.6
VZW	3.64	74	eP	43 00.45	-2.4
KLU	4.03	68	eP	43 05.63	-2.2
TOA	4.12	60	eP	43 07.80	-1.2
FBA	5.43	28	eP	43 24.00	-1.9

28 obs. associated

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* JUL 05, 1989 08h 37m 18.13± 2.20s
55.298 N ± 7.6km 159.261 W ±16.1km
DEPTH = 52.2 ± 18.1 km
ALASKA PENINSULA (12)

BKJ	0.22	230	iPd	37 26.88	0.0
			eS	37 32.84	
CNBA	0.51	202	ePd	37 29.76	0.0
			eS	37 37.62	
NGI	0.53	241	iPd	37 29.95	0.0
			eS	37 38.45	
IVF	0.62	346	ePd	37 31.04	0.0
SASA	0.71	274	iPc	37 32.18	0.0
			eS	37 42.25	
SGB	0.72	291	iPd	37 32.34	0.0
			eS	37 42.83	
SQF	0.75	265	ePd	37 32.79	0.1
			eS	37 43.60	
DLG	1.48	265	eP	37 42.72	-0.1
PS4	1.49	273	eP	37 43.07	0.1
			eS	38 00.83	
DRRA	1.78	259	eP	37 46.77	-0.2
			eS	38 07.57	
SNKA	2.19	249	eP	37 52.86	0.1

S.D. = 0.1 on 11 of 11 obs.

JUL 05, 1989 08h 49m 40.74± 0.66s
43.356 N ± 5.7km 18.883 E ± 7.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (TTG).

PLE	0.37	94	iPgc	49 46.80	-1.7
			eSg	49 52.00	
BRY	0.52	209	ePg	49 49.90	-1.4
			eSg	50 00.00	
NKY	0.55	171	ePg	49 51.00	-0.9
			eSg	50 01.00	
IVA	0.89	123	ePg	49 56.70	-1.1
			eSg	50 11.00	
HCY	0.95	197	ePg	49 58.00	-0.9
			eSg	50 15.00	
TTG	0.97	163	ePg	49 58.60	-0.5
			eSg	50 15.00	
BCI	1.32	138	iPg	50 04.60	-0.5
SDA	1.41	161	ePn	50 12.70	6.2X
ULC	1.42	169	ePg	50 09.00	2.4
			eSg	50 30.00	
PUK	1.51	150	i(Pn)c	50 08.70	0.9
KKS	1.71	138	iPn	50 13.00	2.4
HVAR	1.79	265	iPn	50 45.70	33.8X
			iSg	51 12.90	
LACI	1.82	160	ePn	50 12.20	-0.2
BEO	1.85	37	ePn	50 14.50	1.7
			eSg	50 41.00	
PHP	2.03	145	iPnd	50 18.30	3.0X
TIR	2.14	160	ePn	50 21.20	4.3X
SKO	2.34	125	ePn	50 21.50	1.7
BERA	2.77	163	ePn	50 34.50	8.6X
BZS	2.99	40	ePc	50 26.50	-2.5
PTJ	3.29	322	e(Pn)	50 34.00	0.6
			eSn	51 17.90	
VBY	3.37	311	ePn	50 34.40	-0.1
			i	50 44.60	
			e(Sn)	51 24.30	
VAY	3.41	125	ePn	50 40.30	5.3X
CEY	3.98	308	eP	50 53.50	10.4X
			e(Sn)	51 35.00	
VOY	4.45	309	ePn	50 49.90	0.0
			e(Sn)	51 40.20	

S.D. = 1.5 on 17 of 24 obs.

? JUL 05, 1989 09h 19m 13.55± 5.93s
43.395 N ±40.2km 18.860 E ±23.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (TTG).

PLE	0.40	99	iPgc	19 20.00	-1.7
			iSg	19 25.00	
BRY	0.55	205	iPgd	19 23.10	-1.5
			eSg	19 32.70	
NKY	0.59	170	iPgc	19 24.00	-1.6
			eSg	19 34.00	
IVA	0.92	124	ePg	19 29.80	-1.4
			eSg	19 42.00	
TTG	1.01	163	ePg	19 32.10	-0.5
			eSg	19 46.50	
BCI	1.36	139	iPgd	19 39.00	0.5
SDA	1.46	161	ePn	19 44.40	4.5X
PUK	1.55	150	ePn	19 42.00	0.8
LACI	1.87	160	ePn	19 48.60	2.8X
PHP	2.07	145	iPnd	19 51.40	2.7X
TIR	2.18	160	ePn	19 54.00	3.7X
VBY	3.33	311	e(Pn)	20 18.00	11.3X
			e(Sn)	21 20.70	

S.D. = 1.3 on 7 of 12 obs.

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* JUL 05, 1989 09h 52m 43.84± 1.03s
30.563 S ± 7.9km 71.949 W ±13.6km
DEPTH = 149.8 ± 14.8 km
4.9mb (1 obs.)
NEAR COAST OF CENTRAL CHILE (135)

RTRS	2.19	80	iPc	53 22.00	0.5
RTBS	2.40	118	iPd	53 23.80	-0.4
JACH	2.41	152	iPd	53 23.50	-0.9
			iS	53 39.50	
ROCH	2.53	162	eP	53 25.50	-0.5
			iS	53 53.40	
PEL	2.79	158	iP	53 29.00	-0.1
			i	53 32.00	
			iS	54 02.00	
RTCB	2.86	110	iPd	53 29.70	-0.3
LCCH	2.92	174	eP	53 32.50	1.8
			iS	54 10.20	
SAN	3.08	160	eP	53 30.00	-2.8
			iS	54 11.10	
RTLL	3.09	105	iPd	53 32.30	-0.6
FCH	3.10	153	iPc	53 34.60	1.3
			iS	54 09.50	
RTCV	3.20	115	ePd	53 35.50	1.2
TACH	3.20	165	iPc	53 35.00	0.7
			iS	54 08.00	
PCH	3.28	159	eP	53 36.00	0.5
			iS	54 15.10	
CFA	3.35	109	iPd	53 31.00	-5.3X
			S	53 52.50	
LNV	3.41	172	iPc	53 37.10	0.1
			iS	54 22.10	
CHCH	3.54	162	iP	53 39.00	0.3
			iS	54 16.00	
MRA	5.64	111	ePd	54 05.10	-1.5
CYA	5.76	70	iPd	54 10.00	1.7
ANT	6.97	12	e(P)	54 23.20	-1.3
SLA	8.16	46	e(P)	54 46.00	5.4X
			e	55 09.00	
CNCB	14.16	16	eP	56 09.00	9.6X
LPB	14.40	15	eP	56 03.00	0.7
ZOBO	14.65	15	eP	56 10.00	4.4X
			e	56 20.00	
PPD	20.34	70	e(P)	57 17.10	7.0X
BNG	92.65	86	ePd	05 40.00	-0.1
	0.5s		4.00nm		4.9mb

S.D. = 1.2 on 20 of 25 obs.

% JUL 05, 1989 10h 15m 18.78± 1.11s
31.633 S ±11.9km 67.993 W ± 7.8km
DEPTH = 5.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.21	277	iPd	15 21.00	-2.1
RTLL	0.51	306	iPc	15 29.00	0.1
RTCV	0.52	244	iPc	15 30.00	0.9
RTCB	0.70	282	ePd	15 33.50	0.6
			S	15 43.00	
RTBS	1.25	268	ePd	15 42.50	0.1
			S	16 00.00	
RTRS	1.93	319	iPc	15 53.20	0.7
MRA	2.09	112	e(P)	15 54.60	-0.3

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

? JUL 05, 1989 10h 27m 43.00± 4.50s
34.917 N ±36.3km 139.191 E ±13.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.14	352	iP+	28 03.90	-0.9
			S	28 18.30	
IIDJ	1.19	299	iPd	28 05.10	-0.6
			S	28 20.10	
KAKJ	1.51	32	iP+	28 10.40	-0.3
			S	28 30.50	
MAT	1.81	334	iPd	28 15.00	0.0
			iS	28 37.30	
MTMJ	2.01	326	P	28 18.90	0.9
			S	28 44.70	
NIIJ	2.32	356	eP	28 23.40	0.9

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

JUL 05, 1989 11h 21m 32.99± 0.50s
17.126 N ± 8.1km 93.245 W ± 7.4km
DEPTH = 10.0km (geophysicist)
4.1mb (3 obs.)
CHIAPAS, MEXICO (61)

SCX	0.70	123	iP	21 47.16	0.3
			iS	21 56.75	
TPX	2.40	157	eP	22 12.00	-1.0
			iS	22 45.50	
OXX	3.33	270	eP	22 27.50	1.2
			iS	23 15.00	
LVVM	4.00	311	eP	22 34.18	-1.4
			iS	23 20.05	
IISM	4.34	296	iP	22 40.00	-0.6
IIT	5.17	292	eP	22 53.50	0.9
III	6.06	283	eP	23 06.00	1.0
ACX	6.33	269	(P)	23 06.50	-2.2
CRX	6.52	291	(P)	23 19.00	7.3X
MRX	7.97	290	eP	23 32.50	0.9
SIO	18.74	352	e(P)	25 55.30	1.2
TUL	18.85	354	eP	25 54.50	-0.8
	1.0s		11.30nm		4.0mb
			e	29 17.00	
RLO	19.03	356	e(P)	25 56.50	-1.1
ALQ	21.31	329	e(P)	26 23.50	1.1
	1.0s		4.50nm		3.8mb
			e	26 30.50	
PNT	38.56	332	eP	28 58.00	0.4
ZOBO	41.40	142	P	29 24.00	2.0
LPB	41.63	142	eP	29 25.00	1.3
CNCB	41.91	142	eP	29 24.00	-2.2
CCH	43.45	141	(P)	29 38.10	-0.4
YKA	47.73	347	P	30 13.30	1.7
INK	57.12	343	eP	31 20.00	-1.7
MBC	60.68	353	eP	31 45.00	-1.3
	1.0s		8.00nm		4.8mb
NB2	81.98	28	P	33 55.10	0.8

S.D. = 1.4 on 22 of 23 obs.

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* JUL 05, 1989 12h 09m 21.47± 0.54s
1.289 N ±10.1km 85.474 W ±11.4km
DEPTH = 10.0km (geophysicist)
4.7mb (8 obs.) 4.3Msz (2 obs.)
OFF COAST OF ECUADOR (104)

RECU	7.17	105	eP	11 08.20	-1.2
COTA	7.20	98	eP	11 05.50	-4
UPA	9.66	38	iPc	11 44.50	0

05d 12h

1.3s 396.15nm 6.7mb X
Z 20s 5.85um
NNA 15.73 147 eP 13 04.00 -0.9
1.0s 13.00nm 4.1mb
OXX 19.20 325 iP 13 29.00 -19.6X
iS 13 55.50
ZOBO 24.45 136 P 14 44.30 1.9
1.4s 46.04nm 4.9mb
LR 22 32.00
LPB 24.65 137 eP 14 34.00 -10.2X
Z 22s 1.11um 4.3Msz
eLR 21 40.00
CNCB 24.92 137 P 14 47.00 0.0
ALQ 38.78 332 eP 16 49.20 0.9
1.0s 7.75nm 4.4mb
Z 22s 0.46um 4.3Msz
e 16 54.00
e 16 56.80
eLg 31 16.00
GOL 42.31 337 eP 17 18.00 0.6
1.0s 11.25nm 4.6mb
MSU 44.40 330 eP 17 34.10 -0.3
RSSD 45.73 341 eP 17 44.60 -0.3
BW06 46.60 336 eP 17 51.30 -0.5
KVN 47.96 326 eP 18 02.70 0.1
IMW 48.09 335 eP 18 03.90 0.2
CMB 48.62 323 e(P) 18 08.40 0.9
HPI 48.87 333 eP 18 10.50 0.8
RSON 49.88 353 eP 18 15.30 -1.6
SES 53.53 340 eP 18 44.00 -0.5
FFC 54.95 348 eP 18 53.00 -1.8
1.0s 12.00nm 4.9mb
PNT 56.06 334 eP 19 03.00 0.1
EDM 56.68 340 eP 19 06.50 -0.9
YKA 64.83 346 P 20 10.10 7.5X
INK 74.38 343 eP 21 01.00 0.0
MBC 77.27 352 eP 21 17.00 -0.2
1.2s 11.00nm 4.8mb
EKA 84.56 35 P 21 58.00 1.9
1.0s 2.90nm 4.5mb
SPA 91.28 180 e(P) 22 34.90 6.5X
1.0s 6.00nm 4.9mb
CSS 112.51 51 ePKP 28 05.50 5.3X
S.D. = 1.0 on 22 of 28 obs.

JUL 05, 1989 12h 50m 06.05± 0.98s
10.718 N ± 5.8km 62.185 W ±13.6km
DEPTH = 73.5 ± 9.4 km
NEAR COAST OF VENEZUELA (97)

TCE 0.42 93 eP 50 18.08 -0.6
eS 50 28.48
TRN 0.77 95 eP 50 22.06 -0.1
eS 50 31.40
TPP 0.82 119 eP 50 23.45 0.6
TBH 1.12 102 eP 50 26.91 0.4
eS 50 47.16
BOT 1.51 73 eP 50 31.76 0.1
eS 50 49.91
SVB 2.70 20 eP 50 47.87 -0.2
eS 51 21.77
SVV 2.75 20 eP 50 48.61 -0.2
eS 51 19.19
SLB 3.28 20 eP 50 56.00 -0.3
eS 51 34.50
BIM 3.93 16 iPd 51 05.08 -0.2
S 51 47.00
MVM 4.01 18 eP 51 06.29 -0.2
FDF 4.12 14 eP 51 07.46 -0.5
0.1s 1.40nm
S 51 51.40
CRM 4.20 17 eP 51 09.37 0.3
DTMT 4.56 10 eP 51 14.54 0.4
DPMT 4.58 10 eP 51 14.40 0.0
BBL 4.82 8 ePd 51 17.60 -0.3
MGG 5.24 9 eP 51 24.17 0.6
PAG 5.30 5 eP 51 24.50 -0.1
S 52 23.00
SFG 5.59 10 eP 51 28.90 0.5
DEG 5.67 11 ePd 51 29.19 -0.5
MGH 5.97 360 ePd 51 34.15 0.4
S 52 38.50
BPA 6.30 3 eP 51 38.29 -0.1
NEV 6.39 357 eP 51 39.90 0.2
ATB 17.08 144 Pc 54 01.30 -0.3
S.D. = 0.4 on 23 of 23 obs.

% JUL 05, 1989 13h 05m 57.43± 0.74s
59.939 N ± 6.5km 6.376 E ± 8.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 1.6 (BER).

ODD1 0.13 102 iP 06 00.92 0.3
eSg 06 03.01
BLS1 0.60 157 iP 06 09.31 -0.2
iS 06 16.64
ASK 0.80 313 eP 06 13.28 0.3
eS 06 20.98
KMY 0.93 219 iP 06 15.12 0.0
eS 06 27.28
HYA 1.24 356 iP 06 20.00 -0.4
eS 06 35.92
S.D. = 0.4 on 5 of 5 obs.

JUL 05, 1989 13h 12m 41.54± 0.70s
39.140 N ± 5.2km 23.421 E ±10.7km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.9 (ATH).

NEO 0.23 317 iPgc 12 45.80 -0.6
ATH 1.19 169 ePb 13 04.00 0.3
PLG 1.23 1 ePb 13 04.00 -0.5
eSb 13 21.20
KZN 1.73 313 ePg 13 13.50 1.7
VAY 2.27 344 ePn 13 19.50 -0.2
ITM 2.28 211 ePn 13 19.20 -0.7
MMB 2.46 5 eP 13 22.00 -0.3
eS 13 52.00
RZN 2.73 21 eP 13 27.00 0.6
KKB 2.74 355 eP 13 26.00 -0.3
KDZ 2.93 31 eP 13 38.00 8.9X
S.D. = 0.9 on 9 of 10 obs.

JUL 05, 1989 13h 28m 41.94± 0.92s
24.003 N ± 6.2km 122.635 E ± 9.0km
DEPTH = 28.9 ± 5.2 km
4.8mb (9 obs.)
TAIWAN REGION (243)

TWC 0.94 310 iPd 28 58.90 -0.2
TWD 0.95 275 iPc 28 58.00 -1.3
TWF1 1.39 242 ePd 29 04.30 -1.2
eS 29 21.00
TWZ 1.45 319 ePc 29 08.40 1.9
eS 29 28.70
ANP 1.55 319 iPd 29 10.00 2.0
0.8s 3104.48nm
eS 29 19.50
TWQ 1.67 280 ePc 29 10.20 0.6
QZH 3.80 285 Pn 29 38.50 -1.4
E 10s 0.96um
Sn 30 19.00
SSE 7.18 350 eP 30 26.70 -0.9
0.5s 0.57nm 3.8mb
N 16s 1.40um
eLg 32 26.00
NJ2 8.68 338 eP 30 46.00 -2.6
N 12s 1.00um
E 12s 0.80um
S 32 23.00
GYA 14.66 283 P 32 09.40 0.0
S 34 45.00
XAN 15.60 313 P 32 16.10 -5.4X
TIY 16.21 330 Pc 32 33.40 4.1X
N 14s 1.20um
BJI 16.89 343 eP 32 39.00 1.2
Z 12s 0.90um
CD2 18.10 296 eP 32 52.20 -0.8
HHC 19.19 334 eP 33 06.20 -0.1
BTO 19.65 330 eP 33 10.00 -1.5
Z 13s 0.80um
N 13s 1.10um
E 13s 0.60um
CN2 19.88 6 P 33 12.40 -1.4
Z 15s 0.90um
N 14s 0.60um
pP 33 22.40 42kmX
LZH 20.20 311 eP 33 17.00 -0.4
1.5s 44.00nm 4.6mb
Z 16s 0.60um 4.0MszX
LOE 20.62 255 eP 33 21.00 -0.6
CHTO 22.64 261 eP 33 42.80 0.8

1.0s 2.00nm 3.6mb X
GTA 24.66 314 eP 34 01.20 -0.4
0.8s 0.01nm 1.5mb X
WB5 45.09 164 eP 36 57.50 0.0
WRA 45.15 164 Pd 36 57.80 -0.1
0.9s 5.50nm 4.5mb
WARB 50.04 175 eP 37 36.30 0.2
MAIO 55.10 299 eP 38 14.00 0.1
INK 72.89 22 eP 40 10.00 0.2
MBC 73.14 13 eP 40 09.50 -1.7
HFS 78.37 331 eP 40 37.90 -3.0X
0.6s 1.10nm 4.1mb
NB2 79.00 333 P 40 43.30 -1.2
YKA 82.62 23 P 41 04.90 1.4
KHC 83.75 321 eP 41 10.40 0.7
LPG 89.61 321 eP 41 38.50 -0.2
0.8s 5.90nm 4.9mb
MAF 91.55 323 eP 41 47.30 0.0
1.0s 8.00nm 5.1mb
CAF 92.62 322 eP 41 53.00 0.7
0.8s 6.70nm 5.1mb
RJF 92.69 323 eP 41 53.20 0.7
0.8s 5.30nm 5.0mb
FFC 92.76 24 eP 41 52.50 -0.2
0.8s 12.00nm 5.4mb
S.D. = 1.1 on 33 of 36 obs.

? JUL 05, 1989 13h 51m 11.49± 4.38s
7.151 S ±22.5km 128.836 E ±26.7km
DEPTH = 118.7 ± 51.1 km
4.6mb (4 obs.)
BANDA SEA (280)

KNA 8.55 180 eP 53 14.30 0.4
0.2s 10.00nm 5.2mb
eS 54 42.00
WB5 13.74 158 eP 54 20.70 -1.9
i 54 24.00
iS 56 44.20
WRA 13.79 158 Pc 54 29.00 5.8X
0.5s 9.20nm 4.4mb
QIS 16.92 143 eP 55 03.00 0.4
eS 57 59.00
ASPA 17.13 164 eP 55 06.50 1.4
0.5s 26.00nm 4.8mb
eS 58 05.70
WARB 19.04 186 eP 55 26.70 -0.4
CHG 39.17 312 eP 58 29.60 0.1
CHTO 39.17 312 eP 58 29.20 -0.3
0.8s 3.84nm 4.2mb
LZH 49.00 333 (P) 59 48.50 0.3
S.D. = 1.3 on 8 of 9 obs.

? JUL 05, 1989 13h 54m 51.05± 5.10s
34.910 N ±41.6km 139.216 E ±15.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 1.15 351 eP 55 12.50 -0.5
eS 55 26.30
IIDJ 1.21 298 iPd 55 13.30 -0.8
eS 55 28.30
KAKJ 1.51 31 eP 55 18.60 -0.1
MAT 1.82 334 eP 55 23.00 -0.3
eS 55 46.00
MTMJ 2.03 326 eP 55 28.10 1.7
eS 55 52.70
NIIJ 2.33 356 eP 55 33.00 2.3X
S.D. = 1.4 on 5 of 6 obs.

? JUL 05, 1989 13h 58m 22.60± 3.14s
35.111 N ±25.6km 139.187 E ±15.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 0.95 351 eP 58 40.50 -0.6
eS 58 54.70
IIDJ 1.11 290 eP 58 42.00 -1.9
eS 58 56.30
KAKJ 1.35 36 P 58 47.20 -0.8
eS 59 04.90
MAT 1.63 331 eP 58 52.00 -0.1
eS 59 14.00
MTMJ 1.85 323 eP 58 56.10 0.8
eS 59 21.10
NIIJ 2.13 356 eP 59 00.70 1.4
TSRJ 2.65 280 eP 59 08.00 1.2

eS 59 40.30
S.D. = 1.5 on 7 of 7 obs.

? JUL 05, 1989 14h 01m 10.64± 5.08s
34.857 N ±41.3km 139.199 E ±15.0km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.20	352	iP+	01 32.80	-0.7
			S	01 47.00	
IIDJ	1.22	301	P	01 33.10	-0.8
			S	01 49.00	
KAKJ	1.56	30	iP+	01 38.90	-0.2
MAT	1.86	335	eP	01 44.00	0.5
			iS	02 06.40	
MTMJ	2.06	327	P	01 47.60	1.1
			S	02 13.50	
NIIJ	2.38	356	eP	01 53.30	2.3X
			eS	02 22.50	

S.D. = 1.2 on 5 of 6 obs.

? JUL 05, 1989 14h 05m 54.78± 4.61s
34.917 N ±37.6km 139.208 E ±14.3km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.14	351	iPd	06 16.10	-0.5
			S	06 30.10	
IIDJ	1.20	298	iPd	06 17.00	-0.6
			S	06 31.90	
KAKJ	1.51	31	iPd	06 22.30	-0.1
			eS	06 42.40	
MAT	1.81	334	eP	06 27.00	0.1
			eS	06 50.00	
MTMJ	2.02	326	eP	06 31.10	1.2
			S	06 56.70	
NIIJ	2.32	356	P	06 36.70	2.4X
			eS	07 05.60	

S.D. = 1.0 on 5 of 6 obs.

? JUL 05, 1989 14h 09m 45.46± 4.18s
34.974 N ±34.4km 139.197 E ±13.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.08	351	iP	10 05.80	-0.5
			S	10 20.20	
IIDJ	1.17	296	iP	10 07.20	-0.6
			S	10 22.30	
KAKJ	1.46	33	iP	10 12.40	-0.1
			S	10 32.50	
MAT	1.76	333	iPc	10 17.00	0.2
			eS	10 40.00	
MTMJ	1.97	325	P	10 20.80	0.9
			S	10 46.70	
NIIJ	2.27	356	eP	10 26.10	2.0X
			eS	10 55.60	

S.D. = 0.9 on 5 of 6 obs.

? JUL 05, 1989 14h 19m 22.01±11.01s
34.392 N ±89.9km 139.285 E ±26.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.57	314	iPd	19 50.30	-0.3
			S	20 06.10	
CHJJ	1.67	352	P	19 50.30	-1.7
			S	20 04.10	
KAKJ	1.95	22	P	19 55.90	-0.1
			S	20 16.00	
MAT	2.32	338	eP	20 01.00	-0.4
			eS	20 23.00	
MTMJ	2.50	332	P	20 04.80	0.7
			eS	20 30.10	
NIIJ	2.85	355	P	20 10.70	1.7
			S	20 39.60	

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

? JUL 05, 1989 14h 24m 21.00± 3.42s
35.024 N ±29.0km 139.214 E ±16.7km
DEPTH = 33.0km (normol)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.04	350	P	24 38.10	-1.2
			eS	24 52.20	
IIDJ	1.16	293	P	24 39.20	-1.8
			S	24 54.10	
KAKJ	1.41	33	P	24 44.50	-0.1
			eS	25 03.70	
MAT	1.72	332	iPd	24 49.20	0.1
			iS	25 11.60	
MTMJ	1.93	324	P	24 53.00	0.7
			eS	25 18.40	
NIIJ	2.22	356	eP	24 56.80	0.6
			eS	25 25.30	
TSRJ	2.69	282	eP	25 03.90	1.0
			eS	25 36.60	

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

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* JUL 05, 1989 14h 31m 02.20± 0.67s
1.682 S ±15.5km 14.550 W ±12.5km
DEPTH = 10.0km (geophysicist)
4.6mb (8 obs.)
NORTH OF ASCENSION ISLAND (407)

LIC	12.33	50	Pc	33 52.50	-8.3X
			S	35 59.00	
ITR	24.78	253	eP	36 24.90	-0.8
SOB1	27.25	253	eP	36 48.50	-0.3
BNG	33.63	79	iPd	37 45.50	0.1
	1.0s		15.00nm	4.9mb	
			i	42 05.50	
			iS	43 08.00	
			i	44 30.00	
			i	45 08.00	
			i	56 14.00	
BUL	45.97	117	iPd	39 28.10	0.3
LSF	49.80	15	eP	39 59.20	2.1
	0.8s		6.70nm	4.7mb	
TCF	50.01	15	eP	40 00.40	1.7
	0.8s		3.20nm	4.3mb	
MAF	50.04	15	eP	40 03.00	4.0X
	1.1s		12.20nm	4.8mb	
LPG	50.63	19	eP	40 02.00	-1.9
	1.0s		6.00nm	4.5mb	
CCH	53.01	250	P	40 12.20	-10.1X
SKO	54.29	33	eP	40 32.00	1.1
			i	40 43.00	
PTJ	54.51	26	eP	40 31.50	-1.1
CNCB	54.63	251	P	40 34.00	-0.5
ZOBO	54.68	251	P	40 36.00	1.2
	Z 24s		0.74um	4.7MszX	
			LR	58 10.00	
LPB	54.70	251	eP	40 30.00	-4.8X
			LR	58 08.00	
KHC	56.15	22	eP	40 49.00	4.7X
			i	40 57.00	
MOX	56.72	20	e(P)	40 45.00	-3.4X
ZST	56.79	25	eP	40 58.70	9.8X
			e	50 41.00	
BZS	56.93	30	eP	40 57.00	7.1X
EKA	57.59	8	P	40 55.00	0.6
	0.8s		2.80nm	4.3mb	
CLL	57.75	20	eP	40 54.00	-1.6
SPC	58.90	26	e(P)	41 13.60	9.7X
MLR	59.07	32	eP	41 04.00	-1.1
NB2	65.63	13	P	41 47.80	-0.7
MAIO	78.18	53	eP	43 12.00	8.1X
MEO	86.05	305	eP	43 45.60	0.9
SPA	88.33	180	e(P)	43 58.20	2.9X
	1.0s		1.50nm	4.3mb	
			e	44 23.80	
FFC	89.87	325	eP	44 09.00	6.4X
	0.8s		8.00nm	5.0mb	
MBC	95.13	347	eP	44 36.00	9.5X
YKA	96.13	333	P	44 23.70	-7.6X

S.D. = 1.3 on 16 of 30 obs.

% JUL 05, 1989 14h 34m 30.60± 1.58s
31.222 S ±14.6km 68.329 W ±11.8km
DEPTH = 93.5 ± 20.3 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.16	228	iPd	34 44.20	-0.2
			S	34 54.00	
CFA	0.39	169	i(P)	34 45.50	0.3
			S	34 57.00	
RTCB	0.48	237	iPd	34 46.00	0.1
			S	34 57.00	
RTCV	0.66	196	iPc	34 47.10	-0.2
RTBS	1.06	245	ePd	34 51.50	0.1
			S	35 07.40	
RTRS	1.43	317	iPd	34 56.00	0.0
			S	35 14.00	
MRA	2.53	119	ePc	35 10.50	0.0

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

& JUL 05, 1989 16h 01m 28.45s
62.556 N 152.082 W
DEPTH = 13.3km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.4 (PMR).

SKT	0.63	156	iP	01 40.79	-0.1
CUT	0.86	99	eP	01 44.57	0.0
HUR	1.20	68	eP	01 50.25	-0.3
SUA	1.27	149	iP	01 51.63	-0.1
			S	02 09.87	
PWA	1.38	130	eP	01 53.40	0.2
SPU	1.38	179	eP	01 53.35	0.0
GHO	1.68	117	eP	01 57.51	-0.1
PMR	1.69	124	eP	01 58.30	0.6
RND	1.70	59	eP	01 57.69	-0.3
PMS	1.78	137	eP	02 00.00	1.0
TTA	1.85	283	eP	01 59.80	-0.3
MCK	1.85	49	eP	02 00.54	0.4
RDT	2.00	185	eP	02 03.59	1.3
KNK	2.06	122	eP	02 03.78	0.6
RED	2.17	189	eP	02 06.34	1.5
SVW	2.22	231	eP	02 05.80	0.3
SLKM	2.24	156	eP	02 06.01	0.2
NEA	2.43	32	eP	02 06.46	-2.0
ILIM	2.52	190	eP	02 09.52	-0.2
NNL	2.55	171	eP	02 12.06	1.9
WRH	2.63	41	eP	02 10.35	-0.8
SEW	2.77	152	eP	02 13.84	0.6
TOA	2.79	97	eP	02 15.10	1.4
CCB	2.84	40	eP	02 13.96	-0.2
RDS	2.88	36	eP	02 13.53	-1.2
HDA	2.96	49	eP	02 15.05	-0.8
OPT	2.97	191	eP	02 18.24	2.2
FBA	3.03	37	eP	02 16.81	0.0
PAX	3.07	79	eP	02 16.87	-0.7
IMA	3.59	350	eP	02 25.70	0.6

30 obs. ossocioted

JUL 05, 1989 16h 16m 31.85± 0.83s
4.057 N ± 2.9km 126.625 E ± 4.9km
DEPTH = 93.9 ± 8.3 km
4.9mb (12 obs.)
TALAUD ISLANDS (263)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 14S, 27C
Centroid Locotion:
Origin Time 16:16:32.7 0.6
Lot 4.31N 0.05 Lon 126.73E 0.09
Dep 88.6 4.7 Holf-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-3.41 0.56 Mtt= 6.51 0.69
Mff=-3.10 1.07 Mrt= 0.77 0.51
Mrf= 1.20 0.46 Mtf= 1.02 0.68
Principol Axes:
T Vol= 6.70 Plg= 5 Azm=354
N -2.24 41 259
P -4.46 49 90
Best Double Couple:Mo=5.6*10**16
NP1:Strike=119 Dip=53 Slip= -35
NP2: 232 62 -138

DAV	3.19	341	eP	17 22.40	1.6
AAI	7.85	168	ePd	18 23.00	-2.2
PCI	8.39	234	ePd	18 32.90	0.4
			eS	20 03.50	
TSM	8.53	271	ePc	18 38.00	3.5X
KKM	10.56	281	ePd	19 04.00	2.0
MKS	11.66	218	ePd	19 16.00	-0.6
BAG	13.64	335	eP	19 42.50	-0.2
			eS	22 30.00	
KHKI	16.52	222	eP	20 21.50	2.2
			e	23 20.30	
KNA	19.79	174	iPc	20 56.00	-1.3
	0.7s		204.00nm	5.6mb	
GUMO	20.34	61	eP	21 03.00	0.0
	Z 22s		0.53um	3.9Msz	
GUA	20.36	61	eP	21 04.00	0.8
ANP	21.57	347	eP	21 15.80	0.4
HKC	21.79	327	iP	21 16.90	-0.5
OIZ	22.14	314	eP	21 20.00	-1.0
QZH	22.16	340	eP	21 19.00	-1.0
	Z 30s		1.10um	4.1M	

05d 16h

			S	25	16.00	
GZH	22.87	327	iPd	21	26.40	-1.6
			S	25	32.50	
KGM	23.36	266	eP	21	33.00	0.1
PMG	24.44	123	eP	21	43.00	-0.3
WB5	24.98	163	eP	21	47.50	-0.8
			eS	26	09.70	
WRA	25.03	163	Pd	21	48.00	-0.8
	0.7s	33.90nm			4.9mb	
IPM	25.53	272	eP	21	52.70	-0.9
			e	22	05.10	
MBL	25.93	195	eP	21	57.30	0.2
SNG	26.06	278	eP	22	04.80	6.3X
SSE	27.38	350	eP	22	10.00	-0.2
	1.0s	35.00nm			4.9mb	
	Z 24s	0.50um			4.0MszX	
	E 10s	0.20um				
			sP	22	30.00	
			S	26	48.00	
			e(sS)	27	02.00	
QIS	27.58	153	eP	22	11.00	-1.2
LOE	27.77	300	eP	22	13.50	-0.5
NNT	27.90	289	eP	22	04.50	-10.6X
ASPA	28.45	166	iPd	22	19.20	-0.9
	0.6s	13.00nm			4.7mb	
	Z 20s	0.15um			3.6Msz	
			eS	27	10.40	
			LR	36	23.80	
NST	28.49	296	eP	22	30.50	10.0X
NANU	28.59	202	iPd	22	21.10	-0.2
WHN	28.78	338	eP	22	22.50	-0.4
NJ2	28.79	346	Pc	22	23.80	0.9
GYA	29.35	321	P	22	28.00	-0.2
			PcP	25	33.00	
WARB	30.06	180	iPc	22	35.10	0.7
BDT	30.08	298	eP	22	36.00	1.4
CHG	30.76	301	eP	22	40.20	-0.5
CHTO	30.76	301	iP	22	40.70	0.0
	0.6s	3.79nm			4.3mb	
CTA	30.78	142	iPd	22	41.00	0.2
	1.0s	80.00nm			5.4mb	
KMI	31.08	315	eP	22	44.50	0.9
MEKA	31.48	194	iPc	22	46.20	-0.6
	0.3s	12.00nm			5.1mb	
			e	22	55.00	
TIA	33.17	346	eP	23	01.40	-0.1
MAT	34.04	17	eP	23	07.00	-2.0
XAN	34.08	333	Pc	23	08.00	-1.4
CD2	34.32	324	eP	23	10.60	-0.9
MRWA	34.62	196	eP	23	14.00	0.0
FORR	34.74	178	eP	23	13.00	-1.9
			e	23	23.00	
DL2	34.98	353	eP	23	17.80	0.9
COOL	35.14	188	eP	23	17.70	-0.7
			i	23	27.70	
BAL	35.75	195	eP	23	23.10	-0.4
			e	23	34.00	
TIY	35.93	341	eP	23	24.00	-1.0
	Z 30s	1.30um			4.5MszX	
	E 13s	0.20um				
			sP	23	44.50	
KLB	36.44	193	eP	23	29.00	-0.4
			i	23	39.60	
BJI	37.05	347	eP	23	34.50	0.2
			eS	29	15.00	
RMQ	37.16	146	eP	23	35.00	-0.5
			e	25	18.00	
MUN	37.18	195	eP	23	35.00	-0.5
			e	23	41.00	
SNY	37.70	356	iPc	23	40.40	0.6
			S	29	25.50	
NWAO	37.84	193	eP	23	41.00	-0.1
			e	23	51.00	
LZH	38.17	330	P	23	44.50	0.5
	1.5s	48.00nm			5.2mb	
	Z 22s	0.50um			4.3Msz	
			i	24	06.50	
STK	38.47	159	iPd	23	46.20	-0.2
			i	23	55.90	
HHC	39.06	342	eP	23	51.20	-0.1
CN2	39.59	359	Pc	23	55.20	-0.3
	Z 14s	0.90um			4.8MszX	
			sP	24	18.20	
			eS	29	44.00	
BRS	40.18	143	iPc	24	00.80	0.2
			i	24	10.90	
ADE	40.45	165	e(P)	24	03.30	0.6
	0.4s	125.42nm			6.1mb X	
MDJ	40.48	3	eP	24	03.50	0.7
COO	42.06	147	eP	24	17.00	1.0
LSA	42.15	311	eP	24	18.00	0.7
GTA	42.76	329	eP	24	21.20	-0.6
BWA	43.44	153	iPd	24	29.30	2.1
			i	24	41.30	
BFD	43.62	161	iPc	24	28.90	0.4
CAN	44.45	154	eP	24	36.70	1.4
			i	24	48.70	
CNB	44.61	153	eP	24	38.00	1.4
TOO	44.98	159	eP	24	41.00	1.5
			e	26	34.00	
DZM	46.81	125	iPc	24	54.60	0.3
HYB	48.91	290	eP	25	17.00	6.4X
KOD	49.12	280	eP	25	13.00	0.4
GBA	49.43	284	Pd	25	20.00	5.4X
	0.2s	133.10nm			6.6mb X	
WMQ	52.40	325	P	25	36.50	-0.3
	Z 30s	0.20um			4.0MszX	
			eS	33	04.50	
POO	53.51	290	eP	25	53.50	8.3X
QUE	61.88	302	eP	26	43.40	-0.7
MAIO	69.23	307	eP	27	30.00	-0.9
PMR	83.71	29	eP	28	51.60	0.3
MAW	84.02	200	eP	28	54.00	1.3
INK	89.90	21	eP	29	22.00	0.7
SOD	90.13	338	eP	29	22.00	-0.3
SUF	91.21	333	eP	29	28.50	1.1
	0.3s	0.90nm			4.5mb	
MBC	91.66	13	eP	29	30.50	1.2
	0.6s	2.00nm			4.6mb	
NUR	92.37	331	eP	29	39.80	7.1X
VRI	93.99	316	ePc	29	41.50	0.9
SPA	94.03	180	e(P)	29	41.90	1.4
	1.0s	5.50nm			4.9mb	
MLR	94.59	316	eP	29	44.50	1.0
SLL	97.73	333	ePKP	29	56.50	-0.8
	0.5s	1.30nm			4.7mb	
NB2	98.45	334	P	29	59.80	-0.8
TUL	123.83	41	e(PKP)	35	22.70	1.8X
	1.2s	10.00nm				
PEL	146.85	153	iPKPd	36	06.10	2.7X
UPA	150.88	64	iPKPc	36	17.00	6.9X
	1.1s	83.54nm				
LPB	160.96	132	PKP	36	33.00	9.7X
ZOBO	161.10	131	PKP	36	29.00	5.3X

S.D. = 1.0 on 83 of 96 obs.

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* JUL 05, 1989 16h 20m 32.89± 0.85s
30.973 S ± 9.1km 69.042 W ±11.7km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

RTCB	0.55	158	iPd	20	45.00	0.7
			S	20	58.00	
RTLL	0.61	126	iPd	20	45.70	0.6
ZON	0.65	152	iP-	20	46.00	0.3
			eS	20	59.00	
RTBS	0.77	207	iPd	20	47.30	0.0
RTRS	0.88	336	iPc	20	48.80	0.0
CFA	0.93	133	iPd	20	49.00	-0.7
			S	21	05.00	
RTCV	0.98	154	iPc	20	49.50	-0.9
			S	21	06.00	

S.D = 0.8 on 7 of 7 obs.

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* JUL 05, 1989 17h 34m 03.12± 2.85s
34.933 N ±22.7km 139.198 E ±12.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.13	352	iP+	34	23.90	-0.8
			S	34	38.10	
IIDJ	1.19	298	iPd	34	25.20	-0.5
			S	34	40.20	
KAKJ	1.50	32	P	34	30.40	-0.2
			S	34	50.50	
MAT	1.80	334	iPd	34	35.00	0.0
			iS	34	57.80	
MTMJ	2.00	326	eP	34	39.10	1.1
			eS	35	04.90	
NIIJ	2.31	356	eP	34	42.90	0.5
			eS	35	13.20	
TSRJ	2.70	284	eP	34	47.90	-0.1
			eS	35	21.70	

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

JUL 05, 1989 17h 59m 34.82± 0.81s
45.337 N ± 4.8km 6.682 E ±10.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG).

LPG	0.17	17	Pg	59	37.90	-0.9
			Sg	59	42.60	
LPL	0.18	11	Pg	59	37.70	-1.3
			Sg	59	41.90	
BNI	0.28	181	P	59	39.50	-1.3
			eSg	59	45.00	
LSD	0.35	70	P	59	42.33	0.1
			S	59	50.23	
RRL	0.42	170	P	59	43.05	-0.5
			S	59	51.25	
RSP	0.45	114	P	59	44.79	0.8
			S	59	54.12	
PZZ	0.88	160	P	59	51.35	-0.5
			S	00	05.30	
SBF	1.57	160	Pg	00	06.00	3.2X
			Sg	00	30.50	
FRF	1.78	181	Pg	00	07.10	1.3
			Sg	00	30.20	
LRG	1.90	187	Pg	00	07.90	0.4
			Sg	00	33.70	
HAU	2.68	355	Pg	00	20.70	1.9
			Sg	00	53.80	

S.D. = 1.3 on 10 of 11 obs.

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* JUL 05, 1989 18h 26m 39.40± 2.82s
35.033 N ±23.1km 139.210 E ±13.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.03	350	iPd	26	59.10	-0.2
			iS	27	13.60	
IIDJ	1.15	293	iPd	27	00.30	-1.1
			S	27	15.40	
KAKJ	1.41	34	P	27	05.40	-0.3
			S	27	25.00	
MAT	1.71	332	iPd	27	10.20	0.2
			iS	27	32.70	
MTMJ	1.92	324	iPd	27	14.10	0.9
			S	27	39.90	
NIIJ	2.21	356	P	27	19.80	2.6X
			S	27	48.70	
TSRJ	2.69	282	P	27	24.60	0.5
			S	27	58.20	

S.D. = 0.9 on 6 of 7 obs.

? JUL 05, 1989 18h 46m 24.04± 3.37s
34.940 N ±27.0km 139.182 E ±15.1km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.12	352	P	46	44.50	-0.9
			S	46	58.10	
IIDJ	1.17	298	P	46	45.20	-1.2
			S	47	00.10	
KAKJ	1.50	32	eP	46	50.70	-0.9
			S	47	11.10	
MAT	1.78	334	eP	46	56.00	0.3
			iS	47	17.50	
MTMJ	1.99	326	eP	46	59.10	0.4
			eS	47	24.00	
NIIJ	2.30	356	eP	47	05.00	1.8
			S	47	35.10	
TSRJ	2.68	284	eP	47	09.20	0.5

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

JUL 05, 1989 18h 47m 54.92± 0.88s
34.916 N ± 8.2km 139.180 E ± 8.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.14	352	iPd	48	15.80	-0.9
IIDJ	1.18	299	P	48	17.10	-0.4
			S	48	32.00	
KAKJ	1.52	32	iP+	48	22.20	-0.6
			eS	48	43.90	
MAT	1.80	334	iPd	48	26.80	-0.1
			iS	48	49.50	
MTMJ	2.01	327	P	48	30.70	0.8
			S	48	56.70	
NIIJ	2.32	356	eP	48	35.30	0.9

		eS	49 05.20		
TSRJ	2.69	284 P	48 39.50	-0.1	
		eS	49 14.50		
WB5	54.68	186 eP	57 26.70	-0.5	
ZOBO	149.32	60 ePKP	07 44.00	0.9	
LPB	149.51	60 ePKP	07 34.00	-9.2X	
CNCB	149.78	60 ePKP	07 49.00	5.2X	

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

? JUL 05, 1989 18h 52m 20.66± 6.49s
34.800 N ±54.7km 139.190 E ±19.7km
DEPTH = 33.0km (normal)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.25	303 P	52 41.70	-0.2	
		S	52 56.80		
CHJJ	1.26	353 P	52 40.30	-1.7	
		S	52 54.70		
KAKJ	1.62	29 P	52 47.20	0.0	
		S	53 07.90		
MAT	1.91	336 eP	52 51.00	-0.5	
		iS	53 14.00		
MTMJ	2.11	328 P	52 55.60	1.2	
		S	53 21.60		
NIIJ	2.44	356 P	53 00.40	1.4	
		S	53 31.70		

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

JUL 05, 1989 19h 57m 04.81± 0.81s
17.113 N ±10.0km 62.316 W ± 6.7km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.7 (FDF).

NEV	0.24	275 ePd	57 10.27	0.3	
		S	57 13.90		
MGH	0.40	166 ePd	57 13.40	0.3	
		S	57 18.50		
BPA	0.44	99 eP	57 14.50	0.6	
		S	57 21.00		
SKI	0.46	299 eP	57 14.00	-0.2	
		eS	57 20.52		
PAG	1.24	150 eP	57 27.70	-0.2	
		S	57 43.50		
DEG	1.44	123 eP	57 30.15	-0.9	
		S	57 49.00		

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

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* JUL 05, 1989 20h 30m 04.50± 1.02s
34.783 N ± 9.5km 139.193 E ± 9.8km
DEPTH = 5.0km (geophysicist)
3.7mb (1 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.26	304 iPd	30 28.40	0.0	
		S	30 44.30		
CHJJ	1.27	353 iP+	30 27.10	-1.5	
KAKJ	1.63	29 P	30 33.40	-0.5	
		S	30 53.90		
MAT	1.93	336 eP	30 38.00	-0.3	
		iS	31 01.60		
MTMJ	2.12	328 P	30 42.20	1.0	
		S	31 08.50		
NIIJ	2.46	356 P	30 46.30	0.4	
TSRJ	2.74	287 P	30 51.20	1.3	
		eS	31 25.70		
SHK	5.38	269 eP	31 27.00	-0.3	
MDJ	12.28	326 eP	33 06.00	3.1X	
CN2	13.93	314 eP	33 21.00	-3.7X	
BJI	19.00	293 eP	34 30.00	0.7	
Z 14s		0.35um		3.8Msz	
WHN	21.32	266 eP	34 58.00	3.6X	
N 13s		0.40um			
TIY	21.75	286 eP	35 03.40	4.5X	
N 16s		0.70um			
		S	38 53.00		
CHTO	39.00	257 e(P)	37 31.00	-2.7	
1.0s		1.75nm		3.7mb	
WB5	54.55	186 eP	39 36.30	0.4	
KVN	77.56	51 eP	42 04.80	1.4	
ZOBO	149.37	60 PKP	49 59.00	6.2X	
LPB	149.57	60 PKP	50 00.00	7.1X	
CNCB	149.83	61 PKP	50 00.00	6.6X	

S.D. = 1.3 on 12 of 19 obs.

? JUL 05, 1989 20h 32m 33.16± 4.87s
34.980 N ±39.6km 139.139 E ±15.5km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.07	354 P	32 52.40	-1.4	
		S	33 06.90		
IIDJ	1.12	297 P	32 53.80	-0.9	
		S	33 08.70		
KAKJ	1.48	34 P	33 00.00	-0.5	
		S	33 19.50		
MAT	1.73	334 eP	33 04.00	-0.1	
		iS	33 26.10		
MTMJ	1.93	326 P	33 08.50	1.4	
		S	33 33.60		
NIIJ	2.26	357 eP	33 13.10	1.4	
		S	33 43.00		

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

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* JUL 05, 1989 20h 45m 11.59± 2.72s
35.054 N ±22.4km 139.190 E ±12.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.00	351 P	45 31.00	-0.1	
		S	45 45.10		
IIDJ	1.13	292 P	45 32.20	-1.0	
		S	45 47.20		
KAKJ	1.40	35 P	45 37.50	-0.3	
		S	45 58.20		
MAT	1.69	332 iPd	45 41.80	0.0	
		iS	46 04.40		
MTMJ	1.90	324 P	45 45.90	0.9	
		S	46 11.70		
NIIJ	2.19	356 P	45 53.30	4.2X	
		S	46 22.10		
TSRJ	2.67	281 P	45 56.50	0.5	
		S	46 30.40		

S.D. = 0.9 on 6 of 7 obs.

JUL 05, 1989 20h 46m 19.29± 1.34s
34.222 S ±11.5km 70.106 W ± 5.9km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.54	302 iPd	46 30.00	-0.2	
		iS	46 38.60		
PCH	0.69	330 iPc	46 32.50	-0.5	
		iS	46 42.00		
TACH	0.89	309 iPd	46 36.50	0.1	
		iS	46 49.50		
SAN	0.90	329 eP	46 36.20	-0.3	
		iS	46 49.30		
FCH	0.91	350 iPc	46 36.40	-0.5	
		iS	46 50.00		
LNV	1.11	283 iPd	46 39.90	-0.3	
		iS	46 55.50		
PEL	1.18	336 iPc	46 41.40	0.1	
		iS	46 58.20		
LCCH	1.43	301 iPc	46 45.50	0.3	
		iS	47 04.80		
ROCH	1.46	329 iPd	46 46.50	0.6	
		iS	47 05.20		
JACH	1.59	345 eP	46 48.50	0.9	
		eS	47 10.00		
MRA	4.10	65 ePc	47 23.10	-0.2	

S.D. = 0.5 on 11 of 11 obs.

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* JUL 05, 1989 20h 59m 24.88± 2.69s
35.011 N ±22.0km 139.190 E ±12.5km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.05	351 P	59 45.10	0.0	
		S	59 59.40		
IIDJ	1.15	294 P	59 45.90	-0.9	
		S	00 01.20		
KAKJ	1.44	34 P	59 51.30	-0.3	
		S	00 13.10		
MAT	1.72	333 eP	59 56.00	0.3	
		iS	00 18.10		
MTMJ	1.93	325 P	59 59.10	0.3	
		S	00 25.60		
NIIJ	2.23	356 P	00 05.60	2.6X	
		eS	00 34.60		
TSRJ	2.68	282 eP	00 09.90	0.5	
		eS	00 43.80		

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

? JUL 05, 1989 21h 01m 39.55± 4.31s
34.907 N ±35.4km 139.092 E ±12.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.12	301 P	02 00.80	-0.3	
		S	02 15.90		
CHJJ	1.14	356 P	02 01.20	-0.2	
		S	02 14.20		
KAKJ	1.57	34 P	02 08.00	0.0	
		S	02 27.90		
MAT	1.78	336 eP	02 11.00	-0.2	
		iS	02 33.10		
MTMJ	1.97	328 P	02 14.80	0.7	
		S	02 41.10		

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

? JUL 05, 1989 21h 21m 48.51± 5.69s
34.826 N ±45.9km 139.248 E ±16.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.24	350 P	22 11.40	-0.6	
		S	22 24.80		
IIDJ	1.27	301 P	22 11.70	-0.9	
		S	22 26.70		
KAKJ	1.57	28 P	22 16.80	-0.2	
		S	22 37.30		
MAT	1.91	334 eP	22 22.00	0.0	
		iS	22 44.10		
MTMJ	2.11	327 P	22 26.80	1.8	
NIIJ	2.42	355 P	22 33.20	3.9X	
		S	22 59.40		

S.D. = 1.5 on 5 of 6 obs.

? JUL 05, 1989 21h 24m 49.75± 3.85s
35.168 N ±31.8km 139.126 E ±13.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.88	353 P	25 06.70	-0.5	
		S	25 22.50		
IIDJ	1.04	288 P	25 09.60	-0.3	
		S	25 25.10		
KAKJ	1.34	39 P	25 14.90	0.0	
		S	25 35.20		
MAT	1.56	332 eP	25 19.00	0.8	
		iS	25 41.80		
MTMJ	1.77	323 P	25 23.70	2.3X	
		S	25 49.20		
NIIJ	2.07	357 P	25 29.00	3.4X	
		S	25 57.80		

S.D. = 1.0 on 4 of 6 obs.

? JUL 05, 1989 21h 48m 36.85± 4.50s
34.945 N ±36.9km 139.195 E ±14.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.11	352 P	48 57.50	-0.7	
		S	49 11.90		
IIDJ	1.18	297 P	48 58.60	-0.7	
		S	49 13.70		
KAKJ	1.49	32 eP	49 04.10	-0.1	
		S	49 23.40		
MAT	1.78	334 eP	49 09.00	0.5	
		eS	49 31.00		
MTMJ	1.99	326 eP	49 12.60	1.0	
		S	49 38.10		

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

? JUL 05, 1989 21h 53m 36.18± 4.33s
34.950 N ±35.5km 139.213 E ±13.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.11	351 P	53 57.00	-0.5	
		S	54 11.10		
IIDJ	1.19	297 P	53 58.30	-0.6	
		S	54 13.10		
KAKJ	1.48	32 P	54 03.30	-0.1	
		S	54 25.10		
MAT	1.79	333 eP	54 08.00	0.1	
		iS	54 30.40		
MTMJ	1.99	325 P	54 12.00	1.0	
		S	54 37.70		
NIIJ	2.29	356 P	54 17.80	2	

05d 21h

		S	54 47.90			
S.D. = 0.9	on	5 of	6 obs.			

? JUL 05, 1989 21h 58m 07.03± 4.37s
35.004 N ±36.2km 139.153 E ±14.3km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.05	353	P	58	26.40	-0.9
			S	58	41.20	
IIDJ	1.12	295	P	58	27.70	-0.8
			S	58	42.30	
KAKJ	1.46	34	P	58	33.90	-0.1
MAT	1.72	334	eP	58	38.00	0.3
			eS	59	00.00	
MTMJ	1.92	326	P	58	42.10	1.3
S.D. = 1.3	on	5 of	5 obs.			

? JUL 05, 1989 22h 15m 29.22± 3.16s
35.104 N ±25.9km 139.142 E ±15.1km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.95	353	P	15	47.20	-0.6
			S	16	01.70	
IIDJ	1.07	291	iPd	15	48.40	-1.5
			S	16	03.40	
KAKJ	1.38	37	P	15	54.20	-0.9
			S	16	13.10	
MAT	1.62	332	eP	15	58.00	-0.6
			iS	16	20.90	
MTMJ	1.83	324	P	16	02.20	0.5
			S	16	28.00	
NIIJ	2.13	357	P	16	07.90	1.9
			eS	16	36.80	
TSRJ	2.62	280	P	16	14.00	1.1
			eS	16	46.10	
S.D. = 1.5	on	7 of	7 obs.			

* JUL 05, 1989 22h 22m 57.46± 0.93s
17.142 N ±14.1km 62.348 W ± 9.0km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)

NEV	0.21	269	eP	23	05.70	1.5
SKI	0.42	297	eP	23	05.82	-1.1
			eS	23	10.50	
MGH	0.44	163	eP	23	05.60	-1.6
BPA	0.48	101	eP	23	07.00	-0.8
			S	23	12.60	
ANG	0.50	88	eP	23	08.28	0.3
			eS	23	10.23	
PAG	1.28	150	eP	23	20.00	0.8
DEG	1.48	124	eP	23	23.00	0.8
			S	23	39.00	
S.D. = 1.4	on	7 of	7 obs.			

& JUL 05, 1989 22h 42m 27.93s
57.694 N 142.881 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

PNL	2.69	41	iP	43	06.71	-5.3
			eS	43	36.12	
HON	2.74	48	iP	43	07.15	-5.6
			eS	43	37.62	
PCA	2.77	28	iP	43	07.96	-5.2
			eS	43	38.44	
BCPM	2.83	35	iP	43	08.46	-5.5
			eS	43	39.99	
TGL	3.07	0	eP	43	11.87	-5.6
BALM	3.36	4	eP	43	16.12	-5.6
			S	43	53.96	
CTGM	3.38	13	eP	43	16.16	-5.7
GLB	3.79	353	eP	43	21.60	-6.1
KLU	4.11	339	eP	43	25.87	-6.3
HYT	4.18	39	P	43	28.00	-5.3
SLKM	4.72	310	eP	43	34.28	-6.6
11 obs. associated						

& JUL 05, 1989 22h 51m 56.35s
41.707 N 112.371 W
DEPTH = 10.0km
4.2mb (2 obs.)
UTAH (478)
<SLC-P>. ML 4.6 (SLC). Felt (IV) at Corinne, Fielding, Garland, Howell, Portage and Riverside. Felt (III) at Bear River City, Newton, Plymouth, Snowville and Tremonton.

PTI	1.16	0	iPd	52	18.00	-0.2
DAU	1.54	147	iPd	52	25.00	0.8
DUG	1.55	193	iPd	52	23.90	-0.2
HPI	2.07	345	eP	52	32.50	0.6
BW06	2.35	62	eP	52	36.00	0.2
IMW	2.43	25	iPd	52	37.60	0.6
MSU	3.19	177	eP	52	47.50	-0.3
CCMT	3.23	354	ePn	52	49.70	1.5
8GMT	3.53	4	ePn	52	53.40	0.8
MEMT	4.03	14	ePn	53	02.20	2.7
PV09	4.05	141	eP	53	00.50	0.5
LRM	4.11	359	ePn	53	02.20	1.4
PV10	4.20	141	eP	53	03.20	1.2
BUT	4.31	358	ePg	53	14.80	11.2
			eSg	54	08.00	
HRY	5.02	4	ePn	53	16.80	3.3
KVN	5.12	241	eP	53	14.50	-0.5
TNP	5.20	227	eP	53	17.50	1.3
GOL	5.68	108	eP	53	23.00	-0.2
CLC	7.16	216	eP	53	45.00	1.3
			e	54	13.00	
CMB	7.17	242	e(P)	53	44.00	0.2
			e	54	08.30	
			e	55	40.00	
FRI	7.38	233	e(P)	53	58.80	12.1
			e	54	14.30	
			e	55	47.30	
ISA	7.69	220	eP	53	54.00	2.9
			e	54	22.00	
TPC	8.12	202	eP	53	56.00	-1.2
			e	54	25.00	
ALQ	8.20	144	e(Pn)	54	01.00	2.7
			eP*	54	23.50	
			ePg	54	30.50	
			eLg	56	11.00	
LON	8.44	310	eP	54	04.00	2.3
SES	8.74	6	eP	54	07.00	1.3
GLA	8.86	194	eP	54	09.00	1.6
EDM	11.54	357	eP	55	02.50	18.4
TUL	14.16	109	eP	55	11.80	-7.2
	0.8s		2.50nm		4.0mb	
Z	20s		0.31um		2.7Msz	
			e	55	33.70	
			e	56	20.90	
			eLg	59	34.60	
			LR	59	40.00	
RLO	14.58	107	e(P)	55	04.40	-20.2
RSON	15.78	48	eP	55	35.90	-4.2
	0.8s		20.03nm		4.4mb	
FVM	17.25	95	eP	56	00.50	1.7
YKA	20.86	357	P	56	40.60	0.0
BLA	24.99	90	eP	57	24.00	2.4
34 obs. associated						

JUL 05, 1989 22h 55m 49.48± 0.20s
48.808 N ± 6.0km 154.764 E ± 3.7km
DEPTH = 62.0km (9 depth phases)
4.8mb (26 obs.)
KURIL ISLANDS (221)

MAT	17.23	231	eP	59	46.00	-1.2X
MDJ	17.73	266	eP	59	53.30	-0.1
WKYJ	20.37	231	eP	00	23.80	0.4
YONJ	20.78	237	eP	00	26.30	-1.2
CN2	20.79	267	Pc	00	24.40	-3.1X
Z	20s		0.40um		3.8Msz	
			pP	00	39.00	66km
TKSJ	21.37	234	eP	00	33.80	0.4
SHNJ	22.88	239	eP	00	50.20	1.9
SNY	22.90	264	Pc	00	50.40	2.0
KUMJ	24.22	237	eP	01	02.50	1.2
BJI	28.66	267	eP	01	41.00	-1.1
TTA	30.15	44	iP	02	11.80	16.5X
	1.0s		21.25nm			
TIA	30.15	259	eP	01	55.20	-0.3
HHC	31.30	272	eP	02	04.60	-1.1
IMA	31.49	38	eP	02	06.70	-0.5
			ipP	02	23.10	68km
NJ2	31.69	251	eP	02	08.40	-0.6
TIY	32.37	266	eP	02	14.00	-1.0
FBA	33.86	40	iP	02	28.30	0.7
			ipP	02	45.20	70km
WHN	35.55	254	eP	02	42.00	-0.3
XAN	36.82	264	P	02	53.50	0.4
LZH	38.96	270	(P)	03	13.00	1.8
INK	39.32	34	ePc	03	14.40	0.9
	0.9s		26.00nm		5.1mb	
			pP	03	30.00	62km
GTA	39.78	278	eP	03	17.20	-0.6
CD2	42.18	264	eP	03	38.90	1.4
MBC	42.28	21	eP	03	23.00	-14.7X
	0.5s		4.00nm			
			pP	03	38.00	58km
GYA	43.26	257	P	03	46.00	-0.4
WMQ	45.24	290	P	04	01.20	-1.0
QIZ	46.68	247	eP	04	15.40	1.7
PNT	53.10	55	iPd	05	02.50	0.0
	0.6s		8.00nm		4.9mb	
CHG	53.68	257	iPd	05	06.70	-0.3
	1.0s		34.75nm		5.3mb	
CHTO	53.68	257	iPd	05	07.00	0.0
	1.0s		20.25nm		5.1mb	
			pP	05	22.80	60km
			sP	05	35.20	
FHC	55.62	65	ePc	05	22.70	1.7
WDC	56.62	65	ePc	05	28.70	0.6
			e	05	43.90	57km
LTCM	57.10	65	P	05	31.70	0.2
NNT	57.83	251	eP	05	37.00	0.2
ORV	57.88	65	ePc	05	36.70	-0.3
FFC	58.45	41	iPd	05	40.90	0.1
	0.7s		13.00nm		5.2mb	
LRM	59.08	55	eP	05	45.70	0.1
GCC	59.19	68	ePc	05	45.60	-0.5
CMB	59.52	66	ePc	05	48.50	0.0
			e	06	04.00	58km
PRS	60.03	68	eP	05	51.70	-0.2
LLA	60.10	67	ePc	05	52.70	0.3
KVN	60.23	64	P	05	53.60	0.1
FRI	60.61	66	eP	05	55.60	-0.2
TNP	61.39	64	P	06	01.60	0.2
	0.9s		25.39nm		5.4mb	
ISA	62.23	67	eP	06	06.00	-0.9
BW06	62.64	56	P	06	10.00	0.3
CLC	62.66	66	eP	06	09.00	-0.7
SBB	63.28	67	eP	06	14.00	0.2
RVR	64.02	67	eP	06	18.00	-0.6
RSSD	64.66	51	P	06	22.70	-0.2
RSON	64.75	41	P	06	22.30	-0.8
	0.5s		4.86nm		4.7mb	
TPC	64.75	67	eP	06	23.00	-0.4
PLM	64.77	68	eP	06	24.00	0.3
BAR	65.35	68	eP	06	27.00	-0.2
PV09	65.80	59	P	06	30.00	-0.4
PV10	65.93	59	P	06	31.50	0.3
GLA	66.21	67	eP	06	33.00	0.2
NB2	66.63	342	P	06	33.60	-1.4
HFS	66.91	340	eP	06	34.90	-1.8
	0.4s		1.20nm		4.2mb	
GOL	67.05	56	P	06	37.00	-1.3
HY8	68.06	272	eP	06	44.00	-0.6
ALQ	69.82	60	eP	06	56.00	0.6
	0.9s		5.46nm		4.5mb	
			e	07	03.00	22kmX
WB5	70.76	200	eP	06	59.80	-1.1
			e	07	16.50	61km
WRA	70.83	200	Pc	07	00.30	-1.0
	0.5s		3.20nm		4.5mb	
SCH	71.01	24	eP	07	03.00	1.0
GBA	71.56	270	P	07	03.90	-2.0
	1.0s		10.10nm		4.7mb	
KOD	74.01	267	eP	07	20.00	-0.6
ASPA	74.52	200	iPc	07	22.00	-1.0
	0.6s		17.00nm		5.2mb	
KSP	74.55	334	eP	07	23.00	0.1
EKA	74.59	347	Pc	07	27.90	4.9X
	2.2s		23.30nm		4.7mb	
CLL	75.04	336	e(P)	07	25.00	-0.7
BRG	75.18	336	e(P)	07	28.00	1.5
PRU	75.81	335	eP	07	30.50	0.4
MOX	76.01	337	e(P)	07	33.00	1.8
DMU	76.50	349	eP	07	34.00	0.1
KHC	76.86	335	P	07	36.20	0.2
GRF	76.98	337	eP	07	40.00	3.3X
Z	21s		0.04um		3.7Msz	
DLE	77.05	349	eP	07	34.30	-2.6
LOR	81.03	340	eP	07	58.50	-0.1
	1.0s		8.00nm		4.6mb	

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LPF     81.29 344 eP     08 00.60   0.7
        1.2s     17.80nm          4.9mb
SSF     81.30 341 eP     07 59.90  -0.1
        1.0s      4.00nm          4.3mb
AVF     81.59 341 eP     08 01.80   0.3
        1.0s      4.00nm          4.3mb
SMF     81.62 340 eP     08 01.90   0.2
        0.8s      5.90nm          4.6mb
LPG     82.01 338 eP     08 04.90   0.8
        1.0s     10.00nm          4.8mb
MAF     82.30 341 eP     08 05.80   0.6
        1.2s     20.80nm          5.0mb
TCF     82.31 341 eP     08 06.00   0.7
        1.2s     10.10nm          4.7mb
LSF     82.49 342 eP     08 06.50   0.3
FORR    82.80 203 eP     08 07.00  -0.8
RJF     83.40 341 eP     08 11.10   0.2
        1.2s     17.80nm          4.9mb
CAF     83.64 341 eP     08 12.10  -0.1
        1.2s     16.00nm          4.9mb
LFF     83.91 342 eP     08 13.10  -0.4
        1.2s     23.80nm          5.1mb
LRG     84.02 337 eP     08 13.60  -0.4
        1.0s      8.00nm          4.7mb
LMR     84.10 337 eP     08 13.80  -0.6
        1.0s     12.00nm          4.9mb
ZOBO   132.39  62 ePKP   14 58.00  -1.0
LPB    132.61  62 PKP    15 00.00   0.8
CNCB   132.90  63 PKP    15 01.00   1.0
CCH    134.42  61 (PKP)  15 04.00   1.5
SPA    138.62 180 e(PKP) 15 09.70   1.0
        0.7s      2.34nm
      S.D. = 0.9  on  92 of  98 obs.
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? JUL 05, 1989  23h 17m 27.13± 6.45s
   32.324 S ±41.5km   71.795 W ±28.3km
   DEPTH =  10.0km  (geophysicist)
 NEAR COAST OF CENTRAL CHILE      (135)

ROCH    0.92 135 eP      17 44.50  -0.4
                 iS      17 55.20
JACH    1.08 110 eP      17 47.00  -0.5
                 iS      18 01.20
LCCH    1.16 171 iP      17 48.50  -0.4
                 iS      18 03.00
PEL     1.24 131 iPc     17 50.40   0.2
                 iS      18 06.50
TACH    1.51 152 ePd     17 54.00  -0.2
                 iS      18 14.00
FCH     1.61 129 iPd     17 56.00   0.0
                 iS      18 16.60
LNV     1.66 169 eP      17 55.70  -0.6
                 iS      18 15.00
PCH     1.68 141 eP      17 57.20   0.4
                 iS      18 21.00
CHCH    1.87 149 iPc     18 01.00   1.5
                 iS      18 23.40
      S.D. = 0.8  on   9 of   9 obs.
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* JUL 06, 1989  00h 15m 56.14± 2.20s
   51.610 N ± 6.8km     7.019 E ±28.1km
   DEPTH =  10.0km  (geophysicist)
 GERMANY                          (543)

WTS     0.41 342 ePg     16 04.50   0.0
ENN     1.09 220 ePg     16 17.00   0.4
                 iSg     16 33.50
MEM     1.19 213 iPd     16 18.12  -0.1
WLF     2.02 196 iP      16 30.60   0.0
                 iS      17 00.40
SNF     2.05 239 P       16 30.70  -0.3
DOU     2.16 226 eP      17 00.20  27.6X
      S.D. = 0.4  on   5 of   6 obs.
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* JUL 06, 1989  00h 57m 30.82± 1.58s
   34.860 N ±13.1km   139.186 E ±10.8km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN   (230)

CHJJ    1.20 353 P       57 52.10  -1.5
                 S       58 06.60
IIDJ    1.21 301 iPd     57 53.10  -0.8
                 eS      58 08.10
KAKJ    1.56  31 P       57 58.80  -0.5
                 S       58 18.00
MAT     1.86 335 eP      58 04.00   0.4
                 iS      58 25.50
MTMJ    2.06 327 iPd     58 07.20   0.7
                 S       58 33.20
NIIJ    2.38 356 P       58 12.30   1.2
                 S       58 41.90
TSRJ    2.71 285 P       58 16.00   0.2
                 S       58 51.00
WKYJ    3.03 259 eP      58 20.50   0.1
                 S       58 55.50
YAMJ    3.38  11 eP      58 26.90   1.6
TKSJ    4.34 260 eP      58 39.00   0.1
                 eS      59 27.40
OFUJ    4.66  25 eP      58 42.20  -1.2
                 eS      59 36.80
YONJ    4.71 276 eP      58 43.80  -0.4
      S.D. = 1.0  on  12 of  12 obs.
-------------------------------------
* JUL 06, 1989  01h 12m 31.08± 1.32s
   39.013 N ±19.2km    99.564 W ± 8.1km
   DEPTH =   5.0km  (geophysicist)
 KANSAS                           (480)
      mbLg 2.7 (NEIS). Felt (III) at
      Palca.

CNK     1.52  70 P       12 57.50  -1.5
MLK     2.08  87 P       13 07.30   0.2
TCK     2.24  80 P       13 10.40   1.0
LCNE    2.34  12 P       13 11.20   0.3
JHN     3.09  61 P       13 21.40   0.0
GOL     4.55 280 ePn     13 42.40  -0.1
                 ePg     13 52.70
                 eSg     14 54.40
      S.D. = 1.1  on   6 of   6 obs.
-------------------------------------
& JUL 06, 1989  01h 15m 18.89s
   63.440 N          150.594 W
   DEPTH = 137.9km
   3.4mb (  1 obs.)
 CENTRAL ALASKA                   (  1)
      <AGS-P>.

HUR     0.64 136 eP      15 38.63  -1.3
RND     0.78  92 eP      15 40.66  -0.4
MCK     0.80  68 iP      15 41.60   0.5
                 S       15 58.02
CUT     1.05 172 iP      15 41.19  -2.0
NEA     1.32  30 eP      15 47.14   1.2
WRH     1.51  46 eP      15 49.17   1.1
SKT     1.53 197 iP      15 45.67  -2.6
CCB     1.72  44 iP      15 51.60   1.2
RDS     1.76  37 eP      15 52.35   1.5
PWA     1.83 169 iPc     15 49.10  -2.5
GHO     1.84 154 iP      15 49.45  -2.5
                 S       16 12.85
HDA     1.88  57 eP      15 52.94   0.7
FBA     1.91  39 iPd     15 54.20   1.6
PMR     1.98 159 iPc     15 50.40  -3.0
SUA     1.98 182 eP      15 51.23  -2.4
GLM     2.09  41 eP      15 56.42   1.5
PMS     2.26 167 iPc     15 53.90  -3.0
KNK     2.27 153 iP      15 54.10  -2.9
SPU     2.37 197 P       15 55.44  -2.9
PAX     2.37  99 eP      15 57.70  -0.7
                 S       16 27.29
TOA     2.44 121 iP      15 57.88  -1.3
SDG     2.48 109 eP      15 58.34  -1.4
TTA     2.51 261 iPd     15 59.00  -1.1
NKA     2.72 187 eP      16 02.44  -0.3
KLU     2.92 130 iP      16 02.41  -3.0
DOT     2.93  83 iP      16 05.01  -0.5
IMA     2.95 335 ePc     16 07.40   1.5
RDT     3.00 197 eP      16 03.77  -2.7
RED     3.20 200 eP      16 06.49  -2.6
SVW     3.32 227 eP      16 07.94  -2.6
SEW     3.39 170 iP      16 07.97  -3.5
NNL     3.43 186 eP      16 10.23  -1.7
ILIM    3.55 199 eP      16 10.58  -3.1
CNPM    3.94 185 eP      16 15.45  -3.4
OPT     4.00 200 eP      16 17.11  -2.5
AUW     4.31 200 eP      16 21.26  -2.5
BALM    4.55 118 eP      16 24.59  -2.5
SHU     4.90 191 eP      16 29.15  -2.5
DWY     5.00  78 P       16 32.40  -0.5
HYT     6.67 107 P       16 53.80  -2.0
INK     8.51  48 eP      17 21.50   1.3
MBC    16.40  26 eP      19 02.50   0.6
        0.5s     1.00nm          3.4mb
      42 obs. associated
-------------------------------------
* JUL 06, 1989  02h 08m 16.47± 1.62s
   35.483 N ±33.2km    27.647 E ± 9.2km
   DEPTH =  10.0km  (geophysicist)
 DODECANESE ISLANDS               (369)
      MD 3.5 (ATH).

KAP     0.39 280 iPgc    08 24.50   0.0
NPS     1.68 263 ePb     08 46.00   0.0
KSL     1.70  67 ePb     08 46.20  -0.1
ELL     2.22  55 iPn     08 54.30   0.3
VAM     2.82 269 ePb     09 06.50   4.2X
BCK     3.09  49 ePn     09 06.00  -0.2
      S.D. = 0.2  on   5 of   6 obs.
-------------------------------------
? JUL 06, 1989  02h 39m 06.69± 0.99s
   22.757 S ± 9.2km    66.238 W ±17.2km
   DEPTH = 240.0km  (geophysicist)
 JUJUY PROVINCE, ARGENTINA        (128)

SLA     2.08 161 ePc     39 49.70   0.1
ANT     3.96 255 iPc     40 09.80  -0.2
                 iS      40 57.10
CCH     5.35   1 P       40 26.70  -0.7
CNCB    6.14 344 eP      40 38.00   0.4
LPB     6.44 344 eP      40 34.00  -7.2X
ZOBO    6.69 344 P       40 45.00   0.4
      S.D. = 0.6  on   5 of   6 obs.
-------------------------------------
* JUL 06, 1989  03h 51m 12.47± 1.97s
   34.876 N ±14.6km   139.195 E ±14.0km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN   (230)

CHJJ    1.18 352 P       51 33.50  -1.5
                 S       51 47.70
IIDJ    1.21 300 P       51 34.70  -0.8
                 S       51 49.70
KAKJ    1.55  31 P       51 40.10  -0.6
                 S       51 59.40
MAT     1.85 335 eP      51 45.00  -0.1
                 iS      52 07.30
MTMJ    2.05 327 P       51 48.70   0.7
                 S       52 15.00
NIIJ    2.36 356 P       51 54.50   2.0
                 eS      52 24.10
TSRJ    2.71 285 P       51 58.80   1.3
                 S       52 32.40
WKYJ    3.04 259 P       52 02.30   0.1
                 S       52 37.30
TKSJ    4.35 260 eP      52 20.30  -0.4
                 eS      53 08.90
YONJ    4.71 275 eP      52 25.30  -0.6
                 eS      53 21.00
      S.D. = 1.2  on  10 of  10 obs.
-------------------------------------
? JUL 06, 1989  04h 28m 50.84± 0.89s
   52.135 S ±12.7km   159.338 E ±26.4km
   DEPTH =  10.0km  (geophysicist)
   4.7mb (  4 obs.)  4.2Msz (  1 obs.)
 MACQUARIE ISLANDS REGION         (167)

TAU    12.28 314 eP      31 46.00  -2.5
                 eS      33 54.00
DRV    17.45 206 eP      33 05.00   9.5X
TOO    17.51 321 iPc     33 03.00   6.4X
CNB    18.26 333 eP      33 08.00   2.1
CAN    18.36 332 eP      33 09.00   2.0
                 eTT     48 35.00
COO    22.23 343 eP      33 50.00   1.0
BRS    25.20 346 eP      34 22.00   4.1X
SBA    25.97 176 e(P)    34 25.50   0.9
RMQ    26.83 339 eP      34 33.50   0.4
DZM    30.51  13 iPc     35 04.40  -1.9
CTA    33.57 337 iPc     35 32.70  -0.3
        1.0s     25.00nm          5.1mb
ASPA   34.44 316 eP      35 39.30  -1.3
        1.4s     18.00nm          4.8mb
     Z  18s      0.43um          4.2Msz
                 LR      48 48.60
SPA    38.05 180 e(P)    36 10.80  -0.1
        1.0s     14.00nm          4.7mb
CHG    87.94 305 eP      41 42.00   0.1
CHTO   87.94 305 eP      41 42.10   0.2
        0.8s      3.11nm          4.7mb
INK   129.94  27 ePKP    47 58.00  -?
MBC   137.92  21 ePKP    48 15.00  -?
```

06d 04h

0.9s 4.00nm
S.D. = 1.5 on 13 of 17 obs.

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* JUL 06, 1989 04h 41m 53.02± 0.74s
43.188 N ±10.0km 0.393 W ± 8.6km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 3.2 (LDG). mbLg 3.3 (MDD).
Felt (IV) in the Ossau and Aspe Valleys, France.

EPF	0.56	106	Pg	42	04.20	-0.2
			Sg	42	13.40	
ECRI	1.66	250	eP	42	22.80	0.4
			eS	42	42.50	
LPO	1.88	37	Pg	42	30.90	5.4X
			Sg	42	56.90	
LFF	1.93	25	Pg	42	31.90	5.7X
			Sg	42	59.60	
EROO	2.44	166	ePn	42	37.20	3.7X
			eSn	43	05.50	
EBR	2.46	164	eP	43	09.00	35.3X
			e	43	12.00	
			e	43	15.00	
			e	43	19.00	
CAF	2.48	45	Pn	42	35.10	1.0
			Pg	42	42.10	
			Sg	43	16.70	
RJF	2.52	32	Pg	42	42.70	8.0X
			Sg	43	16.90	
ETER	2.55	109	ePn	42	42.00	6.9X
			eSn	43	15.00	
ETOR	2.67	208	ePn	42	37.40	0.5
LSF	3.35	23	Pn	42	45.70	-0.8
			Sn	43	25.50	
			Sg	43	42.40	
MFF	3.42	3	Pg	43	00.10	12.7X
			Sg	43	44.00	
TCF	3.61	30	Pg	43	02.90	12.7X
			Sg	43	52.00	
GUD	3.79	229	ePn	42	52.00	-0.8
			eSn	43	33.60	
BGF	4.08	33	Pg	43	12.20	15.4X
			Sg	44	05.50	

S.D. = 1.0 on 6 of 15 obs.

& JUL 06, 1989 05h 10m 50.00s
36.100 N 120.200 W
DEPTH = 4.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.7 (BRK).

PKEM	0.08	117	iP	10	51.10	-0.8
PHAM	0.31	211	iP	10	56.00	-0.2
PRI	0.38	276	ePc	10	58.10	0.5
			iS	11	06.10	
LLA	0.79	311	ePc	11	05.20	-0.6
BCH	0.92	174	eP	11	06.10	-2.1
FRI	0.97	24	ePc	11	07.00	-2.0
			iS	11	19.70	
PRS	0.97	284	ePc	11	07.90	-1.2
SAO	1.20	304	ePc	11	11.45	-1.5
			i	11	12.15	
			eS	11	31.00	
ABL	1.48	147	eP	11	13.80	-3.9
BLP	1.54	186	eP	11	19.00	0.7
ARN	1.64	320	eP	11	17.50	-2.3
MHC	1.70	317	ePc	11	18.00	-2.7
GCC	1.72	303	e(P)	11	18.90	-1.9
CMB	1.94	356	ePc	11	22.30	-1.8
			iS	11	47.40	
TNP	3.10	49	eP	11	39.50	-1.3
KVN	3.39	29	eP	11	43.60	-1.3

16 obs. associated

% JUL 06, 1989 06h 20m 18.66± 1.26s
31.659 S ±26.7km 67.791 W ±11.6km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.67	299	iPd	20	31.00	-0.7
			S	20	40.20	
RTCV	0.67	252	iPc	20	30.50	-1.2
RTCB	0.88	281	ePc	20	34.80	0.1
			S	20	47.20	
RTBS	1.42	269	e(P)	20	44.00	1.7
MRA	1.92	114	e(P)	20	49.70	0.1

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

JUL 06, 1989 07h 07m 55.28± 0.36s
47.474 N ± 5.7km 115.788 W ± 3.3km
DEPTH = 5.0km (geophysicist)
MONTANA (456)
ML 3.4 (BUT). Felt (V) at Mullan, Idaho. Also felt at Wallace, Idaho.

DPW	1.68	285	eP	08	25.50	0.0
DMMT	2.18	105	ePnc	08	33.40	0.4
LNOR	2.35	228	eP	08	35.90	0.7
BUT	2.66	122	ePg	08	45.70	6.0X
			eSg	09	21.20	
HRY	2.81	104	ePn	08	42.00	0.2
LRM	2.83	124	ePn	08	41.80	-0.5
PNT	3.15	307	eP	08	46.00	-0.5
LCCM	3.15	120	ePn	08	46.40	-0.3
CCMT	3.26	141	ePn	08	48.20	-0.1
BGMT	3.43	129	ePn	08	50.50	-0.2
MEMT	3.82	118	ePn	08	55.90	-0.3
RMW	4.08	272	eP	09	00.10	0.3
LON	4.18	262	eP	09	00.60	-0.5
HPI	4.21	152	eP	09	01.80	0.0
SES	4.28	45	eP	09	03.00	0.4
IMW	4.93	135	eP	09	12.40	0.3
EDM	5.96	14	eP	09	24.50	-1.8X
BW06	6.44	135	e(P)	09	54.00	20.7X

S.D. = 0.4 on 15 of 18 obs.

JUL 06, 1989 09h 31m 26.11± 0.84s
43.201 N ± 8.9km 4.863 E ± 4.1km
DEPTH = 5.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.9 (LDG), 2.7 (STR).

GELF	0.45	66	Pg	31	32.17	-3.0
TREF	0.57	42	Pg	31	36.25	-1.2
BERF	0.61	79	Pg	31	39.22	0.8
PRAF	0.64	20	Pg	31	39.94	1.0
PUYF	0.69	61	Pg	31	35.05	-4.9X
VILF	0.90	43	Pg	31	45.29	1.5
TAVF	0.96	64	Pg	31	40.49	-4.5X
GANF	1.10	43	Pg	31	48.33	1.1
LRG	1.12	76	Pg	31	49.70	2.1X
			Sg	32	04.80	
LMR	1.21	83	Pg	31	50.60	1.5
			Sg	32	06.20	
FRF	1.35	74	Pn	31	52.50	1.0
			Pg	31	53.50	
			Sg	32	11.90	
CALN	1.57	69	Pg	31	55.58	0.7
MVIF	1.80	67	Pn	32	01.00	2.8X
TOUF	1.91	64	Pn	31	58.09	-1.8
AURF	1.92	68	Pn	32	00.45	0.6
SBF	1.98	70	Pn	31	59.80	-1.0
			Pg	32	05.60	
			Sg	32	31.60	
AUTN	2.02	66	Pn	32	04.07	2.6X
SAOF	2.11	67	Pn	32	02.06	-0.5
CAF	2.65	311	Pn	32	10.70	0.4
			Pg	32	17.50	
			Sg	32	53.20	
LPG	2.67	30	Pg	32	18.50	7.8X
LPL	2.67	29	Pg	32	18.70	7.9X
CVF	3.01	101	Pn	32	15.23	-0.2
LPO	3.04	300	Pn	32	16.50	0.7
			Pg	32	25.80	
RJF	3.19	312	Pn	32	17.60	-0.3
			Pg	32	27.30	
			Sg	33	08.10	
EPF	3.32	269	Pn	32	19.30	-0.5
MAF	3.43	332	Pn	32	21.40	0.0
			Pg	32	33.40	
SMF	3.52	348	Pn	32	22.10	-0.5
TCF	3.62	329	Pn	32	24.00	0.0
			Pg	32	35.60	
			Sg	33	23.30	
BGF	3.65	338	Pn	32	23.90	-0.5
			Pg	32	36.90	
			Sg	33	24.80	

S.D. = 1.2 on 22 of 29 obs.

& JUL 06, 1989 09h 45m 07.50s
64.779 N 147.748 W
DEPTH = 11.8km

CENTRAL ALASKA (1)
<AGS-P>. Felt at Fairbanks.

FBA	0.12	351	iP	45	10.70	0.0
			S	45	13.08	
CCB	0.14	191	iP	45	10.91	0.0
RDS	0.18	286	iP	45	11.45	-0.2
			S	45	14.40	
GLM	0.26	36	iP	45	12.84	-0.3
			S	45	16.50	
WRH	0.34	206	iP	45	14.33	-0.3
			S	45	19.12	
HDA	0.51	137	iP	45	17.25	-0.6
			S	45	23.92	
NEA	0.61	251	iP	45	18.97	-0.6
			S	45	26.88	
MCK	1.17	207	eP	45	29.08	-0.2

8 obs. associated

JUL 06, 1989 09h 52m 02.07± 0.77s
44.501 N ± 6.1km 6.876 E ± 6.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (GEN).

FOUF	0.07	293	ePg	52	04.46	0.0
			i	52	04.52	
			eSg	52	05.53	
PZZ	0.16	88	P	52	06.35	0.5
			S	52	09.33	
RRL	0.42	351	P	52	11.07	0.3
			S	52	17.33	
ENR	0.48	125	P	52	11.69	-0.1
			S	52	18.66	
RSP	0.70	22	P	52	16.10	0.0
			S	52	24.48	
ROB	0.74	106	P	52	16.92	0.3
			S	52	26.02	
IMI	0.94	129	P	52	20.20	0.2
			S	52	32.58	
LSD	0.98	12	P	52	20.40	-0.4
			S	52	33.10	
FIN	1.00	107	P	52	20.28	-0.7
			S	52	33.30	

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

? JUL 06, 1989 10h 18m 21.32± 6.84s
34.690 N ±56.9km 139.253 E ±19.7km
DEPTH = 33.0km (normal)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.35	306	P	18	43.80	-0.3
			S	18	59.50	
CHJJ	1.37	351	iP+	18	42.80	-1.5
			S	18	57.10	
KAKJ	1.69	26	P	18	49.00	0.1
			S	19	09.30	
MAT	2.03	336	eP	18	54.00	0.1
			iS	19	16.40	
MTMJ	2.23	328	P	18	57.60	0.9
			S	19	23.30	
NIIJ	2.55	355	P	19	02.10	0.8
			S	19	32.10	

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

? JUL 06, 1989 10h 36m 54.21± 4.76s
34.910 N ±38.8km 139.219 E ±14.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.15	351	P	37	15.50	-0.7
			S	37	30.10	
IIDJ	1.21	298	P	37	16.50	-0.8
			S	37	32.00	
KAKJ	1.51	31	P	37	21.70	-0.2
MAT	1.82	334	eP	37	27.00	0.5
			iS	37	48.40	
MTMJ	2.03	326	P	37	30.60	1.1
			S	37	56.40	
NIIJ	2.33	356	P	37	36.40	2.6X

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

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* JUL 06, 1989 10h 38m 25.56± 1.09s
38.772 N ±10.9km 102.635 W ±13.1km
DEPTH = 5.0km (geophysicist)
COLORADO (479)
ML 2.8 (NEIS).

GLD	2.23	297	ePnd	39 04.20	0.2
			ePg	39 05.90	
			Sn	39 30.00	
			eSg	39 31.20	
GOL	2.32	294	iPnd	39 03.80	-1.5
			iSg	39 31.00	
CNK	3.90	78	ePn	39 34.60	7.2X
			S	40 17.70	
ALQ	4.90	220	(Pn)	39 42.80	1.0
			ePg	39 51.50	
			eSg	40 52.20	
MEO	5.14	140	iPd	39 44.50	-0.6
RSSD	5.45	349	(Pn)	39 50.40	0.8
			ePg	40 09.30	
			eSn	40 54.00	
			eSg	41 19.00	
TUL	6.15	116	eP	40 22.70	23.4X
	0.6s		4.10nm		
			e	41 44.80	
BW06	6.60	309	(Pn)	40 03.20	-2.7X
			eSg	41 46.50	

S.D. = 1.4 on 5 of 8 obs.

% JUL 06, 1989 11h 39m 01.44± 0.78s
41.892 N ± 7.5km 13.994 E ± 7.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

SDI	0.23	216	Pc	39 06.90	0.5
			eSg	39 11.70	
DUI	0.42	123	Pc	39 09.60	-0.4
			eSg	39 15.30	
AZI	0.43	283	Pd	39 09.30	-0.9
			eSg	39 16.90	
AQU	0.64	317	P	39 13.60	-0.7
MNS	1.09	297	P	39 22.20	0.2
			eSg	39 41.10	
ASS	1.54	321	P	39 29.70	0.7
			eSn	39 53.20	
ARV	1.78	335	P	39 33.00	0.5
			eSn	40 02.80	

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

JUL 06, 1989 12h 45m 48.95± 1.05s
16.002 N ± 4.9km 60.574 W ±10.3km
DEPTH = 13.5 ± 3.2 km
LEEWARD ISLANDS (92)
ML 4.2 (FDF).

DEG	0.56	304	eP	46 00.17	0.1
SFG	0.65	293	eP	46 01.70	0.2
			S	46 07.60	
MGG	0.72	263	ePd	46 03.32	0.6
BBL	0.99	241	ePd	46 06.89	-0.6
			S	46 19.50	
PAG	1.06	272	iPd	46 08.53	-0.2
			S	46 21.40	
DPMT	1.08	227	eP	46 08.75	-0.1
CRM	1.28	195	eP	46 11.93	-0.5
			S	46 28.60	
FDF	1.38	204	iPd	46 13.25	-0.5
	0.1s		5.70nm		
			S	46 31.20	
MVM	1.47	192	iPc	46 14.88	-0.2
			S	46 34.30	
BIM	1.55	198	iPc	46 16.20	-0.1
			S	46 37.20	
BPA	1.61	310	eP	46 16.09	-1.0
			S	46 36.00	
ANG	1.66	314	eP	46 17.69	-0.1
			eS	46 39.86	
MGH	1.73	295	eP	46 18.74	-0.1
			eS	46 39.15	
SLB	2.21	192	eP	46 26.49	0.7
			eS	46 53.82	
NEV	2.22	301	eP	46 26.97	1.0
SKI	2.46	303	eP	46 29.02	-0.3
SVB	2.79	194	eP	46 34.77	0.7
			eS	47 07.47	

S.D. = 0.6 on 17 of 17 obs.

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* JUL 06, 1989 12h 53m 00.29± 1.55s
34.848 N ±13.5km 139.176 E ±10.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.21	302	iPd	53 22.50	-0.9
			S	53 37.30	
KAKJ	1.58	31	P	53 27.80	-1.2
			S	53 47.30	
MAT	1.86	335	eP	53 33.00	-0.2
			iS	53 54.50	
MTMJ	2.06	328	P	53 36.40	0.3
			S	54 02.10	
NIIJ	2.39	357	iP+	53 41.40	0.7
			S	54 11.30	
WKYJ	3.02	259	P	53 50.00	0.2
			eS	54 25.70	
YAMJ	3.39	12	eP	53 56.30	1.4
TKSJ	4.33	260	eP	54 08.80	0.6
			eS	54 57.20	
OFUJ	4.67	25	eP	54 12.70	-0.4
YONJ	4.70	276	eP	54 13.00	-0.6
			eS	55 06.80	

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

? JUL 06, 1989 13h 26m 41.46± 4.30s
34.922 N ±34.4km 139.270 E ±13.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.15	349	P	27 02.70	-0.7
			S	27 16.50	
IIDJ	1.24	297	P	27 04.50	-0.6
KAKJ	1.48	30	P	27 08.50	-0.2
			S	27 28.40	
MAT	1.83	332	eP	27 14.00	0.1
			iS	27 36.50	
MTMJ	2.04	325	P	27 17.90	0.9
			S	27 45.30	
NIIJ	2.32	355	P	27 21.30	0.4

S.D. = 0.8 on 6 of 6 obs.

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* JUL 06, 1989 14h 23m 56.84± 0.99s
17.643 S ±19.0km 178.771 W ±15.3km
DEPTH = 584.7 ± 10.2 km
4.2mb (4 obs.)
FIJI ISLANDS REGION (181)

VUN	2.66	262	eP	25 13.00	-0.3
DZM	14.59	250	iPd	27 01.90	0.6
COO	29.61	239	eP	29 18.00	0.3
CTA	33.15	260	iP	29 47.90	0.3
TOO	37.07	230	eP	30 20.00	0.2
WRA	44.34	259	Pc	31 17.60	-0.3
	0.2s		1.40nm	4.1mb	
ASPA	44.53	254	iPd	31 19.40	0.0
	0.7s		54.00nm	5.2mb X	
FORR	49.78	244	eP	32 19.40	20.6X
	0.5s		18.00nm		
WARB	51.05	250	iPc	32 08.50	0.3
	0.3s		3.00nm	4.2mb	
MBL	57.71	256	eP	32 53.80	-1.1
	0.4s		6.00nm	4.2mb	
SPA	72.47	180	e(P)	34 25.90	-0.4
	1.0s		4.00nm	3.9mb	
KVN	79.94	44	iP	35 08.10	0.8
FBA	85.63	13	eP	35 34.30	-0.5

S.D. = 0.6 on 12 of 13 obs.

JUL 06, 1989 14h 51m 54.52± 1.33s
34.908 N ±11.2km 139.184 E ± 9.3km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.15	352	P	52 15.60	-0.9
			S	52 30.10	
IIDJ	1.19	299	iPd	52 16.80	-0.4
			S	52 32.00	
KAKJ	1.53	32	P	52 22.20	-0.2
			S	52 42.30	
MAT	1.81	334	eP	52 27.00	0.4
			iS	52 49.60	
MTMJ	2.01	327	P	52 30.80	1.2
			S	52 56.60	
NIIJ	2.33	356	P	52 36.70	2.6X
			S	53 05.50	
WKYJ	3.04	258	P	52 44.40	0.2
			eS	53 19.70	
YAMJ	3.33	12	eP	52 48.60	0.3
TKSJ	4.34	259	eP	53 02.90	0.2
			eS	53 52.30	
OFUJ	4.61	25	eP	53 06.50	0.0
YONJ	4.70	275	eP	53 07.10	-0.7

S.D. = 0.7 on 10 of 11 obs.

JUL 06, 1989 15h 01m 41.09± 0.25s
34.933 N ± 4.1km 139.200 E ± 3.4km
DEPTH = 5.0km (geophysicist)
4.9mb (12 obs.) 4.3Msz (2 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (IV JMA) at Ajiro ond on Oshimo; (III JMA) at Tokyo, Kofu ond Mishimo.

CHJJ	1.13	352	iP+	02 01.50	-1.1
IIDJ	1.19	298	iPd	02 02.70	-1.0
			S	02 19.60	
KAKJ	1.50	32	iP+	02 07.70	-0.9
MAT	1.80	334	eP	02 13.00	0.0
MAT	1.80	334	eP	02 14.00	1.0
			iS	02 37.30	
MTMJ	2.00	326	P	02 16.60	0.6
			S	02 43.10	
NIIJ	2.31	356	P	02 20.50	0.1
			S	02 53.10	
TSRJ	2.70	284	P	02 25.40	-0.6
			S	02 59.80	
WKYJ	3.06	258	eP	02 30.00	-1.1
			eS	03 07.50	
YAMJ	3.30	12	eP	02 34.30	-0.2
TKSJ	4.36	259	P	02 48.70	-0.8
			S	03 39.90	
OFUJ	4.59	25	eP	02 51.20	-1.5
			eS	03 47.10	
YONJ	4.71	275	P	02 53.20	-1.3
			eS	03 49.00	
SHK	5.39	268	eP	03 03.00	-1.1
AOMJ	5.69	9	eP	03 09.70	1.3
SHNJ	6.73	265	eP	03 22.60	-0.3
KUMJ	7.37	253	eP	03 33.00	1.0
KAGJ	7.91	244	eP	03 40.50	0.9
HOOJ	8.10	22	P	03 38.60	-3.4X
			eS	05 08.20	
SAP	8.28	11	eP	03 54.00	9.3X
KUSJ	9.21	26	P	03 53.90	-3.6X
			S	05 32.00	
ASAJ	9.55	15	P	03 59.70	-2.5
MDJ	12.16	326	Pd	04 40.50	2.6
Z	16s		2.60um		
N	13s		3.40um		
			S	06 58.00	
CN2	13.83	314	Pd	05 03.50	3.5X
Z	18s		2.20um		
N	13s		1.90um		
			sP	05 13.50	
			eS	07 37.00	
SNY	14.04	304	Pc	05 08.00	5.1X
Z	16s		3.80um		
N	12s		2.60um		
E	13s		1.20um		
			sP	05 21.00	
			sS	07 55.50	
NJ2	17.21	266	Pd	05 47.40	3.6X
Z	20s		1.20um		
N	11s		1.90um		
E	13s		0.90um		
			sS	09 05.00	
TIA	18.00	280	eP	05 55.10	1.4
Z	12s		2.50um		
N	11s		2.00um		
E	11s		1.90um		
			sS	09 24.00	
BJI	18.95	292	eP	06 05.00	-0.3
Z	18s		1.48um		
N	11s		1.64um		
			eS	09 40.00	
OZH	20.41	246	eP	06 21.50	-0.2
Z	15s		1.80um	4.6MszX	
N	15s		1.30um		
			eS	10 12.00	
WHN	21.34	265	eP	06 33.00	1.8
N	11s		2.70um		
E	13s		1.96um		
			sP	06 44.50	
TIY	21.72	285	eP	06 35.00	-0.1
E	13s		1.80um		
GUA	21.92	165	eP	06 30.70	-0.5Y
HHC	22.55	293	eP	06 47.00	3 Y
Z	14s		2.10um	4.7	
N	14s		3.30um		

06d 15h

			sS	10	56.00		
BTO		23.69	292 eP	06	55.50		0.9
	N	14s	2.40um				
	E	14s	1.60um				
			pP	07	06.00		40kmX
			eS	11	12.00		
BAG		24.86	227 eP	07	07.00		0.9
XAN		24.93	277 P	07	08.20		1.6
	N	13s	1.20um				
	E	14s	1.40um				
			S	11	26.00		
GYA		29.13	262 eP	07	49.80		4.6X
	N	14s	1.20um				
	E	14s	1.40um				
			sS	12	48.00		
CD2		29.92	272 eP	07	51.00		-1.3
	Z	15s	2.60um				5.0MszX
	N	12s	2.60um				
GTA		31.53	290 eP	08	05.40		-1.0
	Z	14s	1.50um				4.8MszX
	E	11s	1.00um				
			S	13	14.00		
KMI		32.89	263 eP	08	17.50		-1.1
	N	15s	3.30um				
	E	16s	2.40um				
CHG		39.04	256 eP	09	22.00		11.3X
			e	22	34.00		
CHTO		39.04	256 eP	09	10.20		-0.5
WMQ		40.23	299 eP	09	21.70		1.4
	Z	20s	0.60um				4.4Msz
	E	10s	0.50um				
			pP	09	33.50		43kmX
			eS	15	32.00		
TTA		48.17	34 eP	10	24.80		0.8
SVW		48.26	36 eP	10	25.70		1.0
IMA		49.40	30 eP	10	33.70		0.2
KSH		49.65	295 eP	10	33.00		-2.8X
	E	12s	1.50um				
KDC		49.91	41 eP	10	36.90		-0.4
PMR		51.38	36 eP	10	47.80		-0.6
		1.0s	25.00nm				5.1mb
FBA		51.83	31 eP	10	53.20		1.3
WB5		54.70	186 eP	11	11.90		-1.7
WRA		54.77	186 Pc	11	12.50		-1.5
		0.6s	6.30nm				4.8mb
INK		57.07	26 eP	11	29.00		-1.1
			pP	11	45.00		60kmX
ASPA		58.49	186 eP	11	39.90		-0.7
		0.9s	10.00nm				4.9mb
MBC		59.04	16 eP	11	43.00		-0.9
		1.1s	20.00nm				5.2mb
GBA		59.26	265 Pd	11	43.30		-2.8X
RMQ		61.75	170 e(P)	12	03.00		0.1
MAIO		62.96	297 eP	12	14.00		2.9X
SOD		66.20	337 iP	12	30.70		-0.8
YKA		66.52	29 P	12	35.00		1.4
YKC		66.58	29 eP	12	33.30		-0.7
SUF		69.04	333 eP	12	48.80		-0.7
		0.7s	7.20nm				5.0mb
BWA		69.53	172 eP	12	54.00		1.2
PNT		70.93	43 eP	13	01.00		-0.2
		0.6s	6.00nm				4.9mb
NUR		70.95	332 eP	13	08.60		7.5X
	Z	23s	0.40um				4.6MszX
			LR	40	00.00		
DPW		72.49	44 P	13	10.00		-0.7
WDC		73.77	52 ePc	13	18.30		0.1
MIN		74.50	52 e(P)	13	22.10		-0.5
SES		74.92	39 eP	13	25.00		0.3
ORV		75.00	52 e(P)	13	24.70		-0.6
NB2		75.41	337 P	13	26.10		-1.3
FFC		76.44	32 eP	13	32.50		-0.7
		0.9s	16.00nm				5.1mb
CMB		76.56	53 ePc	13	34.70		0.5
			e	13	44.50		
PRS		76.85	55 e(P)	13	35.70		-0.1
LRM		76.90	43 eP	13	36.70		0.4
KVN		77.47	51 P	13	40.00		0.6
FRI		77.59	54 eP	13	39.80		-0.1
FRB		79.21	12 eP	13	48.00		-0.2
KRA		79.81	325 eP	13	52.00		0.3
			e	13	55.00		
SPC		80.26	324 eP	13	55.00		0.6
BW06		80.41	44 P	13	55.00		-0.5
		0.6s	2.21nm				4.3mb
KSP		80.92	327 eP	13	58.00		0.4
BRG		81.92	328 eP	14	03.50		0.6

		1.5s	15.00nm				4.9mb
CLL		82.00	329 eP	14	02.00		-1.2
PRU		82.31	328 eP	14	05.00		0.1
	Z	14s	0.80um				5.2MszX
	N	14s	0.50um				
	E	15s	0.50um				
RSSD		82.59	40 P	14	05.80		-1.0
GLA		83.14	54 P	14	10.50		0.9
KHC		83.37	327 P	14	10.90		0.4
		1.2s	10.00nm				4.9mb
PV09		83.38	47 P	14	12.00		0.9
PV10		83.51	47 P	14	12.90		1.2
GRF		83.97	329 eP	14	13.70		0.2
	Z	20s	0.10um				4.2Msz
VAY		84.40	317 iP	14	17.00		1.2
SKO		84.58	318 iP	14	18.50		1.8
	Z	14s	0.48um				5.0MszX
	N	16s	0.89um				
	E	15s	0.54um				
			LR	55	33.00		
GOL		84.81	44 P	14	19.00		0.8
		0.5s	3.60nm				4.9mb
GLD		84.86	44 P	14	19.00		0.6
		1.2s	46.46nm				5.6mb
VBY		85.26	324 e(P)	14	20.00		0.0
CEY		85.49	325 e(P)	14	20.50		-0.7
VOY		85.52	325 e(P)	14	19.50		-1.9
ALQ		87.32	49 e(P)	14	31.80		1.2
CBM		94.88	18 P	15	14.00		8.6X
ZOBO		149.29	60 ePKP	21	30.00		0.8
			e	21	34.00		
LPB		149.49	60 PKP	21	35.00		5.7X
CNCB		149.76	60 PKP	21	32.00		2.1X
			i	21	36.50		
ITR		153.86	355 e(PKP)	21	25.00		-10.3X
		S.D. = 1.0	on 86 of 104 obs.				

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* JUL 06, 1989 15h 16m 39.84± 0.92s
0.355 N ±12.4km 122.396 E ±11.0km
DEPTH = 135.4 ± 16.4 km
4.8mb (7 obs.)
MINAHASSA PENINSULA (265)

MNI		2.67	66 iPd	17	22.00		-1.0
			eS	17	54.00		
TSM		5.78	312 iPd	18	04.50		-0.1
			e	18	54.00		
KKM		8.37	313 iPc	18	41.00		1.4
			i	19	55.20		
MTN		15.72	147 eP	20	15.00		-0.1
KNA		17.19	159 iPd	20	34.10		0.8
		0.4s	34.00nm				5.0mb
MBL		21.53	187 eP	21	19.00		-0.3
WB5		23.28	150 eP	21	36.50		0.1
WRA		23.32	151 Pd	21	37.40		0.6
		0.7s	12.40nm				4.5mb
NNT		25.55	299 iPd	21	58.20		0.3
ASPA		26.36	156 iPc	22	05.20		-0.1
		0.6s	18.00nm				4.8mb
	Z	22s	0.33um				3.8MszX
			LR	36	15.10		
WARB		26.70	171 eP	22	08.50		0.2
		0.3s	6.00nm				4.7mb
QIS		26.75	142 iPd	22	08.90		0.1
		0.7s	31.00nm				5.0mb
MRWA		30.04	191 iPd	22	37.60		-0.5
BAL		31.26	189 eP	22	48.00		-0.9
FORR		31.50	171 eP	23	11.40		20.5X
		0.4s	32.00nm				
KLB		32.08	187 eP	22	55.20		-0.7
		0.4s	15.00nm				5.1mb
CAN		43.31	148 eP	24	31.70		1.7
GBA		46.42	288 Pc	24	53.50		-1.4
		0.5s	3.10nm				4.3mb
		S.D. = 0.9	on 17 of 18 obs.				

? JUL 06, 1989 16h 38m 41.17± 4.20s
34.968 N ±34.6km 139.163 E ±13.4km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ		1.09	353 P	39	01.50		-0.5
			S	39	15.90		
IIDJ		1.14	297 iP+	39	02.50		-0.6
			S	39	17.30		
KAKJ		1.48	33 P	39	08.40		-0.1
			S	39	29.20		
MAT		1.75	334 iPd	39	12.70		0.3
			iS	39	34.80		
MTMJ		1.95	326 P	39	16.30		0.9
			S	39	42.50		
NIIJ		2.27	357 P	39	23.80		3.9X
		S.D. = 0.9	on 5 of 6 obs.				

JUL 06, 1989 17h 25m 29.43± 0.23s
16.632 S ± 8.1km 177.365 W ± 4.7km
DEPTH = 22.9km (5 depth phases)
5.3mb (16 obs.) 5.5Msz (18 obs.)
FIJI ISLANDS REGION (181)
Ms 5.6 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 37C
Centroid Location:
Origin Time 17:25:35.0 0.5
Lat 16.15S 0.04 Lon 177.64W 0.04
Dep 15.0 FIX Half-duration 3.5
Moment Tensor; Scale 10**17 Nm
Mrr= 0.20 0.14 Mtt=-7.94 0.19
Mff= 7.73 0.19 Mrt= 2.62 0.49
Mrf=-0.29 0.47 Mtf= 2.54 0.15
Principal Axes:
T Val= 8.14 Plg= 1 Azm=279
N 0.95 74 12
P -9.09 16 189
Best Double Couple:Mo=8.6*10**17
NP1:Strike=325 Dip=78 Slip=-169
NP2: 233 80 -12

VUN		4.21	250 eP	26	29.00		-4.9X
SVA		4.25	249 eP	26	30.40		-4.0X
NDF		5.08	257 eP	27	02.20		16.1X
			eS	27	44.00		
AFI		6.03	64 P	26	56.00		-3.7X
			eS	29	31.00		
DZM		16.20	248 iPc	29	17.40		-0.1
RAR		17.25	108 P	29	30.00		-0.6
			S	33	04.00		
KRP		22.11	195 P	30	27.80		2.9X
HNR		23.22	285 eP+	30	34.00		-1.9
			eS	34	54.00		
PAE		26.56	96 eP	31	07.00		-0.7
		1.1s	45.00nm				5.0mb
TVO		26.87	97 eP	31	10.00		-0.6
		1.1s	65.00nm				5.2mb
PMO		28.39	91 eP	31	25.00		0.7
		1.4s	85.00nm				5.3mb
VAH		28.61	91 eP	31	27.00		0.6
		1.4s	95.00nm				5.3mb
TPT		28.66	91 eP	31	27.00		0.3
		1.4s	75.00nm				5.2mb
RUV		28.86	91 eP	31	29.00		0.5
		1.4s	75.00nm				5.2mb
BRS		29.61	244 iPc	31	37.00		1.7
			iS	36	32.00		
COO		31.29	238 eP	31	50.00		-0.1
RAB		32.35	289 eP	31	56.00		-3.5X
			iS	37	16.00		
RMQ		32.91	247 eP	32	04.00		-0.4
CTA		34.66	259 iPc+	32	17.90		-1.6
		1.6s	500.00nm				6.2mb
	Z	19s	9.03um				5.5Msz
			iPP	33	34.00		
			iS	37	54.00		
PMG		35.26	277 eP	32	25.00		0.3
CAN		35.27	232 eP	32	26.00		1.3
BWA		35.37	233 eP	32	24.70		-0.8
TOO		38.75	230 eP	32	53.00		-0.9
WB5		45.83	258 eP	33	49.00		-2.8
WRA		45.85	258 Pc	33	49.40		-2.6
		1.9s	88.90nm				5.4mb
ASPA		46.11	253 eP	33	51.60		-2.4
		0.9s	62.00nm				5.6mb
	Z	21s	18.01um				6.0Msz
			eS	40	34.90		
			LR	51	09.70		
DRV		57.19	199 eP	35	16.80		0.1
SBA		61.75	184 eP	35	50.70		2.7X
NANU		63.05	253 eP	35	56.00		-1.5
		0.8s	26.00nm				5.4mb
MAT		67.50	322 iPc	36	25.10		-0.8
		1.5s	50.00nm				5.4mb
	Z	20s	2.84um				5.5Msz
			eS	45	22.00		

BAG	69.43	295	eP	36	36.00	-2.5
			eS	45	50.00	
SPA	73.47	180	e(P)	37	02.80	0.9
	0.9s		6.36nm			4.7mb
	Z 20s		4.73um			5.8Msz
PRS	74.62	44	e(P)	37	08.30	-0.5
QZH	74.83	302	eP	37	10.00	-0.2
	E 16s		0.90um			
			sS	46	52.00	
BCH	74.85	46	P	37	10.10	-0.2
BRK	74.92	42	e(P)	37	09.50	-1.0
BKS	74.94	42	eP	37	10.00	-0.6
	4.0s		769.00nm			6.1mb X
	Z 20s		1.40um			5.3Msz
	N 20s		1.10um			
	E 20s		1.40um			
			eS	46	52.00	
			eLQ	56	15.00	
			eLR	00	52.00	
PRI	74.99	44	eP	37	10.40	-0.7
MHC	75.02	43	eP	37	11.50	0.3
SSE	75.71	309	P	37	20.00	4.9X
	Z 20s		0.90um			5.1Msz
	N 16s		0.90um			
	E 16s		1.50um			
			S	47	00.00	
			SS	52	00.00	
FRI	76.10	44	e(P)	37	15.30	-1.9
RVR	76.11	48	eP	37	10.00	-7.3X
PLM	76.15	49	eP	37	17.00	-0.8
SBB	76.15	47	eP	37	19.00	1.3
ISA	76.22	46	eP	37	10.00	-8.0X
CMB	76.23	43	eP	37	16.50	-1.5
WDC	76.33	40	eP	37	17.10	-1.3
ORV	76.38	41	e(P)	37	17.40	-1.4
MIN	76.77	40	eP	37	19.50	-1.6
CLC	76.90	46	eP	37	22.00	0.2
GLA	77.47	50	eP	37	26.00	1.0
MDJ	77.73	324	eP	37	26.00	-0.1
	Z 20s		2.20um			5.5Msz
	N 16s		1.00um			
			sP	37	42.00	
			S	47	20.00	
KVN	78.29	43	P	37	28.50	-1.1
TNP	78.35	44	P	37	30.00	0.0
GZH	78.39	298	eP	37	32.50	2.3X
			eS	47	20.00	
DL2	79.36	316	eP	37	41.00	5.9X
	Z 21s		0.90um			5.1Msz
			sS	47	41.00	
CN2	79.63	322	eP	37	37.00	0.5
	5.0s		0.50nm			2.8mb X
	Z 18s		2.00um			5.5Msz
	N 13s		0.60um			
			pP	37	44.00	22km
			eS	47	42.00	
SNY	79.66	319	Pc	37	37.40	0.7
	Z 20s		1.70um			5.4Msz
	N 14s		0.90um			
	E 18s		1.10um			
			SS	52	37.00	
QIZ	79.86	293	eP	37	40.00	1.8
	E 17s		1.10um			
			sS	47	47.00	
			SKS	47	52.00	
WHN	80.67	306	eP	37	44.00	1.7
			pP	37	52.00	25km
			S	47	52.00	
PGC	80.70	33	eP	37	42.00	-0.1
PMR	81.14	13	P	37	43.00	-1.1
TIA	81.14	312	eP	37	44.70	0.0
	Z 26s		1.50um			5.2MszX
	N 16s		1.30um			
			eS	47	58.00	
DPW	83.08	36	P	37	50.00	-4.6X
PNT	83.13	34	eP	37	55.00	0.3
BJI	83.59	315	eP	37	59.00	1.8
	Z 20s		1.58um			5.4Msz
	N 15s		0.85um			
			eS	48	24.00	
			eSS	53	46.00	
PV09	84.11	47	P	38	01.00	0.6
PV10	84.12	47	P	37	59.20	-1.2
FBA	84.35	12	P	37	59.00	-1.6
	1.0s		45.00nm			5.7mb
SNG	84.45	279	eP	38	04.00	1.9
			eS	48	34.60	

ALO	84.52	51	eP	38	02.50	0.1
	1.1s		18.99nm			5.2mb
	Z 20s		1.95um			5.5Msz
			e	38	14.50	39kmX
			eS	48	30.00	
			eLg	00	34.00	
TIY	85.17	312	eP	38	07.00	1.6
	Z 24s		2.72um			5.6MszX
	N 17s		1.60um			
			pP	38	13.50	20km
			S	48	34.50	
GYA	85.28	299	P	38	08.60	2.4X
	N 20s		0.90um			
	E 20s		1.10um			
LRM	85.36	39	eP	38	05.90	-0.5
BW06	85.75	43	P	38	08.00	-0.4
	1.0s		13.00nm			5.1mb
XAN	86.29	307	P	38	11.70	0.7
			S	48	43.50	
HHC	87.10	314	P	38	17.60	2.7X
	Z 24s		2.10um			5.5MszX
	N 20s		1.60um			
			pP	38	24.00	20km
			S	48	50.00	
			sS	49	02.00	
BTO	88.07	313	eP	38	20.00	0.5
	Z 16s		0.90um			5.3MszX
	N 13s		0.40um			
	E 16s		0.90um			
			pP	38	28.50	27km
			eSKS	48	48.50	
			sS	49	15.00	
KMI	88.15	297	eP	38	21.00	0.6
	Z 20s		4.10um			5.8Msz
	E 20s		1.90um			
			e	38	23.00	6kmX
			S	48	54.00	
			S	49	26.00	
SES	88.40	36	eP	38	21.00	0.2
EDM	88.55	33	ePd	38	21.70	0.2
CD2	89.22	302	eP	38	27.80	2.6X
	Z 24s		1.20um			5.2MszX
			S	49	01.40	
			sS	49	22.00	
CHG	89.51	290	eP	38	29.30	2.6X
CHTO	89.51	290	eP	38	27.10	0.4
RSSD	89.96	44	P	38	28.30	-0.3
INK	90.40	15	eP	38	30.00	0.2
LZH	90.91	307	eP	38	35.00	2.0
	2.5s		78.00nm			5.6mb
	Z 48s		9.40um			5.8MszX
	E 10s		0.60um			
			eS	49	00.00	
			PS	50	20.00	
GTA	94.99	310	eP	38	51.80	0.1
	Z 24s		1.30um			5.3MszX
	N 12s		0.50um			
			SKS	49	30.00	
			sS	50	10.50	
			SS	56	24.00	
MAIO	126.23	303	ePKP	44	35.00	2.7X
			e	46	26.00	
SOB1	129.87	118	ePKP	44	42.70	2.9X
			e	44	46.20	
TAB	136.20	308	ePKP	45	05.00	13.7X
KAS	143.60	319	ePKP	45	06.00	1.6
KRA	143.85	341	ePKP	45	08.00	3.6X
			e	45	18.00	
KSP	144.15	345	ePKP	45	03.50	-1.4
CLL	144.43	349	ePKP	45	06.00	0.6
SPC	144.51	340	ePKP	45	07.50	1.6
WTS	144.56	356	ePKP	45	03.00	-2.5X
	0.9s		10.00nm			
BRG	144.66	348	ePKP	45	08.50	2.7X
			e	45	52.00	
			e	48	24.00	
BBTK	145.08	318	iPKPd	45	08.50	1.5
MOX	145.31	350	ePKP	45	07.00	0.1
	Z 20s		1.00um			5.6Msz
	N 19s		0.50um			
PRU	145.36	346	PKP	45	06.50	-0.5
	1.0s		28.90nm			
	Z 19s		1.10um			5.7Msz
	N 19s		1.10um			
			e	45	08.00	
PSZ	145.72	339	ePKP	45	08.60	0.8
BHL	145.74	306	PKP	45	08.00	-0.3

ENN	145.85	356	ePKPc	45	07.50	-0.3
	1.0s		31.00nm			
UCC	145.89	358	PKP	45	10.00	2.1X
			e	46	23.00	
MEM	146.00	356	iPKP	45	09.64	1.6
TNS	146.17	353	ePKPc	45	08.40	-0.1
SNF	146.18	358	PKP	45	10.30	2.0X
GRF	146.30	350	ePKP	45	10.00	1.4
	Z 19s		0.50um			5.3Msz
SRO	146.33	341	ePKP	45	11.00	2.3X
			i	45	16.00	
ZST	146.36	342	ePKP	45	10.50	1.8
	Z 20s		3.00um			6.1Msz
KHC	146.38	347	iPKPc	45	10.00	1.2
	1.0s		28.50nm			
BUD	146.39	340	ePKP	45	09.50	0.7
VKA	146.52	343	ePKP	45	10.00	1.0
	4.8s		430.00nm			
			i	45	17.80	
			i	46	00.00	
			e	47	36.00	
			e	49	07.00	
WET	146.52	348	ePKP	45	11.00	2.0X
DOU	146.58	358	PKPc	45	11.50	2.5X
			e	46	26.00	
ABH	146.60	354	ePKP	45	08.78	-0.3
ITU	146.65	322	iPKPd	45	17.00	7.6X
TOD	146.73	353	ePKP	45	09.50	0.2
RUP	146.82	355	ePKP	45	09.28	-0.2
WLF	146.93	356	PKP	45	11.60	2.1X
SOP	146.98	343	ePKP	45	13.00	3.3X
KMR	147.27	346	iPKP+	45	12.80	2.6X
			i	45	20.60	
			iPP	48	31.70	
GWF	147.48	354	PKP	45	12.88	2.3X
FUR	147.76	349	ePKP	45	15.20	4.2X
FLN	147.85	4	ePKP	45	13.50	2.4X
	0.9s		26.20nm			
LDF	148.04	3	ePKP	45	13.90	2.5X
	1.0s		16.00nm			
CDF	148.08	354	PKP	45	14.80	3.2X
LWI	148.08	236	e(PKP)	45	23.80	11.0X
BEO	148.14	336	ePKP	45	19.50	7.8X
GRR	148.20	4	ePKP	45	14.70	3.0X
	1.2s		38.70nm			
KBA	148.37	346	e(PKP)	45	13.00	0.8
	1.0s		16.20nm			
			i	45	20.50	
VITF	148.38	356	PKP	45	15.95	4.0X
FEL	148.53	353	PKP	45	16.08	3.7X
LPF	148.54	5	ePKP	45	15.60	3.4X
	1.2s		89.25nm			
HAU	148.56	355	ePKP	45	15.80	3.5X
	1.1s		26.85nm			
MOF	148.65	354	PKP	45	15.54	3.0X
BSF	148.70	355	PKP	45	16.55	3.9X
PTJ	148.77	342	ePKP	45	17.50	4.7X
ZAG	148.84	342	ePKPc	45	22.00	9.2X
BBS	148.99	354	PKP	45	17.47	4.4X
LJU	149.04	344	ePKP	45	17.00	3.9X
EZN	149.04	323	ePKP	45	15.00	1.7
LOMF	149.17	354	PKP	45	18.32	4.9X
VOY	149.22	345	ePKP	45	17.90	4.4X
VBY	149.33	342	e(PKP)	45	18.00	4.4X
CEY	149.35	344	ePKP	45	20.40	6.8X
LOR	149.43	358	ePKP	45	18.20	4.5X
	1.0s		18.00nm			
SSF	149.65	359	ePKP	45	18.60	4.6X
	1.0s		26.00nm			
LBF	149.71	358	ePKP	45	18.80	4.7X
	0.9s		15.55nm			
AVF	149.92	359	ePKP	45	19.10	4.7X
	1.2s		16.35nm			
VAY	149.99	329	ePKP	45	20.70	6.0X
SKO	150.03	331	iPKP	45	20.00	5.3X
	Z 20s		2.16um			5.9Msz
	N 20s		0.95um			
	E 20s		1.08um			
			LR	45	21.00	
SMF	150.06	358	ePKP	45	19.80	5.2X
	1.0s		18.00nm			
BGF	150.16	360	ePKP	45	19.90	5.1X
	1.0s		20.00nm			
VAI	150.40	351	PKP	45	21.10	6.0X
TCF	150.43	1	ePKP	45	20.50	5.3X
	1.0s		21.00nm			
LSF	150.46	2	ePKP	45	20.20	5

06d 17h

	1.0s	25.00nm				
MAF	150.50	0	ePKP	45	20.70	5.4X
	1.2s	31.25nm				
ORX	150.74	352	PKP	45	20.47	4.6X
LSD	151.01	353	PKP	45	22.52	6.1X
LPG	151.02	354	ePKP	45	22.90	6.4X
	0.8s	10.75nm				
RSP	151.30	353	PKP	45	22.93	6.2X
RJF	151.40	2	ePKP	45	23.00	6.3X
	1.2s	17.85nm				
RRL	151.58	354	PKP	45	23.24	6.0X
MME	151.69	348	PKP	45	33.70	16.2X
PCP	151.73	351	PKP	45	22.32	5.0X
LFF	151.73	3	ePKP	45	23.60	6.4X
	1.0s	18.00nm				
PGD	151.77	346	PKP	45	25.90	8.4X
CAF	151.79	1	ePKP	45	24.10	6.8X
	0.9s	10.65nm				
PZZ	151.96	353	PKP	45	23.96	6.2X
LPO	152.01	2	ePKP	45	24.10	6.5X
	1.2s	17.85nm				
ROB	152.07	352	PKP	45	23.34	5.6X
FIN	152.11	351	PKP	45	23.85	6.0X
ENR	152.20	353	PKP	45	23.85	5.8X
IMI	152.45	352	PKP	45	24.37	6.0X
BNG	160.23	234	iPKPd	45	34.00	5.0X
	1.0s	9.00nm				
		i		48	46.00	
	S.D. = 1.1	on	93 of 177 obs.			

? JUL 06, 1989 19h 50m 38.85± 3.98s
15.477 N ±10.1km 60.282 W ±39.5km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.7 (FDF).

CRM	0.94	220	iPd	50	55.47	-0.3
			S	51	05.40	
MVM	1.09	213	iPd	50	58.34	0.4
			S	51	10.40	
DEG	1.12	318	eP	50	58.50	0.2
FDF	1.12	229	eP	50	57.53	-0.8
	0.1s	3.70nm				
			S	51	08.80	
BBL	1.15	272	eP	51	00.00	1.2
			S	51	06.50	
BIM	1.22	219	iPd	50	59.81	0.1
			S	51	12.80	
PAG	1.45	292	eP	51	02.00	-1.1
			S	51	16.00	
	S.D. = 1.0	on	7 of	7	obs.	

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* JUL 06, 1989 20h 06m 14.16± 1.47s
16.414 S ±16.2km 176.212 W ±13.2km
DEPTH = 380.4 ± 13.7 km
4.5mb (4 obs.)
FIJI ISLANDS REGION (181)

SVA	5.37	251	eP	07	40.20	0.5
DZM	17.31	248	iPc	09	53.90	0.1
KRP	22.63	197	P	10	46.00	0.8
WB5	46.96	258	iPc	14	09.20	-1.3
ASPA	47.23	253	iPd	14	11.30	-1.3
	0.6s	24.00nm			4.7mb	
FORR	52.51	244	eP	15	12.00	20.0X
WARB	53.76	249	eP	15	00.00	-1.2
MBL	60.39	255	eP	15	45.00	-2.1
KVN	77.37	43	eP	17	28.90	-0.9
RMW	80.05	34	P	17	43.40	-0.3
CN2	80.15	321	eP	17	43.50	-0.7
PNT	82.33	33	eP	17	55.00	-0.3
ALQ	83.53	51	eP	18	02.00	0.1
	1.2s	11.72nm			4.5mb	
FBA	83.91	12	iP	18	01.90	-1.0
	0.9s	6.00nm			4.4mb	
BJI	84.22	314	eP	18	05.00	0.0
IMW	84.48	41	eP	18	06.60	0.0
LRM	84.49	39	eP	18	05.90	-0.7
SNG	85.50	279	eP	18	14.10	2.3
TIY	85.85	311	eP	18	14.00	0.8
CHG	90.48	289	eP	18	36.50	1.4
CHTO	90.48	289	eP	18	36.80	1.7
	1.2s	6.25nm			4.4mb	
NAI	142.98	245	iPKPd	25	05.50	-0.4
KSP	144.22	346	ePKP	25	04.70	-1.9
CLL	144.42	350	ePKP	25	04.00	-2.9X
WTS	144.42	357	ePKP	25	05.50	-1.4
	1.0s	24.00nm				
BRG	144.67	349	iPKPd	25	06.50	-0.9
	1.2s	21.00nm				
SPC	144.67	341	ePKP	25	06.50	-1.2
MOX	145.28	351	ePKPd	25	08.00	-0.4
	1.4s	49.00nm				
PRU	145.40	348	PKPd	25	09.00	0.4
	1.4s	40.00nm				
HOF	145.56	351	iPKPd	25	09.50	0.6
	1.6s	36.00nm				
ENN	145.69	358	ePKP	25	09.50	0.4
	1.0s	12.00nm				
MEM	145.84	357	PKP	25	08.20	-1.1
SNF	145.98	359	PKP	25	09.80	0.3
GRF	146.26	351	ePKP	25	11.00	0.9
DOU	146.40	359	PKP	25	11.70	1.5
	1.1s	26.90nm				
KHC	146.41	348	PKP	25	11.00	0.6
			i	25	12.50	
			i	26	40.20	
ZST	146.47	344	ePKP	25	11.50	1.1
			e	26	41.10	
ABH	146.48	356	ePKPc	25	11.04	0.6
RUP	146.69	356	ePKPc	25	12.02	1.2
WLF	146.78	357	PKP	25	13.90	3.1X
FLN	147.55	5	ePKP	25	14.20	2.1X
	1.2s	38.70nm				
LDF	147.75	5	ePKP	25	14.50	2.0X
GRR	147.89	6	ePKP	25	15.30	2.6X
	1.2s	26.80nm				
CDF	147.96	356	ePKP	25	15.90	2.9X
	1.2s	14.90nm				
LPF	148.22	6	ePKP	25	16.20	3.0X
	1.0s	24.00nm				
HAU	148.43	357	ePKP	25	16.80	3.2X
	1.0s	18.00nm				
FEL	148.43	355	ePKPc	25	16.80	3.0X
LJU	149.12	345	e(PKP)	25	15.20	0.5
			e	25	18.00	
LOR	149.23	360	ePKP	25	19.00	4.1X
	1.4s	30.50nm				
VOY	149.29	346	e(PKP)	25	15.80	0.7
			e	25	19.00	
CEY	149.44	345	e(PKP)	25	20.00	4.8X
SSF	149.44	0	ePKP	25	19.60	4.4X
	1.3s	36.10nm				
VBY	149.44	344	ePKP	25	16.00	0.8
			e	25	20.20	
LBF	149.52	360	ePKP	25	19.50	4.2X
	1.2s	22.30nm				
TRI	149.62	346	iPKPd	25	20.00	4.6X
AVF	149.71	1	ePKP	25	19.90	4.4X
	1.2s	13.40nm				
MFF	149.72	5	ePKP	25	19.90	4.3X
	1.3s	28.90nm				
SMF	149.86	360	ePKP	25	20.60	4.8X
	1.4s	21.80nm				
BGF	149.93	1	ePKP	25	20.40	4.5X
	1.2s	26.80nm				
TCF	150.19	2	ePKP	25	21.00	4.7X
	1.3s	25.25nm				
LSF	150.19	3	ePKP	25	20.90	4.6X
	1.0s	18.00nm				
MAF	150.26	2	ePKP	25	21.30	4.9X
	1.0s	19.00nm				
SKO	150.36	333	iPKP	25	22.00	5 3X
AGO	150.44	1	PKP	25	21.08	4.4X
PLDF	150.53	0	PKP	25	22.17	5.2X
ORX	150.66	354	PKP	25	22.22	5.0X
PYM	150.74	1	PKP	25	22.27	5.0X
LPG	150.90	356	ePKP	25	23.70	5.9X
	1.0s	14.00nm				
LSD	150.91	355	PKP	25	24.28	6.5X
RJF	151.13	3	ePKP	25	23.40	5.6X
LBL	151.27	1	PKP	25	24.14	6.3X
LFF	151.45	5	ePKP	25	24.00	5.8X
	1.2s	26.80nm				
RRL	151.47	356	PKP	25	25.40	6.8X
CAF	151.54	3	ePKP	25	24.50	6.1X
	1.4s	21.80nm				
PCP	151.67	353	PKP	25	24.17	5.5X
LPO	151.73	4	ePKP	25	24.70	6.1X
	1.2s	11.90nm				
PZZ	151.86	355	PKP	25	24.69	5.7X
FIN	152.04	353	PKP	25	24.89	5.7X
IMI	152.37	354	PKP	25	26.12	6.4X
BNG	161.25	232	iPKPd	25	31.00	-0.3
	0.5s	5.00nm				
		i		26	18.70	
	S.D. = 1.1	on	41 of	80	obs.	

JUL 06, 1989 20h 22m 53.23± 1.28s
8.014 N ± 3.7km 126.786 E ± 6.7km
DEPTH = 60.0 ± 12.0 km
5.3mb (21 obs.) 4.5Msz (9 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 24C
Centroid Locotion:
Origin Time 20:22:52.7 0.4
Lat 7.69N 0.05 Lon 126.92E 0.07
Dep 46.8 4.5 Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr= 0.59 0.07 Mtt=-0.11 0.07
Mff=-0.48 0.12 Mrt=-0.76 0.10
Mrf= 0.23 0.08 Mtf=-1.02 0.07
Principal Axes:
T Val= 1.42 Plg=42 Azm=214
N -0.03 46 54
P -1.39 10 314
Best Double Couple:Mo=1.4*10**17
NP1:Strike= 3 Dip=53 Slip= 26
NP2: 257 69 140

DAV	1.51	233	iPc	23	20.60	2.2
MNI	6.81	197	ePd	24	32.50	-0.3
			eS	25	48.70	
OCP	8.64	320	eP	24	55.00	-3.1X
TSM	9.45	247	ePc	25	11.20	2.0
	1.0s	57.20nm			5.5mb	
BAG	10.31	325	eP	25	19.50	-1.8
			eS	27	30.00	
KKM	10.67	260	ePc	25	30.50	4.5X
MKS	15.03	209	ePc	26	25.00	1.4
			e	27	51.00	
QZH	18.56	336	eP	27	06.00	-1.7
Z	18s	1.50um				
N	16s	1.00um				
			eS	30	27.00	
			sS	30	46.00	
GUMO	18.60	71	eP	27	30.00	21.8X
KHKI	19.72	215	ePd	27	19.00	-1.7
			e	30	49.00	
QIZ	19.76	305	eP	27	21.00	-0.2
E	16s	1.40um				
			sS	31	10.50	
			SS	31	25.00	
GZH	19.78	321	P	27	20.00	-1.3
MTN	21.17	168	eP	27	34.00	-1.7
			e	31	20.00	
KAGJ	23.37	9	eP	27	59.40	2.1
SSE	23.55	348	P	27	58.50	-0.5
	8.0s	0.80nm			2.2mb X	
Z	20s	0.90um			4.2Msz	
N	10s	0.40um				
E	10s	0.40um				
			S	32	10.00	
			sS	32	24.00	
KNA	23.69	175	iPc	28	00.50	0.0
	0.5s	105.00nm			5.6mb	
KGM	24.11	257	ePc	28	05.80	1.2
KUMJ	24.69	8	eP	28	11.10	1.1
NJ2	25.03	344	Pc	28	18.00	4.8X
Z	22s	0.90um			4.2Msz	
			sS	33	00.00	
WHN	25.26	334	eP	28	16.00	0.6
E	20s	2.07um				
			eS	32	42.00	
IPM	25.83	264	ePd	28	22.60	1.7
SNG	25.95	270	eP	28	24.50	2.5
			eS	33	03.50	
LOE	26.13	293	eP	28	25.00	1.3
SHNJ	26.29	8	eP	28	25.70	0.8
GYA	26.49	316	P	28	27.60	0.6
N	15s	1.30um				
E	15s	0.60um				
PMG	26.67	130	eP	28	28.00	-0.6
	1.0s	80.00nm			5.2mb	
SHK	26.94	11	eP	28	31.00	0.1
NNT	26.99	282	eP	28	34.50	3.0X
NST	27.15	289	eP	28	31.00	-1.9
KMI	28.56	309	eP	28	45.00	-0.9
Z	20s	4.00um			5.0Msz	

E 16s 1.00um
sP 29 32.50
S 33 33.00
sS 34 07.00
BDT 28.59 291 eP 28 46.80 0.9
WB5 28.71 165 eP 28 44.80 -2.2
eS 33 23.70
WRA 28.76 165 Pd 28 47.40 -0.1
0.5s 5.60nm 4.4mb
CHG 29.08 294 eP 28 51.00 0.5
e 35 34.30
CHTO 29.08 294 eP 28 51.40 0.9
1.2s 9.03nm 4.3mb
pP 29 00.70 32kmX
TIA 29.42 344 eP 28 51.50 -1.8
N 15s 0.41um
eS 33 45.00
MBL 29.78 193 iPc 28 55.30 -1.3
0.5s 47.00nm 5.5mb
MAT 30.24 18 eP 29 00.00 -0.6
XAN 30.69 330 P 29 02.40 -2.2
CD2 31.33 320 P 29 10.00 -0.3
E 13s 1.00um
ASPA 32.25 168 eP 29 16.30 -2.0
0.4s 86.00nm 5.9mb
Z 18s 0.56um 4.3Msz
eS 34 21.50
e 39 40.30
LR 45 19.60
TIY 32.30 338 eP 29 17.40 -1.2
N 21s 1.80um
E 18s 1.10um
S 34 25.00
sS 34 48.00
NANU 32.33 200 eP 29 18.00 -0.9
0.6s 82.00nm 5.7mb
BJI 33.27 345 eP 29 26.00 -1.0
Z 20s 0.61um 4.3Msz
eS 34 42.00
eScP 35 49.00
eScS 39 50.00
CTA 33.87 146 iPc 29 34.00 1.6
0.8s 36.57nm 5.3mb
WARB 33.99 180 eP 29 33.00 -0.4
0.4s 39.00nm 5.7mb
LZH 34.92 327 eP 29 40.00 -1.4
1.5s 39.00nm 5.1mb
Z 20s 1.50um 4.7Msz
MEKA 35.34 193 iPc 29 44.30 -0.6
0.6s 119.00nm 6.0mb
HHC 35.40 340 P 29 45.40 0.0
CN2 35.67 358 eP 29 47.00 -0.5
BTO 35.72 338 eP 29 47.00 -1.1
N 16s 0.50um
E 16s 0.50um
eS 35 12.50
MDJ 36.54 3 Pd 29 56.30 1.5
Z 20s 0.90um 4.5Msz
MRWA 38.45 195 iPd 30 10.30 -0.7
0.3s 31.00nm 5.7mb
COOL 39.05 188 eP 30 15.00 -1.0
GTA 39.52 326 Pd 30 19.70 -0.3
Z 20s 0.90um 4.6Msz
E 12s 0.50um
BAL 39.60 194 eP 30 20.20 -0.4
LSA 39.77 308 eP 30 24.00 1.4
S 36 25.00
KLB 40.32 192 eP 30 36.20 9.7X
RMO 40.39 149 e(P) 30 27.00 -0.1
e 36 17.00
MUN 41.03 194 iPc 30 32.30 0.0
NWAO 41.72 192 eP 30 38.10 0.2
Z 20s 2.40um 5.1Msz
N 20s 1.80um
E 20s 1.70um
eS 44 04.00
STK 42.12 161 eP 30 40.00 -1.2
RKG 42.87 192 eP 30 52.00 4.7X
BRS 43.27 145 iPc 30 49.90 -0.8
ADE 44.21 166 iPc 30 58.10 -0.1
0.5s 98.59nm 5.8mb
COO 45.31 149 eP 31 12.00 4.9X
BWA 46.92 155 iPd 31 21.00 1.3
HYB 47.85 286 eP 31 26.50 -0.9
e 31 41.50
CAN 47.93 155 iPd 31 28.10 0.4
CNB 48.07 155 iPd 31 29.40 0.5

KOD 48.71 277 eP 31 14.00 -20.4X
GBA 48.73 281 Pd 31 32.90 -1.2
0.6s 5.80nm 4.8mb
WMQ 49.31 323 Pc 31 38.50 0.2
Z 28s 1.80um 4.9MszX
S 38 42.50
ScS 41 26.30
NDI 50.92 300 eP 31 49.00 -1.7
MSZ 64.20 149 P 33 25.10 1.2
MAIO 67.02 306 eP 33 42.00 -0.4
DRV 75.11 175 eP 34 29.80 -0.3
SVW 77.03 29 eP 34 53.70 12.4X
TTA 77.08 27 eP 34 42.00 0.4
pP 34 53.10 36kmX
KDC 78.32 33 eP 34 49.70 1.4
pP 35 00.50 35kmX
IMA 78.47 24 eP 34 51.30 2.1
pP 35 00.50 29kmX
PMR 80.19 29 eP 34 59.50 1.2
pP 35 09.10 31kmX
FBA 80.85 26 eP 35 00.90 -0.9
0.5s 0.50nm 3.7mb X
pP 35 10.60 31kmX
TOA 81.59 28 eP 35 18.20 12.4X
INK 86.18 22 eP 35 42.00 13.1X
SOD 86.55 338 eP 35 30.00 -0.7
SUF 87.78 333 iP 35 36.90 0.2
0.7s 2.90nm 4.6mb
MBC 87.79 13 eP 35 39.00 2.4
0.8s 9.00nm 5.0mb
SBA 88.54 172 Pd 35 41.10 1.0
NUR 89.01 331 iP 35 42.90 0.3
0.7s 10.70nm 5.2mb
DAG 93.06 353 iPd 36 01.20 0.1
1.0s 15.00nm 5.4mb
HFS 94.27 333 ePKP 36 07.20 0.2
0.4s 0.60nm 4.4mb
Z 17s 0.17um 4.6MszX
LR 18 12.00
LR 22 23.00
YKA 95.60 24 P 36 19.00 6.0X
SPA 97.96 180 e(P) 36 24.10 0.4
1.0s 5.00nm 5.0mb
CLL 98.21 325 e(P) 36 47.00 22.0X
LNV 149.21 150 ePKP 42 37.50 4.9X
ROCH 150.19 149 ePKP 42 41.00 6.6X
PEL 150.22 150 iPKP 42 40.50 6.3X
FCH 150.27 150 ePKP 42 41.50 6.8X
CNCB 163.15 123 PKP 42 54.00 2.7X
e 43 43.00
LPB 163.18 122 ePKP 42 52.00 0.8
ZOBO 163.28 121 PKPc 42 53.00 1.5
1.0s 7.50nm
S.D. = 1.2 on 83 of 102 obs.

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* JUL 06, 1989 21h 05m 19.51± 1.75s
34.824 N ±14.5km 139.180 E ±10.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ 1.23 303 iPd 05 42.50 -0.4
S 05 57.80
CHJJ 1.23 353 iP+ 05 41.60 -1.3
S 05 55.60
KAKJ 1.60 30 P 05 47.30 -1.2
S 06 09.80
MAT 1.89 336 iPd 05 52.60 -0.1
iS 06 15.00
MTMJ 2.08 328 P 05 56.40 0.8
S 06 22.30
NIIJ 2.42 357 P 06 01.60 1.3
S 06 32.70
YAMJ 3.41 11 eP 06 15.10 0.6
TKSJ 4.32 260 eP 06 27.70 0.3
eS 07 16.70
OFUJ 4.69 24 eP 06 33.00 0.4
YONJ 4.71 276 eP 06 32.40 -0.5
eS 07 26.00
S.D. = 0.9 on 10 of 10 obs.

% JUL 06, 1989 21h 32m 57.98± 0.75s
41.846 N ± 7.5km 12.781 E ± 6.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RMP 0.07 240 Pc 33 00.10 -0.2
eSg 33 01.70
RDP 0.10 209 Pc 33 01.10 0.3
eSg 33 03.70
AZI 0.51 74 Pc 33 08.50 0.2
eSg 33 16.90
MNS 0.54 352 P 33 09.00 0.0
eSg 33 20.50
SDI 0.79 100 Pc 33 13.00 -0.3
eSg 33 24.80
S.D. = 0.4 on 5 of 5 obs.

JUL 06, 1989 23h 21m 03.83± 0.46s
17.568 N ± 6.9km 101.400 W ± 5.0km
DEPTH = 33.0km (normal)
4.8mb (24 obs.)
NEAR COAST OF GUERRERO, MEXICO (58)

ACX 1.63 115 iP 21 30.00 -0.6
III 2.01 66 iP 21 38.00 1.7
CRX 2.45 41 iP 21 45.50 2.8
iS 22 17.00
UNM 2.74 50 iP 21 49.50 2.8
IIC 2.98 43 iP 21 51.50 1.2
IIT 3.27 63 iP 21 55.50 1.2
SMMM 3.32 49 eP 21 57.00 2.3
iS 22 45.00
IISM 4.08 69 iP 22 06.50 1.1
AGX 4.37 349 (P) 22 23.50 13.9X
OXX 4.49 95 iP 22 12.50 0.9
iS 23 09.50
LVVM 5.17 65 (P) 22 31.50 10.6X
TPX 9.17 105 (P) 23 12.00 -4.9X
MEO 17.33 8 iPd 25 04.70 -0.2
UYO 17.66 19 iPd 25 08.60 -0.3
ALQ 17.88 346 eP 25 13.50 1.6
0.9s 4.41nm 3.6mb X
e 25 55.70
eS 28 44.00
eLg 30 28.00
SIO 18.66 13 ePc 25 19.40 -1.9
TUL 18.94 14 iPc+ 25 22.40 -2.2
1.3s 86.00nm 4.8mb
Z 20s 0.36um
i 25 28.20
e(S) 29 00.00
LR 32 15.00
RLO 19.37 16 iPc 25 26.80 -2.9
GLA 19.59 324 eP 25 32.00 -0.3
OLY 19.93 24 P 25 33.50 -2.3
BAR 20.40 320 eP 25 41.00 0.3
PLM 20.98 321 eP 25 49.00 2.1
PWLA 21.03 32 P 25 45.30 -1.8
TPC 21.05 324 eP 25 48.00 0.5
PEC 21.54 322 P 25 53.50 1.1
RVR 21.73 322 eP 25 55.00 0.7
MWC 22.30 321 eP 26 01.00 0.9
GOL 22.32 352 P 26 00.20 -0.2
0.8s 25.30nm 4.7mb
GLD 22.35 352 P 26 00.80 0.2
1.2s 47.98nm 4.8mb
SBB 22.49 322 eP 26 02.00 0.1
FVM 22.50 23 P 26 00.20 -1.7
MSU 22.90 338 P 26 07.00 1.0
CLC 23.17 325 eP 26 10.00 1.5
ISA 23.55 323 eP 26 14.00 1.8
PRM 23.68 42 P 26 11.80 -1.6
TNP 24.69 329 P 26 24.70 1.2
0.8s 12.75nm 4.5mb
PRI 25.17 321 ePc 26 28.20 0.3
e 26 31.30
FRI 25.20 324 ePc 26 27.80 -0.2
LLA 25.65 322 e(P) 26 32.20 -0.1
PRS 25.72 321 e(P) 26 33.80 0.9
KVN 25.88 329 P 26 35.90 1.3
BW06 26.07 346 P 26 35.60 -0.8
1.0s 32.50nm 4.9mb
CMB 26.32 325 ePc 26 38.70 0.2
BLA 26.91 39 P 26 42.40 -1.5
0.9s 28.93nm 4.9mb
ORV 28.01 326 e(P) 26 54.80 1.0
LRM 29.64 344 eP 27 08.50 -0.2
e 27 13.40
LON 33.63 334 P 27 43.40 -0.1
SES 33.65 349 eP 27 43.00 -0.6
RSON 33.78 9 P 27 42.10 -2.5
0.8s 8.01nm 4.7mb
BMW 34.02 333 P 27 45.00 -
PNT 34.93 339 eP 27 55.00 0

06d 23h

	0.7s	9.00nm			4.8mb	
GAC	35.39	32 eP	27	56.00	-2.4	
PGC	35.82	335 eP	28	02.00	0.0	
EDM	36.79	348 iPd	28	09.50	-0.7	
FFC	37.09	359 eP	28	11.50	-1.2	
	0.8s	10.00nm			4.7mb	
SCH	45.65	27 eP	29	21.00	-2.0	
YKC	45.79	352 eP	29	24.00	0.1	
YKA	45.82	351 P	29	24.80	0.7	
ZOBO	46.96	134 Pc	29	33.00	-1.4	
LPB	47.16	134 eP	29	34.00	-1.8	
CNCB	47.44	134 eP	29	38.00	-0.2	
CCH	49.10	133 P	29	59.40	8.7X	
FRB	51.31	18 eP	30	05.00	-1.7	
INK	54.63	346 ePc	30	29.80	-1.5	
PMR	55.23	334 P	30	35.40	-0.3	
	0.8s	10.34nm			4.9mb	
TTA	58.70	334 P	30	59.20	-1.3	
	1.0s	12.50nm			5.0mb	
MBC	59.44	355 ePc	31	05.00	-0.3	
	0.9s	38.00nm			5.5mb	
DAG	71.33	14 iPc	32	20.80	-1.0	
	0.9s	15.97nm			5.1mb	
EKA	80.33	35 Pd	33	12.60	-0.4	
	0.8s	4.00nm			4.5mb	
BMK	84.54	55 eP	33	36.00	0.8	
AAPN	85.14	53 eP	33	39.50	1.2	
NB2	85.21	27 P	33	38.40	0.3	
ALOJ	85.22	53 eP	33	40.00	1.2	
ATEJ	85.35	53 eP	33	41.00	1.6	
ASMO	85.41	52 eP	33	41.00	1.3	
IFR	85.54	56 iP	33	42.00	1.5	
APHE	85.58	53 eP	33	42.40	1.8	
LFF	86.06	44 eP	33	42.40	-0.2	
	0.8s	10.70nm			5.1mb	
EPF	86.47	46 eP	33	44.30	-0.4	
	1.0s	6.00nm			4.8mb	
TCF	86.53	42 eP	33	44.90	0.0	
	0.8s	5.90nm			4.9mb	
MAF	86.79	42 eP	33	45.90	-0.3	
	0.8s	5.90nm			4.9mb	
BGF	86.84	42 eP	33	46.10	-0.3	
	0.8s	5.30nm			4.8mb	
CAF	86.94	44 eP	33	47.20	0.2	
	1.0s	6.00nm			4.8mb	
SSF	87.07	41 eP	33	47.20	-0.3	
	0.8s	4.00nm			4.7mb	
LOR	87.21	41 eP	33	48.10	-0.1	
	1.0s	8.00nm			4.9mb	
LBF	87.39	41 eP	33	49.00	-0.1	
	1.0s	6.00nm			4.8mb	
TIC	94.06	82 P	34	20.40	-0.3	
LIC	94.18	82 P	34	21.30	0.1	
KIC	94.41	82 P	34	21.90	-0.4	
	1.0s	17.00nm			5.4mb	
CHG	138.68	330 ePKP	40	29.50	0.4	
HYB	145.24	0 iPKPc	40	39.00	-1.6	
	1.0s	40.00nm				
GBA	149.01	2 PKPc	40	48.50	1.8	
	0.8s	8.20nm				
	S.D. = 1.3	on 88 of 92 obs.				

? JUL 07, 1989 02h 00m 04.70± 4.89s
24.844 N ±18.7km 125.066 E ±44.0km
DEPTH = 33.0km (normal)
SOUTHWESTERN RYUKYU ISLANDS (246)

TWC	2.93	266 ePc	00	50.00	-0.1	
		eS	01	20.60		
TWZ	3.17	275 eP	00	53.80	0.3	
ANP	3.24	277 eP	00	59.50	5.0X	
TWD	3.25	257 ePc	00	54.20	-0.4	
TWF1	3.75	247 ePc	01	01.50	-0.1	
TWG	4.17	242 ePc	01	08.00	0.3	
SSE	7.11	332 P	01	49.00	0.0	
	0.8s	23.00nm			5.2mb X	
		i	01	55.80		
	S.D. = 0.3	on 6 of 7 obs.				

& JUL 07, 1989 02h 41m 04.89s
62.854 N 150.640 W
DEPTH = 91.8km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.48	74 iP	41	19.53	-0.3	
		S	41	30.58		
CUT	0.48	159 iP	41	19.75	-0.1	
SKT	0.97	206 iP	41	24.47	-0.2	
		S	41	39.19		
RND	0.98	55 iP	41	24.63	-0.3	
		S	41	38.70		
MCK	1.17	40 iP	41	26.84	-0.2	
PWA	1.26	163 eP	41	27.91	-0.1	
GHO	1.35	143 eP	41	29.41	0.1	
		S	41	48.27		
SUA	1.40	182 eP	41	30.07	0.1	
KNK	1.77	144 eP	41	34.69	0.0	
SPU	1.81	202 eP	41	35.27	0.1	
NEA	1.86	21 iP	41	35.32	-0.6	
WRH	1.98	34 iP	41	36.68	-0.8	
CCB	2.20	34 iP	41	39.38	-0.9	
TOA	2.21	108 eP	41	40.61	0.1	
HDA	2.27	45 iP	41	40.43	-0.8	
RDS	2.27	28 iP	41	40.63	-0.7	
SLKM	2.36	175 eP	41	43.34	0.7	
PAX	2.37	85 eP	41	42.54	-0.2	
SDG	2.37	96 eP	41	43.98	1.2	
FBA	2.41	30 eP	41	42.45	-0.7	
RDT	2.44	201 eP	41	44.30	0.6	
	21 obs. associated					

% JUL 07, 1989 03h 23m 39.86± 0.62s
38.207 N ± 6.8km 28.855 E ± 5.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.54	77 iPg	23	50.30	-0.5	
		iSg	23	56.80		
YER	1.16	203 iPn	24	01.70	0.1	
IZM	1.27	279 ePn	24	03.70	0.3	
ALT	1.30	49 iPn	24	04.30	0.3	
DST	1.41	353 iPn	24	06.10	0.5	
BCK	1.56	118 ePn	24	07.90	0.1	
ELL	1.68	150 ePn	24	13.00	3.5X	
EDC	2.27	341 iPn	24	22.50	4.5X	
EZN	2.55	310 ePn	24	21.00	-0.9	
	S.D. = 0.6	on 7 of 9 obs.				

JUL 07, 1989 03h 40m 43.27± 0.46s
37.244 S ± 6.0km 176.363 E ± 9.2km
DEPTH = 340.0 ± 4.2 km
4.4mb (3 obs.)
NORTH ISLAND, NEW ZEALAND (159)

KRP	0.94	224 iPc	41	28.90	1.0	
GBZ	1.25	325 P	41	28.30	-1.0	
HUTZ	1.40	189 eP	41	30.70	0.5	
TUTZ	1.49	191 Pc	41	31.40	0.7	
HITZ	1.54	198 eP	41	31.60	0.6	
HBZ	1.58	104 iPc	41	29.70	-1.5	
		S	42	07.50		
WHH	1.64	176 Pd	41	31.40	-0.3	
HATZ	1.66	187 P	41	31.90	0.2	
RATZ	1.69	196 P	41	32.50	0.6	
GNZ	1.92	137 P	41	32.90	-0.5	
KETZ	1.94	197 P	41	34.30	0.6	
TTH	2.32	171 eP	41	37.10	0.7	
PGZ	3.37	181 Pd	41	45.90	0.2	
KIW	3.79	197 Pc	41	49.80	-0.1	
MTW	3.97	189 Pc	41	51.40	-0.4	
CAW	3.99	194 Pc	41	51.80	-0.2	
WDW	4.16	194 eP	41	53.30	-0 4	
BLW	4.18	189 Pc	41	53.90	-0.1	
MRW	4.19	197 P	41	53.80	-0.2	
		eS	42	49.20		
WEL	4.22	197 P	41	54.70	0.3	
MOW	4.26	191 P	41	54.60	-0.3	
TCW	4.28	202 eP	41	55.00	-0.1	
CCW	4.80	200 eP	42	01.40	0.7	
TMP	8.50	212 P	42	43.10	-0.9	
		S	44	19.50		
MHZ	9.46	212 eP	42	54.70	-0.9	
MSZ	9.78	218 P	42	59.00	-0.4	
		S	44	47.00		
ASPA	38.71	278 iPc	47	37.20	0.3	
	0.9s	27.00nm			4.5mb	
WRA	40.35	283 Pc	47	50.20	-0.2	
	0.4s	3.70nm			4.0mb	
WB5	40.37	284 iPc	47	50.50	0.0	
SPA	52.94	180 e(P)	49	27.90	0.4	
	0.7s	16.02nm			4.5mb	
BNG	141.54	217 iPKPd	59	30.00	-6.3X	
	0.5s	3.00nm				
SOD	145.33	340 iPKP	59	38.10	-3.0X	
SUF	148.65	334 iPKP	59	47.20	0.7	
	0.6s	10.60nm				
NUR	150.62	331 iPKP	59	52.50	2.9X	
	0.7s	14.70nm				
UPP	153.58	336 iPKP	00	12.80	19.0X	
NB2	154.40	343 PKP	59	59.80	4.8X	
	S.D. = 0.6	on 31 of 36 obs.				

? JUL 07, 1989 03h 50m 40.18± 3.15s
48.362 N ±13.8km 1.117 W ±27.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

GRR	0.17	81 Pg	50	44.20	0.1	
LPF	0.33	171 Pg	50	47.10	0.0	
		Sg	50	51.30		
FLN	0.58	46 Pg	50	52.00	0.0	
		Sg	50	59.50		
LDF	0.70	70 Pg	50	53.90	-0.1	
		Sg	51	02.40		
	S.D. = 0.2	on 4 of 4 obs.				

JUL 07, 1989 04h 30m 29.85± 1.58s
43.367 N ± 9.7km 5.427 E ± 9.6km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)

GELF	0.02	0 Pg	30	31.13	-0.7	
BERF	0.20	106 Pg	30	34.26	0.0	
PUYF	0.26	50 Pg	30	33.82	-1.5	
TREF	0.26	353 Pg	30	34.19	-1.2	
PRAF	0.48	337 Pg	30	39.18	-0.3	
TAVF	0.52	61 Pg	30	39.48	-1.0	
VILF	0.53	23 Pg	30	39.49	-1.1	
GANF	0.72	29 Pg	30	43.89	-0.2	
CALN	1.13	70 Pg	30	51.28	0.2	
MVIF	1.36	67 Pn	30	54.77	-0.2	
		Sg	31	14.36		
TOUF	1.47	63 Pn	30	56.37	-0.2	
		Sg	31	16.79		
AURF	1.47	69 Pn	30	56.31	-0.2	
		Sg	31	17.09		
FOUF	1.52	40 e(Pg)	30	58.18	1.2	
		e(Sg)	31	16.97		
AUTN	1.58	66 Pn	30	58.00	-0.2	
		Sg	31	20.58		
PZZ	1.66	46 P	31	00.54	1.3	
		S	31	20.28		
SAOF	1.66	67 Pn	30	58.56	-0.6	
ENR	1.68	59 P	30	59.00	-0.5	
		S	31	18.74		
DOI	1.74	49 P	31	01.20	0.9	
		eSg	31	24.80		
RRL	1.83	32 P	31	03.87	2.0	
		S	31	25.79		
IMI	1.87	72 P	31	02.46	0.3	
BNI	1.91	28 Pd	31	05.30	2.4	
		eSg	31	30.10		
ROB	2.00	61 P	31	04.51	0.5	
FIN	2.18	66 P	31	06.69	-0.1	
RSP	2.22	36 P	31	10.15	2.9X	
CKI	2.32	62 P	31	08.90	0.2	
		eSn	31	41.60		
LSD	2.43	30 P	31	13.99	3.5X	
PCP	2.54	61 P	31	11.69	-0.1	
CVF	2.65	106 Pn	31	12.47	-0.9	
	S.D. = 1.0	on 26 of 28 obs.				

• JUL 07, 1989 04h 39m 34.72± 1.37s
34.938 N ±22.9km 139.376 E ±12.8km
DEPTH = 5.0km (geophysicist)
4.8mb (3 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (III JMA) in the Ajiro area; (II JMA) at Tokyo and Yokohama.

MAT	1.86	330 iPd	40	07.20	-0.3	
		iS	40	29.70		
SHK	5.53	268 eP	40	58.00	-1.7	
CN2	13.93	314 eP	42	59.00	4.0X	
	Z 18s	0.80um				
	N 12s	0.80um				
		eS	45	28.00		
TIA	18.14	280 eP	43	48.50	-0.6	

BJI	19.08	292	eP	43	57.00	-3.5X
			eS	47	36.00	
			e	47	46.00	
WHN	21.48	265	eP	44	27.00	0.7
N	14s		0.85um			
			sS	48	28.00	
TIY	21.86	285	eP	44	35.00	4.9X
N	12s		0.60um			
E	13s		0.70um			
			S	48	13.00	
WMO	40.35	299	eP	47	17.00	2.0
INK	57.00	26	eP	49	22.00	-1.3
MBC	58.99	16	eP	49	36.00	-1.2
	1.5s		10.00nm		4.7mb	
YKA	66.44	29	P	50	27.70	0.9
SUF	69.10	333	eP	50	45.00	1.5
NB2	75.47	337	P	51	30.80	9.5X
FFC	76.36	32	eP	51	25.50	-0.8
	0.7s		6.00nm		4.8mb	
CLL	82.07	329	iP	51	58.00	0.8
	1.3s		13.00nm		4.9mb	
KHC	83.44	328	eP	52	04.40	-0.1
ZOBO	149.17	60	PKP	59	26.00	3.3X
LPB	149.36	60	PKP	59	30.00	7.2X
CNCB	149.63	61	PKPc	59	29.00	5.7X
S.D. = 1.3			on 12 of 19 obs.			

JUL 07, 1989 05h 56m 20.85± 0.60s
28.384 S ± 6.4km 68.253 W ±12.3km
DEPTH = 125.7 ± 15.8 km
4.4mb (1 obs.)
LA RIOJA PROVINCE, ARGENTINA (138)

CYA	2.17	92	iPc	56	56.00	-1.2
RTLL	2.94	184	iPd	57	42.00	34.7X
RTCB	3.13	189	iPd	57	11.50	1.7
			S	57	49.00	
CFA	3.21	180	iP	57	11.50	0.7
			S	57	47.50	
RTBS	3.43	197	ePc	57	15.40	1.8
RTCV	3.47	184	iPc	57	15.50	1.2
SLA	4.40	35	iPc	57	28.00	1.1
JACH	4.74	205	iPd	57	32.00	0.6
			iS	58	28.50	
ANT	5.05	337	eP	57	35.80	0.3
ROCH	5.15	207	iPd	57	36.70	-0.5
			iS	58	34.60	
PEL	5.19	203	iPc	57	37.00	-0.5
			i	58	20.40	
			i	58	35.40	
FCH	5.23	199	iPc	57	39.70	1.4
			iS	58	39.90	
SAN	5.46	202	iPd	57	41.00	-0.2
			iS	58	44.20	
PCH	5.57	200	eP	57	42.50	-0.2
TACH	5.74	203	iPd	57	43.60	-1.3
			iS	58	47.50	
LCCH	5.82	208	ePd	57	44.00	-2.1
CHCH	5.90	200	eP	57	47.00	-0.3
LNV	6.18	205	iPd	57	48.10	-2.9
			iS	58	55.50	
CCH	11.12	11	eP	59	10.90	13.3X
CNCB	11.52	1	P	59	05.00	1.8
LPB	11.80	1	eP	59	05.00	-1.6
ZOBO	12.06	1	eP	59	10.00	-0.2
VAO	19.91	79	ePd	00	43.10	-1 7
			e	01	07.40	
SPA	61.78	180	e(P)	06	30.50	2.3
	1.0s		4.00nm		4.4mb	
S.D. = 1.5			on 22 of 24 obs.			

JUL 07, 1989 06h 49m 48.28± 0.42s
36.966 N ± 3.9km 112.177 W ± 5.1km
DEPTH = 5.0km (geophysicist)
WESTERN ARIZONA (42)
ML 2.9 (NEIS).

GCAZ	0.92	178	P	50	05.80	-0.5
			S	50	17.70	
ARUT	1.30	310	P	50	13.16	0.2
DWU	1.31	330	Pc	50	12.89	-0.3
			S	50	31.46	
MMU	1.42	29	P	50	13.13	-1.9
MSU	1.54	0	ePn	50	15.80	-0.9
			iPg	50	17.50	
WMZ	1.81	184	P	50	21.10	0.6
			S	50	46.50	
FLAG	1.85	166	e(P)	50	21.10	0.0
			S	50	45.30	
PV09	2.86	57	eP	50	36.00	0.3
PV10	2.86	60	eP	50	36.30	0.6
DUG	3.26	351	(Pn)	50	41.40	0.2
DAU	3.52	12	ePn	50	48.10	3.1X
			ePg	50	53.00	
TNP	4.16	287	ePn	50	54.40	0.4
			ePg	51	06.80	
GLA	4.47	210	ePn	50	58.00	-0.3
ALQ	5.06	112	Pn	51	06.60	-0.2
			ePg	51	20.60	
			eSg	52	24.50	
GOL	6.01	61	ePn	51	20.50	0.3
			ePg	51	37.30	
			eSg	52	55.30	
BW06	6.14	18	(Pn)	51	23.60	1.5
			ePg	51	41.20	
			eSg	53	02.00	
S.D. = 0.8			on 15 of 16 obs.			

? JUL 07, 1989 06h 53m 27.27± 1.55s
45.057 N ± 7.0km 7.300 E ±17.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

RSP	0.10	342	P	53	30.02	-0.1
			S	53	31.46	
RRL	0.39	250	P	53	35.36	0.0
			S	53	40.38	
LSD	0.41	346	P	53	35.87	0.1
			S	53	40.79	
PZZ	0.57	194	P	53	38.95	0.0
			S	53	46.12	
S.D. = 0.1			on 4 of 4 obs.			

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* JUL 07, 1989 10h 14m 19.98± 1.08s
17.232 N ± 8.8km 99.744 W ±15.1km
DEPTH = 33.0km (normal)
GUERRERO, MEXICO (59)

ACX	0.38	197	iP	14	28.50	-0.3
			iS	14	35.50	
III	1.17	13	iPd	14	41.00	0.7
UNM	2.16	14	eP	14	55.00	0.5
CRX	2.16	2	(P)	14	51.00	-3.7X
IIT	2.24	37	(P)	14	54.00	-1.8
IIC	2.56	10	(P)	15	04.00	3.6X
SMMM	2.67	21	eP	15	02.00	0.4
IISM	2.85	52	eP	15	03.50	-0.6
OXX	2.89	93	iP	15	06.00	1.0
			iS	15	37.00	
TUL	18.93	10	eP	18	51.90	11.1X
	0.7s		1.70nm			
S.D. = 1.2			on 7 of 10 obs.			

? JUL 07, 1989 10h 50m 18.50± 1.30s
51.823 S ±32.8km 161.315 E ±16.2km
DEPTH = 10.0km (geophysicist)
4.9mb (2 obs.) 4.6Msz (1 obs.)
NORTH OF MACQUARIE ISLAND (165)

CBZ	4.88	102	P	51	32.50	-1.1
TAU	13.00	308	iPd	53	24.10	-1.6
TOO	18.10	316	e(P)	54	34.00	2.6X
DZM	29.96	10	iPc	56	30.30	1.2
ASPA	35.10	313	iPc	57	13.60	-0.2
	1.0s		18.00nm		4.9mb	
Z	19s		0.93um		4.6Msz	
			LR	10	26.80	
WARB	36.61	301	eP	57	26.30	-0.2
W85	38.21	316	eP	57	39.20	-0.8
SPA	38.36	180	e(P)	57	56.00	14.9X
	1.0s		3.50nm			
CHG	88.78	303	eP	03	15.00	1.4
CHTO	88.78	303	iP	03	15.10	1.5
	0.9s		5.97nm		4.9mb	
			i	03	22.00	
S.D. = 1.4			on 8 of 10 obs.			

& JUL 07, 1989 10h 56m 10.10s
38.018 N 122.223 W
DEPTH = 11.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.9 (BRK).
Mo=6.2*10**13 Nm (BRK). Felt (V) at Hercules and (III) at Walnut Creek. Also felt at Benicia, Martinez, Pinole, Richmond, Rodeo, San Pablo and San Francisco.

ZSP	0.08	200	iPd	56	12.50	-0.2
BKS	0.14	184	iPd	56	13.50	0.0
			iS	56	16.10	
BRK	0.15	191	iPd	56	13.50	-0.1
			iS	56	16.40	
PCC	0.53	194	iPd	56	20.40	-0.5
NWRM	0.68	310	iPd	56	22.90	-0.6
MHC	0.82	145	iPc	56	25.40	-0.5
			eS	56	37.30	
ARN	0.86	140	iPc	56	25.90	-0.8
GCC	1.00	170	ePd	56	27.90	-1.1
			i(S)	56	41.10	
SAO	1.40	153	iPc	56	33.30	-2.2
CMB	1.45	89	ePc	56	34.60	-1.7
			i	56	36.50	
			i(S)	56	54.90	
ORV	1.64	20	e(P)	56	36.60	-2.3
			eS	56	56.80	
LLA	1.73	144	eP	56	39.00	-1.3
PRS	1.82	158	eP	56	40.50	-1.0
FRI	2.25	116	ePc	56	46.30	-1.4
TNP	3.95	88	eP	57	08.00	-4.2
15 obs. associated						

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* JUL 07, 1989 11h 11m 30.23± 1.49s
3.725 S ±11.4km 129.929 E ±15.3km
DEPTH = 111.6 ± 17.1 km
4.3mb (3 obs.)
CERAM (272)

AAI	1.73	271	eP	12	00.30	0.0
			eS	12	42.50	
MTN	9.14	173	eP	13	00.00	-40.8X
			eS	13	38.00	
			e	15	24.00	
WB5	16.63	165	eP	15	18.30	0.2
			eS	18	16.50	
WRA	16.69	165	Pc	15	25.50	6.7X
	0.7s		5.40nm		3.9mb	
QIS	19.20	151	eP	15	47.00	-1.1
ASPA	20.19	169	iPc	15	59.20	0.8
	0.7s		50.00nm		5.0mb	
			eS	19	46.60	
WARB	22.55	188	eP	16	25.70	3.9X
GUA	22.70	41	eP	16	23.50	0.2
CHG	37.84	307	eP	18	37.80	-0.1
CHTO	37.84	307	eP	18	37.90	0.0
	1.0s		4.25nm		4.3mb	
ZOBO	153.29	139	ePKP	31	22.00	11.6X
S.D. = 0.8			on 7 of 11 obs.			

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* JUL 07, 1989 12h 26m 19.99± 2.09s
2.668 S ±15.9km 138.805 E ±14.1km
DEPTH = 52.9 ± 19.1 km
4.6mb (4 obs.) 3.2Msz (1 obs.)
WEST IRIAN (201)

JAY	1.90	85	iPc	26	51.00	0.4
			iS	27	15.00	
			e	31	06.50	
MTN	12.65	217	ePd	29	19.40	-0.1
			eS	31	33.00	
KNA	16.33	217	iPd	30	08.60	1.2
	0.6s		23.00nm		4.5mb	
			eS	33	00.00	
WB5	17.65	194	eP	30	23.00	-0.8
			eS	33	29.70	
WRA	17.72	194	Pc	30	24.00	-0.7
	0.6s		7.00nm		4.0mb	
QIS	17.80	178	eP	30	24.00	-1.7
			eS	33	30.00	
CTA	18.78	158	eP	30	53.00	15.2X
ASPA	21.41	192	iPc	31	04.90	-0.6
	0.5s		34.00nm		5.0mb	
Z	20s		0.11um		3.2Msz	
			eS	34	55.30	
			LR	39	23.70	
RMO	25.54	159	eP	31	46.50	1.0
MBL	26.06	224	eP	31	51.30	0.9
WARB	26.14	205	iPc	31	52.00	0
	0.3s		9.00nm		4.8mb	

07d 12h

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BRS     27.98 153 iP     32 09.40    1.5
FORR    29.80 199 eP     32 22.70   -1.5
COOL    32.65 209 eP     32 50.00    0.8
FBA     85.42  24 eP     38 51.50   -1.3
BNG    120.36 274 ePKPd 45 32.00   23.9X
         1.0s    13.00nm
                  i      48 41.80
      S.D. = 1.2  on  14 of  16 obs.
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*  JUL  07, 1989  12h 27m 51.08± 0.39s
   36.265 S ± 9.5km   99.250 W ± 9.2km
   DEPTH =  10.0km  (geophysicist)
   5.2mb ( 13 obs.)  5.0Msz (  8 obs.)
 SOUTHERN PACIFIC OCEAN            (692)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 14S, 33C
      Centroid Locotion:
      Origin Time          12:27:52.4 0.2
      Lat 36.54S 0.03 Lon  98.59W 0.04
      Dep  15.0 FIX Half-durotion  3.1
      Moment Tensor;   Scole 10**17 Nm
        Mrr=-0.71 0.13  Mtt=-0.42 0.14
        Mff= 1.13 0.16  Mrt=-1.01 0.37
        Mrf=-0.82 0.50  Mtf=-5.91 0.13
      Principol Axes:
        T  Val=  6.32  Plg= 0   Azm=229
        N       -0.38      76       137
        P       -5.93      14       319
      Best Double Couple:Mo=6.1*10**17
       NP1:Strike=  3 Dip=80 Slip= -10
       NP2:         95      80      -170

LNV     22.86  92 eP     32 58.00    2.4
PEL     23.65  91 eP     32 57.40   -6.0X
CYA     29.21  84 e(P)   33 46.50   -8.5X
NNA     31.50  46 eP     34 26.30   10.8X
         1.2s    29.69nm
      Z  20s     2.31um          4.8Msz
ARE     31.56  59 eP     34 04.00  -12.3X
CNCB    33.81  63 eP     34 23.00  -13.2X
LPB     33.90  63 P      34 25.00  -11.8X
         1.0s    50.00nm
      Z  22s     1.30um          4.6Msz
                 i      34 39.80
                 SS     42 08.00
                 LR     44 12.00
ZOBO    34.06  62 P      34 26.50  -11.9X
         1.3s   143.93nm
                 i      34 41.00
                 S      39 32.00
                 LR     44 16.00
CCH     34.78  66 P      34 27.00  -17.3X
VAO     46.81  89 eP     36 24.00    1.0
RUV     47.62 283 eP     36 28.00   -1.2
         1.2s    35.00nm          5.3mb
TVO     47.64 279 eP     36 31.00    1.5
         1.0s    25.00nm          5.3mb
VAH     47.78 283 eP     36 29.00   -1.5
         1.2s    35.00nm          5.3mb
TPT     47.92 283 eP     36 29.00   -2.6
         1.2s    40.00nm          5.4mb
PPN     47.93 279 eP     36 33.00    1.3
         1.0s    20.00nm          5.2mb
PAE     47.97 279 eP     36 34.00    2.0
         1.0s    25.00nm          5.3mb
PPT     48.02 279 eP     36 34.00    1.6
         1.0s    40.00nm          5.5mb
      Z  18s     2.00um          5.1Msz
PMO     48.13 283 eP     36 30.00   -3.2X
         1.2s    15.00nm          4.9mb
BAO     49.83  80 eP     36 46.50   -0.1
SPA     53.92 180 e(P)   37 18.70    2.0
         1.0s     4.00nm          4.4mb
      Z  20s     1.13um          4.9Msz
                 e      38 28.90
SBA     55.69 195 eP     37 28.50   -0.8
SOB1    59.19  78 eP     37 53.30   -1.5
ITR     61.41  79 eP     38 07.80   -2.2
                 e      38 10.10
                 e      38 16.30
SNZO    64.58 236 eP     38 29.00   -1.6
                 SS     51 12.00
KRP     65.56 240 P      38 38.00    1.0
UYO     70.21   4 eP     39 06.70    0.8
GLA     70.48 346 P      39 09.50    1.8
BAR     70.50 344 eP     39 08.00    0.2

MEO     70.69   1 eP     39 06.70   -2.1
ALQ     71.16 354 eP     39 10.80   -1.2
         1.0s     5.00nm          4.6mb
      Z  18s     0.94um          5.1Msz
                 e      39 23.50
                 e      39 27.50
                 eS     48 34.00
                 eLg    58 20.00
TPC     71.74 345 eP     39 15.00   -0.3
TUL     71.88   3 eP     39 16.10    0.1
         1.0s     9.30nm          4.8mb
      Z  21s     0.46um          4.7Msz
RVR     71.92 344 eP     39 19.00    2.7X
JSC     72.16  16 P      39 15.50   -2.2
RLO     72.17   4 eP     39 15.00   -2.7
SBB     72.68 344 eP     39 21.00    0.1
SYP     73.03 342 eP     39 38.00   15.0X
CLC     73.72 345 eP     39 26.00   -0.9
ISA     73.76 344 eP     39 27.00   -0.2
PRI     74.74 342 e(P)   39 30.80   -2.1
PV10    74.82 352 P      39 34.80    1.3
PV09    74.95 352 P      39 36.50    2.2
PRS     75.10 342 e(P)   39 35.70    0.9
GOL     75.80 355 P      39 39.90    0.9
         0.8s    11.90nm          5.0mb
MHC     76.12 342 eP     39 42.00    1.2
BKS     76.78 341 eP     39 45.50    1.2
                 eS     49 32.00
                 eSS    54 32.00
                 eLQ    00 28.00
                 eLR    03 50.00
BRK     76.78 341 eP     39 46.40    2.2
ORV     78.18 343 e(P)   39 53.10    1.1
MIN     78.96 343 e(P)   39 56.00   -0.4
WDC     79.41 342 eP     39 57.20   -1.5
FHC     79.98 341 e(P)   40 03.20    1.4
RSSD    80.13 357 P      40 00.00   -2.7
TAU     80.59 223 eP     40 07.00    1.8
LRM     82.57 351 eP     40 16.60    1.1
GAC     84.37  16 eP     40 25.00    0.7
CAN     84.60 230 eP     40 24.80   -1.3
TOO     85.21 226 eP     40 27.00   -2.0
DPW     85.46 347 P      40 30.00    0.2
BWA     85.55 230 eP     40 30.00   -0.8
RSON    86.89   4 P      40 36.00   -0.7
SES     86.91 352 eP     40 39.00    2.1
PNT     87.11 347 eP     40 43.00    5.1X
BRS     87.26 238 eP     40 39.00   -0.3
EDM     89.96 352 eP     40 50.00   -1.4
FFC     90.65 358 eP     40 57.00    2.6X
         1.2s    16.00nm          5.2mb
MOX    129.60  51 ePKP   47 04.00    2.6X
      Z  21s     0.50um          5.2Msz
CLL    130.58  50 ePKP   47 04.00    0.8
NB2    130.69  37 PKP    47 06.20    3.0X
BRG    131.10  51 e(PKP) 47 07.50    3.3X
MDJ    142.38 298 ePKP   47 22.40   -3.0X
KVT    145.06  68 iPKP   47 30.00   -0.1
CN2    145.30 297 ePKP   47 28.00   -2.4X
      Z  20s     0.60um          5.4Msz
OZH    145.73 261 ePKP   47 30.50   -1.1
SNG    145.82 217 ePKP   47 31.70   -0.4
SSE    146.13 273 ePKP   47 33.00    0.9
         1.0s    36.00nm
SNY    146.54 293 ePKP   47 33.00    0.6
DL2    147.69 287 ePKP   47 37.50    3.1X
NJ2    148.33 274 PKPc   47 39.00    3.4X
BHD    150.09  85 ePKPc  47 43.00    4.7X
TIA    150.77 281 ePKP   47 42.70    3.4X
SLY    151.54  81 ePKPc  47 32.00   -8.4X
BJI    152.00 289 ePKP   47 39.00   -1.9X
LOE    153.58 230 ePKP   47 46.60    2.8X
MAIO   162.86  84 ePKP   47 55.00    0.7
GTA    164.61 288 ePKP   47 54.80   -1.1
      Z  14s     0.40um
SHL    165.69 225 ePKP   48 12.00   14.7X
      S.D. = 1.5  on  60 of  86 obs.
-------------------------------------
*  JUL  07, 1989  12h 28m 20.27± 1.21s
   49.924 N ±12.2km    5.341 E ± 7.2km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                            (538)
      MD 1.8 (UCC).

DOU     0.51 290 iPd     28 29.60   -1.0
                 iS     28 36.30
WLF     0.59 116 iP      28 32.30    0.2

MEM     0.81  32 iP      28 35.80   -0.1
SNF     0.90 311 P       28 38.80    1.3
GSH     1.05  39 ePg     28 39.70   -0.4
                 eSg    28 55.60
      S.D. = 1.2  on   5 of   5 obs.
-------------------------------------
*  JUL  07, 1989  12h 39m 51.75± 0.70s
   17.420 S ±16.4km   168.725 E ±19.0km
   DEPTH =  33.0km  (normal)
   4.9mb (  3 obs.)  4.8Msz (  1 obs.)
 VANUATU ISLANDS                   (186)

PVC     0.51 231 iPd     40 01.50   -1.0
                 iS     40 11.30
DZM     5.10 205 iPc     41 08.00    0.0
                 iS     42 04.20
RMQ    20.58 241 eP      44 34.00    3.4X
CTA    21.44 259 iPd     44 44.90    5.5X
         1.2s    54.69nm          4.8mb
CNB    24.79 220 eP      45 14.00    1.8
BWA    24.83 223 eP      45 30.00   17.5X
ASPA   33.14 253 iPd     46 26.60   -0.7
      Z  23s     0.32um          4.0MszX
                 LR     00 48.80
BJI    75.22 321 eP      51 32.50   -0.5
CHTO   77.46 294 e(P)    51 47.00    1.0
         1.6s     5.91nm          4.4mb
LZH    81.15 312 eP      52 07.00    1.2
         2.0s    82.00nm          5.4mb
      Z  22s     0.50um          4.8Msz
ISA    86.72  51 eP      52 35.00    1.1
RVR    86.88  53 eP      52 32.00   -2.7
PLM    87.02  54 eP      52 40.00    4.4X
CLC    87.44  51 eP      52 39.00    1.6
TPC    87.94  53 eP      52 36.00   -3.8X
CNCB  114.61 118 Pdiff   54 56.00   14.6X
LPB   114.64 118 ePdiff  54 59.00   17.7X
ZOBO  114.75 118 Pdiff   54 59.00   17.0X
KHC   142.50 333 ePKP    59 27.20    4.2X
                 e      59 40.00
VBY   144.31 327 ePKP    59 26.00   -0.1
CEY   144.57 328 ePKP    59 26.00   -0.6
VOY   144.63 329 ePKP    59 25.30   -1.5
TRI   144.92 329 ePKP    59 24.10   -3.0X
OGA   145.34 333 ePKP    59 28.50    0.4
CDF   145.58 338 ePKP    59 32.40    4.1X
         1.2s    17.80nm
HAU   146.25 339 ePKP    59 34.30    4.9X
         1.4s    26.10nm
LOR   147.73 341 ePKP    59 37.30    5.5X
         1.4s    17.40nm
LPG   148.22 336 ePKP    59 39.00    6.0X
         1.4s    26.10nm
SMF   148.28 340 ePKP    59 38.50    5.8X
         1.4s    17.40nm
MAF   149.06 341 ePKP    59 41.10    7.2X
         1.4s    21.70nm
CAF   150.38 341 ePKP    59 45.70    9.7X
         1.4s    17.40nm
      S.D. = 1.4  on  14 of  31 obs.
-------------------------------------
&  JUL  07, 1989  13h 26m 45.41s
   61.852 N          150.780 W
   DEPTH =  64.3km
 SOUTHERN ALASKA                   (  2)
      <AGS-P>.

SKT     0.38 290 iP      26 56.11   -0.7
SUA     0.39 177 iP      26 57.10    0.1
                 S      27 06.69
PWA     0.47 115 iP      26 57.52   -0.1
CUT     0.60  23 iP      26 58.56   -0.4
                 S      27 08.81
PMR     0.83 108 iP      27 00.90   -0.7
PMS     0.84 136 iP      27 01.30   -0.6
GHO     0.88  94 iP      27 01.86   -0.6
                 S      27 15.98
SPU     0.91 223 iP      27 02.05   -0.7
                 S      27 15.48
NKA     1.13 191 eP      27 06.71    1.1
HUR     1.25  25 eP      27 06.21   -1.0
                 S      27 22.97
SLKM    1.38 168 eP      27 07.68   -1.3
RDT     1.50 212 iP      27 09.72   -1.0
RED     1.73 215 eP      27 12.82   -1.1
RND     1.80  29 eP      27 13.26   -1.5
SEW     1.87 159 eP      27 14.91   -0.8
```

MCK	2.07	23	eP	27	17.38	-1.1
TOA	2.19	81	iP	27	19.70	-0.6
CNPM	2.35	186	eP	27	21.02	-1.4
SVW	2.44	254	eP	27	21.60	-2.1
TTA	2.67	296	iP	27	24.70	-2.2
WRH	2.90	24	iP	27	27.93	-2.2
HDA	3.10	32	eP	27	30.65	-2.3
CCB	3.11	24	iP	27	30.58	-2.5
RDS	3.21	21	eP	27	32.04	-2.5
FBA	3.34	22	iP	27	34.01	-2.3
GLB	3.35	94	eP	27	34.03	-2.5
DOT	3.58	57	eP	27	37.73	-2.0
IMA	4.42	344	eP	27	45.30	-6.4

28 obs. associated

% JUL 07, 1989 14h 15m 11.73± 0.63s
60.702 N ± 4.9km 5.533 E ± 7.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

ASK	0.28	217	iPg+	15	17.88	0.4
			Sg	15	21.92	
BER	0.33	197	eP	15	17.29	-1.3
			iSg	15	23.31	
SUE	0.52	314	iP	15	22.32	0.1
			eS	15	29.43	
HYA	0.56	34	eP	15	22.30	-0.9
			eS	15	30.20	
ODD1	0.96	145	eP	15	29.91	-0.1
			iS	15	42.46	
BLS1	1.47	153	eP	15	39.02	0.7
			eS	15	57.50	
KMY	1.50	186	iP	15	39.28	0.6
			eS	15	58.51	
MOL	2.11	26	eP	15	48.05	0.6
			eS	16	12.90	

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

JUL 07, 1989 15h 29m 43.41± 0.47s
41.758 N ± 4.6km 19.555 E ± 5.5km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.9 (TTG).

LACI	0.17	136	iPgc	29	45.90	-1.3
SDA	0.26	351	iPgd	29	49.90	1.0
ULC	0.31	312	iPgc	29	49.30	-0.5
			iSg	29	57.00	
TIR	0.47	150	iPgd	29	52.00	-1.0
PHP	0.67	96	iPgd	29	55.20	-1.5
TTG	0.71	342	ePg	29	57.10	-0.2
			eSg	30	09.70	
BCI	0.72	32	iPg	29	56.90	-0.6
BDV	0.75	314	ePg	29	58.00	-0.2
			eSg	30	12.00	
HCY	1.05	312	ePg	30	03.50	0.4
			eSg	30	21.00	
BERA	1.10	164	iPgc	30	04.90	0.9
NKY	1.13	339	ePg	30	04.20	-0.5
			eSg	30	23.00	
IVA	1.14	13	iPgd	30	05.00	0.2
			eSg	30	23.00	
8RY	1.37	327	ePg	30	08.60	0.0
			eSg	30	31.00	
SKO	1.42	81	iPn	30	10.50	1.2
			iSn	30	29.80	
LSK	1.79	153	ePn	30	15.80	1.1
SRN	1.91	170	ePn	30	23.80	7.6X
VAY	2.31	100	ePn	30	23.40	1.4
VBY	4.87	322	eP	31	04.00	5.5X
			e(Sn)	32	03.00	
VOY	5.91	318	e(Pn)	31	12.80	-0.4
			eSn	32	22.70	

S.D. = 0.9 on 17 of 19 obs.

JUL 07, 1989 16h 00m 49.40± 0.74s
20.289 S ± 6.6km 68.783 W ± 9.1km
DEPTH = 128.1 ± 8.1 km
4.4mb (2 obs.)
CHILE-BOLIVIA BORDER REGION (124)

CNCB	3.54	13	iPc	01	44.30	-0.1
ANT	3.72	204	iPd	01	46.10	-0.1
			i	01	51.30	
LPB	3.79	10	Pc	01	48.00	0.4
	1.0s		1140.00nm			
			S	02	33.00	
CCH	3.82	41	Pc	01	47.80	-0.1
			i	01	52.30	
ARE	4.59	326	eP	01	52.00	-6.3X
			iS	02	41.70	
SLA	5.36	146	iPd	02	13.00	4.5X
LNV	13.81	189	eP	04	00.00	-0.8
ITB1	13.99	111	e(P)	04	04.70	1.5
ITB	14.19	111	e(P)	04	10.90	5.1X
ITB7	14.31	112	e(P)	04	11.50	4.2X
BAO	20.31	80	eP	05	16.00	-1.4
VAO	20.45	102	eP	05	19.30	0.5
ATB	23.37	46	e(P)	05	45.40	-2.0
SOB1	29.08	72	eP	06	41.00	0.9
ALQ	65.55	327	eP	11	22.00	0.5
	0.9s		2.52nm			4.1mb
			e	11	47.00	
LIC	67.94	74	P	11	36.74	-0.1
TIC	68.12	74	P	11	37.80	-0.2
KIC	68.26	74	Pc	11	38.90	0.1
SPA	69.84	180	ePd	11	51.70	3.9X
	1.0s		13.00nm			4.7mb
YKC	90.04	341	eP	13	35.40	0.1
YKA	90.09	341	P	13	36.30	0.8

S.D. = 1.0 on 16 of 21 obs.

? JUL 07, 1989 17h 31m 06.65± 4.39s
9.332 N ±11.4km 82.508 W ±41.4km
DEPTH = 33.0km (normal)
PANAMA-COSTA RICA BORDER REGION (80)

JCR	0.79	311	iPc	31	47.50	26.1X
			S	32	21.00	
LIO	0.85	322	iPc	31	22.10	0.0
ACR	0.94	224	iPc	31	23.50	0.0
BUS	1.25	280	iPd	31	22.10	-6.2X
ICR	1.45	296	iPd	31	31.00	-0.3
LCR2	1.53	286	iPd	31	32.00	-0.2
SRA	2.05	291	iPd	31	40.00	0.3
			S	32	06.10	

S.D. = 0.3 on 5 of 7 obs.

& JUL 07, 1989 17h 33m 13.67s
59.941 N 153.306 W
DEPTH = 133.3km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.22	51	iP	33	31.57	0.9
OPT	0.29	172	iP	33	32.06	1.2
AUL	0.56	187	iP	33	33.32	-0.4
RDT	0.78	35	eP	33	34.60	-0.7
HOM	0.89	108	eP	33	33.59	-2.5
XLV	0.94	121	iP	33	35.68	-0.9
			S	33	53.11	
NNL	1.02	83	iP	33	37.59	0.3
CDD	1.03	190	iP	33	36.36	-1.1
			S	33	54.32	
CNPM	1.13	111	iP	33	37.62	-0.8
BRLK	1.23	97	eP	33	38.77	-0.7
			S	33	57.98	
NKA	1.31	51	eP	33	41.13	1.0
SPU	1.39	26	iP	33	40.29	-0.9
SHU	1.41	159	iP	33	39.96	-1.3
			S	34	01.00	
SVW	1.64	317	iP	33	42.33	-1.6
SLKM	1.64	68	eP	33	42.86	-1.1
SEW	1.94	84	eP	33	46.32	-1.2
SUA	1.98	38	eP	33	46.89	-1.2
			S	34	13.70	
SKT	2.22	22	eP	33	49.53	-1.5
KDC	2.24	169	eP	33	48.29	-2.9
			S	34	16.42	
PWA	2.40	43	eP	33	51.58	-1.6
KNK	2.81	56	eP	33	57.84	-0.7
CUT	2.88	29	eP	33	58.05	-1.3
HUR	3.52	28	eP	34	06.11	-1.8
VZW	3.52	69	eP	34	05.29	-2.7
KLU	3.95	64	eP	34	11.05	-2.6
RND	4.07	29	iP	34	12.77	-2.6
PAX	4.83	48	eP	34	23.69	-1.9
HDA	5.38	31	eP	34	29.40	-3.4

28 obs. associated

? JUL 07, 1989 17h 34m 01.89± 2.34s
44.614 N ±10.5km 6.706 E ±24.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

FOUF	0.10	147	iPg	34	04.84	0.3
			eSg	34	06.37	
PZZ	0.30	111	P	34	08.59	0.3
			S	34	13.33	
RRL	0.31	10	P	34	08.44	0.0
			S	34	13.38	
ENR	0.64	127	P	34	14.28	-0.6
			S	34	23.30	

S.D. = 0.7 on 4 of 4 obs.

JUL 07, 1989 19h 14m 58.65± 0.40s
8.019 S ± 5.7km 127.749 E ± 8.7km
DEPTH = 33.0km (normal)
4.7mb (6 obs.)
TIMOR (289)

AAI	4.33	6	iPd	16	05.50	1.7
MTN	5.84	146	eP	16	24.00	-1.2
KNA	7.75	173	iPd	16	51.00	-1.0
	0.2s		80.00nm			6.4mb X
			eS	18	12.00	
MKS	8.68	288	ePd	17	12.60	7.6X
			e	18	46.50	
MNI	9.84	343	eP	17	27.50	6.6X
WB5	13.42	152	eP	18	03.50	-5.8X
WRA	13.46	152	Pc	18	04.60	-5.3X
	0.7s		40.80nm			5.4mb
MBL	15.14	209	eP	18	30.30	-1.5
	0.4s		11.00nm			4.5mb
			eS	21	08.00	
TSM	15.53	321	eP	18	45.00	8.1X
ASPA	16.64	160	iPd	18	48.70	-2.4
Z	21s		0.23um			
			eS	21	34.10	
			LR	25	31.50	
QIS	16.94	139	eP	18	49.00	-5.8X
WARB	18.10	183	eP	19	06.90	-2.4
	0.4s		16.00nm			4.5mb
			eS	22	21.00	
KKM	18.10	320	ePc	19	14.50	5.1X
NANU	18.63	218	eP	19	18.00	2.2
	0.4s		12.00nm			4.4mb
			eS	22	35.00	
PMG	19.23	96	eP	19	25.00	1.9
MEKA	20.46	204	eP	19	37.00	0.7
			eS	23	18.00	
CTA	21.56	126	iPc	19	47.10	-0.4
	1.0s		50.00nm			4.9mb
COOL	23.57	194	eP	20	08.00	0.8
MRWA	23.81	206	eP	20	11.30	1.8
BAL	24.73	203	eP	20	20.50	2.0
KLB	25.23	200	eP	20	24.00	0.8
NWAO	26.63	200	eP	20	37.30	1.1
STK	27.01	153	eP	20	38.80	-0.9
			e	25	51.00	
RMO	27.12	135	eP	20	43.00	2.3
IPM	29.45	294	ePd	21	01.10	-0.8
8RS	30.54	132	iPd	21	10.90	-0.6
COO	31.84	138	eP	21	21.50	-1.4
BWA	32.44	147	eP	21	29.10	1.0
CAN	33.43	147	eP	21	36.90	0.2
NNT	34.56	306	eP	21	46.50	-0.1
BDT	37.91	312	eP	22	13.90	-1.0
CHG	38.96	313	eP	22	22.80	-0.9
GYA	39.92	330	P	22	33.80	2.1
NJ2	40.74	348	Pc	22	39.00	0.8
KMI	40.97	324	eP	22	41.00	0.6
XAN	45.48	338	P	23	14.60	-2.1
BJI	49.00	348	eP	23	44.00	-0.1
LZH	49.30	334	eP	23	47.00	0.3
GTA	53.83	333	eP	24	19.40	-1.4
WMO	63.06	328	eP	25	23.20	-1.9
MAW	73.19	201	eP	26	29.00	1.2
MAIO	77.60	310	eP	26	52.00	-1.6
SPA	82.03	180	e(P)	27	17.70	0.9
	0.7s		11.33nm			5.0mb
SLA	144.98	159	ePKPd	34	34.10	-1.1
CNCB	150.83	148	ePKP	34	48.00	2.9X
			i	34	52.00	
LPB	151.00	147	PKP	34	51.00	5.8X
ZOBO	151.20	147	PKP	34	46.00	0.3

S.D. = 1.4 on 38 of 47 obs.

? JUL 07, 1989 19h 32m 22.77±11.

07d 19h

67.091 N ±83.2km 156.241 W ±51.4km
DEPTH = 5.0km (geophysicist)
ALASKA (676)
ML 2.6 (PMR).

IMA	1.45	134	iP	32 49.70	-0.1
NEA	3.88	127	eP	33 24.68	0.4
RDS	4.02	121	eP	33 26.32	0.0
FBA	4.09	119	eP	33 27.67	0.4
TTA	4.18	179	eP	33 28.59	-0.1
GLM	4.18	116	eP	33 28.53	-0.1
CCB	4.24	121	eP	33 29.44	0.0
WRH	4.26	124	eP	33 29.74	0.0
HDA	4.68	121	eP	33 35.31	-0.4
SVW	6.01	177	eP	33 53.20	-1.4X

S.D. = 0.3 on 9 of 10 obs.

JUL 07, 1989 19h 41m 18.84± 0.20s
4.823 S ± 3.4km 128.973 E ± 4.3km
DEPTH = 34.1km (21 depth phases)
5.5mb (32 obs.) 4.8Msz (9 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 13S, 28C
Centroid Locotion:
Origin Time 19:41:19.6 0.3
Lot 4.82S 0.03 Lon 128.93E 0.04
Dep 46.0 3.4 Holf-durotion 2.6
Moment Tensor; Scole 10**17 Nm
Mrr=-0.12 0.12 Mtt=-2.38 0.14
Mff= 2.49 0.20 Mrt= 0.29 0.18
Mrf=-0.75 0.19 Mtf= 3.17 0.13
Principol Axes:

	Vol=	Plg=	Azm=
T	4.12	7	116
N	-0.10	79	346
P	-4.03	9	207

Best Double Couple:Mo=4.1*10**17
NP1:Strike=251 Dip=79 Slip= -1
NP2: 341 89 -169

MNI	7.47	326	ePc	43 07.50	-0.8
MTN	8.25	165	eP	43 18.00	-1.2
MKS	9.48	267	ePd	43 37.60	1.5
			e	47 24.50	
PCI	9.92	293	ePd	43 45.00	2.8X
	1.0s	110.00nm		6.1mb	
KNA	10.86	181	iPd	43 51.20	-3.9X
	0.6s	723.00nm		7.1mb X	
JAY	11.93	79	ePd	44 07.00	-2.7X
			e	47 25.00	
DAV	12.31	344	eP	44 17.90	3.2X
TSM	14.12	309	ePc	44 39.70	1.1
MNDI	14.68	96	eP	44 44.50	-1.7
WB5	15.86	161	iPc	44 55.20	-6.2X
			iS	47 38.20	
WRA	15.91	161	Pc	44 56.20	-5.8X
	0.9s	140.40nm		5.1mb	
KKM	16.70	310	ePc	45 12.50	0.4
	1.0s	329.60nm		5.4mb	
LAT	18.03	97	eP	45 27.00	-1.6
MBL	18.51	208	iPd	45 32.80	-1.6
	0.7s	153.00nm		5.3mb	
PMG	18.60	105	iPc	45 36.00	0.4
QIS	18.75	147	iPc	45 33.30	-4.1X
ASPA	19.33	166	eP	45 42.90	-1.5
	0.7s	351.00nm		5 7mb	
Z	19s	10.00um		5.1Msz	
		eS	49 00.80		
		LR	53 07.30		
QCP	20.86	338	eP	46 20.00	19.5X
WARB	21.36	186	iPd	46 06.20	0.7
	0.6s	121.00nm		5.5mb	
NANU	21.91	215	iPd	46 10.50	-0.5
	0.6s	63.00nm		5.2mb	
BAG	22.67	339	eP	46 18.00	-0.8
		eS	50 24.00		
RAB	23.13	89	eP	46 24.50	1.3
		iS	50 32.00		
MEKA	23.86	204	iPd	46 30.30	0.2
	0.8s	298.00nm		5.9mb	
GUA	24.15	41	eP	46 33.00	0.0
	1.2s	650.00nm		6.0mb	
		pP	46 42.90	36km	
GUMO	24.16	41	eP	46 32.80	-0.3
PJG	24.16	41	eP	46 32.40	-0.7
FORR	25.90	182	eP	46 48.30	-1.2
KGM	26.52	284	eP	46 56.00	0.6
COOL	26.95	195	eP	46 58.40	-0.8
MRWA	27.20	205	eP	47 00.50	-1.0
BAL	28.13	203	eP	47 09.00	-0.9
KLB	28.64	200	iPd	47 13.60	-0.9
	0.7s	84.00nm		5.5mb	
RMO	28.67	141	eP	47 15.00	0.2
STK	29.40	158	eP	47 21.00	-0.4
			e	47 25.00	14kmX
			e	47 31.00	
IPM	29.44	288	ePd	47 22.00	0.1
	1.1s	98.50nm		5.5mb	
			e	47 31.00	31km
NWAO	30.03	200	eP	47 26.50	-0.5
	0.7s	46.00nm		5.4mb	
			eS	52 38.00	
OIZ	30.28	322	Pc	47 29.00	-0.3
N	12s	1.30um			
			pP	47 39.00	35km
			S	52 27.80	
SNG	30.71	293	eP	47 32.20	-0.9
	1.2s	215.63nm		5.8mb	
			eS	52 35.00	
HNR	31.06	100	P	47 18.00	-18.2X
			S	52 38.00	
RKG	31.15	199	eP	47 41.60	4.8X
QZH	31.26	342	Pd	47 37.00	-0.8
Z	24s	2.00um		4.7MszX	
N	12s	0.80um			
E	12s	0.90um			
			S	52 40.00	
ADE	31.32	165	e(P)	47 32.00	-6.3X
	0.8s	64.18nm		5.5mb	
GZH	31.66	332	eP	47 40.50	-0.9
N	13s	1.40um			
			S	52 48.00	
BRS	31.91	137	iPd	47 42.80	-0.8
			i	47 53.00	37km
			iS	52 56.00	
COO	33.50	143	eP	47 57.00	-0.5
			i	48 08.70	43km
NNT	33.82	301	iPc	47 59.40	-0.9
BWA	34.54	151	iPc	48 08.20	1.9
			i	48 20.20	45kmX
LOE	34.81	310	iPc	48 08.60	-0.2
NST	35.07	306	eP	48 12.00	1.0
CAN	35.54	151	eP	48 15.90	1.0
			i	48 26.20	35km
CNB	35.71	151	iPc	48 18.00	1.6
TOO	35.92	157	iPd	48 20.00	1.9
SSE	36.48	349	P	48 22.00	-0.7
	1.0s	12.00nm		4.7mb	
Z	20s	0.90um		4.5Msz	
N	16s	0.50um			
E	16s	1.00um			
			pP	48 33.00	39km
			ePP	49 36.00	
			S	54 00.00	
			sS	54 30.00	
BDT	36.84	307	iPc	48 25.90	0.0
	0.6s	142.80nm		6.0mb	
CHG	37.77	309	iPc	48 34.20	0.4
	1.2s	234.38nm		5.9mb	
			eS	54 26.00	
CHTO	37.77	309	iPc	48 34.60	0.8
	1.1s	145.76nm		5.8mb	
			ipP	48 45.10	37km
			sP	48 51.80	
WHN	37.85	339	eP	48 35.00	0.8
Z	22s	1.83um		4.8Msz	
N	12s	0.79um			
E	10s	0.61um			
			pP	48 45.00	34km
			S	54 22.00	
GYA	37.87	326	iPc	48 35.40	0.8
N	18s	1.00um			
E	18s	1.60um			
			sP	48 50.00	
			PP	50 08.00	
			PcP	50 52.00	
			S	54 23.00	
			ScP	54 34.00	
NJ2	37.91	346	Pc	48 35.80	1.0
Z	24s	0.90um		4.5MszX	
N	13s	0.40um			
E	14s	0.80um			
			sP	48 49.00	
			S	54 23.50	
KMI	39.19	321	Pc+	48 47.50	1.6
	3.0s	0.50nm		2.8mb X	
Z	18s	2.80um		5.1Msz	
N	15s	1.60um			
			pP	48 57.00	32km
			PP	50 21.00	
			S	54 46.00	
			sS	54 57.50	
SHK	39.30	5	eP	48 46.50	0.1
DZM	40.11	119	iPc	48 52.90	-0.5
PVC	40.55	112	iPc	49 08.00	11.1X
TAU	41.27	159	eP	49 15.00	12.5X
MAT	42.05	11	iPd	49 08.20	-0.7
	0.9s	64.71nm		5.4mb	
Z	20s	1.77um		4.9Msz	
			eS	55 21.00	
TIA	42.30	346	eP	49 12.60	1.6
CD2	42.93	327	iPc	49 14.80	-1.5
Z	20s	1.40um		4.9Msz	
E	13s	1.20um			
			S	55 36.00	
XAN	43.05	335	Pc	49 16.50	-0.7
			S	55 38.00	
DL2	44.04	352	eP	49 25.00	-0.1
			S	55 53.00	
TIY	45.03	341	eP	49 33.00	-0.2
N	15s	0.90um			
E	13s	0.50um			
			pP	49 43.00	34km
			S	56 06.00	
			sS	56 18.50	
			SS	59 30.00	
BJI	46.17	346	eP	49 41.50	-0.6
Z	20s	0.91um		4.7Msz	
E	12s	0.37um			
			eS	56 22.00	
			eSS	59 36.00	
SNY	46.69	354	eP	49 46.20	0.1
Z	26s	1.30um		4.8MszX	
N	20s	2.30um			
E	20s	1.10um			
SHL	46.99	312	iP	49 43.80	-5.3X
			iS	56 31.20	
LZH	47.01	332	Pd	49 49.50	0.4
	2.0s	165.00nm		5.7mb	
Z	32s	2.30um		4.9MszX	
			pP	49 59.00	32km
			ePP	52 03.00	
			eS	56 36.00	
HHC	48.17	342	P	49 57.60	-0.4
N	16s	0.80um			
			S	56 54.00	
BTO	48.43	341	eP	49 58.00	-2.0
N	15s	0.50um			
E	15s	0.40um			
			ScS	59 41.00	
CN2	48.50	357	Pc	50 00.50	0.2
Z	20s	0.90um		4.8Msz	
N	10s	0.40um			
			sP	50 15.00	
			ScP	55 19.00	
			eS	56 53.00	
			SS	00 18.00	
MDJ	49.22	1	Pc	50 06.50	0.7
Z	30s	1.60um		4.8MszX	
			eS	57 06.00	
LSA	49.93	316	iPd	50 12.90	0.7
			S	57 20.00	
GTA	51.58	331	eP	50 23.90	-0.3
	1.2s	0.10nm		2.7mb X	
Z	20s	0.80um		4.7Msz	
E	14s	0.80um			
			pP	50 34.00	34km
			S	57 40.00	
			sS	57 52.00	
MSZ	52.30	145	P	50 30.80	1.5
KRP	53.63	135	P	50 49.50	10.2X
HYB	54.46	295	iPc	50 43.50	-2.2
	1.0s	140.00nm		5.9mb	
			e	50 54.00	35km
POO	59.05	295	iPd	51 15.90	-2.5
	1.0s	38.00nm		5.5mb	
NDI	59.86	307	iP	51 19.40	-4.4X
	1.0s	34.00nm		5.4mb	
			iS	59 27.10	
BOM	60.10	295	eP	51 16.40	-9.1X

			eS	59	21.60	
WMQ	61.02	327	Pc	51	30.80	-0.8
	Z 24s		1.00um			4.9MszX
			pP	51	41.00	33km
			S	59	45.50	
KSH	65.70	317	P	52	02.00	-0.5
	E 12s		0.80um			
			pP	52	13.00	36km
			eS	00	53.00	
SBA	75.61	172	ePd	53	04.00	2.3
MAIO	76.53	309	iPc	53	07.60	-0.1
	1.0s		41.50nm			5.4mb
			eS	02	56.00	
MAW	76.59	201	eP	53	07.50	0.2
KHI	76.61	307	ePc	53	07.80	-0.5
AFR	80.23	107	eP	53	31.00	2.9X
	1.2s		70.00nm			5.5mb
PAE	80.42	107	eP	53	33.00	3.9X
	1.2s		70.00nm			5.5mb
TVO	80.72	107	eP	53	35.00	4.2X
	1.2s		80.00nm			5.6mb
PMO	82.14	104	iP	53	41.50	3.3X
	1.2s		50.00nm			5.4mb
DHR	82.16	297	ePd	53	38.20	0.1
VAH	82.39	105	iP	53	42.90	3.5X
	1.2s		40.00nm			5.3mb
TPT	82.41	104	iP	53	43.10	3.5X
	1.2s		35.00nm			5.3mb
RUV	82.63	105	iP	53	44.10	3.4X
	1.2s		30.00nm			5.2mb
SPA	85.21	180	e(P)	53	53.60	0.5
	0.8s		3.75nm			4.6mb
	Z 20s		1.85um			5.5Msz
			i	54	04.80	36km
KER	86.00	305	ePc	53	57.00	-0.6
TAB	87.17	308	eP	54	04.00	0.7
			e	54	15.00	35km
QASM	88.01	296	ePd	54	07.70	0.3
BHD	88.10	303	ePd	54	09.00	1.4
			e	54	18.50	30km
			ePP	57	47.00	
			eS	04	35.00	
			e	04	49.00	
NAI	92.06	269	iPd	54	38.50	11.7X
PTZ	96.20	255	iP	54	45.00	-0.5
			i	58	39.00	
			i	58	49.00	
INK	97.23	22	eP	54	48.00	-1.0
SLR	97.51	243	eP	54	33.00	-18.4X
			i	56	03.10	386kmX
MZZ	98.94	258	iP	55	00.90	2.9X
			e	59	00.50	
LSZ	99.10	254	eP	55	01.00	2.4
			i	55	09.50	27km
			i	59	10.12	
MBC	99.74	13	eP	55	02.50	2.2
			pP	55	11.00	27km
SPC	105.84	320	ePKP	59	50.20	9.3X
SKO	106.23	312	ePKP	59	36.00	-5.6X
NB2	107.39	333	Pdiff	55	43.40	8.7X
PRU	109.26	321	ePKP	59	29.00	-18.1X
VBY	109.95	317	e(PKP)	00	05.00	16.5X
LJU	110.31	317	e(PKP)	59	55.90	6.7X
VOY	110.74	318	e(PKP)	59	50.60	0.4
HAU	115.00	321	ePKP	00	08.60	10.4X
LOR	116.84	321	ePKP	00	12.60	10.9X
	1.2s		8.90nm			
LBF	116.88	321	ePKP	00	12.60	10.8X
	1.0s		6.00nm			
SSF	117.15	321	ePKP	00	13.10	10.8X
	0.8s		4.00nm			
BGF	117.77	321	ePKP	00	14.30	10.8X
	1.0s		8.00nm			
TCF	118.28	321	ePKP	00	15.40	10.9X
	1.0s		6.00nm			
LPF	119.47	324	ePKP	00	23.80	17.2X
	1.1s		11.70nm			
FRB	119.83	9	ePKP	00	12.00	5.2X
ALQ	120.81	52	e(PKP)	00	12.00	2.1X
			e	00	20.00	
			e	00	29.00	
TOL	125.21	316	ePKP	00	02.90	-15.0X
			ePKKP	02	18.00	
MEO	126.94	49	ePKP	00	32.00	10.5X
UYO	130.29	48	iPKPd	00	29.00	1.2
SLA	147.43	155	e(PKP)	01	02.60	3.3X
ARE	150.73	137	ePKP	01	16.00	11.3X

VAO	152.06	188	ePKP	01	24.90	18.6X
CNCB	152.75	142	ePKP	01	11.00	3.0X
			i	01	17.00	
LPB	152.89	142	PKP	01	09.00	1.0
			e	01	22.00	
ZOBO	153.07	141	ePKP	01	11.00	2.5X
	1.3s		48.11nm			
	Z 24s		0.28um			5.0MszX
			i	01	22.00	
			LR	57	04.00	
CCH	153.36	146	PKP	01	20.40	11.9X
ATB	171.86	172	PKPc	01	26.30	0.5
	S.D. = 1.1		on 89 of 139 obs.			

& JUL 07, 1989 20h 12m 23.04s
62.861 N 151.080 W
DEPTH = 107.2km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.59	140	iP	12	40.18	-0.3
HUR	0.67	79	eP	12	40.77	-0.4
			S	12	53.86	
SKT	0.91	194	iP	12	43.02	-0.4
			S	12	58.39	
RND	1.15	61	eP	12	45.68	-0.3
			S	13	02.44	
PWA	1.34	155	eP	12	48.37	0.3
SUA	1.41	173	eP	12	49.43	0.3
			S	13	09.27	
GHO	1.49	136	eP	12	49.83	-0.2
			S	13	10.04	
SPU	1.75	196	eP	12	52.89	-0.3
KNK	1.91	139	eP	12	54.12	-1.1
			S	13	19.01	
SLKM	2.40	170	eP	13	00.91	-0.7
PAX	2.57	85	eP	13	03.44	-0.6
	11 obs. ossocioted					

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* JUL 07, 1989 21h 45m 37.54± 0.57s
3.370 S ± 8.0km 135.628 E ±10.6km
DEPTH = 33.0km (normol)
5.0mb (7 obs.) 4.1Msz (1 obs.)
WEST IRIAN REGION (196)

JAY	5.14	81	ePc	46	54.50	0.2
			e	49	23.50	
MTN	10.41	205	eP	48	07.00	-0.7
			eS	50	02.00	
PMG	12.93	118	eP	48	41.00	-0.7
KNA	14.03	208	eP	48	54.50	-1.8
	0.9s		89.00nm			5.5mb
PCI	15.97	278	ePc	49	30.20	8.7X
	0.7s		3.00nm			3.5mb X
WB5	16.46	184	eP	49	23.70	-4.0X
			i	49	30.80	
			eS	52	18.50	
			ePcP	53	28.30	
WRA	16.52	184	Pc	49	31.70	3.2X
	1.0s		49.50nm			4.6mb
QIS	17.52	168	eP	49	40.00	-1.0
			e	52	54.00	
CTA	19.58	149	iPd	50	15.80	9.8X
	0.9s		26.05nm			4.5mb
ASPA	20.25	185	eP	50	12.50	-0.5
	1.0s		128.00nm			5.2mb
	Z 18s		0.85um			4.1Msz
			eS	53	57.50	
			e	56	20.20	
			LR	58	16.70	
MBL	23.43	220	eP	50	48.00	3.2X
WARB	24.27	200	eP	50	55.70	2.8
BRS	28.97	147	iPc	51	36.80	0.5
WHN	39.37	330	eP	53	10.00	4.2X
CHG	42.30	303	eP	53	37.00	6.9X
CHTO	42.30	303	eP	53	31.20	1.1
	1.1s		4.71nm			4.1mb
KMI	42.67	313	Pc	53	34.50	1.2
XAN	44.93	328	P	53	50.00	-1.3
BJI	46.74	339	eP	54	03.00	-2.4
CN2	47.84	350	P	54	15.00	0.9
LZH	49.22	326	eP	54	25.00	-0.1
	1.5s		58.00nm			5.4mb
GTA	53.83	326	P	54	59.50	-0.2
WMQ	63.65	323	P	56	07.50	-0.4
MAIO	80.86	307	eP	57	53.00	2.9X
SPA	86.65	180	e(P)	58	21.50	2.5

	1.0s		14.50nm			5.2mb
CNCB	149.25	131	PKP	05	29.00	7.3X
LPB	149.33	131	PKP	05	29.00	7.4X
ZOBO	149.47	130	PKP	05	29.00	7.0X
	1.5s		26.88nm			
CCH	150.22	135	PKP	05	17.30	-5.5X
	S.D. = 1.5		on 17 of 29 obs.			

JUL 07, 1989 22h 18m 00.28± 1.09s
34.577 N ± 5.5km 23.913 E ± 4.5km
DEPTH = 14.8 ± 6.6 km
4.4mb (16 obs.)
CRETE (370)
ML 4.0 (ATH).

VAM	0.86	16	ePg	18	16.00	-0.4
			eSg	18	29.00	
NPS	1.55	63	ePb	18	31.50	4.1X
KAP	2.85	69	ePn	18	50.00	4.0X
ITM	3.06	329	ePb	18	53.20	4.3X
ATH	3.39	357	ePn	18	55.20	1.5
YER	4.37	53	iP	19	11.80	4.1X
VLS	4.48	324	ePn	19	08.50	-0.7
IZM	4.67	34	eP	19	15.00	3.1X
NEO	4.75	354	ePn	19	13.30	0.2
KSL	4.88	70	ePn	19	16.70	1.8
PRK	5.03	21	ePn	19	19.00	2.1
ELL	5.34	64	iP	19	22.90	1.4
EZN	5.58	19	eP	19	36.00	11.3X
PLG	5.80	356	ePn	19	27.30	-0.5
KHL	5.87	49	eP	19	30.50	1.7
KZN	5.97	344	ePn	19	30.30	0.1
KEK	6.09	329	ePn	19	32.00	0.2
BCK	6.13	60	iP	19	33.60	1.1
SRN	6.14	331	ePn	19	36.80	4.2X
LSK	6.16	336	ePn	19	31.10	-1.8
RDO	6.68	11	ePn	19	41.20	1.0
VAY	6.82	351	ePn	19	42.40	0.3
BERA	6.88	334	ePn	19	42.70	-0.2
MMB	7.00	359	iPc	19	44.00	-0.8
KDZ	7.16	9	eP	19	47.00	0.0
KKB	7.31	355	iPc	19	49.00	0.0
LCI	7.45	322	P	19	47.70	-3.2X
			eSn	21	09.50	
TIR	7.48	336	e(Pn)	19	52.20	0.9
SKO	7.64	346	ePn	19	53.00	-0.6
Z	10s		0.67um			
N	10s		0.75um			
			LR	23	10.00	
ATN	7.70	300	P	19	53.90	-0.6
MEU	7.72	292	P	19	53.30	-1.6
			eSn	21	16.80	
VTS	8.02	356	eP	19	59.00	-0.1
MGR	8.66	312	P	20	06.70	-1.2
PVL	8.70	7	eP	20	06.00	-2.4
BBTK	8.80	51	eP	20	11.00	1.1
SALJ	10.18	101	P	20	27.90	-1.0
MKRJ	10.29	104	P	20	29.10	-1.4
MASJ	10.30	103	P	20	29.50	-1.0
JARJ	10.33	100	P	20	28.10	-2.8
HQL	10.84	116	eP	20	35.70	-2.1
AYN	11.75	116	eP	20	49.80	-0.5
VOY	13.75	329	e(P)	21	14.90	-2.0
FVI	14.66	328	P	21	33.60	4.8X
KBA	14.81	331	e(P)	21	29.50	-1.5
	0.9s		11.80nm			4.4mb
			e	21	33.50	
			i	21	39.30	
			i	21	44.90	
			i	21	46.50	
			i	21	53.80	
			e	22	02.00	
BHG	15.52	331	iPd	21	45.80	5.8X
KHC	16.43	335	P	21	52.10	0.4
			i	21	57.50	
FUR	16.53	329	eP	21	56.00	3.0X
WET	16.69	334	iPc	21	57.80	2.8
	1.0s		38.00nm			4.5mb
PRU	16.87	339	eP	21	58.50	1.3
KSP	17.18	343	eP	22	02.50	1.4
GRF	17.76	332	eP	22	09.50	1.2
Z	18s		0.07um			
BRG	17.83	339	eP	22	10.10	0.9
	1.2s		12.00nm			3.9mb
MOX	18.39	335	eP	22	17.00	0.8
CLL	18.50	338	eP	22	17.00	-0
	1.0s		13.00nm			4.1m

07d 22h

```
HAU     18.76 321 eP      22 19.80  -0.9
        1.0s    16.00nm          4.2mb
KER     19.12  84 e(P)    22 26.00   0.6
SSF     19.78 315 eP      22 31.40  -1.3
        0.8s     2.60nm          3.6mb
WLF     19.95 324 P       22 36.00   1.7
MEM     20.66 326 P       22 41.70  -0.1
ENN     20.81 326 eP      22 43.50   0.2
        0.8s    11.00nm          4.3mb
DOU     20.99 323 P       22 44.40  -0.8
        0.9s    32.50nm          4.7mb
SNF     21.41 324 P       22 49.10  -0.3
MFF     21.77 311 eP      22 53.80   0.7
        1.2s    14.20nm          4.3mb
LDF     22.67 315 eP      23 02.30   0.3
        1.0s    17.60nm          4.5mb
LPF     22.94 313 eP      23 03.80  -0.9
        1.2s    23.80nm          4.6mb
FLN     22.96 316 eP      23 04.50  -0.4
        0.8s     5.30nm          4.1mb
GRR     23.00 314 eP      23 05.00  -0.3
        1.2s    17.80nm          4.5mb
HFS     26.43 348 eP      23 36.10  -1.8
        0.5s     5.40nm          4.5mb
NB2     27.72 347 P       23 48.00  -1.7
BNG     30.40 191 iPd     24 15.50   1.3
        0.6s    11.00nm          4.9mb
TIC     38.53 230 P       25 25.90   1.9
KIC     38.57 230 P       25 26.00   1.7
        0.9s    11.50nm          4.6mb
LIC     38.85 230 P       25 28.80   2.1
     S.D. = 1.3  on  62 of  73 obs.
-----------------------------------------
   JUL  07, 1989  22h 24m 00.37± 0.65s
   44.830 N ± 6.0km     9.285 E ± 5.7km
   DEPTH =  10.6 ±  4.4 km
 NORTHERN ITALY                    (545)
      ML 2.7 (LDG).

BOB     0.13 119 Pc       24 03.80   0.1
                 eSg      24 05.90
PCP     0.60 242 P        24 13.14   0.6
                 S        24 23.08
FIN     0.99 232 P        24 19.20   0.1
                 S        24 32.46
MDI     0.99  17 P        24 19.40   0.3
                 eSg      24 33.20
ROB     1.14 243 P        24 22.15   0.4
                 S        24 36.83
BDI     1.21 129 P        24 24.00   1.0
                 eSg      24 38.30
IMI     1.36 228 P        24 24.93  -0.4
ENR     1.46 246 P        24 28.42   1.6
RSP     1.47 283 P        24 25.65  -1.4
DOI     1.49 258 P        24 29.70   2.5X
                 eSn      24 51.00
PZZ     1.59 259 P        24 30.26   1.5
LSD     1.63 293 P        24 29.13  -0.3
SBF     1.64 235 Pn       24 29.60   0.2
                 Sn       24 52.00
RRL     1.78 274 P        24 31.70   0.2
CVF     2.28 188 Pn       24 36.30  -2.3
                 Sn       25 02.20
HAU     3.77 328 Pn       24 59.70   0.0
                 Sn       25 42.80
BGF     4.83 293 Pn       25 14.30  -0.5
                 Sn       26 08.20
     S.D. = 1.1  on  16 of  17 obs.
-----------------------------------------
&  JUL  07, 1989  22h 34m 01.82s
   60.620 N          151.892 W
   DEPTH =  72.6km
 KENAI PENINSULA, ALASKA           ( 14)
      <AGS-P>.

RDT     0.26 260 iP       34 12.78  -0.5
                 S        34 22.06
NKA     0.34  69 iP       34 14.94   1.2
RED     0.48 246 iP       34 14.35  -0.6
SPU     0.57 352 iP       34 15.30  -0.5
                 S        34 26.59
NNL     0.65 153 eP       34 16.76   0.2
CGLM    0.69 355 iP       34 16.77  -0.4
                 S        34 28.69
ILIM    0.76 225 iP       34 16.99  -0.9
                 S        34 29.37
SLKM    0.83  97 iP       34 17.63  -1.1
                 S        34 30.37
SUA     1.01  33 iP       34 20.44  -0.6
                 S        34 35.84
CNPM    1.15 163 eP       34 21.69  -0.9
XLV     1.17 176 eP       34 21.84  -1.1
OPT     1.18 215 iP       34 22.44  -0.6
SEW     1.32 112 eP       34 23.63  -1.2
SKT     1.38   7 eP       34 24.75  -0.9
                 S        34 43.90
PWA     1.42  42 eP       34 26.05  -0.2
AUL     1.46 213 eP       34 26.10  -0.7
GHO     1.84  50 eP       34 30.43  -1.6
KNK     1.85  63 eP       34 30.76  -1.3
SVW     1.89 287 iP       34 30.67  -2.0
CUT     1.95  23 eP       34 33.29  -0.1
WRH     4.25  23 eP       35 03.58  -1.9
        21 obs. associoted
-----------------------------------------
   JUL  07, 1989  22h 37m 06.39± 1.11s
    3.325 S ± 6.1km   146.808 E ± 7.8km
   DEPTH =  33.6 ± 12.4 km
   4.6mb (  4 obs.) 4.2Msz (  1 obs.)
 BISMARCK SEA                      (203)

LAT     3.31 177 eP       37 57.00  -0.2
MNDI    4.21 228 eP       38 15.00   4.9X
RAB     5.42  99 e(P)     38 27.00   0.0
PMG     6.05 177 eP       38 35.00  -1.0
JAY     6.15 277 ePc      38 38.50   1.1
                 e        39 34.50
CTA    16.67 182 eP       41 05.00   5.8X
GUMO   16.91 353 eP       41 02.00  -0.3
OIS    18.51 202 eP       41 22.00  -0.1
WB5    20.45 215 eP       41 43.50  -0.4
WRA    20.51 215 Pd       41 43.80  -0.8
       0.9s    35.20nm          4.7mb
KNA    21.63 234 iPc      41 55.50  -0.3
       0.6s    12.00nm          4.5mb
RMO    23.11 176 e(P)     42 12.00   1.5
ASPA   23.76 211 eP       42 09.10  -7.7X
       1.0s    33.00nm          4.8mb
     Z  19s     0.77um          4.2Msz
                 LR       51 46.60
8RS    24.60 167 eP       42 27.00   2.0
DZM    26.66 136 iPc      42 43.30  -1.0
MAT    40.46 349 (P)      44 45.00   1.4
LOE    49.01 296 eP       45 52.20  -0.1
XAN    51.52 319 P        46 10.00  -1.3
CHTO   51.98 297 eP       46 15.10   0.2
       1.2s     2.43nm          4.0mb
CD2    53.30 313 P        46 24.60  -0.1
GTA    60.59 319 eP       47 16.00  -0.4
WMQ    70.66 319 eP       48 20.40  -0.5
     S.D. = 1.0  on  19 of  22 obs.
-----------------------------------------
%  JUL  07, 1989  22h 42m 53.27± 0.87s
   38.593 N ± 8.5km   27.455 E ± 9.5km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

IZM     0.25 218 iPg      42 57.70  -0.8
                 iSg      43 00.70
DST     1.36  42 iPn      43 17.80  -0.5
EZN     1.51 325 ePn      43 21.00   0.6
YER     1.60 156 iPn      43 22.80   1.1
KHL     1.65  99 ePn      43 22.00  -0.4
     S.D. = 1.2  on   5 of   5 obs.
-----------------------------------------
*  JUL  07, 1989  23h 29m 37.23± 1.85s
   13.592 S ± 8.7km  166.586 E ± 9.4km
   DEPTH =  95.4 ± 16.1 km
   5.1mb (  8 obs.)
 VANUATU ISLANDS                   (186)

PVC     4.45 158 iPc      30 44.00   0.4
                 iS       31 41.00
DZM     8.43 181 iPc      31 33.00  -5.6X
                 iS       33 12.00
8RS    18.84 221 iPc      33 52.00  -0.5
CTA    20.49 249 eP       34 10.00   0.2
RMO    21.07 230 iPc      34 17.20   1.7
       0.9s   123.00nm          5.2mb
                 e        34 34.00
COO    21.66 216 iPc      34 06.00 -15.5X
                 e        34 23.50
KRP    25.51 163 P        35 18.40  20.1X
BWA    26.48 215 eP       35 06.20  -1.1
CAN    26.83 213 eP       35 10.70   0.2
STK    29.25 227 eP       35 32.60   0.2
                 i        35 48.20
WB5    31.44 254 eP       35 50.10  -1.8
                 e        38 43.00
WRA    31.48 254 Pc       35 50.40  -1.7
       0.5s     4.80nm          4.5mb
ASPA   32.48 247 iPd      35 59.30  -1.6
       0.7s    16.00nm          4.9mb
MTN    34.51 267 iPc      36 18.80   0.4
WARB   39.44 245 eP       36 56.20  -3.6X
MAT    56.59 333 eP       39 11.00  -1.5
SSE    62.24 316 Pd       39 50.50  -0.8
       1.0s    36.00nm          5.4mb
NJ2    64.40 316 Pc       40 05.40  -0.1
WHN    66.69 312 P        40 20.00  -0.2
DL2    67.00 323 eP       40 22.00   0.1
SNY    67.90 327 Pc       40 26.80  -0.7
CN2    68.33 329 Pc       40 29.80  -0.4
GYA    70.53 305 iPc      40 44.60   0.4
BJI    70.97 321 eP       40 46.00  -0.4
LOE    71.03 294 iPc      40 42.20  -5.0X
TIY    71.98 317 Pc       40 53.40   0.8
XAN    72.44 313 iPc      40 55.50   0.2
KMI    73.15 302 Pc+      41 01.50   1.6
CHG    74.01 294 iPc      41 05.80   1.1
       1.1s    33.23nm          5.1mb
CHTO   74.01 294 iPc      41 05.90   1.2
       0.9s    20.46nm          5.0mb
                 pP       41 18.30  42kmX
HHC    74.29 320 eP       41 07.00   0.9
CD2    74.79 308 iPc      41 09.70   0.6
BTO    75.13 319 P        41 12.00   1.1
SPA    76.50 180 ePd      41 18.70   0.5
       1.0s     9.50nm          4.6mb
LZH    77.07 312 eP       41 23.00   1.1
       1.5s    77.00nm          5.3mb
GTA    81.40 314 iPc      41 46.20   1.0
SUF   123.55 339 ePKP     48 23.00  -1.5
PTZ   127.77 240 iPKP     48 35.00   0.8
NB2   129.36 345 PKP      48 35.00  -0.8
LSZ   129.84 237 iPKP     48 39.90   1.7
MZZ   131.38 242 ePKP     48 42.00   0.8
                 i        52 05.00
KMZ   132.74 237 ePKP     48 45.00   1.3
LBF   143.66 340 ePKP     49 00.40  -2.3X
       0.8s     2.70nm
SSF   143.75 340 ePKP     49 00.40  -2.4X
       1.0s     6.00nm
LSD   143.77 335 PKP      49 01.18  -2.0X
LPG   143.90 336 ePKP     49 01.40  -2.1X
       0.8s     6.70nm
PCP   143.91 333 PKP      49 00.47  -2.7X
FIN   144.32 333 PKP      49 01.29  -2.6X
RRL   144.36 335 PKP      49 02.72  -1.5
ROB   144.40 333 PKP      49 01.70  -2.4X
BGF   144.40 341 ePKP     49 02.20  -1.7
       1.0s    11.00nm
IMI   144.70 333 PKP      49 03.13  -1.5
MAF   144.79 341 ePKP     49 03.50  -1.1
       0.8s     9.40nm
TCF   144.85 341 ePKP     49 03.70  -1.0
       0.8s     8.05nm
SBF   144.94 333 ePKP     49 04.20  -0.8
       0.8s    24.20nm
LSF   145.09 342 ePKP     49 04.10  -1.0
       1.2s    26.80nm
MFF   145.25 344 ePKP     49 05.00  -0.3
       0.8s    18.80nm
FRF   145.52 334 ePKP     49 06.00   0.1
       0.8s     8.05nm
LRG   145.73 334 ePKP     49 06.60   0.4
       1.0s    20.00nm
LMR   145.76 334 ePKP     49 06.70   0.4
       0.8s    13.45nm
CAF   146.10 340 ePKP     49 07.90   1.0
       0.8s     4.05nm
LFF   146.51 342 ePKP     49 09.00   1.5
       1.0s    16.00nm
ITR   146.69 130 ePKP     49 08.80   0.1
BNG   147.19 257 iPKPd    49 09.80   0.3
       0.8s    61.00nm
STS   150.51 353 ePKP     49 19.70   5.9X
ETOR  151.11 342 ePKP     49 21.60   6.7X
GUD   151.86 345 ePKP     49 23.40   7.3X
     S.D. = 1.0  on  52 of  67 obs.
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* JUL 07, 1989 23h 38m 11.97± 4.01s
51.593 N ±26.4km 16.178 E ±23.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.9 (GRF), 3.6 (VKA).

KSP	0.75	174	iPd	38	26.00	-0.7
	0.6s	187.00nm				
			iS	38	34.70	
			iLR	38	42.50	
BRG	1.58	244	iPn	38	40.40	0.4
			iPg	38	41.00	
			iSg	39	01.30	
PRU	1.91	214	Pn	38	44.50	-0.4
			Pg	38	46.00	
			Sn	39	03.50	
			Sg	39	10.00	
CLL	2.01	263	iPn	38	45.60	-0.6
			iPg	38	48.40	
			iSg	39	14.40	
KHC	2.97	215	iPn	39	01.10	1.0
			Pg	39	08.70	
			Sn	39	34.10	
			Sg	39	45.60	
HOF	3.01	246	iPnd	39	00.20	-0.3
MOX	3.03	254	ePn	39	02.00	1.2
			iPg	39	08.50	
			iSg	40	47.00	
WET	3.23	222	iPnc	39	03.50	-0.3
VKA	3.33	178	i(Pn)	39	05.70	0.5
			iPg	39	14.10	
			iSn	39	37.60	
			iSg	39	52.50	
ZST	3.45	170	eP	39	19.60	12.8X
			e	39	34.60	
			e	39	45.00	
			e	40	01.00	
			i	40	18.60	
SPC	3.54	131	eP	39	21.40	13.1X
GRF	3.68	241	ePn	39	09.70	-0.5
			e(Pg)	39	21.60	
			e(Sn)	39	54.00	
			eSg	40	07.70	
KMR	3.78	201	ePn	39	12.00	0.5
			iSg	40	08.00	
SOP	3.92	176	eP	39	25.00	11.5X
BHG	4.43	210	eP	39	36.70	16.0X
TNS	5.08	257	ePn	39	29.70	-0.3
			eSn	40	56.10	
VOY	5.77	196	e(Pn)	40	03.20	23.5X
			eSn	41	16.20	
OGA	5.81	218	eP	39	39.90	-0.5

S.D. = 0.7 on 13 of 18 obs.

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* JUL 07, 1989 23h 58m 38.53± 0.97s
39.991 N ± 7.7km 23.393 E ±14.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PLG	0.38	6	iPbc	58	45.20	-1.2
			eSb	58	51.20	
NEO	0.70	191	ePn	58	52.00	-0.3
			eSn	59	03.00	
VAY	1.47	335	ePn	59	06.50	1.5
MMB	1.62	9	eP	59	08.00	0.8
			eS	59	28.00	
KKB	1.89	353	eP	59	10.00	-1.1
RDO	2.00	54	ePn	59	12.00	-0.7
KDZ	2.26	42	iPd	59	18.00	1.5
VTS	2.60	357	eP	59	21.00	-0.5
PGB	2.62	13	eP	59	25.00	3.3X

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

JUL 08, 1989 00h 36m 50.45± 0.69s
49.176 N ± 4.5km 6.925 E ± 8.3km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 1.0 (STR).

GWF	0.50	113	Pg	37	00.61	0.0
			Sg	37	08.12	
RUP	0.53	9	ePg	37	01.31	0.1
CDF	0.80	163	Pg	37	05.74	-0.3
			Sg	37	18.41	
ABH	0.81	30	ePn	37	06.20	-0.1
VITF	1.15	213	Pg	37	11.79	-0.1
			Sg	37	26.42	
MOF	1.33	174	Pg	37	15.54	0.4
			Sg	37	33.41	
BSF	1.35	184	Pg	37	15.26	-0.1
			Sg	37	33.18	

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

JUL 08, 1989 00h 48m 09.78± 0.17s
17.720 S ± 6.0km 172.945 W ± 3.5km
DEPTH = 40.9km (3 depth phases)
5.1mb (34 obs.) 5.0Msz (5 obs.)
TONGA ISLANDS REGION (174)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 25C
Centroid Location:
Origin Time 00:48:13.8 1.3
Lat 17.84S 0.07 Lon 172.82W 0.10
Dep 18.1 3.7 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 7.39 0.39 Mtt= 0.49 0.61
Mff=-7.88 0.53 Mrt= 2.19 1.18
Mrf= 2.48 1.42 Mtf=-5.08 0.39
Principal Axes:
T Val= 8.10 Plg=76 Azm=341
N 2.73 10 208
P -10.83 10 116
Best Double Couple:Mo=9.5*10**16
NP1:Strike=194 Dip=36 Slip= 73
NP2: 34 56 102

VUN	8.19	267	eP	50	09.50	0.4
SVA	8.19	266	iPd	50	10.70	1.6
SGE	8.71	269	eP	50	18.60	2.3
NDF	9.15	268	eP	50	27.10	4.7X
RAR	12.90	108	P	51	05.00	-8.1X
			S	53	19.00	
PVC	17.86	267	iPc	52	18.70	1.8
DZM	19.86	254	iPc	52	39.00	-1.5
AFR	22.08	93	eP	53	05.00	2.0
	1.0s	40.00nm			4.8mb	
PAE	22.26	93	eP	53	06.00	1.2
	1.0s	30.00nm			4.7mb	
PPT	22.27	93	eP	53	06.00	1.1
	1.0s	45.00nm			4.9mb	
Z	18s	0.10um			3.3MszX	
PPN	22.41	93	eP	53	07.00	0.7
	1.0s	25.00nm			4.6mb	
KRP	22.52	204	Pd	53	07.00	-0.3
TVO	22.56	94	eP	53	08.00	0.1
	1.0s	60.00nm			5.0mb	
TBI	22.68	108	iP	53	08.20	-0.7
	1.2s	100.00nm			5.1mb	
PMO	24.18	87	iP	53	23.80	0.3
	0.9s	30.00nm			4.8mb	
VAH	24.39	88	iP	53	24.20	-1.4
	0.9s	15.00nm			4.5mb	
TPT	24.45	87	iP	53	25.00	-1.1
	0.9s	20.00nm			4.7mb	
RUV	24.64	88	iP	53	26.60	-1.4
	0.9s	30.00nm			4.8mb	
PGZ	24.64	200	eP	53	27.10	-0.7
MSZ	31.30	207	P	54	32.10	3.9X
BRS	33.00	247	iPc	54	40.90	-2.4
CAN	38.02	235	eP	55	21.80	-4.1X
BWA	38.22	237	eP	55	25.20	-2.4
CTA	38.61	260	iPd	55	27.90	-3.1X
	0.9s	39.50nm			5.2mb	
			iS	01	40.00	
WB5	49.76	259	eP	56	55.00	-5.6X
WRA	49.78	259	Pd	56	55.70	-5.0X
	0.8s	17.40nm			5.1mb	
ASPA	49.85	254	iPc	56	56.50	-4.8X
	1.0s	87.00nm			5.7mb	
Z	17s	1.66um			5.1MszX	
			iS	04	00.10	
			LR	19	28.90	
GUMO	51.97	304	eP	57	13.00	-4.4X
MTN	54.01	267	iPd	57	27.80	-4.7X
			e	59	53.00	
FORR	54.75	244	eP	57	32.60	-5.2X
KNA	55.66	263	eP	57	40.00	-4.6X
	0.7s	18.00nm			5.2mb	
WARB	56.25	250	eP	57	45.00	-3.7X
SBA	60.99	185	Pc	58	23.00	2.1
MBL	63.06	255	eP	58	31.60	-4.0X
KLB	63.56	243	eP	58	35.00	-3.8X
	0.6s	21.00nm			5.4mb	
BAL	64.56	244	eP	58	42.90	-2.4
	0.5s	14.00nm			5.3mb	
NANU	66.76	253	eP	58	57.00	-2.5
	0.5s	17.00nm			5.4mb	
PCI	68.05	276	iPd	59	09.00	1.2
ADK	69.38	358	eP	59	14.00	-1.2
MAT	70.98	320	eP	59	23.00	-2.4
	0.9s	26.89nm			5.2mb	
Z	20s	0.71um			4.9Msz	
			eS	08	41.00	
SPA	72.39	180	e(P)	59	34.40	0.9
	0.6s	5.28nm			4.7mb	
			e	59	44.10	31km
BCH	72.67	43	P	59	35.90	0.3
MHC	73.01	41	eP	59	37.90	0.4
ARN	73.08	41	P	59	35.90	-1.9
MWC	73.45	45	eP	59	40.00	-0.2
BAR	73.51	47	eP	59	40.00	-0.4
BAG	73.73	294	eP	59	40.00	-2.1
PLM	73.76	46	eP	59	43.00	1.0
RVR	73.77	46	eP	59	42.00	0.1
SBB	73.87	45	eP	59	41.00	-1.5
FRI	74.01	42	eP	59	43.00	-0.1
CMB	74.22	41	ePc	59	44.40	0.0
ORV	74.49	39	eP	59	45.80	-0.1
WDC	74.53	38	eP	59	46.30	0.2
CLC	74.68	44	eP	59	46.00	-1.2
TPC	74.74	46	eP	59	47.00	-0.6
MIN	74.93	38	eP	59	48.50	-0.1
GLA	75.01	48	eP	59	50.00	0.9
TNP	76.24	42	iPd	59	56.50	0.3
	1.0s	11.04nm			4.8mb	
			i	00	01.40	16kmX
			i	00	06.40	
KVN	76.26	41	iP	59	56.30	0.0
			i	00	09.10	44km
			i	00	10.70	
KDC	77.08	11	eP	59	59.20	-0.9
BMW	78.04	33	P	00	05.60	-0.2
SHW	78.36	33	P	00	08.20	0.5
GMW	78.98	32	P	00	10.60	-0.2
OZH	79.00	301	Pd	00	11.00	-0.4
RMW	79.42	33	P	00	13.30	0.0
MSU	79.77	44	P	00	16.60	0.9
DUG	80.26	42	P	00	18.50	0.4
	1.0s	6.25nm			4.5mb	
SIT	80.84	20	P	00	38.20	17.7X
	1.0s	380.00nm				
MDJ	81.12	322	eP	00	22.20	-0.1
PMR	81.29	11	eP	00	22.20	-0.6
	1.2s	39.10nm			5.3mb	
DAU	81.38	43	P	00	25.00	0.8
TTA	81.48	8	eP	00	24.00	0.1
PNT	81.73	32	ePc	00	25.00	-0.4
	0.8s	22.00nm			5.2mb	
NJ2	81.91	307	Pc	00	26.50	-0.1
ALQ	81.96	50	eP	00	28.00	0.8
	1.0s	9.50nm			4.8mb	
			e	00	42.00	48km
TOA	82.34	12	eP	00	28.50	0.1
DL2	83.10	314	eP	00	33.20	0.5
CN2	83.13	320	iPc	00	32.60	-0.2
Z	22s	0.60um			4.9Msz	
SNY	83.27	318	Pc	00	33.70	0.2
IMW	83.43	40	P	00	35.20	0.5
LRM	83.57	38	ePc	00	35.40	0.1
BW06	83.70	41	P	00	36.00	0.0
FBA	84.58	10	eP	00	38.50	-1.2
IMA	84.79	8	eP	00	41.40	0.6
	0.9s	13.50nm			5.1mb	
GOL	84.95	46	P	00	42.90	0.5
	0.9s	20.83nm			5.3mb	
TIA	85.03	310	eP	00	42.20	-0.3
MAW	85.75	199	eP	00	45.00	-0.6
SES	86.85	34	ePc	00	50.60	-0.7
	1.0s	7.00nm			4.8mb	
BJI	87.37	313	ePc	00	54.00	0.1
	8.0s	0.35nm			2.7mb X	
Z	24s	0.32um			4.6MszX	
			eS	11	23.00	
MEO	87.72	52	iPd	00	56.40	0.6
RSSD	87.87	42	P	00	56.20	-0.3
SNG	88.79	278	eP	01	02.00	0.8
PSI	89.03	273	iPd	01	01.20	-1.2
	0.8s	13.00nm			5.3mb	
			e	02	50.00	482
GYA	89.51	298	iPc	01	05.40	

08d 01h

		sP	01	19.00		
XAN	90.33	306 P	01	08.40	0.2	
INK	90.41	14 eP	01	07.00	-0.7	
UYO	90.65	54 iPd	01	09.50	0.0	
HHC	90.91	313 eP	01	11.20	0.4	
NST	91.83	286 eP	01	11.70	-3.5X	
BTO	91.91	312 eP	01	15.50	0.2	
		pP	01	22.50	22kmX	
KMI	92.42	295 Pc+	01	18.50	0.4	
BDT	93.33	287 iPc	01	22.90	0.8	
	0.8s	41.50nm		5.9mb		
CD2	93.38	301 eP	01	22.60	0.3	
FFC	93.79	33 eP	01	23.00	-0.5	
	1.6s	41.00nm		5.6mb		
CHG	93.85	288 iPc	01	25.00	0.4	
	1.0s	24.75nm		5.6mb		
CHTO	93.85	288 iP	01	25.10	0.5	
	0.9s	17.26nm		5.5mb		
LZH	94.94	306 eP	01	29.00	-0.5	
RSON	96.96	39 P	01	36.30	-1.8	
	1.1s	12.42nm		5.4mb		
LPB	98.55	110 (P)	01	39.00	-7.5X	
		eLR	33	30.00		
CNCB	98.56	111 eP	01	43.00	-3.7X	
ZOBO	98.62	110 eP	01	24.00	-23.1X	
		LR	34	38.00		
GTA	98.96	308 eP	01	47.60	0.1	
Z	22s	0.60um		5.0Msz		
MBC	99.11	11 eP	01	47.00	-0.3	
	1.0s	5.00nm		5.0mb		
MAIO	130.37	303 iPKPd	07	18.50	0.5	
NB2	136.63	357 PKP	07	28.60	-0.4	
HFS	137.37	355 ePKP	07	22.40	-8.0X	
	0.7s	0.50nm				
LSZ	141.15	214 ePKP	07	36.00	-2.7X	
KMZ	143.90	212 ePKP	07	41.00	-2.5X	
MZZ	144.13	218 iPKP	07	42.00	-1.9	
WIT	144.98	0 ePKP	07	44.50	0.5	
NAI	145.15	240 iPKPc	07	46.60	0.8	
	1.0s	39.00nm				
DBN	145.66	2 ePKP+	07	45.00	-0.2	
WTS	145.80	0 iPKPc	07	46.00	0.6	
	0.9s	60.00nm				
		i	07	58.30		
KVT	145.92	319 iPKP	07	47.00	0.9	
KSP	146.14	349 iPKPc	07	46.90	0.8	
	1.2s	68.00nm				
		i	07	57.00		
CLL	146.15	353 iPKPc	07	46.70	0.6	
	1.2s	120.00nm				
		epP	07	57.00		
BRG	146.47	352 iPKPc	07	48.00	1.4	
	1.5s	95.00nm				
		i	07	57.00		
SPC	146.84	344 ePKP	07	48.40	0.9	
UCC	146.93	3 PKP+	07	50.00	2.7X	
MOX	146.95	355 ePKPc	07	49.00	1.6	
	1.8s	96.00nm				
ENN	147.02	1 iPKPc	07	50.00	2.6X	
	0.9s	42.00nm				
		e	08	03.50		
KAS	147.14	321 iPKPc	07	51.90	3.8X	
MEM	147.18	1 PKPc	07	49.80	2.1X	
SNF	147.21	3 PKP	07	49.90	2.1X	
PRU	147.25	351 PKPc	07	50.50	2.6X	
Z	20s	0.60um		5.4Msz		
		e	08	02.50		
HOF	147.25	354 iPKPc	07	50.70	2.8X	
TNS	147.56	358 ePKPc	07	51.60	3.2X	
DOU	147.64	3 PKPc+	07	51.40	2.9X	
	1.0s	47.20nm				
		e	08	04.40		
ABH	147.91	359 iPKPc	07	52.42	3.4X	
GRF	147.93	355 ePKP	07	52.90	3.9X	
Z	21s	0.09um		4.5Msz		
RUP	148.10	360 iPKPc	07	53.26	4.0X	
PSZ	148.10	344 ePKP	07	52.80	3.4X	
WLF	148.13	1 iPKPc	07	53.50	4.3X	
TOD	148.16	358 iPKPc	07	53.09	3.7X	
KHC	148.22	352 PKP	07	52.20	2.7X	
		i	07	55.50		
		i	08	06.90		
ZST	148.51	347 ePKP	07	50.60	0.6	
		i	07	54.00		
PSN	148.56	330 iPKPd	07	56.00	5.8X	
SRO	148.60	345 ePKP	07	54.00	3.9X	
		e	08	28.00		
VKA	148.61	348 ePKP	07	49.00	-1.1	
	2.4s	143.00nm				
		i	07	54.70		
		e	08	44.00		
BBTK	148.68	320 iPKPd	07	51.00	0.3	
BUD	148.73	344 ePKP	07	54.00	3.7X	
GWF	148.82	359 PKP	07	54.78	4.3X	
LPF	149.05	11 ePKP	07	53.80	3.0X	
	1.7s	44.10nm				
SOP	149.12	347 ePKP	07	51.60	0.7	
KMR	149.19	351 iPKP+	07	56.00	5.0X	
CDF	149.39	360 PKP	07	56.14	4.7X	
FUR	149.44	354 iPKPc	07	56.50	5.1X	
	0.8s	33.00nm				
VITF	149.57	1 PKP	07	56.68	5.2X	
BHG	149.70	352 ePKP	07	56.90	5.1X	
	1.0s	18.00nm				
BHL	149.77	308 PKP	07	57.00	4.5X	
FEL	149.91	359 PKP	07	57.09	4.8X	
PVL	150.23	332 ePKP	07	54.00	1.3	
KBA	150.27	351 ePKP	07	51.00	-1.9	
	1.3s	33.80nm				
		i	07	58.20		
		i	08	13.50		
		i	08	18.70		
		i	08	49.50		
		e	09	11.00		
CTT	150.30	326 ePKP	07	57.00	4.1X	
BBS	150.33	359 PKP	07	58.58	5.8X	
LOR	150.41	4 ePKP	07	53.60	0.7	
	1.3s	14.40nm				
LOMF	150.45	0 PKP	07	58.66	5.6X	
SSF	150.59	5 ePKP	07	53.80	0.6	
	1.5s	17.70nm				
LBF	150.71	4 ePKP	07	54.20	0.8	
	1.7s	17.60nm				
LWI	150.80	229 ePKPc	08	00.70	6.0X	
PTJ	150.94	347 ePKP	07	53.80	0.0	
ZAG	151.01	347 ePKP	08	01.00	7.2X	
BGF	151.03	6 ePKP	07	54.60	0.8	
	0.8s	5.90nm				
LJU	151.08	349 ePKP	07	54.00	0.1	
		e	08	00.10		
VOY	151.20	350 ePKP	07	54.20	0.0	
TCF	151.23	7 ePKP	07	54.50	0.3	
	1.5s	15.60nm				
PGB	151.28	333 ePKP	08	01.00	6.6X	
CEY	151.39	349 ePKP	07	55.00	0.6	
KDZ	151.43	330 iPKPd	08	02.00	7.4X	
VBY	151.46	348 ePKPd	07	55.70	1.2	
		i	08	01.40		
CTI	151.50	353 PKP	08	01.10	6.4X	
TRI	151.54	350 iPKPd	08	00.70	6.1X	
KHL	151.59	321 iPKP	08	01.00	5.9X	
VTS	151.65	334 ePKP	07	55.00	-0.1	
PLDF	151.69	5 PKP	08	01.99	7.0X	
PYM	151.85	6 PKP	08	02.21	7.0X	
RJF	152.11	8 ePKP	07	54.90	-0.6	
MMB	152.25	332 iPKPd	08	03.00	7.1X	
KKB	152.30	334 ePKP	07	57.00	1.1	
ELL	152.34	318 ePKP	08	03.00	6.7X	
EZN	152.36	327 ePKP	08	02.00	6.0X	
LBL	152.38	6 PKP	08	03.79	8.0X	
CAF	152.55	8 ePKP	07	56.00	-0.2	
	0.8s	2.60nm				
LPO	152.67	9 ePKP	07	54.70	-1.6	
BNI	152.75	1 PKP	08	05.30	8.7X	
SKO	152.88	336 iPKP	07	57.00	0.3	
BOB	152.96	356 PKP	08	15.90	19.1X	
VAY	152.97	334 iPKP	07	56.60	-0.2	
BNG	162.65	222 iPKPc	08	09.50	0.4	
	0.6s	11.00nm				
		i	08	57.50		

S.D. = 1.0 on 131 of 200 obs.

& JUL 08, 1989 01h 01m 23.60s
56.918 N 142.870 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

HON	3.31	38 iP	02	10.52	-5.9	
		eS	02	42.59		
PNL	3.31	32 iP	02	10.88	-5.6	
PCA	3.47	22 iP	02	13.28	-5.5	
TGL	3.85	0 iP	02	18.32	-5.9	
		S	03	00.24		
BALM	4.14	4 iP	02	22.49	-5.8	
		S	03	07.34		
GLB	4.56	354 iP	02	27.90	-6.4	
VZW	4.57	337 eP	02	27.73	-6.6	
HYT	4.81	33 P	02	32.00	-5.8	
KLU	4.85	342 eP	02	32.25	-6.1	
CNPM	5.14	304 eP	02	35.76	-6.6	
SLKM	5.26	316 eP	02	38.07	-6.0	
NNL	5.42	309 eP	02	40.52	-5.8	
CDD	6.08	294 eP	02	49.88	-5.8	
OPT	6.11	301 eP	02	50.30	-5.8	
AUL	6.11	298 eP	02	51.12	-5.0	
ILIM	6.17	305 eP	02	50.42	-6.5	

16 obs. assaciated

JUL 08, 1989 01h 12m 21.32± 0.60s
43.800 N ± 6.8km 11.992 E ± 5.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.17	190 P	12	25.70	0.4	
		eSg	12	28.40		
PGD	0.21	291 P	12	25.20	-0.8	
		eSg	12	26.10		
RSM	0.36	69 P	12	29.00	0.3	
		eSg	12	31.50		
ARV	0.75	113 P	12	35.30	-0.8	
		eSg	12	48.30		
ASS	0.88	146 P	12	38.00	-0.2	
		eSg	12	48.00		
MME	1.01	293 P	12	41.70	1.1	
		eSn	13	02.70		
BDI	1.04	285 P	12	40.60	-0.4	
		eSg	12	55.40		
MNS	1.50	160 P	12	47.80	-0.5	
SDI	2.49	147 P	13	03.50	1.0	
KBA	3.41	16 e(P)	13	36.00	20.2X	
		i	13	37.00		
		i	13	54.60		
		i	14	02.30		
KHC	5.44	11 eP	14	08.10	23.6X	

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

? JUL 08, 1989 01h 13m 06.92± 5.28s
34.888 N ±33.4km 139.098 E ±45.0km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

MAT	1.80	337 iPd	13	38.80	-0.1	
		iS	14	01.60		
NIIJ	2.35	358 P	13	46.80	0.0	
		S	14	17.80		
WKYJ	2.97	258 P	13	55.60	0.0	
		S	14	31.30		
TKSJ	4.27	259 eP	14	14.00	0.0	
YONJ	4.63	275 P	14	19.30	0.1	
		eS	15	12.00		

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

? JUL 08, 1989 01h 25m 33.84± 3.83s
37.590 N ±23.6km 141.801 E ±35.0km
DEPTH = 5.0km (geophysicist)
NEAR EAST COAST OF HONSHU, JAPAN(228)

OFUJ	1.49	356 iPd	26	01.20	-0.1	
		S	26	19.40		
YAMJ	1.51	293 P	26	02.10	0.5	
		S	26	20.80		
NIIJ	2.26	262 iPd	26	11.20	-1.2	
MAT	3.06	251 (P)	26	24.00	0.3	
		eS	27	02.00		
TSRJ	5.11	248 eP	26	53.40	0.5	

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

JUL 08, 1989 01h 40m 57.32± 0.73s
61.390 N ± 7.1km 141.281 W ± 6.9km
DEPTH = 10.0km (geophysicist)
3.9mb (2 obs.)
SOUTHERN ALASKA (2)
ML 4.1 (PMR).

CTGM	0.43	183 iP	41	04.60	-1.5	
		S	41	12.78		
BALM	0.63	236 iP	41	08.61	-1.4	
TGL	0.99	230 iP	41	15.14	-1.0	
		S	41	30.46		
GLB	1.22	274 eP	41	18.75	-1.3	

		S	41 37.75		
HYT	1.92 106	P	41 27.80	-2.7	
YKU	2.00 157	ePc	41 32.70	1.3	
KLU	2.23 275	eP	41 35.81	0.9	
SDG	2.31 301	eP	41 35.08	-1.0	
TOA	2.43 289	eP	41 39.00	1.2	
PAX	2.52 311	eP	41 40.24	1.1	
VZW	2.57 265	eP	41 41.05	1.3	
DOT	2.61 332	eP	41 37.93	-2.3	
DWY	2.81 17	P	41 39.90	-3.1X	
MID	3.19 234	eP	41 50.20	1.8	
PMR	3.77 277	eP	41 58.20	1.5	
SIT	5.31 142	eP	42 20.50	2.0	
KDC	6.76 242	eP	42 39.40	0.4	
SVW	6.93 274	eP	42 41.00	-0.3	
TTA	7.07 289	eP	42 41.60	-1.8	
IMA	7.22 316	eP	42 41.50	-4.1X	
INK	7.68 22	eP	42 47.00	-4.8X	
MBC	16.68 18	eP	44 54.00	1.8	
	1.0s 6.00nm			3.7mb	
FFC	21.56 90	eP	45 45.00	-3.5X	
	0.9s 9.00nm			4.2mb	
KHC	67.99 18	eP	51 58.20	0.0	
S.D. = 1.6 on 20 of 24 obs.					

JUL 08, 1989 02h 03m 36.67± 0.62s
38.250 N ± 5.8km 22.643 E ± 7.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.9 (ATH).

ATH	0.89 108	ePb	03 54.20	0.5	
		eSb	04 07.20		
NEO	1.15 23	ePb	03 58.20	0.0	
ITM	1.21 208	ePb	03 57.80	-1.4	
VLS	1.62 268	ePb	04 07.00	1.6	
KZN	2.16 342	ePb	04 13.50	0.2	
PLG	2.21 16	ePn	04 13.00	-0.9	
VAY	3.07 359	ePn	04 26.00	0.0	
VAM	3.10 156	ePn	04 27.00	0.5	
MGR	5.82 291	P	05 04.60	-0.5	
		eSn	06 09.70		
ELL	5.97 102	ePg	05 16.50	9.2X	
S.D. = 1.0 on 9 of 10 obs.					

% JUL 08, 1989 02h 04m 23.67± 0.86s
43.796 N ± 9.9km 11.978 E ± 6.1km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.17 186	Pc	04 27.90	0.3	
		eSg	04 30.90		
PGD	0.20 293	P	04 27.40	-0.8	
		eSg	04 29.10		
RSM	0.37 69	P	04 32.00	0.8	
ARV	0.76 113	P	04 37.60	-1.0	
		eSg	04 50.30		
BDI	1.03 285	P	04 46.00	2.8X	
PII	1.06 266	P	04 44.20	0.6	
S.D. = 1.2 on 5 of 6 obs.					

JUL 08, 1989 02h 48m 30.97± 0.66s
43.830 N ± 6.9km 11.994 E ± 5.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.20 189	P	48 35.30	-0.2	
		eSg	48 40.30		
RSM	0.35 73	P	48 38.90	0.8	
		eSg	48 42.30		
ARV	0.76 115	P	48 45.80	-0.1	
		eSg	48 58.50		
ASS	0.90 147	P	48 48.30	0.0	
		eSg	49 02.90		
MME	1.00 292	P	48 53.90	3.8X	
BDI	1.04 283	P	48 51.40	0.8	
		eSg	49 02.90		
PII	1.07 265	P	48 50.70	-0.4	
		eSg	48 53.80		
TRI	2.26 33	iP	49 36.30	27.3X	
		i(Sg)	49 47.60		
VOY	2.58 31	e(Pn)	49 12.60	-1.0	
		eSn	49 56.40		
VBY	2.87 53	eP	49 09.20	-8.4X	
		e(Sn)	49 52.00		
		eSg	50 06.00		
S.D. = 0.8 on 7 of 10 obs.					

JUL 08, 1989 03h 26m 16.05± 0.85s
43.864 N ± 9.0km 12.009 E ± 6.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.24 190	P	26 20.40	-0.8	
		eSg	26 24.50		
RSM	0.33 79	P	26 24.00	1.2	
		eSg	26 26.70		
ARV	0.77 118	P	26 30.80	-0.3	
		eSn	26 42.30		
ASS	0.92 149	P	26 34.10	0.4	
		eSn	26 46.80		
BDI	1.04 282	P	26 37.50	1.8	
PII	1.09 263	P	26 36.10	-0.3	
		eSg	26 39.10		
TRI	2.23 33	eP	27 21.50	28.0X	
		i(Sg)	27 31.70		
NB2	17.21 359	P	30 16.00	-1.9	
S.D. = 1.5 on 7 of 8 obs.					

JUL 08, 1989 03h 46m 57.64± 0.09s
49.888 N ± 2.4km 78.802 E ± 1.7km
DEPTH = 0.0km (geophysicist)
5.6mb (102 obs.) 4.1Msz (4 obs.)
EASTERN KAZAKH SSR (329)

WMQ	8.60 132	iPc	49 05.40	-0.9	
GTA	18.19 117	iPd	51 12.40	-0.9	
	Z 10s 0.60um				
MAIO	19.50 233	iPd	51 29.00	-0.2	
	0.6s 31.43nm			4.8mb	
		eS	55 21.00		
NDI	21.21 184	iPc	51 46.00	-1.1	
KHI	21.62 231	iP+	51 51.80	0.3	
LSA	22.23 151	iPd	51 59.00	1.1	
LZH	22.79 118	Pd	52 03.50	0.3	
	2.0s 136.00nm			5.1mb	
	Z 12s 0.50um			4.2MszX	
	E 11s 0.30um				
TEH	24.41 245	eP	52 23.00	4.1X	
HHC	24.56 99	P	52 21.00	0.8	
	Z 10s 2.20um			5.0MszX	
	N 10s 0.70um				
	E 10s 1.10um				
SHL	26.31 153	iP	52 31.60	-5.3X	
CD2	26.64 126	iPc	52 40.20	0.5	
TIY	26.92 104	eP	52 43.00	0.7	
	N 11s 0.40um				
XAN	27.19 114	Pc	52 44.80	0.1	
BJI	27.95 96	Pc	52 52.00	0.4	
	Z 12s 0.90um			4.6MszX	
	N 10s 0.34um				
TIA	30.80 102	Pc	53 17.50	0.4	
KMI	30.92 134	Pc+	53 18.00	-0.5	
SUF	30.94 315	iP	53 17.50	-0.6	
	0.5s 162.30nm			6.2mb	
SOD	31.05 324	iP	53 18.10	-0.8	
KEV	31.33 328	iP	53 20.60	-0.8	
	0.5s 54.70nm			5.7mb	
POO	31.53 189	eP	53 24.00	0.3	
GYA	31.72 127	iPc	53 25.60	0.2	
		PcP	56 16.60		
NUR	31.77 310	iP	53 24.50	-0.8	
	0.5s 273.70nm			6.4mb	
	Z 18s 0.50um			4.2Msz	
		LR	06 40.00		
SNY	31.80 87	iPc	53 25.10	-0.7	
CN2	32.06 83	iPc	53 27.60	-0.4	
		pP	53 34.00	22kmX	
		PcP	56 16.00		
DL2	32.10 93	eP	53 29.80	1.4	
DHR	32.27 234	iPc	53 30.00	0.0	
HYB	32.39 180	iPc	53 30.00	-1.2	
	0.8s 85.70nm			5.7mb	
		e	56 13.00		
WHN	32.89 113	Pc	53 34.50	-0.9	
BBTK	33.66 271	iPc	53 43.00	0.8	
TRO	34.10 327	iPd	53 45.00	-0.5	
NJ2	34.59 106	Pd	53 50.80	0.7	
		PcP	56 24.00		
PSN	34.65 280	iPc	53 51.00	0.4	
CHG	34.95 145	iPc	53 52.90	-0.4	
	0.7s 96.75nm			5.7mb	
		PcP	56 25.00		
GPA	35.00 273	iP	53 53.70	0.0	
BHL	35.32 260	P	53 58.00	1.5	
UPP	35.34 310	iP	53 55.40	-0.8	
RYD	35.42 237	iPc	53 57.60	0.3	
CTT	35.76 276	eP	53 49.00	-11.1X	
GBA	36.20 182	Pc	54 01.40	-2.5	
	0.8s 46.90nm			5.3mb	
JMB	36.27 279	eP	54 05.00	0.7	
BCK	36.40 269	eP	54 05.50	-0.1	
EDC	36.55 275	iP	54 07.00	0.3	
KHL	36.60 271	iP	54 06.50	-0.7	
PVL	36.69 281	iPc	54 10.00	2.1	
SSE	36.70 105	Pd	54 08.00	0.0	
	1.0s 52.00nm			5.2mb	
KBS	37.12 343	eP	54 11.30	0.2	
DIM	37.15 279	eP	54 13.00	1.3	
SPC	37.16 292	iP	54 12.60	0.6	
HFS	37.20 311	eP	54 11.30	-0.6	
	0.4s 866.10nm			6.8mb X	
	Z 22s 0.20um			3.9Msz	
		LR	09 31.00		
ELL	37.26 268	iP	54 14.00	1.1	
LOE	37.29 142	iPc	54 12.50	-0.6	
KDZ	37.43 278	iPd	54 15.00	0.9	
RDO	37.62 277	iPc	54 16.00	0.3	
PGB	37.77 280	iPc	54 18.00	1.0	
EZN	37.82 275	eP	54 18.20	0.8	
KSL	37.85 268	eP	54 16.50	-1.1	
PSZ	37.91 290	eP	54 19.00	0.9	
GZH	38.00 122	Pc	54 17.50	-1.5	
IZM	38.02 273	iP	54 19.50	0.4	
NRA0	38.09 313	P	54 18.40	-1.0	
NB2	38.16 313	P	54 19.20	-0.9	
PRK	38.18 274	eP	54 20.70	0.3	
NST	38.27 146	eP	54 23.50	2.2	
VTS	38.36 281	iPc	54 23.00	0.9	
MMB	38.55 279	iPc	54 24.00	0.5	
BUD	38.63 290	iP	54 25.00	1.0	
KKB	38.81 280	iP	54 27.00	1.3	
HQL	38.81 255	iPc	54 27.10	1.3	
KSP	38.82 296	iPc	54 25.70	0.0	
	0.8s 77.00nm			5.4mb	
		e	55 50.00		
		e	07 28.00		
SRO	38.91 291	iPc	54 28.00	1.6	
		i	55 59.00		
COP	39.16 305	iPd	54 29.10	0.7	
	1.0s 160.00nm			5.6mb	
BADA	39.37 254	ePc	54 31.30	0.9	
VAY	39.43 280	iPc	54 31.60	0.8	
	0.7s 0.17nm			2.8mb X	
		i	54 35.40		
MOL	39.45 316	iP	54 30.50	-0.2	
ZST	39.47 292	iP	54 32.20	1.1	
		i	56 01.70		
		e	04 55.40		
QIZ	39.52 130	Pc	54 32.10	0.4	
KOD	39.55 182	iP	54 32.60	0.2	
QZH	39.55 114	eP	54 32.00	0.0	
KAP	39.75 269	eP	54 33.50	0.0	
SKO	39.80 281	iP	54 34.70	0.8	
VKA	39.91 293	iPc	54 36.00	1.3	
		i	54 48.70		
		i	54 50.80		
		e	55 04.00		
		i	55 13.40		
		e	55 58.00		
SOP	40.03 292	iPc	54 37.20	1.5	
KMSA	40.08 235	ePc	54 36.10	-0.3	
NEO	40.11 277	eP	54 36.50	0.0	
BRG	40.17 297	iPc	54 37.20	0.4	
	0.9s 46.00nm			5.1mb	
		i	54 43.00		
		i	54 50.10		
PRU	40.20 296	Pc	54 37.70	0.6	
	Z 14s 0.50um			4.5MszX	
	E 12s 0.50um				
		e	56 12.00		
KKS	40.40 282	eP	54 40.00	1.2	
BCI	40.46 283	eP	54 40.80	1.5	
HYA	40.47 315	iP	54 39.09	-0.1	
KZN	40.48 279	eP	54 40.00	0.3	
CLL	40.52 298	iPc	54 39.70	0.0	
	1.1s 115.00nm			5.5mb	
ATH	40.55 275	eP	54 41.00	0.9	
PHP	40.59 281	eP	54 40.40	0.1	
ODD1	40.67 313	eP	54 41.21	0	
BLS1	40.74 312	iP	54 41.71	0	

08d 03h

NPS	40.93	270	iPc	54	42.70	-0.6	LLS	44.93	294	ePc	55	16.00	0.0	PYM	49.03	296	P	55	47.93	-0.1
NNT	40.98	148	iPc	54	43.80	0.0	ZLA	44.97	295	ePc	55	16.40	0.3	LBL	49.18	295	P	55	49.02	0.0
SDA	41.01	282	iPd	54	45.00	1.2	FEL	44.99	296	iPc	55	15.86	-0.5	TCF	49.20	297	iPc	55	48.80	-0.4
SHNJ	41.07	92	eP	54	44.10	-0.2	CDF	45.15	297	iPc	55	17.40	-0.2		0.7s	22.00nm			5.3mb	
LACI	41.08	282	iPd	54	45.00	0.7		1.0s	17.60nm			5.0mb		LDF	49.25	301	iPc	55	49.00	-0.5
BER	41.12	314	iPc	54	44.20	-0.3	WLF	45.17	299	Pc	55	15.50	-2.0		0.6s	70.40nm			5.8mb	
TIR	41.13	281	iPd	54	45.50	0.7	MME	45.31	290	P	55	20.00	0.9	FLN	49.35	301	iPc	55	49.80	-0.6
KHC	41.14	295	iPc	54	47.50	2.6	TMA	45.39	293	iPc	55	18.90	-0.7		0.6s	84.50nm			5.9mb	
	1.0s	46.00nm			5.2mb		BDI	45.44	290	Pc	55	20.00	0.1	YRH	49.37	307	iPc	55	49.90	-0.6
		e		56	07.40		VAI	45.58	293	Pc	55	20.00	-0.8		0.5s	43.00nm			5.7mb	
ASK	41.15	314	iP	54	44.60	-0.1	UCC	45.61	301	P	55	21.50	0.4	LSF	49.61	297	iPc	55	51.50	-0.9
SUE	41.16	315	eP	54	42.18	-2.6	PII	45.67	290	Pc	55	21.50	-0.1		0.7s	19.80nm			5.2mb	
PTJ	41.23	289	iPc	54	46.10	0.4	BSF	45.72	296	iPc	55	21.80	-0.3	GRR	49.77	301	iPc	55	52.90	-0.7
LSK	41.32	279	eP	54	46.00	-0.5		0.6s	21.60nm			5.3mb			0.6s	43.20nm			5.6mb	
WET	41.54	295	iPc	54	49.10	0.9	ATN	45.73	280	Pc	55	21.80	-0.4	DMU	49.96	310	iPc	55	54.80	-0.1
	0.9s	98.00nm			5.5mb		BOB	45.76	291	Pc	55	22.60	0.2		0.5s	57.00nm			5.8mb	
KMY	41.57	312	iP	54	47.71	-0.4	SNF	45.80	301	iPc	55	22.70	0.2	CAF	50.05	296	iPc	55	56.00	0.2
HOF	41.60	297	iPc	54	49.30	0.7				e	57	07.60			0.8s	38.90nm			5.4mb	
	0.6s	36.00nm			5.3mb		DOU	45.83	300	Pc	55	23.10	0.3	LPF	50.07	301	iPc	55	55.20	-0.7
MOX	41.60	298	iPc	54	49.00	0.4		1.0s	50.00nm			5.5mb			0.6s	65.60nm			5.7mb	
	0.9s	101.00nm			5.6mb					PcP	57	00.80		DLE	50.10	309	iPc	55	55.80	-0.3
Z	14s	0.40um			4.4MszX		HAU	45.89	297	iPc	55	23.10	-0.2		0.5s	63.00nm			5.8mb	
VAM	41.76	271	eP	54	48.70	-1.4		0.6s	40.40nm			5.6mb		RJF	50.15	296	iPc	55	56.50	-0.1
SRN	41.85	279	iP	54	51.70	1.0	MMK	45.96	294	ePc	55	24.00	-0.2		0.6s	25.90nm			5.3mb	
VBY	41.86	289	ePc	54	51.20	0.5	DIX	46.27	294	iPc	55	26.50	-0.2	ETA	50.26	308	eP	55	56.60	-0.6
		ePP		56	19.00		SNG	46.33	149	eP	55	27.20	0.2		0.5s	41.00nm			5.6mb	
YONJ	41.93	89	eP	54	49.50	-2.0				e	57	02.50		MFF	50.37	299	iPc	55	57.60	-0.6
LJU	42.03	290	ePc	54	52.50	0.4	ALE	46.38	353	eP	55	27.00	0.2		0.5s	52.40nm			5.7mb	
		ePP		56	28.00			0.5s	17.00nm			5.4mb		ECP	50.62	307	iPc	55	59.20	-0.8
KEK	42.07	279	iPc	54	51.60	-1.0	PCP	46.42	292	P	55	27.32	-0.3		0.4s	54.00nm			5.8mb	
ITM	42.17	275	iPc	54	51.80	-1.6	EDU	46.69	311	iPc	55	29.00	-0.5	LPO	50.70	296	iPc	56	00.80	0.1
BHG	42.21	293	eP	54	54.90	1.3	MEU	46.70	279	P	55	30.60	0.6		0.6s	73.90nm			5.8mb	
	1.1s	92.00nm			5.4mb		LSD	46.76	293	P	55	30.40	-0.1	ECB	50.73	308	iPc	56	00.40	-0.4
KBA	42.24	292	iPc	54	54.70	0.6	ESY	46.79	310	iPc	55	29.60	-0.7		0.5s	87.00nm			5.9mb	
	1.0s	45.80nm			5.2mb			0.7s	82.00nm			5.9mb		LFF	50.81	296	iPc	56	01.70	0.2
		i		54	57.20		FIN	46.81	292	P	55	29.27	-1.4		0.6s	41.40nm			5.5mb	
		i		55	03.60		RSP	46.86	293	P	55	28.25	-2.9	KGM	52.06	148	eP	56	10.70	-0.6
		i		55	09.80		ROB	46.96	292	P	55	30.71	-1.2	EPF	52.16	295	iPc	56	10.80	-1.1
		e		56	22.00		LPG	46.97	294	iPc	55	32.70	0.4		0.7s	51.60nm			5.6mb	
		i		56	28.00			0.7s	172.20nm			6.3mb		ESEL	52.61	290	e(P)	56	15.50	0.3
		i		56	35.50		ELO	47.06	311	eP	55	31.80	-0.7	VAL	52.73	309	iP	56	15.60	-0.3
CEY	42.24	290	eP	54	54.00	0.1	EDI	47.07	310	eP	55	31.80	-0.7	BRW	52.85	19	iPc	56	16.40	-0.2
GRF	42.26	297	iPc	54	55.30	1.3	EBL	47.07	310	ePc	55	32.00	-0.6	EBR	53.41	292	eP	56	21.00	-0.1
	1.0s	84.00nm			5.4mb			0.7s	52.00nm			5.8mb		EROQ	53.46	292	eP	56	20.80	-0.7
Z	18s	0.08um			3.6Msz		IMI	47.16	291	P	55	31.73	-1.8	MBC	53.60	5	iPc	56	21.80	-0.3
HVAR	42.31	286	iPc	54	53.20	-1.3	EAU	47.24	310	iPd	55	33.60	-0.3		0.8s	250.00nm			6.3mb	
VOY	42.42	291	eP	54	54.90	-0.6		0.7s	73.00nm			5.9mb		ECRI	54.09	296	e(P)	56	26.00	-0.2
		ePP		56	31.80		BNI	47.26	293	Pc	55	34.40	0.0	ETOR	54.93	294	eP	56	31.70	-0.8
VLS	42.44	277	iPc	54	55.20	-0.4	RRL	47.27	293	P	55	34.50	0.0	ECHE	55.05	292	eP	56	33.00	-0.3
MRRJ	42.65	75	P	54	56.80	-0.5	ENR	47.27	292	P	55	32.55	-1.8	GUD	56.28	295	iPc	56	41.80	-0.5
TRI	42.66	290	iPc	54	57.00	-0.3	PZZ	47.31	292	P	55	32.66	-2.1	EVIA	56.58	292	eP	56	44.30	-0.1
FVI	42.81	292	Pc	54	58.50	0.0	CVF	47.32	289	P	55	34.73	0.1	TOL	56.70	294	iPc	56	44.50	-0.7
FUR	42.94	295	iPc	55	00.80	1.2	SAOF	47.32	292	P	55	34.80	0.1		1.0s	60.00nm			5.6mb	
	0.8s	95.00nm			5.6mb		EKA	47.35	310	Pd	55	34.40	-0.3	STS	57.38	299	eP	56	50.00	0.1
TKSJ	43.06	90	eP	54	59.60	-1.1		0.7s	51.10nm			5.8mb		IMA	57.62	23	iPc	56	50.80	-0.6
WIT	43.40	303	ePc	55	04.50	1.3	AUTN	47.39	292	P	55	35.99	0.5	EBAN	57.65	292	eP	56	51.60	-0.3
		ePP		56	44.00		SBF	47.46	292	iPc	55	35.90	0.0	AFC	58.10	291	eP	56	54.00	-1.2
TNS	43.60	299	iPc	55	06.50	1.5		0.8s	59.10nm			5.8mb		ASMO	58.15	292	iP	56	54.50	-1.0
WTS	43.70	302	iPc	55	06.20	0.6	FOUF	47.48	293	eP	55	35.73	-0.2	CRT	58.18	291	iP	56	54.90	-0.7
	0.6s	26.00nm			5.2mb		TOUF	47.49	292	P	55	36.25	0.0	ACHM	58.37	291	eP	56	55.90	-1.1
		ePP		56	46.00		AURF	47.51	292	P	55	36.62	0.3	APHE	58.39	291	iPc	56	56.00	-1.2
OGA	43.73	293	iPc	55	06.70	0.5	MVIF	47.61	292	P	55	36.86	-0.3	AAPN	58.41	292	iPc	56	56.00	-1.3
	0.6s	47.00nm			5.5mb		LOR	47.71	297	iPc	55	36.80	-0.9	ALOJ	58.53	292	iPc	56	56.50	-1.7
DAG	43.74	341	iPc	55	05.00	-0.7		0.5s	22.80nm			5.6mb		ATEJ	58.61	291	iP	56	57.20	-1.6
	0.7s	54.79nm			5.5mb		LBF	47.79	297	iPc	55	37.50	-0.9	EHOR	58.75	293	eP	56	59.40	-0.1
CTI	43.77	292	Pc	55	06.20	-0.2		0.5s	14.10nm			5.4mb		TAF	59	02	288	iP	57	02.00	0.4
WKYJ	43.91	89	eP	55	06.50	-1.2	CALN	47.85	292	P	55	38.85	-0.2	EPRU	59.30	292	e(P)	57	02.00	-1.5
AMAN	43.97	251	eP	55	09.00	0.9	SSF	48.02	297	iPc	55	39.30	-0.9	TTA	59.50	26	ePc	57	04.20	-0.3
AKSR	44.13	251	iPd	55	11.00	1.5		0.8s	24.10nm			5.4mb		INK	59.69	13	iPc	57	05.10	-0.5
MAT	44.17	84	eP	55	08.00	-1.8	SMF	48.06	297	iPc	55	39.90	-0.6		0.7s	104.00nm			6.1mb	
	0.6s	18.00nm			5.1mb			0.6s	16.20nm			5.3mb		EJIF	59.79	292	e(P)	57	05.40	-1.4
KTD	44.24	298	iPc	55	10.49	0.4	FRF	48.10	292	iPc	55	40.50	-0.3	EVAL	59.80	294	eP	57	06.50	-0.3
ABH	44.27	299	iPc	55	10.71	0.3		0.6s	59.50nm			5.9mb		FBA	59.99	21	eP	57	07.40	-0.4
OSS	44.34	293	iPc	55	11.70	0.5	AVF	48.26	297	iPc	55	41.30	-0.7	BMK	61.03	291	iPc	57	13.50	-1.7
DUI	44.37	285	Pc	55	11.80	0.5		0.9s	27.80nm			5.4mb					i	57	21.50	
AGMR	44.50	251	eP	55	15.50	3.1X	LMR	48.31	291	iPc	55	42.10	-0.3	SVW	61.06	27	iP	57	15.80	0.6
SAX	44.53	295	iPc	55	13.30	0.5		0.8s	41.30nm			5.6mb		IFR	61.56	289	iPc	57	18.00	-1.1
MGR	44.53	283	Pd	55	13.10	0.5	LRG	48.34	292	iPc	55	42.60	0.0	PCI	61.58	132	iPc	57	22.00	2.9
RUP	44.64	299	iPc	55	13.94	0.6		0.7s	37.40nm			5.6mb		PWA	62.21	24	iPc	57	21.80	-1.0
SDI	44.74	285	Pc	55	14.20	-0.1	PLDF	48.55	296	P	55	43.82	-0.6	PMR	62.45	24	iPc	57	23.20	-1.2
ENN	44.76	300	iPc	55	14.50	0.2	BGF	48.68	297	iPc	55	44.70	-0.5		0.7s	57.10nm			5.9mb	
	0.5s	24.00nm			5.4mb			0.7s	18.70nm			5.3mb		PMS	62.63	24	iPc	57	24.80	-0.9
		ePP		56	55.00		AGO	48.79	296	P	55	45.91	-0.2	TOA	62.75	22	iPc	57	26.20	-0.3
SLE	44.77	296	ePc	55	14.50	0.1	IPM	48.90	150	ePc	55	47.10	-0.1	AVE	63.10	290	iPd	57	28.80	-0.3
MEM	44.79	300	iP	55	14.94	0.4		0.8s	175.10nm			6.2mb					i	57	49.00	
AZI	44.82	286	P	55	15.90	1.0	MAF	49.03	297	iPc	55	47.80	-0.1	FRB	63.84	344	eP	57	32.00	-1.5
VDL	44.84	294	ePc	55	15.50	0.2		0.6s	30.60nm			5.5mb			0.7s	59.00nm			5.9mb	

SDN	64.07	33	e(P)	57 34.70	-0.4
TIO	64.65	288	iPc	57 34.50	-5.0X
KDC	64.73	28	iP	57 38.90	-0.5
MID	65.02	24	e(P)	57 41.30	0.0
LWI	67.30	236	iPc	57 55.50	-1.2
YKA	67.46	7	P	57 56.70	-0.1
YKC	67.49	7	iPc	57 56.00	-0.9
	0.7s	12.00nm		5.2mb	
BNG	67.76	249	iPc	57 58.00	-1.3
	0.7s	192.00nm		6.4mb	
		i		58 16.30	
SIT	69.75	19	eP	58 11.00	0.1
SCH	71.76	340	iPc	58 22.10	-1.2
	0.7s	46.00nm		5.7mb	
MZZ	74.80	231	iPc	58 42.20	0.6
	0.5s	4.00nm		4.7mb	
FFC	75.76	0	iPc	58 45.90	-0.6
	0.5s	58.00nm		5.9mb	
PTZ	76.26	227	iP	58 50.00	0.1
	0.8s	3.50nm		4.5mb	X
EDM	76.75	7	iPc	58 52.20	0.0
	0.6s	74.00nm		6.0mb	
MTN	77.46	128	iPd	58 55.70	-0.8
KUK	78.32	266	eP	59 01.00	-0.3
LEGH	78.61	265	eP	59 04.00	1.1
LSZ	78.67	230	iPc	59 03.50	0.2
	0.5s	2.80nm		4.6mb	X
KNA	78.76	131	iPc	59 03.40	-0.1
	0.7s	51.00nm		5.7mb	
NANU	79.15	146	iPc	59 05.90	0.4
	0.6s	58.00nm		5.8mb	
KRI	79.31	228	eP	59 07.50	0.7
CBM	79.40	338	P	59 07.30	0.6
RSON	79.43	355	P	59 06.20	-0.6
	0.7s	55.36nm		5.7mb	
MBL	79.53	141	iPc	59 07.10	-0.6
	0.5s	61.00nm		5.8mb	
SES	79.74	6	iPc	59 08.20	-0.4
	0.7s	106.00nm		5.9mb	
PNT	79.92	12	ePc	59 09.00	-0.5
	0.7s	37.00nm		5.4mb	
PGC	79.99	15	eP	59 10.00	0.2
MCW	80.06	14	P	59 11.20	0.9
TIC	80.98	270	Pc	59 15.62	-0.1
	0.6s	30.50nm		5.5mb	
KIC	81.01	269	Pc	59 15.94	0.1
	0.5s	43.00nm		5.7mb	
GMW	81.17	15	P	59 17.00	0.8
MIM	81.21	338	P	59 17.00	0.6
EMM	81.29	336	P	59 17.50	0.7
LIC	81.30	269	Pc	59 17.32	0.0
RMW	81.41	14	P	59 18.30	0.8
DPW	81.52	11	P	59 19.00	0.9
LON	82.10	14	P	59 21.90	0.8
BMW	82.14	15	P	59 22.60	1.3
GAC	82.20	342	ePc	59 22.10	0.6
BNH	82.35	339	P	59 13.30	-9.1X
SHW	82.58	15	P	59 25.00	1.3
BUL	82.64	227	iPd	59 24.00	-0.3
PTN	83.19	341	P	59 27.50	0.8
PMG	83.59	113	eP	59 29.50	0.4
	1.0s	54.00nm		5.7mb	
MEKA	83.94	145	iPd	59 30.10	-0.5
	0.5s	29.00nm		5.8mb	
LRM	84.17	8	eP	59 32.00	0.0
WB5	85.04	129	iPc	59 35.70	-0.6
WRA	85.08	129	Pd	59 36.70	0.2
	0.5s	27.60nm		5.7mb	
MRWA	85.41	148	eP	59 37.30	-0.6
HPI	86.21	9	P	59 52.90	10.6X
WARB	86.82	138	iPd	59 45.00	0.0
	0.4s	6.00nm		5.2mb	
BAL	86.92	148	eP	59 45.00	-0.3
	0.7s	26.00nm		5.6mb	
BW06	87.43	6	P	59 48.40	0.2
	0.7s	5.12nm		4.9mb	
FHC	87.50	17	eP	59 50.10	1.8
WDC	87.98	16	ePc	59 50.90	0.4
ASPA	88.00	131	iPc	59 50.70	0.0
	0.7s	67.00nm		6.1mb	
MUN	88.01	149	iPc	59 50.10	-0.4
	0.7s	63.00nm		6.1mb	
KLB	88.19	148	eP	59 51.00	-0.4
QIS	88.31	125	iPc	59 51.40	-0.8
	0.6s	19.00nm		5.6mb	
MIN	88.37	15	ePc	59 53.00	0.4
COOL	88.77	145	eP	59 54.00	-0.2
	0.6s	58.00nm		6.0mb	
ORV	89.16	16	ePc	59 56.50	0.3
NWAO	89.22	148	eP	59 56.00	-0.3
DAU	89.65	8	P	00 00.70	1.8
DUG	89.72	9	P	00 00.40	1.4
	0.7s	17.93nm		5.4mb	
RKG	90.19	149	eP	00 03.00	2.2
KVN	90.19	13	P	00 02.30	0.9
CVL	90.23	342	P	00 20.00	18.7X
GLD	90.67	3	P	00 04.90	1.4
	1.1s	27.00nm		5.5mb	
GOL	90.72	3	P	00 04.70	0.9
	0.9s	35.04nm		5.7mb	
CMB	90.83	15	eP	00 05.00	0.9
MHC	91.29	16	eP	00 07.60	1.3
NAV	91.32	344	P	00 06.50	0.2
MSU	91.45	9	P	00 08.90	1.7
FORR	91.51	139	iPd	00 05.40	-1.5
	0.4s	54.00nm		6.2mb	
CTA	91.56	120	iPd	00 07.30	-0.1
	0.9s	25.21nm		5.5mb	
FRI	91.96	15	ePc	00 10.30	1.1
PRS	92.32	16	eP	00 12.20	1.3
TKL	93.44	346	P	00 16.10	0.0
GBTN	93.50	346	P	00 16.30	-0.1
RLO	94.15	355	iPc	00 19.30	0.0
JSC	94.36	344	P	00 18.40	-1.9
TUL	94.44	356	ePd	00 21.30	0.6
	1.2s	19.10nm		5.3mb	
Z	19s	0.10um		4.3Msz	
		LR	36 30.00		
SBB	94.51	14	eP	00 22.00	0.9
SIO	94.63	356	eP	00 21.90	0.3
PRM	94.74	344	P	00 22.10	0.0
MWC	94.93	14	eP	00 24.00	0.8
RVR	95.26	13	eP	00 25.00	0.5
SGS	95.27	343	P	00 24.10	-0.4
TPC	95.34	12	eP	00 26.00	1.0
PEC	95.39	13	P	00 25.60	0.4
ALQ	95.41	4	eP	00 26.90	1.4
	1.0s	6.00nm		5.0mb	
		e	00 33.20		
		e	00 55.00		
HBF	95.50	343	P	00 26.00	0.4
MEO	95.67	358	iPc	00 26.50	0.1
PLM	95.97	13	eP	00 29.00	1.0
UYO	96.10	354	iPc	00 28.80	0.5
GLA	96.54	11	eP	00 32.00	1.6
BAR	96.66	13	eP	00 32.00	1.1
MAW	117.78	187	ePKP	05 46.00	0.0
BAO	125.28	289	ePKP	06 02.00	-0.1
BMA	128.13	280	ePKP	06 07.90	0.5
VAO	130.14	282	ePKP	06 11.70	0.5
CCH	137.06	306	ePKP	06 24.80	0.0
ZOBO	137.13	310	ePKP	06 10.00	-15.3X
		e	06 19.00		
LPB	137.34	309	ePKP	06 18.00	-7.5X
		e	06 26.00		
CNCB	137.52	309	ePKP	06 16.00	-10.0X
		i	06 27.30		
SPA	139.70	180	e(PKP)	06 20.60	-7.4X
	0.8s	5.00nm			
		i	06 27.10		
ANT	144.51	306	iPKPc	06 36.60	-0.9
MRA	148.46	290	ePKP	06 45.00	1.3
	S.D = 0.9	on 375 of 387 obs.			

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* JUL 08, 1989 04h 55m 21.06± 1.92s
13.740 N ± 6.1km 61.441 W ±20.7km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)
ML 2.9 (FDF).

SLB	0.40	78	eP	55 29.90	0.7
			eS	55 32.61	
SVV	0.47	152	eP	55 30.59	-0.1
SVB	0.50	158	eP	55 31.20	0.0
			eS	55 37.23	
BIM	0.85	25	iPc	55 38.58	1.1
			S	55 53.80	
MVM	0.97	33	eP	55 37.89	-1.6
			S	55 52.40	
FDF	1.03	16	eP	55 41.93	1.4
	0.1s	0.37nm			
			S	55 59.00	
CRM	1.13	27	eP	55 40.70	-1.5
			S	55 57.70	

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

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* JUL 08, 1989 05h 04m 07.95± 1.30s
28.740 S ± 9.6km 67.442 W ±14.8km
DEPTH = 142.7 ± 34.6 km
LA RIOJA PROVINCE, ARGENTINA (138)

CYA	1.48	79	iPc	04 37.10	0.0
RTLL	2.73	199	iPc	04 52.30	0.1
			S	05 25.50	
RTCB	2.98	203	iPc	04 55.30	-0.1
			S	05 31.50	
ZON	2.99	201	iP+	04 55.70	0.1
			eS	05 31.00	
RTCV	3.25	197	iPd	04 58.80	-0.1
			S	05 37.00	
RTBS	3.39	210	iPd	05 00.70	0.0
			S	05 40.80	
MRA	3.95	158	ePc	05 08.10	0.0
SLA	4.36	24	ePd	05 13.70	0.0
S.D. = 0.1		on	8 of	8 obs.	

JUL 08, 1989 05h 39m 24.29± 0.76s
44.518 N ± 9.7km 10.024 E ± 9.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

BOB	0.48	301	P	39 32.90	-1.2
			eSg	39 39.20	
MME	0.58	124	P	39 36.50	0.2
			eSg	39 46.80	
BDI	0.61	138	P	39 36.50	-0.2
			eSg	39 43.40	
PII	0.87	156	P	39 40.70	-0.4
			eSg	39 52.90	
MDI	1.28	350	P	39 48.30	0.3
DOI	1.99	271	P	39 59.60	1.2
S.D. = 1.0		on	6 of	6 obs.	

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* JUL 08, 1989 05h 45m 36.26± 0.99s
11.527 S ±11.4km 117.923 E ±16.1km
DEPTH = 33.0km (normol)
3.8mb (1 obs.)
SOUTH OF SUMBAWA ISLAND (291)

KHKI	3.88	324	ePc	46 35.00	-0.1
			eS	47 15.50	
			e	48 20.00	
MBL	9.75	169	eP	47 56.30	-1.1
	0.2s	8.00nm		5.6mb	X
			eS	49 36.40	
NANU	11.21	191	eP	48 18.00	0.7
	0.2s	6.00nm		5.4mb	X
			eS	50 11.00	
WARB	16.74	152	eP	49 30.20	0.2
	0.3s	2.00nm		3.8mb	
WB5	17.87	120	eP	49 44.30	0.2
S.D. = 0.9		on	5 of	5 obs.	

JUL 08, 1989 05h 45m 51.34± 0.59s
36.716 N ± 6.0km 28.072 E ± 5.5km
DEPTH = 69.7 ± 15.6 km
DODECANESE ISLANDS (369)
MD 4.1 (ATH).

YER	0.45	22	iPg	46 04.80	0.9
KSL	1.36	116	ePn	46 13.70	-1 1
KAP	1.37	212	iPnd	46 13.80	-1.2
			eSn	46 31.30	
ELL	1.48	88	iPn	46 17.50	1.0
IZM	1.80	339	iPn	46 20.40	-0.4
KHL	1.98	35	iPn	46 23.50	0.2
BCK	2.15	69	iPn	46 26.50	0.8
NPS	2.47	235	iPnc	46 29.50	-0.6
			eSn	46 57.80	
ALT	2.84	34	ePn	46 35.20	-0.1
DST	2.92	8	iPn	46 36.00	-0.4
EZN	3.40	337	ePn	46 42.00	-1.0
VAM	3.40	249	ePn	46 43.50	0.4
EDC	3.63	357	iPn	46 45.50	-0.8
GPA	3.98	26	ePn	46 50.20	-1.0
BBTK	4.83	48	iPd	47 04.00	0.7
RDO	4.84	337	ePn	47 03.00	-0.3
ITM	4.94	277	ePn	47 07.00	2.2
KHC	16.29	324	P	49 42.30	5.3X
MOX	18.26	325	eP	50 02.00	0
S.D. = 1.0		on	18 of	19 obs.	

? JUL 08, 1989 06h 10m 22.83±11.59s
51.646 N ±66.7km 16.388 E ±72.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.6 (VKA), 3.4 (GRF).

KSP	0.81	184	iPd	10	38.50	0.0
			iS	10	47.30	
			iLR	10	54.00	
BRG	1.72	244	iPg	10	54.00	1.1
			iSg	11	13.90	
CLL	2.14	262	ePn	10	59.00	-0.1
			ePg	11	03.00	
			eSg	11	28.00	
KHC	3.09	217	iPn	11	15.20	2.6X
			Pg	11	20.50	
			Sn	11	48.70	
			Sg	11	59.50	
MOX	3.17	253	ePg	11	21.00	7.3X
			iSg	12	01.00	
WET	3.36	223	iPnc	11	16.50	0.0
VKA	3.39	181	iPg	11	29.20	12.4X
			e	12	06.00	
			i(Sg)	12	09.80	
SPC	3.48	133	eP	11	57.60	39.3X
ZST	3.48	172	eP	12	04.50	46.3X
			e	12	14.60	
			i	12	35.10	
GRF	3.82	241	e(Pn)	11	22.00	-1.0
			e(Pg)	11	36.50	
			eSg	12	21.00	

S.D. = 1.0 on 5 of 10 obs.

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* JUL 08, 1989 07h 43m 33.43± 0.65s
1.443 N ±10.5km 126.829 E ±17.2km
DEPTH = 90.0km (geophysicist)
4.4mb (6 obs.)
MOLUCCA PASSAGE (266)

MTN	14.82	163	eP	47	00.00	0.3
KNA	17.19	174	iPd	47	30.20	0.8
	0.6s		18.00nm			4.5mb
WB5	22.44	161	eP	48	24.80	-1.1
			eS	52	22.50	
WRA	22.50	161	P	48	27.00	0.6
	0.3s		4.70nm			4.3mb
MBL	23.48	197	eP	48	36.30	0.4
QIZ	24.14	317	Pc	48	43.40	1.1
QIS	25.19	151	eP	48	51.00	-1.3
WARB	27.46	180	eP	49	13.50	0.4
MRWA	32.20	198	eP	49	55.00	-0.1
	0.3s		4.00nm			4.8mb
CHTO	32.33	304	eP	49	56.40	0.1
	0.5s		1.15nm			3.9mb
			pP	50	17.90	94kmX
TIY	38.45	342	eP	50	53.00	4.8X
BJI	39.62	347	(P)	51	04.50	6.7X
LZH	40.52	331	eP	51	06.00	0.5
	2.5s		79.00nm			5.1mb
BWA	41.03	152	eP	51	10.20	0.7
CAN	42.04	153	eP	51	17.30	-0.5
GTA	45.11	330	eP	51	42.60	0.0
HYB	50.01	292	eP	52	21.00	0.0
GBA	50.32	286	Pc	52	21.30	-2.0
	0.6s		1.60nm			4.2mb
WMQ	54.65	326	P	52	58.80	3.5X

S.D. = 0.9 on 16 of 19 obs.

JUL 08, 1989 09h 31m 57.13± 0.19s
52.841 N ± 4.1km 159.859 E ± 3.4km
DEPTH = 30.7km (3 depth phases)
5.5mb (66 obs.) 4.2Msz (3 obs.)
OFF EAST COAST OF KAMCHATKA (219)

SMY	8.64	85	P	34	01.00	-1.9
MRRJ	16.35	238	eP	35	42.00	-3.8X
OFUJ	18.61	230	eP	36	10.00	-4.0X
YAMJ	20.10	231	eP	36	29.90	-1.0
MDJ	21.47	260	eP	36	43.50	-1.3
MAT	22.28	232	iPc	36	54.10	1.1
	1.1s		240.51nm			5.6mb
			eS	40	55.00	
CN2	24.40	262	Pc	37	12.00	-1.6
Z	18s		0.90um			4.3Msz
E	14s		0.30um			
			epP	37	20.00	28km
TTA	25.03	49	eP	37	20.20	0.6
WKYJ	25.41	233	eP	37	25.20	1.8
YONJ	25.69	237	eP	37	27.40	1.4
IMA	26.32	42	eP	37	31.40	-0.3
	1.0s		16.30nm			4.6mb
TKSJ	26.35	235	eP	37	33.60	1.5
SHK	26.61	237	eP	37	35.50	1.1
SNY	26.66	260	eP	37	33.80	-1.0
SHNJ	27.73	239	P	37	45.90	1.3
FBA	28.70	45	eP	37	52.80	-0.3
BJI	32.20	264	eP	38	23.00	-1.2
Z	24s		0.65um			4.2MszX
TIA	34.11	258	eP	38	39.00	-1.9
INK	34.16	37	iPc	38	40.80	-0.2
			pP	38	51.00	36km
SSE	35.43	248	P	38	51.10	-1.1
	1.0s		24.00nm			5.1mb
TIY	35.93	264	Pd	38	56.10	-0.4
N	16s		0.50um			
NJ2	36.04	251	Pc	38	56.40	-1.0
MBC	37.33	23	ePc	39	08.00	0.2
	0.5s		8.00nm			4.8mb
			pP	39	26.00	73kmX
WHN	39.76	254	P	39	28.20	-0.3
QZH	41.64	244	Pd	39	45.00	1.0
LZH	42.20	270	eP	39	48.00	-0.7
	1.5s		39.00nm			4.9mb
Z	16s		0.50um			4.5MszX
GTA	42.49	276	eP	39	50.60	-0.5
ALE	43.19	7	eP	39	56.00	-0.1
	0.5s		6.00nm			4.6mb
YKA	43.45	42	P	39	59.80	1.4
YKC	43.51	42	eP	39	59.30	0.5
CD2	45.80	264	P	40	16.70	-1.0
WMQ	46.92	289	iPc	40	26.00	-0.4
Z	24s		0.70um			4.5MszX
			ScP	45	49.20	
GYA	47.31	258	P	40	29.00	-0.7
			PcP	42	00.20	
PNT	48.20	60	eP	40	37.00	0.6
	0.6s		6.00nm			4.8mb
EDM	49.03	53	iPc	40	42.80	0.1
	0.6s		19.00nm			5.3mb
DAG	50.66	360	iPc	40	53.90	-0.9
	0.8s		47.01nm			5.5mb
QIZ	51.21	248	Pc	41	01.40	1.7
FFC	53.30	46	eP	41	14.00	-0.9
	0.7s		9.00nm			4.9mb
SOD	55.09	340	iP	41	26.10	-1.8
KVN	55.65	69	P	41	33.00	0.4
TNP	56.82	69	P	41	41.10	0.1
	1.0s		5.83nm			4.6mb
SHL	56.86	269	iP	41	35.40	-6.0X
LOE	57.17	255	eP	41	42.50	-0.9
CHG	57.71	258	ePc	41	46.80	-0.4
	1.0s		32.50nm			5.3mb
CHTO	57.71	258	eP	41	46.00	-1.2
	0.8s		21.78nm			5.3mb
BW06	57.76	61	P	41	47.70	0.1
	0.8s		11.16nm			5.0mb
ISA	57.79	72	eP	41	54.00	6.3X
FRB	57.80	23	eP	41	45.00	-2.2
CLC	58.19	72	eP	41	52.00	1.6
DAU	58.51	64	P	41	53.50	0.5
SBB	58.85	73	eP	42	05.00	9.9X
MWC	59.05	73	eP	41	57.00	0.4
SUF	59.18	337	iP	41	55.60	-1.3
	0.4s		21.10nm			5.6mb
RSON	59.59	45	P	41	59.50	-0.5
	1.0s		25.76nm			5.3mb
RVR	59.61	73	eP	42	09.00	8.7X
RSSD	59.66	56	P	42	00.40	-0.4
TPC	60.30	72	eP	42	15.00	10.0X
PLM	60.37	73	eP	42	14.00	8.3X
NUR	61.46	337	iP	42	10.90	-1.6
	0.7s		26.70nm			5.5mb
GLA	61.76	72	eP	42	13.00	-2.0
UPP	63.62	340	iP	42	25.40	-1.4
NB2	63.75	344	P	42	26.40	-1.3
NRA0	63.98	343	P	42	27.50	-1.7
HFS	64.15	342	eP	42	28.60	-1.7
	0.5s		27.60nm			5.6mb
ALQ	65.09	65	eP	42	37.00	0.0
	0.9s		2.73nm			4.4mb X
			e	42	45.80	28km
			e	43	08.80	
SCH	65.97	27	eP	42	41.00	-1.1
SNG	66.02	249	eP	42	42.50	-0.3
MEO	69.42	59	iPc	43	03.50	-0.6
KHI	69.74	300	ePc	43	04.50	-1.7
SIO	69.86	57	eP	43	06.00	-0.6
MTN	69.93	210	iPd	43	07.80	0.6
TUL	69.99	57	eP	43	07.00	-0.4
	1.0s		8.00nm			4.8mb
Z	21s		0.25um			4.4Msz
			LR	07	00.00	
EDU	70.07	350	ePc	43	06.90	-0.7
RLO	70.18	56	e(P)	43	06.00	-2.6
ELO	70.22	350	iPc	43	07.80	-0.7
	0.5s		56.00nm			5.9mb
EAB	70.56	351	iPc	43	10.20	-0.4
	0.6s		48.00nm			5.8mb
ESY	70.65	350	iPc	43	10.50	-0.6
EDI	70.70	350	eP	43	11.10	-0.3
EAU	70.81	350	iPc	43	11.80	-0.3
	0.8s		64.00nm			5.8mb
GAC	71.01	38	ePc	43	12.00	-1.5
HYB	71.09	274	iPd	43	14.00	-0.4
	0.6s		31.20nm			5.6mb
EKA	71.28	350	Pd	43	14.90	-0.1
	0.5s		31.30nm			5.6mb
UYO	72.03	57	iPd	43	18.80	-1.0
KSP	72.22	337	iPc	43	20.20	-0.4
	0.9s		47.00nm			5.5mb
WIT	72.35	343	ePc	43	22.50	1.2
CLL	72.54	339	iPc	43	22.50	0.0
	1.1s		125.00nm			5.8mb
SPC	72.73	334	iP	43	24.00	0.1
BRG	72.74	338	iPc	43	23.50	-0.2
	1.1s		44.00nm			5.4mb
			e	43	44.00	77kmX
			e	44	20.00	
			e	46	48.00	
			e	57	36.00	
			e	01	00.00	
DMU	73.06	352	iPc	43	25.70	0.2
	0.7s		51.00nm			5.6mb
WTS	73.11	343	iPc	43	26.40	0.6
	0.7s		74.00nm			5.8mb
PRU	73.43	337	iPc	43	28.00	0.3
	1.0s		50.60nm			5.5mb
MOX	73.46	340	iPc	43	28.00	0.1
	1.1s		58.00nm			5.5mb
DLE	73.63	352	iPc	43	29.20	0.4
	0.6s		53.00nm			5.7mb
HOF	73.72	339	iPc	43	29.80	0.4
	1.0s		112.00nm			5.8mb
GRF	74.45	339	iPc	43	34.40	0.7
	0.9s		99.00nm			5.8mb
Z	18s		0.04um			3.8Msz
ENN	74.45	343	iPc	43	35.50	1.9
	0.9s		112.00nm			5.9mb
KHC	74.45	338	iPc	43	36.50	2.8
	1.0s		50.00nm			5.5mb
ZST	74.47	335	iPc	43	34.30	0.5
TNS	74.50	341	iPc	43	33.90	-0.1
MEM	74.59	343	iPc	43	34.79	0.4
WET	74.60	338	iPc	43	35.50	0.9
	1.0s		83.00nm			5.7mb
VKA	74.61	336	eP	43	34.50	-0.1
			i	43	35.40	3kmX
			i	43	41.20	
KVT	74.62	319	iP	43	35.00	0.2
BUD	74.62	334	iPc	43	35.20	0.5
GBA	74.72	272	Pd	43	33.90	-1.8
	0.6s		37.60nm			5.6mb
SNF	74.98	344	Pc	43	36.80	0.2
ABH	75.00	342	iPc	43	37.00	0.1
TOD	75.03	341	iPc	43	37.38	0.4
RUP	75.27	342	iPc	43	38.65	0.2
DOU	75.33	344	iPc	43	38.60	-0.1
	0.7s		65.50nm			5.7mb
			e	43	55.00	59kmX
KTD	75.44	341	eP	43	39.58	0.2
WLF	75.47	343	P	43	39.80	0.3
WRA	75.79	205	Pd	43	42.10	0.5
	0.3s		1.90nm			4.6mb
GWF	75.86	342	P	43	41.74	0.0
FUR	75.88	339	iPc	43	42.50	0.6
	1.0s		45.00nm			5.4mb
BHG	75.94	338	eP	43	43.20	1.0
	1.0s		35.00nm			5.3mb
KBA	76.43	337	iPc	43	46.10	0.9
	1.2s		406.00nm			6.3mb

08d 09h

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                    i      44 01.00   53kmX
CDF   76.46 342 P          43 45.50    0.2
NA2   76.56  43 P          43 45.40   -0.4
PVL   76.62 328 iPc        43 46.00    0.0
FEL   76.83 341 P          43 47.29   -0.1
SLE   76.84 341 iPc        43 47.40    0.1
JMB   76.87 326 eP         43 48.00    0.5
PTJ   76.89 335 iPc        43 47.80    0.1
VITF  76.89 342 P          43 47.81    0.3
FVI   77.02 337 Pc         43 48.20    0.0
HAU   77.03 342 iPc        43 48.30    0.0
      0.6s    49.40nm              5.7mb
MOF   77.03 342 P          43 48.34   -0.1
BSF   77.11 342 P          43 48.86    0.0
LJU   77.12 336 e(P)       43 48.50   -0.3
ZLA   77.13 341 iPd        43 49.50    0.5
SAX   77.16 340 iPd        43 50.20    0.8
OGA   77.16 339 iPc        43 50.40    1.1
      0.9s    49.00nm              5.5mb
VOY   77.29 336 e(P)       43 49.20   -0.7
BBS   77.33 341 P          43 50.12    0.1
KOD   77.33 270 eP         43 50.50   -0.3
FLN   77.40 347 iPc        43 50.20   -0.1
      0.8s    51.00nm              5.6mb
CEY   77.43 336 ePc        43 50.45   -0.1
VBY   77.44 335 ePc        43 50.80    0.2
                    e      44 05.40   51kmX
LDF   77.52 347 iPc        43 51.00    0.0
      0.9s    24.20nm              5.2mb
OSS   77.53 339 iPc        43 52.20    0.9
LOMF  77.57 342 P          43 51.69    0.3
PGB   77.59 328 iPc        43 52.00    0.5
LLS   77.60 340 iPc        43 52.30    0.6
DIM   77.60 327 iPc        43 52.00    0.5
TRI   77.62 336 iPc        43 51.00   -0.5
CTI   77.80 338 Pc         43 52.40   -0.3
PLD   77.82 328 eP         43 52.00   -0.7
GRR   77.82 347 iPc        43 53.00    0.4
      0.9s    70.10nm              5.7mb
VDL   77.86 340 iPd        43 54.40    1.2
KDZ   77.99 327 iPd        43 54.00    0.3
LOR   78.19 344 iPc        43 55.00    0.3
      0.8s    50.30nm              5.6mb
LPF   78.20 347 iPc        43 55.20    0.5
      0.8s    40.20nm              5.5mb
TMA   78.35 340 iPc        43 56.30    0.5
RDO   78.40 327 iPc        43 56.00    0.1
LBF   78.44 343 iPc        43 56.20    0.1
      0.8s    17.40nm              5.1mb
SSF   78.45 344 iPc        43 56.40    0.3
      0.7s    29.10nm              5.4mb
MDI   78.48 339 Pc         43 56.10   -0.2
KKB   78.56 329 iP         43 58.00    1.2
MMK   78.59 340 iPc        43 58.30    1.1
MMB   78.60 328 iPc        43 57.00   -0.1
ALT   78.65 322 iP         43 57.20   -0.3
DIX   78.67 341 iPc        43 58.90    1.2
AVF   78.74 344 iPc        43 57.50   -0.2
SMF   78.79 343 iPc        43 57.80   -0.2
      0.9s    32.70nm              5.3mb
SKO   78.97 330 iPc        43 59.50    0.5
BCI   79.02 331 iP         44 00.00    0.7
BGF   79.05 344 iPc        43 59.90    0.5
      0.9s    28.50nm              5.3mb
VAY   79.21 329 iP         44 00.50    0.2
HVAR  79.30 334 iPc        43 59.80   -1.0
LSD   79.32 341 Pc         44 02.45    1.2
LPG   79.36 341 iPc        44 01.90    0.4
      1.0s    93.70nm              5.7mb
TCF   79.41 344 iPc        44 02.10    0.7
      0.8s    36.80nm              5.4mb
MAF   79.42 344 iPc        44 02.00    0.6
      0.7s    42.30nm              5.6mb
ASPA  79.47 204 iPc        44 02.70    0.8
MFF   79.47 346 iPc        44 02.40    0.7
      0.8s    32.20nm              5.4mb
PLDF  79.49 343 P          44 02.92    1.0
AGO   79.49 344 P          44 03.07    1.2
KHL   79.51 322 iP         44 01.50   -0.6
SDA   79.51 331 iPc        44 02.00    0.1
PHP   79.53 330 iPc        44 01.50   -0.5
LSF   79.56 345 iPc        44 02.90    0.7
      0.8s    42.90nm              5.5mb
RSP   79.59 341 P          44 02.34   -0.2
RSM   79.61 337 P          44 04.20    1.8
MME   79.77 338 Pc         44 05.30    1.7
PLG   79.79 328 iPc        44 03.00   -0.5

LACI  79.80 331 iPc        44 03.10   -0.4
PYM   79.80 344 P          44 04.57    1.0
BNI   79.80 341 Pc         44 05.00    1.3
PGD   79.84 337 P          44 05.90    2.0
PRK   79.85 325 iPc        44 03.00   -0.8
BCK   79.87 321 eP         44 02.40   -1.7
ARV   79.90 336 Pc         44 05.00    1.0
RRL   79.91 341 Pc         44 05.63    1.2
PCP   79.91 340 P          44 03.99   -0.2
BDI   79.92 338 P          44 04.90    0.7
TIR   80.02 331 iPc        44 04.70    0.0
PZZ   80.25 341 P          44 05.52   -0.5
LBL   80.26 343 P          44 07.13    1.2
ROB   80.29 340 Pc         44 06.04   -0.1
FIN   80.30 340 P          44 05.63   -0.6
KZN   80.39 329 iPc        44 06.00   -0.8
ENR   80.45 340 P          44 05.73   -1.3
IMI   80.65 340 Pc         44 08.09    0.0
ELL   80.75 321 eP         44 08.00   -0.8
CAF   80.76 344 eP         44 10.10    1.4
      0.8s    70.90nm              5.7mb
SBF   80.79 340 eP         44 09.60    0.7
      0.9s    36.00nm              5.4mb
NEO   80.83 327 eP         44 0B.00   -1.1
LSK   80.89 330 iPc        44 09.50    0.1
LFF   80.96 345 eP         44 11.00    1.4
YER   81.02 323 iP         44 10.00   -0.1
LPO   81.14 345 eP         44 11.90    1.3
      0.7s    35.20nm              5.5mb
AZI   81.20 335 Pc         44 11.70    0.8
SDI   81.36 335 Pc         44 12.00    0.1
LRG   81.40 341 eP         44 13.00    1.1
      1.0s    36.00nm              5.3mb
KSL   81.43 321 eP         44 11.00   -1.2
LMR   81.49 341 eP         44 13.30    0.9
      1.2s    55.90nm              5.5mb
KEK   81.54 330 eP         44 12.50   -0.2
ATH   81.87 326 eP         44 14.00   -0.4
VLS   82.70 329 eP         44 18.20   -0.6
KAP   82.83 323 eP         44 17.50   -2.0
EPF   82.89 345 eP         44 20.60    0.8
      1.0s    36.80nm              5.4mb
ITM   83.18 327 eP         44 20.20   -1.1
RYD   83.52 303 iPc        44 22.60   -0.7
NPS   83.65 324 eP         44 22.00   -1.8
WARB  83.85 210 iPd        44 26.00    1.3
      0.5s     7.00nm              5.1mb
OASM  83.93 306 iPc        44 24.80   -0.6
VAM   84.02 325 eP         44 24.70   -0.9
AYN   85.10 313 iPc        44 31.70    0.6
HOL   85.17 314 iPc        44 31.80    0.4
TOL   86.60 348 eP         44 39.50    1.0
BWA   87.47 189 eP         44 43.90    1.5
BNG  114.27 317 iPKPd      50 35.30   -0.1
      0.8s     4.00nm
                    ic     53 06.50
TIC  119.36 343 PKP        50 44.90   -0.1
KIC  119.59 342 PKP        50 45.20   -0.3
LIC  119.78 343 PKP        50 45.60   -0.2
ZOBO 127.69  64 ePKP       51 00.00   -1.7
LPB  127.91  65 PKP        51 03.00    1.1
CNCB 128.20  65 PKP        51 03.80    1.2
SPA  142.65 180 ePKPd      51 22.90   -4.6X
      0.9s    18.18nm
VAO  143.87  45 ePKP       51 29.30   -1.6
BMA  144.76  41 ePKP       51 31.30   -1 0
     S.D. = 0.9  on 233 of 242 obs.
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   JUL 08, 1989  10h 33m 07.87± 0.80s
    1.162 N ± 3.0km  121.476 E ± 4.2km
   DEPTH =  41.3 ±  7.2 km
    5.5mb ( 37 obs.)  5.1Msz ( 17 obs.)
MINAHASSA PENINSULA                (265)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 15S, 32C
      Centroid Location:
      Origin Time        10:33:10.0 0.2
      Lat  1.31N 0.04 Lon 121.77E 0.04
      Dep  39.7 2.3 Half-duration  2.9
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-4.88 0.20  Mtt= 0.46 0.17
        Mff= 4.42 0.32  Mrt=-0.23 0.30
        Mrf= 0.88 0.32  Mtf= 1.59 0.20
       Principal Axes:
        T  Val=  5.04  Plg= 4  Azm=289
        N       -0.05       6      199

        P       -4.99      83       56
   Best Double Couple:Mo=5.0*10**17
    NP1:Strike= 25 Dip=41 Slip= -81
    NP2:       194     50       -98

PCI    2.63 219 iPd      33 51.00   2.2
                  i(S)   34 15.50
MKS    6.65 198 Pc       34 47.50   1.9
KKM    7.15 313 iPc      34 51.20  -1.5
       0.7s   603.90nm            6.6mb X
                  i      34 56.50
DAV    7.17  35 eP       34 52.20  -0.7
KHKI  11.12 212 ePd      35 47.50   0.1
                  e      42 03.00
OCP   13.39 358 eP       36 03.00 -14.8X
BAG   15.18 357 eP       36 41.00  -0.3
                  eS     39 38.00
MTN   16.90 146 iPc      37 03.50   0.5
KGM   18.17 273 eP       37 22.00   3.1X
KNA   18.28 157 iPd      37 20.30   0.0
       0.5s   198.00nm            5.5mb
IPM   20.70 280 ePd      37 46.20  -1.1
       1.2s   162.30nm            5.3mb
QIZ   21.10 328 Pd       37 51.00  -0.4
    N  12s     2.20um
    E  15s     2.90um
                  PP     38 19.00
                  sS     41 48.00
SNG   21.64 287 eP       37 56.30  -0.4
       1.2s   259.38nm            5.5mb
                  eS     41 52.80
HKC   22.18 342 P        38 02.90   0.8
                  S      42 10.00
MBL   22.24 184 eP       38 02.00  -0.7
       0.9s   179.00nm            5.5mb
GZH   23.18 341 eP       38 11.00  -0.9
    Z  16s     4.20um            5.0MszX
    N  13s     3.60um
    E  12s     2.90um
                  sS     42 29.00
QZH   23.81 354 Pd       38 18.00   0.1
       8.0s     2.10nm            2.7mb X
    Z  18s     3.30um            4.8Msz
    N  13s     2.10um
                  pP     38 24.00  21kmX
ANP   23.88   0 eP       38 22.00   3.2X
NANU  24.28 193 eP       38 22.00  -0.6
NNT   24.36 299 iPc      38 24.30   0.9
WB5   24.44 149 iPd      38 23.10  -1.1
                  eS     42 40.00
WRA   24.48 150 Pd       38 24.50   0.0
       0.6s   104.50nm            5.6mb
NST   25.52 306 eP       38 36.60   2.2
GUMO  26.24  61 eP       38 39.80  -1.3
GUA   26.25  61 eP       38 39.70  -1.6
LAT   26.63 107 eP       38 45.50   0.7
ASPA  27.48 155 iPc      38 51.20  -1.2
       0.6s   168.00nm            5.9mb
    Z  19s     9.00um            5.4Msz
                  eS     43 30.20
                  LR     50 56.20
WARB  27.64 170 eP       38 52.40  -1.5
       0.5s    29.00nm            5.2mb
PMG   27.65 113 eP       38 54.00   0.0
MEKA  27.76 186 iPc      38 53.80  -1.1
       0.4s    40.00nm            5.4mb
QIS   27.95 142 iPd      38 55.40  -1.3
       0.5s    98.00nm            5.7mb
CHTO  28.21 310 eP       38 59.70   0.6
GYA   28.91 332 P        39 05.00  -0.4
    N  15s     2.60um
    E  15s     2.60um
                  PP     40 02.00
                  sS     44 06.00
SSE   29.77 360 P-       39 13.00   0.1
       1.5s    61.00nm            5.1mb
    Z  20s     2.00um            4.7Msz
    N  16s     2.40um
    E  16s     1.50um
                  S      44 14.00
                  SS     46 08.00
KMI   29.91 324 Pd       39 15.00   0.4
       9.0s     1.30nm            2.7mb X
    Z  18s     4.30um            5.1Msz
    N  16s     2.90um
                  PP     40 23.00
                  S      44 07.00
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08d .10h

				sS	44	40.00					E	15s	1.10um										
WHN		29.99	348	P	39	16.00	1.1						ScP	46	31.00								
	Z	18s		7.29um			5.4Msz		YAMJ		40.59	23	eP	40	45.40	0.2							
	N	16s		5.00um					BTO		40.61	347	P	40	45.00	-0.5							
	E	16s		1.71um						Z	16s		3.10um			5.3MszX							
				pP	39	26.00	35kmX			N	16s		3.70um										
				PP	40	15.00				E	19s		2.40um										
				S	44	15.00							pP	40	51.00	20kmX							
MRWA		30.66	189	eP	39	19.20	-1.6						PP	42	26.00								
		0.4s		11.00nm			5.0mb						sS	47	06.50								
NJ2		30.82	356	Pd	39	23.40	1.2		BRS		41.38	136	iPc	40	52.30	0.4							
	Z	20s		4.30um			5.1Msz		CN2		42.60	4	iPd	41	01.00	-0.7							
	N	11s		2.10um							7.0s		0.80nm			2.6mb X							
	E	10s		0.70um						Z	20s		2.40um			5.1Msz							
				S	44	29.00				N	14s		1.40um										
RAB		31.13	100	eP	39	28.00	2.8						epP	41	11.00	34kmX							
COOL		31.87	181	eP	39	31.00	-0.5						ePP	42	46.00								
BAL		31.92	188	eP	39	30.20	-1.7						sS	47	34.00								
CTA		32.19	132	iPd	39	34.00	-0.4		COO		42.83	140	eP	41	05.00	1.2							
		1.1s		72.15nm			5.5mb		GTA		42.90	335	iPd	41	05.60	1.3							
				iS	44	44.00					1.2s		0.10nm			2.4mb X							
FORR		32.45	169	eP	39	33.20	-3.3X			Z	16s		2.30um			5.2MszX							
		0.4s		34.00nm			5.6mb			E	15s		2.10um										
KLB		32.76	186	eP	39	37.00	-2.2						pP	41	11.50	20kmX							
CD2		34.02	332	P	39	49.80	-0.4						PP	42	48.00								
	Z	16s		2.20um			5.0MszX						S	47	28.00								
	E	14s		3.40um									sS	47	40.00								
				pP	39	56.50	23kmX		BWA		43.49	147	eP	41	10.90	1.8							
				PP	41	05.00			MDJ		43.86	8	Pd	41	12.00	0.1							
				S	45	13.00				Z	20s		5.30um			5.4Msz							
NWAO		34.14	186	eP	39	50.00	-1.1						epP	41	18.00	20kmX							
	Z	18s		2.10um			4.9Msz						S	47	36.00								
	N	18s		2.00um					CAN		44.48	147	eP	41	17.50	0.4							
	E	18s		2.30um					TOO		44.49	153	iPc	41	18.00	0.9							
XAN		34.75	342	P	39	55.70	-0.8		KOD		44.66	283	eP	41	20.50	1.4							
	N	15s		4.60um									eS	47	56.00								
				S	45	30.50			CNB		44.67	147	ePd	41	19.50	0.8							
SHK		34.81	16	eP	39	56.10	-0.8		MRRJ		44.69	21	eP	41	18.40	-0.2							
TIA		35.11	354	Pd	39	59.00	-0.4		HYB		45.17	294	iPd	41	23.00	0.1							
	N	15s		1.40um							0.8s		50.00nm			5.4mb							
	E	12s		0.80um									eS	48	04.00								
				S	45	28.10			GBA		45.29	288	Pc	41	23.00	-0.8							
RKG		35.30	186	eP	40	05.00	4.0X				1.4s		61.50nm			5.3mb							
TIY		37.31	348	iPc	40	19.00	0.9		DZM		49.56	121	iPc	41	58.00	0.7							
	Z	18s		4.10um			5.3Msz		TAU		49.65	155	eP	41	58.00	0.5							
	N	14s		2.20um					POO		49.78	293	iPd	42	02.50	3.5X							
				PP	41	47.50							iS	49	10.00								
				S	46	09.00			NDI		50.30	307	eP	42	01.50	-1.2							
SHL		37.45	313	iP	40	15.50	-4.0X						eS	49	14.00								
DL2		37.56	0	P	40	20.00	0.0		WMO		52.02	329	Pd	42	15.70	0.1							
	Z	18s		2.00um			5.0Msz			Z	18s		1.80um			5.1Msz							
	N	18s		3.60um									S	49	42.00								
	E	18s		1.80um									ScS	52	00.50								
				eS	46	09.00			KSH		56.27	318	Pd	42	48.00	1.1							
STK		37.99	152	iPd	40	23.60	-0.2			E	14s		1.50um										
		0.6s		46.00nm			5.5mb						pP	42	55.00	23kmX							
RMQ		38.05	138	eP	40	24.00	-0.4						sS	50	42.00								
LZH		38.41	337	Pc	40	28.00	0.6		SVA		59.21	112	eP	43	11.50	3.8X							
	Z	16s		3.70um			5.3MszX		MSZ		61.48	144	P	43	23.00	0.3							
	E	14s		1.60um					KRP		63.15	134	P	43	35.00	1.0							
				PP	41	56.00			TCW		63.72	138	P	43	36.60	-1.1							
				eS	46	20.00			KIW		63.99	137	P	43	38.40	-1.1							
				sS	46	42.00			MRW		64.01	138	P	43	38.30	-1.3							
MAT		38.46	22	iPd	40	26.00	-1.7		SNZO		64.05	138	P	43	38.70	-1.1							
		1.5s		236.11nm			5.8mb						S	52	12.00								
	Z	20s		2.48um			5.0Msz						SS	56	32.00								
				eS	46	17.00							SSS	59	48.00								
BJI		39.00	354	eP	40	32.00	0.0		CAW		64.20	138	P	43	39.50	-1.4							
		8.0s		1.06nm			2.7mb X		MOW		64.46	138	P	43	41.30	-1.3							
	Z	16s		2.64um			5.2MszX		MTW		64.52	137	P	43	41.40	-1.5							
	N	12s		0.67um					BLW		64.59	138	P	43	42.20	-1.2							
				PP	42	07.00			PGZ		64.81	137	eP	43	42.60	-2.2							
				eS	46	32.00					0.5s		38.00nm			5.7mb							
ADE		39.40	157	iPc	40	35.90	0.4		HBZ		65.02	133	P	43	46.00	-0.2							
		0.9s		117.65nm			5.7mb		MAIO		66.97	309	iPd	43	59.30	0.4							
LSA		40.47	317	eP	40	47.40	2.5						eS	52	52.00								
	N	13s		0.48um					KHI		67.05	307	eP	43	59.20	-0.4							
	E	16s		0.79um					TAB		77.61	309	eP-	45	03.00	1.1							
				pP	40	53.50	21kmX		SLY		77.93	306	ePc	45	02.00	-1.5							
HHC		40.51	348	iPd	40	46.00	1.3						e	48	02.00								
	Z	19s		4.00um			5.3Msz						eS	55	03.00								
	N	16s		1.10um					BHD		78.57	304	ePd	45	06.00	-1.1							
				PP	42	24.00							eS	55	03.00								
				S	46	56.00			MAW		79.57	199	eP	45	11.00	-0.8							
SNY		40.53	2	iPd	40	44.80	0.2		MSL		79.91	307	ePc	45	14.00	-0.4							
	Z	19s		3.60um			5.2Msz						eS	55	25.00								
	N	12s		0.90um					SDN		82.24	34	eP	45	25.80	-0.3							
SBA		82.57	171	(P)d	45	29.80	2.4																
AAE		82.62	279	eP	45	28.50	-0.8																
NAI		84.70	269	iPc	45	41.50	1.7																
AYN		85.48	299	ePd	45	44.10	1.0																
TTA		85.55	27	eP	45	43.40	0.5																
KVT		85.79	311	iP	45	44.50	0.0																
BHL		85.89	304	P	45	44.00	-1.2																
				PP	49	06.00																	
				SKS	56	10.00																	
BRW		86.26	19	eP	45	47.70	1.5																
HOL		86.32	299	ePd	45	48.10	0.8																
IMA		86.85	24	eP	45	49.90	0.6																
		1.7s		32.40nm			5.3mb																
BBTK		88.27	310	eP	45	50.00	-6.7X																
PMR		88.70	29	eP	45	57.20	-0.8																
		1.5s		34.70nm			5.4mb																
AFR		89.15	107	eP	46	03.00	2.0																
		1.2s		55.00nm			5.8mb																
FBA		89.27	25	P	45	59.70	-1.0																
PAE		89.34	108	eP	46	04.00	2.1																
		1.2s		25.00nm			5.4mb																
PPT		89.34	107	eP	46	04.00	2.0																
		1.2s		30.00nm			5.5mb																
	Z	20s		0.60um			5.0Msz																
PPN		89.48	107	eP	46	05.00	2.4																
		1.2s		30.00nm			5.5mb																
TVO		89.66	108	eP	46	08.00	4.5X																
		1.2s		50.00nm			5.7mb																
PTZ		90.41	256	iPc	46	07.00	-0.1																
SOD		90.81	337	iP	46	07.20	-0.6																
PMO		90.90	105	iP	46	12.30	3.1X																
		1.2s		40.00nm			5.7mb																
SPA		91.15	180	e(P)	46	09.00	-0.6																
		1.0s		10.00nm			5.2mb																
VAH		91.16	105	iP	46	13.20	2.8																
		1.2s		25.00nm			5.5mb																
TPT		91.17	105	iP	46	13.60	3.2X																
		1.2s		30.00nm			5.6mb																
RUV		91.40	105	iP	46	14.50	3.0X																
		1.2s		15.00nm			5.3mb																
SUF		91.43	333	iP	46	09.50	-1.2																
		0.5s		7.20nm			5.3mb																
KRI		92.11	253	iPc	46	15.80	0.8																
				iPP	49	54.00																	
NUR		92.37	331	eP	46	17.00	1.9																
KBS		92.58	349	eP	46	15.40	-0.4																
MZZ		92.77	259	iPc	46	18.00	0.0																
		2.0s		1.00nm			3.9mb X																
BUL		93.08	250	iPd	46	18.70	-0.7																
LSZ		93.47	255	iPc	46	21.00	-0.2																
				i	50	05.20																	
PRY		94.09	243	eP	46	23.50	-0.5																
		0.9s		11.54nm			5.3mb																
INK		94.45	21	iPd	46	23.70	-0.8																
MBC		95.57	12	eP	46	29.50	-0.1																
		1.5s		23.00nm			5.4mb																
KMZ		95.76	257	iPd	46	32.00	0.3																
				e	50	22.00																	
ALE		96.38	1	eP	46	33.00	-0.2																
HFS		97.78	331	eP	46	37.40	-2.4																
		1.2s		20.60nm			5.5mb																
NRA0		98.62	332	P	46	41.90	-1.7																
KSP		98.65	322	eP	46	44.00	0.0																
NB2		98.68	332	P	46	41.80	-2.2																
DAG		99.06	351	iPd	46	43.90	-1.5																
		1.4s		62.79nm			6.0mb																
BRG		100.09	322	ePdiff	46	49.50	-1.0																
		1.0s		10.00nm			5.3mb																
CLL		100.55	323	ePdiff	46	52.00	-0.6																
MOX		101.58	322	ePdiff	47	00.00	2.8X																
	Z	18s		1.00um			5.4Msz																
WLF		105.22	323	ePKP	51	39.40	11.9X																
BSF		105.45	321	ePKP	51	41.00	12.7X																
HAU		105.68	321	ePKP	51	42.70	14.1X																
DOU		106.01	323	ePKP	51	42.00	12.9X																
KVN		112.43	47	PKP	51	42.00	0.1																
TNP		113.43	47	PKP	51	46.80	3.0X																
FFC		113.87	26	ePKP	51	43.00	-0.9																
		1.4s		25.00nm																			
BW06		116.70	40	PKP	51	50.00	0.0																
MSU		116.90	45	PKP	51	51.70	1.2																
RSSD		119.38	36	PKP	51	54.10	-0.9																
RSON		120.16	25	PKP	51	55.00	-1.0																
GOL		120.98	41	PKP	51	58.50	0.2																
ALO		122.60	46	ePKP	52	02.30	0.9																
		1.5s		14.58nm																			
				e	52	12.50																	

		e	52 43.20			
SCH	123.80	6	ePKP	52 03.00	0.1	
MEO	128.20	42	iPKPc	52 11.80	-0.2	
SIO	129.13	40	ePKP	52 13.90	0.2	
TUL	129.36	39	ePKP	52 13.90	-0.2	
	1.4s	16.10nm				
RLO	129.68	39	ePKP	52 14.80	0.0	
UYO	131.30	40	iPKPd	52 17.80	-0.1	
LNV	145.22	161	ePKP	52 47.00	3.8X	
TACH	145.65	161	ePKP	52 44.00	-0.1	
PCH	145.81	162	ePKP	52 45.40	1.0	
IHA	145.99	160	ePKP	52 46.00	1.4	
FCH	146.15	162	ePKP	52 47.00	1.7	
PEL	146.20	161	iPKPc	52 45.90	0.9	
ROCH	146.25	161	ePKPd	52 46.00	0.6	
MRA	148.19	168	ePKP	52 49.00	0.9	
RTLL	148.55	164	e(PKP)	52 48.50	-0.4	
CYA	151.99	166	e(PKP)	52 55.10	1.0	
VAO	155.56	206	e(PKP)	52 57.50	-1.7	
SLA	155.62	164	e(PKP)	53 04.20	4.8X	
NNA	158.89	121	ePKP	53 05.00	1.6	
	1.0s	14.00nm				
SOB1	160.72	245	ePKP	53 04.20	-1.2	
		e	53 47.80			
CNCB	161.88	150	PKP	53 09.80	2.7X	
LPB	162.05	149	PKP	53 10.00	2.9X	
	1.2s	78.13nm				
		LR	50 26.00			
CCH	162.22	156	PKP	53 09.20	2.1	
ZOBO	162.26	148	PKPd	53 09.20	1.7	
	1.7s	161.34nm				
		LR	24 36.00			
ATB	173.36	251	PKPd	53 14.50	0.0	
	S.D. = 1.1	on 164 of 187 obs.				

JUL 08, 1989 10h 56m 54.17± 0.20s
52.654 N ± 3.7km 164.053 W ± 2.7km
DEPTH = 33.0km (normal)
5.1mb (54 obs.) 5.0Msz (3 obs.)
SOUTH OF ALASKA (17)

SNKA	1.98	22	iPd	57 26.60	0.7
			eS	57 49.50	
DRRA	2.50	24	iPd	57 33.82	0.4
BALA	2.65	16	eP	57 37.83	2.3
DLG	2.82	27	eP	57 38.42	0.6
			eS	58 09.97	
PS4	3.00	25	iPd	57 41.86	1.4
PVV	3.03	25	ePd	57 42.39	1.4
			eS	58 16.16	
SOF	3.30	37	ePd	57 45.35	0.7
			eS	58 20.99	
NGI	3.36	43	eP	57 45.50	-0.1
			eS	58 21.82	
SASA	3.41	37	ePc	57 47.14	0.8
			eS	58 24.06	
SDN	3.41	37	iPd	57 47.20	0.9
CNBA	3.43	49	eP	57 46.56	0.0
			eS	58 22.71	
SGB	3.59	35	iPd	57 49.38	0.6
			eS	58 27.94	
BKJ	3.65	45	ePd	57 49.47	-0.2
			eS	58 28.70	
IVF	4.19	37	iPd	57 57.88	0.5
			eS	58 42.97	
ADK	7.79	269	ePd	58 50.00	2.0
KDC	8.35	48	eP	58 53.20	-2.5X
SVW	9.64	25	eP	59 12.60	-1.0
TTA	11.15	19	eP	59 33.00	-1.3
PMS	11.67	37	eP	59 38.30	-2.9X
PWA	11.83	35	eP	59 39.60	-3.7X
MID	11.98	49	eP	59 43.70	-1.7
PMR	12.05	36	eP	59 42.20	-4.1X
	0.7s	42.90nm		5.7mb	
TOA	13.47	38	eP	00 02.20	-3.0X
IMA	14.42	17	ePd	00 16.80	-1.0
	0.8s	15.40nm		4.6mb	
FBA	14.82	28	e(P)	00 19.70	-3.2X
HYT	16.60	50	P	00 46.90	1.1
BRW	19.00	7	eP	01 14.60	-0.6
INK	21.37	31	eP	01 44.00	3.7X
	0.9s	85.00nm		5.2mb	
			pP	01 54.00	38kmX
YKA	27.59	50	P	02 40.60	0.7
YKC	27.66	50	eP	02 40.00	-0.4
PNT	27.84	79	eP	02 43.00	0.8
MBC	29.12	20	ePd	02 54.40	1.0
	0.9s	26.00nm		4.9mb	
			pP	03 13.00	80kmX
EDM	30.04	68	iPd	03 01.70	-0.3
SES	32.45	72	eP	03 22.00	-1.1
CMB	33.43	98	eP	03 32.60	0.8
LRM	33.75	81	eP	03 34.60	-0.2
KVN	34.17	95	eP	03 39.00	0.6
HPI	34.48	84	eP	03 42.00	0.9
FRI	34.52	99	e(P)	03 42.50	1.4
TNP	35.32	95	eP	03 48.90	0.7
IMW	35.68	82	eP	03 52.00	0.6
FFC	35.76	61	eP	03 50.50	-1.1
	0.7s	9.00nm		4.8mb	
ISA	36.15	100	eP	03 56.00	0.9
DUG	36.68	89	eP	04 00.50	0.8
SBB	37.20	100	eP	04 05.00	1.1
DAU	37.50	87	eP	04 06.50	-0.2
RVR	37.95	101	eP	04 10.00	-0.1
MSU	38.11	91	eP	04 12.90	1.1
TPC	38.66	99	eP	04 17.00	0.8
PLM	38.70	101	eP	04 17.00	0.3
BAR	39.28	101	eP	04 23.00	1.6
ALE	39.65	12	eP	04 24.00	0.1
	0.6s	5.00nm		4.5mb	
GOL	41.51	84	eP	04 40.40	0.5
	0.6s	16.98nm		5.0mb	
GLD	41.57	84	eP	04 41.40	1.1
	1.0s	32.50nm		5.0mb	
RSON	41.99	63	eP	04 42.40	-1.0
	0.9s	25.56nm		5.0mb	
ALQ	43.92	90	eP	05 00.00	0.5
	1.0s	5.25nm		4.3mb	
			e	05 08.90	
			e	06 44.50	
			e	06 47.50	
CN2	46.04	289	iPc	05 16.00	-0.1
			sP	05 35.00	
FRB	46.82	37	eP	05 21.00	-1.0
	0.7s	42.00nm		5.5mb	
SNY	48.33	288	iPd	05 35.40	1.3
MEO	48.81	84	iPd	05 37.30	-0.7
DAG	48.98	10	iPc	05 37.90	-0.7
	0.6s	30.67nm		5.5mb	
SIO	49.54	82	e(P)	05 42.30	-1.2
TUL	49.74	81	iPd	05 43.90	-1.2
	0.8s	15.10nm		5.1mb	
			e	05 55.20	
			e	06 00.30	
RLO	50.03	80	iPd	05 45.90	-1.4
			e	06 03.60	
FVM	51.56	75	eP	05 56.30	-2.6
UYO	51.73	82	iPd	05 58.80	-1.4
OLY	52.61	78	eP	06 03.60	-3.2X
SCH	52.98	46	eP	06 08.00	-1.4
BJI	53.76	290	eP	06 15.00	-0.1
GAC	54.81	59	eP	06 20.50	-2.3
TIA	55.81	286	Pd	06 29.70	-0.5
HHC	55.81	294	P	06 30.40	0.1
BTO	56.84	295	P	06 37.50	-0.2
SSE	56.98	279	Pc	06 39.00	0.4
	1.5s	0.97nm		3.6mb X	
			pP	06 50.20	38kmX
TIY	57.48	291	Pc	06 42.80	0.6
KEV	57.64	355	eP	06 41.00	-1.8
NJ2	57.70	282	Pd	06 43.00	-0.7
BLA	57.90	70	eP	06 42.90	-2.2
	0.7s	7.50nm		4.9mb	
CVL	58.47	68	eP	06 47.30	-1.7
SOD	60.03	355	iP	06 48.30	-11.1X
WHN	61.46	284	Pd	07 09.50	-0.1
XAN	62.09	290	P	07 13.40	-0.5
GTA	63.19	300	Pc	07 20.40	-0.8
	2.0s	0.14nm		2.7mb X	
LZH	63.45	295	Pd	07 22.00	-1.0
SUF	64.69	355	iP	07 29.50	-1.0
	0.4s	7.80nm		5.2mb	
WMQ	65.85	311	Pd	07 38.00	-0.3
NB2	66.59	3	P	07 41.60	-1.1
NRA0	66.91	2	P	07 43.70	-1.0
NUR	66.97	355	eP	07 44.00	-1.1
Z	19s	1.20um		5.1Msz	
			LR	35 40.00	
CD2	67.34	291	P	07 47.80	-0.1
HFS	67.55	1	eP	07 47.20	-1.5
	0.5s	15.10nm		5.3mb	
UPP	67.83	359	iP	07 49.40	-1.1
GYA	69.01	286	P	07 58.40	0.0
EKA	71.22	11	Pd	08 11.40	0.1
	0.8s	12.60nm		5.0mb	
KMI	72.31	288	Pd-	08 18.50	0.0
PMG	74.50	230	eP	08 31.00	0.0
	1.1s	81.01nm		5.6mb	
WIT	74.62	6	eP	08 33.00	1.8
LSA	75.19	300	Pd	08 37.00	1.4
WTS	75.44	6	eP	08 32.50	-3.5X
	0.8s	18.00nm		5.1mb	
CLL	76.38	2	eP	08 41.00	-0.3
ENN	76.61	7	eP	08 42.50	-0.1
	1.0s	41.00nm		5.4mb	
SNF	76.74	8	P	08 42.70	-0.6
MEM	76.77	6	P	08 43.40	-0.1
BRG	76.83	1	iP	08 43.40	-0.4
	1.3s	22.00nm		5.0mb	
			e	09 09.00	
KSP	76.88	360	iPd	08 44.10	0.0
MOX	77.01	3	eP	08 44.50	-0.4
	1.2s	37.00nm		5.3mb	
DOU	77.18	7	P	08 46.30	0.6
ABH	77.59	6	ePc	08 47.92	-0.2
WLF	77.72	6	P	08 47.00	-1.7
RUP	77.74	6	eP	08 49.02	0.1
TOD	77.94	5	eP	08 50.29	0.3
GRF	77.95	3	eP	08 50.70	0.6
	1.3s	51.00nm		5.4mb	
Z	20s	0.30um		4.6Msz	
FLN	78.00	11	eP	08 50.00	-0.3
	0.9s	6.50nm		4.7mb	
KTD	78.18	5	eP	08 51.49	0.1
LDF	78.21	11	eP	08 51.20	-0.3
	0.8s	6.40nm		4.7mb	
GRR	78.32	11	eP	08 51.90	-0.2
	1.0s	12.00nm		4.9mb	
SPC	78.47	357	eP	08 53.70	0.6
WET	78.54	2	iPc	08 53.80	0.5
	1.3s	28.00nm		5.1mb	
LPF	78.65	12	eP	08 53.80	-0.1
	1.1s	24.40nm		5.1mb	
CDF	79.04	6	eP	08 56.50	0.3
	1.0s	9.60nm		4.8mb	
HAU	79.39	7	eP	08 57.90	0.0
	0.9s	13.10nm		4.9mb	
ZST	79.52	359	e(P)	08 59.40	0.8
Z	18s	0.90um		5.2Msz	
BSF	79.59	6	eP	08 59.20	0.1
	1.0s	12.00nm		4.8mb	
FEL	79.62	5	iPc	08 58.88	-0.5
LOR	79.92	8	eP	09 00.80	0.0
	1.0s	22.00nm		5.1mb	
BHG	79.97	2	iPd	09 02.10	1.0
	1.0s	18.00nm		5.0mb	
SSF	80.10	9	eP	09 01.70	0.0
	1.0s	28.00nm		5.2mb	
MFF	80.17	11	eP	09 02.20	0.1
	0.8s	21.40nm		5.2mb	
LBF	80.21	8	eP	09 02.00	-0.4
	1.0s	16.00nm		5.0mb	
AVF	80.35	9	eP	09 03.00	-0.1
	1.0s	24.00nm		5.1mb	
BGF	80.53	9	eP	09 04.00	-0.1
	1.0s	18.00nm		5.0mb	
SMF	80.54	8	eP	09 04.20	0.1
	1.0s	26.00nm		5.2mb	
KBA	80.62	2	iPd	09 05.00	0.2
	1.1s	35.10nm		5.3mb	
			i	09 06.10	
			i	09 21.20	
LSF	80.70	10	eP	09 04.70	-0.3
	1.0s	34.00nm		5.3mb	
TCF	80.74	10	eP	09 05.00	-0.2
	1.2s	23.80nm		5.1mb	
MAF	80.84	9	eP	09 05.80	0.1
	0.9s	11.40nm		4.9mb	
OSS	80.91	4	ePd	09 07.20	0.9
TMA	81.43	5	ePd	09 09.50	0.5
MMK	81.44	6	ePd	09 10.60	1.5
RJF	81.64	10	eP	09 09.80	-0.1
	0.8s	5.30nm		4.6mb	
VOY	81.68	1	e(P)	09 09.50	-0.7
LPG	81.91	7	eP	09 12.70	1.0
	1.1s	12.20nm		4.8mb	
LFF	81.91	11	eP	09 11.40	0.1
	0.8s	19.80nm		5.2mb	
LSD	81.98	6	P	09 13.10	1
CEY	81.98	1	eP	09 12.00	0.

08d 11h

CAF	82.07	10	eP	09	12.60	0.4
	0.8s	8.00nm			4.8mb	
LPO	82.21	11	eP	09	12.80	-0.1
	1.2s	23.80nm			5.1mb	
VBY	82.22	0	eP	09	13.10	0.2
RSP	82.29	6	P	09	14.02	0.6
RRL	82.49	7	P	09	16.18	1.6
PZZ	82.92	6	P	09	17.31	0.6
PCP	82.97	5	P	09	16.38	-0.5
ROB	83.18	6	P	09	17.61	-0.4
ENR	83.22	6	P	09	17.51	-0.7
FIN	83.29	6	P	09	18.23	-0.3
IMI	83.56	6	P	09	18.84	-1.1
SBF	83.58	6	eP	09	20.80	0.8
	1.2s	35.70nm			5.4mb	
MAIO	83.64	326	iPc	09	32.10	11.6X
			e	12	30.00	
FRF	83.83	7	eP	09	21.90	0.7
	1.0s	24.00nm			5.3mb	
LRG	83.91	7	eP	09	22.40	0.8
	1.1s	39.00nm			5.5mb	
CVF	84.96	5	eP	09	27.30	0.4
	1.0s	36.00nm			5.5mb	
SKO	85.63	356	iPc	09	30.80	0.5
	1.1s	90.00nm			5.9mb	
VAY	86.23	355	iP	09	34.40	1.2
RMQ	88.90	221	eP	09	47.00	0.9
GBA	95.59	301	Pd	10	15.70	-1.7
	0.9s	6.60nm			5.1mb	
BNG	123.08	357	iPKPd	15	48.00	-0.8
	0.5s	8.00nm				
BUL	146.09	338	iPKPd	16	31.10	-0.4
			ipPKP	16	44.00	
PRY	152.89	337	ePKP	16	45.20	3.5X
	0.9s	11.54nm				
	S.D. = 0.9	on	156	of	168	obs.

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* JUL 08, 1989 11h 10m 30.89± 0.96s
59.718 N ± 8.7km 152.767 W ±10.8km
DEPTH = 33.0km (normal)
SOUTHERN ALASKA (2)
ML 3.0 (PMR).

KDC	1.98	176	iP	11	02.50	-0.2
SVW	1.99	316	iP	11	03.70	0.8
PMS	2.21	45	iP	11	06.90	1.0
PWA	2.40	35	ePd	11	09.60	0.9
PMR	2.60	42	eP	11	11.10	-0.3
TTA	3.58	336	eP	11	25.00	-0.5
FBA	5.69	22	eP	11	53.70	-1.6
	S.D. = 1.2	on	7	of	7	obs.

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* JUL 08, 1989 11h 23m 42.15± 0.90s
27.656 S ±10.8km 67.446 W ±12.8km
DEPTH = 172.0 ± 13.8 km
CATAMARCA PROVINCE, ARGENTINA (130)

CYA	1.66	119	iPd	24	14.60	-0.8
SLA	3.40	31	ePd	24	36.40	0.3
RTLL	3.77	193	e(P)	24	41.00	0.3
			S	25	27.00	
RTCB	3.99	197	iPc	24	44.20	0.5
RTCV	4.30	192	iPd	24	48.00	0.5
			S	25	37.40	
RTBS	4.36	203	e(P)	24	49.00	0.8
			S	25	39 40	
MRA	4.97	163	ePc	24	56.50	0.2
ROCH	6.13	209	eP	25	11.00	-0.8
PEL	6.14	206	eP	25	12.00	0.2
			i(S)	26	23.00	
TACH	6.69	206	eP	25	13.00	-6.0X
LNV	7.14	208	iPc	25	23.70	-1.3
			iS	26	40.40	
VAO	19.08	81	e(P)	27	54.00	0.1
	S.D. = 0.8	on	11	of	12	obs.

? JUL 08, 1989 11h 25m 51.68± 4.59s
35.024 N ±31.1km 138.877 E ±40.9km
DEPTH = 5.0km (geophysicist)
HONSHU, JAPAN (227)

MAT	1.61	340	iPd	26	21.10	0.3
			iS	26	42.90	
NIIJ	2.21	3	P	26	29.40	-0.2
			S	26	59.50	
TSRJ	2.42	283	P	26	36.00	3.4X
			S	27	09.90	
WKYJ	2.82	254	P	26	38.20	-0.2
			S	27	13.80	
TKSJ	4.12	257	eP	26	57.10	0.5
YONJ	4.44	274	eP	27	00.90	-0.4
	S.D. = 0.5	on	5	of	6	obs.

JUL 08, 1989 11h 35m 15.23± 0.96s
34.770 N ± 8.6km 139.331 E ± 9.0km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

MAT	1.99	333	iPd	35	49.20	-0.7
			iS	36	10.60	
NIIJ	2.48	354	eP	35	56.70	-0.2
			S	36	28.90	
WKYJ	3.14	261	P	36	06.50	0.2
			S	36	41.70	
YAMJ	3.44	9	eP	36	11.10	0.5
TKSJ	4.44	261	eP	36	25.40	0.6
OFUJ	4.69	23	eP	36	28.80	0.5
			eS	37	23.20	
YONJ	4.84	277	P	36	29.70	-0.7
SHK	5.49	269	eP	36	40.50	0.8
BJI	19.11	293	eP	39	41.00	-0.4
WB5	54.55	186	eP	44	46.00	-0.6
	S.D. = 0.7	on	10	of	10	obs.

% JUL 08, 1989 12h 05m 24.90± 1.61s
12.994 S ± 8.7km 75.832 W ±20.4km
DEPTH = 33.0km (normal)
PERU (116)

PT02	0.59	275	eP	05	37.20	0.3
			eS	05	49.10	
PT06	0.96	210	eP	05	41.80	-0.3
			eS	05	57.20	
PT03	0.99	178	eP	05	42.70	0.2
			eS	05	58.70	
PT08	1.24	326	eP	05	46.50	0.1
			eS	06	04.50	
NNA	1.40	315	iPd	05	48.50	0.1
	0.5s	44.37nm				
			iS	06	06.00	
PT10	1.44	309	eP	05	48.50	-0.4
			eS	06	08.20	
	S.D. = 0.4	on	6	of	6	obs.

JUL 08, 1989 12h 22m 58.42± 0.28s
44.856 N ± 2.3km 7.747 E ± 3.2km
DEPTH = 23.4 ± 4.0 km
NORTHERN ITALY (545)
ML 2.8 (LDG), 2.7 (GEN).

RSP	0.46	311	P	23	08.66	0.7
			S	23	14.87	
DOI	0.50	226	Pd	23	09.00	0.4
			eSg	23	16.40	
ROB	0.57	171	P	23	10.66	0.9
			S	23	17.77	
CKI	0.57	138	Pc	23	10.60	0.8
			eSg	23	18.90	
PZZ	0.58	233	P	23	09.95	0.0
			S	23	16.84	
PCP	0.65	119	P	23	11.64	0.6
			S	23	19.99	
ENR	0.67	201	P	23	11.48	0.0
			S	23	19.66	
RRL	0.69	276	P	23	12.73	0.9
			S	23	21.36	
FIN	0.73	153	P	23	12.62	0.3
			S	23	21.14	
LSD	0.73	325	P	23	12.94	0.3
			S	23	22.25	
FOUF	0.76	245	iPg	23	13.06	0.2
			e(Sg)	23	22.56	
BNI	0.79	285	P	23	14.40	1.0
			eSn	23	24.80	
ORO	0.79	12	P	23	13.40	0.0
SAOF	0.88	189	Pg	23	14.51	-0.4
			Sg	23	25.71	
AUTN	0.89	195	Pg	23	14.86	-0.4
TOUF	0.91	203	Pg	23	14.82	-0.8
IMI	0.95	174	P	23	16.02	-0.2
			S	23	27.08	
LPG	0.95	313	Pg	23	17.60	1.1
			Sg	23	29.90	
LPL	0.98	313	Pg	23	17.90	1.1
			Sg	23	30.70	
AURF	1.01	197	Pg	23	16.43	-0.8
SBF	1.02	193	Pg	23	17.20	-0.1
			Sg	23	29.90	
MVIF	1.05	204	Pg	23	16.96	-0.9
MMK	1.21	7	ePd	23	19.50	-0.6
BOB	1.21	94	P	23	21.50	1.4
			eSn	23	37.40	
TMA	1.48	32	iPd	23	22.90	-1.0
FRF	1.52	212	Pg	23	24.30	0.0
			Sg	23	42.50	
LRG	1.72	216	Pg	23	27.10	-0.1
			Sg	23	47.90	
LMR	1.76	211	Pg	23	27.20	-0.7
			Sg	23	48.40	
VDL	2.03	36	ePc	23	31.50	-0.4
CVF	2.43	160	Pn	23	34.50	-2.9X
			Sn	24	00.50	
HAU	3.30	343	Pg	23	48.00	-1.7
			Sg	24	24.30	
LBF	3.38	310	Pg	23	50.50	-0.5
			Sg	24	28.90	
LOR	3.63	313	Pg	23	54.50	0.0
			Sg	24	34.20	
BGF	3.83	298	Pg	23	56.70	-0.6
			Sg	24	39.70	
	S.D. = 0.8	on	33	of	34	obs.

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* JUL 08, 1989 12h 46m 48.75± 2.61s
34.762 N ±23.4km 139.358 E ±19.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

NIIJ	2.49	353	P	47	31.00	0.4
			eS	48	01.80	
TSRJ	2.87	287	P	47	35.80	-0.2
			eS	48	10.90	
WKYJ	3.16	261	eP	47	40.40	0.3
			eS	48	15.50	
YAMJ	3.45	9	eP	47	44.70	0.5
TKSJ	4.46	261	eP	47	59.00	0.4
			S	48	47.70	
OFUJ	4.69	23	eP	48	01.20	-0.6
			eS	48	58.50	
YONJ	4.86	277	eP	48	03.70	-0.6
			eS	48	56.70	
BJI	19.14	293	eP	51	15.00	-0.2
	S.D. = 0.6	on	8	of	8	obs.

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* JUL 08, 1989 13h 26m 39.66± 0.88s
71.689 N ±10.5km 3.617 W ±13.1km
DEPTH = 10.0km (geophysicist)
4.4mb (13 obs.)
JAN MAYEN ISLAND REGION (639)

DAG	6.54	328	iPd	28	17.10	-1.0
	0.5s	14.79nm			5.2mb	
SOD	11.34	98	eP	29	24.00	-0.5
HFS	13.50	140	eP	29	51.10	-2.3
	0.7s	4.80nm			4.6mb	
SUF	14.43	113	eP	30	05.00	-0.6
EKA	16.42	179	Pc	30	33.20	1.8
	0.7s	5.40nm			3.8mb	
CLL	21.77	151	e(P)	31	28.00	-4.9X
DOU	21.99	166	Pc	31	37.30	2.2
			e	38	31.80	
MOX	22.21	154	eP	31	38.00	0.6
KSP	22.76	146	eP	31	43.00	0.2
PRU	23.29	149	P	31	50.00	2.0
LPF	23.76	176	eP	31	52.60	0.1
	0.9s	11.10nm			4.4mb	
LOR	24.75	168	eP	32	02.00	-0.1
	0.8s	5.30nm			4.3mb	
SSF	24.93	168	eP	32	03.00	-0.9
	0.8s	4.00nm			4.2mb	
LBF	25.04	168	eP	32	04.90	-0.1
	0.8s	9.40nm			4.5mb	
AVF	25.19	169	eP	32	05.30	-1.0
	1.0s	6.80nm			4.3mb	
SMF	25.37	168	eP	32	07.90	-0.1
	0.8s	8.00nm			4.5mb	
BGF	25.39	170	eP	32	07.70	-0.6
	0.9s	15.30nm			4.7mb	
MAF	25.71	170	eP	32	10.40	-0.9
	1.2s	20.80nm			4.7mb	
RJF	26.58	172	eP	32	17.60	-1.6
	0.8s	9.10nm			4.5mb	

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CHTO    76.17   72 eP     38 32.10    2.8
        0.9s      1.71nm            4.1mb
     S.D. = 1.4   on  19 of  20 obs.
-------------------------------------------
*  JUL  08, 1989  14h 31m 41.16± 1.11s
   34.162 N ±11.9km   26.173 E ± 8.9km
   DEPTH =  33.0km  (normal)
   4.4mb (  1 obs.)
 CRETE                              (370)

NPS      1.19 337 eP     32 02.00    0.4
KAP      1.61  30 eP     32 09.00    1.3
VAM      2.04 308 eP     32 15.00    1.1
KSL      3.41  54 eP     32 32.20   -1.1
YER      3.43  29 iPn    32 33.10   -0.5
ELL      3.99  49 iPn    32 42.00    0.3
ITM      4.58 312 eP     32 48.20   -1.8
BCK      4.87  46 ePn    32 48.30   -5.8X
MEU      9.61 291 Pc     33 57.10   -3.2X
                eSn      35 35.80
BNG     30.42 195 iPc    37 53.00    0.2
        0.6s      4.00nm            4.4mb
     S.D. = 1.3   on   8 of  10 obs.
-------------------------------------------
*  JUL  08, 1989  14h 44m 06.20± 0.49s
    9.034 N ± 7.6km  138.005 E ± 9.5km
   DEPTH =  33.0km  (normal)
   4.9mb (  2 obs.)
 WEST CAROLINE ISLANDS              (209)

GUMO     8.11  55 eP     46 04.30   -0.3
GUA      8.12  56 eP     46 04.80    0.0
                eS       47 31.70
PMG     20.46 153 eP     48 42.00   -1.8
        1.0s     56.00nm            4.9mb
WB5     28.95 187 eP     50 06.90    2.0
ASPA    32.75 187 eP     50 36.90   -1.4
     Z  22s       0.17um            3.7MszX
                LR       03 20.90
BJI     36.50 331 eP     51 10.00   -0.3
XAN     36.51 317 P      51 10.30   -0.3
CD2     38.60 309 eP     51 28.00   -0.2
BWA     44.33 168 eP     52 15.90    0.8
CAN     45.32 167 eP     52 23.30    0.3
GTA     45.57 318 eP     52 24.70   -0.4
WMQ     55.65 318 eP     53 41.30   -0.3
MBC     84.28  14 eP     56 36.00    0.5
        0.9s     10.00nm            5.0mb
YKA     89.94  26 eP     57 04.50    1.3
LPB    153.50 109 ePKP   04 06.00    9.7X
ZOBO   153.53 108 PKP    04 05.00    8.4X
CNCB   153.54 110 PKP    04 05.00    8.4X
     S.D. = 1.1   on  14 of  17 obs.
-------------------------------------------
   JUL  08, 1989  15h 41m 11.55± 0.43s
   45.602 N ± 3.8km   26.507 E ± 4.1km
   DEPTH = 140.1 ±  6.0 km
   4.4mb ( 32 obs.)
 ROMANIA                            (358)

PSN      2.26 147 iPd    41 51.00    1.3
JMB      3.13 179 iP     42 01.00    0.1
PGB      3.49 210 iP     42 06.00    0.5
PLD      3.73 201 eP     42 08.00   -0.7
VTS      3.83 219 iP     42 10.00   -0.2
KDZ      4.03 192 iPd    42 13.00    0.3
RZN      4.12 199 eP     42 14.00   -0.1
KKB      4.48 215 iP     42 19.00    0.3
MMB      4.49 208 iPd    42 19.00    0.1
RDO      4.51 189 iPnd   42 18.20   -0.9
CTT      4.67 162 eP     42 20.90   -0.3
MFT      4.85 173 iP     42 23.40   -0.3
ITU      4.85 157 ePn    42 24.00    0.4
                iSg      43 04.00
ISK      4.90 157 eP     42 20.00   -4.3X
VAY      5.15 215 iPn    42 28.00    0.3
SKO      5.16 227 iPn    42 27.40   -0.4
EDC      5.35 169 iP     42 29.00   -1.3
BUD      5.50 293 eP     42 31.80   -0.5
SPC      5.56 312 iPd    42 33.70    0.3
PLG      5.69 204 ePn    42 34.20   -0.8
EZN      5.77 181 eP     42 35.60   -0.5
GPA      6.00 151 iP     42 40.10    0.9
SRO      6.05 294 iPd    42 41.00    1.1
KZN      6.33 215 ePn    42 43.80    0.1
NEO      6.74 202 ePn    42 47.20   -2.1
ZST      6.95 295 eP     42 50.90   -1.1

ALT      7.06 157 eP     42 44.10   -9.6X
SOP      7.16 290 eP     42 55.30    0.4
BBTK     7.37 139 eP     42 59.00    1.2
PTJ      7.39 276 eP     42 58.00   -0.1
VKA      7.47 295 eP     42 49.00  -10.0X
                 i       42 59.10
                 i       43 08.90
KHL      7.61 162 iP     43 00.90   -0.2
VBY      7.90 273 eP     43 05.50    0.7
KVT      8.29 120 iP     43 10.00   -0.1
LJU      8.38 277 eP     43 11.50    0.3
CEY      8.46 275 eP     43 13.50    1.1
KSP      8.60 311 ePc    43 13.00   -1.2
        0.8s     28.00nm            5.0mb
                 ic      43 23.70
VOY      8.82 277 eP     43 17.70    0.4
PRU      9.17 303 P      43 21.50   -0.3
                 e       43 29.50
BRG      9.90 307 eP     43 30.50   -0.9
        1.4s     14.00nm            4.5mb
CLL     10.63 307 e(P)   43 40.00   -1.0
                 e       43 53.00
MOX     11.15 302 e(P)   43 43.00   -5.0X
                eSg      00 36.00
PCP     12.75 272 P      44 12.84    4.1X
FEL     12.89 287 P      44 15.88    5.2X
FIN     13.05 270 P      44 16.02    3.3X
BBS     13.21 285 P      44 18.66    3.9X
GWF     13.25 292 P      44 19.84    4.5X
ROB     13.27 271 P      44 17.76    2.2
IMI     13.34 269 P      44 18.17    1.7
MOF     13.48 287 P      44 22.68    4.4X
RSP     13.54 275 P      44 20.43    1.3
LSD     13.57 276 P      44 21.86    2.3
ENR     13.60 271 P      44 21.04    1.2
LOMF    13.68 284 P      44 24.56    3.8X
BSF     13.71 286 P      44 24.93    3.7X
LPG     13.85 277 eP     44 24.30    1.1
        1.0s     14.00nm            4.3mb
RRL     13.91 274 P      44 25.66    1.7
HAU     14.01 287 eP     44 26.90    1.9
        0.8s      8.00nm            4.1mb
WTS     14.45 303 eP     44 35.00    4.6X
        1.0s     12.00nm            4.2mb
MEM     14.57 297 Pd     44 37.20    5.3X
ENN     14.65 298 eP     44 37.50    4.5X
        0.8s     14.00nm            4.3mb
WIT     14.81 306 eP     44 39.50    4.6X
NUR     14.98 356 eP     44 35.60   -1.3
        0.5s     14.00nm            4.5mb
UPP     15.24 343 eP     44 38.80   -1.4
DOU     15.37 295 P      44 39.50   -2.4
        0.9s     12.50nm            4.2mb
SNF     15.63 296 P      44 48.00    2.8
LBF     15.63 283 eP     44 44.90   -0.4
        0.9s      8.10nm            4.0mb
LOR     15.70 284 eP     44 45.20   -0.9
        0.8s     12.00nm            4.3mb
SMF     15.75 282 eP     44 46.50   -0.2
        0.9s     11.40nm            4.2mb
SSF     15.95 284 eP     44 48.00   -1.2
        0.9s     11.40nm            4.2mb
AVF     16.07 283 eP     44 49.70   -1.0
        1.0s     10.00nm            4.1mb
HFS     16.43 337 eP     44 53.50   -1.5
        0.9s     18.80nm            4.4mb
BGF     16.44 282 eP     44 53.60   -1.6
        1.0s     12.80nm            4.2mb
SUF     17.15 359 iP     45 03.90    0.1
        0.3s      3.80nm            4.2mb
NRA0    17.54 335 iP     45 06.60   -1.9
NB2     17.88 335 P      45 10.80   -1.8
LDF     18.34 289 eP     45 13.70   -4.0X
        0.8s     16.10nm            4.4mb
MFF     18.48 283 eP     45 16.10   -3.1X
        0.8s     26.80nm            4.6mb
FLN     18.58 290 eP     45 16.60   -3.6X
        1.0s     24.00nm            4.5mb
GRR     18.84 288 eP     45 19.00   -3.9X
        0.8s     11.80nm            4.3mb
LPF     18.97 287 eP     45 20.60   -3.7X
        0.8s     18.80nm            4.5mb
EKA     21.09 308 P      45 46.00    0.2
        1.2s     17.50nm            4.3mb
SOD     21.83   0 iP     45 54.40    1.5
DLE     22.66 302 eP     46 01.30    0.1
        0.7s     43.00nm            5.0mb

DMU     22.95 303 eP     46 04.40    0.4
TOL     23.07 267 eP     46 04.50   -0.8
TRO     24.40 354 eP     46 19.20    1.5
KBS     33.89 355 eP     47 43.30    1.2
BNG     41.59 192 iPc    48 47.00    0.0
        0.4s      3.00nm            4.3mb
TIC     47.44 225 P      49 32.64   -1.1
KIC     47.55 224 Pc     49 33.30   -1.3
        0.5s     13.00nm            4.9mb
LIC     47.81 225 Pc     49 35.26   -1.3
        0.4s     10.00nm            4.9mb
FRB     52.39 326 eP     50 10.00   -0.8
MBC     56.47 351 ePc    50 40.80    0.5
        0.5s      4.00nm            4.6mb
CHG     64.60  89 iPc    51 37.00    1.0
        0.9s     13.03nm            4.9mb
CHTO    64.60  89 iPd    51 37.00    1.0
        0.7s      9.05nm            4.8mb
                 pP       52 12.00 146kmX
YKA     67.85 342 P      51 56.30    0.3
IMA     68.67   0 eP     52 02.60    1.5
        0.8s      5.10nm            4.4mb
PMR     73.10 358 eP     52 28.00    0.5
        1.0s      7.50nm            4.4mb
PNT     80.96 338 eP     53 12.00    0.7
RLO     83.03 316 eP     53 20.20   -2.0
TUL     83.61 316 eP     53 25.20    0.1
        0.8s     10.20nm            4.7mb
ALQ     89.26 323 e(P)   53 52.50   -0.5
WB5    116.32  92 ePdiff 55 49.10   -5.3X
WRA    116.34  92 Pdiff  55 51.00   -3.5X
        0.6s      7.10nm
     S.D. = 1.1   on  82 of 105 obs.
-------------------------------------------
    JUL  08, 1989  15h 48m 17.40± 0.44s
    41.215 N ± 4.6km   23.180 E ± 4.3km
    DEPTH =  10.0km  (geophysicist)
  GREECE-BULGARIA BORDER REGION     (363)
       MD 3.5 (ATH). ML 3.0 (SKO).

VAY      0.47 283 iPd    48 26.70   -0.3
                iSg      48 32.70
MMB      0.56  48 iPgc    48 28.00   -0.7
                Sg       48 34.00
PLG      0.86 166 iPnc    48 33.70   -0.4
                eSn      48 45.70
RZN      1.25  67 eP     48 42.00    1.3
VTS      1.38   1 iP     48 43.00    0.3
KZN      1.40 230 ePn    48 44.00    0.9
PLD      1.45  52 iP     48 44.00    0.4
SKO      1.51 301 ePn    48 44.00   -0.5
                 i       48 48.00
PGB      1.52  29 iP     48 45.00    0.3
RDO      1.78  91 ePn    48 48.00   -0.4
NEO      1.91 179 ePn    48 50.00   -0.3
DIM      1.95  64 eP     48 55.00    4.1X
PVL      2.56  38 eP     49 00.00    0.4
EZN      2.77 119 ePn    49 03.00    0.4
JMB      2.83  63 iP     49 02.00   -1.5
     S.D. = 0.8   on  14 of  15 obs.
-------------------------------------------
?  JUL  08, 1989  17h 07m 28.81± 3.02s
    34.916 N ±29.1km  139.121 E ±24.6km
    DEPTH =   5.0km  (geophysicist)
  NEAR S. COAST OF HONSHU, JAPAN    (230)

NIIJ     2.32 358 eP     08 08.90    0.6
                eS       08 38.00
TSRJ     2.64 284 eP     08 13.50    0.7
WKYJ     2.99 258 P      08 18.40    0.5
                eS       08 53.70
YAMJ     3.33  13 P      08 22.60    0.0
TKSJ     4.29 259 eP     08 36.80    0.5
                S        09 25.40
OFUJ     4.63  25 eP     08 40.50   -0.5
YONJ     4.65 275 P      08 39.30   -2.0
BJI     18.90 292 (P)    11 47.00   -5.3X
     S.D. = 1.2   on   7 of   8 obs.
-------------------------------------------
&  JUL  08, 1989  17h 38m 21.00s
    37.425 N          121.707 W
    DEPTH =   6.0km
  CENTRAL CALIFORNIA                 ( 39)
       <BRK>. ML 2.6 (BRK).

MHC      0.10 148 iPc    38 23.30    0
ARN      0.16 118 iP     38 24.30   -0.
```

08d 17h

GCC	0.46	210	iPd	38 29.90	-0.3
PCC	0.54	278	iPc	38 31.10	-0.8
BKS	0.62	317	iPc	38 32.80	-0.5
			eS	38 42.40	
BRK	0.63	316	ePc	38 32.80	-0.8
			eS	38 44.90	
SAO	0.69	162	iPc	38 34.55	-0.3
LLA	1.01	143	ePc	38 39.20	-1.3
PRS	1.12	166	ePc	38 41.30	-1.1
CMB	1.21	59	ePd	38 42.80	-1.2
			eS	39 01.30	
FRI	1.65	105	eP	38 49.40	-1.2
KVN	3.27	59	eP	39 12.00	-2.0
	12 obs. associated				

? JUL 08, 1989 17h 43m 46.09± 1.20s
5.334 S ±23.4km 103.851 E ±25.7km
DEPTH = 60.0km (geophysicist)
3.9mb (1 obs.)
SOUTHERN SUMATERA (274)

KHKI	12.05	105	eP	46 37.00	-0.4
CHG	24.48	349	eP	49 01.80	0.8
CHTO	24.48	349	iP	49 01.30	0.3
	1.0s		4.50nm		3.9mb
			pP	49 16.00	62kmX
W85	33.02	119	eP	50 16.80	-1.1
NDI	42.44	324	eP	51 35.50	-1.3
BWA	50.33	131	eP	52 40.00	0.9
CAN	51.14	132	eP	52 45.90	0.7
	S.D. = 1.1		on 7 of 7 obs.		

? JUL 08, 1989 19h 24m 26.25± 3.68s
34.707 N ±33.9km 139.430 E ±30.2km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

NIIJ	2.55	352	P	25 09.50	0.6
			S	25 39.00	
WKYJ	3.21	262	P	25 18.90	0.6
			S	25 54.20	
YAMJ	3.49	8	P	25 24.30	2.0X
TKSJ	4.51	262	P	25 37.00	0.2
			S	26 26.10	
OFUJ	4.72	22	P	25 39.40	-0.3
			S	26 31.80	
YONJ	4.92	277	eP	25 41.70	-1.0
	S.D. = 1.0		on 5 of 6 obs.		

JUL 08, 1989 19h 27m 49.47± 0.61s
42.028 N ± 6.7km 20.094 E ± 3.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (TTG), 2.5 (SKO).

PUK	0.15	276	iPgc	27 53.10	0.1
KKS	0.24	78	ePg	27 54.00	-0.6
BCI	0.34	357	iPg	27 57.20	0.7
SDA	0.44	269	iPgd	27 59.00	0.5
LACI	0.49	216	ePg	27 54.50	-4.8X
PVY	0.57	351	iPgc	28 00.70	-0.5
			iSg	28 11.00	
ULC	0.63	264	iPgd	28 01.80	-0.4
			eSg	28 13.50	
TIR	0.70	194	ePg	28 08.70	5.4X
TTG	0.74	303	iPgd	28 03.30	-0.6
			iSg	28 16.00	
BDV	0.98	286	ePg	28 08.00	0.0
			eSg	28 26.00	
SKO	1.00	93	iPg	28 09.00	0.5
			iSg	28 20.50	
NKY	1.13	314	ePg	28 10.60	-0.1
			eSg	28 30.00	
HCY	1.26	290	iPgd	28 12.70	-0.1
			eSg	28 34.00	
BRY	1.44	308	ePg	28 15.90	0.2
			eSg	28 40.00	
VAY	1.98	110	iPn	28 25.40	2.0X
	S.D. = 0.5		on 12 of 15 obs.		

& JUL 08, 1989 19h 38m 04.94s
59.156 N 151.996 W
DEPTH = 51.1km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

XLV	0.33	25	iP	38 13.82	-0.7
CNPM	0.54	46	iP	38 16.22	-0.6
			S	38 25.06	
SHU	0.56	199	eP	38 16.29	-0.7
AUL	0.77	288	eP	38 19.35	-0.5
OPT	0.80	309	eP	38 19.78	-0.5
			S	38 31.45	
BRLK	0.83	42	eP	38 20.19	-0.5
CDD	0.88	256	iP	38 20.50	-0.8
NNL	0.96	22	eP	38 22.51	0.2
ILIM	1.05	333	eP	38 22.71	-0.9
			S	38 36.89	
MCNL	1.21	272	eP	38 24.68	-1.1
RED	1.33	343	eP	38 26.54	-1.0
			S	38 44.03	
RDT	1.44	352	eP	38 28.12	-0.9
			S	38 46.90	
SEW	1.61	53	eP	38 29.97	-1.3
SLKM	1.63	33	eP	38 30.65	-1.0
SPU	2.03	359	iP	38 36.93	-0.5
			S	39 00.49	
SUA	2.40	15	eP	38 42.14	-0.5
PWA	2.71	22	eP	38 46.74	-0.3
KNK	2.87	36	eP	38 48.47	-0.8
KLU	3.82	50	eP	39 00.69	-2.1
	19 obs. associated				

JUL 08, 1989 19h 43m 33.31± 0.31s
44.294 N ± 2.4km 7.362 E ± 2.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (LDG), 2.0 (GEN).

ENR	0.08	148	P	43 36.55	0.7
			S	43 38.46	
PZZ	0.28	318	P	43 39.81	0.5
			S	43 43.80	
TOUF	0.29	196	Pg	43 39.65	0.1
AUTN	0.30	171	Pg	43 39.85	0.1
			Sg	43 44.01	
SAOF	0.34	156	Pg	43 40.33	0.0
			Sg	43 44.92	
ROB	0.37	90	P	43 41.48	0.6
			S	43 46.42	
AURF	0.41	184	Pg	43 41.64	0.0
			Sg	43 47.10	
MVIF	0.43	201	Pg	43 41.93	-0.1
SBF	0.43	173	Pg	43 42.20	0.0
			Sg	43 47.10	
FOUF	0.48	300	e(Pg)	43 43.35	0.3
			e(Sg)	43 49.58	
IMI	0.54	135	P	43 43.93	-0.3
			S	43 50.87	
FIN	0.61	98	P	43 45.12	-0.6
			S	43 52.82	
RRL	0.75	327	P	43 47.37	-0.8
			S	43 57.64	
RSP	0.86	355	P	43 50.00	0.0
PCP	0.88	73	P	43 50.07	-0.2
			S	44 01.53	
FRF	0.90	215	Pg	43 50.70	0.2
			Sg	44 01.70	
LRG	1.11	221	Pg	43 53.70	-0.4
			Sg	44 08.10	
LMR	1.14	213	Pg	43 54.40	-0.3
			Sg	44 08.90	
	S.D. = 0.4		on 18 of 18 obs.		

JUL 08, 1989 20h 03m 55.67± 0.22s
55.110 N ± 5.6km 165.419 E ± 3.1km
DEPTH = 57.9km (5 depth phases)
4.8mb (32 obs.)
KOMANDORSKY ISLANDS REGION (4)

SMY	5.66	111	eP	05 18.10	-1.0
ADK	11.13	99	eP	06 32.10	-2.4
SDN	19.33	75	eP	08 18.30	-0.4
MRRJ	20.33	241	eP	08 27.40	-1.8
TTA	21.05	53	eP	08 36.80	0.3
IMA	22.42	44	P	08 50.60	0.4
	1.1s		53.10nm		4.9mb
BRW	22.92	31	e(P)	08 56.70	1.9
KDC	23.15	66	eP	08 56.70	-0.5
PMR	24.28	56	eP	09 08.00	-0.1
	0.6s		13.40nm		4.6mb
FBA	24.76	48	eP	09 13.30	0.6
TOA	25.62	54	eP	09 21.40	0.5
CN2	27.95	263	eP	09 40.50	-1.7
	Z 18s		0.80um		4.3Msz
	N 14s		0.40um		
			eS	14 24.00	
INK	30.33	40	eP	10 03.00	-0.2
MBC	33.93	24	eP	10 34.50	-0.1
	0.5s		13.00nm		5.1mb
			pP	10 50.00	62km
BTO	38.83	272	eP	11 18.00	1.5
	N 14s		0.50um		
	E 14s		0.50um		
SSE	39.30	251	e(P)	11 34.80	14.5X
	Z 20s		0.50um		4.3Msz
TIY	39.39	266	eP	11 21.90	0.8
	Z 20s		0.50um		4.3Msz
	N 15s		0.60um		
			eS	17 26.00	
YKA	39.53	46	P	11 23.30	1.4
ALE	40.48	9	eP	11 27.00	-2.5
	0.7s		6.00nm		4.5mb
WHN	43.50	257	eP	11 54.70	0.0
XAN	44.00	265	P	11 58.70	-0.1
BMW	44.07	70	eP	12 00.50	1.2
RMW	44.22	68	eP	12 01.50	1.0
PNT	44.24	65	eP	12 01.00	0.4
	0.7s		18.00nm		5.0mb
LON	44.66	69	eP	12 04.90	0.8
EDM	45.04	57	ePc	12 07.00	0.0
	0.5s		18.00nm		5.2mb
LZH	45.45	272	eP	12 11.00	0.4
	1.0s		35.00nm		5.2mb
	Z 16s		0.70um		4.7MszX
GTA	45.46	278	iPd	12 11.00	0.4
	Z 13s		0.70um		4.8MszX
	E 15s		0.60um		
SES	47.92	59	ePc	12 29.00	-0.7
WDC	48.30	76	ePc	12 33.40	0.7
DAG	48.36	1	iPd	12 32.00	-0.7
	0.9s		9.24nm		4.8mb
WMO	49.22	291	P	12 40.00	0.2
	Z 22s		0.40um		4.4Msz
			eS	19 47.00	
CD2	49.25	267	P	12 40.40	0.3
FFC	49.34	50	eP	12 40.00	-0.5
	0.9s		15.00nm		5.0mb
ORV	49.58	76	eP	12 42.40	-0.1
LRM	50.20	64	eP	12 46.50	-1.1
GYA	50.96	261	P	12 53.60	0.3
CMB	51.26	77	eP	12 55.90	0.5
KVN	51.82	74	iP	13 00.70	0.9
IMW	52.30	65	eP	13 04.20	0.7
TNP	52.99	75	iP	13 09.30	0.7
			iPcP	14 00.60	
BW06	53.81	65	iP	13 14.80	0.3
	0.9s		12.71nm		4.9mb
DUG	53.90	70	eP	13 15.90	0.7
SOD	54.03	342	eP	13 14.00	-1.5
KMI	54.22	263	Pc	13 17.50	-0.3
	Z 20s		0.70um		4.7Msz
			pP	13 32.00	54km
			S	20 55.00	
FRB	54.36	26	eP	13 16.00	-2.0
CLC	54.41	77	eP	13 19.00	0.2
QIZ	55.07	252	eP	13 25.10	1.4
SBB	55.10	78	eP	13 24.00	0.1
			e	14 15.00	229kmX
PAS	55.30	79	eP	13 26.00	0.7
MWC	55.31	79	eP	13 26.00	0.4
RSON	55.64	49	iP	13 27.60	0.1
RSSD	55.68	61	eP	13 27.80	-0.4
RVR	55.86	78	eP	13 29.00	-0.3
TPC	56.52	77	eP	13 34.00	-0.1
PLM	56.62	78	eP	13 34.00	-1.0
BAR	57.23	79	eP	13 39.00	-0.1
GLA	57.99	77	eP	13 45.00	0.6
GOL	58.21	65	eP	13 47.10	0.9
			i	14 04.80	68km
GLD	58.25	65	P	13 47.80	1.4
	1.1s		32.79nm		5.4mb
SUF	58.28	339	eP	13 45.00	-1.0
	0.6s		6.10nm		4.9mb
SHL	60.11	272	iP	13 53.50	-5.8X
NUR	60.59	339	eP	14 01.00	-1.0
	0.6s		13.00nm		5.2mb
	Z 22s		0.30um		4.4Msz
			LR	41 20.00	
ALQ	61.18	70	eP	14 07.00	0.4
	1.0s		11.75nm		5.0mb

		epP	14	17.00	33kmX	
		esP	14	22.00		
		e	14	58.40		
CHG	61.34	262 iPd	14	07.10	-0.5	
	1.0s	12.25nm			5.0mb	
CHTO	61.34	262 iP	14	07.50	-0.1	
	0.9s	8.31nm			4.9mb	
		pP	14	18.60	37kmX	
SCH	62.38	31 eP	14	12.00	-2.1	
NB2	62.41	346 P	14	12.60	-1.7	
HFS	62.92	345 eP	14	15.70	-1.8	
	0.5s	2.60nm			4.6mb	
MEO	65.46	64 iPc	14	33.40	-1.0	
FVM	67.01	56 eP	14	43.70	-0.6	
GAC	67.17	42 eP	14	44.00	-1.1	
EKA	69.52	353 Pd	14	59.70	0.2	
	1.5s	30.70nm			5.0mb	
PWLA	70.55	57 eP	15	05.80	-0.3	
DMU	71.17	355 eP	15	09.90	0.3	
KSP	71.32	340 eP	15	10.70	0.2	
CLL	71.49	342 eP	15	11.00	-0.5	
	1.4s	14.00nm			4.7mb	
BRG	71.74	341 e(P)	15	13.50	0.5	
DLE	71.77	355 eP	15	13.50	0.4	
PRU	72.48	341 P	15	17.00	-0.4	
GRF	73.36	343 eP	15	23.40	0.8	
Z	20s	0.05um			3.8Msz	
MTN	73.61	215 iPc	15	24.70	0.4	
	0.6s	29.00nm			5.4mb	
		i	15	39.50	52km	
		e	16	31.00		
ZST	73.67	339 e(P)	15	25.20	0.8	
HYB	74.13	278 eP	15	42.00	14.5X	
KBA	75.50	341 iPd	15	36.50	1.4	
	1.0s	14.10nm			4.8mb	
		i	16	05.70	115kmX	
		e	16	28.50		
		e	16	39.00		
FLN	75.83	350 eP	15	36.70	0.0	
	0.8s	6.40nm			4.6mb	
GRR	76.23	351 eP	15	39.40	0.4	
	0.6s	5.40nm			4.7mb	
LPF	76.60	351 eP	15	41.40	0.3	
	0.6s	3.60nm			4.5mb	
LOR	76.82	347 eP	15	42.60	0.2	
	0.6s	2.70nm			4.4mb	
SSF	77.06	347 eP	15	44.10	0.4	
	0.7s	3.30nm			4.4mb	
AVF	77.35	347 eP	15	45.40	0.2	
	0.7s	3.30nm			4.4mb	
MAF	78.01	348 eP	15	49.50	0.6	
	1.0s	8.80nm			4.7mb	
LSF	78.10	349 eP	15	49.80	0.4	
	0.7s	4.40nm			4.6mb	
LPG	78.15	345 eP	15	51.20	1.1	
	1.0s	8.00nm			4.7mb	
WB5	79.24	210 eP	15	55.90	0.0	
		e	16	11.00	53km	
		e	17	02.30		
LPO	79.69	349 eP	15	59.10	1.1	
	0.6s	4.30nm			4.6mb	
ASPA	82.97	209 iPd	16	16.10	0.7	
	1.0s	20.00nm			5.1mb	
KOGH	117.87	344 ePKP	22	57.00	19.8X	
LEGH	118.29	344 ePKP	22	53.00	15.1X	
SPA	144.93	180 e(PKP)	23	25.10	-1.2	
	1.0s	13.50nm				
		e	23	40.10		

S.D. = 0.9 on 95 of 100 obs.

& JUL 08, 1989 20h 04m 16.35s
61.455 N 146.655 W
DEPTH = 21.1km
SOUTHERN ALASKA (2)
<AGS-P>.

KLU	0.35	84 iP	04	23.69	-0.4
		S	04	29.68	
TOA	0.69	19 iP	04	28.79	-0.9
KNK	0.87	268 iP	04	31.37	-1.2
GHO	1.13	287 eP	04	34.91	-2.1
SDG	1.20	26 iP	04	36.02	-1.9
		S	04	51.45	
GLB	1.37	89 iP	04	38.52	-1.8
		S	04	56.17	
PWA	1.56	279 eP	04	42.17	-0.8
PAX	1.62	20 iP	04	42.07	-2.0
		S	05	02.66	
CUT	1.96	301 iP	04	48.13	-0.7
		S	05	12.73	
SUA	1.96	272 eP	04	47.77	-1.2
SLKM	1.98	243 eP	04	47.93	-1.3
TGL	1.99	109 eP	04	47.82	-1.5
		S	05	15.26	
BALM	2.13	100 iP	04	49.31	-2.1

13 obs. associated

JUL 08, 1989 21h 20m 38.08± 1.09s
44.008 N ± 5.4km 8.759 E ± 8.2km
DEPTH = 5.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (LDG), 2.5 (GEN). MD 2.4 (STR).

FIN	0.44	297 Pd	20	46.58	-0.4
		S	20	51.11	
PCP	0.56	344 P	20	49.50	0.3
		S	20	56.50	
IMI	0.64	261 Pd	20	50.28	-0.5
		S	20	57.88	
ROB	0.70	294 Pd	20	50.98	-1.1
		S	20	59.04	
SAOF	0.87	269 Pg	20	54.84	-0.4
		Sg	21	05.10	
AUTN	0.96	270 Pg	20	58.20	1.2
		Sg	21	10.49	
SBF	0.97	262 Pg	20	57.00	0.0
		Sg	21	09.30	
ENR	0.99	283 P	20	56.37	-1.0
		S	21	07.81	
AURF	1.04	264 Pg	20	59.31	1.1
		Sg	21	12.52	
TOUF	1.09	271 Pg	20	59.11	-0.1
		Sg	21	12.52	
PZZ	1.29	293 P	21	01.58	-1.0
		S	21	16.20	
CVF	1.44	177 Pn	21	03.80	-1.1
		Sn	21	21.10	
RSP	1.57	317 P	21	06.23	-0.5
FRF	1.59	254 Pg	21	08.10	1.1
		Sg	21	27.80	
RRL	1.68	304 P	21	08.75	0.2
		S	21	28.76	
LMR	1.77	248 Pn	21	10.00	0.5
		Pg	21	12.20	
		Sg	21	34.20	
LRG	1.82	253 Pn	21	10.80	0.5
		Pg	21	12.60	
		Sg	21	36.20	
LSD	1.85	322 P	21	12.24	1.3

S.D. = 0.9 on 18 of 18 obs.

? JUL 08, 1989 21h 39m 14.02± 4.82s
34.909 N ±41.1km 139.152 E ±42.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

NIIJ	2.33	357 P	39	54.00	0.4
		S	40	24.00	
WKYJ	3.02	258 P	40	03.40	0.0
		S	40	39.30	
YAMJ	3.33	12 P	40	07.50	-0.4
TKSJ	4.32	259 P	40	22.10	0.3
YONJ	4.68	275 P	40	26.50	-0.4

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

JUL 08, 1989 21h 51m 31.55± 0.76s
37.741 N ± 7.1km 15.145 E ± 6.5km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.40	298 Pd	51	39.10	-0.8
		eSg	51	45.40	
ATN	0.49	31 P	51	41.80	0.3
		eSg	51	50.30	
MSI	0.56	35 P	51	43.70	0.7
		eSg	51	51.60	
MEU	0.66	195 Pd	51	44.00	-0.8
		eSg	51	54.80	
GIB	0.92	286 P	51	49.50	0.3
		eSg	52	05.80	
MCT	1.20	265 P	52	01.50	7.4X
		eSn	52	24.60	
FAI	1.26	249 P	51	55.80	0.9
CVT	1.87	269 P	52	04.30	0.5
MGR	2.41	7 Pd	52	10.30	-1.4
		eSn	52	41.40	
LCI	3.39	39 P	52	25.70	0.2
		eSn	53	04.10	

S.D. = 0.9 on 9 of 10 obs.

JUL 08, 1989 22h 50m 44.28± 0.44s
22.279 S ± 5.6km 68.296 W ± 8.5km
DEPTH = 118.5km (2 depth phases)
4.7mb (6 obs.)
NORTHERN CHILE (123)

ANT	2.41	234 iP	51	22.40	-1.1
		iS	51	48.70	
SLA	3.54	134 ePc	51	45.20	6.5X
CCH	5.28	23 Pc	52	04.50	2.1
CNCB	5.45	3 iPd	52	06.00	1.0
LPB	5.72	2 P	52	09.60	1.0
	1.0s	140.00nm			5.1mb
ZOBO	5.98	2 P	52	12.00	-0.4
		i	52	13.00	
ARE	6.52	332 eP	52	14.00	-5.5X
		iS	53	24.30	
CYA	6.54	160 e(P)	52	21.20	1.7
RTLL	9.02	181 e(P)c	52	05.20	-47.8X
RTCB	9.18	183 ePc	52	53.30	-2.0
MRA	10.35	168 ePd	53	10.00	-0.7
PEL	11.03	191 eP	53	21.50	1.7
ITB1	12.98	103 eP	53	54.80	9.4X
NNA	13.09	320 eP	53	48.00	1.1
	0.4s	3.39nm			4.2mb
		e	56	03.50	
ITB	13.16	104 e(P)	53	55.20	7.4X
ITB7	13.24	105 e(P)	53	57.10	8.2X
VAO	19.70	96 eP	55	07.20	0.4
		epP	55	27.70	114km
BAO	20.30	75 eP	55	12.00	-1.0
BMA	22.31	96 eP	55	30.70	-2.1
		e(pP)	55	59.00	142kmX
ATB	24.49	42 Pc	55	52.70	-1.1
SOB1	29.33	68 eP	56	37.20	-0.9
ITR	31.68	70 eP	56	58.10	-0.6
RLO	63.39	336 e(P)	01	01.90	-1.3
		e	01	31.50	
TUL	63.46	335 eP	01	01.90	-1.7
	1.0s	7.70nm			4.6mb
		e	01	32.00	
ALQ	67.46	327 eP	01	29.00	-0.5
	0.8s	9.33nm			4.7mb
		e	01	33.00	
		epP	01	59.30	123km
SPA	67.86	180 e(P)	01	33.60	2.0
	0.8s	5.00nm			4.5mb
		e	02	03.80	
GAC	67.97	355 eP	01	31.50	-0.7
LIC	68.06	73 P	01	33.70	0.2
TIC	68.26	73 P	01	35.00	0.3
KIC	68.38	73 Pc	01	35.90	0.5
	0.7s	17.00nm			5.0mb
KVN	76.76	322 eP	02	24.20	-0.3
		e	02	55.50	
SCH	76.79	1 eP	02	23.00	-1.0
BUL	88.61	111 iPd	03	27.80	2.1
		ipP	03	37.00	29kmX
GBA	146.34	99 PKPd	10	13.20	1.2
	0.9s	11.20nm			

S.D. = 1.3 on 28 of 34 obs.

? JUL 08, 1989 23h 17m 48.13± 4.79s
34.912 N ±38.9km 139.167 E ±14.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.14	353 P	18	09.10	-0.9
		S	18	24.40	
IIDJ	1.17	299 P	18	09.90	-0.6
		S	18	25.60	
KAKJ	1.53	32 P	18	15.80	-0.3
		S	18	36.60	
MTMJ	2.00	327 P	18	24.10	1.0
		S	18	50.70	
NIIJ	2.33	357 P	18	28.40	0.7
		S	19	00.40	

S.D. = 1.2 on 5 of 5 obs.

JUL 09, 1989 00h 02m 15.80± 0.3

09d 00h

36.074 N ± 4.8km 30.706 E ± 4.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KSL	0.91	273	iP	02 34.70	1.5
ELL	0.93	317	iPn	02 34.50	0.8
BCK	1.39	356	iPn	02 41.10	-0.1
PPCY	1.79	131	eP	02 50.50	3.6X
YER	2.22	299	iPn	02 53.80	0.6
CSS	2.41	117	eP	02 55.50	-0.4
FAM	2.89	111	eP	03 12.00	9.2X
KAP	2.92	261	eP	03 02.70	-0.4
ALT	3.01	351	iPn	03 04.40	-0.1
DST	3.89	336	iPn	03 16.50	-0.5
BBTK	4.10	23	eP	03 20.50	0.6
NPS	4.23	260	eP	03 21.00	-0.7
PRK	4.73	313	eP	03 27.50	-1.4
VAM	5.33	265	eP	03 37.00	-0.4
BURJ	5.69	131	P	03 42.70	0.2
SALJ	5.79	133	P	03 43.70	-0.1
KFNJ	5.89	134	P	03 45.10	-0.1
MKRJ	6.10	136	P	03 48.80	0.6

S.D. = 0.7 on 16 of 18 obs.

& JUL 09, 1989 00h 09m 17.41s
60.375 N 152.809 W
DEPTH = 133.4km
SOUTHERN ALASKA (2)
<AGS-P>.

RED	0.05	23	eP	09 34.97	0.8
RDT	0.28	45	iP	09 35.50	0.9
ILIM	0.31	194	iP	09 35.50	0.8
			S	09 49.33	
OPT	0.75	196	iP	09 38.18	-0.7
			S	09 52.92	
NNL	0.83	113	iP	09 39.14	-0.2
NKA	0.86	64	iP	09 40.53	0.9
SPU	0.89	24	iP	09 39.24	-0.7
HOM	0.93	140	iP	09 39.85	-0.4
CGLM	1.02	22	iP	09 40.41	-0.7
XLV	1.07	149	iP	09 40.42	-1.2
			S	09 58.76	
CNPM	1.16	136	iP	09 41.66	-0.9
SLKM	1.29	83	iP	09 42.30	-1.5
MCNL	1.42	214	iP	09 44.08	-1.1
SUA	1.49	42	eP	09 45.27	-0.8
			S	10 07.27	
CDD	1.51	197	eP	09 44.74	-1.5
SVW	1.57	299	iP	09 45.81	-1.1
SEW	1.70	98	eP	09 46.73	-1.6
			S	10 09.62	
SKT	1.73	20	iP	09 47.81	-0.9
CUT	2.38	30	eP	09 55.45	-1.2

19 obs. associated

? JUL 09, 1989 01h 04m 05.40± 6.71s
34.740 N ±56.1km 139.232 E ±19.9km
DEPTH = 33.0km (normal)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.31	305	iPd	04 27.20	-0.4
			S	04 42.20	
CHJJ	1.32	352	iPd	04 26.00	-1.6
			S	04 40.30	
KAKJ	1.65	27	P	04 32.50	0.1
			S	04 52.50	
MAT	1.98	335	iPd	04 37.00	-0.3
			iS	04 59.40	
MTMJ	2.18	328	P	04 41.00	0.9
			S	05 07.40	
NIIJ	2.50	356	P	04 45.80	1.2
			S	05 16.30	

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

? JUL 09, 1989 01h 14m 38.85± 3.24s
2.269 N ±64.6km 121.936 E ±61.5km
DEPTH = 603.7 ± 31.3 km
4.6mb (4 obs.)
CELEBES SEA (262)

PCI	3.79	214	iPc	16 03.50	0.0
MTN	17.57	149	eP	18 12.00	0.5
	0.4s		31.00nm		5.1mb
WB5	25.17	152	iP	19 19.80	-0.5
CHTO	27.88	308	eP	19 43.90	-0.1
	0.8s		1.65nm		3.7mb
WARB	28.65	171	iPd	19 54.90	4.4X
	0.3s		8.00nm		4.9mb
HYB	45.17	292	eP	22 08.00	2.8X
GBA	45.40	287	Pc	22 07.10	0.2
	0.9s		8.20nm		4.3mb

S.D. = 0.7 on 5 of 7 obs.

JUL 09, 1989 02h 09m 09.18± 0.22s
34.942 N ± 3.8km 139.193 E ± 3.7km
DEPTH = 5.0km (geophysicist)
5.1mb (33 obs.) 5.0Msz (8 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
At least 18 people injured (IV JMA), landslides at 16 places and roads cracked at 10 places in the Ito area. Felt (IV JMA) at Ajiro; (III JMA) at Tokyo, Yokohama, Mishima, Tateyama and on Oshima.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 02:09:10.8 0.7
Lat 34.78N 0.05 Lon 138.90E 0.08
Dep 15.0 FIX Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 0.88 0.44 Mtt=-1.05 0.45
Mff= 0.18 0.61 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-8.01 0.44
Principal Axes:

T	Val= 7.59	Plg= 0	Azm=227
N	0.88	90	180
P	-8.47	0	137

Best Double Couple:Mo=8.0**16
NP1:Strike=272 Dip=90 Slip= 180
NP2: 2 90 0

CHJJ	1.12	352	iPd	09 30.70	0.1
IIDJ	1.18	297	iPd	09 31.70	0.0
			S	09 47.00	
KAKJ	1.49	32	iP+	09 37.30	0.7
MAT	1.79	334	iPd	09 41.90	1.0
			iS	10 04.30	
MTMJ	1.99	326	iPd	09 45.70	1.8
NIIJ	2.30	356	iP+	09 48.90	0.6
			S	10 22.30	
YAMJ	3.30	12	P	10 03.50	1.0
OFUJ	4.58	25	P	10 20.10	-0.6
SHK	5.38	268	eP	10 31.70	-0.4
AOMJ	5.69	9	eP	10 38.20	1.9
SHNJ	6.72	265	P	10 51.10	0.1
KUMJ	7.37	253	P	11 00.10	0.1
MRRJ	7.62	11	P	11 04.50	1.1
KAGJ	7.91	244	P	11 07.90	0.3
HOOJ	8.09	22	eP	11 08.30	-1.8
SAP	8.27	11	eP	11 16.00	3.4X
			eS	12 55.00	
KUSJ	9.20	26	eP	11 21.30	-4.2X
			eS	13 02.30	
ASAJ	9.54	15	eP	11 28.70	-1.5
MDJ	12.15	326	eP	12 08.50	2.7
Z	16s		11.30um		
N	12s		5.30um		
			sS	14 30.00	
CN2	13.82	314	Pd	12 29.00	1.0
Z	16s		8.80um		
N	13s		6.60um		
E	13s		4.00um		
			pP	12 32.00	
			eS	15 08.00	
SNY	14.03	304	Pd	12 32.00	1.2
Z	18s		10.60um		
N	12s		8.60um		
DL2	14.59	291	eP	12 42.00	3.8X
N	11s		5.80um		
E	11s		7.50um		
			eS	15 28.00	
SSE	15.58	261	eP	12 56.00	4.9X
	1.0s		24.00nm		4.4mb
Z	20s		2.30um		
N	14s		12.80um		
E	14s		4.20um		
			S	16 00.00	
			eSS	16 28.00	
NJ2	17.21	266	eP	13 12.00	0.2
Z	20s		3.70um		
N	11s		5.60um		
E	11s		2.40um		
			pP	13 23.00	
			sS	16 36.00	
TIA	18.00	280	eP	13 22.00	0.3
Z	15s		8.20um		
N	10s		4.80um		
E	12s		6.80um		
ANP	18.11	242	eP	13 31.00	7.9X
BJI	18.94	292	eP	13 32.00	-1.3
	8.0s		0.71nm		1.9mb X
Z	16s		4.10um		4.7MszX
N	14s		3.28um		
E	13s		3.83um		
			eS	17 06.00	
QZH	20.41	246	eP	13 50.00	0.2
Z	16s		3.60um		4.8MszX
N	12s		2.40um		
E	12s		2.60um		
			S	17 36.00	
WHN	21.33	265	P	14 00.00	0.7
Z	16s		4.35um		4.9MszX
N	12s		8.38um		
E	12s		4.88um		
			pP	14 08.20	30kmX
			S	17 56.00	
TIY	21.71	285	Pc	14 03.40	0.3
N	13s		6.00um		
E	11s		3.60um		
			pP	14 07.50	15kmX
			sP	14 19.00	
			sS	18 18.00	
GUMO	21.87	165	eP	14 06.00	1.2
	1.2s		411.11nm		5.7mb
GUA	21.93	165	eP	14 05.30	-0.1
	1.0s		168.00nm		5.4mb
Z	18s		3.85um		4.9Msz
HHC	22.54	293	eP	14 09.80	-1.6
N	13s		7.40um		
E	11s		3.30um		
BTO	23.68	292	eP	14 21.00	-1.6
Z	13s		6.20um		5.3MszX
N	13s		5.80um		
E	13s		5.80um		
			PP	14 56.00	
			S	18 38.00	
BAG	24.86	227	eP	14 35.00	0.8
			eS	19 04.00	
XAN	24.93	277	P	14 35.00	0.4
N	13s		5.70um		
E	11s		0.70um		
GZH	25.43	249	eP	14 45.00	5.7X
N	14s		3.70um		
E	15s		4.60um		
			S	19 08.00	
LZH	28.70	283	eP	15 08.00	-1.5
	2.0s		93.00nm		5.2mb
Z	18s		4.20um		5.1Msz
N	12s		4.10um		
			eS	20 05.00	
GYA	29.12	262	P	15 13.80	0.5
N	15s		6.50um		
E	15s		3.80um		
			S	20 08.00	
CD2	29.92	272	eP	15 20.90	0.6
Z	13s		3.70um		5.2MszX
E	12s		4.40um		
			S	20 20.40	
GTA	31.52	290	eP	15 32.20	-2.2
Z	16s		3.70um		5.2MszX
N	13s		3.20um		
			S	20 40.00	
KMI	32.89	263	eP	15 46.50	-0.1
Z	16s		6.90um		5.5MszX
N	12s		2.50um		
E	12s		4.20um		
			pP	15 56.50	35kmX
			sP	16 01.00	
			S	21 02.00	
ADK	35.61	48	eP	16 09.00	-0.6
	1.2s		70.30nm		5.4mb
CHG	39.04	256	eP	16 40.90	2.2
WMQ	40.22	299	Pd	16 49.60	1.2
Z	18s		3.70um		5.3Msz
			S	22 56.00	
SNG	44.92	241	eP	17 29.00	2.1
			eS	24 10.20	

MTN	48.14	191	eP	17	50.00	-2.1
SVW	48.25	36	eP	17	53.90	1.2
BRW	49.04	23	eP	17	58.80	0.3
IMA	49.40	30	eP	18	01.50	-0.1
	1.0s	23.60nm			5.1mb	
KSH	49.65	295	eP	18	02.00	-1.8
E	12s	2.30um				
		eS		25	16.00	
KDC	49.91	41	eP	18	04.60	-0.8
PMR	51.37	36	eP	18	15.80	-0.7
	1.2s	43.00nm			5.3mb	
FBA	51.83	31	eP	18	20.50	0.6
TOA	52.73	35	eP	18	27.40	0.5
WRA	54.78	186	P	18	41.00	-1.2
	0.6s	9.20nm			5.0mb	
CTA	55.13	172	eP	18	47.00	2.2
QIS	55.19	180	iPc	18	43.30	-1.9
HYB	56.35	268	eP	18	54.00	0.2
INK	57.06	26	eP	18	57.00	-1.2
ASPA	58.50	186	iPc	19	07.00	-1.7
	0.8s	13.00nm			5.1mb	
MBC	59.03	16	eP	19	11.00	-0.9
	0.9s	14.00nm			5.1mb	
GBA	59.25	265	P	19	18.00	3.8X
	0.9s	8.10nm			4.9mb	
RMQ	61.76	170	eP	19	31.00	-0.1
WARB	61.94	193	eP	19	32.20	-0.1
ALE	62.30	3	eP	19	34.00	-0.1
	0.7s	10.00nm			5.1mb	
DZM	62.32	151	iPc	19	36.20	1.2
MAIO	62.95	297	eP	19	41.00	1.9
		eS		28	12.00	
BRS	63.31	166	iP	19	41.20	-0.1
KEV	64.75	339	eP	19	49.00	-1.3
SOD	66.19	337	iP	19	57.50	-2.1
DAG	67.70	355	eP	20	05.00	-4.0X
SUF	69.03	333	eP	20	16.00	-1.5
	0.7s	7.60nm			5.0mb	
BWA	69.54	172	eP	20	22.10	1.2
CAN	70.50	172	eP	20	29.90	3.2X
PNT	70.93	43	eP	20	29.00	-0.3
	0.8s	10.00nm			5.0mb	
NUR	70.94	332	eP	20	27.00	-2.1
Z	22s	1.00um			5.0Msz	
		LR		53	00.00	
TAB	71.48	304	eP	20	33.00	0.0
EDM	72.10	37	ePd	20	36.00	-0.3
WDC	73.77	52	eP	20	46.60	0.3
UPP	74.03	333	iP	20	46.50	-0.8
MIN	74.50	52	e(P)	20	50.00	-0.7
SES	74.91	39	eP	20	52.00	-0.8
ORV	74.99	52	eP	20	52.70	-0.7
HFS	75.24	335	eP	20	52.50	-1.9
	1.2s	24.00nm			5.1mb	
NB2	75.40	337	P	20	53.40	-2.0
FFC	76.43	32	eP	21	00.50	-0.7
	0.6s	8.00nm			5.0mb	
CMB	76.56	53	e(P)	20	57.90	-4.4X
LRM	76.90	43	eP	21	04.60	0.2
FRI	77.59	54	eP	21	08.10	0.2
FRB	79.21	12	eP	21	17.00	0.7
CLC	79.66	54	eP	21	20.00	0.6
SPC	80.25	324	eP	21	23.50	1.0
MWC	80.27	55	eP	21	23.00	0.1
BW06	80.41	44	P	21	23.70	0.2
	0.9s	3.60nm			4.4mb	
RVR	80.87	55	eP	21	28.00	2.2
KSP	80.91	327	eP	21	25.50	-0.2
		e		24	32.00	
PLM	81.59	55	eP	21	32.00	2.2
TPC	81.69	54	eP	21	30.00	-0.2
BRG	81.91	328	eP	21	30.00	-0.9
	1.2s	12.00nm			4.9mb	
		e		21	34.90	
CLL	81.99	329	eP	21	30.00	-1.3
	1.4s	31.00nm			5.2mb	
BAR	82.12	56	eP	21	33.00	0.6
SRO	82.13	324	iP	21	34.00	1.9
PRU	82.30	328	eP	21	31.00	-1.9
Z	17s	1.50um			5.4MszX	
N	16s	1.00um				
E	16s	1.80um				
		e		22	19.00	
ZST	82.43	325	eP	21	33.00	-0.7
Z	18s	2.00um			5.5Msz	
		e		44	16.50	
RSSD	82.59	40	P	21	35.00	0.1
RSON	82.71	31	P	21	34.20	-0.9
	1.1s	10.56nm			4.9mb	
VKA	82.75	326	e(P)	21	38.00	2.7
Z	13s	0.68um			5.2MszX	
		e		21	45.00	
		LR		03	10.00	
MOX	83.07	329	eP	21	36.00	-0.9
Z	14s	1.50um			5.5MszX	
GLA	83.14	54	eP	21	38.00	0.3
BEO	83.14	321	eP	21	38.00	0.6
KHC	83.36	327	eP	21	37.50	-1.0
GRF	83.96	329	eP	21	41.50	0.0
	1.5s	65.00nm			5.6mb	
Z	18s	0.40um			4.8Msz	
VAY	84.39	317	eP	21	43.60	-0.2
SKO	84.57	318	iP	21	45.20	0.5
Z	15s	1.36um			5.4MszX	
N	15s	1.46um				
E	16s	1.02um				
		iS		32	12.00	
		LR		02	54.00	
GOL	84.81	44	P	21	47.70	1.4
	1.0s	9.50nm			5.0mb	
KBA	84.99	326	eP	21	37.00	-9.9X
	1.7s	25.00nm			5.2mb	
		i		21	48.10	
		e		22	23.00	
		e		25	03.00	
		i		25	15.70	
		e		25	56.50	
TOD	85.03	330	eP	21	45.82	-1.1
LJU	85.20	325	e(P)	21	48.00	0.2
ENN	85.25	332	eP	21	46.50	-1.4
	1.0s	14.00nm			5.1mb	
VBY	85.25	324	eP	21	47.50	-0.5
ABH	85.32	331	eP	21	47.68	-0.7
MEM	85.34	332	P	21	48.30	-0.1
CEY	85.48	325	e(P)	21	49.50	0.3
VOY	85.51	325	eP	21	49.60	0.1
RUP	85.66	331	eP	21	49.09	-1.0
WLF	86.04	332	P	21	52.60	0.7
SNF	86.07	333	P	21	54.80	2.8
FEL	86.71	330	eP	21	54.46	-0.9
DMU	86.79	341	eP	21	56.00	0.5
DLE	87.23	340	eP	21	44.00	-13.7X
ALQ	87.32	49	eP	21	59.80	1.1
	1.1s	6.01nm			4.8mb	
Z	20s	0.35um			4.8Msz	
		e		22	18.90	
		e		22	23.50	
		e		39	47.90	
RSM	87.76	325	P	22	01.00	0.7
SCH	87.85	15	eP	22	01.00	0.3
BOB	88.51	327	P	22	05.80	1.7
LSD	88.98	328	P	22	06.04	-0.5
PCP	89.09	327	P	22	04.60	-2.2
LPG	89.12	329	eP	22	07.50	0.2
	1.0s	8.00nm			4.9mb	
AVF	89.47	331	eP	22	08.70	0.2
	1.2s	11.90nm			5.0mb	
FIN	89.50	327	P	22	06.34	-2.4
RRL	89.57	328	P	22	06.14	-3.2X
ROB	89.59	327	P	22	06.96	-2.2
IMI	89.88	327	P	22	07.78	-2.8
SBF	90.12	327	eP	22	12.60	0.9
	1.0s	8.00nm			4.9mb	
MAF	90.25	332	eP	22	12.80	0.6
	1.2s	11.90nm			5.0mb	
LSF	90.62	332	eP	22	14.20	0.3
	1.2s	11.90nm			5.1mb	
LMR	90.95	328	eP	22	16.60	1.2
	1.2s	17.80nm			5.3mb	
MFF	90.96	333	eP	22	16.30	0.9
	1.1s	14.60nm			5.2mb	
CAF	91.52	331	eP	22	19.20	1.1
	1.1s	9.70nm			5.1mb	
SPA	124.76	180	e(PKP)	28	12.20	1.4
	1.0s	11.50nm				
ATB	146.77	21	PKPd	28	52.70	0.0
ARE	146.98	64	ePKP	28	56.00	2.7X
ZOBO	149.29	60	ePKP	28	47.00	-10.3X
	1.2s	25.34nm				
Z	20s	0.35um			5.2Msz	
		i		29	02.20	
		LR		20	48.00	
LPB	149.49	60	PKP	29	03.60	6.2X
CNCB	149.76	60	PKP	29	04.00	6.0X
CCH	151.44	59	PKP	29	06.90	6.7X
ITR	153.85	355	e(PKP)	29	14.00	10.6X
		e		29	49.20	

S.D. = 1.2 on 138 of 157 obs.

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* JUL 09, 1989 02h 09m 52.21± 0.80s
34.868 N ±13.6km 139.369 E ± 8.5km
DEPTH = 5.0km (geophysicist)
4.2mb (5 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt in the Ajiro area.

IIDJ	1.34	298	P	10	16.50	-1.0
			S	10	31.30	
MAT	1.92	331	eP	10	27.00	1.1
			eS	10	49.00	
KUMJ	7.49	254	eP	11	45.00	0.3
KAGJ	8.01	245	eP	11	52.20	0.2
DAV	30.42	208	eP	15	59.00	-8.8X
PMR	51.35	36	e(P)	18	59.20	-0.1
	1.0s	0.40nm			3.3mb	
FBA	51.81	31	eP	19	02.10	-0.8
	1.0s	2.70nm			4.1mb	
WB5	54.65	186	eP	19	39.80	15.5X
NB2	75.53	337	P	21	42.20	3.1X
NRA0	75.65	336	eP	21	42.90	3.2X
KVN	77.40	51	eP	21	51.30	1.1
TNP	78.52	52	eP	21	57.90	1.5
	0.9s	5.27nm			4.6mb	
BW06	80.36	44	(P)	22	04.70	-1.6
	1.1s	2.98nm			4.2mb	
ALQ	87.26	49	e(P)	22	40.90	-0.5
	1.0s	1.50nm			4.2mb	
BAO	159.74	21	ePKP	29	49.70	-4.1X

S.D. = 1.2 on 10 of 15 obs.

? JUL 09, 1989 02h 28m 02.51± 4.46s
34.933 N ±36.1km 139.151 E ±13.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.12	354	P	28	23.00	-1.0
			S	28	37.50	
IIDJ	1.15	299	P	28	23.80	-0.7
			S	28	38.70	
KAKJ	1.52	33	P	28	30.00	-0.3
			S	28	51.40	
MAT	1.78	335	iPd	28	34.40	0.3
			iS	28	56.60	
MTMJ	1.98	327	P	28	38.10	1.0
			S	29	03.90	
NIIJ	2.30	357	P	28	42.40	0.7
			S	29	12.00	

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

? JUL 09, 1989 02h 28m 03.68± 0.80s
18.733 S ±40.7km 177.787 W ±22.1km
DEPTH = 550.0km (geophysicist)
4.2mb (11 obs.)
FIJI ISLANDS REGION (181)

DZM	15.15	255	iPd	31	19.70	5.3X
STK	38.76	242	iPd	34	43.60	1.1
WB5	45.05	260	eP	35	32.90	0.5
WRA	45.07	260	Pc	35	33.10	0.5
	0 6s	7.40nm			4.4mb	
ASPA	45.15	255	iPd	35	33.60	0.5
	0.7s	34.00nm			5.0mb	
		eS		41	32.30	
KNA	50.98	265	iPd	36	17.50	0.5
	0.4s	21.00nm			4.9mb	
WARB	51.57	251	iPd	36	20.70	-0.6
	0.3s	5.00nm			4.4mb	
MBL	58.36	256	eP	37	06.00	-2.7
	0.4s	12.00nm			4.6mb	
PLM	77.83	48	eP	39	06.00	-0.1
ISA	77.96	46	eP	39	07.00	0.4
CLC	78.64	46	eP	39	10.00	-0.2
TPC	78.80	48	eP	39	11.00	0.0
KVN	80.09	43	eP	39	18.10	0.3
TNP	80.13	44	iP	39	18.70	0.6
	1.0s	4.75nm			3.9mb	
PNT	85.08	34	eP	39	43.00	0.6
	0.8s	8.00nm			4.4mb	
ALQ	86.15	51	eP	39	48.00	0.0
	1.0s	1.00nm			3.5r	
FBA	86.48	12	eP	39	48.90	0

09d 02h

	1.0s	0.80nm			3.4mb	
BW06	87.55	43	eP	39	54.30	-0.3
	1.0s	0.80nm			3.5mb	
			pP	41	55.70	553kmX
GOL	88.98	47	e(P)	40	00.60	-0.7
	1.0s	1.50nm			3.9mb	
CHTO	89.83	290	e(P)	40	01.30	-4.0X
RSSD	91.75	44	eP	40	13.70	-0.1
INK	92.52	15	eP	40	16.00	-0.6

S.D. = 0.8 on 20 of 22 obs.

JUL 09, 1989 03h 06m 58.01± 1.13s
34.390 N ±10.6km 25.331 E ± 5.7km
DEPTH = 57.0 ± 20.0 km
3.7mb (1 obs.)
CRETE (370)

NPS	0.90	15	ePn	07	13.20	-1.6
VAM	1.38	318	ePb	07	24.00	2.7X
KAP	1.91	52	ePb	07	31.20	2.6X
YER	3.64	40	iP	07	54.00	0.8
KSL	3.88	62	ePn	07	56.80	0.2
CIN	3.90	34	eP	07	57.00	0.2
ITM	3.93	316	ePn	07	59.00	1.8
IZM	4.29	21	eP	08	03.20	0.9
ELL	4.41	56	iP	08	05.00	0.9
PRK	4.90	9	ePn	08	12.20	1.2
KHL	5.18	40	iP	08	13.90	-1.0
BCK	5.25	53	eP	08	16.10	0.2
VLS	5.38	316	ePn	08	17.60	0.0
EZN	5.48	8	eP	08	18.50	-0.5
PLG	6.16	346	ePn	08	28.00	-0.5
SKO	8.16	339	e(P)	09	02.50	6.1X
LCI	8.35	317	P	08	56.80	-2.0
			eSn	10	23.20	
MEU	8.88	291	P	09	08.10	1.8
			eSn	10	42.20	
SALJ	8.99	102	P	09	07.80	-0.1
BURJ	9.00	101	P	09	07.30	-0.6
KFNJ	9.04	103	P	09	08.10	-0.2
MGR	9.67	309	P	09	15.90	-1.2
SGO	10.06	311	P	09	21.90	-0.5
HFS	26.86	347	eP	12	35.20	0.4
	0.5s	1.00nm			3.7mb	

S.D. = 1.1 on 21 of 24 obs.

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* JUL 09, 1989 03h 15m 05.81± 3.01s
35.143 N ±24.6km 139.172 E ±14.0km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.91	351	P	15	23.70	-0.1
			S	15	38.40	
IIDJ	1.08	288	P	15	25.20	-1.5
			S	15	40.20	
KAKJ	1.34	37	P	15	30.60	-0.3
			S	15	49.50	
MAT	1.60	331	iPd	15	34.90	0.1
			iS	15	57.70	
MTMJ	1.82	323	P	15	39.00	0.9
			S	16	04.80	
NIIJ	2.10	356	P	15	44.70	2.7X
TSRJ	2.64	279	P	15	50.60	0.9
			S	16	22.00	

S.D. = 1.2 on 6 of 7 obs.

JUL 09, 1989 03h 22m 26.98± 0.58s
34.932 N ± 6.4km 139.254 E ± 7.5km
DEPTH = 5.0km (geophysicist)
4.2mb (3 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.13	349	P	22	47.90	-0.8
IIDJ	1.23	297	iPd	22	50.00	-0.3
			S	23	05.20	
KAKJ	1.47	30	iP+	22	54.90	0.7
			S	23	15.30	
MAT	1.82	332	iPd	22	59.80	0.6
			iS	23	22.90	
MTMJ	2.03	325	iPd	23	03.70	1.4
			S	23	30.20	
NIIJ	2.31	355	P	23	07.50	1.2
			S	23	38.70	
YAMJ	3.30	11	P	23	21.20	0.9
OFUJ	4.57	24	P	23	38.00	-0.3
SHK	5.43	268	eP	23	55.00	4.4X
AOMJ	5.69	9	eP	23	55.90	1.7
SHNJ	6.77	265	eP	24	10.00	0.6
KUMJ	7.41	254	eP	24	18.70	0.2
KAGJ	7.95	244	eP	24	25.60	-0.4
HOOJ	8.08	22	P	24	26.00	-1.7
KUSJ	9.19	26	eP	24	39.40	-3.7X
ASAJ	9.54	15	eP	24	45.70	-2.3
BJI	18.99	292	eP	26	50.00	-1.7
FBA	51.81	31	iP	31	39.20	1.6
	0.7s	1.70nm			4.1mb	
WB5	54.71	186	eP	31	57.60	-1.9
WRA	54.77	186	P	32	00.00	0.0
	0.3s	1.90nm			4.6mb	
INK	57.05	26	eP	32	15.00	-0.9
MBC	59.03	16	eP	32	27.50	-2.2
BWA	69.53	172	eP	33	39.80	1.2
CAN	70.48	172	eP	33	45.80	1.4
HFS	75.27	335	eP	34	11.30	-1.0
	0.5s	0.80nm			4.0mb	
NB2	75.43	337	P	34	14.70	1.4
LRM	76.87	43	eP	34	22.50	0.5
ZOBO	149.26	60	PKP	42	19.90	4.8X
LPB	149.45	60	PKP	42	21.00	5.8X
CNCB	149.72	60	iPKPd	42	22.30	6.6X

S.D. = 1.3 on 25 of 30 obs.

? JUL 09, 1989 03h 37m 15.88± 2.73s
9.742 S ±32.2km 161.482 E ±23.7km
DEPTH = 96.9 ± 16.9 km
4.3mb (2 obs.)
SOLOMON ISLANDS (193)
Felt (I) at Honiora.

HNR	1.55	281	iP	37	43.00	0.1
			iS	38	01.00	
DZM	13.15	159	iPd	40	19.60	-0.6
			iS	42	34.00	
CTA	17.94	233	iPd	41	21.70	1.1
	0.9s	11.76nm			4.1mb	
BRS	19.38	204	iPd	41	43.40	6.6X
RMQ	20.56	214	e(P)	41	49.00	0.1
WB5	28.04	246	eP	42	59.80	-0.4
			i	43	19.70	
WARB	36.80	239	eP	44	14.50	-1.7
			e	44	35.00	
SPA	80.32	180	e(P)	49	18.90	1.4
	1.0s	9.00nm			4.6mb	
			e	49	39.20	

S.D. = 1.5 on 7 of 8 obs.

? JUL 09, 1989 03h 44m 14.88± 4.41s
34.936 N ±35.6km 139.193 E ±13.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.12	352	P	44	35.40	-1.0
			S	44	49.80	
IIDJ	1.18	298	P	44	36.80	-0.6
			S	44	51.70	
KAKJ	1.50	32	P	44	42.00	-0.4
			S	45	01.30	
MAT	1.79	334	eP	44	47.00	0.3
			iS	45	09.30	
MTMJ	1.99	326	P	44	50.40	0.7
			S	45	16.40	
NIIJ	2.30	356	P	44	55.00	0.9
			S	45	25.30	

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

? JUL 09, 1989 03h 49m 10.76± 2.40s
44.393 N ±23.7km 7.116 E ±26.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

PZZ	0.11	355	P	49	13.51	-0.3
			S	49	14.84	
ENR	0.27	127	P	49	16.48	-0.1
			S	49	21.30	
ROB	0.55	100	P	49	22.12	0.1
			S	49	29.61	
RRL	0.58	336	P	49	22.84	0.2
			S	49	30.12	

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

& JUL 09, 1989 03h 52m 45.83s
58.714 N 136.895 W
DEPTH = 0.0km

SOUTHEASTERN ALASKA (19)
<AGS-P>.

HQN	1.26	307	eP	53	08.30	-1.9
			eS	53	24.89	
PNL	1.60	308	eP	53	13.84	-1.7
			eS	53	35.38	
BCPM	1.88	313	eP	53	18.27	-1.2
			eS	53	41.53	
HYT	2.14	352	P	53	25.20	1.8
PCA	2.21	310	eP	53	22.84	-1.5
			eS	53	52.13	
DWY	5.50	348	P	54	12.00	1.1

6 obs. associated

JUL 09, 1989 03h 54m 37.05± 0.26s
43.670 N ± 2.9km 12.174 E ± 2.2km
DEPTH = 7.1 ± 1.9 km
CENTRAL ITALY (381)
ML 3.7 (LDG), 3.7 (KBA), 3.5 (VKA), 3.1 (LJU). MD 3.7 (TRI), 3.6 (STR), 3.5 (ROM).

CRE	0.17	256	P	54	41.60	0.9
RSM	0.33	38	Pc	54	44.50	0.8
			eSg	54	48.40	
ARV	0.58	107	Pc	54	48.00	-0.8
ASS	0.70	149	Pd	54	50.70	-0.3
			eSg	55	14.40	
MME	1.19	297	P	55	00.50	0.9
			eSg	55	24.10	
PII	1.20	273	P	54	59.70	0.1
			eSn	55	17.80	
BDI	1.21	290	P	54	59.80	0.0
MNS	1.34	164	Pd	55	01.90	-0.1
			eSn	55	21.80	
MAO	1.46	211	P	55	03.70	-0.1
AQU	1.59	145	P	55	06.60	0.8
RMP	1.90	168	P	55	11.80	1.7
AZI	1.92	151	P	55	11.60	1.2
BOB	2.25	300	P	55	18.00	2.7
SAL	2.27	329	P	55	16.70	1.3
RIY	2.30	43	iPnd	55	15.00	-1.0
			iSn	55	43.50	
SDI	2.31	148	P	55	17.10	1.0
TRI	2.33	29	iPnc	55	14.60	-1.8
			i	55	23.10	
			iSn	55	43.30	
			iSg	55	52.50	
CTI	2.41	351	P	55	19.60	2.0
			eSn	55	57.10	
CEY	2.62	37	ePnc	55	19.00	-1.5
			eSn	55	53.00	
DUI	2.62	139	P	55	25.30	4.7X
CVF	2.66	247	Pn	55	21.27	0.2
RFI	2.72	150	P	55	24.26	2.4
MDI	2.74	321	P	55	24.70	2.5
PCP	2.76	290	P	55	22.92	0.4
VBY	2.87	49	e(Pn)c	55	23.50	-0.5
			ePb	55	28.90	
			iSn	55	58.50	
CKI	2.91	286	P	55	23.60	-1.0
			eSn	55	58.40	
LJU	2.91	34	ePnc	55	23.50	-1.1
			eSn	56	02.00	
			e	56	12.80	
FIN	2.91	282	P	55	23.88	-0.8
			S	55	55.24	
FVI	2.95	8	P	55	24.80	-0.4
IMI	3.11	276	P	55	26.93	-0.6
			S	55	59.73	
HVAR	3.15	98	iPnc	55	27.30	-0.7
			iSg	56	05.80	
ROB	3.17	283	P	55	27.61	-0.7
VAI	3.27	313	P	55	29.70	0.0
OGA	3.30	346	ePn	55	31.50	1.2
OSS	3.34	335	ePd	55	33.00	2.1
SAOF	3.36	277	Pn	55	31.02	0.0
TMA	3.38	317	ePc	55	32.50	1.0
SCE	3.38	355	iPnc	55	32.90	1.4
VDL	3.41	327	ePd	55	34.70	2.9
SBF	3.44	275	Pn	55	31.90	-0.3
			Sn	56	11.80	
AUTN	3.45	277	Pn	55	32.61	0.1
ZAG	3.46	50	e(Pn)	55	25.20	-7.2X
			iSg	56	32.80	
ENR	3.48	281	P	55	32.26	-0.5

REVF	3.49	273	Pn	55	33.21	0.4
PTJ	3.50	49	ePn	55	33.20	0.2
			e(Sn)	56	19.10	
KBA	3.51	13	iPnc	55	33.70	0.5
	0.5s		50.80nm			
			i	55	36.40	
			i	55	46.20	
			iSn	56	14.60	
			i	56	19.10	
AURF	3.52	275	Pn	55	33.78	0.5
ORO	3.57	305	P	55	34.40	0.3
TOUF	3.58	277	Pn	55	34.32	0.0
DOI	3.65	285	P	55	34.80	-0.4
PZZ	3.75	285	P	55	35.88	-0.8
RSP	3.82	295	P	55	36.98	-0.7
CALN	3.83	273	Pn	55	37.58	-0.3
LSD	4.01	298	P	55	40.11	-0.3
FRF	4.01	270	Pn	55	39.70	-0.6
			Sn	56	25.30	
RRL	4.07	290	P	55	42.31	1.1
BHG	4.08	7	ePn	55	42.50	1.3
SAX	4.10	332	ePd	55	43.50	1.8
LMR	4.13	267	Pn	55	40.80	-1.1
			Sn	56	27.60	
DIX	4.16	307	ePc	55	44.10	1.6
LRG	4.23	269	Pn	55	42.50	-0.8
			Sn	56	31.70	
LPG	4.28	297	Pn	55	44.70	0.3
LPL	4.30	297	Pn	55	45.00	0.4
BRY	4.71	97	ePn	55	50.00	-0.4
			eSn	56	45.20	
HCY	4.79	103	ePn	55	50.60	-0.8
			eSn	56	47.00	
SLE	4.84	329	ePc	55	51.90	-0.1
NKY	5.06	97	ePn	55	55.00	-0.2
			eSn	56	53.20	
BDV	5.07	104	ePn	55	54.60	-0.7
			eSn	56	52.00	
FEL	5.11	327	Pn	55	55.73	-0.3
LOMF	5.26	316	Pn	55	58.01	0.0
TTG	5.34	101	ePn	56	01.00	1.9
			eSn	56	59.40	
VKA	5.43	31	e(Pn)	55	58.00	-2.3
			eSn	56	48.00	
			i	57	01.50	
MOF	5.47	322	Pn	56	00.46	-0.5
WET	5.50	5	ePn	56	00.40	-1.0
KHC	5.55	10	ePn	56	02.00	-0.1
			e	56	24.00	
BSF	5.61	320	Pn	56	02.42	-0.6
SDA	5.63	105	ePn	56	04.30	1.1
ZST	5.68	35	eP	56	11.80	7.9X
			e	56	17.30	
			e	56	44.30	
			e	57	44.00	
IVA	5.70	95	ePn	56	04.50	0.3
			eSn	57	11.00	
PVY	5.81	98	ePn	56	06.50	0.7
			eSn	57	13.00	
CDF	5.84	326	Pn	56	05.51	-0.7
PUK	5.90	103	ePn	56	06.80	-0.1
LACI	5.92	108	ePn	56	05.00	-2.1
BCI	5.93	100	ePn	56	08.40	1.0
HAU	5.95	319	Pn	56	06.60	-1.0
			Sn	57	12.30	
BEO	6.06	76	eP	57	01.00	51.8X
GRF	6.06	354	ePn	56	08.00	-1.2
			e(Pg)	56	47.00	
			e(Sg)	57	17.00	
GWF	6.17	331	Pn	56	10.09	-0.7
KKS	6.26	102	ePn	56	16.00	4.0X
PRU	6.53	14	ePn	56	14.00	-1.8
			ePg	56	28.00	
			eSg	57	15.50	
SMF	6.60	300	Pn	56	15.90	-1.0
			Sn	57	29.70	
LBF	6.66	303	Pn	56	15.50	-2.3
			Sn	57	29.30	
LOR	6.86	305	Pn	56	19.00	-1.6
			Sn	57	35.30	
AVF	6.97	300	Pn	56	21.20	-0.8
			Sn	57	38.00	
SSF	6.98	302	Pn	56	20.10	-2.1
			Sn	57	37.10	
MOX	6.99	357	ePn	56	22.00	-0.3
SKO	7.02	101	iPn	56	21.00	-1.8
BGF	7.20	297	Pn	56	23.70	-1.6
			Sn	57	43.00	
WLF	7.29	327	P	56	29.00	2.6
			S	57	51.80	
BRG	7.31	9	e(P)	56	33.00	6.3X
			e	57	45.00	
			e	58	13.00	
			e	58	34.00	
CAF	7.36	283	Pn	56	26.60	-1.0
CLL	7.67	4	e(P)	56	49.00	17.3X
			e	57	56.00	
			e	58	54.00	
KSP	7.70	20	e(P)	56	34.00	1.7
			eS	57	53.00	
DOU	8.26	324	P	56	42.30	2.3
	0.6s		6.40nm			5.1mb X
			S	58	08.30	
EPF	8.65	270	Pn	56	43.60	-2.0
	S.D. = 1.2		on 98 of 105 obs.			

& JUL 09, 1989 04h 26m 01.70s
61.701 N 149.569 W
DEPTH = 29.8km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA	0.16	251	iP	26	08.27	0.8
GHO	0.32	77	iP	26	08.92	-0.5
			S	26	15.06	
KNK	0.61	118	iP	26	12.55	-1.3
			S	26	21.93	
SUA	0.61	248	iP	26	13.17	-0.8
			S	26	22.68	
CUT	0.78	335	eP	26	15.14	-1.4
			S	26	25.65	
SKT	0.97	288	iP	26	17.93	-1.4
			S	26	31.72	
SLKM	1.24	195	iP	26	22.22	-0.9
HUR	1.28	359	eP	26	22.59	-1.1
			S	26	39.64	
SPU	1.30	248	eP	26	23.38	-0.6
			S	26	41.23	
VZW	1.59	113	iP	26	26.76	-1.4
			S	26	47.24	
SEW	1.60	178	eP	26	27.12	-1.2
TOA	1.66	74	iP	26	28.28	-0.9
			S	26	51.14	
RND	1.74	11	eP	26	29.39	-1.0
KLU	1.76	95	iP	26	28.69	-1.9
			S	26	51.21	
RDT	1.78	232	eP	26	29.97	-1.0
RED	2.02	232	eP	26	33.85	-0.6
SDG	2.07	65	iP	26	33.93	-1.1
PAX	2.30	55	eP	26	37.11	-1.3
			S	27	05.77	
ILIM	2.32	227	eP	26	37.98	-0.7
CNPM	2.33	201	eP	26	37.08	-1.7
GLB	2.77	93	eP	26	42.55	-2.4
HDA	2.96	23	eP	26	47.56	-0.2
	22 obs. associoted					

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* JUL 09, 1989 04h 55m 28.22± 2.85s
34.931 N ±23.0km 139.214 E ±13.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.13	351	P	55	49.00	-0.8
			S	56	03.40	
KAKJ	1.49	31	P	55	55.10	-0.6
			S	56	14.20	
MAT	1.80	333	iPd	56	00.10	-0.1
			iS	56	22.60	
MTMJ	2.01	326	P	56	03.90	0.6
			S	56	30.20	
NIIJ	2.31	356	P	56	07.50	0.0
TSRJ	2.71	284	P	56	13.00	-0.3
			S	56	47.80	
YAMJ	3.30	11	eP	56	22.70	1.1
	S.D. = 0.8		on 7 of 7 obs.			

? JUL 09, 1989 05h 05m 02.60± 4.32s
34.905 N ±35.1km 139.076 E ±12.5km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.11	301	P	05	23.20	-0.3
			S	05	38.40	
CHJJ	1.14	357	P	05	23.60	-0.4
			S	05	36.50	
KAKJ	1.58	34	P	05	30.40	-0.2
			S	05	47.80	
MAT	1.78	337	eP	05	33.00	-0.6
			iS	05	55.80	
MTMJ	1.97	329	P	05	37.30	0.9
			S	06	02.80	
NIIJ	2.33	359	P	05	42.20	0.6
	S.D. = 0.8		on 6 of 6 obs.			

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* JUL 09, 1989 05h 50m 13.82± 0.90s
38.307 N ±10.2km 27.433 E ±10.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.16	304	iPg	50	18.20	0.6
			iSg	50	20.70	
CIN	0.87	144	eP	50	29.00	-1.6
YER	1.35	150	ePn	50	39.80	1.1
DST	1.60	35	iPn	50	41.90	-0.3
KHL	1.64	89	iPn	50	43.90	1.0
EZN	1.74	331	ePn	50	43.50	-0.8
	S.D. = 1.4		on 6 of 6 obs.			

? JUL 09, 1989 06h 48m 55.76± 4.58s
34.865 N ±37.9km 139.208 E ±12.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.19	352	P	49	17.60	-0.9
			S	49	31.80	
IIDJ	1.23	300	P	49	18.80	-0.3
			S	49	34.10	
KAKJ	1.55	30	P	49	23.50	-0.5
			S	49	45.80	
MAT	1.86	334	iPd	49	28.70	0.1
			iS	49	51.40	
NIIJ	2.38	356	P	49	37.50	1.5
			S	50	09.00	
YAMJ	3.37	11	eP	49	52.90	2.8X
OFUJ	4.64	24	eP	50	08.20	0.0
	S.D. = 1.1		on 6 of 7 obs.			

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* JUL 09, 1989 07h 07m 27.69± 2.59s
36.549 N ±11.9km 7.787 W ±24.5km
DEPTH = 13.5 ± 5.9 km
STRAIT OF GIBRALTAR (385)
MD 2.8 (TIO).

EVAL	1.33	39	eP	07	53.00	1.2
			eS	08	05.50	
CNIL	1.41	97	iP	07	53.00	0.1
GIBL	1.50	79	iP	07	56.00	1.8
MOMI	1.68	97	iP	08	03.00	6.2X
OJEN	1.87	103	iP	08	16.00	16.3X
LIJA	1.94	79	iP	08	00.00	-0.7
SRQ	1.97	98	iP	08	02.00	1.0
BMK	2.25	135	iPn	08	05.00	-0.1
			iSn	08	25.50	
EHOR	2.39	57	eP	08	07.50	0.4
			eS	08	33.00	
EBAN	3.57	62	iP	08	22.90	-1.0
			eS	08	58.50	
EVIA	4.68	62	eP	08	37.80	-2.0
			eS	09	27.00	
TIO	5.62	175	iPn	08	53.00	-0.1
			iSn	09	51.50	
	S.D. = 1.4		on 10 of 12 obs.			

% JUL 09, 1989 08h 14m 03.78± 1.43s
40.953 N ±10.5km 12.664 E ±10.0km
DEPTH = 10.0km (geophysicist)
TYRRHENIAN SEA (389)

RDP	0.81	3	P	14	19.00	-0.5
			eSg	14	30.70	
RMP	0.86	2	Pd	14	20.40	0.1
			eSg	14	31.50	
SDI	1.15	49	Pc	14	25.60	0.3
			eSg	14	41.80	
AZI	1.19	29	P	14	25.60	-0.3
			eSg	14	41.30	
MNS	1.43	0	P	14	30.20	0.4
			eSg	14	51.80	
MAO	1.85	323	P	14	35.80	0.0
MGR	2.35	109	P	14	42.90	-0
	S.D. = 0.4		on 7 of 7 obs.			

• JUL 09, 1989 08h 15m 10.58± 2.80s
34.939 N ±22.4km 139.182 E ±12.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.12	352	P	15	31.40	-0.6
			S	15	45.80	
IIDJ	1.17	298	P	15	32.40	-0.6
			S	15	47.60	
KAKJ	1.50	32	P	15	37.80	-0.3
			S	15	58.50	
MAT	1.78	334	eP	15	42.00	-0.3
			iS	16	05.00	
MTMJ	1.99	326	P	15	46.20	0.9
			S	16	12.40	
NIIJ	2.30	356	P	15	50.50	0.8
			eS	16	21.90	
TSRJ	2.68	284	P	15	55.30	0.1

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

• JUL 09, 1989 08h 38m 40.48± 2.38s
37.777 N ±15.8km 20.590 E ±19.9km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
ML 3.5 (ATH).

VLS	0.40	0	iPgc	38	47.80	-0.9
ITM	1.22	119	ePb	39	02.50	-0.7
KEK	2.03	343	ePn	39	15.50	0.4
ATH	2.48	85	ePn	39	22.50	0.9
NEO	2.57	53	ePn	39	22.50	-0.3
KZN	2.69	20	ePn	39	25.20	0.6
VAY	3.86	23	ePn	39	52.00	10.9X
SKO	4.24	9	ePn	39	57.50	10.9X

S.D. = 1.0 on 6 of 8 obs.

• JUL 09, 1989 09h 30m 00.23± 2.41s
34.924 N ±20.3km 139.184 E ± 9.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.13	352	iPd	30	21.10	-0.8
			S	30	35.30	
IIDJ	1.18	298	iPd	30	22.20	-0.6
			S	30	37.30	
KAKJ	1.51	32	iP+	30	27.40	-0.5
			S	30	48.20	
MAT	1.80	334	iPd	30	32.00	-0.1
			iS	30	54.60	
MTMJ	2.00	326	iPd	30	36.00	0.8
			S	31	02.40	
NIIJ	2.32	356	P	30	40.20	0.6
			S	31	12.10	
TSRJ	2.69	284	iP+	30	45.00	0.1
YAMJ	3.31	12	eP	30	54.30	0.5
OFUJ	4.60	25	P	31	12.00	0.0
			eS	32	06.20	

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

& JUL 09, 1989 09h 32m 21.10s
60.085 N 152.887 W
DEPTH = 105.2km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.04	262	iP	32	35.17	0.9
			S	32	46.58	
RED	0.34	10	iP	32	36.10	-0.7
OPT	0.47	202	iP	32	36.90	-0.6
			S	32	49.48	
RDT	0.55	26	iP	32	37.36	-0.7
			S	32	50.00	
AUL	0.76	202	eP	32	39.13	-0.6
HOM	0.76	124	eP	32	39.39	-0.4
NNL	0.80	92	eP	32	40.00	-0.2
XLV	0.86	136	iP	32	39.63	-1.2
CNPM	1.01	123	iP	32	41.39	-0.9
NKA	1.05	50	iP	32	43.73	1.0
BRLK	1.06	107	eP	32	42.05	-0.8
SPU	1.17	20	iP	32	43.50	-0.7
CDD	1.22	199	eP	32	43.40	-1.3
SLKM	1.39	71	eP	32	45.24	-1.5
			S	33	04.66	
SHU	1.49	169	eP	32	46.53	-1.3
			S	33	06.46	
SVW	1.70	308	iP	32	49.44	-1.1
SEW	1.72	88	eP	32	48.98	-1.8
			S	33	11.03	
SUA	1.74	36	eP	32	50.54	-0.6
			S	33	13.44	
SKT	2.01	19	iP	32	53.67	-0.9
			S	33	20.34	
PWA	2.15	42	eP	32	55.43	-0.9
GHO	2.57	47	eP	32	59.99	-2.0
CUT	2.65	27	eP	33	02.67	-0.3

22 obs. associated

JUL 09, 1989 09h 46m 39.62± 0.22s
1.577 S ± 4.5km 15.548 W ± 4.7km
DEPTH = 10.0km (geophysicist)
5.4mb (57 obs.) 5.4Msz (10 obs.)
NORTH OF ASCENSION ISLAND (407)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 35C
Centroid Location:
Origin Time 09:46:47.5 0.2
Lat 1.02S 0.03 Lon 15.11W 0.03
Dep 15.0 FIX Half-duration 2.8
Moment Tensor; Scale 10**17 Nm
Mrr=-0.06 0.09 Mtt= 2.05 0.11
Mff=-1.99 0.14 Mrt=-0.84 0.32
Mrf= 1.56 0.34 Mtf=-3.43 0.08
Principal Axes:

T	Val= 4.51	Plg=19	Azm=212
N	-0.34	67	353
P	-4.17	14	117

Best Double Couple:Mo=4.3*10**17
NP1:Strike=254 Dip=67 Slip= 176
NP2: 345 87 23

LIC	13.05	53	P	49	42.74	-5.1X
TIC	13.31	52	P	49	45.88	-5.4X
KIC	13.36	54	P	49	46.86	-5.1X
LEGH	16.94	65	eP	50	42.00	3.5X
KUK	17.01	63	eP	50	35.00	-4.3X
TIO	33.27	13	iP	53	19.00	-0.6
			i	54	17.90	
BNG	34.59	80	iPd	53	31.70	0.6
	1.0s	235.00nm			6.0mb	
			ic	53	41.50	
			id	54	57.00	
BAO	34.90	245	eP	53	33.00	-0.9
AVE	35.53	12	eP	53	40.00	1.2
BRAS	35.85	232	eP	53	34.10	-7.9X
IFR	36.26	15	iP	53	46.00	0.7
ATB	36.68	267	Pd	53	47.80	-1.0
VAO	37.19	233	eP	53	48.00	-5.1X
			e(pP)	53	51.60	12kmX
BMK	37.45	13	iP	53	56.50	1.6
			i	55	12.00	
			i	56	03.00	
TAF	38.24	18	iP	54	03.00	1.3
MAL	39.49	14	iPd	54	25.30	13.2X
			iPP	55	40.00	
			eS	00	00.00	
EPRU	39.53	13	eP	54	14.00	1.6
ATEJ	39.77	15	eP	54	15.50	0.9
APHE	39.89	15	eP	54	15.00	-0.5
ALOJ	39.93	14	eP	54	16.00	0.1
AAPN	40.11	14	eP	54	17.10	-0.3
AFC	40.21	15	eP	54	18.50	0.3
ASMO	40.26	15	eP	54	18.00	-0.5
ENIJ	40.30	17	eP	54	19.00	0.2
EHOR	40.34	13	e(P)	54	19.00	-0.1
EBAN	41.01	14	eP	54	24.00	-0.6
TOL	42.58	13	iPc	54	39.00	1.5
	1.7s	192.31nm			5.6mb	
			ePP	56	16.00	
			iS	01	05.00	
			eSS	03	52.00	
KMZ	42.60	108	iPc	54	39.00	0.9
	1.0s	2.40nm			3.9mb X	
			i	56	25.60	
ECHE	43.09	17	eP	54	42.20	0.5
GUD	43.29	13	eP	54	44.50	1.1
ETOR	43.95	15	e(P)	54	48.50	-0.2
LWI	44.33	92	ePc	54	52.70	0.4
EBR	44.66	17	(P)	54	56.00	1.7
			eS	01	30.00	
MZZ	45.10	104	iPc	54	59.50	1.1
	1.5s	5.40nm			4.3mb X	
			i	55	09.00	
			i	56	59.20	
LSZ	45.23	110	iPd	55	00.80	1.4
			i	56	57.00	
EPF	46.65	16	eP	55	10.40	0.2
	1.3s	54.10nm			5.4mb	
BUL	46.91	116	iPd	55	12.10	-0.6
PZI	47.69	33	P	55	20.26	1.8
PTZ	48.00	108	iPc	55	21.50	0.2
			i	57	11.90	
PRY	48.33	125	eP	55	23.00	-0.8
	0.7s	17.50nm			5.2mb	
LPO	48.41	16	eP	55	23.50	-0.4
	1.5s	77.30nm			5.5mb	
LFF	48.53	15	eP	55	24.80	0.0
	1.4s	78.40nm			5.6mb	
SLR	48.53	124	iPd	55	25.00	-0.3
	1.0s	60.00nm			5.6mb	
Z	20s	9.22um			5.8Msz	
			i	55	34.00	
ATN	48.81	33	P	55	28.70	1.7
CAF	48.88	17	eP	55	27.30	-0.2
	1.5s	75.20nm			5.5mb	
LMR	48.90	21	eP	55	27.70	0.0
	1.3s	43.30nm			5.3mb	
LRG	48.95	21	eP	55	28.30	0.3
	1.2s	44.00nm			5.4mb	
GMB	49.03	33	P	55	30.78	1.9
RJF	49.08	16	eP	55	29.00	0.0
	1.4s	52.20nm			5.4mb	
FRF	49.15	21	eP	55	29.70	0.1
	1.4s	26.10nm			5.1mb	
CVF	49.16	24	eP	55	29.40	-0.3
	1.4s	47.00nm			5.3mb	
MVIF	49.62	21	P	55	34.78	1.4
AURF	49.68	22	P	55	35.08	1.3
SBF	49.70	22	eP	55	33.90	0.0
	1.2s	55.90nm			5.4mb	
TOUF	49.76	21	P	55	35.76	1.2
AUTN	49.81	22	P	55	36.25	1.3
SAOF	49.85	22	P	55	36.08	1.1
MFF	49.86	14	eP	55	34.70	-0.3
	1.5s	45.90nm			5.2mb	
IMI	49.91	22	P	55	34.93	-0.6
LSF	49.95	15	eP	55	35.50	-0.2
	1.5s	101.30nm			5.6mb	
ENR	50.01	21	P	55	36.26	0.0
PZZ	50.13	21	P	55	37.59	0.3
TCF	50.17	16	eP	55	37.70	0.3
	1.5s	78.30nm			5.5mb	
MAF	50.21	16	eP	55	38.10	0.4
	1.2s	65.40nm			5.5mb	
ROB	50.23	22	P	55	37.69	-0.3
FIN	50.28	22	P	55	37.80	-0.5
RRL	50.38	21	P	55	39.44	0.1
RFI	50.41	29	P	55	41.40	2.2
BNI	50.46	20	P	55	40.60	0.8
CKI	50.50	22	P	55	40.40	0.5
BGF	50.60	16	eP	55	40.90	0.3
	1.5s	67.90nm			5.4mb	
AZI	50.68	28	P	55	42.60	1.4
PCP	50.69	22	P	55	39.03	-2.4
RSP	50.75	21	P	55	41.80	-0.1
LPG	50.87	20	eP	55	43.30	0.2
	1.2s	38.60nm			5.2mb	
AQU	50.95	28	P	55	45.10	1.7
AVF	50.95	17	eP	55	43.40	0.1
	1.4s	32.20nm			5.1mb	
SMF	50.96	17	eP	55	43.60	0.2
	1.4s	32.20nm			5.1mb	
LSD	50.98	20	P	55	43.64	-0.2
LPF	51.00	12	eP	55	43.00	-0.6
	1.5s	35.50nm			5.1mb	
BOB	51.23	23	P	55	46.00	0.4
SSF	51.24	17	eP	55	45.40	-0.1
	1.5s	78.30nm			5.4mb	
LBF	51.31	17	eP	55	45.70	-0.4
	1.5s	62.60nm			5.3mb	
GRR	51.38	12	eP	55	46.20	-0.3
	1.0s	29.60nm			5.2mb	
PGD	51.41	25	P	55	47.10	0.0
LOR	51.53	17	eP	55	47.30	-0.4
	1.5s	57.40nm			5.3mb	
VLS	51.73	36	eP	55	48.00	-1.3
LDF	51.73	13	eP	55	48.90	-0.3
	1.4s	38.30nm			5.1mb	
FLN	51.81	13	eP	55	49.00	-0.8
	1.0s	12.00nm			4.8mb	

09d 09h

ITM	51.89	38	eP	55	50.00	-0.6
VAI	51.91	21	P	55	50.00	-0.5
CCH	52.12	249	P	55	53.50	0.5
NAI	52.34	90	iPc	56	05.00	10.4X
	1.5s	27.78nm				
LOMF	52.52	19	P	55	54.54	-0.7
BBS	52.84	19	P	55	56.54	-1.1
BSF	52.93	19	P	55	56.96	-1.4
HAU	52.94	18	eP	55	57.50	-0.9
	1.5s	83.50nm			5.4mb	
VITF	53.02	18	P	55	57.74	-1.1
MOF	53.06	19	P	55	57.80	-1.5
NPS	53.12	42	eP	56	02.20	2.4
CTI	53.16	23	P	55	58.80	-1.3
FEL	53.37	20	P	55	59.89	-1.7
SLA	53.39	240	ePc	56	01.80	-0.4
VAL	53.51	4	eP	56	03.00	0.7
			S	03	36.00	
CDF	53.60	19	P	56	01.57	-1.6
RIY	53.73	26	eP	56	03.20	-0.9
TRI	53.75	25	iPd	56	03.60	-0.6
ZOBO	53.77	251	Pc	56	04.50	-1.0
	1.8s	189.39nm			5.8mb	
	Z 23s	3.89um			5.4MszX	
			S	03	48.00	
			LR	13	24.00	
LPB	53.79	251	P	56	05.50	0.0
	1.5s	277.78nm			6.0mb	
	Z 20s	7.09um			5.7Msz	
			LR	14	08.00	
KZN	53.82	35	eP	56	04.50	-0.4
FVI	54.06	24	P	56	05.80	-0.6
CEY	54.06	26	eP	56	06.50	-0.1
VOY	54.06	25	eP	56	05.70	-1.0
GWF	54.20	19	P	56	06.17	-1.4
VBY	54.24	26	eP	56	07.90	0.1
			i	56	17.00	
DOU	54.30	16	P+	56	07.10	-1.1
	1.1s	50.00nm			5.5mb	
	Z 19s	2.90um			5.4Msz	
			PP	59	11.00	
			S	03	45.00	
KAP	54.34	43	eP	56	08.50	-0.3
LJU	54.35	25	eP	56	07.50	-1.2
			eS	03	48.00	
			e(sS)	04	30.00	
WLF	54.36	17	Pc	56	09.00	0.4
SNF	54.60	15	P	56	10.40	0.0
KTD	54.65	19	eP	56	09.29	-1.6
RUP	54.66	18	eP	56	09.95	-1.0
KBA	54.68	24	iPd	56	10.50	-0.8
	2.1s	194.00nm			5.8mb	
			i	56	20.60	
			i	56	30.70	
			i	56	41.50	
			e	58	20.00	
SKO	54.75	33	iP	56	12.70	1.0
	1.6s	98.00nm			5.6mb	
	Z 17s	4.94um			5.6MszX	
	N 18s	2.39um				
	E 18s	4.87um				
			i	56	21.00	
			iPPP	59	40.00	
			iS	03	50.00	
			iSS	07	38.00	
			iSSS	09	44.00	
			LR	22	14.00	
ZAG	54.81	27	eP	56	15.00	3.0X
PLG	54.84	36	eP	56	13.00	0.6
CYA	54.84	236	ePd	56	11.20	-1.5
PTJ	54.86	27	eP	56	11.60	-0.9
UCC	54.88	15	P	56	11.00	-1.5
			e	56	29.00	
			S	03	59.00	
VAY	54.94	35	eP	56	13.70	0.6
ABH	54.97	18	eP	56	11.91	-1.3
BHG	55.01	23	eP	56	11.40	-2.2
	1.0s	35.00nm			5.3mb	
MEM	55.16	17	P	56	14.90	0.4
ENN	55.28	16	eP	56	15.00	-0.4
	1.3s	109.00nm			5.7mb	
			e	56	23.00	
TNS	55.55	18	ePd	56	16.20	-1.3
KKB	55.59	34	eP	56	18.00	0.2
KMR	55.78	24	iP+	56	16.40	-2.7
			i	56	34.30	
GRF	56.03	21	eP	56	19.20	-1.6
	1.5s	56.00nm			5.4mb	
	Z 18s	1.50um			5.1Msz	
			e	56	28.50	
			e	56	36.50	
VTS	56.14	34	iP	56	21.00	-0.9
WET	56.18	22	iPd	56	20.80	-1.1
	1.5s	105.00nm			5.6mb	
BEO	56.20	30	eP	56	23.00	0.9
	Z 17s	3.70um			5.5MszX	
			eS	04	14.00	
MRA	56.20	231	eP	56	21.50	-0.8
DBN	56.28	15	eP	56	23.00	0.5
	Z 20s	2.50um			5.3Msz	
			eS	04	16.00	
KSL	56.29	44	eP	56	22.50	-0.4
KHC	56.43	23	iP	56	22.40	-1.4
	1.4s	29.00nm			5.1mb	
			i	56	31.90	
			S	04	14.00	
SOP	56.50	26	eP	56	24.90	0.7
WTS	56.62	16	eP	56	25.00	0.0
	1.0s	36.00nm			5.4mb	
KDZ	56.80	36	eP	56	26.00	-0.5
VKA	56.84	25	eP	56	25.00	-1.7
	3.5s	235.00nm			5.6mb X	
	Z 17s	1.65um			5.2MszX	
			e	57	59.00	
			e	58	43.00	
			LR	23	15.00	
ELL	56.84	43	eP	56	27.50	0.4
MOX	56.97	20	eP	56	26.00	-1.6
	1.6s	65.00nm			5.4mb	
	Z 16s	3.50um			5.6MszX	
	N 17s	2.50um				
	E 16s	1.00um				
ARE	56.99	251	eP	56	27.00	-1.6
ZST	57.12	25	eP	56	28.10	-0.6
	Z 17s	4.00um			5.6MszX	
			i	56	35.90	
			e	56	43.70	
			eS	04	26.50	
WIT	57.32	16	e(P)	56	31.00	1.1
KHL	57.43	41	eP	56	31.00	-0.1
ANT	57.44	243	eP	56	30.80	-0.5
PRU	57.49	23	P	56	29.60	-1.7
	Z 20s	4.00um			5.5Msz	
	N 18s	1.90um				
	E 20s	2.90um				
			e	56	39.20	
EKA	57.63	8	P	56	31.00	-1.1
	1.9s	126.70nm			5.6mb	
PVL	57.73	34	eP	56	26.00	-7.0X
CFA	57.91	233	e(P)	56	33.50	-1.1
BRG	57.99	22	iPc	56	34.00	-0.7
	1.5s	36.00nm			5.2mb	
			i	56	42.10	
			i	56	50.00	
			eP'P'	26	35.00	
RTLL	58.00	234	ePc	56	34.00	-1.2
CLL	58.00	21	eP	56	34.00	-0.8
	1.8s	55.00nm			5.3mb	
	Z 17s	3.00um			5.5MszX	
			epP	56	43.00	30kmX
			eS	04	36.00	
ALT	58.21	41	eP	56	36.00	-0.6
RTCB	58.32	234	ePc	56	37.00	-0.5
KSP	58.85	23	eP	56	39.50	-1.3
	1.4s	37.00nm			5.3mb	
RTBS	58.90	234	ePc	56	42.10	0.7
SPC	59.25	27	eP	56	42.70	-1.1
HUA	60.14	257	e(P)	56	50.30	-0.4
BBTK	60.37	41	eP	56	52.50	1.0
PEL	60.38	232	iPd	56	51.30	-0.4
CHCH	60.62	232	eP	56	52.50	-0.8
LCCH	61.19	232	eP	56	55.50	-1.6
NNA	61.61	257	eP	57	07.50	7.2X
	1.2s	28.13nm			5.3mb	
UPA	64.60	281	iPc	57	20.00	0.0
	1.2s	212.50nm			6.2mb	
	Z 20s	0.92um			5.0Msz	
			i	57	28.80	
HFS	65.61	16	eP	57	23.50	-2.3
	1.3s	43.80nm			5.5mb	
NB2	65.76	14	P	57	24.90	-1.9
BHD	66.13	52	ePc	57	30.00	0.5
MSL	66.23	49	eP	57	31.00	0.8
			eS	06	25.00	
UPP	66.51	18	iP	57	30.20	-1.2
SLY	67.76	50	ePc	57	40.00	0.2
			ePcP	57	49.50	
			eS	06	41.50	
			eLR	24	02.00	
SNA	69.18	175	eP	57	49.00	1.0
	1.2s	118.75nm			5.9mb	
CBN	69.21	312	eP	57	50.00	1.2
NUR	69.27	20	iP	57	49.50	0.8
	Z 19s	1.90um			5.4Msz	
			eS	06	52.00	
			LR	30	40.00	
SCH	70.13	331	eP	57	56.00	1.9
GAC	70.64	320	eP	57	59.00	1.6
JSC	71.02	307	P	58	01.80	1.8
SUF	71.36	19	iP	58	00.50	-0.9
	0.7s	10.00nm			5.0mb	
SOD	74.84	16	iP	58	21.60	-0.2
FRB	75.93	339	eP	58	30.00	2.0
KEV	76.66	14	eP	58	35.00	2.9
MAIO	78.91	53	eP	58	42.00	-3.3X
			eS	08	48.00	
FVM	79.09	309	P	58	45.00	-1.1
	1.0s	17.00nm			5.0mb	
UYO	81.71	305	iPc	59	00.00	-0.1
OXX	82.03	287	(P)	59	04.50	2.2
RLO	82.43	307	eP	59	05.40	1.6
IISM	82.78	289	(P)	59	09.00	3.1X
TUL	83.02	306	eP	59	05.50	-1.4
	1.1s	11.10nm			5.0mb	
	Z 22s	1.69um			5.4Msz	
			e	00	32.30	
			LR	25	00.00	
SIO	83.41	306	e(P)	59	10.00	1.1
RSON	83.75	321	eP	59	08.80	-1.4
MAW	84.14	158	eP	59	16.00	4.1X
QUE	84.30	60	eP	59	16.00	2.3
MEO	85.17	305	iPd	59	18.20	0.4
MRX	86.42	290	(P)	59	25.00	0.8
FFC	89.21	325	eP	59	37.50	0.6
	1.4s	25.00nm			5.3mb	
RSSD	90.00	314	eP	59	42.60	1.4
			ipP	59	50.00	23kmX
GLD	90.75	310	eP	59	46.60	1.9
			ipP	59	53.40	21kmX
GOL	90.86	310	eP	59	46.60	1.3
			ipP	59	54.80	26kmX
ALQ	91.64	305	eP	59	50.30	1.4
			ipP	59	58.70	26kmX
GBA	93.27	77	P	00	00.00	3.6X
	0.3s	1.20nm			4.8mb	
BW06	94.01	313	P	00	01.00	1.3
	1.0s	4.75nm			4.8mb	
MBC	94.80	347	eP	00	04.50	2.1
	1.5s	45.00nm			5.7mb	
EDM	95.94	323	eP	00	09.00	0.9
LRM	95.94	316	eP	00	10.60	2.1
GYA	119.33	60	PKP	05	36.60	4.8X
CN2	125.54	34	PKP	05	44.50	1.5
	Z 22s	1.20um			5.5Msz	
	E 15s	0.40um				
MDJ	127.22	31	ePKP	05	48.00	1.8
CAN	140.55	160	ePKP	06	17.70	6.0X
ASPA	141.11	132	ePKP	06	09.40	-3.6X
BWA	141.15	159	ePKP	06	18.20	5.4X
WRA	143.54	127	PKP	06	17.00	-0.3
	0.3s	2.30nm				
WB5	143.59	127	ePKP	06	17.00	-0.4
			e	06	23.00	
			e	09	35.50	
COO	145.86	160	e(PKP)	06	24.00	3.0X
QIS	147.19	133	ePKP	06	26.00	2.6X
			i	06	34.70	
RMQ	148.25	153	ePKP	06	31.00	6.1X
BRS	149.08	159	iPKPd	06	35.80	9.6X
CTA	152.03	141	iPKPc	06	40.70	9.9X
	0.9s	27.73nm				
			i	06	46.80	

S.D. = 1.1 on 202 of 227 obs.

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* JUL 09, 1989 09h 47m 35.16± 0.70s
8.316 S ±10.8km 119.696 E ± 8.0km
DEPTH = 156.2 ± 15.3 km
4.6mb (6 obs.)
FLORES ISLAND REGION (286)

MKS	3.09	356	iPc	48	25.00	ρ

09d 09h

```
KHKI     4.05 269 iPd    48 36.00   -0.8
                 iS     49 24.10
                 e      51 57.00
KNA     11.54 131 iPd    50 16.80    0.5
        0.3s     30.00nm          5.3mb
                 eS     52 18.00
MTN     12.11 113 eP     50 23.00   -0.7
                 eS     52 29.00
MBL     12.77 179 eP     50 33.30    1.0
        0.3s     10.00nm          4.7mb
                 eS     52 48.00
NANU    14.72 195 eP     51 01.00    4.0X
        0.2s      3.00nm          4.3mb
                 eS     53 33.00
MEKA    18.23 183 eP     51 39.40    0.1
                 eS     54 58.00
WB5     18.27 131 eP     51 38.00   -1.8
                 eS     54 54.30
WRA     18.29 131 P      51 40.00    0.0
        0.4s      5.80nm          4.3mb
WARB    18.96 160 eP     51 47.10    0.2
        0.4s     10.00nm          4.5mb
ASPA    20.45 140 iPc    52 02.10   -0.1
        0.6s     16.00nm          4.6mb
                 epP    52 17.90   75kmX
MRWA    21.08 189 eP     52 27.00   18.6X
                 eS     56 01.00
BAL     22.35 187 eP     52 21.00    0.2
                 eS     56 34.00
COOL    22.49 177 eP     52 22.00   -0.2
                 eS     56 37.00
QIS     22.77 124 iPc    52 25.10    0.1
                 eS     56 25.00
KLB     23.23 184 eP     52 29.40    0.0
                 eS     56 50.00
BRS     36.58 125 iPc    54 28.80    1.0
     S.D. = 0.8  on  15 of  17 obs.
-------------------------------------
*  JUL 09, 1989  10h 50m 48.78± 1.45s
   38.315 N ±10.5km   26.429 E ±13.5km
   DEPTH =  10.0km  (geophysicist)
 AEGEAN SEA                        (365)
      MD 3.4 (ATH).

IZM      0.66  83 iPg    51 01.40   -0.6
                 iSg    51 10.00
PRK      0.94 352 ePb    51 07.00    0.4
                 eSg    51 20.00
CIN      1.49 118 eP     51 15.00   -0.6
EZN      1.51 357 iPn    51 15.60   -0.2
YER      1.88 128 ePn    51 22.00    0.6
DST      2.14  52 iPn    51 26.30    1.2
EDC      2.31  28 ePn    51 27.00   -0.5
RDO      2.91 347 ePn    51 35.70   -0.2
     S.D. = 0.8  on   8 of   8 obs.
-------------------------------------
*  JUL 09, 1989  10h 51m 07.91± 0.74s
   52.437 S ± 9.9km  159.270 E ±19.2km
   DEPTH =  33.0km  (normal)
   4.9mb (  4 obs.) 4.8Msz (  1 obs.)
 MACQUARIE ISLANDS REGION          (167)

TAU     12.46 315 eP     54 03.00   -2.6
TOO     17.72 322 eP     55 15.00    1.4
                 eTT    12 30.00
CNB     18.52 334 eP     55 24.00    0.6
                 eTT    12 21.00
CAN     18.61 333 eP     55 24.90    0.4
                 eTT    11 48.00
BWA     19.61 332 eP     55 36.20   -0.1
                 eTT    12 20.00
COO     22.51 343 e(P)   56 07.00    1.2
BRS     25.49 346 iPc    56 35.90    1.3
RMQ     27.10 339 e(P)   56 48.00   -1.4
DZM     30.81  13 iPc    57 21.00   -1.9
CTA     33.84 338 iPd    57 50.20    1.0
        1.2s     51.56nm          5.3mb
ASPA    34.63 316 eP     57 55.70   -0.3
        1.4s     22.00nm          4.9mb
WARB    35.87 304 eP     58 07.00    0.4
SPA     37.75 180 ePc    58 20.70   -1.5
        1.0s     16.00nm          4.8mb
     Z  18s      1.53um           4.8Msz
WB5     37.83 320 eP     58 21.40   -1.6
MAW     45.24 212 eP     59 23.50    0.3
CHG     88.07 305 eP     03 56.30    0.2
CHTO    88.07 305 eP     03 56.30    0.2
        1.3s     2.86nm           4.4mb
LRM    123.53  57 ePKP   10 02.20   -0.7
INK    130.23  27 ePKP   10 11.00   -3.6X
MBC    138.22  21 ePKP   10 26.50   -3.2X
        1.0s     6.00nm
KDZ    147.29 269 ePKP   10 47.00    0.7
MMB    148.28 268 iPKPc  10 49.00    1.0
VAY    148.84 267 ePKP   10 50.40    1.6
VTS    149.17 269 ePKP   10 52.00    2.5X
SKO    149.90 267 iPKP   10 53.50    3.1X
     S.D. = 1.3  on  21 of  25 obs.
-------------------------------------
?  JUL 09, 1989  11h 27m 01.27± 4.09s
   31.341 S ±38.4km   69.346 W ±23.7km
   DEPTH =  33.0km  (normal)
 SAN JUAN PROVINCE, ARGENTINA      (137)

RTBS     0.33 196 iPd    27 09.50    0.1
                 S      27 25.00
RTCB     0.49 107 iPd    27 13.00    1.2
                 S      27 30.20
RTLL     0.75  89 eP     27 15.30   -0.2
                 S      27 34.50
RTCV     0.86 127 ePd    27 16.70   -0.4
CFA      0.98 106 iPd    27 18.00   -0.8
                 S      27 40.00
     S.D. = 1.0  on   5 of   5 obs.
-------------------------------------
%  JUL 09, 1989  11h 54m 09.53± 1.84s
   37.903 N ±14.7km   31.754 E ±17.5km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

BCK      1.02 245 ePn    54 27.40   -1.6
ALT      1.73 312 ePn    54 39.40   -0.5
KHL      1.81 284 ePn    54 41.80    0.8
ELL      1.87 232 ePn    54 42.50    0.5
BBTK     2.09  22 eP     54 45.00   -0.1
                 iS     55 10.00
YER      2.86 256 ePn    54 57.00    0.8
     S.D. = 1.2  on   6 of   6 obs.
-------------------------------------
?  JUL 09, 1989  12h 02m 27.26± 4.88s
   34.903 N ±39.7km  139.228 E ±15.1km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN    (230)

CHJJ     1.16 351 iP+    02 48.70   -0.7
                 S      03 02.70
IIDJ     1.22 298 iP+    02 49.70   -0.8
KAKJ     1.51  30 P      02 54.80   -0.2
                 S      03 14.80
MAT      1.83 333 eP     03 00.00    0.3
                 iS     03 22.10
MTMJ     2.04 326 P      03 04.00    1.3
                 S      03 30.10
NIIJ     2.34 356 eP     03 09.50    2.5X
                 S      03 38.50
     S.D. = 1.2  on   5 of   6 obs.
-------------------------------------
?  JUL 09, 1989  12h 04m 25.35± 4.24s
   34.982 N ±35.0km  139.153 E ±13.6km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN    (230)

CHJJ     1.07 353 P      04 45.40   -0.6
                 S      04 59.50
IIDJ     1.13 296 P      04 46.40   -0.6
KAKJ     1.48  34 P      04 52.50   -0.1
                 S      05 13.00
MAT      1.74 334 iPd    04 56.50    0.2
                 iS     05 18.60
MTMJ     1.94 326 P      05 00.50    1.1
                 S      05 25.50
     S.D. = 1.0  on   5 of   5 obs.
-------------------------------------
*  JUL 09, 1989  12h 11m 33.04± 2.49s
   34.947 N ±20.9km  139.201 E ±10.4km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN    (230)

CHJJ     1.11 351 iPd    11 53.90   -0.5
                 S      12 08.10
IIDJ     1.18 297 iPd    11 54.70   -0.9
                 S      12 10.20
KAKJ     1.48  32 iP+    12 00.20   -0.2
                 S      12 21.20
MAT      1.78 333 iPd    12 04.70    0.0
                 iS     12 27.70
MTMJ     1.99 326 iPd    12 08.60    0.8
                 S      12 35.20
NIIJ     2.29 356 P      12 12.90    0.8
                 S      12 42.30
TSRJ     2.70 284 P      12 18.20    0.3
                 S      12 51.60
OFUJ     4.57  25 eP     12 44.10   -0.3
                 eS     13 38.70
     S.D. = 0.7  on   8 of   8 obs.
-------------------------------------
   JUL 09, 1989  12h 40m 17.16± 0.70s
   37.738 N ± 6.7km   15.128 E ± 5.9km
   DEPTH =  10.0km  (geophysicist)
 SICILY                            (398)

MNO      0.39 299 P      40 24.90   -0.4
                 eSg    40 31.90
ATN      0.50  32 Pc     40 27.70    0.4
                 eSg    40 34.60
MSI      0.57  36 P      40 29.50    0.7
                 eSg    40 37.20
MEU      0.65 194 P      40 29.60   -0.7
                 eSg    40 38.80
GIB      0.91 286 P      40 34.60    0.0
                 eSg    40 49.80
MCT      1.19 265 P      40 39.60    0.1
FAI      1.24 249 Pc     40 41.60    1.3
CVT      1.85 269 P      40 48.90   -0.3
MGR      2.42   8 Pc     40 56.20   -1.2
                 eSn    41 25.60
LCI      3.40  39 P      41 11.20   -0.1
                 eSn    41 50.90
     S.D. = 0.8  on  10 of  10 obs.
-------------------------------------
*  JUL 09, 1989  12h 44m 48.57± 2.98s
   34.925 N ±24.3km  139.164 E ±12.8km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN    (230)

CHJJ     1.13 353 P      45 09.10   -1.1
                 S      45 24.10
IIDJ     1.17 299 P      45 10.20   -0.6
                 S      45 25.60
KAKJ     1.52  33 P      45 15.50   -0.9
                 S      45 36.90
MAT      1.79 335 iPd    45 20.20   -0.2
                 iS     45 42.10
MTMJ     1.99 327 P      45 23.90    0.6
                 S      45 50.10
NIIJ     2.31 357 P      45 29.30    1.4
                 eS     45 59.80
TSRJ     2.67 284 P      45 33.20    0.2
YAMJ     3.32  12 eP     45 42.80    0.6
     S.D. = 1.0  on   8 of   8 obs.
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*  JUL 09, 1989  13h 36m 04.43± 2.76s
   35.031 N ±22.4km  139.156 E ±12.8km
   DEPTH =   5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN    (230)

CHJJ     1.02 353 iP+    36 23.90   -0.3
                 S      36 37.30
IIDJ     1.11 294 iPd    36 24.60   -1.2
                 eS     36 41.40
KAKJ     1.44  35 P      36 30.60   -0.5
                 eS     36 51.20
MAT      1.69 333 iPd    36 34.60   -0.2
                 iS     36 57.10
MTMJ     1.90 325 P      36 38.70    0.8
                 S      37 04.50
NIIJ     2.21 357 P      36 43.00    0.8
                 eS     37 13.10
TSRJ     2.64 282 eP     36 49.10    0.6
     S.D. = 0.9  on   7 of   7 obs.
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&  JUL 09, 1989  13h 38m 44.50s
   37.403 N           121.788 W
   DEPTH =   5.0km
   4.1mb (  1 obs.)
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 4.0 (BRK).
      Mo=2.0*10**15 Nm (BRK). Felt
      (IV) at Felton and San Jose.
      Felt (III) at Fremont, Milpitas,
      Morgan Hill and Redwood Estates.
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MHC	0.13	118	iPc	38	47.33	0.0
ARN	0.21	105	iPc	38	48.50	-0.3
GCC	0.41	204	iPd	38	52.90	0.2
PCC	0.48	282	iPc	38	54.00	-0.2
BKS	0.59	323	iPd	38	56.20	-0.1
			eS	39	04.50	
BRK	0.60	322	iPc	38	56.30	-0.2
SAO	0.69	157	iPd	38	58.20	-0.2
LLA	1.04	139	iPd	39	03.20	-1.3
PRS	1.12	162	iPd	39	04.40	-1.6
CMB	1.28	60	iPd	39	07.20	-1.5
NWRM	1.37	321	eP	39	08.00	-2.1
PRI	1.55	144	ePd	39	11.00	-1.9
FRI	1.71	103	ePc	39	12.70	-2.4
			ic	39	13.45	
PKEM	1.90	134	eP	39	16.50	-1.4
PHAM	1.92	144	eP	39	16.00	-2.2
ORV	2.16	6	eP	39	19.10	-2.6
BCH	2.61	148	eP	39	25.20	-2.9
MIN	2.94	3	e(P)	39	30.50	-2.4
BLP	3.05	158	eP	39	31.50	-2.8
ISA	3.18	122	eP	39	33.00	-3.3
WDC	3.23	350	e(P)	39	33.70	-3.1
ABL	3.29	140	eP	39	34.90	-3.0
KVN	3.34	59	eP	39	36.70	-1.9
TNP	3.69	78	eP	39	43.50	-0.1
CLC	3.73	114	eP	39	43.00	-1.0
LBFM	3.94	359	eP	39	46.60	-0.5
SBB	4.20	129	eP	39	48.00	-2.7
PAS	4.38	137	eP	39	50.00	-3.2
MWC	4.39	135	eP	39	53.00	-0.5
RVR	4.95	132	eP	39	51.00	-10.2
PEC	5.14	132	eP	40	01.00	-3.1
PLM	5.70	134	eP	40	10.00	-2.1
TPC	5.71	123	eP	40	08.00	-4.1
BAR	6.31	137	eP	40	20.00	-0.5
GLA	7.16	125	eP	40	29.00	-3.5
LRM	10.93	37	eP	41	24.70	-0.1
EDM	16.87	18	eP	42	44.00	1.1
FFC	21.98	32	eP	43	39.50	-1.4
	0.8s		6.00nm			4.1mb
	38 abs. ossociated					

? JUL 09, 1989 14h 06m 24.92± 3.24s
34.995 N ±26.0km 139.191 E ±14.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.06	351	iPd	06	44.70	-0.7
			S	06	59.10	
IIDJ	1.15	295	iPd	06	45.60	-1.4
			S	07	01.10	
KAKJ	1.45	33	P	06	51.00	-0.8
			S	07	11.70	
MAT	1.74	333	iPc	06	55.70	-0.2
			iS	07	14.30	
MTMJ	1.95	325	P	06	59.90	0.9
			S	07	25.70	
NIIJ	2.25	356	P	07	04.80	1.5
			S	07	35.40	
TSRJ	2.68	283	P	07	10.20	0.7
			S	07	43.60	
S.D. = 1.3			an	7 af	7 obs.	

• JUL 09, 1989 14h 46m 31.34± 3.18s
34.869 N ±26.5km 139.240 E ±12.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.19	350	iPd	46	52.90	-1.1
			S	47	07.70	
IIDJ	1.25	300	iPd	46	54.30	-0.7
			S	47	09.70	
KAKJ	1.53	29	iP+	46	59.30	-0.1
			S	47	19.20	
MAT	1.87	334	iPd	47	03.90	-0.4
			iS	47	26.80	
MTMJ	2.07	326	iPd	47	08.00	0.7
			S	47	33.90	
NIIJ	2.37	355	iP+	47	13.90	2.4
			S	47	43.50	
TSRJ	2.75	285	P	47	17.00	0.1
			eS	47	51.80	
YAMJ	3.36	11	P	47	25.60	0.1
OFUJ	4.63	24	eP	47	42.60	-1.0
S.D. = 1.2			an	9 af	9 abs.	

• JUL 09, 1989 15h 07m 07.68± 1.50s
23.076 N ±10.7km 120.655 E ±10.3km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWK	0.24	321	iPc	07	12.60	-0.3
TWG	0.46	123	iPd	07	17.20	0.1
TWF1	0.65	65	iPc	07	19.80	-0.9
			eS	07	29.40	
TWQ	1.20	8	ePc	07	30.20	0.1
TWD	1.32	41	ePd	07	31.90	-0.1
TWC	1.88	35	eP	07	41.20	1.1
ANP	2.24	20	eP	07	49.50	4.1X
S.D. = 0.9			an	6 of	7 abs.	

? JUL 09, 1989 15h 31m 43.13± 5.26s
23.624 N ±27.1km 122.808 E ±40.1km
DEPTH = 33.0km (normal)
TAIWAN REGION (243)

TWD	1.20	292	iPc	32	02.40	-1.2
TWC	1.32	318	iPc	32	05.20	-0.1
			eS	32	20.10	
TWF1	1.41	259	ePc	32	07.20	0.4
			eS	32	24.10	
TWZ	1.85	323	ePc	32	13.80	0.8
ANP	1.95	323	eP	32	15.30	0.7
SSE	7.58	349	P	33	33.50	-0.6
			i	33	40.50	
			i	35	52.50	
S.D. = 1.0			an	6 of	6 abs.	

• JUL 09, 1989 15h 46m 29.14± 1.36s
23.089 N ±10.1km 120.664 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TAIWAN (244)

TWK	0.24	318	iPc	46	34.10	-0.2
TWG	0.46	125	iPd	46	38.70	0.2
			eS	46	45.20	
TWF1	0.64	66	iPc	46	41.40	-0.5
TWQ	1.19	8	ePc	46	51.70	0.3
TWD	1.31	41	eP	46	53.50	0.2
ANP	2.23	20	eP	47	11.50	4.8X
S.D. = 0.5			on	5 of	6 obs.	

• JUL 09, 1989 17h 14m 33.28± 1.03s
1.476 N ±13.9km 121.840 E ±14.8km
DEPTH = 33.0km (normal)
MINAHASSA PENINSULA (265)

PCI	3.10	220	iPc	15	21.00	0.0
			iS	15	51.00	
TSM	4.65	306	eP	15	43.00	0.0
KKM	7.22	309	ePc	16	19.50	0.2
MTN	16.95	147	eP	18	31.00	1.3
WB5	24.52	151	eP	19	49.80	-1.4
BWA	43.56	148	eP	22	44.30	8.3X
CAN	44.55	148	eP	22	43.90	-0.1
S.D. = 1.1			an	6 of	7 abs.	

% JUL 09, 1989 17h 18m 32.73± 2.32s
16.025 N ±13.4km 60.749 W ±24.7km
DEPTH = 29.3 ± 10.2 km
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

DEG	0.41	314	eP	18	41.65	-0.2
			S	18	48.35	
BBL	0.86	235	eP	18	48.20	-0.6
			S	19	00.00	
PAG	0.90	270	eP	18	49.85	0.6
			S	19	03.00	
CRM	1.27	187	eP	18	54.20	-0.4
FDF	1.34	197	eP	18	55.11	-0.5
	0.1s		0.37nm			
			S	19	11.00	
MVM	1.47	186	eP	18	57.30	-0.2
BIM	1.53	192	eP	18	59.72	1.3
			S	19	17.70	
S.D. = 1.0			an	7 of	7 obs.	

• JUL 09, 1989 17h 27m 51.31± 1.77s
0.227 S ± 8.8km 123.176 E ±13.8km
DEPTH = 91.9 ± 18.9 km
4.4mb (4 abs.)
MINAHASSA PENINSULA (265)

PCI	3.41	259	iPd	28	45.00	1.7
			i(S)	29	11.00	
MKS	6.19	217	P	29	20.00	-1.8
			iS	30	29.00	
KKM	9.33	312	ePc	30	04.00	-1.0
MTN	14.81	148	eP	31	18.00	0.7
KNA	16.38	161	iPc	31	36.80	-0.3
	0.8s		24.00nm			4.5mb
MBL	21.06	189	eP	32	30.00	0.1
WB5	22.40	151	eP	32	43.70	0.5
QIZ	23.18	326	eP	32	53.00	2.2
ASPA	25.52	157	eP	33	13.60	0.5
	0.8s		12.00nm			4.4mb
QIS	25.82	143	eP	33	16.00	0.2
WARB	26.02	173	eP	33	18.00	0.4
MRWA	29.63	193	eP	33	49.00	-1.2
CHG	30.40	310	eP	33	56.90	-0.2
CHTO	30.40	310	eP	33	56.90	-0.2
	0.9s		3.62nm			4.1mb
			pP	34	16.40	84kmX
CD2	36.04	331	eP	34	45.40	-0.3
XAN	36.62	340	P	34	50.20	-0.3
MAT	39.15	19	eP	35	10.00	-1.7
	1.0s		18.00nm			4.9mb
GTA	44.87	334	P	35	59.20	0.8
HYB	47.29	294	eP	36	37.00	19.3X
S.D. = 1.2			an	18 af	19 obs.	

JUL 09, 1989 17h 46m 27.14± 0.29s
57.078 S ± 6.6km 23.965 W ± 7.2km
DEPTH = 33.0km (normal)
5.2mb (8 obs.) 4.7Msz (3 obs.)
SOUTH SANDWICH ISLANDS REGION (153)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 20C
Centroid Location:
Origin Time 17:46:29.8 0.9
Lat 57.14S 0.09 Lan 23.45W 0.17
Dep 15.0 FIX Half-durotian 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-6.08 0.37 Mtt= 0.56 0.55
Mff= 5.52 0.45 Mrt=-3.60 1.50
Mrf= 1.76 1.76 Mtf=-2.36 0.40
Principal Axes:
T Val= 7.18 Plg=14 Azm=243
N 0.51 18 149
P -7.69 67 8
Best Double Couple:Mo=7.4*10**16
NP1:Strike=356 Dip=35 Slip= -57
NP2: 138 61 -111

SNA	16.22	153	eP	50	12.80	-1.0
	1.0s		50.00nm			4.6mb
SPA	33.10	180	e(P)	53	01.10	-0.7
	0.8s		7.92nm			4.7mb
Z	18s		1.14um			4.6Msz
			e	54	09.90	
VAO	37.94	324	eP	53	44.40	1.2
			epP	53	50.90	22kmX
MAW	38.25	142	eP	53	45.00	-0.2
SLA	43.93	300	ePc	54	31.60	-0.9
SBA	45.17	183	Pc	54	43.30	1.6
BAO	45.18	326	eP	54	43.00	0.4
BAO	45.18	326	eP	54	42.00	-0.6
PRY	47.06	72	e(P)	54	57.00	-0.4
	1.0s		20.00nm			5.1mb
SLR	48.45	72	eP	55	07.00	-1.3
	1.3s		51.92nm			5.4mb
Z	18s		4.12um			5.5Msz
ITR	49.50	341	eP	55	15.10	-1.2
SOB1	49.54	338	eP	55	15.00	-1.6
CNCB	51.91	302	Pd	55	36.00	0.7
LPB	52.20	302	Pd	55	38.00	0.7
	1.0s		100.00nm			5.7mb
ZOBO	52.45	302	iPd	55	39.00	-0.3
	1.0s		65.00nm			5.5mb
Z	20s		0.20um			4.2Msz
			LR	13	32.00	
BUL	53.23	69	eP	55	44.60	0.0
ARE	53.86	299	eP	55	50.00	0.6
LSZ	57.13	65	eP	56	13.00	0.1
KMZ	57.55	62	eP	56	18.00	2.2
PTZ	59.58	68	eP	56	31.00	1.0
MZZ	61.02	63	eP	56	41.00	1.2
BNG	70.31	46	iPd	57	38.00	-1
	0.4s		3.00nm			4.7mb

09d 17h

			id	02	10.00	
			id	03	06.00	
			iS	07	17.00	
			ec	12	38.00	
			ic	16	09.70	
			ic	19	08.00	
TAU	80.11	174	eP	58	34.00	-0.7
NWAO	84.53	148	eP	58	57.70	-0.1
MUN	85.12	147	eP	59	00.50	-0.2
COOL	87.55	151	eP	59	13.00	0.3
CAN	87.77	174	eP	59	14.50	0.8
FORR	89.28	156	eP	59	21.50	0.5
	0.4s		17.00nm			5.7mb
WARB	93.43	154	eP	59	40.30	0.0
SUF	125.60	26	ePKP	05	29.00	3.9X
LRM	126.07	300	ePKP	05	26.70	-0.2
EDM	131.75	306	ePKP	05	35.50	-1.7X
YKC	138.08	316	ePKP	05	38.00	-10.8X
SSE	144.58	122	PKP	06	00.00	-1.2
			i	06	11.50	
MBC	145.66	335	ePKPd	06	02.20	0.5
	0.9s		21.00nm			
INK	147.74	319	ePKP	06	08.00	2.7X
	0.6s		21.00nm			
BJI	149.16	106	ePKP	06	12.50	4.1X
	S.D. = 0.9		on 32 of 37 obs.			

? JUL 09, 1989 17h 48m 10.87± 1.09s
36.152 N ± 9.0km 3.334 W ±11.9km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EMEL	0.90	160	iP	48	28.50	0.3
MAL	1.04	304	iPnd	48	29.30	-1.2
			iSg	48	42.80	
AFC	1.11	351	eP	48	32.50	0.6
ENIJ	1.22	47	eP	48	32.40	-1.1
			eS	48	45.50	
EBAN	2.04	350	eP	48	47.00	1.3
	S.D. = 1.6		on 5 of 5 obs.			

? JUL 09, 1989 17h 49m 12.51± 5.14s
32.496 S ±34.0km 71.587 W ±30.7km
DEPTH = 33.0km (normol)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.53	185	eP	49	23.80	0.2
			iS	49	32.00	
ROCH	0.68	135	iPd	49	25.00	-0.9
			iS	49	35.00	
PEL	1.00	131	iPd	49	29.60	-0.7
			iS	49	39.70	
TACH	1.28	155	iPd	49	33.60	-0.6
			iS	49	49.50	
FCH	1.37	128	iPc	49	34.70	-1.1
			iS	49	51.90	
PCH	1.44	142	ePc	49	38.10	1.5
LNV	1.46	174	iPc	49	35.70	-1.1
			iS	49	54.00	
CHCH	1.63	152	iPc	49	41.50	2.1
			iS	50	02.50	
MRA	4.97	91	e(P)	50	27.20	0.4
	S.D. = 1.4		on 9 of 9 obs.			

& JUL 09, 1989 18h 05m 48.67s
57.615 N 153.830 W
DEPTH = 5.4km
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC	0.73	79	eP	06	02.74	-0.5
			S	06	13.54	
CDD	1.32	4	eP	06	11.41	-2.1
MCNL	1.60	351	eP	06	16.08	-1.5
AUI	1.74	7	eP	06	17.70	-1.9
OPT	2.07	8	eP	06	22.66	-1.8
XLV	2.15	30	eP	06	25.25	-0.4
ILIM	2.51	10	eP	06	28.76	-2.1
NNL	2.77	27	eP	06	31.46	-3.0
SEW	3.38	41	eP	06	39.86	-3.2
SLKM	3.45	31	eP	06	39.82	-4.3
	10 obs. ossocioted					

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* JUL 09, 1989 18h 54m 45.74± 2.99s
34.966 N ±24.3km 139.191 E ±13.1km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.09	352	P	55	06.00	-0.7
			S	55	20.10	
IIDJ	1.17	296	P	55	06.90	-1.1
KAKJ	1.47	33	P	55	12.20	-0.7
			S	55	32.90	
MAT	1.76	333	iPd	55	16.80	-0.3
			iS	55	39.20	
MTMJ	1.97	325	P	55	21.10	0.9
			S	55	46.70	
NIIJ	2.27	356	P	55	26.00	1.5
			S	55	56.40	
TSRJ	2.69	283	P	55	30.90	0.5
			eS	56	03.90	
YAMJ	3.27	12	eP	55	38.70	0.0
	S.D. = 1.1		on 8 of 8 obs.			

& JUL 09, 1989 19h 41m 01.13s
61.025 N 151.905 W
DEPTH = 104.2km
SOUTHERN ALASKA (2)
<AGS-P>.

SPU	0.17	335	iP	41	15.51	1.1
			S	41	26.91	
NKA	0.43	131	iP	41	18.41	1.3
RDT	0.52	209	iP	41	16.84	-0.9
SUA	0.71	51	iP	41	19.12	-0.3
RED	0.74	215	iP	41	18.87	-0.8
SKT	0.98	10	iP	41	21.29	-0.6
			S	41	36.87	
NNL	1.03	163	iP	41	22.64	0.2
ILIM	1.08	209	iP	41	22.05	-1.1
PWA	1.16	56	eP	41	23.15	-0.8
BRLK	1.36	158	eP	41	25.14	-1.2
SEW	1.53	126	eP	41	26.89	-1.4
OPT	1.53	206	iP	41	27.72	-0.6
			S	41	48.42	
CNPM	1.54	167	eP	41	27.28	-1.2
			S	41	47.51	
XLV	1.58	177	eP	41	27.49	-1.5
			S	41	49.25	
CUT	1.59	29	eP	41	28.54	-0.5
			S	41	49.51	
GHO	1.62	61	iP	41	28.08	-1.5
KNK	1.71	75	iP	41	29.07	-1.6
AUW	1.84	206	eP	41	31.45	-0.8
HUR	2.23	28	eP	41	37.75	0.3
SHU	2.42	186	eP	41	38.27	-1.5
VZW	2.60	87	eP	41	39.79	-2.6
			S	42	11.34	
RND	2.78	30	eP	41	43.78	-1.1
KLU	2.93	78	iP	41	44.47	-2.4
TOA	2.95	66	eP	41	45.98	-1.1
			S	42	21.43	
PAX	3.61	54	eP	41	54.92	-1.2
NEA	3.79	19	eP	41	56.70	-1.8
GLB	3.94	80	eP	41	57.81	-2.7
HDA	4.09	32	eP	42	01.06	-1.5
CCB	4.09	26	eP	42	00.83	-1.8
RDS	4.18	23	eP	42	02.72	-1.2
GLM	4.48	25	eP	42	06.23	-1.7
DOT	4.50	51	eP	42	05.81	-2.5
BALM	4.65	86	eP	42	07.48	-2.9
	33 obs. ossocioted					

JUL 09, 1989 19h 46m 32.09± 0.53s
43.672 N ± 5.3km 12.182 E ± 4.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE	0.17	255	Pc	46	35.70	-0.4
			eSg	46	39.40	
RSM	0.32	37	Pc	46	38.50	-0.3
			eSg	46	42.30	
PGD	0.39	302	Pc	46	39.30	-0.8
			eSg	46	52.10	
ARV	0.58	107	Pc	46	42.00	-1.8
			eSg	46	50.60	
ASS	0.70	150	P	46	47.10	1.2
			eSg	46	55.90	
MME	1.19	296	P	46	54.90	0.4
			eSn	47	13.40	
PII	1.20	273	P	46	54.30	-0.2
			eSg	47	10.40	
BDI	1.21	289	P	46	54.50	-0.2
MNS	1.34	164	P	46	57.10	0.3
			eSn	47	15.60	

CTI	2.41	351	P	47	13.60	1.4
VOY	2.66	27	ePn	47	15.30	-0.5
			eSn	47	58.20	
VBY	2.86	49	eP	47	25.00	6.4X
			e(Sn)	47	57.00	
LJU	2.90	34	eP	47	20.00	0.8
			eSn	48	07.00	
PTJ	3.49	49	eP	47	42.20	14.6X
	S.D. = 1.0		on 12 of 14 obs.			

JUL 09, 1989 20h 07m 46.49± 0.31s
57.286 N ± 5.6km 121.936 E ± 5.5km
DEPTH = 33.0km (normol)
4.9mb (33 obs.)
EASTERN USSR (656)

MDJ	13.56	156	eP	11	02.50	3.8X
	Z 16s		0.40um			
BJI	17.66	195	eP	11	47.50	-3.8X
	Z 16s		0.88um			
	E 10s		1.57um			
HHC	17.76	207	eP	11	50.80	-1.9
BTO	18.40	210	eP	12	02.00	1.5
	N 11s		0.90um			
	E 11s		0.70um			
GTA	22.97	228	eP	12	50.00	1.0
	Z 12s		0.90um			4.4MszX
LZH	24.42	217	eP	13	04.50	1.4
WMQ	25.27	253	eP	13	12.00	1.0
	Z 16s		0.40um			4.0MszX
FBA	40.68	41	P	15	25.60	0.9
	0.7s		3.49nm			4.2mb
SOD	40.99	324	iP	15	28.30	1.1
MBC	41.16	19	eP	15	29.00	0.5
INK	43.21	32	eP	15	47.00	1.6
DAG	43.92	348	eP	15	51.40	0.4
SUF	43.94	319	iP	15	52.60	1.2
	0.7s		11.20nm			4.8mb
NUR	45.92	317	iP	16	08.10	0.9
	0.6s		18.30nm			5.2mb
HFS	50.07	322	eP	16	39.40	-0.1
	0.6s		12.70nm			5.1mb
NB2	50.21	324	P	16	40.60	0.0
YKA	52.79	29	P	17	00.50	0.5
KSP	56.18	313	iPd	17	25.80	0.8
BRG	57.08	314	iPd	17	31.50	0.1
	1.0s		16.00nm			5.0mb
CLL	57.10	315	iP	17	31.30	-0.2
	1.2s		22.00nm			5.1mb
PRU	57.55	313	P	17	35.20	0.5
MOX	58.16	315	eP	17	39.00	0.0
	1.0s		24.00nm			5.2mb
KHC	58.61	313	iPc	17	42.50	0.3
	1.0s		9.50nm			4.9mb
WTS	58.84	319	eP	17	44.00	0.4
	0.9s		14.00nm			5.1mb
WET	58.88	314	eP	17	44.60	0.6
	1.0s		14.00nm			5.0mb
EKA	59.29	327	Pd	17	47.10	0.4
	0.8s		10.70nm			5.0mb
ENN	60.17	319	eP	17	53.00	0.2
	0.9s		7.00nm			4.8mb
MEM	60.27	319	P	17	53.40	-0.1
KBA	60.35	312	eP	17	52.00	-2.4
	1.0s		9.20nm			4.9mb
			i	17	54.90	
EDM	60.99	34	eP	17	58.00	-0.4
DOU	61.20	319	P	17	59.80	-0.1
CDF	61.63	317	eP	18	02.80	-0.1
BSF	62.29	316	eP	18	07.00	-0.4
HAU	62.31	317	eP	18	07.00	-0.4
FFC	62.80	27	eP	18	09.00	-1.5
	0.7s		6.00nm			4.8mb
LOR	63.84	318	eP	18	16.60	-0.9
	1.2s		17.80nm			5.0mb
LBF	64.04	318	eP	18	18.20	-0.6
	0.9s		5.50nm			4.7mb
FLN	64.09	322	eP	18	18.00	-1.0
	0.8s		17.10nm			5.2mb
LDF	64.11	321	eP	18	18.30	-0.9
	0.9s		20.90nm			5.2mb
SSF	64.15	318	eP	18	18.80	-0.6
	1.1s		7.30nm			4.7mb
SES	64.16	35	ePc	18	19.30	-0.2
LPG	64.25	315	eP	18	20.80	0.3
	1.0s		12.80nm			5.0mb
SMF	64.38	318	eP	18	20.70	-0.3

0.8s 4.50nm 4.6mb
GRR 64.54 322 eP 18 21.20 -0.7
1.0s 21.60nm 5.2mb
BGF 64.81 318 eP 18 22.70 -1.1
0.8s 4.50nm 4.6mb
LPF 64.91 322 eP 18 23.90 -0.4
MAF 65.20 318 eP 18 26.50 0.2
1.0s 8.00nm 4.8mb
TCF 65.27 318 eP 18 26.40 -0.4
0.8s 3.20nm 4.5mb
LSF 65.55 319 eP 18 28.00 -0.5
0.8s 5.30nm 4.7mb
MFF 65.84 320 eP 18 30.40 0.1
1.0s 16.00nm 5.1mb
LFF 66.96 319 eP 18 37.80 0.3
1.2s 14.20nm 4.9mb
LPO 67.02 318 eP 18 38.10 0.2
LRM 67.72 38 eP 18 42.70 0.1
RSON 68.30 23 eP 18 44.50 -1.3
EPF 68.76 318 eP 18 48.60 -0.2
0.8s 10.70nm 5.0mb
BW06 71.38 37 P 19 04.00 -1.0
KVN 71.60 45 P 19 06.50 0.2
RSSD 71.90 33 P 19 07.20 -0.9
FRI 72.75 48 eP 19 07.90 -5.0X
TNP 72.78 45 P 19 13.10 -0.3
0.9s 4.10nm 4.4mb
PV09 75.36 39 P 19 28.70 0.3
GOL 75.51 36 P 19 29.70 0.5
1.0s 25.00nm 5.2mb
GLD 75.51 36 P 19 29.80 0.7
0.7s 45.33nm 5.6mb
WB5 77.57 168 eP 19 38.30 -2.1
i 19 47.90
ALQ 79.48 39 e(P) 19 52.80 1.7
RLO 81.82 29 e(P) 20 03.70 0.5
TUL 81.86 30 eP 20 04.20 0.9
1.2s 8.60nm 4.7mb
SPA 147.11 180 e(PKP) 27 21.40 -2.4X
0.9s 5.00nm
S.D. = 0.9 on 64 of 68 obs.

JUL 09, 1989 20h 43m 22.22± 0.96s
34.817 N ± 9.0km 139.194 E ± 9.0km
DEPTH = 5.0km (geophysicist)
4.5mb (1 obs.) 4.1Msz (1 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 1.24 353 iPd 43 44.20 -1.5
IIDJ 1.24 303 iPd 43 45.30 -0.5
S 44 00.80
KAKJ 1.60 30 P 43 50.70 -0.5
S 44 11.80
MAT 1.90 335 iPd 43 55.20 -0.4
iS 44 18.50
MTMJ 2.10 328 P 43 59.10 0.6
S 44 25.30
NIIJ 2.42 356 P 44 03.90 0.8
eS 44 35.90
TSRJ 2.73 286 P 44 08.00 0.5
eS 44 43.20
YAMJ 3.42 11 eP 44 17.40 0.2
OFUJ 4.69 24 P 44 34.60 -0.8
eS 45 29.70
SHK 5.38 269 eP 44 47.70 2.6
AOMJ 5.81 9 eP 44 52.30 1 2
MDJ 12.25 326 eP 46 25.00 4.7X
Z 16s 1.30um
BJI 18.99 293 eP 47 47.00 0.1
Z 20s 0.36um
N 12s 0.34um
E 12s 0.37um
eS 51 24.00
TIY 21.74 285 eP 48 16.00 -0.5
N 13s 0.50um
E 13s 0.60um
LZH 28.73 283 eP 49 21.50 -1.3
Z 20s 0.50um 4.1Msz
QIZ 30.38 246 eP 49 35.50 -2.0
GTA 31.56 290 eP 49 46.00 -1.9
Z 16s 0.60um 4.4MszX
WMQ 40.28 299 eP 51 03.00 1.1
Z 16s 0.20um 4.1MszX
WB5 54.59 186 eP 52 54.20 0.4
MBC 59.15 16 eP 53 27.50 1.7
1.0s 4.00nm 4.5mb
CLL 82.10 329 e(P) 56 02.00 17.1X
ZOBO 149.36 60 ePKP 03 14.00 3.5X
LPB 149.55 60 ePKP 03 18.00 7.5X
CNCB 149.82 60 ePKP 03 17.00 5.9X
S.D. = 1.3 on 19 of 24 obs.

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* JUL 09, 1989 21h 29m 18.67± 2.37s
1.388 N ±18.8km 127.396 E ±20.3km
DEPTH = 118.0 ± 16.6 km
4.7mb (5 obs.)
HALMAHERA (267)

AAI 5.10 171 eP 30 34.60 0.5
MTN 14.62 165 eP 32 40.00 -1.0
KNA 17.08 176 eP 33 12.00 0.3
0.4s 8.00nm 4.3mb
WB5 22.22 162 eP 34 06.80 0.4
QIS 24.87 152 iPc 34 32.60 0.6
0.2s 9.00nm 4.9mb
ASPA 25.70 166 iPd 34 39.00 -0.6
0.4s 12.00nm 4.8mb
IPM 26.52 277 ePd 34 41.60 -5.6X
0.4s 19.80nm 5.0mb
e 35 31.50
SNG 27.30 283 eP 34 53.50 -0.8
e 35 54.80
MEKA 29.12 196 eP 35 10.50 -0.1
FORR 32.07 179 eP 35 35.30 -1.0
MRWA 32.33 199 iPd 35 39.00 0.3
COOL 32.64 190 eP 35 41.00 -0.4
KLB 34.05 195 iPd 35 53.70 0.1
MUN 34.84 197 eP 36 00.70 0.4
NWAO 35.45 195 eP 36 06.00 0.5
GBA 50.88 286 Pc 38 10.60 0.7
0.5s 2.20nm 4.3mb
S.D. = 0.7 on 15 of 16 obs.

% JUL 09, 1989 23h 12m 32.90± 1.17s
31.627 S ±18.9km 68.026 W ±10.6km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.18 276 iPc 12 38.00 -1.4
S 12 41.50
RTLL 0.48 308 e(P) 12 42.70 -0.6
(S) 12 50.00
RTCV 0.49 242 iPc 12 42.50 -1.0
RTCB 0.68 282 e(P) 12 46.50 0.4
RTBS 1.22 268 e(P) 12 55.50 1.9
S 13 14.00
MRA 2.12 112 ePc 13 06.90 0.2
S.D. = 1.5 on 6 of 6 obs.

? JUL 10, 1989 00h 21m 12.14± 3.42s
17.469 N ±26.8km 61.461 W ±18.2km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 3.1 (FDF).

ANG 0.47 229 eP 21 21.80 -0.5
eS 21 30.46
BPA 0.57 222 eP 21 23.25 -0.5
eS 21 32.31
MGH 1.04 224 eP 21 30.20 -0.2
S 21 44.50
NEV 1.11 253 eP 21 32.08 0.6
eS 21 48.06
DEG 1.21 161 eP 21 32.30 -0.6
S 21 47.50
SKI 1.23 264 eP 21 32.96 -0.1
eS 21 51.35
PAG 1.45 188 eP 21 37.50 1.2
S 21 57.00
S.D. = 0.8 on 7 of 7 obs.

? JUL 10, 1989 00h 22m 44.26± 0.91s
8.808 S ±12.5km 117.777 E ±11.0km
DEPTH = 33.0km (normal)
4.6mb (3 obs.)
SUMBAWA ISLAND REGION (285)

KHKI 2.19 281 eP 23 19.00 0.0
eS 23 54.20
e 28 30.20
MKS 3.94 25 P 23 44.00 0.0
i(S) 24 28.00
e 24 41.00
MBL 12.44 171 eP 25 45.00 3.1X
0.3s 2.00nm 4.7mb
eS 28 00.00
NANU 13.85 189 eP 26 06.00 5.5X
0.3s 2.00nm 4.4mb
eS 28 33.00
WARB 19.22 155 eP 27 11.60 3.0X
WB5 19.46 126 eP 27 10.90 -0.5
ASPA 21.36 136 iPd 27 31.60 0.4
0.6s 15.00nm 4.6mb
S.D. = 0.6 on 4 of 7 obs.

? JUL 10, 1989 00h 52m 25.06±20.86s
43.229 N ±105.km 127.402 W ±128.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)
CL 3.2 (SEA).

GROR 3.42 50 eP 53 18.83 -0.8
KMOR 3.69 48 eP 53 22.70 -0.8
eS 54 04.27
NLO 4.01 43 eP 53 28.17 0.2
GT2 4.16 61 eP 53 30.27 0.2
PGO 4.20 56 eP 53 30.88 0.4
BMW 4.40 41 eP 53 33.11 -0.3
RVW 4.42 47 eP 53 33.60 -0.1
ONR 4.46 34 eP 53 34.35 0.1
VLMM 4.48 57 eP 53 34.75 0.1
TDH 4.53 61 eP 53 35.43 0.1
LVP 4.56 50 eP 53 35.82 0.1
VBEM 4.57 64 eP 53 35.68 -0.3
MTMW 4.64 51 eP 53 36.76 -0.2
FL2 4.66 49 eP 53 37.69 0.4
eS 54 30.30
VLL 4.67 59 eP 53 37.62 0.2
SHW 4.73 49 eP 53 38.61 0.4
CZM 4.73 46 eP 53 38.16 0.0
ERK 4.74 48 eP 53 38.20 -0.1
JLK 4.74 50 eP 53 38.55 0.1
VFP 4.75 62 eP 53 38.12 -0.4
STD 4.76 49 eP 53 38.84 0.2
LON 5.30 46 eP 53 46.60 0.3
S.D. = 0.4 on 22 of 22 obs.

? JUL 10, 1989 01h 07m 45.07± 4.01s
20.843 S ±29.7km 178.611 W ±33.4km
DEPTH = 633.2 ± 32.9 km
4.6mb (4 obs.)
FIJI ISLANDS REGION (181)

DZM 13.97 262 iPc 10 43.00 0.2
BRS 26.88 250 iPd 12 40.90 0.8
CTA 32.89 265 iPd 13 30.90 -0.2
0.7s 18.49nm 4.8mb
ASPA 43.89 257 iPd 14 59.70 0.0
1.0s 27.00nm 4.7mb
WB5 43.97 263 eP 14 59.80 -0.6
MTN 48.60 271 iPc 15 34.20 -1.2
WARB 50.18 253 eP 15 46.90 -0.1
COOL 54.57 246 eP 16 17.50 -0.6
KLB 57.39 245 eP 16 37.60 0.2
NWAO 57.70 244 eP 16 40.00 0.4
RKG 57.79 242 eP 16 40.50 0.3
BAL 58.39 246 eP 16 44.20 0.0
MUN 58.66 245 eP 16 46.30 0.4
SPA 69.29 180 ePd 17 51.80 -0.4
0.9s 13.64nm 4.4mb
CHTO 89.82 290 iPd 19 40.20 0.9
0.7s 5.08nm 4.5mb
BNG 156.67 228 iPKPc 27 04.00 32.9X
0.4s 5.00nm
id 31 50.00
id 32 35.00
S.D. = 0.6 on 15 of 16 obs.

? JUL 10, 1989 01h 33m 23.09± 3.15s
34.976 N ±25.4km 139.161 E ±14.3km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 1.08 353 iPd 33 43.00 -0.8
S 33 57.10
IIDJ 1.14 297 iPd 33 44.30 -0.6
KAKJ 1.48 34 P 33 49.60 -0.7
S 34 10.10
MAT 1.74 334 eP 33 54.00 -0.2
iS 34 16.60
MTMJ 1.95 326 eP 33 57.20 0

10d 01h

NIIJ 2.26 357 eP 34 03.70 2.0
TSRJ 2.66 283 eP 34 07.70 0.3
eS 34 42.00
S.D. = 1.2 on 7 of 7 obs.

? JUL 10, 1989 02h 33m 00.85± 5.58s
33.838 S ±18.3km 71.713 W ±37.4km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNV 0.28 115 iPd 33 07.10 0.4
iS 33 16.10
LCCH 0.38 18 iP 33 09.00 0.3
iS 33 18.40
TACH 0.67 74 iPd 33 14.50 0.3
iS 33 28.50
CHCH 0.89 96 iPd 33 17.00 -0.9
iS 33 34.70
PCH 1.02 78 eP 33 20.00 -0.3
iS 33 38.80
ROCH 1.04 34 eP 33 20.00 -0.7
iS 33 38.00
FCH 1.29 67 iP 33 25.90 0.9
iS 33 47.40
S.D. = 0.8 on 7 of 7 obs.

& JUL 10, 1989 02h 35m 58.20s
40.332 N 124.278 W
DEPTH = 47.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. Felt (III) at Rio Dell.

FHC 0.52 25 iPd 36 08.10 -1.5
iS 36 14.90
WDC 1.35 79 iPc 36 19.40 -1.6
iS 36 35.00
LTCM 1.65 94 eP 36 23.90 -1.3
MIN 2.04 89 iPc 36 29.00 -1.9
LBFM 2.08 60 eP 36 31.10 -0.4
ORV 2.27 109 eP 36 32.10 -1.9
eS 36 57.20
BRK 2.91 147 eP 36 41.00 -2.2
BKS 2.92 146 iPc 36 41.52 -1.8
i 36 47.52
PCC 3.19 152 eP 36 44.70 -2.4
MHC 3.63 145 ePc 36 51.90 -1.5
i 36 58.70
ARN 3.67 143 eP 36 52.50 -1.5
GCC 3.75 151 ePc 36 52.20 -2.8
i 36 54.10
CMB 3.80 126 e(P) 36 54.60 -1.2
SAO 4.20 147 iPc 36 58.20 -3.2
LLA 4.54 144 eP 37 03.90 -2.3
PRS 4.60 149 eP 37 04.00 -3.0
i 37 05.90
FRI 4.89 132 eP 37 09.80 -1.2
KVN 4.93 103 eP 37 09.80 -2.1
PRI 5.06 145 e(P) 37 12.60 -1.0
TNP 5.93 110 eP 37 17.70 -8.2
20 obs. associated

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* JUL 10, 1989 03h 37m 20.41± 1.81s
37.187 N ±14.9km 28.158 E ±16.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER 0.11 118 iPg 37 23.40 0.0
eSg 37 28.40
CIN 0.42 352 ePg 37 28.00 -0.9
iSg 37 36.00
IZM 1.40 330 ePn 37 46.70 0.7
ELL 1.47 107 ePn 37 46.00 -1.0
KHL 1.57 43 ePn 37 48.70 0.3
BCK 1.96 81 ePn 37 55.00 0.9
S.D. = 1.1 on 6 of 6 obs.

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* JUL 10, 1989 04h 58m 16.04± 0.66s
6.045 S ±10.9km 103.326 E ±11.7km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
SOUTHWEST OF SUMATERA (273)

KHKI 12.40 101 ePd 01 12.00 -1.2
eS 03 22.00
e 05 45.50
PCI 17.25 73 ePd 02 23.80 7.7X
CHG 25.08 350 eP 03 39.00 -0.2
CHTO 25.08 350 eP 03 38.10 -1.1
1.1s 6.18nm 4.1mb
pP 03 49.80 46kmX
QIZ 25.73 14 eP 03 47.70 2.4
WB5 33.14 117 eP 04 52.00 0.3
e 05 01.00
ASPA 34.23 124 iPc 05 12.20 11.1X
0.4s 21.00nm
XAN 40.22 7 P 05 51.00 -0.3
NDI 42.72 325 eP 06 12.00 0.1
PMG 43.54 97 eP 06 19.00 0.3
CTA 43.93 113 eP 06 23.00 1.1
WMQ 51.61 346 P 07 22.00 0.5
CN2 53.49 20 P 07 34.00 -1.4
MAW 67.26 196 eP 09 09.00 -0.1
BUL 73.61 251 iPd 09 48.50 -0.2
S.D. = 1.1 on 13 of 15 obs.

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* JUL 10, 1989 05h 30m 23.60± 1.32s
7.701 S ± 9.9km 128.104 E ±15.7km
DEPTH = 123.3 ± 20.3 km
4.1mb (5 obs.)
BANDA SEA (280)

AAI 3.99 1 eP 31 24.50 0.6
MTN 5.92 150 iPc 31 50.20 0.0
eS 32 44.00
KNA 8.03 175 iPd 32 18.90 0.0
0.3s 78.00nm 5.9mb X
eS 33 43.00
WB5 13.54 154 eP 33 28.10 -3.8X
eS 35 48.80
MBL 15.59 210 iPc 33 58.40 0.6
0.3s 3.00nm 4.0mb
eS 36 44.00
ASPA 16.82 161 iPc 34 11.80 -1.4
0.5s 22.00nm 4.7mb
eS 37 12.00
QIS 16.95 140 iPc 34 12.60 -2.1
eS 37 08.00
WARB 18.43 184 iPd 34 32.70 0.4
0.4s 6.00nm 4.2mb
NANU 19.10 218 eP 34 40.00 0.6
0.3s 3.00nm 4.1mb
CTA 21.46 127 eP 35 06.00 2.5
FORR 23.03 180 eP 35 19.00 0.4
CHTO 39.00 313 eP 37 38.10 -1.7
1.1s 1.77nm 3.8mb
CNCB 150.91 147 PKP 50 03.00 4.2X
LPB 151.07 146 PKP 50 03.40 4.1X
ZOBO 151.27 146 PKP 50 03.20 3.8X
S.D. = 1.5 on 11 of 15 obs.

& JUL 10, 1989 05h 52m 17.98s
60.969 N 152.568 W
DEPTH = 125.4km
SOUTHERN ALASKA (2)
<AGS-P>.

SPU 0.33 49 iP 52 35.46 1.1
RDT 0.40 169 iP 52 35.80 -0.6
S 52 50.77
RED 0.56 190 iP 52 36.41 -0.9
NKA 0.69 109 eP 52 39.82 1.8
ILIM 0.91 192 iP 52 39.16 -0.9
SUA 1.01 60 eP 52 40.60 -0.4
S 52 58.91
NNL 1.12 145 eP 52 42.07 0.1
SKT 1.13 26 iP 52 41.21 -0.9
SLKM 1.24 111 eP 52 42.10 -1.2
OPT 1.36 194 eP 52 43.69 -0.9
S 53 05.37
PWA 1.47 61 eP 52 45.11 -0.6
XLV 1.58 164 eP 52 45.67 -1.3
S 53 08.11
CNPM 1.59 155 eP 52 46.11 -1.1
S 53 08.51
SEW 1.77 118 eP 52 47.96 -1.3
CUT 1.81 36 eP 52 49.01 -0.8
S 53 13.04
KNK 2.04 76 eP 52 50.89 -1.8
SHU 2.35 177 eP 52 54.82 -1.7
HUR 2.45 33 eP 52 56.53 -1.3
S 53 25.43
VZW 2.93 86 iP 53 01.72 -2.5
KLU 3.26 78 iP 53 06.12 -2.5
WRH 4.07 28 eP 53 15.98 -3.5
CCB 4.29 29 eP 53 18.69 -3.6
HDA 4.31 34 eP 53 19.83 -2.8
23 obs. associated

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* JUL 10, 1989 06h 00m 55.59± 1.66s
5.150 S ± 8.9km 153.529 E ±12.5km
DEPTH = 82.2 ± 13.8 km
4.7mb (6 obs.)
NEW IRELAND REGION (190)

RAB 1.66 305 e(P) 01 26.00 2.5
iS 01 46.00
LAT 6.66 257 eP 02 30.50 -2.3
PMG 7.61 236 eP 02 44.00 -1.8
CTA 16.45 205 iPc 04 43.50 0.7
1.2s 46.88nm 4.6mb
QIS 20.44 220 eP 05 29.00 0.3
DZM 20.96 145 iPd 05 32.90 -1.2
RMQ 21.70 192 eP 05 43.70 2.3
ASPA 26.39 224 iPd 06 26.70 0.4
0.4s 6.00nm 4.5mb
Z 22s 0.19um 3.6Msz
LR 16 00.30
TCW 40.43 156 P 08 27.50 0.2
MRW 40.62 155 P 08 29.00 0.1
CAW 40.67 155 P 08 29.10 -0.3
WDW 40.77 155 P 08 29.70 -0.5
PGZ 40.80 153 P 08 29.90 -0.5
MTW 40.90 154 P 08 30.50 -0.7
MAT 43.88 342 (P) 08 53.00 -2.6
XAN 57.37 316 Pc 10 37.20 -0.7
CHG 58.79 296 eP 10 48.70 0.7
CHTO 58.79 296 eP 10 48.10 0.1
1.0s 7.25nm 4.8mb
CD2 59.51 310 Pd 10 52.70 -0.1
LZH 61.98 316 eP 11 10.00 0.3
1.5s 39.00nm 5.3mb
GTA 66.40 317 iPc 11 39.00 0.7
HYB 77.29 289 eP 12 43.50 0.2
GBA 77.76 285 Pc 12 44.90 -0.9
0.8s 4.30nm 4.4mb
SPA 84.88 180 ePc 13 23.70 1.3
0.7s 19.92nm 5.2mb
e 13 39.90
MAW 85.53 203 eP 13 26.00 0.6
INK 88.52 21 eP 14 02.00 22.1X
BUL 120.34 243 iPKPc 19 39.90 -0.1
BNG 135.14 271 iPKPd 20 09.50 1.2
0.5s 3.00nm
S.D. = 1.3 on 27 of 28 obs.

JUL 10, 1989 06h 15m 30.73± 0.80s
39.781 N ±10.4km 29.746 W ± 4.8km
DEPTH = 25.4 ± 7.6 km
4.4mb (16 obs.) 4.5Msz (2 obs.)
AZORES ISLANDS (405)

CALA 1.45 146 eP 15 55.40 -0.1
eS 16 12.50
HOR 1.52 145 eP 15 56.60 0.1
eS 16 14.70
ADH 2.25 119 iP 16 04.60 -2.4
PDA 3.78 121 eP 16 27.00 -1.8
TOL 19.72 81 eP 20 02.00 0.7
eS 23 55.00
EPF 22.74 72 eP 20 33.30 1.3
1.2s 11.90nm 4.3mb
EKA 23.54 40 P 20 39.00 -0.5
0.9s 8.10nm 4.3mb
CAF 23.97 67 eP 20 44.00 0.1
1.0s 4.00nm 3.9mb
TCF 24.14 64 eP 20 45.90 0.4
0.8s 4.00nm 4.0mb
MAF 24.38 64 eP 20 47.80 0.0
1.0s 12.00nm 4.4mb
BGF 24.59 63 eP 20 49.60 -0.3
0.8s 9.40nm 4.4mb
SSF 25.08 62 eP 20 53.90 -0.7
0.7s 4.40nm 4.2mb
LOR 25.34 62 eP 20 56.20 -0.8
0.7s 2.20nm 3.9mb
LBF 25.40 62 eP 20 56.60 -1.0
0.6s 1.80nm 3.9mb
SNF 26.07 54 Pc 21 04.30 0.6
DOU 26.19 55 P 21 04.00 -0.8
Z 20s 0.90um 4.3Msz
S 25 47.00

WLF	27.12	57	P	21	17.70	4.4X
MEM	27.17	55	P	21	19.70	5.9X
SUF	40.12	36	iP	23	05.10	-0.5
	0.7s	11.60nm				4.7mb
FVM	46.47	288	P	23	58.00	0.7
FFC	49.04	313	eP	24	18.00	0.8
	1.0s	12.00nm				4.9mb
RLO	50.56	288	eP	24	29.20	0.1
TUL	51.24	288	eP	24	33.50	-0.7
	1.3s	10.10nm				4.6mb
Z	22s	0.79um				4.7Msz
		e		24	39.20	
		LR		39	45.00	
MBC	51.68	342	eP	24	38.00	0.9
	1.0s	5.00nm				4.4mb
EDM	55.89	314	eP	25	08.00	-0.4
BNG	55.93	116	iPc	25	09.50	0.3
	0.6s	4.00nm				4.6mb
GLD	56.30	296	P	25	12.00	0.3
	1.1s	54.00nm				5.5mb X
GOL	56.42	296	P	25	11.50	-1.3
BW06	57.88	301	P	25	21.50	-1.5
	1.0s	12.50nm				4.9mb
LRM	58.40	305	eP	25	27.20	0.6
INK	58.44	335	eP	25	24.00	-2.2
ALO	59.41	292	e(P)	25	34.10	0.4
TNP	65.28	300	P	26	13.00	0.2
	1.0s	9.50nm				4.9mb
KVN	65.35	301	P	26	12.70	-0.5
ZOBO	66.25	221	eP	26	23.00	3.5X
Z	24s	0.18um				4.2MszX
		LR		48	10.00	
MIN	66.93	304	e(P)	26	22.10	-1.2
CMB	67.40	301	ePc	26	25.80	-0.4
S.D. = 0.9		on	34 of	37	obs.	

? JUL 10, 1989 06h 52m 23.14± 3.39s
35.013 N ±27.6km 139.224 E ±15.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.05	350	iPd	52	42.80	-0.6
			eS	52	57.70	
IIDJ	1.17	294	P	52	44.10	-1.4
			eS	52	59.60	
KAKJ	1.42	33	P	52	49.30	-0.3
MAT	1.73	332	eP	52	54.00	-0.1
			iS	53	16.70	
MTMJ	1.95	324	eP	52	59.30	2.0
			eS	53	24.80	
NIIJ	2.23	355	eP	53	03.80	2.5X
			eS	53	34.30	
TSRJ	2.70	282	eP	53	08.40	0.4
			eS	53	40.30	
S.D. = 1.5		on	6 of	7	obs.	

JUL 10, 1989 07h 23m 18.57± 0.58s
37.646 N ± 5.2km 19.845 E ± 4.2km
DEPTH = 12.9 ± 2.6 km
4.2mb (2 obs.)
IONIAN SEA (399)
ML 4.0 (ATH).

VLS	0.79	48	ePg	23	33.20	-0.5
ITM	1.72	105	ePb	23	48.70	0.3
KEK	2.06	359	ePn	23	53.50	0.2
SRN	2.23	3	ePn	23	57.00	1.2
LSK	2.57	13	ePn	24	01.40	0.8
VLO	2.83	355	ePn	24	04.70	0.4
KZN	3.05	29	ePn	24	09.00	1.6
BERA	3.05	1	ePn	24	07.80	0.5
LCI	3.06	332	P	24	07.60	0.1
			eSn	25	02.00	
ATH	3.08	83	ePb	24	12.00	4.2X
NEO	3.13	57	ePn	24	08.50	0.0
ATN	3.50	280	P	24	13.80	0.0
			eSn	24	54.60	
TIR	3.70	0	ePn	24	16.60	0.0
PLG	3.91	45	ePn	24	19.30	-0.3
MEU	3.95	264	P	24	19.80	-0.5
			eSn	25	04.90	
LACI	3.99	359	ePn	24	23.50	2.9
PHP	4.06	6	iPnd	24	20.70	-1.0
MNO	4.09	276	P	24	22.80	0.5
VAM	4.16	121	ePn	24	23.00	-0.1
MGR	4.17	308	P	24	23.20	-0.1
			eSn	25	10.30	
VAY	4.23	29	iPn	24	24.30	0.2
SDA	4.37	357	ePn	24	27.00	0.9
PUK	4.39	0	ePn	24	26.00	-0.4
SKO	4.49	15	ePn	24	26.00	-1.8
Z	13s	0.82um				
N	12s	0.98um				
E	12s	1.04um				
		i		24	44.00	
		i		25	42.00	
		LR		26	37.00	
SGO	4.57	311	P	24	30.40	1.4
BDV	4.70	351	ePn	24	29.50	-1.3
			eSn	25	20.00	
BCI	4.72	2	ePn	24	31.40	0.4
TTG	4.80	355	ePn	24	32.00	-0.2
			eSn	25	23.50	
PVY	4.94	1	ePn	24	35.00	0.6
			eSn	25	30.00	
BRY	5.34	350	ePn	24	38.00	-2.0
			eSn	25	35.00	
HVAR	6.10	336	e(Pn)	24	50.20	-0.4
KAP	6.26	107	ePn	24	53.50	0.7
KSL	7.95	98	ePn	25	16.50	-0.1
VBY	8.57	338	e(Pn)	25	43.50	18.4X
			eSn	26	57.00	
PTJ	8.74	342	eP	25	24.50	-3.1X
CEY	9.04	335	eP	25	50.50	18.8X
			e(Sn)	27	14.00	
VOY	9.48	334	ePn	25	36.80	-1.0
			eSn	27	16.40	
HFS	22.85	352	eP	28	22.00	-0.3
	0.6s	4.30nm				4.1mb
EKA	23.56	326	P	28	31.00	1.7
	0.9s	6.50nm				4.2mb
NB2	24.04	350	P	28	33.00	-0.9
SUF	25.40	7	iP	28	46.90	0.0
S.D. = 1.0		on	37 of	41	obs.	

? JUL 10, 1989 08h 47m 49.12± 8.26s
32.372 S ±52.5km 71.834 W ±45.1km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.67	166	iPd	48	02.10	0.0
			iS	48	08.00	
JACH	1.09	107	iPd	48	08.40	0.1
			iS	48	20.10	
LCCH	1.12	169	iPd	48	08.50	-0.1
			iS	48	19.90	
PEL	1.24	129	iPd	48	10.10	-0.1
			iS	48	22.60	
TACH	1.48	150	iPd	48	13.50	-0.3
			iS	48	31.00	
FCH	1.61	127	iPd	48	15.60	-0.3
			iS	48	32.70	
PCH	1.67	139	iPc	48	16.70	0.2
			iS	48	35.10	
CHCH	1.85	148	iPd	48	19.60	0.5
			iS	48	40.10	
S.D. = 0.3		on	8 of	8	obs.	

? JUL 10, 1989 08h 48m 59.61± 3.13s
34.996 N ±25.1km 139.198 E ±14.4km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.06	351	iPd	49	19.30	-0.8
			S	49	33.90	
IIDJ	1.16	295	P	49	20.60	-1.2
			S	49	36.30	
KAKJ	1.44	33	iP+	49	25.70	-0.7
			eS	49	47.50	
MAT	1.74	333	iPd	49	30.50	-0.2
			iS	49	53.20	
MTMJ	1.95	325	iPd	49	34.50	0.7
			S	50	00.30	
NIIJ	2.25	356	P	49	39.50	1.5
			S	50	09.70	
TSRJ	2.69	283	P	49	44.80	0.6
			S	50	18.90	
S.D. = 1.2		on	7 of	7	obs.	

? JUL 10, 1989 08h 50m 51.76± 3.44s
34.932 N ±27.9km 139.193 E ±14.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.13	352	iP+	51	12.30	-1.0
			S	51	26.30	
IIDJ	1.18	298	iPd	51	13.20	-1.1
			eS	51	28.90	
KAKJ	1.50	32	P	51	18.00	-1.3
			S	51	38.70	
MAT	1.79	334	eP	51	23.00	-0.6
			iS	51	46.10	
MTMJ	2.00	326	P	51	27.40	0.8
			S	51	53.80	
NIIJ	2.31	356	P	51	32.80	1.8
			S	52	01.90	
TSRJ	2.70	284	P	51	37.10	0.6
			eS	52	13.20	
YAMJ	3.31	12	eP	51	46.10	0.9
S.D. = 1.4		on	8 of	8	obs.	

? JUL 10, 1989 09h 41m 46.70± 3.72s
16.938 N ±43.6km 101.967 W ±29.8km
DEPTH = 33.0km (normal)
4.1mb (6 obs.)
NEAR COAST OF GUERRERO, MEXICO (58)

ALO	18.37	348	eP	46	01.30	0.4
	1.0s	3.00nm				3.4mb
TUL	19.68	15	ePc	46	14.90	-1.1
	0.6s	8.20nm				4.2mb
PV09	22.38	345	P	46	43.00	-0.9
GOL	22.87	353	P	46	50.00	1.3
GLD	22.91	354	P	46	50.00	1.1
	1.2s	34.34nm				4.7mb
TNP	24.96	331	P	47	08.30	-0.6
	0.6s	1.85nm				3.9mb
KVN	26.15	331	P	47	19.90	-0.1
BW06	26.56	347	P	47	23.00	-0.7
	1.2s	7.19nm				4.2mb
LRM	30.10	345	eP	47	55.30	-0.4
YKA	46.36	352	P	50	12.00	0.7
MBC	60.02	355	eP	51	52.50	0.4
	0.5s	1.00nm				4.2mb
S.D. = 0.9		on	11 of	11	obs.	

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* JUL 10, 1989 10h 03m 23.06± 1.55s
37.629 N ±18.0km 19.804 E ± 7.7km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
IONIAN SEA (399)
MD 3.6 (ATH).

VLS	0.83	48	ePg	03	39.00	-0.1
KZN	3.08	29	ePb	04	14.00	1.3
NEO	3.16	57	ePn	04	14.00	0.1
MEU	3.92	264	P	04	24.50	-0.2
			eSn	05	08.40	
PLG	3.94	45	ePn	04	24.00	-1.0
MGR	4.16	308	P	04	28.60	0.7
			eSn	05	11.70	
VAY	4.26	29	ePn	04	29.30	-0.1
SKO	4.52	16	ePn	04	42.00	9.0X
VBY	8.57	338	e(Pn)	05	34.50	4.4X
			e(Sn)	07	01.50	
VOY	9.48	334	e(Pn)	05	41.40	-1.3
			eSn	07	19.50	
HFS	22.86	352	eP	08	26.90	-0.4
	0.5s	1.30nm				3.7mb
NB2	24.05	350	P	08	39.90	0.9
S.D. = 0.9		on	10 of	12	obs.	

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* JUL 10, 1989 10h 23m 35.88± 0.87s
0.664 S ±17.9km 67.143 E ±11.6km
DEPTH = 10.0km (geophysicist)
4.3mb (6 obs.)
CARLSBERG RIDGE (421)

GBA	17.46	35	Pd	27	41.00	-0.3
	1.1s	16.20nm				4.1mb
HYB	21.19	31	eP	28	23.80	-0.3
CHG	36.75	57	eP	30	46.20	0.6
CHTO	36.75	57	eP	30	46.00	0.4
	1.2s	9.03nm				4.4mb
MAIO	37.46	350	eP	30	52.00	0.6
BNG	48.82	276	iPc	32	24.80	1.0
	0.7s	3.00nm				4.4mb
BCAO	48.83	276	eP	32	23.00	-0.9
	1.0s	2.60nm				4.2mb
WB5	68.40	111	eP	34	39.50	-0
CLL	68.98	327	iPd	34	43.70	0

10d 10h

1.8s 26.00nm 5.1mb
HFS 73.26 335 eP 35 07.00 -2.0
0.5s 0.80nm 4.0mb
ALQ 145.38 351 ePKP 43 17.90 1.4
1.2s 9.77nm
e 43 21.40
e 43 28.80
S.D. = 1.1 on 11 of 11 obs.

JUL 10, 1989 11h 02m 51.14± 0.71s
38.499 N ± 7.0km 21.532 E ± 8.8km
DEPTH = 33.0km (normal)
3.6mb (1 obs.)
GREECE (364)
ML 3.3 (ATH).

VLS 0.81 247 ePn 03 06.00 -0.1
ITM 1.35 167 ePn 03 14.00 0.1
NEO 1.55 58 ePn 03 16.50 -0.2
ATH 1.80 106 ePn 03 20.70 0.4
KZN 1.82 6 ePb 03 22.80 2.1
PLG 2.39 38 ePn 03 27.50 -1.3
VAY 2.93 15 ePn 03 37.20 0.8
SKO 3.47 359 ePn 03 43.00 -1.1
i 04 29.50
HFS 22.22 350 eP 07 46.00 -0.1
0.5s 1.30nm 3.6mb
NB2 23.47 347 P 07 57.80 -0.6
S.D. = 1.1 on 10 of 10 obs.

JUL 10, 1989 12h 00m 17.88± 0.94s
37.124 N ± 8.0km 27.880 E ± 8.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.7 (ATH).

YER 0.32 88 iPg 00 23.20 -1.4
IZM 1.36 339 iPn 00 45.50 2.6X
ELL 1.67 102 iPn 00 48.00 0.6
KAP 1.67 200 ePn 00 47.30 0.0
KSL 1.70 126 ePn 00 48.00 0.3
KHL 1.77 47 iPn 00 49.70 0.9
APE 1.88 269 ePb 00 54.10 3.7X
BCK 2.19 80 ePn 00 54.50 -0.4
PRK 2.47 330 ePn 00 57.80 -1.0
DST 2.55 13 iPn 01 01.20 1.3
ALT 2.61 42 ePn 00 59.00 -1.9
EZN 2.96 336 ePn 01 09.00 3.3X
BBTK 4.69 53 eP 01 32.00 1.5
S.D. = 1.3 on 10 of 13 obs.

& JUL 10, 1989 12h 14m 06.31s
62.224 N 152.257 W
DEPTH = 110.6km
CENTRAL ALASKA (1)
<AGS-P>.

SKT 0.42 125 iP 14 22.33 -0.7
S 14 35.59
CUT 0.95 78 eP 14 26.47 -0.8
SUA 1.05 136 iP 14 27.85 -0.6
SPU 1.05 175 iP 14 27.59 -0.8
PWA 1.26 116 eP 14 30.16 -0.5
S 14 49.21
HUR 1.43 57 eP 14 31.57 -1.1
S 14 51.54
GHO 1.64 105 eP 14 34.12 -1.2
S 14 57.13
RDT 1.66 183 eP 14 34.66 -0.9
TTA 1.88 294 eP 14 35.95 -2.4
RND 1.96 51 eP 14 37.97 -1.4
S 15 02.64
KNK 1.98 113 eP 14 37.70 -1.9
S 15 03.71
SLKM 1.98 149 eP 14 39.41 -0.2
ILIM 2.18 189 iP 14 41.45 -0.7
SEW 2.53 146 eP 14 45.54 -1.1
CNPM 2.75 169 eP 14 49.69 -0.1
VZW 2.96 111 eP 14 49.92 -2.7
KLU 3.09 101 eP 14 51.10 -3.2
CCB 3.15 37 eP 14 52.31 -2.7
PAX 3.23 74 eP 14 54.02 -2.2
19 obs. associated

% JUL 10, 1989 12h 30m 04.72± 1.83s
10.661 N ±15.5km 60.830 W ±19.8km
DEPTH = 33.0km (normal)

TRINIDAD (98)

TBH 0.29 233 eP 30 12.51 0.1
eS 30 20.98
BOT 0.51 12 eP 30 15.35 -0.2
eS 30 23.73
TPR 0.52 6 eP 30 15.89 0.2
eS 30 25.42
TRN 0.56 269 eP 30 15.78 -0.4
eS 30 25.10
TPP 0.70 241 eP 30 18.03 -0.1
eS 30 29.72
TCE 0.91 272 eP 30 21.52 0.4
eS 30 33.61
S.D. = 0.4 on 6 of 6 obs.

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* JUL 10, 1989 14h 19m 01.59± 2.64s
35.136 N ±22.4km 139.078 E ±12.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 0.91 356 P 19 19.20 -0.3
S 19 33.10
IIDJ 1.01 290 iPd 19 20.10 -1.2
KAKJ 1.39 40 P 19 27.40 -0.2
S 19 46.40
MAT 1.57 334 iPd 19 30.00 -0.2
iS 19 52.50
MTMJ 1.78 325 P 19 34.60 1.3
S 19 59.70
NIIJ 2.10 358 P 19 40.90 3.1X
TSRJ 2.56 280 P 19 45.00 0.6
S 20 18.30
S.D. = 1.1 on 6 of 7 obs.

JUL 10, 1989 14h 20m 47.21± 0.70s
43.388 N ± 5.8km 5.440 E ± 4.7km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF 0.01 245 Pg 20 48.72 -0.4
BERF 0.20 112 Pg 20 51.91 0.3
PUYF 0.24 53 Pg 20 51.46 -0.9
TREF 0.24 350 Pg 20 51.65 -0.7
PRAF 0.46 335 Pg 20 56.85 0.3
TAVF 0.50 63 Pg 20 57.13 -0.3
VILF 0.51 23 Pg 20 57.06 -0.4
GANF 0.70 29 Pg 21 01.71 0.7
MVIF 1.34 67 Pn 21 12.13 0.1
Sg 21 31.74
TOUF 1.45 64 Pn 21 13.60 -0.1
Sg 21 34.71
AURF 1.46 69 Pn 21 13.67 0.0
Sg 21 35.32
FOUF 1.50 40 e(Pg) 21 15.86 1.8
e(Sg) 21 33.49
AUTN 1.56 66 Pn 21 14.99 -0.3
SAOF 1.65 68 Pn 21 16.12 -0.2
S.D. = 0.7 on 14 of 14 obs.

JUL 10, 1989 14h 46m 54.24± 0.80s
23.544 N ± 4.4km 94.351 E ± 5.1km
DEPTH = 67.7 ± 8.2 km
4.5mb (23 obs.)
BURMA-INDIA BORDER REGION (294)

CHG 6.36 137 iPn 48 27.40 -0.2
iSg 50 06.80
CHTO 6.36 137 ePn 48 27.00 -0.6
LSA 6.77 336 iPnd 48 33.10 -0.4
Sn 49 47.10
BDT 7.64 144 eP 48 44.00 -1.1
eS 50 32.10
KMI 7.81 77 Pc 48 53.00 5.2X
Z 18s 1.80um
N 10s 1.00um
eS 50 24.00
LOE 9.22 130 eP 49 08.00 1.0
NST 9.54 144 eP 49 16.00 4.7X
CD2 11.13 47 P 49 33.20 0.3
GYA 11.54 73 P 49 40.00 1.5
NNT 12.03 154 eP 49 48.20 3.3X
e 51 57.50
LZH 14.96 31 eP 50 25.60 2.3
1.5s 39.00nm 4.4mb
Z 24s 0.70um

QIZ 15.12 104 Pc 50 32.20 6.9X
HYB 16.00 251 eP 50 34.00 -2.6
1.0s 35.00nm 4.4mb
NDI 16.21 292 iP 50 41.00 1.8
0.8s 63.43nm 4.8mb
GTA 16.48 15 eP 50 40.40 -2.3
SNG 17.35 159 eP 50 55.40 2.0
GBA 18.82 241 Pd 51 11.10 -0.2
1.1s 22.00nm 4.3mb
WHN 19.12 64 eP 51 12.50 -2.1
pP 51 25.00 56kmX
POO 19.77 259 eP 51 12.20 -9.4X
iS 54 51.20
IPM 19.92 160 ePd 51 23.50 0.2
0.7s 30.20nm 4.7mb
WMO 20.95 346 P 51 34.60 0.9
Z 16s 0.20um 3.6MszX
S 55 13.00
TIY 20.96 43 eP 51 32.50 -1.3
Z 20s 0.60um 4.0Msz
pP 51 42.00 36kmX
S 55 25.00
KSH 22.22 320 eP 51 48.50 2.0
TIA 23.37 52 eP 51 56.80 -0.7
BJI 24.69 43 eP 52 13.50 3.3X
eS 56 49.00
SSE 24.96 67 P 52 23.00 10.2X
1.0s 26.00nm
Z 22s 0.50um 4.0Msz
e(S) 57 00.00
QUE 25.29 291 eP 52 17.70 1.5
MAIO 32.60 301 eP 53 20.00 -1.5
KNA 51.55 136 eP 55 55.30 -0.3
KAS 53.08 305 iPd 56 07.30 0.4
MRWA 56.44 157 eP 56 31.80 0.5
BAL 57.96 157 eP 56 42.00 0.0
WB5 58.18 135 eP 56 43.80 0.1
WARB 58.48 146 iPd 56 46.30 0.6
0.3s 4.00nm 5.1mb
MUN 59.03 158 iPd 56 49.30 -0.2
KLB 59.23 157 eP 56 50.60 -0.2
SUF 59.37 330 iP 56 50.90 -0.5
0.5s 2.50nm 4.6mb
NUR 59.82 328 eP 56 53.00 -1.6
SOD 59.94 336 iP 56 54.80 -0.5
NWAO 60.25 158 eP 56 57.00 -0.8
ASPA 60.64 138 iPd 57 00.90 0.3
0.7s 17.00nm 5.3mb
PMG 61.12 116 eP 56 53.00 -11.0X
FORR 63.02 148 eP 57 15.50 -0.9
e 59 23.00
HFS 65.26 327 eP 57 29.90 -0.8
0.5s 4.30nm 4.7mb
NB2 66.40 328 P 57 37.00 -1.0
LPG 71.98 312 eP 58 12.60 -0.3
0.7s 4.40nm 4.5mb
LBF 73.42 314 eP 58 20.70 -0.3
0.6s 1.80nm 4.2mb
SMF 73.61 314 eP 58 22.30 0.2
0.6s 9.00nm 4.9mb
SSF 73.70 315 eP 58 22.40 -0.2
0.6s 3.60nm 4.5mb
AVF 73.88 314 eP 58 23.60 0.0
0.7s 4.40nm 4.5mb
BGF 74.29 314 eP 58 25.40 -0.6
0.6s 2.70nm 4.4mb
MAF 74.57 314 eP 58 27.80 0.1
0.7s 3.30nm 4.4mb
TCF 74.79 314 eP 58 29.10 0.2
0.6s 3.60nm 4.5mb
EKA 75.08 324 P 58 31.00 0.6
0.8s 4.20nm 4.4mb
BNG 75.23 268 iPd 58 32.00 0.0
0.6s 10.00nm 4.9mb
BCAO 75.24 268 eP 58 31.30 -0.8
0.8s 2.90nm 4.3mb
CAF 75.31 313 eP 58 32.80 0.8
0.6s 1.80nm 4.2mb
RJF 75.56 313 eP 58 34.30 1.0
LPF 76.32 317 eP 58 38.40 0.9
BUL 77.39 241 iPc 58 44.20 0.1
MBC 78.29 8 eP 58 48.50 0.6
0.7s 5.00nm 4.6mb
SLR 80.55 237 iPd 59 02.00 0.9
0.9s 21.01nm 5.1mb
PRY 81.79 236 eP 59 01.70 -5.9X
SPA 113.40 180 e(PKP) 05 25.90 0.4

	0.8s	4.17nm				
ALQ	118.58	19	e(PKP)	05	37.50	1.0
	0.7s	1.88nm				
	S.D. = 1.1	on	56 of	65 obs.		

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* JUL 10, 1989 14h 55m 25.48± 1.01s
7.383 S ± 8.4km 129.370 E ±17.0km
DEPTH = 140.2 ± 15.9 km
4.5mb (6 obs.)
BANDA SEA (280)

AAI	3.85	342	ePd	56	25.00	0.7
MTN	5.70	162	iPd	56	49.10	0.0
			eS	57	51.00	
KNA	8.34	184	eP	57	23.20	-1.5
	0.2s	69.00nm			6.0mb	X
			eS	58	52.00	
PCI	11.48	304	ePc	58	15.40	9.1X
	1.0s	4.20nm			4.0mb	
WB5	13.33	159	iPd	58	26.80	-3.7X
			eS	00	48.00	
QIS	16.42	144	eP	59	10.00	0.7
			eS	01	59.00	
MBL	16.51	213	eP	59	10.50	0.2
	0.3s	8.00nm			4.5mb	
			eS	02	02.00	
ASPA	16.77	165	eP	59	12.60	-0.9
	0.6s	23.00nm			4.7mb	
			eS	02	10.00	
WARB	18.88	188	eP	59	38.00	0.4
			e	59	44.00	
			eS	03	01.00	
NANU	20.13	220	eP	59	51.00	0.4
	0.4s	14.00nm			4.7mb	
CTA	20.67	129	eP	00	05.00	8.9X
MEKA	21.73	207	eP	00	08.00	1.5
	0.4s	5.00nm			4.3mb	
			eS	04	04.00	
CHG	39.72	311	eP	02	45.20	-0.7
CHTO	39.72	311	iP	02	45.00	-0.9
	1.1s	9.13nm			4.4mb	
CNCB	150.47	145	PKP	15	05.00	7.1X
LPB	150.62	144	(PKP)	15	04.00	6.0X
ZOBO	150.81	144	ePKP	15	01.00	2.5X
	S.D. = 1.1	on	11 of	17 obs.		

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* JUL 10, 1989 16h 06m 54.82± 2.81s
35.073 N ±23.0km 139.240 E ±13.5km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.99	348	iP+	07	13.90	-0.2
			S	07	28.30	
IIDJ	1.16	291	iPd	07	15.80	-1.2
KAKJ	1.36	34	P	07	20.10	-0.3
			S	07	39.80	
MAT	1.69	331	iPc	07	25.20	0.1
			iS	07	47.90	
MTMJ	1.91	323	P	07	29.40	1.0
			S	07	55.60	
NIIJ	2.17	355	P	07	35.40	3.3X
TSRJ	2.70	281	eP	07	40.30	0.6
	S.D. = 1.0	on	6 of	7 obs.		

JUL 10, 1989 16h 16m 52.84± 0.97s
17.065 S ± 9.7km 175.107 W ± 7.9km
DEPTH = 288.7 ± 9.3 km
4.6mb (13 obs.)
TONGA ISLANDS (173)

AFI	4.49	46	iPd	17	53.60	-11.0X
			eS	18	43.50	
VUN	6.21	260	eP	18	25.20	0.2
SVA	6.23	259	eP	18	25.00	-0.2
DZM	18.08	251	iPc	20	47.00	0.9
KRP	22.35	200	iPc	21	28.90	1.0
BRS	31.37	245	iPc	22	58.60	9.3X
COO	32.92	240	eP	23	02.60	0.0
RMQ	34.74	248	eP	23	18.70	0.7
			e	23	27.50	
CTA	36.70	259	iPc	23	34.10	-0.4
	0.9s	16.81nm			4.5mb	
STK	41.80	241	iPc	24	16.90	0.6
WB5	47.86	258	iPc	25	03.60	-0.7
ASPA	48.05	253	iPd	25	05.00	-0.7
	0.8s	151.00nm			5.4mb	
			iPcP	26	29.70	
MTN	51.98	267	eP	25	35.00	-0.4
FORR	53.18	244	eP	25	42.70	-1.2
	0.4s	13.00nm			4.7mb	
WARB	54.53	250	iPc	25	53.30	-0.6
	0.3s	7.00nm			4.6mb	
COOL	59.16	244	eP	26	34.50	8.4X
MEKA	61.75	249	iPc	26	42.80	-0.8
	0.4s	4.00nm			4.4mb	
KLB	62.02	243	eP	26	44.30	-1.0
BAL	62.99	244	eP	26	51.00	-0.6
MUN	63.31	242	eP	26	53.40	-0.3
NANU	64.98	253	iPd	27	05.00	0.4
	0.4s	21.00nm			5.2mb	
SPA	73.04	180	ePd	27	53.10	0.1
	1.0s	21.00nm			4.8mb	
PRS	73.45	43	ePc	27	56.00	0.4
BCH	73.63	44	P	27	57.10	0.3
PRI	73.80	43	ePc	27	58.20	0.4
BRK	73.81	41	ePc	27	57.40	-0.2
MHC	73.88	42	ePc	27	58.50	0.2
MWC	74.47	46	eP	28	01.00	-0.8
BAR	74.60	48	eP	28	01.00	-1.4
RVR	74.81	47	eP	28	03.00	-0.5
PLM	74.83	48	eP	28	04.00	0.2
SBB	74.88	46	eP	28	03.00	-1.0
FRI	74.92	43	ePc	28	04.00	0.0
ISA	74.98	45	eP	28	04.00	-0.5
CMB	75.09	42	ePc	28	05.00	0.0
WDC	75.29	39	eP	28	06.40	0.4
ORV	75.30	40	ePc	28	06.00	-0.1
MIN	75.71	39	eP	28	08.00	-0.6
TPC	75.80	47	eP	28	09.00	-0.1
GLA	76.12	49	eP	28	11.00	0.1
KVN	77.14	42	P	28	16.10	-0.4
TNP	77.17	43	P	28	16.20	-0.5
PMR	81.08	12	P	28	37.10	0.3
	0.5s	4.55nm			4.5mb	
PNT	82.29	33	eP	28	44.00	0.6
	0.7s	8.00nm			4.6mb	
PV09	82.83	46	P	28	47.10	0.3
ALQ	83.12	50	eP	28	48.30	0.2
	1.0s	13.75nm			4.7mb	
LRM	84.33	39	eP	28	54.40	0.4
FBA	84.33	11	P	28	54.00	0.7
BW06	84.60	42	P	28	54.90	-0.5
	0.5s	3.57nm			4.5mb	
MAW	85.70	199	eP	29	00.80	0.7
GOL	85.98	47	P	29	01.60	-0.7
	0.7s	11.16nm			4.8mb	
RSSD	88.79	43	P	29	14.90	-0.7
INK	90.27	14	eP	29	22.00	0.4
CHTO	91.69	289	e(P)	29	30.20	1.1
	1.0s	6.88nm			4.6mb	
YKA	92.27	24	P	29	33.40	2.5
KSP	145.09	347	ePKP	35	58.70	1.5
			e	37	03.00	
CLL	145.23	351	iPKP	35	59.70	2.3X
BRG	145.50	350	ePKP	36	00.20	2.3X
	1.4s	12.00nm				
GRF	147.06	352	ePKP	36	06.60	6.1X
KHC	147.25	349	ePKP	36	05.50	4.7X
FLN	148.08	7	ePKP	36	06.00	3.9X
	1.0s	8.00nm				
LDF	148.29	6	ePKP	36	07.20	4.8X
	1.0s	8.00nm				
GRR	148.41	7	ePKP	36	07.70	5.1X
	1.1s	14.60nm				
LPF	148.74	8	ePKP	36	08.40	5.3X
	0.8s	5.30nm				
LOR	149.87	1	ePKP	36	11.40	6.5X
	1.0s	4.80nm				
SSF	150.07	2	ePKP	36	13.20	8.0X
	1.0s	4.00nm				
LBF	150.16	1	ePKP	36	13.40	8.0X
	1.0s	6.00nm				
LSF	150.77	5	ePKP	36	14.40	8.1X
	0.8s	3.20nm				
MAF	150.86	3	ePKP	36	14.90	8.4X
	1.0s	6.00nm				
	S.D. = 0.7	on	53 of	69 obs.		

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* JUL 10, 1989 16h 26m 10.04± 1.02s
34.985 N ± 9.4km 139.162 E ±10.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.3 (JMA). Felt (I JMA) on Oshima.

OSH	0.28	141	iPd	26	16.10	0.3
			iS	26	20.50	
CHJJ	1.07	353	P	26	29.80	-0.8
			S	26	44.10	
IIDJ	1.14	296	iPd	26	31.70	-0.1
			S	26	47.00	
KAKJ	1.47	34	P	26	35.80	-1.4
			S	26	55.70	
MAT	1.74	334	iPc	26	41.00	0.0
			iS	27	03.70	
MTMJ	1.94	326	P	26	44.90	0.8
			S	27	12.00	
NIIJ	2.25	357	P	26	48.50	0.0
YAMJ	3.26	12	eP	27	05.20	2.4
	S.D. = 1.3	on	8 of	8 obs.		

% JUL 10, 1989 17h 38m 08.28± 0.59s
60.624 N ± 4.9km 6.229 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

ASK	0.53	255	eP	38	19.09	0.1
			eS	38	26.55	
HYA	0.54	358	iP	38	18.79	-0.5
			eS	38	26.57	
ODD1	0.74	164	eP	38	21.71	-1.1
			eS	38	30.82	
SUE	0.84	302	eP	38	24.10	-0.4
			iS	38	36.28	
BLS1	1.27	166	iP	38	32.05	0.1
			iS	38	48.91	
KMY	1.50	200	eP	38	36.19	1.0
			eS	38	56.11	
MOL	2.05	17	iP	38	43.85	0.7
			eS	39	08.89	
NRA0	2.62	85	iPc	38	51.50	0.2
			iPg	38	54.20	
			iS	39	28.10	
	S.D. = 0.8	on	8 of	8 obs.		

JUL 10, 1989 18h 22m 27.41± 0.31s
39.081 N ± 5.6km 75.140 E ± 4.5km
DEPTH = 10.0km (geophysicist)
4.5mb (16 obs.) 4.3Msz (1 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	0.75	60	iPgc	22	43.00	0.8
NDI	10.51	170	eP	25	01.00	-0.2
WMQ	10.54	59	P	25	00.50	-1.2
Z	16s	0.70um				
			S	26	56.00	
QUE	11.14	220	eP	25	10.20	0.3
			eS	26	13.00	
MAIO	12.70	262	eP	25	28.00	-2.9
			eS	27	54.00	
GTA	19.10	81	eP	26	51.80	-1.1
Z	10s	0.60um				
HYB	21.79	171	eP	27	22.00	0.6
LZH	22.90	88	eP	27	32.50	0.0
	2.0s	47.00nm			4.7mb	
Z	16s	0.70um			4.2MszX	
E	11s	0.20um				
GBA	25.46	175	Pd	27	58.20	1.1
	0.8s	4.10nm			4.2mb	
BTO	26.72	76	eP	28	09.00	0.2
Z	11s	0.40um			4.2MszX	
N	12s	0.30um				
E	11s	0.30um				
			eS	32	46.00	
TIY	29.13	81	eP	28	36.60	6.0X
Z	20s	0.80um			4.3Msz	
SUF	37.57	325	eP	29	44.00	0.7
	0.9s	4.70nm			4.3mb	
HFS	43.13	320	eP	30	29.30	0.0
	0.5s	6.30nm			4.6mb	
PRU	43.43	305	eP	30	33.00	1.2
BRG	43.67	306	i(P)	30	34.80	1.1
	1.0s	8.00nm			4.5mb	
CLL	44.18	307	eP	30	36.00	-1.9
KHC	44.20	304	eP	30	39.00	0.9
NB2	44.36	321	P	30	39.20	0.0
BSF	48.90	304	eP	31	15.70	0.4
HAU	49.13	304	eP	31	17.20	0.2
LPG	49.61	301	eP	31	21.60	0.5
	1.0s	6.00nm			4.5m	
AVF	51.44	303	eP	31	34.70	0

10d 18h

0.6s 4.80nm 4.6mb
MAF 52.14 303 eP 31 40.20 0.3
0.8s 5.30nm 4.5mb
TCF 52.35 303 eP 31 41.80 0.3
1.0s 4.00nm 4.3mb
EKA 52.74 315 Pd 31 44.30 0.0
0.7s 4.60nm 4.5mb
LSF 52.81 303 eP 31 44.40 -0.5
0.8s 2.60nm 4.2mb
CAF 52.93 302 eP 31 46.30 0.4
0.8s 2.60nm 4.2mb
LPO 53.60 302 eP 31 50.80 0.1
LFF 53.80 302 eP 31 52.50 0.4
0.6s 4.30nm 4.6mb
BNG 61.61 251 iPc 32 47.00 -0.7
0.5s 14.00nm 5.4mb
MBC 64.58 4 eP 33 06.00 -0.4
0.8s 15.00nm 5.2mb
INK 70.80 11 eP 33 45.00 -0.5
FBA 71.05 18 eP 33 46.90 -0.2
1.0s 0.70nm 3.7mb
S.D. = 0.9 on 32 of 33 obs.

? JUL 10, 1989 22h 44m 57.65±13.67s
17.400 N ±81.2km 60.742 W ±85.2km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

ANG 1.07 257 eP 45 16.48 0.2
eS 45 29.16
BPA 1.12 252 eP 45 16.79 -0.3
eS 45 27.42
DEG 1.12 196 eP 45 17.10 -0.1
MGH 1.56 245 eP 45 23.70 0.2
S 45 39.50
MGG 1.57 201 eP 45 23.70 0.1
S 45 39.50
PAG 1.63 214 eP 45 24.40 -0.1
S 45 41.00
S.D. = 0.3 on 6 of 6 obs.

JUL 10, 1989 22h 55m 35.63± 1.07s
19.261 N ± 6.5km 121.010 E ± 6.7km
DEPTH = 32.5 ± 8.6 km
4.4mb (4 obs.) 4.4Msz (2 obs.)
PHILIPPINE ISLANDS REGION (248)

BAG 2.86 188 eP 56 20.90 0.7
QCP 4.60 179 eP 56 37.00 -7.7X
ANP 5.91 4 eP 57 00.50 -2.8
QZH 6.08 339 eP 57 01.50 -4.1X
Z 20s 1.50um
E 13s 1.50um
GZH 8.10 299 eP 57 34.20 0.2
QIZ 10.56 271 eP 58 07.50 -0.3
N 14s 1.40um
SSE 11.78 1 eP 58 23.50 -0.9
Z 16s 0.40um
E 12s 0.60um
TIA 17.23 349 eP 59 37.40 2.0
Z 25s 0.50um
KMI 17.89 292 eP 59 49.00 5.0X
Z 16s 2.10um
E 14s 1.30um
LOE 18.40 267 eP 59 50.00 0.0
CD2 19.43 310 P 00 02.40 0.0
sP 00 16.00
eS 03 38.00
WKYJ 19.75 38 eP 00 05.40 -0.4
TIY 19.85 340 eP 00 07.40 0.5
Z 20s 1.50um
N 13s 1.00um
sS 03 58.00
CHG 20.87 272 ePg 00 18.00 0.5
0.9s 9.24nm 4.2mb
CHTO 20.87 272 iP 00 17.00 -0.4
1.6s 30.84nm 4.4mb
BJI 21.12 350 eP 00 20.00 0.1
Z 16s 0.59um 4.1MszX
eS 04 15.00
NNT 21.50 255 eP 00 24.30 0.4
LZH 22.57 321 eP 00 35.00 0.4
3.0s 156.00nm 5.0mb
Z 16s 4.30um 5.0MszX
N 11s 0.50um
eS 04 46.00

HHC 22.99 341 eP 00 40.60 2.0
Z 18s 0.60um 4.1Msz
N 13s 0.70um
eS 04 50.50
sS 05 00.00
BTO 23.26 338 eP 00 42.00 0.7
N 15s 0.50um
E 15s 1.00um
ePP 01 15.00
S 04 47.00
GUMO 23.56 100 eP 00 46.50 2.3
CN2 24.75 8 eP 00 56.00 0.5
MDJ 26.28 14 eP 01 10.80 1.0
GTA 27.16 322 eP 01 16.60 -1.6
Z 14s 0.60um 4.3MszX
E 10s 0.40um
WMQ 37.09 319 eP 02 45.50 0.7
Z 16s 0.50um 4.4MszX
ScP 08 49.50
WARB 45.50 173 eP 03 52.00 -1.9
QUE 49.90 294 eP 04 28.30 -0.2
MAIO 56.14 301 eP 05 15.00 0.3
SUF 75.28 332 eP 07 16.00 -0.9
NUR 76.52 330 eP 07 24.00 0.1
Z 18s 0.30um 4.6Msz
LR 43 50.00
MSZ 76.66 148 eP 07 24.00 -0.9
INK 77.84 22 eP 07 31.00 -0.1
MBC 78.08 12 eP 07 31.00 -1.4
HFS 81.77 331 eP 07 51.40 -0.9
0.4s 1.20nm 4.3mb
NB2 82.49 332 P 07 55.50 -0.6
KSP 84.18 322 eP 08 05.00 0.1
YKA 87.55 23 P 08 22.50 1.1
YKC 87.61 23 eP 08 21.00 -0.6
S.D. = 1.1 on 35 of 38 obs.

JUL 10, 1989 23h 07m 29.57± 0.60s
44.672 N ± 4.2km 7.276 E ± 6.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

PZZ 0.21 217 P 07 34.51 0.3
S 07 37.00
FOUF 0.38 248 ePg 07 37.16 -0.2
e(Sg) 07 41.45
RRL 0.43 305 P 07 38.33 -0.1
S 07 43.38
ENR 0.46 167 P 07 38.87 0.0
S 07 44.71
RSP 0.48 358 P 07 39.28 -0.1
S 07 45.53
ROB 0.57 131 P 07 41.05 -0.1
LSD 0.79 354 P 07 45.28 0.2
S 07 54.56
S.D. = 0.2 on 7 of 7 obs.

JUL 10, 1989 23h 59m 15.09± 0.12s
46.050 N ± 3.0km 151.316 E ± 2.0km
DEPTH = 75.1km (23 depth phases)
5.5mb (69 obs.)
KURIL ISLANDS (221)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 28C
Centroid Locotion:
Origin Time 23:59:17.3 0.4
Lat 46.04N 0.04 Lon 150.85E 0.05
Dep 54.3 5.2 Half-durotion 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 0.54 0.04 Mtt= 0.51 0.06
Mff=-1.05 0.06 Mrt=-0.38 0.07
Mrf=-1.49 0.10 Mtf= 0.45 0.07
Principal Axes:
T Val= 1.69 Plg=50 Azm=131
N 0.27 24 9
P -1.96 30 265
Best Double Couple:Mo=1.8*10**17
NP1:Strike=307 Dip=27 Slip= 25
NP2: 194 79 114

KUSJ 5.57 240 iPd 00 33.90 -3.2X
S 01 34.10
ASAJ 6.44 256 iPd 00 50.80 1.6
HOOJ 6.83 240 iPd 00 52.50 -2.2X
S 02 06.90

MRRJ 8.20 247 P 01 10.80 -2.7X
S 02 41.60
AOMJ 9.68 239 P 01 29.40 -4.3X
OFUJ 9.95 229 iPd 01 31.10 -6.4X
S 03 14.80
YAMJ 11.49 231 eP 01 52.50 -5.6X
NIIJ 12.73 231 P 02 09.70 -4.8X
KAKJ 12.92 224 P 02 11.20 -5.8X
CHJJ 13.63 227 P 02 21.60 -4.8X
IIDJ 14.63 229 P 02 36.10 -3.3X
MDJ 15.34 272 iPd 02 48.00 -0.4X
Z 20s 5.30um
N 14s 2.20um
sP 03 00.00
SS 05 58.00
TSRJ 15.63 233 P 02 49.30 -2.8X
SMY 16.23 57 eP 03 01.20 1.6
WKYJ 16.82 231 eP 03 03.10 -4.0X
YONJ 17.32 238 eP 03 10.50 -2.8X
TKSJ 17.85 234 eP 03 17.00 -2.7X
CN2 18.43 272 eP 03 23.00 -3.8X
Z 13s 2.30um
E 15s 2.30um
pP 03 31.40
eS 06 48.00
ScP 11 22.50
ScS 15 02.00
SHNJ 19.46 239 eP 03 36.80 -1.4X
SNY 20.37 268 iPd 03 46.00 -1.7
Z 20s 3.56um 4.7Msz
E 14s 2.12um
S 07 21.00
KUMJ 20.74 237 P 03 51.10 -0.5
ADK 21.69 63 ePc 04 00.00 -0.9
1.3s 377.40nm 5.6mb
KAGJ 21.70 234 eP 04 01.50 0.3
DL2 22.94 263 eP 04 13.00 -0.3
E 12s 0.67um
S 08 15.00
BJI 26.23 269 eP 04 43.50 -1.0
Z 20s 2.73um 4.8Msz
esP 05 00.00
eS 09 10.00
TIA 27.38 261 P 04 54.40 -0.7
N 17s 0.81um
E 20s 1.78um
eS 09 24.00
SSE 27.69 248 P+ 04 57.00 -0.8
3.0s 1.00nm 2.9mb X
Z 20s 1.10um 4.4Msz
E 16s 1.00um
e 05 25.00 132kmX
eS 09 40.00
NJ2 28.60 252 iPd 05 05.70 -0.3
N 15s 0.60um
E 15s 0.80um
S 09 50.00
HHC 29.10 274 P 05 10.00 -0.7
N 13s 1.12um
E 15s 0.93um
pP 05 18.00 28kmX
S 09 57.00
TIY 29.88 268 P 05 18.50 0.9
Z 22s 1.96um 4.7Msz
E 16s 0.30um
S 10 15.50
BTO 30.28 275 eP 05 20.00 -1.1
Z 20s 3.00um 4.9Msz
N 14s 0.70um
E 20s 2.70um
PP 06 17.50
S 10 18.00
WHN 32.55 255 iPd 05 40.50 -0.4
S 10 54.00
GUMO 32.81 192 eP 05 49.00 5.7X
Z 21s 0.66um 4.3Msz
GUA 32.86 192 eP 05 49.30 5.6X
QZH 33.61 242 iPd 05 50.00 -0.1
4.0s 0.90nm 3.0mb X
Z 14s 1.00um 4.7MszX
S 11 10.00
TTA 33.77 41 ePc 05 51.00 -0.3
SVW 33.84 44 ePc 05 52.30 0.4
XAN 34.22 265 iPd 05 54.60 -0.8
IMA 35.10 36 ePc 06 02.40 -0.3
0.6s 92.70nm 5.9mb
BRW 35.14 26 eP 06 03.10 0.3

KDC 35.56 50 ePc 06 05.20 -1.3
PMR 36.96 43 eP 06 18.80 0.6
0.7s 21.40nm 5.2mb
Z 20s 0.80um 4.5Msz
FBA 37.48 38 ePc 06 23.10 0.6
GTA 37.85 279 iPd 06 25.60 -0.5
Z 16s 1.17um 4.8MszX
E 12s 0.72um
pP 06 40.00 56kmX
PcP 08 42.00
S 12 10.00
ScS 16 31.20
TOA 38.33 42 ePc 06 30.70 0.9
CD2 39.58 265 iPd 06 40.50 0.0
S 12 40.00
GYA 40.35 257 Pd 06 46.80 -0.1
ScP 12 33.00
S 12 47.80
INK 42.91 32 iPc 07 08.00 0.8
0.7s 133.00nm 5.9mb
KMI 43.89 259 Pd- 07 16.00 0.0
3.0s 1.40nm 3.3mb X
Z 35s 1.20um 4.6MszX
pP 07 36.50 85km
sP 07 47.00
PP 09 06.00
S 13 41.00
WMQ 44.02 291 P 07 15.40 -1.3
PP 08 58.50
ScP 12 46.20
PcS 12 53.50
eS 13 42.00
ScS 17 07.00
SIT 44.77 48 ePc 07 24.10 1.7
MBC 45.68 20 eP 07 30.00 0.6
pP 07 45.00 58kmX
LSA 49.07 272 iPd 07 58.00 1.0
S 14 58.00
LOE 49.88 252 eP 08 02.00 -0.7
ALE 50.56 5 eP 08 07.00 -0.2
0.5s 9.00nm 5.1mb
TSM 50.70 225 ePc 08 09.60 0.6
CHG 50.74 256 iPd 08 09.50 0.1
0.9s 126.05nm 5.9mb
BDT 51.81 254 iPd 08 17.00 -0.4
1.0s 75.90nm 5.7mb
YKA 52.22 36 P 08 20.70 0.7
YKC 52.29 36 iP 08 20.00 -0.5
0.9s 60.00nm 5.6mb
KSH 53.79 292 eP 08 30.00 -2.0
ScS 18 12.00
PGC 54.87 54 eP 08 40.00 0.4
PNT 56.63 52 iPc 08 52.10 -0.3
0.7s 73.00nm 5.9mb
DAG 57.30 357 iPc 08 55.00 -1.6
0.9s 8.40nm 4.9mb
KEV 57.58 340 eP 09 00.00 1.3
0.8s 20.50nm 5.3mb
EDM 57.69 45 iPc 08 59.30 -0.5
0.6s 121.00nm 6.2mb
DPW 58.22 52 P 09 03.20 -0.4
FHC 58.94 62 ePc 09 09.40 0.7
NDI 59.32 281 iPd 09 10.70 -0.7
1.0s 205.00nm 6.2mb
SOD 59.45 338 iP 09 11.10 -0.7
TRO 59.48 343 eP 09 10.96 -1.0
WDC 59.96 61 iPc 09 15.90 0.3
i 09 35.60 77km
LTCM 60.43 62 P 09 18.90 0.1
SES 60.52 47 iPc 09 18.60 -0.8
0.7s 15.00nm 5.2mb
MIN 60.67 61 ePc 09 20.30 -0.3
ORV 61.21 62 ePc 09 23.50 -0.6
BRK 61.77 64 ePc 09 27.50 -0.4
e 09 47.20 76km
LOF 61.83 343 iP 09 26.43 -1.5
PCC 61.92 64 ePc 09 28.50 -0.4
FFC 62.07 39 iPc 09 29.60 -0.1
0.8s 89.00nm 5.9mb
HRY 62.39 50 iPc 09 32.30 0.2
GCC 62.45 64 eP 09 31.90 -0.5
MHC 62.48 64 ePc 09 32.70 -0.1
LRM 62.61 52 iPc 09 33.70 0.0
CMB 62.83 63 iPc 09 35.00 0.0
e 09 54.60 75km
KHKI 62.88 220 eP 09 23.00 -12.3X
e 10 47.00 389kmX

LCCM 62.91 51 iPc 09 35.60 0.0
CCMT 62.94 53 iPc 09 35.50 -0.4
SAO 62.96 64 ePc 09 36.30 0.5
SUF 63.12 335 eP 09 35.00 -1.5
0.4s 8.30nm 5.1mb
BGMT 63.20 52 iPc 09 37.70 0.1
PRS 63.28 65 ePc 09 37.70 -0.2
LLA 63.37 64 ePc 09 38.70 0.2
KVN 63.59 60 iPd 09 40.10 -0.1
pP 10 00.90 81km
PRI 63.84 64 iPc 09 41.10 -0.7
FRI 63.90 63 iPc 09 41.70 -0.3
TNP 64.74 61 iPd 09 47.50 -0.2
pP 10 07.10 75km
BCH 64.81 65 P 09 48.00 -0.1
NSS 65.26 342 iP 09 49.20 -1.1
QUE 65.28 288 eP 09 50.40 -0.8
e(S) 18 27.00
SYP 65.30 65 eP 09 50.00 -1.2
NUR 65.30 334 iP 09 49.40 -1.2
Z 21s 0.90um 4.9Msz
LR 40 50.00
ISA 65.52 63 eP 09 52.00 -0.5
e 10 11.00 72km
HYB 65.76 270 iPd 09 53.50 -0.8
1.0s 50.00nm 5.4mb
e 10 11.00 65km
CLC 65.96 63 eP 09 55.00 -0.4
e 10 15.00 76km
CTA 65.98 185 iPd 09 54.70 -0.7
1.1s 27.85nm 5.1mb
iS 18 39.00
MAIO 66.10 298 ePd 09 56.40 0.1
FRB 66.11 18 ePc 09 44.40 -11.4X
0.5s 44.00nm
BW06 66.16 53 iPc 09 56.40 -0.3
pP 10 16.70 78km
SBB 66.55 64 eP 09 59.00 -0.2
e 10 22.00 90kmX
MWC 66.71 64 eP 10 01.00 0.7
e 10 20.00 72km
QIS 67.14 192 iPc 10 01.60 -1.1
RVR 67.29 64 eP 10 02.00 -1.7
e 10 23.00 81km
WB5 67.39 197 iPc 10 03.10 -1.3
MOL 67.92 343 iP 10 07.49 0.3
PLM 68.03 64 P 10 07.50 -1.1
TPC 68.04 63 eP 10 07.00 -1.5
e 10 33.00 103kmX
RSSD 68.22 49 iPd 10 09.00 -0.7
pP 10 28.30 73km
POO 68.28 274 iPc 10 09.90 -0.2
0.8s 29.85nm 5.3mb
AKU 68.30 355 iP 10 10.60 1.1
1.0s 24.00nm 5.1mb
RSON 68.37 38 iPd 10 08.80 -1.4
1.0s 54.23nm 5.4mb
pP 10 27.20 69km
NB2 68.48 340 P 10 08.40 -2.4
BAR 68.59 65 eP 10 11.00 -0.9
HFS 68.67 339 eP 10 10.40 -1.5
0.6s 20.40nm 5.2mb
NRA0 68.67 340 eP 10 10.40 -1.5
GBA 69.16 268 Pc 10 13.90 -1.6
0.8s 35.90nm 5.4mb
DZM 69.17 165 iPc 10 15.70 0.2
PV09 69.26 56 iP 10 16.30 0.1
pP 10 36.70 77km
GLA 69.50 63 eP 10 18.00 0.5
e 10 40.00 84km
GOL 70.56 53 P 10 24.20 0.1
0.6s 20.58nm 5.2mb
GLD 70.61 53 P 10 25.00 0.7
1.2s 155.56nm 5.8mb
ASPA 71.16 197 iPc 10 27.70 0.2
0.6s 17.00nm 5.2mb
epP 10 43.30 56kmX
TEH 71.36 302 iPc 10 30.00 1.1
RMO 72.23 182 eP 10 35.00 1.3
TAB 72.64 307 eP 10 37.00 0.6
ALQ 73.26 57 iPc 10 40.40 0.3
1.0s 22.50nm 5.1mb
e 10 44.00 12kmX
e 10 46.50
e 10 56.90
SCH 74.46 22 iPc 10 46.20 -0.3
0.6s 31.00nm 5.4mb

KER 74.83 304 iPd 10 49.60 0.4
SLY 74.86 306 iPc 10 49.50 0.4
e 20 09.00
WARB 75.30 203 eP 10 52.60 1.0
MSL 75.61 308 iPc 10 54.00 0.6
NANU 75.61 214 eP 10 54.00 0.7
KVT 75.82 315 iP 10 55.00 0.5
KSP 75.96 332 eP 10 54.00 -1.1
1.0s 47.00nm 5.4mb
i 10 54.80 3kmX
SPC 76.03 329 iP 10 55.90 0.1
COO 76.27 179 eP 10 58.40 1.5
CLL 76.57 335 iPd 10 58.10 -0.4
1.3s 98.00nm 5.6mb
BRG 76.67 334 iPc 10 58.80 -0.3
1.4s 45.00nm 5.2mb
KAS 76.70 317 iPc 11 01.10 1.6
EKA 76.71 345 Pc 10 59.30 0.1
0.5s 10.00nm 5.0mb
WIT 76.97 339 eP 11 02.00 1.4
BHD 77.18 305 iPc 11 02.50 0.4
PRU 77.26 333 P 11 02.40 0.1
1.0s 36.10nm 5.3mb
e 11 22.00 73km
MOX 77.57 335 iP 11 04.00 0.0
1.4s 62.00nm 5.3mb
Z 22s 0.60um 4.9Msz
WTS 77.68 338 iPd 11 05.00 0.5
0.8s 29.00nm 5.3mb
HOF 77.79 335 eP 11 06.30 1.0
1.0s 44.00nm 5.3mb
MEO 77.85 52 iPc 11 05.60 -0.3
SRO 77.88 330 iP 11 06.80 1.1
e 34 29.70
ZST 77.97 331 iPc 11 07.20 1.0
i 11 11.80 15kmX
i 11 21.40
KHC 78.32 333 iP 11 08.80 0.6
1.1s 129.00nm 5.8mb
e 11 20.50 39kmX
SIO 78.36 50 ePc 11 08.60 -0.1
BBTK 78.37 316 iPd 11 09.50 0.7
TUL 78.52 50 iPc 11 09.50 0.0
1.3s 65.90nm 5.4mb
Z 20s 0.39um 4.7Msz
i 11 29.30 73km
LR 37 19.00
WET 78.52 334 iPd 11 09.90 0.6
1.2s 129.00nm 5.7mb
GRF 78.54 335 iPd 11 10.20 0.8
1.0s 87.00nm 5.6mb
Z 20s 0.20um 4.4Msz
e 11 27.50 63kmX
SOP 78.60 331 iPd 11 11.30 1.6
DMU 78.71 347 eP 11 10.80 0.6
RLO 78.73 49 iP 11 10.50 -0.2
e 11 29.80 71km
DHR 78.75 296 iPd 11 11.00 0.1
TNS 78.85 337 iPd 11 11.30 0.2
VVO 78.98 50 ePc 11 12.70 0.7
ENN 79.03 338 iPd 11 12.30 0.3
0.9s 49.00nm 5.4mb
MEM 79.15 338 iPd 11 12.76 0.1
DLE 79.25 347 eP 11 13.30 0.2
CTT 79.35 320 eP 11 09.10 -4.8X
YRH 79.36 345 eP 11 13.40 -0.4
1.2s 102.00nm 5.6mb
FORR 79.38 200 eP 11 14.50 0.5
UCC 79.39 339 P 11 14.50 0.6
ABH 79.41 337 ePd 11 13.99 -0.1
BEO 79.64 327 iP 11 15.20 -0.2
FVM 79.67 45 iP 11 15.30 -0.4
0.6s 50.06nm 5.6mb
pP 11 35.00 73km
SNF 79.67 339 iPd 11 15.63 0.2
RUP 79.70 337 ePd 11 15.58 -0.2
GAC 79.76 31 ePc 11 15.40 -0.6
ETA 79.76 346 eP 11 16.10 0.2
BHG 79.78 333 eP 11 16.90 0.8
1.4s 80.00nm 5.5mb
FUR 79.88 334 iPc 11 17.40 0.7
1.3s 109.00nm 5.6mb
WLF 79.98 338 Pd 11 17.00 -0.1
e 11 38.30 79km
DOU 79.98 339 Pc 11 17.20 0.1
S 21 15.00
KBA 80.20 332 iPd 11 18.30 -0

11d 00h

	1.0s	78.90nm		5.6mb		
		i	11 19.30	3kmX		
		i	12 29.20			
		i	14 17.00			
GWF	80.21	337 P	11 18.66	0.2		
ECP	80.29	346 eP	11 19.00	0.3		
	0.9s	58.00nm		5.5mb		
RDO	80.63	322 eP	11 21.30	0.6		
FVI	80.81	332 P	11 21.30	-0.2		
CDF	80.82	337 P	11 21.68	0.0		
PTN	80.91	32 P	11 21.10	-1.0		
VBY	80.94	330 eP	11 22.00	-0.2		
		e	11 42.00	74km		
VOY	80.94	331 eP	11 20.90	-1.5		
ECH	81.03	337 P	11 22.83	0.1		
SLE	81.06	336 ePd	11 22.70	-0.2		
FEL	81.10	336 P	11 23.09	-0.2		
VAL	81.11	349 iP	11 23.50	0.5		
KHL	81.11	317 iP	11 22.60	-0.8		
OGA	81.12	334 iPd	11 24.20	0.8		
	1.1s	58.00nm		5.4mb		
CBM	81.14	26 P	11 23.00	-0.3		
SAX	81.28	335 ePd	11 24.40	0.0		
BCK	81.29	316 eP	11 23.30	-1.0		
VITF	81.35	337 P	11 24.61	0.3		
ZLA	81.35	336 ePd	11 24.40	-0.1		
EZN	81.36	320 eP	11 23.70	-0.8		
MOF	81.37	337 P	11 24.56	0.0		
HAU	81.45	337 eP	11 24.30	-0.6		
	1.2s	53.50nm		5.3mb		
BSF	81.48	337 P	11 25.35	0.1		
BHL	81.51	311 P	11 26.00	0.4		
OSS	81.55	334 ePd	11 26.10	0.4		
BBS	81.62	336 P	11 25.81	0.0		
SKO	81.65	325 iPd	11 26.00	-0.1		
	1.0s	******** nm		7.8mb X		
Z	19s	0.56um		4.9Msz		
N	17s	0.62um				
E	18s	0.49um				
		i	11 43.00	61kmX		
		iS	21 30.00			
		LR	51 52.00			
LLS	81.73	335 ePd	11 27.00	0.4		
KNT	81.74	323 iPd	11 27.10	0.6		
VAY	81.74	324 iPd	11 26.50	0.0		
	1.0s	0.19nm		3.0mb X		
PRK	81.86	320 eP	11 27.00	-0.1		
LOMF	81.91	336 P	11 27.63	0.2		
VDL	81.93	334 ePd	11 28.40	0.7		
HRI	81.96	310 iPd	11 29.00	1.1		
RYD	82.09	297 iPd	11 29.00	0.3		
IZM	82.10	319 eP	11 28.00	-0.5		
PLG	82.16	322 eP	11 28.40	-0.4		
ELL	82.19	316 iP	11 29.00	-0.1		
PHP	82.29	325 Pc	11 28.60	-0.7		
SDA	82.39	326 iPc	11 29.50	-0.3		
SAL	82.40	333 P	11 30.00	0.2		
FLN	82.42	342 eP	11 29.70	-0.2		
	1.2s	77.30nm		5.5mb		
TMA	82.45	335 ePd	11 30.50	0.1		
LDF	82.50	341 eP	11 29.90	-0.4		
	1.2s	71.40nm		5.5mb		
LACI	82.63	326 iP	11 30.70	-0.4		
JARJ	82.64	309 P	11 31.60	0.1		
VAI	82.70	335 P	11 31.60	0.2		
BURJ	82.76	310 Pd	11 32.90	0.9		
MMK	82.77	335 ePd	11 32.80	0.7		
LOR	82.78	338 eP	11 31.60	-0.3		
	1.0s	56.80nm		5.5mb		
LIT	82.79	323 iPc	11 32.10	0.1		
TIR	82.81	325 eP	11 32.20	0.1		
GRR	82.86	342 eP	11 32.30	0.1		
	1.2s	136.80nm		5.8mb		
DIX	82.91	336 ePd	11 33.60	0.7		
KZN	82.92	324 eP	11 31.90	-0.9		
OASM	82.96	300 ePd	11 33.30	0.1		
SALJ	82.96	309 Pd	11 34.40	1.3		
LBF	83.01	338 eP	11 32.80	-0.3		
	1.1s	46.30nm		5.3mb		
SSF	83.06	338 eP	11 33.20	-0.1		
	0.9s	44.20nm		5.4mb		
KFNJ	83.08	309 Pd	11 34.80	1.2		
NEO	83.14	322 eP	11 33.50	-0.4		
LPF	83.23	342 eP	11 34.40	0.3		
	1.2s	145.10nm		5.8mb		
RSM	83.28	331 P	11 33.80	-0.6		
BERA	83.33	325 iPd	11 34.90	0.2		
AVF	83.36	338 eP	11 34.70	-0.1		
	1.3s	231.00nm		6.0mb		
SMF	83.36	338 eP	11 35.10	0.2		
DSI	83.46	309 iPd	11 37.00	1.5		
BOB	83.49	334 Pc	11 36.20	0.6		
ARV	83.49	331 Pc	11 36.00	0.5		
LSK	83.53	324 iPd	11 36.00	0.1		
LSD	83.55	335 P	11 37.02	0.9		
PGD	83.56	332 P	11 37.50	1.4		
MME	83.61	333 P	11 36.10	-0.3		
LPG	83.63	336 eP	11 37.00	0.4		
	1.0s	64.80nm		5.6mb		
BGF	83.70	339 eP	11 36.50	-0.1		
	1.4s	74.00nm		5.5mb		
RSP	83.80	335 P	11 37.43	0.2		
PCP	83.97	334 P	11 38.35	0.4		
SRN	84.00	324 eP	11 39.50	1.4		
BNI	84.06	336 P	11 39.60	1.1		
MAF	84.08	339 eP	11 39.30	0.8		
TCF	84.11	339 eP	11 39.00	0.3		
	1.2s	89.20nm		5.7mb		
RRL	84.14	336 P	11 39.89	0.8		
KEK	84.23	325 eP	11 38.80	-0.5		
LSF	84.32	339 eP	11 39.80	0.1		
FIN	84.37	334 P	11 38.76	-1.2		
MFF	84.38	341 eP	11 40.50	0.5		
	0.8s	61.70nm		5.7mb		
ROB	84.40	335 P	11 39.79	-0.4		
LCI	84.43	326 P	11 39.80	-0.4		
PZZ	84.43	335 P	11 39.17	-1.3		
KAP	84.45	317 eP	11 40.50	0.0		
ENR	84.59	335 P	11 39.58	-1.6		
AZI	84.66	330 Pd	11 41.70	0.4		
IMI	84.74	334 P	11 40.10	-1.8		
SAOF	84.77	335 P	11 41.92	-0.1		
AUTN	84.80	335 P	11 41.12	-1.3		
TOUF	84.84	335 P	11 42.29	-0.3		
SBF	84.92	335 eP	11 42.60	-0.2		
	1.0s	40.00nm		5.4mb		
AURF	84.93	335 P	11 42.75	-0.1		
BLA	84.96	39 iPc	11 43.20	0.1		
	0.8s	30.20nm		5.4mb		
		pP	12 02.50	70km		
MVIF	84.97	335 P	11 42.88	-0.3		
REVF	85.05	335 P	11 43.46	0.0		
MBH	85.13	309 eP	11 45.00	1.1		
CALN	85.18	335 P	11 44.29	0.1		
RJF	85.20	339 eP	11 44.80	0.7		
	1.0s	48.00nm		5.5mb		
VLS	85.21	323 eP	11 43.80	-0.4		
AYN	85.21	307 ePd	11 45.30	0.9		
CAF	85.42	339 eP	11 46.30	1.1		
HQL	85.42	308 ePd	11 46.30	0.9		
FRF	85.43	335 eP	11 45.20	0.0		
	1.2s	53.50nm		5.4mb		
ITM	85.48	322 eP	11 44.50	-1.1		
LRG	85.61	335 eP	11 46.20	0.1		
	1.2s	85.60nm		5.7mb		
CVF	85.65	333 P	11 46.52	0.1		
LMR	85.68	335 eP	11 46.60	0.1		
	1.2s	97.50nm		5.7mb		
LFF	85.74	340 eP	11 47.60	0.8		
	8.0s	32.20nm		4.4mb X		
LPO	85.87	339 eP	11 48.20	0.8		
	1.0s	48.00nm		5.5mb		
BADA	86.03	308 ePd	11 48.80	0.3		
KMSA	86.60	296 ePd	11 51.50	0.0		
JSC	87.03	41 eP	11 53.10	-0.1		
		pP	12 10.90	63kmX		
EPF	87.63	339 eP	11 55.40	-0.7		
	1.0s	20.00nm		5.2mb		
LVI	88.59	329 P	12 01.10	0.4		
MRW	89.37	163 P	12 03.20	-0.7		
BNG	114.61	306 iPKPd	17 48.50	0.0		
	0.5s	4.00nm				
KRI	123.85	281 iPKPc	18 08.10	1.9		
		ipPKP	18 25.10			
BUL	126.81	279 ePKP	18 12.00	0.1		
SLR	130.72	274 ePKP	18 08.50	-10.7X		
	0.9s	21.01nm				
		e	20 28.00			
SPA	135.86	180 e(PKP)	18 15.10	-12.5X		
	0.9s	4.55nm				
LPB	135.97	61 ePKP	18 15.00	-14.7X		
		e	18 30.00			
CNCB	136.26	61 PKP	18 17.00	-13.4X		
		i	18 31.00			
		i	18 32.00			
CCH	137.81	60 PKP	18 34.70	1.7		
SOB1	141.82	20 ePKP	18 31.10	-8.9X		
		e	18 40.80			
		e	18 53.60			
ITR	141.91	16 ePKP	18 35.50	-4.7X		
SLA	143.67	67 ePKP	18 40.10	-3.0X		
LCCH	145.13	84 iPKPc	18 44.70	-0.4		
ROCH	145.24	83 iPKPc	18 45.10	-0.5		
LNV	145.51	85 iPKPc	18 45.20	-0.5		
PEL	145.56	83 iPKPc	18 45.70	-0.2		
BAO	145.63	34 ePKP	18 47.00	0.4		
		e	19 07.00			
TACH	145.67	84 iPKPc	18 46.00	0.0		
RTCB	145.89	79 iPKPc	18 47.50	0.9		
FCH	145.94	83 iPKPd	18 48.00	1.1		
PCH	145.94	84 iPKPc	18 47.00	0.4		
CYA	146.01	72 ePKPc	18 47.10	0.3		
CHCH	146.02	84 iPKPd	18 47.50	0.8		
RTLL	146.02	78 ePKP	18 47.00	0.3		
ITB1	150.30	53 ePKP	18 58.80	5.3X		
ITB	150.51	53 e(PKP)	18 58.20	4.3X		
ITB7	150.79	53 e(PKP)	18 59.40	5.1X		
SNA	152.45	199 ePKP	18 56.20	0.9		
	1.1s	18.99nm				
VAO	152.64	39 ePKP	19 05.00	7.9X		
		epPKP	19 15.90			

S.D. = 0.7 on 306 of 339 obs.

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* JUL 11, 1989 00h 23m 52.26± 0.86s
0.799 S ±17.7km 67.066 E ±13.8km
DEPTH = 10.0km (geophysicist)
4.0mb (2 obs.)
CARLSBERG RIDGE (421)

GBA	17.62	35 P	28 01.00	1.4		
	1.3s	15.30nm		4.0mb		
HYB	21.35	31 eP	28 40.50	-1.5		
NAI	30.26	269 eP	30 07.50	1.3		
CHG	36.88	56 eP	31 04.20	1.1		
MAIO	37.58	350 eP	31 10.00	1.2		
SLR	44.85	233 iPc	32 08.00	-0.9		
PRY	46.04	232 eP	32 06.00	-12.3X		
WMQ	48.10	20 eP	32 34.50	0.2		
BNG	48.75	277 iPd	32 40.50	0.8		
	0.5s	4.00nm		4.7mb X		
BJI	60.42	42 eP	34 03.00	-1.3		
BRG	68.32	327 e(P)	34 56.00	0.3		
	1.4s	12.00nm		4.9mb X		
WB5	68.42	111 eP	34 56.80	-0.1		
CLL	69.05	327 eP	34 58.00	-2.2		
	1.7s	18.00nm		5.0mb X		
HFS	73.35	335 eP	35 24.20	-1.7		
	0.4s	0.70nm		4.1mb		
ALQ	145.50	351 ePKP	43 34.60	1.5		
	1.5s	20.83nm				
		e	43 52.80			

S.D. = 1.4 on 14 of 15 obs.

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* JUL 11, 1989 00h 41m 41.56± 1.37s
24.323 N ± 9.9km 123.193 E ±13.6km
DEPTH = 25.1 ± 8.0 km
SOUTHWESTERN RYUKYU ISLANDS (246)

TWC	1.26	283 iPd	42 03.10	-0.5		
		eS	42 15.70			
TWD	1.48	261 ePc	42 06.50	-0.2		
TWZ	1.66	298 eP	42 09.90	0.5		
ANP	1.75	300 ePc	42 11.00	0.2		
	0.6s	277.33nm				
		eS	42 27.50			
SSE	6.98	346 Pc	43 24.50	-0.2		
	0.7s	65.00nm		5.8mb X		
		Lg	45 31.00			
BJI	16.75	341 eP	45 41.00	5.0X		
CHG	23.19	261 eP	46 47.60	0.1		
ASPA	48.82	167 eP	50 27.00	0.1		
FFC	92.26	24 eP	54 50.50	-0.1		
	0.8s	11.00nm		5.3mb X		

S.D. = 0.4 on 8 of 9 obs.

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* JUL 11, 1989 01h 27m 31.61± 0.67s
31.586 N ± 8.2km 49.578 E ±10.5km
DEPTH = 33.0km (normal)
WESTERN IRAN (347)

SHI	3.19	127 eP	28 20.00	-0.8		

KER	3.45	324	ePd	28	36.50	12.0X
TEH	4.41	20	eP	28	38.00	-0.1
BHD	4.70	292	ePnc	29	13.00	31.0X
			eSn	30	15.50	
			e	30	29.00	
SLY	5.25	321	ePn	29	01.20	11.3X
			iSn	29	56.30	
			iS*	30	06.50	
			iSg	30	16.50	
BBU	5.41	172	ePn	28	52.90	0.9
			eSn	29	49.00	
OASM	7.62	226	iPc	29	43.30	20.1X
PRNI	12.58	268	eP	30	23.00	-8.0X
MBH	12.78	266	e(P)	30	33.00	-0.7
SUF	34.57	341	eP	34	20.00	1.0
HFS	37.13	331	eP	34	40.90	0.3
	0.5s		4.00nm			4.5mb
NB2	38.65	331	P	34	52.80	-0.6
	S.D. = 0.9		on	7 of	12 obs.	

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* JUL 11, 1989 01h 52m 01.90± 2.21s
22.984 S ±10.3km 175.244 W ± 9.3km
DEPTH = 37.7 ± 18.5 km
4.9mb (10 abs.) 4.7Msz (5 abs.)
TONGA ISLANDS REGION (174)

RAO	6.69	200	eP	53	40.50	0.3
			eS	54	58.00	
SVA	7.63	308	eP	54	03.40	9.9X
VUN	7.70	309	eP	53	57.00	2.5
RAR	14.45	86	P	55	14.00	-11.8X
			S	57	33.00	
DZM	16.94	270	iPc	56	03.90	6.0X
CTA	35.86	267	iPd	59	00.30	-0.1
	1.0s		57.00nm			5.5mb
PMG	38.42	284	eP	59	21.00	-0.9
QIS	41.88	264	eP	59	48.00	-2.4
ASPA	46.50	259	iPc	00	26.80	-0.8
	1.1s		44.00nm			5.3mb
Z	19s		1.22um			4.9Msz
			eS	07	12.60	
			LR	19	41.60	
WB5	46.83	264	eP	00	28.30	-1.9
WRA	46.84	264	Pd	00	29.20	-1.1
	0.5s		6.90nm			4.9mb
FORR	50.67	248	eP	00	58.50	-1.3
	0.5s		23.00nm			5.4mb
WARB	52.57	254	iPd	01	13.10	-1.2
KNA	53.05	267	eP	01	16.70	-1.2
GUMO	53.35	309	eP	01	18.00	-2.0
Z	22s		0.18um			4.1Msz
SBA	55.59	185	(P)	01	39.00	3.3X
COOL	56.60	247	eP	01	42.30	-1.3
KLB	59.35	246	eP	02	02.00	-0.9
MBL	59.74	258	eP	02	04.00	-1.6
	0.5s		7.00nm			5.0mb
MUN	60.59	245	eP	02	11.00	-0.3
MRWA	61.29	248	eP	02	15.80	-0.3
NANU	63.24	255	eP	02	29.10	-0.1
SPA	67.15	180	e(P)	02	55.30	1.3
	1.0s		9.00nm			4.8mb
MHC	78.38	41	eP	03	59.50	-0.9
CMB	79.59	41	e(P)	04	05.80	-1.1
WDC	79.99	38	ePc	04	08.30	-0.6
MAW	80.09	199	eP	04	11.00	2.0
TNP	81.57	43	P	04	16.70	-0.8
	0.8s		4.12nm			4.5mb
KVN	81.62	41	P	04	16.90	-0.8
MDJ	84.02	324	eP	04	30.50	0.9
CN2	85.82	321	iPc	04	39.50	0.8
	2.0s		0.30nm			3.2mb X
Z	20s		0.20um			4.5Msz
			PP	08	04.00	
			SKS	15	04.00	
SNA	86.83	178	iPd	04	45.00	1.7
TIA	86.83	311	eP	04	44.50	0.7
PMR	86.86	12	eP	04	43.20	-0.2
	1.1s		9.40nm			4.9mb
ALQ	86.99	50	eP	04	44.20	-0.7
	1.0s		5.00nm			4.7mb
			e	04	48.10	
			e	04	50.40	
			e	04	54.50	
DPW	87.11	34	P	04	44.50	-0.5
PSI	87.20	274	eP	04	47.00	0.9
			e	06	05.00	
PNT	87.31	33	eP	04	46.00	0.1
BW06	89.05	42	P	04	53.00	-1.6
BJI	89.45	314	eP	04	57.00	0.8
GYA	90.09	299	P	05	02.20	2.5
FBA	90.13	11	eP	04	57.90	-1.0
GOL	90.13	46	P	04	59.10	-0.7
	0.7s		3.88nm			4.8mb
TIY	90.83	311	Pc	05	04.20	1.4
Z	22s		0.52um			4.9Msz
N	15s		0.50um			
XAN	91.66	306	P	05	08.30	1.6
SES	92.39	35	eP	05	09.00	-0.6
MEO	92.60	53	iPd	05	09.80	-1.2
EDM	92.82	32	eP	05	10.50	-1.0
BDT	92.82	287	eP	05	14.00	1.8
HHC	92.91	313	eP	05	13.20	0.8
RSSD	93.18	43	P	05	13.00	-0.7
CHG	93.48	289	eP	05	17.60	2.3
INK	96.01	14	eP	05	25.00	-0.8
NB2	141.71	355	PKP	11	23.20	-7.5X
HFS	142.35	353	ePKP	11	25.60	-6.2X
	0.4s		0.80nm			
EKA	147.16	8	PKP	11	41.00	1.0
	1.1s		12.90nm			
DMU	147.89	13	ePKP	11	44.00	2.8
DLE	148.55	13	ePKP	11	45.00	2.8
KAS	149.57	314	iPKPd	11	50.80	6.5X
WIT	150.18	358	ePKP	11	52.00	7.3X
KSP	150.77	345	ePKPc	11	51.50	5.8X
HRI	150.91	297	ePKP	11	54.00	7.4X
JARJ	150.95	295	PKP	11	53.60	6.9X
BBTK	150.95	312	iPKPc	11	52.50	6.0X
WTS	150.99	357	ePKP	11	52.00	6.0X
	1.0s		25.00nm			
CLL	151.01	349	iPKPc	11	51.90	5.9X
	1.0s		24.00nm			
BURJ	151.11	295	PKP	11	53.60	6.7X
SPC	151.12	339	ePKP	11	53.00	6.4X
SALJ	151.21	295	PKPc	11	53.80	6.7X
KFNJ	151.24	295	PKPd	11	54.40	7.4X
BRG	151.25	348	iPKPc	11	52.40	6.0X
	1.0s		20.00nm			
			i	12	08.40	
DSI	151.54	294	ePKP	11	54.00	6.5X
MOX	151.87	351	ePKP	11	53.00	5.6X
PRU	151.97	346	ePKP	11	54.30	6.8X
			e	12	03.00	
MBH	152.23	291	iPKP	11	56.50	8.0X
ENN	152.25	358	ePKP	11	55.00	7.1X
	1.0s		11.00nm			
MEM	152.41	358	PKP	12	04.10	16.0X
SNF	152.52	1	PKP	12	06.00	17.7X
GRF	152.86	351	ePKP	12	07.60	18.8X
	0.9s		15.00nm			
Z	19s		0.10um			4.6Msz
DOU	152.94	0	PKP	11	56.60	7.7X
SRO	152.95	340	e(PKP)	11	56.50	7.5X
			e	12	09.00	
			e	12	19.70	
ZST	152.98	342	ePKP	12	08.00	19.0X
KHC	152.99	347	iPKP	11	57.00	7.9X
			e	12	01.00	
ABH	153.06	356	ePKPc	11	58.28	9.2X
RUP	153.27	357	ePKPc	11	57.08	7.6X
WLF	153.35	358	PKP	12	07.70	18.3X
KBA	154.98	346	e(PKP)	11	53.00	1.0
	1.0s		12.00nm			
			e	12	16.00	
			i	12	19.30	
			i	12	29.90	
			i	12	37.80	
BNG	157.25	218	iPKPd	11	56.50	0.7
	0.9s		5.00nm			
			id	12	28.00	
	S.D. = 1.4		on	54 of	88 abs.	

JUL 11, 1989 02h 05m 31.00± 0.56s
39.281 N ± 4.9km 23.789 E ± 4.9km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.0 (THE), 2.8 (ATH).

NEO	0.44	273	ePb	05	40.00	0.0
PAIG	0.65	353	iPgc	05	44.60	0.6
			eSg	05	55.20	
OUR	1.06	8	iPgc	05	51.10	0.1
			eSg	06	07.10	
PLG	1.12	346	ePn	05	51.50	-0.6
LIT	1.29	310	iPbd	05	55.50	0.5
			eSb	06	13.80	
ATH	1.31	182	ePn	05	55.00	-0.2
SRS	1.84	355	ePb	06	02.20	-0.7
KZN	1.86	304	ePn	06	03.00	-0.3
PRK	1.93	90	ePn	06	05.00	0.9
KNT	2.00	340	ePnd	06	05.40	0.2
EZN	2.03	74	ePn	06	05.00	-0.7
	S.D. = 0.6		on	11 of	11 abs.	

JUL 11, 1989 02h 43m 30.62± 0.67s
34.580 N ± 6.8km 26.916 E ± 5.2km
DEPTH = 56.6 ± 8.6 km
4.1mb (11 abs.)
CRETE (370)

KAP	0.99	12	ePg	43	46.30	-2.3
NPS	1.27	303	ePb	43	51.20	-1.2
VAM	2.38	291	ePn	44	10.00	2.1
KSL	2.67	54	ePn	44	13.50	1.5
APE	2.73	336	ePn	44	10.00	-2.9
YER	2.78	23	iP	44	14.00	0.3
ELL	3.26	48	iP	44	22.00	1.5
IZM	3.82	4	eP	44	28.90	0.6
BCK	4.14	45	eP	44	33.20	0.4
ATH	4.26	324	ePn	44	34.00	-0.4
KHL	4.29	29	eP	44	29.00	-5.9X
PRK	4.69	354	ePg	44	52.00	11.6X
ITM	4.81	304	ePn	44	42.20	-0.1
ALT	5.15	29	eP	44	46.00	-1.1
DST	5.20	15	iP	44	46.30	-1.5
EZN	5.26	355	eP	44	48.70	0.2
CSS	5.29	84	eP	44	51.50	2.4
NEO	5.57	329	ePn	44	53.50	0.6
VLS	6.24	307	ePn	45	05.10	2.8
BBTK	7.02	40	eP	45	14.00	0.7
KZN	7.03	326	ePn	45	15.50	2.2
VAY	7.55	334	ePn	45	23.00	2.5
DSI	7.71	111	eP	45	21.00	-1.7
			eS	46	47.00	
BURJ	7.77	105	P	45	23.20	-0.3
JARJ	7.90	105	P	45	25.90	0.4
MASJ	7.91	109	P	45	25.20	-0.4
PRNI	8.03	120	eP	45	26.00	-1.1
MBH	8.28	123	eP	45	31.00	0.4
SKO	8.54	331	ePn	45	33.00	-1.2
Z	11s		0.43um			
N	11s		0.72um			
E	11s		0.71um			
			e(Sn)	47	08.00	
			LR	49	10.00	
HQL	8.70	125	eP	45	36.30	-0.1
SRFA	9.02	126	eP	45	40.20	-0.5
MEU	10.05	288	P	45	54.60	-0.4
MGR	10.60	305	P	45	59.00	-3.4X
KBA	16.14	325	e(P)	47	18.50	3.3X
	0.8s		1.90nm			3.3mb
			e	47	42.00	
			e	47	53.00	
KHC	17.57	330	eP	47	31.00	-1.9
SBF	17.68	307	eP	47	29.00	-5.4X
PRU	17.87	333	eP	47	37.00	0.4
KSP	18.00	338	eP	47	38.00	-0.2
BRG	18.82	334	e(P)	47	47.00	-1.2
LPG	18.85	311	eP	47	46.20	-2.7
	0.7s		5.90nm			3.9mb
CLL	19.52	333	e(P)	47	55.00	-0.9
MOX	19.55	330	eP	48	01.00	4.7X
HAU	20.38	317	eP	48	06.00	1.0
SMF	21.18	312	eP	48	11.90	-1.2
	0.8s		7.20nm			4.1mb
LBF	21.25	313	eP	48	13.40	-0.5
	1.0s		10.00nm			4.1mb
LOR	21.45	313	eP	48	15.80	-0.1
	0.8s		4.50nm			3.9mb
AVF	21.54	312	eP	48	17.10	0.4
	0.8s		4.00nm			3.9mb
SSF	21.57	312	eP	48	17.30	0.3
	0.8s		8.00nm			4.2mb
MEM	22.10	323	P	48	23.30	1.1
ENN	22.24	323	eP	48	27.00	3.4X
	0.9s		14.00nm			4.4mb
DOU	22.51	320	P	48	27.80	1.5
	0.8s		13.30nm			4.4mb
			S	52	22.00	
FLN	24.72	313	eP	48	48.70	0
NUR	25.99	357	eP	49	00.00	0

11d 02h

HFS	26.98	345	eP	49 07.40	-1.2
	0.5s	2.90nm		4.1mb	
SUF	28.17	359	iP	49 19.70	0.4
NB2	28.34	344	P	49 19.60	-1.3
EKA	29.35	324	P	49 30.00	0.0
	0.6s	2.30nm		4.0mb	
MBC	67.40	352	eP	54 23.00	1.4
	S.D. = 1.4	on	51 of	58 obs.	

JUL 11, 1989 02h 44m 15.94± 1.21s
32.694 S ± 9.2km 68.590 W ±13.2km
DEPTH = 13.2 ± 3.9 km
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.83	3	ePd	44 32.50	0.7
CFA	1.12	15	iPd	44 32.50	-4.2X
RTCB	1.22	352	iPc	44 38.50	0.1
			S	44 53.50	
RTBS	1.26	324	iPc	44 38.80	-0.3
			(S)	44 54.50	
RTLL	1.36	4	ePc	44 41.00	0.4
FCH	1.56	246	iPc	44 43.10	-0.6
			iS	45 02.90	
JACH	1.69	270	iPd	44 44.60	-0.7
			iS	45 05.50	
PEL	1.82	255	iPc	44 47.50	0.3
			iS	45 09.50	
PCH	1.86	240	iPc	44 48.50	0.7
			iS	45 12.00	
SAN	1.90	246	eP	44 48.00	-0.3
			iS	45 13.10	
ROCH	2.06	262	iPd	44 51.00	0.2
			iS	45 16.90	
CHCH	2.12	234	iPd	44 53.00	1.4
			iS	45 20.50	
TACH	2.19	243	iPd	44 52.90	0.4
			iS	45 21.90	
LNV	2.68	241	eP	44 58.00	-1.4
			iS	45 35.00	
CYA	4.87	30	eP	45 29.80	-0.9
	S.D. = 0.9	on	14 of	15 obs.	

* JUL 11, 1989 03h 27m 11.82± 3.31s
44.264 N ±13.3km 6.613 E ±22.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)

FOUF	0.29	24	iPg	27 18.36	0.5
			eSg	27 21.13	
PZZ	0.42	55	P	27 20.44	-0.1
			S	27 25.05	
ENR	0.58	93	P	27 23.21	-0.5
			S	27 29.67	
RRL	0.67	11	P	27 24.95	-0.3
			S	27 33.05	
ROB	0.90	88	P	27 29.26	0.1
			S	27 40.23	
IMI	0.99	111	P	27 30.90	0.3
			S	27 42.28	
	S.D. = 0.5	on	6 of	6 obs.	

& JUL 11, 1989 03h 56m 43.60s
62.242 N 151.159 W
DEPTH = 69.5km
CENTRAL ALASKA (1)
<AGS-P>.

SKT	0.32	214	iP	56 54.64	-0.4
			S	57 03.83	
CUT	0.45	68	iP	56 55.62	-0.4
			S	57 05.40	
SUA	0.81	166	iP	56 59.49	-0.6
PWA	0.85	134	eP	56 59.72	-0.7
HUR	1.02	43	iP	57 01.72	-0.9
			S	57 15.50	
SPU	1.15	202	eP	57 03.26	-1.0
			S	57 19.66	
GHO	1.16	113	eP	57 03.86	-0.6
NKA	1.50	181	eP	57 10.46	1.5
KNK	1.53	122	eP	57 08.14	-1.2
RND	1.58	41	eP	57 08.70	-1.4
RDT	1.78	200	eP	57 11.65	-1.2
SLKM	1.80	165	eP	57 12.47	-0.6
MCK	1.81	33	eP	57 11.95	-1.2
ILIM	2.34	203	eP	57 18.96	-1.6
TOA	2.34	91	eP	57 19.38	-1.3
			S	57 46.91	
SVW	2.41	244	eP	57 19.75	-1.8
VZW	2.50	116	eP	57 21.07	-1.7
KLU	2.59	105	eP	57 21.60	-2.5
WRH	2.63	30	eP	57 22.50	-2.1
CNPM	2.73	181	eP	57 26.29	0.3
PAX	2.73	72	eP	57 24.62	-1.5
OPT	2.79	202	eP	57 26.49	-0.3
CCB	2.85	30	eP	57 25.27	-2.3
HDA	2.88	39	eP	57 26.28	-1.9
			S	58 00.47	
FBA	3.06	28	eP	57 28.53	-2.1
GLB	3.58	100	eP	57 34.78	-3.1
	26 obs. associated				

? JUL 11, 1989 04h 06m 26.30± 3.62s
34.853 N ±29.6km 139.082 E ±15.5km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

IIDJ	1.14	303	iPd	06 48.10	-0.1
CHJJ	1.19	357	P	06 47.50	-1.5
			S	07 14.00	
KAKJ	1.62	33	eP	06 55.10	-0.4
			S	07 13.00	
MTMJ	2.02	329	P	07 02.10	0.7
NIIJ	2.38	358	P	07 08.40	1.8
TSRJ	2.63	286	eP	07 09.70	-0.4
			S	07 44.90	
	S.D. = 1.4	on	6 of	6 obs.	

& JUL 11, 1989 04h 13m 34.20s
37.418 N 118.642 W
DEPTH = 12.0km
4.1mb (3 obs.)
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 4.4 (BRK). Felt (V) at Big Pine, (IV) at Bishop and (III) at Benton, California. Also felt at Fresno, Californio. Foreshock, ML 1.5, about 31 seconds earlier.

PPK	0.59	89	iPc	13 44.80	-1.2
SVP	0.73	66	iPc	13 47.60	-1.0
LCH	0.81	103	iPc	13 48.90	-1.0
MGM	0.91	88	iPc	13 50.90	-0.7
FRI	0.95	244	iPc	13 51.50	-0.6
			iS	14 03.60	
MNA	1.08	21	eP	13 54.00	-0.5
TNP	1.31	59	eP	13 57.80	-0.6
CMB	1.51	295	iPc	14 01.20	0.1
			iS	14 20.80	
KVN	1.69	15	eP	14 03.40	-0.4
PKEM	1.79	221	iPc	14 06.70	1.5
LLA	2.01	247	iPc	14 08.90	0.6
PRI	2.06	232	iPc	14 09.70	0.5
ARN	2.30	269	eP	14 13.10	0.5
SAO	2.33	255	eP	14 13.60	0.6
			i	14 17.43	
			iS	14 44.50	
			iSg	14 49.65	
MHC	2.39	269	ePc	14 14.50	0.6
			iS	14 45.50	
PRS	2.44	244	ePc	14 14.90	0.4
BCH	2.51	208	eP	14 16.30	0.7
ABL	2.60	191	eP	14 17.60	0.6
GCC	2.71	263	ePc	14 18.40	0.1
BKS	2.89	280	ePc	14 20.70	-0.1
			eS	15 06.70	
BRK	2.91	280	e(P)	14 20.50	-0.6
ZSP	2.92	281	ePc	14 21.80	0.6
PCC	2.98	273	eP	14 21.90	-0.1
ORV	3.10	314	eP	14 23.80	0.1
BLP	3.19	207	eP	14 25.20	0.1
PEC	3.72	161	eP	14 32.50	-0.2
MIN	3.73	323	e(P)	14 31.50	-1.4
LTCM	3.89	317	eP	14 36.00	0.9
PLM	4.31	160	eP	14 40.80	-0.4
WDC	4.38	317	e(P)	14 41.70	-0.3
MSU	5.23	76	eP	14 53.20	-1.0
PV09	7.59	79	eP	15 28.00	0.4
BW06	8.78	50	eP	15 44.00	-0.1
LRM	9.59	27	eP	15 58.50	3.3
ALQ	10.15	100	e(Pn)	16 03.90	0.9
			eP+	16 41.70	
			ePg	16 48.80	
			eLg	18 58.00	
DPW	10.45	2	eP	16 09.00	2.1
GOL	10.64	74	eP	16 09.30	-0.4
PNT	11.91	357	eP	16 34.00	7.3
	0.6s	4.00nm		4.9mb	
RSSD	12.93	54	eP	16 39.00	-1.6
SES	14.07	20	eP	17 00.00	4.6
EDM	16.23	11	eP	17 27.60	4.2
TUL	18.39	88	eP	17 52.90	2.3
	0.9s	4.00nm		3.6mb	
FFC	20.72	28	eP	18 15.00	-1.8
	0.6s	5.00nm		4.1mb	
FVM	22.30	80	eP	18 33.40	0.5
	44 obs. associated				

& JUL 11, 1989 04h 28m 26.40s
37.415 N 118.645 W
DEPTH = 11.0km
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 3.0 (BRK).

PPK	0.59	89	iPc	28 37.20	-1.2
SVP	0.73	66	iPc	28 39.90	-1.0
LCH	0.82	102	eP	28 41.00	-1.2
MGM	0.91	88	iPc	28 43.10	-0.9
FRI	0.95	244	iPc	28 43.50	-0.9
			iS	28 56.00	
TNP	1.31	59	eP	28 50.00	-0.7
CMB	1.51	295	iPc	28 53.25	-0.2
			eS	29 12.90	
KVN	1.69	15	eP	28 57.00	0.9
LLA	2.00	247	ePc	29 01.70	1.1
PRI	2.06	233	ePc	29 02.10	0.6
ARN	2.30	269	eP	29 05.80	0.9
SAO	2.33	255	ePd	29 06.00	0.7
MHC	2.39	269	ePd	29 06.85	0.7
PRS	2.44	244	ePd	29 07.40	0.6
	14 obs. associated				

? JUL 11, 1989 04h 58m 12.16± 2.77s
35.467 N ±23.9km 34.182 E ±10.7km
DEPTH = 10.0km (geophysicist)
CYPRUS (372)

FAM	0.49	198	eP	58 23.00	0.8
CSS	0.86	234	eP	58 27.00	-1.7
PPCY	1.61	249	eP	58 42.00	1.3
BHL	1.97	142	Pg	58 46.00	-0.1
			Sg	59 08.00	
BURJ	3.50	157	P	59 08.00	0.2
SALJ	3.67	160	Pc	59 09.70	-0.5
	S.D. = 1.4	on	6 of	6 obs.	

? JUL 11, 1989 05h 33m 52.47± 3.78s
10.736 S ±38.4km 123.699 E ±13.6km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)
TIMOR (289)

KNA	7.01	136	eP	35 36.80	1.3
			e	36 58.00	
MTN	7.57	107	eP	35 44.00	0.6
			eS	37 11.00	
MBL	11.01	199	eP	36 30.00	-0.8
	0.3s	7.00nm		5.3mb X	
			eS	38 29.00	
WB5	13.72	133	eP	37 05.20	-2.0
			eS	39 32.00	
WRA	13.75	133	P	37 06.00	-1.4
	0.2s	1.80nm		4.5mb X	
NANU	14.12	213	eP	37 12.00	-0.3
	0.4s	12.00nm		4.9mb	
			eS	39 40.00	
WARB	15.62	170	eP	37 32.70	0.8
			eS	40 21.00	
ASPA	16.12	144	iPd	37 38.80	0.4
	0.5s	21.00nm		4.5mb	
	Z 19s	0.24um		4.2MszX	
			eS	40 34.20	
			LR	41 36.50	
QIS	18.15	124	iPd	38 03.70	-0.1
			eS	41 23.00	
MRWA	19.75	200	eP	38 22.70	0.1
			eS	41 52.00	
FORR	20.43	169	eP	38 31.00	1.3
CTA	23.62	116	eP	39 07.00	5.3X
BRS	31.97	125	iPd	40 23.00	5.1X
CNCB	150.29	157	PKP	53 47.00	8.9X

CCH 150.42 161 PKP 53 46.80 8.8X
LPB 150.50 157 ePKP 53 46.00 7.8X
ZOBO 150.73 156 ePKP 53 46.00 7.2X
S.D. = 1.2 on 11 of 17 obs.

% JUL 11, 1989 05h 47m 31.55± 1.45s
42.530 N ±16.4km 3.700 E ± 6.6km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 2.8 (LDG).

LRG 2.16 64 Pg 48 07.50 -0.5
Sg 48 31.20
LMR 2.21 68 Pg 48 09.40 0.6
Sg 48 34.10
FRF 2.39 64 Pg 48 11.30 -0.1
Sg 48 37.70
EPF 2.52 283 Pn 48 13.40 0.1
Pg 48 19.80
Sg 48 53.20
CAF 2.67 334 Pn 48 06.80 -8.6X
Pg 48 11.00
Sg 48 38.10
RJF 3.19 331 Pg 48 22.10 -0.6
Sg 48 53.40
TCF 3.91 345 Pg 48 33.20 0.3
Sg 49 14.00
BGF 4.07 352 Pg 48 35.50 0.3
Sg 49 19.10
S.D. = 0.5 on 7 of 8 obs.

% JUL 11, 1989 06h 16m 01.44± 0.92s
43.317 N ±17.1km 3.579 E ± 6.5km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.8 (LDG).

CAF 1.94 326 Pn 16 35.50 0.7
Pg 16 39.30
Sg 17 06.60
LRG 2.03 85 Pg 16 35.90 -0.2
Sg 16 59.10
LMR 2.14 89 Pg 16 37.50 -0.1
Sg 17 02.30
LPO 2.20 309 Pn 16 37.70 -0.9
Sg 17 15.10
FRF 2.25 83 Pg 16 39.50 0.3
Sg 17 05.60
EPF 2.39 264 Pn 16 41.50 0.2
Pg 16 48.30
Sg 17 21.50
RJF 2.48 324 Pg 16 50.30 7.8X
Sg 17 21.80
TCF 3.13 342 Pg 17 01.80 10.1X
Sg 17 42.00
LSF 3.28 334 Pg 17 04.30 10.5X
Sg 17 47.40
S.D. = 0.7 on 6 of 9 obs.

& JUL 11, 1989 07h 54m 54.20s
37.543 N 118.438 W
DEPTH = 7.0km
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 3.6 (BRK).

PPK 0.44 105 iPc 55 02.40 -0.7
SVP 0.53 71 iPc 55 04.20 -0.8
LCH 0.70 116 iPc 55 06.90 -1.4
MGM 0.76 97 iPc 55 08.30 -1.1
MNA 0.92 14 eP 55 11.30 -0.8
TNP 1.11 61 iPd 55 14.60 -0.8
FRI 1.15 242 iPc 55 15.60 -0.4
iS 55 30.00
KVN 1.53 10 iPc 55 21.90 -0.2
CMB 1.62 288 iPc 55 23.20 -0.1
iS 55 44.30
PKEM 2.00 223 eP 55 30.10 1.4
LLA 2.21 246 ePc 55 32.30 0.5
PRI 2.27 233 eP 55 33.40 0.6
ARN 2.47 266 eP 55 36.00 0.4
SAO 2.52 253 ePd 55 37.30 1.0
eS 56 09.75
i 56 15.40
i 56 27.90
MHC 2.56 266 ePd 55 37.50 0.6
eS 56 10.50
PRS 2.64 244 ePc 55 38.60 0.6
BCH 2.70 210 eP 55 39.50 0.5
GCC 2.88 261 e(P) 55 41.10 -0.3
BKS 3.03 277 ePd 55 44.20 0.8
eS 56 29.20
BRK 3.05 277 eP 55 44.30 0.6
ZSP 3.05 279 eP 55 44.90 1.1
ORV 3.13 311 e(P) 55 46.20 1.3
PCC 3.14 270 ePc 55 45.50 0.6
MIN 3.73 320 eP 55 59.20 5.6
PEC 3.79 164 eP 55 54.00 -0.3
LTCM 3.92 314 eP 55 56.00 -0.1
PLM 4.37 162 eP 56 02.00 -0.7
MSU 5.04 77 eP 56 11.50 -0.7
GLA 5.37 146 eP 56 17.00 0.3
BW06 8.58 50 eP 57 02.00 0.1
LRM 9.40 27 eP 57 15.00 1.7
ALQ 10.02 101 e(P) 57 21.10 -0.7
e 58 02.00
32 obs. ossocioted

& JUL 11, 1989 08h 02m 17.50s
32.020 N 115.550 W
DEPTH = 6.0km (geophysicist)
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 3.4 (PAS).

IKP 0.79 323 iPc 02 32.50 -0.7
BAR 1.16 305 iPc 02 39.40 -0.1
GLA 1.20 31 iPd 02 38.20 -2.0
PLM 1.73 321 eP 02 47.00 -1.4
PEC 2.31 324 eP 02 54.50 -2.2
5 obs. associated

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* JUL 11, 1989 11h 32m 36.30± 0.94s
31.697 N ± 9.7km 104.625 E ±14.2km
DEPTH = 33.0km (normal)
SICHUAN PROVINCE, CHINA (307)

CD2 1.08 224 iPgc 32 54.30 -0.9
S 33 09.80
XAN 4.30 56 Pn 33 40.20 -1.0
Pg 33 53.00
Sn 34 31.60
Sg 34 47.00
LZH 4.43 352 Pn 33 44.00 0.9
Pg 33 54.50
Sg 34 45.50
GYA 5.52 161 Pn 33 59.60 1.2
Sn 35 03.00
BTO 9.89 25 iP 35 05.00 5.6X
CN2 20.36 48 eP 37 15.60 3.0X
WB5 58.68 147 eP 42 32.70 -0.3
S.D. = 1.5 on 5 of 7 obs.

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* JUL 11, 1989 11h 40m 27.43± 0.84s
21.419 S ± 6.8km 66.990 W ±14.8km
DEPTH = 33.0km (normal)
SOUTHERN BOLIVIA (125)

SLA 3.57 158 iPc 41 22.00 0.0
S 42 09.20
ANT 3.90 234 iP 41 26.50 0.0
iS 42 12.00
CCH 4.09 11 Pc 41 29.60 0.0
CNCB 4.68 348 iPc 41 39.00 0.9
(S) 42 35.00
LPB 4.97 348 P 41 42.50 0.3
1.0s 164.00nm
ZOBO 5.23 348 iPc 41 44.80 -1.2
0.8s 54.55nm 5.1mb
S 42 46.00
S.D. = 0.9 on 6 of 6 obs.

& JUL 11, 1989 13h 42m 39.61s
62.756 N 149.627 W
DEPTH = 75.2km
CENTRAL ALASKA (1)
<AGS-P>.

HUR 0.22 359 iP 42 51.03 -0.1
S 42 59.29
CUT 0.46 220 iP 42 52.79 0.1
S 43 02.29
RND 0.74 28 iP 42 55.29 -0.4
S 43 07.25
MCK 1.03 17 iP 42 59.00 0.0
S 43 12.58
GHO 1.04 161 iP 42 58.96 -0.3
S 43 15.00
PWA 1.12 186 iPd 43 00.20 0.1
SKT 1.18 230 iP 43 01.00 0.0
S 43 16.90
PMR 1.19 169 eP 43 00.90 -0.1
SUA 1.40 203 eP 43 04.19 0.3
KNK 1.46 157 eP 43 04.86 0.3
S 43 24.49
PMS 1.52 179 eP 43 05.10 -0.3
TOA 1.73 111 iPd 43 09.20 0.8
NEA 1.84 7 eP 43 09.15 -0.7
WRH 1.85 21 iP 43 09.32 -0.6
SDG 1.90 95 eP 43 10.71 0.1
PAX 1.92 82 eP 43 10.98 0.1
SPU 1.95 217 eP 43 11.81 0.5
HDA 2.04 35 iP 43 11.84 -0.7
S 43 35.81
CCB 2.06 22 iP 43 11.95 -0.9
KLU 2.15 124 eP 43 13.10 -1.0
RDS 2.18 17 iP 43 13.86 -0.6
S 43 38.54
VZW 2.24 138 eP 43 14.05 -1.2
SLKM 2.27 187 eP 43 16.70 0.9
FBA 2.30 20 iPd 43 15.50 -0.6
GLM 2.45 23 iP 43 17.40 -0.8
SEW 2.66 178 eP 43 21.42 0.4
DOT 2.68 68 eP 43 20.63 -0.7
TTA 2.93 276 iPd 43 24.50 -0.4
GLB 3.04 113 eP 43 25.31 -1.0
SVW 3.28 242 eP 43 29.20 -0.5
TGL 3.80 119 eP 43 36.14 -0.9
BALM 3.85 113 eP 43 36.20 -1.6
DWY 4.76 70 P 43 48.80 -1.7
33 obs. ossocioted

JUL 11, 1989 14h 07m 30.42± 0.84s
40.775 N ± 6.3km 19.829 E ±11.5km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)

BERA 0.12 128 ePg 07 33.60 0.3
VLO 0.40 220 ePg 07 38.20 -0.4
TIR 0.57 3 ePg 07 40.70 -1.3
LACI 0.86 354 ePg 07 47.20 0.2
PHP 1.02 27 iPgc 07 48.60 -1.1
PUK 1.27 2 iPnc 07 54.70 0.8
BCI 1.60 6 ePn 08 00.00 1.2
SKO 1.70 45 ePn 08 04.00 3.7X
S.D. = 1.1 on 7 of 8 obs.

JUL 11, 1989 14h 31m 12.21± 0.61s
40.777 N ± 4.6km 19.940 E ± 6.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)

BERA 0.07 174 iPgc 31 15.60 1.0
VLO 0.46 228 iPg 31 20.80 -0.7
TIR 0.57 354 iPgc 31 22.70 -1.1
KBN 0.68 103 ePg 31 24.60 -1.1
LSK 0.80 141 ePg 31 28.00 0.1
LACI 0.88 349 ePg 31 29.90 0.9
PHP 0.99 22 iPgc 31 30.10 -0.8
PUK 1.26 358 iPnc 31 36.20 0.5
BCI 1.59 3 ePn 31 44.00 3.6X
SKO 1.64 43 ePn 31 42.00 0.8
VAY 2.06 74 ePn 31 47.60 0.3
S.D. = 1.0 on 10 of 11 obs.

? JUL 11, 1989 14h 36m 43.25± 1.70s
5.212 S ±19.9km 129.930 E ±36.8km
DEPTH = 184.2 ± 25.2 km
4.6mb (1 obs.)
BANDA SEA (280)

MTN 7.68 171 eP 38 33.00 -0.3
eS 40 23.00
MNI 8.34 322 ePd 38 42.00 0.0
WB5 15.21 164 eP 40 10.50 0.5
QIS 17.92 149 eP 40 41.50 -0.5
ASPA 18.74 169 iPd 40 51.30 0.6
0.9s 21.00nm 4.6mb
Z 21s 0.28um 4.6Msz
eS 45 58.40
LR 49 27.00
WARB 21.09 188 eP 41 14.00 -0
S.D. = 0.7 on 6 of 6 obs.

? JUL 11, 1989 14h 38m 50.65± 4.54s
10.509 S ±43.5km 121.908 E ±20.8km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
SAVU SEA (288)

KNA	8.47	129	eP	40	53.00	-1.1
			eS	42	26.00	
MTN	9.33	105	eP	41	05.00	-0.9
			eS	42	45.00	
MBL	10.78	190	eP	41	25.00	-0.8
	0.3s		8.00nm			5.4mb X
			eS	43	19.00	
NANU	13.45	206	eP	42	00.70	-1.0
	0.4s		8.00nm			5.0mb X
			eS	44	23.00	
WB5	15.20	129	eP	42	21.00	-3.7X
			eS	45	05.40	
WRA	15.22	130	P	42	24.00	-0.9
WARB	16.22	165	eP	42	37.50	-0.3
			eS	45	32.00	
MEKA	16.33	191	eP	42	40.00	0.8
	0.4s		9.00nm			4.3mb
			eS	45	30.00	
ASPA	17.38	140	eP	42	54.30	1.9
	0.6s		11.00nm			4.2mb
MRWA	19.42	196	eP	43	21.10	3.9X
			eS	46	41.00	
QIS	19.74	123	iPc	43	21.90	1.1
	0.4s		9.00nm			4.4mb
			eS	46	47.00	
FORR	21.04	165	eP	43	35.30	1.2
CNCB	151.15	160	PKP	58	45.90	8.3X
LPB	151.37	160	ePKP	58	46.00	8.3X
ZOBO	151.60	159	ePKP	58	45.00	6.7X

S.D. = 1.3 on 10 of 15 obs.

% JUL 11, 1989 14h 55m 12.47± 2.95s
35.004 N ±23.9km 139.259 E ±13.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.06	348	iP+	55	32.70	-0.3
			eS	55	46.80	
IIDJ	1.20	294	P	55	34.30	-1.0
			eS	55	50.30	
KAKJ	1.41	32	eP	55	38.50	-0.3
			eS	55	57.50	
MTMJ	1.97	324	eP	55	48.00	1.0
			eS	56	14.80	
NIIJ	2.24	355	eP	55	50.90	0.1
TSRJ	2.73	282	eP	55	58.20	0.4
			eS	56	33.80	

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

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* JUL 11, 1989 16h 40m 41.07± 1.39s
32.632 N ± 6.3km 35.386 E ±25.9km
DEPTH = 10.0km (geophysicist)
DEAD SEA REGION (373)

BURJ	0.53	143	Pc	40	51.80	0.1
SALJ	0.67	158	P	40	54.20	-0.2
KFNJ	0.81	162	Pc	40	56.70	0.0
MASJ	0.94	163	Pd	40	59.10	0.0
MKRJ	1.10	169	Pd	41	01.90	0.2
BHL	1.29	10	Pg	41	05.00	0.0
			Sg	41	22.00	

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

% JUL 11, 1989 16h 59m 37.48± 2.77s
35.017 N ±22.9km 139.142 E ±12.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.04	353	eP	59	57.50	0.0
			eS	00	11.40	
IIDJ	1.11	295	P	59	57.90	-0.9
KAKJ	1.45	35	eP	00	04.30	-0.1
			eS	00	24.50	
MTMJ	1.91	326	eP	00	12.00	1.0
			eS	00	37.80	
NIIJ	2.22	357	eP	00	15.60	0.1
TSRJ	2.64	282	eP	00	22.00	0.6
			eS	00	55.00	

S.D. = 0.8 on 6 of 6 obs.

% JUL 11, 1989 17h 14m 04.40± 3.54s
35.137 N ±28.6km 139.242 E ±16.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.93	348	iP+	14	22.50	-0.1
			S	14	36.70	
IIDJ	1.14	288	iPd	14	24.30	-2.0
KAKJ	1.31	35	iPd	14	28.60	-0.4
			S	14	48.30	
MTMJ	1.86	321	P	14	38.60	1.4
			S	15	04.10	
NIIJ	2.11	355	eP	14	40.80	0.1
TSRJ	2.69	279	P	14	50.30	1.1
			eS	15	22.40	

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

% JUL 11, 1989 17h 37m 25.02± 0.53s
60.637 N ± 4.4km 6.225 E ± 5.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.0 (BER).

HYA	0.53	358	iP	37	35.47	-0.3
			eS	37	44.32	
ASK	0.53	254	eP	37	35.57	-0.2
			eS	37	43.40	
ODD1	0.75	164	iP	37	39.26	-0.6
			eS	37	47.55	
SUE	0.83	301	iP	37	41.12	0.1
			iS	37	53.04	
BLS1	1.29	166	iP	37	48.86	-0.1
			iS	38	05.56	
KMY	1.51	199	iP	37	52.80	0.7
			eS	38	12.08	
MOL	2.04	17	iP	37	59.96	0.2
			eS	38	26.22	
NRA0	2.62	86	eP	38	08.20	0.2
			iPg	38	10.90	
			iS	38	45.20	

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

% JUL 11, 1989 17h 58m 39.47± 0.96s
16.773 N ± 8.4km 61.617 W ± 9.5km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.6 (FDF).

BPA	0.36	320	eP	58	46.91	0.1
			eS	58	51.68	
MGH	0.58	265	eP	58	51.00	-0.2
			S	59	58.50	
DEG	0.70	130	ePd	58	53.24	-0.2
PAG	0.74	185	ePd	58	54.35	0.3
			S	59	04.80	
MGG	0.90	161	ePd	58	56.95	0.3
BBL	1.25	174	ePd	59	02.40	-0.3

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

JUL 11, 1989 18h 50m 14.85± 0.94s
37.550 N ±10.9km 118.363 W ± 9.7km
DEPTH = 5.0km (geophysicist)
CALIFORNIA-NEVADA BORDER REGION (40)
ML 2.5 (BRK).

MNA	0.90	10	e(P)	50	32.50	-0.1
TNP	1.05	59	eP	50	35.20	-0.1
FRI	1.21	243	ePc	50	36.10	-1.7
			iS	50	51.20	
KVN	1.51	8	eP	50	42.90	0.1
CMB	1.67	287	ePc	50	44.40	-0.6
			eS	51	05.30	
LLA	2.26	246	eP	50	54.30	0.8
PRI	2.32	233	eP	50	54.50	0.1
SAO	2.58	253	ePd	50	59.00	1.0
MHC	2.62	266	e(P)c	50	59.20	0.6

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

% JUL 11, 1989 19h 31m 59.75± 1.36s
42.547 N ±14.1km 3.675 E ± 6.4km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 2.8 (LDG).

LRG	2.17	64	Pg	32	35.30	-1.1
			Sg	32	59.00	
LMR	2.22	68	Pg	32	37.30	0.1
			Sg	33	01.80	
FRF	2.40	64	Pg	32	39.20	-0.5
			Sg	33	06.00	
EPF	2.50	282	Pn	32	41.30	0.1
			Pg	32	48.00	
			Sg	33	21.80	
CAF	2.65	334	Pn	32	34.80	-8.5X
			Pg	32	39.00	
			Sg	33	06.70	
SBF	3.05	63	Pg	32	50.40	1.5
			Sg	33	26.20	
RJF	3.17	331	Pg	32	50.20	-0.4
			Sg	33	21.70	
MAF	3.76	348	Pg	32	58.50	-0.5
			Sg	33	38.30	
TCF	3.88	345	Pg	33	01.00	0.2
			Sg	33	42.70	
BGF	4.05	352	Pg	33	03.50	0.4
			Sg	33	46.60	
SMF	4.10	2	Pg	33	04.00	0.2
			Sg	33	47.20	

S.D. = 0.8 on 10 of 11 obs.

? JUL 11, 1989 20h 52m 59.83± 3.06s
35.153 N ±26.4km 139.031 E ±14.8km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	0.89	358	P	53	16.60	-0.8
			S	53	30.30	
IIDJ	0.97	290	P	53	17.10	-1.7
KAKJ	1.40	41	P	53	25.30	-0.7
			S	53	44.20	
MTMJ	1.74	325	P	53	31.60	0.6
			eS	53	56.20	
NIIJ	2.08	359	eP	53	37.30	1.5
			eS	54	05.80	
TSRJ	2.52	280	P	53	43.20	1.1
			S	54	13.80	

S.D. = 1.6 on 6 of 6 obs.

JUL 11, 1989 22h 43m 59.83± 0.28s
32.117 N ± 4.8km 140.472 E ± 4.3km
DEPTH = 85.4km (3 depth phases)
4.9mb (16 obs.)
SOUTH OF HONSHU, JAPAN (211)

IIDJ	3.97	328	P	45	01.30	1.6
KAKJ	4.08	357	P	45	00.00	-1.2
			S	45	48.90	
CHJJ	4.11	343	P	45	01.50	0.0
			S	45	50.40	
WKYJ	4.60	298	iPd	45	08.50	0.1
			S	45	59.10	
MTMJ	4.97	334	P	45	13.80	0.2
TSRJ	5.06	314	P	45	15.20	0.5
NIIJ	5.25	347	P	45	15.90	-1.5
TKSJ	5.71	291	iPd	45	23.80	0.1
			S	46	27.50	
YAMJ	6.05	357	P	45	26.00	-2.5
			eS	46	32.50	
YONJ	6.60	300	P	45	36.60	0.5
			eS	46	49.30	
SHK	6.95	292	eP	45	40.60	-0.4
OFUJ	7.02	8	P	45	37.40	-4.4X
			S	46	50.90	
SHNJ	8.11	287	eP	45	56.50	-0.3
KUMJ	8.17	275	eP	45	58.20	0.5
			S	47	29.00	
KAGJ	8.22	266	eP	45	59.60	1.2
AOMJ	8.43	359	eP	45	58.30	-2.8
			eS	47	29.40	
MDJ	15.10	329	eP	47	25.00	-4.6X
SSE	16.46	272	eP	47	49.50	2.6
			eS	50	50.00	
SNY	16.59	310	eP	47	49.40	1.0
GUMO	18.88	167	eP	48	16.00	-0.2
	1.0s		144.00nm			5.2mb
PJG	18.88	167	eP	48	16.00	-0.2
GUA	18.94	167	eP	48	17.00	0.1
	0.7s		71.23nm			5.0mb
BJI	21.13	299	eP	48	53.00	13.7X
			eS	52	23.00	
TIY	23.61	291	eP	49	05.00	1.2
	Z 16s		0.60um			4.2MszX
BTO	25.85	298	eP	49	24.00	-1.0
XAN	26.46	283	P	49	30.60	0.0

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GTA    33.56 294 eP     50 31.80  -1.9
LOE    37.89 257 eP     51 08.80  -1.5
CHG    39.53 261 eP     51 42.30  18.3X
SVW    49.93  35 eP     52 47.60   1.1
TTA    49.94  32 ePc    52 47.30   0.7
IMA    51.34  28 eP     52 57.80   0.5
       1.2s     6.80nm          4.6mb
KDC    51.38  39 iPc    52 57.50   0.0
WB5    52.03 187 eP     53 00.00  -2.8
PMR    53.07  34 ePc    53 09.50  -0.5
       1.0s    25.00nm          5.2mb
TOA    54.46  34 eP     53 21.20   0.8
ASPA   55.82 187 iPc    53 29.00  -1.5
       0.6s     8.00nm          4.9mb
INK    59.13  26 eP     53 52.00  -1.3
DZM    59.34 152 iPd    53 56.20   0.9
GBA    60.15 268 Pc     53 57.20  -3.8X
       0.9s     5.40nm          4.7mb
MBC    61.45  16 ePc    54 08.70  -0.4
       0.6s     9.00nm          5.0mb
FORR   63.71 192 eP     54 22.10  -2.3
       0.3s    11.00nm          5.3mb
SUF    72.03 334 iP     55 15.10  -0.8
       0.4s     2.30nm          4.4mb
PNT    72.27  43 eP     55 18.00   0.3
FHC    73.61  52 e(P)   55 27.10   1.5
EDM    73.71  37 eP     55 25.50  -0.5
DPW    73.80  43 P      55 27.40   0.7
NUR    73.92 332 eP     55 27.00   0.0
WDC    74.68  52 eP     55 32.20   0.4
MIN    75.42  51 eP     55 36.10  -0.1
ORV    75.88  52 eP     55 38.50  -0.2
BRK    76.20  54 e(P)   55 41.00   0.5
SES    76.45  39 eP     55 42.00   0.3
CMB    77.40  53 ePd    55 47.80   0.6
                 e      56 10.00
LRM    78.23  43 eP     55 52.70   0.8
HFS    78.24 336 eP     55 52.30   1.0
       0.4s     1.30nm          4.2mb
FFC    78.27  32 eP     55 51.00  -0.6
       0.8s    11.00nm          4.8mb
FRI    78.40  54 eP     55 53.20   0.6
                 e      56 15.00
KVN    78.40  51 P      55 53.10   0.2
                 pP     56 16.10  87km
NB2    78.41 337 P      55 51.60  -0.7
TNP    79.50  52 P      55 59.00   0.1
       1.1s    11.36nm          4.7mb
                 pP     56 21.50  85km
BW06   81.68  44 P      56 10.50   0.2
       0.5s    20.09nm          5.3mb
KRA    82.73 326 eP     56 01.50 -13.7X
                 e      56 16.90
KSP    83.86 328 eP     56 21.00   0.0
                 e      56 41.50
GLA    83.90  55 P      56 22.50   0.9
PV09   84.49  48 P      56 26.20   1.3
RSON   84.58  31 P      56 24.00  -0.6
       1.2s    13.85nm          4.8mb
BRG    84.87 329 e(P)   56 37.20  11.1X
                 e      56 46.80
CLL    84.96 330 eP     56 26.00  -0.5
       1.6s    16.00nm          4.8mb
                 i      56 47.40
PRU    85.26 328 eP     56 29.50   1.5
                 e      56 48.50
GOL    86.06  45 P      56 33.40   0.8
GLD    86.12  45 P      56 34.00   1.2
       1.1s    50.14nm          5.5mb
ALQ    88.37  49 e(P)   56 39.00  -4.8X
                 e      56 45.50
                 epP    57 02.00  85km
LOR    91.87 332 eP     57 12.30  12.7X
LBF    92.05 332 eP     57 11.70  11.3X
       1.2s     5.90nm
SSF    92.17 332 eP     57 12.30  11.3X
SMF    92.38 332 eP     57 13.00  11.1X
       1.0s     6.80nm
AVF    92.46 332 eP     57 12.80  10.6X
       1.0s     8.00nm
ARE   147.12  69 ePKP   03 37.00   3.9X
ZOBO  149.64  65 PKPd   03 43.00   5.6X
       1.0s    27.50nm
LPB   149.82  66 PKP    03 44.00   6.5X
       1.1s    88.61nm
CNCB  150.07  66 ePKP   03 40.00   2.0
                 i      03 45.00
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CCH   151.83  65 PKP    03 38.30  -2.0
      S.D. = 1.1  on  67 of  83 obs.
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   JUL  12, 1989  01h 35m 14.12± 0.63s
   43.424 N ± 9.9km  147.112 E ± 9.7km
   DEPTH =  33.0km  (normal)
   4.7mb (  8 obs.)
 KURIL ISLANDS                    (221)
      Felt (I JMA) at Nemuro,
      Hokkaido.

NEM     1.12 266 iPd    35 34.00   0.6
                 S      35 43.70
KUSJ    1.78 260 iPd    35 42.20  -0.9
                 S      35 58.50
HOOJ    3.00 251 P      36 01.70   1.3
                 S      36 32.20
ASAJ    3.31 284 P      36 05.20   0.4
MRRJ    4.55 259 P      36 22.50   0.1
                 eS     37 10.10
AOMJ    5.78 243 P      36 41.00   1.2
OFUJ    5.97 225 P      36 42.80   0.3
                 S      37 45.10
NIIJ    8.74 228 eP     37 20.60  -0.6
KAKJ    8.97 219 P      37 23.10  -1.2
                 S      38 57.50
CHJJ    9.66 223 eP     37 29.30  -4.5X
                 eS     39 13.00
INK    46.70  30 eP     43 43.00   2.0
CHG    47.17 254 eP     43 44.70  -0.7
NB2    69.90 339 P      46 21.40  -2.0
HFS    69.98 337 eP     46 21.70  -2.1
       0.4s     1.30nm          4.3mb
KSP    76.84 330 eP     47 03.40  -0.6
CLL    77.59 333 iPd    47 07.30  -0.8
       1.1s    10.00nm          4.8mb
PRU    78.17 331 eP     47 11.00  -0.4
KHC    79.23 331 eP     47 12.60  -4.7X
LDF    83.95 339 eP     47 41.30  -0.6
SMF    84.60 336 eP     47 45.20   0.0
       1.0s    10.00nm          5.0mb
AVF    84.61 336 eP     47 44.90  -0.3
       1.0s     4.80nm          4.6mb
LPG    84.71 333 eP     47 46.10   0.0
       0.6s     2.70nm          4.6mb
BGF    84.97 336 eP     47 47.40   0.3
       1.0s     4.80nm          4.6mb
MAF    85.36 336 eP     47 49.60   0.6
       0.6s     4.50nm          4.9mb
LSF    85.64 337 eP     47 51.50   1.1
       0.6s     2.70nm          4.6mb
MFF    85.78 338 eP     47 51.80   0.7
CAF    86.68 336 eP     47 56.50   0.9
ITR   145.13  10 e(PKP) 54 50.00  -0.1
SOB1  145.21  14 ePKP   54 51.00   0.8
      S.D. = 1.0  on  27 of  29 obs.
-------------------------------------
?  JUL  12, 1989  01h 59m 47.67± 7.13s
   34.769 N ±57.3km  139.553 E ±25.9km
   DEPTH =  5.0km  (geophysicist)
 NEAR S. COAST OF HONSHU, JAPAN  (230)

CHJJ    1.36 341 P      00 14.50   1.3
                 S      00 33.70
KAKJ    1.52  19 P      00 16.10   0.6
                 S      00 37.30
IIDJ    1.52 298 P      00 16.40   0.8
                 S      00 36.80
MAT     2.08 329 eP     00 23.00  -0.7
                 iS     00 48.00
MTMJ    2.30 322 eP     00 26.20  -0.8
NIIJ    2.51 350 P      00 28.40  -1.3
      S.D. = 1.4  on   6 of   6 obs.
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*  JUL  12, 1989  02h 41m 39.25± 0.49s
    8.129 S ±11.9km   68.355 E ± 8.1km
   DEPTH =  10.0km  (geophysicist)
   4.7mb ( 15 obs.)  5.0Msz (  8 obs.)
 CHAGOS ARCHIPELAGO REGION        (426)
      Appears to be a multiple event.
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 12S, 30C
      Centroid Location:
      Origin Time        02:41:38.5 0.4
      Lat  8.81S 0.04 Lon  67.41E 0.03
      Dep  15.0 FIX Half-duration  2.9
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```
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.72 0.11  Mtt=-4.98 0.13
        Mff= 5.71 0.17  Mrt= 0.00 0.00
        Mrf= 0.00 0.00  Mtf= 0.42 0.12
       Principal Axes:
        T  Val=  5.72  Plg= 0  Azm= 92
        N       -0.72       90       180
        P       -5.00        0         2
      Best Double Couple:Mo=5.4*10**17
       NP1:Strike=137 Dip=90 Slip= 180
       NP2:       227     90         0

KOD    20.37  27 eP     46 23.00   3.7X
                 iS     50 24.00
GBA    23.40  23 Pc     46 51.30   2.0
       0.9s    16.40nm          4.6mb
POO    27.04  12 eP     47 10.00 -13.8X
BOM    27.21   9 eP     48 16.50  51.2X
                 iS     52 46.00
HYB    27.31  22 eP     47 28.00   1.7
                 eS     52 14.00
CLK    33.47 254 iPd    48 05.10 -16.0X
SNG    35.58  66 eP     48 41.00   1.9
                 eS     54 20.20
NDI    37.58  13 eP     48 56.00   0.2
                 eS     54 52.00
KRI    38.74 253 iPd    48 51.70 -14.2X
LWI    39.80 276 eP     49 03.70 -11.2X
BUL    40.23 248 iPd    49 06.00 -12.3X
       1.1s    18.99nm
CHG    40.33  48 eP     49 20.70   1.8
       0.9s    13.24nm          4.6mb
PRY    42.98 239 eP     49 22.70 -18.0X
       0.6s     7.14nm
KHI    43.04 348 e(P)   49 38.00  -3.1X
LSA    43.54  29 eP     49 47.00   1.5
     Z 12s      1.50um          5.1MszX
     E 13s      0.70um
MAIO   44.97 350 eP     49 54.00  -2.6
                 eS     56 40.00
KMI    47.05  44 eP     50 21.50   8.1X
     N 16s      1.40um
                 eS     57 16.00
                 iS     57 19.00
BHD    47.06 332 ePd    50 26.50  13.5X
KSH    47.87   8 eP     50 19.00  -0.5
     E 10s      5.10um
                 eS     57 17.00
SLY    48.54 335 ePd    50 19.50  -5.0X
                 e      50 38.00
                 ePP    52 08.00
                 eScP   54 26.00
                 eS     57 23.00
                 eSS    01 52.00
                 e      04 40.00
MSL    50.21 333 eP     50 51.00  13.6X
                 e      57 48.00
TAB    50.34 337 eP     50 34.00  -4.6X
BNG    51.22 282 iPd    50 33.00 -12.5X
       0.8s    11.00nm
                 ic     51 16.00
                 ic     52 37.00
                 ic     53 37.00
                 ic     57 52.00
                 id     01 11.30
                 id     05 28.30
CD2    51.55  39 eP     50 46.40  -1.4
     E 16s      1.10um
                 eS     58 15.00
WMQ    54.60  17 P      51 09.50  -0.8
     Z 24s      2.60um          5.2MszX
     E 12s      2.50um
                 S      58 53.50
LZH    55.21  35 P      51 15.00   0.1
     Z 27s      1.40um          4.9MszX
     E 10s      0.20um
GTA    55.57  29 eP     51 16.00  -1.4
     Z 20s      1.40um          5.0Msz
     N 11s      0.80um
                 S      59 09.00
XAN    56.89  40 P      51 26.00  -0.9
     N 15s      1.20um
     E 12s      0.50um
                 S      59 23.00
BAG    57.14  65 eP     51 27.00  -?
                 eS     59 32.00
WHN    58.51  47 eP     51 39.50
```

12d 02h

E 20s 1.72um
eS 59 51.00
TIY 61.41 39 eP 51 56.80 -1.4
Z 20s 1.63um 5.2Msz
N 14s 1.00um
E 13s 0.90um
S 00 20.50
BTO 61.83 35 eP 52 01.00 0.0
N 14s 0.70um
E 14s 0.70um
eS 00 30.00
NJ2 62.57 48 eP 52 04.20 -1.8
N 13s 0.60um
E 13s 0.60um
HHC 62.88 36 eP 52 09.00 1.0
Z 32s 1.70um 5.0MszX
N 15s 0.90um
E 14s 1.20um
sP 52 21.00
PP 54 32.00
S 00 43.00
SS 04 36.00
SSE 63.84 50 eP 52 14.50 0.2
Z 18s 0.90um 5.0Msz
N 14s 0.70um
E 14s 1.10um
pP 52 36.30 85kmX
S 00 56.00
esS 01 32.00
SS 05 12.00
ASPA 64.42 112 iPd 52 13.90 -4.5X
1.0s 12.00nm 5.0mb
Z 22s 1.69um 5.2MszX
LR 15 28.40
VAY 64.68 323 eP 52 03.50 -16.2X
WB5 64.77 108 eP 52 20.90 0.2
i 52 24.20
BJI 65.14 39 eP 52 23.00 0.4
Z 20s 0.79um 4.9Msz
N 13s 0.46um
eS 01 12.00
eSKS 02 18.00
eSS 05 28.00
SKO 65.75 323 eP 52 16.00 -10.5X
N 20s 0.73um
E 21s 0.81um
iS 01 02.00
iSSS 08 30.00
QIS 69.68 109 eP 52 53.00 1.4
SNY 70.81 41 Pd 52 57.20 -0.9
Z 24s 1.00um 5.0MszX
S 02 12.00
SPC 70.87 329 eP 52 58.50 -0.1
SRO 71.04 327 eP 53 03.20 3.8X
e 53 06.20
e 53 26.10
VBY 71.44 324 e(P) 53 03.00 1.1
KRA 71.57 329 eP 53 07.10 4.6X
ZST 71.93 327 eP 53 16.00 11.3X
CEY 72.06 323 e(P) 53 07.50 1.9
LJU 72.16 324 e(P) 53 06.00 -0.2
TRI 72.44 323 eP 53 16.50 8.7X
VOY 72.53 324 eP 53 06.30 -2.2
CN2 72.99 39 eP 53 09.60 -1.5
Z 22s 1.00um 5.1Msz
N 13s 0.60um
E 13s 0.40um
epP 53 20.00 34kmX
eS 02 39.00
KBA 73.41 324 e(P) 53 16.00 2.3
1.7s 32.50nm 5.1mb
i 53 17.60
i 53 25.60
i 53 42.30
i 53 58.60
KSP 73.90 329 eP 53 14.00 -2.2
e 53 27.80
KIC 74.30 279 P 53 07.20 -12.0X
PRU 74.33 327 eP 53 25.50 6.8X
e 53 44.50
KHC 74.38 326 eP 53 25.50 6.4X
e 53 31.00
LIC 74.55 279 P 53 08.74 -12.0X
S 02 58.00
TIC 74.62 279 P 53 09.00 -12.1X
BRG 75.14 328 eP 53 26.10 2.7
1.6s 14.00nm 4.8mb

e 53 34.10
e 53 50.20
CLL 75.88 328 eP 53 26.00 -1.6
e 53 36.00
CTA 75.93 109 iPc 53 31.80 3.2X
1.3s 53.85nm 5.5mb
iS 03 20.00
GRF 75.99 326 eP 53 25.60 -2.7
Z 20s 0.10um 4.1Msz
e 53 30.60
e 53 51.70
MDJ 76.00 40 eP 53 25.50 -2.9X
Z 25s 1.00um 5.0MszX
S 03 17.00
MOX 76.27 327 eP 53 36.00 6.2X
e 53 43.00
e 03 05.00
LPG 76.63 321 eP 53 31.20 -1.1
1.0s 4.00nm 4.5mb
FEL 76.94 323 eP 53 28.50 -5.3X
SUF 77.68 342 eP 53 32.00 -5.4X
WLF 78.86 324 P 53 49.70 5.6X
SMF 78.95 321 eP 53 44.70 0.0
MAT 78.97 50 eP 53 49.00 3.9X
1.8s 109.09nm 5.6mb
Z 20s 0.71um 5.0Msz
eS 03 46.00
LBF 79.00 321 eP 53 45.10 0.0
LOR 79.19 321 eP 53 46.00 -0.1
SSF 79.33 321 eP 53 46.60 -0.2
1.0s 4.80nm 4.5mb
MEM 79.37 325 P 53 48.60 1.8
CAF 79.40 319 eP 53 47.20 -0.1
BGF 79.54 320 eP 53 48.10 0.2
1.0s 10.00nm 4.8mb
MAF 79.58 320 eP 53 48.40 0.2
1.2s 7.10nm 4.5mb
TCF 79.84 320 eP 53 49.70 0.1
LPO 79.88 318 eP 53 50.10 0.3
RJF 79.90 319 eP 53 50.10 0.2
DOU 79.95 324 P 54 00.40 10.4X
S 03 47.00
e 03 47.80
LSF 80.26 320 eP 53 52.10 0.3
1.0s 4.80nm 4.4mb
LFF 80.28 318 eP 53 52.20 0.3
SNF 80.31 324 P 53 53.50 1.6
i 03 45.40
HFS 80.50 336 (P) 53 49.00 -3.8X
1.0s 6.50nm 4.6mb
SOD 81.00 345 eP 53 50.00 -5.3X
MFF 81.46 320 eP 53 58.60 0.5
TOL 81.92 312 eP 54 06.00 5.4X
eS 04 55.00
SPA 81.92 180 e(P) 54 00.50 0.1
1.0s 5.00nm 4.6mb
NB2 82.02 336 P 54 06.20 5.4X
LDF 82.18 321 eP 54 02.20 0.4
FLN 82.46 322 eP 54 04.20 1.0
LPF 82.55 321 eP 54 04.30 0.6
GRR 82.56 321 eP 54 04.50 0.8
1.0s 8.00nm 4.8mb
KEV 82.70 347 eP 54 02.00 -2.1
CCH 128.38 240 ePKP 00 30.10 -19.1X
CNCB 130.21 240 ePKP 00 47.00 -6.0X
LPB 130.44 240 ePKP 00 43.00 -10.3X
eLR 36 30.00
ZOBO 130.57 241 ePKP 00 45.00 -8.7X
1.1s 5.80nm
Z 24s 0.53um 5.2MszX
e 00 53.00
LR 37 00.00
EDM 135.02 1 ePKP 01 00.50 0.1
PNT 138.41 8 ePKP 01 18.00 11.0X
RSSD 143.54 351 PKP 01 12.80 -3.7X
FVM 144.63 330 PKP 01 16.70 -1.5
0.9s 16.95nm
BW06 145.44 357 PKP 01 10.50 -9.3X
1.4s 36.49nm
WDC 146.26 15 e(PKP)01 10.60 -10.3X
MIN 146.71 14 e(PKP)01 19.80 -2.0
LTCM 146.71 15 PKP 01 29.90 8.3X
ORV 147.48 14 e(PKP)01 22.30 -0.6
GLD 147.99 351 PKP 01 26.80 2.9
1.0s 80.00nm
GOL 148.07 351 PKP 01 20.00 -4.2X
1.0s 30.00nm

RLO 148.24 334 e(PKP)01 22.90 -1.3
KVN 148.67 10 PKP 01 24.00 -1.1
TUL 148.78 335 ePKP 01 23.80 -1.3
0.8s 18.50nm
Z 22s 0.63um 5.4Msz
LR 53 00.00
BKS 148.87 16 e(PKP)01 26.00 0.9
CMB 149.20 14 e(PKP)01 26.30 0.6
MHC 149.54 16 e(PKP)01 29.80 3.5X
UYO 149.63 331 iPKPc 01 26.30 -0.1
PV09 149.68 356 PKP 01 32.10 5.3X
TNP 149.76 9 PKP 01 26.50 -0.3
0.9s 8.79nm
FRI 150.35 13 e(PKP)01 28.00 0.6
PRS 150.56 16 e(PKP)01 32.30 4.6X
MEO 150.88 338 ePKP 01 29.00 0.7
PRI 150.93 15 e(PKP)01 34.30 5.8X
CLC 151.91 10 ePKP 01 40.00 10.1X
BCH 151.98 15 PKP 01 38.00 7.9X
ALQ 152.89 351 e(PKP)01 31.00 -0.5
e 01 40.00
e 01 50.80
SBB 152.96 11 ePKP 01 41.00 9.6X
RVR 153.72 11 ePKP 01 43.00 10.6X
S.D. = 1.3 on 72 of 129 obs.

JUL 12, 1989 02h 51m 02.19± 0.57s
38.855 N ± 5.6km 27.069 E ± 8.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.48 162 iPg 51 11.20 -0.8
iSg 51 20.20
PRK 0.73 302 ePb 51 16.50 -0.1
eSb 51 27.00
EZN 1.13 329 ePn 51 23.30 0.0
DST 1.42 58 iPn 51 27.70 -0.4
CIN 1.49 147 ePn 51 29.00 0.0
iSg 51 48.00
YER 1.97 150 ePn 51 37.00 1.0
KHL 2.00 105 ePn 51 40.00 3.6X
CTT 2.52 24 ePn 51 44.00 0.2
RDO 2.57 333 ePn 51 44.50 0.0
VTS 4.75 323 iPg 52 22.00 6.4X
S.D. = 0.6 on 8 of 10 obs.

JUL 12, 1989 04h 52m 23.63± 0.53s
31.738 N ±12.1km 40.956 W ± 5.7km
DEPTH = 10.0km (geophysicist)
4.6mb (15 obs.)
NORTH ATLANTIC RIDGE (403)

LPF 34.24 50 eP 59 11.40 -0.1
1.0s 13.60nm 4.8mb
MFF 34.53 53 eP 59 14.50 0.4
1.0s 8.00nm 4.6mb
FLN 34.78 49 eP 59 16.50 0.3
1.0s 9.60nm 4.6mb
LFF 34.88 56 eP 59 16.80 -0.3
1.0s 9.60nm 4.6mb
LSF 35.62 54 eP 59 23.40 0.0
1.0s 14.00nm 4.8mb
CAF 35.81 56 eP 59 24.60 -0.5
0.8s 3.20nm 4.2mb
TCF 36.09 54 eP 59 27.50 0.1
1.0s 12.80nm 4.7mb
SMF 37.25 53 eP 59 37.50 0.4
1.0s 14.00nm 4.7mb
LOR 37.35 52 eP 59 38.00 0.1
1.0s 8.00nm 4.4mb
LBF 37.39 53 eP 59 38.40 0.1
1.0s 8.00nm 4.4mb
LPG 39.16 55 eP 59 53.10 -0.4
1.4s 10.40nm 4.3mb
KHC 43.99 50 eP 00 38.20 5.5X
RLO 44.59 291 e(P) 00 44.50 6.8X
PRU 44.66 49 eP 00 38.50 0.5
TUL 45.25 291 eP 00 43.20 0.2
0.7s 6.20nm 4.7mb
FFC 48.25 317 eP 01 06.50 0.1
0.7s 6.00nm 4.8mb
ALQ 53.93 292 e(P) 01 51.00 1.2
0.9s 2.52nm 4.2mb
ZOBO 54.39 213 eP 01 47.00 -6.7X
CCH 54.49 210 eP 01 53.80 -0.4
LRM 55.72 307 eP 02 02.50 -0.3
MBC 56.68 344 eP 02 08.50 -0.6

0.7s 4.00nm 4.6mb
INK 61.85 335 eP 02 44.00 -0.9
S.D. = 0.5 on 19 of 22 obs.

JUL 12, 1989 05h 01m 39.96± 0.29s
44.466 N ± 2.3km 7.304 E ± 2.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (LDG), 2.2 (GEN).

DOI	0.06	312	Pc	01 42.70	0.4
			eSg	01 44.10	
PZZ	0.15	285	Pc	01 43.44	-0.1
			S	01 45.55	
ENR	0.25	161	Pc	01 45.59	0.2
FOUF	0.38	280	iPg	01 47.10	-0.6
			eSg	01 50.84	
ROB	0.44	113	P	01 49.70	0.7
			S	01 55.70	
TOUF	0.45	185	Pg	01 49.66	0.4
AUTN	0.48	169	Pg	01 49.32	-0.4
			Sg	01 55.92	
SAOF	0.51	159	Pg	01 49.84	-0.5
			Sg	01 56.81	
AURF	0.58	178	Pg	01 51.03	-0.7
			Sg	01 58.78	
MVIF	0.58	191	Pg	01 51.37	-0.5
			Sg	01 59.13	
RRL	0.59	321	P	01 50.96	-1.0
			S	01 58.26	
SBF	0.61	171	Pg	01 52.30	0.0
			Sg	02 00.20	
IMI	0.70	143	P	01 53.37	-0.4
			S	02 02.36	
FIN	0.70	111	P	01 53.42	-0.4
			S	02 02.57	
CALN	0.77	203	Pg	01 55.43	0.3
PCP	0.89	85	P	01 57.22	0.1
LSD	1.00	354	P	01 59.03	0.0
			S	02 11.61	
FRF	1.02	208	Pg	01 59.90	0.6
			Sg	02 12.40	
LPG	1.10	339	Pg	02 01.30	0.4
			Sg	02 14.70	
LPL	1.13	339	Pg	02 01.60	0.4
			Sg	02 15.70	
LRG	1.22	214	Pg	02 03.40	0.8
			Sg	02 19.20	
LMR	1.27	207	Pg	02 03.90	0.4
			Sg	02 20.20	

S.D. = 0.5 on 22 of 22 obs.

& JUL 12, 1989 05h 02m 47.57s
61.800 N 150.228 W
DEPTH = 37.5km
SOUTHERN ALASKA (2)
<AGS-P>. ML 2.2 (PMR).

PWA	0.22	132	iP	02 55.20	0.4
SUA	0.42	216	eP	02 57.14	-0.1
PMR	0.56	111	iPc	02 58.10	-1.0
CUT	0.61	358	eP	02 58.86	-0.8
GHO	0.62	92	eP	02 59.12	-0.9
			S	03 09.09	
PMS	0.64	150	iPc	02 59.40	-0.9
SKT	0.64	287	iP	02 59.35	-0.9
			S	03 09.10	
KNK	0.93	114	eP	03 03.28	-1.1
			S	03 17.00	
SPU	1.07	235	eP	03 05.57	-0.8
NKA	1.17	205	eP	03 08.82	1.2
HUR	1.21	13	eP	03 07.60	-0.7
SLKM	1.30	180	eP	03 08.13	-1.4
RDT	1.62	222	eP	03 13.41	-0.8
			S	03 34.70	
RND	1.73	21	eP	03 14.78	-1.1
SEW	1.74	167	eP	03 16.35	0.4
NNL	1.84	197	eP	03 16.78	-0.5
RED	1.86	223	iP	03 16.81	-0.8
			S	03 40.91	
VZW	1.92	111	eP	03 17.17	-1.3
TOA	1.94	79	eP	03 19.60	0.8
MCK	2.03	16	eP	03 19.51	-0.5
KLU	2.08	97	eP	03 19.15	-1.7
			S	03 46.14	
ILIM	2.18	219	eP	03 21.49	-0.7
CNPM	2.34	193	eP	03 22.47	-1.9
PAX	2.51	60	eP	03 27.15	0.2
OPT	2.61	216	eP	03 28.06	-0.2
HDA	3.01	28	eP	03 32.95	-1.0
CCB	3.06	20	eP	03 32.78	-1.9
GLB	3.09	94	eP	03 34.51	-0.6
RDS	3.18	16	eP	03 33.90	-2.5
			S	04 10.65	
FBA	3.30	18	eP	03 36.80	-1.2
GLM	3.45	21	eP	03 38.22	-1.9
IMA	4.55	342	eP	03 53.70	-2.2

32 obs. associated

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* JUL 12, 1989 05h 34m 07.59± 0.67s
29.988 S ±10.9km 67.789 W ±18.1km
DEPTH = 33.0km (normal)
LA RIOJA PROVINCE, ARGENTINA (138)

RTLL	1.46	204	iPc	34 31.00	-0.9
			S	34 50.00	
CFA	1.66	193	iPc	34 35.00	0.2
			S	34 56.50	
RTCB	1.73	210	ePc	34 35.80	-0.1
			S	34 58.00	
ZON	1.73	206	eP	34 36.00	0.1
			eS	34 58.00	
RTCV	1.97	199	iPc	34 40.00	0.6
			S	35 18.50	
RTBS	2.20	220	ePd	34 43.00	0.5
			S	35 11.00	
CYA	2.33	49	ePc	34 44.80	0.4
RFA	4.80	187	ePc	35 19.10	-0.4
SLA	5.62	22	ePc	35 30.80	-0.4

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

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* JUL 12, 1989 07h 03m 07.44± 0.94s
50.760 N ± 7.6km 19.730 E ±12.1km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.6 (VKA).

KRA	0.72	169	ePg	03 21.80	0.2
			iSg	03 31.90	
SPC	1.61	168	iPc	03 34.70	-1.4
			i(Sg)	03 54.90	
KSP	2.18	274	ePn	03 36.50	-7.8X
	0.8s	188.00nm			
			iPg	03 39.00	
			iSn	04 00.60	
			iSg	04 03.50	
ZST	3.09	215	i(Pn)	03 58.70	1.6
			i	04 18.50	
			i(Sg)	04 31.30	
SRO	3.09	198	e(Pn)	04 03.20	6.1X
			i	04 46.90	
VKA	3.34	223	iPnc	03 33.50	-27.3X
			iSn	04 13.60	
			iSg	04 28.10	
PRU	3.41	259	Pg	04 01.00	-0.7
			Sn	04 21.50	
			eSg	04 28.50	
			i	04 34.00	
CLL	4.28	280	ePg	04 19.00	4.9X
			eSg	05 12.50	
KHC	4.29	250	Pn	04 14.40	0.1
			Pg	04 18.10	
			Sn	04 44.60	
			Sg	05 01.70	
WET	4.71	253	iPnc	04 23.40	3.2X
KBA	5.59	231	iP	05 25.50	52.7X
			i	05 34.80	
NUR	10.16	14	eP	05 40.00	3.8X
SLL	10.38	342	eP	05 38.30	-1.1
	0.3s	0.80nm		4.6mb X	
SUF	12.49	14	eP	06 09.00	1.2

S.D. = 1.4 on 7 of 14 obs.

JUL 12, 1989 07h 46m 04.27± 0.63s
35.436 N ± 8.2km 26.656 E ± 5.5km
DEPTH = 66.4 ± 8.7 km
4.0mb (5 obs.)
CRETE (370)
MD 3.8 (ATH).

KAP	0.44	75	iPnd	46 15.30	-1.0
NPS	0.87	259	ePn	46 20.70	-0.5
APE	1.87	331	ePb	46 33.80	-0.8
			eSn	46 54.30	
VAM	2.01	270	ePn	46 38.20	1.7
YER	2.15	37	iP	46 39.00	0.5
CIN	2.45	28	eP	46 42.00	-0.7
KSL	2.48	73	ePn	46 45.50	2.5
ELL	2.94	63	iP	46 51.50	1.8
IZM	3.00	9	eP	46 49.70	-0.7
KHL	3.69	38	iP	47 00.40	0.3
ITM	4.20	296	ePn	47 08.20	0.9
EZN	4.39	357	eP	47 08.50	-1.4
DSI	8.24	115	iPc	48 02.50	-1.0
			eS	49 32.00	
PRNI	8.66	124	eP	48 08.00	-1.3
			eS	49 41.00	
LBF	20.52	311	eP	50 38.80	-0.5
	0.8s	6.70nm		4.0mb	
LOR	20.72	312	eP	50 40.80	-0.5
	1.0s	6.00nm		3.9mb	
AVF	20.82	310	eP	50 41.50	-0.8
	0.6s	2.70nm		3.8mb	
SSF	20.84	311	eP	50 42.20	-0.3
	0.8s	13.40nm		4.3mb	
FLN	23.99	312	eP	51 14.60	1.1
GRR	24.07	311	eP	51 15.00	0.7
	1.0s	9.60nm		4.2mb	

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

? JUL 12, 1989 08h 19m 14.21± 9.71s
32.169 S ±75.7km 71.264 W ±27.6km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

JACH	0.76	132	iPd	19 28.70	0.1
			iS	19 41.00	
ROCH	0.83	165	iPd	19 30.40	0.7
			iS	19 44.00	
LCCH	1.33	191	iPd	19 37.00	0.4
			iS	19 55.40	
FCH	1.42	145	iPc	19 38.00	-0.2
			iS	19 57.00	
TACH	1.51	170	iPd	19 39.00	-0.2
			iS	19 58.50	
PCH	1.58	157	iPc	19 40.20	-0.1
			iS	20 00.70	
LNV	1.79	184	iPc	19 42.50	-0.7
			iS	20 05.60	
CHCH	1.83	164	iPd	19 44.00	0.0
			iS	20 00.70	

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

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* JUL 12, 1989 11h 03m 37.06± 1.18s
54.267 N ±11.9km 159.580 W ± 7.9km
DEPTH = 33.0km (normal)
SOUTH OF ALASKA (17)

CNBA	0.55	360	ePd	03 48.67	0.2
NGI	0.82	340	ePc	03 51.62	-0.6
			eS	04 00.07	
IVF	1.63	1	ePd	04 04.08	0.2
			eS	04 21.58	
PVV	1.69	312	ePc	04 04.79	0.1
			eS	04 22.40	
PS4	1.71	310	eP	04 05.15	0.1
			eS	04 23.35	
KDC	5.29	46	eP	04 55.50	-0.2
PMR	9.20	33	eP	05 58.00	7.6X
ADK	10.56	264	eP	06 09.00	-0.1
KVN	31.75	101	eP	10 15.00	14.8X
NB2	64.81	5	P	14 14.40	0.2
HFS	65.82	4	eP	14 20.70	0.1
	0.7s	7.90nm		4.9mb	
SPA	144.08	180	e(PKP)	23 10.50	1.0X
	1.0s	5.00nm			

S.D. = 0.3 on 9 of 12 obs.

JUL 12, 1989 11h 16m 14.00± 0.61s
37.528 N ± 7.0km 119.496 W ± 6.5km
DEPTH = 5.0km (geophysicist)
CENTRAL CALIFORNIA (39)
ML 2.7 (BRK).

FRI	0.56	198	iPc	16 24.00	-1.2
			iS	16 34.80	
CMB	0.87	306	iPc	16 29.40	-1.8
			eS	16 43.80	
MNA	1.39	49	e(P)	16 39.80	-0.4
LLA	1.47	232	iPc	16 41.10	-(
PRI	1.67	214	ePd	16 44.00	-0

12d 11h

MHC	1.72	264	ePd	16	45.63	0.8
			e	16	48.10	
			eS	17	13.10	
SAO	1.73	245	eP	16	46.30	1.3X
			eS	17	12.90	
SAO	1.73	245	eP	16	45.52	0.6
KVN	1.88	35	eP	16	48.20	1.0
TNP	1.89	72	eP	16	47.20	-0.2
PRS	1.92	232	ePc	16	49.00	1.4
BKS	2.20	280	ePd	16	51.98	0.2

S.D. = 1.0 on 11 of 12 obs.

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* JUL 12, 1989 11h 57m 33.22± 1.78s
32.266 N ±38.7km 40.894 W ± 5.7km
DEPTH = 10.0km (geophysicist)
4.7mb (17 obs.) 4.2Msz (1 obs.)
NORTH ATLANTIC RIDGE (403)

LPF	33.86	51	eP	04	17.90	0.0
	1.0s		13.60nm			4.8mb
MFF	34.17	53	eP	04	20.70	0.1
	1.0s		9.60nm			4.7mb
LPO	34.83	57	eP	04	25.50	-0.7
	1.2s		17.80nm			4.8mb
LSF	35.26	54	eP	04	30.00	0.1
	1.0s		16.00nm			4.8mb
CAF	35.47	57	eP	04	31.20	-0.6
	1.2s		13.00nm			4.7mb
TCF	35.73	54	eP	04	34.00	0.0
	1.0s		16.00nm			4.8mb
SSF	36.72	53	eP	04	42.30	0.1
	1.2s		11.90nm			4.6mb
SMF	36.90	54	eP	04	44.10	0.4
	1.0s		18.00nm			4.8mb
LOR	36.99	53	eP	04	44.70	0.2
	1.0s		10.00nm			4.5mb
LBF	37.03	53	eP	04	44.80	-0.1
	1.0s		12.80nm			4.6mb
LPG	38.82	56	eP	05	01.00	0.7
	1.2s		13.00nm			4.5mb
BSF	39.03	52	eP	05	01.30	-0.4
CDF	39.41	51	eP	05	04.80	-0.1
CLL	43.37	48	iPc	05	37.20	0.0
	1.2s		16.00nm			4.7mb
KHC	43.62	51	iPc	05	39.50	0.2
	1.3s		9.00nm			4.4mb
BRG	43.93	48	eP	05	41.30	-0.5
	1.1s		10.00nm			4.6mb
PRU	44.27	50	eP	05	45.00	0.5
			e	05	52.00	
TUL	45.11	290	eP	05	51.40	-0.1
	1.3s		7.80nm			4.5mb
Z	22s		0.28um			4.2Msz
			LR	19	00.00	
FFC	47.90	317	eP	06	13.00	-0.3
	1.3s		17.00nm			5.0mb
EDM	54.69	315	eP	07	05.00	0.4
MBC	56.19	344	eP	07	15.00	-0.1
	1.0s		5.00nm			4.5mb

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

? JUL 12, 1989 12h 12m 37.92± 3.20s
10.598 S ±39.4km 129.203 E ±12.8km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
TIMOR SEA (290)

MTN	2.93	140	eP	13	28.50	5.3X
			eS	14	24.00	
KNA	5.14	185	eP	14	00.00	5.4X
	0.3s		31.00nm			5.2mb X
			i	14	12.00	
			eS	15	24.00	
WB5	10.49	152	iPc	15	07.90	-1.2
			e	15	19.00	
			eS	17	26.00	
MBL	13.83	219	eP	15	45.00	-9.0X
			eS	18	33.00	
QIS	14.08	136	eP	15	43.00	-14.3X
			e	16	06.50	
			eS	18	42.00	
			e	18	52.00	
WARB	15.69	189	eP	16	18.00	-0.3
			ePP	16	28.50	
			eS	18	43.00	
NANU	17.68	226	eP	16	42.80	-0.6
	0.3s		6.00nm			4.2mb
			eS	20	10.00	
MEKA	18.85	211	eP	17	02.00	4.2X
			eS	20	43.00	
CTA	18.94	122	eP	16	46.00	-13.0X
	1.1s		25.32nm			
FORR	20.18	183	eP	17	06.00	-6.5X
			e	17	18.00	
			eS	21	23.00	
COOL	21.53	199	eP	17	29.00	2.6
MRWA	22.26	212	eP	17	33.00	-0.7
KLB	23.43	205	eP	17	45.50	0.4
STK	24.08	153	eP	17	53.00	1.6
RMQ	24.30	133	eP	17	52.00	-1.7
MUN	24.43	208	eP	17	53.50	-1.3
NWAO	24.80	205	eP	17	58.00	-0.4
BFD	29.07	158	eP	18	38.60	1.1
BWA	29.51	146	eP	18	42.20	0.6
CAN	30.50	147	eP	18	50.10	-0.2
MAT	47.65	10	eP	20	24.00	-49.0X
CNCB	147.90	148	ePKP	31	54.00	-25.9X
LPB	148.07	147	ePKP	31	51.00	-29.0X
ZOBO	148.27	147	ePKP	31	55.00	-25.5X

S.D. = 1.4 on 13 of 24 obs.

& JUL 12, 1989 12h 18m 49.94s
61.802 N 150.236 W
DEPTH = 35.8km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.2 (PMR).

PWA	0.23	132	iPc	18	57.60	0.5
SUA	0.42	216	P	18	59.36	-0.2
PMR	0.57	111	iPc	19	00.20	-1.3
CUT	0.61	359	iP	19	01.12	-0.9
			S	19	10.52	
GHO	0.62	92	iP	19	01.37	-1.0
			S	19	11.21	
SKT	0.64	287	iP	19	01.59	-0.9
PMS	0.65	150	iPc	19	01.40	-1.3
SPU	1.07	235	eP	19	08.04	-0.7
			S	19	22.97	
NKA	1.17	205	eP	19	11.04	1.0
HUR	1.21	13	eP	19	09.83	-0.9
			S	19	26.10	
SLKM	1.30	180	eP	19	10.37	-1.6
RND	1.73	21	eP	19	17.09	-1.2
SEW	1.75	167	eP	19	17.97	-0.4
RED	1.86	223	iP	19	19.04	-1.0
			S	19	42.94	
TOA	1.94	79	iPd	19	20.70	-0.6
MCK	2.03	17	eP	19	21.68	-0.8
KLU	2.08	97	eP	19	21.39	-1.9
ILIM	2.18	219	eP	19	23.57	-1.0
			S	19	50.52	
CNPM	2.34	193	eP	19	24.77	-2.0
PAX	2.51	60	eP	19	29.08	-0.3
OPT	2.61	216	eP	19	29.99	-0.7
SVW	2.68	257	eP	19	29.70	-2.0
WRH	2.85	19	eP	19	32.38	-1.7
TTA	2.92	295	eP	19	32.70	-2.4
RDS	3.18	16	eP	19	36.96	-1.8
F8A	3.30	18	eP	19	38.90	-1.5
IMA	4.54	342	eP	19	55.80	-2.4

27 obs. associated

JUL 12, 1989 13h 42m 53.98± 0.25s
37.151 N ± 3.3km 31.090 E ± 3.8km
DEPTH = 125.6 ± 3.5 km
4.2mb (27 obs.)
TURKEY (366)

BCK	0.50	308	iPg	43	12.00	-0.9
ELL	1.03	247	iPn	43	19.00	1.8
KSL	1.59	230	iPd	43	23.50	0.3
KHL	1.71	314	iPn	43	24.40	-0.3
YER	2.24	270	iPn	43	31.50	0.2
CIN	2.43	282	ePn	43	33.00	-0.7
			iSg	43	55.00	
PPCY	2.48	155	eP	43	34.50	0.2
CSS	2.84	140	eP	43	38.50	-0.5
			eS	44	11.50	
BBTK	2.99	25	iPd	43	42.00	0.9
			iS	44	17.00	
DST	3.12	322	iPn	43	42.90	0.1
FAM	3.19	131	eP	43	44.50	0.9
GPA	3.19	349	iPn	43	43.50	-0.2
IZM	3.28	293	iPn	43	46.10	1.3
KAP	3.54	244	eP	43	48.00	-0.3
EDC	4.07	323	iPn	43	54.90	-0.5
ISK	4.22	339	iPn	43	57.00	-0.3
PRK	4.33	300	eP	43	59.00	0.0
CTT	4.49	333	iPn	44	00.50	-0.6
EZN	4.59	307	iPn	44	02.70	0.2
MFT	4.69	322	iPn	44	03.50	-0.4
KAS	4.70	25	eP	44	04.00	0.0
NPS	4.81	249	eP	44	04.20	-1.3
BHL	4.93	130	Pn	44	06.00	-1.2
			Sn	45	00.00	
HRI	5.43	134	iPd	44	14.50	0.5
VAM	5.83	255	eP	44	20.20	0.8
RDO	5.88	314	eP	44	20.20	0.2
BURJ	6.25	141	Pc	44	26.70	1.5
JVI	6.28	145	iPd	44	25.00	-0.5
			eS	45	33.00	
JARJ	6.33	139	Pc	44	27.30	1.1
KFNJ	6.49	143	Pc	44	29.10	0.7
HLW	7.28	178	ePn	44	38.75	-0.3
			e	44	41.75	
			eSn	45	54.50	
KKB	7.77	310	eP	44	46.00	0.2
VAY	7.81	305	eP	44	48.00	1.7
MBH	8.01	156	iPd	44	48.00	-1.0
HQL	8.53	156	eP	44	54.70	-1.3
SKO	8.87	306	eP	44	58.00	-2.5
SRFA	8.89	156	eP	44	59.00	-1.8
AYN	9.23	152	eP	45	04.70	-0.6
OSS	18.22	308	ePc	47	01.60	1.4
BRG	18.38	324	iP	47	01.70	0.1
	1.0s		10.00nm			4.1mb
TMA	18.82	305	ePc	47	06.50	0.0
SAX	18.95	309	ePc	47	07.70	-0.4
LLS	19.02	308	ePc	47	08.40	-0.3
CLL	19.12	323	iPc	47	09.00	-0.4
	1.1s		12.00nm			4.1mb
MOX	19.39	320	eP	47	12.00	-0.3
	0.9s		30.00nm			4.6mb
			e	47	16.00	
ZLA	19.64	309	ePc	47	14.60	-0.4
SLE	19.69	310	ePc	47	14.60	-0.9
DIX	19.77	304	ePc	47	16.90	0.4
LPG	20.03	302	eP	47	20.50	1.2
	0.6s		17.40nm			4.6mb
CDF	20.70	310	eP	47	25.70	-0.1
	0.8s		13.40nm			4.4mb
BSF	20.77	309	eP	47	25.80	-0.7
	0.6s		3.60nm			3.9mb
HAU	21.11	309	eP	47	29.70	-0.1
	0.8s		11.80nm			4.3mb
SMF	22.30	304	eP	47	41.80	0.3
	0.8s		14.70nm			4.4mb
LBF	22.30	305	eP	47	41.80	0.3
	0.8s		11.20nm			4.3mb
LOR	22.46	305	eP	47	43.20	0.2
	0.8s		13.40nm			4.4mb
SSF	22.63	305	eP	47	45.00	0.3
	0.8s		14.70nm			4.4mb
AVF	22.66	304	eP	47	45.20	0.2
	0.7s		15.40nm			4.5mb
BGF	22.94	303	eP	47	48.00	0.3
	0.6s		6.30nm			4.2mb
MAF	23.05	302	eP	47	49.60	0.8
	0.6s		3.60nm			3.9mb
TCF	23.30	302	eP	47	51.80	0.5
	0.6s		3.60nm			4.0mb
RJF	23.59	299	eP	47	54.60	0.6
	0.6s		3.60nm			4.0mb
LPO	23.72	298	eP	47	56.60	1.3
	0.5s		2.90nm			4.0mb
NUR	23.73	352	eP	47	56.00	0.8
MFF	24.96	302	eP	48	06.00	-1.0
	0.4s		3.80nm			4.2mb
LDF	25.40	307	eP	48	09.40	-1.6
	0.4s		2.70nm			4.1mb
HFS	25.55	340	eP	48	13.60	1.3
	0.7s		4.70nm			4.1mb
FLN	25.67	307	eP	48	11.90	-1.6
	0.6s		5.40nm			4.3mb
SUF	25.78	355	iP	48	14.40	0.0
	0.4s		2.10nm			4.0mb
GRR	25.82	306	eP	48	13.40	-1.5
	0.4s		3.40nm			4.3mb
LPF	25.85	305	eP	48	13.40	-1.8
	0.4s		2.20nm			4.1mb
NB2	27.00	339	P	48	28.20	2.6

EKA	29.44	319	Pc	48 46.00	-1.5
	0.8s	6.20nm			4.4mb
SOD	30.37	357	iP	48 54.60	-1.0
BNG	34.53	202	iPc	49 33.80	1.6
	0.4s	14.00nm			5.1mb
TIC	44.74	236	P	50 56.90	0.4
KIC	44.76	236	Pc	50 57.00	0.4
	0.6s	9.50nm			4.7mb
LIC	45.05	236	P	50 59.40	0.5

S.D. = 1.0 on 77 of 77 obs.

% JUL 12, 1989 14h 38m 55.94± 2.16s
35.775 N ±18.3km 22.356 E ±15.4km
DEPTH = 10.0km (geophysicist)
MEDITERRANEAN SEA (400)
ML 3.6 (ATH).

VAM	1.55	103	iPbd	39 23.70	0.1
			eSb	39 44.20	
ATH	2.45	26	ePn	39 37.00	0.4
VLS	2.78	330	ePn	39 41.30	-0.1
APE	2.87	62	ePn	39 42.20	-0.4
NEO	3.59	11	ePn	39 52.70	-0.1

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

& JUL 12, 1989 15h 10m 33.43s
60.256 N 140.659 W
DEPTH = 11.4km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

PCA	0.26	128	iP	10 39.40	0.4
BCPM	0.60	120	iP	10 44.64	-0.7
			eS	10 54.74	
CTGM	0.79	335	iP	10 47.73	-1.0
PNL	0.87	132	iP	10 48.47	-1.5
			iS	11 01.51	
BALM	1.14	314	iP	10 52.76	-2.0
TGL	1.19	296	iP	10 53.47	-2.0
HQN	1.21	131	iP	10 53.65	-2.2
			eS	11 10.23	
HYT	1.66	69	P	11 03.20	0.5
GLB	1.95	309	eP	11 05.11	-1.7
KLU	2.86	298	eP	11 18.17	-1.6
VZW	3.01	288	eP	11 19.34	-2.6
TOA	3.25	307	eP	11 27.61	2.3
PAX	3.56	322	eP	11 30.78	1.0
DOT	3.77	336	eP	11 31.89	-0.7
DWY	3.85	8	P	11 35.10	1.3
KNK	3.99	290	eP	11 38.53	2.8
GHO	4.30	294	eP	11 39.65	-0.6
PMR	4.35	292	eP	11 46.00	5.2
SLKM	4.75	277	eP	11 42.39	-4.3
SUA	5.08	288	eP	11 47.32	-3.9
CUT	5.11	299	eP	11 52.60	1.1
SKT	5.55	293	eP	11 56.50	-1.3

22 obs. associated

% JUL 12, 1989 15h 29m 38.02± 1.86s
32.628 N ± 8.3km 130.098 E ±16.2km
DEPTH = 5.0km (geophysicist)
KYUSHU, JAPAN (235)
Felt (II JMA) at Nagasaki.

UNZ	0.18	52	iPd	29 42.20	0.5
			S	29 44.60	
KUMJ	0.62	98	iPd	29 50.20	-0.3
			S	29 58.30	
KAGJ	1.59	155	eP	30 07.00	0.2
			eS	30 28.00	
SHNJ	1.72	29	P	30 08.30	-0.4
			eS	30 29.20	
YONJ	3.79	47	eP	30 38.40	0.0

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

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* JUL 12, 1989 16h 18m 15.76± 1.17s
32.146 S ± 8.4km 69.127 W ±12.3km
DEPTH = 10.0km (geophysicist)
MENDOZA PROVINCE, ARGENTINA (139)

RTBS	0.56	330	iPd	18 27.30	0.3
			(S)	18 39.50	
RTCV	0.58	61	iPd	18 32.10	4.6X
			S	18 48.50	
RTCB	0.71	23	iPc	18 30.10	0.2
			S	18 44.70	
CFA	0.93	55	iPc	18 34.50	1.0
			S	18 53.00	
RTLL	0.99	35	e(P)	18 33.20	-1.3
RFA	2.68	168	ePd	18 59.60	-0.1

S.D. = 1.2 on 5 of 6 obs.

% JUL 12, 1989 17h 01m 11.67± 0.58s
60.638 N ± 4.8km 6.234 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

HYA	0.53	358	iP	01 21.97	-0.4
			eS	01 29.40	
ASK	0.54	254	eP	01 22.33	-0.2
			iS	01 29.90	
ODD1	0.75	165	eP	01 25.52	-0.9
			eS	01 34.17	
SUE	0.83	301	iP	01 27.64	-0.1
			eS	01 38.39	
BLS1	1.29	166	iP	01 35.33	-0.3
			eS	01 51.53	
KMY	1.51	200	iP	01 40.04	1.2
			eS	01 58.66	
MOL	2.04	17	iP	01 46.77	0.4
			eS	02 09.56	
NRA0	2.61	86	eP	01 54.90	0.3
			iS	02 31.80	

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

JUL 12, 1989 17h 36m 49.66± 0.95s
7.786 S ± 4.7km 122.902 E ± 7.3km
DEPTH = 259.3 ± 10.8 km
5.2mb (16 obs.)
FLORES SEA (279)

PCI	7.49	336	ePc	38 42.80	5.6X
			eS	39 03.00	
MTN	9.53	123	iPc	39 03.30	0.1
KNA	9.78	145	iPd	39 05.30	-1.0
	0.7s	347.00nm			5.6mb
			eS	40 53.00	
TSM	12.87	338	ePd	39 50.00	5.1X
	1.0s	549.20nm			5.8mb
MBL	13.62	192	eP	39 54.00	-0.2
	0.4s	112.00nm			5.5mb
			eS	42 23.00	
DAV	15.01	10	eP	40 12.80	1.7
			eS	42 58.00	
KKM	15.27	334	ePc	40 16.00	1.7
	0.8s	220.90nm			5.6mb
NANU	16.31	205	iPd	40 25.80	-0.3
	0.4s	60.00nm			5.4mb
			eS	43 29.00	
WB5	16.37	138	iPd	40 25.00	-1.8
WARB	18.64	169	iPd	40 40.40	-10.2X
	0.4s	41.00nm			
			eS	44 33.00	
ASPA	18.99	147	eP	40 54.10	0.0
			eS	44 10.30	
MEKA	19.18	192	eP	40 56.10	0.1
	0.4s	57.00nm			5.4mb
			eS	44 36.00	
QIS	20.55	130	iPd	41 09.70	0.1
	0.5s	77.00nm			5.5mb
			e	41 43.00	
			e	44 43.00	
MRWA	22.29	196	iPc	41 26.70	0.2
	0.4s	54.00nm			5.4mb
			eS	45 48.00	
FORR	23.46	169	eP	41 36.00	-1.5
	0.4s	25.00nm			5.1mb
PMG	24.03	96	eP	41 43.00	0.0
IPM	25.05	299	ePc	41 52.20	-0.2
NWAO	25.56	191	eP	41 56.10	-0.8
	0.6s	27.00nm			5.0mb
CTA	25.71	121	eP	42 08.00	9.6X
			i	42 51.00	
RKG	26.72	191	eP	42 12.10	4.8X
QIZ	29.59	334	eP	42 33.00	0.0
STK	29.63	147	iPd	42 33.20	0.0
	0.6s	23.00nm			5.0mb
			e	43 26.00	
NNT	30.66	311	eP	42 43.60	1.2
RMQ	30.81	130	eP	42 44.00	0.4
			e	43 44.00	
QZH	32.80	353	eP	43 00.20	-0.6
BFD	34.27	152	eP	43 13.00	-0.2
BDT	34.30	317	iPc	43 13.80	0.1
BRS	34.35	128	eP	43 15.00	0.9
BWA	35.42	142	eP	43 25.10	2.1
			e	44 59.90	
CHG	35.45	318	ePd	43 23.90	0.5
			e	49 07.90	
TOO	36.03	149	eP	43 29.50	1.4
			e	44 25.00	
CAN	36.37	143	eP	43 26.90	-4.1X
			e	44 56.10	
KMI	38.15	330	Pd	43 47.50	1.3
SSE	38.69	358	eP	43 50.20	0.0
	1.0s	12.00nm			4.3mb
			e	52 32.00	
WHN	38.98	348	Pd	43 53.60	1.0
			S	49 30.00	
NJ2	39.80	355	Pd	43 59.60	0.3
CD2	42.63	335	eP	44 22.40	-0.1
XAN	43.66	343	P	44 30.20	-0.5
TIY	46.31	349	Pc	44 50.60	-1.0
MAT	46.38	17	iPd	44 50.40	-1.7
	0.8s	12.69nm			4.3mb
LZH	47.18	339	P	44 59.00	0.5
BJI	47.99	353	eP	45 03.00	-1.4
HHC	49.51	349	P	45 10.00	-6.2X
BTO	49.59	347	eP	45 15.40	-1.4
GBA	49.89	295	Pc	45 18.20	-1.1
	0.7s	25.70nm			4.7mb
HYB	50.47	300	eP	45 22.00	-1.8
GTA	51.60	337	Pd	45 31.60	-0.5
WMQ	60.45	331	Pd	46 33.50	-1.0
			PcP	47 17.50	
			eS	54 25.00	
QUE	65.60	308	eP	47 06.70	-1.8
MAIO	73.80	311	eP	47 57.00	-0.8
SPA	82.27	180	ePd	48 43.90	0.7
	0.9s	5.00nm			4.3mb
NAI	85.96	269	eP	48 48.00	-14.9X
SLR	90.80	244	eP	49 28.00	2.7
			i	52 12.00	
BUL	91.35	250	iPd	49 30.20	2.3
	1.0s	7.50nm			4.6mb
LPG	113.76	316	ePKP	54 59.40	-0.1
	0.6s	2.10nm			
LOR	115.22	319	ePKP	55 01.90	0.0
SSF	115.51	319	ePKP	55 02.60	0.2
	0.9s	3.90nm			
BGF	116.10	318	ePKP	55 03.70	0.2
	0.7s	7.00nm			
MFF	118.04	319	ePKP	55 07.00	-0.2
ALQ	127.37	52	e(PKP)	55 26.90	1.1
CNCB	153.30	156	ePKP	56 11.00	-0.9

S.D. = 1.1 on 53 of 61 obs.

JUL 12, 1989 18h 43m 14.97± 0.53s
19.215 S ± 7.9km 177.705 W ± 4.1km
DEPTH = 564.2 ± 6.0 km
5.0mb (31 obs.)
FIJI ISLANDS REGION (181)

SVA	3.80	286	ePc	44 38.50	1.6
			eS	45 50.40	
DZM	15.11	256	iPc	46 26.00	1.1
AFR	26.55	91	iP	48 09.80	-0.5
	0.8s	75.00nm			5.4mb
PAE	26.72	91	iP	48 11.20	-0.6
	0.8s	50.00nm			5.2mb
PPT	26.73	91	iP	48 12.00	0.1
	0.8s	85.00nm			5.4mb
TVO	27.01	92	iP	48 14.10	-0.3
	0.8s	40.00nm			5.1mb
BRS	28.25	248	iPd	48 26.00	0.8
			i	51 21.80	
PMO	28.77	86	iP	48 29.40	-0.3
	0.8s	25.00nm			4.9mb
VAH	28.98	87	iP	48 30.60	-0.8
	0.8s	30.00nm			5.0mb
TPT	29.04	86	iP	48 31.70	-0.3
	0.8s	30.00nm			5.0mb
RUV	29.22	87	iP	48 33.20	-0.3
	0.8s	45.00nm			5.2mb
RMQ	31.68	251	iPd	48 55.40	1.0
	0.6s	16.00nm			4.8mb
CTA	33.91	262	iPd	49 13.00	-0.2
	0.8s	68.66nm			5.3mb
			i	51 35.20	
PMG	35.35	281	eP	49 26.00	

12d 18h

QIS	40.08	261	eP	50	03.00	-0.8	FBA	86.93	12	ePd	55	00.00	-0.9	UCC	148.44	357	PKP	01	59.70	4.8X
JAY	43.92	287	ePd	50	48.80	14.7X	IMA	86.94	10	ePd	55	00.70	-0.4	MEM	148.54	355	iPKPd	01	59.00	3.9X
WB5	45.05	261	eP	50	41.50	-1.3	NNT	87.22	284	ePd	55	04.30	1.1	SRO	148.64	339	iPKP	02	06.00	10.7X
			e	52	11.10		LRM	87.55	39	ePd	55	04.90	0.4	MBH	148.64	296	iPKP	02	00.50	4.6X
ASPA	45.10	255	iPd	50	42.50	-0.7	XAN	87.58	307	P	55	05.20	0.5	TNS	148.67	352	ePKPc	01	59.80	4.4X
	0.9s	62.00nm			5.1mb		BW06	87.85	43	P	55	06.00	0.0	SNF	148.73	358	PKPd	01	59.70	4.3X
			e	52	10.80			0.7s	10.96nm			4.8mb		GRF	148.76	349	ePKP	01	55.00	-0.5
			eS	56	38.70		HHC	88.66	314	Pc	55	10.60	1.0				id	02	00.50	
GUA	49.14	309	eP	51	13.00	-0.8	KMI	89.02	297	Pd	55	13.00	1.3				ed	02	06.20	
	0.8s	179.10nm			5.7mb		GOL	89.25	47	P	55	13.20	0.7	CTT	148.77	320	ePKP	01	58.60	2.8
GUMO	49.21	309	eP	51	13.70	-0.6		1.0s	20.50nm			5.0mb		KHC	148.80	346	iPKP	01	55.50	-0.1
	0.8s	131.77nm			5.5mb		GLD	89.37	47	P	55	13.90	0.9				i	01	59.90	
PJG	49.21	309	eP	51	13.70	-0.6	BDT	89.48	288	iPd	55	14.00	0.4	VKA	148.87	342	ePKP	01	57.00	1.3
FORR	50.03	246	eP	51	19.00	-1.1		1.0s	44.90nm			5.4mb			1.0s	59.70nm				
	0.5s	18.00nm			4.9mb		BTO	89.60	314	eP	55	14.20	0.3				i	02	00.90	
KNA	51.01	265	eP	51	26.40	-1.2	CHG	90.07	290	iPd	55	17.30	0.9				i	02	06.90	
WARB	51.49	251	iPd	51	29.80	-1.2		0.6s	17.67nm			5.2mb		WET	148.95	346	iPKPd	02	00.50	4.7X
	0.4s	7.00nm			4.4mb		EDM	90.89	33	eP	55	19.00	-0.4		1.3s	48.00nm				
MBL	58.32	257	iPd	52	17.20	-1.5	RSSD	92.04	44	P	55	25.20	0.0	ABH	149.12	353	iPKPd	02	00.87	4.8X
	0.4s	10.00nm			4.5mb		LZH	92.21	307	eP	55	26.50	0.4	DOU	149.13	357	PKP	02	00.30	4.3X
NANU	62.01	254	iPd	52	42.30	-0.6		1.5s	22.00nm			5.0mb					e	02	06.90	
PCI	63.77	279	ePc	52	57.00	2.8	INK	92.97	15	eP	55	27.00	-1.6	TOD	149.23	352	iPKPd	02	00.78	4.5X
	1.0s	9.00nm			4.2mb		GTA	96.38	309	eP	55	44.80	-0.1	RUP	149.35	354	iPKPd	02	01.60	5.2X
CHJJ	68.55	323	P	53	22.60	-0.7	MBC	101.47	12	ePdiff	56	06.00	-0.8	WLF	149.46	355	iPKPd	02	02.40	5.9X
IIDJ	68.77	322	P	53	23.90	-0.8		0.6s	2.00nm			4.9mb		KTD	149.61	353	iPKPd	02	01.90	5.1X
MAT	69.35	323	iPd	53	27.00	-1.1	QUE	120.93	294	ePKP	01	04.60	-1.0	KHL	149.65	315	ePKP	02	01.80	4.5X
	0.9s	25.21nm			4.7mb		KEV	127.26	349	ePKP	01	15.00	-1.3	DIM	149.88	324	iPKPc	02	03.00	5.6X
NIIJ	69.40	324	P	53	27.60	-0.7	MAIO	127.33	301	ePKP	01	17.00	-0.6	GWF	150.00	353	PKP	02	03.11	5.7X
MTMJ	69.61	323	P	53	29.20	-0.5	SOB1	128.92	120	ePKP	01	20.30	-0.9	ELL	150.16	312	ePKP	02	03.60	5.4X
TSRJ	69.94	321	P	53	31.20	-0.3	SOD	129.41	348	iPKP	01	20.20	-0.3	FUR	150.21	348	iPKPd	02	03.50	5.7X
ADK	70.80	1	ePc	53	34.50	-1.6	BUL	133.15	215	iPKPd	01	28.00	-1.2		0.7s	78.00nm				
	0.6s	29.30nm			5.0mb			1.0s	10.50nm					PGB	150.28	326	ePKP	02	03.00	4.9X
SPA	70.90	180	e(P)	53	37.80	0.8	SUF	133.52	345	ePKP	01	20.00	-8.4X	BHG	150.29	346	iPKPd	02	03.40	5.5X
	0.9s	10.00nm			4.3mb		KRI	135.23	219	ePKP	01	34.90	1.7		0.9s	35.00nm				
SDN	75.69	10	eP	54	02.50	-1.3				iPP	04	13.90		FLN	150.44	4	ePKP	01	57.50	-0.5
OZH	75.95	303	Pc	54	05.70	-0.2	NUR	135.78	344	ePKP	01	25.00	-7.7X	RZN	150.58	324	iPKPd	02	04.00	5.3X
SYP	76.58	46	eP	54	10.00	0.6	NB2	137.74	354	PKP	01	35.00	-1.5	CDF	150.60	353	PKP	02	04.13	5.7X
PRS	76.70	44	ePd	54	10.80	1.0	HFS	138.32	351	ePKP	01	26.40	-11.1X	LDF	150.63	3	ePKP	01	57.60	-0.7
GCC	76.71	43	ePd	54	10.50	0.7		1.0s	12.80nm					KBA	150.77	344	iPKPd	02	01.70	2.8
PCC	76.74	42	eP	54	10.50	0.5	EAB	142.75	6	ePKP	01	42.10	-3.3X		0.8s	28.60nm				
BCH	76.89	45	P	54	11.80	0.8	ESY	143.17	5	ePKP	01	43.20	-3.0X				i	02	04.10	
SAO	76.91	43	e(P)	54	11.60	0.7	EAU	143.17	5	ePKPd	01	43.50	-2.7	ECH	150.80	353	PKP	02	04.38	5.7X
BRK	77.05	42	e(P)	54	12.10	0.5	EBL	143.28	5	ePKPd	01	43.80	-2.6	EZN	150.85	320	iPKP	02	04.60	5.7X
PRI	77.05	44	eP	54	12.90	1.1	EKA	143.71	5	PKPd	01	44.70	-2.4	VITF	150.92	355	PKP	02	04.97	6.3X
BKS	77.06	42	e(P)d	54	12.30	0.6		0.8s	44.30nm					FEL	151.04	352	PKP	02	04.85	5.7X
SSE	77.08	310	eP	54	11.50	-0.4	DMU	144.66	9	ePKP	01	47.10	-1.7	SLE	151.08	351	ePKPd	02	04.90	5.8X
MHC	77.12	43	ePd	54	13.00	0.8		0.5s	58.00nm					PTJ	151.09	340	e(PKP)	02	05.50	6.3X
LLA	77.15	44	ePd	54	12.80	0.6	DCN	145.14	10	ePKP	01	48.60	-1.0	IZM	151.10	317	ePKP	02	04.70	5.3X
MWC	77.73	47	eP	54	16.00	0.4		0.7s	58.00nm					MOF	151.17	353	PKP	02	05.30	6.0X
BAR	77.87	49	eP	54	15.00	-1.2	KAS	145.29	316	iPKPd	01	52.10	1.8	BSF	151.22	354	PKP	02	05.55	6.2X
RVR	78.08	48	eP	54	17.00	-0.2	DLE	145.31	9	iPKPd	01	49.30	-0.5	KKB	151.33	326	ePKP	02	06.00	6.4X
PLM	78.09	48	eP	54	18.00	0.4		1.0s	104.00nm					FVI	151.37	345	PKP	02	05.10	5.7X
FRI	78.17	44	ePd	54	17.90	0.3	VAL	145.89	14	ePKP	01	48.00	-2.8	ZLA	151.37	351	ePKPd	02	05.60	6.1X
ISA	78.24	46	eP	54	19.00	0.9	ETA	145.93	9	ePKP	01	52.00	1.1	LJU	151.40	342	ePKP	02	00.00	0.4
CMB	78.34	43	iPd	54	19.00	0.4		0.9s	57.00nm								i	02	06.00	
WDC	78.51	40	ePd	54	20.00	0.6	YRH	146.02	8	ePKP	01	51.40	0.4	SAX	151.45	350	ePKPd	02	06.20	6.2X
ORV	78.53	41	eP	54	19.80	0.3	KRA	146.16	339	iPKPd	01	52.80	1.5	BBS	151.50	353	PKP	02	06.02	6.3X
CLC	78.92	46	eP	54	22.00	0.3	WIT	146.30	355	iPKP	01	54.80	3.4X	VOY	151.59	343	ePKP	01	59.40	-0.6
MIN	78.94	40	ePd	54	21.90	0.1	ECP	146.41	10	ePKP	01	52.60	1.0				i	02	05.90	
TPC	79.07	48	eP	54	23.00	0.5		1.0s	89.00nm								e	02	16.90	
NJ2	79.28	309	Pd	54	23.80	0.3	KSP	146.54	344	ePKP	01	51.50	-0.5	VBY	151.67	341	ePKP	02	00.00	0.1
GLA	79.38	50	eP	54	25.00	0.9		0.7s	55.00nm								e	02	06.90	
KDC	79.50	13	ePd	54	23.70	-0.3				id	01	54.30					e	02	18.00	
KVN	80.38	43	P	54	29.90	0.5				i	01	56.40		LOMF	151.69	353	PKP	02	06.77	6.7X
TNP	80.42	44	P	54	29.20	-0.4	BBTK	146.71	315	iPKPc	01	52.00	-0.7	CEY	151.71	342	ePKP	02	06.50	6.4X
	0.8s	14.56nm			4.5mb		SPC	146.79	338	ePKP	01	54.90	2.2				i	02	18.00	
CN2	81.46	322	iPd	54	34.50	0.0	CLL	146.87	348	ePKP	01	52.00	-0.4	OSS	151.85	349	ePKPd	02	07.30	6.9X
			epP	56	36.50	569kmX				i	01	55.00		LLS	151.88	350	ePKPd	02	07.00	6.5X
WHN	81.91	306	Pc	54	38.00	0.9				i	01	57.70		TRI	151.92	343	iPKPd	02	06.70	6.4X
SVW	81.99	11	eP	54	36.20	-0.7	HRI	147.06	302	iPKPd	01	56.50	3.0X				i	02	18.50	
TIA	82.62	312	eP	54	40.40	-0.1	BRG	147.09	346	ePKP	01	52.80	0.0	VAY	151.99	326	iPKP	02	06.50	6.0X
PGC	83.04	33	eP	54	43.00	0.7				i	01	55.60					i	02	19.60	
IPM	83.28	277	ePd	54	44.90	0.6				i	01	59.10		LOR	151.99	358	ePKP	02	00.20	-0.2
	0.9s	67.40nm			5.2mb		WTS	147.10	355	iPKPd	01	55.60	2.9	RIY	152.08	342	ePKPd	02	07.10	6.6X
TTA	83.64	10	ePd	54	45.00	-0.1		0.8s	47.00nm					SKO	152.09	329	iPKP	02	07.20	6.5X
PMR	83.71	13	eP	54	44.80	-0.6				i	01	58.70					i	02	20.40	
	0.5s	30.70nm			5.2mb		PRU	147.77	345	iPKPd	01	57.80	3.9X	SSF	152.21	358	ePKP	02	00.40	-0.3
TOA	84.83	14	ePd	54	50.70	-0.3		0.9s	33.50nm					LBF	152.27	358	ePKP	02	00.70	-0.1
BJI	85.18	315	eP	54	53.50	0.5				i	02	02.40		MFF	152.61	4	ePKP	02	00.70	-0.5
DPW	85.35	36	P	54	54.00	0.2	MOX	147.77	349	ePKP	01	53.00	-1.0	TMA	152.64	350	ePKPd	02	08.70	7.1X
PNT	85.44	34	eP	54	49.00	-5.1X				i	01	57.00		MMK	152.83	351	ePKPd	02	09.80	7.9X
	0.8s	43.00nm			5.2mb		DSI	147.81	299	iPKPd	01	57.00	2.5	DIX	152.88	352	ePKPd	02	09.80	7.8X
PV09	86.10	47	P	54	57.20	-0.7	HOF	148.04	348	ePKP	01	55.00	0.6	TCF	153.00	0	ePKP	02	01.40	-0.5
ALQ	86.38	51	eP	55	00.20	1.0				i	01	59.00		LSD	153.52	352	PKP	02	11.61	8.7X
	1.0s	12.50nm			4.6mb		ENN	148.39	356	iPKPd	01	58.90	4.1X	RRL	154.10	353	PKP	02	12.63	9.0X
			e	55	05.20			0.8s	23.00nm					PCP	154.21	350	PKP	02	10.37	6.8X
TIY	86.63	312	Pd	55	00.90	0.7				i	02	04.00		ROB	154.56	351	PKP	02	12.12	8.1X

```
FIN    154.59 350 PKP    02 13.96   9.9X
ENR    154.70 351 PKP    02 11.91   7.6X
IMI    154.93 350 PKP    02 13.35   8.8X
BNG    158.38 229 iPKPd  02 09.00  -0.7
        0.8s     11.00nm
                   ic    02 48.20
                   ic    04 55.60
KIC    165.50 151 PKP    02 16.30  -0.3
TIC    165.62 149 PKP    02 16.40  -0.3
      S.D. = 1.0  on 145 of 210 obs.
-------------------------------------
&  JUL  12, 1989  19h 07m 23.80s
   37.722 N          122.572 W
   DEPTH =  11.0km
 CENTRAL CALIFORNIA                ( 39)
      <BRK>. ML 2.8 (BRK).
      Mo=4.4*10**12 Nm (BRK). Felt at
      Daly City.

PCC      0.27 146 iPc    07 29.00  -0.5
                  iS     07 32.70
BRK      0.29  58 iPd    07 29.60  -0.3
                  iS     07 33.60
BKS      0.31  60 iPd    07 29.80  -0.5
                  eS     07 34.40
ZSP      0.33  48 ePd    07 30.70  -0.1
GCC      0.83 146 e(P)   07 38.70  -1.0
MHC      0.83 117 ePc    07 39.45  -0.4
                  eS     07 51.15
ARN      0.91 114 eP     07 40.30  -0.8
SAO      1.31 136 iPd    07 45.73  -2.2
CMB      1.76  79 e(P)   07 53.00  -1.4
                  eS     08 14.80
         9 obs. associated
-------------------------------------
   JUL  12, 1989  21h 51m 01.83± 0.74s
   38.312 N ± 6.8km   22.757 E ± 8.0km
   DEPTH =  10.0km  (geophysicist)
 GREECE                            (364)
      ML 3.0 (ATH).

ATH      0.83 114 eP     51 18.30   0.5
NEO      1.06  20 eP     51 22.00   0.2
ITM      1.31 210 eP     51 25.20  -0.8
VLS      1.71 266 eP     51 32.70   0.8
LIT      1.80 353 eP     51 27.10  -6.0X
PLG      2.13  14 eP     51 37.20  -0.7
KZN      2.13 339 eP     51 38.00   0.0
VAY      3.01 357 eP     51 53.60   3.2X
SKO      3.79 345 eP     51 56.00  -5.6X
      S.D. = 0.8  on   6 of   9 obs.
-------------------------------------
   JUL  12, 1989  22h 55m 58.33± 0.92s
   38.258 N ± 7.9km   21.700 E ± 7.8km
   DEPTH =  31.1 ±  7.6 km
 GREECE                            (364)
      ML 3.3 (ATH).

VLS      0.88 265 ePn    56 12.60  -1.9
ITM      1.09 170 ePb    56 18.20   0.7
NEO      1.59  48 ePn    56 24.70   0.1
ATH      1.62 100 ePn    56 25.50   0.5
KZN      2.05   2 ePn    56 31.50   0.2
LSK      2.07 336 ePn    56 34.20   2.5
SRN      2.09 321 ePn    56 32.50   0.6
KBN      2.46 344 ePn    56 37.70   0.6
PLG      2.51  32 ePn    56 37.50  -0.4
VLO      2.79 323 ePn    56 49.30   7.6X
BERA     2.79 332 ePn    56 42.70   1.0
VAY      3.13  12 iPn    56 46.40  -0.2
TIR      3.39 336 ePn    56 54.00   3.6X
SKO      3.71 357 iPn    56 53.00  -1.9
                  i      57 05.00
                  iSn    57 35.00
PUK      4.03 340 ePn    56 58.50  -0.8
RDO      4.13  45 ePn    57 00.00  -0.9
HFS     22.48 349 eP     00 52.10  -4.0X
        0.7s      4.10nm          4.0mb
      S.D. = 1.3  on  14 of  17 obs.
-------------------------------------
?  JUL  13, 1989  00h 03m 48.31± 4.72s
   7.842 S ±48.0km  128.463 E ±15.8km
   DEPTH = 123.7 ± 28.8 km
   3.9mb (  2 obs.)
 BANDA SEA                         (280)

KUPT     5.32 244 eP     05 06.30  -0.4
                  eS     06 01.70
MTN      5.62 152 eP     05 12.00   1.1
                  eS     06 15.00
KNA      7.86 178 eP     05 41.20  -0.2
        0.3s     18.00nm          5.2mb X
                  eS     07 07.00
WB5     13.26 155 eP     06 50.80  -2.2
                  eS     09 12.20
MBL     15.65 211 eP     07 24.00   0.8
                  eS     10 01.00
ASPA    16.58 162 eP     07 35.00   0.1
        0.6s     10.00nm          4.3mb
                  eS     10 33.40
QIS     16.61 141 iPd    07 35.90   0.6
                  eS     10 33.00
WARB    18.32 185 eP     07 56.00   0.2
        0.3s      1.00nm          3.6mb
                  eS     11 14.00
      S.D. = 1.4  on   8 of   8 obs.
-------------------------------------
*  JUL  13, 1989  00h 26m 48.70± 2.40s
   17.707 S ±26.0km   71.927 W ±14.0km
   DEPTH =  33.0km  (normal)
 NEAR COAST OF PERU                (115)

ARE      1.31  19 iPc    27 11.00   0.0
                  iS     27 24.10
LPB      3.84  73 Pd     27 47.00  -0.4
        1.2s    562.50nm
                  S      28 29.00
CNCB     3.87  77 P      27 48.60   0.6
ZOBO     3.91  69 Pc     27 44.00  -4.5X
                  i      27 45.20
                  iS     28 26.00
CCH      5.53  88 P      28 10.90  -0.3
                  e      28 24.40
HUA      6.52 329 eP     28 31.70   6.4X
NNA      7.41 319 eP     28 37.40   0.0
        0.8s      6.72nm          4.7mb X
      S.D. = 0.6  on   5 of   7 obs.
-------------------------------------
*  JUL  13, 1989  00h 54m 21.39± 2.02s
   38.331 N ± 9.0km   72.960 E ±12.6km
   DEPTH =  69.8 ± 24.8 km
   4.3mb (  1 obs.)
 TAJIK SSR                         (715)

QUE      9.52 213 eP     56 37.80  -0.5
                  eS     58 21.70
NDI     10.26 159 eP     56 49.00   0.9
                  eS     58 27.50
WMO     12.39  59 P      57 16.30  -0.4
GTA     20.91  79 eP     58 55.60  -4.7X
HYB     21.40 165 eP     59 06.00   0.8
                  eS     02 49.50
GBA     24.95 170 Pd     59 38.30  -1.3
        0.6s      7.90nm          4.3mb
SUF     37.23 326 iP     01 27.70   0.3
NUR     37.29 322 iP     01 28.10   0.2
HFS     42.62 321 eP     02 12.00   0.1
        0.5s      4.20nm          4.5mb X
      S.D. = 1.0  on   8 of   9 obs.
-------------------------------------
%  JUL  13, 1989  01h 52m 07.61± 0.68s
   61.808 N ± 7.4km    7.364 E ± 9.1km
   DEPTH =  10.0km  (geophysicist)
 SOUTHERN NORWAY                   (535)
      MD 2.1 (BER).

MOL      0.77   6 iP     52 22.14  -0.5
                  eS     52 32.70
HYA      0.86 222 iP     52 23.24  -0.8
                  iS     52 35.55
SUE      1.46 240 iP     52 33.48  -0.5
                  eS     52 54.35
ASK      1.70 219 iP     52 37.58   0.2
                  iS     53 00.88
BER      1.74 215 eP     52 38.73   0.8
                  iS     53 02.26
RGS      1.88  48 eP     52 41.20   1.2
                  eS     53 02.30
ODD1     1.94 191 eP     52 40.61  -0.3
                  eS     53 03.52
NRA0     2.29 116 iPd    52 44.50  -1.5
                  iPg    52 46.50
                  iS     53 11.90
BLS1     2.44 186 iP     52 49.86   1.7
                  eS     53 18.60
KMY      2.81 203 eP     52 53.05  -0.3
                  eS     53 22.40
      S.D. = 1.1  on  10 of  10 obs.
-------------------------------------
   JUL  13, 1989  02h 02m 22.97± 0.13s
   13.259 S ± 3.3km  167.110 E ± 3.7km
   DEPTH = 201.5km  ( 15 depth phases)
   5.3mb ( 29 obs.)
 VANUATU ISLANDS                   (186)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 27C
      Centroid Location:
      Origin Time        02:02:27.4 0.7
      Lat 13.24S 0.06 Lon 166.73E 0.06
      Dep 187.1 1.8 Half-duration  1.8
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 0.97 0.05  Mtt= 0.33 0.10
        Mff=-1.30 0.09  Mrt=-0.36 0.06
        Mrf=-0.19 0.06  Mtf= 0.12 0.09
       Principal Axes:
        T  Val=  1.15  Plg=65  Azm=168
        N        0.17     24      358
        P       -1.32      4      267
      Best Double Couple:Mo=1.2*10**17
       NP1:Strike=333 Dip=46 Slip=  55
       NP2:        198     54      121

HNR      7.99 298 eP     04 16.00  -1.1
                  eS     05 42.00
DZM      8.79 184 iPc    04 28.30   0.8
                  iS     06 09.60
SVA     11.95 115 eP     05 10.80   2.6
BRS     19.42 221 iPd    06 37.30   1.2
                  i      07 08.50
                  i      07 32.20
                  iS     10 08.00
                  iPcP   10 50.00
                  i(ScP)14 08.70
PMG     19.93 279 iPd    06 42.10   0.9
        0.7s    130.14nm          5.6mb
LAT     20.86 286 eP     06 52.00   1.6
CTA     21.09 248 iPd    06 53.60   0.9
        0.6s     42.00nm          5.1mb
                  i      07 30.30
                  iS     10 36.00
RMQ     21.67 230 iPc    07 00.90   2.6
                  e      10 55.00
COO     22.23 217 eP     07 06.00   2.2
        1.0s    150.00nm          5.5mb
                  e      10 55.00
KRP     25.69 164 P      07 36.00  -0.1
HBZ     26.22 160 P      07 41.30   0.3
WHH     26.84 164 P      07 47.30   0.5
BWA     27.04 216 iPc    07 47.60  -0.9
                  iPcP   11 04.90
QIS     27.27 251 eP     07 50.00  -0.7
CAN     27.38 214 iPc    07 52.00   0.4
                  iPcP   11 06.10
TTH     27.55 164 eP     07 52.60  -0.4
MNG     28.23 166 eP     07 57.80  -1.3
        0.6s     99.00nm          5.7mb
KIW     28.34 167 P      07 59.10  -1.0
PGZ     28.42 165 P      07 59.10  -1.7
        0.6s     36.00nm          5.3mb
TCW     28.54 169 P      08 01.60  -0.3
CAW     28.60 167 P      08 01.40  -1.1
MRW     28.65 168 P      08 01.80  -1.0
WEL     28.71 168 eP     08 02.90  -0.5
WDW     28.74 168 P      08 02.50  -1.2
MTW     28.75 167 P      08 02.20  -1.5
BLW     28.94 167 P      08 04.10  -1.3
MOW     28.94 167 P      08 03.90  -1.6
TOO     30.95 215 iPc    08 23.70   0.5
        0.6s     72.00nm          5.6mb
                  e      11 15.00
MSZ     31.31 179 Pd     08 27.00   0.9
        1.0s    113.00nm          5.5mb
WB5     32.03 254 iPc    08 31.80  -0.9
                  iPcP   11 27.30
                  iScP   14 44.80
BFD     32.39 218 iPc    08 35.90   0.3
                  i      11 18.30
ASPA    33.08 247 iPc    08 40.80  -1.0
      Z  21s      0.65um          4.3M.
                  e      11 19.90
```

13d 02h

		eS	13	42.60			
		e	14	47.60			
		e	18	44.40			
		LR	21	14.30			
ADE	33.55	225 iPc	08	46.00	0.3		
	0.9s	67.23nm			5.3mb		
TAU	34.13	206 iPc	08	50.90	0.4		
MTN	35.03	266 eP	08	59.00	0.5		
KNA	37.17	261 eP	09	16.50	0.1		
FORR	39.92	238 iPc	09	39.00	0.0		
	0.4s	71.00nm			5.6mb		
WARB	40.04	245 iPc	09	40.70	0.6		
	0.4s	37.00nm			5.3mb		
PMO	43.61	98 iP	10	10.60	1.3		
	1.1s	80.00nm			5.2mb		
VAH	43.85	98 iP	10	12.20	1.0		
	1.1s	75.00nm			5.1mb		
RUV	44.09	98 iP	10	14.00	0.9		
	1.1s	65.00nm			5.1mb		
MBL	45.70	253 iPc	10	26.30	0.5		
	0.7s	73.00nm			5.2mb		
MEKA	47.29	246 eP	10	38.30	0.1		
	0.4s	22.00nm			4.9mb		
PCI	48.38	281 ePd	10	50.00	3.3X		
	0.6s	8.00nm			4.3mb		
KLB	48.69	240 iPd	10	48.10	-0.8		
NWAO	49.38	238 iPc	10	53.10	-1.1		
NANU	49.74	252 iPc	10	57.40	0.4		
	0.4s	41.00nm			5.3mb		
RKG	49.79	236 eP	10	57.60	0.3		
MRWA	49.83	243 eP	10	57.20	-0.4		
MUN	50.06	239 iPd	10	59.00	-0.3		
TRT	53.77	270 iPc	11	27.40	0.2		
KKM	54.06	288 ePd	11	29.30	-0.1		
KAKJ	55.38	334 iP+	11	38.10	-0.3		
CHJJ	55.77	332 P	11	39.90	-1.3		
IIDJ	55.80	331 iP+	11	40.90	-0.6		
DRV	56.34	193 eP	11	44.80	0.0		
MAT	56.54	332 iPc	11	45.70	-0.9		
	1.0s	55.00nm			5.2mb		
MTMJ	56.76	332 P	11	47.80	-0.5		
NIIJ	56.76	333 P	11	47.80	-0.3		
TSRJ	56.77	330 P	11	48.00	-0.2		
HOOJ	59.54	340 eP	12	05.30	-2.0		
QZH	60.66	309 eP	12	14.50	-0.7		
		epP	12	58.50	190kmX		
ASAJ	61.30	340 eP	12	18.90	-0.3		
SSE	62.36	316 Pc	12	26.00	-0.4		
	1.0s	47.00nm			5.3mb		
		i	12	35.20			
		i	13	04.00			
		e	20	36.00			
NJ2	64.52	315 Pc	12	37.20	-3.3X		
S8A	64.60	180 iPc	12	41.70	1.4		
QIZ	64.90	299 eP	12	44.30	1.2		
KGM	65.05	279 ePc	12	44.20	0.0		
ADK	66.38	11 eP	12	52.00	0.0		
	1.0s	60.00nm			5.3mb		
WHN	66.85	312 P	12	55.00	-0.4		
DL2	67.04	323 P	12	56.00	-0.4		
TIA	68.14	318 eP	13	02.70	-0.6		
CN2	68.31	329 iPc	13	04.50	0.3		
SNG	69.08	283 eP	13	09.90	0.5		
GYA	70.76	304 P	13	20.00	0.4		
BJI	71.03	321 eP	13	21.00	0.2		
		eS	22	20.00			
NNT	71.56	288 eP	13	25.00	0.6		
TIY	72.08	317 iPc	13	28.00	0.8		
	1.0s	0.10nm			2.5mb X		
		S	22	39.50			
XAN	72.59	312 Pc	13	30.20	0.0		
KMI	73.41	301 Pc+	13	37.00	1.7		
	2.0s	0.50nm			2.9mb X		
		pP	14	25.50	203km		
		S	22	53.00			
BDT	73.75	293 iPc	13	37.50	0.4		
CHG	74.34	294 iPc	13	41.00	0.5		
	1.1s	44.30nm			5.1mb		
HHC	74.37	319 eP	13	41.40	1.0		
CD2	75.00	307 eP	13	44.60	0.5		
BTO	75.22	319 P	13	46.50	1.2		
		eS	23	10.00			
SPA	76.83	180 iPc	13	54.90	1.0		
	0.9s	150.91nm			5.7mb		
		e	14	10.90			
LZH	77.22	312 P	13	58.50	1.9		
	2.0s	137.00nm			5.3mb		

KDC	78.16	21 ePc	14	01.00	0.0		
SVW	79.80	17 eP	14	10.10	0.2		
TTA	81.16	16 ePc	14	17.50	0.5		
GTA	81.54	314 iPc	14	20.80	1.2		
		pP	15	08.00	193km		
		SKS	24	17.80			
PMR	82.17	20 ePc	14	22.30	0.2		
	0.8s	37.70nm			5.2mb		
SHL	82.74	298 iP	14	26.80	0.7		
MAW	83.18	202 eP	14	27.00	-0.3		
	0.9s	69.00nm			5.4mb		
BRK	83.32	49 e(P)	14	30.00	1.5		
		epP	15	19.20	201km		
PRS	83.41	50 e(P)	14	29.70	0.7		
		epP	15	18.20	198km		
TOA	83.52	20 ePc	14	30.00	0.9		
MHC	83.58	49 e(P)	14	32.10	2.1		
		epP	15	20.80	199km		
PRI	83.87	51 ePc	14	32.00	0.5		
		epP	15	22.60	207km		
BCH	83.97	52 P	14	31.80	-0.2		
		pP	15	22.20	206km		
WDC	84.16	46 ePc	14	33.00	0.3		
		ipP	15	23.40	206km		
IMA	84.28	15 ePc	14	33.20	0.3		
	1.0s	23.30nm			4.9mb		
ORV	84.51	47 ePc	14	34.40	-0.1		
		epP	15	24.70	206km		
CMB	84.76	49 ePc	14	35.80	0.0		
		ipP	15	26.20	206km		
FRI	84.89	50 eP	14	36.30	-0.1		
		epP	15	26.70	206km		
FBA	85.01	18 ePc	14	36.10	-0.3		
ISA	85.37	52 eP	14	40.00	1.1		
		e	15	26.00			
PLM	85.87	55 eP	14	42.00	0.4		
		e	15	30.00			
TPC	86.75	54 eP	14	46.00	0.3		
		e	15	32.00			
KVN	86.79	49 P	14	46.00	0.0		
		pP	15	35.50	201km		
TNP	87.12	50 P	14	47.50	-0.1		
		pP	15	35.00	192km		
GLA	87.40	55 eP	14	50.00	1.2		
		e	15	37.00			
PNT	89.37	39 eP	14	58.00	0.3		
DPW	89.73	40 P	15	00.00	0.5		
		pP	15	46.80	188kmX		
INK	91.55	19 eP	15	07.00	-0.3		
		pP	15	53.00	184kmX		
WMQ	91.59	315 Pc	15	08.60	0.4		
		pP	15	55.20	186kmX		
		SKS	25	20.00			
		S	25	38.50			
HYB	92.54	287 eP	15	13.00	0.0		
	1.4s	125.00nm			5.8mb		
GBA	92.74	283 Pd	15	14.60	0.7		
	1.0s	15.90nm			5.1mb		
LRM	92.85	44 eP	15	14.90	0.7		
PV09	93.34	51 P	15	17.50	0.9		
		pP	16	06.80	198km		
BW06	94.07	47 P	15	20.00	0.2		
ALQ	94.60	55 e(P)	15	21.80	-0.6		
		epP	16	11.50	200km		
YKA	96.32	27 eP	15	32.70	3.4X		
GOL	96.46	51 P	15	31.20	0.4		
	0.6s	4.32nm			5.0mb		
		pP	16	18.20	188kmX		
MBC	98.93	13 eP	15	42.00	1.1		
FRB	116.64	24 ePKP	20	43.00	-1.1		
ZOBO	118.02	117 PKP	20	49.00	0.1		
		eLR	39	24.00			
KEV	118.27	345 iPKP	20	47.20	0.2		
	0.6s	22.20nm					
SOD	120.05	343 iPKP	20	50.30	-0.2		
SUF	123.42	340 iPKP	20	56.50	-0.5		
	0.6s	69.10nm					
PRY	124.04	224 iPKPd	20	59.20	-0.4		
	0.7s	22.50nm					
SLR	124.24	226 iPKPc	21	00.00	0.0		
	0.9s	29.41nm					
NUR	125.45	338 ePKP	21	01.00	0.0		
	0.6s	83.40nm					
BUL	127.38	232 iPKPd	21	05.90	-0.3		
	1.0s	41.00nm					
AKU	127.51	3 iPKP	21	06.80	1.9		
	1.0s	24.00nm					

PTZ	128.37	240 iPKPd	21	08.50	0.3		
KRI	128.45	236 iPKPd	21	19.80	11.5X		
PPD	128.52	133 ePKP	21	08.00	-0.2		
NAI	128.66	258 iPKPc	21	11.50	2.6		
	1.0s	10.00nm					
REY	128.80	5 iPKP	21	09.20	1.9		
IKZ	129.16	245 ePKP	21	11.00	1.2		
NB2	129.17	345 PKP	21	07.80	-0.5		
HFS	129.28	343 ePKP	21	08.00	-0.4		
	0.8s	27.60nm					
LSZ	130.44	236 ePKP	21	13.00	0.9		
	0.5s	2.00nm					
		i	24	20.10			
VAO	130.89	137 ePKP	21	14.20	1.5		
HRI	131.57	303 ePKP	21	15.50	1.7		
MZZ	131.99	242 iPKPd	21	16.20	1.1		
BBTK	132.03	312 iPKPc	21	14.00	-0.5		
DSI	132.22	301 ePKP	21	16.00	1.1		
MBH	132.97	298 iPKPd	21	17.00	0.7		
KMZ	133.34	237 iPKPd	21	18.90	1.3		
BAO	134.95	128 e(PKP)	21	00.00	-20.7X		
SPC	134.99	330 iPKP	21	20.70	0.8		
KSP	135.66	334 ePKP	21	09.00	-11.8X		
	0.8s	30.00nm					
		e	21	21.00			
		id	21	22.70			
EZN	136.58	315 ePKP	21	17.00	-5.9X		
BRG	136.62	335 ePKP	21	13.60	-9.1X		
		i	21	22.60			
		i	24	39.40			
		i	24	45.60			
CLL	136.65	336 ePKP	21	13.00	-9.7X		
		i	21	22.90			
		iSKP	24	39.20			
SRO	136.86	329 iPKP	21	24.00	0.8		
PRU	137.04	334 PKP	21	23.60	0.1		
		i	21	25.80			
ZST	137.19	331 iPKPc	21	24.00	0.2		
EKA	137.34	352 PKPc	21	23.50	-0.4		
	1.2s	17.20nm					
WIT	137.56	342 ePKP	21	27.00	2.7		
MOX	137.71	337 ePKP	21	24.00	-0.8		
	1.2s	18.00nm					
KHC	138.10	334 PKP	21	15.90	-9.7X		
		i	21	25.90			
WTS	138.24	342 ePKP	21	26.00	0.4		
	0.9s	45.00nm					
		e	24	45.50			
VAY	138.35	319 ePKP	21	14.50	-11.7X		
		i	21	25.00			
		i	24	44.00			
GRF	138.63	336 ePKP	21	19.00	-7.5X		
		e	21	26.00			
		e	21	28.50			
SKO	138.72	320 ePKP	21	16.00	-10.8X		
		i	21	27.00			
		i	24	45.50			
DMU	139.18	355 ePKP	21	15.90	-11.4X		
TNS	139.22	339 ePKPd	21	28.20	0.6		
PTJ	139.35	329 ePKP	21	20.20	-7.8X		
ENN	139.58	342 ePKP	21	28.50	0.4		
	1.0s	52.00nm					
		i	21	31.00			
		e	24	47.50			
MEM	139.69	341 PKPd	21	28.80	0.6		
		i	21	31.00			
DLE	139.75	354 ePKP	21	26.00	-2.3		
KBA	139.75	332 iPKPc	21	24.80	-4.0X		
	0.6s	11.60nm					
		i	21	30.10			
		i	21	37.70			
		e	22	23.00			
		e	23	25.00			
DCN	139.77	355 ePKP	21	16.20	-12.1X		
ABH	139.82	340 ePKP	21	21.02	-7.6X		
LJU	139.95	330 ePKP	21	22.00	-6.9X		
		e	21	28.50			
YRH	139.98	352 ePKP	21	28.00	-0.7		
VBY	139.98	329 ePKP	21	23.00	-6.0X		
		e	21	29.20			
UCC	140.02	343 PKPd	21	29.80	1.0		
RUP	140.14	340 ePKP	21	21.90	-7.3X		
CEY	140.22	330 ePKP	21	23.00	-6.5X		
VOY	140.27	331 ePKP	21	22.30	-7.3X		
		e	21	31.80			
SNF	140.30	343 PKPd	21	29.80	0.4		
		i	21	32.40			

ETA	140.30	354	ePKP	21	33.30	4.0X
FVI	140.37	332	PKP	21	27.70	-1.9
WLF	140.47	341	PKP	21	23.00	-6.7X
GWF	140.56	339	PKP	21	23.02	-7.0X
DOU	140.58	342	PKP	21	23.20	-6.7X
			i	21	33.00	
			e	24	50.20	
ECB	140.69	354	ePKP	21	31.50	1.5
ECP	140.83	354	ePKP	21	30.00	-0.2
CDF	141.16	339	PKP	21	24.80	-6.4X
FEL	141.34	337	PKP	21	24.40	-7.1X
ECH	141.37	338	PKP	21	25.12	-6.3X
MOF	141.69	338	PKP	21	25.04	-7.1X
VITF	141.78	340	PKP	21	26.20	-5.9X
BSF	141.82	338	PKP	21	26.89	-5.5X
RSM	142.50	329	PKPc	21	31.00	-2.5
VAI	142.69	335	PKPc	21	30.10	-3.6X
SFI	142.80	330	PKP	21	31.90	-2.1
FLN	143.14	346	ePKP	21	31.00	-3.4X
	0.8s		24.20nm			
MME	143.15	331	PKPc	21	32.60	-2.3
LDF	143.21	346	ePKP	21	31.20	-3.4X
	0.8s		13.45nm			
BOB	143.27	333	PKPc	21	32.40	-2.5
LOR	143.31	341	ePKP	21	32.90	-1.9
	1.0s		23.00nm			
LBF	143.52	340	ePKP	21	32.80	-2.4
	1.0s		25.00nm			
GRR	143.58	346	ePKP	21	32.90	-2.3
	0.8s		34.90nm			
PII	143.59	331	PKPc	21	32.00	-3.3X
SSF	143.60	341	ePKP	21	33.40	-1.9
	0.8s		36.25nm			
LSD	143.68	336	PKP	21	34.38	-1.4
LPG	143.80	336	ePKP	21	34.50	-1.6
	1.2s		71.40nm			
PCP	143.84	334	PKP	21	33.56	-2.3
SMF	143.86	340	ePKP	21	34.10	-1.7
	1.2s		68.45nm			
AVF	143.89	341	ePKP	21	33.80	-2.0
	1.1s		62.25nm			
LPF	143.95	346	ePKP	21	34.20	-1.6
	0.7s		67.25nm			
BNI	144.20	336	PKPc	21	36.00	-0.6
FIN	144.26	334	PKP	21	34.58	-2.0
BGF	144.26	341	ePKP	21	35.40	-1.0
RRL	144.27	336	PKP	21	36.02	-0.8
ROB	144.33	334	PKP	21	34.89	-1.8
SOI	144.33	319	PKPc	21	36.10	-0.7
SOB1	144.34	127	ePKP	21	35.40	-2.1
			e	21	37.40	
PZZ	144.48	335	PKP	21	35.30	-1.8
ENR	144.58	334	PKP	21	34.79	-2.4
IMI	144.63	334	PKP	21	36.33	-0.9
MAF	144.65	341	ePKP	21	36.70	-0.4
ATN	144.66	320	PKPc	21	35.70	-1.7
TCF	144.70	342	ePKP	21	37.00	-0.2
SAOF	144.71	334	PKP	21	36.86	-0.5
AUTN	144.76	334	PKP	21	37.22	-0.4
TOUF	144.82	334	PKP	21	37.40	-0.3
SBF	144.87	334	ePKP	21	37.10	-0.5
AURF	144.89	334	PKP	21	37.46	-0.2
LSF	144.93	342	ePKP	21	37.40	-0.2
MVIF	144.96	334	PKP	21	37.72	-0.2
REVF	144.99	334	PKP	21	37.55	-0.3
MFF	145.07	345	ePKP	21	37.70	-0.1
CALN	145.19	335	PKP	21	38.11	-0.2
CVF	145.25	331	PKP	21	38.83	0.6
MNO	145.28	320	PKPc	21	39.40	0.7
FRF	145.44	335	ePKP	21	38.50	0.0
MEU	145.63	319	PKPc	21	40.30	1.1
LRG	145.65	335	ePKP	21	39.00	0.2
	0.8s		83.95nm			
LMR	145.69	335	ePKP	21	38.80	-0.1
RJF	145.79	342	ePKP	21	39.50	0.4
	1.0s		88.00nm			
CAF	145.96	341	ePKP	21	40.00	0.6
LFF	146.36	342	ePKP	21	40.60	0.6
LPO	146.45	342	ePKP	21	40.80	0.6
	0.8s		72.55nm			
ITR	146.51	129	ePKP	21	41.10	0.0
			e	21	46.20	
			e	22	10.90	
LVI	146.69	322	PKPc	21	42.70	2.0
BNG	147.76	257	iPKPc	21	42.60	-0.6
	0.7s		174.00nm			
			ic	21	46.40	
			id	21	49.80	
			ic	22	33.40	
ETER	148.00	338	ePKP	21	46.80	4.1X
ECRI	149.40	345	iPKPc	21	51.20	6.2X
ESEL	150.15	335	ePKP	21	52.50	6.4X
EROO	150.17	339	ePKP	21	52.20	6.1X
STS	150.24	354	iPKPc	21	52.70	6.6X
ERUA	150.55	351	ePKP	21	53.00	6.4X
ETOR	150.95	343	iPKPc	21	54.60	7.2X
EZAM	150.99	354	ePKP	21	54.00	6.7X
GUD	151.66	346	iPKPc	21	56.40	7.9X
ECHE	151.74	340	iPKPc	21	56.50	8.0X
TOL	152.36	345	ePKP	21	51.00	1.6
			ipP	21	58.50	
EVIA	153.10	342	iPKPc	21	59.80	9.2X
EALH	153.46	339	ePKP	22	00.20	9.3X
EBAN	153.91	344	e(PKP)	22	01.00	9.4X
EHOR	154.61	346	e(PKP)	22	02.50	10.0X
ASMO	154.65	343	ePKP	22	01.60	8.9X
AAPN	154.80	343	ePKP	22	02.00	9.1X
ACHM	154.91	343	ePKP	22	02.50	9.5X
ALOJ	154.98	343	ePKP	22	03.10	9.9X
APHE	155.01	342	iPKP	22	02.50	9.3X
ATEJ	155.14	343	ePKP	22	03.00	9.6X
EVAL	155.16	348	e(PKP)	22	03.80	10.6X
EPRU	155.42	345	ePKP	22	05.00	11.4X
BMK	157.49	345	ePKP	22	00.00	3.7X
			e	22	20.00	
KIC	169.45	230	PKP	22	07.94	0.2
	1.1s		31.50nm			
LIC	169.57	229	PKP	22	08.02	0.2
	1.0s		16.50nm			
TIC	169.84	230	PKP	22	08.12	0.1
	1.1s		31.00nm			

S.D. = 1.1 on 219 of 279 obs.

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* JUL 13, 1989 02h 44m 17.91± 0.98s
39.729 N ± 6.9km 15.625 E ±11.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

MGR	0.41	352	Pd	44	26.10	-0.2
			eSg	44	32.20	
TDS	0.55	97	P	44	28.50	-0.7
ATN	1.57	185	P	44	46.10	0.2
SOI	1.69	168	P	44	47.40	-0.1
			eSn	45	07.00	
LCI	1.89	71	P	44	51.30	0.9

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

& JUL 13, 1989 03h 34m 42.10s
62.912 N 151.316 W
DEPTH = 116.3km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.70	136	iP	35	01.16	-0.2
HUR	0.77	84	eP	35	01.45	-0.5
			S	35	15.88	
SKT	0.94	186	iP	35	03.24	-0.3
			S	35	19.00	
RND	1.22	65	iP	35	06.09	-0.5
			S	35	23.70	
MCK	1.35	51	iP	35	07.68	-0.3
			S	35	26.75	
PWA	1 43	151	eP	35	08.86	0.0
SUA	1.48	169	eP	35	09.23	-0.3
			S	35	31.65	
GHO	1.60	135	eP	35	10.74	-0.2
SPU	1.77	192	iP	35	12.85	-0.2
NEA	1.95	30	eP	35	14.26	-0.9
KNK	2.02	137	eP	35	15.51	-0.6
WRH	2.13	41	eP	35	16.82	-0.6
TTA	2.15	273	iP	35	17.20	-0.6
NKA	2.18	179	iP	35	20.41	2.3
CCB	2.34	40	eP	35	19.33	-0.8
RDT	2.40	193	eP	35	20.62	-0.5
HDA	2.46	50	eP	35	21.00	-0.8
TOA	2.52	106	eP	35	22.48	-0.2
SDG	2.69	96	eP	35	24.56	-0.3
GLM	2.71	38	iP	35	24.31	-0.8
NNL	2.88	180	eP	35	28.95	1.6
KLU	2.90	117	eP	35	26.07	-1.7
VZW	2.92	127	eP	35	27.34	-0.6
ILIM	2.95	196	eP	35	29.32	1.0
SEW	2.96	162	eP	35	27.87	-0.5
DOT	3.36	74	iP	35	32.79	-1.0
GLB	3.82	109	iP	35	38.58	-1.4
			S	36	21.17	

27 obs. ossocioted

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* JUL 13, 1989 05h 45m 58.49± 1.03s
32.148 S ± 8.4km 68.694 W ±10.7km
DEPTH = 10.0km (geophysicist)
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.32	25	iPc	46	12.80	7.7X
CFA	0.66	36	iPd	46	13.50	1.8
			S	46	25.50	
RTCB	0.67	352	iPd	46	12.20	0.4
			S	46	24.00	
RTBS	0.81	307	iPd	46	14.00	-0.1
RTLL	0.84	13	iPd	46	13.20	-1.5
MRA	2.54	97	iPc	46	39.50	-0.9
RFA	2.62	176	ePd	46	42.10	0.4

S.D. = 1.5 on 6 of 7 obs.

? JUL 13, 1989 06h 10m 48.89± 4.09s
39.355 N ±13.8km 142.827 E ±35.1km
DEPTH = 10.0km (geophysicist)
NEAR EAST COAST OF HONSHU, JAPAN(228)

OFUJ	0.94	253	iPd	11	07.00	0.2
			S	11	13.90	
AOMJ	2.24	303	eP	11	26.60	0.1
YAMJ	2.48	242	P	11	28.20	-1.8
NIIJ	3.68	236	P	11	47.90	0.9
KAKJ	3.78	215	P	11	48.00	-0.5
			eS	12	25.70	
CHJJ	4.49	224	P	11	58.90	0.5
			eS	12	44.50	
MAT	4.61	234	iPd	12	00.80	0.6

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

? JUL 13, 1989 08h 51m 30.51± 3.18s
24.821 N ±17.4km 122.645 E ±42.0km
DEPTH = 108.8 ± 30.6 km
TAIWAN REGION (243)

TWC	0.75	254	iPd	51	49.50	0.1
TWZ	1.01	286	iPd	51	51.80	-0.2
			eS	52	06.10	
ANP	1.09	290	iPd	51	53.00	0.1
	0.9s		766.39nm			
			eS	52	09.50	
TWD	1.21	233	ePc	51	54.10	0.0
TWQ	1.73	252	iPd	52	00.60	0.0
SSE	6.38	349	Pc	53	03.50	0.0
	0.6s		19.00nm		4.6mb X	
			eLg	55	11.50	

S.D. = 0.1 on 6 of 6 obs.

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* JUL 13, 1989 09h 05m 02.93± 0.83s
49.635 N ± 9.4km 5.992 E ± 9.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 1.0 (STR).

WLF	0.11	74	iPc	05	04.40	-1.3
MEM	0.98	1	P	05	22.60	1.2
DOU	1.02	298	P	05	21.10	-1.0
GWF	1.25	121	Pg	05	31.30	5.1X
			Sg	05	37.67	
SNF	1.41	309	P	05	28.90	0.3
VITF	1.42	180	Pg	05	33.61	4.9X
CDF	1.49	145	Pg	05	30.59	0.8
			Sg	05	43.47	
ECH	1.62	151	Pg	05	31.63	0.1
			Sg	05	47.13	
BSF	1.88	163	Pg	05	39.17	3.7X
			Sg	05	55.43	

S.D. = 1.3 on 6 of 9 obs.

JUL 13, 1989 09h 48m 45.05± 0.28s
41.207 N ± 2.7km 19.514 E ± 2.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 3.6 (ATH), 3.2 (TTG).

TIR	0.30	62	iPgd	48	51.20	-0.1
LACI	0.45	19	iPgd	48	53.90	-0.4
BERA	0.60	147	ePg	48	57.70	0.5
ULC	0.78	345	iPgc	49	00.40	0
			eSg	49	10.50	

13d 09h

PHP	0.85	55	iPgd	49	00.70	-0.7
PUK	0.88	19	ePg	49	01.10	-0.9
KKS	1.10	37	iPg	49	05.00	-0.6
BCI	1.23	19	ePg	49	07.00	-0.9
TTG	1.24	351	ePg	49	08.50	0.5
			iSg	49	26.00	
SRN	1.38	164	iPn	49	14.60	4.4X
PVY	1.43	14	ePg	49	12.50	1.4
			eSg	49	33.00	
HCY	1.45	329	ePg	49	11.50	0.2
			eSg	49	31.00	
LCI	1.47	234	Pc	49	11.00	-0.6
			eSn	49	34.40	
SKO	1.63	61	iPn	49	14.50	0.5
			iSn	49	36.00	
			Lg	49	38.00	
NKY	1.65	347	iPgd	49	15.20	0.9
			eSg	49	38.00	
IVA	1.69	10	ePn	49	16.10	1.3
			eSn	49	40.00	
BRY	1.84	337	ePn	49	17.50	0.4
			eSn	49	42.20	
KZN	1.94	117	ePb	49	19.80	1.4
PLE	2.12	358	ePn	49	22.50	1.4
			eSn	49	50.00	
VAY	2.31	86	iPn	49	23.80	0.1
LIT	2.52	115	ePd	49	26.70	0.0
KNT	2.55	90	eP	49	27.20	0.0
THE	2.68	101	eP	49	28.30	-0.6
TDS	2.87	239	P	49	31.90	0.1
HVAR	3.01	312	e(Pn)	49	28.90	-4.7X
SRS	3.08	90	iPc	49	34.20	-0.4
PLG	3.10	104	ePn	49	34.80	-0.1
VLS	3.14	164	ePn	49	35.30	-0.2
MGR	3.19	252	Pd	49	37.00	0.7
			eSn	50	33.00	
SGO	3.25	260	P	49	37.50	0.4
NEO	3.41	123	ePn	49	39.20	-0.2
SOI	4.11	222	P	49	48.40	-0.9
			eSn	50	36.00	
BZS	4.67	18	ePc	49	51.00	-6.2X
VBY	5.30	326	ePn	50	04.80	-1.3
			eSn	51	03.00	
PTJ	5.36	332	eP	51	03.60	56.6X
CMP	5.72	43	ePc	50	45.00	32.9X
VOY	6.32	322	ePn	50	18.70	-1.8
			eSn	51	28.80	
MLR	6.35	45	ePd	50	21.00	-0.1
VRI	7.01	46	eP	50	30.00	-0.2

S.D. = 0.8 on 34 of 39 obs.

JUL 13, 1989 11h 57m 37.21± 0.74s
18.055 N ± 6.2km 61.577 W ± 9.0km
DEPTH = 33.0km (normol)
LEEWARD ISLANDS (92)
ML 4.0 (FDF).

ANG	0.93	195	eP	57	53.86	0.0
BPA	1.04	195	eP	57	55.06	-0.5
NEV	1.32	226	eP	57	59.16	-0.3
SKI	1.32	237	eP	57	59.31	-0.2
MGH	1.46	205	iPc	58	01.86	0.3
			S	58	23.50	
DEG	1.80	164	eP	58	06.00	-0.5
PAG	2.02	183	eP	58	10.50	0.8
			S	58	36.00	
MGG	2.14	173	eP	58	12.10	0.8
DTMT	2.81	176	eP	58	22.11	1.2
FDF	3.33	173	eP	58	27.96	-0.3
			S	59	06.10	
CRM	3.34	169	eP	58	27.55	-0.9
			S	59	04.80	
MVM	3.54	169	eP	58	30.69	-0.6
BIM	3.55	172	eP	58	31.37	-0.1
			S	59	10.10	
YKA	57.42	334	eP	07	24.60	-0.2
INK	66.70	337	eP	08	27.00	0.3

S.D. = 0.6 on 15 of 15 obs.

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* JUL 13, 1989 12h 53m 05.54± 0.71s
35.696 N ±12.7km 80.691 E ± 9.3km
DEPTH = 33.0km (normol)
4.5mb (3 obs.)
KASHMIR-TIBET BORDER REGION (304)

KSH	5.30	316	ePn	54	25.50	0.9
			Sn	55	24.00	
QUE	12.78	248	eP	56	06.10	-1.7
GTA	15.61	71	eP	56	49.20	4.4X
	Z 10s		0.30um			
MAIO	17.16	278	eP	57	06.00	1.5
CHG	23.30	131	eP	58	12.10	0.7
TIY	25.47	76	eP	58	32.20	0.0
	Z 17s		0.40um			4.0MszX
SUF	42.85	327	eP	01	01.00	-0.8
HFS	48.54	322	eP	01	46.80	-0.3
	0.5s		1.90nm			4.4mb
NB2	49.73	323	P	01	55.60	-0.7
BNG	64.92	257	ePd	03	45.20	0.9
	0.5s		5.00nm			4.9mb
			ic	03	47.30	
MBC	67.60	5	eP	04	00.00	-0.5
	0.7s		2.00nm			4.3mb

S.D. = 1.1 on 10 of 11 obs.

? JUL 13, 1989 13h 04m 12.91± 4.29s
34.972 N ±35.4km 139.148 E ±13.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.08	353	P	04	33.20	-0.5
			S	04	47.30	
IIDJ	1.13	297	iPd	04	34.00	-0.6
KAKJ	1.49	34	eP	04	40.20	-0.1
			S	04	59.70	
MAT	1.74	334	eP	04	44.00	0.0
			eS	05	06.00	
MTMJ	1.95	326	eP	04	48.20	1.2
			eS	05	13.50	

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

& JUL 13, 1989 14h 26m 42.16s
39.698 N 110.735 W
DEPTH = 1.1km
UTAH (478)
<SLC-P>. ML 3.1 (SLC).

DAU	0.82	331	ePn	26	58.10	-0.4
			iPg	27	03.40	
MSU	1.63	224	iP	27	12.00	-0.3
DUG	1.67	288	ePn	27	14.10	1.2
BW06	3.20	16	iP	27	35.30	0.5
GOL	4.14	88	eP	27	48.50	0.4
			i	27	57.00	
TNP	5.31	254	eP	28	21.50	16.7
KVN	5.74	266	eP	28	12.50	1.6
ALQ	5.84	143	eP	28	30.00	17.8

8 obs. associoted

& JUL 13, 1989 14h 41m 42.50s
40.422 N 125.913 W
DEPTH = 1.0km
4.1mb (1 obs.)
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.4 (BRK).

WDC	2.58	85	iPc	42	23.60	-2.5
			eS	42	54.30	
LTCM	2.90	93	eP	42	29.00	-1.8
LBFM	3.19	72	eP	42	33.00	-1.9
MIN	3.29	90	eP	42	33.60	-2.8
			e(S)	43	12.80	
ORV	3.50	103	eP	42	36.40	-2.8
			iS	43	17.90	
BRK	3.81	131	e(P)	42	41.70	-2.0
BKS	3.83	130	ePd	42	41.80	-2.1
PCC	4.01	136	e(P)	42	43.20	-3.2
MHC	4.53	131	eP	42	50.80	-3.2
GCC	4.57	137	e(P)	42	51.20	-3.1
ARN	4.59	131	eP	42	51.00	-3.7
CMB	4.91	117	e(P)	42	58.50	-0.8
SAO	5.06	135	iPd	42	57.38	-3.9
			i	42	58.10	
PRS	5.42	137	e(P)	43	02.30	-4.2
FRI	5.94	123	e(P)	43	12.50	-1.2
KVN	6.18	100	eP	43	14.00	-3.3
PNT	9.95	25	eP	44	10.00	0.4
	0.7s		8.00nm			5.3mb X
FFC	21.43	40	eP	46	31.00	-3.0
	0.8s		8.00nm			4.1mb

18 obs. associoted

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* JUL 13, 1989 16h 47m 14.67± 3.11s
18.141 N ±24.3km 61.465 W ±10.6km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.9 (FDF).

ANG	1.04	200	eP	47	35.15	0.9
BPA	1.15	199	eP	47	36.11	-0.1
			eS	47	44.51	
NEV	1.45	227	eP	47	40.82	-0.1
			eS	47	52.74	
			eS	47	54.67	
SKI	1.46	237	eP	47	41.58	0.6
			eS	47	52.61	
MGH	1.58	207	iPc	47	41.80	-1.1
			S	47	54.20	
DEG	1.86	168	iPd	47	48.10	1.2
PAG	2.11	186	iPd	47	50.35	-0.2
			S	48	09.60	
MGG	2.21	176	ePd	47	52.55	0.6
			S	48	13.00	
BBL	2.60	180	ePd	47	57.48	-0.1
DPMT	2.87	178	eP	48	02.03	0.8
DTMT	2.89	178	eP	48	01.64	0.0
FDF	3.40	175	eP	48	08.52	-0.4
	0.1s		0.65nm			
			S	48	42.10	
CRM	3.41	171	eP	48	08.68	-0.3
MVM	3.61	171	eP	48	11.54	-0.3
BIM	3.62	174	eP	48	12.04	0.0
			S	48	48.40	
SLB	4.31	175	eP	48	21.57	-0.3
			eS	49	07.39	
SVB	4.85	178	eP	48	28.67	-0.7
TCE	7.41	182	eP	49	04.34	-1.1
TRN	7.45	180	eP	49	06.72	0.7

S.D. = 0.7 on 19 of 19 obs.

JUL 13, 1989 18h 06m 28.40± 1.27s
3.669 N ± 4.4km 127.992 E ± 6.5km
DEPTH = 105.8 ± 12.4 km
4.9mb (16 obs.)
TALAUD ISLANDS (263)

MNI	3.85	235	ePc	07	26.50	-0.1
			eS	08	10.00	
PCI	9.33	241	ePc	08	45.00	3.3X
	1.0s		6.00nm			4.4mb
TSM	9.91	274	eP	08	52.00	2.5
KKM	11.97	282	eP	09	16.20	-0.7
	1.0s		63.70nm			5.3mb
MTN	16.70	169	eP	10	16.00	-1.4
TRT	19.04	234	ePd	10	45.50	0.5
KNA	19.31	178	eP	10	46.90	-0.9
GUMO	19.36	58	eP	10	50.60	2.2
	0.5s		44.90nm			5.1mb
GUA	19.37	59	eP	10	50.70	2.2
QIZ	23.40	312	P	11	29.60	0.9
WRA	24.28	165	Pc	11	35.10	-2.1
	0.3s		6.80nm			4.6mb
MBL	25.94	198	eP	11	52.00	-0.6
QIS	26.64	155	eP	11	58.00	-1.1
ASPA	27.77	168	eP	12	08.80	-0.6
SSE	28.03	348	P	12	12.50	1.0
	1.0s		7.00nm			4.3mb
NANU	28.77	204	eP	12	18.10	-0.2
LOE	29.14	300	iPc	12	21.60	-0.2
NNT	29.31	289	iPd	12	22.80	-0.5
CTA	29.65	143	eP	12	32.00	5.8X
WARB	29.70	182	eP	12	27.00	0.4
	0.4s		4.00nm			4.5mb
MEKA	31.46	196	iPc	12	41.90	-0.2
	0.4s		13.00nm			5.0mb
BDT	31.47	297	eP	12	41.90	-0.3
CHG	32.14	300	iPd	12	48.20	0.1
	1.0s		49.00nm			5.2mb
KMI	32.32	314	Pd	12	50.00	0.1
TSRJ	32.56	12	P	12	51.30	-0.2
IIDJ	32.96	15	eP	12	54.60	-0.5
CHJJ	33.78	16	eP	12	59.70	-2.4
TIA	33.90	344	eP	13	03.70	0.6
MTMJ	33.98	14	P	13	03.50	-0.4
MAT	34.04	15	eP	13	02.00	-2.4
	1.0s		23.00nm			5.0mb
KAKJ	34.27	18	P	13	04.00	-2.3
FORR	34.32	180	eP	13	05.00	-1.7
	0.3s		10.00nm			5.1mb
MRWA	34.67	199	eP	13	09.20	-0.6
NIIJ	34.91	15	P	13	09.30	-2.4

XAN	35.05	332	iPd	13	13.00	0.0
CD2	35.45	323	eP	13	16.60	0.2
YAMJ	36.06	16	eP	13	21.90	0.4
TIY	36.76	339	eP	13	26.50	-0.9
OFUJ	37.38	18	eP	13	33.80	1.3
BJI	37.75	345	eP	13	35.00	-0.6
BRS	39.06	144	eP	13	48.00	1.3
LZH	39.20	328	Pc	13	49.50	1.5
	1.0s	77.00nm			5.5mb	
ADE	39.73	166	ePd	13	53.60	1.4
HHC	39.86	340	eP	13	53.80	0.5
BWA	42.50	155	eP	14	16.20	1.3
BFD	42.84	163	eP	14	19.00	1.5
GTA	43.80	328	iPd	14	26.40	0.9
HYB	50.32	290	eP	15	17.00	0.3
GBA	50.85	284	Pd	15	20.00	-0.7
	0.5s	4.90nm			4.8mb	
WMQ	53.50	324	P	15	40.20	0.1
QUE	63.25	302	eP	16	48.20	-0.2
MAIO	70.55	307	iPd	17	34.70	0.5
	1.0s	10.00nm			4.6mb	
KHI	70.89	305	iP+	17	35.80	-0.6
MAW	84.14	200	eP	18	49.00	0.6
INK	89.76	22	eP	19	16.00	0.3
SOD	91.00	338	iP	19	20.60	-0.9
MBC	91.73	13	eP	19	25.00	0.2
SUF	92.18	333	iP	19	25.20	-1.8
	0.6s	3.70nm			4.9mb	
SPA	93.64	180	e(P)	19	35.10	1.2
	0.8s	4.17nm			4.9mb	
HFS	98.66	333	eP	19	55.50	-1.1
	1.1s	14.30nm			5.5mb	
YKA	99.03	25	P	19	59.80	1.5
NB2	99.40	334	P	19	58.50	-1.6
ALQ	116.13	48	ePKP	25	03.00	1.5
KIC	131.77	282	PKPc	25	32.80	1.1
	0.6s	6.50nm				
TIC	131.99	282	PKP	25	33.20	1.0
LIC	132.07	282	PKPc	25	33.40	1.1
	0.6s	9.00nm				
	S.D. = 1.2	on	64 of	66 obs.		

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* JUL 13, 1989 18h 35m 22.90± 0.71s
39.168 N ±12.7km 99.472 W ± 5.8km
DEPTH = 5.0km (geophysicist)
KANSAS (480)
mbLg 3.4 (NEIS). Felt (V) at Zurich, (IV) at Palco and (III) at Damar.

CNK	1.41	75	P	35	49.50	0.3
SNK	1.47	98	P	35	51.00	0.9
TCK	2.14	83	P	36	10.50	10.7X
LCNE	2.18	11	P	36	11.00	10.7X
BENE	2.45	64	P	36	03.00	-1.2
GLD	4.49	279	eP	36	34.00	0.7
GOL	4.60	278	eP	36	35.00	0.0
			iS	37	47.00	
RSSD	6.01	327	eP	36	54.90	0.0
ALQ	7.00	235	e(Pn)	37	08.00	-0.8
			ePg	37	31.50	
			eLg	39	01.00	
			e	39	06.80	
BW06	8.44	299	eP	37	26.50	-2.5X
	S.D. = 0.9	on	7 of	10 obs.		

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* JUL 13, 1989 19h 16m 01.12± 0.64s
20.000 S ±14.6km 168.296 E ±21.3km
DEPTH = 33.0km (normal)
4.2mb (3 obs.)
LOYALTY ISLANDS (188)

PVC	2.25	0	iP	16	36.00	-0.7
DZM	2.69	220	iPc	16	42.80	-0.3
			iS	17	18.60	
RMQ	19.07	247	eP	20	28.00	4.4X
CTA	20.71	266	iPc	20	46.70	5.4X
	0.8s	7.84nm			4.1mb	
BWA	22.72	227	eP	21	02.50	1.1
CAN	22.85	224	eP	21	06.80	4.1X
WB5	31.86	264	eP	22	25.60	0.0
WRA	31.88	264	Pd	22	25.10	-0.7
	0.6s	1.60nm			4.1mb	
SPA	70.12	180	e(P)	27	10.20	-1.9
	1.0s	5.00nm			4.5mb	
VAY	144.00	314	iPKP	35	30.50	-4.5X
			i	35	43.50	
MOX	144.29	334	ePKP	35	33.00	-2.3
			e	35	44.00	
SKO	144.46	315	iPKP	35	33.50	-2.3
			i	35	46.00	
KHC	144.58	331	ePKP	35	34.00	-1.9
GRF	145.19	334	ePKP	35	36.00	-0.8
			e	35	48.00	
MEM	146.39	340	PKP	35	38.70	0.0
ABH	146.47	337	ePKPc	35	39.42	0.4
BNG	146.73	246	iPKPd	35	41.60	1.1
	0.9s	16.00nm				
			id	35	47.10	
			ic	35	53.80	
YRH	146.77	352	ePKP	35	38.00	-1.3
RUP	146.80	338	ePKPc	35	40.53	1.0
SNF	147.02	341	PKP	35	40.70	0.9
WLF	147.15	338	PKP	35	41.50	1.5
GWF	147.19	336	PKP	35	41.36	1.2
DOU	147.29	340	PKP	35	41.30	1.1
	0.7s	20.00nm				
ECP	147.61	354	ePKP	35	41.00	0.4
CDF	147.78	336	PKP	35	42.57	1.3
ECH	147.99	336	PKP	35	46.56	5.1X
HAU	148.47	337	ePKP	35	44.60	2.4
	0.8s	5.35nm				
LOMF	148.83	335	PKP	35	45.92	3.0X
FLN	149.92	345	ePKP	35	47.70	3.3X
	0.8s	8.05nm				
LDF	149.98	345	ePKP	35	47.80	3.3X
LOR	149.99	339	ePKP	35	48.50	3.9X
	0.8s	6.70nm				
SSF	150.29	339	ePKP	35	49.10	4.1X
	0.8s	6.05nm				
LPG	150.35	333	ePKP	35	49.90	4.3X
	0.8s	2.70nm				
GRR	150.36	345	ePKP	35	49.00	3.9X
LPF	150.73	345	ePKP	35	49.80	4.2X
	0.8s	13.45nm				
BGF	150.95	339	ePKP	35	50.60	4.6X
	0.8s	5.35nm				
MAF	151.34	339	ePKP	35	51.30	4.7X
	0.8s	3.35nm				
TCF	151.40	340	ePKP	35	51.60	4.8X
	0.8s	4.05nm				
MFF	151.83	343	ePKP	35	52.40	5.1X
	0.7s	4.40nm				
	S.D. = 1.4	on	22 of	39 obs.		

? JUL 13, 1989 22h 32m 48.02± 4.81s
24.377 S ±37.9km 179.722 E ±48.9km
DEPTH = 539.3 ± 35.6 km
4.6mb (1 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.42	278	iPc	35	33.00	1.4
PGZ	16.45	189	P	36	11.20	-0.3
MNG	16.58	191	P	36	10.60	-2.2
	0.2s	13.00nm			5.2mb X	
CAN	28.68	241	eP	38	05.10	1.9
BWA	28.95	243	eP	38	05.20	-0.3
CTA	31.23	271	iPd	38	25.40	0.4
	0.6s	54.00nm			5.3mb X	
PMG	34.42	290	eP	38	51.00	-0.8
ASPA	41.71	261	P	39	51.60	0.3
WB5	42.11	267	iPd	39	54.00	-0.5
WRA	42.12	267	Pd	39	54.00	-0.5
	0.5s	9.50nm			4.6mb	
FORR	45.87	250	iPd	40	23.30	-0.2
KNA	48.41	270	eP	40	42.20	-0.8
SBA	53.89	183	eP	41	24.70	2.5
MBL	54.95	261	eP	41	29.20	-1.2
NANU	58.43	258	eP	41	54.30	0.1
HFS	142.96	348	ePKP	51	15.30	-5.8X
	0.4s	10.20nm				
KSP	150.64	338	iPKP	51	38.00	4.3X
BRG	151.35	341	i(PKP)	51	39.50	4.8X
	S.D. = 1.4	on	15 of	18 obs.		

& JUL 14, 1989 00h 40m 31.05s
66.690 N 149.649 W
DEPTH = 0.0km
ALASKA (676)
<AGS-P>.

IMA	1.74	251	eP	41	02.09	-0.7
			S	41	26.94	
GLM	1.95	150	eP	41	05.36	-0.4
FBA	1.95	156	eP	41	05.34	-0.5
RDS	1.97	161	eP	41	06.91	0.8
NEA	2.14	173	eP	41	08.81	0.4
CCB	2.19	159	eP	41	08.93	-0.3
WRH	2.32	163	eP	41	10.58	-0.5
HDA	2.55	153	eP	41	14.73	0.3
	8 obs. assaciated					

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* JUL 14, 1989 00h 56m 02.10± 1.03s
21.174 S ± 8.0km 67.584 W ±14.0km
DEPTH = 197.8 ± 35.0 km
CHILE-BOLIVIA BORDER REGION (124)

ANT	3.63	226	iP	57	00.50	0.7
			iS	57	41.70	
CCH	4.01	20	P	57	04.00	-0.8
SLA	4.03	152	ePc	57	04.20	-0.7
CNCB	4.36	355	iPc	57	10.20	0.7
LPB	4.64	354	iPc	57	14.10	1.2
	0.9s	92.44nm				
			S	58	09.80	
ZOBO	4.91	354	iPc	57	16.50	0.0
	0.9s	36.76nm				
			S	58	11.00	
ARE	5.97	321	iPd	57	28.50	-1.5
			iS	58	31.20	
PPD	15.16	96	e(P)	59	28.00	0.3
	S.D. = 1.2	on	8 of	8 obs.		

? JUL 14, 1989 01h 34m 35.21± 5.06s
36.595 N ±40.5km 2.380 W ±14.2km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.0 (MDD).

ENIJ	0.40	19	iP	34	43.40	0.0
			eS	34	45.60	
AFC	1.14	306	ePg	34	56.40	-0.3
			eSg	35	10.50	
EALH	1.47	31	ePn	35	01.80	0.0
EBAN	1.93	325	ePn	35	08.90	0.6
			eSn	35	30.20	
EVIA	2.04	357	ePn	35	09.80	-0.3
			eSn	35	31.60	
	S.D. = 0.5	on	5 of	5 obs.		

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* JUL 14, 1989 02h 03m 21.50± 0.89s
38.691 N ± 8.6km 21.053 E ±13.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.0 (ATH).

VLS	0.63	215	ePn	03	33.70	-0.4
ITM	1.66	155	ePb	03	51.50	0.7
KZN	1.71	19	ePb	03	51.90	0.4
LIT	1.80	38	eP	03	52.00	-0.7
NEO	1.80	69	ePn	03	52.10	-0.7
KNT	2.85	29	eP	04	08.60	0.8
	S.D. = 0.9	on	6 of	6 obs.		

& JUL 14, 1989 03h 38m 55.05s
63.613 N 149.830 W
DEPTH = 130.0km
CENTRAL ALASKA (1)
<AGS-P>.

MCK	0.42	73	eP	39	13.82	-0.1
			S	39	27.06	
RND	0.48	115	eP	39	13.87	-0.5
			S	39	28.81	
HUR	0.64	172	eP	39	14.83	-0.5
			S	39	29.92	
NEA	1.02	19	iP	39	17.84	-0.6
WRH	1.15	41	P	39	19.24	-0.5
CUT	1.23	190	iP	39	20.10	-0.4
			S	39	40.14	
CCB	1.37	40	iP	39	21.38	-0.6
RDS	1.42	30	iP	39	22.32	-0.3
HDA	1.50	57	iP	39	22.73	-0.7
FBA	1.57	34	iP	39	23.88	-0.4
GLM	1.74	37	iP	39	25.84	-0.5
SKT	1.82	206	iP	39	26.34	-0.9
			S	39	50.86	
GHO	1.89	167	eP	39	27.79	-0.5
			S	39	52.91	
PAX	2.07	106	eP	39	30.00	-0.7
	14 obs. assaciated					

? JUL 14, 1989 04h 40m 58.86± 4.14s
35.040 N ±34.6km 139.072 E ±13.6km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ	1.01	356	P	41	17.60	-0.8
			S	41	31.60	
IIDJ	1.05	295	P	41	18.30	-0.8
KAKJ	1.47	37	eP	41	25.90	-0.1
			S	41	46.00	
MAT	1.65	335	eP	41	29.00	0.3
			eS	41	51.00	
MTMJ	1.85	327	eP	41	33.00	1.3
TSRJ	2.58	282	eP	41	46.80	4.9X
			S	42	15.70	

S.D. = 1.3 on 5 of 6 obs.

? JUL 14, 1989 05h 13m 04.60± 2.86s
51.077 N ±18.7km 177.521 W ±37.5km
DEPTH = 33.0km (normal)
3.9mb (3 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	0.96	33	iP	13	20.70	-1.1
SVW	15.73	42	e(P)	16	46.20	1.0
KDC	15.96	56	e(P)	16	45.30	-2.7
TTA	16.57	36	eP	16	56.70	0.9
PMR	18.77	45	e(P)	17	25.00	2.1
IMA	19.30	30	e(P)	17	28.70	-0.7
	1.2s		15.60nm		4.1mb	
FBA	20.70	37	eP	17	46.00	2.0
INK	27.25	34	eP	18	46.00	-1.1
MBC	33.59	22	eP	19	43.00	-0.2
	0.7s		1.00nm		3.8mb	
LON	36.12	75	eP	20	05.80	0.6
PNT	36.29	70	eP	20	07.00	0.5
KVN	42.55	82	eP	21	04.00	5.2X
TNP	43.68	83	eP	21	08.50	0.5
	0.5s		1.15nm		3.9mb	
BW06	45.63	73	eP	21	23.50	-0.1
			e	21	35.00	
RSON	49.97	55	eP	21	55.30	-1.8
GOL	50.00	73	eP	21	58.00	0.2
			e	22	09.00	

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

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* JUL 14, 1989 05h 56m 43.28± 1.15s
49.358 N ± 8.6km 5.849 E ±11.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 2.3 (STR).

WLF	0.37	33	iPd	57	02.80	12.0X
RUP	0.86	66	ePgd	57	00.18	0.3
DOU	1.10	313	P	57	20.90	17.0X
			S	57	41.60	
VITF	1.15	175	Pg	57	09.93	5.2X
			Sg	57	24.70	
ABH	1.22	64	ePg	57	04.91	-1.1
MEM	1.26	5	iPc	57	18.80	12.2X
CDF	1.34	135	Pg	57	03.94	-4.0X
ECH	1.43	142	Pg	57	07.82	-1.5
			Sg	57	21.27	
KTD	1.46	91	ePg	57	05.94	-3.8X
SNF	1.54	319	P	57	10.30	-0.4
BSF	1.65	157	Pg	57	14.30	1.8
			Sg	57	32.44	
MOF	1.73	150	Pg	57	14.19	0.5
			Sg	57	32.19	
TNS	1.89	62	ePn	57	17.70	1.7
			eSn	57	37.40	
FEL	2.06	135	Pg	57	17.34	-1.2
			Sg	57	36.82	

S.D. = 1.5 on 8 of 14 obs.

JUL 14, 1989 06h 30m 24.46± 0.49s
34.953 N ± 5.6km 139.081 E ± 4.2km
DEPTH = 5.0km (geophysicist)
4.4mb (3 obs.)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (III JMA) at Ajiro; (II JMA) at Mishima and Yokohomo; (I JMA) at Toteyama, Nagatsuro, Tokyo and on Oshima. An underseo volcono east of the Izu Peninsulo erupted on July 13.

MIS	0.20	322	iPd	30	28.80	0.2
			iS	30	32.00	
OSH	0.31	128	iPd	30	31.10	0.4
			S	30	35.70	
NGT	0.40	209	eP	30	39.00	6.5X
TAT	0.65	87	P	30	38.40	1.0
			S	30	48.90	
YOK	0.67	44	iP+	30	39.20	1.3
			iS	30	50.20	
TOK	0.92	37	iP+	30	43.00	0.6
			iS	30	43.10	
IIDJ	1.09	299	P	30	44.70	-0.8
			S	31	00.60	
CHJJ	1.10	356	P	30	44.30	-1.2
KAKJ	1.53	35	P	30	50.90	-1.6
			S	31	12.10	
MAT	1.74	336	iPd-	30	55.30	-0.2
			iS	31	17.50	
MTMJ	1.93	328	P	30	59.50	1.1
			S	31	25.80	
NIIJ	2.28	358	P	31	04.50	1.1
			S	31	35.80	
WKYJ	2.97	257	P	31	13.00	-0.2
			S	31	48.50	
YAMJ	3.30	13	eP	31	18.10	0.2
TKSJ	4.27	258	P	31	31.10	-0.5
			S	32	20.20	
OFUJ	4.61	26	eP	31	35.30	-1.1
			eS	32	29.40	
YONJ	4.61	275	P	31	36.20	-0.3
			eS	32	31.90	
SHK	5.29	267	eP	31	47.20	1.1
SHNJ	6.63	265	eP	32	05.00	0.0
KUMJ	7.28	253	P	32	15.30	1.2
KAGJ	7.83	244	P	32	21.70	-0.1
TIA	17.90	280	eP	34	39.50	3.7X
N	13s		0.86um			
			S	38	07.00	
BJI	18.85	292	(P)	34	36.00	-11.5X
Z	12s		0.60um			
N	12s		0.47um			
			eS	38	25.00	
WHN	21.24	265	eP	35	18.50	4.9X
E	10s		0.61um			
			S	39	13.00	
TIY	21.62	285	eP	35	19.80	2.3
Z	14s		1.19um		4.4MszX	
N	12s		0.60um			
			eS	39	23.50	
LZH	28.61	283	(P)	36	22.00	-1.9
Z	10s		0.30um		4.2MszX	
WMQ	40.13	299	eP	38	04.00	1.1
WB5	54.71	185	eP	39	53.10	-3.9X
WRA	54.78	185	Pd	39	53.60	-3.9X
	0.8s		2.50nm		4.3mb	
INK	57.09	26	eP	40	10.00	-3.7X
MBC	59.05	16	eP	40	25.00	-2.3
	0.9s		2.00nm		4.2mb	
FFC	76.47	31	eP	42	17.00	0.3
	1.0s		11.00nm		4.9mb	
LRM	76.96	43	eP	42	20.50	0.6
DRV	101.30	180	ePdiff	44	14.60	-2.4
ZOBO	149.37	60	PKP	50	16.00	3.3X
LPB	149.56	60	ePKP	50	19.00	6.2X
CNCB	149.83	60	ePKP	50	18.00	4.6X
			e	50	19.00	

S.D. = 1.2 on 27 of 37 obs.

JUL 14, 1989 06h 52m 08.96± 0.28s
41.935 N ± 2.3km 20.020 E ± 1.7km
DEPTH = 29.6 ± 2.7 km
4.7mb (21 obs.) 4.4Msz (1 obs.)
ALBANIA (391)
ML 4.8 (ATH), 4.6 (THE), 4.5 (TTG). Felt (V) in the Puke-Kukes oreo; (IV) ot Bojrom Curri, Lac, Peshkopi, Rreshen ond Shkoder; (III) at Tirano. Also felt (V) in the Skopje orea ond (IV) in the Titogrod-Ulcinj orea, Yugoslavio.

ULC	0.58	273	iPgc	52	20.50	-0.1
			iSg	52	31.40	
PVY	0.66	357	iPgc	52	21.00	-1.1
			iSg	52	32.30	
TTG	0.75	311	iPgc	52	22.70	-0.6
			iSg	52	36.50	
IVA	0.94	355	iPgc	52	25.80	-0.4
			iSg	52	41.50	
BDV	0.95	292	iPgc	52	27.00	0.7
			iSg	52	44.30	
OHR	1.01	144	iPg	52	24.50	-2.7
SKO	1.06	88	iPg	52	26.00	-1.8
			iSg	52	39.00	
			LQ	52	45.00	
NKY	1.16	320	iPgc	52	29.80	0.5
			iSg	52	50.30	
HCY	1.24	295	iPgc	52	31.70	1.3
			eSg	52	53.20	
BRY	1.46	312	iPgc	52	34.90	1.3
			eSg	52	58.50	
PLE	1.47	342	iPgc	52	35.50	1.8
			eSg	52	57.50	
VAY	2.01	107	iPnc	52	41.20	-0.3
			iSn	53	04.80	
GRG	2.04	118	ePn	52	42.60	0.6
KZN	2.10	140	ePn	52	43.50	0.7
KEK	2.23	184	ePn	52	46.00	1.4
LCI	2.24	225	Pd	52	44.70	0.1
KKB	2.29	91	iP	52	46.00	0.6
KNT	2.29	109	iPnc	52	45.40	-0.1
THE	2.57	119	ePnc	52	49.40	-0.1
			iSn	53	26.20	
LIT	2.62	134	iPnc	52	50.40	0.2
MMB	2.80	96	iPc	52	53.00	0.4
			iS	53	39.00	
SRS	2.80	106	iPnc	52	52.80	0.1
BEO	2.90	6	iPn	52	55.00	0.9
			iSg	53	40.00	
HVAR	2.92	296	iPnc	52	55.90	1.6
			iSg	53	41.90	
PLG	3.02	120	ePn	52	55.60	-0.3
PGB	3.14	77	iP	52	58.00	0.4
PAIG	3.42	125	ePn	53	01.30	-0.3
PLD	3.49	86	iPg	53	02.00	-0.6
			iSg	53	15.00	
RZN	3.52	92	iP	53	03.00	-0.1
NEO	3.58	136	ePn	53	03.10	-0.8
TDS	3.60	232	Pd	53	04.70	0.6
			eSn	53	46.30	
VLS	3.78	173	ePn	53	06.20	-0.4
SGO	3.81	250	P	53	07.90	0.9
			eSn	53	53.90	
MGR	3.83	243	Pd	53	08.50	1.3
			eSn	53	54.50	
TIM	3.90	12	eP	53	18.00	9.8X
GZR	3.99	29	iPd	53	12.00	2.3
DIM	4.11	87	iP	53	13.00	1.7
			iS	53	54.00	
DRA	4.13	47	iPd	53	12.00	0.4
GRI	4.15	223	P	53	11.92	0.0
DUI	4.17	268	P	53	13.70	1.5
DEV	4.46	27	iPc	53	17.00	0.7
RFI	4.57	264	P	53	19.42	1.6
ZAG	4.85	324	ePn	53	24.00	2.2
			iPg	53	39.00	
			iSg	54	48.00	
ATH	4.87	143	ePn	53	22.00	-0.1
JMB	4.90	82	iP	53	21.00	-1.6
AZI	4.91	273	Pd	53	24.40	1.8
SOI	4.91	220	Pd	53	21.90	-0.8
			eSn	54	19.60	
PTJ	4.93	325	iPnd	53	25.00	2.0
			iSg	54	53.00	
GMB	4.93	222	P	53	22.84	-0.3
AQU	4.94	277	Pc	53	24.60	1.5
VBY	4.96	318	iPnc	53	25.30	1.9
			i	53	26.80	
			i	53	28.50	
			i(Sn)	54	35.60	
ITM	4.97	162	ePn	53	23.90	0.3
BUC1	5.01	59	ePd	53	24.00	-0.1
BUC	5.09	59	eP	53	21.50	-3.7X
ATN	5.14	224	P	53	25.30	-0.7
			eSn	54	23.00	
LPI	5.20	230	P	53	28.28	1.5
EZN	5.22	112	iP	53	26.20	-0.9
RIY	5.32	312	iPnc	53	29.50	1.1
			iSn	54	29.90	
ARV	5.44	289	P	53	30.70	0.5
RDP	5.46	271	P	53	32.10	1.6
PRK	5.46	117	ePn	53	30.00	-0.5
RMP	5.47	271	P	53	32.70	2.2

MNS	5.47	277	P	53	31.60	0.9
CEY	5.55	315	iPc	53	33.40	1.7
			eS	54	40.00	
MLR	5.57	48	iPd	53	32.00	-0.1
MFT	5.58	99	iP	53	31.20	-1.0
BUD	5.59	353	iPd	53	31.50	-0.7
LJU	5.70	318	ePn	53	35.00	1.2
			e(Sn)	54	42.00	
ISR	5.72	54	ePc	53	33.00	-1.2
MNO	5.72	227	P	53	35.80	1.5
TRI	5.89	312	ePnc	53	36.60	0.1
			iSg	54	24.70	
			iSn	54	48.00	
RSM	5.90	292	Pd	53	37.60	1.0
SRO	6.00	349	iPn	53	39.40	1.4
			i	54	27.70	
			i(Sn)	55	02.50	
			i	55	07.00	
VOY	6.02	315	iPnc	53	39.30	0.8
			eSn	54	46.50	
GIB	6.06	231	P	53	38.90	-0.1
EDC	6.13	102	iP	53	39.10	-0.8
CRE	6.17	289	P	53	41.20	0.6
MEU	6.23	221	P	53	39.40	-1.9
VRI	6.24	49	ePc	53	41.00	-0.4
PSN	6.25	71	iPc	53	41.00	-0.6
PZI	6.29	221	P	53	39.84	-2.4
SFI	6.32	291	P	53	44.00	1.5
CTT	6.36	94	iP	53	40.70	-2.4
PGD	6.40	290	P	53	44.74	1.0
TLB	6.42	63	ePc	53	43.00	-1.0
APE	6.46	137	ePn	53	43.50	-1.1
RBL	6.46	316	P	53	45.00	0.4
MCT	6.53	231	P	53	46.70	1.0
IZM	6.58	120	iP	53	45.90	-0.3
ZST	6.59	343	i(Pn)	53	48.30	2.0
			i	53	52.90	
			i(Sn)	55	03.10	
MAO	6.61	277	P	53	46.50	-0.1
ITU	6.80	94	ePn	53	47.00	-2.3
			iSg	54	01.00	
ISK	6.84	94	eP	53	45.00	-4.8X
VKA	6.85	339	iPnc	53	52.00	2.1
			i	53	53.70	
			i	54	28.30	
			iSn	55	11.10	
			i	55	14.30	
DST	6.94	107	iP	53	52.00	0.8
CLI	6.96	46	ePc	53	51.00	-0.5
FVI	6.98	314	P	53	52.00	0.3
MME	7.19	291	P	53	55.29	0.3
PII	7.21	288	P	53	55.00	0.1
BDI	7.23	290	P	53	54.50	-0.9
SPC	7.26	1	ePn	53	55.60	-0.2
			i(Sn)	55	21.20	
VAM	7.29	152	ePn	53	53.00	-3.1X
KMR	7.41	328	iP+	53	58.60	0.9
			i	54	26.70	
			iS	55	32.00	
BHG	7.69	321	eP	54	03.00	1.2
SAL	7.79	301	Pd	54	02.40	-0.7
SCE	7.83	313	eP	54	03.80	-0.1
GPA	7.94	99	eP	54	04.00	-1.3
NPS	7.97	145	ePn	54	06.10	0.4
YER	7.98	124	iP	54	06.40	0.5
OGA	8.11	310	eP	54	07.50	-0.3
KRA	8.12	360	eP	54	06.30	-1.4
Z	12s		1.80um			
N	12s		2.40um			
			e	54	17.70	
			i	55	40.90	
			e	56	09.00	
BOB	8.21	294	P	54	09.10	0.0
CVF	8.30	278	eP	54	09.90	-0.3
KAP	8.48	136	ePn	54	11.60	-1.1
KHC	8.50	330	iP	54	12.80	-0.1
			i	54	15.40	
OSS	8.52	307	eP	54	13.60	0.1
PCP	8.77	291	P	54	13.68	-3.2X
WET	8.78	328	eP	54	16.90	0.1
FUR	8.78	318	iPc	54	17.50	0.7
VDL	8.84	305	eP	54	18.30	0.4
PRU	8.91	337	P	54	20.50	1.9
	1.1s		15.30nm		5.1mb	
Z	12s		4.30um			
N	10s		1.40um			
E	12s		4.20um			

			e	54	26.20	
CKI	8.93	290	P	54	17.50	-1.5
FIN	8.94	289	P	54	16.34	-2.8
VAI	9.02	300	P	54	19.60	-0.6
TMA	9.05	301	eP	54	19.30	-1.4
IMI	9.12	287	P	54	20.75	-0.9
ROB	9.19	289	P	54	20.96	-1.7
ELL	9.24	121	eP	54	26.00	2.6
KSP	9.27	345	eP	54	24.00	0.4
			iS	56	13.00	
SAX	9.28	309	eP	54	23.90	-0.2
BCK	9.29	115	iP	54	24.30	0.3
LLS	9.30	306	eP	54	24.50	0.2
KSL	9.44	125	ePn	54	29.50	3.6X
SBF	9.44	286	eP	54	24.60	-1.4
ORO	9.46	297	P	54	25.20	-1.1
ENR	9.50	288	P	54	24.75	-2.2
STV	9.57	288	P	54	26.91	-1.0
MMK	9.61	299	eP	54	27.50	-1.1
DOI	9.67	290	P	54	27.80	-1.5
PZZ	9.78	290	P	54	29.57	-1.2
BRG	9.87	337	eP	54	32.60	0.7
	1.9s		38.00nm		5.4mb	
BBTK	9.87	98	eP	54	30.50	-1.6
GRF	9.89	325	ePn	54	32.00	-0.1
			e(Pg)	54	43.00	
			e(S)	56	52.00	
LSD	9.96	295	P	54	30.70	-2.7
ZLA	9.96	308	eP	54	32.60	-0.6
FRF	9.97	284	eP	54	32.20	-1.1
DIX	9.98	299	eP	54	32.40	-1.3
SLE	10.04	309	eP	54	32.70	-1.6
LMR	10.06	283	eP	54	33.50	-1.0
	0.6s		18.00nm		5.5mb X	
RRL	10.08	292	P	54	33.06	-2.0
HOF	10.10	329	iPc	54	35.80	0.8
LRG	10.17	283	eP	54	35.30	-0.7
	0.8s		75.20nm		6.0mb X	
BNI	10.19	292	P	54	35.20	-1.2
LPG	10.24	295	eP	54	35.00	-2.3
	0.6s		47.90nm		5.9mb X	
KAS	10.31	89	eP	54	41.50	3.5X
FEL	10.38	309	P	54	36.69	-2.3
MOX	10.47	329	ePn	54	41.00	1.0
	1.7s		69.00nm		5.6mb X	
Z	14s		2.40um			
			e	56	26.00	
CLL	10.54	335	eP	54	41.00	0.0
	1.7s		30.00nm		5.3mb X	
			e	54	47.60	
			e(S)	57	10.00	
LOMF	10.84	304	P	54	44.06	-1.2
MOF	10.88	307	P	54	44.90	-0.9
ECH	11.04	309	P	54	46.26	-1.7
BSF	11.08	307	P	54	47.25	-1.3
CDF	11.08	310	P	54	46.73	-1.7
GWF	11.19	313	P	54	48.94	-1.0
HAU	11.42	307	eP	54	51.60	-1.5
	0.6s		37.80nm		5.8mb X	
TNS	11.53	320	ePd	54	53.60	-1.0
VITF	11.74	307	P	54	55.93	-1.3
WLF	12.37	313	P	55	07.50	1.7
SMF	12.51	298	eP	55	05.00	-2.7
LBF	12.52	299	eP	55	05.20	-2.7
LBL	12.60	291	P	55	09.06	0.2
LOR	12.69	300	eP	55	07.80	-2.3
	0.6s		27.00nm		5.5mb X	
AGO	12.84	294	P	55	10.74	-1.3
SSF	12.85	299	eP	55	09.60	-2.6
	0.6s		13.50nm		5.2mb X	
PYM	12.86	293	P	55	14.03	1.6
AVF	12.87	298	eP	55	10.60	-1.9
	0.8s		22.80nm		5.3mb X	
MEM	12.99	317	iPc	55	19.30	5.3X
ENN	13.13	317	eP	55	18.50	2.7
	0.7s		24.00nm		5.4mb X	
			eS	57	46.00	
BGF	13.15	296	eP	55	13.70	-2.5
	0.6s		21.60nm		5.4mb X	
MAF	13.26	295	eP	55	15.30	-2.3
	0.6s		9.00nm		4.9mb X	
DOU	13.45	313	P	55	20.30	0.1
	0.8s		10.00nm		4.8mb X	
			LR	58	19.00	
			e	00	50.00	
WTS	13.49	323	eP	55	25.00	4.4X
	0.9s		34.00nm		5.3mb X	

			eS	58	02.00	
TCF	13.51	295	eP	55	16.90	-4.1X
	0.6s		8.10nm		4.8mb X	
SNF	13.84	314	P	55	31.10	5.9X
LSF	13.97	294	eP	55	25.40	-1.6
	0.6s		3.90nm		4.3mb X	
BHL	14.70	118	P	55	47.50	10.8X
HRI	15.15	120	iPc	55	47.50	4.9X
LDF	15.64	302	eP	55	51.70	2.9X
	0.8s		24.10nm		4.4mb	
FLN	15.92	302	eP	55	55.50	3.2X
	0.8s		42.90nm		4.6mb	
GRR	16.05	301	eP	55	57.60	3.6X
	0.8s		16.10nm		4.2mb	
DSI	16.06	125	eP	55	55.00	0.9
LPF	16.08	299	eP	55	56.90	2.6
	0.7s		35.20nm		4.6mb	
MBH	17.07	131	eP	56	08.00	1.1
TOL	18.30	272	eP	56	25.00	2.8
HFS	18.64	350	eP	56	25.30	-0.8
	0.6s		10.60nm		4.2mb	
NUR	18.82	7	iP	56	27.70	-0.6
	0.7s		13.30nm		4.3mb	
Z	17s		1.10um			
			LR	04	40.00	
NRA0	19.53	347	P	56	33.20	-3.5X
EKA	20.23	319	Pc	56	43.60	-0.5
	0.7s		12.80nm		4.4mb	
ESK	20.24	319	eP	56	38.50	-5.8X
	1.0s		80.00nm		5.0mb	
TAB	20.49	92	eP	56	51.00	3.8X
ECP	20.58	309	eP	56	51.10	3.3X
	1.0s		56.00nm		4.9mb	
ETA	20.67	310	eP	56	52.70	4.0X
	0.6s		60.00nm		5.2mb	
SLY	20.81	99	ePc	56	53.50	3.2X
			iPcP	57	13.00	
			eScP	00	44.00	
			eS	04	01.50	
			ePS	04	29.00	
ECB	20.88	309	eP	56	51.60	0.7
AMAN	20.93	145	eP	56	52.00	0.5
DLE	21.07	312	eP	56	55.80	3.0X
SUF	21.13	8	iP	56	52.40	-1.0
	0.7s		20.80nm		4.7mb	
AKSR	21.22	145	eP	56	54.90	0.3
AGAL	21.33	146	iPd	56	56.50	0.9
DCN	21.50	311	eP	56	58.40	1.2
DMU	21.51	313	eP	56	56.90	-0.3
SOD	25.74	6	eP	57	39.00	0.8
BNG	37.36	182	iPd	59	20.50	-0.2
	0.5s		13.00nm		5.0mb	
			id	59	27.30	
QUE	39.26	92	eP	59	56.00	19.2X
TIC	41.58	219	P	59	56.40	0.7
KIC	41.70	219	P	59	57.20	0.5
LIC	41.95	219	P	59	58.90	0.2
ALE	47.70	350	eP	00	28.00	-16.1X
WMO	48.35	64	P	00	49.60	-0.2
FRB	52.80	326	eP	01	22.00	-1.2
SCH	55.46	315	eP	01	42.00	-0.9
GTA	58.44	63	eP	02	03.00	-1.4
MBC	59.28	350	eP	02	14.00	4.4X
	0.6s		2.00nm		4.4mb	
BUL	62.27	171	iPd	02	30.50	-0.1
GAC	64.86	310	eP	02	48.00	0.8
CD2	65.78	70	eP	02	52.60	-0.8
XAN	67.49	64	P	03	03.30	-1.0
INK	68.30	350	eP	03	07.00	-1.7
BJI	68.58	55	eP	03	10.00	-0.9
CHG	69.56	83	eP	03	15.00	-2.3
YKA	69.74	339	P	03	19.70	2.0
SEK	70.26	173	iPc	03	22.50	1.1
	0.5s		14.08nm		5.3mb	
CN2	71.61	47	eP	03	28.70	-0.6
			pP	03	34.00	17kmX
FFC	71.76	329	eP	03	30.00	0.0
	0.6s		5.00nm		4.7mb	
FBA	73.08	355	eP	03	37.50	-0.1
NJ2	75.27	60	Pc	03	49.40	-1.4
PMS	76.83	355	eP	03	59.40	0.2
FVM	78.34	311	P	04	08.00	0.1
RSSD	80.74	323	P	04	21.50	0.5
RLO	82.21	312	e(P)	04	34.00	5.5X
PNT	82.45	335	eP	04	30.00	0.4
	0.7s		4.00nm		4.6mb	
TUL	82.82	313	eP	04	32.60	0.9

14d 07h

0.6s 10.00nm 5.1mb
Z 19s 0.15um 4.4Msz
LR 37 00.00
IMW 83.89 327 P 04 39.30 1.9
BW06 84.23 325 P 04 37.40 -1.7
0.8s 0.54nm 3.8mb
BAO 84.79 244 eP 04 44.50 2.5
LON 85.41 335 P 04 36.50 -8.2X
PV09 87.53 322 P 04 56.00 0.5
DUG 87.74 326 P 04 57.30 1.0
0.7s 2.64nm 4.6mb
MSU 88.87 324 P 05 02.70 0.8
ALQ 89.13 319 e(P) 05 03.50 0.4
e 05 08.50
KVN 90.85 329 P 05 10.50 -0.5
ASPA 122.87 93 iPKPc 11 02.70 -1.1
1.0s 7.00nm
CTA 129.93 81 ePKP 11 12.00 -5.5X
DZM 145.63 65 iPKPc 11 47.00 0.8
S.D. = 1.3 on 225 of 254 obs.

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* JUL 14, 1989 07h 45m 16.89± 1.58s
45.118 N ± 7.8km 28.323 E ±16.3km
DEPTH = 10.0km (geophysicist)
SOUTHWESTERN USSR (357)

CFR 0.14 299 iPc 45 19.00 -1.1
TLB 0.57 201 iPc 45 27.00 -1.4
BRD 0.98 294 eP 45 36.00 0.5
PPE 1.21 336 ePc 45 38.00 -1.3
ISR 1.26 272 iPc 45 41.00 0.7
VRI 1.35 304 ePc 45 41.00 -0.8
PSN 1.44 184 iPd 45 44.00 1.0
CLI 1.61 333 iPc 45 47.00 1.6
MLR 1.72 283 ePd 45 48.00 0.8
S.D. = 1.3 on 9 of 9 obs.

JUL 14, 1989 07h 54m 18.15± 0.30s
41.950 N ± 3.3km 20.108 E ± 3.1km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 3.0 (TTG).

PUK 0.18 300 iPgd 54 23.00 0.7
PHP 0.36 136 iPgc 54 23.90 -1.7
BCI 0.42 356 iPgd 54 27.30 0.6
LACI 0.43 224 iPgd 54 28.00 1.0
SDA 0.46 278 iPgc 54 27.10 -0.4
TIR 0.63 197 iPgc 54 29.20 -1.6
ULC 0.64 271 iPgc 54 30.00 -1.0
iSg 54 40.00
PVY 0.65 351 ePg 54 30.10 -1.1
eSg 54 41.20
TTG 0.79 308 iPgc 54 32.60 -0.9
iSg 54 45.80
IVA 0.93 351 ePg 54 36.30 0.3
eSg 54 50.50
SKO 0.99 88 iPg 54 36.30 -0.7
0.6s 350.00nm
iSg 54 49.00
BDV 1.01 290 ePg 54 36.70 -0.6
eSg 54 54.00
NKY 1.19 317 ePg 54 40.50 0.1
eSg 55 00.00
BERA 1.25 186 ePn 54 40.60 -0.8
HCY 1.29 293 ePg 54 41.70 -0.4
eSg 55 02.00
KBN 1.43 158 iPnc 54 45.00 0.9
PLE 1.48 339 ePg 54 45.20 0.3
eSg 55 09.50
BRY 1.50 310 ePg 54 46.00 0.8
eSg 55 10.80
VLO 1.55 198 ePn 54 47.70 1.9
LSK 1.84 168 ePn 54 51.40 1.3
VAY 1.95 108 iPn 54 50.30 -1.3
SRN 2.07 182 ePn 54 54.40 1.1
KKB 2.22 91 iP 54 56.00 0.4
KNT 2.24 110 eP 54 55.20 -0.6
THE 2.52 120 eP 54 59.60 -0.2
LIT 2.58 135 eP 55 00.40 -0.3
MMB 2.73 96 iPd 55 05.00 2.1
iS 55 50.00
SRS 2.75 106 eP 55 01.20 -1.9
PGB 3.07 77 iP 55 10.00 2.3
RZN 3.45 93 iP 55 13.00 -0.2
BZS 3.82 16 ePc 55 18.00 -0.3
PTJ 4.96 324 e(P) 55 35.10 0.7
VBY 5.00 317 ePn 55 35.00 0.1
e(Sn) 56 41.50
CEY 5.59 315 ePn 55 43.10 -0.2
TRI 5.93 311 eP 55 42.90 -5.2X
e 56 35.90
VOY 6.06 314 ePnc 55 49.00 -1.0
eSn 56 58.40
KHC 8.52 330 eP 56 25.00 0.6
S.D. = 1.1 on 36 of 37 obs.

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* JUL 14, 1989 07h 58m 59.31± 0.61s
44.270 N ± 8.0km 7.528 E ± 4.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

ENR 0.09 241 P 59 02.75 0.8
STV 0.15 260 P 59 02.14 -0.7
ROB 0.25 84 P 59 04.81 0.2
S 59 08.85
PZZ 0.39 308 P 59 07.17 -0.1
S 59 13.33
IMI 0.44 144 P 59 08.25 -0.1
S 59 14.65
FIN 0.49 97 P 59 09.01 -0.3
S 59 16.40
PCP 0.78 69 P 59 14.65 0.1
S.D. = 0.6 on 7 of 7 obs.

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* JUL 14, 1989 09h 14m 00.75± 0.99s
38.495 N ± 7.3km 26.188 E ±11.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.3 (ATH).

PRK 0.75 5 ePb 14 15.90 0.4
IZM 0.85 96 iPg 14 16.80 -0.4
iSg 14 28.30
EZN 1.33 5 iPn 14 25.30 0.0
APE 1.52 200 ePb 14 28.00 0.0
DST 2.20 59 iPn 14 39.40 1.5
EDC 2.26 35 iPn 14 37.60 -1.1
CTT 3.16 32 ePn 14 51.00 -0.5
S.D. = 1.0 on 7 of 7 obs.

% JUL 14, 1989 10h 39m 43.95± 0.78s
34.907 N ±10.1km 136.742 E ± 8.3km
DEPTH = 5.0km (geophysicist)
SOUTHERN HONSHU, JAPAN (232)
MG 3.5 (JMA). Felt (III JMA) at Tsu.

TSU 0.28 222 eP 39 50.00 0.5
iS 39 54.10
TSRJ 0.88 316 P 40 00.40 -1.0
S 40 11.80
IIDJ 1.12 59 P 40 03.30 -2.1
WKYJ 1.17 234 P 40 05.20 -1.1
S 40 20.90
MTMJ 1.88 27 eP 40 18.30 1.1
S 40 42.20
MAT 2.02 36 eP 40 20.00 0.9
eS 40 44.00
CHJJ 2.16 58 P 40 21.80 0.7
TKSJ 2.41 248 P 40 25.40 0.7
S 40 55.70
YONJ 2.70 277 P 40 29.10 0.2
S 41 02.80
S.D. = 1.3 on 9 of 9 obs.

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* JUL 14, 1989 10h 57m 08.84± 0.62s
31.184 N ±11.7km 84.685 E ± 7.6km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
TIBET (306)

LSA 5.77 103 iPd 58 36.60 1.7
NDI 6.94 251 eP 58 51.50 0.6
eS 00 10.50
SHL 8.45 130 iP 59 11.20 -1.0
eS 00 43.00
WMQ 12.84 10 eP 00 16.60 4.9X
HYB 14.80 204 eP 00 36.50 -1.0
eS 03 13.00
GTA 14.82 52 eP 00 34.60 -3.2X
QUE 15.29 271 eP 00 44.20 0.1
CHG 17.83 130 eP 01 18.00 1.9
GBA 18.72 202 P 01 32.00 4.9X
1.1s 10.80nm 4.0mb
GYA 19.82 98 P 01 37.40 -2.3
MAIO 21.54 290 eP 02 02.00 4.7X
SUF 48.44 328 iP 05 50.20 0.6
HFS 54.14 324 eP 06 32.10 -0.6
0.5s 1.70nm 4.3mb
NB2 55.34 325 P 06 51.20 9.7X
BNG 67.34 261 iPc 08 03.60 0.4
0.5s 6.00nm 4.9mb
id 08 07.00
WB5 69.65 130 eP 08 17.10 -0.2
MBC 71.76 6 eP 08 29.00 -0.3
0.8s 3.00nm 4.4mb
S.D. = 1.3 on 12 of 17 obs.

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* JUL 14, 1989 11h 06m 23.60± 1.08s
51.625 N ±20.7km 175.179 W ± 9.6km
DEPTH = 33.0km (normal)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 0.97 286 iPd 06 41.00 0.1
e(S) 06 50.00
KDC 14.44 56 eP 09 52.00 4.7X
TTA 15.27 35 e(P) 10 04.80 6.6X
IMA 18.10 29 eP 10 34.70 0.8
FBA 19.38 36 eP 10 44.50 -4.7X
INK 25.97 34 eP 11 53.00 -1.4
LON 34.57 77 eP 13 11.50 0.5
PNT 34.72 71 eP 13 13.00 0.8
KVN 41.03 85 eP 14 05.50 0.2
BW06 44.07 75 eP 14 29.50 -0.6
0.5s 0.32nm 3.4mb
GOL 48.43 75 eP 15 04.30 -0.5
S.D. = 0.9 on 8 of 11 obs.

? JUL 14, 1989 11h 39m 48.95± 0.91s
38.891 N ± 9.5km 3.953 W ±11.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.5 (MDD).

EBAN 0.74 170 ePg 40 03.20 -0.2
eSg 40 14.60
EVIA 1.16 102 ePg 40 11.00 0.3
eSg 40 26.80
GUD 1.76 355 iPnd 40 19.30 -0.4
eSn 40 41.40
EPLA 2.02 306 ePn 40 23.90 0.4
eSn 40 49.60
S.D. = 0.7 on 4 of 4 obs.

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* JUL 14, 1989 12h 54m 46.52± 1.19s
4.819 N ±12.1km 94.661 E ±11.9km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
OFF W COAST OF NORTHERN SUMATERA(705)

BSI 0.92 43 ePd 55 05.00 1.9
eS 55 16.50
PSI 4.75 116 iPd 55 59.00 1.4
IPM 6.35 92 ePc 56 19.20 -1.1
0.4s 22.80nm 5.3mb X
e 57 28.10
SNG 6.37 68 eP 56 21.00 0.4
PPI 7.76 132 eP 56 40.00 -0.1
NNT 9.20 33 eP 56 58.20 -1.9
CHG 14.52 16 eP 58 22.00 10.3X
GBA 19.10 298 Pc 59 09.80 0.4
0.7s 5.50nm 3.9mb
WB5 46.11 123 eP 03 13.10 3.4X
WRA 46.11 124 Pd 03 08.80 -1.0
0.7s 5.90nm 4.6mb
S.D. = 1.5 on 8 of 10 obs.

% JUL 14, 1989 13h 16m 37.13± 0.57s
60.721 N ± 4.7km 5.551 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.9 (BER).

ASK 0.30 217 iP 16 43.07 -0.2
iSg 16 47.18
SUE 0.51 311 iP 16 47.27 -0.2
eS 16 54.91
HYA 0.54 34 iP 16 47.60 -0.5
eS 16 54.93

ODD1	0.97	146	eP	16	54.91	-0.7
			eS	17	07.86	
BLS1	1.48	154	iP	17	04.15	0.3
			eS	17	23.78	
KMY	1.52	186	iP	17	04.96	0.6
			iS	17	23.96	
MOL	2.09	26	iP	17	13.32	0.8
			eS	17	38.20	
NRA0	2.94	87	eP	17	24.80	0.0
			iPg	17	28.60	
			iSg	18	06.70	

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

% JUL 14, 1989 15h 20m 27.16± 0.93s
33.055 S ± 8.7km 70.986 W ±10.8km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

ROCH	0.09	346	iPc	20	34.70	1.5
			iS	20	42.00	
JACH	0.50	42	iPd	20	36.70	-1.2
			iS	20	45.60	
TACH	0.60	176	iPd	20	39.10	-0.1
			iS	20	50.00	
FCH	0.64	115	iPd	20	40.20	0.1
			iS	20	51.50	
LCCH	0.64	229	iP	20	39.10	-0.7
			iS	20	50.60	
PCH	0.69	145	iPc	20	41.50	1.0
			iS	20	52.90	
CHCH	0.92	162	ePd	20	43.10	-0.7
			eS	20	57.00	
LNV	0.97	201	iPd	20	39.10	-5.3X
			iS	20	57.90	

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

JUL 14, 1989 15h 43m 18.13± 0.21s
1.472 S ± 4.0km 15.546 W ± 4.4km
DEPTH = 10.0km (geophysicist)
5.4mb (62 obs.) 5.3Msz (13 obs.)
NORTH OF ASCENSION ISLAND (407)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 40C
Centroid Location:
Origin Time 15:43:26.7 0.2
Lat 1.18S 0.02 Lon 15.12W 0.02
Dep 15.0 FIX Half-durotion 3.2
Moment Tensor; Scale 10**17 Nm
Mrr=-0.38 0.10 Mtt= 3.13 0.15
Mff=-2.75 0.17 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-5.36 0.10
Principal Axes:

	Val=	Plg=	Azm=
T	6.30	0	211
N	-0.38	90	180
P	-5.92	0	121

Best Double Couple:Mo=6.1**17
NP1:Strike=256 Dip=90 Slip= 180
NP2: 346 90 0

LIC	12.99	54	P	46	20.98	-4.5X
			S	48	54.00	
TIC	13.24	52	P	46	24.30	-4.6X
KIC	13.30	54	P	46	25.10	-4.6X
KDS	14.34	13	iP	46	38.50	-4.8X
			iS	49	12.50	
MBO	15.82	355	iP	47	00.20	-2.5
			iS	49	45.30	
WEGH	16.74	65	eP	47	13.00	-1.4
LEGH	16.90	65	eP	47	14.00	-2.4
KUK	16.96	63	eP	47	14.00	-3.2X
KOGH	17.02	64	eP	47	35.00	17.0X
ITR	23.89	252	iPc	48	32.10	-0.9
			i	48	35.90	
			i	48	41.00	
			i	48	50.20	
SOB1	26.36	252	iPc	48	56.30	-0.3
TIO	33.17	13	iPc	49	57.50	0.3
			i	50	41.50	
BNG	34.57	80	iPd	50	09.90	0.5
	0.8s	205.00nm			6.1mb	
			ic	51	38.90	
BMA	34.89	231	eP	50	11.30	-0.8
BAO	34.95	244	eP	50	12.40	-0.4
AVE	35.42	12	iP	50	17.50	1.0
BRAS	35.92	232	iPc	50	20.40	-0.7
IFR	36.16	15	iPc	50	24.00	1.1
			i	51	43.00	
ATB	36.69	266	Pc	50	25.80	-1.6
BMK	37.35	13	iPc	50	33.50	0.9
			i	51	54.00	
TAF	38.14	18	iPd	50	40.00	0.6
			i	52	13.00	
MAL	39.39	14	iPd	50	50.00	0.3
			iPP	52	28.00	
			iS	56	50.00	
EPRU	39.42	13	eP	50	51.20	1.1
ATEJ	39.67	15	eP	50	53.00	0.7
EVAL	39.71	11	eP	50	53.00	0.6
APHE	39.78	15	eP	50	53.70	0.5
ALOJ	39.83	14	eP	50	54.00	0.4
ACHM	39.89	15	eP	50	55.50	1.5
AAPN	40.01	14	iPc	50	55.00	-0.1
CRT	40.03	15	eP	50	57.00	1.8
AFC	40.11	15	eP	50	56.60	0.7
ASMO	40.15	15	eP	50	56.50	0.3
ENIJ	40.20	17	eP	50	57.40	0.9
EHOR	40.24	13	eP	50	57.40	0.7
PPD	40.35	237	eP	50	57.90	0.0
EBAN	40.91	14	eP	51	02.20	-0.1
EALH	41.26	17	eP	51	06.40	1.3
EVIA	41.68	15	eP	51	08.30	-0.4
EPLA	42.24	11	eP	51	14.00	0.8
TOL	42.48	13	iPc	51	15.50	0.4
	1.3s	96.15nm			5.4mb	
			i	52	55.00	
			iS	57	40.00	
			eSS	00	30.00	
KMZ	42.64	108	iPc	51	17.10	0.2
	0.6s	4.00nm			4.3mb X	
			i	52	59.90	
ECHE	42.99	17	eP	51	20.50	1.1
GUD	43.18	13	eP	51	21.80	0.8
POF	43.71	133	iPd	51	26.00	0.7
	1.0s	50.00nm			5.3mb	
ETOR	43.85	15	eP	51	26.80	0.4
ITB	43.94	235	e(P)	51	26.60	-0.6
ITB1	44.02	235	eP	51	27.50	-0.4
LWI	44.33	92	eP-	51	30.80	0.0
ESEL	44.38	20	e(P)	51	30.50	-0.1
MZZ	45.12	104	iPc	51	37.50	0.4
	1.0s	1.20nm			3.8mb X	
			i	53	18.00	
			i	54	36.00	
LSZ	45.27	110	iPd	51	40.00	1.8
			i	53	22.00	
CER	45.52	138	eP	51	45.50	5.6X
SUR	45.99	136	iPd	51	43.50	-0.3
	1.0s	60.00nm			5.5mb	
EPF	46.55	16	iPc	51	48.70	0.8
	1.1s	58.60nm			5.5mb	
BUL	46.96	116	iPc	51	50.40	-1.1
			iPP	53	35.60	
KSR	47.49	124	eP	51	40.50	-15.2X
	0.7s	27.50nm				
			i	51	53.70	
FRS	47.93	130	iPd	51	58.00	-0.9
	1.0s	105.00nm			5.9mb	
PTZ	48.03	108	iPc	52	00.00	0.0
			i	53	48.00	
LPO	48.31	16	iPc	52	01.80	0.2
	0.8s	26.80nm			5.4mb	
LFF	48.43	15	iPc	52	03.10	0.6
	1.0s	56.00nm			5.6mb	
HVD	48.47	131	iPd	52	16.00	12.7X
	1.0s	60.00nm				
			i	52	30.00	
IKZ	48.66	102	iPc	52	05.00	0.1
			i	53	49.60	
ATN	48.72	33	Pd	52	06.50	1.6
CAF	48.78	17	iPc	52	05.20	-0.1
	1.1s	48.80nm			5.5mb	
LMR	48.81	21	eP	52	05.90	0.5
	0.9s	36.00nm			5.4mb	
LRG	48.86	21	eP	52	06.30	0.5
	1.0s	37.60nm			5.4mb	
GMB	48.94	33	P	52	08.10	1.4
RJF	48.98	16	iPc	52	06.90	0.2
	1.0s	32.00nm			5.3mb	
SOI	48.98	33	Pc	52	07.80	1.0
FRF	49.05	21	eP	52	07.80	0.5
	0.8s	13.40nm			5.0mb	
SEK	49.10	127	iPd	52	08.00	-0.1
	1.0s	225.00nm			6.1mb	
SBF	49.60	22	eP	52	12.10	0.4
	1.0s	68.00nm			5.6mb	
GRI	49.71	33	P	52	12.90	0.4
MFF	49.76	14	iPc	52	12.70	0.0
	0.9s	26.20nm			5.2mb	
IMI	49.81	22	P	52	13.07	-0.2
LSF	49.85	15	iPc	52	13.70	0.2
STV	49.89	21	P	52	14.61	0.7
ENR	49.91	22	P	52	14.81	0.8
PZZ	50.03	21	P	52	16.14	1.1
TCF	50.07	16	iPc	52	15.60	0.4
	1.2s	62.40nm			5.5mb	
MAF	50.11	16	iPc	52	15.80	0.3
ROB	50.13	22	P	52	16.14	0.4
FIN	50.19	22	P	52	16.45	0.4
MGR	50.22	31	P	52	16.20	-0.1
RRL	50.28	21	P	52	17.68	0.6
BNI	50.36	20	Pd	52	18.70	1.2
BGF	50.50	16	iPc	52	18.70	0.3
	1.0s	34.00nm			5.3mb	
AZI	50.58	28	P	52	19.40	0.4
PCP	50.60	22	P	52	19.02	-0.2
LPG	50.77	20	iPc	52	21.50	0.7
	1.0s	54.00nm			5.4mb	
AVF	50.85	17	iPc	52	21.30	0.3
	1.1s	31.70nm			5.2mb	
SMF	50.86	17	iPc	52	21.40	0.2
	1.1s	21.90nm			5.0mb	
LSD	50.88	20	P	52	21.99	0.4
LPF	50.90	13	eP	52	21.20	-0.2
	0.9s	19.60nm			5.0mb	
BDI	51.00	24	Pc	52	21.70	-0.6
BOB	51.13	23	P	52	24.40	1.1
SSF	51.14	17	iPc	52	23.50	0.2
	1.0s	38.00nm			5.3mb	
LBF	51.21	17	iPc	52	24.00	0.2
	1.0s	40.80nm			5.3mb	
GRR	51.28	13	iPc	52	24.30	0.1
	0.9s	42.50nm			5.4mb	
LOR	51.43	17	iPc	52	25.50	0.0
	1.0s	44.00nm			5.3mb	
DIX	51.51	20	ePc	52	26.60	0.2
LDF	51.63	13	eP	52	26.80	-0.2
	0.8s	10.70nm			4.8mb	
MMK	51.68	21	ePc	52	27.60	-0.1
FLN	51.71	13	eP	52	27.20	-0.3
	0.8s	17.10nm			5.0mb	
VAI	51.81	21	Pc	52	27.10	-1.2
TMA	52.05	21	ePc	52	29.10	-1.3
CCH	52.15	249	P	52	32.60	0.8
NAI	52.33	90	iPc	52	37.20	4.1X
LOMF	52.42	19	P	52	32.12	-0.9
VDL	52.59	22	ePc	52	33.40	-1.1
TPE	52.73	34	eP	52	38.20	2.9
BBS	52.74	20	P	52	34.76	-0.7
LLS	52.74	21	ePc	52	34.40	-1.2
BSF	52.83	19	P	52	35.32	-0.8
HAU	52.84	18	eP	52	35.80	-0.3
	1.0s	48.00nm			5.4mb	
VITF	52.92	18	P	52	36.21	-0.4
MOF	52.96	19	P	52	36.01	-1.1
LSK	52.96	35	eP	52	36.50	-0.7
OSS	53.01	22	ePc	52	36.40	-1.2
ZLA	53.06	20	ePc	52	37.00	-0.8
SAX	53.19	21	ePc	52	37.90	-1.2
FEL	53.27	20	P	52	38.30	-1.1
ECH	53.29	19	P	52	38.46	-0.9
SLE	53.34	20	ePc	52	39.10	-0.7
TIR	53.37	33	eP	52	41.00	1.0
KBN	53.40	34	eP	52	44.00	3.8X
VAL	53.40	4	P	52	44.00	3.9X
			S	00	15.00	
SLA	53.45	240	ePc	52	39.80	-1.3
LACI	53.49	33	eP	52	41.70	0.8
CDF	53.50	19	P	52	40.05	-0.9
RIY	53.64	26	ePc	52	41.10	-0.8
TRI	53.66	25	iPc	52	41.60	-0.5
CNCB	53.77	250	Pc	52	43.30	-0.7
ZOBO	53.80	251	iPc	52	43.00	-1.3
	1.1s	29.00nm			5.2mb	
Z	22s	2.58um			5.2Msz	
			S	00	24.00	
			LR	08	20.00	
STR	53.80	19	P	52	43.74	0.7
LPB	53.83	251	Pc	52	44.00	-0.3
	2.0s	141.18nm			5.6mb	
Z	18s	4.12um			5.5Msz	

14d 15h

		S	00 22.00			
		LR	08 16.00			
PHP	53.92	33 eP	52 44.10	0.1		
FVI	53.96	24 Pc	52 44.10	-0.1		
CEY	53.97	26 ePc	52 44.10	-0.3		
VOY	53.97	25 ePc	52 44.20	-0.3		
ECP	54.01	7 eP	52 44.00	-0.5		
	1.0s	123.00nm	5.9mb			
LIT	54.01	36 iPc	52 44.50	-0.3		
GWF	54.10	19 P	52 44.72	-0.6		
VBY	54.15	26 ePc	52 45.60	-0.1		
ECB	54.15	7 eP	52 44.80	-0.7		
RBL	54.16	25 Pc	52 45.70	-0.2		
KKS	54.17	33 eP	52 47.50	1.7		
BCI	54.19	32 eP	52 47.20	1.2		
DOU	54.20	16 P	52 45.30	-0.7		
		i	52 53.00			
		S	00 21.00			
LJU	54.25	25 ePc	52 46.00	-0.5		
		e	53 12.50			
		e	54 44.00			
		eS	00 24.00			
WLF	54.26	17 P	52 45.40	-1.0		
HLW	54.49	51 eP	52 48.50	0.0		
		eS	00 32.00			
SNF	54.49	15 Pd	52 47.60	-0.5		
ETA	54.54	7 eP	52 47.80	-0.6		
	1.0s	67.00nm	5.6mb			
KTD	54.55	19 ePc	52 48.05	-0.6		
RUP	54.56	18 ePc	52 48.09	-0.7		
KBA	54.58	24 iPc	52 47.70	-1.4		
	1.2s	26.00nm	5.1mb			
		i	52 53.40			
		i	52 58.70			
		e	54 31.00			
SKO	54.66	33 iPc	52 49.80	0.3		
Z	18s	2.99um	5.4Msz			
N	18s	2.11um				
E	18s	3.47um				
		i	52 53.00			
		iPP	54 55.00			
		iPPP	55 58.00			
		iSS	04 12.00			
		iSSS	06 15.00			
		LR	18 50.00			
FUR	54.67	22 iPc	52 48.80	-0.7		
	1.0s	82.00nm	5.7mb			
ZAG	54.71	27 eP	52 49.70	-0.1		
PTJ	54.76	27 e(P)	52 50.10	-0.3		
UCC	54.78	15 P	52 53.00	2.8		
		e	53 12.00			
		S	00 34.00			
VAY	54.86	35 eP	52 50.40	-0.6		
ABH	54.87	18 ePc	52 50.10	-0.9		
YRH	54.88	8 eP	52 49.60	-1.4		
	1.2s	62.00nm	5.5mb			
BHG	54.91	23 iPc	52 49.90	-1.5		
	0.8s	40.00nm	5.5mb			
TOD	55.03	19 ePc	52 51.27	-0.9		
DCN	55.06	6 eP	52 50.70	-1.5		
	1.0s	102.00nm	5.8mb			
MEM	55.06	17 Pd	52 52.70	0.4		
DLE	55.08	7 eP	52 51.30	-1.1		
AAE	55.11	78 eP	52 54.50	0.9		
ENN	55.18	16 ePc	52 53.00	-0.1		
	1.0s	59.00nm	5.6mb			
		i	53 01.00			
TNS	55.45	18 ePc	52 54.10	-1.2		
DMU	55.64	6 eP	52 58.00	1.5		
KMR	55.68	24 eP	52 54.00	-2.9		
		i	52 58.20			
		e	55 52.00			
IZM	55.91	40 eP	52 58.00	-0.7		
GRF	55.93	21 iPc	52 57.70	-0.9		
	1.1s	40.00nm	5.4mb			
Z	19s	1.10um	5.0Msz			
		e	53 00.40			
		e	53 05.80			
WET	56.08	22 iPc	52 58.80	-0.9		
	1.0s	78.00nm	5.7mb			
EZN	56.15	38 eP	53 00.10	-0.2		
KHC	56.33	23 eP	53 00.00	-1.6		
	1.2s	34.00nm	5.3mb			
		e	53 22.80			
		S	00 50.00			
WTS	56.52	16 iPc	53 02.80	0.0		
	1.0s	68.00nm	5.6mb			

			e	53 10.50		
HOF	56.68	21 eP	53 02.50	-1.6		
VKA	56.75	25 eP	53 03.50	-1.0		
	4.4s	558.00nm		5.9mb X		
Z	16s	1.20um		5.1MszX		
		i	53 06.40			
		e	53 43.00			
		e	55 04.00			
		i	55 10.80			
		LR	17 30.00			
ELL	56.77	43 iP	53 05.70	0.7		
ARE	57.02	251 eP	53 05.00	-2.4		
ZST	57.03	25 iPc	53 05.20	-1.3		
		e(S)	01 03.00			
WIT	57.21	16 eP	53 08.00	0.3		
		e	53 16.00			
MBH	57.24	53 eP	53 09.00	0.7		
BZS	57.25	30 eP	53 07.50	-0.6		
SRO	57.27	27 eP	53 11.00	2.8		
BUD	57.34	27 eP	53 08.50	-0.2		
KHL	57.35	41 iP	53 10.90	1.8		
PRU	57.39	23 ePc	53 07.50	-1.6		
	2.2s	160.20nm		5.7mb		
Z	20s	3.00um		5.4Msz		
N	20s	1.10um				
E	20s	2.30um				
		e	53 18.50			
		S	01 07.00			
EKA	57.52	8 Pd	53 09.30	-0.6		
	1.0s	33.50nm		5.3mb		
BRG	57.89	22 eP	53 11.20	-1.3		
	1.1s	25.00nm		5.2mb		
		e	53 30.40			
		i	55 18.00			
		e	01 20.00			
CLL	57.91	21 iPc	53 11.10	-1.5		
	2.2s	150.00nm		5.6mb		
		eS	01 16.00			
ALT	58.13	41 eP	53 13.50	-1.0		
CTT	58.23	38 eP	53 13.00	-2.0		
DSI	58.36	51 eP	53 19.00	2.9		
ITU	58.56	38 iPc	53 30.00	12.6X		
ISK	58.57	38 eP	53 18.00	0.6		
BUC1	58.75	34 ePc	53 16.00	-2.6		
KSP	58.75	23 eP	53 18.00	-0.6		
BUC	58.83	34 ePd	53 22.00	2.8		
SPC	59.15	27 iP	53 21.20	-0.4		
RFA	59.29	230 ePc	53 21.50	-1.2		
HRI	59.34	49 eP	53 23.00	-0.1		
MLR	59.43	33 ePc	53 22.50	-1.0		
BHL	59.55	49 P	53 25.00	0.5		
		S	01 44.00			
KRA	59.66	26 eP	53 23.20	-1.6		
Z	20s	2.30um		5.3Msz		
N	20s	2.90um				
		e	53 26.20			
		e	57 07.00			
		e	01 41.00			
VRI	60.09	33 ePc	53 26.00	-1.9		
BBTK	60.29	41 eP	53 29.00	-0.5		
CFR	60.46	34 eP	53 29.00	-1.3		
CLI	60.82	33 ePc	53 31.00	-1.9		
LNV	61.28	232 iPc	53 34.50	-1.7		
NNA	61.64	257 eP	53 36.00	-3.0X		
	0.3s	6.49nm		5.3mb		
KAS	61.72	40 iPd	53 39.20	0.0		
NRA0	65.47	14 P	54 02.90	-0.5		
HFS	65.51	16 eP	54 02.00	-1.6		
	1.3s	93.60nm		5.8mb		
Z	17s	1.33um		5.2MszX		
		LR	21 46.00			
NB2	65.66	14 P	54 03.70	-0.9		
BHD	66.07	52 ePd	54 11.00	3.4X		
		eS	03 01.50			
MSL	66.16	49 eP	54 12.00	3.8X		
		eS	03 04.00			
AKU	67.03	359 iP	54 19.20	6.1X		
	1.0s	24.00nm		5.3mb		
SLY	67.69	50 ePc	54 17.50	-0.4		
		iPcP	54 28.00			
		ePP	56 50.00			
		ePPP	58 36.00			
		eS	03 17.00			
		eScS	04 18.00			
		eLR	19 35.00			
		e	23 55.00			
TAB	69.13	48 e(P)	54 29.00	2.0		

NUR	69.17	20 eP	54 26.00	-0.6		
	0.7s	16.00nm		5.3mb		
Z	21s	1.60um		5.2Msz		
		eS	03 36.00			
		LR	26 00.00			
SNA	69.28	175 iPd	54 27.90	0.8		
	0.9s	50.42nm		5.7mb		
NA2	69.39	312 P	54 31.20	2.8		
GAC	70.56	320 eP	54 39.00	3.6X		
JSC	70.96	307 P	54 40.80	2.7		
BLA	71.12	310 P	54 43.20	4.1X		
	1.2s	45.45nm		5.5mb		
SUF	71.26	19 iP	54 38.60	-0.7		
SOD	74.74	16 iP	54 59.40	-0.3		
FRB	75.83	339 eP	55 09.00	3.0X		
KEV	76.56	14 eP	55 12.00	2.0		
	0.7s	17.40nm		5.3mb		
		eS	05 00.00			
MAIO	78.85	53 iPd	55 23.70	0.3		
		eS	05 24.00			
FVM	79.02	309 P	55 25.60	1.4		
OLY	79.42	306 P	55 27.40	1.0		
RLO	82.37	307 eP	55 44.30	2.3		
TUL	82.96	306 eP	55 47.70	2.7		
	0.7s	12.10nm		5.2mb		
Z	22s	3.91um		5.7Msz		
		LR	20 43.00			
SIO	83.35	306 eP	55 51.00	3.9X		
RSON	83.67	321 P	55 53.00	4.7X		
	1.2s	76.53nm		5.8mb		
MAW	84.23	158 eP	55 54.00	3.1X		
ALE	86.30	354 eP	56 07.00	6.0X		
	0.8s	14.00nm		5.2mb		
SPA	88.54	180 e(P)	56 14.80	2.6		
	1.0s	5.50nm		4.8mb		
Z	20s	1.22um		5.3Msz		
		e	56 21.00			
FFC	89.12	325 eP	56 17.00	2.0		
	1.6s	40.00nm		5.4mb		
RSSD	89.93	314 P	56 23.50	4.2X		
GLD	90.68	310 P	56 27.40	4.5X		
	1.3s	40.23nm		5.6mb		
Z	20s	1.00um		5.2Msz		
GOL	90.79	310 P	56 27.00	3.5X		
	0.9s	32.20nm		5.6mb		
Z	20s	0.75um		5.1Msz		
ALQ	91.58	305 P	56 27.10	0.0		
Z	20s	0.68um		5.1Msz		
NDI	93.13	62 eP	56 35.00	0.9		
BW06	93.94	313 P	56 40.00	2.1		
SES	94.64	320 eP	56 47.00	6.3X		
MBC	94.70	347 eP	56 42.50	2.1		
	1.0s	22.00nm		5.5mb		
IMW	94.91	314 P	56 46.20	3.8X		
EDM	95.85	323 eP	56 50.00	3.8X		
WMQ	100.56	46 Pdiff	57 13.50	5.7X		
Z	22s	1.50um		5.5Msz		
		PP	01 21.00			
		SKS	07 52.00			
		SS	15 36.00			
GYA	119.27	60 PKP	02 15.40	5.2X		
BJI	121.81	42 ePKP	02 22.00	7.6X		
Z	24s	1.04um		5.4MszX		
CN2	125.46	34 ePKP	02 24.00	2.6		
Z	26s	1.30um		5.5MszX		
		ePP	04 06.00			
MDJ	127.13	31 ePKP	02 24.50	-0.1		
ASPA	141.18	132 ePKP	02 45.60	-6.1X		
WB5	143.65	127 ePKP	02 52.00	-4.0X		
QIS	147.26	133 ePKPd	03 03.80	1.8		
		e	03 15.00			
BRS	149.18	159 ePKP	03 15.00	10.1X		
CTA	152.12	141 iPKPc	03 18.10	8.7X		
	1.1s	29.11nm				
	S.D. = 1.1	on 229 of 266 obs.				

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* JUL 14, 1989 16h 32m 15.58± 1.10s
1.83B N ±12.8km 97.931 E ±15.1km
DEPTH = 33.0km (normal)
4.0mb (1 obs.)
NORTHERN SUMATERA (706)

PSI	1.31	49 iPc	32 59.50	21.9X		
		eS	33 19.00			
PPI	3.36	133 eP	33 31.50	24.5X		
		eS	34 12.20			
IPM	4.12	49 ePd	33 18.50	0.7		

0.5s 172.90nm
e 33 50.40
BSI 4.49 324 eP 33 45.00 22.0X
SNG 5.94 27 eP 33 43.10 -0.5
e 34 33.80
CHG 16.90 3 iPd 36 11.00 -0.3
0.9s 10.92nm 4.0mb
MNI 26.90 90 ePd 38 01.50 5.7X
WB5 41.75 123 eP 40 03.30 -0.4
SUF 80.08 334 eP 44 24.00 0.6
NUR 80.21 331 eP 44 24.00 -0.1
S.D. = 0.7 on 6 of 10 obs.

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* JUL 14, 1989 17h 19m 45.36± 2.52s
23.012 N ±17.8km 121.888 E ±21.5km
DEPTH = 33.0km (normal)
4.3mb (1 obs.)
TAIWAN (244)

TWF1 0.64 302 iPc 19 57.00 -1.0
eS 20 02.60
TWG 0.78 256 iPd 20 01.00 1.1
eS 20 10.90
TWD 1.10 346 iPc 20 03.70 -0.7
eS 20 16.10
TWK 1.31 281 ePc 20 07.90 0.3
TWC 1.59 359 iPd 20 12.20 0.7
eS 20 30.50
TWZ 2.09 352 ePd 20 19.00 0.2
ANP 2.19 351 eP 20 22.00 1.8
SSE 8.08 356 e(P) 21 43.00 -0.2
Lg 24 03.40
WHN 10.08 320 P 22 06.50 -4.4X
eS 23 57.00
OIZ 11.92 253 eP 22 36.50 0.4
GYA 14.25 287 P 23 06.20 -0.8
LZH 20.36 314 (P) 24 17.00 -4.9X
SUF 72.39 331 iP 31 08.00 -1.8
0.5s 1.80nm 4.3mb
S.D. = 1.2 on 11 of 13 obs.

? JUL 14, 1989 18h 35m 19.85± 3.24s
35.171 N ±27.2km 139.182 E ±15.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (I JMA) ot Ajiro.

CHJJ 0.89 350 P 35 37.70 0.3
S 35 52.20
IIDJ 1.08 287 P 35 39.10 -1.6
KAKJ 1.31 38 P 35 44.10 -0.4
MAT 1.58 330 eP 35 49.00 0.4
iS 36 11.40
NIIJ 2.07 356 P 35 58.60 2.9X
TSRJ 2.64 279 P 36 05.10 1.3
S.D. = 1.5 on 5 of 6 obs.

JUL 14, 1989 18h 35m 37.05± 0.73s
37.731 N ± 6.7km 14.728 E ± 6.6km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.20 352 Pd 35 42.50 0.9
eSg 35 47.20
GIB 0.61 295 P 35 48.80 -0.7
eSg 35 59.00
MEU 0.65 166 Pd 35 49.60 -0.5
eSg 36 00.00
ATN 0.72 53 Pc 35 51.60 0.3
eSg 36 04.60
FAI 0.95 242 P 35 56.00 0.8
SOI 1.10 72 Pc 35 58.10 0.4
eSn 36 14.70
MGR 2.49 15 P 36 16.90 -1.3
S.D. = 1.0 on 7 of 7 obs.

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* JUL 14, 1989 20h 12m 41.36± 0.92s
8.804 S ±14.2km 119.313 E ±11.1km
DEPTH = 140.5 ± 27.5 km
FLORES ISLAND REGION (286)

MKS 3.57 3 iPc 13 37.00 0.6
e 17 35.00
KHKI 3.69 277 ePc 13 37.20 -0.8
eS 14 18.20
e 17 26.00
KNA 11.53 128 eP 15 24.30 1.5
eS 17 25.00
MTN 12.28 110 iPc 15 31.80 -0.9
eS 17 39.00
MBL 12.29 178 eP 15 32.00 -0.8
0.2s 10.00nm 5.0mb X
eS 17 39.00
NANU 14.15 194 eP 15 57.50 0.8
eS 18 23.00
WB5 18.26 129 eP 16 45.40 -1.5
eS 20 02.00
MRWA 20.54 188 eP 17 11.30 0.7
eS 20 53.00
FORR 23.42 161 eP 17 39.00 0.3
S.D. = 1.3 on 9 of 9 obs.

? JUL 14, 1989 20h 42m 07.50± 3.18s
35.175 N ±26.1km 139.182 E ±15.0km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)

CHJJ 0.88 350 P 42 25.20 0.3
S 42 38.40
IIDJ 1.08 287 P 42 26.50 -1.8
KAKJ 1.31 38 P 42 31.70 -0.4
S 42 52.30
MAT 1.58 330 eP 42 36.00 -0.2
iS 42 58.00
MTMJ 1.80 322 P 42 40.30 0.8
S 43 06.70
TSRJ 2.64 279 P 42 52.80 1.3
S 43 27.80
S.D. = 1.4 on 6 of 6 obs.

JUL 14, 1989 20h 42m 40.06± 0.11s
8.081 S ± 2.9km 125.129 E ± 3.3km
DEPTH = 9.8km (geophysicist)
6.4mb (53 obs.) 6.2Msz (17 obs.)
TIMOR (289)
Mo=1.3*10**19 Nm (PPT). Seven people injured seriously ond 38 buildings damaged on Alor. Depth from broadbond displocement seismogroms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=240 Dip=54 Slip= 70
NP2: 92 41 115
Principal Axes:
T Plg=72 Azm= 97
P 7 344
Comment: The focal mechonism is poorly controlled and corresponds to reverse foulting with o moderate strike-slip component. The preferred foult plone is not determined.
RADIATED ENERGY
No. of sto: 10 Focol mech. F
Energy 0.6±0.1*10**15 Nm
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 15S, 41C M.W.: 12S, 22C
Centroid Locotion:
Origin Time 20:42:48.4 0.1
Lot 7.86S 0.01 Lon 125.41E 0.02
Dep 36.4 0.9 Half-duration 7.8
Moment Tensor; Scale 10**18 Nm
Mrr= 8.74 0.12 Mtt=-7.18 0.12
Mff=-1.56 0.14 Mrt=-3.39 0.31
Mrf=-3.35 0.27 Mtf=-5.45 0.14
Principol Axes:
T Val= 9.93 Plg=75 Azm=118
N 1.63 7 236
P -11.56 13 328
Best Double Couple:Mo=1.1*10**19
NP1:Strike= 67 Dip=33 Slip= 103
NP2: 232 58 82

AAI 5.32 35 ePd 44 03.30 1.7
0.3s 9.60nm 4.9mb X
eS 47 52.00
MKS 6.30 296 iPd 44 18.50 3.2X
1.2s 109.00nm 5.6mb
e 56 41.00
MTN 7.57 129 iPd 44 32.90 -0.2
KNA 8.41 155 eP 44 44.00 -1.0
eS 46 10.00
KHKI 9.43 268 ePc 45 01.80 2.8
MNI 9.46 358 iPd 45 02.70 3.2X
MBL 13.97 201 eP 45 59.50 -0.9
WB5 14.75 144 iPd 46 05.50 -5.2X
WRA 14.79 144 Pc 46 07.60 -3.6X
0.4s 65.70nm 5.5mb
DAV 15.07 2 eP 46 16.50 1.6
1.7s *******nm 7.0mb
KKM 16.61 327 iPd 46 39.00 4.2X
1.8s 4947.80nm 6.3mb
NANU 17.10 212 iPd 46 40.10 -0.8
ASPA 17.63 153 iPc 46 45.50 -2.1
0.8s 1727.00nm 6.2mb
Z 20s 643.53um 4.8Msz
eS 49 50.00
LR 53 49.50
WARB 18.06 176 eP 46 52.00 -0.9
MNDI 18.49 85 eP 47 01.00 2.6
QIS 18.70 133 ePd 46 58.00 -2.8
MEKA 19.47 198 iPc 47 10.80 0.7
eS 50 39.00
LAT 21.74 88 eP 47 34.00 0.3
PMG 21.81 95 eP 47 32.00 -2.5
MRWA 22.71 201 iPc 47 44.40 1.0
eS 51 54.00
LMG 22.78 94 eP 47 45.00 0.7
FORR 22.82 173 eP 47 44.00 -0.4
0.5s 301.00nm 6.1mb
COOL 22.99 189 iPc 47 46.70 0.6
CTA 23.68 122 iPc+ 47 54.80 1.9
iS 52 01.00
CTAO 23.68 122 ePc 47 54.54 1.7
BAL 23.76 198 iPc 47 55.30 1.8
KGM 23.95 294 ePc 47 58.00 2.5
1.0s 665.20nm 6.2mb
e 48 11.00
KLB 24.38 195 iPc 48 00.50 0.9
BAG 24.75 350 eP- 48 05.00 1.6
1.5s 472.22nm 5.9mb
MUN 25.19 198 iPc 48 08.30 1.0
PPI 25.78 286 eP 48 18.00 5.0X
1.0s 249.60nm 5.9mb
eS 52 53.50
NWAO 25.78 195 eP 48 13.54 0.6
KLM 25.93 294 ePd 48 17.50 3.1X
IPM 27.13 297 Pc 48 26.50 1.0
1.6s 1735.20nm 6.5mb
e 49 22.10
RAB 27.16 83 iPc+ 48 24.00 -1.7
iS 52 00.00
PSI 28.24 291 ePc 48 36.50 0.9
1.6s 566.40nm 6.1mb
SNG 28.76 301 eP 48 42.50 2.3
0.8s 486.57nm 6.3mb
eS 53 28.10
RMQ 28.96 132 iPc 48 42.70 0.8
e 49 20.00
e 55 13.00
e 56 45.00
GUMO 29.11 42 eP 48 42.33 -1.0
1.8s 3098.59nm 6.8mb
PJG 29.11 42 e(P) 48 43.10 -0.3
ADE 29.52 157 iPc 48 48.60 1.6
CMS 30.24 143 iPc 48 54.60 1.2
e 54 41.00
QIZ 30.87 331 Pc 49 00.00 1.0
8.0s 8.80nm 3.7mb X
E 12s 20.20um
pP 49 15.50 64kmX
PP 50 06.00
iS 54 02.50
sS 54 18.00
SS 55 53.00
HKC 32.05 341 P 49 11.00 1.7
iS 54 24.00
MCO 32.09 340 eP 49 11.70 2.0
8RS 32.45 130 iPc- 49 13.90 1.0
iS 54 24.00
NNT 32.54 309 iPc 49 15.00 1.3
8SI 32.67 293 ePd 49 14.60 -0.2
0.8s 803.10nm 6.7mb
BFD 33.00 154 iPc 49 18.90 1.4
0.8s 307.00nm 6.3mb
GZH 33.05 340 Pc 49 19.00 1.0
9.0s 9.70nm 3.7mb X
Z 32s 66.90um 6.1MszX
N 12s 27.50um

14d 20h

	E	10s	7.50um				
			S	54	37.00		
ANP		33.25	354 eP+	49	20.00	0.2	
			eS	54	36.00		
QZH		33.44	349 Pc	49	22.00	0.7	
		4.0s	2.30nm			3.5mb	X
	Z	20s	15.60um			5.7Msz	
	N	12s	11.10um				
	E	12s	11.20um				
			S	54	40.00		
			SS	56	40.00		
			ScS	59	40.00		
COO		33.57	135 iPc	49	25.00	2.4	
BWA		33.86	144 iPc	49	28.40	3.4	X
NST		34.21	314 iPc	49	31.00	2.9	
LOE		34.29	318 iPc	49	30.00	1.1	
HNR		34.43	95 eP	49	29.00	-1.2	
TOO		34.67	151 eP	49	35.00	3.0	X
			e	52	07.00		
			e	55	24.00		
			e	04	20.00		
CAN		34.83	145 iPc	49	35.50	2.1	
CNB		35.04	144 iPd	49	37.20	2.0	
		0.4s	143.00nm			6.2mb	
			e	55	12.00		
			e	03	16.00		
RIV		35.11	141 iPd	49	38.90	3.2	X
			eS	55	16.00		
			e	01	28.00		
			e	03	12.00		
BDT		36.06	314 ePd	49	45.00	1.1	
		1.0s	752.90nm			6.5mb	
CHG		37.16	316 iPc	49	44.90	-8.3	X
		1.0s	262.50nm			6.0mb	
			eS	55	28.00		
CHTO		37.16	316 ePc	49	55.47	2.2	
			ePPc	49	58.03	9km	X
			e	51	29.73		
GYA		38.73	333 iPc	50	08.80	2.3	
		3.0s	6.80nm			3.8mb	X
	Z	36s	38.80um			6.0Msz	X
	N	13s	8.40um				
	E	13s	17.80um				
			sP	50	34.00		
			PP	51	43.00		
			PcP	52	18.00		
			S	55	58.00		
SSE		39.13	355 P+	50	10.00	0.4	
	Z	22s	116.00um			6.7Msz	
	N	13s	8.70um				
	E	14s	8.40um				
			i	50	22.00		
			sP	50	44.00		
			PP	51	50.00		
			PcS	56	05.00		
			S	56	08.00		
			i	56	26.00		
			sS	56	50.00		
			SS	59	04.00		
			e	22	40.00		
KAGJ		39.43	8 eP	50	13.00	0.9	
KMI		39.56	327 ePc	50	16.88	3.4	X
			ePPc	50	19.61	9km	X
			ePP	51	59.17		
			ePcP	52	36.00		
			eS	56	19.88		
WHN		39.77	345 iPc	50	18.00	3.1	X
	Z	20s	38.30um			6.2Msz	
	E	16s	36.20um				
TAU		39.79	154 ePc	50	16.99	2.0	
			ePPd	50	20.22	11km	X
			esPd	50	21.79		
			e	51	34.21		
			ePP	51	54.32		
NJ2		40.35	352 iPc	50	21.00	1.3	
		5.0s	5.00nm			3.5mb	X
			S	56	26.00		
KUMJ		40.75	7 P	50	23.80	0.9	
DZM		42.09	114 iPc	50	34.70	0.4	
			iS	56	52.10		
SHNJ		42.35	7 P	50	37.00	1.0	
TKSJ		42.68	11 P	50	40.50	1.8	
SHK		42.98	9 iPc	50	42.30	1.1	
		1.2s	718.75nm			6.3mb	
PVC		43.08	107 iPc	50	43.00	0.7	
WKYJ		43.22	13 P	50	44.80	1.5	
YONJ		43.75	10 eP	50	48.80	1.4	

CD2		43.85	333 iPc	50	49.80	1.4	
	Z	14s	16.00um			6.1Msz	X
	N	14s	24.70um				
			pP	51	02.00	44km	X
			sP	51	10.00		
TSRJ		44.57	13 iP+	50	55.40	1.3	
XAN		44.62	341 iPc	50	55.00	0.4	
	N	12s	15.20um				
	E	12s	8.90um				
			pP	51	12.00	68km	X
			S	57	30.00		
TIA		44.69	351 Pc	50	55.30	0.2	
		9.0s	5.00nm			3.4mb	X
	Z	40s	56.30um			6.2Msz	X
			S	57	28.50		
IIDJ		44.97	15 P	50	57.50	0.1	
CHJJ		45.79	16 P	51	02.70	-1.1	
MAT		46.05	15 iPc+	51	05.70	-0.2	
		1.7s	2596.15nm			7.0mb	
	Z	20s	18.09um			6.0Msz	
			eS	57	50.00		
KAKJ		46.27	17 P	51	06.60	-0.9	
SHL		46.52	317 iP	51	11.20	1.2	
			iS	57	58.00		
DL2		46.86	356 iPc	51	11.00	-1.1	
	N	12s	5.40um				
	E	14s	17.00um				
NIIJ		46.92	15 P	51	11.90	-0.8	
TIY		47.07	346 iPc	51	14.40	0.4	
		8.0s	6.60nm			3.8mb	X
	N	14s	20.00um				
			pP	51	32.00	70km	X
			S	58	02.00		
YAMJ		48.07	16 eP	51	23.00	1.2	
LZH		48.28	337 eP	51	25.32	1.7	
		7.0s	2616.00nm			6.4mb	X
			ePPc	51	28.63	11km	X
			esPd	51	30.54		
			eS	58	23.07		
BJI		48.59	351 ePc	51	26.03	0.3	
			ePPd	51	29.18	11km	X
			esPd	51	30.42		
			ePP	53	25.87		
			eS	58	26.62		
			esS	58	42.00		
OFUJ		49.37	17 P	51	33.10	1.3	
SNY		49.68	358 iPc	51	34.00	-0.1	
		9.0s	9.80nm			3.8mb	X
	Z	28s	35.10um			6.2Msz	X
	N	15s	14.60um				
	E	14s	8.70um				
			pP	51	51.00	67km	X
			PP	53	34.00		
			S	58	44.00		
LSA		49.79	320 iPc	51	38.00	2.3	
	Z	13s	7.50um			5.9Msz	X
	N	15s	6.60um				
	E	15s	6.70um				
			pP	51	48.00	34km	X
			sP	51	56.00		
			sS	59	08.50		
			ScS	01	13.00		
HHC		50.26	347 iPc	51	39.00	0.2	
		8.0s	6.20nm			3.6mb	X
	Z	25s	35.00um			6.3Msz	X
	N	13s	9.30um				
			PP	53	44.00		
			S	58	51.00		
AOMJ		50.40	15 eP	51	41.50	1.9	
BTO		50.40	345 iPc	51	40.00	0.2	
		6.0s	6.40nm			3.8mb	X
	Z	13s	9.30um			6.0Msz	X
	N	13s	9.50um				
	E	14s	9.80um				
			sP	51	59.00		
			PP	53	31.00		
KOD		50.82	290 iP	51	42.80	-0.8	
			eS	58	55.00		
CN2		51.64	0 iPc	51	48.60	-0.3	
		6.0s	7.90nm			3.8mb	X
	Z	24s	31.20um			6.3Msz	X
	N	16s	12.20um				
			pP	52	02.00	49km	X
MSZ		51.95	142 Pc	51	52.20	0.8	
		1.0s	547.00nm			6.4mb	
			PcP	53	04.00		
			ScP	56	57.60		

GBA		52.02	294 Pc	51	49.50	-2.8	
MRRJ		52.33	15 P	51	55.30	1.1	
HYB		52.53	299 iPc	51	55.00	-1.2	
		1.8s	2636.40nm			6.9mb	
MDJ		52.61	4 Pc	51	56.50	0.3	
	Z	25s	24.60um			6.1Msz	X
	E	14s	8.90um				
			eS	59	25.00		
SVA		52.73	107 ePc	51	56.60	-1.0	
GTA		52.76	335 iPc	51	58.60	0.9	
		8.0s	9.00nm			3.8mb	X
	Z	16s	16.30um			6.2Msz	X
	E	12s	13.80um				
			pP	52	11.00	44km	X
			sP	52	16.00		
			S	59	23.00		
HOOJ		52.89	17 iP+	52	00.20	1.8	
SAP		52.99	15 eP	52	00.00	0.9	
			eS	59	30.00		
KUSJ		53.96	18 iP+	52	07.10	0.8	
ASAJ		54.32	15 iP+	52	10.00	1.1	
CCW		54.70	136 eP	52	12.50	0.7	
MRW		54.83	135 P	52	12.90	0.1	
SNZO		54.86	135 ePc	52	13.22	0.2	
			epPc	52	15.29	7km	X
WEL		54.90	135 P	52	13.40	0.1	
MNG		55.15	134 Pd	52	15.20	0.1	
MOW		55.29	135 P	52	15.90	-0.2	
MTW		55.36	135 Pc	52	16.40	-0.3	
BLW		55.42	135 P	52	17.00	-0.1	
PGZ		55.71	134 P	52	19.00	-0.1	
HBZ		56.20	130 Pc	52	23.50	0.8	
YSS		57.04	14 iPc	52	28.00	-0.5	
			iS	00	24.00		
POO		57.07	298 iPc	52	29.30	0.0	
			iS	00	16.50		
HIA		57.30	356 ePc	52	31.11	0.8	
			epPd	52	33.76	9km	X
			eS	00	25.58		
			eSS	04	06.39		
NDI		58.90	310 iPc	52	39.00	-2.9	
			iS	00	41.10		
DRV		59.38	173 eP	52	45.80	1.2	
WMQ		61.78	330 ePc	53	02.20	0.7	
			epP	53	04.93	9km	X
			eS	01	24.44		
			eScS	03	15.35		
			eSS	05	40.28		
AFI		62.06	101 ePc	53	03.25	-0.6	
			epPc	53	06.81	12km	X
			esPd	53	08.47		
IRK		62.70	346 iPc	53	08.00	0.6	
			eS	01	18.00		
KSH		65.60	320 iPc	53	28.00	1.3	
	N	16s	25.90um				
TLG		66.98	324 iPc	53	37.00	1.6	
			iS	02	31.00		
PET		67.20	21 iPc	53	38.00	1.6	
			iS	02	32.00		
QUE		67.53	307 iPc	53	38.70	-0.5	
			ePS	53	50.80		
			eS	02	24.00		
FRU		68.37	322 iPc	53	45.00	0.9	
			iS	02	42.00		
MAW		72.20	201 iPc+	54	08.00	1.1	
SBA		72.95	172 iPc+	54	15.00	3.9	X
		1.6s	1560.00nm			6.8mb	
RAR		73.27	110 P	54	15.00	1.0	
			S	03	48.00		
SMY		73.48	29 ePc	54	15.20	0.7	
KHI		75.54	308 iP+	54	27.00	-0.1	
MAIO		75.66	311 iPc+	54	28.50	0.9	
		2.0s	593.02nm			6.3mb	
			eS	04	04.00		
ADK		77.65	33 iPc	54	38.30	0.1	
		1.7s	1666.70nm			6.9mb	
TIK		79.58	1 iPc	54	48.00	-0.4	
			eS	04	46.00		
BBU		79.99	298 eP	54	49.50	-2.1	
		1.4s	1313.00nm			6.7mb	
DHR		80.29	298 iPc	54	53.40	0.2	
HON		80.83	67 ePc	54	56.01	-0.1	
	Z	20s	9.04um			6.1Msz	
			epPc	54	58.00	6km	X
TEH		81.70	308 ePc	55	01.00	0.4	
SPA		81.97	180 e(P)	55	02.60	1.1	
		1.0s	551.00nm			6.6mb	

TBI	82.65	113	iP	55	09.20	3.6X			PP	59	48.00				eSS	10	16.00						
	1.4s	590.00nm			6.6mb				SKS	03	00.00		VAY	104.72	311	iPdiff56	46.30	-1.8				
AFR	82.96	107	iP	55	09.80	2.6	HVD	94.14	238	iPc	56	15.00	14.1X	BZS	105.18	315	ePdiff56	49.00	-1.0				
	1.3s	550.00nm			6.6mb			1.8s	345.45nm					ITM	105.35	306	ePdiff56	50.00	-1.0				
RYD	83.04	296	iPc	55	07.50	-0.2	SNA	94.17	196	iPc	56	02.20	2.2	ALE	105.51	1	ePdiff56	51.00	0.2				
PAE	83.13	107	iP	55	10.60	2.5		0.8s	120.15nm			6.3mb		SKO	105.53	311	iPdiff56	49.00	-2.7				
	1.3s	620.00nm			6.6mb		MBH	94.17	299	eP	56	01.00	0.3		7.5s	5440.00nm			7.6mb X				
PPT	83.14	107	iP	55	10.50	2.3	FRS	94.46	239	iPc	56	03.00	0.9		E 19s	8.62um							
	1.3s	605.00nm			6.6mb			1.0s	124.00nm			6.3mb				iPP	01	11.00					
	Z 22s	12.00um			6.2Msz		LSZ	94.53	254	iPc	56	03.00	0.2			iPS	10	10.00					
TVO	83.43	107	iP	55	12.50	2.7		0.8s	6.90nm			5.1mb X				i	11	32.00					
	1.3s	690.00nm			6.7mb				i	59	52.00			SPC	105.80	319	ePdiff56	53.50	0.5			
KMSA	84.10	291	iPd	55	12.70	-0.4			i	06	44.00					e	59	54.40					
ARO	84.11	282	iP+	55	15.00	1.7	MZZ	94.53	258	iPd	56	15.00	12.1X			i	01	14.40					
PMO	85.04	104	iP	55	20.00	2.2		1.1s	16.00nm							e	12	16.60					
	1.3s	770.00nm			6.8mb				i	59	57.00			KRA	105.90	320	ePdiff56	53.40	0.3			
VAH	85.27	105	iP	55	21.00	2.1	PMR	95.02	29	eP	56	01.80	-2.1		1.9s	183.00nm			6.8mb				
	1.3s	590.00nm			6.6mb			1.7s	185.20nm			6.2mb			Z 22s	7.30um			6.2Msz				
TPT	85.31	104	iP	55	21.50	2.4		Z 20s	4.50um			5.9Msz			N 22s	10.00um							
	1.3s	755.00nm			6.7mb		AKSR	95.11	293	eP	56	07.50	2.3			e	01	18.00					
A8HA	85.33	289	iPc	55	21.70	2.1	AMAN	95.22	293	iPd	56	07.50	1.8			e	08	56.00					
RUV	85.51	105	iP	55	22.40	2.3	AGAL	95.26	293	iPd	56	07.50	1.6	BUD	106.79	317	ePdiff56	57.00	-0.2				
	1.3s	565.00nm			6.6mb		OBN	95.73	325	iPc	56	06.00	-1.3	BNG	107.01	272	iPdiff56	58.30	-0.7				
QASM	86.04	297	iPd	55	23.50	0.8		1.9s	840.00nm			6.9mb			0.6s	7.00nm			5.9mb				
TAB	86.21	309	ePc+	55	24.60	1.1		Z 24s	12.80um			6.3MszX				id	00	29.00					
SLY	86.31	307	ePd	55	24.00	0.2			eS	07	24.00			BCAO	107.02	272	ePdiff56	56.71	-2.3X				
			iPcP	55	38.50		LWI	95.95	267	ePc	56	08.90	-0.7			epP	57	00.27					
			iPP	58	48.00		COL	96.01	25	ePc	56	05.75	-2.8	SRO	107.23	318	ePdiff57	01.50	2.4				
			iPPP	00	57.00					ePP	59	59.46				i	01	25.20					
			iS	06	01.50					eSKS	06	36.49				e	12	38.60					
			iPS	06	46.00					eS	07	20.69		ZST	107.99	318	e(Pdif57	03.00	0.5				
			iSS	11	46.50		FBA	96.01	25	P	56	04.70	-3.8X			e	01	32.00					
BHD	86.72	304	ePd	55	26.00	0.2		1.8s	115.74nm			6.1mb				e	10	44.00					
			i	55	48.00		KAS	96.30	311	iPc	56	10.60	0.2	KSP	108.10	321	ePdiff57	03.00	0.1				
			iPP	58	54.00		ANTO	96.90	309	ePc	56	12.38	-0.8			e	00	47.00					
			ePPP	01	16.00					epPc	56	15.11	9kmX			i	01	33.00					
			i	05	49.00					e	59	24.16		VIE	108.47	318	ePdiff57	05.00	0.4				
			iSKS	06	06.00					ePP	00	01.68				e	00	36.00					
			iSKKKS	06	40.00		BBTK	96.93	309	iPc	56	13.00	-0.3			e	00	45.00					
AAE	87.69	279	ePc	55	33.30	2.0	KMZ	97.08	255	iPd	56	15.00	0.5			iPP	01	39.40					
SDN	87.84	33	eP	55	29.70	-1.0		0.8s	2.00nm			4.8mb X				i	01	49.00					
CLK	88.00	255	iPc	55	31.80	-0.6			i	00	11.00			VKA	108.50	318	iPdiff57	04.60	-0.2				
NAI	88.16	269	iPc	55	36.20	2.7	HLW	97.24	299	eP	56	15.00	0.2		5.0s	448.00nm			6.9mb X				
	1.0s	39.00nm			5.7mb					e	00	19.00			Z 18s	4.70um			6.1Msz				
MSL	88.34	307	ePc	55	35.00	1.4				e	02	10.00				e	00	05.00					
			e	56	39.00		SUR	97.63	236	iPc	56	18.50	1.7			i	00	46.80					
			ePP	59	07.00			0.7s	253.42nm			7.0mb				iPP	01	36.10					
			eSKS	06	08.00		APA	98.10	337	iPKPc	56	16.00	-1.8			i	01	40.50					
			eSKKS	06	20.00		CER	98.61	235	iPd	56	28.00	7.0X			e	10	09.00					
			eS	06	47.00			1.0s	120.00nm			6.5mb				i	12	01.90					
			ePS	07	55.00		ALT	98.92	308	eP	56	20.40	-1.9			i	12	58.30					
BKR	89.11	312	iPc	55	39.00	1.6	ELL	98.95	306	iP	56	21.20	-1.3			LR	54	36.00					
			iS	06	22.00		POF	99.10	239	iPc	56	26.00	2.8	NB2	108.50	332	Pdiff	57	02.10	-2.4			
IKZ	91.02	260	iPd	55	47.00	0.3		0.6s	23.33nm			6.0mb		DAG	108.67	352	ePdiff57	03.50	-1.4				
PTZ	91.68	255	iPd	55	49.40	-0.3	KHL	99.34	308	iP	56	24.90	0.7	ZAG	109.08	316	ePdiff57	07.50	0.1				
	0.9s	12.00nm			5.3mb X		DWY	99.60	26	P	56	24.00	-0.7	PTJ	109.09	316	ePdiff57	07.20	-0.4				
		i	59	28.00			ISK	99.82	310	eP	56	22.00	-4.2X			e	00	11.50					
SVW	91.85	29	eP	55	49.40	-0.1	ITU	99.85	310	iPc	56	24.00	-2.4	PRU	109.35	320	ePdiff57	08.00	-0.5				
TTA	92.10	27	eP	55	49.70	-0.9	DST	100.09	309	iPdiff56	25.70		-2.0			e	00	04.50					
SLR	92.65	244	iPc	55	54.40	0.3	CTT	100.30	310	ePdiff56	26.00		-2.5	COP	109.36	326	iPdiff57	10.00	1.7				
	1.2s	171.88nm			6.3mb		CIN	100.44	307	ePdiff56	27.00		-2.2			i	11	04.00					
	Z 20s	49.65um			7.0Msz		HYT	100.60	30	Pdiff	56	29.00	-0.5	BRG	109.56	321	ePdiff57	09.40	0.0				
KDC	92.72	32	eP	55	52.80	-0.6	SOD	100.68	337	iPdiff56	27.90		-1.6		2.0s	60.00nm							
SEK	92.76	241	iPc	55	55.60	1.0	EDC	100.71	310	iPdiff56	28.70		-1.6			e	57	14.80					
	1.1s	265.82nm			6.6mb		KAP	101.10	305	ePdiff56	31.50		-0.7			e	00	19.70					
AYN	93.09	299	iPd	55	56.00	0.2	IZM	101.12	308	ePdiff56	31.60		-0.6			e	01	07.60					
PRY	93.15	242	iPd	55	56.90	0.5	SUF	101.25	332	iPdiff56	31.40		-0.7			i	01	39.80					
	1.1s	2229.73nm			7.5mb X			0.6s	1.90nm			4.9mb X				i	01	58.60					
BUL	93.31	249	iPd	55	57.20	0.0	VRI	101.60	315	ePdiff56	34.00		-0.1			e	07	31.00					
		iPP	59	53.00		INK	101.66	22	ePdiff56	32.20		-1.6	VBY	109.63	315	ePdiff57	10.00	0.1					
QUTJ	93.39	301	Pc	55	57.60	0.3	EZN	101.88	309	ePdiff56	34.60		-0.9			e	00	48.20					
JARJ	93.56	302	Pc	55	58.60	0.5	PRK	101.91	308	ePdiff56	34.70		-0.9			e	01	14.00					
BURJ	93.71	302	Pc	55	59.10	0.4	SIT	101.93	33	e(Pdif56	34.50		-0.8			e	01	45.70					
MKRJ	93.74	301	Pc	55	59.00	0.1	BUC	102.05	314	ePdiff56	33.00		-3.1X	BRN	109.68	323	ePdiff57	11.00	1.1				
KFNJ	93.74	301	Pc	55	59.10	0.4	BUC1	102.10	314	ePdiff56	36.00		-0.4			ec	01	42.00					
BFS	93.75	242	iPc	55	54.00	-5.2X	MLR	102.15	315	ePdiff56	36.00		-0.8	SOI	109.95	307	PKP	01	13.50	-0.3			
	1.5s	1250.00nm			7.1mb		NUR	102.15	330	iPdiff56	36.70		0.5	KMR	109.97	318	iPdiff57	11.00	-0.3				
IMA	93.76	24	eP	55	57.70	-0.6				e	59	40.00				e	00	16.00					
	2.0s	257.80nm			6.3mb					eS	00	48.00				i	00	29.00					
BRW	93.81	18	P	55	58.00	-0.3	KBS	102.27	350	ePdiff56	35.60		-0.8			iPP	01	40.00					
KSR	93.85	243	iPc	55	58.60	-1.1	NPS	102.37	304	ePdiff56	37.80		0.0			i	01	50.20					
	1.2s	210.00nm			6.4mb		APE	102.47	306	ePdiff56	32.20		-6.1X			i	11	29.00					
HRI	93.86	303	iP	56	01.00	1.6	VAM	103.53	304	ePdiff56	42.70		-0.3	CLL	110.05	322	ePdiff57	12.00	0.4				
BADA	93.91	298	ePd	56	00.00	0.4	MBC	103.75	13	ePdiff56	42.60		-0.4		2.5s	80.00nm							
DSI	93.96	301	eP	56	01.00	1.3		0.8s	16.00nm			5.9mb		LJU	110.05	316	ePdiff57	11.50	-0.2				
HOL	93.96	299	ePd	56	01.00	1.2	ATH	103.91	307	ePdiff56	44.00		-0.6			e	01	14.50					
BHL	94.01	304	PKPd	56	00.00	-0.1				ePPP	01	02.90				e	01	45.50					

14d 20h

KHC	110.13	319	Pdiffc	57	12.00	-0.1					PKKP	11	58.50		GOL	125.08	47	PKP	01	42.40	-0.7
			e	00	11.80						PPP	19	35.80			Z 20s		3.50um			6.0Msz
			i	01	51.60		RRL	115.61	316	PKP	01	24.86	0.1		TAF	125.16	307	iPKPd	01	43.00	-0.1
CEY	110.17	316	ePdiff	57	12.00	-0.3	KVN	115.78	51	PKP	01	25.00	-0.2					i	03	34.00	
TRI	110.63	316	ePKP	01	13.90	-0.9	ISA	116.08	54	ePKP	01	25.00	-0.7		GLD	125.17	47	PKP	01	43.30	0.2
YKA	110.82	25	PKP	01	14.40	-0.2				e	02	50.00				Z 20s		4.50um			6.1Msz
FVI	111.15	317	PKP	01	15.50	-0.2	MWC	116.63	56	ePKP	01	25.00	-2.0		EBAN	125.19	311	ePKP	01	42.50	-0.5
BER	111.44	332	ePdiff	57	26.80	9.3X	LOR	116.89	319	ePKP	01	25.70	-1.1		ASMO	125.42	310	ePKP	01	42.00	-1.6
GRF	111.52	320	e(Pdif	57	11.00	-7.2X		1.3s		68.60nm					APHE	125.51	310	ePKP	01	43.20	-0.6
WDC	112.15	50	ePdiff	57	21.00	-0.2	LBF	116.90	319	ePKP	01	25.80	-1.1		ACHM	125.57	310	ePKP	01	44.20	0.3
SFI	112.29	314	PKP	01	18.10	0.1		1.4s		93.65nm					LEGH	125.68	271	ePKP	01	44.00	-0.6
PNT	112.46	40	ePKP	01	18.00	-0.2	SMF	117.10	319	ePKP	01	25.70	-1.5					e	03	35.00	
			pP	02	01.00			1.3s		57.75nm					AAPN	125.72	310	ePKP	01	42.50	-1.7
ORV	113.09	50	ePdiff	57	32.00	6.5X	AKU	117.10	344	iPKP	01	26.90	0.3		ATEJ	125.77	310	ePKP	01	43.00	-1.4
TNS	113.12	321	ePKP	01	05.00	-14.5X		0.9s		53.78nm					ALOJ	125.77	310	ePKP	01	44.20	-0.2
			e	02	09.50					i	02	27.10			KOGH	125.78	272	ePKP	01	44.00	-0.9
			ed	12	07.10		SSF	117.18	319	ePKP	01	26.20	-1.1					e	03	35.00	
			ec	19	47.40		RVR	117.23	56	ePKP	01	26.00	-1.8		ANMO	125.81	53	ePKP	01	43.00	-1.6
WIT	113.42	324	ePKP	01	14.00	-5.9X				e	02	35.00						ePP	03	33.91	
			ePP	02	05.00		AVF	117.37	319	ePKP	01	26.20	-1.5		ALQ	125.81	53	ePKP	01	44.00	-0.6
SAO	113.54	53	ePdiff	57	31.35	3.9X		1.2s		46.10nm						Z 21s		8.06um			6.4Msz
			ePP	02	32.15		SES	117.40	37	ePKP	01	26.00	-1.7					e	02	34.00	
			eSKP	04	14.00			2.1s		409.00nm								ePP	03	36.00	
			e	05	54.00		PLDF	117.45	318	PKP	01	26.81	-1.2		WEGH	125.82	271	ePKP	01	38.00	-6.9X
			eSKS	07	16.00		EKA	117.72	330	PKP	01	27.00	-1.1		KUK	125.92	272	ePKP	01	45.00	-0.1
			e	08	14.00			1.5s		94.80nm					ERUA	125.96	317	ePKP	01	44.50	0.1
			e	11	21.00		AGO	117.75	318	PKP	01	27.29	-1.2		MAL	126.13	310	iPKPc	01	43.70	-1.1
			ePKKP	11	59.00		PLM	117.75	57	ePKP	01	30.00	0.9					iPP	03	40.00	
			eSPP	13	05.00					e	02	35.00						iS	13	30.00	
			eP'P'	15	18.00		BGF	117.78	319	ePKP	01	27.50	-1.0		EPLA	126.17	314	ePKP	01	45.20	0.3
			e	22	28.00		PYM	117.93	318	PKP	01	28.09	-0.8		EHOR	126.39	311	ePKP	01	45.20	-0.1
			eLQ	24	40.00		LBL	117.93	317	PKP	01	27.78	-1.0		RSON	126.65	30	PKP	01	43.90	-1.5
			eLR	39	39.00		BAR	118.01	57	ePKP	01	29.00	-0.4		EPRU	126.67	310	ePKP	01	45.20	-0.7
WTS	113.59	324	ePKP	01	21.00	0.7				e	02	21.00			STS	126.68	318	e(PKP)	01	45.50	-0.2
	1.0s		21.00nm				LRM	118.10	42	ePKP	01	28.80	-0.7		EVAL	127.58	312	ePKP	01	48.00	0.4
			iPP	02	07.40		TCF	118.28	319	ePKP	01	28.60	-0.9		IFR	127.68	306	iPKPc	01	48.80	0.6
GWF	113.98	320	PKP	01	20.08	-1.1		1.4s		115.45nm								i	03	37.00	
VAI	114.02	317	PKP	01	20.30	-1.0	TPC	118.30	56	ePKP	01	29.00	-1.0					i	03	49.00	
CMB	114.19	52	ePdiff	57	35.30	4.9X				e	02	40.00			AVE	129.57	307	iPKP	01	51.50	0.0
CDF	114.35	320	PKP	01	20.25	-1.8	CAF	118.82	317	ePKP	01	30.00	-0.6					i	02	45.00	
BBS	114.46	319	PKP	01	19.93	-2.3		1.3s		104.70nm					TIO	130.17	304	iPKP	01	52.50	-0.4
ECH	114.48	320	PKP	01	19.34	-2.9X	LDF	118.94	322	ePKP	01	29.70	-0.9					i	03	56.00	
PCP	114.49	315	PKP	01	20.19	-2.2		1.4s		65.35nm					KIC	130.26	272	PKP	01	53.16	-0.2
ENN	114.50	322	ePKP	01	21.00	-1.1	RJF	119.06	318	ePKP	01	30.60	-0.4			0.8s		48.50nm			
	1.0s		34.00nm					1.4s		139.40nm					LIC	130.53	271	PKP	01	53.58	-0.3
			ePP	02	17.00		FLN	119.09	322	ePKP	01	30.00	-0.9			0.8s		58.50nm			
D8N	114.51	324	ePdiff	57	29.00	-2.4		1.2s		56.55nm					TIC	130.56	272	PKP	01	53.76	-0.2
	Z 20s		6.50um			6.2Msz	GRR	119.47	322	ePKP	01	31.00	-0.6			0.8s		39.50nm			
			ePP	02	18.00			1.2s		47.60nm					SCH	132.43	9	ePKP	01	56.00	-0.3
			eS	10	05.00		GLA	119.48	57	ePKP	01	32.00	-0.2		SIO	133.24	48	(PKP)	01	57.10	-1.3
			eSP	11	44.00					e	02	50.00			TUL	133.55	47	Pdiff	59	00.00	3.4X
			eSPP	12	58.00		LPO	119.49	317	ePKP	01	31.20	-0.6			Z 22s		8.59um			6.4Msz
			eSS	18	16.00			1.4s		174.25nm					RLO	133.99	46	(PKP)	01	53.50	-6.3X
			eSSS	22	42.00		MFF	119.70	320	ePKP	01	31.00	-1.1		UYO	135.30	49	iPKPd	02	00.10	-2.3
MOF	114.60	319	PKP	01	20.52	-2.0		1.2s		71.40nm					LNV	135.35	160	ePKP	01	51.50	-10.9X
WLF	114.70	321	ePKP	01	04.40	-18.1X	LFF	119.70	318	ePKP	01	31.50	-0.7		RFA	135.48	164	ePKPd	01	50.70	-12.1X
			e	01	23.20			1.3s		115.55nm					SAN	136.05	161	ePKP	01	58.00	-5.9X
			PP	02	22.00		LPF	119.72	321	ePKP	01	31.20	-0.9		PEL	136.33	161	ePKP	01	55.50	-8.9X
			PKKP	12	00.80			1.2s		89.25nm					RT8S	138.09	161	e(PKP)	01	58.50	-9.2X
			PPP	19	40.80		ESEL	119.74	311	e(PKP)	01	33.00	0.6		MRA	138.43	166	ePKP	01	58.00	-10.3X
FIN	114.80	315	PKP	01	20.52	-2.4	FFC	120.31	29	ePKP	01	31.50	-1.5		RTCB	138.46	162	e(PKP)	01	57.50	-11.1X
BSF	114.83	319	PKP	01	21.32	-1.7		1.1s		75.00nm					GAC	138.52	22	ePKP	01	58.00	-10.0X
LOMF	114.94	319	PKP	01	20.99	-2.2	DMU	120.33	329	ePKP	01	31.00	-2.1					pP	02	08.00	
ROB	115.01	315	PKP	01	21.37	-2.0	DLE	120.46	329	ePKP	01	28.60	-4.7X		CFA	138.52	163	ePKP	01	57.00	-11.6X
EDM	115.02	34	iPKP	01	21.50	-1.6	EPF	120.61	316	ePKP	01	33.10	-1.0		RTLL	138.71	162	e(PKP)	01	57.50	-11.4X
HAU	115.06	319	ePKP	01	21.90	-1.4		1.4s		87.15nm					SCP	141.53	28	ePKP	02	02.67	-11.0X
	1.2s		56.55nm				DCN	120.81	329	ePKP	01	32.20	-1.8					ePP	05	13.87	
IMI	115.09	315	PKP	01	21.89	-1.7	8W06	121.06	45	PKP	01	33.50	-1.7		CYA	142.19	164	ePKP	02	09.50	-5.8X
LSD	115.22	317	PKP	01	24.01	0.0	ECHE	122.65	312	ePKP	01	38.20	0.2		HRV	142.69	21	ePKP	02	08.47	-7.1X
VITF	115.24	320	PKP	01	22.19	-1.4	ETOR	123.03	314	ePKP	01	38.80	0.0					e	04	42.83	
ENR	115.34	315	PKP	01	23.12	-1.0	VAL	123.09	329	iPKP	01	37.50	-0.8					ePP	05	18.01	
STV	115.41	315	PKP	01	23.22	-1.0	EALH	123.51	310	e(PKP)	01	40.00	0.3					eSkS	09	27.28	
SBF	115.42	315	ePKP	01	23.30	-0.9	FRB	123.57	7	ePKPc	01	36.70	-2.3		BLA	142.88	35	PKP	02	10.80	-5.4X
	1.2s		77.35nm					1.3s		142.00nm					CBN	143.78	31	ePKP	02	12.00	-5.6X
UCC	115.43	323	PKP	01	24.80	1.0	EVIA	124.08	312	ePKP	01	40.80	-0.2					e	05	27.00	
			PP	02	21.00		RSSD	124.28	41	PKP	01	39.90	-1.4		ANT	144.95	155	iPKPc	02	21.00	1.0
			e	10	23.00		ENIJ	124.38	310	ePKP	01	40.80	-0.7		SLA	145.79	163	ePKPc	02	22.10	0.5
			PKKP	11	59.20		GUD	124.59	314	ePKP	01	42.20	0.3		ITB	147.32	181	ePKP	02	22.80	-1.1
			PS	12	05.00		TOL	124.79	313	ePKP	01	41.31	-0.8		IT81	147.47	181	e(PKP)	02	23.70	-0.4
			PPP	19	38.00			1.8s		454.55nm					BMA	147.66	199	PKPd	02	25.80	1.3
LPG	115.48	317	ePKP	01	23.60	-1.0				e	03	15.91						e	02	29.00	
	1.4s		91.50nm							ePP	03	29.98			VAO	148.16	194	ePKP	02	23.70	-1.7
PZZ	115.50	316	PKP	01	23.45	-1.0				ePKS	04	46.00						i	02	30.30	
DOU	115.52	322	PKP+	01	23.90	-0.2				iPS	12	18.00			BRAS	148.24	196	iPKPc	02	32.30	6.6X
			PP	02	29.00					iPPS	13	38.00			PPD	149.87	187	ePKP	02	28.10	0.1
			PKKP	11	57.00					iSS	20	10.00						e	02	32.80	
SNF	115.57	323	PKP	01	23.60	-0.5				eSSS	25	10.00			NNA	150.42	132	iPKPc	02	29.60	0.6

	1.6s	1116.67nm				
	Z 22s	4.26um				6.2Msz
ARE	150.59	146	ePKP	02	31.00	1.5
SRA	150.73	84	ePKPd	02	30.00	0.4
SJS	151.12	84	ePKPc	02	31.00	0.8
ICR	151.34	84	ePKP	02	32.00	1.1
GCM	151.98	64	ePKP	02	29.60	-1.5
CNCB	152.08	152	iPKPc	02	34.00	1.9
LPB	152.26	152	PKP+	02	34.20	2.0
	1.0s	660.00nm				
	Z 24s	7.75um				6.4MszX
			i	02	40.70	
			PP	06	20.00	
			LR	38	40.00	
CCH	152.36	156	PKPc	02	12.50	-19.6X
ZOBO	152.48	152	iPKPc	02	34.00	1.3
			i	03	32.00	
DVD	152.71	87	ePKP	02	40.80	8.5X
BDF	155.42	196	ePKP	02	36.36	0.2
			ePP	06	38.46	
BAO	155.47	196	ePKP	02	36.40	0.2
			e	03	01.00	
UPA	155.59	86	iPKPc+	02	35.20	-1.1
	1.0s	90.00nm				
	Z 21s	8.53um				6.5Msz
ITR	156.58	225	iPKPc	02	37.50	-0.1
			e	02	40.30	
			e	02	49.80	
			i	03	07.10	
			i	03	19.50	
PSO	156.61	106	ePKP	02	38.50	0.3
SOB1	157.89	219	iPKPc	02	40.10	0.8
			e	03	14.90	
			e	03	26.90	
CHN	159.16	97	iPKPc	02	21.00	-19.9X
BOG	160.62	99	iPKP	02	43.00	0.4
BMG	161.93	92	iPKPd	02	47.00	3.4X
ATB	168.40	193	PKPc	02	48.60	-0.4
FDF	170.97	42	ePKP	02	50.00	-0.4
TPP	173.13	71	ePKP	02	48.90	-2.4
	S.D. = 1.2	on 394 of 451 obs.				

% JUL 14, 1989 22h 02m 18.33± 0.59s
41.303 N ± 6.8km 141.697 E ±11.0km
DEPTH = 33.0km (normal)
HOKKAIDO, JAPAN REGION (224)

MRRJ	1.21	338	iPd	02	38.50	-0.5
			S	02	54.20	
AOMJ	1.25	234	iP+	02	39.00	-0.5
			S	02	55.20	
HOOJ	1.61	47	P	02	45.20	0.5
			S	03	06.10	
OFUJ	2.22	181	P	02	52.20	-1.3
			S	03	19.30	
KUSJ	2.87	50	P	03	02.40	-0.3
			S	03	36.60	
ASAJ	2.90	14	P	03	03.50	0.3
			S	03	38.90	
YAMJ	3.38	203	eP	03	09.60	-0.4
NIIJ	4.56	208	eP	03	28.30	1.5
KAKJ	5.23	194	eP	03	28.10	-8.1X
MAT	5.48	211	eP	03	45.00	5.2X
CHJJ	5.66	203	eP	03	43.10	0.8
IIDJ	6.53	208	eP	04	02.10	7.5X
	S.D. = 1.0	on 9 of 12 obs.				

% JUL 14, 1989 22h 38m 39.78± 0.80s
31.694 S ±10.2km 67.852 W ± 7.7km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.34	285	iPd	38	46.50	-1.6
RTLL	0.64	304	iPd	38	51.80	-0.6
ZON	0.72	282	eP	38	53.00	-0.5
			eS	39	04.00	
RTCB	0.83	284	iPd	38	56.00	0.8
			(S)	39	08.00	
RTBS	1.37	271	ePc	39	04.50	1.8
MRA	1.96	112	ePc	39	11.10	-0.1
RFA	3.11	189	ePd	39	27.60	-0.1
CYA	3.70	29	ePd	39	36.50	0.5
	S.D. = 1.2	on 8 of 8 obs.				

JUL 15, 1989 00h 08m 02.64± 0.60s
38.607 N ± 6.6km 83.569 W ± 3.6km
DEPTH = 10.0km (geophysicist)

KENTUCKY (490)

mbLg 3.1 (BLA). Felt (V) at Vanceburg, Kentucky. Also felt (V) at Aberdeen, Manchester and Ripley, Ohio. Felt (IV) at Decatur and Bentonville, Ohio and Concord, Kentucky. Felt (III) at Camp Dix, Carlisle, Dover, Minerva and Tollesboro, Kentucky. Also felt (III) at Cherry Fork and Stout, Ohio.

SLKY	0.23	218	P	08	07.60	0.0
PKKY	0.48	118	P	08	11.70	-0.6
BHKY	0.93	233	P	08	19.50	-0.9
SOKY	2.18	241	P	08	40.50	1.1
PWV	2.36	122	ePn	08	42.38	0.3
HWV	2.38	114	ePn	08	42.95	0.6
NAV	2.54	120	eP	08	45.60	0.9
PUV	2.69	125	ePn	08	46.74	-0.1
VWV	2.75	113	ePn	08	50.41	2.7X
BLA	2.85	118	eP	08	48.70	-0.4
TKL	2.95	183	eP	08	50.00	-0.4
GBTN	2.98	190	eP	08	51.00	0.2
LLKY	3.96	246	P	09	05.30	0.5
PRM	4.62	167	eP	09	13.40	-0.7
JSC	4.70	156	eP	09	13.50	-1.8X
PWLA	5.11	226	eP	09	21.00	0.0
FVM	5.43	266	eP	09	33.80	8.2X
RSON	14.19	333	e(P)	11	25.00	-0.6
	S.D. = 0.7	on 15 of 18 obs.				

JUL 15, 1989 00h 09m 16.12± 0.10s
22.809 N ± 2.5km 94.560 E ± 1.9km
DEPTH = 107.7km (4 depth phases)
5.4mb (79 obs.)
BURMA (296)

Felt at Shillong, India.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 12C
Centroid Location:
Origin Time 00:09:24.9 1.7
Lat 22.91N 0.17 Lon 93.94E 0.19
Dep 139.4 6.4 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr= 0.81 0.43 Mtt=-1.80 0.60
Mff= 0.99 0.66 Mrt=-0.23 0.32
Mrf=-2.06 0.37 Mtf=-0.52 0.58
Principal Axes:

	Val=	Plg=	Azm=
T	2.98	43	86
N	-0.87	40	230
P	-2.11	19	337

Best Double Couple:Mo=2.5**10**17
NP1:Strike=111 Dip=44 Slip= 159
NP2: 217 75 48

SHL	3.68	319	iP	10	09.80	-2.4
			iS	10	46.80	
CHG	5.71	133	iPn	10	38.10	-1.9
			iPg	11	40.30	
LSA	7.51	337	iPd	11	04.70	-0.4
			S	12	18.50	
KMI	7.83	71	iPc+	11	14.00	4.8X
			pP	11	24.00	
			S	12	44.00	
LOE	8.62	127	iPn	11	18.50	-1.2
NST	8.84	142	iPc	11	22.50	-0.1
NNT	11.29	153	eP	11	55.00	-0.5
CD2	11.51	44	iPd	11	59.00	0.7
			S	14	06.00	
GYA	11.59	69	iPd	12	00.60	1.0
	Z 14s	2.10um				
			S	14	09.00	
			ScS	24	39.00	
QIZ	14.77	102	Pc	12	42.20	1.5
LZH	15.49	29	eP	12	48.00	-2.0
	1.0s	173.00nm				5.3mb
	Z 14s	2.00um				
			pP	12	54.50	
			PP	13	03.50	
			eS	15	44.00	
			SS	16	14.00	
HYB	15.96	253	ePc	12	51.30	-4.5X
	1.0s	240.00nm				5.4mb
			iS	15	31.00	
SNG	16.60	160	eP	13	05.00	1.3
			eS	16	09.40	
NDI	16.68	294	iPc	13	03.10	-1.6
			iS	15	51.00	
XAN	16.85	45	P	13	06.10	-0.7
	N 10s	2.60um				
	E 10s	1.30um				
			S	16	16.00	
GTA	17.14	14	iPd	13	08.20	-2.3
	5.0s	0.80nm				2.2mb X
	Z 14s	1.50um				2.9Msz
	N 16s	2.60um				
			pP	13	23.00	
			S	16	15.00	
			sS	16	41.00	
			ScP	21	14.40	
			PcS	21	25.00	
			ScS	24	53.00	
GZH	17.31	85	Pc	13	12.60	0.2
	N 10s	3.10um				
			S	16	26.00	
HKC	18.12	88	iP	13	23.40	1.1
GBA	18.65	244	Pc	13	26.00	-2.4
	1.1s	161.10nm				5.2mb
IPM	19.17	160	ePc	13	32.20	-1.8
	0.4s	105.30nm				5.5mb
			e	13	50.30	
WHN	19.27	62	Pc	13	35.00	0.1
			sP	14	04.00	
			S	17	03.00	
			ScP	21	18.00	
TSI	19.58	168	ePc	13	38.00	-0.2
POO	19.83	261	iPd	13	40.40	-0.5
	0.8s	53.73nm				4.9mb
			iS	17	06.60	
KOD	20.58	235	iPd	13	49.50	0.7
			iS	17	12.50	
TIY	21.37	42	eP	13	55.90	-0.4
			PP	14	22.50	
			S	17	49.00	
WMQ	21.71	346	P	14	01.00	1.3
			S	17	54.00	
BTO	22.02	33	eP	14	02.00	-0.7
			PP	14	29.50	
			S	18	02.00	
			SS	18	41.50	
QZH	22.07	80	Pc	14	03.00	-0.2
	4.0s	1.00nm				2.5mb X
	N 10s	3.00um				
			S	18	03.00	
			sS	18	36.00	
KGM	22.35	156	eP	14	05.00	-1.0
KSH	22.91	321	P	14	14.50	3.1X
	N 10s	3.30um				
HHC	23.00	35	eP	14	13.00	0.8
	Z 18s	1.80um				4.6Msz
	N 10s	1.10um				
	E 11s	0.90um				
			S	18	18.00	
NJ2	23.40	62	iPc	14	17.00	0.9
	3.0s	1.40nm				2.8mb X
			S	18	24.50	
TIA	23.68	51	Pd	14	19.60	0.8
	Z 15s	1.60um				4.6MszX
			S	18	26.50	
SSE	25.08	65	Pd	14	32.00	-0.2
	1.0s	331.00nm				5.7mb
	Z 20s	1.40um				4.5Msz
			pP	14	56.00	113km
			eS	19	00.00	
			sS	19	40.00	
			SS	20	24.00	
BJI	25.10	42	Pc	14	33.00	0.8
			iS	18	52.00	
			eScP	21	32.50	
			e	22	42.00	
			eScS	25	20.50	
BAG	25.30	100	eP	14	35.90	1.4
QUE	25.74	292	eP	14	38.50	0.0
QCP	26.36	103	e(P)	14	46.00	1.9
KKM	26.72	125	ePc	14	49.00	1.5
DL2	28.09	49	P	15	00.00	0.5
	Z 14s	0.60um				4.3MszX
			eS	19	33.00	
TSM	29.30	126	iPd	15	09.50	-1.1
	0.8s	626.30nm				6.3mb
SNY	30.78	45	iPd	15	22.40	-1.0
	N 26s	1.50um				

15d 00h

	E	26s		1.20um					IZM	58.79	302	eP	19	05.30	-0.1	KMR	67.12	314	eP	20	01.00	0.8
				S	20	18.00			ISR	58.88	310	eP	19	04.00	-2.0				i	20	26.00	
CN2		32.94	43	Pc	15	41.20	-1.1		COOL	59.17	153	iPc	19	07.00	-0.9	NB2	67.12	328	P	19	59.10	-0.9
	Z	15s		0.80um			4.5MszX		KAP	59.17	299	eP	19	07.60	-0.4	LJU	67.18	312	eP	20	01.00	0.4
	N	10s		0.70um					MLR	59.29	310	ePc	19	09.00	0.1				e	20	25.80	
				pP	16	02.20	91kmX		EZN	59.38	304	eP	19	09.20	-0.1	RGS	67.29	331	eP	20	02.20	1.3
				PcP	18	23.00			PRK	59.47	303	eP	19	10.00	0.0	CEY	67.30	312	eP	20	01.50	0.1
				S	20	50.50			NWAO	59.50	158	iPc	19	09.10	-1.1	KHC	67.32	315	iPc	20	01.50	0.1
				sS	21	27.00			ASPA	59.97	138	iPc	19	13.40	-0.2		1.0s		14.00nm			4.8mb	
				ScP	21	57.50				0.6s		220.00nm			6.4mb X				e	20	24.50	
				ScS	25	56.00			SUF	60.10	330	iPc	19	13.90	0.0	CLL	67.35	318	iPc	20	01.30	-0.2
MAIO	33.14	302	eP		15	45.00	0.8			0.4s		23.30nm			5.6mb		1.2s		28.00nm			5.1mb	
KAGJ	33.31	68	eP		15	43.90	-1.7		APE	60.30	301	eP	19	14.70	-1.1				i	20	26.80	
KUMJ	33.41	65	eP		15	46.00	-0.5		NPS	60.48	299	eP	19	17.00	0.0				eS	28	47.00	
DAV	33.69	113	eP		15	51.00	2.0		NUR	60.54	328	iPc	19	16.40	-0.5	RIY	67.40	311	eP	20	04.20	2.3
SHNJ	33.88	62	eP		15	50.80	0.3			0.6s		13.00nm			5.2mb	SOI	67.55	303	Pd	20	03.10	0.1
TRT	35.11	148	iPc		16	01.70	0.6			Z 23s		0.90um			4.9MszX	VOY	67.62	312	iPc	20	03.00	-0.5
	0.4s		75.30nm				5.9mb					LR	47	10.00					e	20	26.00	
SHK	35.23	62	eP		16	01.20	-0.8		PMG	60.63	116	eP	19	18.50	0.4	TRI	67.76	312	eP	20	03.80	-0.4
MDJ	35.96	44	eP		16	06.50	-1.5		SOD	60.69	336	iP	19	27.90	10.0X	WET	67.77	315	iPc	20	04.50	0.3
YONJ	35.97	61	eP		16	07.80	-0.5		KEV	61.05	338	iP	19	20.80	0.5		1.0s		49.00nm			5.4mb	
TKSJ	36.28	63	eP		16	10.60	-0.2			0.8s		35.20nm			5.4mb	RBL	67.77	312	Pd	20	03.80	-0.6
MKS	37.00	136	iPc		16	18.00	1.0		LMG	61.19	115	eP	19	22.00	-0.2	ATN	67.99	303	Pd	20	05.50	-0.3
WKYJ	37.58	63	P		16	22.40	0.6		DEV	61.40	311	ePd	19	24.00	0.9	BHG	68.01	314	iPc	20	05.60	-0.2
TSRJ	38.06	61	eP		16	26.50	0.7		VAM	61.60	299	eP	19	24.40	-0.1		0.9s		51.00nm			5.4mb	
SHI	38.16	289	eP		16	27.00	0.1		LIT	62.28	304	ePd	19	28.80	-0.2	HOF	68.21	317	iPc	20	07.00	0.0
IIDJ	39.62	61	eP		16	37.80	-1.0		FORR	62.30	148	eP	19	28.50	-0.6		0.7s		21.00nm			5.1mb	
MTMJ	39.67	60	eP		16	39.10	-0.2			0.3s		20.00nm			5.6mb	FVI	68.28	313	Pd	20	06.60	-0.8
MAT	39.99	60	iPc		16	41.10	-0.7		BZS	62.32	311	ePc	19	29.00	-0.1	MOL	68.66	330	iP	20	09.28	-0.1
			eS		22	37.00			SPC	62.96	315	iP	19	33.80	0.2	PZI	68.66	302	P	20	10.20	0.2
CHJJ	40.56	61	eP		16	46.30	-0.1		KRA	63.10	316	eP	19	34.10	-0.1	LWI	68.68	258	ePc	20	10.30	-0.3
NIIJ	40.71	59	eP		16	46.40	-1.2			0.8s		61.00nm			5.6mb	AZI	68.71	308	Pd	20	10.00	-0.1
KAKJ	41.52	61	eP		16	51.80	-2.5					e	19	39.10		GRF	68.74	316	ePc	20	10.80	0.6
YAMJ	41.65	58	P		16	55.40	0.0					e	19	59.60			0.8s		38.00nm			5.3mb	
AOMJ	42.30	54	eP		17	02.70	2.1		KBN	63.48	305	iPd	19	35.50	-1.3		Z 30s		0.20um			4.2MszX	
OFUJ	43.05	57	P		17	05.80	-0.9		PHP	63.61	306	iPd	19	35.80	-1.9				e	20	34.10	
MRRJ	43.18	52	eP		17	09.10	1.4		LSK	63.71	305	eP	19	37.20	-1.3				e	20	36.70	
RYD	43.75	282	ePc		17	13.00	0.3		BCI	63.79	307	eP	19	38.30	-0.6				e	20	47.00	
TAB	43.80	302	eP		17	14.00	1.0		TRO	63.82	338	iPc	19	38.30	-0.3	FUR	68.99	315	iPc	20	12.00	0.2
ASAJ	44.65	50	eP		17	19.50	-0.1		BUD	63.92	313	eP	19	40.00	0.3	RDP	69.29	308	P	20	13.10	-0.7
HOOJ	44.78	52	eP		17	24.10	3.5X		UPP	64.02	327	iPc	19	39.10	-1.0	SFI	69.45	310	Pd	20	15.70	1.1
KUSJ	45.93	52	eP		17	28.30	-1.4			0.9s		200.00nm			6.0mb	MCT	69.52	303	Pd	20	16.30	0.9
QASM	46.33	285	ePc		17	33.00	-0.2					i	20	04.90		PGD	69.55	310	Pd	20	16.70	1.2
GUMO	48.47	92	eP		17	48.80	-1.1		TIR	64.08	306	eP	19	40.00	-0.8	CLK	69.73	242	iPc	20	16.00	-0.8
	0.6s		35.91nm				5.4mb		LACI	64.16	306	iPd	19	40.00	-1.3	SAL	70.01	312	Pd	20	18.60	0.6
PJG	48.47	92	eP		17	49.10	-0.8		SDA	64.26	307	eP	19	41.00	-0.9	OSS	70.04	313	ePc	20	18.10	-0.3
GUA	48.53	92	eP		17	49.10	-1.3		SRO	64.37	313	iP	19	42.80	0.3	STU	70.22	316	iPc	20	19.20	-0.1
	0.4s		74.58nm				5.9mb					e	20	05.20			0.9s		57.14nm			5.4mb	
ABHA	48.54	275	iPc		17	52.90	2.2		ZST	65.13	314	iPd	19	47.80	0.3	TOD	70.30	316	eP	20	19.72	0.0
NANU	49.50	154	iPc		17	57.70	0.1					i	20	13.30		BDI	70.30	310	P	20	19.40	-0.5
	0.5s		46.00nm				5.7mb		KSP	65.35	317	iPc	19	48.50	-0.3	TNS	70.39	317	iPc	20	20.60	0.3
MBL	50.17	149	eP		18	02.10	-0.7			0.9s		71.00nm			5.6mb				iPcP	20	46.20	
JARJ	52.27	294	Pd		18	22.10	3.3X					i	20	15.00		PII	70.43	310	P	20	19.40	-1.2
QUTJ	52.31	293	Pd		18	20.10	1.0		VKA	65.64	314	eP	19	31.00	-19.8X	SAX	70.45	314	ePc	20	20.60	-0.5
HRI	52.36	295	iP		18	21.00	1.6			2.2s		197.00nm				VDL	70.54	313	ePc	20	21.30	-0.2
BHL	52.39	296	Pc		18	21.00	1.4					e	19	50.50		STK	70.58	139	iPc	20	21.40	-0.2
			S		25	46.00						i	20	05.90		LLS	70.77	314	ePc	20	22.50	-0.4
BURJ	52.43	294	Pc		18	20.30	0.4					i	20	17.70		SLE	70.90	315	ePc	20	23.00	-0.4
KFNJ	52.54	293	Pd		18	21.70	1.1					i	20	24.90		WIT	70.92	320	eP	20	24.00	0.7
MKRJ	52.60	293	Pd		18	22.20	1.0		LCI	65.68	305	Pd	19	49.30	-1.8				e	20	48.00	
DSI	52.82	293	eP		18	23.00	0.4		LOF	65.71	336	iPc	19	49.94	-0.9	BOB	70.94	311	P	20	24.40	0.6
MBH	53.46	291	iPd		18	28.00	0.7		SMY	65.93	41	P	19	52.30	-0.2	WTS	71.01	319	ePc	20	24.50	0.6
BADA	53.52	289	iPc		18	28.10	0.3			0.8s		114.94nm			5.9mb		0.9s		76.00nm			5.5mb	
MEKA	54.33	153	iPc		18	33.30	-0.5					pP	20	18.50	104km				e	20	31.50	
	0.4s		34.00nm				5.7mb		HFS	65.98	327	eP	19	52.50	-0.2				i	20	39.00	
BBTK	54	43	303	iPd	18	35.00	0.4			0.7s		62.50nm			5.7mb				i	20	49.80	
BCK	56.24	301	eP		18	37.50	-10.1X			Z 15s		0.19um			4.4MszX				e	21	00.50	
GPA	56.30	304	eP		18	46.90	-1.0					LR	48	31.00					e	21	10.00	
ALT	56.51	303	eP		18	49.40	-0.2		CTA	66.05	126	iPc	19	53.50	-0.2				e	21	34.00	
ELL	56.84	300	iP		18	51.80	-0.2			1.2s		167.19nm			5.8mb	TMA	71.03	313	ePc	20	23.80	-0.6
KHL	57.02	302	iP		18	52.40	-0.7		ZAG	66.21	311	eP	19	54.30	-0.1	ABH	71.03	317	ePc	20	24.26	0.1
KSL	57.16	299	eP		18	53.00	-1.0		PTJ	66.22	312	eP	19	53.90	-0.7	ZLA	71.03	314	ePc	20	24.00	-0.3
BAL	57.21	157	iPc		18	52.20	-2.1		HVAR	66.31	309	iPd	19	54.00	-1.1	ADE	71.10	143	ePc	20	25.00	0.3
ISK	57.21	305	eP		18	52.00	-2.3		KBS	66.36	348	iP	19	54.80	-0.1		0.4s		115.25nm			6.1mb	
WB5	57.53	134	iP		18	55.90	-0.8		NSS	66.49	332	iPc	19	55.07	-0.7	VAI	71.15	313	P	20	24.00	-0.9
WRA	57.56	135	Pd		18	56.80	-0.1		PRU	66.57	316	Pc	19	57.00	0.4	GWF	71.19	316	P	20	25.16	0.0
	0.5s		58.30nm				5.9mb			1.1s		27.50nm			5.1mb	RUP	71.38	317	ePc	20	26.67	0.4
DST	57.63	303	iP		18	56.40	-0.9					e	20	19.70		CDF	71.54	315	P	20	26.99	-0.4
CTT	57.68	305	eP		18	57.00	-0.6		VBY	66.77	311	ePd	19	58.50	0.5	PCP	71.62	311	P	20	26.92	-0.9
CFR	57.74	310	eP		18	59.00	1.1					e	20	23.30		MMK	71.65	313	ePc	20	28.10	-0.1
YER	58.10	300	iP		19	00.40	-0.3		BRG	66.82	317	iPc	19	58.30	0.1	ECH	71.67	315	P	20	27.44	-0.6
PPE	58.11	311	eP		19	07.00	6.5X			1.1s		60.00nm			5.4mb	RMQ	71.77	130	iPc	20	30.80	1.9
EDC	58.16	304	eP		19	00.00	-0.9					i	20	18.60			0.4s		61.00nm			5.8mb	
MUN	58.28	158	iPc		19	00.80	-1.0					i	21	57.40		MOF	71.77	315	P	20	28.51	-0.2
KLB	58.48	157	iPc		19	02.00	-1.1		NRA0	66.99	328	P	19	58.30	-0.8	MEM	71.83	318	iPc	20	28.93	0.1
BRD	58.52	310	eP		19	07.50	4.1X					pP	20	18.30	76kmX				e	20	54.20	
VRI	58.74	311	ePd		19	05.50	0.6		GRI	67.12	304	P	19	59.40	-1.0	ENN	71.84	318	iPc	20	29.00	0.1

	0.9s	47.00nm		5.3mb		LFF	76.84	313	iPc	20	58.50	0.8		TIC	96.21	280	PKPc	22	34.30	0.5
		e	20	52.00			0.8s	60.10nm		5.5mb				LIC	96.39	279	PKPc	22	35.00	0.4
		e	21	23.00		MFF	76.88	315	iPc	20	58.30	0.4		FFC	101.49	10	ePdiff	23	04.00	7.3X
FIN	71.94	311	P	20	28.76	-0.9		0.7s	15.40nm		4.9mb			SPA	112.67	180	ePKPc	27	40.70	-0.2
WLF	71.96	317	iPc	20	30.30	0.7	LPF	76.98	317	iPc	20	59.00	0.6		0.8s	24.17nm				
		i	20	54.00			0.7s	52.90nm		5.5mb						e	28	10.00		
BSF	72.00	315	P	20	29.36	-0.7	BUL	77.21	242	iPd	20	59.40	-0.9	ALQ	119.20	20	ePKP	27	55.00	0.4
DIX	72.02	313	ePc	20	30.90	0.4		1.0s	46.00nm		5.2mb				1.1s	12.03nm				
LOMF	72.09	314	P	20	27.55	-3.1X			ipP	21	22.10	86kmX				ePP	28	21.50		
ROB	72.15	311	P	20	30.40	-0.6	CAN	77.47	137	eP	21	01.90	0.6	RLO	120.65	9	iPKP	27	56.60	-0.4
IMI	72.24	311	P	20	30.40	-1.1	YRH	77.47	322	eP	21	01.60	0.6	TUL	120.78	10	ePKP	27	55.80	-1.5
HAU	72.25	315	iPc	20	31.20	-0.2		0.9s	67.00nm		5.5mb				1.0s	11.00nm				
	0.6s	12.60nm		4.9mb		CNB	77.69	137	iPd	21	03.00	0.4	SIO	120.86	10	ePKP	27	57.10	-0.3
LSD	72.35	312	P	20	32.56	0.2	IMA	77.74	23	P	21	02.50	0.0	UYO	122.70	9	iPKPd	28	00.30	-0.6
CGL	72.39	306	P	20	32.50	0.0				pP	21	30.80	110km	ITR	132.86	279	ePKP	28	19.90	-1.1
VITF	72.43	315	P	20	32.16	-0.2	AKU	78.25	337	iP	21	07.10	2.0				e	31	38.50	
ENR	72.48	311	P	20	31.84	-1.1		1.5s	77.78nm		5.3mb						e	32	06.20	
STV	72.54	311	P	20	31.63	-1.7	TTA	78.33	26	eP	21	05.50	-0.2				e	32	27.60	
SBF	72.56	311	iPc	20	33.60	0.2	DMU	78.34	324	iPc	21	06.20	0.4	SOB1	135.28	280	ePKP	28	25.90	0.3
	0.8s	42.90nm		5.3mb			0.4s	28.00nm		5.4mb						e	31	47.60		
LPG	72.61	313	iPc	20	34.20	0.2	DLE	78.37	323	iPc	21	06.10	0.1	ATB	142.44	296	e(PKP)	28	34.50	-4.2X
PZZ	72.63	311	P	20	31.94	-2.0		0.7s	47.00nm		5.4mb			BAO	144.00	275	ePKP	28	39.00	-2.4
RRL	72.74	312	P	20	33.99	-0.7	EBR	78.39	309	eP	21	07.00	0.7	VAO	144.63	262	ePKP	28	41.60	-0.7
BNI	72.78	312	P	20	34.30	-0.5	ETA	78.41	322	eP	21	07.00	0.8				e(pPKP	29	08.30	
UCC	72.79	318	P	20	34.90	0.4		1.0s	86.00nm		5.5mb			UPA	147.88	349	iPKPc	28	44.60	-3.1X
DOU	72.83	318	P	20	35.10	0.4	ECP	78.70	322	eP	21	08.50	0.8		1.1s	116.46nm				
		e	21	01.60			0.8s	71.00nm		5.5mb				PPD	148.48	265	ePKP	28	49.60	1.1
SNF	72.91	318	iPc	20	35.20	0.0	DCN	78.76	323	eP	21	08.40	0.3				i	28	53.20	
FRF	73.20	311	iPc	20	37.10	0.1		1.0s	70.00nm		5.4mb			ITB7	151.37	259	ePKP	28	58.00	5.2X
	0.8s	42.90nm		5.3mb		ECB	78.86	322	eP	21	09.90	1.3	ITB	151.39	260	e(PKP)	28	58.10	5.3X
LMR	73.35	310	iPc	20	38.00	0.1		0.9s	86.00nm		5.6mb			ITB1	151.54	260	e(PKP)	28	58.60	5.6X
	0.8s	51.00nm		5.4mb		MBC	78.99	8	ePc	21	09.20	0.2	MRA	160.10	237	ePKPc	29	05.60	1.9
LRG	73.43	311	iPc	20	38.60	0.3	ACU	79.85	307	e(P)	21	15.00	0.6	CCH	161.10	283	PKP	29	17.50	11.9X
	0.8s	64.40nm		5.5mb		ECRI	79.86	312	e(P)	21	15.60	1.3	SLA	161.64	260	ePKPc	29	07.00	1.2
LOR	74.06	315	iPc	20	41.80	-0.2	ECHE	79.87	309	eP	21	15.20	0.8	ZOBO	162.44	289	iPKPc	29	08.30	1.0
	0.8s	22.80nm		5.0mb		ETOR	80.19	310	eP	21	16.50	0.3			1.2s	69.26nm				
LBF	74.07	315	iPc	20	42.00	-0.1	SLR	80.31	237	iPc	21	16.80	-0.3	LPB	162.52	288	iPKPc	29	09.10	1.9
	0.8s	42.90nm		5.3mb			0.7s	44.52nm		5.4mb					1.2s	150.00nm				
SMF	74.25	314	iPc	20	43.30	0.2	FBA	80.45	23	eP	21	16.70	-0.2				i	29	59.00	
ALE	74.30	357	eP	20	43.00	0.2	EALH	80.82	307	eP	21	20.60	1.1	ARE	165.43	293	iPKPc	29	11.70	2.0
	0.6s	15.00nm		5.0mb		VAL	80.98	323	iP	21	21.70	1.8	NNA	166.47	321	iPKPd	29	11.50	1.2
SSF	74.35	315	iPc	20	43.80	0.1			i	21	46.90				1.1s	20.25nm				
BRW	74.37	18	eP	20	43.40	0.1	EVIA	81.33	308	eP	21	23.20	1.0		S.D. = 0.9	on 341 of 362 obs.				
AVF	74.53	315	iPc	20	44.50	-0.2	TAU	81.44	144	iPc	21	23.10	0.7	---						
PLDF	74.59	314	P	20	45.36	0.2	KSR	81.45	237	iPc	21	21.20	-1.9	* JUL 15, 1989 01h 30m 40.49± 1.16s						
BFD	74.85	142	eP	20	46.00	-0.5		0.7s	25.00nm		5.1mb			11.991 S ±14.3km 76.736 W ±11.1km						
AGO	74.90	314	P	20	47.22	0.4	PRY	81.54	236	iPd	21	24.20	0.7	DEPTH = 33.0km (normal)						
BGF	74.93	314	iPc	20	47.10	0.1		1.1s	20.27nm		4.9mb			PERU						(116)
	0.6s	16.50nm		5.0mb		GUD	81.74	311	iPc	21	25.20	0.9								
LBL	75.06	313	P	20	48.32	0.6	ENIJ	81.74	307	eP	21	25.00	0.7	NNA	0.10	272	eP	30	47.00	0.6
PYM	75.07	314	P	20	48.24	0.3	PMR	81.78	26	eP	21	23.50	-0.4		0.7s	23.97nm				
BRS	75.18	129	iPd	21	03.80	15.1X		1.0s	22.50nm		4.9mb					i	30	48.50		
MAF	75.22	314	iPc	20	49.20	0.5			e	21	52.50					eS	31	34.30		
	0.6s	27.00nm		5.2mb		TOL	81.96	310	iPd	21	26.50	1.1	PT08	0.19	80	eP	30	48.80	1.4	
ESY	75.30	325	ePc	20	49.00	0.1		1.2s	109.38nm		5.5mb					e(S)	31	45.40		
	0.8s	33.00nm		5.2mb		BFS	82.05	237	iPc	21	20.00	-6.1X	PT10	0.24	250	eP	30	46.30	-1.3	
BNG	75.41	269	iPc	20	49.40	-0.9		1.0s	80.00nm		5.5mb					eS	31	34.80		
	0.8s	56.00nm		5.4mb		SEK	82.14	235	iPd	21	28.00	1.4	PT02	0.99	163	eP	30	58.70	0.6	
		ic	21	15.50			0.9s	58.82nm		5.4mb						eS	31	58.80		
		id	22	19.20		EBAN	82.44	308	eP	21	28.40	0.5	PT06	1.87	168	eP	31	10.90	0.2	
TCF	75.44	314	iPc	20	50.40	0.5	INK	82.61	16	iPc	21	27.90	-0.2	PT03	2.19	155	eP	31	16.40	1.1
EBL	75.58	325	ePc	20	50.80	0.3		1.0s	51.00nm		5.4mb			ZOBO	9.37	118	P	32	55.00	-1.9
EAU	75.78	325	ePc	20	50.80	-0.8				pP	21	55.00	104km	LPB	9.51	119	eP	32	58.00	-0.7
	0.6s	48.00nm		5.5mb		TOA	82.65	24	eP	21	29.60	1.1	CCH	11.56	119	P	33	32.40	5.7X	
EKA	75.79	324	Pc	20	52.10	0.4	TAF	82.71	305	iPd	21	30.50	1.1		S.D. = 1.4	on 8 of 9 obs.				
	0.9s	44.50nm		5 3mb					i	21	57.00			---						
ESK	75.82	324	ePd	20	52.50	0.7	ASMO	82.72	307	eP	21	29.00	-0.5	JUL 15, 1989 02h 12m 43.32± 0.72s						
	1.0s	80.00nm		5.5mb		APHE	82.84	307	eP	21	30.50	0.4	43.223 N ± 8.3km 0.405 W ± 8.8km							
LSF	75.90	314	iPc	20	52.60	0.1	DZM	82.98	117	iPd	21	32.40	1.4	DEPTH = 10.0km (geophysicist)						
	0.8s	16.10nm		4.9mb		AAPN	83.02	307	eP	21	30.00	-1.0	PYRENEES						(378)	
CAF	75.95	313	iPc	20	53.70	0.8	ATEJ	83.09	307	eP	21	31.00	-0.5	mbLg 3.3 (MDD). ML 3.2 (LDG). Felt (IV) in the Ossou Volley, France.						
	0.8s	38.90nm		5.3mb		EHOR	83.63	308	iP	21	34.90	0.9								
EAB	76.13	325	ePc	20	50.90	-2.6	EPRU	83.97	307	eP	21	35.80	0.1							
	0.7s	33.00nm		5.3mb		FRS	84.60	235	iPc	21	38.00	-0.8								
RJF	76.20	313	iPc	20	55.20	1.0	EVAL	84.81	309	eP	21	41.00	1.1	EPF	0.58	109	Pg	12	54.10	-1.0
	0.6s	39.60nm		5.4mb		HVD	84.89	234	iPc	21	53.50	13.0X				Sg	13	03.40		
LDF	76.22	317	iPc	20	54.50	0.3		0.9s	48.74nm					ECRI	1.66	249	iP	13	13.30	0.6
	0.6s	41.40nm		5.4mb					e	22	17.50					eS	13	31.00		
FLN	76.39	317	iPc	20	55.40	0.2	AVE	87.12	305	iP	21	52.50	1.2	LPO	1.86	38	Pg	13	21.00	5.6X
	0.6s	18.70nm		5.1mb					i	22	19.50					Sg	13	48.60		
COO	76.44	132	eP	20	56.00	0.2	TIO	88.01	303	iP	21	57.50	1.7	LFF	1.90	25	Pg	13	22.40	6.3X
BWA	76.53	137	iPc	20	57.30	1.1				i	22	23.50					Sg	13	50.20	
LPO	76.62	313	iPc	20	57.40	0.8	YKB0	91.77	13	eP	22	14.00	1.4	CAF	2.46	45	Pn	13	24.80	0.6
	0.8s	77.90nm		5.6mb		YKA	91.88	13	P	22	15.30	2.2				Pg	13	31.90		
GRR	76.75	317	iPc	20	57.60	0.4	YKC	91.92	13	eP	22	14.00	0.8				Sg	14	06.50	
	0.8s	37.60nm		5.3mb		MAW	93.16	192	eP	22	19.00	0.4	EROQ	2.47	166	ePn	13	26.20	1.9	
TOO	76.82	141	eP	20	58.00	0.3	KIC	96.07	279	PKPc	22	33.90	0.7				eSn	13	52.20	

15d 02h

RJF	2.50	33	Pg	13 33.40	8.8X	
			Sg	14 07.80		
ETER	2.57	110	ePn	13 31.40	5.7X	
			eSn	14 05.00		
ETOR	2.70	208	ePn	13 26.20	-1.4	
LSF	3.33	24	Pn	13 36.00	-0.4	
			Pg	13 47.80		
			Sg	14 33.70		
MFF	3.38	3	Pg	13 50.10	12.9X	
			Sg	14 34.80		
TCF	3.59	30	Pg	13 53.40	13.3X	
			Sg	14 42.90		
GUD	3.80	229	ePn	13 43.00	-0.4	
			eSn	14 23.00		
BGF	4.06	34	Pn	13 46.80	0.1	
			Sg	14 55.70		
S.D. = 1.2			on	8 of 14 obs.		

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* JUL 15, 1989 03h 06m 05.54± 0.78s
35.727 S ± 9.1km 144.515 E ± 7.7km
DEPTH = 10.0km (geophysicist)
NEW SOUTH WALES, AUSTRALIA (601)
ML 3.3 (BFD).

TOO	2.00	157	eP	06 40.00	0.2	
			ePg	06 41.50		
			eS	07 04.00		
BFD	2.15	227	iPc	06 41.70	-0.2	
			eS	07 08.00		
BWA	3.45	69	iPc	07 04.50	4.0X	
CAN	3.68	85	iP	07 03.50	-0.2	
			eS	07 41.40		
			iSg	08 00.00		
CNB	3.98	85	eP	07 08.00	0.1	
			ePg	07 20.00		
			eS	07 42.00		
			eSg	07 57.00		
STK	4.54	327	ePn	07 16.00	0.1	
			ePg	07 24.00		
			eSn	08 08.00		
S.D. = 0.3			on	5 of 6 obs.		

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* JUL 15, 1989 03h 45m 15.94± 0.56s
6.784 N ± 7.6km 73.144 W ±10.4km
DEPTH = 168.1 ± 6.0 km
3.8mb (1 obs.)
NORTHERN COLOMBIA (99)

BMG	0.29	13	eP	45 40.00	-0.2	
BOG	2.33	203	iPc	45 57.00	0.2	
			iS	46 27.00		
UPA	6.70	289	ePd	46 53.00	0.1	
	0.6s		22.67nm		4.7mb X	
			i	48 10.00		
ATB	23.16	115	Pd	50 08.70	0.2	
LPB	23.70	168	eP	50 14.00	-0.2	
CNCB	23.99	168	P	50 17.20	0.0	
CCH	24.99	164	eP	50 35.00	8.8X	
BAO	33.42	132	e(P)	51 35.00	-5.9X	
SCH	48.17	5	eP	53 41.00	0.2	
YKA	63.29	340	P	55 28.40	-0.2	
MBC	73.84	350	eP	56 33.50	0.2	
	0.5s		1.00nm		3.8mb	
PMG	140.03	263	ePdiff	01 33.50	-8.3X	
OIS	145.45	243	iPKPd	04 36.00	-0.3	
	0.5s		6.00nm			
ASPA	149.07	234	iPKPd	04 45.70	3.6X	
	0.6s		12.00nm			
WRA	150.30	241	PKPd	04 48.90	4.9X	
	0.4s		2.80nm			
WB5	150.30	241	iPKPd	04 49.10	5.1X	
S.D. = 0.3			on	10 of 16 obs.		

JUL 15, 1989 03h 45m 36.63± 0.85s
33.804 S ± 9.4km 71.143 W ± 6.3km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

TACH	0.23	49	iPd	45 45.00	1.4	
			iS	45 53.00		
LNV	0.27	236	iPd	45 43.90	-0.1	
			iS	45 51.70		
LCCH	0.48	313	iP	45 46.60	-0.4	
			iS	45 56.50		
SAN	0.53	49	iPd	45 48.00	0.2	
			iS	45 59.00		
PCH	0.56	71	iPc	45 47.60	-0.5	
			iS	45 58.30		
PEL	0.76	30	iPc	45 51.20	0.2	
			iS	46 05.00		
ROCH	0.84	8	iPd	45 52.30	0.1	
			iS	46 07.00		
FCH	0.86	57	iP	45 52.00	-0.6	
			iS	46 06.00		
IHA	0.88	332	eP	45 53.00	0.4	
			iS	45 56.50		
JACH	1.21	23	iPd	45 56.60	-0.8	
			iS	46 14.50		
S.D. = 0.7			on	10 of 10 obs.		

? JUL 15, 1989 04h 26m 07.76± 5.53s
18.247 N ±41.0km 61.865 W ±12.1km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.5 (FDF).

ANG	1.09	178	eP	26 28.55	0.4	
BPA	1.19	180	eP	26 29.83	-0.2	
			eS	26 43.93		
SKI	1.23	223	eP	26 30.99	0.3	
			eS	26 47.09		
NEV	1.29	211	eP	26 31.20	-0.5	
			eS	26 49.88		
MGH	1.56	192	eP	26 35.60	0.1	
			S	26 56.50		
DEG	2.07	158	eP	26 43.00	-0.1	
PAG	2.21	175	eP	26 45.00	-0.1	
			S	47 11.50		
S.D. = 0.4			on	7 of 7 obs.		

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* JUL 15, 1989 05h 01m 54.13± 2.00s
0.122 S ±14.9km 79.100 W ±18.1km
DEPTH = 33.0km (normal)
ECUADOR (107)

GGP	0.51	96	P+	02 04.30	-1.1	
			S	02 20.50		
QUR	0.57	95	iP+	02 05.50	-0.7	
			S	02 20.90		
RECU	0.74	134	iP+	02 09.10	0.5	
			eS	02 27.00		
COTA	0.89	59	iPd	02 10.90	0.2	
			eS	02 27.30		
CAYA	1.13	80	iPd	02 15.50	1.3	
			S	02 37.50		
CBN	38.17	2	eP	09 12.00	-0.3	
S.D. = 1.1			on	6 of 6 obs.		

? JUL 15, 1989 06h 04m 45.55± 0.86s
25.330 N ±14.3km 127.926 E ±21.1km
DEPTH = 33.0km (normal)
4.4mb (1 obs.)
RYUKYU ISLANDS (238)

BJI	17.67	329	eP	08 52.00	1.4	
CN2	18.54	354	Pc	09 02.80	1.4	
			sP	09 15.80		
HHC	20.62	323	eP	09 25.00	0.3	
WMO	37.47	310	P	11 56.90	-0.9	
WB5	45.37	171	eP	13 04.10	1.4	
INK	69.82	23	eP	15 54.00	-0.4	
MBC	70.76	14	eP	15 59.00	-1.1	
SUF	72.99	332	iP	16 12.70	-0.8	
	0.7s		2.90nm		4.4mb	
NUR	74.52	330	eP	16 22.00	-0.3	
YKA	79.45	25	eP	16 50.20	0.4	
NB2	80.00	334	P	16 51.50	-1.4	
S.D. = 1.2			on	11 of 11 obs.		

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* JUL 15, 1989 07h 09m 34.44± 1.10s
31.619 S ±18.1km 69.003 W ± 9.7km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTCB	0.22	53	iPc	09 43.00	1.6	
			S	09 54.50		
RTBS	0.39	264	ePd	09 43.00	-0.4	
			S	09 54.20		
RTCV	0.46	121	ePd	09 45.20	0.6	
RTLL	0.54	58	ePd	09 45.00	-0.7	
			S	09 58.50		
CFA	0.65	89	iPc	09 46.00	-1.2	
			S	10 01.00		
S.D. = 1.6			on	5 of 5 obs.		

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* JUL 15, 1989 07h 28m 36.77± 0.60s
8.143 S ± 7.6km 125.155 E ±10.1km
DEPTH = 33.0km (normal)
4.3mb (4 abs.)
TIMOR (289)

KUPT	2.51	217	eP	29 18.00	1.8	
	1.2s		2412.20nm			
MKS	6.35	297	iPc	30 10.50	0.0	
MTN	7.51	129	eP	30 25.50	-1.3	
			eS	31 47.00		
KNA	8.34	155	eP	30 32.00	-6.4X	
			e	30 36.50		
MBL	13.92	201	eP	31 52.00	-2.0	
WB5	14.69	144	eP	31 54.70	-9.4X	
			i	31 58.20		
			eS	34 34.90		
WRA	14.72	144	Pc	31 59.80	-4.8X	
	0.7s		7.50nm		4.2mb	
NANU	17.06	212	eP	32 36.50	2.0	
ASPA	17.57	152	eP	32 39.20	-1.6	
	0.9s		32.00nm		4.5mb	
Z	21s		0.98um		4.9Msz	
			eS	35 46.60		
			LR	39 38.60		
WARB	18.00	176	eP	32 43.00	-3.2X	
	0.4s		4.00nm		3.9mb	
			iPP	32 46.60		
QIS	18.64	133	eP	32 49.00	-5.1X	
			e	32 53.00		
MRWA	22.67	201	eP	33 35.50	-1.0	
FORR	22.76	173	eP	33 36.50	-0.9	
COOL	22.93	189	eP	33 39.00	-0.2	
CTA	23.62	122	eP	33 47.00	1.1	
BAL	23.70	198	eP	33 47.00	0.4	
KLB	24.33	195	eP	33 53.00	0.3	
MUN	25.13	198	eP	34 00.00	-0.4	
STK	28.14	149	eP	34 28.00	0.0	
BWA	33.79	144	eP	35 20.30	2.3	
CHG	37.22	316	eP	35 46.00	-1.2	
GYA	38.80	333	P	36 01.20	0.7	
CD2	43.92	333	eP	36 40.40	-1.9	
MAT	46.11	15	(P)	37 02.00	2.3	
GTA	52.83	335	eP	37 48.00	-3.5X	
WMO	61.85	330	P	38 54.30	-0.9	
SPA	81.91	180	e(P)	40 54.90	0.6	
	0.9s		9.09nm		4.8mb	
PPD	149.81	187	e(PKP)	48 30.00	9.1X	
CNCB	152.01	152	PKP	48 32.00	7.0X	
LPB	152.20	152	PKP	48 33.00	7.9X	
CCH	152.29	156	ePKP	48 42.00	16.9X	
ZOBO	152.41	152	ePKP	48 30.00	4.4X	
S.D. = 1.4			on	21 of 32 obs.		

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* JUL 15, 1989 07h 30m 05.01± 2.39s
32.517 S ±10.1km 71.699 W ±21.8km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.51	175	iPd	30 53.00	37.2X	
			iS	31 32.80		
ROCH	0.74	128	iPd	30 18.10	-1.1	
			iS	30 29.00		
JACH	0.95	100	iPd	30 20.20	-1.9	
			iS	30 33.50		
LCCH	0.96	174	iPd	30 22.50	0.3	
			iS	30 36.70		
PEL	1.06	127	iP	30 23.40	-0.2	
			iS	30 38.00		
SAN	1.28	137	iP	30 26.50	-0.2	
			iS	30 44.70		
TACH	1.30	151	iPd	30 27.50	0.5	
			iS	30 45.10		
FCH	1.43	125	iPd	30 28.50	-0.7	
			iS	30 49.00		
LNV	1.46	171	iPc	30 29.10	-0.1	
			iS	30 47.40		
PCH	1.48	138	iPd	30 30.50	0.8	
			iS	30 51.60		
RTBS	2.09	66	e(P)	30 39.50	1.2	
RTCB	2.67	68	ePc	30 47.50	0.8	
			S	31 26.00		
ZON	2.74	70	eP	30 49.00	1.3	
RTCV	2.76	77	e(P)	30 49.20	1.3	
			S	31 27.80		
RTLL	2.99	68	ePc	30 51.50	0.3	

```
                    S     31 32.00
CFA      3.07  74 iPc     30 52.80    0.4
RFA      3.51 131 ePc     30 59.20    0.5
CYA      6.51  53 e(P)    31 38.00   -3.1
      S.D. = 1.2  on  17 of  18 obs.
-------------------------------------------
?  JUL  15, 1989  08h 30m 25.08± 4.21s
    8.549 S ±42.3km  125.627 E ±14.3km
   DEPTH =  81.4 ± 23.8 km
   4.1mb (  4 obs.)
 TIMOR                                (289)

KUPT     2.55 231 eP      31 05.00   -0.1
       0.4s   160.70nm
MTN      6.89 129 iPd     32 06.50    1.1
                  eS      33 28.00
KNA      7.79 157 eP      32 17.40   -0.4
WB5     14.09 144 eP      33 39.10   -3.1X
                  eS      36 10.80
WRA     14.12 144 Pd      33 40.10   -2.6
       0.8s     4.80nm            3.8mb
ASPA    16.99 153 iPc     34 20.20    1.1
       0.9s     19.00nm           4.3mb
                  eS      37 26.90
WARB    17.56 177 eP      34 27.00    0.9
       0.4s     3.00nm            3.9mb
QIS     18.02 133 eP      34 32.00    0.2
                  e       34 35.00
BWA     33.19 144 eP      37 01.10    4.9X
SPA     81.51 180 ePd     42 34.60   -0.2
       0.7s     5.08nm            4.5mb
      S.D. = 1.6  on   8 of  10 obs.
-------------------------------------------
%  JUL  15, 1989  08h 42m 26.05± 0.85s
   37.813 N ±15.2km    4.615 W ± 6.2km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                                (377)
      mbLg 2.9 (MDD).

EHOR     0.50 271 iP      42 35.20   -1.0
                  eS      42 42.00
E8AN     0.74  62 iPgd    42 40.90    0.3
                  eSg     42 51.00
AFC      1.02 123 ePg     42 45.20   -0.2
                  eSg     42 59.00
EVAL     1.71 263 ePn     42 57.20    1.2
                  eSn     43 18.20
EVIA     1.85  63 ePn     42 58.00   -0.3
                  eSn     43 21.50
EPLA     2.52 334 ePg     43 14.30    6.5X
                  eSg     43 44.80
GUD      2.85   7 ePg     43 20.90    8.4X
                  eSg     43 55.00
      S.D. = 1.2  on   5 of   7 obs.
-------------------------------------------
?  JUL  15, 1989  09h 08m 43.34± 2.73s
    8.196 S ±29.2km  125.301 E ±11.4km
   DEPTH =  33.0km  (normal)
   3.9mb (  2 obs.)
 TIMOR                                (289)

KUPT     2.56 221 eP      09 23.50    0.0
       0.5s   240.10nm
MTN      7.36 129 eP      10 32.00    0.7
                  eS      11 53.00
KNA      8.24 156 eP      10 42.70   -0.8
                  eS      12 15.00
WB5     14.56 144 eP      12 05.10   -3.9X
                  eS      14 41.10
WRA     14.60 144 Pd      12 05.70   -3.8X
       0.6s     2.30nm            3.8mb
ASPA    17.45 153 eP      12 45.30   -0.7
     Z  21s      0.22um
                  eS      15 51.00
                  LR      19 45.40
WARB    17.93 176 eP      12 53.00    1.0
       0.4s     4.00nm            3.9mb
QIS     18.50 133 eP      12 59.00    0.0
                  eS      16 16.00
SPA     81.86 180 e(P)    21 00.30   -0.3
       0.8s     5.83nm            4.7mb X
CNCB   151.90 152 PKP     28 38.00    6.6X
LPB    152.08 152 ePKP    28 37.00    5.5X
ZOBO   152.30 151 ePKP    28 39.00    7.0X
      S.D. = 0.8  on   7 of  12 obs.
-------------------------------------------
?  JUL  15, 1989  09h 55m 01.59± 2.57s
    32.325 S ±18.9km   72.557 W ±36.4km
   DEPTH =  24.3 ± 12.9 km
 OFF COAST OF CENTRAL CHILE           (134)

LCCH     1.42 144 iPd     55 26.10    0.2
                  iS      55 49.10
ROCH     1.45 117 iPd     55 29.40    2.7
                  iS      55 35.40
JACH     1.70 103 iPd     55 29.90   -0.2
                  iS      55 43.60
PEL      1.78 118 iPc     55 30.50   -0.7
                  iS      55 44.90
LNV      1.89 150 iPd     55 33.10    0.3
                  iS      55 49.10
TACH     1.90 135 iPd     55 32.50   -0.5
                  iS      55 47.60
SAN      1.95 126 ePd     55 33.00   -0.8
                  iS      55 50.00
PCH      2.15 128 iPd     55 36.60   -0.1
                  iS      55 56.20
FCH      2.15 118 iPd     55 36.10   -0.9
                  iS      55 54.50
NNA     20.62 348 iPc     59 41.90    0.0
       0.4s     6.78nm            4.4mb
                  eS      59 57.80
      S.D. = 1.3  on  10 of  10 obs.
-------------------------------------------
    JUL  15, 1989  10h 41m 00.34± 0.57s
    8.148 S ± 6.8km  125.313 E ± 9.3km
   DEPTH =  33.0km  (normal)
   4.3mb (  6 obs.)
 TIMOR                                (289)

KUPT     2.61 220 eP      40 46.50  -54.6X
       0.8s   626.00nm
MKS      6.49 296 e(P)c   42 37.50    1.4
MTN      7.38 130 eP      42 49.00    0.4
                  eS      44 13.00
KNA      8.28 156 eP      43 00.30   -0.8
MBL     13.98 202 eP      44 16.70   -1.6
WB5     14.59 144 eP      44 22.00   -4.4X
                  eS      46 59.90
WRA     14.63 144 Pd      44 23.00   -3.9X
       0.6s     2.70nm            3.9mb
NANU    17.14 212 eP      45 01.00    1.9
ASPA    17.49 153 iPc     45 02.30   -1.2
       1.0s     23.00nm           4.3mb
     Z  21s      0.40um           4.9Msz
                  eS      48 11.10
                  LR      52 12.60
WARB    17.98 176 eP      45 10.00    0.4
       0.6s     13.00nm           4.2mb
QIS     18.52 133 eP      45 17.00    0.8
                  eS      48 29.00
MEKA    19.46 198 eP      45 26.50   -0.9
       0.4s     11.00nm           4.5mb
MRWA    22.72 201 eP      46 00.00   -0.6
COOL    22.95 189 eP      46 04.00    1.1
CTA     23.49 123 iPc     46 12.30    4.1X
BAL     23.75 199 eP      46 11.00    0.4
KLB     24.36 196 eP      46 17.00    0.4
MUN     25.18 198 eP      46 24.00   -0.4
CHG     37.34 316 eP      48 10.00   -1.7
GYA     38.87 333 P       48 22.80   -1.9
MAT     46.07  14 eP      49 24.00    1.0
       0.8s     2.24nm            4.2mb
MDJ     52.66   4 eP      50 14.20    0.6
GTA     52.90 335 eP      50 12.20   -3.4X
SPA     81.91 180 e(P)    53 18.60    0.7
       0.9s     8.64nm            4.8mb
CNCB   151.93 152 PKP     00 55.00    6.5X
LPB    152.12 152 PKP     00 57.30    8.8X
CCH    152.22 156 ePKP    01 07.00   18.5X
                  i       01 19.20
ZOBO   152.33 151 PKP     00 57.00    7.9X
      S.D. = 1.2  on  19 of  28 obs.
-------------------------------------------
*  JUL  15, 1989  11h 06m 08.85± 0.53s
    3.401 S ± 6.6km   34.444 E ±12.9km
   DEPTH =  10.0km  (geophysicist)
   4.8mb (  6 obs.)  3.7Msz (  1 obs.)
 LAKE VICTORIA REGION                 (569)

LWI      5.75 281 iPc     07 36.80    0.2
                  iS      08 43.80
CLK     12.21 178 eP      09 03.20   -2.7
                  iSn     11 14.90

AAE     13.08  19 ePn     09 18.20    0.5
BUL     17.59 198 iP      10 17.50    1.6
       1.0s     15.00nm           4.1mb
                  iSn     13 17.30
                  iLg     15 13.90
BNG     17.69 296 iPc     10 16.10   -1.0
       0.8s     61.00nm           4.8mb
                  iS      14 01.10
                  Lg      15 08.00
SLR     22.98 194 eP      11 14.50   -0.5
       0.7s     23.97nm           4.8mb
                  S       16 02.00
PRY     24.33 195 eP      11 28.60    0.6
                  S       16 17.00
BFS     24.49 197 iPd     11 20.50   -9.1X
                  S       26 02.00
SEK     25.62 194 iPc     11 42.70    2.3
                  S       17 02.50
IZM     42.12 352 eP      14 04.30    1.4
QUE     45.62  41 eP      14 32.20    0.6
VAY     45.81 348 eP      14 34.50    1.9
SRO     52.93 346 eP      15 25.70   -1.7
ZST     53.58 346 e(P)    15 34.00    1.8
SPC     53.81 348 eP      15 33.70   -0.4
KHC     55.37 343 iPc     15 44.80   -0.6
       1.0s     13.00nm           4.9mb
TOL     55.69 325 eP      15 51.00    3.2X
GRF     56.57 342 eP      15 53.00   -1.0
     Z  18s      0.06um           3.7Msz
NUR     64.18 355 iP      16 44.90   -0.8
SUF     66.24 356 iP      16 58.00   -0.9
       0.6s     2.80nm            4.6mb
NB2     66.73 348 P       17 01.10   -1.1
MAW     66.99 169 eP      17 03.00   -0.7
SPA     86.62 180 e(P)    18 54.00    0.3
       1.0s     6.00nm            4.8mb
      S.D. = 1.4  on  21 of  23 obs.
-------------------------------------------
&  JUL  15, 1989  11h 42m 53.06s
   59.812 N          145.610 W
   DEPTH =   0.1km
 GULF OF ALASKA                       ( 15)
      <AGS-P>.

SGAM     0.72  16 iP      43 07.57    0.1
                  eS      43 20.72
HIN      0.74 323 eP      43 07.90    0.1
                  eS      43 20.27
CVA      0.74 355 eP      43 07.65   -0.2
                  eS      43 20.12
WAX      1.52  64 eP      43 19.91   -1.8
                  eS      43 40.63
TGL      1.68  54 eP      43 22.02   -1.9
                  S       43 45.54
KLU      1.69 355 eP      43 22.28   -1.8
                  S       43 46.53
GLB      1.86  28 iP      43 24.87   -1.6
SEW      1.95 280 iP      43 25.71   -2.1
BALM     2.03  51 eP      43 27.16   -1.9
KNK      2.13 320 eP      43 28.90   -1.5
TOA      2.32 353 eP      43 32.00   -1.1
SLKM     2.41 289 eP      43 31.96   -2.5
PAX      3.17   1 eP      43 43.11   -2.1
      13 obs. associated
-------------------------------------------
    JUL  15, 1989  11h 49m 23.14± 0.47s
    35.981 N ± 4.7km   30.793 E ± 5.9km
   DEPTH =  59.0 ± 11.8 km
 EASTERN MEDITERRANEAN SEA            (371)
      MD 4.0 (ATH).

KSL      0.99 278 ePn     49 42.00    0.9
ELL      1.05 317 iPn     49 42.30    0.3
BCK      1.49 354 iPn     49 48.70    0.7
CSS      2.31 115 eP      50 00.00    0.6
YER      2.33 300 iPn     50 10.60   10.8X
KHL      2.55 337 iPn     50 03.20    0.3
CIN      2.71 307 eP      50 05.00   -0.1
FAM      2.80 110 eP      50 12.00    5.7X
KAP      2.97 263 ePn     50 09.70    0.8
ALT      3.12 350 iPn     50 11.20    0.2
IZM      3.71 312 iPn     50 18.30   -1.0
DST      4.00 335 ePn     50 21.70   -1.7
BBTK     4.16  21 iPc     50 26.00    0.4
NPS      4.28 262 ePn     50 27.70    0.4
GPA      4.32 355 ePn     50 28.00    0.2
EDC      4.93 333 ePn     50 37.00    0.5
```

15d 11h

EZN 5.22 319 ePn 50 38.00 -2.4
DSI 5.82 138 eP 50 49.00 0.1
HLW 6.12 176 (P) 50 53.00 -0.1
(S) 51 58.50
MBH 7.08 150 iP 51 05.50 -1.0
VRI 10.35 344 ePc 51 51.50 0.2
ed 08 35.00
KHC 18.21 322 eP 53 34.60 1.5
NUR 24.86 353 eP 54 42.00 0.8
SUF 26.92 355 iP 54 59.70 -0.6
S.D. = 1.0 on 22 of 24 obs.

? JUL 15, 1989 12h 18m 05.62± 1.37s
30.391 S ±16.4km 177.444 W ±21.9km
DEPTH = 33.0km (normol)
4.8mb (4 obs.) 4.5Msz (1 obs.)
KERMADEC ISLANDS (178)

RAO 1.21 340 iP 18 27.00 0.8
DZM 16.65 296 iPc 22 03.70 5.6X
8RS 26.21 269 iPc 23 41.30 2.0
COO 26.39 262 iPc 23 44.70 3.8X
CAN 28.53 251 eP 24 02.00 1.7
BWA 29.02 253 eP 24 04.00 -0.7
QIS 39.79 274 eP 25 38.00 0.6
ASPA 43.59 267 iPd 26 08.40 -0.2
0.7s 13.00nm 4.8mb
Z 18s 0.51um 4.5Msz
LR 43 35.90
WRA 44.58 272 Pc 26 15.30 -1.2
0.8s 10.60nm 4.7mb
WB5 44.58 272 eP 26 15.50 -1.1
FORR 46.46 255 eP 26 29.30 -2.0
0.4s 15.00nm 5.3mb
SPA 59.78 180 e(P) 28 11.00 1.3
1.0s 7.00nm 4.7mb
e 28 19.60
SUF 144.25 342 iPKP 37 36.80 -2.2
0.7s 5.00nm
NUR 146.47 340 iPKP 37 43.90 1.1
0.6s 13.00nm
NB2 148.81 352 PKP 37 50.30 3.7X
HFS 149.33 349 ePKP 37 51.00 3.6X
0.4s 1.20nm
BNG 150.10 213 ePKPd 37 55.00 5.0X
0.5s 5.00nm
id 38 03.10
S.D. = 1.6 on 12 of 17 obs.

& JUL 15, 1989 13h 44m 11.60s
40.600 N 122.400 W
DEPTH = 33.0km (normol)
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.8 (BRK).

WDC 0.11 259 iPd 44 16.50 -1.0
eS 44 22.50
LTCM 0.44 152 eP 44 21.20 -0.2
MIN 0.66 113 iPd 44 24.30 -0.3
eS 44 33.90
LBFM 0.84 27 eP 44 28.10 0.9
FHC 1.22 280 eP 44 34.20 1.7
ORV 1.25 146 eP 44 32.50 -0.4
CMB 3.00 148 e(P) 44 58.80 0.8
ARN 3.32 168 eP 45 03.00 0.6
KVN 3.65 114 eP 45 07.70 0.3
LNOR 6.06 28 e(P) 45 39.00 -2.3
10 obs. associated

JUL 15, 1989 14h 08m 31.26± 0.36s
15.181 S ±14.6km 72.315 W ± 8.8km
DEPTH = 150.9 ± 7.8 km
SOUTHERN PERU (117)

ARE 1.50 148 iPd 09 01.50 0.0
i(S) 09 23.50
PT03 3.57 289 eP 09 26.80 0.1
eS 10 09.40
PT06 4.12 289 eP 09 33.80 0.0
eS 10 22.50
ZOBO 4.18 106 iPc 09 34.50 -0.7
LPB 4.27 109 P 09 36.80 0.5
1.0s 80.00nm
HUA 4.28 317 eP 09 36.10 -0.3
eS 10 25.50
CNCB 4.47 112 iPc 09 39.30 0.2
PT02 4.58 299 eP 09 39.90 0.0
eS 10 33.60
PT08 5.22 307 eP 09 49.20 0.4
eS 10 48.60
NNA 5.43 305 iPc 09 51.00 -0.3
0.3s 55.84nm 5.3mb X
eS 10 50.80
CCH 6.32 111 P 10 13.00 9.4X
ITB1 19.29 122 eP 12 47.20 0.4
IT8 19.50 122 e(P) 12 48.80 -0.2
ITB7 19.67 123 e(P) 12 50.00 -0.8
PPD 21.03 112 eP 13 05.10 0.6
S.D. = 0.5 on 14 of 15 obs.

JUL 15, 1989 15h 14m 17.28± 0.75s
40.583 N ± 8.1km 122.327 W ± 6.8km
DEPTH = 21.0 ± 12.4 km
NORTHERN CALIFORNIA (36)
ML 2.5 (BRK).

WDC 0.16 269 iPd 14 21.40 -0.7
LTCM 0.40 157 eP 14 26.40 0.7
MIN 0.60 113 iPd 14 29.20 0.1
iS 14 38.30
LBFM 0.83 23 eP 14 33.20 0.1
ORV 1.21 148 eP 14 38.60 -0.4
eS 14 56.70
FHC 1.28 280 eP 14 40.50 0.5
NWRM 2.17 192 eP 15 01.00 8.2X
KVN 3.60 114 eP 15 12.90 -0.4
S.D. = 0.7 on 7 of 8 obs.

? JUL 15, 1989 18h 33m 12.33± 2.07s
3.869 S ±22.6km 136.807 E ±17.4km
DEPTH = 33.0km (normol)
4.5mb (2 obs.)
WEST IRIAN (201)

MTN 10.54 212 eP 35 45.00 0.8
eS 37 45.00
KNA 14.21 213 eP 36 33.00 -0.4
eS 39 10.00
WB5 16.09 188 eP 36 56.20 -1.6
e 37 05.50
eS 39 53.70
WRA 16.16 188 P 37 07.00 8.3X
0.5s 8.10nm 4.1mb
QIS 16.81 171 eP 37 07.00 0.1
eS 40 08.00
CTA 18.57 151 eP 37 30.00 1.2
ASPA 19.88 188 iPc 37 45.10 1.1
0.9s 47.00nm 4.8mb
Z 19s 0.28um 4.2MszX
eS 41 21.30
LR 45 45.70
WARB 24.23 203 eP 38 39.50 12.1X
0.3s 2.00nm
BRS 27.92 149 iPc 39 00.40 -1.3
ZOBO 148.25 130 PKP 52 55.00 0.1
S.D. = 1.3 on 8 of 10 obs.

? JUL 15, 1989 18h 48m 57.80± 0.74s
35.316 S ±21.0km 78.597 E ±12.4km
DEPTH = 10.0km (geophysicist)
4.9mb (6 obs.)
MID-INDIAN RISE (429)

SEK 43.48 264 iPc 57 04.50 1.4
0.6s 46.67nm 5.4mb
SLR 43.98 268 eP 57 04.50 -2.7
1.0s 20.00nm 4.9mb
PRY 44.15 266 P 57 09.20 0.6
0.8s 12.50nm 4.8mb
HVD 44.37 260 eP 57 25.00 14.7X
BFS 44.73 266 iPc 57 07.00 -6.2X
1.0s 120.00nm 5.8mb
FRS 44.81 261 iPd 57 14.50 0.8
0.6s 13.33nm 5.0mb X
BUL 46.28 275 iPd 57 25.00 -0.6
1.1s 38.61nm 5.3mb X
WRA 51.08 88 Pd 58 02.70 0.0
1.2s 25.20nm 5.0mb X
WB5 51.14 88 eP 58 02.30 -0.8
HYB 52.44 360 eP 58 21.00 8.2X
SPA 54.87 180 e(P) 58 31.00 0.5
1.0s 10.00nm 4.8mb
QUE 66.07 349 eP 59 46.60 -0.6
BNG 68.72 292 iPd 00 03.40 -0.7
0.7s 5.00nm 4.8mb
MAIO 73.44 344 eP 00 34.00 2.0
S.D. = 1.4 on 11 of 14 obs.

JUL 15, 1989 18h 58m 28.80± 0.92s
34.448 N ± 8.2km 87.339 W ± 8.7km
DEPTH = 10.0km (geophysicist)
ALABAMA (507)
mbLg 2.8 (NEIS).

LAL 0.01 172 iPc 58 30.70 0.0
MSAL 0.68 54 iPd 58 41.00 -1.2
PWLA 0.80 312 ePc 58 43.90 -0.4
e(S) 58 55.00
TCT 1.56 354 eP 58 57.06 0.4
iS 59 18.80
ABTN 1.75 35 eP 59 00.16 0.7
iS 59 23.34
WMTN 2.10 67 eP 59 05.02 0.5
eS 59 32.82
GBTN 2.84 64 eP 59 17.00 2.0X
TKL 3.16 67 eP 59 21.20 1.6X
OLY 3.55 288 eP 59 31.50 6.4X
PRM 4.14 94 e(P) 59 41.20 7.8X
JSC 5.03 90 e(P) 59 57.20 11.1X
BLA 6.26 62 e(P) 00 14.00 10.5X
S.D. = 0.9 on 6 of 12 obs.

& JUL 15, 1989 22h 05m 10.05s
57.573 N 155.050 W
DEPTH = 48.2km
ALASKA PENINSULA (12)
<AGS-P>.

KDC 1.39 82 eP 05 32.24 -1.1
CDD 1.55 28 eP 05 34.46 -1.2
MCNL 1.66 13 iP 05 36.03 -1.2
S 05 55.05
SHU 1.78 52 eP 05 37.68 -1.2
S 06 01.32
AUW 1.98 24 eP 05 40.83 -0.9
OPT 2.29 24 eP 05 45.00 -1.2
XLV 2.57 41 eP 05 49.54 -0.6
ILIM 2.74 22 eP 05 51.12 -1.5
CNPM 2.80 44 eP 05 51.24 -2.1
RED 3.09 21 eP 05 56.04 -1.5
NNL 3.15 37 eP 05 56.92 -1.5
RDT 3.30 23 eP 05 58.88 -1.7
SVW 3.56 356 eP 06 02.17 -2.1
SLKM 3.86 38 eP 06 05.67 -2.8
SEW 3.86 47 eP 06 06.51 -1.9
SPU 3.93 22 eP 06 07.32 -2.1
SUA 4.48 28 eP 06 14.72 -2.5
WRH 7.70 23 eP 06 59.37 -2.8
18 obs. associated

% JUL 15, 1989 22h 12m 31.13± 2.83s
35.102 N ±23.6km 139.140 E ±13.5km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
Felt (I JMA) at Ajiro.

CHJJ 0.95 353 P 12 49.70 0.0
S 13 04.30
IIDJ 1.07 291 P 12 50.30 -1.5
KAKJ 1.39 37 P 12 56.70 -0.4
S 13 15.80
MAT 1.62 332 iPd 13 00.50 0.0
iS 13 22.80
MTMJ 1.83 324 P 13 04.60 1.0
S 13 30.30
NIIJ 2.14 357 eP 13 12.10 4.2X
TSRJ 2.62 280 P 13 15.70 0.9
eS 13 48.40
S.D. = 1.2 on 6 of 7 obs.

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* JUL 15, 1989 22h 27m 24.15± 2.13s
23.488 N ±19.1km 123.333 E ±12.2km
DEPTH = 23.1 ± 8.3 km
4.6mb (1 obs.)
SOUTHWESTERN RYUKYU ISLANDS (246)

TWD 1.70 291 eP 27 51.00 -1.7
TWC 1.76 310 ePc 27 54.40 0.9
TWF1 1.87 266 ePc 27 52.10 -3.2X
TWZ 2.26 315 eP 28 02.70 1.8
ANP 2.37 316 eP 28 11.00 8.7X

QZH		4.56	289	ePn	28 30.50	-3.1X
	Z	12s		2.40um		
	N	12s		1.30um		
	E	12s		2.00um		
				Sn	29 21.50	
SSE		7.81	346	eP	29 20.80	1.6
	N	12s		1.26um		
	E	12s		0.58um		
				pP	29 27.00	
				e(Lg)	31 25.50	
NJ2		9.41	336	Pc	29 39.20	-2.1
GYA		15.40	285	P	31 07.40	5.6X
	N	12s		1.10um		
	E	12s		1.00um		
TIY		16.98	329	eP	31 19.20	-2.6
	Z	13s		1.44um		
	N	13s		1.20um		
	E	11s		0.30um		
				sP	31 30.50	
				S	34 20.50	
BJI		17.58	342	eP	31 30.00	0.8
	N	12s		0.34um		
				eS	34 28.00	
MAT		18.28	41	(P)	31 38.00	0.1
CHJJ		18.45	44	P	31 39.90	-0.1
CD2		18.90	297	eP	31 44.80	-0.9
CN2		20.34	4	eP	32 00.60	-0.9
	Z	15s		0.70um	4.1MszX	
	N	12s		0.40um		
BTO		20.41	330	eP	32 04.00	1.6
	N	12s		0.80um		
	E	12s		0.50um		
				eS	35 38.00	
LZH		21.02	311	e(P)	32 09.00	0.3
		2.0s		55.00nm	4.6mb	
CHG		23.21	263	eP	32 31.00	0.5
GTA		25.47	314	eP	32 53.20	0.9
WMQ		35.56	314	eP	34 21.80	0.1
	Z	12s		0.30um	4.3MszX	
MBC		73.50	13	eP	38 56.00	-0.3
ZOBO		167.05	58	PKP	47 45.60	15.2X
LPB		167.23	59	ePKP	47 41.00	10.7X
CNCB		167.47	60	PKP	47 43.00	12.3X
	S.D. = 1.4		on	17 of	24 obs.	

JUL 15, 1989 23h 14m 31.32± 0.38s
41.799 N ± 3.7km 20.102 E ± 3.5km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 2.9 (TTG).

PHP		0.28	113	iPgc	14 37.20	0.1
KKS		0.36	40	iPg	14 39.50	0.8
TIR		0.48	201	ePg	14 40.50	-0.7
BCI		0.57	357	iPgd	14 43.00	0.2
ULC		0.66	285	iPgd	14 44.40	0.0
				eSg	14 54.10	
PVY		0.80	353	iPgc	14 46.40	-0.6
				iSg	14 59.50	
TTG		0.89	315	iPgd	14 47.80	-0.5
				iSg	15 02.50	
SKO		1.01	80	iPg	14 50.00	-0.5
				i	14 51.00	
				iSg	14 54.00	
BDV		1.07	297	ePg	14 51.50	0.1
				eSg	15 07.50	
IVA		1.08	352	ePg	14 52.00	0.3
				eSg	15 08.00	
KBN		1.29	155	iPnd	14 56.80	1.6
NKY		1.30	321	ePg	14 55.50	0.0
				eSg	15 16.00	
HCY		1.36	299	ePg	14 56.40	0.1
				eSg	15 18.00	
BRY		1.60	314	ePn	15 01.10	1.3
				eSn	15 24.20	
PLE		1.62	341	ePn	15 01.20	1.1
				eSn	15 24.50	
KNT		2.19	106	eP	15 07.90	-0.5
VTS		2.44	70	eP	15 12.00	0.0
LIT		2.48	132	eP	15 11.80	-0.6
BZS		3.97	16	ePc	15 32.50	-1.0
VOY		6.16	315	ePn	16 03.40	-1.3
				eSn	17 14.10	
	S.D. = 0.8		on	20 of	20 obs.	

JUL 15, 1989 23h 17m 38.45± 0.83s
40.682 N ± 9.2km 30.488 E ± 6.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

GPA		0.42	199	iPg	17 46.30	-0.7
				eSg	17 53.60	
ISK		1.15	290	iPn	18 00.10	0.2
CTT		1.63	287	ePn	18 07.60	0.4
ALT		1.65	190	ePn	18 08.40	0.7
DST		1.79	234	ePn	18 11.40	1.8
BBTK		1.93	115	eP	18 11.00	-0.8
				iS	18 37.00	
EDC		2.03	261	ePn	18 11.00	-2.1
KHL		2.47	198	ePn	18 25.10	5.6X
KAS		2.57	73	ePn	18 21.40	0.5
				iSg	18 55.00	
EZN		3.30	256	ePn	18 31.10	0.0
JMB		3.43	303	eP	18 41.00	8.0X
	S.D. = 1.3		on	9 of	11 obs.	

? JUL 15, 1989 23h 29m 07.94± 8.40s
38.412 N ±15.0km 142.692 E ±72.5km
DEPTH = 10.0km (geophysicist)
NEAR EAST COAST OF HONSHU, JAPAN(228)

OFUJ		1.04	310	iPd	29 27.90	0.3
				S	29 37.80	
YAMJ		2.10	264	P	29 41.80	-1.8
				S	30 03.20	
KAKJ		2.98	223	P	29 54.70	-1.4
				S	30 25.20	
NIIJ		3.15	249	P	29 58.30	-0.2
CHJJ		3.78	232	P	30 07.50	0.0
				S	30 50.00	
MAT		4.02	244	(P)	30 12.00	1.0
				eS	31 01.00	
IIDJ		4.82	234	P	30 23.40	1.1
TSRJ		6.09	244	P	30 41.00	0.9
	S.D. = 1.3		on	8 of	8 obs.	

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* JUL 15, 1989 23h 37m 26.83± 1.07s
37.722 N ±12.1km 14.969 E ± 6.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO		0.30	314	P	37 33.20	0.0
				eSg	37 34.90	
ATN		0.59	42	P	37 38.80	0.1
GIB		0.79	290	P	37 42.20	-0.1
				eSg	37 55.30	
SOI		0.93	68	P	37 44.40	-0.1
				eSg	37 59.00	
FAI		1.12	247	P	37 47.90	0.1
	S.D. = 0.1		on	5 of	5 obs.	

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* JUL 16, 1989 00h 11m 12.44± 0.62s
11.847 N ±12.0km 126.478 E ±10.1km
DEPTH = 33.0km (normal)
4.5mb (3 obs.)
PHILIPPINE ISLANDS REGION (248)

GUMO		18.02	83	eP	15 21.80	-0.4
PJG		18.02	83	eP	15 22.00	-0.2
GYA		23.65	311	P	16 20.20	-1.7
XAN		27.29	327	P	16 55.20	-0.8
GTA		36.22	324	eP	18 15.40	1.0
WARB		37.80	180	eP	18 28.00	0.4
		0.3s		2.00nm	4.5mb	
FORR		42.48	178	eP	19 05.60	-0.6
WMQ		46.12	321	P	19 35.60	0.1
BWA		50.52	156	eP	20 13.90	4.2X
SUF		84.25	333	iP	23 42.70	0.9
		0.8s		7.00nm	4.9mb	
HFS		90.75	333	eP	24 14.60	1.3
		0.4s		0.60nm	4.3mb	
	S.D. = 1.1		on	10 of	11 obs.	

& JUL 16, 1989 02h 27m 46.83s
61.775 N 152.128 W
DEPTH = 108.6km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT		0.35	54	iP	28 02.26	-0.7
				S	28 14.86	
SPU		0.60	177	iP	28 03.59	-0.9
SUA		0.73	115	iP	28 05.27	-0.5
				S	28 19.25	
CUT		1.08	53	iP	28 08.41	-0.6
				S	28 25.48	
PWA		1.08	96	iPc	28 08.40	-0.6
NKA		1.12	157	iP	28 10.32	0.9
RDT		1.21	187	iP	28 09.87	-0.7
				S	28 32.74	
PMS		1.34	112	iPc	28 11.00	-1.1
RED		1.40	193	iP	28 12.09	-0.7
PMR		1.44	96	iPc	28 11.50	-1.7
				eS	28 31.80	
GHO		1.52	89	iP	28 13.00	-1.3
				S	28 34.38	
SLKM		1.57	143	eP	28 13.31	-1.6
HUR		1.68	43	eP	28 14.99	-1.1
				S	28 37.23	
ILIM		1.75	194	iP	28 16.15	-0.9
NNL		1.79	166	eP	28 16.98	-0.5
KNK		1.79	100	iP	28 15.82	-1.8
				S	28 39.28	
SVW		1.81	250	iPc	28 16.40	-1.4
SEW		2.13	141	eP	28 20.26	-1.6
TTA		2.15	304	iPd	28 20.70	-1.6
OPT		2.20	195	eP	28 22.44	-0.4
RND		2.23	41	eP	28 22.17	-1.2
CNPM		2.30	169	eP	28 22.07	-2.1
XLV		2.34	175	iP	28 23.05	-1.6
MCK		2.45	35	eP	28 24.77	-1.4
AUW		2.50	196	iP	28 26.37	-0.5
VZW		2.77	103	eP	28 28.13	-2.4
MCNL		2.82	204	eP	28 30.42	-0.7
TOA		2.83	81	iPc	28 29.90	-1.5
CDD		2.95	195	eP	28 31.68	-1.2
KLU		2.98	93	iP	28 30.60	-2.7
NEA		3.13	25	eP	28 33.29	-2.0
PAX		3.33	66	eP	28 36.26	-1.8
HDA		3.54	39	eP	28 38.49	-2.3
FBA		3.70	30	eP	28 41.20	-1.7
GLB		3.99	91	eP	28 44.42	-2.6
KDC		4.04	183	eP	28 44.90	-2.8
IMA		4.37	352	iPc	28 50.50	-1.7
TGL		4.60	99	eP	28 54.19	-1.3
BALM		4.76	95	eP	28 55.22	-2.4
HYT		7.11	91	P	29 26.80	-3.1
	40 obs. ossocioted					

JUL 16, 1989 03h 27m 44.49± 0.34s
39.060 N ± 3.8km 26.543 E ± 3.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
ML 3.9 (THE), 3.7 (ATH).

PRK		0.28	312	iPgd	27 50.00	-0.4
EZN		0.78	348	iPg	27 49.00	-10.7X
IZM		0.87	139	iPn	28 01.10	-0.1
EDC		1.64	38	ePn	28 12.20	-1.3
DST		1.71	71	iPn	28 14.10	-0.4
MFT		1.82	18	ePn	28 16.30	0.2
ALN		1.87	348	ePb	28 17.40	0.6
				eSb	28 45.10	
CIN		1.90	140	ePn	28 36.00	18.8X
				iSg	29 15.00	
APE		2.14	202	ePn	28 19.50	-1.3
YER		2.36	144	ePn	28 23.60	-0.4
PAIG		2.38	292	ePnc	28 24.50	0.4
KHL		2.45	107	iPn	28 25.50	0.3
ATH		2.47	245	ePg	28 32.00	6.6X
CTT		2.54	34	ePn	28 26.20	-0.2
NEO		2.59	277	ePn	28 27.00	-0.2
PLG		2.73	300	ePn	28 29.00	-0.1
ALT		2.78	89	iPn	28 29.40	-0.5
ISK		2.78	43	ePn	28 30.20	0.3
SRS		3.06	313	ePn	28 33.60	-0.1
DIM		3.08	346	eP	28 34.00	-0.1
				Sg	28 55.00	
THE		3.17	301	ePnc	28 35.60	0.3
LIT		3.30	290	ePnc	28 37.60	0.3
				eSn	29 17.30	
PLD		3.35	336	eP	28 39.00	1.1
JMB		3.40	1	eP	28 40.00	1.3
KNT		3.50	308	ePnc	28 40.40	0.4
				eSn	29 21.50	
ELL		3.52	130	ePn	28 42.30	1.8
BCK		3.56	115	iPn	28 41.20	0.2
VAY		3.79	308	iPn	28 45.30	1.1
KKB		3.85	318	eP	28 45.00	-0.1
KZN		3.89	290	ePb	28 48.90	3.3X
PGB		3.93	333	eP	28 45.00	-1.1

16d 03h

```
PSN      4.78  14 eP     28 59.00    0.8
SKO      4.86 308 iPnc   29 00.10    0.8
     N  10s      0.43um
     E  10s      0.37um
                 LR      31 00.00
BBTK     4.88  79 eP     28 56.00   -3.7X
                 i       29 17.50
                 iS      30 26.00
BUC1     5.30 356 eP     29 16.00   10.5X
TLB      5.64  11 eP     29 10.00   -0.3
CMP      6.30 350 ePc    29 09.00  -10.8X
MLR      6.44 356 ePd    29 21.00   -0.8
BZS      7.50 332 ePc    29 34.00   -2.4
     S.D. = 0.9  on  32 of  39 obs.
-------------------------------------------
   JUL  16, 1989  04h 26m 02.54± 0.32s
   45.666 N ± 3.6km   26.497 E ± 4.4km
   DEPTH = 167.8 ±  5.4 km
   4.1mb (  3 obs.)
 ROMANIA                            (358)

MLR      0.43 246 iPc    26 25.00   -0.4
ISR      0.53 176 iPd    26 26.00   -0.4
PPE      0.96  54 iPc    26 30.00    1.0
BIR      0.99  52 iPd    26 29.00   -0.2
CLI      1.04  31 iPc    26 29.00   -0.6
CFR      1.26 112 iPd    26 32.00    0.5
PTT      1.27 357 iPc    26 32.00    0.4
BUC      1.28 193 iPc    26 32.50    0.8
TLB      1.53 134 iPc    26 36.00    1.9
CVD      1.72 140 iPd    26 17.00  -19.1X
DRA      1.87 239 iPd    26 37.00   -0.7
DEV      2.52 276 iPc    26 45.50    0.2
BZS      3.42 271 iPc    26 56.00   -0.4
RZN      4.18 199 iP     27 06.00   -0.4
BEO      4.35 261 e(Pn)  27 07.50   -0.9
CTT      4.73 162 eP     27 12.20   -1.2
ITU      4.91 157 iPd    27 16.00    0.2
VAY      5.20 215 iPn    27 19.60    0.0
KNT      5.21 211 ePnd   27 20.00    0.3
EDC      5.41 169 eP     27 20.00   -2.4
SPC      5.51 312 iPd    27 24.70    0.7
THE      5.66 208 ePn    27 26.40    0.8
EZN      5.84 181 ePn    27 27.50   -0.5
SRO      6.02 294 iP     27 31.40    0.9
GPA      6.06 151 iP     27 31.60    0.6
KRA      6.22 317 ePd    27 32.50   -0.7
                 e       27 44.00
DST      6.26 165 iP     27 32.80   -0.9
LIT      6.29 209 ePn    27 33.60   -0.5
KAS      6.81 127 ePg    27 41.00    0.0
                 iSg     27 53.00
ZST      6.91 295 iP     27 42.40    0.1
ALT      7.13 157 eP     27 45.90    0.6
PTJ      7.37 276 eP     27 49.00    0.4
BBTK     7.42 139 eP     27 50.00    0.7
KHL      7.67 162 eP     27 52.00   -0.6
KSP      8.55 311 eP     28 03.50   -0.6
RBL      9.03 280 Pd     28 12.20    1.8
PRU      9.13 303 eP     28 12.00    0.3
       1.1s     10.70nm          4.3mb X
                 e       28 31.20
NUR     14.91 356 iP     29 24.60   -1.3
HFS     16.37 337 eP     29 43.20   -0.7
       0.4s      2.30nm          3.9mb
SUF     17.09 359 iP     29 50.30   -2.3
       0.3s      2.90nm          4.1mb
SOD     21.76   0 eP     30 43.00    2.0
BNG     41.65 192 iPd    33 37.20    1.4
       0.4s      5.00nm          4.5mb
KIC     47.59 224 P      34 34.00   10.9X
LIC     47.85 225 P      34 36.00   10.9X
     S.D. = 1.0  on  41 of  44 obs.
-------------------------------------------
*  JUL  16, 1989  04h 52m 11.48± 0.71s
   52.626 N ±14.9km  174.732 W ± 9.4km
   DEPTH = 218.2 ±  7.3 km
   4.1mb ( 12 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (  7)

ADK      1.41 239 iPc    52 46.30    0.0
                 eS      53 11.00
KDC     13.67  59 eP     55 17.50    0.0
TTA     14.30  36 eP     55 26.00    0.6
IMA     17.09  30 eP     55 59.00    0.4
INK     24.99  35 eP     57 15.00   -1.3
MBC     31.51  22 eP     58 14.00   -0.2

       0.5s      1.00nm          3.7mb
BW06    43.54  76 eP     59 55.00   -0.2
GOL     47.92  77 eP     00 29.50   -0.2
SUF     63.83 349 iP     02 20.20   -1.7
       0.6s      2.20nm          4.1mb
HFS     67.39 355 eP     02 43.40   -1.2
       0.4s      1.50nm          4.1mb
HAU     79.74 359 eP     03 56.20    0.3
LOR     80.48   1 eP     04 00.20    0.4
       0.6s      2.70nm          4.2mb
SSF     80.68   1 eP     04 01.20    0.4
       0.6s      3.60nm          4.3mb
LBF     80.76   1 eP     04 01.60    0.3
       0.6s      1.80nm          4.0mb
AVF     80.95   1 eP     04 02.40    0.2
       0.8s      3.20nm          4.1mb
MFF     81.04   4 eP     04 03.00    0.3
SMF     81.10   1 eP     04 03.40    0.4
       0.8s      2.60nm          4.0mb
BGF     81.17   2 eP     04 03.70    0.3
       0.6s      2.10nm          4.0mb
TCF     81.43   2 eP     04 05.20    0.4
       0.6s      1.80nm          4.0mb
LSF     81.45   3 eP     04 05.10    0.2
       0.6s      3.60nm          4.3mb
MAF     81.51   2 eP     04 05.70    0.5
       0.6s      2.70nm          4.2mb
     S.D. = 0.7  on  21 of  21 obs.
-------------------------------------------
&  JUL  16, 1989  04h 57m 01.25s
   58.207 N         152.875 W
   DEPTH =  46.4km
 KODIAK ISLAND REGION               ( 13)
      <AGS-P>.

KDC      0.50 156 eP     57 11.79   -0.6
                 S       57 21.01
SHU      0.51  33 iP     57 11.00   -1.4
                 S       57 18.89
CDD      0.83 331 iP     57 15.95   -0.8
MCNL     1.24 323 eP     57 21.54   -1.0
XLV      1.39  25 eP     57 25.09    0.5
OPT      1.46 353 eP     57 24.83   -0.8
                 S       57 44.40
CNPM     1.57  32 eP     57 26.16   -1.0
ILIM     1.88 359 eP     57 30.41   -1.1
NNL      2.01  23 eP     57 32.70   -0.7
RED      2.22   1 eP     57 35.32   -1.1
                 S       58 02.05
SLKM     2.68  29 eP     57 40.60   -2.4
                 S       58 11.96
SPU      3.01   8 eP     57 46.06   -1.6
SUA      3.44  17 eP     57 52.42   -1.3
VZW      4.30  46 eP     58 02.41   -3.4
       14 obs. associated
-------------------------------------------
?  JUL  16, 1989  06h 54m 13.71± 2.65s
   15.559 S ±57.3km   74.144 W ±32.3km
   DEPTH =  29.2 ± 12.8 km
 NEAR COAST OF PERU                 (115)

PT03     2.23 314 eP     54 49.20   -0.3
                 eS      55 18.20
PT06     2.73 309 eP     54 56.80    0.3
                 eS      55 31.10
PT02     3.42 319 eP     55 06.20   -0.2
                 eS      55 50.90
PT08     4.27 327 eP     55 18.80    0.0
                 eS      56 11.40
ZOBO     5.83  98 P      55 41.00   -0.1
LPB      5.89 100 eP     55 43.00    1.2
CNCB     6.05 103 P      55 43.00   -1.1
     S.D. = 1.0  on   7 of   7 obs.
-------------------------------------------
?  JUL  16, 1989  07h 01m 29.00± 1.44s
    3.087 N ±16.5km  124.080 E ±20.3km
   DEPTH = 334.2 ± 10.8 km
   4.6mb (  4 obs.)
 CELEBES SEA                        (262)

MNI      1.80 155 iPc    02 18.00    0.2
                 eS      02 57.20
MTN     17.31 156 iPc    05 11.20   -0.2
KNA     19.28 166 eP     05 30.40   -0.8
MBL     24.45 190 eP     06 18.50   -1.8
WB5     24.96 157 iPd    06 23.50   -1.5
                 eS      10 36.00

NANU    26.83 198 eP     06 42.70    1.0
ASPA    28.26 161 iPd    06 53.40   -1.1
       0.4s     19.00nm          4.8mb
MEKA    30.01 190 eP     07 10.00    0.2
       0.4s      7.00nm          4.4mb
MRWA    33.04 193 iPc    07 36.40    0.5
FORR    33.96 174 iPd    07 43.00   -0.6
       0.4s     26.00nm          5.0mb
BAL     34.24 191 eP     07 46.00    0.0
KLB     35.01 189 iPc    07 52.90    0.5
NWAO    36.40 190 eP     08 05.00    0.9
STK     38.55 156 iPd    08 22.20    0.3
       0.5s     11.00nm          4.4mb
BWA     43.78 151 eP     09 06.30    2.0
CAN     44.78 151 eP     09 13.30    1.1
SUF     90.92 333 iP     13 55.50   -0.6
     S.D. = 1.1  on  17 of  17 obs.
-------------------------------------------
   JUL  16, 1989  08h 01m 17.07± 0.63s
   17.113 N ± 7.9km   62.398 W ± 5.1km
   DEPTH =  10.0km  (geophysicist)
 LEEWARD ISLANDS                    ( 92)
     ML 2.8 (FDF).

NEV      0.17 278 eP     01 20.91    0.0
                 eS      01 23.76
SKI      0.39 304 eP     01 25.12    0.0
                 eS      01 29.68
MGH      0.43 156 eP     01 26.35    0.5
                 S       01 31.80
BPA      0.52  97 eP     01 27.65    0.0
ANG      0.55  86 eP     01 28.40    0.3
PAG      1.28 147 eP     01 40.50   -0.3
                 S       01 58.20
DEG      1.51 122 eP     01 43.70   -0.5
                 S       02 04.00
     S.D. = 0.4  on   7 of   7 obs.
-------------------------------------------
   JUL  16, 1989  09h 37m 37.12± 0.50s
    2.559 N ± 8.2km  101.361 W ± 9.7km
   DEPTH =  10.0km  (geophysicist)
   5.0mb ( 13 obs.) 4.8Msz (  2 obs.)
 EAST CENTRAL PACIFIC OCEAN         (693)
      CENTROID, MOMENT TENSOR       (HRV)
      Data Used: GDSN
      L.P.B.: 11S, 22C
      Centroid Location:
      Origin Time        09:37:42.4 0.7
      Lat  2.45N 0.06 Lon 101.83W 0.08
      Dep  15.0 FIX Half-duration  1.7
      Moment Tensor;   Scale 10**16 Nm
        Mrr=-0.65 0.62  Mtt= 5.82 0.74
        Mff=-5.17 1.07  Mrt= 0.00 0.00
        Mrf= 0.00 0.00  Mtf=-8.09 0.50
      Principal Axes:
        T  Val= 10.11  Plg= 0  Azm=208
        N       -0.65       90       180
        P       -9.45        0       118
      Best Double Couple:Mo=9.8*10**16
       NP1:Strike=253 Dip=90 Slip= 180
       NP2:       343     90         0

UPA     22.62  73 eP     42 41.50    1.9
       1.4s     55.81nm          4.9mb
                 i       47 10.00
ALQ     32.57 352 eP     44 11.00    0.0
       1.0s     12.50nm          4.8mb
     Z  18s      2.25um          4.9Msz
                 e       44 22.00
                 e       44 42.00
                 eS      49 35.00
                 eLg     51 41.00
GLA     32.86 339 eP     44 14.00    0.6
SIO     33.35   7 e(P)   44 17.30   -0.3
TUL     33.58   8 iPd    44 19.50   -0.1
       0.7s     14.50nm          5.0mb
     Z  21s      1.68um          4.7Msz
                 LR      54 13.00
PLM     33.90 336 eP     44 30.00    7.4X
RLO     33.95   9 e(P)   44 23.00    0.2
OLY     34.04  15 P      44 23.20   -0.4
TPC     34.25 338 eP     44 25.00   -0.5
PWLA    34.55  19 P      44 27.60   -0.3
RVR     34.66 336 eP     44 30.00    1.0
MWC     35.14 336 eP     44 35.00    1.7
PRM     36.03  27 P      44 40.90    0.3
ISA     36.56 336 eP     44 45.00   -0.1
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JSC     36.71   28 P      44 46.40   0.2
BCH     36.83  334 P      44 48.10   0.7
MSU     37.13  346 P      44 51.80   1.8
GOL     37.15  355 P      44 50.30   0.1
        1.1s     36.86nm          5.1mb
GLD     37.18  355 P      44 51.00   0.5
        1.4s     57.43nm          5.2mb
ZOBO    37.80  121 Pd     44 56.20  -0.1
        1.2s     47.30nm          5.1mb
      Z 24s       1.89um          4.8MszX
                   S      50 54.00
                   LR     56 44.00
LPB     37.94  121 P      44 58.00   0.7
        1.0s     60.00nm          5.3mb
CNCB    38.16  121 P      45 00.00   0.6
TNP     38.22  340 P      45 00.10   0.9
        1.4s     15.63nm          4.6mb
DAU     38.73  348 P      45 04.50   0.9
CMB     39.38  336 eP     45 10.20   1.5
KVN     39.40  339 P      45 09.90   0.8
BLA     39.50   27 P      45 09.40  -0.3
CCH     39.99  121 P      45 15.30   1.0
BW06    40.71  351 P      45 20.00   0.1
ORV     41.13  336 eP     45 22.70  -0.3
RSSD    41.45  357 P      45 26.10   0.2
IMW     42.03  350 P      45 30.90   0.1
WDC     42.42  336 eP     45 32.60  -1.0
LRM     44.17  349 eP     45 49.20   1.1
LON     47.48  341 P      46 14.00  -0.2
RSON    48.56    6 P      46 21.20  -1.2
        1.2s     76.53nm          5.6mb
GAC     48.59   24 eP     46 23.00   0.3
PNT     49.13  344 eP     46 26.00  -0.9
        1.0s     17.00nm          5.0mb
FFC     52.00  360 eP     46 47.00  -1.6
        1.3s     34.00nm          5.1mb
PPD     54.64  119 e(P)   47 12.00   3.2X
BAO     55.78  111 eP     47 16.50  -0.7
VAO     58.75  119 e(P)   47 37.40  -0.7
SCH     59.19   22 eP     47 39.00  -1.6
YKC     60.58  353 eP     47 49.40  -0.5
YKB0    60.72  353 eP     47 49.40  -1.5
FRB     65.60   15 eP     48 22.00  -1.1
PMR     68.90  338 eP     48 42.60  -1.4
        1.1s      2.50nm          4.3mb
INK     69.17  348 eP     48 44.00  -1.5
M8C     74.31  356 eP     49 15.50  -0.5
ALE     81.61    5 eP     49 57.00   0.8
SPA     92.54  180 e(P)   50 50.00   0.2
        1.0s      6.50nm          5.0mb
QUE    145.58   18 ePKP   57 16.60  -1.6
SHL    149.24  336 ePKP   57 29.50   5.3X
LOE    149.80  312 iPKPc  57 30.50   5.5X
CHG    150.84  318 ePKP   57 36.90  10.3X
     S.D. = 0.9   on  50 of  55 obs.
-------------------------------------------
    JUL  16, 1989  09h 39m 57.16± 0.43s
    46.283 N ± 3.8km     7.251 E ± 4.5km
    DEPTH =  10.0km  (geophysicist)
 SWITZERLAND                          (544)
      ML 2.7 (LDG).

DIX     0.23  151 iPc    40 01.30  -1.0
MMK     0.55  115 ePd     40 06.30  -2.0
LSD     0.83  185 P       40 12.10  -1.3
                  S       40 23.66
ORO     0.83  142 Pc      40 12.40  -0.9
                  eSg     40 20.50
LPL     0.85  205 Pg      40 13.00  -0.7
                  Sg      40 23.50
LPG     0.86  204 Pg      40 13.10  -0.8
                  Sg      40 23.40
VAI     1.14  111 Pc      40 18.40   0.0
                  eSg     40 32.70
TMA     1.14   98 ePc     40 17.40  -1.2
BNI     1.29  198 P       40 21.10  -0.1
LLS     1.34   63 ePc     40 23.90   1.9
RRL     1.40  194 P       40 23.66   0.7
                  S       40 40.07
ZLA     1.43   33 ePd     40 23.10  -0.1
BSF     1.58  349 Pg      40 26.20   0.8
                  Sg      40 47.20
SLE     1.71   29 iP      40 28.50   1.3
SAX     1.73   55 ePc     40 26.50  -1.3
PZZ     1.78  183 P       40 29.72   1.4
HAU     1.83  341 Pn      40 28.30  -0.6
                  Pg      40 31.60
                  Sg      40 55.80
PCP     1.97  152 P       40 32.79   1.9
ROB     2.04  167 P       40 32.28   0.3
STV     2.04  179 P       40 31.92  -0.1
ENR     2.06  177 P       40 32.48   0.2
CDF     2.13    0 Pg      40 38.30   5.0X
FIN     2.18  162 P       40 35.56   1.5
LBF     2.36  288 Pn      40 35.80  -0.8
                  Pg      40 41.80
                  Sg      41 11.20
SMF     2.38  280 Pg      40 42.30   5.4X
                  Sg      41 12.60
IMI     2.42  169 P       40 39.25   1.8
LOR     2.53  294 Pg      40 44.00   5.0X
                  Sg      41 16.30
SSF     2.69  288 Pg      40 47.40   6.1X
                  Sg      41 21.50
AVF     2.74  282 Pn      40 41.50  -0.4
                  Sg      41 23.40
BGF     3.06  277 Pn      40 46.00  -0.4
                  Sg      41 34.60
      S.D. = 1.2   on  26 of  30 obs.
-------------------------------------------
    JUL  16, 1989  09h 59m 17.86± 0.73s
    13.290 S ± 7.5km    76.231 W ± 9.3km
    DEPTH =  33.0km  (normal)
  NEAR COAST OF PERU                  (115)

PT02    0.40  330 eP     59 27.40   0.4
PT06    0.54  190 eP     59 29.50   0.4
PT08    1.36  347 eP     59 40.40  -0.6
PT10    1.41  329 eP     59 41.00  -0.4
                  eS      59 58.20
HUA     1.53   36 iPc     59 44.50   1.0
                  iS      00 05.40
ZOBO    8.38  112 eP     01 19.00  -1.6
LPB     8.50  113 eP     01 23.00   1.0
CNCB    8.70  115 eP     01 25.00   0.0
      S.D. = 1.0   on   8 of   8 obs.
-------------------------------------------
*   JUL  16, 1989  10h 41m 30.09± 0.47s
    41.334 S ± 9.4km    85.388 W ±10.0km
    DEPTH =  10.0km  (geophysicist)
    4.9mb (  8 obs.)  4.7Msz (  2 obs.)
  WEST CHILE RISE                     (686)

TACH   13.79   61 eP     44 52.00   4.1X
ROCH   14.17   59 eP     44 52.00  -1.1
PEL    14.27   60 eP     44 55.50   1.3
ARE    27.53   30 iPc    47 22.00   2.8
CNCB   28.67   37 P      47 30.00   0.2
LPB    28.86   36 P      47 31.00  -0.4
ZOBO   29.09   36 P      47 33.40  -0.2
       1.3s      11.83nm          4.5mb
     Z 22s        2.24um          4.7Msz
                   S      52 28.00
                   LR     55 52.00
BAO    41.18   63 eP     49 16.00  -0.6
ATB    48.17   47 e(P)   50 10.90  -1.6
SPA    48.86  180 e(P)   50 16.60  -0.9
       1.0s      5.00nm          4.5mb
SNA    49.47  154 eP     50 23.20   1.3
SOB1   50.58   64 eP     50 39.50   8.4X
MAW    68.76  168 eP     52 36.00   0.3
PRM    75.10    3 P      53 12.10  -1.6
PWLA   75.98  358 P      53 17.80  -0.9
SIO    77.36  351 e(P)   53 22.70  -3.7X
TUL    77.46  351 eP     53 23.50  -3.4X
       1.1s     15.30nm          5.0mb
     Z 22s        0.32um          4.6Msz
                   e      53 35.90
                   LR     15 30.00
RLO    77.63  352 eP     53 27.50  -0.4
ALO    78.33  342 eP     53 32.50   0.4
       1.1s     16.14nm          5.0mb
                   e      53 39.20
GOL    82.68  345 P      53 55.40   0.3
       1.0s      8.75nm          4.9mb
MSU    83.14  339 P      53 58.40   0.9
TNP    84.21  335 P      54 03.30   0.4
       1.1s      9.20nm          4.9mb
CM8    85.21  333 eP     54 07.00  -0.7
KVN    85.38  335 P      54 09.20   0.5
BW06   86.52  342 P      54 15.00   0.7
       1.0s      9.69nm          5.0mb
RSSD   86.71  347 P      54 15.40   0.2
GAC    87.10    7 eP     54 21.50   4.8X
WDC    88.23  333 eP     54 25.80   3.5X
LRM    90.08  341 eP     54 32.60   1.3
RSON   92.10  355 P      54 38.30  -1.8
       1.0s     10.85nm          5.2mb
SNG   145.57  191 ePKP   01 10.60   0.1
MAT   146.02  276 ePKP   01 10.00  -0.7
GBA   148.58  147 PKPc   01 19.20   3.9X
       0.9s      6.40nm
MAIO  152.30   89 ePKP   01 16.00  -4.5X
     S.D. = 1.1   on  26 of  34 obs.
-------------------------------------------
&   JUL  16, 1989  14h 09m 12.28s
    61.774 N          148.979 W
    DEPTH =  16.1km
    4.4mb ( 11 obs.)
 SOUTHERN ALASKA                      (  2)
      <AGS-P>. ML 4.6 (PMR). Felt (IV)
      at Chickaloon, Kashwitna,
      Palmer, Willow and Wasilla. Also
      felt at Anchorage, Eagle River,
      Talkeetna and Tropper Creek.

GHO     0.03   94 iP     09 15.29  -0.1
PMR     0.20  202 iPc    09 17.30   0.2
KNK     0.44  145 iP     09 20.87  -0.4
                  S       09 26.93
PWA     0.45  254 iPc    09 21.40   0.1
PMS     0.60  208 iPc    09 23.70  -0.3
CUT     0.88  317 iP     09 27.51  -1.1
SUA     0.90  251 eP     09 28.18  -0.9
SKT     1.23  281 iP     09 33.66  -0.9
                  S       09 50.78
HUR     1.25  346 eP     09 33.09  -1.8
TOA     1.37   75 iPd    09 34.90  -1.8
VZW     1.37  121 eP     09 34.71  -2.0
SLKM    1.41  206 eP     09 36.42  -0.8
KLU     1.49  100 iP     09 36.16  -2.3
NKA     1.50  228 eP     09 39.95   1.4
SPU     1.59  249 eP     09 39.39  -0.5
RND     1.64    2 eP     09 38.91  -1.7
SEW     1.69  188 iP     09 41.65   0.4
                  S       10 05.66
SDG     1.78   63 eP     09 40.87  -1.8
HIN     1.83  138 iP     09 44.13   0.8
                  eS      10 08.11
MCK     1.97    1 eP     09 44.09  -1.2
CVA     1.99  127 iP     09 45.96   0.3
                  iS      10 13.53
PAX     2.03   52 eP     09 44.41  -1.9
RDT     2.05  236 eP     09 46.27  -0.3
NNL     2.07  214 eP     09 47.85   1.0
BRLK    2.22  206 eP     09 49.48   0.4
                  S       10 21.84
SGAM    2.23  123 iP     09 48.54  -0.6
                  eS      10 18.19
RED     2.29  235 eP     09 49.75  -0.3
GLB     2.49   95 eP     09 51.31  -1.5
HOM     2.49  213 eP     09 53.89   1.1
RAGM    2.51  122 iP     09 52.53  -0.6
                  eS      10 25.92
CNPM    2.51  207 iP     09 53.56   0.4
ILIM    2.58  231 iP     09 54.90   0.7
MID     2.69  150 eP     09 56.00   0.4
XLV     2.69  211 eP     09 55.57  -0.1
WRH     2.74    8 eP     09 54.12  -2.2
HDA     2.80   18 eP     09 55.12  -2.0
NEA     2.81  359 eP     09 55.02  -2.4
CCB     2.93   10 eP     09 56.54  -2.5
DOT     2.94   48 eP     09 58.68  -0.6
OPT     2.98  226 eP     10 00.54   0.8
RDS     3.09    7 eP     09 59.02  -2.2
TGL     3.14  106 eP     10 01.03  -1.1
FBA     3.18    9 iPc    10 00.30  -2.3
AUL     3.25  224 eP     10 04.48   0.8
SVW     3.26  261 iPc    10 03.70  -0.1
BALM    3.28  100 iP     10 02.66  -1.4
GLM     3.30   12 eP     10 01.78  -2.6
TTA     3.48  293 ePc    10 06.00  -0.9
SHU     3.58  210 iP     10 08.24   0.1
CDD     3.68  221 eP     10 09.83   0.2
MCNL    3.71  228 eP     10 10.35   0.2
CTGM    3.77   99 eP     10 10.32  -0.8
KDC     4.41  205 iPc    10 18.40  -1.6
PCA     4.58  108 eP     10 20.60  -1.9
                  eS      11 24.26
IMA     4.78  336 iP     10 23.40  -2.1
IMA     4.78  336 eP     10 21.43  -4.0
```

16d 14h

BCPM	4.92	108	eP	10 25.03	-2.2
			eS	11 21.23	
DWY	4.93	58	P	10 25.70	-1.6
YKU	5.07	112	e(P)	10 28.70	-0.5
PNL	5.16	110	eP	10 29.01	-1.6
HON	5.49	111	eP	10 32.45	-2.9
HYT	5.61	95	P	10 34.50	-2.7
SIT	8.41	118	eP	11 22.40	6.2
SDN	8.81	228	eP	11 22.70	0.9
INK	9.23	38	eP	11 24.00	-3.5
YKA	15.98	72	P	12 59.00	1.5
MBC	17.62	23	eP	13 16.00	-2.1
	0.8s	7.00nm		3.8mb	
ADK	17.96	249	e(P)	13 20.60	-1.9
PNT	20.55	114	eP	13 52.00	-0.3
	0.8s	6.00nm		4.0mb	
RMW	21.06	120	eP	13 57.20	-0.5
			e	14 06.00	
BMW	21.29	124	eP	13 58.80	-1.1
LON	21.63	122	eP	14 03.80	0.4
FFC	25.22	85	eP	14 36.00	-2.3
	0.8s	13.00nm		4.6mb	
LRM	26.36	110	eP	14 48.40	-0.9
IMW	28.53	111	eP	15 09.00	-0.1
			e	15 19.30	
ALE	28.86	16	eP	15 09.00	-2.3
	0.6s	4.00nm		4.4mb	
KVN	29.57	126	eP	15 17.90	-0.5
BW06	30.04	111	eP	15 21.00	-1.5
	1.0s	5.00nm		4.3mb	
TNP	30.76	126	eP	15 27.00	-1.9
RSSD	31.49	103	eP	15 34.00	-1.3
RSON	31.56	85	eP	15 32.90	-2.6
	1.0s	18.98nm		4.9mb	
MSU	32.41	119	eP	15 42.70	-0.7
GOL	34.38	110	eP	15 59.80	-0.7
	0.9s	5.68nm		4.5mb	
GLD	34.41	109	eP	16 00.00	-0.7
	0.9s	10.53nm		4.8mb	
FRB	34.60	51	eP	15 59.00	-2.8
GLA	36.10	127	eP	16 14.00	-1.0
ALQ	37.86	115	e(P)	16 30.00	0.1
			iPP	17 50.20	
			ePcP	18 45.00	
			e	20 08.50	
			e	20 22.70	
DAG	38.24	17	eP	16 29.60	-2.8
	1.2s	4.69nm		4.1mb	
			epP	16 35.90	21kmX
TUL	41.84	103	eP	17 01.50	-1.1
	1.0s	4.70nm		4.2mb	
RLO	41.99	102	eP	17 02.00	-1.8
GAC	43.76	76	eP	17 16.00	-2.1
EKA	60.18	22	Pc	19 26.90	5.9
	0.8s	3.40nm		4.5mb	
KHC	68.57	12	eP	20 22.40	6.7
	93 obs. associated				

& JUL 16, 1989 15h 45m 04.03s
63.180 N 150.627 W
DEPTH = 124.3km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.49	114	eP	45 22.21	-0.5
CUT	0.80	168	eP	45 24.46	-0.4
RND	0.83	73	iP	45 24.75	-0.5
			S	45 41.00	
MCK	0.94	53	iP	45 25.95	-0.2
SKT	1.27	200	eP	45 29.13	-0.5
NEA	1.56	25	eP	45 32.20	-0.6
			S	45 52.33	
PWA	1.57	167	eP	45 32.72	-0.2
GHO	1.62	150	eP	45 33.18	-0.4
			S	45 56.17	
WRH	1.72	40	iP	45 34.17	-0.5
SUA	1.72	182	eP	45 34.82	-0.1
CCB	1.93	39	iP	45 36.67	-0.6
HDA	2.04	51	eP	45 37.95	-0.7
KNK	2.04	149	iP	45 37.95	-0.8
GLM	2.31	37	eP	45 41.58	-0.5
	14 obs. associated				

& JUL 16, 1989 15h 57m 03.21s
61.771 N 149.016 W
DEPTH = 14.0km
SOUTHERN ALASKA (2)

<AGS-P>. ML 2.9 (PMR).

GHO	0.04	88	iP	57 06.12	0.0
PMR	0.19	197	iPc	57 08.10	0.4
			iS	57 12.20	
PWA	0.43	254	iPc	57 12.10	0.1
KNK	0.45	143	iP	57 11.65	-0.8
PMS	0.59	207	iPc	57 14.40	-0.4
CUT	0.87	318	eP	57 18.25	-1.3
SUA	0.88	250	eP	57 19.53	-0.3
SKT	1.21	281	eP	57 24.55	-0.8
			S	57 41.79	
HUR	1.25	347	eP	57 24.04	-1.9
			S	57 40.05	
VZW	1.38	120	eP	57 26.94	-1.1
TOA	1.39	75	iP	57 26.50	-1.6
SLKM	1.40	205	eP	57 28.03	-0.2
KLU	1.50	99	eP	57 27.16	-2.6
SPU	1.57	249	eP	57 31.40	0.6
RND	1.64	3	eP	57 29.70	-2.1
SEW	1.69	187	eP	57 32.92	0.6
HIN	1.84	137	eP	57 34.88	0.2
			eS	58 00.44	
MCK	1.97	1	eP	57 35.06	-1.4
CVA	2.00	126	eP	57 37.22	0.3
			eS	58 04.80	
RDT	2.04	235	eP	57 38.25	0.8
PAX	2.05	52	eP	57 35.59	-2.1
SGAM	2.24	123	eP	57 40.27	-0.2
GLB	2.51	95	eP	57 43.47	-0.8
			S	58 14.87	
RAGM	2.53	121	eP	57 45.19	0.7
SVW	3.24	261	eP	57 56.40	1.7
TTA	3.46	293	eP	58 05.70	7.9
	26 obs. associated				

JUL 16, 1989 16h 48m 24.94± 0.32s
39.125 N ± 3.6km 26.593 E ± 3.4km
DEPTH = 10.0km (geophysicist)
3.6mb (4 obs.)
TURKEY (366)
ML 4.0 (ATH).

PRK	0.28	296	ePg	48 30.00	-0.8
IZM	0.89	144	iPn	48 41.40	-0.7
EDC	1.57	38	ePn	48 52.20	-0.6
DST	1.65	72	iPn	48 54.70	0.6
MFT	1.74	17	ePn	48 56.40	0.9
APE	2.22	203	ePn	48 59.00	-3.3X
PAIG	2.39	291	ePn	49 04.40	-0.4
			eSn	49 38.20	
YER	2.39	146	iPn	49 03.50	-1.3
KHL	2.43	108	iPn	49 05.90	0.5
ATH	2.53	244	ePb	49 10.50	3.8X
NEO	2.62	275	ePb	49 13.20	5.1X
ISK	2.71	44	ePn	49 08.40	-0.9
ITU	2.71	42	ePn	49 15.00	5.6X
			iSg	49 55.00	
PLG	2.73	298	ePn	49 09.30	-0.3
ALT	2.74	90	iPn	49 10.20	0.4
DIM	3.03	345	eP	49 14.00	0.2
			Sg	49 55.00	
SRS	3.04	312	ePnc	49 13.40	-0.6
GPA	3.09	67	iPn	49 15.10	0.4
THE	3.17	299	ePnc	49 15.90	0.1
			eSn	49 56.10	
MMB	3.29	319	eP	49 17.00	-0.6
			Sg	50 13.00	
LIT	3.32	288	ePnd	49 17.90	0.0
JMB	3.34	360	eP	49 18.00	-0.2
KNT	3.49	307	ePn	49 21.40	1.1
			eSn	50 02.90	
ELL	3.54	131	iPn	49 21.80	0.7
BCK	3.56	117	ePn	49 21.90	0.5
KAP	3.60	172	ePn	49 21.00	-0.9
GRG	3.70	301	ePn	49 24.50	1.1
VAY	3.78	307	iPn	49 25.60	1.1
KKB	3.83	317	eP	49 25.00	-0.2
PGB	3.89	333	iP	49 25.00	-1.0
KZN	3.90	289	ePn	49 25.90	-0.4
NPS	3.93	192	ePn	49 24.50	-2.2
ITM	4.16	244	ePn	49 29.00	-0.9
VAM	4.17	208	ePn	49 30.50	0.5
PSN	4.71	14	eP	49 37.00	-0.7
BBTK	4.83	80	eP	49 40.00	0.5
			i	50 01.50	
			iS	51 03.00	
SKO	4.85	308	iPn	49 40.50	0.8
N	11s	0.80um			
			LR	51 40.00	
BUC	5.30	356	eP	49 45.00	-1.0
DRA	5.82	343	eP	49 53.00	-0.3
KAS	5.93	65	ePn	50 15.00	20.0X
CFR	6.17	10	eP	50 00.00	1.8
CMP	6.25	350	ePc	50 21.00	21.6X
MLR	6.38	356	ePc	50 01.00	-0.4
CLO	6.58	336	ePc	50 01.50	-2.6
VRI	6.74	1	ePd	50 06.00	-0.4
BEO	7.30	323	ePn	50 22.00	7.9X
BZS	7.46	332	ePc	50 14.00	-2.3
VOY	11.62	311	e(P)	51 15.70	1.8
KHC	13.67	321	eP	51 58.30	17.1X
LPG	15.98	300	eP	52 11.90	0.3
	0.8s	2.60nm		3.4mb	
LBF	18.26	303	eP	52 41.90	2.0
	1.0s	6.00nm		3.7mb	
AVF	18.61	302	eP	52 45.80	1.6
	0.8s	2.60nm		3.5mb	
BNG	35.29	194	ePc	55 24.70	2.6
	0.5s	3.00nm		4.4mb	
	S.D. = 1.1 on 45 of 53 obs.				

? JUL 16, 1989 17h 01m 59.54± 2.19s
14.045 S ±19.9km 75.653 W ±23.3km
DEPTH = 89.7 ± 29.7 km
NEAR COAST OF PERU (115)

PT03	0.15	291	eP	02 12.80	-0.8
PT06	0.69	288	eP	02 17.50	1.3
			e(S)	02 27.30	
PT02	1.33	325	eP	02 23.00	-0.6
			eS	02 40.50	
HUA	2.02	9	ePc	02 34.00	1.0
			eS	03 06.30	
PT08	2.25	337	eP	02 35.10	-0.9
			eS	03 02.30	
ZOBO	7.60	108	eP	03 50.00	-0.1
	S.D. = 1.5 on 6 of 6 obs.				

JUL 16, 1989 17h 17m 22.30± 0.55s
46.308 N ± 4.4km 7.267 E ± 5.9km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.8 (LDG).

DIX	0.25	156	iPc	17 26.50	-1.2
MMK	0.55	118	ePd	17 31.90	-1.5
ORO	0.84	144	Pd	17 38.00	-0.7
			eSg	17 46.30	
LSD	0.85	185	P	17 37.30	-1.6
			S	17 48.80	
LPL	0.88	205	Pg	17 38.20	-1.1
			Sg	17 48.50	
LPG	0.89	204	Pg	17 38.40	-1.1
			Sg	17 48.50	
TMA	1.13	100	ePd	17 42.80	-0.8
VAI	1.14	112	P	17 45.00	1.5
			eSg	17 58.60	
LLS	1.32	64	ePc	17 45.50	-1.3
BNI	1.32	199	P	17 46.30	-0.5
			eSg	18 01.70	
ZLA	1.40	33	ePc	17 46.40	-1.6
RRL	1.43	194	P	17 50.13	1.6
			S	18 06.53	
BSF	1.56	348	Pg	17 51.80	1.6
			Sg	18 12.30	
SLE	1.68	29	ePc	17 50.90	-1.0
SAX	1.71	56	ePc	17 55.10	2.5
PZZ	1.81	184	P	17 54.95	1.1
HAU	1.81	340	Pn	17 53.70	-0.1
			Pg	17 57.20	
			Sg	18 20.40	
PCP	1.98	153	P	17 57.92	1.6
ROB	2.06	168	P	17 58.13	0.7
STV	2.06	179	P	17 57.31	-0.2
ENR	2.08	177	P	17 58.07	0.3
FIN	2.20	162	P	18 00.79	1.3
LBF	2.37	288	Pg	18 06.70	4.9X
			Sg	18 36.00	
SMF	2.39	279	Pg	18 07.40	5.3X
			Sg	18 37.40	
IMI	2.44	169	P	18 04.08	1.2
LOR	2.53	294	Pg	18 09.60	5.5X
			Sg	18 41.40	

AVF	2.74	282	Pn	18 06.40	-0.8
			Sg	18 48.20	
S.D. = 1.3			on	24 of 27 obs.	

JUL 16, 1989 17h 19m 26.60± 0.65s
44.533 N ± 4.5km 7.330 E ± 5.7km
DEPTH = 14.3 ± 6.6 km
NORTHERN ITALY (545)
ML 2.2 (LDG), 2.1 (GEN).

PZZ	0.17	260	P	19 30.08	-0.9
			S	19 31.84	
STV	0.29	181	P	19 32.32	-0.7
			S	19 35.60	
ENR	0.31	168	P	19 32.97	-0.4
			S	19 36.86	
FOUF	0.39	270	iPg	19 33.62	-1.1
			i	19 33.80	
			e(Sg)	19 37.74	
ROB	0.45	121	P	19 36.60	0.7
			S	19 43.38	
RRL	0.55	315	P	19 37.37	-0.2
			S	19 44.57	
SBF	0.67	174	Pg	19 40.80	1.2
			Sg	19 48.20	
FIN	0.71	117	P	19 40.89	0.7
			S	19 50.46	
IMI	0.74	147	P	19 40.81	0.0
			S	19 50.46	
PCP	0.87	89	P	19 40.81	-2.1
LSD	0.93	352	P	19 43.69	-0.5
LPG	1.05	337	Pg	19 47.30	1.1
			Sg	20 00.60	
LPL	1.07	337	Pg	19 47.70	1.2
			Sg	20 01.70	
FRF	1.09	207	Pg	19 47.80	1.1
			Sg	19 59.50	
LRG	1.29	213	Pg	19 49.60	-0.4
			Sg	20 06.80	
LMR	1.34	207	Pg	19 51.00	0.2
			Sg	20 07.50	
S.D. = 1.1			on	16 of 16 obs.	

JUL 16, 1989 19h 09m 02.63± 0.68s
47.515 N ± 5.0km 13.075 E ± 8.4km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)

BHG	0.25	327	iPc	09 06.80	-1.1
FVI	0.94	192	Pd	09 20.00	-0.6
			eSg	09 31.10	
SCE	1.04	243	ePg	09 21.60	-0.9
RBL	1.13	162	P	09 24.00	0.2
			eSg	09 38.40	
FUR	1.38	299	iPc	09 28.30	0.4
OGA	1.54	246	iPc	09 31.80	1.4
VOY	1.59	159	e(Pn)	09 30.80	-0.1
			eSn	09 53.50	
WET	1.64	356	iPc	09 32.40	0.8
KHC	1.65	12	iPg	09 31.50	-0.3
			iSg	09 53.30	
TRI	1.87	165	iP	10 02.20	27.3X
GRF	2.50	331	ePg	09 49.30	5.3X
			eSg	10 20.80	
PRU	2.66	21	Pg	09 51.80	5.5X
			Sg	10 24.50	
HOF	2.91	345	eP	09 56.50	6.7X
CLL	3.80	359	e(P)	11 01.00	58.6X
S.D. = 0.9			on	9 of 14 obs.	

JUL 16, 1989 21h 43m 02.89± 0.43s
46.556 N ± 3.6km 9.038 E ± 4.0km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.8 (LDG).

VDL	0.31	103	iPd	43 08.90	-0.5
LLS	0.31	355	iPc	43 08.90	-0.6
TMA	0.46	194	iPc	43 11.30	-1.1
VAI	0.71	195	P	43 17.00	0.1
			eSg	43 23.70	
SAX	0.73	17	iPd	43 17.40	0.0
OSS	0.77	80	iPd	43 17.40	-0.7
MMK	0.90	236	iPc	43 18.70	-1.6
MDI	0.91	149	P	43 25.00	4.8X
			eSg	43 37.60	
ZLA	1.03	335	iPc	43 22.70	0.4
ORO	1.19	219	P	43 24.90	-0.2
			eSn	43 37.30	
DIX	1.22	248	iPc	43 25.00	-0.9
SLE	1.27	343	iPc	43 27.10	0.7
BOB	1.81	171	Pd	43 36.50	2.1
			eSn	43 57.30	
SCE	1.90	74	ePn	43 40.10	4.3X
LPG	1.91	237	Pn	43 36.90	0.8
			Sg	44 01.70	
LPL	1.91	238	Pn	43 37.00	1.0
			Sg	44 01.50	
BSF	1.99	311	Pg	43 42.80	5.7X
			Sn	44 00.30	
BNI	2.23	229	P	43 42.00	1.4
HAU	2.34	309	Pn	43 42.40	0.4
			Sn	44 08.30	
GRF	3.46	24	ePg	44 08.00	10.1X
			eSg	44 55.00	
LBF	3.50	279	Pn	43 58.60	0.1
			Pg	44 08.50	
			Sg	44 51.80	
SMF	3.58	273	Pg	44 09.90	10.2X
			Sg	44 53.50	
LOR	3.62	283	Pn	44 01.00	0.8
			Pg	44 12.10	
			Sg	44 54.60	
SSF	3.83	280	Pn	44 03.20	0.0
			Pg	44 15.00	
			Sg	45 01.40	
AVF	3.92	275	Pn	44 04.00	-0.4
BGF	4.27	272	Pn	44 08.20	-1.2
			Sn	44 53.60	
CAF	5.15	254	Pn	44 21.40	-0.4
S.D. = 0.9			on	22 of 27 obs.	

JUL 16, 1989 22h 10m 53.33± 0.59s
47.537 N ± 5.6km 13.076 E ± 5.8km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.3 (VKA), 3.1 (GRF).

BHG	0.23	324	iPgc	10 58.00	-0.2
FVI	0.97	192	P	11 11.20	-0.5
			eSg	11 23.30	
SCE	1.05	242	iPgc	11 12.80	-0.5
RBL	1.15	163	P	11 14.70	-0.1
			eSg	11 30.00	
FUR	1.37	298	iPgc	11 19.60	1.2
OGA	1.55	245	iPd	11 23.10	1.9
VOY	1.61	159	ePn	11 22.50	0.6
			ePg	11 23.50	
			eSn	11 45.10	
			eSg	11 46.60	
WET	1.61	355	eP	11 23.20	1.2
KHC	1.63	12	iPn	11 21.50	-0.7
			iPg	11 23.00	
			Sn	11 37.00	
			Sg	11 43.00	
LJU	1.80	146	e(Pn)	11 22.50	-2.1
			e	11 27.00	
			eSn	11 51.00	
TRI	1.89	165	ePc	11 27.70	1.8
			i(Sg)	11 52.90	
OSS	2.18	248	ePc	11 34.20	4.0X
VKA	2.30	70	e(Pn)	11 32.00	0.1
			iPg	11 34.10	
			iSn	11 54.00	
			iSg	11 57.80	
GRF	2.48	331	iPg	11 40.70	6.3X
			eSg	12 12.00	
VBY	2.53	143	eP	11 44.50	9.4X
			i(Sn)	12 16.00	
SAX	2.55	265	ePd	11 37.40	1.7
PRU	2.64	21	Pg	11 41.50	4.8X
			Sg	12 16.20	
VDL	2.68	248	ePd	11 44.10	6.6X
ZST	2.79	75	eP	11 44.90	6.1X
LLS	2.86	258	ePc	11 41.00	1.0
HOF	2.89	345	iPnc	11 47.40	7.2X
SLE	3.11	276	ePd	11 42.80	-0.5
ZLA	3.18	271	ePc	11 44.00	-0.3
BRG	3.39	9	ePg	11 56.00	8.7X
			iSg	12 42.00	
CDF	3.99	285	Pg	12 07.70	11.7X
			Sg	13 00.30	
BSF	4.25	276	Pn	11 58.10	-1.6
			Sn	12 46.50	
			Sg	13 06.90	
HAU	4.56	278	Pn	12 03.20	-0.8
			Pg	12 19.00	
			Sg	13 17.10	
BGF	7.06	266	Pn	12 37.00	-2.2
			Sn	13 54.20	
S.D. = 1.3			on	19 of 28 obs.	

JUL 16, 1989 22h 10m 54.52± 0.83s
30.389 S ± 6.4km 178.616 W ± 4.6km
DEPTH = 115.1 ± 7.0 km
5.2mb (31 obs.)
KERMADEC ISLANDS (178)
Felt on Raoul.

RAO	1.29	28	iP	11 20.60	1.1
HBZ	7.63	199	eP	12 41.90	-2.6
KRP	8.94	211	P	13 08.00	5.8X
WHH	9.38	204	P	13 06.30	-2.0
PGZ	11.02	201	eP	13 24.90	-5.0X
MNG	11.28	204	P	13 27.80	-5.6X
			S	15 31.00	
KIW	11.70	205	eP	13 33.60	-5.3X
MTW	11.76	202	eP	13 32.80	-6.8X
CAW	11.86	204	eP	13 34.70	-6.3X
MOW	12.07	203	eP	13 37.40	-6.4X
MRW	12.10	205	eP	13 40.00	-4.1X
			eS	15 55.00	
MRW	12.10	205	eP	13 36.70	-7.4X
			eS	15 52.50	
TCW	12.24	206	P	13 39.70	-6.2X
SVA	12.51	347	eP	13 51.40	1.9
DZM	15.75	298	iPd	14 35.10	4.0X
PVC	17.33	314	iP	15 06.00	15.4X
COO	25.39	262	eP	16 18.00	5.3X
CAN	27.57	251	eP	16 36.50	3.9X
			iPcP	19 47.80	
BWA	28.05	253	eP	16 38.30	1.4
RMQ	28.90	270	eP	16 48.00	3.4X
			e	16 51.00	
			e	19 52.00	
AFR	29.20	71	iP	16 46.60	-0.7
	1.0s		20.00nm	4.7mb	
PAE	29.30	71	iP	16 47.60	-0.5
	1.0s		20.00nm	4.8mb	
PPT	29.35	71	iP	16 48.00	-0.6
	1.0s		25.00nm	4.9mb	
Z	18s		0.80um	4.4Msz	
TVO	29.50	72	iP	16 49.70	-0.4
	1.0s		15.00nm	4.6mb	
TOO	30.48	247	eP	17 02.00	3.5X
			e	17 04.00	
			e	17 37.00	
			e	19 56.00	
PMO	32.08	68	iP	17 12.00	-0.6
	1.0s		10.00nm	4.5mb	
VAH	32.16	69	iP	17 12.60	-0.7
	1.0s		20.00nm	4.8mb	
TPT	32.31	69	iP	17 14.00	-0.6
	1.0s		15.00nm	4.7mb	
RUV	32.39	69	iP	17 14.60	-0.7
	1.0s		20.00nm	4.8mb	
CTA	33.27	280	iPd	17 24.80	1.8
	0.9s		165.55nm	5.8mb	
			iPcP	20 03.20	
			eS	22 29.00	
STK	33.96	257	iPc	17 32.00	3.2X
			e	18 06.00	
PMG	38.12	296	eP	18 04.50	0.4
QIS	38.78	275	iPd	18 10.90	1.3
	0.9s		26.00nm	5.0mb	
			e	20 18.00	
ASPA	42.58	267	iPc	18 41.70	0.9
	0.9s		36.00nm	5.1mb	
			epP	19 16.00	155kmX
			iPcP	20 32.70	
			eScP	24 07.80	
			ePcS	24 21.60	
			eS	24 54.20	
			eScS	28 28.10	
WB5	43.57	273	iPd	18 49.10	0.4
			iPcP	20 34.20	
			eS	25 08.00	
FORR	45.48	255	eP	19 04.50	0.6
	0.4s		29.00nm	5.4mb	
WARB	48.00	261	eP	19 24.00	0.2
	0.4s		3.00nm	4.4mb	

16d 22h

SBA	48.01	184	iPd	19	29.00	5.9	PV09	94.27	47	P	24	01.80	-0.3	KHC	159.12	337	iPKPc	30	39.30	-0.2
	0.9s	33.61nm			5.1mb		PMR	94.72	14	P	24	02.20	-1.0	WET	159.33	338	iPKPc	30	39.50	-0.2
MTN	49.46	279	eP	19	34.00	-1.0		0.7s	6.98nm			5.2mb					i	31	17.80	
			e	20	55.00		DPW	94.87	36	P	24	04.00	-0.3	ENN	159.36	352	ePKP	30	39.50	-0.1
KNA	50.14	275	eP	19	41.00	0.8	PNT	95.13	34	eP	24	05.00	-0.4		1.0s	121.00nm				
COOL	51.26	253	eP	19	48.00	-0.6		0.7s	13.00nm			5.5mb					i	31	17.00	
			e	20	24.00		CD2	95.63	302	P	24	09.30	1.1				e	32	15.50	
KLB	53.84	251	eP	20	05.00	-2.7	HHC	95.84	314	P	24	09.80	0.8	MEM	159.51	352	PKPc	30	39.40	-0.4
NANU	58.75	261	eP	20	42.00	-0.7	BW06	96.50	44	P	24	11.20	-0.9				e	31	17.40	
	0.5s	12.00nm			5.2mb		GOL	97.36	48	P	24	16.20	0.2	SNF	159.78	355	PKPc	30	40.20	0.1
SPA	59.78	180	ePd	20	52.80	3.3X		0.7s	2.43nm			4.8mb					e	31	18.80	
	1.0s	53.00nm			5.6mb		GLD	97.48	48	P	24	17.50	1.0	DOU	160.17	354	PKP	30	41.30	0.8
			e	21	23.90		FBA	97.97	13	P	24	16.00	-1.9				e	31	20.30	
KKM	72.05	288	eP	22	07.50	-0.8		0.7s	8.72nm			5.4mb		WLF	160.41	351	PKP	30	42.50	1.7
	0.8s	60.40nm			5.4mb		ZOBO	98.65	114	eP	24	25.00	2.2				e	31	21.60	
WKYJ	77.44	323	eP	22	37.40	-1.2	SES	100.12	37	ePdiff	24	27.00	-1.2	PTJ	160.78	328	e(PKP)	30	40.80	-0.6
MAT	77.93	326	iPd	22	39.40	-1.8	RSSD	100.59	45	Pdiff	24	30.00	-0.6	LJU	161.31	330	ePKP	30	41.50	-0.3
	1.0s	108.00nm			5.6mb		SHL	102.08	293	iPdiff	24	38.00	0.4				e	31	26.00	
TKSJ	78.08	321	eP	22	40.70	-1.3	GTA	102.72	308	ePdiff	24	40.00	-0.1	VBY	161.40	328	e(PKP)	30	44.60	2.7
YAMJ	78.38	328	eP	22	43.10	-0.5	MBC	112.52	13	ePKP	29	16.00	-1.5				e	31	27.20	
OFUJ	78.39	329	eP	22	42.90	-0.7	WMQ	112.80	308	PKP	29	17.00	-2.1	VOY	161.58	331	ePKP	30	41.60	-0.6
YONJ	79.31	322	eP	22	47.30	-1.4	KSH	119.75	301	ePKP	29	33.00	0.4				i	31	26.80	
SNA	79.55	179	iPd	22	52.90	3.5X	BUL	123.34	211	iPKPc	29	39.70	-0.3	CEY	161.59	330	e(PKP)	30	42.00	-0.2
	1.0s	75.00nm			5.4mb			0.9s	30.25nm								e	31	27.00	
SHNJ	79.80	320	eP	22	49.70	-1.6	SOB1	123.45	127	ePKP	29	40.90	0.6	FLN	161.59	4	ePKP	30	41.80	-0.2
AOMJ	80.17	330	eP	22	54.70	1.6	QUE	124.15	288	ePKP	29	41.70	0.2		0.6s	5.40nm				
KUSJ	80.50	334	eP	22	55.00	0.2	ITR	125.45	129	ePKP	29	43.90	-0.3	LDF	161.78	3	ePKP	30	42.00	-0.2
MRRJ	81.40	331	eP	22	59.70	0.2	FRB	125.64	31	ePKP	29	41.00	-2.0	GRR	161.94	5	ePKP	30	42.50	0.1
QZH	81.51	305	eP	22	58.50	-2.0	MAIO	131.72	293	ePKP	29	54.00	-1.6		0.8s	5.35nm				
ADK	81.93	1	P	23	00.60	-1.4	KEV	137.99	347	ePKP	30	04.00	-2.3	HAU	162.00	349	ePKP	30	42.40	-0.1
	0.6s	68.97nm			5.6mb		SOD	140.05	345	iPKP	30	01.90	-8.2X	BSF	162.09	348	ePKP	30	42.10	-0.6
ASAJ	82.17	333	eP	23	05.10	1.6	TAB	142.35	294	ePKP	30	11.00	-4.4X	LPF	162.28	5	ePKP	30	42.60	-0.1
SSE	83.70	312	Pd	23	11.50	-0.1	MSL	144.82	291	ePKP	30	18.00	-1.4		1.0s	8.00nm				
	0.8s	48.00nm			5.4mb		NUR	146.12	339	iPKP	30	19.70	-1.1	LOR	163.04	354	ePKP	30	43.40	-0.2
IPM	84.01	279	ePc	23	13.00	-0.6		0.8s	275.80nm						0.8s	8.05nm				
	0.8s	37.00nm			5.3mb		UPP	148.56	344	iPKP	30	25.80	1.1	SSF	163.27	355	ePKP	30	43.70	-0.1
QIZ	84.51	296	P	23	16.80	0.9		0.8s	100.00nm						0.8s	5.35nm				
SYP	84.99	45	eP	23	19.00	0.8	NB2	148.66	351	PKP	30	23.20	-1.7	LBF	163.31	354	ePKP	30	43.80	-0.1
BCH	85.37	45	P	23	20.50	0.4	HFS	149.12	348	ePKP	30	24.20	-1.4		0.8s	7.40nm				
PRS	85.38	43	ePd	23	20.50	0.6		0.7s	87.60nm					AVF	163.55	355	ePKP	30	43.80	-0.2
GCC	85.49	42	ePd	23	21.00	0.6	BNG	149.52	215	iPKPd	30	27.30	-0.3	SMF	163.66	354	ePKP	30	43.80	-0.4
PCC	85.59	42	ePd	23	21.20	0.3		0.5s	68.00nm						1.0s	6.00nm				
SAO	85.63	43	eP	23	21.30	0.1				id	30	32.70		MFF	163.77	4	ePKP	30	44.40	0.1
PRI	85.66	43	ePd	23	22.50	1.0				id	31	07.90			1.0s	12.00nm				
LLA	85.82	43	ePd	23	22.50	0.3	JARJ	150.49	283	PKPc	30	34.80	6.2X	BGF	163.82	356	ePKP	30	44.20	-0.1
NJ2	85.83	311	iPc	23	23.00	0.7	BURJ	150.64	283	PKPd	30	35.00	6.2X		1.2s	11.90nm				
	1.0s	0.10nm			2.7mb	X	KFNJ	150.68	282	PKP	30	35.30	6.5X	TCF	164.11	358	ePKP	30	44.60	-0.1
BAR	85.86	48	eP	23	22.00	-0.4	SALJ	150.68	282	PKPd	30	34.80	5.9X		1.0s	10.00nm				
PAS	85.86	46	eP	23	22.00	-0.4	HRI	150.75	285	e(PKP)	30	35.00	6.0X	LPG	164.34	346	ePKP	30	44.90	-0.4
MHC	85.91	42	ePd	23	23.40	0.7	DSI	150.89	281	iPKPd	30	35.00	5.9X		0.8s	2.70nm				
BRK	85.92	41	ePd	23	23.00	0.5	PRNI	151.06	279	iPKPc	30	36.00	6.5X	RJF	165.11	360	ePKP	30	45.80	0.3
BKS	85.94	41	ePd	23	23.00	0.3	BBTK	152.77	299	ePKP	30	30.00	-1.8	LFF	165.47	2	ePKP	30	46.20	0.4
	1.0s	143.00nm			5.9mb					i	30	39.00		CAF	165.48	358	ePKP	30	46.30	0.4
PLM	86.17	48	eP	23	25.00	0.9	CSS	152.79	288	ePKP	30	38.50	6.7X		1.0s	8.00nm				
RVR	86.26	47	eP	23	25.00	0.7	EAU	154.33	6	ePKPc	30	41.30	8.0X	SBF	165.72	342	ePKP	30	45.50	-0.7
ISA	86.67	45	eP	23	27.00	0.6	ESY	154.33	5	ePKPc	30	41.00	7.7X		0.8s	5.35nm				
FRI	86.80	43	ePd	23	27.30	0.4	EBL	154.43	6	ePKPc	30	41.40	8.0X	LPO	165.73	1	ePKP	30	46.60	0.6
FHC	87.01	38	ePd	23	28.70	0.8	BCK	154.83	294	ePKP	30	41.00	6.4X	EPF	167.36	4	ePKP	30	47.80	0.4
CMB	87.11	42	ePd	23	28.10	-0.3	EKA	154.86	6	PKPc	30	33.70	-0.2		1.0s	16.00nm				
TPC	87.17	48	eP	23	30.00	1.2		0.7s	3.00nm					TOL	169.54	24	ePKP	30	50.00	1.1
GLA	87.29	49	eP	23	31.00	1.6	ALT	154.94	298	ePKP	30	37.00	2.3	AVE	171.97	67	iPKP	30	52.80	2.6
ORV	87.51	41	ePd	23	30.20	0.0	LIC	155.22	165	PKP	30	36.74	1.1	MAL	172.04	36	ePKP	30	51.00	0.9
LTCM	87.61	40	P	23	30.00	-0.7	KIC	155.41	165	PKP	30	36.96	1.0				i	32	14.30	
WDC	87.64	39	ePd	23	31.10	0.3	ELL	155.45	293	ePKP	30	46.30	10.7X	TIO	172.53	84	ePKP	30	53.00	2.3
WHN	87.92	307	Pd	23	32.80	0.4	KHL	155.53	296	ePKP	30	35.00	-0.6	IFR	173.65	59	iPKP	30	53.20	2.1
MIN	87.99	40	e(P)	23	32.30	-0.4	MLR	155.59	315	ePKP	30	39.00	3.5X		S.D. = 1.1	on 168 of 206 obs.				
MDJ	88.32	326	eP	23	32.50	-1.5	TIC	155.62	164	PKP	30	37.26	1.0	---						
TNP	89.01	44	P	23	37.80	0.1	KRA	155.90	330	ePKP	30	34.20	-1.4		JUL 16, 1989 23h 16m 02.08± 0.63s					
	0.6s	34.63nm			5.6mb		KSP	156.73	336	ePKP	30	36.00	-0.7		47.531 N ± 5.5km 13.087 E ± 7.3km					
KVN	89.12	43	P	23	38.00	-0.2		0.8s	60.00nm						DEPTH = 10.0km (geophysicist)					
NNT	89.23	285	iPc	23	40.20	1.3				i	30	46.50			AUSTRIA					(546)
SNY	89.45	321	Pd	23	39.00	-0.4				i	31	06.50			ML 3.0 (VKA), 2.7 (GRF).					
TIA	89.57	313	eP	23	40.20	0.1	CLL	157.38	341	iPKP	30	47.90	10.5X							
LOE	90.09	290	iPd	23	44.00	1.1		1.3s	19.00nm					BHG	0.24	324	iPgc	16	06.50	-0.7
NST	90.49	288	eP	23	48.00	3.3X				i	31	08.40		FVI	0.96	193	P	16	19.20	-1.1
GYA	91.08	300	iPc	23	48.40	0.9	BRG	157.49	339	ePKP	30	37.40	-0.2				eSg	16	31.20	
BDT	92.22	289	eP	23	53.00	0.4		1.0s	46.00nm					SCE	1.06	243	ePg	16	21.50	-0.7
	0.8s	26.00nm			5.6mb					i	31	09.30		RBL	1.14	163	Pc	16	22.90	-0.5
BJI	92.54	316	eP	23	54.00	0.3	EZN	157.59	302	ePKP	30	20.00	-18.0X				eSg	16	38.00	
CHG	93.08	290	ePd	23	57.60	1.0	WTS	158.04	351	ePKP	30	38.00	-0.1	FUR	1.37	298	iPgc	16	27.70	0.4
	1.1s	34.18nm			5.6mb			1.0s	13.00nm					OGA	1.55	245	iPd	16	31.50	1.5
TIY	93.47	312	Pd	23	57.70	-0.4	PRU	158.06	337	ePKP	30	37.20	-1.1	VOY	1.60	159	ePn	16	31.60	1.0
XAN	93.68	307	P	24	00.00	0.8				e	31	12.00					eSn	16	53.30	
ALQ	93.98	52	eP	24	01.00	0.3	BZS	158.06	319	ePKPc	30	36.50	-1.9	WET	1.62	355	iPd	16	31.90	1.1
	0.9s	6.09nm			5.0mb		ZST	158.53	330	ePKP	30	37.70	-1.1	KHC	1.63	11	iPn	16	29.50	-1.5
			e	24	20.50		VKA	158.80	332	e(PKP)	30	39.00	-0.2				iPg	16	31.00	
			e	24	48.00					i	31	15.10					Sg	16	53.00	

TRI	1.88	165	eP	17	01.50	27.0X
VKA	2.29	70	e(Pn)	16	41.00	0.4
			e(Pg)	16	45.00	
			iSg	17	08.70	
GRF	2.49	331	iPg	16	48.90	5.6X
			eSg	17	20.10	
PRU	2.64	21	Pg	16	50.00	4.6X
			Sg	17	24.00	
HOF	2.90	344	eP	16	55.60	6.5X
CLL	3.78	359	e(P)	18	01.00	59.3X

S.D. = 1.2 on 10 of 15 obs.

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* JUL 16, 1989 23h 20m 33.79± 0.99s
40.112 N ±10.2km 20.600 E ± 9.4km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

LSK	0.04	0	iPgc	20	35.80	-0.1
SRN	0.52	243	iPg	20	44.10	-0.1
KBN	0.54	18	ePg	20	43.50	-1.1
VLO	0.92	293	ePn	20	54.40	3.1X
LIT	1.45	90	eP	20	59.80	-0.3
VAY	1.92	50	ePn	21	07.00	0.1
SKO	1.96	19	ePn	21	09.00	1.5

S.D. = 1.1 on 6 of 7 obs.

JUL 17, 1989 02h 26m 39.35± 0.23s
53.439 N ± 5.1km 169.271 W ± 2.7km
DEPTH = 112.3km (14 depth phases)
4.6mb (38 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

SNKA	3.97	72	eP	27	39.34	0.1
			eS	28	22.78	
BALA	4.18	63	eP	27	43.96	1.8
			eS	28	31.32	
DRRA	4.37	67	ePc	27	45.11	0.5
DLG	4.68	66	ePc	27	49.44	0.5
			eS	28	41.02	
PS4	4.73	63	eP	27	50.96	1.3
PN6	4.74	62	eP	27	51.20	1.3
ADK	4.77	254	ePc	27	52.80	2.6
PVV	4.78	63	eP	27	51.82	1.5
			eS	28	44.70	
SASA	5.47	66	eP	27	59.85	0.1
			eS	28	58.63	
SDN	5.47	66	eP	27	50.00	-9.7X
SGB	5.56	64	eP	28	01.54	0.6
			eS	29	01.60	
NGI	5.63	70	eP	28	01.35	-0.6
			eS	29	01.63	
CNBA	5.86	72	eP	28	03.45	-1.6
			eS	29	05.17	
BKJ	5.94	69	eP	28	05.32	-0.9
IVF	6.16	63	eP	28	09.25	-0.1
			eS	29	15.26	
KDC	10.42	59	eP	29	05.70	-1.1
SVW	10.64	38	ePd	29	12.90	3.1X
TTA	11.78	31	ePd	29	28.80	3.9X
PMR	13.51	45	eP	29	49.20	2.0
IMA	14.84	25	eP	30	05.00	0.6
TOA	14.99	46	eP	30	07.00	0.7
FBA	15.80	35	eP	30	16.00	-0.4
INK	22.43	35	eP	31	28.00	-0.9
	0.5s		22.00nm			4.8mb
YKA	29.50	50	P	32	33.90	-0.5
MBC	29.52	22	eP	32	34.00	-0.4
	0.4s		3.00nm			4.3mb
PNT	30.76	77	iPd	32	46.00	0.4
	0.6s		9.00nm			4.7mb
EDM	32.67	67	iPc	33	02.50	0.2
			pP	33	28.00	115km
WDC	33.74	93	eP	33	12.00	0.3
			ePcP	36	28.30	
ORV	35.01	94	e(P)	33	22.00	-0.5
SES	35.19	71	eP	33	23.00	-1.0
			pP	33	49.00	113km
CMB	36.65	95	ePc	33	36.90	0.5
			ePcP	36	26.40	
LRM	36.70	78	eP	33	40.60	3.6X
PRS	37.20	98	e(P)	33	41.00	0.0
KVN	37.36	91	eP	33	42.90	0.4
			epP	34	08.50	111km
FRI	37.74	95	e(P)	33	45.70	0.2
FFC	38.13	60	iPd	33	48.10	-0.4
	0.7s		21.00nm			5.1mb
TNP	38.51	92	eP	33	52.00	-0.2
	0.7s		4.11nm			4.4mb
			epP	34	18.00	114km
IMW	38.68	80	eP	33	54.20	0.6
DUG	39.80	86	eP	34	03.10	0.4
BW06	40.15	80	eP	34	06.00	0.3
	1.0s		8.75nm			4.5mb
			epP	34	31.40	110km
MSU	41.25	87	eP	34	15.20	0.5
PLM	41.93	97	eP	34	20.50	0.2
			epP	34	46.50	113km
RSSD	42.57	75	eP	34	25.00	-0.5
			epP	34	50.50	110km
PV09	43.07	85	eP	34	29.00	-0.7
GLA	43.35	96	eP	34	31.80	0.1
			epP	34	57.50	111km
RSON	44.41	61	eP	34	39.30	-0.7
			epP	35	06.00	116km
GOL	44.53	81	eP	34	41.40	0.0
	0.8s		14.29nm			4.8mb
GLD	44.59	81	eP	34	42.00	0.2
			epP	35	08.00	112km
ALQ	47.04	87	e(P)	35	00.50	-0.8
			epP	35	27.40	116km
			ePcP	36	32.50	
			ePP	37	02.10	
FRB	48.07	36	eP	35	07.00	-1.6
DAG	48.71	9	eP	35	12.40	-1.0
	0.7s		6.85nm			4.6mb
BTO	53.63	291	eP	35	51.00	0.0
TIY	54.24	287	eP	35	54.80	-0.7
FVM	54.37	73	eP	35	53.80	-2.5
	0.5s		15.40nm			5.2mb
			epP	36	20.50	111km
GAC	57.05	56	ePc	36	14.60	-0.8
GTA	60.05	297	P	36	34.80	-1.7
CVL	61.03	65	eP	36	42.10	-0.9
			epP	37	09.50	112km
WMO	62.92	308	P	36	54.50	-1.1
CD2	64.10	287	eP	37	03.20	-0.2
NUR	65.86	353	iP	37	13.00	-1.2
	0.6s		18.30nm			5.2mb
NB2	65.87	360	P	37	13.60	-0.7
HFS	66.75	358	eP	37	18.20	-1.7
	0.5s		9.00nm			4.9mb
EKA	70.99	8	Pc	37	45.80	-0.2
	0.8s		6.60nm			4.5mb
DMU	72.03	11	eP	37	50.90	-1.3
DCN	72.53	11	eP	37	53.80	-1.3
CLL	75.61	359	iP	38	12.60	-0.3
	1.1s		12.00nm			4.6mb
BRG	76.03	358	eP	38	15.30	0.0
MEM	76.25	3	P	38	16.60	0.1
TSM	76.32	258	ePd	38	18.80	1.4
DOU	76.71	4	Pc	38	19.00	-0.1
	0.8s		11.70nm			4.7mb
			e	38	23.00	13kmX
PRU	76.90	357	P	38	20.50	0.4
WLF	77.20	3	P	38	22.60	0.9
GRF	77.24	360	eP	38	23.00	1.0
	0.9s		14.00nm			4.8mb
			eSg	57	27.00	
FLN	77.73	8	eP	38	24.50	-0.2
KHC	77.78	358	iPc	38	26.50	1.5
LDF	77.93	7	eP	38	25.40	-0.4
	0.8s		8.00nm			4.6mb
GRR	78.07	8	eP	38	26.90	0.3
LPF	78.41	8	eP	38	28.60	0.1
	0.8s		6.40nm			4.5mb
CDF	78.48	2	eP	38	29.20	0.2
ZST	78.60	356	eP	38	30.30	0.8
HAU	78.86	3	eP	38	31.30	0.3
	0.8s		6.40nm			4.5mb
SRO	78.92	355	eP	38	31.40	0.2
BSF	79.05	3	eP	38	32.00	-0.1
LOR	79.50	5	iPd	38	34.30	-0.1
	0.8s		6.70nm			4.5mb
SSF	79.69	5	eP	38	35.40	0.0
	0.9s		8.80nm			4.6mb
LBF	79.79	5	eP	38	35.80	-0.2
	0.8s		4.50nm			4.3mb
MFF	79.91	8	eP	38	36.90	0.4
	1.0s		13.60nm			4.7mb
AVF	79.95	5	eP	38	36.90	0.1
	0.8s		10.70nm			4.7mb
SMF	80.12	5	iPd	38	38.00	0.3
	0.9s		8.80nm			4.6mb
BGF	80.15	6	eP	38	37.90	0.0
	1.0s		8.00nm			4.5mb
LSF	80.38	6	eP	38	38.90	-0.2
	0.8s		10.70nm			4.7mb
TCF	80.38	6	eP	38	39.10	0.0
	0.8s		3.20nm			4.2mb
MAF	80.47	6	eP	38	39.70	0.1
	1.0s		8.00nm			4.5mb
PLDF	80.78	5	P	38	41.65	0.3
PYM	80.97	5	P	38	41.99	-0.3
LPG	81.38	3	eP	38	44.90	0.2
	1.0s		8.00nm			4.5mb
LSD	81.43	3	P	38	45.81	0.9
LBL	81.50	5	P	38	45.16	0.3
LFF	81.63	7	eP	38	45.90	0.3
	0.8s		11.80nm			4.7mb
CAF	81.73	6	eP	38	46.50	0.3
	1.1s		9.70nm			4.5mb
LPO	81.91	7	eP	38	47.10	0.0
	0.7s		4.40nm			4.4mb
RRL	81.96	3	P	38	49.50	1.8
PZZ	82.38	3	P	38	50.43	0.7
ROB	82.61	2	P	38	50.43	-0.4
STV	82.65	2	P	38	50.43	-0.6
CTA	82.67	222	iPc	38	51.30	0.1
	0.9s		10.92nm			4.7mb
ENR	82.67	2	P	38	50.43	-0.7
FIN	82.71	2	P	38	51.35	0.1
IMI	83.00	2	P	38	52.48	-0.3
SBF	83.03	2	eP	38	54.10	1.1
	1.0s		12.00nm			4.8mb
FRF	83.31	3	eP	38	55.40	1.0
	1.3s		14.40nm			4.7mb
LRG	83.41	3	iPc	38	56.00	1.2
EPF	83.49	8	eP	38	54.90	-0.5
	1.0s		8.00nm			4.6mb
QUE	83.52	314	eP	38	55.00	-0.9
LMR	83.54	3	eP	38	56.70	1.2
CVF	84.36	1	eP	39	00.20	0.5
	1.0s		13.60nm			4.8mb
WB5	87.65	232	eP	39	15.70	-0.2
ASPA	91.13	230	eP	39	32.70	0.5
	1.0s		11.00nm			5.0mb
			e	40	02.10	111km
TIC	118.68	18	PKP	45	15.06	-0.5
	0.8s		14.00nm			
KIC	119.01	18	PKP	45	15.66	-0.5
	0.6s		8.00nm			
LIC	119.09	18	PKP	45	15.82	-0.5
	0.6s		11.00nm			
BNG	121.97	351	iPKPc	45	21.40	-0.5
	0.6s		11.00nm			
SPA	143.25	180	e(PKP)	45	56.40	-4.0X
	1.0s		6.00nm			
BUL	144.02	331	iPKPd	46	00.40	-2.7X
SLR	149.37	328	ePKP	46	10.50	-1.2
KSR	149.92	330	ePKP	46	12.40	-0.1
	0.7s		10.00nm			
FRS	154.04	330	iPKPc	46	27.50	9.4X
	1.0s		30.00nm			
HVD	154.78	329	ePKP	46	31.00	11.7X

S.D. = 0.8 on 120 of 128 obs.

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* JUL 17, 1989 03h 06m 54.25± 1.04s
41.614 N ± 8.1km 15.685 E ±11.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

DUI	0.92	273	P	07	12.50	0.6
			eSg	07	24.70	
SGO	1.09	195	P	07	15.40	0.6
			eSg	07	33.50	
SDI	1.40	274	Pc	07	19.10	-0.8
			eSn	07	37.80	
MGR	1.48	184	Pd	07	20.30	-0.6
			eSn	07	42.70	
HVAR	1.66	20	iPn	07	23.70	0.2
ARV	2.77	314	Pd	07	35.20	-4.2X

S.D. = 1.0 on 5 of 6 obs.

JUL 17, 1989 04h 53m 32.39± 0.73s
31.768 S ± 6.6km 68.293 W ± 6.4km
DEPTH = 18.1 ± 11.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.17	16	iPc	53	37.00	0.0
RTCV	0.23	246	iPc	53	37.60	-0.3
ZON	0.40	304	iPd	53	40.50	-0.2

17d 04h

		eS	53 46.00		
RTLL	0.46	341 iPd	53 41.30	-0.5	
RTCB	0.52	303 iPd	53 43.00	0.3	
		S	53 50.00		
RTBS	0.99	276 ePd	53 51.30	0.5	
		S	54 05.30		
MRA	2.29	107 e(P)	54 10.20	0.4	
RFA	3.00	183 ePd	54 19.60	-0.4	
S.D. = 0.5		on 8 of 8 obs.			

% JUL 17, 1989 05h 31m 19.15± 3.54s
15.626 N ± 8.7km 60.320 W ±30.3km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.7 (FDF).

DEG	0.99	314 eP	31 38.00	0.1	
		S	31 50.80		
BBL	1.12	265 eP	31 40.00	-0.2	
FDF	1.20	222 eP	31 41.95	0.5	
0.1s		0.80nm			
		S	31 58.30		
MVM	1.20	208 eP	31 41.53	0.0	
BIM	1.32	213 eP	31 43.23	-0.3	
		S	32 01.20		
PAG	1.37	287 eP	31 44.30	0.0	
		S	32 01.60		
S.D. = 0.4		on 6 of 6 obs.			

? JUL 17, 1989 07h 07m 06.80± 3.87s
4.085 S ±39.3km 154.473 E ±30.8km
DEPTH = 33.0km (normal)
SOLOMON ISLANDS (193)

RAB	2.30	267 iPc	07 43.50	0.3	
		iS	07 56.50		
PMG	8.99	234 eP	09 17.00	-0.4	
WB5	25.11	230 iPd	12 31.00	0.6	
ASPA	27.81	224 eP	12 55.60	0.4	
FORR	36.42	220 eP	14 10.50	0.2	
MBL	37.68	240 eP	14 20.00	-1.1	
S.D. = 0.8		on 6 of 6 obs.			

? JUL 17, 1989 07h 52m 06.20± 7.73s
23.472 N ±49.0km 122.070 E ±37.8km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWD	0.75	324 iPc	52 20.70	-0.1	
		eS	52 24.30		
TWC	1.15	350 iPd	52 27.80	0.1	
		eS	52 36.90		
TWQ	1.38	306 ePc	52 31.60	0.1	
TWZ	1.68	345 ePc	52 35.00	-0.7	
		eS	52 49.80		
ANP	1.78	344 eP	52 37.90	0.7	
SSE	7.63	354 eP	54 06.00	5.9X	
		eLg	56 03.40		
S.D. = 0.7		on 5 of 6 obs.			

JUL 17, 1989 08h 00m 20.29± 0.58s
37.069 N ± 5.2km 21.653 E ± 4.1km
DEPTH = 57.1 ± 10.5 km
4.5mb (3 obs.)
SOUTHERN GREECE (368)
MD 3.6 (ATH).

ITM	0.24	63 ePg	00 20.90	-8.9X	
ATH	1.87	61 ePn	00 50.00	-0.4	
NEO	2.55	29 ePn	01 00.60	0.6	
VAM	2.64	128 ePn	01 00.10	-1.2	
KEK	3.02	332 ePn	01 07.80	1.2	
SRN	3.09	336 ePn	01 09.10	1.4	
LIT	3.10	12 ePnc	01 08.90	1.1	
APE	3.10	89 ePn	01 06.30	-1.6	
LSK	3.18	345 iPnc	01 10.90	1.8	
KZN	3.23	2 ePn	01 11.30	1.5	
PAIG	3.27	29 iPnc	01 09.80	-0.4	
TPE	3.47	339 ePn	01 20.60	7.6X	
PLG	3.58	22 ePn	01 14.50	-0.2	
KBN	3.61	350 iPnc	01 17.00	2.1	
NPS	3.68	118 ePb	01 17.00	1.0	
THE	3.70	16 ePnc	01 16.20	-0.1	
VLO	3.79	334 ePn	01 22.90	5.4X	
BERA	3.86	340 ePn	01 19.00	0.5	
GRG	3.93	8 ePn	01 21.70	2.2	
KNT	4.20	13 iPnc	01 24.00	0.7	

		eSn	02 13.40		
VAY	4.31	9 iPn	01 25.00	0.3	
SRS	4.31	20 ePnd	01 24.50	-0.4	
		eSn	02 16.40		
TIR	4.49	343 ePn	01 27.50	0.2	
SOI	4.56	284 P	01 28.00	-0.3	
		eSn	02 21.50		
EZN	4.59	52 eP	01 28.00	-0.7	
IZM	4.64	72 eP	01 28.00	-1.5	
PHP	4.71	349 iPnd	01 30.00	-0.4	
KAP	4.71	107 ePn	01 31.00	0.5	
LACI	4.80	342 ePn	01 31.50	-0.3	
SKO	4.90	358 iPn	01 32.70	-0.5	
E 10s		0.74um			
		iPg	01 54.00		
		iSn	02 29.80		
		LR	02 35.00		
TDS	4.91	303 Pd	01 35.10	1.7	
		eSn	02 33.50		
ATN	5.03	284 Pc	01 35.00	-0.1	
		eSn	02 33.50		
KKS	5.09	350 ePn	01 36.60	0.8	
ALN	5.13	40 ePn	01 36.40	0.0	
PUK	5.15	345 ePn	01 36.30	-0.3	
ULC	5.23	340 ePn	01 36.30	-1.5	
		eSn	02 33.00		
MEU	5.38	272 Pd	01 38.90	-1.0	
		eSn	02 39.40		
BCI	5.43	347 iPnc	01 41.40	0.9	
MNO	5.60	281 Pc	01 42.90	-0.3	
		eSn	02 46.40		
BDV	5.64	338 ePn	01 42.00	-1.6	
		eSn	02 46.50		
TTG	5.66	342 ePn	01 42.00	-1.8	
		eSn	02 47.00		
HCY	5.90	337 ePn	01 45.00	-2.1	
		eSn	02 52.00		
SGO	6.06	307 Pc	01 50.20	0.9	
		eSn	03 00.20		
NKY	6.09	341 ePn	01 48.50	-1.4	
		eSn	02 58.00		
BRY	6.29	339 ePn	01 50.50	-2.3	
		eSn	03 02.40		
ELL	6.62	90 eP	01 59.30	1.9	
DUI	7.22	312 Pd	02 05.90	0.3	
HVAR	7.29	328 iPn	02 03.40	-3.1X	
CLO	8.04	6 ePc	02 15.00	-2.0	
BUC	8.07	23 eP	02 29.00	11.7X	
MLR	9.01	20 ePc	02 31.00	0.6	
VRI	9.58	22 ePd	02 38.00	-0.1	
VBY	9.70	332 ePn	02 39.40	-0.3	
		eSn	04 22.80		
VOY	10.67	329 eP	02 51.20	-1.8	
		eS	04 44.80		
KHC	13.41	337 eP	03 21.40	-8.0X	
		e	03 42.50		
PRU	13.90	341 eP	03 47.50	11.8X	
CLL	15.51	339 eP	04 04.00	7.3X	
NUR	23.54	4 iP	05 25.00	-0.8	
HFS	23.64	350 eP	05 26.60	-0.2	
0.5s		4.80nm	4.2mb		
EKA	24.85	325 P	05 41.00	2.5	
1.5s		19.80nm	4.4mb		
NB2	24.88	348 P	05 38.60	-0.3	
BNG	32.60	186 iPd	06 49.20	0.6	
0.5s		12.00nm	5.0mb		
S.D. = 1.2		on 54 of 62 obs.			

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* JUL 17, 1989 08h 04m 50.58± 0.52s
14.486 S ±19.0km 173.478 W ±10.3km
DEPTH = 33.0km (normal)
4.9mb (12 obs.) 4.7Msz (2 obs.)
SAMOA ISLANDS REGION (169)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 24C
Centroid Locotion:
Origin Time 08:04:55.8 1.1
Lat 14.65S 0.12 Lon 173.82W 0.10
Dep 24.5 8.4 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-1.40 0.29 Mtt=-1.15 0.58
Mff= 2.54 0.49 Mrt= 1.87 1.30
Mrf=-0.56 0.90 Mtf= 4.92 0.30
Principal Axes:
T Val= 6.00 Plg= 5 Azm=306
N -0.58 65 46

	P	-5.42	25	213	
Best Double Couple:Mo=5.7*10**16					
NP1:Strike=352 Dip=69 Slip=-165					
NP2:	257	76	-21		
AFI	1.75	71 eP	05 20.00	0.9	
		eS	09 00.00		
DZM	20.49	245 iPc	09 23.20	-5.4X	
PMO	24.74	94 iP	10 11.20	0.7	
1.0s		25.00nm	4.7mb		
VAH	24.99	95 iP	10 13.20	0.3	
1.0s		20.00nm	4.7mb		
TPT	25.01	94 iP	10 13.80	0.7	
1.0s		30.00nm	4.8mb		
RUV	25.23	95 iP	10 15.50	0.3	
1.0s		25.00nm	4.8mb		
WB5	49.96	256 eP	13 38.20	-5.6X	
ASPA	50.33	251 iPc	13 38.90	-7.7X	
0.9s		16.00nm	5.0mb		
Z 21s		0.91um	4.8Msz		
		LR	32 17.80		
PLM	71.94	47 P	16 12.10	-1.0	
CMB	72.13	42 eP	16 13.60	-0.4	
		e	16 33.50		
WDC	72.31	38 eP	16 14.80	-0.2	
KVN	74.18	42 P	16 25.70	-0.5	
TNP	74.22	43 P	16 25.00	-1.4	
0.9s		9.57nm	4.8mb		
SPA	75.61	180 e(P)	16 31.00	-2.9	
1.0s		10.00nm	4.8mb		
PNT	79.29	33 eP	16 54.00	-0.3	
ALQ	80.27	50 eP	17 00.80	0.6	
1.7s		28.85nm	5.0mb		
Z 20s		0.35um	4.7Msz		
		e	17 08.00		
		e	17 27.00		
CN2	80.34	320 eP	16 58.00	-2.0	
LRM	81.35	38 eP	17 04.90	-0.7	
FBA	81.52	11 P	17 05.00	-0.8	
0.7s		15.99nm	5.1mb		
BW06	81.65	42 P	17 07.00	-0.2	
1.2s		10.27nm	4.7mb		
GOL	83.08	46 P	17 15.00	0.2	
0.7s		9.71nm	5.0mb		
GLD	83.20	46 P	17 15.50	0.2	
SES	84.50	35 eP	17 21.00	-0.4	
EDM	84.75	32 eP	17 22.00	-0.6	
BJI	84.79	313 eP	17 24.00	1.0	
RSSD	85.84	43 P	17 28.10	-0.4	
TIY	86.61	310 eP	17 33.00	0.8	
Z 14s		0.70um	5.2MszX		
INK	87.40	14 eP	17 35.00	-0.3	
YKA	89.29	23 P	17 47.90	3.5X	
BTO	89.37	312 P	17 47.40	2.0	
FVM	93.43	52 P	18 03.00	-1.1	
1.0s		13.00nm	5.3mb		
MBC	96.05	11 eP	18 15.00	-0.3	
SPC	143.61	345 ePKP	24 21.70	-2.3	
PRU	143.99	351 PKP	24 23.50	-0.8	
SNF	144.02	2 PKP	24 21.20	-3.1X	
DOU	144.45	2 PKP	24 26.20	1.1	
ABH	144.69	359 ePKP	24 22.80	-2.8	
RUP	144.88	359 ePKP	24 24.34	-1.6	
WLF	144.92	0 PKP	24 24.80	-1.1	
TOD	144.93	357 ePKP	24 24.18	-1.8	
KHC	144.97	352 iPKPc	24 25.00	-1.1	
		e	24 33.80		
MLR	145.01	336 ePKPd	24 17.50	-8.9X	
ZST	145.26	348 ePKP	24 26.10	-0.4	
FLN	145.34	8 ePKP	24 23.10	-3.5X	
1.2s		35.70nm			
SRO	145.36	346 ePKP	24 25.20	-1.5	
CMP	145.55	337 ePKPd	24 29.00	1.8	
LDF	145.55	8 ePKP	24 24.20	-2.8	
1.6s		49.70nm			
GRR	145.65	9 ePKP	24 24.80	-2.4	
1.6s		42.20nm			
LPF	145.97	9 ePKP	24 27.20	-0.5	
1.2s		38.00nm			
CDF	146.17	359 ePKP	24 29.60	1.4	
1.2s		23.80nm			
BZS	146.45	341 ePKP	24 28.50	-0.1	
CLO	146.53	339 ePKPc	24 31.50	2.7	
HAU	146.58	0 ePKP	24 31.00	2.2	
0.7s		11.00nm			
BSF	146.75	360 ePKP	24 31.80	2.6	
0.8s		6.40nm			

LOR 147.24 3 ePKP 24 31.00 1.1
1.2s 26.70nm
SSF 147.43 4 ePKP 24 31.20 1.1
1.3s 43.30nm
LBF 147.53 3 ePKP 24 31.60 1.2
1.3s 36.10nm
AVF 147.69 4 ePKP 24 32.00 1.5
0.8s 8.00nm
SMF 147.86 3 ePKP 24 32.60 1.7
1.2s 24.90nm
BGF 147.88 5 ePKP 24 31.90 1.0
0.8s 9.90nm
VOY 147.95 350 e(PKP)24 29.40 -1.7
LSF 148.06 7 ePKP 24 32.70 1.5
1.0s 28.00nm
TCF 148.09 6 ePKP 24 33.10 1.8
1.3s 23.10nm
CEY 148.14 349 e(PKP)24 33.50 2.1
MAF 148.19 5 ePKP 24 33.20 1.8
1.0s 22.00nm
VBY 148.21 348 ePKP 24 35.10 3.7X
TRI 148.28 350 ePKP 24 35.80 4.3X
e 26 09.80
LPG 149.09 360 ePKP 24 36.80 3.6X
1.0s 26.00nm
SKO 149.72 338 iPKP 24 38.00 4.1X
TOL 153.06 18 ePKP 24 52.00 13.1X
S.D. = 1.5 on 58 of 70 obs.

JUL 17, 1989 08h 25m 15.79± 0.71s
43.374 N ± 6.2km 11.229 E ± 5.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

PGD 0.62 35 P 25 27.50 -0.8
eSg 25 38.60
PII 0.62 304 Pc 25 27.80 -0.4
eSg 25 38.20
SFI 0.71 39 Pd 25 29.20 -0.6
eSg 25 41.10
BDI 0.83 327 P 25 31.70 -0.1
eSg 25 45.70
MME 0.90 335 P 25 34.40 1.1
eSg 25 47.50
MAO 0.96 183 Pc 25 34.10 0.1
eSg 25 47.50
RSM 1.05 58 Pc 25 37.00 1.5
ARV 1.25 84 Pc 25 38.70 -0.4
eSg 25 57.10
BOB 1.89 318 P 25 48.40 -0.1
FVI 3.40 18 P 26 09.70 -0.2
S.D. = 0.8 on 10 of 10 obs.

% JUL 17, 1989 09h 33m 56.60± 0.55s
60.637 N ± 4.7km 5.531 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.1 (BER).

ASK 0.23 227 iP 34 01.52 0.1
iS 34 05.14
SUE 0.57 319 iP 34 07.89 -0.2
eS 34 15.98
HYA 0.62 31 iP 34 08.50 -0.6
eS 34 15.83
ODD1 0.91 143 iP 34 13.52 -0.5
eS 34 25.58
BLS1 1.41 152 iP 34 22.56 0.2
eS 34 41.09
KMY 1.44 186 eP 34 22.76 0.1
eS 34 40.62
MOL 2.17 26 iP 34 33.72 0.5
eS 34 58.83
eSg 35 05.17
NRA0 2.96 85 iPc 34 44.80 0.4
iPg 34 48.40
eS 35 19.50
iSg 35 26.80
S.D. = 0.5 on 8 of 8 obs.

JUL 17, 1989 09h 41m 32.77± 1.01s
44.408 N ±10.6km 7.281 E ±10.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

PZZ 0.16 307 P 41 36.58 0.0
S 41 38.84
STV 0.17 169 P 41 36.60 0.0
S 41 39.18
ENR 0.21 151 P 41 37.40 0.1
S 41 40.45
ROB 0.44 105 P 41 41.70 0.0
S 41 47.65
S.D. = 0.1 on 4 of 4 obs.

JUL 17, 1989 10h 34m 14.89± 0.46s
17.079 N ± 8.4km 62.009 W ±11.4km
DEPTH = 108.9 ± 5.1 km
LEEWARD ISLANDS (92)

BPA 0.15 103 eP 34 30.53 -0.7
eS 34 39.86
ANG 0.19 66 eP 34 30.99 -0.3
MGH 0.41 209 iPd 34 31.36 0.1
S 34 42.30
NEV 0.54 276 eP 34 32.29 0.2
eS 34 44.35
SKI 0.74 290 eP 34 33.94 0.2
eS 34 46.97
SEG 0.83 144 iPc 34 34.88 0.4
S 34 48.30
PAG 1.09 163 eP 34 37.70 0.4
S 34 54.10
DEG 1.19 130 eP 34 38.70 0.3
MGG 1.33 150 ePc 34 40.50 0.5
S 34 57.60
BBL 1.63 162 ePc 34 43.45 -0.2
FDF 2.47 160 iPc 34 54.31 -0.3
S 35 12.60
BIM 2.70 160 iPc 34 57.48 -0.2
MVM 2.73 157 iPc 34 57.49 -0.5
S 35 28.90
YKA 58.11 334 eP 43 58.20 -0.7
MBC 65.99 347 eP 44 52.00 0.8
S.D. = 0.5 on 15 of 15 obs.

JUL 17, 1989 10h 42m 29.70± 0.60s
44.482 N ± 5.9km 6.991 E ± 5.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ 0.08 74 P 42 32.76 0.4
S 42 34.41
FOUF 0.16 287 ePg 42 33.36 0.0
eSg 42 35.07
STV 0.34 135 P 42 36.80 0.1
S 42 41.39
ENR 0.40 130 P 42 37.69 -0.2
S 42 43.23
RRL 0.46 341 P 42 38.82 -0.3
S 42 45.41
ROB 0.66 106 P 42 42.62 -0.2
S 42 51.13
IMI 0.86 131 P 42 46.43 0.1
FIN 0.91 107 P 42 47.13 -0.1
LSD 0.98 7 P 42 48.57 0.1
S.D. = 0.3 on 9 of 9 obs.

JUL 17, 1989 13h 27m 21.41± 0.64s
43.373 N ± 5.8km 11.294 E ± 4.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE 0.54 62 P 27 32.50 0.1
eSg 27 40.70
PGD 0.59 32 P 27 32.90 -0.6
eSg 27 42.10
PII 0.66 302 P 27 34.00 -0.5
eSg 27 44.10
SFI 0.68 36 Pd 27 34.40 -0.5
eSg 27 45.90
BDI 0.85 324 P 27 37.30 -0.6
eSg 27 50.40
MME 0.93 333 Pc 27 40.10 0.8
eSg 27 53.70
MAO 0.96 186 P 27 39.50 -0.2
eSg 27 54.50
RSM 1.01 56 P 27 40.50 0.1
ARV 1.21 83 P 27 44.40 0.5
eSg 28 01.80
BOB 1.93 317 P 27 55.50 0.9
S.D. = 0.7 on 10 of 10 obs.

JUL 17, 1989 14h 15m 04.14± 0.40s
44.562 N ± 2.8km 6.840 E ± 4.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (GEN).

FOUF 0.05 232 iPg 15 06.38 0.1
e(Sg) 15 07.55
PZZ 0.20 107 P 15 08.98 0.4
S 15 12.49
DOI 0.30 101 P 15 10.40 0.0
eSg 15 15.40
RRL 0.36 354 P 15 11.69 0.1
S 15 17.06
STV 0.47 132 P 15 13.33 -0.4
S 15 19.82
BNI 0.50 347 Pc 15 14.20 -0.2
eSg 15 21.10
ENR 0.53 129 P 15 14.67 -0.3
S 15 22.25
TOUF 0.62 152 Pg 15 16.46 -0.3
AUTN 0.71 143 Pg 15 18.82 0.6
Sg 15 27.68
AURF 0.76 152 Pg 15 18.97 -0.1
Sg 15 28.66
SAOF 0.77 138 Pg 15 19.41 0.2
Sg 15 29.22
ROB 0.79 110 P 15 19.36 -0.1
S 15 30.18
CALN 0.81 177 Pg 15 20.00 0.0
LSD 0.92 14 P 15 22.01 0.1
S 15 33.91
IMI 1.00 130 P 15 23.16 0.1
S 15 36.00
FIN 1.04 109 P 15 23.74 -0.1
S.D. = 0.3 on 16 of 16 obs.

• JUL 17, 1989 14h 16m 28.91± 3.72s
44.473 N ±14.9km 6.685 E ±27.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

FOUF 0.09 51 iPg 16 32.30 0.8
eSg 16 33.08
PZZ 0.30 84 P 16 34.94 -0.3
S 16 38.14
RRL 0.45 9 P 16 37.81 -0.4
S 16 43.03
STV 0.51 116 P 16 39.41 0.1
S 16 46.22
ENR 0.58 115 P 16 40.85 0.1
S 16 47.59
ROB 0.87 101 P 16 45.29 -0.4
S.D. = 0.6 on 6 of 6 obs.

JUL 17, 1989 14h 28m 25.11± 0.90s
34.743 N ± 8.0km 25.941 E ± 5.4km
DEPTH = 62.2 ± 11.8 km
4.3mb (7 obs.)
CRETE (370)
MD 4.2 (ATH).

NPS 0.58 333 iPgc 28 31.80 -6.5X
KAP 1.29 51 ePb 28 45.70 -1.6
VAM 1.57 295 ePb 28 50.00 -1.2
APE 2.34 352 ePn 29 00.00 -2.0
YER 3.05 38 iP 29 12.00 0.0
KSL 3.28 64 ePn 29 16.00 0.9
CIN 3.34 31 eP 29 16.00 0.1
ATH 3.69 332 ePn 29 20.60 -0.3
ELL 3.80 57 iP 29 23.30 0.8
IZM 3.80 16 eP 29 20.90 -1.6
ITM 4.06 308 ePn 29 26.50 0.3
PRK 4.50 3 ePn 29 30.50 -1.8
KHL 4.59 38 iP 29 34.50 0.9
BCK 4.64 53 eP 29 35.80 1.5
NEO 5.05 335 ePn 29 40.50 0.5
EZN 5.08 3 eP 29 37.70 -2.8
DST 5.31 23 iP 29 44.10 0.4
ALT 5.45 37 eP 29 43.90 -1.8
PAIG 5.48 341 eP 29 46.40 0.4
VLS 5.51 310 ePn 29 47.50 1.0
OUR 5.79 345 eP 29 52.20 1.8
PLG 5.96 341 ePn 29 53.40 0.6
LIT 6.01 334 ePd 29 53.60 0.1

17d 14h

CSS		6.08	86	eP	29 55.50	1.1
THE		6.33	339	ePd	29 57.80	-0.1
KZN		6.47	330	ePn	30 00.00	0.1
GPA		6.53	31	eP	30 02.20	1.5
SRS		6.63	344	eP	30 03.00	0.9
GRG		6.80	337	eP	30 06.40	1.9
KNT		6.84	340	ePc	30 05.20	0.2
VAY		7.08	339	ePn	30 09.40	1.0
BBTK		7.44	45	iPc	30 14.00	0.5
SKO		8.04	335	iPn	30 22.20	0.7
	Z	10s		0.45um		
	N	15s		0.68um		
	E	14s		0.95um		
				LR	33 08.00	
DSI		8.52	109	iPd	30 27.00	-1.2
				eS	33 02.00	
PRNI		8.81	117	eP	30 31.00	-1.3
MBH		9.05	121	iP	30 36.50	1.1
CMP		10.54	357	iPd	31 05.00	9.2X
MLR		10.74	0	ePd	31 00.00	1.4
BEO		10.91	339	e(P)	31 01.00	0.2
VRI		11.13	3	ePc	31 09.00	5.2X
BZS		11.35	344	eP	31 05.00	-1.7
KHC		17.03	331	P	32 25.80	5.4X
PRU		17.38	335	eP	32 22.00	-2.6
				e	32 29.60	
KSP		17.55	339	eP	32 27.00	0.2
BRG		18.33	335	e(P)	32 48.00	11.7X
LBF		20.55	313	eP	32 59.80	-0.9
		0.9s		14.70nm	4.3mb	
LOR		20.75	314	eP	33 02.40	-0.4
		0.8s		21.40nm	4.5mb	
AVF		20.83	312	eP	33 04.10	0.5
		0.4s		1.90nm	3.8mb	
SSF		20.87	313	eP	33 03.70	-0.2
		0.9s		21.20nm	4.5mb	
CAF		20.90	306	eP	33 05.20	0.9
BGF		21.04	311	eP	33 06.00	0.3
		0.6s		7.20nm	4.2mb	
MEM		21.49	324	iP	33 14.40	4.3X
ENN		21.63	324	eP	33 16.00	4.5X
		0.7s		10.00nm	4.3mb	
DOU		21.88	321	P	33 13.80	-0.2
				e	45 23.90	
SNF		22.29	322	P	33 25.40	7.3X
EKA		28.75	325	P	34 24.00	5.5X
		0.9s		5.60nm	4.2mb	
BNG		30.93	194	ePc	33 06.80	-91.4X
		0.4s		3.00nm		
				ic	34 32.10	
TIC		39.94	233	P	36 02.70	7.7X
KIC		39.97	232	P	36 01.50	6.2X

S.D. = 1.2 on 47 of 59 obs.

JUL 17, 1989 14h 36m 00.50± 0.80s
44.555 N ± 6.9km 6.827 E ± 6.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

FOUF		0.04	232	ePg	36 02.70	0.1
				eSg	36 03.73	
PZZ		0.20	104	P	36 05.40	0.4
				S	36 08.57	
RRL		0.37	355	P	36 08.00	-0.1
				S	36 13.39	
STV		0.47	131	P	36 09.81	-0.3
				S	36 16.67	
ENR		0.54	127	P	36 11.28	-0.1
				S	36 18.21	
ROB		0.79	109	P	36 15.94	0.0
				S	36 26.31	

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

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* JUL 17, 1989 15h 09m 27.92± 0.32s
55.695 S ± 8.3km 26.535 W ±10.4km
DEPTH = 33.0km (normal)
5.1mb (6 obs.) 5.2Msz (2 obs.)
SOUTH SANDWICH ISLANDS REGION (153)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 29C
Centroid Location:
Origin Time 15:09:33.6 1.0
Lat 55.51S 0.07 Lon 26.41W 0.18
Dep 27.3 5.3 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 5.91 0.38 Mtt=-2.47 0.57
Mff=-3.44 0.50 Mrt=-0.37 1.06
Mrf= 5.01 1.41 Mtf= 4.72 0.48
Principal Axes:
T Val= 8.34 Plg=62 Azm=290
N 0.50 22 149
P -8.84 16 53
Best Double Couple:Mo=8.6*10**16
NP1:Strike=113 Dip=35 Slip= 48
NP2: 341 65 115

SNA		18.10	153	iPd	13 38.20	0.2
		1.0s		45.00nm	4.6mb	
AIA		20.58	227	eP	14 11.60	5.5X
SPA		34.49	180	ePc	16 13.70	-0.9
		1.0s		34.50nm	5.2mb	
VAO		35.99	327	e(P)	16 29.00	1.4
PPD		38.34	321	eP	16 47.50	0.3
				e	16 55.90	
SBA		46.46	184	eP	17 53.30	0.6
SOB1		47.73	341	eP	18 03.00	-0.5
ITR		47.75	344	eP	18 02.10	-1.4
				e	18 08.20	
				e	18 16.10	
KSR		48.58	75	eP	18 09.00	-1.2
		0.7s		6.00nm	4.7mb	
SLR		49.44	76	eP	18 16.00	-0.7
	Z	20s		4.26um	5.4Msz	
CNCB		49.95	304	iPc	18 21.20	0.0
LPB		50.25	304	Pc	18 24.00	0.7
	Z	20s		1.42um	5.0Msz	
				eLR	33 48.00	
ZOBO		50.49	304	iPc	18 24.90	-0.4
		1.1s		101.51nm	5.7mb	
				LR	34 34.00	
ARE		51.93	301	eP	18 36.00	0.1
BUL		54.11	72	iPd	18 51.90	0.0
ATB		56.20	329	Pd	19 07.20	0.4
NNA		58.40	298	iP	19 21.00	-1.5
		1.0s		25.00nm	5.3mb	
BNG		70.41	49	ePd	20 51.30	10.7X
		0.5s		8.00nm		
MSZ		79.26	190	P	21 29.10	-1.8
KRP		84.86	197	eP	21 58.50	-1.6
ADE		88.82	168	iPd	22 20.00	0.4
CAN		89.27	176	eP	22 22.60	0.9
BWA		90.14	176	eP	22 26.70	0.9
ASPA		99.22	162	iPd	23 06.60	-0.9
		0.8s		6.00nm	5.2mb	
NB2		120.14	20	PKP	28 15.60	0.1
KVN		121.95	293	ePKP	28 20.00	0.1
FRB		123.45	339	ePKP	28 21.00	-0.6
SUF		124.99	27	ePKP	28 25.00	0.3
		0.7s		2.40nm		
YKA		136.15	318	ePKP	28 47.50	1.5
MBC		143.80	336	ePKPd	28 57.60	-1.8
		0.9s		19.00nm		
INK		145.76	321	ePKP	29 03.00	0.1
		0.7s		37.00nm		
NJ2		146.20	120	PKPd	29 06.50	1.7
SSE		146.54	124	ePKP	29 07.20	1.9
BTO		147.92	100	PKP	29 11.40	4.0X
TIA		148.61	113	ePKP	29 10.20	1.7
TOA		149.22	307	ePKPc	29 13.60	4.8X
PMR		150.43	305	ePKP	29 15.70	5.3X
		1.1s		18.80nm		
FBA		150.56	312	ePKP	29 15.40	4.8X
BJI		150.93	107	ePKP	29 18.50	6.6X
KDC		150.93	297	ePKP	29 17.40	6.1X
IMA		153.13	314	ePKP	29 22.30	7.8X
		1.0s		10.00nm		
TTA		153.85	307	ePKP	29 23.80	8.3X

S.D. = 1.1 on 32 of 42 obs.

JUL 17, 1989 15h 09m 43.99± 0.72s
47.496 N ± 5.5km 13.077 E ± 9.0km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 2.6 (FUR), 2.3 (KBA).

BHG		0.26	329	iPgc	09 47.90	-1.6
KBA		0.46	156	iPgd	09 52.10	-1.2
				iSg	09 58.00	
FVI		0.93	193	Pc	10 01.10	-0.5
				eSg	10 12.90	
SCE		1.04	244	ePg	10 03.20	-0.5
RBL		1.11	162	Pd	10 04.20	-0.6
				eSg	10 19.70	
FUR		1.39	300	iPgc	10 09.60	0.2
OGA		1.53	247	eP	10 13.20	1.6
VOY		1.57	159	ePn	10 13.80	1.8
				eSn	10 35.30	
WET		1.66	356	iP	10 13.50	0.3
KHC		1.67	11	Pg	10 14.10	0.7
				Sg	10 35.30	
TRI		1.85	165	iP	10 42.90	26.9X
PRU		2.68	21	ePg	10 31.40	3.5X
				e	10 33.00	
				Sg	11 05.60	
HOF		2.93	345	eP	10 37.50	6.0X
ARV		4.00	181	Pc	11 52.10	65.4X
				eSg	11 54.30	

S.D. = 1.3 on 10 of 14 obs.

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* JUL 17, 1989 15h 19m 50.12± 0.91s
44.569 N ± 7.8km 6.850 E ± 8.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (GEN).

FOUF		0.06	231	ePg	19 52.58	0.2
				eSg	19 53.57	
PZZ		0.19	110	P	19 55.34	0.9
				S	19 58.40	
RRL		0.35	352	P	19 57.29	-0.2
				S	20 02.42	
STV		0.47	134	P	19 59.22	-0.5
				S	20 06.36	
ENR		0.53	130	P	20 00.48	-0.5

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

? JUL 17, 1989 16h 49m 44.14± 3.20s
18.292 N ±11.4km 100.619 W ±32.0km
DEPTH = 33.0km (normal)
GUERRERO, MEXICO (59)

III		1.10	85	iPc	50 03.90	0.5
				iS	50 19.90	
CRX		1.42	39	iP	50 09.80	1.6
ACX		1.59	153	eP	50 10.20	-0.1
				(S)	50 39.00	
UNM		1.71	53	eP	50 10.80	-1.5
				iS	50 27.80	
IIC		1.95	41	iPd	50 15.20	-0.7
				iS	50 33.30	
IIT		2.31	71	eP	50 20.20	-0.7
				iS	51 03.30	
IISM		3.15	77	iP	50 33.50	0.9
				(S)	51 32.70	

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

% JUL 17, 1989 17h 33m 01.02± 1.21s
16.886 N ±21.8km 94.458 W ± 9.7km
DEPTH = 33.0km (normal)
OAXACA, MEXICO (60)

SCX		1.75	95	eP	33 29.50	-0.1
				iS	33 49.50	
EVV		1.78	332	eP	33 30.20	0.3
				(S)	33 49.50	
OXX		2.18	275	iPd	33 36.80	1.0
				iS	34 07.00	
LVVM		3.41	327	(P)	33 49.00	-4.2X
				(S)	34 26.80	
IIT		4.23	301	eP	34 05.20	0.1
III		5.00	288	iPc	34 14.70	-1.3

S.D. = 1.2 on 5 of 6 obs.

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* JUL 17, 1989 19h 47m 01.81± 3.18s
51.215 N ±25.3km 15.970 E ±17.3km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.3 (VKA).

KSP		0.42	151	iP	47 10.50	0.0
		0.3s		62.00nm		
				iS	47 20.00	
BRG		1.32	256	iPg	47 26.60	0.4
				iSg	47 46.40	
PRU		1.53	217	ePn	47 29.50	0.3
				Pg	47 32.00	
				eSn	47 48.50	
				Sg	47 55.40	
				i	48 02.10	

CLL	1.87	274	ePg	47 35.00	1.0
			eSg	48 00.00	
KHC	2.59	217	Pg	47 45.00	0.5
			Sn	48 21.50	
			Sg	48 29.50	
HOF	2.75	252	ePn	47 44.60	-2.2
WET	2.87	225	ePn	47 48.70	0.2
VKA	2.96	175	ePn	47 49.50	-0.2
			ePg	47 59.00	
			iSg	48 41.30	

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

JUL 17, 1989 20h 10m 22.25± 0.73s
34.038 N ± 6.6km 110.946 W ± 8.2km
DEPTH = 5.0km (geophysicist)
EASTERN ARIZONA (495)
ML 3.0 (NEIS). Felt (IV) at Forest Lakes and Young.

FLAG	1.26	333	P	10 46.30	-0.1
			S	10 59.30	
SCN	1.42	340	P	10 42.00	-6.9X
WMZ	1.59	315	P	10 50.40	-1.0
			S	11 11.90	
TDM	1.80	186	P	10 54.20	0.0
GCAZ	2.22	334	P	11 00.60	0.3
			S	11 26.30	
GLA	3.39	254	eP	11 17.20	0.3
ALO	3.82	75	e(Pn)	11 23.00	-0.2
			ePg	11 28.90	
			eLg	12 17.50	
			e	12 24.00	
PV05	4.30	20	P	11 37.00	7.0X
PV01	4.52	25	P	11 39.70	6.6X
PV02	4.53	23	P	11 40.10	6.8X
MSU	4.58	348	eP	11 34.50	0.6
PV04	4.65	20	P	11 41.80	6.9X
PV06	4.73	24	P	11 42.70	6.5X
RW5	4.76	31	P	11 45.40	8.7X
PV07	4.77	22	P	11 44.40	7.7X
RW1	4.93	30	P	11 46.80	7.8X

S.D. = 0.6 on 7 of 16 obs.

? JUL 17, 1989 20h 31m 48.98± 2.55s
4.326 S ±24.0km 133.576 E ±20.1km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
WEST IRIAN REGION (196)

AAI	5.41	277	eP	33 09.50	0.1
MTN	8.80	196	eP	33 58.00	1.0
			eS	35 35.00	
KNA	12.30	202	eP	34 43.30	-1.4
			eS	37 00.00	
WB5	15.48	177	eP	35 25.40	-1.2
			eS	38 12.70	
ASPA	19.23	179	iPd	36 15.30	1.9
	0.8s		18.00nm		4.4mb
			eS	39 39.00	
CTA	19.95	143	iPd	36 21.00	-0.3
	0.6s		7.33nm		4.2mb

S.D. = 1.6 on 6 of 6 obs.

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* JUL 17, 1989 20h 56m 32.39± 2.70s
17.394 N ±19.9km 61.119 W ±14.2km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.8 (FDF).

ANG	0.72	251	eP	56 47.09	0.6
BPA	0.79	244	eP	56 47.78	0.1
DEG	1.08	177	eP	56 53.00	0.3
			S	57 04.70	
MGH	1.24	238	iPd	56 54.90	-0.6
			S	57 10.00	
NEV	1.41	260	eP	56 57.75	-0.4
			eS	57 14.95	
PAG	1.46	202	eP	56 58.80	0.0
			S	57 16.50	
MGG	1.48	187	eP	56 59.10	0.1
SKI	1.55	268	eP	57 00.27	0.2
			eS	57 10.98	
BBL	1.89	191	eP	57 05.30	0.2
CRM	2.63	176	eP	57 14.10	-1.6
FDF	2.65	181	eP	57 15.64	-0.3
	0.1s		0.40nm		
			S	57 44.10	
MVM	2.83	176	eP	57 18.60	0.1
BIM	2.86	179	eP	57 20.22	1.3

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

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* JUL 17, 1989 20h 59m 27.12± 3.38s
17.336 N ±23.6km 61.213 W ±18.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.2 (FDF).

ANG	0.62	253	eP	59 40.26	0.7
DEG	1.03	172	eP	59 46.55	0.0
MGH	1.14	238	eP	59 48.00	-0.5
			S	00 03.00	
NEV	1.31	261	eP	59 50.97	-0.4
			eS	00 08.63	
PAG	1.37	199	eP	59 52.35	0.0
			S	00 19.90	
MGG	1.41	184	eP	59 52.75	-0.1
SKI	1.46	270	eP	59 53.54	0.0
			eS	00 11.51	
BBL	1.82	188	eP	59 59.00	0.2

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

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* JUL 17, 1989 21h 02m 55.01± 3.03s
17.420 N ±20.5km 61.188 W ±16.8km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.2 (FDF).

ANG	0.67	247	eP	03 08.64	0.4
BPA	0.74	240	eP	03 09.38	-0.2
			eS	03 18.50	
MGH	1.20	235	iP	03 17.50	0.0
			S	03 32.00	
NEV	1.35	258	eP	03 19.66	-0.2
PAG	1.46	199	iP	03 21.10	-0.4
			S	03 38.20	
SKI	1.48	267	eP	03 21.79	0.0
MGG	1.50	185	eP	03 22.60	0.7
BBL	1.91	188	eP	03 27.50	-0.4

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

& JUL 17, 1989 21h 38m 05.80s
36.362 N 120.377 W
DEPTH = 2.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

PRI	0.32	227	iPd	38 12.20	0.0
PKEM	0.37	144	eP	38 13.80	0.6
LLA	0.52	299	ePc	38 15.20	-1.0
PHAM	0.53	182	eP	38 16.00	-0.3
PRS	0.80	268	eP	38 20.90	-0.9
FRI	0.83	40	eP	38 20.00	-2.3
			iS	38 31.40	
SAO	0.95	295	iPc	38 23.10	-1.6
BCH	1.20	168	eP	38 27.00	-2.0
ARN	1.35	317	eP	38 29.30	-2.3
MHC	1.41	314	ePc	38 31.30	-1.2
GCC	1.46	298	ePc	38 30.90	-2.3
CMB	1.67	360	ePc	38 34.10	-2.1
			eS	38 55.40	
KVN	3.24	33	eP	38 56.20	-2.6

13 obs. associated

JUL 17, 1989 21h 44m 40.56± 0.72s
31.364 N ± 5.2km 49.515 E ± 4.1km
DEPTH = 37.2 ± 7.6 km
4.7mb (12 obs.)
WESTERN IRAN (347)

SHI	3.11	123	iP	45 30.50	1.9
KER	3.60	326	eP	45 36.00	0.5
TEH	4.63	19	eP	45 49.50	-0.6
BHD	4.74	295	ePn	45 52.00	0.5
			e	46 13.50	
			i	46 26.50	
			iSn	46 32.00	
			iSg	46 47.50	
			i	47 23.50	
			e	47 28.00	
DHR	5.07	174	iPd	45 58.20	2.0
SLY	5.39	323	ePnd	46 01.00	0.4
			iP*	46 13.50	
			ePg	46 23.50	
			iSn	47 00.00	
			iS*	47 10.00	
			iSg	47 19.50	
RYD	7.10	202	iPd	46 24.00	-0.7
TAB	7.18	339	eP	46 30.00	4.0X
			e	46 40.00	
MSL	7.28	315	ePnd	46 22.00	-5.3X
			iSn	47 42.00	
QASM	7.43	226	iPd	46 27.30	-2.0
MAIO	9.65	57	eP	46 59.00	-1.1
			eS	48 43.00	
MASJ	11.78	275	Pd	47 28.10	-1.0
DSI	12.07	275	e(P)	47 41.00	8.0X
PRNI	12.52	269	eP	47 40.00	1.0
HQL	12.67	264	ePd	47 40.00	-1.0
BADA	12.90	261	ePd	47 42.40	-1.6
TAIF	12.96	221	ePc	47 43.00	-2.0
ABHA	14.42	207	eP	48 09.50	5.1X
BBTK	16.02	306	eP	48 30.00	5.2X
ELL	17.10	294	eP	48 41.90	3.4X
KHL	17.80	298	eP	48 49.00	1.9
DST	18.86	302	eP	48 51.00	-9.2X
EZN	20.62	301	eP	49 16.00	-3.2X
VRI	22.85	316	ePc	49 45.00	3.6X
KSH	22.97	62	eP	49 45.00	2.1
Z	16s		1.80um		4.6MszX
MLR	23.13	314	ePc	49 48.00	3.7X
CMP	23.58	313	iPd	49 56.00	7.4X
AAE	24.37	207	eP	50 01.40	4.6X
KBN	24.90	300	eP	50 03.50	2.2
PHP	25.43	302	iPc	50 07.40	1.1
TPE	25.43	299	eP	50 04.00	-2.4
TIR	25.76	301	eP	50 11.50	2.0
BZS	25.90	311	eP	50 12.00	1.3
LACI	25.95	302	eP	50 12.50	1.4
SPC	28.30	317	eP	50 39.50	6.7X
SRO	28.86	314	eP	50 50.80	13.2X
ZST	29.76	314	eP	50 44.60	-1.1
KBA	31.78	310	iPd	51 03.50	-0.2
	1.1s		26.30nm		5.0mb
			i	51 05.20	
			i	51 15.50	
KHC	32.28	314	iPc	51 08.50	0.6
			e	51 16.30	
WMQ	32.43	57	P	51 08.50	-0.8
BRG	32.69	317	e(P)	51 10.00	-1.4
CLL	33.41	317	eP	51 21.00	3.4X
NUR	33.48	338	iP	51 16.50	-1.6
	0.8s		17.60nm		5.0mb
Z	16s		0.20um		3.9MszX
			LR	06 40.00	
GRF	33.92	314	eP	51 22.00	-0.1
SUF	34.76	341	iP	51 27.90	-1.2
SBF	35.23	303	eP	51 30.40	-3.0X
	1.0s		12.00nm		4.8mb
UPP	35.54	333	iP	51 37.50	1.7
LPG	35.92	306	eP	51 39.70	0.2
	0.8s		8.00nm		4.7mb
HFS	37.29	331	eP	51 49.10	-1.4
	0.5s		3.50nm		4.5mb
LBF	38.03	308	eP	51 56.50	-0.4
	0.8s		4.50nm		4.4mb
SMF	38.08	307	eP	51 57.00	-0.3
	0.8s		13.40nm		4.9mb
LOR	38.15	308	eP	51 57.80	-0.1
	0.8s		2.60nm		4.1mb
DOU	38.16	313	P	52 00.20	2.3
SSF	38.36	308	eP	51 59.00	-0.7
	0.8s		5.30nm		4.4mb
NB2	38.82	331	P	52 02.10	-1.3
BNG	39.55	234	iPd	52 10.50	0.6
	0.5s		12.00nm		4.9mb
			id	52 18.80	
KEV	40.48	348	eP	52 17.00	0.1
FLN	41.22	310	eP	52 23.50	0.2
GTA	41.34	64	Pc	52 24.80	0.2
EKA	43.83	319	P	52 52.00	7.5X
	1.0s		5.30nm		4.3mb
LZH	44.95	69	eP	52 54.00	0.0
DLE	45.50	316	eP	53 01.00	3.1X
DMU	45.78	317	eP	53 01.00	0.9
DCN	45.94	316	eP	53 02.00	0.6
CHG	46.13	94	eP	53 03.10	-0.3
BDT	46.87	95	eP	53 09.80	0.6
LOE	49.13	94	eP	53 31.40	4.6X
NNT	49.72	100	eP	53 31.00	-0.3
GYA	49.80	80	P	53 31.80	-0.2
TIY	51.37	65	eP	53 43.20	-0.5

17d 21h

```
WHN     54.85   73 eP     54 09.50    0.0
BUL     55.00  204 iPd    54 11.20    0.4
KIC     56.38  256 P      54 21.40    0.6
TIC     56.46  256 P      54 21.80    0.5
LIC     56.69  256 Pc     54 23.60    0.6
NJ2     58.01   70 Pc     54 31.20   -0.8
CN2     59.48   55 eP     54 40.00   -2.1
SLR     60.30  202 eP     54 40.00   -8.0X
KSR     60.87  203 eP     54 49.00   -3.0X
BLF     64.10  203 eP     55 02.00  -11.4X
FRB     73.45  336 eP     56 10.00   -0.5
SCH     78.29  328 eP     56 38.00   -0.1
INK     80.61    1 eP     56 49.00   -1.2
FBA     83.10    7 eP     57 08.70    5.3X
        0.9s      8.85nm              4.8mb
YKA     85.60  353 eP     57 22.10    6.1X
SVW     85.60   12 eP     57 15.80   -0.4
TOA     86.00    7 eP     57 19.40    1.3
PMR     86.14    9 eP     57 18.80    0.1
RSSD   101.09  341 ePdiff58 13.20  -15.0X
SPA    121.19  180 e(PKP)03 33.20    2.9X
        0.7s      3.52nm
      S.D. = 1.2  on  64 of  90 obs.
-----------------------------------------
*  JUL 17, 1989  21h 53m 54.03± 0.80s
   2.463 N ± 7.9km   79.551 W ±16.3km
   DEPTH =  15.5 ±  5.6 km
   4.3mb (  2 obs.)  3.5Msz (  1 obs.)
 SOUTH OF PANAMA                 ( 83)

COTA    2.44  150 eP     54 33.50   -0.8
GGP     2.79  160 eP     54 38.50   -0.9
                S      55 12.00
QUR     2.81  159 P+     54 38.80   -0.7
                S      55 11.80
RECU    3.23  162 eP     54 46.40    0.7
UPA     6.48    0 eP     55 31.00   -0.1
                e      56 42.60
ZOBO   21.77  149 P      58 47.60   -0.2
       1.1s     14.50nm             4.3mb
     Z 22s       0.21um             3.5Msz
                LR     06 08.00
LPB    22.00  149 eP     58 50.00    0.0
CNCB   22.30  150 P      58 53.00   -0.1
ATB    27.90  102 e(P)   59 46.10    0.5
ALQ    40.86  325 eP     01 38.00    0.8
       1.0s      7.00nm             4.3mb
                e      01 43.90
                e      01 53.90
                e      03 09.50
RSSD   46.81  336 eP     02 12.10  -13.0X
LIC    74.36   84 P      05 33.70    0.2
TIC    74.36   84 P      05 33.80    0.3
KIC    74.64   84 P      05 35.00   -0.1
MBC    76.99  351 eP     05 46.00   -1.3
       0.9s      4.00nm             4.5mb X
     S.D. = 0.7  on  14 of  15 obs.
-----------------------------------------
?  JUL 17, 1989  22h 06m 41.49± 3.50s
   61.135 N ±12.2km    3.875 E ±26.9km
   DEPTH =  10.0km  (geophysicist)
 NORWEGIAN SEA                   (642)
      MD 1.8 (BER).

SUE     0.44  100 eP     06 51.17    0.8
                eS     06 57.06
ASK     0.92  135 eP     06 59.31    0.3
                iSg    07 12.47
HYA     1.12   87 iP     07 02.30   -0.2
                eS     07 17.33
ODD1    1.83  131 eP     07 13.44    0.1
                eS     07 38.76
MOL     2.26   49 eP     07 20.08    0.7
                eS     07 44.74
                iSg    07 49.96
NRA0    3.76   93 eP     07 39.10   -1.7
                eS     08 20.60
                eSg    08 39.10
     S.D. = 1.2  on   6 of   6 obs.
-----------------------------------------
*  JUL 17, 1989  22h 15m 05.39± 2.90s
   39.917 N ±19.8km   22.414 E ±16.4km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)
      ML 2.4 (THE).

LIT     0.19   18 iPgc   15 09.60   -0.1
                iSg    15 18.10
THE     0.83   30 ePb    15 22.30    0.9
PAIG    0.97   89 ePb    15 23.70   -0.2
                eSb    15 40.50
GRG     1.04  359 ePb    15 24.30   -0.7
KNT     1.30   16 ePb    15 20.30   -9.1X
VAY     1.41    5 ePn    15 30.30   -0.7
SKO     2.18  341 ePn    15 43.00    0.8
      S.D. = 0.9  on   6 of   7 obs.
-----------------------------------------
*  JUL 17, 1989  22h 46m 19.47± 3.48s
   39.926 N ±19.1km   22.272 E ±20.6km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)
      ML 2.4 (THE).

LIT     0.24   44 iPgc   46 24.10   -0.5
                eSg    46 28.40
THE     0.88   37 ePgd   46 36.60    0.2
GRG     1.03    5 ePg    46 38.50   -0.5
PAIG    1.08   89 ePb    46 39.60   -0.2
                eSb    46 55.00
KNT     1.32   21 ePbc   46 44.60    0.7
OUR     1.37   72 ePb    46 44.80    0.2
VAY     1.41    9 ePn    46 45.00   -0.2
SRS     1.56   40 ePb    46 47.60    0.3
      S.D. = 0.5  on   8 of   8 obs.
-----------------------------------------
?  JUL 17, 1989  23h 03m 48.49± 2.99s
   22.246 S ±21.9km  170.129 E ±22.8km
   DEPTH = 162.4 ± 24.3 km
   4.8mb (  4 obs.)
 LOYALTY ISLANDS REGION          (189)

DZM     3.42  272 iPd    04 42.10   -0.2
                iS     05 27.20
MNG    18.87  167 P      07 58.90    0.2
       0.6s     50.00nm             5.1mb
PGZ    19.04  166 P      08 00.10   -0.3
       0.7s     29.00nm             4.8mb
RMQ    19.92  253 iPd    08 14.30    4.7X
CTA    22.36  271 iPc    08 36.60    2.8
       1.0s     18.00nm             4.5mb
ASPA   33.33  260 iPc    10 12.70   -0.4
       0.9s     17.00nm             4.8mb
WB5    33.41  267 eP     10 12.20   -1.5
CHG    80.66  295 eP     15 43.50   -1.4
KSP   144.91  331 iPKPc  23 03.00   -4.5X
       1.0s     31.00nm
BRG   145.92  333 iPKPc  23 05.50   -3.6X
       1.0s     20.00nm
SRO   145.94  325 iPKP   23 06.60   -2.7
CLL   145.98  334 iPKPc  23 05.50   -3.7X
       1.0s     21.00nm
PRU   146.31  331 ePKP   23 06.00   -3.8X
                e      23 07.10
ZST   146.32  327 ePKP   23 07.40   -2.5
SKO   147.25  314 iPKP   23 10.60   -1.0
BNG   147.28  241 iPKPc  23 13.10    0.6
       0.6s     13.00nm
KHC   147.36  331 iPKPc  23 11.00   -0.6
       1.0s      8.50nm
GRF   147.95  334 ePKP   23 12.00   -0.5
KBA   148.95  329 e(PKP)23 13.00   -1.4
       0.6s      3.90nm
                i      23 17.30
TOD   148.97  336 ePKPc  23 13.93   -0.2
MEM   149.08  340 PKP    23 14.20    0.1
ABH   149.19  338 ePKPc  23 14.80    0.4
RUP   149.51  338 ePKPc  23 15.63    0.7
WLF   149.85  339 PKP    23 16.40    1.1
DOU   149.96  341 PKPd   23 16.60    1.1
CDF   150.52  336 ePKP   23 17.90    1.3
FEL   150.68  335 ePKPc  23 17.60    0.7
BSF   151.18  336 ePKP   23 19.30    1.7
       1.1s      9.70nm
HAU   151.20  337 ePKP   23 19.40    1.9
       1.1s     19.50nm
LOR   152.69  339 ePKP   23 22.90    3.2X
       1.1s      4.80nm
SSF   152.99  340 ePKP   23 23.40    3.3X
     S.D. = 1.4  on  24 of  31 obs.
-----------------------------------------
*  JUL 17, 1989  23h 04m 20.78± 3.17s
   39.885 N ±18.2km   22.288 E ±18.7km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)

LIT     0.27   36 iPgc   04 26.20   -0.2
                eSg    04 28.40
THE     0.91   35 ePb    04 38.60    0.5
PAIG    1.07   87 ePbc   04 41.10    0.2
                eSb    04 57.20
GRG     1.07    5 ePb    04 40.80   -0.2
KNT     1.36   20 ePbc   04 46.20    0.5
                iSb    05 07.00
OUR     1.37   70 ePb    04 45.70   -0.2
VAY     1.45    8 ePn    04 47.00    0.0
SRS     1.58   39 ePb    04 48.50   -0.4
      S.D. = 0.4  on   8 of   8 obs.
-----------------------------------------
*  JUL 17, 1989  23h 35m 58.25± 2.58s
   39.823 N ±17.3km   22.190 E ±13.4km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)
      ML 2.2 (THE).

LIT     0.36   40 iPgd   36 04.80   -0.9
                eSg    36 13.20
THE     1.00   36 ePg    36 17.40    0.2
GRG     1.14    8 ePb    36 19.50   -0.2
PAIG    1.15   84 iPbc   36 19.40   -0.4
                eSb    36 35.50
KNT     1.44   22 ePbc   36 25.50    1.1
                eSb    36 48.00
OUR     1.47   69 ePb    36 24.70    0.0
VAY     1.52   11 ePn    36 25.40   -0.1
SRS     1.68   39 ePb    36 28.70    0.9
SKO     2.22  345 ePn    36 35.00   -0.6
      S.D. = 0.8  on   9 of   9 obs.
-----------------------------------------
*  JUL 18, 1989  03h 33m 51.27± 1.51s
   39.161 S ±18.5km  176.060 E ±22.8km
   DEPTH =  10.0km  (geophysicist)
 NORTH ISLAND, NEW ZEALAND       (159)

WHH     0.44   51 eP     34 00.20    0.0
PGZ     1.46  174 eP     34 18.10    0.4
MNG     1.52  197 eP     34 19.70    1.2
                eS     36 22.30
MTW     2.04  192 eP     34 24.90   -1.1
CAW     2.09  201 eP     34 26.20   -0.5
MRW     2.31  206 eP     34 29.60   -0.4
                eS     36 40.90
TCW     2.46  213 eP     34 32.60    0.5
      S.D. = 0.9  on   7 of   7 obs.
-----------------------------------------
   JUL 18, 1989  03h 42m 52.59± 0.47s
   39.827 N ± 4.8km   22.289 E ± 4.0km
   DEPTH =  10.0km  (geophysicist)
 GREECE                          (364)
      MD 3.3 (ATH). ML 2.9 (THE).

LIT     0.31   29 iPgc   42 59.20    0.1
                eSg    43 06.90
KZN     0.62  321 ePg    43 00.90   -4.3X
NEO     0.89  125 ePg    43 09.10   -0.6
THE     0.96   33 ePgd   43 10.70   -0.1
PLG     1.04   58 ePg    43 12.00   -0.3
PAIG    1.08   84 ePb    43 12.90    0.1
                eSb    43 29.30
GRG     1.13    4 ePb    43 13.10   -0.7
                eSb    43 32.70
LSK     1.34  285 ePn    43 06.60  -10.7X
KBN     1.38  306 ePn    43 15.60   -2.2
OUR     1.39   68 iPbc   43 18.20    0.2
KNT     1.41   19 iPbd   43 18.50    0.2
                eSb    43 40.70
VAY     1.51    8 iPn    43 19.00   -0.6
SRS     1.63   37 ePbd   43 22.00    0.6
SRN     1.76  272 ePn    43 22.90   -0.4
TPE     1.81  286 ePn    43 26.00    2.0
KEK     1.92  267 ePg    43 25.60   -0.1
8ERA    1.99  297 ePn    43 26.50   -0.1
MMB     2.07   31 iPd    43 28.00    0.1
VLS     2.11  219 ePn    43 27.20   -1.2
SKO     2.24  344 iPn    43 32.00    1.8
PHP     2.33  324 ePn    43 28.00   -3.5X
TIR     2.39  310 ePn    43 34.00    1.6
ITM     2.66  186 ePb    43 37.50    1.2
KKS     2.66  328 ePn    43 35.40   -0.8
PUK     2.86  321 ePn    43 38.40   -0.7
      S.D. = 1.0  on  22 of  25 obs.
-----------------------------------------
   JUL 18, 1989  03h 50m 26.60± 0.60s
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39.838 N ± 6.0km 22.202 E ± 4.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.2 (ATH). ML 2.8 (THE).

LIT	0.34	40	iPgc	50	33.50	-0.2
KZN	0.57	325	ePg	50	35.90	-2.4
NEO	0.95	124	ePg	50	43.70	-1.0
THE	0.99	36	Pg	50	45.90	0.6
PLG	1.09	60	ePg	50	47.00	-0.2
GRG	1.13	8	ePb	50	47.80	0.1
			eSb	51	07.70	
PAIG	1.14	85	ePb	50	47.30	-0.6
			eSb	51	04.00	
LSK	1.27	285	ePn	50	49.60	-0.6
KBN	1.32	307	ePn	50	50.00	-1.0
KNT	1.42	22	ePbd	50	53.30	0.8
			eSb	51	17.20	
OUR	1.45	69	ePbc	50	52.50	-0.4
			eSb	51	13.80	
VAY	1.51	11	ePn	50	54.00	0.4
SRS	1.66	39	ePb	50	57.20	1.3
SRN	1.69	272	ePn	50	57.40	1.1
TPE	1.74	286	ePn	51	01.50	4.4X
BERA	1.93	297	ePn	51	03.00	3.3X
VLS	2.08	218	ePn	51	02.90	0.9
SKO	2.21	345	ePn	51	08.00	4.2X
PHP	2.28	325	ePn	51	04.50	-0.3
ITM	2.66	185	ePb	51	15.00	4.7X
PUK	2.81	322	e(Pn)	51	13.90	1.5
BCI	3.00	328	e(Pn)	51	21.70	6.8X

S.D. = 1.1 on 17 of 22 obs.

• JUL 18, 1989 04h 01m 12.21± 2.58s
39.860 N ±17.3km 22.251 E ±13.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.6 (THE).

LIT	0.30	37	ePgd	01	18.00	-0.5
			eSg	01	25.60	
THE	0.95	35	ePgd	01	30.30	0.1
GRG	1.10	6	ePbd	01	32.40	-0.5
			eSb	01	51.10	
PAIG	1.10	86	ePbc	01	31.90	-1.0
			iSb	01	48.40	
KNT	1.39	21	ePbd	01	38.70	1.1
			eSb	02	00.30	
OUR	1.41	70	ePb	01	38.80	0.9
VAY	1.48	9	ePn	01	38.50	-0.3
SRS	1.62	39	ePb	01	41.40	0.5
SKO	2.20	344	ePn	01	49.00	-0.3

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

• JUL 18, 1989 04h 10m 41.04± 0.62s
0.853 S ±23.4km 24.493 W ±14.6km
DEPTH = 10.0km (geophysicist)
CENTRAL MID-ATLANTIC RIDGE (406)

ITR	15.94	240	e(P)	14	29.00	1.8
KIC	20.98	70	P	15	26.30	-0.7
KUK	25.08	73	eP	16	18.00	10.6X
BAO	27.45	236	eP	16	29.30	-0.2
BNG	43.32	83	iPc	18	45.60	0.3
	0.8s		11.00nm			4.7mb
			id	18	52.50	
ZOBO	45.64	248	P	19	03.50	-1.0
	Z 24s		0.15um			3.9MszX
			LR	33	20.00	
CNCB	45.65	247	eP	18	55.00	-9.6X
LPB	45.68	248	eP	19	03.00	-1.7
			eLR	35	20.00	
KHC	59.61	28	eP	20	48.10	0.6
SPA	89.15	180	e(P)	23	37.70	-0.4
	1.0s		5.00nm			4.7mb
MBC	91.99	346	eP	23	51.00	0.2
ASPA	147.83	141	ePKP	30	27.00	1.2
			i	30	33.00	

S.D. = 1.2 on 10 of 12 obs.

JUL 18, 1989 04h 12m 33.52± 0.53s
39.840 N ± 5.2km 22.263 E ± 4.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.4 (ATH). ML 3.0 (THE).

LIT	0.31	34	iPgc	12	40.00	0.0
			eSg	12	47.50	
KZN	0.60	321	ePg	12	42.20	-3.5X
NEO	0.91	125	ePg	12	50.20	-0.8
THE	0.96	34	iPgd	12	52.10	0.4
PLG	1.05	59	ePg	12	53.40	0.0
PAIG	1.09	85	ePbc	12	53.90	-0.2
			eSb	13	11.40	
GRG	1.12	5	ePbc	12	54.50	0.0
			eSb	13	13.20	
LSK	1.31	284	ePn	12	53.10	-4.8X
KBN	1.36	306	ePn	12	56.30	-2.1
KNT	1.41	20	ePbc	13	00.50	1.3
			eSb	13	21.60	
OUR	1.41	69	ePbd	12	59.50	0.3
			eSb	13	22.90	
VAY	1.50	9	iPn	13	01.20	0.8
SRS	1.63	38	ePbd	13	02.50	0.2
SRN	1.74	272	ePn	13	03.90	0.0
TPE	1.79	285	ePn	13	07.70	3.1X
BERA	1.97	297	ePn	13	09.30	2.1
MMB	2.07	32	eP	13	08.00	-0.8
VLS	2.11	219	ePn	13	09.00	-0.3
KKB	2.12	17	eP	13	08.00	-1.4
SKO	2.22	344	iPn	13	12.60	1.7
PHP	2.31	324	ePn	13	10.40	-1.7
TIR	2.37	310	ePn	13	14.20	1.2
LACI	2.64	314	ePn	13	16.70	-0.2
ITM	2.67	186	ePn	13	18.30	1.0
PUK	2.84	322	ePn	13	18.40	-1.3

S.D. = 1.1 on 22 of 25 obs.

JUL 18, 1989 05h 03m 50.31± 0.44s
39.827 N ± 4.1km 22.301 E ± 4.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.3 (ATH).

LIT	0.31	28	ePg	03	56.50	-0.3
			iSg	04	04.30	
KZN	0.63	320	ePg	03	59.40	-3.6X
NEO	0.88	126	ePg	04	07.00	-0.3
THE	0.95	32	ePg	04	08.20	-0.2
PLG	1.03	58	ePg	04	10.00	0.1
PAIG	1.07	84	ePb	04	10.60	0.2
			eSb	04	26.70	
GRG	1.13	4	ePb	04	11.20	-0.3
			eSb	04	29.30	
OUR	1.39	68	ePb	04	16.40	0.8
			eSb	04	36.10	
KBN	1.39	305	iPnd	04	14.60	-1.1
KNT	1.41	19	ePb	04	16.50	0.5
			eSb	04	39.10	
VAY	1.51	8	iPn	04	16.70	-0.6
SRS	1.62	37	ePb	04	18.80	-0.2
			eSb	04	44.20	
BERA	2.00	297	ePn	04	24.20	-0.3
MMB	2.07	31	iPd	04	26.00	0.5
VLS	2.12	220	ePn	04	26.00	-0.3
KKB	2.12	16	eP	04	25.00	-1.3
SKO	2.24	343	iPn	04	31.00	3.0X
PHP	2.34	323	iPnc	04	31.10	1.8
TIR	2.40	310	ePn	04	31.00	0.8
ITM	2.66	186	ePn	04	34.00	0.0
LACI	2.67	313	ePn	04	40.70	6.6X
BCI	3.05	327	ePn	04	49.00	9.6X

S.D. = 0.8 on 18 of 22 obs.

JUL 18, 1989 05h 08m 54.10± 0.86s
38.538 N ± 7.1km 14.718 E ± 4.7km
DEPTH = 10.1 ± 7.3 km
SICILY (398)

MNO	0.61	182	P	09	07.00	0.5
			eSg	09	15.90	
ATN	0.70	123	Pc	09	08.00	0.1
			eSg	09	18.50	
MSI	0.74	117	Pc	09	09.00	0.4
			eSg	09	19.70	
GIB	0.77	225	Pc	09	08.20	-1.0
			eSg	09	21.90	
SOI	1.15	113	P	09	14.80	-0.8
			eSg	09	30.80	
USI	1.22	278	P	09	16.90	0.2
MCT	1.25	224	Pd	09	18.00	0.6
			eSn	09	33.90	
MEU	1.44	173	Pd	09	20.10	-0.3
			eSg	09	38.70	
TDS	1.69	48	Pc	09	24.00	0.3
MGR	1.72	22	Pc	09	24.10	-0.2
			eSn	09	45.10	

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

? JUL 18, 1989 06h 38m 39.79± 0.88s
2.431 N ±26.9km 79.731 W ±51.6km
DEPTH = 10.0km (geophysicist)
3.4Msz (1 obs.)
SOUTH OF PANAMA (83)

COTA	2.50	146	eP	39	20.90	-0.8
			eS	39	41.50	
GGP	2.83	156	P	39	25.30	-1.1
			S	39	57.30	
OUR	2.85	155	P	39	25.70	-0.9
			eS	39	58.00	
CAYA	2.92	143	eP	39	28.00	0.4
RECU	3.26	159	eP	39	31.50	-1.0
ARE	20.46	157	eP	43	21.00	0.2
ZOBO	21.84	149	P	43	34.80	-0.3
	Z 22s		0.16um			3.4Msz
			LR	50	36.00	
LPB	22.07	149	P	43	38.00	0.8
CNCB	22.36	149	P	43	43.00	2.7
CCH	23.82	146	P	43	55.40	1.2
ALQ	40.79	326	eP	46	24.90	1.7
	1.0s		3.75nm			4.1mb X
			e	46	31.40	
INK	75.02	342	eP	50	22.00	-0.9
MBC	76.99	351	eP	50	32.00	-2.0
	0.9s		3.00nm			4.4mb X

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

• JUL 18, 1989 07h 24m 28.36± 1.13s
7.311 S ± 9.7km 128.427 E ±13.0km
DEPTH = 143.1 ± 14.1 km
4.5mb (4 obs.)
BANDA SEA (280)

AAI	3.61	356	eP	25	23.10	-0.9
KUPT	5.54	239	ePd	25	52.30	2.5
			eS	26	48.50	
MTN	6.11	154	eP	25	59.00	1.5
			eS	27	00.00	
KNA	8.39	178	iPd	26	27.00	-1.3
			eS	27	52.00	
WB5	13.76	156	eP	27	37.20	-1.5
			eS	29	57.20	
WRA	13.81	156	Pc	27	38.50	-0.8
	0.6s		12.00nm			4.4mb
MBL	16.08	210	eP	28	05.00	-2.7
	0.3s		7.00nm			4.5mb
			eS	30	55.00	
QIS	17.05	142	iPc	28	21.10	1.5
			eS	31	21.00	
ASPA	17.09	163	iPd	28	21.00	0.8
	0.6s		77.00nm			5.2mb
			eS	31	18.50	
WARB	18.85	185	iPd	28	39.50	-0.5
	0.4s		5.00nm			4.2mb
			eS	32	03.00	
NANU	19.60	218	eP	28	45.70	-2.1
CTA	21.45	128	eP	29	31.00	24.6X
FORR	23.42	181	eP	29	25.50	0.0
MRWA	24.74	207	eP	29	38.70	0.6
BAL	25.65	204	eP	29	47.00	0.5
KLB	26.13	201	eP	29	51.00	0.1
MUN	27.06	203	eP	30	01.00	1.7
CHG	38.97	312	eP	31	42.70	0.3
PPD	150.84	180	e(PKP)	44	06.00	5.8X
CNCB	151.06	146	PKP	44	09.20	7.9X
LPB	151.21	145	PKP	44	09.80	8.4X
ZOBO	151.41	145	ePKP	44	02.00	0.1
			e	44	09.00	

S.D. = 1.5 on 18 of 22 obs.

• JUL 18, 1989 09h 05m 35.35± 0.82s
6.226 S ±14.2km 149.976 E ±13.8km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
NEW BRITAIN REGION (192)
ML 4.1 (PMG).

RAB	2.98	47	iPc	06	23.00	1.6
	0.5s		957.75nm			
			iS	07	16.00	

18d 09h

LAT	2.99	262	eP	06	22.00	0.5
LMG	3.22	214	eP	06	24.50	-0.4
PMG	4.22	221	iPd	06	40.80	1.8
	0.9s	243.70nm				
QIS	17.44	214	eP	09	37.00	-0.9
RMQ	20.18	183	ePd	10	10.70	0.6
	0.8s	51.00nm			4.9mb	
GUMO	20.33	346	eP	10	23.50	11.9X
WB5	20.35	227	iPc	10	10.70	-1.2
WRA	20.41	227	Pd	10	09.50	-3.0X
	0.5s	3.60nm			4.0mb	
BRS	21.22	173	iPd	10	20.80	0.1
ASPA	23.23	220	iPc	10	42.70	2.0
	0.5s	5.00nm			4.3mb	
		e		10	58.70	
		eS		14	51.90	
BNG	131.62	270	iPKPd	24	46.00	-1.6
	0.6s	8.00nm				
CNCB	136.04	122	ePKP	24	45.00	-11.6X
LPB	136.07	122	ePKP	24	44.00	-12.5X
ZOBO	136.17	121	ePKP	24	56.00	-0.9
PPD	145.02	144	ePKP	25	10.30	-1.5
BAO	151.92	141	e(PKP)	25	28.50	5.6X
	S.D. = 1.4	on	12 of	17 obs.		

JUL 18, 1989 09h 27m 37.49± 0.24s
76.850 N ± 3.2km 12.972 E ± 6.3km
DEPTH = 10.0km (geophysicist)
4.7mb (32 obs.) 4.5Msz (1 obs.)
SVALBARD REGION (643)

KBS	2.09	354	eP	28	11.10	-1.9
		eS		28	28.50	
DAG	7.20	285	iPc	29	22.00	-3.2X
	0.6s	66.00nm			6.0mb X	
Z	19s	1.81um			4.9Msz	
TRO	7.45	164	eP	29	28.30	-0.4
		eS		30	42.40	
KEV	8.16	144	eP	29	33.00	-5.6X
LOF	8.77	179	eP	29	42.22	-4.9X
		eS		31	12.00	
SOD	10.36	149	iP	30	04.90	-4.1X
NSS	12.39	182	iP	30	34.92	-1.6
ALE	13.44	327	eP	30	51.00	0.7
	0.8s	25.00nm			5.3mb	
MOL	14.46	190	eP	31	01.70	-2.1
AKU	14.70	237	eP	31	13.60	6.7X
	0.9s	20.17nm			4.7mb	
SUF	14.84	156	iP	31	05.50	-3.2X
	0.5s	7.80nm			4.5mb	
NB2	15.90	183	P	31	26.80	4.2X
NRA0	16.20	183	eP	31	27.00	0.6
HFS	16.80	179	eP	31	37.30	3.4X
	0.4s	5.40nm			4.0mb	
NUR	16.89	160	iP	31	33.00	-2.0
Z	17s	0.50um				
		LR		38	30.00	
EAB	21.67	207	eP	32	28.60	-1.1
	0.7s	33.00nm			4.9mb	
EDI	21.82	205	eP	32	31.60	0.5
EAU	21.92	205	ePd	32	32.70	0.5
	0.6s	48.00nm			5.1mb	
EKA	22.40	205	Pd	32	39.00	2.0
	0.8s	7.50nm			4.2mb	
MBC	24.74	335	eP	33	01.00	1.5
	1.1s	37.00nm			5.0mb	
WTS	25.07	189	eP	33	04.00	1.1
	1.0s	26.00nm			4.9mb	
CLL	25.64	180	ePc	33	09.00	0.7
	1.3s	16.00nm			4.6mb	
		ipP		33	16.40	26kmX
BRG	26.08	179	eP	33	12.50	0.1
	1.5s	32.00nm			4.8mb	
		e		33	19.50	
KSP	26.14	175	eP	33	15.30	2.3
ENN	26.33	190	eP	33	15.00	0.4
	1.0s	35.00nm			5.0mb	
MEM	26.48	190	Pc	33	17.10	1.0
VAL	26.52	213	eP	33	17.00	0.6
HOF	26.64	182	eP	33	18.30	0.7
	0.9s	18.00nm			4.8mb	
PRU	26.97	178	P	33	21.20	0.6
		e		33	24.00	
KRA	27.04	170	eP	33	22.10	1.0
	1.2s	58.00nm			5.1mb	
		e		33	29.40	
FRB	27.52	288	eP	33	32.00	6.6X
KHC	27.83	179	eP	33	36.10	7.7X
		e		34	45.40	
SPC	27.91	170	eP	33	38.10	8.7X
ZST	28.81	174	eP	33	45.60	8.4X
LOR	29.92	192	iPc	33	46.20	-1.0
	1.0s	8.00nm			4.5mb	
SSF	30.14	193	iPc	33	48.00	-1.2
	0.9s	3.20nm			4.2mb	
LBF	30.19	192	iPc	33	48.50	-1.2
	1.0s	6.00nm			4.4mb	
SMF	30.54	192	eP	33	51.80	-0.9
TCF	30.98	195	iPc	33	55.80	-0.8
	1.2s	11.90nm			4.7mb	
MAF	31.03	194	eP	33	56.40	-0.6
	1.0s	6.00nm			4.4mb	
LSF	31.06	195	iPc	33	56.40	-0.9
	1.2s	13.00nm			4.7mb	
LPG	31.56	188	eP	34	02.10	0.1
	1.0s	10.80nm			4.7mb	
VRI	31.59	162	ePc	34	20.50	18.6X
MLR	31.91	163	ePc	34	10.00	5.1X
CMP	32.08	164	ePd	34	16.00	9.8X
INK	33.63	338	ePc	34	18.50	-0.9
	0.9s	25.00nm			5.1mb	
EPF	34.34	197	eP	34	25.60	-0.3
	1.0s	10.00nm			4.7mb	
SCH	35.18	279	eP	34	32.00	-0.9
YKB0	37.02	322	eP	34	49.00	0.7
YKC	37.12	322	eP	34	49.00	-0.2
YKA	37.13	322	eP	34	49.60	0.4
KVT	37.21	151	eP	34	51.00	0.8
FBA	37.98	347	P	34	57.50	1.1
	0.7s	6.10nm			4.5mb	
BCK	40.25	158	eP	35	16.40	0.7
FFC	42.53	309	eP	35	34.00	-0.1
	0.7s	6.00nm			4.4mb	
WMQ	44.33	92	P	35	49.00	0.0
Z	14s	0.60um			4.7MszX	
RSON	44.66	300	P	35	50.00	-1.4
	0.5s	10.81nm			5.0mb	
			pP	35	59.70	32kmX
MAIO	45.49	125	iPc	36	00.40	2.1
			e	37	52.00	
GAC	45.67	282	eP	36	08.00	8.5X
EDM	45.87	318	iPc	36	01.50	0.4
PTN	46.63	281	P	36	07.60	0.5
SES	48.24	315	eP	36	20.00	0.2
			pP	36	28.00	27kmX
PNT	50.61	321	eP	36	38.00	0.1
GTA	51.30	82	eP	36	43.00	-0.4
DPW	51.81	320	P	36	47.10	0.0
CN2	52.55	57	eP	36	50.40	-2.3
			epP	37	00.00	32kmX
LRM	52.91	314	eP	36	55.30	-0.4
			e	37	04.60	
RSSD	53.10	307	P	36	56.60	-0.4
			pP	37	04.00	24kmX
BW06	55.38	311	P	37	13.20	-0.6
	1.1s	10.71nm			4.8mb	
			pP	37	20.50	24kmX
GOL	57.63	306	P	37	29.00	-0.9
			pP	37	37.50	28kmX
WDC	59.58	322	ePc	37	43.40	0.3
			epP	37	49.70	21kmX
MIN	59.68	321	ePc	37	43.80	-0.2
KVN	60.42	318	P	37	49.00	-0.2
			pP	37	57.00	26kmX
ORV	60.43	321	e(P)	37	48.30	-0.7
UYO	60.84	295	iPd	37	50.80	-1.0
TNP	61.23	317	P	37	54.10	-0.6
	0.7s	4.78nm			4.7mb	
			pP	38	03.50	31kmX
ALQ	62.45	306	eP	38	02.50	-0.4
	1.0s	5.00nm			4.7mb	
			epP	38	10.50	26kmX
FRI	62.68	319	eP	38	04.40	0.3
LLA	63.24	320	eP	38	08.80	1.0
			epP	38	15.80	23kmX
PRS	63.58	320	eP	38	10.70	0.6
PRI	63.66	319	ePc	38	11.90	1.1
SBB	64.65	316	eP	38	17.00	-0.2
TPC	64.93	315	eP	38	20.00	1.0
GLA	65.76	313	eP	38	25.00	0.7
PLM	65.80	315	P	38	24.50	-0.2
BAR	66.43	315	eP	38	29.00	0.5
CHG	70.90	89	eP	38	55.40	-1.0
KIC	71.10	199	Pc	38	57.30	-0.2
	0.7s	26.50nm			5.5mb	
GBA	71.13	112	Pd	38	57.20	-0.5
	0.5s	5.50nm			4.9mb	
LIC	71.26	199	Pc	38	58.40	-0.1
BNG	72.42	174	iPd	39	05.50	0.1
	0.5s	6.00nm			4.9mb	
ZOBO	103.71	258	Pdiff	41	53.00	12.1X
Z	20s	0.13um			4.5Msz	
		LR		12	36.00	
MAW	147.42	147	ePKP	47	21.00	2.7
	S.D. = 1.0	on	76 of	93 obs.		

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* JUL 18, 1989 09h 50m 41.44± 0.78s
36.803 N ± 8.3km 27.413 E ± 8.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

YER	0.77	64	iPg	51	04.30	7.8X
			iSg	51	17.80	
CIN	0.96	34	ePg	51	12.00	12.3X
			iSg	51	29.00	
KAP	1.26	189	eP	51	05.00	0.1
			eS	51	21.00	
KSL	1.88	111	eP	51	09.30	-4.5X
			eS	51	28.50	
ELL	2.00	91	iPn	51	15.40	-0.4
NPS	2.12	224	eP	51	23.30	5.9X
KHL	2.26	47	ePn	51	29.30	9.8X
BCK	2.62	75	ePn	51	25.00	0.4
PTJ	12.50	320	eP	53	41.90	-0.4
VKA	14.06	328	iP	54	03.00	0.3
	S.D. = 0.5	on	5 of	10 obs.		

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* JUL 18, 1989 09h 52m 45.14± 1.24s
46.853 N ±15.7km 14.751 E ±10.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.0 (GRF), 2.9 (FUR), 2.3 (KBA).

KBA	0.99	284	iPg	53	05.20	1.2
			iSg	53	11.00	
FVI	1.38	260	P	53	14.40	4.0X
			eSg	53	26.50	
BHG	1.54	305	iPgc	53	01.50	-11.2X
SCE	2.09	276	ePg	53	16.20	-4.6X
KHC	2.41	341	iPg	53	26.20	0.9
			Sg	53	47.00	
OGA	2.56	272	eP	53	26.50	-1.0
WET	2.62	332	iPc	53	26.40	-1.8
FUR	2.70	300	iPgc	53	22.90	-6.5X
PRU	3.14	358	Pg	53	45.00	9.4X
			e	53	46.00	
			Sg	54	19.00	
GRF	3.69	322	ePg	53	44.00	0.5
			eSg	54	15.00	
BZS	4.92	102	eP	54	01.00	0.2
	S.D. = 1.5	on	6 of	11 obs.		

% JUL 18, 1989 10h 22m 44.08± 2.93s
44.333 N ±16.0km 8.206 E ±18.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

FIN	0.12	179	P	22	47.10	-0.1
			S	22	49.38	
ROB	0.24	261	P	22	49.12	-0.2
			S	22	53.37	
IMI	0.48	208	P	22	53.97	0.1
ENR	0.57	260	P	22	55.55	-0.2
			S	23	04.17	
STV	0.64	262	P	22	57.23	0.3
PZZ	0.81	283	P	23	00.00	0.1
			S	23	11.53	
	S.D. = 0.3	on	6 of	6 obs.		

JUL 18, 1989 10h 41m 14.59± 0.12s
53.384 N ± 2.8km 160.376 E ± 2.2km
DEPTH = 33.0km (normal)
5.4mb (70 obs.) 4.8Msz (11 obs.)
NEAR EAST COAST OF KAMCHATKA (218)
Felt (IV) at Petropavlovsk-Komchatskiy.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 28C

Centroid Location:
Origin Time 10:41:19.0 0.8
Lat 53.12N 0.07 Lon 161.05E 0.09
Dep 53.6 3.9 Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr= 0.81 0.05 Mtt= 0.60 0.07
Mff=-1.41 0.05 Mrt= 0.02 0.07
Mrf= 0.72 0.11 Mtf=-0.62 0.07
Principal Axes:
T Val= 1.09 Plg=59 Azm=221
N 0.68 27 7
P -1.78 15 105
Best Double Couple:Mo=1.4*10**17
NP1:Strike=227 Dip=38 Slip= 137
NP2: 353 65 60

SMY 8.30 89 ePc 43 14.40 -1.1
ADK 14.00 87 eP 44 31.40 -1.2
KUSJ 14.62 232 eP 44 35.80 -4.9X
ASAJ 14.89 239 eP 44 45.90 1.7
HOOJ 15.85 233 eP 44 52.00 -4.6X
MRRJ 16.90 237 eP 45 07.40 -2.6
AOMJ 18.65 235 eP 45 27.80 -3.8X
OFUJ 19.21 229 eP 45 33.70 -4.6X
YAMJ 20.69 231 P 45 53.00 -1.1
MDJ 21.87 259 eP 46 04.50 -1.6
Z 20s 2.70um 4.7Msz
esP 46 20.00
sS 50 20.00
NIIJ 21.92 231 iP+ 46 06.80 0.2
KAKJ 22.24 228 iP+ 46 09.60 -0.2
SDN 22.68 69 eP 46 14.50 0.6
CHJJ 22.90 229 P 46 17.00 0.7
IIDJ 23.87 230 P 46 27.20 1.5
TTA 24.43 50 iPd 46 31.80 0.8
SVW 24.60 54 ePd 46 33.70 1.1
TSRJ 24.73 234 P 46 35.20 1.2
CN2 24.78 261 iPc 46 32.40 -2.1
4.0s 0.30nm 2.2mb X
Z 18s 3.80um 4.9Msz
E 16s 1.70um
pP 46 42.00 35kmX
IMA 25.71 43 ePd 46 43.40 0.2
1.3s 136.80nm 5.4mb
WKYJ 25.99 232 P 46 46.90 1.0
YONJ 26.25 237 P 46 49.00 0.7
KDC 26.57 61 ePd 46 49.60 -1.3
SNY 27.06 260 Pc 46 53.90 -1.7
Z 20s 3.50um 4.9Msz
N 18s 1.80um
E 20s 2.40um
eS 51 26.00
SHK 27.16 237 eP 46 57.30 0.7
PMR 27.69 53 eP 46 59.50 -1.6
0.8s 20.50nm 4.9mb
Z 20s 2.00um 4.7Msz
FBA 28.10 45 ePd 47 04.70 -0.1
SHNJ 28.28 239 eP 47 07.60 0.9
KUMJ 29.68 237 eP 47 19.50 0.1
KAGJ 30.74 236 eP 47 29.50 0.8
BJI 32.56 264 eP 47 43.00 -1.6
Z 20s 1.58um 4.7Msz
N 16s 1.26um
ePP 48 44.00
eS 52 48.00
eScS 58 08.00
INK 33.54 38 ePd 47 52.90 0.2
1.5s 161.00nm 5.7mb
TIA 34.53 258 Pc 47 59.60 -2.1
HHC 34.82 269 Pd 48 03.50 -0.8
Z 26s 2.70um 4.9MszX
N 15s 1.90um
E 15s 1.30um
SIT 35.65 58 eP 48 12.10 1.1
BTO 35.90 270 eP 48 12.00 -1.4
N 17s 1.70um
E 20s 2.70um
sP 48 25.00
sS 54 08.00
SSE 35.92 248 eP 48 13.00 -0.5
1.0s 24.00nm 5.1mb
E 20s 0.90um
eS 53 54.00
TIY 36.29 264 eP 48 16.50 -0.2
N 17s 1.30um
E 15s 0.90um
pP 48 27.00 36kmX

ScP 54 24.50
NJ2 36.51 251 Pd 48 17.60 -0.9
Z 21s 1.90um 4.9Msz
ScP 54 28.00
MBC 36.71 23 eP 48 20.00 0.3
0.7s 13.00nm 4.9mb
WHN 40.21 254 eP 48 48.50 -0.8
LZH 42.51 269 Pc 49 08.00 -0.5
1.5s 77.00nm 5.2mb
Z 20s 2.20um 5.0Msz
E 11s 0.50um
ALE 42.61 8 eP 49 09.00 0.5
GTA 42.74 276 Pc 49 09.80 -0.5
Z 16s 1.20um 4.9MszX
N 13s 1.00um
YKB0 42.78 43 ePd 49 11.50 1.4
YKA 42.83 43 eP 49 11.70 1.2
YKC 42.89 43 ePd 49 11.50 0.5
PGC 46.03 63 eP 49 37.00 0.7
CD2 46.17 264 eP 49 36.40 -1.3
WMQ 47.03 289 iPc 49 44.80 0.3
Z 28s 4.50um 5.3MszX
E 15s 1.60um
S 56 35.00
ScS 59 32.20
PNT 47.66 61 iPd 49 49.40 0.1
0.9s 41.00nm 5.4mb
GYA 47.73 258 iPd 49 49.40 -0.8
PcP 51 19.00
EDM 48.46 53 iPd 49 55.50 0.1
0.7s 84.00nm 5.9mb
DPW 49.29 61 P 50 01.60 -0.4
FHC 50.65 72 eP 50 13.50 1.1
SES 51.34 55 eP 50 17.00 -0.5
WDC 51.62 71 iPd 50 20.00 0.3
QIZ 51.70 249 P 50 22.10 1.6
LTCM 52.11 71 P 50 23.20 -0.2
MIN 52.31 71 ePd 50 24.80 -0.3
KEV 52.59 341 eP 50 25.00 -1.6
FFC 52.70 46 iPd 50 27.30 -0.4
1.1s 25.00nm 5.1mb
ORV 52.90 72 ePd 50 28.90 -0.5
BRK 53.61 74 eP 50 34.50 0.0
LRM 53.63 60 ePd 50 34.60 -0.3
PCC 53.80 74 eP 50 35.70 -0.2
TRO 54.12 344 iP 50 37.30 -0.6
MHC 54.34 74 ePd 50 40.00 -0.1
GCC 54.35 74 ePd 50 39.60 -0.4
CMB 54.58 72 ePd 50 40.80 -0.9
e 51 06.70
LSA 54.58 273 P 50 42.20 -0.2
SOD 54.69 340 iP 50 39.50 -2.6
SAO 54.85 74 e(P) 50 43.50 -0.2
KVN 55.17 70 P 50 46.50 0.3
pP 51 12.50 107kmX
PRS 55.19 74 ePd 50 46.10 -0.1
LLA 55.24 74 iPd 50 46.80 0.2
FRI 55.69 73 ePd 50 49.50 -0.2
PRI 55.73 74 eP 50 50.90 0.7
TNP 56.34 70 P 50 54.50 -0.2
1.0s 72.50nm 5.7mb
pP 51 20.60 107kmX
KSH 56.49 292 eP 50 56.00 0.3
Z 16s 1.20um 5.1MszX
BCH 56.74 74 P 50 57.70 0.2
FRB 57.17 24 eP 50 58.00 -2.0
BW06 57.23 61 P 51 01.20 0.2
0.3s 3.20nm 4.8mb
LOE 57.61 255 iPc 51 03.00 -0.6
CHG 58.13 258 ePc 51 06.60 -0.6
0.8s 36.38nm 5.5mb
SBB 58.40 73 eP 51 09.00 -0.1
PAS 58.58 74 eP 51 10.00 -0.3
SUF 58.79 337 iP 51 10.30 -1.1
0.6s 71.20nm 6.0mb
RSON 58.99 45 P 51 12.20 -0.7
1.1s 74.53nm 5.7mb
RSSD 59.10 57 P 51 13.70 -0.4
RVR 59.15 74 eP 51 13.00 -1.2
BDT 59.32 257 eP 51 16.90 1.4
TPC 59.83 72 eP 51 18.00 -1.0
NST 59.91 255 eP 51 22.00 2.4
PLM 59.91 74 eP 51 20.00 0.3
BAR 60.51 74 eP 51 23.00 -0.6
NUR 61.08 337 iP 51 25.40 -1.6
0.8s 32.30nm 5.5mb
GLA 61.30 72 eP 51 28.00 -1.0

GOL 61.63 61 P 51 31.10 -0.3
GLD 61.67 61 P 51 32.20 0.6
SVO 62.29 181 P 51 35.00 -0.6
NNT 62.60 253 iPc 51 38.60 0.8
UPP 63.22 340 iP 51 38.80 -2.5
NB2 63.31 344 P 51 40.60 -1.4
PMG 63.55 195 eP 51 43.50 -0.4
NDI 63.58 283 eP 51 41.50 -2.6
HFS 63.73 342 eP 51 42.90 -1.8
0.4s 13.10nm 5.4mb
ALQ 64.57 65 iPd 51 51.00 0.2
1.0s 18.75nm 5.1mb
Z 22s 0.74um 4.8Msz
epP 52 18.50 111kmX
e 52 46.00
e 52 53.50
eS 00 30.00
eLR 16 10.00
SCH 65.34 28 eP 51 54.00 -1.2
SNG 66.50 249 eP 52 04.20 1.1
0.8s 64.18nm 5.8mb
QUE 68.31 292 eP 52 13.70 -0.9
IPM 68.41 247 ePc 52 15.50 0.4
0.8s 67.70nm 5.8mb
KGM 69.30 244 ePc 52 20.80 0.2
SIO 69.30 58 eP 52 19.60 -0.8
TUL 69.43 57 iP 52 21.00 -0.2
1.2s 63.60nm 5.6mb
Z 21s 1.16um 5.1Msz
LR 15 00.00
RLO 69.62 57 iP 52 21.80 -0.5
EAB 70.07 351 eP 52 23.60 -1.1
0.8s 53.00nm 5.7mb
ESY 70.17 350 eP 52 24.70 -0.6
EAU 70.33 350 eP 52 26.20 -0.1
0.8s 46.00nm 5.6mb
GAC 70.39 38 ePd 52 25.50 -1.3
FVM 70.42 52 P 52 26.30 -0.9
0.7s 54.42nm 5.7mb
MTN 70.56 210 iPc 52 28.30 0.2
EKA 70.80 350 Pc 52 28.50 -0.7
0.6s 18.90nm 5.3mb
PSI 71.13 248 ePc 52 31.00 -0.7
UYO 71.48 58 iPc 52 32.60 -1.0
KRA 71.67 334 iPd 52 34.00 -0.5
0.9s 38.00nm 5.4mb
e 52 43.00
e 52 53.50
KSP 71.84 337 iPd 52 35.60 0.1
1.0s 49.00nm 5.5mb
WIT 71.92 344 ePc 52 37.00 1.1
CLL 72.14 339 iPc 52 37.00 -0.3
1.1s 105.00nm 5.7mb
i 52 45.60
BRG 72.35 338 iP 52 37.50 -1.0
1.0s 40.00nm 5.4mb
i 52 46.50
SPC 72.38 334 eP 52 38.60 -0.4
DMU 72.57 352 eP 52 38.70 -1.0
WTS 72.68 343 iPc 52 40.30 -0.1
0.8s 65.00nm 5.7mb
TRT 72.99 230 iPc 52 42.40 -0.2
0.7s 123.40nm 6.0mb
PRU 73.04 338 Pc 52 42.50 -0.1
1.0s 36.10nm 5.3mb
N 17s 0.50um
E 17s 0.80um
DLE 73.14 352 eP 52 42.10 -1.0
DCN 73.15 352 eP 52 42.10 -1.0
0.8s 60.00nm 5.6mb
HOF 73.32 340 iPc 52 44.10 -0.1
0.9s 40.00nm 5.4mb
VRI 73.51 328 ePc 52 45.00 -0.3
ETA 73.70 352 eP 52 47.00 0.7
ENN 74.02 343 iPc 52 48.40 0.2
1.0s 130.00nm 5.9mb
GRF 74.05 340 iPc 52 49.20 0.8
0.9s 95.00nm 5.8mb
Z 22s 0.10um 4.1Msz
KHC 74.07 338 iPc 52 48.90 0.3
1.0s 43.00nm 5.4mb
i 52 57.40
ECB 74.08 352 eP 52 48.00 -0.5
MLR 74.09 329 ePd 52 49.00 0.1
ZST 74.11 335 iP 52 49.70 0.9
Z 18s 0.70um 5.0Msz
MEM 74.16 343 iPc 52 49.27 0.3

18d 10h

CTA	74.18	194	iPc	52	49.00	-0.5	VAY	78.91	329	iP	53	15.80	0.0				LR	44	00.00				
	1.0s	45.00nm			5.4mb		HVAR	78.95	334	iP	53	14.90	-1.1	CNCB	127.69	65	PKP	00	19.90	1.2			
WET	74.21	338	iPc	52	49.80	0.4	LPG	78.95	341	eP	53	17.50	1.1	BUL	130.47	293	ePKP	00	23.90	0.5			
	1.0s	100.00nm			5.8mb			0.8s	92.30nm			5.8mb					iPP	03	43.30				
ECP	74.22	352	eP	52	50.00	0.6	TCF	78.97	345	eP	53	16.80	0.7	SLR	135.07	289	ePKP	00	33.00	1.0			
BUD	74.27	334	eP	52	50.00	0.3		0.9s	19.60nm			5.1mb		BLF	138.84	288	ePKP	00	41.00	2.0			
KVT	74.41	320	eP	52	50.00	-0.7	MAF	78.98	345	eP	53	16.90	0.7	SPA	143.20	180	e(PKP)	00	41.00	-4.5X			
SNF	74.54	344	iPd	52	51.62	0.4		0.8s	18.80nm			5.1mb			0.9s	36.36nm							
CMP	74.57	329	ePd	52	38.00	-13.6X	MFF	79.02	346	eP	53	17.00	0.7	CER	145.93	290	iPKPd	00	56.00	4.9X			
VAL	74.76	354	eP	52	53.00	0.6		1.0s	16.00nm			5.0mb			0.6s	17.86nm							
DOU	74.89	344	Pc	52	53.00	-0.3	PLDF	79.05	344	P	53	17.40	0.8	SNA	161.29	198	e(PKP)	01	12.10	1.3			
	0.9s	80.00nm			5.7mb		AGO	79.05	344	P	53	17.32	0.7		S.D. = 0.9		on 281 of 290 obs.						
GBA	75.01	273	Pc	52	53.20	-1.2	BOB	79.11	339	Pc	53	17.90	1.0	---									
	0.8s	81.90nm			5.8mb		LSF	79.11	345	eP	53	17.40	0.5	%	JUL 18, 1989 11h 06m 02.07± 0.57s								
KAS	75.03	321	eP	52	55.00	0.7		0.8s	25.50nm			5.3mb			17.003 N ± 5.9km			62.263 W ± 4.8km					
WLF	75.04	343	P	52	54.60	0.5	PHP	79.21	331	iPd	53	16.80	-0.6		DEPTH = 10.0km			(geophysicist)					
BZS	75.27	331	eP	52	55.00	-0.5	RSM	79.23	337	Pd	53	19.20	1.7		LEEWARD ISLANDS							(92)	
CLO	75.42	330	ePd	52	56.50	0.1	PYM	79.37	344	P	53	18.91	0.6		ML 3.0 (FDF).								
GWF	75.44	342	P	52	56.75	0.3	MME	79.38	338	Pd	53	20.10	1.4										
FUR	75.48	339	iPc	52	57.20	0.4	BNI	79.39	341	Pd	53	20.00	1.4	MGH	0.28	171	eP	06	08.71	0.7			
	1.0s	57.00nm			5.5mb		PGD	79.45	338	Pd	53	20.40	1.4	NEV	0.32	294	eP	06	09.17	0.4			
BHG	75.55	338	iPc	52	57.80	0.7	LACI	79.47	331	eP	53	18.50	-0.3				eS	06	11.05				
BLA	75.59	46	P	52	57.50	-0.1	RRL	79.50	341	P	53	20.53	1.3	BPA	0.39	84	eP	06	10.51	0.4			
QIS	75.80	200	iPc	52	57.90	-0.8	ARV	79.52	337	Pc	53	19.90	0.7				eS	06	16.20				
	0.8s	14.00nm			5.0mb		BDI	79.53	338	P	53	19.40	0.2	ANG	0.44	70	eP	06	11.40	0.4			
CDF	76.04	342	P	53	00.11	0.1	CKI	79.68	340	Pd	53	20.30	0.4	SKI	0.56	306	eP	06	12.90	-0.6			
KBA	76.05	337	iPc	53	01.00	0.8	TIR	79.70	331	eP	53	19.20	-0.8	SEG	0.94	129	eP	06	19.80	-0.2			
	0.9s	173.50nm			6.1mb		DOI	79.81	341	Pd	53	19.90	-0.9	PAG	1.12	150	eP	06	22.90	-0.2			
ECH	76.25	342	P	53	01.06	-0.1	LBL	79.83	344	P	53	21.59	0.9				S	06	38.60				
PVL	76.32	328	iPd	53	02.00	0.5	PZZ	79.83	341	P	53	20.63	-0.3	DEG	1.34	121	eP	06	25.80	-1.0			
WB5	76.35	205	eP	53	01.30	-0.6	ROB	79.88	340	P	53	20.74	-0.4	MGG	1.41	140	eP	06	27.90	0.2			
WRA	76.42	205	Pc	53	02.10	-0.1	FIN	79.90	340	P	53	20.94	-0.2		S.D. = 0.6		on 9 of 9 obs.						
	0.7s	24.10nm			5.3mb		ASS	80.00	337	Pd	53	22.50	0.8	---									
FEL	76.42	341	P	53	01.91	-0.3	ENR	80.04	341	P	53	21.15	-0.9	&	JUL 18, 1989 11h 07m 22.10s								
SLE	76.43	341	ePc	53	02.00	-0.1	RJF	80.04	345	eP	53	22.40	0.5		36.907 N			121.348 W					
VITF	76.47	343	P	53	02.33	0.1		0.6s	5.40nm			4.7mb			DEPTH = 7.0km								
PTJ	76.53	335	eP	53	02.60	-0.2	STV	80.04	341	P	53	20.94	-1.1		CENTRAL CALIFORNIA							(39)	
RBL	76.60	337	Pc	53	02.90	-0.2	KBN	80.08	330	eP	53	22.00	-0.1		<BRK>. ML 3.7 (BRK).								
HAU	76.61	342	eP	53	03.30	0.2	ASPA	80.09	205	iPd	53	22.60	0.3		Mo=8.9*10**14 Nm (BRK). Felt								
	0.8s	29.50nm			5.4mb			0.9s	59.00nm			5.6mb			(IV) at Hollister and (III) at								
MOF	76.61	342	P	53	02.99	-0.2	RMO	80.17	191	eP	53	24.00	1.3		Gilroy.								
FVI	76.64	338	Pd	53	03.40	0.2	SAOF	80.24	340	P	53	23.16	0.1										
BSF	76.69	342	P	53	03.41	-0.3	IMI	80.25	340	P	53	23.20	0.1	SAO	0.16	209	iPc	07	26.00	0.4			
ZLA	76.72	341	ePc	53	04.10	0.3	AUTN	80.26	341	P	53	23.51	0.2				eS	07	29.00				
BBTK	76.74	321	eP	53	04.50	0.4	TOUF	80.28	341	P	53	23.88	0.5	LLA	0.44	132	iPd	07	30.50	-0.4			
SAX	76.75	340	ePc	53	04.50	0.2	CAF	80.32	345	eP	53	24.50	1.1	ARN	0.47	342	iPd	07	31.40	-0.1			
OGA	76.77	339	iPc	53	05.20	1.0		0.9s	18.00nm			5.1mb		MHC	0.49	332	iPd	07	31.80	-0.2			
	0.8s	50.00nm			5.6mb		AURF	80.38	341	P	53	24.20	0.4				eS	07	40.60				
VOY	76.91	337	ePKP	53	04.40	-0.5	SBF	80.38	341	eP	53	24.40	0.6	GCC	0.53	283	iPc	07	32.10	-0.7			
BBS	76.91	341	P	53	04.93	0.1		0.8s	48.30nm			5.5mb		PRS	0.57	182	iPd	07	33.20	-0.4			
FLN	76.94	347	eP	53	04.90	0.0	DHR	80.39	301	ePc	53	23.00	-1.0	PRI	0.94	144	eP	07	40.00	-0.4			
	1.0s	33.60nm			5.3mb		MVIF	80.41	341	P	53	24.53	0.5				i	07	41.60				
LDF	77.06	347	eP	53	05.50	-0.1	AQU	80.49	336	Pc	53	26.20	1.8	PCC	1.02	306	ePc	07	40.20	-1.4			
	1.0s	12.00nm			4.9mb		LFF	80.51	345	eP	53	25.10	0.7				i	07	41.20				
VBY	77.08	336	iPKPc	53	05.80	0.1		0.8s	16.10nm			5.1mb		BKS	1.20	324	ePc	07	43.30	-1.4			
OSS	77.13	339	ePc	53	06.90	0.7	REVF	80.52	341	P	53	24.98	0.5				i	07	44.73				
LOMF	77.15	342	P	53	06.46	0.3	ELL	80.52	322	eP	53	25.00	0.3				eS	08	00.40				
LLS	77.19	340	ePc	53	07.20	0.6	CALN	80.60	341	P	53	25.35	0.3	BRK	1.21	323	ePd	07	43.20	-1.6			
TRI	77.24	337	iPc	53	06.00	-0.6	LPO	80.70	345	eP	53	26.10	0.7				i	07	44.40				
GRR	77.36	347	eP	53	07.50	0.3		0.9s	29.40nm			5.3mb		ZSP	1.26	325	eP	07	43.80	-2.0			
	1.0s	36.00nm			5.4mb		BHL	80.75	316	Pd	53	25.00	-0.9				iSg	08	06.30				
RIY	77.44	336	ePc	53	07.10	-0.5	FRF	80.83	341	eP	53	26.80	0.7	PKEM	1.31	130	eP	07	46.00	-0.6			
VDL	77.46	340	ePc	53	09.00	0.9		1.0s	28.00nm			5.2mb		PHAM	1.32	144	eP	07	45.80	-0.9			
KOD	77.64	270	eP	53	09.60	0.0	LRG	80.99	341	eP	53	27.90	1.0	FRI	1.32	86	iPc	07	45.30	-1.4			
LOR	77.75	344	eP	53	09.40	0.0		0.9s	85.10nm			5.7mb		CMB	1.36	34	iPc	07	46.20	-1.3			
	0.8s	30.80nm			5.4mb		SDI	81.00	335	Pc	53	27.10	0.0				iS	08	04.10				
TMA	77.94	340	ePc	53	11.20	0.5	LMR	81.08	341	eP	53	28.30	0.9	BCH	2.00	149	eP	07	55.00	-1.8			
LBF	78.01	344	eP	53	11.10	0.2		0.8s	37.60nm			5.4mb		BLP	2.47	162	eP	08	01.60	-1.7			
	0.8s	9.90nm			4.9mb		CVF	81.33	339	P	53	29.03	0.3	ORV	2.65	357	ePc	08	05.30	-0.6			
SSF	78.01	344	eP	53	11.10	0.3	RFI	81.34	335	P	53	29.94	1.2	ABL	2.68	139	eP	08	04.80	-1.9			
	0.8s	16.60nm			5.1mb		MGR	82.02	334	P	53	32.50	0.2	KVN	3.34	49	eP	08	14.80	-1.2			
MDI	78.09	339	Pc	53	10.90	-0.3	MBL	82.09	218	eP	53	32.70	-0.1	MIN	3.44	357	e(P)	08	16.30	-1.0			
MMK	78.18	341	ePc	53	13.10	1.0	TDS	82.26	333	Pc	53	34.30	0.7	TNP	3.49	69	eP	08	17.00	-1.1			
VAI	78.19	340	Pc	53	11.90	0.1	GRI	83.02	332	P	53	38.00	0.4	WDC	3.78	346	e(P)	08	20.40	-1.7			
DIX	78.26	341	ePc	53	13.60	1.0	RYD	83.49	303	ePc	53	39.60	-0.7		23 obs. associated								
SMF	78.36	344	eP	53	13.00	0.2	SOI	83.82	332	Pc	53	41.30	-0.3	---									
	1.0s	22.00nm			5.1mb		OASM	83.86	306	ePc	53	41.50	-0.6		JUL 18, 1989 12h 53m 55.07± 0.54s								
ALT	78.41	323	eP	53	10.00	-3.2X	WARB	84.48	210	iPd	53	46.00	1.1		39.801 N ± 5.1km			22.395 E ± 5.1km					
BGF	78.61	344	eP	53	14.40	0.3		0.7s	17.00nm			5.3mb			DEPTH = 10.0km			(geophysicist)					
	0.9s	15.30nm			5.0mb		NANU	85.00	221	eP	53	48.00	0.4	GREECE								(364)	
SKO	78.66	330	iPc	53	14.00	-0.4		0.7s	26.00nm			5.5mb			MD 3.7 (ATH). ML 3.2 (THE).								
Z	17s	0.55um			5.0MszX		BWA	88.06	190	eP	54	03.70	1.4										
E	23s	1.15um					KMSA	88.18	302	iPc	54	03.10	-0.4	LIT	0.31	14	iPgc	54	00.60	-0.9			
		eS	03	20.00			CAN	88.89	189	eP	54	07.40	1.1				iSg	54	08.20				
		LR	33	30.00			TIC	118.93	343	PKP	00	01.00	-0.3	KZN	0.70	317	iPgc	54	03.00	-5.9X			
BCI	78.70	331	iP	53	18.00	3.4X	KIC	119.16	343	PKP	00	01.40	-0.3				eSg	54	13.20				
LSD	78.91	341	P	53	17.35	1.3	ZOBO	127.17	65	PKP	00	17.00	-0.8	NEO	0.81	127	ePg	54	11.00	0.2			

THE	0.94	28	ePgd	54	13.40	0.5
			eSg	54	30.50	
PLG	0.99	54	ePb	54	15.00	1.2
			eSb	54	32.10	
PAIG	1.00	82	ePbc	54	15.00	1.1
			eSb	54	31.70	
GRG	1.15	0	ePb	54	15.10	-1.6
			eSb	54	34.70	
OUR	1.33	66	ePbd	54	20.40	0.8
			eSb	54	41.20	
KNT	1.41	16	iPbd	54	20.70	-0.1
			eSb	54	44.00	
LSK	1.42	285	ePn	54	16.10	-4.9X
KBN	1.46	305	ePn	54	17.50	-4.0X
VAY	1.52	5	iPn	54	21.50	-0.8
SRS	1.60	34	ePbc	54	23.60	0.1
			eSb	54	49.30	
TPE	1.90	286	ePn	54	28.50	0.7
MMB	2.05	29	iPd	54	29.00	-1.1
BERA	2.08	296	ePn	54	28.30	-2.1
ATH	2.10	150	ePn	54	30.00	-0.7
KKB	2.13	14	eP	54	29.00	-2.1
VLS	2.15	222	ePb	54	30.00	-1.4
SKO	2.29	342	iPnc	54	35.00	1.6
			iSn	55	05.00	
VLO	2.32	288	ePn	54	35.60	1.7
PHP	2.40	322	iPnc	54	31.00	-4.0X
TIR	2.47	310	ePn	54	38.50	2.5
RZN	2.58	42	iPc	54	38.00	0.2
ITM	2.64	188	ePn	54	38.30	-0.2
LACI	2.74	313	ePn	54	44.50	4.6X
PUK	2.93	321	ePn	54	42.90	0.4
BCI	3.11	326	ePn	54	49.50	4.5X
IZM	4.04	109	iPg	55	41.90	43.6X

S.D. = 1.3 on 22 of 29 obs.

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* JUL 18, 1989 15h 22m 32.56± 1.05s
39.599 N ± 8.4km 22.114 E ±10.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.8 (THE).

LIT	0.58	30	iPgc	22	43.20	-1.1
			iSg	22	49.70	
THE	1.22	32	ePg	22	54.70	-0.6
PAIG	1.25	74	ePb	22	56.30	0.5
			iSb	23	12.80	
OUR	1.61	62	ePb	23	01.90	0.8
			eSb	23	23.90	
KNT	1.67	21	ePbd	23	01.90	-0.1
			iSb	23	24.70	
VAY	1.76	11	ePn	23	03.00	-0.2
SRS	1.89	36	ePbd	23	05.20	0.0
			iSb	23	30.30	
SKO	2.43	348	ePn	23	14.00	1.1
BNG	35.15	186	ePc	29	28.00	-0.5
	0.4s		3.00nm			4.5mb X

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

& JUL 18, 1989 15h 35m 36.00s
36.903 N 121.342 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.8 (BRK). Felt at Hollister.

SAO	0.16	211	iPc	35	39.85	0.4
			iS	35	42.85	
LLA	0.43	132	iPd	35	44.30	-0.4
			eS	35	50.30	
ARN	0.47	341	iPd	35	45.20	-0.3
MHC	0.50	331	iPd	35	45.70	-0.4
			eS	35	54.50	
GCC	0.54	284	iPc	35	46.10	-0.7
PRI	0.94	144	eP	35	53.90	-0.3
PCC	1.02	306	ePc	35	54.90	-0.7
BKS	1.20	324	ePbc	35	57.75	-1.0
BKS	1.20	324	ePd	35	58.20	-0.5
			iPnd	35	58.48	
BRK	1.21	323	ePn	35	58.40	-0.4
ZSP	1.27	325	e(P)	35	58.70	-1.1
PKEM	1.30	130	eP	36	00.70	0.3
FRI	1.31	86	iPc	35	59.20	-1.3
			eS	36	16.20	
CMB	1.36	34	ePc	36	00.00	-1.4
			eS	36	17.60	
BCH	1.99	149	eP	36	08.90	-1.7
ORV	2.65	357	ePc	36	19.10	-0.8
KVN	3.34	49	eP	36	29.00	-0.9
TNP	3.48	69	eP	36	29.50	-2.4

18 obs. associated

JUL 18, 1989 15h 46m 47.80± 0.74s
45.186 N ± 9.9km 25.293 E ± 8.0km
DEPTH = 10.0km (geophysicist)
ROMANIA (358)

CMP	0.20	295	ePc	46	48.00	-4.2X
MLR	0.55	56	iPc	46	58.00	-1.1
VRI	1.22	55	ePd	47	11.50	1.0
CLO	1.77	267	iPc	47	18.00	-0.6
PVL	1.97	179	eP	47	28.00	6.5X
BZS	2.63	281	iPd	47	31.50	0.6
RZN	3.52	187	eP	47	44.00	0.2
KKB	3.69	207	eP	47	46.00	-0.1

S.D. = 1.0 on 6 of 8 obs.

& JUL 18, 1989 15h 53m 51.90s
37.375 N 121.760 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

MHC	0.10	109	iPc	53	54.10	-0.2
			iS	53	55.95	
ARN	0.18	98	iPc	53	55.20	-0.5
GCC	0.39	209	iPc	54	00.10	0.3
			iS	54	06.80	
PCC	0.51	284	ePc	54	01.70	-0.4
BKS	0.63	323	ePd	54	03.80	-0.7
			ePgc	54	04.18	
BKS	0.63	323	iPbd	54	04.85	0.4
BRK	0.64	322	eP	54	04.30	-0.3
SAO	0.66	157	iPgd	54	04.85	-0.3
SAO	0.66	157	iPnc	54	06.10	1.0
			eS	54	13.90	
ZSP	0.69	325	eP	54	05.50	-0.3
			eS	54	16.80	
LLA	1.00	139	ePd	54	09.80	-1.4
PRS	1.09	163	eP	54	11.30	-1.4
CMB	1.27	58	eP	54	14.50	-1.4
			eS	54	31.20	
PRI	1.51	144	e(P)	54	18.70	-1.0
FRI	1.68	103	ePc	54	20.30	-1.7
			eS	54	41.50	
KVN	3.33	59	eP	54	50.00	4.2

16 obs. associated

JUL 18, 1989 16h 21m 14.86± 0.68s
37.998 N ± 7.3km 29.124 E ± 6.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.45	44	iPg	21	23.70	-0.4
			iSg	21	29.70	
CIN	0.91	244	iPgd	21	31.00	-1.3
			iSg	21	39.00	
YER	1.09	218	iPn	21	35.70	0.3
BCK	1.28	114	ePn	21	39.00	0.3
ALT	1.31	36	iPn	21	39.00	-0.1
ELL	1.40	153	ePn	21	53.00	12.5X
IZM	1.52	286	iPn	21	43.30	1.2
DST	1.65	347	ePn	21	44.00	0.0

S.D. = 0.9 on 7 of 8 obs.

? JUL 18, 1989 16h 44m 05.70± 1.34s
11.854 S ±12.8km 127.055 E ±16.5km
DEPTH = 33.0km (normal)
4.5mb (1 obs.)
TIMOR SEA (290)

MTN	4.10	104	iPc	45	06.70	-1.0
			eS	46	28.00	
KNA	4.21	157	eP	45	10.00	0.8
			e	45	18.00	
			eS	46	47.00	
WB5	10.63	140	eP	46	39.80	0.9
			eS	49	15.30	
WRA	10.67	140	Pc	46	40.60	1.2
	0.7s		8.20nm			5.1mb X
ASPA	13.43	152	iPc	47	19.60	3.1X
			eS	50	27.20	
WARB	14.26	182	eP	47	26.00	-1.4
	0.3s		4.00nm			4.5mb
QIS	14.83	127	eP	47	34.00	-0.9
			eS	50	51.00	
CTA	20.18	116	eP	48	32.00	-8.4X
BJI	52.61	349	eP	53	19.00	0.4

S.D. = 1.3 on 7 of 9 obs.

? JUL 18, 1989 17h 35m 25.99± 2.56s
9.026 S ±25.8km 125.381 E ±12.1km
DEPTH = 106.7 ± 19.3 km
3.8mb (3 obs.)
TIMOR (289)

KUPT	2.08	237	eP	36	00.70	0.4
MTN	6.80	124	iPc	37	03.70	-1.1
	0.4s		31.00nm			5.1mb X
			eS	38	23.00	
KNA	7.46	154	eP	37	14.30	0.5
			eS	38	43.00	
MBL	13.20	203	eP	38	30.00	-0.4
WRA	13.89	142	P	38	38.00	-1.4
	0.3s		1.00nm			3.6mb
ASPA	16.69	152	eP	39	16.50	1.7
	0.6s		7.00nm			4.1mb
			eS	42	22.50	
WARB	17.11	176	eP	39	19.00	-1.0
	0.4s		2.00nm			3.7mb
			ePP	39	25.00	
			eS	42	32.00	
QIS	17.89	131	eP	39	31.00	1.5
			eS	42	43.50	
CNCB	151.13	153	PKP	55	09.00	5.4X
ZOBO	151.53	152	(PKP)	55	04.00	-0.2

S.D. = 1.4 on 9 of 10 obs.

JUL 18, 1989 18h 35m 40.64± 1.08s
5.645 S ± 8.5km 146.375 E ± 7.4km
DEPTH = 58.9 ± 13.8 km
4.2mb (3 obs.) 3.9Msz (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	1.18	148	iPc	36	01.10	-0.1
MNDI	2.75	259	eP	36	25.00	1.6
LMG	3.69	152	eP	36	36.50	-0.1
PMG	3.82	168	iPd	36	37.50	-0.8
RAB	5.95	76	iPc	37	07.00	-1.3
			iS	37	22.00	
HNR	13.97	106	P	38	59.00	1.8
CTA	14.36	180	iPc	39	02.80	0.5
	0.6s		16.67nm			4.7mb
QIS	16.22	203	eP	39	25.00	-1.2
MTN	16.65	243	eP	39	31.00	-0.7
WRA	18.41	218	Pd	39	49.80	-3.7X
	0.5s		1.70nm			3.5mb
RMQ	20.85	174	ePc	40	21.00	1.1
ASPA	21.57	213	iPd	40	23.20	-4.0X
	Z 21s		0.50um			3.9Msz
			LR	49	11.00	
WARB	27.79	221	eP	41	26.00	-0.3
	0.4s		3.00nm			4.3mb
SSE	43.75	328	iP	43	42.00	0.0
CN2	52.72	341	Pd	44	52.40	0.9
CD2	54.58	314	eP	45	04.70	-0.8
GTA	62.07	320	eP	45	57.20	-0.6
CNCB	139.36	124	ePKP	54	56.00	-8.7X
LPB	139.40	123	(PKP)	54	56.00	-8.6X
ZOBO	139.51	123	ePKP	54	51.00	-14.0X
PPD	147.49	148	e(PKP)	55	23.00	5.2X
KIC	151.27	273	PKP	55	30.20	6.4X

S.D. = 1.1 on 15 of 22 obs.

JUL 18, 1989 19h 20m 16.28± 0.29s
51.109 N ± 7.4km 176.675 W ± 3.4km
DEPTH = 33.0km (normal)
4.8mb (30 obs.) 4.7Msz (5 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 4.7 (PMR). Felt (III) on Adak.

ADK	0.78	360	iPd	20	32.50	1.8
SMY	5.93	289	eP	21	45.70	1.6
SDN	10.58	60	eP	22	46.80	-1.7
SVW	15.36	41	eP	23	54.50	2.5
KDC	15.51	55	eP	23	51.80	-2.0
TTA	16.23	35	eP	24	06.70	3.5X
PMR	18.37	45	eP	24	25.50	-4.2X
	Z 18s		2.60um			
IMA	19.01	29	eP	24	37.50	-0.1

18d 19h

	1.6s	165.30nm		5.0mb		
FBA	20.35	36 eP	24 52.00	-0.2		
SIT	24.67	60 eP	25 36.90	2.0		
INK	26.92	34 eP	25 53.00	-2.8		
MBC	33.36	21 ePc	26 52.80	-0.1		
	0.6s	8.00nm		4.8mb		
NIIJ	34.14	264 P	26 59.70	-0.3		
GMW	34.64	74 eP	27 05.60	1.3		
CHJJ	34.89	262 P	27 06.50	0.0		
MTMJ	35.30	264 P	27 09.60	-0.5		
LON	35.60	75 eP	27 13.70	1.2		
PNT	35.78	70 eP	27 15.00	1.1		
	0.8s	33.00nm		5.3mb		
		pP	27 26.00	39kmX		
IIDJ	35.93	262 P	27 16.00	0.6		
MDJ	35.94	281 eP	27 14.70	-0.6		
Z	20s	1.20um		4.7Msz		
		PP	28 42.00			
EDM	37.77	61 iPc	27 31.50	0.8		
	0.5s	39.00nm		5.5mb		
WDC	38.34	84 e(P)	27 44.80	9.3X		
CN2	38.91	282 eP	27 40.00	-0.2		
Z	15s	0.60um		4.5MszX		
N	15s	0.40um				
SES	40.28	64 ePc	27 51.90	0.4		
SNY	41.14	281 Pc	27 57.80	-0.8		
Z	22s	1.10um		4.7Msz		
N	20s	1.00um				
E	20s	0.80um				
		eS	34 13.00			
CMB	41.19	86 e(P)	28 04.40	5.2X		
LRM	41.70	71 eP	28 04.10	0.6		
KVN	42.01	83 eP	28 06.30	0.2		
TNP	43.15	84 eP	28 16.00	0.6		
	0.8s	4.41nm		4.3mb		
FFC	43.21	55 eP	28 15.00	-0.4		
	0.5s	6.00nm		4.6mb		
ISA	43.86	87 eP	28 22.00	1.0		
CLC	44.31	86 eP	28 25.00	0.3		
MWC	45.04	89 eP	28 31.00	0.3		
BW06	45.11	73 iPc	28 32.00	0.8		
RVR	45.62	88 eP	28 36.00	0.9		
PLM	46.36	89 eP	28 41.00	-0.2		
TPC	46.38	87 eP	29 01.00	19.9X		
BJI	46.74	284 eP	28 43.00	-0.7		
Z	24s	0.32um		4.2MszX		
		eS	35 37.00			
BAR	46.93	89 eP	29 01.00	15.6X		
GLA	47.84	87 eP	28 53.00	0.3		
TIA	48.52	279 eP	28 57.50	-0.3		
GUMO	48.61	234 eP	29 01.00	2.4		
HHC	49.05	287 eP	29 01.70	-0.2		
SSE	49.33	271 eP	29 04.50	0.4		
	1.0s	17.00nm		5.0mb		
E	20s	0.50um				
		eS	36 24.00			
		i	40 16.00			
GOL	49.48	74 eP	29 06.00	0.6		
	0.8s	19.35nm		5.2mb		
RSON	49.51	56 eP	29 04.40	-0.8		
BTO	50.13	288 P	29 11.00	0.8		
N	15s	0.80um				
E	15s	0.80um				
		S	36 22.00			
TIY	50.47	284 Pc	29 13.00	0.2		
N	15s	0.70um				
ALQ	51.84	79 e(P)	29 22.80	-0.6		
		e	29 33.50			
		e	29 51.00			
FRB	52.55	32 eP	29 27.00	-1.1		
WHN	54.01	276 P	29 38.50	-0.7		
XAN	55.02	283 P	29 45.20	-1.6		
LZH	56.74	288 Pc	29 58.50	-0.8		
	2.0s	140.00nm		5.6mb		
Z	18s	1.50um		5.1Msz		
E	16s	0.60um				
GTA	56.90	293 iPc	29 59.20	-1.2		
Z	16s	1.20um		5.1MszX		
E	15s	0.70um				
SIO	57.50	72 e(P)	30 03.50	-0.9		
TUL	57.70	71 ePd	30 05.50	-0.3		
	1.0s	11.70nm		4.9mb		
Z	19s	0.50um		4.6Msz		
		LR	49 00.00			
RLO	57.99	71 e(P)	30 05.00	-2.8		
SCH	59.41	39 eP	30 16.00	-1.5		
FVM	59.45	66 eP	30 16.20	-1.8		
UYO	59.69	72 iPd	30 18.80	-0.8		
CD2	60.34	283 eP	30 23.70	-0.5		
WMQ	60.60	304 P	30 24.50	-1.4		
Z	28s	1.40um		5.0MszX		
GYA	61.68	278 P	30 32.60	-0.9		
GAC	62.10	51 eP	30 35.00	-0.8		
CBM	64.67	46 eP	30 51.70	-1.0		
SUF	65.09	349 eP	30 53.00	-2.2		
BLA	65.63	61 eP	30 59.50	0.4		
CVL	66.14	59 eP	31 02.50	0.3		
JSC	67.30	63 eP	31 08.10	-1.6		
NUR	67.42	349 iP	31 08.70	-1.3		
Z	21s	0.40um		4.6Msz		
		LR	02 20.00			
NB2	68.02	356 P	31 13.00	-0.9		
HFS	68.80	354 eP	31 17.20	-1.4		
	0.4s	2.40nm		4.6mb		
Z	17s	0.20um		4.4MszX		
		LR	02 39.00			
KSH	69.77	308 eP	31 24.50	-0.6		
SHL	71.41	288 iP	31 34.70	-0.6		
		eS	41 08.00			
CHG	72.10	278 eP	31 38.50	-0.8		
BDT	73.24	277 eP	31 46.90	1.0		
	0.7s	18.10nm		5.2mb		
EKA	73.79	4 P	31 48.00	-0.5		
	1.1s	6.30nm		4.5mb		
CTA	78.01	215 eP	32 25.00	12.2X		
KHC	79.76	353 iPd	32 22.50	0.4		
MAIO	79.98	317 iPc	32 24.20	0.7		
		eS	42 04.00			
LDF	80.63	2 eP	32 26.90	0.2		
	0.6s	5.40nm		4.7mb		
GRR	80.82	3 eP	32 28.40	0.7		
	0.7s	5.20nm		4.6mb		
LPF	81.17	3 eP	32 30.40	0.9		
	0.6s	3.60nm		4.6mb		
HAU	81.23	358 eP	32 30.30	0.4		
	1.0s	8.00nm		4.7mb		
VRI	81.31	344 ePc	32 31.50	1.2		
QUE	81.61	308 eP	32 33.20	0.8		
MLR	81.81	344 ePd	32 34.00	0.9		
KBA	81.81	353 eP	32 33.50	0.4		
	1.0s	14.10nm		4.9mb		
		i	32 34.20			
		i	32 50.80			
		e	33 49.00			
LOR	82.00	360 eP	32 34.20	0.3		
	1.0s	6.00nm		4.6mb		
CMP	82.18	345 ePc	32 36.00	1.1		
SSF	82.21	360 eP	32 35.40	0.5		
	1.0s	6.80nm		4.6mb		
LBF	82.29	360 eP	32 35.70	0.3		
	0.8s	4.00nm		4.5mb		
BZS	82.37	347 eP	32 36.00	0.2		
RBL	82.43	353 Pd	32 36.10	-0.1		
AVF	82.48	360 eP	32 36.80	0.5		
	1.0s	4.80nm		4.5mb		
SMF	82.63	360 eP	32 37.80	0.7		
	1.0s	6.80nm		4.7mb		
TCF	82.98	1 eP	32 39.40	0.4		
	0.6s	2.10nm		4.4mb		
MAF	83.05	1 eP	32 40.40	1.1		
	1.2s	17.80nm		5.0mb		
LFF	84.31	2 eP	32 46.60	0.9		
	0.8s	13.40nm		5.2mb		
CAF	84.34	1 eP	32 46.80	0.9		
	0.8s	13.40nm		5.2mb		
PSI	84.39	267 e(P)	32 45.00	-1.6		
LPO	84.57	2 eP	32 47.60	0.5		
	0.8s	8.00nm		5.0mb		
PGD	85.12	354 Pc	32 51.60	1.6		
HYB	85.56	292 eP	32 54.00	1.6		
ASS	85.85	353 Pc	32 53.80	0.2		
SKO	85.96	347 iPc	32 54.50	0.4		
	1.3s	40.00nm		5.5mb		
VAY	86.43	346 eP	32 57.00	0.6		
CVF	86.58	356 eP	32 57.20	0.1		
	0.8s	9.10nm		5.1mb		
MAW	147.08	217 ePKP	39 56.00	2.4X		
SLR	148.29	314 ePKP	39 47.50	-9.5X		
KSR	149.02	316 ePKP	39 40.00	-18.2X		
BLF	152.13	313 ePKP	40 10.00	7.3X		
	S.D. = 1.1	on 101 of 112 obs.				

JUL 18, 1989 19h 56m 07.89± 0.41s

47.606 N ± 3.3km 13.056 E ± 3.9km

DEPTH = 10.0km (geophysicist)

AUSTRIA (546)

ML 3.8 (LDG), 2.7 (KBA). Felt (IV) in the Werfen area.

BHG	0.17	314 iPgc	56 12.70	1.0		
KBA	0.56	160 iPgd	56 16.30	-3.1X		
SCE	1.08	239 iPgc	56 27.50	-0.8		
WET	1.55	356 iPd	56 36.00	0.5		
		i	56 37.90			
KHC	1.57	13 iPn	56 36.40	0.6		
		iPg	56 38.10			
		Sg	56 57.50			
OGA	1.57	243 iPnc	56 36.80	0.8		
		iPgc	56 37.70			
VOY	1.68	160 iPn	56 37.00	-0.5		
		eSn	56 59.00			
LJU	1.86	146 ePn	56 41.00	0.9		
		i(Pg)	56 42.30			
		eSg	57 06.00			
TRI	1.96	165 ePgc	56 41.20	-0.3		
CEY	2.09	153 e(Pn)	56 48.50	5.0X		
		eSg	57 13.00			
OSS	2.19	246 ePd	56 47.80	2.8		
VKA	2.29	72 iPnd	56 41.50	-4.8X		
		iPg	56 49.00			
		iSn	57 08.80			
		i	57 15.30			
		iSg	57 18.10			
GRF	2.42	330 iPn	56 49.70	1.6		
		iPg	56 55.40			
		e(Sn)	57 14.00			
		eSg	57 26.80			
RIY	2.44	157 iPnc	56 48.00	-0.4		
		iPg	56 54.30			
		iSn	57 19.50			
SAX	2.54	263 iPc	56 51.40	1.3		
PRU	2.58	22 Pn	56 49.90	-0.5		
		ePg	56 54.70			
		i	56 55.50			
		Sg	57 28.70			
VBY	2.59	143 ePn	56 56.00	5.4X		
		iSn	57 30.30			
		iSb	57 37.40			
		iSg	57 39.90			
PTJ	2.63	129 ePn	56 50.00	-1.1		
		eSn	57 22.20			
SAL	2.65	222 P	56 53.90	2.5		
		eSn	57 31.40			
ZAG	2.69	131 iPg	56 57.50	5.5X		
		iSn	57 23.00			
VDL	2.70	247 ePc	56 54.80	2.5		
ZST	2.79	76 i(Pn)	57 03.00	9.7X		
		i	57 22.10			
		i(Sn)	57 32.60			
		i	57 34.90			
		i	57 37.60			
HOF	2.82	344 iPnc	56 54.10	0.3		
STU	2.83	296 ePnc	56 54.00	0.0		
	0.5s	21.13nm				
		ePg	57 02.50			
		e(Sg)	57 36.50			
LLS	2.86	257 ePc	56 55.30	0.7		
SLE	3.09	275 iP	57 06.90	9.3X		
ZLA	3.16	269 iPc	56 58.60	-0.1		
TMA	3.24	244 ePc	57 00.90	1.0		
BRG	3.32	10 ePn	57 03.00	2.1		
		iPg	57 10.40			
		iSn	57 30.30			
		iSg	57 52.50			
FEL	3.41	276 Pn	57 01.89	-0.5		
VAI	3.42	241 P	57 04.90	2.6		
		eSn	57 49.30			
TOD	3.46	307 ePnc	57 03.88	1.0		
CLL	3.71	359 iPn	57 05.90	-0.5		
		iPg	57 18.30			
		iSg	58 07.20			
KTD	3.73	299 ePn	57 06.72	0.0		
BBS	3.76	270 Pn	57 06.32	-0.9		
BOB	3.79	223 P	57 08.60	1.0		
		eSn	57 57.50			
MMK	3.83	248 ePd	57 09.00	0.7		
KSP	3.87	32 ePn	57 07.00	-1.7		
		e	57 14.50			
		e	57 21.00			
		iS	58 12.00			
GWF	3.88	293 Pn	57 08.60	-0.3		

			Pg	57	21.97	
			Sg	58	13.54	
BDI	3.94	207	P	57	10.70	1.0
			eSn	57	59.80	
CDF	3.96	284	Pn	57	09.66	-0.4
			Pg	57	23.05	
MOF	4.01	276	Pn	57	09.66	-1.0
TNS	4.01	312	iPnc	57	10.80	0.1
			i	57	55.20	
			eSn	58	18.20	
ECH	4.01	281	Pn	57	10.10	-0.6
ARV	4.11	181	P	57	10.80	-1.3
			eSn	57	59.80	
DIX	4.16	251	iPc	57	13.50	0.4
LOMF	4.23	269	Pn	57	13.01	-0.9
BSF	4.23	275	Pn	57	13.09	-0.9
ABH	4.30	304	ePn	57	14.64	-0.2
RUP	4.49	300	ePn	57	17.72	0.1
HAU	4.54	278	Pn	57	17.10	-1.1
			Pg	57	34.40	
			Sg	58	31.40	
LPG	4.83	246	Pn	57	22.20	-0.5
			Pg	57	38.10	
LPL	4.84	247	Pn	57	22.50	-0.2
			Pg	57	38.30	
WLF	5.02	297	iPn	57	25.40	0.5
			i	57	43.40	
			iSg	58	48.20	
BNI	5.10	242	P	57	26.80	0.5
SBF	5.43	228	Pn	57	30.30	-0.6
			Sn	58	29.10	
MEM	5.52	306	iPn	57	32.30	0.3
			iSn	58	34.40	
ENN	5.65	307	ePn	57	34.00	0.2
			e(Pb)	57	42.00	
			eSn	58	34.50	
WTS	5.97	320	ePn	57	42.00	3.7X
			e(Pb)	57	50.50	
			eSn	58	46.50	
DOU	6.12	297	Pnc	57	39.80	-0.6
			iPg	58	07.80	
			Sn	58	45.30	
LBF	6.21	268	Pn	57	40.60	-1.2
			Pg	58	04.30	
			Sn	58	48.30	
			Sg	59	24.00	
LOR	6.25	270	Pn	57	41.00	-1.4
			Pg	58	05.20	
			Sn	58	49.00	
			Sg	59	24.50	
LRG	6.27	231	Pn	57	42.10	-0.5
SMF	6.36	265	Pn	57	42.80	-1.2
			Pg	58	07.90	
			Sn	58	51.50	
			Sg	59	28.60	
SNF	6.46	300	P	57	46.60	1.3
SSF	6.51	269	Pn	57	45.00	-1.1
			Pg	58	09.30	
			Sn	58	54.80	
			Sg	59	33.00	
AVF	6.66	267	Pn	57	46.60	-1.6
			Sn	58	59.30	
BGF	7.05	265	Pn	57	51.70	-1.9
			Sn	59	07.00	
MAF	7.32	263	Pn	57	54.50	-2.9
			Sn	59	13.70	
CAF	8.07	255	Pn	58	04.30	-3.7X
			Sn	59	29.30	

S.D. = 1.2 on 61 of 70 obs.

? JUL 18, 1989 20h 13m 13.63± 1.06s
51.345 N ±20.7km 177.235 W ±11.7km
DEPTH = 33.0km (normal)
4.5mb (1 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 4.0 (PMR).

ADK	0.64	32	iPc	13	26.00	-0.2
SVW	15.41	42	eP	16	52.00	1.9
KDC	15.66	56	eP	16	51.40	-1.8
IMA	18.98	30	eP	17	33.30	-1.3
FBA	20.38	37	eP	17	51.30	1.6
KVN	42.33	83	e(P)	21	06.00	-0.1
BW06	45.38	73	eP	21	30.00	-0.7
RSON	49.67	56	eP	21	58.50	-5.3X
BTO	49.72	288	eP	22	05.70	1.2
GOL	49.75	74	eP	22	06.00	1.1
	0.7s		3.64nm			4.5mb
GTA	56.49	293	eP	22	53.40	-1.3
CD2	59.94	283	eP	23	19.40	0.6
QUE	81.19	308	eP	25	26.50	-1.0

S.D. = 1.4 on 12 of 13 obs.

% JUL 18, 1989 20h 51m 36.04± 1.48s
15.710 N ± 7.6km 61.614 W ±13.4km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 1.5 (FDF).

BBL	0.23	145	iPd	51	40.95	0.0
			S	51	44.00	
PAG	0.32	349	eP	51	42.80	0.0
			S	51	47.50	
MGG	0.35	54	iPc	51	43.75	0.4
			S	51	49.10	
SEG	0.70	9	eP	51	50.00	0.2
DEG	0.80	42	eP	51	51.00	-0.7

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

• JUL 18, 1989 21h 01m 27.79± 0.67s
51.065 N ±14.4km 176.514 W ± 6.7km
DEPTH = 33.0km (normal)
4.6mb (6 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 4.6 (PMR). Felt on Adak.

ADK	0.83	353	iPd	01	44.10	1.1
SMY	6.04	290	e(P)	03	00.00	2.9
SVW	15.32	41	ePc	05	10.10	7.1X
KDC	15.45	55	eP	05	03.70	-0.9
TTA	16.21	35	eP	05	19.50	5.0X
IMA	19.00	29	eP	05	47.00	-2.0
FBA	20.33	36	eP	06	03.00	-0.4
MBC	33.37	21	eP	08	05.00	0.6
	0.6s		3.00nm			4.4mb
LON	35.51	75	eP	08	29.00	5.7X
EDM	37.71	61	iPd	08	43.60	2.0
SES	40.21	64	eP	09	05.00	2.5
SNY	41.25	281	Pc	09	11.20	0.2
KVN	41.92	83	e(P)	09	15.50	-1.3
BW06	45.02	73	eP	09	43.00	0.9
	0.7s		6.21nm			4.6mb
BJI	46.85	284	eP	09	56.00	-0.1
GOL	49.39	74	eP	10	16.00	-0.3
	0.7s		7.29nm			4.8mb
RSON	49.45	56	eP	10	16.10	-0.2
BTO	50.24	288	eP	10	23.00	0.4
TIY	50.58	284	eP	10	25.00	-0.1
ALQ	51.75	80	e(P)	10	35.50	1.3
FRB	52.54	32	eP	10	38.00	-1.5
XAN	55.13	283	P	10	57.00	-2.1
LZH	56.85	288	eP	11	11.00	-0.6
	1.5s		38.00nm			5.2mb
GTA	57.01	293	iPc	11	11.10	-1.6
CD2	60.45	284	P	11	37.00	0.6
GYA	61.79	278	P	11	44.40	-1.3
JSC	67.23	63	eP	12	21.00	0.2
NB2	68.08	356	P	12	24.40	-1.3
EKA	73.83	4	P	13	00.00	-0.3
	1.1s		4.00nm			4.3mb
QUE	81.72	308	eP	13	44.40	0.0
KBA	81.87	353	iPd	13	45.50	0.6
	0.8s		5.20nm			4.6mb
			eSg	15	36.50	
SKO	86.03	347	eP	14	06.50	0.6

S.D. = 1.3 on 29 of 32 obs.

JUL 18, 1989 21h 24m 00.91± 0.77s
30.924 N ± 6.3km 49.649 E ± 4.2km
DEPTH = 36.4 ± 9.8 km
4.4mb (3 obs.) 4.0Msz (1 obs.)
WESTERN IRAN (347)

SHI	2.80	116	eP	24	44.00	-0.4
KER	4.04	329	eP	25	14.00	12.0X
DHR	4.62	175	ePc	25	12.50	2.3
BRF	4.90	170	iPn	25	13.40	-0.8
BEE	4.95	171	iPn	25	14.80	0.0
			eSn	26	11.50	
BHD	5.04	299	ePnd	25	17.00	0.9
			e	25	42.00	
			eSn	26	15.00	
			i	26	44.00	
			i	27	07.00	
SLY	5.81	324	ePnd	25	29.00	2.0
			ePg	25	56.00	
			iSn	26	33.00	
			iS•	26	50.00	
			iSg	27	06.00	
RYD	6.74	204	eP	25	40.00	-0.1
QASM	7.22	230	ePc	25	46.00	-0.8
TAB	7.63	340	e(P)	25	25.00	-27.7X
MSL	7.68	317	ePd	25	46.00	-7.2X
			eS	27	15.50	
			e	28	25.50	
MAIO	9.80	54	eP	26	21.00	-1.6
			eS	27	57.00	
KMSA	11.49	205	eP	26	49.50	3.9X
SALJ	11.97	279	Pd	26	51.60	-0.5
MKRJ	12.01	277	Pd	26	52.80	0.2
PRNI	12.63	271	eP	27	00.00	-0.9
MBH	12.81	269	eP	27	01.00	-2.2
BADA	12.95	263	ePc	27	04.80	-0.3
QUE	14.93	88	eP	27	31.60	0.3
			e	30	28.20	
ELL	17.39	295	eP	28	06.40	3.9X
KSH	23.08	61	eP	29	05.00	0.6
VRI	23.24	316	ePc	29	16.00	10.3X
MLR	23.52	315	eP	29	13.00	4.5X
CMP	23.96	314	ePd	29	16.00	3.2X
NDI	24.01	88	eP	29	14.00	0.7
BZS	26.28	312	eP	29	36.50	1.9
KBA	32.15	311	e(P)	30	27.00	-0.4
	1.0s		5.60nm			4.4mb
			i	30	33.60	
WMQ	32.58	56	P	30	31.00	0.0
Z	20s		0.30um			4.0Msz
KHC	32.67	314	iPd	30	33.00	1.3
NUR	33.93	338	eP	30	41.00	-1.4
SUF	35.22	341	iP	30	52.30	-1.1
HFS	37.73	331	eP	31	14.90	0.3
	0.4s		1.80nm			4.3mb
NB2	39.26	331	P	31	28.30	0.8
BNG	39.38	234	iPc	31	30.40	1.4
	0.5s		5.00nm			4.5mb
GTA	41.43	64	Pc	31	46.50	0.8
LZH	45.00	68	eP	32	15.00	0.1
ECP	45.68	314	eP	32	19.00	-0.8
DLE	45.89	316	eP	32	20.00	-1.4
CHG	45.99	93	eP	32	22.10	-0.6
DMU	46.18	317	eP	32	23.00	-0.7
DCN	46.34	316	eP	32	27.00	2.1
BTO	49.08	61	eP	32	47.40	0.7
XAN	49.49	70	P	32	49.60	-0.3
GYA	49.76	80	P	32	51.20	-0.9
TIY	51.45	64	eP	33	04.80	0.0
CN2	59.65	54	eP	34	03.00	-0.6
			epP	34	13.00	33kmX
FRB	73.89	336	eP	35	33.00	-0.6

S.D. = 1.1 on 39 of 47 obs.

? JUL 18, 1989 22h 28m 00.78± 3.53s
46.138 N ±30.8km 2.597 E ±13.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.8 (LDG).

TCF	0.31	299	Pg	28	07.40	0.2
			Sg	28	10.30	
BGF	0.45	22	Pg	28	09.80	-0.2
			Sg	28	14.40	
LSF	0.75	279	Pg	28	15.30	-0.2
			Sg	28	23.10	
AVF	0.84	38	Pg	28	17.10	0.2
			Sg	28	28.30	

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

JUL 18, 1989 22h 41m 31.96± 1.08s
39.791 N ±10.0km 22.252 E ± 5.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.6 (THE).

LIT	0.36	31	iPgc	41	38.50	-0.9
			eSg	41	46.00	
THE	1.00	33	ePgd	41	51.40	0.5
PAIG	1.11	83	ePb	41	52.60	-0.1
GRG	1.17	6	iPbc	41	53.30	-0.5
			eSb	42	12.80	
LSK	1.32	286	ePn	41	52.00	-4.4X
KBN	1.38	308	ePn	41	56.10	-1.1

18d 22h

OUR	1.43	67	ePb	41	58.10	0.1
KNT	1.46	20	ePbc	41	59.00	0.7
			eSb	42	20.90	
VAY	1.55	9	ePn	41	59.00	-0.6
SRS	1.67	37	ePb	42	01.80	0.4
			eSb	42	26.00	
SRN	1.74	274	ePn	42	02.50	0.2
TPE	1.79	287	ePn	42	09.00	5.8X
MMB	2.12	32	ePd	42	07.00	-0.9
KKB	2.17	17	eP	42	09.00	0.4
SKO	2.26	344	ePn	42	12.00	2.0
PHP	2.34	325	ePn	42	10.70	-0.4

S.D. = 0.9 on 14 of 16 obs.

JUL 18, 1989 23h 10m 56.83± 0.61s
48.669 N ± 4.3km 6.942 E ± 6.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (LDG).

CDF	0.34	139	Pg	11	03.60	-0.3
ECH	0.48	162	Pg	11	06.32	-0.2
			Sg	11	12.57	
GWF	0.55	55	Pg	11	09.12	1.3
HAU	0.77	211	Pg	11	11.90	0.0
			Sg	11	22.10	
VITF	0.78	235	Pg	11	11.69	-0.3
			Sg	11	21.95	
MOF	0.83	171	Pg	11	12.83	-0.1
BSF	0.84	187	Pg	11	13.11	-0.1
			Sg	11	23.85	
RUP	1.04	4	iPg	11	16.80	0.4
FEL	1.07	138	Pg	11	17.41	0.4
			Sg	11	31.13	
ABH	1.28	18	iPg	11	21.00	0.5
LOMF	1.32	183	Pg	11	22.24	0.9
TOD	1.54	52	eP	11	21.99	-2.4
LOR	2.50	237	Pg	11	43.40	5.2X
			Sg	12	15.00	
LBF	2.61	231	Pg	11	46.00	6.1X
			Sg	12	19.40	

S.D. = 1.0 on 12 of 14 obs.

? JUL 18, 1989 23h 49m 41.00± 7.98s
51.537 N ±63.8km 19.600 E ±33.2km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.1 (KRA).

KRA	1.50	172	ePg	50	07.50	-0.4
			eSg	50	17.70	
KSP	2.19	253	ePn	50	25.00	7.0X
			iPg	50	28.00	
			iS	50	51.00	
SPC	2.39	170	iPn	50	21.10	0.1
			i(Sg)	50	38.70	
			i	50	41.20	
PRU	3.57	246	ePn	50	38.50	1.0
			Pg	50	47.00	
			Sg	51	22.50	
BRG	3.62	262	ePg	50	54.00	15.8X
PSZ	3.63	177	eP	50	41.80	3.3X
ZST	3.71	207	e(Pn)	50	40.80	1.2
			e	51	13.60	
VKA	3.90	214	eP	50	43.00	0.7
			e(Sg)	51	17.00	
CLL	4.14	269	ePg	51	07.00	21.5X
			eSg	52	03.00	
KHC	4.55	240	iPn	50	51.10	-0.3
			Pg	50	58.80	
			Sn	51	31.50	
			Sg	51	47.50	
GRF	5.64	254	e(Pg)	51	30.00	23.0X
			eSg	52	29.00	
KBA	6.05	225	e(P)	51	10.50	-2.3
	1.1s		26.30nm			4.9mb X
			i	52	21.50	
			e	52	29.00	
			i	52	34.40	

S.D. = 1.5 on 7 of 12 obs.

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* JUL 18, 1989 23h 52m 39.48± 1.29s
17.569 S ±10.9km 168.683 E ± 9.8km
DEPTH = 41.3 ± 11.9 km
5.2mb (2 obs.)
VANUATU ISLANDS (186)

PVC	0.39	244	iPd	52	47.40	-1.5
			iS	52	57.20	
DZM	4.95	205	iPd	53	54.20	0.8
			iS	54	55.60	
HNR	11.73	312	eP	55	29.00	1.8
CTA	21.37	260	iPd	57	28.40	2.7
	1.5s		72.22nm			4.8mb
			iS	02	00.00	
BWA	24.69	223	eP	57	58.30	0.2
ASPA	33.06	254	iPd	59	12.30	-1.2
FORR	39.09	243	eP	00	04.30	-0.3
BJI	75.31	321	eP	04	18.00	-2.2
TIY	76.26	317	eP	04	25.00	-0.8
HHC	78.61	319	eP	04	38.40	-0.4
LZH	81.22	312	eP	04	53.00	0.1
	2.5s		135.00nm			5.5mb
PRI	85.43	50	ePc	05	15.00	0.7
GTA	85.60	314	eP	05	15.20	0.1
WDC	86.07	45	ePc	05	17.20	0.0
ORV	86.32	47	ePc	05	18.40	-0.1
CMB	86.44	48	ePc	05	19.10	-0.1
FRI	86.49	50	eP	05	19.50	0.1
MWC	86.58	53	eP	05	21.00	0.9
SBB	86.94	52	eP	05	22.00	0.3
RVR	87.00	53	eP	05	21.00	-1.0
BAR	87.03	55	eP	05	22.00	-0.2
PLM	87.15	54	eP	05	17.00	-5.9X
TPC	88.06	53	eP	05	28.00	0.9
KVN	88.50	48	eP	05	29.40	0.1
GLA	88.61	55	eP	05	30.00	0.3
WMQ	95.67	314	P	06	01.20	-1.0
SKO	142.95	318	ePKP	12	05.00	-5.6X
BNG	147.98	249	iPKPc	12	22.90	3.1X
	1.1s		23.00nm			

S.D. = 1.1 on 25 of 28 obs.

& JUL 19, 1989 00h 24m 47.60s
41.714 N 112.384 W
DEPTH = 9.4km
UTAH (478)
<SLC-P>. ML 3.2 (SLC).

PTI	1.16	1	iP	25	09.30	-0.1
DUG	1.55	192	iP	25	15.20	-0.3
	0.4s		4.57nm			
			iS	25	36.90	
DAU	1.56	146	ePn	25	16.40	0.7
			iPg	25	17.70	
			iS	25	36.80	
BW06	2.35	62	iP	25	25.60	-1.6
KVN	5.11	241	eP	26	06.20	-0.1
	5 obs. associated					

? JUL 19, 1989 00h 27m 51.76± 1.42s
40.917 S ±24.1km 74.960 W ±17.7km
DEPTH = 33.0km (normal)
OFF COAST OF SOUTHERN CHILE (143)

CCH	24.66	21	eP	33	05.00	-6.1X
CNCB	24.77	16	eP	33	13.00	0.5
LPB	25.01	16	eP	33	16.00	1.4
ZOBO	25.26	16	P	33	16.50	-0.7
PPD	27.45	54	eP	33	36.10	-0.5
			e	33	37.90	
VAO	29.53	61	eP	33	55.20	-0.3
SOB1	43.65	53	eP	35	55.10	0.0
SIO	78.77	342	e(P)	39	51.00	-1.4
TUL	78.81	343	ePc	39	51.60	-1.0
	1.1s		13.00nm			4.8mb X
ALQ	80.86	334	iPc	40	04.90	1.1
	1.0s		10.00nm			4.8mb X
			e	40	09.00	
			e	40	27.50	
MAIO	144.42	82	ePKP	47	27.00	0.9

S.D. = 1.1 on 10 of 11 obs.

& JUL 19, 1989 02h 21m 44.00s
31.250 N 115.960 W
DEPTH = 6.0km (geophysicist)
BAJA CALIFORNIA (48)
<PAS-P>. ML 3.6 (PAS).

IKP	1.40	355	iPd	22	09.20	-1.0
BAR	1.55	337	ePc	22	11.20	-1.0
CPE	1.89	330	ePc	22	17.30	0.2
GLA	2.04	28	P	22	18.80	-0.5
PLM	2.23	340	P	22	22.20	0.0
PEC	2.82	339	eP	22	30.40	-0.1
ABL	4.52	324	eP	22	54.80	0.1
BCH	5.23	320	P	23	04.10	-0.6
TNP	6.89	352	eP	23	28.40	0.1
MSU	7.88	22	eP	23	44.50	2.3
KVN	7.98	348	eP	23	43.00	-0.4
	11 obs. associated					

JUL 19, 1989 03h 14m 09.39± 0.88s
7.338 S ± 4.9km 154.331 E ± 4.3km
DEPTH = 46.0 ± 8.0 km
5.2mb (18 obs.) 4.3Msz (3 obs.)
SOLOMON ISLANDS (193)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 25C
Centroid Locotion:
Origin Time 03:14:10.8 0.7
Lat 7.53S 0.10 Lon 154.24E 0.08
Dep 15.0 FIX Half-durotion 1.5
Moment Tensor; Scole 10**16 Nm
Mrr=-5.13 0.35 Mtt= 5.21 0.43
Mff=-0.08 0.50 Mrt=-0.57 1.67
Mrf= 1.60 1.17 Mtf=-2.71 0.34
Principol Axes:

	Val=	Plg=	Azm=
T	6.47	6	204
N	-0.87	16	295
P	-5.60	73	95

Best Double Couple:Mo=6.0*10**16
NP1:Strike=277 Dip=42 Slip=-115
NP2: 128 53 -70

RAB	3.79	325	e(P)	15	08.00	1.1
			iS	15	56.00	
SVO	5.72	109	eP	15	35.00	1.0
HNR	5.93	111	eP	15	35.00	-2.0
			eS	16	45.00	
LAT	7.31	275	eP	15	56.00	-0.3
PMG	7.39	253	eP	15	57.00	-0.5
CTA	14.90	211	iPd	17	38.70	-0.1
	1.1s		37.97nm			4.6mb
			i	17	45.00	
			iS	20	43.00	
DZM	18.74	143	iPc	18	26.90	-0.2
QIS	19.39	226	iPc	18	34.30	-0.3
	0.9s		118.00nm			5.2mb
			e	18	42.00	
RMO	19.77	195	iPc	18	39.50	0.8
BRS	20.00	184	iPd	18	40.70	-0.4
GUA	22.75	336	eP	19	10.00	1.1
GUMO	22.81	336	eP	19	10.30	0.8
WB5	23.03	235	iPc	19	11.30	-0.3
			e	22	38.50	
			e	23	23.80	
WRA	23.08	235	Pc	19	12.10	0.0
	0.8s		30.30nm			4.8mb
COO	23.23	185	eP	19	14.00	0.5
MTN	23.48	255	eP	19	18.60	2.7
ASPA	25.46	228	iPc	19	34.70	-0.2
	1.0s		61.00nm			5.1mb
Z	20s		1.23um			4.4Msz
			eS	24	06.50	
			LR	28	24.30	
KNA	26.38	249	eP	19	44.50	1.0
BWA	27.50	191	eP	19	53.10	-0.5
WARB	32.34	231	iPc	20	25.40	-11.3X
	0.4s		5.00nm			
FORR	33.90	223	iPd	20	48.70	-1.5
	0.5s		21.00nm			5.3mb
PCI	34.97	279	ePd	21	03.20	3.6X
	1.0s		3.50nm			4.2mb
MAT	46.20	342	eP	22	30.00	-1.7
NJ2	51.76	321	Pc	23	15.80	1.1
WHN	53.73	317	P	23	30.20	0.9
			sP	23	46.50	
AFR	55.34	106	iP	23	41.50	0.2
	0.8s		40.00nm			5.5mb
PAE	55.54	106	iP	23	43.30	0.6
	0.8s		30.00nm			5.4mb
TIA	55.65	324	Pd	23	42.10	-1.1
SNY	56.44	333	eP	23	47.20	-1.6
PMO	57.06	103	iP	23	53.80	0.2
	1.1s		65.00nm			5.6mb
CN2	57.22	335	eP	23	53.00	-1.4
VAH	57.32	103	iP	23	54.10	-1.4
	1.1s		20.00nm			5.1mb
TPT	57.32	103	iP	23	55.70	0.2

	1.1s	45.00nm			5.4mb	
RUV	57.56	103	iP	23	57.20	0.1
	1.1s	40.00nm			5.4mb	
BJI	58.83	326	eP	24	05.00	-0.7
TIY	59.45	322	eP	24	07.70	-2.4
Z	22s	0.50um			4.6Msz	
XAN	59.50	317	P	24	10.00	-0.5
CHG	60.46	296	eP	24	17.80	0.5
CD2	61.54	311	P	24	24.60	0.2
BTO	62.73	323	eP	24	32.00	-0.3
LZH	64.10	316	eP	24	41.50	0.0
	1.5s	38.00nm			5.2mb	
GTA	68.54	317	iPd	25	10.50	0.8
KDC	77.78	26	ePd	26	02.30	-0.8
SVW	78.55	22	ePd	26	07.90	0.4
WMQ	78.63	317	P	26	08.60	0.4
			SKS	36	05.20	
GBA	79.10	285	Pd	26	15.30	4.1X
	0.9s	4.80nm			4.4mb	
TTA	79.57	21	eP	26	12.50	-0.5
PMR	81.37	24	ePd	26	21.60	-0.7
	0.8s	27.40nm			5.3mb	
IMA	82.34	19	P	26	27.40	-0.2
	0.8s	16.10nm			5.1mb	
TOA	82.83	24	ePd	26	30.30	0.2
FBA	83.67	21	ePd	26	32.90	-1.3
KSH	85.71	311	eP	26	47.50	2.3
BRK	89.28	52	e(P)	27	02.40	0.2
WDC	89.53	49	e(P)	27	03.30	-0.1
PRS	89.73	53	ePd	27	05.30	0.9
ARN	89.76	52	P	27	05.40	0.8
LLA	90.11	53	e(P)	27	06.70	0.5
ORV	90.15	50	ePd	27	06.10	-0.2
MIN	90.20	49	e(P)	27	05.90	-0.8
INK	90.27	21	eP	27	06.00	-0.2
CMB	90.77	52	ePd	27	09.40	0.2
FRI	91.15	53	ePd	27	11.20	0.3
PAS	92.00	56	eP	27	16.00	1.1
MWC	92.11	56	eP	27	17.00	1.4
SBB	92.36	56	eP	27	17.00	0.4
RVR	92.64	56	eP	27	18.00	0.2
KVN	92.69	51	P	27	18.60	0.4
PEC	92.81	56	P	27	19.40	0.7
PLM	92.99	57	eP	27	21.00	1.3
TNP	93.25	52	P	27	21.00	0.1
	0.8s	11.76nm			5.4mb	
TPC	93.75	56	eP	27	24.00	1.0
MBC	96.19	14	eP	27	32.50	-0.8
	0.6s	4.00nm			5.1mb	
SES	98.55	40	ePd	27	43.80	-0.7
GOL	102.56	51	Pdiff	28	03.50	0.4
NB2	119.80	340	PKP	32	53.60	-2.3
BZS	124.24	321	ePKP	33	04.00	-0.9
BRG	125.61	330	i(PKP)	33	08.00	0.6
SKO	126.01	318	ePKP	33	08.80	0.3
KHC	126.89	329	iPKPc	33	11.00	1.0
GRF	127.71	330	ePKP	33	13.00	1.5
Z	19s	0.02um			3.8Msz	
DMU	131.16	345	ePKP	33	19.60	1.7
DLE	131.62	345	ePKP	33	19.70	1.0
DCN	131.75	345	ePKP	33	15.20	-3.8X
CNCB	131.77	120	ePKP	33	11.00	-9.8X
			i	33	22.50	
LPB	131.79	120	PKP	33	22.20	1.5
ZOBO	131.88	119	PKP	33	22.00	0.9
CCH	133.07	122	(PKP)	33	25.00	2.0
BNG	135.94	269	iPKPc	33	28.80	0.6
	0.7s	6.00nm				
ASMO	144.08	330	ePKP	33	40.20	-2.1
AAPN	144.31	330	iPKP	33	40.70	-2.0
APHE	144.37	329	ePKP	33	41.40	-1.4
ALOJ	144.46	330	ePKP	33	41.00	-2.0
ATEJ	144.56	329	ePKP	33	41.60	-1.6
MAL	144.91	330	iPKPd	33	42.40	-1.1
BMA	145.10	149	ePKP	33	42.70	-1.6
			i	33	44.90	
			e(pPKP	33	52.00	
			e	34	03.40	
IFR	147.75	327	iPKPc	33	53.00	4.4X
BAO	148.22	136	ePKP	33	45.50	-4.2X
AVE	149.12	329	ePKP	33	59.00	8.5X
TIO	150.89	326	iPKPc	34	00.50	7.1X
SOB1	157.63	137	ePKP	34	21.70	18.8X
			e	34	35.80	

S.D. = 1.1 on 90 of 100 obs.

% JUL 19, 1989 04h 07m 18.13± 0.71s

44.290 N ± 7.4km 7.389 E ± 5.7km

DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.0 (GEN).

STV	0.07	226	P	07	20.60	0.1
			S	07	22.02	
ENR	0.07	161	P	07	20.60	0.0
			S	07	21.95	
PZZ	0.30	316	P	07	24.33	-0.1
			S	07	28.81	
ROB	0.35	89	P	07	25.36	0.1
			S	07	30.18	
IMI	0.52	136	P	07	28.53	-0.2
			S	07	35.44	
FIN	0.59	98	P	07	30.23	0.1

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

JUL 19, 1989 04h 13m 00.97± 0.58s

37.863 N ± 5.3km 22.359 E ± 6.1km

DEPTH = 10.0km (geophysicist)

SOUTHERN GREECE (368)

ML 3.1 (ATH).

ITM	0.76	207	eP	13	16.00	0.1
ATH	1.08	84	eP	13	21.00	-0.3
			eS	13	34.80	
VLS	1.43	283	eP	13	27.00	0.0
NEO	1.59	25	eP	13	30.00	0.7
LIT	2.24	3	ePnd	13	39.10	0.5
			eSn	14	08.90	
PAIG	2.30	26	iPnc	13	39.30	-0.3
			eSn	14	07.80	
KZN	2.48	350	eP	13	40.80	-1.3
APE	2.65	106	eP	13	40.30	-4.2X
			eS	14	09.80	
PLG	2.65	18	eP	13	44.00	-0.5
OUR	2.77	27	ePnd	13	46.10	-0.1
THE	2.81	9	ePnd	13	46.40	-0.3
VAM	2.86	148	eP	13	41.60	-5.9X
KNT	3.32	7	ePnd	13	54.60	0.6
			eSn	14	34.60	
SRS	3.39	16	ePn	13	55.10	0.2
			iSn	14	35.50	
VAY	3.46	3	ePn	13	56.40	0.5
SKO	4.16	351	ePn	14	06.00	0.1
CIN	4.55	92	ePg	13	27.00	-44.4X
			iSg	13	34.00	

S.D. = 0.6 on 14 of 17 obs.

% JUL 19, 1989 04h 30m 51.34± 0.80s

37.099 N ± 8.5km 3.565 W ± 5.2km

DEPTH = 10.0km (geophysicist)

SPAIN (377)

mbLg 3.2 (MDD).

MAL	0.77	242	iPnc	31	01.00	-5.4X
			iSg	31	11.00	
EBAN	1.08	351	ePg	31	12.00	0.4
			eSg	31	28.00	
ENIJ	1.09	96	iP	31	11.70	-0.1
			eS	31	26.80	
EPRU	1.34	265	ePn	31	16.30	0.2
			eSn	31	35.00	
EHOR	1.52	299	ePn	31	18.20	-0.3
			eSn	31	37.90	
EVIA	1.75	28	ePn	31	22.20	0.2
			eSn	31	45.00	
EVAL	2.58	282	ePn	31	34.00	0.1
TOL	2.80	352	ePg	31	46.00	8.9X
			e(Sb)	32	17.00	
			iSg	32	21.50	
EPLA	3.56	327	ePn	31	47.30	-0.4
GUD	3.57	353	ePn	32	00.00	12.0X
			eSg	32	42.50	
ETOR	3.90	17	ePn	31	52.50	-0.1

S.D. = 0.3 on 8 of 11 obs.

JUL 19, 1989 04h 44m 55.73± 0.48s

6.985 S ± 5.8km 130.040 E ±11.2km

DEPTH = 33.0km (normol)

4.8mb (8 obs.)

BANDA SEA (280)

AAI	3.76	331	eP	46	04.30	11.5X
MTN	5.92	170	iPc	46	27.00	3.5X
KNA	8.80	188	eP	47	04.30	0.6
	0.3s	262.00nm			6.9mb X	
		eS	48	35.00		
WB5	13.49	162	iPc	48	05.80	-1.5
		iS	50	22.50		
WRA	13.54	162	Pc	48	07.10	-0.9
	0.5s	22.90nm			5.3mb	
OIS	16.37	146	eP	48	45.00	0.2
		e	48	49.00		
		eS	51	33.00		
ASPA	17.00	168	iPd	48	52.40	-0.3
	0.5s	93.00nm			5.2mb	
		eS	51	49.30		
PMG	17.11	99	eP	49	01.00	6.9X
MBL	17.21	214	iPd	48	55.20	-0.1
	0.3s	24.00nm			4.8mb	
WARB	19.37	189	eP	49	21.00	-0.7
	0.4s	19.00nm			4.7mb	
		eS	52	44.00		
CTA	20.42	131	eP	49	41.00	8.0X
NANU	20.87	221	iPd	49	38.00	0.5
	0.3s	13.00nm			4.8mb	
MEKA	22.38	208	eP	49	53.00	0.3
FORR	23.81	184	eP	50	07.00	0.4
		i	50	14.40		
COOL	25.19	198	eP	50	21.50	1.5
MRWA	25.78	209	eP	50	25.30	-0.1
	0.3s	3.00nm			4.4mb	
BAL	26.62	206	eP	50	34.00	0.8
KLB	27.04	204	eP	50	37.20	0.2
	0.3s	5.00nm			4.6mb	
MUN	28.02	206	eP	50	46.00	0.1
NWAO	28.42	203	eP	50	47.00	-2.5
BDT	38.99	308	iP	52	21.10	0.1
CHG	39.96	310	iPc	52	29.00	-0.1
	1.0s	16.00nm			4.7mb	
XAN	45.44	335	P	53	12.50	-1.0
BJI	48.51	346	eP	53	37.00	-0.4
GTA	53.98	331	P	54	18.40	-0.5
WMQ	63.40	327	Pd	55	24.00	-0.5
SLA	145.03	155	ePKPc	04	31.10	-1.2
NNA	147.29	125	ePKP	04	38.80	2.7
	0.7s	8.22nm				
ARE	148.43	138	ePKP	04	42.00	3.8X
BMA	149.96	191	ePKP	04	44.90	4.8X
VAO	150.06	186	ePKP	04	45.00	4.7X
CNCB	150.39	143	PKP	04	42.80	1.2
		i		04	47.80	
LPB	150.54	143	ePKP	04	41.00	-0.6
		i		04	48.00	
UPA	150.65	84	iPKPd	04	46.00	4.7X
ZOBO	150.72	142	PKP	04	42.00	-0.1
	1.0s	12.50nm				
		i		04	48.10	
CCH	150.98	147	ePKP	04	44.00	1.9
		i		04	50.00	
PPD	151.13	177	ePKP	04	46.70	4.8X

S.D. = 1.1 on 28 of 37 obs.

JUL 19, 1989 04h 56m 36.92± 0.72s

31.979 S ± 8.7km 68.205 W ± 9.1km

DEPTH = 33.0km (normol)

SAN JUAN PROVINCE, ARGENTINA (137)

RTCV	0.31	293	iPc	56	49.20	4.4X
ZON	0.59	317	iPd	56	49.50	0.6
			eS	57	01.00	
RTLL	0.69	341	iPd	56	49.90	-0.3
RTCB	0.71	314	iPd	56	50.30	-0.2
RTBS	1.11	286	ePd	56	56.00	-0.1
MRA	2.16	102	iPc	57	11.30	0.0
RFA	2.79	184	ePc	57	20.30	0.0

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

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* JUL 19, 1989 05h 03m 08.16± 1.61s

37.807 N ±11.7km 27.574 E ±16.2km

DEPTH = 10.0km (geophysicist)

TURKEY (366)

CIN	0.46	117	iPgd	03	17.00	-0.4
			iSg	03	23.00	
IZM	0.64	337	iPg	03	20.50	-0.5
			iSg	03	32.30	
YER	0.88	140	iPn	03	25.50	0.5
KHL	1.62	71	ePn	03	36.50	-0.5
DST	1.98	24	ePn	03	43.00	1.0

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

19d 05h

JUL 19, 1989 05h 28m 20.69± 0.56s
65.700 N ± 7.3km 11.267 W ± 5.9km
DEPTH = 10.0km (geophysicist)
4.4mb (20 obs.)
ICELAND REGION (637)

AKU	2.83	273	iP	29 07.10	0.4
	0.8s	1850.75nm			
			iS	29 43.10	
REY	4.79	256	e(P)	29 33.40	-1.1
			iS	30 38.00	
SUE	8.56	115	iP	30 22.52	-4.9X
			eS	31 52.50	
MOL	8.79	102	iP	30 26.48	-4.1X
			eS	32 00.78	
HYA	9.03	112	iP	30 29.83	-4.1X
			eS	31 59.78	
ASK	9.10	117	iP	30 29.50	-5.3X
			eS	32 01.30	
BER	9.22	118	eP	30 32.60	-3.8X
			eS	32 06.79	
NSS	9.84	86	iP	30 43.92	-1.2
			eS	32 25.70	
LOF	10.01	65	iP	30 45.98	-1.4
			eS	32 29.93	
ODD1	10.01	117	eP	30 43.20	-4.3X
			eS	32 22.57	
KMY	10.01	123	iP	30 42.15	-5.3X
			eS	32 23.73	
BLS1	10.45	119	eP	30 49.26	-4.3X
			eS	32 36.18	
EKA	11.13	155	P	30 59.00	-3.7X
	0.4s	1.40nm		4.7mb	
NRA0	11.39	105	iPd	31 03.70	-2.5
			iS	33 05.00	
			iSg	33 34.50	
DMU	12.04	168	eP	31 09.00	-6.0X
TRO	12.05	58	eP	31 15.30	0.2
DCN	12.56	169	eP	31 23.30	1.3
DLE	12.68	167	eP	31 19.70	-3.9X
			e	33 36.00	
KEV	14.87	57	eP	32 02.00	9.7X
SOD	15.03	66	eP	31 56.00	1.6
SUF	16.38	83	eP	32 13.00	1.1
	0.5s	3.50nm		3.7mb	
NUR	16.88	91	eP	32 22.00	3.9X
ENN	17.39	141	eP	32 26.50	1.9
	1.0s	16.00nm		4.1mb	
			i	32 35.80	
MEM	17.56	141	P	32 29.20	2.5
CLL	19.01	128	eP	32 46.00	1.5
BRG	19.69	127	e(P)	32 53.50	0.9
	1.1s	10.00nm		4.0mb	
LOR	20.17	149	eP	32 57.90	0.2
	0.8s	7.20nm		4.1mb	
SSF	20.29	150	eP	32 58.70	-0.2
	1.0s	8.00nm		4.0mb	
LBF	20.47	149	eP	33 01.10	0.3
	0.9s	14.70nm		4.3mb	
AVF	20.52	150	eP	33 01.30	0.0
	0.9s	11.40nm		4.2mb	
BGF	20.64	151	eP	33 02.00	-0.5
	0.6s	17.10nm		4.6mb	
PRU	20.65	127	eP	33 01.50	-1.1
LSF	20.69	154	eP	33 02.90	-0.1
	1.0s	22.00nm		4.5mb	
SMF	20.76	150	eP	33 03.70	-0.1
	0.8s	20.10nm		4.5mb	
TCF	20.78	153	eP	33 03.80	-0.2
	0.8s	18.80nm		4.5mb	
MAF	20.91	152	eP	33 04.90	-0.4
	0.8s	18.80nm		4.5mb	
KHC	21.08	130	eP	33 06.80	-0.3
	1.2s	12.00nm		4.1mb	
RJF	21.60	155	eP	33 11.20	-1.1
	1.0s	25.60nm		4.6mb	
LFF	21.82	157	eP	33 13.70	-0.8
	0.8s	10.70nm		4.3mb	
CAF	22.06	154	eP	33 15.60	-1.4
	1.0s	22.00nm		4.5mb	
LPG	22.50	145	eP	33 21.40	-0.2
	0.8s	8.00nm		4.2mb	
LSD	22.63	145	P	33 26.09	3.2X
RRL	23.05	146	P	33 28.96	2.0
PZZ	23.51	146	P	33 35.11	3.7X
EPF	23.62	158	eP	33 29.90	-2.4
	1.1s	14.60nm		4.5mb	
FRB	23.81	292	eP	33 34.00	0.1
FFC	42.39	301	eP	36 17.50	1.3
	1.0s	11.00nm		4.5mb	
S.D. = 1.3 on 32 of 47 obs.					

& JUL 19, 1989 06h 50m 47.95s
59.922 N 151.580 W
DEPTH = 50.2km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL	0.19	50	iP	50 56.76	0.5
			S	51 03.13	
HOM	0.27	187	eP	50 56.78	-0.1
			S	51 04.33	
BRLK	0.38	114	iP	50 57.35	-0.7
			S	51 04.99	
CNPM	0.43	156	iP	50 57.82	-0.7
			S	51 05.73	
XLV	0.47	189	eP	50 57.98	-1.0
ILIM	0.71	283	iP	51 01.10	-0.9
RED	0.78	310	iP	51 02.15	-0.8
			S	51 14.06	
NKA	0.84	12	iP	51 04.79	1.1
OPT	0.88	253	eP	51 03.42	-0.8
SLKM	0.90	49	iP	51 03.26	-1.3
			S	51 16.16	
AUL	1.09	241	iP	51 06.64	-0.4
SEW	1.09	79	eP	51 06.50	-0.5
SPU	1.29	350	eP	51 09.18	-0.7
CDD	1.45	228	iP	51 11.71	-0.5
			S	51 31.37	
MCNL	1.59	243	eP	51 13.04	-1.1
			S	51 32.97	
SUA	1.60	15	eP	51 13.79	-0.6
PWA	1.93	25	eP	51 18.48	-0.3
PMR	2.06	35	eP	51 19.50	-1.3
KDC	2.23	193	eP	51 20.80	-2.3
SVW	2.33	303	ePd	51 23.10	-1.5
VZW	2.74	63	eP	51 27.78	-2.6
KLU	3.20	58	iP	51 34.64	-2.4
			S	52 10.69	
TOA	3.42	48	eP	51 38.70	-1.5
PAX	4.24	41	eP	51 49.81	-1.9
FBA	5.30	18	eP	52 04.40	-2.1
25 obs. associated					

* JUL 19, 1989 06h 59m 12.02± 3.14s
16.945 N ±14.3km 60.968 W ±23.2km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

DEG	0.63	188	iP	59 25.40	0.6
			S	59 33.00	
SEG	0.75	224	iPc	59 27.00	0.4
ANG	0.85	284	eP	59 29.44	1.0
			eS	59 41.03	
BPA	0.86	277	eP	59 29.18	0.6
			eS	59 40.53	
MGG	1.07	198	eP	59 32.12	-0.1
			S	59 45.30	
PAG	1.14	217	eP	59 32.75	-0.6
			S	59 47.10	
MGH	1.22	260	ePd	59 34.12	-0.5
BBL	1.50	199	eP	59 38.80	-0.2
			S	59 57.50	
NEV	1.54	277	eP	59 40.07	0.4
			eS	00 01.07	
SKI	1.74	283	eP	59 40.71	-1.7
S.D. = 0.9 on 10 of 10 obs.					

* JUL 19, 1989 08h 49m 22.47± 1.15s
36.116 N ±13.3km 32.451 E ±16.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

PPCY	1.23	184	eP	49 45.70	0.3
CSS	1.36	148	eP	49 48.00	0.6
BCK	2.01	312	ePn	49 57.90	1.0
ELL	2.15	288	iPn	49 59.50	0.6
KHL	3.21	314	ePn	50 13.50	-0.5
YER	3.50	288	ePn	50 17.00	-1.1
DSI	5.15	151	iP	50 40.50	-0.9
			eS	51 36.00	
PRNI	6.14	159	eP	50 52.00	-3.4X
S.D. = 1.0 on 7 of 8 obs.					

? JUL 19, 1989 09h 12m 51.48± 1.42s
51.762 N ±30.6km 179.575 W ±10.3km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.80	85	eP	13 21.70	1.1
SMY	4.00	286	eP	13 53.00	1.0
KDC	16.67	58	eP	16 44.00	0.2
PMR	19.22	47	eP	17 18.20	3.0X
MBC	33.43	22	eP	19 30.50	1.8
	0.7s	11.00nm		4.9mb	
LON	37.18	74	eP	20 00.00	-1.0
KVN	43.73	82	e(P)	20 56.50	1.3
TNP	44.87	82	eP	21 05.00	0.5
BW06	46.65	72	eP	21 17.20	-1.4
GOL	51.03	73	eP	21 51.50	-1.0
NB2	67.22	354	P	23 43.00	-1.0
HFS	67.95	353	eP	23 47.10	-1.4
	0.4s	1.60nm		4.5mb	
S.D. = 1.3 on 11 of 12 obs.					

* JUL 19, 1989 10h 07m 34.97± 0.89s
31.745 S ±10.8km 68.258 W ±10.1km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

RTCV	0.26	244	iPc	07 47.50	5.1X
ZON	0.41	299	iPd	07 45.50	1.2
			eS	07 56.00	
RTLL	0.45	336	iPd	07 44.80	-0.1
RTC8	0.53	299	iPd	07 46.30	0.2
			S	07 58.50	
RTBS	1.02	274	ePd	07 51.50	-1.5
MRA	2.26	108	Pc	08 10.50	-0.3
RFA	3.02	183	ePc	08 22.20	0.5
S.D. = 1.2 on 6 of 7 obs.					

JUL 19, 1989 10h 08m 47.86± 0.54s
36.124 N ± 6.4km 27.187 E ± 4.8km
DEPTH = 55.5 ± 10.2 km
4.0mb (10 obs.)
DODECANESE ISLANDS (369)
MD 4.0 (ATH).

KAP	0.57	181	ePg	08 59.00	-1.4
YER	1.34	41	iPn	09 10.10	-0.5
NPS	1.54	237	ePb	09 13.80	0.4
APE	1.63	306	ePb	09 13.20	-1.5
CIN	1.64	26	ePn	09 14.00	-0.7
			iSg	09 39.00	
KSL	1.94	89	ePn	09 20.50	1.6
IZM	2.27	1	ePn	09 23.30	-0.4
ELL	2.28	73	iPn	09 26.00	2.1
VAM	2.53	254	ePn	09 28.20	0.9
KHL	2.88	40	iPn	09 32.00	-0.4
BCK	3.04	63	ePn	09 35.90	1.2
PRK	3.20	347	ePg	09 45.00	8.2X
ATH	3.33	305	ePn	09 38.00	-0.7
ALT	3.74	38	ePn	09 43.00	-1.5
ITM	4.36	286	ePn	09 55.20	2.1
PPCY	4.39	105	eP	09 55.50	2.0
NEO	4.47	317	ePn	09 53.60	-1.1
CSS	5.14	101	eP	10 04.50	0.3
VLS	5.65	293	ePn	10 13.20	1.8
BBTK	5.76	48	eP	10 14.00	1.1
HRI	7.60	110	eP	10 37.00	-1.6
DSI	8.19	121	eP	10 44.00	-2.6
MBH	9.05	132	iP	10 57.00	-1.4
KBA	15.04	321	e(P)	12 25.00	6.5X
	0.9s	10.60nm		4.1mb	
KHC	16.37	327	P	12 37.90	2.6
SMF	20.36	308	eP	13 20.50	-1.6
	0.5s	3.60nm		4.0mb	
LBF	20.40	309	eP	13 21.60	-1.0
	0.6s	1.80nm		3.6mb	
LOR	20.59	310	eP	13 23.60	-0.9
	0.6s	2.10nm		3.6mb	
AVF	20.72	308	eP	13 24.80	-1.0
	0.8s	4.00nm		3.8mb	
SSF	20.73	309	eP	13 25.40	-0.5
	0.5s	5.80nm		4.2mb	
LPF	23.95	309	eP	13 57.60	-0.1
	0.5s	4.90nm		4.3mb	
GRR	23.96	309	eP	13 58.20	0.5
	1.0s	9.60nm		4.3mb	

HFS 25.56 344 eP 14 13.20 0.4
0.4s 1.30nm 3.8mb
BNG 32.52 196 iPd 15 17.70 2.1
0.5s 9.00nm 4.9mb
S.D. = 1.5 on 32 of 34 obs.

% JUL 19, 1989 10h 21m 33.53± 0.78s
40.758 N ± 6.3km 29.100 E ± 7.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ISK 0.31 354 iPg 21 39.90 0.0
CTT 0.64 308 ePg 21 45.40 -1.0
EDC 1.03 247 iPn 21 53.10 0.1
GPA 1.03 117 ePn 21 53.00 -0.1
DST 1.21 198 ePn 21 56.00 0.0
DMK 1.47 317 ePn 22 01.00 1.0
S.D. = 0.8 on 6 of 6 obs.

% JUL 19, 1989 10h 35m 03.66± 0.89s
40.770 N ± 7.3km 29.070 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ISK 0.30 358 ePg 35 10.40 0.6
CTT 0.61 308 ePg 35 14.40 -1.6
EDC 1.01 246 iPn 35 22.60 -0.2
GPA 1.06 117 ePn 35 23.00 -0.7
DST 1.21 196 ePn 35 27.00 0.8
DMK 1.44 317 ePn 35 31.00 1.2
EZN 2.30 247 ePn 35 47.20 5.0X
S.D. = 1.3 on 6 of 7 obs.

% JUL 19, 1989 10h 49m 32.36± 2.24s
36.557 N ±18.4km 4.420 W ± 6.6km
DEPTH = 105.3 ± 17.8 km
STRAIT OF GIBRALTAR (385)

MAL 0.17 2 iPnd 49 46.50 -0.7
iSg 49 54.70
EPRU 0.77 302 iP 49 51.70 0.5
eS 50 03.40
AFC 0.99 45 iPnc 49 54.00 0.5
eSn 50 07.50
EHOR 1.42 333 iPnc 49 58.20 -0.1
eSn 50 16.00
EBAN 1.68 17 iPnc 50 01.80 0.2
eSn 50 21.00
ENIJ 1.82 76 ePn 50 03.50 0.2
eSn 50 25.00
EVAL 2.12 300 ePn 50 07.20 -0.1
eSn 50 31.00
EVIA 2.57 36 ePn 50 13.00 -0.3
eSn 50 41.80
EPLA 3.74 340 ePn 50 29.10 0.0
eSn 51 10.00
GUD 4.09 3 ePn 50 34.00 0.1
ETOR 4.64 23 ePn 50 41.20 -0.3
eSn 51 30.50
S.D. = 0.4 on 11 of 11 obs.

? JUL 19, 1989 13h 03m 30.67± 1.15s
28.808 S ±14.4km 66.632 W ±11.8km
DEPTH = 33.0km (normol)
CATAMARCA PROVINCE, ARGENTINA (130)

CYA 0.82 64 eP 03 45.90 0.1
RTRS 2.81 240 iPc 04 14.00 -0.3
S 05 51.00
RTLL 2.98 212 iPc 04 07.50 -9.2X
S 05 03.00
CFA 3.12 206 iPc 04 19.00 0.3
RTCB 3.26 215 iPc 04 21.00 0.2
S 05 07.80
MRA 3.68 168 ePc 04 26.30 -0.3
RFA 6.15 194 ePd 04 58.50 -3.1X
S.D. = 0.4 on 5 of 7 obs.

JUL 19, 1989 13h 43m 47.54± 0.54s
39.270 N ± 4.6km 23.270 E ± 6.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.0 (ATH).

NEO 0.05 316 iPgc 43 49.00 -0.8
PAIG 0.73 26 ePgc 44 02.10 0.3
LIT 1.03 324 ePgc 44 07.40 0.5
PLG 1.11 7 ePn 44 08.00 -0.4
OUR 1.20 27 iPgd 44 09.50 -0.3
ATH 1.34 165 ePn 44 12.00 -0.2
THE 1.38 350 ePb 44 13.00 0.2
KZN 1.55 312 ePb 44 16.20 0.9
GRG 1.81 339 ePb 44 19.50 0.5
eSb 44 41.80
SRS 1.86 8 ePb 44 19.10 -0.6
eSb 44 43.40
KNT 1.91 352 ePbd 44 20.50 0.0
eSb 44 45.00
VAY 2.12 346 ePn 44 23.40 0.0
ITM 2.34 207 ePn 44 26.50 -0.2
VLS 2.36 243 ePn 44 26.70 -0.3
EZN 2.43 76 ePn 44 30.00 2.2
RDO 2.55 42 ePn 44 27.50 -2.1
S.D. = 1.0 on 16 of 16 obs.

% JUL 19, 1989 14h 41m 30.84± 0.67s
44.386 N ± 6.5km 7.424 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

STV 0.16 207 P 41 34.74 0.2
S 41 37.51
ENR 0.16 181 P 41 34.74 0.2
S 41 37.51
PZZ 0.26 297 P 41 36.38 0.0
S 41 40.28
ROB 0.33 106 P 41 38.43 0.7
IMI 0.58 145 P 41 41.71 -1.0
FIN 0.59 107 P 41 42.43 -0.4
RRL 0.70 320 P 41 44.58 -0.3
S.D. = 0.6 on 7 of 7 obs.

JUL 19, 1989 15h 14m 55.29± 0.39s
39.180 N ± 3.9km 24.513 E ± 4.4km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.3 (ATH).

NEO 1.01 278 ePn 15 14.30 -0.1
eSn 15 29.00
ATH 1.36 208 ePn 15 19.00 -1.2
PRK 1.37 87 ePb 15 20.20 -0.2
EZN 1.54 65 ePn 15 23.20 0.4
LIT 1.81 301 ePd 15 26.00 -0.8
THE 1.88 321 ePd 15 27.80 0.1
SRS 2.06 340 eP 15 30.40 0.1
RDO 2.11 21 ePn 15 31.00 -0.1
APE 2.26 159 ePn 15 31.50 -1.7
IZM 2.29 109 ePn 15 34.00 0.3
KNT 2.33 328 eP 15 34.40 0.1
KZN 2.40 299 ePn 15 35.00 -0.3
MMB 2.48 346 iPc 15 36.00 -0.4
RZN 2.51 3 iPc 15 37.00 0.1
KDZ 2.56 15 iPc 15 37.00 -0.5
VAY 2.60 326 ePn 15 38.40 0.3
MFT 2.66 52 ePn 15 48.00 8.9X
EDC 2.83 65 ePn 15 46.00 4.6X
ITM 2.85 226 ePn 15 42.00 0.3
KKB 2.90 338 iPc 15 42.00 -0.3
DST 3.22 81 ePn 15 57.00 10.1X
VTS 3.55 344 iP 15 52.00 0.3
SKO 3.64 321 ePn 15 54.00 1.1
VAM 3.77 184 ePb 15 57.30 2.5
S.D. = 0.9 on 21 of 24 obs.

JUL 19, 1989 15h 35m 51.96± 0.97s
45.636 N ± 7.7km 13.614 E ± 8.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.7 (KBA). MD 3.4 (TRI).
Possible explosion.

TRI 0.13 55 iPg 35 54.90 -0.1
VOY 0.44 26 iPgc 36 00.20 -0.8
CEY 0.58 79 eP 36 02.90 -0.8
e 36 14.00
LJU 0.76 57 eP 36 27.00 20.2X
RBL 0.81 358 P 36 06.00 -1.7
eSn 36 18.50
FVI 1.12 329 P 36 13.30 0.4
eSn 36 27.70
VBY 1.16 96 ePn 36 15.60 2.0
eSn 36 36.70
KBA 1.45 353 iPgc 36 19.80 1.4
i 36 20.20
i(Sg) 36 42.00
PTJ 1.66 80 ePn 36 20.70 -0.6
eSn 36 51.80
ARV 2.19 193 P 36 28.20 -0.8
KHC 3.50 360 eP 36 48.50 1.0
S.D. = 1.3 on 10 of 11 obs.

JUL 19, 1989 20h 25m 04.25± 0.48s
40.777 N ± 4.8km 27.873 E ± 4.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC 0.43 181 iPg 25 13.40 0.4
eSg 25 18.90
MFT 0.45 271 ePg 25 13.60 0.2
eSg 25 21.60
CTT 0.56 49 ePg 25 15.10 -0.5
ISK 0.94 72 ePg 25 22.10 -0.1
DMK 1.05 355 iPn 25 24.20 0.2
GBZT 1.19 89 iPgd 25 27.20 0.7
iSg 25 44.10
DST 1.30 153 ePn 25 28.00 -0.4
EZN 1.52 232 ePn 25 31.00 -0.4
RDO 1.81 283 ePn 25 35.70 0.1
eSn 26 03.00
PRK 1.96 219 ePn 25 44.00 6.1X
IZM 2.42 191 ePn 25 53.00 8.4X
ALT 2.43 134 ePn 25 50.10 5.3X
KHL 2.76 152 ePn 25 57.30 7.8X
S.D. = 0.5 on 9 of 13 obs.

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* JUL 19, 1989 21h 10m 48.25± 1.02s
29.494 N ± 9.8km 105.625 E ±13.5km
DEPTH = 10.0km (geophysicist)
SICHUAN PROVINCE, CHINA (307)

CD2 2.15 312 Pg 11 25.40 0.8
Sg 11 55.10
GYA 3.16 163 iPnd 11 38.80 -0.3
Pg 11 48.40
Sn 12 15.60
Sg 12 32.40
XAN 5.33 31 Pn 12 10.70 0.9
Pg 12 25.50
Sn 13 11.00
Sg 13 38.20
GTA 10.99 336 eP 13 28.00 -0.7
BTO 11.65 17 eP 13 36.00 -1.6
CN2 21.30 43 eP 15 38.00 0.9
S.D. = 1.3 on 6 of 6 obs.

JUL 19, 1989 23h 44m 54.78± 0.65s
43.320 N ± 5.5km 11.309 E ± 5.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CRE 0.56 56 P 45 06.20 0.0
eSg 45 15.00
PGD 0.63 28 P 45 07.40 -0.2
eSg 45 16.90
PII 0.70 305 Pc 45 08.50 0.0
eSg 45 17.80
SFI 0.72 33 P 45 08.90 0.0
eSg 45 21.00
BDI 0.90 325 P 45 11.70 -0.4
eSg 45 25.80
MAO 0.91 187 P 45 12.20 0.0
eSg 45 26.10
MME 0.98 333 P 45 14.10 0.6
eSg 45 28.40
ARV 1.20 81 P 45 17.30 0.1
eSn 45 35.40
S.D. = 0.3 on 8 of 8 obs.

& JUL 19, 1989 23h 46m 22.80s
33.970 N 116.670 W
DEPTH = 11.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.0 (PAS).

PEC 0.42 259 iPd 46 30.70 -0.6
TPC 0.53 75 iPd 46 33.00 -0.6
RVR 0.59 272 iPd 46 33.50 -1.1
PLM 0.64 195 iPd 46 34.70 -0.9
CPE 1.15 198 eP 46 42.70 -1.4
BAR 1.29 180 ePd 46 45.60 -1.0

19d 23h

GLA	1.79	120	eP	46	56.00	2.1
TNP	4.13	354	eP	47	26.30	-1.0
KVN	5.20	348	eP	47	41.70	-0.8
	9 obs. assaciated					

JUL 20, 1989 01h 10m 49.19± 1.32s
15.838 N ±10.5km 97.053 W ± 6.0km
DEPTH = 20.3 ± 6.5 km
4.9mb (19 abs.) 3.3Msz (1 abs.)
NEAR COAST OF OAXACA, MEXICO (66)

OXX	1.28	14	iP	11	14.30	2.2
			(S)	11	34.80	
ACX	2.88	291	iP	11	33.50	-1.4
			iS	12	18.00	
EVV	3.07	32	(P)	11	38.70	1.1
			(S)	12	38.00	
IISM	3.15	354	iP	11	40.30	1.6
			iS	12	23.50	
IIT	3.38	339	eP	11	46.00	3.7X
			iS	12	18.00	
III	3.42	318	iP	11	42.30	-0.4
			(S)	12	19.70	
LVVM	3.92	8	eP	11	58.60	9.0X
			(S)	12	45.70	
UNM	4.02	330	iP	12	03.80	12.4X
			iS	12	55.50	
SCX	4.34	78	eP	12	13.50	17.9X
			iS	12	56.30	
CRX	4.34	325	(P)	12	00.00	4.0X
IIC	4.44	332	iP	12	06.80	9.5X
			(S)	13	04.00	
TPX	4.71	101	(P)	12	00.00	-1.0
MRX	5.51	315	(P)	12	00.00	-12.1X
AGX	7.80	321	(P)	12	00.00	-44.3X
UYO	18.40	7	iPc	15	03.30	-1.5
SIO	19.84	2	e(P)	15	21.70	0.0
TUL	20.02	3	eP	15	21.90	-1.8
	1.1s		51.50nm			4.8mb
Z	19s		0.12um			3.3Msz
			e	15	24.50	
OLY	20.21	13	eP	15	24.30	-1.3
RLO	20.32	5	eP	15	24.70	-2.2
			i	15	27.30	
PWLA	20.70	21	eP	15	29.10	-1.6
ALQ	20.81	338	iPc	15	32.20	0.1
	1.1s		28.16nm			4.6mb
			e	15	35.50	
			e	15	43.00	
			e	15	53.00	
			e	15	57.80	
			eS	20	19.00	
PRM	22.48	33	eP	15	47.00	-1.6
FVM	22.82	14	eP	15	49.40	-2.6
GBTN	22.84	28	eP	15	53.70	1.5
TKL	23.03	29	eP	15	55.30	1.2
GLA	23.51	320	eP	16	00.00	1.2
BAR	24.44	317	eP	16	09.00	1.1
GOL	24.86	345	iP	16	12.50	0.4
	1.1s		43.27nm			5.0mb
GLD	24.87	345	eP	16	13.20	1.1
	1.2s		30.30nm			4.8mb
TPC	24.97	320	eP	16	13.00	0.1
PLM	24.99	318	eP	16	14.00	0.7
RVR	25.73	318	eP	16	20.00	0.0
BLA	25.89	32	eP	16	21.80	0.3
MSU	26.21	332	eP	16	27.00	2.2
SBB	26.46	319	eP	16	26.00	-0.8
DAU	27.43	336	eP	16	40.00	4.1X
TNP	28.41	325	iP	16	45.10	0.4
KVN	29.58	325	iP	16	54.00	-1.3
			i	17	01.70	
LRM	32.56	340	ePc	17	21.90	0.4
SES	36.28	345	eP	17	53.00	-0.1
LON	37.06	331	eP	18	00.00	0.3
PNT	38.12	336	eP	18	09.00	0.5
	0.8s		13.00nm			4.8mb
EDM	39.45	345	eP	18	19.00	-0.6
ARE	40.82	141	eP	18	22.00	-9.6X
SCH	45.39	24	eP	19	08.00	0.0
FRB	51.75	16	eP	19	57.00	-0.1
INK	57.35	345	eP	20	36.00	-1.9
MBC	61.54	354	eP	21	06.00	-0.8
	0.9s		20.00nm			5.3mb
EKA	79.32	35	P	22	55.00	0.1
	0.8s		4.50nm			4.5mb
LPF	82.33	42	eP	23	11.00	0.1
	1.1s		9.70nm			4.8mb
GRR	82.36	42	eP	23	11.30	0.3
	1.1s		11.70nm			4.9mb
FLN	82.50	42	eP	23	12.20	0.4
	1.2s		20.20nm			5.1mb
LDF	82.78	42	eP	23	13.40	0.2
LFF	84.36	45	eP	23	22.00	0.7
	1.1s		11.70nm			5.0mb
N82	84.83	28	P	23	24.40	1.0
TCF	84.95	43	eP	23	24.40	0.1
	1.0s		8.00nm			4.9mb
MAF	85.21	43	eP	23	25.90	0.3
	1.0s		8.80nm			4.9mb
BGF	85.29	43	eP	23	26.00	0.0
	1.0s		10.00nm			5.0mb
AVF	85.55	43	eP	23	27.10	-0.1
	1.3s		7.20nm			4.7mb
SSF	85.56	42	eP	23	27.20	-0.1
	1.0s		6.00nm			4.8mb
LOR	85.73	42	eP	23	28.10	-0.1
	1.0s		12.80nm			5.1mb
ENN	85.86	38	eP	23	29.50	0.8
	0.9s		15.00nm			5.2mb
LBF	85.89	42	eP	23	28.90	-0.1
	0.9s		3.20nm			4.5mb
HAU	87.07	41	eP	23	34.90	0.1
PRU	91.23	37	eP	23	55.00	0.7
ZST	93.55	38	eP	24	05.50	0.5
HYB	146.67	8	ePKPc	30	30.50	0.2
	S.D. = 1.1 on 57 of 67 obs.					

? JUL 20, 1989 01h 12m 05.27± 4.32s
7.063 S ±16.2km 81.193 W ±59.5km
DEPTH = 33.0km (normal)
OFF COAST OF NORTHERN PERU (108)

GGP	7.32	21	eP	13	52.50	-0.7
			eS	15	31.50	
HUA	7.61	131	eP	14	01.40	4.3X
			eS	14	45.50	
ARE	13.32	135	e(P)	15	25.00	10.1X
ZOBO	15.72	127	eP	15	45.00	-1.6
Z	20s		0.15um			
			LR	34	00.00	
LP8	15.89	127	eP	15	49.00	0.4
CNCB	16.14	128	P	15	52.00	0.0
SLA	23.12	141	ePc	17	10.00	0.3
AT8	29.09	84	Pd	18	06.80	1.6
	S.D. = 1.4 on 6 of 8 abs.					

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* JUL 20, 1989 01h 17m 34.93± 1.00s
39.426 N ± 7.2km 20.433 E ±12.7km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.1 (ATH).

SRN	0.56	324	ePg	17	46.40	0.1
LSK	0.73	10	ePg	17	47.60	-1.8
TPE	0.93	340	iPgd	17	56.60	4.0X
KBN	1.23	14	ePg	17	59.20	1.4
VLS	1.25	174	ePb	17	58.20	0.0
KZN	1.35	49	ePb	18	00.00	0.1
VAY	2.50	40	ePn	18	16.00	-0.2
SKO	2.66	16	ePn	18	19.00	0.5
	S.D. = 1.2 on 7 of 8 obs.					

& JUL 20, 1989 02h 00m 46.06s
63.123 N 147.847 W
DEPTH = 1.1km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.4 (PMR).

RND	0.54	302	iP	00	56.39	-0.4
			S	01	03.43	
MCK	0.78	322	iP	01	00.96	-0.7
HUR	0.83	261	eP	01	01.72	-0.9
			S	01	13.02	
PAX	1.09	97	eP	01	06.36	-1.2
			S	01	23.44	
SDG	1.22	118	iP	01	09.08	-0.4
TOA	1.28	142	iP	01	10.62	-0.1
CUT	1.33	238	eP	01	10.59	-0.8
			S	01	30.24	
HDA	1.35	17	eP	01	11.47	-0.3
			S	01	31.18	
WRH	1.36	356	eP	01	11.48	-0.5
			S	01	30.79	
CCB	1.53	1	eP	01	13.75	-0.8
			S	01	34.46	
NEA	1.56	340	eP	01	13.84	-1.1
PMR	1.65	202	eP	01	15.40	-0.8
RDS	1.72	356	eP	01	16.42	-0.8
			S	01	38.22	
PWA	1.75	214	eP	01	17.40	-0.4
DOT	1.78	71	eP	01	18.83	0.6
FBA	1.78	1	iP	01	17.60	-0.6
KLU	1.87	150	eP	01	19.50	0.0
GLM	1.88	6	eP	01	18.78	-0.9
PMS	2.05	204	eP	01	22.30	0.2
SKT	2.06	238	eP	01	21.04	-1.1
SUA	2.15	220	eP	01	23.09	-0.5
VZW	2.16	163	eP	01	23.14	-0.6
TTA	3.73	271	eP	01	44.10	-1.9
IMA	3.88	322	eP	01	46.90	-1.4
SVW	4.17	245	eP	01	51.90	-0.4
	25 obs. associated					

JUL 20, 1989 02h 49m 48.55± 0.87s
36.405 N ± 8.2km 98.981 W ± 7.6km
DEPTH = 5.0km (geophysicist)
OKLAHOMA (499)
mbLg 2.7 (NEIS).

SIO	2.26	106	P	50	26.17	-1.0
TUL	2.63	100	P	50	32.10	-0.3
SNK	2.77	23	P	50	37.75	3.3X
MLK	3.16	31	P	50	40.50	0.5
RLO	3.21	93	P	50	42.40	1.8
CNK	3.26	18	P	50	41.60	0.3
TCK	3.47	30	P	50	44.45	0.1
LAK	3.99	48	P	50	50.70	-1.0
BENE	4.24	25	P	50	54.50	-0.7
LCNE	4.90	0	P	51	04.80	0.2
GOL	6.02	305	P	51	16.00	-4.7X
ALQ	6.26	259	eP	51	24.00	0.0
	S.D. = 1.0 on 10 of 12 obs.					

& JUL 20, 1989 04h 16m 48.70s
40.380 N 125.340 W
DEPTH = 5.0km
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.4 (BRK).

FHC	1.11	67	iPc	17	08.70	-1.4
			iS	17	23.20	
WDC	2.15	84	iPc	17	23.50	-2.1
			eS	17	48.90	
LTCM	2.47	93	eP	17	28.00	-2.2
LBFM	2.79	69	eP	17	33.70	-1.4
MIN	2.85	89	ePc	17	33.40	-2.5
			eS	18	08.70	
ORV	3.06	104	ePc	17	36.10	-2.6
			eS	18	12.40	
ARN	4.24	134	eP	17	52.50	-3.0
CM8	4.50	120	e(P)	17	59.10	-0.1
KVN	5.74	101	eP	18	13.00	-3.8
	9 obs. assaciated					

JUL 20, 1989 04h 41m 59.21± 0.86s
4.433 N ± 3.3km 126.671 E ± 5.1km
DEPTH = 63.5 ± 8.0 km
5.4mb (34 abs.)
TALAUD ISLANDS (263)

DAV	2.85	338	eP	42	45.00	1.7
			iS	43	30.30	
MNI	3.49	212	ePc	42	53.50	1.3
			eS	43	42.50	
AAI	8.21	169	eP	43	56.90	-1.2
TSM	8.58	269	ePc	44	07.20	4.0X
			e	45	45.00	
PCI	8.65	232	iPd	44	06.00	1.9
KKM	10.54	279	ePd	44	34.00	3.9X
	1.0s		102.50nm			5.8mb
OCP	11.54	332	eP	44	40.00	-3.5X
MKS	11.98	217	e(P)	44	51.00	1.5
BAG	13.32	334	eP	45	12.50	5.2X
JAY	15.63	116	ePd	45	36.00	-1.1
KHKI	16.83	221	ePc	45	51.00	-1.3
			e	50	15.00	
MTN	17.73	166	iPc	45	59.50	-3.9X
TRT	18.48	229	ePd	46	11.70	-0.9
	1.0s		259.00nm			5.4mb
GUMO	20.12	62	eP	46	29.50	-1.2

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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

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KNA	20.16	174	eP	46	29.00	-2.1
OZH	21.82	340	eP	46	48.00	0.2
OIZ	21.92	313	eP	46	49.00	0.2
GZH	22.58	326	Pd	46	53.40	-1.9
KGM	23.44	265	ePc	47	05.40	1.7
WB5	25.32	163	iPd	47	21.00	-0.7
			eS	51	47.30	
WRA	25.37	163	Pc	47	21.20	-1.0
	0.5s	50.30nm			5.3mb	
IPM	25.57	271	ePc	47	23.50	-0.6
	0.7s	29.80nm			4.9mb	
M8L	26.30	195	iPc	47	30.10	-0.7
	0.5s	45.00nm			5.3mb	
SSE	27.02	350	P	47	38.00	0.7
	1.2s	54.00nm			5.0mb	
Z	20s	0.70um			4.2Msz	
LOE	27.62	300	eP	47	41.50	-1.5
			e	56	42.00	
NNT	27.82	289	eP	47	44.20	-0.5
OIS	27.89	153	iPd	47	44.50	-0.8
NST	28.37	295	iPc	47	51.00	1.3
NJ2	28.44	346	Pc	47	51.00	0.9
WHN	28.45	337	P	47	50.50	0.3
ASPA	28.80	166	iPd	47	52.70	-0.8
	0.8s	33.00nm			5.0mb	
			eS	53	00.10	
NANU	28.96	202	eP	47	54.20	-0.6
	0.5s	61.00nm			5.5mb	
GYA	29.09	321	P	47	56.00	-0.2
WARB	30.43	180	eP	48	07.70	-0.3
	0.3s	11.00nm			5.1mb	
KMI	30.85	314	Pd	48	13.00	1.1
CTA	31.05	142	iPd	48	13.10	-0.4
	0.9s	19.33nm			4.8mb	
MEKA	31.85	194	iPc	48	19.80	-0.7
	0.3s	36.00nm			5.7mb	
TIA	32.82	346	eP	48	28.20	-0.6
MAT	33.67	17	eP	48	34.00	-2.2
	1.6s	33.33nm			5.0mb	
Z	20s	0.35um			4.1Msz	
			eS	54	15.00	
XAN	33.77	333	iPc	48	35.50	-1.6
CD2	34.05	323	iPc	48	38.30	-1.2
DL2	34.62	353	eP	48	45.40	1.2
MRWA	34.99	196	iPd	48	47.00	-0.6
	0.3s	12.00nm			5.4mb	
FORR	35.11	178	iPd	48	46.10	-2.4
	0.3s	34.00nm			5.8mb	
COOL	35.51	188	iPc	48	50.70	-1.3
	0.5s	25.00nm			5.4mb	
TIY	35.59	340	iPd	48	52.30	-0.3
Z	10s	0.30um			4.4MszX	
BAL	36.12	195	iPc	48	56.50	-0.6
	0.4s	37.00nm			5.7mb	
BJI	36.69	346	eP	49	02.00	0.2
KLB	36.82	193	iPc	49	02.40	-0.5
	0.3s	17.00nm			5.5mb	
SNY	37.34	356	Pc	49	07.80	0.7
			eS	54	55.00	
RMQ	37.44	146	eP	49	09.00	0.7
MUN	37.55	195	iPc	49	08.70	-0.4
	0.6s	85.00nm			5.9mb	
LZH	37.87	329	Pc	49	12.00	0.0
	1.0s	82.00nm			5.6mb	
Z	24s	0.80um			4.4MszX	
NWAO	38 22	193	iPc	49	14 70	0.0
	0.5s	21.00nm			5.3mb	
HHC	38.72	342	P	49	19.60	0.7
STK	38.81	160	eP	49	20.00	0.4
BTO	39.00	340	eP	49	20.00	-1.3
SHL	39.42	306	iP	49	23.80	-1.3
MDJ	40.10	3	eP	49	29.40	-0.8
BRS	40.45	143	iPc	49	33.90	0.6
ADE	40.79	165	iPd	49	37.00	1.0
	0.5s	38.03nm			5.5mb	
LSA	41.94	311	P	49	46.80	0.8
COO	42.35	147	eP	49	50.00	1.1
GTA	42.47	329	iPc	49	49.60	-0.2
Z	20s	0.60um			4.5Msz	
BWA	43.75	154	eP	50	02.20	2.0
BFD	43.96	162	eP	50	02.50	0.7
CAN	44.76	154	eP	50	10.20	1.8
CNB	44.92	153	iPc	50	12.20	2.6
DZM	46.99	126	iPc	50	25.80	-0.4
HYB	48.83	289	eP	50	41.00	0.5
GBA	49.39	284	Pd	50	43.90	-0.9
	1.4s	182.90nm			5.9mb	

WMQ	52.12	325	iPd	51	05.00	-0.3
Z	22s	0.50um			4.5Msz	
NDI	52.69	303	ePc	51	07.60	-2.1
	0.5s	84.51nm			6.0mb	
KSH	57.48	315	P	51	45.00	0.6
MSZ	61.24	148	P	52	10.20	0.3
MAIO	69.04	307	iPd	53	00.30	-0.3
SVW	80.20	29	eP	54	05.20	1.1
TTA	80.30	27	eP	54	05.30	0.6
KDC	81.38	32	eP	54	10.70	0.5
IMA	81.77	24	ePc	54	13.50	1.1
	0.8s	13.80nm			5.0mb	
PMR	83.36	29	eP	54	20.40	0.0
	0.7s	12.90nm			5.0mb	
MAW	84.39	200	eP	54	27.00	1.5
TOA	84.78	28	eP	54	28.80	1.1
KVT	87.59	311	eP	54	42.00	0.1
PRNI	89.23	300	iPc	54	50.00	0.0
MBH	89.38	300	iP	54	51.00	0.4
INK	89.54	21	eP	54	50.00	-0.6
SOD	89.80	338	iP	54	51.30	-0.5
SUF	90.90	333	iP	54	56.50	-0.5
	0.4s	28.60nm			6.0mb	
MBC	91.28	13	eP	54	54.50	-4.0X
NUR	92.06	331	iP	55	02.80	0.5
	0.6s	20.90nm			5.7mb	
Z	21s	0.30um			4.7Msz	
			LR	39	30.00	
VRI	93.75	316	ePc	55	11.00	0.5
MLR	94.36	316	iPd	55	14.00	0.6
SPA	94.40	180	ePd	55	14.40	1.2
	1.0s	6.00nm			5.0mb	
DAG	96.57	352	iPc	55	19.90	-2.9
	0.6s	14.67nm			5.7mb	
KRA	97.26	322	eP	55	26.20	-0.1
			e	55	33.10	
BZS	97.30	317	eP	55	26.00	-0.6
			e	05	06.00	
HFS	97.37	332	eP	55	25.90	-0.8
	0.8s	11.00nm			5.4mb	
VAY	97.61	313	eP	55	27.20	-0.9
NB2	98.14	334	P	55	29.00	-1.2
KSP	99.25	323	iPd	55	36.00	0.6
	1.0s	22.00nm			5.7mb	
BRG	100.64	324	iPdiff	55	42.30	0.7
	1.2s	32.00nm			5.8mb	
			i	55	48.40	
CLL	101.04	324	iPdiff	55	44.00	0.6
	1.3s	19.00nm			5.6mb	
KHC	101.48	322	iPdiff	55	46.30	0.9
	1.0s	5.00nm			5.1mb	
GRF	102.70	323	ePdiff	55	52.10	1.3
KIC	130.32	282	PKP	01	05.60	0.5
TIC	130.54	283	PKP	01	05.80	0.3
LIC	130.63	282	PKP	01	06.00	0.3
VAO	160.54	198	e(PKP)	01	53.80	0.3
			e	02	36.70	
CNCB	161.08	132	PKP	01	58.30	3.5X
LPB	161.17	131	ePKP	01	55.00	0.3
ZOBO	161.31	130	PKP	01	57.00	1.9
	1.0s	10.00nm				
SOB1	166.78	248	ePKP	02	01.00	1.5
			e	03	03.00	

S.D. = 1.1 on 106 of 113 obs.

JUL 20, 1989 04h 53m 20.59± 0.61s
2.845 N ± 3.8km 99.127 E ± 4.6km
DEPTH = 187.3 ± 5.8 km
5.2mb (57 obs.)
NORTHERN SUMATERA (706)

IPM	2.56	48	ePd	54	04.10	-0.7
			e	54	40.20	
PPI	3.52	159	iP	54	17.30	0.9
			iS	54	58.00	
KGM	4.27	101	iPc	54	25.80	-0.2
NNT	9.70	4	iPc	55	37.60	0.5
BDT	14.31	360	eP	56	37.60	1.6
	1.0s	151.80nm			5.4mb	
CHG	15.87	359	ePd	56	55.60	0.2
	0.8s	48.51nm			5.0mb	
TRT	17.07	128	ePd	57	11.10	1.3
	0.5s	139.00nm			5.6mb	
KKM	17.33	79	ePc	57	14.00	1.1
	0.8s	270.90nm			5.7mb	
TSM	18.96	85	ePd	57	28.50	-1.5
	0.8s	328.80nm			5.9mb	

QIZ	19.20	32	P	57	33.40	0.9
KHKI	19.85	124	ePc	57	39.60	0.5
			e	00	30.00	
PCI	21.04	100	iPd	57	54.90	4.0X
MKS	21.84	111	iPd	58	01.70	2.9
SHL	23.64	344	iP	58	15.60	-0.8
			eS	02	14.80	
GBA	23.95	298	Pc	58	20.00	0.8
	0.6s	106.00nm			5.6mb	
GYA	24.57	16	P	58	25.20	0.2
HY8	24.85	307	iPd	58	28.70	1.1
	0.7s	102.60nm			5.5mb	
			e	59	27.00	
LSA	27.76	345	P	58	53.50	-0.9
CD2	28.25	8	eP	58	57.80	-0.6
POO	29.25	304	iPc	59	07.80	0.4
	0.9s	20.17nm			4.9mb	
NANU	29.90	148	eP	59	12.00	-0.9
MBL	31.31	141	eP	59	23.20	-2.1
XAN	32.35	15	Pc	59	32.50	-1.8
NDI	33.10	323	iPd	59	39.00	-1.8
LZH	33.36	7	eP	59	42.00	-1.2
KNA	34.65	123	eP	59	52.00	-2.2
MEKA	34.78	149	eP	59	54.50	-0.6
MTN	35.40	117	iPd	59	59.70	-0.7
MRWA	35.75	154	eP	00	04.20	1.0
	0.3s	5.00nm			4.6mb	
GTA	36.40	1	eP	00	09.10	0.3
BAL	37.26	155	eP	00	16.00	0.1
MUN	38.24	156	eP	00	24.00	-0.1
	0.8s	42.00nm			5.1mb	
KL8	38.56	154	eP	00	26.70	-0.1
	0.3s	9.00nm			4.9mb	
WARB	39.26	139	eP	00	31.70	-0.9
NWAO	39.49	156	eP	00	35.00	0.6
	0.7s	25.00nm			4.9mb	
COOL	39.57	150	eP	00	34.50	-0.6
	0.4s	8.00nm			4.7mb	
BJI	40.12	20	eP	00	39.50	0.0
WB5	41.32	125	iPc	00	49.20	-0.4
			eScP	06	17.30	
			eS	06	47.50	
WRA	41.33	125	Pc	00	49.30	-0.4
	0.8s	54.20nm			5.2mb	
WMQ	42.04	348	iPc	00	56.00	0.7
			S	07	00.50	
			ScS	10	38.00	
ASPA	42.90	130	iPc	01	01.90	-0.6
	0.5s	49.00nm			5.3mb	
FORR	43.42	143	iPd	01	04.60	-1.9
	0.5s	86.00nm			5.6mb	
QIS	46.00	122	iPc	01	26.90	-0.2
	0.3s	29.00nm			5.2mb	
PMG	49.38	105	eP	01	53.00	-0.4
MAIO	49.42	317	iPd	01	52.80	-0.8
	0.6s	12.63nm			4.6mb	
DHR	52.41	301	iPd	02	15.30	-0.7
ADE	52.84	139	iPc	02	18.80	-0.3
	0.6s	52.00nm			5.4mb	
STK	53.07	134	iPc	02	20.00	-0.8
	0.6s	36.00nm			5.2mb	
			e	02	22.00	
RYD	55.02	298	iPd	02	34.20	-1.1
RMQ	56.09	125	iPc	02	44.20	1.4
BFD	56.65	139	iPc	02	45.80	-0.7
ABHA	57.25	290	iPd	02	52.30	0.9
QASM	58.06	299	iPd	02	55.40	-1.3
BWA	59.29	133	iPc	03	06.00	1.0
			i	03	51.70	
BHD	59.34	307	ePc	03	03.50	-1.8
CAN	60.13	134	eP	03	10.80	0.1
			i	03	54.50	
COO	60.25	128	iPd	03	13.00	1.4
	0.5s	25.00nm			5.2mb	
HNR	61.81	102	eP	03	22.00	-0.2
AYN	65.19	300	iPd	03	44.50	0.5
SRFA	65.90	300	iPd	03	48.30	-0.3
BADA	65.98	300	iPd	03	49.00	-0.2
HQL	66.08	301	iPd	03	49.30	-0.5
DSI	66.25	303	iPd	03	51.00	0.2
HRI	66.31	305	iPd	03	52.00	0.7
MBH	66.32	301	iPd	03	51.00	-0.3
KVT	68.03	313	eP	04	01.20	-0.7
KAS	69.76	313	iPd	04	11.70	-0.8
ELL	71.70	308	iP	04	23.50	-0.8
ALT	71.98	310	iP	04	23.90	-1.9
GPA	72.07	311	iP	04	24.60	-1.7

20d 05h

BUL	72.77	248	iPd	04	30.90	0.1
DST	73.21	310	eP	04	30.50	-2.4
IZM	74.05	309	iP	04	27.30	-10.5X
VRI	75.74	317	ePd	04	47.00	-0.3
MLR	76.21	316	iPd	04	50.00	-0.1
PVL	76.26	314	iPd	04	49.00	-1.2
RZN	76.48	312	eP	04	50.00	-1.7
MSZ	77.10	137	P	04	55.10	0.4
KKB	77.72	312	iP	04	51.00	-7.3X
VTS	77.72	313	iPd	04	58.00	-0.4
SKO	78.95	312	iPd	05	03.20	-1.8
SUF	79.72	333	iP	05	08.40	-0.2
	0.5s	14.30nm			5.0mb	
NUR	79.91	331	iP	05	09.70	0.0
	0.5s	39.30nm			5.4mb	
BNG	80.40	274	iPd	05	13.00	-0.3
	0.6s	32.00nm			5.2mb	
		id		05	55.00	
SPC	80.59	319	iP	05	13.90	0.2
SOD	80.69	338	iP	05	13.90	0.2
KRA	80.88	320	ePd	05	14.90	-0.1
	0.8s	42.00nm			5.2mb	
KEV	81.20	340	iP	05	16.50	0.2
	0.7s	16.00nm			4.9mb	
MNG	81.52	132	P	05	18.60	0.0
	0.6s	57.00nm			5.5mb	
SRO	81.73	318	iP	05	19.60	0.2
PGZ	82.12	131	P	05	21.60	0.0
	0.5s	57.00nm			5.6mb	
ZST	82.57	318	eP	05	23.70	-0.1
HBZ	83.16	128	P	05	26.90	-0.1
PTJ	83.21	316	eP	05	27.50	0.3
MGR	83.26	310	Pc	05	27.20	-0.3
KSP	83.27	321	ePd	05	28.00	0.7
UPP	83.28	330	iP	05	26.60	-0.5
	0.8s	100.00nm			5.6mb	
VBY	83.68	315	i(PKP)	05	30.30	0.8
LJU	84.21	316	e(PKP)	05	32.90	0.8
CEY	84.27	316	ePKP	05	32.50	0.0
PRU	84.35	320	P	05	33.50	0.8
	1.0s	14.50nm			4.7mb	
VOY	84.65	316	iPKP	05	34.80	0.3
BRG	84.76	321	iPd	05	35.40	0.6
	1.1s	30.00nm			5.0mb	
RBL	84.89	316	Pd	05	35.70	0.1
KHC	84.95	319	iPd	05	36.00	0.2
HFS	85.27	330	eP	05	37.50	0.4
	0.5s	40.40nm			5.5mb	
Z	17s	0.07um			4.1MszX	
		LR		41	36.00	
CLL	85.37	321	iP	05	38.70	0.9
	1.3s	30.00nm			4.9mb	
FVI	85.43	316	Pd	05	38.20	0.0
GRF	86.49	319	eP	05	44.30	0.9
	1.0s	36.00nm			5.2mb	
N82	86.52	331	P	05	43.10	-0.2
OGA	86.64	317	eP	05	44.50	0.1
	0.8s	17.00nm			4.9mb	
OSS	87.25	316	ePd	05	48.00	0.7
SAX	87.78	317	ePd	05	50.40	0.4
BOB	87.79	315	Pd	05	50.30	0.5
LLS	88.03	317	ePd	05	51.20	0.1
TOD	88.06	319	ePd	05	51.44	0.5
TMA	88.15	316	ePd	05	51.40	-0.2
TNS	88.27	320	iPd	05	53.10	1.1
CVF	88.29	312	eP	05	52 30	0.1
	0.9s	11.10nm			4.8mb	
FEL	88.66	318	ePd	05	54.10	0.2
FIN	88.70	314	P	05	54.19	0.1
GWF	88.86	319	P	05	55.24	0.5
ABH	88.87	320	ePd	05	55.69	0.9
ROB	88.93	314	P	05	55.01	-0.2
IMI	88.94	314	P	05	55.32	0.0
CDF	89.12	318	P	05	55.65	-0.4
DIX	89.16	316	ePd	05	57.50	1.0
RUP	89.19	320	ePd	05	57.01	0.7
ECH	89.21	318	P	05	55.99	-0.4
MOF	89.25	318	P	05	56.23	-0.5
ENR	89.26	314	P	05	56.04	-0.8
AUTN	89.27	314	P	05	56.73	-0.3
SBF	89.27	314	eP	05	57.10	0.3
	0.7s	38.30nm			5.5mb	
STV	89.33	314	P	05	56.04	-1.1
LSD	89.38	315	P	05	57.99	0.5
PZZ	89.47	314	P	05	56.86	-1.0
BSF	89.48	318	P	05	57.13	-0.7
LOMF	89.49	317	P	05	57.11	-0.7
LPG	89.66	315	eP	05	59.20	0.3
	0.7s	37.40nm			5.5mb	
RRL	89.67	315	P	05	57.27	-1.6
HAU	89.77	318	eP	05	59.10	0.1
	0.8s	41.30nm			5.4mb	
WLF	89.78	320	P	06	00.40	1.5
FRF	89.86	313	eP	06	00.20	0.7
	0.8s	40.20nm			5.4mb	
LMR	89.98	313	eP	06	00.60	0.6
	1.0s	21.60nm			5.1mb	
VITF	90.00	318	P	05	59.92	0.0
LRG	90.08	313	eP	06	01.20	0.8
LRG	90.08	313	eP	06	01.30	0.9
	1.0s	56.00nm			5.5mb	
DOU	90.75	320	P	06	00.90	-2.5
LBF	91.46	317	eP	06	07.40	0.6
	0.9s	28.50nm			5.3mb	
LOR	91.51	317	eP	06	07.40	0.4
	0.8s	27.40nm			5.4mb	
SMF	91.58	317	eP	06	08.00	0.6
	0.8s	36.80nm			5.5mb	
SSF	91.77	317	eP	06	08.60	0.4
	1.1s	12.20nm			4.9mb	
AVF	91.90	317	eP	06	09.20	0.4
	0.9s	18.00nm			5.1mb	
BGF	92.28	317	eP	06	11.40	0.9
	1.0s	24.00nm			5.2mb	
MAF	92.51	316	eP	06	12.20	0.6
	1.0s	22.00nm			5.2mb	
TCF	92.74	316	eP	06	13.70	1.0
	1.1s	13.10nm			5.0mb	
SPA	92.83	180	e(P)	06	14.50	1.7
	0.6s	6.91nm			5.0mb	
CAF	93.01	315	eP	06	14.90	0.9
	1.0s	18.80nm			5.2mb	
LSF	93.22	316	eP	06	15.40	0.5
	1.2s	14.80nm			5.0mb	
RJF	93.35	316	eP	06	16.40	0.9
LPO	93.66	315	eP	06	17.80	0.9
	0.8s	13.40nm			5.1mb	
LDF	94.00	319	eP	06	18.60	0.2
FLN	94.21	319	eP	06	19.40	0.1
	0.8s	6.40nm			4.8mb	
EPF	94.49	313	eP	06	21.40	0.5
	0.7s	2.60nm			4.5mb	
EKA	94.64	326	Pc	06	22.00	0.8
	0.7s	4.90nm			4.8mb	
BAO	145.22	246	ePKP	12	39.00	0.5
ATB	151.39	268	PKPd	12	54.30	6.2X
CNCB	161.21	222	ePKP	13	04.00	3.0X
			i	13	48.00	
LPB	161.48	222	ePKP	13	02.00	0.9
ZOBO	161.69	222	PKP	13	02.00	0.5
			i	13	49.20	

S.D. = 0.9 on 165 of 170 obs.

JUL 20, 1989 05h 41m 38.71± 0.68s
36.462 N ± 5.2km 34.768 E ± 7.9km
DEPTH = 61.4 ± 8.2 km
3.9mb (8 obs.)
TURKEY (366)

FAM	1.59	203	eP	42	03.00	-2.0
CSS	1.90	218	eP	42	05.50	-3.8X
PPCY	2.52	232	eP	42	19.00	1.0
BHL	2.65	164	Pnd	42	52.00	32.0X
HRI	3.28	166	iP	42	29.00	0.1
BCK	3.49	288	iP	42	32.90	1.1
BBTK	3.73	335	iPd	42	36.00	0.9
			iS	43	41.00	
ELL	3.92	276	iP	42	39.50	1.6
SALJ	4.51	170	P	42	46.80	0.8
ALT	4.51	306	eP	42	44.90	-1.2
KHL	4.57	296	eP	42	45.70	-1.2
KVT	4.72	12	eP	42	49.00	0.0
DSI	4.91	174	eP	43	52.00	60.4X
MKRJ	4.95	171	Pd	42	53.00	0.7
YER	5.25	279	iP	42	56.50	0.0
DST	5.77	305	eP	43	03.00	-0.8
IZM	6.28	290	eP	43	10.00	-0.8
M8H	6.67	179	eP	43	16.00	-0.3
MSL	6.76	88	eP	44	08.00	50.5X
			i	44	55.00	
			e	45	09.00	
EZN	7.45	299	eP	43	26.00	-1.1
BHD	8.52	109	ePc	44	20.00	38.2X
			e	46	10.00	
			e	46	30.00	
SLY	8.74	92	ePd	44	32.00	47.2X
			e	46	25.00	
			e	46	46.00	
			e	47	26.00	
MLR	11.21	326	eP	44	20.00	1.4
SKO	11.71	302	eP	44	27.00	1.8
Z	11s	1.00um				
N	12s	0.49um				
E	11s	1.69um				
		LR		49	20.00	
MAIO	19.90	83	eP	46	15.00	7.1X
KHC	19.97	316	Pd	46	07.80	-0.6
BRG	20.74	321	e(P)	46	16.00	-0.3
LPG	22.90	302	eP	46	44.50	6.3X
	0.9s	7.20nm			4.1mb	
CDF	23.41	309	eP	46	43.40	0.6
BSF	23.52	308	eP	46	44.60	0.7
LBF	25.12	304	eP	46	59.40	0.2
	0.6s	1.80nm			3.7mb	
SMF	25.13	304	eP	47	00.10	0.8
	0.8s	6.70nm			4.2mb	
LOR	25.27	305	eP	47	00.10	-0.5
	0.6s	1.80nm			3.7mb	
SSF	25.45	304	eP	47	02.10	-0.2
	0.8s	4.00nm			4.0mb	
AVF	25.49	304	eP	47	03.10	0.4
	0.6s	2.70nm			3.9mb	
HFS	27.28	337	eP	47	18.30	-0.6
	0.5s	0.70nm			3.5mb	
EKA	31.90	318	Pd	47	58.80	-1.3
	2.2s	22.00nm			4.6mb	

S.D. = 1.0 on 29 of 37 obs.

& JUL 20, 1989 05h 58m 44.00s
36.898 N 121.343 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.1 (BRK). Felt at Hollister.

SAO	0.16	212	iPd	58	47.85	0.5
			iS	58	50.95	
LLA	0.43	131	iPd	58	52.30	-0.3
ARN	0.48	341	iPd	58	53.30	-0.3
MHC	0.50	332	ePd	58	53.75	-0.4
			eS	59	02.35	
GCC	0.54	284	iPc	58	54.10	-0.7
			iS	59	00.80	
PRS	0.57	182	iPd	58	55.00	-0.4
PRI	0.93	144	eP	59	01.20	-0.9
PCC	1.02	306	iPd	59	02.80	-0.8
BRK	1.22	323	e(P)	59	05.20	-1.7
PKEM	1.30	130	eP	59	08.40	0.1
FRI	1.31	85	iPc	59	07.20	-1.3
			iS	59	24.40	
CMB	1.37	34	ePc	59	08.10	-1.4
BCH	1.99	149	eP	59	16.80	-1.7
KVN	3.34	49	eP	59	37.00	-0.9
TNP	3.49	69	eP	59	38.00	-2.0
PLM	5.10	133	eP	00	01.00	-1.8

16 obs. associated

JUL 20, 1989 06h 07m 50.42± 0.86s
36.434 N ± 7.6km 98.876 W ± 6.2km
DEPTH = 5.0km (geophysicist)
OKLAHOMA (499)
mbLg 3.1 (NEIS). Felt (III) at Canton.

SIO	2.19	108	P	08	27.70	-0.3
TUL	2.55	101	P	08	31.80	-1.3
SNK	2.71	21	P	08	35.50	0.1
EMK	2.86	45	P	08	37.90	0.3
MLK	3.10	30	P	08	41.75	0.9
RLO	3.12	94	P	08	41.40	0.1
CNK	3.20	16	P	08	42.20	-0.2
TCK	3.40	29	P	08	45.70	0.5
LAK	3.91	47	P	08	51.85	-0.6
BENE	4.18	25	P	08	55.30	-0.9
HWK	4.29	37	P	08	58.80	1.0
JHN	4.59	28	P	09	01.20	-0.9
LCNE	4.87	359	P	09	05.60	-0.5
GLD	6.00	305	e(P)	09	23.00	0.8
GOL	6.07	304	eP	09	22.80	-0.5
OLY	6.08	97	eP	09	24.50	1.4
ALQ	6.35	259	e(Pn)	09	32.50	5.3X

ePg 09 55.50
e 11 11.00
eLg 11 17.00
e 11 22.50
FVM 6.92 75 e(P) 09 37.30 2.3X
S.D. = 0.8 on 16 of 18 obs.

JUL 20, 1989 06h 27m 25.13± 0.09s
5.048 N ± 3.0km 95.635 E ± 2.4km
DEPTH = 82.1km (geophysicist)
5.9mb (81 obs.)
NORTHERN SUMATERA (706)
Felt in the Banda Aceh area.
Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=165 Dip=55 Slip= 40
NP2: 49 58 138
Principal Axes:
T Plg=51 Azm= 15
P 2 108
Comment: The focal mechanism is poorly controlled and corresponds to strike-slip faulting with a large normal component. The preferred fault plane is not determined.
RADIATED ENERGY
No. of sta: 7 Focal mech. M
Energy 0.4±0.1*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 92 No. of sto: 10
Moment Tensor; Scale 10**17 Nm
Mrr= 1.90 Mtt= 0.79
Mff=-2.68 Mrt= 1.73
Mrf= 0.26 Mtf=-1.17
Principal axes:
T Val= 3.21 Plg=52 Azm= 8
N -0.03 36 208
P -3.17 10 111
Best Double Couple:Mo=3.2*10**17
NP1:Strike=165 Dip=48 Slip= 37
NP2: 49 64 131
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 33C
Centroid Location:
Origin Time 06:27:29.4 0.3
Lat 5.13N 0.03 Lon 95.80E 0.04
Dep 100.8 2.2 Half-durotion 2.4
Moment Tensor; Scale 10**17 Nm
Mrr= 1.33 0.07 Mtt= 0.76 0.10
Mff=-2.09 0.13 Mrt= 1.52 0.07
Mrf=-0.10 0.08 Mtf=-1.74 0.10
Principal Axes:
T Val= 2.90 Plg=43 Azm= 20
N 0.09 46 216
P -2.99 8 118
Best Double Couple:Mo=2.9*10**17
NP1:Strike=169 Dip=54 Slip= 28
NP2: 62 68 141

IPM 5.39 95 ePd 28 46.10 1.3
e 29 29.20
e 30 19.00
KLM 6.30 108 eP 28 58.00 0.7
1.0s 2217.40nm 6 5mb
PPI 7.25 139 iPd 29 10.00 -0.4
iS 30 24.00
KGM 8.24 111 ePd 29 23.20 -0.9
1.0s 2893.70nm 7.0mb X
e 29 32.10
e 30 18.90
e 30 49.10
e 31 31.00
NNT 8.52 28 iPc 29 32.00 4.1X
NST 11.45 22 iPc 30 13.00 5.5X
BDT 12.56 15 ePc 30 27.00 4.8X
1.2s 315.90nm 6.0mb
LOE 13.65 25 eP 30 41.00 4.4X
CHG 14.06 13 iPc 30 45.30 3.4X
1.0s 262.50nm 5.5mb
eS 33 26.00
QIZ 19.63 44 iPc 31 51.50 1.7
4.0s 1.90nm 2.7mb X
N 13s 1.80um
E 15s 3.50um

pP 32 14.00 131kmX
PP 32 18.00
sS 35 53.00
GBA 19.85 297 Pd 31 54.30 2.1
1.0s 96.80nm 5.1mb
KKM 20.51 86 ePc 32 00.00 0.9
1.0s 156.50nm 5.3mb
eS 32 15.50
SHL 20.72 350 iP 31 57.50 -3.8X
eS 35 41.00
HYB 20.75 308 iPc 32 05.00 3.5X
1.0s 284.00nm 5.6mb
e 32 23.50 89kmX
e 32 35.50
iS 35 51.50
KMI 21.09 18 ePc 32 14.36 9.2X
eS 36 05.86
e 36 39.97
TRT 21.17 127 iPd 32 06.30 0.7
0.7s 625.70nm 6.1mb
TSM 22.38 91 ePd 32 15.20 -2.4
GYA 23.76 25 iPc 32 32.00 0.9
KHKI 23.96 124 ePd 32 32.10 -1.0
MCO 24.27 44 iP 32 38.10 2.1
GZH 24.78 42 Pc 32 40.00 -0.8
N 10s 1.60um
ipP 33 14.00 170kmX
sS 37 44.00
LSA 24.88 351 iPc 32 43.00 0.7
S 36 59.00
PCI 24.89 103 ePd 32 45.00 3.1X
POO 25.14 304 iPd 32 48.00 3.7X
1.1s 116.46nm 5.2mb
MKS 25.90 113 iPc 32 51.50 0.2
BOM 26.17 304 eP 32 54.10 0.3
eS 37 06.00
CD2 26.84 16 iPc 33 00.00 0.2
E 10s 2.70um
BAG 26.94 63 eP 33 02.00 0.9
eS 37 28.00
NDI 29.29 325 iPc 33 21.60 -0.3
1.0s 210.00nm 5.8mb
eS 38 06.00
MNI 29.37 96 eP 33 23.00 0.2
QZH 29.61 46 Pd 33 26.50 1.6
N 17s 2.50um
DAV 29.84 85 eP 33 50.10 23.1X
WHN 30.89 33 iPc 33 37.00 1.0
XAN 31.37 22 iPc 33 39.50 -0.8
N 10s 0.90um
E 10s 1.10um
pP 34 12.00 153kmX
S 38 40.00
NANU 33.64 145 iPd 33 59.60 -0.5
GTA 34.42 6 iPc 34 06.30 -0.4
1.6s 0.30nm 3.0mb X
pP 34 36.00 135kmX
PcP 36 40.80
eS 39 31.00
NJ2 34.56 36 Pc 34 08.60 0.7
PcP 36 40.80
MBL 35.24 138 iPd 34 12.50 -1.3
SSE 35.32 40 Pc 34 15.60 1.2
1.5s 159.00nm 5.7mb
Z 20s 0.70um 4.4Msz
PcP 36 43.30
eS 39 40.00
ScP 40 17.50
TIY 35.95 23 iPc 34 20.00 0.3
1.6s 0.20nm 2.8mb X
N 13s 1.10um
E 15s 1.60um
pP 34 53.00 149kmX
TIA 36.77 30 Pc 34 26.80 0.3
N 12s 0.80um
E 12s 1.00um
PcP 36 47.00
BTO 37.68 18 iPc 34 35.00 0.7
Z 13s 0.90um 4.8MszX
N 12s 1.30um
E 13s 0.80um
PP 36 04.00
S 40 18.00
HHC 38.40 20 iPc 34 42.00 1.6
N 10s 0.50um
E 11s 0.50um
pP 35 15.00 150kmX

PP 36 20.00
S 40 33.00
MEKA 38.50 146 eP 34 41.00 -0.2
KSH 38.59 335 iPc 34 43.00 1.1
4.0s 1.20nm 3.2mb X
pP 35 13.00 134kmX
ePP 36 22.00
S 40 34.00
KNA 38.77 123 eP 34 40.80 -2.7
WMQ 39.24 351 ePc 34 47.34 0.1
2.0s 0.60nm 3.1mb X
esPd 35 15.48
ePP 36 19.10
ePcP 36 50.55
eS 40 39.27
MRWA 39.29 151 eP 34 49.00 1.3
BJI 39.45 25 ePc 34 50.86 2.0
eS 40 46.82
esS 41 27.38
eSS 43 33.30
MTN 39.49 117 ePd 34 47.50 -2.1
BAL 40.78 152 P 35 00.00 0.0
DL2 41.12 31 Pc 35 02.00 -0.6
E 14s 1.40um
pP 35 35.00 149kmX
S 41 09.00
MUN 41.71 153 eP 35 08.00 0.5
1.0s 100.00nm 5.6mb
KLB 42.10 151 eP 35 11.00 0.2
0.4s 9.00nm 5.0mb
NWAO 42.97 153 iPd 35 17.80 0.0
1.0s 120.00nm 5.7mb
Z 20s 0.60um 4.5Msz
N 20s 0.40um
E 20s 0.40um
e 35 39.50 91kmX
WARB 43.21 137 iPd 35 19.40 -0.5
COOL 43.26 147 eP 35 20.00 -0.2
0.6s 31.00nm 5.3mb
RKG 43.84 154 eP 35 28.00 3.2X
SNY 44.29 30 iPc 35 28.60 0.2
Z 14s 1.30um 5.0MszX
N 19s 1.00um
E 19s 1.20um
S 41 56.00
KHI 44.87 315 ePc 35 33.00 -0.4
SHK 45.11 45 eP 35 34.30 -0.8
0.9s 235.29nm 6.0mb
WB5 45.43 124 iPd 35 37.10 -0.7
i 35 58.20 88kmX
iPP 37 39.20
eS 42 08.00
WRA 45.44 124 Pd 35 37.40 -0.5
0.6s 96.40nm 5.8mb
MAIO 45.46 318 iPc 35 38.00 0.1
1.8s 174.30nm 5.6mb
eS 42 14.00
JAY 45.65 98 ePc 35 54.40 14.7X
CN2 46.68 30 iPc 35 47.40 0.1
4.0s 0.70nm 2.9mb X
Z 18s 0.60um 4.6Msz
N 13s 0.60um
pP 36 15.00 119kmX
PcP 37 19.00
S 42 25.00
ASPA 46.98 129 iPd 35 49.60 -0.5
0.8s 404.00nm 6.4mb
iS 42 30.20
iScS 45 33.80
e 46 13.20
FORR 47.29 141 iPd 35 50.50 -1.8
0.5s 71.00nm 5.8mb
DHR 48.29 301 iPc 36 01.00 0.8
HIA 48.57 21 ePc 36 02.49 0.4
ePcP 37 25.91
ePP 37 59.02
epPP 38 30.47
eScP 40 33.00
eS 42 59.42
esS 43 35.84
GUMO 49.24 76 eP 36 00.50 -7.1X
MDJ 49.36 32 ePc 36 09.02 0.9
epP 36 38.48 127kmX
ePP 37 59.21
eS 43 08.59
esS 43 49.42
MAT 50.01 45 iPc 36 12.60 -0.7

20d 06h

	1.4s	232.56nm			6.0mb		TLB	70.59	316	iPc	38	32.50	-1.0				i	39	52.20	128kmX								
	Z 20s	0.71um			4.7Msz		NPS	70.81	305	eP	38	35.30	0.2				i	40	13.10									
		eS	43	14.00			PRK	70.87	310	eP	38	35.00	-0.3				e(S)	49	03.20									
QIS	50.11	122 iPd	36	13.30	-0.9		EZN	70.92	310	eP	38	34.80	-0.8	HVAR	78.68	313	iPc	39	18.60	-1.4								
	1.2s	267.00nm			6.1mb		JMB	71.20	313	iPc	38	37.00	-0.3	SMY	79.02	37	ePc	39	21.50	-0.1								
		e	41	18.00			PPE	71.23	317	eP	38	36.00	-1.4	VIE	79.11	318	iP+	39	23.00	0.8								
		e	41	57.00			BIR	71.23	317	eP	38	38.00	0.6				i	39	55.70	130kmX								
		e	43	15.00			ALN	71.32	311	iPc	38	37.30	-0.7	VKA	79.14	318	iPc	39	22.50	0.1								
TEH	50.85	313 eP	36	14.00	-5.8X		BRD	71.46	316	eP	38	38.50	-0.3				i	39	54.90	128kmX								
RYD	50.92	298 iPc	36	21.00	0.6		CLI	71.53	317	eP	38	39.00	-0.2	MGR	79.18	310	Pc	39	22.10	-0.7								
KMSA	51.93	292 iPc	36	28.00	-0.1		RDO	71.74	312	eP	38	39.70	-0.8	ZAG	79.19	316	iPc	39	23.50	0.9								
ABHA	53.24	289 iPc	36	40.00	1.9		VRI	71.76	317	ePd	38	40.00	-0.6	PTJ	79.21	316	iPc	39	22.90	0.0								
PMG	53.31	106 eP	36	37.00	-1.3		DIM	71.89	313	eP	38	41.00	-0.4X	KSP	79.37	321	iPc	39	24.00	0.4								
QASM	53.95	299 iPc	36	43.00	0.0		KDZ	71.91	312	iPc	38	41.00	-0.6		1.2s	197.00nm				5.9mb								
BHD	55.24	307 iPd	36	51.00	-1.2		BUC	71.91	315	iPc	38	41.00	-0.4				i	39	56.00	126kmX								
		i	37	21.50	129kmX		VAM	71.97	305	eP	38	42.50	0.5	SGO	79.39	310	P	39	23.70	-0.1								
		eS	44	31.50			SLR	72.05	241	iPc	38	43.50	0.7	UPP	79.64	330	iPc	39	23.40	-1.3								
TAB	55.51	313 eP	36	53.00	-1.2		CVO	72.13	317	eP	38	42.00	-0.8		1.1s	400.00nm				6.2mb								
		e	37	24.00	131kmX		PTT	72.21	318	eP	38	42.00	-1.2				i	39	55.10	125kmX								
CTA	55.65	118 iPd	36	54.00	-1.4		MLR	72.22	316	iPc	38	43.00	-0.5	VBY	79.67	315	iPc	39	25.80	0.5								
	1.0s	97.00nm			5.8mb		PVL	72.23	314	iPc	38	43.00	-0.4	MNO	79.77	307	Pd	39	27.30	1.0								
		i	37	15.20	85kmX		RZN	72.43	312	iPc	38	53.00	8.1X	DUI	80.07	311	Pc	39	27.00	-0.6								
		i	41	43.80			ATH	72.67	308	eP	38	45.00	-1.1	LJU	80.21	316	iPc	39	28.80	0.6								
		i	42	24.30			OUR	72.78	311	iPc	38	45.70	-1.0				i	40	01.50	129kmX								
		iS	44	31.00			CMP	72.81	316	iPc	38	45.00	-1.8	CEY	80.27	315	iPc	39	28.50	0.0								
AAE	56.54	277 eP	37	03.80	1.6		PAIG	72.95	310	iPc	38	46.90	-0.8	RIY	80.28	315	iPc	39	27.70	-0.8								
ADE	56.79	138 iPd	37	03.10	-0.2		PRY	73.05	240	iPc	38	49.70	1.0	GIB	80.30	308	Pc	39	28.20	-0.7								
	0.6s	73.33nm			5.9mb			0.9s	50.00nm				5.4mb	PRU	80.43	320	Pc	39	29.50	0.3								
STK	57.10	133 iPc	37	05.10	-0.4					i	39	11.70	84kmX				e	40	02.00	128kmX								
		e	37	26.00	83kmX		MMB	73.15	312	iPc	38	48.00	-0.9				S	49	26.00									
RMO	60.20	124 iPc	37	28.20	1.1		SRS	73.18	311	iPc	38	48.10	-0.9	FAI	80.57	307	Pc	39	31.70	1.5								
		e	37	49.00	81kmX		PLG	73.19	311	eP	38	48.20	-0.9	KMR	80.59	318	iP+	39	30.40	0.3								
BFD	60.59	138 eP	37	31.00	1.4		THE	73.59	311	iPc	38	49.80	-1.5				ipP	40	03.00	129kmX								
		e	37	50.00	73kmX		BFS	73.64	240	iPd	38	52.50	0.4	MCT	80.61	307	Pc	39	32.10	1.4								
AYN	61.08	300 iPc	37	33.40	0.4					i	39	15.00	86kmX	VOY	80.65	316	iPc	39	30.70	0.1								
OUTJ	61.55	303 Pc	37	36.90	0.6		KKB	73.67	312	iPc	38	51.00	-0.8				e	40	01.90	122kmX								
SRFA	61.79	300 iPc	37	38.90	1.1		VTS	73.68	313	iPc	38	52.00	-0.1	TRO	80.67	340	eP	39	29.22	-0.9								
BADA	61.87	300 iPc	37	39.30	0.9		KNT	73.71	311	iPc	38	51.20	-0.9	TRI	80.73	315	iPc	39	30.40	-0.5								
HOL	61.97	300 iPc	37	39.30	0.3		LIT	73.88	310	iPc	38	51.70	-1.4	AZI	80.85	312	Pc	39	31.60	0.0								
SALJ	61.97	304 P	37	39.80	0.7		VAY	73.97	311	iPc	38	52.00	-1.6	BRG	80.86	321	iPc	39	31.50	0.0								
DSI	62.13	303 iPc	37	41.00	0.9			1.3s	0.25nm				3.0mb X		1.4s	230.00nm				5.9mb								
HRI	62.20	305 iPc	37	42.00	1.3		ITM	73.99	307	eP	38	52.70	-1.1				i	40	03.80	127kmX								
MBH	62.20	301 iPc	37	41.00	0.4		DZM	74.27	114	iPc	38	57.20	1.4				i	42	36.60									
BHL	62.42	306 P	37	42.00	-0.1		DEV	74.39	316	iPc	38	56.00	0.1				eS	49	31.00									
		S	46	02.00			KZN	74.45	310	eP	38	54.60	-1.9				e	50	20.00									
TOO	62.79	137 eP	37	45.00	0.7		BLF	74.71	238	iPc	38	58.90	0.6	KHC	81.01	319	iPc	39	32.50	0.2								
		e	38	07.00	86kmX			1.0s	40.00nm				5.3mb		1.2s	58.00nm				5.4mb								
BWA	63.33	133 eP	37	49.10	1.1					i	39	21.00	84kmX				i	40	04.30	125kmX								
		i	38	10.70	84kmX		SKO	74.90	312	iPc	38	57.50	-1.4	KBA	81.07	317	i(P)	39	32.30	-0.6								
		e	38	22.80				1.2s	140.00nm				5.7mb		1.2s	115.00nm				5.7mb								
BRS	63.86	124 iPc	37	51.30	-0.3					i(PcP)	39	28.00		MSZ	81.08	137	P	39	32.30	-0.4								
		i	38	12.10	81kmX					iS	48	18.00					pP	39	55.00	85kmX								
		i	38	31.00						i(SS)	56	40.00		ARV	81.25	313	Pc	39	34.30	0.6								
CAN	64.16	133 iPd	37	53.70	0.3		VLS	75.14	308	eP	38	59.20	-1.2	BHG	81.41	317	iPc	39	34.20	-0.3								
		i	38	15.10	83kmX		KBN	75.21	311	eP	38	58.00	-2.7		1.1s	232.00nm				6.0mb								
		e	38	24.20			BZS	75.24	316	eP	39	01.00	0.2	MNS	81.42	312	Pc	39	34.10	-0.5								
COO	64.34	127 iPd	37	55.70	1.0		LSK	75.33	310	eP	39	00.40	-1.1	FVI	81.45	316	Pc	39	34.40	-0.2								
		i	38	17.10	83kmX		PHP	75.61	312	eP	39	05.00	2.1	CLL	81.48	321	iPc	39	34.60	0.0								
CN8	64.43	133 eP	37	55.00	-0.2		SRN	75.76	310	eP	39	03.20	-0.6		1.5s	200.00nm				5.8mb								
		e	38	17.00	86kmX		BERA	75.88	311	eP	39	03.20	-1.3				ipP	40	07.00	127kmX								
CSS	64.52	306 eP	37	55.00	-0.8		BEO	75.95	315	i(P)	39	04.50	-0.3				eS	49	35.00									
KOT	64.84	301 eP	37	58.00	0.1					i	39	36.50	127kmX	RSM	81.61	314	Pc	39	36.60	1.1								
HLW	65.25	300 eP	38	00.00	-0.5		TIR	76.00	311	eP	39	03.50	-1.7	HFS	81.63	330	eP	39	35.00	-0.3								
		e	38	30.50	125kmX		PUK	76.05	312	eP	39	04.20	-1.2		1.3s	494.00nm				6.3mb								
VSG	65.42	103 eP	38	01.00	-0.8		LACI	76.15	312	eP	39	04.00	-2.0	LVI	81.64	308	Pd	39	36.10	0.3								
SVO	65.50	102 P	37	51.00	-11.3X		SUF	76.21	334	iP	39	04.90	-1.0	COP	82.02	325	iPc	39	37.90	0.6								
HNR	65.68	103 eP	38	02.00	-1.4		NUR	76.32	331	iP	39	05.90	-0.6		0.8s	92.54nm				5.7mb								
KAS	65.73	313 iPc	38	02.80	-0.7			0.5s	35.10nm				5.5mb				ipP	39	44.40	21kmX								
ANTO	66.06	311 ePc	38	04.54	-1.1		Z	23s	0.70um				4.9MszX	SFI	82.05	314	Pc	39	39.20	1.5								
		epPd	38	34.83	123kmX					LR	15	30.00		HOF	82.15	320	iPc	39	38.60	0.3								
		e	40	57.68			SPC	76.65	319	iPc	39	09.40	0.4		1.2s	91.00nm				5.6mb								
LWI	67.16	265 ePc	38	14.10	0.9					i	39	41.00	125kmX	FUR	82.50	318	iPc	39	40.00	-0.1								
BCK	67.21	309 iP	38	10.50	-2.5		BNG	76.78	273	iPc	39	10.60	0.5		1.4s	250.00nm				5.9mb								
ELL	67.60	308 iP	38	14.50	-1.0			0.6s	114.00nm				6.0mb	GRF	82.56	319	iPc	39	41.30	0.9								
KSL	67.75	307 eP	38	14.50	-1.8					id	39	30.50	74kmX		1.3s	253.00nm				6.0mb								
ALT	67.90	310 iP	38	16.40	-0.9					ic	39	36.30		Z	21s	0.05um				3.9Msz								
GPA	68.01	311 eP	38	12.10	-5.8X					id	40	42.20		OGA	82.66	316	iPc	39	41.20	0.0								
KHL	68.21	309 iP	38	17.70	-1.5		BCAO	76.79	273	ePc	39	09.94	-0.3		1.0s	185.00nm				6.0mb								
GBZT	68.76	312 eP	38	22.40	-0.1		SOD	77.37	338	iP	39	11.80	-0.5	NSS	82.74	334	iP	39	40.68	-0.3								
KAP	69.58	306 eP	38	27.50	-0.1		SRO	77.76	318	iP	39	15.60	0.8	MME	82.88	314	Pd	39	42.70	0.3								
EDC	69.86	311 eP	38	27.70	-1.5					i	39	48.00	129kmX	NB2	82.91	331	P	39	41.30	-0.7								
IZM	69.97	309 iP	38	29.60	-0.3		KEV	77.98	341	ePc	39	15.02	-0.6	BDI	82.95	314	Pc	39	41.90	-0.7								
DMK	70.22	313 eP	38	30.70	-0.6			1.0s	186.00nm				5.9mb	OSS	83.26	316	ePc	39	44.80	0.5								
PSN	70.29	315 eP	38	31.00	-0.7					epPc	39	44.81	117kmX	MDI	83.57	315	Pc	39	45.20	-0.4								
MFT	70.37	311 eP	38	30.00	-2.4		DRV	78.26	163	eP	39	40.00	22.9X	VDL	83.73	316	ePc	39	46.80	0.1								
BUL	70.40	247 iPd	38	33.40	0.4		ZST	78.61	318	iPc	39	19.90	0.4	SAX	83.81	317	ePc	39	47.40	0.3								
		ipP	38	54.10	78kmX			1.2s	282.00nm				6.0mb	KBS	83.87	349	iPc	39	45.80	-0.7								

LLS	84.05	316	ePc	39	48.40	0.1	AVF	87.92	317	iPc	40	07.20	0.2	FBA	96.37	23	eP	40	45.10	-0.7
TOD	84.13	319	iPc	39	48.40	0.0		1.3s	131.40nm			5.9mb					e	44	00.00	
TMA	84.15	316	ePc	39	48.40	-0.4	LBL	88.14	315	P	40	08.87	0.8				e	44	39.00	
VAI	84.23	315	Pc	39	48.00	-0.8	AGO	88.14	316	P	40	08.53	0.4	BMK	96.49	306	iP	40	47.50	0.6
CVF	84.24	312	P	39	49.19	0.1	PYM	88.26	316	P	40	09.18	0.4				i	41	05.00	61kmX
TNS	84.35	320	iPc	39	49.70	0.2	BGF	88.29	316	iPc	40	09.30	0.5	KDC	97.19	30	P	40	49.00	-0.5
SLE	84.37	317	ePc	39	49.70	0.1	ETER	88.70	312	eP	40	11.80	1.0		0.8s	31.03nm			5.9mb	
ZLA	84.45	317	ePc	39	50.10	0.0	TCF	88.76	316	iPc	40	11.50	0.4				pP	41	13.50	90kmX
KTD	84.61	319	iPc	39	50.90	0.1		1.5s	146.20nm			5.9mb		PMR	97.26	26	P	40	48.50	-1.3
ADK	84.63	38	ePc	39	50.10	-0.7	ESEL	88.91	310	eP	40	13.20	1.3		1.2s	51.14nm			5.9mb	
	1.2s	263.10nm			6.1mb		CAF	89.00	315	iPc	40	12.70	0.4	AVE	98.08	305	eP	40	56.00	1.9
FIN	84.67	314	P	39	51.12	-0.1		1.4s	135.00nm			6.0mb		TOA	98.29	25	ePc	40	54.80	0.2
MOL	84.67	332	iPc	39	51.08	0.3	LSF	89.23	316	iPc	40	13.30	0.0	TIO	98.42	302	iPd	40	57.50	1.7
FEL	84.70	318	P	39	50.92	-0.5		1.5s	153.50nm			6.0mb		INK	99.27	17	iPc	40	57.60	-1.2
MMK	84.78	316	ePc	39	52.20	0.2	RJF	89.34	315	iPc	40	14.70	0.8		1.2s	47.00nm			5.9mb	
ROB	84.91	314	P	39	52.35	-0.1		1.5s	208.90nm			6.1mb		FRB	110.36	353	ePKP	45	47.00	-1.9
IMI	84.91	314	P	39	52.35	-0.1	LPO	89.65	315	iPc	40	16.00	0.7	PMO	116.84	104	iPKP	46	27.50	24.8X
GWF	84.92	319	P	39	52.77	0.4		1.4s	226.50nm			6.2mb			1.0s	25.00nm				
ABH	84.94	320	iPc	39	52.80	0.4	LFF	89.93	315	iPc	40	17.30	0.7	EDM	117.01	19	iPKPc	46	01.30	-0.8
BBS	85.05	317	P	39	52.73	-0.3		1.4s	182.90nm			6.1mb		VAH	117.09	104	iPKP	46	27.60	24.4X
MRW	85.12	132	P	40	14.60	21.2X	LDF	90.06	319	iPc	40	17.50	0.4		1.0s	25.00nm				
KRP	85.15	129	eP	39	54.50	0.9		1.3s	226.70nm			6.2mb		TPT	117.11	104	iPKP	46	28.10	24.9X
			e	40	18.80	91kmX	FLN	90.27	319	iPc	40	18.40	0.4		1.0s	25.00nm				
SAOF	85.15	314	P	39	53.87	0.3		1.2s	185.90nm			6.2mb		RUV	117.33	104	iPKP	46	28.40	24.7X
DIX	85.17	316	ePc	39	54.70	0.7	MFF	90.34	317	iPc	40	19.00	0.6		1.0s	25.00nm				
CDF	85.17	318	P	39	53.37	-0.3	EPF	90.46	313	iPc	40	19.90	0.8	PNT	117.79	25	iPKPd	46	03.50	-0.2
ENR	85.24	314	P	39	53.07	-1.0		1.4s	47.90nm			5.6mb			0.8s	24.00nm				
AUTN	85.24	314	P	39	54.58	0.3	ESY	90.47	326	eP	40	19.50	0.7	AIA	118.24	189	ePKP	46	30.10	26.2X
SBF	85.24	313	iPc	39	54.30	0.2	DAG	90.56	348	iPc	40	17.20	-1.7	SCH	118.58	349	ePKP	46	05.00	0.0
ECH	85.26	318	P	39	53.72	-0.3		0.9s	63.03nm			5.9mb		DPW	119.50	26	ePKP	46	06.50	-0.5
RUP	85.26	319	iPc	39	54.34	0.3	GRR	90.57	319	iPc	40	20.30	0.9				i	46	30.70	
MOF	85.29	317	P	39	53.89	-0.4		1.3s	197.80nm			6.2mb					e	46	40.00	
REVF	85.29	313	P	39	54.41	0.1	EDU	90.58	327	ePd	40	20.00	0.7	SES	120.17	19	ePKPc	46	07.00	-1.2
STV	85.30	314	P	39	53.17	-1.3	EBR	90.62	311	iPd	40	41.00	21.2X				pP	46	31.00	
AURF	85.32	314	P	39	54.71	0.2	EROQ	90.68	311	eP	40	21.50	1.4	FHC	121.71	35	ePKPc	46	11.90	0.5
WTS	85.34	322	iPc	39	54.90	0.6	LPF	90.74	318	iPc	40	20.90	0.7	LBFM	122.50	33	PKP	46	13.00	-0.1
	1.0s	180.00nm			6.0mb		BRW	90.83	18	ePc	40	20.60	0.4	WDC	122.67	34	iPKPc	46	12.70	-0.5
			e	40	18.00	86kmX	EKA	90.88	326	Pc	40	20.90	0.2				e	46	20.30	
			e	40	26.50			1.1s	93.80nm			6.0mb		MIN	123.35	34	ePKPc	46	13.90	-0.8
			ePP	43	16.00		ESK	90.90	326	ePc	40	21.50	0.7	LRM	123.51	23	ePKP	46	14.30	-0.7
TOUF	85.37	314	P	39	55.15	0.2		1.0s	80.00nm			6.0mb					e	46	38.70	
LSD	85.37	315	P	39	55.12	0.1	EAU	90.95	326	eP	40	19.50	-1.5	ORV	123.95	34	ePKPc	46	14.90	-0.9
WIT	85.39	322	ePc	39	55.00	0.5	ELO	90.98	327	ePd	40	21.40	0.2	BRK	124.66	36	ePKP	46	16.90	-0.2
			e	40	19.50	92kmX		1.2s	125.00nm			6.1mb		PCC	124.83	37	ePKP	46	17.30	-0.1
			e	40	28.50		SBA	90.98	168	Pd	40	23.70	2.9X	MHC	125.38	36	ePKPc	46	18.90	0.2
MVIF	85.44	314	P	39	55.28	0.0	EAB	91.38	327	ePc	40	21.20	-1.8	ARN	125.44	36	PKP	46	18.40	-0.3
PZZ	85.45	314	P	39	53.68	-1.6		1.1s	79.00nm			6.0mb		CMB	125.63	35	iPKPc	46	18.70	-0.4
EMS	85.50	316	ePc	39	56.10	0.6	ALE	91.99	357	eP	40	25.50	0.1	KVN	126.17	32	iPKPc	46	20.30	-0.1
LOMF	85.52	317	P	39	55.13	-0.3		0.6s	20.00nm			5.7mb		PRS	126.22	37	ePKPc	46	20.30	0.0
BSF	85.52	317	P	39	54.76	-0.7	YRH	92.19	323	iPc	40	27.20	0.4	LLA	126.28	36	ePKPc	46	20.70	0.3
MNG	85.58	131	P	39	55.30	-0.5		1.2s	78.00nm			6.0mb		CBM	126.28	346	PKP	46	19.00	-1.0
CALN	85.64	313	P	39	56.64	0.4	ETOR	92.54	311	iPc	40	29.70	0.9	FRI	126.74	35	ePKPc	46	20.80	-0.4
LPG	85.65	315	iPc	39	56.50	0.1	ECRI	92.59	313	eP	40	30.60	1.6	PRI	126.77	37	ePKP	46	21.80	0.3
	1.0s	106.20nm			5.8mb		ETA	93.16	323	eP	40	32.10	0.9	TNP	127.35	33	PKP	46	22.40	-0.2
RRL	85.66	315	P	39	55.73	-0.7		1.2s	216.00nm			6.4mb		BCH	127.76	37	ePKPd	46	23.60	0.2
FOUF	85.68	314	eP	39	56.56	0.4	EVIA	93.22	309	eP	40	33.10	1.1				e	46	48.00	
BNI	85.73	315	Pc	39	56.20	-0.4	DLE	93.23	324	iPc	40	33.70	2.2	SBB	129.44	36	ePKP	46	27.00	0.5
HAU	85.81	318	iPc	39	56.70	-0.1		1.0s	70.00nm			6.0mb					e	46	50.00	
	1.2s	190.40nm			6.0mb		DMU	93.30	325	eP	40	32.10	0.2	PAS	129.62	37	ePKP	46	27.00	0.2
FRF	85.82	313	iPc	39	57.40	0.5	ECP	93.37	323	eP	40	32.50	0.3				e	46	50.00	
	1.3s	241.10nm			6.1mb			1.1s	182.00nm			6.4mb		MWC	129.63	37	ePKP	46	27.00	-0.1
WLF	85.85	319	Pc	39	57.50	0.6	ECB	93.57	323	eP	40	33.90	0.8				e	46	51.00	
MEM	85.90	320	iPd	39	57.00	-0.1	DCN	93.64	324	eP	40	33.50	0.1	PTN	129.89	351	ePKP	46	26.50	-0.4
			e	40	20.70	88kmX		1.0s	116.00nm			6.3mb					e	46	51.50	
LMR	85.94	313	iPc	39	57.70	0.2	IMA	93.65	22	ePc	40	34.00	0.5				i	49	40.00	
	1.4s	200.40nm			6 0mb			1.1s	109.00nm			6.2mb					e	50	22.00	
ENN	85.95	320	iPc	39	57.50	0.2	SDN	93.71	34	eP	40	32.70	-1.0	RVR	130.20	36	ePKP	46	27.00	-0.9
	1.1s	81.00nm			5.7mb		TTA	93.77	26	ePc	40	34.30	0.3				e	46	52.00	
			e	40	29.50	124kmX	GUD	94.14	311	eP	40	37.20	1.0	PEC	130.39	36	PKP	46	28.00	-0.3
LRG	86.04	313	iPc	39	58.50	0.5	TOL	94.19	310	iPc	40	37.00	0.7	TPC	130.89	35	ePKP	46	30.00	0.7
VITF	86.04	318	P	39	57.66	-0.2		1.2s	62.50nm			5.9mb					e	46	55.00	
PGZ	86.18	131	P	39	58.70	0.0	AFC	94.25	308	eP	40	37.00	0.2	PLM	130.95	37	ePKP	46	30.00	0.4
DOU	86.84	320	iPc+	40	01.90	0.2	EBAN	94.29	309	eP	40	37.80	1.0				e	46	55.00	
	1.1s	103.80nm			5.8mb		ASMO	94.39	308	eP	40	38.40	1.0	GOL	131.44	22	PKP	46	29.50	-0.9
			e	40	25.70	88kmX	APHE	94.41	308	eP	40	38.50	0.9	GLD	131.45	21	ePKP	46	29.90	-0.4
			e	50	35.00		SVW	94.53	27	ePc	40	38.00	0.5				e	48	48.60	
UCC	86.93	321	P	40	02.70	0.5	ATEJ	94.68	308	eP	40	39.00	0.2				i	49	45.40	
			e	40	36.00	129kmX	ALOJ	94.72	308	eP	40	37.50	-1.5				i	50	27.60	
SNF	87.00	320	iPc	40	02.80	0.3	SPA	95.01	180	e(P)	40	40.80	1.1	BAR	131.54	37	ePKP	46	32.00	1.5
			e	40	26.10	86kmX		1.0s	6.00nm			5.0mb					e	46	56.00	
			e	40	43.30		EHOR	95.48	309	eP	40	42.80	0.5	GLA	132.35	35	ePKP	46	32.00	-0.1
LBF	87.48	317	iPc	40	05.10	0.1	VAL	95.74	323	iP	40	43.90	0.8				e	46	57.00	
LOR	87.54	317	iPc	40	05.40	0.2	IFR	96.16	304	iP	40	47.50	1.8	ITR	134.27	263	ePKP	46	34.00	-2.2
	1.3s	169.20nm			6.0mb		MBC	96.34	8	iPc	40	45.00	-0.5				e	46	35.40	
SMF	87.60	316	iPc	40	05.60	0.1		1.0s	63.00nm			6.1mb					e	47	00.80	
SSF	87.79	317	iPc	40	06.60	0.2	COL	96.37	23	ePDIF	40	44.60	-1.2	ANMO	135.11	26	ePKP	46	36.54	-0.9
PLDF	87.81	316	P	40	06.90	0.3				ePP	44	38.83					eSKP	49	57.25	

20d 06h

ALQ	135.11	26	ePKP	46	37.50	0.0
			e	47	02.00	
			e	47	10.90	
			e	47	26.20	
			ePP	49	58.00	
			e	50	20.00	
			e	50	39.50	
CBN	136.48	352	ePKP	46	40.00	0.4
			e	49	17.00	
SOB1	136.69	262	ePKP	46	39.40	-1.4
			e	47	07.60	
FVM	136.82	7	ePKP	46	39.90	-0.4
			e	47	11.50	
			i	50	02.10	
			i	50	44.00	
BMA	137.40	242	ePKP	46	41.60	-0.3
BLA	137.80	355	ePKP	46	40.00	-2.3
			e	47	07.50	
RLO	137.80	13	ePKP	46	30.50	-11.8X
			e	46	41.80	
TUL	137.87	14	ePKP	46	31.50	-10.9X
	0.7s	13.80nm				
			i	46	42.20	
SIO	137.90	15	e(PKP)	46	31.60	-10.9X
MEO	138.18	18	iPKPc	46	30.70	-12.3X
VAO	139.75	240	ePKP	46	46.60	0.4
			epPKP	47	10.70	
BAO	142.77	251	ePKP	46	46.00	-5.8X
MZX	144.61	37	iPKP	46	59.10	4.5X
RFA	146.96	204	ePKPc	46	58.50	0.2
MRA	147.67	210	ePKPd	47	00.10	0.7
ATB	147.90	272	PKPc	47	00.10	-0.2
CHCH	148.56	202	ePKP	47	04.60	3.7X
ANG	148.66	315	ePKP	47	05.41	4.1X
DEG	148.66	313	ePKPc	47	04.90	3.5X
BPA	148.75	315	ePKP	47	05.50	4.0X
PCH	148.79	203	iPKPd	47	01.80	0.5
TACH	148.92	202	iPKPd	47	05.40	4.0X
SEG	148.93	314	ePKPc	47	04.90	3.1X
FCH	148.96	203	PKP	47	06.50	4.6X
MGG	149.11	313	ePKPc	47	06.40	4.3X
SKI	149.16	317	ePKP	47	06.98	4.8X
NEV	149.19	316	ePKP	47	07.05	4.9X
MGH	149.22	315	ePKPc	47	06.60	4.3X
PEL	149.27	203	iPKPd	47	06.50	4.5X
			i	47	30.30	
PAG	149.30	313	ePKPc	47	07.90	5.4X
LCCH	149.31	201	ePKP	47	04.50	2.6
BBL	149.48	312	ePKPc	47	07.50	4.8X
CRM	149.55	311	ePKP	47	07.28	4.5X
ROCH	149.55	203	iPKPd	47	07.50	4.9X
CFA	149.55	208	iPKPd	47	03.00	0.6
DPMT	149.58	312	ePKP	47	07.76	5.0X
JACH	149.65	203	ePKP	47	08.00	5.4X
MVM	149.65	310	ePKP	47	07.98	5.0X
FDF	149.74	311	ePKP	47	08.29	5.2X
	0.4s	1.85nm				
BIM	149.81	310	ePKP	47	08.25	5.1X
RTLL	149.89	208	ePKPc	47	03.00	0.0
RTBS	150.06	206	ePKPc	47	09.00	5.9X
MRX	150.35	33	iPKPc	47	05.60	1.8
SVB	150.71	309	ePKP	47	10.13	5.6X
CYA	150.81	215	ePKP	47	04.80	0.4
IIC	151.32	30	iPKP	47	12.30	6.5X
RTRS	151.33	208	ePKPc	47	06.70	1.7
CRX	151.40	31	ePKP	47	07 00	1.1
TBH	152.14	304	ePKP	47	15.49	8.8X
TRN	152.33	304	ePKP	47	15.39	8.5X
III	152.37	32	iPKP	47	14.50	7.3X
IIT	152.42	29	iPKP	47	14.80	7.5X
TPP	152.54	304	ePKP	47	16.62	9.4X
TCE	152.59	305	ePKP	47	15.98	8.7X
IISM	152.89	28	iPKP	47	16.30	8.7X
SLA	153.32	221	ePKPc	47	09.20	0.9
ACX	153.38	35	ePKP	47	10.50	2.2
OXX	154.85	29	ePKP	47	12.80	2.2
CNCB	160.14	233	PKPc	47	19.00	1.6
			i	47	59.60	
LPB	160.39	233	ePKPc	47	19.00	1.5
	1.2s	93.75nm				
ZOBO	160.55	234	PKPc	47	19.00	1.1
	1.2s	47.97nm				
	Z 24s	0.28um				
			eLR	44	08.00	
ARE	163.03	227	ePKP	47	21.00	1.0
	S.D. = 0.9	on 417 of 482 obs.				

JUL 20, 1989 08h 40m 24.32± 1.24s
43.216 N ± 4.9km 126.591 W ±11.3km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.)
OFF COAST OF OREGON (30)

KMOR	3.28	41	eP	41	16.18	-0.7
NLO	3.64	37	eP	41	21.88	-0.1
			eS	42	07.40	
GT2	3.66	57	eP	41	22.75	0.5
			eS	42	09.20	
PGO	3.73	51	eP	41	23.84	0.7
			eS	42	09.39	
LBFM	3.96	117	eP	41	26.60	0.0
VLMM	4.00	53	eP	41	27.48	0.3
			eS	42	15.91	
RVW	4.02	42	eP	41	27.38	0.2
			eS	42	16.74	
TDH	4.02	57	eP	41	27.89	0.4
BMW	4.04	35	eP	41	26.71	-0.9
VBEM	4.05	61	eP	41	27.74	0.0
LVP	4.13	45	eP	41	29.17	0.3
			eS	42	18.73	
VLL	4.18	56	eP	41	30.20	0.6
			eS	42	20.94	
MTMW	4.20	47	eP	41	30.00	0.1
VFP	4.24	59	eP	41	30.47	-0.1
FL2	4.24	44	eP	41	31.07	0.5
GMO	4.26	71	eP	41	30.29	-0.5
SHW	4.30	45	eP	41	31.80	0.4
JLK	4.31	46	eP	41	31.66	0.1
HSR	4.31	45	eP	41	32.15	0.5
			eS	42	24.91	
APM	4.32	53	eP	41	32.13	0.5
ERK	4.32	43	eP	41	31.82	0.1
CZM	4.34	41	eP	41	31.71	-0.1
YEL	4.34	45	eP	41	32.39	0.4
STD	4.34	44	eP	41	32.23	0.3
			eS	42	24.21	
LON	4.90	42	ePc	41	40.00	0.2
KVN	7.64	120	eP	42	18.80	0.3
PNT	7.78	36	eP	42	19.00	-1.3
	0.5s	7.00nm			5.1mb X	
LRM	10.43	71	eP	42	55.90	-1.3
SES	12.83	51	eP	43	28.00	-1.5
GOL	16.28	95	eP	44	14.00	-0.9
ALQ	17.65	111	eP	44	32.00	0.0
MEO	23.26	102	iPd	45	33.30	0.6
MBC	33.27	3	eP	47	03.50	0.1
	0.6s	4.00nm			4.5mb	
	S.D. = 0.6	on 33 of 33 obs.				

JUL 20, 1989 08h 46m 02.82± 0.88s
37.996 N ± 8.1km 26.752 E ± 8.7km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

IZM	0.57	45	iPg	46	12.80	-1.6
			iSg	46	21.30	
CIN	1.13	110	ePg	46	20.00	-3.9X
			iSg	46	36.00	
PRK	1.30	343	ePb	46	28.00	1.1
APE	1.34	227	ePn	46	27.20	-0.4
YER	1.49	125	iPn	46	30.20	0.5
EZN	1.86	350	ePn	46	34.00	-0.9
DST	2.18	42	ePn	46	41.00	1.4
KHL	2.21	81	ePn	46	40.00	-0.1
	S.D. = 1.3	on 7 of 8 obs.				

JUL 20, 1989 09h 15m 56.03± 0.57s
47.555 N ± 5.1km 13.046 E ± 6.4km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.5 (VKA).

BHG	0.20	326	iPgc	16	00.60	0.1
KBA	0.52	157	iPg	16	04.60	-2.0
			iSg	16	10.40	
FVI	0.98	191	P	16	13.50	-1.1
			eSg	16	25.30	
SCE	1.05	241	iPgc	16	15.40	-0.5
RBL	1.17	162	Pd	16	16.90	-1.0
			eSn	16	31.10	
FUR	1.34	298	iPc	16	22.10	1.4
OGA	1.54	244	iPgc	16	25.40	1.7
WET	1.60	356	iPn	16	23.90	-0.5
KHC	1.62	12	iPn	16	24.00	-0.7
			Pg	16	25.80	
			Sg	16	45.50	
LJU	1.83	145	e(Pn)	16	30.00	2.3
			eSn	16	52.50	
TRI	1.91	165	e(Pn)	16	29.50	0.6
			iSg	16	55.10	
CEY	2.05	152	eP	16	52.00	21.0X
			eSn	17	00.00	
OSS	2.16	247	ePc	16	36.40	3.6X
VKA	2.31	71	e(Pg)	16	36.00	1.2
			i	16	43.10	
GRF	2.46	331	ePg	16	43.30	6.5X
			e(Sn)	17	05.50	
			eSg	17	13.30	
VBY	2.56	143	ePn	16	43.90	5.7X
			eSn	17	18.00	
PRU	2.63	22	Pg	16	44.00	4.8X
			Sg	17	17.50	
VDL	2.67	248	eP	16	43.60	3.6X
ZST	2.80	75	eP	17	22.60	40.9X
HOF	2.87	345	iPd	16	50.00	7.4X
TMA	3.21	245	eP	16	49.30	1.7
BRG	3.37	10	ePg	16	58.00	8.2X
			iSg	17	42.00	
FEL	3.41	277	ePn	16	49.50	-1.0
TOD	3.48	308	ePn	16	50.58	-0.8
TNS	4.04	313	iPnd	16	58.70	-0.6
			e	17	43.00	
			eSn	18	05.50	
ABH	4.32	305	ePn	17	02.39	-0.9
	S.D. = 1.3	on 17 of 26 obs.				

? JUL 20, 1989 09h 29m 25.59± 5.84s
33.731 S ±30.9km 114.961 E ±43.4km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

RKG	1.74	102	iPc	29	56.10	0.1
			iS	30	18.10	
MUN	2.04	31	eP	30	01.40	1.0
			eS	30	28.40	
NWAO	2.07	68	iPc	30	02.30	1.6
			eS	30	28.40	
KLB	3.18	49	iPd	30	16.10	-0.5
			eS	30	53.50	
BAL	3.45	26	eP	30	20.70	0.3
			eS	31	03.00	
MRWA	4.59	11	iPd	30	36.10	-0.5
			eS	31	28.00	
COOL	5.95	63	eP	30	54.00	-1.9
	0.3s	13.00nm			5.1mb X	
			eS	32	04.00	
MBL	13.24	20	eP	32	30.50	-5.8X
	0.3s	1.00nm			4.4mb X	
			eS	34	50.00	
	S.D. = 1.4	on 7 of 8 obs.				

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* JUL 20, 1989 10h 15m 57.93± 1.08s
37.065 N ±10.5km 23.082 E ± 9.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.3 (ATH).

ITM	0.93	277	ePg	16	15.50	-0.2
ATH	1.04	29	ePg	16	18.90	1.4
			eSb	16	33.70	
APE	1.96	89	ePn	16	29.40	-2.2
VLS	2.27	300	ePg	16	41.60	5.5X
NPS	2.73	131	ePn	16	44.00	1.4
PLG	3.32	5	ePn	16	50.50	-0.4
KZN	3.40	343	ePn	16	51.90	-0.2
EZN	3.75	42	eP	16	09.00	-48.1X
VAY	4.27	355	ePn	17	04.50	0.1
	S.D. = 1.5	on 7 of 9 obs.				

JUL 20, 1989 10h 34m 59.87± 0.47s
39.098 N ± 4.8km 24.451 E ± 4.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 3.3 (ATH), 3.3 (THE).

PAIG	1.02	324	iPgd	35	19.90	0.7
			eSg	35	33.30	
ATH	1.26	207	ePn	35	23.50	0.2
			eSn	35	43.10	
OUR	1.29	344	iPbc	35	23.10	-0.6
			eSb	35	41.50	

PRK	1.42	83	ePb	35 25.30	-0.4
PLG	1.49	329	ePn	35 25.30	-1.4
EZN	1.62	63	ePn	35 27.50	-1.1
LIT	1.82	304	iPbd	35 31.00	-0.4
			eSb	35 54.70	
THE	1.91	324	ePn	35 33.30	0.5
SRS	2.12	342	ePn	35 34.90	-0.9
ALN	2.17	34	ePn	35 37.80	1.2
APE	2.20	157	ePn	35 36.00	-1.0
IZM	2.31	107	ePn	35 38.30	-0.3
KNT	2.38	330	ePnd	35 39.60	0.1
			eSn	36 10.50	
KZN	2.39	301	ePn	35 39.70	-0.1
VAY	2.65	328	ePn	35 49.70	6.4X
MFT	2.75	51	ePn	35 50.80	5.9X
ITM	2.76	227	ePn	35 46.00	1.0
EDC	2.91	64	ePn	35 49.00	1.9
DST	3.28	80	ePn	35 59.00	6.6X
SKO	3.68	322	ePn	35 58.50	0.6

S.D. = 1.0 on 17 of 20 obs.

JUL 20, 1989 12h 09m 53.30± 0.12s
18.870 S ± 3.9km 175.528 W ± 3.3km
DEPTH = 240.8km (8 depth phases)
5.4mb (44 obs.)
TONGA ISLANDS (173)
CENTROID, MOMENT TENSOR (HRV)
Dotо Used: GDSN
L.P.B.: 12S, 24C
Centroid Locotion:
Origin Time 12:10: 0.3 0.9
Lot 18.87S 0.07 Lon 175.68W 0.07
Dep 266.8 2.7 Holf-durotion 1.9
Moment Tensor; Scole 10**17 Nm
Mrr=-0.93 0.05 Mtt= 0.65 0.11
Mff= 0.27 0.10 Mrt=-0.18 0.07
Mrf=-1.24 0.09 Mtf= 0.47 0.05
Principol Axes:

T	Vol= 1.39	Plg=25	Azm=128
N	0.32	19	29
P	-1.71	57	265

Best Double Couple:Mo=1.6*10**17
NP1:Strike=254 Dip=26 Slip= -42
NP2: 22 73 -110

AFI	6.11	37	iPc	11 16.40	-6.9X
			eS	12 22.60	
RAR	14.99	102	P	13 14.00	-1.0
			S	16 05.00	
PVC	15.39	272	iPd	13 22.00	2.1
DZM	17.19	256	iPc	13 40.20	-0.2
HBZ	19.43	195	P	14 05.70	2.4
TAZ	20.50	198	P	14 17.20	3.2X
KRP	20.53	201	Pc	14 17.00	2.8
UTU	20.55	199	P	14 18.00	3.5X
PGZ	22.79	196	P	14 37.20	1.0
MNG	23.01	198	P	14 38.10	-0.3
KIW	23.40	198	P	14 44.10	2.0
MTW	23.51	197	P	14 42.60	-0.4
CAW	23.58	198	P	14 43.80	0.0
BLW	23.71	197	P	14 45.60	0.7
WDW	23.75	198	P	14 45.10	-0.2
MRW	23.80	198	P	14 45.70	-0.1
MOW	23.82	197	P	14 46.20	0.2
WEL	23.83	198	P	14 45.70	-0.4
TCW	23.92	199	P	14 48.40	1.5
AFR	24.49	91	iP	14 51.60	-0.7
	1.2s	135.00nm			5.4mb
PAE	24.66	91	iP	14 53.10	-0.8
	1.2s	195.00nm			5.5mb
PPT	24.68	91	iP	14 53.20	-0.9
	1.2s	340.00nm			5.8mb
Z	19s	0.40um			3.9Msz
TBI	24.71	105	iP	14 54.30	0.0
	1.3s	290.00nm			5.7mb
PPN	24.82	91	iP	14 54.70	-0.7
	1.2s	125.00nm			5.3mb
TVO	24.96	92	iP	14 56.10	-0.6
	1.2s	165.00nm			5.5mb
HNR	25.53	288	eP	15 02.00	0.1
SVO	25.77	289	eP	15 11.00	6.9X
VSG	25.82	288	eP	15 05.00	0.4
PMO	26.70	86	iP	15 11.10	-1.3
	1.2s	80.00nm			5.2mb
VAH	26.90	87	iP	15 12.50	-1.7
	1.2s	45.00nm			5.0mb
TPT	26.96	86	iP	15 13.40	-1.4
	1.2s	75.00nm			5.2mb
RUV	27.14	87	iP	15 15.00	-1.4
	1.2s	75.00nm			5.2mb
MHZ	29.02	203	eP	15 31.60	-1.5
MSZ	29.21	205	P	15 33.30	-1.2
BRS	30.29	248	iPc	15 44.20	-0.2
COO	31.69	242	iPc	15 56.70	0.1
	0.4s	23.00nm			5.2mb
CNB	35.06	235	iPd	16 25.70	0.4
	1.4s	260.00nm			5.6mb
CAN	35.35	235	eP	16 26.70	-1.0
BWA	35.54	237	eP	16 27.00	-2.3
CTA	36.00	262	iPd-	16 32.60	-0.7
	1.2s	509.38nm			5.9mb
			i	16 42.40	
			i	17 27.50	
			i	18 54.60	
			iS	22 21.80	
PMG	37.32	279	iPc	16 44.00	-0.4
TOO	38.73	233	iPd	16 56.00	0.1
STK	40.60	243	iPd	17 11.60	0.4
	0.4s	17.00nm			4.8mb
OIS	42.17	260	iPd	17 22.80	-1.4
			e	19 14.00	
			e	22 45.00	
ADE	43.45	239	iPd	17 33.70	-0.8
	1.2s	81.25nm			5.0mb
JAY	45.80	285	ePd	17 50.00	-3.2X
	1.0s	163.40nm			5.3mb
WB5	47.14	260	iPd	18 02.20	-1.4
			ePcP	19 31.50	
			eS	24 31.80	
GUA	50.56	307	eP	18 28.30	-1.5
	0.8s	208.96nm			5.6mb
GUMO	50.63	307	eP	18 29.00	-1.2
	0.8s	178.62nm			5.6mb
PJG	50.63	307	eP	18 28.90	-1.3
MTN	51.51	268	iPd	18 35.00	-1.9
FORR	52.05	245	iPd	18 38.00	-2.7
	0.5s	126.00nm			5.6mb
KNA	53.10	264	iPd	18 47.00	-1.6
WARB	53.55	251	iPd	18 50.30	-1.6
	0.3s	17.00nm			5.0mb
COOL	58.02	245	iPd	19 21.70	-1.8
	0.4s	16.00nm			5.0mb
SBA	59.65	184	Pd	19 37.10	3.1X
	0.9s	48.74nm			5.2mb
MBL	60.40	256	iPd	19 38.20	-1.7
	0.3s	19.00nm			5.2mb
MEKA	60.73	250	eP	19 40.30	-1.8
	0.4s	19.00nm			5.1mb
KLB	60.85	244	iPd	19 41.30	-1.5
	0.4s	15.00nm			5.0mb
NWAO	61.18	242	eP	19 44.00	-1.0
RKG	61.28	241	eP	19 44.70	-0.9
BAL	61.85	245	iPd	19 47.90	-1.5
	0.4s	17.00nm			5.1mb
MUN	62.13	243	iPd	19 50.00	-1.3
	1.0s	80.00nm			5.4mb
MRWA	62.63	246	eP	19 52.50	-2.1
NANU	64.08	254	iPd	20 03.30	-0.8
	0.4s	48.00nm			5.6mb
PCI	65.76	278	iPc	20 18.50	3.6X
KHKI	67.40	269	eP	20 22.00	-3.3X
			e	24 14.00	
TSM	69.23	282	ePd	20 37.50	1.0
MAT	70.33	322	iPd	20 41.50	-1.2
	1.0s	118.00nm			5.6mb
TRT	70.41	268	iPd	20 43.20	-0.5
	1.5s	421.90nm			5.9mb
ADK	70.46	359	ePd	20 41.20	-1.9
	0.8s	90.90nm			5.6mb
SPA	71.25	180	iPd	20 50.00	2.0
	1.0s	88.50nm			5.4mb
Z	20s	0.95um			5.1Msz
KKM	71.63	283	ePd	20 50.50	-0.5
	1.0s	83.10nm			5.4mb
SHK	72.42	317	iP	20 54.40	-0.7
	1.1s	156.96nm			5.7mb
SDN	75.01	9	ePd	21 07.00	-2.6
PRS	75.04	43	ePd	21 10.30	0.1
			epP	22 07.00	240km
BCH	75.19	44	P	21 11.00	-0.2
MWC	76.00	46	eP	21 16.00	0.1
			e	22 12.00	
BAR	76.10	48	eP	21 17.00	0.7
			e	22 14.00	
PLM	76.34	47	eP	21 18.00	0.2
			e	22 24.00	
RVR	76.34	47	eP	21 17.00	-0.5
			e	22 15.00	
FRI	76.51	43	ePd	21 18.00	-0.3
			epP	22 14.80	240km
CMB	76.70	42	ePd	21 19.00	-0.5
			epP	22 16.20	242km
ORV	76.93	40	ePd	21 20.30	-0.4
			epP	22 17.10	240km
WDC	76.95	39	iPd	21 20.40	-0.3
			epP	22 18.10	244km
TPC	77.31	47	eP	21 23.00	0.0
			e	22 20.00	
MIN	77.36	39	ePd	21 22.50	-0.7
			epP	22 19.20	239km
QZH	77.50	302	Pd	21 24.00	-0.1
GLA	77.60	49	eP	21 25.00	0.4
			e	22 20.00	
SSE	78.47	309	P	21 29.00	-0.2
	1.0s	0.08nm			2.4mb X
KDC	78.70	12	ePd	21 29.40	-0.5
KVN	78.74	42	P	21 30.40	-0.4
MDJ	80.56	324	Pd	21 40.40	0.4
NJ2	80.67	308	Pd	21 41.40	0.5
	1.0s	0.10nm			2.5mb X
SVW	81.29	10	ePd	21 42.50	-1.1
PGC	81.64	32	eP	21 46.00	0.5
DL2	82.18	316	iP	21 49.00	0.5
KGM	82.28	275	ePc	21 49.50	-0.2
CN2	82.46	321	iPd	21 50.00	0.1
	4.0s	0.50nm			2.6mb X
			S	31 49.00	
SNY	82.49	319	iPd	21 50.50	0.4
			S	31 51.00	
PMR	82.92	12	ePd	21 51.10	-0.7
	1.1s	87.50nm			5.4mb
TTA	82.96	9	ePd	21 52.30	0.1
WHN	83.38	305	iPd	21 56.00	1.1
	1.5s	0.25nm			2.8mb X
MAW	83.87	199	iPd	21 58.00	1.3
DPW	83.89	35	P	21 57.00	-0.1
TIA	83.92	311	Pd	21 57.80	0.3
TOA	84.00	13	ePd	21 57.40	0.0
PNT	84.02	33	ePd	21 58.00	0.3
ALQ	84.57	50	iPd	22 02.00	1.0
	1.0s	16.50nm			4.8mb
			e	22 08.00	
			epP	22 59.90	240km
IPM	85.28	276	ePd	22 05.20	0.4
	0.9s	176.20nm			5.9mb
LRM	85.98	39	eP	22 07.70	-0.1
			e	23 07.30	
FBA	86.17	11	ePd	22 07.20	-0.8
IMA	86.27	9	ePd	22 08.30	-0.3
BJI	86.40	314	Pd-	22 10.50	0.9
SNG	86.52	279	eP	22 12.70	2.0
	1.0s	128.00nm			5.7mb
GLD	87.63	47	P	22 16.50	0.7
GYA	87.89	299	iPd	22 18.40	1.1
TIY	87.95	311	iPd	22 18.00	0.8
	1.3s	0.20nm			2.8mb X
			sS	34 19.00	
LOE	88.93	289	eP	22 23.00	0.9
XAN	89.02	306	P	22 23.40	1.1
SES	89.20	35	ePd	22 22.80	0.0
	1.2s	73.00nm			5.5mb
			pP	23 22.00	243km
EDM	89.49	32	iPd	22 23.50	-0.5
NST	89.79	287	iPd	22 29.00	2.9
MEO	90.37	53	iPd	22 28.80	0.3
KMI	90.70	296	Pd	22 32.50	2.0
BDT	91.33	288	iPd	22 35.80	2.7
	1.2s	168.50nm			5.9mb
CD2	91.89	302	eP	22 36.50	0.9
CHG	91.90	289	iPd	22 37.00	1.2
	1.1s	91.77nm			5.7mb
			e	37 01.60	
INK	92.11	14	iPd	22 35.00	-0.7
	0.9s	74.00nm			5.7mb
LZH	93.65	307	Pd	22 45.00	1.3
	1.5s	115.00nm			5.8mb
YKA	94.07	24	eP	22 45.80	0.9
GTA	97.76	309	eP	23 03.10	0.8
MBC	100.72	12	ePdiff	23 14.00	-0.7
	0.8s	3.00nm			4.8mb
SOB1	127.28	118	ePKP	28 31.40	-0.2

20d 12h

MAIO	128.90	302	ePKP	28	34.00	-0.1
SUF	133.69	346	ePKP	28	35.00	-7.3X
BUL	134.58	213	iPKPd	28	44.90	-0.5
			iPP	31	18.30	
N82	137.60	355	PKP	28	48.80	-1.0
HFS	138.26	353	ePKP	28	41.30	-9.7X
	1.2s		15.00nm			
NAI	142.45	241	iPKPc	28	58.00	-2.1
	1.0s		19.00nm			
EKA	143.14	7	PKPc	28	55.50	-4.3X
	0.9s		12.10nm			
DMU	143.95	11	ePKP	28	57.00	-4.2X
DCN	144.41	12	iPKPd	28	58.40	-3.6X
	1.0s		93.00nm			
DLE	144.60	11	iPKPd	29	00.00	-2.3
	0.8s		58.00nm			
VAL	145.03	16	iPKP	29	01.80	-1.2
AAE	145.37	258	ePKP	29	06.00	0.8
WIT	146.08	358	ePKP	29	06.00	1.2
KAS	146.43	318	ePKP	29	03.50	-2.4
KRA	146.52	342	ePKP	29	05.40	-0.2
	0.9s		113.00nm			
			e	29	07.00	
			e	29	14.20	
BIR	146.67	330	ePKP	29	09.00	3.0X
PTT	146.74	332	ePKP	29	06.50	0.4
KSP	146.74	346	ePKP	29	06.00	0.1
	1.1s		223.00nm			
			id	29	08.50	
			i	29	22.00	
			e	30	08.50	
			i	30	12.50	
			e	38	00.00	
DBN	146.83	359	ePKP	29	08.00	2.0
			e	30	13.00	
WTS	146.89	357	ePKP	29	06.50	0.4
	1.0s		136.00nm			
			i	29	08.90	
			e	30	12.00	
CLL	146.93	350	iPKP	29	05.80	-0.4
	1.5s		34.00nm			
			i	29	08.30	
			pPKP	30	11.60	
SPC	147.19	341	ePKP	29	07.60	0.6
			i	29	10.30	
BRG	147.19	349	PKP	29	06.90	0.2
			i	29	09.10	
			i	29	15.80	
			i	30	12.60	
CFR	147.20	328	ePKP	29	05.00	-1.8
VRI	147.39	331	ePKPc	29	09.00	1.9
TLB	147.68	328	iPKPd	29	11.00	3.4X
BBTK	147.90	317	ePKP	29	08.00	-0.3
PRU	147.92	348	PKPc	29	08.40	0.5
	1.0s		86.70nm			
			e	29	11.50	
MLR	148.03	331	ePKPc	29	07.00	-1.4
HOF	148.08	351	ePKP	29	08.50	0.4
UCC	148.14	0	PKP-	29	08.00	-0.1
			e	29	11.80	
			e	30	14.00	
ENN	148.15	358	ePKP	29	08.00	-0.2
	1.0s		54.00nm			
			e	29	11.70	
			e	30	16.00	
LWI	148.18	231	iPKPd	29	14.50	4.9X
MDB	148.22	333	iPKPd	29	12.00	3.5X
MEM	148.31	358	PKPc	29	08.90	0.5
			e	29	12.20	
SNF	148.43	0	PKPd	29	12.30	3.7X
BHL	148.46	305	PKP	29	14.00	4.6X
TNS	148.56	355	ePKPd	29	12.70	3.7X
HRI	148.61	303	ePKP	29	10.00	0.4
JARJ	148.77	301	PKPc	29	16.10	6.2X
DOU	148.85	360	PKP	29	10.80	1.5
			i	29	13.10	
			e	30	15.20	
KHC	148.93	348	iPKPd	29	09.70	0.2
			i	29	14.50	
ABH	148.96	356	ePKPd	29	09.52	0.0
ZST	149.00	343	ePKP	29	09.90	0.3
			i	29	14.20	
SRO	149.00	342	iPKP	29	14.50	4.9X
WET	149.05	349	ePKP	29	09.90	0.2
KFNJ	149.10	301	PKPd	29	15.40	5.2X
VKA	149.14	344	ePKP	29	09.50	-0.3
	2.0s		299.00nm			
			i	29	14.70	
			i	29	19.80	
RUP	149.17	357	ePKP	29	10.05	0.1
GPA	149.20	319	ePKP	29	09.60	-0.6
MKRJ	149.22	300	PKPd	29	15.60	5.0X
WLF	149.25	358	PKPc	29	10.80	0.9
			i	29	15.20	
			e	30	16.60	
DRA	149.42	332	ePKP	29	16.00	5.6X
DSI	149.43	300	e(PKP)	29	11.00	0.3
GZR	149.49	334	ePKPd	29	16.50	5.9X
DMK	149.73	324	ePKP	29	16.00	5.1X
BZS	149.78	336	ePKP	29	11.00	0.2
CTT	149.80	322	ePKP	29	09.00	-2.0
CSS	149.83	308	ePKP	29	16.00	4.7X
KMR	149.84	347	ePKP	29	11.00	0.1
			i	29	16.70	
			i	30	21.00	
GWF	149.86	356	PKP	29	11.32	0.4
FLN	149.91	7	ePKP	29	11.40	0.5
JMB	149.93	326	ePKP	29	16.00	4.8X
PVL	150.02	329	iPKP	29	12.00	0.7
ALT	150.05	318	ePKP	29	10.80	-0.8
LDF	150.12	6	ePKP	29	11.80	0.5
GRR	150.24	7	ePKP	29	12.00	0.6
FUR	150.26	351	iPKPc	29	12.20	0.7
			i	29	17.40	
			i	29	23.90	
MBH	150.33	297	iPKPc	29	12.00	-0.1
CDF	150.44	356	PKP	29	11.36	-0.5
LPF	150.57	8	ePKP	29	12.40	0.5
BCK	150.61	314	iPKP	29	17.40	4.9X
EDC	150.64	322	ePKP	29	16.70	4.4X
VITF	150.70	358	PKP	29	13.21	1.1
DIM	150.77	327	ePKP	29	13.00	0.5
KHL	150.84	317	iPKP	29	18.70	5.9X
BEO	150.89	336	i(PKP)	29	19.00	6.5X
			i	29	26.50	
HAU	150.90	357	ePKP	29	13.00	0.5
FEL	150.92	355	PKP	29	12.47	-0.2
KBA	150.94	347	i(PKP)	29	16.70	3.9X
	1.2s		115.00nm			
MOF	151.01	356	PKP	29	12.41	-0.4
BSF	151.05	357	PKP	29	12.61	-0.3
KDZ	151.12	326	iPKPd	29	20.00	7.0X
PLD	151.16	328	ePKP	29	19.00	6.0X
BBS	151.37	356	PKP	29	13.48	0.2
RDO	151.41	325	ePKP	29	13.50	0.1
PTJ	151.42	343	ePKP	29	12.80	-0.6
ELL	151.44	314	ePKP	29	20.00	6.2X
RZN	151.45	327	ePKPc	29	13.00	-0.8
RBL	151.50	347	PKP	29	12.30	-1.2
FVI	151.52	348	PKPc	29	13.00	-0.4
VTS	151.52	330	iPKP	29	14.00	0.2
LOMF	151.53	357	PKP	29	15.08	1.5
OGA	151.56	351	iPKPc	29	14.60	0.8
			i	29	21.00	
			i	29	30.50	
LJU	151.65	345	ePKP	29	14.00	0.3
			i	29	20.10	
			e	30	10.00	
LOR	151.67	1	ePKP	29	14.40	0.7
VOY	151.81	346	ePKP	29	13.50	-0.5
			i	29	20.20	
SSF	151.87	1	ePKP	29	14.60	0.6
EZN	151.87	323	ePKP	29	20.50	6.4X
LBF	151.96	1	ePKP	29	14.70	0.6
CEY	151.96	345	ePKP	29	14.00	-0.2
			i	29	21.00	
VBY	151.97	344	ePKPd	29	14.30	0.2
			i	29	21.30	
KSL	151.99	313	ePKP	29	20.90	6.5X
MMB	152.03	328	ePKPc	29	14.00	-0.4
MFF	152.08	7	ePKP	29	14.70	0.4
KKB	152.13	329	ePKP	29	14.00	-0.5
AVF	152.14	2	ePKP	29	15.00	0.7
TRI	152.15	346	ePKPc	29	14.30	-0.1
			i	29	20.80	
PRK	152.29	322	ePKP	29	21.90	7.1X
SMF	152.29	1	ePKP	29	15.30	0.7
YER	152.32	316	ePKP	29	21.80	6.8X
RIY	152.34	345	ePKP	29	13.90	-0.7
BGF	152.35	2	ePKP	29	15.30	0.6
LSF	152.59	4	ePKP	29	15.30	0.3
TCF	152.59	3	ePKP	29	15.60	0.6
MAF	152.68	3	ePKP	29	15.90	0.8
VAY	152.80	329	iPKP	29	15.00	-0.4
SKO	152.82	332	iPKP	29	15.50	0.0
VAI	152.84	353	PKP	29	15.70	0.4
AGO	152.87	2	PKP	29	15.54	0.1
PLDF	152.97	1	PKP	29	15.73	0.1
PLG	153.07	327	ePKP	29	22.50	6.6X
PYM	153.17	2	PKP	29	16.61	0.7
KKS	153.19	333	ePKP	29	16.70	0.8
LPG	153.38	356	ePKP	29	17.00	0.5
LSD	153.39	356	PKP	29	17.68	1.2
PHP	153.49	333	ePKP	29	16.20	-0.1
RJF	153.53	5	ePKP	29	17.00	0.7
LBL	153.69	2	PKP	29	17.43	0.9
LFF	153.82	6	ePKP	29	17.40	0.7
BOB	153.85	352	PKPc	29	25.10	8.2X
LACI	153.85	333	ePKP	29	24.50	7.7X
CAF	153.94	4	ePKP	29	18.00	1.0
RRL	153.95	356	PKP	29	17.49	0.2
KZN	153.97	329	ePKP	29	24.90	7.7X
LPO	154.12	5	ePKP	29	18.10	1.0
KBN	154.18	331	ePKP	29	17.60	0.3
MME	154.22	350	PKPc	29	26.10	8.5X
PZZ	154.35	356	PKP	29	17.88	0.2
ROB	154.49	354	PKP	29	17.69	-0.1
FIN	154.54	354	PKP	29	16.34	-1.4
ENR	154.68	355	PKP	29	19.42	1.5
LSK	154.65	330	ePKP	29	16.50	-1.6
IMI	154.87	354	PKP	29	18.45	0.2
SBF	154.96	355	ePKP	29	19.50	1.1
LRG	155.44	357	ePKP	29	19.50	0.6
LMR	155.55	356	ePKP	29	20.00	0.9
EPF	155.66	7	ePKP	29	20.30	0.9
CVF	156.08	352	ePKP	29	20.00	0.1
BNG	160.13	226	iPKPd	29	25.60	0.2
	0.6s		48.00nm			
			ic	30	07.50	
			id	33	48.90	
MAL	160.57	22	ePKP	29	26.00	0.9
			i	31	11.00	
AVE	162.12	34	iPKPc	29	28.50	1.7
IFR	163.08	29	iPKPc	29	30.00	2.0
			i	30	15.00	
TIO	163.97	39	iPKPc	29	31.00	2.1
LIC	164.39	142	PKP	29	30.00	0.4
KIC	164.67	143	PKP	29	29.40	-0.4
TIC	164.73	142	PKP	29	29.50	-0.4

S.D. = 1.0 on 245 of 291 obs.

& JUL 20, 1989 12h 23m 14.47s
58.558 N 152.622 W
DEPTH = 47.3km
KODIAK ISLAND REGION (13)
<AGS-P>.

SHU	0.16	64	iP	23	21.68	-0.6
CDD	0.65	305	iP	23	26.87	-0.7
KDC	0.82	175	eP	23	28.94	-0.8
			S	23	40.50	
AUL	0.93	333	iP	23	30.74	-0.6
XLV	1.01	27	eP	23	31.69	-0.8
MCNL	1.09	306	iP	23	32.71	-0.9
OPT	1.14	344	eP	23	33.67	-0.7
			S	23	48.91	
CNPM	1.21	36	eP	23	34.21	-1.0
HOM	1.21	24	eP	23	35.19	-0.1
ILIM	1.54	354	eP	23	38.51	-1.4
NNL	1.64	24	eP	23	40.69	-0.6
RED	1.87	358	eP	23	43.02	-1.6
SLKM	2.31	31	eP	23	48.55	-2.3
SPU	2.65	6	eP	23	54.29	-1.5

14 obs. assocated

? JUL 20, 1989 12h 25m 42.79± 0.68s
37.110 S ±14.7km 52.352 E ±24.1km
DEPTH = 10.0km (geophysicist)
4.6mb (2 obs.)
SOUTH INDIAN OCEAN (425)

MAW	31.12	172	eP	32	04.00	0.8
SPA	53.08	180	e(P)	35	01.40	-0.9
	1.0s		6.80nm			4.5mb
WRA	72.03	102	Pd	37	08.90	-0.2
	0.7s		4.60nm			4.7mb
WB5	72.09	102	eP	37	09.50	0.1
SKO	83.62	337	eP	38	06.00	-6.3X
VRI	85.77	342	ePd	38	22.50	-0.5
BRG	93.89	337	eP	39	02.10	1.0
CLL	94.57	336	eP	39	04.00	-0.2

IMA 147.30 19 ePKP 45 37.80 13.0X
INK 148.58 4 ePKPd 45 29.60 3.0X
TTA 148.87 25 ePKP 45 42.30 14.9X
FBA 149.71 17 ePKP 45 42.80 14.4X
SVW 150.23 27 ePKP 45 45.50 16.1X
PMR 152.05 22 ePKP 45 48.80 16.8X
0.6s 7.30nm
S.D. = 0.8 on 7 of 14 obs.

JUL 20, 1989 13h 50m 50.06± 0.85s
44.173 N ±11.4km 117.184 W ± 5.1km
DEPTH = 5.0km (geophysicist)
OREGON (32)
ML 3.7 (NEIS). Felt in the Huntington and Vale areas. Also felt at Weiser, Idaho.

LNOR 1.87 336 eP 51 22.95 -0.1
eS 51 50.34
WG2 2.20 328 eP 51 29.41 1.6
JBO 2.29 305 eP 51 28.80 -0.3
eS 52 04.56
VIPM 2.49 279 eP 51 31.90 -0.1
PATW 2.50 314 P 51 35.00 3.0X
VTHM 2.61 294 eP 51 33.90 0.2
ETP 2.65 331 eP 51 35.20 1.1
VGB 2.89 299 eP 51 37.00 -0.6
HPI 2.99 97 P 51 39.60 0.3
CCMT 3.17 75 ePn 51 41.80 0.1
CBTI 3.19 103 P 51 42.00 0.0
LRM 3.74 62 ePn 51 49.20 -0.8
BUT 3.75 59 ePg 52 00.10 10.0X
eSn 52 43.50
eSg 52 57.50
DPW 3.77 349 eP 51 47.50 -2.6
BGMT 3.82 72 ePn 51 51.30 0.3
LCCM 4.11 64 ePn 51 57.80 2.7X
DMMT 4.14 48 ePn 51 42.80 -12.6X
HRY 4.54 54 ePn 51 49.10 -12.1X
MEMT 4.64 70 ePn 52 02.20 -0.5
KVN 5.16 188 eP 52 14.70 4.6X
TNP 6.09 180 eP 52 28.00 4.9X
SES 7.49 32 eP 52 44.00 1.3
S.D. = 1.1 on 15 of 22 obs.

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* JUL 20, 1989 14h 08m 31.63± 2.95s
51.102 N ±20.9km 14.734 E ±19.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 3.7 (VKA).

BRG 0.55 246 iPg 08 47.70 5.0X
iSg 09 07.80
KSP 1.02 104 iP 08 32.20 -18.7X
0.3s 49.00nm
iS 08 42.00
CLL 1.11 281 iPn 08 52.30 -0.1
iPg 08 57.70
iSg 09 21.10
PRU 1.12 186 Pg 08 53.50 0.8
Sn 09 10.50
Sg 09 16.50
HOF 1.98 248 iPn 09 06.30 0.7
KHC 2.11 201 Pn 09 06.60 -0.9
Pg 09 11.80
Sg 09 50.40
WET 2.29 212 ePn 09 09.50 -0.6
VKA 3.02 159 iPgc 09 20.40 0.0
i 09 56.30
i(Sg) 10 03.80
ZST 3.29 151 eP 09 37.00 12.8X
e 10 11.80
e 36 23.30
SPC 4.03 116 eP 10 37.50 62.7X
S.D. = 0.9 on 6 of 10 obs.

? JUL 20, 1989 16h 21m 59.67± 3.10s
4.259 S ±35.4km 142.390 E ±13.8km
DEPTH = 136.8 ± 22.9 km
4.0mb (1 obs.)
PAPUA NEW GUINEA (202)

MNDI 2.27 146 eP 22 38.00 0.0
LAT 5.17 118 eP 23 16.00 -0.1
MTN 14.02 232 iPd 25 13.70 0.2
eS 27 41.00
OIS 16.43 189 iPc 25 44.60 0.9
eS 28 41.00
e 31 06.00
WB5 17.38 206 eP 25 54.90 -0.5
eS 29 25.00
WRA 17.45 206 Pd 25 55.30 -0.9
0.6s 5.40nm 4.0mb
KNA 17.60 229 eP 25 58.30 0.3
ASPA 20.96 202 eP 26 33.50 0.1
S.D. = 0.7 on 8 of 8 obs.

% JUL 20, 1989 17h 17m 08.75± 0.97s
43.984 N ±17.5km 7.542 E ± 7.6km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 1.0 (STR).

SAOF 0.01 73 Pg 17 10.60 -0.1
Sg 17 12.20
AUTN 0.08 278 Pg 17 11.70 0.2
Sg 17 13.50
AURF 0.18 238 Pg 17 13.00 0.1
TOUF 0.21 278 Pg 17 13.40 -0.1
Sg 17 16.80
MVIF 0.29 253 Pg 17 14.80 -0.2
Sg 17 19.40
S.D. = 0.2 on 5 of 5 obs.

JUL 20, 1989 17h 22m 21.24± 0.30s
17.410 S ± 6.9km 167.829 E ± 8.2km
DEPTH = 33.0km (normal)
5.1mb (5 obs.) 4.9Msz (3 obs.)
VANUATU ISLANDS (186)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 21C
Centroid Location:
Origin Time 17:22:24.7 0.6
Lat 17.40S 0.07 Lon 167.61E 0.07
Dep 19.3 3.2 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 6.94 0.38 Mtt= 0.43 0.65
Mff=-7.37 0.55 Mrt= 3.55 1.08
Mrf=-4.35 1.54 Mtf= 0.39 0.40
Principal Axes:
T Val= 9.40 Plg=66 Azm= 34
N -0.60 17 165
P -8.80 17 261
Best Double Couple:Mo=9.1*10**16
NP1:Strike= 15 Dip=31 Slip= 124
NP2: 157 64 71

PVC 0.57 126 iPd 22 30.30 -2.5
iS 22 38.00
DZM 4.82 195 iPd 23 31.40 -2.0
iS 24 23.10
HNR 11.03 315 eP 24 59.00 -0.8
eS 27 00.00
VSG 11.31 315 eP 25 03.00 -0.8
eS 27 06.00
SVO 11.32 315 eP 25 05.00 1.2
eS 27 03.00
BRS 17.08 232 iP 26 20.00 0.7
COO 19.56 225 eP 26 50.00 0.6
CTA 20.60 259 iPd 27 02.00 1.7
1.2s 39.06nm 4.7mb
i 27 10.10
i 27 14.80
iS 30 53.40
KRP 21.53 163 P 27 10.00 0.4
CNB 24.25 219 eP 27 38.00 1.6
BWA 24.26 222 eP 27 36.00 -0.5
CAN 24.48 220 eP 27 40.70 2.1
STK 27.77 234 eP 28 09.00 -0.1
ASPA 32.32 253 iPd 28 47.70 -2.0
0.9s 42.00nm 5.3mb
Z 21s 2.88um 4.9Msz
iPcP 31 36.20
LR 40 42.70
KNA 37.43 267 eP 29 32.00 -1.4
GUMO 38.24 322 eP 29 44.80 4.6X
Z 22s 0.75um 4.5Msz
FORR 38.44 242 eP 29 40.00 -1.8
MBL 45.33 257 eP 30 37.90 -0.3
MEKA 46.38 250 eP 30 46.00 -0.5
NANU 49.22 255 eP 31 03.00 -5.7X
PCI 49.94 284 ePd 31 19.00 4.6X
DRV 52.47 194 eP 31 52.20 19.4X
SBA 60.47 180 Pd 32 29.60 -0.1
MAT 60.52 333 iPd 32 28.50 -2.1
1.0s 12.00nm 5.0mb
eS 40 53.00
NJ2 67.97 316 Pc 33 18.40 -0.9
WHN 70.13 313 eP 33 32.30 -0.3
MDJ 70.89 332 eP 33 37.00 0.1
CN2 72.21 329 P 33 44.00 -0.9
SPA 72.70 180 e(P) 33 46.80 -0.9
0.8s 30.42nm 5.3mb
BJI 74.68 321 eP 33 58.50 -0.8
TIY 75.59 318 eP 34 04.50 -0.2
Z 20s 0.80um 5.0Msz
XAN 75.89 313 P 34 05.60 -0.9
KMI 76.17 302 Pd 34 08.50 0.0
CHG 76.67 295 eP 34 10.90 -0.3
HHC 77.97 320 P 34 17.50 -0.5
CD2 78.06 308 eP 34 19.00 0.4
BTO 78.78 319 eP 34 23.00 0.5
MAW 79.62 202 eP 34 26.80 0.4
LZH 80.51 312 eP 34 32.00 0.0
2.0s 46.00nm 5.1mb
GTA 84.90 314 eP 34 54.20 -0.2
SHL 85.31 298 eP 34 56.50 -0.3
KVN 89.00 48 eP 35 13.60 -0.9
WMQ 94.98 314 P 35 40.40 -1.4
SUF 127.52 339 iPKP 41 22.50 -1.5
NUR 129.54 337 iPKP 41 26.70 -1.2
NB2 133.34 345 PKP 41 34.40 -0.8
SOB1 141.20 131 ePKP 42 04.60 13.4X
KHC 142.10 332 PKP 41 47.50 -4.3X
MEM 143.82 340 PKP 41 51.80 -2.8
VBY 143.84 327 ePKP 41 52.20 -2.6
LJU 143.85 328 e(PKP) 41 51.00 -3.8X
CEY 144.11 328 ePKP 41 51.50 -3.8X
YRH 144.16 352 ePKP 41 54.00 -1.1
VOY 144.18 328 ePKP 41 51.60 -3.9X
FVI 144.32 330 PKPd 41 52.00 -3.6X
ETA 144.48 354 ePKP 41 55.00 -0.6
WLF 144.59 339 PKP 41 53.40 -2.5
GWF 144.65 337 PKP 41 53.43 -2.7
DOU 144.71 341 PKP 41 54.70 -1.4
i 41 58.30
ECB 144.86 354 ePKP 41 56.80 0.5
ECP 145.01 354 ePKP 41 57.20 0.7
CDF 145.24 337 PKP 41 55.34 -1.9
FEL 145.40 336 PKP 41 55.66 -1.9
ECH 145.45 337 PKP 41 55.74 -1.8
VAL 145.51 358 ePKP 41 59.00 1.6
MOF 145.76 337 PKP 41 56.50 -1.7
VITF 145.88 338 PKP 41 57.02 -1.1
BSF 145.91 337 PKP 41 57.30 -1.1
HAU 145.93 338 ePKP 41 57.70 -0.6
LOMF 146.29 336 PKP 41 58.14 -0.9
VAI 146.70 333 PKPd 41 58.60 -1.0
PGD 146.79 328 PKPd 42 02.10 2.0
TDS 146.79 318 PKPc 42 00.70 0.7
BOB 147.24 331 PKPd 42 01.80 1.2
BNG 147.27 250 iPKPc 42 02.50 1.0
0.9s 45.00nm
id 42 16.00
FLN 147.31 346 ePKP 42 01.10 0.6
LDF 147.38 345 ePKP 42 01.50 0.9
LOR 147.43 340 ePKP 42 01.80 1.0
LBF 147.63 339 ePKP 42 02.40 1.3
LSD 147.71 334 PKP 42 03.19 1.6
SSF 147.72 340 ePKP 42 02.60 1.4
GRR 147.75 346 ePKP 42 02.60 1.4
SOI 147.84 315 PKP 42 03.50 1.9
LPG 147.85 335 ePKP 42 03.50 1.6
SMF 147.97 339 ePKP 42 03.20 1.6
AVF 148.01 340 ePKP 42 03.00 1.3
LPF 148.13 346 ePKP 42 03.30 1.5
FIN 148.24 332 PKP 42 01.75 -0.4
RRL 148.30 334 PKP 42 04.32 1.8
ROB 148.33 332 PKP 42 01.65 -0.7
BGF 148.38 340 ePKP 42 04.10 1.8
PZZ 148.50 333 PKP 42 04.42 1.7
STV 148.61 333 PKP 42 03.70 0.8
IMI 148.62 332 PKP 42 02.57 -0.3
MAF 148.77 340 ePKP 42 05.30 2.4
TCF 148.83 341 ePKP 42 05.50 2.4
SBF 148.86 332 ePKP 42 05.40 2.2
LSF 149.07 341 ePKP 42 05.80 2.4
CVF 149.17 329 ePKP 42 06.20 2.5
MFF 149.23 344 ePKP 42 06.20 2.6
FRF 149.45 333 ePKP 42 07.40 3.3X

20d 17h

LRG	149.66	333	ePKP	42 07.60	3.3X
LMR	149.69	332	ePKP	42 07.60	3.2X
RJF	149.92	341	ePKP	42 08.40	3.7X
LFF	150.49	341	ePKP	42 09.70	4.2X
LPO	150.58	340	ePKP	42 09.90	4.2X

S.D. = 1.4 on 90 of 106 obs.

JUL 20, 1989 18h 00m 00.63± 0.49s
46.853 N ± 6.2km 9.841 E ± 4.2km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.8 (LDG).

OGA	0.81	89	ePg	00 15.00	-1.5
MDI	1.08	185	Pc	00 21.00	0.1
			eSg	00 32.10	
VAI	1.23	217	Pd	00 23.40	-0.1
			eSg	00 39.10	
SCE	1.29	81	eP	00 23.50	-1.2
FEL	1.61	310	Pn	00 29.36	0.1
			Pg	00 31.29	
			Sg	00 53.33	
FUR	1.63	36	eP	00 31.10	1.6
BBS	1.70	292	Pn	00 31.01	0.4
			Pg	00 33.19	
			Sg	00 55.94	
FVI	2.04	96	P	00 37.60	2.2
			eSn	01 03.60	
MOF	2.09	299	Pn	00 36.18	-0.1
			Pg	00 40.94	
LOMF	2.12	285	Pn	00 36.82	0.2
			Pg	00 40.44	
			Sg	01 08.10	
ECH	2.27	308	Pn	00 38.44	-0.4
			Pg	00 45.25	
BSF	2.29	296	Pn	00 39.01	-0.2
CDF	2.33	313	Pn	00 39.36	-0.4
			Pg	00 46.05	
KBA	2.41	83	iPc	01 17.30	36.4X
	0.8s		18.10nm		
LPG	2.54	239	Pg	00 49.60	6.8X
			Sg	01 22.80	
HAU	2.64	297	Pn	00 43.70	-0.3
			Pg	00 49.90	
			Sg	01 24.20	
GRF	2.99	17	ePg	01 00.00	11.1X
			eSg	01 37.00	
KHC	3.39	46	Pn	00 54.20	-0.5
			Pg	01 04.20	
			Sn	01 33.60	
			Sg	01 44.60	
LOR	4.11	278	Pg	01 18.20	13.4X
			Sg	02 11.10	
BRG	4.85	32	e(P)	01 41.00	25.6X

S.D. = 1.0 on 15 of 20 obs.

% JUL 20, 1989 19h 29m 38.06± 0.82s
61.829 N ± 8.9km 7.370 E ±11.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.1 (BER).

MOL	0.75	6	iPc	29 51.61	-1.1
			eS	30 02.63	
HYA	0.87	221	iP	29 54.22	-0.6
			iS	30 06.90	
SUE	1.47	239	iP	30 04.46	-0.1
			iS	30 25.20	
ASK	1.71	219	iP	30 08.29	0.2
			eS	30 31.09	
BER	1.76	215	eP	30 08.11	-0.6
			eS	30 31.24	
RGS	1.86	49	eP	30 12.00	1.8
			eS	30 33.50	
ODD1	1.96	191	eP	30 11.26	-0.4
			eS	30 33.52	
NRA0	2.29	117	iPd	30 15.30	-1.2
			iS	30 46.50	
BLS1	2.46	186	eP	30 18.12	-0.8
			eS	30 49.50	
KMY	2.83	203	iP	30 26.88	2.8
			eS	30 56.48	

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

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* JUL 20, 1989 19h 44m 15.64± 0.63s
1.939 N ±10.0km 126.792 E ±13.2km
DEPTH = 33.0km (normal)
4.5mb (3 obs.)
MOLUCCA PASSAGE (266)

MNI	2.01	256	iPc	44 48.00	0.0
			eS	45 14.30	
PCI	7.51	248	ePd	46 12.00	6.4X
WRA	22.97	162	Pd	49 17.70	-0.8
	0.5s		3.40nm	4.1mb	
MBL	23.95	196	eP	49 28.00	0.1
ASPA	26.37	165	eP	49 52.60	1.7
	0.7s		12.00nm	4.6mb	
WARB	27.96	180	eP	50 06.00	0.7
FORR	32.63	178	eP	50 44.90	-1.7
	0.4s		38.00nm	5.6mb X	
MAT	36.01	16	(P)	51 12.00	-3.7X
	0.9s		7.56nm	4.6mb	
BWA	41.49	153	eP	52 05.10	3.7X
SVW	82.32	29	eP	56 35.80	0.5
TTA	82.46	27	eP	56 36.00	0.0
IMA	83.99	24	P	56 44.00	0.1
PMR	85.48	29	eP	56 50.50	-0.7

S.D. = 1.0 on 10 of 13 obs.

JUL 20, 1989 19h 51m 17.63± 0.64s
44.351 N ±12.5km 9.806 E ± 5.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

BDI	0.64	117	P	51 31.30	0.8
			eSg	51 39.20	
MME	0.66	103	Pc	51 29.90	-1.1
			eSg	51 38.30	
PII	0.82	140	P	51 33.70	0.3
			eSg	51 45.00	
FIN	1.16	264	P	51 39.30	0.0
			S	51 54.18	
ROB	1.39	268	P	51 42.52	-0.6
			S	52 00.44	
IMI	1.45	253	P	51 44.12	0.2
			S	52 02.11	
ENR	1.72	267	P	51 47.60	-0.2
STV	1.79	267	P	51 48.42	-0.4
PZZ	1.94	275	P	51 51.13	0.0
LSD	2.18	301	P	51 55.36	0.6
RRL	2.23	286	P	51 55.81	0.4

S.D. = 0.6 on 11 of 11 obs.

% JUL 20, 1989 20h 24m 50.34± 0.90s
37.107 N ±10.1km 3.812 W ± 6.8km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

AFC	0.26	55	iP	24 56.00	0.1
			eS	25 00.00	
MAL	0.61	232	iPnc	25 01.00	-1.6
			iSg	25 09.00	
EBAN	1.06	1	ePg	25 10.20	-0.1
			eSg	25 24.80	
EPRU	1.14	263	ePg	25 13.60	1.8
			eSg	25 30.00	
ENIJ	1.28	96	ePn	25 15.00	0.8
			eSn	25 31.80	
EHOR	1.34	302	ePn	25 15.00	-0.1
			eSn	25 32.80	
EVIA	1.85	34	ePn	25 21.40	-1.0
GUD	3.54	356	ePg	26 05.60	19.0X
			eSg	26 45.40	

S.D. = 1.4 on 7 of 8 obs.

% JUL 20, 1989 22h 12m 22.06± 0.85s
43.630 N ± 8.5km 12.625 E ± 7.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ARV	0.27	120	Pd	12 28.00	0.3
			eSg	12 34.60	
RSM	0.32	337	P	12 29.00	0.3
			eSg	12 36.10	
CRE	0.49	270	Pc	12 33.20	1.2
			eSg	12 42.30	
ASS	0.56	177	Pd	12 33.00	-0.5
			eSg	12 43.60	
SFI	0.63	298	P	12 33.90	-0.8
			eSg	12 44.80	
PGD	0.70	291	Pc	12 35.50	-0.5
			eSg	12 46.00	

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

JUL 20, 1989 23h 00m 53.83± 0.67s
33.626 S ± 7.8km 70.819 W ± 7.8km
DEPTH = 33.0km (normal)
CHILE-ARGENTINA BORDER REGION (127)

TACH	0.10	254	iPc	01 01.70	2.0
			iS	01 10.50	
SAN	0.22	37	iP	01 02.00	1.3
			iS	01 11.50	
PCH	0.25	89	iPc	01 01.60	0.4
			iS	01 10.60	
CHCH	0.34	156	iPd	01 01.50	-0.6
			iS	01 10.40	
PEL	0.49	13	iPd	01 04.50	0.1
			iS	01 15.90	
FCH	0.53	56	iPd	01 04.40	-0.8
			iS	01 15.30	
LNV	0.59	236	iPc	01 04.70	-1.0
			iS	01 16.00	
LCCH	0.64	283	iPc	01 06.30	-0.2
			iS	01 19.00	
ROCH	0.67	346	iP	01 07.10	0.0
			iS	01 20.20	
JACH	0.96	11	iPc	01 09.80	-1.3
			iS	01 24.70	

S.D. = 1.2 on 10 of 10 obs.

& JUL 20, 1989 23h 15m 18.15s
62.289 N 150.029 W
DEPTH = 38.2km
CENTRAL ALASKA (1)
<AGS-P>.

PWA	0.64	174	eP	15 31.68	0.9
HUR	0.71	15	iP	15 32.14	0.3
			S	15 41.51	
SKT	0.77	247	eP	15 33.14	0.5
			S	15 43.86	
SUA	0.89	203	iP	15 35.73	1.2
			S	15 49.42	
RND	1.24	25	eP	15 41.09	1.7
			S	15 57.91	
SPU	1.47	222	eP	15 45.26	2.6
MCK	1.53	19	eP	15 46.13	2.7
SLKM	1.79	183	eP	15 50.33	3.1
TOA	1.82	94	eP	15 50.71	3.1
KLU	2.10	111	eP	15 54.56	2.8
PAX	2.22	70	eP	15 56.51	3.2

11 obs. ossocioted

? JUL 21, 1989 00h 26m 44.53± 9.26s
38.909 N ±71.0km 23.232 E ±15.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PAIG	1.07	19	ePgc	27 04.90	0.2
			eSg	27 16.40	
LIT	1.32	334	ePgd	27 09.20	0.3
			eSg	27 24.00	
OUR	1.54	22	ePb	27 12.10	0.1
THE	1.73	353	ePb	27 14.10	-0.7
SRS	2.22	7	ePn	27 21.70	-0.3
KNT	2.26	354	ePnd	27 23.00	0.4
			eSn	27 47.20	
VAY	2.46	348	e(Pn)	27 25.40	0.1

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

? JUL 21, 1989 00h 46m 33.54± 9.05s
38.925 N ±69.5km 23.241 E ±14.5km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PAIG	1.06	19	ePg	46 53.50	0.1
			eSg	47 05.00	
LIT	1.31	334	ePgd	46 57.50	-0.3
			eSg	47 13.10	
OUR	1.52	22	ePbd	47 00.70	0.0
			eSb	47 17.50	
THE	1.72	353	ePn	47 03.60	0.0
SRS	2.21	7	ePn	47 10.30	-0.4
KNT	2.25	353	ePnd	47 11.70	0.3
			eSn	47 35.90	
VAY	2.45	348	ePn	47 14.30	0.2

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

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* JUL 21, 1989 01h 45m 46.94± 0.85s
15.609 S ±12.7km 73.387 W ±11.3km
DEPTH = 136.9 ± 9.7 km
4.7mb (1 obs.)
SOUTHERN PERU (117)

ARE	2.01	115	iPc	46	21.50	-0.7
			iS	46	46.40	
HUA	4.02	332	eP	46	46.70	-1.6
			eS	47	34.60	
NNA	4.92	317	iPd	47	01.60	1.5
	0.5s	105.63nm				
			eS	47	58.50	
ZOBO	5.11	98	iPc	47	03.00	-0.1
	0.9s	160.03nm			5.2mb	X
Z	16s	1.07um			3.8MszX	
			LR	48	32.00	
LPB	5.17	101	Pc	47	04.00	0.3
	0.8s	149.25nm			5.3mb	X
CNCB	5.33	104	iPc	47	07.20	1.1
CCH	7.17	105	eP	47	31.00	0.2
ANT	8.53	161	eP	47	48.50	-0.2
ITB1	19.96	120	e(P)	50	12.10	1.6
ITB	20.16	120	eP	50	11.80	-0.9
ITB7	20.32	121	e(P)	50	13.20	-1.1
BAO	24.45	94	eP	50	54.10	-0.7
BMA	28.47	109	eP	51	34.10	2.8X
SOB1	32.34	83	eP	52	04.90	-0.5
KIC	71.38	78	Pc	56	55.10	0.7
	0.6s	7.50nm			4.7mb	
YKA	84.28	342	eP	58	08.80	4.8X

S.D. = 1.1 on 14 of 16 obs.

JUL 21, 1989 02h 22m 59.01± 0.28s
16.897 S ± 8.5km 167.665 E ± 8.9km
DEPTH = 33.0km (normal)
4.9mb (7 obs.)
VANUATU ISLANDS (186)

DZM	5.27	192	iPc	24	16.00	-1.7
			iS	25	12.60	
SVO	10.85	314	eP	25	39.00	3.8X
			eS	27	28.00	
BRS	17.28	230	iPc	27	01.40	1.9
COO	19.81	224	iPc	27	30.20	0.3
	0.7s	27.00nm			4.7mb	
		e		27	33.00	
CTA	20.55	258	iPd	27	37.80	0.2
	0.8s	42.54nm			4.9mb	
BWA	24.53	221	eP	28	15.10	-1.8
		i		28	32.20	
		i		28	42.70	
CNB	24.55	218	eP	28	18.00	0.9
MNG	24.59	166	P	28	17.60	0.3
CAN	24.77	219	eP	28	22.30	3.1X
		i		28	48.30	
QIS	26.81	258	iPd	28	39.40	1.1
STK	27.94	233	eP	28	48.00	-0.5
WB5	31.71	259	eP	29	21.20	-0.9
ASPA	32.32	252	iPd	29	26.10	-1.4
	0.7s	90.00nm			5.8mb	
Z	22s	0.44um			4.1MszX	
			LR	40	55.20	
WARB	39.12	249	eP	30	25.00	-0.4
COOL	44.45	243	eP	31	08.00	-0.9
MAT	59.99	333	(P)	33	03.00	-1.8
	1.0s	28.00nm			5.3mb	
WHN	69.67	312	eP	34	06.50	-1.1
CN2	71.69	329	P	34	19.20	-0.4
GYA	73.26	305	P	34	29.80	0.4
TIY	75.11	318	eP	34	44.30	4.5X
XAN	75.43	313	P	34	41.80	0.1
CHTO	76.32	295	eP	34	47.00	0.1
	1.0s	3.75nm			4.4mb	
LZH	80.05	312	e(P)	35	08.00	0.7
PRS	85.31	50	eP	35	34.30	0.2
WDC	86.29	46	ePc	35	38.60	-0.3
ORV	86.57	47	eP	35	40.00	-0.3
CMB	86.73	49	ePc	35	41.10	-0.1
FRI	86.80	50	ePc	35	41.40	0.0
PLM	87.54	54	P	35	45.60	0.2
FBA	88.29	17	P	35	46.10	-1.9
	0.6s	4.68nm			5.0mb	
KVN	88.78	49	P	35	50.50	-0.7
TNP	89.05	50	P	35	52.00	-0.5
	0.6s	2.96nm			4.8mb	
KEV	121.91	345	ePKP	41	50.00	-0.7
SOD	123.67	343	ePKP	41	52.00	-2.3
SUF	126.99	339	iPKP	41	59.30	-1.5
	0.5s	5.00nm				
NUR	129.01	337	ePKP	42	04.00	-0.7
NB2	132.80	345	PKP	42	11.80	-0.2
HFS	132.89	343	ePKP	42	10.80	-1.3
	0.5s	0.70nm				
KSP	139.13	332	ePKP	42	17.50	-6.6X
BRG	140.12	334	i(PKP)	42	27.50	1.6
	1.0s	90.00nm				
CLL	140.17	335	e(PKP)	42	25.00	-1.0
PRU	140.52	333	ePKP	42	23.00	-3.7X
KHC	141.58	332	PKP	42	23.50	-5.2X
SOB1	141.65	130	ePKP	42	26.30	-3.5X
KBA	143.18	330	iPKPd	42	27.80	-3.9X
	0.9s	7.10nm				
VBY	143.33	327	e(PKP)	42	28.80	-2.9X
LJU	143.33	328	ePKP	42	28.00	-3.7X
CEY	143.60	328	e(PKP)	42	29.80	-2.4X
VOY	143.66	329	ePKP	42	29.20	-3.2X
			e	42	39.30	
FVI	143.80	330	PKP	42	29.20	-3.3X
RIY	143.89	327	ePKP	42	30.00	-2.7X
WLF	144.05	339	PKPd	42	31.00	-1.8
GWF	144.12	337	PKP	42	31.23	-1.8
OGA	144.41	332	iPKPd	42	33.00	-0.8
	0.6s	48.00nm				
CDF	144.71	337	PKP	42	32.91	-1.2
FEL	144.88	336	PKP	42	33.07	-1.4
ECH	144.92	337	PKP	42	33.21	-1.2
MOF	145.23	337	PKP	42	34.24	-0.8
VITF	145.35	338	PKP	42	34.69	-0.3
BSF	145.38	337	PKP	42	34.85	-0.5
HAU	145.39	338	iPKPc	42	35.30	0.1
LOMF	145.76	337	PKP	42	35.31	-0.6
ARV	145.90	326	PKPc	42	37.30	1.1
VAI	146.17	333	PKPc	42	36.00	-0.5
PGD	146.28	328	PKPc	42	38.90	1.9
TDS	146.31	318	PKP	42	38.00	1.0
AQU	146.42	324	PKPc	42	37.40	0.2
SGO	146.43	320	PKPd	42	38.00	0.9
MME	146.56	329	PKPc	42	39.00	1.5
SDI	146.61	323	PKPc	42	38.10	0.6
BDI	146.70	329	PKPc	42	38.00	0.4
BOB	146.72	331	PKPc	42	39.10	1.5
FLN	146.78	346	iPKPc	42	38.80	1.4
LDF	146.85	345	iPKPc	42	39.10	1.6
LOR	146.89	340	iPKPc	42	39.90	2.2X
PII	146.99	329	PKPc	42	38.50	0.6
LBF	147.10	339	iPKPc	42	40.40	2.3X
LSD	147.18	334	PKP	42	40.82	2.3
SSF	147.19	340	iPKPc	42	40.70	2.6X
GRR	147.22	346	iPKPc	42	40.40	2.3X
BNG	147.29	251	iPKPd	42	40.20	0.9
	1.0s	25.00nm				
			id	42	46.90	
LPG	147.32	335	iPKPc	42	41.40	2.6X
SOI	147.36	316	PKPc	42	41.30	2.6X
SMF	147.44	339	ePKP	42	41.00	2.4X
AVF	147.48	340	ePKP	42	40.90	2.3X
LPF	147.59	346	iPKPc	42	41.40	2.7X
MAO	147.60	327	PKPc	42	41.30	2.3X
BNI	147.71	334	PKPc	42	42.30	3.1X
FIN	147.72	332	PKP	42	40.72	1.6
RRL	147.77	334	PKP	42	42.26	2.8X
ROB	147.80	332	PKP	42	41.13	1 8
BGF	147.85	340	iPKPc	42	42.00	2.8X
PZZ	147.97	333	PKP	42	41.13	1.5
ENR	148.06	333	PKP	42	40.82	1.1
STV	148.08	333	PKP	42	40.93	1.2
IMI	148.09	332	PKP	42	41.85	2.1
SAOF	148.18	332	PKP	42	42.68	2.8X
AUTN	148.23	332	PKP	42	42.53	2.3X
MAF	148.24	340	iPKPc	42	43.10	3.2X
TCF	148.29	341	iPKPc	42	43.50	3.5X
TOUF	148.30	333	PKP	42	42.73	2.4X
SBF	148.34	332	iPKPc	42	43.50	3.3X
AURF	148.36	332	PKP	42	42.73	2.5X
MVIF	148.43	333	PKP	42	42.86	2.4X
REVF	148.46	332	PKP	42	43.74	3.4X
LSF	148.54	341	iPKPc	42	43.70	3.3X
CVF	148.66	329	PKP	42	44.18	3.5X
CALN	148.66	333	PKP	42	44.03	3.2X
MFF	148.70	344	iPKPc	42	44.30	3.7X
FRF	148.92	333	iPKPc	42	45.00	4.0X
LRG	149.13	333	iPKPc	42	45.60	4.3X
LMR	149.17	333	iPKPc	42	45.60	4.2X
RJF	149.39	341	ePKP	42	46.20	4.5X
CAF	149.55	340	ePKP	42	46.80	4.8X
LFF	149.96	341	ePKP	42	47.70	5.2X
LPO	150.05	340	ePKP	42	47.90	5.2X

S.D. = 1.2 on 69 of 116 obs.

JUL 21, 1989 02h 45m 02.94± 0.92s
11.552 S ± 9.2km 73.882 W ±10.3km
DEPTH = 28.7 ± 8.6 km
4.8mb (8 obs.) 4.0Msz (2 obs.)
PERU (116)

HUA	1.49	251	iPd	45	26.90	-1.5
			iS	46	01.40	
NNA	2.93	261	iPc	45	50.50	1.8
	0.6s	116.67nm				
			eS	46	32.00	
ARE	5.40	155	eP	46	23.00	-1.0
ZOBO	7.30	131	P	46	49.80	-1.1
Z	24s	2.19um				
			S	48	49.00	
			LR	49	20.00	
LPB	7.48	132	P	46	54.00	0.6
	1.2s	412.50nm			6.4mb	X
			S	48	50.00	
			i	49	30.00	
CNCB	7.75	133	eP	46	57.00	-0.2
			i	49	07.00	
CCH	9.47	129	P	47	21.10	0.2
RECU	11.80	336	eP	47	52.10	-0.8
CAYA	12.25	340	eP	47	58.50	-0.5
COTA	12.61	339	eP	48	05.70	1.9
PSO	13.12	345	eP	48	09.00	-1.4
BOG	16.07	359	eP	48	53.00	4.0X
			e(S)	52	46.00	
BMG	18.52	3	eP	49	25.00	5.6X
UPA	21.16	344	iPc	49	51.80	3.5X
	1.2s	93.75nm			5.1mb	
Z	20s	0.35um			3.7Msz	
BAO	25.48	102	eP	50	30.50	-0.2
BLA	48.89	353	P	53	48.50	0.2
UYO	49.49	337	iPc	53	53.40	0.5
RLO	51.48	338	iP	54	07.50	-0.6
TUL	51.54	337	eP	54	06.10	-2.4
	1.2s	15.00nm			4.8mb	
Z	22s	0.26um			4.2Msz	
			LR	11	00.00	
SIO	51.60	337	e(P)	54	06.00	-2.9X
FVM	51.66	343	P	54	09.50	0.2
	0.5s	18.19nm			5.3mb	
MEO	51.70	334	iPc	54	10.30	0.6
ALQ	55.60	328	eP	54	38.50	-0.2
	0.9s	2.94nm			4.3mb	
		e		54	42.00	
		e		54	53.00	
GLD	58.76	332	P	55	00.00	-1.0
GOL	58.79	332	P	55	01.00	-0.3
	0.5s	3.96nm			4.8mb	
BW06	63.16	331	P	55	30.00	-0.8
	1.1s	5.95nm			4.6mb	
TNP	63.88	323	P	55	36.00	0.4
	0.6s	1.67nm			4.3mb	
RSON	64.51	346	P	55	37.90	-1.3
KVN	65.04	323	P	55	43.00	-0.1
SCH	66.38	4	eP	55	51.00	-0.2
SES	69.70	336	eP	56	12.00	-0.1
FFC	70.16	343	eP	56	14.00	-0.7
	0.5s	5.00nm			4.9mb	
YKC	80.24	342	ePc	57	12.30	0.2
YKA	80.29	342	eP	57	13.30	0.9
YKB0	80.38	342	ePc	57	12.30	-0.5
TOL	82.36	47	eP	57	25.00	1.3
INK	90.03	341	eP	58	02.00	1.2
MBC	91.65	350	eP	58	09.50	1.4
MTN	145.31	226	ePKP	04	40.20	-0.4
	0.6s	22.00nm				
BJI	150.26	344	ePKP	04	53.00	5.2X
GBA	151.94	83	PKP	04	59.00	8.0X
	0.8s	8.30nm				

S.D. = 1.0 on 35 of 41 obs.

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* JUL 21, 1989 02h 52m 58.61± 0.55s
1.371 S ± 9.1km 77.682 W ±11.3km
DEPTH = 181.3 ± 4.7 km
4.5mb (8 obs.)
ECUADOR (107)

21d 02h

RECU	1.15	309	eP	53 27.50	-1.0
OUR	1.46	325	eP	53 30.80	-0.3
CAYA	1.47	348	eP	53 32.40	1.1
GGP	1.50	322	eP	53 31.30	-0.4
			S	54 07.00	
COTA	1.82	339	eP	53 35.20	0.4
NNA	10.58	176	e(P)	55 27.00	0.3
	0.5s	10.56nm		4.6mb	
VAO	36.76	128	eP	59 57.00	6.5X
			e	00 15.40	
			e	00 51.80	
SOB1	37.42	103	eP	59 55.60	-0.5
ITR	39.76	102	iPc	00 15.90	0.4
			e	00 18.50	
			e	03 09.20	
FVM	40.89	345	P	00 23.80	-0.6
	0.7s	14.97nm		4.7mb	
MEO	40.95	333	iPd	00 25.20	0.2
ALO	45.06	326	iPd	00 59.80	1.4
	0.8s	21.46nm		4.7mb	
			e	01 02.10	
GOL	48.10	331	P	01 22.70	0.5
	0.6s	7.82nm		4.4mb	
PLM	50.53	317	P	01 41.00	0.2
BW06	52.48	331	P	01 54.50	-0.8
	0.9s	4.24nm		4.1mb	
TNP	53.57	321	P	02 03.80	0.5
	0.6s	3.70nm		4.3mb	
RSON	53.80	347	P	02 02.80	-1.7
KVN	54.71	322	P	02 11.50	-0.1
SES	58.92	336	eP	02 41.00	0.1
YKA	69.51	343	eP	03 49.20	0.1
LIC	72.92	83	P	04 10.20	-0.1
TIC	72.95	83	P	04 10.28	-0.2
KIC	73.21	83	Pc	04 12.06	0.1
INK	79.24	342	eP	04 45.00	0.3
MBC	81.05	351	eP	04 55.00	0.9
FBA	82.90	336	P	05 00.00	-3.9X
	0.7s	4.94nm		4.4mb	
SPA	88.64	180	e(P)	05 33.90	1.7
	1.0s	11.00nm		4.8mb	
BTO	140.33	351	PKP	12 29.00	20.9X
N	10s	63.80um			
E	10s	29.50um			
			sP	12 38.50	
WARB	143.91	219	ePKP	12 12.00	-2.7
	0.4s	6.00nm			
HKC	156.21	332	iPKP	12 50.00	16.8X
S.D. = 1.0 on 26 of 30 obs.					

JUL 21, 1989 03h 09m 16.39± 0.50s
30.029 N ± 3.0km 99.455 E ± 2.8km
DEPTH = 35.7 ± 4.7 km
5.5mb (75 obs.) 5.3Msz (8 obs.)
SICHUAN PROVINCE, CHINA (307)
Three houses damoged in Botong County.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 23C
Centroid Locotion:
Origin Time 03:09:22.5 0.3
Lot 29.79N 0.04 Lon 99.54E 0.08
Dep 15.0 FIX Half-durotion 2.6
Moment Tensor; Scole 10**17 Nm
Mrr=-2.12 0.16 Mtt= 3.65 0.12
Mff=-1.53 0.19 Mrt= 1.31 0.59
Mrf=-0.27 0.33 Mtf= 0.58 0.18
Principol Axes:

	Val=	Plg=	Azm=
T	3.99	12	355
N	-1.43	22	89
P	-2.55	65	238

Best Double Couple:Mo=3.3*10**17
NP1:Strike= 59 Dip=38 Slip=-127
NP2: 283 60 -64

CD2	3.82	76	Pn	10 17.20	2.9
			Pg	10 27.00	
			Sn	11 05.00	
			Sg	11 11.00	
KMI	5.69	148	iPgc+	10 42.50	1.6
Z	15s	107.20um			
			e	10 50.00	
			Sn	11 23.00	
			iSg	11 58.00	
LZH	7.08	30	eP	11 02.00	1.6
	3.0s	1204.00nm		6.3mb X	
Z	10s	39.50um			
N	11s	104.10um			
E	11s	153.70um			
			S	12 20.00	
			Lg	12 53.00	
			e	13 04.00	
LSA	7.22	269	Pn	11 02.60	-0.1
			Sn	12 24.00	
GYA	7.28	117	iPnd	11 03.00	-0.3
Z	12s	18.20um			
			Sn	12 22.00	
XAN	B.97	61	Pc	11 26.00	-0.7
N	10s	23.30um			
E	10s	21.70um			
			S	13 00.00	
GTA	9.36	2	P	11 32.10	0.0
2.0s	0.20nm		3.0mb X		
Z	18s	38.30um		4.7Msz	
			S	13 11.00	
CHG	11.17	182	iPd	11 57.30	0.5
	1.4s	182.56nm		6.1mb X	
			eS	14 10.00	
BDT	12.73	182	eP	12 17.50	-0.2
	1.1s	73.20nm		5.7mb	
LOE	12.74	170	eP	12 18.00	0.2
WHN	12.89	84	eP	12 17.00	-2.7
N	10s	36.10um			
E	10s	16.80um			
			sP	12 31.00	
			S	14 40.00	
TIY	13.22	51	eP	12 23.40	-0.8
N	13s	29.80um			
E	15s	26.80um			
			PP	12 34.50	
			eS	14 42.00	
			sS	14 58.00	
GZH	14.22	116	P	12 33.00	-4.2X
Z	10s	28.20um			
N	10s	52.00um			
E	10s	29.80um			
			S	15 11.00	
OIZ	14.46	137	eP	12 38.60	-1.8
N	12s	60.50um			
E	12s	48.80um			
			sP	12 49.00	
			eS	15 14.00	
HHC	14.61	39	Pc	12 43.00	0.5
Z	14s	34.30um			
N	10s	16.70um			
			S	15 24.00	
MCO	14.91	119	eP	12 42.80	-3.5X
TIA	16.03	63	Pc	13 00.10	-0.6
Z	15s	5.80um			
E	10s	3.80um			
WMQ	16.65	329	P	13 07.60	-1.0
	3.5s	0.90nm		2.3mb X	
Z	20s	21.60um		4.2Msz	
NJ2	16.75	78	Pc	13 09.00	-0.9
	5.0s	1.60nm		2.4mb X	
BJI	16.92	49	P	13 13.50	1.5
	4.0s	1.20nm		2.4mb X	
Z	12s	12.60um		4.8MszX	
N	12s	22.80um			
E	13s	19.20um			
			eS	16 30.00	
NNT	17.36	179	eP	13 29.50	11.9X
QZH	17.71	102	Pc	13 20.80	-1.1
Z	12s	12.10um			
N	10s	29.10um			
E	10s	13.00um			
SSE	18.75	81	Pd	13 34.50	-0.1
	1.5s	306.00nm		5.3mb	
			pP	13 44.50	
			S	17 00.00	
			sS	17 28.00	
			i	17 50.00	
			PPP	24 02.50	
NDI	19.43	272	iPc	13 39.00	-3.7X
	1.0s	215.00nm		5.4mb	
			eS	17 18.00	
ANP	20.13	99	iP+	13 55.00	4.7X
			eS	20 18.00	
DL2	20.28	58	iPd	13 52.00	0.4
	6.0s	1.80nm		2.6mb X	
Z	14s	4.70um		5.0MszX	
N	12s	6.10um			
E	10s	5.60um			
			pP	13 56.00	15kmX
KSH	21.41	302	P	14 04.00	0.6
Z	15s	25.80um		5.7MszX	
SNY	22.73	52	iPd	14 17.00	0.8
	6.0s	2.60nm		2.9mb X	
Z	14s	11.80um		5.5MszX	
E	11s	6.00um			
			S	18 22.00	
SNG	22.76	177	eP	14 17.50	0.7
			eS	18 13.80	
			e	21 17.10	
HYB	22.84	241	eP	14 19.00	1.4
	1.0s	200.00nm		5.5mb	
			iS	18 26.00	
BAG	23.62	120	eP	14 25.00	-0.3
			eS	18 45.00	
BSI	24.72	190	eP	14 44.50	8.8X
CN2	24.79	49	Pd	14 36.00	-0.3
	5.0s	2.20nm		3.0mb X	
Z	12s	11.20um		5.6MszX	
N	12s	16.20um			
			eS	18 56.00	
IPM	25.36	176	ePc	14 42.20	0.3
	0.8s	41.70nm		5.1mb	
POO	25.93	250	eP	14 48.50	1.3
			iS	19 28.50	
GBA	26.09	236	Pc	14 53.90	5.2X
	0.7s	37.20nm		5.1mb	
BOM	26.60	251	eP	15 14.00	20.7X
			eS	19 36.00	
PSI	27.19	181	ePd	14 59.40	0.7
MDJ	27.85	50	eP	15 05.00	0.5
Z	12s	10.20um		5.6MszX	
			S	19 47.00	
KOD	28.43	231	eP	15 11.00	0.7
			eS	20 12.00	
KKM	28.61	143	ePc	15 11.50	-0.2
MAT	32.88	68	(P)	15 48.00	-1.2
	0.8s	13.43nm		4.9mb	
Z	20s	2.84um		5.0Msz	
			eS	21 06.00	
DAV	33.51	128	eP	15 54.00	-0.8
MAIO	33.85	291	iPd	15 57.60	-0.2
			eS	21 28.00	
KHI	34.66	288	eP	16 03.50	-1.3
PCI	36.39	144	ePc	16 22.70	3.4X
	1.0s	4.00nm		4.3mb X	
TRT	39.60	159	ePc	16 47.60	1.4
	0.9s	158.00nm		5.8mb	
DHR	43.37	278	ePc	17 16.80	-0.4
KER	44.11	290	eP	17 25.00	1.7
TAB	44.24	295	eP	17 25.00	0.7
			e	17 28.00	
GUMO	44.91	101	e(P)	17 27.60	-2.1
Z	19s	1.02um		4.8Msz	
GUA	44.97	101	e(P)	17 25.70	-4.5X
SLY	45.22	292	ePc	17 32.30	0.4
			i	17 35.00	
			i	18 19.00	
			eS	24 14.50	
			e	27 39.50	
BHD	46.54	289	ePc	17 40.00	-2.4
			eS	24 30.00	
RYD	46.89	277	ePc	17 44.50	-0.9
MSL	46.98	293	eP	17 42.00	-3.8X
			e	24 37.50	
QASM	49.10	280	ePc	18 02.00	-0.5
KMSA	50.25	272	ePc	18 09.10	-2.4
ABHA	52.60	271	ePc	18 31.50	2.0
KAS	53.38	301	iPc	18 36.60	1.9
BHL	53.50	292	P	18 38.50	2.8X
			PP	23 26.50	
			SKKS	30 32.00	
HRI	53.59	291	e(P)	18 35.00	-1.4
KFNJ	54.01	289	Pc	18 41.10	1.8
DSI	54.34	289	e(P)	18 40.00	-1.7
BBTK	54.42	300	iPd	18 41.50	-0.9
			e	18 52.00	
MBH	55.27	287	e(P)	18 48.00	-0.6
SOD	56.07	334	iP	18 53.30	-0.5
KEV	56.10	336	iP	18 54.00	0.0
	0.8s	61.60nm		5.7mb	
SUF	56.17	328	iP	18 54.30	-0.3
	0.9s	192.60nm		6.1mb	
ALT	56.59	299	eP	18 56.00	-2.1
CFR	56.73	307	eP	18 59.00	0.2
TLB	56.92	306	eP	19 01.00	0.8

NUR 56.96 325 eP 19 00.00 -0.3
0.6s 70.40nm 5.9mb
Z 21s 5.40um 5.6Msz
eS 26 52.00
LR 45 00.00
CLI 57.07 308 eP 19 03.00 1.7
KHL 57.21 299 eP 19 00.50 -2.0
ELL 57.32 297 iP 19 02.00 -1.3
CTT 57.36 302 eP 19 01.00 -2.4
VRI 57.58 308 ePd 19 04.50 -0.4
MLR 58.19 307 iPc 19 08.00 -1.3
IZM 58.91 299 eP 19 15.00 0.7
TRO 58.91 336 eP 19 15.00 1.2
PVL 59.12 305 iPc 19 17.00 1.4
EZN 59.24 301 eP 19 16.00 -0.4
AGMR 59.35 281 eP 19 21.00 3.5X
0.2s 125.00nm 6.7mb X
KDZ 59.44 303 eP 19 18.00 0.1
RZN 59.94 303 eP 19 10.00 -11.5X
WRA 59.97 142 Pd 19 21.00 -0.8
0.9s 55.20nm 5.7mb
PGB 60.12 304 eP 19 23.00 0.5
PMG 60.33 123 eP 19 24.00 -0.2
GZR 60.39 308 iPc 19 30.00 5.6X
UPP 60.52 325 iP 19 23.90 -1.1
1.0s 500.00nm 6.6mb X
i 22 04.00
VTS 60.79 305 iPd 19 27.00 -0.2
KKB 61.07 304 iPd 19 28.00 -1.0
BZS 61.13 308 eP 19 29.00 -0.3
KRA 61.16 314 eP 19 28.80 -0.6
0.8s 33.00nm 5.5mb
Z 16s 4.00um 5.7MszX
N 20s 5.90um
e 19 31.00
eS 27 52.00
SPC 61.17 313 eP 19 29.90 0.1
VAY 61.59 303 eP 19 30.60 -1.9
WARB 61.66 152 eP 19 33.00 -0.2
BEO 62.12 308 eP 19 38.00 2.0
SKO 62.22 304 eP 19 35.30 -1.5
Z 22s 1.57um 5.1Msz
N 22s 2.44um
E 20s 2.30um
i 19 38.30
iS 28 02.00
iSS 32 02.00
iSSS 34 50.00
LR 48 50.00
HFS 62.41 326 eP 19 37.10 -0.7
0.9s 122.40nm 6.0mb
Z 17s 2.28um 5.4MszX
LR 45 30.00
SRO 62.75 311 iP 19 40.60 0.4
ASPA 62.81 144 iPd 19 40.00 -0.8
0.7s 21.00nm 5.4mb
KKS 62.93 305 eP 19 43.50 2.2
PHP 63.02 304 eP 19 42.50 0.5
KBN 63.07 303 eP 19 40.20 -2.1
BCI 63.09 305 eP 19 43.50 1.1
KSP 63.22 315 eP 19 42.50 -0.8
1.5s 103.00nm 5.7mb
ic 19 45.50
PUK 63.31 305 eP 19 43.80 -0.1
NRA0 63.31 327 iP 19 42.60 -1.1
i 22 23.60
LSK 63.37 303 eP 19 43.60 -0.8
NB2 63.39 327 P 19 43.00 -1.3
QIS 63.43 137 iPc 19 44.20 -0.7
ZST 63.43 312 eP 19 44.20 -0.5
Z 16s 5.50um 5.8MszX
e 22 03.50
TIR 63.53 304 eP 19 45.00 -0.4
LACI 63.56 305 eP 19 46.50 1.0
BERA 63.67 303 eP 19 46.10 -0.2
MUN 63.68 164 eP 19 46.00 -0.4
0.8s 81.00nm 5.9mb
TPE 63.75 303 eP 19 48.20 1.3
VKA 63.92 312 eP 19 47.50 -0.4
3.0s 269.00nm 5.8mb
Z 15s 2.80um 5.6MszX
i 19 49.10
LR 50 11.00
COOL 63.99 159 eP 19 48.00 -0.5
COP 64.16 321 iPc 19 52.00 2.7X
0.8s 1223.88nm 7.0mb X
PRU 64.54 315 Pd 19 52.00 0.1
1.3s 54.20nm 5.5mb
Z 15s 2.00um 5.4MszX
N 14s 2.00um
E 14s 2.30um
e 19 54.50
S 28 36.00
BRG 64.64 316 iP 19 52.00 -0.6
1.3s 62.00nm 5.5mb
N 19s 3.00um
E 19s 3.00um
eS 28 36.00
NWAO 64.84 164 eP 19 54.00 0.1
0.9s 63.00nm 5.7mb
PTJ 64.85 310 eP 19 53.10 -1.0
ZAG 64.86 310 iPc 19 54.60 0.6
eS 28 38.00
CLL 65.08 316 eP 19 54.00 -1.4
1.6s 82.00nm 5.6mb
eS 28 38.00
P'P' 48 40.00
HVAR 65.37 307 iP 19 56.70 -0.7
KMR 65.38 313 iP+ 19 58.40 1.1
KHC 65.39 314 P 19 58.10 0.6
e 20 00.00
S 28 44.00
VBY 65.44 310 eP 19 58.10 0.3
LJU 65.75 310 eP 19 59.30 -0.5
e 20 33.50
eS 28 48.00
WET 65.82 314 iPc 20 00.90 0.7
CEY 65.92 310 eP 20 00.50 -0.4
RIY 66.07 310 eP 20 01.10 -0.7
BRW 66.13 20 eP 20 02.00 0.2
VOY 66.18 311 eP 20 02.30 -0.3
KBA 66.19 312 eP 20 02.50 -0.3
1.2s 52.10nm 5.5mb
i 20 05.00
e 22 34.00
RBL 66.25 311 Pd 20 03.10 0.0
BHG 66.28 313 eP 20 03.40 0.2
TRI 66.37 310 eP 20 04.90 1.2
FORR 66.39 153 eP 20 01.50 -2.4
TDS 66.63 303 Pd 20 05.10 -0.4
GRF 66.67 315 ePd 20 06.30 0.7
Z 24s 0.50um 4.6MszX
e 20 08.70
FVI 66.72 311 P 20 05.20 -0.7
SGO 67.05 305 P 20 06.00 -2.1
FUR 67.15 313 eP 20 09.40 0.7
0.9s 148.00nm 6.1mb
CTA 67.17 132 iPc 20 09.00 -0.1
1.2s 89.06nm 5.7mb
SDI 67.70 306 Pc 20 11.30 -1.0
RFI 67.73 306 P 20 14.18 1.8
1.5s 137.90nm 5.8mb
OGA 67.76 312 iPc 20 12.50 -0.3
i 20 14.70
AQU 67.76 307 P 20 14.30 1.6
ATN 67.80 302 P 20 10.70 -2.2
AZI 67.87 307 P 20 13.30 0.1
TNS 68.17 316 eP 20 15.20 0.1
WIT 68.28 319 eP 20 19.50 3.9X
e 20 46.00
PGD 68.37 309 P 20 17.40 0.8
OSS 68.39 312 ePd 20 16.10 -0.6
WTS 68.50 318 eP 20 17.00 0.0
0.8s 47.00nm 5.6mb
i 20 19.60
e 22 58.00
ABH 68.84 316 ePd 20 18.99 -0.2
VDL 68.89 312 ePd 20 19.20 -0.7
MME 68.93 310 P 20 21.00 0.8
SLE 69.04 314 ePd 20 20.00 -0.5
LLS 69.06 313 ePd 20 20.30 -0.5
GWF 69.13 315 P 20 20.56 -0.5
RUP 69.20 316 ePd 20 21.47 0.0
PII 69.23 309 P 20 20.80 -0.8
FEL 69.30 314 P 20 21.50 -0.7
DBN 69.39 319 eP+ 20 24.00 1.5
Z 18s 1.70um 5.3Msz
eS 29 35.00
eScS 30 32.00
eSS 37 28.00
IMA 69.39 25 eP 20 22.50 0.0
1.5s 90.30nm 5.6mb
TMA 69.42 312 ePd 20 22.20 -0.9
FAI 69.44 302 P 20 23.70 0.6
ENN 69.47 317 eP 20 23.50 0.5
0.9s 36.00nm 5.4mb
i 20 25.30
e 22 54.00
MEM 69.48 317 iPd 20 25.71 2.7X
BOB 69.55 311 Pd 20 26.70 3.0X
CDF 69.55 315 P 20 23.29 -0.4
VAI 69.58 312 P 20 22.50 -1.2
ECH 69.70 315 P 20 24.49 0.0
WLF 69.76 316 Pd 20 25.90 1.2
e 23 05.00
BBS 69.77 314 P 20 24.01 -1.0
MOF 69.86 314 P 20 25.18 -0.4
TTA 69.93 28 eP 20 25.70 0.0
MMK 70.03 312 ePd 20 26.20 -0.6
BSF 70.08 314 P 20 26.10 -0.8
LOMF 70.24 314 P 20 28.10 0.2
HAU 70.28 315 eP 20 27.50 -0.6
1.0s 20.00nm 5.1mb
DIX 70.37 312 ePd 20 29.00 0.0
UCC 70.37 318 P 20 29.30 0.8
VITF 70.43 315 P 20 30.53 1.7
DOU 70.51 317 Pc 20 31.60 2.2
1.0s 38.90nm 5.4mb
S 29 46.00
SNF 70.53 318 iPd 20 31.38 1.9
FIN 70.59 310 P 20 28.87 -1.1
ROB 70.77 311 P 20 30.65 -0.5
LSD 70.78 312 P 20 31.80 0.3
CVF 70.79 309 eP 20 30.60 -0.7
0.9s 45.80nm 5.5mb
IMI 70.91 310 P 20 31.92 -0.1
LPG 71.02 312 eP 20 32.40 -0.6
0.8s 41.90nm 5.5mb
ENR 71.10 311 P 20 32.02 -1.2
STV 71.15 311 P 20 32.08 -1.4
PZZ 71.20 311 P 20 33.09 -0.8
MBC 71.23 9 eP 20 33.00 -0.3
0.6s 7.00nm 4.9mb
SBF 71.23 310 eP 20 33.60 -0.4
0.8s 40.20nm 5.5mb
RRL 71.24 311 P 20 34.06 -0.1
BNI 71.25 312 P 20 33.60 -0.6
CGL 71.78 305 P 20 37.29 -0.1
1.5s 87.90nm 5.5mb
FRF 71.88 310 eP 20 37.40 -0.4
1.0s 24.00nm 5.1mb
EDU 71.89 325 eP 20 37.50 -0.1
0.9s 60.00nm 5.6mb
ESY 71.98 325 eP 20 37.90 -0.2
LMR 72.06 310 eP 20 38.40 -0.4
0.8s 27.90nm 5.3mb
FBA 72.10 24 ePd 20 38.60 -0.1
1.3s 96.70nm 5.6mb
i 20 42.70
LRG 72.11 310 eP 20 38.80 -0.3
0.8s 25.20nm 5.3mb
LOR 72.12 315 eP 20 38.40 -0.8
1.0s 24.00nm 5.1mb
LBF 72.17 314 eP 20 38.70 -0.8
1.0s 30.00nm 5.2mb
EBL 72.26 325 eP 20 39.90 0.1
0.8s 50.00nm 5.6mb
ELO 72.27 325 eP 20 39.80 0.0
0.8s 60.00nm 5.6mb
SMF 72.40 314 eP 20 40.30 -0.5
1.2s 74.30nm 5.5mb
SSF 72.43 314 eP 20 40.40 -0.5
EAU 72.43 325 eP 20 40.50 -0.3
0.8s 99.00nm 5.8mb
EKA 72.52 324 P 20 41.00 -0.3
1.1s 79.70nm 5.6mb
AVF 72.64 314 eP 20 41.70 -0.5
0.9s 49.10nm 5.5mb
BGF 73.05 314 eP 20 44.10 -0.5
1.0s 26.00nm 5.2mb
MAF 73.37 314 eP 20 46.50 0.0
1.2s 56.50nm 5.4mb
PMR 73.39 28 eP 20 45.80 -0.4
1.1s 59.40nm 5.5mb
TCF 73.57 314 eP 20 47.50 -0.2
1.0s 56.00nm 5.5mb
LDF 73.95 317 eP 20 49.20 -0.5
0.9s 39.30nm 5.4mb
LSF 74.01 314 eP 20 49.80 -0.4
1.0s 16.00nm 5.0mb
FLN 74.08 317 eP 20 50.40 -0.1

21d 03h

1.2s 59.50nm 5.5mb
CAF 74.27 313 eP 20 52.00 0.3
1.2s 41.60nm 5.3mb
TOA 74.27 26 eP 20 52.20 0.7
RJF 74.44 313 eP 20 53.10 0.4
1.0s 40.00nm 5.4mb
INK 74.45 18 ePc 20 52.50 0.2
1.0s 34.00nm 5.3mb
YRH 74.47 322 eP 20 53.50 0.8
1.2s 157.00nm 5.9mb
LWI 74.47 258 iPd 20 54.40 0.8
GRR 74.47 317 eP 20 52.70 -0.1
0.8s 48.30nm 5.5mb
ADE 74.49 147 eP 20 53.00 0.0
0.8s 47.76nm 5.5mb
LPF 74.75 317 eP 20 54.60 0.2
1.0s 36.00nm 5.3mb
MFF 74.88 315 eP 20 55.40 0.2
1.0s 20.00nm 5.1mb
LPO 74.93 313 eP 20 55.80 0.3
1.2s 41.60nm 5.3mb
LFF 75.10 313 eP 20 57.10 0.6
1.2s 44.00nm 5.3mb
DMU 75.12 324 eP 20 56.90 0.5
DLE 75.25 323 eP 20 57.80 0.7
1.1s 75.00nm 5.6mb
ETA 75.37 323 eP 20 58.20 0.3
1.2s 242.00nm 6.1mb
DCN 75.60 324 eP 20 59.50 0.4
1.0s 128.00nm 5.9mb
ECP 75.72 322 eP 21 00.50 0.7
1.1s 185.00nm 6.0mb
ECB 75.84 323 eP 21 01.00 0.5
1.1s 200.00nm 6.0mb
BRS 76.54 133 iPc 21 06.00 1.1
VAL 77.87 323 eP 21 13.00 1.2
BFD 78.10 146 eP 21 13.00 -0.2
ETOR 78.88 311 eP 21 20.20 2.5X
BWA 79.02 141 eP 21 20.30 1.9
TOO 79.86 144 eP 21 24.00 1.2
BNG 79.93 269 iPd 21 22.20 -1.6
1.6s 39.00nm 5.1mb
ic 21 41.60
id 22 11.20
id 24 04.70
ic 24 24.30
CAN 80.00 141 eP 21 26.50 2.8X
EVIA 80.28 309 e(P) 21 28.80 3.5X
GUD 80.34 311 e(P) 21 29.00 3.3X
TOL 80.67 311 iPc 21 28.00 0.7
1.2s 93.75nm 5.6mb
eSS 29 36.50
eS 31 40.00
eSSS 40 10.00
EMON 80.87 315 e(P) 21 30.00 1.7
EBAN 81.38 309 e(P) 21 34.00 3.0X
SIT 81.74 27 e(P) 21 33.60 1.2
ASMO 81.77 308 eP 21 35.20 2.0
EPLA 81.90 312 e(P) 21 36.00 2.3
APHE 81.95 308 eP 21 38.00 3.8X
AAPN 82.06 309 eP 21 36.50 1.8
ATEJ 82.19 308 eP 21 38.50 3.1X
EHOR 82.55 309 e(P) 21 38.60 1.5
DZM 82.62 121 iPc 21 39.00 1.3
YKB0 83.74 15 ePd 21 43.30 0.6
YKA 83.83 15 eP 21 45.80 2.6X
YKC 83.88 15 ePd 21 43.30 -0.1
NKM 83.93 307 iP 21 48.50 4.3X
BUL 84.44 243 iPc 21 45.70 -1.3
iPP 24 25.20
BMK 84.50 307 iP 21 47.00 0.0
i 21 50.00
IFR 84.77 306 iPc 21 50.80 2.1
AVE 86.49 307 iP 21 58.50 1.5
TIO 87.69 305 iP 22 05.00 1.9
SLR 87.86 239 P 22 03.50 -0.3
1.3s 9.62nm 4.9mb
Z 20s 3.90um 5.8Msz
e 24 13.00
iPcP 29 41.00
PRY 89.13 238 eP 22 04.50 -5.3X
e 24 18.20
BFS 89.62 238 e(P) 22 17.00 4.9X
BLF 91.29 237 eP 22 22.00 2.2
FFC 93.60 12 eP 22 30.00 0.0
0.8s 12.00nm 5.4mb
PNT 93.68 24 eP 22 32.00 1.5

SES 95.49 19 eP 22 39.00 0.1
TCW 98.94 133 P 22 57.00 2.8X
KIW 99.17 132 P 22 52.60 -2.7X
CAW 99.40 132 P 22 54.70 -1.6
PGZ 99.92 131 P 22 48.20 -10.5X
ALQ 110.91 23 e(PKP) 27 48.00 0.1
Z 20s 0.89um 5.3Msz
e 42 45.20
e 56 45.50
SBA 114.56 168 ePKPc 28 04.00 10.6X
SPA 119.86 180 e(PKP) 28 03.60 -0.2
0.8s 8.75nm
Z 20s 1.31um 5.6Msz
i 28 24.00
SOB1 137.59 291 ePKP 28 38.50 -0.7
BMA 146.69 274 ePKP 29 02.10 7.3X
BAO 146.89 288 e(PKP) 28 39.00 -16.4X
VAO 149.23 275 ePKP 29 04.60 5.7X
CCH 161.79 311 PKP 29 18.10 2.6X
ZOBO 162.19 318 PKP 29 16.00 -0.2
1.1s 31.90nm
LPB 162.38 317 PKP 29 18.00 1.8
CNCB 162.53 316 PKP 29 18.40 1.9
S.D. = 1.0 on 260 of 298 obs.

JUL 21, 1989 03h 19m 50.49± 0.84s
26.610 S ± 9.9km 178.215 E ± 5.4km
DEPTH = 633.3 ± 13.7 km
4.9mb (16 obs.)
SOUTH OF FIJI ISLANDS (171)

KRP 11.51 191 P 22 26.70 2.4
DZM 11.64 290 iPd 22 26.00 0.2
MNG 14.15 189 P 22 47.90 -1.9
eS 25 11.80
WDW 14.86 190 P 22 56.20 -0.3
eS 25 28.60
MRW 14.87 190 P 22 56.20 -0.4
eS 25 28.30
WEL 14.91 190 eP 22 57.70 0.7
MHZ 19.76 199 P 23 40.70 -1.6
MSZ 19.84 202 P 23 42.00 -0.8
BRS 22.67 262 iPc 24 09.20 0.6
CAN 26.44 244 eP 24 42.90 1.3
BWA 26.76 246 eP 24 43.60 -0.8
TBI 29.44 91 iP 25 07.60 0.2
0.6s 25.00nm 5.0mb
TOO 29.66 240 iPc 25 10.80 1.5
CTA 30.00 276 iPc 25 12.40 0.2
0.5s 18.31nm 5.0mb
AFR 30.93 80 iP 25 19.80 -0.2
0.6s 15.00nm 4.8mb
TVO 31.31 80 iP 25 23.00 -0.3
0.6s 25.00nm 5.0mb
BFD 31.90 242 eP 25 29.00 1.0
STK 32.28 252 iPc 25 32.30 1.0
0.4s 26.00nm 5.2mb
PMO 33.61 77 iP 25 42.20 -0.3
0.8s 20.00nm 4.8mb
VAH 33.74 77 iP 25 44.20 0.6
0.8s 10.00nm 4.5mb
TPT 33.86 77 iP 25 44.60 0.0
0.8s 15.00nm 4.7mb
RUV 33.98 77 iP 25 45.40 -0.2
0.8s 20.00nm 4.8mb
ADE 34.77 246 iPc 25 52.60 0.6
0.5s 63.38nm 5.5mb
QIS 35.80 271 iPc 26 00.20 -0.3
ASPA 40.08 264 iPc 26 35.40 0.2
0.5s 63.00nm 5.3mb
eS 31 58.70
WB5 40.69 270 eP 26 39.50 -0.5
WRA 40.69 270 Pd 26 39.90 -0.2
0.5s 16.20nm 4.7mb
FORR 43.86 252 iPc 27 02.40 -2.3
0.4s 112.00nm 5.7mb
WARB 45.93 258 iPc 27 20.00 -0.7
0.4s 18.00nm 4.9mb
MBL 53.28 263 eP 28 13.30 -1.2
0.4s 11.00nm 4.6mb
MRWA 54.47 252 eP 28 22.00 -0.8
NANU 56.65 259 iPc 28 37.70 -0.1
0.4s 14.00nm 4.6mb
TRT 64.78 274 ePc 29 31.30 0.5
MAW 74.65 201 iPc 30 29.00 1.1
CCH 103.75 118 Pdiff 32 43.10 -4.9X
SUF 139.45 341 ePKP 38 01.00 -7.1X

0.4s 2.50nm
NUR 141.61 339 iPKP 38 07.80 -4.2X
Z 21s 5.40um 6.3Msz
LR 45 00.00
UPP 144.17 343 iPKP 38 15.10 -1.3
NB2 144.46 349 PKP 38 16.40 -0.6
HRI 146.94 291 ePKP 38 27.00 5.0X
KFNJ 147.00 288 PKPd 38 26.80 4.9X
MKRJ 147.03 288 PKPd 38 27.00 4.9X
KAS 147.30 306 ePKP 38 27.50 5.2X
PRNI 147.55 285 iPKPc 38 28.00 5.1X
MBH 147.62 284 iPKPc 38 28.50 5.5X
BNG 150.60 225 iPKPc 38 35.00 7.0X
0.2s 104.00nm
id 38 44.70
KSP 152.14 335 iPKPc 38 37.60 8.5X
CLL 152.89 339 iPKP 38 39.90 9.8X
i 38 53.80
e 41 03.00
BRG 152.96 338 i(PKP) 38 39.00 8.8X
1.0s 10.00nm
KHC 154.55 336 ePKP 38 33.80 1.3
KIC 159.67 172 PKP 38 41.20 1.6
S.D. = 1.0 on 38 of 51 obs.

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* JUL 21, 1989 03h 27m 08.99± 0.58s
29.860 N ±10.7km 99.042 E ±11.3km
DEPTH = 33.0km (normal)
4.8mb (4 obs.)
SICHUAN PROVINCE, CHINA (307)

KMI 5.75 144 ePn 28 34.50 0.0
Sg 28 58.00
e 30 12.00
LZH 7.40 32 eP 29 24.50 26.9X
1.8s 173.00nm
BJI 17.30 49 eP 31 09.50 0.0
GBA 25.70 236 P 32 44.00 6.1X
0.9s 7.50nm 4.3mb
SOD 56.06 334 eP 36 47.00 0.3
SUF 56.12 328 iP 36 47.30 0.1
0.7s 8.40nm 4.9mb
NUR 56.90 325 iP 36 53.10 0.3
UPP 60.46 325 iP 37 17.40 0.0
HFS 62.35 326 eP 37 30.40 0.1
0.9s 7.70nm 4.8mb
NB2 63.34 327 P 37 36.50 -0.3
EKA 72.44 324 Pd 38 33.30 -0.5
1.7s 19.80nm 4.8mb
S.D. = 0.3 on 9 of 11 obs.

& JUL 21, 1989 03h 31m 43.58s
62.348 N 151.115 W
DEPTH = 90.7km
CENTRAL ALASKA (1)
<AGS-P>.

CUT 0.40 81 iP 31 57.21 -0.6
SKT 0.42 208 iP 31 57.40 -0.6
S 32 08.14
SUA 0.90 169 eP 32 02.48 -0.2
S 32 17.08
PWA 0.91 140 iP 32 02.23 -0.3
S 32 17.01
HUR 0.93 47 eP 32 01.81 -1.0
S 32 15.93
SPU 1.25 201 iP 32 06.00 -0.7
S 32 23.66
RND 1.48 43 eP 32 07.74 -1.9
S 32 27.41
MCK 1.71 35 eP 32 11.33 -1.2
TOA 2.33 94 eP 32 19.95 -0.9
NEA 2.42 21 eP 32 19.88 -2.1
VZW 2.53 119 eP 32 21.95 -1.6
WRH 2.53 31 iP 32 21.43 -2.0
KLU 2.60 107 eP 32 22.32 -2.3
CCB 2.74 31 eP 32 24.15 -2.2
HDA 2.79 40 eP 32 24.97 -2.1
CNPM 2.83 181 eP 32 27.27 -0.4
16 obs. associated

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* JUL 21, 1989 03h 45m 54.11± 1.03s
24.468 S ± 8.9km 67.341 W ±14.7km
DEPTH = 198.1 ± 9.9 km
CHILE-ARGENTINA BORDER REGION (127)

SLA 1.70 99 iPd 46 30.00 0.0

			S	46	56.10		
CCH	7.14	9	P	47	36.50	-0.8	
CNCB	7.64	355	P	47	45.00	0.7	
			eS	49	03.00		
LPB	7.93	355	P	47	48.70	0.8	
			S	49	08.00		
MRA	8.04	170	e(P)	47	48.50	-0.4	
ZOBO	8.19	355	P	47	50.80	-0.7	
			S	49	21.00		
ITB1	11.79	94	e(P)	48	43.50	6.1X	
ITB7	11.98	96	e(P)	48	40.90	1.1	
VAO	18.71	90	eP	49	59.60	-0.5	
			i	50	01.10		
			i	50	04.00		
BAO	20.17	68	eP	50	14.50	-0.6	
BMA	21.32	90	eP	50	26.90	0.6	
SOB1	29.43	64	eP	51	40.80	-0.6	
ITR	31.70	65	eP	52	00.10	-1.2	
KIC	68.19	72	P	56	37.00	1.6	

S.D. = 1.0 on 13 of 14 obs.

JUL 21, 1989 06h 20m 47.83± 0.90s
40.860 N ± 4.7km 79.073 E ± 2.6km
DEPTH = 59.8 ± 8.7 km
5.0mb (53 obs.)
SOUTHERN XINJIANG, CHINA (321)

KSH	2.75	240	Pn	21	32.00	1.4	
			Sg	22	13.00		
WMQ	7.04	62	iPnc	22	28.50	-2.1	
			Sn	23	44.50		
NDI	12.24	188	iPc	23	35.50	-6.0X	
	1.2s	117.19nm				5.7mb X	
LSA	14.86	135	P	24	15.00	-1.3	
			sP	24	23.50		
GTA	15.93	88	iPd	24	24.00	-5.6X	
	1.0s	0.30nm				2.4mb X	
N	10s	1.40um					
MAIO	15.97	260	eP	24	26.00	-4.1X	
			eS	27	33.00		
KHI	17.53	254	eP	24	46.00	-3.6X	
LZH	19.95	96	eP	25	17.00	-0.7	
	2.0s	82.00nm				4.7mb	
Z	10s	2.40um				4.8Msz	
N	10s	1.60um					
E	10s	1.70um					
			eS	29	03.00		
CD2	22.26	109	eP	25	42.60	1.6	
POO	22.70	193	eP	26	00.00	14.7X	
			iS	30	20.20		
HYB	23.37	181	eP	25	51.00	-0.8	
			eS	29	13.00		
BTO	23.40	80	eP	25	52.80	0.8	
HHC	24.50	79	eP	26	04.00	1.2	
Z	14s	2.10um				4.8MszX	
XAN	24.58	96	Pc	26	03.50	0.0	
N	12s	0.80um					
E	10s	0.70um					
KMI	25.19	121	eP	26	10.50	1.0	
TAB	25.36	274	eP	26	14.00	3.1X	
TIY	25.92	86	eP	26	16.00	-0.1	
E	11s	1.20um					
			S	30	43.00		
GYA	26.95	114	P	26	25.40	-0.2	
E	10s	0.70um					
GBA	27.19	183	Pc	26	26.60	-1.1	
	1.2s	40.50nm				4.9mb	
CHG	27.80	136	eP	26	33.10	-0.1	
BJI	28.11	79	eP	26	36.00	0.2	
Z	12s	0.90um				4.6MszX	
TIA	29.96	86	eP	26	52.10	-0.4	
N	10s	0.44um					
WHN	30.26	99	P	26	55.50	0.4	
SNY	33.15	73	Pc	27	19.70	-0.6	
NNT	33.49	141	eP	27	23.50	0.0	
KAS	33.84	286	iPd	27	28.50	2.1	
CN2	34.07	69	Pc	27	27.50	-0.7	
Z	14s	1.20um				4.8MszX	
N	11s	0.50um					
			epP	27	32.50	17kmX	
QIZ	34.13	120	eP	27	32.00	3.0X	
SSE	35.16	92	eP	27	38.00	0.3	
Z	14s	0.50um				4.4MszX	
E	14s	1.10um					
			pP	27	53.50	61kmX	
			e(S)	33	10.00		
MDJ	36.81	67	eP	27	52.40	0.9	

Z	12s	1.90um				5.1MszX	
			S	33	36.00		
VRI	37.82	296	ePd	28	01.00	1.0	
SUF	37.90	323	iP	28	01.00	0.6	
	0.6s	42.80nm				5.6mb	
NUR	38.31	320	iP	28	04.60	0.8	
	0.7s	25.40nm				5.2mb	
Z	20s	0.80um				4.5Msz	
			LR	44	20.00		
JMB	38.73	290	eP	28	09.00	1.4	
SOD	38.76	331	iP	28	07.80	0.3	
CMP	39.11	295	eP	28	11.00	0.2	
KEV	39.35	334	iP	28	13.00	0.6	
	0.8s	29.30nm				5.2mb	
PVL	39.41	292	eP	28	15.00	1.8	
EZN	39.71	286	eP	28	16.30	0.6	
KDZ	39.80	289	eP	28	14.00	-2.5X	
RZN	40.28	290	iPd	28	22.00	1.3	
PGB	40.42	291	eP	28	22.00	0.3	
VTS	41.09	292	iPc	28	29.00	1.8	
BZS	41.36	296	eP	28	31.00	1.8	
SPC	41.46	302	eP	28	31.70	1.4	
KRA	41.49	303	iPd	28	30.80	0.6	
	0.6s	33.00nm				5.3mb	
			e	28	34.60		
TRO	42.04	333	eP	28	36.50	2.0	
SKO	42.52	291	iP	28	40.40	1.6	
Z	14s	0.41um				4.5MszX	
			LR	49	35.00		
KSP	43.62	305	eP	28	48.00	0.4	
			ed	28	52.00		
			e	30	29.00		
ZST	43.71	301	eP	28	53.00	4.6X	
			e	30	33.10		
HFS	43.75	319	eP	28	48.60	0.1	
	0.6s	31.50nm				5.3mb	
NRA0	44.76	320	P	28	56.50	-0.2	
NB2	44.89	320	P	28	57.60	-0.2	
PRU	44.91	304	P	28	59.00	1.0	
	1.5s	33.50nm				4.9mb	
			e	29	02.50		
COP	44.97	313	iPd	28	56.60	-1.8	
	0.6s	42.67nm				5.5mb	
BRG	45.06	306	iP	28	59.90	0.7	
	1.4s	46.00nm				5.1mb	
			i	29	03.50		
CLL	45.54	307	iPc	29	03.20	0.2	
	0.9s	22.00nm				5.0mb	
			i	29	06.80		
			i	29	21.30		
MAT	45.60	75	eP	29	03.00	-0.7	
	1.0s	17.00nm				4.9mb	
VBY	45.68	298	eP	29	05.00	0.8	
KHC	45.73	303	iPc	29	05.50	0.9	
			i	29	09.50		
CEY	46.16	299	eP	29	08.70	0.7	
WET	46.17	304	iPc	29	09.00	1.0	
VOY	46.42	299	eP	29	10.20	0.0	
HOF	46.48	305	eP	29	11.20	0.7	
TRI	46.61	299	ePd	29	11.80	0.3	
FVI	46.98	300	P	29	12.60	-1.8	
GRF	47.06	305	ePc	29	16.30	1.3	
Z	17s	0.20um				4.1MszX	
			e	29	20.00		
OSS	48.67	301	ePc	29	27.50	-0.3	
SAX	49.00	302	ePc	29	30.10	-0.3	
WTS	49.08	309	eP	29	31.00	0.4	
	0.8s	15.00nm				5.1mb	
MME	49.17	298	P	29	30.20	-1.6	
ABH	49.27	306	ePc	29	32.61	0.4	
LLS	49.35	302	ePc	29	32.50	-0.6	
SLE	49.37	303	ePc	29	33.20	0.2	
GWF	49.52	305	P	29	33.92	-0.2	
FEL	49.64	303	P	29	34.92	-0.3	
TMA	49.70	301	ePc	29	34.50	-1.2	
VAI	49.85	301	Pd	29	35.50	-1.1	
CDF	49.92	304	P	29	37.11	-0.2	
ENN	49.98	307	eP	29	38.00	0.4	
	0.9s	10.00nm				4.8mb	
MEM	49.98	307	P	29	41.80	4.3X	
ECH	50.06	304	P	29	38.03	-0.2	
WLF	50.20	306	P	29	40.50	1.3	
MOF	50.20	304	P	29	39.50	0.1	
MMK	50.31	301	ePc	29	39.70	-0.7	
BSF	50.43	304	P	29	41.06	-0.1	
LOMF	50.57	303	P	29	42.66	0.4	
HAU	50.64	304	eP	29	42.60	-0.1	

	1.0s	12.00nm				4.9mb	
DIX	50.65	301	ePc	29	42.90	-0.2	
VITF	50.80	304	P	29	43.87	0.1	
FIN	50.83	299	P	29	42.67	-1.5	
DOU	51.01	307	Pc	29	45.70	0.3	
	0.6s	14.50nm				5.2mb	
			i	29	50.20		
ROB	51.02	299	P	29	46.17	0.5	
CVF	51.02	297	eP	29	45.40	-0.3	
	0.8s	11.80nm				5.0mb	
LSD	51.05	301	P	29	45.84	-0.3	
SNF	51.05	308	P	29	46.80	1.1	
IMI	51.16	299	P	29	46.43	-0.3	
LPG	51.30	301	iPc	29	48.20	0.1	
	0.7s	11.40nm				5.0mb	
ENR	51.35	299	P	29	46.83	-1.3	
STV	51.40	299	P	29	47.11	-1.5	
PZZ	51.45	300	P	29	47.34	-1.7	
SBF	51.48	299	eP	29	49.30	0.2	
	0.8s	26.80nm				5.3mb	
RRL	51.50	300	P	29	49.17	-0.3	
BNI	51.52	300	P	29	49.10	-0.4	
FRF	52.12	299	eP	29	53.70	-0.2	
	1.1s	24.40nm				5.1mb	
LMR	52.31	298	eP	29	55.10	-0.2	
	0.9s	11.10nm				4.9mb	
LRG	52.36	299	eP	29	55.80	0.1	
LOR	52.48	304	eP	29	55.90	-0.7	
	1.0s	6.80nm				4.6mb	
LBF	52.51	304	eP	29	56.10	-0.8	
	1.0s	10.80nm				4.8mb	
SMF	52.73	303	iPc	29	58.00	-0.5	
	0.8s	17.90nm				5.1mb	
SSF	52.78	304	eP	29	58.20	-0.6	
	0.8s	10.70nm				4.9mb	
AVF	52.98	303	iPc	29	59.90	-0.4	
	0.8s	38.10nm				5.5mb	
BGF	53.40	303	eP	30	02.80	-0.5	
	0.8s	7.20nm				4.8mb	
EKA	53.60	315	Pd	30	04.60	-0.1	
	0.7s	18.00nm				5.2mb	
MAF	53.71	303	eP	30	05.60	0.0	
	1.0s	18.00nm				5.1mb	
TCF	53.91	303	iPc	30	07.00	-0.1	
	0.7s	11.00nm				5.0mb	
LSF	54.35	304	eP	30	09.40	-1.0	
	0.8s	13.40nm				5.0mb	
LDF	54.43	307	iPc	30	10.10	-0.8	
	0.8s	11.80nm				5.0mb	
CAF	54.56	302	eP	30	12.10	0.1	
	0.8s	8.00nm				4.8mb	
FLN	54.58	307	eP	30	10.90	-1.1	
	1.0s	9.60nm				4.8mb	
RJF	54.76	302	iPc	30	13.70	0.3	
	0.8s	10.70nm				4.9mb	
GRR	54.96	307	eP	30	13.80	-0.9	
	0.8s	19.80nm				5.2mb	
LPF	55.22	306	eP	30	15.40	-1.2	
	1.1s	16.60nm				5.0mb	
LPO	55.23	302	eP	30	16.80	0.0	
	0.9s	16.30nm				5.1mb	
MFF	55.26	304	eP	30	16.00	-1.0	
	1.1s	9.70nm				4.7mb	
LFF	55.41	302	eP	30	18.30	0.3	
	0.8s	26.80nm				5.3mb	
DMU	56.17	315	eP	30	23.00	-0.4	
DLE	56.22	314	eP	30	22.70	-1.1	
EPF	56.51	300	iPc	30	25.20	-0.9	
	0.7s	6.60nm				4.8mb	
DCN	56.60	314	eP	30	25.90	-0.6	
	0.6s	48.00nm				5.7mb	
TOL	60.92	299	eP	30	56.00	-0.7	
BRW	61.35	18	eP	30	58.80	-0.3	
ASMO	62.01	296	eP	31	03.50	-0.7	
APHE	62.18	296	iP	31	04.50	-0.9	
AAPN	62.29	297	eP	31	05.00	-1.1	
ATEJ	62.43	296	eP	31	06.00	-1.0	
MBC	62.58	5	ePc	31	07.10	-0.1	
	0.8s	106.00nm				6.0mb	
NKM	64.16	295	iP	31	17.50	-0.7	
BMK	64.74	295	iPd	31	20.50	-1.4	
			i	31	28.50		
IMA	65.94	21	eP	31	29.00	-0.4	
	0.8s	18.80nm				5.1mb	
			i	31	33.90		
FBA	68.39	20	eP	31	44.70	0.0	
INK	68.45	12	ePc	31	44.50	-0.4	

21d 06h

	1.0s	42.00nm			5.4mb	
SVW	69.10	25	eP	31	50.30	1.2
PMR	70.70	22	eP	31	58.20	-0.6
	0.8s	13.70nm			4.9mb	
TOA	71.10	21	eP	32	01.70	0.4
KDC	72.71	26	eP	32	11.30	0.5
YKB0	76.30	6	iPc	32	23.22	-8.1X
YKA	76.41	6	eP	32	32.80	0.8
YKC	76.43	6	iPc	32	32.20	0.1
	0.8s	58.00nm			5.6mb	
BUL	76.67	228	iPd	32	33.60	-0.6
WB5	79.27	128	eP	32	48.80	0.5
WRA	79.31	128	Pc	32	49.70	1.2
	0.9s	7.90nm			4.6mb	
KIC	81.20	271	P	32	59.20	0.4
	0.6s	8.50nm			4.9mb	
QIS	82.98	125	eP	33	08.00	0.2
FFC	84.78	1	iPc	33	16.60	0.2
	0.9s	43.00nm			5.5mb	
CTA	86.91	120	iPd	33	28.20	0.8
	1.0s	17.00nm			5.2mb	
RSON	88.44	355	P	33	34.50	0.1
	0.6s	13.59nm			5.4mb	
SES	88.69	6	iPc	33	35.80	0.1
PNT	88.71	12	eP	33	36.00	0.2
DPW	90.33	12	P	33	44.00	0.5
LRM	93.09	8	eP	33	56.90	0.5
RSSD	95.36	2	P	34	07.70	0.8
BW06	96.38	6	P	34	11.50	-0.1
	0.7s	2.49nm			4.9mb	
KVN	98.94	13	P	34	24.00	0.9
ALQ	104.40	5	e(Pdif	34	50.40	3.0X
CCH	142.03	298	ePKP	40	12.00	-3.5X
ZOBO	142.54	301	ePKP	40	15.00	-1.7
LPB	142.72	301	ePKP	40	18.00	1.2
CNCB	142.84	300	PKP	40	16.00	-1.2
NNA	144.30	317	iPKPd	40	18.50	-0.5
	0.8s	14.93nm				
ARE	144.82	305	iPKPd	40	21.10	0.9
	1.0s	60.00nm				
	S.D. = 0.9	on 158 of 171 obs.				

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* JUL 21, 1989 06h 30m 24.08± 0.96s
21.386 S ± 7.7km 67.296 W ±14.6km
DEPTH = 135.9 ± 42.3 km
4.3mb (1 obs.)
CHILE-BOLIVIA BORDER REGION (124)

ANT	3.69	231	iPd	31	20.60	-0.1
			iS	32	02.90	
SLA	3.72	154	iPd	31	21.20	0.1
CCH	4.13	15	eP	31	26.60	-0.2
CNCB	4.60	352	Pd	31	33.50	0.1
			S	32	27.00	
LPB	4.89	351	P	31	37.20	0.1
	1.0s	140.00nm				
			S	32	34.00	
ZOBO	5.15	351	Pd	31	49.30	8.5X
	0.8s	27.28nm			4.5mb	X
			S	32	38.00	
ARE	6.30	320	iPc	31	52.40	-3.8X
			eS	32	59.00	
NNA	13.07	314	eP	33	25.80	0.0
	0.8s	9.70nm			4.3mb	
	S.D. = 0.2	on 6 of 8 obs.				

& JUL 21, 1989 06h 53m 05.94s
66.986 N 156.172 W
DEPTH = 10.0km (geophysicist)
ALASKA (676)
<AGS-P>.

IMA	1.36	132	iPd	53	30.90	-0.1
			iS	53	48.30	
NEA	3.79	126	eP	54	05.19	-0.5
RDS	3.94	120	eP	54	07.19	-0.6
FBA	4.02	118	eP	54	08.70	-0.1
TTA	4.07	179	eP	54	08.10	-1.6
GLM	4.11	115	eP	54	09.24	-0.9
CCB	4.17	120	eP	54	10.09	-0.8
WRH	4.18	123	eP	54	10.09	-1.1
HDA	4.61	120	eP	54	16.37	-0.8
SVW	5.91	177	eP	54	34.00	-1.6
PMS	6.45	150	e(P)	54	43.90	0.7
	11 obs. associated					

JUL 21, 1989 09h 34m 09.33± 0.59s
10.811 N ± 3.9km 61.983 W ± 8.8km
DEPTH = 78.9 ± 6.5 km
4.3mb (2 obs.)
TRINIDAD (98)
MD 4.1 (TRN). Felt on Trinidad.

TRN	0.59	106	iPd	34	23.04	-0.9
TBH	0.96	110	iP	34	27.76	-0.3
			eS	34	33.96	
PIG	1.17	73	iP	34	30.84	0.1
			eS	34	46.31	
TPR	1.24	72	eP	34	31.97	0.4
BOT	1.29	74	iP	34	32.20	0.0
SVB	2.55	16	iP	34	49.21	-0.1
SLB	3.13	17	iP	34	57.46	0.0
BIM	3.79	13	iPc	35	06.47	-0.1
			S	35	48.00	
MVM	3.87	16	iPc	35	07.72	0.0
FDF	3.98	12	iPc	35	09.04	-0.3
	0.1s	1.85nm				
			S	35	51.80	
CRM	4.05	15	eP	35	10.86	0.6
DPMT	4.46	7	eP	35	15.70	-0.3
			eS	36	03.25	
BBL	4.71	6	eP	35	19.50	0.0
MGG	5.12	7	eP	35	25.50	0.4
PAG	5.20	3	eP	35	26.50	0.2
			S	36	24.50	
DEG	5.54	9	eP	35	31.00	-0.1
MGH	5.88	358	eP	35	35.75	0.0
BPA	6.20	1	eP	35	40.73	0.5
ANG	6.31	1	eP	35	42.44	0.8
NEV	6.31	355	eP	35	41.93	0.1
SKI	6.52	354	eP	35	44.81	0.1
ZOBO	27.58	193	P	39	51.80	0.0
	Z 20s	0.09um			3.3Msz	
		eLR		48	40.00	
LPB	27.83	193	P	39	54.40	0.5
CNCB	28.08	192	P	39	56.00	-0.2
CCH	28.31	188	P	39	59.10	1.0
SOB1	28.91	133	e(P)	40	03.00	-0.2
SCH	44.06	356	eP	42	10.00	-0.9
MBC	72.08	348	eP	45	24.00	-2.5
	0.6s	2.00nm			4.2mb	
NB2	72.48	29	P	45	29.90	0.8
BNG	79.89	87	iPc	46	12.40	0.7
	0.4s	2.00nm			4.4mb	
	S.D. = 0.7	on 30 of 30 obs.				

? JUL 21, 1989 09h 59m 19.18± 8.78s
18.529 S ±51.7km 169.801 E ±46.9km
DEPTH = 108.8 ± 50.8 km
4.3mb (4 obs.)
VANUATU ISLANDS (186)

DZM	4.73	221	iPc	00	28.90	-0.6
			iS	01	14.20	
BRS	17.97	238	eP	03	25.00	1.4
CTA	22.27	262	iPd	04	10.10	1.8
	0.7s	9.93nm			4.3mb	
BWA	24.76	226	eP	04	29.00	-3.2X
CAN	24.89	224	eP	04	33.30	-0.1
WB5	33.45	262	eP	05	48.50	-1.4
WRA	33.47	262	Pc	05	48.90	-1.2
	1.0s	6.10nm			4.4mb	
ASPA	33 82	255	iPd	05	51 70	-1.4
	0.7s	57 00nm			5.5mb	X
MTN	37.60	273	iPd	06	26.40	1.3
	0.4s	10.00nm			5.1mb	
WARB	40.49	251	eP	06	48.70	-0.3
MBL	46.92	258	eP	07	40.80	0.0
SPA	71.59	180	e(P)	10	30.90	0.6
	1.0s	3.00nm			4.1mb	
BNG	148.61	247	ePKPd	19	01.20	9.2X
	0.5s	5.00nm				
		ic		19	39.00	
	S.D. = 1.4	on 11 of 13 obs.				

? JUL 21, 1989 10h 14m 12.10± 4.74s
17.565 N ±30.5km 61.238 W ±23.2km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
MD 2.7 (TRN).

ANG	0.70	234	eP	14	24.67	-1.2
BPA	0.78	229	eP	14	26.87	-0.5
			eS	14	36.22	
DEG	1.26	172	eP	14	35.40	-0.1
			S	14	50.50	
MGH	1.26	228	eP	14	36.89	1.4
			eS	14	50.49	
NEV	1.34	252	eP	14	37.93	1.1
			eS	14	53.42	
SKI	1.45	261	eP	14	37.68	-0.7
			eS	14	56.02	
	S.D. = 1.3	on 6 of 6 obs.				

JUL 21, 1989 10h 40m 58.91± 1.09s
34.364 S ± 8.9km 70.376 W ± 7.3km
DEPTH = 5.0 ± 4.8 km
4.5mb (4 obs.)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.49	332	iPc	41	08.50	-0.2
PCH	0.75	351	iPc	41	12.70	-1.3
TACH	0.85	326	iPc	41	15.20	-0.6
LNV	0.95	295	iPc	41	17.90	0.5
FCH	1.04	4	iPd	41	17.00	-2.2
PEL	1.24	348	iPd	41	21.60	-0.9
LCCH	1.33	311	iPc	41	23.80	-0.2
			iS	41	43.00	
ROCH	1.49	339	iPc	41	25.50	-1.0
RFA	1.63	105	iPd	41	26.60	-1.8
JACH	1.69	354	iPc	41	29.00	-0.3
			iS	41	59.00	
IHA	1.70	321	eP	41	30.00	0.6
			iS	41	53.30	
RTBS	2.80	16	ePc	41	49.30	4.1X
ZON	3.15	27	eP	41	53.00	2.8
CFA	3.28	34	eP	41	54.00	1.9
RTLL	3.42	28	ePc	41	56.00	1.9
			S	42	44.00	
RTRS	4.25	11	ePc	42	08.20	2.4
			S	43	14.00	
MRA	4.36	65	e(P)	42	06.20	-1.2
CYA	7.08	35	eP	42	44.00	-1.8
SLA	10.50	25	ePc	43	32.20	-1.1
CCH	17.33	14	P	45	06.60	3.1X
CNCB	17.61	8	P	45	08.00	0.7
ARE	17.85	357	eP	45	12.00	1.9
LPB	17.87	7	eP	45	11.00	0.6
	1.0s	40.00nm			4.5mb	
		i		45	13.80	
ZOBO	18.13	7	P	45	13.00	-0.8
	1.1s	29.00nm			4.3mb	
	Z 24s	0.53um			4.2Msz	
		LR		53	20.00	
VAO	23.39	67	e(P)	46	13.00	3.4X
SPA	55.82	180	e(P)	50	40.10	0.8
	1.0s	13.50nm			4.9mb	
UYO	71.81	339	iPd	52	22.70	-1.7
ALQ	76.77	330	e(P)	52	53.00	-0.3
TNP	84.18	325	eP	53	33.00	0.4
	1.0s	2.75nm			4.4mb	
KVN	85.37	325	eP	53	40.00	1.5
GBA	144.29	117	PKP	00	38.00	-0.2
	0.8s	4.50nm				
	S.D. = 1.4	on 28 of 31 obs.				

& JUL 21, 1989 11h 14m 10.82s
46.545 N 121.810 W
DEPTH = 3.5km
WASHINGTON (29)
<SEA>. CL 2.9 (SEA). Felt.

GLK	0.14	82	iPc	14	13.68	0.0
LON	0.21	360	iP	14	14.80	-0.2
WPW	0.24	50	iPd	14	15.33	-0.3
TDL	0.34	235	iPd	14	17.30	-0.4
			eS	14	22.52	
LMW	0.35	291	iPc	14	18.01	0.1
SOSW	0.38	216	eP	14	17.86	-0.6
FMW	0.40	14	iPd	14	18.29	-0.5
RVC	0.41	344	eP	14	18.74	-0.4
ESD	0.42	214	eP	14	18.90	-0.3
			eS	14	25.40	
STD	0.42	223	iPd	14	18.76	-0.5
ASR	0.42	159	iPd	14	19.06	-0.2
YEL	0.43	218	iPd	14	19.02	-0.3
ERK	0.44	237	iPd	14	18.98	-0.6
			eS	14	25.19	
HSR	0.45	215	iPd	14	19.48	-0.4
CDFW	0.46	201	iPd	14	19.48	-0.5
			eS	14	26.11	

SHW	0.46	220	iPd	14	19.60	-0.4
			eS	14	26.52	
JLK	0.46	211	eP	14	19.56	-0.6
CZM	0.49	257	eP	14	20.35	-0.3
			eS	14	27.53	
FL2	0.51	227	iP	14	20.43	-0.6
			eS	14	27.69	
APW	0.59	281	iPc	14	22.03	-0.5
MTMW	0.59	208	iPd	14	21.72	-0.9
LVP	0.63	221	eP	14	22.47	-1.0
GULW	0.64	166	iPd	14	23.03	-0.6
GSM	0.66	1	eP	14	23.15	-0.8
NAC	0.70	74	eP	14	24.45	-0.4
RVW	0.76	239	eP	14	24.66	-1.3
APM	0.81	174	eP	14	25.83	-1.2
RMW	0.92	0	eP	14	27.52	-1.5
EBG	0.93	66	eP	14	28.22	-1.0
BMW	0.98	266	iPc	14	28.57	-1.5
CPW	1.01	296	iPc	14	29.00	-1.5
VLMM	1.02	189	eP	14	29.31	-1.5
T8M	1.04	53	eP	14	30.12	-1.0
VLL	1.09	175	eP	14	30.87	-1.0
GMW	1.21	327	eP	14	31.89	-2.0
VFP	1.25	169	eP	14	33.30	-1.5
TDH	1.26	179	eP	14	33.06	-1.8
VGB	1.26	145	eP	14	33.65	-1.1
HTW	1.26	1	eP	14	33.28	-1.6
SMW	1.30	307	eP	14	34.00	-1.6
ONR	1.39	285	eP	14	33.58	-3.5
GT2	1.43	193	eP	14	35.95	-1.7
ETW	1.46	43	eP	14	36.84	-1.4
KMOR	1.48	233	eP	14	36.80	-1.6
PNT	3.14	27	eP	15	07.00	4.9

45 obs. assocloted

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* JUL 21, 1989 11h 43m 48.65± 0.51s
32.743 N ±12.0km 39.818 W ± 6.6km
DEPTH = 10.0km (geophysicist)
4.7mb (12 obs.) 4.6Msz (3 obs.)
NORTH ATLANTIC RIDGE (403)

EPF	33.04	60	eP	50	27.20	0.9
	1.2s		14.80nm		4.8mb	
MFF	33.16	54	eP	50	26.50	-0.7
	1.2s		11.90nm		4.7mb	
LSF	34.25	55	eP	50	37.20	0.5
	1.4s		19.10nm		4.8mb	
TCF	34.72	55	eP	50	41.10	0.4
	1.2s		11.90nm		4.7mb	
SMF	35.88	54	eP	50	50.20	-0.4
	1.2s		11.90nm		4.6mb	
LOR	35.98	53	eP	50	51.50	0.1
KHC	42.61	51	P	51	47.40	0.9
RSON	43.01	311	eP	51	49.00	-0.7
	1.3s		15.20nm		4.6mb	
PRU	43.27	50	eP	51	52.00	0.2
TUL	45.80	290	eP	52	13.00	0.7
	1.2s		5.90nm		4.4mb	
Z	21s		1.32um		4.9Msz	
			LR	05	27.00	
SIO	46.25	290	e(P)	52	15.90	0.0
FFC	48.18	317	eP	52	30.00	-0.9
	1.8s		41.00nm		5.2mb	
SKO	48.63	61	eP	52	31.60	-2.9X
GOL	52.30	297	eP	53	05.00	2.2
	1 0s		5 00nm		4 4mb	
ALQ	54.45	292	e(P)	53	19.50	0.8
Z	22s		0.57um		4.6Msz	
BW06	54.61	302	eP	53	19.00	-0.8
	1.1s		10.42nm		4.8mb	
ZOBO	55.75	213	P	53	27.00	-1.7
Z	22s		0.24um		4.2Msz	
			LR	12	36.00	
LPB	55.97	213	(P)	53	34.00	4.0X
MBC	56.00	344	eP	53	28.00	-1.1
	1.0s		6.00nm		4.6mb	
CNCB	56.16	213	eP	53	33.00	1.4
BNG	61.18	104	ePc	54	05.00	-1.1
	0.5s		2.00nm		4.5mb	
INK	61.35	335	eP	54	06.00	-0.5
TNP	61.60	299	eP	54	09.00	0.2
KVN	61.90	300	eP	54	10.50	-0.3

S.D. = 1.0 on 22 of 24 obs.

? JUL 21, 1989 13h 46m 54.42± 3.75s
18.127 N ±15.2km 101.749 W ±32.4km
DEPTH = 33.0km (normal)

GUERRERO, MEXICO (59)

MRX	1.66	19	iP	47	21.30	-0.2
			iS	47	48.30	
ACX	2.20	124	iP	47	29.50	0.2
			iS	47	56.80	
CRX	2.34	57	iP	47	33.30	1.7
			iS	48	08.50	
UNM	2.71	63	eP	47	40.70	3.8X
			iS	48	22.50	
IIC	2.87	55	eP	47	38.50	-0.7
			(S)	48	20.00	
IIT	3.38	74	iP	47	46.30	-0.2
			(S)	48	38.50	
IISM	4.24	78	iP	47	57.50	-0.8
			(S)	48	51.00	
OXX	4.90	101	eP	48	12.30	4.3X
			(S)	49	14.50	

S.D. = 1.1 on 6 of 8 obs.

% JUL 21, 1989 14h 03m 25.05± 0.61s
60.721 N ± 4.8km 5.589 E ± 6.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK	0.31	219	iPg+	03	31.39	-0.1
			iSg	03	35.31	
BER	0.36	200	eP	03	31.79	-0.7
			eS	03	36.55	
SUE	0.53	310	eP	03	35.78	0.1
			eS	03	42.85	
HYA	0.53	33	eP	03	36.03	0.2
			eS	03	43.55	
ODD1	0.96	147	eP	03	43.43	0.0
			eS	03	56.02	
BLS1	1.47	155	eP	03	52.58	0.9
			eS	04	11.82	
KMY	1.52	187	eP	03	52.70	0.4
			eS	04	11.95	
NRA0	2.92	87	iPc	04	11.60	-0.8
			iSn	04	55.40	

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

% JUL 21, 1989 14h 12m 35.59± 0.67s
40.461 N ± 5.6km 23.084 E ± 6.5km
DEPTH = 10.0km (geophysicist)
GREECE (364)

THE	0.19	332	ePgd	12	39.70	-0.2
			eSg	12	42.80	
LIT	0.58	232	ePgd	12	47.50	0.1
			eSg	12	57.00	
OUR	0.70	100	ePgc	12	49.30	-0.1
PAIG	0.70	139	ePgd	12	49.30	-0.1
			eSg	13	00.50	
KNT	0.71	349	ePg	12	49.50	-0.2
SRS	0.76	30	ePg	12	50.80	0.3
			eSg	13	03.80	

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

JUL 21, 1989 16h 29m 29.65± 0.81s
0.202 S ± 7.2km 125.066 E ± 9.9km
DEPTH = 72.1 ± 13.2 km
4.6mb (1 obs.)
MOLUCCA SEA (269)

MNI	1.65	352	ePd	29	57.00	-0.1
			eS	30	20.00	
AAI	4.66	138	ePd	30	39.20	0.0
PCI	5.28	262	ePd	30	51.00	3.3X
			eS	31	37.50	
MKS	7.49	228	e(P)	31	18.50	0.1
TSM	8.26	302	ePd	31	29.10	0.1
MTN	13.93	155	iPd	32	45.30	0.2
	0.4s		10.00nm		4.6mb	
WB5	21.57	156	eP	34	14.30	-0.8
WRA	21.62	156	P	34	15.00	-0.6
	0.5s		1.20nm		3.5mb X	
QIS	24.73	146	eP	34	47.00	1.2
MAT	38.54	17	eP	36	47.00	0.0
BWA	40.46	150	eP	37	07.90	5.0X

S.D. = 0.7 on 9 of 11 obs.

JUL 21, 1989 18h 10m 09.98± 0.46s
40.007 N ± 4.7km 19.848 E ± 3.7km
DEPTH = 10.0km (geophysicist)

ALBANIA (391)
MD 3.6 (ATH). Felt ot Borsh, Piqeros, Fterre ond Coroj.

SRN	0.17	137	iPg	10	14.40	0.5
TPE	0.31	23	ePg	10	15.10	-1.4
VLO	0.53	330	ePg	10	19.50	-1.3
LSK	0.59	76	ePg	10	18.00	-4.1X
KBN	0.96	50	iPgd	10	25.20	-3.0X
TIR	1.34	1	iPnc	10	36.20	1.6
LCI	1.49	283	P	10	35.30	-1.4
			eSn	10	58.70	
KZN	1.50	78	ePb	10	36.50	-0.6
LACI	1.63	356	iPnd	10	39.00	0.2
PHP	1.74	15	iPnc	10	40.30	0.0
VLS	1.92	162	ePg	10	47.20	4.2X
LIT	2.03	87	eP	10	45.20	0.6
KKS	2.11	11	ePn	10	47.00	1.3
SKO	2.30	31	iPn	10	48.80	0.2
			iSn	11	14.60	
			iSg	11	20.00	
BCI	2.36	4	iPnd	10	50.30	0.9
VAY	2.45	57	iPn	10	50.40	-0.2
KNT	2.59	63	eP	10	52.10	-0.6
NEO	2.70	104	ePn	10	53.00	-1.2
PLG	2.78	81	ePn	10	56.00	0.6
KKB	3.08	52	iPc	10	59.00	-0.5
MGR	3.30	274	P	11	03.60	0.9
SGO	3.52	280	P	11	06.00	0.3
SOI	3.53	238	Pc	11	05.70	-0.2
			eSn	11	50.80	
VTS	3.62	43	iPc	11	07.00	-0.3
RZN	4.06	64	eP	11	14.00	0.4
KDZ	4.53	67	eP	11	32.00	11.8X
PVL	5.21	50	eP	11	22.00	-7.8X

S.D. = 0.9 on 22 of 27 obs.

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* JUL 21, 1989 18h 27m 15.67± 0.67s
12.375 N ± 9.2km 121.432 E ±22.0km
DEPTH = 33.0km (normol)
4.8mb (2 obs.)
MINDORO, PHILIPPINE ISLANDS (250)

TSM	8.75	203	eP	29	23.00	0.0
LZH	28.44	329	eP	33	09.00	-0.8
	1.5s		44.00nm		4.9mb	
WB5	34.49	158	eP	34	02.20	-0.7
ASPA	37.84	161	iPd	34	31.80	0.6
	0.6s		8.00nm		4.8mb	
WARB	38.66	172	eP	34	38.00	-0.1
SUF	81.52	332	eP	39	31.00	0.0
VRI	84.47	316	iPd	39	47.00	0.5
NB2	88.76	333	PKP	40	07.80	0.5

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

JUL 21, 1989 20h 06m 49.72± 0.46s
40.645 N ± 4.0km 22.623 E ± 4.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.1 (SKO). MD 3.1 (ATH).

THE	0.26	93	ePgd	06	55.40	0.2
			eSg	06	59.00	
GRG	0.35	332	iPgc	06	57.10	0.1
			eSg	07	02.40	
LIT	0 55	191	ePgd	07	01.20	0.2
			eSg	07	10.20	
KNT	0.56	22	iPgc	07	00.80	-0.2
			eSg	07	08.00	
VAY	0.68	357	iPgc	07	02.30	-0.8
			iSg	07	11.40	
PLG	0.68	113	ePb	07	03.00	-0.3
KZN	0.73	243	ePb	07	03.60	-0.6
SRS	0.87	57	ePgd	07	06.10	-0.4
			eSg	07	18.00	
PAIG	1.08	131	ePgc	07	10.30	0.3
			eSg	07	25.60	
OUR	1.08	106	ePgc	07	10.70	0.7
			eSg	07	25.60	
NEO	1.41	161	ePb	07	15.00	-0.5
SKO	1.60	326	iPn	07	19.50	1.4
			iSn	07	39.00	

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

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* JUL 21, 1989 20h 30m 32.38± 1.79s
2.091 N ±13.8km 99.163 E ±17.0km
DEPTH = 11.0 ± 8.5 km

21d 20h

3.8mb (1 obs.)
NORTHERN SUMATERA (706)

PSI	0.65	338	ePd	30	44.50	-0.7
KLM	2.68	68	iP	31	25.50	9.4X
			iS	32	04.20	
PPI	2.82	154	eP	31	25.80	7.7X
			iS	32	04.50	
IPM	3.09	37	ePd	31	23.10	1.1
			e	31	34.90	
			eS	32	13.10	
KGM	4.15	91	eP	31	37.00	-0.1
BSI	5.13	311	eP	31	52.00	1.0
SNG	5.26	16	ePn	31	53.50	0.7
			ePg	32	23.60	
			eSg	34	05.40	
NNT	10.45	3	eP	33	03.50	-1.7
WB5	40.87	124	eP	38	15.20	-1.1
WRA	40.87	124	P	38	17.00	0.7
	0.7s		1.30nm			3.8mb
	S.D. = 1.4		on 8 of 10 obs.			

JUL 21, 1989 20h 48m 00.21± 0.62s
44.399 N ± 8.7km 7.246 E ± 6.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

PZZ	0.15	316	P	48	03.84	0.1
			S	48	06.30	
STV	0.16	160	P	48	04.15	0.1
			S	48	06.92	
ENR	0.21	144	P	48	04.87	0.0
			S	48	07.84	
FOUF	0.36	292	iPgc	48	07.46	-0.1
ROB	0.46	103	P	48	09.38	-0.2
			S	48	15.12	
IMI	0.67	136	P	48	13.48	-0.2
FIN	0.72	105	P	48	14.61	0.3
	S.D. = 0.2		on 7 of 7 obs.			

* JUL 21, 1989 21h 45m 08.58± 0.88s
35.059 N ±13.3km 33.170 E ±10.5km
DEPTH = 66.0 ± 13.8 km
CYPRUS (372)

CSS	0.16	126	eP	45	18.00	-0.7
FAM	0.69	95	eP	45	24.00	0.8
PPCY	0.70	256	eP	45	24.00	0.6
ELL	3.14	303	ePn	45	56.00	-0.8
SALJ	3.70	145	Pc	46	03.90	-0.7
KFNJ	3.82	146	Pd	46	05.70	-0.4
MASJ	3.95	147	Pc	46	08.70	0.6
MKRJ	4.06	149	Pd	46	09.90	0.1
YER	4.47	299	ePn	46	15.90	0.5
	S.D. = 0.8		on 9 of 9 obs.			

% JUL 21, 1989 22h 57m 41.84± 1.46s
38.733 N ±13.8km 13.591 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SICILY (398)

USI	0.32	266	Pc	57	48.50	-0.1
			eSg	57	53.40	
GIB	0.82	155	P	57	56.40	-1.3
			eSg	58	12.00	
ERC	1.05	229	P	58	01.70	0.0
MCT	1.10	178	Pc	58	03.10	0.5
			eSg	58	17.70	
MNO	1.18	132	Pc	58	05.10	1.1
			eSg	58	20.40	
FAI	1.46	177	P	58	08.60	0.4
MEU	1.94	147	P	58	14.90	-0.4
SOI	2.05	108	P	58	16.50	-0.2
	S.D. = 0.8		on 8 of 8 obs.			

& JUL 21, 1989 23h 19m 55.39s
61.434 N 151.755 W
DEPTH = 75.6km
SOUTHERN ALASKA (2)
<AGS-P>.

SPU	0.29	210	iP	20	07.14	-0.2
			S	20	16.99	
SUA	0.49	86	iP	20	08.70	-0.2
SKT	0.56	11	iP	20	08.79	-0.7
			S	20	20.30	
NKA	0.74	160	iP	20	12.51	1.2
RDT	0.92	200	iP	20	12.72	-0.8
PWA	0.92	76	iPc	20	13.00	-0.5
PMS	1.07	99	iPc	20	14.60	-0.8
RED	1.13	206	iP	20	15.43	-0.8
SLKM	1.19	140	iP	20	15.54	-1.4
CUT	1.20	35	eP	20	16.26	-0.7
			S	20	32.77	
PMR	1.27	82	iPc	20	16.10	-1.7
			S	20	33.60	
NNL	1.41	171	eP	20	19.78	0.0
ILIM	1.48	204	iP	20	19.61	-1.1
BRLK	1.73	165	eP	20	23.32	-0.8
HUR	1.84	32	eP	20	24.28	-1.3
SVW	1.90	262	iPc	20	24.70	-1.7
OPT	1.93	203	eP	20	26.01	-0.8
CNPM	1.93	172	eP	20	24.91	-1.9
			S	20	52.10	
XLV	1.99	180	eP	20	25.92	-1.6
AUW	2.24	203	eP	20	30.44	-0.6
RND	2.40	33	eP	20	31.40	-1.9
			S	21	01.46	
TTA	2.50	309	eP	20	32.70	-2.0
VZW	2.54	96	eP	20	31.82	-3.4
			S	21	02.06	
MCK	2.65	28	eP	20	35.69	-1.1
CDD	2.68	201	eP	20	35.80	-1.4
TOA	2.74	73	eP	20	36.00	-2.0
KLU	2.80	86	eP	20	35.35	-3.5
SHU	2.83	186	eP	20	37.43	-1.7
PAX	3.32	60	eP	20	44.62	-1.6
WRH	3.48	27	eP	20	45.25	-3.0
GLB	3.82	86	eP	20	51.28	-1.7
FBA	3.92	26	iPc	20	52.30	-2.0
IMA	4.73	350	iPc	21	03.00	-2.9
	33 obs. ossocioted					

JUL 22, 1989 00h 00m 42.80± 0.45s
44.428 N ± 5.4km 9.877 E ± 3.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

BOB	0.46	318	Pc	00	51.50	-0.6
			iSg	00	59.30	
BDI	0.63	125	P	00	55.60	0.0
			eSg	01	04.60	
MME	0.64	111	Pd	00	55.20	-0.5
			eSg	01	05.10	
PII	0.85	146	Pc	00	59.80	0.7
			eSg	01	12.40	
CKI	1.14	270	Pc	01	04.40	0.2
			eSg	01	21.20	
FIN	1.22	260	P	01	05.37	-0.1
			S	01	18.87	
ROB	1.45	265	P	01	08.60	-0.5
			S	01	24.50	
IMI	1.52	251	P	01	09.78	-0.3
			S	01	26.06	
ENR	1.77	264	P	01	13.65	-0.2
			S	01	31.85	
ORO	1.80	312	P	01	14.20	0.0
			eSg	01	37.20	
STV	1.84	265	P	01	14.61	-0.2
			S	01	33.41	
S8F	1.85	253	Pn	01	15.60	0.8
DOI	1.89	273	P	01	15.20	-0.2
			eSn	01	39.20	
PZZ	1.99	273	P	01	16.13	-0.8
			S	01	37.48	
LSD	2.19	299	P	01	19.76	-0.2
RRL	2.26	284	P	01	21.37	0.4
LPG	2.46	297	Pn	01	25.20	1.3
LPL	2.48	297	Pn	01	25.90	1.8
FRF	2.49	251	Pn	01	23.70	-0.3
			Sn	01	53.10	
LMR	2.67	247	Pn	01	26.10	-0.5
			Sn	01	57.00	
HAU	4.34	327	Pn	01	49.70	-0.6
			Sn	02	40.30	
	S.D. = 0.7		on 21 of 21 obs.			

? JUL 22, 1989 00h 13m 34.44± 1.53s
39.580 N ±10.3km 26.405 E ±16.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EZN	0.25	346	iPg	13	39.90	0.1
			iSg	13	50.30	
IZM	1.36	150	ePn	13	59.30	-0.1
EDC	1.36	55	ePn	13	59.00	-0.4
DST	1.72	88	ePn	14	05.00	0.4
	S.D. = 0.6		on 4 of 4 obs.			

% JUL 22, 1989 00h 51m 00.74± 1.30s
41.003 N ±23.2km 15.020 E ±35.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

SGO	0.50	154	P	51	10.50	-0.3
			eSg	51	19.20	
DUI	0.78	327	P	51	16.00	0.0
			eSg	51	28.00	
MGR	0.96	155	P	51	19.20	0.3
			eSg	51	34.90	
SDI	1.15	308	P	51	22.20	0.0
			eSn	51	39.50	
SOI	3.04	164	P	51	49.70	0.1
	S.D. = 0.3		on 5 of 5 obs.			

? JUL 22, 1989 01h 09m 17.35± 2.41s
53.040 N ±39.2km 163.726 W ±21.2km
DEPTH = 33.0km (normal)
4.4mb (2 obs.)
UNIMAK ISLAND REGION (10)

KDC	7.94	49	eP	11	13.50	0.2
ADK	8.00	267	eP	11	13.70	-0.4
IMA	14.00	17	eP	12	35.80	0.4
INK	20.94	32	eP	13	57.00	-2.1
YKA	27.19	50	eP	15	04.10	4.7X
MBC	28.69	20	eP	15	13.00	0.3
	0.5s		2.00nm			4.1mb
KEV	57.27	356	eP	19	03.00	-0.3
SOD	59.66	355	eP	19	20.00	-0.1
SUF	64.32	355	eP	19	51.00	-0.3
	0.6s		3.70nm			4.7mb
NB2	66.20	3	P	20	03.60	0.2
NUR	66.60	355	eP	20	06.00	0.1
KHC	78.18	2	P	21	16.50	2.0
BUL	145.80	339	iPKPc	28	57.40	3.2X
			ipP	29	08.80	
SLR	151.28	337	iPKPc	29	11.50	8.9X
	1.0s		20.00nm			
PRY	152.61	338	ePKP	29	13.40	8.9X
	S.D. = 1.1		on 11 of 15 obs.			

& JUL 22, 1989 01h 38m 00.29s
59.927 N 152.572 W
DEPTH = 81.4km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.25	308	iP	38	12.13	-0.6
			S	38	21.69	
OPT	0.43	231	eP	38	13.42	-0.4
			S	38	23.89	
RED	0.50	349	iP	38	13.93	-0.6
			S	38	24.83	
HOM	0.54	119	iP	38	14.32	-0.4
			S	38	25.91	
XLV	0.64	137	eP	38	14.66	-1.0
			S	38	26.49	
NNL	0.65	79	iP	38	15.91	0.1
RDT	0.65	7	iP	38	15.07	-0.8
			S	38	26.91	
AUW	0.72	220	iP	38	16.01	-0.5
CNPM	0.79	120	iP	38	16.34	-0.9
BRLK	0.87	100	eP	38	17.31	-0.8
NKA	1.05	38	iP	38	21.40	1.1
CDD	1.14	209	iP	38	20.45	-1.0
MCNL	1.17	231	iP	38	20.66	-1.1
			S	38	36.34	
SPU	1.28	11	iP	38	22.71	-0.6
SLKM	1.31	63	eP	38	22.32	-1.3
SEW	1.58	82	eP	38	25.62	-1.4
SUA	1.79	29	eP	38	29.44	-0.5
			S	38	52.90	
SKT	2.12	13	iP	38	33.40	-1.1
PWA	2.18	36	eP	38	34.50	-0.6
VZW	3.19	67	eP	38	46.11	-3.1
KLU	3.63	61	iP	38	52.48	-2.8
	21 obs. ossocioted					

& JUL 22, 1989 02h 17m 31.60s

40.367 N 125.502 W
DEPTH = 22.0km
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.6 (BRK).

FHC	1.23	69	iPc	17	51.40	-2.2
			eS	18	05.80	
WDC	2.27	84	iPc	18	06.30	-2.2
			eS	18	31.80	
LTCM	2.59	92	eP	18	11.40	-1.6
LBFM	2.91	69	eP	18	16.70	-1.0
MIN	2.98	89	ePc	18	16.10	-2.6
			eS	18	51.90	
ORV	3.18	103	e(P)	18	18.30	-3.1
			eS	18	54.70	
KVN	5.86	101	e(P)	19	01.50	2.0

7 obs. associated

& JUL 22, 1989 02h 41m 41.17s
60.022 N 152.818 W
DEPTH = 108.7km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.09	309	iP	41	55.77	0.9
			S	42	07.62	
RED	0.40	3	iP	41	56.88	-0.7
			S	42	09.90	
OPT	0.42	209	iP	41	57.16	-0.5
			S	42	09.98	
RDT	0.59	20	iP	41	58.02	-0.8
			S	42	11.19	
AUL	0.71	206	eP	41	59.19	-0.6
NNL	0.76	88	iP	42	00.30	0.1
XLV	0.80	135	eP	41	59.49	-1.0
CNPM	0.94	121	eP	42	01.15	-0.8
8RLK	1.01	104	eP	42	01.75	-0.9
			S	42	17.71	
NKA	1.07	47	iP	42	04.13	0.9
MCNL	1.14	223	iP	42	03.10	-1.0
CDD	1.17	201	iP	42	03.18	-1.3
SPU	1.22	18	eP	42	04.44	-0.6
SLKM	1.38	68	eP	42	05.31	-1.6
			S	42	24.33	
SEW	1.69	86	eP	42	08.76	-1.8
SUA	1.77	34	eP	42	10.94	-0.8
SKT	2.06	17	eP	42	14.01	-1.4
VZW	3.27	69	eP	42	28.63	-2.9

18 obs. associated

? JUL 22, 1989 03h 10m 48.76±17.37s
0.488 S ±42.7km 77.378 W ±112.km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)

CAYA	0.83	313	iP+	11	04.60	-0.5
			eS	11	09.20	
OUR	1.19	285	iP+	11	11.70	0.4
			S	11	20.60	
RECU	1.20	263	iPd	11	11.50	0.0
			S	11	20.70	
GGP	1.26	284	iP+	11	12.00	-0.5
			S	11	23.50	
COTA	1.26	310	iP+	11	13.10	0.6

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

% JUL 22, 1989 04h 01m 53.80± 0.82s
37.844 N ± 7.8km 29.137 E ± 7.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.57	32	iPg	02	04.00	-1.4
			iSg	02	17.50	
YER	0.98	224	iPn	02	11.60	-0.9
BCK	1.21	108	ePn	02	17.40	0.9
ELL	1.26	150	ePn	02	17.00	-0.2
ALT	1.43	32	ePn	02	20.30	0.4
IZM	1.58	291	ePn	02	23.00	1.1

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

JUL 22, 1989 04h 58m 41.26± 0.94s
40.143 N ±10.3km 20.795 E ± 5.5km
DEPTH = 5.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.2 (ATH).

LSK	0.15	273	iPgc	58	42.70	-1.7
KBN	0.48	2	ePg	58	50.20	-0.7
TPE	0.62	284	ePg	58	55.00	1.4
SRN	0.66	247	ePg	58	54.10	-0.4
KZN	0.77	77	ePb	58	55.00	-1.7
			eSb	59	41.00	
BERA	0.85	311	ePg	58	57.40	-0.8
VLO	1.05	289	ePn	59	03.10	1.7
LIT	1.30	91	ePd	59	06.80	1.0
TIR	1.39	330	ePn	59	11.00	3.7X
PHP	1.57	350	ePn	59	09.50	-0.2
LACI	1.70	331	ePn	59	13.40	1.7X
VAY	1.79	48	ePn	59	14.50	1.5
SKO	1.89	15	iPn	59	25.50	11.0X

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

JUL 22, 1989 05h 02m 11.51± 0.08s
2.299 N ± 2.4km 128.142 E ± 2.7km
DEPTH = 141.8km (geophysicist)
6.4mb (82 obs.)
HALMAHERA (267)
Mo=5.0*10**18 Nm (PPT). Felt (III) at Manado, Sulawesi. Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=242 Dip=50 Slip= 80
NP2: 77 41 102
Principal Axes:
T Plg=81 Azm= 99
P 5 339
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a small left-lateral strike-slip component. The preferred fault plane is NP1.
RADIATED ENERGY
No. of sta: 4 Focal mech. F
Energy 0.7±0.3*10**15 Nm
MOMENT TENSOR SOLUTION
Dep 141 No. of sta: 13
Moment Tensor; Scale 10**18 Nm
Mrr= 6.19 Mtt=-5.54
Mff=-0.65 Mrt=-0.15
Mrf= 1.17 Mtf=-4.23
Principal axes:
T Val= 6.45 Plg=77 Azm=248
N 1.54 13 59
P -7.99 2 150
Best Double Couple:Mo=7.2*10**18
NP1:Strike=253 Dip=45 Slip= 109
NP2: 47 48 72
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 41C M.W.: 15S, 22C
Centroid Location:
Origin Time 05:02:15.2 0.2
Lat 2.39N 0.02 Lon 127.94E 0.02
Dep 144.6 0.5 Half-duration 6.0
Moment Tensor; Scale 10**18 Nm
Mrr= 4.81 0.06 Mtt=-3.89 0.07
Mff=-0.93 0.07 Mrt=-0.84 0.05
Mrf= 0.21 0.06 Mtf=-2.34 0.09
Principal Axes:
T Val= 4.93 Plg=82 Azm=215
N 0.29 7 62
P -5.21 4 332
Best Double Couple:Mo=5.1*10**18
NP1:Strike= 54 Dip=42 Slip= 79
NP2: 248 49 100

MNI	3.41	256	iPc	03	07.50	3.0X
			eS	03	30.60	
DAV	5.40	332	iPd-	03	33.00	1.9
AAI	5.95	179	ePc	03	41.40	3.0X
			eS	03	55.00	
PCI	8.89	249	iPc	04	22.50	4.4X
			iS	04	57.30	
TSM	10.23	281	ePc	04	40.00	4.1X
	1.2s	5134.90nm			7.1mb	
MKS	11.44	229	iPd	04	54.40	2.7X
KKM	12.46	288	ePd	05	06.50	1.3
	1.0s	824.10nm			6.2mb	
			eS	05	14.50	
			e	05	16.00	
			e	05	25.00	

KUPT	13.17	200	ePd	05	20.80	6.5X
	1.5s	7803.70nm			6.9mb	
			e(S)	08	30.00	
JAY	13.44	111	ePc	05	19.00	1.2
	1.2s	1585.50nm			6.3mb	
QCP	14.10	331	eP	05	28.00	1.8
MTN	15.34	169	iPd	05	40.70	-1.0
			e	14	42.30	
BAG	15.88	332	ePd-	05	46.00	-2.6X
	1.7s	4730.77nm			6.5mb	
			iS	08	48.00	
MNDI	17.62	119	eP	06	11.50	1.4
KNA	17.94	178	eP	06	13.30	-0.2
	0.6s	831.00nm			6.2mb	
TRT	18.39	237	iPc	06	20.90	2.6
	1.4s	2182.10nm			6.3mb	
GUMO	19.98	55	eP	06	33.68	-1.3
PJG	19.98	55	eP	06	33.20	-1.8
GUA	19.99	55	ePc+	06	33.20	-1.9
	0.7s	2531.51nm			6.7mb	
PMG	22.23	122	eP	06	57.00	-0.3
WB5	22.87	165	iPc	07	04.00	0.4
			eS	10	58.00	
WRA	22.93	165	Pd	07	05.60	1.5
	0.6s	170.80nm			5.6mb	
ANP	23.63	345	iP-	07	12.00	1.0
			iS	11	20.00	
HKC	24.08	327	iP	07	17.00	1.9
			iS	11	24.00	
MCO	24.27	325	eP	07	19.00	2.0
OZH	24.32	339	iPd	07	19.00	1.6
	4.0s	11.50nm			3.7mb	X
			sP	08	09.00	
			iS	11	24.50	
KLI	24.33	253	eP	07	19.00	1.4
OIZ	24.44	314	iPd	07	20.00	1.4
N	12s	46.10um				
			S	11	27.00	
MBL	24.69	199	iPc	07	20.70	-0.3
KGM	24.81	270	ePd	07	25.00	2.9X
	1.0s	776.10nm			6.2mb	
RAB	24.86	105	iPc+	07	21.50	-1.1
	0.6s	746.67nm			6.4mb	
			iS	11	32.00	
GZH	25.16	326	P	07	25.10	-0.1
			pP	07	54.00	140kmX
			sP	08	13.00	
			S	11	38.00	
OIS	25.34	154	iPc	07	26.60	-0.4
			e	11	44.00	
KSI	26.21	257	ePd	07	35.70	0.7
	1.0s	7.00nm			4.2mb	X
ASPA	26.41	168	iPc	07	36.20	-0.6
	1.9s	1875.00nm			6.4mb	
Z	23s	32.80um			5.8MszX	
			iPcP	10	58.80	
			iS	11	54.90	
			LR	17	48.80	
			iScS	18	11.60	
IPM	27.16	276	ePc	07	44.10	0.4
	0.8s	171.40nm			5.7mb	
			e	08	20.90	181kmX
			e	11	01.80	
NANU	27.61	206	iPc	07	47.60	0.0
SNG	27.85	281	eP	07	51.10	1.3
	1.4s	744.19nm			6.2mb	
			eS	12	20.20	
WARB	28.35	183	eP	07	54.00	-0.3
CTA	28.48	142	iPc+	07	55.00	-0.5
	1.7s	1653.85nm			6.5mb	
			i	08	44.00	249kmX
			iPcP	11	05.20	
			iS	12	19.00	
CTAO	28.48	142	ePc	07	55.19	-0.3
KAGJ	28.85	5	P	07	57.70	-1.0
PSI	29.19	271	ePc	08	02.30	0.4
	0.8s	247.40nm			6.0mb	
SSE	29.39	348	ePc	08	05.27	1.9
Z	18s	10.40um			5.5Msz	
N	13s	8.10um				
E	12s	10.00um				
			pP	08	32.00	123kmX
			i	08	40.50	
			sP	08	46.00	
			PcP	11	06.50	
			eS	12	46.45	
			sS	13	41.00	

22d 05h

LOE	29.97	302	iPc	08	09.50	0.7		
KUMJ	30.18	5	P	08	09.50	-0.9		
MEKA	30.21	197	eP	08	10.00	-0.7		
NST	30.63	297	iPc	08	22.30	7.8X		
NJ2	30.86	345	Pc	08	16.50	0.1		
			pP	08	45.50	135kmX		
			S	13	06.50			
WHN	30.98	336	iPc	08	19.20	1.8		
			pP	08	50.00	144kmX		
			PcP	11	11.50			
			iS	13	08.00			
			sS	14	04.00			
GYA	31.66	321	iPc	08	25.40	1.8		
Z	18s	15.20um				5.7Msz		
N	12s	13.30um						
E	12s	7.00um						
			pP	08	57.00	148kmX		
			PP	09	36.00			
			S	13	25.00			
SHNJ	31.78	5	P	08	23.10	-1.3		
TKSJ	32.00	9	P	08	25.70	-0.6		
BDT	32.25	299	iPc	08	30.60	1.9		
	1.1s	320.40nm				6.0mb		
SHK	32.35	7	iPc	08	28.40	-0.9		
	0.8s	761.19nm				6.5mb		
WKYJ	32.51	12	P	08	29.90	-0.9		
FORR	32.96	180	eP	08	32.30	-2.4X		
			eS	11	14.00			
CHG	32.97	302	iPc	08	36.30	1.3		
	1.1s	332.28nm				6.0mb		
			eS	13	32.00			
CHTO	32.97	302	ePc	08	35.25	0.3		
			ePP	09	48.42			
			ePcP	11	15.88			
YONJ	33.09	8	iP+	08	35.40	-0.4		
KMI	33.38	315	iPc	08	41.00	2.3		
Z	20s	473.00um				7.2MszX		
			epPc	09	12.85	148kmX		
			sP	09	55.00			
			PP	09	59.00			
			PcP	11	16.00			
			S	13	44.00			
			eS	13	52.10			
			PcS	15	05.00			
			SS	16	10.00			
MRWA	33.43	200	eP	08	38.00	-0.8		
SVO	33.55	110	eP	08	38.00	-2.0		
COOL	33.67	191	eP	08	40.00	-0.8		
	1.0s	447.00nm				6.2mb		
HNR	33.76	111	eP	08	40.00	-1.8		
			eS	12	56.00			
TSRJ	33.86	12	P	08	41.70	-0.7		
IIDJ	34.24	14	P	08	44.30	-1.4		
BAL	34.49	198	iPd	08	47.50	-0.4		
	0.7s	391.00nm				6.3mb		
CHJJ	35.05	15	P	08	50.20	-2.4		
KLB	35.12	196	eP	08	53.00	-0.2		
	1.0s	676.00nm				6.4mb		
TIA	35.25	344	eP	08	53.90	-0.3		
Z	20s	12.70um				5.7Msz		
N	10s	5.30um						
E	11s	9.30um						
			PcP	11	22.80			
			S	14	10.50			
MAT	35.32	14	iPc	08	52.80	-2.0		
	0.7s	723.97nm				6 5mb		
Z	20s	20.21um				5.9Msz		
			eS	14	05.00			
KAKJ	35.53	17	P	08	52.60	-3.9X		
MUN	35.92	197	eP	09	00.00	0.1		
NIIJ	36.18	15	P	08	59.50	-2.5		
STK	36.31	160	eP	09	03.60	0.4		
			e	11	25.00			
			e	14	31.00			
			e	17	56.50			
XAN	36.32	333	iPc	09	04.00	0.7		
N	12s	15.40um						
E	13s	13.70um						
			pP	09	36.00	143kmX		
			S	14	28.00			
NWAO	36.52	196	eP	09	05.00	0.0		
	0.5s	174.00nm				6.1mb		
CD2	36.62	323	iPc	09	07.00	1.1		
			pP	09	37.00	133kmX		
			sP	09	56.00			
			PP	10	32.00			
			S	14	37.30			

DL2	36.92	352	Pc	09	08.00	-0.2		
Z	20s	10.90um				5.6Msz		
N	15s	15.20um						
E	12s	6.70um						
			sP	09	56.00			
			S	14	40.00			
YAMJ	37.33	16	P	09	11.60	-0.1		
			S	14	45.90			
CMS	37.57	155	iPc	09	14.10	0.3		
	1.0s	322.00nm				6.0mb		
			e	10	44.00	495kmX		
			e	15	03.60			
RKG	37.66	195	iPd	09	20.00	5.5X		
	0.5s	196.00nm				6.1mb		
BRS	37.88	143	iPd	09	16.00	-0.4		
			i	10	14.00	287kmX		
			iPcP	11	30.00			
			iS	14	53.80			
			iScP	15	05.20			
			iScS	19	17.20			
TIY	38.08	340	iPc	09	18.90	0.8		
	4.0s	2.30nm				3.3mb X		
N	10s	9.50um						
			pP	09	51.00	145kmX		
			PP	10	51.50			
			S	14	59.50			
			sS	15	59.50			
ADE	38.37	166	iPc	09	21.10	0.6		
	1.0s	1000.00nm				6.5mb		
OFUJ	38.63	17	P	09	22.20	-0.4		
			S	15	05.40			
BJI	39.11	345	ePc	09	26.87	0.4		
			epP	09	56.99	135kmX		
			esP	10	14.00			
			ePcP	11	34.81			
			eS	15	13.48			
			eSS	18	16.28			
			eScS	19	21.50			
SNY	39.57	355	iPc	09	30.20	0.0		
	4.0s	3.20nm				3.4mb X		
Z	21s	16.20um				5.8Msz		
N	13s	5.60um						
E	15s	9.90um						
			S	15	15.00			
AOMJ	39.66	15	eP	09	32.00	1.0		
			S	15	24.30			
COO	39.77	147	iPd	09	33.10	1.0		
	0.4s	102.00nm				5.9mb		
			e	10	26.00	256kmX		
			e	12	27.00			
			e	18	26.00			
LZH	40.44	329	ePc	09	39.89	2.2		
			epPc	10	13.00	149kmX		
			sP	10	36.00			
			PP	11	19.00			
			ePcP	11	39.23			
			S	15	15.00			
			eS	15	37.76			
			PcS	15	38.00			
			esS	16	37.35			
			eSS	18	44.81			
HHC	41.20	341	iPc	09	45.00	1.2		
	4.5s	3.30nm				3.3mb X		
N	11s	9.90um						
			PP	11	25.00			
			S	15	48.00			
			sS	16	50.00			
BWA	41.20	154	iPc	09	46.00	2.2		
			iScP	15	18.00			
CN2	41.39	357	iPc	09	41.40	-3.8X		
	5.0s	2.20nm				3.1mb X		
			pP	10	16.00	156kmX		
			PcP	11	40.00			
			ScP	15	15.00			
			PcS	15	30.00			
			S	15	45.00			
			SS	18	50.00			
BFD	41.49	163	iPc	09	46.30	0.2		
	1.2s	1083.00nm				6.4mb		
			e	11	23.00	533kmX		
			e	15	51.00			
			e	18	40.70			
BTO	41.50	339	iPc	09	46.00	-0.3		
N	11s	6.60um						
E	11s	2.70um						
			epP	10	16.00	133kmX		
			PP	11	22.00			

MRRJ	41.59	14	P	09	46.90	0.1		
RIV	41.97	151	eP	09	53.00	3.0X		
			e	12	00.00			
			eS	16	00.00			
			e	19	04.00			
			e	20	00.00			
HOOJ	42.15	17	P	09	52.30	0.9		
			S	16	01.10			
MDJ	42.16	2	ePc	09	51.66	0.2		
Z	16s	13.10um				5.9MszX		
			epP	10	23.11	140kmX		
			ePcP	11	43.60			
			e	15	36.03			
			eS	15	59.21			
			esS	16	54.66			
			eSS	19	06.26			
CAN	42.21	154	iPc	09	52.90	0.8		
			iPP	11	32.00			
			iScP	15	21.80			
SAP	42.25	14	iP	09	52.80	0.6		
			eS	16	02.00			
CNB	42.37	154	eP	09	55.00	1.6		
	0.2s	123.00nm				6.2mb		
TOO	42.81	160	eP	09	59.00	2.1		
			e	15	24.00			
KUSJ	43.23	18	iP+	10	00.10	0.0		
			S	16	14.50			
ASAJ	43.58	15	P	10	03.00	0.0		
			S	16	19.70			
PVC	44.31	118	iPc	10	09.50	0.3		
LSA	44.44	312	iPc	10	13.00	2.3		
Z	10s	2.00um				5.3MszX		
N	10s	2.00um						
			PP	11	53.00			
DZM	44.56	125	iPd	10	10.60	-0.7		
			ScP	15	31.20			
			ScS	19	57.20			
GTA	45.04	329	iPc	10	16.00	1.1		
	4.0s	4.20nm				3.5mb X		
Z	20s	14.70um				5.9Msz		
			pP	10	48.50	144kmX		
			S	16	33.00			
			SS	19	53.00			
YSS	46.31	14	iPc	10	23.00	-1.6		
			eS	16	56.00			
HIA	47.34	353	ePc	10	32.73	0.0		
			esPd	11	19.74			
			e	13	04.67			
			eS	17	15.27			
			esS	18	07.83			
			e	18	21.49			
			e	20	10.74			
TAU	48.21	161	ePc	10	39.42	-0.1		
			e	13	04.74			
HYB	50.93	291	iPc	11	01.20	0.5		
	1.1s	2368.40nm				6.9mb		
			i	11	39.00	167kmX		
			iS	18	04.00			
GBA	51.35	286	Pc	11	03.60	-0.2		
	0.9s	581.00nm				6.4mb		
WMQ	54.70	325	ePc	11	28.76	0.5		
Z	24s	15.00um				6.0MszX		
E	20s	19.20um						
			epPc	12	03.36	149kmX		
			S	18	50.00			
			sS	19	56.00			
NDI	55.08	304	iPc	11	30.40	-0.8		
			iS	18	58.50			
POO	55.53	291	iPd	11	33.70	-0.9		
	1.0s	410.00nm				6.3mb		
PET	56.50	22	iPc	11	40.00	-0.9		
			iS	19	20.00			
BOM	56.56	291	iPd	11	41.30	-0.6		
			iS	19	19.80			
MSZ	58.67	148	P	11	54.20	-1.9		
	0.8s	1050.00nm				6.8mb		
KRP	59.30	137	ePc	12	00.50	-0.1		
			i	16	35.00			
MHZ	59.65	147	P	12	01.30	-1.8		
HITZ	59.86	138	P	12	04.20	-0.3		
RATZ	59.95	138	P	12	05.20	0.1		
KETZ	59.99	139	eP	12	05.60	0.1		
KSH	60.01	315	iPc	12	07.50	1.8		
	4.0s	8.80nm				4.1mb X		
Z	18s	12.70um				6.1Msz		
N	13s	7.50um						
			pP	12	42.00	145kmX		

			PP	14	24.00						pP	14	59.00	116kmX		GPA	94.50	311	iP	15	15.80	-1.3
			S	20	10.00			ATA	84.59	281	eP+	14	32.00	1.3		BCK	94.61	308	iP	15	15.50	-2.2
			sS	21	10.00			MSL	84.61	306	iPd	14	30.50	0.1		NUR	94.63	331	iP	15	16.20	-1.0
HUTZ	60.04	138	eP	12	05.90	0.2					e	15	02.00	122kmX			1.0s	456.00nm				6.7mb
TAZ	60.12	137	P	12	06.80	0.6					e	16	37.00				Z 22s	5.20um				6.0Msz
WHH	60.44	138	P	12	07.30	-1.2					ePP	18	15.50						ePP	19	48.00	
MRW	60.53	141	P	12	06.90	-2.0					eSKS	24	38.00						eSKS	25	36.00	
SNZO	60.57	141	ePc	12	06.91	-2.3					eS	24	55.50						LR	01	20.00	
WEL	60.60	141	P	12	07.70	-1.7					esP	25	50.50			HLW	94.76	300	eP	15	19.00	0.5
MNG	60.69	140	P	12	07.50	-2.6X		PMO	84.76	105	iP	14	33.80	2.3					e	19	08.00	
CAW	60.69	141	Pd	12	08.10	-2.0			1.4s	940.00nm				6.4mb					eS	25	41.00	
WDW	60.73	141	P	12	07.90	-2.4		JIZN	84.86	287	ePc	14	33.10	1.1		GBZT	95.09	311	eP	15	19.70	-0.1
MTW	60.99	141	P	12	10.10	-2.0		TDD	84.87	282	iP+	14	33.30	1.2		ALE	95.14	1	eP	15	19.00	-0.2
TTH	61.00	138	P	12	11.70	-0.5		ABHA	84.91	288	iPc	14	34.70	2.1			0.8s	52.00nm				5.9mb
BLW	61.09	141	P	12	10.80	-2.0		ARO	84.94	281	iP+	14	33.40	0.9		ELL	95.23	307	iP	15	19.50	-1.2
PGZ	61.20	140	P	12	11.80	-1.7		TPT	85.03	105	iP	14	35.10	2.3		KHL	95.35	309	iP	15	20.00	-1.1
AFI	61.68	107	ePc	12	17.03	-0.2			1.4s	1010.00nm				6.5mb		ISK	95.35	311	iP	15	20.10	-0.8
			eS	20	29.79			VAH	85.03	105	iP	14	34.80	2.0		ITU	95.38	311	iPc	15	16.00	-5.0X
FRU	62.36	318	iPc	12	22.50	1.2			1.4s	675.00nm				6.3mb		CFR	95.42	316	eP	15	20.50	-0.6
			iS	20	37.00			RUV	85.27	105	iP	14	36.20	2.2		KSL	95.57	306	ePn	15	20.00	-2.0
SMY	63.00	29	ePc	12	25.00	-0.2			1.4s	805.00nm				6.4mb		BIR	95.61	317	eP	15	23.00	1.0
QUE	64.10	302	iPc+	12	33.10	0.0		COL	85.40	25	ePc	14	32.74	-1.1		PSN	95.62	314	eP	15	21.00	-1.1
			eS	20	57.00						epPd	15	08.99	143kmX		CTT	95.81	312	eP	15	21.00	-2.0
			eS	21	13.40						esP	15	22.56			DST	95.87	310	eP	15	22.00	-1.4
ADK	67.36	33	iPc	12	52.20	-1.0					eS	24	40.86			DMK	96.21	312	eP	15	23.70	-1.1
	0.8s	1095.90nm				6.8mb					eSKS	24	49.74			VRI	96.30	316	ePc	15	24.50	-0.6
TIK	69.23	0	iPc	13	03.00	-1.4					esS	25	48.18			EDC	96.35	311	eP	15	20.00	-5.5X
			eS	21	53.00			F8A	85.40	25	P	14	32.60	-1.2		YER	96.48	308	iP	15	25.70	-0.5
DRV	69.33	175	eP	13	05.00	-0.1			0.8s	100.00nm				5.7mb		LOF	96.83	340	iPd	15	25.51	-1.6
MAIO	71.49	307	iPc+	13	19.00	0.0					pP	14	57.60	94kmX		JMB	96.97	313	iPc	15	28.00	-0.2
	0.4s	73.21nm				5.8mb		MID	85.75	31	eP	14	36.60	1.0		BUC	96.99	315	iPc	15	28.00	-0.2
			eS	22	24.00			TOA	85.96	28	ePc	14	36.90	0.2		IZM	97.10	309	eP	15	27.80	-1.1
KHI	71.79	305	iP+	13	20.80	-0.1		OBN	89.01	325	iPc+	14	50.00	-1.4		RKT	97.23	113	iP	15	33.10	3.4X
HON	74.12	69	ePc	13	35.07	0.7			1.0s	1600.00nm				7.0mb			1.4s	270.00nm				6.5mb
			esP	14	24.40				Z 20s	5.50um				6.0Msz		CMP	97.57	316	ePd	15	29.00	-1.9
OPA	74.15	68	P	13	35.60	1.1					pP	15	28.00	149kmX		KAP	97.58	306	ePb	15	30.20	-0.9
RAR	74.19	113	P	13	36.00	1.2					sP	15	39.00			EZN	97.59	310	eP	15	29.70	-1.4
ILT	74.72	18	iPc	13	37.00	0.0					iS	25	16.00			PRK	97.73	310	ePb	15	41.00	9.3X
			iS	23	00.00			KVT	90.09	311	iP	14	57.30	0.5		PVL	97.74	314	iPc	15	33.00	1.3
SHI	76.37	300	eP	13	46.00	-1.3		HYT	90.14	29	P	14	57.10	0.4		DIM	97.81	313	eP	15	31.00	-1.0
SDN	77.58	34	iPc	13	52.80	-0.3		QUTJ	90.64	301	P	15	00.00	0.4		MDB	97.85	317	iPd	15	32.00	-0.1
BJA	77.79	296	iPn	13	54.10	-0.8		JARJ	90.65	302	Pc	14	59.90	0.3		RDO	97.96	312	ePn	15	31.20	-1.5
			eSn	14	29.70			AYN	90.78	299	iPc	15	02.00	1.9		KDZ	97.97	312	iP	15	32.00	-0.7
BRF	77.82	296	ePn	13	54.70	-0.4		BHL	90.80	304	Pc	15	00.00	-0.3		DRA	98.23	316	iP	15	34.00	0.2
BEE	77.87	296	iPn	13	55.10	-0.3					S	25	20.00			PLD	98.41	313	eP	15	34.00	-0.7
TEH	77.91	306	eP	13	57.00	1.3		BURJ	90.80	302	P	14	59.20	-1.1		RZN	98.47	313	iPc	15	34.00	-1.3
DHR	78.23	296	iPc	13	56.60	-0.7		KFNJ	90.90	302	Pc	15	01.20	0.6		UZH	98.69	320	iPc	15	37.00	1.2
KER	81.30	304	eP	14	13.50	-0.3		INK	90.97	22	iPc	14	59.10	-1.1		PGB	98.71	313	iPc	15	35.00	-1.2
RYD	81.35	295	iPc	14	14.50	0.4			0.7s	158.00nm				6.3mb		DAG	98.86	353	iPc+	15	35.00	-1.1
TTA	81.53	27	iPc	14	15.20	0.9		NAI	91.39	269	iPc	15	05.50	2.0			0.6s	260.00nm				7.0mb
TAB	82.14	308	iPc+	14	19.20	1.1			1.0s	50.00nm				5.6mb			Z 21s	3.01um				5.8Msz
KDC	82.39	32	iPc	14	19.30	0.6		SRFA	91.49	299	iPc	15	04.40	1.0		NPS	98.89	306	ePb	15	37.00	-0.1
SLY	82.68	305	iPd	14	20.50	-0.2		HOL	91.59	299	iPc	15	06.70	2.9X		DEV	98.91	317	iPd	15	37.00	0.1
			ipP	14	43.00	84kmX		SIT	91.65	33	P	15	03.90	0.4		MMB	99.22	313	ePc	15	37.00	-1.5
			isP	15	00.00			BADA	91.68	298	iPc	15	04.70	0.5		OUR	99.27	311	ePc	15	37.00	-1.7
			iPP	17	20.00			KEV	91.71	340	ePc	15	02.72	-0.9		VTS	99.40	314	iPc	15	39.00	-0.4
			iS	24	21.00				1.0s	584.00nm				6.7mb		SRS	99.41	312	ePc	15	37.60	-1.8
			esPP	25	23.00						epPd	15	38.48	139kmX		LWI	99.42	268	iP+	15	41.00	0.8
			iPPS	25	47.00						ePP	19	28.00			PAIG	99.58	311	ePc	15	38.90	-1.2
			eSS	28	40.00						eSKS	25	20.15			KK8	99.64	313	iPc	15	39.00	-1.4
			iSSS	33	07.00						epPS	26	26.36			PLG	99.67	311	ePn	15	38.30	-2.3
SBA	82.74	172	iPc+	14	21.10	0.9					ePS	27	50.13			BUL	99.73	250	iPd	15	40.20	-1.1
	1.0s	428.00nm				6.2mb		KAS	91.78	311	iPc	15	05.30	0.7					iPP	19	44.50	
MAW	82.91	201	iPc	14	21.40	0.2		PUL	91.98	330	iPc	15	04.00	-0.9					iPKKP	31	54.80	
			i	14	26.70	17kmX					eS	25	48.00			KRA	99.83	322	iPc	15	40.10	-0.9
BRW	83.08	18	iPc	14	23.30	1.3		SPA	92.28	180	ePc	15	07.20	0.7			1.0s	205.00nm				6.6mb
IMA	83.11	24	iPc	14	23.50	1.0			1.0s	290.00nm				6.4mb					e	15	50.90	34kmX
AFR	83.14	108	iP	14	25.40	2.1			Z 20s	6.53um				6.1Msz					e	16	19.00	
PPT	83.34	108	iP	14	26.20	1.9					e	15	24.90	62kmX					i	20	43.00	
	1.6s	142.00nm				5.6mb		SOD	92.32	338	iP	15	05.20	-1.3		SPC	99.87	321	iPKP	15	41.70	0.2
	Z 18s	2.00um				5.5Msz		ANTO	92.65	310	ePc	15	08.21	-0.4					i	19	37.90	
PAE	83.34	108	iP	14	26.60	2.3					esPd	15	58.86			SLR	99.88	244	iPc	15	41.00	-0.9
PPN	83.47	108	iP	14	27.00	2.0					ePP	18	51.89				1.0s	150.00nm				6.5mb
	1.6s	1420.00nm				6.6mb		KBS	92.65	350	iPc	15	07.40	-0.4			Z 20s	3.90um				5.9Msz
BHD	83.52	303	iPd	14	25.00	0.0		B8TK	92.68	310	iPc	15	08.00	-0.8					i	15	43.00	6kmX
			i	15	05.00	160kmX		MBC	93.03	13	iPc	15	09.20	-0.4		KNT	99.92	312	ePc	15	40.40	-1.2
			iS	24	29.00				1.1s	270.00nm				6.4mb		ATH	99.92	309	ePb	15	40.00	-1.7
			iPS	25	30.00			SUF	93.46	333	iP	15	10.50	-1.3		THE	99.98	312	ePc	15	40.30	-1.6
TVO	83.66	108	iP	14	28.60	2.5X			0.8s	234.80nm				6.5mb		VAM	100.00	306	ePdiff	15	42.00	-0.2
	1.6s	1420.00nm				6.6mb		CLK	93.66	255	iPd	15	12.40	-1.3		NEO	100.05	310	ePdiff	15	40.00	-2.3
QASM	84.15	296	iPc	14	28.70	0.3		AKSR	93.78	294	eP	15	15.00	1.0		TIM	100.09	317	iPdiff	15	41.00	-1.3
PWA	84.17	28	eP	14	35.10	7.4X			0.1s	250.00nm				7.4mb X		VAY	100.13	313	iPdiff	15	41.00	-1.5
BKR	84.46	312	iPd	14	31.00	1.2		AMAN	93.84	294	iPd	15	15.00	0.8			1.2s	0.60nm				4.0mb X
			iS	24	39.00			ASW	93.87	294	eP	15	30.00	15.6X		RGS	100.16	336	iPdiff	15	41.20	-1.0
OBO	84.49	282	iP+	14	31.40	1.2					eS	25	40.00			YKA	100.20	25	ePdiff	15	43.20	0.8
PMR	84.52	28	P	14	29.00	-0.4		AGAL	93.97	294	iPd	15	15.36	0.5		GRG	100.33	312	ePdiff	15	41.70	-1.8
	0.8s	758.62nm				6.6mb		TRO	94.46	341	iPd	15	15.19	-1.1		PGC	100.34	40	ePdiff	15	44.00	0.7

22d 05h

1.0s 100.00nm 6.3mb
LIT 100.44 311 ePdiff15 42.40 -1.6
PRY 100.55 243 iPdiff15 44.30 -0.7
0.8s 28.13nm 5.9mb
NRA0 100.67 333 Pdiff 15 42.40 -2.1
NB2 100.69 334 Pdiff 15 42.90 -1.7
SKO 100.81 313 iPdiff15 44.50 -1.1
1.3s 190.00nm 6.5mb
Z 18s 1.18um 5.4Msz
N 17s 1.75um
E 18s 2.71um
i 15 45.80
i 16 24.00
iPP 19 50.00
i 20 26.00
iSKS 26 11.00
i 27 17.00
iSP 28 41.00
i 29 48.00
iSS 34 20.00
iSSS 37 58.00
LR 08 57.00
BEO 100.84 316 ePdiff15 44.50 -1.1
i 20 01.00
KZN 100.94 312 ePdiff15 44.00 -2.3X
8FS 101.17 243 iPdiff15 46.00 -1.7
i 18 29.00
ITM 101.47 309 ePdiff15 47.00 -1.7
SRO 101.48 320 iPdiff15 48.50 0.1
e 40 04.80
KKS 101.53 314 ePdiff15 48.50 -0.2
8LF 101.56 241 iPdiff15 48.00 -1.4
KBN 101.58 312 ePdiff15 47.20 -1.8
PHP 101.60 313 iPdiff15 47.60 -1.5
BCI 101.71 314 ePdiff15 49.70 0.2
KSP 101.83 323 iPdiff15 49.60 -0.3
1.0s 179.00nm 6.7mb
ePP 16 30.00
i 16 58.20
iS 20 02.50
iSS 20 42.50
e 28 41.00
LON 101.92 41 ePdiff15 49.54 -1.0X
epP 16 26.13
ePP 20 01.14
FHC 101.94 48 ePdiff15 51.80 1.1
TIR 102.10 313 ePdiff15 50.10 -1.2
ZST 102.15 320 i(Pdif15 51.20 -0.1
i 20 09.00
i 20 42.00
LACI 102.15 313 iPdiff15 50.20 -1.3
8ERA 102.20 312 ePdiff15 50.60 -1.1
TPE 102.25 312 ePdiff15 53.40 1.4
TTG 102.28 314 ePdiff15 51.00 -1.0
e 26 04.00
COP 102.28 329 iPdiff15 51.00 -0.7
1.0s 132.00nm 6.6mb
VLS 102.30 310 ePdiff15 51.00 -1.3
SRN 102.35 312 ePdiff15 52.00 -0.4
PNT 102.55 38 ePdiff15 53.00 -0.2
0.9s 58.00nm 6.4mb
VIE 102.60 321 iPdiff15 53.40 0.0
VKA 102.62 321 iPdiff15 54.70 1.2
WDC 103.06 48 ePdiff15 55.90 0.3
ePP 20 09.90
e 20 28.30
ePKKP 31 50.00
eSKKP 36 09.10
BRN 103.09 325 iPdiff15 56.50 1.1
ec 20 15.50
PRU 103.17 323 Pdiffc15 56.50 0.7
1.2s 123.80nm 6.6mb
e 15 58.00
BRG 103.22 324 iPdiff15 56.00 0.0
1.2s 220.00nm 6.9mb
i 16 11.00
i 16 29.00
e 19 06.00
e 20 15.00
e 28 59.00
BLS3 103.51 333 ePdiff15 57.50 0.2
BER 103.55 335 ePdiff15 56.50 -0.8
ASK 103.56 335 ePdiff15 57.00 -0.3
PTJ 103.59 318 ePdiff15 54.00 -3.9X
e 20 15.80
e 31 48.10
ZAG 103.60 318 ePdiff15 58.30 0.5

CLL 103.62 324 iPdiff15 57.70 -0.1
1.8s 280.00nm 6.9mb
Z 17s 3.50um 6.0MszX
epP 16 38.00
eSKS 26 24.00
PKKP 31 50.60
PKKP 32 12.60
P'P' 40 07.00
MIN 103.81 48 ePdiff15 58.90 -0.3
e(PP) 20 16.10
ePKKP 31 49.70
eSKKP 36 06.60
PCC 103.93 51 ePdiff15 59.90 0.4
BRK 103.94 50 e(Pdif16 00.00 0.5
8KS 103.96 50 iPdiff16 01.60 1.9
0.9s 73.00nm 6.6mb
Z 20s 3.70um 5.9Msz
N 20s 1.30um
E 20s 2.30um
epP 16 41.00
iPP 20 19.00
iPPP 23 20.00
iSKS 26 28.00
i 27 10.00
iPS 29 11.00
iSS 34 58.00
iLQ 44 57.00
KHC 104.05 322 ePdiff16 00.00 0.1
1.0s 39.00nm 6.3mb
e 16 39.90
S 26 27.00
KMR 104.08 321 iPdiff16 00.30 0.4
i 16 41.00
ORV 104.09 48 ePdiff15 59.80 -0.4
e(PP) 20 18.00
e(PKKP31 50.80
eSKKP 36 04.50
VBY 104.18 318 iPdiff16 00.60 0.2
i 20 16.90
GCC 104.35 51 e(Pdif16 02.00 0.6
WET 104.48 322 iPdiff16 01.80 0.1
1.3s 144.00nm 6.8mb
LJU 104.49 319 ePdiff16 01.50 -0.3
e 20 18.00
eS 26 25.00
i(sS) 27 36.00
MHC 104.54 51 ePdiff16 03.00 0.5
i 16 10.12
esP 16 46.00
ARN 104.63 51 Pdiff 16 03.40 0.7
HOF 104.65 324 ePdiff16 02.30 -0.2
1.7s 257.00nm 6.9mb
CEY 104.66 318 ePdiff16 02.40 -0.2
EDM 104.77 33 iPdiff16 03.10 0.2
RIY 104.81 318 ePdiff16 03.30 0.1
iPP 20 18.10
eSKS 26 28.30
ePKKP 31 47.30
SAO 104.84 51 iPdiff16 07.00 3.4X
isP 16 43.00
iPP 20 26.00
iSKS 26 35.00
e 27 14.00
e 28 24.00
iSP 29 19.00
esPS 30 01.00
i 31 15.00
esSS 35 25.00
eSSS 39 13.00
esSSS 39 56.00
iLQ 45 42.00
VOY 104.91 319 iPdiff16 03.10 -0.7
e 20 18.20
K8A 104.91 320 e(Pdif16 03.00 -0.9
1.2s 83.30nm 6.6mb
e 19 03.00
i 19 26.30
i 20 13.30
i 21 01.10
BHG 104.98 321 ePdiff16 03.90 -0.1
1.4s 77.00nm 6.5mb
RBL 104.99 319 Pdiffc16 03.20 -0.9
PRS 105.00 52 ePdiff16 05.40 1.0
TRI 105.10 319 ePdiff16 03.40 -1.1
e 19 20.40
e 20 09.10
TDS 105.14 312 Pdiff 16 05.20 0.3

LLA 105.27 51 ePdiff16 06.50 1.0
LLA 105.27 51 ePKP 20 20.80 1.6
ePKKP 31 47.00
e 32 03.80
eSKKP 36 01.10
GRF 105.28 323 ePdiff16 05.80 0.5
Z 20s 2.00um 5.7Msz
e 16 06.80
CMB 105.33 50 ePdiff16 05.66 -0.2X
ePP 20 27.74
CMB 105.33 50 ePKP 20 21.00 1.7
ePP 20 28.20
ePKKP 31 46.30
e 32 04.10
eSKKP 36 00.50
CMB 105.33 50 ePdiff16 05.33 -0.5X
epPd 16 41.09
FVI 105.44 320 Pdiff 16 05.00 -1.0
PRI 105.60 52 ePdiff16 08.50 1.3
PRI 105.60 52 ePKP 20 22.70 2.7X
ePKKP 31 46.30
e 32 02.50
CVI 105.76 311 PKP 20 22.20 2.2
SOI 105.79 311 Pdiffc16 07.50 -0.2
FUR 105.82 322 iPdiff16 09.20 1.5
FUR 105.82 322 iPKPc 20 20.50 0.6
0.9s 268.00nm
GMB 105.91 311 PKP 20 20.90 0.4
DUI 105.92 314 Pdiffd16 08.80 0.4
FRI 106.13 51 ePdiff16 09.80 0.5
FRI 106.13 51 ePKP 20 21.70 0.9
e 20 33.00
e 20 41.60
ePKKP 31 58.80
e 32 44.60
SDI 106.37 315 Pdiffc16 09.20 -1.1
SDI 106.37 315 PKPc 20 18.40 -2.8
RFI 106.37 314 PKP 20 05.00 -16.1X
ARV 106.40 317 PKP 20 18.40 -2.7X
OGA 106.47 320 ePdiff16 10.50 -0.4
1.0s 51.00nm 6.6mb
OGA 106.47 320 iPKPd 20 21.00 -0.4
1.0s 113.00nm
AZI 106.55 315 PKP 20 21.20 -0.2
SYP 106.56 53 ePdiff16 14.00 2.5X
ePP 20 23.00
e 20 45.00
ePKKP 31 44.00
WIT 106.56 327 ePdiff16 12.00 1.2
ePP 20 22.50
e 21 18.50
ePKKP 31 43.50
RSM 106.58 317 Pdiff 16 12.80 1.7
TNS 106.70 324 ePdiff16 11.80 0.2
ec 20 21.70
KVN 106.76 48 ePdiff16 12.50 0.1
iPP 20 23.00
ePSP 30 57.80
iPKKP 31 42.00
i 31 56.00
P'P' 39 37.00
WTS 106.85 327 ePdiff16 12.50 0.4
0.9s 76.00nm 6.8mb
ePP 20 20.00
eSP 29 37.00
eSPP 30 39.00
ePKKP 31 41.00
STU 106.86 323 ePdiff16 12.50 0.2
0.9s 36.97nm 6.5mb
OSS 107.10 321 ePdiff16 13.40 -0.2
SES 107.28 35 ePdiff16 15.00 0.8
KTD 107.30 324 ePdiff16 14.35 0.1
ABH 107.37 324 ePdiff16 14.65 0.1
SAX 107.38 321 ePdiff16 14.60 -0.4
ISA 107.45 52 ePdiff16 17.00 1.7
ePP 20 25.00
ePKKP 31 40.00
e 31 54.00
MME 107.67 318 Pdiffc16 17.30 1.0
DBN 107.70 327 ePdiff16 15.00 -0.9
epP 16 55.00
ePP 20 48.00
epPP 21 28.00
eSKS 26 44.00
eS 27 33.00
eSP 29 44.00
eSPP 30 42.00

SLE	107.70	322	ePdiff16	15.70	-0.4	
TNP	107.71	49	Pdiff 16	17.20	0.6	
	1.0s	19.17nm		6.2mb		
GWF	107.72	323	Pdiff 16	16.32	0.2	
GWF	107.72	323	PKP 20	23.00	-0.5	
RUP	107.74	324	ePdiff16	16.05	-0.2	
LLS	107.75	321	ePdiff16	16.50	-0.1	
BDI	107.79	318	PKP 20	22.80	-1.0	
FAI	107.82	310	Pdiffc16	15.40	-1.4	
ENN	107.91	326	ePdiff16	17.00	0.2	
	0.9s	67.00nm		6.8mb		
		ePP	20	24.50		
		eSP	29	49.00		
		eSPP	30	50.00		
		ePKKP	31	38.50		
AKU	107.92	346	iPdiff16	19.30	2.8X	
	1.1s	40.51nm		6.5mb		
AKU	107.92	346	iPKP 20	24.90	1.7	
	0.9s	50.42nm				
MEM	107.93	325	iPdiff16	17.20	0.3	
		e	16	56.40		
		i	20	24.60		
		e	29	49.70		
		e	31	38.40		
FEL	107.95	322	Pdiff 16	16.88	-0.4	
FEL	107.95	322	PKP 20	23.04	-1.0	
CLC	108.09	51	ePdiff16	20.00	1.9	
		ePP	20	26.00		
		ePKKP	31	38.00		
		e	31	52.00		
PAS	108.10	53	ePdiff16	15.00	-3.1X	
		ePP	20	25.00		
		ePPP	23	23.00		
		eSKS	26	44.00		
		eSKKS	27	44.00		
		eS	29	52.00		
		ePPS	31	18.00		
		eSS	35	40.00		
		eSSS	40	59.00		
		eLg	46	20.00		
		eLR	50	32.00		
PAS	108.10	53	ePdiff16	20.58	2.4X	
		ePP	20	25.00		
		ePPP	23	23.00		
		eSKS	26	44.43		
		eSKKS	27	44.00		
		eS	29	52.00		
		ePPS	31	18.00		
		eSS	35	40.00		
		eSSS	40	59.00		
		eLg	46	20.00		
		eLR	50	32.00		
CDF	108.17	323	PKP 20	23.28	-1.1	
CDF	108.17	323	Pdiff 16	18.18	0.0	
SBB	108.23	52	ePdiff16	20.00	1.2	
		ePP	20	35.00		
		e	20	48.00		
		ePKKP	31	37.00		
		e	31	50.00		
WLF	108.28	325	Pdiffc16	19.20	0.7	
		e	19	34.50		
		e	20	26.00		
		e	31	37.20		
		e	31	52.30		
BOB	108.29	319	Pdiff 16	15.20	-3.6X	
VAI	108.30	320	Pdiff 16	13.30	-5.4X	
ECH	108.32	323	Pdiff 16	18.36	-0.5	
ECH	108.32	323	PKP 20	23.49	-1.1	
LRM	108.34	40	ePdiff16	19.00	-0.3	
LRM	108.34	40	ePKP 20	25.40	0.4	
BBS	108.43	322	Pdiff 16	18.43	-0.9	
MOF	108.50	323	Pdiff 16	19.25	-0.5	
MOF	108.50	323	PKP 20	24.04	-1.0	
LVI	108.62	311	PKP 20	26.50	1.1	
BSF	108.71	323	PKP 20	24.49	-1.0	
BSF	108.71	323	Pdiff 16	20.14	-0.5	
MMK	108.74	321	ePdiff16	20.90	-0.1	
UCC	108.77	326	iPdiff16	21.00	0.3	
		e	19	30.00		
		e	20	25.20		
		e	20	51.00		
		e	23	13.00		
		e	27	39.00		
		e	30	05.00		
RVR	108.78	53	ePdiff16	21.00	-0.2	
		ePP	20	26.00		
		e	20	52.00		
		ePKKP	31	35.00		
		e	31	48.00		
LOMF	108.90	322	Pdiff 16	20.86	-0.6	
LOMF	108.90	322	PKP 20	24.84	-1.0	
HAU	108.91	323	ePdiff16	21.30	-0.1	
	1.0s	12.00nm		6.1mb		
SNF	108.95	326	Pdiffd16	22.90	1.4	
		e	19	33.00		
		e	20	26.30		
DOU	108.97	325	iPdiff16	23.00	1.4	
	1.3s	278.60nm		7.3mb		
		e	19	33.30		
		i	20	26.50		
		e	20	58.00		
		e	24	11.00		
		e	27	42.00		
		e	29	17.00		
		e	30	02.00		
		e	31	35.00		
VITF	109.03	323	PKP 20	25.28	-0.6	
DIX	109.07	321	ePdiff16	22.60	0.1	
FIN	109.32	319	Pdiff 16	22.14	-1.2	
FIN	109.32	319	PKP 20	25.65	-1.0	
EDU	109.33	334	ePdiff16	23.70	0.7	
	1.4s	202.00nm				
BNG	109.33	275	iPdiff16	23.40	-0.7	
	0.9s	77.00nm				
		id	20	15.00		
		ic	20	26.80		
		id	20	58.90		
PLM	109.37	54	ePdiff16	29.00	5.0X	
		ePP	20	28.00		
		e	20	56.00		
		ePKKP	31	35.00		
		e	31	46.00		
LSD	109.50	320	Pdiff 16	25.12	0.7	
LSD	109.50	320	PKP 20	27.50	0.3	
CVF	109.52	317	ePdiff16	24.00	-0.3	
	1.2s	23.80nm				
ESY	109.53	333	ePdiff16	24.30	0.3	
	1.5s	125.00nm				
ESY	109.53	333	ePKPd 20	26.50	-0.1	
IMI	109.65	318	Pdiff 16	24.71	-0.2	
IMI	109.65	318	PKP 20	26.78	-0.5	
ELO	109.68	334	ePdiff16	25.10	0.4	
	1.4s	202.00nm				
BAR	109.71	54	ePdiff16	27.00	1.6	
		ePP	20	28.00		
		ePKKP	31	33.00		
		e	31	44.00		
LPG	109.74	320	ePdiff16	25.60	0.1	
	1.2s	23.80nm				
TPC	109.80	53	ePdiff16	27.00	1.2	
		ePP	20	29.00		
		e	21	00.00		
		ePKKP	31	32.00		
		e	31	44.00		
EBL	109.81	333	ePdiff16	25.90	0.7	
EBL	109.81	333	ePKP 20	27.80	0.7	
FFC	109.83	28	ePdiff16	26.00	0.7	
	1.8s	105.00nm				
FFC	109.83	28	ePKP 20	27.00	-0.2	
	1.1s	101.00nm				
ENR	109.83	319	Pdiff 16	24.91	-0.8	
ENR	109.83	319	PKP 20	27.09	-0.6	
DOI	109.83	319	PKPd 20	23.80	-3.9X	
STV	109.89	319	PKP 20	26.47	-1.3	
PZZ	109.93	319	Pdiff 16	24.09	-2.1	
PZZ	109.93	319	PKP 20	26.68	-1.3	
EAU	109.95	333	ePdiff16	26.60	0.8	
	1.1s	59.00nm				
EAU	109.95	333	ePKP 20	27.40	0.0	
RRL	109.96	320	Pdiff 16	27.07	0.6	
RRL	109.96	320	PKP 20	28.52	0.4	
BNI	109.98	320	Pdiffc16	33.60	7.2X	
BNI	109.98	320	PKPd 20	25.80	-2.2	
REY	110.11	347	ePKP 20	28.20	0.8	
FOUF	110.13	319	PKP 20	18.00	-10.1X	
		e	20	29.20		
		e	21	07.90		
EKA	110.13	333	Pdiffc16	26.40	-0.2	
	1.3s	68.60nm				
EAB	110.13	334	ePKP 20	26.60	-1.1	
ESK	110.16	333	ePdiff16	25.50	-1.2	
CGL	110.40	314	PKP 20	29.00	0.1	
FRF	110.62	319	ePdiff16	28.80	-0.3	
	1.0s	9.60nm				
LOR	110.74	323	ePdiff16	29.20	-0.4	
	1.2s	23.80nm				
LBF	110.80	323	ePdiff16	29.60	-0.3	
	1.2s	36.80nm				
LMR	110.80	318	ePdiff16	29.80	-0.1	
	1.0s	8.00nm				
LRG	110.85	319	ePdiff16	30.20	0.1	
	1.0s	12.00nm				
SMF	111.04	322	ePdiff16	31.00	0.1	
	1.2s	26.70nm				
SSF	111.05	323	ePdiff16	30.80	-0.1	
	1.0s	12.00nm				
GLA	111.09	53	ePdiff16	34.00	2.5X	
		ePP	20	31.00		
		e	21	10.00		
		ePKKP	31	28.00		
		e	31	38.00		
AVF	111.27	323	ePdiff16	31.80	-0.1	
	1.0s	20.00nm				
BGF	111.69	323	ePdiff16	33.60	-0.2	
	1.1s	14.60nm				
MAF	112.02	322	ePdiff16	35.40	0.1	
	1.0s	12.80nm				
TCF	112.20	323	ePdiff16	36.40	0.3	
	1.0s	16.00nm				
LDF	112.40	326	ePdiff16	37.10	0.2	
	1.2s	35.70nm				
FLN	112.51	326	ePdiff16	37.40	0.1	
	1.0s	16.00nm				
LSF	112.63	323	ePdiff16	38.00	0.0	
	1.2s	14.80nm				
DMU	112.73	333	ePdiff16	38.00	-0.2	
GRR	112.92	326	ePdiff16	39.80	0.6	
	1.3s	43.30nm				
CAF	112.95	321	ePdiff16	40.40	0.9	
	1.2s	11.90nm				
FRB	112.95	8	ePKP 20	32.00	-0.8	
	0.8s	74.00nm				
DLE	112.95	332	ePdiff16	38.00	-1.2	
RJF	113.11	322	ePdiff16	41.10	1.0	
	1.0s	12.00nm				
ETA	113.17	332	ePKP 20	33.60	0.0	
LPF	113.22	326	ePdiff16	41.20	0.7	
	1.1s	24.40nm				
DCN	113.26	333	iPKPd 20	33.20	-0.5	
	0.8s	136.00nm				
ECP	113.57	331	ePKP 20	34.00	-0.4	
	0.8s	130.00nm				
ECB	113.65	332	ePKP 20	34.20	-0.4	
	0.9s	86.00nm				
ETER	113.67	319	e(PKP)20	35.40	0.4	
RSSD	114.43	39	ePdiff16	47.00	0.7	
RSSD	114.43	39	iPKP 20	36.00	-0.7	
		iPKKP	30	16.00		
		i	30	23.00		
ESEL	114.78	316	ePKP 20	38.00	0.8	
VAL	115.54	333	ePKP 20	38.00	-0.2	
		PcP	21	44.00		
		S	27	24.00		
		e	31	12.00		
GOL	115.66	43	ePdiff16	51.80	-0.1	
GOL	115.66	43	iPKP 20	39.30	0.1	
		i	20	44.00		
		i	20	55.00		
		iPKKP	31	13.00		
RSON	116.16	28	ePdiff16	52.00	-1.5	
RSON	116.16	28	iPKP 20	38.20	-1.3	
		iPP	21	44.00		
		iPKKP	30	15.00		
ALQ	116.92	49	ePdiff17	00.00	2.4X	
ALQ	116.92	49	iPKP 20	42.10	0.4	
	Z 20s	1.68um		5.7Msz		
		ePP	21	48.00		
		e	31	13.30		
		eLg	51	16.00		
ECRI	116.98	321	ePKP 20	42.20	0.8	
ECHE	117.50	317	ePKP 20	43.20	0.8	
ETOR	117.61	319	ePKP 20	43.20	0.5	
ACU	117.64	316	ePKP 20	43.80	1.1	
EALH	118.65	316	e(PKP)20	44.60	0.0	
EVIA	119.01	317	ePKP 20	46.40	1.0	
GUD	119.07	320	ePKP 20	46.40	0.9	
TOL	119.40	319	iPKPd 20	46.50	0.5	
	1.2s	250.00nm				
		iPP	22	11.00		
		ePPP	25	08.00		
		iPS	31	36.00		

22d 05h

			iPPS	32	38.00	
			eSS	38	24.00	
EMON	119.45	324	ePKP	20	46.20	0.2
ENIJ	119.63	315	e(PKP)	20	46.80	0.3
ERUA	119.95	323	ePKP	20	47.50	0.5
EBAN	120.12	317	ePKP	20	47.60	0.2
AFC	120.41	316	ePKP	20	47.20	-1.0
CRT	120.48	316	iPKP	20	48.50	0.3
STS	120.49	324	ePKP	20	49.40	1.5
ASMO	120.50	316	iPKPd	20	47.50	-0.8
APHE	120.66	316	iPKPc	20	48.50	-0.2
ACHM	120.68	316	iPKPc	20	48.00	-0.6
TAF	120.79	313	iPKPd	20	51.00	2.1
			i	21	27.00	
			i	22	15.00	
ALOJ	120.87	316	iPKPd	20	48.50	-0.5
ATEJ	120.91	316	iPKPc	20	48.50	-0.6
EZAM	121.02	324	ePKP	20	49.50	0.5
MZX	121.16	61	(PKP)	20	49.72	0.0
MAL	121.28	316	iPKPc	20	49.00	-0.6
			i	22	56.00	
			i(S)	30	54.00	
EHOR	121.28	318	ePKP	20	50.00	0.4
EPRU	121.72	317	ePKP	20	50.50	0.0
SCH	121.76	10	ePKPc	20	49.60	-0.4
	0.8s	145.00nm				
LIJA	121.88	317	ePKP	20	56.00	5.1X
ALJ	122.13	317	ePKP	20	57.00	5.6X
EJIF	122.15	316	ePKP	20	51.60	0.3
SRO	122.18	316	ePKP	20	50.00	-1.3
GIBL	122.28	317	ePKP	20	57.00	5.4X
OJEN	122.38	316	ePKP	20	48.00	-3.8X
MOMI	122.39	316	ePKP	20	54.00	2.2
EVAL	122.41	318	ePKP	20	53.00	1.2
CNIL	122.59	317	ePKP	20	54.00	1.9
NKM	122.62	315	iPKP	20	47.00	-5.2X
			i	20	52.00	
MEO	122.76	45	iPKPc	20	52.20	-0.3
SIO	123.85	43	ePKPc	20	54.50	-0.2
TUL	124.12	43	ePKP	20	53.50	-1.7
	1.0s	121.30nm				
			LR	47	30.00	
RLO	124.50	42	ePKP	20	55.80	-0.1
AGX	125.19	61	(PKP)	21	01.00	3.4X
UYO	125.98	44	iPKPd	20	58.00	-0.9
MRX	126.88	63	(PKP)	21	02.50	1.6
LEGH	127.79	279	ePKP	21	04.00	1.2
GAC	127.82	21	ePKP	20	47.00	-14.9X
			pP	21	01.50	
KUK	127.90	280	ePKPd	21	03.00	-0.1
	6.0s	10.00nm				
			e	33	06.00	
CRX	128.32	63	(PKP)	21	05.99	1.9
IIC	128.58	62	(PKP)	21	05.54	0.9
III	128.85	64	(PKP)	21	07.85	2.9X
ACX	128.95	66	(PKP)	21	07.26	2.3
IIT	129.67	63	(PKP)	21	08.00	1.4
IISM	130.51	63	(PKP)	21	09.39	1.6
SCP	130.99	26	ePKP	21	07.22	-0.9
			epPKPd	21	45.87	
			ePP	23	20.32	
LVVM	131.06	61	(PKP)	21	11.13	2.3
OXX	131.74	65	(PKP)	21	13.84	3.4X
HRV	131.97	20	ePKP	21	09.85	-0.1
			epPKPd	21	47.51	
			ePP	23	29.85	
			eSKS	28	09.44	
			eS	30	09.29	
			esS	31	19.47	
KIC	132.18	281	PKP	20	53.82	-17.4X
PNJ	132.43	23	iPKP	20	56.90	-14.0X
			i	21	11.70	
			pPKP	21	21.40	
			PKS	24	23.70	
LIC	132.48	281	PKP	20	54.10	-17.7X
EVV	132.50	62	(PKP)	21	14.00	2.4
BLA	132.58	31	iPKP	21	11.50	0.1
			eSKP	33	32.00	
CBN	133.30	28	ePKP	21	01.00	-11.6X
			e	21	13.00	
			e	23	37.00	
			e	24	26.00	
GGC	133.89	314	iPKP	21	15.30	1.2
			iPP	23	44.20	
CTFE	134.14	314	iPKP	21	16.20	1.7
			iPP	23	47.60	
TBT	135.18	316	iPKP	21	18.00	1.5
			iPP	23	54.00	
SCX	135.53	63	(PKP)	21	22.50	5.1X
CVVD	135.71	315	iPKPd	21	20.00	2.4
			iPP	23	57.90	
TPX	136.51	66	(PKP)	21	21.11	1.8
LNV	143.59	152	iPKPd	21	29.00	-2.5X
LCCH	143.91	151	iPKPd	21	30.00	-2.1
GCM	143.92	52	PKP	21	31.20	-1.3
CHCH	143.96	153	iPKPd	21	31.00	-1.3
TACH	144.06	152	iPKPd	21	31.00	-1.4
RFA	144.18	156	ePKPc	21	31.00	-1.6
IHA	144.24	151	ePKP	21	31.00	-1.7
PCH	144.28	153	iPKPc	21	31.40	-1.5
SAN	144.36	152	iPKPc	21	31.40	-1.5
ROCH	144.59	152	iPKPc	21	32.60	-1.0
FCH	144.63	153	iPKPc	21	33.50	-0.3
AR6	144.75	68	iPKPd	21	33.20	-1.0
JACH	145.03	152	iPKPc	21	34.10	-0.1
SRA	145.30	69	iPKPc	21	36.00	0.8
SJS	145.71	69	iPKPd	21	37.00	1.1
LCR2	145.82	69	iPKPc	21	36.50	0.3
BUS	146.11	69	iPKPc	21	37.00	0.1
RTCV	146.66	154	ePKPd	21	39.70	2.9X
ZON	146.86	153	ePKP	21	38.00	0.8
CFA	147.01	154	ePKPd	21	37.80	0.4
RTLL	147.14	153	ePKPc	21	37.20	-0.4
MRA	147.34	158	ePKPc	21	38.00	0.2
RTRS	147.64	151	ePKPc	21	40.00	1.7
DVD	147.69	70	ePKP	21	40.30	1.4
UPA	150.23	68	iPKPc+	21	42.00	-0.8
	1.6s	1400.00nm				
	Z 20s	0.96um				5.6Msz
CYA	150.80	154	ePKPc	21	44.00	0.7
ANT	152.15	141	iPKP	21	40.50	-4.9X
			i	21	48.00	
			i	21	53.10	
GGP	153.19	86	PKPd	21	49.30	1.4
RECU	153.25	87	ePKP	21	49.60	1.7
QUR	153.25	86	ePKP	21	49.10	1.3
COTA	153.40	85	ePKP	21	49.10	1.0
NNA	153.44	112	iPKPc	21	48.30	0.8
	1.0s	45.00nm				
CAYA	153.77	85	ePKP	21	49.70	1.0
SLA	154.11	151	ePKPc	21	48.80	0.5
PSO	154.30	82	iPKPc	21	50.00	0.8
MGP	154.85	36	PKP	21	49.00	-0.2
PNP	155.05	35	PKP	21	49.40	-0.1
CHN	155.19	73	iPKPc	21	51.00	0.9
SJG	155.31	34	ePKP	21	50.50	0.6
ARE	156.10	127	ePKP	21	53.00	1.6
BOG	156.77	73	iPKPc	21	53.00	0.6
			iPP	26	01.00	
BMG	156.87	66	iPKPd	21	57.00	4.8X
BMA	158.39	200	ePKP	21	55.30	1.6
			i	22	07.00	
			e	22	16.40	
			i	22	30.80	
			e	26	10.40	
MGH	158.51	28	ePKP	21	53.00	-0.9
CNCB	158.57	133	iPKPc	21	56.50	1.8
			i	26	08.00	
LPB	158.66	133	PKPc	21	56.70	2.1
	1.1s	488.61nm				
			i	26	09.00	
ZOBO	158.81	132	iPKPc	21	56.00	1.0
	1.3s	205.05nm				
			i	26	13.00	
			LR	48	00.00	
VAO	158.88	193	ePKP	21	55.20	0.9
			e	21	56.50	
			epPKP	22	19.60	
			e	22	31.70	
			e	26	13.00	
BRAS	158.98	196	ePKP	21	52.60	-2.0
DEG	159.39	26	ePKP	21	54.00	-0.9
CCH	159.47	138	PKP	21	57.90	2.6X
			i	22	26.40	
			i	22	37.20	
MGG	159.63	27	ePKP	21	54.30	-0.8
BBL	159.90	28	ePKP	21	55.00	-0.4
FDF	160.74	28	iPKPc	21	57.24	0.9
	0.6s	0.70nm				
ITR	165.17	244	iPKP	22	00.40	-0.3
			e	22	07.70	
			e	22	18.30	
BDF	166.16	196	ePKP	22	00.99	-0.5
			epPKPd	22	39.47	
BAO	166.21	196	ePKP	22	01.30	-0.3
SOB1	167.12	237	iPKPc	22	02.90	0.7
			e	22	18.00	
			e	22	27.00	
			e	22	43.00	
			e	23	05.10	
			e	26	57.30	
ATB	178.95	160	PKPc	22	06.30	-0.3
	S.D. = 1.1	on 578 of 641 obs.				

% JUL 22, 1989 05h 23m 07.35± 1.32s
38.658 N ± 7.8km 30.568 E ±14.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.89	248	iPg	23	23.00	-1.4
			iSg	23	37.50	
BCK	1.20	179	iPn	23	29.00	-0.7
GPA	1.64	353	iPn	23	36.00	-0.4
DST	1.78	303	ePn	23	39.00	0.6
ELL	1.98	196	ePn	23	42.00	0.7
YER	2.36	231	ePn	23	48.00	1.2
EDC	2.69	310	ePn	23	56.00	4.6X
	S.D. = 1.3	on 6 of 7 obs.				

? JUL 22, 1989 05h 27m 29.23± 5.68s
31.246 S ±20.4km 68.659 W ±21.8km
DEPTH = 91.7 ± 57.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.18	117	iPd	27	42.80	-0.1
RTCB	0.27	207	iPd	27	43.10	0.1
			S	27	54.00	
CFA	0.51	135	iPd	27	44.50	0.0
			S	27	57.00	
RTCV	0.62	170	iPd	27	16.00	-29.5X
			S	27	24.30	
RTBS	0.80	238	e(P)	27	47.00	0.0
			S	28	01.40	
RTRS	1.28	327	iPd	27	52.60	0.0
			S	28	11.20	
	S.D. = 0.1	on 5 of 6 obs.				

? JUL 22, 1989 05h 37m 13.04± 3.83s
34.888 N ±30.3km 139.275 E ±10.9km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.2 (JMA). Felt (I JMA) at Ajiro.

AJI	0.21	317	iPd	37	17.50	0.1
			iS	37	19.50	
CHJJ	1.18	349	P	37	34.90	-0.6
			S	37	48.80	
IIDJ	1.26	298	P	37	36.30	-0.7
			S	37	51.70	
KAKJ	1.50	29	P	37	40.50	-0.2
			S	37	59.90	
MAT	1.86	333	eP	37	46.00	0.1
			iS	38	08.60	
MTMJ	2.07	325	P	37	50.10	1.1
			S	38	15.50	
NIIJ	2.36	355	P	37	53.20	0.2
			S	38	24.50	
	S.D. = 0.7	on 7 of 7 obs.				

% JUL 22, 1989 06h 20m 26.91± 1.16s
11.867 N ± 7.0km 43.287 E ±10.3km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 3.7 (ARO).

OBO	0.12	2	iPd	20	29.87	0.0
TDD	0.38	261	iPd	20	35.25	0.6
ATA	0.41	191	iP+	20	35.70	0.3
ARO	0.55	232	iPd	20	38.17	0.2
			iS	20	46.76	
SGH	0.77	236	ePd	20	41.76	-0.2
DAF	0.79	251	ePd	20	41.95	-0.3
GBR	1.08	229	ePd	20	46.56	-0.6
	S.D. = 0.5	on 7 of 7 obs.				

& JUL 22, 1989 07h 00m 46.52s
60.692 N 145.169 W
DEPTH = 2.9km
SOUTHERN ALASKA (2)
<AGS-P>.

VZW	0.77	299	iP	01 01.39	-0.5
			S	01 11.64	
KLU	0.88	336	iP	01 03.06	-1.1
GLB	1.00	41	iP	01 04.82	-1.4
			S	01 18.73	
TGL	1.15	86	eP	01 07.57	-1.2
			S	01 23.03	
BALM	1.42	75	eP	01 11.52	-1.9
			S	01 29.62	
TOA	1.50	342	eP	01 13.48	-0.9
			S	01 34.53	
PAX	2.29	357	eP	01 24.47	-1.5
SLKM	2.50	268	eP	01 26.00	-2.8

8 obs. associated

% JUL 22, 1989 07h 23m 11.56± 1.84s
16.031 N ±10.1km 61.083 W ±14.6km
DEPTH = 77.7 ± 18.3 km
LEEWARD ISLANDS (92)

MGG	0.25	244	iPc	23 23.55	0.1
			S	23 31.50	
DEG	0.28	5	iPc	23 23.65	0.0
			S	23 32.20	
PAG	0.57	270	eP	23 26.00	0.0
			S	23 35.80	
BBL	0.63	217	eP	23 26.50	-0.1
			S	23 36.50	
CRM	1.28	173	iPc	23 34.22	-0.1
MGH	1.29	302	eP	23 34.40	0.0
FDF	1.29	183	iPd	23 34.32	-0.2
	0.1s		0.50nm		
			S	23 51.10	
MVM	1.48	173	iPd	23 36.99	0.1
			S	23 56.50	
BIM	1.51	180	eP	23 37.48	0.2
			S	23 57.20	

S.D. = 0.1 on 9 of 9 obs.

& JUL 22, 1989 07h 26m 55.83s
62.480 N 150.952 W
DEPTH = 85.3km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.33	103	iP	27 08.47	-0.5
			S	27 19.26	
SKT	0.57	209	eP	27 10.07	-0.8
			S	27 21.38	
HUR	0.79	50	iP	27 12.12	-0.9
			S	27 24.52	
PWA	0.97	148	eP	27 14.90	-0.2
SUA	1.02	174	eP	27 15.68	-0.2
			S	27 30.70	
RND	1.34	45	eP	27 18.46	-1.3
			S	27 36.39	
SPU	1.40	202	eP	27 20.02	-0.5
MCK	1.56	35	eP	27 21.69	-0.8

8 obs. associated

JUL 22, 1989 07h 40m 58.21± 0.58s
37.410 N ± 5.4km 29.153 E ± 6.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.75	249	iPg	41 12.00	-0.9
ELL	0.90	137	iPg	41 14.00	-1.5
			iSg	41 29.00	
KHL	0.96	18	iPn	41 16.90	0.4
BCK	1.14	87	iPn	41 20.50	0.8
KSL	1.33	165	eP	41 22.50	-0.3
IZM	1.79	304	ePn	41 29.80	0.4
ALT	1.81	24	ePn	41 30.30	0.6
DST	2.23	350	ePn	41 35.40	-0.4
KAP	2.45	221	eP	41 41.00	2.2
			eS	42 11.50	
GPA	3.01	17	ePn	41 50.00	3.1X
EDC	3.10	341	ePn	41 47.00	-1.0
EZN	3.27	318	ePn	41 50.20	-0.4

S.D. = 1.1 on 11 of 12 obs.

% JUL 22, 1989 09h 40m 35.77± 0.84s
41.152 N ± 8.3km 28.529 E ± 6.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

CTT	0.07	266	ePg	40 38.00	-0.2
ISK	0.41	102	ePg	40 44.00	-0.2
DMK	0.88	319	iPg	40 52.90	0.2
			iSg	41 04.90	
EDC	0.95	212	iPg	40 53.70	-0.2
			iSg	41 08.00	
DST	1.55	177	ePn	41 03.80	0.4

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

JUL 22, 1989 09h 41m 35.45± 0.58s
34.299 S ± 6.0km 70.258 W ± 4.8km
DEPTH = 12.3 ± 2.4 km
4.9mb (8 obs.)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.49	318	iPc	41 45.00	-0.5
PCH	0.71	342	iP	41 48.70	-0.6
TACH	0.86	319	iPc	41 51.20	-0.6
SAN	0.91	338	iPc	41 52.30	-0.3
			iS	42 05.10	
FCH	0.97	358	iPd	41 53.00	-0.9
LNV	1.02	289	iP	41 53.70	-0.7
			iS	42 08.50	
PEL	1.21	343	iPd	41 57.70	0.0
LCCH	1.37	307	iPc	41 59.80	-0.4
ROCH	1.47	334	iPc	42 01.40	-0.4
			iS	42 22.50	
RFA	1.55	108	iPc	42 02.80	-0.1
JACH	1.64	350	iPc	42 04.40	0.2
			iS	42 26.50	
IHA	1.72	317	iPd	42 05.50	0.3
			iS	42 29.30	
RTBS	2.72	15	iPc	42 25.20	5.6X
RTCV	2.83	31	e(P)	42 24.30	3.0X
ZON	3.05	26	eP	42 28.00	3.6X
RTCB	3.06	24	eP	42 29.00	4.4X
CFA	3.18	33	iPc	42 28.50	2.3
			S	43 15.00	
RTLL	3.32	27	e(P)	42 31.60	3.3X
			S	43 22.00	
RTRS	4.17	10	iPd	42 44.50	4.3X
MRA	4.25	65	ePc	42 42.00	0.7
CYA	6.97	34	ePc	43 19.50	-0.4
SLA	10.40	25	ePd	44 06.40	-1.1
CCH	17.25	13	P	45 41.20	3.2X
CNCB	17.54	7	Pc	45 43.00	1.1
ARE	17.80	356	eP	45 45.00	0.1
LPB	17.80	7	P	45 46.00	1.0
	1.1s		126.58nm		5.0mb
			LR	52 43.00	
ZOBO	18.06	7	Pc	45 48.60	0.2
	1.2s		50.68nm		4.5mb
	Z 24s		0.88um		4.4Msz
			S	49 30.00	
			LR	52 58.00	
NNA	23.01	343	iP	46 42.70	1.5
	1.0s		25.00nm		4.7mb
VAO	23.28	67	eP	46 43.50	-0.4
			epP	46 53.80	39kmX
BAO	27.33	53	eP	47 19.80	-2.5
SOB1	36.72	54	eP	48 30.40	-14.0X
SPA	55.88	180	e(P)	51 14.90	-0.2
	1.0s		9.50nm		4.8mb
TKL	70.73	348	P	52 51.40	-1.7
PWLA	70.90	345	P	52 52.80	-1.4
UYO	71.79	339	iPd	52 58.70	-0.8
MEO	73.66	336	iPc	53 09.50	-1.1
TUL	73.81	339	eP	53 10.30	-1.0
	1.0s		27.70nm		5.3mb
SIO	73.81	338	e(P)	53 10.10	-1.3
RLO	73.81	339	eP	53 10.20	-1.2
FVM	74.32	344	P	53 13.20	-1.1
ALO	76.76	330	iPc	53 28.90	0.4
	1.0s		17.75nm		5.1mb
			e	53 35.50	
			e	53 40.80	
GLA	79.00	323	eP	53 41.00	0.3
BAR	79.63	322	eP	53 45.00	0.9
GAC	79.77	356	eP	53 44.50	0.1
PLM	80.26	322	eP	53 49.00	1.3
TPC	80.45	323	eP	53 50.00	1.5
GLD	80.46	333	P	53 49.00	0.4
GOL	80.47	333	P	53 48.60	-0.1
	0.9s		14.68nm		5.0mb
RVR	81.03	322	eP	53 51.00	-0.5
SBB	81.81	322	eP	53 56.00	0.4
MSU	82.22	328	P	53 58.00	0.2
ISA	82.90	322	eP	54 02.00	0.8
RSSD	83.89	336	P	54 05.00	-1.3
TNP	84.18	325	P	54 08.80	0.9
	0.9s		7.65nm		4.9mb
PRI	84.39	321	e(P)	54 09.90	1.0
KVN	85.37	325	P	54 13.90	0.1
CMB	85.70	323	eP	54 15.90	0.6
MHC	85.81	321	e(P)	54 17.50	1.5
BUL	85.87	111	eP	54 15.60	-1.1
RSON	87.28	345	P	54 21.60	-1.0
ORV	87.43	323	ePc	54 24.50	0.9
WDC	88.72	323	e(P)	54 29.30	-0.5
PMG	123.90	226	iPdiff	57 18.00	9.4X
PSI	146.98	160	ePKPd	01 19.80	1.8

S.D. = 1.0 on 55 of 64 obs.

JUL 22, 1989 10h 17m 37.76± 0.50s
39.850 N ± 4.7km 22.220 E ± 4.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.7 (ATH).

LIT	0.33	39	iPgc	17 44.50	0.0
			eSg	17 52.00	
KZN	0.57	323	ePg	17 47.00	-2.4
NEO	0.95	125	ePg	17 55.00	-0.8
THE	0.97	36	ePgd	17 56.50	0.4
			eSg	18 12.80	
PLG	1.08	60	ePb	17 58.00	0.0
			eSb	18 15.70	
GRG	1.11	7	ePg	17 58.60	-0.1
			eSg	18 17.40	
PAIG	1.13	86	ePgd	17 58.30	-0.5
			eSg	18 14.80	
LSK	1.28	284	ePn	17 54.10	-7.5X
KNT	1.41	21	ePnd	18 04.30	0.9
			eSn	18 26.10	
OUR	1.44	70	ePn	18 03.90	0.1
			eSn	18 24.60	
VAY	1.49	10	iPn	18 05.30	0.7
SRS	1.64	39	ePnc	18 07.20	0.4
			eSn	18 32.60	
SRN	1.71	272	ePn	18 08.60	0.9
TPE	1.75	285	ePn	18 12.40	4.0X
VLS	2.10	218	ePn	18 14.00	0.6
SKO	2.20	345	iPnc	18 19.00	4.1X
			iSn	18 48.00	
PHP	2.28	324	ePn	18 16.00	0.0
TIR	2.33	311	ePn	18 21.00	4.2X
ITM	2.68	185	ePn	18 21.50	-0.2
BCI	2.99	328	e(Pn)	18 31.20	5.1X

S.D. = 0.9 on 15 of 20 obs.

% JUL 22, 1989 10h 22m 01.53± 1.07s
41.400 N ±16.9km 14.653 E ±20.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

DUI	0.30	331	Pd	22 07.60	-0.2
			eSg	22 12.40	
SDI	0.70	296	Pc	22 14.50	-0.9
			eSg	22 26.20	
SGO	0.98	149	Pc	22 20.30	0.3
			eSg	22 36.00	
AZI	1.09	303	P	22 23.00	1.1
			eSg	22 38.00	
MGR	1.44	151	P	22 27.30	-0.3
			eSn	22 47.40	

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

? JUL 22, 1989 11h 25m 38.19± 1.02s
42.897 N ±10.9km 8.466 W ± 8.2km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.6 (MDD).

STS	0.06	260	iP	25 40.60	0.1
EZAM	0.77	193	eP	25 53.00	-0.2
			eS	26 03.40	
EMON	0.99	57	eP	25 56.90	-0.1
			eS	26 09.80	
ERUA	1.10	117	eP	25 59.00	0.2
			eS	26 13.50	

S.D. = 0.3 on 4 of 4 obs.

• JUL 22, 1989 11h 40m 05.17± 1.90s
19.566 S ±15.9km 178.404 W ± 6.4km
DEPTH = 523.3 ± 25.5 km

22d 11h

4.7mb (19 obs.)
FIJI ISLANDS REGION (181)

DZM	14.38	257	iPc	43 16.90	7.9X
AFR	27.20	90	iP	45 08.40	0.0
	0.8s	35.00nm		5.0mb	
BRS	27.51	248	iPd	45 13.20	2.1
PPN	27.53	91	iP	45 11.80	0.6
	0.8s	15.00nm		4.6mb	
TVO	27.66	91	iP	45 13.00	0.5
	0.8s	15.00nm		4.6mb	
PMO	29.46	86	iP	45 27.40	-0.6
	0.8s	35.00nm		5.0mb	
TPT	29.72	86	iP	45 29.40	-0.9
	0.8s	35.00nm		5.0mb	
RUV	29.90	87	iP	45 31.00	-0.8
	0.8s	40.00nm		5.0mb	
CAN	32.73	235	eP	45 57.30	1.6
BWA	32.89	236	eP	45 56.90	-0.1
CTA	33.21	263	iPd	46 02.00	2.1
	1.0s	203.00nm		5.7mb	
QIS	39.38	261	eP	46 51.00	0.2
WB5	44.34	261	iPd	47 30.10	-0.2
WRA	44.36	261	Pc	47 30.50	0.1
	0.6s	6.60nm		4.3mb	
ASPA	44.37	256	iPd	47 30.90	0.4
	1.1s	60.00nm		5.0mb	
		eS	53 21.00		
MTN	48.78	270	iPc	48 03.70	-0.5
	0.7s	54.00nm		5.1mb	
FORR	49.29	246	eP	48 05.30	-2.4
	0.4s	26.00nm		5.1mb	
KNA	50.33	265	eP	48 15.00	-0.5
WARB	50.75	252	iPd	48 18.00	-0.6
	0.3s	3.00nm		4.2mb	
MBL	57.60	257	iPd	49 06.00	-1.0
	0.4s	17.00nm		4.7mb	
MEKA	57.94	250	iPc	49 07.80	-1.6
	0.4s	6.00nm		4.3mb	
NANU	61.28	254	iPd	49 30.90	-0.6
	0.4s	18.00nm		4.9mb	
MAT	69.23	324	iPd	50 20.50	-0.5
	0.8s	3.73nm		4.0mb	
SPA	70.56	180	ePc	50 27.60	-1.0
	1.0s	8.50nm		4.2mb	
ADK	71.16	1	P	50 30.60	-1.2
PRS	77.41	44	ePc	51 08.80	1.5
BCH	77.60	46	P	51 09.00	0.5
ARN	77.90	43	P	51 10.00	0.0
PLM	78.82	49	eP	51 15.00	-0.1
SBB	78.87	47	eP	51 15.00	-0.2
FRI	78.88	44	e(P)	51 15.20	0.1
CMB	79.04	43	ePc	51 15.80	-0.2
WDC	79.20	40	e(P)	51 17.20	0.5
ORV	79.23	41	ePc	51 16.70	-0.2
MIN	79.63	41	e(P)	51 19.70	0.6
TPC	79.79	48	eP	51 20.00	0.0
GLA	80.11	50	eP	51 23.00	1.3
TNP	81.13	44	P	51 27.00	0.0
RMW	83.81	35	P	51 40.00	-0.1
ALQ	87.12	51	eP	51 56.20	-0.4
	1.0s	4.25nm		4.1mb	
		epP	54 06.20	605kmX	
IMA	87.39	10	P	51 56.40	-0.7
FBA	87.42	13	P	51 55.10	-1.9
	0.7s	6 54nm		4.5mb	
NB2	138.01	353	PKP	58 21.80	-9.4X
KSP	146.69	343	iPKPd	58 47.40	1.0
CLL	147.07	347	iPKPd	58 48.20	1.2
	0.8s	12.00nm			
BRG	147.26	345	iPKP	58 49.20	1.8
			i	58 53.10	
PRU	147.94	344	PKP	58 50.80	2.3X
			e	58 56.20	
KHC	148.97	345	PKP	58 53.50	3.3X
BZS	149.20	332	iPdiff	56 13.50	-19.8X
S.D. = 1.0 on 44 of 49 obs.					

? JUL 22, 1989 12h 38m 09.39± 2.36s
19.962 S ±16.1km 169.201 E ±29.7km
DEPTH = 108.8 ± 17.0 km
4.8mb (2 obs.)
VANUATU ISLANDS (186)

PVC	2.37	339	iP	38 47.50	-0.1
			iS	39 16.70	
DZM	3.32	230	iPc	39 00.80	0.2
			iS	39 39.10	
BWA	23.37	228	eP	43 08.80	-0.3
CAN	23.48	225	eP	43 11.30	1.2
ASPA	32.93	257	iPd	44 34.40	-1.2
	0.6s	23.00nm		5.2mb	
WARB	39.51	253	iPd	45 31.10	0.0
SPA	70.16	180	e(P)	49 10.60	-1.4
	1.0s	6.50nm		4.4mb	
BNG	147.52	245	iPKPc	57 42.00	1.6
	0.3s	5.00nm			
S.D. = 1.4 on 8 of 8 obs.					

* JUL 22, 1989 12h 52m 50.41± 0.38s
54.412 S ±11.7km 132.680 W ±11.6km
DEPTH = 10.0km (geophysicist)
5.3mb (7 obs.) 5.6Msz (3 obs.)
SOUTH PACIFIC CORDILLERA (691)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 29C
Centroid Location:
Origin Time 12:52:57.8 0.4
Lat 54.40S 0.05 Lon 132.77W 0.07
Dep 15.0 FIX Half-duration 2.7
Moment Tensor; Scale 10**17 Nm
Mrr=-0.17 0.07 Mtt= 2.11 0.10
Mff=-1.95 0.07 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf= 1.81 0.08
Principal Axes:
T Val= 2.80 Plg= 0 Azm=159
N -0.17 90 180
P -2.64 0 69
Best Double Couple:Mo=2.7*10**17
NP1:Strike=204 Dip=90 Slip= 180
NP2: 294 90 0

SBA	31.37	201	ePd	59 16.50	3.7X
SPA	35.77	180	ePd	59 54.10	2.9
	1.0s	68.50nm		5.5mb	
CAN	55.68	256	eP	02 27.20	-1.8
BWA	56.66	256	eP	02 32.30	-3.7X
MAW	57.75	187	eP	02 42.00	-1.1
BRS	59.35	265	eP	02 54.00	-0.9
ARE	60.08	76	eP	03 00.00	-0.3
NNA	60.75	68	eP	03 03.00	-1.6
	1.3s	38.46nm		5.4mb	
CNCB	61.81	79	P	03 12.50	0.1
LPB	61.96	79	P	03 13.00	-0.2
ZOBO	62.15	79	iPc	03 14.40	-0.3
	1.6s	112.78nm		5.8mb	
Z	24s	0.38um		4.5MszX	
		LR	11 52.00		
ASPA	73.03	253	eP	04 15.10	-7.1X
	1.5s	32.00nm		5.2mb	
Z	20s	2.79um		5.5Msz	
		LR	31 45.10		
BAO	74.37	95	eP	04 29.50	-0.7
WRA	75.73	256	Pd	04 34.30	-3.5X
	0.9s	8.90nm		4.8mb	
WB5	75.76	256	eP	04 34.50	-3.5X
ATB	81.78	84	e(P)	05 09.50	-1.2
MTN	83.24	258	eP	05 18.70	0.4
	1.1s	48.00nm		5.6mb	
SOB1	83.63	97	eP	05 19.10	-1.2
BAR	87.83	13	eP	05 41.00	0.4
GLA	88.46	15	eP	05 45.00	1.4
PLM	88.47	13	eP	05 44.00	0.2
RVR	89.03	13	eP	05 46.00	-0.3
PAS	89.08	12	eP	05 46.00	-0.5
TPC	89.32	14	eP	05 48.00	0.3
SBB	89.66	12	eP	05 49.00	-0.3
GSC	90.39	13	eP	05 53.00	0.3
ISA	90.54	12	eP	05 54.00	0.6
PRI	90.78	10	ePd	05 55.70	1.2
CLC	90.80	12	eP	05 54.00	-0.5
FRI	91.72	10	ePd	05 59.10	0.5
ALQ	91.82	21	eP	05 59.50	0.0
	1.0s	10.25nm		5.1mb	
Z	20s	0.90um		5.2Msz	
		e	06 07.10		
		e	06 23.00		
		e	06 40.00		
		eS	17 08.00		
		ePS	18 07.50		
		eLg	31 58.00		
CMB	92.68	10	eP	06 03.60	0.5
TNP	93.08	12	P	06 05.00	-0.2
MSU	94.22	16	P	06 11.00	0.5
SLR	98.51	163	eP	06 36.50	6.1X
Z	18s	4.47um		6.0Msz	
YKA	117.42	9	ePKP	11 37.80	1.4
FBA	119.55	353	PKP	11 38.00	-2.4
INK	122.40	360	ePKP	11 44.00	-1.7
BNG	124.97	144	iPKPd	11 52.00	-0.3
	0.5s	7.00nm			
MBC	130.66	4	ePKP	12 00.00	-1.4
	0.6s	4.00nm			
ALE	141.12	11	ePKP	12 23.00	2.1
	0.5s	3.00nm			
NDI	146.37	232	ePKP	12 30.00	-1.4
EPF	147.58	91	ePKP	12 35.60	2.7
	1.4s	30.40nm			
DAG	147.58	23	iPKPc	12 33.30	1.5
	0.5s	19.01nm			
DCN	148.47	69	ePKP	12 37.20	3.3X
DLE	148.85	70	ePKP	12 39.80	5.3X
LFF	148.93	88	ePKP	12 40.40	5.5X
	1.2s	23.80nm			
LPO	149.04	89	ePKP	12 40.80	5.7X
	1.2s	17.80nm			
MFF	149.33	85	ePKP	12 41.80	6.3X
LPF	149.56	82	ePKP	12 41.50	5.8X
	1.2s	11.90nm			
GRR	149.84	81	ePKP	12 43.50	7.3X
FLN	150.24	81	ePKP	12 43.10	6.3X
	1.1s	9.70nm			
BGF	151.05	87	ePKP	12 45.00	6.9X
	1.4s	26.10nm			
AVF	151.47	87	ePKP	12 45.90	7.2X
	1.2s	7.10nm			
SMF	151.68	88	ePKP	12 46.60	7.6X
	1.2s	8.90nm			
SSF	151.70	87	ePKP	12 46.20	7.2X
	1.4s	8.70nm			
LBF	151.94	87	ePKP	12 47.20	7.7X
	1.2s	8.90nm			
LOR	152.02	87	ePKP	12 47.00	7.5X
	1.2s	7.10nm			
DOU	153.80	82	PKP	13 03.30	21.4X
			e	13 15.00	
WLF	154.51	84	PKP	13 03.80	21.0X
MEM	154.84	82	PKP	13 02.50	19.3X
KHC	158.60	90	ePKP	12 59.90	11.8X
SKO	158.87	115	ePKP	12 50.00	1.4
VAY	158.99	118	ePKP	12 56.60	7.9X
CLL	159.17	84	e(PKP)	12 56.00	7.4X
			e	13 26.00	
PRU	159.54	89	ePKP	13 06.00	16.9X
			e	13 29.50	
S.D. = 1.2 on 39 of 66 obs.					

? JUL 22, 1989 13h 04m 57.49± 0.57s
54.395 S ±18.4km 133.190 W ±15.6km
DEPTH = 10.0km (geophysicist)
4.8mb (4 obs.)
SOUTH PACIFIC CORDILLERA (691)

SPA	35.79	180	eP	12 09.00	10.5X
MAW	57.73	187	eP	14 51.00	0.9
CNCB	62.10	80	P	15 20.90	-0.5
LPB	62.25	79	eP	15 22.00	-0.2
			LR	22 28.00	
ZOBO	62.44	79	Pc	15 22.80	-0.9
	1.7s	79.94nm		5.6mb	
		LR	22 32.00		
ASPA	72.75	254	eP	16 33.00	5.3X
	1.1s	9.00nm		4.8mb	
WRA	75.44	256	Pc	16 42.00	-1.3
	0.7s	1.90nm		4.3mb	
WB5	75.48	256	eP	16 42.90	-0.6
PLM	88.52	14	P	17 51.00	-0.2
ALQ	91.92	22	P	18 06.50	-0.5
	1.0s	5.94nm		4.9mb	
TNP	93.13	13	P	18 13.00	0.5
MEO	93.70	28	iP	18 14.50	-0.4
MSU	94.29	16	P	18 19.00	1.2
BNG	125.16	145	iPKPc	24 06.80	7.0X
	0.5s	4.00nm			
DAG	147.68	23	ePKP	24 41.00	1.9
S.D. = 1.0 on 12 of 15 obs.					

? JUL 22, 1989 13h 08m 11.94± 1.37s
42.702 N ± 9.6km 19.113 E ±11.8km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)
ML 2.0 (TTG).

NKY	0.14	323	iPgc	08 15.50	0.2
			iSg	08 18.70	
TTG	0.29	158	iPgc	08 18.00	-0.1
			iSg	08 23.30	
BRY	0.46	296	ePg	08 21.20	-0.2
			eSg	08 30.00	
HCY	0.52	241	ePg	08 22.60	0.1
			eSg	08 33.00	
HVAR	2.01	285	iPn	08 49.00	2.7X
			iSg	09 18.20	

S.D. = 0.3 on 4 of 5 obs.

? JUL 22, 1989 13h 16m 15.64± 1.27s
38.612 N ± 9.0km 20.646 E ±21.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.4 (ATH).

VLS	0.44	186	ePg	16 24.50	0.0
ITM	1.75	144	ePg	16 51.00	4.7X
KZN	1.90	27	ePn	16 52.00	3.5X
			eSn	17 21.50	
LIT	2.06	43	ePd	16 53.70	2.9X
NEO	2.13	70	ePn	16 52.00	0.3
VAY	3.08	28	ePn	17 04.40	-0.8
SKO	3.41	10	ePn	17 10.50	0.6

S.D. = 1.0 on 4 of 7 obs.

& JUL 22, 1989 13h 37m 56.96s
61.944 N 152.018 W
DEPTH = 108.7km
SOUTHERN ALASKA (2)
<AGS-P>.

SKT	0.23	81	iP	38 12.03	1.2
			S	38 24.07	
CGLM	0.64	180	iP	38 14.34	-0.7
SPU	0.77	181	eP	38 15.22	-0.9
SUA	0.78	128	eP	38 15.88	-0.4
			S	38 31.66	
CUT	0.94	60	iP	38 17.06	-0.6
PWA	1.06	105	eP	38 18.08	-0.8
RDT	1.39	188	iP	38 22.00	-0.8
HUR	1.52	46	eP	38 22.97	-1.3
			S	38 43.57	
SLKM	1.68	148	eP	38 26.17	-0.2
			S	38 46.97	
ILIM	1.93	194	eP	38 28.58	-0.9
RND	2.07	43	eP	38 29.46	-1.9
SEW	2.23	145	eP	38 31.87	-1.5
CNPM	2.46	171	eP	38 34.66	-1.7
TOA	2.76	84	iP	38 38.75	-1.7
VZW	2.77	106	eP	38 38.03	-2.5
KLU	2.94	96	eP	38 40.06	-2.8
WRH	3.10	33	eP	38 42.28	-2.7
PAX	3.21	68	eP	38 44.61	-2.0

18 obs. associated

JUL 22, 1989 15h 23m 03.28± 0.96s
66.914 N ± 6.5km 156.195 W ± 9.3km
DEPTH = 5.0km (geophysicist)
ALASKA (676)
ML 4 0 (PMR)

IMA	1.32	129	iPd	23 28.70	0.5
NEA	3.76	125	eP	24 02.99	-0.2
RDS	3.91	119	eP	24 04.85	-0.5
FBA	3.99	117	iPd	24 06.50	0.1
TTA	4.00	179	eP	24 06.60	0.0
GLM	4.09	114	eP	24 06.97	-0.9
CCB	4.14	119	eP	24 08.21	-0.2
WRH	4.15	122	eP	24 08.15	-0.5
MCK	4.41	133	eP	24 12.38	0.0
BRW	4.42	358	eP	24 11.90	-0.5
HDA	4.58	119	eP	24 14.04	-0.7
RND	4.69	135	eP	24 15.59	-0.8
HUR	4.83	142	eP	24 17.29	-1.1
SKT	5.35	156	eP	24 20.95	-4.7X
SVW	5.83	177	iPc	24 32.10	-0.5
PAX	6.03	126	eP	24 34.36	-1.0
PMR	6.16	147	eP	24 37.10	0.0
PMS	6.39	150	iPc	24 42.30	1.9
TOA	6.48	133	eP	24 43.50	1.9
INK	8.75	70	eP	25 15.00	1.8
KDC	9.36	168	eP	25 22.30	0.6
HYT	10.22	118	P	25 39.00	5.2X
YKA	18.04	84	eP	27 19.00	3.1X

S.D. = 1.0 on 20 of 23 obs.

? JUL 22, 1989 15h 26m 31.07± 0.95s
39.122 N ± 8.0km 27.478 E ± 9.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.74	193	ePg	26 45.80	0.1
			iSg	26 58.80	
DST	1.01	61	ePn	26 49.90	-0.4
EZN	1.14	309	ePn	26 52.00	-0.3
EDC	1.26	14	ePn	26 55.00	0.5

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

& JUL 22, 1989 16h 05m 28.59s
62.155 N 149.420 W
DEPTH = 25.5km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.47	303	iP	05 38.33	0.0
PWA	0.55	203	eP	05 39.48	-0.1
			S	05 48.48	
HUR	0.83	353	iP	05 42.80	-1.5
			S	05 54.50	
SUA	0.94	223	eP	05 44.98	-1.1
SKT	1.01	261	eP	05 45.30	-1.8
			S	05 59.80	
RND	1.28	11	iP	05 48.94	-2.1
TOA	1.53	90	eP	05 53.27	-1.3
			S	06 15.47	
SPU	1.59	233	eP	05 54.17	-1.3
MCK	1.60	8	eP	05 53.58	-2.0
SLKM	1.70	194	eP	05 55.64	-1.3
VZW	1.76	127	eP	05 56.00	-1.8
			S	06 19.84	
KLU	1.79	110	eP	05 56.35	-2.0
SDG	1.85	77	eP	05 57.52	-1.6
PAX	2.00	64	eP	05 59.91	-1.6
SEW	2.06	180	eP	06 01.60	-0.5
RED	2.38	224	eP	06 05.14	-1.6
WRH	2.40	14	eP	06 05.21	-1.8
HDA	2.52	25	eP	06 07.78	-1.0
CCB	2.60	15	eP	06 07.01	-2.9
ILIM	2.70	221	eP	06 10.02	-1.3
GLB	2.76	103	eP	06 09.87	-2.3
			S	06 44.21	
CNPM	2.78	199	iP	06 11.63	-0.8
FBA	2.85	14	eP	06 10.50	-2.9
DOT	2.87	56	eP	06 12.73	-1.0

24 obs. associated

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* JUL 22, 1989 17h 52m 45.61± 0.97s
22.818 S ±14.8km 66.629 W ±16.8km
DEPTH = 295.9 ± 19.5 km
JUJUY PROVINCE, ARGENTINA (128)

ANT	3.59	255	iPc	53 47.50	-0.1
			eS	54 30.60	
CCH	5.43	5	P	54 08.90	0.0
CNCB	6.11	348	iPc	54 20.00	2.7X
LPB	6.40	347	eP	54 24.00	3.3X
			eS	55 39.00	
ZOBO	6.66	348	P	54 24.00	-0.1
			S	55 45.00	
ITB1	11.36	102	eP	55 22.60	1.1
VAO	18.12	94	eP	56 36.70	-2.0
			e	56 37.80	
			e	56 41.00	
BAO	18.98	71	eP	56 47.30	-0.2
SOB1	28.13	65	eP	58 13.10	0.0
KIC	67.07	72	Pc	03 11.00	1.2

S.D. = 1.3 on 8 of 10 obs.

& JUL 22, 1989 18h 29m 42.72s
62.981 N 148.221 W
DEPTH = 77.2km
CENTRAL ALASKA (1)
<AGS-P>.

RND	0.51	326	iP	29 56.30	-0.3
			S	30 04.90	
MCK	0.82	337	iP	29 59.93	0.2
CUT	1.11	239	iP	30 02.90	-0.3
PAX	1.26	89	eP	30 04.85	-0.4
TOA	1.29	132	iP	30 05.69	0.0
			S	30 24.42	
SDG	1.31	109	eP	30 04.96	-0.9
WRH	1.50	2	eP	30 08.07	-0.2
HDA	1.54	21	iP	30 08.95	0.1
PWA	1.54	211	eP	30 09.30	0.4
NEA	1.65	347	iP	30 09.86	-0.4
			S	30 29.15	
CCB	1.68	6	iP	30 10.46	-0.3
			S	30 30.92	
SKT	1.84	238	eP	30 12.97	0.1
			S	30 37.56	
KLU	1.84	143	iP	30 12.34	-0.7
RDS	1.85	1	eP	30 12.31	-0.8
SUA	1.93	219	eP	30 15.03	0.8
FBA	1.94	5	eP	30 13.97	-0.2
GLM	2.05	10	eP	30 15.42	-0.4

17 obs. associated

JUL 22, 1989 19h 03m 07.12± 0.64s
43.945 N ± 7.4km 12.138 E ± 4.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 1.9 (TRI).

SFI	0.21	263	P	03 11.40	-0.2
			eSg	03 15.90	
RSM	0.23	94	Pd	03 11.80	-0.2
			eSg	03 16.20	
PGD	0.31	257	P	03 13.10	-0.5
			eSg	03 18.20	
CRE	0.34	203	P	03 15.10	0.8
			eSg	03 19.90	
ARV	0.73	127	Pc	03 21.30	-0.3
			eSg	03 33.00	
BDI	1.12	277	Pc	03 29.10	1.0
			eSg	03 44.10	
PII	1.19	260	P	03 28.40	-0.9
			eSg	03 45.90	
TRI	2.11	33	e(Pg)	04 00.10	17.2X
			iSg	04 07.90	
FVI	2.69	10	P	03 51.40	0.3

S.D. = 0.8 on 8 of 9 obs.

% JUL 22, 1989 19h 09m 30.00± 1.31s
11.871 N ± 7.0km 43.303 E ±12.3km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)
ML 3.9 (ARO).

OBO	0.12	355	iPc	09 32.92	0.0
MKL	0.22	224	iPc	09 35.40	0.7
TDD	0.39	260	iPd	09 38.42	0.4
ATA	0.42	193	iP+	09 38.75	0.1
ARO	0.56	233	ePd	09 41.31	-0.1
			iSd	09 50.22	
SGH	0.78	237	iPd	09 44.91	-0.4
GBR	1.09	229	iPd	09 49.76	-0.8

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

% JUL 22, 1989 19h 15m 11.38± 0.84s
37.455 N ± 9.2km 115.133 E ± 9.5km
DEPTH = 33.0km (normal)
NORTHEASTERN CHINA (658)

TIA	2.02	127	ePn	15 44.20	0.4
			ePg	15 47.50	
			Sg	16 12.70	
TIY	2.16	278	Pnd	15 44.60	-1.2
			Pg	15 46.80	
			Sg	16 14.20	
BJI	2.71	17	Pn	15 51.50	-2.0
			Pg	15 57.00	
			Sg	16 32.50	
HHC	4.38	322	ePn	16 19.00	1.6
			Pg	16 28.00	
			Sg	17 22.40	
BTO	5.07	310	Pn	16 27.80	0.6
			Pg	16 38.40	
			Sg	17 40.20	
XAN	6.09	238	Pg	16 51.10	9.5X
WHN	6.92	186	ePn	16 53.00	-0.1
LZH	9.16	265	e(P)	17 54.50	30.1X
CN2	10.08	48	eP	17 37.60	0.7
GTA	12.17	284	eP	18 00.00	-5.5X

S.D. = 1.5 on 7 of 10 obs.

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* JUL 22, 1989 21h 25m 02.16± 1.20s
40.732 N ±34.0km 123.269 W ±10.3km
DEPTH = 10.0km (geophysicist)
NORTHERN CALIFORNIA (36)
ML 2.7 (BRK).

FHC	0.55	277	ePc	25	13.30	0.0
			eS	25	22.50	
WDC	0.57	105	iPc	25	14.40	0.6
			iS	25	23.40	
LTCM	1.02	121	e(P)	25	21.50	0.1
MIN	1.33	106	e(P)	25	25.70	-1.0
			i	25	49.30	
ORV	1.79	130	e(P)	25	33.30	-0.1
			e(S)	25	55.00	
KVN	4.32	111	e(P)	26	10.00	0.5

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

? JUL 22, 1989 21h 34m 04.41± 7.36s
51.642 N ±43.5km 16.293 E ±44.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.4 (GRF), 3.2 (VKA).

KSP	0.80	180	iP	34	20.10	0.1
	0.6s	72.00nm				
			iS	34	30.10	
			e	34	37.50	
BRG	1.66	243	iPg	34	34.60	0.9
			iSg	34	54.50	
PRU	1.99	215	Pn	34	38.40	-0.1
			Pg	34	40.20	
			Sn	34	57.60	
			Sg	35	03.70	
CLL	2.08	262	iPn	34	39.60	-0.2
	0.5s	9.00nm				
			iPg	34	42.50	
			iSg	35	08.70	
KRA	2.80	123	eP	35	00.00	9.9X
			eS	35	39.50	
KHC	3.06	216	iPn	34	53.50	-0.2
			ePg	35	00.00	
			Sn	35	24.50	
			Sg	35	39.20	
HOF	3.09	246	ePn	34	53.70	-0.4
WET	3.32	222	ePn	34	57.10	-0.3
VKA	3.38	180	(Pn)	35	07.00	8.7X
			iSg	35	51.70	
GRF	3.77	241	ePn	35	04.10	0.2
			e(Pg)	35	16.00	
			eSg	36	01.00	

S.D. = 0.5 on 8 of 10 obs.

? JUL 22, 1989 21h 35m 53.64± 0.61s
66.102 S ±13.7km 79.987 W ±30.3km
DEPTH = 10.0km (geophysicist)
5.1mb (5 obs.) 4.3Msz (1 obs.)
SOUTHERN PACIFIC OCEAN (692)

SPA	24.04	180	ePc	41	11.70	2.3
	1.7s	139.06nm			5.3mb	
			i	41	21.00	
SBA	30.86	202	eP	42	09.80	-1.6
MAW	44.02	161	eP	44	02.50	0.3
CCH	49.54	17	P	44	34.80	-11.8X
CNCB	49.90	15	P	44	50.00	0.3
LPB	50.16	15	P	44	52.00	0.5
			LR	22	04.30	
ZOBO	50.42	15	P	44	53.20	-0.4
	1.0s	18.75nm			5.0mb	
	Z 20s	0.32um			4.3Msz	
			S	52	20.00	
			eLR	03	48.00	
BAO	54.73	39	eP	45	22.90	-2.4
CAN	72.12	220	eP	47	31.00	11.2X
BWA	73.12	220	eP	47	29.80	4.1X
BUL	79.02	115	iPd	47	57.90	-1.4
NWAO	80.40	195	eP	48	06.00	-0.3
FORR	80.97	204	eP	48	08.00	-1.3
	0.5s	22.00nm			5.4mb	
KLB	81.66	195	eP	48	13.00	0.0
COOL	81.97	198	iPd	48	14.80	0.2
ASPA	86.88	211	iPc	48	39.00	-0.5
	1.3s	14.00nm			5.0mb	
WRA	90.39	212	Pc	48	55.60	-0.6
	1.2s	9.00nm			4.9mb	
WB5	90.45	212	eP	48	56.10	-0.4
NB2	143.32	55	PKP	55	25.30	-2.8X
HFS	143.49	57	ePKP	55	25.20	-3.2X
	0.7s	2.90nm				
UPP	144.65	60	iPKPc	55	38.10	7.8X
NUR	147.63	63	iPKP	55	37.80	2.6
ALE	148.69	4	ePKP	55	39.00	2.5
	0.9s	14.00nm				
SUF	149.62	61	ePKP	55	42.00	3.7X
LZH	149.86	186	ePKP	55	45.00	5.3X
	1.2s	40.00nm				
SOD	152.52	53	iPKP	55	59.20	16.7X

S.D. = 1.5 on 17 of 26 obs.

& JUL 22, 1989 22h 00m 14.04s
61.582 N 150.992 W
DEPTH = 54.4km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.17	135	iP	00	23.37	0.4
			S	00	31.71	
SKT	0.47	328	iP	00	24.79	-0.6
			S	00	33.98	
PWA	0.54	82	iP	00	25.91	-0.2
			S	00	35.92	
SPU	0.65	232	iP	00	27.11	-0.4
			S	00	38.04	
NKA	0.85	188	eP	00	31.56	1.6
CUT	0.89	22	iP	00	29.71	-0.9
			S	00	42.33	
SLKM	1.14	160	eP	00	32.95	-1.1
			S	00	49.26	
RDT	1.22	215	eP	00	34.46	-0.7
			S	00	51.54	
HUR	1.54	24	eP	00	38.93	-0.6
NNL	1.55	186	iP	00	40.08	0.4
ILIM	1.79	213	eP	00	42.37	-0.7
			S	01	06.02	
CNPM	2.07	183	eP	00	45.56	-1.4
RND	2.08	28	eP	00	46.05	-1.2
XLV	2.16	190	eP	00	47.43	-0.9
VZW	2.20	102	eP	00	46.61	-2.3
			S	01	13.32	
OPT	2.23	211	eP	00	48.96	-0.3
SVW	2.28	260	eP	00	48.00	-2.0
TOA	2.35	75	iP	00	49.54	-1.4
MCK	2.36	23	eP	00	50.45	-0.6
KLU	2.43	90	eP	00	49.23	-2.9
PAX	2.93	59	eP	00	58.11	-1.2
WRH	3.19	23	eP	00	59.89	-2.9
HDA	3.38	31	eP	01	04.34	-1.2
CCB	3.40	24	eP	01	03.72	-2.1
GLB	3.44	89	eP	01	04.62	-1.9
GLM	3.79	24	eP	01	09.37	-1.9
BALM	4.21	94	eP	01	14.33	-2.9

27 obs. associated

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* JUL 22, 1989 22h 29m 05.79± 1.76s
11.159 S ±11.2km 111.563 E ±11.8km
DEPTH = 83.6 ± 23.4 km
4.7mb (4 obs.)
SOUTH OF JAVA (282)

TRT	3.59	17	ePd	30	00.50	0.2
			iS	30	28.00	
KLI	9.12	313	eP	31	20.50	3.8X
			eS	31	52.50	
KSI	11.62	309	ePd	31	50.00	-0.3
NANU	11.96	162	eP	31	46.00	-8.8X
	0.3s	44.00nm			5.8mb X	
			eS	33	46.00	
MBL	12.72	142	eP	31	55.00	-9.9X
	0.4s	31.00nm			5.4mb X	
			eS	33	58.00	
MEKA	16.72	158	iPd	32	49.10	-7.2X
	0.3s	53.00nm			5.2mb X	
			eS	35	38.00	
MRWA	18.44	168	eP	33	12.50	-4.8X
	0.3s	15.00nm			4.7mb	
			eS	36	20.50	
BAL	19.93	167	eP	33	34.00	0.5
WARB	20.64	138	eP	33	39.80	-1.0
			eS	37	10.00	
KLB	21.13	165	eP	33	45.00	-0.7
MUN	21.16	169	eP	33	50.00	4.0X
COOL	21.55	157	eP	33	51.00	1.1
NWAO	22.28	167	eP	34	01.00	3.9X
WRA	23.59	114	Pc	34	09.50	-0.5
	0.8s	3.30nm			3.8mb	
WB5	23.60	114	eP	34	09.90	-0.1
ASPA	24.63	123	iPc	34	20.70	0.7
	0.7s	19.00nm			4.6mb	
			epP	34	41.10	93kmX
			eS	38	46.00	
LOE	30.00	341	eP	35	17.80	9.0X
CHG	32.28	337	ePd	35	29.00	0.2
	0.9s	11.55nm			4.7mb	
BWA	40.77	131	eP	36	44.30	3.9X
MAT	53.67	27	eP	38	29.00	7.9X

S.D. = 0.8 on 10 of 20 obs.

% JUL 22, 1989 23h 02m 16.41± 1.75s
31.975 S ±10.2km 69.046 W ±16.3km
DEPTH = 113.4 ± 21.5 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTCV	0.45	75	iPc	02	33.90	0.3
RTBS	0.47	312	iPd	02	33.50	-0.1
RTCB	0.53	23	iPd	02	34.20	0.0
CFA	0.78	62	iPd	02	36.00	-0.1
			S	02	50.80	
RTLL	0.81	38	iPd	02	36.20	-0.2
			S	02	51.00	
RTRS	1.83	349	ePd	02	48.00	0.1
			S	03	11.20	
RFA	2.83	170	iPc	03	01.00	0.0

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

JUL 22, 1989 23h 48m 29.38± 0.55s
35.512 N ± 4.3km 45.167 E ± 3.3km
DEPTH = 60.4 ± 5.9 km
4.8mb (39 obs.)
IRAN-IRAQ BORDER REGION (346)

SLY	0.29	72	iPgd	48	31.00	-8.5X
			iSg	48	38.00	
MSL	1.85	299	iPnd	48	58.00	-1.3
			iPg	49	02.00	
			iSn	49	23.00	
KER	1.97	125	ePc	49	03.00	1.9
BHD	2.32	196	iPnc	49	08.00	2.1
			iP*	49	12.00	
			iPg	49	19.00	
			iSn	49	45.00	
			iS*	49	51.00	
			iSg	49	57.00	
TAB	2.72	20	iPc	49	10.70	-0.9
TEH	5.07	86	ePc	50	00.00	15.2X
			iS	51	08.00	
BHL	8.00	261	P	50	24.00	-1.4
			S	52	38.00	
HRI	8.11	257	eP	50	27.00	0.0
JARJ	8.33	250	Pd	50	34.60	4.5X
QUTJ	8.73	244	Pc	50	40.00	4.5X
MKRJ	8.88	246	Pc	50	42.10	4.6X
JVI	8.92	249	eP	50	38.00	-0.1
ZNT	9.04	252	eP	50	40.00	0.3
KVT	9.07	311	eP	50	40.00	-0.1
QASM	9.50	189	iPc	50	41.30	-4.7X
DHR	10.12	154	iPc	50	53.50	-1.0
AYN	10.20	232	eP	50	52.70	-2.9
MBH	10.39	239	eP	50	55.00	-3.1X
HQL	10.57	237	iPc	50	57.70	-2.9
RYD	10.83	173	iPc	51	00.70	-3.5X
BADA	11.08	234	ePc	51	05.70	-1.8
KHI	11.16	93	eP	51	08.50	-0.3
MAIO	11.65	82	eP	51	13.00	-2.2
			eS	53	05.00	
ELL	12.40	280	iP	51	28.00	2.7X
ALT	12.50	291	iP	51	28.10	1.5
KHL	12.83	287	iP	51	32.90	2.0
IZM	14.60	287	eP	51	55.80	1.8
PSN	15.41	307	eP	52	08.00	3.7X
EZN	15.53	292	eP	52	05.00	-0.8
CFR	16.14	312	eP	52	11.00	-2.6X
KDZ	16.60	298	eP	52	22.00	2.5X
DIM	16.63	299	eP	52	22.00	2.3X
BUC	17.08	307	iP	52	25.00	-0.4
ISR	17.11	310	eP	52	27.00	1.1
RZN	17.12	297	iP	52	28.00	1.9
PVL	17.13	303	iPd	52	28.00	1.9
VRI	17.36	312	eP	52	29.50	0.7
CLI	17.38	315	eP	52	30.00	0.8

OUR	17.38	292	ePd	52 31.40	2.2	
PAIG	17.55	291	ePd	52 31.20	-0.1	
MLR	17.65	310	iPd	52 34.00	1.4	
CVO	17.67	311	eP	52 31.00	-1.7	
PGB	17.74	300	iP	52 34.00	0.3	
MMB	17.81	296	ePc	52 36.00	1.5	
SRS	17.82	295	ePd	52 36.20	1.7	
THE	18.20	293	ePd	52 34.90	-4.3X	
KNT	18.34	295	eP	52 41.10	0.2	
KKB	18.35	297	iPc	52 41.00	0.0	
VTS	18.43	299	iPd	52 43.00	0.8	
LIT	18.48	291	ePd	52 43.20	0.5	
VAY	18.61	295	iP	52 44.00	-0.2	
GRG	18.67	294	eP	52 44.50	-0.5	
OUE	19.04	100	eP	52 49.00	-0.6	
SKO	19.57	296	iPc	52 54.50	-0.5	
OHR	19.89	294	iP	53 09.20	10.7X	
	Z 16s		1.60um			
	N 14s		0.68um			
	E 16s		1.09um			
			LR	01 40.00		
			iS	56 30.00		
			SSS	57 26.00		
LSK	19.93	291	eP	52 58.60	-0.3	
KKS	20.34	296	eP	53 04.00	1.0	
SRN	20.36	290	eP	53 02.50	-0.7	
TPE	20.39	291	eP	53 02.00	-1.5	
BZS	20.47	307	eP	53 03.00	-1.3	
TIR	20.62	294	eP	53 05.50	-0.4	
VLO	20.80	291	eP	53 11.00	3.3X	
SPC	22.80	314	eP	53 28.70	0.9	
KRA	23.39	316	eP	53 33.00	-0.2	
	0.6s	53.00nm		5.2mb		
	Z 16s	0.90um		4.3MszX		
		e	53 36.00			
		e	53 39.50			
SRO	23.40	310	eP	53 34.70	1.4	
HVAR	23.41	298	iP	53 33.50	0.0	
MGR	23.78	290	Pc	53 38.00	0.8	
ZAG	24.29	304	iPc	53 43.40	1.4	
ZST	24.29	310	iP	53 43.20	1.2	
PTJ	24.33	304	iPc	53 43.20	0.7	
MEU	24.37	283	Pd	53 44.50	1.5	
DUI	24.70	294	Pc	53 47.00	0.9	
KSH	24.70	72	eP	53 52.00	5.8X	
	N 12s	1.20um				
VBY	24.71	303	eP	53 46.90	0.8	
VKA	24.81	310	eP	53 47.00	0.0	
	2.5s	149.00nm		5.0mb		
		i	53 48.00			
		i	54 01.20			
LJU	25.33	304	eP	53 53.00	1.1	
CEY	25.33	303	eP	53 52.50	0.6	
MCT	25.35	284	Pd	53 56.60	4.2X	
VOY	25.76	304	ePc	53 56.20	0.2	
TRI	25.78	303	eP	53 56.20	0.2	
KSP	25.82	315	iPc	53 56.60	0.2	
RBL	26.07	304	Pd	53 59.50	0.6	
KBA	26.37	306	iPd	54 02.30	0.5	
	1.0s	44.40nm		5.0mb		
RSM	26.39	299	P	54 03.50	1.8	
PRU	26.51	313	Pc	54 02.80	0.0	
	1.0s	14.50nm		4.5mb		
	Z 14s	0.40um		4.1MszX		
	N 13s	0.30um				
	E 12s	0.50um				
		eS	58 36.00			
FVI	26.63	305	Pd	54 04.20	0.3	
KHC	26.81	310	iPd	54 06.00	0.4	
	1.2s	10.50nm		4.3mb		
BHG	26.84	307	eP	54 05.90	0.0	
	0.9s	16.00nm		4.6mb		
PGD	26.91	298	Pc	54 08.70	2.0	
BRG	27.20	314	iPd	54 09.20	0.2	
	1.1s	21.00nm		4.6mb		
WET	27.25	310	iPd	54 09.50	-0.1	
MME	27.68	299	Pc	54 08.00	-5.8X	
OGA	27.87	305	iPd	54 16.00	0.6	
NDI	27.91	95	eP	54 18.50	2.8X	
CLL	27.91	314	iP	54 15.00	-0.5	
FUR	28.00	307	eP	54 16.00	-0.3	
	1.0s	37.00nm		5.0mb		
NUR	28.28	339	eP	54 17.00	-1.7	
	Z 20s	1.00um		4.4Msz		
		LR	06 00.00			
OSS	28.43	304	ePc	54 20.30	-0.1	
GRF	28.45	310	ePc	54 20.50	0.2	

	1.4s	48.00nm		4.9mb		
	Z 18s	0.10um		3.5Msz		
BOB	28.63	300	Pd	54 23.10	0.9	
SAX	29.07	305	ePc	54 25.20	-1.1	
LLS	29.24	304	ePc	54 26.50	-1.2	
VAI	29.24	302	Pd	54 26.80	-0.7	
FIN	29.47	298	P	54 28.09	-1.5	
IMI	29.68	298	P	54 30.75	-0.8	
SUF	29.70	342	iP	54 30.50	-0.9	
	0.5s	11.00nm		4.8mb		
ROB	29.71	299	P	54 31.98	0.1	
SLE	29.74	306	ePc	54 30.90	-1.1	
ZLA	29.76	305	ePc	54 31.40	-0.8	
FEL	30.08	306	eP	54 34.49	-0.6	
COP	30.09	322	eP	54 34.50	-0.4	
	0.8s	29.85nm		5.1mb		
STV	30.10	298	P	54 34.44	-0.9	
UPP	30.20	332	iP	54 33.80	-2.0	
DIX	30.21	302	ePc	54 35.70	-0.8	
PZZ	30.28	299	P	54 35.47	-1.4	
LSD	30.32	301	P	54 37.62	0.2	
RRL	30.54	300	P	54 38.55	-0.7	
FRF	30.56	297	eP	54 38.90	-0.3	
	1.5s	25.00nm		4.7mb		
LPG	30.61	301	eP	54 38.90	-1.1	
	0.7s	13.20nm		4.8mb		
BNI	30.62	300	Pd	54 39.60	-0.3	
LMR	30.65	297	eP	54 39.50	-0.5	
ABH	30.79	310	eP	54 40.32	-0.9	
WLF	31.63	309	P	54 47.50	-1.0	
WTS	31.78	313	eP	54 51.00	1.2	
	0.8s	13.00nm		4.8mb		
HFS	31.91	330	eP	54 50.30	-0.5	
	0.6s	23.80nm		5.2mb		
	Z 16s	0.19um		3.9MszX		
		LR	07 06.00			
ENN	32.01	311	e(P)	54 53.50	1.7	
WIT	32.10	315	eP	54 54.00	1.4	
LBF	32.67	303	eP	54 56.50	-1.2	
	1.0s	8.00nm		4.5mb		
DOU	32.70	309	Pc	54 59.60	1.7	
SMF	32.73	303	eP	54 57.40	-0.8	
	1.0s	16.00nm		4.8mb		
LOR	32.77	304	eP	54 57.40	-1.2	
	0.9s	5.50nm		4.4mb		
PLDF	32.83	301	P	54 58.14	-1.0	
SSF	32.99	303	eP	54 59.50	-1.0	
	1.0s	8.00nm		4.5mb		
LBL	33.06	300	P	55 00.39	-0.6	
AVF	33.08	303	eP	55 00.20	-1.0	
	1.1s	15.60nm		4.8mb		
PYM	33.25	301	P	55 01.78	-1.0	
BGF	33.41	302	eP	55 03.30	-0.8	
	1.0s	6.00nm		4.4mb		
NB2	33.43	330	P	55 02.10	-2.1	
WMQ	33.47	63	eP	55 05.20	0.5	
		eS	00 30.00			
MAF	33.58	302	eP	55 05.10	-0.5	
	1.3s	36.10nm		5.1mb		
SOD	33.64	347	iP	55 04.90	-0.9	
TCF	33.83	302	eP	55 07.40	-0.4	
	0.9s	13.70nm		4.9mb		
CAF	33.88	299	eP	55 07.00	-1.3	
	1.2s	16.00nm		4.8mb		
RJF	34.28	300	eP	55 11.50	-0.1	
	0.8s	13.40nm		4.9mb		
LFF	34.83	299	eP	55 15.70	-0.6	
	1.4s	52.20nm		5.3mb		
MFF	35.47	302	eP	55 20.80	-0.9	
	1.1s	24.40nm		5.0mb		
FLN	35.81	306	eP	55 23.50	-1.1	
	0.8s	8.00nm		4.7mb		
GRR	36.03	305	eP	55 25.40	-1.1	
	1.0s	32.00nm		5.2mb		
LPF	36.14	305	eP	55 26.10	-1.2	
	1.2s	29.70nm		5.1mb		
TRO	37.07	345	eP	55 34.60	-0.3	
EKA	38.32	317	Pd	55 45.90	0.3	
	0.6s	39.50nm		5.5mb		
ESK	38.35	316	ePd	55 46.00	0.2	
TOL	38.79	292	eP	55 50.00	0.2	
ASMO	39.04	288	eP	56 00.00	8.0X	
APHE	39.09	287	eP	56 01.50	9.1X	
ATEJ	39.35	287	eP	56 03.00	8.4X	
BNG	39.50	225	iPd	55 57.30	1.5	
	0.7s	26.00nm		5.2mb		
MAL	39.71	287	eP	56 05.30	8.0X	

DLE	40.01	313	iPd	55 59.50	-0.1	
DMU	40.28	314	eP	56 02.10	0.3	
DCN	40.45	313	iPd	56 03.40	0.2	
GTA	43.00	68	eP	56 27.00	2.5X	
CD2	48.62	78	P	57 13.40	4.4X	
DAG	49.81	344	iPd	57 18.20	0.7	
	1.0s	12.00nm		4.9mb		
CHG	50.06	95	eP	57 24.30	4.2X	
CHTO	50.06	95	eP	57 20.50	0.4	
	0.8s	2.75nm		4.3mb		
HHC	51.35	63	eP	57 31.60	1.8	
GYA	52.75	82	P	57 41.20	0.6	
KIC	54.14	250	P	57 50.64	0.0	
	0.6s	6.50nm		4.9mb		
LIC	54.44	250	P	57 52.78	-0.1	
	0.5s	5.50nm		4.8mb		
BJI	54.94	62	eP	57 56.50	0.2	
BUL	57.53	198	iPc	58 16.90	1.9	
CN2	60.09	55	P	58 35.60	3.2X	
SLR	62.97	197	iPc	58 53.50	1.4	
	0.9s	15.97nm		5.1mb		
PRY	64.31	198	eP	58 48.00	-12.9X	
BFS	64.46	198	iPc	59 01.50	-0.3	
MBC	68.08	356	eP	59 25.50	1.4	
	0.7s	3.00nm		4.4mb		
IMA	77.70	8	eP	00 22.00	1.2	
	1.0s	5.00nm		4.5mb		
YKA	80.98	351	eP	00 43.10	4.8X	
SES	91.92	345	eP	01 33.00	0.7	

S.D. = 1.1 on 150 of 180 obs.

JUL 23, 1989 00h 15m 29.25± 0.59s
32.883 S ± 4.6km 71.100 W ± 5.9km
DEPTH = 36.8 ± 12.0 km
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.12	140	iPc	15 36.10	0.2	
			iS	15 42.00		
PEL	0.43	127	iPc	15 39.20	0.2	
			iS	15 46.60		
JACH	0.47	65	iPc	15 38.40	-1.2	
			iS	15 46.70		
IHA	0.48	252	iP	15 38.80	-0.7	
			iS	15 46.40		
SAN	0.68	147	iPd	15 42.20	-0.2	
			iS	15 52.70		
LCCH	0.71	214	iPc	15 42.70	-0.1	
			iS	15 53.90		
TACH	0.78	170	iPd	15 44.00	0.1	
			iS	15 55.90		
FCH	0.81	123	iPd	15 44.20	-0.4	
			iS	15 56.10		
PCH	0.88	146	iPd	15 45.10	-0.3	
			iS	15 57.50		
LNV	1.10	194	iPc	15 48.50	0.1	
			iS	16 03.50		
CHCH	1.11	160	iP	15 49.00	0.4	
			iS	16 03.50		
RTBS	1.85	49	ePc	15 59.60	0.4	
			S	16 25.00		
RTCV	2.40	66	e(P)	16 08.50	1.5	
RTCB	2.40	55	ePd	16 07.50	0.4	
RTLL	2.72	56	e(P)	16 11.00	-0.5	
CFA	2.74	63	iP	16 12.00	0.2	
			S	16 43.00		
RFA	2.89	131	ePd	16 14.30	0.3	
RTRS	3.05	28	e(P)	16 16.40	0.2	
MRA	4.57	86	e(P)	16 36.00	-1.8	

S.D. = 0.8 on 19 of 19 obs.

% JUL 23, 1989 01h 20m 01.32± 1.12s
33.289 S ±13.2km 118.589 E ± 7.9km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

NWAO	1.19	287	iPd	20 22.70	-0.9	
			iS	20 37.30		
RKG	1.53	239	iPd	20 28.60	-0.1	
			iS	20 48.10		
KLB	1.83	337	eP	20 37.10	4.0X	
			eS	21 02.00		
MUN	2.40	302	eP	20 41.70	0.5	
			iS	21 10.30		
COOL	3.23	43	eP	20 58.00	4.9X	
			eS	21 39.00		
MRWA	4.63	331	eP	21 14.60	1.7	
			eS	22 06.80		

23d 01h

MEKA	6.65	360	eP	21	52.00	10.5X
			eS	22	55.00	
FORR	8.43	76	eP	22	07.00	0.6
	0.3s		5.00nm			5.3mb X
			eS	23	39.00	
WARB	9.95	47	eP	22	27.00	-0.4
	0.2s		1.00nm			4.9mb X
			iS	24	17.70	
MBL	12.13	6	eP	22	55.70	-1.4
			eS	25	04.00	

S.D. = 1.3 on 7 of 10 obs.

? JUL 23, 1989 01h 28m 22.39± 0.87s
41.384 N ±10.8km 14.512 E ±15.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

DUI	0.28	352	Pd	28	28.30	0.0
			eSg	28	31.80	
SDI	0.61	302	P	28	34.80	0.0
			eSg	28	46.40	
SGO	1.02	144	P	28	41.60	-0.1
			eSg	28	57.20	
MGR	1.48	147	P	28	49.10	0.1
			eSg	29	08.20	

S.D. = 0.1 on 4 of 4 obs.

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* JUL 23, 1989 02h 40m 23.64± 2.18s
33.222 S ± 5.9km 71.754 W ±18.0km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.22	26	iPc	40	27.60	-0.7
			iS	40	31.90	
LCCH	0.30	149	iPd	40	30.50	0.7
			iS	40	38.50	
ROCH	0.67	68	iPd	40	36.00	-1.1
			iS	40	48.50	
LNV	0.79	159	iPc	40	37.50	-1.4
			iS	40	52.00	
TACH	0.81	122	iPd	40	39.50	0.2
			iS	40	53.60	
PEL	0.90	85	iPc	40	40.70	-0.2
			iS	40	55.00	
SAN	0.94	104	iPc	40	42.00	0.4
			iS	40	58.90	
JACH	1.11	61	iPc	40	42.60	-2.0
			iS	41	02.40	
CHCH	1.16	128	iPd	40	44.60	-0.8
			iS	41	04.50	
FCH	1.23	95	iPd	40	46.50	-0.3
			iS	41	07.60	
RTBS	2.49	52	iPd	41	07.00	2.2X
			S	41	44.00	
RTCV	3.04	64	e(P)	41	16.00	3.3X
RTCB	3.04	56	eP	41	12.80	0.0
RFA	3.14	120	ePc	41	15.20	1.1
RTLL	3.36	57	e(P)	41	19.20	1.9
			S	42	07.20	
CFA	3.38	63	e(P)	41	19.00	1.4
MRA	5.15	83	e(P)	41	43.50	0.9

S.D. = 1.2 on 15 of 17 obs.

JUL 23, 1989 03h 23m 04.81± 0.39s
33.164 S ± 5.3km 70.284 W ± 6.5km
DEPTH = 102.4 ± 5.2 km
4.7mb (2 obs.)
CHILE-ARGENTINA BORDER REGION (127)

FCH	0.16	182	iPc	23	19.50	-0.5
PEL	0.34	273	iPd	23	19.60	-0.5
SAN	0.43	228	iPc	23	20.40	-0.2
			iS	23	32.10	
PCH	0.49	203	iPd	23	21.50	0.4
JACH	0.55	332	iPc	23	20.80	-0.7
ROCH	0.64	287	iP	23	21.60	-0.8
TACH	0.73	228	iPd	23	23.10	0.1
CHCH	0.83	202	iPc	23	24.60	0.7
LCCH	1.12	254	iPd	23	27.00	0.0
			iS	23	42.70	
IHA	1.15	277	iPc	23	27.50	0.2
			iS	23	42.10	
LNV	1.23	230	iP	23	28.00	-0.2
			iS	23	45.00	
RTBS	1.66	25	iPc	23	34.50	1.0
RTCV	1.97	49	iPd	23	38.00	0.4
RTCB	2.09	37	iPc	23	29.70	-9.6X
ZON	2.11	41	iPc	23	40.00	0.5
RFA	2.20	137	iPd	23	41.40	0.7
CFA	2.32	49	iPc	23	32.00	-10.3X
			S	24	11.50	
RTLL	2.39	41	iPc	23	43.00	-0.2
RTRS	3.07	13	e(P)	23	53.20	0.9
MRA	3.93	80	ePd	24	02.90	-1.1
CYA	6.09	41	ePd	24	29.50	-4.4X
ANT	9.43	359	e(P)	25	50.00	30.7X
CCH	16.15	14	P	26	49.10	1.7
CNCB	16.42	8	P	26	51.00	0.0
ARE	16.67	356	eP	26	46.00	-7.8X
LPB	16.68	7	P	26	57.30	3.2X
ZOBO	16.93	7	Pc	26	56.60	-0.8
	1.0s		20.00nm			4.3mb
BAO	26.68	54	eP	28	33.50	-2.7
SPA	57.01	180	ePc	32	42.80	0.8
	1.0s		21.00nm			5.1mb
MAW	73.56	163	eP	34	28.00	0.2

S.D. = 0.9 on 24 of 30 obs.

JUL 23, 1989 03h 50m 11.61± 2.25s
33.201 S ± 5.9km 71.784 W ±17.7km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.21	34	iPc	50	16.30	0.1
			iS	50	21.80	
LCCH	0.33	147	iPd	50	18.60	0.2
			iS	50	27.00	
ROCH	0.69	71	iPc	50	33.10	7.7X
			iS	50	53.00	
LNV	0.81	158	iPc	50	26.70	-0.7
			iS	50	41.00	
TACH	0.84	123	iPd	50	28.00	0.2
			iS	50	42.60	
PEL	0.92	87	iPc	50	29.40	0.1
			iS	50	46.50	
SAN	0.97	105	iPc	50	30.60	0.5
			iS	50	47.20	
JACH	1.13	63	iPd	50	31.00	-1.8
			iS	50	49.20	
PCH	1.14	112	iPc	50	33.10	0.1
			iS	50	53.00	
CHCH	1.19	128	iPc	50	34.00	0.1
			iS	50	53.50	
FCH	1.26	96	iPd	50	35.00	-0.2
			iS	50	55.50	
ZON	3.10	59	eP	51	03.00	1.4

S.D. = 0.9 on 11 of 12 obs.

JUL 23, 1989 03h 50m 37.41± 0.55s
47.496 N ± 5.0km 13.012 E ± 6.2km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.3 (VKA), 2.9 (GRF), 2.7 (FUR).

BHG	0.24	338	iPgc	50	42.30	-0.3
KBA	0.47	151	iPgd	50	45.80	-1.3
			iSg	50	52.20	
FVI	0.92	190	Pc	50	55.30	0.4
			eSg	51	04.40	
SCE	1.00	243	ePg	50	56.90	0.5
RBL	1.12	160	P	50	51.90	-6.6X
			eSn	51	13.50	
FUR	1.35	300	iPc	51	03.70	1.5
OGA	1.49	246	iPd	51	07.30	2.8X
VOY	1.58	157	ePn	51	06.20	0.5
			eSn	51	28.90	
WET	1.65	357	ePg	51	07.30	0.7
KHC	1.68	13	iPn	51	05.80	-1.2
			Pg	51	07.80	
			Sg	51	29.00	
LJU	1.79	144	eP	51	14.00	5.4X
			e(Sn)	51	34.20	
TRI	1.86	164	iP	51	36.80	27.2X
CEY	2.01	150	eP	51	42.00	30.2X
VKA	2.36	70	e(Pg)	51	18.00	1.3
			e	51	26.00	
			e	51	37.00	
			iSg	51	44.40	
			e	59	07.00	
			e	59	24.00	
			iSg	59	28.50	
GRF	2.50	332	ePg	51	24.80	6.1X
			e(Sn)	51	47.00	
			eSg	51	56.00	
ZST	2.84	74	eP	52	02.40	38.8X
HOF	2.92	346	eP	51	31.50	6.8X
FEL	3.40	278	ePnc	51	30.90	-0.8
BRG	3.44	10	ePg	51	39.00	7.0X
			eSg	52	24.00	
			e	00	20.60	
TOD	3.50	309	ePnc	51	32.02	-1.0
ABH	4.34	305	ePg	51	44.64	-0.2

S.D. = 1.0 on 12 of 21 obs.

JUL 23, 1989 03h 58m 21.72± 0.80s
47.526 N ± 7.0km 13.114 E ±13.0km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 2.6 (GRF), 2.5 (FUR).

BHG	0.25	321	iPgc	58	26.50	-0.6
KBA	0.47	161	iPgd	58	30.20	-1.2
			iSg	58	36.00	
FVI	0.96	194	P	58	39.60	-0.4
			eSg	58	48.60	
RBL	1.13	164	P	58	43.00	0.1
			eSg	58	58.60	
FUR	1.39	298	iPc	58	47.90	0.7
VOY	1.59	160	e(Pn)	58	51.60	1.6
			eSn	59	13.70	
KHC	1.64	11	iPn	58	50.50	-0.2
			Pg	58	52.50	
			Sn	59	05.90	
			Sg	59	13.60	
TRI	1.87	166	iP	59	21.10	27.1X
GRF	2.50	331	ePg	59	09.20	6.1X
			eSg	59	39.50	
HOF	2.91	344	iPd	59	16.00	7.1X

S.D. = 1.1 on 7 of 10 obs.

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* JUL 23, 1989 05h 21m 56.76± 2.53s
33.205 S ± 6.7km 71.790 W ±19.6km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.22	35	iPc	22	01.30	-0.2
			iS	22	05.90	
LCCH	0.33	146	iPd	22	04.10	0.6
			iS	22	12.50	
ROCH	0.69	71	iPd	22	09.90	-0.7
			iS	22	22.00	
LNV	0.81	157	iPc	22	11.50	-1.0
			iS	22	26.00	
TACH	0.84	122	iPd	22	13.00	0.0
			iS	22	28.00	
PEL	0.93	87	iPc	22	14.40	-0.1
SAN	0.98	105	iPc	22	15.80	0.5
			iS	22	32.00	
JACH	1.13	63	iPc	22	16.50	-1.6
			iS	22	35.00	
PCH	1.14	112	iPc	22	18.50	0.3
			iS	22	38.50	
CHCH	1.20	128	iPc	22	13.50	-5.6X
			iS	22	38.20	
FCH	1.26	96	iPd	22	20.50	0.1
			iS	22	42.50	
ZON	3.11	59	eP	22	49.00	2.2

S.D. = 1.1 on 11 of 12 obs.

? JUL 23, 1989 06h 44m 33.78± 4.73s
33.131 S ±13.1km 72.084 W ±33.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.55	129	iPd	44	45.00	0.0
			iS	44	53.40	
ROCH	0.91	80	iPd	44	51.10	-0.3
			iS	45	05.00	
LNV	1.00	146	iPd	44	52.60	0.0
			iS	46	06.60	
TACH	1.09	119	iPd	44	54.00	-0.3
			iS	45	09.00	
PEL	1.17	91	iPd	44	55.80	0.1
			iS	45	14.00	
SAN	1.23	105	iP	44	57.10	0.4
JACH	1.33	71	iPc	44	58.50	0.1
			iS	45	16.60	
PCH	1.40	111	iPc	44	59.50	0.1
			iS	45	20.00	
CHCH	1.44	124	iPc	45	00.00	0.1

		iS	45 19.10		
FCH	1.52 98	iPc	45 01.30	0.0	
		iS	45 22.00		

S.D. = 0.2 on 10 of 10 obs.

JUL 23, 1989 07h 57m 21.48± 0.60s
45.539 N ± 6.5km 15.294 E ± 4.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 3.2 (LJU), 2.7 (TRI).

VBY	0.04 218	iPgc	57 22.70	-0.9	
		iSg	57 23.90		
ZAG	0.56 60	iPg	57 32.60	-0.2	
		iSg	57 40.00		
PTJ	0.59 52	iPgd	57 32.90	-0.6	
		eSg	57 41.40		
CEY	0.64 289	iPgc	57 33.90	-0.5	
		eSg	57 43.40		
LJU	0.73 314	ePg	57 35.90	0.0	
		eSg	57 47.00		
TRI	1.09 280	ePgd	57 41.00	-0.9	
VOY	1.10 297	iPgc	57 42.40	0.2	
		eSg	57 57.50		
RBL	1.50 308	Pd	57 49.10	0.5	
		eSn	58 09.10		
FVI	2.04 302	P	57 57.20	0.9	
		eSn	58 22.80		
HVAR	2.50 160	iPn	58 03.80	1.0	
		iSn	58 33.90		
		iSb	58 39.00		

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

% JUL 23, 1989 08h 04m 21.34± 1.00s
38.014 N ± 7.6km 29.249 E ±10.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.38 35	iPg	04 29.20	0.1	
		iSg	04 34.70		
YER	1.17 221	iPn	04 42.80	-0.4	
BCK	1.20 117	ePn	04 43.00	-0.7	
ALT	1.24 33	iPn	04 44.50	0.1	
ELL	1.37 157	ePn	04 47.50	0.9	

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

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* JUL 23, 1989 08h 21m 30.54± 3.16s
17.318 N ±21.9km 61.217 W ±17.1km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

ANG	0.61 255	eP	21 43.39	0.6	
BPA	0.67 246	eP	21 44.13	0.3	
DEG	1.01 171	eP	21 50.00	0.3	
MGH	1.13 238	eP	21 51.35	-0.3	
		S	22 06.60		
NEV	1.31 262	eP	21 54.60	-0.1	
		eS	22 12.50		
PAG	1.36 199	eP	21 55.10	-0.4	
		S	22 12.50		
MGG	1.39 184	eP	21 56.00	0.0	
SKI	1.45 271	eP	21 56.52	-0.3	

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

? JUL 23, 1989 08h 30m 10 16± 1.02s
40.381 N ±11.3km 21.683 E ± 8.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.6 (ATH).

KZN	0.10 138	iPgc	30 12.60	-0.4	
KBN	0.71 290	ePn	30 24.20	0.1	
VAY	1.16 35	ePn	30 31.40	-0.3	
PLG	1.35 90	ePg	30 35.50	0.5	
		eSb	30 53.00		
BERA	1.36 284	ePn	30 43.40	8.3X	
PHP	1.61 325	ePn	31 05.30	26.7X	

S.D. = 0.7 on 4 of 6 obs.

? JUL 23, 1989 09h 01m 15.71±12.01s
10.886 N ±29.5km 60.472 W ±100.km
DEPTH = 33.0km (normal)
TRINIDAD (98)
MD 2.8 (TRN).

BOT	0.37 319	eP	01 24.39	0.0	
TPR	0.42 315	eP	01 25.21	0.0	
		eS	01 31.84		
PIG	0.45 307	eP	01 25.54	-0.1	
		eS	01 33.16		
TRN	0.95 256	eP	01 32.42	-0.2	
		eS	01 44.95		
TCE	1.27 262	eP	01 37.53	0.2	

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

& JUL 23, 1989 09h 52m 44.46s
59.875 N 153.607 W
DEPTH = 134.5km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.29 139	iP	53 02.87	1.1	
		S	53 17.42		
ILIM	0.39 57	iP	53 02.89	-0.9	
		S	53 18.19		
AUW	0.51 172	iP	53 03.72	-0.6	
RED	0.69 37	eP	53 04.78	-0.8	
		S	53 20.83		
MCNL	0.79 209	eP	53 05.15	-1.1	
		S	53 21.25		
RDT	0.92 40	iP	53 06.68	-0.8	
		S	53 23.88		
CDD	0.95 181	iP	53 06.60	-1.0	
HOM	1.02 101	eP	53 07.54	-0.6	
XLV	1.05 113	eP	53 07.33	-1.2	
		S	53 25.41		
NNL	1.17 81	eP	53 09.63	-0.1	
CNPM	1.25 105	eP	53 09.36	-1.2	
		S	53 28.94		
SHU	1.41 152	iP	53 10.84	-1.3	
SPU	1.52 30	eP	53 12.74	-0.8	
SLKM	1.81 68	iP	53 15.89	-0.9	
SEW	2.10 82	eP	53 19.02	-1.3	
		S	53 45.26		
SUA	2.13 40	iP	53 20.01	-0.8	
		S	53 48.20		
SKT	2.34 25	eP	53 22.71	-0.7	
PWA	2.55 44	eP	53 25.63	-0.4	
VZW	3.69 68	eP	53 39.42	-1.6	

19 obs. associated

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* JUL 23, 1989 09h 53m 37.63± 2.93s
8.163 S ±25.2km 74.959 W ±13.2km
DEPTH = 100.2 ± 36.8 km
4.3mb (3 obs.)
PERU-BRAZIL BORDER REGION (112)

HUA	3.87 185	iPc	54 36.90	0.4	
		iS	55 19.40		
ZOBO	10.46 141	eP	56 06.00	-0.8	
LPB	10.68 142	eP	56 20.00	10.4X	
CNCB	10.96 142	eP	56 24.00	10.5X	
CCH	12.56 138	eP	56 58.00	23.7X	
ATB	23.13 79	Pc	58 35.90	0.1	
BAO	27.39 108	eP	59 16.50	0.6	
RLO	47.96 338	e(P)	02 08.10	0.0	
TUL	48.03 337	eP	02 08.80	0.2	
	1.1s	5.00nm		4.3mb	
SIO	48.08 337	eP	02 09.00	0.0	
ALQ	52.19 327	eP	02 40.20	-0.4	
	1.0s	2.50nm		4.2mb	
PNT	69.26 331	eP	04 36.00	0.3	
YKA	76.76 342	eP	05 19.40	0.0	
INK	86.50 341	eP	06 09.00	-1.0	
MBC	88.15 350	ePd	06 18.30	0.5	
	0.7s	4.00nm		4.6mb	

S.D. = 0.6 on 12 of 15 obs.

JUL 23, 1989 10h 08m 07.47± 0.65s
45.576 N ± 7.2km 15.300 E ± 5.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.9 (LJU).

VBY	0.08 203	iPgc	08 08.30	-1.6	
		iSg	08 09.60		
ZAG	0.54 63	iPg	08 18.30	0.0	
		iSg	08 25.50		
PTJ	0.56 55	iPgc	08 18.20	-0.8	
		eSg	08 26.70		
CEY	0.63 285	iPgc	08 19.40	-0.8	
		eSg	08 30.40		
LJU	0.71 311	ePgc	08 21.50	0.0	
		eSg	08 34.00		
VOY	1.08 295	iPgd	08 27.90	0.0	
		eSg	08 43.30		
TRI	1.09 278	P	08 28.10	0.2	
		eSn	08 42.20		
RBL	1.49 306	Pd	08 34.60	0.3	
		eSn	08 54.60		
KBA	2.02 319	iP	08 45.50	3.3X	
		iSg	09 13.70		
FVI	2.03 301	P	08 43.10	1.1	
		eSn	09 08.10		
HVAR	2.53 161	ePn	08 50.90	1.6	
		iSn	09 21.10		

S.D. = 1.1 on 10 of 11 obs.

& JUL 23, 1989 10h 39m 43.91s
38.738 N 112.184 W
DEPTH = 10.7km
UTAH (478)
<SLC-P>. ML 3.7 (SLC). Felt (IV) at Annabella and Glenwood. Felt (III) at Kooshorem, Meadow, Monroe and Redmond.

MSU	0.22 178	iPc	39 49.00	0.1	
DUG	1.53 342	eP	40 10.90	-0.5	
DAU	1.82 23	eP	40 16.60	0.9	
DLM	2.31 241	eP	40 22.80	0.1	
SRG	2.42 250	eP	40 24.30	0.0	
WRN	2.78 255	eP	40 28.90	-0.5	
OCS	3.09 253	eP	40 33.40	-0.4	
KRNA	3.45 255	eP	40 38.50	-0.4	
MCY	3.64 236	eP	40 42.50	0.9	
YMT5	3.85 243	eP	40 43.90	-0.6	
TNP	4.01 262	ePn	40 46.30	-0.5	
		iP*	40 54.70		
		iPg	40 59.50		
KVN	4.63 276	ePn	40 55.60	0.0	
		iP*	40 57.50		
		iPg	41 11.10		
		iS	42 10.70		
HPI	5.02 352	eP	41 02.00	0.8	
GSC	5.04 229	eP	41 17.00	15.6	
CLC	5.21 238	eP	41 22.00	18.3	
GOL	5.38 78	eP	41 07.50	1.2	
GLD	5.50 77	e(P)	41 10.00	2.0	
TPC	5.57 215	eP	41 18.00	9.1	
		e	42 36.00		
ALQ	5.95 128	ePn	41 12.90	-1.4	
		eP*	41 32.50		
		ePg	41 36.00		
GLA	6.06 201	eP	41 18.00	2.3	
SBB	6.07 230	eP	41 37.00	21.2	
		e	42 56.00		
RVR	6.32 223	eP	41 28.00	8.7	
PLM	6.57 217	eP	41 31.00	7.9	
LRM	7.08 358	eP	41 39.90	9.7	

24 obs. associated

? JUL 23, 1989 10h 42m 26.69± 0.96s
39.128 N ± 8.2km 27.608 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.78 200	ePg	42 42.00	0.1	
		eSg	42 54.00		
DST	0.92 59	ePn	42 44.10	-0.3	
EZN	1.21 305	ePn	42 49.00	-0.2	
EDC	1.23 9	ePn	42 50.00	0.4	

S.D. = 0.6 on 4 of 4 obs.

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* JUL 23, 1989 11h 24m 52.63± 1.61s
3.836 N ±11.8km 95.361 E ±13.8km
DEPTH = 73.5 ± 17.7 km
4.1mb (2 obs.)
OFF W COAST OF NORTHERN SUMATERA(705)

BSI	1.65 358	ePd	25 18.50	-1.6	
		e(S)	25 42.00		
PSI	3.73 108	iPd	25 51.20	2.1	
IPM	5.70 82	ePc	26 16.90	0.3	
	0.5s	59.60nm		5.2mb X	
		e	27 08.00		
SNG	6.20 57	eP	26 23.00	-0.5	
	0.8s	86.57nm		5.2mb X	
NNT	9.71 26	eP	27 10.00	-1.9X	
KSI	10.36 136	ePc	27 19.50	-1.2	

23d 11h

KLI	12.83	132	eP	27 53.00	-0.7
CHG	15.29	13	ePd	28 28.10	2.4
	0.9s	9.87nm			4.0mb
		e		33 51.50	
GBA	20.18	300	P	29 25.00	1.1
	0.8s	11.40nm			4.3mb
HYB	21.30	311	eP	29 35.50	0.2
GYA	24.96	25	eP	30 11.40	0.4
CD2	28.07	15	P	30 37.60	-1.7
XAN	32.60	21	Pc	31 17.50	-1.8
BJI	40.66	25	eP	32 28.00	0.8
S.D. = 1.6 on 13 of 14 obs.					

JUL 23, 1989 11h 26m 39.00± 0.32s
7.444 S ± 4.1km 126.204 E ± 6.4km
DEPTH = 33.0km (normal)
4.8mb (9 obs.)
BANDA SEA (280)

KUPT	3.72	223	eP	27 42.00	6.5X
	1.0s	704.50nm			
AAI	4.23	28	eP	27 42.10	-0.6
MKS	7.05	288	iPc	28 22.50	-0.1
MTN	7.23	138	eP	28 25.40	0.2
			eS	29 42.20	
KNA	8.63	163	eP	28 43.50	-1.1
			eS	30 16.00	
PCI	9.08	315	ePc	28 50.50	-0.4
WB5	14.68	148	iPc	30 02.00	-4.2X
			eS	32 39.10	
WRA	14.72	148	Pc	30 02.50	-4.2X
	0.6s	3.50nm			4.0mb
MBL	14.96	204	eP	30 07.70	-2.2
ASPA	17.74	156	P	30 44.50	-0.8
	0.7s	160.00nm			5.3mb
Z	19s	0.50um			4.9Msz
			eS	33 51.70	
			LR	38 20.00	
NANU	18.21	213	eP	30 52.70	1.7
QIS	18.39	136	eP	30 52.00	-1.3
			eS	33 51.00	
WARB	18.64	179	eP	30 55.20	-1.1
	0.5s	15.00nm			4.4mb
MEKA	20.41	200	eP	31 16.00	-0.1
CTA	23.14	125	eP	31 46.00	2.5
FORR	23.35	176	eP	31 45.40	0.0
MRWA	23.70	203	eP	31 49.00	0.2
	0.5s	2.00nm			3.9mb
COOL	23.80	191	eP	31 49.30	-0.5
BAL	24.70	200	eP	31 59.00	0.5
KLB	25.29	197	eP	32 04.70	0.6
MUN	26.13	200	eP	32 12.10	0.2
NWAO	26.69	197	eP	32 17.00	-0.1
RKG	27.82	197	eP	32 32.50	5.1X
STK	28.23	151	eP	32 32.70	1.7
PSI	29.02	289	eP	32 38.00	-0.4
BWA	33.76	146	eP	33 23.10	3.2X
BDT	36.40	313	eP	33 43.30	0.8
	0.7s	25.40nm			5.2mb
CHTO	37.46	314	iP	33 51.50	0.1
	1.0s	17.50nm			4.9mb
GYA	38.67	331	P	34 02.60	1.0
MAT	45.18	14	(P)	34 54.00	-0.6
	1.0s	12.00nm			4.8mb
LZH	48.13	336	eP	35 18.50	0.4
	1.5s	48.00nm			5.3mb
BJI	48.15	350	eP	35 17.00	-0.9
GTA	52.64	334	P	35 51.80	-0.6
WMQ	61.78	329	P	36 56.50	-0.5
MAW	73.18	201	eP	38 08.00	0.0
MAIO	76.06	310	eP	38 26.00	0.6
SPA	82.61	180	ePd	39 01.10	0.9
	0.8s	6.25nm			4.7mb
ALQ	124.58	52	e(PKP)	45 37.00	-0.4
S.D. = 1.0 on 33 of 38 obs.					

& JUL 23, 1989 11h 30m 41.95s
63.149 N 149.555 W
DEPTH = 87.0km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.18	192	eP	30 54.42	1.5
			S	31 03.72	
RND	0.41	51	iP	30 55.75	-0.2
			S	31 05.74	
MCK	0.65	25	iP	30 57.98	0.0
CUT	0.82	204	iP	30 59.43	-0.2
			S	31 13.12	
NEA	1.45	8	iP	31 06.93	-0.4
WRH	1.48	25	iP	31 07.34	-0.3
SKT	1.49	219	eP	31 07.57	-0.2
PWA	1.51	186	eP	31 08.09	0.0
			S	31 29.93	
CCB	1.69	26	iP	31 09.93	-0.5
HDA	1.71	41	iP	31 10.10	-0.6
			S	31 30.90	
SUA	1.78	199	eP	31 11.91	0.1
RDS	1.80	20	eP	31 11.56	-0.3
PAX	1.87	94	eP	31 12.58	-0.4
TOA	1.88	122	iP	31 13.34	0.3
FBA	1.92	23	eP	31 12.81	-0.7
KLU	2.38	133	eP	31 18.36	-1.4
16 obs. associated					

JUL 23, 1989 11h 50m 37.32± 1.55s
23.737 S ± 9.8km 179.927 W ± 6.9km
DEPTH = 573.3 ± 21.1 km
4.8mb (15 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.67	275	iPc	53 24.10	1.1
KRP	14.67	194	P	53 46.90	4.4X
PGZ	17.13	190	eP	54 05.30	-1.1
MTW	17.79	191	eP	54 11.90	-0.8
WDW	17.99	192	eP	54 13.10	-1.5
MRW	18.02	193	eP	54 14.30	-0.5
TCW	18.09	194	P	54 15.60	0.0
MSZ	23.12	202	P	55 02.90	1.2
BRS	24.87	256	iPd	55 18.60	1.1
RMQ	28.46	258	iPd	55 50.30	1.5
	0.5s	25.00nm			5.1mb
			i	56 04.60	
CAN	29.28	240	iPd	55 56.90	1.1
BWA	29.53	242	iPd	55 56.80	-1.2
CMS	31.22	248	iPd	56 13.00	0.8
	0.8s	27.00nm			4.9mb
CTA	31.54	270	iPd	56 15.10	0.0
	0.6s	82.67nm			5.5mb
TOO	32.59	237	iPd	56 25.20	1.4
	0.3s	17.00nm			5.2mb
PMG	34.51	289	eP	56 39.00	-0.9
STK	34.85	248	iPd	56 43.60	1.0
	0.5s	10.00nm			4.7mb
ASPA	42.13	260	iPd	57 41.70	0.0
	1.0s	45.00nm			5.0mb
WRA	42.48	266	Pc	57 41.40	-3.1X
	0.6s	24.30nm			4.9mb
FORR	46.39	249	eP	58 14.00	-0.6
	0.4s	36.00nm			5.3mb
MTN	47.51	274	eP	58 22.00	-1.3
WARB	48.22	255	iPd	58 28.00	-0.6
KNA	48.73	270	eP	58 31.60	-0.9
COOL	52.33	248	eP	58 58.00	-0.7
KLB	55.11	247	eP	59 17.90	-0.3
MBL	55.37	260	iPd	59 19.30	-0.9
	0.4s	6.00nm			4.3mb
BAL	56.15	248	eP	59 25.00	-0.4
MUN	56.36	246	eP	59 27.00	0.2
MRWA	57.00	250	eP	59 30.00	-1.2
	0.4s	3.00nm			3.9mb
NANU	58.88	257	iPd	59 44.30	0.3
	0.5s	60.00nm			5.1mb
SPA	66.41	180	ePd	00 34.70	3.0
	1.0s	15.50nm			4.5mb
PRS	81.38	44	eP	01 56.10	0.3
GCC	81.41	43	e(P)	01 55.80	-0.1
SAO	81.60	44	e(P)	01 56.70	-0.2
PRI	81.71	45	eP	01 58.00	0.4
BRK	81.77	43	eP	01 57.60	-0.1
BKS	81.79	43	e(P)	01 59.10	1.3
MHC	81.82	43	eP	01 58.20	0.0
PLM	82.62	49	eP	02 02.70	0.4
FRI	82.84	44	e(P)	02 02.90	-0.2
CMB	83.04	43	ePc	02 04.00	-0.1
ORV	83.28	42	eP	02 04.80	-0.4
WDC	83.29	40	e(P)	02 05.10	-0.2
TNP	85.08	45	iP	02 14.00	-0.4
	1.0s	2.75nm			3.8mb
ALQ	90.80	52	eP	02 41.00	-0.2
	1.0s	2.50nm			4.2mb
GOL	93.81	48	iP	02 54.50	-0.5
	0.8s	2.38nm			4.4mb
NB2	141.93	351	PKP	09 00.00	-5.3X

S.D. = 0.9 on 44 of 47 obs.

JUL 23, 1989 12h 01m 29.72± 0.33s
54.418 N ± 5.6km 125.426 E ± 8.4km
DEPTH = 10.0km (geophysicist)
4.7mb (10 obs.) 4.6Msz (2 obs.)
EASTERN USSR (656)

MDJ	10.18	163	eP	03 59.00	0.2
			S	05 50.00	
CN2	10.63	180	eP	04 02.50	-2.5
			pP	04 10.00	
			eS	06 03.00	
SNY	12.66	186	eP	04 29.10	-3.3X
Z	10s	1.50um			
BJI	15.67	207	eP	05 12.00	0.0
			Lg	09 42.00	
HHC	16.43	220	eP	05 24.00	2.1
E	10s	6.20um			
BTO	17.25	223	eP	05 32.00	-0.1
			epP	05 38.50	
			eS	08 39.00	
TIY	18.93	213	eP	05 53.30	0.4
Z	11s	2.97um			
N	10s	4.20um			
E	12s	6.20um			
TIA	19.09	201	P	05 54.70	-0.1
Z	12s	1.40um			
N	11s	1.10um			
MAT	19.94	149	(P)	06 04.00	-0.4
			eS	09 34.00	
NJ2	22.84	194	Pd	06 35.00	1.1
			S	10 36.00	
GTA	22.87	239	eP	06 32.80	-1.5
Z	10s	2.10um			4.9MszX
N	10s	2.60um			
SSE	23.51	189	Pc	06 41.50	1.2
	1.0s	39.00nm			4.9mb
Z	10s	0.30um			4.1MszX
N	17s	1.10um			
E	16s	1.10um			
			S	10 55.00	
			sS	11 04.00	
			i	11 30.00	
LZH	23.64	228	eP	06 46.50	4.6X
	1.6s	64.00nm			4.9mb
N	18s	3.60um			
E	14s	3.60um			
			Lg	13 55.00	
			e	14 17.00	
WHN	25.16	203	eP	06 57.00	0.7
			sP	07 04.50	
WMQ	26.56	262	P	07 10.00	0.6
Z	10s	1.10um			4.7MszX
N	14s	3.30um			
IMA	38.87	40	eP	08 57.70	1.2
	0.7s	2.90nm			4.1mb
TTA	39.24	45	P	08 59.20	-0.3
	0.9s	3.13nm			4.0mb
CHG	40.92	220	eP	09 13.20	-0.5
FBA	41.59	40	eP	09 19.60	0.9
PMR	42.71	45	e(P)	09 32.20	4.3X
MBC	43.26	18	eP	09 32.00	-0.2
SOD	44.47	327	iP	09 40.40	-1.7
INK	44.64	31	ePc	09 43.80	0.4
SUF	47.41	322	iP	10 03.70	-1.8
	0.7s	6.20nm			4.8mb
NUR	49.38	320	eP	10 21.00	0.3
Z	18s	0.50um			4.6Msz
			LR	32 10.00	
KSP	59.60	316	eP	11 36.00	0.4
BRG	60.52	317	eP	11 44.20	2.3
			e	13 33.50	
CLL	60.55	318	eP	11 43.00	1.0
EKA	62.77	330	Pd	11 55.20	-1.7
	0.7s	3.60nm			4.7mb
PNT	63.12	42	eP	12 04.00	4.6X
RMW	63.74	44	P	12 04.00	0.5
LON	64.30	45	P	12 06.00	-1.2
FFC	64.44	28	eP	12 06.00	-1.9
	1.1s	17.00nm			5.1mb
SES	65.37	36	eP	12 14.00	0.0
LRM	68.73	39	eP	12 33.60	-2.0
TNP	73.35	47	P	13 04.80	1.3
	0.8s	2.21nm			4.3mb
MSU	75.08	43	P	13 14.00	0.5
GOL	76.63	38	P	13 23.20	0.9

0.9s 4.73nm 4.6mb
GLD 76.64 38 P 13 22.00 -0.2
ALQ 80.43 41 e(P) 13 44.90 1.9
TUL 83.29 33 eP 13 58.80 1.2
0.9s 7.70nm 4.9mb
Z 20s 0.30um 4.7Msz
LR 46 30.00
RLO 83.29 32 e(P) 13 53.40 -4.2X
FORR 84.95 178 eP 14 05.50 -0.2
OLY 84.97 29 P 14 06.00 0.0
SPA 144.23 180 e(PKP) 21 03.50 -2.5
1.0s 5.00nm
S.D. = 1.3 on 40 of 45 obs.

% JUL 23, 1989 12h 29m 04.64± 2.85s
39.790 N ±23.5km 23.469 E ± 7.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG 0.21 50 iPgc 29 09.00 -0.3
eSg 29 13.20
OUR 0.67 36 ePgc 29 17.80 -0.2
LIT 0.81 293 ePgc 29 20.50 0.1
eSg 29 31.70
THE 0.93 336 ePgd 29 21.90 -0.4
eSg 29 34.20
SRS 1.33 4 ePb 29 29.70 0.5
eSb 29 47.50
KNT 1.44 343 ePb 29 30.30 -0.4
eSb 29 50.40
S.D. = 0.5 on 6 of 6 obs.

JUL 23, 1989 12h 49m 59.55± 0.65s
46.306 N ± 8.2km 13.383 E ± 6.9km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
MD 3.1 (LJU).

RBL 0.19 43 P 50 03.70 -0.1
eSg 50 08.40
VOY 0.45 128 iPgc 50 07.80 -0.9
eSg 50 15.90
FVI 0.51 305 Pc 50 08.20 -1.6
eSg 50 14.50
TRI 0.65 156 ePg 50 11.70 -0.9
iSg 50 21.50
KBA 0.77 358 iP 50 19.50 4.7X
i 50 21.10
iSg 50 24.70
LJU 0.84 108 ePg 50 16.00 0.2
eSg 50 28.00
RIY 1.19 144 ePg 50 22.30 0.6
iSg 50 39.10
SCE 1.37 303 ePg 50 25.00 0.2
VBY 1.53 121 ePn 50 27.80 0.8
iSn 50 50.40
OGA 1.72 290 iPc 50 31.50 1.6
KHC 2.83 3 ePg 50 57.60 11.9X
Sg 51 31.50
S.D. = 1.1 on 9 of 11 obs.

? JUL 23, 1989 13h 44m 43.62±12.12s
8.842 S ±103.km 128.244 E ±37.5km
DEPTH = 194.7 ± 33.0 km
4.1mb (1 obs.)
TIMOR SEA (290)

MTN 4.89 145 eP 45 57.30 0.2
KNA 6.88 176 eP 46 23.00 -0.1
eS 47 48.00
W85 12.47 152 eP 47 34.80 -0.9
i 47 41.60
eS 49 58.20
WRA 12.51 153 Pd 47 36.30 0.1
0.6s 4.60nm 4.1mb
ASPA 15.70 160 iPd 48 16.90 0.9
0.6s 29.00nm 4.9mb X
eS 51 17.00
QIS 16.00 138 eP 48 19.60 0.0
eS 51 22.00
WARB 17.31 185 eP 48 35.00 -0.1
S.D. = 0.7 on 7 of 7 obs.

% JUL 23, 1989 15h 06m 01.62± 0.82s
44.591 N ± 7.6km 7.245 E ± 7.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

PZZ 0.13 230 P 06 05.11 0.1
S 06 07.46
STV 0.35 171 P 06 08.78 -0.1
S 06 13.62
ENR 0.39 161 P 06 09.52 0.0
S 06 14.95
RRL 0.46 315 P 06 11.05 -0.1
S 06 17.31
ROB 0.54 123 P 06 12.49 0.0
S 06 20.08
FIN 0.79 119 P 06 17.10 0.1
S.D. = 0.1 on 6 of 6 obs.

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* JUL 23, 1989 15h 33m 37.01± 0.68s
7.296 N ±13.1km 77.164 W ±13.8km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
PANAMA-COLOMBIA BORDER REGION (82)

UPA 2.88 306 iPd 34 22.10 0.5
0.6s 213.33nm
S 34 57.00
DVD 5.36 283 eP 34 56.50 -0.3
ZOBO 25.06 159 Pc 39 01.60 0.8
1.0s 6.25nm 4.2mb
LPB 25.32 159 P 39 03.50 0.5
CNCB 25.62 159 eP 39 05.00 -0.9
CCH 26.83 156 P 39 16.50 -0.3
BAO 36.80 128 e(P) 40 50.00 5.9X
ALQ 38.49 320 e(P) 40 58.00 -0.2
e 41 10.00
e 41 16.80
NB2 82.88 29 P 45 59.50 -0.1
S.D. = 0.7 on 8 of 9 obs.

? JUL 23, 1989 15h 59m 40.20± 2.72s
18.475 N ±26.3km 65.941 W ±16.9km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

LPR 0.18 158 iP 59 46.70 0.0
SJG 0.41 209 iP 59 49.40 -0.1
S 00 01.80
APR 0.75 269 iP 59 54.20 -0.1
PNP 0.82 240 iP 59 55.50 0.2
S 00 12.00
S.D. = 0.3 on 4 of 4 obs.

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* JUL 23, 1989 16h 34m 21.60± 1.38s
31.626 S ± 8.3km 69.124 W ±12.3km
DEPTH = 121.5 ± 12.7 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS 0.28 263 iPd 34 38.50 -0.6
RTCB 0.31 63 iPd 34 39.00 -0.4
ZON 0.39 78 iPd 34 39.50 0.1
eS 34 54.00
RTCV 0.55 115 iPc 34 40.50 0.2
RTLL 0.63 62 iPd 34 40.90 0.0
CFA 0.76 89 iPd 34 42.00 0.1
S 34 55.00
RTRS 1.48 349 iPc 34 50.20 1.0
S 35 11.30
MRA 3.01 106 iPc 35 09.30 0.7
RFA 3.18 170 iPc 35 11.00 -0.1
CYA 4.29 43 ePc 35 25.00 -1.0
S.D. = 0.7 on 10 of 10 obs.

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* JUL 23, 1989 16h 38m 41.28± 2.61s
33.222 S ± 6.6km 71.738 W ±21.0km
DEPTH = 6.9 ± 5.5 km
NEAR COAST OF CENTRAL CHILE (135)

LCCH 0.29 151 iPc 38 47.80 0.6
iS 38 56.20
ROCH 0.66 68 iPd 38 53.70 -0.9
iS 39 06.40
LNV 0.78 160 iPd 38 55.20 -1.5
iS 39 09.10
TACH 0.80 123 iPc 38 57.10 0.1
iS 39 11.70
SAN 0.93 105 iP 38 59.90 0.5
iS 39 16.00
PCH 1.10 112 iPd 39 02.30 0.0
iS 39 20.50
JACH 1.10 61 iP 39 00.00 -2.4
iS 39 18.60
CHCH 1.15 128 iPd 39 03.00 -0.1
iS 39 22.40
FCH 1.22 95 iPd 39 04.00 -0.5
iS 39 24.30
RTBS 2.48 52 ePd 39 24.60 1.9
RTCB 3.03 56 ePc 39 31.50 0.9
S 40 21.00
RFA 3.13 121 e(P) 39 32.00 0.0
RTLL 3.35 57 e(P) 39 35.20 0.0
CFA 3.37 62 e(P) 39 36.50 1.1
MRA 5.14 83 e(P) 40 01.20 0.7
CYA 6.98 49 e(P) 40 25.00 -1.6
S.D. = 1.2 on 16 of 16 obs.

JUL 23, 1989 17h 27m 13.32± 0.51s
39.916 N ± 4.5km 29.177 E ± 5.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.52 234 iPg 27 23.00 -1.0
iSg 27 30.30
GBZT 0.90 13 ePg 27 30.10 -0.4
eSg 27 45.30
GPA 0.95 66 iPg 27 31.10 -0.3
eSg 27 44.80
EDC 1.10 294 ePn 27 30.00 -3.9X
ALT 1.12 140 iPn 27 34.90 0.5
ISK 1.15 356 ePn 27 34.50 -0.3
CTT 1.36 335 ePn 27 37.80 -0.4
KHL 1.61 170 iPn 27 42.10 0.1
MFT 1.69 302 ePn 27 44.00 0.9
IZM 2.12 225 Pn 27 53.00 3.6X
DMK 2.19 331 ePn 27 51.00 0.8
EZN 2.20 269 ePn 27 50.50 0.1
BBTK 2.76 90 eP 28 05.50 7.0X
eS 28 43.00
S.D. = 0.7 on 10 of 13 obs.

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* JUL 23, 1989 17h 27m 19.34± 1.21s
33.760 N ±15.3km 117.966 W ± 9.4km
DEPTH = 5.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
ML 2.7 (PAS). Felt at Huntington Beach.

PEC 0.68 79 iPc 27 33.80 0.8
PLM 1.01 113 eP 27 38.10 -0.9
ABL 1.50 317 eP 27 47.20 0.0
BCH 2.25 310 eP 27 58.50 0.5
GLA 2.72 104 e(P) 28 05.00 0.5
TNP 4.36 8 e(P) 28 27.00 -0.9
S.D. = 1.0 on 6 of 6 obs.

JUL 23, 1989 17h 28m 44.78± 0.48s
31.302 S ± 5.7km 68.888 W ± 7.4km
DEPTH = 115.1 ± 6.6 km
4.5mb (1 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)

RTCB 0.20 158 e(P) 29 01.00 -0.4
ZON 0.30 144 iPd 29 01.20 -0.5
RTLL 0.36 95 iPd 29 02.20 0.5
RTBS 0.60 233 iPd 29 03.00 -0.1
CFA 0.63 119 iPd 29 03.80 0.4
RTCV 0.63 152 iPc 29 03.80 0.4
RTRS 1.23 336 ePd 29 09.20 0.1
JACH 2.00 226 iPc 29 19.20 0.6
iS 29 44.70
FCH 2.34 210 iPd 29 24.50 1.3
iS 29 54.00
ROCH 2.45 227 iPc 29 23.70 -0.9
iS 29 53.80
SAN 2.62 215 eP 29 27.50 0.9
iS 29 56.00
PCH 2.69 210 iPc 29 28.60 1.0
TACH 2.92 216 iP 29 29.70 -0.8
MRA 2.92 113 iPc 29 31.00 0.4
CHCH 3.02 209 eP 29 32.40 0.5
LNV 3.40 218 eP 29 34.50 -2.4
iS 30 07.00
RFA 3.48 174 iPc 29 37.50 -0.6
CYA 3.92 44 ePc 29 42.50 -1.5
CCH 14.08 11 P 32 05.60 5.0X
CNCB 14.45 3 eP 32 07.00 1.4
LPB 14.72 3 eP 32 05.00 -3.9X

23d 17h

ZOBO 14.98 3 P 32 12.00 -0.3
SPA 58.87 180 e(P) 38 33.60 0.1
0.9s 4.09nm 4.5mb
S.D. = 1.0 on 21 of 23 obs.

? JUL 23, 1989 18h 39m 16.05± 5.44s
44.149 N ±11.3km 10.816 E ±41.2km
DEPTH = 5.0km (geophysicist)
NORTHERN ITALY (545)

MME 0.09 298 Pd 39 17.30 -1.0
eSg 39 20.50
BDI 0.18 241 Pc 39 19.90 0.1
eSg 39 24.00
PII 0.48 206 Pd 39 25.50 -0.1
eSg 39 33.70
BOB 1.16 303 Pc 39 39.20 1.0
eSg 39 55.90
S.D. = 1.4 on 4 of 4 obs.

• JUL 23, 1989 19h 11m 09.97± 0.89s
14.761 N ±11.2km 92.795 W ± 6.9km
DEPTH = 109.4 ± 6.7 km
4.8mb (10 obs.)
NEAR COAST OF CHIAPAS, MEXICO (69)

TPX 0.54 74 iP 11 29.18 2.0
iS 11 42.58
SCX 1.97 4 iP 11 40.45 -2.5
iS 11 58.69
EVV 4.42 327 eP 12 15.88 -0.1
iS 12 58.37
OXX 4.43 302 iP 12 15.00 -1.4
iS 12 53.45
LVVM 6.06 325 iP 12 31.36 -7.2X
iS 13 29.67
IISM 6.07 314 iP 12 34.57 -4.2X
IIT 6.77 310 eP 12 48.50 -0.1
(S) 14 06.18
ACX 7.11 288 eP 12 52.10 -1.0
III 7.34 300 eP 12 55.77 -0.6
(S) 14 16.78
UNM 7.61 308 (P) 13 03.50 3.4X
(S) 14 25.00
IIC 7.93 310 eP 13 02.00 -2.5
CRX 8.04 306 (P) 13 08.00 2.0
MRX 9.41 303 iP 13 25.00 0.8
SJS 9.79 118 ePc 13 31.50 2.0
BUS 10.24 119 eP 13 32.70 -3.0X
GCM 11.81 66 P 13 56.00 -0.1
eS 16 02.00
eTT 20 44.00
UYO 19.38 356 iPd 15 25.30 -4.4X
PWLA 20.58 11 P 15 43.40 1.4
MEO 20.61 346 iPc 15 38.80 -3.6X
OLY 20.69 3 P 15 43.00 -0.2
PRM 21.43 24 P 15 50.00 -0.5
GBTN 22.20 19 P 15 59.00 0.9
TKL 22.33 20 P 15 59.00 -0.4
FVM 23.23 5 P 16 10.00 1.9
ALQ 23.56 331 eP 16 12.00 0.4
0.9s 24.16nm 4.6mb
e 16 20.70
e 16 24.30
e 16 36.00
BLA 24.92 24 P 16 25.00 0.6
0.8s 67.11nm 5 1mb
GLA 27.05 316 P 16 45.00 1.0
GOL 27.18 338 P 16 43.70 -1.7
0.8s 16.37nm 4.6mb
PLM 28.61 315 P 16 59.00 0.7
MSU 29.20 328 P 17 03.50 0.0
DAU 30.21 331 P 17 12.80 0.2
ISA 31.03 317 eP 17 21.00 1.5
e 17 53.00
TNP 31.72 322 P 17 26.00 0.3
0.8s 2.94nm 4.1mb
FRI 32.61 318 e(P) 17 33.40 0.3
PRI 32.76 316 e(P) 17 38.90 4.2X
KVN 32.87 322 P 17 36.80 1.1
CMB 33.65 319 ePc 17 43.30 1.0
e 18 03.50
MHC 34.08 317 eP 17 47.20 1.2
LRM 35.11 336 eP 17 54.60 -0.3
ORV 35.25 320 eP 17 57.90 2.0
RSON 36.01 359 P 18 03.40 1.3
0.9s 30.20nm 5.2mb

WDC 36.50 321 ePc 18 05.10 -1.2
ZOBO 39.30 141 P 18 38.00 7.4X
LPB 39.52 141 eP 18 28.00 -4.2
CNCB 39.80 141 P 18 42.00 7.3X
LON 40.04 329 P 18 36.50 0.7
FFC 40.52 352 eP 18 37.00 -2.5
0.5s 5.00nm 4.6mb
PNT 40.85 333 eP 18 43.00 0.6
0.9s 21.00nm 4.9mb
YKC 50.07 347 eP 19 53.50 -1.8
YKB0 50.21 347 eP 19 53.50 -2.8
BAO 53.59 122 eP 20 25.60 3.2X
MRA 53.59 151 ePd 20 28.50 6.6X
SOB1 56.70 112 eP 20 48.90 4.1X
VAO 58.48 129 eP 21 02.50 5.3X
INK 59.49 344 eP 21 03.00 -0.5
TOA 60.34 334 eP 21 10.40 1.0
PMR 61.39 333 eP 21 16.70 0.3
0.8s 12.00nm 5.0mb
KDC 61.61 328 e(P) 21 18.40 0.5
FBA 62.24 337 eP 21 21.80 -0.3
MBC 63.07 353 eP 21 26.00 -1.3
1.1s 31.00nm 5.1mb
SVW 64.16 331 eP 21 34.50 -0.3
TTA 64.88 333 eP 21 39.00 -0.4
ALE 68.87 4 eP 22 19.00 14.8X
0.6s 4.00nm
ADK 74.7B 320 e(P) 22 41.00 1.3
EKA 77.80 36 Pc 22 54.90 -1.6
0.8s 3.60nm 4.2mb
NB2 83.85 28 P 23 28.50 0.2
CHG 144.69 341 ePKP 30 36.00 -0.2
LOE 144.97 335 ePKP 30 38.00 1.3
BDT 146.13 339 ePKP 30 42.00 3.4X
0.7s 34.40nm
NNT 150.13 335 ePKP 30 54.00 9.0X
S.D. = 1.4 on 54 of 70 obs.

• JUL 23, 1989 19h 19m 41.38± 0.82s
0.371 N ±14.1km 80.459 W ±12.6km
DEPTH = 33.0km (normal)
4.8mb (1 obs.)
NEAR COAST OF ECUADOR (105)

GGP 1.94 106 iPd 20 13.70 0.5
QUR 2.00 106 iPd 20 14.50 0.5
eS 20 42.80
COTA 2.12 91 iPd 20 15.00 -0.7
eS 20 45.80
RECU 2.14 118 iP+ 20 21.00 5.0X
S 20 58.00
ZOBO 20.53 144 P 24 22.30 1.9
Z 20s 0.23um 3.5MszX
LR 34 24.00
LPB 20.76 145 eP 24 21.00 -1.6
e 24 25.00
CNCB 21.04 145 eP 24 25.00 -0.7
CCH 22.58 142 P 24 44.80 4.0X
BAO 35.79 118 e(P) 26 40.00 0.0
PNT 59.18 331 eP 29 42.00 0.5
0.7s 6.00nm 4.8mb
INK 76.74 342 eP 31 31.00 0.2
MBC 78.90 351 eP 31 42.00 -0.6
S.D. = 1.1 on 10 of 12 obs.

• JUL 23, 1989 19h 43m 42.05± 1.68s
14.974 S ± 8.2km 167.338 E ±13.8km
DEPTH = 142.9 ± 13.4 km
4.8mb (1 obs.)
VANUATU ISLANDS (186)

DZM 7.11 187 iPc 45 25.00 0.1
iS 46 46.20
HNR 9.0B 306 eP 45 50.00 -1.2
eS 47 30.00
SVO 9.36 307 eP 45 51.00 -3.9X
eS 47 38.00
VSG 9.38 306 eP 45 56.00 0.9
eS 47 38.00
CTA 20.73 253 eP 48 14.00 1.0
RMQ 20.79 234 eP 48 15.70 2.2
e 48 17.00
BWA 25.81 218 eP 48 59.80 -1.9
ASPA 32.65 249 eP 50 01.60 -1.0
FORR 39.21 239 eP 50 57.00 -0.9
SPA 75.12 180 iPc 55 10.10 0.2
0.8s 16.25nm 4.8mb

SUF 125.09 339 iPKP 02 25.40 -1.0
0.4s 1.10nm
NB2 130.88 345 PKP 02 37.00 -0.6
PP 18 35.90
FLN 144.85 346 iPKPc 03 02.50 -1.0
LDF 144.92 345 iPKPc 03 02.70 -0.9
LOR 144.99 340 iPKPc 03 03.40 -0.4
LBF 145.20 340 iPKPc 03 04.10 -0.1
GRR 145.29 346 iPKPc 03 04.30 0.1
SSF 145.29 340 iPKPc 03 04.50 0.2
LSD 145.32 335 PKP 03 05.24 0.5
LPG 145.45 336 iPKPc 03 05.60 0.6
SMF 145.54 340 ePKP 03 05.20 0.4
AVF 145.57 340 ePKP 03 05.00 0.2
LPF 145.66 346 iPKPc 03 05.40 0.5
FIN 145.88 333 PKP 03 05.35 -0.1
RRL 145.91 335 PKP 03 06.58 0.8
BGF 145.94 341 iPKPc 03 06.40 1.0
ROB 145.96 333 PKP 03 05.65 0.0
IMI 146.26 333 PKP 03 06.78 0.6
MAF 146.33 341 iPKPc 03 07.60 1.5X
TCF 146.38 341 iPKPc 03 07.70 1.5X
SBF 146.49 333 ePKP 03 07.80 1.3X
MFF 146.77 344 iPKPc 03 08.70 1.9X
CVF 146.85 330 ePKP 03 08.50 1.4X
RJF 147.48 341 ePKP 03 10.80 2.8X
BNG 147.55 254 iPKPc 03 11.30 2.3X
0.7s 25.00nm
CAF 147.64 340 ePKP 03 11.40 3.1X
LFF 148.05 342 ePKP 03 12.20 3.4X
LPO 148.14 341 ePKP 03 12.60 3.6X
S.D. = 0.9 on 27 of 38 obs.

• JUL 23, 1989 20h 41m 15.67± 1.62s
13.060 S ±15.0km 130.385 E ±10.7km
DEPTH = 10.0km (geophysicist)
3.9mb (2 obs.)
NORTHERN TERRITORY, AUSTRALIA (591)

MTN 0.76 74 iPc 41 30.90 0.5
KNA 3.10 210 eP 42 12.70 7.2X
eS 42 54.00
WB5 7.78 151 eP 43 12.50 0.7
eS 44 41.00
WRA 7.83 152 Pc 43 12.80 0.4
ASPA 11.06 163 eP 43 57.20 0.1
0.9s 46.00nm 5.8mb X
eS 46 01.20
QIS 11.55 131 eP 44 02.00 -1.7
eS 46 07.00
MBL 12.90 230 eP 44 21.50 -0.4
eS 46 35.00
WARB 13.52 195 eP 44 31.00 0.9
0.2s 1.00nm 4.5mb
eS 46 59.00
CTA 16.73 117 eP 45 23.00 11.1X
NANU 17.00 234 eP 45 23.00 7.8X
0.3s 1.00nm 3.4mb
iS 48 14.70
FORR 17.83 186 eP 45 25.00 -0.5
MRWA 20.91 217 eP 46 15.00 14.2X
0.3s 1.00nm
eS 49 45.70
S.D. = 1.0 on 8 of 12 obs.

& JUL 23, 1989 20h 56m 23.08s
60.791 N 151.323 W
DEPTH = 62.0km
3.8mb (2 obs.)
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA 0.06 139 iP 56 33.55 2.8
SPU 0.53 318 iP 56 35.42 -0.3
RDT 0.58 248 iP 56 35.57 -0.6
SLKM 0.61 117 iP 56 35.72 -0.9
SUA 0.73 22 iP 56 37.91 -0.2
S 56 50.09
NNL 0.75 179 iP 56 38.29 0.1
RED 0.81 243 iP 56 38.44 -0.5
PMS 0.97 61 iPc 56 40.50 -0.5
BRLK 1.05 168 eP 56 41.26 -0.8
S 56 56.75
ILIM 1.08 229 eP 56 41.77 -0.7
PWA 1.11 38 iPc 56 43.10 0.3
HOM 1.15 188 eP 56 43.35 0.1
SEW 1.16 126 eP 56 42.03 -1.4

			S	56	58.31	
SKT	1.20	355	iP	56	44.02	0.0
			S	57	00.38	
CNPM	1.27	178	eP	56	44.20	-0.8
			S	57	01.25	
PMR	1.33	52	iPc	56	45.20	-0.6
XLV	1.36	189	eP	56	44.99	-1.2
OPT	1.49	221	iP	56	47.81	-0.2
CUT	1.70	17	eP	56	51.09	0.3
AUL	1.77	218	eP	56	51.63	-0.2
SVW	2.12	280	iPc	56	55.20	-1.6
CDD	2.20	213	iP	56	57.36	-0.6
MCNL	2.21	225	iP	56	57.10	-0.9
SHU	2.23	194	eP	56	57.48	-0.8
HUR	2.34	19	eP	57	00.56	0.8
VZW	2.34	81	eP	56	57.68	-2.3
KLU	2.71	73	iP	57	03.16	-2.0
TOA	2.80	60	eP	57	05.63	-0.8
RND	2.87	23	eP	57	07.29	-0.1
TTA	3.09	316	iPc	57	09.60	-0.9
KDC	3.11	192	iPc	57	08.10	-2.6
MCK	3.16	20	eP	57	11.26	-0.2
SDG	3.26	55	eP	57	12.26	-0.6
PAX	3.53	49	eP	57	15.48	-1.2
GLB	3.70	77	eP	57	16.32	-2.8
NEA	3.94	14	eP	57	21.23	-1.1
WRH	3.98	21	eP	57	22.12	-0.9
HDA	4.15	27	eP	57	24.38	-1.0
TGL	4.17	87	eP	57	22.52	-3.1
CCB	4.19	21	eP	57	24.62	-1.3
RDS	4.31	18	eP	57	26.24	-1.3
BALM	4.39	83	eP	57	25.60	-3.2
FBA	4.43	20	eP	57	28.30	-0.9
DOT	4.45	47	eP	57	27.84	-1.6
CTGM	4.89	84	eP	57	33.32	-2.5
IMA	5.40	350	eP	57	42.50	-0.5
DWY	6.42	54	P	57	54.80	-2.2
HYT	6.76	84	P	57	58.00	-4.0
SDN	7.31	226	eP	58	00.90	-8.6
INK	10.70	38	eP	58	52.00	-3.9
MBC	18.97	23	eP	00	40.00	-1.6
	0.5s		2.00nm			3.6mb
PNT	21.25	108	eP	01	04.00	-1.6
LON	22.14	116	eP	01	12.00	-2.6
KVN	29.97	121	eP	02	26.00	-1.6
TNP	31.16	121	eP	02	36.80	-1.2
	0.8s		2.11nm			3.9mb
RSON	32.80	81	e(P)	02	47.00	-5.0
MSU	32.98	115	eP	02	53.00	-1.0
NB2	57.76	10	P	06	00.20	-9.1
NB2	57.76	10	P	06	25.10	15.8
	59 obs. associated					

JUL 23, 1989 22h 42m 01.27± 0.34s
13.601 N ± 5.1km 120.508 E ± 7.9km
DEPTH = 33.0km (normal)
4.9mb (8 obs.) 4.2Msz (1 obs.)
MINDORO, PHILIPPINE ISLANDS (250)

QCP	1.17	28	iPd	41	59.80	-21.5X
BAG	2.79	1	eP	42	44.00	-0.8
QIZ	11.57	299	eP	44	47.50	0.2
SSE	17.42	2	P	46	07.60	4.2X
Z	18s		0.30um			
WHN	17.79	342	eP	46	10.50	2.5
NJ2	18.43	356	Pc	46	19 20	3 3X
NNT	20.26	270	iPc	46	36 50	-0.3
IPM	21.21	247	ePd	46	46.50	-0.1
	0.9s		32.20nm			4.7mb
CHG	21.34	287	eP	46	47.90	0.0
	1.0s		15.75nm		4	4mb
TIA	22.72	353	eP	47	04.90	3.4X
XAN	22.91	335	Pc	47	03.70	0.3
CD2	23.12	321	eP	47	06.00	0.5
PSI	23.93	245	ePc	47	13.80	0.4
TIY	25.07	345	eP	47	25.00	0.7
Z	20s		0.75um			4.2Msz
N	20s		1.29um			
BJI	26.61	353	eP	47	39.00	0.5
Z	16s		0.29um			3.9MszX
			eS	52	33.00	
LZH	26.93	329	e(P)	47	45.50	3.8X
SNY	28.25	5	Pd	47	53.60	0.3
MTN	28.31	158	iPc	47	54.10	0.0
	0.6s		19.00nm			5.0mb
CN2	30.39	7	eP	48	13.00	0.5
GTA	31.52	328	eP	48	22.00	-0.7
MBL	34.55	181	eP	48	49.00	0.0
WB5	35.96	157	iPd	49	01.00	0.0
WRA	36.01	158	Pd	49	01.30	-0.1
	0.7s		46.80nm			5.5mb
OIS	38.79	151	eP	49	25.00	0.2
ASPA	39.29	160	iPd	49	29.80	0.8
	0.7s		64.00nm			5.5mb
WARB	39.99	171	iPd	49	36.00	1.3
	0.4s		10.00nm			4.9mb
WMQ	41.17	323	P	49	46.20	1.9
GBA	41.82	275	Pc	49	49.60	-0.3
	0.8s		8.30nm			4.5mb
MAIO	58.78	304	eP	51	59.00	0.1
SOD	79.05	337	eP	54	03.00	-0.4
MBH	79.64	298	eP	54	05.00	-2.3
SUF	80.02	332	eP	54	08.00	-0.7
NUR	81.14	330	eP	54	13.00	-1.6
INK	83.26	21	eP	54	24.00	-1.5
UPP	84.70	330	iP	54	31.40	-1.5
VAY	86.99	312	eP	54	44.00	-0.7
NB2	87.26	333	P	54	44.60	-1.1
KSP	88.32	322	eP	54	51.50	0.6
8RG	89.70	323	eP	54	57.80	0.4
	0.8s		8.00nm			5.1mb
GRF	91.77	322	eP	55	08.00	1.0
	S.D. = 1.0		on 35 of 40 obs.			

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* JUL 23, 1989 23h 02m 08.29± 1.01s
30.236 N ±11.5km 50.787 E ±13.1km
DEPTH = 33.0km (normal)
IRAN (348)

SHI	1.62	111	eP	02	35.00	-0.1
			eS	02	57.00	
DHR	3.96	188	iPd	03	09.50	1.3
KER	5.15	324	eP	03	50.00	24.7X
BHD	6.24	301	ePnc	04	23.00	42.6X
			eSn	05	44.00	
			e	05	55.50	
RYD	6.63	215	eP	03	44.50	-1.5
OASM	7.62	239	iPc	03	57.10	-2.7X
MAIO	9.47	48	eP	04	25.00	-0.5
VRI	24.41	316	ePc	07	29.00	4.2X
NB2	40.33	331	P	09	44.80	0.8
	S.D. = 1.5		on 5 of 9 obs.			

JUL 24, 1989 00h 18m 11.29± 0.45s
44.859 N ± 3.6km 7.201 E ± 5.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN), 2.7 (LDG).

RRL	0.30	282	P	18	17.27	-0.4
			S	18	20.97	
DOI	0.36	175	Pc	18	18.50	-0.2
			eSg	18	23.30	
PZZ	0.36	191	P	18	18.40	-0.4
			S	18	23.84	
BNI	0.42	298	Pc	18	19.30	-0.6
			eSg	18	25.00	
LSD	0.60	357	P	18	22.91	-0.7
			S	18	30.81	
STV	0.62	172	P	18	22.71	-1.2
			S	18	30.60	
ENR	0.65	166	P	18	23.12	-1.2
			S	18	31.22	
LPG	0.71	334	Pg	18	24.80	-0.7
			Sg	18	33.90	
LPL	0.74	333	Pg	18	25.30	-0.6
			Sg	18	34.70	
ROB	0.74	139	P	18	25.17	-0.7
			S	18	34.17	
TOUF	0.85	178	Pg	18	27.75	0.0
AUTN	0.88	169	Pg	18	28.01	-0.3
			Sg	18	41.32	
CKI	0.88	119	Pd	18	28.50	0.2
			eSg	18	41.70	
ORO	0.94	35	P	18	31.80	2.5
MVIF	0.96	182	Pg	18	30.40	0.7
			Sg	18	43.83	
FIN	0.97	132	P	18	29.37	-0.4
			S	18	40.58	
AURF	0.98	175	Pg	18	29.79	-0.1
			Sg	18	44.31	
PCP	1.01	108	P	18	30.50	0.0
			S	18	42.12	
SBF	1.01	170	Pg	18	29.80	-0.7
IMI	1.07	152	P	18	30.71	-0.8
FRF	1.36	197	Pg	18	37.30	1.1
			Sg	18	55.60	
LRG	1.53	204	Pg	18	40.70	2.1
LMR	1.60	198	Pg	18	42.20	2.5
			Sg	19	02.90	
	S.D. = 1.1		on 23 of 23 obs.			

? JUL 24, 1989 00h 22m 20.56± 1.05s
15.497 N ± 7.7km 60.981 W ±53.4km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

CRM	0.74	175	eP	22	35.26	0.7
FDF	0.78	192	eP	22	35.39	0.3
	0.1s		0.60nm			
			S	22	51.20	
DEG	0.82	355	eP	22	35.65	0.0
			S	22	52.50	
MVM	0.94	175	eP	22	36.96	-0.5
			S	22	53.50	
BIM	0.98	185	eP	22	37.51	-0.5
			S	22	54.00	
	S.D. = 0.7		on 5 of 5 obs.			

? JUL 24, 1989 01h 19m 30.64± 4.94s
45.222 N ±65.7km 151.506 E ±59.7km
DEPTH = 10.0km (geophysicist)
KURIL ISLANDS (221)

KUSJ	5.33	249	P	20	50.50	-1.6
			S	21	46.30	
ASAJ	6.42	263	eP	21	07.10	-0.4
HOOJ	6.59	247	P	21	10.40	0.5
			eS	22	18.50	
MRRJ	8.05	253	eP	21	31.80	1.5
NB2	69.31	341	P	30	39.70	0.0
	S.D. = 1.7		on 5 of 5 obs.			

JUL 24, 1989 01h 36m 40.65± 0.26s
7.524 S ± 5.3km 76.320 W ± 6.6km
DEPTH = 140.1km (9 depth phases)
4.8mb (28 obs.)
NORTHERN PERU (111)

HUA	4.59	168	iPd	37	50.40	0.6
			iS	38	41.90	
RECU	7.20	342	P	38	24.70	-0.4
			eS	39	40.20	
QUR	7.63	343	eP	38	31.80	1.0
GGP	7.65	343	eP	38	32.40	1.2
			S	40	02.00	
CAYA	7.73	348	Pd	38	32.10	-0.2
			eS	39	40.50	
COTA	8.06	345	eP	38	39.00	2.3
ARE	10.06	152	eP	39	12.00	8.9X
ZOBO	11.82	138	P	39	24.00	-2.5
	0.8s		21.63nm			4.8mb
			i	39	38.00	
			S	42	44.00	
LPB	12.03	139	P	39	28.00	-1.1
CNCB	12.31	139	eP	39	24.00	-8.9X
CYA	23.06	156	e(P)	41	36.00	1.3
ATB	24.35	81	Pc	41	45.50	-1.6
BAO	28.87	109	eP	42	28.00	-0.5
SOB1	35.08	95	eP	43	22.00	-0.4
			e	43	50.90	128kmX
ITR	37.52	95	eP	43	43.70	0.7
			e	44	11.70	125kmX
PRM	41.77	352	eP	44	17.30	-0.4
BLA	44.67	355	eP	44	40.80	-0.3
OLY	45.12	342	eP	44	43.30	-1.3
CVL	45.31	358	eP	44	46.30	0.2
NA2	45.43	358	eP	44	47.30	0.3
CBN	45.50	359	eP	44	48.00	0.4
RLO	46.88	339	ePc	44	58.50	-0.1
TUL	46.93	338	ePd	44	58.80	-0.2
	1.0s		42.30nm			5.1mb
SIO	46.97	338	e(P)	44	59.00	-0.3
MEO	47.05	335	iPd	44	59.30	-0.6
FVM	47.15	345	iP	44	59.00	-1.6
	0.8s		6.82nm			4.4mb
ALQ	50.93	328	iPd	45	29.90	0.0
	1.0s		23.75nm			4.9mb
			e	46	02.50	141km
			e	46	10.60	

24d 01h

		e	46	14.60		
GAC	52.99	1 eP	45	44.00	-0.8	
GOL	54.13	332 eP	45	52.50	-1.2	
	1.0s	15.50nm		4.8mb		
		e	46	26.00	144km	
MSU	56.65	327 eP	46	01.20	-10.6X	
		e	47	50.90	566kmX	
RSSD	57.19	337 iP	46	14.00	-1.4	
		e	46	48.00	145km	
DAU	57.55	329 eP	46	17.60	-0.5	
DUG	58.20	328 eP	46	22.20	-0.3	
	1.0s	11.25nm		4.8mb		
TNP	59.23	323 iP	46	30.00	0.2	
	1.0s	6.25nm		4.5mb		
		e	47	02.00	134km	
RSON	60.06	347 eP	46	34.60	-0.3	
PRI	60.16	319 ePc	46	35.90	-0.1	
KVN	60.39	323 iP	46	37.20	-0.4	
		e	47	11.00	142km	
LLA	60.63	320 ePc	46	38.60	-0.4	
PRS	60.73	319 ePc	46	39.70	0.0	
CMB	61.13	321 ePc	46	42.20	-0.3	
MHC	61.51	320 ePc	46	45.50	0.4	
SCH	62.62	6 eP	46	51.00	-1.0	
ORV	62.75	322 ePc	46	53.60	0.4	
FHC	65.02	322 ePc	47	08.60	0.7	
FFC	65.64	344 iPd	47	10.60	-1.0	
	1.2s	32.00nm		5.1mb		
LON	67.45	328 eP	47	23.20	-0.1	
RMW	67.90	329 eP	47	25.60	-0.5	
PNT	68.05	331 ePd	47	27.00	0.1	
	1.0s	31.00nm		5.1mb		
EDM	68.16	337 eP	47	26.00	-1.6	
FRB	71.31	4 eP	47	45.00	-1.4	
KIC	72.72	81 P	47	55.20	-0.5	
YKA	75.75	343 eP	48	14.50	2.3	
YKB0	75.84	343 eP	48	11.00	-1.7	
SPA	82.53	180 e(P)	48	50.50	1.7	
	0.8s	13.33nm		4.8mb		
		e	49	25.90	140km	
DCN	83.77	34 eP	48	54.80	-0.3	
DLE	84.16	34 eP	48	57.00	-0.1	
DMU	84.17	34 eP	48	57.00	-0.1	
EPF	85.45	46 eP	49	05.40	1.5	
	1.2s	20.80nm		4.9mb		
INK	85.47	342 eP	49	03.00	-0.4	
		pP	49	55.00	213kmX	
GRR	86.05	40 eP	49	07.20	0.6	
	1.0s	12.00nm		4.7mb		
LFF	86.21	44 eP	49	08.50	1.1	
	1.0s	12.00nm		4.7mb		
FLN	86.39	40 eP	49	08.50	0.3	
	1.2s	14.20nm		4.7mb		
LDF	86.57	40 eP	49	09.00	-0.2	
EKA	86.71	33 Pc	49	10.10	0.5	
	0.9s	8.70nm		4.7mb		
MBC	87.30	351 ePd	49	12.70	0.6	
	0.7s	30.00nm		5.4mb		
TOA	87.37	334 ePc	49	14.10	1.3	
MAF	87.76	43 eP	49	15.50	0.6	
	1.0s	8.00nm		4.7mb		
BGF	88.03	43 eP	49	16.70	0.5	
	1.0s	10.00nm		4.8mb		
AVF	88.42	43 eP	49	18.30	0.3	
	0.6s	3.00nm		4.5mb		
PMR	88.52	333 eP	49	18 40	0.2	
	0.7s	5.70nm		4.7mb		
SSF	88.58	42 eP	49	19.00	0.2	
SMF	88.71	43 eP	49	19.90	0.4	
	1.0s	6.80nm		4.6mb		
LOR	88.86	42 eP	49	20.20	0.0	
	0.8s	4.00nm		4.5mb		
LBF	88.88	42 eP	49	20.50	0.2	
FBA	89.04	336 eP	49	19.00	-1.6	
LMR	89.92	46 eP	49	26.10	0.9	
	1.0s	12.00nm		4.9mb		
DOU	89.92	39 P	49	25.00	0.0	
		e	50	00.90	140km	
FRF	90.06	46 eP	49	26.80	1.0	
	1.0s	16.00nm		5.0mb		
LPG	90.48	44 eP	49	29.30	1.2	
	1.0s	8.00nm		4.8mb		
WLF	90.83	40 Pc	49	30.00	0.9	
ENN	90.89	39 eP	49	30.00	0.6	
	0.9s	8.00nm		4.9mb		
		e	50	05.50	138km	
WTS	91.66	38 eP	49	34.00	1.1	

	1.0s	8.00nm		4.8mb		
		e	50	09.50	138km	
IMA	91.73	337 eP	49	33.20	0.0	
	1.0s	7.50nm		4.8mb		
NB2	95.33	29 P	49	48.20	-1.5	
ASPA	137.19	223 ePKP	55	46.80	-3.0X	
WB5	139.33	227 ePKP	55	52.40	-1.4	
BJI	145.74	343 ePKP	56	03.00	-1.3	
MTN	146.04	234 ePKP	56	06.20	0.7	
	0.4s	31.00nm				
BTO	146.58	351 PKP	56	06.00	0.2	
MBL	147.38	209 ePKP	56	09.50	2.0	
	0.6s	14.00nm				
NANU	147.93	201 ePKP	56	12.00	3.7X	
GTA	148.06	6 ePKP	56	08.50	0.2	
TIY	148.92	346 ePKP	56	10.80	1.2	
SSE	151.40	327 PKP	56	19.50	6.1X	
	1.0s	2.00nm				
	S.D. = 1.0	on 88 of 94 obs.				

& JUL 24, 1989 02h 37m 50.20s
36.805 N 121.552 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.1 (BRK).

SAO	0.09	115 iPd	37	52.10	-0.3	
GCC	0.42	302 iPc	37	58.20	-0.5	
PRS	0.49	163 iP	37	59.65	-0.5	
LLA	0.52	111 iPd	38	00.55	-0.2	
MHC	0.54	352 ePd	38	01.40	0.3	
		iS	38	09.10		
		e	38	09.40		
ARN	0.54	2 iPd	38	01.30	0.2	
PCC	0.96	317 ePc	38	07.50	-1.3	
PRI	0.97	133 ePd	38	08.40	-0.8	
BKS	1.20	333 iPd	38	11.05	-1.9	
		id	38	13.25		
BKS	1.20	333 iPc	38	13.30	0.4	
BRK	1.21	332 ePc	38	11.40	-1.6	
		i	38	13.50		
ZSP	1.27	334 ePd	38	12.50	-1.6	
		i	38	15.00		
PHAM	1.34	136 eP	38	13.90	-1.5	
PKEM	1.38	122 eP	38	15.50	-0.5	
FRI	1.49	82 ePc	38	15.30	-2.2	
		iS	38	36.20		
CMB	1.54	37 ePd	38	16.40	-1.9	
		iS	38	35.40		
BCH	2.01	143 eP	38	22.80	-2.3	
ORV	2.75	1 eP	38	34.50	-1.1	
KVN	3.53	50 eP	38	45.40	-1.5	
TNP	3.68	68 eP	38	48.50	-0.5	
PLM	5.16	130 eP	39	09.00	-1.0	
GLA	6.67	122 e(P)	39	27.50	-3.7	
	22 obs. associated					

& JUL 24, 1989 03h 08m 00.30s
36.807 N 121.555 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.1 (BRK). Felt (III) at San Juon Boutista.

SAO	0.10	115 iPd	08	02.30	-0.3	
GCC	0.42	302 iPc	08	08.25	-0.5	
PRS	0.50	163 iPd	08	09.90	-0.4	
LLA	0.53	111 iPc	08	10.70	-0.2	
MHC	0.54	353 ePc	08	11.35	0.2	
		iS	08	19.30		
ARN	0.54	2 iPd	08	11.30	0.1	
PCC	0.96	317 iPc	08	17.60	-1.3	
PRI	0.98	133 ePd	08	18.70	-0.6	
BKS	1.20	333 ePc	08	20.93	-2.1	
BRK	1.20	332 eP	08	21.00	-2.1	
		i	08	23.25		
		eS	08	40.50		
ZSP	1.27	334 ePd	08	22.40	-1.7	
		i	08	25.00		
PHAM	1.35	136 eP	08	24.10	-1.4	
PKEM	1.38	122 eP	08	26.00	-0.1	
FRI	1.49	82 eP	08	25.30	-2.3	
		i	08	26.80		
CMB	1.54	37 eP	08	26.60	-1.8	
NWRM	1.96	328 eP	08	33.30	-1.0	
BCH	2.01	143 eP	08	33.00	-2.3	
BLP	2.43	157 eP	08	38.00	-3.2	

ABL	2.72	135 eP	08	42.80	-2.8	
ORV	2.74	1 eP	08	44.10	-1.6	
KVN	3.53	50 eP	08	56.10	-0.9	
TNP	3.68	68 e(P)	09	01.00	1.9	
	22 obs. associated					

? JUL 24, 1989 03h 14m 30.29± 1.13s
21.916 S ±18.1km 69.225 W ±37.0km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

ANT	2.09	211 iP	15	03.70	0.0	
		iS	15	32.70		
CNCB	5.21	13 eP	15	48.00	-0.6	
CCH	5.36	33 P	15	50.50	0.1	
LPB	5.46	11 P	15	52.00	0.1	
		eLR	02	20.00		
ZOBO	5.71	11 P	15	56.00	0.4	
	S.D. = 0.5	on 5 of 5 obs.				

JUL 24, 1989 03h 27m 48.77± 0.10s
36.085 N ± 2.8km 71.069 E ± 1.7km
DEPTH = 95.1km (geophysicist)
5.8mb (85 obs.)
AFGHANISTAN-USSR BORDER REGION (717)
Felt (IV) at Ishkashim and Gissar; (III) at Khorog, Kulyab, Dushanbe, Nurek, Ragun, Obigarm and Leninabad; (II) at Tashkent and Samorkand, USSR. Also felt at Chitral, Peshawar and Rowalpindi, Pakistan. Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike= 30 Dip=72 Slip= 63
NP2: 269 32 144
Principal Axes:
T Plg=55 Azm=266
P 22 140
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting with a moderate right-lateral strike-slip component. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sta: 9 Focal mech. C
Energy 0.8±0.3*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 78 No. of sta: 14
Moment Tensor; Scale 10**17 Nm
Mrr= 2.35 Mtt=-5.19
Mff= 2.84 Mrt= 0.79
Mrf= 4.97 Mtf=-5.00
Principal axes:
T Val= 8.36 Plg=37 Azm=252
N 0.09 48 40
P -8.45 17 149
Best Double Couple:Mo=8.4*10**17
NP1:Strike=284 Dip=51 Slip= 164
NP2: 25 77 40
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 41C
Centroid Location.
Origin Time 03:27:52.5 0.2
Lat 35.78N 0.03 Lon 71.28E 0.03
Dep 105.0 1.6 Half-duration 3.7
Moment Tensor; Scale 10**17 Nm
Mrr= 7.75 0.23 Mtt=-2.43 0.38
Mff=-5.31 0.36 Mrt= 0.03 0.24
Mrf= 5.23 0.26 Mtf=-5.32 0.37
Principal Axes:
T Val= 9.86 Plg=66 Azm=247
N 0.53 19 29
P -10.39 14 124
Best Double Couple:Mo=1.0*10**18
NP1:Strike=238 Dip=36 Slip= 124
NP2: 18 61 68

KSH	5.14	48 P	29	06.50	1.6	
QUE	6.82	212 iPc+	29	26.80	-1.3	
		eS	30	41.00		
NDI	9.02	143 iPd	29	54.00	-4.1X	
		S	30	18.00		

			iS	31	26.50		AYN		30.33	266	iPd	33	54.30	1.0	KDZ		35.65	293	iPc	34	40.00	0.7
MHI	9.36	275	iPc	30	00.20	-2.5	CSS		30.61	279	eP	33	55.00	-0.8	CMP		35.68	299	ePd	34	41.00	1.5
	0.6s	400.00nm			6.5mb X		ABHA		30.66	242	iPd	33	58.50	1.8	GBR		35.85	233	eP+	34	42.20	1.0
			eS	31	40.00		BTO		30.71	70	iPc	33	57.00	0.3	MDB		36.12	301	iPc	34	45.00	1.9
KHI	10.36	263	eP	30	16.10	-0.2	MBH		30.90	269	iPc	33	59.00	0.7	RZN		36.17	293	iPc	34	44.00	0.2
WMO	14.89	54	ePd	31	13.11	-2.4	XAN		30.93	83	P	33	58.50	-0.1					iPP	36	17.00	
TEH	15.96	275	ePc	31	32.00	2.9X		N	13s		3.00um				DRA		36.25	298	eP	34	47.00	2.8X
SHI	16.84	253	eP	31	41.00	0.9		E	10s		2.40um				APE		36.32	285	ePb	34	45.00	0.1
POO	17.66	171	iPc	31	48.70	-1.4					pP	34	20.00	94kmX	WHN		36.36	86	eP	34	46.00	0.7
			iS	35	11.00						S	38	54.00				1.4s		0.21nm			2.9mb X
LSA	18.01	105	iPc	31	53.40	-1.4	HQL		30.94	268	iPc	33	59.70	1.0		Z	24s		5.46um			5.2MszX
KER	19.65	272	iPc	32	13.00	0.4	BDT		31.06	120	eP	34	01.00	1.2		N	10s		3.30um			
HYB	19.74	158	iPd	32	13.00	-0.5			1.0s		82.80nm			5.4mb					sP	35	22.20	
	1.0s	420.00nm			5.7mb		BADA		31.27	266	iPd	34	02.40	0.8					S	40	20.00	
			e	32	40.00		PPCY		31.42	279	eP	34	02.50	-0.3	PGB		36.48	295	iP	34	47.00	0.7
			iS	35	40.00		GYA		31.75	97	iPd	34	06.00	0.0					iPP	35	09.00	
			i	35	48.00				4.0s		1.20nm			3.0mb X					iPP	36	14.00	
TAB	19.83	283	iP+	32	16.00	1.6		Z	22s		5.80um			5.2Msz	NPS		36.68	282	ePn	34	47.50	-0.5
			i	32	23.00	27kmX		N	12s		2.50um				BMR		36.72	303	eP	34	48.00	-0.1
DHR	20.35	247	iPc	32	18.50	-1.1		E	12s		4.00um				OUR		36.90	291	ePd	34	50.50	0.8
SHL	20.68	115	iP	32	21.50	-1.7					pP	34	30.00	107kmX	TIA		36.92	76	Pd	34	50.60	0.7
			iS	36	06.00						S	39	07.00			Z	20s		2.80um			5.0Msz
SLY	20.72	276	iPd	32	25.00	1.7					sS	39	48.00						ScS	44	50.50	
			ipP	32	28.50	13kmX					ScP	40	27.00		SRS		37.08	293	ePd	34	51.80	0.5
			iPP	32	35.50		HHC		31.86	69	Pc	34	08.00	1.2	PAIG		37.20	291	ePd	34	52.80	0.6
			iPPP	32	54.50			Z	11s		3.20um			5.3MszX	PLG		37.30	291	ePn	34	54.00	0.8
			iS	36	02.00						pP	34	30.00	97kmX	HIA		37.49	54	ePc	34	55.37	0.7
			iSS	36	13.50						S	39	10.00						epPd	35	17.88	95kmX
			iSSS	36	50.00		GPA		32.11	290	iP	34	09.40	0.5					esPc	35	28.14	
			iScS	43	31.00		BCK		32.28	285	iP	34	09.50	-0.9					ePP	36	20.40	
BHD	22.10	271	iPd	32	38.00	0.9	ALT		32.41	288	eP	34	11.80	0.3					eS	40	37.55	
			i	32	51.00	54kmX	GBZT		32.72	291	eP	34	14.90	0.8					esS	41	16.18	
			iPP	33	08.00		LOE		32.90	116	iPc	34	14.80	-1.1					eSS	43	25.28	
			iPPP	33	28.00		NST		32.92	121	eP	34	18.00	2.0					e	44	54.67	
			iS	36	34.00		TIY		32.93	75	Pc	34	16.90	0.8	ATH		37.53	287	iPnc	34	56.00	0.9
MSL	22.50	279	eP	32	42.00	1.0		Z	21s		5.40um			5.2Msz	KNT		37.59	293	eP	34	56.00	0.4
			e	33	19.00			N	11s		4.00um				THE		37.62	292	ePd	34	56.00	0.2
			ePcP	36	36.50						pP	34	38.50	94kmX	NEO		37.65	290	iPnc	34	56.50	0.4
			eS	36	54.50						S	39	30.00		BSI		37.71	138	eP	34	56.00	-0.7
			eSS	37	24.50		ELL		32.95	284	iP	34	16.10	-0.2	VAM		37.76	283	ePn	34	56.50	-0.5
			eSSS	37	46.00		KHL		32.97	287	iP	34	16.00	-0.4	VAY		37.81	293	iPc	34	58.50	1.1
GTA	22.93	73	P	32	46.40	1.1	ISK		32.98	292	eP	34	12.00	-4.4X			1.3s		0.22nm			2.9mb X
	5.0s	3.30nm			2.9mb X		ITU		33.01	292	iPc	34	16.00	-0.6	GRG		37.99	293	ePd	34	59.20	0.2
	Z 18s	7.10um			5.2Msz		KSL		33.34	283	ePb	34	18.00	-1.5	LIT		38.07	291	eP	34	59.40	-0.2
	N 10s	7.20um					CTT		33.45	292	eP	34	15.00	-5.4X	BZS		38.07	300	eP	35	01.00	1.5
			pP	33	08.00	101kmX	PSN		33.47	296	iPc	34	12.00	-8.6X	NUR		38.20	325	eP	35	01.00	0.7
			sP	33	20.00		DST		33.47	289	eP	34	20.00	-0.7			0.8s		379.90nm			6.4mb
			iS	36	51.00		CFR		33.48	299	eP	34	21.50	0.9		Z	21s		3.70um			5.2Msz
			sS	37	24.00		TLB		33.56	298	iP	34	21.50	0.2					esPP	36	56.00	
GBA	23.10	164	Pd	32	48.30	1.3	HLW		33.73	271	eP	34	24.50	1.5					eS	40	48.00	
	1.1s	148.70nm			5.3mb						e	34	56.00	145kmX					esS	41	20.00	
RYD	23.88	248	iPc	32	54.80	0.3					e	35	54.00						LR	51	40.00	
OASM	25.52	255	iPc	33	10.10	0.0	BIR		33.87	301	eP	34	26.00	2.0	SUF		38.30	328	iP	35	01.80	0.6
LZH	26.42	80	ePd	33	20.11	1.7	DMK		33.89	293	eP	34	24.00	-0.3			0.9s		370.90nm			6.3mb
	Z 30s	8.90um			5.1MszX		IAS		33.95	303	eP	34	08.00	-16.7X	TIM		38.34	300	iPc	35	02.00	0.3
			pP	33	41.00	94kmX	EDC		33.96	291	iP	34	25.40	0.5	SKO		38.56	294	iPc	35	04.60	0.9
			SP	33	55.00		YER		34.15	285	iP	34	25.90	-0.7			1.7s		330.00nm			5.9mb
			e	37	31.48		BAC		34.38	302	eP	34	25.00	-3.3X		Z	16s		1.16um			4.8MszX
			eS	37	54.10		VRI		34.49	300	ePd	34	30.50	1.2		N	16s		0.82um			
			sS	38	31.00		ISR		34.61	299	eP	34	32.50	2.0		E	16s		1.23um			
CD2	27.67	91	P	33	30.60	1.0	OBO		34.69	233	iP+	34	32.40	1.1					i	35	22.00	71kmX
	N 11s	5.80um					JMB		34.71	294	iP	34	32.00	0.8					i	35	37.00	
			PP	34	19.00						iPP	34	54.00						i	36	07.00	
			S	38	07.00		IZM		34.71	287	eP	34	31.60	0.2					iPPP	36	40.00	
KVT	27.71	291	eP	33	30.50	0.6	NNT		34.83	125	eP	34	33.20	0.7					iS	40	30.00	
KMSA	28.04	243	ePd	33	31.90	-1.1	BUC		34.95	298	ePc	34	34.00	0.8					iScP	41	29.00	
HRI	29.09	275	iPc	33	44.00	1.5	AMAN		34.96	260	iPd	34	35.00	1.5					iSSS	43	50.00	
KMI	29.25	103	ePd	33	43.96	-0.1	BUC1		35.00	298	ePc	34	32.00	-1.7					LR	56	32.00	
	Z 12s	8.60um			5.6MszX		MLR		35.03	300	iPd	34	35.00	0.9	KZN		38.57	292	ePn	35	04.00	0.1
			pP	34	10.00	120kmX	AKSR		35.04	260	iPd	34	37.00	2.8X	GZH		38.69	98	P	35	05.00	0.1
			sP	34	26.00				0.1s	375.00nm				7.3mb X		Z	32s		8.30um			5.3MszX
			PP	34	51.00		TDD		35.07	234	eP+	34	36.00	1.4		N	11s		0.90um			
			eS	38	31.49		ATA		35.14	233	eP+	34	37.00	1.9		E	11s		3.30um			
			sS	39	17.00		EZN		35.20	290	eP	34	35.40	0.0					pP	35	27.00	93kmX
			SS	39	24.00		AGAL		35.29	260	iPd	34	38.00	1.6					S	40	55.00	
			PcS	40	19.00		ARO		35.32	233	iP+	34	38.40	1.7	SPC		38.90	306	iP	35	07.90	1.3
KAS	29.42	292	iPc	33	41.70	-3.6X	PRK		35.33	289	ePn	34	37.00	0.5					i	35	28.20	85kmX
DSI	29.88	272	eP	33	51.00	1.7	KAP		35.37	282	ePn	34	36.80	-0.1					i	35	39.20	
CHG	29.98	118	iPd	33	49.70	-0.6	BJI		35.45	70	ePd	34	38.37	0.9					i	36	40.80	
	0.9s	44.96nm			5.2mb			Z	20s		7.58um			5.5Msz	BEO		38.95	299	iP	35	08.50	1.7
			eS	38	44.00						epPd	35	00.05	91kmX		N	21s		3.60um			
CHTO	29.98	118	ePd	33	49.79	-0.5					eS	40	10.27						e(S)	41	03.00	
FAM	30.07	279	eP	33	51.50	0.6					esS	40	49.72						e(SS)	44	06.00	
ANTO	30.25	289	ePc	33	53.22	0.6	AGMR		35.47	260	eP	34	40.50	2.7X	ITM		39.10	287	ePn	35	07.00	-1.2
			epPc	34	15.73	100kmX	DIM		35.52	294	eP	34	39.00	0.9	KRA		39.11	307	ePd	35	08.50	0.4
			esPd	34	25.50		PVL		35.57	296	iPc	34	40.00	1.5			0.8s		528.00nm			6.4mb
BBTK	30.28	289	iPd	33	54.00	1.1	RDO		35.62	292	iPnc	34	39.50	0.6		Z	16s		1.90um			5.0MszX

24d 03h

	N	16s	2.60um						0.6s	189.70nm			6.1mb		AQU	44.38	296	P	35	53.20	1.9
			i	35	11.60	11kmX					e	35	55.00	103kmX	AZI	44.43	296	P	35	52.70	1.1
			e	35	18.70			CN2	41.75	62	Pc	35	30.00	0.1	MNO	44.47	290	Pc	35	52.70	0.4
			i	35	40.00				5.0s	0.90nm			2.9mb	X	ARV	44.48	298	P	35	52.20	0.1
			e	44	10.00			Z	18s	5.90um			5.5Msz		MEU	44.52	289	Pc	35	53.60	1.1
KBN	39.24	292	iP	35	09.80	0.5					S	41	40.00		MDJ	44.56	60	ePc	35	52.87	0.2
KKS	39.30	295	eP	35	11.00	1.2					SS	44	46.00					epPd	36	15.72	96kmX
PHP	39.34	294	iPc	35	09.20	-0.9		ZAG	41.98	301	iPc	35	32.80	1.1				eS	42	22.45	
SNG	39.47	130	eP	35	12.20	0.8		PTJ	41.99	301	iPc	35	32.40	0.5				esS	43	01.35	
	0.7s	102.74nm			5.8mb			HVAR	42.02	297	iP	35	31.00	-1.1	NB2	44.75	323	P	35	52.70	-1.3
			e	37	43.80			PSI	42.03	136	iPc	35	31.00	-1.4	RSM	44.75	299	Pc	35	55.10	0.9
			e	40	56.00						eS	35	55.00		GRF	44.75	307	eP	35	55.40	1.2
			eS	41	07.20			QZH	42.06	92	eP	35	34.50	1.9		1.7s	660.00nm			6.2mb	
NJ2	39.48	82	Pc	35	12.50	1.1					S	41	41.00			Z	20s	1.00um			4.7Msz	
			pP	35	35.00	96kmX		VBY	42.53	301	iPc	35	37.30	1.1	FUR	44.89	305	eP	35	55.70	0.4
			PP	36	47.00						iS	41	08.20			1.0s	240.00nm			6.0mb	
			ScP	40	54.60			PRU	42.59	307	P	35	37.70	1.1	MNS	44.90	297	Pc	35	55.50	0.1
			S	41	07.00				1.5s	254.50nm			5.8mb		GIB	44.96	290	Pc	35	55.60	-0.4
BCI	39.51	295	eP	35	12.50	1.0		Z	18s	2.10um			5.1Msz		RDP	45.00	296	Pc	35	56.40	0.1
PUK	39.69	295	iPc	35	13.80	0.8		N	14s	1.00um					KGM	45.16	131	ePc	35	58.50	0.8
HKC	39.74	98	P	35	14.50	0.9		E	19s	1.50um					SFI	45.18	299	Pc	35	58.90	1.4
DL2	39.80	70	eP	35	14.00	0.1					e	36	00.00	94kmX	OGA	45.24	303	iPd	35	57.90	-0.4
	Z 25s	3.00um			5.0MszX						PP	37	23.50		PGD	45.28	299	P	35	59.80	1.2
	N 12s	1.70um									S	41	56.00		RGS	45.33	326	eP	36	01.00	2.5X
		S	41	09.00							SS	45	08.00		MCT	45.36	290	Pc	36	00.80	1.5
TIR	39.82	294	eP	35	13.50	-0.6		BRG	42.92	309	iP	35	39.30	-0.1	USI	45.41	291	P	35	59.80	0.4
AAE	39.85	235	ePc	35	17.90	3.0X			1.6s	400.00nm			6.0mb		FAI	45.43	289	P	36	01.30	1.7
PLE	39.87	297	eP	35	15.70	1.1					i	36	04.00	106kmX	PPI	45.45	137	eP	36	10.00	10.1X
BERA	39.87	293	eP	35	14.50	0.0					i	37	55.80			0.6s	201.00nm				
VLS	39.90	289	iPnc	35	13.50	-1.3					eS	42	04.00		SAL	45.79	301	P	36	02.90	0.5
SRN	39.99	291	iP	35	05.90	-9.5X		GRI	42.93	291	P	35	39.90	0.3	OSS	45.87	303	ePc	36	02.30	-0.9
TTG	40.09	295	eP	35	16.50	0.2		LJU	42.96	301	ePc	35	40.50	0.8	MME	45.94	300	P	36	05.00	1.1
SOD	40.14	335	iP	35	17.00	0.7					i	36	03.00	95kmX	MAO	45.99	297	Pd	36	04.40	0.4
KEK	40.17	291	iPnc	35	16.00	-1.0					e	37	25.00		BDI	46.04	299	Pc	36	04.40	-0.1
ULC	40.18	295	eP	35	16.80	-0.2					eS	42	00.00		PII	46.16	299	Pc	36	04.70	-0.6
SRO	40.22	304	iP	35	19.60	2.4					e	45	14.00		LVI	46.24	291	Pd	36	05.20	-0.8
			i	35	41.80	94kmX		KMR	43.00	304	iP+	35	41.00	0.9	SAX	46.32	304	ePc	36	05.90	-1.0
NKY	40.23	296	eP	35	18.50	0.9					i	36	03.40	94kmX	TOD	46.32	307	eP	36	06.62	0.0
VLO	40.25	292	eP	35	17.60	0.0					i	36	13.00		VDL	46.36	303	ePc	36	06.20	-0.9
BRY	40.55	296	eP	35	21.00	0.8					i	37	21.20		TNS	46.47	308	iPc	36	08.40	0.6
HCY	40.65	296	eP	35	21.00	0.1					i	37	47.20		LLS	46.62	303	ePc	36	08.00	-1.1
SNY	40.71	65	iPd	35	22.00	0.7					i	37	58.00		BOB	46.70	301	Pc	36	10.60	0.9
	Z 18s	6.20um			5.5Msz						i	45	32.70		SLE	46.80	305	ePc	36	09.60	-0.8
			PP	36	56.00			CEY	43.07	301	ePc	35	41.50	0.8	KTD	46.83	307	eP	36	10.90	0.3
			S	41	23.00			RIY	43.15	300	iPc	35	41.40	0.1	TMA	46.84	302	ePc	36	09.60	-1.3
ZST	41.01	304	iPc	35	24.80	1.1		MGR	43.27	293	Pc	35	42.80	0.5	BLS1	46.85	321	iP	36	11.03	0.3
			i	35	26.50	6kmX		KHC	43.27	306	iPc	35	43.20	0.9	PTS	46.85	289	Pc	36	11.30	0.4
			i	37	01.50				1.2s	82.00nm			5.4mb		ZLA	46.92	304	ePc	36	10.60	-0.8
			e	44	34.00						e	36	23.10	183kmX	VAI	46.95	302	Pc	36	10.60	-0.9
KEV	41.21	338	ePc	35	25.86	0.8		BRN	43.33	311	iPc	35	44.30	1.7	ODD1	46.95	322	eP	36	10.47	-1.0
	0.9s	243.30nm			6.0mb						ed	36	16.00	141kmX	ABH	47.09	308	eP	36	12.89	0.2
			epP	35	47.05	89kmX					eS	45	35.00		FEL	47.10	305	eP	36	12.19	-0.7
			esPd	35	57.31			SGO	43.36	293	Pd	35	44.10	1.1	HYA	47.19	323	eP	36	13.36	0.2
			epPPP	37	31.67			SOI	43.39	290	Pd	35	43.40	0.1	WIT	47.28	312	eP	36	15.00	1.0
			eS	41	31.47			VOY	43.40	302	ePc	35	43.70	0.3				epP	36	38.00	96kmX
			esS	42	07.56						i	41	10.20					esP	36	47.50	
			eSS	44	13.37			CLL	43.50	309	iPc	35	44.60	0.6				ePP	38	08.50	
UPP	41.43	322	iP	35	25.80	-1.2			1.3s	100.00nm			5.5mb					esPP	38	41.00	
	1.1s	600.00nm			6.3mb						i	35	47.00		WTS	47.28	311	eP	36	14.00	0.0
			iS	41	35.00						i(pP)	36	15.00	135kmX				epP	36	37.00	96kmX
KSP	41.44	309	iP	35	28.20	1.0		TRI	43.53	301	ePc	35	44.50	0.1				ePP	38	09.00	
			ic	35	31.90	12kmX		RBL	43.57	302	Pd	35	44.90	0.2	PCP	47.38	300	P	36	14.03	-1.0
			ic	35	50.40			KBA	43.64	303	eP	35	45.00	-0.4	RUP	47.43	308	eP	36	15.51	0.1
			id	37	12.20				1.2s	104.00nm			5.5mb		MMK	47.47	303	ePc	36	14.90	-1.0
VIE	41.50	305	iP+	35	29.00	1.3					i	35	45.80	3kmX	CDF	47.50	306	eP	36	15.80	-0.2
VKA	41.53	305	iPc	35	29.00	1.0					i	35	49.50			1.0s	49.60nm			5.3mb	
	4.8s	2507.00nm			6.3mb	X					i	36	14.60		CVF	47.60	298	P	36	16.05	-0 7
			i	35	51.80	97kmX					i	37	52.70		BER	47.60	322	iPd	36	16.45	0.0
			i	36	01.40						i	41	11.80		KMY	47.66	321	iP	36	17.03	0.1
			i	37	06.30			TRO	43.67	336	iP	35	45.50	0.4	ASK	47.67	322	iPd	36	16.93	0.0
			i	37	42.60			WET	43.73	306	iPc	35	46.50	0.5	FIN	47.69	300	P	36	16.08	-1.3
			i	38	11.80			DUI	43.75	295	Pc	35	47.20	0.9	DIX	47.84	303	ePc	36	18.00	-0.9
			e	44	42.00			COP	43.78	316	iPc+	35	47.30	1.1	ROB	47.90	300	P	36	18.95	-0.2
SSE	41.68	82	ePd	35	31.48	2.1			0.8s	226.87nm			6.1mb		BSF	47.92	305	eP	36	18.50	-0.7
	1.0s	590.00nm			6.4mb			Z	19s	3.82um			5.3Msz		BAG	47.98	101	eP	36	20.00	-0.1
	Z 20s	2.80um			5.1Msz						ipP	36	10.00	96kmX				eS	43	12.00	
	N 13s	1.20um									i	37	32.00		IMI	47.98	300	P	36	19.36	-0.3
	E 14s	1.80um									i	45	40.00		ENN	48.00	309	iPd	36	19.40	-0.2
			epPd	35	53.66	94kmX		BHG	43.88	304	iPc	35	44.70	-2.5				epP	36	42.00	94kmX
			esPc	36	03.26				0.8s	53.00nm			5.4mb					ePP	38	16.00	
			e	37	12.45			FVI	44.09	303	Pd	35	48.70	-0.1	WLF	48.02	308	iPc	36	20.50	0.7
			eS	41	42.05			LPI	44.14	291	P	35	49.80	0.4				e	36	44.00	98kmX
			e	42	23.44			RFI	44.18	295	P	35	50.50	0.9	LSD	48.14	302	P	36	20.90	-0.3
			SS	44	44.00			SDI	44.21	295	Pd	35	50.60	0.6	HAU	48.18	305	eP	36	20.50	-0.6
			i	45	03.00			HOF	44.27	308	eP	35	50.70	0.3		1.7s	352.90nm			6.0mb	
			ScS	45	27.00				1.3s	170.00nm			5.7mb		SAOF	48.20	300	P	36	21.53	0.2
IPM	41.75	132	ePd	35	31.00	0.9		ANP	44.32	90	eP	35	52.00	0.9	ENR	48.23	300	P	36	20.79	-0.9

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DBN 48.27 311 iP+ 36 22.00 0.3
ipP 36 45.00 96kmX
isP 36 53.00
iPP 38 17.00
isPP 38 48.00
eS 43 22.00
eSP 43 45.00
e 44 07.00
eSS 46 42.00
AUTN 48.28 300 P 36 22.64 0.4
STV 48.30 300 P 36 21.00 -1.2
SBF 48.31 300 eP 36 21.80 -0.4
AURF 48.38 300 P 36 23.11 0.3
REVF 48.39 300 P 36 22.66 -0.1
PZZ 48.39 301 P 36 21.10 -1.9
TOUF 48.40 300 P 36 23.48 0.4
LPG 48.41 302 eP 36 22.80 -0.5
0.8s 134.30nm 5.9mb
SHNJ 48.47 74 P 36 25.00 1.5
MVIF 48.50 300 P 36 23.91 0.1
RRL 48.52 301 P 36 23.67 -0.4
BNI 48.56 302 Pc 36 23.90 -0.4
FOUF 48.61 301 ePc 36 24.64 0.2
e 38 22.80 684kmX
CALN 48.72 300 P 36 25.50 0.0
KUMJ 48.82 76 eP 36 29.20 3.0X
FRF 48.94 300 eP 36 26.30 -0.7
1.5s 261.10nm 6.0mb
DOU 48.94 308 Pc+ 36 27.20 0.3
1.0s 113.90nm 5.8mb
PP 38 19.00
ScP 41 34.00
e 42 24.00
SP 43 25.00
Sg 47 11.00
UCC 48.97 309 iP+ 36 28.00 0.9
i 36 52.00 100kmX
e 43 55.00
NAI 48.98 228 iPc 36 30.00 2.2
1.0s 20.00nm 5.0mb
KBS 49.03 347 iPd 36 29.80 2.6X
SNF 49.07 309 P 36 26.10 -1.8
e 36 51.90 109kmX
LMR 49.09 299 eP 36 27.50 -0.6
1.6s 124.30nm 5.6mb
LRG 49.16 300 eP 36 28.00 -0.7
1.4s 156.80nm 5.8mb
KAGJ 49.37 77 eP 36 31.10 0.6
SHK 49.54 73 eP 36 32.00 0.2
LBF 49.96 305 eP 36 33.50 -1.4
1.3s 119.10nm 5.8mb
LOR 49.98 305 eP 36 33.40 -1.5
1.5s 120.10nm 5.7mb
SMF 50.13 304 eP 36 35.30 -0.8
SSF 50.26 305 eP 36 35.90 -1.1
AVF 50.42 304 iPc 36 37.50 -0.8
PLDF 50.44 303 P 36 37.76 -0.8
AGO 50.75 304 P 36 40.31 -0.5
8GF 50.82 304 iPc 36 40.10 -1.2
1.2s 105.30nm 5.7mb
LBL 50.88 302 P 36 41.47 -0.2
KKM 50.99 115 ePc 36 44.50 1.5
1.2s 112.00nm 5.8mb
e 37 08.00 97kmX
MAF 51.09 304 eP 36 42.90 -0.5
TCF 51.31 304 iPc 36 44.40 -0.7
KLI 51.58 135 eP 36 46.00 -1.3
eS 37 08.00 263kmX
e 37 43.00
TSRJ 51.73 70 P 36 48.60 0.3
CAF 51.77 302 eP 36 48.10 -0.4
ETER 51.96 299 eP 36 49.80 -0.2
RJF 52.04 303 eP 36 50.20 -0.3
1.6s 373.10nm 6.2mb
ESY 52.21 317 iPc 36 50.70 -1.0
1.0s 146.00nm 6.0mb
LDF 52.27 307 eP 36 51.00 -1.2
1.7s 323.50nm 6.1mb
LPO 52.43 302 eP 36 52.70 -0.8
1.6s 223.80nm 5.9mb
FLN 52.46 308 eP 36 52.30 -1.3
1.3s 137.10nm 5.8mb
EBL 52.48 317 eP 36 52.70 -1.0
EDI 52.53 317 iPc 36 53.20 -0.8
EKA 52.62 316 Pd 36 53.50 -1.2
1.0s 140.20nm 5.9mb
ESK 52.65 316 ePc 36 54.00 -1.0
1.0s 120.00nm 5.9mb
LFF 52.67 303 iPc 36 54.60 -0.6
EAU 52.69 317 eP 36 54.40 -0.8
ELO 52.71 318 eP 36 54.40 -1.0
1.0s 68.00nm 5.6mb
ESEL 52.72 296 e(P) 36 56.50 0.8
MTMJ 52.74 68 eP 36 55.70 -0.3
GRR 52.80 307 eP 36 55.00 -1.1
1.4s 221.30nm 6.0mb
MFF 52.80 305 eP 36 55.00 -1.2
1.6s 261.10nm 6.0mb
LPF 53.01 307 eP 36 56.20 -1.4
1.5s 119.00nm 5.7mb
EAB 53.11 317 iPc 36 54.00 -4.3X
1.0s 68.00nm 5.6mb
MRRJ 53.18 60 P 36 58.00 -1.0
IIDJ 53.22 70 eP 36 59.90 0.5
NIIJ 53.40 67 P 36 59.10 -1.5
EPF 53.51 301 eP 36 59.70 -1.7
TSM 53.57 115 ePd 37 01.50 -0.6
ASAJ 53.76 58 P 37 02.20 -1.0
CHJJ 53.83 68 P 37 03.10 -0.7
YAMJ 53.84 66 eP 37 03.60 -0.3
YRH 54.02 313 eP 37 03.60 -1.4
9.0s 81.00nm 4.8mb X
KAKJ 54.65 68 P 37 08.60 -1.3
OFUJ 54.72 64 P 37 09.40 -0.9
HOOJ 54.75 60 eP 37 09.60 -0.9
LWI 54.81 235 iPc 37 11.40 -0.1
ETA 54.98 314 eP 37 10.20 -1.8
0.9s 48.00nm 5.5mb
DLE 55.02 314 eP 37 10.80 -1.5
0.8s 60.00nm 5.7mb
DMU 55.07 315 eP 37 11.40 -1.3
0.6s 48.00nm 5.7mb
DAG 55.17 344 iPc 37 12.00 -1.1
0.7s 200.68nm 6.3mb
iS 44 49.00
ECP 55.21 313 eP 37 11.90 -1.8
1.1s 128.00nm 5.9mb
ECB 55.41 313 eP 37 13.80 -1.3
1.0s 100.00nm 5.8mb
ECB 55.41 313 eP 37 17.00 1.9
1.1s 336.00nm 6.3mb
DCN 55.43 315 eP 37 13.80 -1.4
0.9s 215.00nm 6.2mb
KUSJ 55.51 59 eP 37 13.10 -2.BX
ACU 55.57 296 e(P) 37 16.00 -0.5
ECHE 55.58 297 eP 37 16.50 -0.1
ETOR 55.92 299 eP 37 18.00 -1.1
EALH 56.55 295 eP 37 23.00 -0.5
EVIA 57.04 296 eP 37 26.B0 -0.3
DAV 57.41 106 eP 37 33.00 3.2X
eS 45 26.90
AKU 57.41 331 iP 37 29.90 0.7
1.1s 91.14nm 5.7mb
ENIJ 57.47 295 eP 37 29.40 -0.6
GUD 57.47 299 eP 37 29.00 -1.1
BNG 57.56 250 iPc 37 29.00 -1.9
0.6s 406.00nm 6.6mb
ic 37 56.00 111kmX
id 38 10.00
id 38 50.40
ic 40 06.50
ic 45 20.50
ic 07 16.30
BCAO 57.57 250 ePc 37 29.46 -1.5
epPc 37 53.13 95kmX
esPd 38 02.07
e 41 31.94
VAL 57.57 314 iP 37 29.90 -0.5
S 45 20.00
TOL 57.68 298 ePc 37 30.72 -0.7
1.5s 3703.B9nm 7.2mb X
epPc 37 54.06 94kmX
esPd 38 03.33
ePP 39 54.89
epPPP 40 08.79
ePPP 41 34.00
eS 45 23.B7
ePS 45 48.00
eSS 50 40.00
EBAN 58.15 296 eP 37 34.00 -0.8
AFC 58.33 295 eP 37 34.70 -1.5
PCI 5B.36 118 ePd 37 39.00 2.6X
1.5s 6,50nm 4.5mb X
CRT 58.40 295 eP 37 36.00 -0.6
ASMO 58.44 296 iP 37 35.10 -1.8
TRT 58.50 130 ePd 37 35.50 -1.8
1.0s 62.30nm 5.7mb
APHE 58.56 295 iPc 37 36.70 -1.1
ACHM 58.60 295 eP 37 36.50 -1.5
EMON 58.64 303 eP 37 37.80 -0.3
ALOJ 58.80 295 eP 37 38.50 -1.0
ATEJ 58.81 295 iPd 37 38.00 -1.6
ERUA 58.90 302 eP 37 39.60 -0.3
MAL 59.18 295 iPc 37 40.20 -1.7
i 38 13.50 140kmX
EHOR 59.35 297 eP 37 42.20 -0.8
ALE 59.46 354 eP 37 43.00 -0.3
0.8s 36.00nm 5.6mb
STS 59.68 303 eP 37 45.00 -0.2
EPRU 59.68 296 eP 37 43.80 -1.6
EJIF 60.07 295 eP 37 47.00 -1.0
NKM 60.45 294 iP 37 49.00 -1.5
i 38 00.50 39kmX
EVAL 60.53 297 eP 37 50.60 -0.5
KHKI 60.88 127 ePc 37 50.00 -3.7X
e 40 36.00
IFR 61.07 292 iPd 37 55.00 -0.1
MKS 61.14 122 iPc 38 12.00 16.5X
CLK 61.77 220 iPd 37 58.40 -1.3
iS 46 18.40
AVE 62.88 293 iP 38 06.00 -0.9
i 38 23.50 66kmX
TIO 63.85 290 iP 38 12.60 -0.9
i 38 37.50 99kmX
i 38 46.50
KUPT 67.52 122 ePc 38 39.80 2.9X
1.0s 38B.30nm 6.3mb
BRW 67.69 15 eP 38 37.30 0.1
MBC 67.75 3 ePc 38 36.80 -0.7
1.0s 670.00nm 6.5mb
BUL 68.85 223 iPd 38 45.00 -0.2
ipP 39 09.60 96kmX
iS 47 42.90
i 48 14.20
GUMO 69.10 8B eP 38 48.80 2.0
PJG 69.10 88 eP 38 49.00 2.2
KUK 71.39 264 eP 39 00.00 -0.7
LEGH 71.55 263 eP 39 01.00 -0.6
NANU 71.90 137 iPd 39 03.60 0.2
0.6s 27.00nm 5.3mb
IMA 72.50 18 eP 39 05.40 -1.3
0.8s 58.20nm 5.5mb
MBL 73.27 133 iPd 39 11.60 0.1
0.5s 48.00nm 5.6mb
SLR 73.56 220 iP+ 39 09.00 -4.3X
1.4s 790.70nm 6.4mb
INK 74.31 9 eP 39 16.00 -0.9
0.8s 198.00nm 6.0mb
pP 39 43.00 105kmX
TTA 74.39 20 eP 39 17.50 -0.1
KIC 74.82 267 P 39 19.16 -1.6
1.1s 331.00nm 6.1mb
COL 74.85 16 ePc 39 19.68 -0.4
epPd 39 44.1B 94kmX
esPc 39 54.94
epPPP 42 42.78
eS 48 47.96
eSKS 49 29.35
esS 49 29.90
FBA 74.85 16 eP 39 19.50 -0.6
TIC 74.88 267 P 39 19.70 -1.4
1.0s 249.50nm 6.0mb
KNA 75.01 123 eP 39 21.00 -0.7
LIC 75.13 267 P 39 20.80 -1.7
1.0s 230.50nm 6.0mb
JAY 75.16 104 ePc 39 40.50 17.8X
BFS 75.29 220 iPc 39 20.00 -3.2X
FRB 75.48 343 eP 39 23.00 -0.6
1.2s 167.00nm 5.8mb
SVW 75.95 21 eP 39 27.60 1.1
MEKA 76.76 137 eP 39 31.30 -0.1
0.3s 11.00nm 5.2mb
PMR 77.34 18 eP 39 33.70 -0.4
1.0s 77.50nm 5.5mb
MRWA 77.49 141 iPd 39 34.90 -0.4
0.3s 4.00nm 4.7mb X
TOA 77.63 17 ePd 39 36.50 0.7
BAL 78.97 141 eP 39 42.40 -1.0
KDC 79.62 22 ePd 39 46.60 0.1
MUN 79.83 142 eP 39 47.10 -0.9
KLB 80.30 141 eP 39 49.70 -0.8

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	0.3s	7.00nm		5.0mb																			
GRM	80.60	217	iPc	39	52.20	0.1																	
	1.5s	983.33nm			6.4mb																		
NWAO	81.11	142	ePc	39	53.41	-1.3																	
			esP	40	28.67																		
WARB	81.13	131	eP	39	55.00	0.0																	
COOL	81.52	138	eP	39	56.00	-0.9																	
	0.5s	35.00nm			5.5mb																		
YKA	81.66	3	eP	39	58.10	0.9																	
WB5	81.70	122	eP	39	57.20	-0.9																	
			i	40	24.10	103kmX																	
WRA	81.73	122	Pc	39	56.40	-1.8																	
	0.4s	9.40nm			5.0mb																		
SCH	82.50	337	ePd	40	01.50	-0.3																	
	1.1s	97.00nm			5.6mb																		
			pP	40	28.00	101kmX																	
ASPA	83.97	125	iPd	40	09.70	0.0																	
	1.8s	221.00nm			5.8mb																		
			ipP	40	35.60	98kmX																	
			eS	50	18.70																		
PMG	84.44	106	e(P)	40	12.00	-0.1																	
FORR	85.42	134	eP	40	16.00	-0.7																	
	0.4s	121.00nm			6.2mb																		
QIS	85.81	119	eP	40	18.00	-0.9																	
	1.1s	73.00nm			5.6mb																		
		e		40	44.00	98kmX																	
FFC	89.36	356	eP	40	35.00	-0.5																	
	1.3s	218.00nm			6.1mb																		
CBM	89.61	333	P	40	39.00	2.2																	
CTA	90.32	115	iPd	40	40.00	-0.4																	
	1.0s	61.00nm			5.7mb																		
		i		41	05.70	96kmX																	
		i		41	16.00																		
		i		42	17.90																		
		iS		51	00.00																		
CTAO	90.32	115	ePc	40	40.05	-0.3																	
		epPd		41	05.38	94kmX																	
		esPc		41	15.47																		
EDM	90.98	3	iPc	40	43.60	0.5																	
RSON	92.40	350	ePd	40	49.30	-0.3																	
	1.1s	68.32nm			5.9mb																		
		ipP		41	25.20	139kmX																	
GAC	93.17	337	eP	40	54.00	0.7																	
SES	93.87	1	ePd	40	56.30	-0.2																	
	1.0s	83.00nm			6.1mb																		
		pP		41	23.00	100kmX																	
PNT	94.45	7	iPc	40	59.80	0.7																	
	0.9s	51.00nm			6.0mb																		
STK	94.50	126	eP	40	59.00	-0.4																	
PGC	94.65	10	eP	41	01.00	1.0																	
ADE	94.67	130	iPd	41	00.70	0.5																	
MCW	94.71	9	eP	41	00.60	0.2																	
GMW	95.82	9	eP	41	06.50	1.0																	
RMW	96.04	9	iP	41	07.30	0.7																	
RMO	96.05	118	eP	41	06.00	-0.6																	
		e		41	33.00	101kmX																	
LON	96.73	9	iP	41	10.30	0.6																	
LRM	98.41	2	eP	41	17.50	0.0																	
MAW	103.56	183	ePdiff	41	40.00	0.6																	
ORV	103.85	10	ePdiff	41	46.70	5.3X																	
		e(PKKP		57	54.20																		
KVN	104.76	7	ePdiff	41	47.20	1.4																	
		iPKKP		57	49.70																		
BKS	105.38	11	e(Pdif	41	49.00	0.7																	
	Z 20s	0.30um			4.8Msz																		
	N 20s	0.30um																					
	E 20s	0.30um																					
		ePP		46	06.00																		
		eS		53	27.00																		
		i		53	37.00																		
		esS		54	16.00																		
		ipPS		55	43.00																		
		i		56	57.00																		
		i		57	00.00																		
		i		57	27.00																		
		e		58	55.00																		
		eSS		01	05.00																		
		iSSS		05	13.00																		
		e		05	14.00																		
		e		05	46.00																		
		i		06	32.00																		
		i		09	20.00																		
		eLQ		11	29.00																		
		e		14	12.00																		
		eLR		18	23.00																		
CMB	105.49	9	e(Pdif	41	51.40	2.5X																	
		ePP		46	45.10																		

OXX	9.42	299	eP	42	53.00	1.7
IISM	10.92	306	(P)	43	11.00	-0.5
III	12.34	299	eP	43	31.50	0.7
IIC	12.83	305	(P)	43	49.00	11.6X
UYO	22.17	346	iPd	45	29.50	1.6
JSC	22.39	15	P	45	33.00	2.9
MEO	23.98	338	eP	45	41.60	-4.0X
BLA	25.38	14	P	46	00.70	1.7
	0.5s		9.75nm			4.6mb
CBN	27.16	19	eP	46	17.00	1.7
ALO	27.72	326	eP	46	21.50	0.8
	0.8s		6.53nm			4.3mb
			e	46	26.90	19kmX
			e	46	34.90	
			ePcP	49	37.80	
			e	49	52.50	
GLD	30.92	334	P	46	49.10	-0.1
GOL	30.94	334	P	46	49.20	-0.3
			pP	49	45.50	
GLA	31.75	314	P	46	56.50	0.1
PLM	33.35	313	P	47	09.80	-0.7
RSSD	34.20	339	P	47	18.00	0.3
GAC	34.62	16	eP	47	21.00	0.0
			pP	47	36.00	60km
ZOBO	34.88	145	eP	47	25.00	0.7
Z	22s		0.26um			3.9Msz
			LR	00	00.00	
TNP	36.23	319	P	47	35.30	0.3
BCH	36.58	313	P	47	34.50	-3.4X
KVN	37.36	320	P	47	45.00	0.5
RSON	38.35	354	P	47	51.00	-1.4
			pP	52	03.30	
LRM	38.96	333	eP	47	54.00	-3.9X
			e	47	58.50	15kmX
SES	42.04	338	iPc	48	23.00	0.1
	0.6s		29.00nm			5.2mb
DPW	43.15	330	P	48	31.90	-0.1
FFC	43.35	348	iPc	48	33.10	-0.4
	0.5s		21.00nm			5.1mb
PNT	44.83	331	eP	48	45.00	-0.5
	0.7s		36.00nm			5.3mb
EDM	45.18	339	ePc	48	47.60	-0.7
	0.6s		95.00nm			5.8mb
SCH	45.25	17	eP	48	48.00	-0.8
			pP	49	03.00	58km
PGC	46.29	328	eP	48	57.00	0.0
BAO	48.63	124	eP	49	16.50	0.5
FRB	52.82	11	eP	49	45.00	-2.0
	0.6s		26.00nm			5.4mb
YKA	53.23	345	eP	49	49.40	-0.6
YKB0	53.33	345	ePc	49	48.50	-2.2
VAO	53.65	131	e(P)	49	53.00	-0.7
INK	62.80	343	eP	50	55.00	-2.0
			pP	51	09.00	50km
MBC	65.71	352	eP	51	14.00	-1.8
	0.7s		6.00nm			4.7mb
EKA	76.81	36	Pc	52	38.40	15.8X
	0.7s		1.80nm			
NB2	83.47	29	P	52	58.10	0.0
WB5	138.71	254	ePKP	59	59.00	1.3X
WRA	138.73	254	PKPd	59	58.90	1.1
	0.6s		1.40nm			
ASPA	138.77	249	iPKPd	00	01.20	3.4X
	0.6s		6.00nm			
WARB	144.72	242	ePKP	00	07.50	-0.7
CHG	147.95	347	ePKP	00	14.50	0.9
BDT	149.46	347	ePKP	00	21.00	5.1X
G8A	150.21	29	PKP	00	34.00	16.9X
	0.4s		2.30nm			

S.D. = 1.2 on 36 of 49 obs.

JUL 24, 1989 07h 50m 21.56± 0.56s
49.097 N ± 4.7km 6.805 E ± 8.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.3 (STR), 2.2 (UCC).

WLF	0.71	323	iP	50	34.50	-1.0
CDF	0.75	155	Pg	50	35.21	-1.1
			Sg	50	48.73	
VITF	1.04	212	Pg	50	41.07	0.0
			Sg	50	56.42	
MOF	1.27	170	Pg	50	45.58	0.5
			Sg	51	03.38	
BSF	1.27	180	Pg	50	45.79	0.6
			Sg	51	04.41	
FEL	1.46	146	Pg	50	47.99	-0.1
			Sg	51	08.27	
TNS	1.55	43	ePn	50	49.70	0.4
			eSn	51	08.90	
MEM	1.60	341	P	50	50.40	0.5
DOU	1.75	306	iP	50	52.50	0.4
			iS	51	15.80	
SNF	2.16	312	iP	51	04.80	6.7X

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

JUL 24, 1989 09h 36m 32.74± 1.27s
38.599 N ±13.3km 0.127 E ±12.0km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 3.0 (MDD).

ACU	0.43	258	iP	36	42.90	1.3
			eS	36	49.00	
EVIA	2.06	272	ePn	37	08.10	0.2
ESEL	2.45	61	ePn	37	14.50	1.1
			eSn	37	42.00	
ENIJ	2.47	230	ePn	37	13.00	-0.7
EBAN	3.11	263	ePn	37	21.60	-1.1
TOL	3.49	293	e(Pg)	37	41.00	12.9X
			eSg	38	25.00	
EPF	4.43	2	Pn	37	43.70	2.1
			Sn	38	35.80	
LPO	6.13	7	Pn	38	05.70	0.2
LFF	6.35	4	Pn	38	09.10	0.5
CAF	6.49	12	Pn	38	10.10	-0.5
			Sn	39	22.80	
MAF	7.83	13	Pn	38	27.70	-1.7
TCF	7.84	11	Pn	38	27.90	-1.6

S.D. = 1.4 on 11 of 12 obs.

JUL 24, 1989 10h 03m 45.85± 0.18s
18.874 S ± 4.2km 176.789 E ± 4.6km
DEPTH = 31.4km (5 depth phases)
5.6mb (21 obs.) 5.4Msz (12 obs.)
FIJI ISLANDS REGION (181)
Ms 5.7 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 41C
Centroid Location:
Origin Time 10:03:51.1 0.4
Lat 18.90S 0.04 Lon 176.73E 0.03
Dep 15.0 FIX Half-duration 3.6
Moment Tensor; Scale 10**17 Nm
Mrr=-0.93 0.14 Mtt=-7.94 0.21
Mff= 8.87 0.20 Mrt= 0.92 0.46
Mrf=-0.84 0.51 Mtf= 4.66 0.13
Principal Axes:
T Val= 10.11 Plg= 3 Azm=104
N -0.82 82 352
P -9.29 7 195
Best Double Couple:Mo=9.7*10**17
NP1:Strike=239 Dip=83 Slip= -3
NP2: 330 87 -173

NDF	1.28	30	eP	04	00.00	-7.6X
PVC	8.13	277	iPc	05	47.00	2.3
DZM	10.20	250	iPc	06	13.50	0.1
AFI	12.03	67	eP	06	38.00	-0.2
			eS	08	52.00	
			e	12	22.00	
			e	16	42.00	
HNR	18.82	298	eP	08	05.00	-0.6
			eS	11	42.00	
KRP	19.01	183	P	08	09.00	1.3
SVO	19.08	298	eP	08	07.00	-1.7
VSG	19.11	298	P	08	07.00	-2.1
TAZ	19.29	181	P	08	12.10	1.1
WHH	19.94	181	P	08	16.20	-2.0
TTH	20.60	180	P	08	24.10	-0.8
PGZ	21.68	181	P	08	34.00	-1.8
	1.0s		212.00nm			5.5mb
KIW	21.98	184	P	08	38.80	-0.1
MTW	22.24	183	P	08	41.10	-0.4
MRW	22.36	184	eP	08	42.50	-0.1
TCW	22.37	185	eP	08	42.90	0.1
WDW	22.37	184	P	08	41.70	-1.1
WEL	22.41	184	eP	08	44.10	1.0
BLW	22.45	183	eP	08	43.90	0.3
MOW	22.51	183	eP	08	44.50	0.3
BRS	23.62	245	iPd	08	55.10	-0.1
			iS	13	22.00	
COO	25.38	238	eP	09	15.00	2.9X
MSZ	26.77	194	P	09	26.00	1.3
MHZ	26.85	192	eP	09	23.80	-1.8
RMQ	26.91	249	eP	09	27.00	0.8
RAB	28.13	298	eP	09	34.00	-3.4X
			eS	14	20.00	
CTA	28.79	262	eP	09	44.00	0.7
	1.1s		70.89nm			5.3mb
Z	20s		7.98um			5.3Msz
			i	09	57.40	53kmX
			iS	14	30.00	
CAN	29.53	231	eP	09	53.20	3.3X
BWA	29.58	233	eP	09	51.00	0.7
PMG	30.19	284	eP	09	56.00	0.1
CMS	30.59	240	eP	09	57.60	-1.7
			e	10	06.00	29km
AFR	31.76	93	iP	10	07.60	-2.0
	1.2s		135.00nm			5.7mb
PAE	31.93	93	iP	10	08.00	-3.1X
	1.2s		90.00nm			5.5mb
PPT	31.95	93	iP	10	08.80	-2.5X
	1.2s		100.00nm			5.6mb
PPN	32.09	93	iP	10	09.60	-2.9X
	1.2s		55.00nm			5.3mb
TOO	33.06	229	eP	10	22.00	1.2
			e	10	26.00	14kmX
STK	34.18	241	eP	10	30.00	-0.6
QIS	35.00	261	eP	10	36.00	-1.7
BFD	35.05	232	eP	10	39.00	1.0
ADE	37.29	237	iPc	10	59.00	2.0
	1.5s		138.89nm			5.6mb
WB5	39.96	261	eP	11	15.30	-4.0X
WRA	39.97	261	Pc	11	15.80	-3.7X
	0.9s		36.50nm			5.1mb
ASPA	40.14	255	iPc	11	18.00	-2.9X
	1.5s		241.00nm			5.7mb
			epP	11	34.80	67kmX
			eS	17	16.20	
MTN	44.23	271	iPc	11	51.60	-2.8X
	0.7s		38.00nm			5.3mb
GUA	44.99	313	eP	12	00.70	0.3
GUMO	45.06	313	eP	12	00.30	-0.6
	1.7s		402.44nm			6.1mb
FORR	45.44	245	eP	12	03.00	-0.8
KNA	45.85	266	eP	12	04.50	-2.7X
WARB	46.66	252	eP	12	11.00	-2.6X
HON	46.95	33	eP	12	28.00	12.2X
Z	20s		20.50um			6.1Msz
			eS	19	28.00	
			eLR	25	12.00	
COOL	51.42	245	eP	12	48.70	-1.6
MBL	53.32	257	eP	13	04.00	-0.6
DRV	53.34	197	eP	13	04.40	0.3
NWAO	54.73	243	eP	13	09.00	-5.8X
Z	20s		4.40um			5.5Msz
DAV	56.68	292	eP	13	28.00	-1.1
NANU	57.08	255	eP	13	30.00	-1.8
SBA	59.22	182	ePd	13	46.00	0.0
	1.4s		188.37nm			6.0mb
OCP	64.18	297	eP	14	02.30	-17.8X
KKM	64.59	286	eP	14	22.20	-0.8
KAKJ	64.81	328	eP	14	19.30	-4.5X
CHJJ	65.29	327	eP	14	25.70	-1.3
IIDJ	65.43	326	eP	14	26.70	-1.2
BAG	65.47	299	eP	14	27.00	-1.7
			eS	23	14.00	
NIIJ	66.20	328	eP	14	33.70	0.9
MTMJ	66.32	326	eP	14	32.00	-1.7
TSRJ	66.51	324	eP	14	37.30	2.5X
SHK	67.68	322	eP	14	40.50	-1.7
ANP	69.35	307	eP	14	34.00	-18.9X
ADK	70.68	4	eP	15	01.70	1.4
	1.5s		152.80nm			5.9mb
SPA	71.24	180	e(P)	15	02.90	-1.0
	1.0s		42.00nm			5.5mb
Z	20s		3.47um			5.6Msz
KLI	71.35	271	eP	14	59.50	-5.8X
			e	22	39.00	
OZH	71.45	306	eP	15	07.50	2.0
SSE	72.92	312	P	15	15.50	1.3
Z	20s		1.70um			5.3Msz
E	14s		0.70um			
			PcP	15	30.00	
			S	24	37.00	
			sS	25	18.00	
			SS	29	18.00	
GZH	74.67	301	eP	15	24.00	-0.5
NJ2	75.10	312	Pc	15	28.20	1.4

24d 10h

Z 22s 1.80um 5.3Msz
MDJ 76.44 327 eP 15 33.50 -0.6
Z 25s 1.90um 5.3MszX
epP 15 44.00 34km
esP 15 48.00
WHN 77.56 308 eP 15 41.50 0.9
Z 24s 2.18um 5.4MszX
N 14s 0.70um
sP 15 52.00
S 25 28.00
SNY 77.87 322 eP 15 38.00 -4.0X
IPM 78.07 279 ePd 15 43.90 0.1
1.1s 54.30nm 5.5mb
CN2 78.08 325 Pd 15 42.20 -1.0
5.0s 0.40nm 2.7mb X
Z 20s 1.50um 5.3Msz
N 20s 1.10um
pP 15 49.00 22km
sP 15 53.00
TIA 78.60 315 eP 15 45.50 -0.8
SNG 79.36 281 eP 15 51.90 1.1
PSI 79.41 277 ePd 15 50.50 -0.6
PCC 80.09 45 eP 15 53.00 -1.2
GCC 80.09 45 eP 15 53.00 -1.3
PRS 80.14 46 eP 15 53.70 -0.9
SAO 80.32 46 eP 15 53.50 -2.1
BRK 80.37 45 eP 15 54.50 -1.2
BKS 80.39 45 eP 15 56.00 0.1
Z 20s 3.50um 5.7Msz
N 20s 2.40um
E 20s 2.30um
e 18 25.00 742kmX
eS 25 39.00
iPPS 26 48.00
i 27 20.00
i(PPS)27 22.00
iSS 28 30.00
i 30 54.00
i 31 24.00
eSS 31 30.00
iSSS 34 38.00
iLQ 36 32.00
eLQ 36 40.00
eLR 40 20.00
BCH 80.44 48 P 15 58.50 2.2
KDC 80.50 16 eP 15 55.50 -0.4
PRI 80.53 47 ePd 15 58.50 1.7
BJI 81.33 317 eP 16 02.00 1.3
Z 22s 1.56um 5.3Msz
N 10s 0.57um
eS 26 20.00
MAW 81.38 201 eP 16 00.00 -0.6
MWC 81.39 50 eP 16 09.00 7.5X
GYA 81.60 302 P 16 05.40 2.8X
Z 36s 1.50um 5.1MszX
N 20s 1.00um
E 20s 2.50um
sP 16 17.00
SKS 26 19.00
FRI 81.63 46 eP 16 01.00 -1.3
BAR 81.65 51 eP 16 14.00 11.3X
WDC 81.67 42 eP 16 01.40 -1.1
CMB 81.71 45 eP 16 01.50 -1.4
RVR 81.77 50 eP 16 04.00 0.8
ORV 81.78 43 eP 16 01.80 -1.3
SBB 81.79 49 eP 16 06.00 2.6X
ISA 81.81 48 eP 16 07.00 3.5X
e 16 19.00 40km
PLM 81.84 51 P 16 07.00 3.2X
LOE 82.10 291 iPd 16 06.00 0.8
MIN 82.14 43 ePd 16 03.20 -1.9
CLC 82.51 48 eP 16 10.00 2.9X
TIY 82.58 314 eP 16 07.00 -0.4
Z 20s 2.00um 5.5Msz
E 15s 0.90um
SVW 82.73 13 eP 16 07.00 -0.7
TPC 82.79 50 eP 16 11.00 2.4
NST 82.87 289 eP 16 13.00 3.9X
GLA 83.20 52 eP 16 12.00 1.3
e 16 27.00 52kmX
XAN 83.28 309 P 16 10.80 -0.2
KVN 83.77 45 P 16 15.70 2.1
TNP 83.88 46 P 16 16.50 2.2
1.2s 38.71nm 5.4mb
KMI 84.25 299 Pd 16 18.00 1.6
TTA 84.29 12 eP 16 15.30 -0.3
BDT 84.45 290 eP 16 19.00 1.8

PMR 84.68 16 P 16 16.20 -1.2
HHC 84.75 316 P 16 21.50 3.1X
Z 26s 2.20um 5.4MszX
CHG 85.08 292 iPc 16 21.50 1.2
1.2s 38.67nm 5.5mb
BTO 85.64 315 P 16 24.00 1.1
sP 16 32.00
SKS 26 49.00
CD2 85.80 304 P 16 25.80 2.0
Z 22s 1.80um 5.4Msz
S 26 48.00
TOA 85.89 17 eP 16 23.80 0.2
FBA 87.80 14 eP 16 30.80 -1.9
LZH 87.91 309 eP 16 35.00 0.9
1.6s 182.00nm 6.1mb
Z 40s 5.20um 5.6MszX
E 20s 0.70um
pP 16 45.50 33km
eS 27 05.00
PNT 88.14 36 eP 16 34.00 -0.7
1.2s 42.00nm 5.6mb
DPW 88.19 38 P 16 36.50 1.5
ALQ 90.29 53 e(P) 16 45.00 -0.4
1.3s 19.71nm 5.2mb
Z 22s 1.13um 5.3Msz
e 17 34.50 200kmX
e 17 49.90
eS 27 48.00
eSS 33 48.00
eLR 40 33.00
LRM 90.67 41 eP 16 49.00 2.0
GTA 92.18 311 eP 16 53.40 -0.5
Z 24s 1.60um 5.4MszX
GOL 92.91 49 P 16 58.00 0.6
1.0s 33.50nm 5.7mb
GLD 93.03 49 P 16 59.00 1.1
SES 93.52 38 eP 17 00.00 0.3
INK 94.06 17 eP 17 01.00 -0.7
RSSD 95.45 45 P 17 09.80 0.8
MEO 96.29 56 iPc 17 14.80 2.0
YKA 97.15 26 eP 17 23.00 7.1X
WMQ 102.18 312 ePdiff17 38.00 -1.2X
Z 26s 1.60um 5.4MszX
SKS 28 16.10
LPB 107.13 115 PKP 22 28.00 16.2X
LR 53 08.00
ZOBO 107.22 114 ePKP 22 25.00 12.8X
LR 53 00.00
MAIO 122.70 301 ePKP 22 42.00 1.5
BAO 124.16 125 ePKP 22 40.50 -3.4X
BFS 125.99 213 ePKP 22 52.50 5.2X
SLR 126.11 216 ePKP 22 52.00 4.4X
1.2s 62.50nm
BUL 130.23 220 ePKP 22 57.20 1.7
ipP 23 05.80
SUF 131.73 342 ePKP 23 02.00 5.1X
TAB 133.03 305 ePKP 23 12.00 11.7X
SOB1 133.53 124 ePKP 23 00.70 -1.1
NUR 133.92 341 ePKP 23 04.00 2.9X
ITR 135.73 125 ePKP 23 02.40 -3.6X
e 23 12.40
NB2 136.65 350 PKP 22 56.50 -9.9X
BBTK 142.67 312 ePKP 23 20.00 2.0
VRI 143.45 324 ePKPd 23 15.50 -3.5X
TLB 143.46 322 ePKPc 23 18.00 -1.0
EKA 143.60 360 PKPc 23 23.00 4.1X
0.7s 2.60nm
KRA 143.81 335 ePKP 23 17.70 -1.7
e 23 37.20
PSN 143.87 320 iPKPd 23 20.00 0.2
ISR 144.00 323 ePKPc 23 20.00 0.0
MLR 144.12 324 ePKPc 23 17.50 -2.8X
SPC 144.35 333 ePKP 23 19.00 -1.7
e 30 57.50
KSP 144.54 339 ePKP 23 19.00 -1.7
1.0s 44.00nm
i 23 21.60
BUC 144.69 323 ePKP 23 30.00 8.9X
CMP 144.76 325 ePKPc 23 24.00 2.7X
BUC1 144.76 323 ePKPc 23 20.00 -1.2
DMU 144.92 4 ePKP 23 21.00 -0.2
e 30 56.00
CTT 145.04 316 ePKP 23 06.00 -15.9X
DMK 145.13 318 ePKP 23 23.00 1.0
BCK 145.17 309 ePKP 23 20.40 -1.9
CLL 145.19 342 iPKPd 23 20.70 -1.0
1.4s 48.00nm

i 23 23.50
WIT 145.26 349 ePKP 23 22.00 0.2
BRG 145.29 341 iPKPd 23 21.00 -0.9
1.2s 90.00nm
DCN 145.45 4 ePKP 23 20.50 -1.6
0.8s 66.00nm
JMB 145.52 320 ePKP 23 23.00 0.4
DLE 145.56 4 ePKP 23 21.00 -1.3
1.1s 78.00nm
KHL 145.59 311 ePKP 23 21.90 -1.1
PVL 145.84 322 ePKP 23 24.00 0.9
PRU 145.86 339 ePKP 23 23.50 0.5
2.0s 58.60nm
ELL 145.95 308 ePKP 23 24.60 0.9
MFT 145.97 316 ePKP 23 26.20 2.6X
WTS 146.02 349 ePKPc 23 23.50 0.4
1.0s 45.00nm
i 23 45.00
YRH 146.09 2 ePKP 23 22.10 -1.1
1.2s 78.00nm
ETA 146.16 3 ePKP 23 22.80 -0.5
1.2s 138.00nm
DBN 146.19 351 ePKP 23 29.00 5.6X
6.0s 1.10nm
SRO 146.23 334 e(PKP)23 25.00 1.4
BZS 146.33 328 ePKP 23 24.00 0.2
e 30 03.00
DIM 146.40 320 ePKP 23 26.00 1.9
HOF 146.40 342 iPKPd 23 26.10 2.2
ZST 146.42 335 ePKP 23 27.20 3.3X
TIM 146.44 328 iPKPd 23 31.00 7.0X
ECB 146.46 4 ePKP 23 24.20 0.4
VKA 146.67 336 ePKP 23 27.00 2.7X
6.0s 1254.00nm
i 23 34.60
e 24 49.00
ECP 146.67 4 ePKP 23 24.80 0.7
KDZ 146.70 319 ePKP 23 29.00 4.4X
PLD 146.87 320 ePKP 23 28.00 3.2X
KHC 146.92 340 iPKP 23 26.10 1.3
1.0s 11.00nm
i 23 36.10
i 23 48.80
PGB 146.93 321 ePKP 23 28.00 3.0X
EZN 147.09 316 ePKP 23 29.00 3.8X
RZN 147.11 320 ePKP 23 28.00 2.5X
GRF 147.14 343 ePKP 23 27.50 2.4X
IZM 147.15 313 ePKP 23 28.00 2.5X
ENN 147.36 349 ePKP 23 28.50 3.2X
0.9s 26.00nm
e 23 49.00
TNS 147.36 346 ePKP 23 28.20 2.8X
VTS 147.46 322 iPKP 23 30.00 4.0X
BEO 147.47 328 ePKP 23 30.00 4.3X
MEM 147.50 349 PKPc 23 30.20 4.7X
UCC 147.58 351 PKP- 23 34.90 9.2X
KMR 147.65 338 iPKP+ 23 28.80 2.9X
MMB 147.76 320 ePKP 23 27.00 0.7
TOD 147.86 345 ePKP 23 29.10 2.9X
SNF 147.87 351 PKPc 23 30.90 4.8X
ABH 147.88 347 ePKP 23 28.50 2.2X
KKB 147.98 321 ePKP 23 30.00 3.4X
RUP 148.16 347 ePKP 23 29.30 2.6X
DOU 148.23 350 PKPc 23 31.80 5.1X
i 23 40.20
e 32 30.00
BHG 148.37 339 iPKPc 23 32.30 5.2X
WLF 148.37 348 PKPc 23 30.50 3.6X
KNT 148.52 320 ePKP 23 29.00 1.5
VAY 148.62 321 ePKP 23 27.00 -0.6
GWF 148.72 346 PKP 23 31.08 3.5X
PTJ 148.73 334 ePKP 23 30.90 3.1X
e 31 08.50
KBA 148.77 338 e(PKP)23 30.00 2.0
1.5s 71.40nm
i 23 53.30
i 26 07.10
i 26 11.70
e 31 15.00
SKO 148.87 323 ePKP 23 32.00 4.0X
i 23 33.80
i 23 39.50
i 23 48.00
LJU 149.19 336 ePKP 23 34.00 5.6X
RBL 149.23 337 PKP 23 33.70 5.2X
WLS 149.31 346 PKP 23 32.33 3.7X
CDF 149.33 346 PKP 23 32.33 3.7X

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VBY   149.34 334 ePKP   23 35.00    6.4X
BCI   149.37 325 ePKP   23 34.60    5.9X
KKS   149.38 324 ePKP   23 37.50    8.7X
FVI   149.38 338 PKPc   23 33.60    5.0X
LIT   149.40 319 ePKPc  23 33.30    4.3X
VOY   149.45 336 e(PKP) 23 29.30    0.4
                  e     23 38.50
CEY   149.48 335 ePKP   23 35.00    6.1X
ECH   149.54 346 PKP    23 32.71    3.8X
PHP   149.62 324 ePKP   23 33.00    3.9X
FEL   149.66 345 PKP    23 34.39    5.2X
OGA   149.73 340 ePKP   23 35.00    5.5X
TRI   149.77 336 ePKP   23 34.00    4.8X
VITF  149.79 348 PKP    23 33.08    3.9X
MOF   149.89 346 PKP    23 35.01    5.5X
BSF   149.99 346 PKP    23 33.83    4.1X
FLN   150.10 356 ePKP   23 36.60    6.9X
        1.0s     60.00nm
TIR   150.17 324 ePKP   23 34.00    4.0X
LDF   150.25 356 ePKP   23 37.00    7.1X
        1.2s     55.90nm
GRR   150.50 357 ePKP   23 37.90    7.6X
        1.2s     53.50nm
BERA  150.55 323 ePKP   23 37.80    7.2X
TPE   150.77 322 ePKP   23 39.00    8.0X
LPF   150.86 357 ePKP   23 38.90    8.1X
        1.0s     80.00nm
SRN   151.05 321 ePKP   23 39.40    8.1X
LOR   151.09 350 ePKP   23 39.20    8.0X
VAI   151.31 342 PKPc   23 39.00    7.5X
LBF   151.35 350 ePKP   23 39.90    8.2X
        0.9s     18.00nm
SSF   151.35 350 ePKP   23 39.80    8.2X
AVF   151.64 350 ePKP   23 40.30    8.3X
        1.0s     24.00nm
SMF   151.70 350 ePKP   23 41.50    9.3X
        1.0s     26.00nm
RSM   151.77 336 PKPc   23 41.20    8.9X
BGF   151.94 351 ePKP   23 41.20    8.7X
        0.9s     13.10nm
BOB   152.10 341 PKPc   23 45.50   12.6X
LSD   152.13 344 PKP    23 41.91    8.7X
LPG   152.19 345 ePKP   23 44.10   10.8X
        1.0s     30.00nm
MME   152.19 338 PKPc   23 46.80   13.5X
MFF   152.23 355 ePKP   23 42.00    9.1X
        1.0s     40.00nm
TCF   152.30 352 ePKP   23 42.00    8.9X
        1.0s     30.00nm
MAF   152.31 351 ePKP   23 42.50    9.4X
        1.1s     34.10nm
PCP   152.58 342 PKP    23 42.22    8.7X
BNI   152.63 345 PKPc   23 44.00   10.3X
PYM   152.71 350 PKP    23 39.16    5.4X
RRL   152.72 344 PKP    23 43.55    9.6X
FIN   152.99 342 PKP    23 41.60    7.5X
ROB   153.01 342 PKP    23 42.32    8.2X
PZZ   153.03 344 PKP    23 41.50    7.2X
ENR   153.20 343 PKP    23 38.73    4.3X
STV   153.21 343 PKP    23 42.12    7.6X
RJF   153.35 353 ePKP   23 44.20    9.7X
        0.8s     10.70nm
IMI   153.35 342 PKP    23 40.89    6.2X
AUTN  153.41 343 PKP    23 40.71    5.7X
BNG   154.36 239 iPKPd  23 38.40    1.5
        1.1s     43.00nm
                  id    23 47.10
                  id    24 03.10
EBR   157.90 353 (PKP)  23 40.00   -0.6
KIC   167.47 173 PKP    23 56.40    5.8X
      S.D. = 1.3  on 149 of 281 obs.
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   JUL 24, 1989  10h 11m 24.23± 0.20s
   18.823 S ± 5.3km  176.674 E ± 5.1km
   DEPTH =  33.0km  (normal)
   5.3mb ( 15 obs.)  5.5Msz (  7 obs.)
FIJI ISLANDS REGION                (1B1)
   Ms 5.6 (BRK).
   CENTROID, MOMENT TENSOR         (HRV)
   Data Used: GDSN
   L.P.B.:  9S, 13C
   Centroid Location:
   Origin Time          10:11:26.5 1.4
   Lat 18.75S 0.14 Lon 176.47E 0.11
   Dep  15.0 FIX Half-duration  3.3
   Moment Tensor;   Scale 10**17 Nm
     Mrr=-2.03 0.66  Mtt=-4.48 1.14
     Mff= 6.51 0.66  Mrt= 0.00 0.00
     Mrf= 0.00 0.00  Mtf= 2.80 0.45
   Principal Axes:
     T  Val=  7.18  Plg= 0  Azm=103
     N       -2.03       90       180
     P       -5.15        0        13
   Best Double Couple:Mo=6.2*10**17
     NP1:Strike=148 Dip=90 Slip= 180
     NP2:       238      90         0

NDF    1.29  35 iPd   11 40.00   -6.1X
PVC    8.02 276 iPc   13 24.00    2.6
DZM   10.12 250 iPd   13 51.90    1.4
HNR   18.70 298 eP    15 41.00   -1.3
SVO   18.96 298 eP    15 40.00   -5.4X
VSG   18.99 298 P     15 45.00   -0.9
KRP   19.06 183 P     15 46.00   -0.5
TAZ   19.34 180 P     15 49.90    0.1
TUTZ  19.83 182 P     15 55.40    0.3
HITZ  19.83 182 P     15 55.70    0.5
RATZ  19.99 182 P     15 57.30    0.4
HATZ  20.00 181 P     15 56.10   -0.9
PGZ   21.73 181 P     16 11.40   -3.1X
        0.9s    152.00nm          5.4mb
WEL   22.45 184 P     16 22.00    0.3
BRS   23.55 244 iPd   16 34.40    1.8
COO   25.31 238 eP    16 53.00    3.4X
MSZ   26.79 194 P     17 03.30    0.3
CTA   28.69 262 eP    17 22.00    1.4
        1.1s     37.97nm          5.0mb
BWA   29.52 233 eP    17 26.70   -1.3
CMS   30.52 240 eP    17 36.00   -0.8
AFR   31.87  93 eP    17 53.00    4.2X
        1.2s     55.00nm          5.3mb
PPT   32.06  93 eP    17 56.00    5.6X
        1.2s     45.00nm          5.2mb
    Z  21s     15.00um            5.7Msz
PPN   32.20  93 eP    17 57.00    5.4X
        1.2s     40.00nm          5.2mb
TOO   33.01 229 iPc   17 59.20    0.6
STK   34.11 241 eP    18 08.00   -0.1
QIS   34.90 261 eP    18 14.00   -1.0
BFD   34.99 231 eP    18 17.00    1.3
WB5   39.86 261 iPc   18 55.00   -1.7
WRA   39.87 261 Pc    18 55.40   -1.4
        0.8s     19.30nm          4.9mb
ASPA  40.05 255 iPd   18 58.00   -0.3
        1.1s     98.00nm          5.5mb
MTN   44.12 271 eP    19 31.20   -0.4
        0.7s     36.00nm          5.3mb
GUMO  44.94 313 e(P)  19 45.10    7.0X
FORR  45.36 245 eP    19 41.00   -0.4
WARB  46.57 251 eP    19 51.00    0.0
MBL   53.23 257 eP    20 42.00    0.0
        0.8s      8.00nm          4.7mb
NANU  56.98 255 eP    21 09.40    0.1
CHJJ  65.19 327 eP    22 03.90   -0.6
IIDJ  65.32 326 eP    22 04.70   -0.7
NIIJ  66.10 328 eP    22 13.40    3.1X
MTMJ  66.22 326 eP    22 10.70   -0.5
TSRJ  66.41 325 eP    22 11.90   -0.4
SPA   71.29 180 ePd   22 40.60   -1.8
        1.0s     39.50nm          5.4mb
NJ2   74.99 312 Pc    23 05.00    0.7
WHN   77.44 308 P     23 17.60   -0.5
    Z  24s      2.01um            5.4MszX
    E  20s      1.72um
                  S   33 12.50
SNY   77.76 322 Pd    23 19.70    0.1
    N  34s      3.90um
    E  30s      2.00um
                  S   33 16.00
CN2   77.98 325 Pc    23 20.00   -0.8
        5.0s      0.50nm          2.8mb X
    Z  18s      1.50um            5.4Msz
    N  15s      0.40um
                 pP   23 30.00   32kmX
                 sP   23 32.50
                 eS   33 15.00
TIA   78.49 315 Pc    23 23.00   -0.8
PSI   79.29 277 ePc   23 28.00   -0.6
PCC   80.13  45 eP    23 32.00   -0.6
GCC   80.13  45 eP    23 32.00   -0.6
PRS   80.19  46 eP    23 32.70   -0.3
SAO   80.37  46 e(P)  23 34.10    0.2
BKS   80.43  45 e(P)  23 34.00   -0.2
    Z  20s      2.80um            5.6Msz
    N  20s      2.20um
    E  20s      1.90um
                  i   26 08.00
                 iPPP 27 17.00
                  iS  33 45.00
                  eLQ 44 30.00
                  eLR 48 04.00
BCH    80.48  48 P     23 35.50    0.8
MHC    80.54  45 eP    23 33.40   -1.6
PRI    80.57  47 eP    23 35.00   -0.2
BJI    81.22 317 eP    23 38.00   -0.3
MAW    81.39 201 eP    23 37.00   -1.8
MWC    81.44  50 eP    23 41.00    1.1
GYA    81.48 302 P     23 40.00   -0.1
FRI    81.67  46 eP    23 40.10   -0.6
WDC    81.70  42 eP    23 40.60   -0.2
BAR    81.71  51 eP    23 31.00  -10.1X
CMB    81.75  45 eP    23 40.50   -0.7
ORV    81.82  44 eP    23 40.70   -0.8
RVR    81.82  50 eP    23 41.00   -0.6
SBB    81.84  49 eP    23 42.00    0.2
ISA    81.86  48 eP    23 43.00    1.2
PLM    81.89  51 eP    23 45.00    2.8X
MIN    82.17  43 eP    23 42.50   -1.0
TIY    82.47 314 eP    23 45.60    0.6
    Z  20s      1.25um            5.3Msz
    E  15s      0.80um
CLC    82.55  48 eP    23 46.00    0.6
TPC    82.84  50 eP    23 48.00    1.0
XAN    83.16 309 Pc    23 48.50   -0.1
GLA    83.25  52 P     23 50.10    1.0
KVN    83.81  45 P     23 51.70   -0.3
TNP    83.93  47 P     23 53.20    0.6
        1.3s     25.51nm          5.2mb
KMI    84.13 299 Pc    23 54.00    0.0
TTA    84.27  12 eP    23 54.00    0.4
HHC    84.64 316 P     23 57.00    1.0
PMR    84.66  16 eP    23 54.50   -1.0
        1.4s     93.00nm          5.8mb
CHG    84.96 292 eP    23 59.60    1.7
BTO    85.53 315 eP    24 01.80    1.3
IMA    87.54  12 eP    24 11.90    2.2
F8A    87.78  14 eP    24 09.00   -1.8
LZH    87.80 309 eP    24 13.00    1.3
        6.0s    493.00nm          6.0mb X
PNT    88.16  36 eP    24 13.00    0.1
        1.1s     26.00nm          5.4mb
DPW    88.22  38 P     24 14.00    0.7
ALQ    90.35  53 eP    24 24.40    0.6
        1.0s      4.75nm          4.7mb
    Z  18s      1.68um            5.5Msz
                  e   24 29.00
                  e   24 52.90
LRM    90.70  41 eP    24 26.30    1.0
GTA    92.06 311 eP    24 32.40    0.9
    Z  18s      1.20um            5.4Msz
GOL    92.95  49 P     24 36.50    0.7
        1.0s     22.50nm          5.6mb
    Z  18s      1.39um            5.5Msz
GLD    93.08  49 P     24 37.30    1.0
SES    93.55  38 eP    24 37.00   -1.0
INK    94.04  17 eP    24 39.00   -0.8
RSSD   95.49  45 P     24 47.00   -0.3
MEO    96.35  56 iP    24 53.50    2.3
BAO   124.27 125 e(PKP) 30 12.00  -10.3X
SOB1  133.65 124 ePKP   30 40.80    0.6
                  e   30 48.90
VRI   143.35 324 ePKPd  30 54.50   -2.5
                  ec  44 04.50
KRA   143.71 335 ePKP   30 55.20   -2.2
                  e   31 06.20
ISR   143.89 323 ePKPc  30 56.00   -2.0
MLR   144.01 324 ePKPd  30 55.80   -2.5
KSP   144.46 339 ePKP   30 56.50   -2.2
CMP   144.65 325 ePKPc  30 58.00   -1.2
ALT   144.75 312 ePKP   30 56.80   -2.9
CTT   144.93 316 ePKP   30 57.00   -2.8
DMK   145.02 318 ePKP   30 59.00   -0.9
BCK   145.06 309 ePKP   30 58.40   -1.8
CLL   145.10 342 iPKPc  30 58.40   -1.3
        1.5s    110.00nm
WIT   145.19 349 ePKP   30 59.50   -0.3
BRG   145.20 341 iPKP   30 59.00   -0.9
        1.4s     90.00nm
JMB   145.41 319 ePKP   31 00.00   -0.5
DCN   145.41   4 ePKP   30 58.10   -2.1
        0.8s     44.00nm
```

24d 10h

DLE	145.51	3	ePKP	30	58.60	-1.8
	1.2s	85.00nm				
PVL	145.73	321	ePKP	31	02.00	0.9
PRU	145.78	339	ePKP	31	01.50	0.6
	2.0s	78.10nm				
WTS	145.95	349	ePKP	31	01.50	0.4
	1.0s	45.00nm				
		e		31	17.50	
YRH	146.04	1	ePKP	31	01.70	0.4
	1.4s	98.00nm				
ETA	146.12	3	ePKP	31	02.50	1.1
	1.3s	239.00nm				
D8N	146.13	351	e(PKP)	31	06.00	4.6X
SRO	146.13	334	e(PKP)	31	05.50	3.9X
DIM	146.29	320	ePKP	31	08.00	6.0X
ZST	146.33	335	e(PKP)	31	03.10	1.2
ECB	146.42	4	ePKP	31	03.00	1.1
VKA	146.58	336	ePKP	31	06.00	3.7X
	5.7s	978.00nm				
		i		31	07.80	
		e		32	19.00	
KDZ	146.59	319	ePKP	31	04.00	1.4
ECP	146.63	3	ePKP	31	04.00	1.8
PGB	146.82	321	ePKP	31	05.00	2.0
KHC	146.83	340	iPKPc	31	05.40	2.7X
	1.4s	40.00nm				
		e		31	21.20	
EZN	146.98	316	ePKP	31	04.00	0.8
RZN	147.00	320	ePKP	31	04.00	0.6
WET	147.05	340	iPKPc	31	05.90	2.8X
GRF	147.06	343	ePKP	31	04.70	1.6
ENN	147.29	349	ePKP	31	06.00	2.7X
	1.0s	30.00nm				
TNS	147.29	346	ePKP	31	05.30	1.8
VTS	147.36	322	iPKP	31	06.00	2.1
MEM	147.43	349	PKP	31	06.60	3.1X
UCC	147.52	351	PKP	31	03.00	-0.7
KMR	147.57	338	ePKP	31	08.00	4.1X
MMB	147.66	320	ePKPd	31	06.00	1.7
TOD	147.78	345	ePKP	31	06.50	2.3
SNF	147.81	351	PKP	31	09.40	5.2X
ABH	147.81	347	ePKP	31	06.87	2.6X
KKB	147.87	321	ePKP	31	07.00	2.4
RUP	148.09	347	ePKP	31	07.71	3.0X
DOU	148.16	350	PKP	31	08.60	3.8X
WLF	148.30	348	PKPc	31	09.60	4.6X
VAY	148.51	321	ePKP	31	03.00	-2.6X
GWF	148.65	346	PKP	31	09.98	4.3X
SKO	148.76	323	ePKP	31	09.00	3.0X
		i		31	15.00	
LJU	149.10	335	ePKP	31	10.90	4.5X
RBL	149.14	337	PKP	31	09.70	3.1X
WLS	149.24	346	PKP	31	10.23	3.6X
VBY	149.25	334	ePKP	31	10.60	4.0X
CDF	149.26	346	PKP	31	09.91	3.2X
FVI	149.29	338	PKP	31	10.00	3.4X
VOY	149.36	336	ePKP	31	08.00	1.1
CEY	149.39	335	e(PKP)	31	10.50	3.6X
ECH	149.47	346	PKP	31	11.42	4.5X
FEL	149.58	345	PKP	31	10.35	3.1X
OGA	149.65	340	ePKP	31	12.80	5.3X
TRI	149.68	336	ePKP	31	07.60	0.4
VITF	149.72	348	PKP	31	12.51	5.3X
MOF	149.82	346	PKP	31	12.49	4.9X
BSF	149.91	346	PKP	31	12.66	4.9X
FLN	150.05	356	ePKP	31	13.20	5.5X
	1.2s	35.70nm				
LDF	150.19	356	ePKP	31	13.60	5.7X
	1.2s	17.80nm				
LOMF	150.36	346	PKP	31	13.98	5.6X
GRR	150.44	357	ePKP	31	14.40	6.1X
	1.2s	35.70nm				
LPF	150.81	357	ePKP	31	15.20	6.3X
	1.2s	41.60nm				
LOR	151.03	350	ePKP	31	15.70	6.4X
	1.0s	24.00nm				
VAI	151.23	342	PKP	31	13.90	4.4X
SSF	151.28	350	ePKP	31	14.90	5.3X
	1.1s	26.80nm				
RSM	151.68	336	PKPc	31	18.90	8.6X
LPG	152.11	345	ePKP	31	17.60	6.3X
	1.0s	22.00nm				
MFF	152.17	355	ePKP	31	18.20	7.2X
TCF	152.23	352	ePKP	31	18.40	7.3X
	1.2s	20.80nm				
MAF	152.25	351	ePKP	31	18.80	7.7X
	1.2s	35.70nm				

BNG	154.29	239	ePKPc	31	12.00	-2.9X
	1.5s	25.00nm				
			id	31	21.80	
			ic	31	36.20	

S.D. = 1.2 on 124 of 180 obs.

% JUL 24, 1989 10h 44m 10.05± 0.77s
43.443 N ± 5.0km 5.423 E ± 5.8km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.6 (STR).

GELF	0.06	177	Pg	44	11.86	-0.5
TREF	0.18	351	Pg	44	13.76	-0.4
PUYF	0.22	66	Pg	44	13.76	-1.1
BERF	0.23	124	Pg	44	15.06	-0.1
PRAF	0.41	333	Pg	44	18.66	0.3
VILF	0.46	27	Pg	44	18.90	-0.5
TAVF	0.49	69	Pg	44	19.34	-0.7
GANF	0.66	32	Pg	44	23.62	0.4
CALN	1.11	73	Pg	44	30.87	-0.1
MVIF	1.33	70	Pn	44	35.01	0.3
			Sg	44	54.28	
TOUF	1.44	66	Pn	44	36.73	0.4
			Sg	44	57.07	
AUTN	1.55	68	Pn	44	38.69	0.7
			Sg	45	00.11	
SAOF	1.64	70	Pn	44	40.26	1.2

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

JUL 24, 1989 10h 53m 10.56± 0.15s
18.880 S ± 3.8km 176.811 E ± 3.6km
DEPTH = 19.6km (4 depth phases)
5.5mb (24 obs.) 5.4Msz (11 obs.)
FIJI ISLANDS REGION (181)
Ms 5.6 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 31C
Centroid Location:
Origin Time 10:53:20.8 0.5
Lat 18.89S 0.05 Lon 176.56E 0.04
Dep 15.0 FIX Half-duration 3.4
Moment Tensor; Scale 10**17 Nm
Mrr=-0.96 0.15 Mtt=-6.05 0.27
Mff= 7.01 0.22 Mrt=-0.48 0.47
Mrf= 0.12 0.54 Mtf= 4.01 0.14
Principal Axes:

	Val=	Plg=	Azm=
T	8.14	0	106
N	-0.92	86	197
P	-7.22	4	16

Best Double Couple:Mo=7.7*10**17
NP1:Strike=151 Dip=87 Slip=-177
NP2: 61 87 -3

NDF	1.27	29	iPd	53	30.00	-3.3X
PVC	8.15	277	iPc	55	13.70	2.9X
DZM	10.22	250	iPc	55	40.50	1.1
HNR	18.84	298	ePc	57	33.00	1.2
			eS	01	10.00	
KRP	19.01	183	P	57	35.00	1.4
SVO	19.10	298	eP	57	36.00	1.1
VSG	19.13	298	eP	57	36.00	0.7
TUTZ	19.77	182	P	57	44.20	1.7
HITZ	19.78	182	P	57	44.00	1.4
WHH	19.94	181	P	57	42.90	-1.4
RATZ	19.94	182	P	57	46.20	1.9
HATZ	19.95	182	P	57	44.60	0.2
KETZ	20.17	183	P	57	47.70	0.9
PGZ	21.67	181	P	58	01.70	-0.3
	1.1s	226.00nm			5.5mb	
KIW	21.97	184	P	58	04.40	-0.6
MTW	22.23	183	P	58	06.30	-1.3
MRW	22.35	184	P	58	09.10	0.4
WDW	22.37	184	P	58	08.60	-0.3
WEL	22.40	184	P	58	09.70	0.5
BLW	22.44	183	P	58	08.50	-1.2
BRS	23.64	245	iPd	58	23.20	1.7
			iS	02	41.00	
COO	25.39	238	eP	58	40.00	1.6
MSZ	26.77	194	P	58	52.80	1.9
			e	59	08.00	64kmX
RMQ	26.93	249	iPc	58	54.20	1.6
			e	59	01.00	24km
CTA	28.81	262	iPc	59	09.40	-0.3
	1.0s	88.00nm			5.5mb	
Z	20s	13.62um			5.6Msz	

			iS	04	00.00	
CAN	29.54	231	eP	59	17.00	0.8
BWA	29.59	233	eP	59	14.10	-2.6X
PMG	30.22	284	eP	59	22.00	-0.3
	1.5s	166.67nm			5.7mb	
CMS	30.61	240	eP	59	25.00	-0.7
AFR	31.74	93	eP	59	36.00	0.3
	1.2s	100.00nm			5.6mb	
PAE	31.91	93	eP	59	38.00	0.8
	1.2s	55.00nm			5.4mb	
PPT	31.93	93	eP	59	38.00	0.6
	1.2s	80.00nm			5.5mb	
Z	21s	9.00um			5.4Msz	
TOO	33.07	229	iPd	59	48.20	1.0
			e	59	52.00	13km
PMO	33.94	89	iP	59	54.60	-0.3
	1.2s	135.00nm			5.8mb	
VAH	34.15	89	iP	59	55.80	-0.9
	1.2s	75.00nm			5.5mb	
STK	34.19	241	eP	59	57.00	0.0
TPT	34.21	89	iP	59	56.80	-0.4
	1.2s	85.00nm			5.5mb	
RUV	34.39	89	iP	59	58.20	-0.6
	1.2s	135.00nm			5.7mb	
QIS	35.02	261	iPc	00	03.20	-0.9
BFD	35.06	232	eP	00	04.00	-0.3
ADE	37.30	237	iPc	00	23.80	0.4
	1.3s	100.00nm			5.5mb	
WB5	39.97	261	iPc	00	44.70	-1.1
WRA	39.99	261	Pc	00	44.70	-1.3
	1.0s	100.00nm			5.5mb	
ASPA	40.16	255	iPc	00	46.90	-0.4
	1.2s	330.00nm			5.9mb	
Z	22s	8.36um			5.5MszX	
			eS	06	52.10	
			LR	15	16.00	
MTN	44.25	271	iPd	01	20.30	-0.5
	1.0s	253.00nm			6.0mb	
FORR	45.46	245	eP	01	30.00	-0.2
KNA	45.87	266	eP	01	33.00	-0.7
WARB	46.68	252	iPd	01	40.20	0.2
COOL	51.43	245	eP	02	15.30	-1.4
MBL	53.34	257	iPc	02	30.30	-0.8
	1.0s	66.00nm			5.6mb	
KLB	54.32	244	eP	02	37.00	-1.2
NWAO	54.74	243	eP	02	40.00	-1.3
Z	20s	3.80um			5.5Msz	
MNI	54.89	286	ePd	02	41.50	-1.1
BAL	55.26	245	eP	02	44.00	-1.1
NANU	57.09	255	eP	02	57.00	-1.3
MKS	57.46	276	iPc	03	00.00	-1.0
SBA	59.21	182	P	03	12.60	0.3
TRT	63.15	271	iPc	03	39.30	-0.6
KKM	64.62	286	ePc	03	48.00	-1.6
CHJJ	65.31	327	eP	03	48.90	-4.6X
IIDJ	65.44	326	P	03	54.60	0.2
BAG	65.49	299	eP	03	54.00	-1.2
			eS	12	43.00	
NIIJ	66.22	328	eP	03	59.20	-0.1
ADK	70.69	4	P	04	25.60	-1.2
	1.0s	56.00nm			5.6mb	
SPA	71.24	180	e(P)	04	30.10	-0.2
	1.0s	20.00nm			5.2mb	
KLI	71.38	271	eP	04	28.00	-3.8X
NJ2	75.12	312	Pc	04	53.50	0.2
MDJ	76.46	327	eP	05	01.50	0.9
Z	25s	1.40um			5.2MszX	
DL2	77.25	319	eP	05	07.00	1.8
Z	23s	0.90um			5.0MszX	
			epP	05	16.00	29km
			eS	15	00.00	
WHN	77.58	308	P	05	07.50	0.4
Z	24s	2.18um			5.4MszX	
E	20s	1.72um				
			sP	05	19.00	
			S	15	00.00	
SNY	77.88	322	Pc	05	10.40	1.8
N	36s	6.30um				
E	34s	4.60um				
			S	15	08.00	
IPM	78.10	279	ePc	05	09.50	-0.9
	1.1s	62.60nm			5.6mb	
CN2	78.10	325	Pc	05	10.00	0.3
	5.0s	0.70nm			3.0mb X	
Z	18s	1.30um			5.3Msz	
N	15s	0.50um				
			pP	05	14.00	13km

Sta	Dist	Az	Phase	Time	Res
			eS	15 09.00	
TIA	78.62	315	Pc	05 12.70	-0.1
SNG	79.38	281	eP	05 18.20	0.9
PSI	79.43	277	ePd	05 16.50	-1.1
	1.0s	20.70nm			5.1mb
GCC	80.08	45	eP	05 20.20	-0.5
PRS	80.13	46	ePd	05 20.80	-0.2
SYP	80.16	48	eP	05 24.00	2.7X
SAO	80.31	46	eP	05 21.00	-0.9
BRK	80.36	45	eP	05 21.60	-0.5
BKS	80.38	45	e(P)d	05 21.00	-1.2
Z	20s	2.60um			5.6Msz
N	20s	1.90um			
E	20s	1.70um			
			e	07 42.00	690kmX
			e	15 03.00	
			eS	15 23.00	
			i	15 35.00	
			i(S)	15 42.00	
			i	16 00.00	
			e	16 59.00	
			e	18 23.00	
			e	19 06.00	
			eSS	20 42.00	
			i	21 43.00	
			e	22 40.00	
			eSSS	24 10.00	
			iLQ	25 37.00	
			eLQ	26 14.00	
			iLQ	26 15.00	
			e	26 55.00	
			eLR	29 45.00	
BCH	80.42	48	P	05 24.00	1.3
MHC	80.49	45	eP	05 22.70	-0.3
PRI	80.52	47	eP	05 23.20	0.0
PAS	81.26	50	eP	05 35.00	8.0X
BJI	81.35	317	eP	05 28.00	0.7
Z	20s	1.20um			5.2Msz
			eS	15 40.00	
MWC	81.38	49	eP	05 28.00	0.2
MAW	81.38	201	eP	05 27.00	0.0
FRI	81.62	46	eP	05 28.20	-0.5
BAR	81.64	51	eP	05 35.00	6.0X
WDC	81.66	42	eP	05 28.70	-0.2
CMB	81.70	45	ePd	05 28.80	-0.4
RVR	81.76	50	eP	05 31.00	1.4
ORV	81.77	43	eP	05 28.90	-0.6
SBB	81.78	49	eP	05 30.00	0.3
ISA	81.80	48	eP	05 31.00	1.2
PLM	81.83	51	eP	05 32.00	1.8
LOE	82.12	291	eP	05 32.00	0.3
MIN	82.13	43	eP	05 30.60	-0.9
CLC	82.49	48	eP	05 34.00	0.6
TIY	82.60	314	Pc	05 35.50	1.6
Z	24s	1.77um			5.3MszX
N	17s	1.30um			
			SS	21 14.00	
SVW	82.73	13	eP	05 34.70	0.6
TPC	82.78	50	eP	05 40.00	5.1X
NST	82.89	289	eP	05 39.00	3.3X
GLA	83.19	52	eP	05 38.00	0.9
XAN	83.30	309	Pc	05 46.60	9.0X
TNP	83.87	46	P	05 41.00	0.3
	1.2s	40.32nm			5.5mb
KMI	84.27	299	Pc+	05 44.00	1.0
Z	28s	3.40um			5.6MszX
			SKS	16 14.00	
TTA	84.30	12	eP	05 43.10	1.0
BDT	84.47	290	eP	05 45.00	1.3
PMR	84.68	16	ePc	05 44.30	0.4
	1.3s	42.50nm			5.5mb
Z	19s	1.00um			5.2Msz
CHG	85.10	292	iPc	05 47.90	1.0
	1.0s	23.00nm			5.4mb
BTO	85.66	315	P	05 51.00	1.6
			sP	05 59.00	
			eSKS	16 15.00	
CD2	85.82	304	P	05 51.40	1.0
Z	22s	1.40um			5.3Msz
IMA	87.57	12	eP	06 02.00	3.8X
FBA	87.80	14	eP	05 58.10	-1.1
	0.9s	7.30nm			5.0mb
LZH	87.93	309	eP	06 02.50	1.9
Z	25s	3.20um			5.6MszX
			eS	16 52.00	
PNT	88.13	36	eP	06 02.00	0.9
DPW	88.18	38	P	06 02.20	0.8
ALQ	90.28	53	eP	06 12.90	1.1
Z	22s	1.11um			5.2Msz
			e	06 31.50	66kmX
			eLR	30 00.00	
LRM	90.66	41	eP	06 14.30	0.9
GTA	92.20	311	P	06 21.70	1.3
Z	22s	1.10um			5.3Msz
GOL	92.89	49	P	06 24.60	0.8
GLD	93.02	49	P	06 25.00	0.7
SES	93.52	38	eP	06 26.00	-0.1
SHL	93.58	296	iP	06 27.50	0.4
			eS	09 34.00	
INK	94.06	17	eP	06 27.00	-1.2
RSSD	95.44	45	P	06 35.00	-0.4
MEO	96.28	56	iPc	06 39.40	0.2
MBC	102.26	13	ePdiff	07 08.00	2.9X
	1.3s	9.00nm			5.3mb
ZOBO	107.20	114	ePKP	11 31.00	-7.6X
MAIO	122.72	301	ePKP	12 07.00	0.0
BUL	130.24	220	iPKPd	12 22.00	0.0
SUF	131.74	342	ePKP	12 25.00	1.6
SOB1	133.51	124	ePKP	12 25.70	-2.6
			e	12 30.90	
NUR	133.93	341	ePKP	12 35.00	7.4X
Z	22s	1.50um			5.7Msz
			LR	06 50.00	
ITR	135.71	125	ePKP	12 31.70	-0.7
NB2	136.66	350	PKP	12 28.70	-4.2X
VRI	143.47	324	iPKPc	12 43.00	-2.5
EKA	143.61	360	PKP	12 52.00	6.6X
	1.1s	8.40nm			
PRNI	143.62	296	ePKP	12 44.00	-2.3
CVO	143.80	325	ePKP	12 44.00	-2.2
MBH	143.81	295	ePKP	12 46.00	-0.6
KRA	143.82	335	ePKP	12 48.70	2.7X
	1.8s	159.00nm			
			e	12 53.20	
PSN	143.89	320	ePKP	12 50.00	3.7X
ISR	144.01	323	ePKPd	12 45.00	-1.6
MLR	144.13	324	ePKPc	12 44.50	-2.4
GPA	144.21	314	ePKP	12 44.00	-3.0X
SPC	144.36	333	ePKP	12 45.60	-1.6
			i	12 56.00	
KSP	144.56	339	ePKP	12 46.20	-1.0
	1.4s	148.00nm			
			i	12 53.50	
ITU	144.70	316	ePKP	12 43.00	-4.7X
BUC	144.70	323	ePKP	12 47.00	-0.6
CMP	144.77	325	ePKPc	12 49.00	1.2
BUC1	144.78	323	ePKP	12 48.00	0.2
ALT	144.89	312	ePKP	12 46.80	-1.5
DMU	144.93	4	ePKP	12 45.00	-2.7X
CTT	145.06	316	ePKP	12 44.00	-4.4X
DMK	145.15	318	ePKP	12 47.00	-1.5
BCK	145.19	309	ePKP	12 46.40	-2.4
CLL	145.20	342	iPKPc	12 48.10	-0.2
	1.2s	70.00nm			
			i	12 52.20	
WIT	145.27	349	ePKP	12 49.00	0.7
BRG	145.30	341	iPKPd	12 48.70	0.2
	1.2s	250.00nm			
			i	12 57.00	
DCN	145.46	4	ePKP	12 47.20	-1.4
JMB	145.54	320	ePKP	12 47.00	-2.2
DLE	145.56	4	ePKP	12 48.00	-0.8
KHL	145.61	311	ePKP	12 48 90	-0.7
DST	145.67	314	ePkP	12 49.00	-0.6
PVL	145.86	322	ePKP	12 50.00	0.4
PRU	145.87	339	ePKP	12 50.00	0.5
	1.5s	44.60nm			
			e	12 54.50	
MFT	145.99	316	ePKP	12 50.20	0.1
WTS	146.03	349	ePKP	12 51.00	1.4
	1.0s	58.00nm			
			e	13 04.00	
YRH	146.10	2	ePKP	12 54.10	4.3X
	1.5s	116.00nm			
ETA	146.17	3	ePKP	12 54.80	4.9X
	1.5s	174.00nm			
DBN	146.20	351	ePKP	12 56.00	6.1X
SRO	146.24	334	ePKP	12 55.50	5.4X
ZST	146.43	335	ePKP	12 51.90	1.5
			e	12 55.70	
TIM	146.45	328	iPKPc	12 54.00	3.5X
ECB	146.46	4	ePKP	12 55.50	5.2X
ECP	146.68	4	ePKP	12 56.30	5.7X
VKA	146.68	336	ePKP	12 54.50	3.6X
	5.5s	1026.00nm			
			i	13 51.20	
KDZ	146.71	319	ePKP	12 50.00	-1.1
PLD	146.89	320	ePKP	12 56.00	4.6X
KHC	146.93	340	ePKPc	12 53.50	2.2
			e	12 58.40	
PGB	146.95	321	ePKP	12 56.00	4.5X
EZN	147.11	316	ePKP	12 53.00	1.2
RZN	147.12	320	ePKP	12 52.00	0.0
GRF	147.16	343	ePKP	12 54.00	2.4X
IZM	147.17	313	ePKP	12 54.00	2.0X
ENN	147.37	349	ePKP	12 55.00	3.2X
	1.0s	61.00nm			
TNS	147.37	346	ePKP	12 55.40	3.4X
VTS	147.48	322	iPKP	12 55.00	2.5X
BEO	147.48	328	ePKP	12 58.00	5.8X
MEM	147.51	349	PKP	12 55.40	3.4X
UCC	147.59	351	PKP	12 59.60	7.4X
KMR	147.67	338	iPKP+	12 59.80	7.4X
			i	13 48.00	
MMB	147.78	320	iPKPc	12 55.00	2.1X
TOD	147.87	345	ePKP	12 55.58	2.8X
SNF	147.88	351	PKP	12 56.40	3.7X
ABH	147.90	347	ePKP	12 55.80	3.0X
KKB	148.00	321	ePKP	12 56.00	2.8X
SRS	148.14	320	ePKPd	12 55.90	2.5X
RUP	148.17	347	ePKP	12 56.55	3.3X
DOU	148.24	350	PKP	12 57.80	4.5X
			e	13 05.80	
OUR	148.35	318	ePKPd	12 53.20	-0.5
WLF	148.39	348	PKPd	12 57.90	4.4X
BHG	148.39	339	iPKPd	13 02.60	9.0X
	1.1s	46.00nm			
KNT	148.54	320	ePKP	12 56.20	2.1
VAY	148.64	321	iPKP	12 57.30	3.1X
GWF	148.73	346	PKP	12 57.35	3.2X
PTJ	148.74	334	ePKP	12 53.80	-0.6
KBA	148.78	338	i(PKP)	13 01.20	6.7X
	1.4s	64.60nm			
THE	148.81	320	ePKP	12 57.30	2.8X
SKO	148.89	323	iPKP	12 57.50	2.9X
			i	13 03.50	
GRG	148.96	321	ePKPd	12 57.00	2.2X
LJU	149.21	336	ePKP	12 58.60	3.6X
RBL	149.24	337	PKPd	12 58.60	3.5X
WLS	149.32	346	PKP	12 59.67	4.5X
CDF	149.34	346	PKP	12 59.44	4.2X
VBY	149.35	334	iPKPd	13 00.10	4.9X
BCI	149.39	325	ePKP	13 00.00	4.7X
FVI	149.39	338	PKPc	12 59.40	4.2X
KKS	149.40	324	ePKP	13 04.00	8.7X
LIT	149.42	319	ePKP	12 57.00	1.5
VOY	149.46	336	ePKP	12 59.60	4.1X
CEY	149.50	335	ePKP	13 00.00	4.6X
ECH	149.55	346	PKP	13 00.44	5.0X
PHP	149.64	324	ePKP	12 54.50	-1.2
FEL	149.67	345	PKP	12 59.95	4.2X
OGA	149.74	340	ePKP	13 01.30	5.3X
			i	13 06.80	
VITF	149.80	348	PKP	13 01.20	5.5X
RIY	149.84	335	ePKP	13 00.30	4.4X
MOF	149.90	346	PKP	13 01.32	5.3X
BSF	150.00	346	PKP	13 00.51	4.3X
TIR	150.19	324	ePKP	13 01.40	4.9X
LOMF	150.44	346	PKP	13 02.11	5.2X
BERA	150.56	323	ePKP	13 05.80	8.7X
TPE	150.79	322	ePKP	13 08.00	10.5X
LPF	150.87	357	ePKP	13 01.50	4.2X
	1.2s	77.30nm			
SRN	151.06	321	ePKP	13 03.90	6.0X
LOR	151.10	350	ePKP	13 01.70	3.9X
	1.2s	44.60nm			
VAI	151.32	342	PKPd	13 03.80	5.7X
LBF	151.36	350	ePKP	13 02.40	4.2X
	1.2s	38.60nm			
SSF	151.36	350	ePKP	13 02.40	4.3X
	1.0s	36.80nm			
SMF	151.71	350	ePKP	13 02.80	4.1X
	1.0s	16.00nm			
RSM	151.78	336	PKP	13 06.30	7.5X
BGF	151.95	351	ePKP	13 03.50	4.4X
	1.2s	22.00nm			
PGD	152.11	337	PKP	13 11.40	11.8X
LSD	152.14	344	PKP	13 09.08	9.4X
LPG	152.20	345	ePKP	13 06.80	7.0X
	1.4s	43.50nm			
MME	152.21	338	PKP	13 12.60	12.8X

24d 11h

MAF	152.32	351	ePKP	13 02.90	3.3X
	1.4s	39.20nm			
PCP	152.60	342	PKP	13 11.13	11.0X
RRL	152.74	344	PKP	13 10.62	10.1X
ROB	153.02	342	PKP	13 10.93	10.2X
PZZ	153.04	344	PKP	13 09.59	8.8X
IMI	153.37	342	PKP	13 09.69	8.5X
BNG	154.38	239	ePKPc	13 02.60	-0.8
	1.0s	35.00nm			
			ic	13 07.00	
			id	13 16.00	
			ic	15 06.60	

S.D. = 1.1 on 160 of 258 obs.

JUL 24, 1989 11h 35m 12.90± 0.79s
18.853 N ± 8.6km 64.306 W ± 4.6km
DEPTH = 57.3 ± 9.7 km
4.4mb (6 obs.)
VIRGIN ISLANDS (91)
Felt on St. Thomas and Puerto Rico.

LPR	1.58	250	iP	35 38.50	-0.5
SJG	1.90	247	iP	35 43.00	-0.5
SKI	2.12	135	eP	35 47.19	0.6
			eS	36 17.05	
APR	2.33	261	iP	35 49.80	0.3
NEV	2.38	136	eP	35 51.08	0.9
			eS	36 22.24	
PNP	2.39	251	iP	35 50.00	-0.4
MGP	2.77	253	iP	35 55.80	0.0
ANG	2.90	125	eP	35 56.28	-1.3
MGH	2.91	136	eP	35 58.71	0.9
			eS	36 36.62	
BPA	2.94	127	eP	35 57.44	-0.9
			eS	36 33.82	
PAG	3.76	138	eP	36 09.80	-0.1
			S	36 58.50	
DEG	4.00	129	eP	36 10.60	-2.5
BBL	4.27	140	eP	36 17.70	0.7
FDF	5.09	143	eP	36 30.32	1.8
			S	37 32.40	
CRM	5.21	141	eP	36 30.53	0.3
BIM	5.31	144	eP	36 31.46	-0.2
MVM	5.38	142	eP	36 32.70	0.1
SLB	5.90	147	eP	36 39.79	-0.1
SVB	6.28	152	eP	36 44.17	-1.0
TCE	8.48	163	eP	37 16.09	0.5
TRN	8.63	161	eP	37 19.01	1.3
TBH	8.89	159	eP	37 24.68	3.3X
TPP	8.92	162	eP	37 24.99	3.2X
UPA	17.73	238	iPd	39 18.30	0.9
	0.6s	40.00nm		4.8mb	
PRM	22.11	317	P	40 16.60	11.7X
NA2	22.50	331	P	40 22.70	14.1X
CVL	22.71	330	P	40 26.10	15.4X
BLA	23.11	326	P	40 15.90	1.3
TKL	24.00	318	P	40 44.00	20.7X
GBTN	24.28	318	P	40 47.30	21.3X
MEO	34.26	305	iPd	41 54.70	-0.9
ZOBO	35.10	186	eP	42 02.00	-1.5
CNCB	35.62	186	P	42 07.20	-0.7
BAO	37.85	154	eP	42 16.10	-10.0X
ALQ	40.54	302	eP	42 49.00	0.5
	1.0s	2.75nm		4.0mb	
			e	42 59.50	
			e	44 51.00	
GOL	40.96	309	P	42 51.50	-0.4
MSU	45.77	306	P	43 31.30	0.4
PLM	48.88	298	P	43 55.70	0.5
TNP	49.61	304	P	44 01.10	0.3
	0.8s	2.21nm		4.2mb	
YKA	55.57	334	eP	44 48.70	4.1X
LPF	58.40	45	eP	45 17.70	12.9X
	0.9s	6.50nm			
FLN	58.85	44	eP	45 21.10	13.1X
	0.8s	6.40nm			
MFF	58.85	46	eP	45 21.50	13.5X
	1.2s	20.20nm			
EPF	58.95	51	eP	45 22.30	13.4X
	1.0s	24.00nm			
LPO	59.65	49	eP	45 26.40	12.9X
	1.2s	20.20nm			
RJF	59.92	48	eP	45 28.40	13.0X
	1.2s	23.80nm			
LSF	59.98	47	eP	45 28.80	13.0X
CAF	60.28	49	eP	45 31.00	13.1X
	1.0s	10.80nm			
TCF	60.45	47	eP	45 32.10	13.0X
	1.0s	16.00nm			
MAF	60.70	47	eP	45 33.40	12.7X
	1.2s	13.00nm			
AVF	61.27	46	eP	45 37.10	12.6X
	0.8s	6.70nm			
SSF	61.39	46	eP	45 38.00	12.6X
	1.1s	14.60nm			
SMF	61.60	47	eP	45 39.50	12.7X
	0.8s	6.70nm			
LOR	61.64	46	eP	45 39.70	12.6X
	0.8s	9.40nm			
LBF	61.70	46	eP	45 40.00	12.4X
	1.1s	9.70nm			
HAU	63.34	45	eP	45 51.00	12.6X
LPG	63.61	48	eP	45 53.90	13.4X
BSF	63.64	45	eP	45 52.70	12.3X
ALE	63.72	0	eP	45 41.00	0.7
	0.5s	2.00nm		4.4mb	
MBC	63.79	347	eP	45 39.00	-1.8
	0.7s	3.00nm		4.4mb	
CDF	63.97	45	eP	45 55.00	12.4X
INK	64.97	337	eP	45 48.00	-0.5
NB2	66.68	31	P	46 11.00	11.3X
MLR	76.97	46	ePc	47 02.50	1.2
BNG	81.83	88	ePc	47 37.70	9.8X
	0.7s	3.00nm		4.4mb	

S.D. = 1.0 on 35 of 65 obs.

% JUL 24, 1989 11h 51m 12.81± 1.89s
32.001 S ±10.8km 69.166 W ±17.6km
DEPTH = 111.9 ± 24.7 km
MENDOZA PROVINCE, ARGENTINA (139)

RTBS	0.42	324	iPd	51 29.50	0.0
RTCV	0.55	76	iPc	51 39.70	9.2X
RTCB	0.60	31	iPd	51 31.00	0.1
			S	51 44.00	
CFA	0.88	64	iPd	51 33.20	-0.1
			S	51 48.00	
RTLL	0.89	42	iPd	51 33.50	0.1
			S	51 49.00	
RTRS	1.84	352	iPc	51 44.30	0.0
			S	52 08.50	
RFA	2.82	168	ePc	51 57.30	0.0

S.D. = 0.1 on 6 of 7 obs.

JUL 24, 1989 11h 58m 35.95± 0.61s
45.222 S ± 9.5km 166.936 E ± 4.9km
DEPTH = 33.0km (normal)
4.8mb (3 obs.) 4.2Msz (1 obs.)
OFF W. COAST OF S. ISLAND, N.Z. (161)
Felt near Invercargill.

MHZ	1.67	85	Pc	59 04.50	1.2
OBZ	1.87	154	P	59 06.20	0.0
TMP	2.44	69	P	59 14.90	0.5
RTY	5.49	54	P	59 59.50	2.1
			S	01 03.00	
TCW	6.69	56	eP	00 13.90	-0.5
MRW	6.93	58	eP	00 15.60	-2.2
WEL	6.94	58	P	00 20.00	2.1
			S	01 34.00	
WDW	7.09	59	eP	00 17.60	-2.3
KIW	7.29	56	eP	00 22.30	-0.4
MTW	7.46	60	eP	00 23.60	-1.6
NEZ	7.97	44	P	00 32.00	-0.4
			S	01 58.30	
RATZ	9.13	49	eP	00 49.40	0.9
KRP	9.73	44	eP	00 57.00	0.5
			S	02 42.80	
CNB	16.63	300	eP	02 30.00	1.8
CAN	16.85	300	eP	02 29.50	-1.4
			eS	05 25.00	
			eTT	17 28.00	
TOO	17.78	288	eP	02 42.50	0.1
BWA	17.81	301	iPd	02 41.70	-1.1
			eTT	18 00.00	
BFD	19.98	285	eP	03 09.00	0.7
BRS	21.08	323	iPd	03 21.90	2.2
DZM	23.10	359	iPc	03 43.90	4.1X
RMQ	23.71	316	iPc	03 48.70	3.1X
CTA	30.34	319	iPc	04 47.30	0.5
QIS	33.35	308	eP	05 12.60	-0.5
ASPA	34.35	298	iPd	05 20.20	-1.5
	1.4s	15.00nm		4.7mb	
	Z 21s	0.53um		4.2Msz	
		LR	17 46.00		
WB5	36.90	302	eP	05 42.70	-0.6
MTN	44.33	305	iPc	06 44.60	0.0
	0.6s	25.00nm		5.2mb	
SPA	44.97	180	e(P)	06 49.70	0.2
	1.0s	9.00nm		4.6mb	
SUF	151.67	322	iPKP	18 26.40	5.7X
	0.5s	8.30nm			
MLR	152.77	285	ePKPc	18 29.50	6.5X
NUR	153.05	318	ePKP	18 30.00	7.3X

S.D. = 1.3 on 25 of 30 obs.

? JUL 24, 1989 12h 06m 04.54± 1.62s
19.148 S ±22.2km 169.204 E ±26.1km
DEPTH = 258.7 ± 9.9 km
VANUATU ISLANDS (186)

PVC	1.64	329	iPc	06 45.00	0.0
			iS	07 18.00	
DZM	3.89	221	iPc	07 07.80	-0.2
			iS	07 55.10	
BRS	17.17	238	iPc	09 51.00	0.8
RMQ	20.20	245	iPd	10 23.60	2.5X
CTA	21.64	264	eP	10 37.00	1.9
WB5	32.81	263	eP	12 14.20	-1.8
ASPA	33.12	256	iPd	12 17.50	-1.1
	0.5s	24.00nm		5.1mb	
WLF	146.66	340	PKP	25 15.40	0.5
DOU	146.77	342	PKP	25 14.80	-0.3
BNG	147.85	247	iPKPc	25 18.20	0.2
	0.7s	6.00nm			

S.D. = 1.3 on 9 of 10 obs.

? JUL 24, 1989 13h 06m 06.52± 1.48s
15.377 N ±29.2km 147.455 E ±15.5km
DEPTH = 33.0km (normal)
4.6mb (1 obs.)
MARIANA ISLANDS REGION (215)

GUA	3.07	234	iPc	06 54.00	0.2
			eS	07 16.20	
GUMO	3.07	235	iPc	06 53.80	-0.1
PJG	3.07	235	iPc	06 53.80	-0.1
WB5	37.32	201	eP	13 17.80	0.1
WRA	37.39	201	Pc	13 18.10	-0.2
	1.0s	9.60nm		4.6mb	
WARB	46.00	206	eP	14 29.00	0.2
FORR	49.59	202	eP	14 56.50	-0.1
YKA	80.12	28	eP	18 25.20	10.7X
ZOBO	145.78	96	ePKP	25 45.00	0.0
LPB	145.82	97	(PKP)	25 49.00	4.1X
CNCB	145.95	97	ePKP	25 54.00	8.7X

S.D. = 0.2 on 8 of 11 obs.

? JUL 24, 1989 13h 31m 37.33± 3.79s
34.936 N ±29.5km 139.159 E ±12.7km
DEPTH = 5.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 2.6 (JMA). Felt (I JMA) at Ajiro.

AJI	0.12	335	P	31 40.00	0.2
			iS	31 41.30	
CHJJ	1.12	353	P	31 58.10	-0.6
			S	32 11.60	
IIDJ	1.16	298	P	31 58.80	-0.6
			S	32 13.60	
KAKJ	1.51	33	eP	32 05.00	-0.1
MTMJ	1.98	327	P	32 13.10	1.2
			S	32 38.70	

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

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* JUL 24, 1989 13h 34m 28.27± 2.35s
36.118 N ±15.9km 71.121 E ±12.7km
DEPTH = 83.8 ± 25.5 km
4.4mb (1 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

QUE	6.87	212	eP	36 11.00	2.5
			eS	37 24.60	
NDI	9.03	144	eP	36 37.00	-0.8
MAIO	9.40	275	eP	36 41.00	-2.0
			eS	38 23.00	
SHL	20.66	115	iP	39 03.00	-0.5
NUR	38.19	325	iP	41 41.90	0.9
SUF	38.30	328	iP	41 42.90	1.1

	0.6s	3.10nm			4.4mb	
NB2	44.74	323	P	42 34.40	-0.2	
BNG	57.61	250	iPd	44 10.60	-1.4	
	0.4s	5.00nm			5.0mb X	
MBC	67.71	3	eP	45 18.00	-0.1	
	0.5s	110.00nm			6.0mb X	
BUL	68.90	223	iPc	45 26.00	-0.3	
INK	74.27	9	eP	45 57.00	-0.4	
YKA	81.62	3	eP	46 39.00	1.2	
S.D. = 1.5 on 12 of 12 obs.						

% JUL 24, 1989 13h 56m 02.48± 0.66s
60.722 N ± 4.9km 5.584 E ± 6.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK	0.31	219	iP	56 08.87	0.0	
			iSg	56 12.50		
BER	0.36	200	eP	56 09.49	-0.4	
			eSg	56 14.02		
SUE	0.52	310	eP	56 13.13	0.0	
			eS	56 19.94		
HYA	0.53	33	eP	56 13.17	-0.1	
			eS	56 21.86		
ODD1	0.96	147	eP	56 20.31	-0.5	
			eS	56 33.45		
BLS1	1.47	154	iP	56 29.91	0.8	
			iS	56 49.06		
KMY	1.52	187	eP	56 30.03	0.3	
			eS	56 49.92		
S.D. = 0.5 on 7 of 7 obs.						

JUL 24, 1989 14h 02m 48.25± 0.32s
40.417 N ± 3.7km 27.455 E ± 3.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.32	103	iPg	02 55.00	0.1	
			iSg	03 01.00		
MFT	0.39	340	iPg	02 57.20	0.9	
CTT	1.04	45	ePg	03 08.30	0.4	
EZN	1.05	236	iPn	03 08.40	0.4	
DST	1.21	132	iPn	03 10.80	-0.1	
ISK	1.38	62	ePn	03 13.00	-0.5	
DMK	1.42	9	iPn	03 14.00	-0.1	
PRK	1.48	218	ePb	03 16.00	1.1	
GBZT	1.56	76	ePn	03 16.80	0.7	
			iSg	03 37.10		
RDO	1.63	297	ePb	03 17.50	0.5	
KDZ	1.97	309	iPd	03 23.00	0.9	
IZM	2.02	184	ePn	03 22.00	-0.8	
JMB	2.15	343	iP	03 30.00	5.4X	
DIM	2.18	319	eP	03 25.00	-0.1	
GPA	2.19	92	ePn	03 27.00	1.8	
RZN	2.43	302	iPgd	03 29.00	0.2	
ALT	2.46	123	ePn	03 27.00	-2.1	
KHL	2.64	142	ePn	03 31.90	0.3	
OUR	2.65	269	ePnc	03 31.80	0.0	
			eSn	04 03.20		
PLD	2.67	310	iP	03 32.00	-0.1	
PAIG	2.93	262	ePnc	03 35.60	-0.2	
			eSn	04 10.40		
SRS	3.02	285	ePnd	03 36.90	0.0	
			eSn	04 10.80		
MMB	3.05	294	ePd	03 40 00	2.5X	
PVL	3.22	331	eP	03 38.00	-1.7	
PGB	3.26	312	eP	03 40.00	-0.5	
PSN	3.31	9	eP	04 18.00	36.9X	
NEO	3.44	253	ePb	03 50.00	7.0X	
KNT	3.54	284	ePnd	03 44.40	0.0	
			eSn	04 24.00		
KKB	3.60	295	iP	03 45.00	-0.3	
LIT	3.81	267	ePn	04 31.30	43.0X	
VAY	3.81	285	ePn	03 48.30	0.0	
VTS	3.86	306	iP	03 49.00	-0.1	
BBTK	4.11	96	eP	04 07.00	14.5X	
			eS	05 04.00		
TLB	4.19	6	iPc	04 07.50	14.0X	
ISR	4.77	352	eP	04 11.00	9.2X	
CFR	4.79	6	iPd	04 15.30	13.2X	
SKO	4.80	291	ePn	03 56.00	-6.3X	
MLR	5.19	348	iPc	04 09.00	1.1	
VRI	5.48	355	eP	04 10.00	-1.8	
BZS	6.73	322	ePc	04 27.00	-2.5X	
S.D. = 0.9 on 29 of 40 obs.						

JUL 24, 1989 14h 14m 57.56± 1.67s
31.863 S ± 8.9km 69.929 W ± 8.8km
DEPTH = 129.9 ± 21.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

RT8S	0.45	64	e(P)	15 29.00	12.5X	
JACH	0.99	214	iPd	15 20.80	0.0	
			iS	15 36.10		
RTCB	1.03	69	iPd	15 20.50	-0.7	
			S	15 37.50		
ZON	1.11	74	iPd	15 22.00	0.1	
			eS	15 38.00		
RTCV	1.18	90	iPd	15 28.30	5.7X	
RTLL	1.35	67	iPd	15 24.00	-0.4	
			(S)	15 44.20		
ROCH	1.44	219	iPd	15 25.00	-0.5	
			iS	15 45.50		
CFA	1.46	80	iPd	15 25.50	-0.1	
			S	15 41.00		
FCH	1.49	192	iPd	15 27.50	1.2	
			iS	15 50.00		
SAN	1.70	201	iPd	15 28.70	0.3	
			iS	15 52.40		
RTRS	1.74	14	iPd	15 29.50	0.8	
			S	15 52.50		
PCH	1.82	196	iP	15 30.50	0.6	
			iS	15 55.20		
TACH	1.98	205	iPd	15 31.50	-0.2	
			iS	15 57.60		
CHCH	2.15	196	iPd	15 33.70	-0.2	
			iS	16 03.70		
LNV	2.43	210	iPd	15 36.10	-1.2	
			iS	16 05.10		
RFA	3.15	157	ePc	15 47.10	0.3	
MRA	3.62	100	iPc	15 53.00	0.0	
S.D. = 0.7 on 15 of 17 obs.						

? JUL 24, 1989 15h 59m 28.57± 4.39s
32.814 S ±18.6km 72.409 W ±30.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

IHA	0.68	108	iPc	59 42.00	0.0	
			iS	59 49.20		
LCCH	0.96	133	iPd	59 47.00	0.1	
			iS	59 57.00		
ROCH	1.19	98	iPd	59 50.30	-0.6	
			iS	00 03.80		
LNV	1.41	144	iPc	59 53.60	-0.7	
			iS	00 10.80		
TACH	1.49	125	iPc	59 55.20	-0.2	
			iS	00 12.50		
JACH	1.54	86	iPc	59 56.10	0.0	
			iS	00 14.50		
SAN	1.60	114	iPc	59 57.20	0.2	
			iS	00 15.60		
PCH	1.78	117	iP	59 59.90	0.2	
			iS	00 20.50		
CHCH	1.85	128	iP	00 01.20	0.6	
			iS	00 22.60		
FCH	1.85	107	iPc	00 01.20	0.3	
			iS	00 22.00		
S.D. = 0.4 on 10 of 10 obs.						

% JUL 24, 1989 16h 49m 53.81± 0.76s
38.366 N ± 7.3km 22.163 E ± 7.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (ATH).

ITM	1.20	189	ePb	50 16.00	-0.2	
NEO	1.25	41	ePb	50 16.50	-0.6	
VLS	1.25	262	ePg	50 17.00	-0.1	
ATH	1.29	107	ePg	50 18.00	0.4	
			eSb	50 36.00		
KZN	1.96	351	ePb	50 28.00	0.5	
S.D. = 0.6 on 5 of 5 obs.						

JUL 24, 1989 16h 51m 11.93± 0.43s
26.065 N ± 6.7km 142.633 E ± 8.9km
DEPTH = 33.0km (normol)
4.8mb (5 obs.)
BONIN ISLANDS REGION (212)

KAKJ	10.32	349	eP	53 40.40	-0.4	
CHJJ	10.43	343	P	53 40.10	-2.1X	
MTMJ	11.27	340	P	53 53.50	-0.3	
NIIJ	11.56	345	eP	53 57.10	-0.5	
SNY	22.22	320	eP	56 08.80	1.8	
GYA	32.20	279	P	57 43.40	4.1X	
CD2	34.39	287	P	57 56.70	-1.5	
GTA	38.05	301	eP	58 27.50	-1.7	
MTN	40.26	198	iPd	58 48.00	0.4	
	0.5s	17.00nm			5.1mb	
CHG	40.87	269	iPd	58 53.00	0.3	
	1.0s	12.50nm			4.6mb	
IPM	45.16	249	ePd	59 28.60	1.0	
WB5	46.37	191	eP	59 36.20	-0.8	
WRA	46.44	191	Pc	59 37.00	-0.5	
	1.0s	15.90nm			4.9mb	
PSI	47.94	248	iPc	59 49.40	-0.1	
ASPA	50.16	190	iPc	59 59.60	-6.8X	
	1.3s	6.00nm			4.5mb	
INK	63.80	24	eP	01 41.00	-1.7	
YKA	72.85	28	eP	02 39.70	0.7	
WDC	76.97	51	e(P)	03 03.30	0.3	
SUF	78.29	335	iP	03 10.50	0.7	
CMB	79.53	53	eP	03 17.00	-0.2	
NUR	80.16	334	eP	03 22.00	2.0	
FRI	80.45	54	e(P)	03 21.70	-0.4	
KVN	80.71	51	eP	03 23.80	0.1	
LRM	81.35	43	eP	03 27.10	0.2	
FFC	82.40	32	eP	03 32.00	0.1	
	0.9s	11.00nm			4.9mb	
NB2	84.71	338	P	03 44.30	0.7	
ZOBO	149.77	77	PKP	11 01.00	4.5X	
S.D. = 1.0 on 23 of 27 obs.						

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* JUL 24, 1989 17h 17m 42.26± 1.35s
5.723 S ±10.3km 152.304 E ±23.3km
DEPTH = 10.0km (geophysicist)
4.5mb (2 obs.)
NEW BRITAIN REGION (192)

RAB	1.53	355	iPc+	18 09.50	-0.1	
	0.5s	1436.62nm				
			iS	18 32.00		
LMG	5.20	232	eP	19 02.00	-0.1	
PMG	6.28	234	eP	19 20.00	2.7X	
QIS	19.22	219	iPd	22 09.10	-0.2	
RMQ	20.93	189	eP	22 28.00	0.3	
DZM	21.24	141	iPc	22 49.60	18.6X	
MTN	22.05	250	eP	22 40.00	1.0	
	0.5s	27.00nm			4.9mb X	
WB5	22.41	229	eP	22 43.00	0.4	
WRA	22.47	229	Pc	22 41.70	-1.5	
	0.5s	4.20nm			4.2mb	
ASPA	25.14	223	eP	23 09.40	0.2	
	1.5s	29.00nm			4.7mb	
S.D. = 0.8 on 8 of 10 obs.						

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* JUL 24, 1989 17h 36m 45.80± 1.71s
5.671 S ±13.6km 152.526 E ±14.6km
DEPTH = 47.5 ± 22.0 km
4.3mb (3 obs.)
NEW BRITAIN REGION (192)

RAB	1.51	346	iPc	37 10.50	-0.4	
			iS	37 40.00		
LMG	5.40	233	eP	38 07.00	0.9	
PMG	6.49	235	eP	38 21.00	-0.2	
CTA	15.57	202	iPc	40 28.10	4.2X	
	1.2s	29.69nm			4.3mb	
QIS	19.40	219	eP	41 09.00	-2.0	
RMQ	21.01	189	eP	41 28.00	0.2	
DZM	21.14	142	iPc	41 30.00	0.8	
BRS	21.60	179	iP	41 33.30	-0.4	
MTN	22.27	250	eP	41 42.40	1.9	
WB5	22.61	230	eP	41 44.20	0.4	
WRA	22.67	230	Pc	41 42.90	-1.5	
	0.6s	5.80nm			4.2mb	
ASPA	25.33	223	eP	42 10.30	0.3	
	1.0s	10.00nm			4.3mb	
S.D. = 1.3 on 11 of 12 obs.						

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* JUL 24, 1989 17h 58m 58.95± 1.35s
10.149 S ±27.7km 154.404 E ±14.4km
DEPTH = 10.0km (geophysicist)
4.3mb (1 obs.)
DENTRECASTEAUX ISLANDS REGION (194)

SVO	5.43	80	P	00 22.00	0.1	
HNR	5.51	83	eP	00 23.00	-0.1	
DZM	16.55	137	iPc	02 58.60	5.7X	

24d 18h

RMQ 17.11 197 eP 03 00.00 0.2
WB5 21.61 241 eP 03 52.20 0.8
ASPA 23.73 233 eP 04 11.30 -1.0
0.8s 7.00nm 4.3mb
S.D. = 0.9 on 5 of 6 obs.

JUL 24, 1989 19h 39m 37.46± 0.53s
40.418 N ± 5.2km 27.472 E ± 4.8km
DEPTH = 12.1 ± 5.1 km
TURKEY (366)
MD 3.3 (ATH).

EDC 0.31 103 ePg 39 44.00 0.0
eSg 39 48.00
MFT 0.40 339 iPg 39 45.80 0.1
CTT 1.03 45 ePg 39 57.30 0.6
eSg 40 10.30
EZN 1.06 236 ePg 39 57.00 -0.2
DST 1.20 132 ePn 40 00.40 0.7
ISK 1.37 61 ePn 40 01.80 -0.5
DMK 1.42 9 ePn 40 03.00 0.0
PRK 1.49 219 ePn 40 04.50 0.5
RDO 1.64 297 ePn 40 07.00 0.9
eSn 40 38.00
ALT 2.45 123 ePn 40 24.00 6.1X
S.D. = 0.6 on 9 of 10 obs.

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* JUL 24, 1989 19h 46m 30.70± 0.35s
18.699 S ± 9.5km 176.760 E ± 8.6km
DEPTH = 33.0km (normal)
4.8mb (5 obs.) 4.7Msz (4 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 27C
Centroid Location:
Origin Time 19:46:35.4 0.7
Lat 18.91S 0.06 Lon 176.41E 0.08
Dep 15.0 FIX Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr=-0.26 0.04 Mtt=-1.01 0.06
Mff= 1.27 0.05 Mrt=-0.27 0.10
Mrf=-0.30 0.16 Mtf= 0.04 0.04
Principal Axes:
T Val= 1.33 Plg=11 Azm= 92
N -0.23 68 212
P -1.10 18 358
Best Double Couple:Mo=1.2*10**17
NP1:Strike=136 Dip=69 Slip=-175
NP2: 44 85 -21

NDF 1.14 35 iPd 46 45.00 -5.4X
PVC 8.09 275 iPc 48 29.00 0.2
DZM 10.24 249 iPc 48 56.90 -1.7
HNR 18.71 297 eP 50 50.00 1.1
eS 54 25.00
SVO 18.97 298 eP 50 53.00 0.9
KRP 19.19 183 eP 50 55.00 0.6
BRS 23.67 244 iPc 51 40.10 -0.2
eS 56 30.00
MSZ 26.93 194 P 52 12.20 1.4
RMO 26.95 248 eP 52 12.00 0.8
e 52 20.00
CTA 28.79 262 eP 52 35.00 7.1X
iS 57 18.00
ASPA 40.16 255 iPc 54 03.30 -2.3
1.1s 22.00nm 4.8mb
Z 19s 2.49um 5.1Msz
ePcP 55 58.80
LR 09 59.10
GUA 44.85 313 eP 54 53.30 9.4X
GUMO 44.92 313 eP 54 52.50 8.1X
Z 22s 0.49um 4.4Msz
SBA 59.39 182 Pd 56 31.70 -0.1
SPA 71.42 180 e(P) 57 48.80 -0.8
1.0s 18.50nm 5.1mb
WHN 77.43 308 eP 58 23.50 -1.0
CN2 77.92 325 P 58 26.50 -0.4
Z 24s 0.30um 4.5MszX
pP 58 36.50 32kmX
BJI 81.19 317 eP 58 43.50 -1.1
Z 22s 0.31um 4.6Msz
eS 09 00.00
MAW 81.53 201 eP 58 45.00 -1.0
WDC 81.56 42 ePc 58 46.60 0.1
CMB 81.61 45 ePc 58 46.90 0.0
TIY 82.44 314 Pc 58 51.80 0.5

Z 20s 0.50um 4.9Msz
XAN 83.14 309 Pc 58 55.00 0.0
KVN 83.67 45 eP 58 57.50 -0.2
TNP 83.79 46 eP 58 58.50 0.1
1.0s 5.00nm 4.6mb
CHG 84.99 292 eP 59 05.00 0.5
CD2 85.68 304 P 59 08.30 0.5
FBA 87.64 14 eP 59 14.60 -2.0
1.0s 4.00nm 4.6mb
LZH 87.78 309 eP 59 19.00 0.9
1.5s 48.00nm 5.6mb
PNT 88.02 36 eP 59 19.00 0.3
GTA 92.04 311 eP 59 37.80 -0.1
INK 93.90 17 eP 59 44.00 -1.6
RSSD 95.35 45 eP 59 52.50 -0.6
MLR 143.96 324 ePKPc 06 01.00 -3.7X
SPC 144.18 333 ePKP 06 02.50 -2.5X
KSP 144.37 339 ePKPc 06 02.80 -2.2
DMU 144.75 4 ePKP 06 02.80 -2.7X
CLL 145.01 342 iPKP 06 03.90 -2.1
1.2s 71.00nm
BRG 145.11 341 iPKP 06 04.50 -1.7
1.2s 52.00nm
DCN 145.28 4 ePKP 06 04.00 -2.4
JMB 145.37 320 iPKP 06 07.00 0.0
DLE 145.38 3 ePKP 06 04.90 -1.7
PVL 145.69 322 ePKP 06 06.00 -1.5
PRU 145.69 340 ePKP 06 06.00 -1.3
WTS 145.85 349 ePKPc 06 07.50 0.1
1.0s 34.00nm
SRO 146.06 334 ePKP 06 06.40 -1.5
BZS 146.16 328 ePKP 06 07.00 -1.2
ZST 146.25 335 ePKP 06 08.50 0.3
KDZ 146.55 319 iPKPc 06 12.00 3.0X
KHC 146.75 340 iPKPc 06 10.50 1.4
1.2s 15.00nm
PGB 146.77 322 ePKP 06 10.00 0.6
RZN 146.95 320 ePKP 06 10.00 0.2
GRF 146.97 343 ePKP 06 11.00 1.6
ENN 147.18 349 ePKP 06 13.00 3.4X
1.0s 22.00nm
VTS 147.31 322 iPKP 06 12.00 1.7
UCC 147.41 351 PKP 06 13.00 3.0X
MMB 147.61 321 iPKPc 06 12.00 1.3
TOD 147.68 345 ePKP 06 11.84 1.3
SNF 147.70 351 PKP 06 15.40 4.9X
ABH 147.71 347 ePKP 06 12.23 1.6
KKB 147.83 322 ePKP 06 13.00 2.0
RUP 147.98 347 ePKP 06 13.25 2.2
DOU 148.05 350 PKPc 06 12.90 1.8
WLF 148.20 348 PKP 06 13.50 2.2
VAY 148.47 321 ePKP 06 10.30 -1.7
SKO 148.71 323 iPKP 06 15.00 2.6X
LJU 149.02 336 ePKP 06 15.00 2.2
RBL 149.05 337 PKPc 06 15.10 2.2
CDF 149.15 346 ePKP 06 16.70 3.7X
VBY 149.17 334 ePKP 06 16.60 3.6X
VOY 149.28 336 ePKP 06 16.00 2.7X
CEY 149.32 335 ePKP 06 16.00 2.7X
TRI 149.60 336 ePKP 06 17.00 3.4X
HAU 149.74 347 ePKP 06 18.10 4.3X
BSF 149.81 347 ePKP 06 18.20 4.2X
FLN 149.93 356 ePKP 06 18.10 4.1X
LDF 150.07 356 ePKP 06 18.40 4.2X
GRR 150.32 357 ePKP 06 19.30 4.7X
LPF 150.69 357 ePKP 06 20.30 5.1X
LOR 150.92 350 iPKPc 06 20.80 5.2X
VAI 151.14 342 PKPc 06 20.20 4.3X
LBF 151.17 350 ePKP 06 21.50 5.5X
SSF 151.18 350 iPKPc 06 21.50 5.5X
SMF 151.53 350 ePKP 06 22.10 5.6X
BGF 151.77 351 ePKP 06 22.60 5.7X
LPG 152.02 345 ePKP 06 23.80 6.1X
TCF 152.12 352 ePKP 06 23.60 6.2X
MAF 152.14 351 ePKP 06 23.70 6.3X
BNG 154.43 239 ePKPc 06 30.60 9.0X
0.7s 9.00nm
ic 06 49.00
S.D. = 1.4 on 56 of 89 obs.

JUL 24, 1989 19h 50m 11.40± 0.59s
40.976 N ± 7.0km 142.020 E ±11.8km
DEPTH = 71.8 ± 8.6 km
4.6mb (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Hachinohe.

HAC 0.59 220 eP 50 24.00 -1.4
S 50 33.00
AOMJ 1.32 252 iPd 50 34.30 -0.1
eS 50 51.00
MRRJ 1.61 334 P 50 37.90 -0.4
S 50 57.40
HOOJ 1.70 34 P 50 40.60 1.2
S 51 02.60
OFUJ 1.91 188 P 50 42.30 -0.1
eS 51 05.60
KUSJ 2.92 42 P 50 55.70 -0.7
S 51 28.70
ASAJ 3.17 8 P 51 00.60 0.6
eS 51 39.90
YAMJ 3.19 209 P 51 01.50 1.3
NIIJ 4.41 213 P 51 19.50 2.2X
KAKJ 4.98 197 eP 51 24.00 -1.3
CHJJ 5.46 207 P 51 34.20 2.1X
MTMJ 5.48 218 P 51 34.20 1.8
SUF 64.69 333 iP 00 43.10 -0.4
0.4s 2.90nm 4.6mb
NUR 66.71 331 iP 00 55.90 -0.5
Z 24s 0.40um 4.5MszX
LR 59 20.00
NB2 70.74 337 P 01 21.30 -0.1
S.D. = 1.1 on 13 of 15 obs.

? JUL 24, 1989 21h 54m 29.43± 1.07s
43.292 N ±19.5km 3.594 E ± 7.8km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.9 (LDG).

CAF 1.97 327 Pn 55 03.20 0.0
Pg 55 07.50
Sg 55 34.60
LRG 2.02 84 Pn 55 00.30 -3.6X
Pg 55 03.50
Sg 55 27.20
LMR 2.13 88 Pg 55 05.20 -0.3
Sg 55 29.90
LPO 2.23 309 Pg 55 12.90 6.0X
Sg 55 43.20
FRF 2.24 82 Pg 55 07.40 0.3
Sg 55 33.50
EPF 2.40 265 Pn 55 09.40 0.0
Pg 55 15.80
Sg 55 49.60
RJF 2.50 324 Pg 55 18.20 7.4X
Sg 55 50.00
SBF 2.85 77 Pg 55 18.80 3.0X
Sg 55 54.40
MAF 3.02 346 Pg 55 26.80 8.7X
Sg 56 06.00
TCF 3.15 342 Pg 55 29.80 9.7X
Sg 56 10.60
BGF 3.31 351 Pg 55 31.70 9.4X
Sg 56 16.20
SMF 3.36 3 Pg 55 31.80 8.8X
Sg 56 16.00
S.D. = 0.4 on 4 of 12 obs.

? JUL 24, 1989 21h 56m 45.02±11.94s
0.297 N ±42.2km 79.052 W ±74.8km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF ECUADOR (105)

GGP 0.65 136 eP 56 58.10 -0.4
QUR 0.70 132 P 56 58.80 -0.3
COTA 0.72 87 eP 56 59.00 -0.5
RECU 1.05 152 P+ 57 05.50 0.3
CAYA 1.09 101 Pd 57 06.70 0.8
S.D. = 0.8 on 5 of 5 obs.

? JUL 24, 1989 22h 25m 22.93± 0.92s
37.518 N ± 8.0km 2.769 W ± 8.8km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.4 (MDD).

AFC 0.67 247 eP 25 36.40 0.0
eS 25 45.00
ENIJ 0.70 141 ePg 25 36.80 0.0
eSg 25 45.80
EBAN 1.03 309 ePg 25 42.40 0.0
eSg 25 55.60
EVIA 1.14 11 ePg 25 44.30 0.0

		eSg	26 00.50		
S.D. = 0.0		on	4 of	4 obs.	

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* JUL 24, 1989 22h 57m 13.46± 0.99s
39.794 N ± 8.6km 22.306 E ± 9.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 2.9 (ATH).

LIT	0.34	25 iPc	57 19.90	-0.6	
KZN	0.66	321 ePb	57 22.50	-4.1X	
		eSb	57 34.00		
NEO	0.86	124 ePb	57 30.00	0.0	
KNT	1.44	18 ePc	57 40.50	0.9	
VAY	1.54	7 ePn	57 40.70	-0.2	
SRN	1.78	274 ePn	57 44.30	-0.1	
TPE	1.83	287 ePn	57 48.50	3.3X	
SKO	2.27	343 ePn	57 55.50	3.9X	
PHP	2.36	324 ePn	58 05.20	12.3X	
S.D. = 0.8		on	5 of	9 obs.	

? JUL 24, 1989 23h 49m 29.93± 5.41s
16.006 N ±12.0km 62.033 W ±38.0km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 1.6 (FDF).

PAG	0.34	86 iPd	49 37.60	0.6	
		S	49 40.20		
SEG	0.64	52 iPd	49 43.20	0.4	
MGG	0.69	97 iPd	49 43.35	-0.3	
		S	49 50.50		
BBL	0.72	132 iP	49 44.20	0.1	
		S	49 52.40		
DEG	0.98	72 eP	49 47.80	-0.8	
S.D. = 0.8		on	5 of	5 obs.	

JUL 25, 1989 03h 07m 41.03± 0.44s
39.033 N ± 4.9km 25.924 E ± 3.6km
DEPTH = 9.3 ± 2.8 km
AEGEAN SEA (365)
ML 3.5 (ATH).

PRK	0.34	52 ePb	07 49.50	1.4	
EZN	0.85	21 iPg	07 58.10	0.6	
IZM	1.22	121 ePn	08 04.30	0.4	
PAIG	1.95	298 ePn	08 15.70	1.1	
OUR	1.98	312 ePnd	08 14.20	-0.8	
EDC	1.99	48 iPn	08 15.30	0.1	
ATH	2.03	239 ePn	08 16.00	0.3	
		eSn	08 44.30		
NEO	2.12	278 ePn	08 19.00	2.0	
RDO	2.13	352 ePn	08 16.80	-0.4	
DST	2.17	74 iPn	08 18.20	0.3	
PLG	2.33	306 ePb	08 23.50	3.3X	
KDZ	2.64	352 iP	08 26.00	1.5	
		iS	08 54.00		
YER	2.66	135 ePn	08 25.10	0.3	
SRS	2.74	320 ePnc	08 25.20	-0.8	
		eSn	08 55.40		
RZN	2.81	341 eP	08 28.00	0.9	
CTT	2.86	42 iPn	08 27.90	0.4	
LIT	2.86	293 ePn	08 26.20	-1.4	
		eSn	08 58.40		
KHL	2.90	103 iPn	08 28.30	0.0	
DIM	3 03	354 iP	08 29.00	-0.9	
DMK	3.12	26 ePn	08 30.90	-0.3	
KNT	3.15	313 ePnc	08 34.00	2.3	
ISK	3.15	49 ePn	08 30.40	-1.2	
GBZT	3.23	56 ePn	09 08.50	35.7X	
GRG	3.32	306 ePnc	08 33.90	-0.3	
		eSn	09 10.70		
VAY	3.44	313 ePn	08 35.50	-0.3	
KZN	3.45	293 ePn	08 36.20	0.2	
KKB	3.56	323 eP	08 36.00	-1.6	
GPA	3.61	68 ePn	08 38.00	-0.3	
ITM	3.66	241 ePn	08 39.00	0.1	
PGB	3.76	340 eP	08 40.00	-0.4	
ELL	3.89	125 ePn	08 48.60	6.2X	
BCK	3.99	112 ePn	08 42.00	-1.8	
VTS	4.11	331 eP	08 45.00	-0.4	
KBN	4.24	294 ePn	08 41.70	-5.5X	
SKO	4.51	312 ePn	08 47.00	-3.9X	
TPE	4.73	287 ePn	09 02.00	7.8X	
BBTK	5.35	79 eP	09 26.00	22.9X	
		iS	10 38.50		
TLB	5.77	15 eP	09 10.00	1.2	
CMP	6.27	354 ePd	09 20.00	4.2X	
MLR	6.45	0 iPc	09 18.00	-0.6	
VRI	6.86	5 ePc	09 25.00	0.9	
BZS	7.31	336 ePd	09 28.00	-2.4	
NB2	23.86	342 P	12 55.80	0.6	
S.D. = 1.1		on	35 of	43 obs.	

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* JUL 25, 1989 03h 13m 06.37± 1.25s
28.301 S ± 7.6km 68.490 W ±14.8km
DEPTH = 199.4 ± 37.1 km
LA RIOJA PROVINCE, ARGENTINA (138)

CYA	2.38	94 iPd	13 47.20	-2.1	
RTLL	3.02	180 iPc	13 57.00	0.3	
		S	14 33.80		
RTCB	3.19	185 iPc	13 59.20	0.5	
		S	14 37.20		
ZON	3.24	183 iPc	14 00.28	1.0	
		eS	14 37.00		
CFA	3.30	176 iPc	14 00.50	0.4	
		S	14 40.00		
RTBS	3.45	194 iPc	13 04.00	-57.8X	
SLA	4.46	38 iPc	14 15.00	0.4	
JACH	4.73	202 iPc	14 18.80	0.8	
		iS	15 14.80		
MRA	4.75	150 ePc	14 19.10	1.0	
ANT	4.89	339 iP	14 20.70	0.7	
		iS	15 17.50		
ROCH	5.14	204 iP	14 22.30	-1.1	
		iS	15 22.70		
FCH	5.24	197 iPd	14 26.50	1.6	
		iS	15 39.00		
PCH	5.58	198 iPd	14 29.50	0.5	
TACH	5.73	201 iPd	14 30.10	-0.8	
		iS	15 36.20		
LCCH	5.80	206 iPc	14 30.00	-1.7	
CHCH	5.91	198 eP	14 33.00	-0.2	
LNV	6.17	203 iPc	14 34.50	-2.0	
		iS	15 42.50		
RFA	6.45	180 ePc	14 41.00	0.8	
S.D. = 1.2		on	17 of	18 obs.	

JUL 25, 1989 03h 18m 18.30± 0.69s
0.065 S ± 5.3km 123.912 E ± 8.0km
DEPTH = 168.1 ± 7.9 km
5.1mb (13 obs.)
MINAHASSA PENINSULA (265)

MNI	1.76	32 eP	18 51.50	-0.8	
		eS	19 17.00		
PCI	4.16	258 iPd	19 19.70	-2.1	
		iS	19 52.00		
AAI	5.59	130 iPc	19 40.50	-0.1	
MKS	6.77	221 iPd	19 58.50	2.2	
TSM	7.22	306 iPc	20 03.50	1.1	
	0.3s	624.60nm		6.5mb X	
KKM	9.79	308 ePc	20 38.80	2.4	
	0.3s	71.40nm		5.7mb	
MTN	14.58	151 iPc	21 37.50	-0.4	
KNA	16.30	163 eP	21 57.70	-1.5	
MBL	21.34	191 iPd	22 53.00	-0.2	
	0.5s	37.00nm		5.1mb	
WB5	22.20	153 eP	23 00.60	-1.0	
		e	26 50.30		
WRA	22.24	153 Pd	23 02.30	0.3	
	0.5s	50.80nm		5.3mb	
NANU	23.80	200 eP	23 17.00	-0.1	
ASPA	25.39	158 iPd	23 32.30	0.4	
	0.7s	85.00nm		5.5mb	
		iS	30 41.70		
QIS	25.50	144 iPd	23 34.20	1.3	
	0.6s	127.00nm		5.7mb	
WARB	26.10	174 iPd	23 38.90	0.6	
	0.3s	10.00nm		5.0mb	
MRWA	29.96	194 iPc	24 12.10	-0.8	
	0.3s	4.00nm		4.6mb	
COOL	30.76	185 eP	24 18.00	-1.9	
CHG	30.87	309 eP	24 20.70	-0.3	
FORR	30.87	173 iPd	24 20.20	-0.6	
	0.4s	52.00nm		5.6mb	
KLB	31.89	190 iPd	24 29.00	-0.8	
	0.3s	6.00nm		4.8mb	
NJ2	32.30	352 Pc	24 33.40	0.2	
MUN	32.57	192 eP	24 34.30	-1.3	
NWAO	33.29	190 iPd	24 41.30	-0.5	
	0.5s	13.00nm		4.9mb	
RKG	34.44	190 eP	24 56.80	5.1X	
STK	35.79	154 iPd	25 03.50	0.4	
	0.4s	24.00nm		5.2mb	
		e	26 25.00		
CD2	36.27	330 eP	25 06.80	-0.3	
XAN	36.73	339 P	25 10.50	-0.5	
ADE	37.37	160 eP	25 18.00	1.6	
MAT	38.76	19 iPc	25 27.30	-0.7	
	0.8s	22.39nm		4.9mb	
TIY	39.06	345 eP	25 31.20	0.8	
BFD	40.75	157 iPc	25 46.00	1.8	
BWA	41.17	149 eP	25 49.70	2.0	
CAN	42.16	149 iPd	25 58.80	2.9X	
MDJ	44.77	6 eP	26 16.50	-0.2	
GTA	45.05	333 eP	26 19.00	-0.1	
GBA	47.99	288 Pd	26 41.80	-0.5	
	0.8s	3.00nm		4.0mb X	
SPA	89.94	180 e(P)	31 01.40	2.0	
	0.9s	2.73nm		4.2mb	
NB2	100.88	333 Pdiff	31 47.20	-2.0	
S.D. = 1.2		on	36 of	38 obs.	

? JUL 25, 1989 03h 39m 49.96± 1.01s
35.900 N ±12.7km 28.124 E ± 8.8km
DEPTH = 10.0km (geophysicist)
EASTERN MEDITERRANEAN SEA (371)

KAP	0.85	246 ePg	40 06.30	0.0	
		eSb	40 18.00		
KSL	1.20	79 ePb	40 12.30	-0.1	
YER	1.24	6 ePn	40 13.00	0.0	
ELL	1.67	59 ePn	40 19.60	0.1	
S.D. = 0.1		on	4 of	4 obs.	

? JUL 25, 1989 04h 19m 40.06± 3.93s
3.679 N ±20.3km 126.461 E ±31.0km
DEPTH = 94.0 ± 33.3 km
4.6mb (3 obs.)
TALAUD ISLANDS (263)

MNI	2.75	216 eP	20 23.00	-0.1	
WB5	24.67	162 eP	24 51.80	-1.8	
WRA	24.72	162 Pd	24 56.80	2.7X	
	0.5s	11.00nm		4.5mb	
LOE	27.82	301 eP	25 23.00	0.4	
ASPA	28.13	165 iPc	25 27.70	2.3	
	0.3s	6.00nm		4.7mb	
WARB	29.69	180 eP	25 39.00	-0.3	
CHG	30.82	301 eP	25 50.20	0.8	
BJI	37.37	347 eP	26 45.00	-0.2	
GBA	49.37	285 Pc	28 21.20	-1.1	
	0.6s	3.90nm		4.6mb	
NB2	98.71	334 P	33 09.90	-0.1	
S.D. = 1.5		on	9 of	10 obs.	

? JUL 25, 1989 04h 43m 01.94± 4.48s
11.827 N ±11.3km 43.406 E ±33.6km
DEPTH = 10.0km (geophysicist)
ETHIOPIA (558)

OBO	0.19	325 P	43 06.20	0.0	
TDD	0.49	268 P	43 11.80	-0.1	
ARO	0.62	242 P	43 14.82	0.3	
		S	43 23.21		
GBR	1.14	234 P	43 23.10	-0.3	
AAE	5.34	239 ePn	44 27.00	3.0X	
S.D. = 0.4		on	4 of	5 obs.	

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* JUL 25, 1989 07h 57m 40.53± 0.67s
27.466 N ±12.3km 130.384 E ±19.0km
DEPTH = 33.0km (normol)
4.6mb (7 obs.)
RYUKYU ISLANDS (238)

SSE	8.81	296 e(P)	59 50.00	1.5	
BJI	17.20	320 eP	01 39.50	-0.3	
WB5	47.22	175 eP	06 12.20	-0.1	
WRA	47.28	175 Pc	06 13.10	0.3	
	0.7s	3.10nm		4.4mb	
ASPA	50.95	176 iPc	06 41.20	0.2	
	1.0s	7.00nm		4.6mb	
MBC	68.17	14 eP	08 40.50	1.3	
	1.0s	4.00nm		4.5mb	
ALE	70.06	2 eP	08 52.00	1.3	
	0.9s	6.00nm		4.7mb	
SUF	72.15	332 iP	09 03.50	0.0	
	0.7s	4.00nm		4.5mb	
NUR	73.77	330 iP	09 13.00	0.0	

25d 08h

0.5s 11.20nm 5.1mb
YKA 76.59 26 eP 09 33.50 4.4X
HFS 78.61 333 eP 09 39.40 -0.9
0.8s 6.20nm 4.7mb
NB2 79.05 334 P 09 41.30 -1.4
VRI 79.54 316 ePd 09 43.50 -2.1
S.D. = 1.2 on 12 of 13 obs.

JUL 25, 1989 08h 08m 31.58± 0.50s
39.782 N ± 5.0km 22.208 E ± 4.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.4 (ATH).

LIT 0.39 34 iPgc 08 39.10 -0.4
eSg 08 47.30
KZN 0.62 328 ePn 08 42.00 -2.2
NEO 0.92 121 ePn 08 50.00 0.9
eSn 09 05.00
THE 1.03 34 ePgd 08 51.00 0.0
eSg 09 07.60
PAIG 1.14 82 ePgd 08 53.00 0.1
eSg 09 10.10
GRG 1.18 7 ePgd 08 53.70 0.0
eSg 09 12.20
KBN 1.36 309 ePn 08 56.30 -0.2
OUR 1.47 67 ePbd 08 58.40 0.3
eSb 09 19.30
KNT 1.48 21 ePbd 08 58.10 -0.1
eSb 09 20.80
VAY 1.56 10 iPn 09 00.50 1.1
SRN 1.70 274 iPn 09 03.20 1.8
SRS 1.70 38 ePnd 09 01.40 -0.1
eSn 09 26.80
TPE 1.76 288 ePn 09 02.00 -0.3
BERA 1.96 299 ePn 09 06.80 1.7
VLS 2.04 219 ePn 09 06.00 -0.4
SKO 2.26 345 iPn 09 14.00 4.4X
iSn 09 42.00
PHP 2.33 325 ePn 09 09.40 -1.1
ITM 2.61 185 ePn 09 13.00 -1.5
KKS 2.67 330 ePn 09 16.00 0.7
RDO 2.88 61 ePn 09 18.00 -0.4
BCI 3.05 329 ePn 09 32.20 11.6X
S.D. = 1.0 on 19 of 21 obs.

? JUL 25, 1989 08h 36m 02.89± 6.57s
39.897 N ±34.1km 22.325 E ±39.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)

LIT 0.24 32 ePgc 36 07.90 -0.1
eSg 36 15.50
PAIG 1.04 88 ePg 36 22.40 -0.2
eSg 36 38.80
GRG 1.06 3 ePgd 36 22.30 -0.6
eSg 36 41.30
KNT 1.34 19 ePbc 36 28.40 0.9
e 36 49.70
S.D. = 1.1 on 4 of 4 obs.

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* JUL 25, 1989 09h 07m 24.78± 0.50s
27.455 N ±10.1km 130.161 E ±17.5km
DEPTH = 33.0km (normal)
4.7mb (9 obs.)
RYUKYU ISLANDS (238)

SSE 8.64 297 eP 09 31.00 0.6
BJI 17.08 321 eP 11 21.50 -1.1
WB5 47.23 175 eP 15 56.00 -0.6
WRA 47.29 175 Pd 15 56.50 -0.6
0.8s 4.30nm 4.5mb
CTA 49.76 160 iPd 16 17.00 0.7
0.9s 9.24nm 4.8mb
ASPA 50.95 176 iPd 16 24.90 -0.3
0.8s 10.00nm 4.8mb
WARB 53.44 184 iPd 16 44.00 0.2
MBC 68.23 14 eP 18 24.00 0.2
1.0s 4.00nm 4.5mb
pP 18 38.50 52kmX
ALE 70.08 2 eP 18 35.00 0.0
1.0s 7.00nm 4.7mb
SUF 72.07 332 iP 18 47.00 -0.2
NUR 73.68 330 iP 18 55.50 -1.2
0.6s 15.60nm 5.2mb
HFS 78.53 333 eP 19 23.10 -1.0
0.9s 9.10nm 4.8mb
NB2 78.97 334 P 19 25.30 -1.2
VRI 79.41 316 eP 19 29.50 0.4
KSP 82.72 324 eP 19 46.50 0.0
BRG 83.91 325 iP 19 52.50 0.0
1.0s 8.00nm 4.8mb
CLL 84.12 326 eP 19 53.00 -0.6
KHC 85.15 324 P 20 01.80 3.0
EKA 88.40 335 Pd 20 16.30 1.8
0.6s 1.90nm 4.6mb
S.D. = 1.1 on 19 of 19 obs.

JUL 25, 1989 10h 44m 53.73± 0.69s
62.801 N ±11.6km 18.579 E ± 6.5km
DEPTH = 10.0km (geophysicist)
SWEDEN (536)
MD 3.4 (BER).

UPP 2.99 189 iPg 45 52.40 10.4X
0.7s 1700.00nm
iSn 46 24.50
i 46 30.50
iSg 46 35.80
NSS 3.42 303 eP 45 47.97 -0.1
eS 46 26.20
SUF 3.48 88 eP 45 48.00 -1.0
NUR 3.70 126 eP 45 53.00 0.9
RGS 3.73 277 eP 45 53.00 0.4
eS 46 36.50
MOL 5.09 272 iP 46 11.50 -0.2
eS 47 08.27
LOF 5.75 341 eP 46 21.60 0.5
eS 47 16.71
HYA 6.07 260 eP 46 25.00 -0.5
eS 47 32.80
S.D. = 0.8 on 7 of 8 obs.

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* JUL 25, 1989 11h 47m 43.49± 0.89s
7.622 S ± 9.9km 143.456 E ±12.4km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
NEAR S COAST OF PAPUA NEW GUINEA(206)

MNDI 1.47 8 eP 48 08.00 -0.2
PMG 4.07 116 eP 48 14.50 -30.5X
LMG 4.82 106 eP 48 56.00 0.3
QIS 13.39 196 ePc 50 52.70 -1.1
WB5 15.04 215 iPd 51 15.90 0.5
WRA 15.10 215 Pc 51 16.70 0.5
0.3s 2.00nm 3.9mb
ASPA 18.40 209 iPd 51 49.40 -8.5X
0.6s 20.00nm 4.5mb
eS 55 52.40
S.D. = 0.9 on 5 of 7 obs.

? JUL 25, 1989 11h 54m 17.98± 2.86s
6.891 S ±26.1km 147.641 E ±21.8km
DEPTH = 57.7 ± 14.8 km
4.5mb (3 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LMG 2.07 166 eP 54 50.00 -1.0
MNDI 4.03 280 eP 55 19.50 0.7
WB5 18.24 224 eP 58 29.20 0.4
RMO 19.52 177 eP 58 45.00 1.4
KNA 20.48 243 eP 58 52.50 -1.1
ASPA 21 27 217 iPd 59 02.60 0.9
0.3s 18.00nm 4.9mb
WARB 27.72 224 eP 00 04.00 0.9
FORR 30.06 215 eP 00 23.40 -0.5
MBL 30.40 239 eP 00 26.00 -1.1
0.5s 5.00nm 4.5mb
NANU 34.63 240 eP 01 03.00 -0.9
SPA 83.15 180 e(P) 06 39.20 0.2
1.0s 3.50nm 4.3mb
S.D. = 1.1 on 11 of 11 obs.

? JUL 25, 1989 13h 32m 15.54± 3.53s
34.496 S ±29.2km 179.686 E ±21.6km
DEPTH = 197.2 ± 30.0 km
4.3mb (4 obs.)
SOUTH OF KERMADEC ISLANDS (179)

HBZ 3.29 200 eP 33 09.10 0.1
TAZ 4.53 214 eP 33 29.10 4.7X
PGZ 6.69 203 eP 33 53.30 1.0
MNG 6.96 207 P 33 57.40 1.4
eS 35 30.20
KIW 7.40 209 eP 34 01.00 -0.8
MTW 7.43 205 eP 34 02.80 0.6
CAW 7.54 208 eP 34 02.50 -1.3
WDW 7.71 207 eP 34 04.50 -1.5
TCW 7.95 211 eP 34 09.30 0.1
CTA 32.82 287 iPd 38 31.80 -0.6
0.8s 7.46nm 4.4mb
ASPA 41.14 273 iPc 39 43.20 1.3
0.7s 12.00nm 4.5mb
WRA 42.50 278 Pd 39 52.90 -0.1
0.6s 4.10nm 4.1mb
WB5 42.51 278 eP 39 52.90 -0.2
SPA 55.68 180 ePc 41 40.80 7.5X
0.6s 3.25nm 4.2mb
BNG 145.34 215 ePKPd 51 32.20 0.4
0.5s 8.00nm
SUF 147.25 338 ePKP 51 27.00 -6.4X
0.5s 3.30nm
NUR 149.36 336 iPKP 51 33.70 -3.1X
NB2 152.42 348 PKP 51 41.30 -0.1
HFS 152.77 345 ePKP 51 41.40 -0.4
0.7s 4.20nm
S.D. = 0.9 on 15 of 19 obs.

& JUL 25, 1989 14h 02m 38.35s
61.930 N 149.551 W
DEPTH = 27.6km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA 0.32 209 iP 02 46.16 0.3
S 02 52.96
CUT 0.58 325 iP 02 49.29 -0.7
S 02 58.36
SUA 0.74 231 iP 02 51.43 -1.2
S 03 03.21
SKT 0.94 274 iP 02 54.02 -1.6
HUR 1.05 358 eP 02 55.87 -1.4
S 03 09.96
SPU 1.41 239 eP 03 01.35 -1.1
S 03 20.04
NKA 1.44 215 eP 03 03.75 1.0
SLKM 1.46 193 eP 03 01.55 -1.6
S 03 21.32
RND 1.52 12 eP 03 02.38 -1.6
TOA 1.60 82 iP 03 04.08 -1.1
S 03 25.89
KLU 1.78 103 iP 03 05.59 -2.3
S 03 28.26
SEW 1.83 178 eP 03 07.36 -1.1
RDT 1.94 227 eP 03 08.61 -1.5
S 03 33.09
PAX 2.17 59 iP 03 12.34 -1.0
14 obs. ossociated

JUL 25, 1989 15h 31m 13.66± 0.67s
38.148 N ± 6.2km 22.167 E ± 7.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.2 (ATH).

ITM 0.99 191 eP 31 33.30 0.9
eS 31 49.00
ATH 1.24 98 eP 31 36.00 -0.6
eS 31 54.00
VLS 1.24 272 eP 31 35.50 -1.3
eS 31 56.30
NEO 1.42 35 eP 31 40.00 0.5
eS 31 59.00
LIT 1.97 7 ePnd 31 47.50 0.1
PAIG 2.13 33 ePnd 31 49.40 -0.3
eSn 32 14.00
KZN 2.18 352 eP 31 52.00 1.5
PLG 2.43 24 eP 31 53.00 -1.1
OUR 2.60 32 ePnd 31 56.00 -0.4
eSn 32 27.30
KNT 3.06 10 Pn 32 03.30 0.3
eSn 32 38.90
SRS 3.16 20 ePnd 32 04.80 0.4
eSn 32 41.20
S.D. = 0.9 on 11 of 11 obs.

JUL 25, 1989 15h 40m 46.55± 0.38s
36.145 N ± 5.3km 29.481 E ± 4.3km
DEPTH = 51.7 ± 12.9 km
TURKEY (366)
MD 4.1 (ATH).

KSL	0.09	107	ePb	40 54.00	-0.5
ELL	0.69	30	iPg	41 00.20	-0.3
YER	1.38	316	iPg	41 10.20	0.4
BCK	1.59	34	iPn	41 14.60	1.9
KAP	1.97	253	ePb	41 19.70	1.7
			eSn	41 41.00	
PPCY	2.65	117	eP	41 30.00	2.3
ALT	2.95	10	iPn	41 31.20	-0.9
NPS	3.27	256	ePn	41 36.70	0.1
			eSn	42 13.50	
APE	3.31	287	ePn	41 36.00	-1.2
CSS	3.35	109	eP	41 38.50	0.7
DST	3.52	349	ePn	41 38.90	-1.2
FAM	3.86	106	eP	41 48.00	3.2X
PRK	4.01	322	ePn	41 46.00	-0.9
GPA	4.19	9	ePn	41 43.00	-6.5X
VAM	4.36	262	ePn	41 52.00	0.2
EDC	4.38	344	ePn	41 53.00	0.8
EZN	4.44	327	ePn	41 52.70	-0.3
8BTK	4.51	34	eP	41 55.00	0.9
BHL	5.54	112	Pn	42 06.50	-2.0
			S	43 04.50	
HRI	5.90	117	eP	42 13.00	-0.6
ITM	6.16	282	ePn	42 18.00	0.8
HLW	6.46	165	eP	42 16.75	-4.6X
			eS	43 29.50	
SALJ	6.59	127	Pc	42 23.40	0.0
JARJ	6.62	124	Pd	42 24.50	0.7
KFNJ	6.69	128	Pc	42 24.40	-0.1
DSI	6.70	131	eP	42 24.00	-0.7
VLS	7.38	289	ePn	42 34.00	-0.3
M8H	7.81	143	eP	42 39.00	-1.1
MLR	9.71	345	ePc	43 10.00	3.5X

S.D. = 1.1 on 25 of 29 obs.

% JUL 25, 1989 17h 05m 39.85± 1.25s
44.810 N ± 8.7km 6.842 E ±22.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

RRL	0.12	340	P	05 43.03	0.0
			S	05 45.29	
PZZ	0.36	149	P	05 47.24	0.0
			S	05 53.08	
STV	0.66	148	P	05 53.08	0.0
LSD	0.69	19	P	05 53.60	0.0
			S	06 02.83	
ENR	0.71	144	P	05 54.01	0.0

S.D. = 0.0 on 5 of 5 obs.

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* JUL 25, 1989 17h 32m 02.03± 1.06s
18.912 S ± 9.7km 67.992 W ±18.8km
DEPTH = 76.6 ± 13.6 km
BOLIVIA (120)

CNCB	2.09	0	iPd	32 35.30	-0.9
CCH	2.33	49	eP	32 28.00	-11.2X
			i	32 42.80	
			iS	33 19.30	
LPB	2.37	358	iPd	32 41.00	1.1
ZOBO	2.63	357	Pd	32 43.60	-0.1
Z	20s		1.11um		
			LR	33 52.00	
ARE	4.13	306	eP	32 58.00	-6.4X
ANT	5.28	205	eP	33 20.00	-0.1
BAO	19.37	83	eP	36 24.50	-0.2
YKA	89.05	340	eP	44 48.80	-0.6
GBA	146.43	94	PKPc	51 35.90	0.7
	0.8s		8.20nm		

S.D. = 1.0 on 7 of 9 obs.

? JUL 25, 1989 18h 01m 38.54± 3.51s
41.494 N ±44.4km 14.802 E ±44.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

DUI	0.31	303	Pc	01 45.10	0.1
			eSg	01 51.00	
SDI	0.77	286	Pc	01 53.50	-0.1
			eSg	02 07.10	
SGO	1.01	158	P	01 58.00	0.4
			eSg	02 12.70	
MGR	1.47	157	P	02 04.70	-0.4
			eSg	02 25.50	

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

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* JUL 25, 1989 19h 45m 23.45± 1.67s
51.611 N ± 7.9km 6.870 E ±26.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.6 (UCC).

WTS	0.39	355	iPg	45 31.30	-0.1
	0.6s		13.00nm		
ENN	1.03	216	iPn	45 43.20	0.2
	0.5s		16.00nm		
			iPb	45 43.90	
			iPg	45 45.40	
			eSn	46 01.50	
			iSg	46 03.70	
MEM	1.14	209	iP	45 44.00	-0.8
			S	46 03.90	
SNF	1.97	237	P	45 57.40	0.2
WLF	2.00	193	P	45 58.00	0.4
DOU	2.09	224	P	46 02.50	3.5X
			iS	46 31.10	

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

? JUL 25, 1989 20h 14m 39.01±10.17s
19.011 N ±88.5km 66.296 W ±15.1km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)
Felt (I) on St. Thomas, Virgin Islands ond ot San Juon, Puerto Rico.

APR	0.69	217	iP	14 52.20	-0.1
			S	15 03.40	
LPR	0.81	150	iP	14 54.00	0.0
			S	15 05.50	
SJG	0.91	171	iP	14 55.40	0.0
PNP	1.02	201	iP	14 57.00	0.0
MGP	1.25	217	iP	15 00.30	0.1

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

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* JUL 25, 1989 20h 43m 32.83± 1.47s
6.252 S ±17.9km 145.537 E ± 9.3km
DEPTH = 126.8 ± 12.4 km
4.4mb (3 obs.)
PAPUA NEW GUINEA (202)

MNDI	1.87	273	eP	44 07.00	1.3
PMG	3.52	153	iPd	44 26.00	-0.9
LMG	3.70	136	eP	44 29.00	-0.5
CTA	13.77	177	eP	46 46.00	2.1
HNR	14.62	103	eP	46 54.00	-0.7
OIS	15.34	201	eP	47 03.00	-0.8
MTN	15.64	244	iPc	47 10.30	2.7X
WB5	17.36	218	eP	47 28.10	-0.7
WRA	17.42	218	Pc	47 28.90	-0.7
	0.9s		12.40nm	4.2mb	
KNA	18.96	239	eP	47 45.50	-1.4
RMQ	20.36	172	eP	48 03.40	2.1
			e	48 15.00	
			e	48 42.00	
ASPA	20.62	212	iPc	48 03.30	-0.7
	0.9s		17.00nm	4.4mb	
			epP	48 29.80	144kmX
BWA	28.16	175	eP	49 15.90	0.7
SPA	83.79	180	e(P)	55 49.30	0.3
	0.6s		4.07nm	4.5mb	
KIC	150.46	272	PKP	03 12.20	5.9X
LIC	150.74	272	PKP	03 13.10	6.4X
	0.6s		5.50nm		
TIC	150.74	272	PKP	03 13.00	6.2X

S.D. = 1.4 on 13 of 17 obs.

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* JUL 25, 1989 21h 39m 36.33± 1.60s
4.507 N ±12.6km 126.028 E ±13.4km
DEPTH = 185.8 ± 10.5 km
5.1mb (7 obs.)
TALAUD ISLANDS (263)

MNI	3.27	201	iPc	40 28.00	-1.0
			eS	41 08.50	
TSM	7.94	268	eP	41 31.50	1.7
AAI	8.42	165	eP	41 35.50	-0.6
MTN	17.97	164	eP	43 35.70	0.2
KNA	20.31	172	iPc	43 59.80	0.3
WB5	25.58	162	iPc	44 51.00	0.9
			eS	49 04.00	
MBL	26.22	193	iPd	44 55.70	-0.2
	0.4s		12.00nm	4.9mb	
QIS	28.25	152	eP	45 15.00	0.7
NANU	28.79	200	eP	45 18.70	-0.3
ASPA	29.04	165	iPc	45 21.40	0.2
	0.3s		10.00nm	5.0mb	
			iS	49 59.00	
WARB	30.51	179	eP	45 35.00	0.8
MEKA	31.78	193	iPc	45 44.60	-0.6
	0.3s		38.00nm	5.6mb	
MRWA	34.89	195	eP	46 11.30	-0.6
	0.3s		12.00nm	5.0mb	
FORR	35.21	177	iPc	46 14.80	0.3
	0.3s		44.00nm	5.6mb	
COOL	35.50	187	eP	46 16.40	-0.6
BAL	36.03	194	eP	46 21.20	-0.3
KLB	36.75	192	iPc	46 27.90	0.4
MUN	37.47	194	iPc	46 33.50	0.0
NWAO	38.15	192	iPc	46 39.70	0.5
	0.4s		26.00nm	5.2mb	
RKG	39.30	192	iPd	46 54.30	5.6X
GBA	48.75	284	Pd	48 03.40	-1.0
	0.5s		6.20nm	4.4mb	
NB2	97.78	334	P	52 50.70	-0.6

S.D. = 0.7 on 21 of 22 obs.

JUL 25, 1989 21h 54m 23.11± 0.10s
7.191 S ± 2.6km 122.715 E ± 3.3km
DEPTH = 620.3km (geophysicist)
5.6mb (39 obs.)
FLORES SEA (279)
Depth from broadband displocement seismograms.
FAULT PLANE SOLUTION: P-Woves
NP1:Strike=224 Dip=55 Slip=-165
NP2: 125 78 -36
Principal Axes:
T Plg=15 Azm=179
P 34 79
Comment: The focol mechanism is moderotely well controlled and corresponds to strike-slip faulting with o large normol component. The preferred foult plone is not determined.
RADIATED ENERGY
No. of sta: 6 Focol mech. F
Energy 0.5±0.2*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 629 No. of sto: 10
Moment Tensor; Scale 10**17 Nm
Mrr=-0.13 Mtt= 4.17
Mff=-4.04 Mrt=-1.41
Mrf= 1.48 Mtf= 0.34
Principol oxes:
T Val= 4.60 Plg=17 Azm=181
N 0.01 64 308
P -4.61 20 84
Best Double Couple:Mo=4.6*10**17
NP1:Strike=223 Dip=64 Slip=-178
NP2: 132 88 -26
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 27C
Centroid Location:
Origin Time 21:54:24.2 0.4
Lot 7.47S 0.04 Lon 122.32E 0.05
Dep 637.9 2.5 Half-durotion 3.0
Moment Tensor; Scale 10**17 Nm
Mrr=-1.94 0.15 Mtt= 5.26 0.18
Mff=-3.31 0.24 Mrt=-1.52 0.18
Mrf= 3.72 0.19 Mtf= 0.21 0.22
Principol Axes:
T Val= 5.60 Plg=13 Azm=184
N 0.91 47 289
P -6.52 40 83
Best Double Couple:Mo=6.1*10**17
NP1:Strike=232 Dip=52 Slip=-158
NP2: 128 73 -41

KUPT	3.07	163	ePd	55 42.90	-1.8
			e(S)	56 40.00	
MKS	3.78	301	iPd	55 51.50	2.6X
	1.2s		7786.90nm		
AAI	6.47	58	iPc	56 09.50	-0.2
			eS	56 12.00	
MNI	8.83	14	eP	56 32.00	0.7
			eS	56 55.50	
TRT	10.01	266	iPd	56 42.00	-0.5

25d 21h

				eS	57	49.90						i	05	19.40						eS	08	02.43							
MTN	10.01	125	iPd		56	43.10	0.5	QZH	32.19	353	Pc		00	03.10	-0.7					eScS	10	45.65							
			eScS		07	56.00		BDT	33.75	316	iPc		00	13.00	-3.9X	BJI	47.38	353	ePc		02	03.75	-1.1						
KNA	10.37	146	iPc		56	46.30	0.3		0.7s	264	.30nm			6.0mb						ePcP	03	23.16							
			e		58	40.00		BRS	34.87	129	iPd		00	28.00	1.8					epPd	03	52.68	608kmX						
TSM	12.25	338	ePd		57	07.20	3.0X				iPP		02	08.00						esP	05	00.00							
	0.9s	5575	.20nm			6.7mb	X				iS		05	14.00						ScP	06	19.00							
MBL	14.16	191	iPc		57	23.50	0.8				iSS		08	22.00						eS	08	11.00							
DAV	14.47	11	ePc+		57	26.00	0.3	BFD	34.88	152	eP		00	26.00	-0.1					eScS	10	50.00							
	1.2s	7187	.50nm			6.8mb	X		0.5s	114	.00nm			5.7mb		LSA	47.60	322	iPc		02	08.80	1.5						
			e		59	25.90					e		00	44.00						iS	08	27.00							
KKM	14.66	334	ePc		57	28.80	1.1				e		02	04.00		KOD	48.27	290	iP		02	12.80	0.5						
			e		00	03.80		CHG	34.89	318	ePc		00	26.80	0.4	SNY	48.79	1	iPc		02	14.00	-1.2						
NANU	16.78	204	iPc		57	48.00	0.2		0.8s	73	.69nm			5.3mb						pP	04	00.00	576kmX						
			eS		02	07.00					e		05	30.20						sP	05	05.00							
WB5	16.94	139	iPc		57	48.90	-0.5				eS		08	36.00						S	08	25.00							
WRA	16.97	139	Pd		57	48.50	-1.1	COO	35.89	134	eP		00	37.00	2.4X					ScS	11	01.00							
	0.4s	45	.90nm			5.2mb			0.9s	188	.00nm			5.7mb		HHC	48.89	349	Pc		02	15.50	-0.7						
JAY	18.51	76	iPc		58	07.00	2.9X	BWA	36.00	142	eP		00	37.20	1.8					S	08	33.50							
	1.2s	1458	.70nm			6.3mb					ePP		02	19.40		BTO	48.97	347	Pc		02	16.00	-0.8						
WARB	19.25	169	iPc		58	10.80	0.0				eScP		05	33.10		GBA	49.47	295	Pd		02	20.30	-0.4						
ASPA	19.59	148	iPc		58	13.30	-0.6	TOO	36.64	149	eP		00	41.50	0.9		0.6s	28	.50nm			4.9mb							
	0.6s	488	.00nm			6.2mb					e		02	22.00		CN2	50.81	3	iPd		02	28.60	-1.5						
			iS		01	15.60					e		05	34.00						PcP	03	35.10							
			iScS		08	19.50					e		05	48.00						pP	04	18.00	592kmX						
MNDI	20.83	88	eP		58	26.50	1.1	SVO	36.76	96	eP		00	41.00	-0.9					sP	05	22.00							
QIS	21.07	131	eP		58	26.60	-0.8				eS		02	50.00						ScP	06	32.20							
			eS		01	39.00		HNR	36.90	96	iPd		00	42.50	-0.5					S	08	58.00							
KGM	21.41	295	ePd		58	31.70	1.3				eS		02	25.00						ScS	11	13.00							
QCP	21.75	356	eP		58	27.20	-6.3X	GYA	36.90	336	iPc		00	43.60	0.7	GTA	50.99	337	iPc		02	32.10	0.4						
MRWA	22.81	195	iPc		58	41.70	-1.3		1.0s	0	.20nm			2.7mb	X		0.5s	0	.10nm			2.5mb	X						
PPI	23.24	286	ePd		58	45.50	-1.4				PcP		02	48.20						PcP	03	37.00							
			e(S)		00	07.00					S		05	42.80						S	09	02.00							
BAG	23.54	355	eP		58	47.50	-2.3				ScS		09	46.00						ScS	11	16.00							
COOL	23.62	183	iPc		58	48.10	-2.0	CAN	36.96	143	eP		00	44.10	0.8	MDJ	51.94	6	ePd		02	38.19	0.0						
	0.4s	67	.00nm			5.6mb					ePP		02	26.80						esP	05	32.00							
BAL	23.97	193	iPc		58	51.70	-1.5				iPcP		02	47.60						eS	09	15.11							
FORR	24.07	169	iPc		58	52.50	-1.6				iScP		05	36.00						eScS	11	21.25							
PMG	24.28	97	iPd-		58	55.10	-1.0	CNB	37.17	143	iPc		00	46.60	1.5	MSZ	54.13	141	P		02	53.80	0.1						
	0.8s	291	.04nm			6.0mb					e		02	30.00						i	03	47.40							
IPM	24.60	298	ePd		58	58.60	-0.3	KMI	37.55	329	ePc		00	49.67	1.3					e	04	50.20							
	0.6s	46	.60nm			5.3mb					pP		02	32.00						e	06	46.00							
			e		00	11.00					sP		03	39.00						e	19	58.00							
			e		01	47.80					SPc		05	45.00						e	22	53.00							
KLB	24.71	190	iPc		58	58.40	-1.4				eS		05	56.26		NDI	56.52	311	iPc		03	08.50	-2.0						
LMG	25.24	96	eP		59	04.00	-0.7				eSS		09	11.63			0.6s	613	.33nm			6.0mb							
MUN	25.40	193	iPc		59	04.40	-1.3				ScS		09	53.00						eS	05	09.00							
	0.6s	427	.00nm			6.3mb		SSE	38.10	358	ePc		00	52.64	0.2	KRP	56.61	131	P		03	12.00	1.0						
NWAO	26.11	191	eP		59	11.27	-0.7		0.9s	273	.00nm			5.8mb						e	06	58.00							
Z	20s	1	.40um			4.5Msz					esP		03	47.45		MNG	57.48	134	P		03	15.70	-1.2						
CTA	26.17	122	iPd-		59	12.10	-0.6				eS		06	01.63		PGZ	58.04	134	P		03	19.00	-1.7						
	1.2s	793	.75nm			6.2mb		WHN	38.37	348	iPc		00	55.70	1.1		0.3s	22	.00nm			4.9mb							
			i		59	39.70					pP		02	38.00	599kmX	HBZ	58.60	130	P		03	24.10	-0.3						
			i		01	14.50					ScP		05	42.50		WMO	59.84	331	ePc		03	32.71	0.2						
			iPcP		02	17.90					S		06	02.00						epPd	05	32.56	623kmX						
			iS		03	00.90		NJ2	39.20	355	iPc		01	01.70	0.4					esPc	06	37.12							
			i		03	10.70			4.0s	1	.10nm			2.7mb	X					eS	10	57.10							
			i		03	56.30					pP		02	44.50	599kmX					eScS	12	19.20							
			i		05	38.00					ScP		05	45.20		DRV	60.56	172	iP		03	36.60	-0.2						
			iScS		08	49.00					iS		06	17.00		KSH	63.40	321	eP		03	57.00	1.4						
			i		09	35.60		CD2	42.01	335	iPc		01	24.00	0.2	QUE	65.09	308	eP		04	06.60	0.0						
SNG	26.26	302	eP		59	14.20	0.8				PP		03	13.00		MAW	72.19	200	eP		04	48.00	0.1						
			e		00	40.60					iS		06	57.00			1.1s	210	.00nm			5.6mb							
			eS		05	35.80					ScS		10	16.00		KHI	73.12	309	ePc		04	54.80	0.8						
RKG	27.26	190	iPc		59	26.30	4.3X	XAN	43.04	343	iPc		01	31.00	-0.8	MAIO	73.27	311	iPc		04	56.00	1.3						
QIZ	28.98	334	iPc		59	37 00	0.1				S		07	06.00		SMY	73.87	30	eP		04	58.40	0.9						
			S		03	44.50		TIA	43.49	353	Pc		01	33.80	-1.4		0.8s	390	.80nm			6.0mb							
RAB	29.46	86	iPc		59	40.50	-0.5				PcP		03	09.00						e	07	02.30							
	1.0s	960	.00nm			6.4mb					S		07	15.00		SBA	74.18	171	Pc		05	00.00	1.1						
NNT	30.13	311	iPc		59	46.80	0.1				ScS		10	26.50		SHI	76.61	303	eP		05	14.00	0.7						
GUA	30.17	47	ePd		59	45.80	-1.2	DZM	44.64	114	iPd		01	44.90	0.5	DHR	77.77	299	ePd		05	20.30	1.0						
	0.8s	1373	.13nm			6.6mb	X	PVC	45.63	108	iPd		01	52.70	0.8	ADK	78.21	33	iPd		05	21.40	0.3						
PJG	30.17	47	iPd		59	46.00	-1.0	TIY	45.69	349	iPc		01	50.80	-1.4		1.3s	471	.70nm			5.8mb							
STK	30.22	147	iPc		59	47.20	-0.1		0.6s	0	.10nm			2.5mb	X	RYD	80.50	296	iPd		05	39.60	5.9X						
			e		01	16.00					S		07	47.00		KMSA	81.55	292	iPd		05	39.60	0.6						
			e		04	04.00		MAT	45.87	17	iPc		01	52.30	-1.2	KER	82.29	306	ePd		05	43.00	0.4						
MCO	30.48	343	eP		59	49.70	0.2	Z	20s	0	.35um			4.3Msz		HON	82.69	67	ePd		05	45.99	1.3						
HKC	30.48	344	iP		59	50.00	0.5				eS		07	50.00						e	07	22.70							
ADE	31.32	154	eP		59	57.00	0.5	DL2	45.87	359	Pc		01	52.00	-1.4					e	08	17.20							
RMQ	31.33	131	ePd		59	58.30	1.6				pP		03	42.00	627kmX	OPA	82.76	67	eP		05	47.30	2.3						
	1.0s	373	.00nm			6.0mb					S		07	50.00						e	07	22.30							
			e		00	27.00					ScS		10	40.00						e	08	21.90							
			e		01	29.00		LZH	46.56	339	ePc		01	59.43	0.5	SPA	82.86	180	e(P)		05	45.30	0.4						
			e		02	32.00		Z	20s	0	.70um			4.6Msz			0.8s	64	.17nm			5.2mb							
			e		04	30.00					ePcP		03	20.99		Z	18s	0	.94um			5.2Msz							
NST	31.88	316	eP		00	04.00	2.7X				epPd		03	49.68	625kmX	QASM	83.51	297	ePd		05	50.30	1.5						
LOE	32.05	320	iPc		00	02.80	0.0				esP		04	58.87		TAB	83.80	309	eP		05	52.00	1.9						

			e	08	03.00		BSF	112.59	319	ePKP	11	51.50	-0.5	KUK	123.49	273	ePKP	12	14.00	0.3
BHD	84.25	304	eP	05	53.00	0.9	HAU	112.83	319	ePKP	11	52.20	-0.1	GOL	126.19	45	PKP	12	18.80	0.3
			ePP	08	03.00		SBF	113.10	315	ePKP	11	52.80	-0.2	ALQ	127.15	51	iPKP	12	20.80	0.4
			eS	15	18.00		LPG	113.20	317	ePKP	11	53.20	-0.3		Z 19s		0.24um			4.9Msz
			e	15	26.00		PNT	113.30	39	iPKP	11	53.00	-0.2				ePP	14	26.90	
TBI	85.20	113	iP	05	59.00	2.1	DOU	113.35	322	iPdiff	08	08.40	4.9X				e	14	41.00	
	1.0s		90.00nm			5.4mb	DOU	113.35	322	PKP	11	53.60	0.4				eSKKS	29	31.40	
AFR	85.50	107	iP	06	01.40	3.0X	WDC	113.39	49	ePKPd	11	53.20	-0.4	KIC	127.84	272	PKP	12	22.48	0.5
	1.0s		130.00nm			5.6mb				ePP	12	54.40			0.7s		11.50nm			
PPT	85.69	107	iP	06	02.40	3.0X				e	14	29.90		LIC	128.11	272	PKP	12	23.04	0.5
	1.0s		85.00nm			5.4mb	SNF	113.41	322	iPKPd	11	53.40	0.1		0.5s		13.00nm			
	Z 18s		1.00um			5.3Msz	VG8	113.57	43	ePKP	11	54.40	0.6	TIC	128.14	273	PKP	12	23.06	0.5
NAI	85.79	269	iPd	06	04.50	4.2X	FRF	113.73	314	ePKP	11	54.10	0.0		0.5s		11.00nm			
	1.0s		10.00nm			4.5mb X	LRG	113.95	314	ePKP	11	54.70	0.2	MEO	133.17	48	iPKPd	12	21.50	-10.1X
PPN	85.83	107	iP	06	03.00	3.0X	MIN	114.13	49	e(PKP)	11	55.00	-0.2	UYO	136.47	47	iPKPd	12	26.50	-11.4X
	1.0s		55.00nm			5.2mb	ORV	114.37	50	ePKPd	11	54.90	-0.6	FVM	137.12	39	PKP	12	37.70	-1.3
CLK	85.92	255	iPc	05	55.90	-4.7X	LOR	114.66	319	ePKP	11	55.70	-0.1	OLY	137.87	43	ePKP	12	29.90	-10.5X
			iPP	08	04.50		LBF	114.66	319	ePKP	11	55.70	-0.2				ePP	15	16.20	
TVO	85.98	107	iP	06	04.00	3.2X	MHC	114.67	52	ePKP	11	56.80	0.5				e	28	57.90	
	1.0s		115.00nm			5.6mb	ARN	114.75	52	ePKP	11	57.00	0.6	GAC	138.53	19	ePKP	12	31.50	-9.7X
PMO	87.58	105	iP	06	11.40	3.1X				ePP	13	04.70		CBM	139.33	11	PKP	12	34.30	-8.3X
	1.4s		280.00nm			5.8mb	SMF	114.85	318	ePKP	11	55.80	-0.4	PTN	139.69	20	e(PKP)	12	43.30	-0.1
VAH	87.81	105	iP	06	12.20	2.8X	SSF	114.95	319	ePKP	11	56.30	-0.1				ePP	15	21.00	
	1.4s		270.00nm			5.8mb	PRS	115.06	53	ePKPd	11	57.30	0.4	PWLA	140.44	41	ePKP	12	38.20	-6.8X
TPT	87.85	105	iP	06	12.60	3.0X	AVF	115.13	319	ePKP	11	56.40	-0.3	MIM	140.74	13	e(PKP)	12	39.50	-5.7X
	1.4s		330.00nm			5.9mb	LNOR	115.16	42	e(PKP)	11	57.00	0.1				ePP	15	24.00	
RUV	88.05	105	iP	06	13.40	2.9X	LLA	115.35	53	ePKP	11	57.90	0.4	BNH	140.80	16	e(PKP)	12	39.90	-5.5X
	1.4s		250.00nm			5.8mb				e	14	34.80					ePP	15	24.30	
SDN	88.42	34	ePd	06	10.80	-0.6	CMB	115.52	51	ePKPd	11	57.60	-0.2	EMM	141.55	12	e(PKP)	12	44.00	-2.6X
SLR	90.89	244	iPc	06	24.00	0.3				ePP	13	06.50					ePP	15	25.70	
	0.9s		16.81nm			5.0mb				e	14	34.50		TKL	142.69	37	ePKP	12	45.80	-3.1X
			e	08	34.20		BGF	115.53	318	ePKP	11	57.60	0.1				e	15	25.70	
BUL	91.38	250	iPd	06	26.20	0.2	PRI	115.65	53	ePKP	11	59.10	0.9				e	15	29.30	
			iPP	08	36.90		EKA	115.74	329	PKPc	11	57.50	-0.1	TBR	142.98	21	ePKP	12	47.70	-1.5
BLF	92.21	240	eP	06	29.00	-0.7		0.7s		7.40nm							ePP	15	29.70	
SVW	92.23	29	ePd	06	29.30	0.4	MAF	115.82	318	ePKP	11	57.80	-0.3	NAV	143.18	32	ePKP	12	47.30	-2.4X
TTA	92.39	27	ePd	06	29.70	0.0	TCF	116.03	318	ePKP	11	58.50	0.0				ePP	15	29.80	
KDC	93.25	32	eP	06	33.60	0.1	FRI	116.25	52	ePKPd	11	59.50	0.4	PNJ	143.21	22	iPKPd	12	48.40	-1.2
	0.6s		19.70nm			5.4mb				e	14	25.80		BLA	143.45	32	PKP	12	48.30	-1.9X
BRW	93.73	19	eP	06	34.70	-0.9	BCH	116.29	54	e(PKP)	12	00.20	0.8	PRIN	143.47	23	ePKP	12	36.60	-13.5X
			e	07	56.20					ePP	13	15.70					e	14	48.70	
			e	08	12.40		CAF	116.54	317	ePKP	11	59.90	0.4				ePP	15	21.80	
IMA	93.93	24	eP	06	36.20	-0.5	LDF	116.76	321	ePKP	11	59.50	-0.2	CVL	143.84	29	ePKP	12	49.70	-1.1
	1.0s		41.88nm			5.6mb	RJF	116.80	317	ePKP	12	00.30	0.4				ePP	15	31.40	
			e	08	04.20		FLN	116.92	322	ePKP	11	59.90	-0.1	NA2	144.06	28	ePKP	12	50.30	-0.8
			e	08	40.70		KVN	117.05	50	PKP	12	01.40	0.5				ePP	15	31.30	
PMR	95.39	29	ePd	06	42.30	-0.9	LPO	117.21	317	ePKP	12	01.20	0.5	CBN	144.17	28	iPKPc	12	51.30	0.0
	1.2s		62.50nm			5.7mb	GRR	117.29	321	ePKP	12	00.70	0.0				e	15	16.00	
FBA	96.24	25	P	06	46.00	-1.0	LFF	117.43	317	ePKP	12	01.60	0.5	PRM	144.61	37	e(PKP)	12	52.80	0.6
TOA	96.82	28	ePd	06	50.20	0.4	MFF	117.47	319	ePKP	12	01.10	0.0	SLA	147.28	166	e(PKP)	12	58.10	1.1
SOD	98.94	337	iP	06	57.40	-1.7	ISA	117.49	54	ePKP	12	02.00	0.4				i	13	00.00	
VRI	99.28	315	ePc	07	01.00	-0.1				e	13	20.00		ITB7	147.74	185	ePKP	13	01.10	3.5X
			ec	09	17.50		LPF	117.53	321	ePKP	12	01.30	0.1	ITB	148.07	185	PKPc	13	02.10	4.0X
			ed	36	34.50		PAS	118.03	55	ePKP	12	03.00	0.4	ITB1	148.23	185	ePKP	13	03.00	4.7X
SUF	99.36	332	eP	07	00.00	-1.1	SES	118.10	36	iPKPd	12	01.10	-1.2	VAO	148.34	198	ePKP	13	03.80	5.2X
	0.5s		2.20nm			4.8mb				pP	13	18.00					e	13	09.60	
NUR	100.19	330	iPdiff	07	04.80	0.0	MWC	118.10	55	ePKP	12	03.00	0.0	ARE	152.62	149	ePKP	13	14.00	8.6X
	Z 22s		0.20um			4.6Msz				e	13	27.00		NNA	152.77	134	iPKPd	13	13.50	8.2X
			LR	49	10.00		CLC	118.16	53	ePKP	12	04.00	1.1		0.9s		12.60nm			
HYT	101.01	29	Pdiff	07	09.00	0.3	SBB	118.20	55	ePKP	12	03.00	0.0	HUA	153.80	137	ePKP	13	17.70	10.5X
MBC	103.41	13	ePdiff	07	19.00	0.2				e	13	26.00		CNCB	153.91	156	ePKP	13	06.00	-1.4
	0.7s		10.00nm			5.6mb	EPF	118.30	315	ePKP	12	02.90	0.0				S	15	43.00	
HFS	105.63	331	ePdiff	07	28.20	-0.8	DMU	118.34	329	ePKP	12	02.00	-0.6	CCH	154.06	160	PKP	13	09.60	2.3X
	0.5s		1.40nm			5.0mb	DLE	118.45	328	ePKP	12	01.90	-0.9				i	13	18.10	
NB2	106.60	332	Pdiff	07	32.00	-1.3	RVR	118.70	55	ePKP	12	03.00	-0.9	LPB	154.11	156	PKP	13	07.80	0.3
NB2	106.60	332	PKP	11	39.50	-0.5				e	13	21.00			Z 24s		1.16um			5.6MszX
PRU	107.14	320	ePKP	11	41.50	0.1	DCN	118.81	328	ePKP	12	02.90	-0.5				PP	15	40.00	
DAG	107.45	351	iPdiff	07	35.70	-1.0	GSC	118.90	54	ePKP	12	05.00	0.6				LR	47	14.00	
	0.7s		4.79nm			5.4mb				e	13	33.00		ZOBO	154.34	155	PKPd	13	09.70	1.7
GRF	109.31	320	ePKP	11	45.80	0.3	PEC	118.90	55	ePKP	12	05.30	1.0		1.5s		22.58nm			
YKA	111.03	25	ePKP	11	48.40	0.1				ePP	13	30.10			Z 24s		1.11um			5.6MszX
MCW	111.43	40	ePKP	11	50.40	0.8	LRM	119.03	41	ePKP	12	04.50	0.0				LR	47	24.00	
WTS	111.45	323	iPKP	11	49.90	0.5	PLM	119.25	56	ePKP	12	05.00	-0.2	ITR	155.41	230	ePKP	13	07.30	-1.6
	0.6s		4.00nm							e	13	34.00					e	13	38.80	
BMW	111.68	43	ePKP	11	51.00	0.9	BAR	119.54	57	ePKP	12	06.00	0.4				e	15	38.50	
GMW	111.73	42	ePKP	11	50.90	0.8				e	13	36.00					e	16	04.90	
			ePP	12	41.80		TPC	119.76	55	ePKP	12	07.00	1.0	BAO	155.52	202	ePKP	13	10.00	0.9
FHC	112.27	49	e(PKP)	11	52.80	1.4				e	13	31.00					e	13	35.20	
MEM	112.33	322	PKP	11	51.40	0.3	FFC	120.70	28	iPKPd	12	06.70	-0.3	SOB1	156.93	225	ePKP	13	12.00	1.2
ENN	112.34	322	iPKP	11	51.40	0.3		0.7s		36.00nm							e	13	46.00	
	0.7s		10.00nm				GLA	120.98	56	ePKP	12	09.00	0.7	ATB	168.43	206	PKPc	13	21.60	0.1
RMW	112.40	41	e(PKP)	11	52.00	0.5				e	13	45.00			S.D. = 0.9		on 225 of 267 obs.			
			ePP	12	49.50		ASMO	123.02	310	iPKPc	12	11.40	-0.9	---						
SHW	112.41	43	ePKP	11	52.20	0.5	APHE	123.10	310	iPKPc	12	12.00	-0.5		JUL 25, 1989 22h 16m 12.84± 0.26s					
WLF	112.51	321	iPdiff	07	41.00	-18.7X	AAPN	123.32	310	iPKPd	12	12.00	-0.8		32.099 S ± 8.9km 178.134 W ± 6.9km					
LON	112.57	42	ePKP	11	51.80	-0.1	ATEJ	123.36	310	ePKP	12	12.60	-0.4		DEPTH = 33.0km (normol)					
			ePP	12	51.80		ALOJ	123.37	310	ePKP	12	12.50	-0.5		5.3mb (7 obs.) 4.9Msz (1 obs.)					

25d 22h

SOUTH OF KERMADEC ISLANDS (179)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 20C
Centroid Location:
Origin Time 22:16: 5.8 2.3
Lat 32.42S 0.18 Lon 177.27W 0.22
Dep 15.0 FIX Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 4.00 0.75 Mtt=-1.69 1.19
Mff=-2.31 0.85 Mrt= 4.38 1.90
Mrf=10.00 2.18 Mtf=-1.36 0.70
Principal Axes:
T Val= 11.90 Plg=54 Azm=291
N -0.77 3 25
P -11.13 36 117
Best Double Couple:Mo=1.2*10**17
NP1:Strike=224 Dip=10 Slip= 110
NP2: 25 81 87

HBZ	6.22	207	eP	17	42.10	-2.6
KRP	7.79	220	eP	18	07.00	0.3
			e	19	27.50	
DZM	16.96	302	iPc	20	14.20	4.9X
8RS	25.65	273	iPd	21	44.60	3.3X
CAN	27.46	254	eP	22	01.00	3.1X
8WA	27.99	256	eP	22	01.80	-0.9
RMQ	29.34	272	iPd	22	18.50	3.6X
			e	25	22.00	
TOO	30.22	249	eP	22	24.00	1.3
BFD	32.58	250	eP	22	44.00	0.7
CTA	33.99	282	iPc	22	57.50	1.8
	1.1s	93.67nm			5.6mb	
STK	34.02	259	eP	22	57.00	1.2
ADE	35.89	253	e(P)	23	12.50	0.7
QIS	39.36	276	eP	23	41.00	0.0
ASPA	42.93	269	iPc	24	10.60	0.2
	1.2s	42.00nm			5.0mb	
Z	18s	1.55um			4.9Msz	
			iScP	29	00.70	
			eS	30	31.30	
			LR	41	59.80	
WRA	44.07	274	Pc	24	17.90	-1.7
	0.4s	11.70nm			5.0mb	
WB5	44.08	274	eP	24	18.20	-1.5
FORR	45.47	257	eP	24	30.30	-0.4
	0.4s	24.00nm			5.5mb	
SBA	46.34	184	Pc	24	39.80	2.9X
KNA	50.70	276	eP	25	10.00	-1.5
COOL	51.17	254	eP	25	12.00	-3.0X
KLB	53.70	252	eP	25	30.50	-3.3X
SPA	58.07	180	e(P)	26	05.10	0.0
	1.1s	27.98nm			5.2mb	
			e	26	15.30	
MAW	70.68	201	eP	27	27.00	0.1
SNA	77.84	179	iPc	28	09.50	1.5
	1.0s	37.00nm			5.4mb	
BCH	86.30	44	eP	28	53.00	0.3
PRS	86.35	43	ePc	28	52.90	0.1
GCC	86.48	42	ePc	28	53.50	0.1
SAO	86.61	42	eP	28	53.90	-0.1
PRI	86.62	43	ePc	28	54.90	0.6
BAR	86.69	48	eP	28	55.00	0.4
MWC	86.86	46	eP	28	55.00	-0.6
MHC	86.90	42	ePc	28	56.00	0.4
BRK	86.93	41	ePc	28	56.80	1.3
BKS	86.95	41	ePc	28	55.80	0.1
			eLR	58	00.00	
PLM	87.02	47	eP	28	56.00	-0.3
RVR	87.12	47	eP	28	56.00	-0.6
SBB	87.31	46	eP	28	56.00	-1.6
ISA	87.58	45	eP	28	59.00	0.1
FRI	87.76	43	ePc	28	59.50	-0.1
TPC	88.02	47	eP	29	01.00	0.0
CMB	88.10	42	ePc	29	01.00	-0.3
GLA	88.10	49	eP	29	01.00	-0.4
CLC	88.21	45	eP	29	01.00	-0.9
GSC	88.35	46	eP	29	03.00	0.4
ORV	88.54	40	eP	29	02.30	-1.0
WDC	88.70	39	ePc	29	04.00	0.0
TNP	89.96	44	iP	29	10.00	-0.3
	1.0s	21.25nm			5.4mb	
MDJ	89.96	326	eP	29	10.00	0.2
KVN	90.10	42	eP	29	10.00	-0.9
CN2	91.42	323	Pc	29	16.20	-0.4
ALQ	94.72	51	eP	29	32.00	-0.3
QUE	125.04	286	ePKP	35	12.00	0.2
MAIO	132.75	292	ePKP	35	26.00	-0.2
SUF	145.67	340	iPKP	35	46.90	-1.7
	0.6s	33.20nm				
NUR	147.86	339	iPKP	35	53.50	1.3
	0.7s	36.00nm				
BNG	148.35	213	iPKPd	35	57.30	2.8
	0.9s	82.00nm				
			id	36	05.00	
			id	37	31.30	
UPP	150.32	344	iPKP	35	56.40	0.4
NB2	150.41	351	PKP	36	00.00	3.8X
HFS	150.88	348	ePKP	36	01.30	4.4X
	0.6s	10.10nm				
KVT	151.28	298	ePKP	36	04.10	5.9X
HRI	151.53	282	ePKP	36	05.00	6.1X
DSI	151.58	278	ePKP	36	05.00	6.2X
MBH	151.65	274	e(PKP)	36	05.00	6.0X
BHL	151.68	283	PKP	36	06.00	7.0X
			PP	36	17.50	
LIC	153.46	165	PKP	36	09.24	7.3X
KIC	153.66	165	PKP	36	09.60	7.3X
TIC	153.87	164	PKP	36	10.04	7.4X
KSP	158.45	335	ePKP	35	59.00	-8.4X
KHC	160.84	336	ePKP	36	11.10	1.1
			i	36	53.50	

S.D. = 1.0 on 51 of 69 obs.

& JUL 25, 1989 22h 16m 19.03s
66.366 N 146.879 W
DEPTH = 57.3km
ALASKA (676)
<AGS-P>.

GLM	1.40	189	eP	16	42.46	-0.2
FBA	1.52	195	eP	16	44.17	-0.1
RDS	1.63	199	eP	16	45.63	-0.2
CCB	1.77	193	eP	16	47.18	-0.6
HDA	1.97	181	eP	16	50.41	-0.1
WRH	1.97	195	eP	16	50.52	0.0
NEA	2.02	208	eP	16	51.79	0.6
IMA	2.77	267	eP	17	01.65	-0.4
DOT	2.98	155	eP	17	05.66	0.8
PAX	3.46	169	eP	17	10.62	-1.1

10 obs. associated

% JUL 25, 1989 22h 35m 50.75± 1.05s
37.119 N ±11.4km 3.951 W ± 7.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.6 (MDD).

AFC	0.35	67	iP	35	57.90	-0.2
			eS	36	02.60	
MAL	0.54	223	iPgd	35	57.80	-3.8X
			iSg	36	04.00	
EPRU	1.04	262	ePg	36	10.80	0.5
			eSg	36	25.60	
EBAN	1.05	7	iPg	36	11.00	0.4
			eSg	36	24.60	
EHOR	1.25	305	ePn	36	13.30	-0.6
EJIF	1.39	242	ePn	36	16.00	-0.1
TOL	2.76	358	ePc	37	20.00	44.2X

S.D. = 0.6 on 5 of 7 obs.

? JUL 25, 1989 22h 51m 10.20±12.14s
43.357 N ±81.2km 18.674 E ±61.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.4 (TTG).

BRY	0.47	192	iPgd	51	18.30	-1.4
			iSg	51	24.40	
PLE	0.53	93	ePg	51	20.00	-0.9
			eSg	51	23.40	
HCY	0.92	188	ePg	51	28.40	0.7
			eSg	51	40.50	
TTG	1.02	155	ePg	51	26.50	-3.0X
			eSg	51	39.00	
BDV	1.08	174	ePg	51	30.00	-0.5
			eSg	51	45.50	
BCI	1.42	134	ePg	51	37.00	0.9
LACI	1.88	156	ePn	52	01.00	18.3X
PHP	2.12	141	ePn	51	48.90	2.8X
SKO	2.47	123	ePn	52	02.50	11.4X

S.D. = 1.4 on 5 of 9 obs.

JUL 25, 1989 23h 26m 15.85± 0.92s
46.905 N ±15.2km 153.993 E ±14.8km
DEPTH = 33.0km (normal)
4.9mb (22 obs.) 4.3Msz (1 obs.)
KURIL ISLANDS (221)

KUSJ	7.60	243	P	28	03.60	-3.4X
			S	29	26.10	
ASAJ	8.44	255	eP	28	20.10	1.3
HOOJ	8.87	243	eP	28	24.20	-0.4
			eS	29	58.70	
MRRJ	10.23	249	eP	28	42.20	-1.2
NIIJ	14.71	234	P	29	42.30	-1.0
MAT	15.66	234	iPc	29	55.80	0.2
FBA	35.67	38	eP	33	12.00	-0.4
	1.0s	7.50nm			4.6mb	
LZH	38.49	272	eP	33	38.00	1.4
	1.5s	44.00nm			5.1mb	
ALE	49.53	6	eP	35	04.00	-0.6
	1.0s	19.00nm			5.1mb	
CHG	52.74	257	eP	35	30.00	0.3
LRM	60.62	53	eP	36	25.80	-0.1
SUF	63.12	336	iP	36	40.20	-1.8
	0.3s	1.50nm			4.6mb	
NUR	65.32	335	eP	36	55.00	-1.3
	0.7s	13.30nm			5.1mb	
Z	20s	0.20um			4.3Msz	
			LR	44	00.00	
QUE	66.75	290	eP	37	05.00	-1.2
UPP	67.79	338	iP	37	09.50	-2.5X
	1.0s	100.00nm			5.9mb	
NB2	68.28	342	P	37	13.90	-1.2
HFS	68.52	340	eP	37	15.70	-0.9
	0.6s	18.00nm			5.3mb	
KRA	75.57	331	eP	37	57.90	-0.6
KSP	76.03	334	eP	38	00.00	-1.2
SPC	76.22	331	eP	38	03.00	0.5
CLL	76.57	336	iPd	38	03.30	-0.9
VRI	76.66	325	ePc	38	05.50	0.7
BRG	76.69	335	iP	38	05.00	0.1
	1.2s	12.00nm			4.8mb	
MLR	77.28	325	eP	38	09.00	0.6
PRU	77.31	335	eP	38	08.00	-0.3
WTS	77.54	340	eP	38	10.00	0.5
	1.0s	15.00nm			5.0mb	
SRO	78.05	331	eP	38	12.50	0.1
			e	38	31.10	
ZST	78.11	332	e(P)	38	14.00	1.3
KHC	78.36	335	iPc	38	14.00	-0.1
	1.0s	10.50nm			4.8mb	
GRF	78.52	336	eP	38	15.00	0.0
	1.0s	27.00nm			5.2mb	
BZS	78.81	328	eP	38	15.50	-1.0
ENN	78.89	340	eP	38	19.00	2.1
	1.0s	24.00nm			5.2mb	
MEM	79.01	340	P	38	19.30	1.7
ABH	79.31	339	eP	38	19.40	0.1
SNF	79.50	341	P	38	21.30	1.1
RUP	79.60	339	eP	38	21.00	0.1
DOU	79.82	341	P	38	23.50	1.5
KBA	80.27	334	eP	38	22.50	-2.2
	1.0s	28.20nm			5.2mb	
			i	38	26.60	
PTJ	80.50	332	eP	38	25.80	0.0
CDF	80.74	338	eP	38	27.00	-0.1
	1.0s	8.00nm			4.7mb	
FEL	81.05	338	eP	38	27.35	-1.4
HAU	81.35	339	eP	38	29.90	-0.3
	1.0s	12.00nm			4.9mb	
LOR	82.64	340	eP	38	36.90	0.0
	1.0s	8.80nm			4.8mb	
LBF	82.88	340	eP	38	38.10	-0.1
	0.8s	4.00nm			4.6mb	
SSF	82.92	340	eP	38	38.40	0.1
	0.8s	4.00nm			4.6mb	
AVF	83.21	340	eP	38	39.90	0.1
	1.0s	10.00nm			4.9mb	
LPG	83.58	337	eP	38	42.70	0.6
	1.2s	17.80nm			5.1mb	
TCF	83.95	341	eP	38	44.00	0.4
	1.0s	8.00nm			4.8mb	
DSI	84.32	311	eP	38	41.00	-4.6X
CAF	85.27	340	eP	38	52.10	1.8
	1.0s	4.00nm			4.6mb	
PRNI	85.49	311	eP	38	52.00	0.4
MBH	86.01	310	eP	38	55.00	0.9

S.D. = 1.0 on 49 of 52 obs.

JUL 26, 1989 00h 25m 16.87± 0.55s
38.137 N ± 5.5km 23.276 E ± 4.8km
DEPTH = 20.0 ± 4.5 km
GREECE (364)
ML 3.4 (ATH).

ATH	0.39	115	iPbd	25	25.00	0.1
NEO	1.17	358	ePg	25	38.00	-0.1
ITM	1.44	229	ePn	25	42.00	0.1
PAIG	1.81	10	ePnc	25	47.10	-0.2
			eSn	26	15.80	
LIT	2.05	343	ePnc	25	50.50	-0.4
			eSn	26	15.80	
APE	2.08	120	ePn	25	51.10	-0.2
VLS	2.12	272	ePb	25	51.00	-0.8
PLG	2.24	3	ePn	25	53.00	-0.5
OUR	2.26	14	iPnc	25	53.80	0.0
KZN	2.46	332	ePn	25	56.00	-0.7
THE	2.50	355	ePnd	25	57.00	-0.2
PRK	2.59	64	ePb	26	03.50	5.0X
GRG	2.90	347	ePn	26	02.90	0.1
EZN	2.91	54	ePn	26	09.00	6.0X
SRS	2.99	5	ePnd	26	03.80	-0.2
			eSn	26	40.20	
KNT	3.03	355	ePn	26	03.70	-1.0
			e	26	39.40	
SRN	3.09	305	ePn	26	06.70	1.2
KBN	3.13	323	ePn	26	07.90	1.8
IZM	3.15	84	ePn	26	08.00	1.5
VAY	3.23	351	ePn	26	06.00	-1.5
TPE	3.33	311	ePn	26	10.00	1.1
NPS	3.43	146	ePb	26	14.00	3.6X
RDO	3.48	29	ePn	26	09.60	-1.4
BERA	3.63	316	ePn	26	13.80	0.5
SKO	4.08	340	ePn	26	19.00	-0.6
TIR	4.14	322	ePn	26	29.00	8.5X
PHP	4.16	329	ePn	26	22.00	1.3
LACI	4.44	323	ePn	26	39.80	15.1X
BCI	4.89	331	ePn	26	33.00	2.0
TDS	5.62	288	P	26	42.90	1.4
SOI	5.70	272	Pc	26	41.00	-1.5
			eSn	27	40.80	
MGR	6.33	291	Pd	26	49.90	-1.5
SGO	6.63	294	Pd	26	55.10	-0.6
MLR	7.61	14	eP	27	03.50	-6.0X
SDI	8.10	299	Pd	27	15.30	-0.9
			eSn	28	38.90	

S.D. = 1.1 on 29 of 35 obs.

? JUL 26, 1989 02h 57m 29.79± 5.07s
31.390 S ±22.5km 68.643 W ±20.3km
DEPTH = 84.9 ± 48.4 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.16	68	iPd	57	42.60	0.1
			S	57	53.60	
RTCB	0.17	234	iPd	57	42.50	-0.1
CFA	0.41	122	iPd	57	43.50	0.0
			S	57	55.50	
RTBS	0.74	248	e(P)	57	46.50	0.0
RTRS	1.40	330	ePc	57	54.40	0.0
			S	58	14.20	

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

& JUL 26, 1989 02h 59m 39.56s
63.431 N 151.252 W
DEPTH = 17.5km
CENTRAL ALASKA (1)
<AGS-P>. ML 2.8 (PMR).

KTH	0.19	50	iP	59	44.37	-0.2
HUR	0.86	121	eP	59	55.14	-0.6
MCK	1.08	73	eP	59	59.73	0.3
RND	1.08	90	eP	59	59.32	-0.1
CUT	1.12	156	iP	59	59.82	-0.3
SKT	1.46	185	iP	00	05.09	-0.1
NEA	1.50	39	eP	00	05.14	-0.5
			S	00	25.20	
WRH	1.74	52	eP	00	08.80	-0.4
PWA	1.90	160	eP	00	11.80	0.4
CCB	1.95	50	eP	00	11.38	-0.8
RDS	1.95	43	eP	00	11.56	-0.7
SUA	1.99	173	eP	00	12.58	-0.3
PMR	2.09	151	eP	00	14.30	0.1
FBA	2.11	44	eP	00	19.00	4.4
HDA	2.14	61	eP	00	15.18	0.3
TTA	2.22	259	eP	00	18.50	2.4
GLM	2.30	46	eP	00	16.56	-0.8
PMS	2.33	159	eP	00	19.20	1.5
PAX	2.66	97	eP	00	23.14	0.7
TOA	2.69	117	eP	00	23.50	0.7
IMA	2.85	340	eP	00	24.50	-0.6
RDT	2.92	191	eP	00	25.90	-0.2
SVW	3.10	223	eP	00	33.50	4.9
KLU	3.15	126	eP	00	29.66	0.3

24 obs. associated

JUL 26, 1989 04h 00m 36.52± 0.57s
17.854 S ± 7.2km 69.584 W ± 7.1km
DEPTH = 157.7 ± 5.0 km
4.4mb (6 obs.)
PERU-BOLIVIA BORDER REGION (118)

CNCB	1.85	56	iPd	01	12.00	0.6
LPB	1.93	47	iPd	01	12.80	0.6
			(S)	01	39.00	
ZOBO	2.11	42	iPd	01	14.00	-0.3
ARE	2.29	307	iPc	01	15.00	-1.2
			iS	01	43.00	
CCH	3.32	82	P	01	30.20	1.1
			i	01	38.90	
			(S)	02	08.00	
ANT	5.87	187	iPd	02	02.00	-0.4
			iS	03	07.50	
SLA	7.83	152	ePd	02	29.30	0.4
NNA	9.12	309	eP	02	41.00	-4.9X
	0.5s		5.63nm			4.4mb
			eS	04	20.50	
BAO	20.79	87	eP	05	05.60	-1.4
VAO	21.80	107	e(P)	05	22.00	5.2X
ATB	22.34	52	Pd	05	20.70	-1.3
UYO	56.90	335	iPd	10	06.80	-0.4
FVM	58.89	341	iP	10	20.00	-1.0
	1.0s		170.00nm			5.9mb X
			e	10	55.50	
GOL	66.28	330	eP	11	10.50	0.4
	1.0s		5.00nm			4.3mb
LIC	68.04	75	Pc	11	20.64	-0.7
TIC	68.20	75	Pc	11	21.84	-0.5
KIC	68.35	75	P	11	22.92	-0.3
TNP	71.38	322	eP	11	43.00	1.6
	0.8s		1.32nm			3.8mb
LEGH	72.32	78	eP	11	44.00	-3.2X
KUK	72.34	77	eP	11	47.00	-0.3
SCH	72.42	2	eP	11	46.00	-0.9
KVN	72.54	322	eP	11	49.00	0.8
YKA	87.55	341	eP	13	08.90	1.6
EPF	88.13	44	eP	13	11.40	0.8
	1.0s		4.00nm			4.4mb
LFF	89.24	42	eP	13	16.10	0.4
	1.0s		12.00nm			4.9mb
LPO	89.41	42	eP	13	16.70	0.2
CAF	90.08	42	eP	13	19.90	0.3
	1.0s		6.00nm			4.6mb

S.D. = 0.9 on 24 of 27 obs.

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* JUL 26, 1989 06h 29m 36.56± 0.84s
3.098 S ± 9.7km 130.794 E ±16.0km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
CERAM (272)

AAI	2.66	257	ePd	30	18.50	0.5
			eS	31	06.20	
MTN	9.69	178	eP	31	55.10	-1.7
			eS	33	41.30	
WB5	17.04	168	eP	33	32.90	-1.2
			eS	36	36.70	
WRA	17.10	169	Pd	33	38.00	3.2X
	0.5s		2.00nm			3.5mb
QIS	19.36	154	eP	34	04.00	1.4
ASPA	20.67	172	iPc	34	17.20	0.8
	0.8s		44.00nm			4.9mb
			eS	38	12.80	
CTA	22.64	139	iPc	34	47.20	11.0X
WARB	23.30	189	eP	34	43.50	1.0
CHG	38.16	306	eP	36	58.10	3.1X
XAN	42.30	333	P	37	29.00	0.0
CD2	42.52	325	P	37	30.00	-0.8
BJI	44.98	344	P	37	50.50	0.0
CN2	46.93	355	eP	38	12.20	6.3X
ZOBO	153.17	136	PKP	49	39.00	12.5X

S.D. = 1.2 on 9 of 14 obs.

% JUL 26, 1989 07h 55m 52.25± 0.80s
27.347 S ± 7.5km 117.708 E ± 9.9km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

MEKA	1.04	45	eP	56	13.20	1.4
			eS	56	27.00	
MRWA	2.40	219	iPd	56	31.50	-0.7
			eS	57	05.00	
KLB	4.23	179	eP	56	59.00	0.8
			eS	57	44.00	
COOL	4.63	140	eP	57	03.50	-0.4
			eS	57	52.00	
MUN	4.80	195	eP	57	07.00	0.7
			eS	57	58.00	
NANU	5.16	337	iPd	57	10.90	-0.4
			iS	58	04.40	
MBL	6.46	18	eP	57	25.00	-4.7X
			eS	58	35.00	
WARB	8.07	84	eP	57	51.00	-1.3
			eS	59	17.00	

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

% JUL 26, 1989 09h 12m 28.70± 0.90s
34.967 N ±12.9km 136.962 E ± 9.8km
DEPTH = 33.0km (normal)
SOUTHERN HONSHU, JAPAN (232)
MG 3.4 (JMA). Felt (I JMA) at Gifu.

GIF	0.46	340	eP	12	38.70	0.0
IIDJ	0.93	56	P	12	44.80	-0.7
			S	12	57.50	
TSRJ	0.98	306	iPd	12	40.70	-5.5X
			S	12	50.20	
WKYJ	1.35	237	eP	12	51.50	0.0
			S	13	12.70	
CHJJ	1.98	56	P	13	01.20	0.7
			S	13	25.70	
TKSJ	2.60	249	eP	13	09.30	0.0

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

% JUL 26, 1989 09h 14m 38.42± 1.41s
33.268 S ±13.6km 118.570 E ±10.5km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

NWAO	1.17	286	iPd	14	59.70	-0.6
			iS	15	14.30	
RKG	1.53	238	iPd	15	05.60	-0.2
			iS	15	24.80	
KLB	1.81	337	eP	15	14.10	4.3X
			eS	15	39.90	
MUN	2.37	302	eP	15	19.00	1.0
			eS	15	47.50	
MRWA	4.60	331	eP	15	50.00	0.4
WARB	9.95	47	eP	17	05.00	0.5
	0.3s		2.00nm			5.1mb X
			eS	18	53.00	
MBL	12.11	6	eP	17	32.80	-1.2
	0.3s		1.00nm			4.6mb X
			eS	19	42.00	

S.D. = 1.0 on 6 of 7 obs.

% JUL 26, 1989 09h 22m 12.39± 1.52s
33.265 S ±16.3km 118.592 E ±11.6km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

NWAO	1.19	286	eP	22	33.80	-0.8
			iS	22	48.40	
RKG	1.54	238	eP	22	39.80	-0.2
			eS	22	59.00	
KLB	1.81	337	eP	22	48.40	4.6X
			eS	23	13.80	
MUN	2.39	302	eP	22	53.50	1.4
			eS	23	21.90	
COOL	3.21	43	eP	23	09.00	5.1X
			eS	24	02.00	
MRWA	4.61	330	eP	23	19.40	-4.3X
			eS	24	18.00	
WARB	9.93	47	eP	24	38.60	0.4
	0.2s		1.00nm			4.9mb X
			eS	26	28.00	
MBL	12.11	6	eP	25	07.00	-0.9
	0.3s		1.00nm			4.6mb X
			eS	27	16.00	

26d 09h

S.D. = 1.3 on 5 of 8 obs.

% JUL 26, 1989 09h 40m 51.32± 1.56s
33.233 S ±16.7km 118.559 E ±12.1km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

NWAO	1.15	285	iPd	41 12.70	-0.2
			iS	41 27.30	
RKG	1.54	237	iPd	41 18.40	-0.4
			iS	41 37.80	
KLB	1.77	337	eP	41 27.20	5.0X
			eS	41 52.50	
MUN	2.35	302	eP	41 31.70	1.2
			eS	42 00.30	
COOL	3.21	44	eP	41 52.00	9.2X
			eS	42 38.00	
WARB	9.93	47	eP	43 18.00	0.8
			eS	45 04.00	
M8L	12.08	6	eP	43 45.00	-1.4
	0.2s		1.00nm		4.8mb X
			eS	45 55.00	

S.D. = 1.5 on 5 of 7 obs.

% JUL 26, 1989 10h 18m 22.64± 0.68s
43.348 N ± 5.6km 12.523 E ± 7.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ASS	0.29	160	P	18 28.70	-0.1
			eSg	18 34.10	
ARV	0.34	64	P	18 29.60	-0.1
			eSg	18 35.90	
RSM	0.58	355	P	18 34.50	0.1
SFI	0.75	320	P	18 38.00	0.7
			eSg	18 47.30	
PGD	0.79	312	P	18 37.30	-0.7
			eSg	18 49.70	
MNS	0.97	173	Pc	18 41.30	0.2
			eSg	18 55.70	

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

• JUL 26, 1989 10h 24m 58.85± 1.97s
38.222 S ±11.0km 73.027 W ±13.7km
DEPTH = 39.9 ± 14.8 km
4.5mb (4 obs.) 3.8Msz (1 obs.)
NEAR COAST OF CENTRAL CHILE (135)

CHCH	4.69	25	eP	26 10.00	0.9
			iS	27 18.00	
TACH	4.86	21	iPd	26 11.50	0.0
			iS	27 09.00	
PCH	5.02	25	iPd	26 14.40	0.6
			iS	27 25.50	
SAN	5.13	23	eP	26 15.50	0.2
			iS	27 31.50	
FCH	5.37	25	iPd	26 19.50	0.6
PEL	5.41	21	eP	26 19.50	0.2
			iS	27 22.20	
			i	27 34.70	
JACH	5.87	20	iPd	26 24.90	-0.9
ZON	7.56	29	e(P)	26 48.00	-1.4
ITB7	20.64	56	e(P)	29 36.60	-0.9
ITB1	20.83	55	Pc	29 39.70	0.3
ITB	20.84	55	eP	29 39.40	-0.2
CCH	21.62	18	(P)	29 52.00	4.1X
ARE	21.72	4	eP	29 49.00	0.2
CNC8	21.79	13	P	29 51.50	1.7
LPB	22.04	13	eP	29 50.00	-2.1
			eLR	34 44.00	
ZOBO	22.29	12	P	29 57.00	2.2
	1.0s		16.50nm		4.4mb
	Z 20s		0.34um		3.8Msz
			LR	37 34.00	
VAO	26.95	63	e(P)	30 53.00	14.4X
BRAS	28.23	64	eP	30 50.90	0.5
BAO	31.51	51	eP	31 17.50	-2.0
BAO	31.51	51	eP	31 18.00	-1.5
SNA	48.10	155	iPc	33 35.60	-0.4
	1.0s		20.00nm		5.1mb
SPA	51.97	180	e(P)	34 06.10	0.1
	0.9s		4.55nm		4.5mb
UYO	74.72	342	iPd	36 35.70	-0.4
LIC	76.88	71	P	36 49.80	1.0
TIC	77.16	71	P	36 51.60	1.3
KIC	77.18	71	P	36 51.60	1.2
FVM	77.51	346	eP	36 52.20	0.5
	1.1s		7.32nm		4.6mb
TNP	86.14	327	P	37 35.50	-1.5
BUL	86.47	113	iPc	37 39.50	0.4
G8A	144.13	125	PKP	44 32.00	-0.3
	0.6s		2.70nm		

S.D. = 1.1 on 28 of 30 obs.

? JUL 26, 1989 12h 25m 27.75±11.51s
43.974 N ±78.9km 7.542 E ±11.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 1.9 (GEN).

ENR	0.27	341	P	25 33.37	-0.1
			S	25 36.87	
STV	0.31	330	P	25 34.40	0.1
			S	25 38.61	
ROB	0.40	36	P	25 35.94	0.0
PZZ	0.62	329	P	25 40.25	-0.1

S.D. = 0.1 on 4 of 4 obs.

JUL 26, 1989 12h 26m 11.22± 1.42s
33.713 N ± 8.4km 141.312 E ±10.5km
DEPTH = 60.1 ± 19.4 km
5.2mb (4 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)
Felt (I JMA) on Hachijo-jimo.

HJJ	1.41	245	P	26 34.00	-1.0
			iS	26 49.00	
KAKJ	2.66	340	P	26 53.60	1.2
CHJJ	3.01	321	iPd	26 57.70	0.2
			S	27 32.10	
IIDJ	3.31	303	P	27 02.80	1.0
			S	27 41.70	
NIIJ	3.99	332	P	27 12.10	0.9
MTMJ	4.06	316	P	27 13.40	1.1
YAMJ	4.57	347	P	27 20.20	0.9
			eS	28 10.00	
TSRJ	4.76	294	P	27 21.90	-0.1
WKYJ	4.78	278	iPd	27 21.60	-0.8
OFUJ	5.36	3	P	27 29.90	-0.6
			S	28 28.20	
TKSJ	6.05	275	eP	27 40.00	-0.2
YONJ	6.65	285	eP	27 47.30	-1.2
AOMJ	6.87	354	eP	27 52.40	0.8
SHNJ	8.49	276	eP	28 14.30	0.3
MRRJ	8.70	359	eP	28 16.80	0.0
HOOJ	8.79	10	P	28 16.90	-1.2
			S	29 50.30	
KUSJ	9.74	15	eP	28 27.90	-3.2X
			eS	30 08.70	
ASAJ	10.44	5	eP	28 38.40	-2.3
GUMO	20.29	170	eP	30 45.70	1.1
PJG	20.29	170	eP	30 45.70	1.1
GUA	20.35	170	eP	30 45.00	-0.2
	0.8s		65.67nm		5.0mb
WB5	53.70	188	iPc	35 28.70	-0.5
WRA	53.77	188	Pc	35 29.30	-0.4
	0.3s		8.00nm		5.2mb
ASPA	57.50	188	iPc	35 56.70	0.2
	0.6s		21.00nm		5.4mb
MBL	58.28	204	eP	36 01.00	-1.0
	0.4s		6.00nm		5.1mb
WARB	61.18	195	eP	36 22.60	0.8
ZOBO	148.33	64	ePKP	45 57.00	7.1X
LPB	148.51	64	(PKP)	46 05.00	15.0X
CNCB	148.77	65	PKP	46 02.00	11.5X

S.D. = 1.0 on 25 of 29 obs.

% JUL 26, 1989 12h 41m 26.82± 1.22s
41.100 N ±11.6km 29.014 E ± 8.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ISK	0.05	135	ePg	41 28.90	-0.1
			eSg	41 30.90	
CTT	0.44	276	ePg	41 35.70	-0.2
EDC	1.15	230	ePn	41 48.50	0.1
DMK	1.19	308	ePn	41 49.10	0.1
MFT	1.35	257	ePn	41 51.70	0.0

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

? JUL 26, 1989 13h 17m 53.43± 2.74s
18.564 N ±26.1km 66.065 W ±13.5km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

LPR	0.32	144	P	18 01.50	0.1
SJG	0.46	190	iP	18 03.20	-0.3
			S	18 13.40	
APR	0.64	261	P	18 06.00	0.0
			S	18 18.50	
PNP	0.77	229	P	18 08.70	0.8
			S	18 21.40	
MGP	1.12	241	P	18 12.20	-0.6
			S	18 29.40	

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

• JUL 26, 1989 13h 59m 49.05± 0.40s
20.715 S ± 8.6km 169.219 E ± 9.2km
DEPTH = 29.6km (8 depth phases)
4.9mb (5 obs.) 4.9Msz (4 obs.)
VANUATU ISLANDS (186)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 19C
Centroid Location:
Origin Time 13:59:57.5 0.5
Lat 20.93S 0.10 Lon 168.58E 0.08
Dep 35.0 4.9 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 7.84 0.43 Mtt=-1.39 0.78
Mff=-6.44 0.68 Mrt= 2.54 0.88
Mrf=-1.46 1.23 Mtf= 4.72 0.48
Principal Axes:

T Val=	8.49	Plg=76	Azm= 5
N	1.16	11	146
P	-9.65	9	238

Best Double Couple:Mo=9.1*10**16
NP1:Strike=341 Dip=38 Slip= 108
NP2: 138 54 76

DZM	2.92	242	iPd	00 34.00	-0.6
			iS	01 07.00	
PVC	3.08	344	iPd	00 37.50	0.7
			iS	01 15.00	
HNR	14.34	320	eP	03 14.00	1.8
VSG	14.63	320	P	03 19.00	3.1X
SVO	14.65	320	P	03 18.00	1.9
BRS	16.42	243	iPd	03 39.40	0.4
			iS	07 04.00	
RMO	19.61	249	ePd	04 20.20	2.1
			e	04 28.00	31km
SNZO	21.05	168	eP	04 52.00	19.1X
			S	08 28.00	
CTA	21.53	268	iPc	04 38.90	0.9
	1.3s		115.38nm		5.1mb
			iS	08 38.00	
BWA	22.89	229	eP	04 51.10	-0.3
			i	04 59.80	31km
CAN	22.97	226	eP	04 54.00	1.8
			i	05 03.00	32km
CMS	23.54	238	eP	04 59.00	1.3
			e	05 08.00	32km
PMG	24.05	295	eP	05 12.00	9.2X
TOO	26.56	226	eP	05 28.00	1.6
			e	05 35.00	25km
QIS	27.70	265	eP	05 39.00	2.2
WB5	32.66	265	eP	06 18.70	-2.2
WRA	32.68	265	Pd	06 19.50	-1.6
	0.6s		2.10nm		4.2mb
ASPA	32.78	258	iPc	06 19.90	-2.1
	1.0s		16.00nm		4.9mb
	Z 18s		2.60um		5.0Msz
			i	06 28.70	30km
			LR	19 58.40	
MTN	37.22	276	eP	06 59.30	-0.6
WARB	39.31	254	eP	07 17.80	0.4
NWAO	47.54	244	eP	08 22.00	-1.8
	Z 20s		1.60um		5.0Msz
	N 20s		0.30um		
	E 20s		1.30um		
MUN	48.40	245	eP	08 40.00	9.5X
SBA	57.20	181	ePd	09 35.80	0.5
SPA	69.41	180	e(P)	10 55.00	-1.2
	1.0s		10.50nm		4.9mb
			i	11 08.00	45kmX
IPM	71.41	282	ePd	11 07.90	-1.1
			e	11 16.40	27km
SNG	72.83	285	eP	11 16.80	-0.6
DL2	74.18	323	eP	11 23.80	-0.9
MDJ	74.41	332	eP	11 24.50	-1.4
CN2	75.70	329	Pc	11 31.80	-1.6
	4.0s		0.30nm		2.7mb X

BJI	78.07	321	eP	11	44.50	-2.1
TIY	78.90	317	eP	11	52.00	0.6
	Z 20s	0.50um			4.8Msz	
KMI	79.04	302	Pd	11	53.50	0.9
			pP	12	02.50	29km
CHG	79.25	295	iPc	11	53.40	-0.2
	1.1s	21.84nm			5.1mb	
CD2	81.12	308	eP	12	02.00	-1.4
HHC	81.32	320	Pc	12	03.00	-1.3
BTO	82.12	319	eP	12	06.40	-2.0
LZH	83.70	312	eP	12	17.00	0.3
	2.5s	0.87nm			3.5mb X	
GTA	88.12	313	Pd	12	38.00	-0.4
SNA	89.02	183	eP	12	41.40	-0.7
PGC	91.37	38	eP	12	55.00	1.9
NB2	136.86	345	PKP	18	57.80	-12.4X
SPC	142.34	326	ePKP	19	18.80	-1.9
KSP	143.17	331	ePKPd	19	16.50	-5.3X
RZN	143.50	313	ePKP	19	18.00	-4.9X
PGB	143.51	315	ePKP	19	18.00	-4.7X
VTS	144.12	315	iPKPd	19	21.00	-2.9X
BRG	144.17	333	iPKPc	19	19.20	-4.3X
	1.5s	90.00nm				
			i	19	29.10	
MMB	144.21	313	iPKPd	19	21.00	-2.9X
CLL	144.24	334	iPKP	19	19.40	-4.2X
	1.5s	70.00nm				
			pPKP	19	28.90	
KKB	144.53	314	iPKPd	19	22.00	-2.4
PRU	144.56	332	PKPc	19	20.50	-3.7X
	1.5s	67.00nm				
			e	19	30.30	
			eSg	47	09.40	
ZST	144.58	327	ePKP	19	21.20	-3.1X
BEO	144.75	320	i(PKP)	19	22.50	-2.1
VKA	144.93	328	i(PKP)	19	22.60	-2.3
	2.0s	149.00nm				
			i	19	32.90	
EKA	144.96	352	PKPc	19	20.80	-3.9X
	0.5s	17.40nm				
VAY	145.11	314	iPKP	19	22.00	-3.4X
SOP	145.20	327	ePKP	19	26.10	0.8
WIT	145.24	341	ePKP	19	24.00	-1.2
			e	19	33.00	
HOF	145.46	334	iPKPc	19	23.80	-1.9
	1.5s	131.00nm				
SKO	145.57	315	iPKP	19	23.80	-2.4
	1.8s	140.00nm				
KHC	145.62	331	iPKPc	19	24.90	-1.2
	1.3s	78.50nm				
			i	19	34.80	
WTS	145.91	341	ePKP	19	25.00	-1.3
	1.0s	62.00nm				
			e	19	34.00	
WET	145.92	332	iPKPc	19	25.10	-1.5
	1.7s	129.00nm				
GRF	146.21	334	ePKPc	19	26.40	-0.6
	Z 20s	0.04um			4.2Msz	
			e	19	36.00	
			e	19	51.00	
BCI	146.27	317	ePKP	19	26.80	-0.5
PHP	146.37	315	iPKPd	19	26.80	-0.6
PTJ	146.67	325	ePKP	19	23.70	-4.2X
TNS	146.85	337	ePKPc	19	27.90	-0.2
TIR	146.91	315	ePKP	19	29.00	0.7
BHG	146.96	330	iPKPd	19	28.80	0.5
kBA	147.20	329	e(PKP)	19	28.00	-0.9
ENN	147.25	340	ePKP	19	29.00	0.4
	1.0s	43.00nm				
			e	19	38.00	
VBY	147.30	325	ePKP	19	29.30	0.5
LJU	147.32	327	e(PKP)	19	29.50	0.6
FUR	147.36	332	iPKPc	19	31.00	2.1
MEM	147.36	340	PKP	19	29.40	0.7
CEY	147.58	326	ePKP	19	30.50	1.2
VOY	147.66	327	ePKP	19	30.10	0.6
UCC	147.69	342	PKP	19	29.00	-0.3
FVI	147.82	329	PKPc	19	30.70	1.1
SNF	147.97	342	PKP	19	31.20	1.5
WLF	148.13	339	PKP	19	32.00	2.0
GWF	148.19	337	PKP	19	32.08	1.9
DOU	148.25	341	PKP	19	31.70	1.5
OGA	148.45	331	ePKP	19	33.00	2.1
CDF	148.78	337	ePKP	19	33.60	2.3X
	1.0s	12.00nm				
SLE	148.84	335	ePKPc	19	32.10	0.8
SAX	148.89	333	ePKPd	19	34.30	2.6X
FEL	148.94	335	PKP	19	33.54	2.0
ECH	148.99	336	PKP	19	33.30	1.8
ZLA	149.11	334	ePKPc	19	33.00	1.2
MOF	149.30	336	PKP	19	34.25	2.2
LLS	149.34	333	ePKPd	19	35.00	2.7X
VITF	149.42	338	PKP	19	34.53	2.5X
BSF	149.45	336	ePKP	19	35.10	2.8X
	1.0s	16.00nm				
HAU	149.47	337	ePKP	19	35.10	2.9X
	1.0s	20.00nm				
BBS	149.47	335	PKP	19	34.82	2.5X
LOMF	149.83	336	PKP	19	35.98	3.1X
TMA	149.99	332	ePKPc	19	36.90	3.6X
VAI	150.22	332	PKPd	19	36.30	3.0X
DIX	150.63	334	ePKPd	19	38.80	4.4X
FLN	150.82	346	ePKP	19	38.00	3.8X
	1.0s	32.00nm				
LDF	150.90	345	ePKP	19	37.90	3.6X
	1.0s	18.00nm				
LOR	150.97	339	ePKP	19	38.80	4.3X
	1.0s	20.00nm				
LBF	151.17	339	ePKP	19	39.60	4.8X
	1.2s	17.85nm				
GRR	151.26	346	ePKP	19	39.10	4.3X
	0.8s	24.20nm				
SSF	151.26	339	ePKP	19	39.60	4.7X
	1.0s	20.00nm				
LPG	151.38	334	ePKP	19	40.40	4.9X
	1.0s	16.00nm				
SMF	151.51	339	ePKP	19	39.80	4.5X
	1.2s	17.85nm				
AVF	151.55	339	ePKP	19	39.80	4.5X
	1.0s	4.00nm				
LPF	151.64	346	ePKP	19	39.90	4.5X
	0.8s	32.25nm				
BNI	151.77	333	PKP	19	41.10	5.2X
BGF	151.92	340	ePKP	19	41.00	5.1X
MAF	152.31	340	ePKP	19	41.80	5.3X
TCF	152.36	340	ePKP	19	42.00	5.4X

S.D. = 1.4 on 73 of 115 obs.

% JUL 26, 1989 14h 03m 03.96± 2.77s
36.426 N ±24.2km 4.502 W ± 9.1km
DEPTH = 84.3 ± 21.1 km
STRAIT OF GIBRALTAR (385)

MAL	0.31	14	iPnc	03	15.70	-1.2
			iSg	03	24.00	
EJIF	0.78	272	iP	03	21.30	0.3
			eS	03	35.00	
EPRU	0.80	313	iPgc	03	22.20	1.0
			eSg	03	33.50	
AFC	1.13	43	iPgc	03	26.10	0.8
			eSg	03	41.80	
EHOR	1.51	337	iPn	03	30.00	0.0
			eSn	03	48.50	
EBAN	1.83	18	iPnc	03	34.20	0.0
			eSn	03	55.20	
EVAL	2.14	303	iPn	03	37.80	-0.6
			eSn	04	02.00	
EVIA	2.72	35	ePn	03	47.00	0.5
			eSn	04	17.10	
ECHE	4.21	40	ePn	04	06.60	-0.6
			eSn	04	54.00	
GUD	4.22	4	ePn	04	07.00	-0.3
			eSn	04	52.00	
ETOR	4.79	23	iPnc	04	07.00	-8.2X
			eSn	05	06.50	

S.D. = 0.8 on 10 of 11 obs.

JUL 26, 1989 14h 05m 03.80± 0.35s
14.788 N ± 6.6km 91.942 W ± 6.0km
DEPTH = 77.8km (4 depth phases)
4.8mb (22 obs.)
GUATEMALA (70)
Felt in much of Guatemala.

OC2	0.33	226	iP+	05	15.80	-0.3
TPX	0.33	291	iP	05	14.89	-1.3
			iS	05	20.98	
LHG	0.81	115	iP+	05	23.00	2.2
HUG	0.97	142	eP	05	23.80	1.2
ITG	1.08	100	iP	05	29.00	4.8X
FUG	1.12	107	iP	05	28.00	3.4X
MMG	1.24	101	iP+	05	30.80	4.4X
BVA	1.27	95	iP+	05	31.00	4.3X
TER	1.31	111	iP	05	30.00	3.0X
PCG	1.31	108	iPd	05	31.00	3.7X
PSG2	1.37	127	eP	05	29.80	2.1
GCG	1.38	98	eP+	05	34.00	6.0X
			S	05	56.00	
REC	1.42	104	iP	05	33.00	4.5X
RDG	1.44	81	ePd	05	34.00	5.2X
SLP	1.61	91	iPd	05	36.00	5.0X
SCX	2.05	341	iP	05	42.79	6.0X
			iS	06	05.54	
EVV	4.90	319	(P)	06	20.51	4.0X
OXX	5.13	297	iP	06	18.23	-1.8
			iS	07	15.00	
LVVM	6.54	319	(P)	06	36.39	-3.0X
IISM	6.67	310	iP	06	43.00	1.8
			eS	07	55.36	
IIT	7.41	306	eP	06	54.53	2.9X
ACX	7.90	286	iP	06	54.50	-3.6X
III	8.05	297	eP	06	59.79	-0.6
			(S)	08	43.54	
AR6	8.11	121	eP	07	02.10	0.9
UNM	8.27	304	(P)	07	09.50	6.0X
IIC	8.56	306	eP	07	09.00	1.4
SRA	8.68	122	eP	07	10.50	1.4
CRX	8.71	303	eP	07	08.00	-1.6
SJS	9.09	121	iPc	07	16.00	1.4
LCR2	9.24	122	iPc	07	18.00	1.3
BUS	9.54	122	iPd	07	23.00	2.0
MRX	10.10	300	eP	07	28.50	0.3
UPA	13.44	114	eP	08	30.20	17.6X
UYO	19.43	354	iPd	09	26.70	0.0
PSO	19.77	132	eP	09	32.50	1.6
BOG	20.29	118	eP	09	39.50	3.3X
			eS	10	28.00	
PWLA	20.41	9	e(P)	09	38.90	2.1
OLY	20.63	1	eP	09	40.80	1.7
			epP	10	00.00	93kmX
MEO	20.79	344	iPc	09	40.40	-0.4
PRM	21.07	23	eP	09	46.00	2.4
JSC	21.67	25	eP	09	51.00	1.4
TKL	22.04	18	eP	09	55.80	2.6
			epP	10	13.60	81km
FVM	23.14	3	P	10	04.80	0.8
ALQ	23.95	330	eP	10	14.40	2.4
			epP	10	31.00	72km
NAV	24.53	22	e(P)	10	19.10	1.7
BLA	24.57	23	P	10	18.70	0.8
CBN	26.65	26	eP	10	39.00	2.0
			e	10	58.00	84km
GLA	27.61	315	eP	10	47.00	1.1
TPC	29.05	316	eP	11	18.00	19.1X
PLM	29.19	314	eP	11	01.00	0.7
			epP	11	18.50	74km
PRIN	29.59	27	P	11	07.60	4.0X
DHN	30.34	20	P	11	10.40	0.2
ISA	31.58	316	eP	11	40.00	18.8X
PTN	33.00	23	P	11	33.90	0.5
KVN	33.36	321	P	11	38.00	1.1
GAC	33.80	21	eP	11	41.00	0.8
CMB	34.18	318	ePc	11	44.40	0.6
WDC	37.01	320	e(P)	12	07.70	0.1
ARE	37.04	146	eP	12	28.00	19.6X
ZOBO	38.80	142	Pc	12	23.00	-0.5
			LR	25	24.00	
LPB	39.02	142	eP	12	31.00	5.8X
VGB	39.09	327	e(P)	12	27.20	2.2
CNCB	39.31	142	Pc	12	27.80	0.1
			i	14	39.00	
LON	40.45	328	eP	12	37.50	1.3
			e	13	03.10	111kmX
			e	13	15.60	
CCH	40.86	141	P	12	40.90	0.7
BMW	41.01	327	e(P)	12	42.00	1.2
GMW	41.48	328	eP	12	45.40	0.8
			e	13	22.70	171kmX
MCW	42.26	330	eP	12	52.10	1.1
			e	13	29.70	172kmX
SCH	44.47	21	eP	13	08.00	-0.9
BAO	52.91	123	eP	14	13.00	-1.6
SOB1	55.94	112	eP	14	34.50	-2.1
VAO	57.86	130	e(P)	14	51.00	0.9
			epP	15	07.50	62kmX
ITR	57.99	110	eP	14	50.20	-0.9
TOA	60.67	334	eP	15	10.20	1.2
PMR	61.74	333	eP	15	16.50	0.4
	1.1s	37.50nm			5.4mb	
FBA	62.55	337	eP	15	21.40	0.0
MBC	63.14	353	eP	15	24.00	-1.2

26d 14h

	0.7s	8.00nm			4.8mb	
SVW	64.53	331	eP	15	34.30	-0.2
TTA	65.22	333	eP	15	38.50	-0.5
ALE	68.78	4	eP	16	19.00	18.0X
	0.7s	5.00nm				
DAG	71.86	13	eP	16	18.00	-1.8
	1.0s	14.00nm			4.8mb	
EKA	77.30	36	Pc	16	49.60	-1.6
	0.8s	14.30nm			4.9mb	
LPF	79.76	43	eP	17	03.40	-1.4
	1.2s	23.80nm			5.0mb	
GRR	79.81	43	eP	17	04.00	-1.1
	1.2s	23.80nm			5.0mb	
FLN	79.99	42	eP	17	04.90	-1.1
	1.2s	29.70nm			5.1mb	
LDF	80.25	42	eP	17	06.30	-1.2
	1.2s	11.90nm			4.7mb	
MFF	80.63	44	eP	17	08.00	-1.5
	1.2s	14.20nm			4.8mb	
LFF	81.58	46	eP	17	13.00	-1.5
	1.2s	29.70nm			5.1mb	
EPF	81.71	48	eP	17	14.00	-1.3
	1.0s	10.00nm			4.7mb	
LPO	81.95	46	eP	17	14.90	-1.5
	1.2s	14.20nm			4.8mb	
RJF	82.04	45	eP	17	15.40	-1.5
	1.2s	11.90nm			4.7mb	
TCF	82.29	44	eP	17	16.60	-1.6
	1.2s	11.90nm			4.7mb	
MAF	82.54	44	eP	17	18.00	-1.5
	1.0s	8.00nm			4.6mb	
BGF	82.65	44	eP	17	18.50	-1.6
	1.0s	12.00nm			4.8mb	
AVF	82.94	44	eP	17	19.70	-1.8
	1.0s	6.00nm			4.5mb	
SSF	82.97	43	eP	17	20.10	-1.6
	1.0s	12.00nm			4.8mb	
LOR	83.16	43	eP	17	21.00	-1.6
	0.8s	12.00nm			4.9mb	
SMF	83.30	44	eP	17	21.60	-1.8
	1.0s	14.00nm			4.9mb	
LBF	83.31	43	eP	17	21.90	-1.5
	1.2s	11.90nm			4.7mb	
NB2	83.43	28	P	17	24.10	0.3
ENN	83.58	39	eP	17	44.50	19.9X
	1.0s	19.00nm				
ABH	84.82	40	ePd	17	31.08	0.1
LPG	85.56	44	eP	17	34.50	-0.6
	1.2s	22.00nm			5.1mb	
FEL	85.70	42	ePd	17	35.13	-0.4
RRL	85.74	45	P	17	34.47	-1.5
LSD	85.84	44	P	17	36.62	0.2
RSP	86.00	44	P	17	36.01	-1.1
PZZ	86.08	45	P	17	36.83	-0.7
STV	86.31	45	P	17	35.54	-3.0X
ROB	86.67	45	P	17	38.03	-2.3
IMI	86.79	46	P	17	38.67	-2.2
FIN	86.92	45	P	17	38.57	-2.9X
PCP	87.05	45	P	17	40.01	-2.1
KHC	88.78	39	eP	17	51.40	1.1
SUF	89.13	24	eP	17	51.00	-0.6
BNG	108.55	80	iPdiff	19	27.90	7.4X
	1.6s	91.00nm			6.7mb X	
		ic		19	30.20	
		ic		19	40.20	
		id		19	52.40	
QUE	130.88	24	ePKP	24	09.70	1.1
WB5	135.61	257	ePKP	24	20.20	2.5X
CHG	144.93	342	iPKPc	24	33.00	-1.4
	1.4s	52.33nm				
LOE	145.28	337	iPKPd	24	34.50	-0.5
BDT	146.39	341	ePKP	24	28.90	-7.9X
HYB	146.65	17	iPKPd	24	39.50	2.2
NST	147.47	338	ePKP	24	42.50	4.0X
MUN	149.15	231	ePKP	24	44.00	3.1X
GBA	149.90	21	PKPc	24	47.50	5.1X
	1.2s	77.10nm				
NNT	150.44	336	iPKPc	24	50.20	7.0X
	S.D. = 1.4	on	92	of	126	obs.

% JUL 26, 1989 15h 45m 13.89± 2.46s
18.474 N ±18.1km 65.978 W ±11.4km
DEPTH = 10.0km (geophysicist)
PUERTO RICO REGION (90)

LPR	0.19	148	P	45	18.20	0.0
SJG	0.40	204	iP	45	22.00	0.0
APR	0.71	269	P	45	28.00	0.1
PNP	0.79	238	P	45	29.40	0.2
MGP	1.15	246	P	45	35.20	-0.2
	S.D. = 0.2	on	5	of	5	obs.

JUL 26, 1989 16h 08m 45.39± 0.29s
14.427 N ± 6.3km 91.416 W ± 5.2km
DEPTH = 61.5km (25 depth phases)
4.8mb (21 obs.)
GUATEMALA (70)
Felt in much of Guatemala.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 25C
Centroid Location:
Origin Time 16:08:49.0 0.8
Lat 14.66N 0.07 Lon 90.78W 0.07
Dep 62.3 5.7 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 2.31 0.48 Mtt= 1.00 0.74
Mff=-3.30 1.00 Mrt= 7.09 0.68
Mrf=-2.25 0.60 Mtf=-8.43 0.63
Principal Axes:

	Val=	Plg=	Azm=
T	12.48	35	33
N	-1.97	51	242
P	-10.51	14	134

Best Double Couple:Mo=1.2*10**17
NP1:Strike=179 Dip=54 Slip= 17
NP2: 79 77 143

LHG	0.23	85	iP+	08	59.00	3.7X
HUG	0.41	167	iP	08	58.00	1.3
FUG	0.56	88	iP	09	02.50	4.1X
ITG	0.58	73	iP	09	04.00	5.3X
MMG	0.72	81	iP	09	06.00	5.7X
PCG	0.74	93	iP+	09	06.00	5.3X
OC2	0.76	280	iP	09	00.00	-0.5
KKG	0.81	312	iP	09	02.00	0.7
REC	0.87	89	iP	09	07.50	5.5X
GCG	0.87	79	iPd	09	10.00	7.9X
			S	09	24.00	
TPX	0.95	300	iP	09	02.50	-0.4
			iS	09	14.00	
RDG	1.08	58	iPd	09	12.00	7.1X
SLP	1.14	74	iPd	09	12.00	6.3X
SCX	2.58	333	iP	09	30.00	4.5X
			iS	10	07.00	
EVV	5.50	317	(P)	10	08.00	1.3
OXX	5.75	298	iP	10	10.00	-0.4
			iS	11	11.00	
LVVM	7.14	318	(P)	10	26.00	-3.6X
IISM	7.29	309	iP	10	31.00	-0.6
			(S)	11	55.00	
AR6	7.49	121	iPc	10	36.50	2.0
SRA	8.06	122	ePd	10	44.10	1.7
SJS	8.47	121	eP	10	49.00	1.0
ACX	8.49	288	eP	10	45.00	-3.2X
LCR2	8.61	122	iPc	10	52.00	1.9
ICR	8.63	120	ePd	10	52.20	1.7
III	8.67	298	iP	10	50.50	-0.3
VCR	8.73	118	iPd	10	30.00	-21.6X
BUS	8.92	122	iPd	10	56.00	1.5
CRX	9.33	303	iP	11	00.00	-0.1
DVD	10.61	123	eP	11	19.20	2.0
MRX	10.72	301	iP	11	19.00	0.3
PSO	19.15	132	eP	13	07.50	0.3
BOG	19.67	118	eP	13	22.00	9.3X
			iS	16	56.00	
OLY	20.99	360	eP	13	27.60	1.9
PRM	21.22	21	eP	13	30.70	2.7
			e	13	42.50	49kmX
			e	13	47.30	
MEO	21.28	344	iPc	13	27.70	-1.0
GBTN	22.12	16	P	13	39.50	2.5
TKL	22.23	17	e(P)	13	40.80	2.7X
FVM	23.48	2	P	13	49.50	-0.8
NAV	24.68	21	e(P)	14	03.50	1.5
			epP	14	20.70	76kmX
NA2	26.53	25	eP	14	38.40	19.3X
CBN	26.75	25	eP	14	23.00	1.9
			e	14	40.00	73kmX
GLA	28.22	315	eP	14	35.00	0.4
			e	14	50.00	62km
BAR	29.31	313	eP	14	45.00	0.7
			e	15	00.00	61km
TPC	29.66	316	eP	14	48.00	0.4
			e	15	03.00	61km
PLM	29.80	314	eP	14	50.00	1.0
			e	15	05.00	61km
RVR	30.51	314	eP	14	56.00	1.1
			e	15	10.00	56km
GSC	30.87	317	eP	15	01.00	2.8X
			e	15	15.00	56km
MWC	31.11	314	eP	15	00.00	-0.5
			e	15	16.00	66km
PAS	31.15	314	eP	15	17.00	16.4X
ISA	32.19	316	eP	15	10.00	0.3
			e	15	25.00	61km
TNP	32.82	321	P	15	16.60	1.3
	1.1s	16.23nm				4.8mb
			pP	15	32.10	63km
PTN	33.14	22	e(P)	15	18.10	0.3
FRI	33.76	317	e(P)	15	22.60	-0.6
			epP	15	38.20	63km
			e	15	53.50	
PRI	33.94	315	ePc	15	26.40	1.4
			epP	15	40.70	56km
GAC	33.95	20	eP	15	25.00	0.2
			pP	15	42.00	70km
KVN	33.96	321	P	15	26.40	1.2
			pP	15	42.40	65km
CMB	34.79	318	ePc	15	32.70	0.5
			epP	15	47.80	61km
			esP	15	54.10	
			ePcP	18	03.40	
			epPcP	18	22.40	
ARN	35.17	316	P	15	39.10	3.7X
MHC	35.24	316	eP	15	37.00	0.9
			epP	15	50.20	50kmX
BRK	35.94	316	e(P)	15	42.90	1.1
			epP	15	57.90	58km
LRM	35.97	335	eP	15	42.70	0.4
MIM	36.08	27	e(P)	15	43.80	0.9
ORV	36.37	319	ePc	15	46.60	1.1
			epP	16	02.00	60km
			ePcP	18	08.90	
EMM	36.41	29	e(P)	15	47.30	1.7
MIN	36.90	320	eP	15	50.60	0.5
			epP	16	05.90	60km
			e	16	15.60	
WDC	37.61	320	eP	15	54.50	-1.4
			epP	16	09.90	61km
			esP	16	16.30	
			ePcP	18	11.80	
			epPcP	18	29.80	
			esPcP	18	38.20	
LBFM	37.66	321	e(P)	15	58.00	1.5
			epP	16	13.40	61km
ZOBO	38.21	142	P	16	00.50	-1.2
	1.0s	12.50nm			4.8mb	
Z	24s	0.50um			4.2MszX	
			LR	27	12.00	
LPB	38.43	142	eP	16	06.00	2.6X
			LR	27	50.00	
FHC	38.65	319	eP	16	05.60	1.0
			epP	16	21.00	61km
CNCB	38.71	142	P	16	05.00	-1.0
VGB	39.67	327	eP	16	14.70	1.7
			epP	16	30.90	65km
CCH	40.26	141	P	16	17.80	-0.7
LON	41.03	328	eP	16	24.60	0.4
			epP	16	40.80	64km
FFC	41.05	351	eP	16	41.00	16.8X
	1.0s	14.00nm				
BMW	41.59	327	eP	16	29.70	0.9
GMW	42.05	328	eP	16	32.90	0.4
ATB	42.64	111	e(P)	16	36.50	-1.2
MCW	42.83	329	eP	16	39.50	0.6
			epP	16	56.00	66km
PGC	43.12	329	eP	16	42.00	0.9
SCH	44.63	20	eP	16	53.00	-0.4
BAO	52.29	123	eP	17	52.30	-1.0
SOB1	55.33	112	eP	18	11.60	-4.0X
			e	18	26.90	57km
			e	18	30.60	
			e	18	37.40	
ITR	57.38	110	eP	18	28.60	-1.6
			e	18	40.50	41kmX
PMR	62.30	333	P	19	02.30	-0.8
	1.2s	37.88nm			5.4mb	
PMS	62.36	332	eP	19	02.80	-0.8
FBA	63.08	337	P	19	07.90	-0.4
	1.1s	28.13nm			5.3mb	
MBC	63.56	353	eP	19	09.50	-1.8

	0.7s	6.00nm		4.7mb				iS	14 30.00				0.6s	1.10nm		4.1mb
SVW	65.09	331 eP	19 20.30	-1.2	EVV	5.44	321	(P)	14 51.00	19.8X	KHC	89.09	39 eP	26 17.50	16.8X
TTA	65.78	333 e(P)	19 24.30	-1.6	OXX	5.56	301	iP	14 33.00	-0.3	SUF	89.55	24 eP	26 01.00	-1.6
	1.2s	49.24nm		5.4mb				iS	15 33.00		GTA	125.55	349 ePKP	32 06.50	-0.7
		epP	19 41.40	63km	LVVM	7.08	321	(P)	14 41.00	-13.2X	XAN	128.11	338 PKPc	32 11.50	-0.7
ALE	69.11	4 eP	19 44.00	-2.5	IISM	7.17	312	iP	14 56.50	1.1	CD2	132.70	342 ePKP	32 19.60	-1.4
	1.0s	16.00nm		4.9mb	III	8.48	300	iP	15 14.00	0.3	WB5	135.66	256 ePKP	32 25.70	-1.1
DAG	72.09	13 eP	19 56.00	-8.6X	MRX	10.54	302	iP	15 43.50	1.8	WRA	135.69	256 PKPc	32 25.90	-1.0
	1.0s	14.00nm		4.8mb	OLY	21.17	1	eP	17 52.70	-0.4		0.6s	1.80nm		
ADK	75.89	320 P	20 26.00	-0.9				epP	18 05.90	57km	CHG	145.51	342 iPKPd	32 43.70	-0.8
	0.9s	33.33nm		5.3mb	PRM	21.51	22	eP	17 56.50	0.1		1.0s	34.00nm		
EKA	77.29	36 P	20 33.00	-1.7	TKL	22.50	17	e(P)	18 01.00	-5.3X	NWAO	147.74	230 ePKP	32 49.00	1.3
	0.9s	13.20nm		4.9mb	ALQ	24.51	330	eP	18 26.60	0.6	NST	148.04	338 ePKP	32 52.00	3.4X
LPF	79.67	43 eP	20 45.80	-2.0		0.9s	15.13nm		4.5mb		MUN	148.95	231 ePKP	32 52.70	3.1X
	1.3s	17.30nm		4.8mb				e	19 01.50	176kmX	MBL	149.18	253 ePKP	32 53.00	2.7X
GRR	79.73	43 eP	20 46.30	-1.8				e	21 15.50			0.5s	9.00nm		
	1.2s	23.80nm		5.0mb	NAV	24.97	21	P	18 29.80	-0.4	GBA	150.34	22 PKPc	32 51.90	-0.2
FLN	79.91	42 eP	20 47.40	-1.7	GLA	28.13	316	eP	19 00.00	0.8		1.1s	9.10nm		
	1.2s	17.80nm		4.9mb				e	19 15.00	62km	NNT	151.02	336 iPKPd	32 58.80	5.6X
MFF	80.53	44 eP	20 49.70	-2.8X	TPC	29.58	316	eP	19 13.00	0.8	NANU	152.86	248 ePKP	33 02.00	6.4X
MAF	82.45	44 eP	21 00.30	-2.2				e	19 28.00	61km		S.D. = 1.2	on 67 of 84 obs.		
	1.4s	17.40nm		4.8mb	PLM	29.70	314	eP	19 14.00	0.5	----------				
BGF	82.56	44 eP	21 01.10	-2.0				e	19 28.00	56km	?	JUL 26, 1989	17h 26m 26.64± 2.16s		
	1.0s	12.80nm		4.9mb	RVR	30.41	315	eP	19 20.00	0.5		52.978 N ±27.4km	164.045 W ±18.3km		
SSF	82.89	43 eP	21 02.50	-2.2	MWC	31.01	315	eP	19 25.00	0.0		DEPTH = 33.0km	(normal)		
	1.0s	6.80nm		4.6mb	ISA	32.10	316	eP	19 35.00	0.6		4.1mb (1 obs.)			
LOR	83.07	43 eP	21 03.80	-1.9	PTN	33.43	22	e(P)	19 44.60	-1.2		SOUTH OF ALASKA			(17)
	0.9s	6.50nm		4.6mb	FRI	33.68	317	ePd	19 47.50	-0.5					
LBF	83.22	43 eP	21 04.10	-2.4				epP	20 03.10	63km	SNKA	1.68	26 ePc	26 53.11	-1.0
	1.0s	4.80nm		4.4mb				e	20 22.00				eS	27 13.94	
NB2	83.50	29 P	21 07.40	-0.2	PRI	33.84	315	eP	19 50.20	0.6	DRRA	2.21	27 eP	27 01.27	-0.4
HAU	84.52	42 eP	21 11.50	-1.5				epP	20 05.90	63km	DLG	2.53	30 eP	27 06.47	0.2
	0.8s	5.30nm		4.6mb	KVN	33.91	322	P	19 50.60	0.4			eS	27 34.21	
HFS	84.96	29 eP	21 14.30	-0.6				pP	20 06.90	67km	PS4	2.70	27 eP	27 09.54	0.8
	1.1s	12.60nm		4.9mb	GAC	34.24	20	eP	19 52.00	-0.7			eS	27 39.31	
LPG	85.46	44 eP	21 17.60	-0.5				pP	20 08.00	65km	PVV	2.74	28 eP	27 09.74	0.5
	1.2s	10.10nm		4.8mb	LLA	34.29	316	ePd	19 53.00	-0.4			eS	27 39.21	
GRF	87.10	39 eP	21 25.20	-0.5				epP	20 08.90	64km	SASA	3.15	40 eP	27 15.53	0.5
Z	22s	0.06um		4.0Msz	PRS	34.43	315	e(P)	19 54.00	-0.5			eS	27 49.19	
CLL	87.63	37 e(P)	21 45.00	16.8X	CMB	34.72	318	ePd	19 57.20	0.2	SGB	3.32	38 eP	27 17.26	-0.3
KHC	88.74	39 eP	21 34.00	0.4				ipP	20 13.00	64km			eS	27 53.90	
SUF	89.25	24 eP	21 34.00	-1.7	ARN	35.08	316	eP	20 01.30	1.1	BKJ	3.43	49 eP	27 18.82	-0.2
BJI	120.04	336 ePKP	27 46.00	15.1X	MHC	35.15	316	ePd	20 01.70	0.9	IVF	3.94	40 eP	27 26.06	-0.1
BUL	122.71	105 ePKP	27 35.80	-0.9				epP	20 16.40	57km			eS	28 07.80	
		ipP	27 52.80					esP	20 21.20		SUF	64.37	355 eP	37 01.00	0.2
TIY	123.50	337 ePKP	27 37.60	-0.1				e	20 27.10		HFS	67.23	1 eP	37 19.00	-0.1
Z	25s	0.80um		5.3MszX	ORV	36.31	320	ePd	20 11.20	0.8		0.4s	0.70nm		4.1mb
GTA	125.43	349 PKPc	27 40.40	-1.1				epP	20 27.10	63km		S.D. = 0.6	on 11 of 11 obs.		
LZH	127.73	344 ePKP	27 47.00	0.9	MIM	36.40	27	e(P)	20 09.50	-1.5	----------				
QUE	130.99	25 ePKP	27 52.70	0.2	EMM	36.73	29	e(P)	20 13.30	-0.5	*	JUL 26, 1989	17h 26m 34.50± 0.86s		
GYA	135.72	337 PKP	28 00.80	-0.7	LBFM	37.61	322	e(P)	20 22.50	0.9		14.178 N ±12.7km	91.893 W ± 7.4km		
WB5	136.02	256 ePKP	28 11.70	9.6X				epP	20 37.90	61km		DEPTH = 66.8 ± 5.3 km			
CHG	145.43	343 iPKPc	28 18.00	-0.9	ZOBO	38.26	142	P	20 26.70	-0.9		4.5mb (4 obs.)			
	1.1s	50.63nm			LPB	38.48	142	P	20 30.00	0.7		GUATEMALA			(70)
LOE	145.81	337 iPKPc	28 19.00	-0.5	FHC	38.58	320	ePd	20 30.60	1.1					
		i	32 44.20					epP	20 46.40	63km	JAT	0.28	61 iP	26 46.00	0.7
HYB	146.85	18 ePKP	28 21.50	0.3	VGB	39.65	328	e(P)	20 40.80	2.4	OC2	0.47	323 iPd	26 46.00	-0.9
		e	28 38.00					epP	20 55.60	58km	HUG	0.57	106 iP	26 48.00	0.1
NST	147.99	339 ePKP	28 26.00	3.0X	CCH	40.32	140	P	20 43.30	-1.1	SOG	0.66	26 iP	26 49.00	-0.4
GBA	150.04	22 PKPc	28 26.80	0.6	LON	41.02	328	eP	20 50.50	1.0	LHG	0.74	69 iP+	26 49.00	-0.9
	0.8s	18.40nm						epP	21 06.10	61km	KKG	0.80	350 iP	26 50.50	-0.2
NNT	150.97	337 iPKPc	28 33.20	5.6X				e	22 48.30		TPX	0.81	334 iP	26 51.00	0.4
	S.D. = 1.3	on 96 of 125 obs.			BMW	41.57	327	eP	20 54.70	0.6			iS	27 07.00	
----------					MCW	42.83	330	eP	21 04.70	0.4	FUG	1.05	75 iP	26 53.00	-1.0
	JUL 26, 1989	16h 13m 10.89± 0.41s						epP	21 20.30	61km	PSG2	1.07	102 iP	26 54.00	0.0
	14.239 N ± 8.3km	91.747 W ± 5.2km			PGC	43.11	329	eP	21 08.00	1.5	ITG	1.10	68 eP	26 54.90	0.2
	DEPTH = 61.9km	(19 depth phases)			SCH	44.92	20	eP	21 19.00	-2.1	TER	1.18	84 iP	26 55.00	-0.5
	4.8mb (7 obs.)				YKA	50.85	347	eP	22 06.20	-0.9	PCG	1.22	80 iP+	26 57.00	0.7
	GUATEMALA			(70)	SOB1	55.56	112	eP	22 39.00	-3.7X	MMG	1.23	73 iPd	26 56.50	0.1
								e	22 57.00	70km	BVA	1.31	68 iP+	26 58.00	0.5
JAT	0.13	54 ePd	13 22.00	0.6	TOA	61.25	334	eP	23 21.80	0.1			S	27 13.50	
HUG	0.46	118 iP+	13 24.50	1.8	PMR	62.32	333	P	23 27.80	-0.9	REC	1.35	79 iPd	26 58.00	0.0
OC2	0.53	307 iP	13 24.00	0.6	FBA	63.12	337	eP	23 32.60	-1.5	GCG	1.38	73 eP	27 02.00	3.7X
TPX	0.83	323 iP	13 28.00	1.1	SVW	65.10	331	eP	23 45.30	-1.7			S	27 20.00	
		iS	13 40.00		TTA	65.80	333	e(P)	23 50.20	-1.3	RDG	1.60	59 iPd	27 02.00	0.6
FUG	0.90	77 iP	13 29.00	1.0		0.9s	14.58nm		5.0mb		SLP	1.66	70 iP	27 03.00	0.9
ITG	0.94	68 iP	13 31.00	2.3				epP	24 06.80	61km	SCX	2.64	344 iP	27 19.00	3.4X
PSG2	0.95	107 iP	13 30.50	2.1	ALE	69.31	4 eP		24 10.00	-3.2X			iS	27 48.50	
TER	1.03	86 iP	13 31.00	1.4		0.7s	6.00nm		4.6mb		IISM	7.11	313 (P)	28 04.50	-13.6X
PCG	1.07	82 iP	13 37.00	6.6X	DAG	72.35	13 iPd		24 28.70	-2.8	UYO	20.04	354 iPd	31 02.70	-2.0
MMG	1.07	74 iP	13 33.00	2.6		1.2s	20.31nm		4.9mb		ALQ	24.50	330 eP	31 49.50	0.4
REC	1.20	80 iP	13 35.00	3.0X	ADK	75.83	320 ePd		24 51.00	-1.0		0.9s	6.30nm		4.1mb
GCG	1.23	74 iP+	13 37.00	4.6X		0.8s	94.40nm		5.8mb		PLM	29.64	314 P	32 37.40	1.3
		S	13 54.00		EKA	77.63	36 Pd		24 59.20	-2.8	KVN	33.87	322 P	33 13.90	0.9
RDG	1.45	58 iPd	13 41.00	5.5X		0.6s	9.60nm		5.0mb		VGB	39.63	328 e(P)	34 03.20	1.9
SLP	1.50	70 iP+	13 42.00	5.8X	NB2	83.82	28 P		25 33.80	-0.9			epP	34 18.70	61kmX
SCX	2.63	341 iP	13 58.00	6.4X	HFS	85.28	29 eP		25 39.90	-2.0	LON	40.99	328 eP	34 12.90	0.4

26d 17h

PMR	62.31	333	P	36	50.80	-0.9
	0.8s		4.31nm			4.6mb
TTA	65.79	333	eP	37	12.90	-1.6
	0.8s		6.47nm			4.6mb
IMA	65.84	337	eP	37	16.00	1.1
	0.5s		1.81nm			4.3mb
			e	37	30.00	
			e	37	49.90	
CHG	145.52	342	ePKP	46	06.00	-1.5
LOE	145.86	336	ePKP	46	08.00	-0.1
	S.D. = 1.0		on 28 of 31 obs.			

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* JUL 26, 1989 17h 29m 56.73± 1.80s
14.160 N ±14.2km 91.720 W ± 9.8km
DEPTH = 61.4 ± 17.2 km
GUATEMALA (70)

JAT	0.18	27	iP+	30	07.50	1.2
HUG	0.41	110	iP	30	08.00	0.0
LHG	0.59	61	iP	30	09.00	-1.0
OC2	0.60	311	iPd	30	10.00	0.0
SOG	0.63	12	iP	30	10.00	-0.7
KKG	0.87	339	iP	30	13.00	-0.3
FUG	0.90	71	iP	30	12.00	-1.8
PSG2	0.90	103	iP	30	13.50	-0.1
ITG	0.95	63	iP	30	15.50	0.9
TER	1.01	82	iP	30	15.00	-0.2
PCG	1.06	78	iPd	30	16.00	-0.1
MMG	1.07	69	iP+	30	16.00	-0.2
			S	30	30.00	
BVA	1.16	64	iP	30	17.80	0.4
			S	30	34.00	
REC	1.19	76	iP+	30	17.80	0.1
GCG	1.23	70	eP	30	36.00	17.8X
RDG	1.47	55	eP	30	22.50	0.9
SLP	1.51	67	iP+	30	23.00	1.0
			S	30	45.00	
	S.D. = 0.9		on 16 of 17 obs.			

? JUL 26, 1989 17h 49m 07.10± 8.52s
2.128 N ±114.km 126.896 E ±32.0km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
MOLUCCA PASSAGE (266)

MNI	2.17	252	ePd	49	41.50	0.0
			eS	50	14.00	
WB5	23.07	162	eP	54	10.70	-0.2
WRA	23.12	162	Pd	54	11.30	-0.1
	0.5s		4.00nm			4.2mb
QIS	25.76	152	eP	54	37.00	0.3
ASPA	26.53	166	eP	54	43.30	-0.5
	0.9s		8.00nm			4.3mb
WARB	28.15	180	eP	54	59.00	0.5
	S.D. = 0.5		on 6 of 6 obs.			

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* JUL 26, 1989 18h 30m 47.59± 1.00s
44.559 N ± 6.9km 6.795 E ± 9.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.5 (GEN).

FOUF	0.03	197	ePgc	30	49.59	0.0
			eSg	30	50.24	
PZZ	0.23	104	P	30	52.67	0.1
			S	30	55.93	
RRL	0.36	359	P	30	55.08	0.0
			S	30	59.96	
STV	0.49	130	P	30	57.70	0.1
			S	31	04.36	
ENR	0.56	126	P	30	58.75	-0.2
			S	31	06.19	
	S.D. = 0.2		on 5 of 5 obs.			

? JUL 26, 1989 19h 15m 13.79± 1.93s
11.733 S ±23.8km 115.753 E ±48.5km
DEPTH = 33.0km (normal)
SOUTH OF BALI ISLAND (284)

TRT	5.05	322	ePd	16	29.00	-0.2
MBL	10.16	158	eP	17	39.00	-1.5
	0.2s		9.00nm			5.7mb X
			eS	19	24.00	
NANU	10.77	181	eP	17	47.70	-1.2
	0.3s		4.00nm			5.2mb X
			eS	19	38.00	
MEKA	15.03	170	eP	18	46.30	0.7
MRWA	17.40	179	eP	19	16.30	0.6
COOL	19.70	166	eP	19	45.00	1.5
	S.D. = 1.5		on 6 of 6 obs.			

& JUL 26, 1989 20h 52m 41.05s
58.397 N 154.413 W
DEPTH = 89.2km
ALASKA PENINSULA (12)
<AGS-P>.

CDD	0.67	37	iP	52	56.52	-0.9
			S	53	08.63	
MCNL	0.79	3	iP	52	57.82	-0.9
			S	53	09.28	
AUW	1.09	26	iP	53	01.37	-0.7
			S	53	17.77	
SHU	1.11	77	eP	53	01.30	-0.9
			S	53	16.56	
KDC	1.21	122	eP	53	02.38	-1.1
OPT	1.40	25	iP	53	05.08	-0.8
ILIM	1.85	23	iP	53	10.60	-1.2
CNPM	2.00	54	eP	53	12.11	-1.6
			S	53	36.10	
NNL	2.30	43	iP	53	17.23	-0.6
RDT	2.41	24	iP	53	17.81	-1.6
SPU	3.04	22	eP	53	26.25	-1.7
VZW	4.79	53	eP	53	48.89	-3.3
	12 obs. associated					

% JUL 26, 1989 22h 10m 57.01± 0.92s
61.791 N ±12.2km 7.274 E ±12.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.9 (BER).

HYA	0.82	220	iP	11	12.30	-0.5
			eS	11	24.00	
SUE	1.41	240	iP	11	22.70	0.0
			eS	11	42.50	
ASK	1.66	218	iP	11	26.00	-0.2
			eS	11	49.30	
BER	1.70	215	eP	11	27.60	0.8
			eS	11	50.70	
ODD1	1.91	190	iP	11	30.50	0.5
			iS	11	56.60	
RGS	1.92	49	iP	11	30.00	0.0
			eS	11	53.20	
BLS1	2.42	185	eP	11	36.70	-0.6
			eS	12	06.80	
	S.D. = 0.6		on 7 of 7 obs.			

JUL 26, 1989 22h 38m 08.27± 0.52s
44.754 N ± 3.8km 111.063 W ± 6.0km
DEPTH = 5.0km (geophysicist)
HEBGEN LAKE REGION (458)
ML 3.9 (NEIS), 4.1 (BUT). Felt (IV) at West Yellowstone, Montana.

BGMT	0.84	305	iPd	38	24.70	-0.5
MEMT	0.85	4	iP	38	24.80	-0.5
LCCM	1.23	332	iPc	38	32.10	0.4
CCMT	1.30	278	iPd	38	33.20	0.3
LRM	1.45	318	iPd	38	35.90	0.5
BUT	1.64	321	ePnd	38	39.10	1.0
			ePg	38	40.40	
			iSn	39	00.80	
HRY	2.03	345	iPnd	38	44.40	0.8
PTI	2.11	207	ePn	38	45.20	0.4
			ePg	38	49.90	
			e	39	07.70	
			e	39	10.10	
			eLg	39	13.80	
BW06	2.26	151	eP	38	48.00	0.9
DMMT	2.40	332	ePnc	38	49.70	0.6
DAU	4.34	182	e(Pn)	39	16.50	-0.2
			ePg	39	31.20	
DUG	4.74	196	e(Pn)	39	21.70	-0.5
RSSD	5.07	95	eP	39	30.00	3.0X
LNOR	5.22	285	ePn	39	30.00	1.1
			ePg	39	46.90	
DPW	5.85	305	eP	39	36.60	-1.1
KVN	7.74	225	eP	40	04.00	-0.6
LON	7.78	289	ePn	40	04.90	0.0
			eLg	42	16.00	
			e	42	25.00	
RMW	7.94	294	e(Pn)	40	05.80	-1.4
FFC	11.57	27	eP	40	56.00	-1.0
	S.D. = 0.8		on 18 of 19 obs.			

& JUL 26, 1989 23h 43m 01.99s
56.931 N 146.805 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

MID	2.52	5	eP	43	38.23	-5.3
			S	44	05.62	
SHU	3.42	302	eP	43	50.74	-5.6
SEW	3.47	338	eP	43	50.83	-6.2
			S	44	29.57	
CNPM	3.50	320	eP	43	51.54	-6.0
			S	44	32.75	
XLV	3.63	316	eP	43	53.30	-6.1
NNL	3.91	325	eP	43	58.35	-5.0
SLKM	4.01	335	eP	43	58.73	-6.0
			S	44	43.78	
VZW	4.14	2	eP	44	01.15	-5.5
CDD	4.16	302	eP	44	00.91	-6.0
			S	44	48.20	
OPT	4.35	312	eP	44	03.79	-5.9
TGL	4.36	27	eP	44	03.93	-5.9
ILIM	4.52	317	eP	44	05.25	-6.7
KLU	4.60	5	eP	44	07.65	-5.6
BALM	4.72	27	iP	44	09.22	-5.8
GLB	4.78	18	eP	44	10.00	-5.8
SUA	4.98	338	eP	44	12.12	-6.5
	16 obs. associated					

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* JUL 26, 1989 23h 49m 10.18± 0.91s
29.029 S ±14.4km 139.888 E ±15.5km
DEPTH = 10.0km (geophysicist)
SOUTH AUSTRALIA (592)
ML 3.6 (STK).

STK	3.20	153	eP	50	01.70	0.2
			eS	50	46.00	
CMS	5.69	117	e(P)	50	36.00	-0.8
			eS	51	37.00	
ADE	6.00	189	e(P)	51	29.00	47.8X
ASPA	7.57	313	eP	51	04.90	1.6
	0.6s		18.00nm			5.4mb X
			eS	52	27.50	
RMQ	8.25	74	e(P)	51	19.00	6.2X
			eS	52	48.00	
BFD	8.42	165	eP	51	16.00	0.8
			eS	52	52.00	
WB5	10.40	330	eP	51	42.20	-0.3
			eS	53	38.20	
WARB	12.08	280	eP	52	03.80	-1.6
			eS	54	08.00	
	S.D. = 1.5		on 6 of 8 obs.			

JUL 27, 1989 01h 26m 25.11± 0.84s
44.495 N ± 7.1km 6.880 E ± 7.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (GEN).

FOUF	0.08	296	iPgd	26	27.56	0.0
			eSg	26	28.49	
PZZ	0.16	86	P	26	29.16	0.3
			S	26	31.55	
STV	0.41	128	P	26	33.35	-0.1
			S	26	39.51	
RRL	0.43	351	P	26	34.09	0.1
			S	26	40.45	
ENR	0.47	124	P	26	34.71	0.0
RSP	0.71	22	P	26	38.90	-0.3
ROB	0.74	105	P	26	39.58	-0.1
	S.D. = 0.2		on 7 of 7 obs.			

JUL 27, 1989 01h 34m 50.77± 0.47s
32.336 N ± 5.2km 48.823 E ± 7.2km
DEPTH = 33.0km (normal)
4.7mb (23 obs.)
WESTERN IRAN (347)

KER	2.47	325	eP	35	36.00	6.3X
BHD	3.85	285	ePnd	36	03.00	13.9X
			eP+	36	11.50	
			iSn	36	58.00	
			iS+	37	11.00	
			iSg	37	22.00	

TEH	4.00	31	eP	35	52.00	0.5
			eS	36	48.00	
SHI	4.16	129	eP	35	54.00	0.3
SLY	4.27	321	iPnd	35	57.50	2.5
			iP*	36	04.00	
			iPg	36	12.00	
			iSn	36	45.50	
			iS*	36	55.50	
			iSg	37	03.30	
TAB	6.07	341	eP	36	23.00	2.3
DHR	6.12	169	ePc	36	22.50	1.2
MSL	6.19	312	ePd	36	20.00	-2.2
			eS	37	30.50	
			e	38	08.00	
OASM	7.75	218	ePd	36	43.90	-0.3
RYD	7.83	195	eP	36	45.00	-0.3
MAIO	9.67	63	eP	37	22.00	11.2X
			eS	39	14.00	
PRNI	11.99	264	e(P)	37	42.00	-0.3
MBH	12.23	262	e(P)	37	47.00	1.6
BBTK	14.98	304	eP	38	26.00	4.2X
KHL	16.83	296	eP	38	49.30	3.8X
KDZ	20.83	303	eP	39	34.00	2.1
RZN	21.34	303	eP	39	39.00	1.7
ISR	21.49	313	eP	39	40.00	1.4
VRI	21.74	315	iPd	39	41.90	0.8
			ed	03	42.30	
PGB	22.00	305	eP	39	45.00	1.2
MMB	22.01	302	eP	39	47.00	3.1X
MLR	22.03	313	eP	39	45.00	0.9
CMP	22.49	312	ePd	39	48.00	-0.6
KKB	22.56	302	eP	39	52.00	2.8X
VTS	22.68	304	eP	39	54.00	3.3X
VAY	22.78	301	eP	39	54.50	3.1X
SKO	23.76	302	iP	40	02.80	1.8
Z	14s		0.54um			4.2MszX
N	16s		0.34um			
E	14s		0.54um			
			eS	44	25.00	
			LR	51	06.00	
SPC	27.19	317	e(P)	40	33.80	0.4
KRA	27.78	318	eP	40	38.70	0.3
KSP	30.21	317	eP	41	00.00	-0.3
KBA	30.71	309	iPc	41	05.40	0.4
	0.8s	15.70nm				4.9mb
			i	41	09.60	
			i	41	12.80	
PRU	30.90	315	eP	41	06.00	-0.3
KHC	31.18	313	iPd	41	09.40	0.5
	1.3s	12.00nm				4.6mb
BHG	31.20	310	iPc	41	09.20	0.2
BRG	31.59	316	e(P)	41	11.00	-1.4
WET	31.62	313	iPd	41	12.70	-0.1
	0.8s	9.00nm				4.7mb
OGA	32.20	308	eP	41	18.70	0.7
CLL	32.30	317	iPd	41	18.10	-0.5
	1.1s	12.00nm				4.7mb
FUR	32.35	310	iPc	41	19.10	0.0
	0.7s	27.00nm				5.3mb
NUR	32.36	338	eP	41	18.00	-0.9
OSS	32.75	307	ePd	41	23.60	0.8
GRF	32.82	313	eP	41	23.50	0.3
	0.8s	12.00nm				4.8mb
BOB	32.89	304	Pc	41	25.10	1.2
SAX	33.40	308	ePc	41	28.40	-0.2
PCP	33.49	303	P	41	28.37	-0.8
VAI	33.53	306	Pc	41	25.40	-3.9X
LLS	33.56	307	ePc	41	29.60	-0.3
SUF	33.66	341	iP	41	29.30	-0.9
	0.5s	2.30nm				4.4mb
FIN	33.69	302	P	41	30.73	-0.1
IMI	33.89	302	P	41	30.83	-1.8
ROB	33.94	303	P	41	32.06	-1.0
SLE	34.08	309	ePd	41	33.90	-0.2
ZLA	34.09	308	ePd	41	34.40	0.2
SBF	34.21	302	eP	41	35.70	0.3
	0.8s	9.10nm				4.8mb
STV	34.33	302	P	41	33.42	-3.0X
UPP	34.41	332	iPc	41	35.10	-1.6
RSP	34.48	304	P	41	36.06	-1.7
DIX	34.50	306	ePc	41	38.00	-0.1
LSD	34.59	304	P	41	38.31	-0.5
RRL	34.79	303	P	41	37.60	-2.9
BNI	34.88	304	Pc	41	41.10	-0.1
LPG	34.88	304	eP	41	41.00	-0.4
	0.8s	13.40nm				4.9mb
ABH	35.16	312	ePc	41	42.90	-0.5
RUP	35.43	312	ePc	41	45.08	-0.6
HAU	35.54	309	eP	41	45.70	-0.9
	0.8s	8.00nm				4.7mb
WLF	35.99	311	Pd	41	50.00	-0.4
HFS	36.16	331	eP	41	51.40	-0.2
	0.7s	37.90nm				5.4mb
WTS	36.17	315	eP	41	53.30	1.5
	0.7s	14.00nm				5.0mb
			e	41	58.00	
ENN	36.39	313	eP	41	55.50	1.8
	0.7s	4.00nm				4.4mb
SMF	37.03	306	eP	41	58.80	-0.3
	0.8s	17.90nm				5.0mb
DOU	37.07	312	Pc	42	00.40	1.0
	0.9s	7.50nm				4.6mb
LOR	37.09	307	eP	41	58.90	-0.8
	1.1s	9.70nm				4.6mb
SSF	37.30	307	eP	42	01.10	-0.3
	0.8s	9.90nm				4.7mb
AVF	37.38	306	eP	42	01.70	-0.3
	0.9s	8.10nm				4.6mb
NB2	37.68	331	P	42	03.90	-0.6
BNG	39.66	232	ePd	42	25.20	3.7X
	1.0s	10.00nm				4.5mb
			id	42	40.50	
LDF	39.90	309	eP	42	22.30	-0.8
FLN	40.15	309	eP	42	24.40	-0.8
	0.8s	10.70nm				4.7mb
GRR	40.37	308	eP	42	26.50	-0.4
	0.8s	10.70nm				4.6mb
LPF	40.46	308	eP	42	26.90	-0.8
	1.0s	12.00nm				4.6mb
EKA	42.71	318	P	42	46.00	-0.1
	1.0s	7.00nm				4.3mb

S.D. = 1.1 on 69 of 81 obs.

? JUL 27, 1989 01h 39m 47.00± 5.41s
40.842 N ±16.3km 21.462 E ±41.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PHP	1.14	318	iPnd	40	08.50	0.1
TPE	1.23	244	ePn	40	10.00	0.1
TIR	1.31	293	ePn	40	11.50	0.3
LACI	1.54	302	ePn	40	13.60	-0.9
BCI	1.85	326	ePn	40	19.20	0.3

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

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* JUL 27, 1989 02h 22m 15.36± 1.18s
40.758 N ±11.9km 30.083 E ± 9.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

GBZT	0.49	274	ePg	22	25.30	0.1
			iSg	22	33.30	
GPA	0.50	160	iPg	22	23.30	-2.2
			eSg	22	30.80	
ISK	0.83	292	ePn	22	30.30	-1.2
CTT	1.31	288	ePn	22	38.60	-1.0
DST	1.60	225	iPn	22	44.40	0.6
ALT	1.70	179	iPn	22	46.50	1.2
EDC	1.74	257	ePn	22	47.00	1.2
DMK	2.05	302	ePn	22	50.80	0.5
BBTK	2.24	113	eP	22	54.00	0.8
KHL	2.47	190	ePn	23	00.80	4.4X

S.D. = 1.4 on 9 of 10 obs.

? JUL 27, 1989 03h 00m 16.75± 1.37s
54.827 N ±23.2km 164.754 W ±17.1km
DEPTH = 200.3 ± 11.2 km
4.1mb (1 obs.)
UNIMAK ISLAND REGION (10)

SNKA	1.20	106	ePd	00	48.38	0.1
			eS	01	10.93	
DRRA	1.43	85	eP	00	49.83	-0.3
			eS	01	14.04	
DLG	1.71	78	ePd	00	52.75	0.0
PS4	1.74	71	eP	00	53.02	0.0
			eS	01	28.31	
PN6	1.75	68	eP	00	53.31	0.2
PVV	1.79	71	eP	00	53.59	0.1
SQF	2.45	79	eP	01	00.44	0.0
			eS	01	31.14	
SASA	2.50	76	eP	01	01.08	0.1
			eS	01	32.04	
SGB	2.57	72	eP	01	01.58	-0.2
			eS	01	33.90	
NGI	2.71	84	eP	01	03.49	0.1
			eS	01	36.73	
CNBA	2.99	88	eP	01	06.67	0.0
BKJ	3.01	82	ePc	01	06.91	0.0
			eS	01	42.73	
IVF	3.17	68	eP	01	08.84	0.0
HFS	65.38	1	eP	10	39.00	0.0
	0.4s	1.30nm				4.1mb

S.D. = 0.2 on 14 of 14 obs.

JUL 27, 1989 03h 04m 29.25± 0.67s
40.671 N ± 6.1km 20.885 E ± 7.1km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

KBN	0.07	229	iPgd	04	30.70	-0.9
LSK	0.56	203	iPgd	04	41.50	0.7
TPE	0.77	241	ePg	04	44.00	-0.2
TIR	1.02	312	ePg	04	48.00	-0.6
PHP	1.07	342	iPgc	04	48.50	-0.9
LACI	1.31	318	ePn	04	59.20	5.7X
LIT	1.35	114	ePd	04	54.30	0.2
SKO	1.37	18	ePn	04	54.50	0.2
VAY	1.43	62	ePn	04	54.50	-0.7
PUK	1.56	332	ePn	04	59.20	2.2

S.D. = 1.1 on 9 of 10 obs.

? JUL 27, 1989 03h 43m 09.13± 2.13s
5.928 S ±22.0km 131.066 E ±27.7km
DEPTH = 118.1 ± 29.0 km
4.4mb (2 obs.)
BANDA SEA (280)

AAI	3.63	308	eP	44	04.50	0.0
MTN	6.88	179	iPd	44	50.10	1.2
			eS	46	04.30	
KNA	10.02	193	iPc	45	30.70	-0.6
	0.3s	64.00nm				5.9mb X
			eS	47	17.00	
WB5	14.24	167	eP	46	24.20	-2.4
			iS	48	59.50	
WRA	14.29	167	P	46	35.00	7.7X
	0.2s	1.90nm				4.0mb
QIS	16.74	151	eP	46	58.00	0.1
			eS	49	57.00	
ASPA	17.85	171	iPc	47	12.70	1.1
	0.6s	41.00nm				4.9mb
			eS	50	24.00	
MBL	18.65	215	eP	47	19.70	-0.9
WARB	20.58	191	eP	47	42.00	1.4

S.D. = 1.7 on 8 of 9 obs.

? JUL 27, 1989 03h 49m 58.71±12.21s
0.335 N ±46.8km 79.012 W ±74.6km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF ECUADOR (105)

GGP	0.65	141	eP	50	11.80	-0.4
			S	50	38.70	
COTA	0.67	90	eP	50	12.10	-0.3
OUR	0.70	136	P+	50	12.60	-0.2
			S	50	40.60	
CAYA	1.06	104	eP	50	19.60	0.6
			e	50	54.10	
RECU	1.06	155	eP	50	19.40	0.3
			eS	50	53.00	

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

? JUL 27, 1989 05h 41m 10.75± 4.41s
31.214 S ±14.8km 68.587 W ±20.8km
DEPTH = 91.2 ± 44.8 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.15	139	iPd	41	24.00	-0.2
			S	41	35.00	
RTCB	0.33	214	ePd	41	25.00	0.2
			(S)	41	37.00	
CFA	0.49	143	iPd	41	26.00	0.2
			S	41	38.10	
RTCV	0.65	176	iPc	41	27.00	-0.1
			S	41	40.00	
RTBS	0.86	239	ePd	41	29.20	-0.1
			S	41	43.00	
RTRS	1.28	324	e(P)	41	34.20	0.0

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

27d 05h

? JUL 27, 1989 05h 44m 44.89± 1.19s
4.148 S ±17.2km 141.362 E ±19.7km
DEPTH = 62.7 ± 34.0 km
4.0mb (3 obs.)
PAPUA NEW GUINEA (202)

JAY	1.75	338	ePc	45 13.50	0.0
			eS	45 35.50	
MNDI	3.03	131	eP	45 32.00	0.2
			eS	46 14.00	
MTN	13.30	229	iPd	47 52.00	-0.6
	0.4s		19.00nm		5.2mb X
			eS	50 15.90	
QIS	16.40	186	eP	48 31.00	-1.6
			eS	51 55.00	
WB5	17.06	203	eP	48 40.70	-0.1
			eS	52 00.20	
WRA	17.13	203	Pc	48 43.90	2.2
	0.4s		1.80nm		3.6mb
ASPA	20.70	200	iPc	49 21.80	-0.6
	0.8s		8.00nm		4.1mb
WARB	26.06	211	eP	50 14.80	0.5
	0.3s		2.00nm		4.1mb

S.D. = 1.4 on 8 of 8 obs.

& JUL 27, 1989 05h 48m 47.19s
63.428 N 151.366 W
DEPTH = 18.8km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.0 (PMR).

KTH	0.24	58	eP	48 52.79	-0.1
HUR	0.90	119	eP	49 03.52	-0.6
MCK	1.13	73	eP	49 07.82	-0.1
RND	1.13	90	eP	49 07.84	-0.1
CUT	1.14	153	iP	49 07.76	-0.3
SKT	1.46	183	iP	49 12.52	-0.1
			S	49 30.83	
NEA	1.53	40	eP	49 13.73	0.1
PWA	1.91	158	eP	49 19.70	0.5
CCB	1.99	50	iP	49 19.90	-0.4
SUA	1.99	171	eP	49 20.43	0.0
PMR	2.11	150	eP	49 22.20	0.1
FBA	2.15	45	eP	49 22.30	-0.4
TTA	2.17	259	e(Pn)	49 21.30	-1.6
			ePg	49 25.50	
HDA	2.18	61	eP	49 22.56	-0.6
PMS	2.35	158	eP	49 27.10	1.6
NKA	2.70	179	eP	49 32.94	2.6
PAX	2.71	97	eP	49 31.03	0.3
TOA	2.73	117	eP	49 31.90	0.9
IMA	2.83	341	e(Pn)	49 32.80	0.4
			ePg	49 42.40	
SVW	3.06	222	eP	49 38.20	2.6
VZW	3.27	134	eP	49 39.57	0.9

21 obs. associoted

• JUL 27, 1989 06h 08m 47.84± 0.93s
7.108 S ±13.8km 150.830 E ±17.1km
DEPTH = 33.0km (normal)
4.6mb (1 obs.)
NEW BRITAIN REGION (192)

RAB	3.19	25	e(P)	09 37.00	0.2
			iS	10 10.50	
LMG	3.20	236	eP	09 37.50	0.4
LAT	3.83	277	eP	09 57.00	11.1X
PMG	4.30	238	eP	09 56.00	3.4X
MTN	20.22	252	iPc	13 21.90	-1.0
	0.4s		13.00nm		4.6mb
BRS	20.26	175	iPc	13 22.90	-0.5
ASPA	23.14	223	eP	13 53.60	1.3
WARB	29.84	228	eP	14 54.20	-0.3

S.D. = 1.0 on 6 of 8 obs.

JUL 27, 1989 07h 44m 55.33± 0.96s
41.711 N ± 8.0km 19.487 E ± 7.4km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.5 (TTG).

LACI	0.18	114	iPgc	44 58.70	-0.7
ULC	0.31	325	ePg	45 01.90	0.1
			eSg	45 07.00	
PUK	0.45	42	iPgc	45 03.30	-1.2
TIR	0.46	142	ePg	45 04.60	-0.1
TTG	0.74	347	ePg	45 09.10	-0.7
			eSg	45 21.50	
BDV	0.75	320	ePg	45 10.50	0.4
			eSg	45 24.00	
KKS	0.78	62	ePg	45 13.00	2.5
BCI	0.78	33	ePg	45 10.10	-0.5
HCY	1.04	315	ePg	45 15.00	0.0
			eSg	45 32.00	
LCI	1.80	221	P	45 53.80	27.2X
			eSg	45 55.20	

S.D. = 1.2 on 9 of 10 obs.

? JUL 27, 1989 09h 07m 45.76± 3.46s
15.061 N ±13.5km 61.193 W ±26.0km
DEPTH = 175.5 ± 31.9 km
LEEWARD ISLANDS (92)

FDF	0.33	173	iPd	08 10.16	-0.6
	0.1s		1.70nm		
			S	08 26.50	
CRM	0.41	139	iPd	08 10.14	-0.8
BBL	0.54	329	ePd	08 10.50	0.1
BIM	0.55	168	iPd	08 11.03	0.5
			S	08 30.40	
MVM	0.58	150	iPd	08 11.19	0.5
MGG	0.86	352	iP	08 12.40	0.1
			S	08 30.60	
PAG	1.07	334	eP	08 14.10	0.2
			S	08 34.30	
DEG	1.25	6	iPc	08 15.75	0.3
MGH	1.92	329	eP	08 21.96	-0.1
BPA	2.07	342	eP	08 23.46	-0.3
			eS	08 48.46	
ANG	2.17	344	eP	08 24.44	-0.3
NEV	2.45	327	eP	08 28.15	0.1
SKI	2.70	327	eP	08 31.23	0.1

S.D. = 0.5 on 13 of 13 obs.

? JUL 27, 1989 09h 56m 25.66± 1.17s
14.911 N ±22.3km 92.231 W ±14.4km
DEPTH = 67.8 ± 11.8 km
NEAR COAST OF CHIAPAS, MEXICO (69)

TPX	0.03	259	iP	56 37.00	0.3
			iS	56 53.00	
SCX	1.86	348	eP	57 02.00	6.2X
			iS	57 30.00	
OXX	4.83	297	eP	57 37.00	-0.8
			iS	58 25.50	
LVVM	6.27	321	(P)	57 53.00	-4.6X
IISM	6.38	310	eP	57 57.00	-2.1
IIT	7.11	306	(P)	58 11.50	2.0
ACX	7.59	286	(P)	58 16.00	0.0
III	7.74	297	(P)	58 30.00	11.7X
MRX	9.79	300	eP	58 46.50	0.3
UYO	19.28	354	iPc	00 47.30	-0.5
MEO	20.60	345	eP	01 01.70	0.1
LRM	35.20	335	eP	03 16.60	1.1
			e	03 30.90	
SOB1	56.24	112	eP	06 01.30	-0.4
GBA	149.88	20	PKPd	16 10.40	4.9X
	0.9s		7.20nm		

S.D. = 1.4 on 10 of 14 obs.

? JUL 27, 1989 10h 24m 54.66± 8.50s
31.852 S ±64.0km 71.508 W ±25.4km
DEPTH = 10 0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

JACH	1.13	137	iPc	25 16.60	0.6
			iS	26 34.00	
ROCH	1.19	160	iP	25 17.00	-0.1
			iS	25 37.70	
SAN	1.75	156	eP	25 25.00	-0.3
			iS	25 51.00	
FCH	1.79	145	eP	25 26.00	-0.2
			iS	25 52.70	
TACH	1.86	165	iPd	25 25.50	-1.3
			iS	25 54.60	
PCH	1.95	155	eP	25 28.50	0.2
			iS	26 01.00	
LNV	2.10	178	eP	25 31.50	1.2
			iS	26 03.10	
CHCH	2.20	161	eP	25 31.50	-0.3
			iS	26 04.00	

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

• JUL 27, 1989 10h 32m 54.90± 0.73s
22.097 S ±13.4km 170.069 E ±13.0km
DEPTH = 33.0km (normal)
4.5mb (3 obs.) 4.4Msz (1 obs.)
LOYALTY ISLANDS REGION (189)

DZM	3.36	270	iPc	33 44.30	-2.2
			iS	34 26.30	
HNR	15.91	321	eP	36 39.00	1.0
			eS	39 24.00	
SVO	16.21	321	P	36 42.00	0.1
BRS	16.57	248	iPd	36 55.90	9.5X
RMQ	19.91	253	eP	37 28.00	1.3
CTA	22.31	271	iPc	37 52.50	1.4
	0.9s		15.13nm		4.4mb
			iS	42 00.00	
BWA	22.63	232	eP	37 53.80	-0.5
CAN	22.64	230	eP	38 05.00	10.7X
ASPA	33.30	260	eP	39 35.90	4.0X
Z	19s		0.81um		4.4Msz
			LR	51 47.00	
PCI	53.20	286	ePd	42 27.00	14.5X
SPA	68.04	180	e(P)	43 53.60	0.5
	1.0s		5.00nm		4.6mb
BJI	79.63	321	eP	44 59.00	-1.5
KMI	80.44	302	Pd	45 06.00	0.5
CHTO	80.54	295	eP	45 06.00	0.2
	1.0s		5.00nm		4.5mb
KSP	144.76	331	ePKP	52 26.50	-3.3X
BZS	145.20	320	ePKP	52 24.00	-6.7X
			e	59 11.00	
BRG	145.76	333	iPKP	52 30.50	-1.0
	1.1s		29.00nm		
CLL	145.82	334	ePKP	52 30.00	-1.6
	1.0s		24.00nm		
			i	52 37.80	
PRU	146.15	331	ePKP	52 31.50	-0.7
			e	52 39.50	
ZST	146.17	327	iPKP	52 33.40	1.2
EKA	146.43	353	PKP	52 31.00	-1.4
	0.7s		6.60nm		
SKO	147.11	314	iPKP	52 35.80	1.8
KHC	147.21	331	PKP	52 34.70	0.8
	1.2s		10.00nm		
BNG	147.30	242	iPKPd	52 39.60	4.5X
	0.7s		12.00nm		

S.D. = 1.3 on 17 of 24 obs.

• JUL 27, 1989 10h 51m 36.36± 1.56s
28.886 N ±14.9km 68.238 E ± 7.2km
DEPTH = 31.1 ± 9.8 km
4.7mb (3 obs.) 4.2Msz (1 obs.)
PAKISTAN (710)

QUE	1.72	319	iPc+	52 05.30	0.6
			eSS	52 28.50	
NDI	7.88	89	iPnd	53 31.00	-0.7
	0.6s		24.00nm		5.5mb X
MAIO	10.44	317	eP	54 07.00	-0.1
			eS	55 51.00	
KSH	12.33	29	eP	54 31.50	-1.2
			S	56 56.00	
LSA	20.00	82	P	56 12.80	3.0X
E	10s		0.30um		
SHL	21.28	93	eP	56 23.50	0.9
			eS	00 15.00	
WMQ	21.55	41	Pc	56 26.00	0.9
Z	10s		0.65um		4.3MszX
GTA	28.03	60	eP	57 25.90	-1.0
Z	14s		0.40um		4.2MszX
N	10s		0.30um		
CHTO	29.74	103	eP	57 42.50	0.2
GYA	34.02	85	P	58 20.00	0.1
BTO	35.96	60	eP	58 36.80	0.6
MLR	37.07	308	eP	58 48.00	2.4X
TIY	37.69	65	eP	58 58.90	8.1X
Z	14s		0.70um		4.6MszX
SPC	41.61	313	eP	59 24.20	1.0
NUR	42.95	330	eP	59 36.00	2.2
Z	19s		0.30um		4.2Msz
			LR	20 20.00	
SUF	43.41	333	iP	59 36.80	-0.7
ZST	43.50	311	eP	59 38.80	0.3
BRG	45.88	314	e(P)	59 58.50	1.0
	1.6s		14.00nm		4.6mb
KHC	45.93	312	eP	59 56.40	-1.6
KBA	45.93	309	eP	59 57.00	-1.2
	1.1s		8.80nm		4.6mb

		e	00 04.00		
NB2	49.30	327 P	00 22.20	-1.9	
BNG	52.95	252 iPd	00 51.70	-0.7	
	0.7s	18.00nm		5.1mb	
		ic	00 55.00		
KIC	72.06	267 P	03 03.00	3.1X	
TIC	72.17	268 P	03 03.70	3.1X	

S.D. = 1.2 on 19 of 24 obs.

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* JUL 27, 1989 11h 47m 04.19± 0.99s
7.035 S ±11.7km 144.730 E ± 9.8km
DEPTH = 33.0km (normal)
3.7mb (2 obs.)
NEAR S COAST OF PAPUA NEW GUINEA(206)

MNDI	1.38	309 eP	47 27.00	-0.5	
LAT	2.29	81 eP	47 41.00	0.6	
PMG	3.36	135 eP	47 55.00	-0.7	
QIS	14.33	200 eP	50 26.00	-0.8	
		eS	52 49.00		
MTN	14.58	246 eP	50 18.30	-11.8X	
WB5	16.25	217 eP	50 47.20	-4.6X	
		eS	53 31.00		
WRA	16.32	217 P	50 54.00	1.4	
	0.6s	1.40nm		3.3mb	
ASPA	19.54	211 iPc	51 25.30	-6.8X	
	0.9s	12.00nm		4.2mb	

S.D. = 1.4 on 5 of 8 obs.

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* JUL 27, 1989 12h 17m 25.45± 0.83s
30.222 N ±25.6km 32.567 E ± 9.3km
DEPTH = 10.0km (geophysicist)
ARAB REPUBLIC OF EGYPT (553)
ML 3.3 (JER).

KOT	0.70	246 ePg	17 37.75	-1.5	
HLW	1.12	251 ePg	17 48.00	1.5	
		eSg	18 00.00		
RMN	1.80	81 eP	17 57.00	0.2	
MBH	2.06	102 eP	18 00.70	0.3	
PRNI	2.11	86 eP	18 01.10	-0.1	
MKT	2.34	71 eP	18 04.50	-0.2	
		eS	18 34.10		
DSI	2.77	60 eP	18 10.40	-0.2	

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

? JUL 27, 1989 12h 39m 52.38± 2.37s
8.358 S ±21.3km 160.738 E ±14.2km
DEPTH = 73.8 ± 11.0 km
4.6mb (3 obs.)
SOLOMON ISLANDS (193)

SVO	1.20	229 iPd	40 14.00	0.1	
		iS	40 30.00		
HNR	1.32	216 iPc	40 14.90	-0.6	
		iS	40 32.50		
VSG	1.35	229 ePd	40 16.00	0.1	
		eS	40 31.00		
DZM	14.70	159 iPc	43 18.00	0.1	
CTA	18.23	229 iPc	44 03.80	1.7	
	1.0s	43.00nm		4.6mb	
BRS	20.38	201 iPd	44 25.10	-0.5	
RMQ	21.32	211 iPc	44 36.40	1.3	
	0.8s	90.00nm		5.2mb	
CMS	26.88	209 eP	45 28.00	-0.2	
WB5	27.97	243 iPc	45 37.70	-0.6	
WRA	28.02	243 Pc	45 37.70	-1.0	
	0.7s	2.90nm		4.0mb	
BWA	28.31	202 eP	45 40.00	-1.2	
CAN	28.91	200 eP	45 46.50	-0.1	
WARB	36.90	237 eP	46 56.00	0.1	
ATB	145.15	108 PKPd	59 24.60	0.6	

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

% JUL 27, 1989 12h 53m 27.22± 3.83s
34.184 S ±23.4km 70.378 W ±16.1km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.34	318 iPc	53 34.00	-0.2	
		iS	53 42.00		
PCH	0.57	349 iPc	53 38.60	-0.3	
		iS	53 49.00		
TACH	0.70	319 iPc	53 41.40	0.3	
		iS	53 54.00		
SAN	0.77	342 iPc	53 42.30	0.1	
		iS	53 55.00		
FCH	0.86	5 iPc	53 43.20	-0.8	
		iS	53 56.70		
LNV	0.89	285 iPc	53 44.00	-0.2	
		iS	53 58.00		
PEL	1.07	346 iPc	53 48.00	0.6	
		iS	54 04.50		
ROCH	1.32	336 iPd	53 51.50	-0.2	
		iS	54 12.00		
JACH	1.51	353 eP	53 55.00	0.6	
		iS	54 16.50		

S.D. = 0.5 on 9 of 9 obs.

JUL 27, 1989 13h 58m 40.85± 0.72s
36.109 N ± 4.9km 120.071 W ± 6.8km
DEPTH = 5.0km (geophysicist)
CENTRAL CALIFORNIA (39)
ML 2.6 (BRK).

PKEM	0.06	213 iPc	58 43.80	1.4	
PHAM	0.38	224 eP	58 48.80	0.3	
PRI	0.48	274 ePc	58 50.90	0.4	
		iS	58 58.80		
LLA	0.87	306 ePc	58 58.90	0.9	
BCH	0.92	181 eP	58 58.90	-0.1	
FRI	0.93	18 ePc	59 00.10	1.1	
		iS	59 12.60		
PRS	1.07	282 ePc	59 00.70	-0.8	
SAO	1.29	301 ePd	59 04.20	-1.0	
		i	59 04.90		
ABL	1.43	151 eP	59 06.50	-1.3	
MHC	1.76	315 e(P)	59 11.40	-0.9	
CMB	1.94	353 eP	59 15.00	0.2	
		eS	59 40.20		
TNP	3.01	48 eP	59 36.00	5.7X	
KVN	3.33	27 eP	59 40.00	5.2X	

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

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* JUL 27, 1989 14h 33m 01.52± 1.74s
6.278 N ± 9.6km 126.860 E ±13.4km
DEPTH = 208.5 ± 19.0 km
4.4mb (3 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MNI	5.21	203 ePd	34 18.10	-1.3	
		eS	35 17.50		
PCI	10.00	225 ePd	35 22.50	0.9	
WB5	27.02	164 eP	38 28.70	2.3	
XAN	32.23	331 Pc	39 12.00	-0.3	
WARB	32.27	180 eP	39 11.90	-0.7	
CD2	32.71	321 P	39 16.40	-0.1	
TIY	33.93	339 Pd	39 27.40	0.5	
BJI	34.96	346 eP	39 36.00	0.6	
LZH	36.41	328 eP	39 49.00	1.1	
MDJ	38.26	3 P	40 03.50	0.4	
GTA	41.01	328 P	40 26.80	0.9	
GBA	49.15	282 Pc	41 29.20	-1.3	
	0.7s	5.90nm		4.1mb	
MAIO	68.09	307 eP	43 41.00	-0.1	
SVW	78.50	29 eP	44 41.10	0.3	
TTA	78.59	27 eP	44 41.20	-0.1	
KDC	79.73	33 eP	44 46.80	-0.5	
IMA	80.02	24 eP	44 48.50	-0.4	
PMR	81.66	29 eP	44 56.60	-0.8	
	0.7s	7.10nm		4.5mb	
FBA	82.38	25 eP	44 59.90	-1.2	
TOA	83.07	28 eP	45 05.20	0.4	
MBH	88.64	300 eP	45 33.00	0.4	
HFS	95.84	332 eP	46 03.70	-1.4	
	0.4s	1.00nm		4.5mb	

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

? JUL 27, 1989 14h 42m 53.28± 1.28s
37.685 N ± 8.6km 15.165 E ±10.7km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.45	304 P	43 01.50	-0.9	
		eSg	43 10.50		
ATN	0.53	26 P	43 04.10	0.1	
		eSg	43 11.30		
MEU	0.61	198 P	43 05.50	-0.2	
		eSg	43 15.30		
GIB	0.95	289 P	43 12.50	1.0	
		eSg	43 27.60		

S.D. = 1.4 on 4 of 4 obs.

JUL 27, 1989 15h 08m 52.48± 0.63s
37.755 N ± 7.4km 15.166 E ± 4.9km
DEPTH = 24.7 ± 5.6 km
3.9mb (1 obs.)
SICILY (398)

MNO	0.41	295 Pc	08 59.70	-1.7	
		eSg	09 07.10		
ATN	0.47	30 P	09 02.10	0.0	
		eSg	09 09.70		
MSI	0.54	34 Pc	09 03.40	0.1	
		eSg	09 11.70		
MEU	0.68	196 Pc	09 04.00	-1.7	
		eSg	09 16.10		
SOI	0.77	65 Pc	09 08.00	0.9	
		eSg	09 18.60		
GIB	0.93	285 P	09 09.10	-0.8	
		eSg	09 23.20		
MCT	1.22	265 Pc	09 16.20	2.0	
USI	1.83	302 Pd	09 21.70	-1.1	
CVT	1.88	268 P	09 24.00	0.4	
ERC	2.06	279 P	09 27.60	1.4	
		eSn	09 50.00		
TDS	2.11	25 Pd	09 27.10	0.2	
		eSn	09 53.50		
LVI	2.25	277 P	09 29.60	0.8	
MGR	2.40	7 Pd	09 30.30	-0.6	
		eSn	10 00.00		
SGO	2.80	2 Pc	09 36.70	0.1	
LCI	3.37	39 Pc	09 45.50	0.8	
		eSn	10 24.90		
SDI	4.08	346 P	09 54.10	-0.8	
SRN	4.33	59 ePn	10 00.80	2.4	
TPE	4.55	55 ePn	10 01.00	-0.5	
TIR	5.11	44 ePn	10 08.50	-0.8	
PHP	5.65	44 ePn	10 17.00	-0.1	
KKS	5.91	41 ePn	10 21.50	0.9	
BCI	5.95	38 ePn	10 24.60	3.5X	
SKO	6.40	47 ePn	10 33.50	5.8X	
VAY	6.74	56 ePn	10 31.40	-1.0	
PTJ	8.16	4 eP	10 51.60	-0.7	
HFS	22.42	358 eP	13 49.90	-0.5	
	0.7s	3.40nm		3.9mb	
NB2	23.44	355 P	13 59.10	-1.4	

S.D. = 1.2 on 25 of 27 obs.

% JUL 27, 1989 15h 09m 15.41± 0.95s
43.402 N ± 6.0km 5.418 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.02	158 Pg	09 16.83	-0.6	
BERF	0.22	114 Pg	09 20.20	0.0	
TREF	0.22	354 Pg	09 19.73	-0.5	
PUYF	0.24	57 Pg	09 19.48	-1.1	
PRAF	0.44	336 Pg	09 24.87	0.5	
TAVF	0.51	65 Pg	09 25.16	-0.7	
GANF	0.69	31 Pg	09 29.47	0.3	
TOUF	1.46	65 Pg	09 42.27	0.3	
		Sg	10 03.22		
AURF	1.47	70 Pg	09 41.90	-0.1	
		Sg	10 03.22		
AUTN	1.57	67 Pg	09 44.43	0.8	
		Sg	10 07.75		
SAOF	1.66	69 Pg	09 45.58	0.9	

S.D. = 0.7 on 11 of 11 obs.

% JUL 27, 1989 15h 14m 03.82± 1.03s
37.855 N ±13.4km 15.104 E ± 6.8km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.33	283 P	14 11.20	0.4	
		eSg	14 16.20		
SOI	0.78	74 P	14 19.20	0.2	
		eSg	14 32.80		
GIB	0.86	279 P	14 20.30	-0.2	
		eSg	14 32.00		
FAI	1.27	243 P	14 27.30	-0.1	
MGR	2.31	9 P	14 42.20	-0.2	

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

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* JUL 27, 1989 15h 14m 38.95± 1.74s
31.705 S ± 9.9km 69.120 W ±15.3km
DEPTH = 127.2 ± 13.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

27d 15h

RTBS	0.29	279	iPc	14 57.50	0.4
RTCB	0.35	51	iPc	14 57.50	0.0
			S	15 08.50	
ZON	0.41	67	eP	14 57.00	-0.5
			eS	15 09.00	
RTCV	0.52	107	iPc	14 58.00	-0.1
RTLL	0.67	56	iPc	14 59.40	0.3
CFA	0.76	83	iP	14 59.80	0.0
			S	15 14.00	
MRA	2.98	105	iPc	15 26.20	0.4
RFA	3.11	170	ePc	15 27.40	-0.2
CYA	4.34	42	eP	15 44.00	-0.2

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

% JUL 27, 1989 15h 28m 47.28± 1.16s
37.790 N ±13.7km 15.116 E ± 6.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.36	293	Pc	28 54.40	-0.4
			eSg	29 00.50	
ATN	0.46	36	Pc	28 57.50	0.9
			eSg	29 04.80	
SOI	0.79	69	Pc	29 02.60	-0.1
			eSg	29 16.90	
GIB	0.88	283	Pc	29 04.90	0.6
			eSn	29 18.00	
FAI	1.26	246	P	29 10.60	0.0
TDS	2.10	27	P	29 21.90	-1.0

S.D. = 0.8 on 6 of 6 obs.

? JUL 27, 1989 16h 16m 38.87± 0.67s
41.262 S ±13.9km 85.407 W ±21.4km
DEPTH = 10.0km (geophysicist)
4.8mb (3 obs.) 3.9Msz (1 obs.)
WEST CHILE RISE (686)

CNCB	28.63	37	P	22 40.20	2.0
LPB	28.82	36	(P)	22 37.00	-2.7
			LR	29 20.00	
ZOBO	29.04	36	P	22 43.60	1.7
Z	22s	0.34um		3.9Msz	
			LR	31 00.00	
SPA	48.93	180	e(P)	25 25.80	-1.0
	1.0s	7.50nm		4.7mb	
			e	25 32.40	
PRM	75.03	3	e(P)	28 22.10	0.0
JSC	75.27	4	e(P)	28 22.60	-0.8
			ePP	30 57.70	
LHS	75.49	4	e(P)	28 24.20	-0.5
			ePP	30 42.30	
UYO	75.52	352	iPd	28 24.50	-0.4
PWLA	75.91	358	e(P)	28 26.10	-0.9
			ePP	31 03.40	
TKL	76.56	1	P	28 29.00	-1.7
MEO	76.64	349	iPc	28 30.80	-0.4
ALQ	78.26	342	eP	28 40.90	0.5
	1.0s	12.50nm		4.9mb	
			e	28 48.00	
PLM	79.70	334	P	28 41.00	-7.3X
GOL	82.61	345	P	29 04.00	0.5
TNP	84.14	335	P	29 12.00	0.7
	0.9s	4.88nm		4.7mb	
KVN	85.31	335	P	29 17.00	-0.1
BW06	86.45	342	P	29 23.00	0.2
RSSD	86.63	347	P	29 23.50	-0.1
LRM	90.00	341	eP	29 41.20	1.5
WRA	108.82	219	Pdiffc	31 05.60	0.6
	0.5s	32.40nm		6.8mb X	
NANU	113.59	201	iPdiff	31 19.60	-6.6X
GBA	148.64	147	PKPd	36 25.20	1.0
	0.7s	3.60nm			

S.D. = 1.2 on 20 of 22 obs.

JUL 27, 1989 16h 26m 07.94± 0.56s
5.112 N ± 7.0km 123.283 E ± 9.3km
DEPTH = 569.9 ± 8.1 km
5.0mb (10 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MNI	3.96	157	ePd	27 31.00	-0.5
PCI	6.90	210	ePc	27 56.00	-0.4
KKM	7.10	278	ePc	27 58.80	0.4
	0.6s	329.80nm		5.6mb	
AAI	10.02	151	eP	28 28.00	1.0
MTN	19.47	156	eP	29 58.70	-0.8
KNA	21.43	165	iPc	30 16.60	-0.8
PSI	24.42	265	iPc	30 44.80	0.5
MBL	26.33	187	eP	30 59.50	-1.6
	0.4s	17.00nm		5.0mb	
WB5	27.12	157	iPc	31 06.30	-1.7
			eS	35 02.70	
CHTO	27.37	302	iP	31 10.50	0.2
	0.9s	24.51nm		4.8mb	
QIS	30.13	148	iPc	31 33.30	-0.7
	0.2s	17.00nm		5.3mb	
ASPA	30.42	161	iPc	31 36.10	-0.4
	0.4s	88.00nm		5.7mb	
			iS	35 55.00	
			i	37 05.60	
CD2	31.56	327	P	31 46.20	0.2
XAN	31.72	337	Pd	31 47.00	-0.4
TIY	33.93	344	Pd	32 06.20	0.3
BJI	35.36	351	eP	32 17.50	-0.1
LZH	35.63	332	eP	32 21.50	1.4
	1.5s	44.00nm		4.9mb	
SHL	36.30	307	iP	32 26.00	0.2
CN2	38.58	3	P	32 42.50	-1.4
RMQ	39.95	143	iPd	32 56.10	0.9
GTA	40.20	331	iP	32 58.10	0.8
STK	40.71	156	iPc	33 01.80	0.5
CMS	42.27	151	eP	33 14.00	0.4
ADE	42.43	161	iPc	33 15.20	0.3
	0.7s	75.34nm		5.3mb	
BRS	43.08	140	iPd	33 20.20	0.1
COO	44.82	144	iPc	33 35.00	1.5
HYB	45.42	289	ePc	33 38.80	0.5
BWA	45.92	151	eP	33 43.80	1.8
			e	38 06.10	
GBA	45.95	284	Pd	33 41.80	-0.5
	0.7s	15.00nm		4.6mb	
CAN	46.93	151	eP	33 50.30	0.7
MSZ	63.66	146	P	35 45.90	0.3
MAIO	65.95	307	eP	36 01.00	0.7
PRNI	85.97	300	iPd	37 50.50	0.7
MBH	86.11	299	iPd	37 51.00	0.6
SUF	88.76	333	eP	38 01.00	-1.1
	0.4s	4.20nm		4.7mb	
HFS	95.19	332	eP	38 29.90	-1.8
	0.4s	2.30nm		4.8mb	
NB2	96.02	333	P	38 34.00	-1.4
AIA	119.73	176	ePKP	43 30.70	-23.8X
KIC	126.88	282	PKP	44 09.70	-0.2
LIC	127.18	282	PKP	44 10.10	-0.3

S.D. = 0.9 on 39 of 40 obs.

& JUL 27, 1989 16h 56m 34.25s
63.277 N 150.433 W
DEPTH = 128.5km
CENTRAL ALASKA (1)
<AGS-P>. Felt at Denali National Park.

KTH	0.35	322	iP	56 52.57	1.6
			S	57 05.53	
HUR	0.47	129	iP	56 52.77	-0.5
			S	57 06.71	
RND	0.72	79	iP	56 54.65	-0.4
			S	57 09.83	
MCK	0.81	55	iP	56 55.39	-0.3
			S	57 10.41	
CUT	0.88	175	iP	56 55.89	-0.3
			S	57 12.31	
SKT	1.40	202	iP	57 00.85	-0.6
			S	57 20.99	
NEA	1.44	24	iP	57 01.16	-0.7
			S	57 20.61	
WRH	1.59	40	iP	57 03.02	-0.5
PWA	1.65	171	ePc	57 04.00	-0.3
PMR	1.80	160	iP	57 05.00	-1.0
CCB	1.80	39	iP	57 05.50	-0.6
SUA	1.83	185	eP	57 06.26	-0.3
RDS	1.85	32	eP	57 06.21	-0.6
HDA	1.91	52	eP	57 06.91	-0.6
FBA	2.00	34	iP	57 08.10	-0.5
PMS	2.08	168	eP	57 09.10	-0.5
GLM	2.18	37	eP	57 10.25	-0.6
SPU	2.24	201	eP	57 11.41	-0.2
PAX	2.28	96	eP	57 12.01	-0.1
			S	57 40.35	
TOA	2.29	119	eP	57 12.10	-0.2
SDG	2.36	106	eP	57 13.62	0.5
TTA	2.56	265	ePn	57 15.00	-0.8
NKA	2.57	189	eP	57 18.18	2.4
KLU	2.76	128	eP	57 16.97	-1.4
SLKM	2.78	178	eP	57 18.32	-0.3
RDT	2.87	200	eP	57 20.49	0.7
VZW	2.87	139	eP	57 18.31	-1.5
DOT	2.88	80	eP	57 18.86	-1.1
IMA	3.13	335	ePn	57 22.60	-0.7
SEW	3.22	171	eP	57 23.42	-0.9
SVW	3.26	230	eP	57 24.90	-0.1
ILIM	3.43	202	eP	57 27.07	-0.1
HIN	3.44	145	eP	57 30.14	2.9
			eS	58 05.38	
CVA	3.52	139	eP	57 27.38	-1.0
			eS	58 09.44	
GLB	3.59	118	eP	57 28.45	-0.9
			S	58 09.12	
SGAM	3.72	136	eP	57 29.74	-1.3
			eS	58 13.19	
CNPM	3.78	186	eP	57 31.07	-0.8
RAGM	3.98	134	eP	57 33.43	-1.1
			eS	58 19.71	
CDD	4.63	201	eP	57 42.87	-0.4

39 obs. associated

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* JUL 27, 1989 18h 21m 05.87± 4.16s
44.148 N ±27.2km 7.433 E ±10.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (LDG).

AUTN	0.15	181	Pg	21 09.12	-0.4
			Sg	21 13.56	
SAOF	0.18	151	Pg	21 10.14	0.1
			Sg	21 14.19	
TOUF	0.19	225	Pg	21 09.49	-0.7
			Sg	21 14.54	
AURF	0.27	196	Pg	21 11.44	-0.2
			Sg	21 17.68	
SBF	0.28	180	Pg	21 12.10	0.2
			Sg	21 18.20	
MVIF	0.32	219	Pg	21 12.89	0.3
FRF	0.82	224	Pg	21 22.50	0.8
			Sg	21 36.70	
LRG	1.04	229	Pn	21 25.50	0.0
			Pg	21 26.40	
			Sg	21 42.60	
LMR	1.05	220	Pg	21 25.60	-0.1
			Sg	21 42.10	

S.D. = 0.5 on 9 of 9 obs.

& JUL 27, 1989 19h 48m 21.45s
59.500 N 152.563 W
DEPTH = 75.8km
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.37	295	eP	48 33.63	-0.3
			S	48 42.98	
XLV	0.43	96	iP	48 33.79	-0.6
			S	48 43.98	
AUW	0.48	255	eP	48 34.43	-0.4
ILIM	0.62	341	iP	48 35.33	-0.8
CNPM	0.68	87	iP	48 36.07	-0.7
CDD	0.80	225	iP	48 37.08	-1.0
			S	48 49.20	
NNL	0.84	49	eP	48 38.62	0.0
SHU	0.88	173	iP	48 38.27	-0.8
			S	48 51.63	
BRLK	0.89	72	eP	48 38.25	-1.0
			S	48 51.27	
RED	0.93	354	iP	48 38.93	-0.8
			S	48 52.43	
NKA	1.41	27	eP	48 46.58	0.8
SLKM	1.55	48	eP	48 46.65	-1.1
SPU	1.71	8	iP	48 48.90	-0.9
			S	49 11.69	
KDC	1.76	179	iPd	48 48.20	-2.2
SUA	2.17	24	eP	48 55.34	-0.9
SVW	2.22	318	ePd	48 55.10	-1.7
PMS	2.30	39	eP	48 56.90	-1.1
PWA	2.53	30	eP	49 00.00	-1.1
PMR	2.70	37	eP	49 01.80	-1.6
VZW	3.38	60	eP	49 10.33	-2.6
TTA	3.82	336	eP	49 17.10	-2.1
KLU	3.85	56	eP	49 16.84	-2.7
TOA	4.08	47	eP	49 21.30	-1.5

23 obs. associated

? JUL 27, 1989 21h 44m 35.63± 0.91s
32.297 S ±22.8km 177.935 W ±14.0km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
SOUTH OF KERMADEC ISLANDS (179)

DZM	17.21	302	iPc	48	37.10	1.9
8RS	25.83	273	eP	50	08.00	2.3
BWA	28.11	256	eP	50	25.10	-1.4
CMS	30.69	262	eP	50	50.00	0.5
CTA	34.20	282	iPd	51	20.20	-0.1
	1.3s	80.77nm			5.5mb	
ASPA	43.10	269	iPc	52	32.90	-1.6
	1.2s	14.00nm			4.6mb	
WRA	44.25	274	Pc	52	41.60	-2.3
	0.5s	4.50nm			4.5mb	
SPA	57.88	180	e(P)	54	28.40	1.9
	1.0s	4.00nm			4.4mb	
			e	54	37.10	
PRI	86.65	43	eP	57	17.40	0.2
FRI	87.79	43	eP	57	22.50	0.0
CMB	88.13	42	ePc	57	23.80	-0.4
SUF	145.91	340	iPKP	04	11.00	-0.8
	0.4s	5.80nm				
NUR	148.10	339	ePKP	04	18.00	2.6X
	0.7s	18.70nm				
			i	04	22.00	
BNG	148.27	213	iPKPd	04	20.90	3.8X
	0.6s	14.00nm				
			id	04	31.90	
NB2	150.63	351	PKP	04	24.10	4.8X
HFS	151.11	348	ePKP	04	24.20	4.2X
	0.5s	1.10nm				
HRI	151.74	281	ePKP	04	29.00	7.0X
MBH	151.83	274	iPKPc	04	24.00	2.0X
PRNI	151.86	275	ePKP	04	24.00	1.9X
BHL	151.88	282	PKPc	04	29.00	6.9X

S.D. = 1.6 on 12 of 20 obs.

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* JUL 27, 1989 23h 20m 04.49± 0.89s
11.334 N ±17.8km 57.577 E ± 9.7km
DEPTH = 10.0km (geophysicist)
4.6mb (6 obs.)
ARABIAN SEA (417)

GBA	19.52	81	Pc	24	34.90	-0.3
	1.0s	15.00nm			4.2mb	
HYB	21.19	71	eP	24	52.50	-0.2
NAI	24.15	240	eP	25	23.00	0.9
MAIO	24.92	4	eP	25	31.00	1.8
BNG	39.23	263	ePd	27	48.50	13.4X
	0.5s	3.00nm				
VRI	43.28	328	ePd	28	11.00	3.0X
CLL	53.81	327	e(P)	29	36.00	6.6X
LPG	54.93	318	eP	29	37.80	-0.5
	0.5s	2.90nm			4.6mb	
LBF	57.26	319	eP	29	54.40	-0.3
	1.0s	6.80nm			4.6mb	
LOR	57.44	319	eP	29	55.20	-0.6
	1.0s	6.00nm			4.6mb	
SSF	57.59	319	eP	29	56.40	-0.5
	1.0s	4.80nm			4.5mb	
BGF	57.85	318	eP	29	57.50	-1.2
	1.0s	10.00nm			4.8mb	
DOU	58.02	323	Pc	30	00.70	0.9

S.D. = 1.0 on 10 of 13 obs

% JUL 27, 1989 23h 53m 47.00± 0.99s
61.154 N ± 8.2km 5.224 E ± 7.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

SUE	0.24	247	iP	53	52.74	0.5
			iS	53	56.47	
HYA	0.47	88	iP	53	56.53	0.0
			iS	54	03.23	
ASK	0.67	181	iP	53	59.90	-0.5
			eS	54	09.71	
BER	0.78	176	iP	54	02.03	-0.1
			iS	54	12.83	
ODD1	1.43	150	eP	54	13.26	0.3
			eS	54	30.85	
MOL	1.80	37	eP	54	17.90	-0.3
			eS	54	40.18	
BLS1	1.94	155	iP	54	22.00	1.6
			eS	54	43.70	
KMY	1.95	180	iP	54	18.86	-1.6
			eS	54	42.16	

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

? JUL 27, 1989 23h 53m 50.53± 3.21s
42.699 N ±13.4km 144.993 E ±29.6km
DEPTH = 50.3 ± 31.8 km
HOKKAIDO, JAPAN REGION (224)
MG 3.9 (JMA). Felt (II JMA) at Kushiro.

KUSJ	0.45	333	iP+	54	01.50	0.2
			eS	54	07.80	
KUS	0.52	303	iPd	54	01.70	-0.4
			iS	54	08.50	
HOOJ	1.30	257	iPd	54	13.20	0.6
			S	54	29.00	
ASAJ	2.22	310	P	54	25.70	0.0
MRRJ	2.91	266	P	54	35.10	-0.3
			eS	55	08.00	
OFUJ	4.41	216	eP	54	56.40	-0.1

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

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* JUL 28, 1989 00h 01m 05.12± 0.61s
34.562 N ±13.1km 36.632 W ± 9.4km
DEPTH = 10.0km (geophysicist)
4.7mb (5 obs.)
NORTH ATLANTIC RIDGE (403)

EKA	31.04	38	Pc	07	23.90	-1.1
	1.9s	26.00nm			4.8mb	
SNF	33.61	49	Pc	07	47.20	-0.3
DOU	33.72	50	P	07	47.80	-0.7
UCC	33.72	49	P	07	48.40	-0.1
GRF	37.90	52	eP	08	24.30	0.3
	1.2s	60.00nm			5.2mb	
CLL	39.19	49	iPc	08	35.10	0.4
BRG	39.74	50	eP	08	39.00	-0.3
	1.3s	13.00nm			4.4mb	
PRU	40.07	51	P	08	42.30	0.3
KRA	43.55	51	eP	09	12.00	1.5
MEO	50.20	289	iPd	10	03.40	0.3
MBC	55.02	343	eP	10	38.00	-0.5
	1.1s	4.00nm			4.4mb	
ZOBO	58.76	216	eP	11	06.00	-0.4
Z	24s	0.08um			3.7MszX	
			eLR	31	20.00	
BNG	59.12	108	ePc	11	08.50	0.1
	0.8s	7.00nm			4.8mb	
INK	60.83	335	eP	11	20.00	0.6

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

? JUL 28, 1989 00h 50m 27.46±18.50s
26.020 N ±163.km 111.742 W ±24.7km
DEPTH = 10.0km (geophysicist)
GULF OF CALIFORNIA (49)

GLA	7.51	340	P	52	14.00	-5.6X
BAR	7.91	328	eP	52	28.00	2.7
			e	52	49.00	
			e	54	06.00	
PLM	8.56	330	eP	52	42.00	7.5X
			e	54	26.00	
TPC	8.88	336	eP	52	37.00	-1.8
			e	54	48.00	
RVR	9.32	330	eP	52	44.00	-0.9
			e	54	54.00	
ALQ	9.99	26	P	52	54.50	0.2
SBB	10.11	330	eP	52	56.00	0.2
			e	55	12.00	
CLC	10.98	334	eP	53	10.00	2.3
			e	55	47.00	
ISA	11.21	331	eP	53	17.00	6.1X
			e	55	49.00	
BCH	11.62	324	eP	53	15.00	-1.4
MSU	12.46	358	e(P)	53	28.00	0.1
FRI	12.87	330	eP	53	37.20	4.1X
			e	53	53.90	
TNP	12.89	340	eP	53	32.50	-1.1
CMB	14.03	331	eP	53	52.70	4.1X
KVN	14.05	339	eP	53	48.50	-0.4
MIN	16.48	333	e(P)	54	26.30	5.9X
			e	54	43.20	
BW06	16.81	6	e(P)	54	29.00	4.3X
WDC	17.08	331	eP	54	36.80	9.1X
			e	54	54.00	

S.D. = 1.7 on 10 of 18 obs.

% JUL 28, 1989 01h 11m 56.44± 1.78s
38.784 N ±21.3km 13.828 E ± 9.8km
DEPTH = 33.0km (normal)
SICILY (398)

USI	0.51	262	Pc	12	07.30	0.1
			eSg	12	15.00	
GIB	0.81	169	Pc	12	10.90	-0.6
			eSg	12	21.20	
MNO	1.09	141	P	12	15.80	0.2
			eSn	12	30.80	
SOI	1.89	111	P	12	26.70	-0.2
MEU	1.89	152	P	12	27.70	0.6

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

& JUL 28, 1989 02h 12m 27.14s
60.349 N 152.258 W
DEPTH = 90.1km
SOUTHERN ALASKA (2)
<AGS-P>.

RDT	0.24	342	iP	12	39.87	0.9
ILIM	0.44	233	iP	12	41.02	-0.7
NNL	0.57	122	iP	12	42.90	0.2
NKA	0.64	51	eP	12	44.61	1.3
			S	12	56.14	
OPT	0.85	215	iP	12	44.92	-0.6
			S	12	59.04	
XLV	0.94	163	eP	12	45.44	-1.0
			S	13	00.03	
CNPM	0.97	148	eP	12	45.86	-1.0
			S	13	00.58	
SLKM	1.02	80	eP	12	46.21	-1.2
			S	13	01.24	
SUA	1.34	33	iP	12	50.81	-0.6
			S	13	09.14	
SEW	1.42	99	eP	12	50.69	-1.6
CDD	1.59	207	eP	12	53.25	-1.2
SKT	1.67	12	iP	12	54.36	-1.2
SHU	1.73	182	eP	12	55.20	-1.0
			S	13	17.42	
PWA	1.75	41	eP	12	56.15	-0.3
SVW	1.82	296	iP	12	55.80	-1.7

15 obs. ossocioted

& JUL 28, 1989 02h 18m 32.80s
59.607 N 139.037 W
DEPTH = 11.4km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

HQN	0.18	152	iP	18	36.76	-0.1
			eS	18	40.18	
PNL	0.19	289	iP	18	37.20	0.0
			eS	18	40.73	
BCPM	0.46	319	iP	18	41.95	-0.3
PCA	0.79	309	iP	18	46.80	-1.3
			eS	18	59.11	
HYT	1.44	31	P	19	00.20	1.3
BALM	2.18	312	eP	19	08.09	-1.5
TGL	2.22	303	eP	19	07.82	-2.3
			S	19	37.53	
GLB	2.99	310	eP	19	19.18	-1.8
KLU	3.89	302	eP	19	30.92	-2.9
VZW	4.01	295	eP	19	31.60	-3.8
TOA	4.30	309	eP	19	37.30	-2.2
DOT	4.71	332	eP	19	43.84	-1.6
SLKM	5.68	284	eP	19	53.69	-5.3
SKT	6.56	297	eP	20	07.90	-3.6

14 obs. ossocioted

JUL 28, 1989 04h 57m 27.45± 0.59s
35.705 N ± 8.1km 31.253 E ± 6.6km
DEPTH = 73.4 ± 16.3 km
3.8mb (3 obs.)
CYPRUS (372)

PPCY	1.21	132	eP	57	50.50	1.4
KSL	1.42	287	eP	57	51.80	0.0
ELL	1.51	314	iPn	57	53.30	0.2
BCK	1.83	343	iPn	57	55.50	-2.0
CSS	1.85	113	eP	57	56.00	-1.7
FAM	2.36	107	eP	58	04.00	-0.6
YER	2.79	302	iPn	58	11.70	1.0
KHL	2.96	333	iPn	58	13.10	0.0
KAP	3.33	269	eP	58	18.50	0.3

28d 04h

		eS	58	58.60	
ALT	3.47	345 ePn	58	19.60	-0.6
BHL	4.04	115 Pn	58	33.00	4.7X
		Sn	59	10.00	
IZM	4.17	311 ePn	58	28.80	-1.3
BBTK	4.30	16 eP	58	36.00	4.1X
DST	4.42	333 ePn	58	34.00	0.5
NPS	4.62	266 eP	58	36.60	0.2
SALJ	5.21	134 Pd	58	45.00	0.3
EZN	5.67	318 ePn	58	55.00	4.0X
KVT	6.55	34 ePn	59	04.90	1.6
VRI	10.72	343 iPd	00	02.00	1.8
LPG	20.95	305 eP	02	08.80	2.3X
	0.5s	2.10nm		3.7mb	
LOR	23.42	308 eP	02	29.30	-1.3
	0.7s	3.30nm		3.9mb	
SSF	23.58	307 eP	02	28.90	-3.2X
	0.9s	3.20nm		3.8mb	

S.D. = 1.3 on 17 of 22 obs.

& JUL 28, 1989 05h 48m 20.14s
64.147 N 151.709 W
DEPTH = 10.0km
4.1mb (1 obs.)
CENTRAL ALASKA (1)
<AGS-P>. ML 4.5 (PMR).

KTH	0.69	149 iP	48	33.37	-0.5
NEA	1.22	68 iP	48	42.87	0.0
MCK	1.29	108 iP	48	43.77	-0.4
RND	1.47	119 eP	48	46.20	-0.6
HUR	1.50	141 iP	48	46.86	-0.2
WRH	1.61	77 eP	48	48.00	-0.7
RDS	1.69	65 eP	48	49.41	-0.4
CCB	1.77	72 eP	48	50.23	-0.7
FBA	1.85	64 iPc	48	51.70	-0.5
CUT	1.87	159 eP	48	51.96	-0.4
GLM	2.05	64 eP	48	54.33	-0.7
HDA	2.09	81 eP	48	54.55	-1.1
IMA	2.10	338 ePn	48	56.70	0.8
SKT	2.18	178 eP	48	55.49	-1.4
TTA	2.28	240 ePn	48	55.90	-2.6
PWA	2.64	161 eP	49	02.00	-1.5
SUA	2.73	170 eP	49	03.44	-1.5
PMR	2.82	154 iPd	49	04.80	-1.3
SPU	2.98	183 eP	49	06.91	-1.5
PAX	3.03	110 eP	49	08.57	-0.5
PMS	3.08	160 eP	49	08.80	-0.9
SDG	3.22	118 eP	49	11.39	-0.4
TOA	3.24	127 ePc	49	11.90	-0.2
DOT	3.42	95 eP	49	12.91	-1.6
NKA	3.42	176 eP	49	15.37	0.8
SVW	3.54	212 iP	49	13.10	-3.3
SLKM	3.72	169 eP	49	17.77	-1.1
KLU	3.76	132 iP	49	19.21	-0.3
RED	3.78	188 eP	49	18.09	-1.6
VZW	3.91	140 eP	49	20.51	-1.0
ILIM	4.12	189 eP	49	22.73	-1.8
NNL	4.12	177 eP	49	24.67	0.1
SEW	4.19	164 eP	49	24.37	-1.1
GLB	4.53	123 eP	49	29.83	-0.5
OPT	4.57	190 eP	49	29.25	-1.6
CNPM	4.64	177 eP	49	30.46	-1.5
XLV	4.71	180 eP	49	30.99	-1.9
AUL	4.85	190 eP	49	33.47	-1.4
MCNL	5.13	195 eP	49	36.19	-2.7
CDD	5.32	191 eP	49	39.23	-2.3
BALM	5.33	122 eP	49	40.93	-0.9
TGL	5.34	126 eP	49	39.06	-2.9
DWY	5.38	85 P	49	40.70	-1.7
KDC	6.43	184 e(Pn)	49	55.20	-2.0
		ePg	50	17.10	
HYT	7.37	110 P	50	10.00	-0.4
BRW	7.44	347 eP	50	09.50	-1.7
INK	8.43	52 eP	50	23.00	-2.1
SIT	10.71	124 e(P)	50	54.50	-2.0
YKA	16.59	79 eP	52	14.50	0.5
PNT	22.68	116 eP	53	30.00	7.5
	0.7s	5.00nm		4.1mb	
KVN	31.98	126 eP	54	54.30	5.9
TNP	33.15	125 eP	54	58.00	-0.6

52 obs. associated

JUL 28, 1989 06h 58m 54.72± 0.57s
64.114 N ± 4.3km 151.738 W ± 5.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ALASKA (1)
ML 3.1 (PMR).

KTH	0.67	147 iP	59	08.45	0.4
NEA	1.25	67 eP	59	17.79	-0.1
MCK	1.30	106 eP	59	20.15	1.4
		S	59	37.06	
RND	1.47	118 eP	59	21.31	0.0
HUR	1.48	140 eP	59	21.86	0.5
WRH	1.63	76 iP	59	23.06	-0.5
		S	59	47.17	
RDS	1.71	64 eP	59	24.42	-0.3
CCB	1.79	71 eP	59	25.22	-0.6
CUT	1.84	158 eP	59	26.93	0.4
FBA	1.88	63 eP	59	27.22	0.1
GLM	2.07	63 eP	59	29.32	-0.7
HDA	2.11	80 eP	59	29.50	-1.0
IMA	2.13	338 ePn	59	32.60	1.7
		ePg	59	36.50	
		e	00	04.80	
SKT	2.14	177 eP	59	30.53	-0.5
TTA	2.25	240 e(Pn)	59	31.70	-1.0
		ePg	59	36.80	
PWA	2.62	160 eP	59	37.60	-0.1
SUA	2.70	170 eP	59	38.31	-0.8
PMR	2.80	154 eP	59	39.90	-0.4
PMS	3.05	160 eP	59	44.80	0.9
TOA	3.23	126 eP	59	47.30	0.7

S.D. = 0.8 on 20 of 20 obs.

% JUL 28, 1989 07h 19m 21.53± 1.88s
18.545 N ±20.9km 66.418 W ± 8.0km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

APR	0.31	254 P	19	29.60	0.2
		S	19	35.70	
SJG	0.50	149 iP	19	32.30	0.1
PNP	0.55	208 P	19	33.00	0.2
		S	33	41.70	
LPR	0.57	114 P	19	33.10	-0.1
MGP	0.83	230 P	19	36.40	-0.4

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

% JUL 28, 1989 07h 44m 37.64± 0.76s
40.247 N ± 6.9km 23.303 E ± 6.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PAIG	0.43	138 ePgc	44	45.90	-0.5
		eSg	44	52.60	
THE	0.46	326 ePgc	44	46.60	-0.5
OUR	0.53	80 ePgd	44	49.00	0.7
		eSg	44	54.80	
LIT	0.64	257 ePg	44	50.60	0.1
		eSg	45	00.60	
SRS	0.90	14 ePgd	44	54.70	-0.1
		eSg	45	07.90	
KNT	0.96	342 ePg	44	55.10	-0.9
		eSg	45	09.30	
GRG	0.99	316 ePg	44	57.60	1.2
		eSg	45	10.60	

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

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* JUL 28, 1989 08h 10m 04.75± 1.15s
19.426 S ±10.1km 70.194 W ±18.3km
DEPTH = 33.0km (normal)
NEAR COAST OF NORTHERN CHILE (122)

ARE	3.20	337 eP	10	54.00	-0.1
		iS	11	46.00	
CNCB	3.35	39 eP	10	55.00	-1.5
		i	10	57.00	
		S	11	48.00	
LPB	3.50	35 P	11	00.00	1.4
ZOBO	3.71	32 P	11	01.90	0.3
ANT	4.26	183 e(P)	11	09.00	0.0
		eS	11	57.50	
CCH	4.35	63 P	11	19.20	8.6X

S.D. = 1.5 on 5 of 6 obs.

? JUL 28, 1989 08h 18m 54.92± 7.22s
14.081 N ±91.7km 90.860 W ±21.4km
DEPTH = 33.0km (normal)
4.6mb (1 obs.)
GUATEMALA (70)

TPX	1.58	301 iPc	19	19.50	-1.5
		iS	19	32.00	
SCX	3.15	327 eP	19	48.00	4.7X
		iS	20	21.00	
OXX	6.39	299 eP	20	25.50	-3.9X
		(S)	21	32.00	
IISM	7.93	309 eP	20	46.00	-4.8X
IIT	8.67	306 (P)	21	03.00	1.7
III	9.30	298 (P)	21	18.50	8.4X
MRX	11.36	301 (P)	21	38.00	0.0
UYO	20.26	351 eP	23	30.00	-0.4
PNT	42.31	332 ePc	26	47.00	-0.2
	0.6s	8.00nm		4.6mb	
YKA	51.21	346 eP	27	57.40	0.4

S.D. = 1.4 on 6 of 10 obs.

& JUL 28, 1989 08h 51m 07.80s
36.908 N 121.348 W
DEPTH = 7.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.0 (BRK).

SAO	0.16	209 iPd	51	11.72	0.4
LLA	0.44	132 iPd	51	16.20	-0.4
ARN	0.46	342 iPd	51	17.20	0.0
MHC	0.49	332 iPd	51	17.47	-0.3
GCC	0.53	283 iPc	51	18.00	-0.5
PRS	0.58	182 iPd	51	18.90	-0.5
PRI	0.94	144 ePc	51	25.90	-0.2
PCC	1.02	306 iPc	51	26.70	-0.6
BKS	1.20	324 ePc	51	29.50	-0.9
		i	51	29.90	
BKS	1.20	324 iPc	51	30.40	0.0
		e(S)	51	32.30	
BRK	1.21	323 e(P)	51	30.00	-0.5
ZSP	1.26	325 e(P)	51	30.90	-0.6
PKEM	1.31	130 eP	51	32.20	-0.1
FRI	1.32	86 iPc	51	31.00	-1.4
PHAM	1.32	144 eP	51	31.90	-0.5
CMB	1.36	34 ePc	51	31.90	-1.3
BCH	2.00	149 eP	51	40.80	-1.7
BLP	2.47	162 eP	51	47.20	-1.8
ORV	2.65	357 e(P)	51	51.00	-0.6
KVN	3.34	49 eP	52	00.70	-1.0
TNP	3.49	69 eP	52	03.00	-0.8

21 obs. associated

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* JUL 28, 1989 08h 55m 09.38± 1.50s
47.231 N ±12.7km 2.922 E ± 6.5km
DEPTH = 9.8 ± 6.3 km
FRANCE (538)
ML 2.6 (LDG).

SSF	0.43	113 Pg	55	18.20	0.0
		Sg	55	24.90	
AVF	0.53	146 Pg	55	20.20	0.1
		Sg	55	28.50	
LOR	0.64	86 Pg	55	21.50	-0.7
		Sg	55	30.50	
BGF	0.68	184 Pg	55	22.30	-0.5
		Sg	55	32.30	
LBF	0.76	108 Pg	55	24.40	0.1
		Sg	55	35.20	
SMF	0.86	133 Pg	55	26.20	0.2
		Sg	55	38.90	
MAF	1.04	194 Pg	55	28.90	-0.1
		Sg	55	43.00	
TCF	1.06	208 Pg	55	29.30	-0.1
		Sg	55	43.00	
AGO	1.19	173 Pg	55	31.75	0.2
PLDF	1.35	159 Pg	55	34.96	0.7
		Sg	55	53.85	
LSF	1.37	225 Pn	55	31.90	-2.6
		Pg	55	34.00	
		Sg	55	51.50	
PYM	1.48	178 Pg	55	36.83	0.6
		Sg	55	57.06	
MFF	2.19	254 Pg	55	48.40	2.0
		Sg	56	15.00	

S.D. = 1.2 on 13 of 13 obs.

? JUL 28, 1989 10h 14m 59.29± 3.21s
34.575 N ±27.1km 23.849 E ±15.3km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.)
CRETE (370)
MD 4.2 (ATH).

VAM	0.88	19	ePb	15 16.00	-0.2
NPS	1.60	64	ePn	15 29.50	1.8
APE	2.84	28	ePn	15 45.40	-0.1
KAP	2.90	69	ePn	15 48.00	1.7
YER	4.41	53	iPn	16 08.20	0.3
NEO	4.75	354	ePn	16 13.50	0.8
ELL	5.39	65	iPn	16 20.80	-1.0
KHL	5.91	49	iPn	16 27.50	-1.5
KZN	5.96	344	ePn	16 30.50	0.8
BCK	6.17	60	eP	16 31.40	-1.4
HFS	26.42	349	eP	20 35.90	-1.7X
	0.7s		5.60nm		4.4mb
	Z 17s		0.10um		3.4MszX
			LR	31 44.00	
NAO	27.58	346	P	20 46.90	-1.3

S.D. = 1.3 on 11 of 12 obs.

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* JUL 28, 1989 11h 25m 02.93± 1.02s
19.938 S ±11.0km 69.337 W ±17.7km
DEPTH = 123.0 ± 17.4 km
NORTHERN CHILE (123)

CNCB	3.37	23	iPc	25 56.00	0.5
			i	26 28.00	
LPB	3.59	19	P	26 00.00	1.8
	1.0s		60.00nm		
			i	26 43.00	
ZOBO	3.83	18	P	26 01.50	-0.1
ANT	3.88	195	e(P)	26 02.00	0.2
CCH	3.95	51	P	26 01.60	-1.5
ARE	4.02	329	eP	26 03.00	-1.0
			eS	26 51.00	
YKA	89.59	341	eP	37 47.40	0.1

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

& JUL 28, 1989 11h 42m 36.10s
40.343 N 124.495 W
DEPTH = 22.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK).

FHC	0.60	40	iPc	42 47.20	-0.7
			iS	42 57.50	
WDC	1.51	80	iPc	43 00.00	-2.0
MIN	2.21	89	ePc	43 10.10	-2.2
ORV	2.43	108	ePc	43 13.30	-2.0
			eS	43 41.90	
BRK	3.02	144	e(P)	43 20.20	-3.3
BKS	3.03	144	ePc	43 20.40	-3.3
PCC	3.28	149	ePc	43 23.40	-3.9
MHC	3.73	142	eP	43 30.60	-3.3
ARN	3.78	141	eP	43 31.20	-3.3
GCC	3.84	149	eP	43 30.80	-4.5
SAO	4.30	145	ePc	43 35.70	-6.1
PRS	4.70	147	e(P)	43 43.40	-4.1
KVN	5.10	103	eP	43 50.40	-2.9

13 obs. ossocioted

& JUL 28, 1989 11h 49m 27.00s
58.005 N 152.318 W
DEPTH = 19.0km
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC	0.27	200	iP	49 32.97	-0.2
			S	49 38.25	
SHU	0.63	359	iP	49 38.25	-0.8
			S	49 47.85	
CDD	1.16	324	eP	49 46.24	-2.0
XLV	1.49	12	eP	49 51.37	-1.4
AUW	1.50	337	eP	49 51.75	-1.2
CNPM	1.63	20	eP	49 52.81	-2.1
OPT	1.72	344	eP	49 54.62	-1.6
SEW	2.57	34	eP	50 05.04	-3.4
SLKM	2.73	22	eP	50 07.50	-3.2

9 obs. ossocioted

% JUL 28, 1989 11h 51m 14.63± 0.62s
36.850 N ± 5.9km 5.112 W ± 5.1km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 2.8 (MDD).

EPRU	0.15	320	iP	51 18.40	0.2
			eS	51 21.90	
EJIF	0.49	216	eP	51 24.50	-0.1
MAL	0.58	102	iPgc	51 26.30	0.0
EHOR	0.97	354	eP	51 32.80	-0.3
			eS	51 47.30	
AFC	1.32	72	eP	51 39.20	0.1
			eS	51 55.60	
EVAL	1.50	300	eP	51 41.60	0.1
			eS	52 02.50	
EBAN	1.68	38	eP	51 44.20	0.0
			eS	52 04.50	

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

% JUL 28, 1989 13h 11m 45.21± 1.00s
38.139 N ± 9.3km 5.083 W ± 9.6km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

EHOR	0.34	202	iP	11 51.60	-0.7
			eS	11 57.80	
EBAN	1.02	88	iP	12 03.00	-1.6
			eS	12 18.00	
EPRU	1.18	186	eP	12 08.30	1.1
			eS	12 26.00	
EVAL	1.43	248	eP	12 10.50	-0.7
			eS	12 29.80	
AFC	1.51	125	eP	12 13.40	1.0
EVIA	2.09	75	eP	12 23.40	2.6X
			eS	12 50.30	
GUD	2.60	16	eP	12 29.00	0.8
			eS	13 00.00	

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

% JUL 28, 1989 13h 22m 18.66± 0.77s
39.768 N ± 6.6km 141.941 E ±12.9km
DEPTH = 120.0 ± 14.3 km
HONSHU, JAPAN (227)
MG 3.8 (JMA). Felt (I JMA) ot Morioko.

MRK	0.60	263	eP	22 37.00	-0.5
			iS	22 49.10	
OFUJ	0.72	197	iPd	22 38.80	0.4
			S	22 52.10	
AOMJ	1.44	304	iPd	22 45.60	-0.1
			S	23 04.50	
YAMJ	2.18	224	iPd	22 55.10	0.3
			S	23 21.40	
MRRJ	2.73	346	eP	23 02.00	0.0
			eS	23 33.80	
HOOJ	2.80	21	P	23 03.70	0.7
			S	23 37.00	
NIIJ	3.42	223	P	23 11.70	0.5
KAKJ	3.82	202	P	23 15.40	-1.2
			eS	23 58.10	
KUSJ	3.92	31	P	23 17.70	-0.3
			S	24 01.00	
ASAJ	4.38	7	eP	23 23.90	-0.3
CHJJ	4.38	213	eP	23 24.90	0.6
			eS	24 12.80	

S.D. = 0.7 on 11 of 11 obs.

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* JUL 28, 1989 13h 39m 18.98± 2.16s
43.288 N ±17.0km 19.064 E ±13.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.3 (TTG).

PLE	0.24	80	iPgd	39 24.20	-0.1
			iSg	39 27.80	
NKY	0.48	186	ePg	39 28.00	-0.7
			eSg	39 35.50	
BRY	0.54	225	ePg	39 29.70	-0.3
			eSg	39 38.50	
TTG	0.87	170	ePg	39 35.40	-0.3
			eSg	39 47.20	
BDV	1.02	190	ePg	39 39.60	1.3
			eSg	39 54.00	
HVAR	1.92	268	iPn	39 55.90	4.0X
			iSg	40 23.80	

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

? JUL 28, 1989 13h 58m 13.36± 5.94s
52.969 N ±13.6km 4.232 W ±47.9km
DEPTH = 10.0km (geophysicist)
UNITED KINGDOM (533)

ETA	1.23	258	eP	58 36.20	0.0
			eS	58 51.50	
DLE	1.43	284	eP	58 39.10	-0.2
			eS	58 55.80	
ECP	1.52	240	eP	58 40.60	0.0
			eS	59 00.00	
ECB	1.67	250	eP	58 42.70	0.0
			eS	59 04.20	
DMU	1.85	301	eP	58 45.40	0.0
			eS	59 08.00	
DCN	1.87	283	eP	58 45.90	0.2
			eS	59 08.70	

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

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* JUL 28, 1989 14h 07m 02.72± 1.84s
37.443 N ±11.9km 143.064 E ±16.1km
DEPTH = 38.7 ± 11.5 km
4.5mb (3 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)

OFUJ	1.97	327	iP+	07 34.00	-0.3
YAMJ	2.51	288	P	07 42.50	0.5
KAKJ	2.63	243	P	07 42.90	-0.8
NIIJ	3.24	268	P	07 52.60	0.2
CHJJ	3.55	248	P	07 56.30	-0.5
			eS	08 37.70	
MTMJ	4.30	260	P	08 09.10	1.7
IIDJ	4.59	246	P	08 12.60	1.0
HOOJ	4.94	2	P	08 18.40	2.0
			S	09 09.80	
KUSJ	5.79	12	P	08 26.50	-1.8
			eS	09 28.20	
TSRJ	6.01	254	P	08 32.40	0.8
WKYJ	6.87	244	eP	08 43.40	-0.2
YONJ	8.07	257	eP	08 59.30	-1.1
TKSJ	8.10	247	eP	08 59.50	-1.3
MDJ	12.43	309	eP	10 05.00	5.1X
TIA	20.78	275	eP	11 41.00	-1.9
BJI	21.11	285	eP	11 44.00	-2.1
WHN	24.72	262	Pd	12 23.50	1.8
BTO	25.78	287	eP	12 31.00	-0.8
CD2	32.99	270	eP	13 36.00	-0.2
GTA	33.70	287	eP	13 43.60	1.2
WMQ	41.83	297	P	14 52.40	2.0
WB5	57.60	190	eP	16 51.70	0.6
			e	17 01.20	
GBA	62.56	266	Pd	17 25.60	0.3
	0.9s		4.10nm		4.6mb
SUF	68.21	334	iP	18 02.30	1.4
	0.7s		2.80nm		4.4mb
SLL	74.11	337	(P)	18 34.30	-2.1
	0.8s		3.60nm		4.4mb
NAO	74.60	338	P	18 40.60	1.4
CLL	81.39	331	e(P)	19 15.00	-1.6
KHC	82.88	329	eP	19 27.60	3.1X
ZOBO	145.34	61	ePKP	26 42.00	2.8X
CNCB	145.81	62	PKP	26 44.90	5.0X

S.D. = 1.4 on 26 of 30 obs.

% JUL 28, 1989 14h 39m 48.26± 0.84s
46.186 N ± 7.2km 7.726 E ± 7.8km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)

MMK	0.21	129	iPc	39 52.70	-0.3
DIX	0.24	244	iPc	39 53.30	-0.3
ORO	0.59	162	Pc	40 00.80	0.5
			eSg	40 06.60	
LLS	1.11	52	eP	40 08.90	-0.4
SLE	1.67	18	ePd	40 18.10	0.5

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

JUL 28, 1989 15h 10m 57.57± 0.75s
38.705 N ± 5.3km 142.294 E ±10.1km
DEPTH = 64.0 ± 6.3 km
4.3mb (3 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (III JMA) ot Ofunoto; (II JMA) ot Miyoko ond Morioko; (I JMA) ot Sendoi.

OFU	0.57	309	iP	11 10.60	-0.2
			iS	11 18.20	
OFUJ	0.62	308	iP+	11 11.10	-0.2
			iS	11 19.00	
MIY	0.97	345	P	11 17.10	1.5
			S	11 28.30	
SEN	1.18	248	P	11 18.00	-0.4
			iS	11 31.20	

28d 15h

MRK	1.32	319	iPd	11	20.50	0.2
			S	11	34.90	
YAMJ	1.85	254	iP+	11	26.90	-0.7
			S	11	47.80	
AOMJ	2.37	322	iPd	11	35.10	0.2
NIIJ	2.98	242	P	11	43.50	0.0
KAKJ	3.01	215	P	11	43.10	-0.8
			S	12	16.80	
CHJJ	3.73	226	P	11	54.00	0.0
HOOJ	3.75	11	P	11	54.80	0.6
			S	12	37.10	
MRRJ	3.83	346	eP	11	55.10	-0.2
			eS	12	38.60	
MTMJ	4.14	241	P	12	00.70	0.8
KUSJ	4.76	22	P	12	07.60	-0.8
			S	12	59.10	
IIDJ	4.76	229	P	12	09.30	0.8
			eS	13	02.10	
ASAJ	5.42	3	eP	12	16.60	-1.0
TSRJ	5.95	240	P	12	28.20	3.1X
WB5	58.75	189	eP	20	50.90	-0.2
WRA	58.81	189	Pd	20	51.50	-0.1
	0.5s		2.00nm			4.5mb
SUF	66.81	333	iP	21	43.40	-0.7
	0.5s		1.80nm			4.3mb
NUR	68.81	332	iP	21	56.00	-0.6
HFS	72.85	336	eP	22	21.10	0.1
	0.3s		0.70nm			4.1mb
NAO	73.20	337	P	22	23.10	0.1
ZOBO	145.23	59	ePKP	30	32.00	1.4
LPB	145.43	59	ePKP	30	36.00	5.3X
CNCB	145.71	59	PKP	30	35.00	3.6X
S.D. = 0.7 on 23 of 26 obs.						

% JUL 28, 1989 15h 35m 17.60± 1.84s
47.214 N ±12.8km 9.657 E ±13.6km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

SAX	0.22	280	ePc	35	21.50	-0.9
LLS	0.57	233	eP	35	28.80	-0.5
OSS	0.62	148	eP	35	30.10	-0.2
SLE	0.96	305	eP	35	36.10	0.1
TMA	1.23	206	eP	35	39.90	-0.7
DIX	1.92	235	eP	35	53.10	2.2
S.D. = 1.5 on 6 of 6 obs.						

? JUL 28, 1989 15h 54m 33.84± 1.82s
35.293 N ±14.7km 45.526 E ±24.2km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
IRAN-IRAQ BORDER REGION (346)

SLY	0.31	356	iPgd	54	41.50	-0.2
			iSg	54	45.00	
KER	1.60	125	iPd	55	14.50	14.2X
MSL	2.22	300	iPnd	55	08.50	-0.5
			iPg	55	09.30	
			iSn	55	33.50	
			iSg	55	36.50	
BHD	2.22	205	ePnc	55	18.00	8.9X
			iP*	55	22.00	
			iSn	55	56.00	
			iS*	56	03.00	
			iSg	56	13.00	
TAB	2.84	13	eP	55	22.00	4.0X
BHL	8.26	263	Pn	57	37.00	62.7X
			Sn	58	48.00	
SALJ	8.83	251	Pc	57	25.20	42.9X
QASM	9.33	191	iPc	56	54.70	5.6X
SPC	23.17	315	eP	59	39.80	1.4
KHC	27.17	310	eP	00	20.60	4.5X
HFS	32.24	330	eP	01	00.40	-0.6
	0.5s		1.60nm			4.2mb
EKA	38.68	317	P	01	56.00	0.1
	2.7s		138.90nm			5.3mb X
BNG	39.55	225	ePd	02	03.50	-0.1
	0.2s		8.00nm			5.1mb X
S.D. = 0.9 on 6 of 13 obs.						

* JUL 28, 1989 16h 18m 15.87± 1.23s
23.489 N ± 8.2km 121.758 E ±10.4km
DEPTH = 37.2 ± 12.3 km
4.2mb (3 obs.)
TAIWAN (244)

TWF1	0.45	252	iPd	18	25.30	-0.5
			eS	18	31.90	
TWD	0.61	346	iPd	18	27.40	-0.6
			eS	18	35.40	
TWC	1.12	4	ePc	18	36.10	0.9
			eS	18	50.50	
TWO	1.15	313	iPd	18	35.60	-0.2
			eS	18	49.30	
TWK	1.19	260	iPc	18	37.00	0.7
TWZ	1.61	354	ePc	18	42.40	0.1
ANP	1.70	353	ePc	18	45.00	1.3
			eS	18	52.00	
QZH	3.23	297	Pnc	19	03.50	-1.9
			Sn	19	36.80	
SSE	7.59	356	eP	20	06.30	-0.6
			eLg	22	05.00	
MCO	7.69	261	eP	20	06.50	-1.8
NJ2	8.91	344	Pd	20	41.40	16.3X
			eS	22	07.40	
WHN	9.64	318	P	20	34.50	-0.7
			S	22	13.00	
QIZ	11.96	250	eP	21	06.80	-0.1
			S	23	15.40	
GYA	14.01	285	P	21	36.00	1.9
			S	23	57.00	
TIY	16.28	333	eP	22	08.00	4.6X
Z	16s		0.48um			
E	12s		0.30um			
CD2	17.62	299	eP	22	23.00	2.7
BTO	19.72	333	eP	22	49.00	3.7X
CHG	21.77	262	eP	23	07.50	1.1
WB5	44.83	163	eP	26	28.30	0.0
WRA	44.88	163	P	26	29.00	0.3
	0.5s		0.70nm			3.8mb
WARB	49.60	174	iPd	27	06.10	0.5
	0.4s		3.00nm			4.7mb
SLL	78.44	331	eP	30	12.70	-1.5
	0.5s		1.40nm			4.2mb
NAO	79.35	332	P	30	17.60	-1.6
S.D. = 1.3 on 20 of 23 obs.						

% JUL 28, 1989 16h 34m 29.25± 2.26s
42.167 N ±24.0km 106.255 E ± 9.5km
DEPTH = 33.0km (normal)
MONGOLIA (334)

BTO	3.24	118	Pn	35	20.20	1.2
			Pg	35	28.40	
HHC	4.20	107	Pnc	35	31.40	-1.3
			Sn	36	25.80	
			Sg	36	48.20	
GTA	5.61	243	Pg	35	53.00	0.3
			Sn	36	48.00	
LZH	6.35	198	Pn	36	02.00	-1.2
			Pg	36	36.00	
			Sn	37	20.00	
			Sg	37	57.00	
TIY	6.51	131	Pc	36	05.40	0.2
BJI	7.79	103	eP	36	50.50	27.4X
			Lg	38	40.00	
XAN	8.38	165	P	36	31.10	-0.3
GYA	15.67	179	P	38	10.40	1.0
S.D. = 1.2 on 7 of 8 obs.						

& JUL 28, 1989 17h 18m 28.08s
63.250 N 150.655 W
DEPTH = 138.2km
CENTRAL ALASKA (1)
<AGS-P>.

KTH	0.33	339	P	18	47.38	1.5
			S	19	01.04	
HUR	0.54	120	iP	18	48.00	-0.6
			S	19	02.73	
RND	0.83	78	iP	18	50.15	-0.5
			S	19	07.16	
CUT	0.87	168	iP	18	50.54	-0.3
			S	19	07.92	
MCK	0.91	57	iP	18	50.99	-0.3
			S	19	07.82	
SKT	1.34	198	iP	18	54.88	-0.5
			S	19	15.64	
NEA	1.50	27	iP	18	56.44	-0.7
			S	19	17.87	
PWA	1.65	167	iP	18	58.50	-0.2
WRH	1.67	42	iP	18	58.43	-0.6
SUA	1.79	181	eP	19	00.86	0.3
			S	19	25.50	
PMR	1.81	156	eP	18	59.20	-1.4
CCB	1.88	41	iP	19	00.85	-0.6
RDS	1.93	34	iP	19	01.51	-0.6
			S	19	25.87	
HDA	2.01	53	iP	19	02.32	-0.7
PMS	2.08	165	eP	19	03.20	-0.7
FBA	2.08	36	iPc	19	03.40	-0.5
SPU	2.18	198	eP	19	04.61	-0.5
GLM	2.26	38	iP	19	05.73	-0.4
TOA	2.37	117	eP	19	07.30	-0.2
PAX	2.37	94	eP	19	07.19	-0.5
			S	19	36.53	
SDG	2.45	105	eP	19	08.20	-0.3
TTA	2.46	265	eP	19	08.00	-0.7
NKA	2.53	186	iP	19	11.52	2.0
SLKM	2.76	176	eP	19	11.70	-0.8
KLU	2.82	127	eP	19	12.10	-1.3
VZW	2.92	137	eP	19	13.48	-1.1
DOT	2.99	79	eP	19	14.38	-1.1
RED	3.01	200	eP	19	15.81	0.0
IMA	3.11	337	e(P)	19	15.30	-1.9
			e	19	16.70	
SVW	3.17	230	eP	19	17.00	-0.8
SEW	3.21	169	eP	19	17.22	-1.0
NNL	3.23	186	eP	19	19.02	0.4
ILIM	3.37	200	eP	19	19.69	-0.7
HIN	3.48	144	eP	19	20.70	-1.1
			eS	20	01.19	
CVA	3.57	137	eP	19	22.92	-0.1
			eS	20	05.45	
GLB	3.67	117	eP	19	23.63	-0.8
CNPM	3.75	185	eP	19	24.52	-0.9
SGAM	3.78	134	eP	19	23.94	-1.8
			eS	20	08.19	
OPT	3.82	200	eP	19	26.40	0.1
RAGM	4.04	133	eP	19	28.46	-0.8
TGL	4.46	121	eP	19	33.88	-1.1
BALM	4.49	116	eP	19	34.24	-1.2
DWY	5.07	76	P	19	42.00	-1.0
KDC	5.59	190	e(P)	19	49.50	-0.6
44 obs. associated						

JUL 28, 1989 17h 25m 27.17± 1.06s
38.336 N ± 5.5km 22.224 E ± 6.1km
DEPTH = 64.5 ± 37.2 km
GREECE (364)
ML 3.3 (ATH).

ITM	1.18	192	ePn	25	48.00	0.0
ATH	1.23	107	ePb	25	49.50	0.8
NEO	1.24	39	ePn	25	48.60	-0.3
VLS	1.30	263	ePn	25	49.20	-0.4
LIT	1.77	7	ePnd	25	56.10	-0.1
			eSn	26	18.90	
PAIG	1.95	35	ePnd	25	58.20	-0.4
			eSn	26	20.70	
KZN	2.00	350	ePn	26	00.00	0.6
PLG	2.24	25	ePn	26	02.60	-0.1
THE	2.36	14	ePnd	26	04.00	-0.3
			eSn	26	33.10	
OUR	2.42	34	ePnd	26	04.70	-0.4
GRG	2.62	3	ePn	26	09.00	1.0
KNT	2.87	10	ePn	26	11.50	0.0
			eSn	26	46.10	
APE	2.91	115	ePn	26	12.00	-0.1
SRS	2.97	20	ePn	26	12 30	-0.6
			eSn	26	47.00	
VAY	2.99	5	e(Pn)	26	13.60	0.4
SKO	3.68	351	e(Pn)	26	27.10	4.2X
S.D. = 0.6 on 15 of 16 obs.						

JUL 28, 1989 18h 38m 53.92± 0.55s
46.503 N ± 4.4km 9.464 E ± 5.6km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)

VDL	0.02	166	iPc	38	56.40	0.4
LLS	0.49	319	iPc	39	03.10	-0.8
OSS	0.50	68	ePd	39	03.90	-0.3
TMA	0.57	226	ePd	39	04.90	-0.7
MDI	0.75	167	P	39	08.50	0.0
			eSg	39	14.80	
SAX	0.75	354	eP	39	08.70	-0.1
VAI	0.80	217	P	39	09.30	-0.1
			eSg	39	19.70	
MMK	1.13	247	eP	39	15.90	0.6
SLE	1.43	333	eP	39	21.00	1.1

BOB	1.74	180	Pd	39 09.30	-15.1X
			eSg	39 19.10	
S.D. = 0.7 on 9 of 10 obs.					

? JUL 28, 1989 21h 27m 09.69± 6.23s
32.448 S ±36.3km 71.832 W ±31.5km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.87	127	iPd	27 26.50	0.0
			iS	27 38.00	
LCCH	1.05	168	iPc	27 29.10	-0.3
			iS	27 42.50	
JACH	1.07	103	iPd	27 29.70	-0.2
			iS	27 44.00	
PEL	1.19	126	iPd	27 32.00	0.1
			iS	27 47.60	
SAN	1.40	136	iP	27 35.20	-0.1
			iS	27 53.30	
TACH	1.42	148	iPd	27 35.60	0.1
			iS	27 54.50	
FCH	1.57	124	iPc	27 38.00	0.1
			iS	27 58.00	
PCH	1.61	137	iP	27 38.30	0.0
CHCH	1.78	147	iP	27 41.20	0.4
			iS	28 04.70	
S.D. = 0.3 on 9 of 9 obs.					

* JUL 28, 1989 23h 20m 23.91± 1.22s
29.280 S ± 8.1km 71.095 W ±12.3km
DEPTH = 65.9 ± 15.9 km
4.6mb (1 obs.)
NEAR COAST OF CENTRAL CHILE (135)

RTBS	2.76	150	e(P)	21 25.00	18.3X
RTCB	2.96	139	iPd	21 10.00	0.4
RTLL	3.05	133	iPd	21 10.20	-0.7
ZON	3.08	138	eP	21 11.00	-0.2
CFA	3.39	134	iPd	21 14.90	-0.6
			S	21 52.00	
RTCV	3.39	140	e(P)	21 16.00	0.4
			S	21 53.50	
JACH	3.42	173	iPc	21 16.40	0.4
			iS	22 55.00	
ROCH	3.68	179	iPd	21 19.60	-0.2
			iS	22 04.00	
PEL	3.87	175	iP	21 22.90	0.6
			iS	22 05.50	
FCH	4.09	171	iPc	21 27.30	1.5
			iS	22 15.00	
SAN	4.18	175	eP	21 27.00	0.3
			iS	22 12.50	
LCCH	4.20	185	iPc	21 26.40	-0.6
			iS	22 27.10	
PCH	4.36	174	ePd	21 30.00	0.8
			iS	22 19.80	
TACH	4.36	178	iPd	21 29.00	-0.3
			iS	22 17.60	
CHCH	4.65	175	ePd	21 24.20	-9.2X
CYA	4.72	81	ePd	21 32.80	-1.5
ANT	5.59	6	e(P)	21 58.50	12.2X
			iS	23 13.00	
RFA	5.91	158	ePd	21 49.00	-2.0
SLA	6.75	49	ePc	22 04.20	1.6
CNCB	12.74	14	P	23 29.00	4.5X
LPB	12.98	13	eP	23 31.00	3.4X
ZOBO	13.23	13	eP	23 30.00	-1.1
			i	23 34.00	
VAO	22.52	80	eP	25 21.10	1.9
			e	25 33.20	
SPA	60.88	180	ePc	30 30.90	-0.9
	1.0s		5.00nm		4.6mb
S.D. = 1.1 on 19 of 24 obs.					

* JUL 29, 1989 00h 10m 31.45± 2.20s
5.284 S ±12.9km 148.611 E ±13.6km
DEPTH = 46.7 ± 17.8 km
4.8mb (3 obs.)
NEW BRITAIN REGION (192)

LAT	2.10	230	eP	11 05.50	0.6
LMG	3.63	187	eP	11 27.50	0.8
RAB	3.71	73	iPd	11 14.50	-13.2X
			eS	12 08.00	
PMG	4.35	199	eP	11 36.00	-0.7
QIS	17.52	209	iPc	14 33.30	-0.8
MTN	18.82	245	eP	14 50.30	0.2
GUMO	19.11	349	eP	15 00.30	6.7X
WB5	20.07	222	iPc	15 02.80	-1.0
WRA	20.13	222	Pd	15 03.10	-1.4
	1.0s		56.10nm		4.9mb
BRS	22.34	170	iPc	15 33.00	6.2X
ASPA	23.13	216	eP	15 35.80	1.3
	0.9s		36.00nm		4.8mb
	Z 22s		0.42um		3.8MszX
			eS	19 49.60	
			LR	23 54.80	
DZM	24.01	136	iPc	15 42.20	-0.9
WARB	29.55	223	eP	16 34.60	0.5
XAN	54.17	319	P	19 54.60	0.0
CD2	55.94	313	eP	20 07.10	-0.4
GTA	63.23	319	eP	20 57.60	-0.1
SPA	84.75	180	e(P)	23 03.80	1.9
	1.0s		4.00nm		4.5mb
INK	90.41	21	eP	23 38.00	9.2X
S.D. = 1.1 on 14 of 18 obs.					

JUL 29, 1989 01h 21m 26.63± 0.68s
48.044 N ± 5.2km 6.698 E ± 5.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (LDG).

BSF	0.22	163	Pg	21 31.22	-0.3
			Sg	21 34.29	
HAU	0.24	261	Pg	21 31.90	0.2
			Sg	21 35.10	
MOF	0.35	123	Pg	21 33.76	-0.1
ECH	0.35	61	Pg	21 33.96	0.0
			Sg	21 38.82	
CDF	0.53	46	Pg	21 37.28	-0.2
WLS	0.57	50	Pg	21 38.04	-0.3
LOMF	0.70	173	Pg	21 40.41	-0.1
FEL	0.90	100	Pg	21 44.66	0.7
			Sg	21 57.17	
S.D. = 0.4 on 8 of 8 obs.					

? JUL 29, 1989 01h 33m 52.51± 5.25s
25.877 S ±33.1km 179.389 E ±39.1km
DEPTH = 554.8 ± 46.6 km
SOUTH OF FIJI ISLANDS (171)

DZM	12.43	285	iPc	36 35.30	-0.6
BRS	23.83	260	iPd	38 24.70	0.5
RMQ	27.47	262	iPd	38 57.80	1.5
	0.6s		43.00nm		5.3mb
CTA	30.99	274	iPd	39 26.80	0.2
	0.8s		51.49nm		5.2mb
STK	33.51	251	iPc	39 47.80	0.1
	0.3s		7.00nm		4.8mb
PMG	34.67	292	eP	39 58.00	0.5
QIS	36.84	270	iPd	40 15.40	0.0
	0.4s		18.00nm		5.1mb
ASPA	41.21	263	iPd	40 50.50	-0.3
	0.6s		45.00nm		5.2mb
			eS	46 27.80	
WRA	41.76	269	Pc	40 54.60	-0.5
	0.4s		10.70nm		4.7mb
MTN	47.09	276	iPd	41 36.20	-0.3
	0.2s		16.00nm		5.2mb
WARB	47.12	257	iPc	41 35.20	-1.4
KNA	48.13	272	eP	41 44.50	0.1
NAO	144.20	350	PKP	52 26.60	0.5
HFS	144 36	348	ePKP	52 26.00	-0.4
	0.4s		2.30nm		
PRNI	148.36	286	iPKPc	52 40.00	6.2X
MBH	148.45	285	iPKPc	52 40.50	6.6X
S.D. = 0.8 on 14 of 16 obs.					

JUL 29, 1989 01h 50m 37.52± 0.39s
40.618 N ± 4.0km 19.100 E ± 3.4km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MG 3.2 (TIR).

VLO	0.34	116	iPg	50 43.60	-0.9
TPE	0.77	115	ePg	50 51.50	-1.0
LCI	0.92	252	Pc	50 55.00	-0.1
TIR	0.93	38	iPgc	50 55.20	-0.1
SRN	1.01	137	iPg	50 57.90	1.3
LACI	1.12	24	iPgd	50 58.50	0.1
KBN	1.30	89	iPnd	51 01.50	-0.1
SDA	1.43	12	ePn	51 03.70	0.3
PHP	1.47	43	iPnc	51 03.40	-0.6
PUK	1.54	22	ePn	51 04.70	-0.3
KKS	1.76	34	ePn	51 09.00	0.8
TTG	1.81	4	ePn	51 08.00	-1.0
			eSn	51 31.20	
BCI	1.89	22	ePn	51 10.90	0.8
SKO	2.22	52	ePn	51 15.60	0.6
	0.4s		150.00nm		
			i	51 21.20	
			iSn	51 43.80	
TDS	2.32	247	P	51 16.60	0.2
VAY	2.72	74	ePn	51 22.40	0.4
MGR	2.75	261	Pd	51 22.70	0.2
			eSn	52 07.40	
SDI	4.13	287	P	51 41.60	-0.5
			eSn	52 39.60	
S.D. = 0.7 on 18 of 18 obs.					

JUL 29, 1989 03h 05m 01.17± 1.34s
1.139 N ± 6.1km 121.574 E ±10.6km
DEPTH = 42.6 ± 13.1 km
4.7mb (5 obs.) 3.9Msz (1 obs.)
MINAHASSA PENINSULA (265)

PCI	2.67	221	iPd	05 45.00	2.3
TSM	4.65	311	ePc	06 10.50	-0.3
MKS	6.66	198	iPd	06 44.70	5.7X
KKM	7.23	312	ePd	06 45.20	-2.0
	0.5s		47.30nm		5.6mb
KNA	18.22	157	eP	09 13.00	0.2
PPI	21.24	266	e(P)	09 28.00	-17.9X
MBL	22.23	184	eP	09 55.00	-0.8
WB5	24.37	150	eP	10 16.80	0.1
WRA	24.41	150	Pc	10 16.80	-0.3
	0.6s		15.20nm		4.7mb
ASPA	27.42	155	eP	10 44.50	-0.5
	1.0s		11.00nm		4.5mb
	Z 21s		0.32um		3.9Msz
			LR	22 20.70	
WARB	27.60	170	eP	10 45.60	-1.1
MEKA	27.75	186	eP	10 47.00	-1.0
QIS	27.87	142	eP	10 48.50	-0.7
			e	10 53.00	
CHG	28.30	310	eP	10 52.90	-0.2
CD2	34.08	332	P	11 44.10	0.2
TIY	37.36	348	eP	12 12.30	0.7
	Z 28s		0.60um		4.2MszX
MAT	38.45	22	eP	12 20.00	-0.7
	1.3s		26.92nm		4.9mb
BJI	39.03	353	eP	12 26.00	0.5
SNY	40.54	2	Pd	12 37.80	-0.1
GTA	42.96	335	iPd	12 59.20	1.2
MDJ	43.87	8	eP	13 06.00	0.9
CAN	44.41	147	eP	13 11.20	1.5
GBA	45.39	288	Pc	13 16.80	-0.9
	0.9s		5.90nm		4.5mb
WMQ	52.09	329	P	14 09.00	-0.3
KVT	85.88	311	eP	17 38.00	-0.1
PRNI	86.47	300	eP	17 42.00	0.8
MBH	86.57	300	ePc	17 43.00	1.4
BUL	93.17	250	iPd	18 12.10	-0.8
ZOBO	162.18	148	PKP	25 03.00	2.4X
S.D. = 1.0 on 26 of 29 obs.					

JUL 29, 1989 03h 12m 26.51± 0.38s
40.662 N ± 4.8km 21.584 E ± 3.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.6 (ATH).

KZN	0.38	158	ePg	12 34.00	-0.4
KBN	0.59	267	iPgc	12 36.50	-1.9
GRG	0.69	64	ePgc	12 40.10	0.0
LIT	0.89	129	ePgd	12 43.30	-0.3
			eSg	12 57.70	
VAY	1.00	48	iPn	12 45.40	0.0
			iSn	13 02.70	
THE	1.05	91	ePgd	12 46.70	0.4
			eSg	13 01.90	
KNT	1.11	63	ePgd	12 47.90	0.5
TPE	1.25	254	ePn	12 49.60	-0.2
SKO	1.31	355	iPnc	12 50.40	-0.4
	0.6s		350.00nm		
			i	12 51.70	
			iSn	13 09.20	
			LQ	13 13.20	
PHP	1.34	320	iPgc	12 49.40	-1.8
SRN	1.44	238	ePn	12 55.80	3.2

29d 03h

PLG	1.45	101	ePb	12	53.00	0.2
TIR	1.47	298	ePn	12	52.50	-0.5
SRS	1.59	73	ePbd	12	54.10	-0.7
			eSb	13	15.10	
VLO	1.60	264	ePn	12	55.60	0.7
KKS	1.67	328	ePn	12	57.20	1.4
LACI	1.72	305	iPnd	12	57.50	0.9
PAIG	1.76	114	ePn	12	56.50	-0.8
			eSn	13	18.80	
NEO	1.85	137	ePn	12	59.00	0.4
OUR	1.86	99	ePn	12	58.30	-0.3
			eSn	13	24.10	
PUK	1.88	318	ePn	12	59.00	0.1
BCI	2.05	327	iPn	13	01.80	0.4
SDA	2.07	311	ePn	13	03.20	1.5
TTG	2.48	316	ePn	13	07.50	-0.1
			eSn	13	41.00	
MGR	4.63	265	P	13	37.80	-0.4
			eSn	14	24.30	
SGO	4.78	271	P	13	38.00	-2.2
			eSn	14	26.80	

S.D. = 1.1 on 26 of 26 obs.

? JUL 29, 1989 03h 15m 44.72± 2.97s
8.851 N ±28.2km 85.329 W ±17.3km
DEPTH = 31.1 ± 9.2 km
OFF COAST OF COSTA RICA (77)

SRA	1.50	35	iPc	16	09.90	0.0
			S	16	32.00	
LCR2	1.58	56	iPd	16	10.60	-0.5
AR6	1.63	15	iPc	16	11.70	-0.1
			S	16	35.30	
SJS	1.66	49	iPc	16	12.30	0.1
BUS	1.70	66	iPd	16	12.80	-0.3
ICR	1.86	53	iP	16	15.80	0.5
LIO	2.54	63	iPd	16	25.00	0.3
			S	16	57.50	
INK	67.24	343	eP	26	38.00	0.0

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

% JUL 29, 1989 03h 40m 04.99± 0.97s
32.187 S ± 7.7km 69.061 W ±11.0km
DEPTH = 33.0km (normal)
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.55	54	iPd	40	20.00	3.6X
RTBS	0.62	327	iPd	40	17.20	-0.1
RTCB	0.73	18	iPd	40	19.30	0.3
			S	40	33.00	
CFA	0.91	51	iPc	40	22.20	0.8
			S	40	39.00	
RTLL	0.99	31	ePc	40	21.80	-0.9
			(S)	40	38.00	
RFA	2.62	169	iPc	40	46.10	0.1
MRA	2.85	95	ePc	40	48.80	-0.3

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

% JUL 29, 1989 05h 31m 32.95± 0.85s
18.229 N ±17.7km 66.317 W ± 7.8km
DEPTH = 33.0km (normal)
PUERTO RICO REGION (90)

CSB	0.16	68	P	31	40.40	1.1
			S	31	53.40	
SJG	0.20	126	iP	31	39.90	0.3
PNP	0.39	244	P	31	42.50	0.6
			S	31	56.40	
LPR	0.43	79	P	31	41.00	-1.6
			S	31	53.70	
APR	0.45	300	P	31	42.80	-0.1
			S	31	56.80	
MGP	0.77	253	P	31	45.70	-1.6

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

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* JUL 29, 1989 05h 48m 14.38± 0.53s
20.722 S ±15.2km 173.714 W ±11.3km
DEPTH = 35.5km (2 depth phases)
5.1mb (11 obs.) 4.9Msz (7 obs.)
TONGA ISLANDS (173)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 05:48:17.5 1.8
Lat 20.75S 0.12 Lon 173.35W 0.15
Dep 15.0 FIX Half-duration 1.7

Moment Tensor; Scale 10**16 Nm
Mrr= 4.06 0.30 Mtt=-0.46 0.48
Mff=-3.60 0.41 Mrt= 1.20 1.21
Mrf= 2.98 1.35 Mtf=-2.11 0.32
Principal Axes:
T Val= 5.12 Plg=72 Azm=286
N 0.59 3 25
P -5.71 18 116
Best Double Couple:Mo=5.4*10**16
NP1:Strike=210 Dip=27 Slip= 96
NP2: 23 63 87

AFI	7.02	16	eP	50	00.00	2.4
			eS	51	34.00	
			e	52	52.40	
RAR	13.03	95	P	51	09.00	-10.8X
			S	53	13.00	
DZM	18.53	262	iPc	52	31.90	1.7
MSZ	28.32	208	eP	54	14.00	7.2X
BRS	31.25	251	iPc	54	33.30	0.2
RMQ	34.78	253	eP	55	05.00	1.2
CAN	35.76	238	eP	55	13.10	1.0
BWA	36.02	240	eP	55	13.10	-1.2
CTA	37.46	264	iP	55	26.90	0.4
	1.0s		21.00nm			5.0mb
			eS	01	36.00	
TOO	39.04	236	eP	55	41.00	1.3
JAY	47.94	286	ePc	56	55.00	3.1X
	0.7s		77.70nm			5.8mb
ASPA	48.37	256	eP	56	54.00	-1.1
	1.1s		25.00nm			5.2mb
	Z 19s		1.48um			5.0Msz
			LR	16	16.00	
WB5	48.53	261	eP	56	55.00	-1.3
WRA	48.54	261	Pd	56	54.70	-1.7
	1.0s		12.80nm			4.9mb
GUMO	53.10	306	eP	57	26.00	-4.9X
PJG	53.10	306	eP	57	25.50	-5.4X
MTN	53.18	269	iPc	57	29.80	-1.8
	0.7s		19.00nm			5.2mb
WARB	54.59	252	eP	57	40.80	-1.1
SBA	57.95	185	(P)	58	10.00	4.8X
MBL	61.62	257	eP	58	30.00	-1.2
SPA	69.41	180	e(P)	59	23.70	3.0
	0.9s		5.00nm			4.6mb
	Z 20s		0.72um			4.9Msz
MAT	72.83	321	(P)	59	40.00	-1.5
	1.9s		100.00nm			5.5mb
			eS	09	13.00	
ARN	75.82	40	eP	59	59.50	0.7
PLM	76.35	46	P	00	00.90	-1.2
CMB	76.96	41	eP	00	03.80	-1.4
WDC	77.35	37	e(P)	00	07.70	0.5
MIN	77.73	38	e(P)	00	09.30	-0.2
TNP	78.95	42	P	00	15.30	-1.1
KVN	78.99	41	P	00	15.40	-1.2
RMW	82.33	33	P	00	32.80	-1.1
MSU	82.42	44	eP	00	35.00	0.2
			epP	00	46.60	38km
ALQ	84.45	50	eP	00	46.00	0.9
	1.3s		19.23nm			5.1mb
	Z 20s		0.37um			4.8Msz
			epP	00	56.50	33km
PNT	84.65	32	eP	00	45.00	-0.5
	0.8s		10.00nm			5.0mb
CN2	84.97	321	Pc	00	48.40	1.2
	4.0s		0.30nm			2.8mb X
	Z 16s		0.30um			4.8MszX
			sS	11	20.00	
LRM	86.37	38	eP	00	52.70	-1.8
TIA	86.42	311	eP	00	54.90	0.3
GOL	87.55	46	P	01	00.90	0.5
	0.9s		5.49nm			4.8mb
FBA	87.65	11	P	00	57.80	-2.1
	0.8s		16.55nm			5.4mb
BJI	88.91	314	P	01	07.00	0.5
	Z 20s		0.30um			4.7Msz
			eS	11	36.00	
			eSKS	12	00.00	
MEO	90.12	53	iPd	01	13.50	1.2
TIY	90.45	310	eP	01	15.80	2.0
	Z 26s		0.70um			5.0MszX
			S	11	53.00	
RSSD	90.57	42	P	01	13.80	-0.6
XAN	91.49	306	P	01	19.60	0.9
HHC	92.41	313	eP	01	24.60	1.7
KMI	93.05	296	eP	01	25.00	-1.3
			eS	10	09.00	
INK	93.48	14	eP	01	29.00	2.0
ZOBO	98.26	111	eP	01	54.00	3.3X
	Z 20s		0.44um			4.9Msz
			LR	34	32.00	
WTS	148.78	359	ePKP	08	04.00	8.5X
	1.0s		13.00nm			
KRA	148.79	343	ePKP	08	00.60	5.0X
			e	08	11.50	
KSP	148.92	348	ePKP	07	59.50	3.7X
CLL	149.02	352	ePKP	07	59.00	3.1X
	2.4s		65.00nm			
BRG	149.31	350	ePKP	08	03.50	7.2X
	2.0s		52.00nm			
SPC	149.48	342	ePKP	08	03.80	6.9X
VRI	149.83	331	ePKPd	08	01.50	4.2X
ENM	150.02	0	ePKP	08	04.50	7.1X
	2.0s		84.00nm			
PRU	150.07	349	ePKP	08	02.50	5.0X
			e	08	05.00	
MLR	150.47	331	ePKP	08	06.00	7.5X
DOU	150.66	2	PKP	08	04.20	5.8X
GRF	150.83	353	ePKP	08	06.60	7.9X
	2.0s		175.00nm			
	Z 20s		0.10um			4.6Msz
HRI	151.04	302	e(PKP)	08	04.00	4.4X
KHC	151.06	350	PKP	08	05.90	6.8X
			e	08	17.60	
WLF	151.12	0	PKP	08	04.50	5.5X
ZST	151.24	345	ePKP	08	07.80	8.5X
	Z 18s		0.60um			5.4Msz
FLN	151.50	9	ePKP	08	05.00	5.3X
	0.8s		10.70nm			
LDF	151.72	9	ePKP	08	05.40	5.4X
	0.8s		6.40nm			
LPF	152.12	11	ePKP	08	06.50	5.9X
	0.8s		8.00nm			
PRNI	152.44	296	e(PKP)	08	08.00	6.3X
MBH	152.67	295	e(PKP)	08	09.00	7.1X
SSF	153.63	4	ePKP	08	13.00	10.2X
	1.0s		4.80nm			
LSF	154.24	8	ePKP	08	10.80	7.1X
	1.0s		10.00nm			
TCF	154.28	7	ePKP	08	10.50	6.7X
BNG	159.89	218	ePKPc	08	15.40	3.8X
	0.4s		3.00nm			
			id	08	52.60	

S.D. = 1.4 on 40 of 72 obs.

? JUL 29, 1989 06h 31m 41.67± 6.28s
5.961 S ±51.7km 147.759 E ±47.0km
DEPTH = 113.6 ± 11.6 km
4.5mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	1.02	228	e(P)	32	04.00	0.3
LMG	2.95	172	eP	32	27.50	-0.5
PMG	3.48	190	eP	32	35.00	0.1
QIS	16.53	208	iPd	35	28.60	0.5
WB5	19.00	222	eP	35	55.80	-1.4
WRA	19.06	222	Pd	35	57.60	-0.3
	0.4s		3.40nm			4.0mb
KNA	21.02	241	eP	36	17.00	-0.9
ASPA	22.09	216	iPd	36	29.50	1.0
	0.4s		25.00nm			4.9mb
WARB	28.48	223	eP	37	29.50	1.3

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

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* JUL 29, 1989 07h 02m 16.49± 0.95s
24.179 S ±10.3km 69.355 W ±11.2km
DEPTH = 101.7 ± 13.8 km
4.3mb (1 obs.)
NORTHERN CHILE (123)

ANT	1.08	296	iPd	02	38.20	0.0
			iS	02	54.00	
SLA	3.56	100	ePd	03	10.80	-0.1
CCH	7.40	25	P	04	04.20	0.4
CNCB	7.44	10	P	04	05.00	0.3
LPB	7.70	9	P	04	15.00	7.0X
ZOBO	7.95	9	P	04	11.00	-0.7
VAO	20.55	91	eP	06	44.40	-4.7X
SPA	65.97	180	e(P)	12	53.80	0.0
	0.8s		3.33nm			4.3mb

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

? JUL 29, 1989 07h 26m 33.24± 3.04s

0.489 N ±29.7km 125.461 E ±30.8km
DEPTH = 46.2 ± 23.5 km
4.6mb (2 obs.)
MOLUCCA PASSAGE (266)

AAI	4.97	147	iPc	27	47.80	0.6
MTN	14.39	157	eP	29	55.20	-0.8
	0.9s	155.00nm			5.5mb	X
KNA	16.46	169	eP	30	23.00	0.3
WB5	22.05	157	eP	31	24.80	-0.9
WRA	22.09	157	Pd	31	24.70	-1.5
	0.6s	19.00nm			4.7mb	
ASPA	25.37	162	eP	31	57.80	-0.2
	0.9s	79.00nm			5.3mb	X
WARB	26.54	178	eP	32	10.00	1.3
STK	35.63	156	iPd	33	28.20	-0.6
BWA	40.86	150	eP	34	13.90	1.5
CAN	41.86	151	eP	34	21.20	0.6
HYB	49.10	293	eP	35	18.50	0.0
GBA	49.29	288	Pc	35	19.70	-0.2
	0.5s	2.90nm			4.6mb	
S.D. = 1.1		on	12	of	12	obs.

? JUL 29, 1989 07h 47m 34.03± 6.41s
17.221 N ±32.6km 62.379 W ±41.3km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 3.0 (FDF).

MGH	0.52	163	iPc	47	44.50	-0.1
			S	47	49.10	
SEG	1.17	134	iPc	47	55.88	0.1
PAG	1.36	150	ePc	47	59.10	0.0
			S	48	14.00	
DEG	1.55	125	eP	48	01.40	-0.4
			S	48	20.00	
MGG	1.65	142	ePc	48	03.80	0.7
BBL	1.90	153	eP	48	06.50	-0.3
S.D. = 0.5		on	6	of	6	obs.

& JUL 29, 1989 07h 54m 28.88s
62.484 N 151.186 W
DEPTH = 90.3km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.43	100	iP	54	42.81	-0.5
			S	54	53.25	
SKT	0.53	198	iP	54	43.47	-0.7
			S	54	55.03	
HUR	0.87	55	iP	54	46.55	-0.9
			S	54	59.90	
PWA	1.04	143	eP	54	48.89	-0.4
			S	55	04.75	
SUA	1.05	168	eP	54	49.04	-0.5
			S	55	05.06	
KTH	1.08	6	iP	54	48.76	-1.1
			S	55	03.48	
SPU	1.37	198	eP	54	52.90	-0.5
			S	55	11.43	
RND	1.41	48	eP	54	52.94	-1.1
			S	55	11.26	
MCK	1.62	38	eP	54	55.64	-1.0
			S	55	15.68	
RDT	2.00	197	eP	55	00.94	-0.8
WRH	2.43	33	eP	55	05.73	-1.7
HDA	2.71	43	eP	55	09.58	-1.7
12 obs. ossocioted						

JUL 29, 1989 08h 00m 20.16± 0.70s
43.104 N ± 6.2km 10.782 E ± 5.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

PII	0.65	343	Pc	00	32.10	-1.0
			eSg	00	41.10	
MAO	0.74	158	Pc	00	35.70	1.0
			eSg	00	47.60	
BDI	0.97	352	Pc	00	37.80	-0.8
			eSg	00	51.40	
PGD	1.03	41	Pd	00	39.50	-0.2
MME	1.09	357	P	00	40.50	-0.3
			eSg	00	55.60	
SFI	1.13	43	P	00	40.80	-0.5
			eSg	00	57.40	
CVF	1.51	250	Pn	00	47.30	0.1
			Sn	01	06.50	
ARV	1.63	75	P	00	48.90	0.0
SBF	2.55	288	Pn	01	00.60	-1.7
			Sn	01	31.10	
FRF	3.05	280	Pn	01	09.70	0.4
			Sn	01	41.60	
LMR	3.13	276	Pn	01	08.60	-1.8
			Sn	01	43.10	
LRG	3.25	278	Pn	01	10.70	-1.4
TMA	3.30	336	eP	01	13.00	0.0
VDL	3.51	345	eP	01	17.80	1.8
OSS	3.61	353	eP	01	18.60	1.1
LPG	3.75	311	Pn	01	21.40	1.7
FVI	3.77	21	P	01	18.20	-1.3
LPL	3.78	311	Pn	01	21.70	1.8
LLS	3.97	342	eP	01	24.00	1.4
SAX	4.27	347	eP	01	28.50	1.6
SLE	4.93	342	eP	01	35.60	-0.5
KHC	6.33	17	P	01	54.50	-1.4
S.D. = 1.3		on	22	of	22	obs.

? JUL 29, 1989 08h 31m 12.44± 4.00s
36.481 N ±34.0km 70.576 E ±20.1km
DEPTH = 122.2 ± 54.6 km
4.7mb (2 obs.)
HINDU KUSH REGION (718)

QUE	6.97	207	eP	32	53.70	0.1
			eS	33	10.00	
MAIO	8.94	272	ePn	33	20.00	-0.1
	0.5s	7.65nm			4.7mb	
			eSn	34	53.00	
NDI	9.58	142	eP	33	28.50	-0.1
SUF	37.76	328	iP	38	18.30	0.7
HFS	42.87	322	eP	38	59.80	0.1
	0.5s	6.80nm			4.6mb	
NAO	44.36	323	P	39	11.00	-0.7
S.D. = 0.7		on	6	of	6	obs.

JUL 29, 1989 10h 38m 08.29± 0.43s
40.373 N ± 5.8km 21.499 E ± 3.2km
DEPTH = 16.9 ± 5.3 km
GREECE (364)
MD 3.9 (ATH).

KZN	0.22	108	ePg	38	13.00	-0.6
KBN	0.58	296	iPgd	38	18.50	-1.1
LIT	0.81	109	ePgc	38	23.70	0.2
			eSg	38	37.00	
GRG	0.90	49	ePgc	38	25.00	-0.1
			eSg	38	39.70	
TPE	1.14	267	iPgd	38	29.50	0.3
THE	1.15	76	ePgd	38	29.50	0.2
			eSg	38	45.40	
VAY	1.25	40	iPn	38	30.80	-0.1
			iSn	38	47.30	
SRN	1.25	247	iPgd	38	34.70	3.8X
KNT	1.32	53	ePg	38	32.20	0.2
			eSg	38	50.60	
PLG	1.49	89	ePb	38	35.00	0.7
VLO	1.53	274	iPn	38	38.10	3.2X
PHP	1.54	329	iPgd	38	34.60	-0.4
TIR	1.57	309	ePn	38	37.50	2.0
SKO	1.60	358	ePn	38	37.00	1.1
	0.8s	250.00nm				
			i	38	43.20	
			i	38	44.20	
			iSn	38	58.50	
			LQ	39	10.20	
			LR	39	10.50	
NEO	1.70	128	ePb	38	37.00	-0.4
PAIG	1.73	104	ePn	38	37.80	0.0
			eSn	38	59.20	
SRS	1.76	64	ePnd	38	37.80	-0.4
			eSn	38	59.40	
LACI	1.85	314	iPn	38	42.50	3.0X
KKS	1.89	335	ePnc	38	47.80	7.7X
OUR	1.90	90	ePn	38	41.10	0.9
SDA	2.23	318	ePn	38	48.60	3.6X
BCI	2.26	332	ePn	38	47.80	2.3X
ULC	2.33	314	ePn	38	51.40	5.0X
			eSn	39	22.50	
TTG	2.66	321	ePn	38	52.50	1.4
			eSn	39	25.00	
MGR	4.55	269	P	39	17.70	-0.4
			eSn	40	07.50	
SGO	4.73	274	P	39	20.90	0.4
			eSn	40	06.10	
NAO	21.51	346	P	42	54.00	-4.2X
S.D. = 0.8		on	19	of	27	obs.

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* JUL 29, 1989 11h 28m 30.57± 1.64s
1.565 N ±12.3km 79.693 W ±30.9km
DEPTH = 43.9 ± 15.3 km
4.8mb (3 obs.) 3.8Msz (1 obs.)
NEAR COAST OF ECUADOR (105)

COTA	1.82	132	eP	29	00.00	-0.5
			eS	29	30.00	
GGP	2.05	148	eP	29	03.00	-0.8
OUR	2.08	146	eP	29	03.50	-0.6
			eS	29	32.80	
CAYA	2.26	131	eP	29	07.60	0.9
RECU	2.46	153	eP	29	10.60	0.9
			eS	29	46.50	
UPA	7.37	1	ePc	30	18.40	0.0
ZOBO	21.09	148	P	33	13.60	-0.7
	1.1s	20.30nm			4.4mb	
Z	20s	0.44um			3.8Msz	
			S	37	20.00	
			LR	42	20.00	
LPB	21.32	148	P	33	17.00	0.5
	1.0s	56.00nm			4.9mb	
			eLR	42	22.00	
CNCB	21.61	148	Pc	33	19.80	0.2
FFC	56.04	345	eP	38	07.00	-0.2
	1.1s	******nm			7.8mb	X
PNT	58.52	330	ePc	38	25.00	0.1
	0.7s	6.00nm			4.8mb	
S.D. = 0.7		on	11	of	11	obs.

JUL 29, 1989 11h 44m 06.40± 1.04s
5.877 S ± 8.0km 142.195 E ± 8.9km
DEPTH = 60.4 ± 18.9 km
4.4mb (3 obs.)
PAPUA NEW GUINEA (202)

MNDI	1.48	101	iP	44	31.00	-0.4
			eS	44	53.00	
JAY	3.66	336	ePd	45	02.50	0.7
LAT	4.84	99	eP	45	19.00	0.6
PMG	6.04	126	eP	45	34.00	-1.2
MTN	12.92	237	eP	47	07.70	-1.5
CTA	14.67	165	eP	47	56.00	24.0X
QIS	14.81	190	eP	47	36.00	2.1
			e	47	42.60	
			e	50	15.00	
			e	52	03.00	
WB5	15.86	208	eP	47	47.90	0.5
			eS	50	57.20	
WRA	15.93	208	Pc	47	48.10	-0.2
	0.6s	4.90nm			3.8mb	
KNA	16.43	232	eP	47	54.00	-0.5
ASPA	19.41	203	eP	48	34.20	3.6X
	0.9s	40.00nm			4.7mb	
Z	17s	0.34um			3.8MszX	
			eS	52	07.30	
			LR	55	05.10	
RMO	21.43	164	eP	49	01.00	9.6X
PCI	22.85	282	(P)	49	10.70	5.2X
BRS	23.65	156	iPd	49	18.00	4.9X
WARB	25.07	215	eP	49	31.00	4.2X
XAN	50.65	324	P	53	06.50	4.7X
CD2	51.85	317	eP	53	11.00	0.1
BTO	54.88	330	eP	53	32.80	-0.4
GTA	59.67	323	eP	54	11.70	4.6X
SPA	84.16	180	e(P)	56	41.80	9.6X
	1.0s	4.00nm			4.4mb	
KIC	147.12	273	PKP	03	53.10	10.1X
TIC	147.40	273	PKP	03	53.90	10.4X
LIC	147.41	272	PKP	03	54.00	10.5X
S.D. = 1.2		on	11	of	23	obs.

& JUL 29, 1989 14h 06m 05.42s
66.977 N 148.822 W
DEPTH = 75.0km
ALASKA (676)
<AGS-P>.

GLM	2.08	163	eP	06	38.46	-0.5
FBA	2.13	168	eP	06	40.19	0.7
IMA	2.15	247	eP	06	39.70	-0.2
RDS	2.18	172	eP	06	40.06	-0.2
CCB	2.38	169	eP	06	41.47	-1.5
WRH	2.53	173	eP	06	44.26	-0.9

29d 14h

HDA 2.70 162 iP 06 47.26 -0.1
DOT 3.89 147 eP 07 00.54 -3.5
8 obs. associated

? JUL 29, 1989 14h 25m 45.67± 7.08s
32.558 S ±34.5km 71.963 W ±45.4km
DEPTH = 18.5 ± 8.0 km
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.90	117	iPd	26 02.90	0.2
			iS	26 12.00	
LCCH	0.97	160	iPc	26 04.00	0.3
			iS	26 14.00	
JACH	1.16	96	iPc	26 07.40	0.4
			iS	26 19.50	
TACH	1.39	142	iPd	26 09.80	-0.4
			iS	26 24.50	
SAN	1.41	130	eP	26 10.80	0.3
			iS	26 26.50	
FCH	1.60	119	iPd	26 14.10	0.6
			iS	26 32.00	
PCH	1.61	131	iPd	26 14.30	0.8
			iS	26 33.50	
CHCH	1.76	142	iP	26 16.70	1.2
			iS	26 36.50	

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

& JUL 29, 1989 14h 30m 46.89s
63.214 N 149.546 W
DEPTH = 99.6km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.24	190	eP	31 01.06	1.4
			eS	31 11.03	
MCK	0.59	28	eP	31 03.49	-0.1
			eS	31 15.47	
KTH	0.71	299	iP	31 04.52	-0.1
			eS	31 16.86	
CUT	0.88	203	iP	31 05.99	-0.2
NEA	1.38	8	iP	31 11.59	-0.5
WRH	1.42	26	iP	31 12.06	-0.4
SKT	1.54	217	eP	31 13.46	-0.6
CCB	1.63	27	iP	31 14.58	-0.6
			eS	31 34.71	
HDA	1.66	43	eP	31 15.04	-0.5
RDS	1.73	20	iP	31 16.09	-0.4
SUA	1.84	198	eP	31 18.34	0.3
FBA	1.86	24	iP	31 17.72	-0.4
PAX	1.87	96	eP	31 18.25	-0.1
TOA	1.91	124	eP	31 19.02	0.1
SDG	1.96	109	eP	31 19.32	-0.1
GLM	2.02	27	iP	31 19.75	-0.5
CGLM	2.23	212	eP	31 23.16	0.0
SPU	2.35	211	eP	31 24.50	-0.2
KLU	2.42	134	eP	31 24.27	-1.3
DOT	2.50	78	eP	31 25.87	-0.8
VZW	2.58	146	eP	31 26.21	-1.5
NKA	2.61	199	eP	31 30.38	2.4
SLKM	2.73	187	eP	31 29.89	0.1
RDT	2.98	208	eP	31 33.56	0.4
SEW	3.12	179	eP	31 33.96	-1.1
GLB	3.21	121	eP	31 35.44	-0.9
NNL	3.29	195	eP	31 37.78	0.4
ILIM	3.54	209	eP	31 40.38	-0.5
CNPM	3.79	193	eP	31 43.34	-0.9

29 obs. associated

? JUL 29, 1989 14h 55m 48.90± 2.36s
22.551 S ±26.3km 66.019 W ±14.8km
DEPTH = 250.0 ± 16.5 km
4.6mb (6 obs.)
JUJUY PROVINCE, ARGENTINA (128)

CCH	5.14	359	(P)	57 32.00	24.7X
CNCB	6.00	342	iPc	57 19.80	1.5
			S	58 28.00	
LPB	6.30	342	P	57 23.00	1.1
			S	58 34.00	
ZOBO	6.56	342	Pc	57 25.20	0.0
	0.9s		32.01nm		4.3mb X
			S	58 39.00	
ARE	7.96	319	iPc	57 40.20	-2.5
			iS	59 03.00	
VAO	17.58	95	eP	59 39.80	0.3
			e	59 44.10	
BAO	18.36	71	eP	59 48.20	0.5
ATB	23.36	37	e(P)	00 35.00	-1.7
ITR	29.83	67	eP	01 33.10	-2.0
KIC	66.45	72	P	06 12.70	-1.2
ALQ	68.86	325	e(P)	06 28.60	-0.1
	0.9s		2.31nm		3.9mb
BUL	86.54	110	iPd	08 06.30	0.8
EPF	89.28	42	eP	08 17.90	0.1
	0.7s		5.50nm		4.6mb
LFF	90.54	41	eP	08 23.90	0.4
	0.5s		4.90nm		4.7mb
MFF	90.90	39	eP	08 25.80	0.7
LPF	91.16	37	eP	08 26.50	0.2
FLN	91.87	37	eP	08 29.70	0.2
LDF	91.98	37	eP	08 30.20	0.2X
	0.9s		4.50nm		4.5mb
MAF	92.30	40	eP	08 32.10	0.5
SMF	93.27	40	eP	08 36.60	0.5
	0.6s		3.60nm		4.6mb
LPG	94.50	42	eP	08 43.50	1.4
	0.6s		2.70nm		4.6mb
GBA	144.22	98	PKPc	14 56.30	-0.9
	0.6s		15.90nm		
HYB	146.37	92	ePKP	15 03.40	2.6X
	S.D. = 1.2 on 20 of 23 obs.				

JUL 29, 1989 16h 09m 20.85± 0.48s
41.135 N ± 4.2km 142.463 E ± 6.2km
DEPTH = 63.4 ± 4.8 km
4.7mb (19 obs.)
HOKKAIDO, JAPAN REGION (224)
Felt (II JMA) at Hachinohe,
Miyoko and Moriaka, Honshu.

HAC	0.94	230	iP+	09 38.60	0.2
			S	09 51.00	
HOOJ	1.39	26	P	09 44.70	0.2
			S	10 03.10	
MIY	1.54	194	eP	09 46.00	-0.5
			S	10 05.20	
MRRJ	1.66	322	iP+	09 47.40	-0.7
			S	10 06.80	
AOMJ	1.69	251	P	09 49.50	0.9
			eS	10 09.40	
MRK	1.74	215	P	09 50.50	1.1
			S	10 12.90	
SAP	2.10	337	eP	09 54.00	-0.3
			iS	10 18.30	
OFUJ	2.14	197	iP+	09 55.10	0.2
			S	10 21.90	
KUSJ	2.58	40	P	09 59.80	-1.2
			S	10 29.10	
ASAJ	2.98	2	P	10 06.90	0.1
YAMJ	3.50	213	iP+	10 15.00	1.0
			S	10 56.70	
NIIJ	4.73	216	iP+	10 32.10	0.8
KAKJ	5.24	201	P	10 36.20	-2.2
			S	11 34.20	
MAT	5.66	217	iPc	10 44.90	0.5
	0.7s		236.30nm		5.6mb X
			eS	11 47.00	
CHJJ	5.76	209	P	10 44.60	-1.2
IIDJ	6.68	214	P	10 58.40	-0.3
TSRJ	7.56	224	P	11 11.90	1.2
MDJ	10.07	294	eP	11 46.00	0.8
BJI	19.97	276	eP	13 47.00	-3.5X
TIY	23.39	271	eP	14 21.80	-2.9
GTA	32.35	281	Pc	15 45.30	-1.0
GYA	32.90	255	P	15 54.40	3.3X
WMQ	39.86	293	P	16 50.00	0.2
IMA	42.77	33	eP	17 14.00	0.6
	0.8s		12.00nm		4.7mb
CHG	43.21	252	eP	17 20.20	2.9
KDC	43.61	45	eP	17 20.00	-0.1
PMR	44.89	39	eP	17 30.60	0.2
	0.9s		8.30nm		4.6mb
TOA	46.22	38	eP	17 42.30	1.3
MBC	52.37	17	eP	18 28.00	0.0
	0.4s		3.00nm		4.7mb
ALE	55.97	4	eP	18 53.00	-1.3
	0.9s		10.00nm		4.8mb
WB5	61.16	189	eP	19 30.00	-1.0
WRA	61.23	189	Pc	19 30.10	-1.3
	0.6s		2.70nm		4.6mb
DAG	61.77	355	eP	19 30.00	-4.6X
GBA	62.40	264	Pd	19 38.30	-1.2
	0.8s		4.80nm		4.7mb
PNT	64.70	46	iPd	19 54.10	-0.1
	0.6s		6.00nm		4.7mb
SUF	64.70	333	iP	19 52.50	-1.4
	0.5s		2.20nm		4.4mb
ASPA	64.96	189	eP	19 53.70	-2.3
NUR	66.73	332	eP	20 01.00	-5.9X
WDC	68.01	55	eP	20 15.80	0.5
			e	20 34.50	
WARB	68.57	195	eP	20 20.60	1.8
ORV	69.25	55	eP	20 23.20	0.2
			e	20 41.50	
FFC	69.83	34	iPd	20 26.00	-0.3
	0.8s		14.00nm		4.9mb
LRM	70.67	46	eP	20 32.20	0.3
			e	20 50.70	
HFS	70.69	336	eP	20 30.30	-1.1
	0.6s		4.40nm		4.6mb
CMB	70.86	56	eP	20 33.60	0.7
			e	20 52.10	
NAO	71.01	337	P	20 32.10	-1.3
FRB	72.60	14	eP	20 42.00	-0.7
CLL	77.95	330	e(P)	21 22.00	8.7X
PRU	78.41	329	eP	21 16.00	0.1
KHC	79.48	329	eP	21 22.40	0.7
ALQ	81.35	51	eP	21 33.80	1.7
	1.0s		5.00nm		4.4mb
LOR	84.61	333	eP	21 48.50	0.1
	0.8s		3.20nm		4.4mb
LBF	84.81	333	eP	21 49.60	0.2
	0.6s		1.80nm		4.3mb
SSF	84.91	333	eP	21 49.50	-0.3
LPG	85.09	330	eP	21 51.50	0.3
	0.6s		5.40nm		4.8mb
AVF	85.20	333	eP	21 51.40	0.1
	0.6s		4.50nm		4.7mb
MAF	85.96	333	eP	21 55.80	0.7
	0.6s		5.40nm		4.8mb
MFF	86.51	335	eP	21 58.50	0.7
	1.0s		8.00nm		4.8mb
CAF	87.26	333	eP	22 02.60	1.1
	0.8s		5.30nm		4.8mb
LFF	87.70	334	eP	22 04.10	0.6
	0.6s		5.40nm		4.9mb
LPO	87.77	333	eP	22 04.60	0.7
	S.D. = 1.1 on 56 of 61 obs.				

JUL 29, 1989 16h 57m 05.30± 0.20s
4.441 S ± 3.0km 144.027 E ± 4.3km
DEPTH = 105.9km (5 depth phases)
5.4mb (15 obs.)
NEAR N COAST OF PAPUA NEW GUINEA(200)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 18S, 35C
Centroid Location:
Origin Time 16:57: 9.3 0.5
Lat 4.45S 0.04 Lon 143.99E 0.05
Dep 112.8 2.6 Half-duration 1.8
Moment Tensor; Scale 10**17 Nm
Mrr= 0.46 0.05 Mtt=-0.74 0.07
Mff= 0.28 0.08 Mrt= 1.15 0.05
Mrf=-0.55 0.05 Mtf=-0.24 0.06
Principal Axes:

T	Val= 1.46	Plg=50	Azm= 45
N	-0.01	21	287
P	-1.44	32	183

Best Double Couple:Mo=1.4*10**17
NP1:Strike=224 Dip=23 Slip= 25
NP2: 111 80 111

MNDI	1.74	192	iP	57 38.00	2.5
LAT	3.69	127	iPd	58 02.20	0.9
JAY	3.83	300	ePc	58 08.00	4.7X
			eS	58 38.50	
			e	03 22.00	
PMG	5.83	148	iPd-	58 29.40	-1.4
LMG	6.04	138	eP	58 32.00	-1.8
RAB	8.12	89	iPc+	59 04.00	1.8
			iS	00 40.00	
MTN	15.23	236	iPd	00 34.50	-1.5
			eS	03 16.50	
CTA	15.70	172	iPd	00 41.90	0.0
	1.4s		232.56nm		5.2mb
			iS	04 03.00	
AAI	15.81	272	eP	00 52.00	8.8X
VSG	16.29	108	eP	00 48.00	-1.2
SVO	16.36	107	eP	00 51.00	0.9
			eS	04 03.00	

QIS	16.59	195	ePd	00	51.00	-1.9
			e	03	52.00	
			e	05	41.00	
GUA	17.88	3	eP	01	09.40	0.5
	0.7s	82.19nm			5.1mb	
GUMO	17.93	3	eP	01	09.30	-0.1
	1.4s	415.38nm			5.5mb	
PJG	17.93	3	eP	01	07.90	-1.5
WB5	18.00	211	iPd	01	09.00	-1.3
			iS	04	26.00	
KNA	18.74	232	iPc	01	17.30	-1.5
	0.4s	109.00nm			5.5mb	
ASPA	21.47	206	iPd	01	46.10	-0.6
	0.7s	155.00nm			5.5mb	
Z	19s	1.74um			4.5Msz	
			eS	05	35.20	
			LR	10	16.90	
RMQ	22.39	169	iPd	01	57.70	2.0
BRS	24.30	161	iPc+	02	15.10	0.8
			i	02	48.80	169kmX
PCI	24.41	278	ePc	02	19.90	4.5X
MKS	24.48	267	e(P)c	02	39.10	23.0X
			e	03	38.90	
COO	27.04	165	ePd	02	40.00	0.4
			e	04	53.00	
WARB	27.29	216	iPd	02	42.10	0.3
STK	27.39	185	iPc	02	43.00	0.3
DZM	27.91	131	iPd	02	46.40	-1.2
MBL	28.78	233	iPd	02	54.70	-0.6
	0.5s	47.00nm			5.4mb	
BWA	30.11	173	iPd	03	07.70	0.6
ADE	30.77	189	iPd	03	13.00	0.1
	1.0s	90.00nm			5.5mb	
CAN	31.07	172	iPd	03	15.70	0.2
CNB	31.12	172	eP	03	16.00	0.1
MEKA	32.86	225	eP	03	30.70	-0.5
	0.3s	11.00nm			5.2mb	
NANU	32.93	234	iPc	03	31.60	-0.2
TOO	33.00	178	ePd	03	33.40	1.1
	1.0s	108.00nm			5.6mb	
COOL	34.00	217	iPd	03	40.90	-0.1
KLB	36.57	219	iPd	04	02.80	0.1
BAL	36.61	222	iPd	04	03.10	0.0
NWAO	37.80	218	iPd	04	13.10	0.0
MUN	37.82	220	iPd	04	13.50	0.3
	0.3s	275.00nm			6.6mb	X
QZH	38.27	321	eP	04	18.00	1.0
RKG	38.72	217	eP	04	25.10	4.4X
IIDJ	40.12	352	P	04	31.30	-1.0
TSRJ	40.48	350	iP+	04	34.50	-0.6
CHJJ	40.55	354	P	04	35.10	-0.6
QIZ	40.94	306	eP	04	44.60	5.4X
MAT	41.13	353	iPc	04	39.00	-1.5
	1.4s	88.37nm			5.4mb	
			eS	11	27.00	
MTMJ	41.22	352	P	04	40.90	-0.5
SSE	41.52	330	Pc	04	44.80	1.1
	1.2s	74.00nm			5.4mb	
			pP	05	07.00	94kmX
			sP	05	20.00	
			eS	10	50.00	
			sS	11	35.00	
NIIJ	41.73	354	P	04	44.90	-0.4
NJ2	43.48	328	Pd	05	01.00	1.3
PPI	43.76	274	eP	05	02.00	-0.3
KRP	44.00	143	P	05	05.80	1.9
WHN	44.89	323	Pd	05	13.50	2.5
			pP	05	38.00	104km
MSZ	45.22	156	P	05	14.80	1.3
			e	05	42.30	119kmX
TCW	45.55	148	P	05	16.40	0.3
MRW	45.79	148	P	05	17.50	-0.5
CAW	45.90	147	P	05	18.80	-0.1
WDW	45.97	147	P	05	19.00	-0.5
MTW	46.17	147	eP	05	20.70	-0.4
MOW	46.22	147	P	05	21.10	-0.4
PGZ	46.23	146	P	05	20.70	-0.8
BLW	46.30	147	P	05	20.30	-1.8
LOE	47.06	299	eP	05	30.00	1.6
GYA	47.44	312	P	05	33.00	1.5
TIA	47.64	330	P	05	32.50	-0.1
SNY	49.68	340	Pc	05	47.80	-0.4
N	18s	0.50um				
			S	12	48.00	
KMI	49.71	308	eP	05	50.50	1.4
			pP	06	11.50	86kmX
			S	12	57.00	

CHG	50.04	299	iPc	05	52.00	0.5
	1.1s	14.87nm			4.9mb	
XAN	50.62	322	P	05	55.50	-0.1
CN2	50.86	343	Pc	05	56.00	-1.2
	4.0s	0.20nm			2.5mb	X
Z	36s	0.80um			4.5MszX	
			pP	06	18.00	90kmX
			ScP	10	57.00	
			eS	13	04.00	
BJI	51.13	333	eP	05	58.00	-1.3
Z	20s	0.30um			4.3Msz	
			epP	06	24.00	109km
			sP	06	37.00	
			eS	13	08.00	
			esS	13	52.00	
TIY	51.19	328	eP	06	00.40	0.5
Z	24s	0.70um			4.6MszX	
			S	13	10.00	
			sS	13	54.00	
CD2	52.08	315	eP	06	06.90	0.2
HHC	53.98	330	P	06	21.00	0.4
BTO	54.59	328	eP	06	25.00	-0.1
			epP	06	51.00	108km
			eS	14	00.00	
LZH	55.12	320	eP	06	29.50	0.4
	3.0s	0.20nm			2.6mb	X
			pP	06	54.50	103km
			S	13	57.00	
GTA	59.67	321	eP	07	00.00	-1.0
			pP	07	20.60	81kmX
DRV	62.18	182	eP	07	17.20	0.0
GBA	68.46	286	Pd	07	58.20	-0.2
	1.2s	7.50nm			4.4mb	
WMQ	69.69	320	P	08	05.20	-0.5
			pP	08	32.00	106km
SBA	74.34	175	(P)	08	34.00	1.5
TTA	80.80	24	eP	09	08.30	-0.1
MAW	82.54	202	eP	09	17.00	-0.3
PMR	83.11	26	eP	09	19.20	-1.0
IMA	83.17	21	eP	09	20.70	0.0
	1.5s	31.30nm			5.0mb	
SPA	85.59	180	iPd	09	33.20	0.3
	0.6s	35.77nm			5.5mb	
Z	20s	0.41um			4.8Msz	
INK	91.30	22	eP	09	56.00	-3.7X
KHC	118.87	325	ePKP	16	03.00	20.1X
BNG	125.65	272	iPKPd	15	57.00	0.0
	1.0s	15.00nm				
			i	16	25.40	
CBN	129.54	42	ePKP	15	58.00	-5.7X
CNCB	141.97	125	ePKP	16	24.00	-4.2X
LPB	142.01	124	(PKP)	16	22.00	-6.1X
ZOBO	142.13	124	ePKP	16	22.00	-6.5X
CCH	143.16	127	PKP	16	27.00	-2.9X
KIC	148.85	275	PKP	16	43.08	4.1X
TIC	149.12	275	PKPc	16	43.68	4.3X
	0.4s	10.50nm				
LIC	149.14	275	PKPc	16	43.74	4.3X
	0.5s	11.50nm				
VAO	150.69	159	ePKP	16	48.10	6.5X
BMA	151.87	164	e(PKP)	16	38.00	-5.3X
			e	16	51.00	

S.D. = 1.0 on 81 of 99 obs.

? JUL 29, 1989 17h 07m 11.35± 1.41s
50.393 N ±18.6km 18.951 E ± 9.8km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.1 (KRA).

KRA	0.72	118	ePgc	07	25.30	-0.2
			iSg	07	35.50	
SPC	1.47	145	iPn	07	38.30	0.3
			iSg	07	59.70	
KSP	1.75	286	ePn	07	42.00	0.0
	0.7s	62.00nm				
			iPg	07	44.20	
			iS	08	08.00	
SRO	2.62	189	eP	08	46.50	52.2X
VKA	2.74	220	eP	07	56.00	-0.1
			i	07	57.80	
			e	08	27.00	
			i	08	35.40	
			i	08	41.10	
PRU	2.86	264	Pg	08	04.20	6.3X
			e	08	22.00	
			Sg	08	39.00	

BRG	3.22	281	ePg	08	08.00	5.0X
			eSg	08	57.00	
KHC	3.71	252	ePg	08	13.90	4.0X
			Sg	09	01.50	
CLL	3.88	286	ePg	08	23.00	10.7X
			iSg	09	19.60	
KBA	4.98	230	eP	09	23.00	55.0X
	0.8s	9.50nm				
			i	09	51.80	

S.D. = 0.4 on 4 of 10 obs.

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* JUL 29, 1989 17h 30m 02.35± 2.15s
48.761 N ±17.9km 153.680 E ± 9.8km
DEPTH = 114.0 ± 23.1 km
4.4mb (15 obs.)
KURIL ISLANDS (221)

KUSJ	8.43	231	P	32	02.50	-0.6
			S	33	31.10	
ASAJ	8.92	243	P	32	14.90	5.1X
HOOJ	9.68	233	P	32	20.70	0.8
			S	34	01.10	
MRRJ	10.86	239	P	32	35.70	0.0
			S	34	31.30	
MAT	16.65	229	eP	33	51.00	0.9
MDJ	17.01	265	eP	33	55.00	0.6
CN2	20.07	266	eP	34	26.00	-2.6
HHC	30.59	271	P	36	07.00	-0.2
TIY	31.65	265	Pc	36	17.40	0.9
BTO	31.73	272	eP	36	17.20	-0.1
FBA	34.36	40	eP	36	43.50	3.9X
	1.0s	9.00nm			4.6mb	
GTA	39.07	277	eP	37	20.00	0.4
CD2	41.46	263	eP	37	39.50	0.3
GYA	42.55	256	P	37	48.40	0.1
CHG	52.97	256	iPc	39	09.50	0.4
	1.0s	12.75nm			4.8mb	
LRM	59.69	54	eP	39	57.20	0.2
SUF	61.34	335	iP	40	06.10	-1.5
	0.4s	1.60nm			4.4mb	
TNP	62.05	63	iP	40	12.00	-1.0
	0.9s	1.56nm			4.0mb	
BW06	63.26	55	iP	40	20.50	-0.4
	0.8s	1.25nm			3.9mb	
RSSD	65.24	51	eP	40	33.10	-0.6
HFS	66.71	339	eP	40	40.90	-1.6
	0.4s	2.10nm			4.4mb	
Z	18s	0.07um			3.9Msz	
			LR	05	41.00	
NAO	66.73	341	P	40	41.50	-1.1
HYB	67.34	271	eP	40	46.00	-1.2
GBA	70.84	269	Pc	41	06.50	-2.0
	0.5s	1.40nm			4.0mb	
CLL	74.79	336	iP	41	30.10	-1.0
	0.9s	10.00nm			4.6mb	
PRU	75.55	334	eP	41	35.00	-0.5
KHC	76.59	334	P	41	42.00	0.6
GRF	76.74	336	eP	41	42.90	0.7
	1.0s	48.00nm			5.3mb	
FLN	80.32	343	eP	42	02.70	1.1
LOR	80.83	340	eP	42	04.60	0.3
	0.8s	4.00nm			4.3mb	
LBF	81.07	340	eP	42	05.80	0.2
SSF	81.10	340	eP	42	06.10	0.3
LPF	81.13	343	eP	42	06.70	0.8
AVF	81.39	340	eP	42	08.10	0.8
	0.8s	4.00nm			4.3mb	
LPG	81.78	337	eP	42	10.20	0.5
	0.8s	4.00nm			4.3mb	
MAF	82.11	340	eP	42	12.00	1.0
	0.6s	8.10nm			4.7mb	
CAF	83.45	340	eP	42	19.40	1.4
	0.6s	3.60nm			4.5mb	
LFF	83.73	341	eP	42	20.50	1.2
	0.6s	4.30nm			4.5mb	
LPO	83.87	341	eP	42	21.40	1.3
MAW	134.11	212	ePKP	49	30.00	23.6X

S.D. = 1.0 on 37 of 40 obs.

JUL 29, 1989 17h 43m 09.06± 0.66s
40.645 N ± 6.3km 21.260 E ± 5.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)

KBN	0.34	267	iPgc	43	14.70	-1.4
TPE	1.01	250	ePn	43	28.40	0.1
LIT	1.09	120	eP	43	29.00	-0.5

29d 17h

VAY	1.20	55	ePn	43 31.70	0.3
PHP	1.21	330	ePn	43 31.10	-0.5
SRN	1.23	232	ePn	43 32.80	0.9
SKO	1.33	6	ePn	43 33.50	-0.1
	0.6s	110.00nm			
			i	43 35.00	
			iSn	43 52.30	
			LQ	43 55.00	
			LR	43 57.50	
LACI	1.53	311	ePn	43 37.50	1.0
SDA	1.91	316	ePn	43 42.00	0.1
S.D. = 0.9		on	9 of	9 obs.	

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* JUL 29, 1989 18h 00m 34.17± 1.71s
39.458 N ±10.0km 73.024 E ± 9.3km
DEPTH = 38.1 ± 18.6 km
4.6mb (6 obs.)
TAJIK-XINJIANG BORDER REGION (719)

KSH	2.29	89	iPd	01 11.00	0.6
			S	01 43.00	
QUE	10.50	210	eP	03 04.60	-0.9
			eS	05 03.30	
MAIO	11.15	258	eP	03 11.00	-3.2X
			eS	05 14.00	
NDI	11.29	161	eP	03 12.00	-4.1X
WMQ	11.81	64	P	03 19.80	-3.3X
Z	18s	0.30um			
GTA	20.67	82	eP	05 12.20	-1.2
Z	12s	0.30um		3.9MszX	
GBA	26.04	170	Pc	06 07.60	1.9
	0.6s	1.90nm		3.9mb	
CD2	26.43	99	eP	06 09.10	-0.1
MLR	34.84	296	eP	07 28.00	4.4X
SUF	36.33	325	eP	07 36.00	0.2
NUR	36.44	321	eP	07 36.00	-0.8
HFS	41.79	320	eP	08 21.80	0.6
	0.4s	11.40nm		5.0mb	
Z	17s	0.06um		3.6MszX	
		LR	26 09.00		
KHC	42.63	303	P	08 30.00	1.7
NAO	43.22	321	P	08 33.00	0.1
EKA	51.31	315	Pc	09 35.90	-0.5
	0.7s	2.80nm		4.4mb	
DAG	52.38	343	iPd	09 43.90	-0.3
	0.7s	8.22nm		4.8mb	
BUL	72.37	224	eP	11 57.20	-1.2
	0.8s	4.10nm		4.5mb	
FFC	86.09	357	eP	13 12.00	0.0
	0.7s	5.00nm		4.9mb	
S.D. = 1.1		on	14 of	18 obs.	

? JUL 29, 1989 19h 15m 56.47± 4.33s
11.099 N ±22.5km 61.706 W ±24.7km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)
MD 3.4 (TRN).

TCE	0.40	187	eP	16 04.14	-0.6
			eS	16 15.91	
TRN	0.54	146	eP	16 07.61	0.3
			eS	16 21.69	
TPP	0.82	162	eP	16 13.47	1.2
			eS	16 26.79	
TBH	0.88	134	eP	16 12.22	-1.1
			eS	16 32.20	
BOT	0.97	86	eP	16 15.10	0.2
S.D. = 1.2		on	5 of	5 obs.	

JUL 29, 1989 20h 33m 36.55± 0.50s
48.044 N ± 4.6km 6.697 E ± 3.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG).

BSF	0.22	163	Pg	33 41.10	-0.3
			Sg	33 44.20	
HAU	0.24	261	Pg	33 41.90	0.3
			Sg	33 45.40	
MOF	0.35	123	Pg	33 43.77	0.0
			Sg	33 48.23	
ECH	0.35	61	Pg	33 43.86	0.0
			Sg	33 48.66	
VITF	0.51	290	Pg	33 46.77	-0.1
			Sg	33 53.23	
CDF	0.53	46	Pg	33 47.23	-0.2
WLS	0.57	50	Pg	33 47.97	-0.2
LOMF	0.70	173	Pg	33 50.30	-0.1
FEL	0.90	100	Pg	33 54.57	0.7
			Sg	34 07.09	
LOR	2.07	249	Pg	34 16.00	4.2X
			Sg	34 41.80	
LBF	2.13	241	Pg	34 17.00	4.4X
			Sg	34 44.20	
SSF	2.37	247	Pg	34 21.70	5.6X
			Sg	34 52.40	
SMF	2.39	235	Pg	34 21.80	5.4X
			Sg	34 52.10	
BGF	3.01	242	Pg	34 33.20	8.0X
			Sg	35 12.80	
S.D. = 0.4		on	9 of	14 obs.	

JUL 29, 1989 22h 21m 02.29± 0.89s
41.719 N ± 7.5km 19.867 E ± 7.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)

LACI	0.14	235	iPgc	21 06.10	0.5
TIR	0.37	180	iPg	21 09.00	-0.9
SDA	0.40	317	ePg	21 11.00	0.4
PHP	0.43	94	iPgd	21 12.90	1.8
KKS	0.54	49	ePg	21 11.60	-1.6
BCI	0.66	13	ePg	21 21.80	6.3X
SKO	1.20	77	ePn	21 28.60	3.9X
TPE	1.43	176	ePg	21 28.00	-0.2
S.D. = 1.6		on	6 of	8 obs.	

% JUL 29, 1989 23h 36m 52.16± 0.95s
32.703 S ± 8.7km 68.865 W ±19.3km
DEPTH = 22.4 ± 11.5 km
MENDOZA PROVINCE, ARGENTINA (139)

RTCV	0.88	18	iPd	37 08.80	0.0
			S	37 21.30	
RTBS	1.15	334	e(P)	37 13.00	0.1
RTCB	1.21	3	ePd	37 13.80	-0.1
			S	37 31.50	
CFA	1.21	26	iPd	37 14.00	0.1
			S	37 31.00	
RTLL	1.41	14	iPd	37 16.50	-0.1
			S	37 35.30	
RFA	2.09	171	e(P)	37 26.50	0.0
MRA	2.68	85	e(P)	37 41.20	6.4X
S.D. = 0.2		on	6 of	7 obs.	

& JUL 30, 1989 00h 45m 03.82s
66.596 N 147.162 W
DEPTH = 3.2km
ALASKA (676)
<AGS-P>.

GLM	1.62	183	eP	45 32.74	-0.6
FBA	1.72	189	eP	45 34.42	-0.4
RDS	1.82	193	eP	45 35.49	-0.8
CCB	1.98	188	eP	45 38.65	0.2
WRH	2.17	191	eP	45 41.45	0.2
NEA	2.18	202	eP	45 40.88	-0.6
HDA	2.20	178	eP	45 42.77	1.0
7 obs. ossocioted					

? JUL 30, 1989 00h 56m 14.99± 1.94s
45.554 N ±26.9km 14.304 E ± 9.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.0 (TRI).

TRI	0.41	292	iPg	56 22.80	-0.5
			iSg	56 32.70	
VOY	0.56	329	ePg	56 26.80	0.4
			eSg	56 38.30	
V8Y	0.67	94	eP	56 29.20	0.9
			e	56 31.70	
PTJ	1.21	73	e(Pg)	56 36.50	-1.1
			eSg	56 50.10	
FVI	1.48	315	P	56 43.70	2.0X
			eSg	57 07.30	
S.D. = 1.5		on	4 of	5 obs.	

JUL 30, 1989 03h 04m 10.93± 0.92s
45.930 N ±12.7km 15.732 E ± 6.1km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.8 (LJU).

PTJ	0.16	101	iPgd	04 15.10	0.4
			eSg	04 19.70	
ZAG	0.21	123	iPg	04 14.90	-0.6
			iSg	04 18.50	
VBY	0.54	218	iP	04 22.30	0.4
LJU	0.84	278	e(Pg)	04 27.80	0.6
			eSg	04 38.80	
VOY	1.29	275	ePn	04 33.30	-1.5
			eSn	04 52.70	
RBL	1.59	290	P	04 39.90	0.7
			eSg	05 02.50	
S.D. = 1.1		on	6 of	6 obs.	

JUL 30, 1989 04h 38m 24.46± 0.49s
33.236 N ± 2.6km 140.764 E ± 3.2km
DEPTH = 61.0 ± 3.9 km
5.3mb (56 obs.)
SOUTH OF HONSHU, JAPAN (211)
Felt (III JMA) on Hachijo-jimo;
(I JMA) ot Toteyama, Tokyo,
Yokohomo ond Kofu.
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 14S, 26C
Centroid Locotion:
Origin Time 04:38:24.7 0.4
Lot 33.27N 0.04 Lon 140.68E 0.05
Dep 62.3 4.0 Half-durotion 1.7
Moment Tensor; Scole 10**16 Nm
Mrr=-0.29 0.27 Mtt= 9.68 0.44
Mff=-9.40 0.46 Mrt=-1.65 0.47
Mrf=-3.10 0.43 Mtf= 3.06 0.43
Principol Axes:

T	Vol= 10.59	Plg=12	Azm=169
N	0.06	70	44
P	-10.65	15	263

Best Double Couple:Mo=1.1*10**17
NP1:Strike=306 Dip=71 Slip= -3
NP2: 36 87 -161

HJJ	0.83	261	iPd	38 41.70	1.3
			S	38 54.10	
TAT	1.89	337	P	38 54.40	-0.5
			iS	39 14.90	
YOK	2.38	338	eP	39 01.00	-0.7
			iS	39 28.80	
TOK	2.58	342	P	39 03.40	-1.2
			S	39 32.60	
KAKJ	3.00	351	P	39 07.60	-3.0X
			eS	39 43.60	
KOF	3.03	324	P	39 11.20	0.2
			S	39 46.50	
CHJJ	3.16	333	iP+	39 11.60	-1.3
			eS	39 47.70	
IIDJ	3.25	314	iPd	39 15.40	1.2
			eS	39 50.90	
MAT	3.91	328	iPc	39 23.70	0.3
			eS	40 07.00	
MTMJ	4.13	325	iP+	39 27.30	0.7
NIIJ	4.25	341	P	39 25.70	-2.4
			eS	40 14.80	
WKYJ	4.42	284	iPd	39 31.70	1.1
			eS	40 21.50	
TSRJ	4.57	301	P	39 33.40	0.8
YAMJ	4.96	353	P	39 35.80	-2.4
			eS	40 31.50	
TKSJ	5.65	279	P	39 49.80	2.0
OFUJ	5.88	7	P	39 46.10	-4.9X
			S	40 47.90	
YONJ	6.35	290	P	39 58.70	1.1
SHK	6.85	283	eP	40 05.70	1.2
AOMJ	7.32	358	P	40 07.90	-3.1X
SHNJ	8.10	279	P	40 22.70	0.9
KUMJ	8.39	268	P	40 28.10	2.3
KAGJ	8.61	259	eP	40 33.00	4.1X
MRRJ	9.18	1	P	40 31.00	-5.6X
HOOJ	9.35	12	P	40 33.00	-5.9X
			eS	42 09.80	
KUSJ	10.32	16	P	40 44.70	-7.5X
			S	42 29.60	
ASAJ	10.96	7	P	40 54.20	-6.7X
			eS	42 49.40	
MDJ	14.29	326	eP	41 42.00	-2.9X
Z	14s	1.74um			
			sS	44 34.00	
CN2	15.94	316	eP	42 04.50	-1.6
Z	20s	2.40um			

N 13s 0.90um
E 13s 0.60um
eS 45 02.00
SNY 16.09 307 Pc 42 09.60 1.6
Z 22s 2.10um
N 31s 4.80um
E 26s 1.50um
DL2 16.46 296 eP 42 16.00 3.2X
Z 18s 1.80um
N 14s 2.70um
eS 45 16.00
SSE 16.72 268 Pc 42 19.00 3.0X
1.0s 197.00nm 5.2mb
Z 22s 0.90um 5.2Msz
E 12s 1.10um
eS 45 28.00
sS 45 41.00
SS 45 49.00
TIA 19.65 285 eP 42 49.80 -1.1
Z 23s 1.90um
N 13s 1.10um
E 13s 1.60um
esS 46 39.00
PJG 19.91 168 eP 42 52.30 -1.5
GUMO 19.91 168 eP 42 52.80 -1.0
1.3s 2137.25nm 6.3mb X
GUA 19.97 168 eP 42 52.50 -1.9
0.9s 773.11nm 6.0mb X
BJI 20.83 296 eP 43 02.00 -1.1
Z 34s 1.88um 4.2MszX
N 20s 2.40um
eS 46 48.00
QZH 21.04 253 eP 43 05.50 0.3
WHN 22.57 270 eP 43 21.00 0.5
0.7s 0.11nm 2.4mb X
N 16s 1.49um
S 47 21.00
TIY 23.46 289 Pd 43 29.00 -0.2
Z 14s 2.60um 4.8MszX
N 14s 1.60um
E 15s 1.60um
S 47 39.50
HHC 24.44 297 P 43 39.00 0.3
Z 29s 2.50um 4.5MszX
N 13s 0.70um
E 15s 0.90um
S 47 59.00
BTO 25.57 296 P 43 50.00 0.7
N 15s 1.20um
E 15s 0.90um
S 48 11.00
eSS 49 21.20
XAN 26.47 281 eP 43 56.50 -1.2
N 16s 2.00um
eS 48 20.00
GYA 30.25 266 iPd 44 31.00 -0.8
Z 12s 0.64um 4.5MszX
E 11s 0.50um
S 49 23.00
LZH 30.39 286 eP 44 21.00 -12.0X
Z 20s 1.70um 4.7Msz
N 17s 1.80um
E 16s 0.90um
S 49 30.00
CD2 31.34 276 eP 44 38.90 -2.4
Z 16s 1.30um 4 7MszX
N 15s 2.00um
GTA 33.35 293 eP 44 50.00 -8.9X
Z 18s 0.90um 4.5Msz
N 18s 2.00um
eS 50 14.00
SS 52 21.00
KMI 34.02 266 Pc 45 04.00 -0.9
LOE 38.39 256 iPc 45 40.80 -0.8
i 47 55.00
CHG 39.96 260 ePd 45 54.00 -0.7
1.0s 26.75nm 5.1mb
NST 40.61 255 eP 45 59.00 -1.0
WMQ 42.19 301 P 46 13.20 0.4
Z 14s 0.60um 4.6MszX
PcS 51 56.00
S 52 29.00
ScS 56 10.50
NNT 42.66 251 iPc 46 16.20 -0.6
PMG 42.84 171 eP 46 18.00 -0.2
SNG 45.30 244 eP 46 38.20 0.1
IPM 46.71 241 ePc 46 48.10 -1.1

1.1s 79.30nm 5.6mb
MTN 46.74 193 eP 46 48.10 -1.2
0.4s 54.00nm 5.8mb
KGM 46.84 236 eP 46 50.00 -0.2
PSI 49.52 241 iPc 47 08.60 -2.5
IMA 50.24 29 eP 47 16.70 0.5
KSH 51.56 297 eP 47 25.40 -1.1
S 54 48.00
PMR 52.01 35 eP 47 28.20 -1.2
1.0s 20.00nm 5.1mb
FBA 52.62 31 P 47 34.50 0.6
WB5 53.17 188 iPc 47 39.20 0.8
WRA 53.23 188 Pd 47 38.50 -0.4
0.5s 62.90nm 5.9mb
CTA 53.28 174 iPd 47 39.00 -0.2
1.3s 48.08nm 5.4mb
QIS 53.50 181 iPc 47 40.00 -0.8
NDI 53.95 283 iPd 47 43.00 -1.2
eS 54 21.00
ASPA 56.96 188 iPc 48 05.20 -0.7
0.6s 166.00nm 6.3mb
Z 22s 0.58um 4.6MszX
eScP 51 28.40
eS 55 53.40
LR 10 31.30
HYB 57.63 270 eP 48 10.00 -0.9
0.8s 42.90nm 5.6mb
MBL 57.66 203 eP 48 10.10 -0.7
0.4s 19.00nm 5.6mb
INK 58.02 26 eP 48 12.00 -0.8
RMO 59.88 172 iPc 48 27.00 0.9
DZM 60.21 152 iPc 48 29.00 0.4
MBC 60.31 16 eP 48 28.00 -0.6
0.9s 20.00nm 5.2mb
GBA 60.44 267 Pc 48 29.70 -0.6
0.9s 38.30nm 5.5mb
NANU 60.48 207 eP 48 30.30 0.0
WARB 60.60 195 iPc 48 31.70 0.6
POO 61.04 274 eP 48 33.50 -0.9
BRS 61.36 168 iPc 48 37.20 0.9
QUE 61.63 289 eP 48 37.50 -0.9
0.8s 38.81nm 5.6mb
KOD 62.16 264 iP 48 42.00 -0.3
MEKA 63.16 202 eP 48 47.80 -0.4
ALE 63.93 3 eP 48 52.00 -0.6
0.7s 10.00nm 4.9mb
KBS 64.31 350 eP 48 55.20 0.0
COO 64.33 169 eP 48 56.00 0.1
e 49 25.00
CMS 64.55 175 eP 48 57.00 -0.2
STK 64.77 179 iPd 48 58.80 0.2
MAIO 64.89 298 iPc 49 00.30 0.7
eS 57 44.00
COOL 66.42 198 eP 49 08.50 -0.7
KHI 66.42 296 eP 49 08.80 -0.8
KEV 66.81 340 eP 49 14.00 2.7X
BAL 67.45 202 eP 49 15.70 -0.1
8WA 67.69 173 eP 49 18.10 0.9
ADE 67.87 182 eP 49 19.00 0.7
KLB 68.04 201 eP 49 19.10 -0.3
0.3s 5.00nm 5.0mb
SOD 68.26 338 iP 49 19.70 -0.7
CAN 68.63 173 eP 49 25.90 2.8X
MUN 68.88 202 eP 49 24.30 -0.3
NWAO 69.44 201 iPc 49 28.00 0.0
0.5s 56.00nm 5.7mb
DAG 69.51 355 iPd 49 27.20 -0.7
0.8s 32.09nm 5.3mb
RKG 70.57 201 eP 49 38.20 3.3X
TOO 70.58 176 eP 49 36.00 1.1
SUF 71.14 334 iP 49 37.30 -0.7
0.8s 25.20nm 5.2mb
PNT 71.29 43 eP 49 39.00 -0.2
0.8s 18.00nm 5.1mb
EDM 72.67 37 eP 49 45.00 -2.4
DPW 72.82 44 P 49 49.00 0.6
NUR 73.05 332 eP 49 53.00 3.6X
0.6s 28.70nm 5.4mb
i 49 56.00
WDC 73.80 52 eP 49 54.50 0.4
MIN 74.53 52 eP 49 58.40 -0.2
ORV 75.00 52 eP 50 01.10 0.0
MHC 76.04 54 eP 50 07.60 0.4
UPP 76.13 334 eP 50 05.00 -2.0
CMB 76.53 53 iPc 50 10.20 0.4
MSL 76.55 305 ePc 50 10.50 0.6
PRS 76.75 55 eP 50 11.40 0.4

FFC 77.19 32 eP 50 12.00 -1.1
1.0s 34.00nm 5.3mb
BHD 77.30 301 ePc 50 14.00 0.0
HFS 77.33 336 eP 50 13.10 -0.6
1.1s 52.30nm 5.4mb
Z 18s 0.25um 4.6Msz
LR 20 53.00
KVN 77.51 51 P 50 16.20 0.8
FRI 77.54 54 eP 50 15.50 0.2
NAO 77.76 337 P 50 15.40 -0.7
KRP 77.85 153 P 50 18.70 2.0
BCH 78.25 56 P 50 20.20 0.8
TNP 78.62 52 P 50 22.20 0.7
1.0s 17.50nm 5.0mb
SYP 78.67 56 eP 50 23.00 1.2
KVT 78.69 312 eP 50 12.70 -8.9X
ISA 79.10 55 eP 50 24.00 0.0
CLC 79.61 54 eP 50 27.00 0.3
SBB 80.07 55 eP 50 30.00 0.7
PAS 80.13 56 eP 50 27.00 -2.5
MWC 80.17 56 eP 50 30.00 0.1
FRB 80.59 13 eP 50 32.00 0.7
BW06 80.72 45 P 50 32.90 0.2
RVR 80.77 55 eP 50 33.00 0.1
VRI 81.27 320 eP 50 36.50 1.2
MSZ 81.38 161 eP 50 36.50 0.9
PLM 81.48 56 eP 50 37.00 0.2
TPC 81.62 55 eP 50 38.00 0.6
MLR 81.94 320 ePc 50 40.50 1.6
KRA 81.94 326 iPd 50 39.20 0.6
0.8s 57.00nm 5.6mb
Z 14s 1.10um 5.4MszX
e 50 41.50
BAR 81.99 56 eP 50 40.00 0.7
SPC 82.39 325 eP 50 41.50 0.3
CMP 82.57 320 ePc 50 42.00 -0.1
RSSD 83.03 41 P 50 45.00 0.3
BHL 83.04 306 Pd 50 46.00 1.2
KSP 83.04 328 ePd 50 45.00 0.6
1.2s 43.00nm 5.3mb
GLA 83.05 55 eP 50 46.00 1.2
HRI 83.35 305 iPd 50 47.50 1.1
PSZ 83.43 324 eP 50 47.40 0.9
JMB 83.52 317 iP 50 48.00 1.1
ALT 83.56 313 eP 50 47.50 0.1
PVL 83.74 318 eP 50 49.00 1.0
JARJ 83.80 305 Pd 50 49.90 1.2
BRG 84.04 329 iPd 50 50.00 0.6
1.3s 29.00nm 5.2mb
i 50 58.00
e 54 53.00
CLL 84.12 330 iP 50 50.10 0.3
1.3s 58.00nm 5.5mb
SRO 84.27 325 iP 50 51.30 0.7
i 50 53.80
i 51 13.60
KHL 84.37 313 iP 50 51.10 -0.3
MKRJ 84.41 304 Pc 50 52.60 0.9
PRU 84.44 328 P 50 52.00 0.6
Z 18s 0.30um 4.7Msz
N 16s 0.20um
E 16s 0.30um
ZST 84.57 326 eP 50 53.00 0.9
DSI 84.58 304 eP 50 53.00 0.5
KDZ 84.71 317 eP 50 53.00 0.0
PGB 84.82 318 eP 50 55.00 1.4
VKA 84.89 326 eP 50 54.00 0.3
1.0s 52.20nm 5.6mb
Z 16s 1.20um 5.4MszX
i 50 57.00
i 51 07.30
i 51 15.00
i 51 23.00
e 51 47.00
LR 10 35.57
RZN 85.08 318 eP 50 56.00 1.0
ELL 85.11 311 iP 50 55.40 0.2
GLD 85.15 45 P 50 57.00 1.5
VTS 85.32 319 iP 50 57.00 0.8
HOF 85.34 330 iPd 50 56.50 0.5
EZN 85.36 315 eP 50 56.00 -0.2
WIT 85.44 334 eP 51 00.50 4.2X
KHC 85.49 328 iPc 50 57.50 0.7
1.2s 30.00nm 5.3mb
i 51 13.50
MMB 85.70 318 eP 50 58.00 0.0
IZM 85.71 314 eP 50 59.00 0.9

30d 04h

WET	85.79	329	eP	50	59.00	0.8
KKB	85.88	318	eP	51	00.00	1.2
MBH	85.98	303	eP	51	01.00	1.5
WTS	86.04	334	eP	50	59.00	-0.3
	1.0s	17.00nm			5.1mb	
		e		51	06.00	
GRF	86.08	330	eP	51	00.80	1.1
	1.2s	35.00nm			5.4mb	
	Z 19s	0.10um			4.2Msz	
EKA	86.52	340	Pd	51	01.10	-0.6
	1.0s	19.40nm			5.2mb	
VAY	86.53	318	eP	51	01.60	-0.4
SKO	86.71	319	eP	51	03.50	0.6
PTJ	86.77	325	eP	51	02.60	-0.6
KBA	87.13	327	i(P)	51	08.80	3.8X
	0.6s	6.50nm			5.0mb	
		i		51	11.60	
		i		51	25.30	
		i		51	29.20	
		e		54	15.00	
		e		54	29.00	
TOD	87.15	331	eP	51	04.95	0.1
LJU	87.34	326	e(P)	51	05.00	-0.9
ENN	87.36	333	eP	51	06.00	0.2
	1.0s	36.00nm			5.5mb	
VBY	87.39	325	e(P)	51	06.00	-0.1
ABH	87.44	332	eP	51	06.10	-0.2
ALO	87.45	49	eP	51	07.00	0.1
	1.0s	6.00nm			4.7mb	
RBL	87.50	327	P	51	05.40	-1.3
CEY	87.62	326	e(P)	51	07.00	-0.2
VOY	87.65	326	eP	51	06.60	-0.9
FVI	87.75	327	Pc	51	07.30	-0.4
RUP	87.77	332	eP	51	07.88	0.0
UCC	87.91	334	P	51	09.50	1.0
WLF	88.16	332	P	51	10.90	1.3
SNF	88.18	334	Pd	51	09.90	0.2
DOU	88.40	334	P	51	12.20	1.4
		S		01	46.00	
FEL	88.83	330	eP	51	13.20	0.1
OSS	88.85	328	ePd	51	13.00	-0.3
SCH	89.15	16	eP	51	15.00	0.6
LLS	89.21	329	ePc	51	14.00	-1.0
DLE	89.27	341	eP	51	16.60	1.7
DCN	89.42	341	eP	51	14.80	-0.8
TMA	89.86	329	ePc	51	18.00	-0.1
RSM	89.90	325	Pd	51	18.90	0.9
VAI	90.09	329	Pd	51	18.20	-0.6
PGD	90.29	326	Pd	51	20.60	0.5
MMK	90.29	329	ePc	51	20.90	0.7
ASS	90.45	325	Pc	51	21.00	0.3
DIX	90.51	330	ePd	51	21.30	0.1
MME	90.52	327	Pc	51	21.90	0.7
ORX	90.62	329	P	51	22.57	1.1
BOB	90.65	328	Pd	51	21.50	-0.1
LOR	90.99	332	eP	51	22.60	-0.5
	1.2s	11.90nm			5.2mb	
LSD	91.11	329	P	51	24.62	0.7
LBF	91.18	332	eP	51	23.40	-0.6
	0.8s	4.00nm			4.9mb	
PCP	91.23	328	P	51	24.01	-0.2
LPG	91.25	330	eP	51	24.50	-0.1
	1.0s	18.00nm			5.4mb	
SSF	91.30	332	eP	51	24.20	-0.3
	1.2s	17.80nm			5.3mb	
RSP	91.31	329	P	51	25.34	0.7
SMF	91.51	332	eP	51	25.40	-0.1
	1.0s	14.00nm			5.3mb	
AVF	91.58	332	eP	51	25.70	0.0
	1.0s	22.80nm			5.5mb	
BNI	91.64	329	Pc	51	26.30	0.1
FIN	91.64	328	P	51	24.93	-1.2
RRL	91.70	329	P	51	26.06	-0.6
ROB	91.72	328	P	51	25.24	-1.3
PZZ	91.89	329	P	51	24.93	-2.5
ENR	91.97	328	P	51	26.27	-1.4
BGF	91.97	332	eP	51	27.60	0.0
	0.6s	3.90nm			5.0mb	
STV	92.00	329	P	51	25.14	-2.7
IMI	92.01	328	P	51	25.96	-1.9
LPF	92.16	335	eP	51	28.80	0.4
	1.2s	38.00nm			5.7mb	
SBF	92.25	328	eP	51	28.10	-0.9
	0.6s	13.30nm			5.5mb	
MAF	92.36	332	eP	51	29.70	0.3
	0.8s	9.40nm			5.3mb	
MEO	92.40	45	iPd	51	30.20	0.4
TCF	92.44	333	eP	51	30.00	0.2
	0.6s	4.50nm			5.1mb	
CVF	92.62	327	eP	51	29.60	-1.1
	1.0s	12.00nm			5.3mb	
LSF	92.74	333	eP	51	31.00	-0.1
	0.6s	10.80nm			5.5mb	
FRF	92.84	328	eP	51	31.00	-0.6
	0.7s	6.60nm			5.2mb	
LRG	93.05	329	eP	51	32.00	-0.5
	1.0s	25.60nm			5.6mb	
MFF	93.06	334	eP	51	33.10	0.5
	1.2s	23.80nm			5.5mb	
LMR	93.08	328	eP	51	32.20	-0.5
	0.9s	16.30nm			5.5mb	
RJF	93.53	333	eP	51	35.30	0.5
	0.7s	11.00nm			5.4mb	
CAF	93.63	332	eP	51	35.80	0.5
	1.0s	14.00nm			5.3mb	
LFF	94.14	333	eP	51	37.40	-0.1
	0.6s	9.00nm			5.4mb	
LPO	94.18	332	eP	51	38.00	0.2
	0.6s	5.40nm			5.2mb	
BNG	113.80	293	ePKPc	57	04.10	5.6X
	0.5s	5.00nm				
		i		57	57.90	
BUL	118.92	264	iPKPc	57	08.00	-0.2
	0.6s	3.67nm				
SLR	121.64	258	iPKPc	57	13.00	-0.3
	1.0s	12.00nm				
BLF	124.68	255	ePKP	57	19.00	-0.1
KIC	128.79	314	PKP	57	27.40	0.2
ARE	146.48	68	ePKP	58	01.00	1.3
ATB	147.82	25	PKPd	58	01.80	0.2
ZOBO	148.95	64	PKP	58	04.00	0.0
	1.0s	42.50nm				
		i		58	08.00	
		LR		49	53.00	
LPB	149.13	64	PKP	58	10.00	5.9X
	1.0s	64.00nm				
CNCB	149.39	65	ePKP	58	09.00	4.4X
CCH	151.12	63	PKP	58	13.40	6.5X
BAO	160.77	26	ePKP	58	23.00	4.0X

S.D. = 0.9 on 235 of 260 obs.

JUL 30, 1989 04h 44m 44.48± 0.68s
33.360 N ± 6.6km 141.236 E ± 9.5km
DEPTH = 33.0km (normal)
4.9mb (1 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)

CHJJ	3.26	326	eP	42	34.70	0.3
			eS	43	10.00	
IIDJ	3.47	309	eP	42	38.70	1.2
			eS	43	17.30	
MAT	4.03	323	eP	42	46.00	0.5
			eS	43	30.00	
MTMJ	4.28	320	eP	42	50.10	1.1
			S	43	37.30	
NIIJ	4.28	335	eP	42	50.50	1.6
WKYJ	4.78	282	P	42	54.60	-1.4
YAMJ	4.90	349	eP	43	01.00	3.2X
			eS	43	53.80	
OFUJ	5.72	3	eP	43	09.00	-0.3
			eS	44	09.80	
TKSJ	6.02	278	eP	43	13.40	-0.2
YONJ	6.69	288	P	43	21.70	-1.3
KUSJ	10.10	15	eP	44	08.30	-1.9
			eS	45	52.30	
ASAJ	10.80	5	eP	44	19.70	-0.1
			S	46	13.70	
ANP	19.01	250	e(P)	46	20.00	13.7X
GUMO	19.96	170	e(P)	46	17.00	0.2
PJG	19.96	170	e(P)	46	17.00	0.2
GUA	20.01	170	e(P)	46	19.30	1.9
	0.7s	43.84nm			4.9mb	
WB5	53.34	188	iPd	51	01.00	-1.8

S.D. = 1.3 on 15 of 17 obs.

% JUL 30, 1989 04h 41m 53.83± 0.85s
59.993 N ± 6.7km 5.655 E ± 9.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.9 (BER).

BER	0.42	338	iPg	42	03.33	0.9
			eSg	42	09.44	
ODD1	0.50	99	iP	42	04.57	0.7
			iS	42	11.47	
ASK	0.54	335	iPg+	42	05.19	0.4
			eSg	42	12.25	
KMY	0.81	195	iP	42	08.99	-0.5
			eS	42	18.94	
BLS1	0.85	135	eP	42	10.75	0.5
			eS	42	21.39	
SUE	1.16	338	eP	42	15.62	0.2
			eS	42	29.52	
HYA	1.21	12	iP	42	16.74	0.5
			eS	42	32.90	
MOL	2.74	19	eP	42	36.00	-2.6
			eS	43	09.15	

S.D. = 1.4 on 8 of 8 obs.

& JUL 30, 1989 06h 17m 57.65s
57.303 N 143.284 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

TGL	3.47	4	iP	18	47.14	-5.8
BALM	3.78	7	iP	18	51.47	-5.8
			S	19	34.68	
CTGM	3.81	14	eP	18	51.88	-5.9
VZW	4.13	337	eP	18	55.80	-6.3
GLB	4.16	357	iP	18	56.56	-6.1
SEW	4.27	314	eP	18	57.42	-6.7
KLU	4.41	343	eP	19	00.20	-6.0
HYT	4.62	38	P	19	02.60	-6.7
CNPM	4.74	301	eP	19	02.81	-8.0
XLV	4.94	299	eP	19	07.13	-6.5
NNL	5.00	307	eP	19	08.77	-5.7
TOA	5.03	344	eP	19	09.19	-5.8
RDT	5.75	309	eP	19	18.28	-6.8
ILIM	5.76	303	eP	19	18.45	-6.8
PAX	5.79	350	eP	19	15.12	-10.6
CUT	6.21	328	eP	19	26.02	-5.4
DWY	7.03	14	P	19	37.20	-5.9

17 obs. associated

JUL 30, 1989 07h 09m 16.25± 0.95s
42.778 N ± 8.5km 18.236 E ± 7.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.2 (TTG).

BRY	0.26	62	iPgd	09	21.30	-0.5
			iSg	09	26.00	
HCY	0.38	150	ePg	09	23.70	-0.4
			iSg	09	30.20	
NKY	0.56	86	ePg	09	27.70	0.0
			eSg	09	36.00	
BDV	0.66	138	ePg	09	29.00	-0.4
			eSg	09	39.20	
TTG	0.83	114	ePg	09	33.50	1.2
			eSg	09	45.00	
HVAR	1.37	288	e(Pg)	09	41.50	0.1
			iSg	10	00.30	

S.D. = 0.8 on 6 of 6 obs.

& JUL 30, 1989 07h 11m 11.82s
65.205 N 154.712 W
DEPTH = 10.0km (geophysicist)
ALASKA (676)
<AGS-P>. ML 4.1 (PMR).

IMA	0.97	26	iPc	11	30.30	0.0
KTH	2.34	133	eP	11	51.00	0.0
TTA	2.35	195	e(P)	11	50.90	-0.3
NEA	2.48	102	eP	11	53.46	0.5
RDS	2.81	95	eP	11	57.74	0.1
MCK	2.91	118	eP	12	00.50	1.5
WRH	2.92	102	eP	11	58.33	-0.8
FBA	2.95	93	eP	11	59.80	0.3
CCB	2.99	98	eP	11	59.28	-0.9
GLM	3.11	91	eP	12	00.76	-1.0
RND	3.13	123	eP	12	03.05	0.9
HDA	3.41	100	eP	12	05.73	-0.4
CUT	3.43	143	eP	12	05.92	-0.5
SVW	4.13	186	eP	12	13.60	-2.8
PWA	4.18	146	eP	12	16.61	-0.3
PMR	4.41	143	eP	12	21.10	0.9
PMS	4.61	147	eP	12	24.60	1.5
PAX	4.63	115	eP	12	23.22	-0.3
DOT	4.87	104	eP	12	25.78	-1.1
TOA	4.91	125	eP	12	30.20	2.7

DWY 6.67 93 P 12 50.00 -2.1
INK 8.92 60 eP 13 22.00 -1.4
22 obs. associated

? JUL 30, 1989 07h 46m 06.14± 0.95s
40.339 N ±12.2km 20.580 E ± 8.8km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

KBN 0.34 32 iPg 46 13.50 0.4
TPE 0.44 264 ePg 46 14.40 -0.7
SRN 0.64 224 ePg 46 19.70 0.8
PHP 1.35 356 ePg 46 34.50 3.6X
LIT 1.48 99 ePd 46 32.30 -0.6
SKO 1.76 21 ePn 46 43.00 6.2X
eSn 47 04.00
S.D. = 1.2 on 4 of 6 obs.

JUL 30, 1989 08h 31m 10.31± 0.71s
33.250 N ± 4.3km 140.778 E ± 4.4km
DEPTH = 60.7 ± 5.6 km
5.1mb (37 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ 2.99 351 P 31 55.10 -1.1
S 32 30.90
CHJJ 3.15 333 iPd 31 57.30 -1.3
S 32 34.10
IIDJ 3.25 314 P 32 01.10 1.1
S 32 41.90
MAT 3.90 328 iPd 32 09.40 0.3
eS 32 54.00
MTMJ 4.13 325 P 32 13.10 0.7
NIIJ 4.24 340 P 32 13.00 -0.8
S 33 00.30
WKYJ 4.43 284 P 32 17.50 1.0
eS 33 08.80
TSRJ 4.57 301 iPd 32 18.80 0.3
YAMJ 4.95 353 P 32 22.40 -1.5
S 33 16.10
OFUJ 5.86 7 P 32 32.40 -4.2X
S 33 34.40
SHK 6.86 283 eP 32 52.00 1.5
AOMJ 7.30 358 eP 32 55.60 -1.1
SHNJ 8.11 279 eP 33 08.70 0.9
KUMJ 8.40 268 eP 33 12.80 1.0
MRRJ 9.16 1 P 33 18.70 -3.6X
eS 34 58.30
HOOJ 9.33 12 P 33 19.50 -5.1X
S 34 54.00
KUSJ 10.31 16 P 33 30.80 -7.1X
eS 35 15.10
ASAJ 10.95 7 P 33 40.90 -5.7X
eS 35 34.10
MDJ 14.29 326 eP 34 33.50 2.8X
CN2 15.94 316 P 34 51.00 -1.0
SNY 16.09 307 eP 34 54.20 0.4
SSE 16.73 268 P 35 09.50 7.5X
1.0s 34.00nm 4.5mb
Z 20s 0.90um 5.7Msz
GUMO 19.92 168 eP 35 32.70 -7.1X
BJI 20.84 296 eP 35 45.50 -3.5X
WHN 22.58 270 Pc 36 07.60 1.1
TIY 23.46 289 Pd 36 16.70 1.6
Z 14s 0.95um 4.4MszX
E 12s 0.60um
HHC 24.44 297 eP 36 21.00 -3.6X
BTO 25.57 296 eP 36 35.60 0.3
XAN 26.48 281 P 36 42.50 -1.1
GYA 30.26 266 P 37 16.40 -1.4
GTA 33.36 293 eP 37 41.50 -3.3X
CHG 39.97 260 eP 38 45.30 4.6X
WMQ 42.20 301 P 38 59.20 0.5
MTN 46.75 193 iPc 39 34.10 -1.2
0.5s 19.00nm 5.3mb
FBA 52.60 31 eP 40 20.20 0.5
WB5 53.18 188 iPc 40 23.40 -1.0
WRA 53.25 188 Pc 40 24.00 -0.9
0.6s 35.80nm 5.6mb
QIS 53.52 181 eP 40 25.70 -1.1
ASPA 56.98 188 iPc 40 51.10 -0.8
0.6s 54.00nm 5.8mb
MBL 57.68 203 eP 40 55.90 -0.9
INK 58.00 26 eP 40 58.00 -0.6
MBC 60.30 16 ePc 41 13.80 -0.6
0.9s 13.00nm 5.1mb
BRS 61.37 168 iPc 41 22.90 0.7
KOD 62.17 264 eP 41 27.00 -1.3
ALE 63.91 3 eP 41 38.00 -0.4
0.8s 13.00nm 5.0mb
MAIO 64.90 298 eP 41 46.00 0.5
COOL 66.43 198 eP 41 54.00 -1.2
BWA 67.70 173 eP 42 04.20 1.0
SOD 68.25 338 iP 42 05.70 -0.6
NWAO 69.46 201 eP 42 14.00 0.0
0.6s 45.00nm 5.6mb
DAG 69.50 355 iPc 42 12.90 -0.8
0.7s 22.60nm 5.2mb
RKG 70.59 201 eP 42 24.50 3.6X
SUF 71.13 334 iP 42 22.90 -1.0
0.7s 13.30nm 5.0mb
PNT 71.27 43 eP 42 25.00 0.0
0.7s 12.00nm 4.9mb
DPW 72.80 44 P 42 34.50 0.3
NUR 73.04 332 iP 42 35.00 -0.2
0.6s 17.00nm 5.2mb
WDC 73.78 52 eP 42 40.40 0.5
MIN 74.51 52 eP 42 44.30 0.0
ORV 74.98 52 eP 42 47.00 0.1
CMB 76.52 53 ePc 42 56.30 0.7
PRS 76.74 55 eP 42 57.60 0.8
FFC 77.17 32 iPc 42 58.60 -0.3
0.9s 24.00nm 5.2mb
HFS 77.32 336 eP 42 58.80 -0.7
0.9s 12.90nm 4.9mb
Z 16s 0.04um 3.8MszX
LR 20 46.00
KVN 77.49 51 P 43 01.90 0.7
FRI 77.52 54 eP 43 02.40 1.3
NAO 77.76 337 P 43 01.50 -0.5
TNP 78.60 52 P 43 07.90 0.6
1.0s 10.00nm 4.7mb
KVT 78.69 312 eP 42 58.70 -8.8X
ISA 79.08 55 eP 43 09.00 -0.8
CLC 79.59 54 eP 43 13.00 0.5
SBB 80.06 55 eP 43 16.00 0.9
PAS 80.11 56 eP 43 15.00 -0.3
MWC 80.15 56 eP 43 16.00 0.3
FRB 80.57 13 eP 43 17.00 -0.1
BW06 80.70 45 eP 43 19.00 0.5
RVR 80.75 55 eP 43 18.00 -0.6
PLM 81.46 56 eP 43 22.00 -0.6
TPC 81.60 55 eP 43 24.00 0.9
KRA 81.93 326 eP 43 24.80 0.3
0.8s 38.00nm 5.4mb
MLR 81.93 320 eP 43 27.00 2.2
BAR 81.97 56 eP 43 26.00 0.9
SPC 82.38 325 eP 43 28.00 0.9
RSSD 83.01 41 eP 43 31.00 0.5
GLA 83.04 55 eP 43 32.00 1.4
KSP 83.04 328 eP 43 30.80 0.6
HRI 83.35 305 ePc 43 33.00 0.7
BRG 84.04 329 iP 43 35.30 0.0
1.0s 14.00nm 4.9mb
i 43 37.70
CLL 84.11 330 iP 43 35.40 -0.2
0.9s 21.00nm 5.2mb
i 43 51.50
SRO 84.26 325 iP 43 37.70 1.2
PRU 84.43 328 Pc 43 37.50 0.2
1.0s 14.50nm 5.0mb
ZST 84.57 326 iP 43 38.70 0.7
DSI 84.58 304 ePc 43 39.00 0.6
GOL 85.08 45 eP 43 42.10 1.0
1.0s 5.00nm 4.6mb
GLD 85.14 45 P 43 42.90 1.6
1.0s 26.00nm 5.3mb
HOF 85.33 330 iPc 43 42.20 0.4
0.9s 13.00nm 5.0mb
KHC 85.49 328 Pc 43 42.50 -0.1
1.0s 7.00nm 4.7mb
MBH 85.99 303 eP 43 45.00 -0.4
GRF 86.08 330 eP 43 46.60 1.1
1.0s 26.00nm 5.3mb
EKA 86.52 340 Pd 43 48.10 0.5
0.6s 3.80nm 4.7mb
ENN 87.35 333 eP 43 51.50 -0.1
0.9s 14.00nm 5.1mb
LOR 90.99 332 eP 44 08.60 -0.3
0.8s 2.60nm 4.7mb
LSD 91.10 329 P 44 10.02 0.2
LBF 91.17 332 eP 44 09.10 -0.7
0.8s 2.60nm 4.7mb
LPG 91.24 330 eP 44 10.40 -0.1
0.9s 9.80nm 5.2mb
SSF 91.29 332 eP 44 09.20 -1.1
AVF 91.58 332 eP 44 11.80 0.2
0.8s 7.20nm 5.1mb
FIN 91.63 328 P 44 10.64 -1.3
RRL 91.69 329 P 44 12.48 0.0
ROB 91.71 328 P 44 11.25 -1.1
ENR 91.97 328 P 44 11.35 -2.2
IMI 92.01 328 P 44 11.15 -2.6
LPF 92.16 335 eP 44 13.90 -0.3
0.8s 8.00nm 5.2mb
SBF 92.25 328 eP 44 13.40 -1.4
0.7s 6.60nm 5.2mb
MAF 92.35 332 eP 44 15.60 0.4
0.7s 4.40nm 5.0mb
TCF 92.44 333 eP 44 14.90 -0.7
0.7s 2.60nm 4.8mb
LSF 92.73 333 eP 44 17.10 0.2
0.7s 8.80nm 5.3mb
LRG 93.04 329 eP 44 18.20 -0.2
0.7s 4.40nm 5.0mb
LMR 93.08 328 eP 44 18.10 -0.4
RJF 93.52 333 eP 44 21.00 0.4
0.8s 5.30nm 5.0mb
CAF 93.63 332 eP 44 21.90 0.8
0.7s 3.70nm 4.9mb
BUL 118.94 264 iPKPc 49 54.00 -0.1
0.6s 3.33nm
SPA 123.07 180 e(PKP)50 00.90 0.3
1.0s 9.50nm
ZOBO 148.93 64 ePKP 50 50.00 0.1
0.9s 17.30nm
i 50 54.00
LPB 149.11 64 PKP 50 56.00 6.1X
CNCB 149.37 65 PKP 50 56.80 6.3X
CCH 151.10 63 PKP 50 59.60 6.8X
S.D. = 0.9 on 109 of 126 obs.

JUL 30, 1989 09h 22m 31.37± 0.45s
7.923 S ± 6.7km 121.230 E ± 9.0km
DEPTH = 33.0km (normal)
5.0mb (7 obs.) 4.5Msz (1 obs.)
FLORES SEA (279)

MKS 3.21 327 iPc 23 21.50 0.9
eS 24 05.00
KNA 10.72 137 eP 25 04.00 -1.7
MTN 10.90 117 iPd 25 08.70 0.5
0.4s 68.00nm 6.2mb X
eS 27 07.30
MBL 13.23 186 eP 25 36.00 -3.5X
NANU 15.55 200 eP 26 08.00 -1.9
WB5 17.42 134 eP 26 31.40 -2.2
WRA 17.44 135 P 26 34.00 0.1
0.6s 5.20nm 3.8mb X
MEKA 18.77 188 eP 26 51.00 0.8
0.3s 11.00nm 4.5mb
ASPA 19.82 144 iPd 27 02.70 0.4
0.7s 82.00nm 5.2mb
QIS 21.76 127 iPd 27 23.60 1.3
0.6s 31.00nm 4.9mb
e 27 35.50
COOL 22.84 180 eP 27 33.00 0.1
BAL 22.96 190 eP 27 34.50 0.5
0.4s 30.00nm 5.1mb
KLB 23.77 187 eP 27 43.10 1.2
0.3s 20.00nm 5.1mb
MUN 24.39 190 eP 27 48.70 0.9
NWAO 25.16 188 eP 27 55.70 0.5
STK 30.45 144 iPc 28 44.40 1.1
i 28 56.80
CHG 34.48 321 eP 29 19.40 0.8
BRS 35.58 127 iPd 29 31.50 3.5X
i 29 43.10
CD2 42.09 337 P 30 22.50 0.5
BJI 47.95 355 eP 31 09.00 0.3
GBA 48.45 296 Pc 31 11.40 -1.6
0.7s 5.10nm 4.7mb
GTA 51.11 339 eP 31 31.80 -1.4
Z 20s 0.50um 4.5Msz
E 12s 0.40um
WMQ 59.79 332 P 32 35.20 -0.6
SPA 82.13 180 e(P) 35 04.70 14.7X
0.7s 4.30nm
BUL 89.75 250 eP 35 28.00 -0.5
0.8s 5.22nm 4.9mb
PSO 160.34 109 ePKP 42 24.00 -6.1X

30d 09h

S.D. = 1.1 on 22 of 26 obs.

JUL 30, 1989 09h 29m 16.01± 0.20s
52.602 S ± 5.9km 12.927 E ± 7.1km
DEPTH = 10.0km (geophysicist)
5.6mb (21 obs.) 5.7Msz (15 obs.)
SOUTHWEST OF AFRICA (413)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 37C
Centroid Location:
Origin Time 09:29:19.6 0.3
Lat 52.41S 0.03 Lon 12.87E 0.09
Dep 15.0 FIX Half-duration 3.1
Moment Tensor; Scale 10**17 Nm
Mrr=-6.26 0.17 Mtt= 6.89 0.17
Mff=-0.62 0.22 Mrt= 0.39 0.67
Mrf=-0.47 0.48 Mtf=-1.78 0.21
Principal Axes:
T Val= 7.30 Plg= 2 Azm= 13
N -1.00 4 103
P -6.31 85 256
Best Double Couple:Mo=6.8*10**17
NP1:Strike= 99 Dip=43 Slip= -96
NP2: 287 47 -84

SNA	19.10	196	iPc	33	41.40	0.5			
	1.2s	1007.81nm				5.9mb X			
KIM	25.40	25	iPc	34	44.00	-1.1			
	1.3s	240.38nm				5.7mb			
BLF	25.44	28	iPc	34	44.00	-1.5			
	1.0s	130.00nm				5.6mb			
			i	35	04.00				
MAW	28.07	141	eP	35	09.30	0.2			
SLR	29.23	29	iPc	35	17.50	-2.6			
	1.0s	70.00nm				5.4mb			
	Z 20s	47.52um				6.1Msz			
BUL	34.61	27	iPc	36	04.50	-2.8X			
	1.0s	50.00nm				5.4mb			
	Z 19s	38.89um				6.2Msz			
	N 19s	13.19um							
	E 20s	25.53um							
			ipP	37	07.50	323kmX			
			iS	41	41.00				
SPA	37.58	180	e(P)	36	32.80	0.7			
	1.0s	143.00nm				5.7mb			
	Z 21s	27.94um				6.0Msz			
SBA	48.81	173	iPc+	38	03.90	1.4			
LWI	51.90	20	iPc	38	26.70	-0.4			
BMA	52.40	282	eP	38	28.00	-2.6X			
VAO	53.86	279	e(P)	38	43.00	1.6			
			e	38	47.80				
DRV	54.52	157	eP	38	45.40	-0.2			
BNG	57.02	7	iPd	39	01.00	-3.2X			
	1.2s	91.00nm				5.7mb			
			i	39	10.00				
			i	39	58.30				
MRA	58.37	257	e(P)	39	12.00	-1.6			
LEGH	59.09	345	eP	39	17.00	-1.7			
KOGH	59.53	345	eP	39	20.00	-1.8			
KUK	59.65	345	eP	39	20.00	-2.5			
BAO	60.14	284	eP	39	24.40	-1.7			
ITR	60.23	297	eP	39	23.70	-3.0X			
			e	39	30.30				
			e	39	42.60				
			e	40	09.60				
LIC	60.56	339	Pc	39	26.34	-2.4			
	Z 20s	7.00um				5.8Msz			
			S	47	40.00				
KIC	60.63	340	P	39	26.50	-2.7X			
TIC	60.97	340	P	39	29.20	-2.3			
SLA	63.83	263	eP	39	51.80	0.9			
AAE	65.25	28	eP	40	01.00	0.8			
ARO	68.85	32	iP+	40	24.00	1.3			
CCH	69.77	268	P	40	27.60	-1.1			
CNCB	71.33	267	iPc	40	39.20	0.7			
LPB	71.62	267	P	40	40.60	0.5			
	1.1s	227.85nm				6.2mb			
	Z 25s	6.43um				5.8MszX			
			S	50	06.00				
			LR	06	28.00				
ZOBO	71.83	267	iPc	40	41.20	-0.4			
	1.2s	195.95nm				6.1mb			
	Z 23s	3.84um				5.6MszX			
			S	50	10.00				
			LR	06	08.00				
NWAO	72.43	121	eP	40	43.00	-1.2			
	0.6s	33.00nm				5.6mb			
	Z 20s	1.80um				5.3Msz			
	N 20s	1.20um							
	E 20s	1.10um							
MUN	72.63	120	eP	40	44.00	-1.4			
ARE	73.73	264	eP	40	52.00	-0.4			
	1.1s	79.75nm				5.7mb			
BAL	73.97	119	eP	40	52.00	-1.2			
COOL	76.07	123	eP	41	04.00	-1.3			
MEKA	78.10	118	eP	41	15.50	-1.1			
HUA	79.49	264	eP	41	27.40	2.6X			
NANU	79.67	114	eP	41	25.30	0.2			
NNA	80.45	263	iP	41	30.50	1.0			
	1.0s	18.00nm				5.0mb			
MSZ	80.75	162	eP	41	35.00	4.5X			
KOD	83.21	64	eP	41	45.60	1.5			
HLW	83.67	16	eP	41	45.00	-0.7			
KOT	83.83	16	eP	41	46.50	0.0			
MBH	84.24	19	ePc	41	50.00	1.5			
CAN	84.44	145	eP	41	53.00	3.2X			
STK	84.70	138	eP	41	51.00	-0.1			
PRNI	84.82	19	eP	41	52.00	0.5			
TIO	85.03	343	iP	41	54.00	1.3			
BWA	85.05	144	eP	41	54.00	1.1			
SNZO	85.14	166	eP	42	02.00	8.9X			
			PP	45	08.00				
			S	52	26.00				
			SP	53	32.00				
			SS	58	00.00				
GBA	85.99	62	Pc	41	55.70	-1.9			
	1.3s	100.70nm				5.8mb			
DSI	86.08	19	eP	41	59.00	1.3			
IFR	87.19	345	iPc	42	05.00	1.6			
			i	42	12.00				
			i	45	35.00				
ASPA	88.37	128	iPd	42	08.50	-0.8			
	1.0s	45.00nm				5.7mb			
	Z 23s	2.83um				5.6MszX			
			LR	13	47.70				
BHL	88.40	19	Pc	42	10.00	1.0			
			PP	45	38.00				
			S	52	48.00				
PSI	89.68	85	iPc	42	16.70	1.2			
	1.0s	82.80nm				5.9mb			
HYB	89.74	60	ePc	42	16.50	0.8			
	1.4s	150.00nm				6.0mb			
BHD	89.82	26	iPd	42	17.00	1.4			
			iS	52	47.00				
IZM	91.48	11	eP	42	23.00	-0.2			
WRA	91.74	127	Pc	42	25.60	0.6			
	0.8s	5.10nm				4.9mb			
KGM	91.83	89	ePc	42	26.20	0.8			
SLY	92.31	26	iPd	42	28.50	1.5			
			ePP	46	01.50				
			eS	53	04.00				
			esS	53	15.50				
			esP	54	05.00				
			e	59	43.00				
MSL	92.45	24	ePd	42	29.50	1.9			
			ePP	46	12.50				
			eS	53	04.00				
ALT	92.50	13	eP	42	28.00	0.0			
EZN	92.78	10	eP	42	30.00	0.9			
BRS	92.97	145	eP	42	39.00	8.3X			
TOL	93.28	347	eP	42	32.00	0.6			
			ePP	46	08.00				
			eS	54	50.00				
			eSS	00	00.00				
BBTK	93.67	15	iPc	42	35.00	1.7			
EBR	93.67	351	eP	42	32.00	-1.1			
VAY	93.92	7	eP	42	35.40	1.1			
RZN	94.47	9	ePd	42	38.00	0.9			
SKO	94.48	6	iP	42	37.70	0.8			
	Z 20s	2.88um				5.7Msz			
	N 19s	2.86um							
	E 19s	2.33um							
			i	42	46.80				
			i(PP)	46	24.00				
			iSKS	53	14.00				
			iS	54	02.00				
			iSS	00	16.00				
			LQ	27	33.00				
KDZ	94.49	9	iPd	42	36.00	-1.0			
KKB	94.50	8	eP	42	38.00	1.0			
TAB	94.86	26	eP	42	39.00	0.1			
OUE	94.95	45	eP	42	41.00	1.4			
JMB	95.42	10	eP	42	42.00	0.8			
LMR	95.72	355	eP	42	41.50	-1.0			
	0.8s	10.70nm				5.4mb			
EPF	95.87	351	eP	42	44.10	0.8			
	1.2s	22.00nm				5.5mb			
RIY	97.57	1	eP	42	53.10	2.3			
CAF	97.60	352	eP	42	50.30	-0.7			
	1.2s	14.80nm				5.5mb			
VBY	97.75	2	e(P)	42	53.00	1.4			
LPG	97.86	356	eP	42	52.80	0.3			
	1.2s	19.00nm				5.6mb			
CEY	97.97	1	e(P)	42	54.50	1.9			
ZAG	98.07	2	ePc	42	55.00	2.0			
BZS	98.12	6	eP	42	50.00	-3.3X			
VOY	98.26	1	eP	42	56.00	2.0			
MLR	98.35	9	ePc	42	55.00	0.5			
NDI	98.39	53	eP	42	53.00	-1.9			
VRI	98.80	10	ePc	42	56.50	0.1			
FVI	98.82	360	Pd	42	59.60	3.3X			
MAF	98.84	353	eP	42	56.50	-0.1			
	0.8s	5.30nm				5.2mb			
SRO	100.14	4	e(Pdif	43	04.60	2.0X			
ZST	100.48	3	ePdif	43	01.00	-3.1X			
	Z 20s	1.80um				5.6Msz			
			e	47	08.00				
			e	47	17.60				
KHC	101.36	0	ePdiff	43	11.10	3.1X			
PRU	102.22	1	ePdiff	43	12.00	0.2			
			e	43	26.00				
CHG	102.35	75	ePdiff	43	13.90	0.8			
DOU	102.56	355	Pdiff+	43	16.00	2.7X			
	Z 19s	1.80um				5.6Msz			
			SKS	54	02.00				
			PS	56	26.00				
UCC	103.28	354	Pdiff	43	18.00	1.6			
			e	56	07.00				
CLL	103.54	0	ePdiff	43	30.00	12.4X			
	Z 18s	1.50um				5.6Msz			
WMQ	115.52	51	PKP	48	00.80	1.7			
LZH	118.20	67	ePKP	48	04.00	-0.6			
	Z 22s	2.10um				5.7Msz			
			PP	49	18.00				
			SS	05	40.00				
GTA	118.39	62	PKP	48	03.80	-1.0			
	Z 36s	2.10um				5.5MszX			
	E 20s	2.10um							
XAN	119.63	72	PKP	48	06.00	-1.2			
GBTN	121.45	289	PKP	48	09.20	-1.4			
GAC	123.60	303	ePKP	48	13.50	-0.8			
TIY	124.24	71	PKPd	48	15.40	-0.6			
	Z 26s	1.71um				5.6MszX			
	E 19s	1.78um							
			ePP	50	04.00				
OLY	125.58	284	PKP	48	16.50	-2.1			
SCH	125.67	315	ePKP	48	17.00	-1.2			
HHC	125.86	68	PKP	48	18.20	-0.9			
FVM	126.65	287	PKP	48	17.50	-3.1X			
BJI	127.96	71	ePKP	48	21.00	-1.9			
	4.0s	0.41nm							
	Z 24s	1.30um				5.5MszX			
			PP	50	24.00				
			PKS	51	40.00				
			eSS	07	42.00				
MEO	129.35	278	iPKPd	48	26.00	0.2			
DL2	130.41	76	PKP	48	26.00	-1.6			
	Z 20s	0.60um				5.3Msz			
			PP	50	36.00				
DAG	130.66	351	ePKP	48	25.00	-2 0			
FRB	132.03	324	ePKP	48	29.00	-0.9			
SNY	133.41	74	ePKP	48	32.00	-1.2			
ALQ	134.24	272	e(PKP)	48	36.00	0.6			
	Z 22s	1.19um				5.6Msz			
			ePP	51	17.50				
			ePKS	52	09.00				
			ePKKS	01	32.00				
CN2	135.70	73	PKP	48	36.00	-1.6			
	Z 20s	1.80um				5.8Msz			
	N 18s	1.10um							
			PP	51	10.00				
			PKS	52	08.00				
GLD	136.60	278	PKP	48	40.00	0.3			
GOL	136.66	278	PKP	48	32.00	-7.9X			
	Z 20s	0.85um				5.5Msz			
GLA	138.06	263	ePKP	48	42.00	-0.4			
RSSD	138.50	284	PKP	48	34.30	-8.9X			
MDJ	138.61	75	ePKP	48	44.00	1.0			
	N 18s	1.41um							
			PP	51	32.00				

MAT	138.89	91	ePKP	48	35.00	-8.8X
	Z 20s		0.71um			5.4Msz
BAR	138.91	261	ePKP	48	44.00	0.0
PLM	139.49	262	ePKP	48	46.00	0.8
TPC	139.52	264	ePKP	48	46.00	0.9
ALE	139.93	349	ePKP	48	41.00	-3.4X
	0.8s		6.00nm			
MSU	140.05	272	PKP	48	37.80	-8.3X
RVR	140.24	262	ePKP	48	46.00	-0.3
GSC	140.78	264	ePKP	48	50.00	2.6X
MWC	140.81	262	ePKP	48	49.00	1.4
PAS	140.83	262	ePKP	48	48.00	0.6
SBB	140.99	263	ePKP	48	30.00	-17.7X
BW06	141.02	279	PKP	48	39.10	-8.7X
CLC	141.61	264	ePKP	48	46.00	-2.8X
ISA	142.04	263	ePKP	48	51.00	1.4
FFC	142.61	300	ePKP	48	44.00	-5.8X
	1.3s		38.00nm			
BCH	142.69	261	PKP	48	52.80	2.1
TNP	142.85	267	PKP	48	46.00	-5.1X
PRS	144.23	261	e(PKP)	48	51.90	-1.3
MRRJ	144.25	85	ePKP	48	50.80	-2.2
CMB	144.75	265	ePKP	48	52.50	-1.6
HOOJ	145.57	87	ePKP	48	55.70	0.5
BKS	145.77	263	ePKP	48	54.80	-0.9
	1.3s		138.00nm			
BRK	145.78	263	e(PKP)	48	56.80	1.1
ASAJ	146.14	84	ePKP	48	56.40	0.2
KUSJ	146.84	87	ePKP	48	58.20	0.9
MIN	146.92	267	e(PKP)	48	57.80	0.1
LTCM	147.16	266	PKP	49	00.10	2.2
WDC	147.63	266	ePKP	48	58.50	-0.2
EDM	148.23	293	ePKPc	48	57.00	-2.3
DPW	148.87	281	PKP	49	00.00	-0.5
MBC	150.19	339	ePKP	48	58.50	-3.1X
	0.9s		65.00nm			
PNT	150.35	283	ePKP	49	02.00	-0.6
	1.0s		55.00nm			
LON	150.52	277	PKP	49	02.00	-1.0
YKA	150.97	311	ePKPd	49	07.00	3.9X
INK	157.61	327	ePKP	49	07.00	-5.0X
FBA	164.22	329	ePKP	49	23.20	4.2X
IMA	164.92	339	PKP	49	06.70	-13.1X
PMR	166.77	320	e(PKP)	49	07.00	-14.2X
	2.8s		223.20nm			
	Z 20s		1.80um			
KDC	170.20	307	PKP	49	25.30	1.9
ADK	174.05	93	PKP	49	24.40	-0.8
	S.D. = 1.3		on 128 of 163 obs.			

? JUL 30, 1989 10h 15m 36.32± 0.97s
39.118 N ± 8.3km 27.694 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.79	205	ePg	15	51.80	0.0
			eSg	16	03.80	
DST	0.87	56	ePn	15	53.10	0.0
EDC	1.23	6	ePn	15	59.30	0.0
EZN	1.27	304	ePn	15	59.90	0.0
	S.D. = 0.1		on 4 of 4 obs.			

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* JUL 30, 1989 10h 41m 53.85± 0.68s
6.874 N ±12.6km 127.126 E ±17.9km
DEPTH = 33.0km (normal)
4.6mb (3 obs.)
PHILIPPINE ISLANDS REGION (248)

QIZ	20.70	307	eP	46	35.00	1.0
WB5	27.52	165	eP	47	40.30	0.7
QIS	29.89	156	eP	48	07.00	6.0X
MAT	31.22	17	(P)	48	12.00	-0.5
	1.3s		21.15nm			4.8mb
XAN	31.84	331	P	48	17.50	-0.6
CD2	32.42	321	P	48	23.30	0.2
BJI	34.45	345	eP	48	41.00	0.4
LZH	36.05	327	eP	49	02.00	7.5X
GTA	40.65	327	eP	49	34.20	1.4
BRS	42.15	145	eP	49	45.00	0.0
BWA	45.75	155	eP	50	23.50	9.5X
CAN	46.76	155	eP	50	31.00	9.0X
GBA	49.28	282	Pd	50	40.30	-1.6
	0.6s		3.40nm			4.6mb
SUF	88.94	333	eP	54	50.00	3.8X
SLL	95.46	333	eP	55	15.50	-0.9
	0.4s		0.80nm			4.5mb
	S.D. = 1.0		on 10 of 15 obs.			

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* JUL 30, 1989 10h 55m 37.09± 0.71s
7.322 S ±23.5km 107.081 E ±16.7km
DEPTH = 33.0km (normal)
4.9mb (5 obs.)
JAVA (277)

NANU	17.20	153	iPc	59	35.30	-1.2
			eS	02	33.00	
MBL	18.47	139	eP	59	53.00	0.7
			eS	03	01.00	
KNA	22.82	113	eP	00	38.40	0.0
WB5	29.25	118	iPc	01	37.20	-1.3
ASPA	30.44	125	iPc	01	48.40	-0.7
	0.9s		14.00nm			4.8mb
QIS	34.11	116	iPc	02	20.60	-0.6
KOD	34.26	300	eP	02	24.50	1.7
GBA	36.04	305	Pd	02	35.60	-2.0
	0.4s		2.50nm			4.5mb
STK	40.37	132	eP	03	14.00	0.4
	0.7s		39.00nm			5.3mb
BWA	46.61	131	eP	04	07.80	3.6X
CAN	47.43	132	eP	04	12.20	1.5
BRS	47.62	121	iPd	04	13.70	1.4
BUL	76.72	251	iPd	07	27.70	0.2
	0.9s		7.98nm			4.7mb
BNG	89.11	275	iPd	08	31.10	-0.1
	0.7s		9.00nm			5.2mb
	S.D. = 1.3		on 13 of 14 obs.			

? JUL 30, 1989 10h 59m 34.28± 3.73s
31.265 S ±30.4km 68.633 W ±13.9km
DEPTH = 105.9 ± 26.0 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.15	115	ePc	59	49.00	-0.6
RTCB	0.26	213	ePc	59	50.00	0.0
			S	00	03.00	
CFA	0.48	135	iPc	59	51.00	0.2
			S	00	03.80	
RTCV	0.60	172	iPd	59	52.00	0.3
			S	00	05.10	
RTBS	0.80	240	ePd	59	53.70	0.3
			S	00	08.30	
MRA	2.74	115	ePc	00	17.60	0.2
RFA	3.50	178	e(P)	00	27.40	-0.4
	S.D. = 0.5		on 7 of 7 obs.			

JUL 30, 1989 11h 33m 27.62± 0.75s
40.191 N ± 9.0km 20.703 E ± 6.4km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

LSK	0.09	242	iPgc	33	29.40	-0.9
KBN	0.44	11	ePg	33	36.50	-0.1
TPE	0.54	281	iPgc	33	39.00	0.5
SRN	0.62	240	ePg	33	40.50	0.4
LIT	1.37	93	eP	33	53.20	0.4
PHP	1.51	353	ePg	33	36.60	-18.0X
LACI	1.63	333	ePn	34	01.80	5.4X
VAY	1.81	51	ePn	33	58.80	-0.3
SKO	1.86	17	ePn	34	03.50	3.7X
	0.6s		50.00nm			
			iSn	34	28.30	
			LQ	34	32.80	
BCI	2.23	348	ePn	34	10.20	5.2X
	S.D. = 0.7		on 6 of 10 obs.			

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* JUL 30, 1989 13h 17m 25.43± 0.87s
24.456 N ±13.8km 94.033 E ±15.0km
DEPTH = 33.0km (normal)
4.5mb (2 obs.)
BURMA-INDIA BORDER REGION (294)

CHG	7.24	140	iPc	19	11.70	0.1
	0.8s		14.74nm			5.0mb X
CHTO	7.24	140	iP	19	11.50	-0.1
KMI	7.94	83	Pd	19	22.00	0.3
HFS	64.34	327	eP	28	00.70	0.8
	0.7s		4.00nm			4.6mb
NAO	65.69	328	P	28	08.50	0.0
MBC	77.43	8	eP	29	17.50	-1.0
	0.5s		2.00nm			4.4mb
	S.D. = 0.7		on 6 of 6 obs.			

? JUL 30, 1989 13h 17m 43.80± 5.21s
10.421 N ±38.4km 60.720 W ±37.7km
DEPTH = 33.0km (normal)
TRINIDAD (98)
MD 3.4 (TRN).

TBH	0.35	280	eP	17	52.37	0.2
			eS	18	01.41	
TRN	0.71	289	eP	17	57.03	-0.3
			eS	18	09.38	
TPP	0.73	262	eP	17	57.47	-0.1
			eS	18	08.96	
BOT	0.74	0	eP	17	57.77	0.0
TCE	1.05	285	eP	18	02.51	0.2
			eS	18	18.71	
	S.D. = 0.3		on 5 of 5 obs.			

? JUL 30, 1989 13h 33m 35.50± 1.95s
11.058 S ±18.5km 165.896 E ±21.8km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
SANTA CRUZ ISLANDS (184)

SVO	6.28	287	eP	35	09.00	0.7
			eS	36	17.00	
VSG	6.35	286	eP	35	09.00	-0.3
			eS	36	21.00	
DZM	10.96	177	iPc	36	06.70	-6.6X
BRS	20.40	215	iPd	38	12.80	0.3
CTA	20.92	242	iPc	38	17.20	-0.7
	0.9s		10.92nm			4.2mb
RMO	22.29	224	iPc	38	32.40	0.8
WRA	31.62	250	Pc	39	54.00	-3.9X
	0.6s		3.80nm			4.4mb
NANU	49.34	250	eP	42	23.00	-0.9
BNG	147.01	261	iPKPd	53	15.60	0.2
	0.2s		16.00nm			
	S.D. = 0.8		on 7 of 9 obs.			

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* JUL 30, 1989 14h 04m 48.93± 0.98s
8.624 S ±10.2km 121.377 E ± 9.3km
DEPTH = 141.4 ± 13.8 km
4.3mb (3 obs.)
FLORES ISLAND REGION (286)

MKS	3.88	331	iPd	05	48.00	-0.1
KNA	10.11	135	iPd	07	11.30	-0.4
	0.3s		23.00nm			5.3mb X
			eS	08	59.00	
MTN	10.46	114	iPd	07	16.10	-0.2
MBL	12.55	187	eP	07	44.00	0.3
	0.3s		8.00nm			4.7mb X
			eS	09	56.00	
NANU	14.95	201	eP	08	16.00	1.7
			eS	10	56.00	
WRA	16.85	133	Pd	08	37.80	-0.1
	0.5s		6.20nm			4.2mb
WARB	18.17	165	eP	08	52.50	-1.0
	0.3s		4.00nm			4.3mb
ASPA	19.17	143	iPc	09	03.70	-0.4
	0.8s		39.00nm			4.8mb X
			i	09	07.40	
			eS	12	33.10	
QIS	21.23	126	iPc	09	25.10	0.1
	0.6s		66.00nm			5.2mb X
BAL	22.30	191	eP	09	35.00	-0.4
KLB	23.10	188	eP	09	42.50	-0.6
NWAO	24.49	188	eP	09	55.00	-1.4
BRS	35.05	126	iPd	11	30.00	-0.2
BWA	35.72	140	eP	11	37.80	2.1
CAN	36.66	141	eP	11	44.80	1.2
SPA	81.43	180	e(P)	16	50.80	-0.5
	0.5s		4.63nm			4.5mb
	S.D. = 1.0		on 16 of 16 obs.			

? JUL 30, 1989 15h 19m 33.00± 1.29s
21.384 S ±17.2km 68.761 W ±35.3km
DEPTH = 33.0km (normal)
CHILE-BOLIVIA BORDER REGION (124)

ANT	2.77	213	iP	20	16.00	0.0
			i	20	38.30	
CNCB	4.61	9	P	20	43.00	0.3
CCH	4.68	32	P	20	43.50	0.0
LPB	4.87	8	eP	20	47.00	0.8
ZOBO	5.12	7	P	20	49.00	-1.0
	S.D. = 0.9		on 5 of 5 obs.			

% JUL 30, 1989 15h 45m 18.45± 1.77s

30d 15h

31.136 S ±13.7km 68.607 W ±12.5km
DEPTH = 97.4 ± 21.2 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTLL	0.23	149	iPd	45	32.70	-0.2
RTCB	0.39	205	iPc	45	33.60	0.1
			S	45	44.50	
CFA	0.57	146	iPc	45	35.00	0.3
			S	45	48.00	
RTCV	0.72	175	iPd	45	36.10	-0.1
RTBS	0.89	234	e(P)	45	37.70	0.0
			S	45	52.00	
RTRS	1.21	322	iPd	45	41.40	0.0
MRA	2.78	118	iPc	46	01.80	-0.1

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

JUL 30, 1989 16h 42m 34.08± 0.46s
13.181 N ± 3.4km 144.079 E ± 5.0km
DEPTH = 118.2 ± 4.6 km
4.8mb (10 obs.)
MARIANA ISLANDS (216)

GUMO	0.87	62	iPd	42	55.00	0.1
PJG	0.87	62	iPd	42	55.00	0.0
GUA	0.89	66	iPd	42	54.90	-0.2
			eS	43	08.30	
IIDJ	22.89	347	P	47	29.00	0.8
CHJJ	23.22	350	P	47	32.00	0.6
MAT	23.85	348	(P)	47	36.00	-1.5
	1.0s	20.00nm				4.5mb
MTMJ	23.98	347	P	47	38.80	0.0
NIIJ	24.39	350	P	47	42.90	0.3
SSE	27.61	314	eP	48	07.00	-5.2X
MTN	28.87	207	eP	48	23.20	-0.5
WHN	32.41	307	Pd	48	55.00	0.3
CTA	33.13	176	iPd	49	01.30	0.2
QIS	33.81	188	iPd	49	06.70	-0.3
WRA	34.28	196	Pc	49	11.10	0.1
	0.7s	15.30nm				4.9mb
CN2	34.46	336	P	49	12.00	-0.3
BJI	36.29	323	eP	49	27.50	-0.3
TIY	37.29	317	Pd	49	36.60	0.3
	1.0s	0.05nm				2.3mb X
GYA	37.45	296	iPd	49	39.00	1.1
ASPA	37.95	195	iPd	49	41.90	0.0
	0.7s	12.00nm				4.9mb
			eS	55	25.30	
XAN	38.05	309	Pd	49	42.00	-0.7
HHC	39.58	320	eP	49	55.00	-0.5
BTO	40.42	319	P	50	02.80	0.5
KMI	40.66	293	Pd	50	05.50	0.9
CD2	41.06	302	iPd	50	07.40	-0.2
BRS	41.20	168	iPd	50	10.20	1.5
DZM	41.33	148	iPc	50	11.60	1.7
MBL	41.62	215	eP	50	12.20	0.1
	0.5s	10.00nm				4.8mb
WARB	42.65	203	iPd	50	21.40	0.9
	0.4s	13.00nm				5.0mb
LZH	42.68	309	eP	50	21.50	0.5
	1.5s	97.00nm				5.3mb
SNG	43.15	266	eP	50	26.20	1.4
NANU	45.22	218	iPc	50	41.40	0.2
	0.7s	40.00nm				5.3mb
GTA	46.87	312	iPd	50	54.00	-0.3
	1.0s	0.05nm				2.2mb X
BWA	47.52	175	eP	50	59.90	0.7
CAN	48.46	175	eP	51	07.30	0.8
COOL	49.05	206	iPd	51	10.20	-0.9
TOO	50.50	179	iPc	51	23.80	1.8
BAL	50.88	211	eP	51	24.20	-0.8
KLB	51.18	209	eP	51	26.20	-1.0
MUN	52.24	210	eP	51	34.60	-0.6
WMQ	56.86	314	Pd	52	08.00	-0.8
			pP	52	36.00	116kmX
			ePP	54	09.00	
KIW	60.88	154	P	52	35.80	-0.6
TCW	60.89	154	eP	52	35.20	-1.2
MRW	61.09	154	P	52	36.90	-0.9
CAW	61.15	154	P	52	37.60	-0.6
WDW	61.25	154	P	52	37.70	-1.1
PGZ	61.28	152	P	52	38.30	-0.8
MTW	61.38	153	P	52	38.80	-0.9
MSZ	61.51	161	Pc	52	41.00	0.4
BLW	61.54	154	P	52	40.00	-0.8
GBA	64.63	279	Pc	53	00.10	-1.5
	0.5s	3.00nm				4.5mb
MBC	78.85	14	eP	54	23.50	-1.6
	0.5s	2.00nm				4.2mb
YKA	83.57	27	eP	54	50.40	0.4
CMB	86.28	52	eP	55	04.10	0.0
KVN	87.77	51	eP	55	11.10	-0.3
TNP	88.69	51	eP	55	15.50	-0.4
	1.0s	7.50nm				4.7mb
			e	55	47.00	
CLC	89.00	54	eP	55	17.00	-0.2
MWC	89.06	55	eP	55	17.00	-0.6
SBB	89.12	55	eP	55	18.00	0.2
PLM	90.25	56	eP	55	24.00	0.8
BAR	90.59	56	eP	55	25.00	0.4
GLA	91.97	56	eP	55	32.00	1.1
BUL	118.10	254	iPKPd	01	09.20	-0.4
BNG	123.16	284	ePKPc	01	18.80	-0.5
	0.6s	6.00nm				
LIC	143.76	300	PKP	01	54.60	-3.2X
ZOBO	148.72	100	PKP	02	07.00	0.4
	1.0s	15.00nm				
	Z 20s	0.20um				4.9Msz
			LR	32	28.00	
LPB	148.74	100	PKP	02	12.00	5.6X
CNCB	148.84	101	PKP	02	08.50	1.8
			i	02	12.50	
CCH	150.57	102	PKP	02	09.70	0.7

S.D. = 0.8 on 65 of 68 obs.

JUL 30, 1989 17h 50m 53.69± 0.65s
13.479 S ± 7.7km 150.553 E ± 8.2km
DEPTH = 33.0km (normal)
4.5mb (5 obs.)
CORAL SEA (595)

PMG	5.24	320	eP	52	10.50	-1.3
	0.5s	12.68nm				4.7mb X
CTA	7.75	211	iP	52	45.00	-2.2
			i	54	11.00	
QIS	12.61	235	eP	53	54.00	0.3
			eS	56	13.00	
RMQ	13.05	187	iPc	53	58.20	-1.3
BRS	14.00	172	eP	54	13.00	1.1
WRA	16.80	245	Pd	54	49.90	1.7
	0.5s	8.80nm				4.1mb
DZM	17.37	122	iPc	54	55.20	-0.2
ASPA	18.74	235	eP	55	15.30	3.1X
	0.5s	12.00nm				4.4mb
MTN	18.92	270	eP	55	15.10	0.6
BWA	20.94	185	eP	55	36.00	-0.2
KNA	21.20	261	eP	55	39.00	0.1
CAN	21.79	183	eP	55	45.20	0.4
WARB	25.74	237	eP	56	23.00	-0.1
			e	56	33.00	
SPA	76.61	180	e(P)	02	43.40	0.8
	1.0s	6.50nm				4.6mb
			e	02	51.30	
PMR	88.45	25	eP	03	44.00	0.5
	1.0s	3.00nm				4.6mb
FBA	90.71	22	eP	03	54.00	-0.1
	1.0s	2.50nm				4.5mb

S.D. = 1.1 on 15 of 16 obs.

% JUL 30, 1989 18h 20m 21.55± 1.02s
59.865 N ± 5.5km 6.974 E ±10.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.5 (BER).

ODD1	0.18	285	iPg	20	26.16	0.5
			iSg	20	28.45	
BLS1	0.48	189	iPg	20	31.67	0.3
			eSg	20	37.88	
BER	0.97	303	eP	20	39.71	-0.3
			eS	20	51.41	
KMY	1.10	234	iP	20	41.53	-0.6
			eS	20	53.88	
HYA	1.36	344	eP	20	47.07	0.6
			eS	21	03.58	
SUE	1.62	318	eP	20	50.14	-0.1
			eS	21	10.14	
MOL	2.73	6	eP	21	05.70	-0.5
			eS	21	37.42	

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

JUL 30, 1989 19h 14m 37.31± 0.18s
4.695 N ± 4.2km 95.907 E ± 4.1km
DEPTH = 22.8km (7 depth phases)
5.2mb (35 obs.) 4.8Msz (10 obs.)

NORTHERN SUMATERA (706)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 17C
Centroid Location:
Origin Time 19:14:42.0 0.8
Lat 4.99N 0.08 Lon 96.22E 0.09
Dep 30.7 8.8 Half-duration 1.8
Moment Tensor; Scale 10**16 Nm
Mrr=-0.26 0.44 Mtt=-7.93 0.60
Mff= 8.19 0.71 Mrt= 2.08 1.47
Mrf= 3.89 1.40 Mtf=-1.33 0.51
Principal Axes:

	Val=	Plg=	Azm=
T	9.72	21	268
N	-0.94	62	45
P	-8.78	17	171

Best Double Couple:Mo=9.3*10**16
NP1:Strike=309 Dip=62 Slip= 177
NP2: 40 88 28

IPM	5.10	91	ePd	15	52.30	-2.1
	0.4s	155.50nm				5.9mb X
			e	16	43.00	
			e	17	55.30	
SNG	5.29	62	ePn	15	51.00	-6.0X
			ePg	16	15.00	
			eSn	16	57.20	
			eSg	17	23.20	
KGM	7.86	110	eP	16	30.50	-2.7
			e	16	34.00	
			e	18	47.40	
NNT	8.71	25	ePn	16	41.20	-3.7X
			ePg	16	45.40	
			eSg	16	47.00	
BDT	12.84	13	eP	17	40.20	-1.0
			eS	21	46.30	
LOE	13.86	24	eP	17	55.00	0.2
			e	21	50.00	
CHG	14.34	12	iPc	18	01.90	0.8
	1.0s	18.25nm				4.6mb
			eS	21	06.00	
KOD	19.09	288	iP	19	05.50	4.0X
			eS	22	44.00	
QIZ	19.70	43	eP	19	11.00	2.8
N	15s	4.50um				
E	16s	6.10um				
			eS	22	47.00	
GBA	20.25	297	Pc	19	14.60	0.6
	0.7s	45.80nm				4.9mb
KKM	20.26	85	ePd	19	13.80	-0.5
SHL	21.11	350	iP	19	21.20	-1.8
			eS	23	18.00	
HYB	21.18	308	iPc	19	25.40	1.7
	1.0s	240.00nm				5.6mb
			eS	23	18.00	
KMI	21.35	17	Pd	19	27.00	1.5
Z	10s	12.90um				5.6MszX
N	12s	5.40um				
E	12s	4.30um				
			pP	19	34.00	25km
			PP	19	54.50	
			S	23	24.00	
TSM	22.10	90	ePd	19	36.00	3.1X
GYA	23.96	24	iPd	19	52.00	0.9
N	12s	2.50um				
E	12s	2.20um				
			pP	19	58.00	21km
			S	24	11.00	
			sS	24	20.00	
GZH	24.86	41	eP	20	02.60	2.9
N	11s	4.25um				
			eS	24	24.00	
LSA	25.27	350	P	20	04.30	0.2
E	15s	1.30um				
			pP	20	12.00	27km
			S	24	30.00	
			SS	25	30.00	
MKS	25.51	112	iPd	20	05.00	-0.9
POO	25.56	304	iPc	20	09.80	3.3X
	1.0s	32.00nm				4.9mb
			iS	25	03.80	
BOM	26.59	304	eP	20	19.50	3.6X
			eS	24	37.00	
CD2	27.10	15	eP	20	19.60	-1.0
Z	12s	3.90um				5.2MszX
E	12s	4.40um				
			S	24	53.00	

NDI 29.73 325 iPd 20 44.00 -0.2
eS 25 37.00
WHN 31.04 32 P 20 57.60 1.9
N 12s 3.40um
E 12s 3.20um
sP 21 09.00
S 26 00.00
XAN 31.60 21 P 21 00.00 -0.8
N 11s 1.20um
E 16s 4.90um
S 26 14.00
LZH 32.08 12 eP 21 05.00 -0.1
3.0s 401.00nm 5.8mb
Z 33s 1.90um 4.6MszX
N 13s 0.90um
E 13s 1.70um
eS 26 17.00
NANU 33.20 145 iPd 21 15.40 0.7
0.8s 109.00nm 5.8mb
NJ2 34.68 36 P 21 31.40 3.9X
N 10s 0.50um
GTA 34.74 5 P 21 27.40 -0.6
0.8s 0.05nm 2.5mb X
Z 12s 1.80um 5.0MszX
N 10s 1.10um
pP 21 33.70 22km
eS 27 02.00
MBL 34.80 138 eP 21 28.00 -0.6
SSE 35.42 39 eP 21 37.50 3.7X
1.0s 12.00nm 4.8mb
Z 20s 1.40um 4.7Msz
N 11s 1.50um
E 10s 0.70um
sP 22 04.50
eS 27 17.00
TIY 36.17 22 iPd 21 44.00 3.9X
Z 13s 3.11um 5.3MszX
E 13s 2.89um
S 27 24.00
TIA 36.94 29 Pc 21 47.20 0.6
N 13s 0.90um
E 13s 1.70um
BTO 37.93 18 eP 21 55.00 0.0
N 12s 4.70um
E 12s 2.50um
pP 22 02.00 24km
S 27 47.00
MEKA 38.06 146 eP 21 56.00 -0.1
HHC 38.65 19 eP 22 02.00 1.0
Z 14s 3.80um 5.4MszX
N 14s 3.00um
E 11s 1.20um
eS 28 00.00
KSH 39.02 335 eP 22 05.00 0.9
E 16s 2.40um
eS 28 02.00
MTN 39.09 117 eP 22 03.10 -1.8
WMQ 39.63 351 P 22 09.00 -0.1
Z 28s 2.20um 4.8MszX
S 28 08.50
BJI 39.65 25 eP 22 10.50 1.3
Z 14s 2.06um 5.1MszX
N 14s 1.35um
E 14s 0.99um
S 28 18.00
BAL 40.35 152 eP 22 17.00 2.0
MUN 41.27 153 iPc 22 24.60 2.0
DL2 41.28 31 eP 22 24.00 1.4
Z 18s 0.90um 4.7Msz
N 12s 0.70um
E 14s 1.80um
eS 28 43.00
KLB 41.67 151 eP 22 27.10 1.3
NWAO 42.54 153 eP 22 34.00 1.0
WARB 42.77 137 iPc 22 35.70 0.7
COOL 42.81 147 eP 22 36.10 0.8
0.4s 35.00nm 5.4mb
RKG 43.40 154 eP 22 45.40 5.4X
SNY 44.46 30 Pc 22 49.20 0.7
N 25s 2.20um
E 25s 2.30um
S 29 24.00
SS 32 27.00
WRA 45.02 124 Pd 22 52.00 -1.3
0.6s 12.20nm 5.0mb
KHI 45.31 315 ePd 22 55.20 -0.4
MAIO 45.90 318 iPc 23 00.40 0.2

ASPA 46.55 129 iPd 23 04.70 -0.7
0.8s 128.00nm 6.0mb
Z 21s 1.87um 5.0Msz
ePcP 24 30.00
eS 29 45.80
LR 41 57.60
CN2 46.85 29 eP 23 09.00 1.6
Z 18s 1.20um 4.9Msz
N 14s 1.00um
E 14s 1.00um
S 30 02.00
OIS 49.69 122 eP 23 28.00 -1.9
MAT 50.07 45 (P) 23 32.00 -0.6
Z 20s 1.06um 4.8Msz
eS 30 48.00
CTA 55.25 118 iPc 24 10.00 -1.5
1.0s 54.50nm 5.5mb
BHD 55.67 307 ePc 24 13.00 -1.3
TAB 55.94 314 eP 24 11.00 -5.4X
e 27 38.00
ADE 56.34 138 iPd 24 19.50 0.3
0.7s 54.79nm 5.7mb
STK 56.66 133 eP 24 21.00 -0.4
0.5s 13.00nm 5.2mb
MSL 57.67 311 eP 24 23.00 -5.5X
e 24 48.00 102kmX
CMS 59.60 131 eP 24 41.00 -1.0
RMQ 59.78 124 iPd 24 44.40 1.1
TOO 62.35 137 eP 25 02.00 1.4
KFNJ 62.37 304 Pd 25 02.10 1.3
BURJ 62.37 304 Pd 25 02.50 1.6
SALJ 62.39 304 Pd 25 02.70 1.6
DSI 62.55 303 e(P) 25 03.50 1.5
MBH 62.62 301 iPd 25 03.50 1.0
HRI 62.63 305 iP 25 03.50 0.9
BHL 62.84 306 Pc 25 05.00 1.0
S 32 00.00
BWA 62.89 133 iPc 25 05.20 0.9
BRS 63.44 124 iPc 25 08.10 0.1
CAN 63.73 133 iPc 25 09.00 -0.8
COO 63.91 127 eP 25 11.00 -0.1
e 25 18.00 23km
CNB 63.99 133 eP 25 11.00 -0.5
KVT 64.43 314 eP 25 04.00 -10.3X
BBTK 66.51 312 eP 25 26.50 -1.3
e 26 40.00 327kmX
LWI 67.40 266 eP 25 37.70 3.7X
ELL 68.03 308 iP 25 36.90 -0.6
KHL 68.64 309 eP 25 39.00 -2.2
ISK 69.54 312 iP 25 44.40 -2.1
DST 69.57 310 eP 25 45.80 -1.0
EDC 70.29 311 eP 25 49.00 -2.1
IZM 70.40 309 eP 25 51.00 -0.9
BUL 70.51 247 eP 25 56.50 3.5X
PSN 70.73 315 eP 25 53.00 -0.7
EZN 71.36 310 eP 25 56.00 -1.6
SLR 72.12 241 eP 26 06.50 3.9X
0.9s 37.82nm 5.4mb
DIM 72.33 313 eP 26 03.00 -0.3
KDZ 72.34 312 eP 26 03.00 -0.5
PVL 72.67 314 eP 26 05.00 -0.3
RZN 72.87 312 eP 26 10.00 3.2X
CMP 73.25 316 ePc 26 10.00 1.3
PGB 73.41 313 eP 26 05.00 -4.8X
DZM 73.88 114 iPc 26 12.50 -0.4
KKB 74.10 312 eP 26 13.00 -0.7
VTS 74.11 313 iP 26 13.00 -1.0
VAY 74.41 311 eP 26 14.00 -1.5
SWZ 75.03 240 iPc 26 15.00 -4.6X
0.6s 36.67nm 5.6mb
SKO 75.33 312 iP 26 19.50 -1.3
BZS 75.68 316 eP 26 21.50 -1.2
KIM 75.87 239 eP 26 27.00 2.7
SUF 76.64 334 iP 26 26.30 -1.5
0.7s 4.00nm 4.6mb
NUR 76.75 331 eP 26 32.00 3.6X
BNG 77.07 273 iPc 26 32.90 1.7
0.6s 35.00nm 5.6mb
i 26 50.40 64kmX
i 27 57.60
SPC 77.10 319 eP 26 30.60 -0.2
KRA 77.41 320 eP 26 31.70 -0.6
SOD 77.79 338 eP 26 33.00 -1.1
SRO 78.21 318 iP 26 37.40 0.7
KEV 78.40 341 eP 26 35.00 -2.4
ZST 79.05 318 iP 26 40.60 -0.8
Z 16s 0.70um 5.1MszX

e 46 46.70
PTJ 79.65 316 eP 26 44.80 0.0
KSP 79.82 321 eP 26 45.40 0.0
UPP 80.07 330 iP 26 44.10 -2.4
VBY 80.11 315 eP 26 47.70 0.6
MSZ 80.64 137 P 26 51.00 1.1
LJU 80.65 316 eP 26 50.50 0.5
CEY 80.71 315 e(P) 26 50.50 0.2
PRU 80.87 320 iP 26 51.00 0.0
Z 18s 0.50um 4.9Msz
E 18s 0.30um
VOY 81.09 316 eP 26 52.20 -0.2
BRG 81.30 321 iP 26 53.70 0.4
i 26 59.40 18km
RBL 81.34 316 Pd 26 53.40 -0.3
KHC 81.45 319 P 26 54.50 0.4
e 27 16.70 83kmX
KBA 81.52 317 eP 26 55.00 0.3
0.9s 15.30nm 5.0mb
i 27 12.90 65kmX
i 27 25.00
i 27 38.20
ARV 81.69 313 Pd 26 55.90 0.4
BHG 81.86 317 eP 26 56.10 -0.2
FVI 81.89 316 Pd 26 56.40 0.0
WET 81.91 319 iPc 26 56.80 0.3
CLL 81.92 321 eP 26 59.00 2.5X
1.7s 21.00nm 4.9mb
HFS 82.07 330 eP 26 55.90 -1.1
0.8s 4.90nm 4.6mb
Z 18s 1.06um 5.2Msz
LR 00 55.00
GRB4 82.78 319 eP 27 02.00 1.0
1.2s 28.00nm 5.3mb
Z 19s 0.10um 4.2Msz
GRF 83.01 319 eP 27 02.00 -0.2
1.2s 28.00nm 5.3mb
Z 19s 0.10um 4.2Msz
OGA 83.10 316 eP 27 03.00 0.0
NAO 83.52 331 P 27 03.60 -1.0
OSS 83.70 316 ePd 27 06.20 0.2
SAX 84.25 317 ePc 27 09.30 0.4
TMA 84.59 316 ePd 27 09.90 -0.6
FIN 85.11 314 P 27 12.05 -0.9
ROB 85.35 314 P 27 13.28 -0.9
DIX 85.61 316 ePd 27 16.20 0.5
ENR 85.67 314 P 27 17.07 1.2
STV 85.74 314 P 27 18.82 2.6X
RSP 85.75 315 P 27 15.84 -0.4
LSD 85.81 315 P 27 16.66 -0.1
LPG 86.09 315 eP 27 18.00 -0.2
0.7s 12.10nm 5.2mb
RRL 86.10 315 P 27 17.59 -0.5
BNI 86.17 315 P 27 21.70 3.3X
HAU 86.25 318 eP 27 18.30 -0.2
0.6s 9.00nm 5.2mb
DOU 87.28 320 P 27 23.60 0.2
SNF 87.45 320 P 27 24.30 0.1
LBF 87.92 317 eP 27 26.60 -0.1
0.6s 4.50nm 5.0mb
LOR 87.98 317 eP 27 26.80 -0.1
0.6s 6.30nm 5.1mb
SMF 88.04 316 eP 27 27.10 -0.1
0.6s 7.20nm 5.2mb
BGF 88.73 316 eP 27 30.90 0.4
0.9s 9.80nm 5.1mb
MAF 88.96 316 eP 27 31.90 0.3
1.0s 10.00nm 5.1mb
LPO 90.09 315 eP 27 36.80 -0.1
0.6s 5.40nm 5.0mb
LDF 90.50 319 eP 27 39.20 0.5
0.8s 11.80nm 5.2mb
FLN 90.71 319 eP 27 40.00 0.3
0.8s 18.80nm 5.4mb
MFF 90.78 317 eP 27 40.80 0.7
1.2s 23.80nm 5.4mb
ALE 92.35 357 eP 27 47.00 0.3
0.7s 6.00nm 5.1mb
MBC 96.65 8 eP 28 07.00 0.5
0.8s 6.00nm 5.1mb
FFC 118.95 12 ePKP 33 27.00 1.4
0.6s 4.00nm
ALQ 135.31 26 e(PKP)34 04.50 6.7X
Z 18s 0.34um 5.1Msz
ePP 37 26.50
eLR 21 10.00
BAO 142.91 250 ePKP 34 09.50 -2.5X

30d 19h

MRA	147.50	210	e(PKP)	34 24.00	4.9X
ATB	148.18	271	e(PKP)	34 24.30	3.6X
MGG	149.54	313	ePKP	34 31.00	8.3X
PAG	149.74	313	ePKP	34 28.00	4.9X
BBL	149.92	312	ePKP	34 30.00	6.7X
SLB	150.64	309	ePKP	34 31.82	7.4X
CYA	150.67	214	ePKP	34 31.50	7.3X
CNCB	160.14	231	ePKP	34 37.00	-0.5
			i	35 23.50	
LPB	160.39	232	PKP	34 36.00	-1.5
			e	35 31.00	
ZOBO	160.56	233	PKP	34 40.00	2.1
	1.0s		10.00nm		
			i	35 24.00	

S.D. = 1.1 on 144 of 176 obs.

& JUL 30, 1989 19h 21m 10.72s
59.980 N 152.773 W
DEPTH = 97.9km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.14	317	iP	21 24.09	0.9
			S	21 34.94	
OPT	0.40	215	eP	21 25.28	-0.6
			S	21 36.90	
RED	0.44	0	iP	21 25.59	-0.6
			S	21 37.59	
AUW	0.71	210	eP	21 27.64	-0.6
NNL	0.74	85	iP	21 28.72	0.1
XLV	0.75	134	iP	21 27.61	-1.0
			S	21 41.10	
CNPM	0.90	120	iP	21 29.36	-0.9
			S	21 44.41	
BRLK	0.98	102	eP	21 30.38	-0.7
MCNL	1.13	226	iP	21 31.75	-1.0
			S	21 47.72	
CDD	1.14	203	iP	21 31.63	-1.3
SPU	1.26	16	iP	21 33.59	-0.7
			S	21 51.56	
SHU	1.37	171	eP	21 34.59	-1.0
			S	21 52.91	
SLKM	1.38	66	eP	21 34.52	-1.3
SEW	1.67	84	eP	21 37.96	-1.4
SUA	1.79	33	iP	21 40.65	-0.5
			S	22 03.75	
SVW	1.81	310	iP	21 40.10	-1.1
PWA	2.20	39	eP	21 45.12	-1.2
WRH	5.01	24	eP	22 22.26	-2.6
HYT	7.61	77	P	22 58.00	-2.7
YKA	18.36	66	eP	25 17.20	-2.7

20 obs. ossocioted

JUL 30, 1989 19h 36m 18.17± 0.91s
5.006 S ± 3.6km 130.943 E ± 4.5km
DEPTH = 56.6 ± 9.0 km
5.3mb (17 obs.) 4.9Msz (1 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Dotо Used: GDSN
L.P.B.: 15S, 28C
Centroid Location:
Origin Time 19:36:17.3 0.8
Lot 4.59S 0.09 Lon 131.32E 0.10
Dep 62.7 8.5 Half-durotion 1.7
Moment Tensor; Scole 10**16 Nm
Mrr= 3.82 1.10 Mtt=-2 09 0.76
Mff=-1.73 1.47 Mrt= 0.46 1.19
Mrf= 2.97 1.01 Mtf=-7.24 1.52
Principol Axes:

T	Vol= 6.65	Plg=36	Azm=232
N	2.94	52	31
P	-9.60	10	134

Best Double Couple:Mo=8.1*10**16
NP1:Strike=267 Dip=57 Slip= 160
NP2: 8 73 35

AAI	3.04	295	iPd	37 07.50	2.6
			iS	37 43.50	
MTN	7.79	179	iPc	38 10.70	-0.8
JAY	10.05	76	ePc	38 43.20	0.6
KNA	10.89	191	eP	38 51.50	-2.4X
	0.3s	171.00nm			6.6mb X
			eS	40 45.00	
MKS	11.43	268	iPc	39 05.00	3.7X
MNDI	12.71	96	eP	39 17.00	-1.5
DAV	13.15	336	eP	39 20.00	-4.2X
WRA	15.21	168	Pd	39 45.10	-6.0X
	0.2s	6.10nm		4.5mb	
TSM	15.79	305	ePd	40 02.10	3.6X
LAT	16.06	97	eP	40 05.00	3.2X
PMG	16.66	106	eP	40 09.00	-0.5
	0.9s	11.76nm		4.0mb X	
QIS	17.60	152	iPd	40 17.20	-4.0X
			eS	43 20.00	
KKM	18.35	307	ePc	40 31.60	1.1
	0.8s	135.50nm		5.2mb	
ASPA	18.77	172	iPd	40 33.50	-2.1
	0.6s	292.00nm		5.7mb	
Z	22s	2.20um		4.9Msz	
		eS	43 51.30		
		LR	48 26.70		
MBL	19.34	213	iPc	40 40.80	-1.2
			iS	44 12.40	
CTA	21.14	137	iPd	41 00.90	0.3
	0.8s	119.40nm		5.3mb	
		eS	45 00.00		
RAB	21.17	89	iPc	41 01.00	0.0
WARB	21.46	191	iPc	41 04.70	0.9
NANU	22.95	219	iPc	41 18.40	-0.1
GUA	23.06	37	eP	41 19.50	-0.1
	0.8s	119.40nm		5.4mb	
BAG	23.62	334	ePc	41 25.60	0.4
	1.1s	569.62nm		6.0mb	
		eS	45 32.80		
MEKA	24.54	208	eP	41 33.70	-0.3
	0.3s	35.00nm		5.3mb	
RMQ	27.32	143	eP	42 00.00	0.3
			e	42 25.00	
			e	47 23.00	
COOL	27.34	199	iPc	41 59.00	-0.9
	0.4s	16.00nm		5.0mb	
STK	28.54	161	eP	42 10.80	0.2
			e	42 34.00	
			eS	47 37.00	
BAL	28.78	206	eP	42 12.00	-0.8
	0.3s	20.00nm		5.2mb	
KLB	29.20	204	iPc	42 16.00	-0.6
	0.3s	40.00nm		5.5mb	
CMS	29.82	154	eP	42 22.00	-0.1
			e	42 51.00	
			e	48 09.00	
MUN	30.18	205	eP	42 24.60	-0.7
BRS	30.47	139	iPc	42 28.30	0.4
NWAO	30.58	203	eP	42 28.00	-0.9
	0.4s	19.00nm		5.2mb	
ADE	30.67	167	eP	42 32.00	2.4X
IPM	31.36	287	ePd	42 35.20	-0.8
	0.8s	41.70nm		5.3mb	
QIZ	31.66	320	Pc	42 38.90	0.4
RKG	31.68	202	eP	42 43.00	4.5X
COO	32.19	145	iPc	42 43.80	0.7
			e	49 42.00	
BWA	33.46	153	eP	42 55.80	1.8
			e	49 41.00	
CAN	34.47	153	eP	43 03.70	1.0
			iPcP	45 37.90	
CNB	34.63	153	eP	43 05.00	0.9
			e	50 47.00	
TOO	35.03	160	eP	43 09.00	1.5
			e	50 15.00	
LOE	36.44	308	eP	43 20.00	0.4
SSE	37.09	346	Pd	43 24.60	-0.2
	1.2s	0.04nm		2.2mb X	
DZM	38.31	120	iPc	43 35.00	-0.4
BDT	38.52	306	iPd	43 38.00	0.9
WHN	38.75	337	iPd	43 40.00	1.2
	1.0s	0.03nm		2.1mb X	
			pP	43 52.00	44kmX
GYA	39.13	324	P	43 42.00	-0.2
			S	49 36.00	
CHG	39.42	308	ePc	43 45.30	0.7
	0.8s	39.18nm		5.3mb	
KMI	40.60	319	Pd	43 55.50	1.0
MAT	41.89	9	(P)	44 03.00	-1.6
TIA	43.00	344	Pd	44 12.80	-0.9
XAN	44.06	333	Pd	44 21.50	-0.9
CD2	44.16	326	P	44 22.70	-0.5
TIY	45.86	339	iPd	44 36.50	-0.2
	1.0s	0.04nm		2.3mb X	
BJI	46.84	344	Pd	44 44.00	-0.3
SNY	47.09	352	Pd	44 45.60	-0.6
LZH	48.12	330	eP	44 55.00	0.4
	1.5s	101.00nm		5.6mb	
			pP	45 14.00	77kmX
			eS	51 40.00	
CN2	48.83	355	eP	44 58.60	-1.2
HHC	48.97	341	eP	45 01.00	0.0
BTO	49.28	339	eP	45 03.00	-0.4
MDJ	49.41	359	eP	45 03.50	-0.7
MSZ	51.05	147	eP	45 21.00	4.3X
LSA	51.44	315	P	45 20.70	0.2
GTA	52.71	330	iPd	45 29.50	0.0
KOD	55.37	286	iP	45 48.90	-0.6
GBA	56.23	290	Pc	45 53.40	-1.9
	0.5s	7.70nm			5.0mb
HYB	56.31	295	eP	45 54.00	-2.0
NDI	61.54	306	iPc	46 30.50	-1.5
	0.6s	30.00nm			5.6mb
DRV	61.87	176	eP	46 34.00	0.4
WMQ	62.26	326	Pd	46 37.00	0.3
			S	54 55.00	
KSH	67.17	317	eP	47 09.50	0.8
QUE	70.44	304	eP	47 29.80	0.7
			e	50 15.20	
MAIO	78.17	309	eP	48 15.00	1.6
SPA	85.03	180	iPc	48 49.40	0.6
	0.9s	22.73nm			5.3mb
INK	96.67	22	eP	49 42.00	-1.1
SLR	99.18	243	eP	49 55.00	-0.5
MBC	99.47	13	eP	49 55.00	-0.6
SUF	101.19	333	ePdiff	50 03.00	-0.5
BNG	112.65	273	ePKPc	54 50.90	-0.2
	0.4s	9.00nm			
TIC	136.17	274	PKP	55 22.34	-13.7X
SLA	146.39	152	ePKPc	55 56.10	2.0X
NNA	147.62	122	ePKP	55 58.00	1.9
	0.7s	7.53nm			
ARE	149.22	134	ePKP	56 04.00	5.1X
ITB7	149.64	171	ePKP	56 03.30	4.3X
ITB	149.96	171	PKPd	56 04.60	5.2X
ITB1	150.07	170	ePKP	56 05.00	5.5X
CNCB	151.37	140	PKP	56 04.20	1.8
			i	56 11.00	
LPB	151.49	139	ePKP	56 04.00	1.6
	0.9s	60.50nm			
			i	56 10.50	
ZOBO	151.67	139	PKP	56 04.00	1.1
	1.0s	33.75nm			
Z	20s	0.18um			4.9Msz
			i	56 10.50	
			LR	33 20.00	
BMA	152.06	190	ePKP	56 05.80	3.1X
CCH	152.08	143	PKP	56 11.90	8.7X
VAO	152.09	184	ePKP	56 07.10	4.3X

S.D. = 1.0 on 72 of 91 obs.

? JUL 30, 1989 20h 28m 54.43± 6.52s
31.660 S ±32.9km 69.334 W ±22.6km
DEPTH = 97.3 ± 54.8 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS	0.10	269	iPd	29 08.30	-0.1
			S	29 19.70	
RTCB	0.49	69	iPd	29 10.30	0.1
			S	29 23.50	
RTCV	0.71	107	ePd	29 12.20	0.2
			S	29 27.00	
RTLL	0.81	66	ePd	29 12.90	0.0
			S	29 31.00	
CFA	0.93	87	iPd	29 14.00	-0.3
			S	29 30.80	
RTRS	1.49	356	iPc	29 20.80	0.1
			S	29 43.20	

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

JUL 30, 1989 20h 29m 05.31± 0.33s
7.663 S ± 4.0km 130.711 E ±10.6km
DEPTH = 33.0km (normol)
5.0mb (9 obs.) 4.6Msz (2 obs.)
TANIMBAR ISLANDS REGION (281)
CENTROID, MOMENT TENSOR (HRV)
Dotо Used: GDSN
L.P.B.: 14S, 27C
Centroid Location:
Origin Time 20:29:10.0 0.4
Lot 7.43S 0.06 Lon 130.54E 0.07
Dep 36.3 5.8 Half-durotion 1.6
Moment Tensor; Scole 10**16 Nm
Mrr= 4.62 0.56 Mtt=-2.27 0.45
Mff=-2.35 0.73 Mrt= 5.42 1.28

Mrf= 2.47 0.99 Mtf=-6.07 0.60
Principal Axes:
T Vol= 7.68 Plg=58 Azm= 12
N 2.80 24 238
P -10.48 21 138
Best Double Couple:Mo=9.1*10**16
NP1:Strike=193 Dip=32 Slip= 41
NP2: 67 70 116

AAI 4.68 327 ePc 30 15.70 0.3
MTN 5.17 175 iP 30 25.20 2.8X
KNA 8.26 193 eP 31 05.10 -0.7
0.2s 96.00nm 6.6mb X
eS 32 34.00
WB5 12.65 164 eP 32 04.10 -1.7
WRA 12.71 164 Pd 32 04.20 -2.3
0.5s 17.00nm 5.4mb
QIS 15.44 147 eP 32 43.00 0.6
eS 35 26.00
ASPA 16.20 169 iPd 32 51.40 -0.9
Z 19s 6.37um
eS 35 44.90
LR 39 33.30
PMG 16.35 97 eP 33 02.00 7.9X
MBL 17.04 217 eP 33 00.30 -2.5X
0.3s 8.00nm 4.3mb
eS 36 00.00
TSM 17.28 313 eP 33 10.00 4.3X
WARB 18.82 191 eP 33 24.70 -0.2
0.3s 6.00nm 4.4mb
eS 36 44.00
CTA 19.48 131 iPc 33 40.70 8.1X
1.0s 41.00nm 4.7mb
iS 37 20.00
KKM 19.86 313 ePc 33 39.80 3.0X
NANU 20.81 223 eP 33 46.00 -0.5
eS 37 30.00
MEKA 22.12 210 eP 34 01.50 1.8
COOL 24.78 200 eP 34 27.00 1.4
RMQ 25.39 140 eP 34 39.00 7.5X
e 34 53.00
e 39 34.00
BAG 25.94 337 eP 34 37.10 0.4
STK 26.14 159 eP 34 43.00 4.7X
e 34 45.60
KLB 26.70 205 eP 34 44.10 0.6
CMS 27.58 151 eP 34 58.00 6.5X
e 35 18.00
e 40 09.00
MUN 27.71 207 eP 34 53.00 0.3
NWAO 28.08 205 eP 34 57.00 1.0
Z 20s 1.40um 4.5Msz
N 20s 0.90um
E 20s 0.70um
ADE 28.15 166 eP 35 08.00 11.3X
BRS 28.67 136 iPd 35 08.20 6.7X
BWA 31.23 151 eP 35 29.80 5.6X
CAN 32.24 151 eP 35 37.30 4.4X
TOO 32.65 158 eP 35 41.00 4.4X
DZM 37.27 117 iPc 36 21.60 5.4X
SSE 39.60 347 eP 36 36.50 1.0
1.0s 23.00nm 4.9mb
eS 42 32.00
CHG 40.91 310 eP 36 44.50 -1.9
1.0s 13.75nm 4.6mb
WHN 41 10 338 eP 36 48.50 0.7
pP 37 01.20 47kmX
GYA 41.17 326 P 36 48.60 0.0
KMI 42.47 321 eP 36 59.00 -0.4
TSRJ 43.25 6 P 37 06.30 1.0
IIDJ 43.44 9 P 37 07.70 0.7
CHJJ 44.17 10 P 37 12.40 -0.4
MTMJ 44.51 8 P 37 16.10 0.4
MAT 44.53 9 iPc 37 15.50 -0.2
1.0s 105.00nm 5.6mb
KAKJ 44.53 11 P 37 15.40 -0.3
NIIJ 45.34 9 P 37 22.40 0.3
TIA 45.47 345 eP 37 21.70 -1.5
CD2 46.24 327 eP 37 28.00 -1.4
XAN 46.33 335 P 37 28.00 -2.1
PcS 43 00.00
TIY 48.26 341 eP 37 44.00 -1.3
Z 30s 0.94um 4.6MszX
PcS 43 07.20
BJI 49.33 345 eP 37 51.50 -1.8
S 39 19.50
SNY 49.68 353 Pc 37 57.10 1.1

LZH 50.32 332 eP 38 01.00 -0.2
1.5s 88.00nm 5.5mb
Z 30s 0.60um 4.4MszX
HHC 51.39 341 eP 38 08.60 -0.6
CN2 51.44 355 eP 38 09.50 0.1
Z 20s 0.60um 4.6Msz
eS 45 26.00
BTO 51.67 340 eP 38 10.00 -1.3
MDJ 52.05 359 eP 38 15.00 1.1
ASAJ 52.66 11 eP 38 19.50 0.9
GTA 54.89 331 eP 38 33.80 -1.4
WMQ 64.33 327 P 39 39.60 -0.5
KSH 68.94 317 eP 40 11.50 1.9
MAIO 79.64 309 eP 41 13.00 1.6
SUF 103.44 333 iPdiff43 04.30 0.8
0.7s 3.60nm 5.3mb
SLL 109.93 332 ePdiff43 33.10 0.6
0.5s 0.70nm
NAO 110.94 333 Pdiff 43 37.30 0.3
SLA 144.14 154 ePKPd 48 41.00 0.6
NNA 146.36 125 ePKP 48 49.80 5.6X
0.8s 9.70nm
ARE 147.48 138 ePKP 48 54.00 7.7X
BMA 149.41 189 e(PKP)48 53.00 4.1X
e 49 01.90
VAO 149.44 184 ePKP 48 54.40 5.4X
CNCB 149.45 143 ePKP 48 56.00 6.3X
i 48 59.40
LPB 149.60 142 PKP 48 52.00 2.2
1.0s 90.00nm
i 49 00.00
ZOBO 149.78 142 PKP 48 55.00 4.8X
1.1s 93.39nm
i 48 59.30
S.D. = 1.2 on 47 of 68 obs.

? JUL 30, 1989 21h 02m 46.33± 3.25s
5.640 S ±45.0km 144.695 E ±10.6km
DEPTH = 109.4 ± 15.9 km
4.1mb (2 obs.)
PAPUA NEW GUINEA (202)

MNDI 1.15 244 eP 03 10.00 0.4
eS 03 46.00
LAT 2.50 114 eP 03 26.00 -0.4
PMG 4.47 147 eP 03 53.00 0.0
WB5 17.36 214 eP 06 48.40 5.2X
WRA 17.42 214 Pc 06 43.90 -0.1
0.5s 4.60nm 4.0mb
ASPA 20.72 209 eP 07 19.10 -0.9
1.0s 12.00nm 4.2mb
BRS 22.96 161 iPd 07 43.10 1.1
S.D. = 1.1 on 6 of 7 obs.

? JUL 30, 1989 21h 06m 21.96± 5.78s
31.558 S ±28.0km 69.424 W ±23.8km
DEPTH = 88.1 ± 51.1 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTBS 0.11 193 iPd 06 34.80 0.0
S 06 46.20
RTCB 0.54 83 ePd 06 37.20 0.0
S 06 51.10
RTCV 0.81 112 ePd 06 39.80 0.0
S 06 55.70
RTLL 0.85 75 iPc 06 40.10 0.0
CFA 1.01 93 iPc 06 42.00 0.0
S 06 59.50
RTRS 1.38 359 iPc 06 46.50 0.0
S 07 07.80
S.D. = 0.0 on 6 of 6 obs.

JUL 30, 1989 21h 09m 45.89± 0.32s
7.661 S ± 3.7km 130.652 E ± 8.8km
DEPTH = 33.0km (normal)
4.8mb (12 obs.)
TANIMBAR ISLANDS REGION (281)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 25C
Centroid Location:
Origin Time 21:09:51.3 0.6
Lat 7.38S 0.08 Lon 130.59E 0.09
Dep 52.3 9.1 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 3.18 0.38 Mtt=-1.94 0.45
Mff=-1.24 0.67 Mrt= 2.50 0.69

Mrf= 2.89 0.74 Mtf=-3.14 0.44
Principal Axes:
T Vol= 4.76 Plg=67 Azm=298
N 1.51 7 44
P -6.28 22 137
Best Double Couple:Mo=5.5*10**16
NP1:Strike=240 Dip=24 Slip= 107
NP2: 41 67 83

AAI 4.64 328 eP 10 56.50 0.9
MTN 5.17 175 iPc 11 06.00 2.9X
KNA 8.25 193 eP 11 46.10 -0.1
eS 13 15.00
MKS 11.37 282 ePc 12 14.90 -14.3X
WB5 12.67 164 eP 12 45.10 -1.5
WRA 12.72 164 Pc 12 45.80 -1.6
0.5s 27.70nm 5.6mb
QIS 15.47 147 iPc 13 23.30 -0.2
e 13 44.00
eS 16 05.00
DAV 15.50 341 eP 13 13.00 -10.8X
ASPA 16.22 169 iPd 13 32.20 -0.8X
0.8s 182.00nm 5.3mb
Z 20s 3.49um 4.9Msz
eS 16 21.40
LR 20 03.30
PMG 16.41 97 eP 13 42.00 6.5X
MBL 17.01 217 iPc 13 41.00 -2.0
0.4s 25.00nm 4.7mb
eS 16 37.00
TSM 17.23 313 ePc 13 49.70 3.9X
WARB 18.81 191 iPd 14 05.00 -0.3
0.3s 21.00nm 4.8mb
eS 17 23.00
CTA 19.52 131 iPc 14 19.00 5.3X
0.6s 20.67nm 4.6mb
i 14 33.90
iS 18 01.00
KKM 19.82 313 ePd 14 18.70 1.8
NANU 20.77 223 eP 14 27.50 0.8
eS 18 06.00
MEKA 22.09 210 eP 14 41.30 1.3
eS 18 35.00
COOL 24.76 200 eP 15 09.00 3.0X
RMQ 25.43 140 eP 15 21.00 8.6X
e 15 30.00
e 20 22.00
BAG 25.91 337 eP 15 16.00 -1.1
STK 26.17 159 eP 15 23.00 3.9X
e 15 26.00
BAL 26.30 208 eP 15 24.50 4.1X
KLB 26.68 205 eP 15 26.00 2.2
0.3s 6.00nm 4.7mb
CMS 27.61 151 eP 15 42.00 9.6X
e 16 05.00
MUN 27.68 207 eP 15 35.00 2.0
NWAO 28.05 205 eP 15 37.50 1.1
ADE 28.17 166 e(P) 15 41.00 3.6X
BRS 28.71 136 iPc 15 48.80 6.4X
BWA 31.26 151 iPd 16 11.00 6.0X
CAN 32.27 151 eP 16 18.90 5.1X
TOO 32.68 158 eP 16 23.00 5.7X
LOE 37.91 311 eP 17 01.00 -1.1
SSE 39.59 347 Pd 17 16.50 0.6
0.8s 14.00nm 4.8mb
eS 23 16.00
BDT 39.89 309 eP 17 17.70 -0.9
CHG 40.86 310 ePc 17 25.70 -0.9
1.0s 22.25nm 4.9mb
WHN 41.08 338 P 17 29.00 0.8
pP 17 39.70 37kmX
GYA 41.14 326 P 17 28.60 -0.3
KMI 42.43 321 eP 17 40.00 0.3
IIDJ 43.45 9 P 17 48.50 0.9
CHJJ 44.18 10 P 17 53.60 0.2
MTMJ 44.52 8 P 17 57.10 0.8
MAT 44.54 9 iPc 17 56.60 0.2
0.9s 66.39nm 5.5mb
KAKJ 44.54 11 P 17 56.70 0.4
NIIJ 45.34 9 P 18 03.50 0.8
TIA 45.45 345 eP 18 03.30 -0.4
CD2 46.20 327 iPd 18 08.80 -0.9
XAN 46.31 335 Pc 18 09.20 -1.3
TIY 48.24 341 Pd 18 25.40 -0.3
BJI 49.31 345 P 18 33.50 -0.3
SNY 49.67 353 Pc 18 36.70 0.2
LZH 50.29 332 eP 18 41.00 -0.6

30d 21h

	1.5s	0.08nm				2.5mb X
HHC	51.37	341	eP	18	49.10	-0.5
CN2	51.44	355	Pc	18	49.70	-0.2
BTO	51.65	340	eP	18	51.40	-0.4
MDJ	52.04	359	eP	18	55.00	0.5
GTA	54.86	331	iPc	19	15.00	-0.6
GBA	56.90	292	Pd	19	29.30	-1.2
	0.8s	2.50nm				4.3mb
NDI	62.90	308	eP	20	09.50	-1.9
WMO	64.30	327	P	20	20.50	0.0
MAIO	79.60	309	iPc	21	53.00	1.3
	0.6s	7.01nm				4.8mb
SPA	82.39	180	e(P)	22	10.00	4.1X
	1.0s	10.00nm				4.8mb
SUF	103.41	333	ePdiff	23	44.00	0.0
HFS	109.85	332	ePdiff	24	12.60	-0.1
	0.4s	0.40nm				
NAO	110.91	333	Pdiff	24	17.10	-0.4
BNG	112.46	272	ePKPd	28	22.20	0.8
	0.6s	3.00nm				
LPG	118.88	318	ePKP	28	35.40	2.2X
	0.6s	2.70nm				
LBF	120.12	321	ePKP	28	38.30	3.1X
	1.2s	8.90nm				
SSF	120.39	321	ePKP	28	37.90	2.3X
BGF	121.01	320	ePKP	28	39.40	2.6X
	0.6s	5.40nm				
ALQ	121.18	54	e(PKP)	28	41.50	3.7X
TCF	121.52	320	ePKP	28	39.30	1.5
MFF	122.85	322	ePKP	28	42.60	2.3X
SLA	144.17	154	ePKPc	29	23.80	2.8X
NNA	146.41	125	iPKP	29	31.00	6.1X
	0.8s	5.97nm				
ARE	147.53	138	e(PKP)	29	32.00	5.1X
BMA	149.41	189	ePKP	29	29.30	-0.2X
			e	29	50.30	
VAO	149.44	184	ePKP	29	38.00	8.5X
CNCB	149.49	143	PKP	29	36.00	5.6X
			i	29	40.80	
LPB	149.63	142	ePKP	29	36.00	5.6X
	1.0s	120.00nm				
			i	29	41.00	
ZOBO	149.82	142	ePKP	29	25.00	-5.9X
	1.5s	206.99nm				
			i	29	40.80	
CCH	150.09	146	PKP	29	41.90	11.0X
UPA	150.11	85	iPKPd	29	39.80	9.2X
	S.D. = 1.0	on	48 of	82	obs.	

? JUL 30, 1989 22h 56m 20.38± 2.35s
0.644 S ±28.8km 150.219 E ±14.3km
DEPTH = 33.0km (normol)
4.2mb (1 obs.)
NEW IRELAND REGION (190)

PMG	9.23	199	eP	58	34.00	-0.2
MTN	22.47	237	eP	01	18.60	0.3
WB5	24.62	218	iPc	01	39.20	-0.1
WRA	24.69	218	Pc	01	39.50	-0.4
	0.5s	4.00nm				4.2mb
RMQ	25.73	183	eP	01	50.00	0.3
DZM	26.52	145	iPd	01	56.60	-0.5
BRS	26.71	175	iPd	01	59.50	0.8
ASPA	27.83	213	eP	02	08.80	-0.1
	S.D. = 0.5	on	8 of	8	obs.	

• JUL 30, 1989 23h 44m 54.03± 2.11s
43.280 N ±15.2km 19.905 E ±10.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

PLE	0.38	278	ePg	45	01.00	-0.8
			eSg	45	12.00	
IVA	0.41	181	ePg	45	01.70	-0.7
			eSg	45	13.00	
PVY	0.69	176	ePg	45	05.50	-2.2
			eSg	45	20.30	
NKY	0.81	235	ePg	45	10.50	0.6
			eSg	45	28.50	
BCI	0.92	173	ePg	45	13.10	1.5
TTG	0.97	209	ePg	45	13.50	1.0
			iSg	45	33.00	
BRY	1.07	250	ePg	45	14.50	0.3
			eSg	45	36.00	
PUK	1.24	180	ePg	45	16.70	-0.3
SDA	1.30	194	ePg	45	21.10	3.1X
PHP	1.64	166	ePg	45	29.40	6.4X
SKO	1.73	139	ePn	45	18.10	-6.2X
BZS	2.64	27	iPc	45	19.50	-17.8X
VAY	2.78	134	ePn	45	40.00	0.6
	S.D. = 1.3	on	9 of	13	obs.	

? JUL 31, 1989 00h 29m 23.67± 6.98s
9.165 N ±48.1km 84.049 W ±14.4km
DEPTH = 10.0km (geophysicist)
COSTA RICA (78)
MD 3.1 (SJR).

BUS	0.48	36	iP	29	33.00	-0.6
LCR2	0.58	5	iP	29	36.00	0.5
SJS	0.77	360	iP	29	39.10	0.3
SRA	0.99	337	iPd	29	42.10	-0.5
LIO	1.30	50	iP	29	48.00	0.2
	S.D. = 0.7	on	5 of	5	obs.	

• JUL 31, 1989 01h 14m 40.46± 1.18s
54.774 N ±18.0km 163.929 W ±12.2km
DEPTH = 147.7 ± 7.9 km
3.9mb (1 obs.)
UNIMAK ISLAND REGION (10)

SNKA	0.74	114	iPd	15	03.39	0.2
			eS	15	17.36	
BALA	0.78	57	ePd	15	03.60	0.1
DRRA	0.96	80	iPd	15	04.57	-0.4
DLG	1.26	72	iPd	15	07.71	0.0
			eS	15	25.85	
PS4	1.32	63	iPd	15	08.39	0.1
PVV	1.37	63	ePd	15	08.81	0.0
SOF	1.99	76	eP	15	15.63	-0.1
			eS	15	39.96	
SASA	2.05	73	ePc	15	16.40	0.0
			eS	15	40.61	
SGB	2.14	67	ePd	15	17.32	-0.2
			eS	15	42.67	
NGI	2.24	82	ePd	15	18.91	0.2
			eS	15	45.02	
CNBA	2.51	87	ePd	15	21.81	-0.2
BKJ	2.55	80	eP	15	22.74	0.2
			eS	15	51.25	
IVF	2.75	64	ePd	15	25.29	0.2
			eS	15	55.93	
HFS	65.43	1	eP	25	08.60	0.0
	0.4s	0.60nm				3.9mb
	S.D. = 0.2	on	14 of	14	obs.	

? JUL 31, 1989 01h 24m 13.93± 1.08s
37.042 N ±11.0km 27.927 E ±11.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.30	72	iPg	24	19.50	-0.7
IZM	1.45	339	iPn	24	39.80	-0.5
KAP	1.61	202	ePb	24	42.50	0.1
			eSb	25	03.50	
ELL	1.62	100	ePn	24	47.00	4.3X
KHL	1.80	44	iPn	24	46.40	1.1
BCK	2.17	78	ePn	24	54.00	3.4X
	S.D. = 1.4	on	4 of	6	obs.	

% JUL 31, 1989 03h 03m 53.17± 0.74s
37.707 N ± 7.2km 29.182 E ± 7.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.67	24	iPg	04	05.40	-1.2
			iSg	04	17.90	
YER	0.92	232	iPn	04	10.30	-0.4
ELL	1.12	149	iPn	04	14.40	0.2
BCK	1.14	102	ePn	04	14.60	0.0
ALT	1.53	28	ePn	04	21.70	1.1
IZM	1.66	295	ePn	04	23.00	0.4
	S.D. = 1.0	on	6 of	6	obs.	

• JUL 31, 1989 04h 37m 53.02± 2.00s
36.685 N ± 9.1km 27.040 E ±10.4km
DEPTH = 147.9 ± 29.0 km
DODECANESE ISLANDS (369)
MD 3.6 (ATH).

YER	1.09	65	iPn	38	18.70	0.0
KAP	1.14	174	ePb	38	19.00	-0.1
IZM	1.72	6	iPn	38	25.30	0.1
NPS	1.83	220	ePn	38	26.50	0.0
			eSn	38	50.00	
ELL	2.31	88	iPn	38	32.40	0.2
KHL	2.56	50	iPn	38	35.40	0.0
BCK	2.94	74	ePn	38	40.10	-0.1
DST	3.17	23	ePn	38	43.00	-0.1
	S.D. = 0.1	on	8 of	8	obs.	

JUL 31, 1989 04h 48m 32.86± 1.37s
8.802 S ± 6.3km 119.160 E ±11.0km
DEPTH = 104.6 ± 14.8 km
4.7mb (3 obs.)
FLORES ISLAND REGION (286)

MKS	3.57	5	iPd	49	30.20	2.9
			iS	50	08.30	
KUPT	4.59	107	ePc	49	47.00	5.8X
			eS	50	36.50	
KNA	11.65	127	eP	51	15.40	-1.7
	0.3s	23.00nm				5.4mb X
			eS	53	20.00	
MBL	12.30	177	eP	51	23.50	-2.2
	0.3s	19.00nm				5.3mb X
			eS	53	26.00	
MTN	12.42	110	eP	51	26.00	-1.3
			eS	53	32.00	
TSM	12.98	355	eP	51	43.00	8.4X
NANU	14.12	194	iPc	51	48.50	-0.8
			eS	54	15.00	
MEKA	17.73	182	iPc	52	35.60	1.1
	0.3s	20.00nm				4.8mb
			iS	55	38.70	
WB5	18.38	128	eP	52	41.70	-0.7
			eS	55	58.90	
WRA	18.39	129	Pd	52	41.60	-1.0
	0.5s	7.80nm				4.2mb
WARB	18.69	159	eP	52	46.30	0.4
			eS	56	03.00	
ASPA	20.43	138	iPd	53	04.30	0.3
	0.8s	35.00nm				4.8mb
Z	19s	0.25um				3.6MszX
			iS	56	44.50	
			LR	01	21.80	
COOL	22.05	175	iPc	53	20.10	0.0
			eS	57	19.00	
KLB	22.71	183	eP	53	27.40	0.9
			eS	57	33.00	
QIS	22.94	123	eP	53	30.00	1.2
			e	53	55.00	
			eS	57	49.00	
MUN	23.22	186	eP	53	39.70	8.2X
			iS	57	44.50	
NWAO	24.07	184	eP	53	41.00	1.3
			eS	58	07.00	
CTA	28.49	116	iPc	54	21.20	0.8
			i	54	43.90	
STK	31.00	141	eP	54	43.00	0.4
BRS	36.73	125	iPc	55	34.10	2.2
GYA	37.09	341	P	55	35.40	0.5
NJ2	40.62	360	Pd	56	04.80	0.8
CD2	42.16	340	eP	56	16.20	-0.5
SHL	43.26	323	iP	56	25.80	-0.1
XAN	43.70	348	P	56	28.50	-0.7
TIY	46.70	353	eP	56	52.00	-1.0
BJI	48.67	357	eP	57	07.00	-1.2
GTA	51.22	341	eP	57	27.20	-0.7
CN2	52.66	6	eP	57	36.00	-2.4X
MDJ	54.00	9	eP	57	46.30	-1.9
WMO	59.65	334	P	58	27.00	-1.3
ITR	151.66	233	ePKP	08	15.80	4.9X
CCH	153.46	169	PKP	08	29.20	15.5X
CNCB	153.59	164	PKP	08	24.90	10.7X
LPB	153.82	164	ePKP	08	22.00	7.6X
ZOBO	154.07	164	ePKP	08	17.00	2.1
	S.D. = 1.4	on	28 of	36	obs.	

? JUL 31, 1989 05h 08m 04.81± 5.45s
14.919 N ±23.9km 60.674 W ±65.3km
DEPTH = 63.1 ± 28.1 km
WINDWARD ISLANDS (95)

CRM	0.29	235	iPc	08	15.31	0.0
			S	08	23.00	
MVM	0.42	211	iPc	08	16.36	-0.1
			S	08	25.80	
FDF	0.50	248	iPc	08	17.19	0.0
	0.1s	1.85nm				
			S	08	27.20	

BBL	0.98	308	eP	08	23.00	0.0
			S	08	36.80	
SLB	1.14	198	eP	08	25.21	0.0
			eS	08	40.10	
S.D. = 0.1			on	5 of	5 obs.	

& JUL 31, 1989 05h 12m 15.30s
37.200 N 122.000 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<8RK>. ML 3.0 (BRK). Felt (IV) at Holy City and Redwood Estates. Felt (III) at Mount Hermon.

ARN	0.40	68	iPd	12	24.00	0.6
SAO	0.62	134	iPd	12	26.40	-1.4
			e(S)	12	37.75	
NWRM	1.44	331	e(Pn)	12	42.20	0.3
			ePg	12	43.30	
			eLg	13	01.80	
CMB	1.53	56	eP	12	42.50	-0.7
PHAM	1.88	136	eP	12	46.40	-1.8
PKEM	1.90	126	e(P)	12	41.00	-7.5
ORV	2.38	9	e(P)	12	56.10	0.6
BCH	2.54	142	e(P)	12	55.40	-2.4
KVN	3.59	58	eP	13	12.00	-0.8
9 obs. associated						

? JUL 31, 1989 05h 16m 15.09± 4.82s
31.555 S ±22.2km 68.920 W ±14.0km
DEPTH = 93.0 ± 45.9 km
SAN JUAN PROVINCE, ARGENTINA (137)

RTCB	0.12	57	ePc	16	28.80	0.0
			S	16	39.70	
RTLL	0.45	60	iPc	16	30.00	0.0
			S	16	42.30	
RTCV	0.45	133	iPc	16	30.10	0.1
			S	16	42.70	
RTBS	0.47	257	ePc	16	30.00	-0.1
			S	16	42.40	
CFA	0.58	95	iPd	16	31.00	-0.1
			S	16	44.00	
RTRS	1.46	341	ePc	16	40.80	0.0
S.D. = 0.1			on	6 of	6 obs.	

* JUL 31, 1989 06h 40m 29.76± 1.66s
50.985 N ±18.3km 15.913 E ± 9.2km
DEPTH = 10.0km (geophysicist)
CZECHOSLOVAKIA (547)

KSP	0.28	120	iP	40	35.30	-0.3
	0.5s		77.00nm			
			iS	40	43.90	
BRG	1.25	266	iPg	40	51.40	-1.6
			iSg	41	10.80	
PRU	1.33	222	Pn	40	55.00	0.7
			Pg	40	56.20	
			Sn	41	13.00	
			Sg	41	21.00	
CLL	1.86	281	ePg	41	03.00	1.1
			eSg	41	26.00	
KHC	2.39	220	ePn	41	09.60	0.0
			Pg	41	15.00	
			Sn	41	43.50	
			Sg	41	52.30	
MOX	2.75	265	ePg	41	19.00	4.3X
			iSg	41	59.00	
S.D. = 1.5			on	5 of	6 obs.	

JUL 31, 1989 07h 00m 19.90± 0.73s
54.046 N ± 7.2km 164.124 W ± 4.5km
DEPTH = 57.5 ± 5.2 km
4.8mb (23 obs.)
UNIMAK ISLAND REGION (10)
Felt (III) at False Pass.

SNKA	0.90	61	ePd	00	35.15	-1.5
BALA	1.39	34	ePd	00	45.40	2.1
DRRA	1.39	50	ePc	00	42.99	-0.3
PS4	1.85	44	eP	00	50.77	1.0
PVV	1.90	45	eP	00	51.29	0.9
			eS	01	14.70	
SQF	2.38	59	eP	00	57.69	0.5
			eS	01	25.05	
SASA	2.47	57	eP	00	58.60	0.2
			eS	01	27.61	
SDN	2.47	57	eP	00	59.20	0.7
NGI	2.56	66	eP	00	59.00	-0.7
			eS	01	28.41	
SGB	2.60	53	eP	01	00.21	-0.1
			eS	01	30.85	
CNBA	2.76	72	eP	01	01.64	-0.9
			eS	01	32.38	
BKJ	2.88	65	eP	01	03.52	-0.8
IVF	3.23	53	ePc	01	09.20	-0.1
KDC	7.52	56	eP	02	06.70	-2.5X
ADK	7.89	259	eP	02	13.60	-0.8
SVW	8.42	29	ePd	02	22.70	0.9
TTA	9.86	22	eP	02	41.10	-0.4
PMS	10.61	41	eP	02	49.00	-2.7X
	1.1s		65.60nm		5.6mb	
Z	20s		4.50um		4.5Msz	
PMR	10.98	41	eP	02	54.20	-2.4X
TOA	12.43	42	eP	03	13.60	-2.5X
FBA	13.63	31	eP	03	29.50	-2.2X
YKA	26.74	52	eP	05	51.30	-4.1X
YKA	26.74	52	eP	05	58.40	3.0X
MBC	27.83	21	eP	06	04.50	-0.6
EDM	29.60	71	eP	06	19.50	-1.8
KVN	34.35	97	eP	07	04.20	1.0
			e	07	15.20	
FFC	35.15	63	eP	07	10.00	0.5
	0.8s		6.00nm		4.6mb	
TNP	35.51	97	eP	07	13.50	0.4
			e	07	25.00	
ALE	38.30	12	eP	07	35.50	-0.2
PLM	39.02	102	eP	07	44.50	2.0
RSSD	39.46	79	eP	07	45.90	-0.2
GLA	40.41	101	eP	07	54.30	0.5
GOL	41.42	85	eP	08	02.90	0.6
GLD	41.48	85	e(P)	08	04.00	1.3
ALQ	43.98	92	e(P)	08	27.50	4.4X
			ePcP	10	08.90	
CN2	45.57	287	eP	08	34.40	-1.0
FRB	45.75	38	eP	08	36.00	-0.5
	0.6s		32.00nm		5.4mb	
DAG	47.61	10	iPd	08	50.60	-0.6
	1.0s		13.00nm		4.9mb	
SCH	52.05	47	eP	09	25.00	-0.4
GAC	54.13	60	eP	09	39.50	-1.4
PTN	55.17	61	eP	09	47.50	-1.0
HBVT	56.30	60	eP	09	55.60	-1.0
			e	10	06.20	
CBM	56.92	54	e(P)	09	59.80	-1.2
			ePcP	10	45.30	
TIY	56.95	290	eP	10	01.50	0.0
BNH	57.05	58	e(P)	10	01.00	-1.0
MIM	57.68	56	e(P)	10	05.30	-1.0
EMM	58.80	56	e(P)	10	13.20	-1.0
SUF	63.30	355	iP	10	43.30	-1.0
	0.4s		2.20nm		4.6mb	
NAO	65.41	3	P	10	56.90	-1.1
NUR	65.58	355	eP	10	58.00	-1.1
HFS	66.16	1	eP	11	01.60	-1.2
	0.6s		19.70nm		5.3mb	
CD2	66.79	291	eP	11	07.20	-0.1
GYA	68.58	286	P	11	19.00	0.3
EKA	69.86	11	P	11	27.00	1.1
	0.7s		5.10nm		4.6mb	
KHC	77.18	2	eP	12	09.50	0.9
LPF	77.29	12	eP	12	09.80	0.6
	0.5s		4.90nm		4.8mb	
HAU	78.00	7	eP	12	13.70	0.5
	0.6s		5.40nm		4.7mb	
LOR	78.55	8	iPc	12	16.70	0.5
	0.7s		8.80nm		4.8mb	
SSF	78.72	9	iPc	12	17.80	0.7
	0.6s		10.20nm		4.9mb	
MFF	78.81	11	eP	12	18.20	0.6
	0.7s		11.90nm		4.9mb	
LBF	78.84	8	iPc	12	18.20	0.4
	0.6s		5.70nm		4.7mb	
AVF	78.98	9	iPc	12	19.00	0.5
	0.6s		7.20nm		4.8mb	
BGF	79.16	9	eP	12	19.40	-0.1
	0.6s		4.50nm		4.6mb	
SMF	79.16	8	iPc	12	20.20	0.7
	0.6s		8.10nm		4.8mb	
LSF	79.34	10	iPc	12	21.00	0.5
	0.6s		10.20nm		4.9mb	
TCF	79.37	10	iPc	12	21.20	0.5
	0.8s		4.00nm		4.4mb	
MAF	79.47	9	eP	12	21.90	0.7
	0.6s		4.50nm		4.6mb	
LFF	80.55	11	eP	12	26.90	0.0
	0.6s		7.20nm		4.8mb	
LPO	80.85	11	eP	12	28.20	-0.3
	0.6s		3.60nm		4.5mb	
SKO	84.24	356	eP	12	47.50	1.5
MTN	86.16	242	iPd	12	56.70	0.9
	0.6s		16.00nm		5.4mb	
			e	13	08.60	
HYB	91.04	302	eP	13	19.50	0.3
GBA	94.84	301	Pd	13	36.70	0.1
	0.6s		5.50nm		5.2mb	
SPA	143.86	180	e(PKP)	19	47.00	-1.8X
	0.9s		7.73nm			
BUL	144.78	339	iPKPd	19	51.10	-0.7
	0.7s		32.53nm			
SLR	150.25	337	iPKPc	20	06.50	6.1X
	1.9s		152.63nm			
KSR	150.68	339	ePKP	20	06.50	5.4X
S.D. = 0.9			on	66 of	77 obs.	

? JUL 31, 1989 07h 12m 31.11± 7.16s
4.746 S ±65.9km 139.234 E ±30.4km
DEPTH = 33.0km (normal)
4.0mb (2 obs.)
WEST IRIAN (201)

MTN	11.35	224	ePd	15	13.60	-0.5
			eS	17	16.00	
KNA	15.01	222	eP	16	02.60	0.0
QIS	15.72	179	eP	16	11.00	-0.9
			eS	19	05.00	
WB5	15.77	197	eP	16	13.40	0.9
			eS	19	05.20	
WRA	15.84	197	P	16	18.00	4.6X
	0.7s		5.30nm		3.8mb	
CTA	16.71	156	eP	16	41.00	16.5X
ASPA	19.50	195	iPd	16	59.40	0.7
	1.2s		14.00nm		4.1mb	
			e	17	14.60	
			eS	20	34.60	
WARB	24.49	208	eP	17	48.50	-0.1
S.D. = 0.9			on	6 of	8 obs.	

% JUL 31, 1989 07h 45m 39.91± 0.83s
37.923 N ± 7.0km 29.381 E ± 8.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.41	16	iPg	45	47.80	-0.6
			iSg	45	55.30	
BCK	1.06	115	iPn	46	00.50	0.5
YER	1.18	228	iPn	46	00.40	-1.5
ELL	1.25	160	ePn	46	03.40	0.3
ALT	1.27	27	iPn	46	03.20	-0.3
IZM	1.74	286	ePn	46	12.00	1.7
DST	1.78	341	ePn	46	13.50	2.5X
S.D. = 1.4			on	6 of	7 obs.	

% JUL 31, 1989 08h 20m 12.32± 0.80s
10.909 N ± 6.7km 61.523 W ±15.3km
DEPTH = 33.0km (normal)
TRINIDAD (98)
MD 3.1 (TRN).

TRN	0.28	155	eP	20	20.53	0.7
			eS	20	25.66	
TCE	0.31	227	eP	20	20.62	0.4
			eS	20	24.97	
TPP	0.59	173	eP	20	23.08	-1.1
			eS	20	27.28	
TBH	0.62	133	eP	20	24.83	0.3
			eS	20	35.33	
SVB	2.36	6	eP	20	48.12	-1.5
			eS	21	20.85	
SVV	2.41	7	eP	20	52.01	1.7
			eS	21	22.63	
SLB	2.94	9	eP	20	57.53	-0.3
			eS	21	31.35	
S.D. = 1.3			on	7 of	7 obs.	

% JUL 31, 1989 09h 41m 39.48± 0.51s
47.249 N ± 4.7km 0.164 E ± 5.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 3.4 (LDG).

31d 09h

MFF	0.68	198	Pg	41 52.90	-0.1
			Sg	42 01.30	
LPF	1.13	314	Pn	42 00.30	-0.3
			Sg	42 17.00	
LDF	1.36	352	Pn	42 04.80	0.4
			Pg	42 05.90	
			Sg	42 22.90	
LSF	1.37	136	Pg	42 05.90	1.3
			Sg	42 22.20	
FLN	1.58	344	Pn	42 07.80	0.3
			Pg	42 09.80	
			Sg	42 30.60	
TCF	1.70	124	Pn	42 10.10	0.7
			Pg	42 12.40	
			Sn	42 29.70	
			Sg	42 32.20	
MAF	1.95	121	Pn	42 13.30	0.4
			Pg	42 17.00	
			Sg	42 41.00	
BGF	1.96	110	Pn	42 13.80	0.6
			Pg	42 17.60	
			Sg	42 41.50	
RJF	2.16	154	Pg	42 19.30	3.3X
			Sg	42 46.70	
AVF	2.23	101	Pn	42 17.30	0.3
			Sg	42 49.80	
SSF	2.29	93	Pn	42 17.80	-0.1
			Pg	42 23.70	
			Sg	42 50.40	
LFF	2.34	170	Pn	42 18.20	-0.5
			Pg	42 23.30	
			Sg	42 54.20	
LOR	2.52	88	Pn	42 21.00	-0.1
			Pg	42 27.40	
			Sg	42 58.90	
SMF	2.59	102	Pn	42 22.20	0.1
			Sg	42 59.80	
LBF	2.62	94	Pn	42 22.50	-0.1
			Pg	42 29.50	
			Sg	43 01.00	
LPO	2.66	164	Pg	42 29.80	6.6X
			Sg	43 03.70	
CAF	2.67	150	Pn	42 23.10	-0.3
			Pg	42 29.40	
			Sg	43 04.50	
DOU	4.09	44	iPnd	42 43.10	-0.3
			iPg	43 00.40	
			Sn	43 31.70	
HAU	4.25	77	Pg	42 58.10	12.4X
			Sg	43 53.00	
LPG	4.88	109	Pn	42 52.50	-2.5

S.D. = 0.8 on 17 of 20 obs.

JUL 31, 1989 09h 43m 23.42± 1.78s
3.554 N ± 6.5km 126.653 E ±11.0km
DEPTH = 94.5 ± 18.2 km
4.5mb (6 obs.)
TALAUD ISLANDS (263)

MNI	2.77	221	ePc	44 07.50	0.8
			eS	44 50.00	
MTN	16.89	165	eP	47 11.70	-3.7X
			eS	50 25.00	
KNA	19.29	174	eP	47 41.90	-1.7
GUMO	20.56	60	eP	47 56.00	-0.8
WB5	24.49	162	eP	48 35.00	-0.3
			eS	52 57.00	
WRA	24.54	162	Pd	48 34.80	-1.0
	0.8s		24.00nm	4.7mb	
MBL	25.45	195	eP	48 45.00	0.7
	0.4s		3.00nm	4.1mb	
QIS	27.12	153	eP	48 59.00	-0.6
SSE	27.88	350	eP	49 06.50	0.3
			sP	49 20.50	
ASPA	27.96	166	eP	49 06.00	-1.2
LOE	28.05	301	eP	49 07.50	-0.5
WAR8	29.56	180	eP	49 22.00	0.5
	0.3s		4.00nm	4.6mb	
MEKA	31.00	194	iPc	49 36.00	1.8
	0.4s		4.00nm	4.5mb	
CHG	31.05	301	eP	49 34.00	-0.7
TIA	33.67	346	eP	49 57.40	0.1
XAN	34.54	334	P	50 03.00	-1.8
CD2	34.74	324	eP	50 02.90	-3.7X
TIY	36.41	341	eP	50 25.20	4.6X
BJI	37.54	347	eP	50 30.00	0.1
STK	38.00	159	eP	50 34.00	0.1
SNY	38.21	356	Pc	50 36.60	1.1
BRS	39.77	142	eP	50 50.00	1.2
GBA	49.59	285	Pd	52 06.80	-0.5
	0.7s		2.40nm	4.3mb	
TTA	81.09	27	eP	55 30.80	1.4
PMR	84.14	29	eP	55 45.80	0.9
	1.2s		15.60nm	4.8mb	

S.D. = 1.1 on 22 of 25 obs.

% JUL 31, 1989 09h 51m 12.93± 0.43s
47.240 N ± 4.2km 0.144 E ± 4.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 3.1 (LDG).

MFF	0.67	197	Pg	51 25.90	-0.3
			Sg	51 34.30	
LPF	1.13	315	Pn	51 34.20	0.2
			Pg	51 34.90	
			Sg	51 49.80	
LDF	1.37	353	Pn	51 37.90	-0.1
			Pg	51 39.20	
			Sg	51 56.20	
LSF	1.37	136	Pg	51 39.40	1.3
			Sg	51 57.50	
FLN	1.58	345	Pn	51 41.10	0.1
			Pg	51 43.00	
			Sg	52 03.10	
TCF	1.71	123	Pn	51 43.50	0.5
			Pg	51 46.00	
			Sg	52 05.40	
MAF	1.95	121	Pn	51 46.50	0.0
			Pg	51 50.10	
			Sn	52 08.90	
			Sg	52 13.90	
BGF	1.97	109	Pn	51 47.10	0.3
			Pg	51 50.90	
			Sg	52 14.30	
RJF	2.16	153	Pn	51 48.70	-0.7
			Pg	51 52.80	
			Sg	52 19.90	
AVF	2.24	100	Pn	51 50.40	-0.2
			Sg	52 22.70	
SSF	2.30	93	Pn	51 51.40	-0.1
			Pg	51 56.50	
			Sg	52 25.20	
LFF	2.34	170	Pn	51 52.20	0.2
			Pg	51 58.50	
			Sg	52 26.20	
LOR	2.53	88	Pn	51 54.20	-0.5
			Pg	51 58.70	
			Sg	52 32.30	
SMF	2.60	102	Pn	51 55.40	-0.4
			Sg	52 34.00	
LBF	2.63	94	Pg	52 02.80	6.6X
			Sg	52 34.50	
LPO	2.66	164	Pg	52 03.40	6.8X
			Sg	52 37.50	
CAF	2.67	149	Pn	51 56.50	-0.3
			Pg	52 02.80	
			Sg	52 37.80	

S.D. = 0.5 on 15 of 17 obs.

& JUL 31, 1989 10h 25m 28.10s
37.465 N 121.777 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.0 (BRK).
Mo=2.5*10**14 Nm (BRK). Felt in the southern San Froncisco Bay oreo.

MHC	0.16	139	iPc	25 31.38	-0.2
			iS	25 34.25	
ARN	0.23	121	iPc	25 32.30	-0.4
GCC	0.47	202	iPd	25 37.10	-0.4
PCC	0.48	274	eP	25 32.90	-4.9
			i	25 37.20	
BKS	0.55	319	iPc	25 38.65	-0.4
BRK	0.56	317	iPc	25 38.70	-0.6
SAO	0.75	159	iPd	25 42.52	-0.5
			eS	25 53.10	
CMB	1.24	62	eP	25 50.20	-1.5
			eS	26 07.80	
FRI	1.72	105	ePd	25 57.60	-1.2
ISA	3.21	123	eP	26 18.00	-2.2
KVN	3.30	60	eP	26 20.50	-1.2
CLC	3.74	115	eP	26 30.00	2.2
SBB	4.23	130	eP	26 30.00	-4.8
MWC	4.43	136	eP	26 51.00	13.4
GSC	4.56	117	eP	26 44.00	4.6

15 obs. ossocioted

JUL 31, 1989 10h 33m 59.67± 1.09s
33.496 S ± 6.3km 70.401 W ± 7.8km
DEPTH = 87.2 ± 13.3 km
CHILE-ARGENTINA BORDER REGION (127)

PCH	0.16	217	iPc	34 12.70	0.1
			iS	34 23.00	
FCH	0.19	29	iPc	34 13.10	0.1
			iS	34 23.30	
PEL	0.42	326	iP	34 13.70	-0.1
			iS	34 23.40	
TACH	0.47	251	iPc	34 14.00	-0.1
			iS	34 26.00	
CHCH	0.48	206	iPc	34 14.40	0.2
			iS	34 25.50	
ROCH	0.73	315	iPd	34 16.20	-0.5
			iS	34 29.00	
JACH	0.83	349	iPd	34 17.40	-0.2
			iS	34 31.00	
LCCH	0.98	271	iPc	34 19.10	0.0
			iS	34 33.20	
RTBS	2.00	24	ePd	34 33.20	1.0
			S	34 59.50	
RFA	2.05	129	ePd	34 33.70	0.7
RTCV	2.26	44	iPd	34 35.80	-0.2
RTCB	2.42	34	ePc	34 38.60	0.5
			S	35 08.80	
CFA	2.62	45	iPc	34 40.80	-0.1
			S	35 13.50	
RTLL	2.71	38	iPc	34 41.80	-0.2
RTRS	3.41	14	ePd	34 52.00	0.4
MRA	4.09	76	e(P)	34 59.70	-1.4

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

? JUL 31, 1989 10h 41m 25.70± 4.00s
23.347 N ±29.2km 121.663 E ±33.4km
DEPTH = 24.3 ± 13.4 km
TAIWAN (244)

TWF1	0.34	271	iPd	41 33.60	0.4
			eS	41 38.60	
TWD	0.73	355	iPc	41 39.60	-0.1
TWK	1.08	266	ePc	41 45.00	-0.4
TWQ	1.19	321	iPc	41 47.10	0.2
			eS	42 01.90	
TWC	1.27	8	ePc	41 48.30	0.4
			eS	42 04.50	
TWZ	1.74	357	ePc	41 54.60	-0.2
ANP	1.83	356	eP	41 56.00	-0.2

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

JUL 31, 1989 10h 49m 08.62± 0.53s
40.617 N ± 6.3km 20.901 E ± 4.7km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.4 (ATH).

KBN	0.07	276	iPgd	49 09.70	-1.2
KZN	0.73	115	ePb	49 22.10	-1.0
TPE	0.75	245	iPgd	49 23.00	-0.3
SRN	1.01	223	iPn	49 29.10	1.4
TIR	1.07	313	ePn	49 26.50	-2.3
VLO	1.08	263	ePn	49 35.50	6.6X
LIT	1.32	112	ePd	49 33.50	0.5
SKO	1.41	16	ePn	49 34.50	0.1
			eSn	49 51.60	
VAY	1.45	60	ePn	49 34.00	-0.8
KNT	1.61	70	eP	49 37.70	0.6
PUK	1.61	332	ePn	49 37.80	0.6
SDA	1.75	323	ePn	49 40.50	1.3
BCI	1.86	341	ePn	49 42.00	1.3
PLG	1.96	96	ePn	49 42.20	0.0
NEO	2.21	126	ePn	49 45.70	-0.2

S.D. = 1.2 on 14 of 15 obs.

% JUL 31, 1989 12h 01m 31.66± 0.84s
47.189 N ± 8.7km 0.028 W ±11.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG).

MFF	0.59	188	Pg	01	43.90	0.2
			Sg	01	51.80	
LPF	1.09	321	Pg	01	52.00	-0.1
			Sg	02	07.30	
LDF	1.41	357	Pg	01	56.90	-0.4
			Sg	02	14.20	
LSF	1.43	131	Pg	01	57.40	-0.2
			Sg	02	01.49	
FLN	1.60	349	Pg	02	00.40	0.3
			Sg	02	20.50	
TCF	1.78	120	Pn	02	00.30	-2.5
			Pg	02	03.30	
			Sn	02	21.20	
			Sg	02	24.80	
MAF	2.03	118	Pg	02	07.40	1.1
			Sg	02	31.20	
BGF	2.07	107	Pg	02	08.30	1.4
			Sg	02	32.20	

S.D. = 1.4 on 8 of 8 obs.

JUL 31, 1989 12h 24m 46.16± 0.92s
35.644 N ± 8.2km 22.634 E ± 5.6km
DEPTH = 44.9 ± 9.6 km
4.4mb (9 obs.)
MEDITERRANEAN SEA (400)
MD 4.0 (ATH).

VAM	1.30	100	ePn	25	08.40	0.2
ITM	1.63	340	ePn	25	15.60	2.7
NPS	2.46	98	ePn	25	24.70	0.0
ATH	2.48	20	ePb	25	29.50	4.6X
APE	2.74	58	ePn	25	29.00	0.3
VLS	3.01	328	ePn	25	34.00	1.4
NEO	3.69	7	ePn	25	44.10	2.0
KAP	3.70	90	ePn	25	41.20	-1.1
LIT	4.45	359	ePd	25	54.00	1.1
KZN	4.70	352	ePn	25	57.70	1.2
SRN	4.71	335	ePn	25	58.10	1.5
PLG	4.76	7	ePn	25	58.30	1.0
YER	4.79	70	ePn	25	58.00	0.2
TPE	5.08	337	iPnd	26	07.20	5.4X
EZN	5.10	34	ePn	26	02.00	0.1
VLO	5.42	334	ePn	26	05.50	-1.0
KNT	5.51	2	eP	26	08.30	0.4
SRS	5.52	8	ePd	26	09.70	1.8
KSL	5.66	83	ePn	26	05.00	-5.0X
VAY	5.67	360	ePn	26	10.50	0.5
LCI	5.96	323	Pd	26	12.90	-1.3
			eSn	27	15.00	
ELL	5.99	77	ePn	26	12.90	-1.7
TIR	6.09	340	ePn	26	16.70	0.7
KHL	6.13	62	ePn	26	15.00	-1.6
ATN	6.27	296	Pd	26	17.80	-0.7
PHP	6.27	345	iPnc	26	17.30	-1.2
SKO	6.39	352	iPn	26	20.00	-0.1
TDS	6.40	311	Pd	26	20.40	0.1
			eSn	27	28.80	
PUK	6.74	342	ePn	26	24.80	-0.2
MNO	6.77	292	P	26	25.40	-0.3
			eSn	27	37.30	
SDA	6.82	340	ePn	26	26.70	0.6
ULC	6.84	338	ePn	26	24.90	-1.6
			eSn	27	38.00	
BCI	7.00	344	iPnd	26	58.70	30.0X
MGR	7.17	311	Pc	26	30.60	-0.5
BDV	7.26	337	ePn	26	30.20	-2.2
			eSn	27	47.50	
TTG	7.27	340	ePn	26	31.00	-1.4
			eSn	27	49.00	
HCY	7.52	336	ePn	26	33.20	-2.7
			eSn	27	53.60	
NKY	7.69	340	ePn	26	36.50	-2.0
			eSn	27	59.00	
BRY	7.91	338	ePn	26	39.10	-2.4
			eSn	28	05.00	
MLR	10.15	13	eP	27	07.50	-4.9X
VRI	10.67	16	eP	27	21.50	2.2
TRI	12.09	329	iPg	27	40.20	1.8
			iSg	27	43.50	
KHC	15.03	337	iP	28	23.90	6.8X
	1.0s		7.00nm			3.9mb
PRU	15.50	340	eP	28	27.00	3.9X
DOU	19.51	323	iPd	29	13.10	0.7
	0.6s		20.00nm			4.6mb
SNF	19.93	324	iPd	29	17.50	0.7
MFF	20.28	310	eP	29	24.90	4.4X
	0.4s		2.70nm			3.9mb
LDF	21.17	315	eP	29	29.90	0.3
	0.5s		7.80nm			4.3mb
LPF	21.45	313	eP	29	32.40	0.0
	0.5s		7.20nm			4.3mb
FLN	21.46	315	eP	29	32.90	0.4
	0.6s		18.00nm			4.6mb
NUR	24.92	2	eP	30	06.00	-0.1
HFS	25.18	349	eP	30	07.80	-0.9
	0.4s		6.50nm			4.5mb
NAO	26.31	347	P	30	18.50	-0.7
SUF	27.19	4	eP	30	26.00	-1.1
BNG	31.28	188	ePd	31	06.40	2.2
	0.4s		3.00nm			4.4mb
MBC	65.81	351	eP	35	28.00	-0.4
FFC	78.22	331	eP	36	43.00	0.7
	0.7s		5.00nm			4.6mb

S.D. = 1.3 on 49 of 57 obs.

% JUL 31, 1989 12h 31m 50.25± 0.64s
47.198 N ± 6.9km 0.168 E ± 8.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (LDG).

MFF	0.63	200	Pg	32	03.00	0.0
			Sg	32	11.20	
LPF	1.17	316	Pg	32	11.50	-0.5
			Sg	32	26.90	
LSF	1.33	135	Pg	32	16.00	1.2
			Sg	32	34.10	
LDF	1.41	352	Pg	32	15.90	0.0
			Sg	32	33.70	
FLN	1.62	345	Pg	32	19.80	0.8
			Sg	32	39.60	
TCF	1.67	122	Pn	32	19.50	-0.2
			Pg	32	22.80	
			Sg	32	44.00	
MAF	1.92	120	Pn	32	22.10	-1.2
			Pg	32	26.60	
			Sg	32	50.40	
BGF	1.95	108	Pn	32	23.70	0.0
			Sn	32	46.30	
			Sg	32	52.90	

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

? JUL 31, 1989 12h 32m 41.22± 0.95s
39.117 N ± 8.1km 27.600 E ± 9.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.77	200	ePg	32	56.10	-0.1
			eSg	33	07.80	
DST	0.93	58	ePn	32	59.30	0.2
EZN	1.21	306	ePn	33	04.00	0.2
EDC	1.24	9	ePn	33	04.00	-0.3

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

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* JUL 31, 1989 12h 52m 36.31± 0.74s
7.193 S ±10.7km 125.290 E ±13.0km
DEPTH = 480.2 ± 12.3 km
5.0mb (7 obs.)
BANDA SEA (280)

KUPT	3.38	209	ePd	53	51.00	1.9
			eS	54	39.00	
AAI	4.53	40	iPd	53	58.50	-0.2
MKS	6.11	288	ePd	54	09.00	-4.8X
MTN	8.04	135	iPc	54	33.00	-0.9
			e	56	28.00	
MNI	8.59	357	eP	54	39.50	-0.3
KNA	9.16	158	iPc	54	44.70	-1.3
	0.4s		64.00nm			5.3mb
MBL	14.85	200	iPc	55	45.00	-1.1
	0.4s		18.00nm			5.0mb
WB5	15.38	146	iPc	55	51.00	-0.5
			eS	58	30.60	
WRA	15.42	146	Pd	55	51.40	-0.5
	0.3s		3.30nm			4.4mb
NANU	17.94	211	iPc	56	17.00	0.2
ASPA	18.35	154	iPc	56	22.10	1.3
	0.4s		15.00nm			4.9mb
			eS	59	24.00	
WARB	18.93	176	iPc	56	27.90	1.5
	0.3s		23.00nm			5.2mb
QIS	19.20	135	eP	56	29.00	-0.1
	0.3s		22.00nm			5.2mb
			e	59	43.00	
KLB	25.27	195	eP	57	24.10	-0.8
MUN	26.07	198	eP	57	31.00	-1.0
NWAO	26.68	195	eP	57	36.30	-1.0
CAN	35.46	145	eP	58	54.60	2.1
SPA	82.85	180	ePd	04	11.10	0.8
	0.5s		8.33nm			4.6mb
FBA	95.15	25	P	04	54.00	-13.9X
	0.7s		7.85nm			
ZOBO	153.17	150	ePKP	11	37.00	3.4X

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

JUL 31, 1989 12h 56m 45.29± 0.71s
40.372 N ± 4.0km 144.801 E ± 4.2km
DEPTH = 6.2 ± 3.8 km
5.0mb (13 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)
Felt (I JMA) at Morioka.

HOOJ	2.31	331	iP+	57	24.20	-0.2
			S	57	49.80	
KUSJ	2.73	359	P	57	29.20	-1.1
			S	57	59.00	
OFUJ	2.74	243	iP+	57	30.90	0.4
			S	58	00.30	
MRK	2.87	258	eP	57	33.00	0.6
			S	58	04.10	
AOMJ	3.38	275	P	57	40.30	0.6
			S	58	17.90	
MRRJ	3.48	307	P	57	40.30	-0.6
			S	58	17.70	
ASAJ	4.07	338	iP+	57	48.80	-0.6
			eS	58	34.40	
YAMJ	4.30	241	iP+	57	52.80	0.1
			S	58	40.10	
NIIJ	5.50	237	P	58	10.10	0.3
			S	59	13.80	
KAKJ	5.53	223	P	58	08.40	-1.7
			S	59	06.70	
CHJJ	6.29	228	P	58	19.90	-0.9
			S	59	27.30	
MAT	6.43	236	iPd	58	23.00	0.1
			eS	59	34.00	
MTMJ	6.66	238	P	58	27.00	0.8
IIDJ	7.31	230	P	58	36.00	0.8
			S	59	56.90	
CN2	14.77	290	eP	00	15.50	-0.9
SNY	16.06	282	eP	00	32.20	-1.0
DL2	17.90	273	eP	00	55.00	-1.4
BJI	21.83	278	eP	01	39.00	-1.1
			eS	05	33.50	
TIA	22.08	268	eP	01	42.50	-0.1
TIY	25.20	274	eP	02	14.00	0.8
BTO	26.36	282	eP	02	25.10	1.2
WHN	26.56	258	eP	02	26.50	0.8
			pP	02	32.00	19kmX
XAN	29.13	269	eP	02	50.00	1.0
LZH	32.25	276	eP	03	19.00	2.2X
	1.5s		44.00nm			5.2mb
GTA	34.25	283	eP	03	34.00	-0.1
CD2	34.41	267	eP	03	36.90	1.5
GYA	34.45	258	P	03	35.80	-0.1
WMQ	41.80	294	eP	04	37.80	0.7
			ePcP	06	38.80	
IMA	42.46	32	e(P)	04	30.50	-11.9X
	0.4s		2.80nm			
			e	04	40 80	
			e	04	51.50	
CHG	44.70	255	eP	05	01.30	0.4
FBA	44.87	34	eP	05	02.80	1.1
	0.9s		8.75nm			4.7mb
MBC	52.57	17	eP	05	45.00	-16.2X
MTN	54.45	196	eP	06	14.00	-1.6
WB5	60.72	191	iPd	06	59.20	-0.7
WRA	60.79	191	Pd	06	59.30	-1.0
	0.6s		10.50nm			5.1mb
LON	64.06	50	e(P)	07	22.40	0.3
ASPA	64.51	191	iPc	07	24.40	-0.7
	1.0s		11.00nm			5.0mb
WDC	66.98	56	eP	07	41.20	0.3
ORV	68.21	56	eP	07	48.30	-0.4
WARB	68.34	198	eP	07	50.00	0.6
CMB	69.80	57	eP	07	58.90	0.4
LRM	69.92	47	eP	07	59.50	0.1
KVN	70.65	55	P	08	04.20	0.3
TNP	71.79	55	P	08	10.70	0.0
	0.6s		5.56nm			4.8mb
HFS	72.11	337	eP	08	10.30	-1.7

31d 13h

	0.4s	1.00nm			4.3mb	
NAO	72.39	338	P	08	12.20	-1.5
BW06	73.45	48	P	08	20.00	-0.5
RSSD	75.58	44	P	08	32.30	-0.5
KSP	78.62	330	eP	08	49.40	0.2
			e	09	02.50	
CLL	79.48	332	iP	08	53.40	-0.4
			e	09	06.00	
BRG	79.48	331	e(P)	09	07.00	13.1X
PRU	79.97	330	P	08	56.00	-0.5
			e	09	09.00	
ALQ	80.43	52	eP	09	00.70	1.2
	1.0s	5.00nm			4.5mb	
KHC	81.04	330	iPc	09	03.00	0.7
			i	09	16.00	
LOR	86.08	335	eP	09	28.20	0.2
	1.0s	8.80nm			4.9mb	
FLN	86.09	338	eP	09	27.80	-0.2
LBF	86.29	334	eP	09	29.20	0.1
	1.2s	11.90nm			4.9mb	
SSF	86.37	335	eP	09	29.80	0.4
	1.6s	24.80nm			5.1mb	
LPG	86.62	332	eP	09	31.50	0.5
	1.4s	26.10nm			5.2mb	
SMF	86.63	334	eP	09	31.30	0.6
AVF	86.66	335	eP	09	31.30	0.5
	1.2s	53.50nm			5.6mb	
MAF	87.42	335	eP	09	35.40	0.9
	1.1s	14.60nm			5.2mb	
SNA	145.53	199	iPKPc	16	25.00	0.3
	1.0s	20.00nm				
SOB1	148.56	11	ePKP	16	34.60	3.3X
PDCR	152.05	8	ePKP	16	42.50	6.0X
			e	16	55.60	

S.D. = 0.8 on 59 of 65 obs.

JUL 31, 1989 13h 22m 29.73± 0.72s
40.617 N ± 7.4km 20.950 E ± 6.8km
DEPTH = 12.5 ± 6.4 km
GREECE-ALBANIA BORDER REGION (392)
MD 3.4 (ATH).

KZN	0.70	116	ePg	22	42.70	-0.7
TPE	0.79	246	iPgd	22	43.00	-1.8
SRN	1.03	225	ePg	22	49.10	0.1
TIR	1.10	312	ePg	22	52.00	1.9
VLO	1.12	263	ePg	22	55.50	5.1X
PHP	1.14	340	iPgc	22	48.70	-2.1
LIT	1.28	113	ePd	22	54.00	0.7
SKO	1.40	15	ePn	22	53.50	-1.5
			i	22	55.00	
			eSn	23	12.00	
VAY	1.41	60	ePn	22	54.50	-0.6
KNT	1.57	69	ePd	22	57.10	-0.3
PUK	1.63	331	ePn	22	59.60	1.4
SDA	1.77	322	ePn	23	01.50	1.2
PLG	1.92	96	ePb	23	04.00	1.5
NEO	2.18	126	ePn	23	06.50	0.2

S.D. = 1.5 on 13 of 14 obs.

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* JUL 31, 1989 13h 40m 35.15± 0.51s
20.819 S ±15.5km 174.195 W ±11.5km
DEPTH = 33.0km (normal)
5.0mb (11 obs.)
TONGA ISLANDS (173)

DZM	18.07	263	iPc	44	47.90	2.4
MSZ	28.02	208	P	46	28.00	2.9
BRS	30.79	251	iPc	46	51.60	1.5
RMO	34.32	253	iPd	47	21.70	0.8
CTA	37.00	264	iPc	47	42.60	-1.1
	1.0s	20.00nm			4.9mb	
CMS	37.24	245	eP	47	45.00	-0.6
ASPA	47.91	256	iPc	49	11.20	-1.4
	1.3s	36.00nm			5.2mb	
Z	17s	0.73um			4.7MszX	
			iS	56	15.00	
			LR	09	59.50	
WB5	48.07	262	eP	49	11.80	-2.0
WRA	48.08	261	Pd	49	12.30	-1.6
	0.9s	11.10nm			4.9mb	
MTN	52.73	269	iPd	49	47.90	-1.5
	0.7s	21.00nm			5.2mb	
WARB	54.13	252	eP	49	58.00	-1.5
COOL	58.35	246	eP	50	28.60	-1.2
KLB	61.14	245	eP	50	48.10	-0.8
MBL	61.16	257	eP	50	47.00	-2.2
	0.4s	4.00nm			4.9mb	
BAL	62.18	246	eP	50	55.00	-0.9
MUN	62.39	244	eP	50	57.50	0.2
NANU	64.75	254	eP	51	12.40	-0.5
SPA	69.31	180	ePd	51	41.30	0.1
	0.9s	9.55nm			4.9mb	
MAT	72.63	321	iPd	52	01.80	0.4
PLM	76.75	46	e(P)	52	24.30	-1.1
FRI	77.09	42	e(P)	52	25.60	-1.3
CMB	77.33	41	eP	52	27.40	-0.9
GLA	77.96	48	P	52	33.20	1.3
TNP	79.32	42	P	52	38.70	-0.8
	0.8s	6.76nm			4.7mb	
KVN	79.36	41	P	52	38.10	-1.5
LON	82.18	33	e(P)	52	53.60	-0.5
MAW	82.45	199	eP	52	56.00	0.8
MSU	82.81	44	eP	52	58.60	0.8
MDJ	82.86	323	eP	52	59.40	1.8
TTA	84.70	8	eP	53	06.90	0.3
	1.0s	8.75nm			4.9mb	
CN2	84.76	321	eP	53	08.50	1.3
			epP	53	18.50	31kmX
DPW	84.78	34	P	53	06.90	-0.4
ALQ	84.85	50	eP	53	07.70	-0.5
	1.0s	7.75nm			4.9mb	
IPM	86.74	276	ePd	53	19.90	2.1
	0.9s	38.30nm			5.6mb	
BW06	86.79	42	P	53	20.00	2.3
FBA	87.83	11	P	53	21.20	-0.7
	1.0s	12.50nm			5.2mb	
SNG	88.05	278	eP	53	27.20	3.2X
BJI	88.65	314	P	53	28.00	1.7
XAN	91.18	306	P	53	40.50	2.2
BHD	143.67	298	ePKPd	00	06.00	-2.7X
MSL	143.98	304	ePKP	00	05.00	-4.2X
EKA	144.88	9	PKPd	00	06.60	-3.5X
	0.8s	4.10nm				
KRA	148.75	342	ePKP	00	21.20	4.6X
KSP	148.92	347	ePKPc	00	21.70	4.8X
CLL	149.05	351	iPKPc	00	21.20	4.2X
	1.4s	27.00nm				
BRG	149.33	350	iPKP	00	21.80	4.3X
	2.0s	75.00nm				
SPC	149.43	341	ePKP	00	23.60	5.7X
VRI	149.69	330	iPKPc	00	23.00	4.8X
MOX	149.88	353	ePKPc	00	23.00	4.7X
	1.0s	19.00nm				
PRU	150.08	349	PKPc	00	24.00	5.4X
			e	00	34.00	
HOF	150.18	352	ePKP	00	24.10	5.3X
	1.0s	17.00nm				
MLR	150.34	331	iPKPc	00	25.00	5.7X
BHL	150.58	303	PKP	00	27.00	7.0X
DOU	150.77	2	iPKPd	00	25.90	6.3X
	0.7s	15.50nm				
KHC	151.08	349	ePKP	00	21.90	1.7X
			i	00	26.50	
WET	151.18	350	iPKPc	00	28.80	8.5X
ZST	151.21	344	e(PKP)	00	28.30	7.9X
WLF	151.22	360	PKP	00	28.40	8.1X
FLN	151.67	9	ePKP	00	27.10	6.1X
	0.9s	17.60nm				
LDF	151.88	8	ePKP	00	27.60	6.2X
	0.9s	16.30nm				
LPF	152.29	10	ePKP	00	28.60	6.7X
	0.9s	17.60nm				
CDF	152.45	358	ePKP	00	29.30	7.0X
HAU	152.87	359	ePKP	00	29.20	6.4X
	0.6s	5.40nm				
LOR	153.57	3	ePKP	00	32.00	8.2X
	0.9s	6.50nm				
SSF	153.76	4	ePKP	00	32.50	8.4X
	0.9s	6.50nm				
LBF	153.86	3	ePKP	00	32.30	8.0X
	0.9s	3.90nm				

S.D. = 1.4 on 38 of 66 obs.

? JUL 31, 1989 14h 17m 14.64± 5.70s
41.540 N ±27.2km 12.537 E ±29.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RDP	0.26	32	Pc	17	20.00	-0.1
			eSg	17	24.50	
RMP	0.30	24	Pc	17	20.70	-0.2
			eSg	17	25.20	
AZI	0.81	56	P	17	29.90	-0.4
			eSg	17	43.30	
MNS	0.85	7	Pd	17	31.00	-0.1
			eSg	17	44.60	
SDI	0.97	80	P	17	33.20	0.0
			eSg	17	46.90	
AQU	1.04	38	Pc	17	35.00	0.7
			eSg	17	51.00	

S.D. = 0.5 on 6 of 6 obs.

% JUL 31, 1989 14h 40m 47.88± 0.71s
43.448 N ± 4.7km 5.429 E ± 5.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.06	181	Pg	40	49.80	-0.4
TREF	0.18	349	Pg	40	51.43	-0.5
PUYF	0.21	67	Pg	40	51.51	-1.0
BERF	0.23	125	Pg	40	53.06	0.1
PRAF	0.40	332	Pg	40	56.51	0.4
VILF	0.45	27	Pg	40	56.92	-0.2
TAVF	0.49	69	Pg	40	57.02	-0.8
GANF	0.65	32	Pg	41	01.32	0.4
CALN	1.10	74	Pg	41	09.18	0.5
MVIF	1.33	70	Pn	41	12.61	0.1
TOUF	1.43	66	Pn	41	14.49	0.4
			Sg	41	35.01	
AURF	1.45	72	Pn	41	15.14	1.0
			Sg	41	34.83	
AUTN	1.55	69	Pn	41	16.31	0.6
			Sg	41	38.22	
SAOF	1.63	70	Pn	41	16.18	-0.6

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

JUL 31, 1989 15h 34m 24.65± 0.59s
40.627 N ± 7.4km 20.889 E ± 5.4km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.2 (ATH).

KBN	0.06	267	iPgd	34	26.50	-0.4
KZN	0.75	115	ePb	34	38.50	-0.8
TPE	0.75	244	ePg	34	39.50	0.2
SRN	1.01	223	ePn	34	49.10	5.4X
TIR	1.06	313	ePn	34	43.90	-0.6
VLO	1.07	262	ePg	34	07.20	-37.6X
LIT	1.33	113	eP	34	49.90	0.7
SKO	1.41	17	ePn	34	48.80	-1.5
			i	34	51.00	
			eSn	35	08.00	
VAY	1.45	61	ePn	34	51.50	0.6
PUK	1.60	332	ePn	34	55.20	2.2
BCI	1.84	341	ePn	34	56.00	-0.5
PLG	1.97	97	ePn	34	59.00	0.6
NEO	2.23	126	ePn	35	01.70	-0.5

S.D. = 1.1 on 11 of 13 obs.

& JUL 31, 1989 16h 15m 07.99s
60.379 N 151.294 W
DEPTH = 45.9km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL	0.34	180	iP	15	17.93	0.7
NKA	0.37	4	eP	15	19.02	1.6
			S	15	25.98	
SLKM	0.55	76	eP	15	18.83	-0.9
			S	15	29.14	
RDT	0.58	290	iP	15	19.41	-0.8
			S	15	29.18	
BRLK	0.65	161	eP	15	20.34	-0.7
			S	15	30.86	
CNPM	0.86	178	iP	15	22.97	-0.9
			S	15	35.73	
ILIM	0.88	251	iP	15	23.11	-1.1
			S	15	35.39	
SPU	0.89	335	eP	15	23.58	-0.7
			S	15	36.29	
XLV	0.95	193	eP	15	23.89	-1.3
SEW	0.96	106	iP	15	24.09	-1.1
CGLM	1.00	340	iP	15	25.35	-0.5
SUA	1.12	14	iP	15	27.05	-0.6
			S	15	43.42	
OPT	1.21	234	eP	15	28.54	-0.3
			S	15	45.03	
PWA	1.45	28	eP	15	31.68	-0.5
			S	15	51.40	

AUL	1.47	228	eP	15 32.12	-0.3
SKT	1.61	356	eP	15 34.32	-0.1
SHU	1.84	197	eP	15 37.80	0.2
CDD	1.88	220	eP	15 37.59	-0.7
			S	16 01.59	
VZW	2.43	72	eP	15 43.62	-2.5
			S	16 11.66	

19 obs. associated

? JUL 31, 1989 16h 21m 11.83±10.41s
40.290 N ±23.0km 126.363 W ±86.9km
DEPTH = 10.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)
ML 3.7 (BRK).

FHC	1.88	73	eP	21 43.90	-0.5
			eS	22 05.70	
WDC	2.93	83	eP	22 00.00	0.7
LBFM	3.55	71	eP	22 08.50	0.1
MIN	3.64	88	eP	22 09.60	0.1
			eS	22 51.20	
PCC	4.17	131	eP	22 17.10	0.2
GCC	4.72	132	eP	22 24.50	-0.2
ARN	4.78	126	eP	22 25.70	0.0
KVN	6.49	98	eP	22 49.50	-0.5

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

JUL 31, 1989 17h 07m 27.87± 0.15s
8.048 S ± 3.8km 121.384 E ± 4.7km
DEPTH = 13.8km (geophysicist)
6.3mb (51 obs.) 6.2Msz (30 obs.)
FLORES ISLAND REGION (286)
Ms 6.4 (BRK), 6.4 (PAS).
Mo=1.3*10**19 Nm (PPT). Slight domoge (V) ot Moumere. Felt ot Pogo. Two events about 5.5 seconds oport. Depth from broodbond displocement seismograms, bosed on second event.
FAULT PLANE SOLUTION: P-Woves
NP1:Strike= 66 Dip=70 Slip= 90
NP2: 246 20 90
Principol Axes:
T Plg=65 Azm=336
P 25 156
Comment: The focol mechonism is poorly controlled ond corresponds to reverse foulting. The preferred foult plone is NP2.
RADIATED ENERGY
No. of sto: 13 Focol mech. C
Energy 0.4±0.1*10**15 Nm
MOMENT TENSOR SOLUTION
Dep 27 No. of sto: 16
Moment Tensor; Scole 10**19 Nm
Mrr= 0.24 Mtt=-1.59
Mff= 1.35 Mrt= 0.13
Mrf= 0.57 Mtf= 0.41
Principol oxes:
T Vol= 1.65 Plg=22 Azm=278
N 0.00 67 93
P -1.65 2 187
Best Double Couple:Mo=1.6*10**19
NP1:Strike=321 Dip=73 Slip= 165
NP2: 55 76 17
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 16S, 45C M.W.: 15S, 28C
Centroid Locotion:
Origin Time 17:07:38.9 0.1
Lot 7.94S 0.01 Lon 121.18E 0.02
Dep 30.4 0.8 Half-durotion 7.8
Moment Tensor; Scole 10**18 Nm
Mrr= 6.93 0.10 Mtt=-5.47 0.09
Mff=-1.46 0.12 Mrt=-0.20 0.30
Mrf=-4.66 0.31 Mtf=-7.52 0.11
Principol Axes:
T Vol= 9.72 Plg=56 Azm= 65
N 2.02 32 224
P -11.74 10 320
Best Double Couple:Mo=1.1*10**19
NP1:Strike= 83 Dip=45 Slip= 139
NP2: 205 62 53

KUPT	3.03	134	ePc	08 24.30	8.1X
			e(S)	09 52.50	
MKS	3.39	326	iPc	08 17.20	-4.3X
			iS	10 13.50	
AAI	8.04	58	eP	09 31.00	3.9X
MNI	10.04	20	eP	09 54.30	-0.4
			eS	11 53.50	
KNA	10.52	137	eP	10 00.40	-1.0
			eS	11 43.00	
MTN	10.70	117	iPd	10 04.80	1.0
TSM	12.63	345	ePd	10 32.00	2.1
MBL	13.12	186	eP	10 31.00	-5.5X
KKM	14.92	340	ePc	11 05.50	5.3X
	1.2s	302.30nm		5.6mb	
NANU	15.49	201	eP	11 03.60	-4.0X
DAV	15.61	16	ePc+	11 14.00	4.9X
	1.6s	2373.33nm		6.2mb	
WB5	17.22	134	eP	11 27.90	-1.8
WRA	17.24	135	Pc	11 28.10	-1.9
	0.6s	21.10nm		4.4mb X	
MEKA	18.66	188	iPd	11 47.30	-0.2
			eS	15 07.00	
WARB	18.72	165	eP	11 48.10	-0.1
ASPA	19.63	144	iPd	11 58.30	-0.9
	1.5s	7146.00nm		6.7mb	
	Z 22s	168.90um		3.8Msz	
			eS	15 40.80	
			LR	20 10.20	
			eScS	23 29.50	
JAY	20.00	75	ePd	12 09.00	5.9X
KGM	20.60	298	ePc	12 08.80	-0.6
			e	12 27.90	
QIS	21.56	127	iPd	12 19.50	0.3
			e	16 31.00	
MRWA	21.66	193	eP	12 18.20	-1.9
			iS	16 13.40	
MNDI	22.18	87	eP	12 31.00	5.4X
KLM	22.59	299	eP	12 30.00	0.6
			e	12 48.00	
COOL	22.72	181	eP	12 29.00	-1.6
BAL	22.87	190	eP	12 30.60	-1.4
KLB	23.67	188	eP	12 38.70	-1.1
IPM	23.87	301	ePd	12 38.80	-3.1X
	0.8s	212.60nm		5.8mb	
			e	13 10.80	
			e	13 25.10	
MUN	24.29	191	iPd	12 44.40	-1.5
	1.0s	1660.00nm		6.6mb	
	Z 20s	57.40um		6.1Msz	
			eS	17 00.00	
BAG	24.31	358	ePc+	12 47.00	0.6
	1.7s	1446.15nm		6.3mb	
			eS	17 06.00	
NWAO	25.05	188	ePc	12 55.15	1.9
			eS	17 24.00	
LAT	25.44	89	eP	13 06.00	8.9X
PMG	25.51	95	eP	12 58.00	0.4
SNG	25.64	306	eP	12 56.30	-2.6
	0.8s	694.03nm		6.4mb	
			eS	17 32.90	
RKG	26.21	188	eP	13 08.00	4.0X
LMG	26.49	94	eP	13 12.00	5.1X
CTA	26.88	119	iPc	13 10.20	-0.2
	1.0s	313.00nm		5.9mb	
			iS	17 50.00	
CTAO	26.88	119	eP	13 16.75	6.4X
QIZ	29.21	337	eP	13 30.20	-1.2
	N 16s	32.40um			
			pP	13 33.00	10kmX
NNT	29.72	313	eP	13 31.00	-5.0X
STK	30.26	144	eP	13 40.00	-0.7
			e	13 47.00	
RAB	30.84	85	e(P)	13 48.00	2.0
			eS	19 00.00	
HKC	30.98	347	P	13 48.00	0.9
			(S)	19 00.00	
ADE	31.16	152	iPc	13 51.20	2.6X
	0.8s	358.21nm		6.3mb	
NST	31.60	318	eP	13 52.50	-0.1
GUMO	31.71	47	ePc	13 55.49	1.9
	1.0s	1611.11nm		6.9mb	
GUA	31.71	48	eP	13 52.00	-1.6
	1.1s	1508.86nm		6.8mb	
			pP	13 56.50	16kmX
PJG	31.71	47	eP	13 51.70	-1.9
RMO	31.80	129	iPd	13 56.00	1.6
			e	14 03.00	
LOE	31.89	323	eP	13 51.50	-3.7X
GZH	31.93	346	Pc	13 56.40	1.0
	Z 20s	33.90um		6.0Msz	
	N 14s	19.20um			
	E 16s	28.90um			
			iS	19 02.00	
CMS	32.60	139	eP	14 02.00	0.8
			e	14 05.50	
			e	14 21.00	
			e	15 24.00	
TATO	32.82	0	eP	14 02.94	-0.2
QZH	32.90	355	Pc	14 04.00	0.1
	Z 24s	27.70um		5.9MszX	
	N 15s	5.80um			
	E 15s	8.00um			
			S	19 24.00	
ANP	33.03	0	iP+	14 06.50	1.4
			iS	19 25.00	
BDT	33.48	319	eP	14 04.90	-4.1X
	0.6s	260.80nm		6.3mb	
CHG	34.67	321	ePd	14 14.90	-4.4X
	1.1s	100.63nm		5.6mb	
			eS	19 52.00	
CHTO	34.67	321	ePc	14 13.34	-6.0X
			ec	14 19.87	
			ed	14 23.93	
			ec	14 26.25	
			ePP	15 43.80	
BFD	34.78	150	eP	14 22.00	1.9
			e	14 25.00	
			e	15 43.00	
BRS	35.39	127	iPc	14 26.90	1.5
			eS	20 07.00	
COO	36.27	132	iPd	14 35.00	2.1
			e	14 42.00	
			e	16 55.00	
TOO	36.61	147	eP	14 37.00	1.4
			e	14 40.00	
			e	17 17.00	
			e	20 45.00	
CAN	37.10	141	eP	14 42.90	3.2X
			i	14 47.50	
			iPP	16 13.40	
GYA	37.16	338	P	14 36.80	-3.6X
	Z 16s	26.00um		6.1MszX	
	N 16s	25.00um			
	E 16s	34.50um			
			sP	14 51.00	
CNB	37.32	141	iPd	14 45.80	4.1X
			e	15 02.00	
			e	16 09.00	
RIV	37.57	137	ePc	14 52.30	8.6X
			eS	20 45.00	
			e	23 16.00	
			e	27 40.00	
KMI	37.64	332	ePc	14 42.44	-2.2
	N 15s	30.00um			
	E 17s	45.50um			
			ec	14 47.82	
			ec	14 52.21	
			ec	14 54.03	
			PP	16 08.00	
			eS	20 35.42	
			sP	20 43.00	
VSG	37.90	95	P	14 50.00	3.3X
SVO	38.00	95	eP	14 51.00	3.4X
SSE	38.92	360	iP+	14 58.00	3.1X
	1.3s	1633.00nm		6.6mb	
	Z 20s	16.30um		5.9Msz	
	N 18s	17.00um			
	E 16s	7.30um			
			PP	16 36.00	
			S	20 50.00	
			sS	21 42.00	
			SS	23 46.00	
WHN	38.96	350	eP	14 54.50	-0.8
	Z 24s	17.80um		5.8MszX	
	N 16s	15.40um			
	E 14s	11.80um			
			S	20 48.00	
NJ2	39.95	357	iPd	15 01.00	-2.5
	2.0s	3.60nm		3.7mb X	
	N 16s	6.40um			
	E 17s	6.30um			
			S	21 00.00	
KAGJ	40.06	13	P	14 57.80	-6.6X
KUMJ	41.35	12	eP	15 10.70	-4.3X
TAU	41.53	151	ePd	15 27.91	11.6X

31d 17h

Sta	Δ / Per	Az / Amp	Phase	Time	Res / Mag
			ePP	17 00.97	
CD2	42.26	337	eP	15 17.30	-5.3X
Z	16s	28.00um			6.2MszX
E	16s	57.50um			
			pP	15 24.00	23kmX
			S	21 40.00	
SHNJ	42.94	12	P	15 27.20	-0.8
TKSJ	43.49	15	eP	15 31.00	-1.5
XAN	43.49	345	P	15 28.00	-4.6X
	8.0s	6.40nm			3.5mb X
N	18s	80.40um			
E	13s	9.50um			
			S	22 00.00	
SHK	43.68	14	ePc	15 32.00	-2.0
SHL	44.05	320	iP	15 36.80	-0.6
			iS	22 12.00	
WKYJ	44.14	17	eP	15 36.60	-1.3
TIA	44.20	355	Pd	15 34.50	-3.8X
Z	28s	24.60um			6.0MszX
E	17s	15.00um			
			S	22 12.00	
YONJ	44.49	14	eP	15 37.50	-3.1X
TSRJ	45.48	17	P	15 45.60	-2.9X
DZM	45.51	113	iPd	15 50.70	1.6
			ScP	21 20.00	
IIDJ	46.01	19	P	15 49.70	-3.1X
TIY	46.28	350	eP	15 51.00	-3.9X
	6.0s	10.80nm			4.0mb X
Z	10s	27.70um			6.5MszX
N	18s	21.00um			
			S	22 39.00	
			sS	22 55.00	
PVC	46.63	107	iPc	16 03.00	5.1X
DL2	46.71	0	iPd	15 56.00	-2.1
Z	40s	14.40um			5.6MszX
N	15s	9.70um			
E	15s	11.30um			
			S	22 40.00	
CHJJ	46.89	20	P	15 57.80	-1.8
LZH	46.90	340	eP	15 56.00	-3.9X
	1.2s	0.10nm			2.8mb X
Z	30s	39.40um			6.2MszX
N	18s	20.90um			
E	17s	24.40um			
			pP	16 07.00	38kmX
			PP	17 45.00	
			eS	22 50.00	
MTMJ	47.00	18	P	15 57.60	-3.0X
MAJO	47.08	19	eP	15 57.04	-4.2X
			ec	16 01.84	
			ec	16 05.74	
			ed	16 07.97	
			ePP	17 49.63	
MAT	47.08	19	iPd	15 57.30	-3.9X
	1.0s	52.00nm			5.6mb
Z	20s	28.37um			6.2Msz
			eS	23 00.00	
KAKJ	47.43	21	P	16 04.60	0.7
LSA	47.48	324	eP	16 04.00	-1.0
	7.0s	4.90nm			3.7mb X
Z	19s	19.00um			6.1Msz
E	19s	18.00um			
			S	22 58.50	
			SS	26 15.00	
NIIJ	47.98	19	P	16 04.50	-3.7X
BJI	48.09	355	eP	16 05.43	-3.5X
Z	18s	18.00um			6.1Msz
N	16s	10.68um			
			ec	16 10.81	
			ec	16 14.79	
			ec	16 16.53	
			ePP	18 07.87	
			eS	23 00.12	
			eSS	26 09.00	
GBA	48.65	296	Pd	16 06.90	-6.8X
	1.1s	23.90nm			5.2mb X
YAMJ	49.16	19	eP	16 14.70	-2.6
HYB	49.31	301	iPc	16 17.70	-1.1
	1.2s	969.70nm			6.7mb
			i	16 32.50	
			iS	23 17.00	
HHC	49.49	350	eP	16 16.00	-3.9X
Z	23s	18.90um			6.0MszX
N	15s	11.20um			
E	17s	9.50um			
			sP	16 30.00	
			S	23 24.00	
BTO	49.53	349	iPd	16 17.00	-3.2X
N	17s	13.10um			
E	17s	10.80um			
			PP	18 16.50	
SNY	49.67	2	Pc	16 16.00	-5.1X
Z	22s	28.20um			6.2Msz
N	17s	8.20um			
E	18s	15.40um			
			S	23 26.00	
OFUJ	50.53	20	eP	16 26.80	-1.0
GTA	51.28	339	P	16 35.10	1.4
	1.6s	0.70nm			3.3mb X
Z	20s	21.00um			6.2Msz
E	16s	27.50um			
AOMJ	51.44	18	eP	16 37.00	2.3X
CN2	51.73	4	Pc	16 32.20	-4.6X
	7.0s	3.30nm			3.4mb X
Z	20s	18.10um			6.1Msz
N	20s	10.70um			
E	20s	16.20um			
			pP	16 43.00	37kmX
			PcS	21 44.00	
			S	23 50.00	
			SS	27 32.00	
MDJ	52.94	7	ePc	16 41.50	-4.4X
N	19s	13.70um			
			ec	16 47.29	
			ec	16 51.51	
			ec	16 53.00	
			eS	24 12.62	
MRRJ	53.35	18	eP	16 47.30	-1.6
POO	53.81	300	iPd	16 51.20	-1.6
	1.2s	312.50nm			6.2mb
			iS	24 21.00	
SAP	54.01	18	eP	16 55.00	1.3
HOOJ	54.03	20	eP	16 53.40	-0.5
MSZ	54.30	140	P	16 56.00	0.1
BOM	54.86	300	eP	17 01.00	0.6
			iS	24 34.50	
KUSJ	55.15	21	eP	17 02.50	0.3
NDF	55.32	106	ePc	17 09.00	5.2X
MHZ	55.34	140	eP	17 04.50	0.8
ASAJ	55.37	19	P	17 01.20	-2.6
NDI	56.10	312	iP	17 06.00	-3.3X
	1.5s	833.33nm			6.5mb
			iS	24 50.00	
			eS	28 40.00	
KRP	57.06	130	P	17 22.80	6.8X
	0.7s	190.00nm			6.2mb
			PP	19 31.00	
HIA	57.09	359	eP	17 11.81	-4.2X
			ec	17 17.11	
			e	17 21.91	
			eS	25 08.09	
TCW	57.18	134	P	17 15.20	-1.6
MRW	57.49	134	eP	17 17.40	-1.6
KIW	57.51	134	eP	17 19.90	0.7
SNZO	57.51	134	eP	17 19.72	0.6
			ec	17 23.78	
WEL	57.55	134	P	17 24.70	5.3X
			pP	17 38.00	48kmX
			PP	19 48.00	
			S	25 16.00	
			SS	29 28.00	
CAW	57.71	134	P	17 19.00	-1.5
WDW	57.71	134	P	17 18.50	-2.0
YSS	58.01	17	iPc	17 24.00	1.5
			eS	25 38.00	
MTW	58.03	134	eP	17 21.10	-1.7
BLW	58.08	134	eP	17 24.30	1.1
PGZ	58.42	133	eP	17 24.50	-1.0
HBZ	59.08	129	eP	17 29.00	-1.2
DRV	59.91	172	eP	17 37.00	1.6
WMQ	59.97	332	ePc	17 32.01	-4.3X
			ec	17 37.47	
			ec	17 42.27	
			ePP	20 00.24	
			eS	25 44.14	
IRK	61.84	348	iPc	17 49.00	0.2
			eS	26 13.00	
KSH	63.24	322	eP	17 55.00	-3.4X
Z	24s	36.00um			6.5MszX
N	20s	44.70um			
			eS	26 31.00	
QUE	64.59	309	iP+	18 00.50	-7.0X
			eS	26 47.00	
AFI	65.70	102	eP	18 30.00	15.2X
			eS	27 00.00	
			e	37 50.00	
			e	40 00.00	
AFI	65.70	102	ePc	18 18.34	3.6X
			ePP	20 38.79	
			eS	27 46.92	
			e	37 50.00	
			e	40 00.00	
FRU	66.12	324	eP	18 19.00	2.0
			eS	27 08.00	
DSH	67.35	318	eP	18 19.00	-5.9X
			eS	27 13.00	
PET	68.57	23	iPc	18 30.00	-2.1
			eS	27 42.00	
MAW	70.93	200	eP	18 40.30	-6.1X
			i	18 52.00	
KHI	72.63	309	e(P)	18 53.00	-4.4X
MAIO	72.85	312	eP	18 52.00	-6.5X
	1.8s	463.03nm			6.3mb
			eS	28 34.00	
SBA	73.54	171	Pd	19 01.90	0.2
SMY	75.26	30	eP	19 12.90	0.9
Z	20s	7.50um			6.0Msz
SHI	75.97	303	eP	19 16.00	-0.7
BJA	76.54	299	eP	19 19.20	-0.6
	0.8s	354.00nm			6.5mb
DHR	77.03	299	eP	19 21.00	-1.5
ADK	79.65	34	eP	19 37.40	1.1
	1.3s	943.40nm			6.6mb
TIK	79.67	2	iPd	19 32.00	-4.0X
			eS	29 32.00	
RYD	79.71	297	ePd	19 36.20	-1.1
ARO	80.49	283	eP+	19 42.00	0.4
KMSA	80.64	292	eP	19 27.30	-15.1X
KER	81.73	306	eP	19 45.00	-2.9X
ABHA	81.83	290	eP	19 49.70	0.9
SPA	82.01	180	e(P)	19 42.50	-6.2X
	0.9s	16.82nm			5.1mb X
Z	19s	27.97um			6.6Msz
			e	20 01.00	
QASM	82.73	298	eP	19 48.70	-4.5X
SLY	83.33	307	iPd	19 55.50	-0.4
			ePcP	20 06.50	
			e	20 29.50	
			ePP	23 10.00	
			ePPP	25 01.50	
			eS	30 08.50	
			eScS	30 26.00	
			ePS	31 07.50	
TAB	83.33	310	iP+	19 57.00	0.9
BHD	83.64	305	iPd	19 58.00	0.4
			isP	20 13.50	
			e	22 33.00	
			ePP	23 07.50	
			e	30 04.50	
			iS	30 15.00	
			ePS	30 53.00	
AAE	84.03	280	eP	20 02.50	2.2X
HON	84.24	68	ePc	20 06.27	5.5X
KIP	84.25	67	ePc	20 07.11	6.2X
			ePP	23 59.67	
			eS	30 35.67	
OPA	84.30	67	e(P)	20 02.90	1.8
NAI	84.46	269	iP	20 03.00	0.5
	0.8s	61.19nm			5.9mb
MSL	85.37	308	ePd	20 03 00	-3.2X
			epP	20 19.50	58kmX
			eSKS	30 27.00	
			eS	30 46.00	
TBI	86.09	113	iP	20 18.20	8.2X
	1.6s	495.00nm			6.4mb
BKR	86.36	313	iPc	20 07.00	-4.2X
			iS	30 50.00	
AFR	86.51	107	iP	20 19.20	7.0X
	1.2s	140.00nm			6.0mb
PAE	86.68	107	iP	20 20.20	7.2X
	1.2s	170.00nm			6.1mb
PPT	86.70	107	iP	20 20.60	7.4X
	1.2s	170.00nm			6.1mb
Z	21s	10.00um			6.2Msz
TVO	86.98	107	iP	20 22.00	7.4X
	1.2s	225.00nm			6.3mb
PMO	88.64	105	iP	20 29.80	7.3X
	1.6s	405.00nm			6.5mb
VAH	88.86	105	iP	20 30.40	6.9X
	1.6s	380.00nm			6.4mb
TPT	88.91	105	iP	20 30.60	6.8X

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        1.6s   660.00nm            6.7mb
RUV    89.10 105 iP      20 31.60   6.9X
        1.6s   305.00nm            6.3mb
SLR    89.33 244 iPd-    20 22.00  -3.9X
        1.0s   200.00nm            6.3mb
     Z  22s    40.52um             6.8Msz
                 i       20 46.00
SLR    89.33 244 ePc     20 27.27   1.4
        1.0s   200.00nm            6.3mb
     Z  22s    40.52um             6.8Msz
                 ec      20 31.40
                 ed      20 34.14
                 i       20 46.00
AYN    89.82 299 ePd     20 28.30   0.4
BUL    89.85 250 iPc     20 24.00  -4.4X
        0.9s   310.92nm            6.5mb
     Z  19s    19.44um             6.6Msz
     N  19s    13.89um
     E  18s     5.50um
                 i       20 29.00
                 iS      31 19.20
PRY    89.87 243 iPc     20 28.50   0.1
                 i       20 45.50
SDN    89.87  34 eP      20 26.90  -0.5
     Z  21s    10.00um             6.2Msz
MASJ   90.52 302 P       20 31.70   0.5
KSR    90.54 244 iPd     20 31.20  -0.4
                 i       20 46.80
SALJ   90.59 302 P       20 29.80  -1.7
BLF    90.64 241 iPc     20 33.50   1.6
        0.9s   153.85nm            6.3mb
                 i       20 47.00
HRI    90.74 303 eP      20 31.00  -1.2
DSI    90.78 302 eP      20 29.00  -3.2X
BHL    90.91 304 Pd      20 36.00   3.1X
                 PP      23 54.00
                 S       31 04.00
MBH    90.93 300 eP      20 28.00  -4.9X
SWZ    91.71 242 iPc     20 30.00  -6.9X
        1.0s   275.00nm            6.6mb
KVT    91.73 311 eP      20 22.80 -13.7X
KIM    91.92 241 iPc     20 39.00   1.2
        1.2s   250.00nm            6.5mb
                 i       20 58.00
LWI    92.25 267 eP      20 39.10  -0.6
SNA    93.17 196 eP      20 41.90  -0.7
        1.0s   100.00nm            6.2mb
OBN    93.57 325 iP+     20 44.00  -0.5
     Z  26s    20.00um             6.5MszX
                 iS      32 02.00
SVW    93.61  29 eP      20 45.90   1.2
SIM    93.69 315 eP      20 45.00  -0.4
                 eS      32 00.00
TTA    93.75  27 eP      20 46.20   0.9
BBTK   94.04 309 eP      20 47.00  -0.2
BRW    94.96  19 eP      20 55.60   4.9X
IMA    95.24  24 eP      20 50.80  -1.4
        1.5s    55.60nm            5.8mb
BCK    95.46 307 eP      20 51.80  -2.0
CER    95.59 235 iPc     21 03.00   8.5X
        1.0s   150.00nm            6.4mb
ELL    95.93 306 eP      20 55.00  -1.0
GPA    95.96 310 eP      20 55.80  -0.1
ALT    95.99 308 eP      20 54.50  -1.7
KHL    96.38 308 eP      20 56.70  -1.3
APA    96 63 337 e(P)    21 00.00   1.7
PMR    96.77  29 eP      20 59.90   0.9
ISK    96.97 310 eP      21 00.00  -0.4
DST    97.19 309 eP      21 01.10  -0.4
PUL    97.43 329 iPKP    21 03.00   1.0
CTT    97.45 310 eP      20 59.90  -2.7X
COL    97.58  25 ePDIFc21 04.07     1.4
FBA    97.58  25 P       21 02.00  -0.7
        1.0s    30.00nm            5.8mb
EDC    97.83 310 eP      21 03.00  -1.3
CFR    97.92 315 iPc     21 05.00   0.4
IZM    98.16 308 eP      21 05.80  -0.1
TOA    98.20  28 eP      21 06.50   0.9
PPE    98.35 316 iPc     21 08.00   1.5
CLI    98.60 316 eP      21 09.00   1.3
VRI    98.96 315 iPc     21 09.50   0.2
EZN    98.97 309 eP      21 05.00  -4.4X
KEV    99.02 339 eP      21 09.00   0.0
     Z  24s     6.30um             6.0MszX
                 ePP     25 12.00
                 eS      32 32.00
                 eSS     39 28.00
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                         LR      11 40.00
ISR     99.05 314 eP     21 10.00   0.2
SOD     99.21 337 iP     21 10.30   0.3
CVO     99.34 315 iPd    21 10.00  -1.1
BUC     99.35 314 eP     21 00.00 -11.0X
BUC1    99.39 314 iPd    21 06.00  -5.3X
MLR     99.49 315 iPc    21 11.50  -0.4
SUF     99.50 332 eP     21 13.00   1.6
         0.8s     6.50nm           5.3mb
NUR    100.27 330 ePdiff21 15.00    0.1
         0.7s    24.00nm           5.8mb
     Z  20s     15.30um            6.5Msz
                 ePP     25 20.00
                 eS      32 44.00
                 LR      12 40.00
COZ    100.62 315 ePdiff21 07.50   -9.6X
KBS    101.55 349 iPdiff21 21.00    0.7
KNT    101.63 310 ePdiff21 19.50   -2.0
DEV    101.63 315 ePdiff21 24.00    2.6X
VAY    101.87 310 ePdiff21 21.00   -1.6
LIT    101.93 309 ePdiff21 21.30   -1.6
UZH    101.99 318 ePdiff21 25.00    2.1
HYT    102.40  29 Pdiff 21 25.00    0.4
BZS    102.53 315 ePdiff21 24.00   -1.4
SKO    102.72 311 ePdiff21 25.00   -1.3
BNG    103.30 273 iPdiff21 30.00    0.4
         0.9s    35.00nm           6.1mb
                 i       25 07.40
                 i       25 49.00
SPC    103.33 319 ePdiff21 29.20    0.1
                 e       25 13.10
                 e       25 38.80
BEO    103.37 314 ePdiff21 28.00   -1.1
                 i       25 43.00
KRA    103.47 319 ePdiff21 31.20    1.7
     Z  22s      8.80um            6.2Msz
     N  22s     11.40um
                 e       21 45.70
                 e       22 08.30
MBC    104.53  12 ePdiff21 33.00   -0.6
         1.0s    24.00nm           6.0mb
SRO    104.70 317 ePdiff21 36.60    1.7
                 e       24 47.50
                 i(PP)   25 55.90
ZST    105.47 318 e(Pdif21 48.60   10.2X
     Z  20s      8.50um            6.3Msz
                 e(PP)   25 56.30
ALE    105.53   1 ePdiff21 39.00    1.0
         1.0s    12.00nm           5.8mb
HFS    105.72 330 ePdiff21 40.40    1.2
         0.9s    21.60nm           6.2mb
KSP    105.72 321 ePdiff21 42.30    2.8X
         1.7s   158.00nm           6.7mb
                 e       25 09.00
                 e       25 31.50
                 i       26 07.70
PRU    106.94 320 ePdiff21 48.00    3.1X
     Z  24s      7.20um            6.1MszX
     N  20s      7.40um
     E  20s      5.10um
                 e       22 01.80
NAO    106.95 331 Pdiff 21 44.30   -0.4
SOI    106.98 307 PKP    26 07.20  12.0X
VBY    107.00 315 e(PKP)26 10.50   15.4X
BRG    107.20 321 ePdiff21 47.40    1.4
         1.8s   200.00nm           6.9mb
     Z  18s      2.00um            5.7Msz
     N  24s      5.00um
     E  24s      6.00um
                 i       32 36.00
                 e       37 16.80
                 e       37 36.00
                 e       41 40.00
                 e       45 14.00
ATN    107.44 307 PKP    26 13.00  16.8X
KMR    107.47 318 ePKP   25 52.00  -3.9X
                 i       26 10.80
                 iPP     26 13.70
                 i       26 23.00
KHC    107.68 319 Pdiff 22 03.10   14.8X
                 eSg     26 19.80
CLL    107.71 321 ePdiff21 50.00    1.7
     Z  18s      6.50um            6.2Msz
                 PKKP    37 06.00
                 PKKP    37 13.00
MOX    108.69 321 ePdiff21 52.00   -0.7
     Z  19s      8.20um            6.3Msz
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     E  19s      9.00um
                 e       25 38.00
                 ePKKP   37 09.00
GRB3   108.80 319 ePdiff21 56.00    2.8X
         1.3s    28.00nm           6.3mb
     Z  20s      1.90um            5.7Msz
                 e       26 24.20
GRF    109.11 320 ePdiff21 56.00    1.4
         1.3s    28.00nm
     Z  20s      2.00um            5.7Msz
                 e       26 24.20
WTS    111.34 323 ePKP   26 05.50   2.5X
         0.9s    14.00nm
                 e       26 46.00
ENN    112.20 322 ePKP   26 06.50   1.8
         0.9s    15.00nm
                 ePP     26 45.00
YKA    112.36  25 ePKP   26 05.00   0.3
BSF    112.36 319 ePKP   26 06.80   1.5
         0.8s    10.75nm
HAU    112.61 319 ePKP   26 06.60   0.9
         0.8s     8.05nm
DOU    113.19 321 Pdiff  22 12.00  -0.7
DOU    113.19 321 PKP    26 09.40   2.7X
     Z  22s      8.50um            6.3Msz
                 PP      27 00.00
                 SKS     36 56.90
BMW    113.20  43 e(PKP)26 10.60    3.7X
                 ePS     36 56.20
GMW    113.24  42 ePKP   26 10.40   3.5X
                 ePP     26 57.20
SNF    113.27 322 PKP    26 08.20   1.4
                 e       26 53.80
SHW    113.93  43 e(PKP)26 12.50    4.0X
LON    114.08  42 e(PKP)26 07.00   -1.7
                 ePP     26 52.50
                 ePS     36 25.70
                 e       41 13.00
LBF    114.42 318 ePKP   26 11.90   2.6X
         0.8s    10.05nm
LOR    114.43 318 ePKP   26 11.80   2.6X
         1.0s    24.00nm
SMF    114.60 318 ePKP   26 11.40   1.8
         0.8s     6.70nm
SSF    114.71 318 ePKP   26 11.60   1.8
         0.8s    26.20nm
PNT    114.79  39 ePKP   26 10.00   0.1
AVF    114.89 318 ePKP   26 11.60   1.5
         0.8s    10.75nm
WDC    114.94  49 ePKP   26 09.80  -0.6
                 ePP     27 11.10
                 ePKKP   36 48.50
                 eSKKP   40 24.70
VGB    115.09  43 e(PKP)26 14.00    3.4X
LBFM   115.27  48 ePKP   26 14.90   3.6X
                 ePP     27 14.10
BGF    115.29 318 ePKP   26 12.90   2.0X
         0.8s    36.25nm
MAF    115.56 318 ePKP   26 13.20   1.8
         0.8s     6.70nm
TCF    115.78 318 ePKP   26 13.80   1.9X
         1.0s    19.00nm
ORV    115.92  50 ePKP   26 11.50  -0.8
                 ePP     27 15.70
AKU    116.00 343 ePKP   26 13.40   1.8
         1.3s    69.23nm
MHC    116.23  52 ePKP   26 13.50   0.4
CAF    116.26 316 ePKP   26 13.60   0.8
         0.8s    14.80nm
ARN    116.32  52 ePKP   26 17.20   4.0X
                 ePP     27 27.30
RJF    116.52 317 ePKP   26 15.30   2.0
         1.0s    18.00nm
LDF    116.59 321 ePKP   26 15.10   1.8
         1.0s    18.00nm
PRS    116.62  53 e(PKP)26 16.70    3.0X
FLN    116.76 321 ePKP   26 15.70   2.1X
         0.8s    16.10nm
LLA    116.91  53 e(PKP)26 18.00    3.7X
                 ePKKP   36 46.80
LPO    116.92 316 ePKP   26 16.40   2.4X
         1.0s    16.00nm
EDM    117.06  33 ePKP   26 08.00  -6.1X
CMB    117.08  51 ePKP   26 12.22  -2.4
                 ePP     27 27.62
                 ePKKP   36 42.60
LFF    117.15 317 ePKP   26 16.70   2.3X
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31d 17h

	0.8s	13.45nm				
MFF	117.25	319	ePKP	26	16.60	2.0
	0.6s	9.90nm				
LPF	117.35	320	ePKP	26	15.90	1.2
	0.6s	21.65nm				
FRI	117.81	52	e(PKP)	26	17.00	1.1
			ePP	27	30.60	
BCH	117.85	54	e(PKP)	26	18.90	2.6X
			ePP	27	27.80	
EPF	117.97	315	ePKP	26	17.20	1.0
	0.8s	5.35nm				
SYP	118.06	55	ePKP	26	20.00	3.3X
			e	27	26.00	
			ePKKP	36	42.00	
REY	118.24	343	ePKP	26	20.00	4.1X
DMU	118.38	328	ePKP	26	33.80	17.3X
			e	27	19.00	
EBR	118.45	312	ePdiff	22	42.00	5.7X
			e	27	20.00	
			e	37	28.00	
			e	37	36.00	
DLE	118.47	327	ePKP	26	32.70	16.1X
			e	27	18.00	
KVN	118.61	50	PKP	26	13.30	-4.4X
DCN	118.83	328	ePKP	26	34.80	17.5X
			e	27	15.00	
ECP	118.88	326	ePKP	26	18.40	1.0
ECB	119.02	327	ePKP	26	19.50	1.8
ISA	119.06	54	ePKP	26	20.00	1.5
			e	27	38.00	
			ePKKP	36	37.00	
			e	36	52.00	
PAS	119.59	55	ePdiff	22	46.00	4.4X
			e	26	22.00	
			ePP	27	41.00	
			ePKS	29	08.00	
			ePPP	30	17.00	
			eSKS	32	36.00	
			eS	35	40.00	
			ePKKP	36	39.00	
			ePPS	39	00.00	
			e	40	05.00	
			eSS	44	08.00	
MWC	119.67	55	ePKP	26	23.00	3.2X
			e	26	39.00	
			e	27	32.00	
			ePKKP	36	35.00	
CLC	119.72	53	ePKP	26	19.00	-0.7
			e	26	23.00	
			e	27	41.00	
			ePKKP	36	34.00	
SBB	119.77	55	ePKP	26	22.00	2.1
			e	26	36.00	
			e	27	40.00	
			ePKKP	36	35.00	
RVR	120.27	55	ePKP	26	24.00	3.3X
			e	26	38.00	
			e	27	33.00	
			ePKKP	36	29.00	
GSC	120.46	54	ePKP	26	25.00	3.8X
			e	26	40.00	
			e	27	47.00	
			ePKKP	36	31.00	
			e	36	46.00	
PEC	120.47	55	ePKP	26	24.70	3.5X
LRM	120.54	41	ePKP	26	29.20	8.0X
PLM	120.82	56	ePKP	26	25.00	3.0X
			e	26	38.00	
			e	27	43.00	
			ePKKP	36	31.00	
PLM	120.82	56	ePKP	26	35.00	13.0X
			e	26	38.00	
			e	27	43.00	
			ePKKP	36	31.00	
BAR	121.11	57	ePKP	26	25.00	2.6X
			e	27	54.00	
			ePKKP	36	29.00	
TPC	121.33	55	ePKP	26	26.00	3.2X
			ePKKP	36	28.00	
PTI	121.65	44	e(PKP)	26	27.60	4.3X
TOL	122.05	312	ePdiff	22	51.46	-1.0X
			PP	27	59.00	
			ePPP	30	22.00	
			eSKS	33	16.82	
			eS	35	47.95	
			iPS	38	04.00	
			iPPS	39	26.00	
			iSS	44	26.00	
TOL	122.05	312	ePKP	26	26.00	2.1
			iPP	27	59.00	
			ePPP	30	22.00	
			iSKS	33	30.00	
			iPS	38	04.00	
			iPPS	39	26.00	
			iSS	44	26.00	
FFC	122.07	28	ePdiff	23	09.00	16.9X
	1.4s	20.00nm				
FFC	122.07	28	ePKP	26	26.00	2.5X
	0.9s	65.00nm				
KUK	122.21	272	ePKP	26	25.00	0.0
DUG	122.22	47	e(PKP)	26	24.40	0.0
			ePKKP	36	23.50	
IMW	122.25	43	e(PKP)	26	24.60	0.0
GLA	122.55	56	ePKP	26	25.00	-0.1
			e	26	30.00	
			e	28	03.00	
			ePKKP	36	23.00	
			e	36	39.00	
ASMO	122.55	309	ePKP	26	25.50	0.4
APHE	122.62	309	ePKP	26	26.00	0.7
ACHM	122.69	309	ePKP	26	27.20	1.9
AAPN	122.86	309	ePKP	26	25.50	-0.2
ATEJ	122.88	309	ePKP	26	27.20	1.4
ALOJ	122.90	309	ePKP	26	27.20	1.4
MSU	123.21	49	e(PKP)	26	24.10	-2.4
			ePKKP	36	19.50	
MAL	123.24	309	iPKPc	26	27.00	0.7
			i	28	00.00	
			eS	37	56.00	
			iPS	39	24.00	
DAU	123.27	47	ePKP	26	29.60	2.9X
			ePKKP	36	18.50	
FRB	123.94	5	ePKPc	26	28.40	1.6
	0.8s	55.00nm				
NKM	124.37	308	iPKP	26	30.50	1.9
			i	26	43.00	
			i	26	52.00	
IFR	124.66	305	iPKP	26	31.00	1.6
			i	26	33.00	
			i	28	18.50	
			i	28	47.50	
KIC	126.55	272	PKP	26	33.10	-0.3
	1.0s	35.50nm				
AVE	126.56	306	ePKP	26	33.50	0.6
			i	26	51.00	
RSSD	126.66	40	PKP	26	28.20	-4.9X
LIC	126.83	272	PKP	26	33.60	-0.3
	1.1s	47.00nm				
	Z 20s	8.00um			6.4Msz	
TIC	126.86	272	PKP	26	33.90	-0.1
	1.0s	45.50nm				
TIO	127.05	303	iPKP	26	36.40	2.3X
			i	28	38.00	
GOL	127.73	45	PKP	26	29.20	-6.1X
	Z 20s	7.00um			6.3Msz	
GLD	127.81	45	PKP	26	29.00	-6.3X
	Z 20s	6.60um			6.3Msz	
ALQ	128.71	51	PKP	26	31.00	-6.2X
ALQ	128.71	51	e(PKP)	26	35.50	-1.7
	Z 20s	3.74um			6.1Msz	
			ePP	28	41.00	
			ePKS	29	55.50	
			eSS	45	59.00	
ANMO	128.71	51	ePKP	26	39.42	2.2
			ePP	28	47.20	
MEO	134.72	48	iPKPd	26	41.00	-7.4X
RFA	136.41	168	ePKPd	26	42.20	-9.5X
FVM	138.61	39	PKP	26	47.30	-8.3X
MRA	139.20	171	e(PKP)	26	50.50	-6.3X
GAC	139.76	18	ePKP	26	49.50	-7.9X
			pP	26	59.50	
CBM	140.41	10	e(PKP)	26	54.10	-4.4X
			e	28	48.10	
			ePP	30	03.20	
PTN	140.93	19	e(PKP)	26	57.80	-1.7
HBVT	141.70	17	e(PKP)	26	58.30	-2.7X
			ePP	30	06.70	
			ePKS	30	55.70	
MIM	141.86	12	e(PKP)	26	57.80	-3.4X
BNH	141.97	15	e(PKP)	27	00.90	-0.6
			e	27	04.10	
EMM	142.64	10	e(PKP)	27	00.60	-1.9
			e	27	06.70	
			e	27	21.30	
CYA	143.07	169	e(PKP)	26	58.80	-5.0X
SCP	143.16	25	ePKP	27	00.07	-3.5X
			ePP	30	16.46	
HRV	143.83	16	ePKP	27	03.94	-0.7
TBR	144.24	20	e(PKP)	27	02.10	-3.3X
			ePP	30	23.10	
PNJ	144.48	20	ePKPd	27	03.40	-2.4
			i	27	06.30	
			i	27	23.80	
PRIN	144.75	22	e(PKP)	27	03.90	-2.4
BLA	144.86	31	PKP	27	01.10	-5.5X
CBN	145.53	27	ePKP	27	05.00	-2.6X
			i	27	09.00	
BMA	146.32	205	ePKP	27	07.90	-1.6
			e	27	14.80	
			epPKP	27	18.30	
			e	27	26.10	
			i	27	43.90	
ANT	146.40	160	ePKP	27	11.00	1.5
SLA	146.74	169	ePKP	27	09.50	-0.8
			e	27	16.70	
ITB7	146.75	187	e(PKP)	27	08.30	-1.8
ITB	147.08	187	e(PKP)	27	09.40	-1.2
VAO	147.10	200	ePKP	27	10.50	-0.3
			e	27	15.30	
			i	27	17.50	
			e	27	29.90	
ITB1	147.24	187	ePKP	27	10.50	-0.3
PDCR	151.83	224	ePKP	27	14.50	-3.7X
			e	27	20.30	
			i	27	24.10	
			i	27	35.50	
			i	27	41.40	
ARE	152.52	152	ePKP	27	21.00	1.5
CCH	153.66	164	ePKP	27	19.00	-2.1
	0.8s	10.00nm				
			i	27	25.00	
			i	27	47.00	
ITR	153.85	231	ePKP	27	19.10	-2.0
			i	27	23.80	
			e	27	31.50	
			i	27	34.40	
			i	27	46.60	
			i	28	00.10	
			i	28	11.80	
			e	31	22.90	
SOB1	155.39	226	ePKP	27	20.30	-2.8
			e	27	25.00	
			e	27	34.20	
			e	27	49.70	
UPA	159.29	86	iPKPc	27	28.70	0.9
	1.1s	139.24nm				
	Z 21s	7.28um			6.5Msz	
			i	27	30.40	
PSO	160.16	109	ePKP	27	32.00	2.6X
BOG	164.27	102	ePKP	27	36.00	2.6X
			ePP	32	20.00	
FUQ	164.77	99	ePKP	27	38.50	4.7X
TRN	176.23	47	ePKP	27	41.34	2.1X
TPP	176.41	51	ePKP	27	43.08	3.8X
	S.D. = 1.3		on 229 of 402 obs.			

% JUL 31, 1989 17h 55m 00.87± 0.78s
47.175 N ± 7.9km 0.129 W ±10.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (LDG).

MFF	0.57	181	Pg	55	12.50	0.0
			Sg	55	20.80	
LPF	1.06	325	Pg	55	20.70	-0.1
			Sg	55	36.00	
FLN	1.61	352	Pn	55	29.40	0.1
			Sg	55	49.00	
MAF	2.09	116	Pn	55	36.40	0.1
			Sg	56	00.90	
BGF	2.13	106	Pg	55	36.90	-0.1
			Sg	56	02.20	
	S.D. = 0.1		on 5 of 5 obs.			

? JUL 31, 1989 18h 26m 48.89± 0.90s
39.218 N ± 6.3km 16.087 E ±16.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

TDS	0.48	24	P	26	58.60	-0.1
MGR	1.01	336	P	27	08.00	0.1

			eSg	27	23.50	
SOI	1.14	181	P	27	10.40	0.1
			eSn	27	27.70	
ATN	1.16	205	Pd	27	10.50	-0.1
			eSn	27	27.30	

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

? JUL 31, 1989 19h 54m 53.78± 2.44s
17.426 S ±37.2km 178.942 W ±24.0km
DEPTH = 549.8 ± 29.5 km
5.0mb (3 obs.)
FIJI ISLANDS REGION (181)

DZM	14.51	249	iPc	57	58.90	0.7
BRS	27.91	244	eP	00	02.00	0.3
COO	29.59	238	iPd	00	16.10	-0.2
	0.5s		20.00nm			5.0mb
CTA	33.03	260	iPc	00	45.80	0.4
	1.1s		20.25nm			4.7mb
STK	38.42	240	eP	01	30.00	0.1
WB5	44.20	259	eP	02	15.30	-0.7
ASPA	44.44	254	iPd	02	17.20	-0.6
	0.7s		41.00nm			5.1mb
WARB	50.96	250	eP	03	06.00	-1.0
CMB	77.84	44	iP	05	55.10	-0.9
GLA	79.14	50	iP	06	03.00	0.1
KVN	79.90	44	iP	06	07.00	0.1
TNP	79.97	45	iP	06	07.20	-0.2
	1.0s		2.75nm			3.6mb X
FBA	85.45	13	eP	06	34.00	0.1
KSP	144.50	343	iPKPc	13	29.00	0.1
CLL	144.88	347	iPKPc	13	30.10	0.6
	0.8s		20.00nm			
BRG	145.08	346	iPKP	13	30.80	1.0
	1.0s		14.00nm			
			eSg	39	05.00	
PRU	145.75	344	iPKPd	13	33.00	2.0X
KHC	146.78	345	PKP	13	36.00	3.3X
DOU	147.29	356	iPKPd	13	36.70	3.3X
WLF	147.58	354	PKP	13	37.90	4.0X
CDF	148.68	352	ePKP	13	40.10	4.3X
	0.7s		4.40nm			
FLN	148.72	2	ePKP	13	39.70	4.0X
	1.0s		30.00nm			
LDF	148.90	2	iPKPc	13	39.80	3.8X
	0.8s		9.40nm			
HAU	149.20	353	ePKP	13	41.20	4.7X
	0.8s		8.05nm			
BSF	149.31	352	ePKP	13	41.30	4.5X
LPF	149.43	3	iPKPc	13	41.20	4.4X
	0.5s		11.65nm			
LOR	150.15	356	iPKPc	13	43.30	5.3X
	0.4s		7.45nm			
SSF	150.38	357	iPKPc	13	44.00	5.7X
	0.4s		5.75nm			
LBF	150.43	356	ePKP	13	43.90	5.5X
	0.6s		7.65nm			
MFF	150.89	2	ePKP	13	44.70	5.6X
	1.0s		8.00nm			
BGF	150.91	357	iPKPc	13	45.30	6.2X
	0.8s		9.40nm			
MAF	151.26	358	ePKP	13	46.30	6.7X
	1.0s		8.00nm			
LPG	151.61	352	ePKP	13	47.70	7.2X

S.D. = 0.6 on 16 of 33 obs

? JUL 31, 1989 20h 29m 45.66± 3.60s
10.989 N ±18.4km 62.010 W ±25.8km
DEPTH = 79.9 ± 40.5 km
NEAR COAST OF VENEZUELA (97)
MD 3.7 (TRN).

TCE	0.38	139	eP	29	58.52	-0.1
TRN	0.69	120	eP	30	01.38	0.0
			eS	30	13.06	
TPP	0.86	141	eP	30	03.44	0.1
			eS	30	16.10	
TBH	1.05	118	eP	30	05.55	-0.1
			eS	30	21.88	
BOT	1.28	82	eP	30	08.46	0.0
			eS	30	27.44	
SVB	2.39	18	eP	30	23.99	0.6
			eS	30	55.98	
SVV	2.44	18	eP	30	24.18	0.0
			eS	30	56.70	
SLB	2.97	18	eP	30	31.05	-0.5
			eS	31	09.76	

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

% JUL 31, 1989 21h 08m 14.15± 0.71s
34.261 N ± 9.4km 132.605 E ± 5.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN HONSHU, JAPAN (232)
MG 3.6 (JMA). Felt (I JMA) at Hiroshimo.

HIR	0.17	306	iP+	08	18.90	0.9
YONJ	1.16	37	iPd	08	35.50	-0.4
			iS	08	51.00	
TKSJ	1.23	103	P	08	37.30	0.3
			S	08	53.60	
SHNJ	1.25	264	iPd	08	36.30	-1.0
			S	08	52.70	
KUMJ	2.27	221	eP	08	52.70	0.4
			S	09	23.60	
WKYJ	2.48	90	P	08	55.10	-0.1

S.D. = 0.8 on 6 of 6 obs.

JUL 31, 1989 21h 29m 12.41± 1.12s
15.797 S ± 6.2km 167.618 E ± 6.8km
DEPTH = 138.3 ± 9.7 km
5.1mb (17 obs.)
VANUATU ISLANDS (186)

PVC	2.04	161	iPc	29	47.50	-0.3
			iS	30	16.50	
DZM	6.34	190	iPd	30	44.60	-0.2
			iS	31	55.70	
SVO	10.08	310	eP	31	36.00	1.1
			eS	33	25.00	
BRS	17.97	228	iPc	33	16.30	1.4
RMO	20.53	236	iPd	33	44.60	2.9X
	0.9s		103.00nm			5.2mb
COO	20.59	222	iPd	33	44.70	2.4X
CTA	20.76	255	iPd	33	45.00	1.0
	1.0s		57.00nm			4.9mb
			i	34	10.90	
KRP	23.12	164	P	34	09.90	2.9X
CMS	25.27	228	eP	34	28.00	0.6
			e	34	55.00	
CNB	25.39	217	eP	34	30.00	1.4
CAN	25.61	217	eP	34	30.50	-0.1
MNG	25.66	166	P	34	30.60	-0.3
	0.4s		25.00nm			5.1mb
KIW	25.77	167	eP	34	31.90	0.0
PGZ	25.85	165	P	34	32.60	-0.1
	0.4s		34.00nm			5.3mb
TCW	25.97	168	P	34	34.70	0.9
CAW	26.03	167	eP	34	34.10	-0.3
MRW	26.08	168	eP	34	34.20	-0.5
WDW	26.17	167	P	34	35.10	-0.5
MTW	26.18	166	P	34	35.00	-0.7
BLW	26.37	167	P	34	36.90	-0.5
MOW	26.37	167	P	34	37.00	-0.5
QIS	27.01	256	iPd	34	43.20	-0.3
STK	28.58	231	iPd	34	58.20	0.7
	0.3s		13.00nm			5.1mb
WB5	31.88	258	eP	35	24.80	-1.9
			e	40	30.00	
ASPA	32.63	251	iPc	35	32.00	-1.2
	1.0s		87.00nm			5.5mb
			eScP	41	49.60	
KNA	37.35	265	eP	36	12.10	-1.2
	0.4s		55.00nm			5.7mb
WARB	39.48	248	iPc	36	31.00	0.0
	0.3s		6.00nm			4.9mb
MBL	45.50	256	eP	37	19.00	-0.8
	0.4s		12.00nm			4.9mb
MEKA	46.76	248	iPd	37	30.00	0.2
	0.4s		18.00nm			5.1mb
NANU	49.46	254	eP	37	50.40	-0.2
WHN	68.90	312	P	40	03.70	-0.6
MDJ	69.38	332	eP	40	05.50	-1.4
CN2	70.73	329	eP	40	12.00	-3.2X
GYA	72.60	305	P	40	26.20	-0.6
BJI	73.30	321	eP	40	31.00	0.6
TIY	74.27	317	Pd	40	36.40	0.2
SPA	74.30	180	e(P)	40	37.00	0.9
	1.0s		45.00nm			5.2mb
XAN	74.66	313	P	40	38.00	-0.5
KMI	75.15	302	Pc	40	42.00	0.2
CHG	75.82	294	iPc	40	45.40	0.0
	1.1s		18.99nm			4.8mb
CD2	76.92	308	P	40	51.30	0.0
LZH	79.28	312	eP	41	04.50	0.2
	1.5s		44.00nm			5.0mb
MAW	81.03	202	eP	41	13.00	0.3
GTA	83.64	314	Pc	41	27.20	0.3
SHL	84.37	298	iP	41	31.20	0.4
PLM	86.94	54	eP	41	44.00	0.6
			epP	42	15.00	119kmX
FBA	87.26	17	eP	41	42.50	-1.5
	1.0s		5.00nm			4.4mb
KVN	88.09	49	eP	41	50.00	1.2
			epP	42	20.00	115kmX
TNP	88.37	50	eP	41	50.00	-0.2
	0.9s		2.34nm			4.2mb
			epP	42	21.50	121kmX
GLA	88.43	55	eP	41	50.00	-0.4
			epP	42	23.50	130kmX
WMQ	93.71	314	P	42	14.70	0.1
GBA	93.80	283	Pd	42	15.30	-0.1
	1.0s		5.20nm			4.8mb
SNA	93.82	183	eP	42	15.50	0.9
	0.9s		33.61nm			5.6mb
KEV	120.84	345	ePKP	47	47.00	-1.9
SUF	125.95	339	iPKP	47	57.50	-1.6
	0.5s		16.50nm			
NUR	127.98	338	iPKP	48	03.00	0.0
	0.5s		28.10nm			
HFS	131.84	343	ePKP	48	08.80	-1.5
	0.4s		1.70nm			
NAO	132.02	345	PKP	48	09.10	-1.6
MLR	136.35	321	iPKPc	48	17.50	-2.1
KSP	138.13	333	ePKP	48	11.50	-11.1X
			i	48	24.40	
BRG	139.11	335	iPKP	48	24.00	-0.3
			i	48	26.40	
CLL	139.16	336	iPKPc	48	26.30	1.9
SKO	140.96	319	ePKP	48	21.00	-6.9X
			i	48	28.00	
TOD	142.13	337	ePKPd	48	24.28	-5.5X
ABH	142.35	339	ePKPd	48	25.60	-4.6X
SOB1	142.39	129	ePKP	48	25.30	-6.0X
WLF	143.01	340	PKPc	48	27.70	-3.5X
DOU	143.13	342	PKP	48	27.90	-3.5X
OGA	143.42	333	ePKP	48	29.50	-2.8X
	0.8s		29.00nm			
WLS	143.66	338	PKP	48	29.20	-3.3X
CDF	143.69	338	PKP	48	29.55	-3.0X
FEL	143.86	337	PKP	48	29.93	-3.0X
ECH	143.89	338	PKP	48	29.93	-2.9X
OSS	143.94	333	ePKPc	48	31.30	-1.9
MOF	144.21	337	PKP	48	31.21	-2.3
VITF	144.31	339	PKP	48	31.77	-1.7
BSF	144.35	338	PKP	48	31.77	-2.0
HAU	144.36	338	ePKP	48	31.60	-2.1
	0.8s		41.65nm			
VDL	144.39	334	ePKPd	48	32.70	-1.3
BBS	144.39	337	PKP	48	32.01	-1.7
ITR	144.50	132	ePKP	48	31.80	-3.1X
LOMF	144.74	337	PKP	48	32.56	-1.8
TMA	144.94	334	ePKPd	48	33.80	-1.1
VAI	145.17	334	PKP	48	34.20	-0.8
MMK	145.36	335	ePKPc	48	35.90	0.2
TDS	145.46	319	PKP	48	36.00	0.3
SGO	145.56	321	PKPc	48	35.60	-0.2
DIX	145.56	335	ePKPc	48	36.10	0.0
MME	145.59	330	PKPc	48	36.30	0.1
ORX	145.69	334	PKP	48	35.49	-0.6
SDI	145.70	324	PKPc	48	35.30	-0.9
FLN	145.71	346	ePKP	48	35.50	-0.4
	0.8s		73.90nm			
BDI	145.74	330	PKPc	48	35.30	-0.9
BOB	145.74	332	PKP	48	36.70	0.5
LDF	145.78	345	iPKPc	48	35.80	-0.2
	0.8s		55.05nm			
LOR	145.85	340	iPKPc	48	36.70	0.5
	0.9s		64.00nm			
LBF	146.06	340	ePKP	48	37.50	0.9
SSF	146.15	340	iPKPc	48	37.80	1.1
LSD	146.18	335	PKP	48	38.56	1.4
LPG	146.31	335	iPKPc	48	38.50	1.1
	0.8s		49.05nm			
PCP	146.32	333	PKP	48	37.64	0.5
RSP	146.38	335	PKP	48	37.33	0.1
SMF	146.40	340	ePKP	48	38.10	1.0
	1.1s		85.45nm			
AVF	146.44	340	ePKP	48	37.90	0.8
	1.0s		60.00nm			
LPF	146.52	346	iPKPc	48	38.40	1.2

31d 21h

	0.7s	88.20nm				
SOI	146.54	317	PKP	48	37.30	-0.2
BNI	146.70	335	PKP	48	39.70	1.9
FIN	146.73	333	PKP	48	38.46	0.7
RRL	146.77	335	PKP	48	39.90	1.9
BGF	146.80	341	iPKPc	48	39.40	1.7
ROB	146.81	333	PKP	48	38.77	0.9
PZZ	146.97	334	PKP	48	38.36	0.1
PLDF	147.07	339	PKP	48	40.44	2.2
IMI	147.11	333	PKP	48	37.95	-0.4
AGO	147.16	340	PKP	48	40.58	2.2
MAF	147.19	341	iPKPc	48	40.40	2.0
	0.9s	55.70nm				
TCF	147.24	341	ePKP	48	40.80	2.3
	1.2s	98.20nm				
PYM	147.46	340	PKP	48	41.59	2.7X
LSF	147.49	342	ePKP	48	41.10	2.3
BNG	147.58	253	iPKPd	48	39.20	-0.8
	0.8s	105.00nm				
			i	48	42.20	
			i	49	14.50	
			i	49	37.00	
			i	50	06.50	
MFF	147.64	344	iPKPc	48	41.30	2.3
	0.8s	85.95nm				
LBL	147.84	339	PKP	48	42.93	3.6X
FRF	147.93	333	ePKP	48	42.50	2.9X
	1.1s	73.25nm				
LRG	148.14	334	ePKP	48	43.40	3.5X
	1.4s	148.10nm				
LMR	148.17	333	ePKP	48	43.20	3.2X
	1.0s	74.00nm				
RJF	148.34	341	ePKP	48	43.70	3.5X
	1.4s	87.15nm				
CAF	148.51	340	iPKPc	48	44.20	3.6X
	0.8s	30.90nm				
LFF	148.91	342	ePKP	48	45.10	4.0X
	1.0s	62.00nm				
LVI	148.96	320	PKPd	48	44.90	3.5X
LPO	149.00	341	iPKPc	48	45.30	4.0X
	0.8s	45.65nm				
	S.D. = 1.1	on 103 of 130 obs.				

% JUL 31, 1989 21h 38m 42.96± 0.74s
37.529 N ± 6.6km 29.784 E ± 7.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BCK	0.64	96	iPg	38	55.70	-0.2
			iSg	39	06.70	
ELL	0.79	173	iPg	38	58.50	0.2
			iSg	39	11.00	
KHL	0.82	346	ePg	38	58.70	-0.2
			iSg	39	13.70	
YER	1.26	252	iPn	39	06.30	-0.1
ALT	1.55	9	ePn	39	11.00	0.3
	S.D. = 0.3	on	5 of	5	obs.	

JUL 31, 1989 22h 06m 15.38± 0.52s
4.679 N ± 8.1km 95.987 E ± 7.0km
DEPTH = 33.0km (normal)
4.7mb (7 obs.)
NORTHERN SUMATERA (706)

IPM	5.02	91	ePd	07	29.00	-1.5
	0.6s	41.60nm			5.0mb	
			e	08	26.40	
SNG	5.23	61	ePn	07	31.70	-1.7
			ePg	07	44.50	
			eSg	08	28.20	
KLM	5.86	105	eP	08	07.50	25.3X
KGM	7.78	110	eP	08	10.00	0.8
			e	10	26.50	
NNT	8.69	25	ePn	08	17.80	-4.0X
			e	09	43.50	
			eSg	10	43.50	
LOE	13.84	24	eP	09	33.20	1.6
			e	13	26.00	
CHG	14.34	11	ePd	09	44.80	6.6X
	1.1s	12.66nm			4.4mb	
CHTO	14.34	11	eP	09	38.00	-0.2
	1.0s	10.00nm			4.4mb	
QIZ	19.66	42	eP	10	50.00	5.4X
GBA	20.33	297	Pd	10	50.70	-1.0
	0.7s	6.40nm			4.1mb	
SHL	21.14	350	iP	11	00.00	-0.1
HYB	21.25	308	ePd	11	02.00	0.8
KMI	21.34	17	eP	11	03.50	1.3
GYA	23.94	24	P	11	28.60	0.9
LSA	25.30	350	P	11	42.00	0.8
CD2	27.10	15	eP	11	57.40	0.1
XAN	31.59	21	eP	12	36.00	-1.4
GTA	34.75	5	eP	13	03.70	-1.1
QUE	37.34	316	eP	13	26.50	-0.4
BJI	39.64	25	eP	13	48.00	2.3
WMQ	39.66	351	eP	13	49.80	3.7X
COOL	42.76	147	eP	14	13.10	1.6
WB5	44.93	124	eP	14	29.00	-0.3
MAIO	45.97	318	eP	14	37.00	-0.4
ASPA	46.48	129	iPd	14	41.90	0.4
	0.9s	22.00nm			5.1mb	
CTA	55.17	118	iPc	15	46.90	-0.6
	1.0s	11.00nm			4.8mb	
HRI	62.70	305	eP	16	40.00	0.2
PRNI	62.70	302	iPc	16	40.00	0.3
VRI	72.27	317	iPc	17	38.50	-1.0
MLR	72.73	316	iPd	17	40.00	-2.4
BNG	77.15	273	ePc	18	09.40	1.2
	0.6s	5.00nm			4.7mb	
ZOBO	160.61	232	ePKP	26	21.00	6.5X
	S.D. = 1.2	on 26 of 32 obs.				

• JUL 31, 1989 22h 07m 21.52± 3.17s
45.465 N ±10.0km 3.737 E ±24.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (LDG).

LBL	0.42	236	Pg	07	29.94	-0.1
			Sg	07	35.33	
PLDF	0.51	351	Pg	07	31.55	-0.4
			Sg	07	38.19	
PYM	0.59	299	Pg	07	32.96	-0.5
			Sg	07	40.31	
AGO	0.72	324	Pg	07	35.58	-0.2
MAF	1.11	313	Pg	07	42.60	0.2
			Sg	07	56.70	
BGF	1.26	331	Pg	07	45.50	0.6
			Sg	08	00.90	
CAF	1.30	246	Pg	07	46.20	0.6
			Sg	08	03.00	
TCF	1.35	308	Pg	07	47.20	0.9
			Sg	08	03.70	
	S.D. = 0.6	on	8 of	8	obs.	

% JUL 31, 1989 23h 06m 37.34± 1.78s
36.648 N ±17.9km 3.074 W ± 7.4km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.2 (MDD).

AFC	0.71	328	iP	06	50.40	-1.1
			eS	06	58.00	
ENIJ	0.76	65	iP	06	52.00	-0.2
			eS	07	00.50	
MAL	1.08	275	ePn	06	57.80	0.2
			iSg	07	11.50	
EBAN	1.62	340	iP	07	06.40	0.4
			eS	07	25.00	
EALH	1.79	47	eP	07	08.00	-0.5
EVIA	2.04	13	eP	07	13.30	1.1
			eS	07	37.00	
EHOR	2.09	305	eP	07	16.30	3.5X
			eS	07	42.60	
TOL	3.32	347	ePg	07	49.00	18.6X
			iSg	08	21.00	
	S.D. = 1.0	on	6 of	8	obs.	

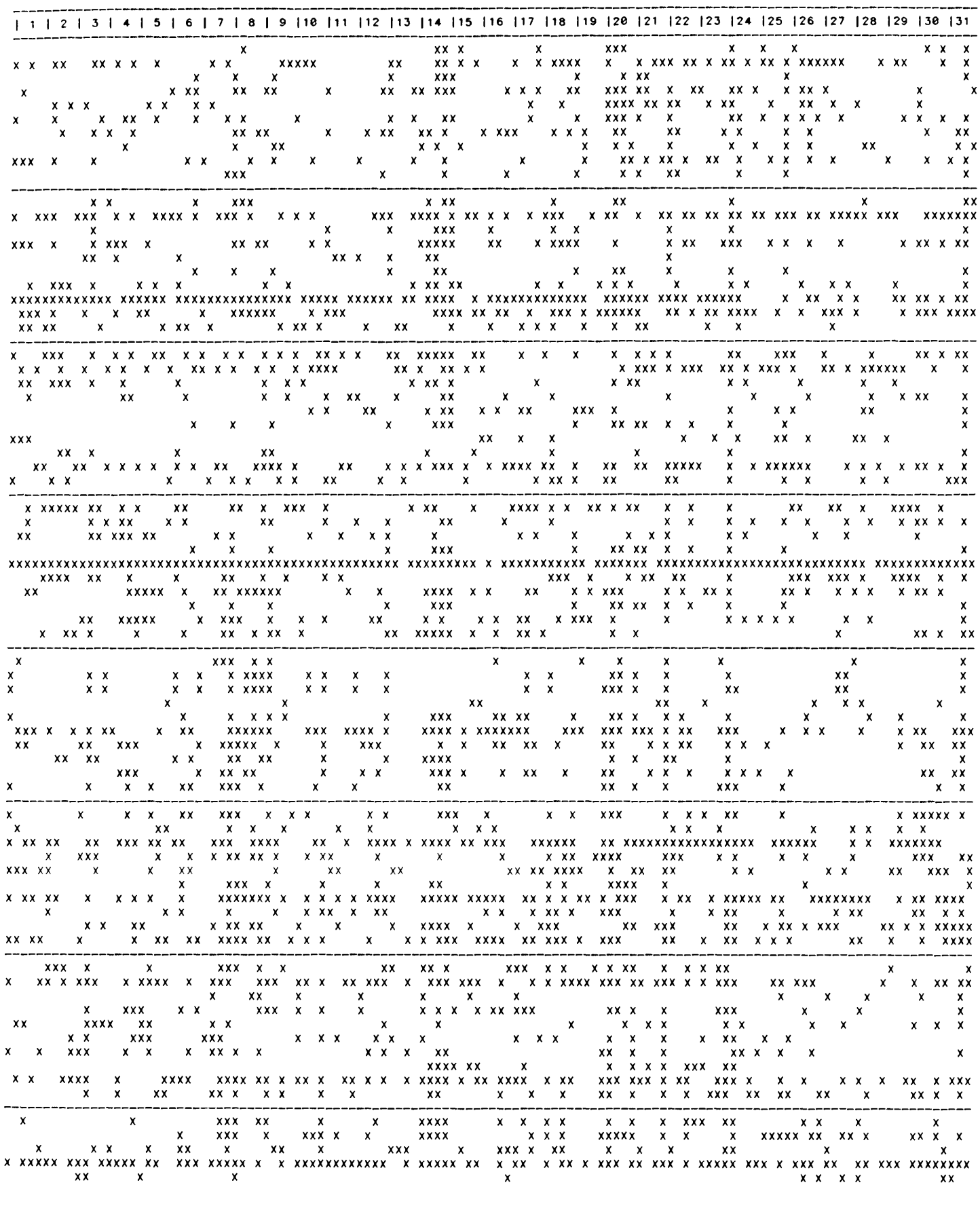
JUL 31, 1989 23h 56m 07.59± 0.74s
40.708 N ± 8.5km 20.878 E ± 6.1km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

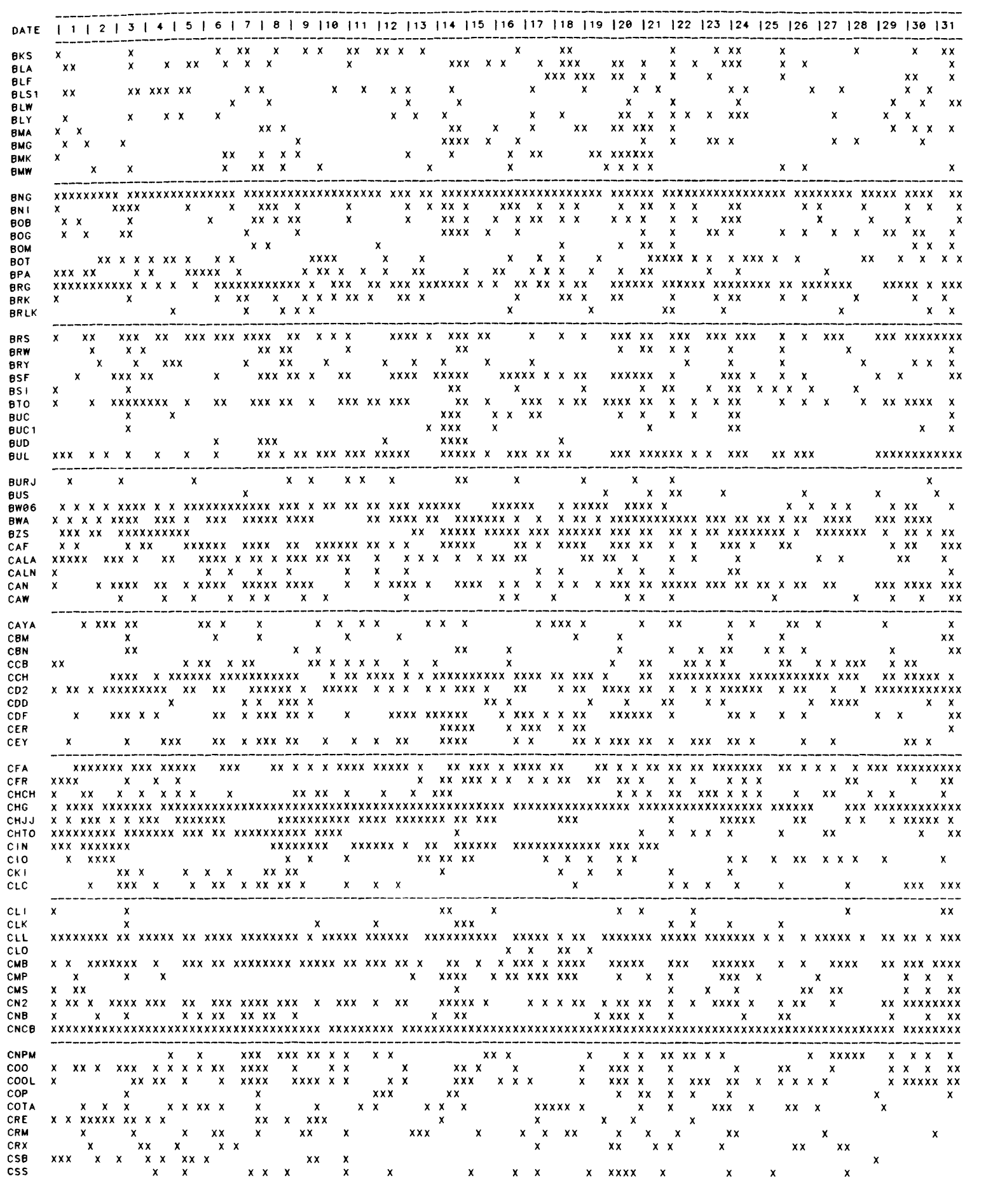
TPE	0.78	238	iPgc	56	22.70	-0.1
TIR	1.00	310	ePg	56	26.00	-0.5
PHP	1.03	342	ePg	56	27.80	0.7
LIT	1.37	116	eP	56	33.30	0.5
VAY	1.42	64	ePn	56	33.00	-0.4
KNT	1.60	73	eP	56	35.60	-0.3
BCI	1.77	340	ePg	56	22.00	-16.3X
	S.D. = 0.7	on	6 of	7	obs.	

STATION DATA REPORT FOR JULY, 1989

1220 stations reported 49625 reoding orrival groups

X = data received for this 6-hour time period

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BMW
BNG
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BRLK
BRS
BRW
BRY
BSF
BSI
BTO
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BURJ
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BW06
BWA
BZS
CAF
CALA
CALN
CAN
CAW
CAYA
CBM
CBN
CCB
CCH
CD2
CDD
CDF
CER
CEY
CFA
CFR
CHCH
CHG
CHJJ
CHTO
CIN
CIO
CKI
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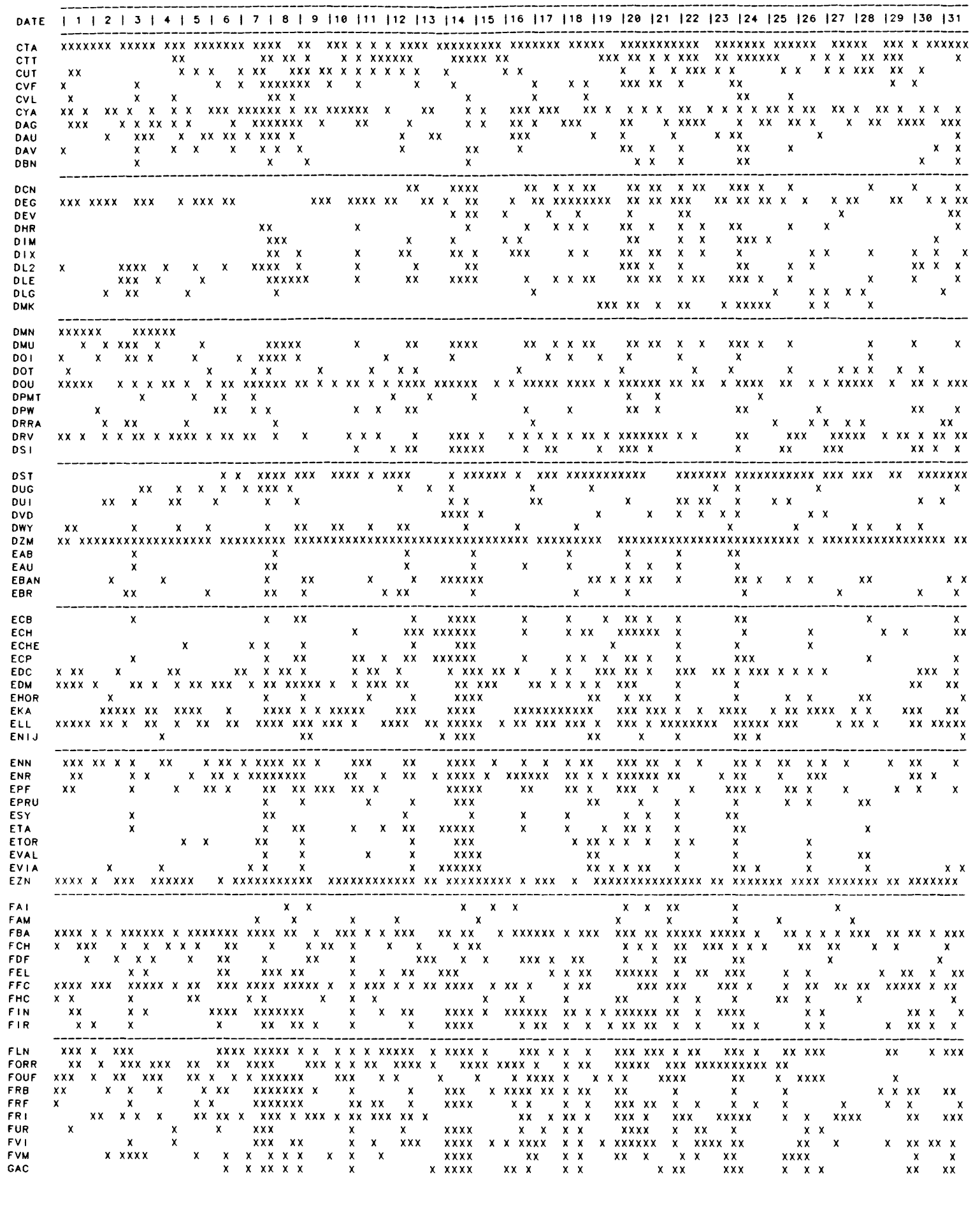
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DAG
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DL2
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DMU
DOI
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DRRA
DRV
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EAB
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ENIJ
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EPF
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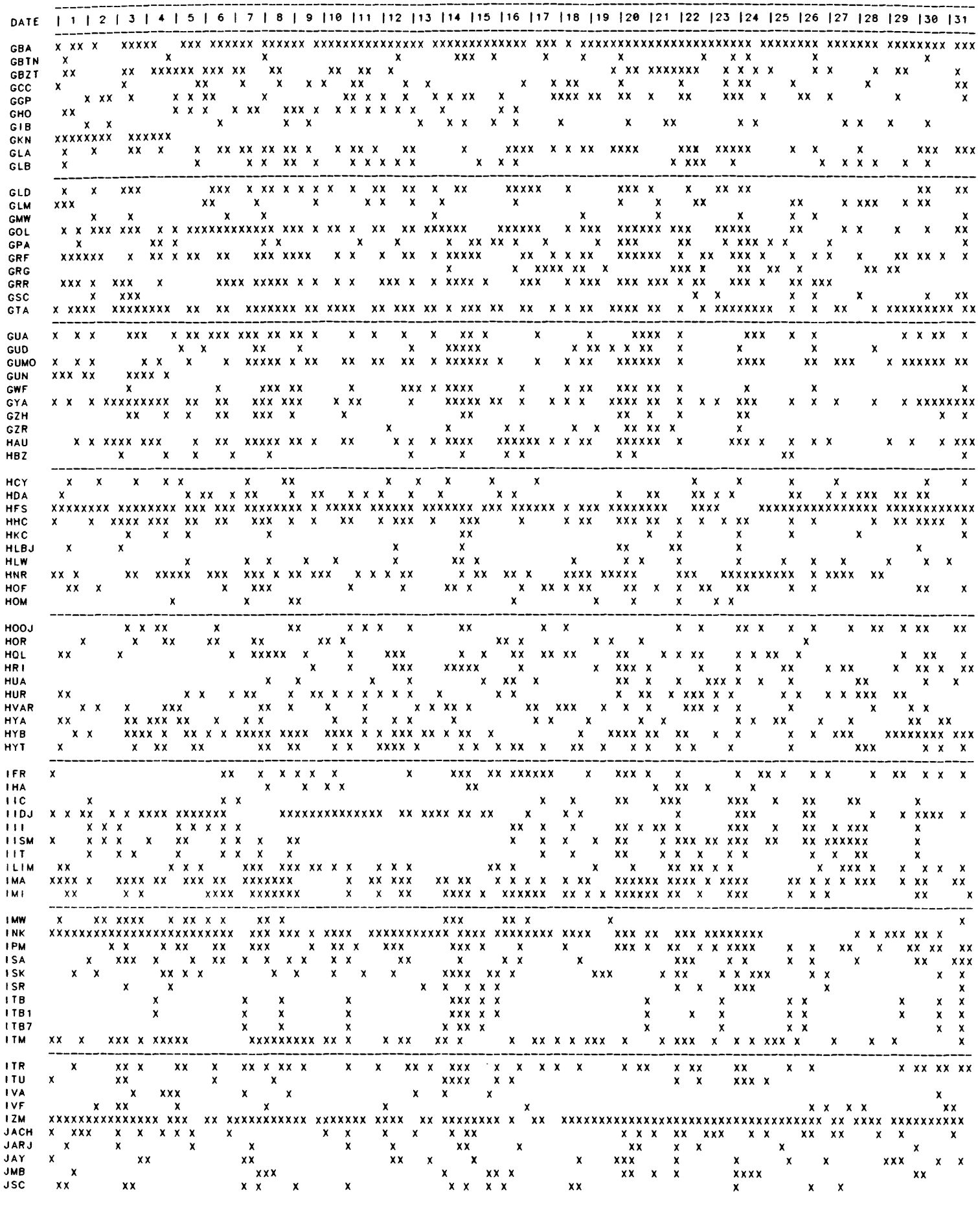
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GLD
GLM
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GPA
GRF
GRG
GRR
GSC
GTA
GUA
GUD
GUMO
GUN
GWF
GYA
GZH
GZR
HAU
HBZ
HCY
HDA
HFS
HHC
HKC
HLBJ
HLW
HNR
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HOM
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HOR
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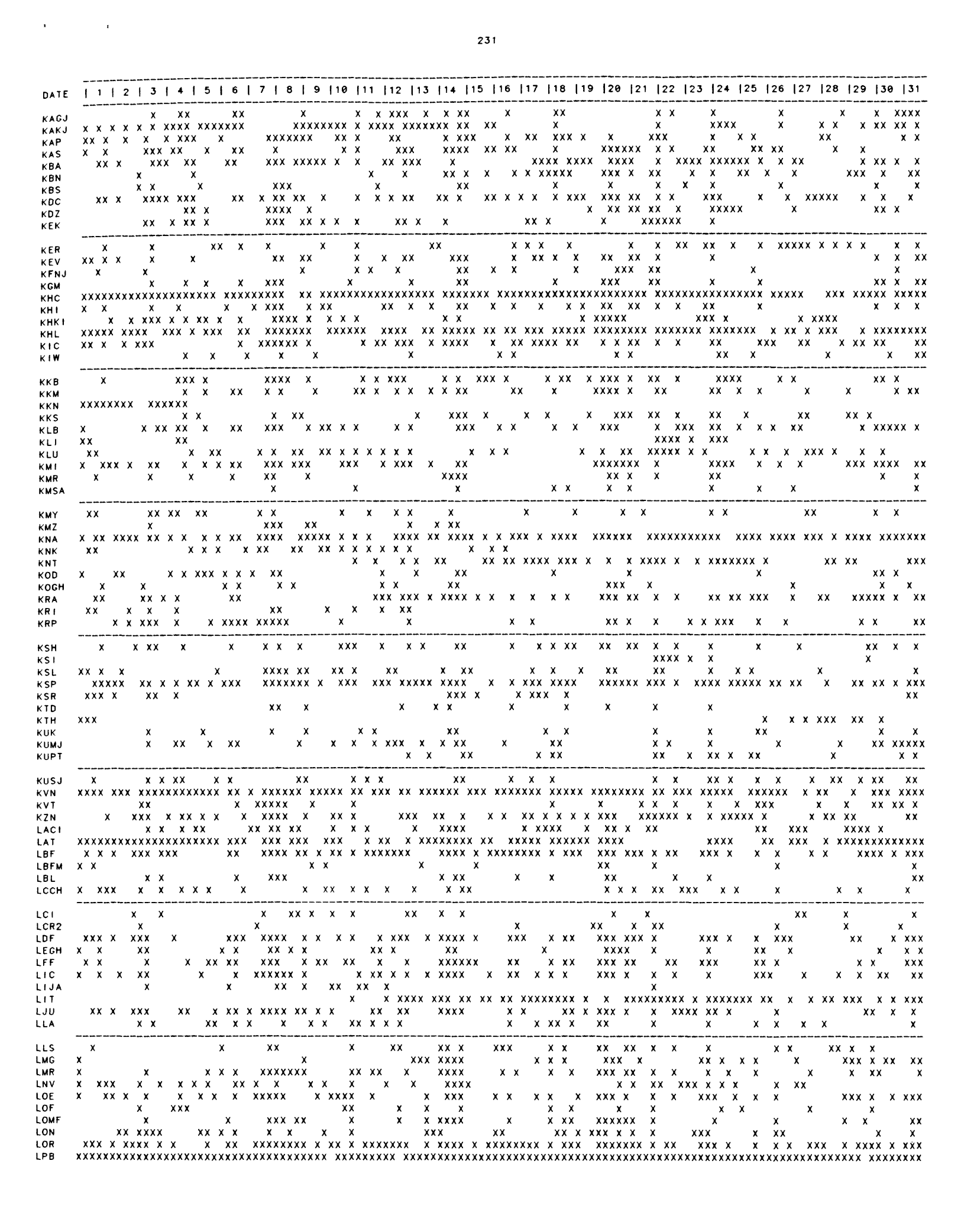
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KHL
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KKB
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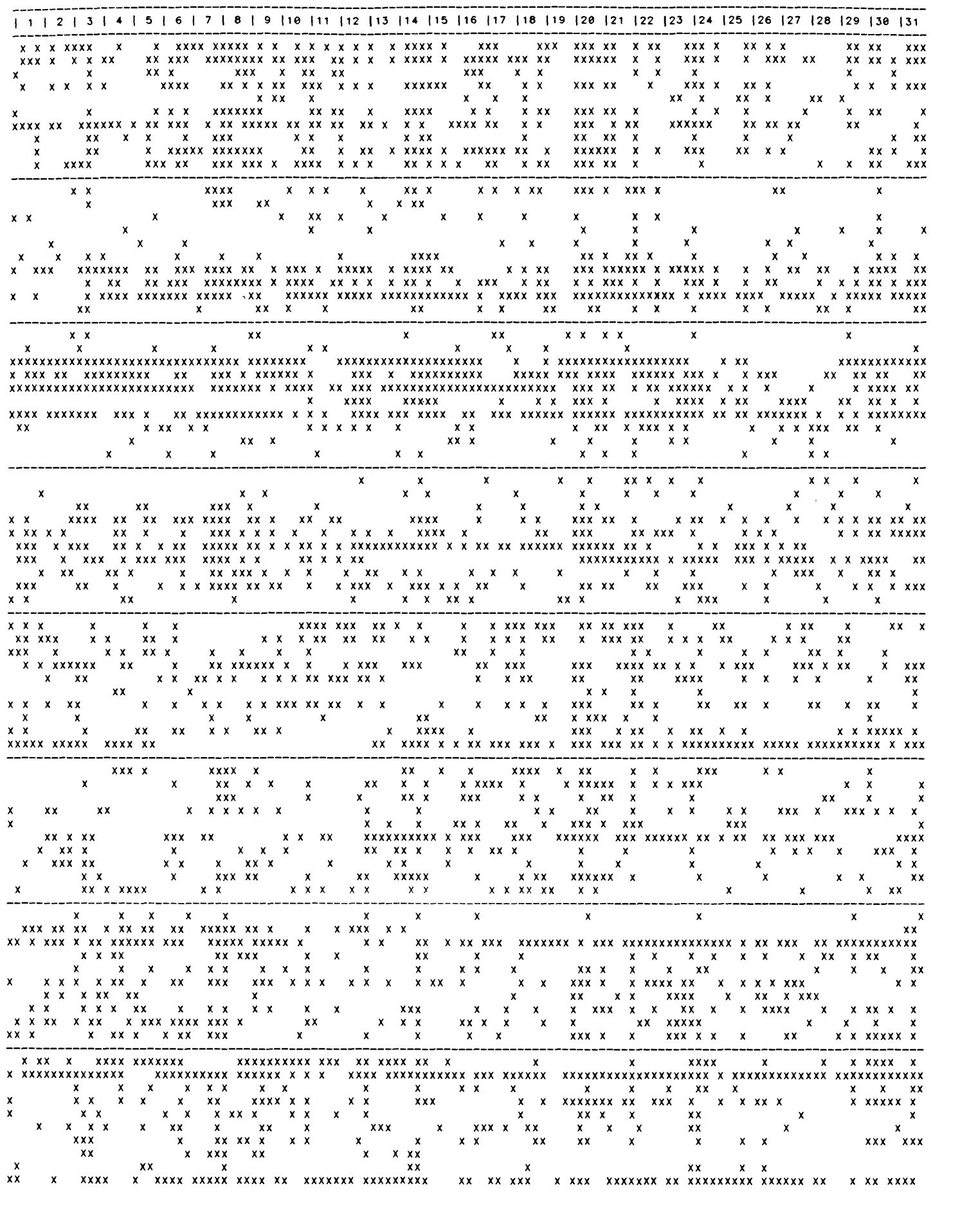
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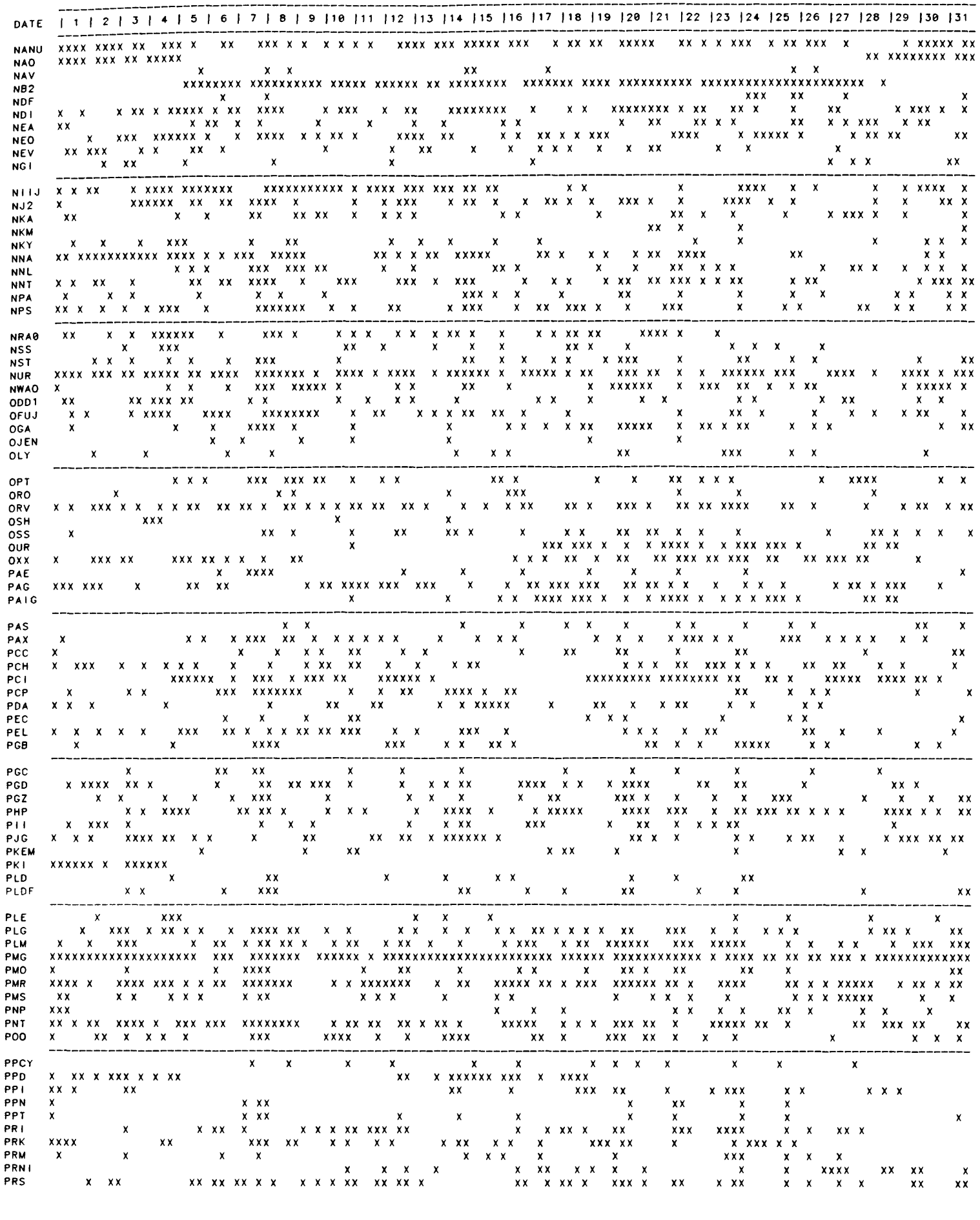
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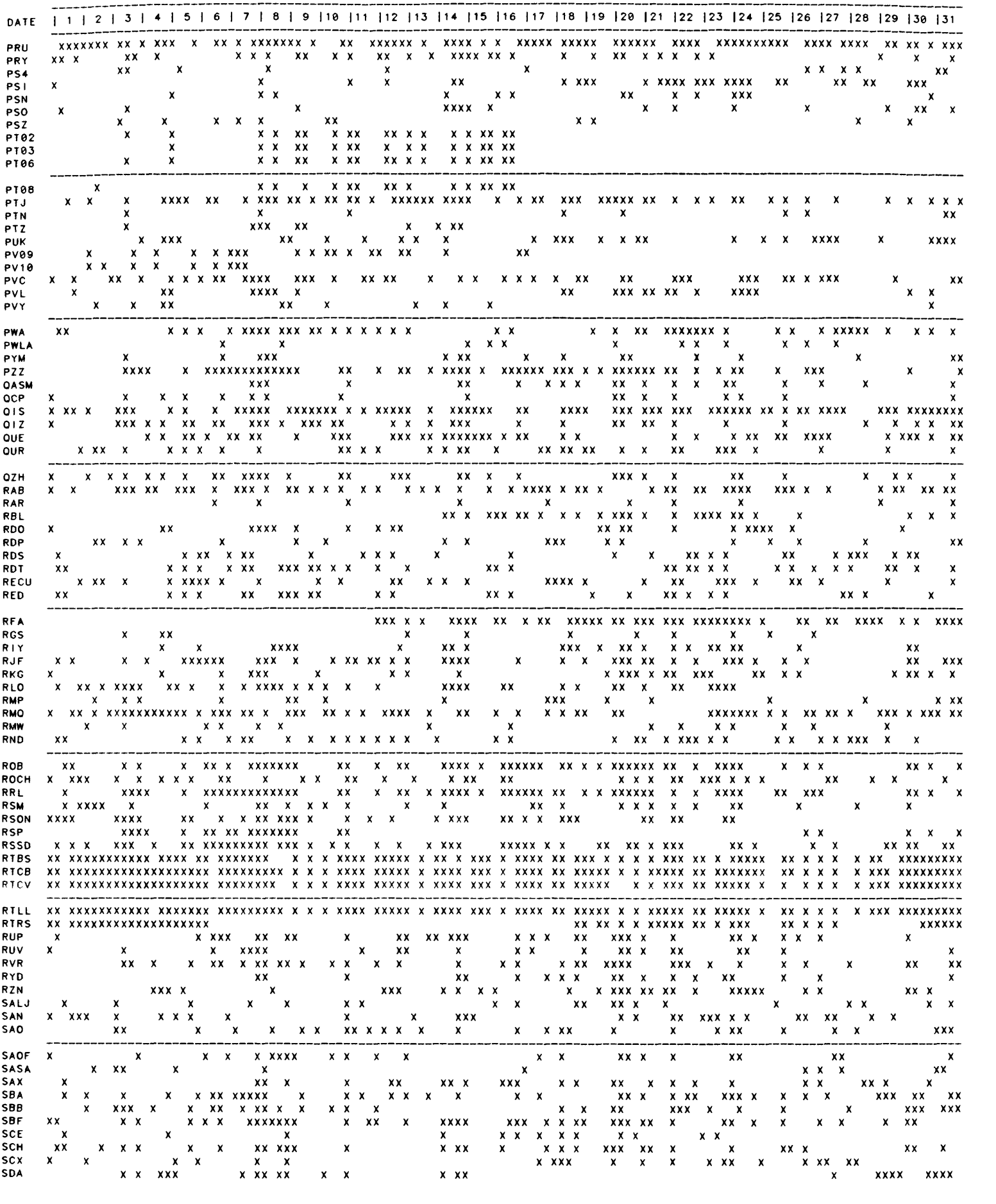
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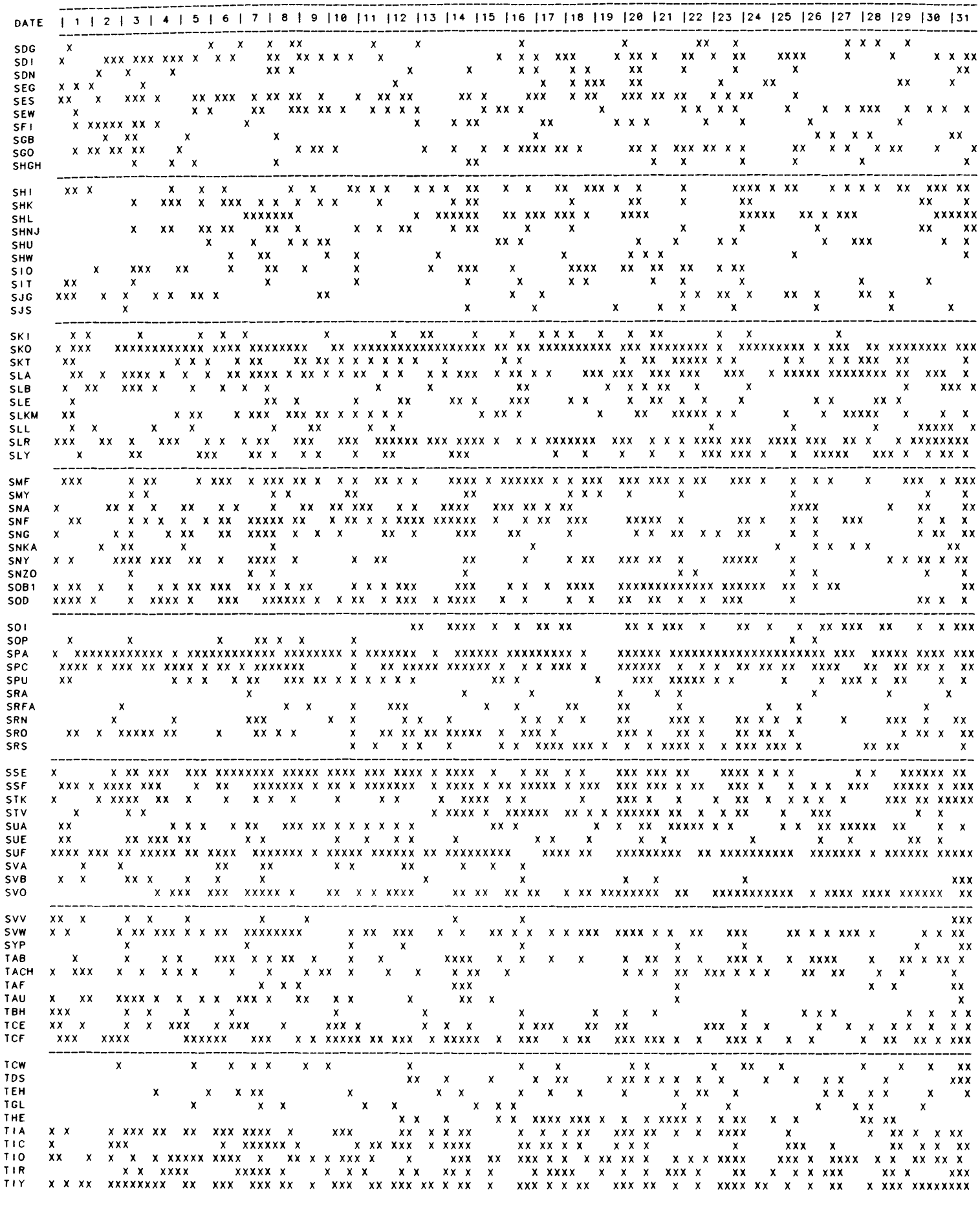
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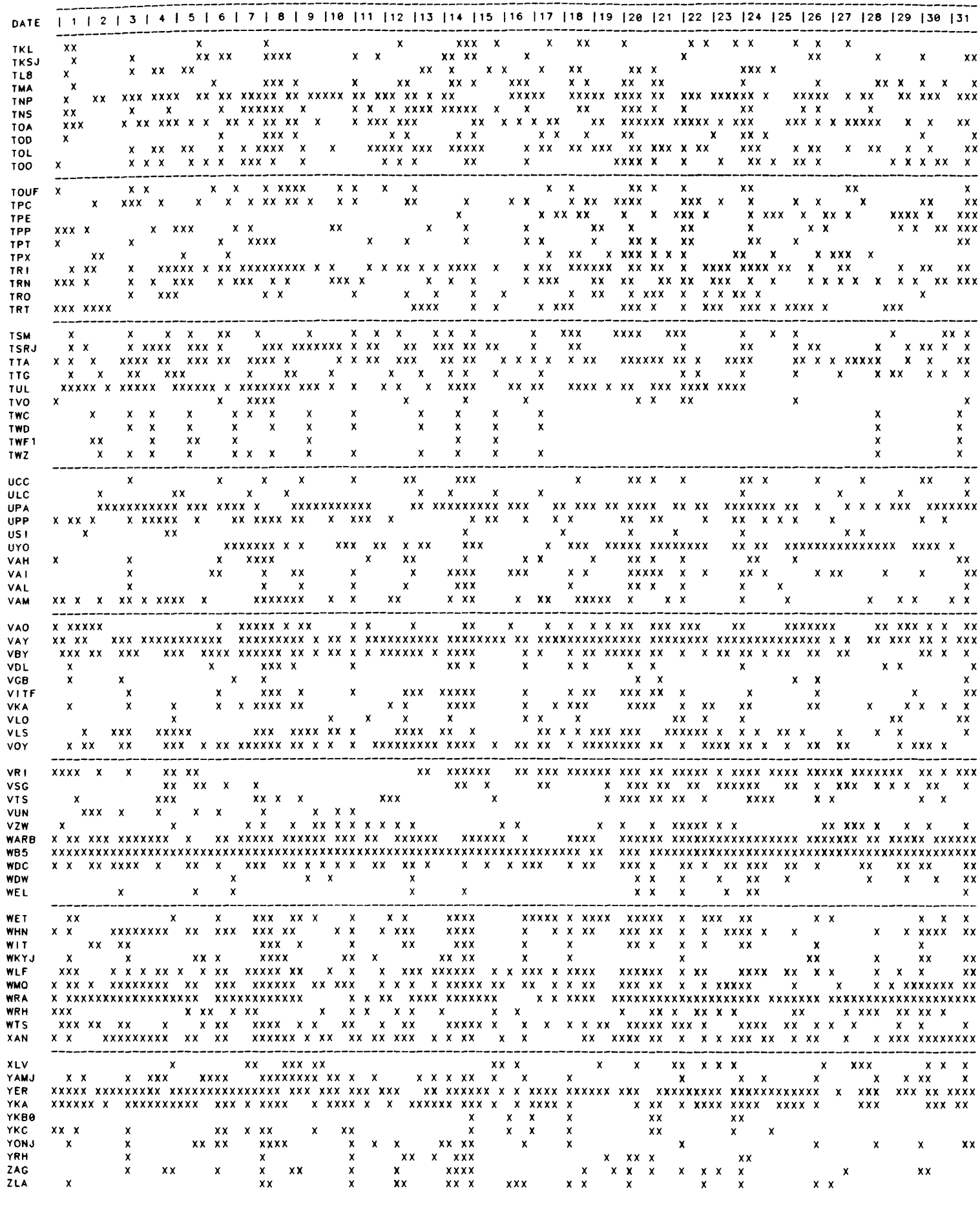
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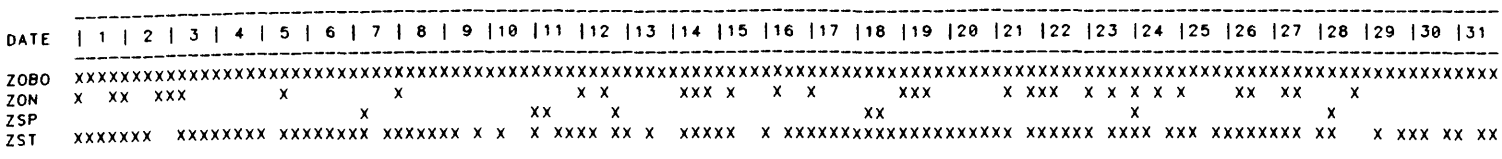

The following stations each reported less than 10 readings:

ABHA	ABL	ABTN	ACHM	ACR	ACU	ADH	AGAL	AGMR	AGX	AJI	AKSR	ALN	AMAN	ANMO	ANTO	APA	APM
APW	AR6	ARO	ARUT	ASR	ASW	ATA	AUI	AVN	BAC	BALA	BBU	BCAO	BCPM	BDF	BEE	BENE	BERF
BGMT	BHKY	BIR	BJA	BKR	BLHA	BLP	BLS3	BMR	BNH	BNT	BRAS	BRD	BRF	BRN	BUT	BVA	CBTI
CBZ	CCMT	CCW	CDFW	CGL	CGLM	CHN	CNBA	CNIL	CNK	COL	COY	COZ	CPE	CPW	CRF	CRPM	CRT
CTAO	CTFE	CTGM	CTI	CVA	CVD	CVI	CVO	CVT	CVVD	CZM	DAF	DHN	DHW2	DLM	DMMT	DRA	DSH
DSVT	DTMT	DWU	EALH	EBG	EBL	ECRI	EDI	EDU	EJIF	ELO	EMEL	EMK	EMM	EMON	EMS	EPLA	ERC
ERK	EROQ	ERUA	ESD	ESEL	ESK	ETER	ETP	ETW	EVV	EZAM	FKS	FL2	FLAG	FMW	FRS	FRU	FUG
FUQ	GANF	GBN	GBR	GBZ	GCAZ	GCG	GCM	GELF	GGC	GIBL	GIF	GLK	GMB	GMO	GNZ	GRB3	GRB4
GRI	GRM	GROR	GSH	GSM	GT2	GULW	HAC	HATZ	HBF	HBVT	HIA	HIN	HIR	HITZ	HJJ	HON	HPI
HQN	HRT	HRV	HRY	HSR	HTW	HUG	HUTZ	HVA	HVD	HWK	HWV	IAS	ICR	IKP	IKZ	ILT	IRK
ITG	JAT	JBO	JCK	JCR	JHN	JIZN	JLK	JVI	KBR	KDS	KETZ	KIM	KIP	KKG	KLM	KMG	KMJ
KMOR	KOF	KOT	KRNA	KUG	KUS	LAK	LAL	LCCM	LCH	LCNE	LHG	LHS	LIO	LLKY	LMW	LNOR	LPI
LVP	MAJO	MBO	MCP	MCW	MCY	MDB	MEMT	MGM	MHI	MID	MIM	MIS	MIT	MIY	MKL	MKT	MLK
MMG	MMU	MNA	MOMI	MRK	MRT	MSAL	MSI	MTD	MTMW	MTU	MZX	NAC	NEM	NEZ	NGT	NLO	NWRM
NZJ	OBN	OBO	OBZ	OC2	OFU	OHR	ONA	ONR	OPA	ORX	OSG	PATW	PCA	PCG	PDB	PDCR	PET
PGO	PHAM	PIG	PKKY	PLH	PN6	PNJ	PNL	POF	PPE	PPK	PRAF	PRIN	PSG2	PT10	PTI	PTP	PTS
PTT	PUL	PUV	PUYF	PV01	PV02	PV04	PV05	PV06	PV07	PVV	PWV	PYN	PZI	QCS	QUTJ	RAGM	RAO
RATZ	RDG	REC	REVF	REY	RFI	RIV	RKT	RMN	RSW	RTY	RVC	RVW	RW1	RW5	SAL	SAP	SAW
SCN	SCP	SEK	SEN	SFG	SGAM	SGE	SGH	SGS	SIM	SLKY	SLP	SMMM	SMW	SNK	SOG	SOKY	SONG
SOSW	SQF	SRG	SRO	SSO	STD	STR	STS	STU	SUR	SVP	SWZ	TAIF	TAT	TATO	TAVF	TAZ	TBI
TBM	TBR	TBT	TBY	TCK	TCT	TDD	TDH	TDL	TDM	TER	TIK	TIM	TLG	TMP	TOK	TPR	TREF
TSI	TSU	TTH	TUNG	TUTZ	TWG	TWK	TWM1	TWQ	UER	UNM	UNZ	UTS	UTU	UZH	VBEM	VCR	VFP
VIE	VILF	VIPM	VLL	VLMM	VTHM	VVO	VWV	WAH2	WAX	WEGH	WG2	WHH	WLS	WMTN	WMZ	WPW	WRD
WRN	YEL	YKU	YMT5	YOK	YSS	ZNT											

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Langitude	Elev.	Networks
AAHD		Abu Hodid Egypt opened 1982? HLW code AHD.	23 44 46.8 N (23.7463)	32 45 10.2 E (32.7528)	...	HLW
AAPN		Arroyo Pinares Spain	37 18 27.6 N (37.3077)	4 07 15.6 W (4.1210)	1160.0	CRT
AAT	R	Alma-Ata Kazakh S.S.R., U.S.S.R.	...	...	...	
ABH		Alteburg Rheinland-Pfolz, Fed. Rep. of Germany	49 52 54.0 N (49.8817)	7 32 51.0 E (7.5475)	620.0	KRW
ABHA		Abha Saudi Arobia opened 198811.	18 15 .. N (18.2500)	42 45 .. E (42.7500)	2200.0	RYD
ABR	R	El Abra Veracruz, Mexico	19 48 25.2 N (19.8070)	96 32 02.4 W (96.5340)	520.0	IIM
ACHM		Chimeneas Spain	37 06 18.0 N (37.1050)	3 49 46.8 W (3.8297)	862.0	CRT
ACP	R	Acatlan Puebla, Mexico	18 12 28.2 N (18.2078)	98 03 34.8 W (98.0597)	1250.0	UNM
AECU		Ecuador Network Ecuador	0 16 13.8 S (0.2705)	78 24 25.2 W (78.4070)	3000.0	OUI
AFAR		Ash Flat Arkansas, U.S.A.	36 08 00.0 N (36.1333)	91 31 52.2 W (91.5312)	239.0	TEIC
AFH	RD	Ashford Hill Englond, United Kingdom	51 20 38.0 N (51.3439)	1 13 11.0 W (1.2197)	91.0	BKN
AFL	R	Alpe Faloria Veneto, Italy	...	...	...	TRI
AGAL		Gebel Alisa Egypt opened 1982? HLW code GAL.	23 25 42.6 N (23.4285)	32 49 31.8 E (32.8255)	...	HLW
AGD	D	Arta Grotte Djibauti opened 19850509.	11 31 48.0 N (11.5300)	42 49 12.0 E (42.8200)	450.0	ARO GEOS
AGG	R	Agios Georgios Greece	39 01 20.0 N (39.0222)	22 19 49.0 E (22.3303)	540.0	THE
AGMR		Gebel Marawa Egypt opened 1982? HLW code GMR.	23 32 15.6 N (23.5377)	32 32 25.8 E (32.5405)	...	HLW
AGO		Saint Agoulin Auvergne, Fronce opened 1984?	46 03 08.6 N (46.0524)	3 07 51.8 E (3.1311)	523.0	CFF
AGRW		Gebel Rewraw Egypt opened 1982? HLW code GRW.	23 38 42.0 N (23.6450)	32 48 34.8 E (32.8097)	...	HLW
AGX	D	Aguascalientes Aguoscalientes, Mexico opened 1988.	21 52 43.2 N (21.8787)	102 18 03.6 W (102.3010)	...	UNM
AKGH		Akosombo Ghana opened 1987.	6 14 36.0 N (6.2433)	0 02 25.0 E (0.0403)	377.0	KUK
AKL		Akola Maharashtra, India	20 07 .. N (20.1167)	77 07 .. E (77.1167)	310.0	NDI
AKRL		Khor El Raml Egypt opend 1982? HLW code KRL.	23 39 36.0 N (23.6600)	32 42 36.0 E (32.7100)	...	HLW
AKSR		Khor Sakr Egypt opened 1982? HLW code KSR.	23 38 13.8 N (23.6372)	33 01 15.0 E (33.0208)	...	HLW
AKUR		Kurkur Egypt opened 1982? HLW code KUR.	23 53 38.4 N (23.8940)	32 46 33.6 E (32.7760)	...	HLW
ALBI	R	Allahabad Uttar Pradesh, India	25 29 .. N (25.4833)	81 50 .. E (81.8333)	107.0	NDI
ALJ		Aljibe Spain	36 40 25.2 N (36.6737)	5 36 14.4 W (5.6040)	1091.0	SFS
ALME	R	Alemoyo Ethiopia	9 25 48.0 N (9.4300)	42 02 24.0 E (42.0400)	2133.0	
ALN		Alexandroupolis Greece opened 198906.	40 53 50.0 N (40.8972)	26 02 44.0 E (26.0456)	110.0	THE
ALOJ		Loja Spain	37 06 32.4 N (37.1090)	4 06 18.0 W (4.1050)	1340.0	CRT
ALPW		Alpine Wyoming, U.S.A. opened 198601.	43 09 02.3 N (43.1506)	110 59 52.1 W (110.9978)	1792.0	USBR
AMAN		Manam Egypt opened 1982? HLW code MAN.	23 56 00.0 N (23.9333)	32 56 02.4 E (32.9340)	...	HLW
ANAL		New Aliso Egypt opened 1982? HLW code NAL.	23 24 36.0 N (23.4100)	32 40 40.8 E (32.6780)	...	HLW
ANCC		Alta Anchicaya Colombia opened 1987.	3 30 55.2 N (3.5153)	76 52 00.0 W (76.8667)	540.0	UVC
ANGC	R	Angol Malleco, Chile	37 47 00.0 S (37.7833)	72 42 30.0 W (72.7083)	...	
ANGV	R	Angostura Venezuela opened 1984.	9 42 18.0 N (9.7050)	69 31 18.1 W (69.5217)	680.0	CAR

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRIN'ED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
ANMR		North Mavowa	23 40 37.2 N (23.6770)	32 32 32.4 E (32.5423)	...	HLW
		Egypt				
		opened 1982? HLW code NMR.				
AOI		Ancona (Monte Conero)	43 33 00.0 N (43.5500)	13 36 07.2 E (13.6020)	530.0	SSO
		Morche, Italy				
APHE		Pico Herrero	36 57 07.2 N (36.9520)	3 41 16.8 W (3.6880)	1360.0	CRT
		Spain				
APKP	F	(phase code designation)				
APM		Augspurger Mountain	45 44 10.0 N (45.7361)	121 40 50.0 W (121.6806)	865.0	SEA
		Washington, U.S.A.				
		opened 198110.				
APW		Alpha Peak	46 39 06.0 N (46.6517)	122 38 51.0 W (122.6475)	457.0	SEA
		Washington, U.S.A.				
AQBJ		'Aqaba	29 43 40.8 N (29.7280)	35 03 00.0 E (35.0500)	170.0	JSO
		Jordan				
		opened 1989.				
ARL		.....	17 24 43.2 N (17.4120)	93 07 04.8 W (93.1180)	...	UNM
		Chiapas, Mexico				
ARNI	R	Argonne North	43 40 15.0 N (43.6708)	112 37 04.8 W (112.6180)	1552.0	USGS
		Idaho, U.S.A.				
ARTJ		Al Aritein	32 14 48.0 N (32.2467)	36 49 42.0 E (36.8283)	1058.0	JSO
		Jordan				
		opened 1987.				
AS01	R	Alice Springs Array	23 39 53.0 S (23.6647)	133 57 03.0 E (133.9508)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS02	R	Alice Springs Array	23 40 45.0 S (23.6792)	133 56 13.0 E (133.9369)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS03	R	Alice Springs Array	23 40 28.0 S (23.6744)	133 55 11.0 E (133.9197)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS04	R	Alice Springs Array	23 39 35.0 S (23.6597)	133 55 45.0 E (133.9292)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS05	R	Alice Springs Array	23 38 57.0 S (23.6492)	133 56 51.0 E (133.9475)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS06	R	Alice Springs Array	23 38 51.0 S (23.6475)	133 58 17.0 E (133.9714)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS07	R	Alice Springs Array	23 39 56.0 S (23.6656)	133 58 11.0 E (133.9697)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS08	R	Alice Springs Array	23 40 53.0 S (23.6814)	133 57 36.0 E (133.9600)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS09	R	Alice Springs Array	23 41 58.0 S (23.6994)	133 56 29.0 E (133.9414)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS10	R	Alice Springs Array	23 41 49.0 S (23.6969)	133 54 50.0 E (133.9139)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS11	R	Alice Springs Array	23 40 42.0 S (23.6783)	133 53 52.0 E (133.8978)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS12	R	Alice Springs Array	23 39 59.0 S (23.6664)	133 54 16.0 E (133.9044)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS13	R	Alice Springs Array	23 39 07.0 S (23.6519)	133 53 40.0 E (133.8944)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS14	R	Alice Springs Array	23 39 06.0 S (23.6517)	133 54 37.0 E (133.9103)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS15	R	Alice Springs Array	23 38 08.0 S (23.6356)	133 54 44.0 E (133.9122)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS16	R	Alice Springs Array	23 38 13.0 S (23.6369)	133 55 48.0 E (133.9300)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS17	R	Alice Springs Array	23 39 52.0 S (23.6644)	133 59 30.0 E (133.9917)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS18	R	Alice Springs Array	23 41 24.0 S (23.6900)	133 58 51.0 E (133.9808)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
AS19	R	Alice Springs Array	23 42 16.0 S (23.7044)	133 57 45.0 E (133.9625)	550.0	AUST
		Northern Territory, Australia				
		AUST opened 1986.				
ASAR	R	.....	...	...	...	AUST
		Northern Territory, Australia				
ASKD		Sinn el Kaddab	23 39 34.8 N (23.6597)	32 23 04.8 E (32.3847)	...	HLW
		Egypt				
		opened 1982? HLW code SKD.				
ASME	R	Asmera	15 21 00.0 N (15.3500)	38 55 48.0 E (38.9300)	2420.0	
		Ethiopia				
ASMO		Sierra Morrones	37 21 28.8 N (37.3580)	3 44 34.8 W (3.7430)	1170.0	CRT
		Spain				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
ASPF		Aspremont Provence-Cote d'Azur, France	43 46 05.4 N (43.7682)	7 15 29.9 E (7.2583)	850.0	STR
ASR		Mount Adams--Stagmon Ridge Washington, U.S.A.	46 09 02.4 N (46.1507)	121 35 33.6 W (121.5927)	1280.0	SEA
ATEJ		Tejeda Spain	36 54 54.0 N (36.9150)	4 00 50.4 W (4.0140)	1480.0	CRT
ATN		Antennamare (Messina) Sicilia, Italy	38 09 38.0 N (38.1606)	15 27 46.0 E (15.4628)	350.0	ERC
ATZ		Mount Atzmon Isroel opened 1986.	32 49 17.8 N (32.8216)	35 16 11.0 E (35.2697)	500.0	JER
AURF		Auriere Provence-Cote d'Azur, Fronce	43 53 14.4 N (43.8873)	7 19 39.0 E (7.3275)	1040.0	STR
AUW		Augustine West Western Alaska, Alaska, U.S.A. opened 198607.	59 22 12.3 N (59.3701)	153 28 14.9 W (153.4708)	276.0	GIA
AVN		Avellanes Spain Sent to NEIS by MDD.	41 53 01.2 N (41.8837)	0 45 06.6 E (0.7518)	630.0	MRB
AVOW		Apres Vouz Peak Wyoming, U.S.A. opened 198601.	43 36 39.8 N (43.6111)	110 48 50.3 W (110.8140)	2036.0	USBR
AWAL		West Alisa Egypt opened 1982? HLW code WAL.	23 22 45.0 N (23.3792)	32 34 57.0 E (32.5825)	...	HLW
AWDQ		Awoonga Dam No. 3 Queensland, Australia opened 19870701. QDM code AWD.	24 02 52.1 S (24.0478)	151 18 56.5 E (151.3157)	110.0	QDM
AWKL		West Kalabsha Egypt apened 1982? HLW code WKL.	23 25 30.6 N (23.4252)	32 26 49.2 E (32.4470)	...	HLW
AYK	R	Aydincik Turkey opened 198801.	36 09 08.0 N (36.1522)	33 19 37.0 E (33.3269)	50.0	ISK
AYN		Al 'Uyaynoh Soudi Arabio opened 1986.	28 52 12.0 N (28.8700)	36 00 00.0 E (36.0000)	...	RYD
AZI		Avezzano Abruzzo, Itoly opened 1987.	41 59 18.4 N (41.9884)	13 26 08.4 E (13.4357)	...	ROM
AZO	R	..... Oaxaco, Mexico	15 57 57.6 N (15.9660)	97 24 28.8 W (97.4080)	...	UNM
BADA		Al Bad' Soudi Arabia opened 1986.	28 31 22.8 N (28.5230)	35 00 07.2 E (35.0020)	...	RYD
BAE1	RD	Brosilia Arroy Site E1 Distrito Federal, Brazil opened 197101?	15 39 00.0 S (15.6500)	47 56 49.0 W (47.9469)	1200.0	BDF
BAE2	RD	Brasilio Arroy Site E2 Distrito Federol, Brazil opened 197101?	15 39 00.0 S (15.6500)	47 56 49.0 W (47.9469)	1200.0	BDF
BAE3	RD	Brosilia Array Site E3 Distrito Federal, Brazil opened 197101?	15 39 25.0 S (15.6569)	47 55 35.0 W (47.9264)	1200.0	BDF
BAE4	D	Brosilia Arroy Site E4 Distrito Federal, Brozil opened 197101?	15 39 51.0 S (15.6642)	47 54 11.0 W (47.9031)	1260.0	BDF
BAE5	RD	Brosilia Array Site E5 Distrito Federol, Brazil opened 197101?	15 40 21.0 S (15.6725)	47 52 51.0 W (47.8808)	1200.0	BDF
BAEE	RD	Brosilia Array Site EE Distrito Federal, Brazil opened 197101?	15 44 19.0 S (15.7386)	47 37 12.0 W (47.6200)	1200.0	BDF
BALA		Baldy Mountain Alaska Peninsulo, Aloska, U.S.A. PAL code BAL.	55 11 35.6 N (55.1932)	162 47 12.5 W (162.7868)	360.0	PAL
BAS1	RD	Brosilia Array Site S1 Distrito Federal, Brozil opened 197101?	15 39 22.0 S (15.6561)	47 59 59.0 W (47.9997)	1200.0	BDF
BAS2	RD	Brasilio Array Site S2 Distrito Federol, Brazil opened 197101?	15 40 41.0 S (15.6781)	48 00 25.0 W (48.0069)	1200.0	BDF
BAS3	RD	Brasilia Array Site S3 Distrito Federal, Brazil opened 197101?	15 41 55.0 S (15.6986)	48 00 53.0 W (48.0147)	1200.0	BDF
BAS4	RD	Brasilia Array Site S4 Distrito Federal, Brozil opened 197101?	15 43 09.0 S (15.7192)	48 01 20.0 W (48.0222)	1200.0	BDF
BAS5	RD	Brosilio Array Site S5 Distrito Federal, Brazil opened 197101?	15 44 31.0 S (15.7419)	48 01 50.0 W (48.0306)	1200.0	BDF
BASE	RD	Brasilia Array Site SE Distrito Federal, Brozil apened 197101?	15 57 26.0 S (15.9572)	48 04 14.0 W (48.0706)	1200.0	BDF
BAUT		Bautismo Venezuela opened 1984.	10 30 23.4 N (10.5065)	66 28 55.2 W (66.4820)	1976.0	CAR
BAW1	D	Brasilia Array Site W1 Distrito Federal, Brazil opened 197101?	15 37 42.0 S (15.6283)	48 00 46.0 W (48.0128)	1200.0	BDF

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
8AW2	RD	Brasilia Array Site W2 Distrito Federal, Brazil opened 197101?	15 37 17.0 S (15.6214)	48 01 07.0 W (48.0186)	1200.0	BDF
BAW3	RD	Brasilia Array Site W3 Distrito Federal, Brazil opened 197101?	15 36 46.0 S (15.6128)	48 03 27.0 W (48.0575)	1200.0	BDF
BAW4	RD	Brasilia Array Site W4 Distrito Federal, Brazil opened 197101?	15 36 19.0 S (15.6053)	48 04 46.0 W (48.0794)	1200.0	BDF
BAWE	D	Brasilia Array Site WE Distrito Federal, Brazil opened 197101?	15 35 28.0 S (15.5911)	48 04 50.0 W (48.0806)	1200.0	BDF
BBB		Bella Bella British Columbia, Canada opened 19861205.	52 11 04.9 N (52.1847)	128 06 47.9 W (128.1133)	14.0	OTTR
BBTK		Belbasi Turkey	39 50 32.0 N (39.8422)	32 45 37.0 E (32.7603)	1200.0	
BBU		Al Budayyi' Bahrain opened 1986.	26 12 54.0 N (26.2150)	50 27 24.0 E (50.4567)	...	BMU
BCI		Bajram Curri Albania	42 21 59.8 N (42.3666)	20 04 03.0 E (20.0675)	...	TIR
BDBC		Bennett Dam British Columbia, Canada	56 10 27.0 N (56.1742)	122 16 57.0 W (122.2825)	700.0	
BDMQ		Baandaama Dam Queensland, Australia opened 19800729. QDM code BDM.	26 06 44.3 S (26.1123)	151 26 39.8 E (151.4444)	320.0	QDM
BEB		Belem Para, Brazil opened 1987.	1 27 00.0 S (1.4500)	48 26 42.0 W (48.4450)	15.0	
BECU		Ecuador Network Ecuador	0 28 28.8 S (0.4747)	78 35 46.2 W (78.5962)	3320.0	QUI
BEE		Al Areen Bahrain opened 1986.	26 01 00.0 N (26.0167)	50 31 18.0 E (50.5217)	...	BMU
BERA		Berat Albania	40 42 09.7 N (40.7027)	19 56 57.8 E (19.9494)	...	TIR
BERF		Bertagne Provence-Cote d'Azur, France	43 18 46.8 N (43.3130)	5 41 26.5 E (5.6907)	1030.0	STR
BEVG		Clark Hill Reservoir Georgia, U.S.A.	34 05 21.5 N (34.0893)	82 44 00.0 W (82.7333)	158.0	ATL
BFO	R	Black Forest Observatory (Schiltach) Rheinland-Pfalz, Fed. Rep. of Germany opened before 197410.	48 19 52.0 N (48.3311)	8 19 49.0 E (8.3303)	589.0	KRW
BFT		Belfast Transvaal, South Africa opened 1986.	25 41 12.0 S (25.6867)	30 02 36.0 E (30.0433)	1868.0	PRE
BGL		Barrier Glacier Western Alaska, Alaska, U.S.A. opened 1989.	61 15 48.6 N (61.2635)	152 23 25.8 W (152.3905)	1173.0	AGS
BGMT		Barton Gulch Montana, U.S.A. opened 19871021.	45 14 00.0 N (45.2333)	112 02 25.8 W (112.0405)	2172.0	BUT
BGRQ	R	Glenroy Queensland, Australia opened 19810216. QDM code BGR.	20 32 57.1 S (20.5492)	147 06 18.7 E (147.1052)	160.0	QDM
8HM	RD	Barham England, United Kingdom	51 12 46.0 N (51.2128)	1 10 27.0 W (1.1742)	100.0	BKN
BIAC		(Alternate Abbreviation for DIAC)				
BJA		Joww Bohrain opened 1986.	25 59 30.0 N (25.9917)	50 36 30.0 E (50.6083)	...	BMU
BJU	R	 Chiapas, Mexico	16 52 36.5 N (16.8768)	93 10 44.8 W (93.1791)	...	IIM
BKE		Bekescsaba Hungary opened 1987.	46 36 45.0 N (46.6125)	17 53 34.8 E (17.8930)	95.0	BUD
BKJ		Big Koniuji Island Alaska Peninsula, Alaska, U S.A.	55 09 24.0 N (55.1567)	159 33 31.9 W (159.5589)	146.0	PAL
BKO		Bokasso Cameroon opened 19850213.	4 25 04.8 N (4.4180)	9 08 27.6 E (9.1410)	380.0	YND
BKOA		 Assam, India	25 59 .. N (25.9833)	91 16 .. E (91.2667)	50.0	JHI
BLH		Bald Hill Washington, U.S.A. SEA code BHW.	47 50 12.6 N (47.8368)	122 01 55.8 W (122.0322)	198.0	SEA
BLHA		Black Hill Alaska Peninsula, Alaska, U.S.A. PAL code BLH.	55 42 09.0 N (55.7025)	162 03 57.0 W (162.0658)	390.0	PAL
BLLO		Bululo New Guinea, Papua New Guinea opened 19880610.	7 12 07.2 S (7.2020)	146 37 12.0 E (146.6200)	700.0	PMG
BLPI		Bilospur Modhya Pradesh, India NDI code BLP.	22 05 .. N (22.0833)	82 25 .. E (82.4167)	85.0	NDI
BLS		Blasjo Norway opened 1985.	59 23 24.0 N (59.3900)	6 26 56.4 E (6.4490)	1170.0	BER

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
BLS1		Blasjo Norway opened 198610.	59 23 27.6 N (59.3910)	6 49 37.2 E (6.8270)	1160.0	BER
BLS2		Blasjo Norway opened 198610.	59 17 38.4 N (59.2940)	6 55 37.2 E (6.9270)	1190.0	BER
BLS3		Blasjo Norway opened 198610.	59 25 30.0 N (59.4250)	6 30 54.0 E (6.5150)	1130.0	BER
BMNM		Beor Mountains New Mexico, U.S.A. SNM code BMT.	34 16 30.0 N (34.2750)	107 15 36.6 W (107.2602)	1972.0	SNM
BMU	R	Al Muhorraq Bahrain opened 1986.	26 14 06.0 N (26.2350)	50 39 36.0 E (50.6600)	...	BMU
BMW		Boistfort Mountain Washington, U.S.A. SEA code BOW. USTN opened 1988.	46 28 30.0 N (46.4750)	123 13 41.0 W (123.2281)	870.0	SEA USTN
BNAB	R	Bonillo British Columbia, Canada opened 19871204.	53 29 36.0 N (53.4933)	130 38 14.0 W (130.6372)	16.0	OTTR
BNI		Bardonecchio Piemonte, Italy	45 03 09.7 N (45.0527)	6 40 30.7 E (6.6752)	1395.0	ROM
BNM		Barren Site New Mexico, U.S.A. SNM code BAR.	34 08 31.2 N (34.1420)	106 37 40.8 W (106.6280)	2120.0	SNM
BOB	D	Bobbio (Coli) Emilio-Romagno, Italy	44 46 01.2 N (44.7670)	9 26 53.5 E (9.4482)	930.0	ROM
BRCI		Bohraich Uttor Prodesh, India NDI code BRC.	27 34 .. N (27.5667)	81 35 .. E (81.5833)	123.0	NDI
BRF		Ar Rifo' Bahrain opened 1986.	26 04 24.0 N (26.0733)	50 35 00.0 E (50.5833)	...	BMU
BRTN		Brown Mountain Tennessee, U.S.A. opened 19860605.	36 21 24.0 N (36.3567)	82 52 04.2 W (82.8678)	630.0	TVA
BRVW		Black Rock Valley Washington, U.S.A. SEA code BRV.	46 29 07.2 N (46.4853)	119 59 29.4 W (119.9915)	925.0	SEA
BS01	R	Boso O.B.S. 1 Honshu, Japan	34 39 12.0 N (34.6533)	140 58 42.0 E (140.9783)	-4011.0	JMA
BS02	R	Boso O.B.S. 2 Honshu, Japan	34 45 06.0 N (34.7517)	140 45 18.0 E (140.7550)	-2090.0	JMA
BS03	R	Boso O.B.S. 3 Honshu, Japan	34 48 06.0 N (34.8017)	140 30 36.0 E (140.5100)	-1898.0	JMA
BS04	R	Boso O.B.S. 4 Honshu, Japan	34 59 24.0 N (34.9900)	140 20 18.0 E (140.3383)	-658.0	JMA
BSLQ	RD	Bruslee Queensland, Australia opened 19840302. QDM code BSL.	20 52 01.2 S (20.8670)	146 33 50.4 E (146.5640)	185.0	QDM
BTA	R	Bajo Tolamanca Costa Rica	...	...	...	HDC
BTE	R	Batoke Comeroon opened 19850301.	4 02 52.8 N (4.0480)	9 05 13.2 E (9.0870)	90.0	YND
BTH	R	Betharram Aquitaine, France opened 198608.	43 07 23.0 N (43.1231)	0 12 25.0 W (0.2069)	300.0	
BUE	R	Buenavisto Veracruz, Mexico	19 26 16.8 N (19.4380)	96 33 32.4 W (96.5590)	200.0	IIM
BUGC	R	Bugo Colombia	...	...	...	UVC
BUW	RD	Bucklebury West England, United Kingdom	51 24 34.0 N (51.4094)	1 13 28.0 W (1.2244)	125.0	BKN
BUWY	R	Burn England, United Kingdom	53 44 34.4 N (53.7429)	1 03 59.4 W (1.0665)	5.0	OMB
BVTM	R	..... Michoacon, Mexico UNM code BVT.	18 53 36.0 N (18.8933)	102 15 54.0 W (102.2650)	...	UNM
BVW		Beverly Washington, U.S.A. opened 198609.	46 48 37.8 N (46.8105)	119 52 54.1 W (119.8817)	707.0	SEA
BW01	R	Boulder Array Wyoming, U.S.A.	42 47 09.1 N (42.7859)	109 34 49.7 W (109.5805)	2200.0	NEIS
BW02	R	Boulder Array Wyoming, U.S.A.	42 47 19.8 N (42.7888)	109 33 49.6 W (109.5638)	2200.0	NEIS
BW03	R	Boulder Array Wyoming, U.S.A.	42 47 12.7 N (42.7869)	109 32 46.8 W (109.5463)	2200.0	NEIS
BW04	R	Boulder Array Wyoming, U.S.A.	42 46 44.8 N (42.7791)	109 34 18.3 W (109.5717)	2190.0	NEIS
BW05	R	Boulder Array Wyoming, U.S.A.	42 46 52.0 N (42.7811)	109 33 50.0 W (109.5639)	2200.0	NEIS
BW06		Boulder Array Wyoming, U.S.A. opened 19860718.	42 46 40.0 N (42.7778)	109 33 20.0 W (109.5556)	2200.0	NEIS USTN
BW07	R	Boulder Array Wyoming, U.S.A.	42 46 51.0 N (42.7808)	109 32 30.5 W (109.5418)	2200.0	NEIS
BW08	R	Boulder Array Wyoming, U.S.A.	42 46 10.4 N (42.7696)	109 34 51.9 W (109.5811)	2200.0	NEIS

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
BW09	R	Boulder Array Wyoming, U.S.A.	42 46 20.2 N (42.7723)	109 33 50.9 W (109.5641)	2200.0	NEIS
BW10	R	Boulder Array Wyoming, U.S.A.	42 46 10.8 N (42.7697)	109 33 13.8 W (109.5538)	2200.0	NEIS
BW11	R	Boulder Array Wyoming, U.S.A.	42 45 45.8 N (42.7627)	109 34 26.7 W (109.5741)	2200.0	NEIS
BW12	R	Boulder Array Wyoming, U.S.A.	42 45 55.5 N (42.7654)	109 33 36.3 W (109.5601)	2200.0	NEIS
BW13	R	Boulder Array Wyoming, U.S.A.	42 45 55.5 N (42.7654)	109 32 46.8 W (109.5463)	2200.0	NEIS
CABA		Caballa Blanco Venezuela opened 1984.	7 51 20.9 N (7.8558)	71 30 07.9 W (71.5022)	1600.0	CAR
CAE	D	Caneva Friuli-Venezia Giulia, Italy opened 19830423.	46 00 24.0 N (46.0067)	12 26 12.0 E (12.4367)	870.0	TRI
CAMM	R	..... Veracruz, Mexico IIM code CAM.	19 35 16.8 N (19.5880)	96 27 36.0 W (96.4600)	190.0	IIM
CAY	RD	Cayenne French Guiana opened 19850722.	4 57 00.0 N (4.9500)	52 19 12.0 W (52.3200)	25.0	GEOS
CAYA		Cayambe Ecuador opened 198904.	0 04 48.0 N (0.0800)	77 59 00.0 W (77.9833)	4000.0	QUI
CBD		Cypress Bend Missouri, U.S.A. opened 19850621. SLM code CBMO.	36 19 01.2 N (36.3170)	89 39 03.6 W (89.6510)	84.0	SLM
CBTI		Cedar Butte Idaho, U.S.A. opened 19860711.	43 23 15.0 N (43.3875)	112 54 41.4 W (112.9115)	1754.0	USGS
CBZM	R	..... Michaacan, Mexico UNM code CBZ.	18 00 54.0 N (18.0150)	102 24 18.0 W (102.4050)	...	UNM
CC5	R	Presa El Caracol No. 5 Guerrero, Mexico	17 32 24.0 N (17.5400)	99 16 40.8 W (99.2780)	...	IIM
CCMX		Caleta de Campos Michaacan, Mexico Strang-matian station.	18 03 12.0 N (18.0533)	102 45 00.0 W (102.7500)	...	LJC
CDAM	R	Ciudad Altamirano Guerrera, Mexico UNM code CDA.	18 21 .. N (18.3500)	100 39 .. W (100.6500)	300.0	UNM
CDFW		Cedar Flats Washington, U.S.A. SEA code CDF.	46 06 58.2 N (46.1162)	122 02 51.0 W (122.0475)	780.0	SEA
CECU		Ecuador Network Ecuador	0 28 34.2 S (0.4762)	77 52 13.2 W (77.8703)	2220.0	QUI
CEDI		Cerro Diablo Venezuela opened 1984.	7 39 14.4 N (7.6540)	71 53 06.0 W (71.8850)	900.0	CAR
CENE		Cerra Negro Venezuela opened 1984.	7 45 50.4 N (7.7640)	71 19 22.1 W (71.3228)	400.0	CAR
CEO	R	Cerro Encantodo Oaxaca, Mexico	16 14 00.0 N (16.2333)	97 01 06.0 W (97.0183)	3000.0	UNM
CEOS		Cerra El Oso Venezuela opened 198612.	9 01 50.5 N (9.0307)	68 20 02.8 W (68.3341)	800.0	CAR
CFS		Crass Fire Station South Caralina, U.S.A. opened 19880530.	33 16 43.3 N (33.2787)	80 10 09.5 W (80.1693)	26.0	USGS
CFTV		Fuerteventura Canary Islands, Spain opened 198512.	28 24 49.8 N (28.4138)	14 05 00.0 W (14.0833)	540.0	MDD
CGG		..... Guerrero, Mexico	16 40 30.0 N (16.6750)	98 27 27.0 W (98.4575)	400.0	UNM
CGY		Coligny Transvaol, South Africa opened 1986.	26 20 54.0 S (26.3483)	26 22 30.0 E (26.3750)	...	PRE
CHMZ		Chama Zambia opened 1987.	16 50 .. S (16.8333)	27 04 .. E (27.0667)	1278.0	LSZ
CHOI		Cayote Hollow Idaho, U.S.A. opened 198601.	43 18 45.0 N (43.3125)	111 12 45.9 W (111.2127)	2103.0	USBR
CHOR		Cabbage Hill Oregon, U.S.A. opened 198608. SEA code CHO.	45 35 27.0 N (45.5908)	118 34 45.0 W (118.5792)	1076.0	SEA
CHPM		Chiautla de Tapia Puebla, Mexico UNM code CHP.	18 17 55.0 N (18.2986)	98 36 47.6 W (98.6132)	1030.0	UNM
CIO		Camerina (Monte d'Aria) Marche, Italy	43 11 42.0 N (43.1950)	13 08 38.4 E (13.1440)	956.0	SSO
CIPM		..... Puebla, Mexico UNM code CIP.	17 57 43.2 N (17.9620)	97 51 14.4 W (97.8540)	...	UNM
CJR1		Cluj Romania opened 19851201.	46 45 58.0 N (46.7661)	23 33 05.0 E (23.5514)	345.0	BUC

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CKL		Chokochamna Lake Western Alaska, Alaska, U.S.A. opened 1989.	61 11 47.4 N (61.1965)	152 20 16.2 W (152.3378)	1265.0	AGS	
CLMC		Lago Calimo Colombia	3 52 52.9 N (3.8814)	76 33 46.8 W (76.5630)	1480.0	UVC	
CLN6		Carlsbad New Mexico, U.S.A. SNM code CL6.	32 31 15.0 N (32.5208)	103 52 45.0 W (103.8792)	1100.0	SNM	
CLNB		Carlsbad New Mexico, U.S.A. SNM code CL2B.	32 15 51.6 N (32.2643)	103 52 42.6 W (103.8785)	1045.0	SNM	
CMB	D	Columbia College Tuolumne County, Califarnia, U.S.A. opened 19861106. MNLO code CMBB.	38 02 06.0 N (38.0350)	120 23 06.0 W (120.3850)	719.0	BRK	DWSS USTN
CMG2		La Cumbre 2 Guatemala opened 1988. GCG code CM2.	14 39 39.0 N (14.6608)	89 47 12.0 W (89.7867)	1710.0	GCG	
CMX		(Alternate Abbreviation for COLM)					
CNBA		Chernabura Island Alaska Peninsula, Alaska, U.S.A. PAL code CNB.	54 49 13.2 N (54.8203)	159 35 18.0 W (159.5883)	90.0	PAL	
CNIL		Conil Spain Also sent to NEIS by MDD.	36 22 10.2 N (36.3695)	6 03 06.6 W (6.0518)	80.0	SFS	
CNS		Constantine Algeria opened 19870907.	36 22 12.0 N (36.3700)	6 36 45.0 E (6.6125)	670.0	ALG	
COAS		Coatepeque El Solvador SSS code COA.	13 53 12.0 N (13.8867)	89 34 19.0 W (89.5719)	1260.0	SSS	
COLM		Colima Colima, Mexico opened 1986. UNM code COL.	19 10 51.0 N (19.1808)	103 41 27.5 W (103.6910)	779.3	UNM	
COLW		Colter Conyan Wyoming, U.S.A. opened 198601.	43 57 14.2 N (43.9539)	110 41 45.6 W (110.6960)	2079.0	USBR	
COM2	R	Comitan 2 Chiapos, Mexico	16 14 30.0 N (16.2417)	92 08 13.8 W (92.1372)	...	UNM	
COOL		Coolgardie Western Australia, Australia opened 198808.	30 53 01.8 S (30.8838)	121 08 40.8 E (121.1447)	500.0	AUST	
COTA		Cotacachi Ecuador opened 198809.	0 20 06.0 N (0.3350)	78 20 16.2 W (78.3378)	4020.0	QUI	
COTO	R	..... Ecuador	...	...	...		
CPO5		(Alternate Abbreviation for CPOT)					
CRNM		Carthage New Mexico, U.S.A. SNM code CAR.	33 57 09.0 N (33.9525)	106 44 04.2 W (106.7345)	1662.0	SNM	
CROR		Criterion Ridge Oregon, U.S.A. opened 198708. SEA code VCR.	44 58 58.2 N (44.9828)	120 59 17.4 W (120.9882)	1015.0	SEA	
CRZF	D	Crozet Islands Crozet Islands opened 19860201.	46 25 46.7 S (46.4296)	51 51 40.4 E (51.8612)	140.0	STR	GEOS
CSO	D	Casso Friuli-Venezia Giulia, Italy opened 19880101.	46 16 24.0 N (46.2733)	12 19 26.0 E (12.3239)	1070.0	TRI	
CSZ	D	Cosera Razzo Friuli-Venezio Giulio, Italy opened 19880101.	46 28 23.0 N (46.4731)	12 37 02.0 E (12.6172)	1825.0	TRI	
CTAS	R	Couta El Solvador SSS code CTA.	13 44 56.0 N (13.7489)	89 51 55.0 W (89.8653)	355.0	SSS	
CTFE		Tenerife--Las Mesas Conary Islands, Spain opened 198301.	28 28 46.4 N (28.4796)	16 15 43.7 W (16.2621)	270.0	MDD	
CUMC		Nevado de Cumbal Colombia opened 1989.	0 57 38.4 N (0.9607)	77 52 20.4 W (77.8723)	3950.0	UVC	
CUPM		Cuyoaco Pueblo, Mexico UNM code CUP.	19 36 13.0 N (19.6036)	97 37 07.0 W (97.6186)	2450.0	UNM	
CUSS		Cusmapa El Solvador SSS code CUS.	13 54 33.0 N (13.9092)	89 56 50.0 W (89.9472)	678.0	SSS	
CUT		Chulitna Central Aloska, Alaska, U.S.A. opened 19860718.	62 24 16.8 N (62.4047)	150 16 10.2 W (150.2695)	168.0	GIA	
CVLQ	R	Collinsville Queensland, Australia opened 19850430. QDM code CVL.	20 35 24.0 S (20.5900)	147 36 32.4 E (147.6090)	102.0	QDM	
CVM	R	Colonia del Valle Distrito Federal, Mexica	19 22 55.7 N (19.3821)	99 10 42.5 W (99.1785)	...	UNM	
CVT		Costelvetrano Sicilia, Italy	37 40 40.8 N (37.6780)	12 47 31.2 E (12.7920)	...	ERC	
CVVD		Valverde--Aguarija Canary Islands, Spain opened 198502.	27 49 15.0 N (27.8208)	17 56 10.0 W (17.9361)	450.0	MDD	

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
CWZ		Cowlitz River Washington, U.S.A. SEA code COW.	46 29 27.6 N (46.4910)	122 00 43.6 W (122.0121)	305.0	SEA
CXP		..... Puebla, Mexico	18 16 31.4 N (18.2754)	97 08 30.3 W (97.1418)	...	UNM
CYK		Cape Yakataga Central Alaska, Alaska, U.S.A. opened 1989.	60 04 58.8 N (60.0830)	142 29 04.8 W (142.4847)	3.0	AGS
CZM		Crazy Man Mountain Washington, U.S.A. opened 198004. SEA code CMM.	46 26 07.0 N (46.4353)	122 30 21.0 W (122.5058)	620.0	SEA
DBY	C	Dabrova Slovenija, Yugoslavia 19890814-19890817.	45 59 56.4 N (45.9990)	13 31 40.8 E (13.5280)	100.0	LJU
DEG		La Desirade Guadeloupe opened 198803.	16 18 47.5 N (16.3132)	61 03 35.3 W (61.0598)	575.0	FDF
DEK	R	DeKalb Illinois, U.S.A. opened 198701.	41 55 59.2 N (41.9331)	88 45 54.0 W (88.7650)	259.0	
DGBT		Grand Bay Dominica	15 14 20.4 N (15.2390)	61 19 44.4 W (61.3290)	70.0	TRN
DHW2		Dyer Hill 2 Washington, U.S.A. SEA code DY2.	47 59 06.9 N (47.9853)	119 46 13.0 W (119.7703)	884.0	SEA
DIAC		La Diana Colombia opened 1987.	3 17 28.8 N (3.2913)	76 11 50.4 W (76.1973)	1520.0	UVC
DLBQ	RD	Dalbeg Queensland, Australia opened 19840409. QDM code DLB.	20 09 03.6 S (20.1510)	147 15 50.4 E (147.2640)	70.0	QDM
DLG		Dolgai Island Alaska Peninsula, Alaska, U.S.A.	55 08 27.6 N (55.1410)	161 50 09.0 W (161.8358)	367.0	PAL
DMMT		Dalton Mountain Montana, U.S.A. opened 19871119.	46 51 44.4 N (46.8623)	112 42 52.8 W (112.7147)	2039.0	BUT
DMW		Delta Microwave Central Alaska, Alaska, U.S.A. opened 1986.	64 03 22.8 N (64.0563)	145 43 52.2 W (145.7312)	346.0	GIA
DNGQ	RD	Doongara Queensland, Australia opened 19840229. QDM code DNG.	20 33 18.0 S (20.5550)	146 28 30.0 E (146.4750)	280.0	QDM
DOI	D	San Damiano Macro Piemonte, Italy	44 30 12.8 N (44.5036)	7 14 43.4 E (7.2454)	1015.0	ROM
DOT		Dot Lake Central Alaska, Alaska, U.S.A. opened 1986.	63 38 55.2 N (63.6487)	144 03 45.0 W (144.0625)	671.0	GIA
DPI		Dunn Peak Idaho, U.S.A. opened 198710.	47 17 19.2 N (47.2887)	116 53 55.8 W (116.8988)	1709.0	
DPMT		Pointe Michel Dominica	15 15 32.4 N (15.2590)	61 23 06.0 W (61.3850)	50.0	TRN
DPQ		Saint-Jean-des-Piles Quebec, Canada	46 40 49.8 N (46.6805)	72 46 38.4 W (72.7773)	167.0	ECTN
DPW		Davenport Washington, U.S.A. opened 198611. USTN opened 1988.	47 52 14.3 N (47.8706)	118 12 10.2 W (118.2028)	B92.0	SEA USTN
DR1		Dominican Republic Network Dominican Republic	19 18 36.6 N (19.3102)	70 41 48.6 W (70.6968)	...	SDD
DR12		Dominican Republic Network Dominican Republic	18 47 15.0 N (18.7875)	69 22 52.2 W (69.3812)	...	SDD
DR3		Dominican Republic Network Dominican Republic	19 16 21.0 N (19.2725)	70 46 07.8 W (70.7688)	...	SDD
DR4		Dominican Republic Network Dominican Republic	19 27 55.8 N (19.4655)	70 21 28.2 W (70.3578)	...	SDD
DR5		Dominican Republic Network Dominican Republic	19 37 59.4 N (19.6332)	70 51 34.8 W (70.8597)	...	SDD
DR6		Dominican Republic Network Dominican Republic	19 13 58.2 N (19.2328)	70 59 29.4 W (70.9915)	...	SDD
DR8		Dominican Republic Network Dominican Republic	18 57 28.8 N (18.9580)	70 01 50.4 W (70.0307)	...	SDD
DRE	D	Drenchio Friuli-Venezia Giulia, Italy opened 19821220.	46 10 24.0 N (46.1733)	13 38 36.0 E (13.6433)	810.0	TRI
DRRA		Deer Island Alaska Peninsula, Alaska, U.S.A. PAL code DRR.	54 55 24.6 N (54.9235)	162 16 59.4 W (162.2832)	380.0	PAL
DSC		Scotts Head Dominica	15 12 30.3 N (15.2084)	61 21 54.6 W (61.3652)	50.0	TRN
DSI		Dead Sea--Mitzpe Shalem Israel	31 34 12.0 N (31.5700)	35 22 48.0 E (35.3800)	...	JER
DSIT	F	DSI--State Water Works Division, Ankara, Turkey				
DSVT		Soufriere Village Dominica	15 13 44.4 N (15.2290)	61 22 12.0 W (61.3700)	5.0	TRN
DTMT		Tete Morne Dominica	15 13 58.8 N (15.2330)	61 21 07.2 W (61.3520)	496.0	TRN
DUT		Dutch Harbor Aleutian Islands, Alaska, U.S.A.	53 53 54.0 N (53.8983)	166 32 12.0 W (166.5367)	60.0	GIA

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
DVD		David Panama opened 198606.	8 26 09.0 N (8.4358)	82 27 02.0 W (82.4506)	20.0	
DWK		..... Meghalaya, India	25 11 12.0 N (25.1867)	92 01 21.6 E (92.0227)	...	JHI
EALH		Alhama de Murcia Spain opened 198601.	37 51 25.8 N (37.8572)	1 25 13.8 W (1.4205)	260.0	MDD
EAP	F	(phase code designation)				
EAPC	F	(phase code designation)				
EAPD	F	(phase code designation)				
EBAN		Banos de la Encina Spain opened 198611.	38 09 51.6 N (38.1643)	3 47 08.4 W (3.7857)	460.0	MDD
EBG		Ellensburg Washington, U.S.A. SEA code ELL.	46 54 35.0 N (46.9097)	120 34 06.0 W (120.5683)	805.0	SEA
EBI		Elk Butte Idaho, U.S.A. opened 1987.	46 50 15.0 N (46.8375)	116 07 06.0 W (116.1183)	1765.0	
ECHE		Chera Spain opened 198611.	39 35 22.2 N (39.5895)	0 58 12.0 W (0.9700)	643.0	MDD
ECRI		Cripan Spain opened 198610.	42 36 36.0 N (42.6100)	2 30 40.0 W (2.5111)	807.0	MDD
EDR	D	Drumtochty Scotland, United Kingdom opened 19890112.	56 55 08.2 N (56.9189)	2 32 20.9 W (2.5391)	388.0	BGS
EJC	R	Estacian Juarez Chiapas, Mexico	17 36 16.0 N (17.6044)	93 11 44.0 W (93.1956)	...	UNM
EJIF		Jimena de la Frontera Spain opened 19880520.	36 27 04.8 N (36.4513)	5 28 07.8 W (5.4688)	260.0	MDD
EJIM	C	Jimena de la Frontera Spain 198704-19880519.	36 26 09.0 N (36.4358)	5 27 15.0 W (5.4542)	203.0	MDD
EKB	RD	Eskdalemuir Scotland, United Kingdom	55 20 15.0 N (55.3375)	3 10 38.0 W (3.1772)	356.0	BKN
EKC		Ekona Cameroon opened 19841201.	4 12 36.0 N (4.2100)	9 19 37.2 E (9.3270)	450.0	YND
EKR		Elk River Humboldt County, California, U.S.A. opened 19740620; BRK opened 1986. MNLO code EKRT.	40 41 43.2 N (40.6953)	124 08 22.2 W (124.1395)	49.0	BRK
ELMO		Cerro Marra Venezuela opened 1984.	8 00 46.8 N (8.0130)	71 43 00.8 W (71.7169)	2100.0	CAR
ELPA		Fila Paraisa Venezuela opened 1984.	7 47 30.1 N (7.7917)	71 43 31.1 W (71.7253)	1285.0	CAR
ELYF		Eloudy Aquitaine, France opened 198502?	43 10 12.0 N (43.1700)	0 59 30.0 W (0.9917)	700.0	PAR
EMEL		Melillo Ceuta and Melilla, Spain opened 198802.	35 18 00.0 N (35.3000)	2 57 24.0 W (2.9567)	85.0	MDD
EMN		Eldorado Mountains Nevada, U.S.A. opened 19880811.	35 55 17.9 N (35.9216)	114 45 15.2 W (114.7542)	789.5	USGS
EMON		Mondaneda Spain opened 198807.	43 26 10.0 N (43.4361)	7 19 47.4 W (7.3298)	615.0	MDD
EMUT		Emma Park Carbon County, Utah, U.S.A.	39 48 50.4 N (39.8140)	110 48 55.2 W (110.8153)	2268.0	SLC
ENH	D	Enshi Hubei, China (Mainland) opened 1987	30 16 18.5 N (30.2718)	109 29 12.5 E (109.4868)	...	BJI
ENR		Entracque Piemonte, Italy	44 13 35.8 N (44.2266)	7 25 13.1 E (7.4203)	1040.0	GEN
EPBC	F	(phase code designation)				
EPBD	F	(phase code designation)				
EPCP	F	(phase code designation)				
EPCR	F	(phase code designation)				
EPCS	F	(phase code designation)				
EPCU	F	(phase code designation)				
EPDR	F	(phase code designation)				
EPDU	F	(phase code designation)				
EPGC	F	(phase code designation)				
EPGD	F	(phase code designation)				
EPH		Ephrata Washington, U.S.A. opened 198303.	47 21 12.8 N (47.3536)	119 35 46.2 W (119.5962)	628.0	SEA
EPKP	F	(phase code designation)				
EPKS	F	(phase code designation)				
EPNC	F	(phase code designation)				
EPND	F	(phase code designation)				
EPP	F	(phase code designation)				
EPPP	F	(phase code designation)				
EPPS	F	(phase code designation)				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
EPRU		Pruna Spain opened 198611.	36 57 57.6 N (36.9660)	5 13 52.8 W (5.2313)	560.0	MDD
EPS	F	(phase code designation)				
EPSS	F	(phase code designation)				
ERK		Elk Rock Washington, U.S.A. SEA code ELK.	46 18 20.0 N (46.3056)	122 20 27.0 W (122.3408)	1270.0	SEA
EROQ		Roquetas del Mar Spain opened 198702.	40 49 23.4 N (40.8232)	0 24 31.8 E (0.4088)	284.0	MDD
ERT	C	Erto Friuli-Venezia Giulia, Italy 19821124-19880101.	46 16 36.0 N (46.2767)	12 22 36.0 E (12.3767)	775.0	TRI
ERUA		La Rua Spain opened 198705.	42 23 33.6 N (42.3927)	7 08 33.0 W (7.1425)	431.0	MDD
ERZT		Erzurum Turkey	39 54 24.1 N (39.9067)	41 15 11.9 E (41.2533)	1955.0	MTAT
ESCP	F	(phase code designation)				
ESCS	F	(phase code designation)				
ESD		East Dome Washington, U.S.A. SEA code EDM.	46 11 50.4 N (46.1973)	122 09 00.0 W (122.1500)	1609.0	SEA
ESEL		Selva Balearic Islands, Spain opened 198807.	39 46 05.4 N (39.7682)	2 53 39.6 E (2.8943)	231.0	MDD
ESKP	F	(phase code designation)				
ESKS	F	(phase code designation)				
ESPP	F	(phase code designation)				
ESSP	F	(phase code designation)				
ESSS	F	(phase code designation)				
ETER		Terradas Spain opened 198803.	42 18 05.4 N (42.3015)	2 51 19.8 E (2.8555)	238.0	MDD
ETOR		Torete Spain opened 198803.	40 49 10.0 N (40.8194)	2 03 18.6 W (2.0552)	1018.0	MDD
ETW		Entiat Washington, U.S.A. opened 198610.	47 36 16.2 N (47.6045)	120 19 51.6 W (120.3310)	1475.0	SEA
EVIA		Vianos Spain opened 198511.	38 38 13.2 N (38.6370)	2 30 15.0 W (2.5042)	1110.0	MDD
EVR	R	Evritania Greece opened 198906.	38 55 00.0 N (38.9167)	21 48 31.2 E (21.8087)	1050.0	ATH
EVV		El Vigia Veracruz, Mexico opened 1988.	18 27 23.4 N (18.4565)	95 20 57.6 W (95.3493)	...	UNM
EXP	F	(phase code designation)				
EXPC	F	(phase code designation)				
EXPD	F	(phase code designation)				
EXS	F	(phase code designation)				
EZAM		Zamans Spain opened 198612.	42 08 56.4 N (42.1490)	8 41 42.0 W (8.6950)	398.0	MDD
FAM		Famagusta Cyprus opened 198702.	34 59 46.0 N (34.9961)	34 00 07.0 E (34.0019)	68.0	CSS
FARM	R	..... Veracruz, Mexico IIM code FAR.	19 37 33.6 N (19.6260)	96 23 34.8 W (96.3930)	...	IIM
FAU	R	Forcella Aurine Veneto, Italy	...	...	...	TRI
FDKY		Freedom Kentucky, U.S.A. opened 19870327.	36 47 24.0 N (36.7900)	85 47 39.0 W (85.7942)	306.0	TVA
FG2		Serrocopriolo Puglia, Italy Sent to NEIS by ROM.	41 48 13.0 N (41.8036)	15 10 17.0 E (15.1714)	200.0	FOG
FG3		Monte Sant'Angelo Puglia, Italy Sent to NEIS by ROM.	41 42 02.5 N (41.7007)	15 57 01.0 E (15.9503)	830.0	FOG
FG4		Candela Puglia, Italy Sent to NEIS by ROM.	41 08 05.0 N (41.1347)	15 31 14.0 E (15.5206)	450.0	FOG
FG5		Orsara di Puglia Puglia, Italy Sent to NEIS by ROM.	41 16 56.0 N (41.2822)	15 16 09.0 E (15.2692)	...	FOG
FGO2		Fuego 2 Guatemala opened 198611? GCG code FG2.	14 26 19.2 N (14.4387)	90 50 09.0 W (90.8358)	1335.0	GCG
FGTQ	R	Fig Tree Queensland, Australia opened 19870803. QDM code FGT.	20 58 12.4 S (20.9701)	147 46 35.4 E (147.7765)	220.0	QDM
FIG		Monte Figo Portugal opened 198501?	37 05 59.0 N (37.0997)	7 49 47.0 W (7.8297)	...	INMG

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
FIN		Finale Ligure Liguria, Italy	44 12 33.0 N (44.2092)	8 12 30.0 E (8.2083)	590.0	GEN
FIPE		Filo de Piedro Venezuela opened 1984.	7 58 10.9 N (7.9697)	71 15 04.0 W (71.2511)	600.0	CAR
FISA		Fila de Sacuragua Venezuela opened 198612.	11 15 53.3 N (11.2648)	69 20 00.0 W (69.3333)	600.0	CAR
FKO		Franklin Oklahoma, U.S.A. opened 1987.	35 15 40.7 N (35.2613)	97 23 10.0 W (97.3861)	351.0	TUL
FL2		Flat Top 2 Washington, U.S.A.	46 11 47.0 N (46.1964)	122 21 01.0 W (122.3503)	1378.0	SEA
FLKY		Flemingsburg Kentucky, U.S.A. opened 1989.	38 25 33.6 N (38.4260)	83 45 03.6 W (83.7510)	280.0	BHKY
FMKY		Fulgham (Clinton) Kentucky, U.S.A. opened 19861030.	36 39 50.4 N (36.6640)	88 54 32.4 W (88.9090)	152.0	BHKY
FONT		Fontmartina Spain Sent to NEIS by MDD.	41 45 42.0 N (41.7617)	2 26 00.0 E (2.4333)	...	
FORR		Farrest Western Australia, Australia opened 1988.	30 51 .. S (30.8500)	128 06 .. E (128.1000)	...	AUST
FOXC	R	Fox Airport Los Angeles County, California, U.S.A. opened 198103. PAS code FOX.	34 43 58.8 N (34.7330)	118 13 50.4 W (118.2307)	716.0	PAS
FRS		Fauresmith Orange Free State, South Africa opened 1985.	29 45 00.0 S (29.7500)	25 19 18.0 E (25.3217)	...	PRE
FSI		Fosdinovo Toscana, Italy	44 07 34.0 N (44.1261)	10 01 31.0 E (10.0253)	...	ROM
FSP		False Pass Alaska Peninsula, Alaska, U.S.A.	54 57 12.0 N (54.9533)	163 27 24.0 W (163.4567)	200.0	PAL
FST	C	Fort Simpson Northwest Territories, Canada 19860109-19870331.	61 50 24.0 N (61.8400)	121 16 30.0 W (121.2750)	175.0	OTTR
FST1	C	Fort Simpson Northwest Territories, Canada 19851006-19860109. Temporary station, replaced by FST.	61 47 09.0 N (61.7858)	121 15 32.0 W (121.2589)	175.0	OTTR
FUG		Fuega 3 Guatemala opened 198703.	14 26 52.2 N (14.4478)	90 50 31.2 W (90.8420)	1505.0	GCG
FVI	D	Forni Avoltri Friuli-Venezia Giulia, Italy	46 35 35.7 N (46.5932)	12 46 51.3 E (12.7809)	...	ROM
GAM	R	Garm Tajik S.S.R., U.S.S.R.	...	...	...	
GANF		Ganagobie Provence-Cote d'Azur, France	43 59 51.3 N (43.9976)	5 54 31.2 E (5.9087)	650.0	STR
GAZ		Gaziantep Turkey opened 198907.	37 10 19.7 N (37.1721)	37 12 40.8 E (37.2113)	100.0	ISK
GBZT		Gebze Turkey	40 47 20.0 N (40.7889)	29 26 42.0 E (29.4450)	184.0	
GCAZ		Grand Canyon Arizona, U.S.A. opened 1987.	36 02 38.4 N (36.0440)	112 07 40.8 W (112.1280)	...	FLAG
GECU		Ecuador Network Ecuador	0 19 01.8 S (0.3172)	78 11 22.8 W (78.1897)	4350.0	QUI
GELF		Grande-Etoile Provence-Cote d'Azur, France	43 23 00.9 N (43.3836)	5 25 39.0 E (5.4275)	550.0	STR
GGP		Guagua Pichincha Ecuador opened 198809.	0 10 28.2 S (0.1745)	78 35 45.6 W (78.5960)	4600.0	QUI
GIBL		Gibalbin Spain	36 49 35.4 N (36.8265)	5 57 10.2 W (5.9528)	412.0	SFS
GIO	R	Monte San Gregorio Sicilia, Italy opened 198902.	37 34 00.0 N (37.5667)	15 06 30.0 E (15.1083)	330.0	ERC
GKN		Gorkha Nepal opened 198307.	28 00 10.8 N (28.0030)	84 38 13.2 E (84.6370)	1478.0	DMN
GL2		New Goldendale Washington, U.S.A.	45 57 35.0 N (45.9597)	120 49 22.5 W (120.8229)	1000.0	SEA
GLH		Golan--Tel Qazir Israel opened 1986.	32 42 36.0 N (32.7100)	35 39 36.0 E (35.6600)	...	JER
GLK		Glacier Lake Washington, U.S.A.	46 33 50.2 N (46.5639)	121 36 30.7 W (121.6085)	1320.0	SEA
GMB		Gambarie d'Aspramonte Calabria, Italy	38 10 03.0 N (38.1675)	15 51 48.0 E (15.8633)	1350.0	ERC
GMC		Grassy Mountain Georgia, U.S.A. opened 198511.	34 51 45.6 N (34.8627)	84 40 13.2 W (84.6703)	1097.0	TEIC
GMO		Grizzlie Mauntain Oregon, U.S.A.	44 26 20.8 N (44.4391)	120 57 22.3 W (120.9562)	1689.0	SEA
GOGC	R	Isla Gorgona Colombia	...	...	...	UVC

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GRI	D	Girifalco Calobria, Italy	38 49 01.7 N (38.8171)	16 25 12.5 E (16.4201)	480.0	ROM
GRI*		(Alternate Abbreviation for GR1TX)				
GROR		Grindstone Mountain Oregon, U.S.A. opened 198605. SEA code GRO.	45 21 04.5 N (45.3512)	123 39 43.0 W (123.6619)	945.0	SEA
GT2		Goat Mountain Oregon, U.S.A. opened 198509. SEA code VG2.	45 09 20.0 N (45.1556)	122 16 15.0 W (122.2708)	823.0	SEA
GUAC		Guacamaya Venezuela opened 198706.	10 11 31.2 N (10.1920)	67 16 16.0 W (67.2711)	1330.0	CAR
GUAN		Valle Guanape Venezuela opened 1984.	9 57 27.0 N (9.9575)	65 38 52.1 W (65.6478)	1107.0	CAR
GUB	R	Guba	10 40 .. S (10.6667)	26 26 .. E (26.4333)	...	
GULW		Guler Mountain Washington, U.S.A. opened 19860731. SEA code GUL.	45 55 27.0 N (45.9242)	121 35 44.0 W (121.5956)	1189.0	SEA
GUM2		Guadalajara 2 Jalisco, Mexico	20 40 .. N (20.6667)	103 18 .. W (103.3000)	1543.0	UNM
GUN		Gumba Nepal opened 198503.	27 54 38.2 N (27.9106)	85 52 45.8 E (85.8794)	2900.0	DMN
GUO	R	 Oaxaco, Mexico	16 05 55.2 N (16.0987)	97 03 39.6 W (97.0610)	244.0	UNM
GWY		Greenwater Valley Inyo County, California, U.S.A. opened 19880401.	36 11 06.6 N (36.1852)	116 40 10.8 W (116.6697)	1540.0	USGS
HAKY		Hadley Quad Kentucky, U.S.A. opened 19870626.	37 06 20.5 N (37.1057)	86 35 05.8 W (86.5849)	169.0	TVA
HAT		Hattorf Hessen, Fed. Rep. of Germany opened before 1981.	50 49 46.9 N (50.8297)	9 56 39.1 E (9.9442)	-592.0	
HDW		Haodsport Washingtan, U.S.A.	47 38 54.6 N (47.6485)	123 03 15.2 W (123.0542)	1006.0	SEA
HEA	RD	Headley England, United Kingdom	51 21 30.0 N (51.3583)	1 15 50.0 W (1.2639)	114.0	BKN
HHH		Horse Heaven Hills Washington, U.S.A. opened 198703. SEA code HH2.	46 10 18.0 N (46.1717)	119 23 01.0 W (119.3836)	490.0	SEA
HHWY	R	High Hoylond England, United Kingdom	53 35 12.1 N (53.5867)	1 35 50.6 W (1.5974)	205.0	QMB
HIA	D	Hailor Heilongjiong, China (Mainland) opened 198703.	49 16 00.0 N (49.2667)	119 44 30.0 E (119.7417)	610.0	BJI
HIRJ	R	Hiroshima 2 Hiroshimo, Honshu, Japon	34 25 42.0 N (34.4283)	132 33 54.0 E (132.5650)	412.0	JMA
HITJ		 Jordan opened 1989.	29 44 34.8 N (29.7430)	35 50 27.6 E (35.8410)	1235.0	JSO
HLBJ		Hallabot Jordon 1987-19871024; reopened 1989.	32 04 39.0 N (32.0775)	36 18 09.0 E (36.3025)	827.0	JSO
HLGA	R	Haflong Assam, Indio opened 198408.	25 09 36.0 N (25.1600)	93 01 00.0 E (93.0167)	662.0	JHI
HMCY		Holy Mount Cemetery New York, U.S.A. opened 198512. PAL code HMC.	40 57 53.4 N (40.9648)	73 48 11.4 W (73.8032)	245.0	PAL
HMNA	R	Hamren Assam, Indio opened 198501.	25 55 24.0 N (25.9233)	92 36 30.0 E (92.6083)	...	JHI
HOBC		El Hobo Colombia opened 1987.	4 21 17.4 N (4.3548)	76 08 07.8 W (76.1355)	1180.0	UVC
HOGH		Ho Ghana opened 1987.	6 36 33.0 N (6.6092)	0 26 42.0 E (0.4450)	372.0	KUK
HONU		Honeyville Coche County, Utah, U.S.A. opened 19890613.	41 36 36.0 N (41.6100)	111 55 01.2 W (111.9170)	1515.0	SLC
HOQC		La Horqueta Colombia opened 1987.	3 28 04.8 N (3.4680)	76 38 01.2 W (76.6337)	2220.0	UVC
HQL		Haql Saudi Arabia opened 1986.	29 16 12.0 N (29.2700)	35 03 00.0 E (35.0500)	75.0	RYD
HSHJ		 Jordan opened 198909.	29 42 06.0 N (29.7017)	35 40 00.0 E (35.6667)	1100.0	JSO
HSR		South Ridge Washington, U.S.A.	46 10 22.2 N (46.1728)	122 10 58.2 W (122.1828)	1774.0	SEA
HUG		Huitzitzil Guatemala opened 198712.	14 01 14.4 N (14.0207)	91 19 24.0 W (91.3233)	...	GCG

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
HUO	R	Hudson	50 04 50.0 N	92 05 53.0 W	367.0	OTTR
		Ontario, Canada	(50.0806)	(92.0981)		
		opened 19861002.				
HVAR		Hvar	43 10 40.8 N	16 26 52.8 E	250.0	ZAG
		Hrvatska (Croatia), Yugoslavia	(43.1780)	(16.4480)		
		opened 19861001.				
IAP	F	(phase code designation)				
IAPC	F	(phase code designation)				
IAPD	F	(phase code designation)				
IECU		Ecuador Network	0 28 30.0 S	78 18 24.0 W	3720.0	QUI
		Ecuador	(0.4750)	(78.3067)		
IGT	R	Igoumenitsa	39 31 57.0 N	20 19 57.0 E	320.0	THE
		Greece	(39.5325)	(20.3325)		
		opened 198906.				
IHA		Instituto Hidrografica de la Armada	33 01 32.7 S	71 38 27.9 W	88.5	
		Valparaiso, Chile	(33.0257)	(71.6411)		
		opened 198801.				
IHC	R	Ixhuatan	17 17 26.0 N	93 00 30.0 W	...	IIM
		Mexico	(17.2906)	(93.0083)		
IIA		Altzomani	19 08 58.2 N	98 39 30.0 W	...	IIM
		Mexico, Mexico	(19.1495)	(98.6583)		
		Sent to NEIS by UNM.				
IIJ	R	Jocotitlan	19 44 02.4 N	99 44 02.4 W	3900.0	IIM
		Mexico, Mexico	(19.7340)	(99.7340)		
IIO	R	.....	19 35 31.2 N	98 43 26.4 W	...	IIM
		Tlaxcala, Mexico	(19.5920)	(98.7240)		
IISM		Ciudad Serdan	18 59 16.8 N	97 22 36.6 W	...	IIM
		Puebla, Mexico	(18.9880)	(97.3768)		
		Also sent to NEIS by UNM. IIM and UNM code IIS.				
IKL		Isikli	36 14 19.0 N	33 41 07.0 E	120.0	ISK
		Turkey	(36.2386)	(33.6853)		
		opened 198801.				
ILIM		Iliamna	60 04 48.6 N	152 57 34.2 W	823.0	AGS
		Western Alaska, Alaska, U.S.A.	(60.0802)	(152.9595)		
		AGS code ILI.				
IMI		Imperia	43 54 36.6 N	7 53 21.6 E	860.0	GEN
		Liguria, Italy	(43.9102)	(7.8893)		
IMM	R	Islas Marias	...	...	...	UNM
		Nayarit, Mexico				
IMU		Iron Mountain	38 37 59.2 N	113 09 30.2 W	1832.0	SLC
		Millard County, Utah, U.S.A.	(38.6331)	(113.1584)		
		opened 19880929.				
IPA		Ipanguacu	5 41 45.0 S	36 51 22.0 W	65.0	
		Rio Grande do Norte, Brazil	(5.6958)	(36.8561)		
		opened 198708.				
IPBC	F	(phase code designation)				
IPBD	F	(phase code designation)				
IPCP	F	(phase code designation)				
IPCR	F	(phase code designation)				
IPCS	F	(phase code designation)				
IPCU	F	(phase code designation)				
IPDR	F	(phase code designation)				
IPDU	F	(phase code designation)				
IPGC	F	(phase code designation)				
IPGD	F	(phase code designation)				
IPKP	F	(phase code designation)				
IPKS	F	(phase code designation)				
IPNC	F	(phase code designation)				
IPND	F	(phase code designation)				
IPP	F	(phase code designation)				
IPPP	F	(phase code designation)				
IPPS	F	(phase code designation)				
IPS	F	(phase code designation)				
IPSS	F	(phase code designation)				
ISCP	F	(phase code designation)				
ISCS	F	(phase code designation)				
ISKP	F	(phase code designation)				
ISKS	F	(phase code designation)				
ISPP	F	(phase code designation)				
ISSP	F	(phase code designation)				
ISSS	F	(phase code designation)				
ITU		Istanbul	41 06 22.2 N	29 00 53.4 E	98.0	IST WWSS
		Turkey	(41.1062)	(29.0148)		
		opened 19890102.				
IVAG		Clark Hill Reservoir	34 16 19.6 N	82 44 45.6 W	168.0	ATL
		Georgia, U.S.A.	(34.2721)	(82.7460)		
IVF		Ivanof Bay	55 53 45.0 N	159 31 48.0 W	275.0	PAL
		Alaska Peninsula, Alaska, U.S.A.	(55.8958)	(159.5300)		
IXC	R	Ixtacomitan	17 25 38.0 N	93 06 03.0 W	...	UNM
		Chiapas, Mexico	(17.4272)	(93.1008)		
IXP	F	(phase code designation)				
IXPC	F	(phase code designation)				
IXPD	F	(phase code designation)				
IXS	F	(phase code designation)				
JARJ		Jarash	32 14 15.0 N	35 56 46.8 E	840.0	JSO
		Jordan	(32.2375)	(35.9463)		
JBO		Jordan Butte	45 27 41.7 N	119 50 13.2 W	645.0	SEA
		Oregon, U.S.A.	(45.4616)	(119.8370)		
		opened 198209.				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
JCM		Jocotitlan Mexico, Mexico opened 1988.	19 44 03.0 N (19.7342)	99 45 40.0 W (99.7611)	...	UNM
JDN	R	Jardin Chiapas, Mexico	17 09 54.0 N (17.1650)	92 30 00.0 W (92.5000)	920.0	IIM
JHNI	R	Jhansi Uttar Pradesh, India	25 27 .. N (25.4500)	78 37 .. E (78.6167)	250.0	NDI
JIL	R	Jilotepec Veracruz, Mexico	19 37 50.4 N (19.6307)	96 56 00.0 W (96.9333)	1330.0	IIM
JIZN		Jizan Saudi Arabia opened 198902.	16 57 32.4 N (16.9590)	42 49 30.0 E (42.8250)	100.0	RYD
JLK		June Lake Washington, U.S.A. SEA code JUN.	46 08 48.0 N (46.1467)	122 09 10.8 W (122.1530)	1049.0	SEA
JMU		Jammu Jammu and Kashmir, India	32 43 .. N (32.7167)	74 54 .. E (74.9000)	...	NDI
JTS		Juntas de Abangares Costa Rica opened 198806.	10 17 27.0 N (10.2908)	84 57 09.0 W (84.9525)	340.0	HDC
JVI		Jordan Valley--Mount Masua Israel	31 55 48.0 N (31.9300)	35 21 00.0 E (35.3500)	...	JER
KAP		Karpathas Greece opened 1988.	35 33 03.0 N (35.5508)	27 10 28.8 E (27.1747)	250.0	ATH
KBB		Kelsey Bay British Columbia, Canada opened 19860823.	50 23 05.0 N (50.3847)	126 01 39.0 W (126.0275)	1310.0	OTTR
KBC		Kumba Cameroon opened 19841116; moved slightly 19850317. Old position 4.652N, 9.412E, 375m.	4 39 10.8 N (4.6530)	9 24 46.8 E (9.4130)	375.0	YND
KBR		Kanchanoburi Thailand opened 198807.	14 01 .. N (14.0167)	99 32 .. E (99.5333)	28.0	CHG
KEK		Kerkira Greece opened 198903.	39 42 46.8 N (39.7130)	19 47 55.2 E (19.7987)	280.0	ATH
KHL		Karahalli Turkey opened 198808.	38 19 23.5 N (38.3232)	29 31 23.5 E (29.5232)	940.0	ISK
KKB		Krupnik Bulgaria opened 1988.	41 52 00.1 N (41.8667)	23 04 59.9 E (23.0833)	434.0	SOF
KLP	R	Kalpa Himachal Pradesh, India	31 32 .. N (31.5333)	78 15 .. E (78.2500)	2724.0	NDI
KMC		Kompino Cameroon opened 19841214.	4 23 09.6 N (4.3860)	9 34 40.8 E (9.5780)	85.0	YND
KMOR		Kings Mountain Oregon, U.S.A. opened 198209. SEA code KMO.	45 38 07.8 N (45.6355)	123 29 22.2 W (123.4895)	975.0	SEA
KOGH		Koforidua Ghana opened 1987.	6 05 10.0 N (6.0861)	0 14 38.0 W (0.2439)	483.0	KUK
KOSW		Kosmos Washington, U.S.A. SEA code KOS.	46 27 40.8 N (46.4613)	122 11 25.8 W (122.1905)	828.0	SEA
KOT		Kottamio Egypt	29 55 48.0 N (29.9300)	31 49 48.0 E (31.8300)	...	HLW
KPL		Plockton Scotland, United Kingdom opened 19860418.	57 20 20.8 N (57.3391)	5 39 09.7 W (5.6527)	36.0	BGS
KSL		Kastellorizan Greece opened 1988.	36 07 08.4 N (36.1190)	29 35 00.0 E (29.5833)	100.0	ATH
KSZ	R	Kasamo Zambia	...	...	...	
KTD		Kalmit Rheinland-Pfalz, Fed. Rep. of Germany opened before 197410.	49 19 12.6 N (49.3202)	8 05 01.2 E (8.0837)	670.0	KRW
KTH		Kantishna Hills Central Alaska, Alaska, U.S.A. opened 1989?	63 33 10.8 N (63.5530)	150 55 18.0 W (150.9217)	975.0	GIA
KTK1	R	Kautokeino Norway	...	...	...	BER
KTK2	R	Kautokeino Norway	...	...	...	BER
KTK3	R	Kautokeino Norway	...	...	...	BER
KTK4	R	Kautokeino Norway	...	...	...	BER
KTK5	R	Kautokeino Norway	...	...	...	BER
KTK6		Kautokeino Norway	69 00 36.0 N (69.0100)	23 14 09.6 E (23.2360)	340.0	BER
KYR	R	Kayrak Turkey opened 198801.	36 21 06.0 N (36.3517)	33 31 31.0 E (33.5253)	1210.0	ISK

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
LACI		Laci Greece opened 198704.	41 38 10.7 N (41.6363)	19 42 33.8 E (19.7094)	40.0	TIR
LACU	R	La Cuchilla Venezuela opened 1984.	7 52 36.1 N (7.8767)	71 23 26.2 W (71.3906)	800.0	CAR
LADA	R	La Danta Venezuela opened 1984.	7 56 20.4 N (7.9390)	71 36 46.8 W (71.6130)	1200.0	CAR
LAGM	R	..... Oaxaca, Mexica UNM code LAG.	16 06 15.0 N (16.1042)	97 04 40.2 W (97.0778)	201.0	UNM
LAGU	R	Laguneta Venezuela	9 46 12.0 N (9.7700)	69 45 54.0 W (69.7650)	800.0	CAR
LAL		Leola Alabama, U.S.A. opened 19890328.	34 26 12.0 N (34.4367)	87 20 13.8 W (87.3372)	320.0	TVA
LAPE	R	La Pedrera Venezuela opened 1984.	7 33 28.8 N (7.5580)	71 34 32.2 W (71.5756)	327.0	CAR
LAZ		Ladron New Mexico, U.S.A.	34 24 07.2 N (34.4020)	107 08 21.6 W (107.1393)	1853.0	SNM
LAZM	R	Lazaro Cardenas Michaacan, Mexica UNM code LAZ.	18 02 09.6 N (18.0360)	102 12 18.0 W (102.2050)	...	UNM
LBL		Laubilhac Auvergne, France	45 13 57.0 N (45.2325)	3 14 49.0 E (3.2469)	...	STR
LCCH		Las Cruces Santiago, Chile opened 19871117.	33 28 31.2 S (33.4753)	71 34 10.8 W (71.5697)	180.0	SAN
LDVG		Clark Hill Reservair Georgia, U.S.A.	34 08 52.1 N (34.1478)	82 41 00.0 W (82.6833)	162.0	ATL
LEGH		Legan Ghana opened 1987?	5 38 54.0 N (5.6483)	0 10 53.0 W (0.1814)	91.0	KUK
LENM		Lemitar New Mexica, U.S.A. SNM code LEM.	34 09 55.8 N (34.1655)	106 58 27.0 W (106.9742)	1698.0	SNM
LFK		Lefkase Cyprus opened 19870101.	35 16 45.1 N (35.2792)	33 31 57.0 E (33.5325)	690.0	ISK
LFU		La Fuente El Salvadar	13 44 55.2 N (13.7487)	89 06 49.8 W (89.1138)	732.0	SSS
LHIS		Lihir Island New Ireland, Papua New Guinea opened 19870622.	3 07 01.2 S (3.1170)	152 37 58.8 E (152.6330)	10.0	PMG
LIBM		..... Chiapas, Mexica UNM code LIB.	17 17 38.4 N (17.2940)	93 00 43.2 W (93.0120)	...	UNM
LIJA		Lijor Spain opened 198711.	36 53 54.0 N (36.8983)	5 24 42.0 W (5.4117)	970.0	SFS
LIMM	R	..... Veracruz, Mexica IIM code LIM.	19 40 49.2 N (19.6803)	96 31 41.3 W (96.5281)	200.0	IIM
LJI	R	Lemhi Junction Idaho, U.S.A.	43 49 26.4 N (43.8240)	112 50 33.6 W (112.8427)	1634.0	USGS
LJS	R	..... Mexico	17 59 34.8 N (17.9930)	93 29 16.8 W (93.4880)	...	IIM
LJY		La Joya New Mexica, U.S.A.	34 20 11.4 N (34.3365)	106 53 45.0 W (106.8958)	1532.0	SNM
LKGA		Lookout Mountain Georgia, U.S.A. opened 19851205.	34 37 24.0 N (34.6233)	85 28 19.8 W (85.4722)	655.0	TVA
LKO	R	Korhogo Ivory Coast opened 198906.	9 32 39.8 N (9.5444)	5 35 20.0 W (5.5889)	435.0	LIC
LLAV		El Llonito Venezuela opened 1988.	10 28 30.0 N (10.4750)	66 48 28.8 W (66.8080)	907.0	CAR
LLJ		..... Guerrero, Mexica	16 33 51.0 N (16.5642)	98 53 04.8 W (98.8847)	...	UNM
LLRI	R	Little Lost River Idaho, U.S.A.	43 43 21.6 N (43.7227)	112 55 57.6 W (112.9327)	1469.0	USGS
LMX		La Mesa de Andrade Sonora, Mexico opened 1988.	32 06 31.2 N (32.1087)	114 57 37.8 W (114.9605)	...	ECX
LNO	D	Leonard Oklahama, U.S.A. opened 19881207.	35 54 45.0 N (35.9125)	95 47 21.1 W (95.7892)	-506.0	TUL
LNOR		Lincton Mountain Oregon, U.S.A. opened 198608. SEA code LNO. USTN opened 1988.	45 52 15.8 N (45.8711)	118 17 06.0 W (118.2850)	768.0	SEA USTN
LOF		Lofoten Norway opened 198701.	68 07 51.6 N (68.1310)	13 32 31.2 E (13.5420)	80.0	BER
LOHW		Lang Hallow Wyoming, U.S.A. opened 198601.	43 36 44.7 N (43.6124)	110 36 13.5 W (110.6037)	2121.0	USBR

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

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LOMF		Lomont du Chomesol Fronche Comte, Fronce	47 21 03.0 N (47.3508)	6 49 39.0 E (6.8275)	1000.0	STR
LORO		Los Roques Venezuelo opened 1984.	11 57 28.1 N (11.9578)	66 40 27.1 W (66.6742)	20.0	CAR
LPD		Lompeduso Itoly opened 198905.	35 30 41.0 N (35.5114)	12 35 42.2 E (12.5951)	20.0	ERC
LPI		Lipori Lipori Islands, Itoly opened 19871211.	38 29 22.0 N (38.4894)	14 56 00.0 E (14.9333)	594.0	ERC
LPL		Lo Plogne Rhone-Alpes, Fronce opened 198608.	45 30 59.2 N (45.5164)	6 43 56.6 E (6.7324)	2070.0	LDG
LRDO		Loredo Arkonsos, U.S.A. opened 198812.	35 58 09.0 N (35.9692)	90 41 43.2 W (90.6953)	137.0	TEIC
LSD		Ceresole Reole Piemonte, Itoly	45 27 27.6 N (45.4577)	7 09 20.4 E (7.1557)	2284.0	GEN
LSK		Leskovik Albanio	40 09 .. N (40.1500)	20 36 .. E (20.6000)	920.0	TIR
LSO	R	Little Silver Creek Oklohomo, U.S.A.	...	...	...	TUL
LSR	D	Lussori Friuli-Venezio Giulio, Itoly opened 19880101.	46 28 33.0 N (46.4758)	13 31 40.0 E (13.5278)	1750.0	TRI
LTMT		Little Toble Mountoin Montono, U.S.A. opened 19890914.	44 31 33.0 N (44.5258)	112 06 36.0 W (112.1100)	2603.0	BUT
LVGX		Lo Villito Guerrero, Mexico Strong-motion station.	18 02 42.0 N (18.0450)	102 10 30.0 W (102.1750)	...	LJC
LVI		Isolo di Levonzo Sicilio, Itoly	37 59 08.1 N (37.9856)	12 20 14.7 E (12.3374)	20.0	ERC
LVMM		... Verocruz, Mexico UNM code LVM.	19 36 05.2 N (19.6014)	96 23 43.8 W (96.3955)	160.0	UNM
LVP		Lakeview Peok Woshington, U.S.A.	46 04 06.0 N (46.0683)	122 24 30.0 W (122.4083)	1170.0	SEA
LVVM		Loguno Verde Veracruz, Mexico opened 1988. UNM code LVV.	19 44 16.8 N (19.7380)	96 26 55.8 W (96.4488)	...	UNM
LXQ	R	Lo Grande 3 Quebec, Conodo opened 19861216.	53 43 20.4 N (53.7223)	76 01 20.0 W (76.0222)	195.0	OTTR
MAF		Mozirot Auvergne, Fronce opened 19850711.	46 13 17.3 N (46.2215)	2 33 59.2 E (2.5664)	470.0	LDG
MANM	R	... Verocruz, Mexico IIM code MAN.	19 35 24.0 N (19.5900)	96 25 00.0 W (96.4167)	2.0	IIM
MARA		Morocoy Venezuelo opened 1984.	10 19 26.0 N (10.3239)	67 36 24.8 W (67.6069)	1200.0	CAR
MARM	R	... Chiopos, Mexico IIM code MAR.	17 13 04.8 N (17.2180)	92 41 34.8 W (92.6930)	...	IIM
MBET		Bethel Montserrot opened 198907.	16 44 29.0 N (16.7414)	62 09 47.2 W (62.1631)	350.0	TRN
MBH		Mount Berech Isroel	29 46 12.0 N (29.7700)	34 52 48.0 E (34.8800)	...	JER
MCMT		McKenzie Conyon Montono, U.S.A. opened 19890914.	44 49 39.6 N (44.8277)	112 50 55.8 W (112.8488)	2323.0	BUT
MCPQ	RD	Mount Cooper Queensiond, Austrolio opened 19840223. ODM code MCP.	20 33 07.2 S (20.5520)	146 48 21.6 E (146.8060)	300.0	ODM
MCT		Monte Commoroto Sicilio, Itoly	37 37 52.0 N (37.6311)	13 38 01.0 E (13.6336)	1565.0	ERC
MDI		Monti di Nese Lombordio, Itoly	45 46 38.0 N (45.7772)	9 42 41.0 E (9.7114)	...	ROM
MDL		Mondileni Cope Province, South Africo opened 1988.	30 42 36.0 S (30.7100)	28 48 00.0 E (28.8000)	1320.0	PRE
MDSJ		Mudoysisot Jordon	31 37 55.2 N (31.6320)	36 15 07.2 E (36.2520)	970.0	JSO
MECU		Ecuador Network (Micotombo) Ecuodor	0 32 15.0 S (0.5375)	78 14 39.0 W (78.2442)	4090.0	QUI
MEKA		Meekothorro Western Austrolio, Austrolio opened 19860501.	26 36 51.1 S (26.6142)	118 32 01.0 E (118.5336)	390.0	AUST
MEMT		Mount Ellis Montono, U.S.A. opened 19871015.	45 36 14.4 N (45.6040)	110 58 10.8 W (110.9697)	1951.0	BUT
MEU		Monte Louro Sicilio, Itoly	37 06 04.0 N (37.1011)	14 55 48.0 E (14.9300)	985.0	ERC
MEW		McNeil Island Woshington, U.S.A. opened 198503.	47 12 07.0 N (47.2019)	122 38 45.0 W (122.6458)	98.0	SEA

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
MFTN		Millsfield	36 09 39.6 N	89 23 34.8 W	113.0	SLM
		Tennessee, U.S.A.	(36.1610)	(89.3930)		
MGR	D	Morigerati	40 08 15.4 N	15 33 17.4 E	260.0	ROM
		Campania, Italy	(40.1376)	(15.5548)		
MGRP	R	Monte Groppo	...	...	...	TRI
		Veneto, Italy				
MHPO	RD	Mount Hope	21 23 45.6 S	146 48 07.2 E	200.0	QDM
		Queensland, Australia	(21.3960)	(146.8020)		
		opened 19840410. QDM code MHP.				
MILT		Milan	35 50 56.0 N	88 43 58.4 W	146.0	TEIC
		Tennessee, U.S.A.	(35.8489)	(88.7329)		
		opened 198511.				
MIO	R	Morion Island	46 57 30.0 S	37 54 00.0 E	10.0	PRE
		Prince Edward Islands	(46.9583)	(37.9000)		
MIV		Mineville/Witherbee	44 04 27.0 N	73 31 48.0 W	...	PAL
		New York, U.S.A.	(44.0742)	(73.5300)		
		opened 198506.				
MME		Monte Cimone	44 11 37.0 N	10 42 00.0 E	2160.0	ERC
		Emilia-Romagna, Italy	(44.1936)	(10.7000)		
MMI	F	(Mercalli intensity descriptor)				
MML		Mount Malkishua	32 26 06.3 N	35 24 47.9 E	475.0	JER
		Israel	(32.4351)	(35.4133)		
		opened 19860501.				
MNCI	R	Minicoy	7 18 .. N	73 06 .. E	...	NDI
		Laccadive Islands, India	(7.3000)	(73.1000)		
MNGI	R	Mangalore	12 52 .. N	74 52 .. E	...	NDI
		Karnataka, India	(12.8667)	(74.8667)		
MNO		Monte Soro	37 55 52.0 N	14 41 42.0 E	1840.0	ERC
		Sicilia, Italy	(37.9311)	(14.6950)		
MOC		Mount Cameroon	4 17 13.2 N	9 13 01.2 E	2475.0	YND
		Cameroon	(4.2870)	(9.2170)		
		opened 19851123.				
MOE		Montemor-o-Novo	38 32 05.0 N	8 21 17.0 W	...	INMG
		Portugal	(38.5347)	(8.3547)		
		opened 198401?				
MOH	D	Mohaka	39 07 57.0 S	177 08 52.2 E	245.0	WELH
		North Island, New Zealand	(39.1325)	(177.1478)		
		opened 19870319.				
MOKY		Morganfield	37 28 49.2 N	87 54 03.6 W	204.0	BHKY
		Kentucky, U.S.A.	(37.4803)	(87.9010)		
		opened 1989.				
MOL		Molde	62 34 12.0 N	7 32 52.8 E	98.0	BER
		Norway	(62.5700)	(7.5480)		
		opened 198702.				
MOLL		Mollejon	7 44 06.0 N	71 37 44.4 W	900.0	CAR
		Venezuela	(7.7350)	(71.6290)		
		opened 1984.				
MOMI		Momios	36 19 18.0 N	5 43 14.4 W	344.0	SFS
		Spain	(36.3217)	(5.7207)		
		Also sent to NEIS by MDD.				
MOOW		Moose Ponds	43 44 54.9 N	110 44 41.4 W	2128.0	USBR
		Wyoming, U.S.A.	(43.7486)	(110.7448)		
		opened 198601.				
MOPM		Molcoxoc	18 44 .. N	97 55 .. W	1840.0	UNM
		Puebla, Mexico	(18.7333)	(97.9167)		
		UNM code MOP.				
MOR1	R	Mo i Rona	...	...	...	BER
		Norway				
MOR2	R	Mo i Rona	...	...	...	BER
		Norway				
MOR3	R	Mo i Rona	...	...	...	BER
		Norway				
MOR4	R	Mo i Rona	...	...	...	BER
		Norway				
MOR5	R	Mo i Rona	...	...	...	BER
		Norway				
MOR6		Mo i Rona	66 14 13.2 N	14 46 01.2 E	650.0	BER
		Norway	(66.2370)	(14.7670)		
		opened 198602.				
MORO		Morrocoy	10 52 19.9 N	68 18 57.6 W	920.0	CAR
		Venezuela	(10.8722)	(68.3160)		
		opened 1984.				
MOTA	R	Maosalm	...	...	...	VIE
		Austria				
		opened 1989.				
MRB		Montserrat	41 35 41.4 N	1 50 13.8 E	890.0	MRB
		Spain	(41.5948)	(1.8372)		
MRH	D	Morewa	39 29 55.8 S	176 53 27.0 E	4.0	WELH
		North Island, New Zealand	(39.4988)	(176.8908)		
		opened 19870319.				
MRX	D	Morelia	19 42 16.2 N	101 11 30.0 W	...	UNM
		Michoacan, Mexico	(19.7045)	(101.1917)		
		opened 1988.				
MSTB	R	Masset	54 00 12.0 N	132 07 05.0 W	91.0	OTTR
		British Columbia, Canada	(54.0033)	(132.1181)		
		opened 19871204.				
MTAT	F	MTA--Mineral Research and Exploration Inst, Ankara				
MTLO	R	Montello	...	...	...	TRI
		Veneto, Italy				
		opened 1987.				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
MTMW		Mount Mitchell Washington, U.S.A. SEA code MTM.	46 01 31.8 N (46.0255)	122 12 42.0 W (122.2117)	1121.0	SEA
MTO	R	Montecristo El Salvador	14 23 23.0 N (14.3897)	89 24 18.0 W (89.4050)	1380.0	SSS
MUDI		Mud Lake Idaho, U.S.A. opened 198601.	43 37 07.9 N (43.6189)	111 04 37.4 W (111.0771)	2124.0	USBR
MUX		Union Juorez Chiopas, Mexico	15 04 44.4 N (15.0790)	92 04 26.4 W (92.0740)	...	UNM
MVIF		Mont Viol Provence-Cote d'Azur, France	43 53 46.8 N (43.8963)	7 09 09.0 E (7.1525)	1480.0	STR
MVO		Moncorvo Portugal opened 198401?	41 09 51.6 N (41.1643)	7 01 43.8 W (7.0288)	...	INMG
MXC		Moxie City Washington, U.S.A. SEA code MOX.	46 34 38.0 N (46.5772)	120 17 35.0 W (120.2931)	540.0	SEA
NAC		Noches Washington, U.S.A.	46 44 03.8 N (46.7344)	120 49 33.2 W (120.8259)	738.0	SEA
NAIN	C	Natchez Trace State Park Tennessee, U.S.A. 19850327-19870306.	35 51 21.6 N (35.8560)	88 14 24.0 W (88.2400)	198.0	TVA
NANS		Nonahuazin El Salvador SSS code NAN.	13 42 54.0 N (13.7150)	89 30 33.0 W (89.5092)	1160.0	SSS
NANU		Nonutorro Western Australia, Australia opened 19871022.	22 33 43.2 S (22.5620)	115 31 44.4 E (115.5290)	80.0	AUST
NCA		Nelchina Central Alaska, Alaska, U.S.A. opened 19860717.	61 59 37.2 N (61.9937)	146 49 27.0 W (146.8242)	741.0	GIA
NCG		North Capps Glacier Western Alaska, Alaska, U.S.A. opened 1989.	61 24 13.2 N (61.4037)	152 09 24.0 W (152.1567)	1244.0	AGS
NDB	R	Noden British Columbia, Canada	53 57 18.0 N (53.9550)	132 56 30.0 W (132.9417)	686.0	OTTR
NE01	CD	Goteborg Sweden 198302-198601.	57 48 03.6 N (57.8010)	12 07 55.2 E (12.1320)	55.0	NARS
NE02	D	Monsted Denmark opened 198302.	56 27 32.4 N (56.4590)	9 10 12.0 E (9.1700)	60.0	NARS
NE03	D	Logumkloster Denmark opened 198302.	55 02 42.0 N (55.0450)	9 09 10.8 E (9.1530)	25.0	NARS
NE04	D	Witteveen Netherlands opened 198207.	52 48 48.0 N (52.8133)	6 40 06.0 E (6.6683)	17.0	NARS
NE05	D	Utrecht Netherlands 198203-198406; reopened 198601.	52 05 16.8 N (52.0880)	5 10 19.2 E (5.1720)	2.0	NARS
NE06	D	Dourbes Belgium opened 198207.	50 05 49.2 N (50.0970)	4 35 42.0 E (4.5950)	225.0	NARS
NE07	D	Villiers-Adom Ile-de-France, France opened 198311.	49 04 27.8 N (49.0744)	2 13 54.8 E (2.2319)	70.0	NARS
NE08	CD	Aigurande Centre, France 198211-198412.	46 25 12.0 N (46.4200)	1 43 48.0 E (1.7300)	360.0	NARS
NE09	CD	Les Eyzies Aquitaine, France 198211-198602.	44 51 07.2 N (44.8520)	0 58 51.6 E (0.9810)	160.0	NARS
NE10	D	Arette Aquitoine, France opened 198211.	43 05 09.6 N (43.0860)	0 41 56.4 W (0.6990)	480.0	NARS
NE11	D	Ainzon Spain opened 1983.	41 48 50.4 N (41.8140)	1 31 01.2 W (1.5170)	440.0	NARS
NE11*	CD	Lo Almunio Spain 198305-198311.	41 28 37.2 N (41.4770)	1 22 19.2 W (1.3720)	370.0	NARS
NE12	CD	Volle de los Coidos Spain 198305-198502.	40 38 31.2 N (40.6420)	4 09 18.0 W (4.1550)	1280.0	NARS
NE13	D	Puertollono Spain opened 198305.	38 41 06.0 N (38.6850)	4 05 27.6 W (4.0910)	700.0	NARS
NE14	D	Granodo Spain opened 198305.	37 11 24.0 N (37.1900)	3 35 42.0 W (3.5950)	774.0	NARS
NE15	D	Volkenburg Netherlands opened 198406.	50 52 01.2 N (50.8670)	5 47 06.0 E (5.7850)	100.0	NARS
NE16	D	Clermont Ferrand Auvergne, France opened 198411.	45 45 46.0 N (45.7628)	3 06 09.0 E (3.1025)	80.0	NARS

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NE17	D	Toledo Spain opened 198502.	39 52 53.0 N (39.8814)	4 02 55.0 W (4.0486)	480.0	NARS
NE18	D	Les Rejoudoux Limousin, France opened 198602.	45 18 16.0 N (45.3044)	1 30 59.0 E (1.5164)	410.0	NARS
NECR	R	Nordeste de Costa Rica Costa Rica	...	...	...	HDC
NEO		Neokhori Greece opened 1988.	39 18 24.0 N (39.3067)	23 13 24.6 E (23.2235)	500.0	ATH
NGI		Nagai Island Alaska Peninsula, Alaska, U.S.A.	55 02 21.6 N (55.0393)	160 04 09.0 W (160.0692)	240.0	PAL
NGJA		 Assam, India	26 42 24.0 N (26.7067)	91 40 30.0 E (91.6750)	60.0	JHI
NGNA		Nongstain Meghalaya, India	25 31 18.0 N (25.5217)	91 16 19.2 E (91.2720)	...	JHI
NGP	R	Nagpur Maharashtra, India	21 09 .. N (21.1500)	79 03 .. E (79.0500)	311.0	NDI
NJJJ	R	Nii-shima 2 Bonin Islands, Japan	34 24 .. N (34.4000)	139 17 .. E (139.2833)	180.0	JMA
NLO		Nicolai Mountain Oregon, U.S.A.	46 05 18.0 N (46.0883)	123 27 00.0 W (123.4500)	900.0	SEA
NLW		Nelson Butte Washington, U.S.A. opened 198505. SEA code NEL.	48 04 41.8 N (48.0783)	120 20 17.7 W (120.3383)	1490.0	SEA
NMMO		New Madrid Missouri, U.S.A. SLM code NMMO.	36 35 16.8 N (36.5880)	89 33 07.2 W (89.5520)	90.0	SLM
NOC	RD	Noumea New Caledonia opened 19851209.	22 10 12.0 S (22.1700)	166 15 00.0 E (166.2500)	5.0	NOU GEOS
NPRI	R	New Production Reactor Idaho, U.S.A.	43 35 51.0 N (43.5975)	112 49 37.8 W (112.8272)	1513.0	USGS
NSS		Namsos Norway opened 198702.	64 31 48.0 N (64.5300)	11 58 01.2 E (11.9670)	102.0	BER
NWC		North Woods Club New York, U.S.A. opened 198610.	43 50 42.0 N (43.8450)	74 09 00.6 W (74.1502)	...	PAL
OBC		Olympics--Bonidu Creek Washington, U.S.A. opened 198007.	48 02 07.1 N (48.0353)	124 04 39.0 W (124.0775)	938.0	SEA
OBH		Olympics--Burnt Hill Washington, U.S.A.	47 19 34.5 N (47.3262)	123 51 57.0 W (123.8658)	383.0	SEA
OC2		Ocos 2 Guatemala opened 1988.	14 33 37.8 N (14.5605)	92 11 09.6 W (92.1860)	5.0	GCG
ODD1		Odda Norway opened 19871203.	59 54 43.2 N (59.9120)	6 37 40.8 E (6.6280)	684.0	BER
OFK		Olympics--Forks Washington, U.S.A. opened 198007.	47 57 00.0 N (47.9500)	124 21 28.1 W (124.3578)	134.0	SEA
OHTN		Owl Hoot Tennessee, U.S.A.	36 09 00.0 N (36.1500)	89 31 12.0 W (89.5200)	82.0	SLM
OJEN		Ojen Spain Alsa sent to NEIS by MDD.	36 06 00.0 N (36.1000)	5 32 13.2 W (5.5370)	804.0	SFS
OLLA		Las Ollas Venezuela opened 1984.	10 01 08.4 N (10.0190)	66 48 14.4 W (66.8040)	947.0	CAR
OLQ		Olympics--Lake Quinalt Washington, U.S.A.	47 39 58.1 N (47.6661)	123 48 31.5 W (123.8087)	121.0	
OLT		Olot Spain opened 1986. Sent to NEIS by MDD.	42 08 39.6 N (42.1443)	2 28 27.6 E (2.4743)	700.0	MRB
OLW		Olympia Washington, U.S.A. opened 19860802	47 04 22.0 N (47.0728)	122 55 21.0 W (122.9225)	37.0	
OMWY	R	Oxenhope Moor England, United Kingdom	53 47 27.2 N (53.7909)	1 58 47.6 W (1.9799)	438.0	OMB
ONF		Office National des Forets Aquitaine, France opened 198502?	43 05 42.0 N (43.0950)	0 42 57.6 W (0.7160)	30.0	PAR
ONR		Olympics--North River Washington, U.S.A. opened 198007.	46 52 37.5 N (46.8771)	123 46 16.5 W (123.7713)	257.0	SEA
OOW		Octopus West Washington, U.S.A.	47 44 12.0 N (47.7367)	124 11 22.0 W (124.1894)	743.0	SEA
ORI		(Alternate Abbreviation for ORI)				
ORX		Oropa Piemonte, Italy	45 37 57.0 N (45.6325)	7 58 54.0 E (7.9817)	1250.0	GEN
OSCM		Ostuacan Chiapas, Mexico UNM code OSC.	17 24 20.0 N (17.4056)	93 20 05.0 W (93.3347)	...	UNM
OSD		Olympics--Snow Dome Washington, U.S.A.	47 49 15.0 N (47.8208)	123 42 06.0 W (123.7017)	2010.0	SEA

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
OSG		Oseberg A Platform Norway opened 1988.	60 29 49.2 N (60.4970)	2 52 33.6 E (2.8760)	-100.0	BER
OSM	R	Ostula Michoacan, Mexico	18 29 50.0 N (18.4972)	103 28 19.0 W (103.4719)	...	UNM
OSP		Olympics--Soaes Peak Washington, U.S.A. opened 198310.	48 17 05.5 N (48.2849)	124 35 23.3 W (124.5898)	...	SEA
OTR		Olympics--Tyee Ridge Washington, U.S.A.	48 05 00.0 N (48.0833)	124 20 39.0 W (124.3442)	712.0	SEA
OXFB	R	Oxford Borehole Mississippi, U.S.A.	34 28 30.4 N (34.4751)	89 20 36.0 W (89.3433)	-390.0	
PAB		San Pablo de los Montes Spain	9 32 45.0 N (9.5458)	4 20 54.0 W (4.3483)	...	MDD
PACW		Pacific Creek Wyaming, U.S.A. opened 198601.	43 54 08.3 N (43.9023)	110 29 07.0 W (110.4853)	2140.0	USBR
PALM	R	Palmichal Venezuela opened 1984.	10 12 16.6 N (10.2046)	64 26 19.7 W (64.4388)	1100.0	CAR
PALR		Palma Real Venezuela opened 1984.	11 00 00.0 N (11.0000)	63 54 39.6 W (63.9110)	920.0	CAR
PANV		Panamint Range Inyo County, Califarnia, U.S.A. opened 19880401.	36 23 54.0 N (36.3983)	117 05 57.0 W (117.0992)	1830.0	USGS
PATW		Paterson Washington, U.S.A. SEA code PAT.	45 52 50.1 N (45.8806)	119 45 40.1 W (119.7611)	300.0	SEA
PAY		..... Mexico	17 28 18.0 N (17.4717)	93 29 28.8 W (93.4913)	...	UNM
PCB	R	Port Clements British Columbia, Canado	53 42 22.0 N (53.7061)	132 34 03.0 W (132.5675)	634.0	OTTR
PCG		Pacaya Guatemalo opened 198705?	14 23 .. N (14.3833)	90 39 .. W (90.6500)	2550.0	GCG
PCP		Pian Castagno-Ponzone Piemonte, Italy apened 19890315.	44 32 30.6 N (44.5418)	8 32 42.6 E (8.5452)	770.0	GEN
PDCR		Pedra do Cavalo Reservoir Bahia, Brazil opened 19870101.	12 31 52.8 S (12.5313)	39 07 21.0 W (39.1225)	220.0	VAO
PDUI		Pindiu New Guinea, Papua New Guinea opened 19880616.	6 26 49.2 S (6.4470)	147 30 39.6 E (147.5110)	950.0	PMG
PECU		Ecuador Network Ecuador	0 23 42.0 S (0.3950)	78 36 09.0 W (78.6025)	3550.0	OUI
PENM	R	..... Chiapas, Mexico IIM code PEN.	17 26 09.6 N (17.4360)	93 31 40.8 W (93.5280)	...	IIM
PEO	R	Puerto Escondido Oaxaco, Mexico	15 51 04.2 N (15.8512)	97 03 19.8 W (97.0555)	3.0	UNM
PFH		Pohoo Fire House Hawaii, Hawaii, U.S.A. opened 1986.	19 29 48.8 N (19.4969)	154 56 55.0 W (154.9486)	201.0	HON
PGB		Panagyurishte Bulgoria opened 1988.	42 33 00.0 N (42.5500)	24 10 00.1 E (24.1667)	775.0	SOF
PGD		Poggio Sodo Emilia-Romagna, Italy Also sent to NEIS by ROM.	43 52 31.0 N (43.8753)	11 43 17.0 E (11.7214)	1600.0	ERC
PGF		Pioggiola Corse, France opened 19891115.	42 32 54.0 N (42.5483)	8 59 58.0 E (8.9994)	1130.0	LDG
PGO		Gresham Oregon, U.S.A. opened 198206.	45 28 00.0 N (45.4667)	122 27 10.0 W (122.4528)	237.0	SEA
PGW		Port Gamble Washington, U.S.A.	47 49 18.8 N (47.8219)	122 35 57.7 W (122.5994)	122.0	SEA
PGY		Peter Gray Mountain New York, U.S.A. opened 198611.	43 42 27.6 N (43.7077)	74 02 42.6 W (74.0452)	...	PAL
PGZ	D	Pongaroo North Island, New Zealand opened 198804.	40 37 07.8 S (40.6188)	176 16 25.2 E (176.2737)	60.0	WEL
PII	D	Pisa Toscana, Italy	43 43 16.3 N (43.7212)	10 31 25.8 E (10.5238)	50.0	ROM
PINI		Pine Creek Idaho, U.S.A. opened 198601.	43 30 27.4 N (43.5076)	111 20 44.6 W (111.3457)	1932.0	USBR
PINR		Pinar Spain	36 29 56.4 N (36.4990)	6 07 06.0 W (6.1183)	10.0	SFS
PKO		Pickens Oklahoma, U.S.A. opened 19871016.	34 23 50.3 N (34.3973)	95 01 51.8 W (95.0311)	264.0	TUL
PLAT		Plata Spain Also sent to NEIS by MDD.	36 07 15.6 N (36.1210)	5 45 30.6 W (5.7585)	460.0	SFS

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PLAV		Platillan Venezuela opened 1984. CAR code PLAT.	9 52 26.4 N (9.8740)	67 30 08.6 W (67.5024)	1830.0	CAR
PLR		Palermo Sicilio, Italy	38 08 38.4 N (38.1440)	13 20 51.6 E (13.3477)	60.0	
PLRO	RD	Paularo Friuli-Venezia Giulio, Italy opened 19880101.	46 32 59.0 N (46.5497)	13 08 53.0 E (13.1481)	1420.0	TRI
PN1	R	Presa Penitas No. 1 Chiapas, Mexico	17 28 08.4 N (17.4690)	93 29 16.8 W (93.4880)	...	IIM
PN2	R	Presa Penitas No. 2 Chiapas, Mexico	17 26 16.8 N (17.4380)	93 27 01.8 W (93.4505)	...	IIM
PN3	R	Presa Penitas No. 3 Chiapas, Mexico	17 21 14.4 N (17.3540)	93 36 28.8 W (93.6080)	...	IIM
PN4	R	Presa Penitas No. 4 Chiapas, Mexico	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	IIM
PN6		Povlof North-6 Alaska Peninsula, Alaska, U.S.A.	55 27 07.1 N (55.4520)	161 54 53.3 W (161.9148)	814.0	PAL
POA2		Poas 2 Costa Rica opened 19860506.	10 10 37.8 N (10.1772)	84 15 03.0 W (84.2508)	2500.0	HDC
POB1	C	Pontebba Friuli-Venezia Giulia, Italy 19830130-19880101.	46 30 48.0 N (46.5133)	13 16 36.0 E (13.2767)	860.0	TRI
POF		Pofadder Cape Province, South Africa opened 1986.	29 22 54.0 S (29.3817)	19 57 00.0 E (19.9500)	...	PRE
PORM	R	 Chiapas, Mexico UNM code POR.	17 10 44.4 N (17.1790)	93 23 42.0 W (93.3950)	...	UNM
PORP		Portuguez Puerto Rico opened 198908.	18 03 13.7 N (18.0538)	66 38 13.2 W (66.6370)	218.0	
PPCY		Paphos Cyprus opened 198702.	34 53 05.0 N (34.8847)	32 20 42.0 E (32.3450)	60.0	CSS
PPD		Presidente Prudente Sao Paula, Brazil opened 198802.	22 01 53.0 S (22.0314)	51 18 43.0 W (51.3119)	406.0	VAO
PS4		Povlof South-4 Aloska Peninsula, Aloska, U.S.A.	55 21 14.3 N (55.3540)	161 52 05.5 W (161.8682)	520.0	PAL
PSG2		Puerto de San Jose 2 Guotemala opened 1988. GCG code PS2.	13 57 07.8 N (13.9522)	90 48 55.8 W (90.8155)	5.0	GCG
PSR		Paul Sauer Dam Cape Province, South Africa opened 1988.	33 40 48.0 S (33.6800)	24 24 36.0 E (24.4100)	360.0	PRE
PTH		Pithoragarh Uttar Pradesh, India	29 33 .. N (29.5500)	80 13 .. E (80.2167)	1669.0	NDI
PTS		Isola di Pantelleria Italy	36 48 25.9 N (36.8072)	11 59 34.4 E (11.9929)	150.0	ERC
PTT		Piatro Neamt Ramania opened 19870115.	46 56 05.0 N (46.9347)	26 23 10.0 E (26.3861)	350.0	BUC
PURC		Volcan Purace Colombia opened 1987.	2 19 19.8 N (2.3222)	76 21 42.0 W (76.3617)	3950.0	UVC
PUYF		Puyloubier Provence-Cote d'Azur, France	43 31 56.3 N (43.5323)	5 42 01.1 E (5.7003)	460.0	STR
PVV		Pavlof Volcano Alaska Peninsula, Alaska, U.S.A.	55 22 27.1 N (55.3742)	161 47 23.9 W (161.7900)	164.0	PAL
PXO	R	 Oaxaca, Mexico	15 44 52.2 N (15.7478)	96 18 10.8 W (96.3030)	25.0	UNM
PZZ		Prazza (Strappo) Piemonte, Italy	44 30 18.0 N (44.5050)	7 06 04.8 E (7.1013)	1420.0	GEN
QAP	F	(phase code designation)				
QASM		Qassim Saudi Arabia opened 198801.	26 05 24.0 N (26.0900)	43 31 58.8 E (43.5330)	675.0	RYD
QDM	F	Queensland Dept. of Mines, Australia				
QHW	R	Quartz Hill North Island, New Zealand opened 19851015.	41 15 07.0 S (41.2519)	174 41 26.0 E (174.6906)	190.0	WELW
QIS		Mount Isa Queensland, Australia opened 19870615.	20 33 27.7 S (20.5577)	139 36 18.7 E (139.6052)	330.0	AUST
QLP		Quilpie Queensland, Australia opened 19890812.	26 35 01.3 S (26.5837)	144 14 05.3 E (144.2348)	210.0	AUST
QPCP	F	(phase code designation)				
QPCS	F	(phase code designation)				
QPKP	F	(phase code designation)				
QPP	F	(phase code designation)				
QPPP	F	(phase code designation)				
QPPS	F	(phase code designation)				
QPSS	F	(phase code designation)				
QRI		Quarto Campania, Italy	40 52 40.8 N (40.8780)	14 08 44.9 E (14.1458)	...	ROM
QSCP	F	(phase code designation)				
QSCS	F	(phase code designation)				

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
OSKP	F	(phase code designation)				
OSKS	F	(phase code designation)				
OSPP	F	(phase code designation)				
OSSP	F	(phase code designation)				
OSSS	F	(phase code designation)				
OUTJ		Outrana Jordan opened 1987.	31 17 55.2 N (31.2987)	36 00 36.0 E (36.0100)	876.0	JSO
OXP	F	(phase code designation)				
OXS	F	(phase code designation)				
OZA		Quezalapa El Salvador	13 31 26.0 N (13.5239)	88 59 49.0 W (88.9969)	250.0	SSS
RAMW		Rammel Mountain Wyoming, U.S.A. opened 198601.	43 53 20.3 N (43.8890)	110 57 00.8 W (110.9502)	2512.0	USBR
RDO		Rodhopi Greece opened 1988.	41 08 46.2 N (41.1462)	25 32 15.0 E (25.5375)	100.0	ATH
RDX		Rancho Dowling Bajo Califarnia, Mexico opened 19880929.	31 55 56.4 N (31.9323)	115 56 51.0 W (115.9475)	1680.0	ECX
RE1		(Alternate Abbreviatian for RCL)				
RECU		Ecuador Network Ecuador	0 38 19.2 S (0.6387)	78 34 03.0 W (78.5675)	4060.0	QUI
REDW		Red Top Meadow Wyoming, U.S.A. opened 198601.	43 21 44.6 N (43.3624)	110 51 06.4 W (110.8518)	2192.0	USBR
REVF		Revere Provence-Cote d'Azur, France	43 44 24.0 N (43.7400)	7 22 03.0 E (7.3675)	700.0	STR
RFI		Roccamonfina Compania, Italy	41 18 01.6 N (41.3004)	13 59 05.2 E (13.9848)	...	ROM
RGS		Rognes Norwoy opened 19851222.	63 01 15.6 N (63.0210)	10 26 06.0 E (10.4350)	120.0	BER
RIN2	C	Rincon de la Viejo 2 Costa Rica 19870520-19880826. Reploced by RIN3.	10 49 06.6 N (10.8185)	85 20 58.2 W (85.3495)	1400.0	HDC
RIN3		Rincon de la Viejo 3 Costa Rica opened 19880826.	10 47 27.0 N (10.7908)	85 22 43.2 W (85.3787)	900.0	HDC
RIY		Rijeka Hrvatska (Crootia), Yugoslavia opened 19890504.	45 20 38.4 N (45.3440)	14 23 09.6 E (14.3860)	75.0	ZAG
RND		Reindeer Central Alaska, Aloska, U.S.A. opened 1986.	63 24 22.2 N (63.4062)	148 51 10.2 W (148.8528)	991.0	GIA
ROKY	R	Rotten Point Kentucky, U.S.A.	37 54 32.4 N (37.9090)	83 55 33.6 W (83.9260)	433.0	BHKY
RPW		Rockport Washington, U.S.A.	48 26 54.0 N (48.4483)	121 30 49.0 W (121.5136)	850.0	SEA
RRI2		Red Ridge Idoho, U.S.A. opened 19860702.	43 21 50.4 N (43.3640)	111 19 08.4 W (111.3190)	2566.0	REX USTN
RRL		Cesano Torinese Piemonte, Italy	44 55 12.6 N (44.9202)	6 47 04.2 E (6.7845)	2131.0	GEN
RSM		Repubblico di San Marino San Morino opened 1988.	43 55 39.7 N (43.9277)	12 27 08.4 E (12.4523)	...	ROM
RSP		Reno Superiore Piemonte, Italy	45 09 06.0 N (45.1517)	7 15 25.8 E (7.2572)	1250.0	GEN
RUP		Ruppelstein Rheinland-Pfalz, Fed. Rep. of Germany	49 42 06.0 N (49.7017)	7 03 37.0 E (7.0603)	750.0	KRW
RUWJ		... Jordan opened 1989.	32 28 30.0 N (32.4750)	38 49 40.8 E (38.8280)	960.0	JSO
RVC		Mount Rainier--Voight Creek Woshington, U.S.A.	46 56 34.5 N (46.9429)	121 58 17.3 W (121.9715)	1000.0	SEA
RVW		Rose Valley Woshington, U.S.A. opened 198102.	46 08 58.2 N (46.1495)	122 44 37.2 W (122.7437)	460.0	SEA
RYD		Riyadh Soudi Arobio opened 1986.	24 43 12.0 N (24.7200)	46 36 36.0 E (46.6100)	650.0	RYD
RZN		Rozhen Bulgaria opened 1988.	41 41 16.8 N (41.6880)	24 42 57.6 E (24.7160)	1730.0	SOF
SADC	RD	Soddle Peak Los Angeles County, California, U.S.A. opened 197308. PAS code SAD.	34 04 51.6 N (34.0810)	118 39 54.0 W (118.6650)	732.0	PAS
SAE		Stotte Puglia, Italy	40 33 43.0 N (40.5619)	17 12 22.0 E (17.2061)	...	ROM
SALC		Salvajina Colombio	2 58 22.5 N (2.9729)	76 41 42.6 W (76.6952)	1430.0	UVC
SAOF		Soorge Provence-Cote d'Azur, France	43 59 11.0 N (43.9864)	7 33 19.0 E (7.5553)	600.0	STR
SASA		Sand Point Alasko Peninsula, Alosko, U.S.A. PAL code SAS.	55 20 24.0 N (55.3400)	160 29 49.8 W (160.4972)	23.0	PAL

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
SBG		Sibinal Guotemalo opened 198603.	15 07 55.2 N (15.1320)	92 03 12.6 W (92.0535)	2860.0	GCG
SBM		South Baldy New Mexico, U.S.A. SNM code SB.	33 58 30.6 N (33.9752)	107 10 50.4 W (107.1807)	3230.0	SNM
SCSP	F	(phase code designation)				
SCX		San Cristobol de los Casas Chiapas, Mexico opened 1987.	16 44 09.0 N (16.7358)	92 38 04.2 W (92.6345)	...	UNM
SDG		Sourdough Central Alaska, Alaska, U.S.A. opened 1986.	62 31 37.2 N (62.5270)	145 32 36.0 W (145.5433)	625.0	GIA
SDI		San Donato Val di Comino Lazio, Italy	41 42 21.0 N (41.7058)	13 48 55.5 E (13.8154)	720.0	ROM
SEJ	R	Sejong Station South Shetland Islands, Antarctica	62 13 15.0 S (62.2208)	58 45 10.0 W (58.7528)	18.0	
SFI		Santa Sofia Emilia-Romagna, Italy opened 1987.	43 55 15.6 N (43.9210)	11 51 07.2 E (11.8520)	...	ROM
SGB		San Diego Bay Alaska Peninsula, Alaska, U.S.A.	55 32 45.0 N (55.5458)	160 27 13.8 W (160.4538)	275.0	
SGI	C	San Gemini Italy	...	...	...	
SHBJ	C	Al Shahba Jordan 19871024-19890326.	32 18 09.0 N (32.3025)	37 34 30.0 E (37.5750)	960.0	JSO
SHGH		Shai Hills Ghana opened 1987.	5 55 42.0 N (5.9283)	0 02 31.0 W (0.0419)	84.0	KUK
SHMJ		 Jordan opened 198909.	32 43 37.2 N (32.7270)	35 45 50.4 E (35.7640)	363.0	JSO
SILC	R	Silvia Colombia	...	...	...	UVC
SIPM	R	 Chiapas, Mexico UMN code SIP.	17 13 22.8 N (17.2230)	93 09 25.2 W (93.1570)	...	UNM
SJAS		San Jacinto El Salvador SSS code SJA.	13 40 .. N (13.6667)	89 10 .. W (89.1667)	1100.0	SSS
SJID		St. Joe Idaho, U.S.A. opened 198710.	47 21 50.4 N (47.3640)	116 24 40.2 W (116.4112)	1775.0	
SJX	R	San Joaquin Baja California, Mexico opened 1986.	31 45 46.2 N (31.7628)	115 57 31.2 W (115.9587)	...	ECX
SKDB		 Saint Christopher, Saint Christopher-Nevis	17 23 48.8 N (17.3969)	62 48 30.0 W (62.8083)	...	TRN
SKSP	F	(phase code designation)				
SLKY		Flemingsburg Kentucky, U.S.A. opened 19890215.	38 25 33.6 N (38.4260)	83 45 03.6 W (83.7510)	280.0	BHKY
SLZ	R	Solwezi Zambia	...	...	...	
SMAM	R	San Marcos Guerrero, Mexico UNM code SMA.	16 47 07.8 N (16.7855)	99 23 53.4 W (99.3982)	...	UNM
SMG		Somos Greece opened 198906.	37 42 31.2 N (37.7087)	26 50 13.2 E (26.8370)	...	ATH
SMJM	R	Simojovel Chiapas, Mexico IIM code SMJ.	17 08 02.4 N (17.1340)	92 42 54.0 W (92.7150)	...	IIM
SMMM		San Miguel Ometusco Mexico, Mexico opened 1988. UNM code SMM.	19 44 23.4 N (19.7398)	98 44 25.8 W (98.7405)	...	UNM
SMNM		San Marcial New Mexico, U.S.A. SNM code SMC.	33 46 43.2 N (33.7787)	107 01 09.6 W (107.0193)	1560.0	SNM
SNKA		Sanak Island Alaska Peninsula, Alaska, U.S.A. PAL code SNK.	54 28 26.4 N (54.4740)	162 46 31.2 W (162.7753)	159.0	PAL
SNOW		Snow King Mountain Wyoming, U.S.A. opened 198601.	43 27 44.9 N (43.4625)	110 45 18.8 W (110.7552)	2390.0	USBR
SOG		Santioguito Guatemala opened 198602? GCG code STG.	14 46 34.8 N (14.7763)	91 35 15.6 W (91.5877)	2950.0	GCG
SOG2		Santiaguito 2 Guatemala opened 198612? GCG code ST2.	14 43 01.8 N (14.7172)	91 34 13.2 W (91.5703)	1560.0	GCG
SOI	D	Samo Calabria, Italy	38 04 19.5 N (38.0721)	16 03 17.7 E (16.0549)	...	ROM
SONG		Songo Mozambique opened 198511.	15 36 12.0 S (15.6033)	32 46 42.0 E (32.7783)	900.0	LMM
SOO	R	Sioux Lookout Ontario, Canada opened 19870607.	50 04 34.2 N (50.0762)	91 53 16.8 W (91.8880)	358.0	OTTR

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
SOSW		Source of Smith Creek Washington, U.S.A. SEA code SOS.	46 14 12.0 N (46.2367)	122 08 12.0 W (122.1367)	1270.0	SEA
SQF		Squaw Harbor Alaska Peninsula, Alaska, U.S.A.	55 13 12.0 N (55.2200)	160 33 44.4 W (160.5623)	360.0	PAL
SQTA	R	Sankt Quirin Austria opened 1989.	...	...	...	VIE
SRFA		Sharaf Saudi Arabia opened 1986.	28 55 48.0 N (28.9300)	35 11 16.8 E (35.1880)	...	RYD
SRNI		Srinagar Jammu and Kashmir, India NDI code SRN.	33 57 .. N (33.9500)	74 45 .. E (74.7500)	...	NDI
SRP		Santa Rosa Puebla, Mexico	18 53 48.0 N (18.8967)	97 46 48.0 W (97.7800)	...	UNM
SRQ		San Roque Spain Also sent to NEIS by MDD.	36 15 27.0 N (36.2575)	5 22 27.0 W (5.3742)	202.0	SFS
SSO		Sasso d'Italia (Macerata) Marche, Italy opened 198705.	43 17 34.8 N (43.2930)	13 25 12.0 E (13.4200)	302.0	SSO
STD		Studebaker Ridge Washington, U.S.A.	46 14 16.0 N (46.2378)	122 13 21.9 W (122.2227)	1268.0	SEA
STEW		Steamboat Mountain Wyoming, U.S.A. opened 198601.	44 02 59.0 N (44.0497)	110 40 54.0 W (110.6817)	2316.0	USBR
STF		Statfjord A Platform Norway	61 15 21.6 N (61.2560)	1 49 01.2 E (1.8170)	-148.0	BER
SULJ	R	Sultana Jordan	31 05 12.0 N (31.0867)	36 04 36.0 E (36.0767)	951.0	JSO
SWO	RD	Sudbury Ontario, Canada opened 198705.	46 43 58.0 N (46.7328)	80 59 58.0 W (80.9994)	372.0	ECTN
SXG		Socronix Guatemala opened 1986. GCG code SCG.	15 30 21.0 N (15.5058)	90 25 10.8 W (90.4197)	1904.0	GCG
SXT		Sachs Harbour Northwest Territories, Canada opened 19860813.	71 59 21.0 N (71.9892)	125 14 23.0 W (125.2397)	77.0	OTTR
SZH		Strazhitsa Bulgaria opened 1988.	43 16 .. N (43.2667)	25 56 .. E (25.9333)	310.0	SOF
SZO	RD	Sudbury Ontario, Canada opened 19870124.	46 26 17.0 N (46.4381)	81 29 46.0 W (81.4961)	312.0	ECTN
TAIF		At Ta'if Saudi Arabia opened 198902.	21 17 31.2 N (21.2920)	40 21 14.4 E (40.3540)	1680.0	RYD
TANM	R	..... Chiapas, Mexico UNM code TAN.	16 55 08.4 N (16.9190)	93 06 54.0 W (93.1150)	...	UNM
TARW		Grand Targhee Resort Wyoming, U.S.A. opened 198601.	43 45 49.7 N (43.7638)	110 59 26.9 W (110.9908)	2091.0	USBR
TBM		Table Mountain Washington, U.S.A.	47 10 10.1 N (47.1695)	120 35 54.0 W (120.5983)	1064.0	SEA
TBO	R	Thunder Bay Ontario, Canada opened 19870123.	48 38 50.4 N (48.6473)	89 24 30.0 W (89.4083)	468.0	OTTR
TCG		Tocana Guatemala opened 198607.	15 07 22.2 N (15.1228)	92 05 09.0 W (92.0858)	3100.0	GCG
TCO		Three Creek Meadows Oregon, U.S.A. opened 19870827.	44 06 27.0 N (44.1075)	121 36 00.0 W (121.6000)	1975.0	SEA
TCPM	R	Tecamachalco Puebla, Mexico UNM code TCP.	18 53 24.0 N (18.8900)	97 41 22.0 W (97.6894)	...	UNM
TCT		Tennessee City Tennessee, U.S.A. opened 19880310.	36 00 19.2 N (36.0053)	87 33 10.2 W (87.5528)	245.0	TVA
TCUT		Toone Canyon Morgan County, Utah, U.S.A. opened 198908.	41 07 05.4 N (41.1182)	111 24 38.4 W (111.4107)	2316.0	SLC
TDH		Tom, Dick, Harry Mountain Oregon, U.S.A. opened 198209.	45 17 23.4 N (45.2898)	121 47 25.2 W (121.7903)	1541.0	SEA
TDL		Trodedollor Lake Washington, U.S.A.	46 21 03.0 N (46.3508)	122 12 57.0 W (122.2158)	1400.0	SEA
TDS	D	Terranova di Sibari Calabria, Italy	39 39 31.8 N (39.6588)	16 20 16.3 E (16.3379)	273.0	ROM
TEGH		Tema Ghana opened 1987.	5 38 12.0 N (5.6367)	0 00 05.0 W (0.0014)	14.0	KUK
TEO	R	Teotitlan Oaxaca, Mexico	18 08 17.6 N (18.1382)	97 04 30.6 W (97.0752)	1060.0	UNM
TGL		Tana Glacier Central Alaska, Alaska, U.S.A. opened 19880701.	60 45 21.0 N (60.7558)	142 49 46.8 W (142.8297)	1234.0	GIA

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
TIH		Tihany Hungary opened 1987.	46 54 00.0 N (46.9000)	17 53 34.8 E (17.8930)	187.0	BUD
TLA		Tapachula Chiapas, Mexico	15 01 44.0 N (15.0289)	92 12 00.0 W (92.2000)	...	UNM
TLI	D	Talmassons Friuli-Venezia Giulia, Italy opened 19851127.	45 55 18.0 N (45.9217)	13 06 07.0 E (13.1019)	25.0	TRI
TME		Tecomasuche El Salvador	14 01 01.0 N (14.0169)	89 21 20.0 W (89.3556)	516.0	SSS
TMM2	R	Technalagico de Monterrey 2 Nueva Lean, Mexica	25 41 57.0 N (25.6992)	100 15 58.8 W (100.2663)	...	UNM
TMW		Tok Microwave Central Alaska, Alaska, U.S.A. opened 1986.	63 19 28.2 N (63.3245)	142 59 48.0 W (142.9967)	495.0	GIA
TOD		Tromm Hessen, Fed. Rep. of Germany opened before 197410.	49 36 20.4 N (49.6057)	8 48 13.8 E (8.8038)	570.0	KRW
TORT	R	La Tortuga Venezuela opened 1984.	10 54 30.2 N (10.9084)	65 18 50.0 W (65.3139)	40.0	CAR
TOUF		Mont Tournerait Provence-Cote d'Azur, France	44 00 48.6 N (44.0135)	7 14 53.9 E (7.2483)	1830.0	STR
TPAW		Tetan Pass Wyoming, U.S.A. opened 198601.	43 29 24.3 N (43.4901)	110 57 02.3 W (110.9506)	2512.0	USBR
TPE		Tepelena Albania opened 198404.	40 17 42.7 N (40.2952)	20 00 39.2 E (20.0109)	240.0	TIR
TPG	R	Tlapa Guerrero, Mexica	17 33 38.4 N (17.5607)	98 33 19.8 W (98.5555)	1100.0	UNM
TQTN		Tranquillity Tennessee, U.S.A. opened 19860716.	35 30 57.6 N (35.5160)	84 43 33.0 W (84.7258)	260.0	TVA
TREF		Trevaresse Provence-Cote d'Azur, France	43 37 26.8 N (43.6241)	5 23 02.0 E (5.3839)	460.0	STR
TRXW		Triangle-X Ranch Wyoming, U.S.A. opened 198601.	43 44 57.3 N (43.7493)	110 33 36.5 W (110.5601)	2256.0	USBR
TSUJ	R	Tsu 2 Mie, Honshu, Japan	34 42 36.0 N (34.7100)	136 25 12.0 E (136.4200)	30.0	JMA
TTH	D	Taradale Trig North Island, New Zealand opened 19870319.	39 32 28.8 S (39.5413)	176 49 34.2 E (176.8262)	120.0	WELH
TU1		Tuscania Lazio, Italy	42 25 07.0 N (42.4186)	11 52 28.0 E (11.8744)	166.0	ROM
TULC	R	Montelora Colombia	...	...	...	UVC
TUNG		Tungurahua Ecuador opened 198906.	1 25 05.4 S (1.4182)	78 26 43.8 W (78.4455)	2774.0	QUI
TUU	R	Turnu Rosu Romania opened 19880615.	45 39 09.0 N (45.6525)	24 16 23.0 E (24.2731)	519.0	BUC
TVGG		Rocky Mountain Net Georgia, U.S.A.	34 22 37.9 N (34.3772)	85 18 08.3 W (85.3023)	323.0	ATL
TWB		Tillmans-Whites Bay South Carolina, U.S.A. opened 19880301.	33 06 54.0 N (33.1150)	80 06 09.0 W (80.1025)	9.0	USGS
TWW		Teanaway Washington, U.S.A. opened 198610.	47 08 17.2 N (47.1381)	120 52 04.5 W (120.8679)	1046.0	SEA
TZR		Tezpur Assam, India	26 38 .. N (26.6333)	92 48 .. E (92.8000)	...	JHI
UJZ	R	 Chiapas, Mexica	15 04 30.0 N (15.0750)	92 05 00.0 W (92.0833)	...	UNM
UKAQ	RD	Ukalunda Queensland, Australia opened 19840328. ODM code UKA.	20 53 56.4 S (20.8990)	147 07 37.2 E (147.1270)	200.0	QDM
UMI		 India	25 31 .. N (25.5167)	92 44 .. E (92.7333)	...	JHI
UMT		Umtata Cape Province, South Africa opened 198808.	31 35 00.0 S (31.5833)	28 45 18.0 E (28.7550)	800.0	PRE
UON	R	La Union Guerrero, Mexica	17 58 12.0 N (17.9700)	101 48 54.0 W (101.8150)	...	UNM
USBR	F	U.S. Bureau of Reclamation, Denver				
USH	RD	Wushi Xinjiang, China (Mainland)	41 12 .. N (41.2000)	78 36 .. E (78.6000)	...	
UTMA		University of Tennessee at Martin Tennessee, U.S.A. opened 198511. Station moved from UTM.	36 17 34.8 N (36.2930)	88 58 33.6 W (88.9760)	108.0	
UTSU	R	Utsunamiya Tochigi, Honshu, Japan opened 196202. UTSU code UTU.	36 32 49.3 N (36.5470)	139 55 01.4 E (139.9171)	110.0	UTSU
UVC	F	Universidad del Valle, Cali				
UYO		Union Valley Oklahoma, U.S.A. opened 19890415.	34 10 00.0 N (34.1667)	94 27 31.7 W (94.4588)	231.0	TUL

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
UZD		Uzd Hungary opened 1987.	46 35 33.0 N (46.5925)	18 34 54.5 E (18.5818)	207.0	BUD
VACR		Volcan Arenal Costa Rica opened 19860429.	10 28 22.8 N (10.4730)	84 40 39.0 W (84.6775)	360.0	HDC
VASS		Vassouras Rio de Janeiro, Brazil opened 1988.	22 23 58.0 S (22.3994)	43 39 08.0 W (43.6522)	448.0	RDJ
VBY		Vinica-Bojonci Slovenija, Yugoslavia opened 19861030.	45 30 16.2 N (45.5045)	15 15 23.8 E (15.2566)	259.0	LJU
VC1		Cotapaxi 1 Ecuador opened 198809.	0 38 20.2 S (0.6389)	78 24 02.4 W (78.4007)	4064.0	QUI
VDF	R	Valdeflares Oaxaca, Mexico	16 45 39.6 N (16.7610)	96 49 19.2 W (96.8220)	...	UNM
VEA		Veano Emilia-Romagna, Italy	44 53 21.5 N (44.8893)	9 37 08.4 E (9.6190)	...	GEN
VFP		Flag Point Oregon, U.S.A. opened 198010.	45 19 05.0 N (45.3181)	121 27 54.3 W (121.4651)	1716.0	SEA
VGP		 Mexico	17 21 25.8 N (17.3572)	93 36 50.4 W (93.6140)	...	UNM
VHTN	C	Van Hill Tennessee, U.S.A. 19860114-19860323.	36 23 56.4 N (36.3990)	82 48 07.2 W (82.8020)	658.0	TVA
VIH		Vielha (Viella) Spain opened 1986.	42 37 43.8 N (42.6288)	0 46 12.0 E (0.7700)	1700.0	MRB
VILF		Villemus Provence-Cote d'Azur, France	43 51 09.0 N (43.8525)	5 42 55.1 E (5.7153)	770.0	STR
VLI		Vellies Greece opened 198906.	36 43 05.4 N (36.7182)	22 56 13.2 E (22.9370)	220.0	ATH
VLL		Lourance Lake Oregon, U.S.A. opened 198010.	45 27 48.0 N (45.4633)	121 40 45.0 W (121.6792)	1195.0	SEA
VMO	R	Villa Marinero Oaxaca, Mexico	15 51 04.2 N (15.8512)	97 03 49.8 W (97.0638)	3.0	UNM
VNV	R	Volcan Villarrica Coutin, Chile	39 22 09.0 S (39.3692)	71 57 10.0 W (71.9528)	...	
VPT	R	Volcan Platanar Costa Rica	...	...	...	HDC
VRAC	R	Vranov Czechoslovakia opened 198912.	...	...	...	
VSM		Volcan San Miguel El Salvador	13 25 41.0 N (13.4281)	88 16 27.0 W (88.2742)	2129.0	SSS
VSS		Volcan San Salvador El Salvador	13 44 30.0 N (13.7417)	89 14 30.0 W (89.2417)	1250.0	SSS
VTU	R	Volcan Turrialba Costa Rica	...	...	...	HDC
VVI		Villa di Villa Veneto, Italy opened 19870610.	45 58 58.4 N (45.9829)	12 25 25.0 E (12.4236)	515.0	ERC
WA4		Burakin Western Australia, Australia opened 19860422.	30 36 07.2 S (30.6020)	117 13 30.0 E (117.2250)	320.0	AUST
WAH2		Wahluke Slope Washington, U.S.A. SEA code WA2.	46 45 24.2 N (46.7567)	119 33 45.5 W (119.5626)	230.0	SEA
WAJH		Al Wajh Saudi Arabia opened 19880620.	26 10 30.0 N (26.1750)	36 33 43.2 E (36.5620)	75.0	RYD
WARB		Warburton Western Australia, Australia opened 19870628.	26 11 01.7 S (26.1838)	126 38 34.8 E (126.6430)	460.0	AUST
WATA	R	Walderalm Austria opened 1989.	47 20 08.7 N (47.3357)	11 34 34.7 E (11.5763)	1492.0	VIE
WBAQ		Buoroba No. 3 Queensland, Australia opened 19840706. QDM code WBA.	27 21 09.7 S (27.3527)	152 18 29.5 E (152.3082)	...	QDM
WCBC		Windy Craggy British Columbia, Canada opened 19880610.	59 37 40.1 N (59.6278)	137 42 57.6 W (137.7160)	750.0	OTTR
WEGH		Weija Ghana opened 1987.	5 35 36.0 N (5.5933)	0 19 37.0 W (0.3269)	180.0	KUK
WELH	F	DSIR Hawkes Bay Network, Wellington, NZ				
WEN		Wenatchee Washington, U.S.A.	47 31 46.2 N (47.5295)	120 11 39.0 W (120.1942)	1061.0	SEA
WG2		Wallula Gap Washington, U.S.A. opened 198704.	46 01 50.2 N (46.0306)	118 51 20.0 W (118.8556)	511.0	SEA
WHH	D	Whakatou North Island, New Zealand opened 19870301.	38 53 04.2 S (38.8845)	176 29 42.0 E (176.4950)	921.0	WELH

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
WIGH		Winnebo Ghana opened 1987.	5 21 49.0 N (5.3636)	0 37 08.0 W (0.6189)	64.0	KUK
WMBQ		Mount Brisbane Queensland, Australia opened 19770318. QDM code WMB.	27 06 55.8 S (27.1155)	152 33 00.7 E (152.5502)	160.0	QDM
WMZ		Williams Arizona, U.S.A. opened 19860131.	35 09 29.0 N (35.1581)	112 19 13.0 W (112.3203)	2018.0	FLAG
WNS		Wenos Washington, U.S.A.	46 42 37.0 N (46.7103)	120 34 30.0 W (120.5750)	1000.0	SEA
WON	RD	Wolverton North England, United Kingdom	51 19 39.0 N (51.3275)	1 12 03.0 W (1.2008)	104.0	BKN
WPMQ	R	Pine Mountain Queensland, Australia opened 19770318. QDM code WPM.	27 32 08.5 S (27.5357)	152 44 07.8 E (152.7355)	35.0	QDM
WPO		West Portland Oregon, U.S.A. opened 198610.	45 34 24.0 N (45.5733)	122 47 22.4 W (122.7896)	334.0	SEA
WPW		White Poss Washington, U.S.A.	46 41 53.4 N (46.6982)	121 32 48.0 W (121.5467)	1250.0	SEA
WRCQ		Reedy Creek No. 5 Queensland, Australia opened 19840711. QDM code WRC.	27 11 14.6 S (27.1874)	152 39 47.2 E (152.6631)	...	QDM
WSSR		Wesser Bald North Carolina, U.S.A. opened 198511.	35 16 40.2 N (35.2778)	83 34 40.8 W (83.5780)	1390.0	TEIC
WTGQ	R	Toogoolawah Queensland, Australia opened 19770318. QDM code WTG.	27 08 44.9 S (27.1458)	152 19 59.9 E (152.3333)	130.0	QDM
WTRQ		Thallon Road Queensland, Australia opened 19840523. QDM code WTR.	27 31 43.0 S (27.5286)	152 27 52.2 E (152.4645)	...	QDM
WTV		Waterville Washington, U.S.A. SEA code WAT.	47 41 55.0 N (47.6986)	119 57 15.0 W (119.9542)	900.0	SEA
WTX		Workmon Tunnel New Mexico, U.S.A.	34 04 19.8 N (34.0722)	106 56 45.0 W (106.9458)	1555.0	SNM
WWHQ		Wivenhoe Hill No. 3 Queensland, Australia opened 19840712. QDM code WWH.	27 22 12.7 S (27.3702)	152 35 13.9 E (152.5872)	...	QDM
XLV		Seldovia Kenai Peninsula, Alaska, U.S.A. opened 1989?	59 27 16.8 N (59.4547)	151 43 18.0 W (151.7217)	380.0	GIA
XPKP	F	(phase code designation)				
XPP	F	(phase code designation)				
XSCS	F	(phase code designation)				
XSS	F	(phase code designation)				
YAKW		Yakima Washington, U.S.A. SEA code YAK.	46 31 15.8 N (46.5211)	120 31 45.2 W (120.5292)	619.0	SEA
YEL		Yellow Rock Washington, U.S.A.	46 12 35.0 N (46.2097)	122 11 16.0 W (122.1878)	1750.0	SEA
YERD	R	Yerdonie Rock Western Australia, Australia	31 11 08.6 S (31.1857)	120 37 41.2 E (120.6281)	...	
YKB0		Yellowknife Array Northwest Territories, Canada opened 1962.	62 36 21.4 N (62.6059)	114 36 18.1 W (114.6050)	221.6	OTTR
YKB1	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 24 08.6 N (62.4024)	114 36 19.6 W (114.6054)	172.5	OTTR
YKB2	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 25 29.2 N (62.4248)	114 36 19.5 W (114.6054)	180.0	OTTR
YKB3	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 26 55.0 N (62.4486)	114 36 18.7 W (114.6052)	187.6	OTTR
YKB4	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 28 15.9 N (62.4711)	114 36 17.8 W (114.6049)	192.9	OTTR
YKB5	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 35.6 N (62.4932)	114 36 19.1 W (114.6053)	196.7	OTTR
YKB6	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 30 59.5 N (62.5165)	114 36 18.0 W (114.6050)	202.6	OTTR
YKB7	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 32 20.4 N (62.5390)	114 36 19.0 W (114.6053)	204.4	OTTR
YKB8	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 33 41.6 N (62.5616)	114 36 16.9 W (114.6047)	197.9	OTTR
YKB9	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 34 58.6 N (62.5829)	114 36 13.9 W (114.6039)	213.1	OTTR
YKR0	U	Yellowknife Array Northwest Territories, Canada 1962-197605.	62 29 35.2 N (62.4931)	114 30 30.8 W (114.5086)	204.9	OTTR

STATIONS ADDED SINCE STATION BOOK (OF 85-714) WAS PRINTED

Code		Station Name, Region and Comments	Latitude	Longitude	Elev.	Networks
YKR1	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 33.8 N (62.4927)	114 56 44.1 W (114.9456)	170.0	OTTR
YKR2	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 34.0 N (62.4928)	114 53 47.1 W (114.8964)	175.0	OTTR
YKR3	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 34.7 N (62.4930)	114 50 51.8 W (114.8477)	176.8	OTTR
YKR4	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 33.9 N (62.4927)	114 47 58.2 W (114.7995)	173.4	OTTR
YKR5	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 35.8 N (62.4933)	114 44 59.8 W (114.7499)	182.9	OTTR
YKR6	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 36.0 N (62.4933)	114 42 04.9 W (114.7014)	192.2	OTTR
YKR7	R	Yellowknife Array Northwest Territories, Canada opened 1962.	62 29 36.1 N (62.4934)	114 39 13.2 W (114.6537)	198.9	OTTR
YKR8		(Alternate Abbreviation for YKB5)				
YKR9	R	Yellawknife Array Northwest Territories, Canada opened 1962.	62 29 35.6 N (62.4932)	114 33 20.7 W (114.5558)	201.1	OTTR
YOO	R	..... Oaxaca, Mexico	17 45 00.0 N (17.7500)	97 49 30.0 W (97.8250)	1600.0	UNM
YPE		Yupe El Salvador	14 07 18.0 N (14.1217)	89 40 50.0 W (89.6806)	1581.0	SSS
YRH		Rhiw Wales, United Kingdom opened 1984.	52 50 00.6 N (52.8335)	4 37 44.0 W (4.6289)	300.0	BGS
YYYY		Yonkie New Guinea, Papua New Guinea opened 19880602.	6 14 31.2 S (6.2420)	145 57 57.6 E (145.9660)	1200.0	PMG
ZA1		Zafferana Sicilia, Italy	37 41 07.0 N (37.6853)	15 05 24.0 E (15.0900)	875.0	
ZAC	R	Zacaltic Chiapas, Mexico	17 15 00.0 N (17.2500)	92 45 39.6 W (92.7610)	380.0	IIM
ZHGX		Zihuatenejo Guerrero, Mexico Strong-motion station.	17 36 30.0 N (17.6083)	101 27 54.0 W (101.4650)	...	LJC
ZLA		Zurich--Logern Switzerland opened 198607.	47 28 55.6 N (47.4821)	8 23 21.3 E (8.3892)	780.0	ZUR
ZOU	D	Zoufplan Friuli-Venezia Giulia, Italy opened 19821017.	46 33 24.0 N (46.5567)	12 58 24.0 E (12.9733)	1896.0	TRI
ZZA	R	..... Chiapas, Mexico	15 08 .. N (15.1333)	92 19 .. W (92.3167)	...	UNM

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