UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT

SEPTEMBER 1989

by

U.S. Geological Survey

NATIONAL EARTHQUAKE INFORMATION CENTER[1]

Open-File Report 89-609-A

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[1]USGS, Denver, Colorado

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

Earthquake Data Report for September, 1989

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

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

EDR No. 9-89
Part 1 of 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

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.

SEP 01, 1989 00h 26m 54.98± 0.80s
41.963 N ± 7.1km 20.364 E ± 6.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.5 (SKO).

KKS	0.12	17	iPg	26 58.60	0.7
PHP	0.28	168	iPgd	27 00.70	-0.2
PUK	0.36	283	ePg	27 01.80	-0.6
LACI	0.59	237	ePg	27 10.00	3.1X
SDA	0.65	275	ePg	27 13.80	5.9X
TIR	0.72	211	ePg	27 09.60	0.5
SKO	0.80	89	ePg	27 09.00	-1.6
			iSg	27 22.00	
OHR	0.91	159	iPg	27 12.20	-0.3
BERA	1.30	194	ePn	27 22.40	3.4X
VAY	1.77	110	ePn	27 27.30	1.4

S.D. = 1.2 on 7 of 10 obs.

SEP 01, 1989 00h 40m 17.93± 0.48s
51.840 N ±10.8km 178.851 W ± 5.3km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.34	87	iPc	40 38.30	-2.2
SMY	4.42	284	eP	41 26.30	2.0
SDN	11.45	65	eP	43 02.30	0.3
SVW	15.75	45	eP	44 03.80	5.1X
KDC	16.25	58	eP	44 06.60	1.7
TTA	16.47	39	eP	44 09.20	1.3
PWA	18.52	47	eP	44 34.80	1.6
IMA	19.07	32	eP	44 38.40	-1.6
TOA	20.33	47	eP	44 53.30	-0.4
FBA	20.60	39	eP	44 54.50	-1.9
INK	27.10	35	eP	45 58.00	-1.1
MBC	33.19	22	eP	46 54.00	1.0
	1.5s	41.00nm			5.1mb
MAT	33.83	260	eP	46 59.00	0.0
	1.0s	10.00nm			4.7mb
EDM	38.62	61	eP	47 38.50	-0.9
LBFM	39.57	82	eP	47 48.30	0.6
WDC	39.62	84	eP	47 48.60	0.8
ORV	40.87	84	eP	47 57.90	-0.2
ARN	42.21	87	eP	48 10.00	0.9
CMB	42.49	85	e(P)	48 11.90	0.4
KVN	43.27	82	eP	48 17.50	-0.5
FRI	43.56	86	e(P)	48 20.00	-0.1
TNP	44.41	83	eP	48 26.50	-0.8
CLC	45.62	86	eP	48 37.00	0.3
SBB	46.21	87	eP	48 42.00	0.5
GSC	46.44	86	eP	48 44.00	0.7
PLM	47.70	88	eP	48 54.00	0.7
BAR	48.27	88	eP	48 58.00	0.4
BTO	48.61	286	eP	48 59.00	-1.2
N	13s	0.40um			
E	13s	0.20um			
TIY	48.98	282	eP	49 04.00	1.0
Z	16s	0.60um			4.7MszX
GLA	49.16	86	eP	49 05.00	0.5
ALQ	53.04	79	e(P)	49 33.00	-1.0
	1.0s	4.75nm			4.4mb
GTA	55.37	291	P	49 49.80	-1.1
CD2	58.85	281	eP	50 14.20	-1.4
NB2	67.18	355	P	51 10.00	-0.3
	0.9s	2.80nm			4.4mb

S.D. = 1.1 on 33 of 34 obs.

• SEP 01, 1989 00h 46m 30.22± 1.57s
23.126 S ±13.0km 68.252 W ±18.3km
DEPTH = 137.5 ± 18.2 km
4.2mb (2 obs.)
NORTHERN CHILE (123)

SLA	2.99	123	ePc	47 17.80	0.1
CCH	6.05	19	P	48 00.90	2.0
CNCB	6.29	2	P	48 02.00	-0.4
LPB	6.56	1	P	48 06.00	0.0
ZOBO	6.82	1	P	48 08.00	-1.6
Z	20s	0.12um			
		LR		40 28.00	
ARE	7.30	335	eP	48 16.00	0.2
PPD	15.69	89	eP	50 04.30	-0.7
SPA	67.01	180	ePd	57 10.40	0.2
	1.0s	6.00nm			4.4mb
		e		57 38.80	
ALQ	68.18	327	eP	57 18.00	0.1
	0.9s	2.52nm			4.1mb
GBA	146.16	100	PKPc	05 57.40	2.1X
	0.8s	2.70nm			

S.D. = 1.2 on 9 of 10 obs.

• SEP 01, 1989 03h 08m 10.12± 3.00s
20.438 S ±14.7km 177.708 W ± 9.9km
DEPTH = 447.9 ± 33.1 km
4.6mb (10 obs.)
FIJI ISLANDS REGION (181)

DZM	14.86	261	iPc	11 21.90	0.6
CTA	33.77	264	iPd	14 15.00	0.6
	0.6s	30.00nm			4.9mb
		i		15 10.20	
ASPA	44.80	257	iPd	15 44.40	0.2
	0.6s	16.00nm			4.6mb
		iPcP		17 17.50	
		eS		21 49.80	
WB5	44.86	262	iPd	15 44.10	-0.6
WRA	44.88	262	Pd	15 43.60	-1.2
	0.4s	7.40nm			4.5mb
FORR	49.53	246	eP	16 20.00	-0.2
GUA	49.91	309	eP	16 23.10	-0.1
	0.6s	64.00nm			5.1mb
GUMO	49.97	309	eP	16 23.50	-0.1
	0.6s	53.87nm			5.1mb
PJG	49.97	309	eP	16 23.60	0.0
WARB	51.11	252	eP	16 32.00	0.1
MBL	58.04	257	eP	17 20.30	-0.8
	0.4s	10.00nm			4.6mb
NANU	61.68	255	eP	17 45.50	0.1
MAT	70.32	323	eP	18 38.00	-0.9
	0.8s	5.97nm			4.3mb
PRS	77.58	43	eP	19 20.30	0.3
SAO	77.80	43	eP	19 21.30	0.1
PRI	77.93	44	eP	19 22.40	0.4
BKS	77.97	42	iPd	19 22.80	0.7
MHC	78.02	43	eP	19 22.70	0.2
FRI	79.05	44	eP	19 27.70	-0.1
CMB	79.23	43	eP	19 28.80	0.0
ORV	79.45	41	eP	19 29.40	-0.5
WDC	79.45	39	eP	19 30.00	0.2
MIN	79.87	40	eP	19 31.70	-0.5
MDJ	80.62	325	eP	19 36.50	0.7
PNT	86.45	34	eP	20 05.00	0.2
	0.6s	6.00nm			4.5mb
ALQ	87.15	51	eP	20 08.70	0.0
	0.9s	5.46nm			4.3mb
LRM	88.49	39	ePd	20 14.50	-0.3
CHTO	90.48	290	eP	20 26.50	2.3
	0.9s	1.92nm			4.0mb
SES	91.66	36	ePd	20 28.70	-0.3
INK	94.14	15	eP	20 39.00	-1.0
NB2	138.95	353	PKP	26 27.00	-18.6X
	1.1s	2.60nm			
HFS	139.52	351	ePKP	26 33.20	-13.4X
	0.4s	0.90nm			
KSP	147.71	343	iPKPd	27 04.50	3.7X
CLL	148.06	347	iPKP	27 04.90	3.6X
	0.9s	17.00nm			
BRG	148.27	346	iPKP	27 05.80	4.1X
	0.5s	14.00nm			
PRNI	148.95	295	ePKP	27 09.00	5.6X
PRU	148.95	345	PKPd	27 07.70	4.9X
MOX	148.97	348	iPKP	27 07.50	4.7X
MBH	149.15	294	iPKPd	27 10.00	6.3X
MEM	149.75	355	PKP	27 07.00	3.1X
GRF	149.95	348	ePKP	27 10.70	6.4X
			e	27 18.00	
KHC	149.98	345	PKP	27 10.20	5.8X
ABH	150.32	353	ePKPd	27 10.90	6.0X
DOU	150.35	357	PKPc	27 10.90	6.1X
TOD	150.44	351	ePKPd	27 10.82	5.8X
RUP	150.55	354	ePKPd	27 11.98	6.7X
WLF	150.68	355	PKPc	27 13.00	7.7X
FLN	151.65	4	ePKP	27 13.20	6.4X
	0.8s	13.40nm			
CDF	151.80	353	ePKP	27 14.00	6.8X
LDF	151.84	3	ePKP	27 13.50	6.4X
GRR	152.00	4	ePKP	27 13.90	6.6X
	0.7s	8.80nm			
HAU	152.30	354	ePKP	27 15.10	7.3X
LPF	152.34	5	ePKP	27 14.90	7.1X
	0.6s	11.50nm			
BSF	152.43	353	ePKP	27 15.10	7.0X
LOR	153.21	358	ePKP	27 16.10	7.0X
LSF	154.25	1	ePKP	27 18.70	8.2X

S.D. = 0.7 on 30 of 56 obs.

• SEP 01, 1989 05h 14m 18.20± 2.56s
30.871 S ±13.2km 177.949 W ± 9.8km
DEPTH = 119.4 ± 24.2 km
4.9mb (10 obs.)
KERMADEC ISLANDS (178)

MNG	11.09	207	eP	16 52.90	-1.5
			eS	18 53.90	
MRW	11.92	208	eP	17 07.00	1.7
			eS	19 16.00	
DZM	16.48	298	iPd	18 03.30	-0.4
BRS	25.77	270	iPc	19 43.00	3.4X
CAN	27.97	252	eP	20 02.80	3.4X
BWA	28.47	254	eP	20 05.30	1.4
RMO	29.47	270	iPd	20 15.10	2.1
	0.7s	26.00nm			5.0mb
CTA	33.92	280	iPc	20 52.20	0.4
	0.9s	30.25nm			5.1mb
STK	34.42	258	iPc	20 59.30	3.3X
ASPA	43.13	267	iPc	22 08.30	-0.2
	0.6s	15.00nm			4.9mb
WRA	44.16	273	Pc	22 14.70	-2.1
	0.7s	30.20nm			5.2mb
WB5	44.16	273	iPd	22 16.30	-0.5
FORR	45.92	255	eP	22 31.00	0.5
	0.4s	24.00nm			5.3mb
WARB	48.49	261	eP	22 50.50	-0.3
MBL	56.13	264	eP	23 46.20	-1.4
	0.4s	4.00nm			4.8mb
SPA	59.30	180	e(P)	24 08.60	-0.8
	0.7s	3.52nm			4.5mb
		e		24 42.40	
PLM	86.07	47	eP	26 48.00	1.2
SBB	86.35	46	eP	26 47.00	-1.0
ISA	86.60	45	eP	26 50.00	0.8
CMB	87.08	42	P	26 51.40	-0.1
	0.8s	7.20nm			4.7mb
GLA	87.17	49	eP	26 51.00	-1.0
CLC	87.23	45	eP	26 53.00	0.7
TNP	88.96	44	P	27 00.50	-0.2
	0.6s	3.80nm			4.7mb
KVN	89.09	42	P	27 00.20	-1.0
LON	92.36	35	P	27 15.80	-0.2
ALQ	93.83	51	eP	27 24.00	0.8
	1.0s	2.50nm			4.5mb
SUF	144.57	341	iPKP	33 38.40	-2.8X
	0.5s	2.50nm			
NUR	146.77	340	ePKP	33 46.00	1.1
	0.5s	14.00nm			
NB2	149.22	351	PKP	33 51.80	2.9X
	0.7s	2.20nm			
BNG	149.46	214	iPKPd	33 58.00	7.3X
	0.4s	9.00nm			

S.D. = 1.2 on 24 of 30 obs.

• SEP 01, 1989 05h 28m 40.25± 0.88s
51.509 N ±15.1km 175.078 W ± 7.2km
DEPTH = 33.0km (normal)
3.9mb (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	1.07	291	iPd	28 57.80	-1.1
SMY	6.78	285	eP	30 21.00	1.1
KDC	14.45	56	eP	32 04.00	-0.1
TTA	15.33	34	eP	32 15.60	-0.1
IMA	18.17	29	eP	32 52.00	0.6
FBA	19.44	36	eP	33 06.00	-0.5
	0.5s	4.13nm			4.0mb
PNT	34.70	71	eP	35 29.00	0.3
EDM	36.70	62	eP	35 45.50	-0.1
KVN	40.97	85	e(P)	36 27.00	5.5X
WRA	83.76	227	P	41 07.00	-0.2
	0.8s	0.80nm			3.9mb

S.D. = 0.7 on 9 of 10 obs.

SEP 01, 1989 06h 42m 13.48± 0.69s
0.162 S ± 6.6km 78.369 W ± 6.5km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)
Felt (III) at Quito.

QUR	0.16	267	iPd	42 17.80	0.4
GGP	0.23	267	iPd	42 18.70	0.0

01d 06h

CAYA	0.45	58	iP+	42	21.90	-1.0
COTA	0.49	4	P	42	23.70	0.0
RECU	0.51	203	iPd	42	22.50	-1.5
			S	42	30.00	
BMG	8.92	36	eP	45	07.00	41.5X
ZOBO	18.93	148	eP	46	37.00	-0.6
LPB	19.16	149	P	46	46.00	5.7X
CNCB	19.45	149	P	46	45.00	1.0
CCH	20.92	146	P	47	00.80	1.6

S.D. = 1.2 on 8 of 10 obs.

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* SEP 01, 1989 09h 10m 00.24± 0.67s
18.332 S ± 9.4km 167.977 E ±11.4km
DEPTH = 10.0km (geophysicist)
4.6mb (5 obs.)
VANUATU ISLANDS (186)

PVC	0.67	28	iPd	10	13.60	0.1
			iS	10	22.50	
DZM	3.99	201	iPc	11	01.80	-1.0
			iS	11	47.00	
SVO	12.09	318	eP	12	56.00	0.5
BRS	16.65	234	eP	13	57.00	1.7
RMQ	19.52	242	eP	14	31.50	0.6
	1.1s	59.00nm			4.8mb	
CTA	20.59	262	iPd	14	42.80	0.7
	0.9s	25.21nm			4.6mb	
OLP	23.40	245	iPd	15	11.80	1.6
BWA	23.68	224	eP	15	12.80	-0.1
CAN	23.87	221	eP	15	14.80	0.1
STK	27.35	235	eP	15	48.10	0.6
WB5	31.77	262	eP	16	25.20	-1.9
WRA	31.79	262	Pd	16	25 10	-2.2
	0.5s	1.00nm			4.0mb	
ASPA	32.20	255	iPd	16	29.30	-1 6
	1.1s	21.00nm			5.0mb	
Z	22s	0.51um			4.2MszX	
		LR		28	25.90	
FORR	38.15	243	eP	17	21.60	0.1
CHTO	77.19	295	eP	21	56.10	-0.4
	1.2s	3.82nm			4.4mb	
CMB	87.45	49	eP	22	49.30	-0.1
FRI	87.49	50	eP	22	49.70	0.2
BNG	147.08	249	ePKPd	29	44.90	1.1
	0.5s	4.00nm				
		id		30	06.00	

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

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* SEP 01, 1989 09h 55m 39.26± 1.28s
5.380 S ± 8.1km 152.284 E ±11.2km
DEPTH = 50.3 ± 12.8 km
4.9mb (7 obs.) 3.5Msz (2 obs.)
NEW BRITAIN REGION (192)

RAB	1.19	354	iPc	56	00.00	0.2
			iS	56	18.00	
LAT	5.41	256	eP	57	04.00	4.6X
KDB	6.51	231	eP	57	15.00	0.2
CTA	15.75	201	iPd	59	23.30	3.8X
	1.0s	33.50nm			4.4mb	
QIS	19.48	218	iPd	00	04.20	-0.9
	0.7s	42.00nm			4.8mb	
GUA	20.17	339	e(P)	00	00.70	-11.7X
GUMO	20.23	339	e(P)	00	06.30	-6.7X
Z	20s	0.12um			3.2Msz	
RMQ	21.26	189	iPc	00	23.00	-0.5
	1.1s	57.00nm			4.8mb	
DZM	21.52	142	iPc	00	25.10	-1.1
BRS	21.90	179	eP	00	31.00	1.1
MTN	22.15	249	eP	00	31.80	-0.6
	0.3s	26.00nm			5.1mb	
WB5	22.62	229	eP	00	36.90	-0.1
WRA	22.68	229	Pd	00	37.30	-0.3
	0.8s	39.30nm			4.9mb	
ASPA	25.38	222	iPd	01	05.50	1.8
	0.8s	40.00nm			5.0mb	
Z	20s	0.29um			3.8Msz	
		LR		10	33.30	
WARB	32.07	227	eP	02	04.00	0.2
MBL	35.15	240	eP	02	29.70	-0.7
PMR	80.42	24	e(P)	07	46.90	0.1
	1.2s	27.30nm			5.1mb	
FBA	82.61	22	eP	07	57.70	-0.5
INK	89.18	21	eP	08	30.00	-0.5
ZOBO	134.61	119	ePKP	14	57.00	1.4

S.D. = 0.9 on 16 of 20 obs.

SEP 01, 1989 09h 55m 46.61± 0.52s
44.250 N ± 6.1km 7.451 E ± 4.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN)

ENR	0.03	223	P	55	48.53	-0.2
			S	55	49.49	
STV	0.09	267	P	55	49.58	0.3
			S	55	51.44	
ROB	0.30	81	P	55	53.11	0.1
			S	55	58.41	
PZZ	0.36	316	P	55	53.94	-0.1
			S	55	59.54	
IMI	0.46	137	P	55	56.14	0.1
			S	56	03.43	
FIN	0.55	94	P	55	57.14	-0.5
			S	56	06.17	
FOUF	0.56	300	P	56	08.00	10.1X
RRL	0.82	325	P	56	02.51	-0.2
			S	56	13.89	
PCP	0.84	69	P	56	03.26	0.4
			S	56	13.79	

S.D. = 0.4 on 8 of 9 obs.

% SEP 01, 1989 10h 00m 14.21± 0.78s
44.392 N ± 6.6km 8.331 E ± 6.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN)

FIN	0.20	206	P	00	18.77	0.1
			S	00	22.51	
PCP	0.21	46	P	00	18.92	0.0
			S	00	22.71	
ROB	0.34	254	P	00	21.13	-0.2
			S	00	26.20	
IMI	0.58	214	P	00	25.79	-0.2
ENR	0.67	256	P	00	27.43	-0.2
			S	00	36.96	
STV	0.74	259	P	00	29.33	0.6
			S	00	38.40	
PZZ	0.89	278	P	00	31.64	0.3
			S	00	43.73	
RRL	1.22	296	P	00	36.82	-0.3

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

SEP 01, 1989 10h 27m 06.73± 0.61s
41.797 N ± 5.2km 19.905 E ± 6.7km
DEPTH = 12.5 ± 5.7 km
ALBANIA (391)
ML 2.6 (TTG)

LACI	0.22	222	iPgc	27	12.00	0.4
PUK	0.25	358	iPgc	27	13.70	1.6
SDA	0.37	306	iPgd	27	14.80	0.3
PHP	0.42	105	iPgd	27	18.20	2.9X
TIR	0.45	184	ePg	27	16.50	0.5
ULC	0.52	289	iPgd	27	15.50	-1.7
			eSg	27	23.50	
BCI	0.58	12	iPgc	27	18.80	0.5
TTG	0.79	323	ePg	27	21.00	-0.9
			eSg	27	33.60	
BDV	0.94	302	ePg	27	24.00	-0.4
			eSg	27	38.00	
OHR	0.96	135	ePn	27	23.20	-1.6
BERA	1.09	178	ePn	27	28.90	1.9
NKY	1.22	327	ePg	27	29.40	0.2
			eSg	27	46.00	
HCY	1.23	302	iPgc	27	29.10	-0.3
			eSg	27	46.20	
BRY	1.49	318	ePg	27	34.60	1.2
			eSg	27	55.00	
VAY	2.06	102	ePn	27	40.40	-1.0

S.D. = 1.3 on 14 of 15 obs.

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* SEP 01, 1989 10h 41m 47.21± 0.90s
43.024 N ± 7.6km 13.257 E ± 7.8km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (SSO)

CIO	0.19	334	iPg	41	52.19	0.7
			iSg	41	56.20	
ALP	0.34	136	ePg	41	54.33	0.1
			iSg	42	00.02	
ASS	0.44	276	P	41	56.00	-0.2
			(Sg)	42	04.30	
ARV	0.53	334	Pc	41	57.50	-0.4
			eSg	42	05.90	
AOI	0.58	26	iPg	41	58.79	-0.2
			iSg	42	09.09	

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

SEP 01, 1989 10h 48m 32.39± 0.84s
20.550 S ± 6.6km 69.108 W ± 8.8km
DEPTH = 105.9 ± 8.0 km
4.9mb (11 obs.)
NORTHERN CHILE (123)

ANT	3.37	201	iP	49	21.20	-2.8
			i	49	25.50	
			i	49	49.00	
			i(S)	50	07.80	
CNCB	3.87	16	iPc	49	34.20	2.7
LPB	4.11	14	Pd	49	39.20	4.6X
CCH	4.22	42	Pc	49	38.00	2.0
			i	49	41.30	
ZOBO	4.36	13	iPc	49	40.20	2.0
			eS	50	10.00	
ARE	4.65	331	iPd	49	40.00	-1.9
			iS	50	34.00	
SLA	5.33	142	ePc	49	50.60	-0.6
HUA	10.35	324	e(P)	51	03.40	3.6X
			eS	51	52.30	
ZON	10.96	178	e(P)	51	09.00	1.6
NNA	11.29	318	eP	51	09.80	-2.1
	1.0s	20.00nm			4.8mb	
			eS	53	13.00	
MRA	12.20	166	e(P)	51	19.00	-4.6X
PEL	12.62	186	eP	51	36.80	7.5X
SAN	12.93	186	eP	51	39.80	6.5X
ITB1	14.19	109	e(P)	51	51.60	1.9
PPD	16.65	98	eP	52	18.90	-1.9
			e	52	21.70	
			epP	52	31.70	
ITR	31.85	73	eP	54	45.80	-3.7X
SGS	54.54	348	P	57	51.20	-0.4
PRM	55.78	347	P	57	59.00	-1.5
			pP	58	25.00	107kmX
LHS	55.84	348	P	58	00.60	-0.4
TKL	57.60	346	P	58	11.90	-1.5
GBTN	57.71	345	P	58	11.50	-2.7
RSCP	57.99	344	P	58	14.20	-2.0
	0.8s	112.18nm			5.9mb	X
			pP	58	38.00	96kmX
PWLA	58.08	342	P	58	14.60	-2.2
BLA	58.43	349	P	58	18.20	-1.1
CVL	58.88	351	P	58	21.90	-0.4
NA2	58.93	352	P	58	21.90	-0.7
UYO	59.53	336	iPc	58	25.70	-1.1
OLY	59.64	339	P	58	25.80	-1.8
			pP	58	52.40	108kmX
FVM	61.58	341	P	58	39.10	-1.6
			pP	59	06.10	109kmX
TUL	61.58	336	eP	58	38.20	-2.5
	1.2s	18.20nm			5.0mb	
			e	59	06.50	
LNO	61.58	336	eP	58	39.30	-1.3
SIO	61.63	335	iP	58	39.90	-1.2
ALQ	65.60	327	eP	59	07.10	-0.2
	1.0s	7.50nm			4.6mb	
			e	59	35.00	
			e	59	38.50	
GAC	66.19	355	ePc	59	10.20	-0.3
			pP	59	36.50	105kmX
LIC	68.31	74	P	59	22.72	-1.8
TIC	68.49	74	P	59	23.84	-1.8
KIC	68.62	74	Pc	59	24.86	-1.6
	0.7s	26.50nm			5.2mb	
GOL	68.84	331	P	59	27.00	-0.6
	0.7s	13.35nm			4.9mb	
			pP	59	50.70	92kmX
GLA	68.89	320	eP	59	29.00	1.2
SPA	69.58	180	e(P)	59	32.20	0.5
	1.0s	16.50nm			4.8mb	
BAR	69.77	318	eP	59	33.00	-0.2
PLM	70.34	319	eP	59	38.00	1.1
TPC	70.36	320	eP	59	38.00	1.2
PEC	70.89	319	P	59	40.40	0.4
RVR	71.09	319	eP	59	42.00	0.9
MSU	71.29	326	P	59	43.20	0.6
GSC	71.63	320	eP	59	45.00	0.6
MWC	71.66	319	eP	59	46.00	1.2

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CBB    71.83 319 eP     59 46.00   0.4
RSSD   71.86 334 P      59 45.60  -0.2
               pP       00 12.50 105kmX
CLC    72.45 320 eP     59 50.00   0.7
BCH    73.55 318 P      59 56.70   1.0
TNP    73.77 322 P      59 57.50   0.4
       0.7s     7.59nm          4.6mb
RSON   74.33 344 P      59 58.60  -1.2
       0.8s    20.03nm          5.0mb
               pP       00 25.40 104kmX
FRI    74.50 320 eP     00 04.00   3.0
PRI    74.53 319 eP     00 02.50   1.1
KVN    74.94 323 P      00 04.50   0.7
LLA    75.01 319 ePd    00 05.10   1.1
PRS    75.09 319 eP     00 05.70   1.2
CMB    75.59 321 ePd    00 08.00   0.7
ARN    75.84 319 P      00 09.50   0.7
MHC    75.90 319 eP     00 10.70   1.5
GCC    75.92 319 ePd    00 10.30   1.2
BKS    76.61 319 iPc    00 14.40   1.4
LRM    76.87 330 iPd    00 15.50   0.9
ORV    77.24 321 eP     00 17.70   1.2
WDC    78.51 321 iPd    00 22.90  -0.5
FHC    79.50 321 eP     00 30.30   1.5
SES    79.74 334 ePd    00 29.80  -0.1
               pP       00 58.00 109kmX
FFC    80.07 341 iPd    00 30.70  -0.8
       1.0s    17.00nm          4.8mb
DPW    81.07 329 P      00 37.80   0.8
LON    82.12 326 P      00 41.30  -1.1
               pP       01 17.10 142kmX
PNT    82.75 329 eP     00 46.00   0.4
       0.7s    10.00nm          4.8mb
EDM    82.83 335 iPd    00 45.30  -0.6
       0.8s    32.00nm          5.3mb
YKA    90.23 341 eP     01 24.00   2.3
ASPA  130.66 208 iPKPc  07 32.50  -0.7
WRA   133.67 211 PKPc   07 38.60  -0.3
       0.8s     4.30nm
WB5   133.71 211 ePKP   07 38.70  -0.3
GUA   146.78 263 ePKP   08 04.30   1.8
       0.6s    58.67nm
GUMO  146.84 263 ePKP   08 03.80   1.2
       0.6s    51.63nm
PJG   146.84 263 ePKP   08 04.50   1.9X
GBA   147.33  97 PKPc   08 03.80   0.5
       0.7s     4.40nm
NDI   148.41  68 iPKPd  08 08.50   3.7X
MAT   151.33 310 ePKP   08 15.00   6.0X
       0.8s    15.67nm
     S.D. = 1.4  on  75 of  84 obs.
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   SEP  01, 1989  11h 57m 22.55± 0.17s
    6.699 S ± 3.9km  108.426 E ± 5.2km
   DEPTH = 221.9km  (  6 depth phases)
   5.3mb ( 24 obs.)
 JAVA                              (277)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 16S, 28C
      Centroid Location:
      Origin Time        11:57:25.0 0.6
      Lat  7.13S 0.06 Lon 108.23E 0.06
      Dep 228.7 3.5 Half-duration  2.1
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-0.91 0.06  Mtt=-0.09 0.09
        Mff= 1.00 0.11  Mrt= 0.73 0.09
        Mrf= 0.08 0.08  Mtf= 0.72 0.11
       Principal Axes:
        T  Val=  1.44  Plg=11  Azm=300
        N       -0.06      32       37
        P       -1.38      56      194
      Best Double Couple:Mo=1.4*10**17
       NP1:Strike=357 Dip=44 Slip=-139
       NP2:       235     63      -53

KLM    11.86 325 ePd    00 08.50   2.4
PSI    13.31 314 ePc    00 23.00  -1.3
       0.9s   163.10nm          5.4mb
IPM    13.42 326 ePc    00 27.50   1.8
       0.9s   595.50nm          6.0mb
                e       01 06.50
TSM    14.51  42 eP     00 50.00  10.9X
KKM    14.85  32 ePd    00 45.00   1.5
       1.0s    72.00nm          5.1mb
SNG    15.83 330 ePc    00 54.90  -0.4
       1.1s   592.41nm          5.9mb

                eS       03 41.70
NANU   17.19 157 iPd    01 10.70  -0.2
                e       01 19.00
                eS       04 14.00
MBL    18.13 144 iPc    01 19.70  -1.1
       0.4s    78.00nm          5.5mb
                eS       04 31.00
DAV    21.91  52 eP     02 04.30   5.6X
MEKA   22.02 155 iPd    02 00.50   0.8
       0.4s    32.00nm          5.2mb
                e       02 25.50 123kmX
                eS       06 12.00
MTN    23.18 107 iPd    02 10.40  -0.6
                eS       06 11.00
MRWA   23.51 163 eP     02 13.60  -0.4
       0.3s     6.00nm          4.7mb
                e       02 43.00 146kmX
                eS       06 44.00
NST    23.70 340 iPc    02 16.60   0.8
                e       03 03.50
LOE    24.85 345 eP     02 26.00  -0.5
                e       09 15.00
BAL    25.02 163 eP     02 27.00  -1.0
                eS       07 20.00
BDT    25.55 339 eP     02 32.80  -0.1
QIZ    25.60   3 eP     02 38.60   5.2X
                pP       03 18.00 200kmX
                sS       08 09.00
MUN    26.18 165 iPc    02 37.90  -0.6
       0.8s   111.00nm          5.6mb
CHG    27.02 340 iPc    02 46.00  -0.2
       1.0s    77.25nm          5.3mb
                e       09 22.00
CHTO   27.02 340 iP     02 45.00  -1.2
       0.8s    53.26nm          5.3mb
                pP       03 30.50 231km
NWAO   27.35 164 iPc    02 48.00  -1.1
RKG    28.37 165 eP     03 01.00   2.7
WB5    28.38 120 iPc    02 57.20  -1.4
                ePcP     03 44.80
                e       09 05.00
WRA    28.39 120 Pc     02 57.00  -1.6
       0.3s    12.50nm          5.1mb
ASPA   29.73 127 iPc    03 09.50  -0.9
       0.7s   121.00nm          5.7mb
                epP      04 03.90 279kmX
                eS       07 46.40
                esS      09 18.30
KMI    32.11 350 Pc     03 32.50   1.2
                pP       04 20.00 234kmX
                PP       04 54.50
                S        08 31.00
                sS       09 50.00
GYA    33.00 357 P      03 39.80   0.9
                S        08 43.00
QIS    33.20 118 iPc    03 39.20  -1.4
                e       04 39.00 305kmX
                eS       08 40.00
KOD    35.12 298 eP     03 56.60  -0.7
GBA    36.79 303 Pd     04 09.40  -1.5
       1.1s    53.20nm          5.0mb
WHN    37.46   8 eP     04 16.50   0.2
                eS       09 48.00
CD2    37.66 353 P      04 18.20   0.1
                pP       05 06.00 229km
                S        09 51.60
HYB    38.02 309 ePc    04 19.00  -2.2
       1.0s    50.00nm          5.1mb
CTA    39.02 114 iPc    04 29.30  -0.1
       1.2s    62.50nm          5.1mb
                iPP      06 01.00
                iS       10 12.00
QLP    39.39 124 iPc    04 33.10   0.7
                e       06 04.20 497kmX
ADE    39.60 139 iPc    04 34.60   0.6
       0.9s    92.44nm          5.3mb
NJ2    39.80  14 Pc     04 37.80   2.2
STK    39.80 133 iPd    04 36.10   0.4
       0.4s    95.00nm          5.7mb
                iPcP     06 37.50
                iS       10 14.60
XAN    40.52   1 P      04 42.00   0.5
                pP       05 28.00 217km
                S        10 33.00
                sS       11 53.00
POO    42.33 307 iPc    04 55.20  -1.3
CMS    42.75 130 iPc    05 00.00   0.2

       0.6s    11.00nm          4.5mb
                i       06 45.20 601kmX
LZH    42.77 355 P      05 00.00  -0.1
                pP       05 08.00  27kmX
                S        11 08.00
RMO    43.11 122 eP     05 04.00   1.2
                i       06 47.20 582kmX
                e       10 19.20
TIA    43.46  10 eP     05 05.50   0.1
TIY    44.34   5 eP     05 13.00   0.5
                pP       05 59.00 214km
                S        11 30.00
                sS       12 57.50
TOO    45.56 138 eP     05 23.00   0.8
                e       06 57.40 502kmX
BWA    46.03 132 eP     05 27.70   1.8
                i       06 59.20 479kmX
NDI    46.28 321 eP     05 24.50  -3.4X
GTA    46.56 351 eP     05 30.70   0.6
CAN    46.87 133 eP     05 31.60  -0.9
                i       07 01.70 467kmX
BJI    47.05   8 eP     05 34.00   0.3
                epP      06 23.00 227km
                eScP     10 34.00
                eS       12 08.00
                esS      13 32.00
BTO    47.09   2 eP     05 34.00  -0.1
COO    47.13 126 eP     05 35.70   1.1
       0.8s    32.00nm          4.8mb
HHC    47.40   3 eP     05 37.70   1.2
TAU    49.72 143 iPd    05 54.70   0.6
SNY    50.24  15 eP     05 57.80  -0.3
MAT    51.28  31 eP     06 03.00  -3.0X
       0.9s     8.40nm          4.2mb X
                (S)      13 14.00
CN2    52.57  15 eP     06 14.50  -0.9
                eS       13 20.00
WMO    53.67 341 P      06 22.80  -0.8
QUE    54.10 315 eP     06 24.50  -2.6
KSH    54.86 329 eP     06 28.90  -3.4X
DZM    57.91 112 iPc    06 53.40  -0.7
MAIO   62.69 317 eP     07 23.00  -3.2X
DRV    63.68 167 iP     07 31.40  -0.6
SHI    64.68 307 eP     07 37.00  -2.3
                e       15 50.00
MAW    68.06 197 iP     08 00.00   0.2
       1.0s   174.00nm          5.7mb
MNG    68.29 131 P      08 00.80  -0.9
NAI    71.60 271 iPd    08 23.00   0.5
PTZ    75.90 257 iPc    08 47.60   0.6
SBA    77.07 169 iPd    08 53.80   1.6
BUL    78.19 251 iPc    09 00.00   0.5
                iS       18 35.20
MZZ    78.52 260 iPc    09 02.30   0.9
LSZ    78.88 256 iPd    09 04.00   0.7
PRY    78.95 244 iPd    09 05.50   1.9
       0.7s   100.00nm          5.7mb
MBH    79.20 302 eP     09 04.00  -0.6
DSI    79.23 304 iPd    09 05.00   0.2
PRNI   79.24 302 iPd    09 05.00   0.1
LWI    79.44 269 iPd    09 07.20   0.6
KSR    79.51 245 iPd    09 07.30   0.7
       0.9s    46.15nm          5.2mb
KMZ    81.29 257 iPc    09 17.00   0.9
MLR    89.48 316 eP     09 48.00  -7.8X
BNG    90.39 274 iPd    10 00.30  -0.2
       0.8s    51.00nm          5.5mb
                id      10 52.90 213km
SNA    90.59 198 iPd    10 01.60   1.3
       1.2s   132.81nm          5.8mb
NRA0   99.17 330 P      10 32.00  -7.6X
RMW   121.08  38 PKP    15 50.00  -0.4
LON   121.40  38 PKP    15 50.00  -1.0
PNT   121.48  35 ePKP   15 51.00   0.0
EDM   122.55  28 ePKPd  15 52.20  -0.7
DPW   123.02  36 PKP    15 53.70  -0.4
WDC   123.47  45 ePKP   15 54.70  -0.4
LBFM  123.63  44 PKP    15 55.50  -0.2
MIN   124.22  45 ePKP   15 56.90   0.1
ORV   124.60  46 ePKP   15 57.20  -0.1
ARN   125.40  48 PKP    15 59.30   0.3
SES   125.44  30 ePKP   15 57.00  -1.7
PRS   125.88  50 ePKP   16 00.40   0.4
CMB   125.99  47 ePKP   16 00.10  -0.1
KVN   127.22  45 PKP    16 02.00  -0.7
TNP   128.26  46 PKP    16 04.70   0.0
MSU   131.57  43 PKP    16 11.70   0.7
```

01d 12h

GLA	132.10	51	PKP	16	13.60	1.7
RSSD	133.16	32	PKP	16	12.70	-1.1
GOL	135.28	38	PKP	16	15.80	-2.3X
ALQ	137.35	44	e(PKP)	16	22.60	0.6
			iPKS	19	34.50	
TCA	141.59	190	ePKPd	16	24.30	-5.4X
PDCR	142.51	239	ePKP	16	25.10	-6.5X
			e	16	32.50	
			e	19	45.60	
SIO	143.25	35	ePKPd	16	29.10	-3.2X
			e	19	49.30	
TUL	143.42	34	ePKP	16	29.80	-2.7X
	1.0s	12.30nm				
			e	19	49.00	
LNO	143.42	34	ePKP	16	29.50	-2.9X
ITR	143.56	246	iPKPc	16	30.00	-3.4X
			e	16	35.70	
			e	16	38.70	
			e	19	48.60	
FVM	144.47	26	PKP	16	32.10	-2.2X
PPD	145.22	214	ePKP	16	36.50	0.5
			e	16	39.10	
UYO	145.44	35	iPKPc	16	34.70	-1.3
TBR	145.62	4	PKP	16	34.00	-2.1X
OLY	146.00	30	PKP	16	36.00	-0.9
BAO	147.78	226	ePKP	16	41.00	0.6
PWLA	148.02	26	PKP	16	52.40	12.2X
SLA	148.21	191	ePKPd	16	45.20	4.2X
NA2	148.22	9	PKP	16	43.30	3.0X
CVL	148.24	10	PKP	16	43.70	3.3X
BLA	148.58	14	PKP	16	40.20	-0.9
GBTN	148.92	20	PKP	16	45.30	3.7X
TKL	149.08	20	PKP	16	41.60	-0.2
PRM	150.98	19	PKP	16	50.20	5.5X
LHS	151.07	16	PKP	16	50.00	5.2X
JSC	151.13	17	PKP	16	45.00	0.1
CNCB	156.37	189	ePKP	16	51.00	-2.4X
			e	21	00.00	
LPB	156.66	188	PKP	16	54.00	0.4
			e	21	04.00	

S.D. = 1.0 on 102 of 128 obs.

? SEP 01, 1989 11h 58m 20.52± 9.97s
50.437 N ±32.3km 6.139 E ±71.5km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 1.7 (UCC).

MEM	0.19	334	iPc	58	24.56	-0.2
ENN	0.36	338	iPgc	58	28.00	0.1
	0.5s	17.00nm				
			iSg	58	33.20	
			e	58	38.50	
DOU	1.05	252	P	58	40.30	0.0
			iS	58	54.90	
SNF	1.19	274	Pc	58	42.60	0.0

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

? SEP 01, 1989 11h 59m 19.40± 9.10s
50.443 N ±31.9km 6.116 E ±66.0km
DEPTH = 10.0km (geophysicist)
GERMANY (543)

MEM	0.18	337	iPc	59	23.20	-0.2
ENN	0.35	339	iPg	59	26.70	0.2
	0.5s	8.00nm				
			eSg	59	31.50	
			e	59	37.00	
DOU	1.04	251	P	59	39.00	0.0
SNF	1.17	274	iP	59	41.20	-0.1

S.D. = 0.3 on 4 of 4 obs.

% SEP 01, 1989 12h 25m 29.63± 0.66s
59.959 N ± 5.8km 6.268 E ± 6.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.0 (BER).

ODD1	0.19	105	iP	25	33.88	0.1
			eS	25	37.15	
BLS1	0.64	153	iP	25	41.15	-1.3
			iS	25	50.30	
ASK	0.75	315	eP	25	43.39	-0.9
			iS	25	53.92	
KMY	0.91	215	iP	25	48.29	1.2
			eS	26	00.32	
HYA	1.21	358	eP	25	52.53	0.4
			eS	26	10.22	
SUE	1.33	327	iP	25	53.95	-0.2
			iS	26	11.95	
MOL	2.69	13	eP	26	13.80	0.1
			eS	26	46.10	
NRA0	2.73	71	iPc	26	15.00	0.7
			iSg	26	55.30	

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

• SEP 01, 1989 13h 12m 11.62± 2.69s
50.241 N ±15.7km 6.585 E ±17.0km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.0 (UCC).

MEM	0.49	319	iPd	12	21.86	0.4
			iS	12	30.20	
ENN	0.65	325	ePgd	12	24.00	-0.5
	0.7s	10.00nm				
			iSg	12	34.80	
			i	12	45.10	
DOU	1.24	264	iP	12	34.50	-0.1
			iS	12	53.00	
SNF	1.45	282	iP	12	38.00	0.2
WTS	1.77	6	ePn	12	42.50	0.1
	0.9s	28.00nm				
			ePg	12	46.50	
			eSg	13	13.00	

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

• SEP 01, 1989 14h 02m 43.94± 0.66s
10.336 N ± 8.0km 63.725 W ± 9.9km
DEPTH = 10.0km (geophysicist)
4.6mb (1 obs.)
NEAR COAST OF VENEZUELA (97)

TCE	1.97	79	eP	03	16.83	-0.9
TPP	2.24	90	eP	03	25.88	4.3X
TRN	2.30	82	eP	03	23.70	1.2
TBH	2.62	87	eP	03	31.89	4.9X
BIM	4.90	32	eP	03	59.22	-0.2
MVM	5.02	33	eP	04	01.31	0.2
FDF	5.04	30	iPd	04	01.13	-0.3
ZOBO	26.79	189	P	08	27.00	0.2
LPB	27.04	189	P	08	33.00	4.0X
CNCB	27.30	189	eP	08	31.00	-0.4
MBC	72.18	348	eP	14	10.50	0.0
	0.5s	3.00nm			4.6mb	
INK	73.03	339	eP	14	16.00	0.4

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

% SEP 01, 1989 14h 04m 15.54± 1.61s
61.333 N ±11.6km 4.195 E ±11.5km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.2 (BER).

SUE	0.39	135	eP	04	25.21	1.7
			eS	04	31.02	
HYA	0.98	99	iP	04	34.84	0.8
			iS	04	48.80	
ASK	0.98	150	iP	04	34.67	0.5
			eS	04	48.45	
OSG	1.06	218	eP	04	36.20	0.8
			iS	04	49.88	
BER	1.10	149	eP	04	37.08	0.8
			iS	04	51.85	
ODD1	1.86	139	iP	04	47.04	-0.7
			eS	05	09.21	
			iSg	05	14.49	
MOL	2.01	50	iP	04	50.82	0.9
			eS	05	14.25	
KMY	2.19	166	iP	04	50.77	-1.7
			eS	05	16.67	
BLS1	2.35	145	eP	04	53.82	-1.0
			iS	05	21.20	
NRA0	3.62	96	iPc	05	10.80	-2.0
			eS	05	51.80	

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

SEP 01, 1989 14h 42m 22.26± 0.93s
28.012 S ± 6.3km 70.134 W ±10.1km
DEPTH = 94.8 ± 7.7 km
5.0mb (5 obs.)
CENTRAL CHILE (136)

ZON	3.74	161	eP	43	20.00	1.0
			eS	43	52.00	
CYA	3.85	97	iPc	43	21.10	0.6
CFA	3.94	156	iPd	43	22.50	0.8
			S	44	07.00	
ANT	4.30	357	iPd	43	25.50	-1.0
			i(S)	44	25.70	
PEL	5.14	185	iPc	43	37.10	-1.2
			i(S)	44	34.50	
SLA	5.29	53	ePc	43	42.20	1.7
MRA	5.82	140	ePd	43	47.00	-0.7
TCA	5.85	126	ePc	43	47.00	-1.2
			S	44	38.60	
PPD	18.06	75	eP	46	28.00	-0.5
SPA	62.15	180	iPd	52	35.60	0.1
	1.0s	32.00nm			5.3mb	
LIC	71.36	72	P	53	33.46	-0.6
	0.5s	7.50nm			4.8mb	
TIC	71.59	72	P	53	35.18	-0.3
	0.5s	5.50nm			4.7mb	
KIC	71.67	72	Pd	53	35.54	-0.4
	0.5s	13.50nm			5.1mb	
MAW	78.44	163	eP	54	14.00	0.4
KVN	80.34	324	eP	54	26.30	1.8
			pP	54	52.00	98kmX
			sP	55	02.90	
BUL	88.08	112	iPd	55	04.40	0.6
BNG	90.89	85	ePc	55	17.70	0.7
	0.4s	4.00nm			5.0mb	
PTS	100.46	54	Pdiff	55	59.25	-0.9
RBL	105.69	46	Pdiff	56	21.60	-1.7
BLS3	107.29	31	iPdiff	56	37.20	7.1X
BLS2	107.42	32	iPdiff	56	37.00	6.3X
WRA	126.77	209	PKPc	01	16.70	-0.2
	0.5s	2.50nm				
W85	126.82	209	ePKP	01	16.90	-0.1
			e	01	44.00	
GBA	146.59	109	PKPc	01	54.20	1.0
	0.5s	3.80nm				
HYB	149.33	103	iPKPc	02	02.50	4.9X

S.D. = 1.0 on 22 of 25 obs.

• SEP 01, 1989 14h 53m 32.15± 1.90s
51.521 N ±17.9km 16.136 E ± 9.9km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.7 (VKA), 3.7 (KBA).

KSP	0.69	172	iPd	53	46.00	0.3
			iS	53	54.80	
BRG	1.52	246	ePn	53	59.10	-0.3
			iPg	54	00.80	
			iSg	54	20.60	
PRU	1.84	214	Pn	54	04.20	0.2
			Pg	54	06.10	
			Sn	54	23.00	
			Sg	54	29.50	
			e	54	37.00	
CLL	1.97	265	iPn	54	05.40	-0.5
			iPg	54	08.60	
			iSn	54	29.20	
			iSg	54	34.40	
KHC	2.90	215	iPn	54	18.90	-0.3
			Pg	54	25.10	
			Sn	54	52.20	
			Sg	55	03.10	
MOX	2.98	255	ePn	54	22.00	1.7
			iPg	54	28.00	
			iSg	55	07.00	
VKA	3.26	178	iPgc	54	33.40	9.0X
			iSg	55	16.30	
ZST	3.39	169	eP	54	57.00	30.9X
			e(Sg)	55	46.00	
SPC	3.52	130	e(Pn)	54	28.00	-0.1
			i(Sg)	54	45.50	
GRF	3.63	242	ePn	54	28.70	-0.8
			ePg	54	43.10	
			eSn	55	08.10	
			eSg	55	28.40	
KBA	4.81	203	iP	55	44.60	58.1X
	0.6s	29.00nm				
			i	56	04.90	
			i	56	09.20	

S.D. = 0.9 on 8 of 11 obs.

SEP 01, 1989 15h 14m 25.64± 0.42s
38.841 N ± 4.1km 25.768 E ± 4.7km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)
ML 3.5 (ATH).

PRK	0.56	44	ePn	14 37.80	0.7
EZN	1.07	24	iPg	14 45.50	-0.3
IZM	1.25	110	iPn	14 48.60	-0.3
SMG	1.41	143	ePn	14 50.80	-0.5
APE	1.78	186	ePn	14 55.50	-1.2
ATH	1.83	242	ePb	15 00.80	3.4X
NEO	2.03	284	ePn	15 00.50	0.1
EDC	2.21	46	iPn	15 02.40	-0.5
BNT	2.25	47	iPn	15 03.70	0.3
DST	2.35	70	ePn	15 00.70	-4.2X
PLG	2.36	311	ePn	15 05.60	0.6
YER	2.62	130	ePn	15 11.50	2.8
KDZ	2.82	355	iP	15 08.00	-3.6X
RZN	2.96	345	iPg	15 13.00	-0.6
KHL	2.99	99	ePn	15 05.00	-9.0X
MMB	3.16	331	ePc	15 16.00	-0.4
DIM	3.21	357	eP	15 17.00	-0.1
YLV	3.27	57	ePn	15 20.00	1.9
PLD	3.36	346	iPd	15 19.00	-0.2
ITU	3.37	47	ePn	15 28.00	8.7X
			iSg	16 15.00	
ALT	3.39	85	ePn	15 19.50	-0.3
KZN	3.42	297	ePn	15 21.00	0.9
ITM	3.46	243	ePn	15 20.30	-0.3
KAP	3.47	161	ePn	15 19.30	-1.5
VAY	3.49	316	ePn	15 21.00	0.0
NPS	3.57	182	ePn	15 20.10	-2.2
HRT	3.60	55	ePn	15 22.60	0.0
VAM	3.65	201	ePn	15 26.00	2.7
KKB	3.65	327	iP	15 22.00	-1.4
JMB	3.67	9	eP	15 22.00	-1.7
ELL	3.89	121	ePn	15 33.00	6.1X
PGB	3.90	342	iP	15 26.00	-0.9
VTS	4.22	333	iPd	15 32.00	0.4
PVL	4.38	356	eP	15 22.00	-11.7X
SKO	4.55	315	e(Pn)	15 38.50	2.4
MLR	6.65	1	ePc	16 05.50	-0.3

S.D. = 1.3 on 29 of 36 obs.

SEP 01, 1989 15h 22m 54.63± 0.67s
43.435 N ± 5.8km 12.964 E ± 5.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ARV	0.07	346	Pc	22 56.80	-0.2
			eSg	22 58.30	
CIO	0.27	151	iPg	23 00.14	-0.3
			iSg	23 04.64	
ASS	0.43	211	Pc	23 03.50	0.1
			eSg	23 09.90	
AOI	0.48	76	ePg	23 04.53	0.2
			iSg	23 12.66	
CRE	0.76	285	P	23 09.60	0.0
			eSg	23 19.20	
ALP	0.79	145	ePg	23 10.23	0.1
			e(Sg)	23 23.61	

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

SEP 01, 1989 16h 13m 58.52± 1.06s
36.003 N ± 7.5km 70.369 E ± 7.4km
DEPTH = 102.8 ± 13.2 km
4.5mb (4 obs.)
HINDU KUSH REGION (718)

KSH	5.63	51	eP	15 21.50	0.2
			S	16 23.50	
QUE	6.47	207	eP	15 33.30	0.3
			eS	16 46.50	
MAIO	8.80	275	eP	16 04.00	-0.7
			eS	17 42.00	
NDI	9.31	140	iPd	16 07.00	-4.6X
	0.2s	222.22nm			6.7mb X
			eS	17 47.50	
WMO	15.40	54	eP	17 31.40	0.1
HYB	19.89	156	eP	18 23.50	-0.6
GBA	23.19	162	Pd	18 58.30	1.4
	0.6s	4.00nm			3.9mb
GTA	23.50	73	P	19 00.00	0.1
CHTO	30.45	117	eP	20 02.10	-1.3
	0.7s	0.48nm			3.3mb X
NUR	37.94	325	iP	21 07.80	0.7
SUF	38.08	329	iP	21 09.20	0.9
	0.6s	6.30nm			4.7mb
NB2	44.47	323	P	21 59.80	-1.0
	0.4s	2.10nm			4.3mb
MBC	67.86	3	eP	24 47.00	-0.1
	0.5s	4.00nm			4.6mb

S.D. = 0.9 on 12 of 13 obs.

? SEP 01, 1989 17h 01m 34.47± 8.51s
48.796 N ±26.6km 9.011 E ±56.9km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 1.0 (STR).

GWF	0.93	282	Pg	01 52.19	-0.1
			Sg	02 05.93	
FEL	1.14	216	Pg	01 55.68	-0.2
			Sg	02 11.64	
WLS	1.17	251	Pg	01 56.39	0.1
			Sg	02 11.28	
CDF	1.21	252	Pg	01 57.03	-0.1
			Sg	02 12.64	
ECH	1.36	245	Pg	01 59.79	0.3
			Sg	02 17.33	

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

? SEP 01, 1989 17h 16m 45.93± 3.11s
5.748 S ±31.6km 147.118 E ±25.4km
DEPTH = 200.0 ± 8.9 km
4.9mb (4 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.91	187	iPc	17 15.00	-0.3
			eS	17 37.00	
MNDI	3.47	263	eP	17 42.50	0.6
KDB	3.70	179	iPd	17 44.00	-0.5
			eS	18 29.00	
CTA	14.28	183	iPc	20 02.00	1.5
QIS	16.43	206	eP	20 26.10	-0.8
	0.3s	9.00nm			4.7mb
MTN	17.27	245	iPc	20 36.60	0.0
	0.7s	93.00nm			5.3mb
WB5	18.74	220	eP	20 51.80	-0.3
WRA	18.80	220	Pc	20 52.50	-0.3
	0.3s	15.40nm			5.0mb
RMO	20.68	176	eP	21 12.00	0.2
ASPA	21.89	214	iPd	21 24.80	1.2
	0.6s	24.00nm			4.9mb
			eS	25 14.70	
WARB	28.20	222	eP	22 22.00	-0.2
FORR	30.70	213	eP	22 43.00	-1.1

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

• SEP 01, 1989 17h 45m 25.68± 0.89s
39.390 N ± 9.2km 21.718 E ±10.8km
DEPTH = 10.0km (geophysicist)
3.2mb (1 obs.)
GREECE (364)
MD 3.0 (ATH).

KZN	0.92	3	ePg	45 42.70	-0.5
			eSg	45 59.00	
NEO	1.17	94	ePb	45 47.00	-0.6
VLS	1.50	216	ePb	45 53.00	0.4
PLG	1.65	53	ePb	45 56.00	1.1
ITM	2.21	176	ePb	46 06.00	3.0X
BCAO	34.92	186	eP	52 19.20	-0.4
	1.1s	0.40nm			3.2mb

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

SEP 01, 1989 18h 03m 31.22± 0.68s
37.695 N ± 6.7km 29.282 E ± 6.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.66	17	iPg	03 43.50	-0.8
			eSg	03 55.50	
CIN	0.95	265	eP	03 49.00	-0.4
YER	0.97	235	iPn	03 49.90	0.2
BCK	1.06	102	ePn	03 52.80	1.5
ELL	1.07	152	iPn	03 50.20	-1.2
ALT	1.51	25	ePn	03 58.40	0.1
IZM	1.74	294	ePn	04 03.00	1.3
DST	1.98	345	iPn	04 04.60	-0.5

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

• SEP 01, 1989 18h 05m 44.00± 0.83s
37.738 N ±10.0km 29.210 E ± 7.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.63	23	iPg	05 56.00	-0.8
			iSg	06 07.50	
CIN	0.90	262	eP	06 01.00	-0.3
YER	0.95	231	ePn	06 02.40	0.2
BCK	1.13	104	ePn	06 05.00	-0.2
ALT	1.49	28	ePn	06 12.00	1.1

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

• SEP 01, 1989 18h 11m 01.30± 1.82s
22.757 S ±14.4km 179.882 W ± 9.7km
DEPTH = 622.8 ± 25.7 km
4.8mb (14 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.67	270	iPc	13 46.90	0.4
HBZ	14.88	186	eP	14 09.30	1.7
MNG	18.23	191	eP	14 37.70	-1.7
	0.2s	10.00nm			4.9mb
			eS	17 39.10	
MTW	18.76	191	eP	14 43.40	-0.8
CAW	18.79	192	eP	14 44.10	-0.3
WDW	18.95	192	P	14 45.50	-0.5
BLW	18.96	191	P	14 47.20	1.1
MRW	18.98	193	eP	14 45.70	-0.4
TCW	19.05	194	P	14 47.50	0.7
RMO	28.71	256	iPd	16 13.70	1.1
	0.6s	23.00nm			5.0mb
CTA	31.60	268	iPd	16 36.80	-0.2
	0.7s	51.37nm			5.3mb
QLP	32.76	256	iPd	16 47.20	0.5
ASPA	42.34	259	iPc	18 04.30	-0.2
	0.8s	23.00nm			4.7mb
			eS	23 45.10	
			eScP	23 52.60	
WB5	42.59	265	iPd	18 05.50	-1.0
			ePcP	22 45.20	
WRA	42.60	265	Pd	18 05.60	-1.0
	0.2s	5.00nm			4.7mb
FORR	46.78	248	eP	18 38.80	0.3
	0.3s	19.00nm			5.1mb
MTN	47.49	273	iPc	18 42.50	-1.5
	0.5s	24.00nm			4.9mb
WARB	48.51	255	iPd	18 51.40	-0.2
	0.3s	9.00nm			4.7mb
MBL	55.59	259	iPd	19 41.80	-0.4
	0.3s	17.00nm			4.8mb
MRWA	57.39	249	eP	19 54.40	0.0
	0.3s	3.00nm			4.0mb
NANU	59.15	257	iPd	20 06.80	0.7
	0.3s	34.00nm			5.1mb
PLM	81.95	49	eP	22 19.10	0.3
KVN	84.35	44	eP	22 30.00	-0.6
TNP	84.36	45	eP	22 30.50	-0.2
	1.0s	3.50nm			3.9mb
CHTO	89.38	291	iP	22 56.90	2.5
	0.9s	8.53nm			4.6mb
PNT	89.50	35	eP	22 54.00	-0.3
	0.6s	4.00nm			4.5mb
CLL	149.79	344	ePKP	29 43.00	5.5X
BRG	149.94	342	iPKP	29 43.80	6.0X
	0.8s	10.00nm			

S.D. = 1.0 on 26 of 28 obs.

• SEP 01, 1989 18h 11m 37.27± 0.80s
37.721 N ± 9.5km 29.241 E ± 7.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.64	20	iPg	11 49.50	-0.7
			eSg	12 01.00	
CIN	0.92	263	ePg	11 55.09	0.2
			iSg	12 07.00	
YER	0.96	233	ePn	11 55.40	-0.2
BCK	1.10	103	ePn	11 58.00	0.0
ALT	1.50	27	ePn	12 05.00	0.7

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

• SEP 01, 1989 18h 21m 50.19± 0.50s
5.970 N ± 9.3km 124.407 E ±15.0km
DEPTH = 33.0km (normol)
4.4mb (4 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MNI	4.52	174	eP	22 57.50	-0.6
			iS	23 46.50	
JAY	18.33	117	ePd	26 05.20	1.5
MTN	19.85	160	eP	26 20.90	-0.6

01d 18h

	1.0s	79.00nm		5.0mb		
PSI	25.61	264	ePc	27	20.00	1.5
WB5	27.49	159	eP	27	34.70	-1.0
WRA	27.54	159	Pc	27	33.70	-2.5
	0.5s	2.90nm		4.2mb		
CHTO	27.90	300	eP	27	39.70	0.3
	1.2s	1.74nm		3.6mb		
ASPA	30.88	163	eP	28	05.40	-0.6
			e	28	14.70	
XAN	31.40	335	P	28	10.10	-0.4
CD2	31.48	325	eP	28	11.20	-0.1
WARB	32.04	176	eP	28	16.00	-0.1
TIY	33.43	343	eP	28	29.20	1.0
BJI	34.72	349	eP	28	39.00	-0.2
GTA	40.00	330	P	29	25.00	1.2
STK	41.05	157	eP	29	33.22	0.9
BWA	46.14	152	eP	30	15.90	2.4
CAN	47.15	152	eP	30	23.00	1.6
INK	88.94	21	eP	34	41.00	-1.4
NUR	89.63	331	eP	34	45.00	-0.8
NB2	95.76	333	P	35	12.10	-2.1
	0.9s	2.50nm		4.7mb		
	S.D. = 1.4	on	20 of	20 obs.		

? SEP 01, 1989 18h 37m 30.34± 0.96s
39.300 N ± 8.8km 21.522 E ±11.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.2 (ATH).

KZN	1.02	11	ePg	37	50.00	0.3
			eSg	38	06.00	
NEO	1.32	89	ePb	37	54.80	0.1
			eSb	38	12.00	
VLS	1.34	213	ePb	37	55.00	0.0
KEK	1.40	288	ePn	38	01.00	5.2X
PLG	1.83	53	ePg	38	07.00	4.9X
OHR	1.89	343	ePn	38	08.00	5.0X
ITM	2.14	171	ePg	38	13.00	6.4X
VAY	2.17	21	ePn	38	06.70	-0.3
	S.D. = 0.4	on	4 of	8 obs.		

SEP 01, 1989 19h 02m 07.56± 0.60s
19.053 S ± 4.0km 169.478 E ± 4.5km
DEPTH = 263.9 ± 5.8 km
4.9mb (13 obs.)
VANUATU ISLANDS (186)

PVC	1.71	320	iPc	02	48.50	-0.6
			iS	03	21.00	
DZM	4.13	223	iPc	03	15.00	0.9
			iS	04	09.00	
HNR	13.29	315	eP	05	08.00	0.1
SVO	13.58	315	eP	05	12.00	0.5
BRS	17.44	239	iPd	05	57.00	1.3
			i	06	01.00	
			i	06	36.00	
HBZ	20.02	159	eP	06	22.90	1.1
RMQ	20.48	245	iPd	06	28.10	1.7
	0.9s	101.00nm		5.3mb		
CTA	21.91	263	iPd	06	41.80	1.5
	1.0s	69.00nm		5.1mb		
			iS	10	26.20	
MNG	22.10	168	eP	06	42.20	0.1
	0.3s	23.00nm		5.1mb		
KIW	22.23	169	eP	06	43.10	-0.2
TCW	22.47	170	P	06	46.50	0.9
CAW	22.50	169	eP	06	45.60	-0.3
MRW	22.55	170	eP	06	46.30	-0.1
WEL	22.62	170	eP	06	46.80	-0.2
MTW	22.63	168	eP	06	46.90	-0.3
WDW	22.64	169	P	06	47.10	-0.1
BLW	22.83	168	P	06	48.30	-0.7
MOW	22.83	169	eP	06	48.40	-0.8
BWA	24.18	226	eP	07	00.90	-0.9
OLP	24.42	247	eP	07	04.00	0.0
CMS	24.65	235	iPc	07	06.20	0.1
	0.8s	12.00nm		4.4mb		
QIS	28.13	262	eP	07	36.80	-0.8
STK	28.14	238	eP	07	37.80	0.2
	0.6s	8.00nm		4.5mb		
WB5	33.08	263	iPd	08	19.20	-1.6
			eS	13	16.90	
WRA	33.10	263	Pd	08	19.30	-1.7
	0.8s	26.70nm		4.9mb		
ASPA	33.39	256	iPd	08	22.50	-1.0
	0.8s	134.00nm		5.6mb		
			e	09	07.70	
			ePcP	09	49.80	
			eS	13	21.50	
			eScS	18	17.10	
MTN	37.33	274	iPc	08	56.00	-0.6
	0.7s	38.00nm		5.0mb		
FORR	39.11	244	eP	09	11.00	-0.1
	0.3s	7.80nm		4.6mb		
WARB	40.03	252	eP	09	19.00	0.1
MBL	46.52	259	eP	10	10.10	-0.8
NANU	50.33	256	eP	10	40.00	0.0
SBA	58.85	181	iPd	11	40.80	0.4
MAT	62.69	332	eP	12	05.00	-1.6
	0.9s	16.81nm		4.7mb		
SPA	71.07	180	e(P)	12	58.00	-0.8
	1.0s	38.00nm		5.1mb		
CN2	74.42	329	iPc	13	17.60	-0.7
			epP	14	23.60	284kmX
BJI	76.94	321	eP	13	32.50	0.1
TIY	77.85	317	eP	13	37.80	0.2
KMI	78.37	302	Pc	13	41.50	0.6
CHG	78.78	294	eP	13	43.70	0.7
GCC	85.27	48	eP	14	15.70	-0.2
PRS	85.39	49	ePc	14	16.60	0.1
BKS	85.50	48	eP	14	17.50	0.5
SAO	85.53	49	eP	14	17.10	-0.1
SYP	85.58	51	eP	14	18.00	0.3
MHC	85.66	48	eP	14	18.20	0.2
PRI	85.81	50	ePc	14	19.20	0.5
LLA	85.82	49	eP	14	18.70	0.0
WDC	86.57	45	iPc	14	22.10	-0.1
ORV	86.79	46	ePc	14	23.00	-0.2
CMB	86.86	48	ePc	14	23.40	-0.3
FRI	86.88	49	ePc	14	23.50	-0.2
MWC	86.88	52	eP	14	24.00	0.0
MIN	87.09	46	eP	14	24.20	-0.6
GTA	87.16	313	Pc	14	25.50	0.3
ISA	87.19	51	eP	14	25.00	-0.3
SBB	87.25	52	eP	14	25.00	-0.6
BAR	87.28	54	eP	14	26.00	0.2
RVR	87.29	53	eP	14	26.00	0.2
PLM	87.41	54	eP	14	27.00	0.4
CLC	87.90	51	eP	14	28.00	-0.7
GSC	88.27	52	eP	14	31.00	0.5
TPC	88.34	53	eP	14	31.00	0.1
GLA	88.85	54	eP	14	34.00	0.8
ALO	96.01	55	e(P)	15	05.50	-0.8
	1.0s	4.50nm		4.7mb		
GBA	96.23	282	P	15	09.00	1.6
	0.8s	1.60nm		4.3mb		
INK	96.30	18	ePd	15	05.20	-1.4
BUL	125.33	227	iPKPc	20	38.50	-0.9
SUF	129.61	339	ePKP	20	44.50	-1.5
NUR	131.65	338	ePKP	20	49.70	-0.3
NB2	135.32	345	PKP	20	56.70	-0.3
	0.9s	2.20nm				
BRG	142.80	334	ePKP	21	06.30	-4.6X
	1.3s	16.00nm				
CLL	142.84	335	ePKP	21	04.00	-6.9X
PRU	143.22	333	PKP	21	07.70	-3.9X
MOX	143.90	336	iPKP	21	10.00	-2.8X
	1.2s	23.00nm				
VAY	144.13	315	ePKP	21	10.40	-3.0X
KHC	144.27	333	iPKPc	21	11.50	-2.0
	1.0s	12.50nm				
SKO	144.55	317	iPKP	21	12.70	-1.5
	1.1s	114.00nm				
			i	22	17.20	
GRF	144.82	335	iPKPc	21	13.40	-1.0
OHR	145.40	316	ePKP	21	13.00	-2.7X
	0.8s	0.07nm				
PTJ	145.44	327	ePKP	21	14.40	-1.2
ABH	146.01	339	ePKPc	21	16.73	0.3
LJU	146.06	328	e(PKP)	21	16.50	-0.1
VBY	146.07	327	ePKP	21	16.80	0.2
RBL	146.26	329	PKP	21	16.50	-0.5
RUP	146.33	339	ePKPc	21	17.82	0.9
VOY	146.39	329	ePKP	21	17.00	-0.2
			e	22	22.30	
WLF	146.66	340	PKPc	21	18.80	1.5
TRI	146.68	328	PKP	21	18.00	0.5
GWF	146.75	338	PKP	21	18.90	1.3
DOU	146.76	342	iPKP	21	18.90	1.4
WLS	147.33	338	PKP	21	19.81	1.2
CDF	147.35	338	ePKP	21	20.40	1.7
	0.8s	16.10nm				
SLE	147.44	336	ePKP	21	20.50	1.8
CTI	147.45	331	PKP	21	20.50	1.6
SAX	147.52	334	ePKP	21	21.30	2.1X
FEL	147.53	337	ePKP	21	20.43	1.4
ECH	147.56	338	PKP	21	19.89	1.0
OSS	147.63	333	ePKP	21	21.70	2.4X
MOF	147.88	337	PKP	21	21.14	1.6
LLS	147.97	334	ePKP	21	22.00	2.1X
VITF	147.97	339	PKP	21	21.58	2.1X
BSF	148.02	338	ePKP	21	21.90	2.1X
	0.8s	10.75nm				
HAU	148.03	338	ePKP	21	22.00	2.3X
	0.7s	11.00nm				
VDL	148.08	333	ePKP	21	22.90	2.9X
BNG	148.13	247	ePKPc	21	18.80	-2.0
	0.7s	39.00nm				
			ic	21	23.00	
			ic	22	28.00	
LOMF	148.41	337	PKP	21	22.70	2.3X
TMA	148.63	334	ePKP	21	23.50	2.6X
ARV	148.65	326	PKPc	21	24.00	3.2X
VAI	148.86	333	PKP	21	23.70	2.7X
MMK	149.05	335	ePKP	21	25.60	4.0X
TDS	149.06	317	PKP	21	25.20	3.7X
CRE	149.07	327	PKP	21	27.50	5.9X
ASS	149.09	326	PKP	21	24.00	2.5X
SGO	149.19	320	PKPd	21	25.00	3.4X
DIX	149.25	335	ePKP	21	25.70	3.7X
FLN	149.27	347	iPKPc	21	24.80	3.3X
	1.1s	24.40nm				
MGR	149.28	319	PKPc	21	24.00	2.2X
LDF	149.35	346	ePKP	21	25.10	3.4X
	0.8s	16.10nm				
SDI	149.36	323	PKP	21	24.50	2.5X
LOR	149.50	341	iPKPc	21	25.60	3.6X
	0.7s	12.70nm				
MNS	149.55	325	PKP	21	25.50	3.3X
GRR	149.71	347	iPKPc	21	26.30	4.1X
	1.0s	22.00nm				
LBF	149.71	340	ePKP	21	26.30	4.0X
	1.2s	20.85nm				
SSF	149.79	341	iPKPc	21	26.60	4.2X
	1.0s	28.00nm				
LPG	149.99	335	iPKPc	21	27.60	4.5X
	0.8s	12.10nm				
SMF	150.05	340	iPKPc	21	26.80	4.0X
	1.1s	14.65nm				
AVF	150.08	341	iPKPc	21	27.00	4.2X
	0.9s	4.90nm				
LPF	150.08	347	ePKP	21	27.20	4.5X
	0.9s	34.40nm				
SOI	150.10	315	PKPd	21	28.00	4.9X
BNI	150.39	335	PKP	21	22.60	-0.9
BGF	150.44	341	iPKPc	21	28.00	4.6X
	0.7s	11.00nm				
MAF	150.83	341	ePKP	21	28.90	4.9X
	0.7s	4.40nm				
TCF	150.88	342	ePKP	21	28.90	4.8X
	0.8s	10.75nm				
LSF	151.11	343	ePKP	21	29.10	4.7X
	0.7s	9.90nm				
MFF	151.23	345	ePKP	21	29.70	5.2X
	1.1s	22.00nm				
RJF	151.98	342	ePKP	21	31.30	5.6X
LFF	152.53	342	ePKP	21	32.70	6.2X
LPO	152.64	342	ePKP	21	32.90	6.3X
	S.D. = 0.9	on	93 of	138 obs.		

SEP 01, 1989 19h 13m 24.13± 0.56s
47.765 N ± 4.9km 15.984 E ± 7.1km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
ML 3.5 (GRF), 3.1 (KBA), 3.0 (VKA). Felt (V) Gloggnitz.

VKA	0.55	24	iPgd	13	35.50	0.3
			iSg	13	45.30	
ZST	0.87	60	iPn	13	40.30	-0.5
			i	13	41.80	
			i	13	44.90	
			i(Sn)	13	55.50	
SRO	1.57	87	iPnc	13	54.60	2.5X
	0.4s	0.01nm				
			i	14	17.10	
			i	14	20.20	
PTJ	1.87	181	iPgd	13	56.50	0.0
			eSg	14	12.60	
KBA	1.92	250	iPgc	13	55.80	-1.5

		i	13 57.40			
		iSg	14 20.70			
ZAG	1.95	180 iPg	13 56.40	-1.2		
LJU	1.99	211 ePn	13 58.50	0.3		
		eSg	14 23.00			
		e	15 20.00			
KHC	2.11	311 ePn	14 00.00	0.1		
		Pg	14 05.10			
		Sn	14 22.00			
		Sg	14 29.60			
RBL	2.12	232 P	13 57.00	-3.1X		
VOY	2.25	220 ePn	14 03.10	1.0		
		e(Sg)	14 33.20			
		e	15 30.00			
CEY	2.29	208 e(Pn)	14 05.80	3.2X		
		eSn	14 34.80			
		e	15 10.00			
VBY	2.32	193 ePn	14 04.10	1.2		
		eSn	14 32.70			
PRU	2.42	337 Pn	14 05.00	0.7		
		Pg	14 08.80			
		Sg	14 39.00			
TRI	2.56	217 iP	13 40.70	-25.6X		
BRG	3.38	338 ePg	14 26.00	8.0X		
		iSg	15 10.00			
GRF	3.69	303 e(Pn)	14 22.10	-0.4		
		ePg	14 33.40			
		eSg	15 21.00			

S.D. = 1.0 on 11 of 16 obs.

SEP 01, 1989 22h 03m 21.64± 0.69s
37.735 N ± 6.9km 29.206 E ± 6.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.64	23 iPg	03 34.00	-0.5		
		eSg	03 47.00			
CIN	0.90	262 ePg	03 39.00	0.2		
		iSg	03 50.00			
YER	0.95	231 iPn	03 39.90	0.2		
BCK	1.13	104 ePn	03 43.70	0.8		
ELL	1.13	150 iPn	03 42.20	-0.8		
ALT	1.50	28 ePn	03 48.80	0.2		

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

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* SEP 01, 1989 23h 13m 49.19± 1.00s
16.109 S ±15.6km 174.695 W ±11.2km
DEPTH = 254.0 ± 9.8 km
4.7mb (12 obs.)
TONGA ISLANDS (173)

AFI	3.57	53 iPc	14 48.80	0.1		
		S	15 32.00			
DZM	18.78	249 iPd	17 53.00	1.0		
KRP	23.38	200 P	18 40.00	3.3X		
SVO	25.80	282 eP	19 09.00	9.9X		
BRS	32.14	244 iPc	19 54.50	-0.7		
COO	33.74	239 iPd	20 09.10	0.2		
RMO	35.47	247 eP	20 24.20	0.7		
CTA	37.27	258 iPd	20 39.10	0.4		
CAN	37.61	233 eP	20 42.00	0.6		
BWA	37.75	234 eP	20 40.90	-1.7		
CMS	39.00	240 iPc	20 53.00	0.2		
	0.8s	54.00nm		5.1mb		
TOO	41.05	231 eP	21 10.40	0.7		
STK	42.61	240 eP	21 23.00	0.7		
	0.7s	22.00nm		4.6mb		
QIS	43.50	257 eP	21 29.20	-0.5		
	1.1s	38.00nm		4.6mb		
ADE	45.59	237 eP	21 41.30	-4.8X		
WB5	48.45	258 iPc	22 07.70	-0.7		
ASPA	48.71	252 iPd	22 09.50	-0.9		
	1.1s	223.00nm		5.5mb		
		iS	28 51.70			
FORR	53.95	243 eP	22 48.30	-1.0		
	0.3s	23.00nm		5.2mb		
WARB	55.23	249 eP	22 58.00	-0.6		
	0.3s	8.00nm		4.7mb		
MBL	61.87	254 eP	23 43.50	-0.8		
	0.4s	9.00nm		4.8mb		
NANU	65.65	252 eP	24 08.00	-0.7		
SPA	73.99	180 e(P)	24 59.00	0.5		
	1.0s	23.50nm		4.9mb		
TNP	76.20	43 eP	25 10.80	-0.7		
	0.7s	6.89nm		4.5mb		
PNT	81.28	33 eP	25 38.00	-0.2		
ALQ	82.21	50 eP	25 43.50	-0.1		
	1.0s	10.00nm		4.5mb		
GOL	85.04	46 eP	25 56.90	-1.0		
	0.5s	6.30nm		4.7mb		
MAW	86.73	199 eP	26 06.00	0.8		
KMI	90.21	296 Pc	26 24.00	1.3		
CHTO	91.75	289 eP	26 30.90	1.3		
	1.0s	4.75nm		4.4mb		
KSP	144.24	348 ePKP	32 54.50	-1.7		
MZZ	144.26	222 iPKP	32 57.00	-0.5		
KMZ	144.30	216 iPKPc	32 57.20	-0.3		
MOX	145.18	353 ePKP	32 57.00	-0.8		
KHC	146.38	350 iPKPd	33 01.30	1.4		
ZST	146.56	346 ePKP	33 04.00	3.9X		
FLN	147.09	7 ePKP	33 02.30	1.4		
LDF	147.30	7 ePKP	33 02.80	1.5		
	1.1s	19.55nm				
GRR	147.41	8 ePKP	33 03.50	2.0X		
	0.6s	9.00nm				
LPF	147.74	8 ePKP	33 04.40	2.4X		
	0.7s	11.00nm				
LOR	148.91	2 ePKP	33 07.80	3.9X		
SSF	149.10	2 ePKP	33 08.40	4.2X		
LBF	149.19	2 ePKP	33 08.10	3.7X		
MFF	149.26	7 ePKP	33 08.20	3.7X		
AVF	149.37	3 ePKP	33 08.60	4.0X		
BGF	149.57	3 ePKP	33 09.10	4.2X		
LSF	149.78	5 ePKP	33 09.20	3.9X		
	1.1s	15.85nm				
TCF	149.80	4 ePKP	33 09.50	4.2X		
MAF	149.89	4 ePKP	33 10.10	4.7X		
	1.1s	15.85nm				
LPG	150.68	358 ePKP	33 12.90	5.9X		
	1.0s	10.00nm				
LFF	151.00	7 ePKP	33 12.70	5.6X		
CAF	151.14	5 ePKP	33 13.10	5.7X		
	0.6s	1.80nm				
LPO	151.30	6 ePKP	33 13.10	5.5X		

S.D. = 0.9 on 33 of 52 obs.

SEP 01, 1989 23h 28m 31.77± 0.37s
10.982 N ± 5.5km 122.059 E ± 6.5km
DEPTH = 33.0km (normol)
4.7mb (4 obs.) 4.4Msz (4 obs.)
PANAY, PHILIPPINE ISLANDS (254)

OCP	3.76	345 eP	29 55.00	26.2X		
DAV	5.20	138 eP	29 50.00	0.7		
BAG	5.58	345 eP	29 53.00	-1.9		
TSM	7.79	211 ePd	30 25.90	0.2		
ANP	14.13	358 e(P)	32 05.00	13.1X		
QIZ	14.25	306 P	31 51.40	-1.9		
QZH	14.27	347 eP	31 52.00	-1.5		
	Z 15s	1.20um				
	N 14s	1.00um				
		sP	32 10.00			
SSE	20.03	358 P	33 06.00	1.2		
	0.8s	0.01nm		1.2mb X		
	N 12s	0.50um				
	E 12s	1.10um				
		sP	33 19.60			
		S	36 47.00			
		sS	36 56.00			
KGM	20.62	246 eP	33 12.00	0.9		
LOE	20.71	290 eP	33 11.00	-1.0		
WHN	20.74	341 eP	33 12.00	-0.2		
	Z 20s	1.25um		4.3Msz		
	N 12s	0.56um				
	E 11s	1.10um				
		S	37 04.00			
GYA	21.17	319 P	33 17.00	0.3		
	N 12s	1.30um				
	E 12s	2.00um				
		pP	33 23.00	22kmX		
		sS	37 16.00			
NJ2	21.18	352 Pd	33 16.80	0.2		
	Z 18s	1.50um		4.4Msz		
		sS	37 19.00			
IPM	21.78	255 ePd	33 22.50	-0.3		
NST	21.83	285 eP	33 29.10	5.8X		
GUMO	22.43	81 eP	33 28.80	-0.5		
PJG	22.43	81 eP	33 28.50	-0.8		
KMI	23.09	310 Pd	33 36.50	0.5		
	Z 15s	1.80um		4.6MszX		
	N 10s	0.70um				
		sP	33 53.00			
		S	37 43.00			
		sS	37 57.00			
CHG	23.64	292 iPd	33 40.50	-0.6		
	1.0s	17.00nm		4.5mb		
CHTO	23.64	292 eP	33 40.70	-0.4		
XAN	25.91	334 P	34 02.00	-0.7		
	N 12s	0.80um				
	E 12s	0.80um				
		sS	38 41.00			
CDZ	26.10	322 P	34 04.60	0.1		
	Z 16s	1.30um		4.6MszX		
	N 12s	1.90um				
		sS	38 45.00			
BJI	29.41	351 eP	34 34.00	-0.3		
	Z 18s	0.59um		4.3Msz		
		eS	39 26.00			
LZH	29.94	330 P	34 52.50	13.1X		
	2.0s	56.00nm				
	Z 18s	1.20um		4.6Msz		
	N 12s	0.70um				
	E 13s	0.60um				
		eS	39 30.00			
		PcS	41 57.00			
HHC	31.16	345 eP	34 51.00	1.0		
	Z 10s	1.30um		4.9MszX		
	N 12s	0.80um				
	E 11s	0.40um				
WB5	32.98	158 eP	35 02.00	-3.9X		
GTA	34.54	329 eP	35 19.80	0.4		
	Z 16s	1.10um		4.7MszX		
	E 10s	0.60um				
ASPA	36.33	161 eP	35 32.60	-2.1		
WARB	37.21	173 iPd	35 41.10	-0.9		
	0.5s	14.00nm		5.1mb		
GBA	43.63	278 Pd	36 34.40	-0.8		
	1.4s	18.10nm		4.7mb		
WMO	44.17	324 eP	36 42.00	2.7		
	N 16s	1.30um				
	E 13s	1.00um				
		ePP	38 24.00			
		eS	43 16.00			
POO	47.11	285 eP	37 06.50	3.6X		
KSH	49.67	313 P	37 23.00	0.3		
MAIO	61.51	305 eP	38 48.00	-0.1		
TAB	72.11	307 eP	39 55.00	-0.3		
PRNI	82.03	299 e(P)	40 52.00	1.5		
MBH	82.21	299 eP	40 53.00	1.6		
INK	85.14	21 eP	41 06.00	0.5		
VRI	85.89	316 eP	41 10.00	0.3		
MBC	85.91	12 eP	41 10.00	0.7		
	1.0s	7.00nm		4.8mb		
MLR	86.51	316 eP	41 14.00	1.1		
ZOBO	168.80	119 PKP	48 38.00	0.2		

S.D. = 1.1 on 36 of 42 obs.

? SEP 02, 1989 00h 08m 42.32± 6.48s
61.233 N ±17.7km 2.483 E ±52.2km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 2.0 (BER).

SUE	1.12	98 iP	09 04.06	0.8		
		iS	09 13.22			
ASK	1.53	118 eP	09 10.11	0.5		
		eS	09 26.26			
HYA	1.79	91 iP	09 13.36	-0.1		
		eS	09 32.82			
ODD1	2.44	121 eP	09 22.86	0.0		
		eS	09 47.83			
MOL	2.75	59 eP	09 27.79	0.6		
		eS	09 59.35			
NRA0	4.44	92 iPc	09 49.40	-1.8		
		eSg	10 55.70			

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

? SEP 02, 1989 00h 17m 40.93± 3.69s
61.359 N ±13.7km 3.087 E ±30.4km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 2.4 (BER).

SUE	0.87	110 iP	17 58.58	1.0		
		iS	18 07.74			
ASK	1.35	130 eP	18 06.21	0.4		
		iS	18 20.94			
HYA	1.51	96 iP	18 07.91	-0.1		
		eS	18 24.88			
ODD1	2.27	128 eP	18 18.97	-0.1		
		iS	18 43.85			

o2d 00h

KMY	2.41	153	iP	18	20.92	0.0
			eS	18	46.06	
MOL	2.43	58	eP	18	22.01	0.7
			eS	18	48.22	
BLS1	2.71	135	iP	18	25.33	-0.1
			iS	18	53.97	
NRA0	4.16	95	iPc	18	43.90	-1.9
			iS	19	27.10	
			iSg	19	47.80	

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

SEP 02, 1989 00h 50m 32.62± 0.48s
10.637 S ± 8.4km 161.391 E ± 8.4km
DEPTH = 30.6km (8 depth phases)
4.6mb (8 obs.) 4.6Msz (2 obs.)
SOLOMON ISLANDS (193)

HNR	1.86	310	iP	51	04.50	1.6
			iS	51	27.00	
SVO	2.14	313	eP	51	09.00	2.0
			eS	51	31.00	
DZM	12.36	158	iPc	53	29.90	0.4
			iS	55	43.20	
CTA	17.35	235	iP	54	37.00	2.8X
	1.2s	234.38nm				5.2mb
BRS	18.54	205	iP	54	33.00	-15.9X
RMQ	19.77	215	iPc	55	05.30	2.0
	1.2s	147.00nm				5.2mb
COO	21.72	203	iPd	55	24.30	1.0
	0.5s	11.00nm				4.5mb
OIS	23.16	242	eP	55	39.70	2.1
BWA	26.48	205	eP	56	10.00	0.9
WB5	27.61	247	eP	56	19.10	-0.4
WRA	27.65	247	Pc	56	19.10	-0.8
	1.2s	11.90nm				4.4mb
ASPA	29.22	240	eP	56	31.40	-2.7
Z	20s	1.31um				4.5Msz
			LR	07	25.30	
MTN	29.70	263	eP	56	38.60	0.2
WARB	36.27	240	eP	57	34.50	-0.8
MBL	41.20	250	eP	58	16.10	-0.3
PCI	42.40	280	ePd	58	36.40	10.0X
	0.7s	4.50nm				
NANU	45.35	249	eP	58	50.00	-0.1
OZH	54.70	311	eP	00	09.00	7.5X
SSE	56.65	318	P	00	20.30	4.8X
	0.8s	0.01nm				2.0mb X
CN2	63.27	332	eP	01	06.00	5.3X
NST	66.04	292	eP	01	18.00	-1.1
TIY	66.41	319	eP	01	30.00	8.8X
Z	22s	0.50um				4.7Msz
XAN	66.73	314	P	01	30.00	6.7X
CHG	68.16	295	eP	01	31.00	-1.6
CHTO	68.16	295	eP	01	30.00	-2.6
	1.0s	3.00nm				4.4mb
			e	01	40.30	33km
CD2	68.99	309	eP	01	44.40	6.9X
SPA	79.43	180	e(P)	02	37.10	-0.3
	1.0s	9.00nm				4.7mb
MAW	83.48	202	eP	02	58.00	-0.4
WDC	86.48	48	eP	03	14.50	0.6
			e	03	23.60	29km
PRI	86.65	52	eP	03	15.90	1.0
			e	03	25.40	30km
GBA	86.69	284	Pd	03	23.80	8.5X
	0.7s	2.10nm				4.5mb
CMB	87.37	51	eP	03	17.50	-0.8
			e	03	27.70	32km
FRI	87.61	52	eP	03	18.90	-0.5
			e	03	28.80	31km
SBB	88.52	54	eP	03	34.00	10.1X
RVR	88.72	55	eP	03	24.00	-0.8
			e	03	34.00	31km
CLC	88.97	53	eP	03	26.00	0.0
			e	03	36.00	31km
PLM	88.98	56	eP	03	36.00	9.7X
BAR	88.98	57	eP	03	36.00	9.9X
TPC	89.81	55	eP	03	39.00	9.0X
GLA	90.58	57	eP	03	35.00	1.4
			e	03	44.00	28km
PNT	90.91	40	eP	03	44.00	9.3X
ALQ	97.75	56	e(P)	04	16.00	9.4X
	1.0s	2.75nm				4.7mb
BNG	142.68	263	iPKPd	09	59.30	-6.4X
	0.7s	12.00nm				
			id	10	09.50	
PDCR	149.26	138	ePKP	10	16.50	0.1
			e	10	26.90	

S.D. = 1.3 on 27 of 44 obs.

SEP 02, 1989 01h 18m 17.36± 0.51s
37.897 N ± 7.0km 14.702 E ± 4.3km
DEPTH = 11.0 ± 4.2 km
SICILY (398)

MNO	0.03	350	Pd	18	19.90	0.1
			e$g	18	21.00	
GIB	0.54	280	P	18	27.90	-0.4
			e$g	18	38.50	
ATN	0.66	66	P	18	30.50	0.2
			e$g	18	40.40	
MSI	0.74	65	P	18	31.90	0.1
			e$g	18	42.80	
MEU	0.81	167	P	18	31.20	-1.9
			e$g	18	43.00	
MCT	0.89	253	P	18	36.40	2.0
			e$g	18	47.40	
FAI	1.02	233	P	18	37.90	1.3
			e$g	18	52.90	
SOI	1.08	80	P	18	38.00	0.4
			e$g	18	54.60	
USI	1.45	304	P	18	41.40	-2.0
CVT	1.53	262	P	18	45.60	1.0
			e$n	19	04.90	
ERC	1.68	275	P	18	48.30	1.5
			e$n	19	09.80	
LVI	1.87	273	P	18	49.40	-0.1
			e$n	19	13.10	
TDS	2.17	35	P	18	53.10	-0.9
			e$n	19	20.60	
MGR	2.33	16	P	18	55.00	-1.2
PTS	2.42	244	P	18	56.40	-1.0
			e$n	19	26.20	
SGO	2.70	10	P	19	00.90	-0.5
			e$n	19	33.30	
LCI	3.51	45	P	19	15.10	2.2
DUI	3.76	357	P	19	16.00	-0.6
SDI	3.87	350	P	19	19.00	1.0
TPE	4.77	58	ePn	19	30.00	-0.9
BERA	4.94	54	ePn	19	32.70	-0.5
LSK	5.11	62	ePn	19	37.50	1.7
TIR	5.27	48	ePn	19	39.20	1.3
SDA	5.52	40	ePn	19	48.90	7.5X
PUK	5.75	42	ePn	19	46.20	1.6
ARV	5.75	347	P	19	44.00	-0.7
PHP	5.82	48	ePn	19	44.50	-1.1
BCI	6.07	41	ePn	19	53.60	4.5X

S.D. = 1.3 on 26 of 28 obs.

• SEP 02, 1989 01h 32m 52.89± 2.78s
35.651 N ±24.9km 22.12B E ±18.5km
DEPTH = 33.0km (normal)
MEDITERRANEAN SEA (400)

ITM	1.53	354	ePn	33	22.50	4.2X
			eSn	33	47.00	
VAM	1.71	98	ePn	33	20.00	-0.8
ATH	2.64	28	ePb	33	45.20	11.1X
VLS	2.81	334	ePn	33	37.50	1.1
NPS	2.87	97	ePb	33	44.00	6.6X
APE	3.09	62	ePn	33	42.00	1.5
NEO	3.75	13	ePn	33	50.00	0.2
SMG	4.31	60	ePb	34	09.00	11.3X
LSK	4.65	345	ePn	34	02.30	-0.4
KZN	4.66	357	ePn	34	02.90	0.1
TPE	4.93	341	ePn	34	12.00	5.5X
KBN	5.07	349	ePn	34	09.00	0.4
BERA	5.33	342	ePn	34	12.70	0.6
OHR	5.55	350	ePn	34	14.40	-1.0
VAY	5.67	3	eP	34	15.30	-1.7

S.D. = 1.1 on 10 of 15 obs.

? SEP 02, 1989 02h 49m 23.56± 6.08s
5.729 S ±59.5km 135.240 E ±22.7km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
WEST IRIAN REGION (196)

MTN	8.15	210	iPd	51	24.00	1.4
			eS	53	04.20	
WB5	14.09	183	eP	52	42.30	-0.8
			i	52	51.20	
			eS	55	26.00	
WRA	14.16	183	Pd	52	42.40	-1.5
OIS	15.34	164	eP	53	05.40	6.0X
	0.8s	15.00nm				4.3mb
CTA	17.84	144	iPd	53	31.80	0.7
	0.9s	12.60nm				4.0mb
ASPA	17.88	184	iPd	53	33.00	1.4
	0.9s	42.00nm				4.6mb
			eS	56	57.80	
WARB	21.94	201	eP	54	15.00	-1.2
OLP	22.45	158	eP	54	21.10	-0.1

S.D. = 1.5 on 7 of 8 obs.

SEP 02, 1989 03h 57m 18.70± 0.91s
49.196 N ± 7.7km 6.955 E ± 7.8km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.1 (STR).

GWF	0.49	116	Pg	57	28.86	0.2
			Sg	57	36.64	
WLF	0.70	312	iP	57	32.50	0.0
CDF	0.81	165	Pg	57	34.42	-0.1
			Sg	57	45.62	
WLS	0.83	161	Pg	57	34.04	-0.7
			Sg	57	46.56	
ECH	0.99	172	Pg	57	37.69	0.2
			Sg	57	51.36	
VITF	1.17	214	Pg	57	40.65	0.1
			Sg	57	55.10	
MOF	1.35	175	Pg	57	44.01	0.4
			Sg	58	01.53	

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

SEP 02, 1989 04h 16m 57.33± 0.12s
50.039 N ± 3.3km 79.019 E ± 2.5km
DEPTH = 0.0km (geophysicist)
5.0mb (60 obs.)
EASTERN KAZAKH SSR (329)

WMO	8.59	133	Pc	19	05.00	-1.0
GTA	18.14	118	eP	21	11.30	-1.0
MAIO	19.70	233	eP	21	31.00	-0.2
NDI	21.37	184	iPgc	21	47.80	-0.7
	0.2s	291.67nm				6.3mb X
			eSg	21	50.00	
LZH	22.74	118	eP	22	03.00	0.7
	1.5s	56.00nm				4.8mb
BTO	23.60	102	eP	22	12.00	1.4
N	11s	0.30um				
E	11s	0.20um				
HHC	24.45	100	eP	22	20.40	1.6
Z	12s	1.00um				4.5MszX
N	10s	0.30um				
E	10s	0.30um				
CD2	26.62	127	iPc	22	40.00	0.8
TIY	26.82	105	eP	22	42.20	1.1
N	13s	0.40um				
XAN	27.12	115	Pd	22	44.50	0.7
BJI	27.83	97	eP	22	51.00	0.9
SUF	30.94	314	iP	23	17.40	-0.3
	0.4s	64.50nm				5.9mb
SOD	31.01	323	iP	23	17.50	-0.8
KEV	31.27	328	iP	23	19.60	-1.0
	0.5s	14.00nm				5.1mb
GYA	31.70	128	iPc	23	25.40	0.4
NUR	31.78	310	iP	23	24.50	-0.6
	0.6s	45.60nm				5.6mb
CN2	31.90	83	P	23	26.00	-0.3
KAS	32.34	272	iPd	23	31.50	1.2
HYB	32.54	181	eP	23	31.50	-0.7
WHN	32.82	113	P	23	34.90	0.4
TRO	34.05	327	eP	23	44.53	-0.2
CHG	34.99	146	iPc	23	53.20	-0.2
	0.8s	45.71nm				5.4mb
CHTO	34.99	146	iP	23	53.10	-0.3
	0.7s	50.35nm				5.5mb
MLR	35.34	284	ePd	23	57.00	0.7
HRI	35.84	259	eP	24	02.00	1.4
LOF	36.01	325	iPc	24	00.26	-1.2
GBA	36.36	183	Pc	24	03.20	-1.7
	0.6s	9.30nm				4.8mb
SSE	36.60	105	eP	24	07.00	0.1
	0.7s	9.00nm				4.6mb
NSS	37.07	319	eP	24	09.61	-0.8
SPC	37.24	292	iPd	24	14.00	1.7
LOE	37.33	143	eP	24	12.20	-0.9
ELL	37.41	268	iP	24	14.70	0.9
NRA0	38.09	313	P	24	18.00	-1.1

PRNI 38.28 256 eP 24 22.00 1.0
MBH 38.75 255 eP 24 26.50 1.6
KSP 38.88 296 iP 24 26.30 0.4
e 25 26.00
SRO 38.99 291 iP 24 28.00 1.3
MOL 39.44 316 eP 24 30.55 0.3
VAY 39.54 280 eP 24 32.40 1.0
ZST 39.54 292 iPd 24 33.00 1.6
KOD 39.70 182 iPc 24 33.20 -0.2
0.6s 26.67nm 5.0mb
BRG 40.22 297 iP 24 37.10 0.1
0.9s 12.00nm 4.5mb
e 26 00.00
PRU 40.26 296 P 24 38.00 0.7
CLL 40.58 298 iPc 24 40.20 0.4
0.7s 21.00nm 4.9mb
NNT 41.03 148 iPc 24 43.60 -0.3
KHC 41.20 295 iP 24 46.50 1.4
MOX 41.65 298 e(P) 24 49.00 0.3
GRF 42.31 297 iPc 24 55.60 1.5
1.2s 21.00nm 4.7mb
Z 17s 0.10um 3.8MszX
OSS 44.41 293 ePc 25 12.30 0.9
SAX 44.59 295 ePc 25 13.70 0.7
SLE 44.83 296 eP 25 15.40 0.8
VDL 44.91 294 ePc 25 16.00 0.5
LLS 44.99 294 eP 25 16.60 0.4
TMA 45.46 293 ePc 25 19.50 -0.4
SOI 45.52 280 P 25 20.90 0.8
BSF 45.78 296 eP 25 22.00 -0.3
0.7s 5.20nm 4.6mb
HAU 45.95 297 eP 25 23.30 -0.2
0.5s 7.20nm 5.0mb
MMK 46.03 294 ePd 25 24.60 0.2
DIX 46.34 294 eP 25 27.10 0.2
PCP 46.50 292 P 25 27.86 0.0
LSD 46.82 293 P 25 30.94 0.2
FIN 46.88 291 P 25 29.71 -1.2
ROB 47.04 292 P 25 30.94 -1.2
LPG 47.04 294 iPc 25 33.00 0.5
0.5s 34.10nm 5.7mb
IMI 47.24 291 P 25 32.78 -1.0
BNI 47.33 293 P 25 34.60 0.0
RRL 47.34 293 P 25 35.25 0.5
ENR 47.34 292 P 25 34.12 -0.5
EKA 47.36 310 P 25 34.00 -0.5
0.7s 5.50nm 4.8mb
PZZ 47.38 292 P 25 33.60 -1.4
STV 47.39 292 P 25 35.04 0.0
SBF 47.54 292 eP 25 36.40 0.3
0.7s 14.10nm 5.2mb
LOR 47.77 297 eP 25 36.90 -1.0
0.5s 5.30nm 4.9mb
LBF 47.85 297 iPc 25 37.50 -1.1
0.5s 2.90nm 4.7mb
SSF 48.08 297 eP 25 39.60 -0.7
0.5s 3.20nm 4.7mb
SMF 48.11 297 eP 25 39.80 -0.8
0.5s 2.10nm 4.5mb
FRF 48.18 292 iPc 25 41.00 -0.1
0.5s 17.40nm 5.4mb
AVF 48.32 297 eP 25 41.40 -0.7
0.7s 3.70nm 4.6mb
LMR 48.39 291 eP 25 42.40 -0.3
0.5s 7.20nm 5.0mb
LRG 48.41 292 eP 25 42.70 -0.2
BGF 48.74 297 iPc 25 44.50 -0.9
0.7s 5.90nm 4.8mb
MAF 49.08 297 iPc 25 48.10 0.1
0.7s 6.60nm 4.8mb
TCF 49.25 297 eP 25 49.00 -0.4
0.7s 4.40nm 4.6mb
LDF 49.29 301 eP 25 49.20 -0.4
0.6s 12.60nm 5.1mb
FLN 49.40 301 eP 25 49.90 -0.5
0.6s 18.00nm 5.2mb
LSF 49.66 297 eP 25 51.60 -0.9
0.5s 2.90nm 4.5mb
GRR 49.81 301 eP 25 53.30 -0.3
0.6s 9.00nm 4.9mb
DMU 49.97 310 eP 25 54.50 -0.2
CAF 50.11 296 iPc 25 56.30 0.3
0.7s 7.00nm 4.7mb
PSI 50.11 154 eP 25 54.80 -1.4
LPF 50.11 300 eP 25 55.30 -0.6
0.6s 10.80nm 5.0mb
DLE 50.12 309 eP 25 55.20 -0.7

RJF 50.21 296 eP 25 56.80 0.1
0.7s 6.60nm 4.7mb
[illegible] 50.42 299 eP 25 57.70 -0.5
0.4s 10.70nm 5.1mb
LPO 50.76 296 iPc 26 00.90 0.0
0.5s 13.70nm 5.1mb
LFF 50.87 296 eP 26 01.80 0.1
0.5s 7.20nm 4.9mb
EPF 52.23 295 iPc 26 11.10 -1.0
0.7s 18.70nm 5.1mb
MBC 53.44 5 ePc 26 20.60 0.0
0.7s 136.00nm 6.0mb
INK 59.51 13 iPc 27 03.90 -0.2
0.5s 34.00nm 5.7mb
FBA 59.80 21 P 27 06.00 -0.1
0.6s 20.32nm [illegible]4mb
ADK 59.93 44 P 27 06.50 -0.7
0.5s 10.33nm 5.2mb
PMR 62.25 24 P 27 22.00 -0.8
0.5s 14.46nm 5.5mb
KDC 64.53 28 P 27 37.50 -0.3
0.6s 68.[illegible]nm 6.1mb X
BNG 67.94 249 [illegible] 27 59.10 -1.1
0.6s 42.[illegible] 5.8mb
MZZ 75.00 231 iPc 28 42.00 -0.5
FFC 75.61 1 iPc 28 45.20 -0.1
0.5s 19.00nm 5.4mb
PTZ 76.47 228 iPc 28 51.10 0.3
EDM 76.59 8 ePc 28 51.00 0.1
0.6s 19.00nm 5.4mb
MTN 77.45 128 iPd 28 55.20 -0.9
0.5s 10.00nm 5.2mb
LSZ 78.88 230 iPd 29 05.00 0.9
NANU 79.19 146 iPd 29 06.00 0.5
0.5s 20.00nm 5.4mb
RSON 79.29 355 P 29 05.00 -0.8
MBL 79.56 142 iPd 29 07.10 -0.4
0.5s 13.00nm 5.2mb
PNT 79.74 12 eP 29 08.00 -0.3
0.7s 9.00nm 4.8mb
TIC 81.12 270 Pc 29 16.16 0.1
0.7s 4.50nm 4.6mb
KIC 81.15 269 Pc 29 16.50 0.2
0.5s 8.50nm 5.0mb
RMW 81.23 14 P 29 17.00 0.7
LIC 81.44 269 P 29 17.82 0.1
0.6s 4.50nm 4.7mb
LON 81.92 14 P 29 20.50 0.6
BUL 82.85 227 iPc 29 25.20 0.2
1.0s 10.00nm 5.0mb
MEKA 83.99 145 iPd 29 30.00 -0.5
0.4s 5.00nm 5.1mb
LRM 84.00 8 eP 29 31.10 0.2
WB5 85.03 129 iPc 29 35.90 0.0
WRA 85.07 129 Pc 29 36.00 -0.1
0.7s 26.20nm 5.6mb
RSSD 86.19 2 P 29 42.00 0.2
WARB 86.84 138 eP 29 44.80 0.0
LBFM 87.16 16 P 29 47.00 0.4
ASPA 87.99 131 iPc 29 50.30 -0.1
0.7s 21.00nm 5.6mb
KVN 90.01 13 P 30 01.20 1.0
GOL 90.56 3 P 30 03.50 0.7
TNP 91.09 13 P 30 06.30 1.1
0.6s 5.09nm 5.0mb
FORR 91.53 139 eP 30 06.20 -0.5
0.4s 22.00nm 5.8mb
TUL 94.30 356 eP 30 20.70 1.0
1.0s 3.70nm 4.7mb
SIO 94.49 356 eP 30 19.30 -1.3
PPD 132.24 287 ePKP 36 15.70 0.8
S.D. = 0.8 on 135 of 135 obs.

& SEP 02, 1989 05h 39m 35.60s
33.510 N 116.440 W
DEPTH = 9.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.2 (PAS).

PLM 0.39 246 iPc 39 43.00 -0.5
TPC 0.68 29 iPc 39 48.40 -0.8
PEC 0.71 303 eP 39 48.30 -1.5
CPE 0.84 222 iPc 39 50.50 -1.4
BAR 0.85 193 ePd 39 51.00 -1.1
IKP 0.90 162 iPd 39 52.50 -0.5
GLA 1.43 108 eP 40 00.00 -1.7
ABL 2.67 301 eP 40 19.50 -0.2

BCH 3.45 300 eP 40 30.00 -0.6
TNP 4.61 352 eP 40 47.00 -0.2
KVN 5.69 347 eP 41 01.50 -1.0
11 obs. associated

SEP 02, 1989 05h 57m 29.26± 0.89s
22.244 S ± 9.3km 179.543 W ± 3.9km
DEPTH = 582.9 ± 13.1 km
5.1mb (28 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM 12.99 268 iPd 00 19.20 1.3
iS 02 44.90
ScP 07 42.20
BRS 25.62 253 iPc 02 16.50 1.0
e 03 10.00
COO 26.84 246 iPc 02 27.70 1.5
TBI 27.73 98 iP 02 34.40 0.5
0.5s 40.00nm 5.3mb
PAE 28.51 86 iP 02 39.60 -1.1
0.8s 45.00nm 5.2mb
PPT 28.53 86 iP 02 40.00 -0.9
0.8s 55.00nm 5.2mb
PPN 28.67 86 iP 02 42.10 0.0
0.8s 20.00nm 4.8mb
TVO 28.78 87 iP 02 43.80 0.7
0.8s 60.00nm 5.3mb
RMQ 29.14 255 iPd 02 47.40 1.2
CAN 30.36 238 eP 02 57.40 0.9
BWA 30.57 240 eP 02 57.10 -1.2
PMO 30.80 82 iP 03 00.00 -0.2
0.8s 40.00nm 5.1mb
VAH 30.97 83 iP 03 01.20 -0.5
0.8s 40.00nm 5.1mb
TPT 31.06 82 iP 03 02.30 -0.1
0.8s 60.00nm 5.3mb
RUV 31.21 83 iP 03 03.60 -0.1
0.8s 65.00nm 5.3mb
CTA 31.93 267 iPd 03 10.10 0.3
0.6s 66.67nm 5.4mb
iPcP 05 41.80
iS 07 40.50
iScP 08 32.30
iScS 12 33.70
CMS 32.12 246 iPc 03 12.30 1.0
1.0s 57.00nm 5.2mb
OLP 33.19 255 iPd 03 21.00 0.7
STK 35.76 246 iPd 03 42.60 1.1
0.6s 10.00nm 4.6mb
OIS 37.99 265 iPd 03 59.30 -0.7
0.4s 7.00nm 4.6mb
ePcP 05 59.40
eScP 08 53.60
ASPA 42.75 259 iPd 04 37.90 -0.1
0.8s 85.00nm 5.3mb
eS 10 17.80
eScS 13 33.90
WB5 42.95 264 iPd 04 38.90 -0.7
eScP 09 14.00
eS 10 20.90
WRA 42.96 264 Pd 04 38.50 -1.2
0.6s 36.30nm 5.1mb
FORR 47.26 248 iPd 05 12.10 -0.4
0.4s 22.00nm 5.0mb
MTN 47.77 273 iPd 05 15.30 -1.3
0.7s 156.00nm 5.6mb
WARB 48.95 254 iPd 05 24.70 -0.7
0.3s 14.00nm 5.0mb
GUA 49.79 312 ePd 05 30.80 -0.7
0.9s 174.79nm 5.6mb
GUMO 49.85 312 iPd 05 31.30 -0.7
0.7s 86.40nm 5.4mb
PJG 49.85 312 iPd 05 31.50 -0.5
COOL 53.22 247 eP 05 55.00 -1.3
MBL 55.99 259 iPd 06 14.70 -1.0
0.4s 18.00nm 4.8mb
KLB 56.02 246 eP 06 15.00 -0.8
NWAO 56.31 244 eP 06 18.00 0.2
BAL 57.05 247 eP 06 22.00 -0.8
MUN 57.29 245 eP 06 24.00 -0.4
MRWA 57.86 249 eP 06 27.70 -0.7
NANU 59.57 256 iPd 06 39.30 -0.5
0.5s 37.00nm 4.9mb
KAKJ 69.49 326 eP 07 40.90 -0.7
CHJJ 69.99 325 P 07 43.90 -0.7
IIDJ 70.15 324 P 07 44.80 -0.8
MAT 70.78 325 eP 07 48.00 -1.2

02d 06h

	0.7s	20.55nm			4.8mb	
MTMJ	71.03	325	P	07	50.30	-0.4
TSRJ	71.25	323	eP	07	48.60	-3.3X
OZH	76.19	304	Pd	08	19.80	-0.1
SSE	77.72	311	eP	08	27.80	-0.2
	0.7s	11.00nm			4.4mb	
NJ2	79.90	311	Pc	08	40.00	0.6
PRS	80.07	44	eP	08	41.00	0.8
SAO	80.28	44	eP	08	51.80	10.5X
MDJ	81.13	326	Pd	08	45.50	0.0
FRI	81.53	44	eP	08	48.00	0.3
CMB	81.71	43	ePc	08	49.10	0.4
WDC	81.93	40	eP	08	50.30	0.7
ORV	81.93	41	eP	08	50.00	0.4
WHN	82.33	307	eP	08	52.50	0.7
MIN	82.35	41	eP	08	51.80	-0.1
CN2	82.81	323	Pd	08	54.00	0.1
TIA	83.40	313	Pd	08	57.80	0.7
KVN	83.76	43	eP	08	59.10	0.1
			e	09	06.90	
TNP	83.78	45	eP	08	59.80	0.6
	1.0s	7.25nm			4.2mb	
BJI	86.13	316	eP	09	10.50	0.3
NNT	86.31	285	iPd	09	12.60	1.1
TIY	87.38	313	eP	09	16.90	0.6
XAN	88.05	308	Pd	09	20.20	0.7
PNT	88.90	35	eP	09	23.00	0.1
CHG	89.49	290	iPd	09	27.90	1.6
	0.9s	39.92nm			5.3mb	
CHTO	89.49	290	iPd	09	27.80	1.5
	0.8s	33.31nm			5.3mb	
ALQ	89.61	52	eP	09	27.10	0.3
	1.0s	7.00nm			4.5mb	
			epP	11	39.60	615kmX
SOD	131.97	347	ePKP	15	36.00	-1.8
SUF	135.95	343	ePKP	15	33.30	-12.1X
	0.2s	0.80nm				
NUR	138.18	342	iPKP	15	37.60	-12.0X
	0.6s	9.10nm				
			i	15	50.80	
LWI	143.15	232	iPKPd	15	59.00	-1.1
EKA	146.85	4	PKPc	16	06.70	2.0
	0.6s	5.50nm				
BHL	147.00	298	PKP	16	09.00	3.3X
DMU	147.90	8	ePKP	16	09.40	3.0X
VRI	148.18	324	ePKPd	16	11.10	4.0X
DLE	148.55	8	ePKP	16	10.80	3.4X
MLR	148.85	324	ePKPd	16	12.00	3.7X
SPC	148.87	335	iPKP	16	14.90	6.6X
KSP	148.89	340	iPKPd	16	12.80	4.8X
	0.7s	48.00nm				
			i	16	19.50	
			e	16	35.00	
WIT	149.11	353	ePKP	16	13.50	5.2X
CLL	149.39	344	iPKP	16	13.50	4.7X
	0.7s	42.00nm				
			i	16	20.40	
BRG	149.54	343	iPKPd	16	14.00	5.0X
	0.8s	40.00nm				
			i	16	21.40	
WTS	149.90	352	iPKP	16	15.00	5.5X
	0.9s	45.00nm				
PRU	150.17	342	PKPd	16	15.50	5.5X
	0.8s	16.60nm				
			e	16	24.50	
MOX	150.33	346	iPKP	16	16.00	5.8X
			e	16	24.00	
ELL	150.71	306	iPKP	16	16.70	5.3X
ZST	150.88	337	e(PKP)	16	17.00	5.9X
			e	16	28.00	
ENN	151.21	353	ePKP	16	18.00	6.5X
	0.9s	12.00nm				
			e	16	28.50	
KHC	151.22	342	iPKP	16	18.20	6.6X
			i	16	29.50	
GRF	151.32	345	ePKP	16	18.20	6.5X
ABH	151.86	350	ePKP	16	19.23	6.7X
RUP	152.10	351	ePKP	16	19.90	7.0X
	S.D. = 0.9	on	68 of	92	obs.	

? SEP 02, 1989 06h 48m 37.01± 0.70s
12.946 S ±25.2km 65.903 E ±11.5km
DEPTH = 10.0km (geophysicist)
4.7mb (5 obs.)
MID-INDIAN RISE (429)

SLR	37.57	245	eP	56	02.60	8.9X
	0.8s	14.93nm			4.8mb	
PRY	38.54	243	eP	56	02.00	0.1
KSR	38.82	245	eP	56	05.50	1.2
CHTO	45.35	47	eP	56	58.50	1.0
	1.1s	1.47nm			3.8mb	
			e	57	05.20	
BNG	50.10	287	iPc	57	44.40	9.7X
	0.7s	7.00nm			4.7mb	
BCAO	50.11	287	e(P)	57	33.40	-1.4
			e	57	44.40	
ASPA	64.93	110	iPd	59	18.30	-1.2
	0.8s	5.00nm			4.8mb	
WRA	65.64	106	Pc	59	24.10	0.1
	0.9s	5.10nm			4.7mb	
WB5	65.67	106	eP	59	23.80	-0.4
LIC	72.98	281	P	00	18.10	8.8X
CTA	76.73	108	iPd	00	31.20	0.5
KHC	77.08	328	eP	00	27.00	-5.1X
TUL	151.81	327	ePKP	08	39.50	12.2X
	1.0s	4.00nm				
	S.D. = 1.1	on	8 of	13	obs.	

? SEP 02, 1989 08h 19m 14.61± 3.61s
5.372 S ±46.6km 144.079 E ±11.5km
DEPTH = 113.6 ± 15.2 km
PAPUA NEW GUINEA (202)

MNDI	0.88	208	eP	19	36.00	0.5
LAT	3.17	114	eP	20	04.00	0.3
KDB	5.09	143	eP	20	29.00	-0.9
MTN	14.78	239	eP	22	38.00	-1.2
WB5	17.24	212	eP	23	10.00	0.1
ASPA	20.66	207	eP	23	48.50	1.2
	S.D. = 1.4	on	6 of	6	obs.	

* SEP 02, 1989 10h 11m 35.86± 2.43s
44.244 N ±11.6km 6.686 E ±15.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

FOUF	0.29	14	ePgd	11	41.62	-0.4
			eSg	11	45.38	
PZZ	0.40	49	P	11	43.92	-0.1
			S	11	49.30	
STV	0.46	90	P	11	44.71	-0.5
			S	11	50.64	
ENR	0.53	92	P	11	45.95	-0.6
			S	11	53.56	
RRL	0.68	6	P	11	49.12	-0.4
			S	11	58.49	
ROB	0.85	86	P	11	52.38	0.0
			S	12	04.07	
IMI	0.93	111	P	11	53.41	-0.2
			S	12	06.84	
FIN	1.09	91	P	11	56.38	-0.1
LSD	1.26	15	P	11	59.76	0.3
PCP	1.37	77	P	12	01.41	0.4
	S.D. = 0.4	on	10 of	10	obs.	

SEP 02, 1989 10h 27m 48.08± 0.36s
44.423 N ± 2.3km 7.261 E ± 3.1km
DEPTH = 11.5 ± 4.1 km
NORTHERN ITALY (545)
ML 2.8 (FDF), 2.6 (GEN). MD 1.6 (STR).

PZZ	0.14	306	P	27	51.79	0.1
			S	27	53.79	
STV	0.18	166	P	27	52.50	0.1
			S	27	55.17	
ENR	0.23	150	P	27	53.22	0.1
			S	27	56.44	
FOUF	0.36	287	iPgc	27	55.04	-0.5
			eSg	27	59.30	
TOUF	0.41	181	Pg	27	57.03	0.5
AUTN	0.44	164	Pg	27	58.05	0.8
ROB	0.46	106	P	27	57.43	0.0
			S	28	03.70	
SAOF	0.48	154	Pg	27	57.86	-0.1
			Sg	28	04.27	
MVIF	0.53	189	Pg	27	58.79	-0.1
			Sg	28	05.85	
AURF	0.54	175	Pg	27	58.74	-0.2
			Sg	28	06.18	
SBF	0.57	167	Pg	27	59.70	0.1
			Sg	28	06.90	

RRL	0.60	326	P	27	59.56	-0.7
			S	28	07.60	
IMI	0.68	138	P	28	01.14	-0.4
			S	28	10.07	
FIN	0.71	107	P	28	01.79	-0.2
			S	28	11.19	
PCP	0.93	82	P	28	05.79	0.1
			S	28	18.46	
FRF	0.97	207	Pg	28	07.00	0.6
			Sg	28	19.00	
LSD	1.04	356	P	28	08.36	0.7
			S	28	21.13	
LPG	1.13	342	Pg	28	10.20	0.8
			Sg	28	24.00	
LPL	1.16	341	Pg	28	10.40	0.7
LRG	1.17	214	Pg	28	10.20	0.5
			Sg	28	25.60	
LMR	1.22	207	Pn	28	10.00	-0.6
			Pg	28	11.80	
			Sg	28	26.00	
	S.D. = 0.5	on	21 of	21	obs.	

% SEP 02, 1989 12h 08m 49.23± 0.74s
43.873 N ± 8.1km 12.016 E ± 5.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI	0.13	292	P	08	52.30	0.0
			eSg	08	54.90	
PGD	0.21	271	P	08	54.00	0.0
			eSg	08	58.10	
CRE	0.25	191	P	08	54.40	-0.2
RSM	0.32	80	P	08	55.90	0.0
			eSg	09	00.60	
ARV	0.77	119	P	09	04.00	-0.3
			eSg	09	15.20	
ASS	0.93	149	P	09	07.40	0.4
			eSg	09	21.40	
	S.D. = 0.3	on	6 of	6	obs.	

* SEP 02, 1989 13h 00m 04.86± 2.69s
36.145 N ±23.6km 2.782 E ±11.9km
DEPTH = 10.0km (geophysicist)
ALGERIA (396)
mbLg 3.3 (MDD).

ACU	3.47	314	eP	00	59.60	-0.5
			eS	01	35.00	
ESEL	3.62	1	eP	01	02.20	0.1
			eS	01	41.80	
ENIJ	4.11	283	eP	01	07.50	-1.6
			eS	01	52.00	
EROO	5.03	339	eP	01	21.00	-1.1
			eS	02	14.80	
AFC	5.20	284	ePn	01	26.50	1.8
ETOR	6.01	322	ePn	01	37.50	1.4
ETER	6.15	1	eP	01	38.00	0.1
GUD	7.06	312	eP	01	50.20	-0.7
			eS	03	02.50	
EPF	7.13	345	Pn	01	52.20	0.4
			Sn	03	04.40	
LRG	7.80	20	Pn	02	00.40	-0.7
			Sn	03	25.00	
CVF	7.96	34	Pn	02	03.20	-0.1
FRF	7.98	21	Pn	02	02.80	-0.8
			Sn	03	27.20	
CAF	8.79	357	Pn	02	14.50	-0.4
LPL	9.83	16	Pn	02	31.20	1.8
	S.D. = 1.1	on	14 of	14	obs.	

? SEP 02, 1989 13h 15m 34.98± 7.52s
40.084 S ±66.5km 175.774 E ±16.6km
DEPTH = 30.7 ± 10.5 km
NORTH ISLAND, NEW ZEALAND (159)

MNG	0.58	203	eP	15	46.80	0.1
PGZ	0.66	145	eP	15	47.80	-0.1
KIW	1.02	220	eP	15	54.40	1.2
MTW	1.09	191	eP	15	55.40	1.2
CAW	1.16	207	eP	15	54.70	-0.4
WDW	1.32	206	eP	15	56.10	-1.4
MRW	1.41	215	eP	15	58.00	-0.6
	S.D. = 1.3	on	7 of	7	obs.	

SEP 02, 1989 14h 20m 59.05± 0.13s
17.819 S ± 4.8km 178.549 W ± 3.0km
DEPTH = 613.1km (2 depth phases)

02d 14h

5.3mb (39 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 11S, 19C
Centroid Locotion:
Origin Time 14:21:11.0 1.4
Lot 17.41S 0.13 Lon 179.03W 0.11
Dep 601.5 5.6 Holf-durotion 1.5
Moment Tensor; Scole 10**16 Nm
Mrr= 6.43 0.63 Mtt=-4.07 1.37
Mff=-2.36 1.09 Mrt=-3.81 1.00
Mrf=-4.99 1.16 Mtf=-3.13 0.80
Principol Axes:
T Vol= 9.09 Plg=67 Azm=118
N -0.19 7 225
P -8.90 22 318
Best Double Couple:Mo=9.0*10**16
NP1:Strike= 62 Dip=24 Slip= 108
NP2: 222 67 82

PVC	12.52	268	iPc	23 43.50	0.7
DZM	14.73	251	iPc	24 03.80	-0.6
			iS	26 41.70	
			ScP	31 15.10	
HNR	22.48	289	eP	25 14.00	-2.3
SVO	22.72	289	eP	25 20.00	1.6
VSG	22.77	289	eP	25 17.00	-1.9
AFR	27.40	94	iP	25 57.90	-1.6
	0.7s	80.00nm			5.5mb
PAE	27.58	94	iP	25 59.40	-1.7
	0.7s	65.00nm			5.4mb
PPT	27.59	94	iP	25 59.60	-1.6
	0.7s	105.00nm			5.6mb
PPN	27.73	94	iP	26 00.60	-1.8
	0.7s	30.00nm			5.0mb
TBI	27.75	106	iP	26 02.10	-0.4
	1.7s	250.00nm			5.6mb
TVO	27.88	94	iP	26 02.30	-1.5
	0.7s	70.00nm			5.4mb
BRS	28.08	245	iPc	26 05.00	-0.4
			i	26 20.00	62kmX
			i	31 49.00	
PMO	29.52	89	iP	26 16.40	-1.3
	0.9s	70.00nm			5.3mb
COO	29.70	239	iPd	26 19.40	0.1
	0.5s	41.00nm			5.3mb
			iPcP	29 05.40	
			iScP	31 55.40	
VAH	29.73	90	iP	26 17.90	-1.7
	0.9s	55.00nm			5.2mb
TPT	29.79	89	iP	26 18.50	-1.5
	0.9s	80.00nm			5.3mb
RUV	29.98	90	iP	26 20.20	-1.4
	0.9s	95.00nm			5.4mb
RMO	31.42	248	iPd	26 33.00	-0.7
	0.6s	79.00nm			5.5mb
			iPcP	28 10.30	
			iScP	32 00.30	
CTA	33.33	260	iPd	26 49.00	-0.8
	0.9s	98.32nm			5.4mb
			i	31 54.30	
			i	32 06.10	
CNB	33.38	232	iPc	26 51.00	0.9
CAN	33.65	232	eP	26 52.70	0.3
			eScP	32 08.00	
BWA	33.76	234	eP	26 51.70	-1.7
			iScP	32 07.70	
KDB	34.29	279	eP	26 58.00	0.2
CMS	34.95	240	iPd	27 03.40	0.3
	0.7s	46.00nm			5.2mb
			eS	32 12.30	
LAT	35.38	284	eP	27 08.00	1.2
OLP	35.44	249	iPd	27 07.10	-0.1
TOO	37.12	231	iPc	27 22.20	1.3
			e	27 31.00	30kmX
STK	38.56	241	iPd	27 33.30	0.7
	0.4s	24.00nm			5.1mb
QIS	39.54	259	iPd	27 39.20	-1.5
	0.4s	6.00nm			4.5mb
			iScP	32 28.80	
RKT	41.05	105	iP	27 52.40	-0.2
	1.3s	115.00nm			5.2mb
JAY	42.75	286	ePd	28 05.00	-1.2
WB5	44.50	260	iPd	28 18.50	-1.1
			iScP	32 49.00	
			eS	34 09.00	

WRA	44.52	259	Pd	28 18.30	-1.4
	0.6s	60.80nm			5.3mb
ASPA	44.69	254	iPd	28 20.80	-0.3
	0.7s	581.00nm			6.2mb
			ePcP	29 50.20	
			eScP	32 50.00	
			iS	34 14.10	
			iScS	37 14.90	
GUA	47.65	308	iPd	28 42.70	-0.9
	0.7s	350.68nm			6.0mb
GUMO	47.72	308	iPd	28 43.00	-1.1
	0.8s	278.18nm			5.8mb
PJG	47.72	308	ePd	28 43.10	-1.0
MTN	48.67	268	iPd	28 49.70	-1.5
			iScP	33 05.80	
			eS	35 08.30	
FORR	49.89	244	iPd	28 59.10	-0.9
	0.5s	106.00nm			5.6mb
WARB	51.19	250	iPd	29 09.10	-0.5
	0.3s	21.00nm			5.0mb
COOL	55.87	244	iPd	29 41.10	-1.4
MBL	57.87	256	iPd	29 55.30	-0.9
	0.3s	14.00nm			4.7mb
MEKA	58.41	249	iPc	29 58.90	-0.9
	0.4s	7.00nm			4.2mb X
KLB	58.74	243	eP	30 01.00	-0.9
MNI	58.90	283	eP	29 43.00	-20.1X
NWAO	59.14	242	eP	30 04.00	-0.5
RKG	59.29	241	eP	30 05.50	0.0
BAL	59.70	245	eP	30 07.00	-1.3
MUN	60.04	243	eP	30 10.00	-0.5
MRWA	60.42	246	eP	30 12.10	-0.9
SBA	60.50	184	P	30 14.90	2.1
NANU	61.62	254	iPd	30 20.80	0.0
	0.4s	39.00nm			5.1mb
CHJJ	66.96	324	P	30 53.20	-0.7
IIDJ	67.18	322	P	30 54.50	-0.9
MAT	67.75	323	iPd	30 57.60	-1.2
	0.9s	28.57nm			4.8mb
MTMJ	68.02	323	P	30 59.70	-0.8
ADK	69.42	1	eP	31 06.30	-2.1
	0.6s	24.40nm			4.9mb
SPA	72.29	180	iPc	31 26.70	1.5
	0.9s	73.64nm			5.2mb
			e	33 32.00	613km
SDN	74.47	11	eP	31 34.00	-3.1X
OZH	74.52	303	eP	31 38.00	-0.1
SSE	75.58	310	eP	31 44.00	0.2
BLP	75.93	46	P	31 46.00	0.3
SYP	76.20	47	eP	31 48.00	0.6
GCC	76.24	43	ePc	31 47.70	0.4
PRS	76.26	44	iPc	31 48.00	0.5
PCC	76.26	43	ePc	31 47.70	0.3
SAO	76.45	44	eP	31 48.60	0.1
BCH	76.49	46	P	31 49.00	0.1
BRK	76.56	43	eP	31 49.20	0.2
BKS	76.57	43	eP	31 49.40	0.3
	1.0s	113.00nm			5.3mb
PRI	76.62	45	ePc	31 50.40	0.8
MHC	76.65	43	ePc	31 50.30	0.5
LLA	76.70	44	ePc	31 50.30	0.4
ARN	76.73	43	P	31 50.40	0.4
PAS	77.26	48	eP	31 53.00	0.1
MWC	77.38	48	eP	31 54.00	0.2
BAR	77.57	50	eP	31 54.00	-0.6
FRI	77.73	45	iPc	31 55.50	0.2
RVR	77.74	48	eP	31 35.00	-20.5X
PLM	77.78	49	eP	31 56.00	0.1
SBB	77.78	47	eP	31 56.00	0.2
PEC	77.84	48	P	31 56.00	-0.1
ISA	77.85	46	eP	31 56.00	-0.1
CMB	77.87	43	iPc	31 56.20	0.1
WDC	77.96	40	iPc	31 56.70	0.2
ORV	78.01	42	ePc	31 56.80	0.0
MDJ	78.04	325	eP	31 57.50	0.7
KDC	78.34	14	eP	31 57.50	-0.5
MIN	78.40	41	eP	31 58.60	-0.4
CLC	78.54	46	eP	32 00.00	0.3
TPC	78.74	49	eP	32 01.00	0.2
LBFM	78.81	40	P	32 01.00	-0.2
GSC	78.82	47	eP	32 01.00	-0.2
GLA	79.10	50	eP	32 03.00	0.3
CN2	79.87	322	P	32 06.60	0.3
KVN	79.92	43	P	32 07.00	0.0
TNP	79.99	45	P	32 07.40	0.0
SVW	80.78	11	iPc	32 10.00	-0.8
LON	82.04	35	P	32 17.00	-0.4

TTA	82.41	10	iPc	32 18.90	0.0
RMW	82.47	35	P	32 19.50	-0.1
PMR	82.55	14	iPc	32 18.70	-0.8
	0.7s	28.60nm			4.9mb
SNG	83.52	280	eP	32 27.80	2.4
BJI	83.63	315	eP	32 26.00	0.6
			eS	41 53.00	
AIA	83.63	157	eP	32 26.40	1.4
MSU	83.63	46	P	32 26.00	0.2
TOA	83.68	15	eP	32 25.30	0.0
MAW	83.90	200	eP	32 27.00	0.7
PNT	84.74	34	iPc	32 31.30	0.7
	0.7s	73.00nm			5.4mb
TIY	85.11	312	eP	32 34.00	1.3
DAU	85.16	45	P	32 33.50	0.2
FBA	85.75	13	iPc	32 34.00	-1.1
ALQ	86.14	52	iPc	32 38.40	0.4
	1.0s	29.00nm			5.0mb
			e	32 45.30	
			epP	34 49.50	614km
LRM	86.99	40	eP	32 41.90	0.1
BW06	87.38	43	P	32 43.50	-0.2
KMI	87.67	297	Pd	32 47.00	1.6
CHG	88.84	290	eP	32 52.10	1.5
CHTO	88.84	290	eP	32 50.10	-0.5
	0.9s	5.33nm			4.4mb
			pP	34 57.20	585kmX
GOL	88.90	48	P	32 51.00	0.2
	1.0s	62.50nm			5.5mb
SES	90.02	36	iPc	32 55.00	-0.4
	0.8s	81.00nm			5.7mb
EDM	90.16	33	iPc	32 55.50	-0.4
	0.5s	26.00nm			5.4mb
RSSD	91.59	44	P	33 02.60	-0.4
INK	91.83	15	ePd	33 02.80	-0.5
	0.5s	15.00nm			5.3mb
SNA	92.06	179	iPc	33 05.40	0.9
	0.8s	93.28nm			5.9mb
MBC	100.28	12	ePdiff	33 41.00	-0.3
	0.8s	5.00nm			5.0mb
ZOBO	103.57	112	Pdiff	34 02.50	4.5X
KEV	125.75	349	ePKP	38 53.00	0.2
	0.7s	12.00nm			
SOD	127.88	348	iPKP	38 56.50	-0.5
PDCR	129.87	124	ePKP	38 45.00	-17.3X
			e	39 00.00	
SUF	131.97	345	ePKP	39 04.30	-0.5
	0.6s	4.50nm			
BUL	133.81	216	iPKPc	39 10.40	0.6
	0.7s	11.99nm			
			iPP	41 48.20	
NUR	134.23	344	iPKP	39 00.60	-8.6X
	0.6s	17.00nm			
			i	39 10.20	
NB2	136.27	353	PKP	39 02.20	-11.0X
	0.6s	2.50nm			
PTZ	136.59	225	ePKP	39 16.00	0.8
			e	41 57.00	
LSZ	137.86	220	ePKP	39 10.00	-7.5X
			i	39 21.00	
			e	42 00.00	
IKZ	138.49	230	ePKP	39 17.00	-1.8
			e	42 00.00	
			i	42 09.10	
			i	44 50.10	
MZZ	140.48	225	iPKP	39 18.00	-4.3X
			i	42 08.80	
KMZ	140.70	219	iPKP	39 18.00	-4.7X
			i	39 26.90	
			i	42 08.00	
EKA	142.39	4	PKPc	39 20.60	-3.6X
	0.6s	6.00nm			
DMU	143.41	8	iPKPc	39 23.90	-2.1X
DLE	144.06	8	iPKPc	39 26.20	-0.9
	0.5s	62.00nm			
CLI	144.28	329	ePKPc	39 27.50	-0.3
ETA	144.68	8	iPKPc	39 28.50	0.3
	0.7s	155.00nm			
VAL	144.72	13	iPKP	39 28.60	0.3
WIT	144.84	355	iPKPc	39 30.30	1.9
ECB	144.92	9	ePKP	39 28.60	0.0
	0.6s	115.00nm			
KSP	144.99	344	ePKP	39 29.60	0.8
	0.7s	84.00nm			
			ic	39 30.50	
			e	41 44.50	
VRI	145.03	329	ePKPc	39 30.00	0.9

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ECP	145.16	8	ePKP	39 29.20	0.2
	0.7s	119.00nm			
SPC	145.21	338	iPKP	39 30.50	1.0
TLB	145.24	326	ePKPd	39 31.00	1.6
CLL	145.35	347	ePKP	39 29.00	-0.4
	1.0s	115.00nm			
			pPKP	41 50.00	
BRG	145.55	346	iPKP	39 30.00	0.3
	1.1s	62.00nm			
			i	39 30.90	
			e	41 47.00	
WTS	145.64	354	ePKPc	39 31.90	2.1X
	0.7s	61.00nm			
MLR	145.69	329	ePKPd	39 32.00	1.7
PRU	146.22	345	ePKP	39 30.70	-0.1
	1.0s	37.60nm			
			i	39 33.50	
			e	39 35.20	
			e	41 43.50	
MOX	146.25	348	ePKP	39 31.00	0.1
	1.4s	44.00nm			
PSZ	146.40	337	iPKP	39 33.90	2.6X
LWI	146.48	236	iPKPc	39 36.80	4.2X
ENN	146.93	355	iPKPc	39 35.20	3.3X
	0.6s	42.00nm			
			i	39 37.80	
UCC	147.02	357	PKP	39 35.90	3.9X
SRO	147.05	339	iPKPc	39 36.00	3.8X
MEM	147.08	355	PKP	39 31.30	-0.8
			i	39 35.64	
ZST	147.12	341	iPKPc	39 36.10	3.8X
	0.8s	2.00nm			
GRF	147.24	348	ePKP	39 33.60	1.1
			ic	39 37.00	
KHC	147.26	345	iPKPc	39 33.00	0.4
	1.0s	33.50nm			
			i	39 36.50	
			e	40 34.30	
VKA	147.30	341	iPKPc	39 36.80	4.2X
	0.6s	59.90nm			
			i	39 38.20	
SNF	147.31	357	PKP	39 32.10	-0.4
			i	39 36.28	
			e	39 39.60	
ABH	147.64	353	ePKP	39 28.53	-4.6X
DOU	147.70	356	iPKPc	39 34.20	1.0
TOD	147.74	351	ePKP	39 27.92	-5.4X
RUP	147.87	353	ePKP	39 28.93	-4.6X
WLF	148.01	354	iPKPc	39 38.50	4.9X
			e	41 55.50	
GWF	148.52	352	PKP	39 39.62	5.1X
FUR	148.69	347	iPKPc	39 40.10	5.3X
	0.9s	74.00nm			
BHG	148.74	345	iPKPc	39 40.00	5.1X
	0.8s	26.00nm			
FLN	149.10	2	ePKP	39 35.60	0.2
WLS	149.11	352	PKP	39 40.79	5.3X
CDF	149.12	352	PKP	39 40.86	5.3X
KBA	149.22	344	iPKPc	39 40.40	4.5X
	0.5s	35.60nm			
			i	39 44.50	
LDF	149.28	2	ePKP	39 35.70	0.0
ECH	149.33	353	PKP	39 41.07	5.3X
GRR	149.45	3	ePKP	39 36.30	0.4
VITF	149.46	354	PKP	39 41.65	5.8X
PTJ	149.51	340	ePKP	39 41.60	5.4X
FEL	149.54	351	ePKP	39 33.33	-2.9X
SLE	149.58	351	ePKPc	39 36.50	0.3
HAU	149.63	353	ePKP	39 36.40	0.2
MOF	149.69	352	PKP	39 41.82	5.4X
BSF	149.75	353	ePKP	39 36.60	0.1
LPF	149.80	3	ePKP	39 36.70	0.3
	1.1s	17.10nm			
LJU	149.83	342	iPKP	39 42.20	5.6X
ZLA	149.87	351	ePKPc	39 37.00	0.3
SAX	149.94	349	ePKP	39 38.00	0.9
BBS	150.02	352	PKP	39 42.79	5.9X
VOY	150.03	343	ePKPc	39 42.50	5.5X
VBY	150.09	340	e(PKP)	39 40.00	3.0X
LOMF	150.22	353	PKP	39 43.50	6.3X
OSS	150.33	348	ePKP	39 38.20	0.7
TRI	150.36	342	iPKPc	39 43.30	6.0X
LLS	150.37	350	ePKP	39 38.20	0.6
VAY	150.39	327	iPKP	39 42.70	5.2X
SKO	150.49	329	iPKPc	39 44.00	6.3X
			i	42 01.00	
LOR	150.56	357	ePKP	39 38.00	0.3

	1.1s	8.55nm			
CTI	150.60	345	PKP	39 44.00	6.1X
VDL	150.65	349	ePKP	39 38.70	0.6
SSF	150.79	357	ePKP	39 38.60	0.6
	1.1s	12.20nm			
TMA	151.13	349	ePKP	39 39.20	0.4
MFF	151.27	2	ePKP	39 39.20	0.5
	0.8s	9.40nm			
BGF	151.32	358	ePKP	39 39.30	0.5
VAI	151.38	349	PKP	39 39.00	0.2
DIX	151.39	351	ePKPc	39 41.00	1.7
OHR	151.45	328	ePKP	39 46.00	6.8X
	0.7s	0.10nm			
TCF	151.60	359	ePKP	39 39.60	0.4
	0.8s	8.05nm			
LSF	151.65	360	ePKP	39 39.30	0.0
MAF	151.66	358	ePKP	39 39.90	0.6
AGO	151.81	358	PKP	39 47.08	7.6X
PLDF	151.87	357	PKP	39 47.42	7.7X
LSD	152.03	351	PKP	39 48.16	8.0X
LPG	152.05	352	ePKP	39 41.30	1.0
	0.8s	7.70nm			
PYM	152.12	358	PKP	39 48.05	8.0X
BNI	152.50	352	PKP	39 42.30	1.6
			eSg	39 49.40	
RJF	152.59	360	ePKP	39 41.20	0.5
	0.9s	13.10nm			
RRL	152.61	352	PKP	39 49.19	8.2X
LBL	152.63	357	PKP	39 48.82	8.2X
PCP	152.70	349	PKP	39 48.57	7.7X
LFF	152.95	1	ePKP	39 41.50	0.4
CAF	152.97	359	ePKP	39 42.00	0.8
PZZ	152.97	351	PKP	39 42.93	1.5
ROB	153.06	350	PKP	39 49.08	7.7X
STV	153.19	351	PKP	39 48.78	7.2X
ENR	153.20	350	PKP	39 48.67	7.0X
LPO	153.22	0	ePKP	39 42.20	0.7
IMI	153.43	350	PKP	39 50.31	8.4X
BNG	158.62	234	iPKPc	39 49.30	0.0
	0.6s	12.00nm			
			id	40 30.20	
			id	42 44.80	
LIC	166.85	150	PKPc	39 57.32	0.4
	0.8s	17.50nm			
KIC	167.11	151	PKPc	39 57.44	0.3
	0.9s	20.50nm			
TIC	167.22	150	PKPc	39 57.50	0.3
	0.8s	12.00nm			

S.D. = 0.9 on 182 of 238 obs.

& SEP 02, 1989 16h 22m 05.50s
31.680 N 116.250 W
DEPTH = 6.0km
BAJA CALIFORNIA (48)
<PAS-P>. ML 3.0 (PAS).

IKP	0.97	7	iPd	22 23.50	-0.9
BAR	1.06	340	ePd	22 24.50	-1.4
			iS	22 38.40	
CPE	1.40	329	eP	22 30.50	-1.0
			eS	22 48.80	
PLM	1.75	343	eP	22 35.80	-0.9
GLA	1.82	41	eP	22 36.00	-1.7
PEC	2.34	341	eP	22 45.50	0.4

6 obs. associated

SEP 02, 1989 16h 53m 26.71± 0.13s
4.242 S ± 2.8km 152.942 E ± 4.0km
DEPTH = 44.0km (3 depth phases)
5.4mb (20 obs.) 5.3Msz (13 obs.)
NEW BRITAIN REGION (192)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 25C
Centroid Location:
Origin Time 16:53:29.4 0.4
Lat 4.54S 0.05 Lon 153.18E 0.06
Dep 15.0 FIX Half-duration 2.7
Moment Tensor: Scale 10**17 Nm
Mrr=-0.97 0.15 Mtt= 0.97 0.17
Mff= 0.00 0.16 Mrt= 6.58 0.50
Mrf= 0.87 0.43 Mtf= 2.25 0.17
Principal Axes:

	Val=	Plg=	Azm=
T	7.36	38	338
N	-0.60	17	81
P	-6.76	47	191

Best Double Couple:Mo=7.1*10**17
NP1:Strike= 9 Dip=18 Slip=-163
NP2: 263 85 -73

LAT	6.38	248	eP	55 04.00	3.3X
KDB	7.74	228	eP	55 19.00	-0.7
			eS	55 29.00	
VSG	8.36	127	eP	55 29.00	0.6
SVO	8.39	126	eP	55 28.00	-0.6
HNR	8.66	127	eP	55 30.00	-2.4
			e	57 15.00	
MNDI	9.44	258	eP	55 46.00	2.6
JAY	12.34	278	ePc	56 02.00	-20.5X
CTA	17.04	202	iPd-	57 24.00	0.4
	1.6s	600.00nm		5.5mb	
			iS	00 34.00	
			i	01 13.00	
			i	09 27.00	
GUA	19.38	336	eP	57 52.20	0.2
	0.8s	334.33nm		5.7mb	
GUMO	19.44	336	eP	57 52.30	-0.4
	1.4s	1061.54nm		5.9mb	
PVC	20.16	133	iP	58 07.90	7.6X
OIS	20.77	218	iPd	58 05.40	-1.2
	1.0s	262.00nm		5.5mb	
			e	01 17.00	
DZM	22.03	145	iPc	58 19.50	0.1
BRS	23.02	180	iPd	58 30.50	1.5
			e	58 43.00	51km
			i	01 47.00	
			eS	02 43.00	
			e	09 11.00	
MTN	23.18	247	iPd	58 30.10	-0.5
			eS	01 44.30	
			iPcP	03 14.00	
			eScP	05 56.30	
			eScS	09 07.50	
WB5	23.86	228	iPd	58 37.00	-0.1
WRA	23.92	228	Pd	58 37.30	-0.4
	1.0s	269.80nm		5.7mb	
COO	26.21	182	eP	59 00.30	0.9
	0.6s	67.00nm		5.4mb	
			ePP	02 13.40	
ASPA	26.66	222	iPd	59 02.50	-1.0
	1.2s	124.00nm		5.4mb	
Z	19s	9.66um		5.4Msz	
			LR	10 19.80	
CMS	27.91	193	iPd	59 14.00	-0.8
	1.1s	73.00nm		5.2mb	
MNI	28.64	281	ePc	59 20.50	-1.1
DAV	29.54	292	eP	59 31.50	1.8
BWA	30.32	187	eP	59 35.90	-0.5
CNB	31.10	186	eP	59 44.00	0.7
			e	59 48.00	14kmX
CAN	31.14	186	eP	59 43.90	0.3
ADE	33.30	202	iPc	00 02.20	-0.3
	0.8s	47.76nm		5.4mb	
TOO	33.87	191	iPc	00 07.80	0.4
MBL	36.28	239	iPd	00 26.40	-1.7
TAU	38.83	187	iPd	00 51.00	1.8
			e	04 02.00	
KRP	39.37	151	eP	00 56.00	2.3
MEKA	39.70	232	iPd	00 55.70	-1.0
	0.4s	18.00nm		5.2mb	
			i	04 07.80	
COOL	39.98	225	eP	00 58.00	-1.0
NANU	40.51	240	eP	01 02.00	-1.4
	0.6s	28.00nm		5.2mb	
KAGJ	41.03	331	eP	01 08.00	0.5
KIW	41.47	155	eP	01 11.60	0.6
TCW	41.49	156	P	01 12.20	1.1
MNG	41.51	154	P	01 11.20	-0.2
MRW	41.68	155	P	01 13.10	0.4
CAW	41.73	155	P	01 13.60	0.4
WEL	41.75	155	P	01 19.00	5.7X
			eS	07 28.00	
WDW	41.83	155	P	01 14.10	0.1
PGZ	41.86	153	P	01 14.90	0.7
	0.4s	60.00nm		5.7mb	
IIDJ	41.96	342	eP	01 17.40	2.3
MTW	41.96	154	P	01 14.70	-0.3
KAKJ	41.97	344	eP	01 17.50	2.4
BLW	42.12	155	eP	01 16.00	-0.4
CHJJ	42.15	343	eP	01 14.60	-2.1
KUMJ	42.17	332	eP	01 16.90	0.1
ANP	42.27	315	e(P)	01 26.00	8.1X
TSRJ	42.65	339	eP	01 20.20	-0.5
KLB	42.79	226	eP	01 20.00	-1.9

MAT	42.84	342	eP	01	20.00	-2.3	HHC	58.68	324	eP	03	22.00	-0.3	VAY	122.34	317	ePKP	12	17.60	-1.3
	1.6s	80.00nm			5.2mb			Z 26s	5.70um			5.6MszX		CLL	122.43	331	iPKP	12	18.80	0.1
	Z 20s	3.19um			5.2Msz			N 15s	1.00um						0.7s	29.00nm				
		eS	07	36.00				E 17s	0.70um							iSKP	15	30.60		
MTMJ	43.01	342	eP	01	22.40	-1.4			S	11	24.00			PRU	122.51	329	PKP	12	18.50	-0.4
BAL	43.05	228	eP	01	23.00	-1.1	BTO	59.44	323	P	03	28.00	0.4		Z 18s	0.90um			5.5Msz	
MHZ	43.10	163	eP	01	24.90	0.4		N 17s	1.70um						N 17s	0.40um				
NIIJ	43.26	344	eP	01	24.40	-1.3		E 17s	1.40um						E 18s	0.50um				
SHNJ	43.37	333	eP	01	24.90	-1.6			pP	03	36.50	28kmX				e	15	30.20		
YAMJ	43.87	345	P	01	30.30	-0.3			S	11	38.00			SKO	122.80	318	ePKP	12	19.50	-0.3
NWAO	43.88	225	eP	01	30.00	-0.8	LZH	60.93	316	eP	03	38.00	0.1			i	12	22.50		
MUN	44.11	227	eP	01	32.00	-0.7		2.0s	0.12nm			2.7mb X				i	12	25.50		
OZH	44.22	313	Pd	01	34.50	0.9		N 13s	0.50um							e	15	31.50		
	Z 24s	2.00um			5.0MszX				pP	03	49.00	37km		MOX	123.53	331	ePKP	12	21.00	0.0
	N 12s	1.30um							eS	12	00.00				1.4s	31.00nm				
		S	08	08.00			ADK	61.60	21	eP	03	41.20	-0.8		Z 28s	1.00um			5.3MszX	
OFUJ	44.35	347	P	01	34.20	-0.2		0.8s	27.40nm			5.4mb				e	15	32.00		
AOMJ	46.05	347	eP	01	49.60	1.7	DRV	62.96	186	eP	03	51.80	1.0	KHC	123.54	329	iPKPc	12	21.50	0.4
SSE	46.39	321	Pd	01	52.50	1.7	GTA	65.35	317	iPc	04	07.40	0.4		1.0s	14.00nm				
	1.5s	0.07nm			2.4mb X			1.4s	0.10nm			2.7mb X			Z 20s	0.70um			5.3Msz	
	Z 18s	1.80um			5.1Msz			Z 30s	1.50um			5.0MszX			N 20s	0.60um				
	E 14s	1.10um						N 13s	0.50um						E 20s	0.60um				
		S	08	34.00					S	12	50.00			OHR	123.63	318	ePKP	12	20.30	-1.2
		sS	08	59.00					sS	13	04.00				0.7s	0.05nm				
		SS	11	53.00			LSA	68.04	304	eP	04	26.00	1.3			e	15	32.70		
GZH	47.24	307	eP	01	58.50	0.9	SBA	73.92	177	Pc	05	02.00	3.4X	WIT	124.19	336	ePKP	12	22.50	0.4
	Z 27s	1.31um			4.8MszX		SVW	76.25	23	eP	05	13.30	1.0	GRF	124.35	331	iPKPc	12	22.50	-0.1
	N 16s	1.50um					HYB	76.45	289	eP	05	14.50	0.3		Z 19s	0.80um			5.4Msz	
	E 14s	1.60um					TTA	77.20	21	eP	05	17.90	0.3	KMZ	124.64	251	ePKP	12	15.00	-9.3X
		eS	08	50.00			PMR	79.12	24	eP	05	27.60	-0.4	WTS	124.73	335	ePKPd	12	24.00	0.8
NJ2	48.50	321	Pc	02	08.40	1.1		0.8s	8.60nm			4.8mb			0.5s	15.00nm				
	Z 25s	2.70um			5.1MszX		IMA	79.89	19	eP	05	32.80	0.5	BHG	124.79	328	iPKPd	12	23.60	0.1
WHN	50.55	316	P	02	23.50	0.4		1.2s	23.50nm			5.0mb		VBY	124.81	325	e(PKP)	12	24.80	1.2
	Z 28s	1.66um			4.9MszX		POO	81.03	289	eP	05	39.50	0.4	KBA	124.94	327	iPKPc	12	25.60	1.6
	N 14s	1.41um					KSH	82.66	310	P	05	50.00	2.6		1.3s	17.50nm				
	E 14s	0.65um						E 10s	1.30um							i	15	16.50		
		S	09	36.00			SPA	85.79	180	e(P)	06	03.80	1.2			e	15	34.00		
DL2	51.77	329	eP	02	31.00	-1.2		0.9s	34.55nm			5.6mb		TRI	125.54	326	ePKP	12	24.80	-0.2
	Z 36s	2.10um			4.9MszX			Z 18s	1.53um			5.4Msz		EKA	125.54	343	PKPd	12	24.60	-0.1
	N 15s	1.60um							e	06	17.00	44km			1.1s	16.50nm				
		S	09	50.00			MAW	86.14	203	eP	06	04.00	-0.1	TOD	125.56	332	ePKP	12	24.78	-0.2
TIA	52.35	323	P	02	36.10	-0.6	INK	87.89	21	eP	06	12.00	-0.5	ABH	125.95	333	ePKP	12	25.99	0.3
MDJ	52.95	339	eP	02	39.50	-1.4	CMB	89.96	52	e(P)	06	25.60	2.5	ENN	126.02	335	iPKPc	12	26.00	0.3
	Z 30s	2.60um			5.1MszX				e	10	08.60				0.9s	28.00nm				
		S	10	00.00			PNT	91.51	41	eP	06	31.00	1.1			i	12	31.50		
SNY	53.07	333	Pc	02	41.20	-0.7	KVN	91.83	51	P	06	31.00	-0.9	MEM	126.10	335	PKPc	12	26.30	0.4
	Z 27s	2.70um			5.2MszX		PLM	92.47	57	P	06	50.00	15.1X			e	15	37.50		
	N 26s	2.60um					MBC	93.54	14	eP	06	39.50	0.8	RUP	126.30	333	ePKP	12	26.77	0.3
	E 32s	1.70um						0.9s	8.00nm			5.1mb		GWF	126.56	332	PKP	12	27.32	0.4
		epP	02	57.00	60kmX		EDM	95.59	37	eP	06	48.00	-0.7	WLF	126.73	334	PKPd	12	28.50	1.4
		S	10	07.00			SES	97.09	40	eP	06	55.00	-0.5			e	15	39.80		
		sS	10	34.00			ALQ	101.11	55	e(Pdif	07	28.00	13.8X	OSS	126.88	329	ePKP	12	28.20	0.4
		SS	13	48.00				Z 20s	0.71um			5.2Msz		SNF	126.90	335	PKPc	12	27.40	0.0
SNG	53.44	282	eP	02	48.60	3.6X			ePP	11	24.00					e	15	40.00		
CN2	53.85	336	Pc	02	46.70	-0.8			eLg	35	57.00			SAX	126.91	330	ePKP	12	28.50	0.5
	Z 22s	4.50um			5.5Msz				eLR	41	10.00			SLE	126.99	331	ePKP	12	27.90	0.1
	N 13s	0.60um					KEV	105.82	343	ePKP	11	42.00	-4.6X	DOU	127.08	335	PKPc	12	28.60	0.8
		PcS	07	51.00			SOD	107.24	341	ePKP	11	47.00	-2.3X			e	15	39.40		
		S	10	18.00			SUF	109.90	337	iPKP	11	53.70	-0.8	WLS	127.08	332	PKP	12	27.79	-0.2
		SS	14	00.00			NUR	111.69	335	ePKP	11	58.00	0.1	CDF	127.12	332	PKP	12	27.68	-0.4
GYA	54.17	307	P	02	52.60	2.2		Z 22s	1.00um			5.4Msz		FEL	127.15	331	PKP	12	27.71	-0.5
	N 20s	2.90um							LR	58	30.00			ECH	127.31	332	PKP	12	28.52	0.1
	E 20s	1.60um					NB2	116.44	340	PKP	12	06.30	-0.8	LLS	127.35	329	ePKP	12	28.80	0.1
		S	10	28.00				0.7s	3.60nm					VDL	127.36	329	ePKP	12	29.40	0.6
BJI	55.51	326	eP	02	58.50	-1.2	MLR	118.32	320	ePKP	12	10.00	-1.3	MOF	127.58	331	PKP	12	28.94	-0.1
	2.0s	88.00nm			5.4mb		SLR	118.67	238	ePKP	12	12.50	-0.1	BSF	127.76	332	PKP	12	29.26	-0.1
	Z 22s	2.77um			5.3Msz			Z 18s	3.44um			6.0Msz		HAU	127.85	332	ePKP	12	28.40	-1.0
	E 14s	0.60um							e	15	21.00				0.6s	11.50nm				
		eS	10	28.00			IKZ	118.84	256	ePKP	12	18.00	4.8X	VITF	127.86	332	PKP	12	29.71	0.4
		eSS	14	06.00					e	15	01.00			TMA	127.92	329	ePKP	12	29.70	-0.1
TIY	56.18	322	eP	03	04.50	-0.2	PRY	118.92	236	ePKP	12	12.00	-1.1	LOMF	128.09	331	PKP	12	29.94	0.0
	N 16s	1.80um					PTZ	119.26	251	ePKP	12	15.00	1.1	SOI	128.30	317	PKP	12	31.00	0.5
		S	10	40.50			KSR	119.79	237	ePKP	12	14.50	-0.3	MMK	128.43	329	ePKP	12	31.90	1.0
XAN	56.32	316	Pc	03	06.50	0.8	SPC	119.94	326	iPKP	12	15.50	1.1	DIX	128.69	330	ePKP	12	32.10	0.7
		S	10	55.00			BUL	120.22	244	iPKPc	12	16.00	0.3	LPG	129.42	330	ePKP	12	32.00	-0.8
KMI	56.79	304	Pc	03	11.00	1.5		0.9s	12.60nm						0.7s	14.30nm				
	Z 30s	3.70um			5.3MszX		KSP	121.10	329	ePKP	12	16.80	0.5	LOR	129.53	333	ePKP	12	31.80	-0.8
	N 12s	0.50um					SRO	121.77	326	e(PKP)	12	19.00	1.4		1.3s	32.40nm				
		sP	03	28.50			LSZ	121.97	249	iPKPc	12	20.00	0.9	LBF	129.69	333	ePKP	12	32.10	-0.9
		eS	11	03.00					i	15	32.00				1.1s	20.50nm				
CHTO	57.88	295	eP	03	18.30	1.4	ZST	122.23	327	e(PKP)	12	19.00	0.5	BNI	129.77	329	PKP	12	26.50	-6.8X
	1.3s	6.13nm			4.5mb				e	12	22.00			SSF	129.85	333	ePKP	12	32.50	-0.7
CD2	58.49	310	P	03	21.00	-0.1	BRG	122.26	331	iPKP	12	18.40	0.0		1.5s	57.40nm				
	Z 20s	1.80um			5.2Msz			0.8s	30.00nm					SMF	130.00	332	ePKP	12	32.60	-0.9
	E 17s	2.00um							i	12	23.70				1.1s	24.40nm				
		S	11	27.00					i	15	30.20			AVF	130.12	333	ePKP	12	32.50	-1.2
		sS	11	45.00			MZZ	122.29	254	iPKP	12	22.00	2.3X		0.8s	6.70nm				

02d 17h

LDF	130.18	337	ePKP	12	32.90	-0.9
FLN	130.19	337	ePKP	12	32.90	-0.9
	0.8s	19.80nm				
SBF	130.19	328	ePKP	12	32.70	-1.3
BGF	130.52	333	ePKP	12	33.80	-0.7
	0.7s	17.60nm				
GRR	130.64	337	ePKP	12	33.90	-0.7
	0.7s	15.40nm				
FRF	130.81	328	ePKP	12	34.30	-0.8
	0.8s	19.80nm				
MAF	130.90	333	ePKP	12	34.60	-0.7
LPF	131.00	337	ePKP	12	34.90	-0.4
	0.7s	22.00nm				
TCF	131.01	333	ePKP	12	34.70	-0.8
	0.7s	18.70nm				
LRG	131.04	328	ePKP	12	34.70	-0.8
	0.7s	22.00nm				
LMR	131.04	328	ePKP	12	34.60	-1.0
LSF	131.35	334	ePKP	12	35.00	-1.1
	0.9s	13.10nm				
MFF	131.79	335	ePKP	12	36.60	-0.3
	0.6s	5.40nm				
RJF	132.08	333	ePKP	12	37.30	-0.2
CAF	132.12	332	ePKP	12	37.80	0.2
LPO	132.71	333	ePKP	12	38.50	-0.2
	0.8s	16.10nm				
LFF	132.71	333	ePKP	12	38.10	-0.6
CNCB	134.48	118	PKP	12	36.00	-7.6X
			e	16	00.00	
			e	19	28.00	
LPB	134.49	118	ePKP	12	48.00	4.6X
			PKS	16	02.00	
BNG	134.53	272	ePKPd	12	34.90	-8.2X
	0.9s	14.00nm				
			ic	12	42.30	
			ic	15	54.50	
			id	16	11.50	
			id	19	24.00	
ZOBO	134.57	118	ePKP	12	35.00	-8.8X
	0.9s	12.98nm				
	Z 24s	0.48um				5.1MszX
			i	12	40.00	
			SKS	19	28.00	
			LR	58	06.00	
CCH	135.84	120	PKP	12	50.00	4.2X
TOL	138.88	333	ePKP	12	51.00	0.5
			ePP	16	30.00	
			eSS	38	45.00	
ASMO	140.73	330	ePKP	12	47.65	-6.4X
AAPN	140.96	330	ePKP	12	46.90	-7.6X
APHE	141.02	330	ePKP	12	53.00	-1.6
ALOJ	141.10	330	ePKP	12	50.70	-4.1X
ATEJ	141.21	330	ePKP	12	56.00	1.0
IFR	144.42	328	iPKP	13	00.00	-0.7
TCE	145.03	77	ePKP	13	02.04	0.1
TRN	145.38	77	ePKP	13	01.18	-1.3
AVE	145.77	330	iPKP	13	03.50	0.8
			i	13	35.00	
VAO	146.67	145	ePKP	13	03.60	-1.0
			e	13	08.00	
			e	13	11.90	
			e	13	17.40	
TIO	147.56	327	iPKPd	13	09.00	3.1X
			i	13	15.00	
			i	13	27.00	
BAO	151.37	134	ePKP	13	13.50	1.4
KIC	157.68	276	PKP	13	23.50	2.9X
TIC	157.93	277	PKP	13	23.80	2.9X
PDCR	159.47	144	ePKP	13	21.70	-0.8
ITR	162.82	139	ePKP	13	26.80	0.9
			e	13	31.80	
			e	14	17.60	
			e	16	37.90	

S.D. = 1.0 on 188 of 214 obs.

SEP 02, 1989 16h 56m 37.35± 0.33s
4.227 S ± 6.4km 153.163 E ± 8.4km
DEPTH = 33.0km (normal)
5.2mb (3 obs.)
NEW IRELAND REGION (190)

LAT	6.59	248	eP	58	16.00	1.5
KDB	7.92	229	eP	58	32.00	-1.1
GUA	19.46	335	eP	01	04.50	0.1
	1.1s	445.57nm				5.7mb X
GUMO	19.52	335	eP	01	05.00	-0.1
	1.2s	486.11nm				5.7mb X
PJG	19.52	335	eP	01	05.30	0.2
DZM	21.92	145	iPc	01	34.10	4.2X
WB5	24.03	228	eP	01	49.00	-1.5
			eS	05	59.00	
			iScP	09	10.50	
WRA	24.09	228	Pc	01	49.40	-1.7
	1.0s	169.90nm				5.5mb
MNI	28.86	281	e(P)	02	31.70	-3.6X
TCW	41.41	156	P	04	22.90	0.6
MNG	41.43	154	P	04	22.50	0.0
MRW	41.60	155	eP	04	24.80	1.0
CAW	41.65	155	P	04	24.80	0.5
WDW	41.75	155	eP	04	25.20	0.1
PGZ	41.78	153	eP	04	25.20	-0.1
MTW	41.88	155	eP	04	26.00	-0.2
CHTO	58.07	295	e(P)	06	31.30	1.1
	1.4s	5.29nm				4.4mb
HYB	76.65	289	eP	08	32.00	4.7X
GBA	77.18	285	P	08	33.00	2.9
SPA	85.80	180	e(P)	09	16.20	1.5
	1.0s	19.00nm				5.3mb
INK	87.79	21	eP	09	23.00	-1.0
PNT	91.36	41	eP	10	14.00	32.8X
SUF	109.98	337	iPKP	15	01.90	-4.8X
BUL	120.42	244	ePKP	15	27.60	-0.5
	0.8s	4.10nm				
KHC	123.64	329	iPKPd	15	33.60	0.3
GRF	124.45	331	ePKP	15	34.40	-0.4
WTS	124.81	335	ePKP	15	36.00	0.6
	1.0s	11.00nm				
TOD	125.65	332	ePKP	15	36.82	-0.4
ABH	126.03	333	ePKP	15	37.99	0.0
ENN	126.10	335	ePKP	15	38.00	0.0
	1.0s	23.00nm				
RUP	126.38	333	ePKP	15	38.53	-0.1
FEL	127.24	331	ePKP	15	39.09	-1.3
VAI	128.24	329	PKPd	15	41.00	-1.2
BOB	128.61	327	PKP	15	40.00	-3.1X
BNI	129.87	329	PKP	15	42.00	-3.5X
PLDF	130.70	332	PKP	15	46.41	-0.6
AGO	130.86	333	PKP	15	47.86	0.6
PYM	131.15	332	PKP	15	48.34	0.5
ARE	131.31	116	ePKP	16	06.00	16.7X
LBL	131.42	332	PKP	15	46.93	-1.3

S.D. = 1.0 on 32 of 40 obs.

? SEP 02, 1989 17h 08m 53.49± 3.41s
32.618 S ±11.8km 71.456 W ±27.9km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

PEL	0.83	129	iPd	09	10.00	0.4
			iS	09	26.10	
SAN	1.07	142	iPd	09	13.50	-0.1
			iS	09	32.10	
TACH	1.12	157	iPd	09	13.80	-0.7
			iS	09	32.00	
FCH	1.21	126	iPd	09	16.30	0.1
			iS	09	37.00	
PCH	1.27	142	iPd	09	16.90	-0.3
			iS	09	38.50	
LNV	1.33	178	eP	09	14.60	-3.5X
			iS	09	35.00	
CHCH	1.47	153	eP	09	21.00	0.9
			iS	09	45.00	
ZON	2.59	66	eP	09	36.00	-0.2

S.D. = 0.6 on 7 of 8 obs.

SEP 02, 1989 17h 38m 23.80± 0.32s
45.661 N ± 2.6km 6.797 E ± 3.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.8 (LDG), 2.6 (GEN).

LPL	0.15	197	Pg	38	27.50	0.0
LPG	0.17	191	Pg	38	27.70	-0.1
			Sg	38	30.50	
LSD	0.32	129	P	38	30.30	-0.3
EMS	0.42	13	iPd	38	32.00	-0.4
DIX	0.60	45	iPc	38	35.40	-0.7
BNI	0.61	188	Pc	38	35.50	-0.8
			(Sg)	38	43.70	
RRL	0.74	181	P	38	36.10	-0.4
			S	38	51.63	
ORO	0.83	92	P	38	39.50	-0.4
			eSg	38	49.90	
MMK	0.90	64	eP	38	41.30	0.0
FOUF	1.13	181	ePnc	38	45.14	0.2
			eSn	39	02.40	
PZZ	1.18	169	P	38	45.68	-0.2
			S	39	01.61	
STV	1.47	165	P	38	50.30	-0.1
ENR	1.50	163	P	38	50.40	-0.5
			S	39	11.22	
TMA	1.52	72	eP	38	53.20	2.0X
ROB	1.56	150	P	38	52.76	1.0
PCP	1.67	132	P	38	54.81	1.6
SBF	1.85	166	Pg	38	59.50	3.5X
			Sg	39	25.00	
LLS	1.95	51	eP	39	00.30	2.9X
FRF	2.10	183	Pg	39	04.20	4.7X
BSF	2.17	360	Pg	39	06.00	5.4X
			Sg	39	32.40	
LRG	2.23	188	Pg	39	06.20	4.9X
SMF	2.28	297	Pg	39	09.00	6.9X
			Sg	39	36.00	
LBF	2.36	305	Pn	39	03.60	0.4
			Pg	39	08.80	
			Sg	39	38.00	
HAU	2.37	353	Pn	39	03.20	-0.1
			Pg	39	09.50	
			Sg	39	39.60	
FEL	2.37	20	ePn	39	02.50	-0.9
SLE	2.41	28	eP	39	05.50	1.6
LOR	2.59	309	Pn	39	06.40	-0.1
			Pg	39	12.80	
			Sg	39	45.00	
BGF	2.89	289	Pn	39	11.00	0.3
			Pg	39	19.20	
			Sg	39	56.30	

S.D. = 0.7 on 21 of 28 obs.

SEP 02, 1989 17h 50m 56.10± 0.67s
35.994 N ± 7.3km 140.178 E ± 8.3km
DEPTH = 85.8 ± 5.4 km
4.1mb (2 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (I JMA) at Tokyo.

KAKJ	0.21	359	iP+	51	07.40	-1.3
			S	51	14.40	
TOK	0.46	228	P	51	10.60	0.4
			S	51	20.70	
CHJJ	0.96	274	iPd	51	14.40	-0.9
			S	51	27.00	
NIIJ	1.56	323	iPd	51	22.80	0.0
			S	51	43.80	
MAT	1.68	290	eP	51	24.00	-0.5
			eS	51	45.00	
IIDJ	1.91	255	iPd	51	28.40	0.8
			S	51	51.50	
MTMJ	2.01	288	iPd	51	29.50	0.6
YAMJ	2.18	357	P	51	32.10	1.0
			eS	51	57.50	
OFUJ	3.30	21	P	51	47.10	0.6
			S	52	24.70	
TSRJ	3.44	264	P	51	49.20	0.7
BJI	19.32	289	eP	55	16.00	-1.0
WB5	55.84	187	eP	00	27.00	0.2
WRA	55.90	187	Pd	00	27.40	0.1
	0.6s	1.50nm				4.2mb
SUF	68.46	333	eP	01	50.00	-0.5
NB2	74.76	337	P	02	28.00	-0.1
	0.8s	1.90nm				4.0mb

S.D. = 0.8 on 15 of 15 obs.

SEP 02, 1989 18h 09m 58.63± 0.29s
0.080 N ± 6.2km 24.866 W ± 6.6km
DEPTH = 10.0km (geophysicist)
5.1mb (24 obs.) 5.4Msz (2 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

ITR	16.11	237	eP	13	46.00	-0.9
			e	13	50.60	
			e	14	02.30	
PDCR	18.90	228	eP	14	18.70	-3.0X
LIC	20.72	72	P	14	40.52	-1.4
KIC	21.03	72	P	14	43.76	-1.4
	1.0s	50.50nm				4.8mb
BAO	27.67	235	e(P)	15	48.00	-1.1
IFR	38.08	27	iP	17	22.00	2.4
BNG	43.58	84	iPc	18	05.60	0.6
	1.2s	65.00nm				5.3mb
TOL	43.93	23	eP	18	09.00	1.5

02d 18h

CCH 44.17 245 P 18 22.50 12.4X
ZOBO 45.65 247 P 18 20.20 -2.0
1.1s 20.30nm 5.0mb
Z 20s 2.98um 5.2Msz
LR 32 44.00
CNCB 45.67 246 P 18 23.00 0.6
LPB 45.70 247 P 18 24.00 1.6
Z 18s 4.81um 5.5Msz
LR 35 32.00
EPF 48.36 25 eP 18 42.90 0.3
1.2s 29.70nm 5.2mb
CAF 50.63 25 eP 18 59.80 -0.2
1.3s 25.20nm 5.0mb
MFF 51.15 22 eP 19 03.20 -0.6
1.1s 16.60nm 4.9mb
MAF 51.89 24 eP 19 09.30 -0.2
1.1s 17.00nm 4.9mb
KMZ 51.98 107 iP 19 10.00 -0.8
SMF 52.75 25 eP 19 15.70 -0.3
1.4s 39.20nm 5.1mb
SSF 52.95 24 eP 19 17.20 -0.2
LBF 53.08 24 eP 19 18.10 -0.3
1.2s 27.90nm 5.1mb
LPG 53.14 27 eP 19 19.20 0.0
1.2s 14.80nm 4.8mb
LOR 53.26 24 eP 19 19.00 -0.7
1.3s 32.40nm 5.1mb
DIX 53.88 27 eP 19 25.60 1.1
BDI 53.97 31 P 19 23.50 -1.5
MMK 54.11 28 eP 19 26.90 0.7
MZZ 54.54 104 iPd 19 31.00 1.2
LSZ 54.57 109 iPd 19 30.00 0.1
LOMF 54.58 26 P 19 29.08 -0.4
TMA 54.58 28 eP 19 28.90 -0.7
HAU 54.88 25 eP 19 30.70 -0.9
1.0s 16.00nm 5.0mb
VITF 54.89 25 P 19 31.30 -0.3
BSF 54.93 26 P 19 31.44 -0.7
MOF 55.09 26 P 19 32.12 -1.2
ECH 55.38 26 P 19 33.83 -1.4
FEL 55.50 26 P 19 35.43 -0.8
CDF 55.58 25 P 19 35.94 -0.9
WLS 55.62 25 P 19 35.04 -1.9
SLE 55.63 27 eP 19 37.90 0.8
SAX 55.64 28 eP 19 37.70 0.3
BUL 56.03 114 iPd 19 39.10 -1.4
1.0s 12.00nm 4.9mb
RUP 56.49 24 eP 19 43.76 0.5
ABH 56.83 24 eP 19 44.91 -0.7
ENN 56.87 23 eP 19 45.50 -0.3
1.1s 45.00nm 5.4mb
TOD 57.15 25 eP 19 48.10 0.2
PTZ 57.38 107 iP 19 50.00 -0.2
OHR 58.06 40 eP 19 56.00 1.5
WTS 58.18 22 eP 19 54.50 -0.5
1.0s 22.00nm 5.2mb
GRF 58.27 27 eP 19 55.30 -0.5
1.5s 51.00nm 5.4mb
SKO 58.93 39 eP 20 01.70 1.2
KHC 58.97 28 P 20 01.00 0.3
1.4s 25.00nm 5.1mb
MOX 59.14 26 eP 20 02.00 0.2
1.4s 34.00nm 5.3mb
VAY 59.31 40 eP 20 03.80 0.7
PRU 60.01 28 eP 20 07.00 -0.8
1.8s 31.30nm 5.1mb
Z 17s 0.50um 4.7MszX
E 16s 0.50um
ZST 60.10 31 iP 20 09.00 0.6
CLL 60.23 26 eP 20 09.00 -0.2
2.1s 46.00nm 5.2mb
BRG 60.35 27 eP 20 10.60 0.6
1.0s 18.00nm 5.2mb
SRO 60.49 32 iP 20 12.50 1.4
KSP 61.42 28 eP 20 18.50 1.1
SPC 62.35 32 eP 20 24.00 0.1
MLR 63.55 38 ePd 20 31.00 -0.8
MBH 63.98 57 eP 20 35.00 0.3
VRI 64.21 37 eP 20 36.00 0.0
DSI 64.89 55 e(P) 20 35.00 -5.6X
HRI 65.67 53 eP 20 47.00 1.2
NB2 66.76 18 P 20 51.80 -0.4
1.4s 17.90nm 5.1mb
AIA 71.09 196 eP 21 32.40 13.6X
COD 75.98 18 eP 21 46.00 -1.3
ALQ 83.05 305 eP 22 27.30 0.9
1.2s 9.77nm 4.9mb

MAIO 85.40 54 eP 22 40.00 2.0
SES 87.49 320 eP 22 57.00 9.1X
LRM 88.25 316 eP 22 52.90 1.0
MAW 89.21 157 eP 22 57.00 1.3
SPA 90.08 180 e(P) 23 00.30 0.3
1.0s 6.50nm 4.8mb
CHG 121.78 68 ePKP 28 56.50 1.0
BWA 145.26 170 ePKP 29 38.90 0.0
ASPA 148.78 140 ePKP 29 48.10 3.2X
1.3s 28.00nm
WRA 151.64 135 PKPc 29 54.70 5.5X
1.0s 9.20nm
WB5 151.70 135 ePKP 29 54.70 5.4X
S.D. = 1.0 on 70 of 78 obs.

? SEP 02, 1989 19h 22m 44.26± 6.37s
34.560 S ±52.0km 72.349 W ±26.5km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNV 0.98 52 iPd 23 03.00 0.1
iS 23 18.50
TACH 1.48 53 iPd 23 10.50 -0.5
iS 23 32.60
CHCH 1.54 66 iPc 23 12.00 0.2
iS 23 33.00
SAN 1.78 52 eP 23 13.50 -1.9
iS 23 43.50
PCH 1.79 59 iPd 23 16.00 0.5
iS 23 40.10
PEL 1.98 45 iPc 23 19.10 0.9
iS 23 47.50
FCH 2.11 55 iPd 23 21.00 0.7
iS 23 51.00
CFA 4.54 51 e(P) 23 54.50 -0.1
CNCB 18.11 14 eP 26 59.00 0.9
LPB 18.35 13 eP 26 48.00 -13.0X
ZOBO 18.61 13 P 27 03.40 -0.9
S.D. = 1.0 on 10 of 11 obs.

SEP 02, 1989 20h 48m 12.45± 0.72s
13.545 N ± 9.7km 90.632 W ± 6.7km
DEPTH = 69.2 ± 7.4 km
4.5mb (2 obs.)
NEAR COAST OF GUATEMALA (71)
Felt (II) at San Salvador, El Salvador.

PSG2 0.44 336 iP 48 24.50 -0.3
IXG 0.65 15 iPc 48 26.40 -0.7
MYT 0.74 48 iPd 48 27.60 -0.6
TER 0.75 356 iPc 48 27.30 -0.9
HUG 0.82 305 iPd 48 31.00 2.1
PCG 0.83 359 iPd 48 29.10 -0.3
REC 0.89 7 iPc 48 29.70 -0.3
FUG 0.92 347 iPc 48 28.70 -1.6
MMG 0.99 357 iPc 48 31.40 0.1
YUP 1.04 51 iPd 48 32.40 0.6
GCG 1.04 5 iPc 48 32.40 0.6
S 48 47.00
ITG 1.07 349 iPd 48 32.10 -0.2
BVA 1.11 360 iPd 48 33.50 0.6
SLP 1.24 16 iPd 48 35.90 1.5
JAT 1.24 308 iPc 48 33.80 -0.5
SSS 1.40 84 iPc 48 35.50 -1.0
eS 48 53.50
RDG 1.46 6 iPd 48 39.50 2.0
SOG2 1.48 322 iPd 48 36.60 -1.1
SOG 1.54 323 iPd 48 37.70 -0.9
OC2 1.81 304 iP 48 41.40 -0.7
KKG 1.97 316 iPc 48 42.80 -1.5
TPX 2.08 311 iP 48 44.63 -1.1
iS 49 08.52
SCX 3.71 329 iP 49 11.36 2.7
iS 49 58.10
OXX 6.85 302 (P) 49 54.22 1.6
(S) 51 11.96
SRA 6.96 119 ePd 49 54.80 0.6
LCR2 7.51 120 eP 50 02.20 0.3
ICR 7.54 117 eP 50 03.40 0.9
LVVM 8.31 319 (P) 50 19.72 7.2X
IIT 9.16 307 (P) 50 29.39 4.8X
(S) 52 32.15
UYO 20.82 351 iPd 52 49.50 -1.0
TUL 22.75 349 eP 53 08.80 -0.8
0.6s 8.20nm 4.3mb
CMB 35.95 318 eP 55 10.60 2.3

FFC 42.04 350 eP 56 13.50 14.9X
0.8s 12.00nm
PNT 42.89 332 eP 56 05.00 -0.6
0.7s 8.00nm 4.6mb
ITR 56.37 110 eP 57 47.30 -2.0
S.D. = 1.3 on 32 of 35 obs.

& SEP 02, 1989 21h 31m 26.20s
36.877 N 121.625 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.2 (BRK).

SAO 0.18 128 iPd 31 30.00 0.0
eS 31 32.85
GCC 0.33 297 iPc 31 32.60 -0.4
MHC 0.46 358 iPd 31 35.75 0.2
eS 31 42.75
ARN 0.48 9 iPd 31 35.80 0.0
PRS 0.58 159 iPd 31 37.30 -0.6
LLA 0.61 115 eP 31 37.80 -0.5
PCC 0.87 316 eP 31 41.80 -1.4
PRI 1.07 133 ePd 31 46.10 -0.6
BKS 1.11 334 eP 31 45.38 -2.0
eS 32 02.75
BRK 1.12 333 ePc 31 47.20 -0.3
PHAM 1.44 136 eP 31 51.00 -1.8
PKEM 1.47 123 eP 31 53.50 0.3
CMB 1.52 40 eP 31 52.50 -1.5
eS 32 11.80
FRI 1.54 85 eP 31 52.30 -1.9
eS 32 08.70
BCH 2.10 143 eP 31 59.80 -2.7
15 obs. ossociated

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* SEP 02, 1989 22h 00m 26.99± 0.47s
0.175 N ±12.4km 24.858 W ±12.4km
DEPTH = 10.0km (geophysicist)
5.0mb (16 obs.) 4.9Msz (3 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

ITR 16.17 236 eP 04 15.60 -0.4
e 04 19.70
PDCR 18.96 228 eP 04 48.30 -2.6
LIC 20.68 73 P 05 09.10 -0.8
1.0s 14.50nm 4.3mb
KIC 20.99 73 Pc 05 12.50 -0.6
1.0s 18.00nm 4.4mb
BAO 27.73 234 eP 06 14.50 -3.5X
VAO 31.52 222 e(P) 06 54.00 2.3
BNG 43.56 84 iPd 08 34.20 0.9
1.0s 30.00nm 5.0mb
id 08 49.90
TOL 43.84 23 iPc 08 37.50 2.4
1.0s 30.00nm 5.1mb
ZOBO 45.69 247 Pc 08 51.00 0.1
1.4s 25.32nm 5.0mb
Z 20s 0.93um 4.7Msz
LR 23 28.00
CNCB 45.72 246 P 08 51.00 -0.1
LPB 45.74 247 P 08 52.00 0.8
Z 20s 1.42um 4.9Msz
LR 25 10.00
EPF 48.27 25 eP 09 09.50 -0.8
1.0s 10.80nm 4.9mb
MFF 51.06 22 eP 09 29.60 -1.9
1.2s 20.20nm 4.9mb
SMF 52.66 25 eP 09 42.30 -1.4
SSF 52.86 24 eP 09 43.80 -1.3
LBF 52.99 24 eP 09 44.50 -1.6
1.3s 28.80nm 5.0mb
LOR 53.17 24 eP 09 45.50 -1.9
1.1s 15.60nm 4.9mb
HAU 54.79 25 eP 09 57.50 -1.8
BSF 54.84 26 eP 09 57.60 -2.2
CDF 55.50 25 eP 10 02.40 -2.1
BUL 56.07 114 iPd 10 08.20 -0.9
1.0s 6.50nm 4.6mb
GRF 58.19 27 eP 10 24.80 1.3
2.1s 65.00nm 5.3mb
KHC 58.88 28 iPc 10 29.20 0.8
1.2s 10.00nm 4.8mb
Z 16s 1.00um 5.0MszX
N 16s 1.00um
E 16s 0.70um
MOX 59.05 26 eP 10 30.50 1.0
1.8s 35.00nm 5.2mb

02d 22h

	Z 18s	2.00um		5.3Msz			
	N 19s	1.60um					
	E 16s	1.20um					
		e	10 37.50				
ZST	60.01	31 iP	10 37.60	1.4			
CLL	60.14	26 eP	10 38.00	1.0			
BRG	60.26	27 eP	10 38.10	0.3			
	1.5s	38.00nm		5.3mb			
SRO	60.41	32 eP	10 41.00	2.1			
SPC	62.27	32 iP	10 53.50	1.8			
MLR	63.47	38 ePd	11 00.00	0.4			
		e	41 23.50				
NB2	66.67	18 P	11 20.90	0.9			
	1.8s	33.10nm		5.2mb			
AIA	71.18	196 e(P)	11 47.00	-0.7			
MAIO	85.34	54 eP	13 08.00	2.0			
SES	87.42	320 eP	13 17.00	1.1			
SPA	90.17	180 e(P)	13 29.40	0.6			
	1.0s	15.00nm		5.2mb			
CD2	122.33	53 PKP	19 29.00	4.4X			
BTO	122.36	40 ePKP	19 30.00	5.5X			
	N 10s	0.50um					
	E 12s	0.50um					
HHC	123.20	39 PKPc	19 23.50	-2.6X			
	Z 16s	0.70um		5.4MszX			
SSE	135.23	43 ePdiff	16 40.20	-10.9X			
		eLg	18 24.00				
		Lg	18 45.80				
ANP	138.87	50 ePdiff	16 50.00	-17.6X			
ASPA	148.85	140 ePKP	20 16.30	3.0X			
	1.2s	21.00nm					
WRA	151.70	135 PKPc	20 23.90	6.2X			
	1.1s	9.30nm					
WB5	151.76	135 ePKP	20 23.90	6.1X			
	S.D. = 1.5	on 34 of	43 obs.				

SEP 02, 1989 22h 29m 25.78± 1.08s
25.607 N ± 4.4km 125.251 E ± 4.9km
DEPTH = 30.9 ± 8.2 km
5.1mb (14 obs.) 5.5Msz (2 obs.)
SOUTHWESTERN RYUKYU ISLANDS (246)
Felt (I JMA) on Miyoko-jimo.
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 9S, 19C
Centroid Locotion:
Origin Time 22:29:25.7 0.6
Lot 25.41N 0.12 Lon 124.65E 0.13
Dep 15.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-6.53 1.28 Mtt= 7.98 0.76
Mff=-1.45 1.68 Mrt=-1.39 4.61
Mrf= 4.15 2.66 Mtf= 3.96 1.12
Principol Axes:
T Vol= 9.43 Plg= 0 Azm=340
N 0.03 34 250
P -9.45 56 71
Best Double Couple:Mo=9.4*10**16
NP1:Strike= 99 Dip=54 Slip= -46
NP2: 221 54 -133

MYK	0.82	178 iP+	29 39.20	-1.9			
		iS	29 50.50				
QZH	6.06	265 eP	30 55.50	-0.2			
	N 12s	7.20um					
		S	32 06.00				
KAGJ	7.45	40 eP	31 13.80	-1.3			
KUMJ	8.45	34 eP	31 29.30	0.2			
NJ2	8.52	320 eP	31 34.00	3.9X			
	Z 18s	10.40um					
	N 11s	5.10um					
	E 10s	13.90um					
		S	33 02.20				
SHNJ	9.89	30 eP	31 46.90	-2.0			
BAG	10.14	206 eP	31 50.80	-1.7			
WHN	10.81	300 eP	32 02.00	0.5			
	Z 16s	5.35um					
GZH	11.14	259 eP	32 06.00	0.0			
	Z 14s	2.90um					
TIA	12.66	329 eP	32 30.90	4.5X			
	Z 15s	6.60um					
	N 13s	5.20um					
	E 13s	7.80um					
DL2	13.61	348 Pc	32 41.00	2.1			
	Z 12s	3.80um		4.9Msz			
	N 10s	4.60um					
	E 10s	2.50um					

MAT	15.54	42 (P)	33 07.00	2.7X			
	1.1s	17.72nm		4.2mb			
		eS	36 02.00				
CHJJ	15.72	45 P	33 13.10	6.5X			
SNY	16.24	356 Pc	33 15.00	1.9			
	4.0s	1.50nm		2.5mb X			
	Z 13s	11.40um		3.8Msz			
	N 12s	6.10um					
		sP	33 25.00				
		S	36 22.00				
TIY	16.25	321 iPc	33 16.50	3.1X			
		sP	33 28.50				
		sS	36 26.50				
BJI	16.27	334 eP	33 17.00	3.4X			
	8.0s	1.40nm		2.1mb X			
	Z 16s	7.20um					
	N 12s	3.90um					
	E 11s	2.40um					
		sS	36 28.00				
XAN	16.46	305 P	33 19.80	3.7X			
	N 12s	8.40um					
	E 12s	7.00um					
		sS	36 35.00				
NIIJ	16.48	42 P	33 17.80	1.6			
GYA	16.73	277 P	33 25.60	6.0X			
	Z 14s	2.10um					
	N 10s	4.50um					
	E 10s	2.40um					
CN2	18.15	0 iPc	33 40.00	2.9X			
	6.0s	2.60nm		2.6mb X			
	Z 14s	16.00um					
	N 12s	3.50um					
	E 12s	3.10um					
		sP	33 51.00				
		sS	37 10.00				
DAV	18.42	179 eP	33 42.00	1.4			
HHC	18.99	327 P	33 48.80	1.3			
	6.0s	1.40nm		2.4mb X			
	Z 14s	5.40um					
	E 10s	1.50um					
		sS	37 30.00				
MDJ	19.29	9 eP	33 50.50	-0.4			
	Z 20s	4.90um					
		sS	37 35.00				
BTO	19.61	323 P	33 54.00	-0.7			
	N 10s	3.90um					
	E 12s	4.10um					
CD2	19.65	291 P	33 54.80	-0.3			
	Z 12s	4.60um					
		PP	34 19.00				
KMI	20.35	274 Pc	34 03.00	0.4			
	Z 12s	4.30um		5.0MszX			
		S	37 57.00				
LZH	21.10	305 eP	34 09.50	-0.7			
	4.0s	806.00nm		5.5mb X			
	Z 16s	5.30um		5.0MszX			
	N 13s	7.00um					
	E 12s	3.30um					
		pP	34 15.00	20kmX			
		sP	34 23.50				
		S	38 00.00				
		sS	38 19.00				
PJG	21.97	119 eP	34 20.80	1.9			
GUMO	21.97	119 eP	34 20.80	1.9			
	1.2s	102.78nm		5.1mb			
		eTT	55 48.40				
GUA	22.04	119 eP	34 20.70	1.1			
	0.9s	100.84nm		5.3mb			
LOE	23.33	254 eP	34 34.20	1.9			
CHG	25.25	260 eP	34 50.50	-0.3			
CHTO	25.25	260 eP	34 50.70	-0.1			
GTA	25.38	309 P	34 51.00	-1.0			
	Z 12s	3.90um		5.1MszX			
	N 12s	6.60um					
		pP	35 01.50	39kmX			
		sS	39 20.00				
LSA	30.41	286 P	35 40.00	1.8			
IPM	31.25	232 ePc	35 45.90	0.8			
PSI	34.06	232 eP	36 10.00	0.4			
WMO	35.44	310 P	36 20.00	-1.3			
	Z 16s	3.10um		5.2MszX			
	N 14s	6.50um					
		PP	37 48.50				
MTN	38.65	171 eP	36 37.30	-11.0X			
NDI	42.63	285 iPc	37 20.50	-0.6			
KSH	43.27	301 eP	37 27.60	1.3			
	N 13s	3.80um					

		PcS	43 08.00				
HYB	44.02	269 eP	37 32.50	-0.1			
WB5	46.07	168 eP	37 47.10	-1.7			
WRA	46.13	168 Pc	37 47.20	-2.0			
	0.8s	10.40nm		4.8mb			
QIS	47.96	162 eP	38 02.80	-0.9			
BOM	48.74	273 eP	37 58.20	-11.6X			
		eS	45 06.70				
ASPA	49.69	170 eP	38 16.10	-0.9			
	0.9s	12.00nm		4.9mb			
	Z 22s	0.86um		4.7MszX			
		e	39 37.90				
		LR	57 17.80				
CTA	49.80	154 iPc	38 18.40	0.6			
	1.1s	18.99nm		5.0mb			
		i	39 44.10				
		iS	45 42.00				
ADK	50.70	43 eP	38 22.10	-2.3			
	1.2s	54.70nm		5.4mb			
QUE	51.26	289 eP	38 28.00	-1.2			
WARB	51.51	178 iPd	38 30.30	-0.4			
	0.4s	18.00nm		5.4mb			
COOL	56.31	184 eP	39 04.00	-2.0			
MAIO	56.44	298 eP	39 07.00	-0.1			
RMO	56.54	155 eP	39 08.00	0.3			
KLB	57.33	188 eP	39 13.00	-0.2			
NWAO	58.71	188 eP	39 23.00	0.2			
DZM	61.99	136 iPc	39 45.90	0.3			
SVW	62.71	32 eP	39 48.90	-1.0			
IMA	63.28	27 eP	39 52.50	-1.2			
	1.5s	30.90nm		5.2mb			
BWA	63.62	159 eP	39 58.70	2.6			
KDC	64.66	36 eP	40 00.10	-2.5			
PMR	65.76	32 eP	40 06.50	-3.1X			
TAB	66.37	302 e(P)	40 15.00	0.9			
TOA	67.05	31 eP	40 18.50	0.5			
KEV	69.03	338 eP	40 28.00	-2.1			
SOD	69.88	336 iP	40 33.70	-1.6			
INK	70.51	23 eP	40 37.50	-1.6			
SUF	71.60	331 eP	40 44.90	-0.9			
	0.9s	9.90nm		4.8mb			
NUR	73.06	329 eP	40 53.00	-1.4			
	Z 18s	2.10um		5.5Msz			
		LR	16 30.00				
VRI	77.64	315 ePc	41 21.00	0.2			
NB2	78.67	333 P	41 22.80	-3.4X			
	0.9s	6.90nm		4.7mb			
KSP	81.58	323 eP	41 40.50	-1.4			
VAY	82.33	312 eP	41 44.00	-2.0			
SKO	82.78	313 eP	41 49.10	0.8			
	E 17s	1.03um					
BRG	82.84	323 e(P)	41 49.00	0.6			
CLL	83.11	324 eP	41 51.00	1.2			
	1.3s	18.00nm		5.0mb			
	Z 18s	2.00um		5.5Msz			
GRF	84.95	323 eP	41 59.50	0.4			
	1.7s	42.00nm		5.4mb			
PNT	85.75	36 eP	42 05.00	1.8			
EDM	86.53	31 iPc	42 08.50	1.5			
SES	89.45	32 eP	42 21.00	-0.1			
FFC	90.32	25 eP	42 24.00	-1.0			
	1.2s	73.00nm		5.8mb			
LRM	91.73	36 eP	42 32.30	0.4			
ZOBO	164.44	56 PKP	49 30.00	1.4			
LPB	164.62	57 PKP	49 21.00	-7.6X			
CNCB	164.88	57 ePKP	49 30.00	1.0			
CCH	166.61	55 (PKP)	49 31.00	0.9			
	S.D. = 1.3	on 72 of	86 obs.				

SEP 03, 1989 00h 01m 32.22± 0.73s
37.876 N ± 7.5km 14.694 E ± 6.7km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.05	1 Pd	01 34.80	0.2			
		eSg	01 36.90				
GIB	0.54	282 P	01 43.00	-0.2			
		eSg	01 49.70				
MSI	0.75	64 P	01 48.30	1.3			
		eSn	01 59.70				
MEU	0.80	166 P	01 46.30	-1.5			
		eSg	01 57.80				
FAI	1.01	234 Pd	01 52.60	1.3			
SOI	1.09	79 P	01 53.40	0.7			
		eSn	02 09.30				
TDS	2.20	35 P	02 08.50	-0.8			
MGR	2.36	16 P	02 10.40	-1.1			

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

SEP 03, 1989 00h 03m 19.56± 0.68s
37.867 N ± 7.1km 14.704 E ± 5.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.06	354	Pd	03	22.20	0.1
			eSg	03	24.20	
GIB	0.55	283	P	03	29.80	-0.9
			eSg	03	37.00	
MSI	0.75	63	P	03	34.30	0.0
			eSn	03	47.50	
MEU	0.78	167	Pd	03	34.00	-0.9
			eSg	03	45.80	
FAI	1.01	234	Pd	03	40.00	1.4
SOI	1.09	79	P	03	40.30	0.3
			eSn	03	56.90	
TDS	2.20	35	P	03	56.60	0.0

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

SEP 03, 1989 00h 12m 06.65± 1.20s
5.467 S ± 5.7km 152.174 E ±10.4km
DEPTH = 43.5 ± 13.6 km
4.8mb (7 obs.)
NEW BRITAIN REGION (192)

RAB	1.27	360	iPd-	12	28.50	0.3
			iS	12	40.00	
KDB	6.37	231	eP	13	40.30	-0.1
CTA	15.63	201	iPd	15	50.70	5.0X
	0.8s		10.45nm			4.1mb
QIS	19.34	218	iPc	16	30.70	-0.8
	0.6s		11.00nm			4.3mb
GUA	20.21	339	eP	16	40.50	-0.3
	1.1s		50.63nm			4.8mb
GUMO	20.27	339	eP	16	41.20	-0.2
	1.2s		86.11nm			5.0mb
PJG	20.27	339	eP	16	41.30	-0.1
RMO	21.16	189	eP	16	50.90	0.4
DZM	21.52	141	iPc	16	54.10	-0.1
BRS	21.81	179	iP	16	57.00	0.0
MTN	22.02	249	iPc	16	59.60	0.5
	0.6s		49.00nm			5.1mb
WB5	22.48	229	eP	17	03.20	-0.5
ASPA	25.24	222	iPc	17	29.90	-0.5
	1.1s		38.00nm			4.9mb
MEKA	38.36	233	eP	19	27.00	1.5
	0.4s		5.00nm			4.7mb
TAB	105.82	308	ePKP	30	32.00	4.2X
KEV	106.76	343	ePKP	30	40.00	11.7X
Z	16s		2.30um			5.8MszX
			LR	05	06.00	

S.D. = 0.7 on 13 of 16 obs.

SEP 03, 1989 00h 19m 37.76± 0.66s
25.540 N ± 3.3km 125.263 E ± 4.0km
DEPTH = 37.6 ± 6.6 km
5.1mb (19 obs.) 5.1Msz (2 obs.)
SOUTHWESTERN RYUKYU ISLANDS (246)
Felt (II JMA) on Miyako-jimo.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 21C
Centroid Location:
Origin Time 00:19:37.5 0.4
Lat 25.61N 0.10 Lon 124.78E 0.11
Dep 15.0 FIX Half-duration 1.9
Moment Tensor; Scale 10**17 Nm
Mrr=-0.34 0.14 Mtt= 0.88 0.09
Mff=-0.54 0.19 Mrt=-1.03 0.42
Mrf=-0.31 0.34 Mtf= 1.31 0.12
Principal Axes:

T	Val= 2.11	Plg=23	Azm=151
N	-0.70	59	287
P	-1.42	19	52

Best Double Couple:Mo=1.8*10**17
NP1:Strike=191 Dip=59 Slip= 177
NP2: 282 87 31

MYK	0.75	179	iP+	19	50.70	-1.3
			iS	20	03.00	
ANP	3.41	265	eP+	20	31.00	1.1
			eS	21	27.00	
OZH	6.07	266	eP	21	06.00	-1.5
N	10s		15.20um			
			S	22	18.00	
SSE	6.60	328	P	21	11.00	-3.8X
			sS	22	40.00	
KAGJ	7.50	40	P	21	25.80	-1.6
KUMJ	8.50	34	P	21	41.20	-0.2
NJ2	8.58	321	Pd	21	48.00	5.5X
N	10s		5.80um			
E	10s		24.80um			
SHNJ	9.94	29	P	22	03.00	1.8
BAG	10.08	207	eP	22	01.00	-2.4
HKC	10.64	255	P	22	11.30	0.4
WHN	10.85	300	eP	22	13.00	-0.7
Z	16s		13.10um			
N	13s		31.30um			
E	12s		20.70um			
GZH	11.14	260	Pd	22	17.00	-0.6
Z	18s		6.00um			
N	10s		9.50um			
E	10s		4.10um			
			sS	24	40.00	
OCP	11.54	201	eP	22	27.00	4.0X
TIA	12.72	329	eP	22	38.40	-0.4
Z	15s		11.20um			
N	10s		11.90um			
E	10s		16.80um			
DL2	13.68	348	eP	22	53.00	1.6
N	10s		3.40um			
E	11s		12.00um			
			eS	25	29.00	
IIDJ	14.72	45	P	23	10.30	5.2X
MTMJ	15.37	41	P	23	20.80	7.1X
MAT	15.58	42	(P)	23	14.00	-2.3
	1.0s		17.00nm			4.2mb
Z	20s		8.51um			
			eS	26	26.00	
CHJJ	15.76	45	P	23	23.70	5.1X
SNY	16.31	356	iPc	23	26.00	0.5
	1.0s		2.30nm			3.3mb X
Z	12s		16.90um			
N	14s		7.50um			
E	15s		18.90um			
			S	26	28.00	
TIY	16.31	321	Pc	23	27.00	1.4
E	10s		10.60um			
			PP	23	41.00	
			sS	26	37.50	
BJI	16.34	334	eP+	23	26.00	0.1
	2.0s		150.00nm			4.8mb
Z	18s		12.92um			
N	10s		10.61um			
			eS	26	36.00	
XAN	16.51	305	P	23	29.00	0.8
N	12s		22.80um			
E	12s		13.50um			
			pP	23	40.00	
NIIJ	16.52	42	P	23	29.00	0.8
KAKJ	16.62	47	P	23	31.30	1.8
GYA	16.75	277	P	23	36.00	4.7X
	2.0s		0.80nm			2.5mb X
Z	16s		4.80um			
N	12s		11.60um			
E	12s		8.40um			
			sS	26	53.00	
DAV	18.35	179	eP	23	52.00	0.8
HHC	19.05	327	P	24	00.80	1.1
Z	12s		9.90um			
N	11s		6.20um			
E	11s		5.80um			
			sS	27	44.00	
BTO	19.67	324	P	24	06.00	-0.6
N	10s		7.40um			
E	10s		4.10um			
			sP	24	24.00	
			sS	27	53.00	
			SS	28	10.00	
CD2	19.68	291	P	24	06.00	-0.8
Z	13s		10.70um			
N	12s		38.10um			
			pP	24	15.00	36kmX
			PP	24	29.20	
			S	27	50.00	
			sS	28	02.00	
KMI	20.36	274	Pc	24	14.50	0.4
N	10s		7.40um			
			sP	24	26.50	
			e	24	36.00	
			S	28	07.50	
LZH	21.14	305	P	24	22.50	0.5
Z	12s		15.40um			5.6MszX
N	12s		13.90um			
E	12s		7.10um			
			e	24	27.00	
			pP	24	30.50	29kmX
			PP	24	44.00	
			S	28	20.00	
			sS	28	25.00	
GUMO	21.93	119	eP	24	30.50	0.7
	1.0s		176.00nm			5.4mb
			eTT	46	01.20	
PJG	21.93	119	eP	24	30.80	1.0
GUA	22.00	119	eP	24	31.20	0.7
	0.8s		179.10nm			5.5mb
TSM	22.29	199	ePc	24	34.50	1.1
MNI	23.96	181	ePd	25	02.50	12.8X
CHG	25.25	260	eP	25	03.30	1.2
	1.3s		25.00nm			4.6mb
			eS	29	46.00	
CHTO	25.25	260	eP	25	01.10	-1.0
GTA	25.43	309	eP	25	03.80	0.0
Z	12s		10.70um			5.6MszX
N	12s		15.30um			
			pP	25	13.50	35kmX
			S	29	30.00	
			sS	29	48.50	
PCI	26.81	192	Pd	25	19.30	2.8
	1.5s		11.50nm			4.3mb
WMQ	35.50	311	P	26	32.00	-0.9
Z	16s		6.30um			5.5MszX
N	14s		13.10um			
			S	32	10.00	
MTN	38.58	171	eP	26	57.80	-1.1
	0.9s		182.00nm			5.9mb
KSH	43.31	301	P	27	40.00	2.1
Z	12s		6.80um			5.8MszX
N	12s		8.90um			
			eS	34	08.00	
HYB	44.03	269	eP	27	45.50	1.6
WB5	46.01	168	eP	27	58.90	-0.5
GBA	46.37	265	Pc	28	02.50	0.0
	0.6s		3.40nm			4.5mb
MBL	46.72	187	eP	28	04.50	-0.5
QIS	47.89	162	iPc	28	13.90	-0.4
	1.1s		74.00nm			5.6mb
POO	47.93	272	eP	28	15.50	0.7
NANU	48.74	192	eP	28	21.10	0.3
BOM	48.75	273	eP	28	39.40	18.3X
			eS	35	21.60	
ASPA	49.63	170	iPc	28	28.30	0.6
	1.0s		43.00nm			5.4mb
Z	22s		1.18um			4.8MszX
			LR	47	16.40	
CTA	49.73	154	iPd	28	29.80	1.3
	1.4s		93.02nm			5.6mb
			iS	35	41.00	
WARB	51.44	178	eP	28	41.00	-0.4
MRWA	55.17	190	eP	29	09.00	0.0
COOL	56.24	184	eP	29	15.50	-1.2
	0.4s		17.00nm			5.4mb
BAL	56.43	189	eP	29	17.50	-0.5
RMQ	56.47	155	eP	29	18.20	-0.2
MAIO	56.48	298	eP	29	18.00	-0.6
KLB	57.26	108	eP	29	23.00	-0.9
MUN	57.85	189	iPd	29	28.50	0.5
NWAO	58.64	188	eP	29	33.70	0.2
STK	59.19	164	eP	29	37.30	-0.1
CMS	60.02	160	eP	29	43.40	0.3
	1.1s		17.00nm			5.1mb
ADE	61.51	167	eP	29	51.70	-1.5
	0.7s		31.51nm			5.6mb
DZM	61.93	136	iPd	29	57.00	0.6
TTA	62.48	30	eP	29	58.50	-1.0
SVW	62.76	32	eP	30	00.70	-0.7
IMA	63.34	27	eP	30	04.10	-1.1
	1.1s		18.80nm			5.1mb
BWA	63.55	159	eP	30	08.70	1.9
KDC	64.70	36	eP	30	12.80	-1.2
PMR	65.82	32	eP	30	19.20	-1.9
Z	22s		0.40um			4.6Msz
SOD	69.95	336	iP	30	44.30	-2.6
INK	70.57	23	eP	30	50.00	-0.6
SUF	71.66	331	eP	30	56.80	-0.5
	0.7s		4.60nm			4.6mb
NUR	73.12	329	iP	31	05.40	-0.5
Z	10s		3.70um			5.7Msz
			LR	06	40.00	

03d 00h

BBTK	75.92	308	eP	31	12.00	-10.7X
			i	41	00.00	
MLR	78.35	315	eP	31	36.50	0.5
NB2	78.73	333	P	31	35.20	-2.5
	0.7s		3.60nm			4.5mb
KSP	81.64	323	eP	31	52.50	-0.8
BRG	82.90	324	eP	32	08.00	8.2X
CLL	83.17	324	eP	32	01.00	-0.2
Z	13s		3.00um			5.9Ms2X
			e	32	12.00	
KHC	84.03	322	P	32	13.90	8.2X
Z	16s		1.80um			5.5Ms2X
N	16s		1.30um			
E	16s		1.50um			
GRC4	85.18	323	eP	32	11.90	0.5
	0.9s		4.00nm			4.6mb
PNT	85.80	36	eP	32	15.00	0.5
EDM	86.58	31	eP	32	19.50	1.2
SES	89.50	32	eP	32	32.00	-0.4
FFC	90.37	25	iPd	32	35.80	-0.5
	0.9s		43.00nm			5.8mb
LRM	91.77	36	eP	32	45.00	1.7
CMB	91.78	46	e(P)	32	43.70	0.5
			e	36	20.40	
FRI	92.82	47	eP	32	48.20	0.3
ZOBO	164.47	56	PKP	39	40.00	0.3
			LR	39	08.00	
LPB	164.65	57	ePKP	39	40.00	0.3
CNCB	164.91	57	ePKP	39	44.00	3.9X
S.D. = 1.1			on	82	of 95	obs.

• SEP 03, 1989 01h 11m 20.11± 1.24s
11.857 S ± 8.6km 34.875 E ±16.0km
DEPTH = 10.0km (geophysicist)
4.3mb (2 obs.)
MALAWI (577)

PTZ	4.19	235	ePn	12	27.00	1.5
			iSn	13	24.50	
			iSg	13	56.00	
SONG	4.24	208	iPg	12	39.60	13.2X
			iSg	13	34.60	
MZZ	5.92	276	ePn	12	49.00	-1.2
			i	13	06.50	
			iSn	13	38.50	
			iSg	14	10.00	
LSZ	7.34	242	iPn	13	10.20	0.1
			e(Sn)	14	35.00	
			eSg	14	56.00	
KMZ	8.97	259	iPn	13	29.50	-3.3X
			iSn	15	04.50	
			iSg	15	52.50	
BUL	10.20	215	iPn	13	49.20	-0.6
			iSn	15	35.00	
			iSg	16	34.00	
NAI	10.69	10	iPd	13	56.50	-0.1
LWI	11.30	327	iPc	13	58.90	-6.0X
			iS	15	57.70	
SLR	15.14	203	eP	14	55.60	-0.3
			S	17	35.50	
KSR	15.84	207	eP	14	57.50	-7.5X
			S	17	45.00	
PRY	16.53	204	eP	15	20.00	6.2X
			e	17	50.50	
BNG	22.93	314	iPd	16	25.90	0.3
	0.4s		8.00nm			4.6mb
			id	20	44.80	
			ic	21	13.80	
			ic	23	53.30	
BCAO	22.93	314	iP	16	26.00	0.3
	0.9s		5.50nm			4.1mb
			i	16	30.60	
GBA	49.20	60	P	20	19.00	8.2X
S.D. = 0.9			on	8	of 14	obs.

• SEP 03, 1989 03h 43m 38.82± 0.88s
22.609 S ± 8.1km 68.934 W ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN CHILE (123)

ANT	1.75	231	iP	44	09.30	8.8
			iS	44	34.80	
SLA	3.79	124	ePd	44	38.80	0.0
CNCB	5.84	9	P	45	07.00	-1.1
LPB	6.10	8	(P)	45	12.00	8.4
			e	45	59.00	
ZOBO	6.35	7	P	45	16.00	0.6
S.D. = 0.9			on	5	of 5	obs.

• SEP 03, 1989 04h 13m 36.40± 0.78s
37.755 N ± 7.6km 15.038 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.32	303	P	13	43.10	-0.1
			eSg	13	47.80	
MEU	0.66	188	P	13	49.60	0.0
			eSg	13	59.90	
GIB	0.83	287	P	13	52.60	0.0
			eSg	14	05.90	
SOI	0.86	68	P	13	52.90	-0.1
			eSg	14	05.50	
TDS	2.16	28	P	14	13.00	0.1
S.D. = 0.1			on	5	of 5	obs.

SEP 03, 1989 04h 23m 10.10± 0.90s
37.899 N ±13.0km 15.021 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.26	277	Pd	23	16.20	0.5
MSI	0.52	54	P	23	21.30	0.7
			eSg	23	29.40	
GIB	0.79	277	P	23	25.70	0.1
			eSg	23	37.80	
SOI	0.83	78	P	23	26.10	-0.1
			eSg	23	38.50	
FAI	1.24	240	P	23	32.70	-0.4
			eSg	23	49.60	
MGR	2.27	10	P	23	47.40	-0.9
			eSn	24	14.90	
S.D. = 0.7			on	6	of 6	obs.

SEP 03, 1989 05h 09m 31.95± 0.77s
37.793 N ± 7.7km 15.223 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.44	288	P	09	41.20	0.2
			iSg	09	48.60	
MSI	0.49	33	P	09	46.80	5.0X
SOI	0.71	67	P	09	45.30	-0.7
			eSn	09	56.00	
MEU	0.73	199	P	09	46.10	-0.2
			eSg	09	55.60	
GIB	0.97	282	P	09	50.20	-0.2
			eSg	10	03.50	
MCT	1.27	263	P	09	55.20	-0.5
			eSn	10	13.30	
FAI	1.33	248	P	09	57.90	1.4
			eSn	10	13.70	
USI	1.85	300	P	10	02.60	-1.4
TDS	2.06	25	P	10	08.20	1.2
			eSn	10	31.80	
MGR	2.36	6	P	10	11.40	0.1
			eSn	10	39.70	
S.D. = 1.0			on	9	of 10	obs.

SEP 03, 1989 06h 26m 53.16± 0.70s
37.766 N ± 7.4km 15.071 E ± 5.6km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.34	299	Pd	26	59.80	-0.5
			eSg	27	05.10	
MSI	0.58	41	P	27	04.70	-0.2
			eSg	27	13.40	
MEU	0.67	198	Pd	27	06.20	-0.4
			eSg	27	16.90	
SOI	0.84	68	P	27	09.60	0.3
			eSg	27	22.00	
GIB	0.86	285	P	27	10.00	0.3
			eSg	27	21.90	
FAI	1.21	247	P	27	16.20	0.5
			eSg	27	32.50	
S.D. = 0.5			on	6	of 6	obs.

• SEP 03, 1989 07h 39m 57.73± 0.83s
0.485 N ±11.7km 126.433 E ±13.8km
DEPTH = 33.0km (normal)
4.5mb (3 obs.)
MOLUCCA PASSAGE (266)

MNI	1.86	301	ePd	40	27.80	-0.0
			eS	40	51.00	
PCI	6.74	258	Pc	41	38.80	1.8
			eS	42	35.40	
WB5	21.68	159	eP	44	47.10	-0.7
			i	44	51.70	
WRA	21.73	160	Pc	44	48.10	-0.2
	0.9s		36.60nm			4.8mb
QIS	24.57	149	eP	45	17.80	1.7
ASPA	25.08	164	iPd	45	20.50	-0.5
	0.7s		9.00nm			4.5mb
NANU	25.25	204	eP	45	22.00	-0.5
WARB	26.51	180	eP	45	34.00	-0.3
TIY	39.23	342	eP	47	26.00	1.1
GTA	45.74	331	eP	48	18.00	0.1
GBA	50.22	287	Pd	48	51.20	-1.8
	0.6s		1.90nm			4.3mb
ALQ	119.40	49	e(Pdif	55	25.00	17.0X
S.D. = 1.3			on	11	of 12	obs.

• SEP 03, 1989 07h 48m 06.68± 1.37s
19.337 N ±12.3km 66.922 W ±10.3km
DEPTH = 29.6 ± 7.4 km
PUERTO RICO REGION (90)

APR	0.90	168	P	48	23.50	0.3
PORP	1.30	168	P	48	28.20	-0.8
MGP	1.33	187	P	48	28.40	-1.0
SJG	1.42	149	P	48	31.00	0.3
			S	48	53.50	
LPR	1.43	136	P	48	31.50	0.7
NEV	4.68	117	eP	49	15.50	-1.7
PAG	5.98	123	eP	49	40.60	5.0X
MGG	6.33	122	eP	49	41.00	0.5
BBL	6.43	125	eP	49	41.50	-0.5
ZOBO	35.40	182	eP	55	03.00	0.2
CCH	36.50	179	(P)	55	19.00	7.3X
LRM	45.74	316	eP	56	27.40	0.0
S.D. = 0.9			on	10	of 12	obs.

& SEP 03, 1989 08h 10m 27.44s
60.208 N 152.590 W
DEPTH = 88.0km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.23	235	eP	10	39.95	1.0
			eS	10	50.98	
RED	0.23	337	iP	10	40.14	1.1
			eS	10	51.26	
RDT	0.38	14	iP	10	40.90	-0.5
OPT	0.64	210	iP	10	42.90	-0.6
			eS	10	55.06	
NNL	0.67	104	iP	10	40.61	-3.1
NKA	0.86	51	iP	10	46.79	1.1
XLV	0.87	149	eP	10	44.81	-1.0
			eS	10	58.31	
AUL	0.93	208	eP	10	45.65	-0.9
AUE	0.94	205	iP	10	45.49	-1.1
AUW	0.95	208	iP	10	45.88	-0.8
CNPM	0.97	134	eP	10	46.23	-0.7
			eS	10	59.95	
CKL	1.00	7	iP	10	46.51	-0.9
			eS	11	03.16	
SPU	1.01	15	iP	10	46.56	-0.9
			eS	11	02.41	
BGL	1.06	5	iP	10	47.42	-0.7
CRP	1.08	11	eP	10	47.66	-0.8
			eS	11	04.32	
CGLM	1.14	14	iP	10	48.22	-0.8
			eS	11	05.01	
SLKM	1.22	75	eP	10	48.86	-1.1
NCG	1.22	10	eP	10	49.29	-0.8
SUA	1.55	35	iP	10	53.47	-0.8
			eS	11	14.25	
SHU	1.59	175	iP	10	53.28	-1.3
			S	11	14.68	
PMS	1.82	54	eP	10	56.62	-1.1
			eS	11	19.07	
PLRM	2.19	49	eP	11	00.41	-2.2
KNK	2.36	57	eP	11	02.68	-2.3
GHO	2.38	47	eP	11	03.28	-2.0
KNIM	2.42	85	eP	11	02.43	-3.4
VZW	3.09	71	eP	11	11.81	-3.3
26 obs. associated						

SEP 03, 1989 08h 36m 32.34± 0.18s
4.527 S ± 2.9km 139.084 E ± 3.8km

DEPTH = 10.0km (geophysicist)
5.1mb (18 obs.) 4.6Msz (8 obs.)
WEST IRIAN (201)

JAY	2.57	39	iPd	37	12.50	-2.3
			iS	37	30.00	
MNDI	4.83	110	eP	37	48.50	1.4
TLE	6.41	260	ePc	38	01.00	-8.1X
	0.9s	12.00nm			4.8mb	
LAT	8.16	105	eP	38	41.00	7.4X
KDB	9.40	122	eP	38	51.00	0.1
MTN	11.40	223	eP	39	17.10	-1.3
			eS	41	21.50	
RAB	13.05	89	eP	39	40.00	-0.6
			e(S)	43	00.00	
MNI	15.42	292	ePc	40	10.30	-1.4
WB5	15.94	196	eP	40	14.10	-4.3X
			i	40	22.90	
			iS	43	05.00	
OIS	15.94	178	ePd	40	14.30	-4.2X
			e	42	54.70	
WRA	16.01	196	P	40	16.00	-3.3X
	1.1s	60.40nm			4.6mb	
CTA	16.97	156	iPd	40	32.80	1.3
	1.4s	479.07nm			5.4mb	
			iS	43	54.70	
DAV	17.75	310	eP	40	30.00	-11.2X
GUA	18.86	18	e(P)	40	55.70	0.7
	1.2s	87.50nm			4.8mb	
GUMO	18.89	18	e(P)	40	55.50	0.1
	1.2s	122.22nm			5.0mb	
PJG	18.89	18	e(P)	40	48.80	-6.6X
PCI	19.56	280	Pc	41	07.90	4.5X
	1.3s	14.00nm			4.1mb	
ASPA	19.67	194	iPc	41	03.50	-1.3
	1.0s	314.00nm			5.6mb	
Z	19s	6.25um				
			eS	44	34.50	
			LR	48	47.10	
SVO	21.08	104	eP	41	20.00	0.6
HNR	21.27	104	eP	41	21.00	-0.3
OLP	22.48	168	iPc	41	34.60	1.3
TSM	22.72	292	ePd	41	40.90	5.1X
RMO	23.72	158	iPc	41	46.20	0.8
	0.5s	25.00nm			5.0mb	
WARB	24.61	208	iPc	41	55.10	1.0
MBL	24.96	227	eP	41	58.00	0.5
	0.4s	18.00nm			5.1mb	
OCP	26.10	317	eP	42	14.00	5.8X
BRS	26.22	152	iPd	42	08.00	-1.3
			e	42	33.00	
			i	46	45.00	
			e	50	24.00	
STK	27.31	175	eP	42	18.00	-1.2
CMS	27.56	167	eP	42	20.90	-0.6
BAG	27.71	319	eP	42	23.00	-0.2
FORR	28.15	200	eP	42	26.50	-0.3
			e	42	47.00	
COO	28.59	156	eP	42	32.60	1.7
NANU	29.00	230	eP	42	34.10	-0.4
ADE	30.29	181	eP	42	47.20	1.1
BWA	30.99	165	eP	42	53.30	1.1
COOL	31.19	211	eP	42	53.00	-1.0
	0.4s	20.00nm			5.4mb	
DZM	31.73	126	iPc	42	57.60	-1.3
CAN	31.98	165	eP	43	06.00	5.0X
MRWA	32.89	219	eP	43	09.00	0.2
TOO	33.41	171	eP	43	13.50	0.2
			e	50	45.00	
BAL	33.43	217	eP	43	13.00	-0.6
KLB	33.55	214	eP	43	14.00	-0.6
MUN	34.72	215	eP	43	20.00	-4.7X
NWAO	34.85	213	eP	43	25.00	-0.8
QZH	35.43	327	eP	43	30.50	-0.2
			S	49	06.50	
RKG	35.84	212	eP	43	37.00	2.8X
SSE	39.33	335	Pd	44	03.40	-0.1
	1.0s	0.24nm			2.8mb X	
Z	20s	0.50um			4.3Msz	
			eS	50	02.00	
TSRJ	39.96	356	P	44	09.30	0.7
CHJJ	40.36	360	P	44	10.60	-1.4
KAKJ	40.53	1	P	44	14.40	1.1
PSI	40.76	279	iPc	44	16.40	0.8
	0.7s	41.90nm			5.3mb	
MAT	40.86	359	(P)	44	15.00	-1.1
	0.8s	13.43nm			4.7mb	
Z	20s	0.71um			4.5Msz	
			(S)	50	26.00	
MTMJ	40.91	358	P	44	15.60	-1.0
NJ2	41.15	334	Pd	44	19.80	1.3
Z	20s	0.60um			4.5Msz	
NIIJ	41.55	360	P	44	20.00	-1.7
WHN	42.14	327	P	44	28.50	1.9
			S	50	52.00	
LOE	42.84	302	eP	44	32.20	-0.3
NST	43.47	298	iPc	44	34.00	-3.7X
GYA	43.97	316	P	44	43.00	1.2
BDT	45.10	300	eP	44	51.70	0.8
TIA	45.44	335	eP	44	52.90	-0.4
CHG	45.83	302	ePd	44	56.80	0.1
	1.1s	52.22nm			5.4mb	
CHTO	45.83	302	iP	44	57.10	0.4
	1.1s	45.05nm			5.4mb	
KMI	45.99	312	Pd	44	59.50	1.4
XAN	47.77	326	P	45	11.50	-0.3
			S	52	07.00	
SNY	48.25	344	eP	45	15.30	0.0
Z	19s	0.60um			4.6Msz	
N	20s	0.50um				
E	20s	0.50um				
			S	52	18.00	
MNG	48.57	143	eP	45	17.30	-0.6
CD2	48.78	319	P	45	20.40	-0.7
TIY	48.79	332	eP	45	19.30	-0.3
N	20s	1.00um				
			S	52	18.00	
PGZ	49.05	142	eP	45	21.10	-0.5
BJI	49.10	337	eP	45	22.00	0.1
	2.0s	0.18nm			2.7mb X	
Z	24s	0.38um			4.3MszX	
			eS	52	28.00	
CN2	49.65	347	Pc	45	25.40	-0.7
Z	19s	1.50um			5.0Msz	
			sP	45	38.00	
			eS	52	26.00	
HHC	51.71	333	P	45	42.50	0.5
LZH	52.15	324	P	45	46.50	1.0
	1.5s	0.06nm			2.3mb X	
Z	20s	0.30um			4.3Msz	
			pP	45	56.50	33kmX
BTO	52.22	332	P	45	45.00	-0.8
			sP	45	58.00	
			S	53	07.00	
GTA	56.75	324	P	46	19.20	0.2
HYB	63.58	292	ePc	47	05.50	-0.5
GBA	63.77	287	P	47	02.00	-5.2X
GBA	63.77	287	Pd	47	06.50	-0.7
	0.7s	26.50nm			5.5mb	
WMO	66.66	322	P	47	25.00	-0.6
NDI	67.94	303	eP	47	33.00	-0.9
POO	68.19	292	iPc	47	35.10	-0.5
KSH	72.57	314	eP	48	04.00	2.0
QUE	76.96	302	eP	48	28.50	1.0
MAW	80.59	202	eP	48	46.00	-0.2
SVW	82.31	26	iPc	48	56.40	1.0
TTA	82.89	25	eP	48	59.10	0.7
MAIO	84.30	307	eP	49	07.00	0.8
IMA	85.08	22	eP	49	10.20	0.7
	1.1s	17.10nm			5.2mb	
PMR	85.40	27	eP	49	10.50	-0.5
	0.9s	24.30nm			5.4mb	
SPA	85.50	180	e(P)	49	11.00	-0.7
	1.0s	6.50nm			4.8mb	
Z	20s	0.68um			5.0Msz	
FBA	86.99	24	eP	49	17.80	-1.0
PNT	100.78	41	ePdiff	50	22.00	-0.7
ALO	112.57	54	e(PKP)	55	11.20	-0.2
Z	20s	0.53um			5.1Msz	
			ePP	55	58.00	
			ePKKP	06	09.00	
			eLR	29	16.00	
BNG	120.73	272	ePKPd	55	27.10	-0.3
	0.6s	4.00nm				
KIC	143.95	275	PKPc	56	08.30	-2.5X
	0.7s	9.00nm				
TIC	144.22	275	PKPc	56	09.18	-2.1X
	0.9s	22.50nm				
LIC	144.23	274	PKPc	56	09.22	-2.1X
	0.9s	13.00nm				
CNCB	145.87	129	iPKPc	56	17.00	2.3X
LPB	145.94	129	PKPc	56	17.20	2.5X
ZOBO	146.07	128	PKP	56	16.00	0.9
	1.5s	81.72nm				
			eLR	48	40.00	
CCH	146.92	132	PKP	56	21.00	4.9X
PPD	151.71	159	e(PKP)	56	23.00	0.0
			e	56	31.00	
			e	56	42.80	
VAO	152.01	168	ePKP	56	27.50	4.0X
			e	56	31.60	

S.D. = 0.9 on 82 of 104 obs.

• SEP 03, 1989 10h 14m 30.17± 2.40s
41.324 N ±11.9km 142.242 E ±11.9km
DEPTH = 83.2 ± 22.5 km
4.4mb (11 obs.)
HOKKAIDO, JAPAN REGION (224)

MAT	5.72	215	(P)	15	54.00	-0.3
	0.7s	7.53nm			4.1mb	
			eS	17	12.00	
BJI	19.79	275	eP	18	58.00	1.8
	1.0s	10.00nm			4.1mb	
TIA	20.21	264	eP	18	56.90	-3.7X
GTA	32.15	281	eP	20	50.20	-1.7
WMO	39.64	292	P	21	55.00	-0.2
CHTO	43.11	252	eP	22	24.70	1.0
FBA	45.17	34	eP	22	41.00	1.2
	1.0s	0.80nm			3.5mb	
INK	50.30	29	ePc	23	19.20	-0.4
SOD	61.28	337	eP	24	56.00	17.5X
WB5	61.33	188	eP	24	38.30	-0.9
WRA	61.39	188	Pd	24	39.20	-0.5
	0.4s	1.00nm			4.3mb	
GBA	62.26	264	P	24	47.00	1.4
SUF	64.46	333	iP	24	58.00	-1.5
	0.6s	5.50nm			4.7mb	
NUR	66.48	331	iP	25	10.90	-1.5
NB2	70.49	337	P	25	36.00	-1.3
	0.5s	2.00nm			4.3mb	
KVN	71.68	54	eP	25	45.90	0.9
LOR	84.36	333	eP	26	53.70	-0.4
	0.6s	2.10nm			4.3mb	
LBF	84.57	333	eP	26	54.80	-0.4
SSF	84.66	333	eP	26	55.50	-0.1
LPG	84.85	330	eP	26	57.20	0.3
	0.6s	3.60nm			4.5mb	
AVF	84.95	333	eP	26	57.10	0.1
MAF	85.72	333	eP	27	01.50	0.6
	0.8s	6.70nm			4.7mb	
LSF	86.04	334	eP	27	02.70	0.2
	0.8s	6.70nm			4.7mb	
CAF	87.02	333	eP	27	08.30	1.0
	0.6s	2.70nm			4.5mb	
LPO	87.53	333	eP	27	10.40	0.7

S.D. = 1.0 on 23 of 25 obs.

• SEP 03, 1989 11h 27m 33.99± 1.18s
16.069 N ±16.8km 93.344 W ±14.8km
DEPTH = 60.1 ± 20.9 km
4.2mb (2 obs.)
CHIAPAS, MEXICO (61)

SCX	0.95	46	iP	28	13.23	21.7X
			iS	28	32.76	
TPX	1.56	138	(P)	28	00.00	0.2
			(S)	28	54.50	
EVV	3.05	321	iP	28	21.79	1.0
			iS	28	46.80	
OXX	3.39	288	iP	28	29.06	3.2X
			iS	28	59.81	
LVVM	4.70	321	iP	28	41.73	-2.2
			iS	29	22.22	
IIT	5.57	303	iP	28	57.54	1.0
			(S)	29	37.53	
III	6.29	292	iPc	29	06.30	-0.2
			(S)	30	02.10	
ACX	6.30	278	iP	29	06.50	0.0
			(S)	30	08.00	
MRX	8.30	297	iP	29	34.30	0.1
TUL	19.88	354	e(P)	32	04.30	1.2
	0.7s	11.40nm			4.3mb	
ZOBO	40.64	141	eP	35	19.00	8.3X
INK	58.10	344	eP	37	17.00	-6.2X
NB2	82.95	28	P	39	52.80	-0.8
	0.7s	1.50nm			4.1mb	

S.D. = 1.3 on 9 of 13 obs.

• SEP 03, 1989 11h 39m 42.19± 0.66s
25.549 N ± 7.4km 125.409 E ±11.8km

03d 11h

DEPTH = 33.0km (normal)
4.2mb (1 obs.)
SOUTHWESTERN RYUKYU ISLANDS (246)
Felt (I JMA) on Miyako-jima.

MYK	0.77	189	iP+	39	56.40	-0.2
			iS	40	07.40	
QZH	6.20	266	eP	41	12.80	-1.1
SSE	6.66	327	eP	41	15.70	-4.6X
			S	42	29.00	
			Lg	43	24.00	
BJI	16.39	334	eP	43	35.00	3.8X
Z	16s		0.29um			
N	11s		0.29um			
CN2	18.21	0	P	43	52.50	-1.5
HHC	19.12	326	P	44	06.00	0.8
BTO	19.74	323	eP	44	12.00	-0.2
N	10s		0.20um			
E	10s		0.20um			
			sS	48	05.00	
CD2	19.80	291	P	44	11.80	-1.0
N	12s		1.20um			
			eS	47	52.50	
LZH	21.25	305	P	44	29.00	1.1
	2.0s		0.05nm			1.5mb X
Z	14s		0.50um			4.1MszX
E	13s		0.30um			
GTA	25.53	309	P	45	11.20	1.6
Z	12s		0.40um			4.2MszX
N	10s		0.40um			
WB5	45.99	168	eP	48	04.00	-0.2
WRA	46.05	168	Pc	48	04.60	-0.1
	0.7s		2.00nm			4.2mb
WARB	51.44	179	eP	48	47.10	0.7
FFC	90.31	25	eP	52	41.00	0.0
	0.8s		10.00nm			5.2mb X
S.D. = 1.0			on 12 of 14 obs.			

• SEP 03, 1989 13h 20m 00.58± 2.91s
34.727 S ±24.1km 70.283 W ±10.9km
DEPTH = 10.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

CHCH	0.85	339	iPc	20	16.40	-0.6
			iS	20	29.60	
PCH	1.12	350	iPd	20	21.10	-0.5
			iS	20	38.10	
TACH	1.20	333	iPc	20	22.60	-0.4
			iS	20	40.40	
LNV	1.21	309	iPc	20	23.00	-0.1
			iS	20	41.10	
SAN	1.31	346	iPd	20	25.50	0.7
			iS	20	44.00	
FCH	1.40	360	iPd	20	26.10	-0.3
			iS	20	46.00	
PEL	1.61	348	iPc	20	30.60	1.4
			iS	20	53.50	
MRA	4.46	60	ePc	21	09.60	-0.2
S.D. = 0.8			on 8 of 8 obs.			

SEP 03, 1989 13h 27m 17.44± 0.71s
40.901 N ± 6.8km 27.773 E ± 5.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT	0.56	168	iPg	27	28.50	-0.2
EDC	0.56	173	iPg	27	28.50	-0.3
			iSg	27	35.50	
ITU	0.96	77	ePg	27	36.00	0.3
			iSg	27	49.00	
ISK	0.99	80	ePg	27	36.70	0.5
			eSg	27	49.90	
YLV	1.26	105	iPn	27	40.50	-0.4
GBZT	1.27	95	ePg	27	41.00	-0.1
			iSg	27	57.30	
HRT	1.44	93	iPn	27	43.10	-0.5
DST	1.45	153	iPn	27	44.10	0.4
EZN	1.54	226	iPn	27	44.00	-1.0
JMB	1.80	331	iP	27	58.00	9.3X
KDZ	1.93	294	eP	27	56.00	5.4X
RZN	2.43	290	iP	27	58.00	0.0
IZM	2.53	189	ePn	28	01.00	1.7
ALT	2.57	135	ePn	27	59.00	-1.0
KHL	2.91	152	ePn	28	12.10	7.4X
MMB	3.13	284	eP	28	17.00	9.3X
AKB	3.66	287	eP	28	37.00	21.7X
VTS	3.81	298	eP	28	20.00	10.4X
VAY	3.95	278	ePn	28	58.70	39.3X
S.D. = 0.8			on 12 of 19 obs.			

? SEP 03, 1989 13h 31m 03.60± 0.90s
37.424 N ±10.0km 4.562 W ± 7.2km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.7 (MDD).

EHOR	0.67	306	eP	31	17.20	0.3
			eS	31	27.00	
EPRU	0.70	230	eP	31	17.30	-0.2
			eS	31	27.20	
MAL	0.71	170	iPg	31	29.80	12.3X
AFC	0.83	101	eP	31	20.00	0.3
			eS	31	30.50	
EBAN	0.96	40	iP	31	21.60	-0.3
			eS	31	34.00	
S.D. = 0.5			on 4 of 5 obs.			

• SEP 03, 1989 13h 50m 57.48± 0.81s
0.108 N ± 8.8km 122.599 E ± 9:4km
DEPTH = 175.4 ± 11.6 km
5.0mb (12 obs.)
MINAHASSA PENINSULA (265)

MNI	2.60	59	iPc	51	39.70	-1.9
			eS	52	12.50	
PCI	2.94	250	iPd	51	45.00	-0.6
			iS	52	19.20	
TSM	6.10	312	iPd	52	28.00	1.5
	0.2s		130.00nm			5.8mb X
KKM	8.68	313	iPd	53	02.20	1.3
MTN	15.40	147	iPd	54	28.90	1.9
	0.4s		48.00nm			5.2mb
MBL	21.31	187	eP	55	31.50	0.0
	0.4s		10.00nm			4.6mb
WB5	22.97	151	eP	55	48.50	0.9
WRA	23.01	151	Pd	55	49.20	1.2
	0.4s		11.90nm			4.8mb
NANU	23.56	197	iPc	55	53.70	0.4
	0.4s		33.00nm			5.2mb
ASPA	26.06	156	iPc	56	16.00	-0.5
	0.4s		15.00nm			5.0mb
WARB	26.43	172	iPc	56	20.40	0.5
	0.3s		15.00nm			5.1mb
QIS	26.43	142	iPd	56	20.90	1.0
	0.4s		12.00nm			4.9mb
MEKA	26.85	188	eP	56	22.00	-1.7
	0.3s		59.00nm			5.7mb X
CHTO	29.74	310	eP	56	49.90	0.3
	0.9s		1.71nm			3.8mb X
MRWA	29.84	192	eP	56	49.70	-0.6
	0.3s		4.00nm			4.6mb
COOL	30.85	182	eP	56	57.70	-1.5
BAL	31.05	190	eP	57	00.10	-0.9
	0.3s		11.00nm			5.1mb
FORR	31.23	171	eP	57	01.50	-0.9
	0.4s		25.00nm			5.3mb
KLB	31.86	188	eP	57	07.10	-0.9
	0.3s		8.00nm			4.9mb
MUN	32.48	190	eP	57	12.40	-1.0
NWAO	33.25	188	eP	57	19.70	-0.3
RKG	34.40	188	eP	57	35.00	5.2X
STK	36.54	152	iPc	57	49.10	1.2
	0.3s		6.00nm			4.8mb
MAT	39.04	20	eP	58	07.00	-1.7
BWA	42.01	147	eP	58	37.30	4.2X
CAN	43.00	148	eP	58	43.30	2.2
S.D. = 1.3			on 24 of 26 obs.			

SEP 03, 1989 14h 16m 50.93± 1.08s
5.426 S ± 4.0km 152.063 E ± 7.8km
DEPTH = 50.7 ± 9.6 km
4.8mb (5 obs.)
NEW BRITAIN REGION (192)

RAB	1.23	5	iPd	17	12.00	-0.1
LAT	5.18	256	eP	18	17.00	9.1X
KDB	6.31	230	eP	18	25.00	1.3
			eS	19	39.00	
CTA	15.63	201	iPd	20	34.40	4.8X
	1.0s		21.50nm			4.3mb
			eS	23	42.00	
QIS	19.30	218	eP	21	14.70	-0.1
GUA	20.13	339	eP	21	23.90	0.3
	0.8s		95.52nm			5.2mb
GUMO	20.20	339	eP	21	24.20	-0.1
	1.5s		306.31nm			5.4mb
PJG	20.20	339	eP	21	23.70	-0.6
RMQ	21.18	188	eP	21	34.40	0.1
DZM	21.62	141	iPc	21	38.20	-0.6
BRS	21.86	178	eP	21	39.00	-2.1
MTN	21.93	249	eP	21	41.70	-0.2
			eS	25	43.60	
WB5	22.42	229	eP	21	47.10	0.3
WRA	22.48	228	Pc	21	47.20	-0.1
	0.8s		33.80nm			4.8mb
ASPA	25.20	222	eP	22	12.70	-0.9
			ipP	22	22.60	36kmX
			i	22	32.20	
			eS	26	44.60	
WARB	31.88	227	eP	23	15.50	1.8
FORR	33.86	219	eP	23	30.00	-0.9
MBL	34.94	240	eP	23	40.00	-0.2
NANU	39.17	241	eP	24	12.00	-3.8X
TIY	56.57	323	eP	26	30.50	-0.5
Z	26s		0.70um			4.6MszX
XAN	56.57	317	P	26	29.50	-1.5
KMI	56.73	305	eP	26	32.50	0.0
			e	26	33.00	
CHTO	57.60	296	eP	26	38.60	0.2
CD2	58.59	311	P	26	44.60	-0.7
GTA	65.62	318	P	27	31.60	-0.6
LSA	67.99	305	eP	27	48.00	0.2
KDC	77.08	27	eP	28	39.90	-0.4
SVW	77.67	23	eP	28	44.50	0.9
TTA	78.62	22	eP	28	49.10	0.3
PMR	80.55	25	ePc	28	58.70	-0.4
IMA	81.29	20	eP	29	03.30	0.2
TOA	82.03	25	eP	29	07.70	0.8
FBA	82.74	22	eP	29	09.40	-1.0
KSH	82.76	311	eP	29	13.00	1.7
SPA	84.61	180	e(P)	29	21.10	0.9
	1.0s		4.50nm			4.5mb
MAW	84.71	203	eP	29	21.00	0.6
INK	89.30	21	eP	29	42.00	-0.7
			pP	29	55.00	43kmX
CMB	91.38	52	e(P)	29	55.60	2.6
NB2	117.25	340	PKP	35	31.60	-0.4
	0.9s		1.40nm			
BUL	118.91	244	iPKPc	35	36.80	0.2
	1.0s		7.50nm			
BNG	133.69	271	ePKPd	36	04.40	-0.5
	0.7s		5.00nm			
S.D. = 0.9			on 38 of 41 obs.			

? SEP 03, 1989 14h 30m 32.12± 1.71s
5.274 S ±16.5km 152.271 E ±19.2km
DEPTH = 33.0km (normal)
4.5mb (4 obs.)
NEW BRITAIN REGION (192)

KDB	6.56	230	eP	32	08.00	-0.9
			eS	33	24.00	
RMQ	21.36	189	eP	35	19.00	0.1
	0.9s		24.00nm			4.6mb
BRS	22.00	179	eP	35	25.00	-0.4
MTN	22.18	249	eP	35	27.70	0.6
WB5	22.68	229	eP	35	31.80	-0.3
WRA	22.74	229	Pc	35	33.20	0.5
	0.6s		3.90nm			4.1mb
ASPA	25.45	222	iPd	35	59.70	0.9
	1.5s		22.00nm			4.5mb
CHTO	57.72	296	eP	40	22.00	-0.5
	1.7s		6.86nm			4.4mb
S.D. = 0.7			on 8 of 8 obs.			

SEP 03, 1989 14h 49m 17.10± 0.74s
39.115 N ± 7.0km 29.142 E ± 7.4km
DEPTH = 5.0km (geophysicist)
TURKEY (366)

DST	0.63	321	iPg	49	27.60	-2.1
			eSg	49	36.10	
ALT	0.76	94	iPg	49	31.60	-0.7
			eSg	49	43.00	
KHL	0.84	159	iPg	49	33.60	-0.4
			iSg	49	45.60	
YLV	1.46	7	ePn	49	43.60	-0.6
GPA	1.48	37	ePn	49	45.00	0.6
BNT	1.56	323	iPn	49	46.10	0.6
EDC	1.58	322	ePn	49	46.50	0.7
IZM	1.63	245	ePn	49	47.30	0.6

HRT 1.75 13 ePn 49 49.60 1.2
S.D. = 1.2 on 9 of 9 obs.

% SEP 03, 1989 14h 56m 22.94± 0.64s
39.131 N ± 6.2km 29.099 E ± 6.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.60	323	iPg	56 33.60	-1.5
			eSg	56 41.10	
ALT	0.79	95	iPg	56 38.00	-0.4
			eSg	56 49.00	
KHL	0.87	158	iPg	56 39.60	-0.2
			iSg	56 51.60	
YLV	1.45	8	iPn	56 49.10	-0.2
GPA	1.49	39	ePn	56 50.70	1.0
BNT	1.52	324	iPn	56 50.60	0.4
EDC	1.54	322	iPn	56 51.50	1.0
IZM	1.61	244	iPn	56 51.80	0.3
HRT	1.74	14	ePn	56 53.10	-0.4

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

SEP 03, 1989 15h 04m 08.82± 0.62s
47.740 N ± 5.0km 7.084 E ± 5.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.7 (LDG). MD 2.0 (STR).

MOF	0.12	17	Pg	04 12.12	0.3
			Sg	04 14.04	
BSF	0.22	295	Pg	04 13.59	0.0
LOMF	0.43	204	Pg	04 17.87	0.3
			Sg	04 24.08	
ECH	0.48	6	Pg	04 18.68	0.1
			Sg	04 25.39	
HAU	0.56	298	Pg	04 20.00	-0.3
			Sg	04 27.50	
FEL	0.64	77	Pg	04 22.10	0.3
CDF	0.69	11	Pg	04 22.64	0.2
			Sg	04 33.87	
WLS	0.70	15	Pg	04 22.06	-0.6
			Sg	04 34.24	
VITF	0.88	303	Pg	04 26.88	1.2
			Sg	04 38.11	
GWF	1.29	16	Pn	04 32.19	-0.5
LOR	2.24	259	Pg	04 51.40	4.9X
			Sg	05 20.00	
LPL	2.24	186	Pg	04 51.60	4.9X
LBF	2.24	251	Pg	04 51.80	5.2X
			Sg	05 19.60	
SMF	2.47	245	Pg	04 56.40	6.7X
			Sg	05 26.40	
SSF	2.52	256	Pg	04 57.20	6.7X
			Sg	05 28.00	
AVF	2.71	251	Pg	05 00.20	7.0X
			Sg	05 34.40	
BGF	3.12	249	Pn	04 58.00	-1.0
			Pg	05 07.60	
			Sg	05 46.40	

S.D. = 0.7 on 11 of 17 obs.

SEP 03, 1989 15h 09m 44.06± 0.22s
47.760 N ± 2.5km 6.943 E ± 2.2km
DEPTH = 14.2 ± 1.9 km
FRANCE (538)
ML 3.6 (LDG), 3.3 (KBA). MD 3.5 (STR).

BSF	0.12	305	Pg	09 48.92	1.2
			Sg	09 52.24	
MOF	0.16	54	Pg	09 47.45	-0.8
			Sg	09 49.64	
LOMF	0.42	191	Pg	09 53.16	0.4
			Sg	09 59.44	
HAU	0.47	302	Pg	09 55.10	1.5
			Sg	10 02.80	
ECH	0.48	17	Pg	09 54.05	0.3
			Sg	10 00.68	
BBS	0.48	127	Pg	09 52.94	-0.9
			Sg	09 59.32	
CDF	0.69	19	Pg	09 57.92	0.5
WLS	0.71	23	Pg	09 58.21	0.5
FEL	0.73	80	Pg	09 57.25	-0.9
VITF	0.79	306	Pg	10 01.38	2.4
			Sg	10 13.77	
STR	0.99	33	Pg	10 03.92	1.5
ZLA	1.02	105	eP	10 02.80	-0.1
SLE	1.05	89	eP	10 03.10	-0.3
GWF	1.30	20	Pg	10 07.60	-0.1
			Sg	10 26.70	
LLS	1.66	122	eP	10 13.70	0.7
EMS	1.69	180	eP	10 14.10	0.7
SAX	1.71	106	eP	10 13.90	0.2
DIX	1.71	169	ePd	10 14.90	1.1
MMK	1.85	157	eP	10 16.80	1.0
RUP	1.95	2	ePn	10 19.04	2.1
WLF	1.98	345	iP	10 22.50	5.1X
			iSg	10 48.60	
TMA	2.12	141	eP	10 21.10	1.5
VDL	2.14	126	ePc	10 21.10	1.1
LOR	2.15	258	Pn	10 20.00	0.1
			Pg	10 26.40	
			Sg	10 54.00	
LBF	2.16	250	Pn	10 20.00	-0.1
			Pg	10 26.60	
			Sg	10 55.00	
ABH	2.16	10	ePn	10 20.51	0.4
TOD	2.22	33	ePn	10 19.60	-1.4
LPL	2.25	184	Pn	10 22.20	0.6
			Sg	10 57.80	
ORO	2.25	161	Pd	10 23.10	1.6
			eSn	10 48.60	
LPG	2.27	183	Pn	10 22.50	0.6
			Pg	10 27.50	
			Sg	10 59.00	
VAI	2.27	146	P	10 26.80	5.2X
			(Sn)	10 51.50	
SMF	2.39	243	Pn	10 23.70	0.3
			Pg	10 30.60	
			Sg	11 01.60	
OSS	2.43	115	eP	10 25.10	1.0
SSF	2.44	255	Pn	10 24.40	0.4
			Pg	10 32.00	
			Sg	11 03.60	
AVF	2.63	250	Pn	10 26.90	0.2
			Pg	10 35.60	
			Sg	11 10.00	
BNI	2.71	184	P	10 34.20	6.1X
			eSn	11 10.80	
DOU	2.80	327	P	10 38.00	8.8X
			S	11 04.30	
			i	11 13.30	
PLDF	2.90	233	Pn	10 30.35	-0.3
			Sg	11 16.24	
MEM	2.92	348	P	10 33.20	2.4
			e	10 39.60	
			Sg	11 21.20	
FUR	2.94	80	iPnc	10 39.40	8.3X
BGF	3.04	248	Pn	10 32.40	-0.2
			Pg	10 42.80	
			Sg	11 22.20	
ENN	3.08	348	iPnc	10 42.70	9.6X
	0.5s		7.00nm		
			eSn	11 20.00	
AGO	3.12	238	Pn	10 33.29	-0.4
			Sg	11 24.52	
SNF	3.26	329	P	10 38.60	2.9X
			S	11 16.40	
SCE	3.32	101	iPnd	10 37.60	0.9
MAF	3.37	244	Pn	10 37.50	0.3
			Pg	10 49.00	
			Sg	11 32.40	
PYM	3.37	235	Pn	10 36.29	-1.0
			Sg	11 32.18	
GRF	3.43	54	ePg	10 48.80	10.7X
			e	10 51.50	
			eSg	11 32.70	
BOB	3.46	149	P	10 40.00	1.4
UCC	3.48	332	iP	11 37.00	58.3X
TCF	3.56	247	Pg	10 52.60	12.7X
			Sg	11 37.40	
LBL	3.59	227	Pn	10 39.45	-0.9
			Sg	11 36.83	
CTI	3.65	116	P	10 43.00	1.6
SBF	3.91	175	Pn	10 45.40	0.4
			Pg	10 58.00	
			Sn	11 29.20	
LSF	4.00	250	Pn	10 46.50	0.3
			Pg	11 00.40	
			Sg	11 51.00	
BHG	4.01	88	iPc	11 03.30	17.1X
FRF	4.20	183	Pg	11 03.20	14.1X
LRG	4.33	186	Pg	11 05.20	14.4X
KBA	4.40	97	iPnd	10 52.10	0.1
			iPg	11 06.40	
			iSn	11 42.60	
			iSg	12 02.20	
CAF	4.41	232	Pn	10 52.00	0.0
			Pg	11 08.30	
			Sg	12 06.00	
KHC	4.62	70	ePn	10 54.10	-1.0
			Pg	11 05.60	
			Sg	12 08.70	
MFF	4.97	259	Pn	10 59.20	-0.7
			Pg	11 19.00	
			Sg	12 23.00	
FLN	5.06	284	Pn	11 01.20	0.0
			Pg	11 21.20	
			Sg	12 25.80	
GRR	5.27	280	Pn	11 03.80	-0.3
			Pg	11 25.20	
			Sg	12 32.40	
LPF	5.38	276	Pn	11 05.40	-0.3
			Pg	11 26.70	
			Sg	12 36.00	
PRU	5.49	63	ePg	10 27.50	-39.8X
			Sg	11 39.60	
BRG	5.54	53	e(P)	11 28.00	20.0X
			e	12 40.00	

S.D. = 0.9 on 52 of 67 obs.

SEP 03, 1989 15h 13m 21.87± 0.64s
47.749 N ± 5.1km 7.052 E ± 5.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.4 (LDG).

MOF	0.12	28	Pg	13 24.98	0.1
BSF	0.19	295	Pg	13 26.46	0.2
			Sg	13 28.89	
LOMF	0.43	201	Pg	13 30.70	0.1
			Sg	13 36.82	
ECH	0.47	9	Pg	13 31.65	0.2
			Sg	13 38.28	
HAU	0.54	299	Pg	13 32.40	-0.4
			Sg	13 40.00	
FEL	0.66	79	Pg	13 34.92	-0.2
			Sg	13 46.41	
CDF	0.68	13	Pg	13 35.41	0.0
			Sg	13 46.56	
WLS	0.69	17	Pg	13 35.62	0.0
			Sg	13 46.82	
SMF	2.45	244	Pg	14 09.00	6.4X
			Sg	14 39.60	

S.D. = 0.2 on 8 of 9 obs.

& SEP 03, 1989 15h 24m 43.00s
38:758 N 122.898 W
DEPTH = 7.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 3.9 (BRK).
Mo=1.1•10••15 Nm (BRK). Felt (III) at Cobb.

NWRM	0.30	178	iPd	24 49.30	0.2
ZSP	0.96	148	eP	25 00.80	-0.7
BRK	1.02	150	iPd	25 02.00	-0.5
			eS	25 16.30	
BKS	1.02	149	eP	25 01.50	-1.1
			eS	25 16.00	
PCC	1.32	162	eP	25 05.30	-2.4
ORV	1.35	53	eP	25 05.70	-2.4
			e	25 13.10	
LTCM	1.57	22	eP	25 11.00	-0.3
MHC	1.73	145	eP	25 12.07	-1.7
ARN	1.77	142	eP	25 12.50	-1.8
WDC	1.84	9	e(P)	25 12.00	-3.2
GCC	1.87	157	eP	25 12.90	-2.7
MIN	1.87	32	eP	25 13.40	-2.5
CMB	2.10	109	ePc	25 17.50	-1.6
FHC	2.21	338	e(P)	25 27.30	6.7
LBFM	2.70	16	e(P)	25 28.50	0.7
KVN	3.75	84	eP	25 40.50	-2.3
TNP	4.51	97	eP	25 51.50	-2.0
TPC	7.21	128	eP	26 29.00	-2.5

18 obs. associated

% SEP 03, 1989 16h 13m 57.61± 0.85s
39.268 N ± 7.7km 29.175 E ± 8.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

03d 16h

DST	0.54	309	iPg	14 07.00	-1.6
			eSg	14 15.00	
ALT	0.76	106	ePg	14 11.40	-1.1
			iSg	14 22.40	
KHL	0.98	164	iPg	14 17.10	0.8
			eSg	14 30.60	
YLV	1.31	7	iPn	14 23.10	1.3
GPA	1.34	40	ePn	14 22.00	-0.4
BNT	1.45	319	iPn	14 25.10	1.2
EDC	1.48	317	ePn	14 24.00	-0.2
HRT	1.60	14	ePn	14 26.00	0.0
S.D. = 1.2		on	8 of	8 obs.	

? SEP 03, 1989 16h 16m 03.45± 0.96s
34.233 N ±21.6km 135.232 E ± 6.7km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF SOUTHERN HONSHU(233)
MG 1.8 (JMA). Felt (I JMA) at Wakayama.

WKY	0.05	263	eP	16 05.00	-0.6
WKYJ	0.30	92	P	16 09.70	0.0
			S	16 14.40	
TKSJ	1.01	256	eP	16 22.80	0.2
			eS	16 36.80	
YONJ	1.74	304	eP	16 33.90	0.0
			eS	16 56.40	
S.D. = 0.6		on	4 of	4 obs.	

& SEP 03, 1989 16h 16m 45.49s
59.347 N 153.140 W
DEPTH = 89.8km
SOUTHERN ALASKA (2)
<AGS-P>.

AUE	0.12	276	iP	16 57.75	0.9
			eS	17 07.26	
AUI	0.15	265	iP	16 57.75	0.8
			eS	17 06.63	
AUL	0.15	283	iP	16 57.98	1.0
AUW	0.17	278	iP	16 58.03	1.1
OPT	0.31	352	iP	16 58.58	-0.6
			eS	17 08.43	
MCNL	0.64	256	iP	17 00.75	-0.9
XLV	0.73	81	iP	17 01.82	-0.7
			eS	17 14.25	
ILIM	0.74	7	iP	17 01.85	-0.9
SHU	0.83	150	iP	17 02.57	-0.9
			eS	17 15.31	
CNPM	0.99	79	iP	17 04.52	-0.8
			eS	17 19.56	
RED	1.09	10	iP	17 05.91	-0.7
			eS	17 21.23	
RDT	1.29	16	iP	17 08.18	-0.8
NKA	1.69	33	iP	17 15.47	1.3
SLKM	1.88	50	eP	17 15.78	-0.8
SPU	1.92	16	iP	17 16.65	-0.5
			eS	17 40.86	
SEW	2.02	66	eP	17 17.40	-1.0
SVW	2.16	326	eP	17 19.78	-0.6
SUA	2.43	28	eP	17 24.07	-0.1
PMS	2.61	42	eP	17 25.91	-0.6
KNIM	2.91	67	eP	17 28.18	-2.4
KNK	3.11	46	eP	17 32.26	-1.2
GLI	3.39	60	eP	17 34.36	-2.9
FID	3.62	64	eP	17 37.20	-3.3
VZW	3.71	60	eP	17 39.48	-2.2
VLZ	3.84	59	eP	17 41.62	-1.7
KLU	4.18	56	eP	17 45.58	-2.6
GLB	5.08	62	eP	17 58.00	-1.9
27 obs. associated					

? SEP 03, 1989 17h 14m 58.63± 4.50s
7.622 S ±21.1km 129.271 E ±62.0km
DEPTH = 177.4 ± 47.2 km
4.4mb (2 obs.)
BANDA SEA (280)

TLE	3.98	61	eP	16 00.00	0.0
MTN	5.50	161	iPc	16 20.00	0.1
			eS	17 24.00	
WB5	13.15	158	eP	17 58.80	-1.1
			eS	20 21.00	
WRA	13.20	159	Pd	18 00.30	-0.2
	0.3s	6.10nm		4.5mb	
ASPA	16.56	165	iPc	18 43.80	1.5
	0.8s	11.00nm		4.3mb	
			eS	21 41.30	
WARB	18.63	187	eP	19 05.00	-0.4
S.D. = 1.4		on	6 of	6 obs.	

SEP 03, 1989 19h 01m 25.90± 0.30s
9.013 S ± 5.6km 116.045 E ± 8.7km
DEPTH = 33.0km (normal)
4.9mb (14 obs.)
SUMBAWA ISLAND REGION (285)

MKS	5.08	42	iPc	02 52.20	10.5X
			e	06 42.00	
PCI	8.89	25	Pd	03 48.10	12.9X
			e(S)	04 42.80	
MBL	12.62	164	eP	04 23.20	-2.7
	0.2s	14.00nm		5.7mb	
			eS	06 27.00	
NANU	13.48	182	eP	04 35.50	-1.8
-	0.4s	35.00nm		5.6mb	
			eS	06 45.00	
MNI	13.59	41	ePd	04 51.50	12.7X
KKM	14.96	1	ePd	05 07.70	10.8X
	0.4s	27.10nm			
MTN	15.29	106	iPd	05 00.30	-0.8
MEKA	17.66	173	iPc	05 32.80	1.6
	0.5s	45.00nm		4.9mb	
			eS	08 30.00	
WARB	19.82	151	iPc	05 56.90	0.1
	0.3s	14.00nm		4.8mb	
			eS	09 22.00	
MRWA	20.10	180	eP	05 59.00	-0.7
	0.3s	6.00nm		4.4mb	
			eS	09 25.00	
IPM	20.16	311	ePd	06 02.20	1.7
WB5	20.75	123	iPd	06 06.90	0.4
			eS	09 49.80	
BAL	21.49	178	eP	06 13.70	-0.3
			eS	09 59.00	
COOL	22.27	168	eP	06 21.00	-0.8
	0.3s	9.00nm		4.7mb	
			eS	10 14.00	
ASPA	22.45	133	iPc	06 24.50	0.8
	0.8s	32.00nm		4.8mb	
			eS	10 30.70	
			i	10 39.90	
KLB	22.52	176	eP	06 24.00	-0.2
			eS	10 16.00	
MUN	22.85	180	eP	06 28.00	0.5
			eS	10 34.00	
NWAO	23.82	178	iPc	06 37.30	0.4
	0.5s	25.00nm		5.0mb	
			eS	10 51.00	
FORR	24.46	154	eP	06 42.70	-0.4
	0.4s	21.00nm		5.1mb	
			eS	11 10.00	
RKC	24.95	178	eP	06 53.10	5.3X
			eS	11 32.00	
OIS	25.47	119	eP	06 53.30	0.5
			iPcP	10 23.80	
CTA	31.18	114	eP	07 49.00	4.5X
CHG	32.39	329	eP	07 55.00	0.8
			e	10 41.20	
CHTO	32.39	329	eP	07 55.90	0.9
	0.7s	1.11nm		3.9mb	
STK	32.86	137	iPc	07 59.00	0.1
			iPcP	10 42.60	
KMI	36.32	339	Pd	08 31.00	2.1
GYA	36.42	346	P	08 31.00	1.4
TOO	38.92	142	iPd	08 52.60	2.1
	0.7s	16.00nm		4.9mb	
BWA	38.99	135	eP	08 59.70	8.6X
			iPcP	11 01.80	
BRS	39.18	123	iPd	08 55.00	2.2
CAN	39.88	136	eP	08 53.70	-4.7X
			iPcP	11 03.90	
CD2	41.41	344	iPd	09 10.30	-0.7
XAN	43.34	351	P	09 27.00	0.2
GBA	44.43	300	Pd	09 34.40	-1.3
	0.6s	2.40nm		4.2mb	
HYB	45.41	305	eP	09 42.50	-1.2
TIY	46.60	356	Pd	09 52.50	-0.3
BJI	48.80	0	eP	10 08.00	-1.8
GTA	50.48	344	eP	10 22.80	-0.1
SNY	51.06	7	eP	10 25.60	-1.5
NDI	53.00	316	iPc	10 39.00	-2.9X
CN2	53.25	8	eP	10 41.50	-2.0
KSH	60.87	325	P	11 37.50	-0.3
MAW	68.25	199	eP	12 24.00	-1.2
MAIO	69.63	314	eP	12 33.00	-1.3
SPA	81.05	180	ePc	13 39.90	1.0
	1.0s	9.50nm		4.7mb	
			e	14 02.80	
PTZ	82.74	257	iPd	13 49.00	0.4
SLR	84.15	245	iPc	13 55.00	-0.7
BUL	84.56	251	iPd	13 58.80	1.0
	0.9s	18.07nm		5.3mb	
PRY	84.72	244	eP	13 52.60	-6.0X
KSR	85.37	245	eP	13 51.70	-10.2X
MZZ	85.54	259	iPc	14 04.00	1.2
LSZ	85.62	255	iPc	14 03.50	0.3
			i	14 27.00	
KMZ	88.14	257	iPc	14 17.00	1.5
KIC	121.31	272	PKP	20 17.10	-1.2
LIC	121.58	272	PKP	20 17.60	-1.2
TIC	121.62	272	PKP	20 17.70	-1.2
FFC	125.32	26	ePKP	20 23.00	-1.8
	0.6s	7.00nm			
ALQ	133.39	50	e(PKP)	20 41.50	0.3
VAO	144.10	207	ePKP	20 59.60	-1.2
SLA	146.43	177	ePKPc	21 06.10	1.3
PPD	146.75	202	ePKP	21 07.30	2.1
PDCR	147.34	229	ePKP	21 08.10	1.8
ITR	149.04	236	iPKPc	21 12.30	3.2X
			e	21 36.30	
ZOBO	154.54	171	PKP	21 18.00	0.4
S.D. = 1.3		on	52 of	64 obs.	

SEP 03, 1989 19h 18m 07.44± 0.15s
49.521 N ± 3.4km 156.441 E ± 3.1km
DEPTH = 81.6km (14 depth phases)
4.9mb (42 obs.)
KURIL ISLANDS (221)
Felt (IV) at Mys Vasilyevo and (II) at Severo-Kurilsk.

YAMJ	16.35	232	P	21 55.20	2.0
NIIJ	17.59	232	eP	22 06.80	-1.7X
KAKJ	17.82	228	eP	22 10.20	-1.0X
CHJJ	18.52	230	eP	22 18.40	-1.4X
MAT	18.54	232	iPd	22 18.60	-1.4X
	1.0s	65.00nm		4.8mb	
			eS	25 44.00	
MTMJ	18.71	233	eP	22 20.70	-1.4X
MDJ	18.89	265	eP	22 20.00	-3.9X
TSRJ	20.47	235	P	22 39.70	-0.8X
CN2	21.93	267	eP	22 50.00	-5.1X
BJI	29.80	267	eP	24 07.00	-1.3
IMA	30.25	38	eP	24 11.90	-0.4
			e	24 30.50	80km
SSE	32.19	248	eP	24 30.20	0.8
HHC	32.38	272	P	24 29.40	-1.7
FBA	32.61	41	eP	24 32.80	0.1
			e	24 51.50	79km
TIY	33.51	266	Pc	24 40.80	-0.2
XAN	37.99	264	P	25 17.20	-1.7
INK	38.11	34	ePc	25 20.20	0.8
GTA	40.77	278	iPd	25 41.00	-0.9
GYA	44.49	258	P	26 12.00	-0.3
WMO	46.03	290	P	26 24.00	-0.3
KMI	47.93	260	eP	26 40.00	0.3
OIZ	47.98	248	eP	26 40.40	0.7
PNT	51.79	56	eP	27 08.00	-0.6
EDM	52.80	49	iPc	27 15.90	-0.2
CHG	54.91	257	ePc	27 32.00	0.1
	1.1s	37.97nm		5.3mb	
CHTO	54.91	257	iP	27 32.00	0.1
	1.1s	26.80nm		5.2mb	
LBFM	55.23	65	P	27 34.40	0.1
			pP	27 55.00	82km
WDC	55.32	66	eP	27 34.90	0.3
			e	27 55.70	83km
			e	28 24.00	
MIN	56.03	66	eP	27 39.30	-0.6
			e	28 00.30	84km
LAT	56.54	191	eP	27 44.00	0.5
ORV	56.59	67	ePc	27 43.10	-0.6
			e	28 04.10	83km
FFC	57.19	43	eP	27 48.00	0.2
	0.8s	13.00nm		5.1mb	
LRM	57.77	56	eP	27 52.50	0.2
			e	28 12.70	79km
CMB	58.23	67	eP	27 55.30	0.0
			e	28 16.20	82km
			e	28 44.00	

PRS 58.74 69 e(P) 27 58.70 -0.2
e 28 19.60 82km
KVN 58.93 65 P 28 00.00 -0.4
TNP 60.09 65 P 28 08.00 -0.4
0.7s 5.56nm 4.8mb
CLC 61.37 67 eP 28 17.00 0.1
e 28 37.00 78km
SUF 61.38 336 eP 28 15.50 -1.1
0.3s 2.50nm 4.8mb
SBB 61.99 69 eP 28 21.00 -0.1
RVR 62.73 69 eP 28 45.00 19.1X
RSSD 63.35 53 P 28 29.50 -0.6
TPC 63.46 68 eP 28 30.00 -0.8
e 28 51.00 82km
NUR 63.63 336 iP 28 29.80 -1.6
BAR 64.06 69 eP 28 34.00 -0.7
GLA 64.92 68 eP 28 40.00 -0.3
e 29 02.00 86km
GOL 65.74 57 P 28 46.00 0.3
0.7s 4.25nm 4.5mb
MTN 65.98 207 eP 28 46.30 -0.7
NB2 66.29 342 P 28 47.00 -1.6
0.8s 5.20nm 4.5mb
ALQ 68.51 61 eP 29 03.30 0.1
1.0s 7.00nm 4.5mb
ePcP 29 24.10
HYB 69.13 273 eP 29 07.00 0.0
CTA 69.88 190 iPc 29 10.20 -1.1
0.9s 23.53nm 5.1mb
OIS 71.35 197 eP 29 18.10 -2.1
WB5 71.82 202 iPc 29 22.10 -0.9
DZM 71.82 170 iPc 29 23.50 0.5
GBA 72.66 271 Pd 29 25.90 -2.2
0.7s 4.40nm 4.5mb
SIO 73.51 54 e(P) 29 32.50 -0.3
TUL 73.65 54 eP 29 33.50 -0.1
1.2s 19.50nm 4.9mb
Z 21s 0.15um 4.3Msz
e 29 53.90 77km
e 30 14.30
LR 58 00.00
EKA 74.13 348 Pd 29 36.10 0.0
0.7s 11.70nm 4.9mb
KSP 74.37 335 iP 29 37.50 -0.1
SPC 74.70 332 eP 29 41.00 1.3
CLL 74.82 337 iPc 29 39.70 -0.4
1.2s 42.00nm 5.2mb
WIT 74.87 342 eP 29 42.00 1.6
BRG 74.97 336 iP 29 40.10 -0.9
1.0s 20.00nm 5.0mb
ASPA 75.57 201 iPc 29 44.00 -0.7
0.8s 19.00nm 5.0mb
WTS 75.61 341 ePc 29 44.50 -0.1
0.8s 28.00nm 5.2mb
PRU 75.62 336 Pc 29 44.60 -0.1
1.0s 20.20nm 5.0mb
CVO 75.66 327 ePc 29 45.50 0.4
MOX 75.77 338 iPc 29 45.00 -0.6
1.0s 28.00nm 5.1mb
RMQ 75.98 187 iPc 29 47.20 0.3
0.8s 23.00nm 5.1mb
DMU 76.00 350 eP 29 46.70 -0.1
MLR 76.03 327 ePd 29 47.00 -0.3
ZST 76.53 333 iPd 29 50.00 0.2
DLE 76.56 350 eP 29 49.80 -0.1
KHC 76.66 336 iPc 29 51.00 0.4
0.9s 18.50nm 5.0mb
e 30 14.00 87km
GRF 76.75 338 iPc 29 51.60 0.5
0.6s 48.00nm 5.6mb
ENN 76.96 341 ePc 29 52.00 -0.1
1.0s 55.00nm 5.4mb
MEM 77.09 341 iPc 29 53.06 0.2
TOD 77.41 339 ePc 29 54.87 0.1
ABH 77.44 340 ePc 29 54.90 0.0
SNF 77.54 342 Pc 29 55.40 0.1
RUP 77.72 340 ePc 29 56.49 0.0
DOU 77.87 342 iPc 29 57.80 0.6
GWF 78.28 340 P 29 59.64 0.2
KBA 78.61 335 iPc 30 02.10 0.6
0.8s 66.70nm 5.6mb
i 30 04.30 7kmX
i 30 41.00
WLS 78.87 340 P 30 02.73 0.0
CDF 78.89 340 P 30 02.93 0.0
PTJ 78.94 333 e(P) 30 03.10 -0.1
ECH 79.10 340 P 30 03.80 -0.2
FEL 79.22 339 P 30 04.56 -0.2
VITF 79.36 340 P 30 05.42 0.1
MOF 79.45 340 P 30 05.84 -0.1
HAU 79.48 340 iPc 30 06.00 0.0
0.8s 10.70nm 4.8mb
BSF 79.54 340 eP 30 06.20 -0.3
BBS 79.72 339 P 30 06.93 -0.5
WARB 79.90 207 iPc 30 09.50 1.1
0.5s 15.00nm 5.2mb
LOMF 79.99 340 P 30 08.64 -0.2
CTI 80.01 336 Pd 30 08.50 -0.5
FLN 80.10 345 iPc 30 09.40 0.1
0.9s 19.60nm 5.0mb
LDF 80.20 344 iPc 30 09.80 0.0
0.7s 6.60nm 4.6mb
NANU 80.45 218 eP 30 12.00 0.6
GRR 80.52 345 iPc 30 11.90 0.4
0.8s 26.80nm 5.2mb
SKO 80.69 328 eP 30 11.50 -1.0
LOR 80.71 341 eP 30 12.50 -0.1
1.0s 10.80nm 4.7mb
VAY 80.87 327 eP 30 13.40 0.0
LPF 80.90 345 eP 30 14.00 0.5
1.0s 20.00nm 5.0mb
VAI 80.92 338 Pd 30 14.00 0.4
LBF 80.96 341 eP 30 13.80 -0.1
0.7s 2.60nm 4.2mb
SSF 80.98 342 eP 30 14.20 0.2
0.9s 5.50nm 4.5mb
CMS 81.20 189 iPd 30 16.20 1.1
1.0s 8.00nm 4.6mb
AVF 81.27 342 iPc 30 15.80 0.3
SMF 81.31 341 iPc 30 16.00 0.3
BGF 81.60 342 eP 30 17.90 0.7
0.5s 2.40nm 4.4mb
LPG 81.75 339 iPc 30 19.40 1.0
0.7s 12.50nm 4.9mb
BOB 81.78 337 Pd 30 19.00 0.7
MAF 81.97 342 iPc 30 20.10 0.9
1.1s 21.90nm 5.0mb
TCF 81.98 342 eP 30 19.70 0.4
0.8s 5.90nm 4.5mb
MFF 82.13 344 eP 30 20.60 0.7
0.9s 9.80nm 4.7mb
BDI 82.13 336 Pc 30 21.20 1.1
LSF 82.15 343 iPc 30 20.40 0.3
1.0s 14.80nm 4.8mb
CRE 82.17 335 P 30 21.00 0.7
RJF 83.06 342 eP 30 25.10 0.3
CAF 83.32 342 eP 30 27.00 0.8
1.1s 12.20nm 4.8mb
LFF 83.56 343 eP 30 27.90 0.5
LPO 83.72 343 eP 30 28.70 0.5
BWA 83.88 187 eP 30 30.00 1.1
FORR 83.90 204 iPd 30 29.40 0.4
0.4s 16.00nm 5.4mb
PRNI 84.99 312 ePc 30 35.00 0.2
EPF 85.48 343 eP 30 37.70 0.6
SPA 139.33 180 e(PKP) 37 26.80 1.3
1.0s 7.00nm
PPD 144.88 49 ePKP 37 36.60 0.2
e 37 47.50
e 37 57.50

S.D. = 0.7 on 122 of 131 obs.

SEP 03, 1989 20h 00m 59.91± 0.63s
45.655 N ± 5.5km 14.280 E ± 4.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.5 (LJU), 2.0 (TRI).

CEY 0.13 51 iPgd 01 03.20 0.1
eSg 01 05.40
e 01 30.00
RIY 0.32 166 iPgd 01 06.40 -0.1
iSg 01 11.60
TRI 0.37 279 iPgd 01 07.70 0.3
iSg 01 13.70
LJU 0.43 24 iPgd 01 08.50 -0.1
eSg 01 15.00
e 01 50.00
VOY 0.46 325 iPgc 01 09.10 -0.3
eSg 01 16.80
e 02 00.00
VBY 0.70 102 ePg 01 13.50 -0.3
eSg 01 23.30
PTJ 1.20 78 ePg 01 22.80 0.5
eSg 01 39.70

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

• SEP 03, 1989 20h 52m 15.51± 2.15s
37.953 S ± 8.6km 177.820 E ±18.6km
DEPTH = 59.9 ± 11.9 km
5.2mb (10 obs.)
OFF E. COAST OF N. ISLAND, N.Z. (160)
Felt in the Bay of Plenty
region.

KRP 1.80 270 iPd 52 44.80 0.1
GBZ 2.55 312 P 52 53.20 -2.0
AUC 2.66 293 P 52 56.00 -0.7
NEZ 3.20 245 P 53 07.00 2.4
S 53 52.00
WEL 4.08 214 eP 53 17.00 0.3
S 54 02.00
DNZ 9.60 212 P 54 32.00 -1.4
S 56 12.00
DZM 18.62 325 iPd 56 32.00 1.3
CAN 23.24 268 eP 57 26.00 7.8X
BRS 23.50 289 eP 57 23.00 2.3
TAU 23.67 248 eP 57 12.00 -10.1X
BWA 23.94 269 eP 57 26.30 1.3
CMS 26.99 274 eP 57 55.30 1.8
0.5s 10.00nm 4.7mb
ADE 31.44 263 eP 58 34.30 1.0
CTA 32.63 294 eP 58 45.00 1.3
OIS 37.27 287 eP 59 24.00 0.7
ASPA 39.95 278 iPd 59 45.80 0.1
0.7s 20.00nm 5.1mb
eS 05 50.00
FORR 41.23 265 eP 59 56.00 0.0
WB5 41.66 283 eP 59 59.10 -0.6
WARB 44.43 270 eP 00 21.60 -0.7
COOL 46.67 261 eP 00 39.00 -0.9
0 4s 12.00nm 5.2mb
MTN 48.38 288 eP 00 52.90 -0.5
NWAO 48.86 257 iPd 00 56.00 -1.0
0.5s 12.00nm 5.2mb
KLB 49.01 258 eP 00 57.10 -1.0
0.3s 6.00nm 5.1mb
MUN 50.04 257 iPd 01 05.40 -0 6
BAL 50.24 259 eP 01 06.30 -1.3
MRWA 51.41 260 eP 01 16.00 -0.5
SPA 52.23 180 ePc 01 26.80 4.4X
0.9s 22.27nm 5.2mb
MBL 52.34 271 eP 01 21.80 -1.8
0.5s 19.00nm 5.4mb
NANU 55.01 267 eP 01 42.00 -1.2
MAW 64.03 203 eP 02 46.00 1.4
PSI 82.91 279 ePd 04 34.50 -0.8
0.7s 17.60nm 5.2mb
SSE 86.66 314 eP 04 53.60 0.0
0.8s 0.01nm 2.0mb X
GYA 92.44 302 P 05 21.40 0.3
CHG 92.97 291 ePc 05 23.70 0.2
1.0s 13.25nm 5.3mb
CHTO 92.97 291 eP 05 23.20 -0.3
1.1s 15.02nm 5.3mb
CN2 94.18 325 Pc 05 28.80 0.3
BNG 141.65 215 ePKPd 11 37.30 -5.0X
0.5s 8.00nm
id 11 40.60
KEV 144.52 343 ePKP 11 41.00 -4.5X
SOD 146.38 340 iPKP 11 49.80 1.1
LIC 148.31 175 PKPc 11 58.58 5.2X
MBH 148.32 266 iPKPc 11 57.00 4.1X
KIC 148.47 175 PKP 11 59.00 5.4X
PRNI 148.47 267 iPKPd 11 57.00 3.8X
SUF 149.79 334 iPKP 11 57.50 3.3X
0.5s 11.30nm
NUR 151.79 332 iPKP 12 02.80 5.6X
0.7s 12.00nm

S.D. = 1.2 on 34 of 45 obs.

• SEP 03, 1989 20h 56m 21.45± 0.73s
24.443 S ± 9.1km 67.272 W ±11.2km
DEPTH = 179.9 ± 10.3 km
4.2mb (2 obs.)
CHILE-ARGENTINA BORDER REGION (127)

SLA 1.64 100 iPd 56 55.70 0.4
S 57 21.00
ANT 2.97 284 iPc 57 11.20 1.1
iS 57 47.30

03d 20h

```
TCA      7.27 162 ePd    58 04.80   -1.3
                  S      59 24.30
CNCB     7.62 355 P      58 11.00   -0.3
                  S      59 39.00
LPB      7.91 354 eP     58 15.00    0.1
                  S      59 42.00
ZOBO     8.17 354 P      58 17.30   -1.2
       1.2s     20.27nm          4.4mb X
                  S      59 49.00
PPD     14.87  84 eP     59 44.90    0.8
BCAO    88.00  84 eP     08 52.90    0.1
       0.9s      1.30nm          3.8mb
BNG     88.01  84 ePd    08 53.30    0.4
       0.4s      3.00nm          4.6mb
     S.D. = 1.0   on   9 of   9 obs.
-------------------------------------------
?  SEP  03, 1989  21h 16m 53.50± 0.87s
   9.397 S ± 9.0km  126.201 E ±12.6km
   DEPTH =  33.0km  (normal)
   4.1mb (  2 obs.)
 TIMOR                                (289)

MTN      5.93 126 iPd    18 27.20    5.8X
                  eS     19 34.10
TLE      7.49  61 iPd    18 42.50   -0.7
PCI     10.55 323 ePd    19 25.90    0.4
WB5     13.07 144 eP     19 59.20   -0.4
                  i      20 05.00
                  eS     22 20.50
MBL     13.21 207 eP     19 56.00   -5.3X
ASPA    15.99 154 iPc    20 38.50    0.8
       0.5s     14.00nm          4.3mb
                  eS     23 28.80
WARB    16.70 179 eP     20 45.30   -1.4
       0.3s      3.00nm          3.9mb
QIS     17.04 132 eP     20 52.10    1.1
                  eS     23 56.00
FORR    21.42 176 eP     21 41.00    0.2
CTA     22.09 121 eP     21 56.00    8.3X
ZOBO   150.82 151 PKP    36 47.00    7.0X
     S.D. = 1.1   on   7 of  11 obs.
-------------------------------------------
   SEP  03, 1989  22h 03m 56.32± 0.57s
   39.571 N ± 7.8km  102.750 E ± 6.6km
   DEPTH =  10.0km  (geophysicist)
   4.4mb (  6 obs.)
 NORTHERN CHINA                       (323)

LZH      3.58 166 Pn     04 52.50   -0.8
                  Pg     05 01.50
                  S      05 37.00
                  Sg     05 45.00
BTO      5.67  77 Pn     05 23.40    0.7
                  Sg     06 49.20
HHC      6.87  76 Pnd    05 39.40   -0.2
                  Pg     06 03.60
                  Sg     07 34.00
XAN      7.41 136 Pn     05 43.00   -4.2X
                  Pg     06 12.00
                  Sg     07 40.00
TIY      7.80 101 Pnd    05 51.50   -1.2
                  Pg     06 17.70
                  Sn     07 21.10
                  Sg     07 56.90
CD2      8.68 174 Pn     06 07.40    2.5
BJI     10.34  83 eP     06 27.00   -0.7
     Z  10s      1.60um
TIA     11.84 102 eP     06 50.40    2.2
     Z  12s      1.20um
     N  12s      1.20um
     E  12s      1.20um
WMO     12.03 296 P      06 50.00   -0.8
     Z  12s      1.10um
                  S      09 03.00
WHN     13.08 130 eP     07 00.00   -4.8X
     E  12s      2.29um
                  eS     09 24.00
GYA     13.48 165 P      07 11.00    0.8
KMI     14.41 180 Pc     07 17.50   -5.0X
     Z  10s      1.10um
     E  12s      1.50um
                  sP     07 32.00
SSE     17.24 114 Pd     07 57.50   -1.1
       1.0s     14.00nm          4.0mb
CN2     17.46  69 Pc     08 02.50    1.1
     Z  14s      2.60um
     N  10s      0.70um
                  pP     08 07.50
                  sS     11 25.00
MDJ     20.50  67 eP     08 36.20   -0.8
     N  10s      0.70um
                  S      12 27.00
KSH     20.63 278 P      08 40.20    1.6
CHG     20.95 190 ePc    08 40.00   -1.8
       1.1s     41.77nm          4.7mb
CHTO    20.95 190 eP     08 40.00   -1.8
       1.1s     13.84nm          4.2mb
QIZ     21.37 161 eP     08 49.80    3.7X
     E  13s      1.30um
                  eS     12 41.00
NDI     23.69 251 eP     09 14.00    5.1X
NST     23.92 186 eP     09 12.50    1.3
GBA     34.14 228 P      10 50.00    6.4X
       0.6s      2.70nm          4.3mb
NB2     57.03 325 P      13 43.90   -0.5
       0.6s      2.60nm          4.4mb
INK     64.57  20 eP     14 36.00    0.6
WB5     66.11 147 eP     14 44.40   -1.4
BNG     82.73 270 ePd    16 22.30    0.3
       0.6s      5.00nm          4.9mb
     S.D. = 1.4   on  20 of  26 obs.
-------------------------------------------
   SEP  03, 1989  23h 53m 01.05± 0.63s
   24.138 S ± 6.2km   66.906 W ±10.2km
   DEPTH = 227.4 ± 15.7 km
 SALTA PROVINCE, ARGENTINA            (129)

SLA      1.41 115 iPc    53 36.90   -0.1
                  S      54 02.60
ANT      3.24 277 iPc    53 55.50    0.2
                  i      53 58.50
                  iS     54 36.00
                  i      54 41.00
CCH      6.76   6 P      54 40.10    0.7
CNCB     7.36 352 P      54 47.20   -0.2
                  S      56 10.00
TCA      7.46 165 ePd    54 48.40    0.3
LPB      7.65 351 P      54 51.50    0.5
                  S      56 15.00
ZOBO     7.91 351 P      54 53.40   -1.1
                  S      56 20.00
MRA      8.31 173 ePd    54 58.90   -0.2
PPD     14.50  85 eP     56 17.40    0.0
                  e      56 21.00
GBA    144.76 101 PKPc   12 15.50    2.6X
       0.5s      2.60nm
     S.D. = 0.7   on   9 of  10 obs.
-------------------------------------------
*  SEP  04, 1989  01h 06m 22.54± 1.08s
   30.688 N ± 8.7km   35.398 E ±27.0km
   DEPTH =  10.0km  (geophysicist)
 DEAD SEA REGION                      (373)

OUTJ     0.80  41 Pc     06 37.50   -0.7
MKRJ     0.89  14 P      06 40.50    0.9
HSHJ     1.01 167 P      06 45.70    4.0X
MASJ     1.07  15 Pc     06 42.50   -0.3
HOL      1.44 192 eP     06 47.00   -1.7
                  iS     07 06.70
AYN      1.89 164 eP     06 55.70    0.7
                  eS     07 19.00
BADA     2.18 189 iPg    07 00.50    1.1
     S.D. = 1.4   on   6 of   7 obs.
-------------------------------------------
*  SEP  04, 1989  01h 07m 27.83± 1.53s
   6.038 S ± 8.3km  147.847 E ±13.9km
   DEPTH =  60.8 ± 11.9 km
   4.8mb (  4 obs.)  3.7Msz (  1 obs.)
 EAST PAPUA NEW GUINEA REGION         (207)

LAT      1.04 234 iPd    07 46.00   -0.6
PMG      3.42 192 iPd    08 19.90    0.0
KDB      3.48 191 eP     08 20.50   -0.2
MNDI     4.17 268 eP     08 33.00    2.4
QIS     16.50 208 eP     11 16.30   -0.5
WB5     19.00 222 eP     11 46.00   -1.6
WRA     19.06 222 Pc     11 46.20   -2.1
       0.3s      7.80nm          4.4mb
GUMO    19.72 351 eP     11 53.50   -1.8
RMO     20.36 178 iPd    12 02.90    1.0
OLP     20.72 189 iPd    12 06.00    0.4
BRS     21.75 168 iP     12 17.00    1.0
ASPA    22.07 216 iPd    12 19.40    0.1
       0.4s     38.00nm          5.2mb
     Z  18s      0.28um          3.7Msz
                  eS     16 22.70
                  LR     21 39.10
WARB    28.48 223 eP     13 19.00   -0.5
FORR    30.87 214 eP     13 40.30   -0.3
COOL    35.19 222 eP     14 18.30    0.1
NANU    35.24 239 eP     14 19.70    1.1
MRWA    37.89 229 eP     14 41.50    0.6
KLB     37.92 224 eP     14 41.00   -0.2
       0.3s      4.00nm          4.8mb
NWAO    39.07 223 eP     14 51.00    0.3
MAT     43.31 349 eP     15 26.00    0.6
       1.1s     20.25nm          4.8mb
     S.D. = 1.2   on  20 of  20 obs.
-------------------------------------------
*  SEP  04, 1989  04h 11m 24.27± 2.93s
   41.076 N ±26.8km   24.578 E ±12.0km
   DEPTH =  10.0km  (geophysicist)
 GREECE-BULGARIA BORDER REGION        (363)

RZN      0.62  10 iPgc   11 36.00   -0.9
KDZ      0.85  47 iP     11 40.00   -0.7
DIM      1.21  36 eP     11 48.00    1.2
KKB      1.37 306 ePg    11 48.00   -1.5
PGB      1.50 348 eP     11 51.00   -0.3
VAY      1.54 280 ePn    11 52.00    0.3
VTS      1.83 326 iP     11 58.00    1.9
PVL      2.21  14 eP     12 05.00    3.5X
     S.D. = 1.5   on   7 of   8 obs.
-------------------------------------------
   SEP  04, 1989  05h 20m 55.93± 0.10s
   4.219 S ± 2.3km  136.667 E ± 2.7km
   DEPTH =   9.1km  (geophysicist)
   5.8mb ( 46 obs.)  6.0Msz ( 28 obs.)
 WEST IRIAN REGION                    (196)
     Ms 5.9 (BRK), 5.5 (PAS). Domage
     at Tembagapura. Two events about
     2.5 seconds oport. Depth from
     broadband displacement
     seismograms, bosed on second
     event.
     FAULT PLANE SOLUTION: P-Waves
      NP1:Strike=123 Dip=68 Slip=  90
      NP2:       303     22        90
      Principal Axes:
       T              Plg=67  Azm= 33
       P                  23      213
     Comment: The focal mechanism is
       poorly controlled and
       corresponds to reverse
       faulting. The preferred fault
       plane is NP2.
     RADIATED ENERGY
      No. of sto:  11  Focal mech.  M
      Energy        0.3±0.0*10**14 Nm
     MOMENT TENSOR SOLUTION
     Dep  17            No. of sto: 12
     Moment Tensor;   Scale 10**18 Nm
       Mrr= 1.07        Mtt=-0.87
       Mff=-0.20        Mrt= 0.75
       Mrf=-0.50        Mtf= 0.43
      Principal axes:
       T  Val=  1.40  Plg=70  Azm= 40
       N        0.00        4       299
       P       -1.40       20       208
     Best Double Couple:Mo=1.4*10**18
      NP1:Strike=291 Dip=25 Slip=  81
      NP2:       121     65        94
     CENTROID, MOMENT TENSOR      (HRV)
     Dota Used: GDSN
     L.P.B.: 17S, 44C  M.W.: 11S, 17C
     Centroid Location:
     Origin Time        05:21: 5.1 0.2
     Lot  4.43S 0.02 Lon 136.48E 0.02
     Dep  16.9 BDY Half-duration  5.1
     Moment Tensor;   Scale 10**18 Nm
       Mrr= 1.75 0.03   Mtt=-1.98 0.03
       Mff= 0.23 0.03   Mrt= 2.87 0.19
       Mrf=-1.60 0.12   Mtf= 0.42 0.03
      Principal Axes:
       T  Val=  3.74  Plg=58  Azm= 40
       N        0.13       10       294
       P       -3.87       30       199
     Best Double Couple:Mo=3.8*10**18
      NP1:Strike=262 Dip=17 Slip=  56
      NP2:       117     76        100
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JAY	4.37	67	iPc	22	06.20	2.1			1.0s	134.00nm		5.8mb	CHG	43.63	303	iPc	29	03.50	0.7
			i(S)	22	59.00					e	28	42.70		1.0s	92.50nm				5.5mb
MNDI	7.22	106	eP	22	44.50	0.0	MUN	33.63	212	eP	27	39.60	0.6			eS	35	48.00	
AAI	8.47	273	eP	23	00.50	-1.2				eS	33	00.00		CHTO	43.63	303	ePc	29	03.40	0.7
			eS	24	36.10		PVC	33.77	116	iPd	27	40.50	0.1	1.2s	476.22nm				6.2mb
MTN	10.17	212	eP	23	24.90	-0.3	NWAO	33.85	210	eP	27	41.30	0.4	Z 20s	0.22um				4.1MszX
LAT	10.57	104	eP	23	33.00	2.4				eS	33	04.00		N 20s	0.12um				
PMG	11.62	117	eP	23	40.50	-4.5X	DZM	33.87	124	iPc	27	39.90	-1.5			ec	29	06.21	
KDB	11.65	117	eP	23	41.00	-4.4X	OZH	33.90	330	Pc	27	40.10	-1.2			epPd	29	08.53	17kmX
KNA	13.84	214	eP	24	12.70	-2.0		Z 20s		14.70um			5.7Msz			esPd	29	10.19	
			eS	26	42.00			N 16s		6.60um						ePP	30	37.92	
RAB	15.46	90	iP+	24	36.00	0.0				eS	32	58.00		KMI	44.00	313	ePc	29	07.41	1.5
			iS	27	26.00					SS	35	16.00				ec	29	10.06	
WB5	15.73	188	iPd	24	34.20	-5.2X	TOO	34.16	167	eP	27	43.40	-0.2			epP	29	12.71	18kmX
WRA	15.79	188	P	24	36.00	-4.3X	HKC	34.33	321	iP	27	45.20	0.0			esPd	29	14.20	
	1.0s	155.50nm				5.2mb	MCO	34.59	320	eP	27	48.00	0.6			e	29	30.00	
QIS	16.49	170	iPd	24	43.50	-5.7X	RKG	34.88	209	eP	27	54.50	4.8X			ePP	30	45.02	
PCI	17.13	281	ePc	25	03.00	5.8X	QIZ	35.09	312	P	27	51.50	-0.2			eS	35	36.11	
			eS	26	03.00			E 17s		8.80um				TIA	44.18	337	Pc	29	06.30	-0.6
MKS	17.17	266	iPc	25	03.50	5.8X				PP	29	13.00			Z 25s		18.30um			5.9MszX
CTA	18.33	150	iPd	25	11.60	-0.6				S	33	25.00			N 17s		12.70um			
			iS	28	30.00		GZH	35.43	321	iPd	27	53.70	-0.8		E 16s		4.50um			
CTAO	18.33	150	eP	25	13.41	1.2		1.4s		0.10nm		2.5mb X				PP	30	54.00	
			ed	25	15.73			Z 20s		9.90um		5.6Msz				S	35	39.00	
GUA	19.45	25	eP	25	25.50	-0.4		N 18s		9.50um						SS	38	51.50	
	1.1s	678.48nm				5.8mb				S	33	26.00		AOMJ	44.69	4	eP	29	12.40	1.5
Z	18s	39.18um					KAGJ	35.64	351	eP	27	55.80	-0.4	DL2	45.11	343	eP	29	12.00	-2.3
GUMO	19.47	25	ePc	25	25.84	-0.4	IPM	36.66	283	ePc	28	05.30	0.2		Z 24s		6.30um			5.5MszX
	1.2s	972.22nm				6.0mb		0.9s		80.80nm		5.5mb			E 16s		9.50um			
			ec	25	28.49					e	28	16.70				eS	35	54.00	
PJG	19.47	25	eP	25	25.80	-0.4	KUMJ	36.97	352	P	28	07.10	-0.3	XAN	46.19	328	iPc	29	23.00	-0.1
ASPA	19.52	188	iPd	25	23.60	-3.1X	SNG	37.72	287	iPc	28	14.80	0.8		N 18s		13.00um			
	1.0s	1613.00nm				6.3mb		0.9s		188.24nm		5.9mb				S	36	12.00	
Z	19s	189.26um								eS	32	13.00		MRRJ	46.60	4	eP	29	24.50	-1.5
			iS	28	53.20					e	33	39.90		HOOJ	46.77	7	eP	29	26.40	-1.0
			LR	33	07.20		TKSJ	38.08	356	P	28	16.80	0.1	CD2	46.98	320	iPc	29	29.60	0.3
TSM	20.38	294	ePd	25	40.30	4.4X	SSE	38.10	338	Pd	28	16.70	-0.2		Z 20s		9.50um			5.8Msz
	1.0s	514.90nm				5.8mb		8.0s		1.10nm		2.7mb X			N 18s		12.40um			
KKM	22.83	296	ePc	26	02.00	1.3		Z 20s		15.40um		5.8Msz				pP	29	34.00	15kmX
	0.9s	119.10nm				5.4mb		N 16s		10.80um						PP	31	23.70	
OLP	23.39	163	iPd	26	06.30	0.3		E 18s		4.10um						S	36	24.00	
MBL	23.48	223	eP	26	08.00	1.2				e	28	50.00		SNY	47.35	347	iPc	29	31.00	-1.1
	0.4s	108.00nm				5.8mb				PP	29	52.00			Z 12s		19.30um			6.3MszX
			eS	30	30.00					S	34	01.00			N 19s		12.10um			
SVO	23.50	103	eP	26	05.00	-2.1				PcS	34	10.00			E 18s		4.30um			
HNR	23.68	104	eP+	26	08.00	-0.9				sS	35	02.00				sP	29	49.00	
			eS	30	20.00					SS	36	47.00				PP	31	22.00	
WARB	23.86	203	iPd	26	12.00	1.5	WKYJ	38.24	359	P	28	18.20	0.0			iS	36	22.00	
QCP	24.29	321	eP	26	14.00	-0.7	PSI	38.34	280	iPc	28	19.00	-0.2	TIY	47.41	334	Pc	29	32.40	-0.3
RMQ	24.99	154	eP	26	20.50	-0.9	SHNJ	38.50	353	P	28	19.60	-0.6		E 19s		9.80um			
BAG	25.95	323	ePc+	26	29.90	-0.8	SHK	38.73	355	ePc	28	21.80	-0.4			S	36	29.00	
	1.6s	880.00nm				6.2mb	TSI	38.84	281	ePc	28	24.00	0.6	KUSJ	47.66	8	P	29	34.30	-0.1
			eS	31	06.00		YONJ	39.31	356	P	28	27.30	0.2	BJI	47.90	339	ePc	29	35.10	-1.3
NANU	27.41	226	eP	26	45.00	1.1	IIDJ	39.51	2	P	28	27.90	-0.8		1.0s	120.00nm				5.9mb
	0.4s	26.00nm				5.3mb	TSRJ	39.55	359	P	28	29.20	0.2		Z 20s	269.00um				7.2MszX
			eS	32	07.00		TAU	39.67	168	eP	28	32.00	2.0		N 19s	19.70um				
FORR	27.69	196	eP	26	46.00	-0.4				eS	36	38.00				ec	29	37.74	
	0.4s	134.00nm				6.1mb	NJ2	39.85	336	Pc	28	32.10	0.6			epPd	29	40.39	18kmX
BRS	27.70	148	iP	26	43.00	-3.6X		N 18s		4.00um						esPd	29	42.21	
			i	26	46.00			E 17s		13.30um						eS	36	28.00	
			ipP	27	13.00	143kmX				S	34	33.60		ASAJ	48.42	6	P	29	40.50	0.2
			eS	31	26.00		CHJJ	40.11	3	P	28	32.60	-1.1	KRP	48.79	139	Pc	29	44.30	0.9
STK	27.90	171	ePd	26	47.00	-1.3	NNT	40.32	295	iPc	28	35.70	0.1	CN2	48.86	349	iPc	29	42.60	-1.1
MEKA	28.23	216	eP	26	53.00	1.6	KAKJ	40.35	4	P	28	34.80	-0.7		5.0s	1.90nm				3.4mb X
CMS	28.46	163	eP	26	55.20	1.8	MAJO	40.57	2	ePc	28	35.66	-1.8		Z 20s	22.70um				6.2Msz
	1.1s	250.00nm				5.9mb	MAT	40.57	2	iPc+	28	36.30	-1.2		N 17s	7.20um				
COO	29.90	153	eP	27	06.30	-0.1		Z 20s		23.05um		6.0Msz				epP	29	50.00	25kmX
			e	27	28.00					eS	34	41.00				PP	31	36.00	
COOL	30.29	207	eP	27	09.10	-0.7	WHN	40.62	330	iPc	28	39.50	1.6			S	36	45.00	
	0.5s	65.00nm				5.7mb		Z 20s		5.77um		5.4Msz				SS	40	10.00	
			eS	33	00.00			N 14s		3.87um				MDJ	49.03	353	ePc	29	45.10	0.1
ADE	30.65	177	iPc	27	12.50	-0.5				sP	28	52.00			Z 30s		6.80um			5.5MszX
	1.2s	687.50nm				6.4mb				S	34	52.00			N 18s		9.20um			
MRWA	31.66	216	eP	27	22.20	0.3	LOE	40.63	303	eP	28	37.00	-1.2			ec	29	47.59	
	0.3s	11.00nm				5.3mb	NIIJ	41.30	3	P	28	43.10	-0.3			epPd	29	50.40	18kmX
			eS	33	44.00		GYA	42.11	318	iPc	28	51.60	1.3			esPd	29	52.55	
BAL	32.30	213	eP	27	28.00	0.5		1.2s		0.10nm		2.4mb X				eS	36	48.13	
RIV	32.40	157	eP	27	33.00	4.7X		Z 20s		6.00um		5.5Msz				e	37	42.76	
			eS	32	42.00			N 18s		7.10um				MHZ	49.69	150	P	29	49.70	-0.6
KLB	32.51	211	eP	27	29.40	0.1				pP	29	00.00	28kmX	TCW	49.91	143	P	29	50.70	-1.2
	0.3s	11.00nm				5.3mb				PP	30	35.00		KIW	50.08	142	P	29	52.20	-1.1
			eS	34	05.00					PcP	30	49.00		MRW	50.18	143	P	29	52.50	-1.4
ANP	32.72	334	eP+	27	34.00	2.7				S	35	08.00		SNZO	50.22	143	ePc	29	52.58	-1.7
			eS	32	50.00		YAMJ	42.29	4	eP	28	52.30	0.8			ec	29	54.40	
CAN	32.98	161	eP	27	30.50	-2.9	BDT	42.87	301	eP	28	57.00	0.5			epPd	29	57.04	15kmX
CNB	33.10	161	eP	27	39.00	4.6X		0.9s		41.20nm		5.2mb				esPd	29	58.70	
BFD	33.24	171	iPd	27	34.90	-0.6	OFUJ	43.33	6	eP	29	00.30	0.3	WEL	50.25	143	P	29	54.00	-0.5

04d 05h

			S	37	02.00				1.3s	85.00nm	5.7mb		GCC	101.58	53	ePdiff	34	48.50	-1.7
MNG	50.29	142	P	29	53.40	-1.5		PPT	73.26	107	iP	32	30.80	0.8		MIN	101.66	50	ePdiff	34	50.80	0.0
CAW	50.32	142	P	29	53.90	-1.2			1.3s	150.00nm	5.9mb			ORV	101.80	51	ePdiff	34	52.00	0.8
WDW	50.37	143	P	29	54.00	-1.4			Z 30s	8.00um	5.8MszX			MHC	101.84	53	ePdiff	34	52.30	0.7
HHC	50.39	335	Pc	29	55.50	-0.2		PPN	73.40	107	iP	32	31.40	0.6			Z 20s	3.60um			5.9Msz	
	Z 20s		24.00um			6.2Msz			1.3s	125.00nm	5.8mb					N 20s	0.10um					
	N 19s		7.50um					TVO	73.57	107	iP	32	32.80	0.9			E 20s	4.10um				
	E 20s		5.90um						1.3s	150.00nm	5.9mb							e	35	45.00		
			PP	31	54.50			QUE	74.76	303	iPc+	32	39.90	1.1				iPP	39	08.00		
			S	37	09.00						eS	33	28.50					eSKS	45	36.00		
LZH	50.50	325	ePc	29	57.81	1.1					eS	42	20.20					eS	46	48.00		
	1.0s		0.46nm			3.4mb X		PMO	74.86	104	iP	32	40.00	0.7				ePS	48	13.00		
	Z 22s		13.10um			5.9Msz			1.3s	145.00nm	5.8mb							iSPP	49	14.00		
	N 17s		4.30um					VAH	75.12	105	iP	32	41.20	0.5				i	49	34.00		
	E 18s		7.00um						1.3s	75.00nm	5.6mb							i	50	15.00		
			ec	30	00.46			TPT	75.13	104	iP	32	41.50	0.7				i	50	40.00		
			epPd	30	02.77	17kmX			1.3s	95.00nm	5.7mb							i	52	10.00		
			esPd	30	04.43			SBA	75.27	174	ePc-	32	40.80	0.2				eSS	53	58.00		
			eS	37	10.13			RUV	75.36	105	iP	32	42.80	0.7				iPSPS	54	13.00		
			e	37	55.65				1.3s	90.00nm	5.7mb							eLQ	02	44.00		
PGZ	50.78	141	P	29	57.00	-1.5		TIK	75.88	357	eP	32	44.00	0.0				eLR	08	26.00		
BTO	50.85	334	P	29	58.00	-1.2					eS	42	36.00			ARN	101.93	53	Pdiff	34	52.50	0.6
	N 20s		14.60um					SDN	78.46	31	iPc	32	59.00	0.4		SAO	102.04	53	ePdiff	35	00.00	7.7X
	E 20s		10.80um						Z 20s	10.00um	6.1Msz						Z 20s	7.00um			6.2Msz	
			PP	31	57.00			SVW	83.12	27	Pc	33	24.80	1.5			N 20s	0.20um				
			S	37	04.50			KDC	83.46	31	iPc	33	25.90	0.9			E 20s	5.00um				
YSS	51.29	5	iPc	30	04.00	1.7		TTA	83.63	25	P	33	27.00	1.0				ePP	39	10.00		
			eS	37	18.00				0.8s	77.59nm	6.0mb							eSKS	45	39.00		
AFI	51.71	104	eP	30	03.91	-2.2		IMA	85.71	23	iPc	33	37.60	1.2				iS	46	46.00		
			ec	30	06.56				1.0s	140.00nm	6.1mb							iPS	48	14.00		
			epPd	30	09.37	18kmX		SPA	85.81	180	e(P)	33	36.80	-0.2				eSP	48	21.00		
			esPd	30	11.20				1.0s	108.50nm	6.0mb							e	50	35.00		
			ePP	32	02.43				Z 18s	16.59um	6.5Msz							ePSPS	54	12.00		
			eS	37	28.60					e	33	45.20						eLQ	03	26.00		
			e	39	46.00			PMR	86.24	27	iPc	33	38.90	0.0				eLR	07	48.00		
			e	43	00.00				1.1s	140.00nm	6.1mb					PNT	102.12	41	ePdiff	34	52.00	-0.4
			e(Lg)	48	30.00				Z 20s	6.30um	6.0Msz						0.7s	5.00nm			5.3mb	
GTA	55.11	325	iPc	30	31.20	0.2		RKT	86.86	113	iP	33	44.20	1.5		PRS	102.12	54	ePdiff	34	53.70	1.0
	Z 20s		6.30um			5.7Msz			1.2s	75.00nm	5.8mb					LLA	102.45	54	e(Pdif	34	55.20	1.0
	N 15s		3.20um					COL	87.70	24	ePc	33	45.65	-0.3		PRI	102.71	54	ePdiff	34	56.60	1.1
			pP	30	38.00	22kmX					ec	33	47.31			CMB	102.79	52	ePdiff	34	55.56	-0.1X
			sP	30	41.00						epPd	33	50.29	15kmX					ec	34	57.71		
			S	38	12.00						ePP	37	13.73						epP	35	00.36		
			sS	38	25.00						eS	44	27.01						ePP	39	10.79		
LSA	55.11	311	iPc	30	33.00	1.4					e	45	19.98			SUF	103.06	334	iPdiff	34	55.00	-1.2
	E 16s		2.00um					FBA	87.70	24	ePc	33	45.70	-0.3			0.8s	14.60nm			5.8mb	
			pP	30	40.50	25kmX		TOA	87.72	27	ePc	33	47.60	1.4		FRI	103.41	53	ePdiff	34	58.80	0.4
PET	59.97	15	iPc	31	04.00	-0.8		DHR	88.74	296	iP+	33	51.50	-0.2		PTZ	103.75	254	iPdiff	35	01.90	1.4
			eS	39	16.00			RYD	91.79	295	eP	34	06.00	0.0		NUR	104.39	332	iPdiff	35	01.40	-0.7
HYB	61.23	292	ePc	31	13.00	-1.1		TAB	92.84	308	eP	34	11.00	0.3		KVN	104.47	51	Pdiff	35	04.00	0.6
GBA	61.38	288	P	31	14.60	-0.5					e	34	14.00			PAS	104.90	56	ePdiff	35	04.00	-1.1
DRV	62.38	178	eP	31	20.00	-0.9		SLY	93.38	305	eP	34	14.50	1.5					ePP	39	22.00		
SMY	64.94	24	P	31	37.50	-0.5					e	45	10.00						ePPP	41	01.00		
	1.0s	433.33nm				6.6mb		KMSA	93.48	290	eP	34	13.70	-0.2					eSKS	45	24.00		
WMO	64.95	323	ePc	31	38.76	0.4		INK	93.82	22	eP	34	13.00	-1.4					eS	47	06.00		
	Z 20s		5.60um			5.8Msz			1.1s	47.00nm	5.8mb								ePS	48	02.00		
	N 18s		6.70um								pP	34	46.00	127kmX					ePPS	49	24.00		
			ec	31	41.58			BHD	94.20	303	ePd	34	16.00	-0.8					eSS	54	04.00		
			epPd	31	44.06	17kmX					e	38	06.50						eSKKP	54	39.00		
			esPd	31	45.38						e	44	13.00						eLg	03	46.00		
			ePP	34	00.79			OASM	94.65	296	eP	34	19.70	0.6		PAS	104.90	56	ePdiff	35	08.54	3.4X
			eS	40	20.00			MSL	95.31	306	iPd	34	21.80	-0.1					ePP	39	22.00		
			SS	40	29.80			MBC	97.39	14	eP	34	30.00	-0.6					ePPP	41	01.00		
NDI	65.76	304	iPc	31	43.00	-0.7			1.0s	28.00nm	5.8mb								eSKS	45	42.52		
	0.5s	84.51nm				6.2mb		OBN	99.21	325	ePc	34	37.50	-1.6					eS	47	06.00		
			eS	40	30.00				1.0s	70.00nm	6.2mb								ePS	48	02.00		
POO	65.85	292	iPd	31	44.30	-0.2			Z 22s	5.80um	6.0Msz								eSP	48	42.54		
			iS	40	27.00						eS	46	04.00						ePPS	49	24.00		
BOM	66.88	292	eP	31	48.50	-2.5		FHC	99.82	49	ePc	34	43.70	1.4					eSS	54	04.00		
			eS	40	46.00			KEV	100.68	341	ePdiff	34	44.00	-1.5					eSKKP	54	39.00		
ADK	68.47	29	P	31	59.50	-0.9		SNA	100.74	193	e(Pdif	34	38.10	-7.6X					eLg	03	46.00		
	1.0s	150.00nm				6.1mb			1.2s	14.06nm	5.4mb					MWC	104.99	56	ePdiff	35	17.00	11.2X
HON	68.79	65	P	32	03.50	0.5		WDC	100.93	50	ePdiff	34	48.40	1.1		PRY	105.06	241	ePKP	39	22.00	0.9
	Z 18s		5.67um			5.8Msz					ePP	38	47.70			SBB	105.14	55	ePdiff	35	10.00	3.7X
KIP	68.81	65	eP	32	04.42	1.3		LON	100.96	43	ePdiff	34	49.10	1.7X		SBB	105.14	55	ePKP	39	15.00	-5.9X
			ec	32	05.91						ePP	38	57.80			CLC	105.21	54	ePdiff	35	07.00	0.4
			epP	32	08.23	12kmX		BRK	101.32	52	ePdiff	34	49.80	0.7		CLC	105.21	54	ePKP	39	28.00	7.0X
			esPd	32	09.89			BKS	101.34	52	ePdiff	34	50.80	1.6		EDM	105.27	36	ePdiff	35	06.50	0.2
KSH	70.62	314	P	32	15.60	1.5			0.8s	50.00nm	6.2mb					TNP	105.27	52	Pdiff	35	08.00	1.0
	Z 20s		8.10um			6.0Msz			Z 20s	2.10um	5.7Msz					BUL	105.39	248	ePdiff	35	12.90	5.1X
	N 18s		4.50um						N 20s	1.40um						RVR	105.57	56	ePdiff	35	08.00	-0.1
			S	41	30.00				E 20s	1.10um						RVR	105.57	56	ePKP	39	19.00	-2.7X
TLG	71.20	318	eP	32	19.00	1.6					e	39	54.80			PLM	106.06	57	ePKP	39	31.00	8.1X
			iS	41	35.00						eSKS	45	48.80			DAG	106.26	354	iPKPc	39	21.00	-0.7
AFR	73.07	107	iP	32	29.40	0.6					e	48	02.80				0.9s	8.40nm				
	1.3s	105.00nm				5.8mb					e	54	02.80					i	49	51.00		
PAE	73.26	107	iP	32	30.60	0.7		SOD	101.51	338	iPdiff	34	48.20	-1.0		BAR	106.29	57	ePKP	39	38.00	14.9X

MZZ	106.56	257	iPdiff	35	15.00	1.9	
MZZ	106.56	257	ePKP	39	40.00	15.7X	
			e	49	20.00		
VRI	106.85	317	ePdiff	35	13.50	0.0	
SES	107.35	38	ePdiff	35	16.00	0.3	
MLR	107.47	316	ePdiff	35	16.50	0.0	
LRM	107.51	43	ePdiff	35	17.00	0.2	
LWI	107.63	266	iPdiff	35	25.00	7.0X	
UZH	109.13	320	ePdiff	35	23.00	-0.5	
KMZ	109.16	254	ePdiff	35	31.00	6.4X	
KMZ	109.16	254	ePKP	39	30.00	0.9	
			e	50	37.00		
			e	50	49.00		
NB2	110.21	335	Pdiff	35	27.00	-1.1	
	1.2s		6.20nm				
SPC	110.26	321	ePKP	39	32.00	1.7	
FFC	111.14	32	ePKP	39	31.00	-0.5	
	1.1s		15.00nm				
SRO	111.91	320	e(PKP)	39	44.00	10.8X	
ZST	112.55	321	e(PKP)	39	35.00	0.6	
VKA	113.02	321	ePKP	39	38.50	3.2X	
	3.7s		331.00nm				
	Z 18s		2.00um			5.8Msz	
			i	40	27.00		
			LR	34	57.00		
BRG	113.46	324	ePdiff	35	41.20	-1.6	
	1.4s		13.00nm				
BRG	113.46	324	iPKP	39	36.80	0.7	
	1.4s		29.00nm				
			i	40	35.30		
PRU	113.46	323	PKP	39	35.90	-0.2	
			e	40	32.20		
RSSD	113.72	43	PKP	39	35.50	-1.7	
CLL	113.82	325	ePKP	39	36.00	-0.8	
	Z 20s		7.00um			6.3Msz	
			PKKP	50	26.70		
GOL	114.03	48	PKP	39	37.50	-0.5	
	Z 18s		6.50um			6.3Msz	
PTJ	114.08	319	ePKP	39	37.00	-0.6	
ALQ	114.33	54	ePKP	39	38.60	0.0	
	Z 20s		5.32um			6.1Msz	
			ePP	40	32.20		
			ePPP	43	21.50		
			eSKS	46	30.00		
			eSKKS	47	50.00		
			ePS	50	09.00		
			ePKKP	50	27.00		
			ePPS	51	25.00		
			eSS	56	42.00		
			eSSS	00	48.00		
			eLR	13	26.00		
ANMO	114.33	54	ePdiff	35	51.40	4.1X	
KHC	114.38	323	PKP	39	37.90	-0.1	
			e	40	14.10		
VBY	114.68	319	ePKP	39	38.50	-0.1	
MOX	114.90	325	e(Pdif	35	57.00	7.8X	
MOX	114.90	325	ePKP	39	39.00	0.1	
	Z 20s		6.40um			6.2Msz	
	N 19s		5.70um				
	E 22s		2.90um				
			ePKKP	50	23.00		
LJU	114.96	319	ePKP	39	39.00	-0.2	
KBA	115.33	321	ePKP	39	38.00	-2.1X	
	0.9s		11.80nm				
			i	39	53.00		
			e	40	30.00		
VOY	115.37	320	ePKP	39	39.20	-0.9	
GRF	115.54	324	e(Pdif	35	55.00	2.9X	
	Z 21s		7.40um			6.3Msz	
GRF	115.54	324	e(PKP)	39	34.00	-6.2X	
			e	40	48.00		
			e	50	14.00		
MNS	117.52	316	PKP	39	43.20	-1.0	
ABH	117.57	326	ePKP	39	44.23	0.2	
ENN	118.02	327	ePKP	39	45.00	0.2	
	1.0s		11.00nm				
			ePP	40	50.00		
MEM	118.06	327	PKP	39	45.50	0.7	
FEL	118.26	323	ePKP	39	44.69	-0.9	
BNG	118.31	273	iPKPc	39	46.10	-0.4	
	0.8s		32.00nm				
			id	41	05.00		
CDF	118.44	324	ePKP	39	44.90	-0.9	
VAI	118.71	321	PKPd	39	45.70	-0.5	
BSF	119.00	324	iPKPc	39	46.20	-0.7	
	0.7s		11.00nm				
SNF	119.04	327	iPKPd	39	47.50	0.8	
DOU	119.10	327	ePKP	39	46.90	0.0	
			e	41	13.00		
HAU	119.18	324	iPKPc	39	46.60	-0.6	
LPG	120.14	321	ePKP	39	49.10	-0.3	
	0.7s		9.35nm				
BNI	120.39	321	PKPd	39	49.90	0.2	
SBF	120.44	319	ePKP	39	49.20	-0.6	
	1.0s		32.00nm				
LOR	121.00	324	iPKPc	39	50.50	-0.1	
	1.0s		8.00nm				
LBF	121.08	324	iPKPc	39	50.70	-0.1	
	1.0s		11.00nm				
FRF	121.09	319	ePKP	39	50.70	-0.2	
LMR	121.28	319	ePKP	39	51.00	-0.3	
SSF	121.32	324	iPKPc	39	51.30	0.1	
	0.9s		11.45nm				
LRG	121.33	319	ePKP	39	51.10	-0.2	
SMF	121.34	324	iPKPc	39	50.90	-0.4	
	1.1s		17.10nm				
AVF	121.55	324	iPKPc	39	51.10	-0.5	
BGF	121.97	324	ePKP	39	52.60	0.1	
	0.7s		14.35nm				
SIO	122.08	50	ePKP	39	53.30	0.3	
MAF	122.31	324	ePKP	39	53.30	0.1	
TUL	122.41	50	Pdiff	36	26.00	3.0X	
	Z 19s		6.18um			6.3Msz	
			LR	19	22.00		
TUL	122.41	50	ePKP	39	53.00	-0.7	
	0.7s		18.90nm				
TCF	122.48	324	iPKPc	39	53.60	0.1	
	0.9s		19.65nm				
LDF	122.50	327	iPKPc	39	53.20	-0.2	
	1.2s		17.85nm				
FLN	122.59	328	iPKPc	39	53.40	-0.1	
	0.9s		13.10nm				
LSF	122.90	324	iPKPc	39	53.90	-0.4	
	0.9s		11.45nm				
CAF	123.29	323	ePKP	39	55.50	0.4	
	1.1s		24.40nm				
LPF	123.32	327	iPKPc	39	55.10	0.1	
	1.3s		46.95nm				
RJF	123.42	323	ePKP	39	55.50	0.2	
	1.1s		17.10nm				
MFF	123.66	325	iPKPc	39	55.50	-0.3	
	1.3s		28.90nm				
LPO	123.95	323	ePKP	39	56.60	0.2	
	1.0s		28.00nm				
UYO	124.05	51	iPKPd	39	55.80	-1.1	
LFF	124.08	323	ePKP	39	56.60	0.0	
	1.0s		22.00nm				
EPF	125.35	322	ePKP	39	58.80	-0.4	
	0.9s		9.85nm				
SCH	126.10	17	ePKP	40	00.00	-0.3	
EBR	126.42	319	(PKP)	40	04.00	2.7X	
			e	41	40.00		
			e	44	38.00		
TOL	129.84	321	ePKPc	40	08.00	0.1	
			ePP	41	23.00		
MAL	131.83	317	iPKP	40	16.00	4.3X	
			iPP	42	36.00		
PTO	131.83	325	ePKP	40	02.60	-9.0X	
LNV	133.69	147	ePKP	40	17.00	1.7	
IFR	134.02	314	iPKP	40	18.00	1.8	
HRV	134.35	29	ePKP	40	16.79	0.5	
			ed	40	20.43		
			epP	42	33.73		
			eSKP	43	41.87		
SAN	134.48	147	ePKP	40	17.00	0.1	
PEL	134.70	147	ePKP	40	18.10	0.7	
TIO	136.90	312	ePKP	40	22.50	0.8	
			i	40	24.00		
MRA	137.83	151	e(PKP)	40	12.80	-10.4X	
TCA	139.24	152	e(PKP)	40	15.00	-11.0X	
KIC	141.52	275	PKPc	40	24.26	-6.2X	
TIC	141.79	275	PKP	40	25.26	-5.7X	
LIC	141.81	275	PKPc	40	25.24	-5.7X	
UPA	143.75	81	ePKP	40	31.20	-3.0X	
	1.2s		281.25nm				
SLA	144.05	144	ePKPd	40	37.60	2.9X	
RECU	144.46	97	PKPd	40	36.30	0.1	
TUNG	144.47	98	ePKP	40	34.00	-2.0	
GGP	144.50	96	PKP+	40	34.60	-1.8	
OUR	144.57	96	iPKP+	40	35.30	-0.9	
CTFE	144.73	316	iPKP	40	36.00	0.5	
COTA	144.82	95	PKPd	40	36.40	-0.4	
CAYA	145.14	96	PKPd	40	37.00	-0.3	
ARE	145.40	127	iPKPc	40	38.50	1.2	
	1.0s		255.00nm				
TBT	145.73	318	iPKPd	40	38.70	1.5	
			i	40	51.00		
PSO	145.92	94	ePKP	40	39.50	1.0	
LPB	147.99	131	PKPc	40	44.60	2.9X	
	1.0s		350.00nm				
	Z 24s		3.49um			6.1MszX	
			LR	36	16.00		
ZOBO	148.13	130	iPKPc	40	43.80	1.7	
			eLR	35	16.00		
CCH	148.89	134	PKP	40	45.90	2.9X	
			i	40	49.40		
FUO	149.68	86	ePKP	40	50.00	5.7X	
BMG	150.27	83	ePKP	40	54.00	9.1X	
VAO	152.71	173	ePKP	40	47.10	-1.1	
			e	40	56.50		
PPD	152.77	164	ePKP	40	50.00	1.7	
			e	40	56.60		
MGP	153.01	58	PKP	40	55.50	6.9X	
TOV	153.17	77	ePKP	40	48.80	-0.3	
BMA	153.24	178	ePKP	40	50.60	1.7	
			e	41	09.70		
			e	41	14.50		
GUAC	155.53	75	ePKP	40	53.00	0.6	
CAR	155.79	74	iPKP	40	56.00	3.3X	
LLAV	155.91	74	ePKP	40	53.00	0.1	
OLLA	156.02	75	ePKP	40	50.00	-3.0X	
BDF	159.73	167	ePKP	40	58.69	1.3	
			e	41	01.18		
			ePP	45	11.07		
PDCR	162.84	194	ePKP	41	01.40	1.0	
			e	41	49.20		
ITR	166.21	201	iPKPc	41	03.50	0.0	
			e	41	08.40		
			e	42	02.70		

S.D. = 1.0 on 274 of 328 obs.

SEP 04, 1989 06h 26m 52.43± 0.62s
37.034 N ± 6.5km 27.999 E ± 6.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.9 (ATH).

YER	0.25	66	iPg	26	57.40	-0.3
SMG	1.15	306	ePb	27	15.20	1.4
IZM	1.48	337	iPn	27	19.40	0.2
ELL	1.56	100	iPn	27	21.90	1.6
KSL	1.57	125	ePn	27	22.40	2.1
KAP	1.62	204	ePg	27	21.90	0.7
KHL	1.77	43	iPn	27	23.50	0.2
APE	1.98	272	ePn	27	28.20	1.9
BCK	2.11	78	ePn	27	29.10	0.8
PRK	2.59	329	ePg	27	43.20	8.1X
DST	2.61	11	iPn	27	33.50	-2.0
ALT	2.62	39	ePn	27	35.00	-0.6
NPS	2.62	228	ePn	27	32.70	-2.8
EZN	3.08	335	ePn	27	41.50	-0.5
EDC	3.31	358	iPn	27	44.50	-0.8
BNT	3.32	359	iPn	27	45.50	0.1
BBTK	4.67	52	eP	28	06.00	1.2
HRI	7.37	118	iPc	28	40.50	-2.2
DSI	8.18	130	eP	28	53.00	-1.0
MBH	9.25	140	eP	29	05.00	-3.7X

S.D. = 1.5 on 18 of 20 obs.

& SEP 04, 1989 06h 34m 54.44s
47.898 N 122.640 W
DEPTH = 17.5km
WASHINGTON (29)
<SEA-P>. CL 2.7 (SEA). Felt at Hood Head, just west of Port Gamble.

PGW	0.08	160	iPd	34	57.91	0.0
HDW	0.37	228	iPd	35	01.52	-0.8
			eS	35	07.13	
BLH	0.41	98	eP	35	02.32	-0.6
OHW	0.43	10	iPd	35	02.39	-0.8
			eS	35	08.47	
SPW	0.44	142	iP	35	03.59	0.3
JCW	0.56	58	iPd	35	04.66	-0.8
			eS	35	12.19	
HTW	0.59	99	iPc	35	05.32	-0.7
CMW	0.63	33	iPd	35	06.03	-0.7
RMW	0.71	128	iPc	35	07.25	-0.9
SMW	0.75	220	iPd	35	07.66	-1.0
			eS	35	08.66	

04d 06h

MCW 0.79 351 eP 35 08.46 -1.0
GHW 0.89 164 eP 35 09.84 -1.2
GSM 0.90 140 iPd 35 10.15 -1.2
RPW 0.93 53 iPd 35 11.10 -0.7
MBW 1.01 29 iPd 35 12.63 -0.7
FMW 1.17 145 iPc 35 14.45 -1.6
APW 1.25 180 eP 35 15.67 -1.4
LMW 1.25 169 eP 35 15.82 -1.4
ONR 1.28 217 eP 35 16.82 -0.6
WPW 1.41 148 eP 35 18.75 -0.7
20 obs. associated

? SEP 04, 1989 06h 51m 24.61± 2.87s
9.309 S ±11.4km 123.683 E ±36.8km
DEPTH = 33.0km (normal)
3.7mb (2 obs.)
TIMOR (289)

AAI 7.16 39 eP 53 09.80 0.1
KNA 8.10 143 eP 53 24.00 1.1
eS 54 42.00
WB5 14.73 137 eP 54 52.90 0.4
eS 57 20.00
WRA 14.76 137 Pc 54 51.30 -1.6
0.5s 0.80nm 3.4mb
WARB 17.02 171 eP 55 21.70 -0.1
ASPA 17.30 147 iPc 55 25.50 0.1
0.6s 8.00nm 4.0mb
S.D. = 1.1 on 6 of 6 obs.

SEP 04, 1989 07h 12m 35.78± 0.39s
37.101 N ± 5.1km 140.736 E ± 6.5km
DEPTH = 87.9 ± 3.8 km
4.5mb (4 obs.)
HONSHU, JAPAN (227)
Felt (III JMA) at Utsunamiyo; (II JMA) at Onahamo and Mito; (I JMA) at Shirokawo, Fukushimo, Sendai and Tokyo.

ONA 0.21 139 iP+ 12 48.70 0.1
iS 12 57.60
SHR 0.41 273 P 12 00.00 -49.8X
FKS 0.69 342 iP+ 12 52.50 0.3
iS 13 03.60
MIT 0.75 196 iP+ 12 52.70 -0.1
iS 13 04.90
UTS 0.89 232 iP+ 12 54.00 -0.3
iS 13 06.60
KAKJ 1.00 207 iP+ 12 55.00 -0.6
S 13 08.20
SEN 1.16 6 iPd 12 57.80 0.2
S 13 13.50
YAMJ 1.21 333 iPd 12 58.40 0.3
S 13 14.70
NIIJ 1.39 276 iP+ 13 00.50 0.1
KMG 1.44 229 P 13 01.50 0.4
iS 13 19.80
TOK 1.62 209 iP 13 03.40 0.1
iS 13 23.60
CHJJ 1.75 234 iPd 13 05.10 0.0
S 13 25.30
MAT 2.10 255 iPd 13 10.50 0.6
iS 13 38.80
OFUJ 2.11 20 iPd 13 10.00 0.1
S 13 34.90
MTMJ 2.41 259 iPd 13 14.60 0.5
IIDJ 2.80 236 P 13 20.40 1.0
S 13 54.30
AOMJ 3.47 355 eP 13 30.20 1.7
TSRJ 4.14 249 iPd 13 38.70 0.8
WKYJ 5.08 237 eP 13 49.50 -1.5
MRRJ 5.32 3 P 13 52.70 -1.6
eS 14 54.40
HOOJ 5.63 20 P 13 56.20 -2.4
eS 14 58.50
YONJ 6.19 254 eP 14 05.60 -0.7
TKSJ 6.28 242 eP 14 06.90 -0.6
KUSJ 6.72 26 P 14 09.40 -4.2X
eS 15 20.50
ASAJ 7.16 11 P 14 16.40 -3.2X
eS 15 37.30
CHTO 40.78 255 e(P) 20 11.80 1.9
FBA 49.34 32 e(P) 21 19.10 1.6
1.0s 0.40nm 3.4mb X
INK 54.58 27 eP 21 56.00 -0.7
WRA 57.06 187 Pd 22 14.00 -0.9

0.6s 1.30nm 4.2mb
GBA 60.68 265 P 22 40.00 -0.2
SUF 67.68 333 iP 23 24.10 -1.0
0.5s 4.90nm 4.7mb
NUR 69.64 332 eP 23 36.30 -0.8
NB2 73.92 337 P 24 01.90 -0.8
0.7s 3.00nm 4.3mb
FFC 73.94 32 eP 24 03.00 0.2
0.9s 10.00nm 4.7mb
CMB 74.27 54 ePc 24 06.30 1.2
LRM 74.48 44 eP 24 07.30 0.8
e 24 37.10
PRS 74.60 56 eP 24 08.00 1.0
FRI 75.31 55 eP 24 11.80 0.8
TAU 79.86 175 eP 24 27.00 -8.7X
BUL 119.24 266 iPdiff27 24.20 -14.2X
0.6s 3.33nm
MAW 119.37 205 ePdiff27 37.00 -0.6
SPA 126.91 180 e(Pdif28 21.90 10.6X
0.8s 24.17nm
Z 20s 1.31um 5.6Msz
ZOBO 147.12 59 ePKP 32 08.00 -0.9
LPB 147.32 59 PKP 32 13.50 4.5X
S.D. = 1.0 on 37 of 44 obs.

SEP 04, 1989 07h 18m 32.80± 0.32s
33.329 S ± 6.8km 178.805 W ± 6.6km
DEPTH = 33.0km (normal)
5.3mb (11 obs.)
SOUTH OF KERMADEC ISLANDS (179)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 16C
Centroid Location:
Origin Time 07:18:23.3 1.3
Lat 33.15S FIX; Lon 177.64W FIX
Dep 15.0 FIX Half-duration 2.2
Moment Tensor; Scale 10**17 Nm
Mrr= 0.73 0.25 Mtt= 0.60 0.31
Mff=-1.33 0.20 Mrt=-0.69 0.56
Mrf= 1.49 0.75 Mtf=-0.83 0.27
Principal Axes:
T Val= 2.16 Plg=46 Azm=219
N 0.02 34 352
P -2.18 25 100
Best Double Couple:Mo=2.2*10**17
NP1:Strike=237 Dip=37 Slip= 159
NP2: 344 78 55

RAO 4.14 11 eP 19 25.00 -10.2X
eS 20 13.10
HBZ 4.87 208 eP 19 50.50 4.9X
KRP 6.50 224 P 20 16.00 7.4X
HITZ 6.94 218 eP 20 18.40 3.6X
RATZ 7.06 217 eP 20 22.00 5.5X
PGZ 8.27 207 eP 20 34.90 1.6
MNG 8.59 210 eP 20 38.40 0.6
eS 22 16.70
KIW 9.04 212 eP 20 44.60 0.6
BLW 9.22 208 eP 20 45.10 -1.4
MRW 9.43 211 eP 20 48.00 -1.3
eS 22 37.20
WEL 9.45 211 eP 20 53.00 3.4X
S 22 36.00
TCW 9.60 213 P 20 51.40 -0.4
COO 24.98 268 iPc 23 59.30 4.4X
0.5s 17.00nm 4.9mb
BRS 25.18 276 iP 23 59.00 2.1
CNB 26.31 257 iPc 24 11.20 3.9X
CAN 26.60 257 eP 24 13.80 3.8X
i 31 12.10
BWA 27.17 259 eP 24 16.00 0.8
e 31 12.50
RMO 28.86 275 iPd 24 32.80 2.4
e 27 40.00
TOO 29.28 251 eP 24 38.50 4.3X
BFD 31.65 252 eP 24 57.80 2.7
iScP 31 28.00
CTA 33.72 284 iPd 25 14.00 0.7
0.6s 71.33nm 5.8mb
ADE 35.01 255 iPd 25 26.50 2.2
0.4s 20.34nm 5.4mb
QIS 38.95 278 iPc 25 57.10 -0.5
0.6s 26.00nm 5.2mb
PMG 39.34 299 eP 25 59.50 -1.3
LAT 41.34 302 eP 26 17.00 -0.2
ASPA 42.36 271 iPc 26 25.80 0.1

0.8s 112.00nm 5.6mb
Z 17s 2.43um 5.1MszX
eS 32 44.00
LR 44 14.70
WRA 43.61 276 Pc 26 34.20 -1.6
0.5s 61.10nm 5.6mb
WB5 43.62 276 iPc 26 35.50 -0.4
MNDI 44.08 299 eP 26 40.00 0.1
FORR 44.65 258 iPc 26 45.00 0.9
0.4s 28.00nm 5.5mb
WARB 47.45 264 iPd 27 05.60 -0.8
0.4s 8.00nm 5.1mb
MTN 49.84 282 eP 27 24.40 -0.5
KNA 50.28 277 eP 27 27.50 -0.7
COOL 50.31 255 eP 27 27.70 -0.7
0.5s 19.00nm 5.4mb
NWAO 52.78 252 eP 27 45.60 -1.4
KLB 52.80 253 eP 27 46.20 -1.0
MUN 53.91 252 eP 27 54.50 -0.8
BAL 53.99 254 eP 27 55.00 -0.9
MRWA 55.07 255 eP 28 03.00 -0.9
NANU 58.16 262 eP 28 25.00 -0.9
0.5s 14.00nm 5.3mb
MAW 69.34 201 eP 29 42.00 3.4X
SNA 76.62 179 iPd 30 26.30 5.0X
0.9s 8.40nm 4.8mb
MAT 80.27 326 (P) 30 38.00 -3.7X
PRS 87.63 43 e(P) 31 19.00 0.1
PRI 87.90 43 e(P) 31 21.70 1.3
BAR 87.93 48 eP 31 27.00 6.5X
MHC 88.19 42 e(P) 31 25.00 3.2X
PLM 88.26 48 eP 31 23.00 0.7
RVR 88.38 47 eP 31 24.00 1.5
SBB 88.57 46 eP 31 23.00 -0.6
ISA 88.85 45 eP 31 25.00 0.1
FRI 89.05 43 e(P) 31 25.10 -0.5
TPC 89.27 48 eP 31 27.00 0.1
GLA 89.33 49 eP 31 28.00 0.8
CMB 89.39 42 ePd 31 26.70 -0.6
CLC 89.48 45 eP 31 28.00 0.2
WDC 90.01 39 eP 31 29.50 -0.6
PNT 97.64 35 eP 32 05.00 0.2
INK 106.78 16 ePKP 36 54.50 -0.9
GBA 108.75 274 PKP 37 01.00 0.4
0.6s 2.20nm
MBC 115.41 13 ePKP 37 20.00 8.4X
BUL 120.73 210 iPKPc 37 24.20 0.6
FRB 128.22 32 ePKP 37 36.00 -0.5
KEV 140.81 346 ePKP 38 00.00 0.1
SOD 142.83 344 ePKP 38 02.00 -1.6
AKU 145.58 14 iPKP 38 08.00 -0.3
0.9s 33.61nm
MSL 145.63 287 ePKPc 38 08.50 -0.8
REY 146.02 18 ePKP 38 14.90 5.8X
SUF 146.63 339 iPKP 38 09.60 -0.5
0.5s 113.20nm
BNG 147.01 213 iPKPc 38 14.70 2.5X
0.7s 50.00nm
ic 39 48.40
NUR 148.79 338 iPKP 38 15.80 2.2X
0.7s 112.10nm
Z 19s 2.30um 6.0MszX
LR 42 40.00
RGS 149.72 352 iPKP 38 18.00 3.1X
AYN 149.95 271 iPKP+ 38 21.70 5.3X
HQL 150.87 271 iPKP+ 38 23.70 6.0X
NB2 151.52 350 PKP 38 22.40 4.6X
0.6s 34.20nm
LIC 152.42 167 PKP 38 27.12 6.7X
KIC 152.60 167 PKP 38 27.40 6.7X
TIC 152.83 166 PKP 38 27.02 6.0X
MLR 157.45 310 ePKPc 38 36.00 9.5X
CLL 160.07 338 i(PKP)38 43.10 14.1X
i 39 12.60
i 39 19.60
KHC 161.71 333 ePKP 38 32.40 1.6
e 39 18.50
S.D. = 1.1 on 53 of 81 obs.

? SEP 04, 1989 08h 11m 58.36± 3.77s
37.089 N ±33.4km 3.729 W ±12.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.6 (MDD).

AFC 0.22 42 iP 12 03.00 -0.2
iS 12 06.00

EBAN	1.07	358	eP	12	18.60	0.0
			eS	12	33.50	
EHOR	1.41	302	eP	12	24.00	-0.1
			eS	12	42.50	
EVIA	1.82	32	eP	12	30.40	0.3
			eS	12	54.00	

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

SEP 04, 1989 08h 12m 41.87± 0.77s
39.276 N ± 7.7km 29.126 E ± 8.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.51	311	iPg	12	51.50	-0.7
			iSg	12	58.50	
ALT	0.80	106	ePg	12	56.60	-0.8
KHL	1.00	162	iPg	13	01.50	0.6
			eSg	13	13.50	
YLV	1.30	8	iPn	13	07.00	1.0
BNT	1.42	320	iPn	13	08.50	0.7
EDC	1.45	318	ePn	13	07.50	-0.6
HRT	1.60	15	ePn	13	10.00	-0.3

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

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* SEP 04, 1989 08h 31m 29.74± 1.06s
33.172 S ±13.5km 179.272 W ±16.5km
DEPTH = 33.0km (normal)
SOUTH OF KERMADEC ISLANDS (179)

KRP	6.35	220	eP	33	11.00	7.5X
WEL	9.39	209	eP	33	47.00	1.3
			S	35	30.00	
DZM	16.79	308	iPc	35	25.90	1.9
BRS	24.78	276	eP	36	43.00	-6.9X
BWA	26.82	258	eP	37	09.80	0.9
CTA	33.30	284	iPd	38	07.90	1.3
	0.6s		20.00nm			5.2mb
QIS	38 54	278	eP	38	50.70	-0.4
	0.4s		5.00nm			4.7mb
ASPA	41.97	271	eP	39	18.50	-0.9
	0.8s		27.00nm			5.0mb
			eS	45	37.20	
WRA	43.21	276	Pc	39	28.70	-0.8
	0.5s		22.80nm			5.2mb
WB5	43.21	276	iPc	39	28.90	-0.7
FORR	44.30	258	eP	39	38.30	0.1
	0.4s		16.00nm			5.2mb
WARB	47.07	264	eP	39	59.00	-1.4
COOL	49.97	256	eP	40	21.00	-1.8
SPA	57.00	180	ePd	41	15.10	0.6
	1.0s		13.50nm			4.9mb
SUF	146.34	339	iPKP	51	02.80	-3.8X
	0.5s		29.60nm			
BNG	146.92	214	iPKPc	51	08.40	-0.7
	0.7s		18.00nm			
			id	51	18.70	
NUR	148.49	337	iPKP	51	09.40	-0.7
	0.6s		37.80nm			
NB2	151.30	349	PKP	51	15.60	1.2
	0.7s		12.30nm			

S.D. = 1.2 on 15 of 18 obs.

? SEP 04, 1989 08h 50m 57.49± 2.02s
46.702 N ±19.0km 150.678 E ±21.6km
DEPTH = 165.8 ± 20.8 km
4.2mb (7 obs.)
KURIL ISLANDS (221)

KUSJ	5.56	232	iPd	52	18.50	-0.8
			S	53	18.00	
ASAJ	6.22	248	P	52	32.20	4.2X
HOOJ	6.82	233	P	52	36.30	0.3
			eS	53	48.20	
MRRJ	8.08	242	eP	52	53.50	0.7
			eS	54	18.60	
FBA	37.24	38	iP	57	54.20	0.2
	0.5s		2.80nm			4.2mb
INK	42.59	32	eP	58	38.00	0.1
SUF	62.35	335	eP	01	01.00	-2.9X
NB2	67.72	340	P	01	36.60	-1.8
	0.7s		2.10nm			4.0mb
WRA	67.95	197	P	01	40.00	-0.2
	0.4s		0.40nm			3.6mb
AVF	82.59	338	eP	03	03.30	0.6
	0.5s		2.90nm			4.3mb
SMF	82.59	338	eP	03	03.30	0.5
LPG	82.85	335	eP	03	06.60	2.1X
	0.5s		2.90nm			4.3mb
MAF	83.32	338	eP	03	06.00	-0.5
	0.6s		4.50nm			4.4mb
MFF	83.62	340	eP	03	09.00	1.0
	0.6s		2.50nm			4.2mb

S.D. = 1.0 on 11 of 14 obs.

? SEP 04, 1989 09h 18m 39.47± 5.87s
5.154 S ±39.3km 148.011 E ±52.9km
DEPTH = 33.0km (normal)
4.5mb (1 obs.)
NEW BRITAIN REGION (192)

LAT	1.80	214	eP	19	09.00	0.3
			eS	19	27.00	
PMG	4.31	191	eP	19	44.50	0.1
KDB	4.37	191	eP	19	45.00	-0.3
WB5	19.76	221	eP	23	09.10	-0.7
WRA	19.83	221	Pd	23	10.00	-0.5
	0.2s		42.40nm			5.4mb X
ASPA	22.88	215	iPd	23	42.60	1.1
	0.6s		10.00nm			4.5mb
WARB	29.24	222	eP	24	32.00	-8.7X

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

SEP 04, 1989 10h 48m 34.31± 0.40s
5.597 N ± 5.9km 126.561 E ±11.0km
DEPTH = 65.6km (2 depth phases)
4.7mb (5 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	1.78	327	eP	49	00.80	-2.6
			iS	49	29.00	
OCP	10.48	329	eP	51	05.00	0.8
BAG	12.24	332	eP	51	29.00	0.9
GUMO	19.71	65	eP	53	01.00	-0.3
Z	20s		0.80um			
ANP	20.07	347	e(P)	53	22.00	16.9X
OZH	20.70	339	eP	53	11.00	-0.5
Z	16s		0.60um			4.1MszX
			sS	57	09.00	
QIZ	21.06	311	eP	53	15.80	0.6
E	18s		1.60um			
			eS	57	09.00	
SNG	25.83	275	eP	54	05.40	4.0X
SSE	25.86	349	eP	54	06.00	4.4X
Z	20s		0.60um			4.1Msz
N	16s		0.60um			
			pP	54	21.00	63km
			sS	58	56.00	
WB5	26.46	163	eP	54	06.70	-0.5
			i	54	22.70	68km
WRA	26.51	163	Pc	54	09.10	1.5
	0.5s		15.80nm			4.8mb
PPI	26.81	258	eP	54	14.00	3.6X
LOE	26.97	298	eP	54	10.00	-1.9
WHN	27.35	337	eP	54	17.20	2.0
Z	20s		1.38um			4.5Msz
N	10s		1.89um			
E	20s		1.03um			
			sS	59	11.00	
QIS	28.98	154	eP	54	29.00	-1.0
ASPA	29.95	166	eP	54	37.90	-0.8
	0.9s		9.00nm			4.5mb
Z	19s		0.40um			4.1Msz
			LR	09	00.70	
CHG	29.96	298	eP	54	41.00	2.2
CHTO	29.96	298	eP	54	39.80	1.0
	1.0s		5.25nm			4.2mb
NANU	29.99	201	eP	54	38.80	-0.2
WARB	31.59	180	eP	54	53.00	0.0
TIA	31.68	345	eP	54	55.20	1.5
XAN	32.69	332	P	55	01.00	-1.6
CD2	33.06	322	P	55	10.60	4.7X
TIY	34.46	340	eP	55	18.00	0.0
N	15s		0.60um			
BJI	35.54	346	eP	55	26.00	-1.0
Z	20s		0.30um			4.1Msz
MRWA	36.07	196	eP	55	30.00	-1.6
FORR	36.27	178	eP	55	32.30	-0.9
	0.4s		8.00nm			5.0mb
LZH	36.82	329	eP	55	38.00	0.0
	2.5s		0.03nm			1.8mb X
Z	20s		1.20um			4.7Msz
E	10s		0.20um			
BAL	37 21	194	eP	55	40.20	-1.0
KLB	37.92	192	eP	55	46.70	-0.4
CN2	38.06	359	eP	55	52.60	4.5X
MUN	38.65	194	eP	55	53.60	0.4
NWAO	39.32	192	eP	55	58.00	-0.8
GTA	41.42	328	eP	56	14.80	-1.4
Z	18s		0.90um			4.7Msz
N	14s		0.50um			
ADE	41.94	165	iPd	56	21.90	1.6
BWA	44.84	154	eP	56	45.70	1.8
CAN	45.85	154	eP	56	52.80	1.0
HYB	48.35	288	eP	57	13.00	1.3
GBA	49.01	283	P	57	18.00	1.2
	0.9s		10.00nm			4.8mb
WMO	51.11	324	eP	57	31.50	-1.1
INK	88.50	21	eP	01	20.00	-0.5
LPB	161.99	128	(PKP)	08	40.00	9.6X
ZOBO	162.12	128	ePKP	08	38.00	7.3X

S.D. = 1.3 on 35 of 43 obs.

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* SEP 04, 1989 12h 26m 03.50± 1.26s
36.952 N ±12.8km 29.361 E ± 8.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.48	115	iPg	26	13.40	0.0
			iSg	26	22.90	
YER	0.88	282	ePn	26	20.50	0.0
BCK	1.10	62	ePn	26	24.00	-0.3
KHL	1.37	5	iPn	26	27.40	-1.4
ALT	2.18	16	ePn	26	42.00	1.6

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

? SEP 04, 1989 12h 54m 35.87± 5.83s
41.200 N ±40.7km 23.180 E ±27.0km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

MMB	0.57	46	iPgd	54	47.00	-0.4
KKB	0.67	354	iPgc	54	48.00	-1.2
RZN	1.25	67	ePg	54	59.00	-0.3
VTS	1.39	1	iP	55	02.00	0.6
PGB	1.54	28	eP	55	05.00	1.6
KDZ	1.74	74	eP	55	06.00	-0.3

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

SEP 04, 1989 13h 14m 58.25± 0.12s
55.543 N ± 2.9km 156.835 W ± 2.2km
DEPTH = 11.4km (geophysicist)
6.5mb (83 obs.) 6.9Msz (21 obs.)
SOUTH OF ALASKA (17)

ML 6.9 (PMR), Ms 6.7 (BRK), 6.4 (PAS). Felt (V) at Chignik, Chignik Lagoon and Port Heiden; (IV) at Perryville, Sand Point and Togiak; (III) at Egegik, Homer, King Cove, Pilot Point and Unalaska; (II) at King Salmon. Also felt at Cold Bay and Kenai. Two events about 2.5 seconds apart. Depth from broadband displacement seismograms, based on the second event.

FAULT PLANE SOLUTION: P-Waves
NP1:Strike= 65 Dip=81 Slip= 90
NP2: 245 9 90
Principal Axes:
T Plg=54 Azm=335
P 36 155

Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.

RADIATED ENERGY
No. of sto: 16 Focal mech. F
Energy 0.4±0.1•10••15 Nm

MOMENT TENSOR SOLUTION
Dep 30 No. of sto: 22
Moment Tensor; Scale 10••19 Nm
Mrr= 1.50 Mtt=-0.91
Mff=-0.60 Mrt= 3.16
Mrf= 0.66 Mtf=-1.09
Principal axes:
T Vol= 3.68 Plg=55 Azm= 2
N -0.06 14 251
P -3.62 31 153
Best Double Couple:Mo=3.7•10••19

04d 13h

NP1:Strike=205 Dip=18 Slip= 42
NP2: 74 78 104
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 15S, 38C M.W.: 11S, 25C
Centroid Location:
Origin Time 13:15: 8.9 0.2
Lat 55.66N 0.02 Lon 157.23W 0.05
Dep 25.7 BDY Half-duration 10.2
Moment Tensor; Scale 10**19 Nm
Mrr= 1.17 0.02 Mtt=-1.03 0.02
Mff=-0.15 0.02 Mrt= 3.87 0.17
Mrf= 2.09 0.11 Mtf=-0.57 0.02
Principal Axes:
T Val= 4.51 Plg=53 Azm=331
N 0.13 1 62
P -4.64 37 152
Best Double Couple:Mo=4.6*10**19
NP1:Strike=247 Dip= 8 Slip= 95
NP2: 62 82 89

SDN 2.10 266 iPd 15 35.00 1.4
KDC 3.26 46 iPc 15 48.30 -1.9
MID 6.87 51 eP 16 40.00 -1.2
PMS 6.87 31 ePc 16 38.40 -3.0X
PMR 7.28 30 eP 16 43.50 -3.4X
TOA 8.59 36 eP 17 02.40 -2.9X
YKU 10.03 59 eP 17 26.00 1.0
FBA 10.39 22 eP 17 25.60 -4.5X
IMA 10.67 7 ePc 17 32.60 -1.4
HYT 11.47 55 P 17 44.00 -0.9
SIT 12.04 74 eP 17 48.00 -4.4X
Z 19s 564.00um
DWY 12.19 39 P 17 51.70 -2.7
ADK 12.31 261 eP 17 54.20 -1.8
BRW 15.82 0 eP 18 41.10 -1.0
ILT 16.01 329 iPc 18 45.00 0.4
eS 21 47.00
INK 16.69 31 eP 18 50.00 -3.2X
SMY 17.20 273 e(P) 19 04.60 5.0X
Z 22s 672.00um
PGC 21.48 95 eP 19 50.00 1.5
1.2s 507.00nm 5.8mb
MCW 21.81 94 eP 19 53.00 1.1
BMW 22.81 99 eP 20 02.40 0.6
RMW 23.05 96 eP 20 05.00 0.8
PNT 23.32 90 eP 20 07.00 0.3
1.6s 2205.00nm 6.5mb
LON 23.45 97 ePd 20 10.27 2.2
ed 20 12.43
DPW 24.87 92 P 20 20.50 -1.3
MBC 24.93 20 ePc 20 21.50 -0.6
0.6s 378.00nm 6.2mb
EDM 25.13 77 iP 20 24.00 -0.2
PET 25.78 283 iPc 20 29.00 -1.2
iS 25 00.00
FHC 26.10 111 eP 20 35.00 1.6
1.0s 540.00nm 6.2mb
LBFM 26.84 107 eP 20 40.60 0.2
WDC 27.03 109 ePd 20 42.70 0.8
SES 27.65 81 eP 20 46.00 -1.5
MIN 27.70 108 ePd 20 47.10 -1.1
ORV 28.32 110 ePd 20 52.10 -1.5
BRK 29.15 113 ePd 21 02.80 1.7
Z 20s 129.00um 6.5Msz
e 21 13.00
eS 25 58.00
eLR 28 26.00
BKS 29.16 113 eP 21 02.60 1.4
2.0s 2190.00nm 6.6mb
Z 20s 155.00um 6.6Msz
N 20s 127.00um
E 20s 88.00um
ePP 22 04.00
e 25 31.00
eS 26 02.00
eLQ 27 32.00
e 27 49.90
eLR 28 19.00
LRM 29.29 91 eP 21 01.50 -1.1
PCC 29.37 113 ePd 21 03.50 0.5
MHC 29.87 113 e(P) 21 06.70 -1.1
Z 20s 174.00um 6.7Msz
N 20s 130.00um
E 20s 171.00um
i 21 20.33
i 21 42.50

ePP 22 08.00
iS 25 58.00
eLQ 27 47.00
eLR 28 43.00
GCC 29.92 114 e(P) 21 06.50 -1.5
ARN 29.92 113 eP 21 07.00 -1.1
CMB 30.02 110 ePd 21 08.73 -0.3
ed 21 11.22
ed 21 14.53
SAO 30.41 113 eP 21 13.60 1.2
Z 20s 244.00um 6.8Msz
N 20s 120.00um
E 20s 170.00um
ePP 22 16.00
eS 26 20.00
eLQ 27 56.00
eLR 28 53.00
PRS 30.78 114 ePd 21 14.50 -1.1
LLA 30.79 113 ePd 21 15.00 -0.7
FRI 31.16 111 ePd 21 17.40 -1.5
PRI 31.29 113 ePd 21 21.10 0.8
IMW 31.30 92 eP 21 20.00 -0.5
TNP 31.69 107 eP 21 22.50 -1.4
BW06 32.79 93 eP 21 32.50 -0.9
ISA 32.81 111 eP 21 33.00 -0.5
SYP 32.89 114 eP 21 37.00 2.7X
CLC 33.16 110 eP 21 35.00 -1.5
OPA 33.82 182 P 21 46.00 3.8X
SBB 33.90 112 eP 21 42.00 -0.9
GSC 33.97 110 eP 21 44.00 0.4
TIK 33.99 327 iPc 21 41.50 -1.8
eS 27 11.00
KIP 34.08 182 ePd 21 48.24 3.7X
ec 21 53.21
ePP 22 56.35
eS 27 14.41
PAS 34.13 113 ePd 21 45.28 0.4
ed 21 47.76
ec 21 50.25
e 21 51.57
ePP 23 01.50
ePcP 24 03.00
eS 27 14.77
eLg 29 34.00
eLR 31 00.00
MWC 34.13 112 eP 21 44.00 -1.1
MSU 34.17 101 eP 21 45.00 -0.5
RVR 34.67 112 eP 21 47.00 -2.5
TPC 35.28 110 eP 21 54.00 -0.8
PLM 35.43 112 eP 21 55.00 -1.2
PFO 35.45 111 ePc 21 58.28 2.0
e 22 05.07
ePP 23 10.36
CPE 35.68 113 eP 22 03.00 4.9X
BAR 36.06 112 eP 22 01.00 -0.3
IKP 36.38 112 eP 22 09.00 4.9X
GLA 36.74 110 eP 22 07.00 -0.1
RSON 36.95 70 eP 22 07.50 -1.1
1.0s 569.41nm 6.3mb
GOL 37.19 93 eP 22 10.00 -1.1
GLD 37.24 93 eP 22 11.00 -0.4
1.5s 1406.25nm 6.5mb
Z 18s 229.99um 7.0Msz
YSS 37.64 283 iPc 22 14.00 -0.5
eS 27 46.00
KUSJ 38.93 277 P 22 23.10 -2.2
S 28 21.50
ASAJ 39.45 279 P 22 29.60 0.0
S 28 32.20
ANMO 39.92 100 ePd 22 34.93 1.0
ed 22 37.25
e 22 40.40
e 22 43.87
eS 28 42.76
eSS 31 42.86
ALQ 39.92 100 eP 22 33.50 -0.4
1.5s 229.17nm 5.6mb
Z 20s 131.21um 6.8Msz
epP 22 46.40 48kmX
esP 22 53.00
ePcP 24 17.10
e 27 07.00
ePcS 28 20.00
eS 28 44.00
eLR 32 07.00
HOOJ 40.19 277 eP 22 35.30 -0.4
S 28 43.90

MRRJ 41.41 278 P 22 44.60 -1.1
S 29 00.50
FRB 41.89 42 eP 22 49.00 -0.4
AOMJ 43.04 277 eP 22 59.90 0.8
OFUJ 43.31 274 P 23 00.90 -0.4
GDH 43.77 30 iPc 23 00.50 -4.1X
2.5s 2000.00nm 6.5mb
i 24 51.00
i 29 30.00
YAMJ 44.86 275 eP 23 13.40 -0.5
SIO 45.09 90 e(P) 23 13.10 -2.7
TUL 45.26 89 ePc- 23 15.60 -1.6
1.1s 133.50nm 5.8mb
Z 21s 19.12um 6.0Msz
eS 28 49.00
LR 36 31.00
DAG 45.31 13 iPc 23 15.30 -1.7
0.7s 54.79nm 5.6mb
KBS 45.62 3 iP 23 21.60 2.1
NIIJ 46.10 274 P 23 23.30 -0.4
KAKJ 46.16 273 P 23 23.50 -0.7
MDJ 46.31 289 ePc 23 23.77 -1.6
E 22s 301.00um
ec 23 26.58
ed 23 33.54
ePP 25 16.99
eS 30 07.83
e 33 20.18
FVM 46.84 83 eP 23 27.30 -2.3
CHJJ 46.94 273 P 23 30.20 -0.2
MAJO 47.04 274 ePc 23 29.82 -1.4
ec 23 32.80
MAT 47.04 274 iPc+ 23 30.00 -1.2
1.5s 1000.00nm 6.7mb
iS 30 22.60
MTMJ 47.24 275 P 23 31.60 -1.3
UYO 47.28 90 iPd 23 35.30 2.2
SCH 47.88 51 eP 23 36.00 -1 6
0.8s 175.00nm 6.2mb
IIDJ 47.96 274 P 23 38.50 0.0
TSRJ 49.02 275 P 23 46.30 -0.3
CN2 49.08 291 iPc 23 45.40 -1.5
5.0s 19.00nm 4.4mb X
N 16s 127.00um
E 18s 368.00um
pP 23 52.40 23kmX
PP 25 40.00
S 30 46.00
SS 34 10.00
WKYJ 50.19 274 eP 23 55.00 -0.7
DHN 50.24 70 eP 23 54.00 -1.9
YONJ 50.69 277 eP 23 58.90 -0.5
PTN 50.73 66 eP 23 57.00 -2.6
TKSJ 51.24 275 P 24 03.70 0.1
SNY 51.43 290 iPc 24 04.00 -0.9
6.0s 20.70nm 4.2mb X
N 17s 303.00um
E 15s 225.00um
PP 26 04.00
ScP 29 07.00
iS 31 22.00
SHK 51.61 277 ePc 24 05.80 -0.6
JNW 51.74 13 iPd 24 09.50 2.6
SCP 51.83 71 ePc 24 05.85 -2.1
ec 24 07.50
ed 24 10.81
ed 24 12.30
ePP 26 09.98
AGX 52.33 107 (P) 24 17.00 5.1X
CBM 52.56 60 eP 24 10.70 -2.7
SHNJ 52.79 278 eP 24 14.00 -1.3
BLA 52.98 76 eP 24 15.30 -1.5
IRK 53.46 311 ePc 24 19.00 -1.0
eS 32 04.00
PNJ 53.73 69 eP 24 22.70 0.6
i 24 24.30
i 24 28.60
CBN 53.94 73 eP 24 24.00 0.4
e 24 31.00
HRV 53.95 66 ePc 24 24.28 0.6
esPd 24 29.41
eS 31 56.48
eScS 34 10.90
eSS 35 34.70
KUMJ 54.12 277 eP 24 24.50 -0.6
DL2 54.56 289 Pc 24 26.00 -2.2
6.0s 12.60nm 4.1mb X

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     N  20s    292.00um
     E  15s     46.40um
                      pP     24 38.00   42kmX
                      PP     26 32.00
                      S      32 00.00
MRX      54.69 108 (P)       24 34.00    4.6X
KEV      54.98 358 ePc       24 29.01   -1.9
         0.6s    678.00nm          6.9mb
                      ec     24 31.83
                      ed     24 35.63
                      ePP    26 33.15
                      eS     32 10.88
                      eScS   34 19.59
                      eSS    35 58.08
                      eP'P'  54 20.00
KAGJ     55.09 275 eP        24 31.80   -0.5
AKU      55.11  19 iP        24 33.20    1.3
         2.0s   2305.88nm          6.9mb
IIC      55.69 106 (P)       24 37.00   -0.1
REY      55.71  22 iP        24 40.60    4.3X
CRX      55.76 106 (P)       24 38.00    0.5
MEX      56.09 106 (P)       24 44.00    4.1X
LOF      56.43   4 eP        24 40.95   -0.5
BJI      56.62 293 ePc+      24 41.43   -1.7
         8.0s     14.60nm            4.1mb X
     E  16s    184.00um
                      ec     24 44.58
                      ed     24 51.69
                      ePP    26 38.28
                      eS     32 36.87
                      eScS   34 31.92
III      56.71 107 (P)       24 43.00   -1.3
IIT      56.82 105 (P)       24 47.50    2.4X
APA      56.99 355 iPc       24 42.80   -2.6
                      iS     32 38.80
LVVM     57.26 103 (P)       24 51.00    3.1X
SOD      57.38 358 iP        24 45.80   -2.3
                      iP'P'  54 48.30
ACX      57.73 108 (P)       24 42.00   -9.2X
HHC      58.40 297 Pc        24 54.60   -1.2
         7.0s     15.90nm            4.2mb X
     Z  26s    188.00um              7.1MszX
                      S      33 00.00
                      ScS    34 35.70
TIA      58.96 290 Pc        24 57.60   -2.0
     N  17s    302.00um
     E  15s     88.20um
                      PP     27 10.00
                      S      33 03.00
BTO      59.36 298 iPc       25 01.00   -1.5
         7.0s     14.70nm            4.2mb X
     N  13s     72.70um
     E  13s     56.40um
                      PP     27 15.00
                      iS     33 12.00
                      sS     33 28.00
NSS      59.95   6 eP        25 05.02   -1.0
TIY      60.30 294 Pc        25 07.50   -1.5
         7.0s     14.00nm            4.2mb X
     E  15s    144.00um
                      sP     25 23.00
                      PP     27 20.50
                      S      33 25.50
SSE      60.60 283 iPc       25 09.00   -1.9
         6.0s      8.80nm            4.1mb X
     Z  20s     53.20um              6.7Msz
     N  15s     97.00um
                      sP     25 23.00
                      PP     27 26.00
                      iS     33 27.00
                      sS     33 45.00
                      ScS    34 56.00
                      SS     37 24.90
GUMO     61.15 251 ePc       25 13.15   -1.6
         0.7s    152.48nm          6.2mb
                      ed     25 16.80
                      ed     25 21.27
PJG      61.15 251 eP        25 11.00   -3.8X
NJ2      61.16 285 Pc        25 12.80   -1.9
         6.0s     13.60nm            4.3mb X
     N  15s     75.70um
                      PP     27 23.00
                      S      33 33.00
GUA      61.17 251 eP        25 11.50   -3.4X
         0.8s    244.78nm          6.4mb
     Z  20s     35.46um            6.5Msz
MOL      61.59   8 eP        25 17.10   -0.2

SCX      61.80 102 (P)       25 33.00   13.8X
SUF      62.05 358 iP        25 18.30   -2.1
SUE      62.84  10 eP        25 25.33   -0.2
HYA      62.86   9 eP        25 25.75    0.0
NB2      63.38   6 P         25 27.20   -2.0
ASK      63.44  10 eP        25 29.44   -0.1
TPX      63.50 103 (P)       25 38.50    8.0X
BER      63.56  10 eP        25 28.76   -1.5
ODD1     64.14   9 eP        25 33.25   -1.0
NUR      64.29 359 iP        25 33.20   -1.9
         1.0s   1532.00nm            7.1mb
     Z  19s      7.50um            5.9Msz
                      eS     34 08.00
                      iP'P'  54 26.90
                      LR     57 40.00
BLS1     64.67   9 eP        25 35.63   -2.2
KMY      64.70  10 eP        25 37.71   -0.1
WHN      64.77 288 Pc        25 37.00   -1.7
         1.2s      0.42nm            3.5mb X
     Z  20s     87.80um            6.9Msz
     N  20s    120.00um
     E  20s    123.00um
                      iS     34 18.00
UPP      64.86   3 iP        25 37.20   -1.6
                      iS     34 19.00
PUL      64.90 356 iPc       25 38.00   -1.0
                      iS     34 20.00
XAN      64.94 294 Pc        25 39.00   -0.8
     N  15s     95.60um
     E  15s     98.40um
                      S      34 24.00
ANP      64.98 278 iP+       25 40.00   -0.2
                      iS     34 20.00
GTA      65.26 304 iPc       25 39.60   -2.3
         6.0s     14.50nm            4.3mb X
     Z  16s    172.00um            7.3MszX
     E  16s    222.00um
                      PP     28 00.00
                      S      34 24.00
                      sS     34 35.00
LZH      65.93 299 ePc       25 44.96   -1.3
         3.0s   1204.00nm          6.6mb
     N  15s    417.50um
     E  17s    330.00um
                      ec     25 47.94
                      ed     25 53.90
                      ePP    28 13.43
                      eS     34 32.13
                      esS    34 43.00
                      PS     34 58.00
                      SS     39 00.00
EDR      65.97  15 eP        25 44.70   -1.3
ELO      66.23  16 eP        25 46.20   -1.5
EDU      66.26  15 eP        25 46.40   -1.4
         0.9s    478.00nm          6.7mb
EAB      66.40  16 eP        25 47.60   -1.1
EBH      66.47  16 eP        25 48.00   -1.2
         0.8s    429.00nm          6.7mb
QZH      66.81 281 iPc       25 50.00   -1.7
         8.0s     12.90nm            4.2mb X
     Z  15s     68.30um            7.0MszX
     N  14s    297.00um
     E  14s     52.30um
                      sP     26 06.00
                      PP     28 20.00
                      S      34 40.50
                      sS     34 58.00
EAU      66.87  16 eP        25 50.60   -1.2
         0.8s    429.00nm          6.7mb
ESY      66.93  15 eP        25 51.80   -0.3
WMQ      67.00 315 ePc       25 52.07   -0.8
         6.0s     18.90nm            4.5mb X
     Z  20s     67.50um            6.9Msz
     N  10s     62.30um
                      ec     25 55.22
                      ed     26 00.51
                      ePP    28 24.52
                      ePPP   29 59.14
                      eS     35 48.69
EKA      67.41  16 Pc        25 54.10   -1.1
         1.7s    646.40nm          6.5mb
ESK      67.42  16 ePd       25 53.80   -1.4
         1.0s    320.00nm          6.5mb
                      ed     25 56.94
DMU      68.15  19 eP        25 59.80    0.0
COP      68.79   6 iPd       26 04.00    0.3
         1.7s   2153.85nm            7.1mb

DLE      68.80  19 eP        26 03.80    0.0
         1.2s    238.00nm          6.3mb
OBN      69.17 352 iPc       26 04.20   -1.9
         1.3s   1200.00nm          6.9mb
     Z  25s    320.00um            7.5MszX
                      iS     35 09.00
OBN      69.17 352 ePc       26 16.65   10.6X
VAL      69.36  21 iP        26 07.60    0.3
                      S      35 14.00
YRH      69.58  18 iPc       26 08.10   -0.5
         0.6s    213.00nm          6.5mb
ECB      69.64  19 iPc       26 09.30    0.4
         0.7s     99.00nm          6.1mb
ECP      69.89  19 iPc       26 10.80    0.3
         0.7s     58.00nm          5.8mb
CD2      70.08 296 P         26 11.20   -0.9
         5.0s     27.10nm            4.6mb X
     Z  17s    160.00um            7.3MszX
     E  15s    325.00um
                      PP     28 42.40
                      iS     35 25.00
AFI      70.32 195 eP        26 17.00    3.4X
                      ed     26 22.01
                      ec     26 27.47
                      ePP    28 41.21
                      ePPP   30 25.17
                      S      35 24.20
                      e      37 20.00
                      e      40 00.00
                      e      43 12.00
TPT      70.68 171 iP        26 17.10    1.5
         1.6s   1015.00nm          6.7mb
RUV      70.91 170 iP        26 18.60    1.6
         1.6s   1015.00nm          6.7mb
VAH      70.93 171 iP        26 18.70    1.5
         1.6s    810.00nm          6.6mb
WIT      71.15  10 eP        26 20.00    1.9
GZH      71.19 283 P         26 17.60   -1.2
     N  17s     90.30um
     E  15s    116.00um
                      PP     28 56.00
                      iS     35 38.00
HKC      71.35 282 P         26 22.10    2.3
                      S      35 39.00
TLG      71.39 321 iPc       26 19.50   -0.3
                      iS     35 06.00
DBN      71.69  12 iP+       26 22.00    0.6
     Z  20s     76.30um            7.0Msz
                      iS     35 47.00
                      eSS    40 32.00
MCO      71.84 283 eP        26 22.50   -0.2
WTS      71.97  11 ePc       26 22.00   -1.1
         0.9s    359.00nm          6.5mb
                      i      26 35.00
BRN      72.09   6 ePc       26 23.50   -0.2
                      eS     35 49.00
GYA      72.13 291 iPc       26 24.00   -0.6
     N  18s    117.00um
     E  18s    221.00um
                      sP     26 40.00
                      PcP    26 46.00
                      PP     29 00.00
                      S      35 46.40
                      SS     40 12.00
BAG      72.46 273 eP+       26 24.00   -2.7
                      eS     35 48.00
WAR      72.57   1 Pc        26 22.00   -4.6X
                      S      35 50.00
                      e      40 40.00
                      e      44 12.00
FRU      72.74 323 iPc       26 27.00   -0.8
                      iS     35 56.00
UCC      72.88  12 iP+       26 28.00   -0.4
                      i      28 53.00
                      PP     29 05.00
                      iS     35 55.00
JCK      72.88  11 ePd       26 29.00    0.6
AFR      73.04 173 iP        26 31.00    1.4
         1.6s    560.00nm          6.4mb
PPN      73.05 173 iP        26 31.30    1.6
         1.6s    570.00nm          6.4mb
PPT      73.08 173 iP        26 31.70    1.8
         1.6s    610.00nm          6.4mb
     Z  30s    107.00um            6.9MszX
ENN      73.09  11 ePc       26 29.00   -0.7
         1.0s    480.00nm          6.5mb
                      i      26 40.10
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04d 13h

				eP'P'	54	18.00						e(S)	36	29.00							SKI	78.18	77	eP	27	01.78	2.8X
SNF	73.15	12	iPd	26	29.92	-0.1		VITF	75.61	12	P		26	44.95	0.7						LBL	78.20	14	P	26	59.66	1.0
GSH	73.17	11	ePd	26	30.80	0.6		SJG	75.66	79	P		26	44.00	-1.0						VAI	78.24	10	P	26	58.70	-0.2
PAE	73.17	173	iP	26	32.00	1.6		ECH	75.74	11	P		26	45.58	0.5						STS	78.32	23	eP	27	02.50	3.1X
	1.6s	610.00nm				6.4mb		HAU	75.86	12	eP		26	45.60	-0.2						CTI	78.32	8	P	26	58.50	-1.0
CLL	73.18	7	iPc	26	28.60	-1.6			0.6s	84.50nm				6.0mb							CAF	78.33	15	eP	26	58.60	-0.9
	3.8s	5100.00nm				7.0mb X		BSF	76.08	11	P		26	47.43	0.3						LPG	78.38	12	eP	27	00.20	0.1
Z	23s	120.00um				7.1MszX		MOF	76.10	11	P		26	47.25	0.0							1.1s	114.40nm				5.9mb
		i	26	47.00				FEL	76.17	10	P		26	47.90	0.3						ORO	78.39	11	P	27	01.30	1.4
		iS	35	57.00				FUR	76.18	8	iPd		26	48.70	1.1						LPO	78.43	16	eP	26	59.00	-1.0
		P'P'	54	12.00					Z 18s	94.30um				7.1Msz							NEV	78.43	77	eP	27	00.00	-0.4
MEM	73.26	11	Pc	26	31.07	0.5				iS	36	34.00									VVI	78.44	8	Pd	27	00.30	0.2
TVO	73.32	172	iP	26	33.00	1.6		UZH	76.19	1	iPd		26	50.00	2.5X						BIR	78.49	357	eP	27	06.00	5.7X
	1.6s	1015.00nm				6.6mb				iS	36	20.00									VOY	78.50	7	eP	27	05.00	4.5X
DOU	73.60	12	Pc+	26	33.00	0.4		LOR	76.28	13	eP		26	47.00	-1.1						MNDI	78.51	241	eP	27	03.00	1.9
		S	36	02.00					1.3s	361.00nm				6.3mb							DSH	78.52	325	eP	27	01.00	0.3
		SS	40	42.00				SLE	76.33	10	ePd		26	48.00	-0.4							6.0s	********	nm			7.6mb X
		P'P'	54	19.70				MFF	76.35	16	eP		26	47.60	-0.9									eS	37	02.00	
OCP	73.60	272	eP	26	30.00	-3.1X		QIZ	76.38	284	P		26	48.00	-1.0						LJU	78.53	6	eP	27	00.00	-0.5
BRG	73.68	6	iP	26	32.00	-1.1			8.0s	11.10nm				4.0mb X										eS	37	02.00	
	2.0s	900.00nm				6.5mb			N 15s	71.00um											PPE	78.54	357	ePc	27	01.50	0.9
Z	18s	63.00um				6.9Msz			E 14s	75.30um											PVC	78.73	214	iP	27	06.00	4.1X
N	20s	76.00um								PP	29	43.00									PTJ	78.75	5	eP	27	02.00	0.2
E	20s	57.00um								S	36	25.00									TRI	78.81	7	iPc	27	03.90	1.9
		i	26	33.50						SqS	36	53.00												i	29	13.50	
		i	26	55.10				VKA	76.40	5	iPc		26	48.60	-0.2						BNI	78.81	12	P	27	04.00	1.7
		iS	36	08.00					3.2s	5445.00nm				7.1mb X							CEY	78.82	6	eP	27	02.00	-0.2
		i	40	28.00					Z 16s	54.30um				7.0MszX							T8I	78.82	173	iP	27	15.40	13.2X
		i	41	30.00						i	26	52.10									1.6s	635.00nm				
		eP'P'	54	15.60						iPP	29	41.40									ANG	78.83	76	eP	27	02.12	-0.4
MOX	73.74	8	iPc+	26	32.50	-1.0				e	36	39.00									ZAG	78.83	5	iPc	27	01.50	-0.7
	1.8s	1192.00nm				6.6mb				iSP	37	00.20												iS	37	01.00	
Z	15s	73.00um				7.1MszX				LR	11	00.00									BPA	78.90	76	eP	27	01.70	-1.3
N	19s	45.30um						SSF	76.44	14	eP		26	48.10	-0.9						VRI	78.92	357	iPd	27	03.50	0.8
E	19s	86.10um						RAR	76.49	183	P		26	53.00	3.6X						EZAM	78.98	24	eP	27	04.50	1.4
		iS	36	04.00						S	36	40.00									ERUA	79.10	22	eP	27	04.90	1.2
		P'P'	54	15.00				KMR	76.49	6	iP+		26	48.70	-0.6						V8Y	79.10	6	iPc	27	04.20	0.5
KSP	73.83	5	eP	26	32.80	-1.2				i	29	07.00									8ZS	79.21	1	eP	27	03.00	-1.2
	1.1s	230.00nm				6.1mb				iPP	29	42.20									RIY	79.21	6	iPd	27	04.70	0.5
		ic	26	34.20						iPS	36	40.40									BRD	79.26	357	eP	27	06.50	2.0
		eS	36	01.50				ZST	76.51	4	i(P)		26	50.70	1.4						MLR	79.31	358	iPd	27	06.00	1.0
SVO	73.85	225	eP	26	37.00	2.5X				e	29	35.00									BOB	79.39	10	P	27	05.65	0.3
HNR	74.05	225	eP	26	38.00	2.3				e(S)	35	45.00										0.8s	614.20nm				6.7mb
ABH	74.14	10	eP	26	35.05	-0.8		BBS	76.52	11	P		26	50.01	0.5						SIM	79.45	352	iPc	27	05.00	-0.6
FLN	74.19	16	eP	26	34.90	-1.2		LOMF	76.56	11	P		26	50.31	0.5									eS	37	06.00	
	1.0s	137.50nm				5.9mb		LBF	76.58	13	eP		26	48.60	-1.2						ELYF	79.55	18	P	27	06.44	0.3
WLF	74.20	11	iPc	26	37.00	0.9		ZLA	76.60	10	ePd		26	50.60	0.7						CMP	79.55	359	iPc	27	04.00	-2.1
RUP	74.27	11	eP	26	36.92	0.3		AVF	76.68	14	eP		26	49.10	-1.2						CFR	79.56	356	eP	27	07.00	0.9
LDF	74.41	16	eP	26	36.00	-1.4		BHG	76.75	7	eP		26	50.80	0.1						MADF	79.60	18	P	27	07.35	0.9
TOD	74.54	10	eP	26	37.40	-0.7				i	26	51.70									BOH	79.61	18	P	27	08.45	1.9
PRU	74.59	6	P	26	37.90	-0.5		BGF	76.84	14	eP		26	50.30	-0.9						OGE	79.64	17	P	27	07.15	0.5
		S	36	15.00				SMF	76.89	14	eP		26	50.30	-1.2						PMG	79.64	236	eP	27	07.50	0.6
GRF	74.66	8	iPc	26	38.70	-0.2		JAY	76.90	245	ePc		26	55.50	3.5X						ISR	79.65	358	ePc	27	07.50	0.8
		e	26	40.20				SAX	76.92	10	ePd		26	52.10	0.1						ATE	79.68	18	P	27	08.41	1.6
		eS	36	17.10				SRO	76.94	3	iPd		26	53.40	1.7						KDB	79.69	236	eP	27	08.00	0.8
LPF	74.82	17	eP	26	38.80	-0.9			1.4s	0.62nm				3.5mb X							ESCF	79.71	17	P	27	08.89	1.9
GWF	75.04	11	P	26	41.51	0.4		LSF	76.95	15	eP		26	50.70	-1.2						ISSF	79.72	18	P	27	08.98	1.8
MGP	75.21	80	P	26	42.30	-0.1		TCF	77.01	15	eP		26	51.10	-1.1						JAU	79.78	17	P	27	08.31	0.7
KSH	75.24	320	iPc	26	43.00	0.5		MAF	77.13	15	eP		26	52.20	-0.7						ECRI	79.82	19	eP	27	09.00	1.3
		PP	29	36.00				CEI	77.14	0	ePc		27	02.00	9.2X						PAG	79.82	77	eP	27	09.30	1.2
KMI	75.28	293	ePc	26	41.84	-1.2		DAV	77.17	264	eP+		26	54.00	0.5						LHE	79.86	18	P	27	09.67	1.7
E	15s	137.00um								eS	36	43.00									TOUF	79.90	12	P	27	09.20	0.9
		ec	26	44.98				LLS	77.27	10	ePd		26	53.90	0.1						EPF	79.91	17	eP	27	07.80	-0.3
		ed	26	51.44				LSA	77.28	304	iPc		26	55.00	0.5							1.0s	125.00nm				5.8mb
		ePcP	26	55.00						S	36	41.00									AUTN	79.94	11	P	27	09.60	1.1
		e	26	58.00				BUD	77.29	3	e(P)		26	53.00	-0.7						SAOF	79.96	11	P	27	09.40	1.0
		e	27	01.50				LAT	77.31	238	eP		26	58.00	3.8X						PTO	79.97	24	iPc	27	09.80	1.4
		S	36	18.00				AGO	77.38	14	P		26	55.12	0.9									iS	37	14.00	
		iS	36	24.00				KBA	77.42	7	iPc		26	54.50	-0.1						BEO	79.98	2	iP	27	09.00	0.6
KHC	75.39	6	iPc	26	43.00	-0.1			1.0s	310.00nm				6.3mb							AURF	80.04	12	P	27	09.40	0.5
	1.0s	125.00nm				5.9mb				i	26	55.70									SBF	80.07	11	eP	27	09.30	0.3
Z	19s	109.00um				7.2Msz				ipPP	29	56.40									MME	80.08	9	P	27	10.26	1.0
N	19s	77.00um								eS	36	36.00									MGG	80.12	76	eP	27	07.00	-2.5
E	19s	59.00um								iSP	37	12.30									CALN	80.12	12	P	27	10.70	1.3
		e	27	04.50						e	54	26.00									DRA	80.15	359	eP	27	11.00	1.7
		S	36	26.00				PLDF	77.52	14	P		26	56.16	1.0						TLB	80.16	356	iPd	27	09.50	0.2
STU	75.40	9	iPd	26	43.80	0.7		OSS	77.55	9	eP		26	55.90	0.5						BDI	80.20	9	P	27	09.00	-0.7
	1.0s	120.00nm				5.9mb		IAS	77.57	357	iP		26	53.50	-1.7							1.0s	1146.80nm				6.8mb
Z	20s	53.19um				6.8Msz		PYM	77.65	14	P		26	56.41	0.6						FRF	80.28	12	eP	27	10.40	0.4
STR	75.44	10	P	26	43.66	0.4		VDL	77.69	10	ePd		26	56.60	0.4						TOV	80.34	87	eP	27	09.50	-1.4
UPA	75.46	95	eP	26	41.90	-2.0		RJF	77.87	15	eP		26	55.90	-1.1						BBL	80.35	77	eP	27	10.00	-0.8
N	20s	26.60um						DIX	77.88	11	ePd		26	57.80	0.5						LRG	80.35	12	eP	27	11.10	0.7
E	20s	308.16um						MMK	77.97	11	ePd		26	58.60	0.8							1.4s	272.30nm				6.1mb
CDF	75.56	11	P	26	44.58	0.4		EMON	78.06	22	eP		26	58.50	0.5						BUC	80.39	358	ePc	27	09.00	-1.5
WLS	75.57	11	P	26	45.02	0.9		RBL	78.07	7	Pd		26	53.40	-4.7X						SFI	80.45	8	P	27	13.11	2.2
SPC	75.61	2	iPd	26	45.90	1.4		LFF	78.11	16	eP		26	57.60	-0.6							2.3s	********	nm			7.7mb X
	1.0s	296.00nm				6.3mb		PDA	78.17	38	e(P)		27	02.00	3.3X						BUC1	80.45	358	iP	27	09.00	-1.9

04d 13h

LMR	80.49	12	eP	27	11.70	0.6				iS	37	42.00		CRT	84.84	21	eP	27	37.00	3.2X
RSM	80.49	8	P	27	13.06	2.0				iPS	38	39.00		ACHM	84.88	21	eP	27	36.50	2.5X
	1.6s	1357.90nm			6.7mb					i	40	00.00		SRN	84.91	2	eP	27	34.40	0.5
RKT	80.54	160	iP	27	11.30	-0.2				iSS	43	23.00		ALJ	84.91	23	eP	27	37.00	2.8X
	1.2s	140.00nm			5.8mb					iSSS	47	10.00		EZN	84.96	358	iP	27	33.00	-1.2
FIR	80.54	9	eP	27	12.50	1.1				LR	11	06.00		TDS	84.99	5	P	27	34.43	0.1
			iS	37	17.00		DUI	82.88	7	P	27	25.44	1.6		1.9s	1254.40nm			6.8mb	
BMG	80.68	91	eP	27	18.00	5.3X		2.1s	1998.70nm			6.9mb		ATEJ	85.02	22	eP	27	36.00	1.2
CRE	80.75	8	P	27	13.50	0.9	KKB	82.96	0	iPc	27	24.00	-0.1	APHE	85.05	21	eP	27	36.50	1.6
AOI	80.95	7	e(P)	27	16.95	3.3X	ECHE	83.03	19	eP	27	26.00	1.5	KEK	85.07	3	eP	27	35.50	0.7
ARV	80.95	8	Pd	27	14.80	1.2	KAS	83.04	352	iPc	27	25.60	1.0	CNIL	85.10	23	eP	27	40.00	5.0X
ETER	81.01	15	eP	27	16.00	2.1	PSO	83.08	98	eP	27	26.00	0.4	DST	85.11	356	iP	27	36.30	1.3
PSN	81.06	356	eP	27	17.00	2.9X	PHP	83.11	2	iPc	27	23.60	-1.2	MAL	85.12	22	iPd	27	37.00	2.0
FDF	81.17	77	eP	27	17.50	2.3	KVT	83.12	350	iP	27	26.00	1.0				iS	38	06.00	
			S	37	20.00		RZN	83.13	359	iPc	27	25.00	-0.2	EJIF	85.15	23	eP	27	37.60	2.3X
CIO	81.27	7	eP	27	16.83	1.5	LACI	83.15	3	iPc	27	25.50	0.5	MOMI	85.22	23	eP	27	41.00	5.4X
ASS	81.36	8	P	27	16.97	1.2	KDZ	83.16	358	iP	27	26.00	0.9	ENIJ	85.33	20	eP	27	39.50	3.3X
	1.5s	3459.50nm			7.2mb		RFI	83.21	7	P	27	27.76	2.4X	SRO	85.36	23	eP	27	37.00	0.7
CAR	81.38	84	iP	27	16.00	-0.4		1.8s	1679.60nm			6.9mb		OJEN	85.48	23	eP	27	34.00	-3.0X
			iS	37	17.00		COTA	83.22	99	iPd	27	42.40	16.0X	NEO	85.52	360	eP	27	37.40	0.3
GUD	81.40	21	eP	27	16.30	0.1	MMB	83.24	360	ePc	27	26.00	0.4	PRK	85.54	358	eP	27	37.90	0.8
GUAC	81.44	85	eP	27	16.40	-0.3	KKM	83.33	271	ePd	27	28.50	2.0	ALT	85.58	355	iP	27	38.00	0.5
LLAV	81.47	84	eP	27	15.70	-1.1		1.3s	515.40nm			6.6mb		USI	85.73	8	P	27	40.34	2.3
HVAR	81.49	5	iP	27	18.10	1.7	DZM	83.38	214	iP	27	27.10	0.7		2.1s	2602.30nm			7.1mb	
CVF	81.51	11	eP	27	16.90	0.3	MAIO	83.39	331	eP	27	29.00	2.5X	GRI	85.83	5	P	27	38.50	-0.2
BKR	81.56	345	iPc	27	17.00	0.0				eS	37	52.00			0.7s	410.50nm			6.7mb	
			iS	37	34.00		TIR	83.44	2	eP	27	22.40	-4.1X	KBR	86.10	289	eP	27	43.40	3.2X
PVL	81.60	358	iPd	27	17.00	0.1	ESEL	83.50	16	eP	27	28.20	1.3	NKM	86.13	23	iP	27	41.50	1.4
ETOR	81.63	19	eP	27	17.50	0.2	ITU	83.59	356	iPc	27	28.00	0.7				i	27	43.50	
ALP	81.71	7	eP	27	18.78	1.0	CAYA	83.63	99	eP	27	27.00	-1.5	KHL	86.34	355	iP	27	41.90	0.6
CEOS	81.78	86	eP	27	16.50	-1.9	ISK	83.63	356	eP	27	27.00	-0.5	ERC	86.35	8	P	27	42.61	1.3
OLLA	81.84	84	eP	27	17.70	-1.1	EVIA	83.66	20	eP	27	29.50	1.6		0.5s	132.50nm			6.4mb	
BRY	81.85	3	eP	27	18.60	0.1	OHR	83.70	2	iPc	27	27.50	-0.4	IZM	86.36	357	iP	27	40.40	-0.9
MAO	81.88	9	P	27	19.44	1.0		1.6s	1.11nm			3.8mb X		LVI	86.38	9	Pd	27	42.40	1.1
	1.6s	988.00nm			6.6mb					i	27	48.40		GIB	86.51	7	P	27	43.00	0.9
NKY	81.95	3	eP	27	19.00	0.0				eS	37	45.00		SOI	86.55	6	Pd	27	41.70	-0.5
MNS	82.04	8	P	27	18.50	-0.8	BDT	83.71	291	eP	27	28.50	0.3	MNO	86.61	7	Pd	27	45.40	2.6X
EROO	82.07	17	eP	27	23.00	3.5X		1.0s	172.50nm			6.2mb		VLS	86.62	2	eP	27	42.70	0.2
EBR	82.08	17	iPc	27	20.00	0.5	TSM	83.76	268	ePc	27	30.50	2.0	CVT	86.72	8	Pd	27	47.20	4.2X
			iPP	30	29.00			1.2s	815.10nm			6.8mb		MCT	86.84	8	P	27	46.34	2.5X
			iS	37	32.00		EVAL	83.78	23	eP	27	28.90	0.5		0.1s	86.20nm			6.9mb	
LOE	82.12	289	eP	27	19.00	-1.1	HRT	83.85	355	eP	27	26.00	-2.7	ATH	86.85	360	eP	27	44.00	0.4
LIS	82.14	25	iPc	27	21.10	1.3	EBAN	83.86	21	eP	27	30.00	1.2				eS	38	20.00	
TOL	82.15	21	ePc	27	20.13	0.2	EHOR	83.89	22	eP	27	29.80	0.9	MSL	86.86	344	ePd	27	43.00	-0.7
			ec	27	22.61		RECU	83.89	100	eP	27	29.80	-0.1				e	27	59.00	
			ed	27	26.91		G8ZT	83.89	355	eP	27	27.60	-1.2				ePP	31	07.00	
			ePP	30	27.22		SGO	84.04	6	P	27	30.34	0.8				eSKS	38	08.50	
			eS	37	37.86			2.4s	1524.40nm			6.8mb					eS	38	24.00	
VTS	82.24	360	iP	27	20.00	-0.5	BERA	84.09	2	eP	27	30.80	1.0				eScS	38	36.00	
PGB	82.28	359	ePc	27	20.00	-0.6	YLV	84.12	355	iP	27	29.60	-0.5	PCI	86.95	264	ePc	27	46.00	1.6
HCY	82.30	3	eP	27	20.50	-0.1	TCE	84.13	80	eP	27	28.22	-2.2		1.6s	6.60nm			4.6mb X	
JMB	82.32	357	eP	27	21.00	0.3	ACU	84.17	18	eP	27	33.00	2.6X	SMG	87.06	357	eP	27	45.00	0.4
TTG	82.34	3	eP	27	21.00	0.2	KBN	84.18	2	iPd	27	31.60	1.3	BCK	87.15	354	iP	27	46.00	0.8
			eS	37	24.00		NDI	84.28	314	iPc	27	30.30	-0.7	NNT	87.17	288	iPd	27	46.00	0.5
BCI	82.43	2	eP	27	22.00	0.8				iPP	30	48.00		FAI	87.19	8	P	27	48.09	2.8X
CHG	82.44	292	ePc	27	20.50	-1.3				iS	37	50.00			0.1s	17.20nm			6.3mb	
	1.4s	406.98nm			6.4mb		VLO	84.31	3	eP	27	32.80	1.9	SLY	87.23	342	ePd	27	44.50	-1.0
			eS	37	36.00		BOT	84.33	79	eP	27	32.23	0.9				iPcP	27	48.00	
CHTO	82.44	292	eP	27	17.70	-4.0X	GPA	84.34	355	eP	27	31.90	0.7				iPP	31	09.00	
BDV	82.48	3	eP	27	21.50	-0.1	TRN	84.37	80	eP	27	29.60	-2.0				iPPP	32	33.50	
AZI	82.49	7	P	27	23.12	1.5	BNT	84.39	356	iP	27	33.60	2.2				eSKS	38	09.50	
	1.5s	445.40nm			6.4mb		LCI	84.39	4	P	27	32.70	1.4				iS	38	28.50	
RMP	82.61	8	P	27	22.60	0.3	EDC	84.40	356	iP	27	32.50	1.1				eSS	43	11.00	
RDP	82.66	8	P	27	23.23	0.6	NST	84.41	289	iPc	27	32.50	0.7				eSSS	45	30.00	
	0.8s	1524.10nm			7.2mb		MGR	84.47	6	P	27	31.65	-0.1	TAF	87.38	21	iPc	27	48.00	1.7
PLD	82.72	359	eP	27	23.00	0.2		1.0s	1056.90nm			7.0mb					i	28	19.00	
KKS	82.73	2	eP	27	23.50	0.7	KZN	84.51	1	eP	27	32.70	0.6	PTS	87.52	9	P	27	49.88	3.0X
PUK	82.75	2	iPd	27	23.90	1.0	AAI	84.58	256	eP	27	31.80	-0.8		0.1s	23.80nm			6.4mb	
DIM	82.76	358	eP	27	25.00	2.0	ANTO	84.60	353	eP	27	32.54	0.0	YER	87.58	356	eP	27	47.40	0.1
SDA	82.76	3	eP	27	33.30	10.3X				ec	27	36.02		ITM	87.64	1	eP	27	46.50	-1.0
SDI	82.80	7	P	27	23.89	0.6				ed	27	42.14		AVE	87.72	25	eP	27	45.00	-2.9
	1.5s	634.80nm			6.6mb					ePP	30	52.16					i	27	49.50	
ULC	82.81	3	eP	27	21.50	-1.8	TPP	84.61	80	eP	27	27.37	-5.4X				i	28	22.00	
SKO	82.85	1	iPc	27	23.50	0.0	AAPN	84.62	22	eP	27	33.00	0.3				i	29	21.00	
	8.0s	********	nm		7.3mb X		EALH	84.62	19	eP	27	34.20	1.6	APE	87.73	358	eP	27	47.20	-0.8
Z	18s	58.10um			7.0Msz		BBTK	84.63	353	iPc	27	33.00	0.2	ELL	87.89	355	iP	27	49.40	0.5
N	19s	124.08um					ASMO	84.65	21	eP	27	34.00	1.1	IFR	88.05	23	iPd	27	50.50	0.8
E	19s	113.00um					LSK	84.65	2	eP	27	33.40	0.6				i	27	59.00	
			i	27	29.00		TAB	84.68	342	iP+	27	34.00	0.9	KSL	88.54	355	eP	27	52.20	0.4
			i	27	44.00					i	30	50.00		TBT	89.06	35	iPd	27	57.70	3.3X
			i	27	50.50		TBH	84.69	79	eP	27	33.43	0.2	KAP	89.20	357	eP	27	54.90	-0.1
			i	29	30.00		EPRU	84.71	22	eP	27	35.00	1.9	FAM	89.35	351	eP	27	57.50	1.9
			iPP	30	35.00		CGL	84.73	11	P	27	34.22	1.0	CTA	89.38	232	iPd	27	57.30	1.5
			i	31	47.00			1.8s	684.50nm			6.6mb			0.9s	74.79nm			5.9mb	
			iPPP	32	22.00		LIJA	84.74	23	eP	27	37.50	4.2X				i	28	10.00	
			i	33	52.00		AFC	84.79	21	eP	27	35.50	1.9				i	28	25.10	
			i	36	46.00		ALOJ	84.81	22	eP	27	35.00	1.3				i	28	40.70	

04d 13h

			i	28	57.60					e	33	39.80			WHH	6.83	213	eP	59	08.70	0.2
			iS	38	25.00			ZOBO	102.52	100	ePdiff	28	57.00	0.5	HATZ	7.03	215	P	59	11.50	0.3
CTAO	89.38	232	ePc	27	55.11	-0.7					SKS	39	36.00		HITZ	7.05	218	eP	59	13.10	1.6
			ec	27	57.92			LPB	102.75	101	Pdiff	29	06.50	9.2X	RATZ	7.17	217	eP	59	14.80	1.6
			ePP	31	25.18						PP	33	22.00		KETZ	7.41	217	eP	59	18.10	1.6
VAM	89.41	359	eP	27	55.50	-0.4					SKS	39	39.00		PGZ	8.37	207	eP	59	27.40	-2.4
CSS	89.44	352	eP	27	56.50	0.4					LR	02	30.00		MNG	8.70	211	eP	59	32.00	-2.3
NPS	89.53	358	eP	27	55.50	-1.1		CCH	104.53	99	Pdiff	29	17.60	12.5X				eS	01	12.30	
PPCY	89.59	352	eP	27	57.00	0.2		ADE	105.55	230	e(Pdif	29	24.30	15.3X	MTW	9.14	209	eP	59	37.50	-2.9
BHD	89.69	342	iPd	27	54.00	-3.3X		ANT	107.24	107	e(Pdif	29	08.00	-8.6X	KIW	9.15	212	eP	59	38.40	-2.1
			iPP	31	30.00			LIC	114.17	31	Pdiff	29	50.00	2.3X	BLW	9.33	208	P	59	39.80	-3.2X
			iPSP	32	44.00				Z 20s		60.00um			7.2Msz	WDW	9.44	210	eP	59	41.30	-3.3X
			iSKS	38	21.00			PPD	116.61	90	ePKP	33	43.90	0.2	WEL	9.55	211	P	59	47.00	0.9
			iS	38	50.00						epPKP	33	56.50					S	01	31.00	
CTFE	89.78	34	eP	28	04.00	6.2X					ePP	34	57.30		TCW	9.71	213	eP	59	45.50	-2.8
			e	28	18.30						epPP	35	08.70		DZM	17.23	307	iPd	01	27.90	0.5
TIO	90.02	26	iPd	28	00.50	1.4		VAO	119.85	88	e(PKP)	33	52.00	2.1X	COO	25.08	268	eP	02	54.00	3.7X
			i	28	02.50			BCAO	120.11	5	ePKP	33	49.33	-1.2X	BRS	25.27	276	iPd	02	54.00	1.8
			i	28	24.50						ePP	35	14.49					i	02	57.00	11kmX
BHL	90.27	350	Pc	28	00.00	-0.1		BMA	121.20	85	e(PKP)	33	57.00	4.6X	CAN	26.71	256	eP	03	07.80	2.3
			PP	31	36.00			NAI	124.78	343	ePKP	34	02.00	2.2X	BWA	27.28	258	eP	03	10.70	0.1
			SKS	38	30.00				1.0s		10.00nm				TAU	28.27	240	iPc	03	21.70	2.3
GGC	90.32	34	iPd	28	03.70	3.4X		LWI	126.66	353	iPdiff	30	45.00	1.4	RMO	28.95	275	iPc	03	27.50	1.8
			e	28	17.70			LWI	126.66	353	PKP	34	03.90	0.4	TOO	29.39	251	eP	03	31.80	2.1
MTN	90.62	248	eP	28	03.30	1.7					iPP	35	50.00		CMS	29.93	264	iPc	03	36.00	1.5
MKS	90.70	262	e(P)c	28	03.60	1.5					iPSc	44	57.00			1.0s		32.00nm			5.0mb
HRI	90.89	349	iPc	28	03.50	0.5		SBA	135.01	190	ePKP	34	17.50	0.3	HNR	30.82	315	eP	03	38.00	-4.4X
SNG	91.17	284	eP	28	04.90	0.6		KMZ	137.95	356	ePKP	34	19.00	-5.7X	BFD	31.76	252	eP	03	52.70	2.2
	1.5s		455.56nm			6.6mb					i	34	29.00		STK	33.36	261	eP	04	06.50	2.0
			eS	37	52.00						i	37	11.00		CTA	33.80	284	iPd	04	08.60	0.2
			e	39	08.00			PTZ	138.31	348	iPKPd	34	19.00	-6.3X		0.8s		59.70nm			5.6mb
SHI	91.51	335	eP	28	07.00	1.0					i	34	29.40					iS	09	29.00	
DSI	92.61	350	e(P)	28	12.00	1.2					i	37	13.00		ADE	35.12	255	iPc	04	21.00	1.3
OIS	92.87	237	iPd	28	12.30	0.4					i	37	58.00			0.9s		38.66nm			5.3mb
IPM	93.09	283	ePc	28	15.00	1.8		AIA	139.20	140	e(PKP)	34	28.00	2.7X	OIS	39.04	278	iPd	04	52.00	-0.7
	0.9s		66.00nm			6.1mb		LSZ	139.63	353	iPKPc	34	19.00	-8.7X	PMG	39.40	299	eP	04	54.50	-1.2
			e	29	03.10						i	34	22.00		DRV	41.28	203	eP	05	15.60	5.0X
BRS	93.11	223	iP	28	17.00	4.1X					i	37	12.00		LAT	41.38	302	eP	05	12.00	0.0
			eSKS	38	52.00						i	37	22.00		ASPA	42.46	270	iPc	05	19.50	-1.4
			eS	39	20.00						i	41	29.00			1.0s		109.00nm			5.5mb
HYB	93.64	308	iPc	28	14.70	-1.1		KRI	141.04	350	iPKPc	34	27.00	-3.3X				eS	11	35.30	
	1.2s		409.10nm			6.7mb					i	37	29.20					eScS	15	12.10	
KGM	93.92	279	ePc	28	21.00	4.0X		BUL	144.42	351	iPKPc+	34	33.80	-2.2X	WB5	43.71	276	iPd	05	30.10	-0.9
RMO	93.93	227	eP	28	16.50	-0.2			1.0s		420.00nm							eScP	11	07.00	
NNA	94.19	105	iPd	28	26.00	7.8X		SPA	145.36	180	ePKPc	34	34.60	-1.6				eS	11	55.50	
	1.4s		65.12nm			5.8mb			0.8s		37.50nm				FORR	44.76	258	iPc	05	39.20	-0.2
			eS	38	46.00				Z 20s		39.32um			7.2Msz		0.4s		26.00nm			5.4mb
MBH	94.44	350	eP	28	20.00	0.8					e	34	36.80		SBA	45.15	184	iPd	05	49.40	7.5X
HLW	94.66	353	iP+	28	22.00	1.8		SLR	149.99	351	ePKP	34	48.53	3.7X	WARB	47.55	263	eP	06	00.00	-1.6
			e	28	56.00						e	34	50.19		JAY	48.75	300	ePd	06	11.00	0.0
			e	29	36.00						ePP	38	23.96		MTN	49.92	282	iPd	06	18.90	-1.0
			e	32	28.00			PRY	151.24	352	iPKPc	34	47.00	0.3	COOL	50.42	255	iPd	06	22.10	-1.5
			e	33	05.00			PRY	151.24	352	ePKP	34	51.20	4.5X		0.3s		7.00nm			5.2mb
POO	94.69	313	eP	28	22.00	1.4			1.0s		160.00nm				KLB	52.91	253	eP	06	40.00	-2.4
			iS	38	53.00						i	35	10.00		MUN	54.02	252	eP	06	49.00	-1.5
WB5	94.86	242	eP	28	21.00	-0.1		MAW	158.05	221	ePKP	34	54.00	-0.4	MRWA	55.18	255	eP	06	58.00	-1.0
			i	28	39.20			SNA	161.43	153	ePKP	34	56.10	-1.8	MBL	55.30	266	eP	06	58.00	-2.0
			e	32	51.50				1.0s		16.00nm					0.4s		9.00nm			5.2mb
HOL	94.92	350	eP	28	24.70	3.2X			S.D. = 1.2		on 507 of 609 obs.				SPA	56.91	180	iPd	07	11.20	-0.1
AYN	95.21	349	eP	28	24.00	1.2		----------								1.0s		180.00nm			6.1mb
SRFA	95.24	349	eP	28	24.00	1.1			SEP 04, 1989		13h 36m 54.67± 0.95s					Z 18s		15.18um			6.1MszX
DHR	95.28	336	eP	28	27.50	4.3X			37.091 N ±10.0km				29.347 E ± 7.4km					e	07	23.00	41km
TSI	95.34	284	eP	28	26.00	2.5X			DEPTH = 10.0km		(geophysicist)				NANU	58.27	262	eP	07	19.60	-1.4
BADA	95.66	350	iP+	28	26.70	1.8			TURKEY					(366)	PCI	65.88	286	iPd	08	13.20	1.2
PSI	95.81	283	ePc	28	25.60	-0.1									MAW	69.43	201	eP	08	36.00	2.5
OLP	95.94	230	eP	28	28.70	2.8X		ELL	0.57	127	iPg	37	05.40	-0.8	SNA	76.69	179	iPd	09	19.70	3.8X
COO	96.30	223	eP	28	33.00	5.5X					iSg	37	14.90			0.9s		69.75nm			5.7mb
OASM	96.85	342	eP	28	33.40	3.0X		YER	0.85	273	ePn	37	11.60	0.5	MAT	80.27	326	(P)	09	26.00	-9.9X
GBA	97.49	307	P	28	34.00	0.7		BCK	1.06	69	iPn	37	16.00	1.3	SYP	87.06	45	eP	10	12.00	1.4
RYD	97.59	339	eP	28	34.50	0.8		KHL	1.24	6	iPn	37	17.40	-0.3	BCH	87.46	44	P	10	13.00	0.5
WAJH	97.81	348	eP	28	35.70	1.1		ALT	2.05	17	ePn	37	33.00	3.3X	PRS	87.52	43	ePd	10	13.10	0.5
ASPA	98.27	240	eP	28	37.80	1.3		IZM	2.11	309	iPn	37	30.90	0.5	GCC	87.66	42	eP	10	13.40	0.1
	Z 21s		67.65um			7.1Msz		DST	2.57	348	ePn	37	36.00	-1.1	PCC	87.78	41	ePd	10	13.70	-0.1
			i	28	51.50			CSS	3.86	122	eP	37	58.00	2.6X	SAO	87.78	43	e(P)	10	13.70	-0.2
			ePP	32	09.00			FAM	4.31	118	eP	37	58.00	-3.8X	PRI	87.79	43	eP	10	14.60	0.5
			eS	39	10.00				S.D. = 1.2		on 6 of 9 obs.				BAR	87.81	48	eP	10	15.00	0.8
			LR	09	03.80			----------							LLA	87.96	43	ePd	10	14.80	0.0
WEL	99.44	201	eP	28	46.00	4.7X			SEP 04, 1989		14h 57m 28.12± 0.24s				MWC	88.00	46	eP	10	16.00	0.8
			PP	32	48.00				33.262 S ± 5.8km				178.689 W ± 5.8km		MHC	88.08	42	ePd	10	15.70	0.2
			SKS	39	14.00				DEPTH = 41.8km		(4 depth phases)				BRK	88.11	41	eP	10	15.50	0.1
			SKS	40	12.00				5.4mb (12 obs.)						BKS	88.13	41	eP	10	15.70	0.2
			PS	41	36.00				SOUTH OF KERMADEC ISLANDS					(179)		1.0s		52.00nm			5.8mb
			SS	46	22.00										ARN	88.15	42	P	10	15.60	-0.1
ROD	100.44	306	ePdiff	28	47.60	0.6		RAO	4.05	10	iP	58	19.80	-9.4X	PLM	88.14	48	eP	10	16.00	0.1
			ePP	32	57.00						eS	59	07.90		RVR	88.26	47	eP	10	17.00	0.8
ARE	100.80	103	ePdiff	28	59.00	10.5X		HBZ	4.98	209	P	58	44.60	2.4	PEC	88.32	47	P	10	16.50	-0.1
CAN	101.62	223	ePdiff	29	08.00	16.5X		KRP	6.61	224	P	59	10.00	4.7X	SBB	88.46	46	eP	10	17.00	-0.3

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ISA     88.74   45 eP     10 19.00    0.4
FRI     88.93   43 ePd    10 19.20   -0.2
TPC     89.15   47 eP     10 21.00    0.4
GLA     89.22   49 eP     10 22.00    1.1
CMB     89.27   42 ePd    10 20.80   -0.3
                   e      10 33.20   41km
CLC     89.36   45 eP     10 22.00    0.5
GSC     89.49   46 eP     10 23.00    0.8
ORV     89.73   41 ePd    10 22.60   -0.5
WDC     89.90   39 ePd    10 23.60   -0.2
                   e      10 37.20   45km
MIN     90.23   40 eP     10 24.80   -0.8
TNP     91.12   44 P      10 29.90    0.1
        1.0s     20.00nm          5.5mb
KVN     91.27   43 P      10 29.00   -1.4
TIA     91.49  313 eP     10 31.00   -0.3
CN2     92.07  323 Pd     10 32.20   -1.5
                   epP    10 44.60   40km
ALQ     95.81   52 eP     10 51.20   -0.2
        1.0s      2.50nm          4.7mb
                   ePP    14 59.00
DPW     97.22   36 P      10 55.20   -2.1
ZOBO    97.51  115 P      11 02.00    1.9
FBA    100.78   13 Pdiff   11 10.00   -3.0X
INK    106.69   16 ePKP    15 48.00   -1.4
GBA    108.84  274 PKPc    15 52.60   -2.4X
        0.7s      1.90nm
WMO    114.51  307 PKP     16 03.60   -1.6
BUL    120.84  210 iPKPd   16 19.10    1.1
KRI    123.33  213 iPKPd   16 25.30    2.5X
PTZ    124.74  216 iPKPd   16 27.00    1.4
LSZ    125.33  212 ePKP    16 28.00    1.3
KMZ    127.98  211 iPKPd   16 35.00    3.1X
KEV    140.76  346 ePKP    16 53.00   -1.1
SOD    142.79  344 iPKP    16 53.00   -4.7X
AKU    145.49   14 iPKP    17 02.30    0.0
        0.9s     36.97nm
MSL    145.70  287 ePKPc   17 02.50   -1.2
REY    145.92   18 ePKP    17 02.80   -0.3
SUF    146.60  339 ePKP    17 03.50   -0.7
        0.4s     66.20nm
BNG    147.12  213 iPKPc   17 07.20    0.6
        0.5s     80.00nm
                   id     17 09.50
NSS    148.02  351 iPKP    17 07.88    1.4
NUR    148.76  338 ePKP    17 07.00   -0.8
        0.8s    146.70nm
RGS    149.67  352 iPKP    17 12.50    3.4X
MOL    150.41  354 iPKP    17 14.56    4.4X
MBH    151.24  272 iPKP    17 12.00   -0.5
DSI    151.26  276 e(PKP)  17 12.00   -0.4
PRNI   151.29  273 ePKP    17 12.00   -0.6
UPP    151.29  343 iPKP    17 15.60    4.0X
KVT    151.39  296 iPKP    17 19.00    6.6X
NB2    151.47  350 PKP     17 10.90   -1.0
        0.9s     65.10nm
NRA0   151.71  349 PKP     17 17.50    5.3X
HYA    151.90  355 iPKP    17 18.40    5.9X
LIC    152.46  166 PKP     17 23.26    8.5X
        0.6s     12.50nm
KIC    152.65  167 PKP     17 23.60    8.6X
TIC    152.87  166 PKP     17 23.98    8.7X
MLR    157.48  310 ePKPc   17 20.00   -0.7
CLL    160.04  338 i(PKP)  17 36.00   12.8X
                   e      18 01.00
                   e      18 14.00
BRG    160.11  336 iPKP    17 36.60   13.3X
        1.1s     11.00nm
                   i      18 02.00
PRU    160.63  334 ePKP    17 36.50   12.7X
                   e      18 04.00
ZST    160.93  326 ePKP    17 24.00   -0.2
KHC    161.69  334 PKPc    17 25.20    0.2
                   e      18 09.80
      S.D. = 1.3   on  97 of 124 obs.
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?  SEP  04, 1989  15h 17m 36.46±11.83s
   32.544 S ±79.8km   71.993 W ±53.7km
   DEPTH =  10.0km  (geophysicist)
 NEAR COAST OF CENTRAL CHILE      (135)

PEL     1.25  119 iPd    17 59.80    0.0
                   iS     18 13.00
TACH    1.42  142 iPc    18 01.50   -0.8
                   iS     18 16.10
SAN     1.44  129 ePd    18 02.90    0.3
                   iS     18 17.40

LNV     1.49  161 iPd    18 03.30    0.1
                   iS     18 19.00
FCH     1.63  119 iPd    18 05.50   -0.1
                   iS     18 23.00
PCH     1.64  131 iPc    18 05.50    0.0
                   iS     18 24.00
CHCH    1.78  141 iPc    18 08.10    0.5
                   iS     18 27.50
      S.D. = 0.5   on   7 of   7 obs.
-------------------------------------------
&  SEP  04, 1989  15h 54m 32.10s
   40.757 N          124.602 W
   DEPTH =  18.0km
 NEAR COAST OF NORTHERN CALIF.    ( 35)
      <BRK>. ML 3.3 (BRK).

FHC     0.47   84 iPc    54 41.30   -0.3
                   iS     54 47.75
WDC     1.58   96 eP     54 57.40   -1.9
                   eS     55 16.50
LBFM    2.13   73 eP     55 06.20   -1.4
MIN     2.32   99 ePc    55 07.40   -2.8
                   e      55 34.90
ORV     2.66  116 eP     55 12.10   -2.8
KVN     5.28  107 eP     55 49.20   -3.1
        6 obs. associated
-------------------------------------------
   SEP  04, 1989  15h 57m 58.03± 0.66s
   64.025 N ± 5.7km   148.712 W ± 9.0km
   DEPTH =  33.0km  (normal)
 CENTRAL ALASKA                   (  1)
      ML 3.0 (PMR).

FBA     0.96   24 iPc    58 15.30    0.1
TOA     2.25  148 iPd    58 33.70    0.0
PWA     2.44  193 eP     58 37.00    0.6
PMR     2.45  185 eP     58 36.40   -0.1
PMS     2.82  188 eP     58 41.30   -0.5
IMA     2.94  316 eP     58 43.50   -0.1
TTA     3.45  255 eP     58 50.90    0.0
      S.D. = 0.4   on   7 of   7 obs.
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*  SEP  04, 1989  17h 38m 12.09± 1.20s
   36.449 S ±12.6km   72.904 W ±14.9km
   DEPTH =   9.4 ±  4.2 km
 NEAR COAST OF CENTRAL CHILE      (135)

LNV     2.77   27 iPd    38 57.00   -0.4
                   iS     39 25.50
CHCH    3.11   37 iPd    39 03.30    1.0
                   iS     39 36.00
TACH    3.22   31 iPd    39 03.90    0.1
                   iS     39 39.20
PCH     3.44   35 iPc    39 07.50    0.6
                   iS     39 43.00
SAN     3.51   32 iPc    39 08.10    0.2
                   iS     39 44.60
PEL     3.77   30 iPc    39 12.00    0.4
                   iS     39 53.40
FCH     3.78   35 iPc    39 12.50    0.4
                   iS     39 52.90
ZON     6.02   37 eP     39 43.00   -0.4
MRA     7.18   58 ePd    40 00.50    0.8
TCA     8.59   56 ePc    40 17.70   -1.8
LPB    20.29   13 (P)    42 51.00   -0.4
ZOBO   20.54   13 P      42 53.40   -0.7
KIC    76.53   72 P      50 04.30   -0.2
WB5   118.33  209 ePKP    57 02.20    0.4
GBA   145.03  123 PKPd    57 51.90    0.1
        0.7s      2.50nm
      S.D. = 0.8   on  15 of  15 obs.
-------------------------------------------
*  SEP  04, 1989  17h 45m 18.97± 0.40s
   54.303 N ±11.9km   159.193 E ± 9.6km
   DEPTH =  10.0km  (geophysicist)
   4.4mb (  3 obs.)
 NEAR EAST COAST OF KAMCHATKA     (218)

OFUJ   19.31  225 eP     49 40.30   -0.7
YAMJ   20.77  227 eP     49 56.00    0.0
NIIJ   21.99  227 P      50 08.50    0.2
KAKJ   22.38  224 P      50 13.10    1.0
MAT    22.92  228 iPd    50 17.70    0.3
        0.9s     60.50nm          5.0mb
CHJJ   23.01  226 P      50 18.80    0.6
IIDJ   23.95  227 P      50 27.70    0.3
TSRJ   24.75  230 P      50 35.40    0.4

WDC     51.99   71 e(P)   54 23.20    0.3
MIN     52.67   71 ePc    54 27.70   -0.4
ORV     53.27   71 ePc    54 32.00   -0.4
CMB     54.96   72 ePc    54 44.80   -0.1
                   e      56 50.70
KVN     55.51   70 eP     54 49.10    0.1
PRI     56.15   74 e(P)   55 03.60   10.1X
CHTO    57.64  257 eP     55 02.10   -2.0
        0.6s      0.80nm          4.0mb
                   pP     55 19.90   68kmX
SUF     57.67  337 eP     55 05.00    1.2
NB2     62.23  343 P      55 35.50    0.5
        0.8s      2.60nm          4.4mb
GBA     74.27  271 P      56 49.00   -1.2
      S.D. = 0.8   on  17 of  18 obs.
-------------------------------------------
&  SEP  04, 1989  17h 53m 41.00s
   33.330 N          116.240 W
   DEPTH =  10.0km
 SOUTHERN CALIFORNIA              ( 43)
      <PAS-P>. ML 3.2 (PAS).

PLM     0.52  273 iPc    53 51.00   -0.6
IKP     0.69  171 iPd    53 53.70   -1.6
BAR     0.74  209 iPc    53 54.50   -1.1
TPC     0.79   12 iPd    53 55.40   -1.0
PEC     0.95  306 iPd    53 58.30   -0.8
GLA     1.22  103 eP     54 01.20   -2.5
ABL     2.90  302 e(P)   54 28.00   -0.3
BLP     3.67  291 e(P)   54 40.00    1.0
BCH     3.68  301 e(P)   54 40.00    0.7
TNP     4.81  351 eP     54 57.00    1.6
KVN     5.90  346 e(P)   55 09.00   -1.8
        11 obs. associated
-------------------------------------------
   SEP  04, 1989  21h 36m 45.42± 0.39s
   21.680 N ± 5.0km   119.854 E ± 5.0km
   DEPTH =  10.0km  (geophysicist)
   4.2mb (  8 obs.)  3.9Msz (  1 obs.)
 TAIWAN REGION                    (243)

TWK     1.68   20 iPc    37 15.10    0.0
TWF1    2.13   38 iPc    37 22.10    0.5
                   eS     37 46.30
TWQ     2.74   19 iPc    37 30.20    0.0
                   eS     38 01.30
TWD     2.88   34 ePc    37 32.00   -0.1
TWC     3.45   32 ePc    37 40.40    0.2
QZH     3.45  341 P      37 37.90   -2.3
      Z 10s      2.50um          4.1MszX
      E 10s      3.70um
TWZ     3.75   25 ePc    37 44.30   -0.3
ANP     3.81   23 iPd    37 44.80   -0.7
HKC     5.31  278 iP     38 05.60   -1.1
                   iS     39 05.10
MCO     5.86  275 iP     38 13.10   -1.4
GZH     6.19  284 Pc     38 15.60   -3.4X
      E 10s      1.90um
                   S      39 24.00
SSE     9.45    7 eP     39 03.40   -1.2
                   Lg     41 06.00
                   Lg     41 20.00
QIZ     9.75  256 eP     39 06.80   -2.0
      N 17s      2.50um
NJ2    10.37  355 Pc     39 25.00    7.8X
      Z 16s      0.90um          4.5Msz
      E 11s      1.50um
GYA    12.95  294 P      39 51.40   -1.0
      E 10s      1.10um
TIA    14.67  351 eP     40 23.70    8.8X
      E 12s      0.60um
XAN    15.64  324 P      40 27.00   -0.5
      E 11s      1.60um
                   sS     43 36.00
KMI    16.08  286 Pc     40 33.00   -0.5
                   pP     40 42.00
                   sP     40 47.00
                   S      44 34.00
CD2    17.10  306 P      40 48.40    2.3
        1.0s      0.10nm          1.9mb X
      Z 10s      1.00um          5.4Msz
TIY    17.22  340 eP     40 50.00    2.4
      N 12s      0.90um
      E 11s      1.10um
BJI    18.57  351 eP     41 05.50    1.2
        1.0s     13.00nm          4.1mb
      Z 20s      0.48um
```

04d 21h

	N	10s	0.54um			
NST		19.61	256 eP	41	20.90	3.9X
CHG		19.82	265 iPc	41	20.00	0.7
		1.0s	13.75nm			4.2mb
CHTO		19.82	265 eP	41	20.00	0.7
		1.2s	10.07nm			4.0mb
LZH		20.02	319 eP	41	23.50	2.0
		1.5s	0.04nm			1.5mb X
	Z	12s	1.10um			4.4MszX
	N	10s	0.50um			
	E	10s	0.20um			
			pP	41	30.50	27kmX
			PP	41	44.50	
			sS	45	10.00	
BDT		20.14	261 eP	41	23.80	1.2
SNY		20.33	8 eP	41	25.10	0.7
	Z	20s	0.50um			3.9Msz
	N	20s	0.70um			
	E	18s	1.20um			
			eS	45	14.00	
HHC		20.36	342 eP	41	25.60	0.7
	Z	12s	1.20um			4.5MszX
	N	12s	0.60um			
	E	20s	1.10um			
			SS	45	30.00	
BTO		20.63	338 eP	41	31.00	3.3X
	N	11s	0.70um			
	E	13s	0.70um			
			sP	41	43.50	
			eS	45	18.00	
NNT		21.22	248 eP	41	33.00	-0.8
MAT		21.77	43 eP	41	38.00	-1.3
		0.6s	7.33nm			4.3mb
CN2		22.55	11 eP	41	45.80	-1.1
	Z	15s	0.90um			4.3MszX
	N	12s	0.50um			
	E	12s	0.40um			
			sP	42	00.00	
			sS	46	05.00	
MDJ		24.25	17 eP	42	06.00	2.6X
GTA		24.61	320 eP	42	07.80	0.6
	Z	12s	0.70um			4.4MszX
			S	46	30.00	
LSA		27.02	293 eP	42	34.00	3.8X
GBA		41.11	266 Pc	44	32.90	1.5
		0.7s	2.10nm			4.0mb
KSH		41.27	306 eP	44	36.00	3.3X
WB5		43.67	160 eP	44	51.70	-0.6
OIS		46.20	154 iPd	45	12.20	-0.3
			e	45	29.00	
ASPA		47.10	162 eP	45	19.50	-0.1
		1.3s	22.00nm			5.1mb
WARB		48.03	172 iPd	45	27.00	0.1
CTA		48.88	146 iPc	45	34.80	1.3
		1.0s	24.50nm			5.2mb X
MAIO		53.98	300 eP	46	13.00	1.0
SOD		71.43	336 eP	48	06.00	-1.6
SUF		72.65	331 eP	48	20.00	5.2X
NUR		73.89	329 eP	48	32.00	9.9X
MBC		75.96	12 eP	48	34.50	0.7
		1.0s	6.00nm			4.6mb
INK		76.00	22 eP	48	34.00	-0.1
NB2		79.85	332 P	48	54.20	-1.3
		0.9s	3.10nm			4.3mb
KSP		81.62	321 eP	49	14.50	9.5X
KIC		118.98	291 PKP	55	37.00	0.2
TIC		119.08	291 PKP	55	37.10	0.1
LIC		119.29	291 PKP	55	37.50	0.1
	S.D. = 1.1		on 42 of 53 obs.			

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* SEP 04, 1989 22h 30m 19.34± 0.83s
36.853 N ± 8.8km 26.598 E ± 8.9km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.5 (ATH).

APE		0.88	284 ePg	30	35.60	-0.7
YER		1.38	78 ePn	30	44.10	-0.5
KAP		1.38	160 ePb	30	44.20	-0.4
IZM		1.63	19 iPn	30	46.40	-1.8
NPS		1.78	207 ePb	30	50.80	0.5
PRK		2.40	354 ePg	31	01.40	2.1
ELL		2.66	91 ePn	31	04.00	0.9
	S.D. = 1.5		on 7 of 7 obs.			

? SEP 04, 1989 22h 46m 27.61± 5.81s
15.558 N ±54.8km 60.825 W ±45.2km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.2 (FDF).

CRM		0.80	186 eP	46	42.39	-0.1
FDF		0.88	201 eP	46	43.54	-0.1
			S	46	52.40	
MVM		1.00	184 eP	46	45.39	0.0
			S	46	55.80	
BIM		1.06	193 eP	46	46.41	0.2
			S	46	57.50	
PDCR		35.22	141 eP	53	21.10	0.0
	S.D. = 0.2		on 5 of 5 obs.			

% SEP 05, 1989 02h 30m 14.20± 0.62s
43.113 N ± 7.2km 0.615 W ± 4.0km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

ESCF		0.05	139 Pg	30	16.56	0.2
			Sg	30	18.55	
ATE		0.07	248 Pg	30	16.68	0.1
			Sg	30	18.68	
OGE		0.12	62 Pg	30	17.31	0.1
			Sg	30	20.57	
MADF		0.15	282 Pg	30	17.71	-0.1
			Sg	30	20.76	
ISSF		0.16	237 Pg	30	18.21	0.3
			Sg	30	21.24	
JAU		0.19	112 Pg	30	18.34	-0.3
LHE		0.20	181 Pg	30	18.48	-0.2
BOH		0.29	268 Pg	30	20.12	-0.2
			Sg	30	24.60	
	S.D. = 0.2		on 8 of 8 obs.			

& SEP 05, 1989 02h 31m 47.51s
62.140 N 153.197 W
DEPTH = 0.0km
CENTRAL ALASKA (1)
<AGS-P>.

SKT		0.80	101 iP	32	03.17	-0.3
NCG		0.89	146 iP	32	04.58	-0.7
BGL		0.96	156 eP	32	05.66	-1.1
CRP		1.01	150 iP	32	06.78	-0.8
CGLM		1.01	145 eP	32	06.74	-0.9
CKL		1.03	156 iP	32	07.11	-0.9
SPU		1.11	150 iP	32	08.58	-0.6
SUA		1.35	119 iP	32	13.02	-0.4
SVW		1.55	229 eP	32	14.50	-2.0
RDT		1.62	166 eP	32	16.95	-0.5
			eS	32	38.52	
PWA		1.65	106 eP	32	17.06	-0.7
NKA		1.69	145 eP	32	20.41	2.0
KTH		1.76	35 eP	32	16.89	-2.7
HUR		1.85	61 eP	32	20.16	-0.6
PMS		1.95	116 eP	32	22.23	-0.1
PLRM		2.00	104 eP	32	21.73	-1.2
GHO		2.05	98 eP	32	23.09	-0.7
ILIM		2.07	177 eP	32	23.37	-0.6
SLKM		2.18	137 eP	32	24.36	-1.2
KNK		2.37	106 eP	32	28.38	0.1
CNPM		2.79	159 eP	32	33.94	-0.4
KNIM		3.19	122 eP	32	38.89	-1.0
CDD		3.23	184 eP	32	39.73	-0.7
FID		3.51	110 eP	32	42.78	-1.8
IMA		3.95	357 eP	32	46.40	-4.4
DWY		6.54	67 P	33	25.00	-2.3
INK		10.27	45 eP	34	16.00	-3.2
	27 obs. associated					

SEP 05, 1989 04h 07m 04.36± 0.43s
35.463 N ± 4.4km 140.157 E ± 4.3km
DEPTH = 72.1 ± 3.1 km
4.9mb (26 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Tokyo, Yokohama and Utsunomiya; (I JMA) at Choshi, Mito, Kumagaya, Ajiro, Kofu and on Oshimo.

TOK		0.39	305 iPd	07	16.90	0.3
			iS	07	25.80	
YOK		0.41	267 iPd	07	17.80	1.1
			iS	07	27.50	
CHD		0.62	65 iP+	07	19.80	1.1
			S	07	31.80	
KAKJ		0.74	1 P	07	18.70	-1.3
			eS	07	30.40	
KMG		0.93	318 iPd	07	22.40	0.1
			iS	07	35.70	
OSH		0.95	223 iPd	07	23.00	0.5
			iS	07	35.50	
MIT		0.95	16 iP+	07	21.90	-0.6
			iS	07	33.90	
AJI		0.96	245 iPd	07	23.20	0.5
			iS	07	35.80	
UTS		1.10	348 iPd	07	23.50	-1.0
			S	07	36.50	
CHJJ		1.11	302 iPd	07	24.50	-0.1
			S	07	39.50	
KOF		1.32	279 iPd	07	27.50	0.1
			S	07	44.10	
IIDJ		1.83	271 iPd	07	35.30	0.9
			S	07	59.00	
MAT		1.91	305 iPd	07	35.30	-0.1
			eS	07	55.00	
NIIJ		2.00	333 iPd	07	35.90	-0.8
			S	07	59.90	
YAMJ		2.71	358 eP	07	46.20	-0.2
TSRJ		3.41	272 iPd	07	56.30	0.1
OFUJ		3.81	18 P	08	00.00	-1.8
			eS	08	41.40	
WKYJ		3.95	253 P	08	04.10	0.2
AOMJ		5.09	2 eP	08	19.40	-0.4
TKSJ		5.24	255 iPd	08	22.30	0.4
YONJ		5.48	269 P	08	24.80	-0.5
SHK		6.21	264 eP	08	34.60	-0.8
SHNJ		7.56	262 eP	08	53.70	-0.4
KUMJ		8.28	252 eP	09	05.50	1.5
KUSJ		8.40	23 eP	09	01.50	-4.1X
			eS	10	27.20	
KAGJ		8.85	244 eP	09	12.70	0.9
ASAJ		8.85	12 eP	09	10.10	-1.7
			eS	10	40.00	
MDJ		12.20	322 eP	09	57.50	0.5
CN2		14.05	311 eP	10	22.50	1.3
SNY		14.42	301 eP	10	27.00	1.0
DL2		15.16	289 eP	10	37.50	1.9
NJ2		18.03	265 Pc	11	12.40	0.9
TIA		18.69	279 eP	11	16.00	-3.4X
BJI		19.49	291 eP	11	26.00	-2.1
		1.0s	20.00nm			4.3mb
QZH		21.34	246 eP	11	44.70	-2.5
WHN		22.17	265 eP	11	58.00	2.6
TIY		22.34	284 eP	11	58.40	1.2
	Z	14s	0.50um			4.1MszX
HHC		23.06	292 eP	12	01.40	-2.9X
GYA		29.98	262 P	13	06.00	-2.2
GTA		32.09	289 P	13	25.40	-1.3
LOE		38.53	252 eP	14	19.50	-2.0
CHTO		39.93	256 eP	14	31.90	-1.2
		0.8s	1.65nm			4.0mb
			pP	14	53.20	90kmX
WMQ		40.66	298 P	14	39.30	0.3
MTN		48.80	192 eP	15	43.10	-1.0
FBA		50.97	31 P	16	01.20	1.0
		0.7s	5.81nm			4.7mb
WB5		55.31	187 iPc	16	31.90	-0.9
WRA		55.38	187 Pc	16	31.90	-1.3
		0.4s	9.70nm			5.2mb
INK		56.25	27 eP	16	39.00	0.0
HYB		57.15	269 eP	16	45.00	-1.2
		1.0s	40.00nm			5.5mb
MBC		58.32	16 eP	16	53.50	0.0
		1.0s	4.00nm			4.5mb
ASPA		59.10	187 eP	16	57.90	-1.6
		1.0s	8.00nm			4.8mb
GBA		60.08	266 Pc	17	05.40	-1.0
		0.4s	14.30nm			5.5mb
KOD		61.93	262 eP	17	18.00	-1.4
WARB		62.63	194 eP	17	23.90	0.6
		0.6s	16.00nm			5.3mb
SOD		66.02	337 iP	17	44.00	-0.9
FORR		66.93	191 eP	17	50.30	-0.7
		0.4s	24.00nm			5.5mb
SUF		68.93	333 eP	18	02.20	-1.0
		0.4s	7.30nm			5.0mb
BWA		69.95	173 eP	18	10.30	0.5
NUR		70.85	332 iP	18	14.00	-0.9
		0.7s	14.70nm			5.0mb
EDM		71.21	38 eP	18	17.00	-0.3
WDC		72.83	52 e(P)	18	36.70	9.6X

MIN	73.56	52	ePc	18 36.70	5.2X
ORV	74.05	53	ePc	18 40.30	6.1X
NB2	75.24	337	P	18 40.20	-0.5
	0.8s	9.50nm		4.8mb	
FFC	75.57	32	eP	18 42.00	-0.6
	0.7s	9.00nm		4.8mb	
CMB	75.61	54	ePc	18 44.40	1.1
LRM	75.98	43	ePc	18 46.50	1.0
TNP	77.65	52	P	18 55.80	1.0
	1.0s	5.50nm		4.5mb	
KSP	80.89	328	eP	19 12.00	0.3
			e	19 31.70	
HRI	81.66	305	e(P)	19 17.00	0.8
RSSD	81.68	41	P	19 16.80	0.5
BRG	81.88	329	e(P)	19 17.10	0.2
CLL	81.94	330	eP	19 16.00	-1.2
	0.9s	11.00nm		4.8mb	
GLA	82.19	55	P	19 20.30	1.4
PRU	82.28	328	P	19 19.50	0.5
			e	19 38.30	
KHC	83.34	328	iPd	19 25.50	1.0
GRF	83.91	329	iPc	19 28.00	0.6
	1.2s	30.00nm		5.2mb	
PRNI	83.93	303	iP	19 28.00	0.2
MBH	84.36	303	eP	19 31.00	1.1
OHR	85.65	319	eP	19 36.20	-0.1
ALQ	86.38	49	eP	19 42.10	1.9
	1.0s	2.50nm		4.3mb	
			e	20 00.20	
CDF	86.53	331	eP	19 40.80	0.3
	0.8s	5.30nm		4.7mb	
BSF	87.19	331	eP	19 43.40	-0.4
HAU	87.22	331	eP	19 43.70	-0.1
	0.6s	5.40nm		4.9mb	
FLN	89.12	335	eP	19 52.70	-0.1
LDF	89.14	335	eP	19 53.00	0.1
AVF	89.39	332	eP	19 54.30	0.2
LPF	89.94	335	eP	19 57.30	0.6
	0.6s	7.20nm		5.1mb	
MAF	90.16	332	eP	19 58.50	0.7
	0.8s	5.30nm		4.8mb	
LSF	90.53	333	eP	19 59.80	0.3
	0.6s	5.40nm		5.0mb	
MFF	90.85	334	eP	20 01.90	1.0
	0.8s	5.30nm		4.9mb	
RJF	91.33	332	eP	20 03.90	0.7
CAF	91.44	332	eP	20 04.80	1.1
	0.8s	2.60nm		4.7mb	
LFF	91.93	332	eP	20 06.80	0.9
	0.6s	7.20nm		5.3mb	
ZOBO	148.35	60	PKP	26 43.70	2.2X
LPB	148.55	60	ePKP	26 44.00	2.4X
CNCB	148.81	61	PKP	26 44.30	2.1X
			i	26 48.20	
CCH	150.50	59	PKP	26 51.30	6.9X
S.D. = 1.0 on 88 of 98 obs.					

• SEP 05, 1989 05h 06m 52.75± 0.68s
6.299 S ± 8.8km 130.097 E ±19.1km
DEPTH = 33.0km (normal)
4.6mb (4 obs.) 4.8Msz (1 obs.)
BANDA SEA (280)

AAI	3.21	324	eP	07 41.50	-0.6
KNA	9.48	188	eP	09 09.50	-0.6
			eS	10 53.00	
WB5	14.12	163	eP	10 04.00	-8.7X
			i	10 12.20	
			eS	12 44.00	
WRA	14.18	163	Pc	10 10.90	-2.5
	1.1s	48.10nm		5.1mb	
QIS	16.91	148	eP	10 48.80	0.2
			eS	14 40.70	
PMG	17.18	101	eP	10 58.00	6.1X
ASPA	17.65	168	eP	10 58.80	0.9
	1.0s	39.00nm		4.5mb	
			eS	13 55.40	
WARB	20.05	189	eP	11 26.80	0.7
CTA	20.83	133	iPc	11 38.90	4.6X
	1.0s	39.00nm		4.7mb	
			iS	15 42.00	
NANU	21.42	220	eP	11 40.50	0.3
QLP	24.26	148	eP	12 12.60	4.6X
BAG	24.45	337	eP	12 10.50	0.4
PSI	32.38	285	ePc	13 26.00	4.2X
BWA	32.71	151	eP	13 31.00	6.5X
CAN	33.72	151	eP	13 34.70	1.4
CHG	39.57	310	eP	14 29.90	7.0X
CHTO	39.57	310	eP	14 19.00	-3.9X
GYA	39.71	326	P	14 30.60	6.6X
KMI	41.04	321	eP	14 36.50	1.4
MAT	43.29	10	eP	14 50.00	-3.1X
	1.0s	8.00nm		4.4mb	
CD2	44.77	327	eP	15 11.00	5.8X
XAN	44.85	335	P	15 05.00	-0.8
TIY	46.78	341	eP	15 27.60	6.5X
BJI	47.86	346	eP	15 35.50	6.0X
LZH	48.84	332	eP	15 44.50	7.2X
	2.0s	0.05nm		2.2mb X	
GTA	53.41	331	eP	16 10.60	-1.2
WMO	62.86	327	eP	17 18.30	0.4
SJS	146.01	82	ePKP	26 16.90	-14.4X
UPA	150.52	83	ePKP	26 18.00	-20.1X
CNCB	150.90	142	PKP	26 49.00	9.7X
LPB	151.04	142	PKP	26 51.30	11.9X
ZOBO	151.23	141	PKP	26 51.00	11.1X
Z	20s	0.15um		4.8Msz	
			LR	41 16.00	
CCH	151.52	146	PKP	26 52.00	12.1X
PPD	151.81	177	e(PKP)	26 57.00	17.1X
S.D. = 1.2 on 13 of 34 obs.					

• SEP 05, 1989 05h 08m 46.07± 0.81s
28.305 S ±10.3km 67.775 W ±12.5km
DEPTH = 141.0 ± 29.5 km
LA RIOJA PROVINCE, ARGENTINA (138)

CYA	1.75	95	iPd	09 18.80	0.6
CFA	3.31	187	iPc	09 38.50	0.7
			S	10 14.50	
ZON	3.32	193	iPc	09 39.50	1.6
			eS	10 16.00	
TCA	4.10	138	iPd	09 46.20	-2.0
SLA	4.11	30	ePc	09 53.80	5.4X
MRA	4.46	157	ePc	09 51.50	-1.5
PEL	5.43	207	eP	10 07.00	0.9
FCH	5.45	203	eP	10 09.00	2.4X
			iS	11 10.00	
SAN	5.70	205	eP	10 08.00	-1.7
PCH	5.80	203	iPd	10 13.00	2.0
			iS	11 17.00	
TACH	5.98	206	eP	10 13.00	-0.5
			iS	11 19.50	
CHCH	6.13	203	iPd	10 16.00	0.5
LNV	6.44	208	eP	10 18.40	-1.2
CCH	10.98	8	P	11 37.30	16.8X
CNCB	11.44	359	P	11 26.00	-0.9
LPB	11.72	358	P	11 30.00	-0.4
ZOBO	11.98	358	P	11 40.00	6.0X
PPD	16.15	71	eP	12 28.30	1.9
S.D. = 1.5 on 14 of 18 obs.					

SEP 05, 1989 05h 10m 04.35± 0.44s
47.069 N ± 3.3km 8.835 E ± 4.8km
DEPTH = 9.2 ± 3.1 km
SWITZERLAND (544)
ML 3.1 (LDG). MD 2.9 (STR).

LLS	0.23	151	ePd	10 09.00	-0.3
SAX	0.39	62	ePc	10 13.20	0.8
ZLA	0.51	324	eP	10 14.50	-0.2
VDL	0.73	143	eP	10 18.20	-0.7
SLE	0.74	342	eP	10 18.60	-0.3
TMA	0.96	178	eP	10 22.10	-0.8
FEL	0.98	326	Pg	10 22.93	-0.2
			Sg	10 35.12	
BBS	0.99	294	Pg	10 23.18	0.0
			Sg	10 36.73	
MMK	1.18	211	eP	10 25.50	-1.1
VAI	1.20	182	P	10 26.70	-0.1
			eSg	10 42.40	
DIX	1.39	225	eP	10 29.80	-0.4
MOF	1.40	305	Pn	10 29.53	-0.5
			Sg	10 49.10	
LOMF	1.40	282	Pn	10 30.57	0.5
			Sg	10 49.10	
ORO	1.56	203	Pc	10 35.10	2.7
			eSg	10 52.20	
BSF	1.58	300	Pn	10 33.65	1.0
ECH	1.61	316	Pn	10 32.66	-0.4
			Sg	10 55.39	
WLS	1.68	324	Pn	10 33.87	-0.1
CDF	1.71	323	Pn	10 33.71	-0.8
HAU	1.93	300	Pn	10 37.20	-0.4
			Pg	10 40.40	
			Sg	11 04.80	
GWF	2.08	337	Pn	10 39.15	-0.6
LPL	2.13	224	Pg	10 44.40	3.7X
			Sg	11 12.40	
LPG	2.13	223	Pn	10 42.00	1.1
			Pg	10 44.60	
			Sg	11 13.20	
VITF	2.24	302	Pn	10 42.47	0.3
BNI	2.52	217	P	10 44.40	-1.8
LBF	3.32	270	Pg	11 06.60	9.0X
			Sg	11 46.60	
LOR	3.40	275	Pg	11 07.60	9.0X
			Sg	11 49.00	
SMF	3.45	265	Pg	11 08.80	9.5X
			Sg	11 51.20	
KHC	3.79	55	Pg	11 19.00	14.8X
			Sg	12 04.50	
BGF	4.14	265	Pn	11 08.90	-0.2
			Sg	12 13.80	
S.D. = 0.9 on 24 of 29 obs.					

% SEP 05, 1989 05h 22m 42.92± 0.96s
36.966 N ±11.9km 29.338 E ± 6.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.51	115	iPg	22 53.00	-0.2
			iSg	23 02.00	
YER	0.86	282	ePn	22 59.90	0.4
BCK	1.11	63	ePn	23 04.30	0.4
KHL	1.36	6	iPn	23 07.80	-0.2
IZM	2.18	312	iPn	23 19.40	-0.4
S.D. = 0.5 on 5 of 5 obs.					

SEP 05, 1989 05h 51m 55.20± 0.16s
4.260 N ± 3.0km 127.408 E ± 4.0km
DEPTH = 42.4km (8 depth phases)
5.6mb (39 obs.) 5.0Msz (17 obs.)
TALAUD ISLANDS (263)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 26C
Centroid Location:
Origin Time 05:51:57.2 0.2
Lat 4.40N 0.05 Lon 127.75E 0.05
Dep 31.1 3.3 Half-duration 3.0
Moment Tensor; Scale 10**17 Nm
Mrr= 3.46 0.27 Mtt=-0.26 0.21
Mff=-3.20 0.33 Mrt= 0.69 0.47
Mrf= 0.83 0.50 Mtf=-3.31 0.29
Principal Axes:

T	Val= 3.60	Plg=82	Azm=335
N	1.88	4	214
P	-5.48	7	123

Best Double Couple:Mo=4.5*10**17
NP1:Strike=208 Dip=38 Slip= 83
NP2: 37 52 95

DAV	3.35	327	eP	52 48.00	1.6
MNI	3.80	223	iPd	52 54.50	1.8
			iS	53 33.50	
AAI	7.93	174	ePd	53 48.30	-2.6
			eS	55 33.00	
PCI	9.14	236	ePd	54 10.40	2.8X
TSM	9.31	270	ePd	54 12.80	2.9
KKM	11.29	280	ePc	54 40.50	3.4X
	1.3s	400.60nm		6.4mb	
OCP	12.05	329	eP	54 56.80	9.6X
MKS	12.31	220	e(P)c	54 52.00	1.3
			e	59 24.00	
BAG	13.81	331	eP	55 14.10	3.4X
			eS	58 00.00	
JAY	14.89	117	ePc	55 27.00	2.2
MTN	17.39	168	eP	55 53.00	-3.5X
MNDI	19.24	122	eP	56 21.00	1.7
GUMO	19.56	61	eP	56 23.80	1.2
PJG	19.56	61	eP	56 23.90	1.3
			TT	16 35.60	
GUA	19.58	61	eP	56 23.70	0.9
	0.8s	113.43nm		5.2mb	
KNA	19.93	176	eP	56 23.80	-2.6
	0.4s	97.00nm		5.5mb	
ANP	21.56	345	eP	56 42.00	-1.2
HKC	22.05	326	P	56 50.50	2.5
			S	00 41.00	
QZH	22.24	338	Pc	56 49.50	-0.4

05d 05h

```
        4.0s       1.70nm              2.8mb X
     Z  18s        3.30um              4.8Msz
     N  18s        4.40um
                   pP      57 00.00   40km
                   S       00 44.00
                   SS      01 27.00
MCO     22.26 324 eP       56 52.40    2.3
OIZ     22.58 312 P        56 52.50   -0.8
     N  15s        1.40um
     E  14s        2.20um
                   S       00 49.50
GZH     23.13 325 Pd       56 57.00   -1.7
     Z  18s        4.50um              5.0Msz
     N  15s        1.50um
     E  16s        3.60um
                   iS      01 05.00
PMG     23.91 125 eP       57 06.00   -0.3
KDB     23.95 125 eP       57 07.00    0.4
KGM     24.15 265 ePc      57 09.40    0.7
WRA     25.00 164 Pd       57 15.30   -1.5
        0.5s     102.80nm              5.6mb
RAB     26.13 108 e(P)     57 28.00    0.7
                  e(S)     02 08.00
IPM     26.31 272 ePd      57 29.90    0.9
        0.9s      59.50nm              5.2mb
MBL     26.33 196 iPc      57 29.20    0.1
        0.5s      85.00nm              5.6mb
SNG     26.81 277 iPc      57 32.30   -1.3
        1.0s      84.00nm              5.3mb
                  eS       02 05.20
                  e        04 33.80
KAGJ    26.98   7 eP       57 32.50   -2.5
SSE     27.33 348 P        57 35.00   -3.1X
        1.0s      52.00nm              5.1mb
     Z  20s        2.30um              4.7Msz
     N  17s       22.00um
                  S        02 14.00
                  sS       02 37.00
PPI     27.39 261 eP       57 37.50   -1.4
OIS     27.42 155 eP       57 36.80   -2.3
        1.0s     154.00nm              5.6mb
KUMJ    28.31   6 eP       57 46.50   -0.5
LOE     28.35 299 eP       57 46.80   -0.8
ASPA    28.47 167 iPc      57 47.20   -1 4
        1.2s     119.00nm              5.4mb
     Z  22s        4.32um              5.0Msz
                  eS       02 31.40
                  eScS     08 28.30
                  LR       10 14.00
PSI     28.47 268 ePc      57 46.40   -2.3
NNT     28.57 289 eP       57 46.40   -3.2X
NJ2     28.79 345 iPc      57 51.00   -0.3
        6.0s       0.80nm              2.6mb X
     Z  20s        2.40um              4.8Msz
     N  12s        0.80um
                  S        02 40.00
WHN     28.90 336 iPd      57 54.50    2.1
     Z  24s        6.15um              5.1MszX
     N  22s        7.69um
     E  24s       12.10um
                  S        02 42.00
NANU    29.08 203 eP       57 53.60   -0.4
        0.5s      31.00nm              5.2mb
NST     29.11 295 iPc      57 54.00   -0.4
GYA     29.69 320 P        57 59.20   -0.5
     Z  22s        3.90um              5.0Msz
     N  16s        2.30um
     E  16s        3.00um
                  PcP      01 04.00
                  S        02 50.00
                  PcS      04 46.60
SHNJ    29.91   6 eP       57 59.50   -1.9
TKSJ    30.21  11 P        58 03.50   -0.6
WARB    30.27 181 eP       58 04.00   -0.7
        0.3s      15.00nm              5.2mb
CTA     30.47 143 iPc      58 07.20    0.7
        1.5s     111.11nm              5.4mb
                  iS       02 59.00
SHK     30.52   9 eP       58 06.30   -0.4
BDT     30.68 297 eP       58 08.00   -0.4
        0.8s      77.90nm              5.5mb
WKYJ    30.77  13 P        58 08.10   -0.9
rONJ    31.28  10 eP       58 11.60   -1.9
CHG     31.34 300 eP       58 12.60   -1.6
        0.9s      85.71nm              5.5mb
                  eS       03 18.00
CHTO    31.34 300 iP       58 12.60   -1.6

MEKA    31.87 195 iPd      58 18.00   -0.7
        0.4s      71.00nm              5.9mb
TSRJ    32.12  13 P        58 20.40   -0.4
IIDJ    32.55  16 P        58 25.40    0.8
TIA     33.18 345 P        58 29.00   -1.0
        5.0s       1.00nm              2.9mb X
     Z  26s        1.70um              4.6MszX
     N  14s        0.60um
     E  14s        1.40um
                  PcP      01 13.00
                  S        03 41.00
CHJJ    33.39  17 P        58 28.50   -3.3X
MTMJ    33.56  15 P        58 32.20   -1.3
MAT     33.63  16 (P)      58 30.00   -3.9X
        1.3s      76.92nm              5.4mb
     Z  19s        3.82um              5.1Msz
                  eS       03 56.00
XAN     34.26 332 P        58 34.80   -4.6X
     N  13s        7.20um
     E  14s        1.00um
                  S        03 58.00
NIIJ    34.50  16 P        58 40.00   -1.4
CD2     34.63 323 P        58 40.80   -1.9
                  pP       58 52.00   41km
OLP     34.72 153 iPd      58 42.20   -1.2
                  i        00 04.00  447kmX
DL2     34.88 352 Pc       58 44.00   -0.7
     Z  20s        1.80um              4.8Msz
     N  16s        1.90um
     E  14s        0.90um
                  eS       04 12.00
FORR    34.92 179 eP       58 43.00   -2.0
        0.4s      82.00nm              6.0mb
MRWA    35.04 198 iPd      58 45.40   -0.8
        0.4s      16.00nm              5.3mb
COOL    35.45 189 eP       58 48.10   -1.6
        0.4s       8.00nm              5.0mb
YAMJ    35.67  17 eP       58 48.50   -2.9
TIY     36.00 340 iPc      58 54.50    0.2
        1.0s       0.30nm              3.2mb X
     E  16s        2.00um
                  pP       59 06.50   44km
                  S        04 30.50
BAL     36.15 196 eP       58 54.50   -1.0
        0.5s      61.00nm              5.8mb
KLB     36.82 194 eP       59 00.30   -0.8
        0.3s      11.00nm              5.2mb
RMQ     36.90 147 eP       59 00.00   -1.8
OFUJ    37.00  19 eP       59 02.40   -0.2
BJI     37.04 346 Pc       59 03.00    0.2
        4.0s       1.21nm              3.2mb X
     Z  19s        1.78um              4.9Msz
     N  16s        1.11um
                  PcP      01 24.00
                  eS       04 39.00
                  ScS      09 14.50
SNY     37.56 355 iPc      59 07.00   -0.2
        4.0s       1.20nm              3.1mb X
     Z  25s        2.70um              4.9MszX
     N  20s        2.00um
     E  22s        2.90um
                  pP       59 20.00   49km
                  sP       59 27.00
MUN     37.58 196 iPd      59 07.10   -0.4
        0.9s     205.00nm              6.0mb
AOMJ    37.98  16 eP       59 12.80    2.0
NWAO    38.22 194 eP       59 12.50   -0.4
        0.6s      80.00nm              5.8mb
     Z  20s        1.00um              4.6Msz
                  eS       05 12.00
STK     38.39 160 iPc      59 14.10   -0.2
LZH     38.40 329 P        59 16.50    1.9
                  pP       59 23.50   24kmX
HHC     39.12 341 Pc       59 21.00    0.6
     Z  22s        2.80um              5.0Msz
     N  20s        2.50um
     E  20s        2.50um
                  sP       59 39.00
                  S        05 15.00
RKG     39.37 194 eP       59 27.50    5.1X
CN2     39.42 358 Pc       59 21.50   -1.2
        5.0s       0.40nm              2.5mb X
     Z  20s        1.80um              4.9Msz
     N  15s        0.80um
     E  15s        1.10um
                  sP       59 41.00
                  PP       00 55.00

                  PcP      01 30.00
                  eS       05 18.00
                  SS       08 04.00
MRRJ    39.91  16 eP       59 27.10    0.3
MDJ     40.24   2 Pc       59 29.00   -0.5
     Z  28s        1.50um              4.7MszX
     E  16s        1.10um
                  epP      59 41.00   44km
ADE     40.44 166 iPd      59 32.00    0.7
        1.0s     260.00nm              6.0mb
HOOJ    40.51  18 eP       59 32.60    0.8
SAP     40.57  16 eP       59 33.00    0.8
KUSJ    41.61  19 eP       59 41.40    0.6
COO     41.81 148 eP       59 42.70    0.1
        0.9s      38.00nm              5.1mb
ASAJ    41.91  16 P        59 43.00   -0.2
LSA     42.60 311 iPc      59 51.00    1.3
        3.0s       1.00nm              3.0mb X
                  pP       00 01.70   37km
                  PcS      05 33.50
                  S        06 08.00
                  sS       06 23.00
GTA     43.00 328 Pc       59 52.20   -0.2
        5.0s       0.90nm              2.8mb X
     Z  21s        5.80um              5.5Msz
     N  15s        2.20um
                  pP       00 03.00   38km
                  S        06 11.00
BWA     43.28 154 eP       59 55.70    1.1
CAN     44.29 154 eP       00 03.80    1.0
CNB     44.44 154 iPd      00 04.10    0.1
        1.5s     124.00nm              5.5mb
                  e        00 12.40   28kmX
TOO     44.89 160 iPc      00 08.00    0.4
                  ePP      01 53.00
DZM     46.29 126 iPc      00 19.80    0.9
KOD     49.85 280 eP       00 45.30   -1.7
GBA     50.14 284 P        00 48.00   -0.8
TAU     50.29 161 iPd      00 50.00    0.4
WMQ     52.68 324 Pc       01 07.00   -0.8
        4.0s       1.40nm              3.3mb X
     Z  21s        6.10um              5.6Msz
     N  15s        3.10um
                  S        08 31.00
POO     54.17 290 iPc      01 17.80   -1.2
KSH     58.12 315 Pc       01 48.00    0.8
     Z  20s        2.60um              5.3Msz
     N  20s        5.20um
                  S        09 48.00
                  sS       10 08.00
KRP     61.23 138 eP       02 11.00    2.6X
QUE     62.44 302 iP       02 16.00   -1.0
                  eS       10 40.00
SNZO    62.55 141 P        02 15.00   -2.1
                  ScP      07 08.00
                  S        10 44.00
                  SS       15 08.00
PGZ     63.16 140 eP       02 17.70   -3.5X
ADK     66.15  34 P        02 39.50   -0.9
MAIO    69.73 307 eP       03 03.00   -0.3
                  eS       12 12.00
DRV     71.34 175 eP       03 14.00    1.8
SHI     74.77 299 eP       03 32.00   -1.4
                  e        12 59.00
BJA     76.28 296 (P)      03 42.30    0.5
BRF     76.31 296 (P)      03 42.00    0.1
BEE     76.36 296 (P)      03 42.50    0.3
        0.5s      46.00nm              5.7mb
DHR     76.71 296 iP+      03 44.50    0.3
RYD     79.88 294 iP+      04 02.00    0.4
TAB     80.37 308 iP+      04 05.00    0.9
SLY     80.96 305 iPd      04 07.00    0.0
                  eS       14 14.00
BHD     81.85 303 iPd      04 10.00   -1.7
                  iS       14 18.00
KMSA    81.90 290 iPd      04 13.50    1.2
OASM    82.65 296 iPd      04 17.00    0.9
MSL     82.87 306 iPd      04 17.00    0.0
                  eS       14 33.50
PMR     83.16  29 P        04 16.00   -1.9
        0.8s      48.28nm              5.6mb
ARO     83.84 281 iP+      04 24.00    1.6
FBA     83.96  25 P        04 21.70   -0.3
        0.9s      20.83nm              5.2mb
MAW     84.48 200 eP       04 25.00    0.5
SBA     84.76 172 Pd       04 28.30    2.5
AAE     88.00 279 eP       04 42.00   -1.2
```

KVT	88.26	311	iP	04	45.00	1.3	CHCH	146.03	153	ePKP	11	34.00	2.1X	MRX	8.96	309	iP	30	22.00	0.0
HRI	89.08	303	eP	04	49.00	1.1	TACH	146.13	152	ePKPd	11	34.00	2.0X	SRA	9.98	113	ePc	30	36.70	0.5
BHL	89.11	304	Pc	04	50.00	2.1	PCH	146.35	152	ePKPd	11	35.10	2.6X	SJS	10.40	113	iPc	30	42.00	0.2
			SKS	15	18.00		SAN	146.42	152	ePKP	11	33.50	1.0	LCR2	10.53	114	eP	30	43.10	-0.6
AYN	89.20	299	iP+	04	49.70	1.4	PEL	146.67	152	iPKPc	11	35.10	2.1X	AGX	11.14	314	eP	30	52.00	0.3
INK	89.43	22	eP	04	48.00	-0.6	FCH	146.70	152	ePKP	11	36.50	3.1X	UPA	14.87	109	e(P)	31	41.00	-0.3
DSI	89.52	301	eP	04	51.00	1.2	MRA	149.42	158	ePKPc	11	38.70	1.5	UYO	19.87	358	iPd	32	41.00	-2.0
KEV	89.63	340	eP	04	49.00	-0.5	UPA	150.09	64	e(PKP)	11	38.90	0.2	PSO	20.77	127	eP	32	54.00	1.1
SRFA	89.91	299	iPd	04	53.00	1.4	TCA	150.79	159	ePKPd	11	40.90	1.4	OLY	21.29	5	P	32	54.00	-3.6X
HOL	90.00	299	iPd	04	54.00	1.9				i	11	46.00		BMG	21.52	107	iPd	33	10.00	9.9X
BADA	90.10	298	iP+	04	53.70	1.2	NNA	154.81	109	iPKPd	11	48.00	2.5X	SIO	21.56	354	eP	32	58.80	-1.5
MBH	90.10	300	iPc	04	54.00	1.5	SLA	156.16	150	e(PKP)	11	48.40	1.1	BOG	21.62	114	eP	33	04.00	2.6
SOD	90.24	338	iP	04	51.60	-0.8	HUA	156.23	110	e(PKP)	11	51.50	3.6X				PS	37	09.00	
NAI	90.70	269	iPc	04	59.00	3.1X	BMA	159.94	203	e(PKP)	11	38.00	-13.6X	TUL	21.68	356	eP	33	02.00	0.5
	1.0s	30.00nm			5.6mb					e	12	47.00			0.8s	155.60nm			5.5mb	
BBTK	90.87	310	eP	04	56.00	0.0	CNCB	160.42	131	PKP	11	55.60	2.7X		Z 21s	14.31um			5.4Msz	
MBC	91.29	13	eP	04	57.00	-0.1	LPB	160.50	130	PKP	11	56.00	3.2X				eS	37	29.00	
	0.8s	17.00nm			5.5mb			1.2s	78.13nm								LR	39	00.00	
SUF	91.39	333	iP	04	56.60	-1.2	VAO	160.59	196	ePKP	11	52.30	0.0	PRM	22.31	26	P	33	05.60	-2.2
	0.6s	17.90nm			5.7mb					e	12	35.00		RSCP	22.52	18	P	33	08.40	-1.5
NUR	92.57	331	eP	05	03.10	-0.1	ZOBO	160.63	129	PKPc	11	55.00	1.9X	ALQ	23.60	333	eP	33	21.50	0.9
Z	19s	2.40um			5.7Msz			1.2s	50.68nm						1.0s	28.75nm			4.7mb	
		LR		40	20.00		CCH	161.39	135	PKP	11	56.30	2.8X				e	35	42.00	
ALT	93.00	309	iP	05	04.70	-1.1	PPD	162.29	184	ePKP	11	55.40	1.5				eS	37	42.00	
TLB	93.70	315	ePd	05	09.00	0.3				e	12	05.10					eSS	38	46.00	
CLI	93.88	317	iPc	05	08.50	-1.1				e	12	42.10		FVM	23.85	7	P	33	20.40	-2.4
VRI	94.38	316	iPc	05	13.00	1.1				e	12	55.90		GLA	26.81	318	eP	33	51.00	0.2
MLR	94.99	316	iPc	05	16.00	1.1				e	13	08.00					e	37	13.00	
CMP	95.66	316	ePc	05	17.00	-0.9	PDCR	164.35	237	ePKP	11	56.30	0.2	GLD	27.36	341	P	33	56.60	0.7
DAG	96.84	353	iPc	05	20.90	-1.6				e	13	33.30			1.2s	101.01nm			5.3mb	
	0.8s	26.12nm			5.8mb			S.D. = 1.2		on 176 of 207 obs.				GOL	27.36	340	P	33	56.00	0.0
PTZ	96.91	256	iPd	05	24.00	-0.1	---								1.0s	152.50nm			5.6mb	
KRA	97.85	322	eP	05	27.90	0.3	SEP 05, 1989 06h 28m 11.80± 0.20s							BAR	27.82	315	eP	34	00.00	0.0
NRA0	98.60	333	P	05	28.00	-2.7	14.218 N ± 4.0km 93.755 W ± 2.9km							CBN	27.96	28	eP	34	00.00	-1.1
NB2	98.61	334	P	05	29.60	-1.3	DEPTH = 35.3km (19 depth phases)							TPC	28.27	318	eP	34	04.00	0.0
	1.1s	27.00nm			5.7mb		5.6mb (64 obs.) 4.9Msz (6 obs.)										e	37	17.00	
BEO	98.92	316	eP	05	32.50	0.0	NEAR COAST OF CHIAPAS, MEXICO (69)							PLM	28.34	316	eP	34	05.00	0.1
SKO	98.94	313	iP	05	32:50	-0.2	Ms 5.0 (BRK).										e	37	17.00	
			i	05	46.50	47km	CENTROID, MOMENT TENSOR (HRV)							PEC	28.87	317	P	34	08.90	-0.5
BUL	99.70	250	iPc	05	37.10	0.4	Data Used: GDSN							RVR	29.07	317	eP	34	12.00	0.8
LSZ	99.99	255	iPc	05	38.40	0.3	L.P.B.: 15S, 25C										e	37	18.00	
PRU	101.17	323	Pdiffc	05	42.50	-0.1	Centroid Location:							MSU	29.17	329	P	34	12.60	0.3
	1.6s	37.50nm			5.7mb		Origin Time 06:28:13.2 0.8							MWC	29.66	316	eP	34	16.00	-0.7
		e		05	59.00		Lat 14.18N FIX;Lon 93.81W FIX							SBB	29.78	317	eP	34	16.00	-1.7
		e		09	04.00		Dep 15.0 FIX Half-duration 2.8										e	37	20.00	
		e		09	47.50		Moment Tensor; Scale 10**17 Nm							DAU	30.26	333	P	34	22.00	-0.1
BRG	101.21	324	iPdiff	05	43.60	0.9	Mrr=-1.88 0.13 Mtt= 1.51 0.14							CLC	30.33	319	eP	34	23.00	0.5
	1.6s	56.00nm			5.9mb		Mff= 0.37 0.19 Mrt= 0.90 0.52										e	37	22.00	
		i		05	59.20		Mrf= 1.76 0.38 Mtf=-0.55 0.14							ISA	30.80	318	eP	34	27.00	0.4
		e		09	56.10		Principal Axes:										e	37	24.00	
		e		16	36.00		T Val= 1.76 Plg= 8 Azm= 13							NNA	30.97	146	eP	34	24.00	-4.2X
CLL	101.61	324	iPdiff	05	44.80	0.4	N 1.33 30 278							SYP	31.13	315	eP	34	29.00	-0.7
	1.8s	52.00nm			5.8mb		P -3.08 59 116										e	37	24.00	
Z	20s	1.00um			5.3Msz		Best Double Couple:Mo=2.4**17							TNP	31.58	323	P	34	33.70	0.1
KHC	102.07	322	iPdiff	05	47.40	0.8	NP1:Strike=133 Dip=46 Slip= -45								0.9s	19.53nm			5.0mb	
		e		09	04.50		NP2: 258 59 -126							HUA	31.85	144	e(P)	34	36.70	0.3
KMZ	102.22	257	iPdiff	05	49.00	0.8								FRI	32.40	319	eP	34	39.70	-0.8
MOX	102.67	324	ePdiff	05	49.00	-0.2	OC2	1.56	77	ePc	28	37.00	-0.6				esP	34	51.70	
	1.8s	50.00nm			5.9mb					S	28	48.00					ePcP	37	26.70	
EDM	103.53	33	ePdiff	05	57.50	4.5X	TPX	1.60	65	iPd	28	37.50	-0.7	PRI	32.51	317	ePc	34	41.90	0.2
OGA	104.50	321	ePdiff	05	58.40	0.7				iS	29	03.00					esP	34	54.00	
KVN	106.00	47	Pdiff	06	06.00	1.4	KKG	1.83	65	iPd	28	40.20	-1.3				ePcP	37	28.00	
SNA	106.58	196	iPKPc	10	31.90	15.2X	SBG	1.88	61	iPc	28	41.50	-1.0	KVN	32.74	324	P	34	43.80	0.0
	1.6s	66.67nm					JAT	2.06	87	ePd	28	44.00	-0.7	LLA	32.97	318	ePc	34	45.10	-0.4
BNG	108.41	276	ePKPd	10	22.40	0.5	SOG	2.17	75	iPd	28	43.90	-2.8				epP	34	55.10	35km
	0.6s	6.00nm					SOG2	2.17	77	ePc	28	45.00	-1.5				ePcP	37	28.70	
		id		10	35.40		LHG	2.50	85	iPc	28	49.10	-2.0	PRS	33.09	317	eP	34	46.30	-0.3
RSSD	113.36	38	PKP	10	30.10	-0.6	SCX	2.73	23	iP	28	55.50	1.3	SAO	33.38	317	eP	34	48.40	-0.7
ALQ	116.17	48	ePKP	10	38.00	1.6X				iS	29	31.00			Z 20s	2.00um			4.8Msz	
		ePP		11	55.40		FUG	2.83	85	iPd	28	54.30	-1.6		N 20s	1.90um				
		ePKKP		21	11.20		ITG	2.84	82	iPd	28	54.90	-1.3		E 20s	2.10um				
SIO	122.92	42	ePKP	10	50.10	1.2	TER	2.98	88	ePd	28	56.00	-1.8	CMB	33.46	320	ePc	34	49.90	0.1
TUL	123.17	42	ePKP	10	50.60	1.2				S	29	24.00					ePcP	37	29.90	
	1.3s	19.00nm					MMG	3.00	84	iPc	28	57.00	-1.3	ARN	33.78	318	P	34	52.80	0.2
TIO	124.39	312	iPKPd	10	54.00	1.9X	PCG	3.01	86	iP	28	57.00	-1.6	MHC	33.84	318	ePc	34	53.60	0.3
		i		11	07.00		OXX	4.04	315	iP	29	11.50	-1.5		Z 20s	1.00um			4.5Msz	
UYO	125.07	43	iPKPd	10	53.00	-0.1				iS	29	55.50			N 20s	2.40um				
FVM	125.25	36	PKP	10	53.80	0.4	EVV	4.48	340	eP	29	17.50	-1.6		E 20s	2.30um				
	1.1s	40.24nm								iS	30	09.00					esP	35	05.47	62kmX
OLY	126.21	39	PKP	10	54.80	-0.6	LVVM	6.06	335	iP	29	37.24	-4.2X				e	35	09.00	
KIC	131.07	282	PKP	11	05.96	0.8	ACX	6.45	295	iP	29	44.00	-2.9				ePcP	37	32.10	
	1.4s	113.00nm					IIT	6.47	318	iP	29	47.50	0.1				e	39	28.00	
TIC	131.29	283	PKP	11	06.36	0.7	PPM	6.71	317	iP	29	50.50	-0.6				eS	39	59.00	
	1.3s	70.50nm								iS	31	06.50					e	41	53.00	
LIC	131.38	282	PKP	11	06.44	0.7	III	6.87	308	iP	29	52.50	-0.5				eLQ	44	15.00	
PRM	132.63	34	PKP	11	10.00	2.4X	IIC	7.63	317	eP	30	03.00	-0.7				eLR	45	20.00	
LNV	145.65	152	iPKPd	11	32.50	1.3	CRX	7.67	313	(P)	30	08.00	3.7X	GCC	33.90	317	eP	34	53.40	-0.2

05d 06h

				ePcP	37	31.10			ECB	77.05	39	eP	40	03.80	0.9		1.0s	90.00nm			5.9mb
PCC	34.42	318	eP		34	57.00	-1.0			1.3s	185.00nm			6.0mb				e	40	57.00	33km
BKS	34.54	318	ePc		34	59.80	0.7		DLE	77.09	38	eP	40	02.10	-1.0	ETER	85.36	48	eP	40	49.00	2.1
Z	20s		2.10um			4.9Msz			ECP	77.32	39	eP	40	05.20	0.8	WLF	85.58	40	P	40	49.50	1.7
N	20s		1.30um							1.2s	187.00nm			6.0mb		VITF	85.89	41	P	40	49.85	0.5
E	20s		2.00um						ETA	77.35	39	eP	40	05.20	0.6	HAU	86.18	41	eP	40	51.40	0.5
			esP		35	11.77				1.3s	291.00nm			6.1mb			1.0s	96.00nm			6.0mb
			ePcP		37	33.23			EAB	78.00	35	eP	40	08.20	0.1	BSF	86.52	42	P	40	52.71	0.0
			epPcP		37	43.35				1.4s	202.00nm			6.0mb		ECH	86.64	41	P	40	53.63	0.5
			isPcP		37	45.48			YRH	78.29	38	eP	40	10.90	1.1	CDF	86.65	41	P	40	53.44	0.2
			e		39	34.00				1.3s	125.00nm			5.8mb		LOMF	86.68	42	P	40	53.85	0.4
			eLO		44	36.00			ELO	78.31	35	eP	40	10.10	0.3	GWF	86.70	40	P	40	54.53	1.1
			eLR		46	28.00			EBH	78.45	35	eP	40	09.80	-0.8	WLS	86.70	41	P	40	54.40	0.9
BRK	34.55	318	eP		34	59.80	0.6			1.3s	148.00nm			5.8mb		MOF	86.73	41	P	40	53.73	0.0
			ePcP		37	33.10			EDU	78.68	34	iPd	40	12.30	0.5	KEV	86.78	17	iP	40	54.00	0.6
ORV	35.08	321	ePc		35	04.50	0.8			0.6s	46.00nm			5.7mb			0.6s	7.80nm			5.1mb
			esP		35	16.80			ESK	78.76	36	ePd	40	12.50	0.2	BBS	87.09	42	P	40	55.72	0.4
			ePcP		37	34.80				1.0s	80.00nm			5.7mb		TIC	87.17	84	P	40	56.96	0.6
LRM	35.23	337	ePd		35	05.50	0.3		EKA	78.78	36	Pd	40	11.70	-0.7	LPG	87.18	44	eP	40	57.50	1.3
MIN	35.64	322	eP		35	08.50	-0.1			1.6s	254.20nm			6.0mb			1.4s	121.90nm			6.0mb
			ePcP		37	35.80			EDR	78.88	34	iPd	40	13.20	0.2	BNI	87.27	44	Pc	40	58.40	2.0
WDC	36.34	322	ePc		35	12.30	-2.1		ESY	79.00	35	ePc	40	13.70	0.1	LIC	87.27	84	P	40	57.58	0.8
			esP		35	24.40			KBS	79.12	11	eP	40	20.50	6.6X	FEL	87.29	41	P	40	56.69	0.3
			ePcP		37	37.40			TIO	79.88	61	iP	40	20.00	0.9	KIC	87.51	84	Pd	40	58.64	0.7
LBFM	36.44	323	P		35	15.00	-0.4					i	40	25.00	16kmX		0.8s	27.50nm			5.6mb
			pP		35	26.40	41km		EHOR	80.27	53	eP	40	21.00	0.2	LRG	87.52	46	eP	40	58.30	0.9
RSON	36.54	0	P		35	13.40	-2.5		EJIF	80.34	55	eP	40	23.50	2.3		1.4s	139.40nm			6.0mb
	0.9s	104.55nm				5.7mb			GUD	80.59	50	eP	40	22.80	0.1	LMR	87.66	46	eP	40	58.90	0.8
FHC	37.35	321	ePc		35	23.50	0.6		TOL	80.81	51	iPc	40	25.50	1.8		1.4s	52.20nm			5.6mb
			epP		35	33.60	34km			1.6s	133.33nm			5.7mb		FRF	87.69	46	eP	40	59.00	0.7
			esP		35	35.80			MAL	81.13	54	iPc	40	26.00	0.7		1.4s	148.10nm			6.1mb
ARE	37.59	143	eP		35	26.00	0.6		LPF	81.37	43	eP	40	26.40	0.0	SOD	87.98	20	eP	41	02.00	2.8
	1.4s	69.77nm				5.3mb				1.2s	55.90nm			5.4mb					i	41	12.20	32km
SES	38.72	342	eP		35	34.50	0.2		FLN	81.58	42	eP	40	27.90	0.4	SBF	88.14	45	eP	41	01.10	0.6
	1.2s	102.00nm				5.5mb				1.2s	77.30nm			5.6mb			1.4s	90.60nm			5.9mb
ZOBO	39.48	139	P		35	39.00	-2.6		AFC	81.71	54	eP	40	29.40	0.8	UPP	88.15	28	eP	41	00.00	-0.1
	0.9s	25.30nm				5.0mb			LDF	81.85	42	eP	40	29.20	0.3	VAI	88.42	43	Pc	41	02.90	1.3
Z	22s		0.98um			4.6Msz				1.2s	73.70nm			5.6mb		MOX	88.59	38	eP	41	03.00	0.5
			LR		48	04.00			ETOR	82.12	50	eP	40	31.50	0.9		1.7s	110.00nm			5.9mb
LPB	39.70	139	P		35	44.00	0.8		MFF	82.26	44	eP	40	30.90	-0.1				e	41	15.00	39km
Z	15s		0.67um			4.6MszX				1.3s	46.20nm			5.4mb		GRF	88.69	39	eP	41	04.20	1.2
			eLR		47	24.00			AIA	82.30	168	eP	40	31.00	0.3	Z	20s	1.20um			5.3Msz
CNCB	39.98	140	P		35	44.20	-1.5		LFF	83.23	45	eP	40	36.50	0.4				e	41	06.60	8kmX
LON	40.03	330	P		35	44.00	-1.2			1.2s	61.80nm			5.6mb					e	41	14.60	
PNT	40.92	334	eP		35	53.00	0.6		EPF	83.39	47	eP	40	37.40	0.4	CLL	89.17	37	iPd	41	06.50	1.3
	1.1s	72.00nm				5.3mb				1.4s	82.70nm			5.7mb			2.4s	150.00nm			5.9mb
FFC	40.92	353	eP		35	52.00	-0.3		LSF	83.47	44	eP	40	37.10	-0.2				i	41	18.00	37km
	0.7s	20.00nm				5.0mb				1.4s	52.20nm			5.5mb		BOB	89.23	44	P	41	06.50	0.8
CCH	41.57	138	P		35	51.30	-7.2X		LPO	83.60	46	eP	40	38.20	0.2	BRG	89.88	37	iP	41	07.60	-0.9
EDM	41.90	342	iPd		36	00.20	-0.2			1.3s	60.60nm			5.6mb			1.0s	32.00nm			5.6mb
	1.3s	206.00nm				5.7mb			RJF	83.68	45	eP	40	38.50	0.1				i	41	12.80	16kmX
PGC	42.16	331	eP		36	03.00	0.5			1.2s	59.50nm			5.6mb					i	41	21.20	
PEL	51.99	155	iPc		37	18.10	-1.9		TCF	83.92	44	eP	40	39.70	0.1				e	52	04.00	
SAN	52.27	156	iPc		37	21.40	-0.7			1.4s	62.70nm			5.6mb		MME	90.26	44	Pc	41	12.20	1.4
LNV	52.42	157	iPc		37	22.00	-1.1		CAF	84.15	45	eP	40	41.00	0.2	KHC	90.33	39	Pd	41	12.20	1.5
PCH	52.48	155	eP		37	22.50	-1.2			1.4s	39.20nm			5.4mb			1.0s	10.50nm			5.1mb
FRB	52.50	14	eP		37	22.00	-1.3		UCC	84.16	39	P-	40	43.00	2.3				e	41	22.50	32km
	0.8s	108.00nm				5.9mb			MAF	84.17	44	eP	40	41.10	0.2	SUF	90.35	24	eP	41	10.10	-0.4
BAO	54.09	122	eP		37	32.50	-3.4X			1.1s	58.60nm			5.7mb			1.0s	29.00nm			5.5mb
PPD	55.04	130	eP		37	37.30	-5.4X		SNF	84.19	39	P	40	42.20	1.4	PRU	90.58	38	P	41	12.50	0.7
			epP		37	51.10	50kmX					e	40	53.40	36km		1.2s	23.10nm			5.4mb
			ePcP		38	43.90			BGF	84.28	44	eP	40	41.40	0.0				e	41	25.00	41km
			e(pPcP		38	54.00				0.8s	36.20nm			5.6mb		NUR	90.93	26	eP	41	13.00	-0.1
			e(PP)		39	50.00			DBN	84.31	38	eP+	40	44.00	2.7				e	41	24.00	35km
VAO	58.87	128	eP		38	07.70	-2.2		DOU	84.49	40	Pc	40	43.00	0.6				e	51	40.00	
			epP		38	17.10	31km					i	40	55.40	41km	KBA	90.96	41	iPd	41	10.50	-3.3X
INK	59.75	344	ePd		38	14.00	-1.3					Lg	01	43.00			1.0s	24.60nm			5.5mb
	0.9s	463.00nm				6.6mb			AVF	84.56	43	eP	40	42.80	0.0				i	41	13.90	11kmX
			pP		38	24.00	33km			0.8s	13.40nm			5.2mb					i	41	21.10	
PDCR	60.30	114	eP		38	17.20	-2.5		SSF	84.59	43	eP	40	43.10	0.2	KSP	91.26	37	eP	41	15.00	0.1
			i		38	18.50	4kmX			1.2s	44.60nm			5.5mb					ed	41	16.00	3kmX
			i		38	23.70			NB2	84.76	28	P	40	44.60	1.0				ec	41	27.50	
			e		38	29.80				1.1s	103.60nm			5.9mb		RBL	91.34	41	Pc	41	16.70	1.3
			e		39	00.50			LOR	84.77	43	eP	40	43.90	0.1	MNS	92.26	45	P	41	21.60	1.9
GDH	60.53	15	eP		38	16.00	-4.6X			1.2s	71.40nm			5.7mb		ZST	92.84	39	iPd	41	24.00	1.8
			e		42	08.00			SMF	84.92	43	eP	40	44.50	-0.1	KRA	93.70	36	eP	41	26.50	0.4
			e		46	30.00				1.2s	32.70nm			5.4mb			1.3s	87.00nm			6.0mb
BMA	60.87	126	eP		38	29.40	5.8X		LBF	84.92	43	eP	40	44.40	-0.2				e	41	30.60	13kmX
			e		38	40.10	36km			1.4s	54.00nm			5.5mb					i	41	38.90	
MBC	63.49	353	eP		38	40.00	-0.3		WIT	84.98	37	eP	40	47.50	2.8	KMZ	121.49	97	iPKPc	47	04.00	-0.3
	1.0s	84.00nm				5.8mb						e	40	56.00	27km	WMQ	122.23	359	PKP	47	04.00	-0.8
AKU	71.24	25	iP		39	30.30	1.2		ENN	85.12	39	eP	40	46.00	0.5	TIY	122.78	335	PKPc	47	06.00	-0.1
	1.0s	32.00nm				5.3mb				0.9s	124.00nm			6.1mb		LSZ	123.99	99	iPKPc	47	10.00	0.9
DAG	72.82	13	iPd		39	37.30	-1.1					e	40	57.00	35km	MAW	124.51	169	ePKP	47	07.00	-1.4
	1.0s	40.00nm				5.4mb			MEM	85.22	39	P	40	46.90	1.0	BUL	124.84	105	iPKPd	47	10.30	-0.4
			i		39	49.10	40km					e	40	57.80	35km		0.9s	33.61nm			
DMU	76.80	37	eP		40	01.10	-0.4		WTS	85.30	38	eP	40	46.50	0.2	GTA	125.17	347	ePKP	47	09.20	-1.6

KRI	125.53	101	iPKPd	47	11.20	-0.9
			i	47	22.10	
KSH	125.75	10	ePKP	47	12.60	0.7
PTZ	126.89	97	iPKPc	47	15.00	0.3
LZH	127.27	342	ePKP	47	15.50	0.5
	1.2s		21.00nm			
XAN	127.38	336	PKP	47	14.00	-1.1
CD2	132.08	340	PKP	47	24.40	0.3
QUE	132.10	23	iPKPd	47	25.10	0.7
WB5	133.77	256	ePKP	47	26.70	-0.9
WRA	133.79	256	PKPd	47	26.60	-1.0
	0.8s		10.40nm			
GYA	134.96	334	PKP	47	29.80	0.0
TSM	143.50	298	ePKPd	47	42.70	-2.8X
COOL	143.94	237	ePKP	47	41.50	-4.3X
CHG	144.87	339	ePKPd	47	45.30	-2.4X
	1.0s		73.25nm			
CHTO	144.87	339	ePKP	47	44.80	-2.9X
	1.2s		93.06nm			
LOE	145.06	334	ePKP	47	45.80	-2.2X
RKG	145.87	229	ePKP	47	48.00	-1.0
NWAO	146.22	231	ePKP	47	49.00	-0.6
BDT	146.30	338	ePKP	47	50.00	-0.1
	0.8s		51.90nm			
NST	147.28	335	ePKP	47	54.00	2.3X
MBL	147.31	253	iPKPd	47	51.70	0.1
	1.0s		88.00nm			
MUN	147.42	232	ePKP	47	51.00	-0.5
BAL	147.60	235	ePKP	47	52.00	0.1
NNT	150.20	333	iPKPd	47	58.30	2.0X
GBA	151.01	18	PKP	47	58.40	0.9
NANU	151.04	249	ePKP	48	01.50	4.2X
	0.6s		33.00nm			
KOD	154.19	20	ePKP	48	11.00	8.5X
SNG	154.40	325	ePKP	48	05.10	2.8X

S.D. = 1.1 on 210 of 232 obs.

• SEP 05, 1989 06h 45m 48.38± 2.71s
41.933 N ±18.9km 15.886 E ±18.7km
DEPTH = 33.0km (normal)
SOUTHERN ITALY (390)

DUI	1.10	256	P	46	07.30	-0.3
			eSg	46	21.70	
HVAR	1.31	18	iPg	46	10.80	0.3
			iSg	46	29.00	
SGO	1.44	198	P	46	16.70	4.3X
			eSn	46	35.50	
SDI	1.56	262	P	46	14.40	0.2
			eSg	46	32.50	
MGR	1.81	188	P	46	23.10	5.3X
			iSn	46	45.80	
AZI	1.83	273	P	46	18.60	0.6
			eSn	46	40.60	
ALP	1.91	297	ePn	46	17.10	-2.2
			iSn	46	41.32	
AOI	2.33	315	e(Pn)	46	27.04	1.8
			e(Sn)	46	58.99	
CIO	2.39	303	e(Pn)	46	28.24	2.1
			eSn	47	02.33	
MNS	2.43	282	P	46	27.00	0.4
			eSn	46	53.10	
ASS	2.64	297	P	46	29.60	-0.1
			eSn	46	58.60	
ARV	2.67	307	P	46	30.20	0.1
CRE	3.36	302	P	46	37.80	-2.1
VBY	3.60	353	ePn	46	42.40	-0.8
			eSn	47	22.20	
PTJ	3.97	1	eP	46	57.10	8.6X
VOY	4.34	341	e(Pn)	46	53.80	0.0
			eSn	47	29.50	
			e	49	20.00	

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

? SEP 05, 1989 06h 51m 28.52± 3.35s
7.090 S ±17.5km 147.425 E ±45.5km
DEPTH = 33.0km (normal)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.60	316	eP	51	40.50	-0.1
PMG	2.32	187	eP	52	06.00	0.8
KDB	2.38	186	eP	52	05.00	-1.1
WB5	17.95	224	eP	55	37.00	-0.4
ASPA	20.98	217	iPc	56	12.30	0.7

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

SEP 05, 1989 06h 52m 30.10± 0.18s
40.200 N ± 2.6km 25.086 E ± 1.9km
DEPTH = 10.0km (geophysicist)
4.9mb (32 obs.) 5.0Msz (3 obs.)
AEGEAN SEA (365)
ML 5.0 (TTG), 4.9 (ATH). Felt in the Edirne-Canokkale area, Turkey and in ports of Macedonia and Thrace, Greece.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 21C
Centroid Location:
Origin Time 06:52:37.2 1.0
Lat 39.12N 0.10 Lon 25.66E 0.14
Dep 15.0 FIX Half-duration 1.7
Moment Tensor; Scale 10**17 Nm
Mrr=-0.48 0.08 Mtt= 1.06 0.11
Mff=-0.58 0.08 Mrt= 0.82 0.24
Mrf=-0.84 0.15 Mtf=-0.46 0.07
Principal Axes:
T Val= 1.69 Plg=26 Azm= 22
N -0.29 32 130
P -1.39 46 261
Best Double Couple:Mo=1.5*10**17
NP1:Strike= 64 Dip=34 Slip=-159
NP2: 317 79 -58

PLG	1.27	278	iPnd	52	53.40	-0.3
PRK	1.32	136	iPnd	52	54.70	0.2
KDZ	1.47	10	iPc	52	57.00	0.4
RZN	1.51	349	eP	52	58.00	0.6
NEO	1.69	239	iPnd	52	58.50	-1.3
DIM	1.88	10	iPc	53	04.00	1.5
PLD	1.93	351	iPc	53	05.00	1.8
EDC	2.13	85	iPn	53	06.60	0.4
BNT	2.17	85	iPn	53	07.00	0.2
KKB	2.25	318	iP	53	07.00	-1.0
PGB	2.45	344	iP	53	11.00	0.2
ATH	2.47	206	ePn	53	10.50	-0.5
IZM	2.47	136	iPn	53	10.90	-0.1
JMB	2.53	26	eP	53	12.00	0.1
KZN	2.54	273	ePn	53	12.00	-0.1
VTS	2.78	330	iPd	53	16.00	0.5
DST	2.79	101	iPn	53	15.70	0.0
SMG	2.84	151	ePn	53	15.50	-0.8
PVL	3.02	3	iPc	53	18.00	-0.8
ITU	3.12	72	iPc	53	19.00	-1.3
APE	3.15	174	ePn	53	19.00	-1.7
ISK	3.14	73	iPn	53	18.90	-1.7
SKO	3.28	304	iPnd	53	23.00	0.5
Z	10s		32.90um			
N	10s		44.00um			
E	10s		34.10um			
			iPg	53	36.50	
			iSn	54	09.00	
			i	54	18.00	
			iSb	54	20.00	
			iSg	54	26.00	
			LR	54	46.00	
KBN	3.29	279	iPnd	53	23.00	0.3
GBZT	3.38	79	ePn	52	54.40	-29.5X
			iSg	53	13.10	
OHR	3.39	287	iPnd	53	24.40	0.3
LSK	3.44	271	iPnc	53	25.60	0.7
HRT	3.55	78	iPn	53	25.20	-1.2
PHP	3.82	294	ePn	53	30.40	0.2
ITM	3.90	220	ePn	53	31.30	-0.1
SRN	3.92	267	ePn	53	33.20	1.6
KHL	3.92	117	iPn	53	32.30	0.6
BERA	3.95	279	ePn	53	33.70	1.7
YER	3.95	140	iPn	53	32.30	0.2
KKS	4.00	299	ePn	53	34.50	1.8
GPA	4.00	87	iPn	53	32.20	-0.6
VLS	4.04	241	ePn	53	33.70	0.4
ALT	4.04	105	iPn	53	33.40	-0.1
KEK	4.09	265	ePn	53	36.30	2.3
TIR	4.13	288	iPnd	53	37.20	2.7
BUC1	4.20	9	iPc	53	36.00	0.4
BUC	4.28	10	iPc	53	34.00	-2.7
VLO	4.28	275	iPn	53	39.20	2.5
LACI	4.32	291	ePn	53	39.00	1.7
PUK	4.33	297	ePn	53	39.00	1.5
BCI	4.36	301	iPnc	53	38.80	1.0
DRA	4.52	352	iPd	53	40.00	-0.1
PVY	4.53	304	ePn	53	41.10	0.7
			eSn	54	46.20	
SDA	4.59	295	iPnc	53	44.00	2.8X

IVA	4.72	306	ePn	53	43.60	0.5
			eSn	54	48.00	
ULC	4.75	294	ePn	53	45.50	2.0
			eSn	54	50.50	
VAM	4.84	189	ePn	53	43.00	-1.7
TLB	4.90	25	iPc	53	45.00	-0.5
TTG	4.92	299	ePn	53	47.50	1.7
			eSn	54	55.00	
KAP	4.93	160	ePn	53	44.50	-1.4
ISR	5.05	12	ePc	53	48.50	0.8
CMP	5.07	360	iPc	53	45.00	-2.9X
BCK	5.09	121	iPn	53	48.90	0.6
ELL	5.12	131	iPn	53	50.50	1.8
BDV	5.16	296	ePn	53	50.30	1.1
			eSn	54	58.00	
NKY	5.26	302	iPc	53	52.00	1.2
			eSn	54	04.50	
MLR	5.33	7	iPc	53	52.00	0.3
KSL	5.40	138	ePn	53	53.00	0.4
HCY	5.44	296	iPnc	53	54.50	1.2
			eSn	54	08.00	
LCI	5.46	274	P	53	51.20	-2.2
CFR	5.47	23	ePc	53	52.50	-1.1
BRD	5.51	15	ePd	53	57.00	2.9X
BRY	5.60	301	ePn	53	57.30	1.7
			eSn	54	12.00	
CVO	5.68	8	eP	54	44.00	47.5X
BEO	5.75	325	ePn	53	55.00	-2.5
VRI	5.79	11	iPc	53	58.50	0.4
BBTK	5.90	91	eP	53	59.00	-0.8
			iS	54	54.00	
BZS	5.98	336	eP	53	59.00	-1.7
BIR	6.34	16	eP	54	04.50	-1.3
KAS	6.69	77	eP	54	12.50	1.6
TDS	6.75	268	P	54	13.10	1.5
HVAR	7.12	298	iPn	54	15.50	-1.3
			iSn	55	48.00	
IAS	7.22	14	iP	54	15.00	-3.1X
MGR	7.30	273	P	54	18.90	-0.5
SOI	7.33	256	Pc	54	19.00	-0.8
SGO	7.47	276	P	54	20.70	-1.1
PPCY	7.83	130	eP	54	27.00	0.2
DUI	8.18	284	Pc	54	30.30	-1.4
CSS	8.37	126	eP	54	33.00	-1.4
KVT	8.38	80	eP	54	35.00	0.5
MNO	8.39	258	P	54	33.40	-1.5
BUD	8.49	331	iP	54	35.90	-0.1
SDI	8.66	284	Pc	54	37.10	-1.3
ZAG	8.71	313	ePn	54	37.00	-2.0
FAM	8.78	123	eP	54	45.00	5.1X
PTJ	8.78	313	eP	54	38.70	-1.3
GIB	8.88	259	P	54	39.10	-2.3
VBY	8.95	310	eP	54	42.90	0.5
ALP	9.01	290	eP	54	41.27	-2.1
SRO	9.04	330	iPc	54	50.00	6.6X
			e	57	15.00	
USI	9.33	265	P	54	44.80	-2.8
FAI	9.38	256	P	54	49.10	0.8
RIY	9.40	307	iPc	54	48.00	-0.5
CEY	9.57	309	ePc	54	51.00	0.1
MNS	9.59	287	P	54	50.00	-1.2
ARV	9.64	294	P	54	50.00	-1.9
LJU	9.67	311	e(P)	54	52.30	0.0
SOP	9.68	323	eP	54	44.80	-7.5X
ASS	9.73	291	P	54	51.50	-1.7
ZST	9.83	327	eP	54	54.00	-0.4
			e	57	35.00	
TRI	9.96	307	iPc	54	55.20	-1.0
			i	57	16.00	
			i	58	03.00	
VOY	10.04	309	iPc	54	57.30	-0.2
LVI	10.15	262	P	54	57.50	-1.4
VKA	10.22	325	iPc	55	11.60	11.8X
			i	55	48.20	
			i	57	02.40	
			e	57	39.00	
			i	58	21.70	
			LR	59	53.00	
CRE	10.37	294	Pc	55	02.80	0.8
RBL	10.45	310	P	55	06.50	3.4X
KRA	10.50	342	ePc	55	04.70	1.1
	1.5s		104.00nm			6.0mb X
			e	55	13.10	
			e	57	17.00	
KBA	10.93	313	iPc	55	11.10	1.4
	1.3s		68.80nm			5.9mb
			i	55	22.30	

05d 06h

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                     i        56 15.30
                     i        58 17.70
KMR     11.11 319 i(P)     55 11.00   -1.0
                     i        56 21.80
MME     11.39 295 P        55 15.60   -0.5
CTI     11.42 305 P        55 14.60   -1.7
BDI     11.43 294 P        55 18.00    1.6
DSI     11.98 133 e(P)     55 23.00   -0.9
KHC     12.11 321 iPc      55 25.10   -0.4
     Z   10s       6.50um
     N   10s       4.50um
     E   10s       5.50um
                     e        55 32:50
                     e        59 21.10
OGA     12.18 308 iPc      55 25.80   -0.9
PRU     12.29 326 ePc      55 28.00    0.1
     Z   14s      27.10um
     N   13s      12.80um
     E   13s       9.60um
                     e        58 26.20
KSP     12.29 333 eP       55 29.30    1.4
        1.2s      38.00nm            5.5mb
                     e        57 25.00
                     e        59 12.00
BOB     12.41 297 P        55 29.00   -0.7
PRNI    12.73 138 e(P)     55 36.00    2.1
MBH     13.13 139 e(P)     55 38.00   -1.2
VAI     13.20 301 P        55 37.00   -3.1X
BRG     13.21 328 eP       55 45.80    5.7X
        0.9s      12.00nm            5.0mb
                     eS       58 32.00
GRB1    13.23 318 ePn      55 38.70   -1.7
                     e        55 50.20
CLL     13.93 327 eP       55 55.00    5.4X
        1.6s      31.00nm            4.9mb
MOX     14.07 322 iPc      56 01.00    9.5X
        2.0s     137.00nm            5.4mb
     N   16s       8.30um
     E   16s       7.70um
FRF     14.14 290 eP       55 52.80    0.3
        1.7s     132.30nm            5.4mb
LMR     14.21 289 eP       55 54.20    0.7
        1.8s      86.30nm            5.2mb
LRG     14.34 289 eP       55 55.60    0.6
        1.8s     334.90nm            5.7mb
BNI     14.39 296 P        55 57.90    2.0
LPG     14.45 298 eP       55 56.60   -0.2
        1.4s     126.30nm            5.4mb
FEL     14.46 308 P        55 54.73   -2.1
BBS     14.60 306 P        55 57.03   -1.5
MSL     14.69  99 ePd      56 04.50    4.8X
                     eS       59 32.00
LOMF    14.98 305 P        56 02.13   -1.5
MOF     14.99 307 P        56 01.67   -2.0
WLS     15.09 309 P        56 04.07   -0.9
ECH     15.12 308 P        56 03.54   -1.8
CDF     15.14 309 P        56 04.17   -1.5
BSF     15.19 306 P        56 04.64   -1.7
HAU     15.53 306 eP       56 09.10   -1.6
        1.4s      43.50nm            4.5mb
ABH     15.69 314 eP       56 14.05    1.3
VITF    15.84 307 P        56 13.21   -1.4
RUP     15.87 313 eP       56 16.44    1.3
WLF     16.37 312 P        56 23.50    2.2
TAB     16.62  91 eP       56 29.00    4.2X
LBF     16.70 301 eP       56 25.10   -0.6
        1.9s     150.90nm            4.8mb
SLY     16.75  99 ePc      56 28.50    2.3
                  eS       59 43.00
                  eSS      59 54.50
                  eLQ      01 51.50
                  eLR      02 22.00
LOR     16.86 302 eP       56 27.20   -0.4
        1.4s      39.20nm            4.3mb
MEM     16.92 314 P        56 31.20    3.0X
BHD     16.93 108 eP       56 30.00    1.5
                  eS       59 51.00
                  eLQ      02 01.00
SSF     17.03 301 eP       56 29.40   -0.4
        1.8s      69.00nm            4.5mb
ENN     17.04 315 eP       56 34.00    4.2X
        1.4s     200.00nm            5.1mb
                     e        02 03.00
WTS     17.26 319 eP       56 35.00    2.5
        1.5s      91.00nm            4.7mb
                     e        02 09.00
MAF     17.46 298 eP       56 34.40   -0.7

        1.6s     133.00nm            4.8mb
CAF     17.58 293 eP       56 38.00    1.2
        1.8s     207.10nm            5.0mb
WIT     17.82 321 eP       56 40.00    0.5
SNF     17.83 312 P        56 37.00   -2.7
UCC     17.92 313 P        56 42.00    1.2
RJF     18.02 294 eP       56 42.70    0.6
        1.6s     136.80nm            4.8mb
DBN     18.15 318 eP+      56 46.00    2.4
LPO     18.18 292 eP       56 44.40    0.3
        1.6s      99.50nm            4.7mb
KER     18.45 101 eP       56 53.00    5.3X
LFF     18.52 293 eP       56 49.10    0.8
        1.6s     211.40nm            5.1mb
MFF     19.37 298 eP       56 58.30   -0.4
        1.6s      68.40nm            4.7mb
LDF     19.80 303 eP       57 02.60   -0.8
        1.9s     322.10nm            5.3mb
FLN     20.08 304 eP       57 05.60   -0.7
        1.7s     249.90nm            5.3mb
UPP     20.23 349 iP       57 07.10   -0.7
NUR     20.34 359 iP       57 08.20   -0.7
        0.9s      32.10nm            4.7mb
     Z   19s       3.70um            4.8Msz
                  LR       05 50.00
ETOR    20.62 281 eP       57 12.00   -0.2
GUD     22.22 281 eP       57 28.20   -0.3
TOL     22.27 279 iP       57 31.50    2.7
                  eS       01 42.00
EBAN    22.43 274 eP       57 32.00    1.6
AFC     22.49 272 eP       57 32.50    1.4
NB2     22.55 342 P        57 29.80   -1.6
        0.9s      15.90nm            4.5mb
SUF     22.56   1 eP       57 32.50    1.1
        1.0s      87.80nm            5.2mb
MAL     23.31 271 iPd      57 37.50   -1.4
EHOR    23.64 274 eP       57 42.00   -0.1
YRH     23.84 312 iPc      57 44.40    0.4
EKA     24.05 318 P        57 46.00    0.0
        1.7s     147.00nm            5.3mb
EJIF    24.20 271 eP       57 47.00   -0.6
ERUA    24.24 286 eP       57 49.00    1.1
ECP     24.65 310 eP       58 02.40   10.7X
ETA     24.71 311 iPc      57 53.10    0.8
SHI     24.75 107 eP       57 55.00    1.8
ECB     24.94 310 iPc      58 02.00    7.4X
DLE     25.08 312 eP       58 03.30    7.4X
DMU     25.49 313 eP       57 59.90    0.1
MAIO    27.20  87 eP       58 16.00    0.1
                  eS       03 08.00
SOD     27.24   1 eP       58 18.00    2.2
TIO     27.77 261 iP       58 22.50    1.4
                  i        58 31.50
KSH     38.65  74 eP       59 55.00   -0.5
LWI     42.37 174 iPc      00 30.40    4.0X
TIC     42.94 227 P        00 32.14    1.3
KIC     43.01 226 P        00 31.12   -0.3
LIC     43.28 227 P        00 33.50   -0.1
WMQ     45.68  64 P        00 53.80    1.0
     Z   24s       1.50um            4.9MszX
POO     46.99 103 eP       00 58.00   -5.3X
KOD     54.99 108 eP       02 10.00    5.6X
GTA     55.75  65 eP       02 06.60   -2.8
FRB     56.34 328 eP       02 13.00   -0.1
LZH     60.14  66 eP       02 53.50   13.2X
        2.0s      23.00nm
     Z   28s       1.10um            4.8MszX
MBC     61.64 351 eP       02 50.00    0.3
        1.0s       7.00nm            4.8mb
CD2     62.75  71 eP       02 57.00   -0.8
HHC     62.96  58 eP       02 59.00   -0.2
XAN     64.75  66 P        03 10.00   -0.9
CHG     65.93  85 eP       03 21.80    3.1X
CHTO    65.93  85 eP       03 17.90   -0.7
        1.0s       4.25nm            4.6mb
BJI     66.37  57 eP       03 20.00   -1.1
     Z   19s       1.10um            5.1Msz
GYA     67.33  74 P        03 30.00    2.4
NST     68.72  87 eP       03 36.00   -0.2
INK     70.63 352 eP       03 47.00   -0.1
FFC     75.17 331 eP       04 11.00   -3.1X
        1.0s      11.00nm            4.9mb
EDM     80.26 336 eP       04 42.50    0.2
SES     81.92 333 eP       04 51.00    0.0
PNT     85.58 338 eP       05 11.00    1.4
LRM     86.31 332 eP       05 14.40    0.8
TUL     86.77 316 eP       05 16.00    0.3

        1.2s       7.30nm            4.8mb
BAO     87.56 247 eP       05 21.40    1.6
VAO     91.85 241 e(P)     05 41.00    1.3
ALQ     92.91 322 e(P)     05 45.20    0.4
        1.0s       2.25nm            4.5mb
     Z   20s       0.62um            5.1Msz
                  e        05 51.10
     S.D. = 1.3  on 196 of 225 obs.
--------------------------------------------
* SEP 05, 1989  07h 57m 50.70± 2.38s
  40.162 N ±22.0km   25.111 E ±13.7km
  DEPTH =  10.0km  (geophysicist)
 AEGEAN SEA                            (365)

KDZ      1.50   9 iPc      58 17.00   -0.7
RZN      1.55 349 eP       58 19.00    0.4
DIM      1.91   9 eP       58 24.00    0.4
PLD      1.97 351 eP       58 29.00    4.6X
EDC      2.11  84 ePn      58 26.60    0.0
KKB      2.29 319 eP       58 29.00   -0.1
PGB      2.49 344 eP       58 32.00    0.1
VTS      2.82 330 eP       58 40.00    3.3X
     S.D. = 0.5  on   6 of   8 obs.
--------------------------------------------
  SEP 05, 1989  08h 50m 13.62± 0.82s
  35.472 N ±  8.3km   31.121 E ±  9.5km
  DEPTH =  22.1 ±  8.7 km
 CYPRUS                                (372)
     ML 4.1 (BHL), 4.0 (CSS).

PPCY     1.16 120 eP       50 35.50    1.0
ELL      1.61 323 ePn      50 41.00   -0.1
CSS      1.88 105 eP       50 44.20   -0.7
                  eS       51 06.50
BCK      2.03 348 ePn      50 45.20   -1.9
FAM      2.41 101 eP       50 55.00    2.6X
YER      2.83 307 ePn      50 59.10    0.6
KHL      3.12 336 iPn      51 02.30   -0.4
ALT      3.67 348 ePn      51 07.70   -2.7
BHL      4.05 111 Pn       51 22.00    6.2X
                  Sn       52 00.00
IZM      4.25 315 ePn      51 16.40   -2.3
HRI      4.41 119 eP       51 19.00   -1.9
BBTK     4.55  16 eP       51 24.00    1.0
GAZ      5.20  69 iPn      51 30.80   -1.3
DSI      5.27 136 eP       51 36.00    2.9X
KOT      5.56 174 eP       51 36.50   -0.6
                  eS       52 38.00
MBH      6.51 150 eP       51 49.00   -1.5
     S.D. = 1.4  on  13 of  16 obs.
--------------------------------------------
? SEP 05, 1989  08h 54m 45.05± 9.93s
  21.617 S ±66.1km   69.688 W ±74.8km
  DEPTH = 157.1 ± 50.5 km
 NORTHERN CHILE                        (123)

CNCB     5.05  19 P        56 01.00    0.4
LPB      5.28  17 P        56 03.00   -0.5
CCH      5.38  39 P        56 04.70    0.0
ZOBO     5.52  16 P        56 07.00    0.1
PPD     17.07  95 eP       58 35.80    0.0
BAO     21.39  78 eP       59 21.50    0.0
     S.D. = 0.5  on   6 of   6 obs.
--------------------------------------------
% SEP 05, 1989  09h 15m 40.60± 0.82s
  39.645 N ±  6.5km   29.412 E ±10.7km
  DEPTH =  10.0km  (geophysicist)
 TURKEY                                (366)

DST      0.61 267 ePg      15 52.50   -0.4
                  eSg      16 04.50
ALT      0.80 137 ePg      15 55.70   -0.5
                  eSg      16 08.20
YLV      0.92 358 iPn      16 00.00    1.8
HRT      1.19   9 ePn      16 02.00   -0.8
KHL      1.32 176 ePn      16 05.80    0.7
ISK      1.44 349 ePn      16 06.00   -0.8
     S.D. = 1.3  on   6 of   6 obs.
--------------------------------------------
* SEP 05, 1989  09h 21m 49.52± 2.86s
  33.331 S ±10.5km   71.659 W ±20.5km
  DEPTH =  10.0km  (geophysicist)
 NEAR COAST OF CENTRAL CHILE           (135)

LNV      0.66 162 iPc      22 02.00   -0.6
                  iS       22 17.50
TACH     0.68 118 iPd      22 03.80    0.7
```

			iS	22 20.50		
PEL	0.84	77	iPd	22 04.70	-1.0	
			iS	22 22.80		
SAN	0.84	99	eP	22 06.00	0.2	
			iS	22 25.10		
PCH	1.00	107	iPd	22 09.00	0.5	
			iS	22 30.00		
CHCH	1.03	126	iPc	22 09.40	0.3	
			iS	22 31.10		
FCH	1.15	90	iPc	22 10.30	-0.9	
			iS	22 32.50		
ZON	3.09	56	e(P)	22 40.00	0.8	
MRA	5.09	81	e(P)	23 03.10	-4.5X	

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

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* SEP 05, 1989 09h 22m 54.67± 2.35s
32.817 S ±12.2km 72.377 W ±26.0km
DEPTH = 10.0km (geophysicist)
3.9mb (1 obs.)
OFF COAST OF CENTRAL CHILE (134)

LNV	1.39	145	iP	23 19.20	-0.9	
			iS	23 34.50		
PEL	1.46	103	iPd	23 22.10	1.0	
			iS	23 40.10		
TACH	1.47	125	iPd	23 21.00	-0.2	
			iS	23 37.20		
SAN	1.57	114	iPd	23 23.50	0.8	
			iS	23 41.90		
PCH	1.76	118	iPd	23 26.40	1.0	
			iS	23 47.30		
CHCH	1.82	128	iPc	23 26.00	-0.3	
			iS	23 47.50		
FCH	1.82	107	iPd	23 27.60	1.0	
			iS	23 50.00		
TCA	6.77	80	e(P)	24 35.50	-1.1	
CCH	16.37	22	P	26 44.90	-1.5	
CNCB	16.43	15	P	26 49.00	1.6	
LPB	16.67	14	P	26 54.00	3.6X	
ZOBO	16.92	14	P	26 55.00	1.3	
	1.0s	10.50nm			3.9mb	
PPD	21.52	65	eP	27 43.40	-2.6	

S.D. = 1.4 on 12 of 13 obs.

% SEP 05, 1989 10h 00m 06.21± 0.60s
43.080 N ±11.8km 0.605 W ± 4.2km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.3 (STR).

ESCF	0.02	94	Pg	00 07.87	-0.3	
			Sg	00 08.82		
ATE	0.07	275	Pg	00 08.24	-0.4	
			Sg	00 10.17		
OGE	0.13	47	Pg	00 09.58	0.2	
			Sg	00 12.42		
ISSF	0.15	250	Pg	00 10.04	0.3	
			Sg	00 13.09		
MADF	0.17	293	Pg	00 10.06	0.0	
			Sg	00 13.15		
JAU	0.18	104	Pg	00 10.50	0.2	
ELYF	0.30	288	Pg	00 12.54	0.1	

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

SEP 05, 1989 10h 03m 26.21± 0.54s
18.153 S ± 4.3km 178.249 W ± 3.6km
DEPTH = 506.2 ± 6.3 km
5.0mb (34 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: BS, 16C
Centroid Location:
Origin Time 10:03:37.6 1.1
Lat 18.07S FIX;Lon 178.31W FIX
Dep 554.0 7.9 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-2.03 0.70 Mtt=-0.79 1.47
Mff= 2.82 1.13 Mrt=-6.72 0.95
Mrf=-3.00 1.00 Mtf= 2.07 0.92
Principal Axes:

T	Val= 7.87	Plg=35	Azm=135
N	0.36	19	240
P	-8.23	49	353

Best Double Couple:Mo=8.1*10**16
NP1:Strike=172 Dip=21 Slip=-159
NP2: 62 83 -71

DZM	14.89	252	iPc	06 37.40	1.8	
			iS	09 20.30		
PGZ	22.88	191	eP	07 50.90	-0.8	
MNG	23.03	192	eP	07 51.40	-1.7	
CAW	23.59	193	eP	07 57.00	-1.1	
BLW	23.76	192	P	07 58.60	-1.0	
WDW	23.76	193	eP	07 58.20	-1.4	
MRW	23.78	193	P	07 59.60	-0.2	
WEL	23.82	193	(P)	08 00.00	-0.1	
TCW	23.86	194	P	08 00.10	-0.4	
AFR	27.10	93	iP	08 30.30	0.8	
	0.8s	55.00nm			5.1mb	
PAE	27.27	93	iP	08 31.80	0.8	
	0.8s	55.00nm			5.1mb	
PPT	27.29	93	iP	08 32.10	0.9	
	0.8s	70.00nm			5.3mb	
BRS	28.20	246	iPc	08 40.00	0.9	
MHZ	28.78	199	P	08 43.40	-0.7	
COO	29.78	240	iPd	08 54.30	1.5	
	0.7s	45.00nm			5.1mb	
RMQ	31.56	249	iPd	09 09.20	1.2	
	0.6s	57.00nm			5.3mb	
CN8	33.40	233	iPc	09 25.50	2.0	
	0.6s	22.00nm			4.9mb	
CTA	33.56	261	iPd	09 25.10	0.3	
	0.8s	75.75nm			5.3mb	
			i	10 05.90		
CAN	33.68	233	eP	09 27.10	1.3	
BWA	33.80	235	eP	09 26.10	-0.7	
PMG	34.65	280	eP	09 34.50	0.4	
CMS	35.04	241	iPd	09 38.30	1.1	
	0.7s	28.00nm			4.9mb	
OLP	35.59	250	iPd	09 42.50	0.7	
LAT	35.74	284	eP	09 41.50	-1.6	
TOO	37.13	231	iPd	09 56.20	1.8	
	0.6s	19.00nm			4.8mb	
STK	38.65	241	iPd	10 08.50	1.6	
	0.4s	16.00nm			4.9mb	
OIS	39.76	259	iPd	10 15.30	-0.7	
	0.5s	9.00nm			4.6mb	
ADE	41.63	238	iPd	10 32.00	1.0	
JAY	43.12	286	ePd	10 44.70	1.8	
WB5	44.72	260	iPd	10 54.80	-0.6	
WRA	44.74	260	Pd	10 54.50	-1.0	
	0.6s	34.20nm			5.1mb	
ASPA	44.87	254	iPd	10 56.70	0.1	
	0.8s	307.00nm			5.9mb	
			ePcP	12 27.40		
			iS	16 53.30		
			eScS	19 55.40		
GUA	48.08	308	eP	11 21.00	-0.1	
	0.8s	214.93nm			5.6mb	
GUMO	48.15	308	eP	11 21.50	-0.1	
	0.7s	149.94nm			5.5mb	
PJG	48.15	308	eP	11 21.50	-0.1	
MTN	48.95	269	iPd	11 26.70	-1.0	
FORR	50.01	245	iPd	11 35.00	-0.3	
	0.4s	58.00nm			5.4mb	
KNA	50.60	264	iPd	11 39.30	-0.5	
	0.6s	99.00nm			5.4mb	
WARB	51.34	251	iPd	11 45.10	-0.2	
	0.4s	20.00nm			4.9mb	
AAI	54.31	279	eP	12 02.30	-4.4X	
COOL	55.99	245	iPd	12 17.10	-1.2	
	0.5s	20.00nm			4.7mb	
MBL	58.07	256	iPd	12 31.80	-0.8	
	0.4s	10.00nm			4.5mb	
MEKA	58.56	250	eP	12 35.00	-1.0	
KLB	58.85	244	eP	12 37.00	-0.9	
NWAO	59.23	242	iPc	12 40.00	-0.4	
RKG	59.37	241	eP	12 41.00	-0.3	
BAL	59.82	245	eP	12 43.20	-1.1	
MUN	60.15	243	iPc	12 46.20	-0.2	
MRWA	60.55	246	eP	12 48.50	-0.6	
NANU	61.80	254	iPd	12 57.20	-0.2	
	0.5s	47.00nm			5.2mb	
PCI	63.10	278	iPd	13 07.00	1.2	
CHJJ	67.40	323	P	13 31.10	-1.2	
IIDJ	67.62	322	P	13 32.70	-1.0	
MAT	68.19	323	iPd	13 36.00	-1.2	
	1.0s	51.00nm			5.1mb	
NIIJ	68.24	324	P	13 35.50	-1.9	
ADK	69.75	1	P	13 44.40	-1.7	
KUSJ	69.81	332	eP	13 45.80	-0.9	
HOOJ	69.90	331	eP	13 48.10	0.9	
MRRJ	70.99	329	eP	13 52.50	-1.1	
ASAJ	71.54	331	eP	13 57.60	0.8	

SPA	71.96	180	ePc	14 00.30	1.1	
	1.0s	20.00nm			4.6mb	
			e	14 21.60		
SYP	76.22	46	eP	14 22.00	-1.6	
GCC	76.29	43	eP	14 24.40	0.7	
PRS	76.30	44	ePd	14 24.70	0.9	
PCC	76.31	43	ePd	14 24.30	0.5	
SAO	76.50	44	eP	14 25.30	0.4	
BCH	76.51	46	P	14 25.80	0.6	
BRK	76.61	42	e(P)	14 26.00	0.5	
BKS	76.63	42	eP	14 26.40	0.8	
	0.8s	34.00nm			4.9mb	
PRI	76.66	45	ePd	14 26.90	0.9	
MHC	76.70	43	ePd	14 26.90	0.7	
LLA	76.74	44	eP	14 26.80	0.5	
BAR	77.57	49	eP	14 31.00	0.1	
RVR	77.75	48	eP	14 31.00	-0.8	
FRI	77.77	44	ePd	14 32.20	0.4	
SBB	77.80	47	eP	14 32.00	-0.1	
ISA	77.88	46	eP	14 33.00	0.5	
CMB	77.91	43	ePd	14 32.90	0.3	
WDC	78.03	40	ePd	14 33.50	0.4	
ORV	78.07	41	ePd	14 33.50	0.1	
MIN	78.47	41	eP	14 35.60	0.0	
MDJ	78.47	325	eP	14 35.50	0.2	
CLC	78.56	46	eP	14 36.00	-0.1	
TPC	78.75	48	eP	14 38.00	0.9	
GLA	79.09	50	eP	14 40.00	1.0	
KVN	79.97	43	P	14 43.20	-0.4	
TNP	80.02	45	P	14 44.00	0.1	
	0.8s	6.91nm			4.1mb	
SNY	80.27	320	Pd	14 44.70	-0.1	
CN2	80.31	322	iPd	14 45.10	0.2	
	3.0s	0.30nm			2.2mb X	
			pP	16 39.00	524kmX	
			eS	24 09.00		
WHN	80.87	306	P	14 48.80	0.7	
TIA	81.52	312	Pd	14 51.00	-0.4	
LON	82.15	35	P	14 54.10	-0.3	
IPM	82.63	277	ePd	14 58.00	0.5	
	0.8s	67.70nm			5.2mb	
PMR	82.80	14	P	14 55.90	-1.3	
	1.1s	68.75nm			5.1mb	
AIA	83.21	157	e(P)	15 00.00	0.6	
SNG	83.86	280	iPc	15 05.40	1.9	
PSI	84.02	275	iPd	15 04.50	0.1	
	0.7s	45.20nm			5.2mb	
BJI	84.06	315	eP	15 04.00	0.0	
	1.5s	0.07nm			2.1mb X	
DPW	84.80	36	P	15 07.50	0.0	
PNT	84.85	34	ePd	15 08.00	0.3	
	0.8s	22.00nm			4.8mb	
GYA	85.29	300	iPd	15 11.20	0.7	
TIY	85.54	312	Pd	15 12.20	0.8	
FBA	86.01	13	P	15 11.80	-1.2	
	0.9s	72.50nm			5.4mb	
ALQ	86.13	51	eP	15 14.70	0.3	
	1.0s	6.50nm			4.3mb	
			epP	17 15.00	550kmX	
XAN	86.53	307	Pd	15 17.00	0.8	
LRM	87.06	40	eP	15 19.20	0.5	
BW06	87.43	43	P	15 20.20	-0.3	
GLD	89.04	48	P	15 29.20	1.2	
CHG	89.23	290	eP	15 29.90	0.9	
	0.9s	17.86nm			4.9mb	
CHTO	89.23	290	iP	15 30.00	1.0	
	1.0s	15.25nm			4.8mb	
CD2	89.33	303	P	15 30.50	1.2	
SES	90.12	36	ePd	15 32.40	-0.1	
EDM	90.28	33	iPd	15 32.60	-0.6	
LZH	91.16	308	eP	15 39.00	1.2	
	1.0s	0.03nm			2.2mb X	
RSSD	91.63	44	P	15 39.90	0.0	
INK	92.08	15	eP	15 40.00	-1.1	
	1.0s	341.00nm			6.3mb X	
MBC	100.55	12	ePdiff	16 18.50	-0.8	
	0.7s	4.00nm			5.0mb	
SUF	132.36	345	ePKP	21 42.00	-1.2	
	0.7s	7.40nm				
NUR	134.63	344	iPKP	21 47.00	-0.6	
	0.7s	17.40nm				
NB2	136.64	353	PKP	21 38.10	-13.4X	
	0.7s	5.30nm				
EKA	142.70	5	PKPd	21 58.50	-3.9X	
	0.7s	9.20nm				
DMU	143.70	9	iPKPc	22 01.60	-2.6X	
DLE	144.35	9	ePKP	22 03.90	-1.4	

05d 10h

	1.0s	174.00nm			
CLI	144.71	329 iPKPd	22	06.00	-0.2
ETA	144.97	8 ePKP	22	05.80	-0.6
	0.7s	159.00nm			
VAL	144.98	13 iPKP	22	06.30	-0.1
KRA	144.99	339 iPKPd	22	06.10	-0.4
	0.7s	56.00nm			
		e	22	29.10	
WIT	145.20	355 iPKPd	22	08.20	1.5
ECB	145.21	9 ePKP	22	06.60	-0.2
	0.7s	102.00nm			
KSP	145.39	344 ePKPc	22	07.00	-0.1
	0.9s	101.00nm			
		id	22	08.00	
		e	24	26.00	
ECP	145.45	9 ePKP	22	07 30	0.2
	0.7s	114.00nm			
VRI	145.46	329 ePKPd	22	18.00	10.6X
SPC	145.62	338 iPKP	22	09.50	1.7
	0.8s	51.00nm			
CLL	145.73	347 iPKP	22	06.90	-0.8
	1.0s	145.00nm			
		i	22	24.20	
BRG	145.94	346 iPKP	22	07.90	-0.1
	0.8s	18.00nm			
		i	22	09.20	
		i	22	26.90	
WTS	146.00	354 iPKPd	22	09.60	1.6
	1.0s	135.00nm			
		e	22	17.50	
HRI	146.06	303 e(PKP)	22	08.00	-0.9
MLR	146.12	329 iPKPc	22	04.00	-4.7X
LWI	146.53	235 iPKPc	22	13.80	3.4X
PRU	146.62	345 ePKP	22	09.00	-0.2
	1.4s	62.00nm			
		i	22	11.50	
		e	22	14.20	
MOX	146.64	349 ePKP	22	08.00	-1.2
	1.5s	67.00nm			
		i	22	11.50	
CMP	146.72	329 ePKPc	22	10.00	0.5
ENN	147.29	355 iPKPd	22	13.00	2.8X
	0.8s	40.00nm			
		e	22	15.00	
UCC	147.36	357 iPKP-	22	14.00	3.7X
MEM	147.44	355 iPKPd	22	13.40	3.0X
SRO	147.46	339 e(PKP)	22	12.00	1.4
		i	22	14.50	
		e	23	35.00	
PRNI	147.47	298 iPKP	22	14.50	3.3X
ZST	147.53	341 iPKP	22	09.30	-1.4
		i	22	13.00	
GRF	147.63	348 iPKPd	22	14.50	3.7X
		e	22	18.30	
KHC	147.65	345 iPKPc	22	11.30	0.4
	1.0s	46.00nm			
		i	22	15.00	
		e	23	12.90	
SNF	147.65	357 PKPd	22	14.00	3.2X
VKA	147.70	342 iPKP	22	14.90	3.9X
		i	22	16.30	
MBH	147.70	297 ePKP	22	15.00	3.5X
ABH	148.01	353 ePKP	22	03.38	-8.1X
DQU	148.05	357 iPKPd	22	15.00	3.6X
TOD	148.11	351 ePKP	22	04.00	-7.6X
RUP	148.24	353 ePKP	22	04.43	-7.4X
WLF	148.37	355 PKP	22	12.30	0.4
		i	22	16.60	
		e	22	20.70	
KMR	148.51	344 iPKP-	22	16.40	4.2X
GWF	148.89	353 PKP	22	17.34	4.5X
FLN	149.41	3 ePKP	22	13.00	-0.6
	0.8s	5.30nm			
WLS	149.47	353 PKP	22	18.39	4.6X
CDF	149.48	353 PKP	22	18.47	4.6X
LDF	149.60	2 ePKP	22	13.20	-0.6
	1.0s	8.00nm			
KBA	149.62	344 (PKP)	22	13.00	-1.2
	1.0s	42.30nm			
		i	22	18.00	
		i	22	26.80	
		i	22	35.20	
		e	24	03.50	
		e	24	20.00	
		i	24	32.50	
		e	25	51.00	
ECH	149.69	353 PKP	22	18.68	4.6X

GRR	149.77	3 ePKP	22	13.70	-0.4
	1.0s	16.00nm			
VITF	149.82	354 PKP	22	19.34	5.2X
FEL	149.92	352 ePKP	22	06.94	-7.6X
PTJ	149.92	340 e(PKP)	22	19.60	5.1X
ZAG	149.99	340 ePKP	22	19.50	5.0X
MOF	150.05	353 PKP	22	19.80	5.1X
LPF	150.11	4 ePKP	22	14.20	-0.4
	1.0s	16.00nm			
BSF	150.11	353 ePKP	22	14.20	-0.6
RBL	150.14	343 PKPc	22	19.60	4.8X
OGA	150.36	347 ePKP	22	15.50	0.2
		id	22	21.20	
BBS	150.39	352 PKP	22	20.43	5.3X
VOY	150.43	343 ePKP	22	14.80	-0.5
		i	22	20.30	
		e	22	23.50	
VBY	150.50	341 iPKP	22	21.40	6.1X
LOMF	150.58	353 PKP	22	21.08	5.6X
TRI	150.76	343 PKPc	22	16.70	1.0
LOR	150.91	357 ePKP	22	15.40	-0.5
	1.0s	6.00nm			
SKO	150.92	329 iPKP	22	22.00	5.9X
CTI	151.00	346 PKPc	22	21.90	5.7X
SSF	151.13	358 ePKP	22	16.20	0.0
	1.2s	7.10nm			
L8F	151.19	357 ePKP	22	15.90	-0.5
MFF	151.59	3 ePKP	22	16.60	-0.3
	0.8s	5.30nm			
VAI	151.76	350 PKP	22	16.70	-0.4
OHR	151.88	328 e(PKP)	22	24.00	6.4X
TCF	151.94	359 ePKP	22	16.80	-0.6
	0.8s	4.00nm			
LSF	151.98	0 ePKP	22	16.60	-0.9
	0.8s	6.70nm			
BNI	152.87	352 PKPc	22	27.30	8.4X
RJF	152.93	0 ePKP	22	18.60	-0.2
	0.8s	8.00nm			

S.D. = 0.9 on 156 of 193 obs.

SEP 05, 1989 10h 59m 47.50± 1.91s
5.420 N ± 6.1km 126.579 E ±10.0km
DEPTH = 108.8 ± 18.9 km
4.6mb (8 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

MNI	4.32	204 iPc	00	52.50	0.4
TSM	8.56	262 eP	01	54.50	4.2X
AAI	9.19	170 eP	01	54.00	-4.8X
		eS	03	29.50	
MTN	18.70	166 eP	03	57.80	-2.6
QZH	20.87	339 eP	04	22.60	0.0
KNA	21.14	174 eP	04	25.60	0.2
	0.7s	117.00nm		5.3mb	
QIZ	21.19	311 eP	04	26.80	0.9
IPM	25.47	269 ePd	05	09.10	1.8
WB5	26.28	163 eP	05	13.90	-0.8
		e	12	14.90	
WRA	26.34	163 Pd	05	14.60	-0.5
	0.4s	4.90nm		4.4mb	
LOE	27.07	298 eP	05	20.50	-1.4
MBL	27.23	194 eP	05	23.00	-0.3
	0.4s	6.00nm		4.5mb	
WHN	27.52	337 P	05	27.50	1.8
PSI	27.72	265 ePd	05	27.50	-0.2
QIS	28.81	154 eP	05	37.00	-0.5
	0.8s	33.00nm		5.0mb	
ASPA	29.78	166 iPd	05	45.50	-0.6
	0.6s	14.00nm		4.8mb	
NANU	29.84	201 eP	05	47.00	0.4
CHG	30.05	299 eP	05	47.40	-1.3
CHTO	30.05	299 eP	05	47.30	-1.3
	1.0s	3.00nm		4.0mb	
WARB	31.42	180 eP	06	00.80	0.3
CTA	31.89	143 iPc	06	05.00	0.3
MEKA	32.78	193 eP	06	09.00	-3.4X
TIY	34.63	340 Pd	06	28.80	0.5
BJI	35.72	346 P	06	37.50	0.2
	1.2s	0.06nm		2.4mb X	
MRWA	35.91	196 eP	06	38.90	-0.2
	0.3s	3.00nm		4.7mb	
SNY	36.35	356 eP	06	41.20	-1.4
LZH	36.98	329 eP	06	49.00	0.8
	1.5s	0.02nm		1.8mb X	
BAL	37.05	194 eP	06	48.70	0.1
KLB	37.75	192 eP	06	55.00	0.5
MUN	38.48	194 iPc	07	00.90	0.3

NWAO	39.15	192 eP	07	07.00	0.8
STK	39.76	160 eP	07	21.70	10.5X
BRS	41.29	144 iP	07	23.00	-0.9
		i	07	36.00	
GTA	41.58	328 eP	07	26.50	0.2
ADE	41.76	165 iPc	07	29.50	1.8
BWA	44.67	154 eP	07	53.30	2.0
CAN	45.68	154 eP	08	02.50	3.3X
DZM	47.64	126 iPc	08	15.00	0.1
GBA	49.07	283 Pc	08	24.30	-1.6
	0.5s	1.50nm		4.1mb	
INK	88.66	21 eP	12	25.00	-4.3X

S.D. = 1.1 on 34 of 40 obs.

SEP 05, 1989 11h 25m 55.80± 0.23s
29.459 N ± 3.8km 128.560 E ± 3.7km
DEPTH = 18.6km (3 depth phases)
5.2mb (22 obs.) 5.3Msz (3 obs.)
EAST CHINA SEA (234)

Felt (I JMA) at Naze, Ryukyu Islands and at Kagoshima, Kyushu.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 24C
Centroid Location:
Origin Time 11:25:58.1 0.3
Lat 29.29N 0.04 Lon 127.93E 0.07
Dep 15.0 FIX Half-duration 2.5
Moment Tensor; Scale 10**17 Nm
Mrr=-0.56 0.08 Mtt= 1.97 0.10
Mff=-1.40 0.11 Mrt=-0.13 0.32
Mrf=-0.98 0.26 Mtf= 1.24 0.10
Principal Axes:

T	Val= 2.44	Plg= 9	Azm=160
N	-0.16	61	54
P	-2.29	28	255

Best Double Couple:Mo=2.4**10**17
NP1:Strike=294 Dip=64 Slip= -14
NP2: 30 77 -153

NZJ	1.36	142 iP+	26	19.20	-0.6
		S	26	39.00	
KAGJ	2.65	49 P	26	36.40	-2.0
KAG	2.72	39 eP	26	42.00	2.6X
		eS	27	14.00	
KUMJ	3.63	32 P	26	50.50	-1.8
SHNJ	5.13	24 eP	27	14.40	0.9
SHK	6.15	34 eP	27	38.80	10.9X
TKSJ	6.50	45 P	27	31.40	-1.4
SSE	6.58	286 eP	27	32.00	-2.0
N	11s	109.00um			
E	11s	30.00um			
		sP	27	47.00	
		S	28	53.00	
		Lg	29	34.00	
		e	39	46.00	
YONJ	7.06	35 eP	27	39.80	-0.9
ANP	7.57	237 eP-	27	48.00	0.0
		eS	30	12.00	
WKYJ	7.64	50 P	27	46.60	-2.3
TSRJ	8.72	44 P	28	02.50	-1.4
NJ2	8.74	290 eP	28	02.00	-2.2
N	13s	70.30um			
E	12s	25.90um			
		S	29	46.00	
IIDJ	9.92	50 P	28	19.80	-0.7
QZH	9.95	245 eP	28	19.20	-1.6
Z	15s	15.60um			
N	10s	50.00um			
E	10s	34.00um			
		S	30	07.00	
MTMJ	10.52	45 eP	28	29.80	1.1
MAT	10.74	46 iPd	28	30.10	-1.6
	1.0s	29.00nm		5.5mb	
		eS	30	42.00	
CHJJ	10.97	51 eP	28	34.50	-0.3
DL2	11.03	331 Pc	28	32.00	-3.6X
Z	10s	21.70um			
N	13s	22.20um			
E	11s	34.80um			
		S	30	40.00	
NIIJ	11.67	46 eP	28	44.60	0.2
TIA	11.73	308 eP	28	38.60	-6.6X
Z	14s	20.10um			
N	12s	18.90um			
E	12s	30.00um			

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                  sS     31 05.50
WHN    12.37 279 P      28 53.00   -0.7
    Z  16s     15.50um
    N  10s     26.00um
    E  10s     20.30um
                  eS     31 05.00
SNY    12.99 343 iPc    29 01.00   -0.9
    Z  14s     62.60um
    N  12s     78.90um
    E  11s     35.50um
                  S      31 29.00
CN2    14.53 351 Pc     29 21.50   -0.7
       5.0s      0.60nm          2.4mb X
    Z  14s     53.00um          5.3Msz
    N  10s     32.00um
    E  10s     23.00um
                  epP    29 29.50
                  eS     32 00.00
BJI    14.65 319 Pc     29 24.00    0.2
       6.0s      0.57nm          2.3mb X
    Z  12s     15.70um          4.4MszX
    N  10s     10.10um
    E  10s     12.80um
                  eS     32 04.00
HKC    14.77 244 eP     29 27.00    1.5
BAG    14.91 211 eP     29 26.00   -1.6
                  eS     32 10.00
GZH    15.05 249 P      29 28.00   -1.1
    Z  12s     31.20um
    N  11s     20.60um
    E  11s     36.90um
                  sS     32 28.00
MDJ    15.15   3 Pc     29 31.00    0.6
    Z  16s     14.40um
    E  11s     19.30um
                  pP     29 37.50
TIY    15.74 306 Pc     29 38.50    0.3
    N  14s     45.00um
    E  14s     28.70um
                  sS     32 40.00
XAN    17.31 290 P      29 58.00   -0.1
    N  12s     33.50um
    E  13s     16.40um
                  S      33 14.00
HHC    17.92 314 Pc     30 07.00    1.4
    Z  12s     21.80um
    N  13s     14.40um
    E  13s     11.40um
                  sS     33 32.50
ASAJ   18.43  34 eP     30 07.80   -4.0X
GYA    19.57 266 iPd    30 25.00   -0.8
       4.0s      1.20nm          2.5mb X
    Z  14s     13.40um
    N  12s     52.00um
    E  12s     17.90um
                  PP     30 43.00
                  S      34 05.00
QIZ    19.95 243 eP     30 30.00    0.3
    N  12s     10.40um
    E  11s     14.00um
                  sS     34 21.00
CD2    21.48 280 eP     30 43.60   -1.9
    Z  12s     19.20um          5.7MszX
    N  13s     66.00um
                  sS     34 44.00
LZH    21.78 294 eP     30 54.50    5.9X
       2.0s    234.00nm          5.3mb
    Z  16s     17.20um          5.6MszX
    N  13s     25.30um
    E  14s     13.50um
                  pP     31 06.50   49kmX
                  eS     34 50.00
                  SS     35 28.00
                  PcS    38 27.00
PJG    21.85 133 eP     30 53.40    4.1X
GUMO   21.85 133 eP     30 54.30    5.0X
       1.3s    326.80nm          5.6mb
GUA    21.92 133 eP     30 53.70    3.8X
       1.1s    151.90nm          5.3mb
KMI    23.33 266 Pd     31 03.50   -0.5
    Z  12s     34.40um          6.0MszX
    N  11s     29.40um
                  sS     35 18.00
GTA    25.61 300 eP     31 20.00   -5.7X
    Z  15s     15.50um          5.7MszX
    N  15s     43.00um
                  sP     31 34.00

                  S      35 47.00
                  sS     36 02.00
CHG    28.95 255 eP     31 56.40    0.1
       1.2s     23.05nm          4.8mb
LSA    32.44 280 eP     32 29.00    1.4
                  eS     37 45.00
WMO    35.41 305 P      32 51.70   -0.9
    Z  14s     14.00um          5.9MszX
    N  12s      7.20um
                  S      38 27.00
IPM    35.93 232 ePd    32 57.50    0.3
PSI    38.73 232 ePc    33 19.00   -1.7
PPI    40.10 227 eP     33 35.00    3.0X
RAB    40.40 142 e(P)   33 36.00    1.4
                  eS     39 48.00
MTN    42.13 176 eP     33 47.70   -0.9
       0.6s     35.00nm          5.3mb
KSH    43.95 298 eP     34 02.60   -0.9
    Z  16s     13.80um          6.0MszX
    N  15s     22.90um
                  eS     40 40.00
NDI    44.58 282 eP     34 08.00   -0.6
                  eS     40 34.00
KNA    44.94 180 eP     34 12.00    0.5
WB5    49.37 173 eP     34 44.90   -1.3
WRA    49.43 173 Pc     34 45.20   -1.4
       0.9s      9.70nm          4.8mb
GBA    49.72 263 Pc     34 51.10    2.1
       0.8s      3.70nm          4.4mb
POO    50.76 271 eP     34 59.50    2.5
OIS    50.85 167 eP     34 56.00   -1.5
       1.0s     38.00nm          5.3mb
MBL    51.02 190 eP     34 59.00    0.3
       0.8s     15.00nm          5.0mb
CTA    52.13 159 iPd    35 08.00    0.8
       0.9s     42.02nm          5.4mb
                  iS     42 40.00
OUE    52.85 287 eP     35 12.00   -0.9
                  eS     42 38.00
ASPA   53.07 174 iPd    35 13.20   -1.0
       1.3s     21.00nm          4.9mb
    Z  22s      1.47um          5.0MszX
                  LR     55 35.00
NANU   53.22 195 eP     35 15.00   -0.2
WARB   55.36 182 eP     35 30.70   -0.2
MAIO   57.31 296 eP     35 48.00    3.1X
RMO    58.90 159 eP     35 55.00   -1.0
COOL   60.42 187 eP     36 06.00   -0.4
BAL    60.79 192 eP     36 08.50   -0.4
BRS    61.10 155 iP     36 12.00    0.9
CMS    62.79 163 eP     36 22.30    0.0
       1.0s     22.00nm          5.3mb
DZM    62.89 140 iPc    36 24.50    1.3
INK    65.82  24 eP     36 41.00   -0.7
BWA    66.25 162 eP     36 46.20    1.4
MBC    66.63  14 eP     36 51.00    4.2X
       1.1s     14.00nm          5.0mb
TAB    66.83 302 e(P)   37 06.00   17.2X
CAN    67.25 162 eP     36 52.00    0.8
SOD    67.58 336 iP     36 53.60    0.7
SLY    68.32 299 eP     37 03.00    5.0X
SUF    69.64 331 eP     37 04.80   -0.8
       1.0s     22.40nm          5.3mb
MSL    69.80 301 eP     37 07.50    0.4
BHD    70.04 298 eP     37 08.00   -0.6
NUR    71.25 330 eP     37 16.00    0.6
       0.7s     12.00nm          5.1mb
    Z  16s      6.90um          6.0MszX
                  e      37 21.20   17km
                  LR     12 20.00
DAG    72.12 352 eP     37 20.00   -0.4
       1.2s     25.00nm          5.1mb
UPP    74.62 331 iP     37 37.90    2.7X
NB2    76.56 334 P      37 47.30    1.0
       0.9s     13.40nm          5.0mb
VRI    76.99 315 ePd    37 51.00    2.0
MLR    77.66 315 ePc    37 56.50    3.7X
KRA    78.78 321 eP     38 05.10    6.4X
KRP    80.15 144 P      38 12.00    5.9X
KSP    80.28 323 eP     38 10.30    3.5X
                  e      41 22.50
PNT    80.92  38 eP     38 15.00    4.8X
ZST    81.36 321 eP     38 23.00   10.5X
BRG    81.47 324 eP     38 16.50    3.5X
    Z  14s      5.00um          6.0MszX
    N  18s     12.00um
    E  18s      3.00um

                  e      38 24.60   26km
CLL    81.68 325 eP     38 16.00    1.9
                  i      38 20.30   14km
PRU    81.69 323 eP     38 15.50    1.3
    Z  14s      4.80um          6.0MszX
    N  19s      8.60um
    E  18s      4.70um
EDM    81.72  32 ePc    38 15.00    0.7
VKA    81.75 321 e(P)   38 26.00   11.4X
    Z  12s      2.50um          5.8MszX
                  LR     18 27.00
SKO    82.27 314 iP     38 20.50    3.1X
    Z  20s      1.73um          5.4Msz
    N  18s      3.52um
    E  17s      6.04um
                  i      38 46.00   97kmX
                  i      48 30.00
                  LR     14 00.00
KHC    82.70 323 P      38 23.50    3.9X
    Z  20s      1.20um          5.3Msz
    N  20s      5.10um
    E  20s      3.40um
MOX    82.78 325 e(P)   38 21.00    1.1
    Z  15s     11.90um          6.4MszX
    N  16s     11.40um
    E  16s      8.30um
WIT    83.73 329 eP     38 28.00    3.4X
KBA    84.07 322 e(P)   38 26.00   -0.8
       1.2s     15.60nm          5.1mb
                  i      38 41.70   55kmX
WDC    84.15  46 e(P)   38 29.40    2.3
WTS    84.21 328 eP     38 31.00    3.9X
       0.9s     11.00nm          5.1mb
SES    84.64  34 eP     38 31.00    1.6
TOD    84.84 325 eP     38 33.69    3.3X
MIN    84.87  46 eP     38 34.60    3.7X
ABH    85.27 326 eP     38 33.88    1.3
ORV    85.39  47 e(P)   38 35.00    1.7
OGA    85.45 322 eP     38 34.80    1.1
ENN    85.45 328 eP     38 35.00    1.7
       1.0s     12.00nm          5.1mb
FFC    85.58  27 eP     38 37.00    3.0X
       1.0s     21.00nm          5.3mb
CTI    85.63 321 P      38 40.00    5.5X
FRB    86.13   8 eP     38 37.00    0.5
DOU    86.53 328 P      38 52.70   14.0X
LRM    86.89  38 eP     38 42.60    1.6
CMB    86.97  48 e(P)   38 43.20    2.0
ALO    97.57  43 e(P)   39 10.30  -20.3X
                  e      39 36.00   95kmX
                  e      12 10.00
SPA   119.29 180 e(PKP)44 48.70    4.0X
       0.5s      3.24nm
    Z  20s      0.63um          5.2Msz
CNCB  160.29  54 ePKP   46 05.00    8.7X
      S.D. = 1.2   on  84 of 120 obs.
-------------------------------------------
%  SEP  05, 1989  12h 16m 32.23± 0.84s
   42.786 N ± 8.8km    19.189 E ± 5.7km
   DEPTH =  10.0km  (geophysicist)
 YUGOSLAVIA                          (383)
      ML 2.0 (TTG).

NKY      0.14 281 ePg     16 35.60   -0.1
                  iSg    16 39.50
TTG      0.36 172 ePg     16 39.50   -0.1
                  eSg    16 45.00
BRY      0.49 284 ePg     16 42.10   -0.1
                  eSg    16 50.00
IVA      0.53  80 ePg     16 43.00    0.1
                  eSg    16 52.00
HCY      0.61 237 ePg     16 44.80    0.2
                  eSg    16 54.00
      S.D. = 0.2   on   5 of   5 obs.
-------------------------------------------
&  SEP  05, 1989  13h 03m 35.54s
   55.725 N          155.932 W
   DEPTH = 107.9km
 SOUTH OF ALASKA                     ( 17)
      <PAL>.

IVF      2.04 276 eP      04 08.59   -0.8
BKJ      2.14 256 eP      04 09.76   -1.0
                  eS     04 35.27
CNBA     2.28 248 eP      04 10.75   -1.8
NGI      2.46 255 eP      04 13.68   -1.2
SGB      2.57 268 eP      04 15.57   -0.8
```

05d 13h

		eS	04 44.46		
SASA	2.62	263 eP	04 16.10	-1.0	
PS4	3.39	266 eP	04 26.78	-0.8	
DLG	3.41	263 eP	04 26.58	-1.2	
DRRA	3.72	260 eP	04 30.75	-1.2	
SNKA	4.13	255 eP	04 36.21	-1.3	
	10 obs. associated				

SEP 05, 1989 13h 03m 36.16± 0.22s
29.502 N ± 3.3km 128.542 E ± 3.1km
DEPTH = 10.0km (geophysicist)
5.0mb (16 obs.)
EAST CHINA SEA (234)
Felt (II JMA) at Noze, Ryukyu Islands.

NZJ	1.40	143 iP+	04 01.50	-0.2	
		S	04 22.00		
KAGJ	2.63	50 P	04 18.50	-0.9	
KUMJ	3.60	32 P	04 32.50	-0.7	
SHNJ	5.10	25 P	04 55.20	0.8	
SHK	6.12	34 eP	05 10.00	1.2	
TKSJ	6.48	45 P	05 13.50	-0.4	
SSE	6.56	286 iPc	05 14.00	-1.0	
		eS	06 36.00		
		Lg	07 16.00		
		Lg	07 28.00		
YONJ	7.03	35 P	05 22.80	1.1	
ANP	7.58	237 eP	05 30.00	0.5	
		eS	07 43.00		
WKYJ	7.62	50 P	05 28.50	-1.5	
TSRJ	8.70	44 P	05 44.40	-0.5	
NJ2	8.71	289 eP	05 43.00	-2.1	
Z	12s	11.50um			
		S	07 17.60		
IIDJ	9.90	51 eP	06 03.00	1.4	
OZH	9.95	245 eP	06 01.50	-0.7	
Z	10s	6.70um		4.5Msz	
N	10s	15.40um			
		eS	08 00.00		
MTMJ	10.50	45 eP	06 12 60	2.8	
MAT	10.72	47 (P)	06 11.00	-1.8	
	0.8s	5.22nm		5.0mb	
		eS	08 26.00		
CHJJ	10.95	51 eP	06 15.80	-0.1	
DL2	10.98	330 eP	06 16.00	-0.3	
Z	10s	7.00um			
N	13s	8.60um			
E	11s	12.40um			
		sS	08 30.00		
TIA	11.70	308 eP	06 24.50	-1.6	
Z	14s	6.40um			
N	12s	12.70um			
E	12s	6.90um			
		sS	08 51.50		
WHN	12.34	278 P	06 35.00	0.2	
Z	14s	4.26um			
		sP	06 48.00		
SNY	12.94	343 Pc	06 43.00	0.3	
Z	14s	23.00um			
N	12s	17.30um			
E	10s	13.90um			
		S	09 11.00		
CN2	14.48	351 Pc	07 03.00	-0.1	
Z	10s	23.00um			
N	10s	11.00um			
E	10s	10.00um			
		pP	07 06.00		
		eS	09 40.00		
BJI	14.61	319 Pd	07 06.00	1.4	
	1.5s	0.08nm		2.1mb X	
Z	12s	6.03um		5.0MszX	
N	10s	3.86um			
E	10s	4.70um			
		eS	09 45.00		
HKC	14.78	244 eP	07 08.00	1.0	
		(S)	10 08.00		
BAG	14.94	211 eP	07 09.50	0.1	
GZH	15.05	248 eP	07 09.00	-1.5	
N	12s	12.80um			
E	13s	7.20um			
		sS	10 12.00		
MDJ	15.11	3 eP	07 11.00	-0.2	
Z	16s	4.80um			
E	11s	6.50um			
		pP	07 18.00		
TIY	15.71	306 eP	07 25.00	5.9X	
N	15s	17.40um			
E	14s	8.70um			
XAN	17.28	290 P	07 39.00	-0.1	
N	12s	9.90um			
E	13s	6.00um			
		S	10 55.00		
HHC	17.88	314 eP	07 48.00	1.4	
Z	12s	6.90um			
N	14s	5.70um			
E	13s	4.70um			
		sS	11 19.00		
GYA	19.56	266 iPd	08 07.60	0.4	
	1.2s	0.10nm		2.0mb X	
E	12s	11.90um			
		S	11 44.00		
OIZ	19.96	243 eP	08 11.60	0.3	
N	12s	4.70um			
		sS	12 02.00		
CD2	21.46	280 P	08 26.20	-0.7	
Z	11s	6.10um		5.3MszX	
E	11s	10.40um			
		S	12 25.40		
		sS	12 36.00		
LZH	21.74	294 eP	08 30.00	0.2	
Z	16s	5.30um		5.0MszX	
N	13s	9.20um			
E	11s	3.10um			
		S	12 32.00		
PJG	21.89	133 eP	08 32.30	1.1	
GUMO	21.89	133 eP	08 31.70	0.5	
	1.3s	215.69nm		5.4mb	
GUA	21.96	133 eP	08 32.50	0.6	
KMI	23.32	265 Pd	08 46.00	0.5	
Z	12s	10.20um		5.5MszX	
E	10s	15.30um			
		sP	09 02.50		
GTA	25.57	300 eP	09 06.40	-0.6	
Z	14s	5.30um		5.2MszX	
N	15s	13.20um			
		pP	09 15.50	32kmX	
		S	13 34.00		
LOE	27.31	250 eP	09 22.00	-1.1	
		e	18 40.00		
CHG	28.95	255 iPc	09 38.70	0.8	
	1.5s	85.42nm		5.3mb	
		eS	14 46.00		
CHTO	28.95	255 iPc	09 38.90	1.0	
	1.4s	62.02nm		5.2mb	
LSA	32.42	280 P	10 11.00	1.9	
SNG	34.40	235 eP	10 25.50	-0.3	
WMO	35.38	305 P	10 34.10	0.1	
Z	14s	5.00um		5.4MszX	
N	13s	4.40um			
		S	16 11.00		
IPM	35.95	232 ePd	10 39.80	0.8	
	0.9s	84.50nm		5.6mb	
PSI	38.75	232 iPc	11 03.00	0.5	
PPI	40.11	227 eP	11 15.00	1.2	
MTN	42.17	176 iPc	11 30.00	-0.6	
	0.7s	28.00nm		5.1mb	
NDI	44.55	282 ePd	11 50.00	-0.1	
		eS	18 28.00		
WB5	49.41	173 eP	12 27.00	-1.2	
WRA	49.47	173 Pc	12 27.60	-1.1	
	0.9s	7.90nm		4.7mb	
GBA	49.71	263 Pd	12 31.50	0.9	
	1.3s	20.80nm		5.0mb	
QIS	50.90	167 iPc	12 38.20	-1.3	
	0.7s	9.00nm		4.8mb	
CTA	52.18	159 iPd	12 49.10	-0.1	
	1.2s	59.38nm		5.4mb	
ASPA	53.11	174 eP	12 55.40	-0.8	
	1.0s	12.00nm		4.8mb	
WARB	55.40	182 eP	13 13.00	0.1	
MAIO	57.28	296 eP	13 28.00	1.6	
RMO	58.95	159 eP	13 37.50	-0.5	
INK	65.79	24 eP	14 23.50	0.3	
BWA	66.30	162 eP	14 27.10	0.3	
KEV	66.51	338 eP	14 36.00	8.2X	
MBC	66.60	14 eP	14 28.00	-0.2	
	1.0s	6.00nm		4.7mb	
CAN	67.30	162 eP	14 34.90	1.7	
SOD	67.53	336 eP	14 43.00	8.7X	
SUF	69.60	331 eP	14 47.40	0.3	
	0.8s	7.10nm		4.9mb	
NUR	71.20	330 eP	14 56.00	-0.9	
Z	15s	3.00um		5.7MszX	
		LR	50 00.00		
NB2	76.51	334 P	15 25.80	-2.0	
	0.9s	4.30nm		4.5mb	
VRI	76.95	315 ePd	15 32.00	1.5	
KRA	78.74	321 eP	15 40.70	0.5	
KSP	80.23	323 eP	15 52.00	3.7X	
PNT	80.90	38 eP	15 45.00	-6.9X	
CLL	81.63	325 eP	15 59.00	3.4X	
	1.6s	16.00nm		4.8mb	
EDM	81.69	32 eP	15 50.00	-6.0X	
SKO	82.23	314 eP	15 57.00	-1.9	
Z	14s	0.68um		5.2MszX	
N	18s	1.21um			
E	17s	1.99um			
		LR	55 45.00		
KHC	82.66	323 eP	16 04.50	3.4X	
WDC	84.13	46 e(P)	16 05.30	-3.5X	
ORV	85.37	47 e(P)	16 15.00	0.0	
FFC	85.55	27 eP	16 15.00	-0.6	
	0.7s	6.00nm		4.9mb	
LRM	86.87	38 eP	16 21.00	-1.6	
ZOBO	159.80	53 PKP	23 51.50	13.9X	
LPB	160.00	53 PKP	23 50.00	12.4X	
CNCB	160.27	54 ePKP	23 52.00	13.9X	
	S.D. = 1.0	on 71 of 83 obs.			

? SEP 05, 1989 13h 15m 15.94±11.78s
57.856 N ±96.1km 6.163 E ±25.3km
DEPTH = 10.0km (geophysicist)
NORTH SEA (534)
MD 2.3 (BER).

KMY	1.44	341 eP	15 42.70	0.6	
		eS	15 57.55		
BLS2	1.50	15 eP	15 42.32	-0.6	
		eS	15 58.40		
ODD1	2.08	6 eP	15 51.99	0.7	
		eS	16 12.91		
ASK	2.68	350 eP	16 00.29	0.4	
		eS	16 29.76		
SUE	3.29	348 eP	16 06.86	-1.6	
		eS	16 42.63		
HYA	3.32	0 iP	16 09.34	0.4	
		eS	16 42.60		
NRA0	3.99	41 iPd	16 18.50	0.0	
		eS	16 59.80		
		iSg	17 12.90		
	S.D. = 1.0	on 7 of 7 obs.			

SEP 05, 1989 13h 42m 33.80± 1.07s
43.403 N ± 6.3km 5.413 E ± 8.7km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.6 (STR).

GELF	0.02	152 Pg	42 35.35	-0.4	
BERF	0.22	114 Pg	42 38.79	0.2	
TREF	0.22	354 Pg	42 38.24	-0.4	
PRAF	0.44	336 Pg	42 43.06	0.3	
VILF	0.50	26 Pg	42 43.23	-0.7	
TAVF	0.52	65 Pg	42 43.72	-0.5	
GANF	0.69	31 Pg	42 48.02	0.5	
DOI	1.72	50 P	43 05.00	1.0	
		eSg	43 30.50		
	S.D. = 0.7	on 8 of 8 obs.			

SEP 05, 1989 14h 39m 46.01± 2.30s
7.138 N ± 5.0km 121.691 E ± 5.8km
DEPTH = 32.9 ± 17.8 km
4.8mb (12 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	3.85	91 eP	40 46.00	1.5	
TSM	4.62	231 ePc	40 55.40	0.0	
KKM	5.55	259 ePd	41 08.00	-0.6	
		e	42 10.50		
MNI	6.47	151 e(P)	41 20.50	-1.0	
		iS	42 35.00		
AAI	12.56	149 eP	42 43.80	-1.5	
QIZ	16.50	317 eP	43 38.00	1.2	
N	12s	0.50um			
		sS	46 53.00		
IPM	20.71	264 ePc	44 26.10	-0.2	
	0.8s	33.90nm		4.8mb	
SNG	20.91	271 ePd	44 28.50	0.2	
JAY	21.26	116 ePd	44 35.70	3.8X	
MTN	21.96	155 eP	44 38.90	0.1	

0.7s 25.00nm 4.8mb
PPI 22.54 251 eP 44 47.00 2.3
PSI 23.10 260 iPc 44 55.50 5.4X
SSE 23.84 359 eP 44 59.00 1.9
1.0s 0.02nm 1.7mb X
sS 49 18.00
WHN 24.28 344 eP 45 01.50 0.1
NJ2 24.93 354 Pc 45 09.40 1.7
CHG 24.9B 300 eP 45 07.60 -0.8
1.0s 11.50nm 4.4mb
CHTO 24.98 300 iP 45 07.90 -0.5
1.1s 12.96nm 4.4mb
CD2 29.00 327 P 45 44.00 -1.1
WB5 29.61 155 eP 45 49.00 -1.6
WRA 29.65 155 Pc 45 49.70 -1.3
0.9s 31.20nm 5.1mb
TIY 31.58 346 eP 46 07.70 -0.2
E 14s 0.30um
pP 46 13.00 18kmX
QIS 32.67 148 iPc 46 16.70 -0.9
1.1s 33.00nm 5.1mb
ASPA 32.86 159 iPc 46 18.70 -0.5
0.9s 10.00nm 4.7mb
MAT 32.93 25 eP 46 17.00 -2.6
1.4s 30.23nm 5.0mb
BJI 33.13 352 eP 46 20.50 -0.8
WARB 33.47 172 eP 46 24.40 0.0
HHC 34.76 346 eP 46 35.90 0.3
GTA 37.68 332 P 47 00.00 -0.2
Z 14s 0.50um 4.5MszX
N 10s 0.20um
MDJ 37.96 9 eP 47 02.00 -0.4
FORR 38.27 171 eP 47 04.60 -0.4
STK 43.20 155 iPc 47 46.20 0.5
0.6s 11.00nm 4.8mb
GBA 43.95 282 Pc 47 51.40 -0.6
1.0s 16.90nm 4.8mb
CMS 44.80 150 iPc 47 59.30 0.6
ADE 44.85 160 eP 48 00.00 0.9
0.6s 44.00nm 5.5mb
BRS 45.64 140 iP 48 05.50 0.0
WMQ 47.10 326 P 48 17.20 0.3
PcP 49 47.20
eS 55 07.30
BWA 48.45 150 eP 48 30.10 2.6
CAN 49.46 150 eP 48 36.00 0.8
CNB 49.63 150 eP 48 37.70 1.1
TOO 49.72 155 eP 48 38.00 0.8
DZM 52.59 125 iPd 48 59.20 0.0
QUE 56.10 302 eP 49 24.50 -0.5
MAIO 63.47 307 eP 50 15.00 -0.4
SOD 85.42 337 iP 52 41.00 19.8X
INK 88.83 21 eP 52 36.00 -1.8
MBC -89.72 12 eP 52 42.00 0.1
0.9s 6.00nm 4.9mb
SPA 97.09 180 e(P) 53 26.30 10.4X
1.0s 2.50nm
ZOBO 166.79 134 PKP 59 51.50 0.7
S.D. = 1.1 on 44 of 48 obs.

& SEP 05, 1989 16h 54m 20.86s
60.861 N 151.589 W
DEPTH = 68.9km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA 0.21 124 iP 54 32.96 T.5
SPU 0.39 325 iP 54 32.38 -0.5
eS 54 41.93
CGLM 0.49 336 iP 54 33.15 -0.6
eS 54 42.87
CRP 0.49 326 iP 54 33.47 -0.4
eS 54 43.28
RDT 0.49 235 iP 54 33.19 -0.6
eS 54 43.59
CKL 0.50 313 iP 54 33.16 -0.7
eS 54 43.69
BGL 0.56 316 iP 54 34.00 -0.5
eS 54 44.30
NCG 0.61 333 iP 54 34.42 -0.6
eS 54 45.37
SUA 0.73 34 iP 54 35.87 -0.5
eS 54 47.39
RED 0.73 233 iP 54 35.85 -0.5
SLKM 0.76 117 eP 54 36.08 -0.6
eS 54 49.23
ILIM 1.04 222 iP 54 39.31 -0.8
eS 54 54.37
PMS 1.06 68 iP 54 39.83 -0.5
eS 54 54.64
SKT 1.12 1 iP 54 40.35 -0.8
PWA 1.15 45 eP 54 40.95 -0.5
eS 54 56.31
SEW 1.30 125 eP 54 42.29 -1.2
eS 54 59.52
KNK 1.62 69 eP 54 46.36 -1.5
eS 55 06.47
GLI 2.20 88 iP 54 52.70 -3.1
eS 55 18.88
18 obs. assocloted

? SEP 05, 1989 17h 52m 16.69± 3.54s
5.590 S ±41.6km 145.657 E ±17.2km
DEPTH = 83.6 ± 21.9 km
4.2mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)
LAT 1.70 128 eP 52 45.00 -0.2
MNDI 2.07 254 eP 52 50.50 0.1
PMG 4.07 159 eP 53 19.00 1.1
KDB 4.13 159 eP 53 18.00 -0.8
MTN 16.04 242 eP 55 54.00 -4.7X
0.6s 9.00nm 4.1mb
WB5 17.95 217 eP 56 21.80 -0.6
ASPA 21.24 211 iPc 56 58.20 0.4
1.1s 19.00nm 4.4mb
S.D. = 1.1 on 6 of 7 obs.

? SEP 05, 1989 18h 58m 34.34± 7.11s
18.354 N ±54.2km 61.817 W ±17.9km
DEPTH = 10.0km (geophysicist)
LEEWARD ISLANDS (92)
ML 2.9 (FDF).

ANG 1.19 181 eP 58 57.58 1.0
eS 59 04.75
BPA 1.30 182 iPc 58 58.34 -0.1
S 59 04.60
SKI 1.34 221 eP 58 57.54 -1.5
eS 59 04.50
NEV 1.41 211 eP 59 02.90 2.9
S 59 14.00
MBET 1.64 192 eP 59 03.12 -0.2
eS 59 11.55
DEG 2.15 160 iPc 59 11.81 1.0
PAG 2.32 177 eP 59 12.50 -0.7
S 59 29.50
MGG 2.47 169 eP 59 15.10 -0.2
BBL 2.83 173 eP 59 20.20 -0.3
S.D. = 1.5 on 9 of 9 obs.

SEP 05, 1989 19h 49m 03.81± 0.26s
52.810 S ± 4.8km 140.316 E ± 6.8km
DEPTH = 10.0km (geophysicist)
5.3mb (14 obs.) 5.4Msz (19 obs.)
WEST OF MACQUARIE ISLAND (701)
CENTROID, MOMENT TENSOR (HRV)
Doto Used: GDSN
L.P.B.: 11S, 26C
Centroid Location:
Origin Time 19:49: 8.0 0.9
Lot 53.21S 0.08 Lon 140.29E 0.08
Dep 15.0 FIX Half-duration 2.8
Moment Tensor; Scale 10**17 Nm
Mrr= 0.53 0.15 Mtt= 0.23 0.20
Mff=-0.76 0.20 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-4.20 0.17
Principol Axes:
T Val= 3.96 Plg= 0 Azm=222
N 0.53 90 180
P -4.50 0 132
Best Double Couple:Mo=4.2*10**17
NP1:Strike=267 Dip=90 Slip= 180
NP2: 357 90 0
TAU 10.96 28 eP 51 45.00 1.4
TOO 15.66 15 ePd 52 45.80 -0.2
1.1s 138.00nm 5.1mb
BFD 15.71 7 eP 52 46.60 0.0
1.4s 189.00nm 5.1mb
eTT 06 42.60
ADE 17.87 356 ePd 53 13.30 -0.7
1.2s 118.75nm 4.9mb
CAN 18.54 23 eP 53 22.00 -0.2
CNB 18.63 24 eP 53 24.00 0.6
Z 17s 0.80um
BWA 19.27 21 eP 53 31.70 0.5
RIV 20.50 27 eP 53 44.00 -0.4
eS 57 39.00
STK 20.94 3 iPd 53 49.10 0.2
1.0s 32.00nm 4.6mb
CMS 21.68 13 eP 53 55.00 -1.5
1.1s 58.00nm 4.9mb
FORR 23.69 333 eP 54 17.00 0.8
COO 23.78 25 eP 54 18.30 1.2
RKG 25.05 309 eP 54 27.00 -2.5
SNZO 25.84 77 P 54 37.00 0.2
S 59 12.00
NWAO 25.90 311 eP 54 38.50 1.1
COOL 26.00 320 eP 54 36.50 -1.8
OLP 26.36 8 iPd 54 42.40 0.8
SBA 26.90 168 eP 54 45.80 -0.4
BRS 27.04 25 eP 54 34.00 -13.9X
RMQ 27.04 17 iPd 54 48.40 0.5
MUN 27.16 311 eP 54 49.00 0.0
Z 20s 15.00um 5.6Msz
N 20s 11.80um
E 20s 7.20um
WARB 28.51 334 eP 55 00.00 -1.2
ASPA 29.51 348 iPc 55 08.50 -1.8
1.3s 82.00nm 5.4mb
Z 20s 4.93um 5.1Msz
LR 05 29.20
QIS 32.20 359 iPc 55 32.70 -1.3
1.2s 225.00nm 6.0mb
CTA 32.98 10 iPd 55 40.60 -0.2
1.3s 96.15nm 5.6mb
Z 18s 11.00um 5.6Msz
iS 01 03.00
WB5 33.19 350 eP 55 40.70 -1.9
MBL 35.32 326 eP 56 00.00 -0.9
1.0s 44.00nm 5.3mb
NANU 35.65 318 eP 56 03.00 -0.7
DZM 36.64 43 iPc 56 12.50 0.3
SPA 37.38 180 e(P) 56 16.90 -1.2
0.9s 64.55nm 5.4mb
e 56 35.80
MAW 38.32 217 eP 56 24.00 -1.7
MTN 40.53 346 iPd 56 44.30 -0.3
1.0s 145.00nm 5.6mb
PMG 43.63 10 eP 57 10.00 0.1
HNR 46.09 27 eP 57 28.00 -1.6
e 04 18.00
RAB 49.44 16 eP 57 54.00 -1.8
eS 05 08.00
TSM 59.85 334 eP 59 13.50 1.8
AIA 60.76 168 eP 59 16.40 -1.0
DAV 60.97 343 eP 59 20.00 0.7
PSI 65.30 313 ePc 59 47.80 -0.2
IPM 66.09 316 ePd 59 52.50 -0.6
GUMO 66.24 5 eP 00 01.00 7.1X
SNG 68.60 317 eP 00 08.50 -0.4
eS 09 11.00
BAG 71.02 340 eP 00 28.00 4.2X
NNT 73.86 319 eP 00 41.70 1.3
BDT 78.37 320 eP 01 07.00 1.3
QZH 79.71 340 eP 01 14.00 1.1
Z 22s 0.60um 4.9Msz
S 11 17.00
CHG 79.82 320 ePc 01 14.40 0.7
1.3s 44.23nm 5.3mb
CHTO 79.82 320 eP 01 14.40 0.8
GYA 84.21 330 P 01 37.00 0.5
E 20s 1.10um
S 12 03.00
KMI 84.23 326 eP 01 39.00 2.3
Z 20s 3.00um 5.7Msz
N 20s 1.60um
sP 01 50.00
e 01 58.00
SKS 12 03.00
S 12 04.00
SSE 85.20 344 eP 01 40.00 -1.1
Z 20s 0.60um 5.0Msz
N 12s 0.30um
esP 01 50.00
S 12 10.00
SS 17 46.00
GBA B5.22 300 Pc 01 40.00 -1.6
0.9s 4.90nm 4.7mb
BUL 86.50 241 eP 01 49.10 0.9

05d 20h

NJ2	86.56	342	eP	01	48.00	0.2	KEV	145.95	325	iPKP	08	44.80	2.0X	0.8s	4.00nm
	Z 20s	1.20um			5.3Msz					i	08	52.80		GUD	153.06 257 ePKP 09 03.20 8.4X
		S	12	24.00		KBA	146.06	282	ePKP	08	43.00	-1.0		S.D. = 1.1 on 94 of 157 obs.
KRI	88.67	244	iP	02	03.00	4.2X	1.5s	69.60nm						SEP 05, 1989 20h 02m 56.74± 0.65s
MAT	89.00	358	eP	02	00.00	0.5				i	08	53.10		41.943 N ± 6.1km 15.358 E ± 7.7km
	1.5s	63.89nm			5.7mb					i	09	10.90		DEPTH = 33.0km (normal)
	Z 20s	0.71um			5.1Msz	KMR	146.07	284	ePKP	08	44.00	0.3		SOUTHERN ITALY (390)
		eS	12	49.00		KSP	146.09	290	ePKP	08	44.30	0.6		
CD2	89.26	329	eP	02	02.00	1.1	CVF	146.35	272	ePKP	08	45.50	1.1	
	Z 20s	0.80um			5.1Msz		0.9s	37.30nm						DUI 0.73 248 Pc 03 10.80 0.1
		sP	02	13.40		CTI	146.55	279	PKP	08	45.50	0.8		eSg 03 24.20
		S	12	55.00		PRU	146.72	287	PKP	08	45.10	0.4		SDI 1.18 259 P 03 16.90 -0.1
XAN	90.71	334	P	02	08.00	0.4	Z 19s	0.70um				5.5Msz		eSn 03 38.10
		SKS	12	38.00						e	08	52.00		SGO 1.38 182 P 03 19.70 -0.2
LSZ	90.72	243	eP	02	05.00	-3.3X				e	09	00.00		eSn 03 40.80
TIA	90.92	341	Pd	02	08.10	-0.4	KHC	146.90	285	PKP	08	46.50	1.4	AZI 1.43 272 Pd 03 22.00 1.4
	Z 27s	1.00um			5.1MszX		1.0s	10.50nm						eSn 03 44.10
	N 16s	0.60um				BOB	147.21	276	PKP	08	47.50	1.8		HVAR 1.47 33 iPg 03 14.50 -6.7X
HON	91.07	55	P	02	10.00	0.6	OGA	147.34	280	ePKP	08	47.90	1.8	iSg 03 32.50
	Z 20s	1.06um			5.3Msz	BRG	147.45	289	ePKP	08	47.80	2.0X		ALP 1.56 303 ePn 03 21.09 -1.6
BOM	92.06	299	eP	02	07.00	-7.0X				i	08	54.60		e(Sn) 03 45.19
		eS	12	48.00						i	09	21.50		MGR 1.81 175 P 03 26.00 -0.1
TIY	93.35	338	eP	02	21.80	2.1	BLA	147.75	102	PKP	08	49.00	2.2X	eSn 03 50.60
	N 19s	1.10um				TIO	147.86	240	iPKP	08	50.00	2.7X		MNS 2.04 283 P 03 30.50 1.0
		SKS	12	56.00						i	08	52.50		eSn 03 54.90
		S	13	25.00		SBF	147.94	273	ePKP	08	48.10	1.2		AOI 2.06 322 e(Pn) 03 31.15 1.4
LZH	94.05	331	eP	02	25.50	2.5	0.9s	39.30nm						eSn 04 02.35
	2.0s	0.05nm			2.5mb X	CLL	148.17	289	ePKP	08	50.00	3.1X		ASS 2.29 300 P 03 33.30 0.3
	Z 30s	1.50um			5.3MszX		2.3s	135.00nm						eSn 04 01.20
		sP	02	35.50						e	08	58.00		ARV 2.36 312 P 03 32.90 -1.2
		S	12	40.00		VAI	148.19	277	PKP	08	49.00	1.9		eSn 04 01.50
BJI	94.81	342	eP	02	26.00	-0.2	FRF	148.25	272	ePKP	08	49.30	2.0X	TDS 2.40 162 P 03 35.60 1.0
	Z 19s	1.36um			5.4Msz		0.8s	21.40nm						(Sn) 04 04.60
		eS	13	02.00		UPP	148.38	306	iPKP	08	46.30	-0.7		LCI 2.53 128 P 03 35.20 -1.2
SNY	95.36	348	eP	02	28.00	-0.7	GRF	148.53	285	iPKPd	08	49.40	1.8	(Sn) 04 04.90
CN2	97.08	349	eP	02	35.50	-1.0				e	08	51.50		CRE 3.02 305 P 03 41.20 -2.3
	Z 18s	1.00um			5.3Msz					e	08	58.50		VBY 3.56 359 e(Pn) 03 51.30 0.3
	N 18s	1.00um				IFR	148.69	246	iPKP	08	53.00	4.4X		e(Sn) 04 38.70
		epP	02	43.00	23kmX	MOX	148.70	287	ePKP	08	51.00	3.1X		TRI 3.94 344 eP 04 34.70 38.4X
		eSKS	13	10.00			2.2s	82.00nm						PTJ 3.98 6 ePn 03 58.10 1.1
GTA	98.33	329	eP	02	43.00	0.7	Z 20s	1.10um				5.6Msz		eSn 04 38.80
	Z 20s	0.90um			5.3Msz	LPG	149.22	275	ePKP	08	52.40	3.2X		VOY 4.22 346 ePn 03 54.30 -6.1X
	N 16s	0.50um					0.9s	18.00nm						eSn 04 43.30
		SKS	13	20.00		FEL	149.62	280	PKP	08	54.33	4.8X		e 06 00.00
CNCB	106.47	152	Pdiff	03	00.00	-20.0X	LOMF	150.08	278	PKP	08	54.65	4.5X	S.D. = 1.2 on 15 of 18 obs.
LPB	106.70	152	Pdiff	03	01.50	-19.3X	WLS	150.25	281	PKP	08	56.42	6.1X	SEP 05, 1989 20h 49m 34.40± 0.43s
	Z 20s	2.13um			5.7Msz	ECH	150.28	280	PKP	08	54.96	4.6X		11.732 S ± 6.3km 34.450 E ± 7.1km
		eLR	39	50.00		CDF	150.30	281	PKP	08	55.80	5.3X		DEPTH = 10.0km (geophysicist)
ZOBO	106.94	151	Pdiff	03	01.00	-21.1X	BSF	150.33	279	PKP	08	54.13	3.6X	4.9mb (18 obs.)
		LR	39	44.00		GWF	150.34	282	PKP	08	55.49	5.1X		MALAWI (577)
SMY	108.90	21	Pdiff	03	40.00	10.8X	APHE	150.35	252	ePKP	08	55.70	4.7X	CENTROID, MOMENT TENSOR (HRV)
	Z 20s	3.00um			5.9Msz	ATEJ	150.52	252	ePKP	08	58.00	6.8X		Data Used: GDSN
CMB	124.40	71	e(PKP)	08	03.20	-0.9	ASMO	150.66	253	ePKP	08	56.00	4.6X	L.P.B.: 6S, 12C
ORV	124.81	69	e(PKP)	08	04.20	-0.5	HAU	150.67	279	ePKP	08	55.40	4.5X	Centroid Location:
WDC	124.92	67	e(PKP)	08	04.20	-0.7	0.9s	14.40nm						Origin Time 20:49:41.2 2.5
TNP	126.26	73	PKP	08	08.20	0.3	ALOJ	150.70	252	ePKP	08	57.50	6.0X	Lat 11.80S FIX;Lon 34.46E FIX
KVN	126.41	71	PKP	08	08.50	0.4	ABH	150.77	283	ePKP	08	55.99	5.0X	Dep 19.816.3 Half-durotion 1.7
MSU	129.50	76	PKP	08	13.00	-1.1	AAPN	150.85	252	ePKP	08	56.40	4.7X	Moment Tensor; Scole 10**16 Nm
ALO	130.52	83	e(PKP)	08	16.00	-0.1	RUP	150.98	283	ePKP	08	56.78	5.4X	Mrr= 6.34 1.76 Mtt= 1.14 1.56
	Z 18s	0.94um			5.5Msz	VITF	150.99	279	PKP	08	55.62	4.3X		Mff=-7.48 2.61 Mrt= 9.72 8.29
		ePKS	11	41.00		EJIF	151.02	249	ePKP	09	11.50	19.7X		Mrf=-7.47 7.06 Mtf=-7.73 2.51
GOL	134.30	79	PKP	08	40.00	16.8X	EBAN	151.24	254	ePKP	09	07.00	14.9X	Principal Axes:
	Z 20s	0.75um			5.4Msz	EPRU	151.25	250	ePKP	09	03.00	10.8X		T Val= 18.22 Plg=46 Azm= 33
INK	136.27	32	ePKP	08	24.00	-1.6	WLF	151.50	282	PKP	09	00.40	8.3X	N -5.98 43 197
UYO	137.27	93	e(PKP)	08	28.80	0.2	NRA0	151.51	307	PKP	08	57.40	5.6X	P -12.24 8 295
SES	137.29	63	ePKP	08	30.00	1.8	SMF	151.55	275	ePKP	08	57.20	4.9X	Best Double Couple:Mo=1.5*10**17
FVM	142.24	92	PKP	08	33.50	-4.0X	0.8s	5.30nm						NP1:Strike= 63 Dip=52 Slip= 149
SRO	143.50	286	e(PKP)	08	43.00	3.7X	LBF	151.63	276	ePKP	08	57.70	5.2X	NP2: 173 66 42
KRA	143.65	290	ePKP	08	38.40	-1.1	0.9s	21.90nm						
FFC	144.19	61	ePKP	08	39.00	-1.3	NB2	151.71	307	PKP	08	57.50	5.4X	SONG 4.18 203 ePn 50 48.70 9.0X
	1.9s	105.00nm					1.0s	22.50nm						e 50 52.20
ZST	144.40	286	e(PKP)	08	41.00	0.2	LOR	151.83	276	ePKP	08	58.00	5.3X	eSn 51 31.00
PRM	144.46	105	PKP	08	39.00	-2.4X	0.8s	5.30nm						eSg 51 46.50
TKL	144.71	101	PKP	08	38.00	-3.8X	EHOR	151.85	252	ePKP	09	07.50	14.5X	KRI 6.90 222 iPnc 51 19.20 0.9
SUF	145.06	313	iPKP	08	40.50	-1.0	ETOR	151.92	260	ePKP	09	03.20	10.0X	iSn 52 33.50
	1.4s	75.50nm				SSF	151.95	276	ePKP	08	58.60	5.7X		iSg 53 08.90
CRE	145.08	276	PKP	08	46.50	4.2X	0.8s	9.90nm						LSZ 7.04 239 iPn 51 21.00 0.9
TRI	145.11	280	ePKP	08	45.10	3.0X	MEM	151.96	284	PKP	09	03.70	11.0X	iSn 52 36.90
NUR	145.15	309	iPKP	08	41.30	-0.4	WTS	152.00	287	ePKP	09	00.50	7.8X	iSg 53 13.00
	0.7s	13.30nm					1.0s	26.00nm						KMZ 8.58 258 iPn 51 41.00 -0.8
		i	08	50.80		ENN	152.07	284	ePKP	08	59.50	6.6X		iSn 53 16.00
VOY	145.20	281	ePKP	08	42.50	0.1	1.0s	33.00nm						BUL 10.07 213 iPn 52 00.40 -1.9
JSC	145.24	105	PKP	08	41.30	-1.4	BGF	152.11	274	ePKP	08	58.40	5.3X	iSn 53 48.00
RBL	145.61	281	PKP	08	46.50	3.4X	1.0s	14.80nm						iSg 54 41.00
LMS	145.65	106	PKP	08	42.80	-0.6	TOL	152.52	256	ePKP	09	09.00	15.1X	NAI 10.65 13 iPc 52 09.00 -1.3
SOD	145.80	321	iPKP	08	42.30	-0.4	DOU	152.60	282	PKP	09	00.70	7.1X	1.0s 15.00nm 5.3mb
		i	08	51.20		LSF	152.76	273	ePKP	09	00.10	6.1X		

			S	55 06.00		
LWI	10.97	329	iPc	52 12.70	-2.0	
			iS	54 10.50		
BNG	22.54	315	iPd	54 35.80	-0.3	
	0.7s	152.00nm			5.6mb	
			ic	54 38.20		
			id	54 41.70		
BCAO	22.55	315	iP	54 35.90	-0.3	
	1.0s	45.70nm			4.9mb	
MBH	41.26	1	iP	57 23.00	1.6	
PRNI	41.84	1	eP	57 28.00	1.8	
KIC	42.93	293	P	57 35.40	0.0	
	1.1s	12.50nm			4.6mb	
TIC	43.30	293	P	57 38.38	0.0	
GBA	49.51	61	Pd	58 25.90	-1.5	
	0.9s	5.50nm			4.6mb	
LPG	62.21	338	eP	59 58.60	-0.2	
	1.0s	10.00nm			5.0mb	
EPF	62.79	332	eP	00 03.20	0.8	
	1.2s	14.80nm			5.1mb	
KHC	63.34	345	iPd	00 05.80	-0.1	
BBS	63.64	340	P	00 08.33	0.4	
LOMF	63.77	339	P	00 09.07	0.2	
FEL	63.83	340	P	00 09.45	0.1	
PRU	63.89	346	eP	00 08.50	-1.0	
RJF	64.09	335	eP	00 11.50	0.6	
LFF	64.13	334	eP	00 11.80	0.7	
	0.8s	6.40nm			4.9mb	
BSF	64.20	340	P	00 11.39	-0.3	
SMF	64.26	337	eP	00 12.10	0.1	
	0.9s	8.10nm			4.9mb	
MAF	64.41	336	eP	00 13.90	1.0	
	1.2s	23.80nm			5.3mb	
ECH	64.41	340	P	00 12.93	0.0	
GRF	64.48	344	iPc	00 11.00	-2.4	
	1.0s	21.00nm			5.3mb	
			e	00 14.50		
LBF	64.49	337	eP	00 13.30	-0.2	
HAU	64.50	339	eP	00 13.70	0.1	
	1.0s	9.60nm			4.9mb	
WLS	64.52	340	P	00 12.93	-0.8	
CDF	64.54	340	P	00 13.82	-0.1	
BGF	64.57	336	eP	00 14.30	0.3	
	1.0s	8.00nm			4.9mb	
TCF	64.60	336	eP	00 15.00	0.8	
	1.0s	14.00nm			5.1mb	
LOR	64.77	337	eP	00 15.20	-0.1	
VITF	64.81	339	P	00 15.18	-0.3	
LSF	64.85	335	eP	00 16.20	0.4	
GWF	64.92	341	P	00 16.62	0.4	
CLL	65.49	345	e(P)	00 19.00	-0.8	
RUP	65.73	341	ePd	00 22.25	0.8	
ABH	65.74	341	ePd	00 22.00	0.5	
MFF	65.82	335	eP	00 22.50	0.5	
LPF	67.33	335	eP	00 31.80	0.2	
	1.0s	12.00nm			5.0mb	
CHG	70.44	65	eP	00 53.00	1.5	
CHTO	70.44	65	eP	00 50.00	-1.4	
	1.0s	6.75nm			4.7mb	
NUR	72.42	355	eP	00 55.00	-7.5X	
Z	24s	1.10um			5.0MszX	
			LR	09 20.00		
WMO	73.45	37	P	01 08.50	-0.5	
SUF	74.50	356	eP	01 14.90	0.4	
	0.8s	7.60nm			4.8mb	
NB2	74.84	349	P	01 17.00	0.4	
	1.0s	10.30nm			4.8mb	
SOD	79.09	357	eP	01 41.00	0.9	
GTA	79.13	46	eP	01 41.20	0.0	
BAO	79.73	256	eP	01 45.00	0.2	
S.D. = 0.9		on	50 of	52 obs.		

SEP 05, 1989 21h 02m 18.82± 0.93s
35.844 N ± 9.1km 140.255 E ± 9.2km
DEPTH = 70.3 ± 10.3 km
NEAR EAST COAST OF HONSHU, JAPAN(228)
MG 3.9 (JMA). Felt (II JMA) at Utsunomiyo and (I JMA) at Kumagaya.

KAKJ	0.37	350	iP+	02 30.80	0.2	
			S	02 38.10		
KMG	0.77	293	iPd	02 34.80	0.1	
			iS	02 45.40		
CHJJ	1.04	282	iPd	02 37.60	-0.5	
NIIJ	1.72	324	iPd	02 46.40	-0.8	
			eS	03 07.30		
MAT	1.80	293	iPd	02 47 90	-0.4	
			eS	03 10.00		
IIDJ	1.94	260	iPd	02 51.10	0.8	
			S	03 13.50		
MTMJ	2.12	291	iPd	02 52.60	-0.1	
YAMJ	2.33	356	P	02 55.70	0.1	
OFUJ	3.42	19	iP	03 10.40	-0.4	
			S	03 49.20		
TSRJ	3.49	266	iPd	03 12.60	0.8	
WKYJ	4.15	248	P	03 20.80	-0.4	
AOMJ	4.71	1	eP	03 29.90	1.0	
TKSJ	5.43	252	eP	03 38.60	-0.4	
YONJ	5.58	265	eP	03 41.60	0.5	
WB5	55.70	187	eP	11 50.00	-0.2	
S.D. = 0.6		on	15 of	15 obs.		

? SEP 05, 1989 21h 41m 00.01± 3.09s
11.759 S ±12.0km 34.221 E ±36.6km
DEPTH = 10.0km (geophysicist)
3.9mb (2 obs.)
MALAWI (577)

PTZ	3.74	228	iPn	42 01.00	1.8	
			iSg	43 03.00		
SONG	4.07	200	eP	42 50.00	46.2X	
			eS	43 09.00		
KRI	6.73	221	ePn	42 41.20	-0.3	
			iSn	43 56.10		
			iSg	45 10.00		
LSZ	6.83	239	iPn	42 43.50	0.6	
			iSn	43 59.00		
			iSg	44 36.00		
KMZ	8.36	257	iPn	43 03.00	-1.3	
			iSn	44 36.00		
			iSg	45 32.50		
BUL	9.93	212	iPn	43 24.90	-1.1	
			iSn	45 10.00		
			iSg	46 09.50		
BNG	22.40	315	ePd	46 00.50	0.2	
	0.4s	6.00nm			4.4mb	
BCAO	22.41	315	eP	46 00.50	0.1	
	0.9s	1.50nm			3.5mb	
S.D. = 1.3		on	7 of	8 obs.		

& SEP 05, 1989 21h 52m 11.85s
63.337 N 149.331 W
DEPTH = 96.0km
CENTRAL ALASKA (1)
<AGS-P>.

RND	0.23	72	iP	52 25.80	1.6	
			eS	52 35.66		
HUR	0.39	201	iP	52 26.27	-0.4	
			eS	52 36.68		
MCK	0.43	24	iP	52 26.90	-0.1	
			eS	52 37.01		
KTH	0.75	288	iP	52 29.47	-0.2	
			eS	52 41.73		
NEA	1.25	5	eP	52 34.64	-0.5	
WRH	1.26	25	eP	52 34.85	-0.5	
CCB	1.48	26	eP	52 37.41	-0.6	
HDA	1.50	43	eP	52 37.85	-0.5	
GHO	1.58	173	eP	52 39.30	-0.1	
			eS	53 00.62		
RDS	1.58	19	eP	52 38.84	-0.5	
SKT	1.70	218	iP	52 40.05	-0.8	
PWA	1.71	189	eP	52 41.34	0.4	
PME	1.72	175	eP	52 41.07	0.0	
PLRM	1.75	177	eP	52 42.35	0.8	
GLM	1.86	26	eP	52 42.47	-0.6	
KNK	1.97	168	eP	52 44.37	-0.1	
NCG	2.35	215	eP	52 48.83	-0.7	
DOT	2.38	80	eP	52 49.65	-0.3	
KLU	2.44	138	eP	52 49.79	-0.9	
VZW	2.63	149	eP	52 51.66	-1.7	
20 obs. associated						

& SEP 05, 1989 22h 36m 16.20s
37.382 N 121.742 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK)

MHC	0.09	117	iPc	36 18.20	-0.2	
ARN	0.17	101	iPc	36 19.50	-0.3	
GCC	0.41	210	iPc	36 24 30	-0.1	
			iS	36 30.60		
PCC	0.52	283	iPc	36 26.10	-0.6	
BKS	0.63	322	eP	36 28.50	-0.3	
BRK	0.64	320	ePc	36 29.10	0.1	
			eS	36 38.30		
SAO	0.66	159	iPd	36 29.20	-0.2	
ZSP	0.69	324	eP	36 30.30	0.2	
LLA	1.00	140	ePd	36 34.30	-1.2	
PRS	1.09	164	ePc	36 36.10	-1.0	
			eS	36 50.30		
CMB	1.26	58	eP	36 39.10	-0.9	
			eS	36 55.90		
PRI	1.51	145	e(P)	36 42.70	-1.2	
FRI	1.67	103	e(P)	36 43.50	-2.6	
			iS	37 05.90		
KVN	3.32	59	e(P)	37 15.00	5.1	
14 obs. associated						

• SEP 05, 1989 22h 45m 13.15± 1.22s
53.349 N ±17.8km 163.523 W ±11.6km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
UNIMAK ISLAND REGION (10)

SNKA	1.21	21	ePc	45 33.44	-0.4	
			eS	45 49.02		
DRRA	1.74	24	eP	45 41.00	-0.5	
BALA	1.90	13	eP	45 44.80	1.0	
DLG	2.05	28	ePc	45 45.64	-0.3	
PS4	2.23	25	eP	45 48.75	0.2	
PVV	2.27	26	eP	45 49.67	0.6	
			eS	46 14.97		
SQF	2.56	42	eP	45 53.97	0.8	
SASA	2.67	40	eP	45 55.23	0.6	
			eS	46 24.76		
CNBA	2.75	56	eP	45 55.98	0.2	
			eS	46 26.96		
SGB	2.84	38	eP	45 57.02	-0.1	
			eS	46 29.10		
BKJ	2.95	50	eP	45 58.44	-0.2	
IVF	3.45	41	eP	46 05.86	0.0	
			eS	46 43.99		
KDC	7.65	50	eP	47 02.50	-2.5	
ADK	8.15	265	e(P)	47 10.00	-1.9	
IMA	13.66	17	eP	48 26.00	-0.8	
INK	20.61	32	eP	49 52.50	0.9	
MBC	28.35	21	eP	51 06.00	0.4	
MAT	43.25	271	eP	53 15.00	2.2	
	1.1s	11.39nm			4.5mb	
SUF	64.03	355	eP	55 44.50	-0.6	
	0.5s	4.10nm			4.8mb	
NB2	65.88	3	P	55 56.60	-0.6	
	0.7s	1.20nm			4.1mb	
NUR	66.30	356	eP	55 57.70	-2.1	
KHC	77.87	2	P	57 10.70	2.1	
KBA	79.92	2	e(P)	57 21.00	1.0	
	1.4s	13.80nm			4.8mb	
			i	57 35.90		
BUL	145.56	340	ePKP	04 51.80	2.3X	
	0.9s	6.72nm				
S.D. = 1.2		on	23 of	24 obs.		

? SEP 05, 1989 22h 59m 46.52± 1.37s
46.296 N ± 9.0km 13.574 E ±17.1km
DEPTH = 10.0km (geophysicist)
AUSTRIA (546)
MD 2.6 (LJU), 2.0 (TRI). Felt (IV) at Lepena, Yugoslavia.

RBL	0.15	359	P	59 50.00	0.0	
VOY	0.35	140	iPgc	59 53.80	0.1	
			eSg	59 59.30		
			e	00 40.00		
TRI	0.60	167	iPgc	59 58.60	-0.1	
			iSg	00 08.00		
LJU	0.71	110	ePg	00 00.50	-0.1	
			iSg	00 10.40		
			e	00 35.00		
VBY	1.42	123	ePn	00 14.90	2.6X	
			iSg	00 37.80		
S.D. = 0.1		on	4 of	5 obs.		

SEP 06, 1989 00h 16m 36.51± 0.66s
35.628 N ± 7.2km 27.613 E ± 6.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

KAP	0.37	258	ePg	16 44.70	0.7	

06d 00h

YER	1.60	20	ePn	17 03.00	-1.9
NPS	1.67	258	ePb	17 04.80	-1.2
KSL	1.67	72	ePn	17 09.20	3.2X
ELL	2.17	58	iPn	17 16.00	2.7X
SMG	2.17	344	ePn	17 14.60	1.5
VAM	2.79	266	ePb	17 26.00	3.9X
BCK	3.01	52	ePn	17 26.50	1.3
KHL	3.09	29	ePn	17 25.60	-0.8
ALT	3.96	29	ePn	17 39.00	0.4
DSI	7.64	120	eP	18 30.00	-0.5
PRNI	8.14	128	eP	18 38.00	0.5
			eS	20 07.00	
MBH	8.46	132	eP	18 42.00	0.0

S.D. = 1.2 on 10 of 13 obs.

SEP 06, 1989 03h 09m 23.08± 0.63s
71.004 N ± 9.9km 7.119 W ± 5.2km
DEPTH = 10.0km (geophysicist)
3.9mb (1 obs.)
JAN MAYEN ISLAND REGION (639)
MD 3.7 (BER).

JNE	0.39	269	iPd	09 31.90	0.9
JNW	0.43	274	iPd	09 32.40	0.6
JMI	0.53	263	iPd	09 34.20	0.3
DAG	6.62	336	iPc	11 00.40	-2.3
	0.5s	104.23nm			6.1mb X
			e	12 07.00	
LOF	7.76	102	iP	11 19.03	0.4
			eS	12 42.34	
TRO	8.86	86	iP	11 33.40	-0.5
			eS	13 07.30	
NSS	9.67	123	iP	11 46.49	1.3
			eS	13 25.42	
MOL	10.22	139	eP	11 51.03	-1.6
			eS	13 39.56	
SUE	11.06	149	eP	12 02.90	-1.2
			eS	13 58.39	
HYA	11.22	145	eP	12 05.30	-0.9
			eS	14 03.03	
KEV	11.44	80	eP	12 11.00	1.7
SOD	12.41	91	iP	12 23.40	1.0
ODD1	12.46	146	eP	12 23.50	0.3
			eS	14 30.70	
NRA0	12.74	135	iPc	12 31.80	5.0X
			eS	14 35.60	
SUF	15.26	106	eP	13 03.40	3.6X
	0.6s	3.20nm			3.9mb
			eS	15 42.30	
NUR	16.49	113	eP	13 12.00	-3.7X
KHC	23.98	145	eP	14 44.50	6.4X

S.D. = 1.3 on 13 of 17 obs.

SEP 06, 1989 03h 42m 43.84± 0.49s
44.847 N ± 3.7km 8.939 E ± 4.9km
DEPTH = 7.3 ± 3.0 km
NORTHERN ITALY (545)
ML 3.1 (LDG), 2.2 (GEN). MD 1.5 (STR).

BOB	0.37	102	Pc	42 51.20	-0.2
			iSg	42 56.20	
PCP	0.41	223	P	42 52.80	0.6
			S	42 59.90	
FIN	0.82	220	P	43 00.39	0.3
			S	43 13.17	
ROB	0.94	234	P	43 03.34	1.2
			S	43 16.27	
VAI	1.03	353	P	43 02.90	-0.6
			eSg	43 16.30	
ORO	1.03	319	P	43 03.60	0.0
			eSg	43 17.80	
IMI	1.20	219	P	43 06.32	-0.2
			S	43 22.42	
ENR	1.25	241	P	43 08.08	0.7
			S	43 25.09	
DOI	1.26	255	P	43 07.30	-0.2
			eSn	43 25.40	
TMA	1.26	358	eP	43 07.60	0.0
STV	1.30	243	P	43 09.05	0.8
			S	43 27.34	
SAOF	1.31	230	Pn	43 11.40	3.0X
			Sg	43 27.40	
PZZ	1.35	256	P	43 08.48	-0.7
			S	43 26.83	
MMK	1.39	331	eP	43 09.90	0.1
LSD	1.40	296	P	43 09.09	-0.9
			S	43 27 04	
BDI	1.42	123	P	43 09.20	-1.0
			e$n	43 27.30	
SBF	1.46	228	Pn	43 10.70	0.1
			Sn	43 29.80	
TOUF	1.47	236	Pn	43 13.00	2.1
			Sg	43 33.40	
AURF	1.50	231	Pn	43 13.20	1.9
			Sg	43 32.00	
RRL	1.53	273	P	43 12.24	0.4
			S	43 32.45	
FOUF	1.57	259	ePnc	43 11.35	-0.8
			e$n	43 30.08	
MVIF	1.60	234	Pn	43 14.40	1.8
			Sg	43 36.60	
BNI	1.62	278	P	43 12.30	-0.7
			e$n	43 32.80	
DIX	1.64	319	eP	43 15.10	1.8
LPG	1.68	294	Pn	43 13.60	-0.4
VDL	1.68	13	eP	43 14.50	0.6
LPL	1.70	294	Pn	43 13.60	-0.6
			Sn	43 36.80	
LLS	2.02	1	eP	43 21.10	2.2
OSS	2.02	24	eP	43 20.00	1.1
FRF	2.09	233	Pn	43 19.30	-0.4
			Sn	43 45.80	
CVF	2.28	181	Pn	43 19.60	-2.9
			Sn	43 45.20	
LMR	2.31	230	Pn	43 21.80	-1.1
			Sn	43 49.60	
LRG	2.32	234	Pn	43 21.60	-1.4
BSF	3.33	334	Pn	43 37.00	-0.5
			Sn	44 15.40	
HAU	3.63	331	Pn	43 40.60	-1.0
			Sn	44 22.00	
SMF	4.00	299	Pn	43 45.50	-1.3
LOR	4.29	306	Pn	43 49.00	-1.9
			Sn	44 37.60	
BGF	4.60	294	Pn	43 53.60	-1.7
			Sn	44 44.80	

S.D. = 1.2 on 37 of 38 obs.

• SEP 06, 1989 05h 08m 04.76± 0.55s
14.512 N ± 8.9km 119.593 E ± 9.9km
DEPTH = 10.0km (geophysicist)
4.6mb (5 obs.)
LUZON, PHILIPPINE ISLANDS (249)

OCP	1.44	85	eP	08 30.00	-0.9
BAG	2.11	27	iP-	08 40.50	-0.3
	0.9s	349.58nm			
			eS	09 03.40	
OIZ	10.36	297	eP	10 35.50	-1.1
			eS	12 20.00	
CHTO	20.24	285	eP	12 41.00	-2.0
XAN	21.71	335	Pd	12 59.00	1.0
TIA	21.72	355	eP	13 00.30	2.2
CD2	21.86	321	eP	13 02.00	2.4
			eS	17 02.80	
BJI	25.61	354	eP	13 36.00	0.2
LZH	25.70	330	P	13 37.00	0.0
	2.0s	50.00nm			4.9mb
			pP	13 51.50	61kmX
WB5	37.14	157	eP	15 16.90	-0.7
WRA	37.19	157	Pd	15 17.60	-0.4
	0.6s	1.90nm			4.0mb
ASPA	40.44	160	iPd	15 46.30	1.1
	0.7s	7.00nm			4.5mb
			eS	21 54.60	
WARB	41.03	170	eP	15 52.10	2.2
SOD	77.86	337	eP	20 03.00	-0.9
SUF	78.80	332	eP	20 08.40	-0.7
	0.4s	2.40nm			4.6mb
INK	82.73	21	eP	20 28.50	-1.3
MBC	82.98	12	eP	20 30.50	-0.5
NB2	86.05	332	P	20 45.80	-1.0
	0.8s	9.20nm			5.0mb
KSP	87.06	322	eP	20 52.60	0.8

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

• SEP 06, 1989 05h 34m 02.12± 1.34s
55.464 N ±18.2km 156.775 W ±12.0km
DEPTH = 33.0km (normal)
4.0mb (1 obs.)
SOUTH OF ALASKA (17)

IVF	1.62	287	ePc	34 29.19	0.5
			eS	34 49.50	
BKJ	1.62	260	eP	34 28.86	0.1
CNBA	1.74	249	eP	34 30.98	0.5
NGI	1.93	259	eP	34 33.60	0.3
SGB	2.09	274	eP	34 35.98	0.4
			S	35 00.13	
SASA	2.13	268	eP	34 36.13	0.2
PVV	2.86	270	eP	34 46.00	-0.4
			eS	35 18.11	
PS4	2.91	270	eP	34 46.56	-0.5
DLG	2.91	266	eP	34 46.66	-0.5
DRRA	3.20	263	eP	34 50.87	-0.4
SNKA	3.60	256	eP	34 56.60	-0.3
INK	16.74	31	eP	37 55.00	-0.3
MBC	24.99	20	eP	39 24.00	0.3
	0.5s	2.00nm			4.0mb

S.D. = 0.4 on 13 of 13 obs.

& SEP 06, 1989 05h 51m 32.81s
59.243 N 145.346 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

RAGM	1.20	16	eP	51 58.66	3.5
			eS	52 18.38	
HMT	1.23	26	eP	51 52.32	-3.3
SGAM	1.26	3	iP	51 54.75	-1.5
			eS	52 11.58	
HIN	1.30	334	eP	51 52.44	-4.4
			eS	52 07.08	
CVA	1.32	351	iP	51 52.22	-5.0
			eS	52 06.87	
WAX	1.75	45	eP	52 07.83	4.4
	6 obs. ossociated				

• SEP 06, 1989 06h 43m 05.95± 0.87s
2.372 N ±16.9km 126.555 E ±25.2km
DEPTH = 33.0km (normal)
4.7mb (5 obs.)
MOLUCCA PASSAGE (266)

WB5	23.41	161	eP	48 13.20	0.2
WRA	23.46	161	Pc	48 13.60	0.1
	0.3s	6.80nm			4.6mb
OIS	26.13	151	eP	48 38.50	-0.5
ASPA	26.85	165	eP	48 45.60	0.0
	0.5s	11.00nm			4.7mb
			eS	53 21.80	
WARB	28.39	180	eP	49 02.00	2.5X
CHG	31.59	303	eP	49 29.00	0.9
CHTO	31.59	303	eP	49 29.00	0.9
	0.7s	4.92nm			4.5mb
FORR	33.07	178	iPd	49 41.30	0.6
	0.3s	12.00nm			5.3mb
BJI	38.66	347	eP	50 28.00	-0.2
BWA	41.98	153	eP	50 47.80	-7.9X
GBA	49.80	286	Pd	51 56.10	-1.9
	0.7s	5.40nm			4.7mb

S.D. = 1.0 on 9 of 11 obs.

& SEP 06, 1989 06h 58m 16.50s
37.555 N 121.660 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.8 (BRK).

MHC	0.21	176	ePc	58 21.00	0.0
			iS	58 24.50	
ARN	0.23	154	iPc	58 21.20	0.0
BKS	0.56	305	iPc	58 27.20	-0.5
BRK	0.57	304	ePc	58 27.60	-0.4
PCC	0.58	265	iPd	58 27.60	-0.5
			iS	58 35.80	
GCC	0.59	207	ePd	58 27.80	-0.5
ZSP	0.61	310	iPc	58 28.80	0.0
			eS	58 40.40	
SAO	0.81	168	iPc	58 32.10	-0.4
LLA	1.10	148	ePc	58 36.40	-1.1
CMB	1.12	64	ePd	58 36.30	-1.6
			eS	58 51.70	
PRS	1.24	169	ePc	58 40.20	0.2
NWRM	1.32	313	eP	58 39.00	-2.3
PRI	1.62	150	e(P)c	58 46.50	0.7
FRI	1.66	109	ePd	58 44.90	-1.3
			eS	59 06.30	
KVN	3.17	61	eP	59 13.50	5.4

15 obs. associated

SEP 06, 1989 08h 41m 35.71± 0.29s
4.271 S ± 4.8km 136.728 E ± 5.6km
DEPTH = 33.0km (normal)
4.9mb (13 obs.) 4.4Msz (4 obs.)
WEST IRIAN REGION (196)
Felt at Tembagapuro.

TLE	4.19	251	ePc	42	41.00	2.1
JAY	4.34	66	ePc	42	43.20	2.1
			eS	43	36.00	
MNDI	7.15	105	eP	43	19.00	-1.9
AAI	8.53	274	eP	43	38.60	-1.4
MTN	10.16	213	eP	44	00.10	-2.3
PMG	11.54	117	eP	44	19.00	-2.3
KNA	13.83	214	eP	44	49.00	-2.8
	0.4s	70.00nm			5.8mb	
			eS	47	15.00	
WB5	15.68	188	eP	45	09.80	-6.2X
			i	45	13.00	
WRA	15.75	188	Pc	45	08.50	-8.4X
	0.7s	18.20nm			4.4mb	
OIS	16.43	170	iPc	45	19.30	-6.2X
	0.8s	76.00nm			4.9mb	
			e	48	13.00	
MKS	17.22	266	ePc	45	41.20	5.7X
CTA	18.26	150	iPc	45	45.00	-3.3X
	1.0s	60.00nm			4.7mb	
			iS	49	56.00	
ASPA	19.47	188	iPc	45	59.50	-3.5X
	0.7s	172.00nm			5.4mb	
Z	22s	1.02um			4.2MszX	
			eS	49	26.10	
			LR	52	36.60	
GUMO	19.50	24	eP	45	45.80	-17.4X
OLP	23.32	163	iPd	46	43.20	1.3
SVO	23.43	103	eP	46	48.00	5.0X
MBL	23.48	223	iPc	46	44.60	1.2
	0.7s	46.00nm			5.1mb	
			eS	51	02.00	
HNR	23.61	104	eP	46	50.00	5.2X
WARB	23.83	203	eP	46	47.70	0.8
	0.5s	42.00nm			5.2mb	
			eS	51	06.00	
RMO	24.91	154	eP	46	57.60	0.3
NANU	27.42	227	eP	47	21.00	0.5
BRS	27.62	148	eP	47	24.00	1.6
FORR	27.66	196	eP	47	20.70	-1.9
	0.5s	56.00nm			5.5mb	
STK	27.84	171	eP	47	22.50	-1.8
CMS	28.39	163	eP	47	45.70	16.5X
ADE	30.60	177	eP	47	49.70	0.7
MRWA	31.65	216	eP	47	57.70	-0.6
BWA	31.91	162	eP	48	07.30	6.8X
			e	48	26.70	
BAL	32.29	214	eP	48	05.00	1.2
KLB	32.50	211	eP	48	05.70	0.1
CAN	32.92	161	eP	48	17.70	8.4X
			e	48	31.00	
BFD	33.18	171	eP	48	11.00	-0.5
MUN	33.62	213	eP	48	17.00	1.6
NWAO	33.83	210	eP	48	18.00	0.8
Z	20s	0.60um			4.3Msz	
N	20s	0.40um				
E	20s	0.40um				
QIZ	35.17	312	eP	48	28.20	-0.6
PPI	36.49	275	eP	48	40.00	-0.1
SSE	38.17	338	eP	48	53.20	-0.7
	1.4s	0.31nm			3.0mb X	
Z	20s	0.50um			4.3Msz	
PSI	38.41	280	ePc	48	56.00	-0.2
MAT	40.62	2	(P)	49	12.00	-2.3
	1.0s	13.00nm			4.6mb	
WHN	40.70	330	eP	49	16.50	1.6
GYA	42.19	318	P	49	28.00	0.6
CHG	43.71	303	eP	49	39.60	-0.2
	1.0s	15.00nm			4.7mb	
CHTO	43.71	303	eP	49	39.20	-0.6
	1.0s	9.00nm			4.5mb	
KMI	44.08	313	Pc	49	43.00	0.0
XAN	46.27	328	Pc	49	59.00	-1.0
CD2	47.06	320	eP	50	06.20	-0.1
TIY	47.48	334	eP	50	09.00	-0.6
Z	22s	0.50um			4.4Msz	
			sS	57	21.00	
BJI	47.97	339	eP	50	12.50	-0.8
Z	20s	0.42um			4.4Msz	
CN2	48.92	349	Pc	50	19.40	-1.2
HHC	50.47	335	eP	50	32.00	-0.6
LZH	50.58	325	iPc	50	33.50	-0.1
	1.5s	0.06nm			2.4mb X	
			pP	50	37.00	12kmX
GTA	55.18	325	iPc	51	07.80	0.0
WMQ	65.03	323	P	52	15.00	-0.1
NDI	65.84	304	eP	52	21.00	0.5
KSH	70.70	314	eP	52	52.50	1.8
MAIO	82.27	307	eP	53	56.00	0.3
SVW	83.14	27	eP	54	00.00	0.5
IMA	85.74	23	eP	54	13.70	1.0
	0.9s	10.40nm			5.1mb	
SPA	85.76	180	e(P)	54	13.20	0.4
	1.0s	9.50nm			5.0mb	
Z	20s	1.76um			5.5MszX	
PMR	86.25	27	eP	54	14.30	-0.7
FBA	87.72	24	eP	54	21.00	-1.2
TOA	87.74	27	eP	54	23.50	1.1
INK	93.85	22	eP	54	50.50	-0.1
BNG	118.38	273	ePKPc	00	23.10	0.5
	0.5s	8.00nm				
			ic	00	25.20	
KIC	141.58	275	PKP	01	03.10	-3.4X
ARE	145.32	127	ePKP	01	14.00	0.8
CNCB	147.83	131	PKP	01	19.00	1.4
			i	01	22.90	
LPB	147.91	131	PKP	01	20.00	2.5X
	1.0s	44.00nm				
ZOBO	148.05	130	PKP	01	19.60	1.6
	1.1s	46.98nm				
ITB1	149.29	160	ePKP	01	23.70	4.7X
PPD	152.70	164	ePKP	01	31.40	7.3X
S.D. = 1.2 on 55 of 71 obs.						

* SEP 06, 1989 09h 10m 39.23± 0.59s
36.087 S ±12.7km 103.171 W ±12.1km
DEPTH = 10.0km (geophysicist)
5.0mb (8 obs.) 5.4Msz (4 obs.)
SOUTHERN PACIFIC OCEAN (692)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 34C
Centroid Location:
Origin Time 09:10:48.6 0.2
Lat 36.12S 0.02 Lon 102.96W 0.02
Dep 15.0 FIX Half-duration 3.9
Moment Tensor; Scale 10**18 Nm
Mrr=-0.29 0.02 Mtt=-0.18 0.03
Mff= 0.46 0.03 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-1.13 0.02
Principal Axes:
T Val= 1.31 Plg= 0 Azm=233
N -0.28 90 180
P -1.03 0 143
Best Double Couple:Mo=1.2*10**18
NP1:Strike=278 Dip=90 Slip= 180
NP2: 8 90 0

LNV	26.04	95	eP	16	16.00	1.8
SAN	26.77	94	eP	16	24.90	3.9X
PEL	26.83	93	eP	16	24.00	2.4
NNA	33.76	51	eP	17	20.20	-3.1X
	0.9s	8.40nm			4.7mb	
ARE	34.25	64	eP	17	27.00	-0.9
CNCB	36.62	68	P	17	47.00	-1.3
LPB	36.71	67	P	17	49.00	0.1
	1.7s	284.62nm			5.8mb	
			S	23	39.00	
			SS	26	26.00	
			LR	28	10.00	
ZOBO	36.85	67	P	17	50.00	-0.3
	1.5s	167.74nm			5.6mb	
			S	23	04.00	
			LR	28	18.00	
PPD	46.93	87	eP	19	11.60	-0.4
			epP	19	14.50	10kmX
			e	19	18.20	
VAO	49.98	91	eP	19	36.30	0.5
			epP	19	39.10	9kmX
UPA	50.05	31	e(P)	19	42.00	5.9X
BMA	52.41	92	eP	19	57.60	3.5X
			epP	20	00.50	10kmX
			e	20	04.10	
BAO	52.94	82	eP	19	57.50	-0.7
SPA	54.10	180	e(P)	20	06.50	0.3
	1.0s	4.00nm			4.4mb	
SDV	54.21	41	eP	20	18.50	10.9X
SBA	55.05	195	(P)	20	22.00	9.2X
CAR	57.57	44	eP	20	24.00	-7.7X
SNA	59.99	157	P	20	47.10	-0.7
	0.9s	12.60nm			5.0mb	
PDCR	61.80	85	eP	21	01.20	0.4
ITR	64.51	82	eP	21	16.30	-2.4
			e	21	27.60	
BAR	69.57	348	eP	21	49.00	-1.2
PLM	70.26	348	eP	21	55.00	0.4
UYO	70.36	8	e(P)	21	54.30	-0.7
ALQ	70.73	357	P	21	59.00	1.5
	1.4s	21.63nm			5.1mb	
Z	18s	1.49um			5.3Msz	
TPC	70.86	349	eP	22	01.00	2.9
SBB	71.73	347	eP	22	06.00	2.6
SIO	71.75	6	eP	22	02.80	-0.6
TUL	71.96	6	eP	22	04.60	0.0
	1.0s	12.00nm			4.9mb	
Z	21s	2.14um			5.4Msz	
			LR	41	00.00	
SYP	71.98	345	eP	22	13.00	8.0X
OLY	72.05	10	P	22	03.80	-1.4
GSC	72.15	348	eP	22	26.00	20.1X
CLC	72.79	348	eP	22	07.00	-2.6
ISA	72.79	347	eP	22	08.00	-1.7
PRI	73.68	345	ePc	22	13.90	-1.0
PRS	74.01	345	e(P)	22	17.40	0.7
FRI	74.31	346	e(P)	22	16.40	-1.9
MHC	75.04	345	ePc	22	23.80	1.0
GOL	75.44	358	P	22	25.20	0.1
Z	18s	1.52um			5.3Msz	
CMB	75.45	346	ePc	22	23.70	-1.3
MAW	76.09	175	eP	22	27.00	-1.2
ORV	77.14	346	e(P)	22	34.40	0.0
WDC	78.34	345	ePc	22	36.70	-4.3X
BW06	78.70	355	P	22	44.00	0.8
RSSD	79.83	359	P	22	51.00	1.7
LRM	81.96	353	eP	23	03.00	2.5
LON	84.15	347	P	23	09.00	-2.5
PNT	86.28	349	eP	23	25.00	3.0X
	1.0s	14.00nm			5.1mb	
SES	86.39	355	eP	23	24.00	1.5
RSON	86.97	6	P	23	30.00	4.7X
Z	20s	2.26um			5.6Msz	
EDM	89.38	354	eP	23	33.00	-3.8X
MOX	131.95	51	e(PKP)	30	11.00	17.0X
CLL	132.91	50	e(PKP)	30	16.00	20.2X
KHC	132.97	53	PKP	30	02.50	6.5X
CN2	142.39	297	PKP	30	18.50	4.9X
Z	28s	0.50um			5.1MszX	
MBH	144.44	88	ePKP	30	14.00	-3.4X
PRNI	144.74	87	e(PKP)	30	16.00	-2.0
NJ2	145.15	276	iPKPc	30	19.60	1.0
BBTK	145.32	70	ePKP	30	20.00	1.2
DSI	145.46	85	ePKP	30	21.00	1.9
TIA	147.62	282	ePKP	30	25.30	2.7X
WHN	148.30	271	ePKP	30	28.70	4.9X
BJI	148.94	289	ePKP	30	29.00	4.5X
Z	24s	0.96um			5.5MszX	
			eSS	53	08.00	
NST	150.93	232	ePKP	30	41.50	13.4X
MSL	152.91	79	ePKPc	30	47.50	17.0X
BHD	153.24	86	ePKPd	30	43.00	12.0X
MAIO	166.00	84	ePKP	30	45.00	-0.3
S.D. = 1.5 on 42 of 66 obs.						

& SEP 06, 1989 09h 45m 33.70s
37.692 N 121.985 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK).
Mo=1.1*10**14 Nm (BRK). Felt at Castro Valley.

BKS	0.27	313	iPc	45	38.90	-0.3
BRK	0.28	310	iPc	45	39.10	-0.4
			iS	45	44.50	
ZSP	0.33	320	iPc	45	40.60	0.2
PCC	0.37	239	iPd	45	40.80	-0.3
MHC	0.44	142	ePd	45	42.43	-0.2
			i	45	47.30	
			iS	45	49.65	
ARN	0.50	133	iPc	45	43.20	-0.5
GCC	0.66	181	iPd	45	46.10	-0.8
			iS	45	56.10	

06d 09h

SAO	1.02	155	ePc	45	51.63	-1.8
			eS	46	07.75	
NWRM	1.04	317	eP	45	52.10	-1.7
CMB	1.31	74	iPc	45	55.90	-2.5
			iS	46	13.30	
LLA	1.36	142	ePd	45	56.50	-2.6
PRS	1.44	160	ePc	45	58.10	-2.3
PRI	1.87	145	e(P)	46	04.50	-2.2
ORV	1.90	11	e(P)	46	03.60	-3.3
FRI	1.94	110	e(P)	46	05.20	-2.4
			eS	46	31.80	
MIN	2.67	6	e(P)	46	16.40	-1.7

16 obs. ossocioted

? SEP 06, 1989 10h 50m 32.65± 5.01s
53.554 N ±35.6km 164.373 W ±29.3km
DEPTH = 33.0km (normol)
UNIMAK ISLAND REGION (10)

SNKA	1.32	45	ePd	50	54.08	-0.8
			eS	51	09.70	
DRRA	1.84	41	ePc	51	01.92	-0.5
			eS	51	22.22	
DLG	2.18	42	eP	51	07.16	-0.1
			eS	51	31.36	
PS4	2.32	38	eP	51	09.75	0.4
PVV	2.37	39	eP	51	10.69	0.7
			eS	51	37.43	
SASA	2.89	50	eP	51	17.37	0.1
			eS	51	47.99	
NGI	2.93	58	eP	51	17.74	-0.2
CNBA	3.08	64	eP	51	20.60	0.5
BKJ	3.24	58	eP	51	22.07	-0.3
IVF	3.66	48	eP	51	28.48	0.2
INK	20.71	33	eP	55	12.00	-0.1

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

SEP 06, 1989 11h 23m 37.88± 0.32s
3.913 S ± 5.5km 125.119 E ± 6.5km
DEPTH = 10.0km (geophysicist)
4.9mb (14 obs.)
CERAM SEA (270)

AAI	3.08	86	ePd	24	25.10	-2.3
			eS	25	13.00	
MKS	5.78	257	ePd	25	06.00	0.3
TLE	7.79	103	ePc	25	36.50	2.4
	0.2s		10.00nm			5.7mb
MTN	10.68	147	eP	26	13.70	-0.3
MBL	17.90	196	eP	27	49.00	0.3
	0.6s		6.00nm			3.9mb
WB5	18.25	151	eP	27	50.50	-2.6
WRA	18.30	151	Pd	27	50.40	-3.2X
	0.6s		22.80nm			4.5mb
NANU	20.74	206	eP	28	20.00	-1.3
ASPA	21.39	157	iPc	28	28.20	0.1
	0.9s		134.00nm			5.3mb
			iPcP	29	22.20	
QIS	21.74	141	ePc	28	31.50	0.0
WARB	22.19	176	iPd	28	36.10	0.0
	0.6s		13.00nm			4.6mb
PMG	22.55	105	eP	28	39.00	-0.6
	0.9s		114.29nm			5.4mb
PPI	24.94	277	eP	29	04.00	1.1
IPM	25.51	289	ePd	29	07.30	-1.0
			e	29	16.00	
CTA	26.13	130	iPd	29	14.80	0.7
	1.2s		57.81nm			5.1mb
FORR	26.94	174	eP	29	20.00	-1.3
PSI	26.99	284	ePc	29	21.00	-1.0
QIZ	27.31	327	eP	29	27.20	2.3
STK	31.84	153	iPc	30	05.10	-0.1
	0.4s		9.00nm			5.0mb
RMO	31.87	137	iPc	30	04.70	-0.9
	0.7s		13.00nm			5.0mb
CHTO	34.27	312	eP	30	27.00	0.5
	1.2s		4.51nm			4.3mb
			pP	30	34.90	27kmX
GYA	35.08	330	P	30	33.20	-0.3
BRS	35.24	134	eP	30	30.00	-4.8X
KMI	36.13	324	Pc	30	45.00	2.4X
NJ2	36.26	351	Pc	30	44.00	0.8
COO	36.63	139	iPd	30	47.60	1.1
BWA	37.29	147	eP	30	54.10	2.1
CAN	38.27	148	eP	31	02.00	1.7
TOO	38.34	154	eP	31	02.80	2.0
	0.9s		24.00nm			4.9mb

TIA	40.61	350	eP	31	21.10	1.5
XAN	40.73	339	Pc	31	20.10	-0.5
MAT	42.06	16	(P)	31	30.00	-1.5
	0.9s		8.40nm			4.5mb
TIY	43.06	345	eP	31	40.00	0.3
LZH	44.49	335	P	31	52.50	1.0
	1.5s		0.04nm			2.1mb X
			pP	32	00.00	25kmX
BJI	44.50	350	eP	31	49.50	-1.8
CN2	47.50	0	eP	32	13.50	-1.4
MDJ	48.48	4	eP	32	22.50	-0.1
GTA	49.01	334	iPc	32	27.00	0.0
GBA	50.41	291	Pt	32	44.00	6.1X
	0.9s		3.50nm			4.3mb
WMO	58.21	329	P	33	35.00	0.3
MAIO	72.98	310	eP	35	09.00	-1.0
MAW	76.08	200	eP	35	26.00	-1.1
SPA	86.11	180	ePc	36	20.00	-0.3
	0.8s		21.67nm			5.4mb
ALQ	123.23	50	ePKP	42	37.50	0.2
CNCB	155.68	148	ePKP	43	39.00	4.2X
LPB	155.85	148	ePKP	43	46.00	11.1X
ZOBO	156.05	147	PKP	43	36.00	0.6

S.D. = 1.3 on 41 of 47 obs.

• SEP 06, 1989 11h 54m 39.64± 1.10s
9.317 S ± 9.0km 78.718 W ±14.8km
DEPTH = 78.7 ± 10.4 km
4.4mb (2 obs.)
NEAR COAST OF NORTHERN PERU (109)
Felt (IV) ot Chimbote, (III) at Huocho ond (II) at Trujillo.

NNA	3.23	145	iPd	55	30.50	1.3
	0.6s		60.00nm			
			eS	56	07.50	
PT10	3.24	148	iP	55	30.60	1.4
PT08	3.38	141	iP	55	30.60	-1.0
PT02	4.24	148	iP	55	43.80	0.5
			iS	56	26.90	
HUA	4.30	129	iPd	55	47.50	3.1X
			iS	56	53.80	
PT06	5.06	153	iP	55	53.90	-0.7
			iS	56	47.80	
PT03	5.46	149	iP	55	59.00	-1.2
RECU	8.62	1	iP	56	46.10	1.7
CAYA	9.36	5	eP	56	54.20	-0.3
COTA	9.60	2	eP	57	03.00	5.3X
ARE	10.00	136	eP	57	09.00	6.0X
			e(S)	58	52.00	
ZOBO	12.43	125	eP	57	34.00	-1.7
			i	57	38.30	
			S	01	46.00	
LPB	12.59	126	P	57	35.00	-2.7
CNCB	12.84	127	P	57	43.00	1.9
PPD	29.19	119	eP	00	36.40	0.4
BAO	30.63	105	eP	00	49.00	0.1
PDCR	38.98	98	ePd	02	00.40	0.2
			e	03	02.70	
ITR	39.78	93	eP	02	06.50	-0.4
TUL	47.78	341	eP	03	10.00	-0.9
	0.6s		3.20nm			4.4mb
ALQ	51.25	331	e(P)	03	37.00	-0.7
			e	03	56.00	
			e	04	06.00	
EDM	68.91	339	ePd	05	36.60	-1.4
LIC	75.03	81	P	06	16.20	1.1
KIC	75.34	81	P	06	18.00	1.2
SPA	80.74	180	e(P)	06	47.90	2.2
	1.0s		4.50nm			4.3mb
			e	07	08.50	
INK	86.43	342	eP	07	14.00	-0.2
			pP	07	34.00	73kmX
MBC	88.68	351	eP	07	45.00	20.1X
	0.7s		6.00nm			
WRA	136.36	228	PKPd	13	54.60	-0.3
	0.6s		1.60nm			
BJI	146.65	339	ePKP	14	12.00	-0.4

S.D. = 1.3 on 24 of 28 obs.

% SEP 06, 1989 12h 01m 07.46± 1.01s
39.483 N ±11.6km 29.268 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.51	284	iPg	01	18.60	0.8
			eSg	01	28.60	
ALT	0.78	123	ePg	01	22.70	0.0
			eSg	01	34.70	
KCT	1.04	318	iPn	01	26.50	-0.6
YLV	1.09	4	iPn	01	28.50	0.6
EDC	1.38	309	ePn	01	32.00	-0.8

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

% SEP 06, 1989 12h 05m 22.80± 1.06s
39.217 N ± 9.4km 27.843 E ±15.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST	0.72	57	ePg	05	37.60	0.6
			eSg	05	47.60	
IZM	0.94	209	ePn	05	40.60	-0.1
KCT	1.10	21	iPn	05	42.00	-1.5
EDC	1.13	1	ePn	05	44.60	0.7
BNT	1.14	3	iPn	05	44.50	0.4

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

& SEP 06, 1989 12h 06m 46.15s
63.258 N 150.822 W
DEPTH = 77.6km
CENTRAL ALASKA (1)
<AGS-P>.

PWA	1.67	164	iPc	07	14.80	0.8
PMR	1.85	154	iPc	07	16.10	-0.3
PMS	2.11	163	iPc	07	19.60	-0.4
FBA	2.12	38	eP	07	20.00	-0.2
TOA	2.44	116	ePc	07	24.00	-0.6
IMA	3.08	338	eP	07	32.90	-0.6
SVW	3.12	228	ePc	07	33.00	-1.0
TGL	4.53	120	eP	07	50.00	-3.8
			eS	08	39.99	

8 obs. associoted

SEP 06, 1989 12h 16m 57.87± 0.43s
24.048 N ± 4.6km 122.562 E ± 5.7km
DEPTH = 23.8km (2 depth phases)
4.2mb (6 obs.) 4.5Msz (1 obs.)
TAIWAN REGION (243)

TWC	0.86	311	iPd	17	14.20	0.2
			eS	17	26.70	
TWD	0.88	272	iPc	17	13.50	-0.9
			eS	17	24.40	
TWF1	1.35	239	ePc	17	20.40	-0.9
TWZ	1.38	320	eP	17	23.20	1.5
ANP	1.48	320	iPc	17	24.70	1.5
TWO	1.59	279	ePd	17	26.10	1.2
			eS	17	47.50	
TWK	2.05	248	ePc	17	32.20	0.6
QZH	3.73	285	Pc	17	53.70	-1.6
N	12s		4.70um			
E	12s		3.40um			
			S	18	34.00	
SSE	7.13	350	iPc	18	42.00	-1.2
	0.5s		0.25nm			3.5mb
Z	20s		1.90um			4.1MszX
N	12s		3.00um			
			pP	18	47.00	
			Lg	20	50.00	
BAG	7.82	194	eP	18	52.00	-1.2
NJ2	8.62	339	Pd	19	02.00	-2.1
Z	14s		4.70um			
WHN	9.75	313	eP	19	17.00	-2.8
Z	16s		2.97um			
N	10s		2.42um			
E	11s		2.03um			
			eS	21	08.50	
QIZ	12.84	250	eP	20	03.60	1.8
N	11s		0.60um			
			eS	22	26.20	
TIA	13.00	340	eP	20	04.00	0.2
Z	15s		2.90um			
N	13s		2.00um			
E	13s		1.30um			
GYA	14.59	283	P	20	24.80	0.0
			S	23	10.00	
DL2	14.83	357	P	20	30.00	2.2
Z	14s		1.60um			
N	12s		2.00um			
E	12s		1.00um			
XAN	15.52	313	P	20	36.90	0.0
N	13s		0.90um			
E	12s		1.10um			

```
TIY     16.14 330 eP     20 45.80    0.9
      Z  14s      4.30um
      N  12s      2.80um
                  SS     24 08.50
BJI     16.83 343 eP     20 55.00    1.5
      Z  14s      2.05um
      N  12s      1.29um
SNY     17.75   2 Pc     21 06.00    1.0
      Z  14s      1.90um
      N  12s      1.50um
      E  12s      0.50um
                  sP     21 18.00
                  sS     24 28.50
CD2     18.02 296 eP     21 07.50   -1.0
      Z  16s      1.70um
                  eS     24 24.90
KMI     18.06 277 Pc     21 10.00    0.8
      Z  14s      3.70um
      E  10s      1.10um
                  eS     24 19.00
MAT     18.34  44 (P)    21 29.00   16.6X
                  eS     24 04.00
HHC     19.12 334 P      21 23.00    1.0
      Z  14s      3.10um
      N  13s      2.10um
      E  13s      0.90um
                  SS     25 10.00
BTO     19.58 330 eP     21 22.70   -4.6X
      N  13s      3.00um
      E  13s      1.80um
                  sP     21 39.50
                  sS     25 13.00
CN2     19.85   6 eP     21 29.00   -1.0
      Z  13s      3.00um
      N  13s      1.40um
      E  13s      0.60um
                  epP    21 36.00   27km
                  sS     25 18.00
LZH     20.12 311 P      21 32.50   -0.6
        2.0s      0.10nm          1.8mb X
      Z  20s      2.20um          4.5Msz
      N  12s      1.80um
      E  15s      1.10um
                  pP     21 38.00   21km
                  sS     25 29.00
LOE     20.56 255 eP     21 40.00    2.4
CHG     22.58 261 eP     22 08.40   10.4X
CHTO    22.58 261 eP     21 58.70    0.7
        1.0s      4.25nm          3.9mb
GTA     24.58 314 iPd    22 17.60    0.2
      Z  14s      1.20um          4.5MszX
      E  10s      0.50um
                  sS     26 44.00
WMQ     34.66 313 eP     23 46.00   -1.7
      Z  12s      1.00um          4.8MszX
GBA     43.79 265 Pc     25 02.90   -0.8
        0.6s      1.30nm          3.9mb
WB5     45.15 164 eP     25 14.50   -0.1
WRA     45.21 164 Pd     25 14.40   -0.6
        0.7s      8.10nm          4.8mb
OIS     47.34 158 iPc    25 32.70    0.8
ASPA    48.69 166 iPc    25 42.90    0.5
        0.9s     14.00nm          5.0mb
WARB    50.09 175 eP     25 53.00   -0.1
BWA     63.12 156 eP     27 39.60   13.6X
CAN     64.14 156 eP     27 38.00    5.4X
KEV     69.57 338 eP     28 05.00   -1.5
SOD     70.30 336 eP     28 10.00   -1.0
SUF     71.79 331 eP     28 20.00    0.0
INK     72.88  22 eP     28 26.00   -0.4
NUR     73.15 329 eP     28 33.00    4.9X
      Z  16s      0.90um          5.1MszX
                  LR     03 40.00
NB2     78.93 332 P      28 59.40   -1.4
        0.5s      1.80nm          4.4mb
KHC     83.67 321 eP     29 26.00    0.0
PNT     88.44  35 eP     29 49.00   -0.4
EDM     89.10  30 iPd    29 53.50    1.0
FFC     92.75  24 iPd    30 09.70    0.4
        0.7s     10.00nm          5.4mb X
ZOBO   167.33  54 (PKP)  37 05.00    0.8
LPB    167.52  55 (PKP)  37 22.00   17.9X
     S.D. = 1.2  on  45 of  52 obs.
-------------------------------------
   SEP  06, 1989  12h 18m 52.21± 0.98s
   37.938 N ±10.7km    19.737 E ± 6.5km
   DEPTH =  20.1 ±  8.9 km

   3.9mb (  2 obs.)
 IONIAN SEA                        (399)
      ML 3.8 (ATH).

KEK     1.77   2 ePn    19 28.60    6.5X
ITM     1.90 113 ePn    19 24.30    0.4
SRN     1.95   6 ePn    19 25.80    1.2
TPE     2.36   5 ePn    19 37.50    7.0X
VLO     2.53 356 ePn    19 39.20    6.2X
LCI     2.77 330 P      19 36.50    0.3
                eSn     20 10.50
KBN     2.81  17 ePn    19 40.60    3.7X
KZN     2.85  33 ePn    19 40.20    2.7
SOI     2.91 274 P      19 38.80    0.5
                eSn     20 12.30
NEO     3.05  62 ePn    19 39.70   -0.7
ATH     3.15  88 ePb    19 48.60    6.9X
TDS     3.16 304 P      19 43.80    1.8
                eSn     20 20.30
OHR     3.27  14 iPn    19 45.40    1.9
TIR     3.41   2 ePn    19 52.30    7.0X
PLG     3.77  49 ePn    19 50.00   -0.6
MEU     3.91 259 P      19 51.40   -1.2
                eSn     20 35.00
MGR     3.93 305 P      19 54.30    1.5
                eSn     20 38.80
SDA     4.08 358 ePn    19 54.50   -0.3
SKO     4.24  17 ePn    19 52.00   -5.2X
SGO     4.32 309 P      19 59.60    1.3
                eSn     20 49.00
KKB     4.69  32 iP     20 04.00    0.3
MMB     4.77  39 eP     20 04.00   -0.8
VTS     5.35  29 eP     20 13.00   -0.1
RZN     5.36  44 iP     20 13.00   -0.3
HVAR    5.80 335 i(Pn)  20 17.90   -1.4
VBY     8.27 338 e(Pn)  20 52.00   -1.9
PTJ     8.44 342 ePn    20 54.30   -2.0
                eSg     21 13.90
VOY     9.18 334 ePn    21 05.30   -1.3
                eSn     22 46.50
EKA    23.27 326 P      24 00.00    0.9
       0.8s      6.60nm          4.2mb
NB2    23.74 350 P      24 02.80   -0.9
       0.5s      0.90nm          3.6mb
     S.D. = 1.4  on  23 of  30 obs.
-------------------------------------
    SEP  06, 1989  12h 57m 32.67± 0.37s
    1.322 S ± 8.2km   67.600 E ± 6.1km
    DEPTH =  10.0km  (geophysicist)
    4.9mb ( 21 obs.)  5.1Msz ( 12 obs.)
 CARLSBERG RIDGE                   (421)
      CENTROID, MOMENT TENSOR      (HRV)
      Doto Used: GDSN
      L.P.B.: 13S, 25C
      Centroid Location:
      Origin Time        12:57:38.1 0.5
      Lat  1.09S 0.05 Lon  67.44E 0.03
      Dep  15.0 FIX Half-duration  2.6
      Moment Tensor:   Scale 10**17 Nm
        Mrr=-0.82 0.08  Mtt=-2.38 0.11
        Mff= 3.21 0.12  Mrt= 0.00 0.00
        Mrf= 0.00 0.00  Mtf=-0.83 0.10
       Principal Axes:
        T  Val=  3.33  Plg= 0  Azm=262
        N       -0.82      90       180
        P       -2.50       0       172
      Best Double Couple:Mo=2.9*10**17
       NP1:Strike=307 Dip=90 Slip= 180
       NP2:         37     90         0

GBA     17.75  33 Pc     01 43.90    2.3
        1.0s     77.90nm          4.8mb
POO     20.67  17 iP     02 16.00    0.5
                iS     06 06.00
NAI     30.79 270 iPd    03 53.00    1.8
NDI     31.23  16 eP     03 55.00    0.4
                eS     09 08.00
PSI     31.57  83 ePc    04 01.00    3.2X
IPM     33.91  80 ePd    04 19.50    1.2
CHG     36.73  55 iPc    04 43.00    0.7
        1.0s     42.50nm          5.2mb
                eS     10 32.00
CHTO    36.73  55 iPc    04 43.10    0.8
        1.2s     55.21nm          5.2mb
PTZ     38.07 248 eP     04 52.00   -1.7
LSA     38.18  34 P      04 56.80    2.0
      N  14s      1.90um

      E  14s      2.00um
                  S      10 50.30
MAIO    38.18 349 eP     04 54.00   -0.3
                  e      06 30.00
                  eS     10 44.00
LOE     38.43  60 eP     04 57.00    0.4
LWI     38.79 268 ePc    05 00.00    0.1
KRI     40.43 245 iPc    05 15.00    1.7
BHD     40.78 330 ePd    05 09.00   -6.8X
LSZ     41.28 248 eP     05 18.00   -2.3
                  i      05 20.50
KSH     41.30  10 eP     05 20.50    0.3
      Z  20s      3.40um          5.2Msz
      E  18s     10.00um
                  eS     11 31.00
SLY     42.13 333 ePd    05 21.50   -5.3X
BUL     42.44 241 iPd    05 30.00    0.2
KMI     42.99  50 Pc     05 35.50    1.1
      Z  19s      3.40um          5.3Msz
      N  15s      1.80um
                  sP     05 42.50
                  S      12 06.00
                  S      13 06.00
                  SS     15 14.00
KMZ     43.05 252 iPc    05 35.00    0.2
TAB     43.84 336 eP     05 41.00    0.0
MSL     43.87 331 ePc    05 40.00   -1.0
PRNI    44.23 318 eP     05 43.00   -1.1
DSI     44.77 320 e(P)   05 48.00   -0.3
SLR     44.97 234 iPd    05 50.00   -0.3
        1.1s     44.30nm          5.3mb
QIZ     46.15  62 eP     05 58.80   -0.7
      N  18s      2.00um
                  eS     12 46.50
GYA     46.71  51 iPc    06 03.60   -0.4
      N  20s      3.80um
                  S      12 53.00
CD2     47.00  44 eP     06 04.80   -1.3
      Z  30s      1.50um          4.8MszX
      E  16s      2.30um
WMQ     48.41  19 P      06 17.00   -0.1
      Z  16s      1.50um          5.1MszX
      N  10s      1.40um
                  PP     08 15.00
                  S      13 18.00
BNG     49.35 277 ePc    06 21.70   -3.0X
        0.9s     45.00nm          5.5mb
                  id     06 23.80
                  ic     06 30.20
GTA     50.15  33 eP     06 28.60   -1.9
      Z  18s      1.80um          5.1Msz
      N  14s      1.40um
                  S      13 42.00
BBTK    51.89 326 eP     06 43.00   -0.8
XAN     52.36  44 Pc     06 46.10   -1.2
WHN     54.59  50 P      07 03.00   -0.8
      Z  18s      1.21um          5.0Msz
      N  14s      0.70um
      E  16s      0.95um
                  sP     07 15.00
                  S      14 42.00
TIY     56.75  42 eP     07 17.90   -1.5
      Z  22s      1.56um          5.1Msz
      N  20s      2.80um
                  S      15 13.50
                  ScS    17 06.00
BTO     56.83  38 eP     07 15.00   -4.9X
      N  15s      0.80um
      E  17s      1.20um
                  pP     07 23.00   26kmX
                  eS     15 17.00
HHC     57.93  38 P      07 27.80    0.1
NJ2     58.72  51 iPd    07 32.60   -0.6
        1.0s      0.10nm          2.9mb X
      Z  20s      1.50um          5.1Msz
                  S      15 40.00
VRI     59.22 328 ePd    07 35.00   -1.4
TIA     59.25  46 eP     07 35.80   -1.0
MLR     59.39 327 iP     07 43.00    5.2X
OHR     59.86 320 eP     07 28.00  -13.0X
SKO     59.93 322 iP     07 40.00   -1.4
      N  17s      0.69um
      E  14s      0.88um
                  i      08 00.00
SSE     60.18  53 Pc     07 42.50   -0.8
        1.0s      0.04nm          2.4mb X
      Z  18s      0.90um          5.0Msz
```

06d 13h

	N	12s	0.30um			
	E	14s	0.50um			
			sP	08	00.70	
			S	15	57.00	
			PS	16	12.00	
			SS	20	00.00	
BJI		60.45	41 eP	07	44.00	-1.0
	Z	16s	1.17um			5.1MszX
	N	12s	0.65um			
			eS	16	00.00	
KRA		65.39	328 eP	08	20.40	2.9
MAW		66.24	182 eP	08	23.00	0.4
SNY		66.24	43 eP	08	28.10	4.9X
	Z	19s	1.10um			5.1Msz
	N	25s	1.10um			
	E	26s	1.00um			
			S	17	13.00	
WRA		67.72	111 Pc	08	33.00	0.0
		0.9s	11.00nm			5.0mb
WB5		67.73	111 eP	08	33.10	0.0
KSP		67.76	328 eP	08	31.50	-1.1
ASPA		67.82	115 iPc	08	33.40	-0.2
		0.9s	17.00nm			5.2mb
CN2		68.32	41 eP	08	35.00	-1.3
	Z	20s	1.00um			5.0Msz
	N	13s	0.50um			
			epP	08	41.00	19kmX
			eS	17	37.00	
KHC		68.38	325 eP	08	27.20	-9.4X
BRG		69.04	327 e(P)	08	38.40	-2.2
			e	08	50.00	
CLL		69.78	327 eP	08	42.00	-3.1X
		1.6s	24.00nm			5.1mb
			e	09	11.00	
LPG		70.96	319 eP	08	54.50	1.7
		1.0s	10.00nm			4.9mb
SUF		71.04	341 eP	08	50.00	-2.6
FEL		71.11	322 eP	08	51.80	-1.7
MDJ		71.38	42 eP	08	56.00	1.0
	Z	20s	0.90um			5.0Msz
			S	18	16.00	
CDF		71.78	322 eP	08	59.80	2.4
		1.0s	8.00nm			4.8mb
BSF		71.84	322 eP	08	59.90	2.1
		0.8s	5.30nm			4.7mb
KIC		72.61	277 P	09	02.20	-0.7
		1.0s	21.00nm			5.2mb
QIS		72.70	111 eP	09	03.00	-0.3
LIC		72.89	277 P	09	04.00	-0.5
	Z	22s	0.55um			4.8Msz
			S	18	44.00	
TIC		72.90	277 P	09	04.10	-0.5
LBF		73.30	320 eP	09	08.90	2.5
		0.8s	5.30nm			4.7mb
LOR		73.47	320 eP	09	09.80	2.5
		0.8s	5.30nm			4.7mb
SSF		73.63	320 eP	09	10.30	2.1
		0.8s	5.30nm			4.6mb
BGF		73.88	319 eP	09	12.80	3.1X
		0.8s	10.70nm			4.9mb
SOD		74.28	345 eP	09	16.00	4.4X
MAT		75.30	52 eP	09	18.00	-0.1
		1.0s	9.00nm			4.8mb
	Z	20s	0.71um			5.0Msz
			eS	18	54.00	
LDF		76.44	321 eP	09	28.50	4.2X
		0.8s	4.00nm			4.6mb
GRR		76.84	320 eP	09	29.70	3.2X
		0.8s	5.30nm			4.7mb
LPF		76.86	320 eP	09	31.10	4.5X
		1.0s	16.00nm			5.1mb
SPA		88.69	180 e(P)	10	29.10	1.6
		1.4s	10.78nm			4.9mb
EDM		128.27	1 ePKP	16	40.50	-0.6
LRM		135.68	0 ePKP	16	39.00	-16.7X
ALQ		146.10	351 e(PKP)	17	17.00	2.5X
BAR		148.55	7 ePKP	17	25.00	6.7X
	S.D. = 1.3		on 63 of 81 obs.			

& SEP 06, 1989 13h 14m 09.90s
41.280 N 125.348 W
DEPTH = 25.0km (geophysicist)
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 4.1 (BRK).

FHC		1.14	114 iPc	14	28.20	-2.1
			eS	14	41.20	
WDC		2.24	107 iPc	14	44.20	-1.9
			eS	15	11.20	
LBFM		2.61	87 eP	14	50.30	-1.2
LTCM		2.67	113 eP	14	50.10	-2.2
MIN		2.99	107 iPc	14	54.50	-2.4
			iS	15	28.60	
ORV		3.41	119 ePc	14	59.50	-3.2
			iS	15	37.40	
ZSP		4.10	143 ePc	15	10.40	-2.1
BRK		4.16	144 ePc	15	10.60	-2.7
BKS		4.16	144 ePc	15	11.10	-2.3
GROR		4.25	16 eP	15	13.73	-1.0
PCC		4.42	148 ePc	15	12.50	-4.5
			eS	16	00.50	
GT2		4.48	29 iP	15	16.52	-1.4
KMOR		4.56	17 eP	15	18.15	-1.0
			eS	16	08.08	
VBEM		4.67	35 eP	15	19.64	-1.1
PGO		4.69	26 eP	15	20.12	-0.7
			eS	16	12.15	
VIPM		4.74	46 eP	15	20.74	-1.0
TDH		4.78	32 eP	15	21.18	-1.0
MHC		4.87	143 eP	15	21.00	-2.5
ARN		4.92	142 eP	15	21.90	-2.2
VFP		4.93	34 eP	15	23.20	-1.2
VLL		4.96	31 eP	15	24.05	-0.8
GCC		4.98	147 ePc	15	21.10	-3.9
NLO		5.00	15 eP	15	23.84	-1.5
CMB		5.02	129 ePc	15	23.50	-2.1
APM		5.19	30 eP	15	27.01	-1.0
RVW		5.22	20 eP	15	27.19	-1.2
VTHM		5.24	40 eP	15	27.55	-1.1
LVP		5.24	23 iP	15	26.83	-1.9
MTMW		5.26	25 eP	15	26.88	-2.1
FL2		5.37	23 eP	15	28.99	-1.6
VGB		5.39	37 eP	15	29.64	-1.1
JLK		5.39	24 eP	15	28.89	-1.9
CDFW		5.39	25 eP	15	28.97	-1.9
			eS	16	28.09	
HSR		5.40	24 eP	15	29.33	-1.8
SHW		5.40	24 eP	15	29.39	-1.7
BMW		5.41	16 eP	15	28.92	-2.2
			eS	16	28.47	
YEL		5.43	24 eP	15	28.71	-2.8
ESD		5.43	24 eP	15	29.64	-1.9
			eS	16	30.25	
SAO		5.44	145 iPc	15	27.30	-4.1
STD		5.45	23 eP	15	29.93	-1.7
SOSW		5.47	24 eP	15	30.16	-1.9
ERK		5.47	22 eP	15	30.16	-1.9
CZM		5.55	21 eP	15	31.67	-1.3
TDL		5.55	23 eP	15	31.29	-1.9
LLA		5.78	142 e(P)	15	32.90	-3.5
PRS		5.84	147 ePc	15	32.70	-4.4
KVN		5.98	109 eP	15	36.50	-2.8
FRI		6.13	133 ePd	15	39.70	-1.4
TNP		7.04	114 eP	15	51.40	-2.7
ISA		7.78	134 eP	16	04.00	-0.4
			e	17	14.00	
CLC		8.16	129 eP	16	18.00	8.3
			e	17	16.00	
SBB		8.86	136 eP	16	17.00	-2.4
			e	17	19.00	
GSC		8.98	129 eP	16	22.00	0.9
			e	17	24.00	
TPC		10.27	131 eP	16	37.00	-1.8
			e	17	26.00	
GLA		11.73	131 eP	16	57.00	-1.8
			e	17	30.00	
FFC		20.50	41 eP	18	50.00	1.6
		0.7s	11.00nm			4.3mb X
		56 obs. associated				

SEP 06, 1989 13h 39m 38.11± 0.88s
23.993 N ± 5.2km 122.569 E ± 9.3km
DEPTH = 32.8 ± 4.9 km
5.0mb (8 obs.) 4.3Msz (1 obs.)
TAIWAN REGION (243)

TWD		0.89	276 iPc	39	52.90	-1.4
			eS	40	05.30	
TWC		0.90	313 iPd	39	53.90	-0.5
			eS	40	07.60	
TWF1		1.33	242 ePd	39	59.50	-1.0
			eS	40	17.40	
TWZ		1.42	321 eP	40	03.20	1.3
ANP		1.52	321 ePc	40	05.00	1.6
		0.8s	5402.98nm			
			eS	40	20.00	
TWO		1.61	280 iPd	40	05.50	0.9
			eS	40	27.00	
TWK		2.04	250 ePc	40	11.40	0.5
QZH		3.75	285 Pc	40	32.80	-2.2
	Z	12s	2.10um			
	E	10s	1.80um			
			S	41	14.00	
SSE		7.18	350 iPc	41	22.00	-1.5
		0.5s	236.00nm			6.4mb X
	Z	16s	1.80um			4.1MszX
	N	12s	1.30um			
			pP	41	27.20	
			Lg	43	36.00	
GZH		8.51	266 eP	41	45.80	3.7X
NJ2		8.67	339 Pc	41	43.00	-1.2
	Z	14s	2.10um			
	N	10s	0.90um			
			S	43	19.00	
WHN		9.80	314 eP	41	54.50	-5.3X
	Z	16s	1.19um			
	N	12s	1.31um			
	E	10s	0.82um			
			eS	43	49.50	
QIZ		12.83	250 eP	42	40.20	-0.8
			eS	44	58.40	
TIA		13.05	340 eP	42	47.10	3.3X
	Z	14s	1.40um			
	N	12s	1.10um			
	E	12s	0.60um			
GYA		14.60	283 P	43	04.20	-0.2
			S	45	40.00	
XAN		15.56	313 P	43	18.70	1.9
TIY		16.19	330 eP	43	26.50	1.7
	Z	13s	2.28um			5.2Msz
	N	13s	1.50um			
BJI		16.88	343 eP	43	35.00	1.6
HHC		19.18	334 P	44	03.50	1.7
BTO		19.63	330 eP	44	06.00	-1.0
	N	13s	1.20um			
	E	13s	0.90um			
			eS	47	48.00	
CN2		19.90	6 eP	44	08.50	-1.2
LZH		20.16	311 Pd	44	12.50	-0.1
		2.0s	0.05nm			1.5mb X
	Z	18s	1.30um			4.3Msz
			pP	44	23.00	44kmX
			eS	50	33.00	
LOE		20.55	255 eP	44	17.00	0.3
CHG		22.58	261 eP	44	38.50	1.4
CHTO		22.58	261 eP	44	38.00	0.9
GTA		24.62	314 Pd	44	57.00	0.1
WMO		34.70	313 P	46	26.50	-0.6
WB5		45.10	164 eP	47	53.00	-0.2
WRA		45.15	164 Pc	47	54.10	0.5
		0.8s	5.90nm			4.5mb
QIS		47.29	158 eP	48	11.00	0.5
ASPA		48.64	166 eP	48	21.20	0.2
		1.0s	10.00nm			4.8mb
WARB		50.04	175 eP	48	32.30	0.6
KEV		69.62	338 eP	50	45.00	-0.8
SOD		70.35	336 iP	50	50.10	-0.2
SUF		71.84	331 eP	50	57.00	-2.3
NB2		78.98	332 P	51	38.50	-1.5
		0.5s	1.90nm			4.3mb
LPG		89.58	321 eP	52	34.10	-0.1
		1.0s	8.00nm			5.0mb
SMF		90.56	323 eP	52	37.90	-0.4
		1.0s	12.00nm			5.2mb
AVF		90.74	323 eP	52	38.70	-0.4
		1.0s	6.00nm			4.9mb
MAF		91.52	323 eP	52	43.60	0.9
		1.0s	10.00nm			5.2mb
FFC		92.79	24 eP	52	49.00	0.6
		0.6s	7.00nm			5.3mb
	S.D. = 1.2		on 38 of 41 obs.			

% SEP 06, 1989 14h 35m 32.55± 0.74s
59.919 N ± 6.3km 6.066 E ± 7.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 1.7 (BER).

ODD1		0.28	91 iP	35	37.92	-0.6
			eS	35	41.34	
ASK		0.71	323 eP	35	45.82	-0.8

```
                  eS     35 58.50
BLS2    0.76 145  iP     35 47.45   -0.1
                  eS     35 55.92
KMY     0.82 211  eP     35 48.76    0.3
                  eS     35 59.83
HYA     1.25   3  iP     35 56.46    0.7
                  eS     36 13.49
NRA0    2.84  71  iPc    36 19.30    0.5
                  iPg    36 23.10
                  iSg    36 58.80
      S.D. = 0.8   on   6 of   6 obs.
-------------------------------------------
%  SEP  06, 1989  14h 45m 33.54± 2.09s
   43.385 N ±12.5km     5.407 E ±13.2km
   DEPTH =  10.0km  (geophysicist)
 NEAR SOUTH COAST OF FRANCE          (379)
      MD 2.5 (STR).

GELF    0.02  97  Pg     45 34.78   -0.7
BERF    0.22 109  Pg     45 38.60    0.3
TREF    0.24 356  Pg     45 37.61   -1.0
PRAF    0.45 338  Pg     45 43.03    0.3
VILF    0.52  26  Pg     45 43.98   -0.1
TAVF    0.53  64  Pg     45 43.09   -1.1
GANF    0.71  31  Pg     45 47.99    0.4
FOUF    1.51  41  ePgd   46 02.33    1.7
                  eSg    46 19.84
      S.D. = 1.1   on   8 of   8 obs.
-------------------------------------------
   SEP  06, 1989  14h 45m 51.00± 0.26s
    0.976 N ± 2.7km  126.106 E ± 3.4km
   DEPTH =  36.7 ±  2.3 km
   5.8mb ( 47 obs.)  5.5Msz ( 19 obs.)
 MOLUCCA PASSAGE                     (266)
      Two events about 2 seconds
      apart, observed on broadband
      displacement seismograms.
      RADIATED ENERGY
       No. of sta:   5  Focal mech.  C
       Energy        0.9±0.3•10••13 Nm
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 28C
      Centroid Location:
      Origin Time          14:45:56.0 0.6
      Lat  0.80N 0.06 Lon 126.20E 0.04
      Dep  36.6  2.5 Half-duration  4.1
      Moment Tensor;   Scale 10••18 Nm
        Mrr= 0.86 0.03   Mtt= 0.17 0.03
        Mff=-1.03 0.06   Mrt= 0.51 0.05
        Mrf= 0.29 0.05   Mtf= 0.04 0.03
       Principal Axes:
        T  Val=  1.17   Plg=62   Azm=345
        N        -0.09      27       187
        P        -1.08       9        92
      Best Double Couple:Mo=1.1•10••18
       NP1:Strike=154 Dip=43 Slip=  49
       NP2:        24     59       121

AAI     5.08 156  eP     47 05.50   -1.3
                  eS     48 00.00
DAV     6.09 355  eP     47 23.00    1.9
TSM     8.65 292  ePc    47 59.00    2.2
      0.9s  1686.60nm          7.1mb X
MKS     9.04 227  iPd    48 04.50    2.3
                  e(S)   49 39.00
KKM    11.08 297  ePc    48 32.10    1.8
      0.9s   194.40nm          6.3mb
OCP    14.46 340  eP     49 06.00   -9.1X
MTN    14.61 160  eP     49 16.30   -0.8
JAY    15.00 103  ePc    49 25.50    3.2X
BAG    16.28 341  ePc+   49 38.00   -0.8
                  eS     52 45.00
KNA    16.83 171  iPc    49 46.20    0.6
      0.7s   592.00nm          5.8mb
MNDI   18.90 112  eP     50 14.00    2.5
LAT    22.19 110  eP     50 48.50    2.7
WB5    22.25 159  eP     50 44.90   -1.5
                  eS     54 47.20
WRA    22.30 159  Pc     50 45.50   -1.4
      1.2s   521.30nm          5.9mb
GUMO   22.40  55  ePd    50 50.78    2.9
      0.8s   210.83nm          5.6mb
PJG    22.40  55  eP     50 49.00    1.1
GUA    22.41  55  eP     50 48.90    0.9
      0.8s   244.78nm          5.7mb
    Z  22s    16.30um          5.4Msz

KGM    22.80 273  ePc    50 54.00    2.1
MBL    22.84 195  eP     50 51.00   -1.2
      0.5s    71.00nm          5.4mb
PMG    23.36 117  eP     50 58.00    0.7
QIZ    24.00 319  Pc     51 03.00   -0.5
     N  12s      4.30um
                sS     55 34.00
HKC    24.17 332  iP     51 05.00   -0.1
                S      55 27.00
MCO    24.31 331  eP     51 06.10   -0.4
ANP    24.47 350  eP     51 07.00   -1.1
KLM    24.54 275  eP     51 10.00    1.3
      1.0s  1219.60nm          6.4mb
QZH    24.91 344  eP     51 11.00   -1.2
      4.0s     3.50nm          3.3mb X
     Z  28s     8.90um          5.1MszX
     N  20s     8.00um
                PP     51 50.00
                S      55 35.00
QIS    25.15 149  iPc    51 13.50   -1.1
GZH    25.23 331  Pc     51 14.50   -0.8
      7.0s     2.30nm          2.9mb X
     Z  30s     7.20um          5.0MszX
     N  15s     3.50um
     E  12s     2.50um
                S      55 36.00
IPM    25.30 279  ePd    51 15.50   -0.5
NANU   25.57 203  eP     51 19.10    0.7
ASPA   25.64 163  iPc    51 18.10   -1.0
      1.1s   533.00nm          6.0mb
                iS     55 43.00
                iScS   02 13.10
PPI    25.75 267  eP     51 20.50    0.3
SNG    26.15 284  ePc    51 24.00    0.1
      1.1s   318.99nm          5.8mb
                eS     55 24.80
RAB    26.55 101  eP     51 28.00    0.4
                eS     56 00.00
WARB   27.01 179  eP     51 32.00    0.3
      0.4s    51.00nm          5.5mb
PSI    27.22 274  e(P)   51 34.00    0.3
TSI    27.63 276  ePd    51 44.50    7.0X
MEKA   28.38 194  eP     51 44.00   -0.1
      0.3s    23.00nm          5.3mb
NNT    28.57 295  iPd    51 45.00   -1.0
CTA    28.78 138  Pd+    51 47.20   -0.6
      1.4s   232.56nm          5.7mb
                i      52 17.20
                i      53 27.40
                iS     56 36.00
                iScP   58 37.50
CTAO   28.78 138  ePc    51 46.94   -0.8
LOE    29.01 306  eP     51 48.50   -1.3
                e      05 04.50
NST    29.49 301  iPd    51 54.00   -0.2
                i      55 00.00
SSE    30.32 352  Pd     52 02.00    0.7
      5.0s     1.00nm          2.9mb X
     Z  20s     4.20um          5.1Msz
     N  12s     1.30um
     E  13s     2.40um
                pP     52 21.50   84kmX
                sP     52 32.00
                ePcP   55 01.50
                S      57 00.00
                sS     57 40.00
                SS     59 08.00
KAGJ   30.39   8  eP     52 01.60   -0.4
BSI    31.08 279  ePc    52 00.50   -7.8X
BDT    31.18 303  eP     52 08.20   -0.9
                e      56 04.10
WHN    31.45 340  Pc     52 10.50   -0.9
     Z  24s     5.46um          5.1MszX
     N  16s     3.96um
     E  14s     2.61um
                sP     52 26.50
                PcP    55 04.50
                S      57 16.00
GYA    31.49 325  iPc    52 11.00   -0.9
     Z  32s     4.60um          4.9MszX
     N  15s     4.00um
     E  15s     2.80um
                sP     52 28.00
                PcP    55 05.40
                PcS    58 47.80
                ScS    02 43.00
MRWA   31.54 197  eP     52 12.00   -0.2

      0.4s    14.00nm          5.2mb
NJ2    31.66 348  Pc     52 13.00   -0.1
       5.5s     1.10nm          2.9mb X
     Z  24s     4.20um          5.0MszX
     N  12s     1.00um
     E  13s     1.10um
                sP     52 26.00
KUMJ   31.70   8  eP     52 13.40   -0.2
FORR   31.71 177  eP     52 11.00   -2.5
      0.4s   136.00nm          6.2mb
CHG    32.00 305  iPc    52 15.80   -0.6
      0.9s    35.29nm          5.2mb
                eS     57 54.00
CHTO   32.00 305  ePc    52 15.55   -0.8
      1.3s   101.72nm          5.5mb
                ec     52 17.04
COOL   32.03 188  iPd    52 15.80   -0.7
      0.4s     8.00nm          5.0mb
QLP    32.50 149  eP     52 20.30   -0.3
                e      53 36.20
BAL    32.66 195  iPd    52 21.90    0.0
KMI    32.95 319  ePc    52 24.58   -0.2
     Z  23s    11.40um          5.5MszX
     E  10s     1.90um
                ec     52 26.57
                SP     52 38.50
                PP     53 12.00
                S      57 12.00
SHNJ   33.31   8  eP     52 26.30   -1.2
TKSJ   33.67  12  P      52 30.60   -0.1
SHK    33.94  10  iP     52 32.20   -0.8
      1.1s   582.28nm          6.4mb
MUN    34.09 195  eP     52 33.50   -0.8
      0.8s    97.00nm          5.8mb
WKYJ   34.24  14  eP     52 36.00    0.3
YONJ   34.72  11  P      52 39.40   -0.3
NWAO   34.74 193  iPd    52 50.50   10.6X
      0.8s    91.00nm
RMO    34.97 143  eP     52 40.70   -1.3
SVO    35.05 107  eP     52 42.00   -0.8
HNR    35.25 108  eP     52 43.00   -1.5
                eS     58 10.00
TSRJ   35.59  14  P      52 47.90    0.8
STK    35.82 157  iPd    52 48.20   -0.9
      0.6s    53.00nm          5.6mb
RKG    35.89 193  eP     52 54.40    4.7X
TIA    36.04 348  eP     52 48.50   -2.4
       5.0s     1.30nm          3.1mb X
     Z  32s     6.00um          5.2MszX
     N  13s     0.80um
     E  13s     1.00um
                PcP    55 17.50
                eS     58 22.60
IIDJ   36.04  16  P      52 50.80   -0.2
CD2    36.54 327  eP     52 53.00   -2.2
     Z  24s     5.60um          5.3MszX
     N  12s     3.20um
                PP     54 12.00
                S      58 28.00
XAN    36.62 336  Pc     52 54.00   -1.9
       2.0s     0.80nm          3.3mb X
     N  18s     4.30um
     E  17s     2.40um
                pP     53 03.00   30kmX
                S      58 30.00
CHJJ   36.89  18  P      52 56.10   -2.0
MTMJ   37.05  16  P      52 58.50   -1.0
MAJO   37.12  16  ePc    52 58.48   -1.5
                ec     53 00.47
MAT    37.12  16  iPc    52 58.20   -1.8
      2.4s  2850.00nm          6.7mb
     Z  20s     5.32um          5.3Msz
                eS     58 38.00
CMS    37.32 152  iPc    53 01.40   -0.3
      1.4s   162.00nm          5.7mb
KAKJ   37.40  19  P      53 00.60   -1.7
ADE    37.65 163  iPc    53 05.00    0.5
      1.3s   365.38nm          6.1mb
DL2    37.97 354  P      53 08.00    0.9
     Z  24s     2.60um          5.0MszX
     N  17s     3.80um
     E  11s     1.20um
                eS     58 50.00
NIIJ   38.00  17  P      53 06.40   -0.9
BRS    38.12 140  iPd    53 07.00   -1.6
                e      53 24.00
                i      54 30.00
```

06d 14h

				iS	59	11.00		GTA	45.16	331	Pc	54	05.20	-1.0	TOA	88.07	28	eP	58	39.80	1.0
				i	06	22.00			3.5s		0.80nm			3.0mb X	NAI	89.32	269	iPd	58	50.00	4.0X
TIY	38.67	343	eP	53	12.00	-1.1		Z	20s		6.20um			5.5Msz		1.0s		15.00nm			5.3mb
Z	27s		6.41um			5.3MszX		N	16s		2.40um				KVT	89.41	311	iP	58	47.00	1.4
N	14s		1.90um								PP	55	46.60		AYN	89.63	299	eP	58	48.00	1.2
			sP	53	27.50						PcS	59	39.00		HRI	89.78	303	e(P)	58	48.00	0.4
			S	59	11.00						s$	00	50.00		DSI	90.11	301	eP	58	49.00	0.0
YAMJ	39.17	17	eP	53	17.10	-0.1					ScS	03	59.00		HQL	90.45	299	eP	58	52.00	1.4
COO	39.84	144	ePd	53	23.50	0.7		ASAJ	45.40	17	eP	54	07.80	-0.1	MBH	90.59	300	eP	58	51.00	-0.2
			e	59	19.00			PVC	45.51	116	iP	54	10.00	0.8	SPA	90.97	180	e(P)	58	53.40	0.9
BJI	39.92	348	ePc	53	22.30	-1.0		DZM	45.52	123	iPc	54	09.00	-0.3		1.4s		128.43nm			6.1mb
	5.0s		0.89nm			2.8mb X					i	59	39.10			Z 20s		2.16um			5.6Msz
Z	28s		6.56um			5.3MszX		TAU	47.67	159	iPd	54	27.00	1.2	KAS	91.12	311	iPd	58	54.30	0.7
N	18s		2.02um					KOD	49.21	283	eP	54	37.00	-1.5	ANTO	91.93	310	ePc	58	56.38	-1.0
			ec	53	24.78			GBA	49.76	287	P	54	40.00	-2.4				ec	58	58.36	
			ePcP	55	29.50			POO	54.12	292	iPc	55	13.50	-1.6	KEV	92.25	340	eP	58	57.00	-1.1
			ePcS	59	19.00				1.2s		75.00nm			5.6mb	SOD	92.76	338	iP	58	59.50	-1.0
			eS	59	22.50						i$n	02	42.00					i	59	08.00	
			eS	59	28.76			NDI	54.15	305	iPc	55	14.00	-1.1	INK	92.94	21	eP	59	01.00	-0.3
			eSS	02	10.00						e$	02	40.00			1.1s		62.00nm			6.0mb
			e	02	22.41			WMQ	54.64	327	ePc	55	17.50	-1.1	SUF	93.71	333	eP	59	04.00	-0.9
			eScS	03	29.00			Z	21s		3.30um			5.4Msz		0.4s		4.40nm			5.2mb
OFUJ	40.51	19	eP	53	27.80	-0.4		E	13s		1.40um				BCK	93.80	307	eP	59	04.00	-2.0
LZH	40.58	332	ePc	53	28.93	-0.1					ec	55	18.82		SIT	93.86	33	P	59	06.80	1.1
	2.0s		0.04nm			1.8mb X					S	02	46.00			1.0s		60.00nm			6.0mb
Z	22s		11.70um			5.7Msz		KSH	59.54	316	P	55	53.00	-0.5	ALT	94.05	309	eP	59	05.70	-1.5
N	18s		4.46um					Z	26s		3.30um			5.3MszX	ELL	94.39	307	eP	59	06.00	-2.8
E	12s		0.95um					E	13s		1.40um				KHL	94.57	308	eP	59	09.00	-0.6
			ec	53	30.92						sP	56	10.00		MBC	94.76	13	eP	59	09.50	-0.1
			pP	53	47.00	74kmX					S	04	04.00			1.0s		22.00nm			5.5mb
			PP	55	01.00			KRP	59.74	136	P	55	55.00	0.3	NUR	94.79	331	eP	59	10.00	0.1
			ePcP	55	32.50			TCW	60.53	140	P	55	58.80	-1.2		Z 22s		1.90um			5.5Msz
			S	59	19.00			KIW	60.76	139	eP	56	00.10	-1.5				i	59	41.20	
			PcS	59	22.00			CCW	60.77	140	eP	56	00.60	-1.0				LR	44	30.00	
			PcS	59	30.10			MRW	60.82	140	eP	56	00.00	-1.9	PTZ	94.86	256	iPd	59	11.90	0.6
			ScS	03	23.00			WEL	60.88	140	P	56	00.00	-2.4	TRO	95.02	340	eP	59	12.10	1.2
SNY	40.73	357	iPc	53	30.00	0.1		CAW	60.99	139	eP	56	00.90	-2.3	KCT	95.30	310	iP	59	11.10	-1.7
4.5s			3.40nm			3.4mb X		MNG	61.01	139	P	56	01.00	-2.4	VRI	95.84	316	iPc	59	15.00	-0.1
Z	22s		4.50um			5.3Msz		WDW	61.02	140	eP	56	01.40	-2.0	JMB	96.37	313	iP	59	17.00	-0.6
N	23s		3.80um					MOW	61.27	140	eP	56	02.60	-2.5	MLR	96.43	316	iPd	59	18.00	0.0
E	24s		5.60um					BLW	61.38	139	eP	56	03.00	-2.9	KRI	96.50	253	eP	59	21.50	2.7X
			PP	55	10.00			PGZ	61.54	138	P	56	04.50	-2.4	CMP	97.10	316	iPc	59	22.00	1.2
			PcP	55	37.00				0.5s		38.00nm			5.8mb	PVL	97.19	314	iPd	59	22.00	0.8
			S	59	34.00			SMY	65.15	30	P	56	31.00	0.6	BUL	97.37	250	iPd	59	23.00	0.3
			ScS	03	35.50				0.8s		206.90nm			6.3mb	LSZ	97.89	255	eP	59	25.00	0.0
BFD	40.90	160	iPd	53	32.50	1.0		Z	20s		3.00um			5.5Msz	PGB	98.13	313	iP	59	25.00	-0.6
1.1s		135.00nm				5.6mb		DRV	68.21	174	eP	56	50.00	0.4	MMB	98.60	312	eP	59	27.00	-0.7
BWA	40.96	151	iPd	53	33.40	1.4		ADK	69.58	34	ePd	56	59.00	0.7	VTS	98.82	313	iPc	59	28.00	-0.8
AOMJ	41.48	16	eP	53	37.80	1.7			1.0s		112.20nm			5.9mb	KKB	99.04	313	iP	59	29.00	-0.6
HHC	41.82	343	P	53	38.80	-0.3		MAIO	70.69	308	eP	57	05.00	-0.6	KRA	99.58	321	eP	59	31.80	-0.1
N	16s		1.50um								e$	06	16.00			1.1s		64.00nm			6.1mb
E	15s		0.90um					SHI	75.26	300	eP	57	31.00	-1.7	SPC	99.59	320	iP	59	32.50	0.3
			S	00	00.00			HON	76.50	68	P	57	50.00	10.5X		2.0s		120.00nm			6.1mb
CAN	41.97	152	eP	53	40.70	0.4			Z 20s		5.05um			5.9Msz	DAG	99.90	352	iPd	59	32.20	-0.7
BTO	42.06	342	P	53	40.00	-1.0		DHR	76.99	297	eP	57	42.00	-0.2		1.0s		66.00nm			6.1mb
Z	17s		2.10um			5.1MszX		RYD	80.05	295	eP	57	58.00	-1.0				i	03	31.80	
N	17s		1.90um					KER	80.37	305	eP	58	00.00	-0.7	PSZ	100.09	319	ePdiff	59	32.00	-2.4X
E	17s		1.70um					MAW	80.97	200	eP	58	03.00	0.0	KMZ	100.22	257	ePdiff	59	36.00	0.2
			sP	53	53.00				1.2s		160.00nm			5.9mb	SKO	100.22	313	ePdiff	59	27.50	-7.6X
			PP	55	20.00			TAB	81.35	308	iP+	58	07.00	1.2		E 17s		1.04um			
			eS	59	53.00			SBA	81.71	172	Pc+	58	08.60	1.9				i	59	33.70	
CNB	42.14	151	eP	53	42.90	1.2		SLY	81.79	306	ePd	58	06.50	-1.4				i	59	45.00	
1.3s		180.00nm				5.6mb					ePcP	58	09.50					i	03	45.50	
Z	17s		0.80um			4.7MszX					eS	08	21.00					i	10	13.00	
TOO	42.34	157	eP	53	44.30	1.0		KMSA	81.79	290	eP	58	08.00	-0.3				i	13	00.00	
1.3s		236.00nm				5.8mb		BHD	82.54	303	iPd	58	10.50	-1.3	OHR	100.86	312	e(Pdiff	59	36.00	-2.0
CN2	42.64	359	iPc	53	45.00	-0.6					iS	08	28.50		NB2	100.96	333	Pdiff	59	36.20	-1.7
5.0s			1.30nm			2.9mb X		ATA	82.85	281	iP+	58	15.42	1.7		1.5s		71.30nm			6.0mb
Z	18s		2.00um			5.1Msz		OASM	82.90	296	eP	58	14.00	0.1	SRO	101.15	319	ePdiff	59	42.00	3.0X
E	12s		0.60um					TDD	83.15	282	iP+	58	17.05	1.8		2.0s		27.00nm			5.5mb
			pP	53	57.00	44kmX		ARO	83.20	281	iP+	58	17.21	1.6	KSP	101.64	322	ePdiff	59	42.00	0.9
			PP	55	24.00			SGH	83.41	281	iP+	58	18.51	1.8				e	02	34.50	
			PcP	55	37.50			SVW	83.48	29	ePc	58	17.40	1.2	ZST	101.85	320	ePdiff	59	45.00	2.9X
			S	00	02.00			DAF	83.51	281	iP+	58	19.36	2.2	PRU	102.96	322	Pdiff	59	47.00	0.0
			eSS	03	08.00			MSL	83.75	306	ePd	58	18.00	0.0		2.1s		47.80nm			5.9mb
MRRJ	43.40	16	eP	53	52.90	1.1					e	58	40.50			Z 21s		1.70um			5.5Msz
MDJ	43.56	4	ePc	53	53.65	0.6					e	59	17.50			N 22s		0.60um			
Z	20s		4.00um			5.3Msz					eS	08	34.50			E 20s		1.10um			
N	18s		2.80um								eScS	08	50.50					e	03	35.00	
			ec	53	55.31			KDC	84.58	32	eP	58	22.60	1.0				e	04	04.70	
			eS	00	22.20			BRW	84.97	18	P	58	25.80	2.4	BRG	103.05	323	iPdiff	59	47.50	0.1
			eSS	03	30.91			IMA	85.14	24	eP	58	26.00	1.5		2.0s		44.00nm			5.8mb
LSA	43.84	314	P	53	56.80	0.7		TAIF	85.69	291	eP	58	30.00	1.8				e	03	10.50	
			PP	55	42.00			PMR	86.65	28	eP	58	31.80	0.0				e	13	07.20	
			eS	00	22.00				1.2s		1.00nm			4.2mb X	ZAG	103.21	318	ePdiff	59	50.00	1.8
HODJ	44.02	18	eP	53	58.40	1.6		AAE	87.22	279	eP	58	37.00	1.0	CLL	103.48	324	iPdiff	59	49.60	0.3
USJ	45.12	19	eP	54	05.60	-0.1		FBA	87.46	25	eP	58	35.00	-0.8		2.2s		51.00nm			5.9mb

KMR	103.80	320	ePdiff	59	50.00	-0.8
KHC	103.82	321	iPdiff	59	52.10	1.2
	Z 22s	0.80um			5.2Msz	
	N 22s	0.70um				
	E 22s	0.70um				
		e	03	06.00		
		e	04	09.50		
MOX	104.53	323	ePdiff	59	55.00	1.0
	2.0s	49.00nm			6.0mb	
	Z 26s	1.80um			5.5MszX	
	N 25s	1.00um				
	E 26s	0.90um				
PNT	104.85	38	ePdiff	00	02.00	6.5X
EDM	106.98	33	ePKP	04	15.50	0.9
BNG	107.42	275	ePdiff	00	16.10	8.3X
	0.8s	4.00nm			5.6mb	
		ic	04	17.70		
CDF	107.98	322	ePKP	04	17.10	0.4
VAI	107.98	319	PKP	04	16.80	0.2
BSF	108.50	322	ePKP	04	17.90	0.2
	1.0s	12.00nm				
KVN	109.16	48	Pdiff	00	16.50	1.4
LPG	109.43	319	ePKP	04	20.60	0.8
	0.9s	11.45nm				
SES	109.52	35	ePdiff	00	15.00	-1.3
CLC	110.50	51	ePKP	04	05.00	-16.8X
LBF	110.59	322	ePKP	04	22.30	0.7
	1.0s	9.00nm				
SBB	110.64	52	ePKP	04	23.00	0.9
LRM	110.65	40	ePKP	04	16.40	-5.7X
SMF	110.82	321	ePKP	04	22.90	0.9
	1.0s	8.00nm				
SSF	110.85	322	ePKP	04	23.10	1.0
	1.0s	12.00nm				
AVF	111.06	322	ePKP	04	23.00	0.6
	1.0s	4.00nm				
BGF	111.48	322	ePKP	04	24.10	0.8
	1.1s	22.00nm				
PLM	111.78	53	PKP	04	25.00	0.5
FFC	111.94	28	iPKPd	04	24.30	0.4
	1.0s	17.00nm				
TCF	111.99	322	ePKP	04	25.10	0.8
	1.2s	26.80nm				
TPC	112.21	52	ePKP	04	27.00	1.9
CAF	112.69	320	ePKP	04	26.90	1.3
	1.0s	16.00nm				
GRR	112.84	325	ePKP	04	26.80	1.1
	1.0s	12.00nm				
LPF	113.12	324	ePKP	04	27.20	0.9
	0.8s	8.05nm				
MFF	113.29	323	ePKP	04	27.50	0.8
	0.8s	10.75nm				
LPO	113.36	320	ePKP	04	28.30	1.4
	1.2s	29.75nm				
LFF	113.52	321	ePKP	04	28.50	1.3
	1.0s	20.00nm				
MSU	113.70	47	PKP	04	29.00	0.9
EPF	114.65	319	ePKP	04	29.90	0.3
	0.8s	12.10nm				
RSSD	116.73	38	PKP	04	32.80	-0.9
ETOR	117.25	318	ePKP	04	36.00	1.4
GOL	118.01	43	PKP	04	36.00	-0.4
GLD	118.09	43	PKP	04	37.10	0.7
RSON	118.28	27	PKP	04	35.40	-0.7
GUD	118.73	319	ePKP	04	37.70	0.2
TOL	119.03	318	ePKPc	04	39.00	1.0
		ePP	05	55.00		
		eSKS	15	15.00		
ENIJ	119.11	314	ePKP	04	36.70	-1.5
EMON	119.29	323	ePKP	04	38.50	0.2
ALQ	119.32	48	ePKP	04	39.50	0.6
	Z 22s	1.48um			5.6Msz	
		ePP	06	06.40		
		ePKKP	14	54.50		
		eSKKS	22	28.00		
ASMO	120.02	315	ePKP	04	40.00	0.0
APHE	120.17	315	ePKP	04	41.00	0.6
ACHM	120.20	315	ePKP	04	41.00	0.7
AAPN	120.31	315	ePKP	04	38.50	-2.1
STS	120.33	323	ePKP	04	42.00	1.7
ALOJ	120.39	315	ePKP	04	41.00	0.2
ATEJ	120.42	315	ePKP	04	41.00	0.1
EHOR	120.85	316	ePKP	04	42.50	1.1
EPRU	121.25	315	ePKP	04	43.00	0.7
EJIF	121.67	315	ePKP	04	43.80	0.8
FR	122.77	312	iPKPd	04	47.00	1.5
SCH	123.39	9	ePKP	04	45.00	-0.8

TIO	125.55	310	iPKPc	04	51.50	0.6
			i	05	00.50	
			i	05	09.00	
SIO	126.20	43	ePKP	04	52.70	0.8
TUL	126.46	42	ePKP	04	52.70	0.3
	1.3s	38.00nm				
	Z 21s	1.84um			5.7Msz	
			LR	44	38.00	
FVM	128.64	37	PKP	04	55.40	-1.0
OLY	129.55	40	PKP	04	58.50	0.3
KIC	130.40	279	PKP	05	00.40	-0.1
TIC	130.64	280	PKP	05	00.90	0.0
LIC	130.70	279	PKP	05	01.00	0.0
	Z 22s	0.93um			5.4Msz	
RSCP	133.12	36	PKP	05	05.40	0.3
BLA	134.75	30	PKP	05	09.40	1.3
PRM	136.06	35	PKP	04	59.90	-10.7X
PEL	144.32	155	iPKPd	05	25.00	-0.6
ZON	146.53	157	ePKP	05	30.00	0.7
MRA	146.81	162	ePKPc	05	30.50	0.9
TCA	148.15	162	ePKPc	05	33.00	1.0
CYA	150.41	158	e(PKP)	05	37.10	1.6
UPA	152.61	68	e(PKP)	05	39.50	0.5
	Z 20s	3.90um			6.2Msz	
SLA	153.86	155	ePKPc	05	41.80	1.1
			e	05	51.00	
BMA	156.43	203	e(PKP)	05	44.00	-0.1
			e	06	07.10	
			e	06	15.10	
PSO	156.47	85	ePKP	05	47.00	2.2X
VAO	157.10	197	ePKP	05	47.10	2.2X
			e	06	16.50	
PPD	158.92	187	ePKP	05	48.40	1.4
			e	05	57.20	
			e	06	24.80	
			ePP	10	01.80	
CNCB	159.02	139	PKP	05	50.20	2.3X
LPB	159.15	139	PKP	05	50.00	2.1X
	1.0s	70.00nm				
			PKS	10	06.00	
			eLR	02	30.00	
BMG	159.26	67	ePKP	05	58.00	10.3X
ZOBO	159.32	138	PKP	05	50.10	1.9
	1.7s	114.83nm				
			LR	02	32.00	
CCH	159.73	144	PKP	05	51.00	2.7X
PDCR	161.39	231	ePKP	05	48.10	-1.6
			e	05	51.50	
			e	06	11.90	
			i	06	35.20	
			e	06	53.60	
ITR	162.76	243	ePKP	05	50.60	-0.5
			e	06	39.50	
			e	10	26.90	
BDF	164.25	202	ePKP	05	53.02	0.3
BAO	164.31	201	ePKP	05	54.00	1.3
			e	06	49.00	

S.D. = 1.2 on 273 of 297 obs.

SEP 06, 1989 14h 59m 06.04± 1.48s
0.957 N ± 4.9km 126.088 E ± 7.7km
DEPTH = 39.8 ± 14.8 km
4.8mb (9 obs.)
MOLUCCA PASSAGE (266)

AAI	5.07	155	eP	00	20.20	-1.4
TSM	8.64	292	ePc	01	14.50	2.9
KNA	16.81	171	eP	03	00.00	-0.2
WB5	22.24	159	eP	04	00.20	-0.9
			eS	08	02.00	
WRA	22.29	159	Pd	04	01.20	-0.4
	0.7s	42.20nm			5.0mb	
MBL	22.82	195	eP	04	06.00	-0.7
	0.6s	12.00nm			4.5mb	
OIZ	24.00	319	eP	04	18.60	0.3
QIS	25.15	149	eP	04	30.00	0.7
GZH	25.24	332	P	04	30.00	-0.1
IPM	25.29	279	ePd	04	30.20	-0.4
NANU	25.54	203	eP	04	33.00	0.1
ASPA	25.63	163	iPc	04	33.30	-0.5
	0.9s	51.00nm			5.1mb	
			eS	08	59.30	
			e	09	06.80	
WARB	26.99	179	eP	04	47.10	0.9
	0.4s	6.00nm			4.6mb	
BDT	31.18	303	eP	05	23.20	-0.6
GYA	31.50	325	P	05	26.00	-0.7

			PcP	08	20.00	
FORR	31.69	177	eP	05	27.50	-0.6
	0.4s	24.00nm			5.4mb	
CHG	31.99	305	eP	05	30.50	-0.5
CHTO	31.99	305	eP	05	30.50	-0.5
	1.0s	5.25nm			4.4mb	
HNR	35.26	108	eP	05	59.00	-0.3
STK	35.81	157	iPd	06	03.70	-0.1
	0.6s	7.00nm			4.8mb	
IIDJ	36.07	17	P	06	07.00	1.1
XAN	36.63	336	P	06	09.40	-1.3
CHJJ	36.91	18	P	06	11.90	-1.1
MTMJ	37.07	16	P	06	14.20	-0.2
MAT	37.14	16	iPc	06	14.30	-0.6
	0.8s	18.66nm			5.0mb	
DL2	37.99	354	eP	06	23.00	1.1
NIIJ	38.02	17	P	06	22.40	0.1
TIY	38.68	343	eP	06	27.00	-0.9
BJI	39.93	348	eP	06	37.50	-0.6
			PcP	08	44.50	
SNY	40.75	357	eP	06	45.10	0.3
BWA	40.96	151	eP	06	48.90	2.2
CAN	41.96	152	eP	06	56.60	1.7
CN2	42.66	359	Pd	07	01.00	0.5
			PcP	08	52.00	
MDJ	43.58	4	eP	07	08.50	0.5
GTA	45.16	331	P	07	20.70	-0.3
			PP	09	02.00	
GBA	49.75	287	Pc	07	54.60	-2.4
	0.6s	2.90nm			4.5mb	
WMQ	54.64	327	P	08	34.10	0.8
MAIO	70.69	308	eP	10	20.00	-0.3
SOD	92.77	338	eP	12	15.00	-0.2
SUF	93.71	333	eP	12	23.00	3.4X
KIC	130.38	279	PKP	18	16.40	1.3
LIC	130.68	279	PKP	18	17.00	1.4

S.D. = 1.1 on 41 of 42 obs.

SEP 06, 1989 16h 04m 41.57± 1.17s
4.781 N ± 7.8km 96.141 E ± 7.9km
DEPTH = 27.5 ± 9.2 km
4.6mb (4 obs.)
NORTHERN SUMATERA (706)

BSI	1.10	310	ePc	05	01.00	-0.2
PSI	3.47	127	ePc	05	38.00	3.0X
			e(S)	06	24.00	
IPM	4.87	92	ePd	05	55.00	0.1
	0.4s	58.90nm				
			e	06	51.50	
SNG	5.05	62	ePn	05	57.60	0.2
			ePg	06	10.00	
			eSn	06	39.20	
			eSg	06	52.80	
KLM	5.74	107	eP	06	08.50	1.3
PPI	6.72	141	eP	06	29.00	8.0X
NNT	8.53	24	ePn	06	43.80	-2.5
			ePg	07	43.20	
			eSg	08	59.40	
LOE	13.69	23	eP	08	04.00	7.7X
CHG	14.21	11	ePd	08	10.90	7.7X
	1.1s	14.56nm			4.5mb	
CHTO	14.21	11	eP	08	04.10	0.9
GBA	20.42	297	P	09	19.00	-0.5
			S	12	59.00	
KMI	21.20	17	Pc	09	30.00	2.4X
GYA	23.79	24	P	09	55.80	2.7X
LSA	25.23	350	eP	10	09.70	2.3
CD2	26.96	15	eP	10	23.00	0.1
WHN	30.84	32	eP	10	59.00	1.4
XAN	31.44	21	P	11	02.50	-0.5
LZH	31.95	12	eP	11	04.50	-3.1X
GTA	34.63	5	eP	11	29.80	-1.0
BJI	39.48	24	eP	12	17.00	5.6X
WMO	39.59	350	eP	12	15.00	2.6X
COOL	42.76	148	eP	12	39.00	0.5
WB5	44.86	124	eP	12	55.00	-0.7
WRA	44.87	124	Pc	12	55.20	-0.6
	0.7s	3.10nm			4.3mb	
ASPA	46.42	129	iPd	13	07.60	-0.4
	0.8s	18.00nm			5.1mb	
FORR	46.77	141	eP	13	10.50	-0.1
BRS	63.29	124	eP	15	10.00	-0.6
BNG	77.30	273	ePc	16	36.20	0.2
	0.9s	8.00nm			4.7mb	
			id	16	40.10	
ZOBO	160.79	232	ePKP	24	32.00	-9.7X

06d 16h

S.D. = 1.1 on 19 of 29 obs.

• SEP 06, 1989 16h 31m 53.39± 1.53s
51.231 N ±16.5km 15.688 E ± 7.3km
DEPTH = 5.0km (geophysicist)
POLAND (548)
ML 3.5 (GRF), 3.3 (VKA), 2.7 (KRA).

KSP	0.54	135	iPd	32 02.50	-1.8
	1.8s	662.00nm			
			iS	32 11.80	
			eLR	32 17.50	
BRG	1.16	253	iPn	32 16.10	0.6
			iPg	32 17.00	
			iSg	32 37.60	
PRU	1.44	211	Pn	32 20.60	0.4
			Pg	32 23.00	
			Sn	32 39.60	
			Sg	32 46.60	
			e	32 54.20	
CLL	1.69	274	iPn	32 22.40	-1.3
			iPg	32 25.90	
			iSg	32 51.80	
KHC	2.50	214	iPn	32 36.20	0.8
			Pg	32 42.80	
			Sn	33 13.00	
			Sg	33 21.80	
HOF	2.59	251	ePn	32 36.40	-0.2
MOX	2.64	259	ePg	32 46.00	8.6X
			iSg	33 25.00	
KRA	2.95	112	eP	32 43.40	1.6
			eS	33 21.50	
VKA	3.00	172	iPgc	32 49.20	6.8X
			iSg	33 34.00	
ZST	3.17	163	e(Pg)	33 08.00	23.1X
			e(Sg)	33 44.00	
GRF	3.24	243	ePn	32 45.80	-0.1
			ePg	32 59.60	
			eSg	33 45.00	
SPC	3.57	123	e(Pn)	32 56.50	5.8X
			e	33 02.00	
			i(Sg)	33 46.50	
KBA	4.43	201	iPnc	33 03.00	0.0
			e	33 17.00	
			iSg	34 22.90	

S.D. = 1.2 on 9 of 13 obs.

SEP 06, 1989 17h 35m 43.72± 0.33s
44.703 N ± 2.6km 7.268 E ± 3.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (GEN), 2.5 (LDG).

DOI	0.20	185	Pc	35 48.00	-0.2
			eSg	35 51.00	
PZZ	0.23	211	P	35 48.80	0.0
			S	35 51.77	
FOUF	0.39	244	iPgd	35 51.40	-0.3
			iSg	35 54.85	
RRL	0.41	302	P	35 52.08	0.0
			S	35 57.21	
STV	0.46	175	P	35 52.59	-0.5
			S	35 58.44	
ENR	0.49	167	P	35 53.00	-0.7
			S	35 59.28	
BNI	0.55	310	P	35 54.50	-0.3
			eSg	36 02.50	
ROB	0.59	133	P	35 55.87	0.1
			S	36 03.87	
LSD	0.76	354	P	35 58.66	-0.1
			S	36 08.38	
FIN	0.83	126	P	36 00.08	0.2
			S	36 10.74	
SBF	0.85	172	Pg	35 59.60	-0.5
			Sg	36 10.40	
LPG	0.88	335	Pg	36 00.80	0.1
			Sg	36 12.80	
LPL	0.90	335	Pg	36 01.00	-0.1
			Sg	36 12.00	
IMI	0.91	150	P	36 00.69	-0.5
			S	36 12.40	
PCP	0.93	100	P	36 01.92	0.5
			S	36 14.54	
FRF	1.23	202	Pg	36 07.50	1.0
			Sg	36 22.40	
LRG	1.41	208	Pg	36 09.80	0.4
			Sg	36 28.00	
LMR	1.47	202	Pg	36 11.20	0.9
			Sg	36 30.20	

S.D. = 0.5 on 18 of 18 obs.

SEP 06, 1989 17h 54m 17.72± 1.44s
24.452 S ± 9.8km 179.868 W ± 6.1km
DEPTH = 517.0 ± 21.2 km
4.9mb (15 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.80	278	iP	57 06.00	0.5
HBZ	13.20	186	eP	57 10.30	0.9
KRP	13.99	195	eP	57 20.00	2.6
PGZ	16.44	190	eP	57 41.90	0.0
	0.3s	33.00nm		5.4mb	
MNG	16.59	192	eP	57 41.30	-2.0
	0.2s	20.00nm		5.4mb	
			eS	00 31.50	
KIW	16.94	194	eP	57 45.10	-1.7
MTW	17.10	192	eP	57 47.30	-1.1
CAW	17.14	193	eP	57 48.30	-0.4
BLW	17.31	192	eP	57 50.10	-0.3
MRW	17.34	194	eP	57 49.60	-1.0
WEL	17.37	194	P	57 53.30	2.4
	0.8s	******nm		7.6mb	X
			S	00 47.00	
TCW	17.42	195	eP	57 51.00	-0.3
HNR	24.36	304	P	58 54.00	-2.1
BRS	24.76	257	iPc	59 00.50	0.8
TBI	27.80	94	iP	59 26.90	0.5
	0.8s	70.00nm		5.3mb	
RMO	28.37	259	iPc	59 32.50	1.1
	0.4s	10.00nm		4.7mb	
			e	00 57.00	
CAN	28.97	241	eP	59 37.90	1.3
BWA	29.25	243	eP	59 38.90	-0.1
CMS	31.01	249	iPd	59 55.10	1.0
PMO	31.46	79	iP	59 57.80	-0.2
	0.8s	35.00nm		5.0mb	
CTA	31.60	271	iPc	59 59.80	0.6
	0.5s	41.55nm		5.3mb	
VAH	31.61	79	iP	59 58.70	-0.6
	0.8s	15.00nm		4.6mb	
TPT	31.72	79	iP	00 00.00	-0.1
	0.8s	60.00nm		5.2mb	
RUV	31.85	79	iP	00 01.20	-0.1
	0.8s	40.00nm		5.0mb	
ASPA	42.07	261	iPc	01 25.20	-0.1
	0.4s	28.00nm		5.1mb	
			iS	07 05.70	
WB5	42.48	267	iPc	01 27.90	-0.6
			i	01 30.00	
			e	07 11.00	
WRA	42.49	267	Pd	01 28.10	-0.5
	0.4s	10.80nm		4.7mb	
WARB	48.10	256	iPc	02 11.40	-0.5
	0.4s	12.00nm		4.7mb	
COOL	52.13	249	eP	02 40.00	-1.6
KLB	54.88	248	eP	03 00.50	-0.6
MBL	55.31	260	iPd	03 03.40	-0.8
	0.3s	3.00nm		4.1mb	
BAL	55.94	249	eP	03 08.00	-0.5
NANU	58.78	258	iPd	03 28.20	0.2
MAT	72.42	326	eP	04 52.00	-0.6
	0.8s	7.45nm		4.3mb	
MDJ	82.79	326	eP	05 47.60	-0.3
WHN	83.43	308	eP	05 52.00	0.5
CN2	84.40	324	eP	05 56.00	0.0
KVN	85.56	43	eP	06 03.00	1.0
TIY	88.65	313	eP	06 17.80	1.3
CHTO	89.98	291	eP	06 24.10	1.2
	0.9s	2.34nm		4.1mb	
KSP	150.84	339	iPKPd	13 13.10	7.2X
CLL	151.41	343	iPKPc	13 13.90	7.2X
BRG	151.54	341	iPKP	13 13.80	6.9X

S.D. = 1.1 on 40 of 43 obs.

& SEP 06, 1989 18h 10m 00.53s
55.267 N 162.720 W
DEPTH = 170.3km
ALASKA PENINSULA (12)
<PAL>.

DRRA	0.43	144	ePc	10 23.33	0.5
			eS	10 40.15	
PS4	0.49	80	eP	10 23.97	0.8
DLG	0.52	104	eP	10 23.74	-0.8
			eS	10 41.04	
PVV	0.54	78	eP	10 24.09	-0.5
			eS	10 40.94	
SNKA	0.80	182	eP	10 25.39	-0.7
			eS	10 43.57	
SQF	1.24	91	eP	10 28.72	-0.8
			eS	10 49.30	
SASA	1.27	86	eP	10 29.01	-0.8
			eS	10 49.88	
SGB	1.32	77	eP	10 29.36	-0.9
			eS	10 50.78	
NGI	1.54	97	eP	10 31.67	-0.7
			eS	10 54.50	
BKJ	1.81	92	eP	10 34.66	-0.6
CNBA	1.86	103	eP	10 34.85	-0.8
IVF	1.92	70	eP	10 35.55	-0.8

12 obs. associated

SEP 06, 1989 21h 27m 27.11± 0.46s
27.657 N ± 4.2km 33.862 E ± 7.8km
DEPTH = 10.0km (geophysicist)
ARAB REPUBLIC OF EGYPT (553)
ML 4.0 (JER). MD 4.0 (HLW).

BADA	1.33	49	iP+	27 51.30	-0.3
SRFA	1.73	42	eP	27 57.30	0.0
HQL	1.92	33	eP	28 04.50	4.4X
			iS	28 25.00	
AYN	2.24	57	iP+	28 05.30	0.5
			iS	28 33.00	
MBH	2.29	23	eP	28 05.00	-0.4
WAJH	2.83	121	eP	28 12.50	-0.6
PRNI	2.86	20	eP	28 13.00	-0.6
KOT	2.88	322	ePn	28 13.50	-0.4
			eSn	28 56.50	
HLW	3.12	315	eP	28 26.50	9.3X
			e	28 50.00	
			e(S)	29 03.00	
MKT	3.47	19	eP	28 23.50	1.3
			eS	29 15.00	
AMAN	3.80	193	eP	28 28.00	1.0
AKSR	4.07	191	eP	28 32.00	1.2
DSI	4.12	18	e(P)	28 31.00	-0.4
MKRJ	4.18	21	P	28 46.00	13.6X
AGMR	4.27	197	eP	28 32.00	-1.6
AGAL	4.31	193	eP	28 34.00	-0.2
ZNT	4.68	12	eP	28 39.50	0.1
			eS	29 45.00	
ATZ	5.29	13	eP	28 48.50	0.4

S.D. = 0.8 on 15 of 18 obs.

• SEP 06, 1989 22h 19m 37.38± 0.48s
0.995 N ± 7.6km 126.089 E ±14.1km
DEPTH = 33.0km (normal)
4.6mb (5 obs.)
MOLUCCA PASSAGE (266)

AAI	5.11	156	eP	20 53.00	-0.6
WB5	22.28	159	eP	24 33.40	0.0
			eS	28 33.50	
WRA	22.33	159	Pc	24 34.10	0.2
	0.6s	22.80nm		4.8mb	
MBL	22.85	195	eP	24 39.00	0.0
	0.5s	5.00nm		4.3mb	
ASPA	25.66	163	iPc	25 06.60	0.5
	0.5s	25.00nm		5.1mb	
PSI	27.20	274	ePd	25 22.00	1.7
CHTO	31.97	305	e(P)	26 01.70	-1.2
XAN	36.59	336	P	26 41.80	-0.6
MAT	37.11	16	iPc	26 46.60	-0.1
	1.0s	12.00nm		4.7mb	
TIY	38.64	343	Pd	26 57.50	-2.1
	Z 16s	0.50um		4.4MszX	
	E 17s	0.50um			
BJI	39.90	348	eP	27 10.00	0.1
SNY	40.71	357	Pc	27 17.80	1.3
MDJ	43.55	4	eP	27 41.50	1.8
GTA	45.13	331	eP	27 53.40	0.6
GBA	49.74	287	Pc	28 28.80	-0.2
	0.4s	1.30nm		4.3mb	
WMO	54.61	327	P	29 05.50	0.3
SOD	92.73	338	eP	32 52.00	4.8X
NUR	94.77	331	eP	32 55.00	-1.6

S.D. = 1.1 on 17 of 18 obs.

SEP 06, 1989 23h 25m 34.17± 2.61s

0.969 N ± 7.2km 126.054 E ±12.7km
DEPTH = 90.9 ± 25.9 km
4.7mb (6 obs.)
MOLUCCA PASSAGE (266)

TSM	8.60	292	ePc	27	38.00	0.1
WB5	22.27	159	eP	30	23.90	-0.9
			eS	34	24.00	
WRA	22.32	159	Pd	30	24.30	-1.0
	0.6s		17.40nm			4.6mb
MBL	22.82	195	eP	30	31.00	0.8
	0.4s		2.00nm			3.8mb
OIS	25.17	149	eP	30	52.00	-0.8
IPM	25.25	279	ePc	30	53.90	0.3
	0.5s		15.00nm			4.7mb
NANU	25.54	203	eP	30	57.00	0.9
ASPA	25.65	163	iPc	30	56.40	-0.8
	0.5s		27.00nm			5.0mb
WARB	27.00	179	eP	31	10.30	0.8
LOE	28.97	306	eP	31	27.00	-0.4
GYA	31.47	325	P	31	50.40	0.9
FORR	31.70	177	eP	31	50.40	-0.9
	0.4s		19.00nm			5.2mb
CHTO	31.96	305	eP	31	53.30	-0.4
CD2	36.51	327	eP	32	32.50	-0.2
XAN	36.60	336	P	32	32.10	-1.2
TIY	38.66	343	eP	32	45.80	-4.8X
BJI	39.91	348	eP	33	01.00	0.2
SNY	40.73	357	eP	33	08.40	0.9
BWA	40.98	151	eP	33	12.00	2.2
MDJ	43.57	4	eP	33	31.80	1.1
GTA	45.14	331	eP	33	43.20	-0.3
GBA	49.71	287	Pd	34	19.10	-0.3
	0.6s		3.70nm			4.6mb
WMO	54.61	327	eP	34	54.50	-1.2
NAI	89.27	269	iPd	38	28.00	5.6X

S.D. = 1.0 on 22 of 24 obs.

? SEP 07, 1989 02h 30m 57.73± 7.29s
51.626 N ±44.2km 16.263 E ±44.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.5 (VKA).

KSP	0.78	179	iP	31	13.20	0.2
			iS	31	22.10	
			eLR	31	31.00	
BRG	1.64	244	iPg	31	27.40	0.7
			iSg	31	47.20	
PRU	1.97	214	Pn	31	31.00	-0.5
			Pg	31	32.90	
			Sn	31	50.10	
			Sg	31	56.50	
			eSg	56	32.00	
CLL	2.06	262	iPn	31	32.30	-0.5
			ePg	31	36.00	
			eSg	32	01.00	
KHC	3.03	216	Pn	31	46.50	-0.1
			Pg	31	53 00	
			Sn	32	15.00	
			Sg	32	34.90	
HOF	3.07	246	ePn	31	46.70	-0.4
MOX	3.09	253	ePn	31	48.00	0.6
			ePg	31	55.00	
			iSg	32	34.00	
VKA	3.37	179	iPgd	31	59.20	7.8X
			iSg	32	42.30	
GRF	3.75	241	e(Pg)	31	56.90	0.1
			e	32	04.10	
			eSg	32	54.70	

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

SEP 07, 1989 02h 54m 13.21± 0.74s
45.763 N ± 8.9km 15.735 E ± 5.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.6 (KBA). MD 3.1 (LJU), 2.7 (TRI). Felt at Samobor.

ZAG	0.18	73	iPgd	54	17.50	0.2
			iSg	54	19.80	
			i	54	20.80	
PTJ	0.21	49	iPgd	54	17.70	-0.1
			eSg	54	20.50	
VBY	0.42	233	iPgd	54	21.00	-0.9
			iSg	54	27.90	
LJU	0.88	289	iPgc	54	29.50	-0.7
			iSg	54	42.50	
			e	55	50.00	
CEY	0.92	269	e(Pg)	54	31.50	0.7
			eSg	54	43.50	
RIY	1.04	247	iPg	54	33.00	0.2
			iSg	54	47.10	
VOY	1.31	282	iPn	54	37.20	-0.4
			eSn	54	56.10	
			e	56	15.00	
TRI	1.38	268	ePg	54	38.80	0.3
			iSg	54	56.70	
RBL	1.65	295	P	54	43.70	1.2
			eSg	55	06.50	
KBA	2.11	309	iPgd	54	52.10	2.9X
			iSg	55	19.10	
ZST	2.61	21	eP	55	42.00	45.9X
CTI	2.87	277	P	55	06.00	6.1X
KHC	3.67	337	Pg	55	10.50	-0.8
			Sg	55	51.00	

S.D. = 0.8 on 10 of 13 obs.

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* SEP 07, 1989 03h 59m 51.45± 1.42s
36.955 N ± 9.6km 140.958 E ±15.5km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	0.98	220	iPd	00	09.80	0.9
			S	00	23.10	
YAMJ	1.42	329	iP+	00	16.00	0.9
			S	00	35.20	
NIIJ	1.59	281	iP+	00	17.80	0.2
CHJJ	1.82	241	iPd	00	20.30	-0.7
			S	00	41.60	
OFUJ	2.19	15	iP+	00	26.00	-0.3
			S	00	52.00	
MAT	2.25	260	iPc	00	26.60	-0.5
			iS	00	52.40	
IIDJ	2.87	240	P	00	35.70	-0.2
AOMJ	3.63	353	P	00	46.30	-0.3

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

? SEP 07, 1989 04h 24m 52.69± 4.42s
32.168 S ±30.7km 71.047 W ±37.5km
DEPTH = 117.8 ± 35.8 km
NEAR COAST OF CENTRAL CHILE (135)

PEL	1.02	163	iPd	25	13.60	-1.5
			i	25	26.50	
			i(S)	25	32.00	
FCH	1.32	151	eP	25	18.50	-0.1
TACH	1.48	176	iPc	25	19.80	-0.4
			iS	28	34.50	
PCH	1.52	163	ePd	25	21.00	0.3
CHCH	1.79	169	iPc	25	25.50	1.6
LNV	1.81	190	eP	25	24.00	-0.1
ZON	2.11	74	eP	25	29.00	1.0
			eS	26	01.00	
CFA	2.45	78	e(P)	25	32.70	0.3
MRA	4.53	94	ePd	26	00.50	0.3
TCA	5.56	83	ePc	26	13.00	-1.5
			(S)	27	19.00	

S.D. = 1.2 on 10 of 10 obs.

? SEP 07, 1989 04h 59m 28.20± 1.84s
30.048 N ±15.2km 141.993 E ±63.4km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ	6.33	347	eP	01	02.10	0.5
			S	02	07.70	
IIDJ	6.41	329	eP	01	03.70	0.8
CHJJ	6.49	338	P	01	03.60	-0.3
			S	02	10.30	
MAT	7.21	335	(P)	01	13.00	-1.0
	0.7s		6.85nm			4.7mb X
			eS	02	27.00	
WB5	50.18	189	eP	08	22.10	-0.7
WRA	50.24	189	P	08	24.00	0.7
	0.3s		0.70nm			4.2mb
BWA	64.41	174	eP	10	06.10	2.8X

S.D. = 1.0 on 6 of 7 obs.

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* SEP 07, 1989 05h 19m 47.31± 1.87s
16.028 N ±22.9km 95.854 W ±10.4km
DEPTH = 33.0km (normal)
3.0mb (1 obs.)
OAXACA, MEXICO (60)

OXX	1.34	322	iP	20	09.00	-1.0
			iS	20	27.00	
EVV	2.46	11	(P)	20	37.50	11.5X
SCX	3.17	77	eP	20	36.50	0.5
			iS	21	15.00	
TPX	3.64	107	(P)	20	49.50	6.8X
LVVM	3.73	351	eP	20	43.50	-0.5
IIT	3.79	322	eP	20	45.00	0.0
			(S)	21	32.50	
ACX	3.93	283	eP	20	46.00	-0.9
			(S)	21	34.50	
III	4.17	305	eP	20	52.00	1.6
			iS	21	42.00	
IIC	4.93	319	(P)	21	03.50	2.1
CRX	4.96	313	(P)	21	05.50	3.7X
MRX	6.26	307	(P)	21	27.00	7.2X
ALQ	21.10	335	eP	24	30.10	-1.5
	1.0s		0.75nm			3.0mb
GLA	24.12	318	eP	25	01.00	-0.2

S.D. = 1.4 on 9 of 13 obs.

% SEP 07, 1989 06h 33m 06.13± 1.22s
41.488 N ± 8.3km 19.767 E ±12.0km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.5 (SKO).

TIR	0.16	152	ePg	33	09.00	-0.8
PHP	0.54	68	ePg	33	16.40	-0.7
SDA	0.56	339	ePg	33	17.70	0.2
OHR	0.86	115	ePg	33	24.20	1.4
			eSg	33	38.00	
LSK	1.48	154	ePn	33	32.60	-0.3

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

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* SEP 07, 1989 06h 44m 11.96± 0.42s
53.811 N ± 9.8km 160.903 E ± 7.9km
DEPTH = 33.0km (normal)
4.5mb (13 obs.)
NEAR EAST COAST OF KAMCHATKA (218)

MAT	23.37	232	eP	49	19.00	0.7
	0.9s		32.77nm			4.8mb
FBA	27.58	46	P	49	58.00	0.5
	1.0s		6.00nm			4.2mb
INK	33.01	38	eP	50	46.00	0.5
EDM	47.95	54	ePd	52	49.00	0.1
CMB	54.15	73	e(P)	53	36.50	0.6
KVN	54.73	70	P	53	40.70	0.3
TNP	55.90	71	P	53	48.70	-0.2
	1.0s		8.50nm			4.7mb
BW06	56.75	62	P	53	55.00	0.0
SUF	58.52	337	eP	54	09.00	2.2
RSSD	58.61	57	P	54	07.90	-0.1
GOL	61.15	62	P	54	26.10	0.6
NB2	62.99	344	P	54	35.70	-1.5
	0.6s		2.10nm			4.4mb
ALQ	64.11	66	eP	54	45.60	0.4
	0.9s		3.57nm			4.5mb
			ePcP	55	20.50	
FVM	69.91	53	P	55	20.00	-1.4
	0.7s		21.77nm			5.3mb
EKA	70.43	350	P	55	24.00	-0.3
	0.5s		1.70nm			4.4mb
OLY	71.40	55	P	55	29.50	-1.0
CLL	71.85	339	iPc	55	32.00	-0.9
KHC	73.79	338	P	55	45.20	0.9
WB5	76.87	206	eP	56	01.80	-0.3
WRA	76.94	206	Pc	56	02.20	-0.3
	1.0s		3.50nm			4.3mb
LOR	77.43	344	eP	56	04.10	-0.9
	0.6s		3.60nm			4.6mb
AVF	77.97	344	eP	56	07.60	-0.3
	0.8s		2.60nm			4.3mb
SMF	78.03	344	eP	56	08.30	0.0
	0.6s		2.10nm			4.3mb
LPG	78.64	342	eP	56	12.60	0.6
	0.8s		8.00nm			4.8mb
MAF	78.65	345	eP	56	11.70	0.0
	0.6s		2.70nm			4.4mb
SPA	143.63	180	e(PKP)	03	39.60	-4.0X
	1.0s		5.00nm			

S.D. = 0.8 on 25 of 26 obs.

SEP 07, 1989 07h 57m 28.57± 0.63s

07d 07h

23.919 N ± 3.4km 121.646 E ± 3.8km
DEPTH = 14.3 ± 3.8 km
4.9mb (19 obs.)
TAIWAN (244)

TWD		0.17	344	iPd	57 31.70	-1.1
				eS	57 33.00	
TWF1		0.65	210	iPc	57 41.50	0.4
				eS	57 51.30	
TWC		0.71	15	iPd	57 41.90	-0.3
				eS	57 52.10	
TWO		0.82	296	ePd	57 43.80	-0.3
TWZ		1.17	357	ePc	57 50.80	0.7
TWK		1.25	239	eP	57 52.50	1.2
				eS	58 10.00	
ANP		1.26	355	iPc	57 52.30	0.6
QZH		2.96	291	Pc	58 14.50	-1.5
	Z	10s		24.10um		
	N	10s		17.00um		
	E	10s		21.10um		
				S	58 55.00	
HKC		7.07	258	iP	59 15.10	1.1
				S	00 31.00	
SSE		7.16	357	P	59 12.00	-3.3X
		0.6s		0.08nm		3.1mb X
	Z	10s		3.40um		5.2Msz
	E	12s		7.10um		
				pP	59 18.80	
				S	00 30.00	
				Lg	01 22.50	
BAG		7.54	188	eP	59 21.50	0.7
MCO		7.66	258	eP	59 22.10	-0.3
GZH		7.67	265	Pc	59 24.80	2.4
	E	10s		4.40um		
NJ2		8.47	344	Pd	59 30.00	-3.6X
	Z	12s		7.90um		
	N	10s		4.80um		
				S	01 03.60	
OCP		9.25	183	eP	00 12.00	27.6X
WHN		9.25	317	P	59 42.00	-2.5
	Z	12s		6.63um		
	N	10s		6.17um		
	E	10s		7.62um		
				S	01 27.00	
OIZ		12.02	248	eP	00 23.00	0.7
	N	12s		2.75um		
				S	02 40.60	
TIA		12.86	343	eP	00 32.00	-1.5
	Z	10s		5.00um		
	N	10s		4.40um		
				sS	03 06.00	
GYA		13.80	284	P	00 45.00	-1.2
	Z	10s		4.60um		
	N	10s		4.80um		
	E	10s		7.40um		
DL2		14.94	360	eP	01 04.00	3.1X
	Z	13s		1.60um		
	E	14s		2.70um		
				SS	04 04.00	
XAN		15.01	315	P	01 00.80	-1.1
TIY		15.85	332	Pc	01 13.80	1.0
	Z	11s		6.90um		
	N	10s		5.60um		
				pP	01 20.00	
				sP	01 26.50	
				sS	04 18.00	
BJI		16.72	345	eP	01 26.00	2.2
		8.0s		0.71nm		1.8mb X
	Z	12s		2.10um		5.1Msz
	N	10s		1.90um		
				eS	04 30.00	
DAV		17.15	167	eP	01 34.00	4.6X
KMI		17.25	278	eP	01 34.00	3.2X
	Z	10s		8.90um		
				SS	05 02.00	
CD2		17.33	298	eP	01 30.40	-1.2
	Z	12s		5.10um		
				eS	04 42.50	
SNY		17.93	5	iPd	01 40.60	1.6
	Z	13s		3.20um		
	N	11s		2.00um		
	E	10s		1.10um		
				sS	05 04.50	
IIDJ		18.20	47	eP	01 45.60	3.2X
MTMJ		18.79	44	eP	01 50.00	0.3
HHC		18.88	336	P	01 54.60	3.8X
	Z	13s		2.20um		5.1MszX
	N	11s		4.20um		
	E	10s		1.60um		
				sS	05 34.00	
MAT		19.02	45	eP	01 55.00	2.6
		1.3s		34.62nm		4.4mb
				(S)	05 37.00	
CHJJ		19.25	47	eP	01 55.50	0.2
BTO		19.29	332	P	01 55.00	-0.8
	Z	11s		5.30um		
	N	11s		6.80um		
	E	11s		3.60um		
				sP	02 07.00	
				sS	05 37.00	
LZH		19.58	312	iPc	02 00.00	0.7
		3.0s		0.23nm		1.9mb X
	Z	10s		4.50um		
	N	10s		2.30um		
	E	10s		2.10um		
				sP	02 12.00	
				sS	05 45.00	
				SS	06 02.00	
LOE		19.72	255	eP	02 01.00	0.3
TSM		19.88	191	eP	02 01.00	-1.4
CN2		20.08	8	Pd	02 03.00	-1.3
	Z	15s		2.30um		4.6MszX
	N	13s		1.00um		
	E	13s		1.90um		
				eS	05 47.00	
MDJ		21.64	16	eP	02 20.30	0.0
	E	16s		3.40um		
				S	06 18.00	
CHG		21.73	261	eP	02 22.80	1.3
		0.8s		24.63nm		4.7mb
CHTO		21.73	261	eP	02 22.20	0.8
		1.3s		21.24nm		4.4mb
NST		21.82	252	eP	02 30.80	8.5X
BDT		22.20	257	eP	02 29.10	3.1X
GTA		24.07	315	eP	02 45.00	0.6
	Z	12s		3.00um		5.0MszX
	E	10s		1.30um		
				pP	02 51.00	21kmX
				sS	07 08.00	
GUMO		24.23	111	eP	02 47.30	1.3
		1.3s		235.29nm		5.6mb
PJG		24.23	111	eP	02 47.50	1.5
				TT	27 40.50	
GUA		24.30	111	eP	02 46.50	-0.1
PCI		24.74	184	ePc	02 52.90	2.0
LSA		27.77	289	eP	03 20.50	1.0
	E	10s		0.90um		
PSI		30.46	230	ePd	03 41.00	-2.1
WMQ		34.14	314	P	04 16.90	1.7
	Z	12s		1.70um		5.0MszX
				PP	05 35.00	
				S	09 38.00	
NDI		39.94	287	eP	05 06.00	1.9
GBA		42.94	264	Pd	05 34.00	5.1X
		0.9s		5.30nm		4.3mb
KOD		44.18	260	eP	05 41.00	1.7
WB5		45.26	163	eP	05 46.00	-1.5
WRA		45.32	163	Pd	05 46.90	-1.0
		0.6s		18.40nm		5.2mb
OIS		47.54	157	iPd	06 05.00	-0.5
ASPA		48.77	165	iPc	06 14.70	-0.4
		1.0s		17.00nm		5.0mb
CTA		49.88	149	iPd	06 24.40	0.8
		0.9s		19.33nm		5.1mb
WARB		50.04	174	eP	06 22.00	-2.7
		0.5s		12.00nm		5.1mb
MAIO		54.34	298	eP	06 57.00	-0.1
MHI		54.34	298	eP	06 57.00	-0.1
FORR		54.81	173	eP	06 58.70	-1.5
STK		58.67	160	eP	07 26.50	-1.3
SVW		65.88	32	eP	08 16.30	0.6
IMA		66.25	26	eP	08 18.10	0.0
		0.9s		10.20nm		5.0mb
FBA		68.85	27	eP	08 33.80	-0.5
PMR		68.90	31	eP	08 33.60	-1.0
KEV		69.38	338	eP	08 31.00	-6.4X
SOD		70.08	336	iP	08 40.90	-0.8
				i	08 54.60	
TOA		70.16	30	eP	08 42.60	0.2
SUF		71.49	331	eP	08 50.00	-0.4
NUR		72.83	329	eP	08 57.00	-1.3
INK		73.31	22	eP	09 00.00	-1.0
		0.9s		54.50nm		5.6mb
MBC		73.42	13	eP	09 01.00	-0.6
		0.8s		6.00nm		4.7mb
VRI		76.49	314	ePc	09 28.50	8.8X
NB2		78.66	332	P	09 30.20	-1.2
		0.8s		3.60nm		4.5mb
PTJ		83.35	317	eP	09 48.40	-8.2X
VOY		84.56	318	e(P)	09 55.30	-7.4X
PNT		89.03	35	eP	10 25.00	0.6
LPG		89.10	320	eP	10 25.70	0.6
		0.8s		5.90nm		4.9mb
LON		89.34	38	P	10 26.30	0.4
EDM		89.63	30	eP	10 26.50	-0.6
SMF		90.11	322	eP	10 28.70	-0.8
		0.6s		3.90nm		4.8mb
AVF		90.29	323	eP	10 29.60	-0.7
		0.9s		3.20nm		4.6mb
DPW		90.65	36	P	10 32.30	0.3
RJF		92.21	322	eP	10 38.50	-0.6
		1.0s		8.00nm		5.1mb
WDC		92.42	43	ePd	10 40.90	0.7
SES		92.59	31	eP	10 41.00	0.1
MIN		93.14	43	ePd	10 43.30	-0.4
FFC		93.20	24	eP	10 43.00	-0.5
		0.8s		17.00nm		5.5mb
ORV		93.66	44	ePd	10 45.70	-0.2
BRK		94.13	45	e(P)	10 48.40	0.3
CMB		95.25	44	ePd	10 53.50	0.1
PRS		95.59	46	ePd	10 55.20	0.3
KVN		96.09	43	P	10 57.10	-0.3
PRI		96.17	46	ePd	10 58.50	0.8
FRI		96.30	45	ePd	10 58.00	-0.1
TNP		97.23	43	P	11 02.70	0.2
		0.7s		4.78nm		5.2mb

S.D. = 1.1 on 83 of 98 obs.

• SEP 07, 1989 08h 07m 30.05± 1.72s
37.496 N ±15.6km 21.181 E ± 9.2km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
SOUTHERN GREECE (368)

SRN		2.55	339	ePn	08 12.80	2.8
LSK		2.69	350	ePn	08 11.70	-0.3
KBN		3.14	355	ePn	08 19.10	0.9
VLO		3.25	337	ePn	08 28.70	8.9X
BERA		3.34	344	ePn	08 22.70	1.5
OHR		3.62	355	iPn	08 24.00	-1.2
LCI		3.79	319	Pc	08 31.00	3.5X
				eSn	09 18.00	
TIR		3.98	346	ePn	08 31.00	0.8
SOI		4.10	280	P	08 26.20	-5.8X
				eSg	09 09.60	
PHP		4.23	352	ePn	08 35.00	1.3
SKO		4.47	2	iPn	08 35.50	-1.8
MMB		4.54	25	eP	08 34.00	-4.2X
KKB		4.61	18	eP	08 40.00	0.9
SDA		4.70	345	ePn	08 40.00	-0.4
BCI		4.94	350	ePn	08 42.50	-1.3
RZN		5.00	32	iPd	08 44.00	-0.9
MGR		5.12	303	P	08 45.00	-1.5
KDZ		5.28	37	iP	08 47.00	-1.7
VTS		5.32	16	eP	08 50.00	0.6
DIM		5.65	35	eP	08 54.00	0.1
ELL		7.01	93	ePn	09 14.00	0.8
VBY		9.15	333	e(Pn)	09 41.70	-1.0
				e(Sn)	11 27.10	
EKA		24.29	325	P	12 45.00	-0.2
		1.0s		9.20nm		4.3mb
NB2		24.39	348	P	12 46.90	0.7
		0.9s		3.60nm		3.9mb

S.D. = 1.3 on 20 of 24 obs.

SEP 07, 1989 08h 18m 33.17± 0.81s
23.883 N ± 5.3km 121.688 E ± 6.3km
DEPTH = 14.8 ± 4.6 km
4.8mb (11 obs.)
TAIWAN (244)

TWD		0.21	337	iPd	18 37.20	-1.0
				eS	18 38.60	
TWF1		0.64	214	iPc	18 46.70	1.2
				eS	18 56.50	
TWC		0.74	11	iPd	18 47.40	0.2
				eS	18 57.70	
TWO		0.87	297	iPd	18 49.10	-0.4
TWZ		1.21	355	eP	18 55.70	0.4
TWK		1.26	241	ePc	18 57.90	1.7
				eS	19 15.10	

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ANP      1.30 353 iPd    18 57.50    0.7
QZH      3.01 291 Pd     19 19.00   -2.2
      Z  10s      7.00um
      N  10s      5.40um
      E  10s      6.20um
                   S     20 01.40
SSE      7.20 357 P      20 16.50   -3.9X
       0.6s      0.05nm          2.8mb X
      Z  10s      1.40um          4.1MszX
      E  12s      2.10um
                  pP     20 23.40
                  Lg     22 22.00
MCO      7.69 258 eP     20 29.00    1.7
GZH      7.70 266 Pc     20 25.20   -2.2
NJ2      8.51 344 Pc     20 35.00   -3.8X
      Z  14s      2.40um
                   S     22 06.20
WHN      9.31 317 eP     20 46.00   -3.7X
      Z  12s      2.41um
      N  10s      1.76um
      E  10s      2.25um
                  pP     20 51.50
                   S     22 23.50
OIZ     12.04 249 eP     21 30.80    3.6X
      N  13s      0.90um
                  eS     23 44.80
GYA     13.84 284 P      21 49.00   -2.3
      N  10s      1.30um
      E  10s      1.80um
                   S     24 14.00
XAN     15.06 315 eP     22 03.60   -3.5X
TIY     15.90 332 Pd     22 20.00    2.0
      Z  13s      2.40um
      N  10s      2.40um
8JI     16.77 345 eP     22 32.50    3.6X
      Z  12s      0.90um
      N  11s      0.58um
CD2     17.38 298 eP     22 39.10    2.3X
      Z  12s      1.60um
      E  10s      2.10um
                  eS     25 53.50
HHC     18.93 336 P      23 00.80    4.9X
      N  11s      1.60um
MAT     19.02  45 eP     23 00.00    3.1X
BTO     19.34 332 eP     23 02.50    1.6
      Z  11s      1.50um
      N  11s      2.00um
      E  11s      0.90um
                  sS     26 45.00
LZH     19.63 312 P      23 07.00    2.7X
       2.0s      0.05nm          1.5mb X
      Z  16s      1.50um          5.1Msz
      N  10s      0.50um
      E  10s      0.60um
                  pP     23 12.00   20kmX
CN2     20.11   8 eP     23 08.50   -0.6
      Z  15s      0.80um          4.2MszX
      N  13s      0.30um
      E  13s      0.60um
                 epP     23 14.00   21kmX
                  eS     26 53.00
MDJ     21.67  15 eP     23 24.50   -0.6
CHG     21.77 261 eP     23 27.20    0.9
       1.0s     20.25nm          4.5mb
CHTO    21.77 261 eP     23 27.50    1.2
       1.0s      8.25nm          4.1mb
                  pP     23 32.60   18kmX
GTA     24.12 315 eP     23 49.80    0.4
WMO     34.19 314 P      25 22.50    2.3X
      Z  12s      0.70um          4.6MszX
                  pP     26 32.00 362kmX
WB5     45.22 163 eP     26 50.20   -1.5
WRA     45.27 163 Pc     26 51.60   -0.5
       0.6s      4.70nm          4.6mb
ASPA    48.73 165 eP     27 17.00   -2.2
       0.9s     10.00nm          4.9mb
CTA     49.83 149 iPc    27 28.90    1.2
       0.8s      7.46nm          4.7mb
MHI     54.39 298 eP     28 02.00    0.0
STK     58.63 160 eP     28 31.50   -0.5
SVW     65.89  32 eP     29 20.40    0.1
IMA     66.27  26 eP     29 22.20   -0.5
       0.8s      6.50nm          4.9mb
FBA     68.86  27 eP     29 38.00   -0.9
PMR     68.91  31 eP     29 37.60   -1.6
KEV     69.43 338 eP     29 52.00    9.8X
SOD     70.12 336 eP     29 48.00    1.5

TOA     70.17  30 eP     29 46.90   -0 1
NUR     72.88 329 eP     29 48.00  -15.1X
      Z  15s      0.60um          5.0MszX
                   LR    44 10.00
INK     73.33  22 eP     30 04.00   -1.6
       0.8s     29.00nm          5.4mb
NB2     78.70 332 P      30 34.20   -2.0
       0.7s      2.60nm          4.4mb
PNT     89.04  35 ePc    31 30.00    1.1
       0.9s     12.00nm          5.2mb
LON     89.34  38 P      31 30.20   -0.3
EDM     89.64  30 ePc    31 31.10   -0.6
DPW     90.66  36 P      31 37.00    0.4
WDC     92.42  43 ePc    31 46.00    1.3
FFC     93.22  24 eP     31 48.00   -0.1
       0.8s     15.00nm          5.5mb
ORV     93.66  44 ePc    31 51.20    0.8
CMB     95.25  44 ePc    31 58.90    1.0
KVN     96.09  43 P      32 02.50    0.6
FRI     96.30  45 e(P)   32 03.30    0.7
TNP     97.23  43 P      32 07.70    0.7
       0.7s      5.11nm          5.2mb
     S.D. = 1.3  on  43 of  56 obs.
-------------------------------------
&  SEP  07, 1989  08h 35m 10.72s
   56.634 N          154.546 W
   DEPTH =  75.2km
 KODIAK ISLAND REGION              ( 13)
      <AGS-P>.

KDC      1.58  44 eP     35 35.50   -1.8
CDD      2.35  11 eP     35 46.43   -1.5
OPT      3.11  12 eP     35 56.92   -1.5
CNPM     3.39  30 eP     36 00.63   -1.7
ILIM     3.56  13 eP     36 02.60   -2.1
SDN      3.59 251 eP     36 02.90   -2.1
NNL      3.82  25 eP     36 09.05    0.7
RDT      4.11  15 eP     36 09.72   -2.7
SVW      4.52 353 eP     36 16.90   -1.4
SPU      4.74  15 eP     36 18.55   -2.8
NCG      4.94  13 eP     36 21.75   -2.4
KNIM     5.16  41 eP     36 23.57   -3.5
SUA      5.23  20 eP     36 25.13   -3.0
PMS      5.30  27 eP     36 25.59   -3.4
PMR      5.70  27 eP     36 33.80   -0.8
TOA      6.95  34 eP     36 53.90    1.9
       16 obs. associated
-------------------------------------
%  SEP  07, 1989  10h 07m 13.68± 0.83s
   38.027 N ± 7.9km   29.178 E ± 8.1km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

KHL      0.40  42 iPg    07 21.80   -0.1
                  iSg    07 28.80
YER      1.14 219 ePn    07 33.60   -1.5
BCK      1.25 116 ePn    07 37.50    0.5
ALT      1.26  35 ePn    07 36.40   -0.8
ELL      1.40 155 ePn    07 40.00    0.6
IZM      1.55 284 ePn    07 42.70    1.3
KCT      2.31 344 iPn    08 08.50   16.1X
     S.D. = 1.3  on   6 of   7 abs.
-------------------------------------
   SEP  07, 1989  10h 25m 45.76± 0.21s
   23.168 S ± 7.6km  175.861 W ± 5.4km
   DEPTH =  33.0km  (normal)
   5.1mb ( 23 abs.)  4.6Msz (  1 abs.)
 TONGA ISLANDS REGION              (174)
      CENTROID, MOMENT TENSOR      (HRV)
      Data Used: GDSN
      L.P.B.:  9S, 16C
      Centraid Location:
      Origin Time        10:25:55.0 0.9
      Lat 23.11S 0.10 Lan 176.11W 0.10
      Dep  69.9 6.9 Half-duration  1.6
      Moment Tensor;   Scale 10**16 Nm
        Mrr=-4.37 0.40  Mtt= 6.95 0.82
        Mff=-2.58 0.72  Mrt= 3.89 0.64
        Mrf= 2.82 0.65  Mtf=-3.49 0.56
       Principal Axes:
        T  Val=  8.76  Plg=13  Azm= 14
        N       -0.53       38      273
        P       -8.22       49      119
      Best Double Couple:Mo=8.5*10**16
       NP1:Strike=143 Dip=46 Slip= -31
       NP2:       255      68      -132

AFI      9.99  23 P      28 54.20   44.0X
                  eS     30 47.00
RAR     15.03  86 P      29 14.00   -3.5X
                   S     31 45.00
PVC     15.78 287 iPc    29 52.00   24.8X
DZM     16.38 270 iPc    29 42.80    7.9X
PGZ     18.62 199 eP     30 03.80    1.2
MNG     18.87 201 eP     30 04.00   -1.7
WEL     19.70 201 eP     30 18.00    2.7
                   S     33 42.00
TBI     24.25  96 iP     31 04.40    3.6X
       1.0s     70.00nm          5.2mb
PAE     25.21  82 iP     31 08.60   -1.6
       1.0s     55.00nm          5.1mb
PPT     25.24  82 iP+    31 08.80   -1.7
       1.0s     85.00nm          5.3mb
      Z  25s      2.00um          4.5MszX
PPN     25.39  82 iP     31 10.70   -1.1
HNR     26.88 297 e(P)   31 15.00  -10.6X
BRS     28.63 255 iPc    31 42.50    1.0
RMO     32.22 257 eP     32 14.30    1.0
       0.6s     20.00nm          5.2mb
CAN     32.80 240 eP     32 19.70    1.4
BWA     33.09 242 eP     32 20.70   -0.1
CMS     34.89 248 eP     32 37.60    1.3
       0.7s     14.00nm          5.0mb
TOO     36.04 238 iPd    32 48.00    1.9
       0.6s     11.00nm          5.0mb
OLP     36.26 256 iPc    32 49.10    1.1
PMG     37.92 285 eP     33 02.00    0.0
STK     38.52 247 eP     33 07.00    0.1
OIS     41.29 265 eP     33 30.00    0.0
ASPA    45.90 259 iPc    34 07.30    0.0
       0.5s     27.00nm          5.4mb
      Z  20s      0.74um          4.6Msz
                   LR    52 14.30
WB5     46.24 264 eP     34 08.30   -1.7
WRA     46.25 264 Pc     34 09.10   -0.9
       0.5s     20.90nm          5.3mb
JAY     46.79 290 ePd    34 14.50    0.2
FORR    50.08 248 eP     34 38.40   -1.2
       0.4s     35.00nm          5.7mb
WARB    51.97 254 eP     34 52.50   -1.7
       0.3s      7.00nm          5.1mb
KNA     52.48 268 eP     34 57.40   -0.6
SBA     55.36 184 eP     35 23.80    5.4X
COOL    56.01 247 eP     35 22.00   -1.7
       0.4s      4.00nm          4.8mb
KLB     58.76 246 eP     35 42.00   -1.1
       0.3s      3.00nm          4.9mb
MBL     59.15 258 iPd    35 45.00   -0.9
       0.3s      4.00nm          5.0mb
BAL     59.82 247 eP     35 49.50   -1.0
       0.4s      5.00nm          5.0mb
MUN     60.00 245 eP     35 51.00   -0.7
NANU    62.64 256 iPc    36 08.60   -1.0
       0.3s     10.00nm          5.4mb
SPA     66.97 180 e(P)   36 41.20    3.9X
       1.0s     26.50nm          5.3mb
PRS     78.41  42 ePc    37 45.50    0.7
GCC     78.48  41 ePc    37 45.60    0.5
BCH     78.49  44 P      37 46.00    0.6
PCC     78.55  41 e(P)   37 46.60    1.1
SAO     78.64  42 eP     37 46.30    0.2
PRI     78.73  43 ePc    37 47.10    0.4
BRK     78.87  40 e(P)   37 47.50    0.2
BKS     78.89  40 eP     37 48.10    0.7
       0.8s     31.00nm          5.4mb
MHC     78.90  41 ePc    37 48.20    0.6
BAR     79.20  48 eP     37 44.00   -5.3X
PLM     79.48  47 eP     37 53.00    2.1
RVR     79.52  46 eP     37 51.00    0.1
SBB     79.64  45 eP     37 52.00    0.4
ISA     79.81  44 eP     37 53.00    0.5
                   e     38 09.00
FRI     79.86  42 ePc    37 52.80    0.2
CMB     80.11  41 ePc    37 54.10    0.1
ORV     80.42  40 eP     37 55.60    0.0
TPC     80.47  47 eP     37 57.00    1.0
CLC     80.47  45 eP     37 56.00    0.0
WDC     80.49  38 ePc    37 56.30    0.4
GLA     80.68  48 eP     37 58.00    0.8
MIN     80.87  39 eP     37 58.00   -0.2
TNP     82.09  43 P      38 04.40   -0.2
       0.8s      8.53nm          4.8mb
KVN     82.14  42 P      38 04.20   -0.6
LON     84.98  34 P      38 18.80   -0.1
```

07d 10h

CN2	85.61	322	eP	38	21.40	-0.7
SNA	86.67	178	e(P)	38	30.60	3.7X
	0.9s	12.60nm			5.1mb	
PMR	87.16	12	P	38	29.70	0.4
ALQ	87.54	50	eP	38	32.50	0.5
	1.0s	6.25nm			4.8mb	
			e	38	47.60	
DPW	87.58	35	P	38	31.50	-0.2
PNT	87.77	33	eP	38	33.00	0.5
	0.7s	12.00nm			5.3mb	
BW06	89.57	42	P	38	40.20	-1.3
FBA	90.43	12	P	38	43.90	-0.8
GOL	90.67	47	P	38	46.90	0.2
	0.6s	4.12nm			4.9mb	
XAN	91.32	307	Pd	38	50.00	0.5
CHG	93.00	289	eP	39	00.10	2.6X
CHTO	93.00	289	eP	38	57.50	0.0
	0.7s	2.06nm			4.7mb	
			e	39	11.80	
EDM	93.28	32	eP	38	57.00	-1.1
RSSD	93.71	43	P	38	59.90	-0.6
CNCB	99.10	113	eP	39	15.00	-11.1X
LPB	99.13	112	(P)	39	16.00	-10.1X
ZOBO	99.23	112	eP	39	26.00	-0.7
			LR	12	24.00	
PDCR	124.76	125	ePKP	44	42.60	-1.9
ITR	127.65	122	ePKP	44	49.30	-0.9
BUL	130.77	211	ePKP	44	57.10	1.0
	1.0s	8.50nm				
KEV	131.45	350	ePKP	45	10.00	14.3X
SUF	137.76	345	ePKP	45	07.00	-0.9
NUR	140.04	344	ePKP	45	09.00	-3.0X
NB2	141.84	354	PKP	45	10.00	-5.4X
	1.0s	2.70nm				
EKA	147.42	8	PKP	45	26.00	1.2
	0.9s	7.20nm				
DMU	148.20	12	ePKP	45	29.50	3.4X
DLE	148.85	12	ePKP	45	30.40	3.2X
WIT	150.34	357	ePKP	45	37.00	7.6X
			e	45	51.50	
KRA	150.44	339	iPKPd	45	35.30	5.6X
			e	45	50.70	
BBTK	150.65	311	ePKP	45	36.00	5.5X
KSP	150.80	344	iPKP	45	35.80	5.6X
	0.8s	32.00nm				
			i	45	51.00	
VRI	150.88	327	ePKPc	45	35.00	4.5X
CLL	151.08	348	iPKPd	45	36.10	5.5X
	1.1s	49.00nm				
			i	45	45.10	
			i	45	51.90	
SPC	151.08	338	iPKP	45	37.50	6.5X
			i	45	52.00	
WTS	151.15	357	ePKP	45	36.50	5.8X
	0.9s	28.00nm				
			e	45	52.00	
BRG	151.31	347	iPKP	45	36.30	5.3X
	0.8s	30.00nm				
			i	45	44.90	
			i	45	52.20	
MLR	151.53	327	ePKPc	45	37.50	5.8X
PRNI	151.59	291	ePKP	45	38.00	5.9X
MBH	151.76	290	iPKPc	45	39.00	6.7X
PRU	152.01	346	PKP	45	38.50	6.4X
	0.9s	14.00nm				
			i	45	54.80	
CMP	152.14	327	ePKPc	45	18.00	-14.5X
ENN	152.42	358	ePKP	45	39.50	6.9X
	1.0s	22.00nm				
			e	45	55.00	
MEM	152.57	357	PKP	45	39.50	6.7X
HHC	153.04	346	ePKP	45	34.00	0.4
			e	45	41.40	
			i	45	57.50	
DOU	153.12	359	PKP	45	41.30	7.7X
	0.7s	4.40nm				
			e	45	57.00	
BSF	155.30	356	ePKP	45	54.90	18.1X
BNG	156.75	219	ePKPc	45	50.90	11.3X
	0.6s	17.00nm				
			id	45	56.20	
			id	46	10.20	
KIC	161.23	152	PKP	45	45.80	1.3
TIC	161.36	150	PKP	45	45.40	0.7
S.D. = 1.0 on 74 of 111 obs.						

• SEP 07, 1989 11h 13m 03.47± 1.89s
24.654 S ±10.0km 179.805 E ±10.2km
DEPTH = 500.8 ± 24.4 km
4.3mb (6 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.54	279	iPc	15	51.00	2.1
KRP	13.72	194	P	16	07.00	6.1X
PGZ	16.19	190	eP	16	27.30	1.6
MNG	16.33	192	eP	16	25.50	-1.6
MTW	16.85	191	eP	16	30.90	-1.3
CAW	16.88	192	eP	16	32.40	-0.2
			eS	19	25.30	
WDW	17.05	192	eP	16	33.10	-1.1
BLW	17.06	191	eP	16	36.10	1.8
MRW	17.07	193	eP	16	34.10	-0.3
			eS	19	27.50	
WEL	17.11	193	eP	16	34.40	-0.4
TCW	17.15	194	eP	16	35.30	0.2
HNR	24.23	305	eP	17	40.00	-1.5
CTA	31.31	272	iPd	18	44.00	0.5
	0.8s	17.91nm			4.7mb	
WB5	42.17	267	eP	20	12.60	-0.3
WRA	42.18	267	Pd	20	11.90	-1.1
	0.6s	2.00nm			3.8mb	
FORR	45.84	250	eP	20	41.00	-0.5
	0.4s	16.00nm			4.9mb	
WARB	47.76	256	eP	20	55.30	-0.9
SPA	65.49	180	e(P)	23	00.10	2.0
	1.0s	9.00nm			4.4mb	
PRS	82.20	44	eP	24	32.60	0.1
GCC	82.24	43	ePc	24	33.50	0.9
PRI	82.54	45	ePc	24	34.60	0.3
BRK	82.61	43	ePc	24	34.20	-0.2
MHC	82.66	43	ePc	24	35.00	0.1
FHC	83.45	39	ePc	24	34.20	-4.4X
FRI	83.66	45	eP	24	39.40	-0.3
CMB	83.87	43	ePc	24	40.50	-0.3
ORV	84.12	42	ePc	24	41.80	-0.2
WDC	84.15	40	ePc	24	42.00	-0.1
MIN	84.55	41	eP	24	43.80	-0.5
CHTO	89.77	291	e(P)	25	10.90	1.7
	1.0s	1.25nm			3.8mb	
PNT	91.21	35	eP	25	15.00	-0.1
ALQ	91.56	52	eP	25	16.80	-0.5
	0.9s	3.15nm			4.3mb	
NB2	142.79	351	PKP	31	35.20	-5.0X
	0.9s	4.60nm				
CLL	151.52	343	iPKP	32	00.00	5.7X
	0.9s	18.00nm				
BRG	151.64	341	iPKP	32	00.80	6.3X
	0.8s	14.00nm				
BNG	153.00	225	ePKPc	31	57.50	0.0
	0.6s	5.00nm				
			ic	32	04.90	
S.D. = 1.1 on 31 of 36 obs.						

? SEP 07, 1989 12h 16m 58.88± 4.59s
47.287 N ±32.3km 7.570 E ±13.8km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
MD 1.0 (STR).

FEL	0.66	27	Pg	17	12.05	-0.1
BSF	0.76	316	Pg	17	13.56	-0.2
			Sg	17	24.04	
ECH	0.97	344	Pg	17	17.40	0.1
			Sg	17	30.69	
WLS	1.14	353	Pg	17	20.43	0.3
			Sg	17	36.16	
CDF	1.14	350	Pg	17	20.12	-0.2
			Sg	17	36.19	
VITF	1.42	312	Pg	17	24.78	0.1
S.D. = 0.2 on 6 of 6 obs.						

? SEP 07, 1989 12h 49m 44.01± 3.47s
23.910 N ±17.5km 122.773 E ±25.7km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWD	1.09	279	iPc	50	03.40	-1.1
			eS	50	14.80	
TWC	1.09	310	iPd	50	03.80	-0.7
TWF1	1.46	248	iPc	50	10.50	0.0
			eS	50	27.80	
TWZ	1.61	318	ePd	50	13.50	1.0
ANP	1.71	318	eP	50	15.50	1.4
TWO	1.81	282	ePd	50	16.00	0.5

SSE	7.30	349	P	51	32.00	-1.2
	0.5s	28.00nm			5.7mb	X
			pP	51	36.50	
S.D. = 1.3 on 7 of 7 obs.						

% SEP 07, 1989 13h 20m 33.45± 1.94s
44.073 N ±12.6km 7.355 E ±12.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

ENR	0.16	17	P	20	36.99	-0.2
			S	20	38.84	
STV	0.17	353	P	20	37.61	0.2
			S	20	39.35	
IMI	0.42	113	P	20	42.02	0.0
			S	20	47.97	
ROB	0.43	59	P	20	42.33	0.0
			S	20	48.07	
DOI	0.44	350	P	20	42.50	0.1
PZZ	0.47	337	P	20	42.84	-0.2
			S	20	48.68	
S.D. = 0.2 on 6 of 6 obs.						

• SEP 07, 1989 13h 20m 35.80± 1.47s
18.838 S ± 7.8km 168.421 E ±12.3km
DEPTH = 49.2 ± 11.2 km
4.8mb (10 obs.)
VANUATU ISLANDS (186)

PVC	1.10	355	iPd	20	56.50	1.5
			iS	21	12.50	
DZM	3.71	210	iPc	21	30.00	-2.2
			iS	22	11.00	
HNR	12.44	318	eP	23	33.00	0.2
RMO	19.67	244	iPc	25	04.70	1.0
	0.7s	72.00nm			5.1mb	
CTA	20.94	263	iPd	25	18.00	1.1
	0.9s	28.15nm			4.6mb	
CNB	23.54	222	iPd	25	44.00	1.5
	0.7s	22.00nm			4.8mb	
OLP	23.58	247	iPc	25	44.70	1.8
BWA	23.61	225	iPc	25	42.70	-0.5
CAN	23.77	222	eP	25	45.80	1.0
CMS	23.96	234	eP	25	47.30	0.7
	0.8s	15.00nm			4.6mb	
WRA	32.14	262	Pd	26	59.10	-1.9
	0.8s	4.80nm			4.4mb	
ASPA	32.48	255	ePc	27	02.50	-1.5
	0.8s	121.00nm			5.8mb	
FORR	38.30	244	eP	27	52.50	-0.9
	0.4s	13.00nm			5.2mb	
WARB	39.15	251	eP	28	00.00	-0.7
IIDJ	61.28	332	P	30	47.60	-0.9
CHJJ	61.28	333	P	30	47.30	-1.2
MAT	62.04	333	iPd	30	52.20	-1.4
	1.0s	25.00nm			5.3mb	
MTMJ	62.25	332	P	30	54.00	-1.1
NIIJ	62.29	334	P	30	54.30	-0.9
ASAJ	66.95	340	eP	31	25.40	0.1
SPA	71.28	180	e(P)	31	56.00	4.0X
	1.0s	10.00nm			4.7mb	
CN2	73.72	329	eP	32	05.60	-0.7
BJI	76.14	321	eP	32	20.00	-0.3
CHTO	77.78	295	eP	32	31.20	1.3
	1.0s	1.75nm			4.0mb	
MAW	78.51	202	eP	32	33.00	0.0
GTA	86.29	314	eP	33	15.00	1.1
ORV	87.37	47	eP	33	18.50	-0.4
CMB	87.47	48	eP	33	18.80	-0.7
			e	33	23.50	
MRA	107.35	134	ePKPd	38	38.00	-20.9X
OHR	144.55	316	ePKP	40	07.00	-1.7
DMU	144.82	355	ePKP	40	06.60	-2.1X
MEM	145.35	340	iPKPc	40	09.12	-0.5
DLE	145.40	355	ePKP	40	08.40	-1.2
ETA	145.95	354	ePKP	40	10.40	-0.2
	0.6s	68.00nm				
SNF	145.96	342	PKP	40	10.80	0.1
			iPg	40	11.10	
WLF	146.11	339	PKP	40	11.60	0.7
DOU	146.24	341	PKPc	40	11.90	0.7
	0.7s	11.10nm				
ECP	146.48	354	ePKP	40	11.60	0.1
	0.5s	45.00nm				
CDF	146.77	337	ePKP	40	13.40	1.2
	0.8s	10.75nm				

```
BNG   147.29 248 ePKPc 40 15.20   1.2
       0.5s     5.00nm
                 id    40 30.50
BSF   147.43 337 ePKP  40 15.10   1.8
       0.8s     5.35nm
HAU   147.45 337 ePKP  40 15.10   1.9
       1.0s    12.00nm
FLN   148.83 346 ePKP  40 18.30   2.9X
       0.6s    12.65nm
LDF   148.90 345 ePKP  40 18.50   3.0X
       0.6s     7.20nm
LOR   148.95 339 ePKP  40 19.00   3.3X
       0.8s    16.20nm
SSF   149.25 340 ePKP  40 20.10   4.0X
       1.0s    26.00nm
GRR   149.27 346 ePKP  40 19.80   3.8X
       0.6s     9.00nm
LPG   149.37 334 ePKP  40 21.20   4.5X
       0.8s    10.75nm
SMF   149.50 339 ePKP  40 20.40   3.9X
       0.8s     5.35nm
AVF   149.54 340 ePKP  40 20.20   3.7X
       0.6s     2.70nm
LPF   149.64 346 ePKP  40 20.80   4.2X
       0.8s    26.85nm
BGF   149.91 340 ePKP  40 21.40   4.3X
       0.8s    12.10nm
MAF   150.30 340 ePKP  40 21.70   4.0X
       0.7s     4.40nm
TCF   150.35 340 ePKP  40 22.60   4.8X
       1.0s    16.00nm
LSF   150.60 341 ePKP  40 22.70   4.6X
       0.8s    13.45nm
CVF   150.68 328 ePKP  40 23.60   5.2X
       0.6s     7.20nm
MFF   150.75 344 ePKP  40 23.30   5.0X
       0.8s    10.75nm
     S.D. = 1.2  on  39 of  57 obs.
-------------------------------------
   SEP  07, 1989  13h 32m 00.09± 0.55s
   30.197 S ± 4.8km  177.960 W ± 3.6km
   DEPTH =  33.0 ±  4.5 km
   5.7mb ( 41 obs.)  5.4Msz ( 17 obs.)
 KERMADEC ISLANDS                (178)
      Ms 5.5 (BRK), 5.4 (PAS).
      CENTROID, MOMENT TENSOR    (HRV)
      Data Used: GDSN
      L.P.B.: 11S, 26C
      Centroid Location:
      Origin Time        13:32:12.4 0.5
      Lat 30.12S 0.06 Lon 177.92W 0.03
      Dep  51.4 2.2 Half-duration  3.2
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 6.21 0.19  Mtt= 3.16 0.32
        Mff=-9.37 0.28  Mrt=-0.55 0.27
        Mrf= 2.53 0.34  Mtf=-2.36 0.24
       Principal Axes:
        T  Val=  6.85  Plg=71  Azm=216
        N        3.30      16       7
        P      -10.15       8     100
      Best Double Couple:Mo=8.5*10**17
       NP1:Strike=208 Dip=39 Slip= 117
       NP2:       355     55       70

RAO     0.94   2 iP     32 18.30   1.3
KRP     9.40 213 eP     34 17.00   0.7
PGZ    11.41 203 eP     34 35.80  -7.9X
MNG    11.69 205 eP     34 36.80 -10.7X
                eS     36 44.10
CAW    12.27 206 eP     34 44.00 -11.3X
BLW    12.35 204 eP     34 46.60  -9.8X
WDW    12.44 205 eP     34 46.90 -10.6X
MRW    12.51 206 eP     34 48.80  -9.8X
                eS     37 03.40
WEL    12.54 206 P      34 59.00   0.1
                S      37 05.00
TCW    12.67 208 eP     34 49.70 -10.9X
                eS     37 09.70
DZM    16.16 296 iPd    35 54.50   8.0X
                iS     39 20.20
                ScP    44 16.40
PVC    17.62 312 iP     36 12.00   7.3X
RAR    18.65  66 P      36 12.00  -5.4X
                S      39 25.00
BRS    25.77 269 iPd    37 33.00   3.3X
                i      37 50.00
COO    25.98 261 iPd    37 35.50   3.9X

TBI    26.30  82 iP     37 33.80  -0.7
       1.2s     90.00nm          5.3mb
RIV    26.38 254 eP     37 40.00   4.8X
     Z  18s      4.54um          5.1Msz
                eS     42 37.00
                e      44 46.00
CNB    27.87 251 iPc    37 51.40   2.5
       0.9s     97.00nm          5.5mb
     Z  22s      0.80um          4.3MszX
CAN    28.17 251 iPc    37 53.30   1.7
AFR    28.60  70 eP     37 55.60   0.2
       0.7s     45.00nm          5.3mb
BWA    28.65 253 iPc    37 55.80  -0.1
PPT    28.75  71 iP+    37 56.40  -0.4
       0.7s    140.00nm          5.8mb
     Z  30s     18.00um          5.5MszX
PPN    28.89  71 iP     37 56.60  -1.4
       0.7s     30.00nm          5.1mb
TVO    28.90  71 iP     37 57.70  -0.6
       0.7s     35.00nm          5.2mb
HNR    29.19 310 eP     37 59.00  -1.8
                e(S)   43 02.00
TAU    30.42 236 iPd    38 11.80   0.3
CMS    31.03 258 iPc    38 18.60   1.6
       0.7s    121.00nm          5.8mb
TOO    31.08 246 eP     38 18.60   1.2
BFD    33.41 247 ePd    38 39.00   1.2
CTA    33.80 279 iPc+   38 43.30   2.0
       0.8s    388.06nm          6.4mb
     Z  18s      8.59um          5.5Msz
                i(PP)  40 11.00
                iS     44 12.00
STK    34.56 257 eP     38 49.00   1.2
                i      38 49.80
ADE    36.61 251 iPd    39 06.50   1.3
       1.0s    160.00nm          5.9mb
PMG    38.55 295 eP     39 24.00   2.4
       1.0s     70.00nm          5.4mb
OIS    39.33 274 ePc    39 28.50   0.4
       0.5s     55.00nm          5.6mb
                e      40 31.00
LAT    40.38 298 eP     39 39.00   2.2
ASPA   43.16 267 iPc    39 59.10  -0.4
       0.5s    190.00nm          6.1mb
     Z  18s     19.48um          6.0Msz
                eScP   45 46.20
                eS     46 24.00
                eScS   49 57.10
                LR     57 36.00
MNDI   43.27 296 eP     40 02.50   1.8
WRA    44.12 272 Pd     40 07.30   0.0
       0.9s    237.20nm          6.0mb
WB5    44.12 272 iPc    40 06.90  -0.5
                eScP   45 49.50
                eS     46 40.00
DRV    44.34 202 eP     40 07.80  -0.6
FORR   46.08 255 eP     40 21.50  -1.3
       0.4s    129.00nm          6.2mb
JAY    47.84 297 ePd    40 38.50   1.6
SBA    48.24 184 Pc+    40 41.20   2.0
       1.1s    198.73nm          6.1mb
WARB   48.59 260 eP     40 41.00  -1.6
       0.3s     11.00nm          5.4mb
KNA    50.69 274 eP     40 58.50  -0.2
       0.5s    120.00nm          6.1mb
COOL   51.86 253 eP     41 05.00  -2.5
       0.5s     56.00nm          5.8mb
RKG    54.38 248 eP     41 23.00  -3.0X
KLB    54.44 251 iPd    41 24.30  -2.3
       0.4s     10.00nm          5.2mb
NWAO   54.50 249 eP     41 25.00  -2.0
       0.5s      8.00nm          5.0mb
     Z  22s      4.20um          5.5Msz
BAL    55.59 252 eP     41 32.00  -2.9
MUN    55.60 250 iPd    41 33.00  -1.9
       1.0s    120.00nm          5.9mb
     Z  20s      4.40um          5.5Msz
MBL    56.19 264 eP     41 37.20  -2.2
       0.6s     61.00nm          5.8mb
GUA    56.29 315 eP     41 38.50  -1.6
       0.8s    358.21nm          6.5mb
GUMO   56.36 315 eP     41 38.00  -2.5
       0.8s    199.12nm          6.2mb
PJG    56.36 315 eP     41 38.70  -1.8
MRWA   56.61 253 eP     41 40.30  -2.0
       0.3s      7.00nm          5.2mb
NANU   59.34 260 iPd    41 59.80  -1.7

       0.5s     40.00nm          5.8mb
SPA    59.97 180 ePc    42 04.90  -0.6
       1.1s    135.71nm          6.0mb
     Z  20s      1.71um          5.2Msz
                e      42 11.70
MNI    62.85 289 ePc    42 24.10  -1.2
DAV    65.59 295 eP     42 40.00  -3.1X
PCI    65.70 284 Pd     42 44.40   0.5
       1.0s     15.00nm          5.0mb
TSM    69.98 287 ePc    43 11.20   0.5
AIA    72.09 156 eP     43 22.50  -0.1
MAW    72.51 201 eP     43 24.00  -1.1
       1.0s     65.00nm          5.6mb
KKM    72.53 288 ePd    43 25.20  -0.9
       0.9s    121.50nm          5.9mb
BAG    75.14 299 eP+    43 40.00  -1.3
KAKJ   76.87 326 P      43 49.90  -0.5
CHJJ   77.32 325 P      43 52.20  -0.7
IIDJ   77.41 324 P      43 52.40  -1.1
MAT    78.09 325 eP     43 55.00  -2.2
     Z  20s      1.42um          5.3Msz
                eS     53 56.00
NIIJ   78.26 326 eP     43 58.00  -0.1
MTMJ   78.33 325 P      43 58.00  -0.6
TSRJ   78.44 323 P      43 58.80  -0.3
OFUJ   78.51 329 eP     44 00.10   0.7
SHK    79.45 320 eP     44 03.60  -1.1
SNA    79.73 178 iPc    44 04.80  -0.8
       0.9s     58.82nm          5.6mb
ANP    79.97 307 eP     44 06.00  -1.8
HOOJ   80.55 332 eP     44 13.60   3.3X
KUSJ   80.59 333 eP     44 13.50   3.0X
KGM    81.27 277 eP     44 14.80   0.0
QZH    81.87 305 eP     44 19.00   1.4
ASAJ   82.26 333 P      44 20.10   0.9
PPI    82.54 274 eP     44 20.80  -0.6
SMY    82.87 355 ePd    44 22.10   0.0
SSE    84.00 311 Pc     44 28.00  -0.4
       5.0s      0.60nm          3.0mb X
     Z  22s      1.90um          5.4Msz
     E  20s      1.50um
                sP     44 42.50
                eS     54 47.00
                sS     55 09.00
SYP    84.45  45 eP     44 31.00   0.1
IPM    84.54 278 ePd    44 30.70  -0.9
       0.8s     67.20nm          5.9mb
BCH    84.83  44 P      44 35.00   2.3
PRS    84.85  43 ePc    44 33.00   0.4
OIZ    84.94 295 eP     44 34.50   1.1
                pP     44 45.00  33kmX
GCC    84.97  42 ePc    44 33.40   0.2
PCC    85.07  41 ePc    44 33.80   0.1
SAO    85.10  42 e(P)   44 36.00   2.1
     Z  20s      1.90um          5.5Msz
     N  20s      0.70um
     E  20s      1.10um
                e      55 05.00
                eS     55 10.00
                i      55 17.00
                eSPP   56 22.00
                e      02 13.00
                eLO    07 08.00
                eLR    10 46.00
PRI    85.14  43 ePc    44 34.70   0.5
LLA    85.30  43 ePc    44 36.20   1.3
BAR    85.31  48 eP     44 35.00   0.0
PAS    85.31  46 eP     44 35.00   0.0
                eSKS   55 02.00
                epPS   56 36.00
                eSS    00 48.00
                eSSS   04 14.00
                eLg    07 00.00
                eLR    10 20.00
MHC    85.39  42 ePc    44 35.80   0.3
     Z  20s      1.60um          5.4Msz
     N  20s      1.30um
     E  20s      1.40um
                e      47 08.00
                e      55 09.00
                eS     55 21.00
                eSPP   56 20.00
                e(SS)  01 04.00
                e      03 19.00
                eLQ    07 09.00
                eLR    10 37.00
PSI    85.40 276 ePd    44 34.70  -1.1
```

07d 13h

1.0s 63.80nm 5.8mb
BRK 85.40 41 e(P) 44 35.40 0.1
BKS 85.42 41 eP 44 35.60 0.2
0.9s 142.00nm 6.2mb
Z 20s 2.60um 5.6Msz
N 20s 1.70um
E 20s 1.90um
eS 55 13.20
MWC 85.44 46 eP 44 35.00 -0.8
e 44 48.00
ARN 85.46 42 P 44 35.00 -0.7
PLM 85.62 47 eP 44 36.00 -0.8
RVR 85.71 47 eP 44 36.00 -1.0
PEC 85.78 47 P 44 37.00 -0.4
LNV 85.80 127 ePc 44 38.50 0.9
SBB 85.89 46 eP 44 37.00 -0.9
ISA 86.13 45 eP 44 40.00 0.9
e 44 57.00
NJ2 86.14 311 Pc 44 40.50 1.4
Z 22s 1.60um 5.4Msz
FRI 86.28 43 eP 44 39.50 -0.2
TACH 86.29 127 eP 44 41.00 0.9
SDN 86.50 10 eP 44 41.10 0.8
FHC 86.51 38 eP 44 41.10 0.3
CMB 86.59 42 iPc 44 41.00 -0.3
SAN 86.60 127 eP 44 41.50 -0.1
TPC 86.62 47 eP 44 42.00 0.5
GLA 86.74 49 eP 44 43.00 0.9
PEL 86.75 127 iPd 44 41.50 -0.9
0.9s 75.63nm 5.9mb
CLC 86.77 45 eP 44 42.00 -0.2
e 4B 21.00
GSC 86.92 46 eP 44 43.00 0.0
ORV 87.00 40 eP 44 42.80 -0.4
WDC 87.14 39 iPc 44 43.70 -0.1
MIN 87.48 40 ePc 44 44.90 -0.8
WHN 88.25 307 eP 44 49.50 0.1
Z 24s 1.37um 5.3MszX
eS 55 32.00
MDJ 88.48 325 eP 44 50.30 0.2
Z 28s 2.10um 5.4MszX
N 12s 0.50um
TNP 88.48 44 P 44 49.00 -1.6
0.8s 39.22nm 5.8mb
KVN 88.60 42 P 44 50.00 -1.1
DL2 88.82 317 eP 44 52.00 0.1
Z 26s 1.40um 5.3MszX
SNY 89.66 320 Pc 44 55.00 -0.8
Z 26s 1.90um 5.4MszX
N 28s 1.00um
E 28s 1.50um
eS 55 35.00
NNT 89.73 285 eP 44 59.00 2.3
TIA 89.86 313 Pc 44 56.60 -0.3
BSI 89.92 276 eP 44 58.00 0.3
CN2 90.00 323 Pc 44 57.00 -0.3
5.0s 0.60nm 3.1mb X
Z 25s 2.20um 5.5MszX
N 20s 1.00um
E 20s 1.00um
pP 45 08.00 35kmX
ePP 48 25.00
KDC 90.19 13 eP 45 00.10 2.2
LOE 90.55 290 eP 45 01.00 0.6
MRA 90.59 128 ePc 44 59.80 -0.7
NST 90.97 287 eP 45 05.00 2.7
GYA 91.48 300 P 45 05.60 0.9
S 55 52.00
LON 91.82 35 P 45 04.90 -0.8
MSU 91.82 46 P 45 06.00 -0.2
BDT 92.70 288 eP 45 13.40 3.1X
BJI 92.80 315 eP 45 10.50 0.2
4.0s 0.41nm 3.2mb X
Z 30s 2.24um 5.4MszX
SKS 55 40.00
eS 56 16.00
esS 56 37.00
ePS 57 12.00
eSS 02 42.00
ALO 93.42 51 eP 45 13.20 -0.4
0.8s 15.86nm 5.5mb
Z 22s 1.28um 5.3Msz
epP 45 31.00 63kmX
eS 56 27.00
ePS 57 42.00
NNA 93.44 106 eP 45 13.00 -0.9
1.0s 15.00nm 5.4mb

CHTO 93.55 290 eP 45 16.30 2.1
1.0s 12.50nm 5.3mb
TIY 93.76 312 eP 45 15.20 0.3
Z 23s 2.00um 5.5MszX
N 20s 1.60um
E 20s 1.60um
sP 45 32.00
SKS 55 48.00
S 56 09.00
KMI 93.76 297 Pc 45 18.00 2.6
Z 20s 1.40um 5.4Msz
pP 45 26.50 27kmX
PP 49 06.00
XAN 94.02 307 eP 45 16.60 0.5
PMR 94.40 13 P 45 16.30 -0.9
0.8s 17.24nm 5.5mb
pP 45 34.00 62kmX
PNT 94.65 34 eP 45 20.00 1.4
0.8s 16.00nm 5.5mb
HUA 94.68 107 e(P) 45 22.90 2.8
ARE 95.43 112 eP 45 24.00 0.6
CD2 96.01 302 eP 45 26.80 1.4
HHC 96.12 314 eP 45 26.00 0.3
Z 34s 2.80um 5.5MszX
BTO 96.95 313 eP 45 31.00 1.6
N 21s 1.30um
E 21s 1.30um
FBA 97.66 12 eP 45 32.50 0.5
CNCB 98.02 115 P 45 39.00 3.6X
LPB 98.08 114 P 45 35.00 -0.5
PS 58 25.00
LR 17 25.00
ZOBO 98.21 114 P 45 38.00 1.7
S 56 18.00
LR 17 54.00
LZH 98.63 307 eP 45 43.50 6.3X
SES 99.63 37 eP 45 41.50 0.3
EDM 100.17 33 ePdiff45 34.00 -9.8X
GTA 103.04 308 ePdiff45 56.20 -0.8X
Z 20s 0.80um 5.2Msz
SKS 56 34.00
INK 103.58 16 ePdiff46 04.00 5.5X
GBA 109.22 275 PKP 50 28.00 -0.9
HYB 109.98 279 ePKP 50 29.50 -0.9
MBC 112.21 13 ePKP 50 32.00 -0.8
WMQ 113.13 308 PKP 50 34.50 -1.2
NDI 115.69 290 ePKP 50 38.80 -2.2X
KSH 120.14 301 PKP 50 49.00 -0.3
PDCR 121.91 131 ePKP 50 50.90 -2.2X
i 50 52.90
i 50 56.70
BUL 123.79 210 iPKPc 50 56.00 -0.9
1.1s 44.30nm
QUE 124.63 288 ePKP 50 57.80 -0.5
ITR 125.13 128 ePKP 50 56.90 -2.5X
e 50 58.80
e 51 14.40
FRB 125.18 31 ePKP 50 56.00 -2.0
0.8s 44.00nm
SCH 126.09 42 ePKPd 50 59.50 -0.7
1.0s 57.00nm
KRI 126.23 213 iPKPd 51 03.50 1.8
PTZ 127.57 217 iPKPc 51 04.00 -0.2
LSZ 128.24 213 iPKP 51 06.00 0.5
e 53 12.00
KMZ 130.92 211 iPKP 51 11.50 0.9
i 54 33.00
KBS 131.00 357 ePKP 51 09.70 0.9
MZZ 131.46 216 iPKP 51 13.00 1.3
i 51 29.00
i 54 35.00
MHI 132.16 293 ePKP 51 11.00 -1.4
e 54 38.00
DAG 132.33 6 iPKPd 51 06.80 -4.6X
0.9s 21.01nm
e 53 32.50
NAI 134.43 233 iPKPc 51 19.00 1.5
1.0s 5.00nm
KEV 137.93 347 ePKP 51 14.00 -8.2X
e 51 20.00
TRO 139.36 351 ePKP 51 19.00 -5.7X
SOD 140.01 345 iPKP 51 19.30 -6.7X
RYD 140.27 273 ePKP 51 21.00 -6.8X
KMSA 140.58 266 ePKP 51 21.50 -7.0X
AKU 142.38 14 iPKP 51 28.20 -2.0
0.9s 20.17nm
TAB 142.79 294 ePKP 51 24.00 -8.0X

e 51 29.00
QASM 143.33 274 ePKP 51 30.00 -3.2X
SLY 143.34 290 ePKPd 51 29.00 -3.8X
SUF 143.93 341 iPKPd 51 29.20 -3.8X
0.6s 64.40nm
BHD 144.03 286 ePKPd 51 30.00 -4.0X
ePKS 55 14.00
NSS 145.09 353 iPKPc 51 32.60 -2.3X
MSL 145.28 291 iPKPd 51 35.00 -1.1
i 51 39.50
NUR 146.13 340 iPKP 51 36.60 -0.1
1.3s 459.20nm
Z 23s 1.70um 5.8MszX
i 51 41.00
LR 52 00.00
RGS 146.72 353 iPKP 51 37.70 0.1
MOL 147.42 355 ePKP 51 39.50 0.8
UPP 148.53 345 iPKP 51 41.50 0.9
NB2 148.56 351 PKP 51 39.80 -0.9
NRA0 148.81 351 PKP 51 40.50 -0.6
HYA 148.91 356 ePKP 51 45.90 4.8X
SUE 149.08 357 iPKPd 51 44.70 3.3X
ASK 149.64 357 iPKP 51 46.00 3.7X
BER 149.73 357 ePKP 51 46.80 4.4X
BNG 150.01 215 iPKPd 51 43.20 -1.1
0.9s 194.00nm
id 51 48.50
id 53 19.20
ic 56 19.90
ODD1 150.12 355 ePKP 51 47.50 4.4X
AYN 150.48 276 ePKP 51 44.00 -0.5
BLS2 150.72 355 ePKP 51 50.80 6.7X
KMY 150.91 357 ePKP 51 49.50 5.3X
HRI 151.25 285 ePKP 51 47.00 1.3
DSI 151.41 281 e(PKP)51 47.00 1.1
MBH 151.60 278 iPKPc 51 46.00 -0.2
AGMR 152.05 264 iPKPd 51 54.30 7.3X
KAS 152.10 302 ePKP 51 49.00 2.3X
FAM 152.72 289 ePKP 51 54.50 6.9X
EDR 153.10 6 ePKP 51 49.70 2.2X
BBTK 153.18 299 ePKP 51 47.00 -1.3
e 51 52.00
CSS 153.27 288 ePKP 51 55.00 6.5X
EDU 153.42 6 ePKP 51 50.00 2.0X
0.9s 158.00nm
ELO 153.43 7 ePKP 51 50.30 2.3X
COP 153.48 347 iPKP 51 57.80 9.8X
EBL 154.18 7 ePKP 51 56.50 7.5X
1.0s 104.00nm
EKA 154.60 7 PKPc 51 56.50 6.9X
1.1s 16.70nm
VRI 155.18 316 ePKPd 51 53.00 2.3X
HRT 155.23 303 ePKP 51 56.00 5.0X
LIC 155.24 163 PKP 51 52.10 0.4
Z 20s 0.73um 5.5Msz
BCK 155.26 295 ePKP 51 49.00 -2.2X
ALT 155.35 299 ePKP 51 46.00 -5.3X
KIC 155.44 164 PKP 51 52.20 0.2
TIC 155.65 163 PKP 51 52.60 0.3
ELL 155.90 293 ePKP 51 52.60 0.4
KHL 155.95 297 ePKP 51 48.00 -4.1X
KRA 156.02 331 ePKP 51 50.90 -0.8
e 52 01.50
CMP 156.51 316 ePKPc 52 01.00 8.4X
SPC 156.53 329 ePKP 51 54.00 1.3
KSP 156.78 337 ePKP 51 51.80 -0.9
0.9s 55.00nm
e 52 03.50
i 52 21.80
WIT 157.15 353 ePKP 51 53.50 0.5
e 52 24.50
CLL 157.38 342 iPKP 51 54.30 0.9
1.8s 180.00nm
i 52 24.30
pPKP 54 07.00
BRG 157.51 340 iPKP 51 53.60 0.0
i 52 05.80
i 52 24.90
eSg 59 56.30
PSZ 157.61 327 ePKP 51 53.50 -0.4
WTS 157.94 352 ePKP 51 55.00 1.0
1.0s 26.00nm
i 52 27.40
e 52 33.50
KDZ 157.96 308 ePKP 51 44.00 -10.4X
DBN 157.99 355 ePKP 51 58.00 4.0X
Z 20s 0.80um 5.6Msz

		e	52	37.00		
PRU	158.10	338 ePKP	51	54.50	0.2	
		e	52	29.00		
MOX	158.35	343 ePKP	51	54.00	-0.6	
	1.9s	56.00nm				
	Z 26s	1.70um			5.8MszX	
		i	52	29.00		
ZST	158.64	331 ePKP	51	56.00	1.1	
VTS	159.01	312 iPKP	51	55.00	-0.8	
MMB	159.13	309 ePKP	51	54.00	-1.8	
HC	159.15	338 PKPd	51	55.90	0.4	
	1.0s	13.00nm				
		i	52	33.00		
ENN	159.25	353 ePKP	51	55.00	-0.5	
	0.9s	247.00nm				
		id	52	32.60		
		ePP	56	12.00		
GRF	159.33	343 ePKP	51	54.40	-1.3	
		e	51	56.70		
MEM	159.39	353 PKP	51	55.30	-0.3	
		e	52	34.50		
		e	56	14.80		
SNF	159.64	356 PKP	51	55.30	-0.6	
		e	52	34.70		
ABH	159.90	350 ePKP	51	56.22	-0.1	
TOD	159.95	347 ePKP	51	56.96	0.6	
DOU	160.03	355 PKP	51	58.20	1.8	
		e	52	36.20		
		e	56	19.10		
RUP	160.15	350 ePKP	51	56.91	0.3	
WLF	160.31	352 PKP	51	57.20	0.5	
		e	52	37.10		
SKO	160.46	312 iPKP	51	56.50	-0.6	
GWF	160.77	349 PKP	51	56.61	-0.6	
PTJ	160.92	329 ePKP	52	00.10	2.5X	
OHR	161.31	311 ePKP	51	57.00	-1.1	
FLN	161.36	5 ePKP	51	57.90	0.1	
	1.0s	36.00nm				
WLS	161.36	349 PKP	51	56.19	-1.7	
CDF	161.37	349 PKP	51	58.63	0.7	
VBY	161.53	329 ePKP	51	57.50	-0.6	
LDF	161.55	5 ePKP	51	58.00	0.0	
	0.9s	19.65nm				
ECH	161.58	349 PKP	51	57.50	-0.6	
VOY	161.68	333 ePKP	51	57.70	-0.6	
GRR	161.70	6 ePKP	51	58.40	0.3	
	1.2s	47.60nm				
VITF	161.75	352 PKP	51	58.06	-0.1	
FEL	161.76	347 PKP	51	57.22	-1.2	
HAU	161.91	351 ePKP	51	58.20	-0.2	
MOF	161.94	349 PKP	51	57.87	-0.7	
BSF	162.01	350 ePKP	51	58.30	-0.3	
	0.8s	12.10nm				
LPF	162.03	7 ePKP	51	58.70	0.2	
	1.0s	24.00nm				
LOMF	162.48	349 PKP	51	58.63	-0.4	
LOR	162.90	356 ePKP	51	59.30	-0.1	
	0.8s	13.45nm				
SSF	163.12	357 ePKP	52	00.00	0.4	
	1.0s	22.00nm				
LBF	163.17	355 ePKP	51	59.90	0.2	
	0.8s	13.45nm				
AVF	163.40	357 ePKP	51	59.80	-0.1	
	1.0s	8.00nm				
VAI	163.49	343 PKP	51	58.40	-1.6	
SMF	163.52	356 ePKP	52	00.10	0.0	
	1.2s	22.30nm				
MFF	163.53	5 ePKP	52	00.40	0.4	
	0.8s	10.75nm				
BGF	163.65	358 ePKP	52	00.40	0.2	
	1.2s	43.15nm				
TCF	163.93	360 ePKP	52	00.60	0.1	
	0.8s	10.75nm				
MAF	164.00	359 ePKP	52	00.70	0.2	
	1.2s	14.90nm				
LPG	164.28	348 ePKP	52	01.30	0.1	
	1.0s	12.00nm				
STS	164.76	31 ePKP	52	03.00	1.7	
RJF	164.91	1 ePKP	52	01.70	0.3	
	0.8s	16.10nm				
LPO	165.52	2 ePKP	52	02.40	0.5	
	1.0s	24.00nm				
ERUA	165.77	29 ePKP	52	04.00	1.8	
PTO	166.08	35 ePKP	52	04.50	2.1X	
EPF	167.12	6 ePKP	52	03.90	0.6	
	1.0s	24.00nm				
GUD	168.42	24 ePKP	52	05.00	0.7	

ETOR	168.89	16 ePKP	52	07.00	2.5X	
TOL	169.13	26 ePKP	52	04.00	-0.6	
		iPKKP	53	18.00		
		iPP	57	06.00		
		ePPS	11	02.00		
		eSS	18	10.00		
EBR	169.33	6 ePKP	52	04.00	-0.6	
		ePKKP	53	12.00		
		e	53	31.00		
		ePP	57	04.00		
ECHE	170.31	14 ePKP	52	08.00	2.7X	
EJIF	171.15	43 ePKP	52	09.00	3.2X	
AAPN	171.25	34 ePKP	52	07.00	1.0	
ASMO	171.39	32 ePKP	52	07.00	1.0	
ATEJ	171.61	35 ePKP	52	07.00	0.8	
APHE	171.74	34 ePKP	52	07.50	1.3	
TIO	171.95	82 iPKPd	52	09.50	3.0X	
		i	52	13.00		
ENIJ	172.37	27 ePKP	52	05.50	-0.8	

S.D. = 1.1 on 242 of 311 obs.

SEP 07, 1989 13h 58m 09.27± 1.21s
0.946 N ± 6.4km 126.112 E ± 8.6km
DEPTH = 51.8 ± 12.2 km
4.8mb (6 obs.)
MOLUCCA PASSAGE (266)

MNI	1.36	291 iPd	58	32.90	0.6	
		eS	58	52.70		
AAI	5.05	156 ePc	59	22.00	-2.4	
		eS	59	27.60		
PCI	6.54	254 Pd	59	44.30	-1.0	
		eS	00	18.30		
TSM	8.67	292 ePd	00	16.10	1.3	
MKS	9.03	227 eP	00	21.00	1.2	
		e	00	57.00		
MTN	14.58	160 eP	01	35.00	0.8	
KNA	16.79	171 eP	02	02.50	0.0	
W85	22.22	159 eP	03	02.00	-1.0	
		eS	07	02.90		
WRA	22.27	159 Pd	02	58.80	-4.7X	
	0.8s	31.10nm			4.8mb	
OIZ	24.03	319 eP	03	20.30	-0.3	
OIS	25.13	149 eP	03	32.00	0.9	
IPM	25.31	279 ePd	03	32.70	-0.2	
	0.8s	27.10nm			4.8mb	
ASPA	25.61	163 iPd	03	35.50	-0.2	
	0.8s	41.00nm			5.0mb	
		eS	08	01.00		
WARB	26.98	179 eP	03	49.00	0.8	
PSI	27.23	274 ePc	03	50.50	-0.1	
FORR	31.68	177 eP	04	29.60	-0.4	
	0.4s	19.00nm			5.2mb	
CHTO	32.02	305 e(P)	04	33.50	0.2	
	0.6s	1.40nm			4.0mb	
CD2	36.57	327 eP	05	12.00	-0.2	
XAN	36.65	336 P	05	11.60	-1.2	
MAT	37.15	16 iPd	05	16.80	-0.2	
TIY	38.70	343 eP	05	29.60	-0.4	
BJI	39.95	348 eP	05	40.00	-0.2	
SNY	40.76	357 Pd	05	47.40	0.5	
BWA	40.94	151 eP	05	51.90	3.4X	
CAN	41.94	152 eP	05	58.80	2.1	
MDJ	43.59	4 eP	06	11.50	1.5	
GTA	45.19	331 eP	06	22.80	-0.3	
HYB	49.53	292 eP	06	56.50	-0.8	
GBA	49.78	287 Pc	06	57.30	-1.8	
	1.1s	8.20nm			4.7mb	
WMQ	54.66	327 P	07	35.00	-0.4	
		eS	15	14.00		
KSH	59.56	316 eP	08	11.00	0.8	

S.D. = 1.0 on 29 of 31 obs.

% SEP 07, 1989 14h 46m 37.14± 1.49s
62.138 N ±13.3km 6.388 E ±14.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.0 (BER).

MQL	0.69	51 eP	46	51.04	0.2	
		eS	46	59.79		
HYA	0.98	186 iP	46	54.90	-0.8	
		eS	47	07.23		
SUE	1.33	216 eP	47	01.12	-0.6	
		eS	47	18.63		
ASK	1.76	200 eP	47	08.13	0.3	
		eS	47	29.74		

ODD1	2.24	177 eP	47	15.00	0.2	
		eS	47	43.91		
BLS1	2.77	175 eP	47	24.41	2.0	
		eS	47	54.46		
NRA0	2.85	117 eP	47	22.50	-0.9	
		eS	47	57.10		
KMY	2.99	191 eP	47	25.00	-0.4	
		eS	47	58.20		

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

SEP 07, 1989 14h 52m 25.19± 0.67s
33.121 N ± 6.0km 138.921 E ± 4.4km
DEPTH = 22.0 ± 5.2 km
SOUTH OF HONSHU, JAPAN (211)
MG 4.3 (JMA). Felt (I JMA) on Hachijo-jima.

HJJ	0.73	91 iP	52	39.10	0.0	
		iS	52	48.60		
IIDJ	2.50	341 iPd	53	05.00	-0.3	
		S	53	34.40		
CHJJ	2.92	1 P	53	11.80	0.5	
		S	53	52.20		
WKYJ	2.98	292 P	53	12.10	-0.1	
		S	53	46.10		
KAKJ	3.24	18 P	53	15.30	-0.6	
TSRJ	3.42	316 P	53	18.00	-0.4	
		S	53	57.50		
MAT	3.46	350 iPd	53	19.30	0.3	
		iS	54	04.00		
MTMJ	3.58	345 P	53	20.90	0.2	
		S	54	04.60		
NIIJ	4.11	1 P	53	29.10	0.9	
TKSJ	4.16	283 P	53	29.00	0.1	
		eS	54	17.20		
YONJ	4.97	296 P	53	40.50	0.1	
		S	54	35.30		
YAMJ	5.12	10 eP	53	42.90	0.4	
SHK	5.38	287 eP	53	45.70	-0.5	
OFUJ	6.35	20 P	53	58.90	-0.9	
SHNJ	6.59	281 P	54	02.90	-0.4	
		eS	55	16.20		
KUMJ	6.84	267 P	54	07.50	0.8	
		eS	55	25.20		
KAGJ	7.08	256 eP	54	09.90	-0.2	
		eS	55	29.90		
MDJ	13.57	330 eP	55	42.00	3.3X	
SNY	14.95	310 eP	56	03.20	6.5X	
CN2	14.98	319 eP	56	00.60	3.4X	
WHN	21.02	270 eP	57	10.00	0.3	
WMQ	40.92	301 P	00	14.50	7.0X	
ZOBO	150.38	62 ePKP	12	26.00	13.8X	

S.D. = 0.5 on 18 of 23 obs.

• SEP 07, 1989 15h 07m 17.37± 2.05s
48.523 N ± 7.3km 8.186 E ±14.3km
DEPTH = 5.0km (geophysicist)
GERMANY (543)
MD 1.0 (STR).

WLS	0.56	259 Pg	07	28.93	0.2	
		Sg	07	38.81		
GWF	0.59	321 Pg	07	29.15	0.0	
		Sg	07	39.41		
CDF	0.62	260 Pg	07	29.89	0.2	
		Sg	07	40.03		
FEL	0.66	190 Pg	07	30.77	0.2	
ECH	0.75	246 Pg	07	32.11	-0.3	
		Sg	07	43.23		
MOF	0.97	227 Pg	07	36.11	-0.3	
		Sg	07	50.46		

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

? SEP 07, 1989 16h 38m 24.51± 7.24s
32.865 S ±26.8km 72.158 W ±57.2km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

LNV	1.25	150 iPd	38	45.90	0.1	
		iS	38	58.40		
SAN	1.39	115 iPd	38	47.50	-0.3	
		iS	39	01.00		
FCH	1.63	107 iPd	38	51.80	0.1	
		iS	39	07.90		
CHCH	1.65	131 iPc	38	51.50	-0.1	
		iS	39	07.50		
MRA	5.46	87 e(P)	39	46.20	0.5	

07d 16h

TCA	6.60	79	ePc	40 01.40	-0.4	
AIA	32.77	174	eP	45 12.40	16.2X	
S.D. = 0.4 on 6 of 7 obs.						

? SEP 07, 1989 16h 50m 40.98± 4.49s
11.342 S ±40.7km 119.504 E ±25.6km
DEPTH = 33.0km (normal)
3.9mb (3 obs.)
SOUTH OF SUMBA ISLAND (292)

MBL	9.77	178	eP	53 01.30	-1.0	
	0.3s	11.00nm			5.6mb X	
			eS	54 40.00		
KNA	10.01	117	eP	53 05.50	-0.2	
MTN	11.47	99	eP	53 25.00	-0.6	
			e	53 32.50		
			e	55 15.00		
NANU	11.79	198	eP	53 28.00	-1.8	
	0.3s	4.00nm			5.1mb X	
			eS	55 30.00		
MEKA	15.22	183	eP	54 16.00	0.8	
			eS	56 46.00		
WARB	16.23	156	eP	54 29.00	0.8	
			eS	57 22.00		
WB5	16.63	122	eP	54 32.50	-0.9	
			eS	57 25.00		
WRA	16.64	123	Pd	54 33.70	0.2	
	0.5s	1.10nm			3.2mb	
MRWA	18.08	190	eP	54 53.00	1.6	
			eS	57 55.00		
ASPA	18.38	134	eP	54 58.40	3.2X	
	0.6s	17.00nm			4.4mb	
			eS	58 10.40		
BAL	19.34	187	eP	55 13.00	6.3X	
			eS	58 24.00		
COOL	19.51	176	eP	55 12.00	3.5X	
	0.4s	3.00nm			3.9mb	
			eS	58 30.00		
MUN	20.76	188	eP	55 29.00	7.4X	
			eS	59 02.00		
QIS	21.37	118	eP	55 29.00	1.1	
NWAO	21.58	185	eP	55 41.00	11.0X	
	0.4s	3.00nm				
			eS	59 19.00		
PSI	24.77	303	ePc	56 05.00	3.8X	
GBA	48.53	300	Pc	59 34.70	11.5X	
	1.1s	4.20nm				
CNCB	151.07	165	PKP	10 38.00	10.2X	
LPB	151.30	165	(PKP)	10 39.00	11.1X	
ZOBO	151.55	164	PKP	10 39.00	10.5X	
S.D. = 1.2 on 10 of 20 obs.						

? SEP 07, 1989 17h 54m 41.94± 3.55s
32.628 S ±13.4km 71.652 W ±28.6km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

PEL	0.96	123	iPc	55 00.70	0.4	
			iS	55 15.10		
SAN	1.17	135	iPc	55 04.00	0.2	
			iS	55 21.00		
TACH	1.19	150	iPd	55 04.50	0.4	
			iS	55 20.90		
LNV	1.34	171	iPd	55 05.50	-1.1	
			iS	55 23.50		
FCH	1.34	122	iPd	55 07.00	0.1	
			iS	55 26.00		
PCH	1.38	136	iPd	55 07.30	0.1	
			iS	55 26.90		
CHCH	1.55	148	iP	55 10.80	1.2	
			iS	55 31.10		
ZON	2.74	68	eP	55 29.00	2.1	
CFA	3.07	72	e(P)	55 32.50	1.1	
MRA	5.03	89	ePc	55 57.00	-2.1	
TCA	6.14	80	ePc	56 12.50	-2.4	
			(S)	57 21.70		
S.D. = 1.5 on 11 of 11 obs.						

SEP 07, 1989 18h 10m 56.86± 1.00s
9.414 N ± 7.3km 93.303 E ± 6.8km
DEPTH = 71.3 ± 11.7 km
4.3mb (5 obs.)
NICOBAR ISLANDS REGION (704)

BSI	4.36	153	eP	12 02.50	0.3	
NNT	7.06	63	iPc	12 37.40	-2.3	
SNG	7.57	107	eP	12 48.00	1.2	
PSI	8.70	140	ePc	13 08.00	5.6X	
IPM	9.04	122	eP	13 06.00	-1.1	
NST	9.12	46	eP	13 08.00	-0.1	
BDT	9.56	35	iPd	13 14.00	0.0	
	0.6s	23.20nm			5.3mb X	
CHG	10.82	30	eP	13 32.20	0.9	
CHTO	10.82	30	eP	13 31.80	0.5	
LOE	11.41	45	iPc	13 40.00	0.8	
KOD	15.63	274	eP	14 35.00	0.4	
GBA	16.09	286	Pc	14 37.80	-2.4	
	0.2s	1.00nm			3.6mb	
HYB	16.40	301	eP	14 46.50	2.4	
LSA	20.28	355	eP	15 28.50	-1.3	
GYA	21.16	35	P	15 38.60	0.3	
CD2	23.50	23	eP	16 01.30	0.1	
GTA	30.43	10	Pc	17 04.60	-0.3	
KSH	33.68	335	P	17 34.00	0.7	
CN2	44.19	34	eP	19 01.20	0.8	
WB5	49.82	126	eP	19 45.20	0.3	
WRA	49.83	126	P	19 52.00	7.0X	
	0.7s	1.80nm			4.2mb	
VRI	67.03	316	iP	21 43.50	-1.0	
MLR	67.50	315	ePc	21 45.50	-2.2	
BNG	74.27	272	ePc	22 30.10	1.3	
	0.5s	8.00nm			4.9mb	
			ic	22 43.90		
KSP	74.56	320	eP	22 29.60	-0.2	
			e	22 42.20		
PRU	75.63	319	eP	22 36.00	0.1	
KHC	76.22	318	eP	22 39.70	0.4	
NB2	77.99	330	P	22 48.30	-0.5	
	0.9s	3.00nm			4.2mb	
LPG	80.95	315	eP	23 06.30	0.9	
	0.7s	4.40nm			4.5mb	
S.D. = 1.2 on 27 of 29 obs.						

% SEP 07, 1989 18h 54m 13.27± 0.76s
44.337 N ± 7.7km 7.312 E ± 9.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

STV	0.09	174	P	54 16.07	0.1	
			S	54 17.83		
ENR	0.13	145	P	54 16.52	-0.1	
			S	54 18.78		
DOI	0.17	344	P	54 17.40	0.1	
			eSg	54 19.50		
PZZ	0.23	318	P	54 18.08	-0.1	
			S	54 21.48		
ROB	0.40	96	P	54 21.52	0.0	
			S	54 27.63		
S.D. = 0.2 on 5 of 5 obs.						

% SEP 07, 1989 19h 22m 53.19± 0.59s
40.352 N ± 5.8km 29.139 E ± 5.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YLV	0.28	40	iPg	22 59.20	0.1	
GBZT	0.50	28	ePg	23 04.00	0.8	
			iSg	23 11.00		
KCT	0.61	261	iPg	23 05.20	-0.3	
			iSg	23 14.70		
HRT	0.62	40	iPg	23 05.40	-0.3	
ISK	0.72	355	ePg	23 07.70	0.4	
			eSg	23 18.70		
GPA	0.90	94	ePg	23 09.00	-1.4	
BNT	0.93	271	iPn	23 11.20	0.2	
EDC	0.98	270	iPn	23 10.70	-1.0	
ALT	1.50	150	ePn	23 19.80	-0.4	
KHL	2.05	172	ePn	23 30.00	1.8	
S.D. = 1.0 on 10 of 10 obs.						

• SEP 07, 1989 19h 29m 35.06± 1.76s
23.931 N ±12.0km 122.743 E ±14.5km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.)
TAIWAN REGION (243)

TWC	1.06	310	iPd	29 54.90	-0.1	
			eS	30 08.00		
TWD	1.06	278	iPc	29 54.20	-0.8	
			eS	30 06.00		
TWF1	1.45	247	iPc	30 00.90	-0.4	
TWZ	1.57	318	eP	30 04.70	1.6	
ANP	1.67	318	iPd	30 06.30	1.7	
	0.8s	2149.25nm				
			eS	30 27.00		
TWO	1.78	281	ePc	30 06.60	0.6	
TWK	2.17	253	eP	30 12.70	0.9	
OZH	3.92	286	Pnc	30 34.20	-2.3	
SSE	7.27	349	Pc	31 23.20	-0.6	
Z	18s	0.50um				
N	14s	0.70um				
			pP	31 27.00		
NJ2	8.79	338	eP	31 44.00	-1.0	
Z	12s	0.90um				
GYA	14.77	283	P	33 06.00	0.0	
			sS	36 00.00		
TIY	16.33	330	eP	33 28.40	2.4X	
N	12s	0.70um				
E	14s	1.10um				
BJI	16.99	343	eP	33 36.00	1.7	
Z	12s	0.30um				
CD2	18.22	297	eP	33 48.80	-1.0	
HHC	19.30	334	eP	34 04.00	0.9	
BTO	19.76	330	eP	34 07.00	-1.2	
N	13s	0.50um				
E	13s	0.30um				
			eS	37 51.00		
CN2	19.94	6	eP	34 09.00	-1.0	
Z	13s	0.60um				
			eS	37 53.00		
CHTO	22.73	262	eP	34 40.00	1.5	
GTA	24.78	314	eP	34 58.00	-0.4	
WMO	34.86	313	P	36 28.50	0.0	
WB5	45.00	164	eP	37 54.50	1.9X	
WRA	45.05	165	Pd	37 55.00	2.0X	
	0.7s	3.50nm			4.4mb	
S.D. = 1.2 on 19 of 22 obs.						

• SEP 07, 1989 20h 02m 05.09± 2.07s
24.001 S ±10.5km 179.799 W ± 8.6km
DEPTH = 491.0 ± 23.5 km
5.1mb (20 obs.)
SOUTH OF FIJI ISLANDS (171)

KRP	14.44	195	eP	05 17.00	6.9X	
PGZ	16.90	190	eP	05 34.80	0.1	
MNG	17.04	192	eP	05 34.80	-1.3	
			eS	08 22.90		
KIW	17.39	194	eP	05 38.20	-1.4	
CAW	17.59	193	eP	05 41.40	-0.1	
MRW	17.79	194	eP	05 43.10	-0.3	
TCW	17.87	195	eP	05 44.20	0.0	
BRS	24.92	256	iPc	06 51.00	1.0	
COO	25.96	249	iPd	07 02.50	3.4X	
RMO	28.52	258	iPd	07 23.20	1.6	
	0.7s	105.00nm			5.5mb	
			epP	07 37.00	56kmX	
			iPcP	10 18.90		
CNB	28.96	240	iPc	07 27.30	1.9	
	0.8s	94.00nm			5.4mb	
CAN	29.25	240	iPd	07 29.20	1.3	
BWA	29.51	242	iPd	07 31.80	1.6	
CMS	31.23	248	iPd	07 46.00	1.1	
	0.5s	44.00nm			5.2mb	
CTA	31.66	270	iPd	07 49.10	0.4	
	0.8s	166.42nm			5.6mb	
			iS	12 18.00		
TOO	32.55	237	eP	07 57.40	1.3	
TAU	33.00	227	iPd	08 01.60	1.9	
STK	34.86	248	iPd	08 16.60	1.1	
ADE	37.50	243	iPd	08 37.60	0.3	
	0.5s	49.30nm			5.3mb	
QIS	37.63	267	iPd	08 37.90	-0.6	
ASPA	42.20	261	iPd	09 15.40	-0.1	
	1.2s	126.00nm			5.3mb	
			eScP	14 02.60		
			eS	14 56.40		
W85	42.57	266	iPd	09 17.80	-0.6	
			eScP	14 04.90		
			eS	15 01.50		
WRA	42.58	266	Pd	09 17.60	-0.9	
	0.5s	43.70nm			5.2mb	
FORR	46.41	250	iPd	09 47.60	-0.5	
	0.5s	179.00nm			5.8mb	
WARB	48.27	256	iPd	10 01.60	-0.8	
	0.3s	21.00nm			5.0mb	
KNA	48.84	270	iPd	10 05.70	-1.1	
GUA	50.81	314	eP	10 20.50	-0.8	
PJG	50.87	314	eP	10 20.30	-1.4	
COOL	52.35	249	iPd	10 31.30	-1.2	

	0.5s	21.00nm			4.7mb		
SBA	54.29	183	Pd	10	49.10	3.4X	
KLB	55.12	247	iPd	10	51.30	-0.8	
	0.3s	13.00nm			4.7mb		
NWAO	55.36	246	eP	10	52.00	-1.8	
	0.6s	20.00nm			4.6mb		
RKG	55.39	244	iPc	10	53.10	-1.0	
	0.4s	26.00nm			4.9mb		
MBL	55.44	260	iPd	10	53.10	-1.5	
	0.3s	14.00nm			4.8mb		
BAL	56.16	248	iPd	10	58.40	-1.1	
	0.4s	34.00nm			5.0mb		
MUN	56.36	247	iPd	11	00.20	-0.6	
MRWA	57.02	250	iPd	11	04.60	-0.8	
	0.4s	22.00nm			4.9mb		
NANU	58.94	257	iPd	11	18.10	-0.4	
	0.4s	64.00nm			5.4mb		
PCI	62.71	282	ePc	11	42.20	-1.2	
	1.0s	5.00nm			4.0mb	X	
SPA	66.14	180	iPd	12	05.10	0.5	
	1.0s	49.00nm			5.1mb		
MAW	77.72	200	iPd	13	12.50	1.3	
NJ2	80.86	311	Pc	13	28.60	0.4	
FRI	82.95	44	eP	13	38.60	0.0	
PSI	83.13	276	ePd	13	39.00	-1.1	
CMB	83.15	43	eP	13	40.00	0.3	
			e	15	34.90		
WHN	83.21	308	P	13	40.50	0.4	
ORV	83.40	41	eP	13	41.00	0.1	
WDC	83.42	40	eP	13	41.30	0.4	
TIY	88.39	313	Pc	14	06.00	0.9	
XAN	88.95	308	P	14	08.40	0.7	
CHG	89.88	291	ePd	14	13.00	0.8	
	1.0s	17.25nm			4.9mb		
CHTO	89.88	291	iPd	14	13.30	1.1	
	0.9s	12.57nm			4.8mb		
CD2	91.29	303	eP	14	20.40	1.9	
GTA	97.90	310	eP	14	48.50	-0.1	
BUL	128.12	215	ePKP	20	17.00	0.0	
	0.8s	7.09nm					
KEV	131.55	348	ePKP	20	40.00	18.2X	
SUF	137.55	343	ePKP	20	33.00	-0.4	
	0.5s	3.50nm					
NUR	139.77	342	ePKP	20	32.00	-5.4X	
NB2	142.21	351	PKP	20	36.50	-5.3X	
	0.6s	2.50nm					
EKA	148.61	4	PKP	20	55.00	2.6X	
	0.5s	2.80nm					
KSP	150.45	339	iPKPd	21	01.00	5.6X	
	0.8s	32.00nm					
			e	23	04.30		
CLL	151.00	343	iPKPd	21	01.80	5.6X	
	0.9s	25.00nm					
			e	23	05.00		
BRG	151.14	342	iPKPd	21	02.20	5.8X	
	0.9s	22.00nm					
PRU	151.75	340	PKP	21	03.50	6.2X	
KHC	152.80	341	PKP	21	06.30	7.4X	
BNG	153.71	225	iPKPc	21	00.60	-0.5	
	0.5s	30.00nm					
			id	21	09.00		
			ic	21	24.90		

S.D. = 1.0 on 54 of 66 obs.

SEP 07, 1989 20h 36m 54.73± 0.54s
40.252 N ± 4.9km 29.229 E ± 5.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YLV	0.33	19	iPg	37	01.70	0.1	
GBZT	0.56	17	iPgc	37	06.00	-0.1	
			iSg	37	13.00		
HRT	0.66	30	iPg	37	07.00	-0.9	
KCT	0.67	270	iPg	37	07.70	-0.3	
ISK	0.82	351	ePg	37	10.20	-0.4	
			eSg	37	20.50		
GPA	0.83	87	iPg	37	10.70	-0.1	
			eSg	37	23.70		
ITU	0.87	349	ePg	37	13.00	1.6	
			iSg	37	23.00		
BNT	1.01	276	iPg	37	14.20	0.4	
			iSg	37	27.70		
EDC	1.05	276	iPg	37	13.70	-0.8	
ALT	1.38	150	iPn	37	21.80	1.8	
KHL	1.94	173	iPn	37	28.80	0.7	
EZN	2.27	260	iPn	37	33.00	0.2	
IZM	2.40	220	iPn	37	40.70	6.0X	
BBTK	2.74	97	eP	37	49.00	9.3X	
			eS	38	27.00		
BCK	2.98	159	ePn	37	41.00	-2.0	
KDZ	3.21	297	eP	37	54.00	7.8X	
RZN	3.71	294	eP	38	00.00	6.6X	
MMB	4.38	290	eP	38	17.00	14.2X	

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

SEP 07, 1989 21h 01m 54.32± 0.77s
41.680 N ± 6.5km 19.512 E ± 6.3km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.8 (TTG).

LACI	0.15	107	iPgc	01	58.50	0.6	
SDA	0.34	358	iPgc	02	01.80	0.6	
ULC	0.34	325	iPgc	02	00.60	-0.8	
			iSg	02	06.30		
TIR	0.43	141	iPgd	02	03.20	0.2	
PUK	0.46	38	iPgc	02	03.50	-0.2	
TTG	0.77	346	iPgd	02	08.10	-1.2	
			iSg	02	20.50		
KKS	0.78	59	ePg	02	10.00	0.5	
BDV	0.79	320	ePg	02	09.00	-0.7	
			eSg	02	23.00		
PVY	0.98	20	ePg	02	12.10	-0.8	
			eSg	02	27.50		
BERA	1.03	161	ePg	02	16.60	2.8X	
HCY	1.08	316	ePg	02	15.70	1.1	
			iSg	02	31.00		
OHR	1.12	120	iPn	02	14.60	-0.8	
NKY	1.19	342	ePg	02	18.40	1.7	
			eSg	02	37.00		
VLO	1.21	181	ePg	02	08.00	-8.8X	
IVA	1.22	13	ePg	02	16.90	-0.3	
			eSg	02	35.50		
BRY	1.42	330	ePg	02	21.90	1.7	
			eSg	02	42.00		
SKO	1.47	78	iPn	02	23.20	2.3X	
			iSn	02	43.00		
VOY	5.95	319	ePn	03	23.10	-1.5	
			eSn	04	32.20		

S.D. = 1.1 on 15 of 18 obs.

? SEP 07, 1989 21h 16m 10.85±14.64s
33.324 S ±26.4km 71.579 W ±97.4km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

TACH	0.63	122	iPd	16	23.50	0.0	
			iS	16	37.00		
PEL	0.77	77	iPd	16	26.00	0.1	
			iS	16	40.70		
SAN	0.78	100	eP	16	26.00	0.0	
			iS	16	41.50		
PCH	0.94	109	iPd	16	29.00	0.2	
			iS	16	47.50		
CHCH	0.98	128	iPd	16	29.50	0.0	
			iS	16	47.20		
FCH	1.08	91	iPc	16	31.20	-0.2	
			iS	16	51.50		

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

• SEP 07, 1989 21h 54m 41.44± 0.82s
32.493 S ±14.9km 70.805 W ±10.3km
DEPTH = 130.3 ± 20.4 km
CHILE-ARGENTINA BORDER REGION (127)
Felt (II) in the Santiago, Chile area.

PEL	0.66	171	iPd	55	00.60	-1.3	
			iS	55	14.70		
FCH	0.94	153	iPd	55	05.30	0.8	
			iS	55	24.00		
SAN	0.97	173	iPc	55	04.50	0.1	
			iS	55	22.00		
PCH	1.15	168	iPd	55	07.00	0.8	
			iS	55	26.90		
TACH	1.16	185	iPd	55	06.50	0.2	
LNV	1.54	199	iPd	55	09.80	-0.6	
			iS	55	32.50		
ZON	2.04	63	iPc	55	16.70	0.3	
CFA	2.35	69	iPc	55	20.20	-0.1	
			S	55	44.00		
MRA	4.31	90	ePd	55	46.40	0.2	
TCA	5.41	79	ePc	56	00.20	-0.9	
			(S)	56	43.00		
CYA	5.91	48	ePd	56	03.30	-4.7X	
CNCB	15.82	10	eP	58	20.00	1.2	
LPB	16.08	9	(P)	58	22.00	0.2	
ZOBO	16.33	9	eP	58	24.00	-1.1	
GBA	145.45	116	PKPc	14	10.50	4.5X	
	0.4s	1.40nm					

S.D. = 0.9 on 13 of 15 obs.

SEP 07, 1989 22h 22m 19.94± 0.35s
31.798 S ± 5.2km 69.498 W ± 6.1km
DEPTH = 119.8 ± 5.3 km
4.1mb (2 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)
Felt (III) in San Juan Province.

ZON	0.74	70	iP	22	40.50	0.6	
CFA	1.09	80	iPc	22	44.00	0.8	
FCH	1.67	203	iPd	22	51.50	1.4	
			iS	23	16.50		
PEL	1.68	216	iPd	22	49.50	-0.4	
			iS	23	12.00		
SAN	1.92	210	iPd	22	52.80	-0.1	
			iS	23	17.70		
PCH	2.01	205	iPd	22	54.50	0.4	
			iS	23	21.60		
TACH	2.21	213	iPd	22	56.00	-0.6	
			iS	23	25.00		
CHCH	2.34	204	iPc	22	58.00	-0.3	
			iS	23	27.60		
LNV	2.69	216	iPd	23	01.20	-1.5	
			iS	23	31.00		
MRA	3.27	102	iPc	23	11.20	0.7	
TCA	4.21	85	iPc	23	23.20	-0.1	
CYA	4.63	45	ePd	23	26.60	-2.4	
SLA	7.88	28	e(P)	24	12.10	-1.3	
ANT	8.10	354	e(P)	24	18.00	1.7	
CCH	14.67	13	eP	25	43.00	-0.1	
CNCB	14.99	6	iPc	25	47.00	-0.3	
			S	26	26.00		
LPB	15.25	5	Pc	25	52.00	1.5	
ARE	15.37	353	e(P)	25	52.00	0.1	
ZOBO	15.51	5	Pc	25	52.50	-1.4	
	0.9s	12.98nm			4.2mb		
PPD	18.89	63	eP	26	34.00	0.3	
			e	26	38.40		
VAO	21.81	72	eP	27	03.00	-0.4	
BAO	25.35	56	eP	27	38.00	0.5	
LIC	72.04	71	P	33	33.00	0.1	
TIC	72.29	70	P	33	34.80	0.3	
KIC	72.35	71	P	33	35.00	0.2	
ALQ	74.93	329	eP	33	49.20	-0.4	
	1.2s	3.52nm			4.0mb		
KVN	83.72	324	eP	34	37.70	1.0	
GBA	144.72	113	PKPd	41	44.00	-0.6	
	0.3s	2.50nm					

S.D. = 1.0 on 28 of 28 obs.

SEP 07, 1989 23h 18m 01.14± 0.27s
55.239 N ± 6.0km 163.071 E ± 4.7km
DEPTH = 33.4km (2 depth phases)
4.8mb (34 obs.) 4.2Msz (1 obs.)
OFF EAST COAST OF KAMCHATKA (219)

OFUJ	21.61	230	P	22	50.10	0.1	
NIIJ	24.32	232	P	23	17.80	1.3	
MAT	25.25	233	eP	23	26.00	0.5	
	1.0s	106.00nm			5.4mb		
			eS	28	00.00		
FBA	25.68	48	P	23	29.80	0.6	
	1.1s	17.50nm			4.6mb		
IIDJ	26.26	232	P	23	36.10	1.2	
TSRJ	27.10	235	P	23	43.20	0.7	
BTO	37.49	270	eP	25	09.50	-3.7X	
Z	14s	1.00um			4.8MszX		
N	14s	0.80um					
E	14s	0.40um					
GTA	44.11	276	eP	26	06.20	-1.6	
Z	14s	1.60um			5.1MszX		
N	13s	0.90um					
LON	45.87	68	P	26	27.00	5.3X	
EDM	46.09	56	eP	26	21.50	-1.9	
WMO	47.91	289	P	26	37.00	-0.9	
Z	14s	1.00um			4.9MszX		
			sS	33	39.50		
CD2	47.92	265	eP	26	36.30	-1.7	
SES	48.99	58	eP	26	44.00	-2.1	
WDC	49.57	75	eP	26	50.70	0.1	

07d 23h

		e	26	55.10	15kmX	
CMB	52.54	75 P	27	12.90	-0.3	
KVN	53.08	73 P	27	16.50	-0.9	
TNP	54.25	73 P	27	25.00	-1.0	
	0.8s	6.62nm		4.7mb		
RSSD	56.78	59 P	27	44.80	0.5	
SUF	57.67	338 iP	27	49.90	-0.1	
	0.7s	10.80nm		5.0mb		
GLA	59.27	75 P	28	02.00	0.4	
GOL	59.37	64 P	28	03.00	0.5	
	1.0s	24.00nm		5.3mb		
GLD	59.41	64 P	28	05.00	2.3	
NUR	59.98	338 eP	28	06.00	0.0	
CHG	60.03	260 eP	28	06.10	-0.8	
CHTO	60.03	260 eP	28	06.10	-0.8	
	0.7s	4.29nm		4.7mb		
NB2	61.95	345 P	28	18.10	-1.4	
	0.8s	9.70nm		5.0mb		
ALQ	62.39	68 eP	28	22.90	0.0	
	1.0s	8.25nm		4.8mb		
		e	28	32.50	31km	
TUL	67.12	60 eP	28	53.50	0.2	
	1.3s	12.80nm		4.9mb		
	Z 19s	0.15um		4.2Msz		
		LR	55	00.00		
EKA	69.21	352 Pd	29	06.10	0.1	
	0.8s	9.70nm		4.9mb		
KRA	70.65	336 eP	29	14.80	0.0	
KSP	70.72	338 eP	29	14.80	-0.5	
DMU	70.91	354 eP	29	16.30	-0.1	
CLL	70.94	341 iPd	29	16.30	-0.2	
	1.4s	22.00nm		5.0mb		
		e	29	48.00	128kmX	
BRG	71.17	340 iP	29	17.60	-0.4	
	1.0s	12.00nm		4.9mb		
		e	29	28.50	36km	
SPC	71.38	335 eP	29	27.00	7.5X	
DLE	71.50	353 eP	29	19.90	0.0	
MOX	71.83	341 eP	29	22.00	0.1	
PRU	71.89	339 iP	29	22.80	0.5	
HYB	72.78	276 eP	29	27.00	-1.0	
	0.8s	35.70nm		5.4mb		
MEM	72.80	345 Pd	29	27.90	0.3	
GRF	72.82	341 iPc	29	28.40	0.6	
	0.8s	14.00nm		5.0mb		
KHC	72.90	340 iPc	29	29.40	1.1	
	1.0s	7.00nm		4.6mb		
ZST	73.04	337 e(P)	29	22.00	-7.1X	
MLR	73.30	330 ePc	29	32.00	1.2	
DOU	73.51	346 P	29	31.30	-0.4	
GWF	74.13	343 P	29	35.29	-0.2	
WLS	74.72	343 P	29	38.85	-0.1	
CDF	74.74	344 P	29	39.06	0.0	
KBA	74.91	339 iP	29	41.00	0.8	
	1.1s	11.40nm		4.8mb		
ECH	74.95	344 P	29	39.90	-0.3	
FEL	75.14	343 P	29	41.15	-0.2	
HAU	75.28	344 eP	29	41.90	-0.2	
	0.6s	5.40nm		4.7mb		
BSF	75.38	344 P	29	42.19	-0.6	
FLN	75.46	349 eP	29	42.70	-0.3	
	0.6s	9.00nm		4.9mb		
LDF	75.58	349 eP	29	43.40	-0.3	
	0.8s	10.70nm		4.9mb		
LOMF	75.84	344 P	29	45.34	0.0	
GRR	75.87	349 eP	29	45.40	0.1	
	0.8s	14.50nm		5.0mb		
LPF	76.24	349 eP	29	47.60	0.2	
	0.9s	11.10nm		4.9mb		
LOR	76.37	346 eP	29	48.10	-0.2	
	0.9s	6.50nm		4.6mb		
GBA	76.47	274 Pc	29	49.00	-0.2	
	1.0s	21.80nm		5.1mb		
SSF	76.63	346 eP	29	49.60	0.0	
	0.8s	2.60nm		4.3mb		
LBF	76.63	345 eP	29	49.30	-0.5	
	0.8s	4.00nm		4.5mb		
AVF	76.91	346 eP	29	51.30	0.1	
	0.8s	4.00nm		4.5mb		
MFF	77.55	348 eP	29	55.10	0.4	
	0.9s	9.80nm		4.8mb		
TCF	77.56	347 eP	29	55.00	0.1	
	1.0s	6.00nm		4.6mb		
MAF	77.58	346 eP	29	55.40	0.5	
	0.8s	5.30nm		4.6mb		
LPG	77.66	343 eP	29	56.90	1.2	
	1.0s	18.00nm		5.1mb		

LSF	77.69	347 eP	29	55.50	0.0	
	1.0s	6.00nm		4.6mb		
BOB	77.89	341 P	29	58.50	1.8	
CAF	78.92	346 eP	30	03.30	1.0	
	0.8s	5.30nm		4.6mb		
LFF	79.08	347 eP	30	04.00	0.9	
	0.8s	8.00nm		4.8mb		
LPO	79.27	347 eP	30	05.00	0.8	
	0.6s	6.10nm		4.8mb		
ASPA	82.45	207 eP	30	07.30	-13.8X	
SPA	145.06	180 e(PKP)	37	34.20	-0.9	
	1.0s	9.50nm				
	S.D. = 0.8	on 69 of 74 obs.				

? SEP 08, 1989 01h 11m 40.61± 7.00s
51.571 N ±42.5km 16.253 E ±43.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.4 (VKA), 3.2 (GRF), 2.6 (KRA).

KSP	0.73	178 iPd	11	55.10	0.2	
	0.2s	87.00nm				
		iS	12	03.80		
		eLR	12	13.00		
BRG	1.61	245 iPg	12	10.00	0.9	
		iSg	12	29.50		
PRU	1.92	215 Pn	12	13.00	-0.7	
		Pg	12	15.00		
		Sn	12	32.40		
		Sg	12	37.50		
CLL	2.05	264 iPn	12	15.20	-0.3	
		ePg	12	19.00		
		eSg	12	43.00		
KRA	2.79	122 eP	12	36.90	10.8X	
		eS	13	14.10		
KHC	2.98	216 Pn	12	29.00	0.1	
		Pg	12	35.00		
		Sn	13	02.10		
		Sg	13	14.50		
MOX	3.07	254 ePn	12	30.00	0.0	
		eSg	12	37.00		
		iSg	13	17.00		
VKA	3.31	179 ePn	12	42.00	8.5X	
		ePg	12	51.00		
		e	13	09.50		
		iSg	13	24.50		
GRF	3.71	242 ePn	12	39.00	-0.3	
		ePg	12	52.20		
		eSg	13	36.10		
	S.D. = 0.6	on 7 of 9 obs.				

& SEP 08, 1989 01h 47m 16.91s
56.135 N 152.300 W
DEPTH = 10.0km (geophysicist)
KODIAK ISLAND REGION (13)
<AGS-P>.

KDC	1.62	356 iP	47	40.15	-5.4	
		S	47	59.74		
CDD	2.89	346 iP	47	58.93	-5.0	
		S	48	32.23		
XLV	3.34	5 eP	48	05.35	-4.9	
CNPM	3.45	9 iP	48	06.16	-5.6	
OPT	3.56	352 iP	48	07.82	-5.6	
ILIM	3.97	355 eP	48	13.12	-6.1	
RED	4.30	357 eP	48	17.79	-6.2	
RDT	4.45	359 eP	48	19.43	-6.6	
SLKM	4.52	13 eP	48	20.73	-6.2	
SPU	5.06	1 eP	48	28.50	-6.2	
BGL	5.14	360 eP	48	29.63	-6.2	
	11 obs. associated					

? SEP 08, 1989 02h 10m 29.19± 1.31s
20.790 S ±13.7km 69.959 W ±36.2km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

ANT	2.93	188 eP	11	14.50	0.0	
CNCB	4.38	26 iPc	11	35.80	0.1	
		S	12	19.00		
LPB	4.59	23 Pc	11	39.00	0.5	
	1.0s	110.00nm				
		S	12	23.00		
ZOBO	4.82	21 P	11	41.30	-0.6	
		eS	12	25.00		
CCH	4.95	47 P	11	43.50	-0.1	

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

• SEP 08, 1989 02h 44m 38.90± 1.02s
22.450 S ±10.3km 68.501 W ±10.8km
DEPTH = 120.9 ± 12.3 km
4.2mb (2 obs.)
NORTHERN CHILE (123)

ANT	2.16	234 eP	45	14.50	-0.4	
		i	45	16.50		
		iS	45	38.00		
SLA	3.57	130 ePc	45	39.30	5.6X	
CCH	5.51	24 eP	46	00.50	0.3	
CNCB	5.63	5 P	46	02.00	-0.1	
		i	46	20.00		
LPB	5.90	4 P	46	07.00	1.3	
ZOBO	6.16	3 P	46	08.00	-1.4	
ARE	6.59	334 eP	46	18.00	3.0X	
		iS	47	17.50		
ITB1	13.13	102 eP	47	50.00	8.2X	
ITB7	13.38	104 eP	47	52.90	7.7X	
PPD	15.92	92 eP	48	19.20	1.8	
		i	48	22.60		
		e	48	26.50		
		e	48	40.80		
VAO	19.87	96 eP	49	03.00	0.1	
		e	49	07.40		
		e	49	18.70		
BAO	20.53	74 eP	49	08.50	-1.2	
ITR	31.92	70 eP	50	53.40	-1.8	
ALQ	67.49	327 eP	55	24.00	-0.1	
	0.6s	1.00nm		3.9mb		
KIC	68.61	73 Pc	55	31.50	0.3	
	0.6s	5.50nm		4.6mb		
KVN	76.78	322 eP	56	20.20	1.3	
EDM	84.78	335 ePd	57	07.50	7.0X	
GBA	146.50	99 PKPc	04	09.30	2.7X	
	0.4s	1.80nm				
	S.D. = 1.3	on 12 of 18 obs.				

SEP 08, 1989 03h 05m 34.68± 0.60s
5.933 N ± 3.8km 125.793 E ± 4.8km
DEPTH = 175.1 ± 6.3 km
5.1mb (23 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	1.17	349 eP	06	03.00	-0.5	
		iS	06	24.00		
MNI	4.56	192 ePd	06	42.50	-1.0	
		eS	07	36.50		
PCI	9.03	221 ePd	07	45.00	2.5	
	0.7s	5.00nm		4.1mb		
TLE	13.43	149 ePc	08	39.20	-0.3	
	0.4s	5.50nm		4.3mb		
JAY	17.09	119 ePd	09	25.50	0.6	
MTN	19.40	164 eP	09	49.00	-0.5	
		e	13	19.00		
GUMO	20.27	67 eP	09	57.60	-0.7	
PJG	20.27	67 eP	09	58.10	-0.2	
OIZ	20.27	311 eP	09	58.60	0.2	
KNA	21.74	172 eP	10	13.20	0.3	
KGM	22.75	261 ePd	10	24.40	1.6	
		e	12	56.00		
IPM	24.70	268 ePc	10	41.80	0.5	
	0.8s	57.30nm		5.2mb		
		e	13	38.90		
SNG	25.04	274 eP	10	45.00	0.5	
	1.0s	114.00nm		5.4mb		
		e	14	05.60		
PPI	26.14	257 iP	10	54.40	-0.1	
	0.7s	190.00nm		5.9mb		
PMG	26.18	125 eP	10	55.50	0.6	
NST	26.97	293 eP	11	03.50	1.5	
		e	11	31.00		
PSI	26.98	264 eP	11	02.40	0.2	
WB5	27.00	162 iPd	11	01.20	-1.1	
		eS	15	23.50		
WRA	27.05	162 Pc	11	02.00	-0.8	
	0.2s	3.80nm		4.7mb		
MBL	27.55	192 iPc	11	06.10	-1.1	
	0.4s	11.00nm		4.9mb		
CHG	29.12	298 eP	11	20.90	-0.5	
CHTO	29.12	298 eP	11	20.90	-0.5	
		pP	11	55.70	168kmX	
QIS	29.62	153 iPd	11	25.00	-0.7	
		e	11	33.00		
		e	18	20.00		

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NANU    30.05 199 iPc    11 28.40  -1.0
        0.5s     22.00nm          5.1mb
                   eS     15 24.00
ASPA    30.47 165 iPd    11 32.50  -0.6
        0.6s     14.00nm          4.9mb
                   eS     16 19.80
WARB    31.94 179 iPd    11 47.00   1.1
        0.3s     10.00nm          5.0mb
XAN     32.04 333 P      11 46.60  -0.2
CD2     32.33 323 eP     11 49.40   0.0
CTA     32.77 143 iPd    11 53.90   0.7
        0.8s     18.66nm          4.8mb
MEKA    33.11 192 eP     11 55.20  -0.9
        0.3s     22.00nm          5.3mb
TIY     33.89 341 eP     12 01.00  -1.8
SNY     35.80 357 Pc     12 19.80   1.1
LZH     36.14 329 P      12 22.50   0.6
        1.5s      0.04nm          1.9mb X
                  PP     12 59.00
MRWA    36.20 195 eP     12 21.50  -0.7
        0.4s     11.00nm          4.9mb
FORR    36.64 177 eP     12 25.10  -0.8
        0.4s     38.00nm          5.4mb
COOL    36.88 187 eP     12 27.00  -1.0
        0.5s      6.00nm          4.5mb
BAL     37.36 193 eP     12 31.00  -1.0
        0.4s     20.00nm          5.1mb
KLB     38.09 191 eP     12 38.00  -0.1
        0.4s     23.00nm          5.2mb
MDJ     38.67   4 eP     12 44.50   1.7
MUN     38.79 193 iPc    12 43.70  -0.2
        0.6s     22.00nm          5.0mb
NWAO    39.49 191 iPc    12 49.90   0.3
        0.4s     25.00nm          5.2mb
      Z  20s      0.50um          4.3Msz
      N  20s      0.20um
      E  20s      0.20um
STK     40.51 159 iPd    12 59.00   1.0
RKG     40.64 191 iPd    13 04.40   5.3X
GTA     40.74 329 P      13 00.00   0.0
                  PcP    14 58.80
ADE     42.46 164 iPd    13 15.60   1.6
BWA     45.48 154 eP     13 38.80   0.7
                   i     13 53.70
CAN     46.49 154 eP     13 47.80   1.7
HYB     47.52 288 eP     13 53.50  -0.9
KOD     48.00 278 eP     13 58.00  -0.5
GBA     48.19 283 Pc     13 58.40  -1.1
        0.7s     20.60nm          4.8mb
DZM     48.57 126 iPc    14 03.70   1.2
WMO     50.40 325 P      14 10.20  -5.9X
MAIO    67.45 307 iPc    16 14.00   0.2
MHI     67.45 307 iPc    16 14.00   0.2
MAW     85.49 200 eP     17 54.00   0.5
KEV     87.51 340 eP     17 59.00  -4.3X
SOD     88.09 338 iP     18 05.80  -0.3
SUF     89.18 333 iP     18 10.80  -0.6
        0.4s     12.00nm          5.2mb
NUR     90.34 331 iP     18 16.00  -0.7
        0.5s     11.20nm          5.1mb
NB2     96.41 334 P      18 43.40  -1.3
        0.7s      6.70nm          5.1mb
KIC    129.14 283 PKP    24 25.00   0.5
LIC    129.45 283 PKP    24 25.50   0.4
PPD    163.75 190 e(PKP)25 16.00  -2.2X
                   e     26 12.00
     S.D. = 0.9  on  59 of  63 obs.
-------------------------------------
•  SEP  08, 1989  03h 11m 00.65± 0.56s
   5.774 S ± 9.9km  102.786 E ±11.2km
   DEPTH =  33.0km  (normal)
   5.0mb (  4 obs.)
 SOUTHERN SUMATERA                (274)

PSI      9.25 335 e(P)   13 14.40  -0.5
PCI     17.69  75 ePc    15 08.30   2.0
                  eS     15 22.00
KKM     17.82  49 eP     15 08.50   0.5
NST     21.47 353 eP     15 49.00   0.4
LOE     23.06 357 eP     16 03.60  -0.7
BDT     23.17 351 eP     15 55.30 -10.1X
        0.8s     51.90nm
CHG     24.72 351 iPc    16 10.20 -10.3X
        0.9s     10.50nm
MTN     28.82 106 eP     16 48.00 -10.2X
GYA     32.26   7 P      17 28.40  -0.2
W85     33.74 117 eP     17 36.50  -5.1X
XAN     40.02   8 P      18 33.40  -0.9
SSE     40.66  25 eP     18 35.00  -4.5X
        4.0s      0.50nm          2.6mb X
LZH     41.65   1 P      18 46.00  -1.8
        1.5s     40.00nm          4.9mb
NDI     42.19 326 iPd    18 42.50  -9.7X
CTA     44.53 113 iPd    19 10.30  -1.1
        1.0s     31.50nm          5.1mb
GTA     45.04 357 P      19 16.40   1.1
      Z  16s      0.80um          4.7MszX
BTO     46.62   8 eP     19 28.00   0.3
      N  14s      0.30um
      E  14s      0.30um
BWA     50.85 130 eP     20 01.20   0.7
WMO     51.21 346 P      20 04.00   0.9
CAN     51.64 131 eP     20 06.20  -0.4
MAT     53.58  35 (P)    20 04.00 -16.8X
MDJ     55.65  23 eP     20 33.50  -2.3
MHI     58.25 319 eP     20 55.00   0.4
MBH     73.98 303 eP     22 31.00  -4.0X
SPA     84.26 180 e(P)   23 41.00  10.7X
        1.0s      5.50nm
SUF     89.01 333 iP     23 54.90   1.7
        0.8s      7.30nm          5.1mb
NUR     89.18 331 eP     23 56.00   2.0
SOD     90.00 338 eP     23 59.00   1.2
NB2     95.77 331 P      24 25.00   0.4
        0.8s      1.30nm          4.4mb
PNT    123.81  32 ePKP   29 56.00  -0.9
LON    124.04  36 PKP    29 57.10  -0.4
KVN    130.42  42 PKP    30 10.10  -0.1
TNP    131.52  43 PKP    30 12.20  -0.1
RSSD   135.14  27 PKP    30 18.50  -0.5
GLA    135.74  47 PKP    30 18.00  -2.2X
GOL    137.76  33 PKP    30 23.00  -1.2
ALO    140.37  39 e(PKP)30 29.50   0.5
        1.0s      3.75nm
                   e     30 41.30
SIO    145.39  28 ePKP   30 25.70 -11.6X
                   e     30 37.60
TUL    145.49  27 ePKP   30 25.40 -12.1X
        1.3s     51.90nm
                   e     30 37.20
FVM    145.76  19 PKP    30 25.50 -12.4X
UYO    147.54  27 e(PKP)30 40.00  -0.9
OLY    147.63  22 PKP    30 31.80  -9.2X
BLA    148.57   5 PKP    30 34.20  -8.3X
RSCP   149.33  13 PKP    30 47.10   3.3X
PRM    151.43   9 PKP    30 41.50  -5.4X
     S.D. = 1.1  on  28 of  45 obs.
-------------------------------------
•  SEP  08, 1989  05h 01m 58.62± 0.85s
   16.663 N ±13.1km   94.908 W ± 9.4km
   DEPTH = 122.5 ± 14.4 km
   4.4mb (  1 obs.)
 OAXACA, MEXICO                   ( 60)

OXX      1.79 284 iP     02 30.81   0.6
                  iS     02 51.50
EVV      1.83 347 eP     02 29.89  -0.7
                  iS     02 48.22
SCX      2.18  88 eP     02 40.86   5.9X
                  iS     03 05.73
TPX      3.09 124 (P)    02 47.00   0.1
LVVM     3.39 335 iP     02 47.28  -3.6X
                  iS     03 21.38
IIT      4.00 306 eP     02 59.96   0.6
PPM      4.27 305 iP     03 06.00   2.7X
                  iS     03 53.50
III      4.67 292 iP     03 09.00   0.6
ACX      4.75 273 (P)    03 08.00  -1.3
SIO     19.05 357 eP     06 13.80  -0.1
TUL     19.19 358 eP     06 15.40   0.1
        0.5s     10.00nm          4.4mb
     S.D. = 0.9  on   8 of  11 obs.
-------------------------------------
   SEP  08, 1989  06h 15m 05.63± 0.25s
   52.766 S ± 7.8km    9.851 E ± 6.4km
   DEPTH =  10.0km  (geophysicist)
   5.3mb ( 16 obs.) 5.6Msz (  6 obs.)
 SOUTHWEST OF AFRICA              (413)
      CENTROID, MOMENT TENSOR     (HRV)
      Data Used: GDSN
      L.P.B.: 11S, 25C
      Centroid Location:
      Origin Time       06:15:15.9 0.3
      Lat 52.75S 0.03 Lon  11.28E 0.06
      Dep  15.0 FIX Half-duration  3.0
      Moment Tensor;   Scale 10**17 Nm
        Mrr=-2.48 0.12  Mtt= 5.93 0.13
        Mff=-3.45 0.13  Mrt= 0.00 0.00
        Mrf= 0.00 0.00  Mtf= 1.19 0.19
        Principal Axes:
         T  Val=  6.08  Plg= 0  Azm=173
         N       -2.49       90       180
         P       -3.60        0        83
        Best Double Couple:Mo=4.8*10**17
         NP1:Strike=218 Dip=90 Slip= 180
         NP2:       308     90         0

BFS     28.78  33 iPc    21 04.50  -1.1
        0.9s     84.03nm          5.5mb
PRY     28.98  34 eP     21 05.60  -1.9
        1.0s     17.00nm          4.8mb
                   i     21 22.70
MAW     29.11 141 eP     21 07.00  -1.1
        1.0s     68.00nm          5.4mb
SLR     30.35  34 iPc    21 20.50   0.7
        1.3s     76.92nm          5.4mb
      Z  17s      7.82um          5.4MszX
BUL     35.66  31 iPc    22 06.40   0.5
                   i     22 21.90
SPA     37.42 180 ePc    22 18.70  -1.6
        1.2s    246.48nm          5.9mb
      Z  22s     15.77um          5.8Msz
                   i     23 40.90
KRI     39.09  31 iPc    22 37.90   3.2X
                   i     22 50.80
LSZ     40.13  28 eP     22 45.00   1.7
KMZ     41.24  24 iPc    22 54.20   1.8
MZZ     44.25  27 iPc    23 29.00  12.0X
SBA     48.87 174 iPc+   23 52.80   0.2
BMA     50.62 285 eP     24 06.00  -0.7
                   e     24 07.90
VAO     52.05 282 eP     24 17.20  -0.4
PPD     55.38 279 eP     24 41.90  -0.2
                   e     24 45.00
                   e     24 47.70
                   e     24 50.20
PDCR    55.90 297 eP     24 42.10  -3.7X
MRA     56.51 259 ePd    24 49.10  -1.0
TCA     56.60 261 eP     24 48.30  -2.6
BNG     57.46  10 iPd    24 56.50  -0.4
        0.9s     45.00nm          5.5mb
                  ic     25 19.60
                  id     26 25.70
CHCH    58.36 254 eP     25 04.50   1.3
BAO     58.38 287 eP     25 03.50  -0.1
PCH     58.50 255 eP     25 05.50   1.3
ITR     58.67 300 eP     25 03.10  -2.4
                   e     25 18.30
                   e     25 30.90
SAN     58.70 255 eP     25 06.50   0.9
TACH    58.72 254 eP     25 06.50   0.8
LNV     58.78 254 eP     25 05.00  -1.0
PEL     58.94 255 iPc    25 08.00   0.8
        1.5s    152.78nm          5.9mb
LIC     60.11 343 Pc     25 14.20  -1.1
        0.8s     26.50nm          5.4mb
      Z  22s      3.25um          5.4Msz
                   S     33 30.00
KIC     60.19 343 P      25 14.20  -1.7
TIC     60.52 343 Pc     25 17.00  -1.1
SLA     61.95 265 ePc    25 28.00  -0.1
CCH     67.90 270 P      26 09.50   2.7
CNCB    69.45 269 Pc     26 17.10   0.4
LPB     69.74 269 Pc     26 19.00   0.7
        1.8s    818.18nm          6.6mb X
                  PS     35 36.00
                  LR     47 33.00
ARE     71.85 267 eP     26 31.00   0.0
NWAO    73.92 123 eP     26 41.50  -1.0
        0.7s     13.00nm          5.1mb
      Z  20s      3.20um          5.6Msz
      N  20s      2.10um
      E  20s      1.60um
MUN     74.15 122 eP     26 43.00  -0.8
        0.8s     28.00nm          5.3mb
      Z  20s      2.90um          5.6Msz
      N  20s      1.50um
      E  20s      1.50um
COOL    77.53 125 eP     27 02.00  -1.0
        0.8s     11.00nm          5.0mb
HUA     77.61 266 e(P)   27 06.20   2.1
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08d 06h

```
NNA      78.57 265 eP     27 09.70    0.8
          1.0s     17.00nm          5.1mb
NANU     81.30 116 eP     27 23.00   -0.4
          0.7s     11.00nm          5.0mb
TIO      84.67 345 eP     27 44.50    4.0X
                    i     27 47.50
KOD      84.97  66 eP     27 45.00    2.4
CAN      85.34 148 eP     27 44.50    0.5
BWA      85.97 147 eP     27 47.00   -0.1
IFR      86.91 348 iPc    27 55.50    3.9X
GBA      87.73  64 Pc     27 56.70    1.0
          1.8s     54.30nm          5.6mb
PSO      89.23 273 eP     28 05.50    2.0
ASPA     89.71 131 iPc    28 05.10   -0.2
          1.9s     36.00nm          5.3mb
       Z  23s      3.10um          5.7MszX
                   LR     59 55.00
EJIF     89.84 348 eP     28 09.50    4.2X
EPRU     90.32 348 eP     28 11.50    4.0X
ELL      90.84  16 eP     28 08.00   -2.0
HYB      91.46  63 eP     28 15.00    1.8
PSI      91.56  88 ePc    28 16.30    2.5
          0.6s     5.00nm           5.0mb
                   e      29 40.00
KHL      92.31  15 eP     28 28.00   11.3X
OHR      93.98   8 eP     28 19.50   -4.8X
BBTK     94.35  17 eP     28 41.00   14.9X
WMQ     117.09  53 ePKP   33 55.00    3.3X
GTA     120.12  64 ePKP   33 58.00    0.3
       Z  30s      0.70um          5.1MszX
XAN     121.47  74 PKP    34 00.00   -0.3
OLY     123.81 286 PKP    34 04.00   -0.7
FVM     124.92 289 PKP    34 07.00    0.2
TIY     126.07  73 ePKP   34 05.70   -3.5X
       Z  20s      1.00um          5.5Msz
       E  15s      0.50um
BTO     126.62  69 ePKP   34 11.00    0.8
       Z  17s      0.90um          5.5MszX
       N  17s      0.60um
       E  17s      0.80um
                   ePP    36 06.00
TUL     126.64 283 ePKP   34 10.60    0.4
          1.0s     4.30nm
                   LR     15 10.00
TIA     127.81  78 ePKP   34 12.40    0.0
BJI     129.79  74 ePKP   34 15.00   -1.0
       Z  28s      1.04um          5.4MszX
       E  18s      0.84um
ALQ     132.38 274 ePKP   34 21.80    0.4
       Z  20s      1.26um          5.6Msz
                   ePP    36 25.00
GOL     134.83 280 PKP    34 20.00   -6.0X
RSSD    136.74 286 PKP    34 28.00   -1.5
BAR     137.03 264 ePKP   34 39.00    8.9X
PLM     137.62 264 ePKP   34 43.00   11.6X
TPC     137.64 266 ePKP   34 32.00    0.7
RVR     138.37 265 ePKP   34 32.00   -0.5
SBB     139.11 265 ePKP   34 34.00    0.1
CLC     139.73 267 ePKP   34 36.00    1.0
ISA     140.16 266 ePKP   34 36.00    0.2
MAT     140.76  93 ePKP   34 30.00   -6.8X
TNP     140.97 270 PKP    34 36.00   -1.4
FRI     141.78 266 ePKP   34 39.20    0.6
KVN     142.12 270 PKP    34 37.50   -1.9
LRM     142.64 283 ePKP   34 37.90   -2.2X
CMB     142.87 267 ePKP   34 37.80   -2.7X
SES     144.09 291 ePKP   34 39.00   -3.2X
ORV     144.50 268 e(PKP) 34 41.90   -1.3
MIN     145.05 269 ePKPc  34 43.10   -1.2
WDC     145.76 269 iPKPc  34 45.40    0.1
EDM     146.58 294 iPKPd  34 46.80    0.6
          1.5s    264.00nm
DPW     147.08 283 PKP    34 48.50    1.3
PNT     148.57 284 ePKP   34 50.00    0.5
          1.1s     58.00nm
LON     148.69 279 PKP    34 53.80    3.9X
FBA     163.34 326 PKP    35 01.00   -6.7X
     S.D. = 1.2  on  70 of  91 obs.
-------------------------------------------
?  SEP  08, 1989  07h 06m 42.99± 5.39s
   22.420 N ±39.9km  121.279 E ±12.9km
   DEPTH =  10.0km  (geophysicist)
 TAIWAN REGION                      (243)

TWG      0.44 334 iPd    06 52.00    0.0
                   eS     07 03.50
TWF1     0.93   1 eP     07 00.70    0.0

TWK      1.11 319 ePc    07 03.90    0.0
TWD      1.68  10 eP     07 12.40   -0.1
TWO      1.89 348 ePd    07 15.70    0.1
TWC      2.24  13 eP     07 20.70    0.0
ANP      2.76   4 eP     08 04.00   35.9X
     S.D. = 0.1   on   6 of   7 obs.
-------------------------------------------
%  SEP  08, 1989  07h 55m 41.79± 1.28s
    44.825 N ± 9.9km    7.761 E ± 5.8km
    DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                     (545)
      ML 2.4 (GEN).

DOI      0.49 229 P      55 51.70    0.0
                   eSg    55 58.50
ROB      0.54 172 P      55 53.62    1.0
                   S      56 01.56
PZZ      0.57 236 P      55 54.40    1.0
                   S      56 03.24
PCP      0.63 117 P      55 54.54    0.1
                   S      56 03.56
ENR      0.65 202 P      55 54.40   -0.4
                   S      56 03.24
STV      0.66 208 P      55 54.28   -0.7
                   S      56 03.14
FIN      0.69 152 P      55 55.31   -0.2
                   S      56 04.61
RRL      0.70 278 P      55 55.63   -0.2
                   S      56 04.82
IMI      0.92 174 P      55 58.98   -0.4
     S.D. = 0.7   on   9 of   9 obs.
-------------------------------------------
    SEP  08, 1989  08h 25m 39.80± 1.63s
    30.178 S ± 8.9km  177.844 W ± 7.1km
    DEPTH =  46.8 ± 13.4 km
    5.3mb ( 18 obs.)  5.2Msz (  1 obs.)
 KERMADEC ISLANDS                   (178)
      Felt (III) on Raoul Island.
      CENTROID, MOMENT TENSOR       (HRV)
      Data Used: GDSN
      L.P.B.: 10S, 19C
      Centroid Location:
      Origin Time        08:25:54.5 1.3
      Lat 29.67S 0.14 Lon 178.14W 0.07
      Dep  64.6 5.8 Half-duration  1.8
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 0.83 0.08   Mtt= 0.50 0.16
        Mff=-1.33 0.12   Mrt= 0.24 0.10
        Mrf= 0.79 0.13   Mtf=-0.38 0.10
       Principal Axes:
        T  Val=  1.11  Plg=70  Azm=307
        N        0.56       8       194
        P       -1.67      18       102
      Best Double Couple:Mo=1.4*10**17
       NP1:Strike=179 Dip=28 Slip=  73
       NP2:        18     64       99

RAO      0.93 356 iP     25 56.10   -0.5
                   eS     26 08.70
KRP      9.48 214 eP     28 17.00   20.4X
DZM     16.24 296 iPc    29 31.10    4.7X
BRS     25.87 269 iPd    31 11.00    2.0
                   i     31 30.00
COO     26.08 261 eP     31 13.40    2.5
          0.8s     56.00nm          5.2mb
CNB     27.98 251 iPd    31 29.30    1.1
          1.0s     72.00nm          5.3mb
CAN     28.27 251 eP     31 31.70    0.9
BWA     28.75 253 eP     31 33.90   -1.2
RMO     29.57 269 iPc    31 43.90    1.4
CMS     31.13 258 iPd    31 57.10    0.8
          1.1s     58.00nm          5.2mb
TOO     31.18 246 eP     31 56.80    0.2
          0.9s     65.00nm          5.4mb
OLP     33.45 267 ePc    32 18.00    1.4
BFD     33.51 247 iPd    32 17.20    0.3
CTA     33.90 279 iPc    32 20.30   -0.2
          0.8s    186.57nm          6.1mb
                   iS     38 16.00
STK     34.66 257 eP     32 27.50    0.6
ADE     36.71 251 iPd    32 44.80    0.5
          0.9s     63.67nm          5.5mb
OIS     39.43 274 eP     33 07.00   -0.2
ASPA    43.26 267 iPc    33 37.20   -1.4
          1.0s     46.00nm          5.2mb
       Z  18s      3.20um          5.2Msz
                   LR     50 59.00

WRA      44.22 272 Pd     33 45.30   -1.1
          0.5s     41.60nm          5.5mb
WB5      44.22 272 iPc    33 45.10   -1.3
DRV      44.40 202 eP     33 45.80   -1.4
FORR     46.18 255 eP     33 59.50   -2.3
          0.5s     62.00nm          5.8mb
SBA      48.27 184 P      34 19.00    1.4
KNA      50.79 274 eP     34 36.20   -1.5
MBL      56.30 264 eP     35 15.10   -3.2X
          0.3s      8.00nm          5.2mb
GUA      56.35 315 e(P)   35 16.40   -2.3
          0.8s     83.58nm          5.8mb
GUMO     56.42 315 e(P)   35 14.50   -4.6X
PJG      56.42 315 e(P)   35 14.80   -4.3X
NANU     59.45 260 eP     35 37.00   -3.3X
          0.6s     29.00nm          5.6mb
SPA      59.99 180 ePc    35 42.90   -0.9
          1.0s     25.50nm          5.3mb
                   e      35 49.20
MAW      72.56 201 eP     37 02.00   -1.5
MAT      78.14 325 eP     37 34.00   -1.5
          0.8s      9.70nm          4.9mb
SNA      79.75 178 iPc    37 42.90   -0.8
          0.8s     17.16nm          5.0mb
ADK      81.71   1 P      37 53.30   -0.9
BCH      84.75  44 P      38 10.70    0.4
PRS      84.77  43 eP     38 10.90    0.6
                   epP    38 20.20   29kmX
                   esP    38 25.50
GCC      84.89  42 eP     38 11.20    0.4
                   epP    38 20.50   29kmX
                   esP    38 25.80
PRI      85.05  43 eP     38 12.80    1.0
                   esP    38 27.30
BAR      85.22  48 eP     38 12.00   -0.6
MHC      85.31  42 eP     38 13.50    0.4
                   epP    38 23.00   30kmX
                   esP    38 28.60
BKS      85.34  41 e(P)   38 28.70   15.6X
          1.0s     48.00nm
PSI      85.49 276 ePd    38 13.40   -1.0
PLM      85.53  47 eP     38 14.00   -0.4
                   e      38 29.00
RVR      85.63  46 eP     38 15.00    0.4
SBB      85.80  46 eP     38 15.00   -0.5
                   e      38 30.00
ISA      86.05  45 eP     38 17.00    0.3
                   e      38 32.00
FRI      86.19  43 eP     38 17.50    0.2
                   epP    38 26.60   29kmX
                   esP    38 32.00
CMB      86.51  42 eP     38 19.00    0.1
                   epP    38 28.10   29kmX
                   esP    38 33.50
TPC      86.54  47 eP     38 20.00    0.8
                   e      38 35.00
GLA      86.65  49 eP     38 21.00    1.3
                   e      38 35.00
CLC      86.68  45 eP     38 20.00    0.2
                   e      38 35.00
GSC      86.83  46 eP     38 29.00    8.4X
ORV      86.92  40 eP     38 20.80    0.0
                   epP    38 29.80   28kmX
                   esP    38 35.20
WDC      87.06  39 eP     38 21.70    0.2
                   epP    38 30.90   29kmX
                   esP    38 36.20
MIN      87.40  39 e(P)   38 22.50   -0.8
                   epP    38 31.90   29kmX
                   esP    38 37.80
KVN      88.51  42 P      38 28.10   -0.7
SNY      89.71 320 eP     38 38.00    4.0X
CN2      90.05 323 Pc     38 35.00   -0.6
       Z  24s      0.50um          4.9MszX
LON      91.75  35 P      38 42.30   -1.1
BJI      92.86 315 eP     38 49.00    0.4
       Z  32s      0.38um          4.6MszX
                   eS     50 00.00
ALQ      93.33  51 eP     38 51.40    0.2
          1.0s     3.75nm           4.8mb
                   epP    39 05.90   49kmX
CHTO     93.63 290 eP     38 53.70    1.1
TIY      93.82 312 eP     38 54.40    1.2
PNT      94.58  34 eP     38 57.00    0.7
          0.8s     6.00nm           5.1mb
FBA      97.62  12 P      39 11.50    1.7
          0.9s     8.75nm           5.3mb
```

ZOBO	98.13	114	eP	39	27.00	13.0X
			LR	11	52.00	
GBA	109.32	275	PKPd	44	04.90	-2.1X
	0.7s		1.90nm			
KSH	120.22	301	PKP	44	27.50	0.1
SUF	143.94	341	iPKP	45	07.80	-3.1X
	0.6s		30.00nm			
BHD	144.12	286	ePKPd	45	08.00	-4.1X
MSL	145.37	291	ePKPd	45	12.00	-2.2X
			e	45	29.00	
NUR	146.15	340	iPKP	45	14.80	0.1
	0.7s		60.10nm			
UPP	148.54	345	iPKP	45	20.30	1.8
			i	45	24.20	
NB2	148.55	352	PKP	45	17.00	-1.7
	0.8s		26.00nm			
NRA0	148.80	351	PKP	45	21.20	2.2X
HFS	149.05	349	ePKP	45	21.60	2.2X
	0.7s		26.80nm			
BNG	150.08	214	iPKPc	45	26.00	3.6X
	0.3s		55.00nm			
			id	45	31.90	
KVT	150.55	301	iPKP	45	33.50	11.2X
BHL	151.44	286	PKPd	45	30.00	6.1X
PRNI	151.69	279	iPKP	45	30.00	5.7X
MBH	151.70	278	ePKP	45	24.00	-0.3
KAS	152.17	302	iPKPc	45	30.80	6.0X
BBTK	153.25	299	ePKP	45	33.00	6.6X
BRG	157.52	340	e(PKP)	45	42.60	11.1X
			i	46	03.20	
KHC	159.17	339	ePKP	45	31.00	-2.5X
			i	46	11.00	

S.D. = 1.1 on 61 of 85 obs.

SEP 08, 1989 09h 04m 49.29± 0.74s
44.217 N ± 6.9km 11.802 E ± 6.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

SFI	0.30	173	P	04	55.50	0.0
			eSn	05	00.50	
PGD	0.35	190	P	05	28.50	32.0X
RSM	0.55	121	P	04	59.10	-1.3
FIR	0.59	222	ePg	05	01.00	-0.2
			e(Sg)	05	11.00	
CRE	0.60	170	P	05	01.50	0.0
			eSg	05	11.50	
BDI	0.88	260	P	05	07.00	0.7
			eSg	05	19.50	
ARV	1.09	131	P	05	09.00	-0.9
			eSn	05	23.60	
ASS	1.30	151	P	05	14.50	1.0
CIO	1.41	136	ePn	05	15.41	0.3
			eSn	05	39.08	
SAL	1.66	327	P	05	40.80	22.3X
CTI	1.83	357	P	05	17.50	-3.7X
TRI	2.04	42	iP	05	42.30	18.2X
			i(Sg)	05	53.00	
MDI	2.15	317	P	05	24.50	-1.2
VOY	2.34	38	ePn	05	23.30	-5.2X
			eSn	05	49.80	
			e	07	15.00	
LJU	2.66	46	eP	05	37.50	4.5X
			e(Sn)	05	59.00	
			e	06	09.10	
VAI	2.71	309	P	05	30.00	-3.6X
VBY	2.77	61	ePn	05	36.00	1.4
			eSn	06	03.10	
KBA	3.06	20	iP	06	25.80	47.1X
	0.6s		9.00nm			
PTJ	3.39	59	eP	05	48.60	5.2X
KHC	5.07	13	eP	06	21.50	14.4X

S.D. = 1.0 on 10 of 20 obs.

& SEP 08, 1989 10h 16m 40.80s
37.645 N 121.687 W
DEPTH = 5.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

MHC	0.30	173	iPd	16	46.90	-0.1
			iS	16	52.30	
ARN	0.32	157	eP	16	47.10	-0.2
BKS	0.49	298	eP	16	50.60	-0.1
BRK	0.51	297	eP	16	50.60	-0.4
			e(S)	16	59.90	
PCC	0.57	256	eP	16	51.70	-0.5
GCC	0.66	202	iPc	16	54.20	0.2
			iS	17	04.60	
SAO	0.90	168	eP	16	58.50	0.0
CMB	1.10	69	eP	17	00.50	-1.5
KVN	3.15	62	e(P)	17	37.00	4.8
	9 obs. ossocioted					

• SEP 08, 1989 11h 19m 17.16± 1.18s
34.579 N ±19.1km 132.915 E ± 9.6km
DEPTH = 79.7 ± 24.8 km
SOUTHERN HONSHU, JAPAN (232)
MG 3.9 (JMA). Felt (I JMA) ot
Hiroshimo.

HIR	0.45	242	iP+	19	31.60	1.0
YONJ	0.76	36	iPd	19	24.30	-9.3X
			iS	19	32.30	
TKSJ	1.11	122	iP+	19	36.90	-0.9
			S	19	54.80	
SHNJ	1.56	254	iPd	19	41.90	-1.8
			S	20	03.50	
WKYJ	2.24	98	P	19	52.70	-0.3
			S	20	22.40	
KUMJ	2.68	221	P	20	00.20	1.2
TSRJ	2.69	68	P	19	59.20	0.1
			S	20	37.10	
IIDJ	4.20	76	P	20	20.50	0.3
			S	21	23.40	
MTMJ	4.46	62	eP	20	26.70	2.8X
MAT	4.74	64	eP	20	28.00	0.3
			eS	21	42.00	
CHJJ	5.18	72	eP	20	35.70	1.8X
			S	21	54.60	

S.D. = 1.3 on 8 of 11 obs.

SEP 08, 1989 11h 26m 43.24± 1.32s
17.868 S ± 7.8km 178.623 W ± 6.3km
DEPTH = 588.6 ± 16.9 km
5.1mb (26 obs.)
FIJI ISLANDS REGION (181)

PVC	12.45	269	iPc	29	30.00	3.6X
DZM	14.65	251	iPc	29	49.00	0.9
MNG	23.24	191	eP	31	06.80	-1.3
COO	29.62	239	iPd	32	04.60	0.6
RMQ	31.33	248	iPd	32	19.10	0.7
	0.8s		176.00nm		5.7mb	
CTA	33.25	260	iPd	32	34.40	-0.2
	0.8s		78.36nm		5.4mb	
CNB	33.29	232	iPc	32	36.10	1.2
	0.6s		113.00nm		5.7mb	
CAN	33.57	232	iPd	32	37.90	0.7
BWA	33.68	234	iPd	32	36.90	-1.2
PMG	34.26	280	iPd	32	44.00	1.0
	0.9s		327.73nm		6.0mb	
CMS	34.87	240	iPd	32	48.60	0.7
	0.7s		85.00nm		5.5mb	
LAT	35.32	284	eP	32	53.00	1.2
QLP	35.36	249	iPd	32	53.30	1.3
TOO	37.04	231	iPd	33	06.90	1.2
	0.7s		66.00nm		5.4mb	
TAU	38.13	222	iPd	33	15.00	0.5
STK	38.47	241	iPd	33	18.50	1.0
	0.5s		52.00nm		5.3mb	
BFD	39.10	233	eP	33	23.00	0.6
QIS	39.46	259	iPd	33	24.80	-0.8
JAY	42.70	286	ePd	33	53.00	1.6
			e	34	33.00	
WB5	44.42	260	iPd	34	03.80	-0.9
WRA	44.44	260	Pd	34	03.90	-0.9
	0.5s		53.00nm		5.3mb	
ASPA	44.61	254	iPd	34	06.00	-0.1
	0.7s		752.00nm		6.3mb X	
			iS	39	58.20	
GUA	47.63	309	eP	34	28.90	-0.2
	0.8s		131.34nm		5.5mb	
GUMO	47.69	309	eP	34	29.50	-0.1
	0.8s		93.70nm		5.4mb	
PJG	47.69	309	eP	34	29.50	-0.1
MTN	48.60	268	iPd	34	35.30	-1.2
TLE	48.99	278	ePd	34	38.00	-1.3
FORR	49.81	244	iPd	34	44.00	-1.1
	0.5s		174.00nm		5.8mb	
KNA	50.27	264	iPd	34	48.00	-0.8
	0.4s		72.00nm		5.5mb	
WARB	51.10	251	iPd	34	54.10	-0.7
	0.3s		21.00nm		5.1mb	
COOL	55.79	244	iPd	35	26.30	-1.6
	0.4s		33.00nm		5.0mb	
MBL	57.79	256	iPd	35	40.70	-0.9
	0.4s		18.00nm		4.7mb	
MEKA	58.33	249	eP	35	44.00	-1.2
	0.3s		11.00nm		4.6mb	
KLB	58.66	244	iPd	35	41.00	-6.3X
	0.3s		12.00nm		4.6mb	
NWAO	59.05	242	eP	35	51.00	1.1
	0.5s		18.00nm		4.6mb	
RKG	59.20	241	eP	35	50.30	-0.6
BAL	59.62	245	iPd	35	52.30	-1.4
	0.3s		11.00nm		4.6mb	
MUN	59.96	243	iPc	35	55.30	-0.6
	0.8s		33.00nm		4.6mb	
MRWA	60.34	246	eP	35	57.20	-1.2
NANU	61.54	254	iPd	36	06.00	-0.3
	0.4s		63.00nm		5.3mb	
MAT	67.75	323	eP	36	44.00	-0.9
SPA	72.24	180	ePd	37	12.00	0.9
	0.9s		16.36nm		4.6mb	
SYP	76.28	47	eP	37	35.00	1.0
GCC	76.33	43	ePc	37	34.00	0.0
PRS	76.34	44	ePc	37	34.50	0.4
PCC	76.35	43	ePc	37	34.00	-0.1
SAO	76.54	44	eP	37	35.10	-0.1
BRK	76.64	43	eP	37	35.60	0.0
BKS	76.66	43	e(P)	37	35.60	-0.2
	1.0s		39.00nm		4.8mb	
PRI	76.71	45	ePc	37	36.80	0.6
MHC	76.74	43	ePc	37	36.60	0.2
LLA	76.79	44	ePc	37	36.70	0.2
MWC	77.46	48	eP	37	40.00	-0.4
BAR	77.65	50	eP	37	41.00	-0.3
FRI	77.82	45	ePc	37	41.90	-0.1
RVR	77.82	48	eP	37	41.00	-1.1
PLM	77.86	49	eP	37	42.00	-0.6
SBB	77.87	47	eP	37	42.00	-0.4
ISA	77.94	46	eP	37	43.00	0.2
CMB	77.95	43	iPc	37	42.60	-0.2
WDC	78.04	40	ePc	37	43.20	0.1
ORV	78.10	42	ePc	37	43.20	-0.2
MIN	78.49	41	eP	37	45.40	-0.3
CLC	78.62	46	eP	37	46.00	-0.4
TPC	78.83	49	eP	37	47.00	-0.5
GLA	79.18	50	eP	37	50.00	0.7
PNT	84.82	34	iPc	38	17.50	0.2
	0.7s		32.00nm		5.1mb	
LOE	85.83	290	eP	38	23.20	0.5
ALQ	86.23	52	iPc	38	24.50	-0.1
	1.0s		9.50nm		4.5mb	
			epP	40	34.50	607kmX
LRM	87.07	40	eP	38	28.30	-0.2
CHTO	88.79	290	iP	38	37.80	1.2
	0.8s		7.69nm		4.7mb	
EDM	90.24	33	iPc	38	41.60	-1.0
PPD	114.95	126	e(PKP)	44	15.00	-5.1X
			ePP	45	25.60	
KEV	125.79	349	ePKP	44	55.00	15.6X
NB2	136.31	353	PKP	44	59.80	0.0
	0.8s		2.10nm			
SLL	136.59	351	ePKP	44	48.60	-11.7X
	0.4s		5.00nm			
EKA	142.44	4	PKPd	45	06.20	-4.7X
	1.3s		16.90nm			
DMU	143.47	8	ePKP	45	10.00	-2.7X
DLE	144.12	8	ePKP	45	12.10	-1.7
WIT	144.88	354	ePKP	45	16.00	1.0
CLL	145.38	347	iPKPc	45	16.40	0.4
	1.0s		34.00nm			
BRG	145.58	346	iPKPc	45	16.60	0.3
	1.0s		24.00nm			
WTS	145.68	354	ePKP	45	18.00	1.6
	1.0s		38.00nm			
MLR	145.69	329	ePKPd	45	19.00	2.1
MOX	146.29	348	e(PKP)	45	19.00	1.5
ENN	146.98	355	iPKP	45	21.30	2.8X
	0.7s		18.00nm			
			i	45	23.80	
MEM	147.13	355	PKPc	45	21.30	2.6X
GRF	147.28	348	ePKP	45	22.50	3.4X
			e	45	26.00	
DOU	147.75	356	iPKPc	45	23.10	3.3X
	0.6s		15.40nm			
WLF	148.05	354	PKPc	45	24.40	4.1X
FLN	149.15	2	iPKPc	45	26.40	4.4X
	0.6s		16.25nm			

08d 11h

CDF 149.16 352 iPKPc 45 26.80 4.6X
0.6s 9.90nm
LDF 149.33 2 iPKPc 45 26.80 4.5X
0.4s 6.85nm
GRR 149.50 .3 iPKPc 45 27.40 4.9X
0.4s 11.45nm
HAU 149.67 353 iPKPc 45 27.90 5.0X
0.6s 9.00nm
BSF 149.79 353 iPKPc 45 28.00 4.8X
0.6s 5.40nm
LPF 149.85 3 iPKPc 45 28.30 5.2X
0.4s 13.70nm
OGA 150.00 347 ePKP 45 29.20 5.6X
LOR 150.61 357 iPKPc 45 30.10 5.8X
0.6s 16.25nm
SSF 150.83 357 iPKPc 45 30.90 6.3X
0.6s 14.45nm
LBF 150.88 356 iPKPc 45 30.60 5.9X
0.6s 6.30nm
AVF 151.11 357 iPKPc 45 30.90 5.9X
0.8s 4.05nm
MFF 151.32 2 iPKPc 45 31.60 6.3X
0.6s 10.80nm
BGF 151.36 358 iPKPc 45 31.80 6.4X
0.6s 10.80nm
VAI 151.41 349 PKP 45 31.50 6.1X
TCF 151.65 359 iPKPc 45 32.10 6.2X
0.7s 8.80nm
LSF 151.70 360 iPKPc 45 32.10 6.2X
0.8s 14.80nm
MAF 151.71 358 iPKPc 45 32.90 7.0X
0.6s 4.50nm
LPG 152.09 352 iPKPc 45 34.20 7.3X
0.6s 4.50nm
S.D. = 0.9 on 78 of 109 obs.

SEP 08, 1989 12h 14m 55.12± 0.49s
38.510 N ± 4.1km 23.558 E ± 8.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.1 (ATH).

ATH 0.55 167 ePg 15 06.50 0.2
eSg 15 14.50
NEO 0.84 342 ePg 15 11.60 0.3
ITM 1.85 225 ePb 15 26.70 -0.5
PLG 1.86 357 iPnc 15 27.50 0.1
APE 2.12 132 ePn 15 31.40 0.2
PRK 2.24 70 ePg 15 44.00 11.2X
KZN 2.27 323 ePn 15 33.30 0.0
VLS 2.36 263 ePg 15 38.40 3.9X
EZN 2.52 58 ePn 15 43.00 6.3X
MMB 3.08 2 eP 15 44.00 -0.7
VAM 3.14 170 ePb 15 51.90 6.4X
KEK 3.16 293 ePg 15 56.00 10.1X
RZN 3.30 15 eP 15 48.00 0.0
KKB 3.37 354 eP 15 49.00 0.1
KDZ 3.44 24 iP 15 49.00 -0.9
SKO 3.82 336 ePn 15 41.50 -13.7X
VTS 4.09 356 iPd 16 00.00 0.9
PVL 4.89 15 eP 16 35.00 24.6X
S.D. = 0.6 on 11 of 18 obs.

? SEP 08, 1989 12h 57m 15.25± 4.77s
11.542 S ±43.2km 119.585 E ±28.6km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
SOUTH OF SUMBA ISLAND (292)

MBL 9.57 179 eP 59 33.30 -0.5
0.3s 5.00nm 5.2mb X
eS 01 12.00
MTN 11.36 98 eP 59 57.00 -1.4
e 00 07.50
eS 01 58.00
NANU 11.62 199 eP 00 01.00 -0.9
0.3s 4.00nm 5.1mb X
eS 02 00.00
MEKA 15.03 184 eP 00 50.00 3.0X
eS 03 18.00
WARB 16.01 156 eP 00 59.00 -0.7
eS 03 53.00
WB5 16.46 122 eP 01 04.70 -0.8
eS 03 58.90
MRWA 17.90 190 eP 01 24.50 1.1
eS 04 26.00
ASPA 18.19 133 eP 01 28.80 1.7
0.7s 12.00nm 4.2mb
COOL 19.30 176 eP 01 44.00 3.5X
eS 05 02.00
MUN 20.58 188 eP 02 02.00 8.0X
eS 05 31.00
QIS 21.21 118 eP 02 02.00 1.5
S.D. = 1.4 on 8 of 11 obs.

SEP 08, 1989 13h 37m 36.98± 2.83s
59.038 N ±26.9km 5.936 E ± 7.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

KMY 0.40 296 iP 37 44.92 -0.2
eS 37 49.93
BLS1 0.58 52 iP 37 48.53 -0.3
eS 37 55.94
ODD1 0.95 22 iP 37 54.88 -0.1
eS 38 06.88
ASK 1.50 346 eP 38 04.15 0.3
eS 38 20.06
NRA0 3.30 57 eP 38 29.90 0.2
iSg 39 17.60
S.D. = 0.4 on 5 of 5 obs.

SEP 08, 1989 13h 46m 18.70± 3.10s
19.915 S ± 8.9km 177.575 W ± 6.0km
DEPTH = 358.8 ± 32.1 km
5.0mb (23 obs.)
FIJI ISLANDS REGION (181)

DZM 15.08 259 iPc 49 38.00 1.6X
KRP 18.92 197 P 50 18.70 3.2X
PGZ 21.30 193 P 50 39.00 0.4
MNG 21.47 195 P 50 38.60 -1.8
COO 29.50 243 eP 51 55.00 1.9
RMO 31.57 252 eP 52 12.00 0.9
CNB 32.88 235 iPd 52 23.30 1.0
0.6s 81.00nm 5.2mb
CAN 33.17 235 iPc 52 25.10 0.4
BWA 33.35 237 iPc 52 24.70 -1.5
CTA 33.95 263 iP 52 31.90 0.6
0.9s 77.31nm 5.0mb
CMS 34.78 243 eP 52 39.90 1.7
0.7s 31.00nm 4.7mb
QLP 35.61 252 eP 52 47.00 1.7
TOO 36.56 233 iPc 52 53.50 0.3
0.6s 39.00nm 4.9mb
STK 38.41 244 eP 53 09.50 1.1
ASPA 45.05 256 iPc 54 01.80 -0.2
0.7s 107.00nm 5.2mb
iS 00 12.40
eScS 03 20.60
WB5 45.06 261 iPc 54 01.00 -1.2
e 00 14.00
WRA 45.08 261 Pc 54 01.40 -0.9
0.7s 25.80nm 4.6mb
MTN 49.56 270 eP 54 36.00 -0.8
FORR 49.86 246 eP 54 37.40 -1.4
0.4s 86.00nm 5.4mb
KNA 51.08 266 eP 54 47.20 -0.9
WARB 51.39 252 iPc 54 49.40 -0.9
0.3s 14.00nm 4.8mb
COOL 55.83 246 eP 55 21.00 -1.3
0.4s 7.00nm 4.4mb
MBL 58.28 257 iPc 55 38.30 -1.1
0.5s 34.00nm 5.0mb
SBA 58.48 184 Pc 55 42.20 2.3
MEKA 58.56 250 eP 55 40.40 -0.9
KLB 58.66 245 eP 55 41.00 -0.9
0.3s 11.00nm 4.8mb
NWAO 58.99 243 iPc 55 43.70 -0.4
0.7s 21.00nm 4.7mb
RKG 59.08 242 eP 55 43.00 -1.7
BAL 59.66 246 iPc 55 47.60 -1.1
0.4s 17.00nm 4.9mb
MUN 59.94 244 iPd 55 50.30 -0.2
0.8s 69.00nm 5.2mb
MRWA 60.44 247 eP 55 53.00 -0.9
NANU 61.94 254 eP 56 03.00 -0.8
0.5s 37.00nm 5.2mb
KAKJ 68.64 324 eP 56 46.50 0.7
CHJJ 69.18 323 P 56 48.60 -0.6
IIDJ 69.39 322 P 56 49.80 -0.7
MAT 69.98 323 iPd 56 52.90 -1.1
0.9s 25.21nm 4.9mb
NIIJ 70.04 324 eP 56 55.10 0.8
SPA 70.21 180 iPc 56 56.80 1.6
1.0s 45.00nm 5.1mb
TSRJ 70.55 321 eP 56 57.10 -0.3
SYP 76.98 46 eP 57 34.00 -0.3
PRS 77.12 44 ePd 57 35.50 0.6
GCC 77.14 43 ePd 57 35.20 0.3
PCC 77.18 42 iPd 57 35.20 0.1
BCH 77.29 45 P 57 36.30 0.3
SAO 77.33 43 eP 57 36.20 0.2
PRI 77.47 44 iPd 57 37.60 0.7
BRK 77.48 42 ePd 57 37.00 0.2
BKS 77.50 42 e(P) 57 37.70 0.8
1.0s 70.00nm 5.4mb
MHC 77.55 43 ePd 57 37.70 0.3
LLA 77.57 43 ePd 57 37.50 0.2
MWC 78.12 47 eP 57 40.00 -0.6
RVR 78.46 47 eP 57 42.00 -0.2
PLM 78.46 48 eP 57 42.00 -0.5
SBB 78.53 47 eP 57 43.00 0.4
FRI 78.59 44 ePd 57 42.50 -0.3
ISA 78.64 45 eP 57 44.00 0.8
CMB 78.76 43 iPd 57 43.90 0.1
WDC 78.97 39 iPd 57 44.70 -0.1
ORV 78.98 41 ePd 57 44.80 0.0
LTCM 78.99 40 P 57 44.00 -0.9
CLC 79.32 46 eP 57 47.00 0.2
TPC 79.44 48 eP 57 47.00 -0.5
GSC 79.57 47 eP 57 49.00 0.8
GLA 79.74 49 eP 57 50.00 0.9
NJ2 79.81 309 Pc 57 51.00 1.6
MDJ 80.27 325 Pd 57 52.40 0.9
KVN 80.81 43 P 57 53.10 -1.6
TNP 80.83 44 P 57 54.00 -0.8
0.7s 9.44nm 4.7mb
AIA 81.35 157 eP 57 57.00 0.2
CN2 82.08 322 Pd 58 01.30 0.4
LON 83.21 35 P 58 06.20 -0.4
PMR 84.36 13 P 58 09.80 -2.1
BJI 85.76 315 eP 58 20.00 0.8
1.2s 0.02nm 1.8mb X
DPW 85.85 36 P 58 19.00 -0.6
PNT 85.95 34 ePd 58 20.00 0.0
0.7s 24.00nm 5.2mb
ALQ 86.73 51 iPd 58 24.50 0.2
0.9s 12.60nm 4.8mb
epP 59 55.70 395kmX
TIY 87.19 312 eP 58 27.20 0.9
FBA 87.59 12 P 58 25.80 -1.7
0.5s 12.40nm 5.1mb
LRM 88.01 39 eP 58 30.20 -0.1
XAN 88.10 307 P 58 32.50 1.8
BTO 90.17 313 eP 58 41.60 1.4
CHG 90.42 290 eP 58 43.40 1.8
CHTO 90.42 290 eP 58 43.10 1.5
0.9s 3.62nm 4.3mb
RSSD 92.46 44 P 58 50.00 -0.8
GTA 96.91 309 eP 59 11.80 0.7
HFS 139.02 351 ePKP 04 53.00 -11.1X
0.4s 0.70nm
EKA 144.39 5 PKPc 05 11.60 -2.0
0.8s 9.70nm
DMU 145.33 10 ePKP 05 15.30 0.0
DLE 145.98 10 ePKP 05 15.90 -0.4
1.0s 35.00nm
KSP 147.25 344 iPKP 05 21.30 2.8X
0.9s 17.00nm
VRI 147.29 328 ePKPc 05 26.50 7.8X
CLL 147.58 348 iPKP 05 21.40 2.4X
0.9s 21.00nm
i 05 24.40
BRG 147.79 346 e(PKP) 05 22.10 2.7X
MLR 147.95 328 ePKPc 05 20.00 0.0
PRU 148.48 345 ePKP 05 24.00 3.5X
MOX 148.48 349 ePKP 05 24.00 3.5X
MEM 149.24 356 PKP 05 27.00 5.4X
GRF 149.47 349 e(PKP) 05 27.00 5.0X
e 05 33.00
KHC 149.51 345 iPKPc 05 27.50 5.4X
1.0s 10.00nm
DOU 149.84 357 PKP 05 27.40 4.9X
WLF 150.17 355 PKP 05 28.70 5.7X
KBA 151.48 344 iPKP 05 41.90 16.6X
0.7s 13.40nm
S.D. = 1.0 on 87 of 102 obs.

SEP 08, 1989 15h 47m 19.61± 0.80s

36.675 N ± 6.3km 139.337 E ± 7.9km
DEPTH = 5.0km (geophysicist)
HONSHU, JAPAN (227)

NIIJ	0.62	335	iPd	47 31.60	-0.5
			S	47 39.50	
CHJJ	0.68	204	P	47 33.00	-0.3
			S	47 42.30	
KAKJ	0.82	125	P	47 35.40	-0.6
			S	47 47.10	
MAT	0.92	262	iPd	47 37.00	-0.6
			iS	47 48.70	
YAMJ	1.60	20	eP	47 49.30	0.7
IIDJ	1.66	224	P	47 50.80	1.3
			S	48 11.80	

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

& SEP 08, 1989 16h 24m 46.80s
64.178 N 139.223 W
DEPTH = 18.0km (geophysicist)
SOUTHERN YUKON TERRITORY, CANADA(18)
<PGC>. ML 4.0 (PGC). Felt at Dawson City.

DWY	0.16	216	P	24 50.70	-0.5
DOT	2.20	258	eP	25 22.08	-1.0
CTGM	3.37	198	eP	25 40.17	0.4
HDA	3.38	277	eP	25 37.46	-2.3
HYT	3.46	166	P	25 39.40	-1.6
GLB	3.46	220	eP	25 40.77	-0.2
BALM	3.47	206	eP	25 40.91	-0.2
GLM	3.61	287	eP	25 40.84	-2.3
CCB	3.75	281	eP	25 42.49	-2.6
FBA	3.77	285	eP	25 44.00	-1.3
TGL	3.82	208	eP	25 47.36	1.2
WRH	3.87	278	eP	25 45.14	-1.6
RDS	3.91	284	eP	25 44.66	-2.6
IMA	6.39	294	eP	26 19.50	-2.9

14 abs. associated

SEP 08, 1989 18h 14m 40.61± 0.56s
43.899 N ± 7.9km 11.746 E ± 4.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI	0.08	74	P	14 42.70	-0.3
			eSg	14 45.40	
CRE	0.31	151	P	14 46.40	-0.7
			eSg	14 53.50	
RSM	0.51	87	P	14 51.10	0.1
			eSg	14 59.10	
MME	0.81	292	P	14 56.30	-0.2
			iSg	15 07.70	
BDI	0.85	282	P	14 57.20	0.2
			eSg	15 09.10	
PII	0.90	259	P	14 57.90	0.0
			eSg	15 10.70	
ARV	0.96	114	P	14 59.00	0.2
			eSg	15 12.70	
ASS	1.06	141	P	15 01.30	0.6
			eSg	15 15.90	

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

SEP 08, 1989 18h 25m 34.16± 0.40s
42.292 N ± 4.8km 16.623 E ± 3.8km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)
ML 2.5 (TTG).

HVAR	0.89	352	iPgc	25 51.10	-0.2
			iSg	26 05.50	
HCY	1.40	83	ePg	25 58.80	-0.9
			eSg	26 17.10	
BRY	1.54	66	ePg	26 01.20	-0.7
			eSg	26 22.00	
BDV	1.64	90	ePg	26 03.20	0.1
			eSg	26 24.50	
DUI	1.73	249	P	26 05.70	1.1
			eSn	26 25.30	
TTG	1.96	85	ePn	26 09.00	1.3
			eSn	26 31.50	
SGO	1.99	210	P	26 07.60	-0.6
			eSn	26 30.90	
SDI	2.17	255	P	26 10.40	-0.5
			eSn	26 38.30	
MGR	2.30	201	P	26 13.20	0.5
			eSn	26 40.10	
ALP	2.30	283	eP	26 12.16	-0.7
ASS	3.02	286	P	26 23.00	0.0
OHR	3.34	109	ePn	26 27.50	-0.1
VBY	3.36	343	e(Pn)	26 29.20	1.5
			e(Sn)	27 18.00	
SKO	3.60	93	ePn	26 31.00	-0.1
TRI	3.99	330	eP	27 23.70	47.1X
			i	27 42.00	
LJU	4.04	339	e(Pn)	26 38.30	1.0
			eSn	27 35.00	
			e	29 30.00	
VOY	4.22	333	ePn	26 39.20	-0.9
			e(Sg)	27 51.90	
KBA	5.33	335	ePn	26 55.00	-0.8
			eSn	27 42.00	

S.D. = 0.9 on 17 of 18 abs.

? SEP 08, 1989 19h 10m 28.83± 3.19s
10.988 N ±18.0km 61.777 W ±25.5km
DEPTH = 33.0km (normal)
TRINIDAD (98)

TCE	0.29	175	eP	10 36.63	0.2
			eS	10 46.74	
TRN	0.50	133	eP	10 40.10	0.7
			eS	10 57.86	
TPP	0.74	154	eP	10 42.42	-0.4
			eS	10 56.55	
TBH	0.86	126	eP	10 44.04	-0.5
			eS	10 58.05	
TPR	1.00	79	eP	10 46.93	0.3
BOT	1.05	80	eP	10 46.98	-0.3
			eS	11 01.12	
GRW	1.17	6	eP	10 43.99	-5.0X
			eS	10 57.68	

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

SEP 08, 1989 19h 40m 37.01± 0.52s
37.897 N ± 4.8km 23.084 E ± 6.1km
DEPTH = 11.1 ± 4.3 km
SOUTHERN GREECE (368)
ML 3.2 (ATH).

ATH	0.51	81	ePb	40 47.40	0.1
			eSb	40 55.60	
ITM	1.17	232	iPnc	40 57.00	-1.7
			eSn	41 16.50	
NEO	1.41	4	ePb	41 02.90	0.3
VLS	1.99	279	ePn	41 11.70	0.8
APE	2.11	112	ePn	41 11.60	-1.2
PLG	2.49	6	ePn	41 17.20	-0.9
KZN	2.61	337	ePn	41 19.50	-0.4
VAM	2.64	160	ePn	41 20.10	-0.2
PRK	2.84	61	ePb	41 31.70	8.7X
SMG	2.98	92	ePn	41 24.10	-0.9
EZN	3.18	52	iPn	41 35.60	7.8X
NPS	3.32	141	ePn	41 31.20	1.2
IZM	3.33	80	ePn	41 42.90	12.8X
OHR	3.66	332	ePn	41 35.30	0.5
MMB	3.72	7	eP	41 35.00	-0.6
KKB	3.97	360	eP	41 39.00	0.0
RZN	3.99	18	eP	41 39.00	-0.5
KAP	4.03	124	ePn	41 41.60	1.6
KDZ	4.16	25	iP	41 41.00	-0.7
SKO	4.26	343	ePn	41 47.50	4.2X
VTS	4.69	1	iP	41 51.00	1.5

S.D. = 1.1 on 17 of 21 abs.

SEP 08, 1989 20h 12m 15.96± 0.52s
43.395 N ± 7.6km 46.604 E ± 8.2km
DEPTH = 33.0km (normal)
4.7mb (8 obs.)
EASTERN CAUCASUS (337)
Felt (IV) at Khasovyurt and (II) ot Kizilyurt.

TAB	5.33	182	eP	13 38.00	2.6
MSL	7.49	202	eP	14 07.00	1.4
			e	16 13.50	
SLY	7.83	187	eP	14 14.00	3.6X
			e	15 35.00	
KER	9.04	177	eP	14 30.00	2.7
BHD	10.25	190	eP	14 30.50	-13.3X
MHI	12.17	121	eP	15 28.00	18.0X
			eS	17 08.00	
CLI	14.03	290	eP	15 20.50	-14.0X
VRI	14.37	287	ePd	15 46.50	7.6X
MLR	14.90	285	ePc	15 47.00	1.0
CMP	15.54	284	ePc	16 01.00	6.8X
RYD	18.63	180	eP	16 31.00	-2.0
SPC	19.06	297	e(Pn)	16 38.00	-0.2
OHR	19.22	272	eP	16 38.50	-1.5
	1.0s		0.07nm		1.9mb X
KRA	19.39	299	eP	16 40.30	-1.5
SRO	20.23	292	iP	16 52.10	1.4
			e	17 07.00	
ZST	21.05	293	e(P)	17 00.00	0.8
			i	17 03.00	
NUR	21.65	330	eP	17 06.00	0.8
	0.8s		39.60nm		4.9mb
	Z 15s		0.10um		3.3MszX
			LR	26 10.00	
KSP	21.82	301	eP	17 07.00	0.1
			e	21 39.50	
PTJ	21.88	287	eP	17 08.00	0.3
KSH	22.32	90	eP	17 12.50	0.3
SUF	22.74	335	eP	17 19.00	3.1X
	0.4s		3.50nm		4.2mb
PRU	22.84	298	eP	17 25.00	8.0X
KMSA	23.03	185	eP	17 19.50	0.4
BRG	23.30	300	e(P)	17 30.00	8.5X
			e	17 37.00	
			e	18 11.00	
KHC	23.42	296	P	17 24.50	1.8
CLL	23.93	301	iPd	17 36.20	8.6X
UPP	24.10	323	iP	17 30.30	1.2
MOX	24.75	299	e(P)	17 45.00	9.4X
			e	19 30.00	
HFS	25.98	322	eP	17 47.30	0.3
	0.6s		27.60nm		5.0mb
SOD	26.32	343	eP	17 54.00	4.0X
			i	18 07.40	
NB2	27.47	322	P	17 59.60	-1.1
	0.8s		11.30nm		4.6mb
NDI	28.59	111	eP	18 11.00	0.0
WMQ	29.54	75	P	18 25.00	5.4X
	Z 12s		0.50um		4.4MszX
DAG	42.60	342	iPd	20 10.90	1.0
	0.6s		9.33nm		4.7mb
BNG	46.06	221	iPc	20 36.50	-1.9
	0.6s		13.00nm		5.0mb
BCAO	46.06	221	iPc	20 36.10	-2.4
	0.6s		3.70nm		4.5mb
CHG	50.11	102	eP	21 09.20	-0.8
CHTO	50.11	102	iP	21 09.20	-0.8
	0.7s		4.76nm		4.6mb
			pP	21 14.30	17kmX
BDT	51.19	104	eP	21 18.20	0.1
LIC	58.43	246	P	22 08.20	-2.7
BUL	65.35	199	iPc	22 56.20	-1.0

S.D. = 1.5 on 28 of 41 abs.

% SEP 08, 1989 21h 07m 14.26± 0.58s
29.893 N ± 5.8km 106.925 E ± 7.0km
DEPTH = 10.0km (geophysicist)
SICHUAN PROVINCE, CHINA (307)

CD2	2.92	291	Pn	08 01.30	-0.3
			Pg	08 08.40	
			Sg	08 44.00	
GYA	3.43	184	Pn	08 09.00	0.1
			Pg	08 19.00	
			Sn	08 50.00	
XAN	4.47	22	Pn	08 23.10	-0.5
			Pg	08 39.60	
			Sn	09 13.60	
			Sg	09 39.50	
KMI	6.03	219	Pgc	08 46.00	0.1
			Sg	09 54.50	
WHN	6.46	82	ePn	08 51.50	-0.2
			Sn	10 03.80	
			Sg	10 44.60	
LZH	6.70	338	ePn	08 56.00	0.8
	1.5s		0.03nm		2.1mb X
			Pg	09 20.50	
			Sn	10 12.00	
			Sg	10 44.00	
			S	10 47.50	
TIY	9.04	29	eP	09 28.40	0.5
GTA	11.15	330	P	09 56.40	-0.5

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

% SEP 08, 1989 21h 17m 23.27± 0.71s
59.934 N ± 6.3km 6.120 E ± 7.0km

08d 21h

DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.2 (BER).

ODD1	0.26	95	iP	17	28.40	-0.3
			iS	17	31.79	
BLS1	0.65	146	eP	17	35.81	-0.6
			eS	17	44.18	
ASK	0.72	320	eP	17	35.95	-1.4
			eS	17	48.18	
KMY	0.85	212	eP	17	40.36	0.7
			eS	17	53.26	
HYA	1.24	2	eP	17	47.01	0.8
			eS	18	00.60	
SUE	1.31	330	eP	17	47.90	0.4
			eS	18	06.04	
NRA0	2.81	71	eP	18	09.50	0.4
			iPg	18	12.60	
			iSg	18	49.10	

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

• SEP 09, 1989 00h 13m 59.90± 2.28s
51.104 N ±19.7km 15.960 E ±12.5km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP	0.34	141	iPd	14	06.60	-0.2
	0.5s	84.00nm				
			iS	14	15.00	
BRG	1.29	261	iPg	14	23.20	-0.7
			iSg	14	43.60	
PRU	1.44	220	ePn	14	27.00	1.0
			Pg	14	28.00	
			Sn	14	45.00	
			Sg	14	52.00	
CLL	1.87	277	ePg	14	33.00	0.8
			eSg	14	58.00	
KHC	2.50	219	iPn	14	41.60	0.3
			iPg	14	48.00	
			Sn	15	14.50	
			Sg	15	25.50	
MOX	2.79	262	ePg	14	52.00	6.6X
			eSg	15	31.50	
GRF	3.35	247	ePn	14	52.20	-1.1
			e(Pg)	15	05.00	
			eSg	15	50.00	
KBA	4.38	204	ePn	15	08.00	-0.1
			e	15	27.00	
			i	15	33.20	
			eSn	16	09.00	
			i	16	30.10	

S.D. = 0.9 on 7 of 8 obs.

% SEP 09, 1989 01h 00m 57.42± 1.33s
40.878 N ±10.9km 19.859 E ±22.2km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MG 2.9 (TIR).

TIR	0.47	1	ePg	01	07.50	0.6
VLO	0.49	214	iPg	01	07.50	0.1
LACI	0.77	352	ePg	01	12.10	-0.2
PHP	0.92	28	iPgc	01	13.80	-1.2
PUK	1.16	1	ePn	01	18.20	-0.9
KKS	1.27	19	ePn	01	22.70	1.8
BCI	1.50	6	ePn	01	24.20.	-0.1

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

• SEP 09, 1989 01h 01m 49.11± 1.09s
40.543 N ±11.0km 20.174 E ± 8.9km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

KBN	0.49	80	iPg	01	59.80	0.7
LSK	0.51	140	iPg	01	59.40	-0.1
LCI	1.71	264	P	02	19.10	0.1
SKO	1.72	33	iPg	02	20.30	1.1
			iSg	02	40.60	
KKB	2.56	58	eP	02	35.00	3.6X
MMB	2.88	68	eP	02	41.00	5.0X
VTS	3.06	47	eP	02	42.00	3.4X
PGB	3.61	55	eP	02	44.00	-2.2
RZN	3.62	70	eP	02	47.00	0.5

S.D. = 1.5 on 6 of 9 obs.

SEP 09, 1989 01h 02m 25.65± 0.65s
40.593 N ± 7.2km 20.084 E ± 5.8km
DEPTH = 28.0 ± 6.9 km
GREECE-ALBANIA BORDER REGION (392)
ML 3.9 (ATH), 3.8 (SKO).

BERA	0.15	317	iPgc	02	31.60	0.5
KBN	0.56	87	iPg	02	34.00	-2.9X
LSK	0.59	138	ePn	02	29.00	-8.5X
SRN	0.71	185	iPg	02	36.20	-3.3X
OHR	0.75	46	ePg	02	39.20	-0.9
			iSg	02	49.80	
TIR	0.77	348	ePg	02	41.00	0.6
KEK	0.91	194	ePg	02	41.70	-0.7
			eSg	02	58.00	
KZN	1.32	102	ePg	02	46.80	-1.6
SKO	1.72	36	iPn	02	55.20	1.1
			iS	03	03.70	
VLS	2.44	171	ePb	03	09.90	5.4X
PLG	2.57	94	ePn	03	05.40	-1.0
TDS	3.02	253	P	03	17.20	4.5X
SGO	3.64	271	P	03	13.40	-8.0X
HVAR	3.75	315	i(Pn)	03	22.70	-0.3
ATH	3.85	132	ePn	03	25.10	0.8
SOI	4.01	232	P	03	29.50	2.8X
BEO	4.24	4	e(Pn)	03	29.00	-0.9
SDI	4.86	285	P	03	39.60	0.8
PRK	4.94	104	ePn	03	40.80	0.9
MNS	5.84	290	P	03	54.40	1.7
VBY	6.05	326	ePn	03	54.50	-1.0
MLR	6.51	39	ePc	04	04.50	2.3
LJU	6.79	325	e(Pn)	04	04.50	-1.4
			eSn	05	21.00	
VOY	7.06	322	ePn	04	08.70	-1.2
			eSn	05	28.00	
KHC	9.70	334	eP	04	53.20	6.8X
			e	05	03.10	

S.D. = 1.3 on 17 of 25 obs.

% SEP 09, 1989 01h 14m 38.83± 1.51s
40.281 N ±18.0km 27.024 E ±13.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.65	84	iPg	14	50.10	-1.7
			iSg	15	00.10	
BNT	0.69	83	iPg	14	52.00	-0.5
			iSg	15	01.00	
EZN	0.70	230	iPg	14	51.60	-1.1
			iSg	15	00.60	
KCT	1.02	91	iPg	14	57.40	-0.7
			iSg	15	10.50	
CTT	1.38	51	ePn	15	05.00	1.0
YLV	1.82	80	iPn	15	12.00	1.6
IZM	1.89	174	ePn	15	12.90	1.4

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

SEP 09, 1989 01h 40m 35.77± 0.11s
2.435 N ± 2.3km 79.761 W ± 1.9km
DEPTH = 6.5km (geophysicist)
6.0mb (72 obs.) 5.0Msz (10 obs.)
SOUTH OF PANAMA (83)
Ms 5.2 (BRK), 5.0 (PAS). Felt at Coli, Colombia. Depth from broodbond displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=215 Dip=60 Slip= -65
NP2: 352 38 -126
Principal Axes:
T Plg=12 Azm=287
P 65 171
Comment: The focal mechanism is moderately well controlled and corresponds to normal faulting with a moderate strike-slip component. The preferred fault plane is not determined.
RADIATED ENERGY
No. of sta: 4 Focal mech. F
Energy 0.7±0.3•10••12 Nm
MOMENT TENSOR SOLUTION
Dep 37 No. of sta: 5
Moment Tensor; Scale 10••17 Nm
Mrr=-2.78 Mtt=-3.71
Mff= 6.49 Mrt= 3.75
Mrf=-0.91 Mtf=-1.14
Principal axes:
T Val= 6.82 Plg= 9 Azm= 81
N 0.20 47 341
P -7.03 41 179
Best Double Couple:Mo=6.9•10••17
NP1:Strike=211 Dip=55 Slip= -26
NP2: 316 69 -142
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 24C
Centroid Location:
Origin Time 01:40:42.4 0.7
Lat 1.92N 0.07 Lon 79.53W 0.04
Dep 15.0 FIX Half-duration 2.6
Moment Tensor; Scale 10••17 Nm
Mrr=-3.64 0.12 Mtt= 0.96 0.14
Mff= 2.67 0.18 Mrt= 2.62 0.48
Mrf= 1.48 0.46 Mtf= 0.06 0.13
Principal Axes:
T Val= 3.28 Plg=20 Azm=295
N 1.77 15 31
P -5.05 65 157
Best Double Couple:Mo=4.2•10••17
NP1:Strike= 1 Dip=29 Slip=-123
NP2: 218 66 -73

PSO	2.73	117	iPd	41	22.00	0.8
GGP	2.84	156	P	41	22.50	-0.5
ANCC	3.08	70	iPc	41	24.97	-0.9
SALC	3.11	80	iPc	41	25.47	-0.9
HOOC	3.29	72	iPc	41	27.90	-1.2
PURC	3.40	92	ePc	41	31.51	0.7
CLMC	3.50	66	iPc	41	30.49	-1.5
DIAC	3.66	76	iPc	41	34.19	-0.1
HOBC	4.09	62	iPc	41	38.67	-1.6
BOG	6.09	69	iP	42	10.00	1.3
			iS	43	20.00	
UPA	6.51	2	iPc	42	13.20	-1.2
	0.8s	358.21nm				6.4mb
			i	43	24.00	
DVD	6.53	336	ePd	42	11.50	-3.3X
			i	43	21.50	
BMG	8.10	55	iPd	42	45.00	8.2X
SDV	11.11	54	eP	43	33.50	15.0X
TOV	12.31	53	eP	43	17.00	-17.6X
			iS	45	21.60	
CEOS	13.12	60	eP	43	39.50	-5.9X
FISA	13.56	49	eP	43	49.50	-1.8
MORO	14.12	53	eP	43	56.50	-2.1
GUAC	14.60	58	eP	44	01.70	-3.4X
NNA	14.62	169	iPc	44	03.30	-1.9
	0.8s	13.43nm				4.6mb X
			eS	47	03.00	
OLLA	14.91	59	eP	44	04.00	-5.1X
HUA	15.04	163	ePc	44	09.90	-1.2
			eS	45	36.90	
CAR	15.05	57	iP	44	07.00	-3.9X
LLAV	15.14	58	eP	44	08.00	-4.0X
GUAN	15.89	61	eP	44	20.50	-1.3
TPX	17.48	316	(P)	44	44.50	2.6
TCE	19.67	65	eP	45	10.18	1.6
TPP	19.80	66	eP	45	11.34	1.4
			eS	48	49.91	
MGP	19.85	38	P	45	10.00	-0.5
TRN	19.97	65	eP	45	11.11	-0.6
			eS	48	52.65	
TBH	20.21	66	eP	45	15.51	1.2
ARE	20.48	157	eP	45	18.00	0.6
	1.0s	245.00nm				5.5mb
SJG	20.52	40	iP	45	17.40	-0.1
CSB	20.64	39	P	45	19.00	0.1
BOT	20.79	64	eP	45	19.85	-0.4
ZOBO	21.85	149	iPd	45	31.80	0.0
	Z 22s	6.07um				5.0Msz
			S	49	31.20	
			LR	54	32.00	
BIM	22.01	56	eP	45	45.24	12.5X
FDF	22.06	55	eP	45	32.22	-1.0
			S	49	39.00	
LPB	22.09	149	Pd	45	34.80	0.9
	1.3s	507.69nm				5.8mb
	Z 17s	6.12um				5.1MszX
			S	49	33.00	
			SS	53	01.00	
			LR	54	08.00	
OXX	22.13	312	(P)	45	36.50	2.4
DPMT	22.15	54	eP	45	33.88	-0.2
MVM	22.18	56	eP	45	33.95	-0.4
BBL	22.22	53	eP	45	34.50	-0.3

09d 01h

CRM	22.26	56	eP	45	34.72	-0.5	CBM	45.46	11	P	48	58.30	0.9	TPT	69.33	253	iP	51	47.60	1.0
NEV	22.33	48	eP	45	36.00	0.1	BAR	45.86	315	eP	49	01.00	0.2		1.4s	150.00nm			6.0mb	
SKI	22.33	47	eP	45	42.13	6.2X				e	50	38.00	520kmX	VAH	69.37	253	iP	51	47.80	0.9
PAG	22.35	52	eP	45	36.00	-0.1	TPC	46.23	317	eP	49	04.00	0.3		1.4s	120.00nm			5.9mb	
MGG	22.57	52	eP	45	39.00	0.8				e	50	40.00	511kmX	PMO	69.59	253	iP	51	49.40	1.2
BPA	22.81	49	eP	45	41.30	0.6	PLM	46.37	316	eP	49	05.00	0.1		1.4s	145.00nm			5.9mb	
ANG	22.90	49	eP	45	41.54	0.1	MSU	46.54	325	P	49	06.80	0.5	SIT	69.88	331	e(P)	51	49.10	-0.1
LVVM	23.70	318	(P)	45	50.50	1.2	RSSD	46.75	336	P	49	08.00	0.2	PAE	71.58	251	iP	52	02.40	2.1
CCH	23.84	146	Pd	45	52.30	1.3	PEC	46.87	316	P	49	09.60	0.8		1.4s	370.00nm			6.3mb	
ACX	24.42	307	(P)	46	00.00	3.7X	RVR	47.08	316	eP	49	10.00	-0.3	TIO	73.75	59	iPd	52	14.20	1.0
IIT	24.52	314	(P)	46	01.00	3.4X				e	50	42.00	479kmX				i	52	23.00	28kmX
III	24.98	311	(P)	46	04.50	2.5	GSC	47.42	318	eP	49	14.00	0.8				i	52	29.50	
IIC	25.69	314	(P)	46	11.00	2.2				e	50	44.00	465kmX	AVE	73.93	56	iPc	52	15.20	1.3
CRX	25.77	312	(P)	46	13.00	3.5X	MWC	47.67	316	eP	49	16.00	0.7	PTO	74.25	48	iPd	52	15.70	0.1
MRX	27.08	311	(P)	46	23.00	1.8	PAS	47.71	316	ePc	49	15.10	-0.3	REY	74.27	23	iP	52	16.00	0.7
ANT	27.53	161	eP	46	27.00	1.8				epPc	49	17.08	7kmX	EZAM	74.38	47	iPd	52	16.00	-0.4
HBF	30.34	359	P	46	52.80	2.4				ePP	51	28.00		LIC	74.57	84	Pd	52	17.50	-0.5
SLA	30.35	154	ePd	46	51.50	0.7				eS	56	15.91		Z	19s	1.65um			5.3Msz	
SGS	30.61	359	P	46	52.80	0.1				eSS	59	53.18					S	01	52.00	
PRM	31.58	356	P	47	00.50	-0.8				eLg	59	56.00		TIC	74.57	84	Pd	52	17.30	-0.7
JSC	31.71	358	P	47	02.50	0.0				eLR	00	20.00		STS	74.62	46	eP	52	17.00	-0.8
LHS	31.90	358	P	47	04.00	-0.1	SBB	47.77	317	eP	49	16.00	0.1	KIC	74.85	84	Pd	52	19.00	-0.6
TKL	33.27	354	P	47	15.00	-1.1				e	50	44.00	451kmX		1.0s	470.50nm			6.5mb	
PWLA	33.29	348	P	47	14.20	-2.0	DUG	48.04	326	P	49	18.40	0.4	BALM	74.88	333	iP	52	19.42	0.3
GBTN	33.32	353	P	47	15.40	-1.1		1.0s	37.50nm			5.4mb		TGL	74.99	333	eP	52	19.79	0.1
RSCP	33.44	351	P	47	16.00	-1.6	CLC	48.25	318	eP	49	19.00	-0.6	INK	75.00	342	iPd	52	19.00	-0.5
	1.2s	583.09nm			6.4mb					e	50	46.00	443kmX	VAL	75.55	37	iP	52	22.90	0.1
BLA	34.61	359	P	47	27.40	-0.3	SYP	49.18	315	eP	49	28.00	1.1	ERUA	75.55	47	iPd	52	23.50	0.3
	1.2s	257.58nm			6.0mb		TNP	49.32	321	P	49	28.40	0.4	EMON	75.61	46	iPd	52	22.50	-1.0
OLY	34.65	343	P	47	26.10	-1.9	BCH	49.60	316	P	49	30.80	0.7	GLB	75.69	334	iP	52	23.92	0.3
ZON	35.40	164	eP	47	34.00	-0.5	RSON	49.67	348	P	49	27.50	-2.7	NKM	75.85	54	iPd	52	26.50	1.5
CFA	35.58	163	eP	47	37.00	0.9		1.2s	284.26nm			6.1mb					i	52	28.00	5kmX
BAO	36.19	121	eP	47	40.40	-1.1	FRI	50.32	318	ePd	49	34.00	-1.4	IFR	75.85	56	iPd	52	25.50	0.2
			e	49	07.00	459kmX				ePcP	50	52.70		EJIF	75.93	53	iPd	52	26.50	1.1
			e	50	06.50		KVN	50.46	321	P	49	36.70	0.0	EPLA	75.97	49	iPd	52	25.80	0.2
TUL	36.47	338	iPd	47	42.40	-1.1	PRI	50.50	317	eP	49	36.70	-0.3	MID	76.16	331	e(P)	52	26.40	0.3
	1.2s	271.30nm			5.9mb					ePcP	50	55.00		EPRU	76.19	53	eP	52	27.30	0.4
Z	19s	1.46um			4.8Msz		LLA	50.95	317	eP	49	39.90	-0.3	EHOR	76.29	52	iPd	52	27.00	-0.4
		eS	53	32.00						ePcP	50	56.30		AKU	76.42	22	iP	52	27.20	-0.3
		LR	58	10.00		PRS	51.09	316	eP	49	41.30	0.0		1.1s	151.90nm			6.0mb	
SIO	36.52	337	ePd	47	42.60	-1.3				ePcP	51	56.70		DOT	76.64	336	eP	52	29.01	0.1
TCA	36.56	158	iPd	47	44.30	-0.1	CMB	51.34	319	ePd	49	42.77	-0.5	KLU	76.66	333	iP	52	28.98	-0.1
FVM	36.71	346	iP	47	43.90	-1.6				ePcP	50	57.40		FID	76.66	332	iP	52	28.70	-0.3
	1.2s	294.12nm			5.9mb		SAO	51.37	317	e(P)	49	43.00	-0.4	VLZ	76.72	333	eP	52	28.99	-0.3
PPD	36.93	133	iPd	47	46.60	-1.0	ARN	51.73	317	P	49	46.70	0.5	VZW	76.80	333	iP	52	29.42	-0.4
		e	47	58.10	41kmX	MHC	51.80	317	ePd	49	47.20	0.3	MAL	76.81	53	iPd	52	31.50	1.2
		e	48	17.10		LRM	51.82	331	iPd	49	46.50	-0.5				eS	02	20.00	
		ePcP	50	09.40					e	49	54.50	27kmX	TOA	76.98	334	iPd	52	30.90	0.0
MRA	37 13	160	iPd	47	49.50	0.5	GCC	51.88	317	ePd	49	47.20	-0.1	MBC	76.98	351	iPd	52	29.50	-1.0
PRIN	38.03	6	P	47	56.20	-0.3	PCC	52.39	317	eP	49	51.10	0.0	GLI	76.99	332	eP	52	30.17	-0.7
TBR	38.85	7	P	48	04.20	0.7	BRK	52.50	318	eP	49	52.10	0.2	ALOJ	77.10	53	iPc	52	32.90	0.8
DHN	40.24	2	P	48	15.00	0.1	ORV	52.91	320	iPd	49	55.20	0.3	AAPN	77.11	52	iPd	52	32.50	0.4
HRV	40.57	9	ePd	48	18.26	0.7				ePcP	51	05.00		KNIM	77.12	332	iP	52	30.62	-0.9
		epPc	48	20.75	8kmX	SCH	53.28	9	iPd	49	56.20	-1.3	ATEJ	77.15	53	iPc	52	33.00	0.6
		esP	48	21.57			1.2s	433.00nm			6.3mb		ACHM	77.32	53	iP	52	33.50	0.3
		ePP	49	55.01		MIN	53.41	321	ePd	49	57.70	-1.1	APHE	77.41	53	iPd	52	35.00	1.1
VAO	40.76	130	iPd	48	18.00	-1.5	WDC	54.13	320	ePd	50	01.40	-2.5	ASMO	77.42	52	iPd	52	34.70	0.9
		epP	48	22.40	15kmX					ePcP	51	06.90		DDM	77.43	335	eP	52	33.70	0.4
		e	48	26.80		LBFM	54.15	321	P	50	03.50	-0.8	EBAN	77.48	52	iPd	52	33.50	-0.5
		e	48	48.70		SES	54.63	336	ePd	50	06.40	-1.1	GUD	77.50	49	iPd	52	34.70	0.4
ALQ	40.77	326	iPd	48	21.00	1.4	FFC	55.19	345	iPd	50	09.60	-1.8	AFC	77.56	53	iPd	52	34.90	0.2
	0.9s	420.17nm			6.2mb			0.9s	65.00nm			5.7mb		KNK	77.78	333	iP	52	35.23	0.0
		eS	54	32.00		DPW	56.08	330	P	50	18.00	0.0	SEW	77.86	331	eP	52	35.25	-0.3
		eSS	57	25.00		LON	57.26	327	eP	50	25.25	-1.3	ECP	77.93	37	iPc	52	35.50	-0.6
ANMO	40.77	326	ePd	48	21.09	1.5				epPc	50	27.07	6kmX		1.3s	451.00nm			6.4mb	
		epPc	48	22.75	6kmX	RMW	57.69	327	P	50	29.00	-0.6	DMU	77.97	35	eP	52	36.00	-0.4
		esPc	48	24.07		EDM	57.71	337	iPd	50	27.90	-1.7	DLE	78.06	36	eP	52	36.20	-0.6
		eS	54	34.33			0.7s	107.00nm			6.0mb		HDA	78.10	336	iP	52	36.41	-0.5
RSNY	42.19	6	P	48	29.00	-1.9				pP	50	36.00	27kmX	GHO	78.11	333	iP	52	36.84	-0.2
ITR	42.68	106	iPd	48	33.60	-1.8	PNT	57.74	330	iPd	50	29.50	-0.2	PME	78.11	333	iP	52	36.72	-0.2
		e	48	42.30	29kmX		1.0s	173.00nm			6.0mb		ETA	78.13	37	iPc	52	35.40	-1.8
		e	48	47.20					pP	50	37.00	25kmX		1.3s	410.00nm			6.4mb	
		e	49	14.10		PGC	59.29	328	eP	50	40.00	-0.5	PLRM	78.15	333	iP	52	36.76	-0.4
		i	50	26.80		RKT	59.45	241	eP	50	41.00	-1.1	PMR	78.15	333	iPd	52	36.70	-0.4
		e	52	34.80			1.4s	160.00nm			6.0mb			1.3s	207.50nm			6.1mb	
BMA	42.78	128	eP	48	34.30	-1.8	FRB	61.73	6	ePd	50	53.70	-3.2X	TAF	78.23	55	iPd	52	36.00	-2.3
		e	48	47.30	48kmX		1.2s	244.00nm			6.3mb		PMS	78.24	332	iP	52	37.61	-0.2
PDCR	43.01	111	iPd	48	36.40	-1.6	CVVD	64.06	60	iP	51	12.50	-0.6	SLKM	78.34	332	iP	52	38.15	-0.2
		e	48	46.50	34kmX	TBT	64.25	59	iP	51	13.50	-0.8	GLM	78.47	336	eP	52	29.74	-9.3X
		e	48	51.60		GGC	66.11	60	eP	51	18.00	-8.4X	GLM	78.47	336	iP	52	38.52	-0.5
		e	50	21.00					i	51	25.40	24kmX	PWA	78.51	333	iP	52	38.96	-0.2
GLD	43.75	331	iP	48	44.20	0.3	AIA	68.47	173	eP	51	39.30	-1.1	CCB	78.53	336	eP	52	38.22	-1.0
	1.2s	565.66nm			6.2mb		GDH	68.97	10	iP-	51	37.00	-6.5X	RND	78.57	335	iP	52	39.76	0.2
GOL	43.79	331	iP	48	44.50	0.2				e	55	55.00		CNPM	78.57	330	eP	52	39.57	0.0
	1.2s	450.82nm			6.2mb					e	01	10.00		WRH	78.59	336	iP	52	38.72	-0.8
GLA	44.79	317	eP	48	53.00	0.7	RUV	69.13	253	iP	51	46.40	1.0	ENIJ	78.59	53	iPd	52	39.00	-1.2
		e	50	34.00	555kmX		1.4s	150.00nm			6.0mb		COL	78.60	336	ePd	52	39.25	-0.4	

09d 01h

			epP	52	41.08	6kmX	AVF	83.51	43	iPd	53	05.60	-0.3	SAX	87.62	43	ePd	53	27.50	0.9
			ePP	55	33.87		SSF	83.63	43	iPd	53	06.20	-0.3	VDL	87.72	44	ePd	53	28.00	1.0
			eS	02	33.62		PLDF	83.65	44	P	53	06.84	0.1	BOB	87.74	45	Pd	53	27.50	0.5
FBA	78.60	336	iPd	52	39.00	-0.7	SMF	83.84	44	iPd	53	07.50	-0.1	CGL	87.74	51	P	53	25.90	-1.2
MCK	78.71	335	iP	52	40.09	-0.2	LOR	83.89	43	iPd	53	07.30	-0.5	MDI	87.90	44	P	53	27.00	-0.6
RDS	78.72	336	eP	52	39.55	-0.8		1.3s	115.50nm			5.9mb		RGS	87.94	27	iP	53	28.20	0.8
NNL	78.74	331	iP	52	40.93	0.5	LBF	83.95	43	iPd	53	07.70	-0.5	KBS	87.95	11	iP	53	28.50	1.2
KDC	78.78	329	eP	52	40.50	-0.1		1.5s	101.30nm			5.8mb		OSS	88.18	44	ePd	53	30.00	0.8
HUR	78.78	334	eP	52	40.26	-0.4	SNF	84.34	40	iPd	53	10.00	0.0	NB2	88.36	29	P	53	29.60	0.0
XLV	78.80	330	eP	52	41.06	0.3	UCC	84.40	39	iPd-	53	10.00	-0.3		1.1s	128.60nm				6.1mb
SUA	78.85	332	iP	52	41.27	0.0				i	53	36.00	98kmX	SAL	88.48	45	P	53	31.00	0.6
NKA	78.89	332	eP	52	42.64	1.4	DOU	84.52	40	iP	53	11.30	0.4		1.1s	380.60nm				6.6mb
NEA	79.02	336	iP	52	41.61	-0.4		0.9s	95.00nm			6.0mb		NRA0	88.53	29	P	53	30.20	-0.1
ETOR	79.11	49	iPd	52	43.00	0.0				SKS	53	41.00		PII	88.54	46	P	53	30.50	-0.2
EALH	79.30	52	eP	52	44.00	0.0	DBN	84.97	38	eP-	53	13.00	-0.1	BDI	88.58	46	Pc	53	30.50	-0.5
SKT	79.35	333	iP	52	43.46	-0.3	Z	20s	0.50um			4.9Msz		MME	88.65	46	P	53	31.80	0.2
SPU	79.39	332	iP	52	43.63	-0.4				eS	03	46.00		OGA	88.78	43	iPd	53	33.00	0.9
CGLM	79.40	332	iP	52	43.81	-0.3	VITF	85.36	42	P	53	15.41	0.3		1.5s	168.00nm				6.1mb
RDT	79.41	331	iP	52	43.59	-0.6	ENN	85.39	39	iPd	53	15.30	1.1	GRF	88.80	41	iPd	53	32.70	0.8
CRP	79.46	332	eP	52	44.25	-0.3		1.1s	286.00nm			6.4mb			1.4s	152.00nm				6.1mb
NCG	79.49	332	iP	52	44.13	-0.6				i	53	25.00	27kmX	Z	22s	0.40um				4.8Msz
KTH	79.50	334	iP	52	44.09	-0.6				i	53	29.00		FUR	88.90	42	eP	53	33.00	0.6
CKL	79.53	332	iP	52	44.46	-0.4	MEM	85.44	40	iPd	53	15.97	0.5		2.0s	400.00nm				6.3mb
RED	79.54	331	iP	52	44.56	-0.4	BER	85.47	30	iP	53	16.00	0.6	MOX	89.01	40	ePd-	53	33.00	0.1
ILIM	79.56	331	iP	52	44.52	-0.5	WLF	85.51	41	iPd	53	16.60	0.8		1.6s	111.00nm				5.9mb
BGL	79.57	332	eP	52	44.82	-0.3				e	53	30.50	47kmX	FIR	89.07	46	eP	53	33.00	-0.2
OPT	79.59	330	eP	52	44.87	-0.3	LRG	85.52	47	iPd	53	16.80	0.8	HOF	89.19	40	eP	53	34.00	0.2
CDD	79.63	330	iP	52	45.37	0.0		1.2s	185.90nm			6.2mb		CTI	89.25	44	Pd	53	34.50	0.3
EAB	79.89	33	ePd	52	45.90	-0.8	HAU	85.60	42	iPd	53	16.20	-0.2	CRE	89.58	47	P	53	34.50	-1.3
	1.1s	133.00nm			5.8mb			1.4s	165.50nm			6.0mb		HFS	89.63	30	ePKP	53	34.70	-0.9
BOH	80 12	47	P	52	49.09	0.6	LMR	85.63	47	iPd	53	17.30	0.7		0.9s	49.70nm				5.8mb
ELYF	80.15	47	P	52	48.35	-0.2		1.2s	172.50nm			6.1mb		Z	19s	0.28um				4.7Msz
MADF	80.27	47	P	52	48.62	-0.5	JCK	85.72	39	ePc	53	17.20	0.4				LR	27	43.00	
ISSF	80.27	47	P	52	50.03	0.7	FRF	85.73	47	iPd	53	17.90	0.8	VVI	89.79	44	P	53	37.00	0.4
ELO	80.28	33	ePd	52	48.40	-0.5	BNI	85.77	45	Pd	53	18.50	1.0	CLL	89.85	39	iPd	53	37.40	0.6
	1.2s	184.00nm			5.9mb		LPG	85.83	45	iPd	53	19.00	1.0		1.9s	160.00nm				5.9mb
EAU	80.31	34	ePd	52	48.40	-0.6		1.2s	139.40nm			6.0mb					i	53	46.30	28kmX
ATE	80.35	47	P	52	49.88	0.3	RRL	85.84	45	P	53	18.97	1.0	BRL	89.95	38	eP	53	39.50	2.3
EBH	80.35	33	ePd	52	48.80	-0.5	BSF	85.89	42	P	53	17.80	-0.2	ASS	90.13	47	P	53	37.40	-0.9
ESK	80.36	34	ePc	52	48.41	-0.9	CALN	85.91	46	P	53	18.84	0.7	MNS	90.18	48	Pd	53	38.60	0.0
	1.0s	300.00nm			6.2mb		LOMF	85.91	43	P	53	18.18	0.2	ARV	90.31	47	P	53	38.50	-0.6
			epP	52	50.40	6kmX	WIT	85.91	37	iPd	53	19.10	1.3	KBA	90.35	43	iPd	53	39.70	0.2
LHE	80.39	47	P	52	50.48	0.6				e	53	28.00	28kmX		1.8s	155.00nm				6.0mb
EKA	80.39	34	P	52	49.00	-0.5				e	53	32.50					e	56	31.00	
	1.3s	233.80nm			6.0mb		EMS	85.96	44	ePd	53	19.50	1.0				i	57	15.80	
ESCF	80.44	47	P	52	50.63	0.6	WTS	85.98	38	iPd	53	17.90	-0.2	KHC	90.37	41	iPd	53	40.20	0.9
EDI	80.48	34	ePd	52	49.30	-0.6		1.0s	384.00nm			6.5mb			1.2s	34.00nm				5.5mb
OGE	80.52	47	P	52	51.05	0.6				i	53	27.50	30kmX	BRG	90.47	39	iPd	53	40.80	1.1
EBL	80.53	34	ePd	52	49.50	-0.7				i	53	32.20			1.8s	105.00nm				5.8mb
JAU	80.59	47	P	52	51.87	0.9	PZZ	86.07	46	P	53	19.79	0.8				i	53	53.60	42kmX
LPF	80.65	42	iPd	52	51.00	0.0	RUP	86.10	41	ePd	53	19.61	0.7				i	54	03.40	
EDU	80.68	33	ePd	52	50.70	-0.2	MVIF	86.10	46	P	53	19.82	0.7				e	56	33.20	
	0.8s	160.00nm			6.1mb		LSD	86.11	45	P	53	20.51	1.2	RBL	90.55	44	Pd	53	40.70	0.5
ESY	80.79	34	ePd	52	51.30	-0.3	MOF	86.12	42	P	53	18.97	-0.1	TRI	90.74	44	iPd	53	41.50	0.5
	1.0s	168.00nm			6.0mb		ECH	86.14	42	P	53	19.43	0.3	TRO	90.76	20	iP	53	41.10	0.5
GRR	80.81	41	iPd	52	52.10	0.3	TOUF	86.17	46	P	53	20.14	0.6	VOY	90.81	44	ePd	53	41.80	0.4
EROO	80.97	49	iPd	52	53.80	0.9	DOI	86.17	46	Pc	53	20.10	0.7	PRU	90.93	40	P	53	42.00	0.2
EDR	81.00	33	eP	52	52.20	-0.4	CDF	86.22	42	P	53	19.65	0.1		2.0s	97.70nm				5.8mb
EBR	81.03	49	eP	52	52.00	-1.1	STV	86.22	46	P	53	19.89	0.2	Z	20s	0.60um				5.0Msz
			eS	03	04.00		REVF	86.25	47	P	53	20.40	0.6	E	20s	0.30um				
SVW	81.06	332	iP	52	52.43	-0.5	WLS	86.27	42	P	53	19.91	0.1				e	53	56.00	47kmX
MFF	81.10	43	iPd	52	53.60	0.2	ENR	86.29	46	P	53	20.71	0.7				S	04	46.00	
	1.5s	307.10nm			6.1mb		DIX	86.30	44	ePd	53	21.40	1.2	SDI	91.07	48	P	53	42.10	-0.6
EPF	81.10	47	iPd	52	54.40	0.8	AUTN	86.30	46	P	53	20.73	0.5	CEY	91.20	44	ePd	53	44.10	0.9
	1.4s	272.30nm			6.1mb		SBF	86.30	46	iPd	53	20.40	0.4	LJU	91.25	44	eP	53	44.00	0.6
FLN	81.10	41	iPd	52	53.80	0.4	BBS	86.37	43	P	53	20.43	0.2	FAI	91.28	53	P	53	45.60	1.9
	1.2s	278.90nm			6.2mb		SAOF	86.39	46	P	53	20.79	0.4	UPP	91.63	30	iP	53	43.70	-1.0
DAG	81.22	12	iPd	52	52.00	-1.5	ABH	86.41	40	ePd	53	21.10	0.7	VBY	91.80	44	eP	53	46.20	0.3
	1.1s	210.13nm			6.1mb		GWF	86.46	41	P	53	21.04	0.4	KSP	91.96	39	eP	53	47.00	0.5
			i	53	00.30	26kmX	STR	86.55	42	P	53	21.44	0.4	PTJ	92.25	44	eP	53	49.00	0.9
IMA	81.29	337	ePd	52	53.60	-0.6	ROB	86.62	46	P	53	21.74	0.2	ZAG	92.28	44	iPd	53	49.50	1.4
LDF	81.32	41	iPd	52	54.90	0.4	IMI	86.63	46	P	53	21.63	0.0	ADK	92.38	322	iPd	53	48.70	0.3
LFF	81.56	45	iPd	52	56.30	0.5	MMK	86.68	44	ePd	53	23.40	1.3		1.0s	340.00nm				6.7mb
	1.3s	238.20nm			6.1mb		ORO	86.69	45	Pc	53	22.00	0.0				e	53	56.30	24kmX
LPO	81.85	45	iPd	52	57.90	0.5	FEL	86.71	42	P	53	22.04	0.0	SPA	92.42	180	iPd	53	49.50	1.0
RJF	82.14	45	iPd	52	59.20	0.4	FIN	86.86	46	P	53	22.25	-0.5		1.0s	86.50nm				6.1mb
	1.4s	243.90nm			6.1mb		ZLA	86.97	43	ePd	53	23.70	0.5	SOP	92.48	42	eP	53	50.80	1.9
LSF	82.22	44	iPd	52	59.40	0.1	SLE	87.04	42	ePd	53	23.80	0.3	ZST	92.78	42	i(P)	53	51.50	1.2
CAF	82.49	45	iPd	53	01.30	0.5	PCP	87.10	46	P	53	24.09	0.2	TDS	93.16	50	Pc	53	52.60	0.3
TCF	82.69	44	iPd	53	01.70	-0.1	TOD	87.23	41	ePd	53	24.51	0.1	KEV	93.48	20	iP	53	52.80	-0.4
	1.2s	95.20nm			5.8mb		VAI	87.24	44	Pd	53	24.50	0.1		1.0s	34.00nm				5.7mb
SDN	82.73	325	iP	53	02.43	0.8	TMA	87.31	44	ePd	53	25.50	0.5	SRO	93.64	42	iP	53	55.00	0.7
MAF	82.94	44	iPd	53	03.20	0.2	CVF	87.36	48	iPd	53	25.10	0.0		2.2s	1.50nm				4.0mb X
HGF	83.15	44	iPd	53	04.30	0.2		1.4s	104.50nm			5.9mb					e	57	38.00	
PYM	83.21	44	P	53	04.93	0.4	LLS	87.39	43	ePd	53	26.40	1.0	SOD	94.02	22	iP	53	55.00	-0.7
AGO	83.32	44	P	53	04.87	-0.1	STU	87.50	41	iPd	53	26.00	0.4	BUD	94.16	42	eP	53	57.00	0.3
LBL	83.35	45	P	53	05.78	0.7		1.0s	120.00nm			6.1mb		KRA	94.37	40	eP	53	58.40	0.8

1.1s 64.00nm 5.9mb
Z 20s 1.10um 5.3Msz
e 54 17.10 66kmX
e 05 16.00
PSZ 94.67 42 eP 53 50.80 -8.4X
SPC 94.71 40 iP 54 01.50 2.1
0.9s 36.00nm 5.8mb
NUR 94.96 29 eP 54 00.00 -0.1
0.7s 53.40nm 6.1mb
Z 22s 0.80um 5.1Msz
LR 33 00.00
SUF 95.09 26 eP 54 00.50 -0.2
BEO 95.54 45 i(P) 54 04.00 0.9
OHR 96.36 48 eP 54 08.20 1.2
1.6s 0.13nm 3.2mb X
SKO 96.70 47 iP 54 09.20 0.7
1.2s 57.00nm 6.0mb
BCAO 98.08 85 ePDIFd54 14.43 -0.8
BNG 98.09 85 iPd 54 14.90 -0.4
0.9s 44.00nm 6.1mb
ic 54 34.70 71kmX
ic 57 05.00
ic 58 14.20
VRI 99.67 43 eP 54 23.50 1.7
LSZ 107.95 105 iPKPc 59 07.10 0.0
i 59 24.00
MZZ 108.75 101 iPKPd 59 09.00 0.3
i 59 30.00
PTZ 111.04 104 iPKPc 59 13.00 0.0
i 59 47.00
IKZ 112.48 100 ePKP 59 33.00 17.2X
RYD 121.42 59 ePKP 59 33.00 0.5
COO 123.78 234 iPKPc 59 36.70 -0.2
0.7s 15.00nm
BRS 124.03 238 iPKP 59 36.00 -1.5
CAN 124.26 228 iPKPd 59 36.80 -0.9
e 59 45.10
BWA 125.06 229 ePKP 59 37.90 -1.3
MHI 125.92 41 ePKP 59 41.00 0.0
MDJ 126.33 334 ePKP 59 39.50 -1.8
RMQ 127.72 238 iPKPd 59 44.10 -0.5
0.8s 65.00nm
CMS 128.26 231 iPKPd 59 44.30 -1.1
0.9s 28.00nm
CN2 128.71 337 PKP 59 43.20 -2.7X
SNY 131.12 337 ePKP 59 48.10 -2.4X
STK 131.32 228 ePKP 59 51.00 -0.2
OLP 131.48 236 ePKP 59 52.00 0.3
CTA 131.80 245 iPKPd 59 51.30 -1.2
1.1s 63.29nm
WMO 132.59 12 ePKP 59 53.06 -0.3
Z 20s 0.70um 5.4Msz
epP 59 55.54
ePP 02 16.40
eSKP 03 19.30
KSH 132.73 26 PKP 59 54.50 0.7
BJI 135.28 343 ePKP 59 57.29 -1.2
Z 32s 0.76um 5.2MszX
PP 02 24.00
PKS 03 32.00
BTO 136.25 349 ePKP 59 54.80 -5.7X
OIS 137.61 242 ePKP 59 54.00 -9.5X
GTA 138.36 0 PKP 00 03.80 -0.7
TIA 138.45 339 ePKP 00 00.00 -4.6X
TIY 138.49 345 ePKP 00 02.60 -2.1X
Z 24s 1.10um 5.5MszX
SSE 141.15 331 PKPd 00 08.20 -1.4
ASPA 141.20 234 ePKP 00 01.50 -8.4X
1.1s 30.00nm
e 03 43.30
LZH 141.53 355 iPKPc 00 02.50 -7.9X
1.5s 60.00nm
ePP 01 44.00
WRA 142.43 240 PKPd 00 06.10 -6.1X
0.9s 48.80nm
WB5 142.43 240 ePKP 00 06.00 -6.2X
eSKP 03 47.00
XAN 142.81 348 PKP 00 06.40 -6.1X
WHN 144.55 339 PKPc 00 13.00 -2.4X
pPKP 00 18.00
RKG 144.85 205 ePKP 00 13.00 -2.9X
COOL 145.48 213 iPKPd 00 15.70 -1.4
1.0s 125.00nm
NWAO 145.73 206 ePKP 00 16.00 -1.4
1.3s 6.00nm
CD2 146.67 354 ePKP 00 18.20 -0.9
POO 146.70 50 iPKPd 00 21.80 2.4X

LSA 146.88 15 PKP 00 21.00 1.0
MUN 146.99 205 iPKPd 00 18.80 -0.7
1.8s 23.00nm
OZH 147.48 328 ePKP 00 20.50 0.1
MTN 147.73 250 ePKP 00 20.50 -0.6
BAL 147.94 207 ePKP 00 20.00 -1.1
0.7s 71.00nm
KNA 148.94 243 ePKP 00 22.00 -1.0
0.8s 304.00nm
i 00 26.20
MEKA 150.23 214 ePKP 00 24.00 -0.7
0.5s 14.00nm
e 00 28.70
GYA 150.61 348 iPKPd 00 24.80 -0.6
HYB 150.90 47 iPKP 00 25.00 -1.0
1.8s 727.30nm
i 00 30.50
e 00 38.00
GZH 151.60 334 PKPd 00 31.40 4.6X
GBA 152.33 54 PKP 00 28.00 -0.1
KMI 152.50 355 ePKP 00 28.09 -0.3
KMI 152.50 355 ePKPc 00 34.71 6.3X
KMI 152.50 355 ePKP 00 44.31 15.9X
e 04 17.00
BAG 152.53 314 ePKP 00 34.00 5.4X
DAV 153.00 291 ePKP 00 36.00 6.9X
MBL 153.34 224 ePKP 00 28.30 -1.1
i 00 36.00
KOD 154.07 61 ePKP 00 32.00 1.1
NANU 155.09 215 iPKPc 00 32.00 0.3
0.8s 33.00nm
CHTO 158.85 3 iPKPd 00 36.00 -0.5
LOE 160.23 356 ePKP 00 37.50 -0.5
SNG 170.44 358 iPKPd 00 35.90 -10.6X
1.1s 207.59nm
PSI 174.74 14 ePKPc 00 47.60 -0.6
1.3s 133.00nm
S.D. = 0.9 on 438 of 478 obs.

SEP 09, 1989 02h 19m 01.17± 0.51s
2.434 N ± 4.7km 79.657 W ± 7.2km
DEPTH = 10.0km (geophysicist)
4.7mb (5 obs.)
SOUTH OF PANAMA (83)

COTA 2.47 148 P 19 41.60 -1.0
GGP 2.80 158 eP 19 46.20 -1.2
eS 20 18.50
OUR 2.82 156 Pd 19 46.50 -1.1
ANCC 2.99 69 ePc 19 49.47 0.0
SALC 3.01 80 eP 19 50.14 0.3
HOOC 3.19 71 eP 19 52.50 -0.1
RECU 3.24 160 P 19 54.70 1.1
CLMC 3.41 65 eP 19 55.44 -0.2
DIAC 3.56 76 iPd 19 58.55 0.8
HOBC 4.00 61 ePc 20 03.54 -0.4
UPA 6.51 1 eP 20 40.60 1.3
TPP 19.70 66 eP 23 37.88 4.0X
ARE 20.44 157 eP 23 43.00 1.1
ZOBO 21.80 149 P 23 55.00 -1.1
1.1s 39.15nm 4.7mb
LPB 22.03 149 P 23 58.00 -0.3
CNCB 22.33 149 P 24 03.20 1.8
CCH 23.78 146 P 24 16.70 1.5
SLA 30.30 154 ePc 25 15.90 0.7
TUL 36.51 338 eP 26 07.20 -1.4
0.8s 4.00nm 4.3mb
PPD 36.86 133 e(P) 26 11.00 -0.8
ALO 40.83 325 eP 26 45.60 0.7
0.7s 8.56nm 4.6mb
epP 26 50.50 17kmX
KIC 74.75 84 P 30 43.20 -0.6
INK 75.04 342 eP 30 44.00 -0.4
NB2 88.31 29 P 31 53.12 -1.0
1.2s 4.80nm 4.7mb
SPA 92.42 180 e(P) 32 13.70 0.4
1.0s 6.50nm 5.0mb
WB5 142.52 240 ePKP 38 33.20 -3.9X
S.D. = 1.0 on 24 of 26 obs.

? SEP 09, 1989 03h 33m 02.05± 3.57s
44.430 N ±44.2km 149.257 E ±40.3km
DEPTH = 33.0km (normal)
4.0mb (1 obs.)
KURIL ISLANDS (221)

KUSJ 3.55 250 P 33 55.00 -1.2
S 34 27.40
ASAJ 4.76 269 P 34 13.50 0.2
HOOJ 4.81 247 P 34 15.00 1.1
S 35 01.80
MRRJ 6.29 254 P 34 34.80 -0.1
eS 35 39.90
NB2 69.51 340 P 44 08.90 0.0
0.5s 0.70nm 4.0mb
S.D. = 1.1 on 5 of 5 obs.

? SEP 09, 1989 03h 41m 47.05± 1.99s
3.122 N ±27.4km 128.462 E ±17.8km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
NORTH OF HALMAHERA (264)

MNI 3.99 245 ePc 42 47.70 0.3
eS 43 14.50
WB5 23.58 166 iPc 46 54.80 -1.0
WRA 23.64 166 P 46 56.00 -0.4
0.4s 10.50nm 4.7mb
OIS 25.95 156 eP 47 20.00 1.6
ASPA 27.15 169 iPd 47 29.10 -0.3
GBA 51.44 285 Pd 50 51.40 -0.2
0.4s 0.70nm 4.0mb
S.D. = 1.2 on 6 of 6 obs.

SEP 09, 1989 04h 11m 24.79± 0.59s
2.411 N ± 5.3km 79.658 W ± 7.0km
DEPTH = 10.0km (geophysicist)
4.3mb (2 obs.) 3.5Msz (1 obs.)
SOUTH OF PANAMA (83)

GGP 2.78 158 Pd 12 10.20 -0.5
S 12 40.00
OUR 2.80 156 iPd 12 10.60 -0.3
eS 12 42.80
ANCC 3.00 68 eP 12 13.00 -0.2
SALC 3.01 79 eP 12 13.47 -0.1
HOOC 3.20 71 eP 12 16.03 -0.3
PURC 3.29 91 eP 12 20.22 2.3
CLMC 3.42 65 eP 12 18.65 -0.7
DIAC 3.57 76 iPd 12 22.17 0.7
HOBC 4.01 61 eP 12 26.88 -0.9
UPA 6.53 1 e(P) 13 03.00 -0.3
ZOBO 21.78 149 P 16 19.20 -0.3
1.1s 15.95nm 4.3mb
Z 22s 0.20um 3.5Msz
LR 24 04.00
LPB 22.02 149 P 16 22.00 0.3
CNCB 22.31 149 P 16 25.00 0.2
ALO 40.85 326 eP 19 09.50 0.8
0.9s 5.67nm 4.3mb
epP 19 16.00 22kmX
PNT 57.81 330 eP 21 24.00 5.3X
LIC 74.47 84 P 23 05.40 -0.4
KIC 74.75 84 P 23 07.00 -0.5
INK 75.06 342 eP 23 08.50 0.3
S.D. = 0.8 on 17 of 18 obs.

% SEP 09, 1989 04h 17m 58.74± 2.31s
35.206 N ±22.0km 3.907 W ± 8.9km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.4 (MDD).

EMEL 0.78 83 iPgc 18 13.80 -0.2
EJIF 1.78 315 ePn 18 29.40 -0.3
eSn 18 50.80
EPRU 2.06 329 ePn 18 35.60 1.8
ENIJ 2.23 37 ePn 18 37.00 0.7
EMOR 2.82 338 ePn 18 45.00 0.3
eSn 19 17.60
EVAL 3.30 317 ePn 18 50.90 -0.6
eSn 19 28.90
EVIA 3.60 18 ePn 18 56.90 1.0
eSn 19 38.20
EPLA 5.15 341 ePn 19 17.20 -0.5
eSn 20 16.00
GUD 5.43 358 ePn 19 20.70 -1.1
ETOR 5.79 14 ePn 19 25.70 -1.1
S.D. = 1.1 on 10 of 10 obs.

% SEP 09, 1989 04h 26m 08.51± 1.10s
17.874 N ±13.0km 98.304 W ±12.1km
DEPTH = 33.0km (normal)
GUERRERO, MEXICO (59)

09d 04h

IIT	1.14	360	iP	26	28.50	0.0
			iS	26	44.50	
III	1.21	294	iP	26	29.50	0.0
PPM	1.23	346	iP	26	30.00	0.1
			iS	26	46.50	
OXX	1.70	117	iP	26	36.50	0.0
IIC	2.09	335	iP	26	42.00	-0.2
S.D. = 0.2 on 5 of 5 obs.						

? SEP 09, 1989 04h 31m 39.51± 0.91s
37.060 N ±10.5km 70.836 E ±15.2km
DEPTH = 33.0km (normal)
4.9mb (4 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

QUE	7.58	206	eP	33	29.00	-1.7
			eS	35	00.40	
MHI	9.14	269	eP	33	54.00	1.7
			eS	35	36.00	
NDI	9.92	145	eP	34	04.00	1.1
			iS	35	43.20	
NUR	37.30	324	iP	38	50.20	0.3
	0.5s	15.40nm			5.1mb	
SUF	37.38	328	eP	38	51.00	0.5
	0.5s	6.50nm			4.7mb	
SOD	39.18	335	eP	39	05.00	-0.5
HFS	42.55	322	eP	39	32.60	-0.7
	0.4s	11.50nm			5.0mb	
NB2	43.86	323	P	39	43.30	-0.7
	0.7s	7.20nm			4.6mb	
S.D. = 1.3 on 8 of 8 obs.						

SEP 09, 1989 04h 45m 13.46± 0.48s
43.147 N ± 5.7km 0.215 W ± 4.4km
DEPTH = 11.9 ± 4.1 km
PYRENEES (378)
ML 3.5 (LDG). mbLg 3.1 (MDD). MD 2.5 (STR). Felt (IV) in the Bearn area and (III) in the Bigorre area, France.

JAU	0.16	226	Pg	45	16.57	-0.8
			Sg	45	18.95	
OGE	0.19	277	Pg	45	18.13	0.3
			Sg	45	22.30	
ESCF	0.27	256	Pg	45	18.89	-0.4
			Sg	45	22.86	
ATE	0.36	261	Pg	45	20.88	-0.1
			Sg	45	26.33	
LHE	0.38	232	Pg	45	20.13	-1.2
			Sg	45	24.84	
EPF	0.42	106	Pg	45	20.70	-1.5
			Sg	45	26.60	
ISSF	0.44	255	Pg	45	22.09	-0.5
			Sg	45	28.49	
MADF	0.44	270	Pg	45	22.65	0.1
ELYF	0.57	273	Pg	45	25.15	0.2
BOH	0.59	266	Pg	45	24.44	-0.8
			Sg	45	33.42	
ECRI	1.77	253	ePn	45	46.30	2.1
			eSn	46	09.00	
LPO	1.84	33	Pg	45	49.70	4.6X
			Sg	46	14.80	
LFF	1.92	21	Pn	45	47.40	1.2
			Pg	45	51.20	
			Sg	46	17.80	
EROO	2.37	168	ePn	45	55.20	2.5
			eSn	46	23.00	
EBR	2.38	167	ePn	45	58.00	5.1X
			eSg	46	27.00	
ETER	2.41	109	eP	46	01.00	7.6X
			eS	46	29.80	
CAF	2.42	42	Pn	45	53.60	0.1
			Pg	46	00.00	
			Sg	46	31.60	
RJF	2.49	29	Pg	46	01.00	6.6X
			Sg	46	34.00	
ETOR	2.70	211	eP	45	57.10	-0.5
			eS	46	30.20	
LSF	3.34	21	Pn	46	06.40	-0.2
			Pg	46	17.00	
			Sg	47	01.20	
MFF	3.46	1	Pg	46	19.60	11.5X
			Sg	47	05.00	
TCF	3.58	28	Pn	46	09.00	-1.0
			Pg	46	21.50	
			Sg	47	08.80	
MAF	3.66	32	Pn	46	10.70	-0.4
			Pg	46	23.20	
			Sg	47	10.40	
GUD	3.86	231	ePn	46	14.60	0.5
			eSn	46	58.20	
BGF	4.05	31	Pn	46	17.00	0.5
			Pg	46	30.40	
			Sg	47	22.40	
SSF	4.72	33	Pg	46	42.60	16.5X
			Sg	47	44.40	
S.D. = 1.1 on 20 of 26 obs.						

% SEP 09, 1989 05h 29m 45.16± 0.67s
38.528 N ± 5.9km 23.613 E ±11.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.7 (ATH).

ATH	0.56	172	ePg	29	56.10	-0.4
			eSg	30	03.20	
NEO	0.83	339	ePb	30	01.20	-0.1
PLG	1.85	356	ePb	30	17.10	-0.1
ITM	1.90	225	ePb	30	18.10	0.2
APE	2.10	133	ePn	30	21.20	0.3
KZN	2.28	322	ePn	30	23.50	0.0
S.D. = 0.3 on 6 of 6 obs.						

SEP 09, 1989 05h 42m 41.21± 0.80s
44.356 N ± 5.8km 7.276 E ± 6.0km
DEPTH = 12.8 ± 6.2 km
NORTHERN ITALY (545)
ML 2.2 (GEN). MD 1.0 (STR).

STV	0.12	163	P	42	44.81	0.2
			S	42	46.86	
ENR	0.17	141	P	42	45.32	0.0
			S	42	47.98	
PZZ	0.20	320	P	42	45.83	0.0
			S	42	48.70	
TOUF	0.34	183	Pg	42	48.39	-0.1
SAOF	0.42	151	Pg	42	49.99	0.1
			Sg	42	55.67	
ROB	0.43	98	P	42	50.24	0.1
			S	42	56.39	
AURF	0.47	175	Pg	42	50.92	0.0
			Sg	42	57.16	
IMI	0.63	135	P	42	53.42	-0.2
			S	43	02.14	
FIN	0.69	102	P	42	54.44	-0.1
			S	43	04.29	
S.D. = 0.2 on 9 of 9 obs.						

SEP 09, 1989 07h 55m 17.05± 0.35s
0.755 S ± 6.6km 13.415 W ± 7.2km
DEPTH = 10.0km (geophysicist)
4.8mb (17 obs.) 4.5Msz (1 obs.)
NORTH OF ASCENSION ISLAND (407)

LIC	10.87	50	Pd	57	52.10	-3.7X
TIC	11.15	49	Pd	57	54.00	-5.6X
KIC	11.18	51	Pd	57	54.60	-5.4X
	0.6s	17.00nm			5.6mb	
			S	59	48.00	
			TT	06	19.00	
ITR	26.14	252	eP	00	52.30	-1.1
BNG	32.35	81	iPd	01	47.80	-1.3
	0.5s	13.00nm			5.1mb	
			id	01	55.20	
IFR	34.97	12	iPd	02	14.00	2.3
BAO	37.18	245	eP	02	29.40	-1.2
KMZ	40.85	110	iP	03	00.80	-0.4
PPD	42.52	237	eP	03	19.50	4.8X
MZZ	43.25	105	iP	03	22.00	1.2
LSZ	43.53	111	eP	03	22.00	-1.1
KRI	45.27	113	iPd	03	38.20	1.1
BUL	45.38	118	iPd	03	38.00	0.0
PTZ	46.23	109	iP	03	45.90	1.2
CAF	47.52	15	eP	03	55.10	0.7
	1.0s	10.00nm			4.9mb	
LSF	48.62	14	eP	04	03.70	0.7
	1.0s	24.00nm			5.2mb	
TCF	48.83	14	eP	04	05.60	1.1
	1.0s	14.00nm			5.0mb	
MAF	48.85	15	eP	04	05.90	1.2
	1.0s	16.00nm			5.0mb	
LPG	49.39	19	eP	04	10.60	1.4
	0.8s	7.20nm			4.7mb	
SSF	49.87	15	eP	04	13.30	0.8
	1.0s	10.00nm			4.7mb	
LBF	49.93	16	eP	04	13.40	0.4
	0.8s	5.30nm			4.6mb	
LOR	50.16	15	eP	04	14.90	0.2
	0.9s	9.80nm			4.8mb	
BBS	51.38	18	P	04	23.07	-1.0
BSF	51.49	17	eP	04	24.80	-0.2
	1.0s	8.00nm			4.6mb	
HAU	51.52	17	eP	04	25.20	0.1
	0.8s	10.70nm			4.8mb	
VITF	51.61	16	P	04	24.81	-0.8
FEL	51.91	18	P	04	27.07	-1.1
CDF	52.16	17	P	04	29.10	-0.9
WLS	52.18	17	P	04	28.79	-1.3
GWF	52.77	17	P	04	33.67	-0.8
SKO	52.90	32	iP	04	35.50	-0.1
E	16s	0.55um				
CCH	54.40	249	eP	04	50.00	2.7
GRF	54.53	19	eP	04	48.00	0.6
KHC	54.87	21	P	04	51.00	1.0
MOX	55.48	19	eP	04	54.00	-0.3
ZST	55.49	24	iP	04	54.50	0.1
			i	05	13.00	
CNCB	56.01	250	P	04	58.00	-1.3
ZOBO	56.05	251	P	05	00.00	0.4
Z	24s	0.23um			4.2MszX	
			LR	23	12.00	
LPB	56.07	251	P	05	01.00	1.4
Z	15s	0.67um			4.9MszX	
			LR	23	12.00	
BRG	56.46	20	eP	05	00.30	-1.0
	1.4s	12.00nm			4.7mb	
CLL	56.50	20	ePd	05	01.00	-0.6
MLR	57.69	32	ePc	05	06.00	-4.3X
HFS	64.27	15	eP	05	52.90	-1.6
	1.3s	24.10nm			5.2mb	
Z	16s	0.21um			4.4MszX	
			LR	29	52.00	
NB2	64.47	13	P	05	54.60	-1.3
	0.8s	3.10nm			4.5mb	
NUR	67.78	19	eP	06	24.00	7.0X
Z	20s	0.30um			4.5Msz	
			LR	38	20.00	
SUF	69.90	18	eP	06	30.00	0.0
	0.5s	4.50nm			4.9mb	
SOD	73.49	15	iP	06	51.50	0.1
MAIO	76.72	53	eP	07	11.00	0.3
MHI	76.72	53	eP	07	11.00	0.3
SPA	89.25	180	e(P)	08	14.30	-0.2
	1.0s	5.00nm			4.7mb	
ALO	92.93	305	e(P)	08	36.00	3.7X
OIS	146.15	130	ePKP	14	58.00	-1.1
BRS	149.02	156	iPKP	15	16.00	12.4X
S.D. = 1.1 on 45 of 53 obs.						

• SEP 09, 1989 08h 02m 53.73± 1.14s
23.952 N ± 8.4km 122.644 E ±11.9km
DEPTH = 10.0km (geophysicist)
3.7mb (2 obs.)
TAIWAN REGION (243)

TWD	0.97	278	iPc	03	11.60	-0.5
			eS	03	22.70	
TWC	0.98	312	iPd	03	12.60	0.3
TWF1	1.37	244	iPc	03	18.20	-0.7
			eS	03	35.00	
TWZ	1.50	320	ePc	03	21.30	0.7
ANP	1.60	320	eP	03	23.00	0.8
SSE	7.23	350	P	04	40.60	-1.4
	0.5s	38.00nm			5.8mb X	
			pP	04	45.00	
CHTO	22.64	262	e(P)	07	56.70	0.4
	0.5s	0.77nm			3.4mb	
WRA	45.09	164	Pc	11	12.40	0.4
	0.9s	1.90nm			4.0mb	
S.D. = 0.9 on 8 of 8 obs.						

? SEP 09, 1989 08h 20m 57.24±11.71s
14.590 N ±52.7km 60.012 W ±75.0km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)

MVM	0.86	268	iPc	21	14.38	0.6
			S	21	23.90	
CRM	0.89	281	eP	21	14.84	0.5
			S	21	25.00	

BIM	1.03	266	iPc	21 16.28	-0.4
			S	21 27.40	
FDF	1.11	278	iPc	21 17.24	-0.9
			S	21 28.90	
BBL	1.69	303	eP	21 27.30	0.3
			S	21 44.50	
MGG	1.83	317	eP	21 28.50	-0.4
			S	21 47.70	
PAG	2.15	312	eP	21 34.00	0.2
			S	21 55.60	

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

& SEP 09, 1989 08h 49m 39.40s
32.700 N 115.930 W
DEPTH = 2.0km
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 3.1 (PAS).

IKP	0.16	251	iPc	49 42.70	0.1
BAR	0.63	268	iPc	49 51.00	-0.9
GLA	0.99	69	iPc	49 57.10	-1.9
CPE	1.00	281	iPc	49 57.40	-1.7
PLM	1.02	310	iPc	49 58.60	-0.9
PEC	1.57	319	ePc	50 07.50	-0.9

6 obs. associoted

SEP 09, 1989 09h 44m 47.75± 0.43s
44.252 N ± 4.8km 7.453 E ± 3.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

ENR	0.03	223	P	44 49.73	-0.2
			S	44 51.63	
STV	0.09	265	P	44 50.73	0.3
			S	44 52.73	
DOI	0.29	329	Pd	44 54.00	0.1
			iSg	44 59.00	
ROB	0.30	82	P	44 54.10	0.0
			S	44 59.09	
PZZ	0.36	315	P	44 55.10	-0.1
			S	45 01.59	
IMI	0.46	137	P	44 57.29	0.1
			S	45 04.52	
FIN	0.54	94	P	44 58.27	-0.5
			S	45 06.30	
FOUF	0.56	300	ePgc	44 59.11	0.1
			eSg	45 07.46	
RRL	0.82	325	P	45 03.76	-0.1
			S	45 15.80	
PCP	0.83	69	P	45 04.46	0.5
			S	45 15.29	
BNI	0.97	326	P	45 06.00	-0.4
			eSg	45 21.00	

S.D. = 0.3 on 11 of 11 obs.

% SEP 09, 1989 09h 47m 57.59± 0.75s
39.644 N ± 6.2km 29.428 E ±11.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.79	138	ePg	48 13.10	0.0
			eSg	48 25.60	
YLV	0.92	357	iPn	48 15.00	-0.3
KCT	1.02	307	iPn	48 17.00	0.1
HRT	1.19	9	ePn	48 20.00	0.2
KHL	1.32	177	ePn	48 22.00	-0.1

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

• SEP 09, 1989 09h 53m 09.23± 2.88s
23.303 N ±14.4km 122.082 E ±22.5km
DEPTH = 10.0km (geophysicist)
TAIWAN REGION (243)

TWF1	0.72	274	iPd	53 23.40	-0.1
			eS	53 33.50	
TWD	0.89	330	iPc	53 25.80	-0.5
TWG	1.05	243	ePd	53 28.70	-0.3
TWC	1.32	351	iPc	53 33.40	-0.2
			eS	54 50.90	
TWK	1.47	269	ePd	53 36.00	0.2
			eS	53 55.50	
TWO	1.50	311	ePc	53 36.70	0.5
			eS	54 56.20	
TWZ	1.84	346	iPc	53 41.10	-0.1
ANP	1.94	345	ePc	53 43.00	0.3
	0.6s	394.67nm			
			eS	54 04.50	

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

SEP 09, 1989 10h 38m 06.95± 0.18s
51.310 N ± 4.7km 175.805 W ± 2.5km
DEPTH = 33.0km (normal)
5.3mb (59 obs.) 5.2Msz (27 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 5.1 (PMR). Ms 5.1 (BRK). Felt (III) on Adak.
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.B.: 10S, 23C
Centroid Locotion:
Origin Time 10:38:10.7 0.7
Lot 51.69N 0.06 Lon 175.73W 0.09
Dep 30.1 3.6 Holf-durotion 2.3
Moment Tensor; Scole 10••17 Nm
Mrr= 1.45 0.05 Mtt=-1.41 0.08
Mff=-0.05 0.07 Mrt= 1.34 0.24
Mrf= 0.44,0.17 Mtf=-0.78 0.07
Principol Axes:
T Vol= 1.99 Plg=69 Azm=350
N 0.29 4 249
P -2.29 21 157
Best Double Couple:Mo=2.1•10••17
NP1:Strike=239 Dip=25 Slip= 80
NP2: 70 66 95

ADK	0.79	317	iPd	38 23.50	1.8
SMY	6.39	287	eP	39 42.70	1.5
SDN	10.00	60	eP	40 30.00	-1.3
SVW	14.85	41	e(P)	41 34.20	-1.8
KDC	14.94	55	eP	41 35.30	-1.9
PMS	17.51	45	eP	42 09.70	-0.2
PWA	17.54	44	eP	42 07.80	-2.3
PMR	17.84	44	eP	42 13.50	-0.4
MID	18.48	52	eP	42 22.00	0.2
IMA	18.57	29	eP	42 23.70	0.8
	1.0s	62.50nm			4.8mb
TOA	19.33	45	eP	42 30.90	-1.2
FBA	19.87	36	eP	42 35.00	-2.8
SIT	24.10	60	eP	43 21.60	1.6
INK	26.45	34	eP	43 40.50	-1.6
	0.5s	25.50nm			5.1mb
			pP	43 54.00	55kmX
KUSJ	27.77	268	eP	43 52.30	-2.1
ASAJ	28.56	272	P	44 01.50	0.0
HOOJ	29.04	268	eP	44 04.70	-1.1
MRRJ	30.41	270	eP	44 16.50	-1.5
MBC	32.98	21	eP	44 41.00	0.8
	1.0s	41.00nm			5.3mb
HON	33.00	148	P	45 00.00	19.1X
Z	20s	3.99um			5.1Msz
GMW	34.06	75	eP	44 51.00	1.0
NIIJ	34.70	264	P	44 55.40	-0.1
LON	35.02	76	eP	44 58.60	0.4
PNT	35.19	71	iPc	45 00.40	0.8
	0.6s	43.00nm			5.6mb
CHJJ	35.46	262	P	45 01.10	-0.9
MTMJ	35.86	264	P	45 04.70	-0.8
MDJ	36.43	281	eP	45 05.50	-4.6X
Z	20s	3.10um			5.1Msz
			ePP	46 32.00	
			sS	51 00.00	
IIDJ	36.50	263	P	45 11.00	0.2
DPW	36.68	72	eP	45 12.50	0.3
EDM	37.20	62	iPc	45 17.20	0.7
	0.5s	126.00nm			6.0mb
			pP	45 31.50	55kmX
TSRJ	37.67	264	P	45 20.30	-0.2
LBFM	37.75	84	eP	45 22.80	1.3
WDC	37.78	85	eP	45 22.50	1.0
MIN	38.50	85	eP	45 28.20	0.5
CN2	39.40	283	iPc	45 34.00	-1.0
	4.0s	0.70nm			2.8mb X
Z	20s	3.60um			5.2Msz
N	15s	1.20um			
E	15s	1.30um			
			epP	45 42.00	27kmX
			PP	47 09.00	
			S	51 32.00	
			SS	54 15.00	
BKS	39.56	88	ePd	45 37.70	1.3
	0.8s	38.00nm			5.2mb
Z	20s	2.50um			5.0Msz
N	20s	1.60um			
E	20s	2.30um			
			eS	51 48.00	
			e	52 32.00	
			eLQ	54 46.00	
			e	55 07.00	
			eLR	56 42.00	
SES	39.70	65	ePc	45 37.30	-0.1
	0.9s	8.00nm			4.5mb
			pP	45 52.00	57kmX
ARN	40.33	89	eP	45 43.50	0.7
SHK	40.38	266	eP	45 43.20	0.0
CMB	40.63	87	eP	45 46.00	0.8
	1.1s	26.47nm			4.9mb
PRS	41.06	90	eP	45 49.90	1.1
LRM	41.12	72	eP	45 46.70	-2.7
LLA	41.15	89	eP	45 50.70	1.2
KVN	41.45	84	eP	45 52.50	0.4
PRI	41.62	89	eP	45 54.70	1.2
SHNJ	41.63	267	P	45 54.10	0.7
SNY	41.64	281	iPc	45 53.50	0.2
	3.0s	1.70nm			3.3mb X
Z	20s	2.30um			5.0Msz
N	15s	1.80um			
E	16s	1.40um			
			PP	47 34.00	
			S	52 08.00	
			sS	52 24.50	
FRI	41.69	88	eP	45 54.70	0.8
TNP	42.58	84	eP	46 02.10	0.6
	1.1s	32.47nm			5.0mb
BCH	42.60	90	eP	46 02.30	0.8
FFC	42.65	55	iPd	46 02.10	0.6
	0.7s	16.00nm			4.9mb
PTI	42.77	76	eP	46 04.20	1.3
KUMJ	42.86	265	P	46 03.90	0.4
KAGJ	43.73	264	eP	46 11.10	0.5
CLC	43.76	87	eP	46 11.00	0.2
DUG	44.05	79	eP	46 13.50	0.3
SBB	44.34	89	eP	46 16.00	0.4
MWC	44.49	89	eP	46 09.00	-8.0X
GSC	44.58	87	eP	46 18.00	0.4
			e	46 28.00	
DAU	44.87	78	eP	46 21.00	0.9
RVR	45.07	89	eP	46 20.00	-1.4
MSU	45.46	80	eP	46 25.30	0.6
PLM	45.81	89	eP	46 28.00	0.5
TPC	45.83	88	eP	46 27.00	-0.4
BAR	46.38	90	eP	46 32.00	0.2
RSSD	47.04	69	P	46 37.50	0.4
Z	20s	1.69um			5.0Msz
BJI	47.22	284	Pc	46 38.50	0.3
	4.0s	0.73nm			3.0mb X
Z	20s	3.00um			5.3Msz
N	18s	1.68um			
			PP	48 32.00	
			ScP	51 27.00	
			eS	53 26.00	
GLA	47.29	88	eP	46 39.00	0.0
GOL	48.89	75	ePc	46 52.00	0.4
RSON	48.94	56	eP	46 51.00	-0.5
	1.1s	180.12nm			6.0mb
Z	20s	2.26um			5.2Msz
GLD	48.95	75	eP	46 52.50	0.5
	1.2s	90.91nm			5.7mb
Z	20s	2.50um			5.2Msz
TIA	49.03	279	P	46 51.60	-0.8
Z	20s	1.30um			4.9Msz
			sP	47 09.00	
			sS	54 12.00	
HHC	49.51	288	iPc	46 56.70	0.6
Z	20s	3.20um			5.3Msz
N	17s	1.60um			
E	17s	1.70um			
			S	54 00.00	
SSE	49.88	271	Pc	46 58.80	-0.1
	1.0s	0.06nm			2.6mb X
Z	20s	1.00um			4.8Msz
E	14s	0.70um			
			pP	47 06.50	26kmX
			sP	47 15.00	
			eS	54 09.00	
			esS	54 21.00	
BTO	50.58	289	iPc	47 05.50	1.1
Z	18s	2.80um			5.3Msz
N	16s	2.20um			
E	18s	1.70um			
			sP	47 20.00	

09d 10h

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TIY    50.95 284 eP     47 07.50   0.4
       1.0s      0.10nm          2.7mb X
     Z 20s       2.50um          5.2Msz
     N 17s       1.60um
               pP     47 17.00   32kmX
               S      54 20.50
               sS     54 41.50
ALQ    51.26  80 iPc   47 09.50  -0.2
       1.0s      9.75nm          4.7mb
     Z 18s       1.29um          5.0Msz
               eS     54 28.00
DAG    51.36   7 iPc   47 07.90  -1.7
       0.9s     24.37nm          5.2mb
               i      48 22.70
FRB    52.09  33 eP     47 14.00  -1.3
       0.7s     56.00nm          5.6mb
WHN    54.53 276 P      47 33.00  -0.8
     Z 24s       1.09um          4.8MszX
SIO    56.92  73 ePc   47 49.90  -1.1
TUL    57.12  72 iPc   47 51.50  -0.9
       0.8s     48.40nm          5.6mb
     Z 19s       1.48um          5.1Msz
               e      48 04.00
               LR     06 51.00
LZH    57.20 288 iPc   47 53.00  -0.2
       4.0s      0.65nm          3.0mb X
     Z 22s       5.70um          5.6Msz
     N 18s       2.30um
     E 20s       2.30um
               sP     48 08.50
               sP     48 16.00
               PP     50 05.00
               eS     55 48.00
               ePS    56 03.00
               esS    56 18.00
GTA    57.33 294 iPc   47 52.50  -1.5
       4.0s      0.40nm          2.8mb X
     Z 20s       3.30um          5.4Msz
     N 16s       1.90um
               S      55 42.00
KEV    58.10 351 eP     48 12.00  13.2X
FVM    58.86  67 eP     48 02.70  -1.9
       0.8s     60.61nm          5.8mb
SCH    58.91  40 eP     48 03.00  -1.7
OLY    59.96  70 eP     48 10.00  -2.2
SOD    60.44 350 iP     48 15.10   0.1
               i      48 59.00
GZH    60.45 271 Pc     48 13.80  -1.8
CD2    60.82 284 eP     48 17.20  -0.9
WMQ    60.94 305 Pc     48 17.80  -1.1
     Z 20s       3.10um          5.5Msz
     N 16s       1.20um
               ScS    58 07.00
GYA    62.19 278 iPc   48 26.40  -1.2
       1.6s      0.10nm          2.7mb X
               S      56 53.80
DHN    62.22  56 eP     48 27.00  -0.4
PWLA   62.32  68 eP     48 26.90  -1.2
PTN    62.60  52 eP     48 28.70  -1.1
RSNY   62.84  52 eP     48 29.50  -2.0
RSCP   63.31  66 eP     48 33.40  -1.3
     Z 20s       2.26um          5.3Msz
GBTN   64.05  65 eP     48 38.70  -0.8
TKL    64.30  65 eP     48 40.00  -1.2
SUF    65.00 349 eP     48 43.00  -2.3
BLA    65.05  61 eP     48 46.00  -0.1
       1.0s     75.00nm          5.7mb
TBR    65.48  54 eP     48 48.50  -0.2
KMI    65.59 280 Pc+    48 49.50  -0.4
     Z 18s       1.30um          5.2Msz
               pP     49 03.00   47kmX
               sP     49 13.50
               PP     51 18.50
               S      57 48.00
               SS     02 14.00
QIZ    65.64 270 Pc     48 50.20   0.2
PNJ    65.69  55 iP     48 49.90  -0.1
PRM    66.24  65 eP     48 53.00  -0.6
JSC    66.72  64 eP     48 56.30  -0.4
NUR    67.32 349 eP     48 58.00  -2.1
       0.7s     24.00nm          5.4mb
     Z 20s       0.80um          4.9Msz
               i      49 27.60
               LR     21 30.00
NB2    67.86 356 P      49 01.60  -1.9
       0.9s     17.30nm          5.2mb
HFS    68.65 355 eP     49 06.20  -2.1

       0.8s     24.80nm          5.3mb
     Z 17s       0.44um          4.8MszX
               LR     13 09.00
UPP    68.66 353 iP     49 06.70  -1.7
               i      49 08.20
               i      49 32.10
LSA    69.22 292 P      49 14.10   1.1
     N 15s       0.70um
               S      58 20.50
KSH    70.07 309 P      49 18.00   0.4
     Z 18s       2.40um          5.5Msz
     N 14s       1.50um
               PcP    49 40.00
               S      58 31.00
LOE    71.94 275 iPc    49 27.50  -1.5
CHTO   72.62 278 iP     49 37.70   4.7X
       1.3s     27.78nm          5.1mb
EKA    73.55   4 Pd     49 38.20   0.4
       1.0s     20.40nm          5.1mb
NST    74.24 275 eP     49 42.10  -0.3
DMU    74.75   7 eP     49 45.60   0.8
PCI    74.97 249 ePd    49 46.00  -0.6
DLE    75.39   7 eP     49 50.00   1.6
NNT    76.84 274 iPc    49 57.20   0.0
WTS    77.05 358 ePd    49 58.50   0.7
       0.8s     16.00nm          5.1mb
CLL    77.48 354 iP     49 59.50  -0.7
       0.9s     19.00nm          5.1mb
BRG    77.86 354 iPd    50 02.10  -0.2
       0.8s     20.00nm          5.2mb
               i      50 17.20
               i      50 39.50
KRA    78.13 350 eP     50 04.10   0.3
     Z 20s       1.30um          5.3Msz
MOX    78.23 355 eP     50 05.00   0.7
ENN    78.29 359 iPc    50 05.90   1.3
       0.7s     41.00nm          5.6mb
               e      50 43.00
MEM    78.45 359 P      50 06.50   1.0
CTA    78.49 216 iPc    50 05.20  -0.9
       1.0s     21.50nm          5.1mb
SNF    78.56 360 iPc    50 07.40   1.3
MTN    78.70 233 iPd    50 07.00  -0.4
       0.9s    123.00nm          5.9mb
DOU    78.97 360 Pc     50 09.10   0.7
       0.9s     45.00nm          5.5mb
               e      50 22.90
               SKS    00 38.00
GRF    79.20 355 eP     50 10.00   0.3
       0.9s     34.00nm          5.3mb
KHC    79.62 354 eP     50 12.50   0.5
GWF    80.05 358 P      50 14.37   0.1
MHI    80.20 318 iPc    50 16.00   0.6
               eS     01 24.00
FLN    80.23   3 eP     50 15.50   0.3
       0.7s     13.20nm          5.0mb
ZST    80.26 351 iP     50 16.60   1.2
     Z 18s       2.00um          5.5Msz
               e      51 17.00
LDF    80.41   3 eP     50 16.10  -0.1
       0.4s     22.20nm          5.5mb
GRR    80.59   3 eP     50 17.40   0.3
       0.6s     25.20nm          5.4mb
WLS    80.62 358 P      50 16.49  -0.9
CDF    80.62 358 P      50 17.05  -0.4
ECH    80.82 358 P      50 18.93   0.5
VITF   80.84 359 P      50 18.41   0.0
LPF    80.94   4 eP     50 19.10   0.2
       0.6s     18.00nm          5.2mb
HAU    81.05 359 eP     50 19.80   0.2
       0.6s      7.90nm          4.9mb
FEL    81.14 357 P      50 19.49  -0.7
MOF    81.19 358 P      50 19.49  -0.9
BSF    81.21 358 P      50 20.31  -0.3
VRI    81.27 344 ePd    50 21.50   0.8
QIS    81.54 222 eP     50 21.00  -1.4
KBA    81.68 354 iPc    50 23.50   0.4
       0.9s     32.40nm          5.3mb
               i      50 48.60
               i      51 04.50
               i      51 48.60
MLR    81.76 345 iPd    50 24.00   0.5
LOR    81.80   0 eP     50 24.20   0.7
       0.6s     14.40nm          5.2mb
SSF    82.01   0 eP     50 25.40   0.8
       0.7s     20.90nm          5.3mb
LBF    82.09   0 eP     50 25.50   0.5

       0.7s     13.20nm          5.1mb
IPM    82.17 268 ePc    50 26.10   0.2
       0.3s     56.30nm          6.1mb
AVF    82.28   1 eP     50 26.60   0.7
       0.8s     20.10nm          5.2mb
RBL    82.29 353 P      50 26.50   0.3
MFF    82.40   3 eP     50 27.00   0.4
       0.6s     19.80nm          5.3mb
SMF    82.43   0 eP     50 27.30   0.5
       0.8s     18.80nm          5.2mb
BGF    82.51   1 eP     50 27.70   0.5
       0.6s      8.10nm          5.0mb
KGM    82.72 264 ePd    50 29.90   1.2
TCF    82.77   1 eP     50 29.20   0.6
       0.8s     12.00nm          5.0mb
LSF    82.79   2 eP     50 29.30   0.6
       0.6s     21.10nm          5.4mb
CTI    82.81 355 P      50 28.00  -0.9
MAF    82.84   1 eP     50 29.90   1.0
       0.8s     25.50nm          5.4mb
AGO    83.01   1 P      50 30.54   0.7
PLDF   83.10   0 P      50 31.15   0.8
BRS    83.11 208 eP     50 14.00 -16.4X
               e      51 25.00
VAI    83.12 357 P      50 31.00   0.7
BEO    83.22 348 eP     50 31.00   0.1
WB5    83.23 226 iPc    50 30.00  -1.1
PYM    83.32   1 P      50 31.22  -0.2
RMO    83.51 212 eP     50 32.00  -0.5
LPG    83.55 358 eP     50 34.90   2.0
       1.0s     18.00nm          5.2mb
LSD    83.58 358 P      50 34.80   1.7
TAB    83.65 328 eP     50 34.00   0.6
RJF    83.74   2 eP     50 34.60   1.1
       0.7s     11.90nm          5.1mb
LBL    83.84   1 P      50 34.00   0.0
BNI    83.99 358 P      50 37.10   2.1
LFF    84.09   2 eP     50 36.80   1.5
       0.7s     33.00nm          5.6mb
RRL    84.13 358 P      50 37.37   1.6
CAF    84.13   2 eP     50 36.60   1.1
       0.8s     22.80nm          5.4mb
BOB    84.20 356 P      50 36.80   0.8
LPO    84.35   2 eP     50 38.00   1.4
       0.8s     24.10nm          5.4mb
PCP    84.46 357 P      50 38.19   1.0
PZZ    84.53 358 P      50 37.57  -0.2
MME    84.71 355 P      50 40.20   1.4
ROB    84.72 357 P      50 38.70   0.1
STV    84.79 358 P      50 38.08  -0.8
FIN    84.80 357 P      50 38.80  -0.1
ENR    84.80 358 P      50 38.39  -0.6
BDI    84.85 355 P      50 40.00   0.8
PSI    84.95 268 iPc    50 40.50   0.5
       0.7s    144.10nm          6.3mb X
IMI    85.11 357 P      50 38.80  -1.7
SBF    85.17 358 eP     50 42.20   1.4
       0.8s     25.20nm          5.5mb
FRF    85.49 358 eP     50 43.50   1.2
       0.6s      9.00nm          5.2mb
ASS    85.71 354 P      50 44.30   0.7
BBTK   85.85 338 eP     50 45.00   0.6
SKO    85.89 347 iP     50 45.00   0.6
       1.6s    115.00nm          5.9mb
     Z 16s       0.95um          5.3MszX
     N 16s       0.82um
     E 16s       1.02um
               LR     37 36.00
HYB    85.98 293 iP     50 45.00  -0.2
       1.0s    100.00nm          6.0mb
               e      50 59.00
SLY    86.16 327 iPd    50 36.00  -9.8X
               e      51 02.00
MSL    86.22 329 ePd    50 46.50   0.4
MNS    86.39 354 P      50 46.50  -0.4
ASPA   86.74 225 iPc    50 48.20  -0.4
       1.1s     21.00nm          5.3mb
     Z 21s       1.08um          5.2Msz
               LR     26 06.30
OHR    86.82 348 eP     50 48.70  -0.4
       1.9s      0.20nm          3.0mb X
POO    87.77 297 iPd    50 53.90   0.0
GBA    89.66 291 Pc     51 01.70  -1.1
       0.7s     10.30nm          5.2mb
STK    90.92 215 iPd    51 08.80   0.6
BWA    90.98 209 eP     51 08.70   0.2
KOD    92.32 289 eP     51 20.00   4.5X
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TIC    121.73   11 PKP    56 58.40   -0.7
KIC    122.05   10 PKPc   56 59.20   -0.4
         0.6s      5.50nm
LIC    122.15   11 PKPc   56 59.50   -0.3
       Z  20s      0.59um          5.2Msz
BNG    123.13 343 iPKPd  57 01.40   -0.3
         0.4s     10.00nm
                   ic     57 16.00
PDCR   127.86   58 ePKP   57 09.70   -1.1
                   e      57 29.00
MZZ    135.17 324 ePKP   57 25.00    0.1
                   e      00 57.00
PTZ    137.05 320 iPKP   57 28.00   -0.4
                   e      57 46.00
                   i      00 12.00
                   i      01 14.00
KMZ    138.38 327 iPKP   57 30.00   -1.0
                   i      57 45.00
LSZ    139.22 323 ePKP   57 24.00   -8.4X
                   e      00 25.00
KRI    140.08 320 ePKP   57 36.00    2.0
                  ipPKP   57 50.50
SPA    141.12 180 e(PKP) 57 27.00   -7.3X
         0.9s      5.00nm
BUL    143.46 319 iPKPd  57 36.80   -3.0
                  ipPKP   57 51.20
MAW    147.58 218 ePKP   57 47.70    2.7
         0.9s     33.00nm
SLR    148.54 315 iPKPc  57 51.00    2.9
         1.0s    125.00nm
                   i      58 06.20
PRY    149.93 315 iPKPd  57 54.70    4.5X
         0.9s     34.62nm
                   i      58 09.70
BFS    150.21 316 iPKPc  57 51.50    0.9
         1.0s    340.00nm
      S.D. = 1.1  on 218 of 229 obs.
-------------------------------------
?  SEP  09, 1989  10h 52m 31.23± 9.74s
    6.589 S ±93.2km  128.433 E ±18.9km
   DEPTH = 306.5 ± 32.6 km
   4.5mb (  1 obs.)
 BANDA SEA                          (280)

MTN      6.76 157 iPd    54 10.50    0.0
                  eS     55 23.00
KNA      9.11 178 eP     54 39.50    0.3
                  eS     56 22.00
WB5     14.41 157 iPc    55 43.70   -0.3
                  eS     58 19.00
WRA     14.46 157 Pc     55 44.20   -0.4
         0.3s     7.60nm          4.5mb
MBL     16.71 209 eP     56 09.00    0.0
QIS     17.61 143 iPc    56 18.50    0.1
ASPA    17.78 163 iPc    56 21.00    0.9
         0.5s     69.00nm         5.3mb X
                  iS     59 27.80
FORR    24.14 181 eP     57 21.20   -0.5
      S.D. = 0.6  on   8 of   8 obs.
-------------------------------------
&  SEP  09, 1989  12h 10m 11.34s
   58.465 N          152.719 W
   DEPTH =  52.1km
 KODIAK ISLAND REGION               ( 13)
      <AGS-P>.

SHU      0.25   50 iP     10 19.81   -0.5
                  eS     10 26.24
CDD      0.67 314 iP     10 24.04   -0.9
KDC      0.73 170 iP     10 24.88   -0.7
                  eS     10 36.11
AUE      0.96 340 eP     10 28.13   -0.6
                  eS     10 41.09
AUW      0.99 337 eP     10 28.59   -0.5
AUL      0.99 338 eP     10 28.58   -0.6
XLV      1.12  27 eP     10 31.01    0.1
OPT      1.22 348 iP     10 31.68   -0.7
                  eS     10 47.03
CNPM     1.31  35 iP     10 32.80   -0.9
BRLK     1.61  35 iP     10 36.59   -1.3
ILIM     1.63 356 eP     10 36.95   -1.1
                  eS     10 56.97
NNL      1.74  24 iP     10 39.20   -0.5
                  eS     11 01.65
RED      1.96 359 eP     10 41.48   -1.3
RDT      2.12   4 iP     10 43.66   -1.4
                  eS     11 08.48

SEW      2.35   44 iP     10 45.70   -2.5
                  iS     11 11.29
NKA      2.41   18 eP     10 48.92   -0.1
SPU      2.75    7 iP     10 52.54   -1.4
                  eS     11 24.29
CKL      2.75    4 iP     10 52.58   -1.4
                  eS     11 25.24
BGL      2.81    3 eP     10 53.60   -1.3
CGLM     2.87    7 iP     10 54.61   -1.2
                  eS     11 27.73
MTU      3.02   57 eP     10 55.57   -2.2
KNIM     3.17   51 eP     10 56.87   -3.1
PMS      3.21   28 iP     10 58.16   -2.4
                  eS     11 33.46
SKT      3.58    9 eP     11 03.31   -2.4
PLRM     3.62   28 eP     11 02.98   -3.2
KNK      3.65   34 eP     11 03.64   -3.1
GLI      3.74   47 eP     11 04.12   -3.9
                  eS     11 43.69
GHO      3.82   28 eP     11 06.23   -3.0
FID      3.91   51 eP     11 06.38   -4.0
                  eS     11 47.06
VZW      4.06   48 eP     11 08.95   -3.5
KLU      4.57   45 eP     11 16.45   -3.2
GLB      5.38   53 eP     11 27.34   -3.7
TGL      5.52   61 eP     11 29.62   -3.5
BALM     5.84   59 eP     11 33.65   -4.0
        34 obs. associated
-------------------------------------
&  SEP  09, 1989  12h 29m 42.78s
   60.457 N          152.321 W
   DEPTH =  85.7km
 SOUTHERN ALASKA                    (  2)
      <AGS-P>.

RDT      0.12 340 iP     29 54.87    1.2
                  eS     30 04.61
RED      0.23 260 iP     29 55.11    1.1
                  eS     30 05.23
ILIM     0.49 220 eP     29 56.54   -0.8
                  eS     30 07.59
NKA      0.61  61 eP     29 59.60    1.4
NNL      0.66 129 iP     29 59.43    0.7
SPU      0.74  10 iP     29 58.85   -0.7
                  eS     30 11.45
CKL      0.74 359 iP     29 58.92   -0.8
BGL      0.81 358 iP     29 59.78   -0.6
CRP      0.82   6 iP     29 59.92   -0.6
                  eS     30 13.72
CGLM     0.87  10 eP     30 00.10   -0.9
OPT      0.93 210 eP     30 01.11   -0.5
                  eS     30 15.32
SLKM     1.04  86 eP     30 02.63   -0.3
XLV      1.05 163 eP     30 02.39   -0.7
CNPM     1.08 149 eP     30 02.90   -0.6
                  eS     30 19.38
SUA      1.27  37 eP     30 05.48   -0.4
                  eS     30 22.65
SEW      1.47 103 eP     30 07.18   -1.2
PMS      1.57  58 eP     30 08.88   -0.7
PWA      1.69  44 iP     30 10.67   -0.5
PLRM     1.93  52 eP     30 12.62   -1.7
PME      1.99  52 iP     30 13.59   -1.6
GHO      2.11  50 iP     30 15.29   -1.7
KNK      2.12  61 eP     30 15.18   -1.8
KNIM     2.28  91 eP     30 16.08   -3.1
GLI      2.61  78 eP     30 20.14   -3.5
VZW      2.89  75 eP     30 24.52   -3.1
FID      2.90  82 eP     30 23.68   -4.0
KLU      3.29  69 eP     30 30.26   -2.9
        27 obs. associated
-------------------------------------
?  SEP  09, 1989  17h 47m 07.88± 5.45s
    12.863 S ±42.0km  166.673 E ±71.9km
   DEPTH = 100.0 ± 23.2 km
    4.2mb (  2 obs.)
 SANTA CRUZ ISLANDS                 (184)

HNR      7.43 297 eP     48 55.00   -0.4
                  eS     50 17.00
SVO      7.68 298 eP     48 59.00    0.2
                  eS     50 23.00
DZM      9.16 181 iPd    49 19.00    0.0
                  iS     51 04.90
BRS     19.45 220 eP     51 28.00   -1.2
CTA     20.84 247 iPd    51 44.20    0.6
         0.9s    13.45nm          4.3mb

RMO     21.60 228 iPd    51 52.20    1.1
WB5     31.73 253 eP     53 23.80   -0.8
WRA     31.76 253 Pd     53 24.20   -0.6
         0.7s     2.60nm          4.1mb
MEKA    47.06 246 eP     55 32.70    1.2
BNG    147.43 258 ePKPd  06 43.80    3.8X
         0.4s     5.00nm
                   id     07 04.10
      S.D. = 1.0  on   9 of  10 obs.
-------------------------------------
*  SEP  09, 1989  18h 58m 15.02± 2.38s
    0.951 N ±18.9km  126.117 E ±18.7km
   DEPTH =  57.9 ± 21.1 km
    4.7mb (  4 obs.)
 MOLUCCA PASSAGE                    (266)

MNI      1.37 291 ePd    58 37.30   -0.9
                  eS     58 53.00
PCI      6.54 254 ePc    59 51.50    0.6
TSM      8.67 292 iPc    00 21.70    1.3
WB5     22.23 159 eP     03 06.80   -1.4
WRA     22.28 159 Pc     03 07.40   -1.3
         0.6s    18.60nm          4.7mb
QIS     25.13 149 iPd    03 36.00   -0.3
         0.8s    25.00nm          4.8mb
ASPA    25.61 163 eP     03 40.60   -0.2
         0.4s    19.00nm          5.0mb
PSI     27.23 274 eP     03 55.00   -0.8
MEKA    28.36 194 eP     04 06.00    0.1
CHTO    32.02 305 eP     04 37.90   -0.5
         1.0s     2.50nm          4.0mb
BRS     38.10 140 iP     05 30.00   -0.2
BWA     40.94 151 eP     05 55.90    2.3
CAN     41.94 152 eP     06 03.20    1.4
GBA     49.78 287 P      07 04.00   -0.2
      S.D. = 1.2  on  14 of  14 obs.
-------------------------------------
    SEP  09, 1989  20h 15m 03.98± 0.41s
    34.563 N ± 4.4km   32.924 E ± 5.5km
    DEPTH =  28.1 ±  4.7 km
    4.2mb (  9 obs.)
 CYPRUS                             (372)
      ML 4.3 (CSS). MD 4.0 (HLW). Felt
      (V) at Limassol.

CSS      0.52   40 ePd    15 12.60   -2.0
                  eS     15 32.80
PPCY     0.57 304 eP     15 16.00    0.5
FAM      0.99  64 eP     15 23.50    1.6
ADI      2.42 127 iPc    15 41.80   -0.7
ATZ      2.62 131 eP     15 44.80   -0.5
                  eS     16 14.50
ZNT      2.91 142 eP     15 48.80   -0.6
                  eS     16 22.50
MML      2.97 135 iPc    15 50.20   -0.1
KSL      3.14 301 eP     15 52.70    0.0
ELL      3.28 312 ePn    15 57.00    2.2
BURJ     3.34 133 P      15 57.00    1.4
BCK      3.46 327 ePn    15 58.60    1.3
KFNJ     3.55 139 P      15 59.80    1.3
DSI      3.63 145 eP     15 59.80    0.2
MASJ     3.67 140 Pc     16 01.50    1.2
MKRJ     3.77 142 Pc     16 03.00    1.3
MKT      4.06 152 iP     16 06.60    0.7
                  eS     16 51.70
YER      4.56 306 ePn    16 13.00    0.1
KHL      4.65 325 ePn    16 14.80    0.6
KOT      4.71 192 ePn    16 15.25    0.3
                  eSn    17 09.25
KAP      4.82 283 eP     16 15.30   -1.2
HLW      4.88 196 ePn    16 18.50    1.2
                  eSn    17 13.00
CIN      4.95 309 eP     16 18.00   -0.4
ALT      5.02 334 ePn    16 19.00   -0.5
MBH      5.06 160 iP     16 19.90    0.0
BBTK     5.27 359 eP     16 25.00    2.0
HOL      5.58 161 ePd    16 27.00   -0.2
SRFA     5.94 160 ePd    16 31.70   -0.6
IZM      5.95 312 iP     16 31.40   -1.2
NPS      6.05 279 eP     16 34.50    0.6
AYN      6.25 154 ePd    16 37.10    0.4
BADA     6.28 163 ePd    16 35.30   -1.8
PTJ     17.17 316 eP     19 05.30    1.9
KHC     20.40 321 P      19 39.90   -1.4
MOX     22.33 322 eP     20 02.00    1.2
LPG     22.72 307 eP     20 05.80    0.8
         0.8s     8.50nm          4.3mb
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09d 20h

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HAU     23.92 312 eP     20 15.30  -1.0
SMF     25.01 308 eP     20 26.20  -0.7
        0.8s     16.10nm          4.7mb
LBF     25.03 308 eP     20 26.50  -0.6
        0.7s      2.20nm          3.9mb
LOR     25.21 309 eP     20 27.80  -0.9
        0.6s      2.70nm          4.0mb
SSF     25.36 308 eP     20 28.80  -1.3
        0.6s      4.50nm          4.3mb
RJF     26.21 304 eP     20 37.80  -0.2
        0.6s      5.40nm          4.3mb
LPO     26.30 302 eP     20 38.80  -0.1
        0.4s      2.20nm          4.1mb
LFF     26.67 303 eP     20 42.10  -0.1
        0.6s      3.60nm          4.2mb
SLL     28.88 340 eP     21 00.70  -1.4
        0.5s      1.10nm          3.8mb
      S.D. = 1.1  on  44 of  44 obs.
-------------------------------------------
%  SEP 09, 1989  20h 29m 24.52± 0.70s
   39.265 N ± 7.5km   29.086 E ± 8.5km
   DEPTH =  22.8 ±  9.4 km
 TURKEY                              (366)

ALT     0.82 104 iPn    29 40.10   0.0
KHL     1.00 160 ePn    29 43.00  -0.2
KCT     1.13 330 iPn    29 44.60  -0.4
YLV     1.32  10 iPn    29 48.10   0.4
EDC     1.43 319 ePn    29 49.00  -0.2
IZM     1.67 239 iPn    29 52.90   0.2
      S.D. = 0.5  on   6 of   6 obs.
-------------------------------------------
*  SEP 09, 1989  20h 53m 47.54± 2.62s
   51.240 N ±21.9km   15.883 E ±14.0km
   DEPTH =  10.0km  (geophysicist)
 POLAND                              (548)
      ML 2.9 (KBA).

KSP     0.47 147 iP     53 57.20   0.0
                iS      54 06.30
BRG     1.28 254 iPg    54 11.20   0.0
                iSg     54 31.10
CLL     1.81 273 iPg    54 19.00   0.0
                eSg     54 45.00
KHC     2.58 216 iPn    54 30.40   0.3
                Pg      54 36.50
                Sn      55 05.80
                Sg      55 14.40
MOX     2.76 259 ePg    54 40.00   7.3X
                eSg     55 18.00
GRF     3.36 244 ePn    54 41.00  -0.1
                ePg     54 54.00
                eSg     55 39.50
KBA     4.49 203 ePn    54 57.00  -0.2
                e(Sn)   55 55.00
                e       56 15.00
      S.D. = 0.2  on   6 of   7 obs.
-------------------------------------------
?  SEP 09, 1989  21h 59m 48.35± 8.53s
   37.229 N ±67.8km   20.935 E ±39.3km
   DEPTH =  10.0km  (geophysicist)
 IONIAN SEA                          (399)
      ML 3.5 (ATH).

VLS     0.99 344 ePg    00 05.90  -1.2
ATH     2.33  71 ePn    00 27.50   0.2
SRN     2.75 345 ePn    00 43.00   9.8X
NEO     2.75  40 ePn    00 31.90  -1.4
LSK     2.93 355 ePn    00 35.10  -0.8
KZN     3.14  12 ePb    00 40.50   1.6
OHR     3.88 358 ePn    00 50.50   1.2
TIR     4.19 349 ePn    00 56.50   2.8X
PHP     4.47 355 ePn    00 03.80 -53.8X
SKO     4.75   5 ePn    01 09.50   7.8X
PUK     4.87 351 ePn    01 03.70   0.3
      S.D. = 1.4  on   7 of  11 obs.
-------------------------------------------
   SEP 09, 1989  22h 47m 49.57± 0.42s
   23.023 S ± 4.3km   66.019 W ± 6.2km
   DEPTH = 254.6 ±  5.7 km
   4.6mb (  9 obs.)
 JUJUY PROVINCE, ARGENTINA           (128)

SLA     1.76 164 iPd    48 32.70   1.8
ANT     4.10 260 iPc    48 53.30  -1.9
                iS      49 39.50
CYA     5.40 178 iPd    49 12.80   1.8
CCH     5.61 359 iPd    49 14.50   0.6
CNCB    6.45 343 iPd    49 24.80   0.2
                S       50 38.50
LPB     6.75 343 iPd    49 29.00   0.8
        1.0s    280.00nm          5.2mb
                S       50 44.00
ZOBO    7.00 343 iPd    49 31.00  -0.6
        0.9s     67.04nm          4.7mb
                S       50 48.00
ARE     8.31 321 eP     49 44.00  -3.9X
                iS      51 13.10
TCA     8.38 172 iPd    49 48.70   0.2
                (S)     51 21.60
CFA     8.78 193 iPd    49 53.00  -0.5
ZON     8.81 195 eP     49 52.00  -2.0
                eS      51 29.00
MRA     9.36 178 e(P)   49 59.50  -1.3
ITB1   10.77 101 eP     50 19.60   0.9
PEL    10.89 201 iPc    50 20.20   0.0
PCH    10.93 199 iPd    50 22.60   1.5
ITB    10.95 102 e(P)   50 19.80  -1.2
ITB7   11.02 103 e(P)   50 28.50   6.6X
SAN    11.17 200 ePd    50 24.00   0.3
                iS      50 30.00
PCH    11.27 200 iPd    50 25.60   0.5
TACH   11.44 201 ePd    50 26.50  -0.6
CHCH   11.61 200 iPc    50 29.20   0.0
LNV    11.88 202 eP     50 31.00  -1.5
VAO    17.54  94 iPc    51 39.50   0.0
                e       51 42.70
                e       51 55.40
                e       53 33.00
BAO    18.52  70 eP     51 50.50   0.8
                e       53 47.70
BMA    20.15  93 eP     52 07.10   1.2
                e       52 14.40
                e       52 26.80
PDCR   27.61  72 eP     53 14.40  -1.4
ITR    30.01  66 eP     53 34.50  -2.5
MVM    37.68   8 eP     54 42.86   0.6
FDF    37.82   8 eP     54 42.14  -1.4
CRM    37.87   8 eP     54 42.70  -1.2
LIC    66.28  72 Pc     58 12.00  -1.0
TIC    66.48  71 P      58 13.50  -0.8
        0.7s      7.00nm          4.5mb
KIC    66.59  72 Pc     58 14.00  -1.0
ALQ    69.25 325 eP     58 31.30   0.1
        0.8s      3.36nm          4.1mb
                e       58 36.50
                e       59 35.40
LLA    78.75 318 eP     59 26.30   0.9
PRS    78.84 317 eP     59 26.80   0.9
ORV    80.97 320 e(P)   59 37.90   0.9
BUL    86.38 110 iPc    00 06.30   1.4
BNG    86.72  84 ePc    00 07.20   0.7
        0.6s      6.00nm          4.6mb
MFF    91.26  39 eP     00 27.10   0.2
        1.0s     12.00nm          4.8mb
LSF    92.05  40 eP     00 30.90   0.3
        1.2s     10.10nm          4.7mb
TCF    92.48  40 eP     00 32.40  -0.2
        1.0s      4.00nm          4.4mb
LPG    94.85  42 eP     00 45.10   1.2
        0.8s      4.00nm          4.7mb
WRA   132.90 207 PKPc    06 37.60   1.0
        0.5s      1.80nm
WB5   132.95 207 ePKP    06 37.70   1.0
GBA   144.15  99 PKPc    06 56.30  -0.9
        0.8s     17.00nm
HYB   146.35  93 iPKP    07 04.00   3.1X
      S.D. = 1.1  on  44 of  47 obs.
-------------------------------------------
*  SEP 09, 1989  23h 19m 55.20± 1.73s
   11.745 N ± 6.7km   61.963 W ±17.6km
   DEPTH = 144.5 ± 20.9 km
 WINDWARD ISLANDS                    ( 95)
      MG 4.3 (FDF).

GRW     0.51  36 eP     20 16.49   0.2
                eS      20 32.77
TCE     1.06 169 eP     20 19.84  -0.4
                eS      20 36.83
TRN     1.22 153 eP     20 21.62  -0.1
                eS      20 39.71
PIG     1.24 118 eP     20 21.96   0.0
                eS      20 43.26
TPR     1.29 115 eP     20 22.65   0.2
BOT     1.35 115 eP     20 22.58  -0.5
                eS      20 37.82
TPP     1.51 160 eP     20 24.97   0.3
                eS      20 46.92
TBH     1.53 145 eP     20 25.45   0.4
                eS      20 46.07
BIM     2.89  17 iPd    20 41.46  -0.1
MVM     2.98  20 iPd    20 42.71   0.0
                S       21 19.60
FDF     3.07  15 iPd    20 43.91   0.0
                S       21 21.50
CRM     3.16  19 eP     20 44.98   0.0
      S.D. = 0.3  on  12 of  12 obs.
-------------------------------------------
?  SEP 09, 1989  23h 39m 50.69± 1.36s
   20.920 S ±15.2km   67.567 W ±27.2km
   DEPTH = 252.7 ± 43.5 km
 SOUTHERN BOLIVIA                    (125)

CCH     3.77  21 P      40 51.00  -1.7
ANT     3.83 223 eP     40 52.50  -0.5
                eS      41 38.50
CNCB    4.11 354 iPc    40 57.00   0.0
                S       41 48.00
LPB     4.39 353 P      41 01.50   1.3
                S       41 54.00
ZOBO    4.66 353 P      41 04.00   0.5
                S       41 59.30
ITB1   12.71 109 e(P)   42 46.70   2.6
PPD    15.17  97 eP     43 12.70  -1.6
                e       43 17.00
VAO    19.22 100 eP     43 57.30  -0.6
      S.D. = 1.9  on   8 of   8 obs.
-------------------------------------------
?  SEP 10, 1989  04h 12m 36.87± 7.14s
   35.608 S ±67.3km   70.947 W ±22.9km
   DEPTH =  91.6 ± 34.9 km
 CHILE-ARGENTINA BORDER REGION       (127)

CHCH    1.69   8 iPc    13 05.60   0.0
                iS      13 23.10
LNV     1.69 347 iPd    13 05.50   0.0
                iS      13 22.00
TACH    1.95   0 iPc    13 08.60  -0.4
                iS      13 28.50
PCH     2.01  10 iPc    13 10.00   0.0
                iS      13 31.60
SAN     2.16   6 iPc    13 11.70  -0.2
                iS      13 33.50
FCH     2.34  14 iPd    13 14.50  -0.1
                iS      13 39.50
PEL     2.47   5 iPc    13 16.60   0.6
                iS      13 40.50
MRA     5.39  55 ePc    13 57.20   0.8
TCA     6.81  53 iPc    14 15.00  -1.0
PPD    21.83  57 eP     17 23.00   0.1
      S.D. = 0.6  on  10 of  10 obs.
-------------------------------------------
?  SEP 10, 1989  05h 10m 42.26± 1.33s
   45.636 N ±45.6km  150.529 E ±17.7km
   DEPTH = 217.0 ± 23.9 km
   4.1mb (  7 obs.)
 KURIL ISLANDS                       (221)

KUSJ    4.88 241 P      11 55.60  -0.5
                S       12 50.00
ASAJ    5.81 258 eP     12 08.50   0.6
FBA    38.14  37 iPc    17 41.70   0.2
        0.6s      3.20nm          4.1mb
INK    43.55  32 eP     18 25.00  -0.6
PNT    57.32  51 eP     20 10.00   0.6
        0.4s      3.00nm          4.3mb
NB2    68.68 340 P      21 19.70  -3.9X
        0.8s      1.20nm          3.7mb
FLN    82.64 341 eP     22 41.40  -0.6
GRR    83.07 341 eP     22 43.80  -0.4
SMF    83.54 338 eP     22 46.80   0.1
        0.6s      2.70nm          4.2mb
LPG    83.78 335 eP     22 48.90   0.7
        0.8s      4.00nm          4.2mb
MAF    84.27 338 eP     22 50.20  -0.1
        0.6s      2.70nm          4.2mb
MFF    84.59 340 eP     22 51.40  -0.5
CAF    85.60 338 eP     22 57.40   0.4
        0.6s      1.80nm          4.1mb
LFF    85.93 339 eP     22 58.80   0.2
LNV   146.09  85 ePKP   30 24.50  28.1X
```

ZON 146.63 79 ePKP 30 13.00 15.5X
CFA 146.97 79 e(PKP)30 17.00 19.0X
S.D. = 0.6 on 13 of 17 obs.

& SEP 10, 1989 05h 29m 27.70s
39.500 N 122.900 W
DEPTH = 1.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.8 (BRK).

LTCM 0.93 40 eP 29 45.00 -1.1
ORV 1.08 87 ePd 29 46.00 -2.9
WDC 1.11 14 eP 29 48.40 -1.0
iS 30 05.20
MIN 1.31 49 eP 29 50.50 -2.3
eS 30 10.00
BKS 1.70 162 e(P)d 30 03.00 4.3
LBFM 2.00 22 eP 30 02.30 -0.9
MHC 2.37 155 eP 30 08.00 -0.5
CMB 2.45 126 eP 30 06.80 -2.8
KVN 3.75 95 eP 30 25.00 -3.2
9 obs. associated

SEP 10, 1989 05h 47m 39.45± 0.84s
39.583 N ± 7.0km 142.298 E ±13.4km
DEPTH = 55.6 ± 11.0 km
3.8mb (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Miyoko.

MIY 0.26 284 P 47 47.80 -1.1
iS 47 52.90
OFUJ 0.70 224 iP+ 47 53.00 -0.6
S 48 01.90
AOMJ 1.77 304 P 48 07.70 -0.5
YAMJ 2.26 232 P 48 14.50 -0.5
HOOJ 2.90 15 eP 48 25.10 1.0
eS 48 58.10
MRRJ 2.99 342 eP 48 25.80 0.4
S 48 59.50
NIIJ 3.49 229 P 48 32.20 -0.3
KAKJ 3.77 207 P 48 36.00 -0.4
eS 49 18.60
KUSJ 3.95 27 eP 48 38.70 -0.3
eS 49 22.30
CHJJ 4.39 218 P 48 44.50 -0.7
eS 49 34.10
MAT 4.43 228 iPc 48 47.00 1.3
0.7s 22.60nm
(S) 49 42.00
ASAJ 4.54 3 eP 48 47.50 0.3
eS 49 42.50
MTMJ 4.64 231 P 48 50.30 1.6
IIDJ 5.38 222 P 48 59.80 0.7
NB2 72.11 337 P 58 58.10 -1.4
0.6s 0.70nm 3.8mb
S.D. = 1.0 on 15 of 15 obs.

% SEP 10, 1989 05h 52m 33.89± 0.73s
40.239 N ± 6.3km 29.570 E ± 6.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YLV 0.36 335 iPg 52 40.70 -0.6
GBZT 0.56 350 iPc 52 46.80 1.6
GPA 0.57 85 iPg 52 44.80 -0.6
eSg 52 53.90
HRT 0.59 7 iPg 52 45.40 -0.4
eSg 52 53.70
KCT 0.93 271 iPg 52 49.70 -1.9
iSg 53 02.20
ALT 1.25 160 iPn 52 57.00 -0.3
BNT 1.27 276 iPn 52 58.70 1.3
EDC 1.31 275 ePn 52 58.00 -0.1
KHL 1.91 181 ePn 53 08.00 1.1
BBTK 2.48 98 eP 53 59.00 43.9X
S.D. = 1.3 on 9 of 10 obs.

? SEP 10, 1989 06h 21m 32.60± 5.06s
36.293 N ±33.8km 27.254 E ±28.3km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)

YER 1.18 44 ePn 21 53.80 -0.8
FIN 1.47 27 ePn 21 59.00 0.0
iSg 22 20.00
IZM 2.10 0 ePn 22 07.90 -0.4
ELL 2.19 77 ePn 22 09.30 -0.3
KHL 2.72 41 ePn 22 18.80 1.6
BCK 2.92 65 ePn 22 19.90 -0.1
S.D. = 1.1 on 6 of 6 obs.

• SEP 10, 1989 06h 28m 32.06± 1.63s
2.321 S ±15.9km 101.887 E ±13.5km
DEPTH = 159.2 ± 14.0 km
4.0mb (2 obs.)
SOUTHERN SUMATERA (274)

PPI 2.38 321 iPd 29 12.50 -0.1
iS 29 43.00
KGM 4.54 18 ePc 29 41.10 0.8
PSI 5.80 329 iPd 29 57.50 0.5
IPM 6.91 353 ePd 30 12.00 0.0
0.8s 52.60nm 5.0mb X
8SI 10.18 320 eP 30 54.00 -1.3
e(S) 32 40.50
LOE 19.60 360 eP 32 49.00 -1.3
CHTO 21.20 352 eP 33 07.00 0.7
1.3s 4.09nm 3.7mb
GBA 28.96 304 Pc 34 19.40 0.7
0.8s 4.50nm 4.3mb
WB5 36.21 121 eP 35 20.70 -0.7
PPD 144.34 226 ePKP 47 52.40 0.8
S.D. = 1.0 on 10 of 10 obs.

SEP 10, 1989 06h 31m 11.97± 0.66s
40.193 N ± 6.6km 141.810 E ±12.2km
DEPTH = 61.0 ± 25.9 km
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (I JMA) at Hachinohe and Miyoko.

HAC 0.40 327 eP 31 23.00 0.0
S 31 31.50
OFUJ 1.12 186 iP+ 31 32.40 0.7
S 31 47.80
AOMJ 1.16 289 P 31 32.10 -0.2
S 31 47.10
MRRJ 2.30 346 P 31 47.70 -0.4
eS 32 15.00
YAMJ 2.44 215 iPd 31 50.70 0.5
HOOJ 2.45 26 P 31 51.40 1.1
S 32 21.80
KUSJ 3.63 36 eP 32 06.20 -0.6
eS 32 45.70
NIIJ 3.68 218 eP 32 06.90 -0.7
ASAJ 3.97 9 P 32 11.70 0.0
eS 32 56.60
KAKJ 4.19 198 P 32 12.40 -2.3
eS 33 03.00
MAT 4.61 219 eP 32 21.00 0.2
CHJJ 4.70 209 eP 32 22.00 0.1
MTMJ 4.78 222 eP 32 22.70 -0.6
IIDJ 5.63 214 eP 32 37.40 2.4
S.D. = 1.2 on 14 of 14 obs.

& SEP 10, 1989 06h 46m 56.10s
36.317 N 120.458 W
DEPTH = 10.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

PRI 0.24 224 iPd 47 00.90 -0.4
PKEM 0.38 132 eP 47 03.30 -0.6
PHAM 0.48 174 eP 47 04.80 -1.1
LLA 0.49 308 ePd 47 05.00 -1.1
PRS 0.74 271 eP 47 09.20 -1.4
eS 47 21.00
FRI 0.90 42 iPd 47 11.30 -2.1
iS 47 22.80
SAO 0.91 300 eP 47 12.70 -0.9
e(S) 47 27.85
BCH 1.17 165 eP 47 15.50 -2.5
MHC 1.40 317 e(P) 47 19.95 -1.8
CMB 1.72 2 eP 47 24.90 -1.3
ABL 1.78 145 eP 47 23.60 -3.7
TNP 3.13 55 eP 47 45.30 -1.3
12 obs. associated

SEP 10, 1989 07h 00m 26.93± 1.16s
44.807 N ± 4.9km 6.721 E ±15.8km
DEPTH = 6.7km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

RRL 0.12 22 P 00 30.26 0.5
S 00 32.93
BNI 0.25 352 P 00 32.10 0.0
eSg 00 35.00
FOUF 0.28 171 ePc 00 32.66 0.0
eSg 00 36.40
PZZ 0.41 138 P 00 35.70 0.5
S 00 41.75
LSD 0.72 25 P 00 40.93 -0.4
S 00 50.87
ENR 0.77 139 P 00 41.64 -0.6
S 00 52.41
S.D. = 0.6 on 6 of 6 obs.

SEP 10, 1989 08h 32m 20.80± 0.43s
40.398 N ± 6.0km 27.470 E ± 3.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC 0.30 100 iPg 32 27.20 0.0
eSg 32 31.00
BNT 0.35 97 iPg 32 27.70 -0.3
KCT 0.69 102 iPg 32 34.20 -0.3
CTT 1.04 44 ePg 32 39.70 -0.8
EZN 1.05 237 iPg 32 40.70 0.2
iSg 32 53.70
ITU 1.37 58 ePg 32 45.00 -0.9
iSg 33 03.00
YLV 1.46 83 iPn 32 47.20 -0.1
GBZT 1.55 75 ePn 32 51.20 2.7
iSg 33 13.00
HRT 1.73 75 iPn 32 50.20 -0.9
KDZ 1.99 309 iP 32 55.00 0.1
IZM 2.00 185 ePn 32 55.00 -0.1
JMB 2.17 342 iP 33 02.00 4.5X
GPA 2.17 92 ePn 33 02.00 4.5X
DIM 2.20 319 ePg 33 00.00 2.1
ALT 2.44 123 ePn 33 01.30 -0.1
RZN 2.45 303 iPc 33 02.00 0.4
KHL 2.61 142 iPn 33 04.30 0.4
PLD 2.69 310 eP 33 05.00 0.1
MMB 3.07 294 eP 33 09.00 -1.3
KKB 3.62 295 eP 33 17.00 -1.2
VTS 3.88 306 eP 33 22.00 0.1
BBTK 4.09 96 eP 33 39.00 14.1X
eSg 34 36.00
VRI 5.50 355 ePd 33 50.00 5.3X
S.D. = 1.0 on 19 of 23 obs.

% SEP 10, 1989 08h 58m 51.41± 0.89s
39.233 N ± 7.4km 27.681 E ± 9.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM 0.90 202 iPn 59 07.90 -0.7
EDC 1.12 7 iPn 59 11.20 -1.2
KCT 1.14 27 iPn 59 13.20 0.4
EZN 1.20 300 iPn 59 14.70 0.9
KHL 1.70 122 ePn 59 22.00 0.6
S.D. = 1.3 on 5 of 5 obs.

% SEP 10, 1989 10h 22m 26.80± 0.77s
40.287 N ± 6.2km 29.546 E ± 7.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YLV 0.31 335 iPg 22 33.20 -0.1
GBZT 0.51 351 iPgc 22 39.60 2.5
iSg 22 48.20
HRT 0.54 10 iPg 22 37.70 -0.1
GPA 0.58 90 iPg 22 37.50 -1.1
eSg 22 46.50
ISK 0.86 335 iPg 22 42.20 -1.2
KCT 0.91 268 iPg 22 44.70 0.5
iSg 22 57.20
CTT 1.21 316 ePn 22 48.70 -0.6
BNT 1.25 274 ePn 22 50.00 0.1
EDC 1.29 273 iPn 22 49.20 -1.5
ALT 1.30 160 iPn 22 50.20 -0.8
KHL 1.96 181 ePn 23 02.80 2.3
BBTK 2.51 99 eP 23 16.00 7.6X
eS 23 51.00
S.D. = 1.5 on 11 of 12 obs.

• SEP 10, 1989 10h 36m 41.45± 0.84s
0.006 S ±23.4km 18.287 W ±13.3km
DEPTH = 10.0km (geophysicist)

10d 10h

4.3mb (2 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

LIC	14.61	65	P	40	10.30	0.1
TIC	14.79	63	P	40	11.60	-1.0
KIC	14.92	65	P	40	13.90	-0.4
			S	42	45.00	
ITR	21.86	246	eP	41	41.30	4.9X
BAO	33.19	241	eP	43	20.90	0.0
BCAO	37.05	83	eP	43	55.30	1.5
	0.7s	1.20nm			3.8mb	
BNG	37.06	83	ePd	43	55.10	1.2
	0.9s	18.00nm			4.8mb	
		id		44	09.60	
BUL	50.06	117	iPc	45	38.80	-0.2
SLR	51.68	123	eP	45	50.20	-1.0
ZOBO	51.72	249	P	45	52.00	-0.1
Z	24s	0.08um			3.6MszX	
		LR		04	32.00	
HFS	64.88	17	eP	47	37.20	14.3X
	0.5s	1.50nm				
NB2	64.94	15	P	47	38.60	15.2X
	0.8s	1.50nm				
NUR	68.77	21	eP	47	57.00	9.5X

S.D. = 1.0 on 9 of 13 obs.

% SEP 10, 1989 10h 41m 35.86± 0.87s
39.669 N ± 7.2km 29.520 E ±13.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.77	143	ePg	41	49.80	-1.1
			eSg	42	02.80	
YLV	0.90	353	iPn	41	53.40	0.2
KCT	1.07	303	iPn	41	55.20	-0.7
HRT	1.16	6	ePn	41	58.00	0.5
KHL	1.34	180	ePn	42	01.80	1.1

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

% SEP 10, 1989 10h 43m 16.96± 0.86s
39.666 N ± 7.1km 29.509 E ±13.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.77	142	ePg	43	31.00	-1.0
			eSg	43	43.00	
YLV	0.91	353	ePn	43	34.70	0.4
KCT	1.06	304	iPn	43	36.20	-0.7
HRT	1.16	6	ePn	43	39.00	0.3
KHL	1.34	180	ePn	43	42.80	1.1

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

SEP 10, 1989 11h 07m 57.81± 0.49s
21.100 N ± 5.1km 99.420 W ± 8.8km
DEPTH = 5.0km (geophysicist)
4.2mb (5 obs.)
CENTRAL MEXICO (523)

IIC	1.33	173	iP	08	21.00	-2.2
			iS	08	42.00	
CRX	1.70	188	iP	08	28.50	-0.1
			iS	08	57.50	
UNM	1.77	173	eP	08	29.50	-0.1
PPM	2.16	160	iP	08	35.00	-0.4
			(S)	09	03.00	
MRX	2.17	230	iP	08	36.00	1.0
			iS	09	08.00	
IIT	2.32	153	(P)	08	39.50	2.0
III	2.71	181	eP	08	45.00	2.0
AGX	2.79	287	eP	08	44.00	0.0
LVVM	3.10	115	(P)	08	47.00	-1.3
OXX	4.74	147	(P)	09	22.50	10.6X
TUL	15.09	11	eP	11	36.00	2.6
	1.2s	12.70nm			4.3mb	
PWLA	17.06	33	(P)	11	59.30	0.6
RSCP	18.86	37	eP	12	20.60	-0.5
	0.8s	22.04nm			4.4mb	
GOL	19.23	346	(P)	12	25.50	-0.3
GLD	19.24	346	(P)	12	26.80	0.9
	1.2s	6.57nm			3.8mb	
MSU	20.54	330	eP	12	39.40	-0.7
DAU	21.73	335	(P)	12	52.40	0.0
TNP	22.87	322	(P)	13	04.00	0.5
	1.5s	6.06nm			3.9mb	
KVN	24.03	322	(P)	13	14.80	-0.8
LRM	26.88	340	eP	13	41.10	-0.6
FBA	53.97	337	eP	17	21.80	-2.8
	1.0s	5.00nm			4.5mb	

S.D. = 1.4 on 20 of 21 obs.

? SEP 10, 1989 11h 35m 30.19± 3.25s
24.194 S ±27.3km 179.705 E ±26.0km
DEPTH = 584.2 ± 32.4 km
4.9mb (7 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.38	277	iPd	38	12.30	-0.6
BRS	24.44	257	iP	40	06.00	0.0
COO	25.46	249	eP	40	15.20	0.2
RMQ	28.03	259	iPd	40	38.10	0.7
CTA	31.21	271	iPd	41	05.10	0.5
	0.9s	98.32nm			5.4mb	
OLP	32.07	258	eP	41	13.00	1.3
PMG	34.34	290	eP	41	31.00	0.2
ASPA	41.72	261	iPc	42	30.80	0.1
	0.5s	24.00nm			5.0mb	
WRA	42.12	267	Pd	42	33.50	-0.4
	0.7s	27.70nm			4.9mb	
FORR	45.92	250	iPc	43	02.00	-1.1
	0.4s	33.00nm			5.2mb	
MTN	47.21	275	eP	43	12.50	-0.7
WARB	47.78	256	iPd	43	17.00	-0.4
	0.3s	8.00nm			4.7mb	
KNA	48.39	270	iPd	43	22.40	0.3
MBL	54.96	260	iPd	44	08.90	-0.5
	0.4s	6.00nm			4.3mb	
NANU	58.45	258	iPd	44	33.60	0.4
	0.4s	14.00nm			4.6mb	
PNT	90.89	35	eP	47	33.00	0.1
HFS	142.78	348	ePKP	53	55.60	-2.9X
	0.4s	5.40nm				

S.D. = 0.7 on 16 of 17 obs.

SEP 10, 1989 13h 28m 41.19± 0.36s
21.170 N ± 3.9km 99.328 W ± 6.2km
DEPTH = 5.0km (geophysicist)
4.6mb (10 obs.)
CENTRAL MEXICO (523)
Slight damage at Jalpan. Felt at Landa de Matamoros and Pinal de Amoles.

IIC	1.40	177	iP	29	05.50	-2.2
			iS	29	26.00	
CRX	1.79	191	iP	29	12.50	-0.7
			iS	29	41.00	
UNM	1.83	176	eP	29	13.00	-0.9
			iS	29	42.00	
PPM	2.19	162	iP	29	18.50	-0.8
			(S)	29	42.50	
MRX	2.28	230	iP	29	20.50	0.5
			iS	29	51.00	
IIT	2.34	156	eP	29	22.50	1.3
III	2.78	183	eP	29	29.50	2.0
AGX	2.86	285	iP	29	28.50	0.2
LVVM	3.05	117	(P)	29	36.00	5.0X
OXX	4.75	148	eP	29	57.00	1.5
UYO	13.64	17	e(P)	31	55.60	-2.2
SIO	14.76	10	e(P)	32	13.50	1.0
TUL	15.01	11	eP	32	16.80	1.1
	1.2s	38.60nm			4.8mb	
Z	18s	0.26um			4.2MszX	
		LR		37	23.00	
ALQ	15.09	337	eP	32	17.70	0.8
	1.3s	28.85nm			4.6mb	
		e		36	30.00	
		e		36	52.50	
		ePcP		37	31.00	
		e		37	58.00	
OLY	15.86	24	(P)	32	25.00	-1.7
PWLA	16.95	33	(P)	32	43.20	2.5
RSCP	18.75	37	eP	33	02.50	-0.6
	1.3s	80.24nm			4.8mb	
GOL	19.18	346	(P)	33	08.50	-0.1
	1.0s	17.50nm			4.3mb	
GLD	19.19	346	P	33	10.00	1.3
	1.3s	28.74nm			4.4mb	
TPC	19.60	315	eP	33	13.00	-0.4
PLM	19.72	312	eP	33	13.00	-1.9
RVR	20.43	312	eP	33	22.00	-0.1
MSU	20.53	330	eP	33	24.00	0.7
JSC	20.61	47	eP	33	23.00	-0.9
GSC	20.82	316	eP	33	26.00	-0.2
SBB	21.13	314	eP	33	29.00	-0.4
CLC	21.64	316	eP	33	35.00	0.4
DAU	21.71	335	eP	33	35.80	0.3
DUG	22.18	332	(P)	33	41.00	1.0
	1.4s	22.85nm			4.4mb	
NAV	22.75	41	P	33	46.20	0.7
TNP	22.86	321	eP	33	48.00	1.1
	1.5s	24.24nm			4.5mb	
BLA	22.91	42	eP	33	46.50	-0.6
	1.1s	25.00nm			4.6mb	
RSSD	23.22	351	eP	33	51.70	1.4
KVN	24.03	322	eP	33	59.10	1.0
CMB	24.76	317	eP	34	05.10	0.0
LRM	26.84	339	eP	34	24.30	-0.4
RSON	29.96	7	P	34	51.00	-1.5
	1.2s	16.40nm			4.7mb	
LON	31.39	330	eP	35	04.40	-0.8
PNT	32.40	335	eP	35	13.00	-1.0
FBA	53.94	337	P	38	06.30	-1.4
	1.0s	11.25nm			4.8mb	

S.D. = 1.2 on 39 of 40 obs.

• SEP 10, 1989 13h 35m 10.34± 0.89s
44.075 N ±20.4km 148.074 E ± 9.4km
DEPTH = 33.0km (normal)
4.8mb (18 obs.)
KURIL ISLANDS (221)

KUSJ	2.63	249	P	35	49.30	-2.1X
			S	36	17.30	
HOOJ	3.89	246	eP	36	09.30	0.1X
			S	36	50.30	
ASAJ	3.91	273	P	36	11.90	2.3X
			eS	36	58.20	
MRRJ	5.37	255	P	36	29.70	-0.5X
			eS	37	26.70	
AOMJ	6.70	241	eP	36	47.90	-1.0X
OFUJ	6.92	226	P	36	47.50	-4.6X
			eS	37	59.90	
YAMJ	8.46	229	eP	37	10.20	-3.3X
NIIJ	9.70	228	P	37	26.40	-4.2X
KAKJ	9.91	220	P	37	28.10	-5.4X
			S	39	08.00	
CHJJ	10.61	224	P	37	39.80	-3.3X
			S	39	26.20	
MAT	10.64	228	eP	37	39.00	-4.5X
			(S)	39	34.00	
MTMJ	10.83	230	P	37	42.70	-3.5X
BJI	23.94	271	eP	40	23.50	1.3
TIY	27.53	269	eP	40	57.20	1.3
BTO	28.18	276	eP	41	01.80	0.0
INK	45.79	31	iPc	43	31.50	1.5
	1.0s	39.00nm			5.3mb	
CHTO	48.01	255	eP	43	45.50	-2.7
	0.9s	1.28nm			4.0mb	
PNT	59.66	49	eP	45	13.00	-0.5
	0.4s	3.00nm			4.8mb	
SOD	60.42	338	eP	45	16.00	-2.4
WDC	62.93	59	eP	45	35.60	0.0
SUF	63.92	334	iP	45	40.30	-1.5
	0.5s	1.80nm			4.4mb	
ORV	64.18	59	eP	45	43.20	-0.7
FFC	65.04	37	iPc	45	49.10	-0.1
	0.5s	11.00nm			5.2mb	
LRM	65.64	49	eP	45	53.50	0.0
CMB	65.79	60	eP	45	54.40	0.1
NUR	66.05	333	eP	45	54.00	-1.5
NB2	69.54	339	P	46	16.70	-0.7
	0.6s	3.20nm			4.6mb	
HFS	69.65	338	eP	46	16.80	-1.2
	0.6s	9.10nm			5.0mb	
Z	16s	0.05um			3.8MszX	
KSP	76.61	331	eP	46	59.00	0.0
CLL	77.33	333	iPd	47	02.70	-0.2
KHC	79.00	331	P	47	12.80	0.6
CDF	81.68	335	eP	47	26.60	0.1
FLN	83.52	340	eP	47	35.80	-0.1
	0.6s	3.60nm			4.7mb	
LOR	83.72	336	eP	47	36.80	-0.2
	0.7s	2.60nm			4.5mb	
LBF	83.94	336	eP	47	38.10	0.0
GRR	83.96	340	eP	47	38.60	0.5
	0.7s	5.20nm			4.8mb	
SSF	84.01	337	eP	47	38.40	0.0
SMF	84.29	336	eP	47	40.10	0.2
	0.7s	4.80nm			4.8mb	
AVF	84.30	336	eP	47	40.10	0.2
	0.6s	2.10nm			4.5mb	

LPF	84.34	340 eP	47	40.60	0.6
	0.8s	5.30nm			4.8mb
LPG	84.43	334 eP	47	41.50	0.5
	0.6s	4.50nm			4.8mb
MAF	85.04	337 eP	47	44.50	0.9
	0.8s	9.90nm			5.1mb
MFF	85.43	339 eP	47	46.30	0.7
	0.6s	5.40nm			4.9mb
CAF	86.37	337 eP	47	51.50	1.2
	0.6s	2.70nm			4.7mb
LFF	86.73	337 eP	47	52.80	0.8
	0.5s	3.40nm			4.8mb
LPO	86.84	337 eP	47	53.70	1.1
ITR	144.37	11 e(PKP)	54	42.00	-3.0X
	S.D. = 1.0	on 34 of 47 obs.			

SEP 10, 1989 14h 06m 02.85± 1.19s
38.135 N ± 5.5km 73.982 E ± 6.3km
DEPTH = 141.9 ± 12.8 km
4.7mb (12 obs.)
TAJIK-XINJIANG BORDER REGION (719)

NDI	9.81	163 iPd	08	21.00	-0.5
	0.6s	96.67nm			5.7mb
		eS	10	03.90	
QUE	9.83	218 eP	08	22.00	-0.1
		eS	10	08.50	
MHI	11.70	265 eP	08	57.00	10.5X
		eS	10	47.00	
WMQ	11.81	57 P	08	47.40	-0.6
		S	11	01.00	
LSA	16.53	115 eP	09	51.60	3.4X
POO	19.53	180 eP	10	34.50	12.9X
		iS	14	07.50	
HYB	21.03	168 ePc	10	37.00	0.3
	1.0s	50.00nm			4.9mb
LZH	23.86	86 P	11	09.00	4.6X
	1.0s	0.02nm			1.6mb X
		PP	11	50.50	
GBA	24.62	172 Pd	11	11.50	0.0
	0.9s	38.90nm			4.9mb
KOD	27.96	173 eP	11	43.00	0.8
CHG	29.04	125 eP	11	52.80	1.2
CHTO	29.04	125 eP	11	52.20	0.6
	1.0s	1.75nm			3.7mb
WHN	33.97	91 eP	12	35.00	0.4
MLR	36.10	297 ePd	12	55.00	2.4X
SUF	37.84	326 eP	13	07.00	0.2
	0.4s	5.60nm			4.7mb
NUR	37.94	322 iP	13	08.00	0.4
SOD	39.31	333 iP	13	19.30	0.4
KRA	39.77	305 eP	13	24.00	1.1
	0.8s	28.00nm			5.1mb
KEV	40.20	337 eP	13	26.00	-0.2
HFS	43.28	321 eP	13	51.00	-0.5
	0.5s	16.10nm			4.9mb
BRG	43.51	307 iP	13	54.40	1.0
	1.1s	11.00nm			4.4mb
		i	14	32.20	
KHC	43.99	305 P	13	58.90	1.5
NB2	44.53	322 P	14	00.70	-0.9
	0.8s	7.70nm			4.4mb
EKA	52.78	316 P	15	05.00	0.0
	0.9s	4.80nm			4.3mb
BNG	60.44	251 iPc	15	58.50	-1.3
	0.2s	20.00nm			5.7mb X
MBC	65.58	3 eP	16	32.00	-0.7
	0.5s	20.00nm			5.3mb
INK	71.89	10 eP	17	11.00	-0.6
BUL	71.94	225 iPc	17	11.60	-1.1
KIC	77.24	268 P	17	42.70	-0.3
WRA	80.89	124 Pd	18	01.50	-1.0
	0.8s	5.90nm			4.4mb
	S.D. = 0.8	on 25 of 30 obs.			

% SEP 10, 1989 14h 22m 06.83± 2.53s
20.950 N ±22.8km 99.205 W ±11.3km
DEPTH = 5.0km (geophysicist)
CENTRAL MEXICO (523)

IIC	1.18	182 eP	22	28.50	-1.0
		iS	22	46.50	
CRX	1.60	196 iP	22	36.50	0.4
UNM	1.61	179 eP	22	33.00	-3.2X
PPM	1.95	164 eP	22	42.50	1.1
IIT	2.10	156 eP	22	48.00	4.7X
MRX	2.24	237 iP	22	45.00	-0.1
III	2.57	186 eP	22	53.00	2.9X
LVVM	2.85	115 eP	22	53.50	-0.4
	S.D. = 1.1	on 5 of 8 obs.			

? SEP 10, 1989 16h 14m 15.23± 2.39s
52.097 N ±30.7km 157.053 E ±57.9km
DEPTH = 120.0km (geophysicist)
4.3mb (12 obs.)
KAMCHATKA (217)

NIIJ	19.55	228 P	18	34.50	-1.1
MAT	20.49	228 iPd	18	44.90	-0.3
	0.7s	17.12nm			4.5mb
IIDJ	21.50	227 P	18	55.80	0.4
CHG	55.88	256 eP	23	43.00	0.5
CHTO	55.88	256 iP	23	43.40	0.9
	0.5s	1.15nm			4.1mb
		pP	24	11.90	119kmX
NB2	63.95	342 P	24	36.40	-0.7
	0.6s	1.00nm			3.9mb
HFS	64.30	341 eP	24	37.50	-1.8
	0.4s	1.30nm			4.2mb
LOR	78.39	342 eP	26	03.10	-0.3
	0.8s	4.50nm			4.3mb
SSF	78.65	342 eP	26	04.90	0.1
AVF	78.94	342 eP	26	06.40	0.0
	0.6s	3.60nm			4.3mb
SMF	78.99	342 eP	26	06.50	-0.2
	0.6s	3.90nm			4.4mb
LPG	79.48	339 eP	26	10.40	0.7
	0.6s	3.60nm			4.3mb
MAF	79.64	342 eP	26	10.70	0.5
	0.6s	5.40nm			4.5mb
MFF	79.75	344 eP	26	11.20	0.4
	0.7s	6.60nm			4.5mb
CAF	80.98	342 eP	26	17.40	0.1
	0.8s	2.60nm			4.1mb
LPO	81.38	343 eP	26	19.90	0.6
	0.6s	3.60nm			4.3mb
EPF	83.13	343 eP	26	28.90	0.4
	0.6s	33.90nm			5.4mb X
	S.D. = 0.8	on 17 of 17 obs.			

? SEP 10, 1989 16h 37m 35.15± 6.57s
4.999 S ±65.1km 136.697 E ±16.4km
DEPTH = 33.0km (normal)
4.0mb (2 obs.)
WEST IRIAN REGION (196)

MTN	9.54	215 eP	39	54.00	0.7
		eS	40	44.00	
KNA	13.22	216 eP	40	42.00	-1.2
		eS	43	06.00	
WRA	15.03	189 P	41	07.00	0.0
	0.4s	0.90nm			3.4mb
CTA	17.65	149 eP	41	40.00	-0.2
ASPA	18.75	188 eP	41	54.20	0.3
	0.5s	21.00nm			4.6mb
		eS	45	55.30	
WARB	23.16	204 eP	42	40.20	0.4
CBN	134.71	38 ePdiff	53	48.00	-5.2X
CNCB	147.37	132 ePKP	57	20.00	3.7X
LPB	147.46	132 ePKP	57	23.00	6.7X
ZOBO	147.60	131 ePKP	57	14.00	-2.7X
	S.D. = 0.9	on 6 of 10 obs.			

% SEP 10, 1989 16h 43m 19.77± 1.84s
20.480 N ±15.7km 99.469 W ±10.0km
DEPTH = 5.0km (geophysicist)
CENTRAL MEXICO (523)

IIC	0.74	164 iP	43	33.50	-1.0
		iS	44	01.50	
CRX	1.09	191 iPc	43	41.50	0.6
		iS	44	15.50	
UNM	1.17	167 (P)	43	28.50	-13.8X
MRX	1.79	245 iPc	43	51.30	-0.3
		(S)	44	24.50	
IIT	1.82	143 (P)	43	53.30	1.1
III	2.09	180 iP	43	59.50	3.4X
LVVM	2.93	104 (P)	44	07.50	-0.4
		(S)	44	43.00	
	S.D. = 1.2	on 5 of 7 obs.			

SEP 10, 1989 17h 55m 16.06± 0.54s
42.847 N ± 7.5km 17.964 E ± 5.0km
DEPTH = 10.0km (geophysicist)
ADRIATIC SEA (382)
ML 2.8 (TTG). MD 3.4 (TRI).

BRY	0.43	83 iPgd	55	23.90	-1.0
		iSg	55	30.50	
HCY	0.56	135 iPgd	55	27.00	-0.4
		iSg	55	37.10	
NKY	0.76	92 ePg	55	29.80	-1.2
		eSg	55	42.00	
BDV	0.85	131 iPgc	55	32.30	-0.2
		iSg	55	46.50	
TTG	1.04	113 ePg	55	36.00	0.3
		eSg	55	53.20	
HVAR	1.16	287 iPg	55	36.10	-1.6
		iSg	55	54.00	
ULC	1.30	132 ePg	55	40.00	-0.1
		eSg	56	01.40	
IVA	1.42	88 ePn	55	42.70	0.7
		eSg	56	07.50	
PVY	1.50	99 ePg	55	44.50	1.3
		eSg	56	08.40	
PUK	1.64	119 ePn	55	48.60	3.6X
TIR	2.06	136 ePn	55	55.70	4.6X
PHP	2.17	121 ePn	55	57.40	4.7X
SKO	2.72	108 ePn	56	05.00	4.4X
OHR	2.73	128 ePn	56	07.70	6.9X
VBY	3.29	325 eP	56	13.50	4.8X
		eSn	56	51.80	
PTJ	3.37	335 ePn	56	11.60	1.7
		eSn	56	45.50	
TDS	3.41	202 P	56	11.30	0.9
ARV	3.73	282 P	56	15.00	0.0
CEY	3.85	320 eP	56	28.00	11.4X
		e(Sn)	57	08.00	
LJU	4.03	324 e(Pn)	56	31.50	12.4X
		e(Sn)	57	14.00	
		e	58	40.00	
TRI	4.16	315 e(Pn)	56	32.70	11.8X
		i(Sn)	57	13.70	
		i(Sg)	57	31.00	
VOY	4.32	319 ePn	56	22.90	-0.4
		e(Sn)	57	14.10	
		eSg	57	36.40	
	S.D. = 1.1	on 13 of 22 obs.			

% SEP 10, 1989 18h 20m 26.93± 2.52s
40.692 N ±19.5km 30.091 E ±19.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

HRT	0.35	292 iPg	20	33.70	-0.4
GPA	0.44	158 ePg	20	36.00	0.2
		eSg	20	44.60	
GBZT	0.50	281 iPgd	20	39.40	2.3
		iSg	20	45.50	
YLV	0.56	257 iPg	20	37.30	-1.1
ISK	0.87	296 iPg	20	43.00	-0.6
		iSg	20	53.30	
CTT	1.34	290 ePn	20	51.30	-0.3
KCT	1.40	252 iPn	20	53.30	0.9
ALT	1.64	179 ePn	20	59.70	3.8X
EDC	1.73	259 ePn	20	56.20	-1.1
KHL	2.41	191 ePn	21	13.00	5.9X
	S.D. = 1.3	on 8 of 10 obs.			

SEP 10, 1989 18h 50m 55.87± 0.61s
44.185 N ± 6.5km 114.492 W ± 6.6km
DEPTH = 5.0km (geophysicist)
WESTERN IDAHO (33)
ML 3.2 (BUT).

PTI	2.03	130 eP	51	30.80	-0.4
BGMT	2.04	58 ePn	51	32.20	0.7
LRM	2.19	41 iPc	51	33.70	0.1
BUT	2.28	36 ePg	51	39.40	4.5X
		eSn	52	05.10	
		eSg	52	09.30	
LCCM	2.48	47 ePnc	51	37.70	-0.1
MEMT	2.88	59 ePn	51	43.70	0.3
DMMT	2.95	24 ePn	51	43.90	-0.6
SXM	3.04	49 ePn	51	45.60	-0.1
LNOR	3.17	303 eP	51	47.50	0.0
KVN	5.80	209 e(P)	52	25.00	0.2
	S.D. = 0.5	on 9 of 10 obs.			

• SEP 10, 1989 19h 04m 31.48± 0.84s
44.437 N ± 8.3km 7.212 E ±13.2km

10d 19h

DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

DOI	0.07	20	P	04	34.00	0.1
PZZ	0.10	311	P	04	34.34	-0.1
			S	04	36.23	
STV	0.21	157	P	04	36.23	0.1
			S	04	39.52	
ENR	0.26	145	P	04	37.11	0.1
			S	04	40.95	
IMI	0.72	137	P	04	45.36	-0.3

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

SEP 10, 1989 19h 18m 52.36± 0.31s
17.701 S ± 8.0km 167.298 E ± 7.4km
DEPTH = 10.0km (geophysicist)
4.6mb (3 obs.)
VANUATU ISLANDS (186)

PVC	0.97	92	iPc	19	11.50	0.8
			iS	19	24.00	
DZM	4.42	190	iP	19	59.10	-2.0
			iS	20	48.10	
HNR	10.89	318	eP	21	30.00	-1.4
	0.8s	149.25nm			6.4mb	X
			eS	23	26.00	
SVO	11.19	318	eP	21	35.00	-0.4
			eS	23	35.00	
CTA	20.05	260	iPc	23	30.00	1.3
	1.3s	34.62nm			4.5mb	
KRP	21.40	162	eP	23	52.00	9.5X
OLP	23.09	243	eP	24	01.00	1.7
BWA	23.70	222	eP	24	04.80	-0.5
CAN	23.93	219	eP	24	12.00	4.5X
PCI	49.52	284	ePc	27	46.50	1.0
CN2	72.20	330	Pd	30	18.30	-1.1
SPA	72.41	180	e(P)	30	20.00	-0.6
	1.0s	7.00nm			4.7mb	
NST	74.02	293	eP	30	32.00	1.4
BJI	74.59	322	eP	30	33.00	-0.4
TIY	75.46	318	eP	30	37.50	-1.1
CHG	76.34	295	eP	30	44.00	0.1
CHTO	76.34	295	eP	30	43.90	0.1
	0.8s	3.66nm			4.5mb	
GTA	84.74	314	eP	31	28.20	0.0
NB2	133.48	344	PKP	38	09.70	-0.6
	0.8s	1.50nm				
KBA	143.70	330	e(PKP)	38	21.00	-8.6X
			e	38	26.00	
TOD	143.75	336	ePKP	38	26.60	-2.8X
ABH	144.00	338	ePKP	38	27.06	-2.7X
RUP	144.32	338	ePKP	38	28.10	-2.3X
SNF	144.55	341	PKP	38	29.20	-1.4
WLF	144.67	339	PKP	38	29.40	-1.4
GWF	144.72	337	PKP	38	29.46	-1.6
OGA	144.95	331	iPKPc	38	31.10	-0.6
WLS	145.28	336	PKP	38	31.13	-0.9
CDF	145.31	336	PKP	38	31.34	-0.8
SLE	145.35	335	ePKPd	38	31.50	-0.6
SAX	145.40	333	ePKPc	38	31.50	-1.1
FEL	145.46	335	PKP	38	31.65	-0.8
OSS	145.48	332	ePKPc	38	32.80	0.2
ECH	145.52	336	PKP	38	31.66	-0.8
MOF	145.83	336	PKP	38	32.81	-0.2
LLS	145.85	333	ePKPc	38	33.60	0.3
VDL	145.94	332	ePKPc	38	34.10	0.7
VITF	145.96	337	PKP	38	33.33	0.3
BSF	145.97	336	PKP	38	33.22	-0.1
HAU	146.00	337	ePKP	38	33.50	0.3
	0.6s	10.80nm				
LOMF	146.35	336	PKP	38	34.69	0.8
TMA	146.49	332	ePKPd	38	35.10	0.8
BNG	146.69	250	iPKPd	38	35.40	0.0
	1.0s	15.00nm				
			id	38	50.80	
VAI	146.72	332	PKPd	38	35.00	0.6
MMK	146.93	333	ePKPc	38	37.30	2.2X
DIX	147.14	334	ePKPc	38	37.80	2.3X
BOB	147.25	330	PKP	38	37.20	1.8
LOR	147.52	339	ePKP	38	37.80	2.1X
	0.8s	8.05nm				
LBF	147.72	338	ePKP	38	38.20	2.2X
	0.8s	10.75nm				
LSD	147.75	333	PKP	38	38.89	2.5X
SSF	147.82	339	ePKP	38	38.70	2.6X
	1.0s	20.00nm				
PCP	147.84	331	PKP	38	37.76	1.4
LPG	147.89	334	ePKP	38	39.50	2.8X
	0.8s	14.80nm				
GRR	147.90	345	ePKP	38	38.60	2.4X
	1.0s	18.00nm				
SMF	148.06	338	ePKP	38	38.90	2.3X
	0.8s	10.75nm				
AVF	148.10	339	ePKP	38	39.10	2.5X
	0.7s	8.25nm				
FIN	148.25	331	PKP	38	38.79	1.8
LPF	148.28	345	ePKP	38	39.70	2.9X
	0.8s	13.45nm				
RRL	148.33	333	PKP	38	40.02	2.7X
ROB	148.34	331	PKP	38	39.00	1.9
BGF	148.48	339	ePKP	38	40.10	2.9X
	0.6s	4.95nm				
IMI	148.63	331	PKP	38	40.02	2.4X
STV	148.63	332	PKP	38	38.69	1.0
SBF	148.87	331	ePKP	38	41.80	3.8X
	0.8s	13.45nm				
TCF	148.93	340	ePKP	38	41.50	3.5X
	1.0s	7.00nm				
CVF	149.16	328	ePKP	38	42.00	3.6X
	0.8s	13.45nm				
LSF	149.18	341	ePKP	38	41.80	3.5X
	1.0s	12.00nm				
MFF	149.36	343	ePKP	38	42.40	3.8X
	0.7s	8.80nm				
FRF	149.47	332	ePKP	38	42.80	4.0X
	1.2s	20.85nm				
LMR	149.71	332	ePKP	38	43.50	4.3X
	0.8s	8.05nm				
CAF	150.17	339	ePKP	38	45.00	5.1X
LFF	150.60	340	ePKP	38	46.00	5.5X
	0.8s	5.55nm				
LPO	150.68	340	ePKP	38	46.00	5.4X
	0.7s	7.70nm				

S.D. = 1.1 on 43 of 73 obs.

SEP 10, 1989 19h 22m 57.89± 0.40s
41.770 N ± 6.8km 21.870 E ± 3.2km
DEPTH = 5.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.2 (SKO), 2.8 (TTG). Felt (IV) at Titov Veles and Sveti Nikole.

SKO	0.38	302	iPgc	23	03.20	-2.3
			iSg	23	07.70	
VAY	0.69	130	iPg	23	10.70	-1.0
KKB	0.91	84	iPgd	23	16.00	0.2
OHR	1.04	231	iPgd	23	16.50	-1.5
			iSg	23	31.00	
PHP	1.07	266	iPgd	23	15.00	-3.5X
KKS	1.13	286	iPg	23	18.00	-1.5
VTS	1.29	50	iP	23	22.00	-0.4
KBN	1.40	215	ePn	23	23.70	-0.3
MMB	1.40	97	iPd	23	25.00	0.8
PUK	1.50	281	iPn	23	26.10	0.6
TIR	1.56	255	ePn	23	26.00	-0.3
LACI	1.62	266	iPnc	23	28.80	1.6
PVY	1.63	301	ePg	23	27.00	-0.5
			eSg	23	49.50	
IVA	1.83	308	ePn	23	29.30	-1.0
			eSn	23	53.00	
PGB	1.88	65	iPd	23	31.00	0.0
ULC	1.97	276	ePn	23	34.20	2.0
			eSn	24	01.00	
TTG	2.05	290	ePn	23	33.90	0.5
			eSn	24	01.00	
RZN	2.13	91	iPd	23	35.00	0.2
PLD	2.14	80	eP	23	35.00	0.3
BDV	2.32	284	ePn	23	38.50	1.1
			eSn	24	09.00	
NKY	2.37	297	ePn	23	38.50	0.3
			eSn	24	09.00	
HCY	2.60	286	ePn	23	43.00	1.7
			eSn	24	15.00	
KDZ	2.66	91	iP	23	43.00	0.8
BRY	2.71	296	ePn	23	43.00	-0.1
			eSn	24	16.00	
PVL	2.94	59	iPc	23	49.00	2.9X
BEO	3.22	342	e(P)	23	53.50	3.5X
JMB	3.57	77	eP	23	54.00	-1.1
CMP	4.19	32	ePc	24	24.00	20.2X
VRI	5.40	39	ePd	24	26.00	5.0X

S.D. = 1.1 on 24 of 29 obs.

SEP 10, 1989 19h 31m 24.11± 0.69s
44.379 N ± 7.8km 7.284 E ± 9.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

DOI	0.13	348	P	31	27.30	0.0
			eSg	31	29.50	
STV	0.14	168	P	31	27.61	0.2
			S	31	29.55	
ENR	0.18	147	P	31	28.32	0.1
			S	31	30.75	
PZZ	0.18	314	P	31	28.25	0.0
			S	31	30.88	
ROB	0.43	101	P	31	33.03	0.1
IMI	0.64	137	P	31	36.64	-0.4

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

SEP 10, 1989 20h 42m 55.84± 0.44s
36.728 N ± 6.0km 24.286 W ± 5.5km
DEPTH = 10.0km (geophysicist)
4.3mb (24 obs.)
AZORES ISLANDS REGION (404)

PDA	1.50	313	eP	43	21.00	-1.7
			iS	43	35.50	
ADH	3.03	310	iP	43	43.80	-0.9
			iS	44	15.50	
HOR	3.89	299	iP	43	55.50	-1.4
			iS	44	35.50	
TBT	9.65	144	iP	45	16.60	-1.2
			i	46	57.20	
CVVD	10.38	147	iP	45	26.90	-0.9
CTFE	10.65	138	iP	45	29.60	-1.8
			i	47	20.50	
AVE	14.25	99	iPg	46	20.00	0.3
			i	46	33.00	
TIO	15.28	107	iP	46	33.50	0.2
			i	46	35.50	
			i	46	39.00	
IFR	16.00	96	eP	46	41.00	-1.7
LPF	20.47	49	eP	47	36.00	-0.2
	1.0s	9.60nm			4.1mb	
MFF	20.48	54	eP	47	35.40	-0.9
	0.8s	10.70nm			4.2mb	
LFF	20.58	59	eP	47	35.20	-2.1
	0.8s	8.00nm			4.1mb	
DLE	20.68	31	eP	47	40.30	2.1
	0.7s	32.00nm			4.8mb	
GRR	20.73	48	eP	47	39.00	0.1
	1.0s	40.00nm			4.7mb	
LPO	20.82	60	eP	47	38.40	-1.5
	1.2s	11.90nm			4.1mb	
DMU	20.98	30	eP	47	40.00	-1.3
LSF	21.47	56	eP	47	45.80	-0.7
	1.2s	14.80nm			4.3mb	
CAF	21.49	59	eP	47	46.20	-0.5
	1.0s	14.00nm			4.3mb	
TCF	21.93	56	eP	47	50.80	-0.3
	1.0s	8.00nm			4.1mb	
MAF	22.15	56	eP	47	53.10	-0.2
	1.0s	18.80nm			4.5mb	
AVF	22.83	55	eP	48	01.20	1.2
	1.2s	8.90nm			4.2mb	
SSF	23.01	55	eP	48	03.00	1.3
	0.8s	5.90nm			4.2mb	
SMF	23.12	56	eP	48	03.90	1.1
	0.9s	8.10nm			4.3mb	
LBF	23.30	55	eP	48	05.50	0.9
	1.2s	10.10nm			4.2mb	
LOR	23.30	54	eP	48	05.30	0.7
	1.0s	6.00nm			4.1mb	
EKA	23.53	31	Pd	48	06.60	-0.1
	0.7s	7.90nm			4.4mb	
DOU	24.69	48	Pc	48	20.60	2.6
			S	52	52.00	
LPG	24.85	60	eP	48	19.60	-0.3
	1.2s	10.10nm			4.4mb	
DOI	25.05	62	P	48	23.00	1.4
WLF	25.49	50	P	48	24.90	-0.6
MEM	25.72	48	P	48	28.50	0.8
KBA	29.60	58	e(P)	49	02.00	-1.3
	1.0s	4.20nm			4.2mb	
PTJ	31.30	60	eP	49	17.90	-0.3
NB2	33.02	31	P	49	31.80	-1.2
	1.1s	7.60nm			4.5mb	

HFS	33.65	34	(P)	49	37.90	-0.6				eSg	46	51.10		LLS	4.82	322	ePc	47	37.60	1.3
	1.7s	60.90nm			5.3mb		PRO	0.82	338	ePg	46	41.70	2.7X	FRF	4.90	277	Pn	47	37.00	-0.2
KIC	35.11	145	P	49	53.00	1.6				iSg	46	56.70		PVY	4.90	94	ePn	47	38.40	1.0
SKO	35.42	67	eP	49	52.50	-1.4	MNS	0.91	213	P	46	39.50	-1.0				eSn	48	33.00	
			i	50	03.30					iSg	46	54.00		PUK	4.96	101	ePn	47	38.70	0.6
VRI	38.82	60	ePd	50	21.50	-0.9	RSM	1.01	320	P	46	43.50	1.7	SAX	4.97	327	ePd	47	40.10	1.5
SUF	40.16	33	eP	50	33.00	-0.3				eSg	46	58.80		BCI	5.01	97	ePn	47	37.00	-1.8
DAG	40.22	2	iPc	50	33.90	0.3	AZI	1.17	177	P	46	44.30	0.2	LRG	5.11	276	Pn	47	39.80	-0.3
SOD	41.84	27	iP	50	46.70	-0.3				eSg	47	03.90		DIX	5.15	307	ePc	47	42.30	1.3
KHL	42.20	71	eP	50	51.20	0.7	SFI	1.33	306	P	46	49.50	3.2X	BNI	5.16	294	P	47	42.00	0.9
ITR	47.16	199	e(P)	51	26.00	-4.3X				eSn	47	05.30		LPG	5.28	299	Pn	47	41.50	-1.4
BNG	50.72	119	iPc	51	59.00	1.1	RMP	1.42	200	Pc	46	49.20	1.5	LPL	5.30	299	Pn	47	42.00	-1.1
	0.6s	15.00nm			5.1mb					eSn	47	05.90		PHP	5.45	103	ePn	47	44.10	-0.9
		id		52	07.80		RDP	1.47	199	P	46	49.70	1.2	VKA	5.52	21	iPnd	47	45.50	-0.4
PDCR	50.95	199	eP	52	08.20	8.7X				eSn	47	06.40					iSn	48	25.30	
TUL	56.32	292	e(P)	52	41.00	1.9	DUI	1.71	151	P	46	55.10	3.2X				iSg	48	46.80	
	1.2s	9.10nm			4.7mb					eSn	47	18.80		ZST	5.69	26	eP	48	09.00	20.7X
INK	62.98	337	eP	53	24.00	-0.5	PII	2.13	286	P	46	58.90	1.0				i	48	14.00	
ALQ	64.57	296	eP	53	37.10	1.4				eSn	47	23.10					i	48	17.00	
	1.2s	6.25nm			4.7mb		MME	2.18	299	P	46	59.70	0.8				i	49	37.50	
ZOBO	66.99	226	P	53	51.90	0.1				eSn	47	26.00					e	49	49.00	
	1.6s	18.80nm			5.0mb		BDI	2.19	295	P	47	00.70	1.8	SRO	5.82	35	eP	48	19.00	28.8X
Z	24s	0.09um			3.9MszX		HVAR	2.27	88	iPn	46	59.90	0.0				e	50	01.00	
		LR		15	36.00		RIY	2.31	19	iPnd	47	00.80	0.3	OHR	5.91	108	eP	47	50.20	-1.3
KSH	74.57	52	eP	54	38.00	1.1				i(Sn)	47	29.20		KHC	5.98	1	iPn	47	51.20	-1.3
BUL	75.43	129	iPc	54	43.90	1.9	TRI	2.57	7	iPnc	47	03.60	-0.6				Pg	47	58.00	
WMO	78.86	43	P	55	02.00	1.3				iPg	47	12.00					Sg	48	56.20	
GTA	88.42	40	P	55	50.20	0.6				iPgPg	47	17.70		WET	6.00	357	ePn	47	50.50	-2.3
S.D. = 1.2 on 51 of 53 obs.										iSn	47	46.30		SKO	6.09	98	iP	47	52.80	-1.3
----------										iSg	48	03.70		BSF	6.56	318	Pn	47	59.40	-1.4
* SEP 10, 1989 21h 37m 24.77± 0.85s							CEY	2.70	16	ePn	47	06.50	0.5				Sn	49	08.80	
36.510 N ±11.9km 71.341 E ±10.1km										ePg	47	11.80		GRF	6.70	348	eP	48	07.00	4.4X
DEPTH = 33.0km (normal)										i	47	21.10					eS	49	14.00	
4.6mb (4 obs.)										eSn	47	38.50		CDF	6.75	323	Pn	48	01.60	-1.8
AFGHANISTAN-USSR BORDER REGION (717)										e	52	30.00					Sn	49	13.60	
							VBY	2.72	30	ePn	47	07.10	0.8	HAU	6.90	317	Pn	48	03.60	-1.8
QUE	7.30	211	eP	39	10.60	-1.3				iPg	47	13.40					Sn	49	18.40	
			eS	40	37.10					iSg	47	55.70		MOX	7.59	352	ePn	48	18.00	3.0X
NDI	9.24	146	eP	39	39.50	0.7	VOY	2.90	8	iPnc	47	08.30	-0.6				e	49	35.00	
MAIO	9.55	272	eP	39	44.00	0.8				eSg	47	59.00		SMF	7.59	301	Pn	48	14.00	-1.2
			eS	41	25.00					e	51	40.00		LBF	7.65	303	Pn	48	13.30	-2.7X
MHI	9.55	272	eP	39	44.00	0.8	SGO	2.98	150	P	47	10.80	0.8				Sn	49	36.00	
			eS	41	25.00		LJU	3.01	16	ePnc	47	11.80	1.4	BRG	7.73	3	ePn	48	22.00	5.0X
CHTO	29.98	119	e(P)	43	32.70	0.2				iPg	47	19.00					e	49	40.00	
HFS	43.23	322	eP	45	23.70	-0.5				i(Sn)	47	46.20		LOR	7.86	305	Pn	48	16.00	-2.8X
	0.9s	13.40nm			4.7mb					iSg	48	04.10					Sn	49	40.60	
NB2	44.54	323	P	45	34.10	-0.7				e	51	00.00		KSP	7.95	14	e(P)	48	18.00	-2.1
	0.7s	4.70nm			4.4mb		CTI	3.13	338	P	47	12.30	0.0				e	49	44.00	
BNG	57.91	250	ePd	47	13.40	-2.8X	SAL	3.18	321	P	47	14.20	1.5	BGF	8.20	298	Pn	48	21.60	-2.0
	0.4s	3.00nm			4.7mb		BOB	3.24	301	P	47	16.30	2.5	S.D. = 1.2 on 69 of 81 obs.						
BCAO	57.92	250	e(P)	47	13.50	-2.8X	ZAG	3.26	34	iPg	47	27.50	13.5X	----------						
	0.7s	1.00nm			4.0mb					iSg	48	09.50		% SEP 11, 1989 03h 02m 10.96± 0.87s						
S.D. = 1.1 on 7 of 9 obs.							RBL	3.29	3	P	47	15.00	0.6	40.462 N ± 7.5km 27.507 E ± 6.5km						
----------							PTJ	3.32	33	ePn	47	21.40	6.5X	DEPTH = 10.0km (geophysicist)						
SEP 10, 1989 21h 37m 42.76± 0.80s										eSn	47	55.80		TURKEY						(366)
41.520 N ± 6.9km 20.231 E ± 6.4km							CVF	3.34	261	Pn	47	16.00	0.9							
DEPTH = 10.0km (geophysicist)							MGR	3.44	150	P	47	18.00	1.4	EDC	0.30	113	iPg	02	17.20	0.1
ALBANIA (391)							MDI	3.69	316	P	47	20.60	0.5				eSg	02	21.20	
							BRY	3.82	92	ePn	47	23.00	0.9	BNT	0.33	108	iPg	02	17.90	0.0
PHP	0.23	43	iPgc	37	47.00	-0.7				eSn	48	06.00		KCT	0.68	108	iPg	02	23.90	-0.6
TIR	0.32	238	iPgc	37	49.50	0.0	KBA	3.92	0	iPnc	47	24.10	0.6				iSg	02	32.90	
LACI	0.41	287	iPgd	37	51.20	0.1				iPg	47	38.90		CTT	0.98	45	ePg	02	29.90	0.3
KKS	0.57	14	ePg	37	55.50	1.2				iSn	48	06.50		EZN	1.11	235	ePg	02	30.80	-0.9
PUK	0.58	334	ePg	37	53.60	-0.9				i	48	09.40					iSg	02	45.80	
OHR	0.59	134	iPg	37	54.70	-0.1				i	48	24.50		ISK	1.32	62	ePn	02	35.10	-0.3
			iSg	38	04.50		SCE	4.05	344	iPnc	47	25.80	0.4	YLV	1.43	85	iPn	02	37.40	0.4
SDA	0.74	312	ePg	37	52.00	-5.2X	OGA	4.06	337	ePn	47	25.50	0.0	GBZT	1.51	77	ePn	02	41.50	3.4X
S.D. = 0.9 on 6 of 7 obs.							BDV	4.13	100	ePn	47	26.00	-0.4				eSg	03	04.20	
----------										eSn	48	14.30		HRT	1.68	77	iPn	02	40.90	0.3
SEP 11, 1989 02h 46m 23.46± 0.29s							NKY	4.16	93	ePn	47	27.00	0.1	IZM	2.07	185	ePn	02	48.00	1.8
43.156 N ± 3.0km 13.343 E ± 2.7km										eSn	48	15.00		ALT	2.45	124	ePn	02	51.00	-0.7
DEPTH = 26.9 ± 3.2 km							OSS	4.20	328	ePd	47	28.60	1.1	KHL	2.65	143	ePn	02	54.00	-0.5
CENTRAL ITALY (381)							VAI	4.25	311	P	47	27.50	-0.4	S.D. = 0.8 on 11 of 12 obs.						
ML 3.8 (KBA), 3.6 (LDG), 3.1										eSn	48	15.80		----------						
(LJU). MD 4.2 (TRI), 3.7 (ROM).							VDL	4.32	322	ePd	47	29.80	0.6	SEP 11, 1989 03h 35m 12.90± 0.69s						
							TMA	4.35	314	ePd	47	29.10	-0.4	43.096 N ± 5.1km 13.287 E ± 6.4km						
SSO	0.15	22	iPgc	46	28.94	0.2	SBF	4.36	281	Pn	47	30.60	1.0	DEPTH = 10.0km (geophysicist)						
			iSg	46	32.68					Sn	48	19.00		CENTRAL ITALY (381)						
ALP	0.41	155	iPgc	46	31.03	-1.4	TTG	4.41	97	ePn	47	31.40	1.0	MD 2.4 (SSO).						
			iSg	46	37.16					eSn	48	20.00								
AOI	0.44	25	iPgc	46	32.43	-0.3	LCI	4.45	128	P	47	32.00	1.1	SSO	0.22	26	iPg	35	18.38	0.7
			iSg	46	38.36		DRO	4.57	305	Pd	47	31.50	-1.2				eSg	35	22.76	
ARV	0.45	320	P	46	32.60	-0.4				eSn	48	23.00		ALP	0.38	146	iPg	35	20.66	-0.1
			eSg	46	40.60		DOI	4.61	289	P	47	34.00	0.7				eSg	35	26.95	
ASS	0.51	261	P	46	32.70	-1.2	SDA	4.69	102	ePn	47	34.90	0.7	ASS	0.46	267	P	35	22.50	0.2
			eSg	46	41.40		IVA	4.81	91	ePn	47	37.00	0.9				eSg	35	30.00	
AOU	0.80	177	P	46	37.60	-1.2				eSn	48	30.50		ARV	0.47	328	Pc	35	22.20	-0.3

11d 03h

			eSg	35 28.70		
AOI	0.51	27	iPg	35 22.74	-0.5	
			iSg	35 31.31		
MNS	0.84	212	P	35 29.10	0.0	
			eSg	35 42.80		

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

SEP 11, 1989 03h 40m 58.54± 0.99s
44.636 N ± 7.1km 8.322 E ± 6.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.6 (LDG), 2.4 (GEN).

PCP	0.19	120	P	41 02.64	-0.1	
FIN	0.43	191	P	41 06.50	-0.9	
			S	41 12.15		
ROB	0.47	224	P	41 07.26	-0.8	
			S	41 13.11		
ENR	0.76	238	P	41 13.43	-0.1	
			S	41 22.44		
DOI	0.78	261	P	41 13.50	-0.3	
			eSg	41 23.50		
IMI	0.79	203	P	41 13.65	-0.3	
			S	41 22.95		
STV	0.81	242	P	41 14.27	-0.1	
			S	41 24.32		
PZZ	0.88	262	P	41 14.96	-0.6	
			S	41 26.23		
SBF	1.00	220	Pg	41 17.00	-0.6	
			Sg	41 30.80		
RRL	1.13	285	P	41 19.77	-0.1	
LPG	1.41	308	Pg	41 24.00	-0.5	
FRF	1.62	229	Pg	41 28.20	1.0	
			Sg	41 49.70		
LRG	1.84	231	Pg	41 32.40	2.0	
			Sg	41 56.80		
LMR	1.85	226	Pg	41 31.80	1.3	
			Sg	41 56.00		

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

SEP 11, 1989 05h 24m 30.27± 0.68s
43.104 N ± 5.0km 13.294 E ± 6.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (SSO).

SSO	0.21	26	iPg	24 35.45	0.6	
			iSg	24 39.28		
ALP	0.38	147	iPgd	24 38.20	0.0	
			iSg	24 45.09		
ASS	0.46	266	Pd	24 40.00	0.3	
			eSg	24 47.10		
ARV	0.47	327	P	24 39.60	-0.2	
			eSg	24 47.20		
AOI	0.50	27	ePg	24 39.95	-0.5	
			iSg	24 48.36		
MNS	0.85	212	P	24 46.50	-0.2	
			eSg	25 00.40		

S.D. = 0.5 on 6 of 6 obs.

• SEP 11, 1989 05h 56m 03.26± 1.71s
35.204 N ±22.2km 26.145 E ± 7.6km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.8 (ATH).

NPS	0.44	278	ePg	56 11.50	-0.7	
			eSg	56 16.50		
KAP	0.91	67	ePg	56 20.50	-0.2	
VAM	1.60	278	ePb	56 32.50	0.8	
APE	1.93	345	ePn	56 36.50	0.1	
YER	2.59	41	eP	56 46.00	0.0	

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

SEP 11, 1989 06h 30m 00.88± 0.29s
44.094 N ± 2.0km 6.971 E ± 2.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.6 (LDG), 2.2 (GEN).

TOUF	0.22	112	Pg	30 05.74	0.1	
MVIF	0.24	146	Pg	30 06.15	0.1	
			Sg	30 10.83		
STV	0.30	59	P	30 07.08	0.0	
			S	30 11.49		
AURF	0.33	129	Pg	30 08.12	0.4	
CALN	0.35	190	Pg	30 08.36	0.3	
ENR	0.35	68	P	30 08.21	0.1	
			S	30 12.92		
SBF	0.41	124	Pg	30 09.40	0.2	
			Sg	30 15.50		
PZZ	0.42	13	P	30 09.44	-0.1	
			S	30 15.38		
SAOF	0.44	104	Pg	30 09.71	-0.1	
			Sg	30 16.34		
DOI	0.45	26	P	30 10.30	0.2	
			eSg	30 17.20		
FOUF	0.46	343	ePgc	30 09.62	-0.5	
			eSg	30 14.91		
REVF	0.46	141	Pg	30 09.79	-0.4	
FRF	0.58	204	Pg	30 12.30	-0.4	
			Sg	30 20.50		
ROB	0.68	72	P	30 12.92	-1.4	
			S	30 21.95		
IMI	0.69	105	P	30 14.46	-0.1	
			S	30 23.90		
LRG	0.78	215	Pg	30 16.20	0.2	
			Sg	30 26.60		
LMR	0.83	204	Pg	30 16.80	-0.1	
			Sg	30 28.00		
RRL	0.84	351	P	30 16.82	-0.4	
			S	30 29.02		
FIN	0.90	82	P	30 18.26	0.1	
BNI	0.98	348	P	30 20.00	0.4	
			eSg	30 35.20		
PCP	1.22	68	P	30 24.41	0.9	
			S	30 39.23		
LSD	1.37	5	P	30 26.25	0.0	
LPG	1.41	354	Pg	30 27.60	0.7	
			Sg	30 47.40		

S.D. = 0.5 on 23 of 23 obs.

& SEP 11, 1989 06h 35m 35.80s
31.940 N 115.850 W
DEPTH = 6.0km (geophysicist)
BAJA CALIFORNIA (48)
<PAS-P>. ML 3.0 (PAS).

IKP	0.74	343	iPd	35 49.70	-0.9	
			eS	35 59.20		
BAR	1.01	317	iPd	35 54.20	-1.2	
			iS	36 07.60		
GLA	1.41	38	eP	35 58.70	-3.3	
PLM	1.65	329	eP	36 04.00	-1.6	
PEC	2.24	331	eP	36 12.00	-2.0	
ABL	4.05	317	e(P)	36 38.70	-1.1	
BCH	4.79	314	e(P)	36 49.00	-1.4	
	7 obs. associated					

• SEP 11, 1989 06h 58m 33.69± 2.22s
43.982 N ±11.2km 8.458 E ±12.9km
DEPTH = 10.0km (geophysicist)
CORSICA (380)
ML 1.9 (GEN). MD 1.0 (STR).

FIN	0.29	322	P	58 40.15	0.4	
			S	58 43.94		
IMI	0.42	260	P	58 41.79	-0.4	
			S	58 47.63		
ROB	0.53	307	P	58 44.15	-0.2	
			S	58 51.12		
PCP	0.56	6	P	58 45.07	-0.1	
			S	58 53.48		
SAOF	0.65	271	Pg	58 46.80	0.1	
AUTN	0.74	271	Pg	58 48.90	0.5	
			Sg	59 00.88		
ENR	0.79	288	P	58 48.97	-0.1	
			S	58 59.73		
TOUF	0.87	272	Pg	58 50.92	0.3	
			Sg	59 03.79		
DOI	1.02	301	P	58 53.00	0.0	
			eSg	59 07.00		
PZZ	1.11	299	P	58 54.20	-0.4	
			S	59 09.58		

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

? SEP 11, 1989 07h 27m 14.47± 1.01s
43.094 N ± 7.0km 13.355 E ±10.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.1 (SSO).

CIO	0.18	303	iPg	27 18.58	-0.1	
			iSg	27 21.70		
SSO	0.20	13	ePg	27 19.40	0.5	
			iSg	27 23.93		
ALP	0.35	153	ePg	27 21.80	0.0	
			eSg	27 28.51		
AOI	0.49	21	e(Pg)	27 24.02	-0.4	
			iSg	27 31.96		

S.D. = 0.6 on 4 of 4 obs.

• SEP 11, 1989 08h 25m 53.87± 0.30s
15.009 S ±12.8km 174.529 W ± 8.7km
DEPTH = 168.3km (3 depth phases)
5.0mb (12 obs.)
TONGA ISLANDS (173)

AFI	2.88	68	iPd	26 40.00	-1.1	
			e	26 55.00		
			eS	27 15.00		
DZM	19.35	246	iPc	30 13.90	5.1	X
CTA	37.67	257	iPc	32 54.90	0.3	
	0.8s		21.64nm		4.9mb	
PMG	37.82	274	eP	32 58.00	2.1	
OLP	40.07	246	iPc	33 15.70	1.4	
OIS	43.91	256	iPc	33 45.00	-0.8	
WRA	48.87	257	Pc	34 23.70	-0.9	
	0.7s		20.80nm		4.9mb	
ASPA	49.20	252	iPd	34 26.50	-0.6	
	0.8s		106.00nm		5.5mb	
FORR	54.59	243	iPd	35 05.90	-1.3	
	0.4s		24.00nm		5.3mb	
WARB	55.78	248	eP	35 14.70	-1.2	
	0.5s		16.00nm		5.1mb	
MBL	62.33	254	iPd	35 59.60	-1.2	
	0.4s		11.00nm		5.1mb	
NANU	66.14	252	iPd	36 25.20	-0.3	
	0.4s		14.00nm		5.2mb	
SPA	75.09	180	e(P)	37 18.90	0.2	
	0.8s		9.58nm		4.6mb	
KVN	75.25	42	P	37 20.00	-0.1	
			pP	38 00.70	167km	
TNP	75.30	43	P	37 20.30	-0.1	
	1.0s		10.00nm		4.5mb	
			pP	38 01.00	167km	
CN2	80.09	320	Pd	37 46.50	0.2	
PNT	80.28	33	eP	37 47.00	-0.2	
ALQ	81.39	50	eP	37 53.80	0.3	
	0.9s		5.25nm		4.3mb	
FBA	82.22	11	P	37 56.50	-0.4	
	0.9s		17.50nm		4.8mb	
			pP	38 39.00	172km	
GLD	84.30	46	P	38 09.00	0.7	
	0.8s		35.29nm		5.2mb	
			pP	38 47.50	153km	X
AIA	84.69	157	e(P)	38 10.00	0.5	
SES	85.51	35	ePd	38 13.30	-0.6	
MAW	87.81	199	eP	38 25.00	0.2	
INK	88.15	14	eP	38 25.50	-0.7	
LSZ	142.46	218	ePKP	45 06.00	-3.3	X
PRU	144.34	350	ePKP	45 09.50	-1.8	
DOU	145.00	1	PKP	45 11.70	-0.7	
GRF	145.09	353	ePKP	45 12.30	-0.3	
MZZ	145.18	223	iPKPc	45 19.00	5.0	X
ABH	145.18	358	ePKPd	45 12.10	-0.7	
KMZ	145.27	216	iPKPc	45 14.90	0.8	
KHC	145.33	351	PKPd	45 13.20	0.1	
	1.0s		14.00nm			
RUP	145.38	358	ePKPd	45 13.12	0.0	
TOD	145.39	356	ePKPd	45 12.72	-0.4	
WLF	145.43	359	PKP	45 14.00	0.9	
FLN	145.99	7	ePKP	45 14.40	0.3	
	0.8s		18.80nm			
LDF	146.19	7	ePKP	45 15.40	0.9	
	0.8s		9.40nm			
GRR	146.31	8	ePKP	45 15.00	0.3	
	0.8s		8.05nm			
LPF	146.63	8	ePKP	45 16.00	0.8	
	0.8s		21.50nm			
CDF	146.66	358	ePKP	45 16.70	1.3	
	0.8s		9.40nm			
HAU	147.09	359	ePKP	45 17.70	1.7	
	0.8s		10.75nm			
FEL	147.16	357	ePKPd	45 17.88	1.6	
LOR	147.81	2	ePKP	45 19.40	2.3	X
	0.8s		9.40nm			
SSF	148.00	3	ePKP	45 20.20	2.8	X
	0.8s		11.40nm			
LBF	148.10	2	ePKP	45 20.40	2.7	X
	0.8s		10.75nm			

AVF	148.27	3 ePKP	45	20.50	2.7X
	0.8s	8.70nm			
SMF	148.43	2 ePKP	45	20.80	2.7X
	0.8s	5.35nm			
TRI	148.61	349 iPKPd	45	21.50	3.1X
		i	45	32.60	
LSF	148.68	5 ePKP	45	21.50	2.9X
	0.8s	10.75nm			
VAI	149.11	356 PKP	45	18.00	-1.2
LPG	149.59	358 ePKP	45	25.20	4.9X
	0.8s	10.75nm			
LFF	149.90	7 ePKP	45	24.90	4.5X
	0.8s	13.45nm			
CAF	150.04	5 ePKP	45	25.30	4.6X
	0.8s	6.05nm			
LPO	150.20	6 ePKP	45	25.50	4.6X
	0.8s	6.70nm			

S.D. = 0.9 on 40 of 54 obs.

SEP 11, 1989 09h 17m 49.34± 0.38s
46.676 N ± 4.3km 10.139 E ± 3.7km
DEPTH = 6.5 ± 3.2 km
NORTHERN ITALY (545)
ML 3.0 (FUR), 3.0 (LDG).

OSS	0.01	16 ePd	17	50.20	-0.5
VDL	0.50	248 ePc	17	58.50	-0.9
OGA	0.64	72 iPgc	18	01.10	-1.1
		iSg	18	09.90	
SAX	0.79	317 ePd	18	03.90	-1.3
MDI	0.95	198 P	18	07.90	0.2
		eSg	18	18.80	
TMA	1.05	237 ePd	18	08.50	-1.0
SCE	1.14	71 iPg	18	09.80	-1.3
CTI	1.22	120 P	18	12.50	0.0
		eSg	18	29.20	
VAI	1.25	230 P	18	12.20	-0.6
		eSg	18	33.30	
SLE	1.56	315 ePd	18	18.80	1.1
MMK	1.63	248 ePd	18	19.00	0.2
FUR	1.68	27 iPgd	18	21.30	2.0
ORO	1.83	236 P	18	22.20	0.6
		eSg	18	44.40	
BOB	1.97	194 P	18	22.20	-1.4
		(Sg)	18	25.30	
DIX	1.98	253 ePc	18	25.20	1.3
BSF	2.56	298 Pg	18	38.00	6.0X
		Sg	19	08.40	
CDF	2.60	313 Pn	18	31.90	-0.8
		Pg	18	39.20	
		Sg	19	09.40	
LPG	2.64	245 Pn	18	34.60	1.2
VOY	2.68	103 ePn	18	35.20	1.4
		e(Sg)	19	15.20	
TRI	2.70	110 iP	19	14.10	40.2X
HAU	2.90	299 Pn	18	37.60	0.7
		Pg	18	44.40	
		Sg	19	19.60	
DOI	2.97	224 P	18	38.00	0.0
KHC	3.37	42 ePg	19	04.00	20.4X
		e	19	23.50	
		Sg	19	33.20	
SBF	3.40	215 Pn	18	45.00	1.0
LBF	4.24	276 Pn	18	55.60	-0.3
		Pg	19	09.80	
		Sg	20	00.20	
SMF	4.34	272 Pn	18	57.60	0.4
		Pg	19	11.00	
LOR	4.34	280 Pn	18	57.20	-0.1
		Sg	20	03.80	
AVF	4.67	274 Pn	19	01.50	-0.4
BGF	5.03	271 Pn	19	06.60	-0.4
CAF	5.91	256 Pn	19	18.60	-0.9

S.D. = 1.0 on 27 of 30 obs.

? SEP 11, 1989 09h 27m 27.55± 3.55s
33.769 S ±13.9km 71.567 W ±31.7km
DEPTH = 28.4 ± 8.1 km
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.23	145 iPd	27	34.00	0.1
		iS	28	43.00	
TACH	0.54	78 iPd	27	38.50	0.0
		iS	27	50.00	
CHCH	0.78	102 iPc	27	42.10	-0.4
		iS	27	58.30	
SAN	0.82	68 ePc	27	43.50	0.4
		iS	27	58.10	
PCH	0.89	81 iPd	27	44.10	0.0
		iS	28	01.50	
PEL	0.97	50 iPd	27	44.70	-0.5
		iS	28	00.80	
FCH	1.15	68 iPc	27	48.60	0.5
		iS	28	08.00	

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

% SEP 11, 1989 09h 54m 12.33± 0.75s
39.612 N ± 6.3km 29.446 E ±11.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.76	137 ePg	54	27.50	0.3
		eSg	54	40.00	
YLV	0.95	357 iPn	54	30.40	-0.2
KCT	1.05	308 iPn	54	32.40	0.2
HRT	1.22	8 ePn	54	35.00	-0.1
KHL	1.29	177 ePn	54	36.00	-0.3

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

% SEP 11, 1989 09h 55m 37.18± 0.79s
39.676 N ± 6.9km 29.533 E ±12.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.76	144 ePg	55	51.50	-0.7
		eSg	56	04.50	
YLV	0.90	352 iPn	55	54.40	0.0
KCT	1.07	303 iPn	55	56.90	-0.4
HRT	1.15	5 ePn	55	59.00	0.3
KHL	1.35	180 ePn	56	02.70	0.6
EDC	1.45	298 ePn	56	00.00	-3.4X

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

• SEP 11, 1989 11h 01m 27.34± 0.70s
12.266 S ± 7.4km 76.719 W ± 9.8km
DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)
Felt at Limo.

NNA	0.30	337 iPc	01	35.20	0.0
	0.6s	30.00nm			
		iS	01	43.50	
PT10	0.31	308 iP	01	35.00	-0.2
		iS	01	43.00	
PT08	0.35	29 iP	01	36.60	0.5
		iS	01	45.20	
HUA	1.38	81 eP	01	50.40	-0.5
		eS	02	11.60	
PT06	1.60	166 iP	01	53.50	-0.2
		iS	02	21.10	
PT03	1.94	152 iP	01	59.00	0.4
		iS	02	26.50	

S.D. = 0.5 on 6 of 6 obs.

& SEP 11, 1989 11h 16m 16.30s
37.148 N 121.963 W
DEPTH = 15.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.4 (BRK). Felt (V) at Felton, (IV) at Ben Lomand, (III) at Boulder Creek and (II) at Santa Cruz. Also felt at Aptos, San Francisco and South San Francisco.

GCC	0.12	193 iPd	16	19.60	-0.3
MHC	0.32	53 ePc	16	23.20	-0.1
		iS	16	28.05	
		i	16	30.00	
ARN	0.40	60 iPc	16	24.30	-0.2
PCC	0.48	317 iPd	16	25.70	-0.3
		iS	16	33.20	
SAO	0.56	132 iPd	16	26.30	-1.1
		eS	16	36.60	
		i	16	38.15	
BKS	0.76	344 ePd	16	30.20	-0.5
		i	16	30.83	
		eS	16	41.40	
BRK	0.76	342 ePc	16	30.20	-0.5
		eS	16	41.00	
ZSP	0.83	344 iPc	16	31.80	0.0
		eS	16	43.10	
PRS	0.94	150 ePc	16	33.50	-0.3
LLA	0.97	123 ePc	16	33.80	-0.6
PRI	1.45	134 ePc	16	41.60	-0.4
NWRM	1.50	331 eP	16	41.00	-1.6
FRI	1.81	94 eP	16	46.10	-1.0
PHAM	1.82	136 eP	16	45.90	-1.4
PKEM	1.84	125 e(P)	16	46.20	-1.4
ORV	2.43	8 eP	16	54.00	-2.0
BCH	2.48	142 eP	16	54.90	-1.9
ISA	3.18	117 eP	17	09.00	2.2
ABL	3.19	135 eP	17	04.40	-2.7
KVN	3.59	57 eP	17	13.80	1.1
TNP	3.88	75 e(P)	17	19.50	2.6

21 obs. associated

? SEP 11, 1989 11h 17m 03.92± 1.00s
43.099 N ± 6.9km 13.353 E ±10.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.0 (SSO).

CIO	0.18	302 iPg	17	07.99	0.0
		iSg	17	11.56	
SSO	0.20	14 ePg	17	08.62	0.3
		eSg	17	13.46	
ALP	0.36	153 e(Pg)	17	11.34	0.0
		eSg	17	18.10	
AOI	0.49	22 e(Pg)	17	13.54	-0.3
		eSg	17	21.47	

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

? SEP 11, 1989 14h 56m 56.02± 4.59s
33.614 S ±10.3km 71.654 W ±32.9km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.40	149 iPd	57	04.20	0.1
		iS	57	11.00	
TACH	0.60	94 iPd	57	08.20	0.1
		iS	57	21.00	
SAN	0.84	79 eP	57	12.00	-0.3
		iS	57	28.00	
CHCH	0.89	111 iPc	57	13.40	0.2
		iS	57	28.00	
PEL	0.94	60 iPc	57	14.40	0.5
		iS	57	30.50	
PCH	0.95	91 iPd	57	14.00	-0.2
		iS	57	31.00	
FCH	1.18	76 iPc	57	18.50	0.3
		iS	57	38.60	
ZON	3.25	51 eP	57	53.00	4.9X
CFA	3.51	56 eP	57	56.80	5.1X
MRA	5.14	78 ePc	58	14.20	-0.6

S.D. = 0.4 on 8 of 10 obs.

SEP 11, 1989 15h 10m 45.74± 0.32s
1.060 N ± 5.5km 126.188 E ± 7.0km
DEPTH = 33.0km (normal)
4.8mb (6 obs.)
MOLUCCA PASSAGE (266)

PCI	6.64	253 ePc	12	23.60	0.0
		eS	13	08.50	
MTN	14.66	161 eP	14	12.50	-0.2
KNA	16.89	171 eP	14	42.50	1.1
WRA	22.35	159 Pc	15	40.40	-2.1
	0.4s	10.60nm			4.6mb
KGM	22.88	273 eP	15	50.00	2.3
QIS	25.18	149 e(P)	16	10.00	0.1
IPM	25.37	278 ePd	16	12.20	0.4
	1.1s	37.60nm			4.9mb
ASPA	25.70	164 eP	16	15.00	0.2
	0.7s	40.00nm			5.1mb
		eS	20	41.40	
SNG	26.21	284 eP	16	19.60	0.1
WARB	27.09	179 eP	16	29.00	1.5
PSI	27.30	274 iPd	16	29.30	-0.2
	1.0s	12.00nm			4.5mb
		e	18	20.00	
CTA	28.78	138 eP	16	43.00	0.1
CHG	32.02	305 eP	17	11.50	-0.1
CHTO	32.02	305 iP	17	11.20	-0.4
	1.0s	3.25nm			4.2mb
HNR	35.20	108 eP	17	38.00	-1.2
STK	35.87	157 eP	17	44.00	-0.6
TIA	35.97	347 eP	17	46.40	0.9
CD2	36.51	327 eP	17	49.60	-0.5
XAN	36.58	336 eP	17	50.10	-0.5
MAT	37.02	16 eP	17	54.00	-0.3

11d 15h

	1.2s	31.25nm			5.0mb	X
TIY	38.61	342	eP	18	08.40	0.7
BJI	39.85	348	eP	18	18.50	0.6
SNY	40.65	357	eP	18	25.40	1.0
BWA	41.00	152	eP	18	27.80	0.3
CAN	42.00	152	eP	18	37.00	1.3
			e	18	39.20	
CN2	42.56	359	eP	18	40.00	-0.1
MDJ	43.48	4	eP	18	49.30	1.8
KOD	49.27	283	eP	19	33.00	-1.1
HYB	49.56	292	eP	19	35.00	-1.0
	1.0s	40.00nm			5.4mb	
GBA	49 82	287	Pd	19	36.80	-1.1
	0.4s	6.00nm			5.0mb	X
WMQ	54.61	326	eP	20	12.50	-1.1
LOR	110.53	322	ePKP	29	31.60	14.9X
	1.2s	11.90nm				
LBF	110.58	322	ePKP	29	31.20	14.4X
	1.2s	7.10nm				
SSF	110.84	322	ePKP	29	29.90	12.7X
	1.4s	13.00nm				
AVF	111.05	322	ePKP	29	27.10	9.5X
	1.0s	6.00nm				
TCF	111.98	322	ePKP	29	19.90	0.4
	1.0s	4.80nm				
LSF	112.42	322	ePKP	29	18.30	-2.0
	1.2s	16.00nm				
	S.D. = 1.0	on	33 of	37	obs.	

SEP 11, 1989 15h 56m 27.29± 1.47s
43.383 N ± 8.7km 5.409 E ± 9.4km
DEPTH = 9.4 ± 3.5 km
NEAR SOUTH COAST OF FRANCE (379)
MD 2.7 (STR).

GELF	0.01	86	Pg	56	28.95	-0.2
BERF	0.22	109	Pg	56	32.26	0.3
TREF	0.24	356	Pg	56	31.77	-0.7
PRAF	0.46	338	Pg	56	36.83	0.3
VILF	0.52	25	Pg	56	36.90	-0.9
TAVF	0.53	63	Pg	56	37.36	-0.6
GANF	0.71	30	Pg	56	41.64	0.2
CALN	1.14	71	Pn	56	49.16	0.4
			Sg	57	05.35	
MVIF	1.37	67	Pn	56	52.69	0.1
			Sg	57	11.78	
REVF	1.47	75	Pn	56	53.54	-0.4
			Sg	57	14.71	
TOUF	1.48	64	Pn	56	54.43	0.3
			Sg	57	15.36	
AURF	1.48	69	Pn	56	54.19	0.0
FOUF	1.52	40	ePgd	56	56.15	1.7
			eSg	57	14.97	
AUTN	1.59	67	Pn	56	55.77	0.0
			Sg	57	18.41	
SAOF	1.67	68	Pn	56	56.74	-0.1
CVF	2.67	107	Pn	57	10.26	-0.9
	S.D. = 0.7	on	16 of	16	obs.	

SEP 11, 1989 16h 07m 08.94± 0.72s
46.632 N ± 7.4km 10.151 E ± 6.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.5 (FUR).

OSS	0.05	355	ePc	07	10.20	-1.1
VDL	0.49	253	ePc	07	18.50	-0.5
OGA	0.65	68	iPgc	07	21.10	-0.9
			iSg	07	29.90	
LLS	0.83	287	ePc	07	23.40	-1.7
SAX	0.83	319	ePd	07	24.30	-0.9
MDI	0.91	200	P	07	26.50	0.2
TMA	1.03	240	ePd	07	28.60	0.1
SCE	1.15	69	iPgc	07	29.90	-0.6
VAI	1.23	232	P	07	32.20	0.5
			eSg	07	51.00	
SLE	1.60	316	ePc	07	38.90	1.5
MMK	1.62	250	ePc	07	39.30	1.4
FUR	1.71	26	iPgd	07	41.40	2.4
DIX	1.98	255	ePd	07	46.20	3.1X
	S.D. = 1.4	on	12 of	13	obs.	

& SEP 11, 1989 16h 20m 36.60s
38.087 N 121.877 W
DEPTH = 14.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.5 (BRK).

ZSP	0.33	245	iPc	20	43.40	-0.3
			iS	20	49.60	
BKS	0.35	234	iPd	20	43.65	-0.4
			iS	20	48.90	
BRK	0.37	235	iPc	20	44.00	-0.4
			iS	20	49.40	
PCC	0.71	214	iPd	20	49.50	-0.7
			iS	20	59.50	
MHC	0.77	166	iPc	20	50.60	-0.7
			eS	20	59.40	
ARN	0.79	160	ePc	20	50.60	-0.9
GCC	1.06	185	ePc	20	54.00	-2.2
SAO	1.36	165	ePc	20	58.90	-2.2
ORV	1.50	11	eP	21	01.60	-1.4
			iS	21	19.20	
KVN	3.11	71	eP	21	26.00	-0.3
	10 obs. associated					

% SEP 11, 1989 17h 09m 12.88± 0.97s
14.127 S ±13.7km 74.995 W ± 9.3km
DEPTH = 33.0km (normal)
PERU (116)

PT03	0.79	280	iP	09	28.60	1.0
			iS	09	41.80	
PT06	1.33	283	iP	09	34.70	-0.6
			iS	09	53.10	
PT02	1.83	310	iP	09	41.80	-0.8
			iS	10	27.00	
HUA	2.10	351	eP	09	47.20	0.4
			eS	10	17.30	
NNA	2.79	320	iPd	09	56.30	0.1
	0.7s	30.82nm				
			iS	10	29.50	
CNCB	7.27	112	P	11	00.00	-0.1
	S.D. = 0.9	on	6 of	6	obs.	

SEP 11, 1989 17h 36m 33.03± 0.90s
18.954 N ± 4.9km 145.582 E ±12.0km
DEPTH = 238.8 ± 8.8 km
4.9mb (13 obs.)
MARIANA ISLANDS (216)

GUMO	5.38	187	eP	37	54.50	0.7
	0.3s	99.53nm			5.3mb	
PJG	5.38	187	eP	37	54.50	0.7
GUA	5.42	187	eP	37	54.20	-0.1
	0.3s	529.87nm			6.0mb	X
			eS	38	53.90	
IIDJ	17.81	339	eP	40	26.40	-0.3
CHJJ	17.99	342	eP	40	26.90	-1.7
MAT	18.68	341	iPd	40	35.70	0.0
	0.8s	11.94nm			4.5mb	
			eS	43	51.00	
MTMJ	18.85	340	eP	40	36.70	-0.8
NIIJ	19.11	344	eP	40	41.10	1.1
PMG	28.23	177	eP	42	05.00	-1.1
SVO	31.25	152	P	42	30.00	-2.6
HNR	31.56	152	e(P)	42	35.00	-0.3
MTN	34.66	205	eP	43	01.00	-0.9
KNA	38.25	207	eP	43	32.60	0.7
CTA	38.81	179	iPd	43	36.80	0.3
	0.8s	9.33nm			4.4mb	
OIS	39.70	189	eP	43	44.00	0.2
WRA	40.20	197	Pd	43	49.00	1.1
	0.6s	42.40nm			5.1mb	
ASPA	43.87	196	iPc	44	18.00	0.3
	0.6s	50.00nm			5.1mb	
GTA	44.31	307	eP	44	21.40	0.2
RMO	45.28	176	eP	44	27.50	-1.2
DZM	45.59	152	iPc	44	31.90	0.5
BRS	46.59	171	iP	44	39.00	-0.2
MBL	47.17	214	eP	44	43.50	-0.1
	0.4s	12.00nm			4.6mb	
WARB	48.49	203	iPc	44	54.70	0.9
	0.3s	14.00nm			4.8mb	
NANU	50.65	217	iPc	45	10.50	0.3
	0.3s	12.00nm			4.8mb	
STK	50.69	184	iPd	45	09.90	-0.4
FORR	52.29	199	iPd	45	22.20	0.0
	0.4s	53.00nm			5.4mb	
MEKA	52.35	211	iPc	45	23.90	1.1
BWA	53.15	177	eP	45	28.50	-0.1
WMQ	54.06	311	eP	45	32.00	-3.3X
CAN	54.07	177	eP	45	35.00	-0.3
MRWA	55.76	211	eP	45	47.00	-0.5
	0.3s	9.00nm			4.8mb	

MUN	57.94	209	eP	46	03.00	0.3
NWAO	58.27	208	eP	46	04.00	-1.0
	0.5s	17.00nm			5.0mb	
RKG	59.34	207	eP	46	15.60	3.3X
MNG	65.47	155	eP	46	51.30	-1.2
LRM	84.63	43	eP	48	42.80	1.5
FFC	86.94	32	iPd	48	53.10	1.1
	0.9s	27.00nm			5.1mb	
HFS	92.11	338	eP	49	13.70	-2.4
	0.3s	0.70nm			4.2mb	
ARE	144.64	92	ePKP	55	45.00	1.2
ZOBO	147.79	91	PKP	55	50.50	1.2
	0.8s	13.17nm				
LPB	147.86	91	ePKP	55	54.00	4.8X
CNCB	148.01	92	PKP	55	51.30	1.6
	S.D. = 1.0	on	39 of	42	obs.	

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* SEP 11, 1989 18h 19m 56.94± 0.37s
17.191 S ±10.9km 171.524 W ±10.6km
DEPTH = 33.0km (normal)
4.9mb (6 obs.)
TONGA ISLANDS REGION (174)

AFI	3.27	356	P	20	45.50	-1.7
			S	21	20.00	
DZM	21.30	253	iP	24	42.20	-1.1
KRP	23.58	206	P	25	14.00	8.6X
CTA	40.04	259	iPc	27	31.30	0.4
	0.8s	8.96nm			4.6mb	
TOO	42.78	233	eP	27	53.00	-0.2
WRA	51.21	258	Pd	28	58.90	-0.8
	0.8s	4.20nm			4.5mb	
ASPA	51.30	253	eP	28	59.30	-1.0
	1.1s	29.00nm			5.2mb	
BKS	71.71	39	e(P)	31	18.00	0.2
SPA	72.92	180	ePc	31	23.20	-1.5
	0.9s	17.73nm			5.1mb	
WDC	73.29	37	eP	31	26.90	-0.1
TNP	74.95	42	P	31	36.20	-0.8
	1.0s	9.50nm			4.7mb	
KVN	74.98	40	P	31	35.80	-1.3
LON	77.78	32	P	31	53.00	0.6
ALO	80.59	49	P	32	07.90	-0.2
CN2	83.61	320	eP	32	32.50	9.2X
GOL	83.61	45	P	32	23.00	-0.8
FBA	83.82	10	P	32	23.60	-0.4
	1.0s	17.50nm			5.2mb	
RSSD	86.57	42	P	32	37.50	-0.9
BJI	88.00	313	eP	32	46.50	1.5
TIY	89.77	310	eP	32	55.20	1.5
KMZ	145.06	210	iPKPd	39	33.00	-0.6
MZZ	145.37	217	iPKPd	39	34.00	-0.2
CLL	145.77	355	iPKPc	39	33.90	0.3
	1.2s	47.00nm				
			i	39	42.80	
			e	39	58.00	
KSP	145.85	351	ePKP	39	34.30	0.5
			e	39	43.00	
KRA	145.94	347	ePKP	39	34.00	0.1
			e	39	43.00	
BRG	146.11	354	iPKPc	39	34.50	0.3
	1.2s	42.00nm				
			i	39	43.60	
ENN	146.44	3	e(PKP)	39	36.00	1.3
	1.0s	16.00nm				
			e	39	45.00	
MOX	146.53	356	iPKPc	39	36.50	1.6
	1.4s	39.00nm				
			i	39	46.00	
NAI	146.59	239	iPKP	39	39.00	2.6X
	1.0s	15.00nm				
SPC	146.68	346	ePKP	39	38.00	2.6X
HOF	146.85	356	ePKP	39	37.20	1.8
PRU	146.92	353	ePKPc	39	36.00	0.5
			e	39	37.80	
DOU	147.03	5	PKPd	39	37.80	2.1X
	1.0s	22.20nm				
ABH	147.38	1	ePKPc	39	38.88	2.6X
GRF	147.51	357	iPKPc	39	39.70	3.2X
			e	39	49.00	
			e	39	55.50	
RUP	147.55	2	ePKPc	39	39.49	2.9X
WLF	147.55	3	PKPc	39	39.80	3.3X
			e	39	49.40	
VRI	147.61	336	ePKPd	39	40.00	3.2X
TOD	147.67	360	ePKPc	39	39.79	3.0X
FLN	147.68	11	iPKPc	39	39.60	2.8X

KHC	147.87	354	PKP	39	38.00	0.8
			i	39	40.70	
			i	39	50.00	
LDF	147.90	11	iPKPc	39	40.10	3.0X
GRR	147.96	12	ePKP	39	40.50	3.3X
MLR	148.23	336	ePKPd	39	42.00	4.0X
LPF	148.27	12	ePKP	39	41.30	3.6X
ZST	148.28	349	iPKP	39	41.90	4.1X
			i	39	51.20	
GWF	148.29	1	PKP	39	41.43	3.6X
SRO	148.41	347	ePKP	39	41.80	3.8X
CDF	148.85	2	PKP	39	42.71	3.9X
WLS	148.85	1	PKP	39	42.17	3.4X
VITF	148.99	3	PKP	39	42.85	4.0X
FUR	149.02	356	ePKP	39	43.50	4.5X
			i	39	52.80	
ECH	149.04	2	PKP	39	42.79	3.8X
HAU	149.22	3	iPKPc	39	43.90	4.6X
FEL	149.40	1	PKP	39	44.05	4.3X
MOF	149.40	2	PKP	39	43.50	3.8X
BSF	149.41	2	PKP	39	43.94	4.2X
LOR	149.77	6	iPKPc	39	45.20	5.1X
MFF	149.81	12	ePKP	39	45.00	4.8X
LOMF	149.89	2	PKP	39	45.37	5.0X
KBA	149.93	353	iPKPd	39	45.00	4.4X
	0.9s		11.80nm			
			i	39	53.10	
SSF	149.93	7	iPKPc	39	45.90	5.5X
SAX	150.02	359	ePKPd	39	46.50	5.6X
LBF	150.06	6	iPKPc	39	45.90	5.3X
AVF	150.18	7	iPKPc	39	46.00	5.3X
OGA	150.33	356	ePKP	39	46.50	5.2X
BGF	150.35	8	iPKPc	39	46.60	5.6X
SMF	150.38	6	iPKPc	39	46.50	5.4X
LLS	150.40	359	ePKPd	39	47.30	5.9X
LSF	150.45	10	iPKPc	39	46.30	5.1X
TCF	150.52	9	iPKPc	39	46.70	5.4X
OSS	150.56	358	ePKPd	39	47.80	6.2X
MAF	150.64	8	ePKP	39	47.20	5.7X
PTJ	150.70	349	ePKP	39	46.00	4.3X
VDL	150.78	359	ePKPd	39	48.40	6.5X
AGO	150.88	8	PKP	39	47.77	5.9X
VOY	150.89	352	e(PKP)	39	41.80	-0.2
			e	39	47.20	
			e	39	56.40	
PLDF	151.02	7	PKP	39	48.26	6.1X
CEY	151.11	351	e(PKP)	39	48.00	5.8X
CTI	151.11	355	PKPc	39	48.00	5.7X
PYM	151.16	8	PKP	39	48.63	6.3X
TMA	151.17	359	ePKPd	39	48.70	6.2X
DIX	151.18	2	ePKPd	39	49.80	7.2X
VBY	151.21	350	e(PKP)	39	42.80	0.5
			i	39	49.40	
RJF	151.37	10	ePKP	39	48.70	6.1X
LFF	151.58	12	ePKP	39	49.20	6.3X
LBL	151.70	8	PKP	39	50.06	7.0X
LPG	151.74	3	ePKP	39	50.90	7.4X
CAF	151.83	10	ePKP	39	50.10	6.8X
LPO	151.91	11	ePKP	39	49.80	6.4X

S.D. = 1.0 on 31 of 90 obs.

SEP 11, 1989 20h 24m 34.55± 0.67s
44.393 N ± 7.2km 7.297 E ± 8.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

DOI	0.12	341	P	24	37.50	-0.1
			iSg	24	39.80	
STV	0.15	173	P	24	38.15	0.0
			S	24	40.01	
PZZ	0.18	309	P	24	38.66	0.0
			S	24	41.06	
ENR	0.19	152	P	24	38.81	0.0
			S	24	41.23	
ROB	0.42	103	P	24	43.30	0.1
			S	24	49.15	
IMI	0.64	138	P	24	47.27	-0.2
			S	24	55.76	

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

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* SEP 11, 1989 20h 51m 08.94± 2.17s
37.386 N ±17.6km 21.368 E ±23.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
ML 3.5 (ATH).

ITM	0.49	115	ePg	51	17.50	-1.4
VLS	1.00	322	ePg	51	25.00	-2.9X
ATH	1.95	72	ePg	51	52.80	10.4X
NEO	2.41	37	ePn	51	50.00	1.0
KEK	2.63	333	ePg	52	00.00	7.9X
SRN	2.71	337	ePn	52	01.50	8.2X
LSK	2.82	348	ePn	51	53.70	-1.3
KZN	2.93	6	ePn	51	57.00	0.5
VAM	3.02	130	ePn	51	58.90	1.2
KBN	3.26	353	ePn	52	00.00	-1.1
VLO	3.41	335	ePn	52	11.20	8.1X
OHR	3.75	353	ePn	52	11.00	2.9X
LCI	3.97	319	P	52	17.50	6.4X
NPS	4.03	120	ePg	52	30.00	18.0X
PHP	4.36	351	ePn	52	20.90	4.3X
SKO	4.58	1	ePn	52	17.00	-2.8X
BCI	5.07	349	ePn	52	27.90	1.1

S.D. = 1.5 on 7 of 17 obs.

SEP 11, 1989 21h 17m 20.05± 0.49s
41.465 N ± 4.7km 20.816 E ± 4.2km
DEPTH = 5.0km (geophysicist)
ALBANIA (391)
ML 3.3 (SKO), 3.1 (TTG).

OHR	0.35	182	iPgc	17	26.60	-0.6
			iSg	17	32.70	
PHP	0.36	308	iPgd	17	25.40	-1.9
KKS	0.68	334	ePg	17	33.00	-0.7
SKO	0.69	42	iPg	17	32.00	-1.8
			iSg	17	42.50	
TIR	0.72	261	ePg	17	33.50	-1.0
KBN	0.84	180	iPgd	17	36.20	-0.5
LACI	0.85	282	ePg	17	36.00	-0.9
PUK	0.90	310	ePg	17	36.20	-1.5
BERA	1.00	221	iPgc	17	39.50	0.0
BCI	1.06	328	ePg	17	40.00	-0.5
ULC	1.27	294	iPgd	17	43.50	-0.7
			eSg	18	02.70	
PVY	1.29	331	ePg	17	46.00	1.5
			eSg	18	05.00	
VLO	1.41	226	iPn	17	47.20	0.8
TTG	1.51	310	ePg	17	50.00	2.3
			eSg	18	11.50	
IVA	1.56	334	iPnc	17	50.00	1.4
			eSn	18	12.00	
BDV	1.70	300	ePn	17	52.00	1.5
			eSn	18	15.00	
SRN	1.70	202	ePn	17	53.10	2.6X
KKB	1.75	76	eP	17	52.00	0.8
NKY	1.91	315	iPnc	17	56.80	3.2X
			eSn	18	22.00	
HCY	1.99	300	ePn	17	57.00	2.3
			eSn	18	23.00	
VTS	2.11	57	iPgd	17	57.00	0.4
MMB	2.19	86	ePd	17	58.00	0.3
			eS	18	35.00	
BRY	2.22	311	ePn	18	00.80	2.7X
			eSn	18	29.00	
RZN	2.93	84	iP	18	09.00	0.6
BEO	3.37	356	eP	18	13.00	-1.3
KDZ	3.46	85	iP	18	15.00	-0.7

S.D. = 1.3 on 23 of 26 obs.

SEP 11, 1989 21h 27m 01.75± 0.52s
51.880 N ±11.0km 170.468 W ± 5.9km
DEPTH = 33.0km (normal)
4.6mb (23 obs.) 4.5Msz (5 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK	3.85	272	eP	28	00.50	0.4
KDC	11.90	53	eP	29	48.50	-3.4X
SVW	12.33	36	eP	30	02.70	5.0X
TTA	13.50	29	eP	30	15.00	1.8
PMS	14.79	43	eP	30	28.40	-1.7
PMR	15.14	42	eP	30	36.00	1.4
IMA	16.56	24	eP	30	59.00	6.2X
TOA	16.62	43	eP	30	52.10	-1.5
FBA	17.50	33	e(P)	31	03.50	-1.0
INK	24.13	33	eP	32	15.00	0.0
MBC	31.24	21	eP	33	20.00	0.2
	0.6s		7.00nm			4.7mb
LON	31.65	80	eP	33	21.60	-2.2
SES	36.42	68	eP	34	06.00	1.2
KVN	38.09	89	eP	34	22.00	2.9X
FFC	39.55	58	iPc	34	30.80	-0.1
	0.7s		8.00nm			4.6mb

MSU	42.08	85	eP	34	55.00	2.8X
CN2	42.49	285	eP	34	53.00	-2.1
GOL	45.52	79	eP	35	20.00	0.0
RSON	45.82	59	eP	35	21.00	-0.9
ALO	47.89	85	eP	35	39.30	0.6
	1.0s		4.50nm			4.4mb
	Z 18s		0.29um			4.3Msz
FRB	49.77	35	eP	35	52.00	-0.4
BJI	50.27	287	eP	35	58.50	1.9
	Z 20s		0.36um			4.4Msz
DAG	50.37	8	iPd	35	57.60	0.7
	0.5s		9.86nm			5.1mb
TIA	52.19	283	eP	36	09.60	-1.7
TIY	54.00	287	eP	36	25.00	0.3
	Z 22s		0.50um			4.5Msz
SCH	56.29	43	eP	36	40.00	-1.1
KEV	58.01	353	eP	36	54.00	1.1
GTA	60.10	297	P	37	06.80	-1.2
	Z 16s		0.60um			4.8MszX
SOD	60.38	352	iP	37	08.30	-1.1
WMO	63.30	308	iPd	37	29.00	-0.4
	Z 20s		0.50um			4.7Msz
			eS	45	58.50	
CD2	63.87	287	P	37	32.60	-0.7
SUF	64.99	352	iP	37	39.00	-1.0
NUR	67.31	352	iP	37	53.50	-1.3
	0.6s		7.80nm			5.0mb
	Z 20s		0.30um			4.5Msz
			LR	06	20.00	
NB2	67.42	359	P	37	54.30	-1.3
	0.7s		3.00nm			4.5mb
HFS	68.29	358	eP	37	59.20	-1.7
	0.6s		6.50nm			4.9mb
	Z 17s		0.10um			4.1MszX
			LR	11	12.00	
EKA	72.64	8	P	38	28.00	0.7
	0.6s		2.50nm			4.4mb
CHG	75.79	282	eP	38	46.00	-0.1
BRG	77.55	357	eP	38	55.80	0.4
	1.6s		22.00nm			4.9mb
KHC	79.31	357	P	39	05.70	0.6
LDF	79.57	7	eP	39	06.40	-0.1
	0.6s		4.30nm			4.6mb
LPF	80.06	7	eP	39	09.50	0.4
	0.6s		3.60nm			4.5mb
HAU	80.46	2	eP	39	11.60	0.3
BSF	80.64	2	eP	39	12.60	0.3
LOR	81.11	4	eP	39	15.30	0.6
	0.6s		2.70nm			4.4mb
SSF	81.30	4	eP	39	16.40	0.7
	0.6s		3.60nm			4.6mb
KBA	81.37	357	iPc	39	17.20	0.9
	0.6s		5.80nm			4.8mb
			i	39	21.50	
			i	39	40.60	
LBF	81.40	4	eP	39	16.70	0.4
	0.6s		2.70nm			4.4mb
MFF	81.55	7	eP	39	17.60	0.6
	0.6s		3.60nm			4.6mb
AVF	81.57	4	eP	39	17.70	0.7
	0.8s		3.20nm			4.4mb
SMF	81.73	4	eP	39	18.50	0.5
	0.8s		7.20nm			4.7mb
BGF	81.77	5	eP	39	18.70	0.5
	0.6s		3.60nm			4.6mb
LSF	82.01	6	eP	39	20.00	0.6
	0.6s		3.90nm			4.6mb
MAF	82.10	5	eP	39	20.80	1.0
	0.8s		6.70nm			4.7mb
LFF	83.26	6	eP	39	26.90	1.0
	0.8s		8.00nm			4.9mb
CAF	83.36	5	eP	39	26.40	0.0
	1.2s		11.90nm			4.9mb
QUE	84.06	313	eP	39	30.80	0.4
EPF	85.13	7	eP	39	35.70	0.3
PSI	88.28	272	ePc	39	50.50	-0.6
			e	41	00.00	
HYB	88.77	297	eP	39	54.00	0.5
SPA	141.69	180	e(PKP)	46	32.00	1.8
	1.0s		5.00nm			
			e	46	41.40	
BUL	144.99	328	iPKPd	46	36.60	-0.6
MAW	150.07	218	ePKP	46	48.50	4.8X

S.D. = 1.0 on 56 of 62 obs.

? SEP 11, 1989 22h 17m 11.26± 1.05s
19.716 S ±11.2km 133.738 E ± 9.5km

11d 22h

DEPTH = 5.0km (geophysicist)
NORTHERN TERRITORY, AUSTRALIA (591)

WB5	0.62	105	iPd	17 22.30	-1.3
ASPA	3.93	178	iPd	18 14.90	1.2
	0.4s		84.00nm		
			eS	18 59.60	
OIS	5.58	100	eP	18 38.00	1.0
MTN	7.27	339	eP	19 01.00	0.2
			eS	20 22.00	
			e	21 18.00	
WARB	9.17	224	eP	19 26.20	-1.1
	0.3s		2.00nm	5.1mb X	
			eS	21 06.00	
S.D. = 1.6			on 5 of 5 obs.		

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* SEP 12, 1989 00h 29m 45.05± 1.29s
31.140 S ±16.6km 68.405 W ±14.1km
DEPTH = 110.4 ± 23.1 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.47	210	iPd	30 01.70	-0.3
CFA	0.49	163	iPc	30 09.00	6.9X
			S	30 13.00	
MRA	2.62	120	iPc	30 26.50	-0.2
FCH	2.70	216	eP	30 29.50	1.4
PEL	2.78	223	iPd	30 29.50	0.6
PCH	3.05	215	iPd	30 33.50	0.9
			iS	31 10.50	
TACH	3.30	220	iPd	30 35.40	-0.4
			iS	31 15.00	
CHCH	3.37	214	iPc	30 37.00	0.2
			iS	31 17.00	
CYA	3.52	41	eP	30 39.00	0.2
LNV	3.78	221	iPd	30 40.10	-2.3
S.D. = 1.3			on 9 of 10 obs.		

% SEP 12, 1989 01h 32m 56.60± 0.81s
38.450 N ± 7.6km 14.753 E ± 9.3km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.52	185	P	33 07.20	0.0
			eSg	33 14.30	
GIB	0.73	231	P	33 10.30	-0.8
			eSg	33 21.00	
SOI	1.09	110	P	33 17.00	-0.1
			eSn	33 32.20	
MEU	1.35	174	P	33 21.00	-0.6
			eSn	33 38.20	
FAI	1.45	216	P	33 24.30	1.5
			eSn	33 43.30	
TDS	1.73	45	P	33 27.70	0.9
MGR	1.80	20	P	33 27.00	-0.8
S.D. = 1.1			on 7 of 7 obs.		

SEP 12, 1989 01h 39m 36.67± 0.37s
45.912 N ± 2.9km 2.905 E ± 3.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (LDG).

PYM	0.18	156	Pg	39 40.90	0.2
			Sg	39 43.86	
AGO	0.21	48	Pg	39 41.39	0.1
			Sg	39 44.52	
MAF	0.39	323	Pg	39 44.80	0.1
			Sg	39 50.00	
PLDF	0.50	83	Pg	39 46.49	-0.4
			Sg	39 53.36	
TCF	0.61	308	Pg	39 48.60	-0.4
			Sg	39 56.50	
BGF	0.65	356	Pg	39 49.30	-0.3
			Sg	39 57.80	
LBL	0.72	160	Pg	39 50.60	-0.2
			Sg	39 59.81	
AVF	0.93	19	Pg	39 54.20	-0.2
			Sg	40 06.10	
SMF	0.98	41	Pg	39 55.20	-0.1
			Sg	40 07.60	
LSF	1.02	290	Pg	39 56.00	0.1
			Sg	40 08.80	
CAF	1.15	211	Pg	39 58.40	0.2
			Sg	40 13.60	
SSF	1.22	20	Pg	39 59.70	0.3
			Sg	40 15.20	
LBF	1.30	34	Pg	40 01.10	0.3
			Sg	40 17.80	
LOR	1.51	26	Pg	40 04.20	0.5
			Sg	40 23.70	
S.D. = 0.3			on 14 of 14 obs.		

SEP 12, 1989 02h 00m 21.34± 0.60s
44.404 N ± 7.2km 7.276 E ± 8.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

DOI	0.10	348	Pd	00 24.60	0.4
			eSg	00 26.80	
PZZ	0.16	309	P	00 25.38	0.2
			S	00 27.66	
STV	0.16	168	P	00 25.41	0.3
			S	00 27.69	
ENR	0.21	150	P	00 26.08	0.2
			S	00 28.96	
ROB	0.44	104	P	00 30.46	0.1
			S	00 36.40	
RRL	0.62	326	P	00 33.43	-0.6
IMI	0.66	138	P	00 33.94	-0.6
			S	00 42.76	
S.D. = 0.5			on 7 of 7 obs.		

? SEP 12, 1989 03h 02m 04.77± 4.30s
46.286 N ±69.3km 152.810 E ±64.5km
DEPTH = 33.0km (normal)
4.5mb (5 obs.)
KURIL ISLANDS (221)

KUSJ	6.59	244	eP	03 40.60	-1.3
			eS	04 46.40	
ASAJ	7.50	257	eP	03 56.40	1.8
HOOJ	7.86	244	eP	03 59.70	0.1
			eS	05 19.70	
MRRJ	9.25	250	eP	04 18.20	-0.6
			eS	05 56.00	
NB2	68.60	341	P	13 04.00	-2.1
	0.5s		1.10nm	4.2mb	
HFS	68.82	339	eP	13 05.00	-2.3
	0.4s		1.80nm	4.5mb	
KBA	80.46	333	iPc	14 14.70	0.1
	0.6s		3.20nm	4.5mb	
LOR	82.94	339	eP	14 27.40	0.0
	0.4s		1.70nm	4.5mb	
GRR	82.95	343	eP	14 29.20	1.8
AVF	83.51	339	eP	14 30.90	0.7
LPG	83.83	337	eP	14 33.10	0.8
MAF	84.23	340	eP	14 35.00	1.0
	0.8s		4.50nm	4.7mb	
S.D. = 1.5			on 12 of 12 obs.		

& SEP 12, 1989 06h 29m 58.20s
60.099 N 151.890 W
DEPTH = 61.7km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL	0.30	101	iP	30 09.50	0.9
ILIM	0.54	268	iP	30 10.37	-0.5
			eS	30 20.34	
RDT	0.54	332	iP	30 10.61	-0.3
			eS	30 20.90	
BRLK	0.61	123	eP	30 11.21	-0.4
			eS	30 21.93	
XLV	0.65	172	eP	30 11.36	-0.7
			eS	30 22.49	
CNPM	0.66	150	iP	30 11.75	-0.5
			S	30 23.22	
NKA	0.72	26	eP	30 14.62	1.7
OPT	0.81	237	eP	30 13.44	-0.6
			eS	30 24.63	
SLKM	0.93	63	eP	30 14.70	-0.8
			S	30 27.79	
AUE	1.06	226	eP	30 16.49	-0.7
SPU	1.09	356	iP	30 17.44	-0.3
			eS	30 33.16	
SEW	1.22	89	eP	30 18.44	-1.0
CDD	1.47	218	eP	30 21.87	-1.1
SUA	1.48	22	iP	30 23.11	0.0
			eS	30 42.69	
SHU	1.49	189	eP	30 22.07	-1.1
PMS	1.62	44	eP	30 24.80	-0.2
PWA	1.84	31	iPc	30 27.90	-0.1
SKT	1.90	5	eP	30 28.47	-0.3
PMR	2.02	41	iPd	30 29.60	-0.8
PME	2.08	41	eP	30 30.39	-0.8
SVW	2.10	300	iPd	30 29.70	-1.9
KDC	2.38	188	iPc	30 32.80	-2.7
GLI	2.50	70	eP	30 34.31	-2.9
			eS	31 03.01	
FID	2.76	74	eP	30 37.49	-3.4
VZW	2.80	68	eP	30 39.39	-2.2
			eS	31 11.13	
KLU	3.24	62	eP	30 45.71	-2.1
TOA	3.43	52	eP	30 39.10	-11.3
TTA	3.46	327	eP	30 49.10	-1.7
KTH	3.50	7	eP	30 51.57	0.2
DDM	4.67	35	eP	31 07.99	0.2
HDA	4.90	26	eP	31 09.35	-1.7
CCB	4.94	21	eP	31 09.59	-2.0
FBA	5.18	20	iPc	31 13.10	-1.8
GLM	5.33	21	eP	31 14.89	-2.2
34 obs. ossociated					

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* SEP 12, 1989 06h 52m 59.56± 1.79s
31.834 N ±22.8km 137.970 E ±11.1km
DEPTH = 384.2 ± 9.9 km
4.6mb (11 obs.)
SOUTH OF HONSHU, JAPAN (211)

MAT	4.70	2	iPd	54 17.30	-0.9
	0.7s		104.79nm		
			eS	55 18.00	
SHK	5.19	303	iPc	54 24.30	1.0
	0.9s		265.55nm	5.2mb	
CN2	15.49	324	Pd	56 19.20	-0.8
BJI	19.42	301	eP	57 01.50	1.9
XAN	24.45	283	P	57 46.00	-1.0
GTA	31.74	295	P	58 50.60	-0.8
	0.6s		0.01nm	1.3mb X	
WMO	40.89	302	P	00 08.00	0.7
			S	05 52.00	
GBA	58.01	266	Pc	02 15.00	-0.9
	0.7s		4.70nm	4.0mb	
KEV	67.29	339	iP	03 15.80	0.3
	0.6s		9.10nm	4.7mb	
SOD	68.65	337	iP	03 23.70	-0.1
SUF	71.33	333	iP	03 39.80	-0.1
	0.4s		7.10nm	4.7mb	
NUR	73.18	332	iP	03 50.80	0.2
	0.7s		17.40nm	4.8mb	
HFS	77.61	335	eP	04 14.50	-0.8
	0.9s		12.00nm	4.7mb	
NB2	77.84	336	P	04 16.30	-0.3
	0.9s		9.30nm	4.5mb	
KVN	80.22	50	eP	04 30.00	0.2
TNP	81.33	51	eP	04 36.50	0.9
KSP	82.96	327	iPc	04 44.20	0.8
CLL	84.12	329	eP	04 49.00	-0.2
	1.2s		14.00nm	4.6mb	
LPG	91.22	328	eP	05 27.10	3.7X
	0.6s		3.90nm	4.5mb	
SMF	91.60	330	eP	05 24.60	-0.1
	0.6s		2.70nm	4.4mb	
AVF	91.69	331	eP	05 25.00	-0.1
	0.8s		5.30nm	4.5mb	
TCF	92.56	331	eP	05 29.20	0.0
LSF	92.87	331	eP	05 30.50	-0.1
S.D. = 0.8			on 22 of 23 obs.		

SEP 12, 1989 08h 25m 31.17± 0.70s
44.232 N ± 7.6km 7.407 E ± 5.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

ENR	0.01	118	P	25 32.81	-0.3
			S	25 33.95	
STV	0.06	282	P	25 33.63	0.1
			S	25 35.06	
DOI	0.30	337	P	25 37.00	-0.4
			eSg	25 41.50	
ROB	0.34	79	P	25 38.20	0.0
			S	25 43.78	
PZZ	0.35	321	P	25 38.72	0.3
			S	25 43.43	
IMI	0.47	133	P	25 40.91	0.1
PCP	0.87	69	P	25 48.20	0.2
			S	25 59.17	
S.D. = 0.3			on 7 of 7 obs.		

```
*  SEP  12, 1989  08h 54m 30.14± 0.42s
    9.029 S ± 8.8km  110.546 E ±10.2km
   DEPTH =  33.0km  (normal)
   4.8mb (  6 obs.)
 SOUTH OF JAVA                          (282)

NANU   14.28 161 eP     57 46.00   -6.1X
       0.3s     13.00nm          5.0mb X
                eS     00 15.00
MBL    15.02 144 eP     57 55.50   -6.3X
       0.3s      8.00nm          4.5mb
                eS     00 24.00
IPM    16.52 325 ePc    58 26.80    5.7X
                e      59 49.50
KNA    19.00 112 eP     58 51.50   -0.4
MEKA   19.06 158 eP     58 53.00    0.5
                eS     02 07.00
MTN    20.56 102 iPd    59 09.90    1.1
                eS     00 37.50
MRWA   20.73 166 eP     59 24.00   13.5X
       0.3s      4.00nm
                eS     02 47.00
WARB   22.90 140 eP     59 33.00    0.8
                e      59 43.00
                eS     03 41.00
MUN    23.43 168 eP     59 51.00   13.7X
                eS     03 54.00
WRA    25.43 118 Pd     59 57.40    0.7
       1.0s     56.00nm          5.1mb
ASPA   26.66 126 iPd    00 07.70   -0.4
FORR   27.19 145 eP     00 11.50   -1.2
                e      00 42.00
QIS    30.28 115 eP     00 41.00    0.2
STK    36.69 133 eP     01 36.00    0.0
KOD    38.08 299 eP     01 48.80    0.6
GBA    39.82 304 Pd     02 01.50   -0.8
       0.5s      3.40nm          4.4mb
XAN    42.86 358 P      02 29.00    2.0
POO    45.40 307 eP     02 48.00    0.2
TIA    45.42   7 eP     02 47.50   -0.1
     Z  32s      1.40um          4.7MszX
     N  30s      1.20um
TIY    46.53   2 eP     02 54.00   -2.4
     N  17s      2.70um
                PcP    04 24.50
BJI    49.10   6 eP     03 17.50    1.2
GTA    49.21 349 eP     03 18.80    1.3
NDI    49.40 321 eP     03 29.00   10.1X
MAT    52.26  28 eP     03 39.00   -1.5
       1.6s     63.33nm          5.3mb
CN2    54.29  13 eP     03 54.00   -1.4
                esP    04 08.00
WMQ    56.54 340 eP     04 12.00    0.1
SNZO   64.73 131 eP     05 16.00    8.5X
                S      15 24.00
                PS     16 42.00
MAW    66.49 198 eP     05 17.00   -1.4
                e      06 44.00
LSZ    80.35 256 eP     06 39.00   -1.4
SPA    81.03 180 e(P)   06 42.60   -0.5
       1.0s      5.00nm          4.5mb
BBTK   86.48 311 eP     07 20.00    8.8X
                e      08 39.50
BNG    92.66 274 ePd    07 42.90    2.2
       0.7s     18.00nm          5.6mb
                id     09 08.40
                ic     09 17.30
KVN   127.30  47 ePKP   13 34.70    1.0
TUL   144.06  38 ePKP   14 02.20   -2.3
       1.4s      8.40nm
FVM   145.53  30 ePKP   14 07.20    0.2
BAO   147.56 221 ePKP   14 14.00    3.0X
                e      15 40.50
                e      15 54.80
RSCP  149.73  27 ePKP   14 28.50   14.7X
CBN   150.09  13 ePKP   14 09.00   -5.2X
                e      15 48.00
                e      16 03.00
CNCB  154.29 183 ePKP   14 32.00   10.5X
                i      15 52.00
LPB   154.57 183 PKP    14 33.00   11.3X
     Z  22s      1.48um          5.8MszX
                i      15 52.00
                LR     12 14.00
ZOBO  154.83 183 PKP    14 24.00    1.8
       1.1s     14.50nm
     Z  24s      0.92um          5.5MszX
                i      15 51.00
                LR     11 00.00
      S.D. = 1.3  on  28 of  41 obs.
-------------------------------------------
   SEP  12, 1989  08h 55m 57.92± 0.22s
    9.017 S ± 5.0km  110.503 E ± 5.4km
   DEPTH =  33.0km  (normal)
   5.1mb ( 21 obs.)  5.3Msz ( 14 obs.)
 SOUTH OF JAVA                          (282)
      CENTROID, MOMENT TENSOR           (HRV)
      Data Used: GDSN
      L.P.B.: 13S, 25C
      Centroid Location:
      Origin Time        08:56:13.0 0.4
      Lat  9.01S  FIX;Lon 110.55E  FIX
      Dep  40.9 4.3 Half-durotian  2.3
      Moment Tensor;   Scale 10**17 Nm
        Mrr= 1.88 0.13  Mtt=-1.94 0.12
        Mff= 0.06 0.21  Mrt= 0.92 0.28
        Mrf=-0.29 0.19  Mtf= 1.59 0.14
       Principal Axes:
        T  Val=  2.10  Plg=76  Azm=348
        N        0.91      9      117
        P       -3.01     11      208
      Best Double Couple:Mo=2.6*10**17
       NP1:Strike=310 Dip=35 Slip= 106
       NP2:       111     57       79

MKS     9.66  68 ePd    58 22.50    4.7X
       1.5s    885.00nm          6.8mb X
KGM    13.09 327 ePd    59 09.40    5.2X
                e      03 40.20
NANU   14.31 161 eP     59 14.00   -6.2X
       0.3s     33.00nm          5.4mb
                eS     01 38.00
MBL    15.05 144 eP     59 25.00   -5.0X
       0.3s     20.00nm          5.0mb
                eS     01 52.00
TSM    15.16  30 ePc    59 39.20    7.8X
MNI    17.66  55 eP     00 07.00    3.8X
AAI    18.36  74 eP     00 11.60   -0.2
       0.4s     40.20nm          4.9mb
SNG    18.86 328 ePd    00 17.20   -0.8
                eS     03 45.80
                e      09 24.40
KNA    19.04 112 eP     00 18.50   -1.6
MEKA   19.08 158 eP     00 20.00   -0.6
                eS     03 31.00
MRWA   20.75 166 eP     00 43.00    4.5X
       0.3s      7.00nm          4.5mb
                eS     04 09.00
DAV    21.94  44 eP     00 40.00  -10.6X
TLE    22.32  83 ePc    00 54.00   -0.3
WARB   22.94 140 eP     01 13.00   12.6X
                eS     05 05.00
MUN    23.45 168 eP     01 17.00   11.7X
       1.2s      1.00nm
     Z  20s     10.30um          5.3Msz
     N  20s      5.90um
     E  20s      5.90um
                eS     05 17.00
NNT    23.98 333 eP     01 12.20    1.6
NWAO   24.59 166 eP     01 16.00   -0.4
       0.8s     17.00nm          4.7mb
     Z  20s      6.60um          5.1Msz
     N  20s      6.00um
     E  20s      7.00um
                eS     05 41.00
WRA    25.47 118 Pd     01 24.90    0.0
       0.7s     88.40nm          5.5mb
NST    26.59 337 eP     01 35.00   -0.2
ASPA   26.70 126 eP     01 35.70   -0.5
       1.0s     94.00nm          5.4mb
     Z  23s      6.04um          5.1MszX
                eS     05 15.10
                e      06 39.50
                LR     11 13.30
BAG    27.16  22 eP     01 43.10    2.5
LOE    27.65 342 eP     01 35.00   -9.8X
CHG    29.91 338 e(P)   02 04.00   -1.2
QIS    30.33 115 e(P)   02 08.00   -0.9
KMI    34.77 348 Pd     02 50.50    2.7
     Z  15s      8.20um          5.6MszX
     N  14s      2.80um
                pP     02 59.50   31kmX
                eS     07 29.00
GYA    35.46 354 P      02 54.20    0.7
     Z  22s      2.60um          4.9Msz
     N  16s      2.30um
     E  16s      4.10um
OLP    36.39 123 eP     03 03.50    2.1
ADE    36.51 139 e(P)   03 01.20   -1.1
STK    36.73 133 eP     03 03.00   -1.1
KOD    38.04 299 eP     03 17.00    1.4
                eS     09 05.00
WHN    39.51   5 eP     03 30.00    2.7
CMS    39.70 129 eP     03 29.00    0.1
GBA    39.78 304 Pc     03 28.50   -1.3
       0.7s     22.30nm          5.0mb
HYB    41.07 310 iPd    03 39.90   -0.5
       1.0s     70.00nm          5.3mb
                e      03 52.00
SSE    41.18  14 P      03 42.50    1.5
     Z  20s      1.90um          5.0Msz
                S      09 32.00
                ScS    13 28.00
NJ2    41.61  11 Pd     03 46.20    1.7
     Z  20s      3.70um          5.3Msz
                S      09 52.00
LSA    42.77 335 eP     03 55.00    0.3
                pP     04 08.00   48kmX
                S      10 15.00
XAN    42.84 358 P      03 54.60   -0.1
CAN    43.79 133 eP     04 02.80    0.3
KAGJ   44.49  25 P      04 07.90   -0.2
LZH    45.30 352 eP     04 16.00    1.3
       1.5s      0.09nm          2.5mb X
     Z  20s      2.70um          5.2Msz
     N  13s      0.90um
     E  15s      1.10um
POO    45.36 307 iPc    04 15.50    0.3
       0.8s     35.82nm          5.3mb
                iS     10 51.00
TIA    45.42   8 eP     04 14.70   -0.7
KUMJ   45.64  24 eP     04 17.50    0.3
TIY    46.52   2 P      04 24.50    0.4
     N  12s      2.70um
     E  18s      2.20um
                S      11 11.00
TKSJ   48.25  26 eP     04 36.90   -0.9
SVO    48.66  94 eP     04 42.00    0.7
HNR    48.77  95 eP     04 42.00   -0.1
YONJ   49.03  25 eP     04 42.80   -0.9
BJI    49.09   6 eP     04 42.50   -1.6
       1.5s      0.10nm          2.6mb X
     Z  16s      1.63um          5.1MszX
     N  16s      0.84um
                PcP    06 08.00
                eS     11 40.00
WKYJ   49.15  28 eP     04 43.50   -1.2
GTA    49.19 349 eP     04 45.00   -0.1
       5.0s      0.90nm          3.1mb X
     Z  15s      2.20um          5.3MszX
     N  15s      1.50um
                S      11 40.00
NDI    49.37 321 iPd    04 44.30   -2.2
                eS     11 44.00
HHC    49.63   1 Pc     04 48.00   -0.3
     Z  16s      1.80um          5.2MszX
TSRJ   50.42  27 P      04 53.90   -0.4
IIDJ   51.26  29 P      05 00.00   -0.9
SNY    52.00  12 iPd    05 05.10   -1.1
     Z  24s      2.20um          5.1MszX
     N  12s      1.30um
     E  21s      1.30um
CHJJ   52.24  29 P      05 06.60   -1.6
MAT    52.27  28 iPc    05 06.70   -1.7
       1.5s    291.67nm          6.0mb
     Z  20s      3.19um          5.4Msz
                eS     12 40.00
KAKJ   52.94  30 P      05 10.80   -2.6
NIIJ   53.20  28 P      05 12.90   -2.4
CN2    54.29  13 Pc     05 21.50   -1.7
     Z  20s      3.10um          5.4Msz
     N  19s      1.60um
     E  19s      1.70um
                epP    05 36.00   54kmX
                PcP    06 26.80
                eS     12 49.00
                SS     16 30.00
YAMJ   54.44  29 P      05 24.00   -0.4
DZM    55.16 111 iPc    05 31.10    1.0
OFUJ   55.94  29 eP     05 34.40   -0.8
MDJ    56.10  16 Pd     05 35.50   -0.8
```

12d 09h

WMO 56.52 340 Pc 05 38.00 -1.5
Z 20s 1.50um 5.1Msz
N 14s 1.20um
PcP 06 37.20
PP 07 42.00
S 13 26.00
ScS 15 23.00
KSH 57.89 329 eP 05 48.50 -0.7
Z 20s 2.50um 5.3Msz
E 15s 1.20um
eS 13 46.00
MHI 65.78 316 eP 06 41.00 -1.2
AAE 73.65 282 eP 07 32.00 0.9
NAI 73.70 271 eP 07 30.00 -1.3
GBA 74.43 169 ePd 07 34.30 0.2
BHD 75.52 308 ePd 07 39.00 -2.1
SLY 75.53 310 ePd 07 34.00 -7.1X
TAB 75.88 313 eP 07 43.00 -0.3
PTZ 77.40 257 iPc 07 52.20 0.1
SLR 79.17 245 eP 08 01.00 -0.8
0.9s 25.21nm 5.2mb
i 08 16.70
BUL 79.38 251 iPc 08 02.70 -0.3
1.3s 19.23nm 4.9mb
i 08 25.80
PRY 79.80 244 eP 08 04.50 -0.6
1.2s 30.00nm 5.2mb
e 08 20.20
MZZ 80.15 260 iPc 08 08.00 0.8
LSZ 80.31 256 iPd 08 08.50 0.5
KSR 80.41 245 eP 08 06.00 -2.4
1.2s 20.00nm 5.0mb
e 08 22.70
BFS 80.41 244 eP 08 09.00 0.6
1.0s 32.00nm 5.3mb
SPA 81.04 180 e(P) 08 09.50 -1.4
1.0s 16.00nm 5.0mb
Z 20s 2.57um 5.6Msz
MBH 82.16 302 iPd 08 18.00 0.8
PRNI 82.22 302 e(P) 08 19.00 1.4
ZNT 82.68 304 eP 08 21.00 1.1
KMZ 82.80 258 iP 08 22.00 1.0
i 08 39.90
ADK 86.63 36 P 08 39.40 0.1
ELL 87.89 308 eP 08 46.00 0.1
KHL 88.53 309 eP 08 48.00 -0.9
SNA 89.05 198 e(P) 08 49.60 -1.1
0.9s 9.24nm 5.1mb
MLR 92.57 315 ePc 09 08.00 0.5
SUF 95.36 333 eP 09 19.00 -0.8
NUR 95.74 330 eP 09 22.00 0.5
Z 20s 1.60um 5.5Msz
e 09 35.00
LR 57 00.00
SOD 95.90 337 eP 09 22.00 -0.2
e 09 36.00
KEV 96.14 340 eP 09 30.00 6.7X
TTA 99.55 28 P 09 39.40 0.5
1.2s 9.47nm 5.2mb
IMA 100.55 24 Pdiff 09 44.40 1.0
APO 101.03 330 ePdiff09 45.10 -0.4
0.4s 1.10nm 4.8mb
NB2 102.33 331 Pdiff 09 52.50 1.1
0.8s 1.30nm 4.6mb
INK 107.78 21 ePKP 14 24.00 1.1
LON 121.89 40 PKP 14 51.00 0.4
PNT 122.16 36 ePKP 14 52.00 1.1
0.8s 6.00nm
FHC 122.48 47 ePKP 14 54.30 2.5
EDM 123.56 30 ePKPc 14 53.50 -0.1
WDC 123.59 47 ePKP 14 55.00 1.0
MIN 124.34 47 ePKPc 14 57.00 1.3
ORV 124.67 48 ePKPc 14 57.60 1.5
PRI 126.36 52 e(PKP)15 03.40 3.7X
SES 126.36 32 ePKP 14 59.00 -0.1
FRI 126.83 50 ePKP 15 02.20 1.9
VN 127.32 47 PKP 15 01.70 0.2
FFC 127.60 23 ePKP 15 03.00 1.7
0.7s 9.00nm
LRM 128.09 37 ePKP 15 03.40 0.6
TNP 128.32 48 PKP 15 04.70 1.2
CLC 128.82 51 ePKP 15 06.00 1.7
MWC 128.97 53 ePKP 15 07.00 2.2
BB 129.01 52 ePKP 15 05.00 0.3
SC 129.60 51 ePKP 15 08.00 2.2
AR 130.54 54 ePKP 15 09.00 1.4
SU 131.78 45 PKP 15 12.20 2.1
RSON 133.75 21 PKP 15 13.50 0.4
GOL 135.77 40 PKP 15 17.30 -0.3
ALO 137.49 47 ePKPd 15 22.80 1.8
1.0s 10.00nm
Z 21s 0.27um 5.0Msz
eSKP 18 53.30
VAO 141.28 214 ePKP 15 23.70 -4.3X
SIO 143.88 38 ePKP 15 31.20 -0.8
MIM 143.91 359 PKP 15 29.60 -2.1
TUL 144.08 38 ePKPd 15 30.90 -1.5
1.3s 49.10nm
Z 22s 1.06um 5.6Msz
LR 30 00.00
PTN 144.26 7 PKP 15 30.40 -2.0
PPD 144.36 210 ePKP 15 26.90 -6.3X
ITR 144.37 241 ePKP 15 30.60 -2.9
e 15 48.20
e 16 03.50
EMM 144.37 358 PKP 15 30.50 -2.0
BNH 144.53 2 PKP 15 31.30 -1.6
DHN 145.47 11 PKP 15 34.40 -0.1
FVM 145.54 30 PKP 15 34.80 0.0
OLY 146.87 34 PKP 15 38.50 1.5
ANT 147.47 178 e(PKP)15 40.00 1.7
CRX 149.02 67 iPKPc 15 48.00 6.7X
III 149.48 69 iPKPd 15 48.00 6.1X
OXX 152.32 70 (PKP) 15 55.50 9.4X
S.D. = 1.3 on 122 of 141 obs.

? SEP 12, 1989 09h 05m 37.99± 1.28s
9.031 S ±24.5km 110.443 E ±19.8km
DEPTH = 33.0km (normal)
4.7mb (6 obs.)
SOUTH OF JAVA (282)

NANU 14.31 161 eP 08 54.00 -6.4X
0.3s 6.00nm 4.7mb
eS 11 17.00
MBL 15.08 144 eP 09 03.00 -7.4X
0.3s 4.00nm 4.3mb
eS 11 34.00
MTN 20.66 102 iPd 10 17.90 0.2
0.4s 36.00nm 5.1mb
WARB 22.96 140 eP 10 52.00 11.3X
eS 14 42.00
WRA 25.52 118 Pd 11 05.30 -0.1
0.8s 29.60nm 4.9mb
GBA 39.74 304 Pc 13 09.40 -0.1
0.6s 3.60nm 4.3mb
BJI 49.11 6 eP 14 25.00 0.7
MAT 52.31 28 eP 14 48.00 -0.8
0.9s 11.76nm 4.8mb
S.D. = 0.8 on 5 of 8 obs.

& SEP 12, 1989 09h 22m 24.54s
63.444 N 145.534 W
DEPTH = 10.7km
CENTRAL ALASKA (1)
<AGS-P>.

DDM 0.37 337 iP 22 31.74 -0.5
PAX 0.48 176 iP 22 34.07 -0.2
eS 22 40.64
DMW 0.62 352 iP 22 36.05 -0.9
DOT 0.69 72 iP 22 37.76 -0.4
eS 22 47.16
TMW 1.15 95 eP 22 46.08 0.1
HDA 1.15 328 eP 22 45.77 -0.2
S 23 01.28
RND 1.49 270 eP 22 52.38 1.0
eS 23 10.25
WRH 1.53 314 eP 22 51.17 -0.6
MCK 1.55 282 eP 22 53.07 1.0
CCB 1.57 321 eP 22 51.27 -1.1
eS 23 12.32
GLM 1.75 333 eP 22 53.69 -1.4
FBA 1.77 327 eP 22 53.61 -1.6
RDS 1.80 322 eP 22 55.05 -0.7
S 23 18.83
NEA 1.93 308 eP 22 56.33 -1.3
eS 23 21.89
KLU 1.97 185 eP 22 59.96 1.7
eS 23 25.95
GLB 2.16 157 iP 23 02.69 1.6
eS 23 30.71
VLZ 2.35 189 eP 23 05.34 1.7
KTH 2.42 275 eP 23 06.56 1.8
PME 2.44 223 eP 23 06.93 2.0
GLI 2.68 197 eP 23 09.99 1.6
PWA 2.70 230 eP 23 10.61 2.0
DWY 2.78 75 P 23 09.10 -0.7
BALM 2.84 147 eP 23 14.15 3.4
HYT 4.59 121 P 23 48.60 13.0
24 obs. associated

% SEP 12, 1989 09h 30m 08.78± 1.08s
39.688 N ± 8.2km 29.284 E ±11.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YLV 0.88 4 iPn 30 25.20 -0.5
KCT 0.91 308 iPn 30 27.70 1.6
HRT 1.17 14 ePn 30 30.90 0.3
EDC 1.27 302 ePn 30 31.00 -1.4
KHL 1.38 172 ePn 30 34.10 0.0
ISK 1.39 353 ePn 30 34.20 0.1
S.D. = 1.3 on 6 of 6 obs.

& SEP 12, 1989 09h 50m 54.13s
63.090 N 150.806 W
DEPTH = 82.8km
CENTRAL ALASKA (1)
<AGS-P>.

PWA 1.51 163 iPd 51 21.00 1.0
PMR 1.69 152 iPd 51 22.40 -0.1
PMS 1.94 162 iPd 51 25.70 -0.2
SPU 2.00 198 iP 51 26.00 -0.7
eS 51 50.80
FBA 2.25 35 iPc 51 29.40 -0.7
TOA 2.36 113 eP 51 31.10 -0.5
TTA 2.38 268 iPc 51 31.80 -0.1
KLU 2.79 123 iP 51 34.80 -2.7
SVW 3.01 231 iPc 51 39.60 -1.0
IMA 3.24 339 iPd 51 42.50 -1.3
DWY 5.17 74 P 52 07.10 -3.5
KDC 5.42 190 eP 52 10.40 -3.7
INK 8.82 46 eP 52 58.00 -2.8
13 obs. associated

• SEP 12, 1989 10h 06m 59.53± 0.81s
25.618 S ± 6.8km 116.545 E ±10.7km
DEPTH = 10.0km (geophysicist)
WESTERN AUSTRALIA (590)

MEKA 2.04 119 eP 07 41.00 6.6X
eS 08 10.00
NANU 3.18 343 eP 07 50.60 0.0
eS 08 32.00
MRWA 3.62 188 eP 07 56.00 -0.8
eS 08 38.00
MBL 5.37 35 eP 08 21.60 0.0
eS 09 25.00
MUN 6.34 183 eP 08 36.20 0.8
eS 09 45.00
NWAO 7.31 175 eP 08 36.20 -12.7X
eS 10 04.00
WARB 9.11 96 eP 09 14.00 -0.1
eS 10 54.00
FORR 11.44 120 eP 09 46.00 0.0
eS 11 48.00
S.D. = 0.7 on 6 of 8 obs.

& SEP 12, 1989 10h 49m 12.38s
57.280 N 142.183 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

HON 2.79 37 iP 49 52.41 -5.5
eS 50 23.74
BCPM 2.99 25 eP 49 55.46 -5.3
eS 50 28.61
PCA 3.00 19 eP 49 55.72 -5.2
eS 50 29.27
YAH 3.10 4 eP 49 56.83 -5.6
eS 50 31.37
4 obs. associated

& SEP 12, 1989 10h 57m 05.00s
49.775 N 126.883 W
DEPTH = 34.0km
4.5mb (8 obs.)
VANCOUVER ISLAND REGION (25)

<PGC>. ML 4.3 (PGC). Felt (V) at Tahsis, Zeballos and on Nootka Island. Also felt at Gold River, Kyuquot and Woss Camp.

EDB	0.18	303	iPgd	57	10.91	-0.6
			Sg	57	15.35	
ETB	0.46	151	iPc	57	14.39	-0.5
GDR	0.54	89	iPc	57	15.50	-0.6
KBB	0.82	42	iPc	57	20.10	-0.2
BTB	0.94	109	iPc	57	21.42	-0.6
PHC	1.00	340	P	57	22.20	-0.4
CBB	1.01	75	iPc	57	22.76	-0.2
OSP	2.12	134	ePg	57	37.69	-1.1
OTR	2.38	134	ePg	57	41.64	-0.9
PGC	2.52	115	ePg	57	43.00	-1.4
OBC	2.54	132	ePg	57	44.42	-0.4
STW	2.67	126	ePg	57	45.03	-1.5
OOW	2.71	138	ePg	57	46.19	-1.0
MCW	2.87	111	ePg	57	48.20	-1.3
OSD	2.87	132	ePg	57	49.12	-0.6
BLN	3.13	123	ePg	57	51.73	-1.4
OBH	3.17	140	ePg	57	52.37	-1.3
OHW	3.21	115	ePg	57	53.46	-0.8
HDW	3.31	129	ePg	57	54.57	-1.2
SMW	3.40	135	ePg	57	55.69	-1.4
CMW	3.41	112	ePg	57	56.82	-0.4
MBW	3.41	105	ePg	57	56.13	-1.2
GMW	3.51	128	ePg	57	57.00	-1.6
RMW	4.09	123	ePg	58	05.80	-1.0
BMW	4.11	142	ePg	58	06.00	-1.1
LON	4.54	130	ePg	58	12.20	-1.0
SHW	4.75	137	ePg	58	15.50	-0.7
PNT	4.75	93	ePg	58	15.00	-1.2
DPW	6.04	105	ePg	58	32.20	-2.2
SIT	8.86	329	ePg	59	11.50	-2.1
EDM	9.12	63	ePg	59	14.50	-2.7
LBFM	9.12	156	ePg	59	19.50	2.0
FHC	9.20	166	ePc	59	20.20	1.8
WDC	9.69	160	ePc	59	27.50	2.4
MIN	10.14	156	ePc	59	33.70	2.3
LTCM	10.14	159	e(P)	59	33.00	1.7
SES	10.20	80	ePg	59	30.00	-2.2
LRM	10.48	107	ePg	59	34.00	-2.2
ORV	10.91	157	ePc	59	43.50	1.7
BRK	12.35	163	e(P)	00	05.80	4.5
BKS	12.36	163	e(P)	00	05.70	4.4
KVN	12.41	146	ePg	00	04.00	1.7
PCC	12.69	163	ePc	00	10.30	4.5
MHC	12.99	161	ePc	00	11.10	1.2
ARN	13.01	161	ePg	00	11.60	1.6
TNP	13.59	146	ePg	00	19.50	1.6
	0.7s		3.89nm			4.4mb
DAU	14.45	124	ePg	00	29.50	0.3
MSU	15.40	131	ePg	00	48.00	6.4
CLC	15.51	151	ePg	00	43.00	0.3
FFC	16.00	62	ePg	00	50.00	1.2
	0.6s		53.00nm			4.8mb
GSC	16.24	149	ePg	00	54.00	1.9
RSSD	16.57	101	ePg	00	53.50	-2.9
PMR	17.13	322	ePg	01	11.50	8.4
TPC	17.58	149	ePg	01	10.00	1.1
PLM	18.01	152	ePg	01	15.00	0.6
GOL	18.24	115	ePg	01	16.50	-0.8
	0.7s		12.38nm			4.2mb
GLD	18.30	115	ePg	01	17.40	-0.5
BAR	18.70	152	ePg	01	29.00	6.4
FBA	18.75	332	e(P)	01	22.00	-1.0
INK	18.88	352	ePg	01	29.00	4.5
GLA	18.96	147	ePg	01	26.00	0.2
TTA	20.59	321	ePg	01	45.50	2.1
ALQ	21.06	127	ePg	01	49.20	0.7
	1.0s		5.50nm			3.9mb
RSON	21.12	74	ePg	01	44.80	-4.0
	0.7s		65.40nm			5.1mb
			e	01	58.00	
TUL	26.45	110	ePg	02	40.50	0.0
	0.7s		12.70nm			4.6mb
FVM	28.52	100	ePg	02	57.50	-1.7
	0.5s		23.09nm			5.1mb
SCH	36.11	58	ePg	04	04.00	-1.3
NB2	64.52	21	P	07	49.40	9.2
	0.9s		1.90nm			4.2mb
	68 obs. associated					

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* SEP 12, 1989 11h 52m 25.06± 2.33s
0.195 N ±12.3km 98.735 E ±18.6km
DEPTH = 64.7 ± 16.1 km
4.3mb (2 obs.)
NORTHERN SUMATERA (706)

PSI	2.49	4	ePg	53	04.00	0.0
TSI	3.29	357	ePd	53	25.00	9.7X
			eS	54	21.00	
KLM	4.10	45	eP	53	26.00	-0.7
IPM	4.92	28	ePd	53	37.80	-0.5
	0.5s		98.90nm			
			e	54	34.20	
			e	55	28.00	
KGM	4.93	68	ePd	53	39.60	1.3
	0.3s		178.50nm			
			e	54	10.70	
			e	55	13.20	
SNG	7.18	15	eP	54	08.20	-1.6
	1.1s		118.99nm			5.5mb X
			eS	55	45.20	
NNT	12.35	5	eP	55	22.00	1.8
NST	15.44	5	eP	56	04.80	4.3X
LOE	17.35	10	eP	56	24.00	-0.6
CHG	18.50	1	eP	56	37.50	-1.2
GYA	27.21	16	iPc	58	05.00	0.1
XAN	35.00	15	P	59	13.00	-0.3
LZH	36.02	7	P	59	22.50	0.3
	4.0s		0.40nm			2.7mb X
GTA	39.04	1	P	59	47.40	0.0
TIY	39.41	17	Pc	59	51.00	0.5
WRA	40.21	122	P	59	57.00	-0.2
	0.6s		1.80nm			4.1mb
ASPA	41.57	127	iPc	00	07.60	-0.7
FORR	41.60	141	eP	00	10.00	1.6
HHC	42.11	15	P	00	14.60	2.0
BJI	42.73	20	eP	00	19.00	1.5
WMQ	44.54	349	iPd	00	33.60	1.3
CN2	49.52	25	iPc	01	10.40	-0.8
MAT	51.42	41	eP	01	25.00	-0.8
BRS	58.63	123	eP	02	18.00	-0.2
MLR	77.85	317	ePd	04	18.00	0.5
HFS	87.35	330	eP	05	06.50	0.5
	0.4s		1.70nm			4.6mb
TKL	144.25	3	ePKP	11	53.50	-2.3
PWLA	144.43	10	ePKP	11	54.20	-1.9
JSC	145.71	360	ePKP	11	58.40	0.1
	S.D. = 1.2		on 27 of 29 obs.			

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* SEP 12, 1989 11h 59m 55.57± 1.49s
44.236 N ±15.2km 7.343 E ± 8.6km
DEPTH = 5.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

STV	0.02	300	P	59	56.64	-0.1
			S	59	57.56	
ENR	0.06	100	P	59	57.05	-0.1
			S	59	57.87	
DOI	0.28	345	P	00	01.00	-0.2
			eSg	00	05.00	
PZZ	0.32	327	P	00	02.07	0.0
			S	00	06.69	
ROB	0.38	81	P	00	03.31	0.0
			S	00	08.74	
	S.D. = 0.1		on 5 of 5 obs.			

? SEP 12, 1989 12h 07m 54.33± 8.06s
51.569 N ±48.0km 16.285 E ±51.0km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP	0.73	180	iPd	08	08.70	0.1
	0.4s		71.00nm			
			iS	08	17.80	
BRG	1.63	246	iPg	08	23.40	0.3
			iSg	08	43.20	
PRU	1.93	216	ePn	08	27.50	0.0
			Pg	08	29.00	
			Sn	08	45.50	
			Sg	08	53.50	
CLL	2.07	264	iPn	08	29.40	-0.1
			iPg	08	32.10	
			iSg	08	57.90	
KHC	2.99	216	Pn	08	42.50	-0.2
			Pg	08	48.50	
			Sn	09	13.00	
			Sg	09	28.00	
MOX	3.08	254	ePg	08	52.00	8.0X
			iSg	09	32.00	
VKA	3.31	180	iP	08	56.50	9.3X
			i	09	40.70	
	S.D. = 0.3		on 5 of 7 obs.			

SEP 12, 1989 13h 19m 23.29± 0.82s
38.442 N ± 7.5km 21.438 E ± 9.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.3 (ATH).

VLS	0.72	249	ePg	19	36.50	-0.9
			eSg	19	49.00	
ITM	1.32	163	ePg	19	48.50	0.8
NEO	1.64	58	ePb	19	51.00	-1.3
KEK	1.80	315	ePn	19	55.00	0.4
KZN	1.88	8	ePg	19	56.50	0.7
OHR	2.71	350	ePn	20	08.00	0.3
SKO	3.53	0	ePn	20	25.00	5.8X
	S.D. = 1.1		on 6 of 7 obs.			

% SEP 12, 1989 13h 34m 26.94± 2.40s
37.157 N ±20.1km 28.017 E ±16.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.21	96	iPg	34	30.70	-0.9
IZM	1.38	334	iPn	34	51.90	-0.3
ELL	1.57	105	ePn	34	55.90	0.9
KHL	1.67	45	iPn	34	57.50	1.1
BCK	2.07	81	ePn	35	02.00	-0.3
ALT	2.51	40	ePn	35	08.00	-0.6
	S.D. = 1.1		on 6 of 6 obs.			

& SEP 12, 1989 13h 43m 41.10s
37.192 N 119.845 W
DEPTH = 30.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.3 (BRK). Heard at Friant Dam.

FRI	0.23	151	iPd	43	47.05	-0.6
			iS	43	51.50	
LLA	1.05	237	ePd	44	00.00	0.2
PRI	1.24	212	eP	44	03.00	0.4
SAO	1.35	252	e(P)	44	05.00	0.9
MHC	1.44	276	e(P)	44	06.90	1.4
			e	44	15.20	
	5 obs. associated					

? SEP 12, 1989 14h 19m 00.89± 1.70s
24.279 S ±34.2km 179.133 W ±26.1km
DEPTH = 500.0km (geophysicist)
SOUTH OF FIJI ISLANDS (171)

DZM	13.45	277	iPc	21	55.40	-0.3
CAN	29.64	241	eP	24	27.60	1.0
BWA	29.92	243	eP	24	27.70	-1.3
CTA	32.27	271	iPd	24	49.50	0.4
	0.5s		28.17nm			5.1mb
ASPA	42.76	261	eP	26	15.20	0.2
FORR	46.88	250	eP	26	47.00	0.1
	0.4s		12.00nm			4.8mb
HFS	143.07	349	(PKP)	37	38.00	-0.1
	0.3s		1.00nm			
	S.D. = 0.9		on 7 of 7 obs.			

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* SEP 12, 1989 15h 11m 14.88± 0.97s
32.861 N ±16.7km 92.575 E ±19.6km
DEPTH = 10.0km (geophysicist)
3.8mb (2 obs.)
TIBET (306)
ML 4.1 (BJI).

LSA	3.38	202	Pn	12	07.80	-1.4
			Pg	12	10.90	
			Sn	12	51.20	
			Sg	12	55.40	
GTA	8.77	40	eP	13	24.00	-0.8
TIY	16.92	68	eP	15	14.00	0.8
Z	18s		1.60um			
N	16s		1.60um			
GBA	23.63	219	Pc	16	28.60	1.6
	0.8s		1.80nm			3.7mb
NB2	57.77	325	P	21	08.00	-0.2
	0.7s		0.80nm			3.9mb
	S.D. = 1.7		on 5 of 5 obs.			

SEP 12, 1989 15h 29m 15.48± 0.22s
9.011 S ± 5.2km 110.521 E ± 5.8km
DEPTH = 48.3km (3 depth phases)
5.1mb (19 obs.) 5.1Msz (12 obs.)
SOUTH OF JAVA (282)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Location:
Origin Time 15:29:27.5 1.2
Lat 9.18S 0.08 Lon 111.18E 0.05
Dep 51.3 3.7 Half-duration 2.0
Moment Tensor; Scale 10**17 Nm
Mrr= 1.51 0.07 Mtt=-1.11 0.08
Mff=-0.39 0.12 Mrt=-0.13 0.16
Mrf= 0.25 0.10 Mtf= 1.06 0.08
Principal Axes:
T Val= 1.54 Plg=83 Azm=272
N 0.35 6 126
P -1.89 4 36
Best Double Couple:Mo=1.7*10**17
NP1:Strike=119 Dip=41 Slip= 81
NP2: 311 49 98

MKS	9.65	68	ePc	31 48.50	13.9X
	1.5s	885.00nm			
KGM	13.10	326	ePd	32 29.30	8.2X
TSM	15.15	30	eP	32 53.50	5.5X
PSI	16.40	315	ePc	33 06.00	2.1
IPM	16.49	325	eP	32 57.10	-8.0X
AAI	18.34	74	ePc	33 29.00	0.9
SNG	18.87	328	eP	33 36.20	1.6
			eS	37 07.20	
			e	38 57.90	
KNA	19.03	112	eP	33 21.50	-15.0X
			e	33 35.00	
MEKA	19.08	158	eP	33 20.00	-17.1X
			e	33 34.00	
			eS	36 34.00	
MTN	20.59	103	eP	33 53.00	-0.1
			eS	37 37.00	
MRWA	20.75	166	eP	33 52.00	-2.7
	0.2s	4.00nm		4.4mb	
			eS	37 12.00	
MUN	23.46	168	eP	34 21.00	-0.5
	1.0s	40.00nm		4.9mb	
Z	20s	5.90um		5.0Msz	
N	20s	3.70um			
E	20s	2.90um			
			eS	38 33.00	
NNT	23.99	333	eP	34 30.00	3.3X
NWAO	24.60	166	eP	34 31.00	-1.5
	1.0s	50.00nm		5.0mb	
			eS	38 56.00	
WRA	25.46	118	Pd	34 20.40	-20.4X
	0.6s	16.30nm			
RKG	25.64	167	iPc	34 46.10	3.7X
NST	26.59	337	eP	35 08.00	16.7X
ASPA	26.69	126	eP	34 51.10	-1.1
	1.0s	123.00nm		5.5mb	
Z	22s	3.55um		4.9MszX	
			eS	39 54.00	
			LR	44 31.50	
FORR	27.22	145	iPc	34 55.90	-0.9
	0.4s	17.00nm		5.0mb	
LOE	27.65	342	eP	35 03.00	2.1
QIZ	27.87	359	eP	35 08.90	6.0X
N	16s	2.50um			
			eS	39 34.50	
CHG	29.91	338	eP	35 21.20	-0.1
QIS	30.31	116	iPc	35 24.20	-0.6
	1.1s	75.00nm		5.3mb	
JAY	30.70	80	ePc	35 27.50	-0.8
			e	36 43.00	411kmX
KMI	34.76	348	Pc	36 05.50	1.8
Z	15s	5.90um		5.5MszX	
N	14s	2.60um			
			eS	41 15.00	
GYA	35.45	354	P	36 12.20	2.7
Z	20s	1.90um		4.9Msz	
			eS	41 44.00	
CTA	36.22	112	iPc	36 16.60	0.7
	1.0s	30.00nm		5.2mb	
			i	41 23.00	
			iS	42 18.00	
QLP	36.38	123	eP	36 19.00	1.8

ADE	36.50	139	iPd	36 17.90	-0.3
	0.8s	19.40nm		5.1mb	
STK	36.72	133	iPd	36 20.00	0.0
	0.6s	14.00nm		5.1mb	
KOD	38.05	299	eP	36 32.00	0.3
WHN	39.50	5	P	36 46.50	3.3X
GBA	39.79	304	Pc	36 44.50	-1.3
	0.9s	28.50nm		5.1mb	
CD2	40.22	351	eP	36 48.40	-0.8
BFD	40.31	139	eP	36 49.00	-0.9
GUMO	40.82	57	eP	36 42.20	-12.1X
GUA	40.83	57	eP	36 41.80	-12.6X
HYB	41.08	310	iPc	36 55.00	-1.4
	1.4s	125.00nm		5.5mb	
			e	37 08.50	51km
NJ2	41.60	11	Pc	37 04.00	3.6X
Z	20s	2.10um		5.0Msz	
TOO	42.47	138	eP	37 07.20	-0.4
BWA	42.95	132	eP	37 13.10	1.5
CAN	43.79	133	eP	37 18.30	-0.1
BRS	43.84	120	iPd	37 20.00	1.1
			e	46 30.00	
COO	44.10	125	eP	37 25.00	4.0X
LZH	45.29	352	P	37 32.00	1.5
	1.5s	0.08nm		2.3mb X	
Z	20s	1.50um		4.9Msz	
			pP	37 41.00	30kmX
			eS	44 10.00	
POO	45.37	307	iPc	37 31.00	-0.2
			iS	44 06.50	
TIA	45.41	8	eP	37 31.50	0.3
N	28s	1.20um			
			eS	44 08.00	
BOM	46.38	307	eP	37 32.30	-6.9X
			eS	44 12.80	
TIY	46.51	2	Pd	37 40.40	0.4
SVO	48.64	94	P	37 58.00	1.0
HNR	48.76	95	ePc	37 59.00	1.1
BJI	49.08	6	eP	38 00.00	0.1
	1.5s	0.07nm		2.5mb X	
Z	16s	1.17um		5.0MszX	
N	14s	0.86um			
			ePcP	39 24.00	
			eS	45 00.00	
GTA	49.19	349	eP	38 01.00	0.0
Z	16s	1.60um		5.1MszX	
N	16s	1.40um			
			S	44 57.00	
NDI	49.37	321	iPc	38 00.00	-2.4
			eS	45 00.00	
HHC	49.62	1	eP	38 04.50	0.3
Z	15s	1.20um		5.0MszX	
TSRJ	50.40	27	P	38 09.80	-0.3
IIDJ	51.25	29	P	38 11.20	-5.4X
SNY	51.99	12	Pc	38 20.80	-1.3
Z	19s	1.80um		5.1Msz	
N	18s	1.50um			
E	20s	1.10um			
			S	45 39.00	
MTMJ	52.10	28	P	38 22.30	-0.8
CHJJ	52.23	29	P	38 21.90	-2.1
MAT	52.25	28	iPc	38 22.70	-1.5
	1.2s	145.31nm		5.9mb	
Z	20s	1.77um		5.1Msz	
KAKJ	52.93	30	P	38 26.90	-2.2
NIIJ	53.19	28	P	38 29.60	-1.5
CN2	54.28	13	iPc	38 37.70	-1.3
Z	20s	1.80um		5.1Msz	
N	19s	1.10um			
			PcP	39 43.00	
			eS	46 08.00	
YAMJ	54.43	29	eP	38 39.30	-0.9
DZM	55.14	111	iPd	38 46.90	1.1
OFUJ	55.92	29	eP	38 49.90	-1.1
MDJ	56.09	16	eP	38 50.00	-2.1
WMQ	56.52	340	P	38 54.10	-1.2
Z	20s	1.00um		4.9Msz	
			S	46 42.00	
			ScS	48 39.50	
QUE	57.19	315	eP	38 58.60	-1.9
			eS	46 49.90	
KSH	57.89	329	P	39 04.40	-0.7
Z	24s	1.30um		5.0MszX	
E	16s	1.40um			
			S	47 01.00	
MAIO	65.78	316	eP	39 56.00	-2.0
MHI	65.78	316	eP	39 56.00	-2.1

MAW	66.50	198	iPd	40 00.80	-1.2
SBA	74.43	169	iPd	40 50.80	0.9
TAB	75.88	313	e(P)	40 58.00	-1.1
PTZ	77.42	257	iPd	41 08.00	0.0
SLR	79.19	245	eP	41 09.40	-8.2X
	0.9s	16.81nm		5.0mb	
BUL	79.40	251	iPd	41 19.00	0.2
	1.0s	10.00nm		4.7mb	
PRY	79.81	244	eP	41 12.00	-9.0X
MZZ	80.17	260	iPd	41 24.00	1.0
			i	42 05.20	167kmX
LSZ	80.33	256	iPc	41 24.30	0.5
			i	41 39.00	51km
KSR	80.42	245	eP	41 09.20	-15.1X
BFS	80.43	244	iPd	41 24.00	-0.2
	0.6s	20.00nm		5.2mb	
SPA	81.05	180	e(P)	41 27.00	0.3
	1.0s	30.00nm		5.2mb	
Z	20s	1.71um		5.4Msz	
MBH	82.18	302	ePc	41 34.00	1.0
DSI	82.23	304	eP	41 34.00	0.7
HRI	82.40	305	eP	41 36.00	1.7
KMZ	82.82	258	iPd	41 37.50	0.7
BBTK	86.45	311	eP	41 55.00	0.4
KHL	88.54	309	eP	42 05.50	0.9
CTT	89.96	312	eP	42 01.00	-10.2X
IZM	90.29	309	iP	42 13.90	1.1
VRI	92.10	316	ePc	42 17.50	-3.4X
MLR	92.57	315	ePc	42 23.50	0.2
BNG	92.63	274	iPd	42 24.30	0.3
	0.7s	26.00nm		5.8mb	
			ic	42 37.20	43km
SUF	95.36	333	eP	42 36.00	0.5
NUR	95.74	330	eP	42 36.00	-1.2
Z	21s	1.00um		5.3Msz	
			LR	30 20.00	
SOD	95.90	337	iP	42 37.60	-0.3
KRA	97.20	319	eP	42 57.70	13.6X
TTA	99.54	28	P	42 55.00	0.5
	1.0s	5.50nm		5.0mb	
NB2	102.34	331	Pdiff	43 06.00	-1.1
	0.9s	1.00nm		4.5mb	
LON	121.87	40	PKP	48 06.50	0.4
PNT	122.14	36	ePKP	48 07.00	0.5
WDC	123.57	47	ePKPd	48 10.60	1.1
DPW	123.63	37	PKP	48 10.00	0.5
BKS	124.63	50	e(PKP)	48 13.30	1.6
			e	48 21.10	
ORV	124.66	48	ePKPd	48 12.70	1.0
PRI	126.34	52	iPKPd	48 17.30	2.0
SES	126.34	32	ePKP	48 15.00	0.3
FRI	126.81	50	ePKPd	48 17.50	1.6
KVN	127.31	47	PKP	48 17.80	0.7
CLC	128.80	51	ePKP	48 22.00	2.1
MWC	128.95	53	ePKP	48 22.00	1.6
SBB	128.99	52	ePKP	48 21.00	0.7
DAU	131.53	43	PKP	48 21.80	-3.4X
RSSD	133.94	35	PKP	48 30.00	0.4
GOL	135.76	40	PKP	48 33.50	0.3
	1.0s	37.50nm			
ALQ	137.48	47	ePKP	48 30.00	-6.6X
Z	20s	0.35um		5.1Msz	
ALQ	137.48	47	PKP	48 36.20	-0.4
	1.2s	11.11nm			
VAO	141.30	214	ePKP	48 42.10	-1.5
			e	48 44.90	
PDCR	143.02	235	ePKP	48 41.00	-5.7X
SIO	143.86	38	ePKPd	48 46.70	-0.9
TUL	144.06	38	ePKPd	48 47.00	-0.9
	1.3s	59.70nm			
RSNY	144.33	6	PKP	48 46.80	-1.3
	0.5s	34.59nm			
			pP	48 59.50	
PPD	144.37	210	ePKP	48 45.40	-3.5X
ITR	144.38	241	ePKP	48 46.70	-2.4
			e	48 49.20	
			e	49 14.60	
HBVT	144.64	4	PKP	48 48.00	-0.7
FVM	145.52	30	PKP	48 49.90	-0.5
SLA	146.24	187	e(PKP)	48 53.60	1.4
OLY	146.86	34	PKP	48 54.50	1.9
BAO	147.56	221	ePKP	48 53.50	-0.9
RSCP	149.72	27	PKP	49 00.80	3.6X
	0.9s	149.63nm			
BLA	150.23	18	PKP	49 03.00	5.1X
GBTN	150.25	25	PKP	49 04.00	6.1X
PRM	152.38	24	PKP	49 09.00	7.9X

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JSC    152.62   22 PKP    49 09.00    7.6X
CCH    153.57  187 PKP    49 01.50   -2.1
CNCB   154.30  183 PKP    49 08.00    3.1X
LPB    154.58  183 PKP    49 08.00    2.9
     Z  16s      0.67um                5.6MszX
                 LR     46 30.00
ZOBO   154.85  183 PKP    49 07.60    1.9
     1.3s     25.63nm
     Z  22s      0.53um                5.3Msz
                 LR     47 00.00
     S.D. = 1.3  on 107 of 141 obs.
-------------------------------------------
   SEP  12, 1989  15h 56m 19.50± 0.75s
   56.117 N ±11.5km  157.225 W ±10.3km
   DEPTH =  33.0km  (normol)
 ALASKA PENINSULA                  ( 12)
     ML 3.7 (PMR).

IVF      1.31 261 eP     56 41.53   -0.1
                eS     56 58.49
CNBA     1.87 227 eP     56 49.63   -0.1
NGI      1.94 237 eP     56 50.41   -0.4
                eS     57 13.44
SDN      2.01 249 eP     56 52.00    0.3
PVV      2.69 256 eP     57 01.58    0.3
KDC      3.07  56 iPc    57 06.20   -0.5
SVW      5.08   9 eP     57 35.50    0.2
PMS      6.51  35 eP     57 54.60   -0.9
TTA      6.86   5 eP     57 59.60   -0.8
TOA      8.26  39 eP     58 20.30    0.3
INK     16.32  32 eP     00 09.00    1.7
     S.D. = 0.8  on  11 of  11 obs.
-------------------------------------------
   SEP  12, 1989  16h 05m 41.94± 1.10s
   44.152 N ± 7.6km    8.171 E ± 7.1km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                    (545)
     ML 2.1 (GEN).

ROB      0.26 304 P      05 47.77    0.3
                S      05 51.42
IMI      0.32 220 P      05 48.56    0.0
                S      05 52.65
PCP      0.47  34 P      05 51.58    0.0
                S      05 57.68
ENR      0.55 278 P      05 52.90   -0.1
                S      06 00.55
STV      0.62 279 P      05 54.55    0.1
                S      06 02.67
DOI      0.75 298 Pd     05 56.50   -0.2
                eSg    06 07.50
PZZ      0.85 295 P      05 58.19   -0.2
                S      06 10.03
     S.D. = 0.2  on   7 of   7 obs.
-------------------------------------------
   SEP  12, 1989  16h 06m 20.83± 0.59s
    3.511 S ± 7.7km  149.497 E ± 9.1km
   DEPTH =  33.0km  (normol)
   4.9mb (  5 obs.) 4.4Msz (  1 obs.)
 BISMARCK SEA                      (203)

RAB      2.75 104 iPd    07 02.00   -1.6
       0.7s   657.53nm
                iS     07 36.00
LAT      3.99 218 eP     07 21.00   -0.2
KDB      6.36 201 eP     07 55.00    0.3
CTA     16.78 191 iPd    10 16.00    1.0
       1.5s   138.89nm          4.9mb
                iS     13 40.00
OIS     19.49 209 iPc    10 46.20   -2.1
       1.1s   116.00nm          5.1mb
WRA     22.03 221 Pc     11 12.80   -1.6
       0.6s    30.00nm          4.9mb
OLP     23.49 192 ePd    11 30.50    1.9
BRS     23.95 173 iP     11 34.50    1.3
DZM     24.72 140 iPd    11 41.00    0.3
ASPA    25.07 216 iPc    11 43.40   -0.6
       1.3s    49.00nm          4.9mb
     Z  19s      1.06um          4.4Msz
                 LR     21 58.00
COO     27.02 175 iPc    12 02.90    0.9
BWA     30.77 182 eP     12 35.10   -0.5
CNB     31.65 180 eP     12 43.30    0.0
CAN     31.65 181 eP     12 43.30   -0.1
OIZ     44.98 301 eP     14 36.20    1.0
GTA     62.49 318 eP     16 43.60   -0.1
WMO     72.58 318 P      17 47.30    0.4
GBA     73.46 285 Pc     17 51.60   -0.8
       0.8s      2.20nm          4.2mb
TTA     77.81  22 eP     18 17.00    0.6
INK     88.45  21 eP     19 26.00   15.3X
     S.D. = 1.1  on  19 of  20 obs.
-------------------------------------------
   SEP  12, 1989  16h 11m 29.84± 0.60s
   40.602 N ± 6.5km   22.465 E ± 5.5km
   DEPTH =  10.0km  (geophysicist)
 GREECE                            (364)
     MD 3.5 (ATH).

KZN      0.61 241 ePg    11 41.00   -1.1
VAY      0.72   6 iPg    11 42.30   -1.7
KBN      1.26 272 ePn    11 52.00   -1.2
KKB      1.35  20 iPgd   11 54.00   -0.6
OHR      1.36 292 iPn    11 53.10   -1.8
MMB      1.37  44 iPgd   11 55.00    0.0
                Sg     12 14.00
NEO      1.42 155 ePb    11 55.50   -0.2
LSK      1.49 253 ePn    11 57.50    0.7
SKO      1.57 331 iPn    11 57.80    0.0
                i      12 08.70
                i      12 16.20
PHP      1.87 306 ePn    12 03.60    1.4
BERA     1.92 274 ePn    12 05.10    2.3
RZN      2.02  57 iPd    12 05.00    0.5
SRN      2.02 250 ePn    12 07.40    3.1X
VTS      2.06  15 iP     12 04.00   -1.1
TIR      2.10 292 ePn    12 07.70    2.2
KEK      2.23 247 ePg    12 14.00    6.6X
PLD      2.26  48 eP     12 14.00    6.2X
LACI     2.32 297 ePn    12 13.20    4.5X
PGB      2.33  33 eP     12 09.00    0.2
KDZ      2.46  64 eP     12 12.00    1.3
BCI      2.52 315 ePn    12 15.40    4.0X
VLS      2.82 212 ePn    12 15.00   -0.8
PVL      3.38  38 eP     12 20.00   -3.6X
MGR      5.30 267 P      12 50.50   -0.4
MLR      5.51  26 ePd    12 54.50    0.5
BRG     11.86 333 eP     14 17.40   -4.5X
                e      14 46.40
CLL     12.56 332 eP     14 16.00  -15.2X
     S.D. = 1.3  on  19 of  27 obs.
-------------------------------------------
&  SEP  12, 1989  17h 00m 57.87s
   58.946 N          142.923 W
   DEPTH =  10.0km  (geophysicist)
 GULF OF ALASKA                    ( 15)
     <AGS-P>.

YAH      1.54  22 eP     01 20.92   -4.7
                eS     01 39.13
PCA      1.78  49 iP     01 24.21   -4.8
                eS     01 45.04
BCPM     1.96  58 eP     01 26.46   -5.0
                eS     01 48.83
HON      2.14  75 eP     01 28.79   -5.3
                eS     01 52.36
CTGM     2.18  21 eP     01 29.84   -5.0
                eS     01 54.81
GLB      2.54 350 iP     01 34.48   -5.4
FID      2.55 317 eP     01 37.73   -2.2
VZW      2.80 321 eP     01 38.42   -5.1
GLI      2.86 314 eP     01 39.28   -5.1
KLU      2.96 331 eP     01 40.67   -5.2
HYT      3.32  53 P      01 46.00   -5.0
     11 obs. associated
-------------------------------------------
&  SEP  12, 1989  17h 13m 58.40s
   60.073 N          152.611 W
   DEPTH = 103.5km
 SOUTHERN ALASKA                   (  2)
     <AGS-P>.

ILIM     0.17 273 iP     14 12.46    0.8
RED      0.36 347 iP     14 13.30   -0.7
                S      14 25.09
RDT      0.51  11 iP     14 14.29   -0.7
                eS     14 26.66
OPT      0.52 217 eP     14 14.32   -0.7
                eS     14 25.85
NNL      0.66  92 iP     14 16.28    0.2
AUL      0.81 211 eP     14 16.98   -0.4
AUE      0.81 209 eP     14 16.85   -0.6
CNPM     0.89 128 eP     14 17.68   -0.5
BRLK     0.92 109 eP     14 18.24   -0.3
                eS     14 33.00
NKA      0.96  45 iP     14 20.13    1.3
SPU      1.15  14 iP     14 20.62   -0.4
                eS     14 37.04
CRP      1.22  10 eP     14 21.77   -0.2
CDD      1.26 205 eP     14 21.36   -1.0
SLKM     1.27  69 eP     14 21.45   -1.0
SEW      1.58  88 eP     14 25.12   -1.1
                eS     14 45.71
SUA      1.67  32 iP     14 27.27   -0.2
                eS     14 48.95
PMS      1.91  51 eP     14 29.89   -0.6
                eS     14 52.91
SKT      1.99  15 eP     14 30.53   -0.9
PWA      2.07  39 eP     14 32.13   -0.4
PME      2.35  47 eP     14 34.99   -1.2
                eS     15 02.78
     20 obs. associated
-------------------------------------------
   SEP  12, 1989  17h 23m 58.65± 0.31s
    8.998 S ± 5.8km  110.479 E ± 6.5km
   DEPTH =  33.0km  (normol)
   4.9mb ( 10 obs.) 4.5Msz (  3 obs.)
 JAVA                              (277)

MKS      9.68  68 iPd    26 24.30    5.6X
KGM     13.06 327 eP     27 11.00    6.4X
NANU    14.33 161 eP     27 15.00   -6.3X
       0.3s    14.00nm          5.0mb
                eS     29 41.00
MBL     15.08 144 eP     27 25.00   -6.1X
       0.3s    12.00nm          4.7mb
                eS     29 55.00
TSM     15.16  30 ePd    27 38.10    6.0X
KKM     16.00  21 eP     27 55.30   12.2X
PSI     16.36 315 ePd    28 04.50   17.0X
IPM     16.45 325 ePd    27 48.10   -0.7
MNI     17.67  55 eP     28 06.80    2.7
AAI     18.37  74 ePc    28 15.10    2.4
SNG     18.84 328 eP     28 21.00    2.6
KNA     19.07 112 eP     28 20.70   -0.5
MEKA    19.11 157 eP     28 23.00    1.3
       0.3s    9.00nm          4.5mb
MTN     20.63 103 iPc    28 38.40    0.3
                eS     32 22.00
MRWA    20.77 166 eP     28 41.00    1.6
       0.3s    3.00nm          4.2mb
                eS     32 12.00
TLE     22.34  83 ePc    28 53.20   -2.0
WARB    22.96 140 eP     29 00.50   -0.9
                eS     33 05.00
MUN     23.48 168 eP     29 06.00   -0.3
                eS     33 18.00
NNT     23.96 333 eP     29 13.20    2.2
NWAO    24.62 166 eP     29 18.00    0.7
     Z  20s      1.00um          4.3Msz
     N  20s      0.60um
     E  20s      1.10um
WRA     25.50 118 Pc     29 25.70   -0.2
       0.8s    63.40nm          5.3mb
NST     26.57 337 eP     29 40.00    4.3X
ASPA    26.73 126 iPc    29 36.10   -1.1
       0.9s    30.00nm          4.9mb
     Z  22s      0.56um          4.1MszX
                eS     34 44.20
                LR     39 14.70
FORR    27.25 145 eP     29 40.50   -1.3
LOE     27.62 342 eP     29 47.00    1.7
CHG     29.89 338 eP     30 05.00   -0.7
OIS     30.36 116 iPc    30 09.40   -0.5
JAY     30.74  80 ePc    30 13.50    0.1
                e      31 15.00
GYA     35.44 354 P      30 55.80    1.7
CTA     36.26 112 iPc    31 02.00    1.0
       1.0s    16.00nm          4.9mb
STK     36.76 133 eP     31 05.00    0.0
GBA     39.75 304 Pd     31 29.90   -0.4
       0.5s    11.30nm          4.9mb
CD2     40.20 351 P      31 33.50   -0.3
HYB     41.04 310 ePc    31 40.50   -0.4
SSE     41.17  14 P      31 43.50    1.9
LSA     42.74 335 P      31 56.60    1.4
XAN     42.82 358 P      31 55.50    0.2
LZH     45.28 352 eP     32 17.00    1.8
       1.0s    0.03nm          2.2mb X
POO     45.33 307 iPd    32 15.90    0.2
TIA     45.40   8 eP     32 15.80   -0.2
```

12d 17h

TIY	46.50	2	Pd	32	24.90	0.2
	Z 20s	0.50um				4.5Msz
HNR	48.80	95	eP	32	44.00	1.0
BJI	49.07	6	eP	32	45.00	0.3
	1.4s	0.05nm				2.3mb X
	Z 16s	0.35um				4.4MszX
		PcP		34	09.00	
GTA	49.17	349	P	32	46.00	0.4
	Z 14s	1.00um				5.0MszX
NDI	49.34	321	eP	32	45.00	-2.0
		eS		39	44.00	
HHC	49.61	1	P	32	48.30	-0.6
TSRJ	50.41	27	P	32	53.90	-1.1
IIDJ	51.26	29	P	33	00.80	-0.7
SNY	51.99	12	Pc	33	05.70	-1.2
MTMJ	52.11	28	P	33	07.10	-0.9
CHJJ	52.24	29	P	33	07.50	-1.4
MAT	52.26	28	iPc	33	07.60	-1.5
	1.2s	125.00nm				5.7mb
KAKJ	52.94	30	P	33	12.30	-1.8
NIIJ	53.20	28	P	33	14.60	-1.4
CN2	54.28	13	iPc	33	22.70	-1.1
	Z 20s	0.60um				4.7Msz
		PcP		34	28.00	
		eS		40	52.00	
MDJ	56.09	16	eP	33	35.20	-1.8
WMO	56.49	340	Pd	33	40.00	0.0
		S		41	28.00	
OUE	57.15	315	eP	33	43.00	-2.1
KSH	57.86	329	eP	33	49.50	-0.3
MAIO	65.75	316	eP	34	41.00	-1.7
MHI	65.75	316	eP	34	41.00	-1.7
SLR	79.16	245	eP	36	15.20	12.8X
	0.7s	13.70nm				
BUL	79.37	251	eP	36	04.30	0.7
		i		36	18.20	
KSR	80.39	245	eP	36	05.20	-3.9X
MBH	82.13	302	eP	36	19.00	1.2
PRNI	82.19	302	eP	36	19.00	0.8
BBTK	86.41	311	eP	36	40.50	1.1
BNG	92.59	274	ePc	37	08.80	-0.1
	0.6s	7.00nm				5.3mb
		ic		37	24.00	
KVN	127.33	47	ePKP	43	03.50	1.2
MSU	131.78	45	ePKP	43	13.00	2.2
GOL	135.77	40	ePKP	43	19.00	0.6
SIO	143.87	38	ePKP	43	31.10	-1.6
TUL	144.08	38	ePKP	43	32.00	-1.1
	1.0s	14.00nm				
ITR	144.35	241	ePKP	43	32.60	-1.6
PPD	144.36	210	ePKP	43	28.80	-5.2X
HBVT	144.64	4	ePKP	43	33.00	-0.8
FVM	145.53	30	ePKP	43	35.80	0.3
UYO	146.06	39	iPKPd	43	37.30	0.8
OLY	146.87	34	ePKP	43	39.50	1.8
BAO	147.54	221	ePKP	43	38.00	-1.5
RSCP	149.73	27	ePKP	43	46.70	4.4X
BLA	150.23	18	ePKP	43	48.00	5.0X
CNCB	154.31	183	PKP	43	53.00	2.9X
ZOBO	154.86	183	PKP	43	52.00	1.2
	1.3s	13.80nm				
	Z 24s	0.15um				4.7MszX
		eLR		39	52.00	
	S.D. = 1.3	on	70	of	84	obs.

? SEP 12, 1989 18h 49m 58.54± 5.20s
32.015 S ±25.7km 179.524 W ±50.9km
DEPTH = 227.5 ± 41.0 km
4.0mb (1 obs.)
SOUTH OF KERMADEC ISLANDS (179)

PGZ	9.23	200	eP	52	11.10	2.7
MNG	9.48	204	eP	52	12.30	0.6
		eS		53	57.20	
KIW	9.90	205	eP	52	16.20	-0.8
MTW	9.96	202	eP	52	17.00	-0.8
BLW	10.16	202	eP	52	20.40	0.1
WDW	10.23	204	eP	52	20.10	-1.1
WEL	10.32	205	P	52	26.00	3.6X
		S		54	18.00	
TCW	10.44	207	eP	52	23.00	-0.9
DZM	15.93	305	iPc	53	32.10	-0.2
WRA	42.89	275	Pd	57	37.00	0.6
	1.0s	6.90nm				4.0mb
SUF	145.19	340	iPKP	09	09.20	-0.3
	0.5s	16.00nm				
NUR	147.35	338	iPKP	09	15.80	2.8X
	0.6s	10.40nm				
BNG	147.75	215	ePKPc	09	20.60	5.4X
	0.4s	4.00nm				
NB2	150.12	350	PKP	09	22.40	5.0X
	0.5s	1.50nm				
HFS	150.53	347	ePKP	09	22.80	4.8X
	0.9s	6.20nm				
	Z 16s	0.07um				4.5MszX
		LR		56	40.00	
	S.D. = 1.4	on	10	of	15	obs.

? SEP 12, 1989 19h 37m 23.44± 5.77s
31.576 S ±64.6km 69.525 W ±37.0km
DEPTH = 120.0 ± 36.4 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.72	88	eP	37	43.00	-0.3
			eS	37	58.00	
CFA	1.10	92	iPc	37	47.20	0.4
			S	38	04.20	
PEL	1.85	212	iPd	37	55.50	0.0
			iS	38	13.50	
MRA	3.35	105	ePc	38	14.90	-0.1
TCA	4.22	88	ePd	38	27.00	0.0
			S	39	14.00	
	S.D. = 0.5	on	5	of	5	obs.

& SEP 12, 1989 20h 24m 13.00s
38.790 N 122.765 W
DEPTH = 1.0km
NORTHERN CALIFORNIA (36)
<BRK> ML 3.0 (BRK).

NWRM	0.35	196	eP	24	20.20	0.3
ZSP	0.93	154	iPd	24	31.10	-0.5
			iS	24	46.30	
BKS	1.00	155	iPd	24	32.50	-0.3
			e	24	32.88	
			iS	24	47.00	
ORV	1.25	52	eP	24	35.50	-1.5
MHC	1.70	148	eP	24	43.00	-1.0
ARN	1.74	146	eP	24	42.60	-1.9
KVN	3.65	84	eP	25	10.00	-2.0
	7 obs. associated					

& SEP 12, 1989 21h 37m 09.50s
62.663 N 143.609 W
DEPTH = 0.0km
CENTRAL ALASKA (1)
<AGS-P>.

TMW	0.72	23	eP	37	23.05	-0.8
SDG	0.91	262	eP	37	26.81	-0.8
PAX	0.91	291	eP	37	26.23	-1.4
			eS	37	38.66	
DOT	1.01	348	eP	37	28.36	-1.2
			iS	37	44.45	
GLB	1.23	185	eP	37	32.24	-1.1
			eS	37	49.22	
DDM	1.52	319	eP	37	37.78	-0.3
			S	37	58.49	
KLU	1.60	224	eP	37	38.72	-0.5
			eS	37	59.67	
BALM	1.74	159	eP	37	40.84	-0.4
TGL	1.95	169	eP	37	44.15	-0.2
VLZ	2.01	221	eP	37	46.19	1.2
CTGM	2.02	147	eP	37	45.99	0.7
VZW	2.13	222	eP	37	46.80	-0.1
HDA	2.30	321	eP	37	48.30	-1.0
RND	2.50	290	eP	37	54.06	1.8
WRH	2.70	314	eP	37	57.99	3.0
PME	2.75	250	eP	37	59.72	4.1
PMS	3.15	246	eP	38	01.97	0.6
HYT	3.44	120	P	38	11.50	5.9
	18 obs. associated					

& SEP 12, 1989 23h 14m 25.72s
59.354 N 154.109 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>.

AUW	0.33	87	iP	14	32.69	0.4
			S	14	39.00	
AUL	0.35	85	eP	14	33.05	0.4
AUI	0.35	93	eP	14	33.02	0.3
AUE	0.38	89	eP	14	33.56	0.3
			eS	14	39.73	
CDD	0.49	150	iP	14	35.84	0.4
OPT	0.54	56	eP	14	36.06	-0.4
			eS	14	43.76	
ILIM	0.93	38	eP	14	41.58	-2.7
RED	1.26	32	eP	14	47.53	-2.6
			S	15	07.37	
CNPM	1.48	82	eP	14	52.05	-1.6
			eS	15	11.80	
NNL	1.58	63	eP	14	54.28	-0.8
SVW	1.92	337	eP	14	59.33	-0.6
			eS	15	24.29	
BGL	2.10	23	eP	15	01.39	-1.3
SPU	2.10	28	eP	15	01.44	-1.2
SLKM	2.27	58	eP	15	04.17	-1.0
			eS	15	33.25	
	14 obs. associated					

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* SEP 12, 1989 23h 22m 40.71± 3.02s
43.260 N ± 7.9km 13.898 E ±21.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 3.1 (SSO).

SSO	0.35	275	e(Pg)	22	48.88	0.9
			iSg	22	54.42	
AOI	0.36	323	iPgd	22	48.20	0.0
			iSg	22	54.10	
ALP	0.53	206	iPgd	22	51.82	0.2
			iSg	23	00.53	
CIO	0.56	263	ePg	22	51.51	-0.5
			iSg	22	59.67	
ARV	0.74	289	P	22	54.80	-0.4
ASS	0.92	259	P	22	58.00	-0.4
			(Sg)	23	10.70	
	S.D. = 0.7	on	6	of	6	obs.

SEP 12, 1989 23h 58m 01.54± 0.48s
15.419 N ± 6.3km 120.082 E ± 9.1km
DEPTH = 33.0km (normal)
4.8mb (10 obs.) 3.9Msz (2 obs.)
LUZON, PHILIPPINE ISLANDS (249)

BAG	1.10	26	iP+	58	22.90	2.1
OCP	1.24	129	iP	58	31.00	8.4X
HKC	8.84	322	iP	00	07.00	-3.0
MCO	9.09	318	eP	00	10.90	-2.6
QZH	9.58	352	eP	00	20.60	0.4
OIZ	10.42	292	eP	00	27.60	-4.2X
			S	02	18.40	
GYA	16.65	313	P	01	55.00	0.8
LOE	17.72	279	eP	02	09.00	1.5
NST	19.22	273	eP	02	27.50	1.7
CHG	20.48	282	eP	02	39.70	0.3
	1.0s	24.25nm				4.5mb
MKS	20.51	182	iPd	02	42.00	2.3
TIA	20.87	353	eP	02	43.40	0.1
XAN	21.10	333	eP	02	45.00	-0.7
CD2	21.47	319	iPd	02	49.60	0.1
TIY	23.22	344	iPc	03	07.90	1.2
	Z 21s	0.60um				4.0Msz
		S		07	15.00	
PSI	24.38	241	ePc	03	19.00	0.9
	0.9s	12.40nm				4.5mb
		e		06	00.00	
BJI	24.77	353	eP	03	23.00	1.5
	Z 20s	0.36um				3.9Msz
		eS		07	55.00	
LZH	25.18	328	P	03	26.00	0.3
	1.5s	0.08nm				2.1mb X
HHC	26.40	345	eP	03	37.20	0.2
SNY	26.49	6	Pd	03	38.80	1.2
CN2	28.66	8	eP	04	05.00	7.7X
GTA	29.77	327	P	04	07.00	-0.6
	Z 12s	0.60um				4.4MszX
MBL	36.35	180	eP	05	03.70	-0.8
	0.3s	3.00nm				4.7mb
WRA	37.83	158	Pc	05	14.90	-2.1
	0.7s	4.60nm				4.4mb
WMQ	39.48	322	P	05	27.50	-3.2
		eS		11	27.00	
HYB	39.83	279	iPd	05	34.00	0.1
	1.0s	40.00nm				5.1mb
ASPA	41.13	161	eP	05	43.20	-1.2
	0.6s	12.00nm				4.8mb
GBA	41.28	273	Pd	05	45.80	0.1
	0.8s	19.80nm				4.9mb

WARB	41.84	171	eP	05	49.70	-0.5
KSH	45.30	311	eP	06	20.00	1.8
MHI	57.43	303	iPd	07	49.20	-0.6
TTA	73.63	28	eP	09	33.60	0.2
KEV	76.72	339	iP	09	50.40	-0.4
SOD	77.22	337	iP	09	52.90	-0.7
PRNI	78.21	298	e(P)	10	01.00	1.1
SUF	78.23	332	eP	09	50.00	-9.2X
SUF	78.23	332	iP	09	52.90	-6.3X
MBH	78.42	298	eP	10	02.00	1.0
NUR	79.37	330	iP	10	05.00	-0.5
	0.7s		13.30nm		5.0mb	
HFS	84.69	331	ePKP	10	32.00	-1.1
	0.7s		10.20nm		5.1mb	
NB2	85.47	332	P	10	35.60	-1.5
	0.8s		14.30nm		5.2mb	
KSP	86.64	322	eP	10	43.00	-0.1
PRU	87.99	322	eP	10	50.00	0.4
BRG	88.02	322	e(P)	10	49.80	0.1
KHC	88.90	321	P	10	54.90	0.9
KBA	89.83	319	eP	10	58.00	-0.6
FEL	92.79	321	eP	11	12.05	-0.1

S.D. = 1.3 on 42 of 47 obs.

? SEP 13, 1989 00h 03m 07.14± 2.59s
33.049 S ±25.3km 71.040 W ±20.3km
DEPTH = 70.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

PEL	0.31	108	iPc	03	18.50	-0.1
			iS	03	27.10	
SAN	0.51	142	iPc	03	20.40	0.1
			iS	03	30.70	
TACH	0.61	172	iPd	03	21.80	0.5
			iS	03	32.50	
FCH	0.69	114	iPc	03	22.50	0.0
			iS	03	34.30	
PCH	0.72	142	iPd	03	22.50	-0.1
			iS	03	35.00	
CHCH	0.94	160	iPd	03	24.90	-0.3
			iS	03	39.10	
LNV	0.96	199	iPd	03	25.10	-0.2
			iS	03	39.00	

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

SEP 13, 1989 00h 38m 43.90± 0.78s
28.453 S ± 5.7km 70.368 W ±12.3km
DEPTH = 33.0km (normal)
CENTRAL CHILE (136)

ZON	3.41	155	eP	39	38.00	1.8
CYA	4.03	91	ePc	39	46.00	1.1
PEL	4.68	183	eP	39	54.20	0.0
			i	40	23.60	
			iS	40	45.90	
ANT	4.73	359	eP	39	54.50	-0.2
FCH	4.86	179	eP	39	57.80	0.9
			iS	40	51.50	
PCH	5.15	181	eP	40	01.20	0.3
			iS	40	57.50	
TACH	5.21	185	eP	40	00.00	-1.6
			eS	40	57.00	
LNV	5.56	189	eP	40	03.00	-3.4X
			iS	41	03.00	
MRA	5.63	136	iPc	40	06.90	-0.6
TCA	5.78	121	ePc	40	07.80	-1.9
			S	41	09.50	
CNCB	11.80	11	P	41	37.00	3.6X
LPB	12.05	10	eP	41	37.00	0.4
ZOBO	12.30	10	eP	41	40.00	-0.2

S.D. = 1.2 on 11 of 13 obs.

SEP 13, 1989 00h 41m 05.93± 0.28s
5.625 N ± 6.4km 32.783 W ± 6.6km
DEPTH = 10.0km (geophysicist)
4.7mb (16 obs.) 4.5Msz (4 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

ITR	15.36	202	eP	44	43.10	-1.4
			e	44	50.80	
PDCR	19.11	199	eP	45	30.80	-0.8
			e	45	36.60	
BAO	25.94	215	eP	46	40.50	0.0
LIC	27.61	87	P	46	55.30	-0.4
	Z 20s		0.77um		4.3Msz	
TIC	27.62	86	P	46	55.20	-0.6
LIC	27.90	87	P	46	57.90	-0.4
	1.0s		7.00nm		4.4mb	
PPD	32.94	213	e(P)	47	29.00	-13.9X
CCH	40.10	235	P	48	45.40	1.3
ZOBO	41.18	238	P	48	52.00	-1.2
	Z 19s		0.69um		4.5Msz	
			LR	01	28.00	
LPB	41.29	237	P	48	56.00	2.1
	Z 18s		1.72um		5.0Msz	
			eLR	01	52.00	
CNCB	41.32	237	P	48	54.80	0.4
EPF	47.36	33	eP	49	43.10	1.0
	1.2s		10.10nm		4.8mb	
CAF	49.55	32	eP	49	59.10	0.1
MFF	49.58	29	eP	49	59.20	0.1
LSF	50.17	31	eP	50	03.90	0.2
LPF	50.19	27	eP	50	03.80	0.0
	1.1s		9.70nm		4.7mb	
GRR	50.53	27	eP	50	06.30	-0.1
	1.1s		9.70nm		4.7mb	
TCF	50.54	31	eP	50	06.70	0.2
MAF	50.68	31	eP	50	07.60	0.0
FLN	50.98	27	eP	50	09.30	-0.5
LDF	51.02	27	eP	50	09.80	-0.3
	1.1s		9.70nm		4.6mb	
BGF	51.05	31	eP	50	10.30	-0.1
	1.2s		13.00nm		4.7mb	
BNG	51.13	89	iPd	50	12.40	0.8
	1.1s		28.00nm		5.1mb	
			id	50	18.50	
AVF	51.46	31	eP	50	13.40	-0.1
SSF	51.72	31	eP	50	15.50	0.0
LBF	51.91	31	eP	50	17.00	0.0
	1.0s		4.80nm		4.4mb	
LOR	52.04	31	eP	50	17.30	-0.6
	1.0s		4.80nm		4.4mb	
LPG	52.48	34	eP	50	21.70	0.1
HAU	53.80	32	eP	50	30.40	-0.5
	1.1s		9.70nm		4.7mb	
BSF	53.93	32	eP	50	31.30	-0.7
DOU	54.28	29	P	50	34.40	0.0
CDF	54.54	32	eP	50	35.60	-0.9
WLF	54.76	30	P	50	39.50	1.6
MEM	55.30	29	P	50	42.30	0.5
KBA	57.15	36	e(P)	50	54.00	-1.4
	1.2s		4.20nm		4.3mb	
KHC	58.36	34	P	51	03.40	-0.3
PRU	59.35	33	eP	51	10.00	-0.5
BRG	59.50	32	eP	51	11.20	-0.3
	1.3s		12.00nm		4.9mb	
ZST	59.91	36	eP	51	13.10	-1.3
SRO	60.45	37	eP	51	29.80	11.7X
KRA	62.42	35	eP	51	31.20	-0.2
NB2	64.31	22	P	51	42.70	-1.0
	1.1s		6.70nm		4.7mb	
SLL	64.76	23	ePKP	51	45.40	-1.2
	1.4s		16.90nm		5.0mb	
TUL	64.94	307	eP	51	47.30	-0.9
	0.8s		5.50nm		4.8mb	
	Z 22s		0.26um		4.4Msz	
			LR	11	00.00	
PRNI	68.02	60	eP	52	09.00	1.0
GOL	73.04	310	eP	52	38.00	-0.6
SOD	73.40	20	eP	52	42.00	2.3
ANMO	73.42	305	eP	52	40.00	-0.8
FFC	73.48	326	iPc	52	39.70	-0.7
	1.1s		20.00nm		5.1mb	
KEV	74.60	18	eP	52	40.00	-6.7X
SES	78.20	320	eP	53	07.00	-0.3
MSU	78.22	308	eP	53	08.00	0.0
LRM	78.79	315	eP	53	11.50	0.6
EDM	79.87	323	eP	53	16.00	-0.4
PNT	83.71	319	eP	53	38.00	1.6
MAIO	88.54	54	eP	54	03.00	2.4
MHI	88.54	54	eP	54	03.00	2.4

S.D. = 1.0 on 54 of 57 obs.

? SEP 13, 1989 01h 06m 28.14± 2.38s
31.667 S ±32.5km 69.649 W ±21.0km
DEPTH = 125.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	0.84	82	iPd	06	50.00	0.5
			eS	07	05.00	
PEL	1.71	210	iPc	06	59.40	0.6
			iS	07	22.00	
FCH	1.74	198	iPc	07	00.50	1.0
			iS	07	23 40	
SAN	1.98	205	eP	07	00.50	-1.5
			iS	07	27.00	
PCH	2.08	200	iP	07	04.00	0.6
			iS	07	30.50	
TACH	2.26	208	iPd	07	05.50	-0.1
			iS	07	32.80	
CHCH	2.41	200	iPd	07	08.20	0.6
			iS	07	37.40	
LNV	2.72	213	iPd	07	10.50	-1.0
			iS	07	41.80	
MRA	3.43	104	ePc	07	20.50	-0.4
TCA	4.33	87	ePd	07	33.00	-0.2
			(S)	08	13.70	

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

& SEP 13, 1989 01h 25m 29.20s
34.760 N 118.950 W
DEPTH = 12.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.1 (PAS).

ABL	0.24	292	iPd	25	34.10	-0.5
SYP	0.88	255	ePc	25	46.10	0.1
SBB	0.93	94	iPd	25	46.10	-0.7
ISA	0.98	23	iPd	25	46.60	-1.1
BCH	1.02	295	eP	25	47.30	-1.1
BLP	1.21	261	eP	25	50.50	-1.1
PHAM	1.60	313	eP	25	55.80	-1.5
PEC	1.72	120	eP	25	57.70	-1.4
PLM	2.23	128	eP	26	05.10	-1.6
FRI	2.31	345	ePd	26	06.10	-1.5
			iS	26	35.70	
LLA	2.46	319	ePd	26	08.10	-1.7
PRS	2.52	309	ePc	26	08.40	-2.2
SAO	2.85	315	eP	26	13.30	-2.0
GCC	3.35	313	ePc	26	20.30	-2.1
TNP	3.60	22	eP	26	32.00	5.9
PCC	3.90	316	eP	26	27.00	-3.1
KVN	4.34	9	eP	26	40.00	3.4

17 obs. associoted

? SEP 13, 1989 01h 37m 38.20± 3.80s
42.258 N ±30.1km 19.111 E ±15.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

TTG	0.20	33	iPgd	37	42.50	-0.1
			iSg	37	45.70	
BDV	0.21	277	ePg	37	43.00	0.2
			iSg	37	47.50	
HCY	0.49	293	iPgd	37	47.70	-0.5
			iSg	37	55.00	
NKY	0.56	351	ePg	37	49.80	0.2
			eSg	37	56.40	

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

% SEP 13, 1989 01h 45m 13.67± 0.86s
38.344 N ± 9.2km 29.586 E ± 8.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.05	247	iPg	45	15.50	-0.5
ALT	0.82	30	iPn	45	29.90	0.3
BCK	1.19	138	ePn	45	35.40	-0.4
YER	1.59	221	ePn	45	43.00	1.0
IZM	1.83	272	iPn	45	44.90	-0.5
KCT	2.13	334	ePn	45	54.00	4.3X
YLV	2.23	356	iPn	45	57.30	6.1X

S.D. = 1.0 on 5 of 7 obs.

? SEP 13, 1989 02h 20m 39.56± 3.21s
31.982 S ±19.4km 71.741 W ±28.5km
DEPTH = 138.7 ± 36.0 km
NEAR COAST OF CENTRAL CHILE (135)

PEL	1.46	143	iPd	21	07.00	-1.3
			iS	21	28.60	
SAN	1.73	148	iPc	21	11.50	0.3
			iS	21	36.00	
TACH	1.80	158	iPc	21	12.20	0.2
			iS	21	38.00	
FCH	1.82	138	iPd	21	12.50	-0.1
			iS	21	39.50	
PCH	1.93	148	iPd	21	13.90	0.2
			iS	21	40.00	
LNV	1.99	172	eP	21	13.90	-0.3

13d 02h
iS 21 40.50
CHCH 2.15 155 iPd 21 17.20 0.9
iS 21 46.00
ZON 2.64 81 iPd 21 23.30 0.8
eS 21 58.00
MRA 5.13 96 e(P)d 21 55.60 0.2
TCA 6.13 86 ePd 22 08.20 -0.9
(S) 23 18.30
CYA 6.24 57 e(P) 22 10.50 0.0
PPD 20.69 66 eP 25 15.20 4.9X
S.D. = 0.7 on 11 of 12 obs.

SEP 13, 1989 03h 31m 35.93± 0.10s
19.009 S ± 3.8km 174.921 W ± 3.0km
DEPTH = 122.2km (20 depth phases)
5.6mb (46 obs.)
TONGA ISLANDS (173)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 21C
Centroid Location:
Origin Time 03:31:49.0 1.1
Lat 18.96S 0.11 Lon 175.38W 0.10
Dep 151.1 2.3 Half-duration 2.6
Moment Tensor; Scale 10**17 Nm
Mrr=-4.94 0.35 Mtt= 0.27 0.57
Mff= 4.68 0.55 Mrt= 1.83 0.35
Mrf=-2.38 0.38 Mtf= 0.93 0.37
Principal Axes:
T Val= 5.28 Plg=12 Azm= 96
N 0.84 18 2
P -6.12 68 218
Best Double Couple:Mo=5.7*10**17
NP1:Strike=208 Dip=37 Slip= -58
NP2: 351 59 -111
AFI 5.90 31 P 32 54.50 -7.9X
eS 33 52.00
NDF 7.35 279 ePd 33 30.00 7.9X
RAR 14.40 101 P 34 52.00 -3.2X
S 38 20.00
PVC 15.97 272 iPc 35 20.50 5.6X
DZM 17.72 257 iPc 35 38.80 2.3
KRP 20.60 202 P 36 08.00 0.9
PGZ 22.83 197 eP 36 29.00 0.0
0.6s 178.00nm 5.6mb
MNG 23.06 199 eP 36 29.20 -2.1
CAW 23.63 199 P 36 35.80 -1.1
BLW 23.75 198 P 36 37.90 -0.1
WDW 23.80 199 P 36 37.50 -1.0
MRW 23.86 200 eP 36 38.30 -0.7
MOW 23.86 198 P 36 38.40 -0.7
AFR 23.92 91 iP 36 38.80 -0.9
SNZO 23.93 200 P 36 39.00 -0.7
S 40 52.00
PAE 24.09 91 iP 36 40.40 -1.0
1.3s 360.00nm 5.7mb
PPT 24.10 91 iP+ 36 40.60 -1.0
1.3s 770.00nm 6.0mb
Z 21s 4.00um 4.9Msz
TBI 24.12 105 iP 36 42.80 1.2
1.3s 495.00nm 5.8mb
PPN 24.24 91 iP 36 41.80 -1.1
TVO 24.38 91 iP 36 43.70 -0.6
PMO 26.13 85 iP 36 59.00 -1.4
1.3s 330.00nm 5.7mb
VAH 26.34 86 iP 37 00.50 -1.8
1.3s 170.00nm 5.5mb
SVO 26.36 288 eP 37 10.00 7.5X
TPT 26.40 85 iP 37 01.30 -1.6
1.3s 330.00nm 5.7mb
RUV 26.58 86 iP 37 02.80 -1.7
1.3s 330.00nm 5.7mb
BRS 30.77 248 iP 37 42.00 0.0
epP 37 55.00 51kmX
COO 32.14 243 iPc 37 54.10 0.2
RMQ 34.23 251 iPd 38 12.10 0.1
CNB 35.46 235 iPd 38 22.60 0.2
1.0s 92.00nm 5.6mb
CAN 35.74 236 eP 38 24.60 -0.2
CTA 36.55 262 iPd- 38 31.70 0.0
1.1s 655.06nm 6.4mb
i 40 01.00 476kmX
i(S) 44 08.00
CMS 37.42 243 iP 38 38.90 0.1
1.0s 75.00nm 5.5mb
e 39 12.00 148kmX
RKT 37.42 103 eP 38 38.00 -0.9
1.0s 95.00nm 5.6mb
PMG 37.91 279 iPd 38 43.50 0.4
1.0s 340.00nm 6.1mb
OLP 38.28 251 iPd 38 45.80 -0.3
LAT 39.01 283 eP 38 54.00 1.7
TOO 39.11 233 eP 38 52.30 -0.7
TAU 39.72 225 iPc 38 57.80 0.0
STK 41.05 243 eP 39 09.00 0.1
OIS 42.71 260 iPd 39 21.80 -0.8
e 41 12.00 650kmX
e 44 56.00
ADE 43.87 239 iPc 39 31.20 -0.7
1.0s 56.00nm 5.3mb
WRA 47.69 260 Pc 40 01.60 -0.7
0.5s 57.40nm 5.6mb
ASPA 47.70 255 iPd 40 00.30 -2.0
1.3s 309.00nm 5.9mb
epP 40 36.70 162kmX
ePP 41 55.10
ePcS 45 23.50
eS 46 46.10
eScS 49 45.50
GUA 51.11 306 eP 40 28.30 -0.1
1.1s 435.44nm 6.3mb
GUMO 51.17 306 eP 40 28.20 -0.6
1.2s 355.56nm 6.1mb
PJG 51.17 306 eP 40 28.90 0.1
MTN 52.08 268 iPd 40 34.50 -1.2
FORR 52.51 245 iPc 40 37.60 -1.1
0.4s 88.00nm 6.0mb
KNA 53.65 264 iPd 40 46.60 -0.7
0.4s 75.00nm 6.0mb
DRV 55.73 200 eP 41 02.80 1.2
COOL 58.48 245 eP 41 19.50 -2.2
0.5s 20.00nm 5.4mb
SBA 59.56 184 iPd 41 31.00 2.7
1.1s 162.03nm 6.0mb
MBL 60.92 256 iPd 41 37.00 -1.5
0.8s 148.00nm 6.0mb
MEKA 61.22 250 eP 41 39.00 -1.5
0.4s 21.00nm 5.5mb
KLB 61.31 244 eP 41 39.60 -1.4
0.4s 11.00nm 5.2mb
NWAO 61.63 242 eP 41 42.00 -1.1
RKG 61.71 241 eP 41 43.00 -0.7
BAL 62.31 245 eP 41 46.00 -1.6
MUN 62.58 243 eP 41 48.00 -1.4
MRWA 63.10 246 iPc 41 51.60 -1.2
0.4s 5.00nm 4.8mb
DAV 64.10 288 eP 41 59.00 -0.5
NANU 64.59 254 iPc 42 02.10 -0.5
0.5s 60.00nm 5.8mb
KAKJ 69.41 322 P 42 32.20 -0.4
TSM 69.82 282 ePd 42 37.20 1.7
CHJJ 69.99 322 P 42 36.10 -0.1
IIDJ 70.25 321 P 42 37.00 -0.8
MAT 70.79 322 iPd 42 40.20 -0.8
1.4s 134.88nm 5.6mb
eS 51 50.00
NIIJ 70.81 323 P 42 40.70 -0.4
KKM 72.22 283 eP 42 48.80 -1.3
0.5s 28.20nm 5.3mb
BAG 72.54 295 eP 42 51.00 -1.0
PRS 74.76 42 ePd 43 04.30 0.0
GCC 74.79 41 ePd 43 04.30 -0.1
PCC 74.85 41 ePd 43 04.30 -0.4
BCH 74.89 44 P 43 05.70 0.5
pP 43 35.40 117km
PRI 75.09 43 iPd 43 06.60 0.3
BRK 75.15 41 ePd 43 06.20 -0.3
BKS 75.17 41 e(P) 43 06.60 0.0
0.9s 40.00nm 5.2mb
e 43 17.20 34kmX
e 43 32.00
e 43 37.10
e 43 39.60
eS 52 38.00
e 57 03.00
eSS 57 46.00
eLQ 02 50.00
eLR 05 50.00
MHC 75.21 41 iPd 43 07.00 0.0
e 43 40.00 132km
ARN 75.28 41 P 43 07.10 -0.2
BAR 75.76 48 eP 43 09.00 -1.1
e 43 42.00 132km
PLM 76.01 47 eP 43 11.00 -0.7
RVR 76.02 46 eP 43 11.00 -0.5
e 43 42.00 123km
PEC 76.10 46 P 43 11.70 -0.3
SBB 76.11 45 eP 43 11.00 -1.0
e 43 42.00 123km
FRI 76.22 43 ePd 43 12.00 -0.5
ISA 76.24 44 eP 43 13.00 0.2
e 43 43.00 118km
ORV 76.67 40 ePd 43 14.50 -0.5
WDC 76.70 38 iPd 43 14.90 -0.2
e 43 47.50 130km
CLC 76.91 45 eP 43 16.00 -0.5
e 43 46.00 118km
TPC 76.99 47 eP 43 17.00 0.1
e 43 47.00 118km
MIN 77.10 39 ePd 43 16.50 -1.0
GSC 77.14 45 eP 43 17.00 -0.8
e 43 50.00 131km
GLA 77.27 48 eP 43 19.00 0.5
e 43 49.00 118km
LBFM 77.56 38 P 43 20.00 -0.1
QZH 78.06 302 Pd 43 23.60 0.7
TNP 78.46 43 P 43 25.30 0.2
1.2s 33.60nm 5.0mb
pP 43 55.00 116km
KVN 78.46 42 P 43 24.80 -0.3
pP 43 54.50 116km
KDC 78.72 12 eP 43 25.20 -0.6
BMW 80.13 33 P 43 33.30 -0.5
MDJ 81.01 323 eP 43 38.50 0.2
LON 81.06 34 P 43 37.80 -0.8
GMW 81.07 33 P 43 38.50 -0.1
AIA 81.19 157 eP 43 40.60 1.7
PGC 81.46 32 eP 43 40.00 -0.5
RMW 81.52 33 P 43 40.80 -0.2
GZH 81.56 298 eP 43 41.40 -0.2
MCW 81.79 32 P 43 42.60 0.3
MSU 82.00 45 P 43 45.00 1.1
DL2 82.68 315 eP 43 44.40 -2.7
OIZ 82.92 293 eP 43 50.20 1.4
PMR 82.93 12 ePd 43 47.00 -0.9
1.1s 52.10nm 5.3mb
CN2 82.93 321 iPd 43 48.80 0.5
4.0s 0.60nm 2.8mb X
pP 44 21.00 126km
SNY 82.98 319 Pd 43 49.20 0.7
TTA 83.01 9 P 43 48.40 0.0
1.2s 66.29nm 5.4mb
DAU 83.60 44 P 43 52.80 0.6
PNT 83.82 33 iPd 43 52.90 0.2
0.7s 13.00nm 4.9mb
MAW 83.93 199 iPd 43 54.20 1.2
1.0s 70.00nm 5.5mb
WHN 83.93 305 P 43 54.00 0.4
ALQ 84.22 50 iPd 43 56.00 0.7
1.2s 66.41nm 5.4mb
pP 44 28.80 128km
esP 44 46.50
TIA 84.45 311 Pd 43 56.30 0.2
LRM 85.73 38 eP 44 02.50 -0.2
IPM 85.87 276 ePd 44 04.80 1.1
0.7s 92.70nm 5.8mb
FBA 86.20 11 P 44 02.50 -1.7
pP 44 33.00 117km
IMA 86.32 9 ePd 44 04.90 0.0
1.1s 47.80nm 5.4mb
BJI 86.91 314 eP 44 09.00 0.9
Z 12s 0.36um 5.0MszX
epP 44 45.00 141kmX
eSKS 54 40.00
esS 55 29.00
GOL 87.19 46 P 44 09.90 0.0
0.8s 13.39nm 5.0mb
PSI 87.23 274 ePd 44 10.50 0.2
0.8s 17.60nm 5.1mb
e 46 40.00 724kmX
GLD 87.31 46 P 44 10.90 0.5
1.2s 40.40nm 5.3mb
GYA 88.46 299 P 44 17.80 1.7
TIY 88.47 311 Pd 44 16.80 1.0
Z 32s 1.00um 5.0MszX
pP 44 51.00 133kmX
SES 88.98 35 ePd 44 17.70 -0.2
pP 44 50.00 124km
EDM 89.30 32 iPd 44 19.00 -0.3
LOE 89.52 288 eP 44 22.00 1.0

XAN	89.57	306	P	44	22.50	1.5	CLL	147.16	351	iPKP	51	03.20	-0.4				i	51	14.80										
RSSD	90.08	43	P	44	22.80	-0.6		1.3s		330.00nm							i	51	21.60										
LNV	90.21	126	eP	44	25.20	1.1				i	51	05.90								ALT	150.53	318	ePKP	51	14.40	5.0X	
HHC	90.42	313	eP	44	25.00	0.1				pPKP	51	38.10								WLS	150.61	357	PKP	51	09.52	0.4	
			epP	45	02.00	145kmX	BRG	147.44	350	iPKPd	51	03.80	-0.2							CDF	150.62	357	PKP	51	08.94	-0.2	
SNA	90.76	177	iPd	44	26.80	0.9		1.5s		52.00nm										LPF	150.63	8	ePKP	51	08.70	-0.3	
	1.1s	217.72nm				6.2mb				i	51	05.90									1.2s	35.70nm					
SAN	90.99	126	eP	44	29.40	1.7				i	51	39.00								BHG	150.66	349	iPKPc	51	09.30	0.1	
PCH	91.03	126	eP	44	30.00	2.0				i	52	02.10											id	51	14.90		
PEL	91.09	126	iPc	44	30.00	1.8				i	52	30.50								ECH	150.82	357	PKP	51	09.86	0.5	
BDT	91.92	287	iPd	44	34.00	2.0	SPC	147.51	341	iPKP	51	05.70	1.2							VITF	150.86	359	PKP	51	09.65	0.3	
	1.0s	124.20nm				6.1mb		1.5s		125.00nm										MBH	150.90	297	ePKP	51	10.00	0.0	
SIO	92.08	53	ePd	44	33.00	0.5	CFR	147.62	329	ePKP	51	04.00	-0.5							HAU	151.06	358	ePKP	51	09.30	-0 5	
INK	92.10	14	ePd	44	31.40	-0.5	VRI	147.79	331	ePKPc	51	05.00	0.2							FEL	151.11	356	PKP	51	09.79	-0.2	
	1.1s	70.00nm				5.8mb	MOX	148.01	352	iPKPc	51	05.00	0.0							BCK	151.11	315	iPKP	51	14.90	4.7X	
			pP	45	03.00	121km		1.5s		39.00nm										MOF	151.18	357	PKP	51	10.00	0 0	
CD2	92.45	302	P	44	35.60	1.2				i	51	08.50								SLE	151.18	355	ePKPc	51	10.00	0.0	
TUL	92.53	53	ePd	44	35.20	0.6				e	51	42.00								KBA	151.20	348	ePKP	51	09.00	-1.2	
	1.4s	56.10nm				5.6mb	TLB	148.10	328	ePKPc	51	09.00	3.7X								0.6s	39.70nm					
	Z 22s	0.26um				4.6Msz	PRU	148.18	348	PKP	51	05.30	0.1										i	51	15.60		
			e	45	06.80	121km				e	51	09.00										i	51	19.80		
			e(S)	54	55.00		UCC	148.28	1	PKP	51	04.70	-0.6									i	51	50.00		
			LR	14	44.00					i	51	09.00										e	53	38.00		
FVM	97.28	52	P	44	55.80	-0.4				e	51	43.00										e	54	48.00		
			pP	45	26.50	117km	HOF	148.30	352	ePKP	51	05.00	-0.5							BSF	151.22	358	ePKP	51	09.40	-0.7	
GTA	98.29	309	eP	44	59.60	-1.3				id	51	09.20									1.3s	21.65nm					
CNCB	99.85	112	P	45	10.00	0.9	ENN	148.31	359	ePKPc	51	05.50	0.1							BEO	151.25	337	iPKP	51	16.60	6.5X	
LPB	99.85	111	(P)	45	14.00	5.1X		0.7s		48.00nm													i	51	24.60		
ZOBO	99.93	111	P	45	13.00	3.5				id	51	09.20								KHL	151.33	317	iPKP	51	17.10	6.5X	
	1.5s	16.13nm				5.4mb				e	51	42.00								ZLA	151.47	355	ePKPc	51	10.40	0.0	
	Z 20s	0.32um				4.8Msz	BBTK	148.40	317	iPKPc	51	06.00	-0.1							PGB	151.50	330	ePKP	51	11.00	0.4	
			LR	18	36.00					i	51	10.00								BBS	151.55	357	PKP	51	10.38	-0.2	
CCH	101.23	113	ePdiff	45	16.00	1.1	MLR	148.43	331	ePKPc	51	06.00	0.0							KDZ	151.55	327	iPKP	51	17.00	6.3X	
PPD	111.42	124	ePKP	49	57.20	-0.7	MEM	148.46	359	PKPc	51	04.68	-0.9							SAX	151.62	354	ePKPc	51	11.20	0.2	
QUE	123.24	294	ePKP	50	21.00	0.5				i	51	09.43								LOMF	151.70	357	PKP	51	10.78	0.0	
PDCR	126.34	122	ePKP	50	25.20	-1.5				e	51	42.80								PTJ	151.71	344	ePKP	51	10.80	-0.1	
KEV	127.52	351	ePKP	50	27.00	-0.3	SNF	148.56	1	PKPc	51	06.30	0.5							RBL	151.76	348	PKP	51	16.73	5.8X	
ITR	129.00	119	ePKP	50	30.10	-1.7				i	51	09.90								RBL	151.76	348	PKP	51	25.80	14.9X	
MAIO	129.46	302	ePKP	50	32.00	-0.2	PSZ	148.74	341	ePKP	51	10.00	3.7X							OGA	151.79	351	ePKP	51	11.70	0.6	
			e	52	41.00		DOU	148.98	1	PKPc	51	06.80	0.3										id	51	17.80		
MHI	129.46	302	ePKP	50	32.00	-0.2				i	51	11.10								LOR	151.80	2	ePKP	51	10.30	-0.6	
			e	52	41.00					e	51	45.20									1.2s	40.15nm					
SOD	129.72	349	ePKP	50	26.00	-5.5X	GRF	148.99	352	ePKP	51	06.80	0.2							RZN	151.88	328	ePKP	51	11.00	-0.4	
			i	50	31.40			Z 22s		0.10um			4.6Msz							VTS	151.92	331	iPKPc	51	12.00	0.6	
SUF	133.96	347	ePKP	50	33.00	-6.7X				id	51	11.40								LJU	151.93	346	iPKPd	51	11.00	-0.1	
BUL	134.76	212	iPKPc	50	42.40	-0.3				e	51	15.40											i	51	17.50		
	1.0s	10.00nm					CMP	149.01	332	ePKPd	51	08.00	1.2										e	51	50.00		
			iSKP	53	07.30		ABH	149.14	357	ePKP	51	06.43	-0.4							ELL	151.95	314	ePKP	51	18.40	6.8X	
NUR	136.26	346	ePKP	50	36.00	-8.1X	HRI	149.16	304	ePKP	51	08.00	0.5							SSF	151.99	2	ePKP	51	11.00	-0.1	
	0.7s	18.70nm					KHC	149.18	349	iPKPd	51	06.70	-0.2								1.3s	50.55nm					
			i	50	43.80					i	51	11.90								LLS	152.03	354	ePKPc	51	11.60	0.1	
NB2	137.79	356	PKP	50	35.60	-11.5X	WET	149.29	350	ePKP	51	07.00	-0.1							LBF	152.08	2	ePKP	51	10.80	-0.5	
	0.6s	2.70nm								id	51	11.80									1.3s	43.30nm					
LSZ	139.03	215	ePKP	50	53.00	2.2	ZST	149.29	344	ePKP	51	07.60	0.6							OSS	152.08	353	ePKPc	51	11.80	0.3	
			i	53	40.00					i	51	12.00								VOY	152.08	347	ePKP	51	10.90	-0.5	
KMZ	141.81	214	iPKP	50	52.00	-3.8X				i	51	16.40											i	51	17.80		
			i	54	07.00					i	51	45.90											e	51	50.50		
NAI	142.89	241	iPKPc	50	55.30	-2.5	SRO	149.31	342	ePKP	51	06.80	-0.3							MFF	152.15	8	ePKP	51	11.10	-0.3	
	1.0s	18.00nm								i	51	12.50									1.2s	29.75nm					
EKA	143.20	8	PKPc	50	52.40	-4.4X	TOD	149.33	355	ePKP	51	06.86	-0.3							CEY	152.24	346	ePKP	51	11.50	-0.1	
	1.0s	10.00nm					RUP	149.34	357	ePKP	51	07.42	0.3							AVF	152.26	3	ePKP	51	10.90	-0.6	
DMU	143.97	12	ePKP	50	47.10	-11.1X	WLF	149.40	359	PKPc	51	08.00	0.9								1.3s	19.85nm					
DLE	144.62	12	ePKP	50	47.40	-11.9X				i	51	12.50								VBY	152.26	345	e(PKP)	51	12.00	0.4	
	0.6s	26.00nm								e	51	44.50											i	51	18.00		
VAL	145.00	17	iPKP	50	59.70	-0.3	VKA	149.42	345	ePKP	51	06.00	-1.3							EZN	152.33	323	iPKP	51	11.00	-0.8	
ETA	145.24	12	iPKPd	50	59.80	-0.6		2.0s		373.00nm										VDL	152.36	353	ePKPc	51	12.20	0.2	
	1.3s	252.00nm								i	51	12.40								TRI	152.42	347	ePKP	51	03.10	-8.6X	
YRH	145.40	10	iPKPd	50	59.90	-0.8				i	51	17.40											i	51	18.50		
	1.2s	152.00nm								i	51	43.30											i	51	51.10		
KVT	145.61	316	ePKP	51	03.00	1.5	KFNJ	149.66	301	PKP	51	13.50	5.4X							TRI	152.42	347	PKP	51	18.65	6.9X	
ECP	145.70	13	iPKPd	51	01.30	0.2	MASJ	149.67	301	PKPd	51	13.20	5.0X								0.8s	674.63nm					
	1.2s	428.00nm					GPA	149.68	320	iPKP	51	12.10	4.2X							TRI	152.42	347	PKP	51	08.30	-3.4X	
AAE	145.91	258	ePKP	51	05.20	2.1	MKRJ	149.78	300	PKP	51	13.70	5.3X							BGF	152.46	3	ePKP	51	11.40	-0.4	
WIT	146.24	358	ePKP	51	04.00	2.0	SOP	149.90	344	ePKP	51	10.00	2.0								1.2s	28.25nm					
			e	51	38.50		FLN	149.98	7	ePKP	51	07.50	-0.5							CTI	152.49	350	PKP	51	12.07	0.0	
KRA	146.82	342	iPKPd	51	04.80	1.7		1.1s		56.15nm											0.6s	47.80nm					
	0.9s	80.00nm					DSI	149.99	301	e(PKP)	51	09.00	0.4							KKB	152.54	330	ePKP	51	13.00	0.9	
			e	51	08.30		GWF	150.03	357	PKP	51	08.57	0.4							RIY	152.62	346	iPKPd	51	18.80	6.8X	
KAS	146.92	319	ePKP	51	04.00	0.4	LDF	150.19	7	ePKP	51	07.80	-0.6							LSF	152.68	5	ePKP	51	11.50	-0.6	
DBN	146.98	360	ePKP	51	06.00	2.8		1.2s		56.55nm										TCF	152.69	4	ePKP	51	11.60	-0.6	
KSP	147.01	347	ePKPd	51	03.50	0.1	CTT	150.25	323	ePKP	51	14.00	5.3X								1.3s	27.10nm					
	1.2s	234.00nm					GRR	150.30	8	ePKP	51	08.20	-0.3							IZM	152.71	320	iPKP	51	18.90	6.4X	
			id	51	06.00			1.2s		41.65nm										MAF	152.78	4	ePKP	51	11.90	-0.4	
			i	51	36.80		JMB	150.36	327	ePKP	51	15.00	6.2X								1.5s	33.95nm					
WTS	147.05	358	ePKPc	51	03.50	0.2	CSS	150.37	308	ePKP	51	14.00	4.9X							TMA	152.80	354	ePKPc	51	12.60	0.1	
	0.9s	153.00nm					PVL	150.44	329	ePKP	51	10.00	1.1							YER	152.82	316	ePKP	51	19.80	7.1X	
			i	51	39.00		FUR	150.48	352	ePKP	51	09.10	0.2							MMK	152.93	356	ePKPc	51	13.70	0.9	

13d 03h

DIX	152.93	356	ePKPc	51	13.80	1.0
AGO	152.98	3	PKP	51	12.66	0.1
MDI	153.03	353	PKP	51	19.44	6.9X
	0.5s	18.50nm				
VAI	153.04	354	PKP	51	12.22	-0.4
	1.1s	214.00nm				
PLDF	153.09	2	PKP	51	13.06	0.3
SAL	153.09	352	PKP	51	20.07	7.4X
	1.1s	196.50nm				
SKO	153.21	332	iPKP	51	12.30	-0.7
	1.2s	64.00nm				
			i	51	20.40	
PYM	153.28	3	PKP	51	13.50	0.4
EMON	153.50	21	ePKP	51	14.50	1.1
LPG	153.55	357	ePKP	51	13.70	-0.1
	1.5s	23.50nm				
STS	153.55	23	ePKP	51	15.00	1.6
LSD	153.57	357	PKP	51	14.45	0.7
RJF	153.61	6	ePKP	51	13.40	-0.1
	1.2s	20.85nm				
LBL	153.81	3	PKP	51	14.60	0.9
LFF	153.89	7	ePKP	51	13.90	0.1
BNI	154.00	357	PKP	51	15.07	0.9
	0.5s	11.10nm				
CAF	154.04	5	ePKP	51	14.10	0.0
	1.6s	31.10nm				
BOB	154.06	353	PKP	51	22.42	8.2X
	0.8s	120.40nm				
HVAR	154.06	341	iPKP	51	21.80	7.7X
RRL	154.12	357	PKP	51	14.24	-0.2
OHR	154.19	332	ePKP	51	13.80	-0.7
	1.2s	0.12nm				
			i	51	22.20	
LPO	154.19	6	ePKP	51	14.50	0.2
PCP	154.38	354	PKP	51	12.91	-1.7
MME	154.45	351	PKPc	51	23.80	8.8X
ERUA	154.49	21	ePKP	51	15.50	0.8
DOI	154.52	356	PKPc	51	22.20	7.4X
PZZ	154.52	357	PKP	51	14.66	-0.2
ROB	154.68	355	PKP	51	13.01	-2.0
ARV	154.70	347	PKPc	51	15.50	0.5
STV	154.77	356	PKP	51	13.32	-1.8
ENR	154.78	356	PKP	51	14.35	-0.8
TOUF	155.00	356	PKP	51	15.27	-0.3
AUTN	155.01	356	PKP	51	14.95	-0.7
SAOF	155.01	356	PKP	51	15.27	-0.1
IMI	155.06	355	PKP	51	14.35	-1.2
AURF	155.12	356	PKP	51	15.43	-0.2
MVIF	155.13	356	PKP	51	15.27	-0.4
ASS	155.17	347	PKP	51	14.00	-1.7
REVF	155.27	356	PKP	51	15.51	-0.3
CALN	155.28	357	PKP	51	15.73	-0.2
FRF	155.49	357	ePKP	51	15.50	-0.5
	1.5s	31.35nm				
LRG	155.60	358	ePKP	51	15.80	-0.4
LMR	155.72	357	ePKP	51	16.00	-0.4
EPF	155.72	8	ePKP	51	16.50	0.0
	1.2s	20.85nm				
MNS	155.82	346	PKP	51	17.50	0.9
GUD	157.03	18	ePKP	51	19.20	0.8
MGR	157.09	339	PKP	51	16.00	-2.3
TDS	157.24	337	PKP	51	18.50	0.0
ETOR	157.42	14	ePKP	51	19.70	0.9
AAPN	160.07	22	ePKP	51	22.50	0.6
ASMO	160.15	21	ePKP	51	22.50	0.6
ALOJ	160.25	22	ePKP	51	23.00	0.9
EJIF	160.30	26	ePKP	51	24.00	2.0
BNG	160.44	224	iPKPd	51	22.50	-0.3
	1.1s	33.00nm				
			ic	52	05.00	
			id	55	46.30	
ATEJ	160.46	22	ePKP	51	23.00	0.7
MAL	160.48	23	iPKPc	51	23.00	0.9
APHE	160.54	21	ePKP	51	23.00	0.6
BMK	161.41	29	iPKPd	51	25.80	2.7
AVE	161.91	36	ePKP	51	25.50	1.9
TAF	162.91	21	ePKP	51	27.00	2.3
IFR	162.91	30	iPKPd	51	27.00	2.1
TIO	163.71	41	iPKPd	51	27.50	1.8
LIC	163.93	141	PKP	51	26.30	0.1
KIC	164.21	141	PKP	51	26.00	-0.5
TIC	164.26	140	PKP	51	26.40	-0.1

S.D. = 1.0 on 305 of 348 obs.

? SEP 13, 1989 04h 24m 34.77± 7.15s
3.320 S ±67.8km 139.343 E ±31.5km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
WEST IRIAN (201)

MTN	12.47	220	eP	27	32.00	-0.9
			eS	29	43.00	
KNA	16.15	219	eP	28	22.50	1.5
			eS	31	05.00	
OIS	17.14	179	eP	28	34.00	0.5
WRA	17.23	196	Pd	28	33.90	-0.8
	0.4s	10.20nm			4.3mb	
ASPA	20.90	194	eP	29	17.00	0.0
	0.6s	26.00nm			4.8mb	
			eS	33	01.10	
WARB	25.79	207	iPc	30	04.30	-0.4
	0.4s	9.00nm			4.7mb	

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

• SEP 13, 1989 05h 21m 16.92± 0.85s
44.439 N ±19.2km 148.473 E ±13.5km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
KURIL ISLANDS (221)

KUSJ	3.04	245	iP+	22	03.00	-0.7
			S	22	34.50	
ASAJ	4.20	268	P	22	24.70	4.5X
HOOJ	4.30	243	P	22	22.10	0.4
			S	23	07.80	
MRRJ	5.75	252	P	22	42.50	0.3
			S	23	43.40	
SUF	63.72	334	eP	31	47.00	0.0
KVN	66.14	58	eP	32	03.50	0.2
TNP	67.29	59	eP	32	10.50	-0.2
NB2	69.30	339	P	32	22.30	-0.2
	0.4s	0.60nm			4.0mb	
HFS	69.42	338	eP	32	23.40	0.2
	0.3s	1.50nm			4.5mb	

S.D. = 0.4 on 8 of 9 obs.

? SEP 13, 1989 05h 55m 01.72±11.40s
33.908 S ±24.8km 71.823 W ±92.0km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.35	98	iPd	55	09.50	-0.6
			iS	55	17.00	
TACH	0.78	71	iPd	55	15.90	-0.4
			iS	55	29.00	
CHCH	0.97	92	iPd	55	20.00	0.9
			iS	55	35.00	
SAN	1.07	65	iPd	55	20.50	0.0
			iS	55	37.00	
PCH	1.13	76	iPd	55	21.50	0.2
			iS	55	42.00	
PEL	1.22	52	iPd	55	23.00	0.4
			iS	55	23.10	
FCH	1.40	66	iPc	55	26.00	0.5
			iS	55	47.00	
ZON	3.55	49	eP	56	00.00	4.1X
MRA	5.34	75	ePd	56	21.80	0.6
TCA	6.62	69	eP	56	37.50	-1.8
PPD	21.59	62	e(P)	59	55.00	4.3X

S.D. = 0.9 on 9 of 11 obs.

? SEP 13, 1989 06h 21m 43.15± 1.31s
30.225 S ±62.7km 178.388 W ±24.2km
DEPTH = 33.0km (normal)
4.9mb (1 obs.)
KERMADEC ISLANDS (178)

CTA	33.44	279	iP	28	23.30	2.1
ASPA	42.78	267	eP	29	39.40	-0.1
WRA	43.75	272	Pc	29	46.20	-1.2
	0.4s	9.00nm			4.9mb	
FORR	45.72	255	eP	30	01.30	-1.7
TNP	88.76	44	eP	34	34.50	-0.5
			e	34	52.00	
KVN	88.87	43	eP	34	34.50	-1.0
			e	34	51.50	
SUF	143.84	341	ePKP	41	11.00	-4.9X
	0.5s	2.00nm				
NUR	146.03	340	iPKP	41	18.80	-0.8
	0.7s	9.30nm				
NB2	148.53	351	PKP	41	25.30	1.6
	0.7s	2.40nm				
BNG	149.77	215	iPKPc	41	28.70	1.7
	0.5s	12.00nm				

S.D. = 1.6 on 9 of 10 obs.

SEP 13, 1989 06h 24m 05.72± 0.82s
40.170 N ± 6.0km 20.011 E ± 7.5km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)

SRN	0.29	182	iPg	24	11.90	0.1
LSK	0.45	92	ePg	24	14.50	-0.4
VLO	0.49	307	ePg	24	15.30	-0.4
BERA	0.53	355	ePg	24	15.40	-1.1
OHR	1.12	32	ePn	24	26.50	-0.2
TIR	1.18	355	ePn	24	28.70	1.0
PHP	1.55	12	ePn	24	34.40	1.0

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

• SEP 13, 1989 06h 33m 33.09± 0.51s
6.600 S ± 7.3km 77.103 W ±19.4km
DEPTH = 33.0km (normal)
PERU (116)

NNA	3.38	176	iPd	34	26.00	1.2
	0.5s	11.27nm				
			eS	34	42.00	
PT08	3.38	171	iP	34	23.50	-1.7
PT10	3.46	178	iP	34	25.50	-0.4
HUA	3.84	153	iPc	34	34.80	3.1X
			iS	35	43.70	
PT02	4.37	171	iP	34	38.90	0.0
PT06	5.25	172	iP	34	53.50	2.1
PT03	5.51	167	iP	34	53.00	-2.0
ARE	9.54	146	e(P)	36	20.00	28.4X
ZOBO	11.61	132	P	36	28.00	7.8X
	1.0s	8.75nm			4.9mb	X
			eLR	40	40.00	
LPB	11.80	133	P	36	24.00	1.4
CNCB	12.07	133	eP	36	35.00	8.7X
CCH	13.79	130	P	36	55.30	6.4X
PPD	28.17	121	eP	39	12.70	-12.1X
RSCP	44.68	350	eP	41	45.00	0.2
FVM	47.98	346	eP	42	11.00	0.2
TNP	59.63	324	eP	43	37.50	0.8
KVN	60.79	324	eP	43	45.00	0.4
RSON	60.94	348	eP	43	43.80	-1.3
SES	65.73	337	eP	44	17.00	0.2
EDM	68.85	338	ePc	44	35.50	-0.9
KIC	73.65	81	P	45	05.00	-0.9
INK	86.25	342	eP	46	13.00	0.7

S.D. = 1.2 on 16 of 22 obs.

SEP 13, 1989 06h 48m 27.88± 0.99s
6.204 S ± 5.6km 130.234 E ± 7.9km
DEPTH = 132.8 ± 11.3 km
5.0mb (10 obs.)
BANDA SEA (280)

AAI	3.22	321	eP	49	20.50	2.4
MTN	6.66	172	eP	50	03.00	-1.6
KNA	9.60	189	iPd	50	42.20	-1.8
	0.3s	229.00nm			6.4mb	X
			eS	52	23.00	
WRA	14.23	164	Pc	51	40.30	-4.3X
	0.4s	16.70nm			4.7mb	
OIS	16.92	148	eP	52	18.00	-0.1
			e	55	10.00	
PMG	17.06	102	eP	52	20.00	0.1
ASPA	17.72	169	iPd	52	26.30	-1.5
	1.0s	201.00nm			5.4mb	
			eS	55	36.60	
MBL	17.96	213	iPd	52	30.80	0.1
			eS	55	04.00	
KKM	18.54	311	ePd	52	36.50	-0.7
	0.6s	45.20nm			5.0mb	
WARB	20.16	189	iPd	52	55.10	1.2
	0.3s	15.00nm			4.9mb	
			eS	56	35.00	
CTA	20.80	133	eP	53	00.00	-0.3
NANU	21.58	220	eP	53	09.00	0.9
	0.5s	20.00nm			4.8mb	
PJG	24.45	36	eP	53	35.50	-0.4
FORR	24.60	184	eP	53	37.20	0.1
	0.4s	46.00nm			5.3mb	
COOL	25.99	198	eP	53	50.40	0.3
MRWA	26.55	209	iPc	53	55.60	0.4
	0.3s	10.00nm			5.0mb	
			i	54	28.80	
BAL	27.40	206	eP	54	03.20	0.3

STK 27.67 159 iPd 54 05.30 0.1
KLB 27.83 203 eP 54 07.10 0.4
MUN 28.80 205 eP 54 15.70 0.3
NWAO 29.21 203 eP 54 19.30 0.2
ADE 29.67 166 iPc 54 23.90 0.7
0.6s 20.00nm 5.0mb
RKG 30.31 202 eP 54 34.50 5.7X
BWA 32.73 152 eP 54 51.80 1.8
CAN 33.74 152 eP 55 00.00 1.3
LOE 36.65 310 eP 55 23.00 -0.5
CHG 39.61 310 iPc 55 48.30 0.1
0.9s 43.70nm 5.2mb
XAN 44.82 335 P 56 29.20 -1.2
GTA 53.39 331 P 57 35.80 -0.3
GBA 55.99 291 Pc 57 52.90 -2.2
0.6s 2.80nm 4.4mb
CNCB 150.89 142 PKP 08 10.00 8.1X
LPB 151.03 141 ePKP 08 18.00 16.1X
ZOBO 151.21 141 ePKP 08 11.00 8.6X
S.D. = 1.1 on 28 of 33 obs.

SEP 13, 1989 07h 01m 31.45± 0.20s
37.277 N ± 4.5km 54.220 E ± 2.7km
DEPTH = 33.0km (normal)
5.1mb (52 obs.)
IRAN-USSR BORDER REGION (341)
Felt in the Gorgon area, Iron.

TEH 2.75 237 ePc 02 17.00 2.7
MHI 4.34 101 iPnc 02 37.60 0.6
0.9s 191.60nm
eSn 03 38.00
TAB 6.31 280 eP 03 05.00 0.2
KER 6.47 245 eP 03 27.00 19.9X
SLY 7.23 259 ePn 03 20.00 2.6
e 04 04.50
iSg 05 10.00
MSL 8.92 268 ePn 03 42.00 0.9
eSn 05 24.00
BHD 8.98 246 ePnd 04 04.00 22.2X
eSn 06 03.00
i 06 39.00
BJA 11.66 196 (P) 04 17.30 -1.2
0.3s 38.00nm 6.0mb
QUE 12.73 120 iPd 04 33.20 0.1
e 09 13.00
HRI 15.61 261 eP 05 08.00 -2.7X
KAS 16.34 291 eP 05 23.00 3.0X
DSI 16.55 255 eP 05 26.00 3.5X
BBTK 16.98 285 eP 05 32.00 4.0X
i 05 58.00
KSH 17.20 76 eP 05 28.50 -2.4
Z 14s 2.40um
pP 05 34.00
PRNI 17.39 252 eP 05 35.00 1.8
BCK 18.78 278 eP 05 51.30 1.0
ALT 19.03 283 eP 05 49.00 -4.4X
ELL 19.41 276 eP 05 58.90 1.0
KHL 19.53 281 eP 05 57.00 -2.2
YLV 19.59 287 iP 06 00.30 0.5
KSL 19.78 274 ePg 06 00.00 -1.7
YER 20.64 278 eP 06 10.00 -0.8
PSN 20.77 296 eP 06 12.00 0.1
TLB 21.03 299 ePc 06 14.50 -0.1
NDI 21.07 107 iPc 06 14.80 -0.3
0.6s 123.33nm 5.5mb
iS 10 05.50
CFR 21.07 300 ePd 06 14.50 -0.5
IZM 21.30 281 iP 06 16.90 -0.5
BIR 21.69 303 eP 06 22.50 1.3
JMB 21.79 292 eP 06 24.00 1.8
KAP 21.81 274 ePb 06 22.00 -0.5
EZN 21.93 285 iP 06 26.00 2.3
IAS 21.99 305 ePc 06 25.00 0.8
CLI 21.99 303 ePc 06 25.00 0.7
VRI 22.20 301 ePc 06 17.50 -8.9X
BUC 22.37 297 ePd 06 28.00 0.1
DIM 22.54 291 eP 06 30.00 0.3
KDZ 22.61 290 eP 06 41.00 10.6X
MLR 22.66 300 ePd 06 33.00 2.0
CMP 23.25 299 ePc 06 40.00 3.4X
PGB 23.58 292 iP 06 43.00 3.1X
MMB 23.88 290 iPc 06 45.00 2.2
VTS 24.28 292 iPd 06 44.00 -2.9
KKB 24.36 291 eP 06 49.00 1.5
POO 25.40 132 iPd 06 58.00 0.5
SKO 25.59 291 iP 07 00.00 0.9
BZS 25.68 299 eP 07 01.50 1.6
OHR 26.09 289 eP 07 03.20 -0.6
1.3s 0.05nm 2.0mb X
KBN 26.10 288 eP 07 04.00 0.1
WMQ 26.14 65 P 07 05.00 0.7
sP 07 16.50
esS 11 45.00
LSK 26.30 287 eP 07 06.60 0.8
PHP 26.34 290 eP 07 05.40 -0.6
BEO 26.41 297 eP 07 10.00 3.3X
BCI 26.60 292 eP 07 08.80 0.4
PUK 26.74 291 eP 07 09.60 -0.1
BERA 26.76 288 eP 07 09.80 0.0
TIR 26.78 289 eP 07 08.20 -1.9
SRN 26.78 286 eP 07 10.00 -0.1
LACI 26.89 290 eP 07 06.00 -5.0X
SDA 27.03 291 eP 07 11.50 -0.9
VLO 27.12 288 eP 07 12.70 -0.4
SPC 27.23 307 iP 07 16.00 1.6
KRA 27.63 308 ePd 07 18.00 0.2
0.7s 64.00nm 5.4mb
i 07 32.90
e 12 27.00
SRO 28.24 303 eP 07 24.20 1.0
ZST 29.10 304 eP 07 31.10 0.1
HYB 29.15 126 iP 07 32.00 0.2
0.8s 28.60nm 5.0mb
PTJ 29.65 299 e(P) 07 36.60 0.5
NUR 29.85 331 iP 07 37.00 -0.5
0.8s 41.10nm 5.3mb
Z 23s 0.60um 4.2MszX
LR 21 30.00
SOI 30.08 283 P 07 38.00 -1.9
KSP 30.08 309 ePd 07 40.00 0.2
VBY 30.12 298 e(P) 07 37.10 -3.1X
e 10 41.40
SUF 30.73 335 eP 07 45.00 -0.3
0.5s 9.60nm 4.9mb
DUI 30.81 291 P 07 47.00 0.6
PRU 31.03 307 eP 07 43.50 -4.6X
e 07 48.50
VOY 31.10 299 eP 07 48.30 -0.6
e 10 42.60
TRI 31.18 299 iPd 07 49.00 -0.4
e 08 01.20
GBA 31.38 133 Pc 07 50.70 -0.8
0.7s 21.30nm 5.1mb
KHC 31.54 305 iP 07 53.00 0.4
AZI 31.55 291 P 07 53.50 0.8
BRG 31.55 308 iPd 07 53.80 1.1
1.5s 38.00nm 5.0mb
ASS 32.03 294 P 07 57.50 0.4
CLL 32.21 309 iPd 07 59.20 0.8
1.3s 26.00nm 5.0mb
i 08 13.80
UPP 32.45 326 iP 07 59.90 -0.5
SFI 32.57 295 P 08 02.50 0.9
CTI 32.66 299 Pd 08 02.50 0.0
PGD 32.66 295 Pc 08 04.00 1.3
MOX 32.98 308 eP 08 06.50 1.3
2.0s 44.00nm 5.0mb
OGA 33.10 301 iPd 08 06.40 -0.1
0.9s 32.00nm 5.2mb
GRF 33.13 306 eP 08 07.50 1.0
MME 33.38 296 P 08 10.30 1.3
BDI 33.46 296 P 08 09.20 -0.3
OSS 33.70 300 ePd 08 11.80 0.1
SOD 33.93 341 iP 08 13.20 0.0
MDI 34.01 299 Pd 08 14.20 0.1
KOD 34.12 136 eP 08 15.40 -0.3
VDL 34.17 300 ePd 08 15.80 0.0
BOB 34.24 297 P 08 17.00 0.7
SAX 34.25 301 ePd 08 16.10 -0.5
HFS 34.35 325 eP 08 15.90 -1.0
1.0s 132.00nm 5.8mb
Z 16s 0.18um 3.9MszX
LR 22 57.00
LLS 34.49 301 ePd 08 17.80 -0.7
TMA 34.59 299 ePd 08 18.90 -0.5
VAI 34.67 299 Pd 08 19.10 -0.7
PCP 34.90 297 P 08 20.93 -1.0
MMK 35.22 299 ePd 08 23.90 -1.0
ROB 35.40 296 P 08 24.93 -1.3
IMI 35.42 296 P 08 25.85 -0.5
BBS 35.50 302 P 08 25.63 -1.3
GTA 35.54 72 eP 08 29.00 1.5
Z 16s 0.90um 4.6MszX
NRA0 35.57 325 P 08 25.40 -1.9
WLS 35.60 303 P 08 26.23 -1.6
DIX 35.61 299 ePd 08 27.90 -0.3
CDF 35.65 303 P 08 27.42 -0.9
KEV 35.68 344 eP 08 28.00 -0.1
0.6s 22.20nm 5.3mb
i 08 41.80
ECH 35.73 303 P 08 28.21 -0.7
ENR 35.73 296 P 08 28.41 -0.6
STV 35.80 296 P 08 28.72 -0.8
LSD 35.82 298 P 08 29.44 -0.5
DOI 35.83 297 P 08 28.10 -1.7
NB2 35.83 325 P 08 28.60 -1.0
0.7s 25.10nm 5.3mb
PZZ 35.93 297 P 08 29.03 -1.7
LOMF 35.96 302 P 08 30.09 -0.8
BSF 35.98 302 P 08 29.99 -1.1
LPG 36.10 298 eP 08 31.70 -0.7
0.8s 16.10nm 5.0mb
RRL 36.12 297 P 08 32.21 -0.3
FOUF 36.16 297 ePd 08 32.25 -0.2
BNI 36.19 298 P 08 32.50 -0.4
HAU 36.27 303 eP 08 32.60 -0.9
0.7s 11.90nm 4.9mb
FRF 36.36 295 eP 08 34.00 -0.2
0.7s 48.50nm 5.5mb
LMR 36.48 295 eP 08 34.80 -0.4
0.9s 13.10nm 4.8mb
VITF 36.52 303 P 08 35.01 -0.4
DOU 37.43 306 iPc 08 45.00 2.0
e 08 57.40
e 11 01.80
TRO 37.55 341 eP 08 44.00 0.2
LBF 37.92 301 eP 08 46.90 -0.4
0.8s 9.40nm 4.7mb
LOR 37.99 302 eP 08 47.20 -0.6
1.0s 14.00nm 4.8mb
SSF 38.24 301 eP 08 49.90 0.0
0.7s 7.70nm 4.6mb
AVF 38.36 301 eP 08 50.80 -0.2
0.8s 29.50nm 5.2mb
BGF 38.73 300 eP 08 53.90 -0.2
1.1s 17.00nm 4.7mb
MAF 38.96 300 eP 08 56.30 0.3
0.9s 29.40nm 5.1mb
TCF 39.19 300 eP 08 58.20 0.2
0.8s 24.10nm 5.0mb
LZH 39.45 76 eP 09 14.50 14.1X
1.5s 30.00nm
Z 17s 0.50um 4.4MszX
CAF 39.46 298 eP 09 00.40 0.2
0.8s 9.40nm 4.6mb
LSF 39.67 300 eP 09 01.80 -0.1
0.8s 17.40nm 4.9mb
RJF 39.79 299 eP 09 03.50 0.6
0.9s 20.90nm 4.9mb
LPO 40.11 298 eP 09 05.60 0.1
0.8s 9.10nm 4.6mb
LFF 40.39 298 eP 09 08.20 0.4
0.7s 40.50nm 5.3mb
LDF 40.56 304 eP 09 09.10 -0.1
0.7s 11.00nm 4.7mb
MFF 40.78 301 eP 09 10.80 -0.2
1.1s 14.60nm 4.6mb
FLN 40.78 304 eP 09 11.00 0.0
0.9s 13.10nm 4.7mb
EPF 40.99 295 eP 09 11.30 -1.5
0.7s 4.40nm 4.3mb
GRR 41.07 304 eP 09 13.50 0.2
0.8s 14.50nm 4.8mb
LPF 41.22 303 eP 09 14.80 0.2
1.1s 21.40nm 4.8mb
EKA 42.21 314 Pd 09 22.90 0.3
0.8s 17.90nm 4.8mb
ECHE 42.72 291 eP 09 27.90 0.9
KMI 42.81 92 Pd 09 28.50 0.3
CHG 43.10 103 iPd 09 31.00 0.7
1.0s 16.25nm 4.7mb
YRH 43.13 311 eP 09 30.40 0.2
0.7s 43.00nm 5.3mb
YRH 43.13 311 eP 09 39.80 9.6X
ETOR 43.21 293 eP 09 30.50 -0.6
BDT 44.05 104 eP 09 38.00 0.1
0.8s 57.10nm 5.4mb
ETA 44.10 310 eP 09 39.00 1.0
ECP 44.24 310 eP 09 39.30 0.2
0.8s 90.00nm 5.6mb

13d 07h

ECP	44.24	310	eP	09	50.00	10.9X
DLE	44.26	311	eP	09	39.50	0.2
GUD	44.80	293	eP	09	43.50	-0.5
KBS	45.10	349	iP	09	46.50	0.7
TAF	45.27	285	eP	09	49.00	1.2
GYA	45.32	88	eP	09	48.80	0.5
AFC	45.33	288	eP	09	47.80	-0.5
ASMO	45.45	289	eP	09	48.32	-0.8
TIY	45.53	71	eP	09	53.50	3.8X
Z	16s	0.70um				4.7MszX
APHE	45.54	288	iP	09	49.70	-0.2
ACHM	45.59	288	eP	09	49.50	-0.8
AAPN	45.75	289	eP	09	50.50	-1.0
ATEJ	45.79	288	iP	09	51.10	-0.8
ALOJ	45.80	288	eP	09	50.50	-1.5
MAL	46.16	288	iP	09	53.80	-0.8
BNG	46.18	234	iPd	09	54.10	-0.9
	0.6s	23.00nm				5.3mb
			id	10	05.80	
			id	10	10.50	
EPLA	46.37	293	eP	09	56.00	-0.3
EJIF	47.05	288	eP	10	01.00	-0.7
NKM	47.35	287	iPd	10	18.00	13.9X
IFR	47.84	284	iP	10	15.50	7.3X
BMK	47.86	286	iP	10	07.00	-1.1
AKU	49.52	329	iP	10	22.60	2.2
	1.0s	28.00nm				5.2mb
AVE	49.69	285	eP	10	22.50	0.3
TIO	50.53	282	iP	10	29.00	0.2
			i	10	37.00	
CN2	53.00	59	Pd	10	46.80	-0.3
KIC	61.63	255	Pd	11	47.50	-1.0
	0.7s	35.50nm				5.6mb
TIC	61.67	256	Pd	11	47.70	-1.0
	0.6s	18.00nm				5.4mb
LIC	61.94	256	Pd	11	49.50	-1.0
BUL	62.00	207	eP	12	00.00	9.1X
TPI	63.52	116	iPd	12	11.00	10.0X
			e	12	15.00	
MAT	64.86	62	eP	12	08.00	-1.5
FRB	69.63	336	eP	12	38.00	-1.0
	0.8s	72.00nm				5.8mb
INK	74.57	3	ePd	13	08.40	0.1
IMA	74.75	11	ePd	13	10.30	0.7
	0.9s	34.20nm				5.3mb
SCH	75.29	329	eP	13	13.00	0.3
FBA	76.70	9	P	13	21.30	0.8
	0.8s	79.66nm				5.8mb
PMR	79.66	11	ePd	13	37.60	0.9
	0.6s	49.70nm				5.7mb
FFC	86.11	346	iPd	14	10.30	0.3
	0.7s	14.00nm				5.3mb
RSON	87.82	340	P	14	18.10	-0.3
EDM	89.23	353	iPd	14	26.00	0.9
	0.8s	53.00nm				5.9mb
SES	91.74	351	ePd	14	37.50	0.7
PNT	93.61	356	eP	14	46.00	0.6
DPW	94.96	355	P	14	51.80	0.1
LON	96.28	357	P	14	58.10	0.3
TNP	104.60	353	Pdiff	15	37.40	2.1
	0.5s	1.08nm				5.0mb
ZOBO	125.30	276	PKP	20	28.40	-3.1X
LPB	125.42	276	PKP	20	32.80	1.2
CNCB	125.48	276	PKP	20	32.00	0.1
S.D. = 1.0 on 184 of 208 obs.						

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* SEP 13, 1989 08h 08m 50.52± 2.21s
47.609 N ±10.8km 7.324 E ±18.3km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
MD 1.0 (STR).

MOF	0.27	332	Pg	08	55.96	-0.4
LOMF	0.42	233	Pg	08	59.13	-0.1
CDF	0.80	358	Pg	09	06.10	-0.1
			Sg	09	17.22	
WLS	0.80	1	Pg	09	06.36	0.2
			Sg	09	18.16	
VITF	1.09	304	Pg	09	11.28	0.3
S.D. = 0.4 on 5 of 5 obs.						

? SEP 13, 1989 08h 46m 57.33± 1.63s
30.263 N ±16.6km 131.056 E ±39.6km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
KYUSHU, JAPAN (235)

KAGJ	0.93	351	iPd	47	14.50	0.4
			eS	47	25.50	
KUMJ	2.27	355	iP+	47	33.50	0.2
SHNJ	3.85	1	P	47	55.00	-0.7
SHK	4.47	17	eP	48	11.20	6.6X
BJI	15.58	313	eP	50	41.00	5.0X
Z	14s	0.58um				
WRA	50.02	176	P	56	07.00	16.3X
	1.0s	3.90nm				
INK	64.21	24	eP	57	31.00	0.3
SLL	76.34	333	eP	58	44.70	0.2
	0.4s	2.10nm				4.5mb
NB2	76.79	334	P	58	46.60	-0.5
	0.9s	1.90nm				4.1mb
S.D. = 0.6 on 6 of 9 obs.						

SEP 13, 1989 09h 02m 39.45± 1.01s
39.183 N ± 7.1km 20.318 E ±11.0km
DEPTH = 5.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.5 (ATH).

SRN	0.74	341	ePg	02	54.00	-0.2
LSK	0.99	13	ePg	02	57.20	-1.5
VLS	1.03	168	ePg	02	59.00	-0.3
VLO	1.43	334	ePn	03	09.20	3.1X
KBN	1.49	15	iPnd	03	02.50	-4.3X
KZN	1.59	44	ePb	03	07.50	-0.8
OHR	1.96	11	ePn	03	15.50	1.8
TIR	2.19	351	ePn	03	20.20	3.2X
NEO	2.26	86	ePn	03	18.50	0.4
ITM	2.37	147	ePg	03	23.50	3.9X
LACI	2.49	349	ePn	03	21.70	0.4
PHP	2.50	2	ePn	03	24.00	2.6X
PLG	2.69	63	ePn	03	24.50	0.3
PUK	2.87	354	ePn	03	26.70	0.0
SKO	2.91	17	ePn	03	20.00	-7.3X
MGR	3.80	286	P	03	46.00	6.1X
SGO	4.09	291	P	03	48.00	4.0X
S.D. = 1.1 on 9 of 17 obs.						

SEP 13, 1989 09h 36m 49.55± 0.38s
37.726 N ± 4.0km 30.219 E ± 4.6km
DEPTH = 10.0km (geophysicist)
4.2mb (9 obs.)
TURKEY (366)

BCK	0.40	132	iPn	36	58.10	0.4
KHL	0.81	318	iPn	37	04.50	-0.8
ELL	1.01	194	iPn	37	08.40	-0.3
ALT	1.33	356	iPn	37	14.60	0.5
YER	1.65	250	iPn	37	20.30	1.6
KSL	1.68	198	ePn	37	22.50	3.4X
IZM	2.43	287	iPn	37	29.40	-0.5
GPA	2.56	2	ePn	37	31.60	-0.2
SMG	2.68	271	ePn	37	33.20	-0.3
BBTK	2.90	42	iPc	37	38.00	1.3
			iS	38	31.00	
KCT	2.91	331	iPn	37	36.80	0.1
YLV	2.91	347	iPn	37	37.30	0.5
GBZT	3.12	349	ePn	37	40.00	0.4
			ePg	37	49.50	
			iSg	38	38.00	
HRT	3.12	352	ePn	37	40.90	1.2
BNT	3.18	326	iPn	37	40.30	-0.2
EDC	3.20	326	iPn	37	41.40	0.6
KAP	3.27	229	ePn	37	43.00	1.1
PPCY	3.32	148	eP	37	49.00	6.5X
PRK	3.45	297	ePn	37	44.50	0.1
ISK	3.45	345	ePn	37	52.00	7.6X
ITU	3.50	345	ePn	38	06.00	20.9X
			iSg	38	46.00	
EZN	3.69	306	iPn	37	47.50	-0.4
CSS	3.73	137	eP	37	48.00	-0.5
APE	3.79	261	ePn	37	50.00	0.7
NPS	4.45	238	ePb	38	03.80	5.2X
KAS	4.56	36	ePn	38	02.00	1.8
VAM	5.37	246	ePn	38	14.00	2.4
KDZ	5.39	318	iPd	38	12.00	0.0
DIM	5.62	322	eP	38	15.00	-0.2
PLG	5.90	299	ePn	38	20.50	1.4
PLD	6.09	318	iPd	38	22.00	0.3
MMB	6.32	310	iPc	38	26.00	0.9
HRI	6.33	133	eP	38	26.00	0.7
ITM	6.62	268	ePn	38	31.00	1.7
PGB	6.69	318	eP	38	39.00	8.8X
KKB	6.88	309	eP	38	52.00	19.1X

VTS	7.24	314	iP	38	42.00	3.9X
DSI	7.47	144	eP	38	41.00	-0.1
LSK	7.88	291	eP	38	50.60	3.6X
SKO	7.97	305	ePn	38	45.50	-2.7X
DRA	8.27	329	eP	39	30.00	37.7X
MLR	8.39	339	ePd	38	53.50	-0.7
CMP	8.48	334	ePc	38	44.00	-11.2X
PHP	8.51	301	eP	39	13.00	17.3X
TIR	8.78	298	eP	38	59.00	-0.4
MBH	8.83	153	eP	38	59.00	-1.1
LACI	8.99	299	eP	39	06.60	4.2X
BCI	9.06	304	eP	39	04.80	1.6
SDA	9.29	301	eP	39	09.00	2.6
BZS	10.17	324	eP	39	17.00	-1.6
KHC	16.57	319	P	40	50.00	6.5X
PRU	16.63	322	P	40	50.70	6.5X
BOB	17.11	301	P	40	54.00	3.7X
CLL	18.24	324	eP	41	06.00	1.8
MOX	18.50	320	eP	41	09.00	1.5
LPG	19.14	301	eP	41	16.50	0.8
	1.1s	19.50nm				4.3mb
CDF	19.80	310	eP	41	20.80	-2.2
	0.8s	6.40nm				4.0mb
HAU	20.21	308	eP	41	24.70	-2.5
LBF	21.40	304	eP	41	38.30	-1.2
LOR	21.56	305	eP	41	38.90	-2.2
	1.1s	12.20nm				4.2mb
SSF	21.73	304	eP	41	40.90	-1.9
	0.9s	6.50nm				4.0mb
AVF	21.76	303	eP	41	41.20	-1.9
	0.9s	6.50nm				4.0mb
MAF	22.16	301	eP	41	47.40	0.4
CAF	22.26	298	eP	41	49.00	0.9
RJF	22.70	299	eP	41	52.30	-0.1
	0.8s	8.00nm				4.3mb
LPO	22.84	297	eP	41	53.50	-0.3
MFF	24.07	301	eP	42	04.60	-1.1
	0.8s	13.40nm				4.6mb
GRR	24.92	305	eP	42	11.20	-2.7
	0.9s	7.80nm				4.4mb
LPF	24.96	304	eP	42	12.30	-2.0
BNG	34.81	201	ePd	43	41.70	-0.9
	0.5s	4.00nm				4.6mb
EDM	84.08	339	ePc	49	21.30	-0.3
SES	85.85	336	eP	49	30.00	-0.5
S.D. = 1.3 on 55 of 72 obs.						

SEP 13, 1989 10h 10m 58.09± 0.65s
43.305 N ± 5.0km 8.232 E ± 5.6km
DEPTH = 10.0km (geophysicist)
CORSICA (380)
ML 2.9 (LDG).

IMI	0.65	338	Pd	11	11.69	0.5
			S	11	19.42	
REVF	0.76	305	Pg	11	13.49	0.4
SBF	0.80	314	Pn	11	15.60	1.9
SAOF	0.84	324	Pg	11	14.62	0.3
			Sg	11	24.61	
CVF	0.87	147	Pg	11	15.35	0.5
AURF	0.88	312	Pg	11	15.03	0.0
AUTN	0.90	320	Pg	11	15.74	0.2
			Sg	11	27.16	
MVIF	0.98	307	Pg	11	16.16	-0.7
TOUF	1.01	315	Pg	11	17.30	0.0
ROB	1.02	345	Pd	11	17.72	0.2
			S	11	28.41	
CALN	1.07	295	Pg	11	18.56	0.2
ENR	1.09	328	P	11	18.78	0.1
			S	11	30.49	
STV	1.15	325	P	11	19.66	0.1
			S	11	31.62	
FRF	1.18	283	Pn	11	19.60	-0.6
			Sn	11	33.50	
PCP	1.26	10	P	11	20.63	-0.9
			S	11	34.49	
LMR	1.26	272	Pn	11	20.60	-0.9
			Sn	11	34.80	
DOI	1.39	330	P	11	23.50	-0.1
			eSg	11	39.50	
PZZ	1.45	326	P	11	24.11	-0.4
			S	11	38.83	
RRL	1.92	328	P	11	31.68	0.3
			S	11	51.84	
LSD	2.29	341	P	11	35.64	-1.0
LPG	2.44	335	Pn	11	41.80	3.0X
LPL	2.46	335	Pn	11	42.20	3.1X

S.D. = 0.7 on 20 of 22 obs.

? SEP 13, 1989 10h 41m 04.16±12.47s
33.957 S ±31.1km 71.817 W ±99.0km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.34	90	iPd	41	12.00	-0.4
			iS	41	20.50	
TACH	0.79	68	iP	41	18.00	-0.9
			iS	41	31.50	
CHCH	0.97	89	iPc	41	22.00	0.5
			iS	41	38.50	
SAN	1.09	63	iPc	41	23.20	0.1
			iS	41	39.40	
PCH	1.14	73	iPc	41	24.00	0.1
			iS	41	42.00	
PEL	1.25	50	iPd	41	25.60	0.2
			iS	41	45.00	
FCH	1.42	64	iPc	41	28.50	0.3
			iS	41	50.00	

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

& SEP 13, 1989 11h 32m 12.06s
60.984 N 150.936 W
DEPTH = 50.2km
KENAI PENINSULA, ALASKA (14)
<AGS-P>. ML 3.7 (PMR).

NKA	0.28	212	iP	32	22.84	1.7
SUA	0.49	11	iP	32	23.11	-0.3
			eS	32	32.05	
SPU	0.58	291	iP	32	23.84	-0.6
			eS	32	33.44	
SLKM	0.59	143	iP	32	24.29	-0.3
CGLM	0.61	302	iP	32	24.38	-0.5
CRP	0.66	296	iP	32	25.05	-0.5
CKL	0.71	288	iP	32	25.56	-0.7
PMS	0.72	68	iP	32	26.20	0.0
NCG	0.73	306	iP	32	25.83	-0.6
			eS	32	36.57	
BGL	0.76	292	iP	32	26.11	-0.7
RDT	0.83	241	iP	32	26.95	-0.8
PWA	0.84	37	iPc	32	27.90	0.1
NNL	0.96	191	iP	32	29.93	0.5
SKT	1.04	344	iP	32	29.89	-0.7
PMR	1.06	54	iPd	32	30.30	-0.5
RED	1.07	239	iP	32	30.20	-0.8
PME	1.12	54	iP	32	31.16	-0.5
SEW	1.15	140	iP	32	30.92	-1.1
BRLK	1.22	179	eP	32	32.74	-0.4
ILIM	1.35	229	iP	32	34.23	-0.7
			S	32	51.82	
CNPM	1.47	186	eP	32	35.94	-0.6
XLV	1.58	195	eP	32	37.23	-0.9
OPT	1.76	222	eP	32	40.57	-0.1
GLI	1.88	92	iP	32	40.09	-2.2
			eS	33	03.01	
AUL	2.03	219	iP	32	44.44	-0.1
HUR	2.09	16	eP	32	45.90	0.5
			eS	33	12.97	
VZW	2.13	86	iP	32	43.92	-2.1
			eS	33	09.21	
FID	2.19	94	eP	32	43.70	-3.1
VLZ	2.24	84	iP	32	45.57	-1.9
			eS	33	12.99	
SVW	2.28	275	iP	32	45.97	-2.1
SHU	2.47	197	eP	32	49.45	-1.2
			eS	33	24.49	
CDD	2.47	215	eP	32	49.70	-1.0
KLU	2.48	76	iP	32	48.81	-2.1
KTH	2.58	0	eP	32	51.34	-0.9
RND	2.62	21	eP	32	51.55	-1.3
MCK	2.91	18	eP	32	56.99	-0.1
TTA	3.09	311	iP	32	57.46	-2.2
IMA	5.25	348	eP	33	29.10	-1.0
DWY	6.15	55	P	33	39.60	-3.0
HYT	6.56	86	P	33	45.00	-3.4
INK	10.43	38	eP	34	37.00	-4.7
PNT	21.13	109	eP	36	53.00	-1.5
EDM	21.58	94	ePd	36	56.20	-2.7
KVN	29.91	122	eP	38	15.00	-2.2

44 obs. associated

• SEP 13, 1989 11h 34m 40.08± 0.65s
35.601 S ±19.4km 17.180 W ± 7.8km
DEPTH = 10.0km (geophysicist)
4.7mb (3 obs.)
SOUTH ATLANTIC RIDGE (410)

PDCR	30.34	314	eP	41	50.50	56.4X
			e	41	52.70	
ITR	33.02	319	eP	42	25.80	68.2X
			e	42	27.40	
FRS	36.04	93	eP	41	40.00	-3.5X
SEK	38.44	92	eP	42	04.00	0.1
	1.0s		16.00nm			4.7mb
KSR	38.84	88	iPd	42	07.40	0.1
PRY	38.86	90	iPc	42	06.70	-0.8
BUL	42.92	81	iPc	42	41.80	0.9
	1.0s		14.50nm			4.7mb
KIC	43.35	18	P	42	44.20	0.1
TIC	43.55	18	P	42	46.00	0.2
CCH	46.92	280	P	43	13.20	0.1
CNCB	48.71	279	P	43	29.00	1.6
LPB	48.95	279	P	43	28.00	-1.1
ZOBO	49.12	279	P	43	30.00	-0.6
	1.0s		7.50nm			4.7mb
BNG	52.04	48	ePd	43	51.60	-0.6
KMC	88.68	20	eP	47	52.30	17.8X

S.D. = 0.9 on 11 of 15 obs.

• SEP 13, 1989 11h 39m 18.55± 0.86s
50.509 N ±18.5km 90.066 E ±16.5km
DEPTH = 33.0km (normal)
4.4mb (5 obs.)
USSR-MONGOLIA BORDER REGION (333)

BJI	21.04	110	eP	44	02.00	0.3
	1.0s		26.00nm			4.6mb
			eS	50	32.00	
HFS	42.13	314	eP	47	08.50	-0.3
	0.6s		2.80nm			4.2mb
NB2	42.91	315	P	47	15.80	0.5
	0.8s		2.30nm			4.0mb
INK	57.15	18	eP	49	03.00	-0.8
FFC	74.65	7	eP	50	56.00	0.1
	0.6s		5.00nm			4.7mb
EDM	74.78	14	eP	50	56.50	-0.2
PNT	77.35	19	eP	51	12.00	0.8
SES	77.87	14	eP	51	14.00	-0.1
WRA	80.26	138	Pc	51	26.90	-0.4
	0.6s		2.30nm			4.4mb

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

• SEP 13, 1989 11h 39m 57.52± 1.96s
5.641 S ±18.1km 133.553 E ±17.9km
DEPTH = 33.0km (normal)
3.7mb (1 obs.)
AROE ISLANDS REGION (204)

AAI	5.68	290	eP	41	21.50	-0.4
MTN	7.55	198	eP	41	49.00	0.9
KNA	11.09	205	eP	42	36.70	-0.2
WRA	14.24	177	Pd	43	17.20	-1.8
	0.5s		1.00nm			3.7mb
QIS	15.95	159	eP	43	45.00	3.8X
			e	48	34.00	
ASPA	17.93	179	eP	44	05.50	-0.6
CTA	18.94	140	eP	44	19.00	0.5
			iS	50	33.00	
WARB	21.47	197	eP	44	47.00	1.6
FORR	25.60	191	iPd	45	28.40	2.9X

S.D. = 1.3 on 7 of 9 obs.

SEP 13, 1989 11h 40m 46.04± 0.34s
35.577 S ± 9.4km 17.063 W ± 5.2km
DEPTH = 11.9km (geophysicist)
5.6mb (47 obs.) 6.2Msz (26 obs.)
SOUTH ATLANTIC RIDGE (410)
Ms 5.6 (PAS). Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=325 Dip=77 Slip= 174
NP2: 56 84 13
Principal Axes:

T	Plg=13	Azm=281
P	5	190

Comment: The focal mechanism is moderately well controlled and corresponds to strike-slip faulting with a small reverse component. The preferred fault plane is not determined.
MOMENT TENSOR SOLUTION
Dep 15 No. of sto: 6
Moment Tensor; Scale 10**18 Nm
Mrr=-0.22 Mtt=-2.01
Mff= 2.23 Mrt=-1.08
Mrf= 0.36 Mtf= 4.03
Principol oxes:

T	Val= 4.68	Plg= 3	Azm=121
N	0.04	76	223
P	-4.72	14	31

Best Double Couple:Mo=4.7*10**18
NP1:Strike=167 Dip=78 Slip=-172
NP2: 75 82 -12
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.8.: 15S, 41C M.W.: 10S, 26C
Centroid Location:
Origin Time 11:40:59.4 0.2
Lat 35.28S 0.02 Lon 16.62W 0.02
Dep 15.0 FIX Half-durotion 6.0
Moment Tensor; Scale 10**18 Nm
Mrr= 0.18 0.05 Mtt=-1.97 0.06
Mff= 1.79 0.05 Mrt=-0.41 0.22
Mrf=-1.16 0.19 Mtf= 4.10 0.04
Principol Axes:

T	Val= 4.73	Plg=15	Azm=122
N	-0.12	75	316
P	-4.61	3	213

Best Double Couple:Mo=4.7*10**18
NP1:Strike=259 Dip=77 Slip= 8
NP2: 167 82 167

BMA	26.82	291	eP	46	23.30	-4.8X
			ePP	47	08.80	
			e	49	22.50	
VAO	28.82	288	eP	46	42.00	-4.2X
CER	29.95	96	iPd	46	56.50	0.2
	1.1s		432.43nm			6.2mb
PDCR	30.39	314	e(P)	47	00.00	-0.3
PPD	32.73	285	eP	47	20.50	-0.3
			e	47	25.40	
			e	47	29.40	
			e	47	38.50	
			e	47	52.50	
ITR	33.06	319	eP	47	22.00	-1.7
			e	47	27.10	
			e	47	39.30	
			e	48	32.00	
			i	48	41.60	
BDF	33.94	298	eP	47	29.69	-1.8
			esPc	47	35.48	
			ePP	48	43.60	
BAO	34.02	298	eP	47	31.50	-0.7
SNA	35.70	172	e(P)	47	50.20	4.4X
	1.0s		169.00nm			5.9mb
FRS	35.95	93	eP	47	44.00	-4.3X
	0.6s		83.33nm			5.8mb
SEK	38.34	92	iPd	48	07.80	-0.9
	0.9s		79.83nm			5.5mb
KSR	38.74	88	iPd	48	10.70	-1.4
	1.0s		250.00nm			5.9mb
PRY	38.77	90	eP	48	10.20	-2.1
	0.8s		53.13nm			5.3mb
			i	48	14.00	
TCA	39.58	262	ePc	48	18.70	-0.2
SLR	39.92	89	eP+	48	20.53	-1.4
	1.4s		348.84nm			5.8mb
Z	18s		72.16um			6.6Msz
			epPc	48	23.68	11kmX
			esP	48	25.66	
			e	49	24.50	
			ePP	49	50.99	
MRA	40.13	260	ePd	48	23.50	0.1
BUL	42.82	81	iPc+	48	45.00	-0.8
	1.1s		139.87nm			5.6mb
			ipP	48	57.80	47kmX
			iS	55	11.50	
SLA	42.88	271	ePc	48	46.90	0.7
LIC	43.09	18	P	48	46.60	-1.1
Z	20s		17.40um			6.0Msz
			S	55	14.00	
KIC	43.30	18	P	48	48.20	-1.2
	1.0s		224.00nm			5.9mb
TIC	43.50	18	P	48	49.60	-1.4
PCH	43.59	256	eP	48	53.00	1.2
SAN	43.76	257	ePc	49	00.50	7.4X

13d 11h

PEL	43.88	257	eP	48	55.00	0.9	AGMR	75.23	46	eP	52	44.00	13.6X	AGO	83.27	14	P	53	16.78	3.3X
LNV	44.20	256	eP	48	58.00	1.5	ASW	75.85	46	iPc	52	32.00	-2.0	PLDF	83.29	14	P	53	17.07	3.4X
KMZ	44.36	71	iP	48	59.20	0.9				eS	02	15.00		ARV	83.31	21	P	53	18.80	5.1X
			i	49	02.70		EPLA	75.95	9	eP	52	38.50	4.3X	TCF	83.32	13	eP	53	15.10	1.4
			i	49	36.00		ECHE	76.26	13	eP	52	39.50	3.5X		1.5s	109.60nm			5.8mb	
LSZ	45.13	75	iP	49	06.00	1.6	DRV	76.57	171	eP	52	44.80	7.4X	MAF	83.32	14	eP	53	15.20	1.5
			i	49	08.10		PTO	76.74	7	eP	52	42.30	3.8X		1.3s	57.70nm			5.6mb	
			i	49	09.00		GUD	76.77	10	eP	52	42.00	3.0X	KBN	83.45	28	eP	53	15.50	1.1
			i	49	40.00		ESEL	77.20	16	eP	52	47.50	6.3X	BOB	83.50	19	P	53	17.90	3.1X
			i	49	49.00		ETOR	77.27	12	eP	52	46.40	4.7X	SMG	83.51	34	eP	53	20.00	5.2X
			i	50	49.00		EROO	77.71	13	eP	52	46.00	2.0X	LPG	83.52	17	eP	53	16.20	1.1
CCH	47.01	279	Pd	49	20.20	0.7	EBR	77.72	14	eP	52	50.00	6.0X		0.9s	51.40nm			5.7mb	
			i	49	28.70					eS	02	32.00		LSD	83.58	17	P	53	18.08	2.7X
ANT	47.35	269	eP	49	19.00	-2.7				ePS	03	12.00		BGF	83.70	14	eP	53	16.90	1.3
			i	49	30.80		FAI	77.90	25	P	52	51.30	6.2X		1.5s	57.40nm			5.6mb	
MZZ	48.12	71	iPc	49	29.00	0.9	ERUA	78.12	7	eP	52	51.60	5.4X	YER	83.70	35	eP	53	19.00	3.1X
			i	49	32.00		MCT	78.21	24	P	52	53.10	6.1X	TIR	83.72	27	eP	53	17.20	1.4
			i	51	30.10		CGL	78.44	21	P	52	51.70	3.5X	OHR	83.86	28	iP	53	20.20	3.6X
PTZ	48.21	77	iPc	49	28.00	-0.7	STS	78.47	6	eP	52	55.50	7.4X		1.7s	0.15nm			2.9mb X	
			i	49	33.10		GIB	78.66	25	P	52	59.00	9.6X	LACI	83.91	27	eP	53	19.50	2.8X
			i	49	51.00		USI	79.03	24	P	52	56.50	5.3X	AVF	84.02	14	eP	53	18.60	1.4
			i	51	33.00		EMON	79.14	7	eP	52	56.20	4.4X		1.0s	68.80nm			5.8mb	
CNCB	48.80	279	P	49	33.70	-0.1	SOI	79.44	26	P	52	58.00	4.5X	HVAR	84.13	24	iP	53	26.60	8.8X
LPB	49.04	279	P	49	34.00	-1.5	GMB	79.46	26	P	52	59.90	6.1X	ELL	84.16	36	eP	53	23.00	4.7X
	1.5s	4333.33nm				7.3mb X	LHE	79.55	12	P	52	57.56	3.4X	SDA	84.16	27	eP	53	20.10	2.1X
Z	20s	13.12um				5.9Msz	ISSF	79.63	12	P	52	58.27	3.7X	HCY	84.18	26	eP	53	22.50	4.4X
			i	49	44.40		BOH	79.66	12	P	52	57.74	3.0X	LPS	84.21	292	eP	53	31.50	12.5X
			PS	56	43.00		ATE	79.70	12	P	52	57.98	3.1X				eS	03	54.30	
			LR	03	32.00		ESCF	79.71	12	P	52	58.30	3.4X	PHP	84.23	27	eP	53	18.60	0.3
ZOBO	49.21	279	P	49	36.00	-0.9	ELYF	79.73	12	P	52	58.49	3.4X	IZM	84.26	33	iP	53	20.90	2.2X
			i	49	44.30		OGE	79.82	12	P	52	59.20	3.7X	SSF	84.31	14	eP	53	20.10	1.4
			LR	03	18.00		EPF	79.83	13	eP	52	56.50	0.9		1.4s	95.80nm			5.8mb	
ARE	51.82	277	eP	49	55.00	-1.5		1.3s	75.80nm			5.5mb		PUK	84.33	27	eP	53	21.60	2.8X
BCAO	51.95	47	eP	49	54.73	-2.4	GRI	80.24	26	P	53	02.60	4.8X	LBF	84.33	14	eP	53	19.90	1.0
			epPd	49	58.21	12kmX	ACI	80.64	26	P	53	12.70	12.8X		1.3s	68.50nm			5.7mb	
			ePP	51	57.38		ITM	80.94	31	eP	53	05.50	4.0X	VAI	84.36	18	P	53	22.10	3.2X
BNG	51.95	47	iPd	49	55.10	-2.1	TDS	80.96	25	P	52	57.00	-4.6X	TTG	84.44	26	eP	53	26.00	6.6X
	1.0s	255.00nm				6.1mb	MGR	81.11	25	P	53	06.00	3.6X				eS	03	42.00	
			ic	50	08.00		MBH	81.33	44	e(P)	53	05.00	1.3	LPF	84.46	11	eP	53	21.00	1.6X
			id	50	23.10		SGO	81.41	24	P	53	06.20	2.4X		1.0s	53.70nm			5.7mb	
			ic	52	53.90		LMR	81.42	17	eP	53	04.30	0.4	MDI	84.51	18	P	53	23.60	3.9X
MAW	53.87	152	eP	50	10.00	-0.7		1.2s	41.60nm			5.4mb		LOR	84.58	14	eP	53	21.20	1.1
	1.0s	70.00nm				5.6mb	LPO	81.58	13	eP	53	05.70	1.0		1.4s	75.80nm			5.7mb	
NNA	58.60	278	eP	50	46.60	1.2		1.4s	87.10nm			5.6mb		BRY	84.60	25	eP	53	25.00	4.6X
	1.0s	15.00nm				5.0mb	RDP	81.66	22	P	53	09.00	3.7X	BCI	84.68	27	eP	53	24.80	4.2X
			eS	58	44.00		FRF	81.67	17	eP	53	05.70	0.5	GRR	84.83	11	eP	53	22.70	1.5
NAI	60.44	68	iP	51	04.00	5.7X		1.5s	87.70nm			5.6mb			0.9s	22.80nm			5.4mb	
	2.0s	100.00nm				5.6mb	RMP	81.70	22	P	53	10.50	5.1X	SKO	84.85	28	iP	53	23.50	2.0X
			eS	06	02.00		LFF	81.75	13	eP	53	06.80	1.2	Z	15s	3.40um			5.8MszX	
OLLA	65.24	304	eP	51	33.00	3.0X		1.2s	77.30nm			5.6mb		N	17s	1.74um				
LLAV	65.58	304	eP	51	32.00	-0.1	MAO	81.80	21	P	53	10.00	4.1X	E	17s	4.18um				
CEOS	65.58	302	eP	51	50.00	17.9X	PRNI	81.83	44	e(P)	53	06.00	-0.4				i	53	58.00	
CAR	65.68	304	iPKP	51	30.00	-2.8	CAF	81.98	14	eP	53	07.80	1.0				iSKS	03	50.00	
TIO	66.79	9	iP	51	44.50	4.9X		1.1s	70.80nm			5.7mb					i	08	50.00	
			i	51	48.50		AZI	82.09	22	P	53	12.73	5.4X				i	09	18.00	
			i	51	54.50			0.1s	4.30nm			5.5mb					i	09	48.00	
SBA	66.81	181	eP	51	41.30	2.2	DUI	82.12	23	P	53	13.10	5.4X				i	10	50.00	
PSO	66.90	289	eP	51	46.50	5.5X	MNS	82.22	22	P	53	09.90	1.8X	EZN	85.02	32	iP	53	26.00	3.7X
FUO	66.98	295	eP	51	42.00	0.5	RJF	82.24	13	eP	53	09.10	1.0	BCK	85.06	36	eP	53	24.30	1.6X
TOV	67.12	302	eP	51	42.00	0.0		1.1s	45.90nm			5.5mb		LDF	85.15	11	eP	53	24.40	1.6X
BMG	67.58	297	eP	52	02.00	17.1X	IMI	82.30	18	P	53	09.98	1.4		1.2s	51.50nm			5.6mb	
AAE	68.78	61	eP	51	58.00	5.3X	ATH	82.36	31	eP	53	14.00	5.1X	KHL	85.24	35	eP	53	26.00	2.4X
AVE	69.11	9	eP	51	59.00	5.1X				eS	02	32.00		FLN	85.26	11	eP	53	25.00	1.7X
IFR	69.64	11	iP	51	58.00	0.7				eSS	09	00.00			1.0s	39.80nm			5.6mb	
			i	52	02.00		STV	82.48	17	P	53	11.52	2.0X	PLE	85.27	26	eP	53	23.50	-0.2
BMK	70.93	10	eP	52	10.00	5.1X	ENR	82.49	17	P	53	11.93	2.4X	CTI	85.28	20	P	53	26.60	2.9X
TAF	71.35	13	eP	52	12.00	4.4X	SRN	82.49	28	eP	53	13.50	4.0X	LOMF	85.29	16	P	53	27.57	3.9X
NKM	71.49	10	eP	52	09.00	0.7	LBL	82.51	14	P	53	13.02	3.6X	RIY	85.42	22	eP	53	28.90	4.7X
			i	52	13.50		ROB	82.66	18	P	53	12.14	1.7X	BBS	85.55	16	P	53	29.34	4.4X
			i	52	15.00		PZZ	82.67	17	P	53	13.98	3.4X	TRI	85.57	21	iPd	53	30.00	5.0X
EJIF	72.47	10	eP	52	19.30	5.2X	DOI	82.70	17	Pc	53	22.20	11.5X				ePP	56	54.00	
MAL	72.89	11	eP	52	20.80	4.2X	PII	82.82	20	P	53	13.50	2.4X				iS	03	59.00	
			iS	01	42.00		ASS	82.84	21	P	53	13.60	2.2X				iSP	04	53.00	
EPRU	73.01	10	eP	52	21.00	3.7X	LSK	82.96	28	eP	53	12.00	0.0				iSS	10	14.00	
ATEJ	73.14	11	eP	52	24.90	6.6X	PYM	82.96	14	P	53	16.84	4.9X				iSSS	13	00.00	
APHE	73.22	11	eP	52	25.00	6.3X	DSI	82.97	43	e(P)	53	15.00	2.8X				iLR	22	00.00	
ACHM	73.35	11	eP	52	25.70	6.3X	RRL	82.99	17	P	53	14.91	2.6X	BSF	85.74	16	P	53	28.09	2.2X
ARO	73.41	62	ePd	52	10.43	-9.8X	PCP	83.06	18	P	53	11.62	-0.9	CEY	85.79	22	eP	53	31.00	4.8X
EVAL	73.42	9	eP	52	22.50	2.8X	FIR	83.08	20	eP	53	24.00	11.5X	HAU	85.80	16	eP	53	26.90	0.7
ENIJ	73.49	12	eP	52	25.20	5.1X				eS	03	30.00			1.2s	44.00nm			5.5mb	
AAPN	73.51	11	eP	52	22.00	1.7X	BNI	83.09	17	P	53	18.60	5.9X	MOF	85.83	16	P	53	30.48	4.1X
AFC	73.54	11	eP	52	24.20	3.6X	BDI	83.16	20	P	53	15.00	2.0X	OGA	85.87	19	eP	53	31.30	4.6X
UPA	73.60	294	eP+	52	28.00	6.8X	LSF	83.16	13	eP	53	14.20	1.3	VOY	85.90	21	eP	53	29.70	2.9X
Z	20s	15.96um				6.3Msz		1.5s	146.20nm			5.9mb		VITF	85.92	15	P	53	30.70	4.0X
ASMO	73.61	11	eP	52	22.70	1.8X	BERA	83.19	27	eP	53	17.90	4.8X	FEL	86.06	17	P	53	29.81	2.3X
EBAN	74.40	11	eP	52	29.00	3.6X	MFF	83.21	12	eP	53	14.70	1.6X	LJU	86.10	21	eP	53	32.50	4.9X
EALH	74.49	13	eP	52	32.50	6.6X		1.2s	35.50nm			5.4mb		RBL	86.18	21	P	53	31.60	3.5X

ECH	86.18	16	P	53	32.54	4	5X				i	54	55.80			LON	124.28	306	PKP	59	50.70	4.7X
ZAG	86.34	22	eP	53	34.50	5.7X					eS	04	44.00			AFI	125.27	211	ePdiff	56	14.17	-11.2X
CDF	86.39	16	P	53	31.76	2.6X	WIT	90.42	14	eP	54	00.00	11.9X			KMI	127.72	84	ePKP	00	00.00	6.5X
PTJ	86.40	22	eP	53	32.20	3.0X				e	55	23.00					Z 30s	9.30um			6.3MszX
WLS	86.41	16	P	53	31.44	2.3X	CLL	90.46	18	eP	53	52.00	3.7X				E 20s	5.40um			
BEO	86.95	26	eP	53	18.00	-13.8X		2.2s	88.00nm			5.6mb						PP	02	25.00	
			eS	03	54.00			Z 18s	5.00um			6.0Msz			GTA	130.67	66	ePKP	59	57.40	-1.2
YLV	86.97	34	iP	53	37.30	5.2X				eS	04	48.00					8.0s	0.40nm			
GWF	87.00	16	P	53	36.05	4.0X	SPC	90.67	23	eP	53	56.00	6.4X				Z 20s	6.30um			6.3Msz
BHG	87.15	20	iPc	53	36.80	4.1X		2.0s	72.00nm			5.6mb					N 17s	2.80um			
ITU	87.25	33	eP	53	36.00	2.7X				e	57	30.00						PP	02	18.00	
WLF	87.33	15	P	53	39.50	6.0X	MSL	90.87	44	eP	53	58.00	7.4X			CD2	130.92	78	ePKP	00	03.70	4.5X
VAL	87.35	4	P	53	36.00	2.5X				eS	04	32.00				GYA	131.48	84	PKP	00	05.60	5.1X
			S	03	36.00		KSP	90.93	20	eP	53	55.00	4.5X			Z 36s	3.03um			5.7MszX
DOU	87.43	14	P	53	40.30	6.3X		1.6s	45.00nm			5.5mb				INK	132.28	333	ePKP	00	00.00	-0.5
			e	54	13.00					e	57	26.00						pP	00	20.50	
			S	04	14.00		EKA	91.33	8	P	53	59.00	6.8X			LZH	132.75	71	PKP	00	14.00	11.3X
			e	05	20.00			0.8s	11.60nm			5.3mb					Z 24s	1.00um			5.4MszX
			e	09	56.00		KRA	91.33	23	eP	53	57.50	5.2X				N 11s	1.00um			
RUP	87.56	15	eP	53	39.46	4.7X		Z 22s	7.40um			6.1Msz						ePP	02	25.00	
SNF	87.77	13	iPc	53	41.20	5.6X		N 22s	6.20um									SS	19	50.00	
KMR	87.80	20	eP	53	41.00	5.1X				e	54	05.90				COL	138.66	331	ePKP	00	09.43	-3.3X
ABH	87.84	16	eP	53	41.14	5.1X				e	04	27.00						e	02	26.91	
TOD	87.86	17	eP	53	39.20	3.1X				e	06	07.00						ePP	03	07.63	
ECP	87.89	7	eP	53	42.00	5.9X	SLY	91.69	46	eP	54	01.00	6.7X			FBA	138.66	331	PKP	00	08.00	-4.7X
BBTK	87.98	36	eP	53	39.00	2.0X				eS	05	03.00				WHN	139.30	83	ePKP	00	19.00	4.1X
			i	53	44.00		JSC	91.77	312	P	54	05.00	10.3X			HHC	139.77	67	ePKP	00	23.80	8.2X
BZS	88.05	26	eP	53	39.50	2.5X	HRV	92.28	323	ePc	53	57.84	1.0				N 18s	3.20um			
UCC	88.05	13	P	53	43.60	6.7X				eS	05	06.05					E 20s	5.10um			
			e	04	34.00					eSP	06	12.43						SKKS	10	03.50	
			e	10	08.00		PRM	92.31	311	P	54	05.00	7.8X			TIY	139.82	72	PKP	00	23.40	7.6X
MEM	88.20	14	P	53	43.80	6.2X	WAR	93.57	22	eP	54	00.00	-2.5				N 19s	4.00um			
ENN	88.33	14	eP	53	44.00	5.7X				eS	05	20.00						SKS	07	18.50	
	1.0s	49.00nm				5.8mb	TAB	93.87	45	e(P)	54	08.00	3.5X					SS	21	38.00	
		ePP	57	08.00			RSNY	95.25	323	P	54	20.00	9.5X			PMR	140.34	326	ePKP	00	17.00	1.2
TNS	88.36	16	eP	53	43.40	4.9X		Z 20s	12.99um			6.4Msz					Z 22s	7.00um			6.4Msz
GRF	88.52	18	eP	53	44.50	5.2X	RSCP	95.30	310	P	54	25.00	14.0X			HON	143.09	258	PKP	01	00.00	38.1X
Z	19s	8.00um				6.2Msz		Z 20s	6.21um			6.1Msz					Z 20s	6.12um			6.4Msz
		e	53	50.50			NB2	99.01	14	P	54	37.60	10.4X			BJI	143.12	69	ePKP	00	21.00	-0.4
		e	53	57.00				1.0s	2.20nm								N 20s	4.60um			
		ePP	57	11.00			CCM	100.38	309	ePdiff	54	32.97	-1.0					ePP	03	32.00	
KHC	88.63	20	P	53	43.50	3.7X				ePP	58	42.40						eSS	22	20.00	
	1.2s	15.00nm				5.2mb				eSKS	05	16.79				TIA	143.15	75	ePKP	00	23.00	1.4
		e	57	12.50						eS	06	06.90					Z 30s	4.60um			6.1MszX
		S	04	36.00						eSP	07	38.49						ePP	03	32.00	
VKA	88.63	22	eP	53	44.00	4.2X	TUL	102.06	306	Pdiff	54	52.00	10.5X					SS	22	12.00	
	3.0s	224.00nm				5.9mb		Z 22s	1.28um			5.4Msz				NJ2	143.43	83	PKPc	00	28.80	6.6X
Z	21s	5.95um				6.0Msz	ALQ	108.85	300	Pdiff	55	30.00	17.9X				Z 30s	3.40um			5.9MszX
		LR	30	08.00				Z 21s	3.88um			5.9Msz				SSE	145.02	85	PKP	00	29.50	4.6X
ZST	88.81	22	eP	53	45.20	4.6X	ALQ	108.85	300	PKP	59	20.00	2.9X				1.1s	47.00nm			
Z	21s	13.30um				6.3Msz		Z 22s	5.24um			6.1Msz					Z 20s	4.20um			6.2Msz
		e	04	38.00						ePP	59	52.00						SS	22	40.00	
SRO	88.85	23	eP	53	46.80	6.0X				eSKS	05	58.00				DL2	147.15	72	PKP	00	33.40	5.3X
CMP	89.02	28	eP	53	50.00	8.2X				ePS	09	12.00					Z 22s	3.40um			6.1Msz
BHD	89.42	47	eP	53	46.00	2.1X				eSS	15	10.00					N 18s	1.80um			
		eS	04	30.00			ANMO	108.86	300	ePdiff	55	21.67	9.6X			SNY	148.86	66	PKPc	00	37.50	6.7X
PSZ	89.45	24	eP	53	45.60	1.8X				eSKS	06	01.06					Z 26s	5.00um			6.2MszX
DBN	89.45	14	eP	53	51.00	7.4X				eSP	09	04.47					N 20s	2.10um			
Z	20s	2.50um				5.6Msz	RSON	109.19	319	Pdiff	55	30.00	17.1X				E 24s	5.00um			
		ePP	57	20.00				Z 21s	8.15um			6.3Msz						eSKS	07	32.00	
		eS	04	44.00			KEV	109.82	15	ePdiff	55	13.48	-1.8					eSKKS	11	08.00	
		ePS	05	40.00			KSH	113.58	58	ePKP	59	24.90	-1.0					SS	23	09.00	
		eSS	10	24.00				Z 20s	9.40um			6.4Msz				CN2	150.21	62	PKP	00	40.50	7.7X
MOX	89.50	18	eP	53	48.00	4.1X		N 18s	8.60um								Z 25s	4.90um			6.2MszX
	2.0s	44.00nm				5.4mb				eSKS	06	36.00					N 22s	5.00um			
Z	20s	9.10um				6.2Msz	WRA	118.49	149	PKPc	59	39.50	3.9X				E 22s	3.20um			
N	20s	4.30um						0.9s	4.60nm									ePP	04	18.00	
E	24s	5.30um					SES	118.77	313	ePKP	59	40.00	4.7X					eSKKS	11	06.00	
		e	04	30.00			KVN	119.01	299	PKP	59	41.50	5.2X					eSS	23	27.00	
PRU	89.67	20	P	53	49.00	4.3X	EDM	121.10	316	ePKP	59	42.00	2.4X			MDJ	153.10	60	PKP	00	44.50	7.5X
	2.0s	78.10nm				5.6mb	CHG	121.62	89	ePKP	59	46.00	4.4X				Z 36s	4.20um			6.0MszX
Z	21s	12.60um				6.3Msz	CTA	122.42	161	iPKPd	59	50.00	6.9X			MAT	159.99	80	(PKP)	00	55.00	9.1X
N	20s	10.90um						1.1s	20.25nm								Z 20s	2.84um			6.1Msz
E	18s	4.00um								iPP	01	24.00					S.D. = 1.3 on 79 of 294 obs.				
		e	04	26.00						iPS	11	19.00				---					
WTS	89.67	14	eP	53	52.00	7.4X				iSS	18	00.00				SEP 13, 1989 12h 18m 19.78± 0.58s					
	1.2s	71.00nm				5.8mb				iSSS	22	30.00				40.601 N ± 6.6km 22.433 E ± 4.8km					
		e	54	15.00			WDC	122.75	299	ePKP	59	47.00	3.9X			DEPTH = 10.0km (geophysicist)					
		ePP	57	21.00			WMQ	123.36	57	ePKP	59	47.50	3.2X			GREECE					(364)
CFR	90.19	30	eP	53	53.00	5.8X		Z 26s	8.20um			6.3MszX					MD 3.6 (ATH).				
BRG	90.31	19	iP	53	53.60	6.0X		N 16s	3.60um												
	1.8s	34.00nm				5.3mb		E 16s	3.60um							KZN	0.58	240	ePg	18	30.50	-1.2
Z	18s	6.00um				6.1Msz				PP	01	28.00				PLG	0.81	106	ePg	18	35.60	0.2
N	20s	7.00um								SKS	07	01.00				KBN	1.23	272	ePn	18	42.00	-0.7
E	20s	4.50um								SKKS	08	20.00				OHR	1.34	293	iPn	18	43.90	-0.6
		i	53	59.70			PNT	123.64	310	ePKP	59	50.00	5.4X			KKB	1.36	21	iP	18	44.00	-0.7
		i	54	37.50				0.7s	6.00nm							MMB	1.39	44	ePc	18	45.00	-0.2

13d 12h

NEO	1.43	155	ePb	18 45.50	-0.3
LSK	1.47	253	ePn	18 47.80	1.4
SKO	1.56	332	iPn	18 47.00	-0.6
			iS	19 08.00	
PHP	1.86	306	ePn	18 52.10	0.3
BERA	1.89	274	ePn	18 55.50	3.1X
SRN	2.00	250	ePn	18 57.50	3.6X
RZN	2.04	57	iP	18 56.00	1.3
VTS	2.07	16	iPg	18 57.00	1.8
TIR	2.08	292	ePn	18 57.30	2.2
KEK	2.21	247	ePg	19 04.00	7.0X
LACI	2.30	298	ePn	19 02.00	3.7X
KDZ	2.49	64	iP	19 00 00	-0.9
BCI	2.50	316	ePn	19 05.60	4.5X
SDA	2.62	304	ePn	19 06.70	3.8X
CMP	5.04	21	ePc	20 04.00	26.8X
BZS	5.05	353	ePc	19 35.50	-1.8
MLR	5.52	27	ePc	19 44.00	-0.1
CFR	6.21	41	iPc	19 48.50	-5.2X

S.D. = 1.2 on 16 of 24 obs.

SEP 13, 1989 12h 19m 02.60± 0.59s
60.304 N ± 4.6km 5.384 E ± 7.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

BER	0.08	343	iPg	19 05.00	-0.1
			iSg	19 07.18	
ASK	0.20	332	iP	19 07.01	0.0
			iSg	19 10.12	
ODD1	0.74	122	iP	19 16.74	-0.4
			eS	19 28.35	
SUE	0.82	338	eP	19 18.45	0.1
			iS	19 30.35	
HYA	0.95	24	iP	19 20.97	0.3
			eS	19 35.05	
KMY	1.10	184	iP	19 23.41	0.2
			eS	19 37.41	
BLS2	1.28	142	eP	19 26.25	-0.2
			eS	19 43.68	
MOL	2.50	24	eP	19 43.28	-0.6
			eS	20 11.50	
NRA0	3.08	79	iPc	19 52.70	0.6
			ePg	19 56.90	
			iS	20 29.00	
			iSg	20 36.90	

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

SEP 13, 1989 12h 20m 10.13± 0.61s
40.594 N ± 8.5km 22.463 E ± 5.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.5 (ATH).

KZN	0.60	242	ePg	20 20.80	-1.5
PLG	0.78	106	ePg	20 26.00	0.6
KBN	1.26	272	ePn	20 34.00	0.6
OHR	1.36	293	iPn	20 34.00	-1.2
MMB	1.38	43	eP	20 35.00	-0.4
			eS	20 57.00	
NEO	1.41	155	ePb	20 35.50	-0.4
LSK	1.49	253	ePn	20 38.40	1.4
SKO	1.58	331	iPn	20 37.50	-0.7
			iSn	20 58.50	
BERA	1.92	274	ePn	20 46.00	2.9X
SRN	2.02	250	ePn	20 48.50	4.0X
RZN	2.02	57	iP	20 46.00	1.2
TIR	2.11	292	ePn	20 47.40	1.6
KEK	2.22	248	ePg	20 54.00	6.4X
LACI	2.33	297	ePn	20 53.40	4.4X
KDZ	2.47	64	eP	20 50.00	-1.0
BCI	2.53	315	ePn	20 55.80	4.0X

S.D. = 1.2 on 11 of 16 obs.

• SEP 13, 1989 12h 31m 18.31± 0.88s
6.118 S ± 9.4km 149.837 E ±10.3km
DEPTH = 65.2 ± 10.8 km
3.9mb (1 obs.)
NEW BRITAIN REGION (192)

LAT	2.87	259	eP	32 03.00	0.4
LAT	2.87	259	eP	32 10.00	7.4X
RAB	3.01	51	iPc	32 04.70	0.1
	0.5s	2591.55nm			
			iS	32 56.30	
PMG	4.21	219	iPd	32 21.50	-0.1
QIS	17.45	214	eP	35 18.00	-1.0
WRA	20.39	226	Pc	35 52.90	0.5
	0.4s	2.80nm			3.9mb
OLP	21.04	194	eP	35 59.20	0.2
BRS	21.34	173	iPd	36 02.00	0.0
ASPA	23.23	220	eP	36 24.30	3.7X
			eS	40 33.50	
MAT	43.81	346	(P)	39 19.00	-0.5
PPD	145.19	144	ePKP	50 51.40	0.4
			e	51 01.30	
KIC	154.73	272	PKP	51 15.40	9.8X

S.D. = 0.6 on 9 of 12 obs.

SEP 13, 1989 12h 34m 36.96± 0.64s
40.360 N ± 5.5km 142.172 E ± 8.8km
DEPTH = 33.0km (normal)
NEAR EAST COAST OF HONSHU, JAPAN(228)
MG 3.6 (JMA). Felt (I JMA) at Hachinohe.

HAC	0.52	289	P	34 48.50	0.7
			S	34 55.90	
OFUJ	1.34	197	iP+	34 59.50	0.1
			S	35 16.10	
AOMJ	1.39	279	P	34 59.80	-0.4
HOOJ	2.19	22	P	35 13.10	1.4
			eS	35 39.60	
MRRJ	2.22	338	P	35 11.30	-0.9
			S	35 36.10	
YAMJ	2.74	218	P	35 19.40	-0.2
			eS	35 50.30	
KUSJ	3.33	34	P	35 27.10	-0.8
			S	36 04.60	
ASAJ	3.77	5	P	35 34.10	-0.1
			eS	36 18.50	
KAKJ	4.44	201	P	35 43.30	-0.4
MAT	4.92	220	(P)	35 51.00	0.5
CHJJ	4.98	211	eP	35 53.90	2.5X

S.D. = 0.8 on 10 of 11 obs.

SEP 13, 1989 12h 53m 51.47± 0.38s
47.073 N ± 3.0km 8.847 E ± 4.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 3.0 (LDG).

LLS	0.23	153	iPd	53 56.10	-0.4
SAX	0.38	62	iPc	54 00.30	0.9
ZLA	0.51	323	iPd	54 01.50	-0.4
VDL	0.73	144	eP	54 05.10	-0.8
SLE	0.73	341	ePd	54 05.60	-0.3
TMA	0.97	179	ePc	54 09.30	-0.7
OSS	0.97	113	ePc	54 10.00	0.0
FEL	0.98	325	Pg	54 09.95	-0.3
			Sg	54 24.73	
BBS	0.99	294	Pg	54 10.24	-0.1
			Sg	54 24.29	
MMK	1.19	211	ePc	54 12.80	-1.0
VAI	1.21	183	Pd	54 13.70	-0.2
			eSg	54 29.50	
MOF	1.40	304	Pg	54 16.37	-0.7
			Sg	54 36.19	
DIX	1.40	225	ePd	54 16.70	-0.6
LOMF	1.40	282	Pg	54 17.50	0.3
			Sg	54 36.16	
MDI	1.43	155	P	54 19.90	2.5X
			eSg	54 33.50	
OGA	1.51	97	ePg	54 22.40	3.7X
BSF	1.59	299	Pg	54 20.77	1.0
			Sg	54 40.85	
EMS	1.66	233	ePd	54 21.70	0.8
WLS	1.68	324	Pg	54 22.21	1.2
CDF	1.71	322	Pn	54 20.72	-0.8
HAU	1.93	300	Pn	54 23.80	-0.9
			Sg	54 51.60	
LSD	2.00	217	P	54 27.32	1.5
BNI	2.52	218	Pc	54 37.60	4.3X
			eSn	55 02.50	
PCP	2.54	185	P	54 34.09	0.6
RRL	2.59	214	P	54 37.78	3.5X
DOI	2.80	204	P	54 39.00	1.7
PZZ	2.84	206	P	54 40.55	2.7X
ROB	2.86	194	P	54 37.78	-0.3
ENR	3.02	200	P	54 39.15	-1.1
STV	3.02	201	P	54 41.15	0.8
LBF	3.33	270	Pg	54 55.60	10.9X
			Sg	55 34.00	
LOR	3.41	275	Pg	54 56.40	10.6X
			Sg	55 36.00	
MAF	4.41	261	Pg	55 15.00	15.1X
			Sg	56 08.00	

S.D. = 0.9 on 25 of 33 obs.

% SEP 13, 1989 13h 03m 22.50± 0.77s
47.067 N ± 6.2km 8.846 E ± 7.5km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)

LLS	0.22	152	ePc	03 26.90	-0.5
SAX	0.39	62	ePc	03 31.30	0.8
VDL	0.72	143	ePd	03 36.40	-0.5
SLE	0.74	341	ePc	03 36.40	-0.6
MMK	1.18	211	ePc	03 45.60	0.8
DIX	1.40	226	ePd	03 48.30	0.0

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

• SEP 13, 1989 13h 22m 11.78± 2.28s
51.145 N ±21.2km 15.885 E ±12.3km
DEPTH = 10.0km (geophysicist)
POLAND (548)

KSP	0.40	139	iP	22 19.90	0.0
	0.5s	82.00nm			
			iS	22 29.50	
BRG	1.26	258	iPg	22 35.00	-0.1
			iSg	22 55.50	
PRU	1.44	217	ePn	22 38.50	0.6
			Pg	22 40.80	
			Sn	22 58.20	
			Sg	23 05.00	
CLL	1.82	276	iPn	22 43.40	0.1
			iPg	22 46.50	
			iSg	23 09.80	
KHC	2.50	217	Pn	22 52.70	-0.5
			ePg	23 00.00	
			Sg	23 38.50	
			Sn	23 48.30	
MOX	2.75	261	ePg	23 03.00	6.3X
			iSg	23 43.00	

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

? SEP 13, 1989 13h 53m 32.62± 2.85s
43.693 N ± 8.8km 16.714 E ±41.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (LJU).

HVAR	0.55	201	iPg	53 43.80	0.0
			iSg	53 53.80	
VBY	2.09	331	ePn	54 07.20	-0.9
			iSn	54 32.50	
PTJ	2.27	347	ePn	54 10.80	0.0
			eSn	54 38.60	
RIY	2.34	316	ePn	54 12.20	0.4
			iSn	54 39.70	
CEY	2.62	322	eP	54 16.50	0.8
			eSg	54 48.50	
			e	55 50.00	
LJU	2.82	327	eP	54 20.00	1.5
			eSn	54 52.00	
			e	56 20.00	
VOY	3.08	320	ePn	54 20.40	-1.9
			eSn	55 00.20	
			e	56 40.00	

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

? SEP 13, 1989 14h 07m 17.68± 2.38s
42.340 N ±19.3km 19.081 E ± 8.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

TTG	0.16	56	iPgd	07 21.40	0.0
			iSg	07 24.40	
HCY	0.45	284	ePg	07 26.50	-0.2
			eSg	07 34.00	
NKY	0.48	353	ePg	07 27.00	-0.4
			eSg	07 35.00	
BRY	0.69	325	ePg	07 32.00	0.6
			eSg	07 42.00	

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

SEP 13, 1989 14h 33m 39.60± 0.95s
5.998 S ± 7.5km 153.152 E ± 7.3km

DEPTH = 65.0 ± 9.9 km
4.4mb (4 obs.)
NEW IRELAND REGION (190)

RAB	2.04	331	e(P)	34 11.00	-1.4
			iS	35 00.00	
LAT	6.15	264	eP	35 11.00	1.0
PMG	6.84	240	eP	35 19.00	-0.6
SVO	7.31	116	eP	35 28.00	1.9
			e(S)	36 53.00	
HNR	7.55	117	eP	35 29.00	-0.4
			eS	37 04.00	
CTA	15.53	205	iPc	37 20.20	4.1X
	1.0s	23.50nm		4.3mb	
QIS	19.55	221	iPd	38 04.30	-0.7
	0.9s	21.00nm		4.4mb	
DZM	20.50	142	iPc	38 10.00	-5.0X
RMQ	20.80	191	iPd	38 17.00	-0.9
BRS	21.28	181	iP	38 21.00	-1.7
			e	38 24.00	
QLP	22.17	202	eP	38 31.50	0.0
MTN	22.75	251	iPc	38 38.60	1.3
WRA	22.94	231	Pc	38 40.80	1.6
	0.6s	4.90nm		4.1mb	
ASPA	25.53	225	iPd	39 04.10	0.1
	1.4s	25.00nm		4.5mb	
Z	18s	0.61um		4.2Msz	
			LR	49 16.00	
CMS	26.27	194	eP	39 11.00	0.3
WARB	32.30	229	eP	40 04.70	0.1
FORR	34.12	220	eP	40 19.50	-0.8
TCW	39.82	155	P	41 17.70	9.6X
			e	41 32.40	
MTW	40.30	154	eP	41 20.80	8.7X
MOW	40.41	154	eP	41 22.00	9.0X
BLW	40.46	154	eP	41 22.60	9.2X
XAN	57.73	317	P	43 25.50	-0.7
CD2	59.78	311	eP	43 40.60	0.0
BTO	60.96	323	eP	43 48.80	0.3
WMQ	76.85	317	eP	45 26.00	-0.5
KSH	83.96	311	eP	46 06.50	2.2
VAO	145.11	146	e(PKP)	53 11.00	-1.2
BAO	149.99	136	e(PKP)	53 20.00	-0.2
S.D. = 1.1 on 22 of 28 obs.					

? SEP 13, 1989 15h 49m 37.95± 3.58s
20.918 S ±24.2km 178.624 W ±20.6km
DEPTH = 534.4 ± 44.2 km
4.0mb (2 obs.)
FIJI ISLANDS REGION (181)

DZM	13.95	263	iPc	52 37.20	0.1
KRP	17.69	195	P	53 13.90	0.3
CTA	32.87	265	iP	55 29.90	0.8
ASPA	43.86	257	iPc	56 58.40	-0.1
	1.2s	10.00nm		4.2mb	
WRA	43.96	263	Pc	56 58.50	-0.8
	0.4s	1.40nm		3.8mb	
FORR	48.56	247	eP	57 33.20	-1.1
MAT	70.20	324	eP	59 58.00	-0.5
KVN	82.21	43	eP	01 04.00	-0.3
CHTO	89.84	290	eP	01 42.50	1.6
NB2	139.32	353	PKP	07 56.10	-9.1X
	0.7s	1.80nm			
KRA	147.42	338	ePKP	08 22.00	2.7X
KSP	147.91	342	ePKP	08 24.00	3.9X
CLL	148.33	346	iPKP	08 24.80	4.1X
	0.9s	23.00nm			
BRG	148.51	345	iPKP	08 25.70	4.7X
	0.8s	10.00nm			
MBH	148.55	293	iPKPc	08 17.00	-4.7X
PRU	149.17	343	PKP	08 27.10	5.1X
			e	08 34.00	
MOX	149.25	347	ePKP	08 28.00	5.9X
KHC	150.21	344	PKP	08 30.00	6.4X
GRF	150.24	347	e(PKP)	08 30.00	6.4X
S.D. = 1.0 on 9 of 19 obs.					

• SEP 13, 1989 16h 01m 24.06± 1.24s
40.806 N ±17.1km 22.349 E ± 9.6km
DEPTH = 10.0km (geophysicist)
GREECE (364)

KKB	1.20	27	eP	01 46.00	-0.3
OHR	1.21	285	ePn	01 45.20	-1.5
MMB	1.30	53	ePc	01 48.00	-0.2
SKO	1.35	330	ePn	01 55.70	6.8X
			i	02 10.00	
			i	02 14.50	
LSK	1.49	244	ePn	01 52.00	1.1
VTS	1.90	20	iP	01 59.00	2.1
TIR	1.95	287	ePn	02 02.00	4.4X
RZN	1.99	63	iP	01 57.00	-1.3
SRN	2.02	243	ePn	02 01.90	3.4X
LACI	2.16	293	ePn	02 06.50	6.0X
PUK	2.22	305	ePn	02 05.60	4.1X
BCI	2.32	313	ePn	02 11.30	8.5X
KDZ	2.46	69	eP	02 05.00	0.1
S.D. = 1.6 on 7 of 13 obs.					

• SEP 13, 1989 17h 42m 40.38± 0.87s
18.556 S ± 8.7km 69.338 W ±10.4km
DEPTH = 33.0km (normal)
NORTHERN CHILE (123)

CNCB	2.17	37	iPc	43 16.00	0.6
			S	43 42.50	
LPB	2.33	31	P	43 18.40	0.7
			S	43 45.00	
ZOBO	2.55	27	iPc	43 20.00	-0.9
ARE	2.93	315	iPc	43 25.80	-0.1
			iS	43 59.30	
CCH	3.26	69	iPc	43 30.20	-0.5
ANT	5.22	191	eP	43 58.30	0.1
S.D. = 0.8 on 6 of 6 obs.					

? SEP 13, 1989 17h 47m 39.22± 5.98s
33.848 S ±18.9km 72.394 W ±42.9km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.78	62	iP	47 55.00	0.6
			iS	48 04.00	
LNV	0.82	98	iP	47 55.20	0.1
			iS	48 03.20	
IHA	1.03	38	eP	47 57.50	-1.2
			iS	48 14.80	
TACH	1.23	81	iPc	48 01.50	-0.6
			iS	48 14.90	
ROCH	1.45	53	iPc	48 06.50	0.8
			iS	48 24.50	
CHCH	1.45	94	iPc	48 05.10	-0.4
			iS	48 19.90	
SAN	1.50	75	iPc	48 06.50	0.3
			iS	48 22.80	
PCH	1.58	82	iPd	48 07.00	-0.5
			iS	48 27.40	
PEL	1.59	64	iPc	48 08.60	1.1
			iS	48 25.90	
			i	48 30.10	
FCH	1.83	74	iPd	48 11.60	0.3
			iS	48 33.00	
JACH	1.90	53	eP	48 15.00	2.9X
			iS	48 38.50	
TCA	7.04	71	ePc	49 24.50	-0.5
			(S)	50 49.60	
S.D. = 0.8 on 11 of 12 obs.					

% SEP 13, 1989 19h 48m 56.27± 1.27s
23.475 N ± 9.3km 120.557 E ±18.2km
DEPTH = 33.0km (normal)
TAIWAN (244)

TWK	0.22	197	iPc	49 03.10	0.0
			eS	49 09.20	
TWG	0.81	144	iPc	49 11.20	0.0
TWO	0.84	18	iPc	49 11.40	-0.2
			eS	49 23.10	
TWD	1.13	57	ePc	49 15.00	-0.7
			eS	49 29.40	
TWC	1.63	46	ePc	49 24.00	0.9
			eS	49 45.10	
ANP	1.91	27	eP	49 32.00	4.8X
S.D. = 0.9 on 5 of 6 obs.					

SEP 13, 1989 20h 13m 10.77± 1.14s
31.494 S ±11.2km 67.385 W ± 7.4km
DEPTH = 129.7 ± 26.1 km
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	1.11	267	iPc	13 34.70	-0.3
			eS	13 52.00	
MRA	1.69	123	iPd	13 41.10	-0.3
TCA	2.39	87	iPc	13 50.50	0.3
JACH	2.97	246	eP	13 59.60	1.9
			iS	14 35.50	
FCH	3.06	233	iPc	14 00.00	0.8
PEL	3.24	239	iPc	14 01.00	-0.3
			i	14 32.00	
			iS	14 37.50	
CYA	3.34	25	iPc	14 02.50	0.0
PCH	3.39	230	iPd	14 03.50	0.3
			iS	14 46.50	
SAN	3.39	234	ePc	14 03.00	-0.2
			iS	14 43.00	
ROCH	3.41	243	iPd	14 03.00	-0.6
			iS	14 43.00	
CHCH	3.67	228	iPd	14 07.50	0.5
			iS	14 50.50	
TACH	3.69	233	iPc	14 06.50	-0.7
			iS	14 50.00	
LCCH	4.05	240	iPd	14 10.80	-1.2
			eS	14 57.20	
LNV	4.19	233	iPc	14 11.50	-2.3X
			iS	14 58.70	
S.D. = 0.9 on 13 of 14 obs.					

? SEP 13, 1989 20h 27m 31.75± 5.67s
25.013 S ±16.7km 110.908 E ±51.5km
DEPTH = 10.0km (geophysicist)
WEST OF AUSTRALIA (589)

NANU	4.88	61	iPc	28 47.40	0.4
	0.2s	20.00nm			
			eS	29 39.30	
MRWA	6.17	134	eP	29 06.40	1.3
	0.2s	18.00nm		5.5mb X	
			eS	30 12.40	
MEKA	7.05	105	iPc	29 19.50	1.9
			iS	30 33.50	
BAL	7.58	139	eP	29 25.50	0.6
			eS	30 47.00	
MUN	8.36	147	eP	29 36.30	0.5
	0.3s	361.00nm		7.2mb X	
			eS	31 05.00	
KLB	8.91	139	eP	29 43.00	-0.5
			eS	31 17.00	
MBL	9.07	67	iPd	29 45.80	0.2
	0.4s	6.00nm		5.3mb X	
			eS	31 18.00	
NWAO	9.63	146	eP	29 53.00	-0.4
			eS	31 36.00	
RKG	10.47	151	eP	30 11.50	6.6X
			eS	32 05.00	
COOL	10.77	125	eP	30 08.10	-1.0
	0.3s	7.00nm		5.5mb X	
			eS	31 59.00	
WARB	14.25	98	eP	30 54.00	-1.7
	0.2s	2.00nm		4.5mb X	
			eS	33 21.00	
FORR	16.26	115	eP	31 20.60	-1.2
S.D. = 1.2 on 11 of 12 obs.					

? SEP 13, 1989 20h 46m 05.37± 1.20s
35.458 S ±31.1km 17.129 W ±16.1km
DEPTH = 10.0km (geophysicist)
4.9mb (4 obs.) 5.2Msz (2 obs.)
SOUTH ATLANTIC RIDGE (410)

PPD	32.65	285	eP	52 42.70	3.0X
ITR	32.94	319	eP	52 43.40	1.2
			e	53 51.10	
BAO	33.92	298	eP	52 51.50	0.6
KSR	38.79	88	eP	53 15.00	-17.2X
	1.0s	10.00nm			
			e	53 52.20	
PRY	38.82	90	eP	53 25.00	-7.4X
SLR	39.98	89	eP	53 41.50	-0.5
Z	20s	3.55um		5.2Msz	
BUL	42.86	82	eP	54 08.40	2.7X
	1.0s	7.50nm		4.4mb	
KIC	43.20	18	P	54 06.80	-1.4
PEL	43.85	257	eP	54 15.50	2.0
	1.0s	24.00nm		5.0mb	
TACH	43.89	256	eP	54 22.00	8.2X
LNV	44.17	256	eP	54 19.50	3.5X
KMZ	44.38	71	eP	54 22.00	4.0X
			i	54 42.00	
LSZ	45.15	75	eP	54 28.00	3.8X
			i	54 48.00	
CCH	46.94	279	P	54 49.90	11.3X

13d 20h

CNCB	48.73	279	P	54	51.00	-1.9													
LPB	48.97	279	P	54	58.00	3.4X													
	Z 24s	3.10um		5.2MszX															
		LR	08	26.00															
ZOBO	49.13	279	P	54	54.00	-2.0													
	1.2s	16.89nm		4.9mb															
	Z 19s	2.62um		5.2Msz															
		LR	08	50.00															
BNG	51.91	48	ePc	55	19.80	3.3X													
	0.6s	8.00nm		4.8mb															
		ic	55	25.30															
EPF	79.73	13	eP	58	25.60	10.9X													
	1.0s	12.00nm																	
PRNI	81.78	44	eP	58	42.00	16.2X													
CAF	81.88	14	eP	58	36.10	10.1X													
	1.1s	12.20nm																	
LSF	83.05	13	eP	58	42.90	10.9X													
	0.9s	5.50nm																	
TCF	83.22	13	eP	58	43.70	10.8X													
	1.1s	8.30nm																	
MAF	83.22	14	eP	58	43.80	10.9X													
	1.0s	6.80nm																	
LPG	83.42	17	eP	58	45.00	10.7X													
	1.0s	8.00nm																	
OHR	83.78	28	e(P)	58	38.00	2.1													
SMF	83.88	14	eP	58	46.90	10.7X													
	1.0s	10.00nm																	
AVF	83.92	14	eP	58	47.20	10.8X													
	1.0s	8.80nm																	
LBF	84.23	14	eP	58	48.40	10.4X													
LOR	84.48	14	eP	58	49.70	10.5X													
	0.9s	3.90nm																	
KHC	88.53	20	P	59	17.90	18.8X													
ZST	88.72	22	eP	59	25.70	25.8X													
SRO	88.76	23	eP	59	24.60	24.5X													
PRU	89.58	20	eP	59	08.00	4.1X													
		e	59	27.50															
BRG	90.22	19	eP	59	33.80	26.9X													
	1.0s	12.00nm																	
CLL	90.37	18	eP	59	25.00	17.5X													
INK	132.15	333	ePKP	05	35.00	15.0X													
BJI	143.12	69	ePKP	05	41.00	-0.1													
S.D. = 1.8 an 9 of 38 abs.																			

SEP 13, 1989 21h 52m 43.94± 0.74s
21.619 S ± 8.6km 129.758 E ± 8.2km
DEPTH = 10.0km (geophysicist)
4.3mb (1 obs.)
NORTHERN TERRITORY, AUSTRALIA (591)

ASPA	4.34	119	iPc	53	52.80	1.3													
	0.3s	181.00nm																	
		eS	54	41.00															
WRA	4.60	70	P	54	11.00	15.8X													
WB5	4.65	69	eP	53	34.60	-21.3X													
WARB	5.36	211	iPc	54	10.80	4.8X													
		eS	55	12.00															
KNA	5.91	351	eP	54	15.60	1.9													
	0.2s	5.00nm		4.9mb X															
		eS	55	21.00															
MTN	8.82	9	eP	54	52.00	-2.5													
		eS	56	26.00															
		e	57	25.00															
QIS	9.25	85	eP	55	00.00	-0.5													
		eS	56	34.00															
		e	57	27.00															
MBL	9.26	271	eP	55	02.00	1.5													
		eS	56	42.00															
FORR	9.31	189	eP	55	01.90	0.7													
		iS	56	37.50															
MEKA	11.39	242	eP	55	30.00	0.2													
		eS	57	30.00															
COOL	12.03	218	eP	55	37.00	-1.4													
	0.3s	3.00nm		5.1mb X															
		eS	57	45.00															
NANU	13.23	263	eP	55	55.00	0.6													
	0.4s	4.00nm		4.9mb X															
		eS	58	56.00															
MRWA	14.55	236	eP	56	10.00	-1.8													
	0.3s	2.00nm		4.3mb															
		eS	58	44.00															
KLB	14.61	225	eP	56	13.00	0.4													
		eS	58	46.00															
NWAO	15.82	222	eP	56	28.00	-0.4													
		eS	59	13.00															
S.D. = 1.5 an 12 of 15 abs.																			

SEP 13, 1989 21h 53m 59.53± 0.14s
45.799 N ± 1.8km 11.207 E ± 1.4km
DEPTH = 10.0km (geophysicist)
4.6mb (7 obs.)
NORTHERN ITALY (545)
ML 5.1 (VKA), 5.0 (FUR), 4.8 (ROM). MD 4.7 (TRI). Felt (VII) in the Rovereto area and (III) at Trieste. Felt (IV) at Ljubljana, Yugoslovia.

CTI	0.40	51	Pc	54	08.60	0.9													
			eSg	54	14.70														
SAL	0.51	248	P	54	11.20	1.3													
MDI	1.05	269	Pc	54	19.70	0.5													
			iSg	54	35.00														
OGA	1.08	353	iPgd	54	20.50	0.6													
OSS	1.15	321	iPc	54	21.80	0.6													
SCE	1.29	16	iPgd	54	24.30	0.8													
VDL	1.39	300	iPc	54	25.80	0.7													
BOB	1.61	231	P	54	30.40	2.2													
			eSn	54	49.80														
MME	1.64	193	P	54	30.80	2.0													
TMA	1.66	282	iPc	54	30.50	1.6													
VAI	1.70	273	Pc	54	30.50	1.1													
			eSn	54	51.00														
RBL	1.76	68	P	54	31.70	1.3													
			eSn	54	54.60														
BDI	1.79	194	P	54	32.50	1.7													
			iSn	54	54.40														
TRI	1.79	92	iPnc	54	32.00	1.3													
			i	54	54.50														
			iSn	54	57.00														
LLS	1.87	306	iPc	54	34.20	2.2													
VOY	1.89	82	iPnc	54	33.30	1.1													
			eSn	54	59.50														
			e	05	00.00														
SFI	1.93	166	P	54	34.60	1.9													
			eSn	54	58.40														
SAX	1.94	319	iPc	54	36.50	3.4X													
KBA	1.96	48	iPnd	54	36.20	2.9X													
PGD	1.96	169	P	54	35.40	2.1													
PII	2.13	193	P	54	36.80	1.2													
			eSn	55	02.70														
PRO	2.24	147	ePn	54	39.60	2.4													
			iSn	55	15.50														
BHG	2.24	30	iPgd	54	39.80	2.6													
CEY	2.25	90	iPnc	54	38.50	1.0													
			i	54	42.30														
PCP	2.26	237	Pn	54	39.31	1.7													
			Pg	54	41.74														
			Sn	55	02.34														
ORO	2.27	267	P	54	36.90	-0.8													
			eSn	55	04.10														
MMK	2.28	278	ePc	54	37.20	-0.8													
RIY	2.28	100	iPnc	54	38.80	1.1													
LJU	2.33	83	iPnc	54	39.40	0.8													
			i	54	44.00														
FUR	2.37	1	iPnd	54	40.10	1.0													
ZLA	2.57	312	iPc	54	43.90	2.0													
ARV	2.61	151	P	54	44.00	1.5													
DIX	2.66	277	eP	54	43.40	-0.1													
SLE	2.71	318	iPc	54	45.30	1.3													
ROB	2.80	239	Pn	54	46.11	0.8													
			Pg	54	49.98														
			Sn	55	14.13														
AOI	2.82	142	iPn	54	47.16	1.6													
			iSn	55	37.18														
VBY	2.86	94	iPnc	54	47.00	1.1													
LSD	2.86	265	Pn	54	44.95	-1.4													
			Pg	54	50.92														
ASS	2.92	159	P	54	47.90	1.0													
			eSn	55	22.30														
CIO	2.95	151	iPn	54	50.12	2.8X													
			iSn	55	44.65														
SSO	2.96	147	iPn	54	50.01	2.6													
			iSn	55	44.07														
EMS	3.00	277	ePc	54	50.00	1.9													
KMR	3.02	41	iPn-	54	49.20	1.0													
			iPg	54	56.20														
			i(Sn)	55	37.00														
			iSg	55	41.80														
FEL	3.02	315	ePn	54	49.60	1.2													
IMI	3.02	233	P	54	48.70	0.4													
			S	55	16.94														
BBS	3.04	305	Pn	54	49.59	1.0													
DOI	3.09	247	P	54	47.80	-1.5													
ENR	3.11	241	Pn	54	49.52	-0.1													
			Pg	54	56.91														
			Sn	55	21.25														
LPG	3.14	266	Pn	54	49.80	-0.4													
LPL	3.15	266	Pn	54	50.20	-0.1													
STV	3.16	242	Pn	54	49.47	-0.9													
			Pg	54	57.10														
			Sn	55	20.69														
SAOF	3.16	236	Pn	54	51.16	0.8													
PZZ	3.18	247	P	54	48.74	-1.9													
AUTN	3.23	237	Pn	54	52.50	1.0													
RRL	3.24	256	Pn	54	49.97	-1.6													
			Pg	54	59.15														
STU	3.27	336	iPn	54	52.00	0.1													
	0.8s	64.18nm																	
			ePg	55	02.40														
BNI	3.28	258	P	54	51.10	-1.0													
			eSn	55	28.40														
SBF	3.31	236	Pn	54	53.00	0.5													
			Sg	55	44.60														
PTJ	3.32	87	iPc	54	52.70	0.0													
TOUF	3.33	239	Pn	54	53.48	0.6													
ZAG	3.34	88	iPnc	54	53.60	0.8													
AURF	3.36	237	Pn	54	53.93	0.8													
FOUF	3.38	250	ePnc	54	51.94	-1.4													
			i	54	54.32														
			i	54	57.94														
			i	54	59.27														
			iSn	55	29.32														
MAO	3.38	181	P	54	53.60	0.2													
			eSn	55	33.20														
LOMF	3.40	299	Pn	54	54.51	0.8													
REVF	3.42	234	Pn	54	55.08	1.0													
MVIF	3.45	238	Pn	54	55.13	0.6													
ALP	3.46	150	ePn	54	55.09	0.4													
			iSn	55	52.69														
MOF	3.47	308	Pn	54	55.81	1.1													
MNS	3.57	162	P	54	56.90	0.7													
			eSn	55	36.50														
CVF	3.64	208	Pn	54	57.25	0.1													
STR	3.64	321	Pn	54	58.69	1.6													
BSF	3.65	305	Pn	54	58.00	0.6													
			Pg	55	10.00														
			Sn	55	42.00														
			Sg	55	57.00														
ECH	3.68	313	Pn	54	58.48	0.8													
CALN	3.69	238	Pn	54	58.72	0.7													
KHC	3.70	25	iPnd	54	58.50	0.5													
			Pg	55	08.20														
			Sn	55	40.00														
			Sg	55	56.00														
WLS	3.71	316	Pn	54	58.80	0.6													
CDF	3.75	316	Pn	54	59.80	1.1													
			Pg	55	13.50														
			Sg	56	01.00														
AQU	3.79	155	P	55	00.00	0.7													
GRF	3.90	0	iPnd	54	59.20	-1.5													
			ePg	55	13.50														
			eSg	56	02.80														
FRF	3.95	237	Pn	55	01.60	0.2													
HAU	4.00	305	Pn	55	02.90	0.8													
			Pg	55	16.40														
			Sn	55	49.00														
GWF	4.01	324	Pn	55	03.32	1.1													
KTD	4.11	330	ePn	55	04.28	0.6													
RMP	4.13	164	P	55	04.90	0.9													
			eSn	55	50.40														
SOP	4.13	61	iP	55	07.90	3.9X													
AZI	4.14	156	P	55	05.00	1.0													
			eSn	55	51.30														
TOD	4.14	338	ePn	55	04.12	0.0													
LMR	4.16	235	Pn	55	04.50	0.0													
			Sn	55	51.00														
GANF	4.17	246	Pn	55	03.91	-0.8													
LRG	4.18	238	Pn	55	04.60	-0.1													
			Pg	55	21.20														
			Sg	56	12.40														
RDP	4.18	164	P	55	05.20	0.3													
			eSn	55	52.80														
TAVF	4.27	241	Pn	55	05.76	-0.3													
VKA	4.28	53	iPnc	55	06.90	0.7													
			i	55	18.40														
			iSn	55	57.60														
			iSg	56	18.50														
VITF	4.31	306	Pn	55	07.28	0.6													
VILF	4.36	245	Pn	55	07.18	-0.2													

HOF	4.54	5	ePn	55 07.60	-2.3
HVAR	4.57	123	iPnc	55 10.60	0.3
BERF	4.66	240	Pn	55 11.10	-0.6
TREF	4.69	244	Pn	55 11.95	0.0
ZST	4.69	57	iPn	55 12.50	0.5
	1.0s		1.27nm		
			i(Pg)	55 27.60	
			i	55 53.70	
			i	56 17.80	
			i	56 26.50	
PRAF	4.74	247	Pn	55 12.31	-0.4
PRU	4.75	27	iPnd	55 12.30	-0.6
			iPg	55 29.50	
			iSg	56 27.00	
DUI	4.76	149	P	55 13.70	0.6
			eSn	56 06.60	
ABH	4.77	330	ePn	55 13.68	0.5
GELF	4.78	242	Pn	55 13.42	0.1
TNS	4.80	338	iPnd	55 12.90	-0.7
			eSn	56 32.50	
RUP	4.80	326	ePn	55 14.38	0.7
MOX	4.86	3	iPn	55 12.00	-2.4
	0.8s		81.00nm		
E	12s		6.10um		
			iPg	55 31.00	
			iSn	56 27.00	
			iSg	56 36.00	
FG2	4.92	143	Pn	55 14.57	-0.6
RFI	4.93	155	P	55 15.60	0.3
LBF	5.14	286	Pn	55 18.00	-0.4
			Pg	55 37.20	
			Sn	56 16.00	
WLF	5.16	320	Pn	55 19.00	0.5
SMF	5.18	282	Pn	55 18.20	-0.8
			Sn	56 17.60	
LOR	5.28	289	Pn	55 19.80	-0.6
			Pg	55 39.00	
			Sn	56 20.00	
SRO	5.28	65	iPn	55 20.00	-0.3
			i(Pb)	55 27.90	
			iPg	55 39.90	
			e	56 21.20	
			e	56 44.30	
PLDF	5.30	275	Pn	55 19.62	-1.1
FG3	5.35	138	Pn	55 20.12	-1.2
BRG	5.40	19	iPnd	55 21.00	-1.0
			iPg	55 40.00	
			i	56 37.00	
			iSg	56 56.00	
AVF	5.53	283	Pn	55 23.00	-0.9
FG4	5.62	145	Pn	55 25.16	0.0
LBL	5.62	267	Pn	55 23.69	-1.5
AGO	5.64	275	Pn	55 24.42	-1.0
BUD	5.64	70	eP	55 27.50	2.1
CLL	5.64	12	iPnd	55 23.80	-1.6
	0.8s		76.00nm	5.4mb X	
			iPg	55 45.90	
			iSg	57 00.00	
PYM	5.74	272	Pn	55 25.55	-1.3
BGF	5.86	280	Pn	55 27.00	-1.4
GSH	5.90	329	ePnc	55 29.80	0.8
MEM	5.94	326	iPnd	55 30.38	0.9
BRY	6.01	116	iPnc	55 30.50	-0.2
			eSn	56 34.50	
MAF	6.03	277	Pn	55 29.20	-1.7
SGO	6.03	149	P	55 30.40	-0.5
			eSn	56 35.40	
KSP	6.08	32	iPn	55 30.20	-1.4
	0.8s		230.00nm	6.0mb X	
			iPg	55 54.60	
			i	56 02.50	
			iSn	56 39.00	
			iSg	57 01.30	
HYF	6.09	287	Pn	55 31.40	-0.4
			Sn	56 35.80	
ENN	6.09	327	iPnd	55 32.90	1.2
	0.7s		134.00nm	5.8mb X	
			iPb	55 45.00	
DOU	6.18	316	iPnc	55 34.50	1.5
			e	55 47.00	
			Sn	56 38.00	
HCY	6.23	120	iPnc	55 32.80	-0.8
			eSn	56 40.40	
TCF	6.28	278	Pn	55 33.20	-1.3
			Sn	56 42.50	
PSZ	6.32	67	eP	55 35.00	-0.1
NKY	6.34	115	ePn	55 35.00	-0.4
			eSn	56 42.00	
MGR	6.49	149	P	55 37.00	-0.5
CAF	6.50	266	Pn	55 36.60	-1.0
BDV	6.52	120	iPnc	55 37.30	-0.5
			eSn	56 46.50	
CGL	6.58	193	P	55 39.60	0.7
BEO	6.60	95	ePn	55 38.80	-0.1
			iPg	56 06.80	
			iSg	57 36.60	
SNF	6.61	318	iPnd	55 40.62	1.6
			Sn	56 50.90	
TTG	6.70	117	iPnd	55 40.00	-0.4
			eSn	56 50.50	
BRN	6.75	10	eP	56 07.00	26.0X
LSF	6.75	277	Pn	55 39.60	-1.5
			Sn	56 54.40	
UCC	6.77	320	Pn	55 45.40	4.1X
			i	55 56.00	
			iSb	57 22.00	
BRL	6.82	11	eP	56 07.50	25.6X
RJF	6.82	269	Pn	55 41.20	-0.9
WTS	6.84	337	ePn	55 43.00	0.7
	0.7s		40.00nm	5.6mb X	
			iPb	55 56.20	
IVA	6.88	112	ePn	55 42.60	-0.4
			eSn	56 58.00	
ETER	6.96	243	eP	55 42.50	-1.5
ULC	6.96	121	iPnd	55 43.20	-0.8
			eSn	56 58.60	
SPC	7.00	58	iP	55 44.50	-0.2
	2.0s		0.76nm	3.5mb X	
			i	55 48.00	
			i	56 07.00	
			i	57 37.00	
TIM	7.01	87	iP	55 53.00	8.4X
PVY	7.07	114	iPnd	55 46.00	0.4
			eSn	57 01.00	
SDA	7.08	119	iPnd	55 45.40	-0.2
LPO	7.16	265	Pn	55 45.60	-1.2
TDS	7.20	147	P	55 48.00	0.6
BCI	7.24	115	iPnc	55 49.70	1.8
KRA	7.25	51	eP	55 47.60	-0.4
Z	10s		2.40um	5.2Msz	
N	16s		5.20um		
			e	55 52.90	
			e	56 15.60	
			e	57 46.40	
			i	57 53.60	
BZS	7.29	88	eP	55 47.50	-1.1
PUK	7.31	118	iPnc	55 48.70	-0.1
LCI	7.36	136	P	55 49.00	-0.6
			eSn	57 08.90	
LFF	7.42	267	Pn	55 49.50	-1.0
LACI	7.43	121	iPnc	55 49.30	-1.3
KKS	7.61	116	ePn	55 53.50	0.4
WIT	7.62	339	ePn	55 59.00	5.8X
			ePb	56 10.50	
TIR	7.70	122	iPnd	55 52.80	-1.6
PHP	7.85	118	iPnd	55 55.00	-1.4
MFF	7.92	280	Pn	55 55.20	-2.2
GRI	7.97	149	P	55 58.30	0.1
VLO	8.07	128	iPn	55 58.20	-1.2
BERA	8.16	126	iPnc	55 58.50	-2.3
DEV	8.17	85	ePc	55 55.00	-5.9X
LDF	8.21	294	Pn	55 59.40	-2.0
			Sg	58 22.00	
EPF	8.26	254	Pn	55 59.70	-2.5
SKO	8.32	114	iPn	56 01.20	-1.8
			i	57 29.50	
			LR	59 41.00	
OHR	8.40	120	iPnc	56 03.20	-1.0
FLN	8.48	295	Pn	56 03.00	-2.3
			Pg	56 40.80	
SOI	8.52	153	P	56 05.80	0.0
ESEL	8.58	228	eP	56 06.40	-0.2
GRR	8.63	292	Pn	56 05.00	-2.3
			Pg	56 45.60	
LPF	8.68	289	Pn	56 05.00	-3.0
KBN	8.71	123	ePn	56 07.00	-1.4
SRN	8.76	129	ePn	56 06.40	-2.6
KEK	8.77	131	ePb	56 07.00	-2.2
LSK	8.90	126	iPnd	56 09.10	-2.0
VTS	9.20	106	iPd	56 14.00	-1.3
EBR	9.26	241	(P)	56 21.00	5.1X
			e	58 18.00	
DRA	9.28	92	eP	56 17.00	0.8
EROO	9.31	242	eP	56 16.50	-0.2
KKB	9.44	110	iPd	56 18.00	-0.5
KZN	9.48	122	ePb	56 17.00	-2.1
CMP	9.72	88	ePd	56 25.00	2.5
MMB	10.00	110	eP	56 25.00	-1.2
VLS	10.33	134	ePn	56 28.00	-2.7
MLR	10.33	86	ePc	56 31.00	0.1
PLD	10.41	106	eP	56 35.00	3.2X
PVL	10.42	99	eP	56 29.00	-2.9X
BUC	10.62	92	ePc	56 32.00	-2.7
VRI	10.83	84	ePc	56 38.00	0.4
ETOR	10.87	247	eP	56 38.50	0.3
DIM	10.99	105	eP	56 45.00	5.2X
KDZ	11.09	107	eP	56 39.00	-2.1
GUD	12.33	251	eP	56 57.50	-0.5
YRH	12.49	310	eP	56 59.90	-0.1
EZN	12.60	113	iP	56 59.60	-1.9
ECP	13.17	305	eP	57 12.00	2.9X
ETA	13.29	308	eP	57 11.00	0.4
DLE	13.72	309	eP	57 23.80	7.5X
ASMO	13.99	238	eP	57 32.70	12.6X
DMU	14.19	311	eP	57 24.20	1.7
ACHM	14.22	238	eP	57 37.50	14.5X
APHE	14.24	237	eP	57 35.20	11.9X
AAPN	14.25	239	eP	57 30.00	6.5X
ALOJ	14.38	238	eP	57 32.50	7.4X
ATEJ	14.45	237	eP	57 39.20	13.0X
UPP	14.60	13	iP	57 26.60	-1.1
			i	57 34.10	
NRA0	14.97	1	P	57 31.00	-1.6
TAF	15.09	228	iP	57 43.00	8.6X
NB2	15.27	0	P	57 35.90	-0.7
	0.8s		54.50nm	5.0mb	
KHL	15.50	112	eP	57 43.00	3.3X
NKM	16.28	236	iP	57 58.50	8.8X
			i	58 00.00	
ELL	16.68	116	eP	57 57.00	2.0
NUR	16.74	24	iP	57 53.80	-1.6
	0.9s		43.90nm	4.6mb	
Z	20s		0.70um		
			LR	05 00.00	
BBTK	16.87	103	eP	58 01.00	3.7X
BMK	16.89	236	eP	58 00.00	2.6
IFR	17.53	231	iP	58 10.00	4.4X
SUF	18.98	21	eP	58 20.00	-3.1X
	1.0s		26.30nm	4.4mb	
TIO	20.67	230	iP	58 46.50	4.4X
			i	59 05.50	
HRI	22.58	115	eP	59 07.00	5.6X
SOD	23.10	15	iP	59 06.00	0.0
PRNI	24.14	121	eP	59 19.00	2.6
MBH	24.49	123	eP	59 23.00	3.2X
KEV	25.29	13	eP	59 27.00	-0.1
BNG	41.69	169	ePd	01 50.50	0.5
	0.8s		11.00nm	4.6mb	
			id	01 53.20	
WMO	52.31	63	eP	03 14.10	0.7
CBM	52.47	302	P	03 11.00	-3.4X
NDI	53.76	84	eP	03 24.00	-0.2
GTA	62.29	61	eP	04 28.00	3.8X
BUL	67.50	162	eP	05 03.00	5.1X
ITR	70.14	233	e(P)	05 25.00	10.8X
XAN	71.33	60	P	05 20.20	-1.1
PMR	71.79	350	P	05 27.00	3.5X
	0.7s		6.40nm	4.8mb	
KSR	72.73	165	eP	05 21.00	-8.7X
SLR	72.87	164	eP	05 35.00	4.5X
PRY	73.88	165	eP	05 32.30	-4.0X
CHG	75.21	78	eP	05 44.00	-0.2
SEK	75.26	165	e(P)	05 49.00	4.7X
PNT	76.05	329	eP	05 55.00	6.5X
	0.4s		3.00nm	4.7mb	
LON	79.01	329	P	06 07.00	2.0
DAU	79.94	319	P	06 19.80	9.4X
BAO	81.15	237	eP	06 18.00	1.2
ALQ	81.92	313	P	06 20.00	-0.8
	0.8s		2.20nm	4.3mb	
KVN	84.07	323	P	06 32.00	0.2
BRS	144.52	72	ePKP	13 38.00	0.3
DZM	148.89	49	iPKPc	13 53.00	7.9X

S.D. = 1.2 on 218 of 261 obs.

? SEP 13, 1989 22h 08m 07.16± 1.24s
44.897 S ±26.2km 15.452 W ±13.2km
DEPTH = 10.0km (geophysicist)
4.5mb (1 obs.) 4.5Msz (2 obs.)
SOUTH ATLANTIC RIDGE (410)

13d 22h

BAO 40.03 306 eP 15 45.40 1.3
ITR 41.12 324 eP 15 51.70 -1.2
BUL 43.89 70 eP 16 16.00 0.3
KRI 46.91 68 eP 16 12.00 -27.8X
LIC 51.74 13 P 17 17.30 0.5
Z 20s 0.21um 4.2Msz
KIC 51.92 14 P 17 18.30 0.1
TIC 52.16 13 P 17 20.10 0.2
ZOBO 52.43 285 P 17 21.00 -1.7
Z 19s 0.79um 4.8Msz
LR 34 00.00
ARE 54.61 283 eP 17 40.00 1.5
BNG 57.76 41 ePd 18 00.10 -0.6
0.4s 2.00nm 4.5mb
BJI 144.41 80 ePKP 27 44.50 -0.2
PMR 148.49 319 ePKP 27 55.50 4.8X
S.D. = 1.1 on 10 of 12 obs.

? SEP 13, 1989 22h 46m 16.36± 1.32s
44.045 S ±20.6km 82.301 W ±21.4km
DEPTH = 10.0km (geophysicist)
4.9mb (3 obs.)
WEST CHILE RISE (686)

SLA 23.66 41 ePc 51 30.20 1.4
CNCB 29.73 29 P 52 24.50 -1.1
CCH 29.88 32 eP 52 26.00 -0.6
LPB 29.95 28 P 52 28.00 0.6
ZOBO 30.18 28 P 52 30.00 0.3
1.7s 45.78nm 5.0mb
BAO 40.58 57 eP 53 57.00 -0.9
TUL 80.52 349 eP 58 28.80 -1.0
1.2s 12.70nm 4.8mb
ALQ 81.63 340 iP 58 36.80 0.9
1.7s 17.31nm 4.8mb
LIC 85.22 77 P 58 54.70 0.3
KIC 85.52 77 P 58 55.90 0.0
TIC 85.52 76 P 58 56.00 0.1
MAT 148.46 270 (PKP) 06 05.00 4.2X
MHI 150.01 92 ePKP 06 07.00 3.7X
QUE 152.03 109 ePKP 06 14.00 7.4X
S.D. = 0.9 on 11 of 14 obs.

? SEP 14, 1989 00h 34m 51.30± 2.77s
40.139 N ±22.1km 20.622 E ±16.7km
DEPTH = 33.0km (normal)
GREECE-ALBANIA BORDER REGION (392)

LSK 0.02 302 ePn 34 57.00 0.1
TPE 0.49 289 ePn 35 02.10 0.3
KBN 0.51 17 ePn 35 02.70 0.7
BERA 0.76 318 ePn 35 06.50 0.9
VLO 0.92 291 ePn 35 07.00 -0.9
TIR 1.34 335 ePn 35 14.50 0.7
PHP 1.55 355 iPnc 35 15.20 -1.7
SDA 2.06 336 ePn 35 24.00 -0.2
BCI 2.26 350 ePn 35 31.70 4.6X
S.D. = 1.1 on 8 of 9 obs.

? SEP 14, 1989 01h 12m 31.13± 2.65s
55.045 N ±52.3km 161.704 E ±19.1km
DEPTH = 33.0km (normal)
4.4mb (2 obs.)
NEAR EAST COAST OF KAMCHATKA (218)

INK 31.75 40 eP 18 54.00 0.3
KVN 53.88 72 eP 21 53.00 -0.3
SUF 57.56 338 eP 22 19.00 -0.2
NUR 59.85 337 eP 22 35.00 -0.2
NB2 61.93 344 P 22 48.70 -0.7
0.5s 1.10nm 4.2mb
CDF 74.70 343 eP 24 09.00 0.2
HAU 75.25 343 eP 24 11.90 0.0
BSF 75.34 343 eP 24 12.40 -0.2
LPG 77.61 342 eP 24 26.70 1.2
0.7s 4.40nm 4.6mb
S.D. = 0.6 on 9 of 9 obs.

% SEP 14, 1989 01h 36m 07.84± 1.15s
11.618 N ±11.1km 61.299 W ±13.3km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)

GRW 0.65 327 eP 36 20.68 0.1
eS 36 29.73
TPR 0.67 130 eP 36 21.44 0.6
BOT 0.72 128 eP 36 20.67 -0.9
eS 36 29.98
TRN 0.97 186 eP 36 24.15 -1.0
eS 36 36.56
TCE 1.02 206 eP 36 24.85 -1.0
eS 36 38.11
TBH 1.15 169 eP 36 20.71 -7.0X
eS 36 29.72
TPP 1.30 187 eP 36 31.86 2.1
eS 36 49.28
S.D. = 1.6 on 6 of 7 obs.

% SEP 14, 1989 01h 57m 36.73± 2.63s
11.271 N ±26.9km 61.180 W ±13.4km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)
MD 3.2 (TRN).

TPR 0.40 102 eP 57 45.87 -0.1
eS 57 54.38
BOT 0.47 103 eP 57 46.97 0.1
eS 57 56.20
TRN 0.66 199 eP 57 50.46 0.9
eS 58 02.82
TBH 0.79 172 eP 57 50.81 -0.6
eS 58 01.17
TCE 0.80 225 eP 57 51.15 -0.4
eS 58 04.48
TPP 0.99 196 eP 57 54.25 0.0
eS 58 07.50
S.D. = 0.7 on 6 of 6 obs.

SEP 14, 1989 02h 19m 29.02± 1.07s
51.703 N ±11.4km 175.294 W ± 4.8km
DEPTH = 63.8 ± 9.0 km
4.7mb (9 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
Felt on Adok.

ADK 0.88 282 iP 19 44.50 -1.4
SMY 6.60 283 eP 21 06.00 0.5
SDN 9.53 62 eP 21 45.00 -1.0
SVW 14.34 41 eP 22 51.70 1.8
KDC 14.46 56 eP 22 49.30 -2.1
TTA 15.25 35 eP 23 04.00 2.3
PMR 17.34 45 eP 23 27.70 -0.1
IMA 18.07 29 eP 23 38.70 1.8
1.1s 2.20nm 3.3mb X
FBA 19.36 36 eP 23 51.70 -0.2
INK 25.95 34 eP 24 56.00 -0.6
RMW 34.29 75 eP 26 11.90 1.0
LON 34.62 77 eP 26 14.80 1.1
PNT 34.76 71 ePc 26 15.00 0.1
0.4s 6.00nm 4.9mb
MAT 36.00 264 eP 26 25.00 -0.5
EDM 36.73 63 iP 26 32.00 0.5
LBFM 37.39 85 eP 26 38.50 1.1
SES 39.24 66 ePc 26 51.70 -0.8
KVN 41.09 85 eP 27 08.80 0.8
SNY 41.87 281 iPd 27 15.40 1.3
FFC 42.16 56 iPc 27 17.00 0.6
0.5s 6.00nm 4.6mb
TNP 42.23 85 eP 27 18.00 0.6
0.8s 4.41nm 4.3mb
DAU 44.48 78 eP 27 36.50 0.7
MSU 45.08 81 eP 27 41.00 0.5
RSSD 46.60 70 eP 27 52.00 -0.4
RSON 48.46 57 eP 28 06.00 -0.6
0.8s 12.82nm 5.0mb
GOL 48.48 75 eP 28 07.70 0.5
TIA 49.28 279 Pc 28 13.10 0.0
SSE 50.18 272 P 28 21.00 1.0
ALQ 50.89 81 eP 28 30.50 4.9X
2.5s 33.33nm 4.9mb
TIY 51.16 284 eP 28 28.50 1.0
Z 20s 0.50um 4.5Msz
FRB 51.59 33 eP 28 29.00 -1.2
SCH 58.40 40 eP 29 19.00 -0.8
FVM 58.42 67 eP 29 18.50 -1.6
PWLA 61.87 68 eP 29 42.50 -1.2
GYA 62.45 278 P 29 47.40 -0.4
RSCP 62.86 66 eP 29 49.30 -1.0
GBTN 63.59 65 eP 29 54.00 -1.1
NA2 65.37 59 eP 30 06.50 0.0
KMI 65.84 280 Pc 30 09.50 -0.5
JSC 66.26 64 eP 30 11.80 -0.5
NB2 67.49 357 P 30 19.00 -0.7
0.8s 2.70nm 4.3mb
HFS 68.28 355 eP 30 23.50 -1.1
0.4s 5.20nm 4.8mb
CHG 72.87 279 eP 30 53.40 0.4
WRA 83.80 227 P 31 53.00 0.6
0.7s 1.10nm 4.0mb
HYB 86.13 293 eP 32 04.50 0.2
ASPA 87.24 225 eP 32 09.90 0.5
0.9s 6.00nm 4.8mb
BNG 122.84 344 iPKPd 38 19.80 0.5
0.5s 7.00nm
BUL 143.37 320 iPKPc 38 56.00 -1.8
0.9s 4.20nm
MAW 148.08 218 ePKP 39 08.00 4.0X
KSR 149.18 318 iPKPd 39 12.70 5.4X
0.8s 7.50nm
PRY 149.87 316 iPKPc 39 13.40 5.2X
0.8s 10.63nm
SEK 151.02 315 ePKP 39 16.50 6.6X
0.4s 33.90nm
FRS 153.25 317 ePKP 39 20.00 7.2X
S.D. = 1.0 on 47 of 53 obs.

? SEP 14, 1989 03h 06m 02.20± 9.10s
33.996 S ±40.1km 72.191 W ±64.3km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

LNV 0.65 87 iPd 06 14.50 -0.4
iS 06 23.00
LCCH 0.73 45 iPd 06 14.60 -1.5
iS 06 23.00
IHA 1.07 26 eP 06 21.00 0.1
iS 06 33.90
TACH 1.10 72 iPd 06 20.50 -0.8
iS 06 34.00
CHCH 1.28 88 iP 06 24.50 0.6
iS 06 41.00
SAN 1.39 67 iPc 06 25.60 0.2
iS 06 41.50
ROCH 1.42 44 iPc 06 25.70 -0.4
iS 06 42.70
PCH 1.45 75 iPd 06 26.40 0.0
iS 06 46.40
PEL 1.52 56 iPc 06 27.80 0.4
iS 06 46.10
i 06 47.30
FCH 1.72 68 iPd 06 30.80 0.2
iS 06 52.50
JACH 1.87 46 eP 06 34.20 1.6
iS 06 58.00
S.D. = 0.9 on 11 of 11 obs.

? SEP 14, 1989 03h 07m 30.32± 8.49s
33.990 S ±30.7km 72.201 W ±60.3km
DEPTH = 25.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LNV 0.66 87 iP 07 43.50 0.4
iS 07 51.50
LCCH 0.74 46 iPd 07 43.50 -0.9
iS 07 52.00
TACH 1.10 73 iP 07 49.70 -0.5
iS 08 03.00
CHCH 1.29 88 iP 07 52.00 -0.8
iS 08 09.00
SAN 1.39 68 iP 07 54.80 0.5
iS 08 11.00
ROCH 1.42 45 iP 07 54.80 -0.1
iS 08 11.50
PCH 1.45 76 iPc 07 55.00 -0.2
iS 08 13.90
PEL 1.52 57 iPd 07 57.20 1.0
iS 08 16.00
FCH 1.73 68 iP 08 00.00 0.6
iS 08 21.70
JACH 1.87 46 eP 08 01.50 0.1
S.D. = 0.7 on 10 of 10 obs.

% SEP 14, 1989 03h 31m 04.76± 3.59s
0.202 S ± 9.1km 78.870 W ±25.3km
DEPTH = 10.0km (geophysicist)
ECUADOR (107)

GGP 0.28 84 iPd 31 10.90 0.1
S 31 15.40
QUR 0.34 85 iP+ 31 11.80 -0.2
eS 31 18.80

RECU	0.53	145	iP+	31	15.60	0.0
			eS	31	29.50	
COTA	0.75	45	P	31	19.80	-0.1
			eS	31	32.00	
CAYA	0.93	73	iP+	31	23.00	0.1

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

& SEP 14, 1989 03h 58m 33.91s
63.281 N 149.702 W
DEPTH = 100.9km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.31	174	eP	58	48 40	-0.5
			eS	58	58.72	
RND	0.40	71	iP	58	49.14	-0.3
KTH	0.61	297	iP	58	50.84	-0.1
			eS	59	02.75	
SKT	1.55	214	iP	59	00.33	-1.0
GHO	1.56	166	iP	59	01.29	-0.1
			eS	59	21.93	
CCB	1.61	31	eP	59	01.18	-0.7
HDA	1.66	46	eP	59	02.02	-0.6
PME	1.69	169	eP	59	02.77	-0.2
			eS	59	25.67	
PLRM	1.72	171	eP	59	02.99	-0.3
DDM	1.79	72	eP	59	04.66	0.3
SUA	1.89	195	eP	59	06.35	0.7
DMW	1.93	65	eP	59	05.50	-0.6
PAX	1.95	97	eP	59	06.44	0.0
KNK	1.96	162	eP	59	06.14	-0.4
PMS	2.05	178	eP	59	07.54	-0.1
NCG	2.20	212	eP	59	09.03	-0.8
KLU	2.51	134	eP	59	13.80	-0.1

17 obs. associated

SEP 14, 1989 04h 31m 41.96± 0.34s
13.688 N ± 6.2km 124.588 E ± 7.0km
DEPTH = 33.0km (normal)
4.9mb (9 obs.) 4.3Msz (1 obs.)
LUZON, PHILIPPINE ISLANDS (249)

SSE	17.61	350	eP	35	53.20	6.8X
GUMO	19.71	88	eP	36	12.60	0.9
	0.9s	75.02nm			5.0mb	
PJG	19.71	88	eP	36	12.80	1.1
GUA	19.75	88	eP	36	12.50	0.3
	0.8s	89.55nm			5.1mb	
LOE	22.33	282	eP	36	38.00	-0.4
TIA	23.41	345	eP	36	50.60	1.7
TRT	24.34	210	ePc	36	59.70	1.6
XAN	24.75	328	P	37	02.40	0.4
CHG	25.13	285	eP	37	06.00	0.3
CD2	25.71	315	eP	37	12.10	1.0
TIY	26.26	338	eP	37	13.80	-2.3
Z	22s	1.04um			4.3Msz	
N	18s	0.80um				
BJI	27.27	346	eP	37	25.00	-0.2
SNY	28.05	358	eP	37	32.00	-0.2
HHC	29.36	340	eP	37	45.00	0.8
GTA	33.66	324	eP	38	22.20	0.2
WRA	34.77	164	Pd	38	35.20	3.6X
	0.5s	1.20nm			4.1mb	
ASPA	38.23	166	iPc	38	59.00	-1.8
	0.5s	28.00nm			5.4mb	
		iPcP		42	39.30	
		eS		44	49.00	
WARB	39.68	177	eP	39	11.60	-1.2
GBA	45.76	276	Pc	40	02.90	0.4
	0.7s	5.80nm			4.6mb	
CMS	49.33	156	eP	40	30.00	-0.1
ADE	50.21	165	eP	40	36.50	-0.3
	0.5s	19.72nm			5.4mb	
BWA	52.94	155	eP	40	58.10	0.6
CAN	53.95	155	eP	41	05.50	0.6
MHI	62.01	304	eP	42	02.00	0.2
TTA	73.09	28	eP	43	09.50	-1.2
FBA	76.71	26	eP	43	30.00	-1.3
SOD	80.52	337	eP	44	03.00	11.0X
INK	81.73	22	eP	43	58.00	-0.3
SUF	81.78	333	eP	43	58.00	-0.6
	0.4s	3.30nm			4.7mb	
MBC	82.75	13	eP	44	04.00	0.5
	0.8s	7.00nm			4.8mb	
HFS	88.28	332	eP	44	30.40	-0.8
	0.4s	2.30nm			4.8mb	

S.D. = 1.0 on 28 of 31 obs.

SEP 14, 1989 04h 42m 39.85± 0.22s
26.141 S ± 3.9km 70.746 W ± 6.0km
DEPTH = 33.0km (normal)
5.3mb (21 obs.) 5.2Msz (4 obs.)
NEAR COAST OF NORTHERN CHILE (122)
Ms 5.0 (BRK). Felt (IV) at Copiapo.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 18C
Centroid Location:
Origin Time 04:42:40.9 0.5
Lat 26.90S 0.10 Lon 71.44W 0.07
Dep 15.0 FIX Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.58 0.06 Mtt= 0.04 0.06
Mff= 0.54 0.07 Mrt= 0.32 0.17
Mrf= 2.06 0.18 Mtf= 0.60 0.08
Principal Axes:

T	Val= 2.31	Plg=35	Azm=290
N	-0.16	12	191
P	-2.16	52	85

Best Double Couple:Mo=2.2*10**17
NP1:Strike= 65 Dip=15 Slip= -35
NP2: 190 81 -102

ANT	2.44	7	iPc+	43	16.50	-1.8
			iS	43	56.40	
SLA	4.95	75	ePd	43	58.50	4.4X
CYA	4.97	119	ePd	43	56.00	1.8
ZON	5.68	162	e(P)	44	04.00	-0.2
CFA	5.87	159	iPc	44	07.00	0.1
JACH	6.52	179	eP	44	14.60	-1.5
ROCH	6.81	182	eP	44	16.00	-4.3X
PEL	6.98	180	eP	44	18.00	-4.4X
FCH	7.17	177	eP	44	24.50	-0.9
			iS	45	58.20	
SAN	7.29	179	eP	44	22.50	-4.2X
			iS	45	49.00	
LCCH	7.34	185	ePd	44	23.50	-4.0X
PCH	7.46	179	eP	44	27.00	-2.2
TCA	7.48	135	eP	44	28.70	-0.8
TACH	7.49	181	eP	44	25.00	-4.5X
MRA	7.64	146	ePc	44	31.20	-0.4
CHCH	7.77	179	eP	44	32.00	-1.5
LNV	7.81	184	iP	44	27.50	-6.5X
CNCB	9.64	16	Pd	44	59.10	-0.7
ARE	9.66	356	ePc	44	54.00	-5.9X
			iS	46	41.50	
CCH	9.71	27	P	45	01.20	0.6
LPB	9.87	15	P	45	03.00	0.0
	1.0s	240.00nm			6.4mb X	
			LR	47	54.00	
ZOBO	10.12	14	P	45	05.10	-1.5
Z	20s	7.01um				
			LR	47	20.00	
HUA	14.68	342	eP	46	09.80	2.4
			eS	48	15.90	
ITB1	14.86	88	e(P)	46	08.10	-1.2
ITB7	14.98	90	e(P)	46	16.50	5.5X
ITB	15.00	88	e(P)	46	07.00	-4.2X
VAO	21.84	87	eP	47	31.00	-0.5
			i	47	32.80	
			ipP	47	39.90	32kmX
			i	47	43.00	
			e	47	52.70	
BAO	23.65	68	iPd	47	49.40	0.0
BMA	24.44	88	eP	47	57.70	0.8
			epP	48	04.50	24kmX
			esP	48	12.80	
PSO	27.91	346	eP	48	31.00	1.5
BOG	30.75	354	eP	48	52.00	-2.8
			eS	54	02.00	
FUO	31.56	354	eP	49	07.00	5.1X
SDV	34.82	0	eP	49	37.00	7.0X
CEOS	35.04	4	eP	49	41.00	9.2X
ITR	35.20	66	eP	49	31.50	-1.7
			i	49	34.10	
			i	49	38.40	
TOV	35.72	2	eP	49	27.10	-10.5X
UPA	35.94	345	eP	49	40.40	1.1
OLLA	36.15	7	iPd	49	40.50	-0.7
CAR	36.62	6	eP	49	46.00	0.8
AIA	39.33	176	eP	50	09.50	2.2
BIM	41.49	14	eP	50	23.98	-1.6
MVM	41.57	14	iPc	50	24.50	-1.7
FDF	41.69	14	eP	50	24.71	-2.5
LPS	44.00	334	eP	50	47.40	1.2
			eS	57	21.00	
PPM	52.47	326	(P)	51	54.00	1.5
SNA	58.38	158	iPd	52	32.80	-1.2
	1.0s	177.00nm			6.1mb	
HBF	59.46	351	P	52	41.20	-0.6
SGS	59.73	351	P	52	42.50	-1.1
PRM	60.90	349	P	52	50.00	-1.6
JSC	60.91	350	P	52	50.00	-1.7
LHS	61.04	351	P	52	51.20	-1.3
TKL	62.69	348	P	53	01.60	-2.0
GBTN	62.78	348	P	53	02.30	-1.9
PWLA	62.96	344	P	53	02.40	-3.0X
RSCP	62.99	346	P	53	04.00	-1.7
	1.0s	159.98nm			6.1mb	
SPA	64.01	180	e(P)	53	11.90	-0.4
	1.0s	54.00nm			5.6mb	
			e	53	33.80	
UYO	64.06	338	iPd	53	11.40	-1.3
NA2	64.26	354	P	53	13.50	-0.4
MEO	66.08	335	iPd	53	24.00	-1.8
TUL	66.09	338	eP	53	24.70	-1.1
	0.8s	41.00nm			5.6mb	
Z	22s	1.03um			5.0Msz	
			e	53	29.40	
			e(S)	02	09.00	
			LR	14	29.00	
FVM	66.41	343	P	53	26.00	-1.8
	1.0s	70.00nm			5.7mb	
DHN	68.96	354	P	53	43.20	-0.5
ALO	69.53	329	iP	53	47.30	-0.3
	1.5s	50.00nm			5.4mb	
Z	19s	1.75um			5.3Msz	
			e	02	06.00	
HBVT	70.19	358	P	53	51.30	0.2
RSNY	70.43	357	P	53	52.40	-0.2
	0.7s	27.68nm			5.4mb	
PTN	70.47	357	P	53	52.90	0.1
SBA	70.98	191	eP	53	57.20	1.6
LIC	71.32	73	P	53	58.50	-0.1
	0.7s	15.50nm			5.2mb	
Z	20s	2.00um			5.4Msz	
			S	03	18.00	
TIC	71.54	73	P	54	00.00	0.0
	0.8s	14.50nm			5.1mb	
KIC	71.63	73	P	54	00.20	-0.3
	0.7s	26.00nm			5.4mb	
CBM	72.77	2	P	54	07.50	1.0
GLD	73.01	333	P	54	09.20	0.8
GOL	73.03	333	P	54	08.60	0.0
	1.0s	27.50nm			5.2mb	
BAR	73.03	321	eP	54	10.00	1.5
PLM	73.64	321	eP	54	12.00	-0.2
TPC	73.74	322	eP	54	13.00	0.4
PEC	74.20	321	P	54	16.10	0.9
RVR	74.39	321	eP	54	17.00	0.7
MWC	74.95	321	eP	54	23.00	3.2X
GSC	75.04	322	eP	54	21.00	0.9
MSU	75.11	328	P	54	21.30	0.7
SBB	75.16	321	eP	54	21.00	0.2
CLC	75.86	322	eP	54	25.00	0.3
DAU	76.18	329	P	54	27.30	0.5
ISA	76.23	322	eP	54	27.00	0.1
SYP	76.27	320	eP	54	20.00	-7.2X
RSSD	76.28	336	P	54	26.80	-0.4
DUG	76.74	328	P	54	29.60	-0.1
TNP	77.33	324	P	54	34.00	0.9
	1.0s	16.67nm			5.0mb	
SUR	77.71	120	eP	54	36.00	0.5
PRI	77.81	321	ePc	54	37.00	1.3
FRI	77.88	322	e(P)	54	36.80	1.0
			e	00	28.30	
LLA	78.30	321	ePc	54	39.30	1.0
PRS	78.35	320	eP	54	39.60	1.1
GCC	79.19	321	e(P)	54	43.40	0.3
MHC	79.21	321	e(P)	54	43.90	0.6
RSON	79.30	345	P	54	42.80	-0.6
	1.0s	82.70nm			5.7mb	
BKS	79.92	321	e(P)	54	48.00	1.0
Z	20s	0.60um			4.9Msz	
N	20s	0.40um				
E	20s	0.30um				
			eS	04	56.00	
			eSS	10	12.00	
			e	20	58.00	
			eLR	21	14.00	

14d 04h

BRK	79.93	321	e(P)	54	45.00	-2.0
MAW	80.38	164	eP	54	48.50	-0.5
	1.0s	105.00nm			5.8mb	
			e	59	28.80	
ORV	80.69	323	ePc	54	51.70	0.6
SCH	80.70	2	eP	54	52.00	1.3
LRM	81.02	332	ePc	54	53.50	0.5
MIN	81.31	323	e(P)	54	53.30	-1.2
WDC	81.98	323	ePc	54	56.50	-1.2
			e	00	32.30	
			e	01	35.50	
HVD	82.09	120	iPd	55	14.20	15.3X
FRS	82.32	119	iPc	54	57.80	-2.0
	0.9s	25.21nm			5.3mb	
FHC	82.92	322	eP	55	04.30	1.6
TIO	83.06	51	iP	55	06.00	2.2
			i	55	11.00	
SES	84.14	335	eP	55	09.00	0.3
AVE	84.35	49	eP	55	12.00	2.0
SEK	84.75	119	eP	55	13.00	0.5
	0.9s	12.60nm			5.1mb	
FFC	84.90	342	eP	55	12.50	0.2
	0.9s	13.00nm			5.1mb	
PRY	85.26	118	eP	55	12.00	-3.1X
KSR	85.27	116	iPc	55	16.60	1.4
	0.8s	12.50nm			5.2mb	
LON	85.97	328	P	55	18.00	0.1
IFR	86.03	50	iP	55	21.00	2.3
BMK	86.37	48	eP	55	22.00	2.0
BMW	86.47	327	P	55	20.80	0.5
PNT	86.81	330	eP	55	22.00	0.1
	0.7s	10.00nm			5.2mb	
NKM	86.95	48	iP	55	25.50	2.7
GMW	87.01	328	P	55	23.20	0.3
EDM	87.26	336	eP	55	23.00	-1.1
MCW	87.82	328	P	55	27.30	0.5
PGC	88.10	328	eP	55	29.00	1.0
BUL	89.28	112	iPd	55	35.90	1 3
	1.0s	15.50nm			5.3mb	
BNG	91.30	86	iPd	55	44.90	1.0
	0.9s	18.00nm			5.5mb	
			id	56	06.40	
KRI	91.65	110	eP	55	48.00	2.4
CAN	108.24	213	PKP	01	03.80	-2.7
WRA	128.12	210	PKPd	01	44.90	0.0
	0.6s	2.80nm				
QUE	142.64	74	ePKP	02	07.70	-4.2X
GUA	144.32	256	ePKP	02	13.10	-1.8
	0.8s	77.61nm				
GUMO	144.38	256	ePKP	02	13.30	-1.7
	0.7s	76.24nm				
PJG	144.38	256	ePKP	02	13.40	-1.6
KOD	146.04	112	ePKP	02	20.20	1.9
TRT	146.20	186	iPKPd	02	19.80	1.7
POO	146.47	96	ePKP	02	23.00	4.5X
GBA	147.68	107	PKPc	02	21.40	1.0
	0.7s	20.50nm				
KSH	149.22	56	ePKP	02	28.00	5.6X
HYB	150.26	101	iPKPc	02	30.30	5.9X
	0.8s	42.90nm				
NDI	151.49	78	iPKPd	02	32.60	6.6X
GTA	164.58	29	ePKP	02	42.60	1.3
	Z 22s	0.90um				
BJI	164.98	339	ePKP	02	48.00	6.6X
	Z 12s	0.48um				
CHG	168.00	125	ePKP	02	45.00	0.6
	S.D. = 1.3	on 119 of 144 obs.				

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* SEP 14, 1989 04h 48m 20.04± 0.48s
28.879 S ± 8.8km 178.452 W ±10.3km
DEPTH = 271.8km (7 depth phases)
4.9mb (7 obs.)
KERMADEC ISLANDS REGION (177)

RAO	0.60	129	iP	48	59.60	3.3
			iS	49	26.30	
PGZ	12.48	199	eP	51	11.30	1.2
MNG	12.72	201	eP	51	11.40	-1.7
WDW	13.47	202	eP	51	20.60	-1.5
MOW	13.53	201	eP	51	23.40	0.5
MRW	13.53	203	eP	51	20.90	-2.0
			eS	53	47.80	
SNZO	13.60	202	eP	51	28.00	4.3X
			S	53	52.00	
DZM	15.22	293	iPd	51	44.20	0.6
BRS	25.39	266	iPd	53	27.00	2 3
CAN	28.23	248	eP	53	53.90	3.7X
BWA	28.66	250	eP	53	55.30	1.3
CTA	33.19	277	iPd	54	34.00	0.5
	0.6s	38.00nm			5.2mb	
ASPA	42.82	266	iPc	55	53.70	0.4
	1.3s	59.00nm			4.7mb	
WRA	43.66	271	Pc	55	57.80	-2.3
	0.7s	45.50nm			4.9mb	
FORR	46.02	254	iPd	56	19.00	0.5
	0.5s	60.00nm			5.2mb	
WARB	48.40	259	eP	56	36.70	-0.3
	0.4s	8.00nm			4.4mb	
NANU	59.15	260	iPc	57	54.80	0.0
	0.8s	66.00nm			5.3mb	
TRT	67.87	273	iPd	58	51.80	0.2
MAT	76.77	325	eP	59	41.00	-2.1
	0.8s	11.19nm			4.6mb	
OZH	80.76	305	eP	00	03.70	-1.0
PLM	85.05	48	eP	00	27.00	0.4
			e	01	33.00	277km
SBB	85.28	46	eP	00	27.00	-0.5
			e	01	33.00	276km
ISA	85.50	45	eP	00	29.00	0.4
			e	01	33.00	267km
TPC	86.05	47	eP	00	31.00	-0.3
			e	01	36.00	271km
CLC	86.15	45	eP	00	31.00	-0.7
			e	01	35.00	267km
TNP	87.83	44	eP	00	38.50	-1.4
			epP	01	43.50	270km
TIA	88.65	313	eP	00	43.80	0.2
CN2	88.69	323	Pc	00	42.80	-0.8
			epP	01	49.00	275km
GTA	101.89	308	ePdiff	01	42.60	-1.5
BUL	124.70	211	iPKPc	06	51.40	1.9
UPP	147.15	345	iPKP	07	29.30	0.2
NB2	147.19	351	PKP	07	30.10	0.8
	0.6s	9.20nm				
HRI	150.47	287	ePKP	07	42.00	6.7X
DSI	150.71	284	ePKP	07	42.00	6.5X
BNG	150.82	217	iPKPd	07	37.30	1.0
	0.3s	38.00nm				
			ic	07	43.50	
MBH	150.98	280	iPKP	07	47.00	11.0X
	S.D. = 1.4	on 31 of 36 obs.				

SEP 14, 1989 05h 14m 30.75± 0.49s
32.123 S ± 8.8km 69.336 W ± 7.7km
DEPTH = 121.3 ± 11.9 km
MENDOZA PROVINCE, ARGENTINA (139)

ZON	0.80	44	iPd	14	51.00	-0.4
JACH	1.20	242	iPc	14	55.00	-0.4
FCH	1.45	214	iPd	14	59.50	1.1
			iS	15	21.00	
PEL	1.53	228	iPc	14	59.10	0.1
ROCH	1.65	239	iPd	14	59.50	-1.1
SAN	1.73	220	iPd	15	01.80	0.3
			iS	15	24.60	
PCH	1.79	213	iPd	15	03.00	0.8
			iS	15	26.50	
TACH	2.04	221	iPd	15	05.20	0.0
			iS	15	30.50	
CHCH	2.12	211	iPd	15	07.40	1.1
			iS	15	34.50	
LCCH	2.31	234	iPd	15	08.00	-0.7
			iS	15	34.60	
LNV	2.53	223	iPc	15	10.00	-1.4
			iS	15	40.00	
MRA	3.09	96	iPc	15	20.00	1.1
TCA	4.12	80	iPc	15	33.00	0.1
CYA	4.78	41	eP	15	40.10	-1.7
CNCB	15.30	5	P	18	02.70	0.8
LPB	15.56	4	P	18	06.50	1.4
ZOBO	15.82	4	P	18	09.00	0.5
VAO	21.78	71	eP	19	12.30	-1.5
WRA	123.48	207	PKPc	33	16.30	0.7X
	0.4s	0.70nm				
	S.D. = 1.1	on 18 of 19 obs.				

SEP 14, 1989 05h 32m 28.01± 0.39s
42.036 N ± 4.2km 20.797 E ± 3.4km
DEPTH = 5.0km (geophysicist)
YUGOSLAVIA (383)
ML 3.4 (SKO). Felt (IV) at Tetovo.

KKS	0.29	278	iPgc	32	34.40	0.5
PHP	0.44	218	iPgc	32	35.20	-1.6
SKO	0.48	97	iPgc	32	36.00	-1.7
	0.2s	2357.00nm				
			Lg	32	44.00	
BCI	0.64	302	iPgc	32	39.70	-1.0
PUK	0.67	271	iPgd	32	41.70	0.2
PVY	0.83	313	ePg	32	44.00	-0.6
			eSg	32	58.00	
LACI	0.91	244	ePg	32	45.30	-0.5
OHR	0.92	180	iPgd	32	44.50	-1.7
			iSg	32	58.00	
TIR	0.98	226	ePn	32	48.20	1.1
IVA	1.07	322	ePg	32	48.50	-0.1
			eSg	33	06.50	
ULC	1.16	267	ePg	32	50.10	0.0
			eSg	33	09.00	
TTG	1.21	290	ePg	32	49.60	-1.3
			eSg	33	10.40	
KBN	1.41	179	ePn	32	54.50	0.2
BERA	1.48	206	ePn	32	57.70	2.5X
BDV	1.49	280	ePg	32	55.30	-0.1
			eSg	33	20.50	
VAY	1.51	118	iPn	32	55.40	-0.3
NKY	1.54	301	ePn	32	56.00	-0.3
			eSn	33	21.50	
KKB	1.71	95	eP	32	59.00	0.3
HCY	1.76	284	ePn	33	00.00	0.7
			eSn	33	28.00	
VTS	1.87	72	iPgd	33	01.00	-0.1
KZN	1.88	157	ePn	33	02.50	1.4
			eSn	33	32.00	
BRY	1.88	298	ePn	33	03.00	1.8
			eSn	33	31.40	
LSK	1.89	185	iPnd	33	03.00	1.7
MMB	2.24	101	eP	33	09.00	2.7X
PLG	2.60	129	ePn	33	12.00	0.6
HVAR	3.41	291	iPn	33	51.70	28.8X
			i(Sn)	34	04.00	
BZS	3.63	9	ePc	33	27.00	1.0
VBY	5.30	313	e(Pn)	33	55.40	5.6X
			e(Sn)	35	14.90	
VOY	6.38	311	ePn	34	05.00	-0.1
			eSn	35	21.40	
	S.D. = 1.0	on 25 of 29 obs.				

? SEP 14, 1989 06h 31m 29.77± 4.91s
16.611 N ±50.5km 96.413 W ±31.0km
DEPTH = 63.0 ± 12.5 km
3.8mb (1 obs.)
OAXACA, MEXICO (60)

OXX	0.55	328	iPd	31	43.00	0.1
			(S)	32	01.50	
EVV	2.10	29	(P)	32	24.50	21.3X
IISM	2.54	339	iPd	32	16.00	6.6X
			eS	33	01.50	
IIT	3.00	323	eP	32	25.00	8.8X
			iS	33	16.50	
LVVM	3.11	359	(P)	32	32.00	14.5X
			(S)	33	21.00	
PPM	3.23	320	eP	32	27.00	7.4X
			eS	33	18.50	
ACX	3.31	275	(P)	32	20.30	0.0
			iS	33	06.50	
III	3.40	302	eP	32	25.50	3.7X
			eS	33	21.00	
SCX	3.62	87	(P)	32	31.00	6.3X
			(S)	32	52.00	
UNM	3.78	316	(P)	32	31.00	3.9X
			iS	33	32.50	
CRX	4.17	312	(P)	32	54.00	21.3X
TUL	19.23	2	eP	36	00.80	9.0X
	1.0s	6.00nm			3.8mb	
OLY	19.33	12	eP	35	53.00	0.2
PWLA	19.76	21	eP	35	57.00	-0.4
ALQ	20.35	336	eP	36	03.00	-0.7
			e	36	10.00	
RSCP	21.23	25	eP	36	18.00	5.5X
GOL	24.29	343	eP	36	43.50	0.7
			e	36	49.50	
LON	36.69	330	eP	38	32.50	0.1
			e	38	38.00	
PNT	37.67	335	eP	38	47.00	6.4X
INK	56.77	344	eP	41	14.00	4.7X
	S.D. = 0.6	on 7 of 20 obs.				

? SEP 14, 1989 08h 06m 38.80± 4.56s

10.564 N ±29.0km 60.299 W ±42.8km
DEPTH = 70.4 ± 21.4 km
TRINIDAD (98)
MD 4.0 (TRN).

BOT	0.73	326	eP	06 54.38	0.2
			eS	07 07.83	
TBH	0.76	264	eP	06 54.60	0.0
			eS	07 08.11	
PIG	0.80	318	eP	06 54.94	-0.1
			eS	07 08.58	
TRN	1.09	274	eP	06 58.35	-0.3
			eS	07 14.22	
TPP	1.16	258	eP	06 59.76	0.1
			eS	07 16.01	
TCE	1.44	275	eP	07 03.47	0.1
			eS	07 21.23	
BIM	4.00	349	eP	07 39.49	0.4
			S	08 24.60	
MVM	4.01	352	eP	07 39.00	-0.2
			S	08 23.80	
CRM	4.21	352	eP	07 41.50	-0.5
FDF	4.23	349	eP	07 42.38	0.1
			S	08 29.30	

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

• SEP 14, 1989 08h 30m 34.89± 0.76s
19.663 S ±10.0km 133.969 E ± 9.5km
DEPTH = 10.0km (geophysicist)
NORTHERN TERRITORY, AUSTRALIA (591)

WB5	0.43	120	iPd	30 43.90	0.2
ASPA	3.98	181	iPc	31 37.20	-0.2
	0.4s	202.00nm			
			eS	32 22.20	
OIS	5.37	100	eP	31 57.00	-0.1
			eS	32 57.50	
			e	33 26.00	
KNA	6.30	307	eP	32 10.50	0.3
	0.3s	5.00nm		4.9mb	X
			iS	33 21.50	
MTN	7.31	338	eP	32 24.00	-0.3
			eS	33 48.00	
			e	34 31.00	
WARB	9.36	225	eP	32 49.50	-3.4X
	0.2s	5.00nm		5.6mb	X
			eS	34 31.00	
FORR	12.34	204	eP	33 27.00	-6.4X

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

SEP 14, 1989 09h 23m 56.17± 1.45s
22.741 S ± 8.0km 179.287 E ± 7.9km
DEPTH = 541.0 ± 17.6 km
4.8mb (13 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	11.90	271	iPc	26 36.00	1.6
			i	28 57.00	
KRP	15.47	191	P	27 14.00	4.0X
PGZ	18.00	187	eP	27 33.80	-0.9
MNG	18.11	189	P	27 34.80	-0.9
	0.2s	6.00nm		4.9mb	
CAW	18.66	190	eP	27 40.20	-0.8
MRW	18.84	191	eP	27 42.00	-0.6
BLW	18.85	189	eP	27 42.10	-0.7
TCW	18.89	192	eP	27 43.50	0.3
MOW	18.93	189	eP	27 43.20	-0.4
MHZ	23.72	198	eP	28 26.40	-1.2
MSZ	23.78	200	P	28 29.80	1.9
			S	31 30.00	
COO	25.65	246	eP	28 46.00	1.2
RMQ	27.97	256	iPc	29 06.30	1.2
	0.9s	78.00nm		5.3mb	
CAN	29.18	238	eP	29 16.10	0.6
BWA	29.39	240	eP	29 15.90	-1.4
CTA	30.83	269	iPc	29 30.00	0.3
	0.7s	116.44nm		5.6mb	
OLP	32.02	256	iPc	29 40.20	0.5
TOO	32.55	235	eP	29 45.00	0.9
PMG	33.51	288	eP	29 52.00	-0.3
ASPA	41.59	259	iPc	30 58.10	-0.3
	0.8s	36.00nm		5.0mb	
			iScP	35 42.40	
			iS	36 31.60	
			eScS	39 59.00	
WRA	41.84	265	Pc	30 59.30	-1.0
	0.2s	4.10nm		4.6mb	
FORR	46.07	249	eP	31 32.70	-0.5
	0.4s	54.00nm		5.4mb	
WARB	47.78	255	iPc	31 45.20	-1.1
KNA	48.02	269	eP	31 47.00	-1.1
SBA	55.49	183	P	32 43.70	2.3
NANU	58.40	257	iPc	33 01.30	-0.8
	0.4s	24.00nm		4.9mb	
SPA	67.40	180	ePd	33 59.90	0.7
	1.0s	41.00nm		4.9mb	
MAT	70.57	326	(P)	34 17.00	-1.3
	0.8s	5.22nm		4.1mb	
MAW	78.60	200	eP	35 03.00	0.5
PLM	82.52	49	P	35 24.00	0.5
CN2	82.57	324	eP	35 23.50	0.3
TIA	82.96	314	eP	35 26.20	0.8
KVN	84.87	44	P	35 35.00	0.0
TNP	84.89	45	P	35 34.70	-0.5
	0.7s	3.44nm		4.1mb	
LON	87.20	36	P	35 45.70	-0.1
PMR	87.79	15	P	35 46.90	-1.2
	0.7s	6.40nm		4.5mb	
PNT	89.92	35	eP	35 59.00	0.7
DAU	90.05	46	P	35 59.90	0.4
ALQ	90.76	52	eP	36 04.00	1.3
	1.0s	2.50nm		4.2mb	
FBA	90.98	13	P	36 02.00	-0.8
	0.9s	6.25nm		4.6mb	
GOL	93.69	48	P	36 16.00	-0.2
SOD	132.20	346	ePKP	42 09.00	-0.2
SUF	136.11	343	iPKP	42 16.50	-0.2
	0.6s	3.50nm			
NUR	138.31	341	ePKP	42 21.00	0.2
NB2	140.84	351	PKP	42 18.60	-6.9X
	0.5s	1.10nm			
HFS	141.29	349	ePKP	42 19.30	-6.9X
	0.3s	3.10nm			
EKA	147.40	3	PKP	42 39.00	2.4X
	0.9s	11.20nm			
KRA	148.29	334	ePKP	42 41.90	3.8X
KSP	148.98	339	iPKPd	42 44.00	4.8X
CLL	149.56	343	iPKPd	42 45.10	5.1X
	1.1s	39.00nm			
BRG	149.68	341	iPKPd	42 43.60	3.4X
	0.7s	30.00nm			
PRU	150.28	340	PKP	42 46.50	5.3X
MOX	150.53	344	iPKP	42 47.50	5.9X
KHC	151.34	340	PKP	42 49.20	6.4X
BNG	153.96	229	ePKPc	42 48.30	0.8
	0.6s	9.00nm			
			ic	43 12.00	
KIC	163.26	166	PKP	42 57.60	-0.4
TIC	163.47	165	PKP	42 57.90	-0.3

S.D. = 0.9 on 46 of 57 obs.

• SEP 14, 1989 10h 10m 10.42± 0.91s
26.330 S ± 6.4km 27.208 E ±15.1km
DEPTH = 5.0km (geophysicist)
REPUBLIC OF SOUTH AFRICA (584)
MG 4.2 (BUL).

PRY	0.64	158	iPd	10 22.40	-0.9
			S	10 27.90	
SLR	1.13	59	eP	10 31.80	-0.4
			S	10 44.20	
SEK	2.02	170	iPd	10 47.50	1.8
			S	11 10.00	
FRS	3.79	206	iPc	11 10.00	-0.8
			S	11 53.00	
HVD	4.52	199	iPc	11 35.50	14.3X
			S	12 25.50	
BUL	6.29	12	iPnc	11 47.50	1.2
			iSn	12 56.90	
			iSg	13 29.50	
KRI	9.72	14	iPn	12 34.30	0.2
			iSn	14 20.00	
			iSg	15 17.50	
LSZ	11.04	5	iP	12 51.00	-1.2
			iSn	14 51.00	
			iSg	16 04.00	
PTZ	12.63	19	iPn	13 10.20	-3.5X
			iSn	15 24.00	
			iSg	16 42.00	
MZZ	15.19	6	iPn	13 42.00	-5.5X
			iSn	16 29.00	
			iSg	18 09.00	

S.D. = 1.4 on 7 of 10 obs.

SEP 14, 1989 11h 45m 36.08± 0.57s
40.766 N ± 4.7km 23.109 E ± 5.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.0 (ATH).

THE	0.17	219	iPgc	45 39.80	-0.2
			iSg	45 42.50	
KNT	0.43	338	iPgc	45 44.70	-0.1
			iSg	45 50.40	
PLG	0.47	147	ePb	45 45.20	-0.4
GRG	0.57	290	ePg	45 47.50	-0.2
			iSg	45 55.30	
LIT	0.82	216	ePg	45 51.80	-0.1
			eSg	46 03.80	
MMB	0.95	29	ePg	45 53.00	-1.1
			Sg	46 06.00	
KZN	1.12	246	ePb	45 57.70	0.6
NEO	1.46	177	ePb	46 02.50	0.0
RZN	1.52	52	iP	46 05.00	1.5
VTS	1.83	2	iPg	46 11.00	3.1X
PGB	1.95	24	iPg	46 12.00	2.4X
KDZ	1.95	62	iP	46 12.00	2.4X

S.D. = 0.8 on 9 of 12 obs.

& SEP 14, 1989 11h 56m 14.30s
40.412 N 125.160 W
DEPTH = 2.0km
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 4.0 (BRK).

FHC	0.98	66	iPc	56 32.70	-0.9
			i	56 43.30	
			iS	56 51.50	
WDC	2.01	84	iPc	56 47.20	-2.4
			iS	57 19.30	
LTCM	2.33	94	eP	56 52.00	-2.3
NWRM	2.63	137	eP	56 55.30	-3.2
LBFM	2.65	68	eP	56 57.20	-1.8
MIN	2.72	90	iPd	56 57.10	-2.8
			iS	57 30.30	
ORV	2.94	106	iPd	56 59.70	-3.2
			eS	57 33.30	
ZSP	3.34	137	iPc	57 05.60	-3.0
BRK	3.39	137	ePc	57 06.00	-3.4
BKS	3.40	137	eP	57 05.82	-3.7
			e	57 19.95	
			i	57 28.55	
			i	57 31.25	
			i	57 37.65	
			e	57 58.85	
			e	58 09.65	
			e(S)	58 28.70	
PCC	3.63	142	iPd	57 09.10	-3.5
MHC	4.12	137	ePc	57 16.30	-3.4
ARN	4.17	136	eP	57 16.90	-3.5
GCC	4.19	143	eP	57 16.40	-4.2
SAO	4.66	140	eP	57 22.50	-4.9
LLA	5.03	138	ePc	57 28.30	-4.3
PRS	5.05	143	eP	57 28.10	-4.7
FRI	5.46	127	iPc	57 37.00	-1.7
PRI	5.54	139	e(P)	57 36.70	-3.2
KVN	5.61	102	eP	57 37.30	-3.7
BCH	6.58	141	eP	57 49.50	-5.2
TNP	6.59	108	eP	57 52.00	-2.8
LON	6.79	20	eP	57 58.00	0.6
DPW	8.97	32	e(P)	58 32.80	4.9
PLM	9.68	134	eP	58 35.00	-2.9
MSU	10.22	97	eP	58 43.30	-2.0
SES	14.05	40	eP	59 47.00	10.4
GOL	15.17	86	e(P)	59 50.00	-1.6
ALQ	15.77	104	eP	59 57.00	-2.4
RSSD	16.06	70	e(P)	00 00.00	-3.1

30 obs. associated

? SEP 14, 1989 13h 00m 38.83± 1.13s
42.634 N ±15.0km 23.994 E ±36.0km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)

SRS	1.54	191	ePb	01 06.00	-0.4
			eSb	01 27.90	
KNT	1.68	209	ePb	01 08.60	0.2
			eSb	01 31.60	
SKO	2.01	252	ePn	00 52.00	-21.1X
OUR	2.30	180	ePn	01 17.60	0.3
MLR	3.18	26	eP	01 30.00	0.0

14d 13h

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

% SEP 14, 1989 13h 07m 58.96± 1.06s
44.405 N ± 9.2km 7.424 E ± 7.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

STV	0.18	204	P	08	03.03	0.0
			S	08	05.70	
ENR	0.18	181	P	08	02.96	-0.1
			S	08	05.70	
PZZ	0.25	294	P	08	04.37	0.0
			S	08	08.47	
ROB	0.34	109	P	08	05.98	0.0
			S	08	11.24	
IMI	0.60	146	P	08	11.13	0.0

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

SEP 14, 1989 13h 10m 52.08± 0.72s
14.503 N ± 9.8km 92.615 W ± 6.4km
DEPTH = 69.6 ± 5.6 km
4.4mb (5 obs.)
NEAR COAST OF CHIAPAS, MEXICO (69)
Felt in the Mexico-Guatemala border region.

OC2	0.42	82	iPc	11	02.50	-1.7
TPX	0.53	41	iP	11	04.18	-1.1
			eS	11	16.88	
SBG	0.83	41	iPc	11	07.50	-1.5
JAT	0.97	101	iPd	11	10.50	0.1
SOG	1.03	75	iPc	11	11.00	-0.6
SOG2	1.03	78	ePc	11	11.30	-0.1
			S	11	32.20	
LHG	1.39	92	iPd	11	16.00	0.0
ITG	1.72	87	iPc	11	20.30	-0.4
FUG	1.72	92	iPc	11	21.00	0.4
PSG2	1.83	107	ePd	11	22.00	0.1
MMG	1.87	89	iPd	11	23.00	0.2
TER	1.88	96	ePd	11	22.40	-0.3
BVA	1.92	85	iPd	11	23.00	-0.5
GCG	2.02	87	ePd	11	26.00	1.3
REC	2.03	92	iPc	11	25.00	0.1
RDG	2.13	76	ePd	11	28.00	1.6
SCX	2.22	360	iP	11	29.88	2.6
			eS	11	55.96	
SLP	2.27	84	iPd	11	29.50	1.3
			S	11	42.00	
MYT	2.51	100	ePd	11	32.00	0.4
YUP	2.74	96	ePc	11	35.50	0.7
OXX	4.71	303	eP	12	02.50	0.0
			eS	13	03.15	
EVV	4.73	327	(P)	12	27.50	25.0X
LVVM	6.37	325	eP	12	22.08	-3.3X
			eS	13	31.98	
IISM	6.38	315	eP	12	28.68	3.1X
			eS	13	37.85	
PPM	7.33	309	eP	12	39.70	0.5
			(S)	14	03.00	
UYO	19.65	355	iPd	15	16.30	-1.7
MEO	20.90	346	iPc	15	30.30	-0.6
PRM	21.59	24	P	15	37.60	-0.2
RSCP	21.94	15	P	15	42.40	1.1
JSC	22.21	26	eP	15	44.00	0.1
GBTN	22.38	18	eP	15	45.20	-0.4
TKL	22.51	19	eP	15	46.50	-0.4
ALQ	23.87	331	P	16	01.90	1.6
	0.7s		5.08nm			4.1mb
8LA	25.09	23	P	16	10.00	-1.8
	0.6s		6.36nm			4.3mb
GOL	27.49	338	P	16	34.10	0.0
BAR	28.41	314	eP	16	43.00	0.8
TPC	28.81	317	eP	16	43.00	-2.8
PLM	28.92	315	eP	16	48.00	1.1
DAU	30.52	331	P	17	02.00	0.7
TNP	32.03	322	P	17	15.00	0.6
	0.5s		1.08nm			3.9mb
KVN	33.18	322	P	17	25.00	0.6
LRM	35.41	336	ePc	17	44.40	0.9
DPW	39.45	333	P	18	15.90	-1.2
LON	40.35	329	P	18	24.80	0.3
PNT	41.16	333	eP	18	32.00	0.9
	0.7s		12.00nm			4.8mb
PDCR	59.40	114	eP	20	49.20	-0.8
			e	21	02.80	
INK	59.79	344	eP	20	51.00	-1.0
FBA	62.55	337	P	21	10.00	-0.6
MBC	63.34	353	eP	21	15.50	-0.2
	0.6s		7.00nm			4.9mb
HYB	147.11	16	ePKP	30	30.00	2.7X
GBA	150.39	20	PKP	30	38.90	6.5X
			e	30	53.40	

S.D. = 1.1 on 46 of 51 obs.

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* SEP 14, 1989 13h 38m 04.51± 0.86s
38.730 N ± 9.1km 21.475 E ± 9.9km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.4 (ATH).

VLS	0.89	232	ePn	38	20.00	-1.6
NEO	1.48	67	ePn	38	31.00	-0.2
ITM	1.59	167	ePb	38	34.00	1.3
KZN	1.59	8	ePn	38	32.70	-0.1
KEK	1.63	308	ePb	38	34.70	1.4
PLG	2.24	42	ePn	38	41.50	-0.7
OHR	2.43	348	ePn	38	50.80	5.8X
SKO	3.24	360	ePn	38	46.00	-10.4X

S.D. = 1.5 on 6 of 8 obs.

? SEP 14, 1989 14h 13m 29.63± 1.31s
9.367 S ±19.2km 110.192 E ±14.9km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)
SOUTH OF JAVA (282)

TRT	2.93	56	ePd	14	16.50	1.6
			iS	14	48.40	
KHKI	5.44	80	eP	14	50.50	-0.1
			eS	15	47.50	
			e	18	16.00	
NANU	14.08	159	eP	16	46.00	-3.0X
	0.3s		2.00nm			4.3mb
			eS	19	12.00	
MBL	14.96	143	eP	16	57.00	-3.4X
			eS	19	29.00	
MTN	20.83	101	iPd	18	10.40	-0.7
WRA	25.58	117	Pd	18	57.90	0.3
	0.7s		21.40nm			4.9mb
ASPA	26.75	125	eP	19	08.80	0.4
	0.6s		8.00nm			4.5mb
			eS	24	11.90	
GBA	39.72	305	Pd	21	02.00	1.0
	0.4s		1.40nm			4.1mb
MAT	52.72	28	(P)	22	41.00	-2.5

S.D. = 1.6 on 7 of 9 obs.

& SEP 14, 1989 15h 00m 00.10s
37.236 N 116.163 W
DEPTH = 0.0km
4.2mb (4 obs.)
SOUTHERN NEVADA (41)
<DOE>. ML 4.0 (BRK). Tunnel Shot. 37° 14' 09.20" N., 116° 09' 46.44" W., Surface Elev. 1943 m., Depth of Burial 300 m., Shot Time 150000.098, "DISKO ELM," Nevada Test Site (Dept. of Energy).

GLR	0.12	107	iPc	00	02.80	0.3
BGB	0.20	195	iPc	00	04.30	0.1
BLT	0.25	7	iPc	00	05.00	-0.1
GMR	0.33	73	iPc	00	06.90	0.3
CDH1	0.39	198	iPc	00	07.40	-0.6
GVN	0.97	256	iPc	00	18.80	-0.7
TNP	1.19	316	iPc	00	23.10	-0.3
DLM	1.19	72	iPc	00	22.70	-0.7
CLC	1.83	220	ePc	00	32.20	-0.9
GSC	2.00	195	eP	00	35.00	-0.6
KVN	2.37	320	iPc	00	40.20	-0.9
ISA	2.44	231	ePc	00	41.30	-0.6
FRI	2.84	266	iPc	00	47.10	-0.5
			iPb	00	52.20	
			e(S)	01	20.80	
PKEM	3.38	251	eP	00	55.50	0.2
MSU	3.40	67	eP	00	54.80	-1.0
PEC	3.43	194	eP	00	55.70	-0.4
ABL	3.44	227	eP	00	55.70	-0.6
BCH	3.77	238	eP	01	00.40	-0.6
PRI	3.78	255	ePc	01	01.20	0.1
			ePb	01	08.10	
LLA	3.88	262	ePc	01	02.90	0.5
PLM	3.92	189	eP	01	02.10	-0.9
DUG	3.95	41	eP	01	03.00	-0.5
SAO	4.25	265	ePc	01	05.70	-1.9
PRS	4.28	259	ePc	01	06.60	-1.4
ARN	4.28	273	eP	01	07.60	-0.5
GLA	4.32	165	eP	01	07.00	-1.6
MHC	4.37	273	ePd	01	08.70	-0.7
			e	02	23.30	
ORV	4.79	301	ePc	01	14.40	-0.9
BKS	4.87	279	ePc	01	14.05	-2.3
BRK	4.89	279	eP	01	15.90	-0.7
DAU	4.97	49	eP	01	18.00	-0.2
WDC	5.99	306	eP	01	25.60	-6.6
ALQ	8.18	103	eP	02	02.00	-1.2
LRM	9.02	17	eP	02	17.80	3.0
LON	10.39	338	eP	02	32.50	-1.0
PNT	12.33	349	eP	03	18.00	18.1
ACO	13.62	87	e(P)	03	20.40	3.3
	0.3s		0.80nm			4.2mb
			e	03	33.00	
SIO	16.04	89	e(P)	03	52.00	3.3
EDM	16.11	6	eP	03	50.00	0.6
TUL	16.42	88	ePc	03	53.50	0.0
	0.9s		4.30nm			3.6mb
UYO	17.89	93	eP	04	11.70	-0.3
FFC	20.01	25	eP	04	35.00	-2.1
	0.6s		9.00nm			4.3mb
RSON	21.01	42	eP	04	45.00	-2.5
	1.1s		39.44nm			4.7mb
	43 obs. associated					

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* SEP 14, 1989 15h 25m 50.30± 1.28s
35.399 N ±13.5km 23.482 E ±11.2km
DEPTH = 76.7 ± 18.6 km
4.6mb (1 obs.)
CRETE (370)

VAM	0.59	89	iPbd	26	03.20	-1.5
NPS	1.75	94	ePb	26	20.60	1.4
ITM	2.18	325	ePb	26	27.50	2.4
APE	2.35	44	ePn	26	26.50	-1.0
KAP	3.02	86	ePn	26	37.50	0.8
NEO	3.91	357	ePn	26	48.50	-0.6
YER	4.25	65	eP	26	55.00	1.0
KSL	5.01	80	ePn	27	03.50	-1.1
KZN	5.08	345	ePn	27	04.00	-1.7
ELL	5.38	74	eP	27	09.50	-0.4
KHL	5.65	57	eP	27	15.00	1.3
OHR	6.08	340	ePn	27	40.20	20.6X
SKO	6.75	347	ePn	27	25.00	-3.8X
DSI	10.64	108	eP	28	17.00	-5.0X
PRNI	10.91	114	eP	28	21.00	-4.7X
KHC	15.54	335	eP	29	30.00	3.9X
BNG	31.15	190	ePd	32	03.50	-0.5
	0.5s		6.00nm			4.6mb

S.D. = 1.5 on 12 of 17 obs.

SEP 14, 1989 16h 29m 12.19± 0.72s
29.460 S ± 5.5km 71.119 W ±10.1km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ZON	2.96	135	iPd	29	59.20	1.2
JACH	3.24	172	iP	30	03.50	1.5
CFA	3.28	131	iPd	30	03.50	1.0
ROCH	3.50	179	iPc	30	15.20	9.3X
PEL	3.69	174	iPd	30	09.00	0.7
FCH	3.92	170	iP	30	13.00	1.1
			iS	30	54.50	
SAN	4.00	175	iPd	30	13.50	0.7
			iS	30	55.20	
LCCH	4.02	185	iPc	30	13.10	0.1
PCH	4.18	173	ePd	30	15.70	0.4
			iS	31	00.00	
TACH	4.18	178	iPc	30	15.20	-0.1
CHCH	4.48	175	iPc	30	18.50	-1.1
			iS	31	06.50	
LNV	4.49	183	iPd	30	18.70	-0.9
			iS	31	04.50	
MRA	5.50	124	iPd	30	32.60	-1.3
ANT	5.77	6	eP	30	39.70	2.0
TCA	5.94	110	ePd	30	39.60	-0.7
CCH	12.86	22	eP	32	31.00	15.4X
CNCB	12.92	14	P	32	29.00	12.3X
ARE	12.94	358	eP	32	26.00	9.2X
LPB	13.16	13	P	32	30.00	10.2X
ZOBO	13.41	12	P	32	34.00	10.7X

			S	36 17.80		
PPD	19.30	72	eP	33 37.40		0.1
			e	33 43.80		
VAO	22.58	79	eP	34 10.80		-0.3
			e	34 31.60		
			e	34 40.50		
BMA	25.10	81	eP	34 36.10		0.5
PDCR	34.14	67	eP	35 55.60		-0.7
			e	36 26.10		
SPA	60.71	180	e(P)	39 20.40		-2.2
	1.0s		15.00nm		5.1mb X	
			e	39 47.00		
LIC	72.62	72	P	40 38.20		-0.5
TIC	72.86	72	P	40 40.30		0.2
KIC	72.93	72	P	40 39.90		-0.6
KVN	81.01	325	eP	41 29.70		4.5X
GBA	146.91	112	PKPc	48 50.30		-1.1
	0.8s		2.60nm			

S.D. = 1.1 on 23 of 30 obs.

& SEP 14, 1989 17h 31m 28.00s
36.545 N 89.620 W
DEPTH = 11.4km
NEW MADRID, MISSOURI REGION (486)
<SLM>. mbLg 3.5 (SLM). MD 3.2 (TEIC). Felt (IV) ot Conron ond Lilbourn; (III) ot Gideon, Groyridge, Marston and Portogeville; (II) ot Kewonee.

LST	0.09	256	iPc	31 30.84		0.1
			eS	31 32.36		
DWM	0.28	22	eP	31 33.56		-0.4
MILT	1.00	134	ePc	31 46.92		0.1
			iS	32 00.90		
LRDO	1.04	237	ePd	31 46.88		-0.6
			eS	32 01.32		
SFTN	1.23	195	iPd	31 50.44		-0.2
			eS	32 07.02		
EBZ	1.42	171	ePc	31 53.18		-0.4
			eS	32 12.44		
FVM	1.57	336	eP	31 55.80		0.0
AFAR	1.60	256	iPd	31 56.44		0.3
			eS	32 18.12		
WLA	1.62	214	ePc	31 56.20		-0.3
			eS	32 18.08		
OLY	1.83	236	eP	31 59.00		-0.5
PWLA	2.01	141	eP	32 01.10		-1.1
LGAR	2.07	204	P	32 02.50		-0.5
HOGG	2.50	239	P	32 09.20		0.0
RSCP	3.40	105	e(P)	32 22.00		0.0
UYO	4.61	240	iPn	32 38.00		-1.2
			ePg	32 49.00		
			eSn	33 49.00		
BLA	7.40	82	e(P)	33 23.00		4.4
MEO	7.51	259	ePn	33 18.00		-2.0
			eSn	34 41.00		
			iLg	35 22.00		

17 obs. associated

? SEP 14, 1989 17h 37m 57.54± 1.84s
39.183 N ± 9.3km 23.610 E ±17.1km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

NEO	0.32	292	ePg	38 04.20		-0.1
PLG	1.20	354	ePb	38 19.80		-0.1
KZN	1.81	309	ePn	38 29.20		0.2
ITM	2.40	214	ePn	38 37.50		0.0
OHR	2.89	313	eP	39 41.00		56.5X

S.D. = 0.2 on 4 of 5 obs.

% SEP 14, 1989 18h 14m 39.09± 1.83s
61.270 N ± 6.8km 3.894 E ±16.0km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 2.9 (BER).

SUE	0.47	117	iPgc	14 49.06		0.4
			eS	14 53.09		
ASK	1.01	141	iPgc	14 58.79		0.5
			eSg	15 10.08		
HYA	1.11	94	iP	14 59.96		0.0
			eS	15 12.21		
BER	1.14	141	iPg+	15 00.64		0.3
			eSg	15 13.12		
ODD1	1.92	134	eP	15 12.05		-0.1
			eS	15 33.77		
MOL	2.17	51	iP	15 16.83		1.2
			eS	15 42.59		
KMY	2.17	161	eP	15 15.51		-0.2
			eS	15 39.54		
BLS1	2.38	141	iP	15 18.69		-0.2
			eS	15 44.02		
NRA0	3.76	95	iPc	15 36.80		-1.6
			iPg	15 43.80		
			iS	16 17.10		
			iSg	16 30.00		
NSS	4.93	45	eP	15 54.54		-0.4
			eS	16 47.02		

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

SEP 14, 1989 18h 17m 06.98± 0.67s
42.289 N ± 4.2km 13.565 E ± 6.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

AQU	0.14	298	P	17 10.40		0.1
			eSg	17 13.00		
AZI	0.32	198	P	17 12.80		-0.7
			eSg	17 17.80		
ALP	0.49	1	iP	17 16.44		-0.5
MNS	0.66	279	P	17 19.30		-0.9
			iSg	17 30.60		
RMP	0.80	234	P	17 23.90		1.4
			eSg	17 36.00		
RDP	0.83	230	P	17 23.50		0.5
			eSg	17 35.90		
DUI	0.92	133	P	17 24.20		-0.3
			eSg	17 37.60		
CIO	0.96	341	eP	17 24.74		-0.5
SSD	1.01	354	eP	17 31.30		5.2X
ASS	1.03	320	P	17 26.00		-0.4
			eSn	17 43.50		
AOI	1.26	1	eP	17 32.22		1.8
ARV	1.29	339	P	17 31.10		0.2
			eSn	17 50.10		
PGD	2.08	320	P	17 42.00		-0.5
			eSn	18 09.10		
HVAR	2.30	66	i(Pn)	17 51.60		6.0X
TRI	3.42	2	eP	18 49.10		47.7X
PTJ	4.00	25	eP	18 17.90		8.2X
MDI	4.46	323	P	18 14.00		-2.1X

S.D. = 0.9 on 12 of 17 obs.

SEP 14, 1989 19h 10m 25.70± 0.11s
1.644 N ± 3.2km 127.322 E ± 3.6km
DEPTH = 103.2km (geophysicist)
6.0mb (66 obs.)
HALMAHERA (267)
Felt (II) on Ternate. Depth from broodbond displocement seismogroms.
FAULT PLANE SOLUTION: P-Woves
NP1:Strike=223 Dip=67 Slip= 127
NP2: 340 43 35
Principal Axes:
T Plg=53 Azm=178
P 14 287
Comment: The focal mechonism is poorly controlled ond corresponds to reverse foulting with a large strike-slip component. The preferred fault plane is not determined.
RADIATED ENERGY
No. of sta: 6 Focal mech. F
Energy 0.2±0.1•10••15 Nm
MOMENT TENSOR SOLUTION
Dep 131 No. of sta: 11
Moment Tensor; Scale 10••18 Nm
Mrr= 0.87 Mtt= 0.13
Mff=-1.00 Mrt=-0.57
Mrf=-0.83 Mtf=-0.09
Principal oxes:
T Vol= 1.39 Plg=61 Azm=142
N -0.02 16 19
P -1.37 23 282
Best Double Couple:Mo=1.4•10••18
NP1:Strike=343 Dip=27 Slip= 51
NP2: 206 70 108
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 10S, 29C

14d 16h

Centroid Locotion:
Origin Time 19:10:32.6 0.3
Lat 1.29N 0.03 Lon 126.85E 0.03
Dep 137.3 1.4 Holf-durotion 4.2
Moment Tensor; Scole 10••18 Nm
Mrr= 0.90 0.04 Mtt= 0.31 0.06
Mff=-1.22 0.07 Mrt=-1.13 0.05
Mrf=-1.02 0.05 Mtf=-0.16 0.06
Principol Axes:
T Vol= 1.95 Plg=54 Azm=156
N -0.14 22 31
P -1.81 26 290
Best Double Couple:Mo=1.9•10••18
NP1:Strike=339 Dip=28 Slip= 34
NP2: 218 75 113

TNE	0.84	179	ePd	10 53.90		9.0X
DAV	5.68	342	ePc+	11 52.00		2.8
	0.9s	2245.38nm			6.4mb	
PCI	7.90	251	ePc	12 23.50		3.9X
TLE	9.04	143	iPc	12 40.00		4.9X
			iS	12 46.90		
TSM	9.59	286	ePc	12 47.00		4.5X
	0.8s	1863.30nm			7.0mb X	
			e	13 06.70		
BKB2	10.82	255	iPc	13 00.00		1.1
	1.2s	3621.70nm			7.1mb X	
KKM	11.91	292	ePd	13 15.50		2.0
	0.9s	559.00nm			6.3mb	
			e	15 25.50		
KUG	12.30	198	eP	13 29.00		10.4X
JAY	14.00	107	ePc	13 45.20		4.4X
QCP	14.31	335	iP	13 39.50		-5.2X
MTN	14.88	165	iPc	13 52.90		0.8
KHKI	15.34	229	ePd	14 02.60		4.8X
			e	23 50.00		
BAG	16.11	336	ePd-	14 07.00		-0.7
	1.0s	512.00nm			5.7mb	
			eS	17 08.00		
KNA	17.34	175	iPc	14 23.90		1.2
TRT	17.34	237	iPd	14 26.70		3.9X
	1.0s	1072.00nm			6.0mb	
MNDI	18.06	116	eP	14 34.00		2.3
GUMO	21.03	55	eP	15 01.38		-1.6
	0.7s	287.17nm			5.7mb	
GUA	21.04	55	eP	15 02.50		-0.6
	0.8s	334.33nm			5.7mb	
			pP	15 15.10		54kmX
LAT	21.30	113	eP	15 18.00		12.3X
PMG	22.60	119	iPd	15 19.00		0.5
MBL	23.82	198	iPc	15 31.20		0.9
KGM	23.99	271	ePd	15 34.70		2.7
	0.6s	436.20nm			6.1mb	
ANP	24.06	347	iP-	15 34.00		1.3
			iS	19 40.00		
HKC	24.19	329	iP	15 35.00		1.2
			iS	19 44.00		
QIZ	24.33	316	iPd	15 36.00		0.8
	5.5s	7.50nm			3.3mb X	
N	13s	11.80um				
E	13s	9.60um				
			PP	16 08.00		
			S	19 43.00		
MCO	24.36	328	eP	15 36.90		1.4
QZH	24.65	341	iPd	15 39.60		1.4
	3.0s	7.30nm			3.6mb X	
Z	24s	5.40um			5.0MszX	
			PcP	19 13.90		
			S	19 52.00		
			sS	20 22.00		
			SS	20 50.00		
QIS	25.13	152	ePc	15 43.00		0.2
			i	25 10.50		
GZH	25.27	329	iPc	15 43.80		-0.2
	5.0s	3.10nm			3.0mb X	
Z	16s	4.60um			5.1MszX	
			sP	16 21.00		
			iS	20 00.00		
			sS	20 45.00		
RAB	25.50	103	iPc+	15 46.50		0.3
	0.7s	493.15nm			6.1mb	
			iS	20 02.00		
KLM	25.69	274	eP	15 49.00		1.0
ASPA	25.96	166	iPc	15 50.30		-0.1
	0.7s	653.00nm			6.3mb	
			epP	15 59.30		32kmX
			eS	20 21.80		

14d 19h

eScS 26 29.00
IPM 26.42 277 ePd 15 55.70 1.0
0.8s 202.10nm 5.7mb
e 16 09.50 57kmX
e 19 18.90
NANU 26.67 205 iPc 15 57.40 0.6
SNG 27.18 282 ePd 16 02.50 0.9
1.2s 375.00nm 5.8mb
e 19 08.00
eS 20 24.00
e 22 47.90
WARB 27.67 181 iPc 16 06.30 0.4
PSI 28.40 273 iPd 16 13.30 0.7
e 26 43.00
e 29 40.00
CTA 28.48 140 iPc+ 16 14.00 0.7
1.6s 1866.67nm 6.5mb
iS 20 56.00
i 21 45.00
CTAO 28.48 140 ePc 16 13.51 0.2
TSI 28.79 274 ePc 16 12.00 -4.1X
MEKA 29.34 196 iPd 16 21.30 0.3
NNT 29.41 293 iPd 16 22.00 0.3
LOE 29.63 303 iPd 16 23.60 0.0
e 19 27.00
e 22 54.60
SSE 29.86 349 Pc 16 26.00 0.5
1.0s 0.18nm 2.7mb X
Z 20s 2.30um 4.8Msz
pP 16 42.00 66kmX
PcP 19 26.00
S 21 12.00
sS 22 00.00
SS 22 52.00
ScP 23 00.00
NST 30.21 299 iPd 16 30.00 1.2
i 32 58.00
WHN 31.26 338 iPd 16 40.00 2.2
1.2s 1.04nm 3.4mb X
Z 22s 5.20um 5.2Msz
N 12s 3.10um
PcP 19 30.00
iS 21 39.00
NJ2 31.28 346 Pc 16 35.50 -2.4
5.0s 0.70nm 2.6mb X
sP 17 10.00
PcP 19 29.70
S 21 37.00
GYA 31.67 323 iPd 16 42.60 1.0
1.2s 0.20nm 2.7mb X
Z 18s 2.60um 5.0Msz
N 11s 3.20um
E 11s 2.70um
pP 17 06.00 104kmX
sP 17 16.00
PcP 19 31.00
S 21 41.00
ScP 23 01.00
ScS 26 53.00
BDT 31.86 301 iPd 16 44.00 0.8
1.0s 390.50nm 6.1mb
BSI 32.19 278 iPc 16 45.00 -1.1
1.0s 194.10nm 5.8mb
FORR 32.32 179 eP 16 46.20 -0.8
OLP 32.46 151 iPc 16 48.30 0.0
MRWA 32.55 199 iPc 16 49.00 0.0
0.3s 50.00nm 5.8mb
CHG 32.63 303 ePd 16 50.20 0.3
1.0s 178.25nm 5.8mb
eS 21 58.00
COOL 32.88 190 iPc 16 50.90 -1.0
0.5s 110.00nm 5.9mb
SHK 33.10 8 iPd 16 53.80 0.0
1.0s 820.00nm 6.5mb
KMI 33.28 317 ePd 16 57.44 1.7
3.0s 3.20nm 3.6mb X
Z 25s 12.60um 5.5MszX
N 13s 4.80um
e 17 22.00 109kmX
esPc 17 31.54
PcP 19 37.50
eS 22 08.12
sS 22 44.00
BAL 33.63 197 iPc 16 58.30 -0.1
0.9s 358.00nm 6.2mb
SVO 34.10 109 eP 16 59.00 -3.7X
KLB 34.28 195 iPc 17 03.90 -0.1
0.9s 535.00nm 6.4mb
HNR 34.31 109 ePc 17 02.00 -2.5
eS 22 20.00
RMO 34.79 145 iPc 17 08.00 -0.4
1.0s 371.00nm 6.2mb
e 18 32.00 463kmX
MUN 35.06 197 iPc 17 10.80 0.2
0.5s 769.00nm 6.9mb
TIA 35.67 346 Pd 17 16.30 0.6
sP 17 51.00
PcP 19 42.10
S 22 39.50
NWAO 35.68 195 iPc 17 16.30 0.4
0.6s 115.00nm 6.0mb
STK 35.98 159 iPc 17 19.00 0.6
e 18 43.00 442kmX
MAJO 36.16 15 ePc 17 18.96 -0.9
epPd 17 42.47 100kmX
MAT 36.16 15 eP 17 18.00 -1.8
0.8s 429.10nm 6.4mb
Z 20s 2.84um 5.0Msz
eS 22 45.00
XAN 36.53 334 Pd 17 23.50 0.4
3.0s 3.30nm 3.7mb X
E 10s 3.00um
sP 17 59.00
S 22 51.40
CD2 36.67 325 iPd 17 25.00 0.7
sP 18 02.00
PP 18 50.00
S 22 56.00
RKG 36.82 194 eP 17 31.00 5.5X
0.5s 313.00nm 6.5mb
CMS 37.34 153 ePc 17 30.50 0.6
DL2 37.45 353 Pd 17 31.00 0.4
Z 14s 3.50um 5.3MszX
N 14s 4.80um
sP 18 08.00
ScS 27 30.00
BRS 37.86 141 iPd- 17 34.90 0.6
epP 19 05.00 495kmX
eS 24 12.00
e(SS) 26 00.00
ADE 37.95 165 iPc 17 35.90 0.9
TIY 38.42 341 iPd 17 39.00 0.1
1.0s 0.40nm 3.3mb X
E 11s 2.00um
sP 18 13.00
S 23 24.50
BJI 39.54 347 eP 17 48.63 0.6
1.0s 0.49nm 3.3mb X
Z 20s 2.99um 5.1Msz
N 14s 172.00um
esPd 18 22.23
ePcP 19 55.00
eScP 23 29.00
eS 23 39.62
esS 24 35.07
eSS 26 22.26
COO 39.68 146 iPc 17 50.90 1.5
SNY 40.15 356 iPc 17 53.00 0.0
2.0s 0.90nm 3.2mb X
pP 18 20.00 118kmX
ScP 23 31.00
iS 23 48.00
SS 26 41.00
ScS 27 50.00
LZH 40.59 330 ePd 17 59.30 2.3
3.0s 4.00nm 3.7mb X
Z 30s 6.70um 5.3MszX
E 11s 2.90um
epP 18 23.97 106kmX
esPc 18 34.73
ePcP 19 59.00
eScP 23 45.00
eS 23 57.73
ePcS 24 08.00
sS 24 22.00
eSS 26 52.37
BWA 40.98 153 iPc 18 02.70 2.6
HHC 41.55 342 iPd 18 06.00 1.3
N 12s 1.80um
E 12s 1.00um
sP 18 41.00
PP 19 46.00
S 24 09.00
RIV 41.81 150 eP 18 09.20 2.4
BTO 41.83 340 iPd 18 08.00 1.0
N 14s 1.20um
E 16s 3.50um
sP 18 44.00
PP 19 48.00
S 24 11.00
CAN 41.99 153 iPc 18 09.80 1.5
ePP 19 48.20
CN2 42.01 358 Pd 18 07.80 -0.5
5.0s 0.90nm 2.8mb X
Z 18s 2.30um 5.1Msz
N 13s 1.00um
E 13s 1.00um
epP 18 29.00 89kmX
esP 18 47.00
PP 19 48.00
PcP 20 01.00
ScP 23 37.00
eS 24 13.00
ScS 27 55.00
CNB 42.15 153 iPd 18 11.30 1.6
1.0s 845.00nm 6.5mb
e 19 51.00 555kmX
TOO 42.49 158 iPc 18 14.30 1.9
MDJ 42.84 2 ePd 18 16.18 1.2
N 18s 2.80um
epPd 18 40.68 105kmX
PcP 20 05.20
eS 24 29.24
esS 25 21.79
eSS 27 44.16
SAP 43.09 15 eP 18 18.00 0.9
eS 24 34.00
LSA 44.26 313 iPc 18 29.50 2.1
4.0s 1.50nm 3.2mb X
pP 18 48.00 75kmX
PP 20 18.00
S 24 48.00
ScS 28 09.00
PVC 44.73 117 iPc 18 31.80 1.2
DZM 44.87 124 iPc 18 32.20 0.3
i 23 54.00
GTA 45.18 330 iPd 18 35.40 1.3
4.0s 1.40nm 3.1mb X
Z 20s 3.20um 5.3Msz
N 12s 1.30um
PcP 20 13.80
PP 20 22.50
ScP 23 52.00
S 25 01.50
KOD 50.25 282 iPd 19 14.00 -0.1
0.8s 261.19nm 6.3mb
HYB 50.40 291 iPd 19 15.00 0.2
0.8s 685.70nm 6.7mb
i 20 00.50 205kmX
iS 26 20.00
GBA 50.74 286 P 19 18.00 0.6
WMO 54.76 326 ePd 19 47.95 0.9
2.0s 2.00nm 3.8mb X
Z 20s 3.70um 5.5Msz
N 18s 7.30um
pP 20 16.00 117kmX
esP 20 23.71
PcP 20 47.00
ePP 21 50.69
eScP 23 34.50
ScP 24 33.60
eS 27 18.86
e 29 19.29
NDI 54.77 304 iPd 19 46.40 -0.8
0.7s 366.44nm 6.5mb
iPcS 24 33.00
iS 27 10.00
iPPS 27 16.50
iSc 29 19.00
POO 55.00 291 iPc 19 47.00 -2.1
1.1s 154.43nm 5.9mb
iS 27 18.50
BOM 56.04 292 iPd 19 55.10 -1.3
iS 27 32.20
MSZ 58.56 147 iPc 20 14.00 0.3
0.8s 1040.00nm 7.0mb
KRP 59.38 137 P 20 19.80 0.3
MHZ 59.55 147 P 20 19.60 -1.2
KSH 59.90 316 iPd 20 25.50 2.2
iS 28 31.00
TCW 60.26 141 eP 20 23.80 -1.7

KIW	60.48	140	P	20	25.20	-1.8	
CCW	60.51	141	P	20	25.80	-1.4	
MRW	60.54	140	eP	20	25.30	-2.1	
SNZO	60.58	140	P	20	25.00	-2.6	
			PP	22	36.00		
			S	29	16.00		
WEL	60.61	140	P	20	26.10	-1.8	
CAW	60.71	140	P	20	26.60	-2.0	
MNG	60.72	139	P	20	26.80	-1.9	
WDW	60.75	140	P	20	26.60	-2.2	
MOW	60.99	140	eP	20	28.50	-2.0	
MTW	61.01	140	P	20	28.70	-1.9	
BLW	61.11	140	P	20	29.50	-1.8	
PGZ	61.24	139	eP	20	30.60	-1.5	
AFI	62.27	107	iPc	20	40.50	1.0	
			eS	29	20.00		
OUE	63.76	303	iPd	20	49.40	0.1	
			eS	29	15.00		
SMY	63.97	30	eP	20	51.00	1.0	
ADK	68.35	34	P	21	18.50	0.6	
DRV	68.76	175	eP	21	19.60	-0.4	
MHI	71.24	308	eP	21	36.00	0.0	
	0.9s	346.22nm			6.2mb		
			eS	30	44.00		
KIP	75.13	68	ePc	22	00.10	1.4	
			eS	31	30.55		
			e	32	07.80		
			e	32	57.54		
BJA	77.34	296	iP	22	12.80	1.8	
	0.3s	76.00nm			6.0mb		
BRF	77.37	296	(P)	22	12.90	1.7	
	0.4s	92.00nm			6.0mb		
BEE	77.42	296	eP	22	13.80	2.3	
DHR	77.78	296	ePd	22	14.00	0.5	
SDN	78.57	34	ePc	22	17.20	0.0	
RYD	80.88	295	ePd	22	30.00	-0.3	
KER	80.99	304	ePc	22	30.50	-0.3	
TAB	81.90	308	eP	22	37.00	1.6	
MAW	82.02	200	iPc	22	35.60	0.4	
SBA	82.20	172	iPc+	22	37.10	1.0	
SVW	82.32	29	ePc	22	38.30	1.3	
TTA	82.48	27	ePc	22	38.90	1.0	
KMSA	82.71	290	eP	22	39.00	-0.8	
BHD	83.19	303	iPc	22	42.00	0.0	
			ePcP	22	51.00		
			iS	32	46.00		
			iScS	33	09.00		
KDC	83.37	32	ePc	22	43.10	0.7	
OASM	83.70	296	ePd	22	44.30	-0.5	
AFR	83.72	108	iP	22	47.40	2.5	
	1.3s	260.00nm			6.0mb		
PPT	83.92	108	iP+	22	48.20	2.3	
	1.3s	220.00nm			5.9mb		
Z	25s	0.90um			5.0MszX		
PAE	83.92	108	iP	22	48.00	2.1	
	1.3s	195.00nm			5.9mb		
BRW	83.95	18	P	22	48.10	3.0X	
IMA	84.04	24	ePc	22	46.30	0.4	
PPN	84.05	108	iP	22	48.80	2.2	
	1.3s	160.00nm			5.8mb		
TVO	84.24	108	iP	22	50.00	2.4	
	1.3s	220.00nm			5.9mb		
ARO	84.26	281	eP+	22	48.80	1.0	
MSL	84.33	306	iPc	22	48.00	0.3	
			e	23	18.00	116kmX	
			eS	32	57.00		
TBI	84.42	114	iP	22	50.70	2.4	
	1.2s	250.00nm			6.0mb		
SGH	84.47	281	iP+	22	50.65	1.8	
DAF	84.57	281	iP+	22	51.26	2.0	
GBR	84.64	281	iP+	22	51.16	1.4	
PMO	85.38	105	iP	22	55.60	2.3	
	1.3s	225.00nm			6.0mb		
PMR	85.48	28	ePc	22	53.00	0.1	
	1.0s	575.00nm			6.5mb		
TPT	85.65	105	iP	22	56.90	2.3	
	1.3s	215.00nm			6.0mb		
VAH	85.65	105	iP	22	56.70	2.1	
	1.3s	170.00nm			5.9mb		
RUV	85.89	105	iP	22	58.00	2.2	
	1.3s	215.00nm			6.0mb		
COL	86.34	25	ePc	22	55.82	-1.3	
			epPd	23	23.29	104kmX	
			eSKS	33	09.18		
			eS	33	19.94		
			esS	34	13.74		
FBA	86.34	25	eP	22	56.80	-0.3	
TOA	86.92	28	eP	23	00.60	0.6	
AAE	88.32	279	eP	23	09.00	1.0	
AYN	90.37	299	ePd	23	17.00	0.0	
HRI	90.43	303	iPd	23	18.00	0.7	
BHL	90.48	304	P	23	17.50	0.0	
			S	33	36.00		
NAI	90.55	269	iPc	23	21.00	2.6	
	1.0s	53.00nm			5.7mb		
DSI	90.81	301	eP	23	19.00	0.1	
BADA	91.26	298	eP	23	21.00	-0.1	
MBH	91.32	300	iPd	23	22.00	0.7	
KAS	91.60	311	eP	23	22.50	0.0	
SPA	91.63	180	ePc	23	22.70	0.5	
	0.8s	142.92nm			6.3mb		
INK	91.87	22	ePc	23	22.50	-0.6	
	0.8s	76.00nm			6.1mb		
KEV	92.04	340	iP	23	22.60	-1.2	
	0.8s	49.90nm			5.9mb		
ANTO	92.44	310	ePc	23	26.38	0.0	
BBTK	92.47	310	iPc	23	26.50	-0.1	
SOD	92.61	338	iP	23	25.30	-1.2	
			iPKKP	40	39.20		
SIT	92.64	33	eP	23	27.20	0.4	
SUF	93.67	333	eP	23	30.00	-1.4	
	0.9s	62.90nm			6.0mb		
MBC	93.84	13	iPc	23	32.50	0.4	
	1.0s	138.00nm			6.3mb		
BCK	94.36	308	iP	23	33.80	-1.5	
ALT	94.58	309	iP	23	34.80	-1.5	
NUR	94.80	331	iP	23	35.90	-0.8	
	0.9s	43.90nm			5.9mb		
			e	33	56.00		
			ePKKP	40	33.00		
IKZ	94.89	260	iPc	23	26.30	-11.9X	
			i	24	06.00	156kmX	
ELL	94.97	307	eP	23	37.50	-0.7	
CFR	95.31	315	eP	23	39.00	-0.3	
TLB	95.47	315	eP	23	40.00	-0.1	
PPE	95.54	317	eP	23	40.00	-0.4	
PTZ	96.20	256	iPd	23	45.00	0.9	
			i	27	32.00		
YER	96.22	307	eP	23	43.00	-0.8	
PTT	96.27	317	eP	23	44.00	0.3	
ISR	96.44	316	eP	23	45.50	0.9	
MLR	96.80	316	iPd	23	46.00	-0.3	
JMB	96.81	313	iP	23	46.00	-0.2	
IZM	96.87	309	iP	23	45.90	-0.7	
CMP	97.47	316	ePc	23	47.00	-2.2	
KDZ	97.80	312	iPd	23	50.00	-0.7	
UPP	98.36	331	iP	23	51.60	-1.2	
			iS	34	14.00		
PGB	98.56	313	iP	23	53.00	-1.2	
MZZ	98.60	259	iPd	23	56.00	1.0	
			e	27	25.00		
BUL	98.74	250	iPd	23	56.70	1.2	
	1.0s	32.50nm			5.9mb		
			iS	34	22.80		
DEV	98.83	317	ePd	23	54.00	-1.3	
SLR	98.86	244	iPc	23	56.80	0.8	
	1.0s	20.00nm			5.7mb		
			i	28	02.60		
MMB	99.06	312	eP	23	55.00	-1.5	
NSS	99.17	337	eP	23	53.85	-2.6	
LSZ	99.24	255	iPc	23	58.50	0.7	
			i	28	01.00		
VTS	99.25	313	ePd	23	58.00	0.5	
KKB	99.48	313	iPc	23	57.00	-1.4	
PRY	99.52	243	eP	23	54.40	-4.7X	
			e	28	29.20		
BZS	99.77	317	eP	23	58.50	-1.0	
KRA	99.83	321	eP	23	59.20	-0.5	
	0.8s	33.00nm			6.0mb		
Z	22s	1.40um			5.4Msz		
N	20s	2.20um					
			e	24	40.00	161kmX	
			e	34	28.00		
SPC	99.85	320	eP	24	00.00	-0.1	
	2.0s	160.00nm			6.3mb		
			e	28	10.00		
			e(S)	34	09.00		
HFS	100.13	332	ePdiff	23	59.40	-1.4	
	1.2s	53.50nm			6.0mb		
SKO	100.66	313	iPdiff	24	02.50	-1.2	
	1.2s	60.00nm			6.1mb		
E	21s	0.95um					
			iPP	28	15.50		
			iSKS	34	53.00		
			iS	35	35.00		
			iPS	36	52.00		
			i	37	48.00		
			iSS	42	33.00		
			iSSS	46	22.00		
BEO	100.74	316	ePdiff	24	02.50	-1.4	
NB2	100.91	334	Pdiff	24	02.70	-1.7	
	1.0s	49.50nm			6.1mb		
HVD	101.01	239	ePdiff	24	20.50	14.8X	
FRS	101.23	240	iPdiff	24	06.50	0.0	
	1.0s	40.00nm			6.0mb		
OHR	101.31	312	ePdiff	24	04.80	-1.9	
	1.0s	0.08nm			3.3mb	X	
			eS	34	29.00		
PGC	101.36	40	ePdiff	24	08.00	1.4	
SRO	101.44	319	iPdiff	24	07.10	0.1	
			e	28	18.40		
			e	34	32.10		
PHP	101.45	313	ePdiff	24	05.20	-1.9	
KMZ	101.55	257	iPdiff	24	09.10	0.7	
			e	28	27.00		
BCI	101.57	314	ePdiff	24	07.20	-0.5	
LSK	101.66	311	ePdiff	24	06.30	-2.0	
PUK	101.77	313	ePdiff	24	07.20	-1.4	
MOL	101.81	336	ePdiff	24	07.62	-0.6	
KSP	101.85	323	ePdiff	24	08.60	-0.2	
	1.0s	39.00nm			6.1mb		
			e	27	36.70		
			e	28	08.00		
			ic	28	24.50		
TIR	101.95	313	ePdiff	24	07.20	-2.2	
LACI	102.00	313	ePdiff	24	08.20	-1.4	
SDA	102.06	313	ePdiff	24	09.70	-0.2	
ZST	102.12	320	ePdiff	24	09.80	-0.2	
Z	18s	1.10um			5.4Msz		
			e	28	26.70		
			e(S)	34	30.00		
PRU	103.18	322	ePdiff	24	15.00	0.3	
	1.0s	14.50nm			5.8mb		
Z	20s	1.00um			5.3Msz		
N	20s	0.90um					
E	20s	0.60um					
			e	27	31.50		
			S	34	40.00		
BRG	103.25	323	iPdiff	24	14.70	-0.3	
	1.4s	46.00nm			6.1mb		
			e	24	24.40		
			e	24	50.60		
			e	28	32.40		
			e	29	08.00		
			e	34	40.00		
			e	37	20.80		
PTJ	103.53	318	ePdiff	24	16.30	-0.1	
ZAG	103.53	318	ePdiff	24	17.00	0.7	
			iS	34	43.50		
PNT	103.57	38	ePdiff	24	17.00	0.5	
CLL	103.66	324	iPdiff	24	17.10	0.3	
	1.2s	21.00nm			5.9mb		
Z	17s	1.00um			5.4MszX		
			ePP	28	36.00		
			eSKS	34	42.00		
KHC	104.06	322	iPdiff	24	19.30	0.6	
			e	27	39.70		
			S	34	46.00		
WDC	104.10	48	ePdiff	24	19.80	0.8	
			e	28	36.50		
VBY	104.11	318	e(Pdif	24	19.20	0.3	
LJU	104.43	318	ePdiff	24	13.50	-6.9X	
MOX	104.72	324	iPdiff	24	22.00	0.5	
	1.4s	26.00nm			6.0mb		
Z	16s	1.30um			5.6MszX		
N	16s	1.30um					
E	16s	0.50um					
			e	34	46.00		
VOY	104.86	319	ePdiff	24	13.20	-9.2X	
			e	24	21.00		
BKS	105.00	50	e(Pdif	24	24.80	1.7	
TRI	105.05	318	PKP	28	48.00	10.6X	
ORV	105.14	48	ePdiff	24	24.60	0.9	
			e	28	41.90		
MGR	105.42	312	PKP	28	37.00	-1.3	
SGO	105.49	313	PKP	28	36.50	-1.9	
SOI	105.58	310	PKP	28	39.50	0.9	
MHC	105.59	51	ePdiff	24	27.30	1.4	
EDM	105.76	33	iPdiff	24	27.20	1.0	
ARV	106.30	316	PKP	28	39.90	0.0	
CTI	106.33	319	PKP	28	39.50	-0.5	

14d 19h

AZI 106.43 315 PKP 28 29.50 -10.6X
ASS 106.63 316 PKP 28 40.00 -0.6
TOD 106.79 323 ePKP 28 31.44 -9.2X
MNS 106.84 315 PKPd 28 40.60 -0.4
SFI 106.91 317 PKPc 28 43.00 2.0
WTS 106.94 326 e(PKP)28 41.50 0.7
0.9s 10.00nm
e 29 00.50
FRI 107.17 50 ePdiff24 33.20 0.4
e 28 42.70
SAL 107.22 319 PKP 28 50.00 8.5X
FIR 107.37 317 ePKP 28 43.00 1.2
e 35 02.00
ABH 107.42 324 ePKP 28 33.68 -8.2X
MDI 107.69 319 PKP 28 50.50 8.1X
BDI 107.72 317 PKPc 28 41.50 -1.1
RUP 107.78 324 ePKP 28 35.66 -6.9X
KVN 107.81 48 PKP 28 43.80 0.6
PII 107.89 317 PKP 28 41.50 -1.3
FEL 107.96 322 ePKP 28 33.23 -9.8X
MEM 108.00 325 ePKP 28 36.30 -6.5X
e 28 41.30
CDF 108.19 323 ePKP 28 41.30 -2.1
0.9s 6.55nm
BOB 108.23 318 PKP 28 43.00 -0.6
VAI 108.27 320 PKP 28 42.50 -1.0
SES 108.28 35 ePKP 28 44.00 0.5
pP 29 06.00
WLF 108.33 324 ePKP 28 45.10 1.6
ISA 108.49 52 ePKP 28 45.00 0.6
e 29 10.00
e 31 24.00
BNG 108.58 275 ePdiff24 39.60 0.0
0.5s 12.00nm 6.3mb
id 27 48.10
ic 28 45.30
BCAO 108.59 275 ePKP 28 38.49 -6.6X
epP 29 05.14
esP 29 20.87
BSF 108.73 322 ePKP 28 42.40 -2.1
1.1s 34.20nm
TNP 108.76 49 PKP 28 45.70 0.7
0.9s 5.40nm
ORO 108.87 320 PKP 28 44.70 -0.1
PCP 108.92 319 PKP 28 44.65 -0.2
HAU 108.93 323 ePKP 28 43.00 -1.7
0.9s 21.30nm
SNF 109.03 326 ePKP 28 42.10 -2.7
i 28 45.60
CLC 109.14 51 ePKP 28 46.00 0.4
e 29 15.00
MWC 109.22 53 ePKP 28 49.00 3.1X
e 29 16.00
SBB 109.27 52 ePKP 28 48.00 2.1
e 29 12.00
LRM 109.36 40 ePKP 28 46.50 0.6
CVF 109.43 316 ePKP 28 44.10 -1.8
0.9s 29.50nm
ROB 109.46 318 PKP 28 45.58 -0.3
LSD 109.47 320 PKP 28 46.50 0.3
IMI 109.59 318 PKP 28 45.78 -0.4
LPG 109.71 320 ePKP 28 44.90 -1.8
0.7s 23.70nm
ENR 109.78 319 PKP 28 45.68 -0.9
DOI 109.79 319 PKP 28 44.80 -1.8
RVR 109.82 53 ePKP 28 48.00 1.2
e 29 19.00
STV 109.84 319 PKP 28 45.37 -1.3
PZZ 109.88 319 PKP 28 45.37 -1.4
GSC 109.90 52 ePKP 28 49.00 1.9
e 29 21.00
SBF 109.91 318 ePKP 28 44.50 -2.3
0.7s 31.95nm
RRL 109.93 319 PKP 28 46.29 -0.7
BNI 109.94 320 PKP 28 46.70 -0.2
FRF 110.56 318 ePKP 28 46.30 -1.6
0.8s 21.50nm
LMR 110.74 318 ePKP 28 46.60 -1.7
0.8s 13.45nm
BAR 110.75 54 ePKP 28 50.00 1.3
e 29 27.00
LOR 110.76 323 ePKP 28 46.50 -1.7
1.2s 19.35nm
FFC 110.79 28 ePKP 28 48.00 0.0
0.8s 27.00nm
LRG 110.79 318 ePKP 28 46.70 -1.6
0.9s 29.50nm

LBF 110.82 322 ePKP 28 46.70 -1.7
0.8s 12.75nm
TPC 110.85 53 ePKP 28 50.00 1.1
e 29 27.00
SMF 111.05 322 ePKP 28 47.00 -1.8
1.0s 15.00nm
SSF 111.07 323 ePKP 28 47.40 -1.4
1.2s 40.15nm
AVF 111.29 322 ePKP 28 47.30 -1.9
1.1s 20.75nm
PLDF 111.49 321 ePKP 28 42.11 -7.6X
AGO 111.76 322 ePKP 28 43.78 -6.4X
PYM 111.98 321 ePKP 28 44.20 -6.4X
MAF 112.03 322 ePKP 28 49.10 -1.5
0.8s 6.70nm
GLA 112.13 53 ePKP 28 53.00 1.7
e 29 36.00
TCF 112.22 322 ePKP 28 49.50 -1.5
0.8s 32.25nm
MSU 112.36 47 PKP 28 52.80 1.0
LDF 112.47 325 ePKP 28 49.80 -1.6
0.8s 9.40nm
FLN 112.59 326 ePKP 28 49.90 -1.7
LSF 112.65 322 ePKP 28 50.00 -1.8
0.7s 15.45nm
CAF 112.95 321 ePKP 28 51.40 -1.1
0.9s 22.10nm
GRR 112.99 325 ePKP 28 51.00 -1.4
RJF 113.11 322 ePKP 28 51.50 -1.2
0.8s 9.40nm
LPF 113.28 325 ePKP 28 51.40 -1.5
0.8s 21.50nm
MFF 113.49 323 ePKP 28 51.60 -1.8
0.6s 36.05nm
LPO 113.61 321 ePKP 28 52.60 -1.2
0.9s 45.85nm
FRB 113.71 8 ePKP 28 52.00 -1.3
LFF 113.77 321 ePKP 28 52.70 -1.3
0.9s 29.50nm
EPF 114.93 320 ePKP 28 54.50 -1.9
0.9s 23.75nm
RSSD 115.45 39 PKP 28 57.00 -0.6
EBR 115.86 318 ePKP 28 59.00 0.9
e 30 08.00
eScS 39 28.00
EROO 115.92 318 ePKP 28 58.20 -0.1
GOL 116.70 43 PKP 28 59.80 -0.4
GLD 116.78 43 PKP 28 59.80 -0.4
RSON 117.12 28 PKP 28 59.00 -1.2
ECHE 117.42 317 ePKP 29 02.00 0.8
ACU 117.53 316 ePKP 29 02.00 0.5
ETOR 117.56 319 ePKP 29 02.00 0.5
ALQ 117.97 49 PKP 29 02.00 -0.6
1.0s 55.00nm
Z 19s 0.87um 5.4Msz
ePP 31 21.80
EVIA 118.92 317 ePKP 29 04.50 0.3
EMON 119.49 323 ePKP 29 05.00 0.0
ENIJ 119.51 315 ePKP 29 05.00 -0.3
ERUA 119.97 322 ePKP 29 06.50 0.5
EBAN 120.03 317 ePKP 29 06.40 0.2
AFC 120.31 316 ePKP 29 06.20 -0.8
ASMO 120.40 316 iPKP 29 06.00 -1.1
STS 120.53 324 ePKP 29 08.00 1.0
APHE 120.56 315 iPKP 29 07.00 -0.4
ACHM 120.58 316 iPKP 29 06.50 -0.9
EPLA 120.59 320 ePKP 29 08.20 1.0
TAF 120.64 313 ePKP 29 08.00 0.5
AAPN 120.69 316 iPKP 29 07.00 -0.6
ALOJ 120.77 316 iPKP 29 07.00 -0.8
ATEJ 120.80 316 iPKP 29 07.60 -0.3
MAL 121.17 316 iPKPd 29 08.50 0.1
EHOR 121.21 317 ePKP 29 08.70 0.3
EPRU 121.63 316 ePKP 29 09.20 -0.1
EJIF 122.05 316 ePKP 29 10.00 -0.1
EVAL 122.34 317 ePKP 29 12.00 1.4
ACO 122.44 44 iPKP 29 10.90 0.1
1.1s 133.20nm
NKM 122.50 315 iPKP 29 11.00 0.1
i 29 14.00
i 29 16.00
BMK 123.06 314 iPKP 29 12.50 0.5
IFR 123.23 313 iPKP 29 14.00 1.3
MEO 123.80 45 iPKPd 29 12.90 -0.7
SIO 124.89 43 ePKP 29 15.00 -0.6
AVE 125.01 313 iPKP 29 17.00 1.1
TUL 125.15 43 ePKP 29 08.50 -7.6X

1.2s 81.40nm
Z 22s 1.49um 5.6Msz
i 29 15.90
LR 09 00.00
TIO 126.04 311 iPKP 29 19.50 1.3
i 29 20.50
i 31 08.50
FVM 127.38 38 PKP 29 20.30 -0.1
PPM 130.40 63 (PKP) 29 29.50 2.2
PWLA 130.76 39 PKP 29 26.30 -0.6
RSCP 131.87 36 PKP 29 28.40 -0.6
pP 31 18.80
HRV 132.86 19 ePKP 29 30.24 -0.4
ePP 31 56.45
eSKP 32 45.01
eSKS 36 23.83
e 37 42.62
e 38 35.93
CBN 134.26 27 ePKP 29 33.00 -0.4
LNV 143.39 153 ePKP 29 47.00 -3.1X
LCCH 143.72 153 ePKP 29 49.00 -1.7
CHCH 143.74 154 ePKP 29 49.00 -1.9
TACH 143.85 154 ePKPd 29 48.50 -2.5
PCH 144.07 154 ePKPd 29 49.70 -1.8
SAN 144.15 154 ePKP 29 49.80 -1.7
ROCH 144.40 153 ePKPd 29 48.50 -3.7X
PEL 144.40 154 iPKPc 29 50.50 -1.5
1.4s 639.53nm
FCH 144.41 154 ePKPd 29 51.50 -0.9
JACH 144.83 153 ePKP 29 52.00 -0.8
SJS 146.71 69 ePKPd 29 58.70 2.2
LCR2 146.82 69 ePKP 30 00.00 3.3X
ICR 146.91 69 ePKP 30 01.70 4.5X
MRA 147.03 159 ePKPc 29 56.50 0.2
JCR 147.61 69 ePKP 29 57.00 -0.8
ACR 147.93 71 ePKP 30 03.40 5.2X
TCA 148.39 160 ePKPc 29 59.00 0.4
UPA 151.23 68 ePKPd 30 03.80 0.5
ANT 152.14 143 iPKPc 30 06.50 2.1
i 30 12.00
SLA 153.92 153 ePKPd 30 08.00 0.9
NNA 153.93 114 ePKP 30 07.72 0.6
0.7s 13.70nm
PSO 155.20 84 ePKP 30 10.50 1.1
HUA 155.29 116 ePKP 30 15.40 5.9X
BMA 157.50 201 ePKP 30 10.70 -1.0
e 30 44.70
e 31 39.70
BMG 157.88 67 iPKPd 30 22.50 10.1X
VAO 158.06 194 ePKP 30 13.30 0.9
e 30 25.80
epPKP 30 47.10
ePP 34 22.00
FISA 159.05 52 ePKP 30 14.00 0.4
SDV 159.27 59 ePKP 30 14.70 0.6
CCH 159.51 141 PKP 30 16.50 2.1
TOV 159.52 56 ePKP 30 14.80 0.6
PPD 159.69 184 ePKP 30 14.70 0.6
epPKP 30 54.00
eSKP 34 29.10
ePP 34 33.80
CEOS 161.14 56 ePKP 30 15.00 -0.9
GUAC 161.31 51 ePKP 30 16.00 -0.1
CAR 161.38 49 ePKP 30 15.00 -1.1
LLAV 161.49 49 ePKP 30 17.00 0.8
GUAN 162.69 48 ePKP 30 17.00 -0.5
PDCR 162.75 231 iPKPc 30 17.50 0.2
i 31 08.50
ITR 164.15 243 ePKP 30 18.00 -0.8
e 31 12.50
BAO 165.35 198 ePKP 30 20.10 0.2
e 31 18.50
S.D. = 1.2 on 376 of 417 obs.

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* SEP 14, 1989 19h 41m 19.13± 1.06s
30.546 N ±17.7km 14.963 W ±14.8km
DEPTH = 10.0km (geophysicist)
CANARY ISLANDS REGION (394)
MD 3.6 (RBA).

CTFE 2.35 209 iPc 41 58.70 0.3
i 42 23.00
GGC 2.49 194 iP 42 00.00 -0.4
i 42 27.00
TBT 3.17 235 iP 42 10.00 0.0
i 42 42.20
TIO 6.64 85 iPn 43 00.00 0.7

		iSn	44 09.00		
AVE	6.98	65 ePn	43 04.00	0.1	
		iSn	44 15.00		
IFR	8.86	68 iPn	43 29.00	-1.3	
		iSn	45 00.00		
NKM	9.39	56 ePn	43 38.00	0.5	
		eSn	45 17.00		
		eS	45 20.00		
S.D. = 0.8		on	7 of 7 obs.		

SEP 14, 1989 19h 45m 26.39± 0.71s
43.089 N ± 5.1km 13.298 E ± 6.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.6 (SSO).

CIO	0.15	313 iPg	45 30.96	0.9	
		iSg	45 34.59		
SSO	0.22	24 iPgd	45 32.00	0.8	
		iSg	45 37.28		
ALP	0.37	146 iPgd	45 34.23	0.2	
		iSg	45 39.99		
ASS	0.47	268 Pd	45 35.80	-0.1	
		eSg	45 42.00		
ARV	0.48	328 Pc	45 35.60	-0.6	
		eSg	45 43.30		
AOI	0.51	26 iPg	45 35.89	-0.9	
		iSg	45 43.71		
MNS	0.84	213 Pd	45 42.30	-0.3	
		eSg	45 55.00		
S.D. = 0.8		on	7 of 7 obs.		

SEP 14, 1989 23h 09m 44.82± 0.40s
40.746 N ± 3.5km 23.107 E ± 4.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.1 (ATH).

THE	0.16	224 iPgc	09 48.90	0.5	
		iSg	09 51.30		
KNT	0.44	339 iPgc	09 53.70	-0.2	
		iSg	09 58.50		
PLG	0.45	145 ePb	09 53.60	-0.4	
SRS	0.52	45 iPgc	09 54.80	-0.6	
		iSg	10 01.80		
GRG	0.58	292 iPgc	09 56.20	-0.3	
		iSg	10 04.70		
OUR	0.78	121 ePg	09 59.70	-0.3	
		eSg	10 11.00		
LIT	0.80	216 ePg	10 00.50	0.2	
PAIG	0.93	152 ePg	10 01.60	-0.9	
		eSg	10 15.40		
MMB	0.96	29 iPgc	10 02.00	-1.2	
		Sg	10 15.00		
KZN	1.11	247 ePb	10 06.00	0.3	
KKB	1.12	359 iP	10 05.00	-0.8	
NEO	1.44	176 ePb	10 11.20	0.2	
RZN	1.54	52 iP	10 14.00	1.5	
SKO	1.75	315 ePn	10 15.00	-0.5	
		i	10 38.50		
PLD	1.81	41 eP	10 20.00	3.7X	
VTS	1.85	2 iPd	10 18.00	1.1	
KDZ	1.96	62 iP	10 20.00	1.5	
PGB	1.97	23 iPg	10 22.00	3.4X	
S.D. = 0.9		on	16 of 18 obs.		

? SEP 14, 1989 23h 59m 38.13± 0.81s
32.086 S ±18.5km 69.393 W ±13.5km
DEPTH = 130.0km (geophysicist)
MENDOZA PROVINCE, ARGENTINA (139)

ZON	0.81	49 eP	00 00.00	0.3	
		eS	00 15.00		
JACH	1.18	239 eP	00 03.50	0.3	
		eS	00 21.00		
FCH	1.45	211 iPd	00 12.80	6.4X	
		iS	00 38.50		
PEL	1.52	226 iPc	00 07.00	0.2	
		iS	00 27.00		
ROCH	1.63	237 iPc	00 08.00	-0.3	
		iS	00 30.00		
SAN	1.73	218 eP	00 09.50	0.2	
		iS	00 32.50		
PCH	1.80	211 iPd	00 11.00	0.8	
		iS	00 34.70		
TACH	2.03	219 iPd	00 12.80	-0.2	
		iS	00 38.50		
CHCH	2.12	210 eP	00 14.50	0.4	
		iS	00 41.90		
LNV	2.52	222 eP	00 17.70	-1.4	
		iS	00 47.50		
TCA	4.16	81 ePc	00 40.60	-0.3	
S.D. = 0.7		on	10 of 11 obs.		

SEP 15, 1989 00h 01m 51.92± 0.38s
44.427 N ± 2.8km 7.323 E ± 4.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.4 (GEN).

DOI	0.09	324 P	01 55.00	0.3	
		eSg	01 56.80		
PZZ	0.18	296 P	01 56.29	0.3	
		S	01 58.82		
STV	0.18	180 P	01 56.36	0.3	
		S	01 58.82		
ENR	0.21	161 P	01 56.87	0.3	
		S	01 59.67		
ROB	0.41	108 P	02 00.80	0.4	
		S	02 06.62		
TOUF	0.42	187 Pg	02 00.34	-0.2	
AUTN	0.44	170 Pg	02 00.94	0.0	
		Sg	02 06.84		
SAOF	0.47	159 Pg	02 01.31	-0.2	
		Sg	02 07.66		
AURF	0.54	180 Pg	02 02.59	-0.3	
		Sg	02 10.28		
MVIF	0.54	193 Pg	02 02.63	-0.3	
		Sg	02 10.39		
S8F	0.57	172 Pg	02 03.40	-0.1	
		Sg	02 10.80		
RRL	0.62	322 P	02 04.23	-0.4	
IMI	0.66	142 P	02 04.80	-0.3	
		S	02 13.38		
FRF	0.99	210 Pg	02 10.80	0.0	
		Sg	02 23.40		
LPG	1.14	339 Pg	02 13.20	-0.3	
LRG	1.20	216 Pg	02 14.60	0.4	
		Sg	02 30.00		
S.D. = 0.3		on	16 of 16 obs.		

SEP 15, 1989 00h 14m 23.87± 0.65s
40.757 N ± 5.6km 23.114 E ± 6.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 2.9 (ATH).

THE	0.17	222 iPgc	14 27.20	-0.5	
		iSg	14 32.10		
KNT	0.44	338 iPgc	14 32.10	-0.7	
		iSg	14 37.50		
PLG	0.46	146 ePb	14 32.30	-0.9	
SRS	0.51	45 ePg	14 33.10	-1.1	
		eSg	14 42.70		
GRG	0.58	290 ePg	14 34.70	-0.9	
OUR	0.78	122 ePg	14 38.40	-0.7	
MMB	0.95	29 ePg	14 41.00	-1.0	
KZN	1.12	247 ePb	14 45.00	0.1	
NEO	1.45	177 ePb	14 52.00	1.8	
RZN	1.52	52 iP	14 53.00	1.6	
OHR	1.79	282 e(P)	15 06.50	11.4X	
VTS	1.83	2 eP	14 58.00	2.2	
KDZ	1.95	62 iP	15 00.00	2.6X	
PGB	1.96	23 iP	15 02.00	4.5X	
S.D. = 1.4		on	11 of 14 obs.		

& SEP 15, 1989 00h 24m 56.33s
60.426 N 144.824 W
DEPTH = 0.1km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.4 (PMR).

RAGM	0.08	118 iP	24 57.58	-0.4	
		iS	24 59.35		
SGAM	0.20	292 iP	25 01.08	0.7	
		iS	25 05.76		
HMT	0.29	108 iP	25 02.22	0.0	
		iS	25 07.60		
CVA	0.47	285 iP	25 05.59	-0.2	
		iS	25 11.96		
KAIM	0.54	158 eP	25 07.85	0.7	
HIN	0.83	269 eP	25 12.44	-0.5	
		iS	25 25.51		
FID	0.88	292 iP	25 14.06	0.2	
WAX	0.98	88 iP	25 14.96	-0.9	
		eS	25 31.42		
SNH	1.02	103 iP	25 15.84	-0.7	
		iS	25 31.91		
VLZ	1.02	314 eP	25 16.53	-0.1	
		eS	25 33.67		
TGL	1.04	71 eP	25 15.59	-1.4	
		eS	25 31.25		
VZW	1.06	308 eP	25 17.01	-0.3	
		eS	25 34.82		
GLB	1.13	25 iP	25 17.46	-1.1	
		eS	25 33.71		
KLU	1.20	334 iP	25 19.46	-0.2	
		eS	25 38.23		
GLI	1.21	293 eP	25 19.32	-0.4	
CYK	1.22	105 eP	25 18.72	-1.1	
		eS	25 36.61		
MID	1.26	218 eP	25 19.90	-0.7	
BALM	1.36	62 eP	25 20.64	-1.9	
		eS	25 40.38		
CTGM	1.80	71 eP	25 27.75	-1.2	
TOA	1.81	339 iPc	25 29.70	0.7	
KNK	2.03	301 eP	25 32.15	-0.1	
SDG	2.14	351 eP	25 34.53	0.8	
SEW	2.33	264 eP	25 32.32	-4.1	
PME	2.38	302 eP	25 36.92	-0.3	
PLRM	2.40	301 eP	25 37.64	0.1	
PMR	2.40	301 eP	25 38.90	1.4	
GHO	2.41	306 eP	25 37.62	-0.1	
PMS	2.46	292 eP	25 37.40	-1.0	
PAX	2.57	353 eP	25 40.10	0.1	
SLKM	2.67	274 eP	25 39.22	-2.2	
YKU	2.71	107 e(P)	25 43.00	1.2	
PWA	2.75	299 eP	25 43.00	0.5	
HYT	3.63	80 P	25 55.00	-0.1	
KDC	4.78	239 eP	26 08.70	-2.6	
SVW	5.34	282 eP	26 21.20	1.9	
IMA	6.93	329 eP	26 43.70	2.0	
36 obs. assocloted					

• SEP 15, 1989 00h 33m 56.85± 2.25s
45.038 N ±15.4km 3.225 E ±16.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG). MD 2.4 (STR).

LBL	0.20	5 Pg	34 00.44	-0.7	
		Sg	34 04.01		
PYM	0.73	348 P	34 10.40	-0.8	
		Sg	34 20.71		
CAF	0.83	263 Pg	34 11.40	-1.5	
		Sg	34 23.00		
PLDF	0.97	16 Pg	34 14.33	-1.1	
		Sg	34 27.06		
AGO	1.02	356 Pg	34 15.54	-0.6	
		Sg	34 29.50		
MAF	1.27	339 Pg	34 20.20	-0.2	
		Sg	34 37.60		
TCF	1.44	331 Pg	34 23.20	0.2	
		Sg	34 43.20		
LPO	1.49	257 Pg	34 23.50	-0.2	
		Sg	34 44.40		
SMF	1.66	15 Pg	34 26.80	0.6	
		Sg	34 47.50		
LSF	1.70	316 Pg	34 28.40	1.7	
		Sg	34 50.20		
AVF	1.76	3 Pg	34 29.00	1.5	
		Sg	34 51.00		
LFF	1.77	268 Pg	34 28.50	0.9	
		Sg	34 53.00		
EPF	2.89	227 Pg	34 48.80	5.0X	
		Sg	35 26.60		
S.D. = 1.1		on	12 of 13 obs.		

& SEP 15, 1989 00h 49m 20.69s
60.416 N 144.824 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.3 (PMR).

RAGM	0.08	111 iP	49 21.71	-0.6	
SGAM	0.21	294 iP	49 25.25	0.4	
HMT	0.29	106 eP	49 26.33	-0.2	
		iS	49 31.76		
CVA	0.48	286 iP	49 29.76	-0.4	
		eS	49 36.15		
KAIM	0.53	157 eP	49 31.91	0.6	

15d 00h

		eS	49 40.63		
HIN	0.83	269 eP	49 36.66	-0.7	
		eS	49 49.60		
FID	0.88	293 eP	49 38.31	0.0	
		eS	49 55.61		
WAX	0.98	87 iP	49 39.12	-1.1	
		eS	49 53.18		
SNH	1.02	103 iP	49 39.98	-0.9	
		iS	49 56.22		
VLZ	1.03	315 eP	49 40.73	-0.4	
		eS	49 58.50		
TGL	1.04	70 eP	49 39.61	-1.8	
		eS	49 55.36		
VZW	1.07	308 iP	49 41.45	-0.3	
		eS	49 59.75		
GLB	1.14	25 iP	49 41.66	-1.4	
KLU	1.21	334 iP	49 43.64	-0.5	
		eS	50 02.45		
GLI	1.21	294 eP	49 43.50	-0.7	
CYK	1.21	105 iP	49 42.84	-1.3	
		iS	50 01.13		
MID	1.25	218 ePc	49 44.00	-0.8	
BALM	1.37	62 eP	49 44.80	-2.2	
		eS	50 04.31		
MTU	1.48	254 eP	49 47.78	-0.8	
CTGM	1.80	71 eP	49 52.34	-1.1	
		eS	50 16.70		
TOA	1.82	340 iPc	49 53.80	0.3	
KNK	2.04	301 eP	49 56.15	-0.5	
SDG	2.15	351 eP	49 58.59	0.3	
PME	2.38	303 eP	50 02.20	0.6	
PLRM	2.41	301 eP	50 01.40	-0.6	
PMR	2.41	301 eP	50 03.30	1.3	
GHO	2.41	306 eP	50 02.47	0.3	
PMS	2.46	292 eP	50 02.00	-0.9	
PAX	2.58	353 eP	50 04.38	-0.2	
SLKM	2.68	274 eP	50 03.33	-2.5	
YKU	2.70	106 P	50 06.90	0.7	
PWA	2.75	299 eP	50 07.20	0.3	
SUA	3.07	293 eP	50 09.68	-1.9	
HYT	3.63	80 P	50 20.00	0.5	
JMA	6.93	329 eP	51 08.00	1.8	

35 obs. associated

? SEP 15, 1989 01h 00m 36.98± 3.73s
51.308 N ±28.4km 15.957 E ±19.6km
DEPTH = 10.0km (geophysicist)
POLAND (548)
ML 3.2 (VKA).

KSP	0.51	155 iPd	00 46.20	-1.2	
		iS	00 54.70		
BRG	1.34	252 iPg	01 01.40	-0.3	
		iSg	01 21.00		
PRU	1.60	215 Pn	01 05.00	-0.3	
		Pg	01 06.50		
		Sn	01 23.50		
		Sg	01 31.50		
CLL	1.85	271 ePg	01 09.00	0.0	
		eSg	01 36.00		
KHC	2.66	216 Pn	01 21.40	0.7	
		Pg	01 26.50		
		Sn	01 52.90		
		Sg	02 07.40		
MOX	2.82	258 ePg	01 29.00	6.0X	
		iSg	02 09.00		
WET	2.93	224 iPnc	01 23.90	-0.6	
VKA	3.06	175 iP	01 27.90	1.7	
		ePg	01 32.50		
		i	01 56.60		
		eSg	02 13.00		
		i	02 16.10		
ZST	3.20	166 eP	02 21.80	53.5X	
KBA	4.57	203 eP	02 51.00	63.2X	

S.D. = 1.1 on 7 of 10 obs.

? SEP 15, 1989 01h 15m 43.63± 2.27s
15.194 S ±18.5km 167.221 E ±15.8km
DEPTH = 147.5 ± 20.3 km
4.6mb (4 obs.)
VANUATU ISLANDS (186)

PVC	2.74	158 iP	16 28.50	0.4	
		iS	17 00.50		
DZM	6.88	186 iPc	17 22.50	-0.8	
		iS	18 36.80		
BRS	18.10	226 eP	19 40.00	-7.0X	
CTA	20.56	253 iPd	20 16.80	4.3X	
	1.2s	20.31nm		4.4mb	
		iS	24 02.00		
RMO	20.57	234 e(P)	20 13.00	0.5	
BWA	25.57	218 eP	21 00.60	0.0	
CAN	25.86	216 eP	21 14.10	10.8X	
WRA	31.67	257 Pd	21 54.80	-0.4	
	0.7s	1.90nm		4.0mb	
ASPA	32.47	250 iPc	22 02.10	-0.1	
	1.1s	23.00nm		4.9mb	
Z	19s	0.33um		4.0Msz	
		eS	27 05.60		
		eSeP	28 18.80		
		LR	34 46.20		
SBA	62.67	180 iPd	25 54.90	0.7	
KMI	74.51	302 Pd	27 09.50	1.2	
SPA	74.90	180 e(P)	27 09.20	-0.6	
	1.0s	35.00nm		5.0mb	
MAW	81.44	202 eP	27 46.00	1.0	
BUL	126.26	230 iPKPc	34 31.00	-0.2	
OGA	142.71	333 ePKP	34 58.00	-3.2X	
CDF	142.99	338 ePKP	34 57.50	-4.0X	
HAU	143.66	338 ePKP	34 58.70	-3.9X	
	1.0s	10.00nm			
SAL	143.90	332 PKP	35 00.00	-3.0	
ARV	144.25	327 PKPd	35 02.50	-1.2	
VAI	144.47	334 PKP	35 01.70	-2.2	
SFI	144.51	329 PKP	35 04.20	0.1	
PGD	144.61	329 PKPc	35 04.00	-0.5	
ASS	144.70	327 PKPc	35 03.00	-1.5	
TDS	144.76	319 PKP	35 03.40	-1.3	
SGO	144.85	321 PKPd	35 03.60	-1.1	
MME	144.88	330 PKPc	35 04.80	-0.3	
ORO	144.99	334 PKPc	35 03.50	-1.5	
AZI	145.02	325 PKP	35 04.50	-0.5	
BDI	145.03	330 PKP	35 03.00	-2.1	
BOB	145.03	332 PKPd	35 04.70	-0.4	
FLN	145.03	346 ePKP	35 02.70	-2.1	
	1.1s	53.70nm			
LDF	145.10	345 ePKP	35 03.00	-2.0	
	1.1s	41.50nm			
LOR	145.16	340 ePKP	35 03.70	-1.4	
	1.3s	86.65nm			
MNS	145.16	326 PKP	35 03.50	-1.8	
ITR	145.18	131 ePKP	35 02.30	-3.8X	
LBF	145.37	340 ePKP	35 04.50	-1.0	
	1.2s	92.25nm			
SSF	145.45	340 ePKP	35 05.00	-0.6	
GRR	145.47	346 ePKP	35 04.50	-1.1	
	1.1s	85.45nm			
LSD	145.47	335 PKP	35 06.85	0.8	
LPG	145.60	335 ePKP	35 06.00	-0.3	
	1.3s	66.80nm			
PCP	145.61	333 PKP	35 05.83	-0.2	
SMF	145.71	340 ePKP	35 05.40	-0.7	
	1.4s	71.90nm			
AVF	145.74	340 ePKP	35 05.50	-0.6	
	1.1s	23.20nm			
SOI	145.84	317 PKP	35 07.00	0.5	
LPF	145.85	346 ePKP	35 05.70	-0.5	
	1.1s	65.95nm			
BNI	146.00	335 PKPc	35 08.00	1.2	
RRL	146.06	335 PKP	35 07.67	0.7	
ROB	146.10	333 PKP	35 06.96	0.1	
PZZ	146.27	334 PKP	35 08.49	1.3	
ENR	146.35	333 PKP	35 06.96	-0.4	
PLDF	146.37	339 PKP	35 08.39	1.1	
STV	146.38	334 PKP	35 07.88	0.5	
IMI	146.40	333 PKP	35 07.57	0.2	
AGO	146.46	340 PKP	35 08.20	0.9	
MAF	146.50	341 ePKP	35 07.80	0.4	
	1.1s	19.55nm			
TCF	146.55	341 ePKP	35 08.00	0.5	
	1.1s	32.95nm			
SBF	146.64	333 ePKP	35 07.80	0.1	
	1.2s	56.55nm			
PYM	146.77	340 PKP	35 09.49	1.6	
LSF	146.80	342 ePKP	35 08.40	0.6	
	1.0s	29.00nm			
MFF	146.95	344 ePKP	35 09.00	0.9	
	0.9s	29.50nm			
LBL	147.14	339 PKP	35 10.83	2.5	
FRF	147.22	333 ePKP	35 09.80	1.2	
	1.1s	31.75nm			
LRG	147.43	334 ePKP	35 10.40	1.5	
	1.0s	14.00nm			
LMR	147.46	333 ePKP	35 10.30	1.3	
	1.0s	18.00nm			
RJF	147.65	341 ePKP	35 11.10	1.9	
	1.0s	18.00nm			
CAF	147.81	340 ePKP	35 11.70	2.2	
	1.0s	12.00nm			
LFF	148.22	342 ePKP	35 12.40	2.3	
	1.0s	28.00nm			
LPO	148.31	341 ePKP	35 12.70	2.4	
	1.0s	18.00nm			

S.D. = 1.3 on 61 of 68 obs.

SEP 15, 1989 02h 24m 27.63± 0.33s
40.175 N ± 4.2km 25.081 E ± 3.0km
DEPTH = 33.0km (normal)
AEGEAN SEA (365)
MD 3.4 (ATH).

OUR	0.86	281 iPgd	24 43.10	-0.1	
EZN	1.02	110 iPg	24 46.10	0.5	
		iSg	24 58.10		
ALN	1.03	45 iPgc	24 45.70	-0.1	
		iSg	25 01.20		
PAIG	1.10	258 ePg	24 46.60	-0.2	
PLG	1.27	280 iPnd	24 49.00	-0.2	
PRK	1.31	135 ePn	24 50.40	0.7	
SRS	1.47	310 iPb	24 51.90	-0.2	
KDZ	1.50	10 iPd	24 52.00	-0.4	
RZN	1.54	350 iP	24 54.00	0.8	
NEO	1.67	239 ePn	24 54.00	-1.1	
THE	1.68	286 ePb	24 56.40	1.3	
MMB	1.75	324 iPd	24 56.00	-0.1	
KNT	1.93	301 ePb	24 59.00	0.2	
PLD	1.95	352 eP	25 05.00	6.0X	
EDC	2.14	84 ePn	25 08.00	6.3X	
BNT	2.18	84 iPn	25 02.40	0.1	
IZM	2.45	136 iPn	25 06.10	-0.1	
PGB	2.47	344 iP	25 06.00	-0.5	
KCT	2.51	87 iPn	25 06.90	-0.1	
KZN	2.54	274 ePn	25 07.70	0.2	
JMB	2.55	26 iP	25 15.00	7.4X	
VTS	2.80	330 eP	25 12.00	0.9	
SKO	3.29	304 ePn	25 11.00	-7.0X	
YLV	3.30	82 ePn	25 17.40	-0.9	
OHR	3.39	287 ePn	25 23.30	3.7X	
MLR	5.35	7 eP	25 48.00	0.6	
BZS	6.00	336 ePc	25 55.00	-1.4	

S.D. = 0.7 on 22 of 27 obs.

SEP 15, 1989 03h 06m 26.58± 0.64s
36.439 N ± 8.9km 28.054 E ± 7.8km
DEPTH = 33.0km (normal)
DODECANESE ISLANDS (369)

YER	0.72	15 iPg	06 40.00	-0.3	
		iSg	06 51.60		
KAP	1.14	219 ePn	06 46.70	0.5	
KSL	1.28	104 ePn	06 47.50	-0.7	
ELL	1.52	78 iPn	06 52.50	0.6	
KHL	2.22	31 ePn	07 02.00	0.2	
BCK	2.27	63 ePn	07 02.70	0.1	
NPS	2.30	240 ePn	07 02.70	-0.3	

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

SEP 15, 1989 03h 30m 28.08± 0.40s
40.763 N ± 3.3km 23.120 E ± 4.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.2 (ATH).

THE	0.18	222 iPgc	30 32.10	0.1	
		iSg	30 34.60		
KNT	0.43	337 iPgc	30 37.00	0.1	
		iSg	30 42.60		
PLG	0.46	147 iPbc	30 36.80	-0.7	
SRS	0.50	45 iPgc	30 38.10	-0.2	
		iSg	30 45.10		
GRG	0.58	290 ePg	30 39.40	-0.4	
		eSg	30 48.60		
OUR	0.78	123 ePg	30 43.10	-0.2	
		eSg	30 54.20		
LIT	0.82	216 ePg	30 43.90	0.0	
		eSg	30 55.60		
PAIG	0.94	153 ePg	30 46.40	0.4	
		eSg	30 58.60		
MMB	0.94	29 iPgc	30 45.00	-1.1	
KKB	1.10	359 iPgd	30 49.00	0.2	
KZN	1.12	247 ePb	30 49.50	0.3	

NEO 1.46 177 ePb 30 54.50 0.1
RZN 1.52 52 iPc 30 57.00 1.5
SKO 1.75 314 ePn 30 54.00 -4.6X
i 31 22.00
OHR 1.79 282 ePn 31 01.20 1.9X
PLD 1.79 41 eP 31 03.00 3.7X
KDZ 1.95 62 iP 31 04.00 2.5X
PGB 1.95 23 iPc 31 04.00 2.4X
S.D. = 0.7 on 13 of 18 obs.

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* SEP 15, 1989 04h 15m 48.29± 1.13s
10.167 S ±10.4km 161.214 E ±12.5km
DEPTH = 113.6 ± 10.5 km
4.8mb (3 obs.)
SOLOMON ISLANDS (193)

HNR 1.45 300 iP 16 14.50 -0.5
iS 16 35.00
SVO 1.71 306 iP 16 18.50 0.3
iS 16 40.00
DZM 12.86 158 iPc 18 48.00 -0.1
iS 21 05.80
CTA 17.47 234 iPc 19 48.00 1.6
1.0s 78.00nm 4.9mb
WRA 27.67 246 Pd 21 27.50 -0.2
0.4s 12.30nm 4.9mb
ASPA 29.30 239 iPc 21 40.50 -1.8
Z 23s · 0.13um 3.5MszX
LR 31 59.00
MBL 41.20 250 eP 23 24.00 0.5
SPA 79.90 180 ePc 27 45.40 -0.4
1.0s 9.00nm 4.5mb
e 28 09.40
IMA 82.92 17 eP 28 02.00 0.6
FBA 83.93 19 eP 28 05.70 -0.7
PNT 90.66 40 eP 28 40.00 0.8
PDCR 149.73 138 ePKP 35 24.80 2.6X
S.D. = 1.1 on 11 of 12 obs.

? SEP 15, 1989 04h 50m 55.27± 2.25s
31.332 S ±35.2km 67.811 W ±10.1km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.77 254 eP 51 09.00 -1.4
eS 51 19.00
MRA 2.09 122 ePd 51 29.50 -1.2
JACH 2.72 240 iPc 51 41.50 1.6
eS 52 14.50
TCA 2.76 91 ePd 51 41.20 0.8
FCH 2.89 226 eP 51 44.00 1.5
iS 52 17.50
PEL 3.03 233 ePd 51 43.50 -0.7
i(S) 52 22.00
PCH 3.23 224 eP 51 49.00 1.9
iS 52 27.70
TACH 3.51 228 eP 51 49.00 -2.0
eS 52 36.50
LNV 4.01 228 eP 51 57.50 -0.5
S.D. = 1.7 on 9 of 9 obs.

SEP 15, 1989 06h 23m 24.49± 0.88s
51.461 N ± 5.2km 150.773 E ± 3.2km
DEPTH = 534.9 ± 11.6 km
4.4mb (26 obs.)
SEA OF OKHOTSK (663)

MAT 17.40 216 (P) 26 58.00 0.8
0.7s 19.86nm 4.9mb
CN2 18.64 256 eP 27 08.00 -1.2
TIA 28.35 251 P 28 35.60 -1.1
TTA 30.11 47 eP 28 51.80 0.2
SVW 30.43 51 eP 28 55.30 0.9
IMA 31.06 41 iPd 29 00.00 0.2
0.7s 31.20nm 5.0mb
KDC 32.59 56 ePd 29 11.90 -0.6
PMR 33.46 49 P 29 19.80 0.1
FBA 33.57 43 iPd 29 21.20 0.5
LZH 36.53 264 eP 29 47.00 1.3
1.0s 0.03nm 1.9mb X
GTA 37.01 271 iPc 29 50.20 0.6
INK 38.59 35 iPd 30 02.40 0.4
0.5s 22.00nm 5.0mb
GYA 41.55 250 P 30 26.00 -0.4
WMO 41.99 285 Pc 30 30.30 0.6
CHG 51.95 251 iPd 31 45.50 0.0
1.0s 17.50nm 4.4mb

KEV 52.39 339 eP 31 49.00 1.0
PNT 53.65 54 eP 31 57.00 -0.4
EDM 54.21 48 iPd 32 00.70 -0.6
SES 57.15 49 ePd 32 21.00 -0.7
WDC 57.79 64 eP 32 26.20 0.1
SUF 58.09 333 eP 32 30.00 2.2
FFC 58.14 41 iPd 32 27.60 -0.7
0.6s 15.00nm 4.5mb
MIN 58.47 64 eP 32 31.60 0.6
ORV 59.07 64 eP 32 34.10 -0.7
LRM 59.60 54 eP 32 38.50 0.0
NUR 60.30 333 eP 32 42.00 -0.6
MHC 60.52 66 eP 32 44.40 -0.1
GCC 60.53 67 eP 32 44.10 -0.3
CMB 60.75 65 eP 32 46.10 0.2
PRS 61.38 67 eP 32 50.00 0.0
LLA 61.42 66 eP 32 50.60 0.3
FRI 61.86 65 eP 32 52.80 -0.3
NB2 63.27 339 P 33 01.20 -0.7
0.9s 8.80nm 4.2mb
HFS 63.51 338 eP 33 02.30 -1.0
0.4s 14.00nm 4.8mb
ISA 63.51 65 eP 33 03.00 -0.8
CLC 63.89 65 eP 33 06.00 -0.2
SBB 64.57 66 eP 33 10.00 -0.6
GSC 64.71 65 eP 33 12.00 0.6
RVR 65.33 66 eP 33 14.00 -1.2
TPC 66.01 65 eP 33 20.00 0.5
PLM 66.09 66 eP 33 20.00 -0.2
MTN 66.28 201 iPc 33 20.90 -0.2
0.5s 17.00nm 4.9mb
BAR 66.69 67 eP 33 24.00 0.4
GLA 67.47 65 eP 33 29.00 0.6
GBA 69.10 266 Pc 33 37.40 -0.9
0.8s 5.30nm 4.1mb
ALQ 70.66 58 iPd 33 47.90 0.3
1.0s 7.50nm 4.2mb
EKA 71.39 345 Pc 33 51.60 0.4
0.4s 1.50nm 3.9mb
CLL 71.55 334 iPc 33 52.00 -0.2
1.1s 21.00nm 4.6mb
BRG 71.67 333 e(P) 33 53.00 0.1
PRU 72.29 332 eP 33 57.00 0.5
MOX 72.53 334 e(P) 33 58.00 0.1
WRA 72.54 196 Pc 33 58.20 -0.1
0.9s 6.40nm 4.2mb
ZST 73.10 330 eP 33 58.00 -3.1X
KHC 73.34 332 iPc 34 03.00 0.4
SIO 75.19 51 eP 34 13.10 0.0
TUL 75.31 50 eP 34 14.00 0.3
1.0s 15.00nm 4.4mb
CDF 75.72 336 eP 34 15.30 -0.6
ASPA 76.26 196 iPd 34 19.20 0.2
0.8s 14.00nm 4.5mb
HAU 76.33 336 eP 34 18.30 -0.9
BSF 76.38 336 eP 34 18.50 -1.0
LOR 77.63 338 eP 34 25.50 -0.7
0.9s 8.10nm 4.2mb
LBF 77.86 337 eP 34 26.90 -0.6
0.8s 5.90nm 4.1mb
SSF 77.90 338 eP 34 27.30 -0.3
AVF 78.20 338 eP 34 29.00 -0.2
0.8s 6.70nm 4.1mb
SMF 78.22 337 eP 34 29.10 -0.2
1.0s 18.00nm 4.5mb
LPG 78.55 335 eP 34 31.70 0.2
0.5s 5.80nm 4.3mb
MAF 78.92 338 eP 34 33.10 0.1
0.7s 16.50nm 4.6mb
TCF 78.94 338 eP 34 32.90 -0.2
0.7s 3.70nm 3.9mb
LSF 79.13 339 eP 34 33.90 -0.2
0.8s 14.70nm 4.5mb
RJF 80.02 339 eP 34 38.80 0.0
CAF 80.25 338 eP 34 40.50 0.5
0.9s 11.40nm 4.3mb
LFF 80.55 339 eP 34 41.70 0.3
0.7s 9.70nm 4.4mb
LPO 80.69 339 eP 34 42.40 0.2
0.8s 8.00nm 4.3mb
MBH 81.50 308 eP 34 47.00 0.4
ZOBO 133.22 56 ePKP 41 31.00 -10.4X
LPB 133.46 56 ePKP 41 43.00 1.4
CNCB 133.75 56 PKP 41 43.30 0.9
VAO 148.45 32 ePKP 42 11.60 4.2X
S.D. = 0.6 on 75 of 78 obs.

& SEP 15, 1989 08h 14m 17.22s
60.381 N 144.862 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 4.5 (PMR). Felt (IV)
at Cordova.

RAGM 0.09 86 iP 14 18.74 -0.3
SGAM 0.21 305 iP 14 22.17 0.8
HMT 0.30 98 iP 14 23.29 0.0
iS 14 28.80
CVA 0.47 291 iP 14 26.66 0.1
KAIM 0.51 154 eP 14 27.30 0.0
HIN 0.81 272 iP 14 33.46 0.0
iS 14 49.51
FID 0.88 296 iP 14 35.17 0.4
WAX 1.00 85 iP 14 36.08 -1.1
SNH 1.03 100 iP 14 36.91 -0.7
iS 14 53.14
VLZ 1.04 317 eP 14 37.21 -0.6
eS 14 55.36
TGL 1.07 69 iP 14 36.58 -1.8
VZW 1.07 310 eP 14 37.27 -1.1
GLB 1.18 25 iP 14 38.72 -1.5
GLI 1.21 295 iP 14 40.36 -0.3
MID 1.21 219 iPc 14 40.80 0.1
CYK 1.22 103 iP 14 39.73 -1.1
eS 14 57.85
KLU 1.23 336 iP 14 40.56 -0.5
BALM 1.40 61 iP 14 41.83 -2.2
MTU 1.45 255 eP 14 44.33 -0.4
CTGM 1.83 70 iP 14 48.87 -1.5
TOA 1.84 340 iPc 14 50.80 0.4
KNK 2.04 302 eP 14 52.69 -0.5
SDG 2.18 352 eP 14 55.17 -0.1
SEW 2.30 265 eP 14 54.96 -2.1
PME 2.39 303 eP 14 57.54 -0.7
PLRM 2.41 302 eP 14 57.54 -1.0
PMR 2.41 302 ePc 14 57.80 -0.7
PMS 2.46 293 eP 14 58.30 -1.0
PAX 2.62 354 eP 15 00.99 -0.6
SLKM 2.66 275 iP 15 00.23 -1.9
YKU 2.71 106 ePc 15 03.00 0.2
PWA 2.75 300 eP 15 02.00 -1.5
SUA 3.07 293 eP 15 06.50 -1.5
NKA 3.17 279 eP 15 15.80 6.5
NNL 3.23 267 eP 15 08.61 -1.5
DOT 3.30 6 eP 15 11.13 -0.1
DDM 3.45 353 eP 15 13.55 0.1
SKT 3.61 299 eP 15 13.44 -2.1
HYT 3.66 80 P 15 14.70 -1.7
NCG 3.71 289 eP 15 14.85 -2.3
RDT 3.74 276 iP 15 14.57 -2.9
ILIM 4.05 269 eP 15 18.51 -3.4
OPT 4.26 264 eP 15 23.19 -1.7
KTH 4.28 321 eP 15 24.21 -0.9
DWY 4.48 32 P 15 26.50 -1.4
CCB 4.49 344 eP 15 25.75 -2.4
FBA 4.73 345 ePc 15 29.00 -2.5
KDC 4.74 239 eP 15 28.80 -2.8
SVW 5.33 283 eP 15 37.00 -3.0
TTA 5.89 301 eP 15 45.00 -3.0
SIT 5.98 120 eP 15 46.60 -2.5
IMA 6.95 329 eP 16 00.50 -2.5
i 16 05.10
INK 9.33 27 eP 16 32.00 -3.9
SDN 9.73 246 eP 16 38.20 -3.2
EDM 18.54 99 eP 18 35.00 -1.8
LON 19.19 125 eP 18 42.50 -2.3
SES 21.41 103 eP 19 06.00 -2.6
LRM 23.98 113 eP 19 33.50 -0.7
KVN 27.14 130 eP 20 02.50 -1.4
TNP 28.32 129 eP 20 12.50 -2.1
60 obs. associated

SEP 15, 1989 08h 49m 55.47± 0.15s
19.329 S ± 4.2km 175.800 W ± 3.4km
DEPTH = 144.8km (geophysicist)
5.5mb (36 obs.)
TONGA ISLANDS (173)
Depth from broadband
displacement seismograms.

AFI 6.63 36 iPc 51 35.30 3.6X
eS 52 36.00
PVC 15.15 273 iPd 53 32.50 9.3X
RAR 15.16 100 P 53 26.00 2.8

15d 08h

			S	56	14.00				0.7s	192.00nm		6.0mb		FBA	86.67	12	ePd	02	22.80	-0.6
DZM	16.84	258	iPd	53	50.00	5.9X		WARB	53.16	251	eP	59	00.00	-0.8			e	02	33.50	
PGZ	22.28	196	eP	54	42.30	1.0		COOL	57.59	245	eP	59	31.00	-1.6			e	03	48.60	
	0.6s	83.00nm				5.3mb		MBL	60.04	256	iPd	59	48.20	-1.4	IMA	86.76	9	eP	02	23.80	-0.2
MNG	22.50	198	eP	54	43.00	-0.4			0.8s	108.00nm		5.9mb				1.2s	12.10nm			4.7mb	
	0.2s	20.00nm				5.2mb		MEKA	60.33	250	eP	59	50.00	-1.5	GYA	87.88	299	P	02	31.20	1.0
KIW	22.89	198	eP	54	48.20	1.0			0.3s	13.00nm		5.4mb			HIA	88.96	324	ePd	02	35.43	0.7
MTW	22.99	197	P	54	48.60	0.4		KLB	60.42	244	eP	59	51.00	-1.1	NNT	88.99	284	eP	02	36.60	1.1
CAW	23.07	198	P	54	48.80	-0.2		NWAO	60.74	243	eP	59	53.00	-1.2	NST	89.67	287	eP	02	41.10	2.5
BLW	23.20	197	P	54	51.40	1.2		RKG	60.83	241	eP	59	54.10	-0.7	SES	89.72	35	eP	02	38.00	-0.2
WDW	23.24	198	P	54	50.80	0.2		BAL	61.42	245	eP	59	57.00	-1.9				pP	03	34.00	229kmX
MRW	23.29	198	P	54	51.30	0.2		MUN	61.70	243	eP	00	00.00	-0.7	EDM	90.01	32	eP	02	39.00	-0.5
WEL	23.32	198	P	54	51.00	-0.4		MRWA	62.21	247	eP	00	03.00	-1.1	KMI	90.68	296	eP	02	44.60	1.2
			S	58	51.00				0.3s	3.00nm		4.7mb						ePPc	03	21.68	145kmX
TCW	23.40	199	P	54	52.30	0.1		NANU	63.70	254	iPd	00	13.40	-0.6				esP	03	35.75	
AFR	24.75	90	iP	55	05.30	0.2			0.2s	26.00nm		5.8mb			RSSD	90.88	43	P	02	43.00	-1.0
	0.9s	70.00nm				5.2mb		KHKI	67.13	269	ePd	00	34.50	-1.5	BTO	90.99	313	eP	02	41.00	-3.4X
TBI	24.84	104	eP	55	10.00	4.0X					e	03	28.00			N 13s		0.40um				
	1.5s	310.00nm				5.6mb		TRT	70.14	269	iPd	00	54.40	-0.1		E 13s		0.40um				
PAE	24.91	90	iP	55	07.00	0.3			0.8s	117.70nm		5.8mb			BDT	91.22	288	ePd	02	46.80	1.1
	0.9s	105.00nm				5.4mb		MAJO	70.53	322	ePd	00	56.45	0.0		0.8s	62.30nm			5.8mb	
PPT	24.93	90	iP+	55	07.30	0.4					esP	01	45.62		CHG	91.80	289	iPd	02	49.60	1.1
	0.9s	210.00nm				5.7mb		MAT	70.53	322	iPd	00	56.20	-0.3		1.0s	40.50nm			5.5mb	
	Z 21s	0.80um				4.2Msz			1.0s	126.00nm		5.7mb			INK	92.62	15	eP	02	51.00	-0.1
PPN	25.07	90	iP	55	08.30	0.2		SPA	70.79	180	e(P)	00	58.40	0.5				pP	03	06.00	51kmX
	0.9s	85.00nm				5.3mb			0.8s	4.58nm		4.4mb X			LZH	93.71	307	eP	02	56.50	-0.6
TVO	25.21	91	iP	55	09.80	0.3		SHK	72.58	317	eP	01	08.80	0.1		1.5s	0.08nm			2.7mb X	
	0.9s	130.00nm				5.5mb		SYP	75.38	45	eP	01	26.00	1.0	GTA	97.84	309	eP	03	16.20	0.4
HNR	25.44	289	eP	55	10.00	-1.6					e	02	19.00		PDCR	126.86	123	e(PKP)	08	42.30	-2.1X
SVO	25.68	290	eP	55	20.00	6.2X		SDN	75.50	9	eP	01	23.90	-1.1	KEV	127.69	350	ePKP	08	48.00	3.6X
PMO	26.99	85	iP	55	25.50	-0.2		BCH	75.70	44	P	01	27.00	0.2	BUL	134.05	213	iPKPc	08	57.00	-1.1
	0.9s	55.00nm				5.2mb		PLM	76.83	47	eP	01	33.00	-0.2	SUF	134.07	346	ePKP	08	55.50	-1.2
VAH	27.19	86	iP	55	27.10	-0.4					e	02	27.00			0.5s	5.30nm				
	0.9s	40.00nm				5.1mb		SBB	76.92	46	eP	01	34.00	0.4	NUR	136.36	345	ePKP	08	57.00	-4.1X
TPT	27.25	85	iP	55	27.90	-0.2					e	02	28.00		NB2	138.04	355	PKP	08	52.80	-11.5X
	0.9s	80.00nm				5.4mb		ISA	77.05	45	eP	01	35.00	0.8		0.7s	2.50nm				
RUV	27.43	86	iP	55	29.40	-0.3					e	02	26.00		HFS	138.68	353	ePKP	08	53.30	-12.1X
	0.9s	85.00nm				5.4mb		CMB	77.21	42	e(P)	01	34.30	-0.7		0.5s	3.40nm				
MHZ	28.50	202	P	55	38.00	-1.2					e	02	29.50		EKA	143.62	7	PKP	09	10.00	-4.3X
MSZ	28.68	205	P	55	40.00	-0.7		ORV	77.45	40	e(P)	01	34.60	-1.6		0.8s	5.80nm				
BRS	29.88	249	iPc	55	53.00	1.4					e	02	30.40		AAE	145.03	258	ePKP	09	18.70	0.4
			e(pP)	56	05.50	48kmX		WDC	77.46	39	eP	01	37.20	0.9	WIT	146.53	357	ePKP	09	22.00	2.8X
			e	58	50.00						e	02	30.80		KRA	146.87	341	ePKP	09	19.10	-0.8
			e	00	33.00			QZH	77.52	302	Pd	01	37.40	0.5				i	09	21.50	
COO	31.25	243	iPc	56	05.60	2.0		CLC	77.72	45	eP	01	39.00	1.1				i	09	23.30	
RMO	33.34	251	iPd	56	23.20	1.5					e	02	33.00		KSP	147.12	346	ePKP	09	20.00	-0.3
	0.7s	107.00nm				5.7mb		TPC	77.81	47	eP	01	39.00	0.5		1.0s	44.00nm				
			i	59	01.00						e	02	32.00					id	09	22.70	
CNB	34.59	235	eP	56	33.00	0.6		KDC	79.20	12	eP	01	45.40	0.0				e	10	24.00	
CAN	34.88	236	eP	56	35.20	0.4		KVN	79.25	42	eP	01	46.00	-0.4	WTS	147.34	357	ePKPd	09	22.50	2.0X
			e	59	05.00						esP	02	41.00			0.7s	35.00nm				
BWA	35.07	237	eP	56	34.90	-1.6		TNP	79.26	43	eP	01	46.40	0.0				e	10	27.00	
			e	59	04.00				1.0s	12.50nm		4.6mb			CLL	147.34	350	ePKP	09	18.00	-2.6
CTA	35.68	262	iPd	56	43.00	1.3					esP	02	40.00			1.2s	98.00nm				
	1.0s	570.00nm				6.3mb		NJ2	80.75	309	Pd	01	55.00	0.8				i	09	22.70	
			iPcP	59	06.00			MDJ	80.77	324	ePd	01	55.61	1.6				e	10	23.00	
			iS	02	02.20						esP	02	46.92		SPC	147.54	340	iPKP	09	24.50	3.2X
CTAO	35.68	262	iPd	56	42.82	1.1		LON	81.78	34	P	01	59.60	0.3				e	10	25.00	
CMS	36.53	243	iPd	56	50.10	1.3		KGM	82.06	275	ePc	02	02.40	1.0	BRG	147.59	348	ePKP	09	20.70	-0.3
	0.9s	105.00nm				5.6mb		CN2	82.66	321	iPd	02	04.90	1.1		1.0s	14.00nm				
			e	58	23.00			SNY	82.67	319	P	02	02.00	-1.9				i	09	23.40	
PMG	37.14	280	eP	56	55.00	1.0		MAW	83.35	199	eP	02	07.50	0.4				e	10	20.30	
OLP	37.39	251	iPd	56	57.00	1.0		PMR	83.42	12	eP	02	06.80	-0.5	ANTO	148.02	316	iPKP	09	25.19	3.0X
RKT	38.16	103	iP	57	03.00	0.6		WHN	83.44	305	eP	02	06.00	-2.1				e	09	29.00	
	1.0s	180.00nm				5.8mb			N 12s	0.82um					BBTK	148.05	316	iPKPc	09	20.00	-2.3X
LAT	38.27	284	eP	57	06.00	2.5		TTA	83.46	9	eP	02	08.00	0.4	MOX	148.20	351	iPKPd	09	25.00	3.0X
STK	40.16	243	iPc	57	20.30	1.4		TIA	84.03	312	eP	02	11.60	0.6		1.6s	62.00nm				
			e	59	21.00				Z 20s	1.40um		5.3Msz						e	10	26.00	
QIS	41.84	260	iPd	57	32.80	0.0		TOA	84.51	14	eP	02	13.20	0.3	MLR	148.30	330	ePKP	09	20.00	-2.5
	0.6s	33.00nm				5.2mb		PNT	84.54	33	eP	02	14.00	0.8				e	17	30.00	
ADE	43.00	239	iPd	57	41.80	-0.3			0.7s	8.00nm		4.7mb			PRU	148.31	347	PKPd	09	25.60	3.4X
	1.2s	56.25nm				5.1mb		ALQ	85.06	50	eP	02	17.50	1.1		1.5s	46.90nm				
WB5	46.81	261	iPd	58	12.40	-0.2			1.3s	10.58nm		4.5mb						e	10	27.00	
			eS	04	43.20						esP	03	12.50		ENN	148.60	358	iPKPd	09	25.00	2.4X
WRA	46.82	260	Pc	58	12.70	0.0		ANMO	85.06	50	eP	02	17.08	0.7		0.7s	23.00nm				
	0.6s	79.90nm				5.5mb					esPc	03	09.39		HRI	148.64	303	ePKP	09	27.00	3.6X
GUA	50.63	307	eP	58	42.50	0.5					eSKS	12	21.39		MEM	148.76	358	PKPd	09	26.60	3.8X
	0.7s	142.47nm				5.8mb					eS	12	32.81		SNF	148.89	360	PKPd	09	26.90	3.8X
GUMO	50.70	307	eP	58	43.00	0.6		IPM	85.08	277	ePd	02	17.10	0.4	TNS	148.99	355	ePKPd	09	27.20	3.8X
	0.7s	99.11nm				5.7mb			0.9s	187.10nm		5.9mb			DOU	149.30	360	iPKPd	09	27.90	4.2X
PJG	50.70	307	eP	58	43.00	0.6		SNG	86.34	279	iPd	02	24.40	1.6	KHC	149.32	348	PKP	09	23.50	-0.4
MTN	51.24	269	iPd	58	46.10	-0.5			0.9s	70.59nm		5.5mb						i	09	38.50	
			eS	05	00.70						e	02	29.00		ZST	149.36	343	ePKP	09	23.90	0.0
FORR	51.62	246	iPd	58	48.30	-1.0		LRM	86.50	39	eP	02	23.50	0.2				i	09	28.30	
TLE	51.84	278	ePc	58	51.50	0.3		BJI	86.53	314	eP	02	23.50	0.3				i	09	34.40	
	0.8s	5.50nm				4.4mb X		COL	86.67	12	ePd	02	22.89	-0.5				e	41	21.50	
KNA	52.80	265	iPd	58	57.70	-0.5					esPc	03	13.71		ABH	149.40	356	ePKP	09	28.20	4.2X

DSI	149.43	300	iPKPd	09	29.00	4.5X
AYN	149.54	294	iPKPd	09	29.70	5.0X
TOD	149.57	354	ePKP	09	28.39	4.2X
RUP	149.61	356	ePKP	09	28.90	4.6X
WLF	149.69	357	PKP	09	29.60	5.3X
YLV	149.79	320	iPKP	09	29.00	4.1X
8ZS	150.08	335	ePKP	09	24.50	-0.5
HOL	150.27	295	iPKPd	09	31.00	5.2X
PVL	150.28	328	iPKPd	09	31.00	5.6X
MBH	150.30	296	iPKPd	09	31.50	5.7X
FLN	150.39	6	ePKP	09	30.20	4.8X
	0.9s	50.80nm				
LDF	150.60	6	ePKP	09	30.50	4.8X
	0.9s	31.10nm				
KCT	150.60	320	iPKP	09	31.50	5.5X
FUR	150.67	350	iPKPd	09	31.40	5.5X
GRR	150.72	7	ePKP	09	31.00	5.1X
	0.8s	33.60nm				
CDF	150.88	356	ePKP	09	31.80	5.5X
	0.8s	26.85nm				
KHL	150.99	316	ePKP	09	32.10	5.3X
DIM	151.01	326	iPKPc	09	33.00	6.5X
LPF	151.05	7	ePKP	09	31.70	5.3X
	0.6s	42.40nm				
BEO	151.20	336	ePKP	09	31.50	4.8X
KBA	151.33	347	iPKPd	09	31.80	4.7X
	0.7s	25.60nm				
		i		09	36.00	
		i		09	43.00	
		ipPKP		10	33.90	
HAU	151.34	357	ePKP	09	32.60	5.7X
	0.6s	23.45nm				
KDZ	151.35	326	ePKP	09	33.00	5.9X
FEL	151.36	355	ePKP	09	32.51	5.4X
BSF	151.49	356	ePKP	09	32.90	5.6X
	0.5s	15.30nm				
ELL	151.57	313	iPKP	09	33.50	5.7X
RZN	151.69	326	iPKPd	09	33.00	5.1X
PTJ	151.78	342	iPKPc	09	33.80	6.1X
VTS	151.78	329	iPKPd	09	34.00	6.1X
LJU	152.03	345	ePKP	09	26.00	-2.0X
		i		09	33.60	
		e(pPKP		10	36.50	
LOR	152.13	0	ePKP	09	34.50	6.4X
	0.7s	18.20nm				
VOY	152.19	345	ePKP	09	27.10	-1.2
		e		09	34.00	
		e		09	44.60	
SSF	152.33	1	ePKP	09	35.10	6.7X
	0.7s	17.65nm				
VBY	152.34	343	e(PKP)	09	27.90	-0.5
		i		09	35.40	
		i		09	45.20	
CEY	152.34	344	ePKP	09	28.00	-0.5X
KKB	152.39	329	iPKPd	09	35.00	6.4X
LBF	152.42	0	ePKP	09	35.10	6.5X
	0.7s	16.55nm				
YER	152.47	315	ePKP	09	35.00	6.0X
TRI	152.53	345	iPKPd	09	35.00	6.4X
		i		09	45.50	
		e		10	36.00	
MFF	152.57	7	ePKP	09	35.10	6.4X
AVF	152.60	1	ePKP	09	35.20	6.5X
	0.9s	131.10nm				
SMF	152.75	1	ePKP	09	35.50	6.5X
LSF	153.06	4	ePKP	09	36.20	6.8X
	0.7s	16.55nm				
TCF	153.06	3	ePKP	09	36.30	6.9X
	0.7s	13.70nm				
SKO	153.10	331	ePKP	09	29.00	-0.6
MAF	153.15	3	ePKP	09	36.90	7.4X
	0.6s	12.65nm				
VAI	153.27	353	PKPd	09	36.20	6.6X
LPG	153.82	356	ePKP	09	39.00	8.1X
RJF	154.00	4	ePKP	09	38.60	7.8X
CAF	154.41	4	ePKP	09	39.60	8.2X
LPO	154.59	5	ePKP	09	39.80	8.3X
SBF	155.39	354	ePKP	09	41.00	8.3X
BNG	159.63	225	iPKPc	09	38.00	-0.7
	0.5s	43.00nm				
		ic		10	17.70	
		id		13	56.70	
LIC	164.18	144	PKP	09	42.00	-1.2
KIC	164.45	145	PKP	09	42.20	-1.2
TIC	164.53	143	PKP	09	42.20	-1.3
S.D. = 1.0 on 133 of 207 obs.						

& SEP 15, 1989 09h 05m 13.57s
60.375 N 144.835 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.7 (PMR). Felt (III) at Cordova.

RAGM	0.08	81	iP	05	14.86	-0.3
			iS	05	16.54	
SGAM	0.22	305	iP	05	18.58	0.5
HMT	0.29	97	iP	05	19.44	0.1
			eS	05	24.76	
CVA	0.48	291	iP	05	23.10	-0.1
			eS	05	30.62	
KAIM	0.50	155	eP	05	24.27	0.8
HIN	0.83	272	eP	05	29.70	-0.4
			eS	05	44.82	
FID	0.90	296	iP	05	31.64	0.2
WAX	0.99	85	iP	05	32.30	-1.0
			iS	05	47.74	
SNH	1.01	100	iP	05	33.16	-0.6
			iS	05	49.20	
VLZ	1.06	317	iP	05	34.03	-0.3
			eS	05	52.48	
TGL	1.06	68	iP	05	32.77	-1.8
			eS	05	48.71	
VZW	1.09	310	eP	05	33.96	-1.0
GLB	1.18	25	iP	05	34.87	-1.7
			eS	05	51.85	
CYK	1.21	103	iP	05	36.00	-1.0
			iS	05	54.25	
MID	1.22	219	eP	05	36.80	-0.3
GLI	1.22	295	iP	05	36.79	-0.5
KLU	1.24	335	iP	05	36.99	-0.6
BALM	1.39	60	iP	05	37.95	-2.3
MTU	1.46	256	eP	05	40.90	-0.3
CTGM	1.82	70	eP	05	45.12	-1.5
			eS	06	09.92	
TOA	1.85	340	iPc	05	47.20	0.3
KNK	2.05	302	eP	05	49.33	-0.5
SDG	2.19	351	eP	05	51.46	-0.3
SEW	2.32	265	iP	05	51.63	-1.9
PME	2.40	303	eP	05	54.40	-0.4
PLRM	2.42	302	eP	05	54.37	-0.7
PMR	2.42	302	iPd	05	54.60	-0.5
GHO	2.43	307	eP	05	54.39	-0.9
PMS	2.47	293	iPc	05	54.70	-1.2
PAX	2.62	354	eP	05	57.33	-0.7
			eS	06	31.45	
SLKM	2.67	275	iP	05	56.67	-2.0
YKU	2.70	106	eP	06	00.00	1.0
PWA	2.77	300	eP	05	59.30	-0.7
SUA	3.09	293	eP	06	02.86	-1.7
NNL	3.24	267	eP	06	05.16	-1.5
DOT	3.31	6	iP	06	07.68	0.0
CNPM	3.33	258	eP	06	07.53	-0.5
DDM	3.46	352	eP	06	09.75	-0.1
RND	3.59	330	eP	06	09.50	-2.2
SKT	3.62	299	eP	06	09.65	-2.4
SPU	3.63	286	eP	06	09.16	-3.1
HYT	3.64	80	P	06	12.00	-0.5
RDT	3.75	276	eP	06	11.00	-3.1
ILIM	4.06	269	eP	06	16.73	-1.7
OPT	4.28	264	eP	06	20.85	-0.6
DWY	4.47	32	P	06	23.00	-1.2
CCB	4.50	343	eP	06	22.15	-2.4
FBA	4.74	345	eP	06	25.50	-2.5
KDC	4.75	240	ePd	06	26.00	-2.1
SVW	5.34	283	eP	06	34.50	-2.1
TTA	5.91	301	eP	06	41.40	-3.1
IMA	6.97	329	eP	06	56.70	-2.8
			e	07	01.40	
INK	9.33	27	eP	07	29.00	-3.3
53 obs. associated						

? SEP 15, 1989 09h 18m 50.72± 0.82s
13.447 N ±14.2km 144.936 E ±35.8km
DEPTH = 69.1 ± 5.1 km
4.1mb (2 obs.)
MARIANA ISLANDS (216)
Felt (III) on Guam.

GUA	0.09	345	iPd	19	01.80	-0.2
			eS	19	07.80	
GUMO	0.16	334	iPd	19	02.30	0.1
PJG	0.16	334	iPd	19	02.40	0.2
WB5	34.71	198	eP	25	36.00	-0.2
WRA	34.78	198	Pc	25	37.00	0.2
	0.7s	2.10nm				4.2mb
GBA	65.42	279	Pd	29	28.70	-0.1
	0.5s	1.00nm				4.0mb
KIC	144.03	301	PKPd	38	21.00	0.0
TIC	144.10	302	PKP	38	21.00	-0.2
LIC	144.34	301	PKPd	38	21.80	0.2
	0.4s	6.50nm				
ZOBO	147.94	99	PKP	38	33.80	5.7X
LPB	147.96	100	ePKP	38	35.00	7.0X
CNCB	148.07	100	PKP	38	34.00	5.7X
S.D. = 0.2 on 9 of 12 obs.						

SEP 15, 1989 09h 30m 25.76± 0.19s
7.439 S ± 4.3km 156.216 E ± 4.6km
DEPTH = 33.0km (normal)
4.8mb (8 obs.)
SOLOMON ISLANDS (193)

SVO	3.95	116	eP	31	26.00	0.5
			eS	32	20.00	
HNR	4.19	118	eP	31	29.00	0.0
			eS	32	23.00	
RAB	5.16	308	iPd	31	53.00	10.2X
			iS	33	10.00	
PMG	9.18	257	eP	32	44.00	5.1X
			eS	32	58.00	
CTA	15.85	217	iPd	34	09.00	0.8
	1.3s	103.85nm				4.8mb
			iS	37	14.00	
DZM	17.58	147	iPc	34	28.90	-1.1
BRS	20.11	189	iP	34	59.00	-0.8
RMO	20.23	200	eP	35	01.00	0.0
OIS	20.70	229	eP	35	05.20	-0.7
	1.2s	61.00nm				4.9mb
QLP	22.19	209	eP	35	20.00	-0.8
COO	23.37	189	iPd	35	33.20	0.7
TLE	23.38	273	ePc	35	35.00	2.4
GUA	23.67	332	eP	35	35.70	0.3
	1.0s	32.00nm				4.8mb
WB5	24.53	238	eP	35	44.00	0.3
			i	35	50.00	
WRA	24.58	237	Pd	35	44.60	0.4
	1.7s	255.20nm				5.5mb
MTN	25.26	256	eP	35	51.60	0.9
CMS	25.82	201	eP	35	56.50	0.7
ADE	31.78	208	e(P)	36	53.10	3.7X
MSZ	38.46	167	P	37	46.00	-0.3
MAT	46.90	340	(P)	38	54.00	-1.0
OZH	48.77	313	eP	39	09.70	0.0
OIZ	52.73	301	eP	39	34.40	-5.6X
NJ2	53.03	320	Pd	39	42.50	0.6
TIA	56.85	322	eP	40	08.60	-1.1
CN2	58.11	334	Pd	40	18.60	0.2
GYA	58.68	307	P	40	22.40	-0.5
LOE	59.22	295	eP	40	26.00	-0.6
BJI	59.97	325	eP	40	30.00	-1.3
NST	60.10	293	eP	40	33.80	1.2
TIY	60.69	321	eP	40	36.00	-0.4
XAN	60.87	316	P	40	36.80	-0.9
KMI	61.27	304	Pc	40	40.50	-0.3
CHG	62.18	296	eP	40	46.50	-0.3
CD2	63.02	310	P	40	51.60	-0.6
BTO	63.94	322	P	40	58.50	0.4
LZH	65.48	315	eP	41	08.50	0.2
	1.5s	0.02nm				2.0mb X
GTA	69.89	317	eP	41	36.40	0.6
WMQ	79.97	317	Pc	42	34.00	0.5
			eS	52	38.00	
KOD	80.34	282	eP	42	37.00	0.8
HYB	80.56	289	eP	42	36.00	-1.0
PMR	80.71	23	eP	42	36.00	-0.8
	0.8s	6.80nm				4.7mb
GBA	80.93	285	Pc	42	38.50	-0.4
	0.9s	7.50nm				4.7mb
IMA	81.83	18	eP	42	42.70	-0.2
SPA	82.61	180	e(P)	42	46.90	0.0
	1.0s	31.00nm				5.3mb
			e	43	02.30	
FBA	83.09	21	eP	42	47.80	-1.4
MAW	84.46	203	eP	42	56.00	-0.1
KSH	87.20	310	eP	43	12.00	1.6
INK	89.71	20	eP	43	22.00	0.5
ISA	90.49	54	eP	43	27.00	1.0
MWC	90.62	56	eP	43	28.00	1.3
SBB	90.88	55	eP	43	29.00	1.2
RVR	91.14	56	eP	43	30.00	1.1

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CLC	91.22	54	eP	43	30.00	0.7
KVN	91.29	51	P	43	30.00	0.3
PLM	91.48	57	eP	43	32.00	1.3
BAR	91.55	57	eP	43	32.00	1.2
TNP	91.84	52	P	43	31.50	-0.8
	0.7s	2.89nm			4.8mb	
TPC	92.25	56	eP	43	35.00	0.9
BUL	121.64	241	iPKPd	49	18.10	-0.7
	0.9s	9.24nm				
			i	49	25.80	
KRI	121.96	245	ePKP	49	20.90	1.4
			i	49	28.00	
KHC	127.93	330	PKPd	49	30.00	0.0
CNCB	130.09	119	ePKP	49	33.00	-2.7
LPB	130.11	119	PKP	49	36.00	0.5
ZOBO	130.20	118	PKP	49	36.00	0.1
	1.0s	10.75nm				
BNG	137.80	268	iPKPd	49	49.00	-0.8
	0.7s	9.00nm				
			id	49	56.20	
ASMO	145.09	331	iPKPc	50	00.50	-1.5
AAPN	145.31	332	iPKPc	50	01.20	-1.2
ACHM	145.34	331	iPKP	50	01.50	-0.9
APHE	145.39	331	iPKPd	50	02.00	-0.6
ALOJ	145.46	332	iPKPc	50	02.00	-0.7
ATEJ	145.58	331	iPKPc	50	02.20	-0.7
MAL	145.92	332	iPKPd	50	03.20	-0.1
TAF	146.40	327	ePKP	50	06.00	1.7
BAO	146.82	134	ePKP	50	05.70	0.2
NKM	147.42	331	iPKPd	50	06.00	0.3
IFR	148.83	329	iPKP	50	13.00	4.7X
AVE	150.13	332	ePKP	50	16.00	6.0X
TIO	151.98	329	iPKP	50	20.50	7.4X
PDCR	154.98	142	ePKP	50	16.40	-1.0
			e	50	25.20	

S.D. = 0.9 on 72 of 79 obs.

SEP 15, 1989 09h 48m 09.18± 0.16s
51.574 N ± 4.1km 173.367 W ± 2.2km
DEPTH = 33.0km (normal)
5.4mb (68 obs.) 5.1Msz (20 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 5.2 (PMR). Ms 5.0 (BRK). Felt (IV) on Adak.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 26C
Centroid Location:
Origin Time 09:48:13.3 0.4
Lat 52.10N 0.04 Lon 173.57W 0.06
Dep 15.0 FIX Half-duration 2.4
Moment Tensor; Scale 10**17 Nm
Mrr= 1.84 0.07 Mtt=-1.73 0.08
Mff=-0.12 0.07 Mrt= 2.60 0.30
Mrf= 1.63 0.25 Mtf=-1.17 0.09
Principal Axes:
T Val= 3.47 Plg=62 Azm=323
N 0.48 3 59
P -3.96 28 151
Best Double Couple:Mo=3.7*10**17
NP1:Strike=249 Dip=17 Slip= 100
NP2: 58 73 87

ADK	2.09	280	eP	48	44.00	1.5
SMY	7.80	283	e(P)	50	01.00	-2.1
SDN	8.55	59	eP	50	14.30	0.7
KDC	13.54	55	eP	51	20.60	-0.5
SVW	13.66	39	eP	51	24.20	1.4
TTA	14.69	33	eP	51	35.10	-1.1
PMS	16.25	44	eP	51	56.00	-0.3
PMR	16.59	43	eP	51	59.00	-1.5
IMA	17.62	27	e(P)	52	12.00	-1.5
FBA	18.77	35	eP	52	25.80	-1.7
SIT	22.64	61	eP	53	09.00	0.9
INK	25.38	34	eP	53	33.00	-1.4
	0.7s	85.00nm			5.5mb	
			pP	53	55.00	101kmX
GMW	32.52	77	eP	54	39.50	0.7
RMW	33.15	76	eP	54	45.00	0.6
LON	33.47	78	eP	54	47.50	0.3
PNT	33.66	72	eP	54	49.00	0.3
	0.9s	47.00nm			5.4mb	
EDM	35.72	63	iPc	55	06.90	0.6
	1.1s	155.00nm			5.8mb	
LBFM	36.21	86	eP	55	11.80	1.0
WDC	36.24	87	eP	55	12.00	1.2
			eScP	01	18.60	
MIN	36.96	87	e(P)	55	17.80	0.8
MAT	37.18	265	iPc	55	19.00	0.3
	1.5s	216.67nm			5.8mb	
	Z 20s	1.77um			4.9Msz	
			eS	01	00.00	
ORV	37.48	88	eP	55	22.40	1.2
MDJ	37.87	283	eP	55	23.50	-0.9
	Z 20s	4.40um			5.3Msz	
	E 20s	3.23um				
			S	01	16.00	
BKS	38.04	91	e(P)d	55	26.90	1.0
	1.3s	41.00nm			5.1mb	
	Z 20s	2.50um			5.0Msz	
	N 20s	0.90um				
	E 20s	2.40um				
			eS	01	18.00	
			eLO	04	14.00	
			eLR	05	54.00	
MHC	38.74	91	eP	55	32.50	0.6
ARN	38.80	91	eP	55	32.70	0.3
CMB	39.09	89	eP	55	36.00	1.2
	1.3s	34.15nm			5.0mb	
PRS	39.54	92	eP	55	39.20	0.7
LRM	39.58	74	eP	55	39.20	0.2
KVN	39.90	86	eP	55	42.20	0.5
FRI	40.16	90	eP	55	44.50	0.9
			eScP	01	33.40	
CN2	40.82	284	Pc	55	48.00	-0.9
	4.0s	0.30nm			2.4mb X	
	Z 20s	4.80um			5.4Msz	
	N 15s	1.20um				
			sP	56	01.00	
			PP	57	24.00	
			eS	02	06.00	
TNP	41.04	87	eP	55	52.00	1.0
	1.3s	40.82nm			5.0mb	
FFC	41.24	57	eP	55	52.00	-0.2
	1.0s	38.00nm			5.1mb	
SYP	41.57	93	eP	56	08.00	12.7X
ISA	41.77	90	eP	55	57.00	0.1
CLC	42.22	89	eP	56	01.00	0.4
DUG	42.50	81	eP	56	03.50	0.6
	1.1s	24.34nm			4.8mb	
SBB	42.81	91	eP	56	05.00	-0.4
MWC	42.97	92	eP	56	06.00	-0.8
GSC	43.05	89	eP	56	08.00	0.6
SNY	43.07	283	iPc	56	08.00	0.7
	3.0s	1.00nm			3.0mb X	
	Z 22s	2.90um			5.1Msz	
	N 22s	1.70um				
	E 20s	1.70um				
			sP	56	22.00	
DAU	43.33	80	eP	56	10.50	0.7
RVR	43.54	91	eP	56	11.00	-0.3
MSU	43.91	82	eP	56	15.00	0.5
PLM	44.29	92	eP	56	18.00	0.4
TPC	44.30	90	eP	56	19.00	1.5
BAR	44.86	92	eP	56	22.00	0.0
GLA	45.76	90	eP	56	31.00	1.9
DL2	46.01	281	eP	56	31.70	0.7
GOL	47.35	77	eP	56	42.00	0.1
	1.3s	110.94nm			5.7mb	
GLD	47.41	76	eP	56	42.90	0.6
	1.3s	77.59nm			5.6mb	
	Z 18s	2.94um			5.3Msz	
RSON	47.52	58	eP	56	41.40	-1.3
	0.7s	71.11nm			5.8mb	
	Z 20s	2.37um			5.2Msz	
BJI	48.63	285	eP	56	50.50	-0.9
	8.0s	0.43nm			2.5mb X	
	Z 20s	3.59um			5.4Msz	
	N 19s	1.97um				
			ePP	58	44.00	
			eS	03	50.00	
ALQ	49.72	82	eP	56	59.80	-0.4
	1.4s	28.13nm			5.1mb	
TIA	50.49	281	P	57	05.40	-0.4
GUMO	50.58	237	eP	57	04.20	-2.4
	1.3s	163.40nm			5.9mb	
PJG	50.58	237	eP	57	04.80	-1.8
HHC	50.87	289	Pc	57	09.00	0.2
	Z 18s	1.50um			5.1Msz	
	N 16s	1.50um				
	E 16s	1.10um				
			S	04	27.00	
FRB	51.04	34	eP	57	06.00	-3.5X
SSE	51.39	273	Pc	57	11.00	-1.7
	4.0s	1.00nm			3.1mb X	
	Z 20s	0.80um			4.7Msz	
	E 16s	0.70um				
			sP	57	25.50	
BTO	51.94	290	P	57	17.00	0.1
	N 17s	2.30um				
	E 18s	2.10um				
			sP	57	31.00	
			ePP	59	18.00	
			eS	04	40.00	
NJ2	52.19	276	Pd	57	18.40	-0.3
	Z 25s	1.30um			4.9MszX	
TIY	52.36	285	Pc	57	20.30	0.3
	1.4s	0.20nm			2.9mb X	
	E 21s	3.00um				
			sP	57	33.50	
			S	04	47.50	
ACO	53.04	75	eP	57	24.80	-0.2
	1.2s	71.00nm			5.5mb	
MEO	54.65	77	iPd	57	36.20	-0.7
SIO	55.38	74	eP	57	40.70	-1.5
TUL	55.58	74	eP	57	42.20	-1.4
	1.3s	65.90nm			5.5mb	
WHN	56.02	278	eP	57	46.00	-0.8
			sP	57	59.50	
XAN	56.93	284	Pc	57	52.70	-0.7
	E 15s	1.20um				
OZH	57.35	270	eP	57	56.40	0.1
FVM	57.35	69	eP	57	54.20	-2.0
UYO	57.57	75	iPc	57	56.50	-1.3
SCH	57.72	41	eP	57	57.00	-1.6
KEV	58.07	352	iP	58	01.70	0.9
	0.8s	17.60nm			5.2mb	
			i	58	52.80	
OLY	58.43	71	eP	58	01.30	-2.5
LZH	58.56	290	P	58	05.00	0.1
	4.0s	0.48nm			2.9mb X	
	N 20s	1.40um				
	E 17s	1.20um				
			sP	58	18.00	
GTA	58.61	295	iPc	58	04.20	-1.0
	1.0s	0.10nm			2.9mb X	
	Z 18s	2.40um			5.4Msz	
	E 15s	1.90um				
			S	06	05.00	
SOD	60.43	351	iP	58	17.50	0.4
			i	59	01.80	
PWLA	60.80	70	eP	58	18.40	-1.7
PTN	61.22	54	eP	58	21.50	-1.3
RSNY	61.46	54	eP	58	22.50	-2.0
	1.3s	59.12nm			5.6mb	
	Z 20s	2.49um			5.4Msz	
RSCP	61.80	68	eP	58	25.30	-1.7
GZH	61.97	272	eP	58	26.30	-1.9
WMO	62.03	306	Pc	58	28.00	-0.5
	Z 22s	2.00um			5.2Msz	
	N 20s	3.20um				
			sP	58	41.80	
CD2	62.23	285	iPc	58	30.20	0.3
	1.4s	0.40nm			3.4mb X	
	Z 22s	0.96um			4.9Msz	
			sP	58	43.00	
HBVT	62.33	53	eP	58	28.70	-1.6
GBTN	62.55	67	eP	58	30.00	-1.9
CBM	62.83	48	eP	58	32.00	-1.6
BNH	63.06	52	eP	58	34.00	-1.1
NAV	63.30	63	eP	58	36.00	-0.9
BLA	63.58	63	eP	58	38.00	-0.7
	1.1s	109.38nm			5.9mb	
GYA	63.66	280	P	58	39.00	-0.5
	Z 20s	0.62um			4.8Msz	
	E 17s	0.58um				
			sP	58	51.40	
			S	07	11.00	
			sS	07	29.00	
TBR	64.07	56	eP	58	41.00	-0.8
CBN	64.54	60	P	58	44.00	-0.9
SUF	65.01	350	eP	58	46.00	-1.6
	0.4s	5.80nm			5.0mb	
JSC	65.23	66	eP	58	48.00	-1.4
LHS	65.34	65	eP	58	49.00	-1.1
KMI	67.04	282	Pc	59	01.00	-0.4
	Z 20s	0.90um			5.0Msz	
	N 16s	0.60um				
			sP	59	14.00	
			PP	01	28.00	
			eS	07	55.00	

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			sS	08	11.00				1.1s	48.80nm		5.4mb		BRS	84.08	210	iP	00	51.50	14.0X
OIZ	67.16	272	eP	59	00.00	-1.9		PSZ	80.24	351	eP	00	12.70	-4.9X		PVL	84.20	346	iPc	00	40.00	1.9
E	19s		1.10um					CDF	80.39	360	P	00	18.21	-0.2		TAB	84.22	330	eP	00	39.00	0.5
			eS	08	01.50			SRO	80.49	352	iP	00	19.70	0.9		PCP	84.25	359	P	00	38.41	0.0
NUR	67.33	350	iP	59	01.60	-0.8		LPF	80.56	5	eP	00	18.80	-0.4		PZZ	84.30	360	P	00	39.54	0.8
	0.9s		22.00nm			5.3mb			1.0s	44.00nm		5.4mb				DOI	84.30	360	P	00	37.00	-1.7
			i	59	44.00			VITF	80.59	0	P	00	19.36	0.1		KAS	84.46	340	iPc	00	41.20	1.6
NB2	67.68	358	P	59	03.30	-1.3		ECH	80.59	360	P	00	19.49	0.1		ROB	84.51	359	P	00	39.44	-0.3
	1.0s		16.60nm			5.1mb		HAU	80.80	0	eP	00	20.10	-0.4		WB5	84.53	228	eP	00	39.30	-0.6
HFS	68.50	356	eP	59	08.20	-1.5			0.9s	36.00nm		5.4mb				MME	84.55	357	P	00	41.60	1.4
	0.4s		13.30nm			5.4mb		FEL	80.92	359	P	00	21.07	-0.2		RMO	84.56	214	eP	00	41.00	1.1
Z	16s		0.58um			4.9MszX		MOF	80.95	360	P	00	21.04	-0.4		STV	84.56	360	P	00	38.92	-1.1
			LR	22	02.00			BSF	80.97	360	P	00	21.44	-0.1		ENR	84.58	359	P	00	39.13	-1.0
UPP	68.57	354	iP	59	08.90	-1.2		MHI	81.01	319	iPc	00	22.60	0.7		WRA	84.60	228	Pd	00	40.30	0.0
	1.1s		100.00nm			5.8mb		SLE	81.03	359	ePc	00	21.50	-0.2			1.0s		15.50nm			5.1mb
LSA	70.53	293	P	59	25.30	2.1		ZLA	81.31	359	ePc	00	23.30	0.1		BDI	84.68	357	P	00	40.50	-0.1
KSH	71.09	310	eP	59	26.00	0.0		VRI	81.40	346	eP	00	23.00	-0.7		JMB	84.75	345	iPc	00	42.00	1.1
E	16s		3.70um					LOMF	81.46	360	P	00	23.93	-0.1		SFI	84.78	356	P	00	42.60	1.7
EKA	73.15	6	P	59	37.00	-0.7		LOR	81.51	2	eP	00	23.80	-0.4		TOUF	84.79	360	P	00	42.01	0.7
	1.1s		24.70nm			5.1mb			1.1s	44.90nm		5.4mb				AUTN	84.81	359	P	00	41.77	0.3
LOE	73.43	277	eP	59	39.00	-0.9		KBA	81.56	355	iPc	00	25.50	0.8		SAOF	84.82	359	P	00	41.77	0.5
CHG	74.08	280	iPc	59	43.90	0.2			1.0s	77.50nm		5.7mb				IMI	84.89	359	P	00	41.79	0.1
	1.1s		30.38nm			5.2mb					i	00	38.60			MVIF	84.91	360	P	00	42.38	0.5
BDT	75.23	279	eP	59	50.20	-0.1					i	00	51.40			AURF	84.92	359	P	00	42.44	0.6
DZM	75.44	199	iPc	59	57.00	5.6X		SSF	81.71	2	eP	00	25.10	-0.1		SBF	84.94	359	eP	00	41.60	-0.3
NST	75.73	277	eP	59	55.00	1.8			0.8s	30.80nm		5.4mb					0.8s		54.80nm			5.8mb
WTS	76.81	360	eP	59	59.00	0.4		LBF	81.80	2	eP	00	25.30	-0.4		PGB	85.03	347	iPc	00	43.00	0.7
	1.0s		21.00nm			5.1mb			0.9s	23.50nm		5.2mb				PII	85.03	357	P	00	41.80	-0.4
CLL	77.35	356	iPc	00	01.50	-0.2		CFR	81.84	345	eP	00	27.00	1.1		REVF	85.07	359	P	00	42.23	-0.3
	1.3s		51.00nm			5.4mb		OGA	81.87	357	iPc	00	27.00	0.7		ARV	85.15	355	Pd	00	44.00	1.1
			e	00	14.00				1.0s	22.00nm		5.1mb				FRF	85.25	360	eP	00	43.50	0.2
KSP	77.63	354	eP	00	02.30	-1.0		MLR	81.89	346	iPd	00	28.00	1.6			1.0s		48.00nm			5.7mb
	1.0s		31.00nm			5.3mb		LLS	81.92	358	ePc	00	27.00	0.4		DIM	85.32	346	iPd	00	46.00	2.3
			i	00	04.10			SNG	81.95	271	eP	00	28.10	1.1		LRG	85.35	0	eP	00	44.20	0.4
			i	00	16.00						e	00	41.60				1.1s		53.70nm			5.7mb
BRG	77.74	355	iPc	00	03.60	-0.3		AVF	81.98	2	eP	00	26.20	-0.4		PLD	85.39	347	eP	00	43.00	-1.1
	1.2s		75.00nm			5.6mb			1.0s	36.80nm		5.4mb				LMR	85.47	0	eP	00	44.70	0.2
			i	00	16.50			MFF	82.03	5	eP	00	26.80	-0.1			1.1s		73.20nm			5.8mb
ENN	78.03	0	eP	00	06.00	0.6			0.9s	32.70nm		5.4mb				ASS	85.59	356	P	00	45.00	-0.2
	1.0s		46.00nm			5.5mb		OSS	82.07	358	ePc	00	28.00	0.6		EPF	85.62	5	eP	00	44.50	-0.8
			e	00	19.00			SMF	82.13	2	eP	00	27.10	-0.4			1.1s		20.50nm			5.3mb
MOX	78.07	357	iPc	00	06.00	0.3			0.9s	39.90nm		5.5mb				BCI	85.71	350	eP	00	46.50	0.8
	1.3s		63.00nm			5.5mb		BGF	82.19	3	eP	00	27.60	-0.2		KDZ	85.73	346	iP	00	47.00	1.2
Z	18s		0.80um			5.1Msz			1.1s	41.50nm		5.4mb				RZN	85.79	347	iPc	00	47.00	0.6
N	18s		1.00um					CMP	82.24	347	eP	00	27.00	-1.1		ALP	85.83	355	eP	00	46.89	0.4
			e	00	19.00			VDL	82.29	358	ePc	00	29.50	1.0		KKB	85.84	348	iPc	00	47.00	0.6
KRA	78.12	351	eP	00	05.90	0.0		BZS	82.33	349	eP	00	28.50	0.0		SKO	85.95	349	iP	00	48.00	1.1
			e	00	19.20			TCF	82.44	3	eP	00	28.80	-0.3		MMB	86.03	347	ePd	00	48.00	0.6
MEM	78.19	0	Pc	00	07.40	1.1			0.9s	21.20nm		5.2mb				PUK	86.05	350	eP	00	48.00	0.6
NNT	78.34	276	eP	00	07.20	-0.5		LSF	82.46	4	eP	00	28.90	-0.3		YLV	86.12	343	iP	00	57.00	9.1X
HOF	78.39	357	iPc	00	07.60	0.1		MAF	82.52	3	eP	00	29.50	0.0		SDA	86.12	350	eP	00	48.90	1.2
	1.5s		61.00nm			5.4mb			0.6s	13.50nm		5.2mb				TRT	86.19	253	iPd	00	48.30	0.0
TNS	78.57	359	ePc	00	08.70	0.2		LJU	82.53	354	eP	00	29.60	0.1		CVF	86.22	358	P	00	48.40	0.2
PRU	78.59	355	Pc	00	08.90	0.3		VOY	82.57	355	e(P)	00	26.00	-3.9X		MNS	86.27	356	Pd	00	48.50	0.0
	1.1s		32.10nm			5.2mb		PTJ	82.57	353	eP	00	30.30	0.4		QLP	86.28	217	eP	00	40.00	-8.5X
Z	26s		0.70um			4.9MszX		CTI	82.66	356	Pd	00	30.50	0.1		PHP	86.34	350	eP	00	48.30	-0.5
N	22s		0.50um					AGO	82.71	2	P	00	31.36	0.9		LACI	86.47	350	eP	00	49.30	-0.1
E	18s		0.70um					DIX	82.72	359	ePc	00	32.00	1.1		KCT	86.61	344	iP	00	51.00	0.8
			e	00	21.00			MMK	82.75	359	ePc	00	32.20	1.2		AZI	86.63	355	P	00	50.90	0.7
DOU	78.69	1	Pc	00	09.00	-0.1		QIS	82.77	224	iPc	00	30.00	-1.0		SLY	86.74	329	ePd	00	51.00	0.2
ABH	78.92	359	eP	00	10.59	0.2			1.3s	35.00nm		5.3mb				TIR	86.74	350	eP	00	50.00	-0.8
SPC	78.95	351	iP	00	11.50	0.7		PLDF	82.80	2	P	00	31.79	0.7		MSL	86.75	331	ePd	00	51.00	0.1
			e	00	23.50			CEY	82.84	355	e(P)	00	30.50	-0.7					e	01	04.00	
RUP	79.10	360	eP	00	11.54	0.1		TRI	82.90	355	eP	00	28.60	-2.8		OHR	86.87	349	iP	00	51.70	0.2
WLF	79.14	0	Pc	00	12.20	0.7					e	11	52.00				1.4s		340.00nm			6.4mb
KHC	79.50	355	iPc	00	14.00	0.4					e	16	48.00						i	00	59.80	
	1.1s		46.00nm			5.4mb					e	29	58.00						i	01	04.60	
Z	18s		0.80um			5.1Msz		QUE	82.91	311	eP	00	32.50	0.5		DUI	86.90	354	P	00	52.00	0.4
N	16s		0.50um					VAI	82.92	358	P	00	31.70	0.2		PLG	87.26	347	eP	00	53.50	0.1
E	16s		0.40um					MDI	82.99	358	P	00	31.70	-0.2		HYB	87.28	295	iPc	00	53.50	-0.3
			i	00	27.00			PYM	83.01	3	P	00	32.68	0.6			1.0s		50.00nm			5.7mb
WET	79.52	356	iPc	00	14.00	0.3		VBY	83.02	354	e(P)	00	32.60	0.5		HYB	87.28	295	iP	01	07.50	13.7X
CTA	79.63	218	iPc	00	14.00	-0.5		BEO	83.24	350	eP	00	33.50	0.3			1.2s		242.40nm			
	1.2s		39.06nm			5.3mb		LPG	83.31	360	eP	00	34.80	0.9		KZN	87.55	348	eP	00	54.70	-0.1
			iS	10	18.00				1.1s	36.60nm		5.4mb				SGO	87.93	353	P	00	56.50	0.0
GWF	79.82	359	P	00	15.39	0.1		LSD	83.35	360	P	00	35.54	1.4		PRK	87.94	345	eP	00	56.50	-0.1
FLN	79.86	5	eP	00	14.50	-0.9		RJF	83.40	4	eP	00	33.70	-0.4		ASPA	88.02	227	iPc	00	57.50	0.5
	1.1s		55.60nm			5.5mb		LBL	83.53	2	P	00	35.99	1.4			1.6s		55.00nm			5.6mb
LDF	80.05	5	eP	00	15.60	-0.9		LFF	83.73	4	eP	00	35.80	0.1		Z	21s		0.47um			4.9Msz
	1.1s		68.30nm			5.6mb			1.2s	73.70nm		5.7mb							LR	35	54.30	
MTN	80.09	235	eP	00	17.10	0.0		BNI	83.75	360	P	00	38.00	2.0		SRN	88.18	350	eP	00	57.80	0.1
	1.0s		125.00nm			5.9mb		CAF	83.80	3	eP	00	36.20	0.1		MGR	88.34	353	P	00	57.80	-0.7
ZST	80.21	353	iP	00	17.50	0.2			1.1s	37.60nm		5.5mb				NEO	88.34	347	eP	00	58.40	-0.2
Z	16s		1.00um			5.3MszX		RRL	83.89	360	P	00	38.51	1.7		KEK	88.37	350	eP	00	59.00	0.3
			i	00	30.20			BOB	84.01	358	Pd	00	38.00	0.8		POO	88.99	299	iPc	01	03.50	1.5
			e	11	10.80			LPO	84.01	4	eP	00	36.90	-0.2		VLS	89.79	349	eP	01	05.50	0.0
GRR	80.21	5	eP	00	16.90	-0.4			1.1s	41.00nm		5.5mb				CMS	90.15	214	eP	01	08.00	1.2

15d 10h

ITM	90.61	348	eP	00	58.50	-10.8X	
GBA	90.97	293	Pd	01	10.80	-0.3	
	1.4s	21.70nm			5.3mb		
ASMO	90.98	8	eP	01	12.00	0.9	
AAPN	90.99	9	eP	01	11.70	0.6	
ALOJ	91.19	9	eP	01	13.00	0.9	
ACHM	91.22	8	eP	01	13.00	0.9	
APHE	91.38	8	eP	01	14.00	1.0	
KAP	91.39	343	eP	01	11.50	-1.4	
ATEJ	91.39	9	eP	01	14.00	1.0	
MAL	91.54	9	iPd	01	15.00	1.5	
NPS	91.94	345	eP	01	13.00	-2.4	
VAM	92.03	346	eP	01	15.50	-0.3	
DSI	93.44	336	eP	01	23.00	0.7	
PRNI	94.70	336	eP	01	28.00	-0.2	
MBH	95.28	336	eP	01	31.00	0.2	
LPB	112.25	89	(PKP)	06	50.00	6.4X	
	Z 18s	1.03um			5.5Msz		
		LR		43	32.00		
CNCB	112.53	89	ePKP	06	47.00	2.7X	
KIC	121.47	13	(PKP)	07	02.20	1.4	
BNG	123.29	346	ePKPc	07	03.30	-1.0	
	1.0s	20.00nm					
		id		07	17.30		
PDCR	126.42	60	e(PKP)	07	17.00	6.7X	
		e		07	24.10		
		e		07	41.70		
KRI	140.81	324	iPKPc	07	40.50	3.0X	
		i		07	50.80		
BUL	144.22	323	iPKPd	07	42.50	-0.8	
	0.8s	70.15nm					
		i		07	55.50		
SLR	149.38	319	iPKPc	07	51.20	-0.4	
	1.2s	156.25nm					
		i		08	09.20		
PRY	150.77	319	iPKPc	07	59.30	5.6X	
	1.2s	60.00nm					
		i		08	11.90		
SEK	151.94	318	iPKPd	08	01.80	6.4X	
	1.1s	44.30nm					
BLF	153.22	319	iPKPc	08	06.00	8.8X	
	1.0s	40.00nm					
		i		08	18.50		
FRS	154.14	320	ePKP	08	07.00	8.8X	
	1.1s	101.27nm					
		e		08	20.00		

S.D. = 0.9 on 281 of 299 obs.

SEP 15, 1989 09h 54m 06.75± 0.67s
43.317 N ± 6.3km 13.211 E ± 5.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.4 (SSO).

CIO	0.13	202	iPg	54	09.97	0.0	
			iSg	54	12.94		
SSO	0.15	99	iPg	54	10.91	0.6	
			iSg	54	15.43		
ARV	0.27	313	P	54	12.30	-0.1	
			eSg	54	16.80		
AOI	0.37	51	iPgc	54	14.13	-0.2	
			iSg	54	21.60		
ASS	0.47	239	P	54	16.60	0.3	
			eSg	54	24.70		
ALP	0.60	153	ePg	54	18.44	-0.5	
			iSg	54	29.61		

S.D. = 0.5 on 6 of 6 obs.

• SEP 15, 1989 09h 57m 31.98± 0.80s
51.870 N ±17.8km 173.349 W ± 8.4km
DEPTH = 33.0km (normol)
4.5mb (6 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	2.07	272	eP	58	05.40	0.4	
KDC	13.36	56	e(P)	00	58.40	16.9X	
TTA	14.43	33	eP	01	03.80	8.1X	
IMA	17.35	27	eP	01	37.50	4.5X	
FBA	18.52	35	eP	01	47.00	-0.2	
INK	25.13	34	eP	02	54.00	-0.9	
PNT	33.56	73	eP	04	18.00	7.4X	
	0.5s	2.00nm			4.3mb		
EDM	35.58	64	eP	04	29.50	1.6	
LBFM	36.18	86	eP	04	34.00	0.7	
SES	38.07	67	eP	04	50.00	1.1	
KVN	39.87	86	eP	05	03.30	-0.9	
TNP	41.01	87	eP	05	13.20	-0.4	
RSON	47.35	58	eP	06	03.20	-1.0	
HFS	68.21	356	eP	08	29.00	-1.6	
	0.3s	1.60nm			4.6mb		
CDF	80.10	360	eP	09	40.10	0.5	
BSF	80.68	360	eP	09	43.10	0.3	
	0.8s	4.00nm			4.5mb		
LOR	81.21	2	eP	09	46.00	0.5	
	0.7s	3.70nm			4.5mb		
KBA	81.27	355	eP	09	46.50	0.5	
	0.7s	12.20nm			5.0mb		
		id		09	47.10		
		i		11	18.70		
		i		11	31.20		
SSF	81.41	2	eP	09	47.30	0.8	
	0.8s	4.00nm			4.5mb		
AVF	81.68	2	eP	09	48.30	0.4	
BUL	143.99	323	iPKPc	17	03.90	-1.8	
		i		17	17.00		

S.D. = 1.0 on 17 of 21 obs.

SEP 15, 1989 09h 59m 02.56± 0.23s
51.559 N ± 5.6km 173.360 W ± 3.0km
DEPTH = 33.0km (normol)
4.8mb (28 obs.) 4.9Msz (2 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	2.09	280	eP	59	37.60	1.6	
SDN	8.56	59	eP	01	09.70	2.7	
KDC	13.55	55	eP	02	15.30	0.8	
SVW	13.67	39	eP	02	18.10	1.8	
TTA	14.70	33	e(P)	02	30.70	1.0	
		e		02	36.60		
PMS	16.26	44	eP	02	49.60	-0.2	
PMR	16.60	43	eP	02	53.20	-0.8	
IMA	17.63	27	eP	03	08.00	1.0	
	0.7s	5.20nm			3.8mb		
FBA	18.78	35	eP	03	18.00	-3.0	
INK	25.39	34	eP	04	27.00	-0.9	
	0.8s	36.00nm			5.0mb		
LON	33.47	78	eP	05	40.00	-0.5	
PNT	33.66	72	eP	05	42.00	-0.1	
	0.7s	6.00nm			4.6mb		
EDM	35.73	63	eP	05	59.50	-0.2	
	0.7s	17.00nm			5.1mb		
LBFM	36.20	86	eP	06	05.00	0.9	
WDC	36.24	87	eP	06	04.90	0.8	
		e		06	17.40		
MAT	37.18	266	eP	06	13.00	0.9	
	1.8s	86.36nm			5.3mb		
SES	38.20	66	eP	06	20.00	-0.6	
MHC	38.73	91	e(P)	06	26.20	0.9	
		e		06	38.10		
CMB	39.09	89	eP	06	28.60	0.4	
		e		06	41.40		
PRS	39.54	92	e(P)	06	32.50	0.7	
		e		06	44.10		
LLA	39.62	91	e(P)	06	31.50	-1.1	
		e		06	45.10		
KVN	39.90	86	eP	06	35.20	0.2	
FRI	40.16	90	e(P)	06	38.00	1.1	
		e		06	50.00		
CN2	40.83	284	P	06	41.60	-0.7	
TNP	41.04	87	eP	06	44.70	0.3	
FFC	41.24	57	eP	06	45.00	-0.6	
	0.9s	12.00nm			4.6mb		
ISA	41.77	90	eP	07	03.00	12.8X	
CLC	42.22	89	eP	07	07.00	13.1X	
SBB	42.80	91	eP	07	10.00	11.3X	
MWC	42.96	92	eP	07	04.00	3.8X	
GSC	43.04	89	eP	07	14.00	13.3X	
SNY	43.08	283	eP	07	01.00	0.2	
DAU	43.32	80	eP	07	03.40	0.2	
RVR	43.54	91	eP	07	17.00	12.4X	
MSU	43.91	82	eP	07	07.30	-0.5	
PLM	44.28	92	eP	07	11.00	0.1	
TPC	44.29	90	eP	07	24.00	13.2X	
BAR	44.85	92	eP	07	20.00	4.7X	
GLA	45.75	90	eP	07	35.00	12.5X	
GOL	47.35	77	eP	07	35.00	-0.3	
RSON	47.52	58	eP	07	34.50	-1.7	
BJI	48.64	285	eP	07	45.00	0.1	
	Z 16s	0.87um			4.8MszX		
ALQ	49.71	82	eP	07	54.00	0.5	
ALQ	49.71	82	eP	07	57.70	4.2X	
	2.0s	17.65nm			4.7mb		
	Z 20s	0.62um			4.6Msz		
		pP		08	11.30	51kmX	
		esP		08	35.50		
HHC	50.88	289	eP	08	02.60	0.4	
SSE	51.39	273	Pd	08	20.00	13.9X	
	1.0s	12.00nm					
BTO	51.95	290	eP	08	10.50	0.2	
TIY	52.37	285	Pc	08	13.60	0.1	
SIO	55.38	74	e(P)	08	35.30	-0.3	
TUL	55.58	74	e(P)	08	35.70	-1.3	
	0.8s	8.30nm			4.8mb		
XAN	56.94	285	P	08	46.00	-0.8	
LZH	58.57	290	eP	08	58.50	0.2	
	1.0s	0.03nm			2.4mb	X	
GTA	58.62	295	Pc	08	57.60	-1.0	
CD2	62.24	285	P	09	23.40	0.1	
BLA	63.59	63	eP	09	31.00	-1.1	
GYA	63.67	280	P	09	32.60	-0.3	
		sP		09	45.60		
JSC	65.23	66	eP	09	41.50	-1.3	
NUR	67.35	350	eP	09	52.00	-3.9X	
	Z 18s	1.60um			5.3Msz		
		LR		32	50.00		
NB2	67.69	358	P	09	56.60	-1.5	
	0.9s	4.30nm			4.5mb		
HFS	68.52	356	eP	10	01.40	-1.8	
	0.4s	2.40nm			4.6mb		
CHG	74.09	280	eP	10	37.50	0.4	
CLL	77.37	356	eP	10	55.00	-0.2	
	1.3s	15.00nm			4.9mb		
KSP	77.65	354	iPd	10	56.50	-0.3	
BRG	77.76	355	iP	10	57.30	0.0	
	1.0s	22.00nm			5.1mb		
MOX	78.09	357	iP	10	59.00	-0.2	
PRU	78.61	355	P	11	02.50	0.5	
		e		11	14.50		
SPC	78.96	351	eP	11	04.00	-0.2	
KHC	79.52	355	iPc	11	07.30	0.2	
	1.0s	10.50nm			4.8mb		
CTA	79.62	218	iPc	11	20.00	12.2X	
	1.1s	12.66nm					
LDF	80.06	5	eP	11	10.20	0.3	
	0.9s	16.30nm			5.0mb		
MTN	80.08	235	iPd	11	10.50	0.1	
CDF	80.41	360	eP	11	11.70	-0.2	
	0.7s	5.20nm			4.6mb		
HAU	80.82	0	eP	11	13.80	-0.2	
	0.8s	9.10nm			4.8mb		
BSF	80.99	360	eP	11	14.50	-0.5	
	0.8s	8.00nm			4.8mb		
MHI	81.03	319	eP	11	16.00	0.6	
LOR	81.52	2	eP	11	17.60	-0.1	
	0.8s	5.90nm			4.7mb		
SSF	81.72	2	eP	11	18.90	0.2	
	0.9s	11.40nm			4.9mb		
LBF	81.81	2	eP	11	19.00	-0.2	
	0.9s	7.20nm			4.7mb		
AVF	81.99	2	eP	11	20.00	-0.1	
	0.9s	7.20nm			4.7mb		
MFF	82.05	5	eP	11	20.50	0.1	
	0.8s	9.10nm			4.9mb		
SMF	82.15	2	eP	11	20.90	0.0	
TCF	82.46	3	eP	11	22.50	-0.1	
	0.8s	3.20nm			4.4mb		
LSF	82.47	4	eP	11	22.60	0.0	
MAF	82.54	3	eP	11	23.10	0.1	
	0.7s	5.50nm			4.7mb		
VAI	82.94	358	Pd	11	25.30	0.3	
LPG	83.33	360	eP	11	28.30	0.9	
LSD	83.36	360	P	11	29.10	1.5	
LFF	83.75	4	eP	11	29.60	0.4	
CAF	83.82	3	eP	11	29.80	0.2	
	0.8s	5.90nm			4.8mb		
RRL	83.90	360	P	11	32.18	1.9	
LPO	84.02	4	eP	11	30.90	0.3	
ROB	84.52	359	P	11	32.49	-0.7	
WB5	84.52	228	eP	11	32.50	-0.8	
WRA	84.59	228	Pd	11	33.40	-0.2	
	1.0s	3.60nm			4.5mb		
ENR	84.59	359	P	11	33.20	-0.4	
SBF	84.96	359	eP	11	35.30	-0.1	
	0.9s	16.30nm			5.2mb		
FRF	85.26	360	eP	11	36.60	-0.2	
	0.7s	4.40nm			4.8mb		
LMR	85.49	0	eP	11	38.40	0.5	
SKO	85.96	349	i(P)	11	40.00	-0.4	
HYB	87.29	295	eP	11	47.00	-0.2	
ASPA	88.01	227	eP	11	50.80	0.4	
GBA	90.98	293	Pd	12	16.90	12.4X	

1.2s 16.20nm
BUL 144.23 323 iPKPd 18 35.60 -1.1
1.0s 24.50nm
i 18 48.40
SLR 149.40 319 iPKPc 18 48.50 3.5X
0.9s 25.21nm
PRY 150.79 319 ePKP 18 47.20 0.1
S.D. = 0.8 on 90 of 105 obs.

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* SEP 15, 1989 10h 03m 36.04± 1.47s
30.654 S ±10.2km 71.112 W ±16.0km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

JACH 2.07 168 eP 04 13.50 2.2
iS 04 40.20
ZON 2.27 114 e(P) 04 13.00 -1.2
ROCH 2.31 178 eP 04 14.00 -1.0
iS 04 45.00
PEL 2.51 172 iPc 04 19.30 1.7
iS 04 51.50
FCH 2.76 166 eP 04 24.60 3.2X
LCCH 2.84 188 eP 04 29.50 7.3X
eS 04 49.00
TACH 2.99 177 eP 04 22.50 -1.9
PCH 3.00 170 eP 04 24.00 -0.6
LNV 3.30 184 eP 04 25.50 -3.3X
MRA 4.93 112 iPc 04 52.60 0.7
TCA 5.64 99 eP 05 02.00 -0.1
(S) 06 07.00
ZOBO 14.58 11 P 07 05.00 0.1
Z 22s 0.37um
LR 43 20.00
S.D. = 1.6 on 9 of 12 obs.

& SEP 15, 1989 10h 16m 31.50s
41.600 N 121.500 W
DEPTH = 4.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.8 (BRK).

LBFM 0.39 229 eP 16 38.50 -0.8
MIN 1.26 184 iPc 16 54.50 -1.0
eS 17 10.30
WDC 1.29 218 eP 16 53.80 -2.1
eS 17 10.30
ORV 2.04 180 eP 17 06.80 -0.3
eS 17 36.70
KVN 3.64 133 eP 17 29.50 -0.5
CMB 3.66 166 eP 17 30.70 0.5
6 obs. associated

& SEP 15, 1989 10h 28m 00.84s
45.373 N 121.707 W
DEPTH = 5.2km
WASHINGTON-OREGON BORDER REGION (28)
<SEA>. CL 3.5 (SEA). Felt (IV)
at Government Camp and (III) at
Milwaukie and Welches, Oregon.

VLL 0.09 12 iPc 28 03.28 0.3
TDH 0.10 215 iPd 28 03.12 -0.1
VFP 0.18 108 iP 28 04.58 0.0
VLMM 0.29 305 iPc 28 07.20 0.5
VBEM 0.32 165 iPc 28 07.68 0.3
APM 0.36 3 eP 28 08.42 0.2
GT2 0.45 242 eP 28 09.86 -0.1
PGO 0.53 280 eP 28 11.51 0.0
GULW 0.56 8 eP 28 11.69 -0.3
VGB 0.67 77 eP 28 13.60 -0.6
MTMW 0.74 332 ePc 28 14.56 -1.1
CDFW 0.78 342 eP 28 15.39 -1.1
ASR 0.78 6 eP 28 15.79 -0.8
VTHM 0.83 103 eP 28 16.34 -1.1
JLK 0.83 338 eP 28 16.50 -1.0
LVP 0.85 325 eP 28 16.29 -1.5
eS 28 28.47
GL2 0.85 46 eP 28 17.29 -0.5
HSR 0.87 338 eP 28 17.20 -0.9
ESD 0.88 340 eP 28 17.41 -0.9
SHW 0.90 336 eP 28 17.30 -1.3
YEL 0.90 338 eP 28 18.09 -0.6
SOSW 0.91 341 eP 28 17.82 -1.0
STD 0.94 338 eP 28 18.17 -1.1
FL2 0.94 332 eP 28 18.47 -0.8
ERK 1.03 335 eP 28 19.40 -1.5
TDL 1.04 340 eP 28 19.65 -1.4
RVW 1.06 317 eP 28 19.93 -1.4
GMO 1.08 150 eP 28 20.62 -1.0
KOSW 1.14 343 eP 28 21.34 -1.3
VIPM 1.16 138 eP 28 21.83 -1.3
GLK 1.19 3 eP 28 22.88 -0.7
KMOR 1.28 282 eP 28 23.88 -1.2
JBO 1.32 85 eP 28 25.31 -0.4
WPW 1.33 5 eP 28 25.40 -0.5
LMW 1.36 343 eP 28 25.75 -0.7
LON 1.38 357 eP 28 25.60 -1.1
BMW 1.53 317 eP 28 27.90 -1.0
RMW 2.09 358 eP 28 37.50 0.5
GMW 2.30 341 eP 28 40.50 0.5
MCW 3.40 347 eP 28 58.00 2.4
DPW 3.47 43 eP 28 55.50 -1.2
LBFM 4.03 182 eP 29 08.40 3.7
PNT 4.19 19 eP 29 16.00 9.2
ORV 5.82 178 eP 29 34.00 4.2
LRM 6.51 83 eP 29 12.90 -27.0
KVN 6.86 156 e(P) 30 07.50 22.8
46 obs. associated

? SEP 15, 1989 10h 42m 46.78± 3.19s
33.512 S ±16.1km 179.739 W ±24.4km
DEPTH = 78.0 ± 23.5 km
4.8mb (2 obs.)
SOUTH OF KERMADEC ISLANDS (179)

HBZ 4.38 201 eP 43 53.80 1.6
PGZ 7.78 203 eP 44 38.80 -0.5
MNG 8.05 207 eP 44 41.60 -1.6
eS 46 18.90
DZM 16.69 310 iPc 46 37.10 -0.1
8RS 24.43 277 eP 47 44.50 -14.9X
CTA 33.01 285 iPd 49 17.20 0.7
ASPA 41.58 271 eP 50 29.20 0.6
WRA 42.85 276 Pc 50 38.50 -0.5
0.4s 3.50nm 4.5mb
WB5 42.86 277 eP 50 38.90 -0.1
SPA 56.67 180 e(P) 52 24.80 0.7
1.0s 14.00nm 5.0mb
NB2 151.55 349 PKP 02 25.40 -0.7
1.1s 9.50nm
HFS 151.94 346 ePKP 02 26.60 0.0
0.5s 1.80nm
S.D. = 1.0 on 11 of 12 obs.

SEP 15, 1989 10h 44m 03.70± 0.31s
51.724 N ± 6.5km 173.245 W ± 3.7km
DEPTH = 48.9km (11 depth phases)
4.7mb (19 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK 2.14 276 eP 44 38.00 0.4
SDN 8.41 60 eP 46 06.00 0.4
KDC 13.39 55 eP 47 11.90 -1.0
TTA 14.52 33 eP 47 27.00 -0.7
PMS 16.09 44 eP 47 47.60 -0.3
PMR 16.43 44 eP 47 51.50 -0.6
IMA 17.45 27 eP 48 07.20 2.3
0.8s 4.40nm 3.6mb X
TOA 17.92 44 eP 48 10.20 -0.5
FBA 18.60 35 eP 48 16.70 -2.2
INK 25.21 34 eP 49 26.00 0.1
GMW 32.41 77 eP 50 31.90 1.2
RMW 33.05 77 eP 50 37.10 0.8
LON 33.37 78 eP 50 40.00 0.9
PNT 33.54 72 eP 50 41.00 0.4
EDM 35.59 63 iPc 50 58.60 0.5
WDC 36.16 88 eP 51 03.80 0.9
e 51 16.50 47km
ORV 37.40 88 eP 51 13.60 0.2
e 51 26.20 47km
SES 38.07 67 eP 51 19.00 0.1
CMB 39.02 89 eP 51 26.80 -0.2
e 51 40.50 52km
PRS 39.47 92 eP 51 31.10 0.4
e 51 44.00 48km
LRM 39.47 74 eP 51 30.90 0.0
KVN 39.82 86 eP 51 33.50 -0.3
PRI 40.03 92 e(P) 51 36.10 0.6
FRI 40.09 90 eP 51 36.10 0.3
e 51 49.00 48km
TNP 40.96 87 eP 51 42.40 -0.8
1.0s 12.50nm 4.6mb
epP 51 56.20 53km
BCH 41.01 92 eP 51 44.00 0.5
FFC 41.09 57 iPc 51 44.40 0.6
0.7s 8.00nm 4.6mb
ISA 41.70 91 eP 51 50.00 0.9
e 52 03.00 49km
CLC 42.15 90 eP 51 52.00 -0.8
e 52 06.00 53km
SBB 42.74 91 eP 51 58.00 0.4
MWC 42.90 92 eP 52 13.00 13.9X
GSC 42.97 90 eP 52 00.00 0.4
e 52 13.00 48km
DAU 43.22 80 eP 52 02.70 0.8
MSU 43.81 83 eP 52 07.40 0.9
epP 52 19.90 46km
esP 52 27.10
PLM 44.22 92 eP 52 10.00 0.2
BAR 44.79 92 eP 52 14.00 -0.2
RSSD 45.39 71 eP 52 18.20 -0.9
GLA 45.68 91 eP 52 21.00 -0.3
GOL 47.24 77 eP 52 34.00 0.2
0.8s 14.88nm 5.0mb
epP 52 46.90 47km
RSON 47.37 58 eP 52 34.00 -0.4
ALQ 49.62 82 eP 52 53.00 0.8
1.0s 5.00nm 4.5mb
ACO 52.92 76 eP 53 16.30 -0.7
0.8s 6.90nm 4.7mb
SIO 55.27 75 eP 53 32.80 -1.3
TUL 55.46 74 eP 53 34.50 -1.0
1.1s 11.40nm 4.8mb
XAN 56.97 284 P 53 44.80 -1.6
FVM 57.23 69 eP 53 46.30 -1.8
GTA 58.61 295 eP 53 56.20 -1.8
PTN 61.07 54 eP 54 13.80 -0.7
RSNY 61.31 54 eP 54 15.60 -0.6
1.1s 12.42nm 5.0mb
RSCP 61.68 68 eP 54 17.00 -1.8
HBVT 62.18 53 eP 54 21.60 -0.4
CD2 62.26 285 eP 54 22.00 -0.8
CBM 62.68 48 eP 54 24.50 -0.8
BLA 63.45 63 eP 54 30.00 -0.5
GYA 63.71 280 eP 54 32.40 -0.1
JSC 65.10 66 eP 54 40.80 -0.4
NUR 67.20 351 eP 54 54.00 -0.2
NB2 67.53 358 P 54 55.00 -1.4
0.6s 1.20nm 4.1mb
HFS 68.36 356 eP 55 00.20 -1.3
0.3s 3.20nm 4.8mb
CLL 77.21 356 eP 55 53.00 -0.5
BRG 77.60 355 iP 55 55.80 0.1
0.9s 10.00nm 4.8mb
MOX 77.92 357 eP 55 58.00 0.5
PRU 78.45 355 eP 56 00.50 0.1
KHC 79.36 355 iP 56 06.40 1.0
1.2s 10.00nm 4.6mb
CDF 80.24 360 eP 56 10.80 0.6
HAU 80.65 0 eP 56 13.00 0.7
BSF 80.82 360 eP 56 13.80 0.4
LOR 81.36 2 eP 56 16.80 0.8
0.8s 5.30nm 4.6mb
KBA 81.42 355 iPc 56 17.70 1.1
0.6s 8.10nm 4.9mb
SSF 81.56 2 eP 56 18.00 1.0
0.5s 3.90nm 4.6mb
LBF 81.64 2 eP 56 18.00 0.4
0.8s 5.30nm 4.6mb
AVF 81.82 2 eP 56 19.10 0.7
1.1s 9.70nm 4.7mb
SMF 81.98 2 eP 56 20.00 0.7
1.1s 14.60nm 4.9mb
TCF 82.29 3 eP 56 21.60 0.7
LSF 82.30 4 eP 56 21.70 0.7
0.8s 8.00nm 4.8mb
MAF 82.37 3 eP 56 22.30 1.0
0.6s 2.70nm 4.5mb
VAI 82.78 359 P 56 30.50 7.2X
CAF 83.65 3 eP 56 28.90 1.0
LPO 83.85 4 eP 56 30.10 1.2
SKO 85.81 349 iP 56 40.00 1.2
OMR 86.74 349 eP 56 43.80 0.3
HYB 87.28 295 eP 56 46.00 -0.4
BUL 144.14 323 iPKPd 03 34.50 -1.2
i 03 47.60
S.D. = 0.9 on 81 of 83 obs.

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* SEP 15, 1989 11h 25m 40.47± 0.89s
16.550 N ± 9.7km 61.893 W ±14.4km
DEPTH = 33.0km (normal)

15d 11h

LEEWARD ISLANDS (92)
ML 2.6 (FDF).

BPA	0.49	4	eP	25 51.51	0.5
			S	25 56.80	
PAG	0.56	158	eP	25 53.50	1.5
			S	26 05.50	
DEG	0.83	106	eP	25 55.27	-0.6
MGG	0.84	139	eP	25 55.97	0.1
NEV	0.87	312	eP	25 55.96	-0.4
BBL	1.10	159	eP	25 58.36	-1.2

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

% SEP 15, 1989 11h 47m 22.41± 0.95s
39.244 N ± 8.2km 27.765 E ±10.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.93	205	iPn	47 40.00	-0.2
KCT	1.10	24	iPn	47 43.00	-0.1
EDC	1.10	4	ePn	47 42.50	-0.6
EZN	1.26	298	ePn	47 46.10	0.4
YLV	1.81	43	iPn	47 54.50	0.6

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

& SEP 15, 1989 13h 20m 05.40s
34.280 N 117.490 W
DEPTH = 11.0km
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.5 (PAS). Felt (IV) at Crestline, Mount Baldy and Wrightwood; (III) at Etiwanda, Monterey Park and Riverside. Also felt at Apple Valley, San Bernardino and Victorville.

RVR	0.30	162	iPd	20 11.20	-0.5
MWC	0.47	263	iPc	20 14.30	-0.8
PEC	0.47	145	iP	20 14.40	-0.7
SBB	0.49	326	iPd	20 14.30	-1.2
PAS	0.58	257	iPc	20 16.20	-0.9
PLM	1.06	150	iPd	20 24.40	-1.0
CIS	1.16	221	ePc	20 25.80	-1.1
GSC	1.16	29	iPd	20 26.70	-0.4
TPC	1.21	98	iPc	20 27.80	0.0
CPE	1.43	167	ePd	20 29.90	-1.4
CLC	1.54	357	iPd	20 31.70	-1.1
ABL	1.54	292	eP	20 32.50	-0.5
ISA	1.60	330	ePd	20 32.70	-1.0
BAR	1.74	157	iPd	20 35.10	-0.6
BCH	2.32	294	eP	20 43.10	-1.1
BLP	2.42	277	eP	20 44.00	-1.5
GLA	2.54	118	eP	20 46.00	-1.2
SAO	4.07	309	eP	21 07.00	-1.9
CMB	4.42	329	e(P)	21 13.50	-0.4
KVN	4.79	354	eP	21 16.50	-2.8

20 obs. associated

SEP 15, 1989 14h 19m 24.62± 0.34s
10.008 N ± 6.6km 126.014 E ±10.2km
DEPTH = 33.0km (normal)
4.8mb (8 obs.)
PHILIPPINE ISLANDS REGION (248)

GUMO	18.79	77	eP	24 00.00	16.2X
SSE	21.46	349	Pc	24 13.50	1.2
	1.0s		0.06nm		2.0mb X
NJ2	22.92	344	Pd	24 27.80	1.0
MTN	23.27	167	eP	24 31.30	1.0
LOE	24.69	290	eP	24 45.00	0.8
KNA	25.74	174	iPc	24 53.10	-0.9
CHG	27.61	292	eP	25 11.50	0.3
XAN	28.60	329	Pc	25 18.50	-1.5
WB5	30.82	165	eP	25 38.20	-1.7
OIS	33.19	156	iPc	25 59.20	-1.4
	0.7s		11.00nm		4.9mb
ASPA	34.34	167	iPc	26 09.90	-0.7
	0.4s		10.00nm		5.1mb
CTA	35.94	146	eP	26 24.00	-0.2
WARB	35.98	179	eP	26 25.80	1.3
	0.2s		8.00nm		5.3mb
GTA	37.45	326	P	26 36.60	-0.3
FORR	40.67	177	eP	27 04.00	0.5
	0.3s		36.00nm		5.6mb
HYB	46.59	284	eP	27 52.80	1.0
WMQ	47.27	322	eP	27 56.80	0.0
GBA	47.63	279	Pd	27 58.50	-1.4
	0.6s		4.30nm		4.6mb
BWA	49.03	155	eP	28 12.20	1.7
CAN	50.05	155	eP	28 19.10	0.8
DZM	50.88	129	iPc	28 25.20	0.3
IMA	76.98	24	eP	31 16.40	0.8
	0.7s		5.20nm		4.7mb
KDC	77.06	33	eP	31 16.30	0.3
PMR	78.82	29	eP	31 25.20	-0.4
FBA	79.39	26	eP	31 28.20	-0.5
INK	84.62	22	eP	31 56.00	0.2
PRNI	85.89	300	eP	32 04.00	1.1
M8H	86.08	299	eP	32 04.00	0.2
HFS	92.16	332	eP	32 30.40	-1.6
	0.5s		1.10nm		4.5mb
NB2	92.88	334	P	32 33.40	-1.9
	1.2s		3.80nm		4.7mb

S.D. = 1.1 on 29 of 30 obs.

SEP 15, 1989 14h 49m 49.72± 0.47s
5.092 S ± 7.1km 102.573 E ± 9.5km
DEPTH = 33.0km (normal)
4.7mb (7 obs.) 4.5Msz (3 obs.)
SOUTHERN SUMATERA (274)

KGM	7.10	6	ePc	51 37.20	3.2
			e	54 08.30	
TSI	9.43	335	eP	52 16.00	9.6X
IPM	9.73	351	ePd	52 13.20	2.6
TRT	10.33	105	ePd	52 20.00	1.2
	0.5s		46.10nm		6.0mb X
SNG	12.34	351	eP	52 46.60	0.5
			e	55 42.20	
PCI	17.73	77	ePc	53 53.00	-2.8
NST	20.77	353	eP	54 30.90	0.3
NANU	21.41	145	iPc	54 37.80	0.8
	0.8s		22.00nm		4.6mb
LOE	22.37	358	iPd	54 45.80	-0.8
BDT	22.47	351	eP	54 45.70	-1.9
MBL	23.14	135	eP	54.55.00	0.8
	0.4s		6.00nm		4.4mb
CHG	24.02	352	iPd	55 02.80	0.0
	1.0s		15.00nm		4.5mb
QIZ	25.02	16	eP	55 14.70	2.4
KNA	27.81	114	eP	55 37.00	-1.2
MTN	29.22	107	eP	55 49.00	-1.8
WARB	31.14	135	eP	56 07.60	-0.2
GYA	31.61	7	P	56 11.40	-0.7
			sP	56 23.00	
WB5	34.25	118	eP	56 35.00	0.0
			eS	02 01.00	
ASPA	35.38	125	iPd	56 44.80	0.1
	Z 20s		0.40um		4.2Msz
			LR	11 47.00	
CD2	35.82	2	P	56 47.20	-1.0
LSA	36.29	343	P	56 52.00	-0.7
XAN	39.38	8	P	57 16.70	-1.4
LZH	40.98	2	eP	57 32.00	0.6
	Z 16s		0.70um		4.6MszX
			pP	57 43.50	41kmX
NDI	41.51	325	eP	57 36.00	0.3
TIY	43.56	11	eP	57 51.50	-0.9
GTA	44.35	357	eP	57 58.40	-0.4
	Z 18s		0.60um		4.6Msz
CTA	44.99	113	iPc	58 05.00	0.8
	1.0s		15.00nm		4.8mb
STK	45.19	131	eP	58 06.50	0.9
HHC	46.46	9	eP	58 15.80	0.3
BJI	46.62	14	eP	58 16.00	-0.7
	Z 19s		0.50um		4.6Msz
WMQ	50.51	346	Pc	58 46.60	-0.2
			pP	58 59.00	45kmX
			S	05 57.50	
BWA	51.45	131	eP	58 56.80	2.6
			e	59 05.20	
CAN	52.25	131	eP	59 13.80	13.6X
CN2	52.86	21	Pd	59 03.20	-1.3
			epP	59 13.40	34kmX
BUL	73.21	251	iPd	01 20.00	0.0
	1.0s		9.50nm		4.7mb
M8H	73.43	303	eP	01 21.00	0.1
PRNI	73.49	304	e(P)	01 19.00	-2.4
VRI	83.85	317	eP	02 18.00	0.5
MLR	84.30	317	eP	02 09.00	-10.9X
BNG	84.46	275	iPc	02 21.20	0.0
	0.8s		11.00nm		5.1mb
SPA	84.94	180	e(P)	02 22.60	-0.1
	1.0s		4.50nm		4.6mb
SUF	88.31	333	eP	02 39.00	0.0
NUR	88.48	331	eP	02 53.00	13.2X
SOD	89.29	338	eP	02 44.00	0.4
			i	02 56.00	
ZST	90.74	318	iP	03 03.40	12.7X

S.D. = 1.3 on 40 of 45 obs.

SEP 15, 1989 15h 36m 37.04± 0.30s
9.988 N ± 4.6km 126.520 E ± 6.6km
DEPTH = 33.0km (normal)
5.1mb (13 obs.) 4.4Msz (8 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 8S, 18C
Centroid Location:
Origin Time 15:36:43.2 1.3
Lat 10.13N 0.15 Lon 127.44E 0.15
Dep 25.3 10.4 Half-duration 1.5
Moment Tensor: Scale 10**16 Nm
Mrr= 4.07 0.68 Mtt= 0.91 0.65
Mff=-4.98 0.87 Mrt=-2.81 1.84
Mrf=-0.35 1.58 Mtf=-1.65 0.63
Principal Axes:

	Val=	Plg=	Azm=
T	5.74	59	186
N	-0.21	30	21
P	-5.54	7	287

Best Double Couple: Mo=5.6*10**16
NP1: Strike=348 Dip=46 Slip= 46
NP2: 222 59 126

DAV	3.03	198	eP	37 26.00	2.2
QCP	7.04	312	eP	38 36.00	15.5X
BAG	8.61	318	eP	38 40.00	-2.6
MNI	8.65	191	P	38 45.70	2.7
QZH	16.67	334	eP	40 33.50	3.6X
	Z 18s		1.70um		
	N 18s		2.20um		
GZH	18.12	318	eP	40 47.60	-0.4
	Z 18s		2.90um		
	E 15s		2.50um		
GUMO	18.31	77	eP	40 50.30	0.0
PJG	18.31	77	eP	40 49.80	-0.5
GUA	18.35	77	eP	40 49.50	-1.3
QIZ	18.46	301	eP	40 50.00	-2.2
	E 18s		1.90um		
KUG	20.23	188	eP	41 17.50	5.2X
SSE	21.58	347	Pc	41 28.00	2.0
	1.0s		0.03nm		1.6mb X
	Z 20s		0.60um		4.0Msz
	E 11s		0.70um		
			S	45 28.00	
			sS	45 34.00	
TRT	22.36	219	ePc	41 35.30	1.4
NJ2	23.07	343	Pd	41 42.00	1.3
	Z 18s		1.20um		4.4Msz
MTN	23.14	168	eP	41 43.00	1.5
WHN	23.38	333	P	41 46.50	2.8
	1.6s		0.11nm		2.1mb X
	N 16s		1.49um		
KGM	24.38	253	ePd	41 55.20	1.6
GYA	24.92	314	P	42 00.40	1.6
	Z 18s		1.23um		4.5Msz
	N 15s		1.29um		
LOE	25.17	290	eP	42 01.00	-0.1
KNA	25.67	175	eP	42 05.00	-0.8
IPM	25.84	260	ePd	42 07.90	0.4
	1.0s		41.50nm		5.0mb
NST	26.33	285	eP	42 13.80	1.9
TIA	27.46	343	eP	42 22.00	-0.1
CHG	28.08	291	iPc	42 26.50	-1.4
	1.1s		15.82nm		4.6mb
XAN	28.87	329	Pc	42 33.90	-1.0
CD2	29.68	318	eP	42 40.40	-1.9
	Z 16s		2.00um		4.8MszX
	E 15s		1.30um		
			eS	47 43.00	
TIY	30.38	338	Pc	42 49.00	0.6
	N 15s		1.10um		
WB5	30.67	165	eP	42 50.50	-0.5
BJI	31.31	345	P	42 57.00	0.6
	2.0s		0.09nm		2.2mb X
	Z 16s		0.76um		4.5MszX
MBL	31.64	192	eP	42 58.00	-1.5
SNY	31.82	356	eP	42 57.00	-3.9X
	Z 22s		0.80um		4.4Msz
	N 20s		1.00um		

	E	16s	0.80um		
			eS	48 00.00	
OIS		32.97	157 eP	43 09.80	-1.3
		0.9s	48.00nm		5.4mb
LZH		33.15	325 eP	43 12.00	-0.7
		1.5s	0.04nm		2.1mb X
	Z	20s	1.00um		4.5Msz
	N	13s	0.50um		
	E	10s	0.20um		
HHC		33.47	339 Pd	43 16.00	0.6
	Z	16s	1.20um		4.7MszX
	N	13s	0.70um		
	E	13s	0.40um		
BTO		33.81	337 P	43 19.00	0.6
	N	15s	0.60um		
	E	15s	0.60um		
			S	48 44.00	
NANU		34.09	198 eP	43 19.00	-1.8
		0.4s	6.00nm		4.9mb
ASPA		34.22	168 eP	43 21.00	-1.0
	Z	19s	0.52um		4.3Msz
			LR	59 31.30	
MDJ		34.60	4 eP	43 26.50	1.5
	Z	15s	0.60um		4.5MszX
			eS	49 00.00	
CTA		35.65	147 iPc	43 36.40	2.2
		1.0s	49.00nm		5.4mb
			iS	49 07.00	
WARB		35.95	180 eP	43 37.00	0.3
		0.3s	8.00nm		5.2mb
MEKA		37.20	192 eP	43 46.00	-1.2
GTA		37.75	325 Pc	43 51.80	-0.1
	Z	16s	0.90um		4.7MszX
MRWA		40.28	194 iPd	44 12.30	-0.5
		0.4s	11.00nm		5.0mb
FORR		40.63	178 eP	44 15.00	-0.6
COOL		40.96	187 eP	44 17.00	-1.4
BAL		41.45	193 eP	44 22.00	-0.4
MUN		42.88	193 eP	44 34.00	-0.1
NWAO		43.58	191 eP	44 50.00	10.2X
RKG		44.74	191 eP	44 54.00	4.9X
BRS		45.04	146 eP	44 50.00	-1.7
			ePP	46 36.00	
ADE		46.17	166 iPd	45 04.50	3.9X
		1.0s	60.00nm		5.5mb
HYB		47.08	284 ePc	45 07.50	-0.5
WMO		47.59	322 P	45 11.50	-0.3
	Z	18s	1.00um		4.8Msz
GBA		48.12	279 Pc	45 15.10	-1.1
		0.9s	21.80nm		5.2mb
BWA		48.81	156 eP	45 22.20	1.0
BFD		49.27	163 eP	45 27.50	2.9X
CAN		49.82	156 eP	45 33.80	4.8X
DZM		50.48	129 iPc	45 34.40	0.1
TOO		50.54	160 eP	45 38.00	3.6X
OUE		58.79	299 eP	46 33.00	-2.0
HI		65.66	305 eP	47 20.00	-0.7
SZ		66.01	149 P	47 27.00	4.5X
MA		76.79	24 eP	48 34.50	7.5X
		0.8s	4.40nm		4.5mb
PMR		78.60	29 e(P)	48 42.30	5.5X
KEV		83.98	340 eP	49 10.00	5.0X
INK		84.46	22 eP	49 08.00	0.6
SOD		84.64	337 eP	49 10.00	1.7
DSI		85.81	301 e(P)	49 15.00	0.1
SUF		85.92	333 iP	49 15.50	0.8
		0.8s	13.50nm		5.2mb
PRNI		86.33	300 eP	49 18.00	0.5
MBH		86.52	299 eP	49 19.00	0.6
NUR		87.16	331 iP	49 21.30	0.4
	Z	18s	0.50um		5.0Msz
			LR	32 10.00	
HFS		92.41	333 eP	49 44.50	-1.0
		1.2s	23.40nm		5.5mb
	Z	16s	0.13um		4.5MszX
			LR	28 34.00	
NB2		93.12	334 P	49 48.00	-0.8
		1.1s	3.40nm		4.7mb
PRU		96.11	323 eP	50 03.90	1.2
CLL		96.46	325 eP	50 02.00	-2.3
KHC		97.02	322 P	50 08.50	1.6
CNCB		164.36	117 PKP	56 43.00	3.2X
LPB		164.36	116 ePKP	56 43.00	3.4X
ZOBO		164.44	115 PKP	56 42.00	2.1X
	S.D. = 1.3		on 63 of	80 obs.	

? SEP 15, 1989 15h 44m 38.70± 1.01s

10.001 N ±20.1km 126.420 E ±28.1km
DEPTH = 33.0km (normal)
4.8mb (2 obs.)
PHILIPPINE ISLANDS REGION (248)

WARB		35.97	180 eP	51 37.00	-1.5
HYB		46.98	284 eP	53 09.50	0.6
GBA		48.02	279 P	53 17.30	0.3
BWA		48.86	156 eP	53 24.80	1.5
			e	53 27.90	
SUF		85.86	333 eP	57 17.00	0.9
SLL		92.38	333 eP	57 46.10	-1.0
		0.8s	5.40nm		5.0mb
NB2		93.06	334 P	57 49.50	-0.8
		0.9s	1.90nm		4.5mb
	S.D. = 1.3		on 7 of	7 obs.	

SEP 15, 1989 16h 31m 27.14± 0.44s
0.988 N ± 7.7km 126.064 E ± 9.0km
DEPTH = 33.0km (normal)
5.0mb (6 obs.)
MOLUCCA PASSAGE (266)

AAI		5.11	155 eP	32 44.10	0.7
DAV		6.08	355 eP	33 01.00	3.9X
PCI		6.50	253 ePc	33 08.30	5.2X
			e(S)	33 36.20	
TSM		8.61	292 ePd	33 35.60	3.2
MKS		9.02	227 ePc	33 42.50	4.3X
			e	35 12.50	
KKM		11.04	297 ePc	34 15.00	9.0X
TRT		15.94	237 ePd	35 15.60	5.0X
BAG		16.25	341 eP	35 16.00	1.1
WB5		22.28	159 eP	36 21.20	-2.0
WRA		22.33	159 Pd	36 21.10	-2.6
		0.5s	21.00nm		4.8mb
GUMO		22.43	55 eP	36 24.50	-0.2
PJG		22.43	55 eP	36 25.50	0.8
GUA		22.44	55 eP	36 24.50	-0.3
		0.6s	26.67nm		4.9mb
KGM		22.76	273 eP	36 30.00	2.1
KLM		24.49	275 eP-	36 46.50	1.7
OZH		24.89	344 eP	36 51.00	2.6
	Z	28s	2.70um		4.6MszX
	E	14s	1.50um		
OIS		25.19	149 eP	36 51.30	-0.1
IPM		25.26	279 ePd	36 51.90	-0.2
ASPA		25.66	163 eP	36 54.40	-1.5
		1.9s	103.00nm		5.1mb
			eS	41 26.80	
SNG		26.10	284 eP	36 50.00	-10.0X
WARB		27.02	179 eP	37 09.00	0.7
NNT		28.53	295 eP	37 21.00	-1.1
WHN		31.43	340 eP	37 48.50	0.9
GYA		31.46	325 P	37 47.40	-0.8
CHG		31.96	305 eP	37 51.00	-1.5
KMI		32.91	319 eP	38 00.50	-0.5
CD2		36.50	327 P	38 29.80	-1.7
XAN		36.59	336 P	38 30.50	-1.6
MAT		37.12	16 iPc	38 34.60	-2.0
		1.3s	48.08nm		5.2mb
BRS		38.16	140 eP	38 48.00	2.6
BJI		39.90	348 eP	38 59.00	-0.7
LZH		40.55	332 eP	39 00.00	-5.3X
		1.5s	0.03nm		1.8mb X
SNY		40.72	357 Pc	39 06.30	0.0
BWA		40.99	151 eP	39 10.10	1.3
CAN		42.00	152 eP	39 20.90	3.8X
CN2		42.63	359 eP	39 26.00	4.0X
	Z	16s	1.90um		5.1MszX
	N	13s	0.30um		
	E	13s	0.60um		
			epP	39 31.00	17kmX
GTA		45.13	331 eP	39 41.00	-1.5
HYB		49.47	292 ePc	40 15.80	-0.9
		1.2s	60.60nm		5.5mb
GBA		49.72	287 Pd	40 16.60	-2.0
		0.7s	5.60nm		4.7mb
WMO		54.60	327 Pc	40 54.50	-0.4
MAIO		70.65	308 eP	42 41.00	-0.9
MHI		70.65	308 eP	42 41.00	-0.9
SVW		83.49	29 eP	43 54.70	1.9
TTA		83.63	27 eP	43 55.20	1.7
ZOBO		159.36	138 PKP	51 27.00	2.1
	S.D. = 1.6		on 36 of	45 obs.	

SEP 15, 1989 16h 40m 25.00± 0.19s

3.062 S ± 3.5km 134.686 E ± 3.8km
DEPTH = 33.0km (normal)
5.5mb (25 obs.) 5.0Msz (11 obs.)
WEST IRIAN REGION (196)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 20C
Centroid Location:
Origin Time 16:40:28.8 1.2
Lat 3.02S 0.14 Lon 134.33E 0.08
Dep 21.1 FIX Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.28 0.10 Mtt=-1.01 0.09
Mff= 1.29 0.14 Mrt=-0.52 0.15
Mrf= 0.14 0.24 Mtf= 0.94 0.09
Principal Axes:

T	Val= 1.63	Plg= 1	Azm=110
N	-0.06	67	203
P	-1.57	23	19

Best Double Couple:Mo=1.6*10**17
NP1:Strike=157 Dip=73 Slip=-165
NP2: 62 75 -17

JAY		6.04	85 iPc	41 54.50	0.1
AAI		6.51	264 ePd	41 58.80	-2.2
			eS	43 08.40	
MNDI		9.46	109 eP	42 42.00	-0.2
MTN		10.34	200 iPc	42 50.10	-4.1X
			eS	44 42.00	
KUG		13.08	237 eP	43 33.50	2.3
		0.6s	315.80nm		6.5mb X
KNA		13.89	204 iPc	43 36.70	-5.1X
		0.9s	1134.00nm		6.6mb X
			e	46 10.00	
PMG		13.90	118 eP	43 40.00	-2.0
PCI		14.99	278 ePc	43 58.20	1.9
		1.0s	9.00nm		4.0mb X
MKS		15.33	261 ePd	44 01.70	1.1
			e	45 59.00	
WB5		16.72	181 eP	44 11.60	-6.9X
			i	44 23.00	
			eS	47 08.00	
WRA		16.78	181 Pd	44 11.90	-7.4X
		0.9s	46.30nm		4.6mb
OIS		18.04	165 eP	44 29.20	-5.7X
		1.0s	235.00nm		5.3mb
			eS	47 43.70	
TSM		18.11	293 ePd	44 39.00	3.2X
		1.0s	572.10nm		5.7mb
GUA		19.36	31 eP	44 51.30	0.3
		1.2s	400.00nm		5.6mb
GUMO		19.38	31 eP	44 51.20	0.0
		1.3s	496.73nm		5.6mb
PJG		19.38	31 eP	44 51.50	0.3
KHKI		19.69	254 ePd	44 52.10	-2.5
			e	51 55.10	
CTA		20.34	147 iPc+	44 59.80	-1.6
		1.2s	468.75nm		5.7mb
			i	45 20.00	
			i	45 50.00	
			iS	48 47.00	
ASPA		20.50	182 iPd	45 01.80	-1.3
		1.1s	647.00nm		5.9mb
	Z	17s	31.84um		5.7MszX
			eS	48 36.60	
			LR	53 24.50	
KKM		20.54	296 ePc	45 01.50	-2.1
		1.0s	358.70nm		5.7mb
OCP		22.16	323 eP	45 35.00	15.2X
M8L		23.08	218 eP	45 29.00	0.2
		0.8s	63.00nm		5.2mb
BAG		23.85	325 eP	45 36.80	0.3
		1.0s	280.00nm		5.7mb
			eS	49 49.60	
WARB		24.25	198 eP	45 41.10	0.8
		0.5s	26.00nm		5.0mb
OLP		25.12	160 ePd	45 48.00	-0.5
SVO		25.70	105 eP	45 55.00	0.9
HNR		25.88	105 eP	45 55.00	-0.8
			eS	50 14.00	
NANU		26.85	222 eP	46 04.00	-0.6
		0.8s	39.00nm		5.1mb
RMO		26.92	151 eP	46 05.00	-0.2
FORR		28.33	192 eP	46 17.00	-0.9
STK		29.40	168 eP	46 25.50	-2.1
BRS		29.74	146 iPc	46 30.00	-0.7
			eS	51 32.00	

15d 16h

CMS	30.16	161	e(P)	46 33.00	-1.4
COOL	30.49	203	eP	46 36.00	-1.3
MRWA	31.50	212	eP	46 47.00	0.8
KGM	31.76	279	eP	46 48.50	-0.2
QZH	31.92	332	iPc	46 48.70	-1.2
AOE	31.96	174	iPd	46 50.00	-0.3
	1.0s	96.00nm		5.6mb	
BAL	32.24	210	eP	46 53.00	0.3
QIZ	32.85	313	eP	46 56.60	-1.5
GZH	33.30	322	eP	46 57.70	-4.2X
MUN	33.61	209	eP	47 06.00	1.5
BWA	33.72	159	eP	47 05.70	0.1
			e	47 58.20	
NWAO	33.91	207	eP	47 08.00	0.8
IPM	34.48	283	ePc	47 11.90	-0.4
	1.1s	109.40nm		5.7mb	
			e	47 21.10	
BFD	34.71	169	eP	47 13.50	-0.5
CAN	34.73	159	eP	47 15.10	0.8
RKG	34.98	206	eP	47 22.50	6.2X
SNG	35.49	287	iPd	47 21.30	0.4
	1.4s	367.44nm		6.1mb	
TSI	36.69	280	eP	47 30.00	-1.0
SHK	37.44	357	eP	47 35.80	-1.3
NJ2	38.02	338	Pd	47 42.00	0.1
Z	20s	1.20um		4.7Msz	
NNT	38.04	295	eP	47 42.00	-0.4
LOE	38.35	303	iPd	47 44.50	-0.5
WHN	38.65	331	Pd	47 48.00	0.8
	1.4s	0.22nm		2.8mb X	
Z	20s	1.25um		4.7Msz	
N	12s	1.41um			
E	14s	0.98um			
NST	38.92	300	P	47 51.00	1.3
MAT	39.53	4	eP	47 52.00	-2.6
	1.2s	40.63nm		5.1mb	
Z	20s	3.19um		5.2Msz	
GYA	39.94	319	P	47 58.20	0.0
Z	14s	1.41um		5.0MszX	
N	12s	0.82um			
BDT	40.58	301	eP	48 03.00	-0.4
	0.8s	41.50nm		5.2mb	
CHG	41.35	303	iPd	48 10.00	0.2
	1.1s	97.47nm		5.4mb	
KMI	41.78	314	Pd	48 13.50	0.0
TIA	42.37	339	eP	48 17.20	-0.7
E	16s	1.10um			
DL2	43.46	345	eP	48 27.30	0.6
Z	20s	1.80um		5.0Msz	
XAN	44.17	329	Pd	48 32.00	-0.6
E	12s	0.52um			
		S		55 00.00	
CD2	44.84	321	P	48 37.60	-0.4
		eS		55 11.00	
TIY	45.52	335	Pd	48 43.00	-0.4
N	13s	0.80um			
E	14s	1.30um			
		S		55 23.50	
SNY	45.81	348	eP	48 44.70	-0.8
BJI	46.13	340	Pd	48 47.50	-0.6
	1.2s	0.16nm		2.8mb X	
Z	21s	1.52um		4.9Msz	
		ePcS		54 18.50	
		eS		55 30.00	
CN2	47.38	351	Pd	48 56.00	-1.9
		epP		49 06.00	33kmX
LZH	48.44	326	iPd	49 07.00	0.5
	1.5s	0.21nm		2.9mb X	
Z	22s	1.50um		4.9Msz	
N	14s	0.70um			
E	15s	0.40um			
		eS		56 06.00	
HHC	48.54	337	P	49 07.10	0.0
Z	20s	1.30um		4.9Msz	
N	11s	0.50um			
E	14s	0.50um			
		S		56 09.00	
BTO	48.96	335	P	49 10.00	-0.4
N	18s	0.80um			
E	18s	1.50um			
		pP		49 22.00	43kmX
MSZ	50.72	150	P	49 26.00	2.4
LSA	52.86	311	P	49 41.00	0.3
		iS		57 07.50	
GTA	53.05	326	iPd	49 41.40	0.0
Z	24s	1.00um		4.8MszX	
KOD	58.48	284	eP	50 21.00	-0.1
HYB	58.97	292	iPc	50 23.50	-0.6
	1.0s	60.00nm		5.7mb	
GBA	59.15	288	Pc	50 24.70	-0.6
	1.0s	35.30nm		5.4mb	
WMQ	62.84	323	iPd	50 50.00	-0.1
Z	22s	1.10um		5.0Msz	
		sP		51 06.00	
		S		59 20.00	
NDI	63.48	304	iP	50 53.50	-1.0
POO	63.58	292	iPd	50 55.30	0.0
KSH	68.41	315	P	51 28.00	2.0
		eS		00 23.00	
QUE	72.48	303	eP	51 51.50	0.5
SBA	76.64	173	Pd	52 17.40	3.7X
MHI	79.93	308	eP	52 34.00	1.3
MAW	80.30	202	eP	52 35.00	1.1
SVW	83.00	27	eP	52 49.70	1.6
TTA	83.44	26	eP	52 51.70	1.3
KDC	83.49	31	eP	52 51.80	1.2
IMA	85.42	23	eP	53 01.70	1.3
	1.0s	41.50nm		5.6mb	
PMR	86.13	28	eP	53 04.00	0.2
	1.7s	148.10nm		5.9mb	
SPA	86.96	180	e(P)	53 08.90	0.9
	1.0s	18.50nm		5.3mb	
Z	20s	4.23um		5.8Msz	
TOA	87.61	28	eP	53 12.00	0.9
INK	93.49	22	eP	53 38.00	-0.2
SOD	99.71	338	eP	54 06.00	-0.6
SUF	101.15	334	ePdiff	54 13.00	-0.1
	0.8s	4.50nm		5.1mb	
NUR	102.44	332	ePdiff	54 17.00	-1.8X
Z	20s	0.80um		5.2Msz	
		LR		47 30.00	
VRI	104.66	317	ePdiff	54 30.50	1.3
NB2	108.32	335	Pdiff	54 45.40	0.3
	0.7s	1.00nm		5.1mb	
CLL	111.75	325	e(PKP)	58 54.00	-4.0X
		e		59 42.00	
ALQ	115.22	53	ePKP	59 03.50	-2.1
	1.3s	2.40nm			
BNG	116.28	273	ePKPd	59 08.30	0.4
	0.6s	3.00nm			
LPG	118.00	321	ePKP	59 10.80	0.2
	0.7s	9.90nm			
LOR	118.91	324	ePKP	59 12.00	0.1
LBF	118.99	324	ePKP	59 12.50	0.4
	0.9s	6.50nm			
SSF	119.22	324	ePKP	59 13.10	0.6
	0.9s	3.90nm			
TCF	120.39	324	ePKP	59 15.40	0.6
	0.8s	9.40nm			
LSF	120.81	324	ePKP	59 15.80	0.2
CAF	121.18	322	ePKP	59 17.30	0.9
	0.8s	6.70nm			
MFF	121.59	325	ePKP	59 16.70	-0.3
	0.8s	5.30nm			
LPO	121.84	322	ePKP	59 18.60	1.0
	0.9s	13.10nm			
EPF	123.22	321	ePKP	59 20.70	0.4
	0.7s	5.50nm			
UYO	124.84	50	iPKPc	59 24.50	0.8
KIC	139.44	276	PKP	59 52.80	0.9
NNA	145.28	116	iPKPd	00 04.60	2.5
	1.0s	17.00nm			
HUA	146.61	117	ePKP	00 11.90	7.1X
ARE	147.67	128	ePKP	00 09.00	2.7X
CNCB	150.15	132	PKP	00 14.00	3.5X
LPB	150.24	132	ePKP	00 17.00	6.6X
	1.0s	64.00nm			
Z	22s	0.37um		5.1Msz	
		LR		51 10.00	
ZOBO	150.38	131	PKP	00 13.70	2.8X
	1.0s	45.00nm			
Z	24s	0.30um		5.0MszX	
		LR		51 32.00	
CCH	151.10	135	PKP	00 29.90	18.3X
PPD	154.38	167	ePKP	00 19.20	3.5X

S.D. = 1.1 on 103 of 122 obs.

? SEP 15, 1989 18h 16m 04.55± 6.60s
33.022 S ±24.4km 72.004 W ±43.4km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.58	141	iPd	16 16.10	-0.2
			iS	16 26.20	
ROCH	0.84	87	iPd	16 20.20	-0.7
			iS	16 32.80	
LNV	1.05	152	iPd	16 23.90	-0.5
			iS	16 40.00	
TACH	1.09	126	iPc	16 25.00	-0.1
			iS	16 41.10	
TACH	1.09	126	iPc	16 25.90	0.8X
			iS	16 54.00	
PEL	1.11	97	iPc	16 35.60	10.1X
			iS	16 42.50	
SAN	1.20	111	iPd	16 27.40	0.4
			iS	16 44.60	
PCH	1.38	116	iPd	16 30.10	0.1
			iS	16 50.00	
CHCH	1.45	129	iPc	16 31.60	0.7
			iS	16 52.20	
FCH	1.47	102	iPd	16 31.50	0.1
			iS	16 52.00	

S.D. = 0.5 on 8 of 10 obs.

? SEP 15, 1989 18h 25m 02.11± 6.05s
33.071 S ±17.5km 72.057 W ±49.8km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.57	135	iPd	25 12.60	-1.2
			iS	25 22.90	
ROCH	0.88	84	iPd	25 16.40	-2.0
			iS	25 29.40	
LNV	1.03	149	iPc	25 19.60	-0.7
			iS	25 35.50	
TACH	1.10	122	iPc	25 21.40	0.1
			iS	25 38.50	
TACH	1.10	122	iPc	25 22.50	1.2
			iS	25 40.90	
PEL	1.15	94	iPc	25 21.50	-0.5
			iS	25 39.00	
SAN	1.23	108	iPd	25 23.60	0.5
			iS	25 41.00	
PCH	1.40	113	iP	25 26.20	0.5
CHCH	1.45	127	iPc	25 27.50	1.1
			iS	25 49.40	
FCH	1.50	100	iPc	25 27.50	0.2
			iS	25 49.50	
ZON	3.24	63	e(P)	25 54.00	2.1
TCA	6.56	77	e(P)	26 37.30	-1.6
			(S)	28 00.30	

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

SEP 15, 1989 18h 34m 12.98± 0.12s
53.232 N ± 2.9km 159.719 E ± 2.3km
DEPTH = 51.3km (62 depth phases)
5.6mb (69 obs.)
NEAR EAST COAST OF KAMCHATKA (218)
mb 5.5 (BRK).
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 25C
Centroid Location:
Origin Time 18:34:18.5 0.6
Lat 53.05N 0.04 Lon 160.18E 0.08
Dep 48.1 3.5 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr= 1.54 0.05 Mtt=-0.24 0.08
Mff=-1.30 0.07 Mrt= 0.63 0.11
Mrf= 0.39 0.15 Mtf=-0.96 0.09
Principal Axes:

T	Val= 1.74	Plg=73	Azm=353
N	0.25	13	215
P	-1.99	11	122

Best Double Couple:Mo=1.9*10**17
NP1:Strike=197 Dip=36 Slip= 68
NP2: 43 57 105

SMY	8.70	88	ePc	36 16.10	-2.7
MDJ	21.46	259	eP	38 57.50	-1.1
N	14s	0.94um			
E	28s	1.70um			
		S		42 48.00	
MAT	22.46	231	iPc	39 09.20	0.5
	0.8s	589.55nm		6.1mb	
Z	20s	1.06um		4.3Msz	
		eS		43 10.00	
CN2	24.37	261	Pc	39 25.50	-1.6
	4.0s	0.40nm		2.3mb X	
Z	18s	1.70um		4.6Msz	
N	12s	0.60um			

	E	12s	0.60um						epP	43	48.30	53km	NRA0	63.58	343	P	44	39.00	-1.0
			epP	39	35.00	34kmX	PCC	54.22	73	eP	43	35.60	0.2	HFS	63.75	342	eP	44	39.10	-2.0
			eS	43	30.00					epP	43	59.00	95kmX		0.6s		29.80nm			5.5mb
TTA		24.83	49 P	39	31.70	0.2	SOD	54.69	340	iP	43	37.00	-1.5		Z	20s	0.29um			4.5Msz
IMA		26.09	42 P	39	42.80	-0.5				i	43	57.20	80kmX				LR	09	46.00	
SNY		26.65	259 Pd	39	47.60	-0.8	GCC	54.77	74	eP	43	39.20	-0.2	ALQ	65.00	65	iPc	44	49.50	-0.3
	Z	20s	2.10um			4.7Msz				epP	43	53.10	51km		1.0s		57.50nm			5.6mb
	N	22s	1.10um				ARN	54.81	73	P	43	40.00	0.1				pP	45	04.50	54km
	E	20s	1.60um							pP	43	54.30	53km				esP	45	36.50	
			S	44	12.00		CM8	55.00	72	eP	43	41.00	-0.2	SCH	65.66	27	ePc	44	52.10	-1.4
SHK		26.75	237 eP	39	50.30	0.9				epP	43	56.50	58km		0.4s		18.00nm			5.4mb
KDC		26.99	61 P	39	50.30	-1.0				esP	44	03.00		SNG	66.08	249	iPc	44	57.79	1.2
		0.9s	62.50nm			5.2mb	GDH	55.43	14	ePc	43	32.00	-11.8X		1.4s		269.77nm			6.1mb
PMR		28.10	52 P	40	00.30	-1.1		1.1s		40.51nm							e	45	12.10	51km
FBA		28.49	45 P	40	05.00	0.1				i	43	54.00	88kmX	MAIO	67.37	301	eP	45	05.00	0.2
		1.1s	86.25nm			5.3mb	KVN	55.59	69	P	43	46.10	0.5				e	45	32.00	108kmX
DL2		29.66	257 eP	40	14.10	-1.5	PRS	55.62	74	eP	43	46.30	0.7	MHI	67.37	301	eP	45	05.00	0.2
BJI		32.16	264 eP	40	36.50	-1.0				epP	43	58.80	44km				e	45	32.00	108kmX
		1.2s	0.03nm			1.9mb X	LLA	55.66	73	eP	43	46.80	0.8	MKS	67.37	224	ePc	45	06.30	1.5
	Z	28s	1.38um			4.5MszX				epP	44	00.20	48km				e	46	00.00	230kmX
	N	10s	0.27um				PTI	56.10	62	P	43	50.30	1.1	IPM	67.99	247	ePc	45	09.10	0.3
			eS	45	52.00					pP	44	04.20	51km		0.9s		66.20nm			5.7mb
INK		33.90	38 iPc	40	52.30	-0.1	FRI	56.11	72	eP	43	49.00	-0.1				e	45	24.00	53km
		0.7s	42.00nm			5.5mb				epP	44	02.60	49km	KGM	68.88	243	ePd	45	15.70	1.5
			pP	41	06.00	53km	PRI	56.15	73	eP	43	50.00	0.4	MEO	69.30	60	iPc	45	15.80	-0.9
TIA		34.11	257 eP	40	51.70	-2.9	KSH	56:18	292	eP	43	46.00	-3.8X	ELO	69.82	350	eP	45	17.50	-2.0
	Z	24s	1.50um			4.6MszX	TNP	56.76	69	P	43	54.40	0.3	TUL	69.85	57	iPd	45	19.80	-0.1
HHC		34.42	269 Pd	40	56.40	-1.0	BCH	57.16	74	P	43	56.90	0.1		1.0s		86.70nm			5.6mb
	N	12s	0.60um							pP	44	01.20	14kmX		Z	21s	0.67um			4.9Msz
BTO		35.50	270 P	41	06.00	-0.6	FRB	57.47	23	eP	43	56.00	-2.4				i	45	34.00	50km
	N	15s	1.00um					0.8s		89.00nm		5.9mb					LR	08	00.00	
	E	15s	0.80um				SYP	57.69	74	eP	44	01.00	0.5	EBH	70.02	350	eP	45	19.00	-1.7
			sP	41	21.50					e	44	15.00	51km		1.0s		86.00nm			5.6mb
XAN		40.47	263 P	41	45.60	-2.4	CHG	57.71	258	iPc	43	59.90	-0.8	EAB	70.16	351	eP	45	19.90	-1.6
QZH		41.74	244 eP	41	58.60	0.2	DUG	57.72	65	P	44	01.10	0.4		0.9s		99.00nm			5.7mb
LZH		42.12	269 P	42	02.00	0.3				pP	44	15.60	53km	MTN	70.23	210	iPd	45	22.40	0.0
		1.5s	0.15nm			2.5mb X	ISA	57.75	72	eP	44	01.00	0 1		1.0s		275.00nm			6.1mb
	Z	24s	1.30um			4.7MszX				e	44	14.00	46km				e	45	36.70	51km
	N	12s	0.40um				CLC	58.14	72	eP	44	03.00	-0.6	ESY	70.25	350	eP	45	20.90	-1.2
			pP	42	16.00	53km				e	44	18.00	56km	TSI	70.25	248	ePc	45	23.00	0.4
GTA		42.37	276 iPc	42	03.20	-0.5	SUF	58.78	337	iP	44	06.20	-1.4	FVM	70.83	52	P	45	24.90	-1.0
		1.2s	0.10nm			2.4mb X		0.3s		25.10nm		5.8mb					pP	45	38.90	49km
	Z	15s	1.20um			4.9MszX	SBB	58.82	73	eP	44	08.00	-0.3	EKA	70.88	350	Pd	45	26.00	0.1
	E	13s	0.70um							e	44	22.00	51km		1.1s		71.10nm			5.5mb
CD2		45.76	264 P	42	29.80	-1.1	KKM	58.85	233	eP	44	07.00	-1.7	BRN	71.06	339	ePc	45	27.50	0.5
PGC		46.45	63 eP	42	37.00	0.9	BDT	58.91	257	eP	44	08.80	-0.2	KRA	71.63	334	eP	45	29.00	-1.5
WMQ		46.71	289 Pc	42	38.00	-0.4	GSC	58.96	72	eP	44	09.00	-0.4				e	45	31.00	6kmX
	Z	18s	1.60um			5.0Msz				e	44	23.00	51km				e	45	50.80	
			sP	42	58.00		MWC	59.02	73	eP	44	10.00	0.1	KSP	71.83	337	eP	45	31.00	-0.7
KBS		46.72	352 eP	42	38.00	0.1				e	44	24.00	51km		0.9s		49.00nm			5.4mb
GYA		47.31	257 P	42	42.00	-1.3	MSU	59.26	66	P	44	12.10	0.5				i	45	45.50	51km
	Z	18s	0.62um			4.6Msz				pP	44	26.40	52km	KHKI	71.84	226	ePc	45	30.80	-1.3
			S	43	33.00		RSON	59.38	45	P	44	10.90	-1.0				e	47	28.00	562kmX
BAG		47.79	235 eP	42	46.00	-1.2		1.0s		176.79nm		6.1mb		WIT	71.95	343	eP	45	33.50	1.2
RMW		48.05	63 P	42	49.30	0.5				pP	44	25.60	54km				e	45	49.00	56km
			pP	43	02.70	50km	TSM	59.57	230	eP	44	30.00	16.4X	RSNY	72.09	38	P	45	32.20	-1.1
PNT		48.08	60 ePc	42	49.00	0.0	RVR	59.58	73	eP	44	13.00	-0.5		1.0s		34.35nm			5.2mb
		0.8s	78.00nm			5.8mb				e	44	27.00	51km	CLL	72.14	339	iPc	45	32.90	-0.6
			pP	43	03.00	53km	PEC	59.77	73	P	44	14.80	-0.1		1.1s		105.00nm			5.7mb
EDM		48.86	53 iPc	42	54.80	-0.2				pP	44	28.20	48km				i	45	53.50	78kmX
		0.7s	217.00nm			6.3mb	TPC	60.25	72	eP	44	18.00	-0.2	CBM	72.22	32	P	45	33.70	-0.3
			pP	43	09.00	54km				e	44	32.00	51km	OLY	72.31	54	P	45	34.20	-0.6
KMI		50.63	259 Pc	43	07.00	-2.0	PLM	60.33	73	eP	44	18.00	-0.9	BRG	72.34	338	iP	45	33.70	-1.0
			sP	43	22.00					e	44	32.00	51km		1.1s		42.00nm			5.3mb
FHC		51.08	71 e(P)	43	12.70	0.7	BAR	60.93	74	eP	44	23.00	0.2				i	45	48.80	54km
			epP	43	25.50	47km				e	44	36.00	46km				i	46	02.20	
QIZ		51.28	248 eP	43	14.80	1.1	NUR	61.06	336	iP	44	22.30	-0.9	SPC	72.35	333	iPd	45	35.50	0.5
SES		51.75	55 ePc	43	16.20	-0.8		1.0s		26.00nm		5.3mb					i	45	56.00	77kmX
		1.0s	125.00nm			5.9mb		Z	18s	1.90um		5.3Msz		TAB	72.41	311	eP	45	51.00	15.5X
			pP	43	29.00	46km				LR	10	00.00		TRT	72.59	230	iPc	45	36.20	-0.3
LBFM		51.90	70 P	43	18.20	-0.3	AKU	61.40	359	eP	44	25.60	0.2		0.8s		178.20nm			6.0mb
			pP	43	33.20	57km		1.0s		72.00nm		5.8mb		DMU	72.66	352	eP	45	36.20	-0.3
WDC		52.05	71 eP	43	19.70	0.4	GLA	61.72	72	eP	44	28.00	-0.1	WTS	72.71	343	iPd	45	37.50	0.7
			epP	43	34.60	56km				e	44	42.00	50km		0.7s		28.00nm			5.3mb
KEV		52.61	341 eP	43	23.00	-0.2	GOL	62.05	60	P	44	31.00	0.4				e	45	51.50	49km
			e	43	36.00	47km		0.9s		46.97nm		5.6mb		HBVT	72.78	37	P	45	37.10	-0.3
MIN		52.73	70 eP	43	23.50	-1.2				pP	44	44.60	49km	PRU	73.04	337	ePc	45	38.00	-0.8
			epP	43	38.40	56km	NNT	62.18	253	iPc	44	31.00	-0.3		0.9s		34.90nm			5.3mb
FFC		53.09	46 iPc	43	26.00	-0.9				e	07	45.00					e	45	59.50	81kmX
		1.0s	87.00nm			5.7mb	UPP	63.22	340	iP	44	35.60	-2.0	MOX	73.07	339	ePc	45	39.00	0.0
ORV		53.32	71 eP	43	26.50	-2.3		1.1s		200.00nm		6.1mb			1.3s		80.00nm			5.5mb
			epP	43	42.20	60km	NDI	63.23	283	ePc	44	36.00	-2.1		Z	34s	0.90um			4.8MszX
DAV		53.72	224 eP	43	32.00	0.1	PMG	63.31	194	eP	44	38.00	-0.6				e	45	53.00	49km
LRM		54.04	60 iPc	43	33.80	-0.6	PCI	63.34	226	ePd	44	50.00	11.1X	BNH	73.22	35	P	45	40.20	0.2
			e	43	47.80	51km		1.0s		3.00nm				DLE	73.24	351	eP	45	39.50	-0.4
BKS		54.05	73 eP	43	34.00	-0.1	NB2	63.35	343	P	44	36.80	-1.7	HOF	73.32	339	eP	45	40.30	-0.2
		1.1s	62.00nm			5.6mb		0.9s		36.70nm		5.5mb		VRI	73.43	328	eP	45	40.00	-1.1

15d 18h

PSZ	73 60	333	eP	45 42.30	0.1					e	52 20.00			ALP	80.02	335	eP	46 19.11	0.9
ETA	73.79	351	eP	45 44.00	0.9					e	56 48.00			ENR	80.05	340	P	46 17.51	-0.8
CTA	73.94	193	iPc	45 43.70	-0.6					e	01 54.00			STV	80.05	340	P	46 17.51	-0.8
	1.0s	75.00nm		5.6mb						e	12 58.00			RJF	80.08	345	eP	46 18.70	0.4
		i	45 58.60	53km		BHD	77.24	309	ePd	46 01.50	-1.5			0.8s	46.70nm			5.5mb	
MLR	74.01	328	eP	45 45.00	0.3	CTI	77.40	338	Pd	46 03.90	0.1			BERA	80.20	330	eP	46 19.30	0.4
ENN	74.05	343	ePc	45 44.50	-0.1	GRR	77.42	347	eP	46 03.50	-0.3			SAOF	80.25	340	P	46 19.59	0.3
	1.0s	101.00nm		5.7mb			0.9s	117.90nm			5.9mb			IMI	80.26	340	P	46 19.86	0.5
		e	45 52.00	24kmX		PLD	77.44	327	eP	46 05.00	1.0			AUTN	80.27	340	P	46 20.50	0.9
		e	46 05.00			VDL	77.47	339	ePc	46 04.80	0.5			TOUF	80.29	340	P	46 20.37	0.7
KHC	74.06	338	iPc	45 45.00	0.2	VTS	77.48	329	iPd	46 04.00	-0.4			CAF	80.36	344	eP	46 20.70	0.9
	1.1s	48.00nm		5.3mb		KDZ	77.62	327	eP	46 06.00	1.0			ELL	80.39	321	eP	46 20.00	-0.2
		i	46 05.50	77kmX		LOR	77.79	343	eP	46 05.60	-0.2			AURF	80.39	340	P	46 20.50	0.4
ZST	74.08	335	eP	45 44.60	-0.3		1.1s	76.30nm			5.6mb			SBF	80.40	340	eP	46 19.90	-0.2
		i	46 05.80	80kmX		LPF	77.80	347	eP	46 05.70	-0.1				1.1s	126.90nm			5.8mb
TNS	74.11	341	ePc	45 45.20	0.1		1.1s	99.60nm			5.8mb			MVIF	80.42	340	P	46 20.95	0.6
SRO	74.12	334	iP	45 45.90	0.8	RZN	77.82	327	iPd	46 07.00	0.7			NEO	80.45	327	eP	46 20.00	-0.4
		i	46 06.20	76kmX		KCT	77.86	324	iP	46 05.60	-0.7			BRS	80.51	186	iP	46 21.50	0.9
MEM	74.19	343	Pd	45 44.90	-0.5	LBF	78.04	343	eP	46 07.00	-0.3			REVF	80.53	340	P	46 21.62	0.9
WET	74.20	338	eP	45 45.80	0.2		1.2s	36.80nm			5.3mb			LFF	80.56	345	eP	46 21.50	0.7
	1.3s	119.00nm		5.7mb		SSF	78.05	344	eP	46 07.40	0.2				0.9s	73.30nm			5.6mb
UCC	74.29	344	Pc+	45 46.20	0.2		1.1s	41.50nm			5.4mb			BHL	80.58	316	P	46 20.00	-1.3
ECP	74.32	351	eP	45 46.30	0.2	SAL	78.07	338	Pd	46 07.80	0.5			OLP	80.61	194	iPc	46 21.90	0.7
PWLA	74.37	52	P	45 45.80	-1.0	JSC	78.08	48	P	46 07.00	-0.6						e	46 36.00	49km
		pP	46 01.50	56km					pP	46 22.00	53km			CALN	80.61	340	P	46 22.21	0.9
CMP	74.50	329	ePd	45 47.00	-0.4	MDI	78.09	339	Pd	46 07.50	0.1			MNS	80.62	336	P	46 21.00	-0.2
SNF	74.58	344	Pc	45 47.80	0.1	LHS	78.11	47	P	46 07.40	-0.4			YER	80.65	323	eP	46 22.00	0.5
ABH	74.61	342	eP	45 47.71	-0.2				pP	46 22.20	52km			LPO	80.74	345	eP	46 22.30	0.5
TOD	74.63	341	eP	45 47.96	-0.1	KK8	78.18	328	iPd	46 09.00	1.0				0.9s	88.40nm			5.7mb
SLY	74.80	310	ePd	45 49.00	-0.2	MMK	78.19	340	ePc	46 09.10	0.7			AZI	80.80	335	P	46 22.70	0.6
RUP	74.87	342	eP	45 49.34	-0.2	VAI	78.20	340	Pd	46 08.70	0.7			FRF	80.85	341	eP	46 22.50	0.1
PSN	74.88	326	eP	45 50.00	0.4	MMB	78.22	328	ePd	46 09.00	0.7				1.0s	41.60nm			5.3mb
DOU	74.93	344	P	45 49.80	0.1	DIX	78.27	341	ePc	46 09.60	0.7			DUI	80.85	334	P	46 23.60	1.1
RSCP	75.02	50	P	45 49.40	-1.2	AVF	78.34	344	eP	46 08.80	0.0			SRN	80.94	330	eP	46 23.10	0.2
	0.9s	291.82nm		6.2mb		SMF	78.39	343	eP	46 09.10	-0.1			LRG	81.00	341	eP	46 23.70	0.5
		pP	46 04.40	53km			0.9s	57.30nm			5.6mb				0.8s	67.10nm			5.6mb
WLF	75.07	343	P	45 51.40	0.9	SKO	78.59	330	iPd	46 10.50	0.2			LMR	81.09	341	eP	46 24.10	0.5
KER	75.07	308	eP	45 50.00	-1.0	ORO	78.60	340	P	46 10.90	0.5				0.9s	73.30nm			5.6mb
BZS	75.22	331	eP	45 50.50	-0.9	8CI	78.64	331	eP	46 11.00	0.5			HRI	81.09	315	iPc	46 24.00	0.0
MSL	75.23	312	ePd	45 51.00	-0.7	BGF	78.65	344	eP	46 10.50	0.0			LCI	81.13	331	P	46 24.00	0.2
		e	46 04.00	45km			1.1s	48.80nm			5.4mb			RMP	81.15	336	Pc	46 25.40	1.4
GWF	75.46	341	P	45 52.97	0.1	HVAR	78.91	334	iP	46 11.40	-0.6			RDP	81.20	336	P	46 24.60	0.3
OIS	75.52	199	eP	45 52.30	-1.1	LSD	78.92	341	P	46 13.92	1.5			RFI	81.31	335	P	46 26.30	1.5
NAV	75.73	46	P	45 54.40	-0.2	LPG	78.96	341	eP	46 13.60	0.9			CVF	81.33	339	eP	46 25.00	0.0
BLA	75.98	46	P	45 55.40	-0.6		0.7s	73.40nm			5.7mb				0.9s	29.40nm			5.2mb
	1.0s	82.50nm		5.6mb		PUK	78.99	331	eP	46 14.10	1.7			SGO	81.66	333	P	46 26.80	0.2
KBA	76.04	337	iPc	45 57.40	1.0	TCF	79.01	344	eP	46 12.70	0.1			PPM	81.68	69	iPc	46 29.00	1.3
	1.1s	197.00nm		6.0mb			0.9s	41.60nm			5.4mb			MGR	81.98	333	P	46 28.20	-0.1
		i	46 13.40	57km		MAF	79.02	344	eP	46 13.10	0.5			TDS	82.21	332	P	46 30.30	0.8
		i	46 18.00			MFF	79.07	346	eP	46 13.10	0.3			VLS	82.32	329	eP	46 28.50	-1.7
WB5	76.04	205	eP	45 56.30	-0.1		1.0s	64.00nm			5.5mb			KAP	82.47	323	eP	46 29.00	-1.9
		i	46 10.50	50km		PLDF	79.09	343	P	46 13.87	0.8			EPF	82.49	345	eP	46 31.40	0.4
CDF	76.07	341	P	45 56.28	-0.1	AGO	79.09	344	P	46 13.94	1.0				1.0s	62.50nm			5.6mb
WRA	76.11	205	Pc	45 56.50	-0.3	BOB	79.11	339	P	46 14.00	0.8			DSI	82.71	315	ePc	46 32.00	-0.2
	1.4s	185.40nm		5.8mb		SDA	79.13	331	eP	46 14.20	1.0			ITM	82.81	327	eP	46 31.40	-1.3
ECH	76.28	342	P	45 57.80	0.3	KHL	79.15	322	eP	46 12.50	-1.0			GRI	82.97	332	P	46 33.60	0.1
BEO	76.28	331	eP	45 57.00	-0.4	LSF	79.16	345	eP	46 13.50	0.2			EMON	83.07	351	e(P)	46 35.00	1.0
NA2	76.33	43	P	45 57.20	-0.6	AOI	79.30	336	eP	46 14.99	0.9			RYD	83.24	303	eP+	46 34.50	-0.7
		pP	46 12.50	54km		SFI	79.37	337	Pd	46 16.30	1.9			NPS	83.29	324	eP	46 34.00	-1.2
FEL	76.44	341	P	45 58.05	-0.5	MME	79.38	338	P	46 16.30	1.5			QASM	83.63	306	eP+	46 37.10	0.0
SLE	76.45	340	ePc	45 58.10	-0.3	PYM	79.40	344	P	46 15.36	0.6			VAM	83.65	325	eP	46 36.00	-1.0
VITF	76.50	342	P	45 58.69	0.1	BNI	79.41	341	P	46 15.90	1.0			STS	83.73	351	eP	46 38.20	0.9
PTJ	76.50	335	eP	45 58.40	-0.4	PLG	79.41	328	eP	46 15.00	0.2			COO	83.73	187	iPd	46 39.00	1.7
RBL	76.59	337	Pd	45 59.30	0.0	LACI	79.42	331	eP	46 15.00	0.3			SOI	83.77	332	P	46 37.30	-0.2
BBTK	76.61	321	iPc	45 59.00	-0.6	PRK	79.49	325	eP	46 15.00	-0.2			ERUA	84.08	350	eP	46 40.50	1.4
		e	46 00.00	3kmX		ARV	79.51	336	P	46 15.80	0.5			WARB	84.15	210	eP	46 40.30	0.8
HAU	76.63	342	eP	45 59.20	-0.3	BCK	79.51	321	eP	46 15.00	-0.5				0.6s	23.00nm			5.4mb
	0.5s	22.40nm		5.4mb		RRL	79.51	341	P	46 17.20	1.6			EZAM	84.47	351	eP	46 42.80	1.7
MOF	76.63	341	P	45 59.73	0.2	PCP	79.52	339	P	46 15.86	0.5			MBH	84.48	314	iPc	46 41.50	0.2
BSF	76.71	342	P	46 00.12	0.1	BDI	79.52	338	P	46 16.20	0.8			EBR	84.62	344	eP	46 44.00	2.2
LJU	76.73	336	eP	46 00.00	0.0	OHR	79.57	330	iP	46 10.20	-5.5X			NANU	84.63	220	eP	46 42.00	0.1
OGA	76.77	339	eP	46 01.00	0.5		1.1s	140.00nm			5.8mb				0.7s	39.00nm			5.6mb
VOY	76.89	336	eP	46 00.30	-0.7				i	46 15.20	16kmX			ERC	84.74	335	Pd	46 43.40	0.8
BBS	76.93	341	P	46 01.48	0.3	TIR	79.64	330	eP	46 16.00	0.1			AYN	84.77	313	eP+	46 43.10	0.4
FLN	77.00	347	eP	46 00.90	-0.6	CIO	79.74	336	eP	46 17.39	0.8			HQL	84.84	314	eP+	46 43.00	-0.1
	1.0s	88.00nm		5.7mb		ASPA	79.79	204	iPc	46 17.50	0.6			ETOR	85.01	346	eP	46 45.80	1.9
CEY	77.04	336	e(P)	46 02.00	0.3		1.4s	85.00nm			5.5mb			CVT	85.03	334	P	46 44.90	1.0
VBY	77.05	335	eP	46 00.00	-1.8	DOI	79.82	340	Pd	46 16.30	-0.7			CMS	85.23	192	ePd	46 46.00	1.3
LDF	77.12	346	eP	46 01.60	-0.5	PZZ	79.85	340	P	46 17.30	0.1			PTO	85.47	351	iP	46 46.50	0.5
	1.1s	68.30nm		5.6mb		PII	79.86	338	P	46 17.00	-0.1			GUD	85.47	348	eP	46 47.70	1.4
GPA	77.13	323	eP	45 58.00	-4.3X	LBL	79.87	343	P	46 18.36	1.3			BADA	85.51	313	eP+	46 46.70	0.3
OSS	77.13	339	ePc	46 02.80	0.4	FOUF	79.89	341	ePd	46 17.94	0.7			STK	86.21	195	eP	46 51.00	1.4
LOMF	77.17	341	P	46 03.03	0.5	ROB	79.89	340	P	46 17.61	0.2						e	47 05.00	48km
LLS	77.20	340	ePc	46 03.10	0.3	RMO	79.95	190	ePc	46 18.00	0.3			EPLA	86.27	349	eP	46 51.00	0.9
PGB	77.22	328	iPd	46 03.00	0.2				i	46 32.80	52km			EVIA	87.22	346	eP	46 55.90	1.1
YLV	77.22	323	iP	46 02.60	-0.3	ASS	79.98	336	P	46 18.50	0.7			BWA	87.84	189	eP	46 58.80	1.3
TRI	77.23	336	iPd	46 02.40	-0.3	KZN	80.01	329	eP	46 17.50	-0.6						e	47 13.10	49km

FORR	88.14	207	eP	46	59.00	0.2
ASMO	88.65	347	eP	47	02.50	0.8
CAN	88.68	189	eP	47	02.80	1.4
			e	47	17.10	48km
AAPN	88.75	347	eP	47	02.50	0.3
ACHM	88.91	347	eP	47	03.20	0.3
ALOJ	88.94	347	eP	47	03.50	0.3
ATEJ	89.12	347	eP	47	04.00	-0.1
EJIF	89.76	348	eP	47	08.00	1.1
TOO	91.27	191	eP	47	15.00	1.5
BNG	113.93	317	iPKPd	52	47.60	-0.3
	0.7s		12.00nm			
			ic	53	03.00	
TIC	118.97	343	PKP	52	57.00	-0.4
KIC	119.19	342	PKP	52	57.40	-0.4
LIC	119.38	343	PKP	52	57.80	-0.4
MZZ	122.63	298	iPKPc	53	06.10	1.6
			i	53	21.60	
PTZ	123.87	294	iPKPc	53	08.00	1.1
			i	53	23.50	
KMZ	126.17	300	iPKPc	53	11.90	0.5
			i	53	27.00	
LSZ	126.44	296	iPKPc	53	12.90	1.0
			i	53	28.00	
KRI	126.93	294	iPKPd	53	14.30	1.5
			ipPKP	53	30.00	
ZOBO	127.59	64	PKPc	53	14.20	-0.4
LPB	127.82	64	ePKP	53	22.00	7.1X
CNCB	128.11	64	PKP	53	16.70	1.1
CCH	129.57	63	ePKP	53	17.00	-1.0
BUL	130.16	292	iPKPd	53	20.70	1.8
			ipP	53	36.00	
			iPP	57	05.50	
SLR	134.74	288	iPKPd	53	28.90	1.4
	0.9s		67.23nm			
			i	53	43.00	
PRY	136.12	288	ePKP	53	29.40	-0.7
	0.9s		11.54nm			
			i	53	46.70	
PDCR	136.71	27	ePKP	53	22.00	-9.3X
			e	53	30.40	
			e	53	37.50	
FRS	139.49	287	ePKP	53	27.00	-9.0X
	0.6s		16.67nm			
			e	53	51.00	
HVD	140.02	286	ePKP	53	55.00	17.8X
			e	54	10.00	
PPD	140.90	49	ePKP	53	36.10	-2.7
SPA	143.05	180	e(PKP)	53	37.00	-4.3X
	1.0s		52.00nm			
			i	53	52.40	
SUR	144.02	289	iPKPc	53	44.00	-0.2
BMA	144.51	40	ePKP	53	44.50	-0.6
			e	53	54.90	
CER	145.61	289	iPKPd	53	47.00	0.4
	0.9s		138.46nm			
	S.D. = 0.9		on 353 of 365 obs.			

SEP 15, 1989 18h 34m 49.22± 0.47s
9.914 N ± 6.7km 126.414 E ±10.4km
DEPTH = 33.0km (normal)
5.1mb (10 obs.) 4.0Msz (1 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	2.93	197	eP	35	36.00	1.5
QCP	7.02	313	eP	36	52.50	20.2X
BAG	8.60	319	eP	36	54.50	-0.1
GUMO	18.43	77	eP	39	54.50	50.5X
PJG	18.43	77	eP	39	54.30	50.3X
SSE	21.63	348	Pc	39	39.50	0.9
	1.0s		36.00nm		4.7mb	
	Z 20s		0.60um		4.0Msz	
			eS	43	51.00	
MTN	23.09	168	eP	39	54.00	0.8
LOE	25.10	290	eP	40	12.00	-0.6
			e	43	56.00	
IPM	25.73	260	ePd	40	19.90	1.3
	0.9s		37.70nm		5.0mb	
NST	26.25	285	eP	40	25.80	2.5
			e	44	14.30	
CHG	28.01	291	eP	40	38.50	-1.0
WB5	30.62	165	eP	41	02.00	-0.8
WRA	30.68	165	Pd	41	02.00	-1.3
	0.8s		2.70nm		4.1mb	
MBL	31.55	192	eP	41	10.00	-0.9
OIS	32.94	157	iPd	41	22.70	-0.4
	0.8s		14.00nm		4.9mb	
LZH	33.15	325	eP	41	25.00	0.1
NANU	33.99	198	iPd	41	31.80	-0.3
	0.6s		13.00nm		5.0mb	
CTA	35.64	147	iPd	41	47.30	1.0
	1.0s		25.00nm		5.1mb	
WARB	35.88	180	eP	41	48.60	0.3
MRWA	40.18	194	iPd	42	24.10	-0.1
FORR	40.56	178	eP	42	26.00	-1.2
BAL	41.35	193	eP	42	33.00	-0.8
MUN	42.78	193	eP	42	45.00	-0.5
NWAO	43.49	191	eP	42	51.00	-0.2
BRS	45.04	146	iP	43	04.50	0.7
ADE	46.13	166	e(P)	43	11.30	-1.1
	0.6s		18.67nm		5.2mb	
HYB	47.00	285	ePc	43	19.50	-0.1
GBA	48.03	279	Pd	43	27.40	-0.2
	0.7s		20.20nm		5.3mb	
BWA	48.79	156	eP	43	35.90	2.7
CAN	49.80	156	eP	43	48.00	7.0X
POO	51.52	286	eP	43	54.50	0.1
QUE	58.73	299	eP	44	45.00	-1.8
SOD	84.67	337	eP	47	21.00	0.4
SUF	85.93	333	eP	47	27.00	0.0
NUR	87.18	331	iP	47	33.20	0.1
	0.8s		19.10nm		5.4mb	
SLL	92.46	333	eP	47	57.10	-0.8
	0.8s		17.90nm		5.5mb	
	S.D. = 1.1		on 32 of 36 obs.			

? SEP 15, 1989 18h 54m 53.45± 8.94s
32.987 S ±32.9km 72.062 W ±55.5km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.64	140	iPd	55	06.50	0.3
ROCH	0.88	89	iPc	55	10.00	-0.6
			iS	55	22.80	
LNV	1.11	151	iPc	55	13.80	-0.4
			iS	55	29.00	
TACH	1.15	126	iPd	55	14.60	-0.4
			iS	55	31.60	
TACH	1.15	126	iPc	55	16.00	1.0X
			iS	55	34.50	
PEL	1.17	98	iPc	55	15.60	0.3
			iS	55	32.50	
SAN	1.26	112	iPd	55	17.30	0.4
			iS	55	36.30	
PCH	1.44	116	iPd	55	20.10	0.4
			iS	55	39.50	
CHCH	1.51	129	eP	55	31.50	10.9X
FCH	1.52	103	iPd	55	31.40	10.3X
			iS	55	43.60	
	S.D. = 0.5		on 7 of 10 obs.			

SEP 15, 1989 18h 57m 41.67± 0.34s
7.470 S ± 6.2km 156.217 E ± 6.8km
DEPTH = 33.0km (normal)
4.6mb (7 obs.)
SOLOMON ISLANDS (193)

SVO	3.93	115	eP	58	43.00	1.8
			eS	59	39.00	
HNR	4.17	118	eP	58	44.00	-0.6
			eS	59	40.00	
RAB	5.18	309	e(P)	59	02.00	3.1
			iS	00	22.00	
PMG	9.17	257	eP	00	00.00	5.3X
CTA	15.83	217	iPc	01	25.20	1.4
	0.8s		15.67nm		4.2mb	
			iS	04	34.00	
JAY	16.21	287	ePc	01	37.50	8.7X
BRS	20.08	189	iPc	02	15.00	-0.4
			e	02	18.50	
RMO	20.20	200	eP	02	16.50	-0.1
OIS	20.68	229	iPc	02	20.10	-1.5
	0.8s		26.00nm		4.7mb	
QLP	22.16	210	eP	02	42.00	5.5X
TLE	23.38	273	ePd	02	43.00	-5.5X
WB5	24.51	238	eP	03	00.10	0.6
			i	03	05.90	
WRA	24.56	237	Pc	03	00.80	0.8
	0.8s		9.10nm		4.4mb	
MTN	25.25	256	eP	03	07.20	0.6
	1.0s		100.00nm		5.4mb	
CMS	25.79	201	eP	03	11.00	-0.4
ASPA	26.79	231	eP	03	19.70	-1.1
	0.9s		11.00nm		4.5mb	
	Z 22s		0.72um		4.2MszX	
			LR	12	53.00	
PCI	36.84	278	ePc	04	56.80	7.8X
MAT	46.93	340	(P)	06	19.00	7.9X
NJ2	53.05	320	Pc	06	58.60	0.6
TIA	56.87	322	eP	07	24.10	-1.7
CN2	58.14	334	eP	07	35.00	0.5
BJI	60.00	325	eP	07	46.50	-0.9
NST	60.11	293	eP	07	55.50	6.9X
TIY	60.72	321	eP	07	52.20	-0.3
XAN	60.89	316	P	07	53.00	-0.7
KMI	61.29	304	eP	07	57.00	0.2
CHG	62.20	296	eP	08	09.50	6.7X
HHC	63.19	323	eP	08	08.80	-0.3
GTA	69.91	317	eP	08	51.60	-0.3
WMQ	80.00	317	Pc	09	49.00	-0.5
HYB	80.57	289	eP	09	59.50	6.6X
GBA	80.94	285	Pd	09	54.60	-0.3
	0.8s		3.40nm		4.4mb	
SPA	82.58	180	e(P)	10	02.90	0.2
	1.0s		24.50nm		5.2mb	
MAW	84.43	203	eP	10	11.00	-0.9
BUL	121.62	241	iPKPc	16	35.00	0.3
	0.9s		4.62nm			
KHC	127.96	330	PKP	16	46.20	0.3
CNCB	130.08	119	PKP	16	52.00	0.4
LPB	130.09	119	PKP	16	54.00	2.6
ZOBO	130.18	119	PKP	16	51.90	0.1
			LR	37	20.00	
BNG	137.80	268	ePKPd	16	59.60	-6.1X
	0.7s		6.00nm			
			id	17	04.50	
ASMO	145.12	331	ePKP	17	16.90	-1.1
AAPN	145.34	332	ePKP	17	17.50	-0.9
ACHM	145.36	331	ePKP	17	18.00	-0.4
APHE	145.42	331	ePKP	17	18.00	-0.6
ALOJ	145.49	332	ePKP	17	18.50	-0.2
ATEJ	145.60	331	ePKP	17	18.50	-0.4
PDCR	154.95	142	ePKP	17	40.30	7.0X
	S.D. = 1.0		on 36 of 47 obs.			

? SEP 15, 1989 19h 22m 10.33± 0.92s
10.137 N ±18.7km 126.237 E ±29.4km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
PHILIPPINE ISLANDS REGION (248)

MTN	23.34	168	eP	27	16.40	-0.4
WARB	36.10	179	eP	29	10.40	-0.9
G8A	47.82	279	Pc	30	47.70	0.6
	0.7s		7.30nm		4.8mb	
BWA	49.06	156	eP	30	57.90	1.5
CAN	50.07	156	eP	31	04.00	-0.2
SLL	92.18	333	eP	35	17.30	-0.5
	0.4s		1.40nm		4.7mb	
NB2	92.86	334	P	35	20.80	-0.2
	1.1s		3.50nm		4.7mb	
	S.D. = 0.9		on 7 of 7 obs.			

? SEP 15, 1989 20h 41m 55.22± 3.58s
6.947 N ±33.9km 82.514 W ±14.2km
DEPTH = 33.0km (normal)
SOUTH OF PANAMA (83)

DVD	1.48	2	iPd	42	20.00	0.2
			S	42	39.20	
ACR	1.81	339	eP	42	24.20	-0.4
			S	42	53.30	
QCR	2.97	327	iPc	42	39.40	-1.7
			S	43	20.40	
LIO	3.08	350	eP	42	45.10	2.4
			S	43	29.30	
SJS	3.34	333	iPd	42	46.50	0.0
			S	43	32.00	
UPA	3.58	55	ePd	42	49.10	-0.6
	0.8s		238.81nm			
SRA	3.66	329	iPc	42	49.80	-1.2
			S	43	36.00	
PPM	19.76	309	iPc	46	27.50	1.4
	S.D. = 1.6		on 8 of 8 obs.			

? SEP 15, 1989 20h 48m 37.49±12.69s
11.811 S ±64.7km 77.335 W ±97.8km
DEPTH = 50.0km (geophysicist)
NEAR COAST OF PERU (115)
Felt (II) at Lima.

15d 20h

PT10	0.44	126	iP	48 47.80	-0.4
			iS	48 57.10	
NNA	0.51	110	iPd	48 48.30	-0.7
	0.5s	63.38nm			
			iS	48 58.00	
PT08	0.78	101	iP	48 52.00	-0.8
PT02	1.43	142	iP	49 00.50	-0.9
HUA	1.98	97	ePd	49 11.20	1.6
PT06	2.23	154	iP	49 13.90	1.1
			iS	49 43.70	
ZOBO	9.97	117	P	51 04.00	2.4X
Z	22s	0.34um			
			LR	57 08.00	

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

? SEP 15, 1989 20h 58m 07.34± 6.37s
33.026 S ±23.7km 72.016 W ±41.3km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.58	140	iPc	58 19.10	0.0
			iS	58 29.00	
ROCH	0.85	87	iPd	58 23.20	-0.6
			iS	58 36.10	
LNV	1.06	152	iPd	58 26.50	-0.7
			iS	58 42.50	
TACH	1.10	125	iPd	58 28.00	0.0
			iS	58 44.50	
TACH	1.10	125	iPc	58 28.80	0.8X
			iS	58 46.50	
PEL	1.12	96	iPc	58 28.40	0.0
			iS	58 45.50	
SAN	1.21	111	iPd	58 30.20	0.3
			iS	58 47.80	
PCH	1.39	116	iPc	58 32.80	-0.1
			iS	58 53.60	
CHCH	1.46	129	iPc	58 34.70	1.0
			iS	58 56.20	
FCH	1.48	102	iPc	58 34.50	0.2
			iS	58 55.50	
MRA	5.35	85	eP	59 31.10	1.9X
TCA	6.52	77	eP	59 44.20	-1.5X
			(S)	01 06.80	

S.D. = 0.6 on 9 of 12 obs.

? SEP 15, 1989 21h 02m 29.95± 7.69s
32.901 S ±27.3km 72.237 W ±50.1km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.80	136	iPc	02 45.50	0.0
			iS	02 55.10	
ROCH	1.03	94	iPd	02 49.00	-0.6
			iS	03 01.70	
LNV	1.26	147	iP	02 52.70	-0.6
			iS	03 08.50	
TACH	1.32	125	iPd	02 49.00	-5.4X
			iS	03 01.70	
TACH	1.32	125	iPc	02 54.90	0.5
			iS	03 12.00	
PEL	1.33	101	iPd	02 54.40	-0.1
			iS	03 11.60	
SAN	1.43	113	iPd	02 56.40	0.4
			iS	03 14.00	
PCH	1.61	117	iPd	02 58.90	0.3
			iS	03 18.60	
FCH	1.69	105	iPd	03 00.00	0.1
			iS	03 21.00	

S.D. = 0.5 on 8 of 9 obs.

SEP 15, 1989 21h 12m 45.09± 0.50s
6.695 N ± 7.4km 122.540 E ± 7.6km
DEPTH = 33.0km (normal)
4.5mb (3 obs.) 4.0Msz (1 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV	3.04	82	eP	13 34.00	2.0
TSM	5.08	241	eP	14 02.50	1.5
KKM	6.32	264	eP	14 18.00	-0.5
PCI	8.02	200	P	14 43.50	1.3
			eS	16 13.00	
BAG	9.85	349	eP	15 09.40	1.7
TRT	17.38	215	ePd	16 48.30	1.4
	1.1s	112.50nm		4.9mb	
QIZ	17.41	316	eP	16 49.00	1.8
N	12s	0.70um			
JAY	20.31	116	ePc	17 22.50	1.3
MTN	21.21	156	eP	17 31.20	0.8
SNG	21.77	273	eP	17 34.60	-1.4
NNT	23.22	286	eP	17 54.00	3.6X
NST	23.70	294	eP	17 55.00	0.0
SSE	24.31	357	Pd	18 11.50	10.7X
	1.5s	45.00nm			
Z	22s	0.50um		4.0Msz	
			S	22 18.00	
BDT	25.27	297	eP	18 19.50	9.4X
CHG	25.93	300	eP	18 15.80	-0.6
WB5	28.86	156	eP	18 41.80	-1.1
WRA	28.91	157	Pc	18 42.30	-1.1
	0.8s	5.50nm		4.3mb	
CD2	29.84	326	eP	18 51.00	-0.7
ASPA	32.15	160	eP	19 10.00	-2.1
WARB	32.92	173	eP	19 19.00	0.3
BJI	33.69	351	eP	19 23.50	-1.7
GTA	38.47	331	eP	20 05.20	-0.7
Z	16s	0.60um		4.5MszX	
HYB	44.21	288	eP	20 55.00	1.7
BRS	44.76	141	e(P)	20 58.00	0.4
GBA	44.87	282	Pd	20 56.70	-1.8
	1.0s	6.80nm		4.5mb	
WMQ	47.94	326	eP	21 22.20	-0.3
DZM	51.64	125	iPd	21 48.90	-2.3

S.D. = 1.4 on 24 of 27 obs.

SEP 15, 1989 21h 32m 19.83± 0.90s
7.123 S ± 7.2km 155.691 E ± 6.5km
DEPTH = 83.3 ± 8.8 km
4.4mb (4 obs.)
SOLOMON ISLANDS (193)

SVO	4.55	117	eP	33 29.00	1.3
			eS	34 39.00	
RAB	4.56	310	e(P)	33 29.00	1.2
			iS	34 34.00	
HNR	4.80	119	eP	33 30.00	-1.1
			eS	34 40.00	
PMG	8.75	254	eP	34 25.00	-0.7
CTA	15.81	214	iPc	35 59.00	0.1
	0.9s	14.71nm		4.2mb	
DZM	18.12	146	iPc	36 34.20	6.5X
BRS	20.35	187	e(P)	36 50.00	-1.9
OIS	20.52	228	eP	36 54.70	1.0
OLP	22.21	208	eP	37 10.00	-0.5
WB5	24.26	236	eP	37 30.00	-0.6
			e	37 39.20	
WRA	24.32	236	Pd	37 30.70	-0.4
	0.6s	4.40nm		4.1mb	
MTN	24.84	255	eP	37 38.00	2.0
MAT	46.43	340	(P)	40 38.00	-2.0
OZH	48.17	313	eP	40 53.50	-0.3
LOE	58.61	295	iPc	42 10.00	-0.8
NNT	58.96	289	eP	42 13.00	-0.3
KMI	60.66	304	Pd	42 25.00	-0.1
CD2	62.42	310	P	42 35.80	-0.8
GTA	69.30	317	eP	43 20.20	-0.3
WMQ	79.39	317	eP	44 18.50	0.1
GBA	80.35	285	P	44 25.00	1.1
	0.4s	6.10nm		4.9mb	
IMA	81.70	19	eP	44 30.20	-0.1
SPA	82.92	180	ePc	44 37.90	1.2
	1.0s	10.00nm		4.7mb	
INK	89.60	21	eP	45 09.00	0.0
APO	119.50	339	ePKP	51 00.70	-0.3
	1.0s	9.40nm			
NB2	120.05	341	PKP	51 02.00	-0.1
	0.7s	1.20nm			
CLL	126.25	332	ePKP	51 15.00	0.6
KHC	127.40	329	iPKPd	51 17.70	1.0
BNG	137.29	269	iPKPd	51 36.10	-0.4
	0.8s	7.00nm			
PDCR	155.54	143	ePKP	52 07.30	1.4

S.D. = 1.0 on 29 of 30 obs.

? SEP 15, 1989 23h 03m 28.51± 1.18s
26.378 S ± 7.7km 27.474 E ±22.2km
DEPTH = 5.0km (geophysicist)
REPUBLIC OF SOUTH AFRICA (584)
MG 3.2 (8UL).

PRY	0.55	180	eP	03 39.50	0.0
			S	03 45.30	
SLR	0.97	49	iPd	03 47.50	0.0
			S	03 59.90	
BLF	2.95	202	eP	04 25.00	8.0X
FRS	3.86	209	eP	04 34.00	4.2X
			S	05 10.00	
HVD	4.56	202	eP	04 30.00	-9.8X
BUL	6.29	10	iPn	05 04.50	0.1
			iSn	06 14.00	
			iSg	06 44.60	
KRI	9.71	12	iPn	05 52.00	0.0
			iSn	07 35.00	
			iSg	08 30.00	

S.D. = 0.1 on 4 of 7 obs.

? SEP 15, 1989 23h 18m 40.06± 1.71s
19.617 S ±28.3km 178.077 W ±24.5km
DEPTH = 600.0km (geophysicist)
4.6mb (4 obs.)
FIJI ISLANDS REGION (181)

BRS	27.78	248	iPc	23 45.00	0.6
CTA	33.51	263	iPd	24 33.70	0.7
	0.9s	42.02nm		5.1mb	
PMG	35.09	282	eP	24 46.00	0.0
WB5	44.64	261	eP	26 02.20	-0.3
WRA	44.66	261	Pc	26 02.30	-0.3
	0.5s	6.00nm		4.4mb	
ASPA	44.66	256	iPd	26 02.80	0.2
	0.9s	24.00nm		4.7mb	
MTN	49.09	270	iPc	26 35.20	-1.0
WARB	51.03	252	eP	26 50.00	-0.3
SPA	70.50	180	e(P)	28 56.80	-0.1
	0.8s	2.92nm		3.9mb	
CHTO	89.88	290	eP	30 38.00	0.6
KSP	146.83	343	ePKP	37 15.20	1.2X
CLL	147.19	347	iPKP	37 15.60	1.1X
	1.1s	14.00nm			
			i	37 18.70	
PRU	148.07	345	PKP	37 18.40	2.4X
KHC	149.10	345	ePKP	37 21.00	3.3X

S.D. = 0.6 on 10 of 14 obs.

• SEP 15, 1989 23h 54m 54.61± 1.63s
40.440 N ±15.4km 19.732 E ± 7.6km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)

VLO	0.18	279	iPgd	54 58.30	-0.4
BERA	0.31	32	iPgc	54 59.80	-1.3
KBN	0.85	77	ePg	55 11.50	0.6
TIR	0.91	6	ePg	55 13.00	1.0
OHR	1.05	50	ePn	55 14.00	-0.5
PUK	1.61	4	ePn	55 23.60	0.6
SKO	2.00	40	ePn	55 33.50	4.7X
			i(Sn)	55 58.00	

S.D. = 1.1 on 6 of 7 obs.

? SEP 16, 1989 00h 15m 36.79± 1.34s
24.421 S ±15.1km 67.232 W ±14.5km
DEPTH = 200.0km (geophysicist)
CHILE-ARGENTINA BORDER REGION (127)

SLA	1.61	101	iPd	16 12.00	0.0
			S	16 37.70	
ANT	3.00	283	iPc	16 26.80	0.0
			iS	17 03.00	
CNCB	7.60	355	P	17 26.80	0.4
			S	18 48.00	
LPB	7.89	354	P	17 31.00	0.9
ZOBO	8.15	354	P	17 32.40	-1.3
			S	19 04.00	
BAO	20.06	68	eP	19 38.00	-18.5X

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

SEP 16, 1989 01h 49m 15.89± 0.18s
0.592 S ± 3.0km 77.469 W ± 3.5km
DEPTH = 10.0km (geophysicist)
5.4mb (49 obs.)
ECUADOR (107)
Felt (IV) at Iborro and (II) at Quito. Also felt at Posto, Colombia.

RECU	1.10	268	iP+	49 34.70	-2.2
			eS	49 44.70	
OUR	1.14	292	iPd	49 38.30	0.8
			eS	49 50.50	
GGP	1.20	290	iPd	49 39.30	0.6
			eS	49 50.30	
CUMC	1.59	345	P	49 45.00	0.3

16d 01h

PSO	1.78	5	iPd	49	48.00	0.8	GOL	47.53	331	P	57	53.60	-0.1	CAF	83.00	45	iPc	01	42.50	-0.4
PURC	3.10	21	iPc	50	07.85	1.6		1.3s	151.04nm			5.9mb			1.2s	22.00nm			5.2mb	
SALC	3.62	12	iPc	50	14.24	0.8	CBM	48.03	9	P	57	56.70	-0.5	TCF	83.29	43	eP	01	43.70	-0.6
DIAC	4.06	18	ePc	50	21.28	1.7	GLA	48.55	317	eP	58	03.00	1.5		1.1s	12.20nm			5.0mb	
HOOC	4.12	12	ePc	50	21.06	0.6	BAR	49.61	316	eP	58	11.00	1.4	MAF	83.53	43	iPc	01	45.10	-0.4
ANCC	4.12	8	iPc	50	21.86	1.5	TPC	49.99	318	eP	58	13.00	0.4		1.2s	26.70nm			5.3mb	
CLMC	4.54	12	eP	50	27.49	1.1	PLM	50.12	316	eP	58	15.00	1.3	BGF	83.76	43	iPc	01	46.30	-0.4
HOBC	5.09	15	ePc	50	34.36	0.2				e	00	11.00			1.2s	36.80nm			5.5mb	
BOG	6.20	33	eP	50	50.00	0.0	MSU	50.32	325	P	58	15.70	0.5	AVF	84.14	43	iPc	01	48.00	-0.6
			iS	52	19.00		RSSD	50.43	335	P	58	16.00	0.0		1.1s	22.90nm			5.3mb	
BMG	8.78	30	eP	51	35.00	9.0X	RVR	50.83	317	eP	58	19.00	0.1	SSF	84.28	43	eP	01	48.70	-0.6
UPA	9.73	348	ePd	51	41.00	2.0	DAU	51.10	327	P	58	21.30	0.1		1.2s	27.90nm			5.4mb	
	1.0s	440.00nm				6.8mb X	GSC	51.19	318	eP	58	23.00	1.3	SMF	84.45	43	iPc	01	49.60	-0.6
NNA	11.34	177	iPc	52	00.40	-0.7	MWC	51.43	316	eP	58	25.00	1.3		1.2s	35.70nm			5.5mb	
	0.9s	176.47nm				6.4mb	SBB	51.53	317	eP	58	24.00	-0.3	LOR	84.54	43	eP	01	49.90	-0.7
			eS	54	00.50		DUG	51.82	326	P	58	26.80	0.3		1.1s	24.40nm			5.3mb	
HUA	11.57	169	iPd	52	03.40	-1.2		1.3s	45.45nm			5.2mb		LBF	84.59	43	iPc	01	50.10	-0.8
			iS	52	12.30		CLC	52.02	318	eP	58	28.00	0.1		1.1s	8.30nm			4.9mb	
SDV	11.62	36	eP	52	17.50	12.4X	SYP	52.93	316	eP	58	35.00	0.1	IMA	84.96	337	P	01	52.20	-0.3
SJS	12.35	328	eP	52	17.00	2.2	RSON	53.09	347	P	58	32.90	-2.7		1.5s	65.88nm			5.6mb	
SRA	12.68	327	eP	52	22.20	2.9X		0.8s	84.54nm			5.7mb		TTA	85.31	333	P	01	53.60	-0.6
TOV	12.83	36	iPc	52	03.20	-18.1X	TNP	53.10	321	P	58	36.70	0.5		1.6s	52.46nm			5.5mb	
	0.8s	340.00nm						0.9s	17.90nm			5.0mb		LMR	86.01	47	eP	01	57.90	-0.1
CEOS	13.20	43	eP	52	22.00	-4.1X	FRI	54.08	318	e(P)	58	42.00	-1.1	FRF	86.13	46	eP	01	58.50	-0.1
FISA	14.29	34	eP	52	45.00	4.5X	PRI	54.26	317	e(P)	58	45.00	0.4		1.1s	24.40nm			5.3mb	
GUAC	14.76	43	eP	52	46.00	-0.7	LLA	54.71	317	e(P)	58	47.00	-0.8	ENN	86.27	39	eP	02	00.00	0.9
OLLA	14.96	45	eP	52	47.50	-1.8	PRS	54.85	317	e(P)	58	48.00	-0.8		1.0s	34.00nm			5.5mb	
GUAN	15.76	48	eP	52	57.50	-2.2	CMB	55.11	319	eP	58	50.20	-0.6	HAU	86.29	42	eP	01	59.10	-0.2
ARE	16.83	160	eP	53	18.00	4.3X	ARN	55.50	318	P	58	53.70	0.1	WLF	86.31	40	P	02	00.60	1.3
ZOBO	18.10	150	P	53	28.80	-1.0	LRM	55.56	331	eP	58	53.50	-0.6	LPG	86.36	45	eP	02	00.70	0.6
	2.0s	479.91nm				5.3mb	MHC	55.57	318	eP	58	54.30	0.1	BSF	86.57	42	eP	02	00.20	-0.6
Z	24s	2.95um				3.8MszX	GCC	55.64	317	e(P)	58	53.00	-1.5	RUP	86.90	40	eP	02	02.76	0.5
			i	53	34.90		SCH	55.92	7	ePd	58	55.40	-0.8	WIT	86.91	37	eP	02	04.00	1.8
			S	57	08.00			1.1s	73.00nm			5.6mb		WTS	86.93	38	eP	02	03.50	1.2
			eLR	01	28.00		ORV	56.68	320	P	59	02.50	0.5		1.0s	59.00nm			5.8mb	
LPB	18.34	150	P	53	33.00	0.5	MIN	57.19	321	eP	59	06.50	0.7				e	02	06.50	
	1.7s	507.69nm				5.4mb	WDC	57.91	320	eP	59	08.60	-2.0	CDF	86.94	42	eP	02	02.10	-0.5
			i	53	39.00		LBFM	57.93	322	P	59	10.80	-0.2	ABH	87.23	40	eP	02	04.02	0.2
			LR	01	45.00		SES	58.31	335	ePc	59	12.00	-1.3	SPA	89.41	180	e(P)	02	15.60	1.5
CNCB	18.63	150	P	53	37.80	1.5		1.0s	121.00nm			5.9mb			1.0s	65.00nm			5.8mb	
LPS	18.78	322	eP	53	40.10	2.4	FFC	58.71	344	iPc	59	14.30	-1.6	NB2	89.87	29	P	02	16.60	0.4
TCE	19.24	54	eP	53	50.45	7.3X		0.8s	61.00nm			5.8mb			1.2s	16.80nm			5.2mb	
TPP	19.27	55	eP	53	53.76	10.1X	FHC	58.96	320	eP	59	19.00	1.0	CLL	90.75	39	ePc	02	20.00	-0.4
TRN	19.49	55	eP	53	48.47	2.2	LON	61.03	327	P	59	31.70	-0.4		1.9s	32.00nm			5.3mb	
TBH	19.68	56	eP	53	57.21	8.9X	EDM	61.38	336	ePc	59	32.40	-2.0	HFS	91.09	30	eP	02	21.80	0.0
CCH	20.06	147	P	53	54.20	1.5		1.2s	131.00nm			6.0mb			1.1s	13.20nm			5.2mb	
TPR	20.30	54	eP	53	52.56	-2.3	RMW	61.46	327	P	59	34.60	-0.5	BRG	91.35	39	eP	02	23.20	0.0
ANT	23.97	164	e(P)	54	33.50	2.1	PNT	61.48	330	eP	59	35.00	-0.1		1.5s	25.00nm			5.3mb	
OXX	25.86	314	(P)	54	53.00	3.2X	BMW	61.66	326	P	59	36.70	0.3	KSP	92.84	39	eP	02	31.20	1.1
SLA	26.64	155	ePd	54	59.10	2.2	GMW	62.04	327	P	59	38.40	-0.5	ZST	93.49	42	eP	02	32.80	-0.3
PPM	28.52	314	iPc	55	17.50	3.1X	MCW	62.74	328	P	59	43.70	0.1	SPC	95.50	41	e(P)	02	44.00	1.4
BAO	32.71	119	eP	55	50.20	-0.9	LIC	72.61	83	Pd	00	45.20	-0.9	SOD	95.95	22	eP	02	44.00	-0.1
ITB1	32.72	139	e(P)	55	49.40	-1.5	TIC	72.64	83	Pd	00	45.20	-1.1	NUR	96.48	29	eP	02	30.00	-16.5X
ROCH	32.78	170	eP	55	53.50	1.9	KIC	72.90	83	Pd	00	46.90	-0.9	KVT	107.96	47	ePKP	07	58.00	12.2X
TCA	32.92	159	ePd	55	53.50	0.7		0.9s	43.00nm			5.5mb		DHR	123.52	59	ePKPd	08	25.50	9.6X
ITB	32.94	139	e(P)	55	51.50	-1.4	ALOJ	77.13	52	eP	01	13.00	1.2	CTA	132.51	242	iPKPd	08	33.40	0.1
PEL	33.00	170	iPd	55	55.00	1.6	AAPN	77.16	52	eP	01	12.50	0.6		1.2s	45.31nm				
ITB7	33.19	139	e(P)	55	53.00	-2.1	ATEJ	77.17	52	eP	01	13.00	1.0	WRA	142.74	235	PKPc	08	48.20	-4.0X
PPD	33.22	132	eP	55	54.10	-1.3	ACHM	77.35	52	eP	01	14.00	1.1		1.5s	28.50nm				
LNV	33.67	171	iP	56	00.50	1.4	APHE	77.43	52	eP	01	14.10	0.6	WB5	142.75	235	ePKP	08	47.80	-4.4X
GBTN	36.62	351	P	56	23.80	-0.5	ASMO	77.46	52	eP	01	14.50	0.9	WARB	144.65	219	ePKP	08	53.00	-2.3
PWLA	36.75	345	P	56	23.60	-1.8	INK	78.57	342	eP	01	18.00	-0.9	LZH	144.66	358	PKP	08	53.50	-1.7
VAO	37.07	129	eP	56	30.60	2.2		1.3s	121.00nm			5.8mb			2.0s	190.00nm				
			e	56	39.20		LPF	81.38	41	eP	01	33.60	-0.7				PP	12	09.50	
BLA	37.71	356	P	56	34.10	0.6		1.1s	29.30nm			5.2mb		MTN	148.65	244	iPKPc	09	02.90	0.8
	1.3s	139.81nm				5.6mb	EPF	81.50	46	iPc	01	35.20	0.1				i	09	05.20	
NAV	37.84	356	P	56	34.60	0.0		1.2s	29.70nm			5.2mb		KNA	149.42	237	ePKP	09	07.00	3.8X
UYO	38.08	337	iPd	56	35.60	-0.9	GRR	81.56	41	eP	01	35.10	-0.2	HYB	151.09	53	ePKP	09	05.50	-0.2
OLY	38.21	341	P	56	35.70	-2.0		1.1s	41.00nm			5.4mb		GBA	151.99	61	PKP	09	14.00	6.9X
CBN	38.61	0	eP	56	41.00	0.1	EKA	81.60	34	P	01	35.00	-0.3		0.6s	5.70nm				
BMA	39.14	127	e(P)	56	46.00	0.3		1.0s	21.00nm			5.2mb			S.D. = 1.1	on 158 of 177 obs.				
PDCR	39.82	109	eP	56	52.60	1.2	MFF	81.73	43	eP	01	35.90	-0.3	---						
TUL	40.13	337	eP	56	52.90	-0.7		1.1s	29.30nm			5.3mb		?	SEP 16, 1989 01h 54m 13.15± 2.28s					
	1.2s	82.70nm				5.3mb	FLN	81.88	41	eP	01	36.80	-0.1		24.035 N ±34.1km 123.859 E ±19.5km					
			e	56	57.00			1.1s	43.90nm			5.5mb			DEPTH = 33.0km (normal)					
SIO	40.19	336	eP	56	52.40	-1.8	LFF	82.07	45	eP	01	37.70	-0.3		4.3mb (2 obs.)					
FVM	40.21	344	P	56	52.60	-1.7		1.1s	24.40nm			5.2mb			SOUTHWESTERN RYUKYU ISLANDS					(246)
MEO	40.36	333	iPc	56	54.50	-1.1	LDF	82.08	41	iPc	01	37.80	-0.2							
TBR	41.64	4	P	57	06.60	0.6		1.1s	39.00nm			5.4mb		TWC	1.92	288	iPc	54	44.20	0.1
ALO	44.54	325	iPc	57	31.00	1.0	FBA	82.28	336	P	01	38.40	-0.3				eS	55	05.80	
	1.0s	87.50nm				5.6mb		1.3s	61.79nm			5.6mb		TWD	2.07	272	ePc	54	46.10	-0.1
			pP	58	11.80	187kmX	LPO	82.35	45	eP	01	39.10	-0.4	ANP	2.42	299	eP	54	55.00	3.7X
HBVT	44.93	4	P	57	33.00	0.3		1.1s	24.40nm			5.2mb		TWK	3.18	257	eP	55	02.20	0.1
RSNY	45.02	3	P	57	34.00	0.6	RJF	82.67	44	eP	01	40.70	-0.4	SLL	78.88	332	eP	06	14.40	0.0
	1.1s	51.76nm				5.4mb		1.1s	24.40nm			5.3mb			0.8s	6.20nm			4.7mb	
GLD	47.49	331	P	57	53.90	0.6	LSF	82.82	43	eP	01	41.40	-0.5	NB2	79.49	333	P	06	17.70	0.0
	1.5s	162.50nm				5.9mb		1.4s	34.80nm			5.3mb			0.7s	1.20nm			4.0mb	

16d 02h

S.D. = 0.1 on 5 of 6 obs.

SEP 16, 1989 02h 05m 08.91± 0.09s
40.337 N ± 2.0km 51.534 E ± 1.3km
DEPTH = 54.8km (26 depth phases)
6.4mb (85 obs.)
CASPIAN SEA (338)

Ms 6.6 (BRK), 6.5 (PAS). Felt (VI) at Baku and Neftyanyye Kamni, (V) at Sumgait and (IV) at Lenkoran, Divichi and Siazan, USSR. Some minor damage reported in the area. Felt in northwestern Iran. Complex event, observed on broadband displacement seismograms.

FAULT PLANE SOLUTION: P-Waves
NP1:Strike=305 Dip=78 Slip= -90
NP2: 125 12 -90
Principal Axes:
T Plg=33 Azm= 35
P 57 215
Comment: The focal mechanism is poorly controlled and corresponds to normal faulting. The preferred fault plane is NP1.
RADIATED ENERGY
No. of sta: 8 Focal mech. F
Energy 0.2±0.1*10**15 Nm
MOMENT TENSOR SOLUTION
Dep 31 No. of sta: 14
Moment Tensor; Scale 10**18 Nm
Mrr=-1.86 Mtt= 3.30
Mff=-1.44 Mrt= 3.98
Mrf=-1.92 Mtf= 2.01
Principal axes:
T Val= 5.58 Plg=26 Azm=351
N 0.11 32 99
P -5.69 46 231
Best Double Couple:Mo=5.6*10**18
NP1:Strike= 34 Dip=35 Slip=-159
NP2: 287 78 -57
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 25C M.W.: 12S, 21C
Centroid Location:
Origin Time 02:05:15.6 0.3
Lat 40.10N 0.04 Lon 52.17E 0.04
Dep 34.5 1.5 Half-duration 8.0
Moment Tensor; Scale 10**18 Nm
Mrr=-3.26 0.10 Mtt= 2.28 0.11
Mff= 0.98 0.08 Mrt= 0.36 0.23
Mrf=-2.72 0.25 Mtf=-2.06 0.07
Principal Axes:
T Val= 4.32 Plg=16 Azm= 43
N 0.32 23 139
P -4.64 62 281
Best Double Couple:Mo=4.5*10**18
NP1:Strike=104 Dip=36 Slip=-132
NP2: 331 64 -65

BAK	1.25	273	P	05 36.00	5.7X	
SHE	2.23	279	P	05 46.00	1.9	
KRV	3.98	276	P	06 07.00	-1.8	
MAK	4.07	312	P	06 52.30	42.2X	
GRS	4.09	260	P	06 09.00	-1.5	
TEH	4.59	182	eP	06 18.00	0.4	
TAB	4.64	242	iP+	06 19.00	0.8	
MTA	5.27	287	P	06 27.00	0.0	
GRO	5.31	306	P	06 28.00	0.5	
ASH	5.81	112	P	06 34.50	-0.1	
BKR	6.22	286	iP	06 42.00	1.5	
			iS	08 38.00		
SLY	6.71	227	iPnd	06 48.00	0.8	
			iP*	07 02.50		
			iPg	07 18.00		
			iSn	07 59.00		
			i	08 05.00		
KER	6.94	212	iPc	06 49.50	-1.0	
PYA	7.30	303	P	06 52.00	-3.4X	
MHI	7.44	120	iPnd	06 54.30	-3.2X	
	0.6s	1866.67nm				7.0mb
			eSn	08 13.00		
MSL	7.68	242	iPd	07 01.00	0.3	
			iS	08 23.50		
			iLR	08 51.50		
BHD	9.08	221	iPnd	07 16.00	-4.0X	
			iP*	07 38.00		
			iPg	07 58.00		
			iSn	08 58.50		
			iS*	09 32.00		
SHI	10.70	175	iP	07 41.00	-1.3	
DSH	13.45	92	iPc	08 14.00	-4.8X	
			eS	10 50.00		
TAS	13.49	80	P	08 14.00	-5.3X	
KAS	13.49	280	iPd	08 19.80	0.4	
SIM	13.62	295	iPd	08 20.00	-0.9	
			iS	10 50.00		
BRF	14.25	183	iP	08 27.20	-2.0	
	0.5s	477.00nm				6.3mb
BJA	14.33	183	iP	08 29.20	-1.0	
	0.4s	400.00nm				6.3mb
KUL	14.35	94	P	08 47.00	16.4X	
BBTK	14.38	274	iPd	08 31.00	-0.1	
			iS	09 25.00		
HRI	14.48	246	iPd	08 33.20	0.9	
SHMJ	14.77	244	P	08 39.20	3.2X	
FAM	14.87	255	eP -	08 38.50	-1.3	
ATZ	15.05	245	iPd	08 40.80	1.1	
CSS	15.38	255	eP	08 43.50	-0.4	
MASJ	15.39	241	Pd	08 44.30	0.2	
OUTJ	15.47	239	P	08 45.70	0.6	
ZNT	15.55	244	iPd	08 46.70	0.6	
MKRJ	15.56	241	P	08 46.10	-0.1	
OASM	15.69	208	eP	08 43.30	-4.7X	
RYD	16.11	196	ePd	08 49.60	-3.7X	
QUE	16.13	124	iPd-	08 57.50	3.8X	
			eS	09 52.00		
			eS	12 42.50		
PPCY	16.14	256	eP	08 53.30	-0.2	
GPA	16.19	277	eP	08 50.00	-4.2X	
NOH	16.55	240	iPd	08 59.00	0.2	
BCK	16.55	267	iP	08 58.90	0.1	
HRT	16.62	279	iP	08 58.60	-1.0	
GBZT	16.79	279	eP	09 03.80	2.1	
YLV	16.87	278	iP	09 01.10	-1.7	
ISK	17.06	280	iP	09 04.60	-0.4	
ITU	17.09	280	iPd	09 04.00	-1.4	
AYN	17.13	233	ePd	09 05.50	-0.4	
KHL	17.15	270	iP	09 05.00	-1.2	
MBH	17.21	237	iPd	09 06.60	-0.3	
ELL	17.29	265	iP	09 08.90	0.9	
HOL	17.44	236	ePd	09 09.50	-0.3	
FRU	17.44	74	iPc	09 09.00	-0.8	
			iS	12 21.00		
CTT	17.52	280	iP	09 09.60	-1.2	
SRFA	17.59	235	ePd	09 12.00	0.4	
PSN	17.66	289	iPd	09 12.50	0.0	
KCT	17.68	277	iP	09 11.60	-1.2	
KSL	17.74	263	eP	09 12.50	-1.0	
OBN	17.80	331	iPc	09 10.80	-3.3X	
	1.1s	1800.00nm				6.1mb
	Z 20s	170.00um				5.4Msz
			iS	12 10.00		
TLB	17.83	292	eP	09 12.50	-2.1	
BADA	17.99	234	ePd	09 16.00	-0.6	
BNT	17.99	278	iP	09 15.10	-1.5	
EDC	18.04	278	iP	09 16.60	-0.6	
PPE	18.35	297	eP	09 17.50	-3.4X	
BIR	18.35	297	eP	09 20.50	-0.4	
YER	18.41	267	iP	09 20.40	-1.4	
NRN	18.52	79	P	09 20.80	-2.6	
IAS	18.58	300	ePd	09 21.00	-2.7	
BRD	18.63	294	ePd	09 24.50	0.1	
CLI	18.63	297	eP	09 26.00	1.6	
KSH	18.77	85	iPc	09 23.00	-3.3X	
	Z 16s	46.80um				4.9Msz
			S	12 50.00		
JMB	18.82	285	iPd	09 26.00	-0.7	
WAJH	18.84	226	ePd	09 27.00	0.1	
IZM	18.86	272	iP	09 25.50	-1.7	
VRI	18.91	295	ePd	09 26.00	-1.7	
ISR	18.94	293	ePd	09 27.50	-0.7	
KOT	19.13	243	eP	09 26.00	-4.3X	
BUC	19.20	291	iPd	09 29.00	-2.0	
BUC1	19.25	290	eP	09 28.50	-3.0X	
EZN	19.28	277	iP	09 31.20	-0.7	
PTT	19.31	298	iPd	09 30.50	-1.7	
ALN	19.34	280	ePd	09 32.10	-0.5	
SMG	19.35	270	eP	09 31.20	-1.5	
MLR	19.40	294	iPd	09 33.00	-0.3	
PRK	19.43	275	iPd	09 32.50	-1.0	
TLG	19.47	73	iPc	09 31.40	-2.6	
			iS	13 00.00		
HLW	19.51	244	iP	09 34.00	-0.4	
			eS	13 18.00		
DIM	19.62	284	iPc	09 35.00	-0.5	
PVL	19.73	287	iPd	09 37.00	0.4	
KDZ	19.74	282	iPd	09 36.50	-0.3	
KAP	19.77	264	iPd	09 36.00	-1.2	
CMP	20.01	293	iPd	09 54.00	14.3X	
PLD	20.23	284	iPd	09 42.00	0.1	
RZN	20.26	283	iPd	09 42.00	-0.4	
DRA	20.53	291	iPd	09 46.00	1.0	
APE	20.53	269	iPd	09 44.50	-0.6	
PGB	20.60	285	iPd	09 46.00	0.2	
KMSA	20.79	199	iPd	09 47.00	-0.9	
OUR	20.98	279	ePd	09 49.20	-0.3	
MMB	21.00	283	iPd	09 50.00	0.1	
NPS	21.07	264	iPd	09 48.60	-1.9	
SRS	21.16	281	ePd	09 51.90	0.5	
TAIF	21.24	210	ePd	09 54.00	1.4	
PAIG	21.27	278	ePd	09 52.70	0.2	
VTS	21.31	285	iPd	09 53.00	-0.1	
PLG	21.37	279	iPd	09 54.00	0.4	
KK8	21.46	283	iPd	09 56.00	1.6	
DEV	21.56	294	iPd	09 52.50	-2.9	
ATH	21.67	273	iPd	09 57.40	0.9	
KNT	21.67	282	ePd	09 56.70	0.1	
THE	21.70	280	eP	09 57.00	0.2	
NEO	21.74	276	iPd	09 57.20	0.0	
CEI	22.07	299	eP	09 54.00	-6.4X	
GRG	22.07	281	ePd	10 08.00	7.4X	
VAM	22.09	266	eP	09 59.20	-1.5	
LIT	22.14	279	ePd	10 01.40	0.2	
UZH	22.34	302	iPd	10 03.00	-0.1	
			iS	14 04.00		
BZS	22.44	294	iPc	10 04.00	-0.1	
AGG	22.47	276	ePd	10 04.80	0.2	
ASW	22.55	230	ePc	10 04.00	-1.3	
			eS	14 04.00		
AMAN	22.63	229	iPc	10 10.00	3.9X	
KZN	22.65	280	iPd	10 06.50	0.2	
SKO	22.67	284	iPd	10 07.00	0.6	
	Z 20s	********um				8.6MszX
	N 16s	********um				
	E 16s	********um				
			i	10 10.00	11kmX	
			i	10 20.50		
			iS	14 10.00		
			i	16 54.00		
TIM	22.72	294	iPd	10 08.00	1.1	
AKSR	22.81	229	iPd	10 15.00	7.2X	
AGAL	23.08	229	iPc	10 12.00	1.5	
AGMR	23.16	229	iPc	10 14.00	2.7	
BEO	23.24	291	iP	10 11.50	-0.4	
			iS	14 22.00		
ITM	23.25	272	iPd	10 10.50	-1.6	
KBN	23.32	281	iPd	10 14.00	1.4	
KKS	23.42	284	iPd	10 15.60	2.0	
PHP	23.44	284	iPd	10 13.90	0.1	
PUL	23.55	333	iPd	10 15.00	0.3	
			iS	14 24.00		
LSK	23.56	280	iPd	10 16.60	1.5	
PVY	23.69	286	iPd	10 18.00	1.6	
			eS	14 28.00		
IVA	23.72	287	iPd	10 18.10	1.4	
			eS	14 27.00		
SPC	23.77	302	iPd	10 18.00	0.7	
PUK	23.81	285	iPd	10 18.20	0.8	
PSZ	23.82	299	iP	10 19.00	1.4	
TIR	23.91	283	iPd	10 18.50	0.0	
LACI	23.99	284	iPd	10 19.10	-0.1	
VLS	24.00	275	iPd	10 18.50	-0.9	
NDI	24.06	111	iPd	10 21.00	1.0	
			eS	14 34.00		
SRN	24.06	279	iPd	10 20.40	0.5	
SDA	24.10	285	iPd	10 20.50	0.3	
KRA	24.13	304	iPd	10 20.00	-0.5	
	1.4s	1989.00nm				6.4mb
	Z 26s	63.70um				6.0MszX
	N 26s	39.20um				
			e	10 32.50	50km	
			iS	14 36.00		
TTG	24.23	286	iPd	10 22.00	0.5	
			eS	14 37.20		
KEK	24.25	279	iPd	10 21.70	0.0	
ULC	24.29	284	iPd	10 21.90	-0.3	
			eS	14 37.50		
VLO	24.33	281	iPc	10 23.00	0.5	

BUD	24.36	298	iPd	10	24.00	1.3	ALP	28.35	288	ePd	10	59.89	0.1	BOB	31.06	292	P	11	24.00	0.2
	2.0s	191.30nm			5.3mb X		SSO	28.40	289	eP	11	01.00	1.0	LLS	31.19	296	ePd	11	23.80	-1.2
NKY	24.39	287	iPd	10	24.00	0.8	BHG	28.52	298	iPd	11	01.00	-0.1	TOD	31.25	302	ePd	11	25.59	0.3
			eS	14	42.00		AQU	28.54	287	P	10	59.80	-1.6	TMA	31.33	295	ePd	11	25.30	-0.9
BDV	24.57	285	iPd	10	24.80	0.0	MNO	28.55	277	iPd	11	02.20	0.6	VAI	31.42	294	Pd	11	25.70	-1.1
			eS	14	42.00		WET	28.57	301	iPd	11	01.00	-0.5	SLE	31.48	298	ePd	11	26.30	-1.1
BRY	24.71	287	iPd	10	27.00	0.7				i	16	08.00		TNS	31.49	303	iPd	11	27.60	0.2
			eS	14	48.50		AZI	28.58	286	P	11	02.26	0.7	ZLA	31.56	298	ePd	11	27.00	-1.1
HCY	24.79	286	iPd	10	26.90	0.0		1.8s	2582.80nm				6.6mb	PCP	31.73	292	P	11	28.78	-0.8
			eS	14	50.00		CIO	28.61	288	eP	11	01.50	-0.5	FEL	31.80	298	ePd	11	29.38	-0.9
SRO	24.87	299	iPd	10	29.30	1.7	MEU	28.61	275	P	11	02.20	0.1	CVF	31.81	288	P	11	29.70	-0.6
LCI	25.51	281	P	10	31.40	-2.3	PZI	28.65	275	P	10	58.56	-3.8X	STR	31.94	300	P	11	31.25	0.0
ZST	25.71	299	iPd	10	36.30	0.8		1.3s	1862.60nm				6.6mb	MMK	31.96	295	ePd	11	30.60	-1.3
			e(S)	15	18.80		BRL	28.68	308	iPd	11	04.30	1.9	ORO	32.00	294	P	11	30.04	-1.9
SOP	26.04	298	iPd	10	42.30	3.8X	CLL	28.69	305	iPd	11	02.90	0.4		0.9s	629.40nm				6.4mb
NUR	26.15	329	iP	10	39.00	-0.4		1.4s	1200.00nm				6.3mb	FIN	32.02	291	P	11	32.96	0.9
	1.1s	2159.30nm			6.6mb		Z	20s	32.00um				5.9Msz	GWF	32.02	300	P	11	32.26	0.2
			eS	15	04.00					i	11	18.90	67kmX	ABH	32.06	302	ePd	11	33.39	0.9
HVAR	26.21	288	iPd	10	39.30	-0.9				eS	15	48.00		NB2	32.13	324	P	11	31.50	-1.4
VKA	26.24	299	iPd	10	41.60	1.2				e	16	15.00		BBS	32.16	298	P	11	32.08	-1.2
	0.9s	3647.00nm			6.9mb		ARV	28.72	289	Pd	11	03.20	0.3	KEV	32.17	344	eP	11	32.83	-0.2
			i	10	54.70	53km	BRN	28.73	308	iPd	11	03.50	0.7		0.8s	333.00nm				6.2mb
			i	10	58.60		UPP	28.74	324	iPd	11	01.90	-1.0				ec	11	44.25	43kmX
			i	13	39.80			1.0s	900.00nm				6.4mb				e	12	36.00	
			iS	15	13.00					iS	15	45.00					eS	16	40.46	
			isS	15	26.70		ASS	28.98	288	P	11	05.71	0.4	WLS	32.22	299	P	11	33.07	-0.7
			i	15	43.60			1.5s	8102.10nm				7.1mb	CGL	32.22	282	iPc	11	33.50	-0.5
			LR	23	36.00		POO	29.00	132	iPd	11	06.40	0.7	ROB	32.24	292	P	11	32.86	-1.2
ZAG	26.39	294	iPd	10	42.50	0.8		1.1s	149.37nm				5.5mb	CDF	32.27	299	P	11	33.56	-0.7
			ipP	10	50.00	27kmX				iSn	16	54.00		IMI	32.29	291	P	11	34.09	-0.4
			iS	15	45.00		GIB	29.04	278	P	11	05.10	-0.8	DIX	32.34	295	ePd	11	34.30	-0.9
PTJ	26.41	294	iPd	10	42.00	0.0	APA	29.05	346	iPc	11	05.50	-0.1	ECH	32.36	299	P	11	34.56	-0.4
KSP	26.57	305	iPd	10	43.80	0.5				iS	15	52.50		RUP	32.38	302	ePd	11	35.89	0.7
	0.9s	873.00nm			6.3mb		MNS	29.07	287	P	11	06.53	0.5	MOF	32.39	298	P	11	34.61	-0.8
			i	10	58.50	61km		1.4s	3162.70nm				6.8mb	SAOF	32.51	291	P	11	36.53	0.1
			iS	15	15.00		RDP	29.15	286	P	11	06.50	-0.3	ENR	32.57	292	P	11	36.37	-0.6
ELT	26.77	49	P	10	44.00	-1.1	RMP	29.15	286	P	11	06.69	-0.1	LSD	32.59	294	P	11	36.74	-0.6
TDS	26.87	280	P	10	45.40	-0.8		0.6s	573.60nm				6.4mb	WTS	32.59	306	iPd	11	38.00	1.1
VBY	26.91	293	iPd	10	47.40	0.9	OBO	29.16	197	iPd	11	08.96	1.9		1.0s	571.00nm				6.4mb
WMQ	26.93	71	ePc	10	47.45	0.6	HOF	29.30	303	iPd	11	08.40	0.3				e	11	49.30	42kmX
			ec	10	57.72	38kmX	SCE	29.32	297	iPd	11	08.00	-0.5	AUTN	32.60	291	P	11	37.76	0.3
			S	15	20.00		CTI	29.40	295	P	11	08.57	-0.6	SBF	32.62	291	iPd	11	37.20	-0.2
SUF	27.07	334	iP	10	47.50	-0.3		0.8s	587.70nm				6.3mb	BSF	32.62	298	P	11	36.60	-0.8
	0.8s	359.10nm			6.0mb		TDD	29.42	197	iPd	11	10.85	1.4	LOMF	32.63	297	P	11	36.60	-0.9
MGR	27.35	281	P	10	50.10	-0.5	MCT	29.44	277	P	11	10.60	1.0	STV	32.64	292	P	11	36.62	-0.9
LJU	27.40	294	iPd	10	51.50	0.5	SFI	29.45	290	P	11	10.64	1.2	HYB	32.65	127	iPd	11	38.00	0.1
SGO	27.45	282	P	10	51.40	0.0		1.2s	3754.80nm				6.9mb		1.2s	893.90nm				6.5mb
SOI	27.48	277	P	10	50.40	-1.3	USI	29.48	279	P	11	09.52	-0.2	DOI	32.66	292	P	11	36.09	-1.6
CEY	27.48	294	iPd	10	52.00	0.2		1.6s	3116.90nm				6.7mb		1.3s	1033.90nm				6.5mb
RIY	27.53	293	iPd	10	51.60	-0.5	FAI	29.51	276	P	11	11.50	1.4	EMS	32.68	295	ePd	11	37.00	-1.0
PRU	27.56	303	Pd	10	57.50	5.1X	PGD	29.55	290	P	11	12.20	1.6	REVF	32.69	291	P	11	37.94	0.0
Z	26s	57.60um			6.0MszX		ATA	29.69	197	iPd	11	13.14	1.3	AURF	32.69	291	P	11	38.11	0.1
N	22s	28.80um					DAF	29.70	198	iPd	11	13.24	1.3	TOUF	32.73	291	P	11	39.00	0.5
E	24s	31.40um					ARO	29.70	197	iPd	11	13.35	1.3	WIT	32.73	308	iPd	11	39.00	0.9
			e	11	12.00	60km	OGA	29.80	296	iPd	11	12.20	-0.6				i	11	53.50	58km
			eS	15	37.00		SGH	29.84	198	iPd	11	14.79	1.6	PZZ	32.76	292	P	11	37.05	-1.6
KMR	27.69	299	iP-	10	53.40	-0.2	COP	29.85	314	iPd-	11	13.20	0.4	MVIF	32.82	291	P	11	39.33	0.1
			i	12	04.60	398kmX				iS	16	08.00		LPG	32.87	294	iPd	11	39.40	-0.4
			i	14	21.90		FIR	29.90	290	iPd	11	14.50	1.1		0.8s	335.80nm				6.2mb
			iS	15	42.30					i	11	32.00	74kmX	HAU	32.91	299	iPd	11	39.00	-0.8
MSI	27.82	277	P	10	51.90	-2.9				iPP	12	12.00		RRL	32.92	293	P	11	39.86	-0.3
VOY	27.84	294	iPd	10	55.30	0.2				iS	16	10.00		WLF	32.97	302	iPd	11	41.50	1.3
DUI	27.88	285	Pd	10	55.90	0.5	CVT	30.06	278	iPc	11	14.50	-0.4				i	11	56.30	59km
TRI	27.95	294	iPd	10	55.50	-0.4	GBR	30.16	198	iPd	11	17.70	1.7	BNI	32.98	293	P	11	40.25	-0.3
			iPP	11	41.90		MAO	30.18	287	P	11	15.52	-0.4		0.4s	86.80nm				5.9mb
			iS	15	29.90			1.4s	1049.90nm				6.4mb	FOUF	32.98	292	ePd	11	40.21	-0.2
			i	16	02.00		SAL	30.22	294	P	11	16.47	0.3	CALN	33.03	291	P	11	41.03	0.0
			i	18	40.00			0.9s	1901.40nm				6.8mb	MEM	33.06	304	iPd	11	42.30	1.3
			i	20	04.00		MME	30.24	291	P	11	17.70	0.9				e	11	57.20	60km
BRG	28.04	305	iPd	10	57.00	0.3	LVI	30.32	278	P	11	15.90	-1.2	ENN	33.11	304	iPd	11	42.40	0.9
	3.0s	7000.00nm			6.8mb		BDI	30.33	291	P	11	17.13	-0.2		1.0s	751.00nm				6.5mb
			i	15	40.00			0.8s	1681.40nm				6.8mb				i	11	54.50	46km
			i	21	24.00		SOD	30.37	341	iP	11	17.20	-0.1	VITF	33.14	299	P	11	41.32	-0.4
RBL	28.06	295	P	10	57.10	0.1	OSS	30.41	296	ePd	11	17.70	-0.4	AAE	33.19	204	iPd	11	44.80	2.0
KHC	28.11	301	iPd	10	57.40	0.0	PII	30.43	290	P	11	17.30	-0.8	RGS	33.23	327	iP	11	41.70	-0.6
	1.0s	449.00nm			6.1mb		HFS	30.65	323	eP	11	19.10	-0.8	FRF	33.23	291	iPd	11	42.60	0.0
Z	20s	34.80um			5.9Msz			1.0s	973.50nm				6.5mb	NSS	33.26	330	eP	11	42.10	-0.5
N	18s	12.50um					Z	18s	32.55um				6.0Msz	LMR	33.37	290	iPd	11	43.40	-0.4
E	24s	29.60um								LR	20	42.00		LRG	33.46	290	iPd	11	44.20	-0.4
			e	11	12.20	61km	MDI	30.77	294	P	11	20.37	-0.7		1.1s	877.60nm				6.5mb
BOM	28.13	133	iPd	10	59.50	1.8		0.6s	390.80nm				6.3mb	DBN	33.60	306	iP-	11	48.00	2.3
			iS	16	05.70		VDL	30.89	296	ePd	11	21.90	-0.5	Z	20s	21.00um				5.9Msz
KBA	28.20	297	iPd	10	58.60	0.2	SAX	30.93	297	ePd	11	21.90	-0.9				iS	17	07.00	
			iS	15	46.00		STU	30.99	300	iPd-	11	23.00	0.0	BLS1	33.70	320	eP	11	47.20	0.5
			i	16	34.10			1.0s	2140.00nm				6.8mb	LSA	33.89	96	P	11	50.10	1.1
AOI	28.24	289	ePd	10	58.63	0.1	Z	20s	21.28um				5.8Msz	E	18s	42.40um				
RFI	28.29	284	P	10	59.10	0.1				eS	16	24.00					sS	17	19.00	

16d 02h

ODD1	33.93	320	iP	11 49.40	0.8
TRO	33.97	340	iP	11 48.40	-0.2
DOU	33.97	303	iPd-	11 50.00	1.1
			S	17 14.00	
UCC	34.10	304	Pd-	11 50.40	0.4
			S	17 15.00	
SNF	34.16	303	iPd	11 51.51	1.0
			e	12 06.40	59km
MOL	34.30	325	iP	11 51.60	0.0
KMY	34.45	319	eP	11 53.40	0.5
HYA	34.48	322	iP	11 53.50	0.4
LOF	34.57	336	eP	11 52.40	-1.4
LBF	34.60	297	iPd	11 53.80	-0.7
LOR	34.65	298	iPd	11 54.00	-0.9
	0.7s	361.70nm			6.4mb
BER	34.68	321	iP	11 55.20	0.4
SMF	34.74	297	iPd	11 55.30	-0.3
ASK	34.77	321	eP	11 56.00	0.4
SSF	34.91	297	iPd	11 56.60	-0.5
PLDF	34.98	295	P	11 57.65	-0.1
GBA	34.99	132	P	11 58.40	0.4
AVF	35.05	297	iPd	11 58.10	-0.1
SUE	35.12	322	iP	11 58.80	0.2
AGO	35.30	296	P	12 00.67	0.2
LBL	35.35	294	P	12 01.06	0.3
BGF	35.43	297	iPd	12 01.20	-0.2
PYM	35.43	295	P	12 01.84	0.2
MAF	35.67	296	iPd	12 03.80	0.3
OSG	35.89	321	eP	12 05.20	0.1
TCF	35.90	296	iPd	12 05.80	0.3
ETER	36.22	289	eP	12 07.20	-1.0
CAF	36.23	294	iPd	12 08.70	0.4
LSF	36.37	296	iPd	12 09.60	0.2
RJF	36.54	295	iPd	12 11.70	0.8
GTA	36.70	75	iPc	12 13.20	0.8
	1.5s	0.60nm			3.3mb X
Z	18s	108.00um			6.7Msz
N	12s	40.20um			
			pP	12 17.50	14kmX
			S	17 54.00	
			SS	20 20.00	
ESEL	36.86	285	iPd	12 13.40	-0.2
LPO	36.89	294	iPd	12 14.20	0.4
LFF	37.15	294	iPd	12 16.60	0.7
LDF	37.16	300	iPd	12 16.00	0.0
FLN	37.37	301	iPd	12 17.90	0.1
	0.8s	566.70nm			6.6mb
MFF	37.46	297	iPd	12 18.40	-0.1
IRK	37.55	53	ePc	12 19.00	-0.3
			eS	18 00.00	
GRR	37.67	300	iPd	12 20.20	0.0
LPF	37.84	300	iPd	12 21.50	-0.2
EPF	37.85	291	iPd	12 20.60	-1.3
	0.7s	93.00nm			5.8mb
EDR	38.27	314	ePd	12 25.50	0.3
ESY	38.29	313	iPd	12 25.50	0.1
	1.0s	855.00nm			6.6mb
EBR	38.32	288	iP	12 26.00	0.2
			e	13 52.00	463kmX
			e	14 10.00	
			eS	18 16.00	
			e	18 32.00	
OGE	38.39	292	P	12 25.72	-0.7
ESCF	38.49	292	P	12 26.44	-0.8
EDU	38.52	314	iPd	12 27.40	0.1
	0.9s	732.00nm			6.6mb
EBL	38.53	312	iPd	12 27.80	0.4
	0.8s	815.00nm			6.7mb
LHE	38.56	291	P	12 28.11	0.2
ATE	38.58	292	P	12 27.31	-0.7
EKA	38.60	312	Pd	12 28.00	0.0
	0.6s	385.20nm			6.5mb
EDI	38.61	313	iPd	12 28.30	0.3
MADF	38.64	292	P	12 27.69	-0.9
ISSF	38.66	292	P	12 29.16	0.4
ELYF	38.76	292	P	12 28.52	-1.0
EAU	38.76	312	iPd	12 31.00	1.7
BOH	38.79	292	P	12 29.20	-0.7
EBH	38.79	313	iPd	12 29.70	0.1
ELO	38.91	313	iPd	12 30.60	0.0
	1.0s	751.00nm			6.5mb
YRH	39.58	308	iPd	12 36.60	0.5
	1.0s	1115.00nm			6.7mb
YRH	39.58	308	eP	12 50.60	14.5X
	1.3s	1806.00nm			
ACU	39.70	285	eP	12 37.00	-0.4
ETOR	40.17	289	iPd	12 40.30	-1.0

ETA	40.55	308	iPc	12 45.30	1.2
	1.1s	855.00nm			6.5mb
ETA	40.55	308	eP	12 59.00	14.9X
	1.2s	1466.00nm			
DLE	40.69	309	iPd	12 45.50	0.3
	1.0s	510.00nm			6.3mb
ECP	40.70	307	iPd	12 45.80	0.5
ECP	40.70	307	eP	12 59.40	14.1X
LZH	40.83	79	eP	12 48.28	1.4
	3.0s	1.28nm			3.2mb X
N	13s	4.05um			
E	16s	51.50um			
			ec	12 58.22	34kmX
			sP	13 04.00	
			ePP	14 28.68	
			PcS	18 43.00	
			eS	18 58.45	
			SS	22 04.00	
			e	22 04.84	
DMU	40.85	310	iPd	12 46.90	0.4
EVIA	41.20	286	iPd	12 50.00	0.3
ENIJ	41.58	283	eP	12 52.00	-0.8
KBS	41.71	349	iP+	12 54.30	1.0
GUD	41.74	289	iPd	12 54.00	-0.2
CRT	42.52	284	iP	13 00.50	-0.1
TAF	42.56	280	iPd	13 01.00	0.1
ASMO	42.57	284	iPd	13 00.50	-0.5
APHE	42.68	284	iPd	13 01.50	-0.4
ACHM	42.72	284	iP	13 01.50	-0.7
AAPN	42.86	285	iP	13 02.50	-0.9
ALOJ	42.93	284	iPc	13 02.70	-1.3
ATEJ	42.93	284	iPc	13 03.20	-0.8
CD2	42.94	86	iPc	13 05.00	0.9
	1.3s	0.40nm			3.0mb X
Z	22s	83.70um			6.6Msz
N	15s	41.80um			
VAL	43.10	307	iP	13 04.30	-0.7
			S	19 56.00	
EMON	43.14	294	iPd	13 06.00	0.5
MAL	43.30	284	iPd	13 06.00	-0.8
			iPP	14 56.00	
			iS	19 52.00	
EPLA	43.32	289	iPd	13 07.20	0.2
ERUA	43.33	293	iPd	13 07.50	0.5
EHOR	43.50	286	iPd	13 08.20	-0.2
BTO	43.76	70	iPc	13 12.00	1.3
Z	15s	45.50um			6.5MszX
N	14s	32.30um			
E	14s	37.20um			
			sP	13 20.00	
			PP	14 55.50	
			iS	19 41.00	
			SS	22 51.00	
EPRU	43.81	285	iPd	13 10.00	-1.0
STS	44.16	294	iPd	13 14.50	0.8
EJIF	44.19	284	iPd	13 12.80	-1.2
EZAM	44.50	293	eP	13 17.00	0.5
NKM	44.55	283	iPd	13 16.00	-0.9
			i	13 18.50	8kmX
			i	13 27.00	
EVAL	44.69	286	iPd	13 18.00	-0.1
PTO	44.76	292	iPd	13 19.50	0.9
			i	13 28.00	28kmX
			eS	19 14.00	
HHC	44.78	69	Pc	13 20.00	1.1
Z	20s	36.60um			6.3Msz
N	10s	14.30um			
			S	19 56.00	
			ScS	23 06.00	
KMI	45.06	94	eP-	13 21.53	0.1
Z	22s	81.90um			6.6Msz
N	16s	21.50um			
E	16s	19.50um			
			ec	13 31.80	35kmX
			sP	14 05.00	
			PP	15 12.00	
			eS	19 57.46	
			eSS	23 31.25	
IFR	45.15	280	iPd	13 22.50	0.5
			i	13 37.00	55km
XAN	45.47	79	iPc	13 24.90	0.6
N	15s	55.30um			
E	15s	50.00um			
			PP	15 13.00	
			S	20 02.00	
			SS	23 24.00	
AKU	45.81	327	iPd	13 28.30	1.8

	1.1s	379.75nm			6.2mb
Z	23s	53.03um			6.4MszX
CHG	45.84	104	iPd	13 26.80	-0.6
	1.0s	197.50nm			6.0mb
			eS	20 08.00	
LIS	46.02	289	iPd	13 29.30	0.8
RBA	46.22	282	iP	13 30.00	-0.2
BNG	46.46	228	iPd	13 32.20	-0.1
	0.9s	298.00nm			6.2mb
BCAO	46.47	228	eP	13 31.86	-0.5
TIY	46.56	73	iPc	13 34.00	1.0
			PP	15 23.50	
			S	20 20.00	
			SS	23 44.00	
DAG	46.63	343	eP	13 35.00	2.1
BDT	46.86	105	iPd	13 34.70	-0.7
	1.0s	551.40nm			6.4mb
AVE	46.96	281	iP	13 36.20	0.1
			i	13 53.00	66kmX
GYA	47.35	89	P	13 39.00	-0.4
Z	28s	38.20um			6.2MszX
E	19s	77.00um			
			S	20 28.00	
REY	47.55	325	iP	13 42.60	2.3
HIA	47.70	55	ePc	13 42.59	0.9
			ec	13 52.85	35kmX
			ePP	15 35.97	
			eS	20 36.61	
			e	23 28.76	
TIO	47.93	278	iPd	13 44.20	0.3
			i	13 57.00	47km
			i	14 00.00	
			i	14 03.00	
TIK	48.35	24	iPc	13 46.50	0.1
			eS	20 41.50	
BJI	48.36	68	ePc	13 47.11	0.3
	9.0s	2.79nm			3.3mb X
			ec	13 57.54	36kmX
			ePP	15 41.49	
			eS	20 44.00	
			eSS	24 08.00	
LOE	48.78	103	eP	13 49.50	-0.9
NNT	50.43	109	iPd	14 03.00	0.0
TIA	50.60	72	Pc	14 04.50	0.4
E	15s	23.80um			
			PP	16 04.50	
			S	21 16.20	
			ScS	23 51.50	
WHN	51.15	80	iPc	14 09.00	0.7
	1.0s	0.20nm			3.1mb X
Z	20s	41.40um			6.5Msz
N	19s	59.00um			
E	15s	40.50um			
			S	21 18.00	
			SS	25 00.00	
DL2	52.67	67	P	14 20.00	0.3
Z	26s	41.40um			6.4MszX
N	15s	21.70um			
E	15s	28.70um			
			S	21 36.00	
SNY	52.81	63	iPc	14 19.70	-1.0
Z	18s	53.20um			6.6Msz
			PP	16 26.00	
			S	21 45.00	
			SS	25 20.00	
CN2	53.27	60	iPc	14 24.00	0.0
Z	22s	93.00um			6.8Msz
N	16s	68.00um			
E	16s	48.00um			
			pP	14 30.00	20kmX
			PP	16 20.00	
			eS	21 47.00	
			SS	25 25.00	
NJ2	53.79	76	Pc	14 27.80	-0.2
Z	18s	45.90um			6.6Msz
N	15s	7.70um			
E	15s	33.60um			
			S	21 58.50	
QIZ	53.92	95	Pc	14 28.70	-0.4
N	12s	9.00um			
E	17s	21.70um			
			S	22 00.00	
			SS	25 45.00	
GZH	54.27	89	eP	14 30.00	-1.7
Z	26s	60.00um			6.5MszX
N	20s	22.20um			
E	17s	29.50um			

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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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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.

				S	22	05.00		MAT		65.30	62	iPc	15	45.90	-1.3				S	28	10.00		
MCO		54.98	90	eP	14	36.60	-0.3		Z	20s		2.84um			5.5MszX				PS	28	33.00		
HKC		55.34	89	iP	14	39.70	0.2					eS	24	24.00		EDM		85.90	351	iPd	17	44.60	0.7
				iS	22	24.00		HOOJ		65.44	55	eP	15	46.90	-1.1			1.0s	392.00nm			6.5mb	
MZZ		55.35	207	iPc	14	40.00	0.3	NIIJ		65.45	61	P	15	46.80	-1.4	NANU		86.34	124	iPd	17	46.40	0.2
				i	14	52.90	46km	YAMJ		65.63	60	eP	15	48.60	-0.8			0.5s	75.00nm			6.1mb	
				i	15	39.00		ILT		65.68	19	iPc	15	49.00	-0.2	TLE		86.95	100	ePd	17	49.80	0.4
GGC		55.65	280	iP	14	42.00	0.3					iS	24	32.00		MBL		88.14	120	iPd	17	54.80	-0.2
MDJ		55.65	58	ePc	14	40.28	-1.2	KUSJ		65.93	53	P	15	49.70	-1.4			0.8s	165.00nm			6.3mb	
				ec	14	51.37	38kmX	FRB		65.98	335	ePd	15	50.00	-1.1	SES		88.36	349	iPd	17	55.80	0.0
				ePPP	18	05.36				0.5s	152.00nm				6.3mb			0.8s	296.00nm			6.6mb	
				eScP	19	36.41		CHJJ		66.10	62	P	15	50.10	-2.3	CBN		88.92	322	eP	17	59.00	0.4
				eS	22	22.06		OFUJ		66.21	58	P	15	51.50	-1.5	PNT		90.39	354	ePd	18	06.00	0.7
				e	24	25.39		TPI		66.74	116	ePd	15	55.50	-1.2			1.1s	174.00nm			6.3mb	
CTFE		55.93	280	iPd	14	44.30	0.6					e	21	00.00						pP	18	21.00	51km
				iPPP	18	12.80		KAKJ		66.81	62	eP	15	54.90	-1.9	MTN		90.45	106	iPc	18	06.20	0.3
				iS	22	30.50		BRW		66.85	10	e(P)	16	01.40	4.8X	KNA		90.64	110	iPd	18	06.50	-0.3
SSE		55.99	76	Pc	14	43.80	-0.2	KKM		66.89	102	ePc	15	57.20	-0.5			1.3s	11.00nm			5.1mb	X
		1.2s	0.49nm				3.4mb X	PET		67.80	39	eP	16	00.00	-2.8	JAY		90.98	92	ePc	18	09.00	0.5
	Z	20s	39.60um				6.5Msz					eS	24	52.00						e	19	57.00	477kmX
	N	15s	22.30um					SLR		69.20	202	ePd~	16	11.71	-0.2	BLA		91.13	324	P	18	09.40	0.4
	E	15s	24.60um							0.9s	497.48nm				6.4mb			1.4s	77.78nm			5.9mb	
				sP	15	02.00			Z	20s	64.54um				6.9Msz	MEKA		91.14	124	eP	18	09.00	0.1
				PP	16	48.00						ec	16	22.47	35kmX	MCW		91.23	356	P	18	10.20	1.0
				S	22	23.00						i	16	28.90		PGC		91.28	357	eP	18	11.00	1.6
				sS	22	48.00		TSM		69.47	102	ePd	16	12.10	-1.5			1.1s	124.00nm			6.2mb	
				ScS	24	28.00		PRY		70.56	203	iPc	16	19.40	-0.8	MRWA		91.43	128	eP	18	11.00	0.8
				SS	26	10.00				0.8s	228.13nm				6.2mb	GMW		92.35	356	P	18	15.80	1.4
TSI		56.00	118	eP	14	39.00	-5.3X					i	16	35.20	57km	RMW		92.39	355	P	18	15.50	0.9
IPM		56.90	115	ePd	14	49.50	-1.2	SCH		71.58	328	ePd	16	25.70	-0.3	BAL		92.86	128	eP	18	17.00	0.3
		1.2s	557.00nm				6.5mb			1.0s	336.00nm				6.2mb	LRM		93.03	349	eP	18	18.50	0.6
				e	15	04.10	54km	INK		71.61	2	eP	16	25.00	-0.8	LON		93.09	355	eP	18	17.83	-0.1
TBT		57.07	281	iP	14	51.80	0.0			0.5s	85.00nm				5.9mb					ec	18	29.75	38kmX
OZH		57.26	84	eP	14	52.00	-1.1					pP	16	36.00	36kmX	MUN		93.55	130	eP	18	19.00	-0.9
		0.8s	0.10nm				2.9mb X	IMA		72.15	11	eP	16	29.30	0.0	LHS		93.56	322	P	18	21.10	1.0
	Z	28s	40.10um				6.4MszX			1.5s	238.10nm				5.9mb	TKL		93.92	325	P	18	22.40	0.6
	N	18s	31.40um					BLF		72.99	203	iPd	16	36.00	1.4	JSC		93.93	322	P	18	23.00	1.2
	E	18s	31.10um							1.0s	560.00nm				6.4mb	SGS		94.47	321	P	18	25.70	1.4
				S	22	38.00						i	16	51.60	56km	HBF		94.62	321	P	18	25.80	0.8
PTZ		57.46	203	iPc	14	55.00	0.4	DAV		73.28	95	eP	16	36.00	-0.5	FVM		94.62	331	P	18	25.30	0.3
				i	15	10.00	55km	FRS		73.85	204	iPd	16	38.00	-1.4	NWAO		94.83	130	eP	18	25.00	-0.7
GDH		57.89	336	iPc	14	47.00	-10.0X	COL		74.01	8	ePd	16	40.88	0.9	CCM		94.86	331	ePDIFc	18	26.94	0.9
		0.8s	131.34nm				6.1mb					ePP	19	29.88						eSKS	29	00.95	
				i	22	43.00						eS	26	10.09						eS	29	36.54	
				i	24	32.00		FBA		74.01	8	ePd	16	40.70	0.7					eSP	31	02.62	
				i	26	56.00		PCI		74.19	105	iPc	16	43.00	1.3	RKG		95.52	131	eP	18	31.20	2.3
PDA		58.18	295	eP	15	00.40	1.0	HVD		74.60	203	iPd	16	59.00	15.1X	COOL		95.76	126	eP	18	29.00	-1.1
KMZ		58.60	210	iPc	15	01.80	-0.8			0.9s	487.39nm					WARB		96.11	119	iPd	18	32.20	0.4
				i	15	17.00	56km					i	17	13.50	51km	WB5		97.37	110	eP	18	36.30	-1.2
ANP		59.34	82	iP+	15	12.00	4.2X	TTA		74.74	13	eP	16	44.70	0.4					i	18	52.50	56km
				eS	23	16.00		SMY		74.84	32	P	16	55.00	10.1X	WRA		97.39	110	Pd	18	36.90	-0.7
LSZ		59.43	206	iPd	15	09.00	0.6		Z	19s	43.14um				6.8Msz			1.3s	91.10nm			6.1mb	
				i	15	25.50	62km	MKS		76.84	109	iPd	16	57.00	0.2	GLD		97.52	342	P	18	35.00	-3.4X
				i	15	43.00		TOA		76.91	8	eP	16	57.70	1.1		Z	19s	26.60um			6.7Msz	
KGM		60.32	115	ePd	15	13.10	-1.4	PMR		77.04	10	ePd	16	57.50	0.3	GOL		97.60	342	P	18	39.20	0.3
				e	15	28.00	55km			0.7s	128.60nm				6.0mb			1.1s	63.46nm			6.1mb	
KRI		60.42	204	iPd	15	21.60	6.4X		Z	20s	40.00um				6.7Msz		Z	19s	23.58um			6.7Msz	
				i(PcP)	15	38.50		CBM		77.86	322	P	17	03.40	1.4	TUL		98.39	334	ePd	18	42.80	0.7
				ePˈPˈ	44	48.00		CER		79.15	207	iPd	17	10.50	1.4			1.3s	187.60nm			6.5mb	
KIC		60.48	252	Pd	15	14.90	-0.6			1.2s	560.00nm				6.4mb		Z	22s	43.63um			6.9Msz	
		1.2s	2047.50nm				7.1mb	KDC		80.22	13	ePd	17	15.40	0.9					LR	52	30.00	
TIC		60.49	252	Pd	15	14.90	-0.7	SDN		80.85	18	eP	17	20.00	2.1	LBFM		98.48	355	P	18	44.10	1.4
LIC		60.78	252	Pd	15	16.90	-0.7	AAI		82.25	101	eP	17	30.00	4.1X	PDCR		98.48	261	iPd	18	44.90	2.2
SHNJ		61.66	68	eP	15	21.40	-1.9	RSNY		82.59	324	P	17	25.00	-2.2					ipP	19	00.40	53km
KUMJ		62.29	70	P	15	27.30	-0.3		Z	22s	30.79um				6.6Msz					e	19	12.10	
SHK		62.55	67	iPd	15	29.00	-0.3	FFC		82.63	345	iPd	17	27.40	0.2	SIO		98.71	334	eP	18	43.70	0.1
		1.1s	556.96nm				6.6mb			0.8s	123.00nm				6.0mb	FHC		99.14	357	ePDIF	18	46.80	1.3
YSS		62.65	50	ePc	15	30.00	0.2	HRV		82.80	321	ePd	17	29.91	1.6	WDC		99.28	355	ePDIF	18	46.80	0.7
				eS	23	54.00						ec	17	42.32	41kmX					e	23	00.20	
YONJ		62.76	66	eP	15	29.60	-1.1					eS	27	48.10						ePKKP	35	09.60	
KAGJ		63.05	71	eP	15	32.00	-0.6	SIT		82.80	4	eP	17	29.20	1.2					e	43	20.50	
MBC		63.55	358	eP	15	34.00	-1.3	KUG		83.18	109	eP	17	34.50	3.9X					e	43	40.00	
BAG		63.68	90	eP	15	36.00	-1.2			1.0s	693.40nm				6.6mb	ASPA		99.45	113	eP	18	45.80	-1.2
		1.0s	138.00nm				6.0mb	GUMO		83.84	78	ePc	17	33.47	-0.5			1.6s	49.00nm			5.8mb	
				eS	24	08.00				1.2s	250.00nm				6.1mb					eS	29	18.00	
TKSJ		63.80	67	eP	15	37.00	-0.6					ec	17	41.91	27kmX	UYO		99.50	332	iPd	18	47.90	0.7
BUL		63.85	204	iPc	15	38.20	0.2	GUA		83.91	78	eP	17	32.30	-2.1	MSU		100.12	347	Pdiff	18	52.20	2.1
				i(PcP)	15	52.00				1.2s	150.00nm				5.9mb	PMG		100.29	94	ePdiff	18	50.00	-1.0
				iPˈPˈ	44	35.50			Z	19s	14.31um				6.4Msz	MEO		100.34	335	iPdiff	18	51.00	0.2
MRRJ		64.03	55	eP	15	37.70	-1.2	RSON		84.22	339	iPc	17	35.60	0.2	TNP		101.28	351	Pdiff	18	56.70	1.5
ASAJ		64.11	53	eP	15	38.50	-0.9			1.1s	352.17nm				6.3mb			1.3s	70.58nm			6.1mb	
TSRJ		64.32	64	P	15	40.60	-0.3		Z	22s	18.73um				6.4Msz	CMB		101.66	353	ePdiff	18	58.00	1.3
AOMJ		64.57	58	eP	15	42.40	-0.1					pP	17	50.00	50km					e	22	21.20	
MTMJ		65.00	62	P	15	45.30	-0.1					sP	18	05.00						e	23	13.80	
OCP		65.13	92	eP	15	39.00	-7.4X	INY		85.12	324	iPd	17	40.70	0.6					ePKKP	35	02.30	
MAJO		65.30	62	eP	15	46.29	-1.0					pP	17	56.00	53km	BKS		101.96	355	e(Pdif	19	06.00	8.1X
				ec	15	56.39	32kmX					SKS	27	58.00			Z	20s	13.00um			6.4Msz	

16d 02h

	N 20s	13.00um				
	E 20s	11.00um				
		ePP	23	18.00		
		eSKS	29	38.00		
		ePS	32	11.00		
		eSS	37	44.00		
		e	46	06.00		
		eLQ	47	15.00		
		eLR	53	40.00		
BRK	101.96	355	ePdiff	19	06.00	8.1X
	Z 20s	23.00um			6.7Msz	
		ePP	23	18.00		
		eSP	32	12.00		
		e	38	16.00		
		e	46	06.00		
		eLR	55	02.00		
ANMO	102.39	342	ePdiff	19	02.24	2.1X
		ec	19	13.34		
		ePP	23	10.19		
		eSKS	29	37.36		
		eS	30	42.34		
		eSP	32	16.28		
ALO	102.39	342	Pdiff	19	01.80	1.6
	1.2s	14.76nm			5.5mb	
	Z 21s	9.18um			6.3Msz	
ARN	102.43	354	Pdiff	19	03.00	2.9X
MHC	102.45	354	ePdiff	19	02.00	1.7
FRI	102.63	353	ePdiff	19	02.20	1.3
		e	23	17.70		
		ePKKP	35	06.00		
SAO	103.00	354	ePdiff	19	03.00	0.4
		ePP	23	26.00		
		ePPP	25	41.00		
		e	27	09.00		
		eSKS	29	45.00		
		eSP	31	43.00		
		e	32	19.00		
		ePPS	32	47.00		
		eSS	36	57.00		
		e	38	05.00		
		e	46	33.00		
		eLQ	51	35.00		
CLC	103.56	351	ePdiff	19	07.00	1.8
		e	22	45.00		
ISA	103.82	352	ePdiff	19	08.00	1.7
		e	22	11.00		
GSC	103.97	350	ePdiff	19	09.00	1.9X
SBB	104.70	351	ePdiff	19	12.00	1.7
TPC	105.05	349	ePdiff	19	14.00	2.2X
		e	22	28.00		
PAS	105.28	351	ePdiff	19	29.51	16.7X
		eSKS	29	56.73		
		eS	31	04.60		
		eSP	32	45.16		
GLA	105.90	348	ePdiff	19	18.00	2.4X
PLM	105.90	350	ePdiff	19	17.00	1.2
		e	22	23.00		
CTA	106.22	103	iPdiff	19	17.00	-0.3
	1.4s	29.07nm			6.1mb	
		iPP	23	40.00		
		i(SKS)	29	55.00		
		i(SKKS	31	08.00		
BAR	106.53	350	ePdiff	19	23.00	4.5X
RMO	111.85	107	e(PKP)	23	39.00	-0.4
		e	34	59.00		
KIP	112.67	30	ePdiff	20	03.91	18.0X
		eSKS	30	25.44		
		eSP	33	56.08		
PPD	113.46	260	ePKP	23	42.40	-0.2
		e	24	34.50		
BFD	113.50	119	ePKP	23	42.00	-0.2
TOO	115.68	118	ePKP	23	46.00	-0.5
OXX	115.69	326	(PKP)	23	54.00	6.8X
BWA	116.01	114	ePKP	23	47.60	0.4
		e	24	04.20		
COO	116.42	109	ePKP	23	48.50	0.4
CAN	116.89	115	ePKP	23	48.70	-0.1
		e	24	06.80		
SNA	116.99	198	iPKPc	23	48.80	0.9
	1.2s	201.56nm				
CCH	122.04	274	PKP	24	11.70	12.3X
DZM	122.65	92	iPKPc	23	59.40	-0.8
ZOBO	122.87	276	PKP	24	00.00	-1.4
LPB	123.01	276	PKP	24	03.00	1.6
	1.0s	110.00nm				
		LR	05	40.00		
CNCB	123.09	276	PKP	24	03.00	1.2
ARE	125.54	279	ePKP	24	07.00	0.7
DRV	125.68	151	ePKP	24	04.40	-0.2
SLA	125.74	266	ePKPc	24	06.30	0.0
NNA	126.68	287	iPKP	24	09.00	0.8
	1.5s	83.33nm				
TCA	128.44	259	e(PKP)	24	11.00	-0.2
MRA	129.78	258	e(PKP)	24	06.00	-7.5X
SPA	130.15	180	ePKPd	24	12.70	-0.6
	1.0s	27.50nm				
	Z 20s	9.0tum			6.5Msz	
		i		24	28.60	
PEL	133.85	260	iPKPc	24	22.50	1.2
MSZ	133.95	117	(PKP)	24	21.00	-0.1
			(PP)	27	48.40	
SAN	133.97	259	ePKP	24	22.00	0.5
ROCH	134.02	260	ePKP	24	23.50	1.6
SBA	134.36	164	ePKP	24	14.00	-6.9X
LNV	134.75	259	ePKP	24	23.00	0.1
AIA	136.46	213	e(PKP)	24	28.00	2.8X
KRP	137.11	106	PKP	24	18.00	-9.3X
			PP	27	55.00	
WEL	137.69	111	PKP	24	28.00	-0.3
			PP	27	28.00	
			PKS	28	16.00	
			PPP	30	32.00	
RAR	147.28	64	PKP	24	48.00	2.5X
PMO	149.59	39	iPKP	24	56.60	7.4X
	1.4s	675.00nm				
TPT	149.71	39	iPKP	24	56.80	7.4X
	1.4s	940.00nm				
VAH	149.93	39	iPKP	24	57.20	7.5X
	1.4s	405.00nm				
RUV	150.00	39	iPKP	24	57.50	7.7X
	1.4s	405.00nm				
AFR	150.76	45	iPKP	24	59.20	8.3X
PPT	150.89	45	iPKP+	24	59.90	8.7X
	1.4s	675.00nm				
	Z 24s	22.00um			6.9MszX	
PPN	150.94	45	iPKP	24	59.40	8.2X
PAE	150.96	45	iPKP	24	59.70	8.5X
TVO	151.24	45	iPKP	25	00.60	8.8X
TBI	155.50	53	ePKP	25	08.00	10.5X
	1.1s	110.00nm				
	S.D. = 1.0	on 563 of 630 obs.				

? SEP 16, 1989 02h 18m 53.81± 2.61s
4.631 S ±27.9km 135.533 E ±11.8km
DEPTH = 33.0km (normal)
4.9mb (2 obs.)
WEST IRIAN REGION (196)

TLE	2.95	250	iPc	19	39.00	-0.4
			iS	20	13.00	
MTN	9.25	208	eP	21	03.30	0.3
			eS	22	51.50	
PMG	12.47	113	eP	21	51.00	-0.9
WB5	15.20	184	eP	22	25.50	-2.3
			eS	25	11.50	
WRA	15.26	184	Pc	22	28.10	-0.6
	0.3s	6.20nm			4.3mb	
CTA	18.57	147	iPd	23	11.90	1.6
ASPA	18.99	185	iPd	23	16.50	1.1
	0.4s	109.00nm			5.4mb	
			eS	26	42.20	
WARB	23.06	201	eP	23	58.70	1.2
	S.D. = 1.5	on 8 of 8 obs.				

• SEP 16, 1989 02h 27m 58.81± 0.65s
40.256 N ±10.5km 51.666 E ±15.6km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)
CASPIAN SEA (338)

TEH	4.52	183	eP	29	07.00	0.2
MHI	7.31	120	eP	29	46.00	-0.2
NUR	26.27	329	eP	33	32.00	-0.5
SUF	27.19	334	eP	33	42.00	1.1
SOD	30.48	341	iP	34	10.80	0.4
HFS	30.77	323	eP	34	12.90	-0.2
	0.6s	14.20nm			4.9mb	
NB2	32.25	324	P	34	25.30	-0.8
	0.6s	3.40nm			4.4mb	
	S.D. = 0.8	on 7 of 7 obs.				

? SEP 16, 1989 03h 00m 19.17± 4.37s
17.716 N ±30.4km 61.599 W ±17.6km
DEPTH = 10.0km (geophysicist)

LEEWARD ISLANDS (92)
ML 3.4 (FDF).

ANG	0.60	202	eP	00	31.68	0.4
BPA	0.71	200	eP	00	32.70	-0.5
			S	00	43.10	
NEV	1.09	238	eP	00	39.90	0.2
			S	00	54.00	
SKI	1.15	251	eP	00	40.59	-0.1
			eS	00	57.45	
PAG	1.68	183	eP	00	48.50	-0.3
			S	01	11.50	
MGG	1.81	171	eP	00	50.80	0.2
	S.D. = 0.4	on 6 of 6 obs.				

SEP 16, 1989 03h 29m 23.25± 0.46s
40.255 N ± 7.1km 51.798 E ± 8.8km
DEPTH = 33.0km (normal)
4.6mb (4 obs.)
CASPIAN SEA (338)

TEH	4.52	184	eP	30	32.00	0.7
			i-	38	49.00	
TAB	4.78	245	e(P)	30	54.00	19.0X
MHI	7.23	121	ePn	31	10.00	0.6
			eSn	32	21.00	
ZST	25.93	299	eP	34	54.80	0.9
			e	43	07.80	
NUR	26.32	329	eP	34	57.00	-0.5
KSP	26.78	305	eP	35	03.00	1.2
SUF	27.23	334	eP	35	06.00	0.2
BRG	28.26	305	eP	35	14.50	-0.7
KHC	28.32	301	P	35	16.50	0.6
SOD	30.51	341	iP	35	35.70	0.6
HFS	30.83	323	eP	35	37.70	-0.3
	0.6s	12.40nm			4.9mb	
NB2	32.31	324	P	35	50.30	-0.8
	0.6s	4.10nm			4.5mb	
GBA	34.79	132	Pc	36	11.80	-1.0
	0.8s	3.20nm			4.3mb	
BNG	46.56	229	ePd	37	50.00	0.2
	0.8s	7.00nm			4.7mb	
KIC	60.64	252	P	39	32.80	-0.7
TIC	60.65	253	P	39	33.00	-0.6
LIC	60.94	252	P	39	35.00	-0.5
	S.D. = 0.8	on 16 of 17 obs.				

• SEP 16, 1989 03h 36m 31.61± 0.99s
10.265 S ± 9.2km 120.122 E ±12.4km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)
SUMBA ISLAND REGION (287)

MKS	5.06	353	iPc	37	47.30	0.2
MBL	10.84	181	eP	39	08.00	0.4
			eS	41	05.00	
MTN	11.09	104	eP	39	10.00	-1.0
			eS	41	10.00	
NANU	12.99	199	eP	39	36.00	-0.6
	0.4s	3.00nm			4.7mb	
			eS	41	51.00	
WB5	16.74	126	eP	40	26.80	1.5
			eS	43	23.80	
WRA	16.75	127	Pc	40	25.10	-0.4
	1.0s	8.20nm			3.8mb	
WARB	16.99	160	eP	40	32.00	3.5X
ASPA	18.72	137	iPd	40	54.60	4.7X
	0.6s	12.00nm			4.3mb	
			eS	44	17.10	
QIS	21.36	121	eP	41	21.30	2.8X
	0.7s	13.00nm			4.4mb	
CTA	27.01	114	eP	42	23.00	10.3X
	S.D. = 1.1	on 6 of 10 obs.				

SEP 16, 1989 03h 37m 38.03± 0.38s
40.277 N ± 7.2km 51.610 E ± 6.7km
DEPTH = 33.0km (normal)
4.6mb (19 obs.)
CASPIAN SEA (338)

TAB	4.66	243	eP	39	06.00	17.9X
MHI	7.36	120	ePn	39	26.00	0.0
			eSn	40	45.00	
SPC	23.85	302	e(P)	42	51.00	1.8
SRO	24.95	299	eP	43	04.60	5.1X
NUR	26.23	330	iP	43	11.50	0.1
	0.6s	13.00nm			4.7mb	

KSP 26.65 305 iP 43 16.60 1.2
SUF 27.15 334 eP 43 20.00 0.2
BRG 28.12 305 iP 43 30.00 1.2
0.8s 10.00nm 4.6mb
KHC 28.19 301 P 43 30.10 0.7
KBA 28.28 297 iP 43 31.10 0.7
CLL 28.77 306 e(P) 43 35.00 0.4
SOD 30.44 341 eP 43 50.00 0.7
HFS 30.73 323 eP 43 51.40 -0.5
0.4s 8.80nm 4.9mb
NB2 32.21 324 P 44 04.00 -0.9
0.7s 5.20nm 4.5mb
KEV 32.24 344 eP 44 04.00 -1.1
CDF 32.35 300 eP 44 05.60 -0.8
BSF 32.70 298 eP 44 08.40 -1.1
LPG 32.95 294 eP 44 11.20 -0.6
HAU 32.99 299 eP 44 11.10 -0.8
0.5s 7.80nm 4.9mb
LBF 34.68 297 eP 44 25.80 -0.7
0.7s 5.90nm 4.6mb
LOR 34.73 298 eP 44 25.90 -1.0
0.7s 5.50nm 4.6mb
SMF 34.81 297 eP 44 27.20 -0.4
0.7s 5.50nm 4.6mb
GBA 34.91 132 Pc 44 29.00 0.4
0.7s 3.90nm 4.4mb
SSF 34.99 297 eP 44 28.80 -0.3
AVF 35.13 297 eP 44 30.20 -0.1
0.7s 5.50nm 4.6mb
BGF 35.51 297 eP 44 33.30 -0.2
0.7s 4.40nm 4.5mb
MAF 35.75 296 eP 44 35.70 0.2
0.5s 3.60nm 4.6mb
TCF 35.98 296 eP 44 37.80 0.3
0.5s 2.40nm 4.4mb
CAF 36.31 294 eP 44 39.90 -0.4
0.6s 2.70nm 4.3mb
LSF 36.45 296 eP 44 41.60 0.1
LPO 36.97 294 eP 44 45.90 0.1
LFF 37.23 294 eP 44 48.20 0.2
0.5s 7.80nm 4.8mb
LDF 37.24 301 eP 44 48.20 0.2
0.5s 5.80nm 4.7mb
FLN 37.45 301 eP 44 49.80 0.0
0.6s 7.90nm 4.8mb
GRR 37.75 300 eP 44 52.30 0.0
LPF 37.92 300 eP 44 54.00 0.3
EKA 38.68 312 P 45 01.00 0.9
0.5s 5.50nm 4.6mb
BNG 46.47 229 ePc 46 04.50 0.7
0.6s 6.00nm 4.7mb
KIC 60.51 252 P 47 47.10 -0.3
TIC 60.52 252 P 47 47.00 -0.5
LIC 60.81 252 P 47 49.10 -0.3
S.D. = 0.7 on 39 of 41 obs.

SEP 16, 1989 04h 03m 03.16± 0.24s
32.561 S ± 5.9km 14.251 W ± 4.8km
DEPTH = 10.0km (geophysicist)
5.7mb (53 obs.) 5.8Msz (5 obs.)
SOUTH ATLANTIC RIDGE (410)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 25C
Centroid Location:
Origin Time 04:03:15.9 0.7
Lat 32.35S 0.09 Lon 13.44W 0.07
Dep 15.0 FIX Half-duration 3.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.60 0.32 Mtt=-4.17 0.52
Mff= 4.77 0.35 Mrt= 2.03 1.27
Mrf=-0.85 1.05 Mtf= 5.59 0.32
Principal Axes:
T Val= 7.46 Plg= 1 Azm=296
N 0.09 72 29
P -7.55 18 206
Best Double Couple:Mo=7.5*10**17
NP1:Strike=342 Dip=77 Slip=-168
NP2: 249 78 -13

CER 28.09 101 iPd 08 57.00 0.0
0.8s 62.50nm 5.5mb
BMA 28.18 283 e(P) 08 57.00 -0.9
SUR 29.50 99 iPc 09 10.50 0.5
0.6s 66.67nm 5.6mb
PDCR 30.28 305 iPc 09 15.00 -1.7
i 09 21.30
e 09 35.20
e 10 00.40
e 10 08.40
VAO 30.37 280 eP 09 16.90 -0.7
i 09 24.50
e 09 42.70
HVD 33.78 98 iPc 10 01.00 13.5X
1.2s 193.75nm
FRS 33.85 96 iPc 09 45.00 -2.9
1.1s 297.47nm 6.1mb
PPD 34.41 278 eP 09 52.30 -0.5
e 09 58.60
BLF 34.75 95 iPc 09 55.30 -0.6
0.9s 123.08nm 5.8mb
BAO 34.91 291 eP 09 55.00 -2.3
PRY 36.49 92 iPd 10 08.90 -1.7
1.2s 170.00nm 5.7mb
SLR 37.57 91 iPd 10 17.50 -2.3
1.0s 180.00nm 5.8mb
SNA 38.38 174 iPd 10 22.90 -2.9
1.1s 210.13nm 5.8mb
LIC 39.56 14 P 10 33.90 -2.3
KIC 39.75 15 P 10 35.40 -2.4
0.9s 100.00nm 5.5mb
TIC 39.97 14 P 10 37.00 -2.6
BUL 40.10 83 iPd 10 40.00 -0.9
i 10 46.90
KMZ 41.20 72 iPd 10 48.00 -1.9
KRI 42.51 79 iPc 11 07.00 6.4X
i 11 12.10
MZZ 44.95 72 iPc 11 20.00 -0.5
i 11 27.00
i 13 01.00
PTZ 45.25 77 iPd 11 22.10 -0.7
i 11 29.00
i 13 04.50
SLA 45.29 266 ePc 11 24.00 0.9
PCH 46.64 253 eP 11 34.50 0.8
SAN 46.81 253 eP 11 35.50 0.6
PEL 46.91 253 iPc 11 36.50 0.8
LNV 47.28 252 eP 11 37.00 -1.5
BNG 48.19 46 iPd 11 44.50 -1.4
0.5s 30.00nm 5.6mb
CCH 48.95 275 P 11 53.20 1.1
CNCB 50.77 275 P 12 05.50 -0.9
LPB 51.00 275 P 12 09.00 1.1
ZOBO 51.15 275 P 12 07.20 -2.0
ARE 53.89 273 eP 12 29.00 -0.4
MAW 55.47 153 iPc 12 40.80 0.9
NAI 57.15 68 iPc 12 55.00 2.1
SPA 57.61 180 ePd 12 57.00 1.4
1.7s 187.50nm 5.8mb
i 13 10.50
HUA 59.30 275 eP 13 09.30 1.1
NNA 60.60 274 eP 13 20.50 3.8X
1.0s 40.00nm 5.5mb
TIO 63.49 7 iPg 13 35.50 -0.2
i 13 39.60
AAE 65.27 60 eP 13 48.50 0.5
AVE 65.82 6 eP 13 44.00 -6.7X
IFR 66.28 8 eP 13 54.50 0.6
TAF 67.94 10 iP 14 03.00 -1.2
i 14 06.00
NKM 68.16 8 iPc 14 05.00 -0.4
i 14 06.50
BMG 68.39 294 eP 14 18.00 10.5X
MAL 69.54 8 eP 14 18.00 4.1X
ATEJ 69.77 9 eP 14 14.50 -1.1
SBA 69.84 180 Pd 14 17.90 2.6
APHE 69.85 9 eP 14 16.20 0.2
ARO 69.93 61 ePd 14 17.46 0.6
ALOJ 69.95 9 eP 14 16.20 -0.5
ACHM 69.99 9 eP 14 16.50 -0.3
AAPN 70.15 9 eP 14 16.40 -1.4
ASMO 70.25 9 eP 14 18.50 0.1
LIS 71.07 4 iPc 14 25.90 2.7
EBR 74.28 12 eP 14 43.00 1.0
CVT 74.29 22 eP 14 43.50 1.3
LVI 74.43 22 P 14 46.38 3.4X
LVI 74.43 22 P 14 39.60 -3.4X
MCT 74.52 23 P 14 47.36 3.6X
0.9s 46.10nm 5.5mb
UPA 74.59 291 e(P) 14 44.90 0.5
Z 20s 7.98um 6.0Msz
CGL 74.82 19 (P) 14 45.00 -0.4
SOI 75.73 24 P 14 47.20 -3.3X
SOI 75.73 24 P 14 50.70 0.2
1.5s 152.30nm 5.9mb
GMB 75.75 24 P 14 50.90 0.1
0.1s 4.40nm 5.5mb
LHE 76.14 10 P 14 53.82 1.0
ISSF 76.23 10 P 14 54.90 1.5
BOH 76.27 10 P 14 54.71 1.1
ATE 76.30 10 P 14 54.35 0.7
ESCF 76.31 10 P 14 54.73 1.0
ELYF 76.34 10 P 14 53.76 -0.1
MADF 76.34 10 P 14 53.90 0.0
EPF 76.40 11 eP 14 53.20 -1.1
1.3s 97.40nm 5.7mb
OGE 76.41 10 P 14 55.44 1.2
GRI 76.52 24 P 14 55.04 0.0
1.3s 145.20nm 5.9mb
NPS 77.14 33 eP 14 58.50 0.0
MBH 77.54 42 ePd 15 02.00 1.3
CVF 77.72 17 eP 14 59.90 -1.6
1.2s 49.90nm 5.5mb
SGO 77.72 23 P 15 01.20 -0.3
1.3s 134.80nm 5.9mb
LMR 77.88 15 eP 15 01.00 -1.4
1.4s 69.70nm 5.6mb
LRG 77.96 15 eP 15 01.70 -1.1
1.4s 104.50nm 5.7mb
RMP 78.05 20 P 15 04.80 1.4
FRF 78.13 15 eP 15 02.60 -1.1
1.4s 90.60nm 5.7mb
LPO 78.15 11 eP 15 02.70 -1.1
1.4s 87.10nm 5.6mb
LFF 78.33 11 eP 15 03.70 -1.1
1.3s 147.20nm 5.9mb
AZI 78.43 21 P 15 02.70 -2.7
AZI 78.43 21 P 15 05.96 0.5
0.4s 10.10nm 5.2mb
DUI 78.45 22 P 15 06.88 1.2
1.3s 72.10nm 5.6mb
CAF 78.53 12 eP 15 04.60 -1.4
1.3s 57.70nm 5.5mb
MNS 78.58 20 P 15 05.17 -1.1
1.5s 432.50nm 6.3mb
SBF 78.60 16 eP 15 05.00 -1.4
1.4s 78.40nm 5.6mb
IMI 78.75 16 P 15 12.29 5.1X
RJF 78.81 11 eP 15 06.20 -1.3
1.3s 96.70nm 5.7mb
STV 78.93 16 P 15 09.52 1.3
ENR 78.94 16 P 15 09.73 1.4
LBL 79.04 12 P 15 09.37 0.7
ROB 79.10 16 P 15 11.37 2.2
PZZ 79.13 15 P 15 09.62 0.2
DSI 79.17 41 eP 15 11.00 1.3
LSK 79.21 26 iPd 15 10.90 1.0
PII 79.22 18 P 15 07.50 -2.2
BERA 79.45 26 eP 15 12.40 1.4
RRL 79.45 15 P 15 11.27 0.0
PCP 79.50 16 P 15 13.62 2.3
PYM 79.50 12 P 15 12.37 1.1
NEO 79.51 29 eP 15 10.00 -1.4
ARV 79.68 20 P 15 12.15 -0.1
0.1s 2.30nm 5.1mb
KBN 79.70 26 eP 15 13.00 0.6
LSF 79.73 11 eP 15 11.80 -0.6
KZN 79.79 27 eP 15 12.00 -1.0
MFF 79.82 10 eP 15 12.10 -0.8
1.4s 95.80nm 5.6mb
PLDF 79.82 13 P 15 13.81 0.8
MAF 79.88 12 eP 15 12.70 -0.5
1.4s 87.10nm 5.5mb
TCF 79.88 12 eP 15 12.60 -0.7
1.3s 86.60nm 5.6mb
YER 79.90 33 eP 15 14.00 0.4
BOB 79.93 17 P 15 04.70 -8.9X
TIR 79.99 25 eP 15 14.00 0.1
LPG 79.99 15 eP 15 13.60 -0.7
1.0s 120.00nm 5.8mb
LSD 80.05 15 P 15 14.75 0.3
OHR 80.12 26 iP 15 16.50 1.8
1.5s 190.00nm 5.9mb
LACI 80.18 25 eP 15 11.80 -3.1X
BGF 80.25 12 eP 15 14.60 -0.6
1.5s 83.50nm 5.5mb
ELL 80.36 35 eP 15 17.00 0.9
SDA 80.44 25 eP 15 17.00 0.7
HVAR 80.45 22 iP 15 17.30 1.0
IZM 80.47 32 eP 15 17.00 0.4
PHP 80.49 26 eP 15 15.90 -0.6

16d 04h

SMF 80.51 13 eP 15 15.90 -0.7
AVF 80.57 12 eP 15 16.30 -0.6
PUK 80.60 25 eP 15 18.20 1.1
HRI 80.65 41 eP 15 19.00 1.2
DIX 80.69 15 ePc 15 17.00 -0.9
MMK 80.79 15 ePc 15 17.50 -0.9
VAI 80.80 16 P 15 17.70 -0.4
SSF 80.85 12 eP 15 17.80 -0.6
LBF 80.87 13 eP 15 17.50 -1.0
1.3s 104.60nm 5.7mb
MDI 80.94 17 P 15 18.63 -0.2
2.1s 307.80nm 6.0mb
BCI 80.95 25 eP 15 20.00 1.0
LPF 81.10 9 eP 15 19.20 -0.4
1.4s 142.80nm 5.8mb
SKO 81.11 26 eP 15 19.50 -0.3
i 15 25.00
LOR 81.12 12 eP 15 18.90 -0.9
1.4s 100.10nm 5.7mb
BCK 81.25 35 eP 15 21.00 0.2
RYD 81.30 53 eP+ 15 22.00 0.7
KHL 81.44 33 eP 15 22.00 0.3
GRR 81.47 9 eP 15 20.90 -0.6
0.7s 20.70nm 5.3mb
KKB 81.64 27 eP 15 23.00 0.4
MMB 81.66 28 eP 15 22.00 -0.7
LDF 81.77 9 eP 15 22.50 -0.6
1.4s 73.10nm 5.6mb
LOMF 81.78 14 P 15 24.27 1.0
RIY 81.78 20 eP 15 23.90 0.7
FLN 81.89 9 eP 15 23.10 -0.6
1.5s 167.10nm 5.9mb
OSS 81.90 17 ePc 15 23.00 -1.1
TRI 81.94 19 iPd 15 24.10 0.1
BBS 82.03 15 P 15 25.74 1.2
RZN 82.13 28 eP 15 25.00 -0.4
CEY 82.15 20 eP 15 26.50 1.3
VBY 82.18 20 eP 15 26.00 0.7
BSF 82.23 14 P 15 26.54 0.9
SAX 82.24 16 ePc 15 25.10 -0.9
ZLA 82.24 15 ePc 15 25.00 -0.7
VOY 82.27 19 eP 15 26.20 0.3
OGA 82.28 17 eP 15 27.20 1.1
HAU 82.30 14 eP 15 24.70 -1.2
1.3s 67.80nm 5.6mb
VTS 82.31 27 iPd 15 27.00 0.7
MOF 82.32 14 P 15 26.94 0.8
KDZ 82.38 29 eP 15 26.00 -0.5
VITF 82.43 13 P 15 28.02 1.5
LJU 82.46 20 eP 15 25.50 -1.3
KCT 82.47 32 eP 15 27.00 0.0
FEL 82.53 15 eP 15 26.50 -0.8
SLE 82.53 15 ePc 15 26.30 -0.8
RBL 82.56 19 P 15 23.30 -4.1X
ECH 82.67 14 P 15 27.86 0.0
ZAG 82.68 21 ePd 15 29.00 1.1
PTJ 82.75 21 eP 15 29.50 1.1
CDF 82.88 14 P 15 29.54 0.5
KBA 83.08 19 eP 15 28.00 -2.2
1.4s 46.20nm 5.5mb
e 15 32.00
i 15 33.90
YLV 83.18 32 iP 15 30.10 -0.6
BEO 83.24 24 eP 15 31.00 0.2
GWF 83.49 14 P 15 33.51 1.5
WLF 83.85 13 P 15 33.60 -0.2
e 18 45.00
DOU 83.97 12 Pc 15 35.90 1.5
e 18 47.00
RUP 84.06 14 eP 15 35.12 0.2
KMR 84.19 19 iP- 15 36.50 0.9
SNF 84.32 12 P 15 38.10 2.0
ABH 84.33 14 eP 15 36.41 0.1
TOD 84.33 15 eP 15 36.41 0.1
SOP 84.53 20 eP 15 41.20 3.9X
UCC 84.61 12 P+ 15 38.00 0.4
i 15 45.00
MEM 84.72 13 Pc 15 40.10 2.0
TNS 84.84 14 ePc 15 40.80 1.9
ENN 84.86 13 eP 15 40.50 1.7
0.9s 15.00nm 5.2mb
e 15 46.00
WET 84.86 17 eP 15 39.00 0.0
BUC 84.97 28 eP 15 40.00 0.5
VKA 84.99 20 eP 15 39.00 -0.6
3.2s 573.00nm 6.3mb X
i 15 42.20

KHC 85.03 18 Pd 15 39.70 -0.1
1.4s 65.00nm 5.7mb
ZST 85.16 20 eP 15 39.80 -0.6
Z 18s 2.60um 5.7Msz
SRO 85.18 21 eP 15 41.30 0.8
BHD 85.66 46 iPd 15 42.00 -1.2
PSZ 85.77 22 eP 15 41.20 -2.4
MLR 85.81 27 iPd 15 44.00 0.1
PRU 86.07 18 ePd 15 45.00 0.1
Z 20s 2.60um 5.6Msz
N 20s 2.40um
E 20s 0.70um
e 15 52.50
WTS 86.20 13 eP 15 48.00 2.5
1.0s 45.00nm 5.6mb
VRI 86.43 27 eP 15 46.00 -0.8
BRG 86.72 17 iP 15 50.10 2.0
i 15 54.20
i 16 06.10
e 19 07.60
CLL 86.89 17 eP 15 49.00 0.1
i 15 55.20
i 16 07.40
SPC 87.00 22 e(P) 15 50.00 0.3
MSL 87.09 43 ePd 15 51.50 1.3
e 19 12.50
KSP 87.31 19 eP 15 51.70 0.7
1.6s 62.00nm 5.6mb
e 16 09.70
e 19 15.00
KRA 87.66 21 eP 15 53.20 0.6
1.7s 175.00nm 6.1mb
e 15 56.80
SLY 87.92 45 eP 15 57.00 2.8
EKA 88.05 6 P 16 01.00 6.6X
1.5s 131.80nm 6.0mb
CBN 91.67 315 eP 16 19.00 7.3X
NB2 95.56 12 P 16 31.00 1.9
1.9s 47.40nm 5.6mb
NUR 98.06 18 eP 16 48.00 7.6X
GBA 98.59 79 P 16 48.00 4.3X
0.8s 2.50nm 4.9mb
QUE 98.98 60 eP 16 50.00 4.5X
SOD 104.29 15 ePdiff16 51.00 -17.2X
KEV 106.33 14 ePKP 21 26.00 -2.5
ALQ 109.40 300 (PKP) 21 52.50 16.8X
1.6s 12.50nm
CHG 119.13 85 ePKP 21 54.90 0.5
WMQ 119.74 55 ePKP 21 59.00 4.0X
E 16s 1.00um
WRA 119.76 146 PKPd 21 55.10 -0.5
1.0s 2.70nm
WB5 119.83 146 ePKP 21 56.60 0.9
e 23 20.00
EDM 120.55 316 ePKP 22 02.50 6.3X
PNT 123.47 311 ePKP 22 08.00 6.2X
MTN 124.02 138 ePKP 22 04.10 0.2
CTA 124.43 158 iPKPc 22 09.00 4.4X
GTA 127.26 63 ePKP 22 10.00 0.3
Z 20s 1.80um 5.7Msz
E 16s 1.10um
SKS 29 25.50
INK 130.60 335 ePKP 22 13.00 -1.9
XAN 133.01 72 PKP 22 20.50 -0.1
BTO 135.18 63 ePKP 22 26.00 1.4
TIY 136.58 68 ePKP 22 27.50 0.1
N 15s 0.80um
PP 25 10.50
SKS 29 32.00
SKKS 31 17.50
FBA 137.10 333 ePKP 22 24.90 -2.5
0.9s 1.30nm
PMS 139.39 329 ePKP 22 31.30 -0.5
TIA 140.04 71 ePKP 22 33.80 0.1
SNY 145.45 62 iPKP 22 42.00 -0.8
CN2 146.70 59 iPKPd 22 45.00 0.2
Z 20s 3.10um 6.1Msz
N 20s 1.30um
PP 26 10.00
MDJ 149.53 56 ePKP 22 53.00 3.7X
GUA 153.15 130 ePKP 23 10.70 15.2X
GUMO 153.15 130 ePKP 23 10.00 14.6X
1.1s 70.67nm
PJG 153.15 130 ePKP 23 10.00 14.6X
MAT 157.01 72 (PKP) 23 03.00 2.9X
1.3s 25.00nm
S.D. = 1.2 on 211 of 242 obs.

SEP 16, 1989 04h 17m 58.23± 0.61s
35.199 N ± 5.9km 3.894 W ± 5.8km
DEPTH = 10.0km (geophysicist)
STRAIT OF GIBRALTAR (385)
mbLg 3.4 (MDD).

EMEL 0.77 82 iP 18 13.80 0.5
eS 18 23.50
NKM 1.26 282 ePg 18 22.00 0.3
iSg 18 37.50
TAF 1.27 107 ePg 18 22.00 0.1
iSg 18 37.50
TAF 1.27 107 iPn 18 24.00 2.1X
iSn 18 44.00
MAL 1.58 345 iPnc 18 26.00 -0.3
EJIF 1.79 315 ePn 18 29.40 0.0
eSn 18 50.80
IFR 1.96 212 iPn 18 33.00 0.9
iSn 18 57.00
iSg 19 05.00
EPRU 2.07 329 eP 18 35.60 2.1
eS 19 01.20
ENIJ 2.23 37 eP 18 34.00 -1.8
eS 19 01.50
RBA 2.71 245 iPn 18 40.00 -2.5
iSn 19 13.50
EHOR 2.83 338 ePn 18 45.00 0.7
eSn 19 17.60
EVAL 3.31 317 ePn 18 50.90 -0.2
eSn 19 28.90
AVE 3.48 238 ePn 18 57.00 3.5X
i 19 02.00
iSn 19 31.00
iSg 19 38.00
EVIA 3.61 18 ePn 18 56.90 1.5
eSn 19 38.20
TIO 5.11 214 iPn 19 17.50 0.7
iSn 20 12.50
i 20 18.00
EPLA 5.16 341 eP 19 16.80 -0.6
eS 20 14.50
GUD 5.44 358 eP 19 20.70 -0.7
eS 20 19.60
ETOR 5.80 14 ePn 19 25.70 -0.7
S.D. = 1.2 on 16 of 18 obs.

? SEP 16, 1989 04h 52m 03.57± 6.02s
20.005 S ±20.3km 176.137 W ±18.8km
DEPTH = 253.7 ± 55.2 km
4.7mb (4 obs.)
FIJI ISLANDS REGION (181)

DZM 16.39 260 iPc 55 43.10 1.8
HBZ 18.19 194 eP 55 59.40 -0.6
KRP 19.27 200 P 56 11.80 0.8
PGZ 21.55 196 eP 56 32.40 -1.0
MRW 22.55 198 P 56 42.00 -1.2
S 00 41.00
MSZ 27.94 205 P 57 34.00 1.5
BRS 29.34 250 eP 57 43.00 -2.2
e(S) 02 10.00
CTA 35.28 263 iPd 58 37.30 1.0
0.7s 32.19nm 5.0mb
CMS 35.95 244 iPc 58 42.90 1.1
ASPA 46.34 256 iPd 00 06.30 -0.1
0.7s 30.00nm 4.7mb
eS 06 36.60
WB5 46.39 261 eP 00 05.90 -0.9
WRA 46.40 261 Pc 00 06.80 -0.2
0.5s 14.40nm 4.6mb
MTN 50.91 269 eP 00 40.50 -1.0
WARB 52.65 252 eP 00 53.80 -0.4
SPA 70.12 180 ePd 02 51.10 0.9
0.9s 13.18nm 4.7mb
KVN 79.97 42 eP 03 45.80 -0.4
epP 04 38.50 218kmX
KHC 149.91 347 ePKP 11 26.00 6.3X
BNG 158.93 225 ePKPd 11 33.90 1.1
0.6s 8.00nm
ic 12 11.70
S.D. = 1.2 on 17 of 18 obs.

? SEP 16, 1989 05h 31m 30.85± 5.19s
20.476 N ±11.3km 146.549 E ±132.km
DEPTH = 147.8 ± 28.6 km
4.3mb (3 obs.)

MARIANA ISLANDS REGION (215)

GUMO	7.04	193	eP	33	12.80	0.2
PJG	7.04	193	eP	33	12.60	0.0
GUA	7.07	193	eP	33	12.80	-0.3
KAKJ	16.64	342	eP	35	17.20	0.5
CHJJ	16.87	338	eP	35	19.10	-0.5
			eS	38	28.70	
NIIJ	17.95	340	eP	35	32.40	0.0
WB5	41.84	197	eP	39	08.00	0.2
WRA	41.91	197	Pd	39	15.40	7.0X
	0.6s		0.80nm			3.5mb
SOD	81.97	340	eP	43	35.00	0.0
SUF	84.84	336	iP	43	49.90	0.3
	0.5s		3.30nm			4.4mb
NUR	86.73	335	eP	43	49.00	-10.0X
APO	90.66	339	eP	44	17.10	-0.5
	0.4s		2.50nm			4.7mb

S.D. = 0.4 on 10 of 12 obs.

? SEP 16, 1989 05h 34m 34.50± 8.76s
45.724 N ±14.9km 16.228 E ±64.5km
DEPTH = 15.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.6 (LJU). Felt (IV) at Zagreb.

ZAG	0.19	298	iPgd	34	39.00	-0.2
			iSg	34	41.00	
PTJ	0.26	313	iPgd	34	40.00	-0.4
			iSg	34	42.50	
VBY	0.72	252	ePg	34	47.60	-0.5
			iSg	34	54.60	
LJU	1.23	286	ePg	34	57.50	0.7
			eSg	35	13.50	
RIY	1.35	254	iPg	34	59.00	0.3
			iSg	35	15.90	
VOY	1.66	282	ePn	35	04.50	1.3X
			eSn	35	25.30	
TRI	1.73	270	eP	35	27.10	23.0X

S.D. = 0.7 on 5 of 7 obs.

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* SEP 16, 1989 05h 49m 25.77± 0.59s
12.708 S ±15.4km 66.386 E ±11.3km
DEPTH = 10.0km (geophysicist)
5.0mb (4 obs.)
MID-INDIAN RISE (429)

PTZ	34.10	263	eP	56	12.00	-1.1
MZZ	36.71	268	eP	56	36.00	0.6
BUL	36.91	253	iPc	56	37.10	0.1
LSZ	37.12	261	iPc	56	49.00	10.2X
SLR	38.10	244	iPc	56	45.60	-1.3
	1.0s		35.00nm			5.1mb
KMZ	39.48	264	iP	57	00.50	1.9
CD2	56.30	39	P	59	08.20	-1.0
WMQ	59.52	18	P	59	31.30	-0.4
GTA	60.48	29	eP	59	38.00	-0.4
TIY	66.17	39	eP	00	19.00	3.1X
E	16s		0.70um			
BTO	66.66	35	eP	00	19.00	0.0
BJI	69.90	39	eP	00	38.00	-1.0
KIC	73.16	281	P	00	58.20	-0.9
LIC	73.40	280	P	00	59.80	-0.7
TIC	73.50	281	P	01	00.10	-1.0
SPC	73.82	330	e(P)	01	03.00	0.5
CTA	76.35	108	iPc	01	17.90	0.5
	1.5s		36.11nm			5.2mb
KHC	77.14	328	P	01	20.30	-0.9
SPA	77.37	180	e(P)	01	21.90	-0.5
	1.2s		14.08nm			4.9mb
BRG	78.01	329	eP	01	27.40	1.5
	1.5s		13.00nm			4.8mb
CLL	78.74	329	e(P)	01	30.00	0.1
ZOBO	126.60	239	PKP	08	36.00	3.3X
LRM	146.98	359	ePKP	09	10.40	1.7
RSSD	147.63	347	ePKP	09	12.00	2.3

S.D. = 1.2 on 21 of 24 obs.

SEP 16, 1989 05h 50m 49.93± 0.61s
37.275 N ± 6.4km 21.155 E ± 4.7km
DEPTH = 10.0km (geophysicist)
4.2mb (2 obs.)
SOUTHERN GREECE (368)
MD 4.0 (ATH).

ITM	0.62	99	ePg	51	00.20	-2.3
VLS	1.01	334	ePg	51	07.50	-1.5
AGG	1.98	28	ePn	51	34.10	10.3X
ATH	2.15	70	ePb	51	28.00	1.7
NEO	2.60	38	ePn	51	33.60	0.8
KEK	2.66	337	ePg	51	40.70	7.2X
SRN	2.75	341	ePn	51	43.90	9.0X
LSK	2.90	352	ePn	51	37.30	0.2
LIT	3.01	20	ePn	51	39.00	0.5
			eSn	52	29.30	
KZN	3.07	9	ePn	51	40.50	1.1
VAM	3.08	126	ePn	51	40.00	0.4
KBN	3.35	356	ePn	51	39.00	-4.4X
APE	3.50	92	ePn	51	44.50	-1.0
BERA	3.55	345	ePn	51	49.90	3.8X
PLG	3.57	29	ePn	51	45.50	-1.1
THE	3.64	22	ePn	51	47.20	-0.2
GRG	3.80	14	ePn	51	49.70	-0.1
OHR	3.84	356	ePn	51	50.80	0.4
LCI	3.95	322	P	51	53.00	1.2
NPS	4.12	118	ePb	52	00.00	5.7X
SOI	4.12	283	P	51	55.00	0.7
TIR	4.19	347	ePn	51	54.00	-1.2
TDS	4.47	304	P	51	58.50	-0.7
LACI	4.50	346	ePn	52	01.00	1.4
SKO	4.70	3	ePn	52	05.50	3.0X
			i	52	19.50	
MMB	4.75	24	iPc	52	02.00	-1.3
SDA	4.90	345	ePn	52	07.40	2.0
MEU	4.97	270	P	52	05.10	-1.4
			eSn	53	05.00	
MNO	5.17	279	P	52	09.00	-0.4
RZN	5.20	31	iPd	52	09.00	-0.7
MGR	5.23	305	P	52	10.00	0.0
VTS	5.54	16	eP	52	03.00	-11.6X
SGO	5.62	308	P	52	16.00	0.5
GIB	5.70	279	P	52	15.00	-1.8
VOY	10.29	330	e(P)	53	23.30	2.6X
KHC	13.07	337	P	54	03.70	5.5X
CLL	15.18	340	e(P)	54	37.00	11.1X
NB2	24.60	348	P	56	15.80	4.6X
	1.1s		3.10nm			3.9mb
BNG	32.77	185	ePd	57	28.10	2.8
	0.6s		5.00nm			4.6mb
			ic	58	30.50	

S.D. = 1.3 on 27 of 39 obs.

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* SEP 16, 1989 05h 58m 54.63± 0.76s
40.275 N ±11.8km 51.791 E ±14.2km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
CASPIAN SEA (338)

TEH	4.54	184	eP	00	04.00	1.0
MHI	7.24	121	ePn	00	40.00	-0.9
			eSn	01	57.00	
ZST	25.91	299	eP	04	39.20	14.0X
NUR	26.30	329	eP	04	41.00	12.3X
SUF	27.21	334	eP	04	39.00	2.0
SOD	30.49	341	eP	05	35.00	28.7X
HFS	30.82	323	eP	05	08.50	-0.8
	0.8s		4.50nm			4.3mb
NB2	32.29	324	P	05	21.70	-0.6
	0.7s		1.70nm			4.1mb
GBA	34.80	132	P	05	45.00	0.7
BNG	46.57	229	ePc	07	20.90	-0.3
	0.5s		4.00nm			4.6mb
			ic	07	35.50	
LIC	60.95	252	(P)	09	05.80	-1.1

S.D. = 1.3 on 8 of 11 obs.

% SEP 16, 1989 06h 00m 50.90± 0.67s
43.113 N ± 7.5km 0.676 W ± 4.8km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.1 (STR).

ATE	0.03	216	Pg	00	53.08	0.1
			Sg	00	54.88	
ESCF	0.08	115	Pg	00	53.44	0.0
			Sg	00	55.33	
MADF	0.11	287	Pg	00	53.82	0.0
			Sg	00	56.44	
ISSF	0.12	226	Pg	00	54.29	0.3
			Sg	00	56.85	
OGE	0.16	69	Pg	00	54.48	-0.1
LHE	0.20	169	Pg	00	55.11	-0.3
BOH	0.25	268	Pg	00	55.85	-0.3
			Sg	01	00.33	

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

& SEP 16, 1989 06h 48m 33.84s
62.464 N 148.092 W
DEPTH = 15.6km
CENTRAL ALASKA (1)
<AGS-P>.

GHO	0.80	210	iP	48	48.11	-0.8
			eS	48	59.03	
HUR	0.88	307	eP	48	49.26	-1.0
PME	0.95	208	eP	48	50.22	-1.2
			eS	49	01.69	
PLRM	1.00	210	iP	48	50.77	-1.6
			eS	49	04.68	
RND	1.01	340	eP	48	51.46	-1.1
KNK	1.07	189	iP	48	52.27	-1.3
			eS	49	05.97	
PWA	1.17	227	iP	48	53.98	-1.3
SDG	1.18	86	eP	48	53.79	-1.7
PAX	1.31	66	eP	48	55.76	-1.8
MCK	1.33	344	eP	48	55.91	-1.9
PMS	1.41	210	eP	48	57.39	-1.5
			eS	49	16.75	
KLU	1.41	133	eP	48	56.77	-2.2
			eS	49	13.44	
VLZ	1.58	147	eP	48	58.42	-2.8
			S	49	20.05	
VZW	1.59	152	eP	48	59.16	-2.3
SUA	1.61	232	eP	49	00.42	-1.3
GLI	1.66	163	eP	49	00.54	-1.9
DDM	1.67	36	eP	49	01.96	-0.7
SKT	1.68	255	eP	49	01.11	-1.7
KTH	1.69	312	eP	49	01.02	-2.0
FID	1.89	155	eP	49	03.79	-1.9
WRH	2.02	0	eP	49	05.17	-2.4
HDA	2.02	14	eP	49	06.05	-1.6
NEA	2.17	349	eP	49	06.80	-3.0
CGLM	2.19	240	eP	49	08.84	-1.3
DOT	2.19	55	eP	49	07.83	-2.3
CCB	2.20	3	eP	49	07.95	-2.2
HIN	2.21	159	eP	49	08.30	-2.2
			eS	49	39.64	
SLKM	2.21	208	eP	49	08.65	-1.8
CVA	2.23	149	eP	49	08.61	-2.0
			eS	49	40.27	
GLB	2.27	115	eP	49	08.28	-3.0
RDS	2.37	359	eP	49	10.10	-2.6
SGAM	2.41	144	eP	49	10.01	-3.2
			eS	49	45.50	
SEW	2.46	196	eP	49	13.09	-0.8
RAGM	2.65	140	eP	49	17.69	0.9
			eS	49	53.52	
TGL	3.04	122	eP	49	19.51	-2.8
BALM	3.09	115	eP	49	19.48	-3.4
KAIM	3.11	143	eP	49	19.70	-3.4
WAX	3.23	126	eP	49	22.34	-2.6
			eS	50	09.15	
SNH	3.42	130	eP	49	29.58	2.0

39 obs. associated

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* SEP 16, 1989 07h 18m 13.07± 1.36s
36.329 S ±11.4km 71.091 W ±10.6km
DEPTH = 92.8 ± 11.5 km
CENTRAL CHILE (136)

LNV	2.38	354	iPc	18	50.70	-0.3
			iS	19	17.10	
CHCH	2.42	9	iP	18	52.20	0.6
			iS	19	22.50	
TACH	2.67	3	iPc	18	54.70	-0.3
			iS	19	24.00	
PCH	2.74	10	iPd	18	56.90	0.8
			iS	19	28.50	
LCCH	2.87	352	iPc	18	56.00	-1.7
			iS	19	27.00	
SAN	2.89	7	iPd	18	58.20	0.2
			iS	19	30.90	
FCH	3.07	13	iPc	19	01.50	0.8
			iS	19	38.00	
PEL	3.20	6	iPc	19	02.00	-0.2
			iS	19	38.10	
ROCH	3.35	1	iPd	19	03.70	-0.8
			iS	19	30.60	
ZON	5.17	23	eP	19	29.00	-0.6
MRA	5.92	50	eP	19	42.20	2.3

16d 07h

TCA	7.35	49	eP	20 00.00	0.4	
ITB7	18.31	57	e(P)	22 20.70	-1.7	
ITB1	18.48	56	e(P)	22 23.60	-0.8	
ITB	18.50	56	e(P)	22 22.80	-1.9	
CCH	19.38	14	P	22 35.10	0.6	
CNCB	19.64	9	P	22 38.40	0.9	
ARE	19.79	359	eP	22 39.00	0.2	
LPB	19.90	8	P	22 41.00	1.0	
ZOBO	20.15	8	P	22 32.70	-10.2X	
PPD	22.33	56	eP	23 03.40	-0.5	
			e	23 04.70		
VAO	24.73	64	eP	23 27.70	0.4	
SPA	53.86	180	e(P)	27 28.30	-0.2	
	1.0s		10.50nm		4.8mb X	
MAW	70.73	163	eP	29 21.00	0.6	
KIC	75.10	70	(P)	29 47.20	0.3	
	S.D. = 1.0		on 24 of 25 obs.			

SEP 16, 1989 07h 27m 11.32± 0.30s
2.121 N ± 4.9km 125.301 E ± 6.5km
DEPTH = 33.0km (normal)
5.1mb (11 obs.) 5.0Msz (1 obs.)
TALAUD ISLANDS (263)

DAV	4.94	3	eP	28 24.00	-1.2	
			eS	29 25.20		
AAI	6.45	153	ePd	28 47.90	1 4	
			eS	30 00.00		
TSM	7.51	286	eP	29 01.00	-0.4	
MKS	9.33	219	iPc	29 34.50	7.9X	
KKM	9.86	294	eP	29 22.50	-11.6X	
QCP	13.12	342	eP	30 11.00	-7.0X	
BAG	14.94	342	eP	30 45.40	3.3X	
MTN	15.96	159	iPd	30 53.20	-1.9	
	1.0s		215.00nm		5.2mb	
			eS	34 17.10		
JAY	16.07	107	ePd	30 56.50	-0.1	
			e	32 19.50		
KNA	18.08	169	eP	31 21.00	-0.8	
GUMO	22.45	58	eP	32 09.80	0.7	
	0.8s		84.92nm		5.3mb	
PJG	22.45	58	eP	32 10.30	1.2	
GUA	22.47	59	eP	32 10.20	1.0	
	1.1s		121.52nm		5.3mb	
QIZ	22.62	319	eP	32 10.00	-0.7	
	N 13s		0.50um			
			sS	36 29.00		
WB5	23.61	158	eP	32 19.90	-0.4	
			eS	36 31.40		
WRA	23.65	158	Pd	32 20.70	-0.1	
	1.4s		210.80nm		5.5mb	
GZH	23.85	332	eP	32 23.30	0.7	
	E 10s		1.70um			
			eS	36 39.00		
PMG	24.60	118	eP	32 30.00	0.0	
SNG	25.10	282	eP	32 36.50	1.7	
NANU	26.32	201	iPc	32 45.70	-0.4	
	0.7s		17.00nm		4.8mb	
QIS	26.54	149	iPc	32 47.10	-1.1	
	0.6s		17.00nm		4.8mb	
ASPA	26.96	162	iPc	32 51.30	-0.7	
	1.1s		127.00nm		5.5mb	
			eS	37 27.80		
			i	37 38.40		
LOE	27.69	305	eP	33 01.00	2.3	
WARB	28.17	177	eP	33 04.80	1.9	
MEKA	29.30	192	eP	33 12.00	-1.1	
GYA	30.10	325	P	33 20.80	0.4	
	Z 18s		3.10um		5.0Msz	
CTA	30.16	138	iPd	33 20.60	-0.3	
	1.4s		134.88nm		5.6mb	
CHG	30.69	305	eP	33 26.50	1.0	
FORR	32.90	176	eP	33 44.00	-0.6	
CD2	35.14	327	P	34 04.40	0.2	
STK	37.18	157	eP	34 21.00	-0.3	
BJI	38.64	349	eP	34 28.50	-4.9X	
ADE	38.98	162	iPd	34 37.10	0.7	
	0.8s		20.90nm		5.0mb	
LZH	39.20	332	P	34 37.50	-0.9	
	1.5s		0.05nm		2.1mb X	
			pP	34 40.00	8kmX	
			ePP	36 05.00		
BRS	39.51	140	iPc	34 40.20	-0.7	
			i	34 44.00		
			e(PP)	36 13.00		
			i	41 00.50		
SNY	39.56	358	eP	34 38.30	-2.7	
COO	41.23	144	eP	34 55.00	0.0	
BWA	42.35	151	iPc	35 06.10	2.0	
LSA	42.47	314	P	35 08.90	3.2X	
CAN	43.35	151	eP	35 13.20	0.9	
TOO	43.70	157	eP	35 16.00	0.9	
GTA	43.77	331	eP	35 15.00	-0.8	
	Z 16s		0.60um		4.6MszX	
	E 15s		0.50um			
DZM	46.82	123	iPc	35 39.20	-1.0	
HYB	48.34	291	eP	35 52.00	-0.2	
WMQ	53.24	327	P	36 27.00	-2.1	
			eS	43 50.00		
MSZ	60.07	146	P	37 17.00	-0.5	
SVW	82.87	29	eP	39 35.00	1.2	
IMA	84.42	24	eP	39 42.30	0.6	
	0.8s		6.80nm		4.9mb	
SPA	92.11	180	e(P)	40 22.30	3.8X	
	1.0s		4.50nm		4.9mb	
LNV	144.69	156	ePKP	46 50.00	3.2X	
PCH	145.34	156	ePKP	46 53.00	4.9X	
SAN	145.43	156	ePKP	46 52.50	4.3X	
PEL	145.69	156	iPKPd	46 54.50	5.8X	
CNCB	160.41	139	PKP	47 12.00	1.8X	
LPB	160.53	138	ePKP	47 11.00	0.9X	
ZOBO	160.70	138	PKP	47 12.60	2.1X	
	1.0s		6.50nm			
	S.D. = 1.1		on 42 of 56 obs.			

SEP 16, 1989 07h 59m 02.64± 0.49s
44.382 N ± 4.1km 7.306 E ± 6.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

DOI	0.13	340	Pg	59 06.40	0.6	
			eSg	59 08.60		
STV	0.14	174	P	59 06.24	0.2	
			S	59 08.42		
ENR	0.18	152	P	59 06.87	0.2	
			S	59 09.41		
PZZ	0.19	310	P	59 07.12	0.2	
			S	59 09.97		
AUTN	0.40	167	Pg	59 10.59	-0.2	
			Sg	59 15.99		
ROB	0.41	102	P	59 11.24	0.1	
			S	59 17.28		
AURF	0.50	178	Pg	59 12.69	0.0	
			Sg	59 19.50		
MVIF	0.50	193	Pg	59 12.93	0.1	
			Sg	59 19.63		
IMI	0.63	138	P	59 14.98	-0.4	
			S	59 23.44		
RRL	0.65	326	P	59 15.13	-0.7	
			S	59 23.95		
	S.D. = 0.4		on 10 of 10 obs.			

SEP 16, 1989 08h 03m 05.14± 0.55s
35.564 N ± 5.0km 140.318 E ± 6.6km
DEPTH = 76.9 ± 4.9 km
4.8mb (4 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (I JMA) in the Utsunomiya-Tokyo-Yokohama area and on Oshima.

TOK	0.47	285	iPd	03 18.70	0.2	
			iS	03 28.50		
YOK	0.56	257	iPd	03 19.50	0.2	
			iS	03 29.10		
KAKJ	0.65	350	iPd	03 20.00	-0.2	
			S	03 29.90		
UTS	1.04	340	eP	03 25.00	0.2	
			S	03 38.00		
OSH	1.11	224	P	03 25.00	-0.6	
			S	03 38.60		
AJI	1.13	243	iPd	03 25.20	-0.6	
			iS	03 38.20		
CHJJ	1.18	295	iPd	03 26.20	-0.3	
			S	03 40.60		
FUN	1.27	267	P	03 00.00	-27.8X	
IIDJ	1.96	268	iPd	03 37.10	0.0	
			S	03 59.90		
MAT	1.97	300	iPd	03 36.90	-0.2	
			iS	04 00.20		
NIIJ	1.98	328	iPd	03 37.20	0.0	
			S	04 01.60		
YAMJ	2.61	355	P	03 46.70	0.7	
TSRJ	3.53	271	P	03 59.20	0.4	
OFUJ	3.67	17	P	04 01.00	0.3	
			eS	04 41.50		
WKYJ	4.11	252	P	04 07.70	0.8	
			eS	04 54.70		
AOMJ	4.99	0	eP	04 19.10	0.0	
TKSJ	5.40	255	P	04 24.30	-0.5	
YONJ	5.61	268	P	04 28.00	0.1	
SHK	6.35	263	eP	04 39.00	0.9	
HOOJ	7.19	18	P	04 48.30	-1.3	
			S	06 05.80		
CN2	14.08	310	P	06 25.80	3.6X	
BJI	19.57	290	eP	07 34.50	5.1X	
GYA	30.12	262	P	09 08.20	-1.6	
MTN	48.92	192	eP	11 45.50	0.2	
	0.7s		21.00nm		5.3mb	
WB5	55.43	187	eP	12 33.90	0.1	
WRA	55.49	187	Pc	12 34.10	-0.2	
	0.8s		3.90nm		4.5mb	
GBA	60.22	266	Pc	13 06.90	-0.7	
	0.4s		5.60nm		5.0mb	
WARB	62.76	194	eP	13 25.70	1.3	
NB2	75.19	337	P	14 41.40	0.7	
	0.7s		1.10nm		3.9mb	
LRM	75.82	44	eP	14 48.00	3.2X	
	S.D. = 0.7		on 26 of 30 obs.			

? SEP 16, 1989 08h 33m 38.82± 4.22s
20.469 S ±23.5km 178.456 W ±23.3km
DEPTH = 536.1 ± 42.6 km
4.9mb (6 obs.)
FIJI ISLANDS REGION (181)

DZM	14.17	261	iPc	36 41.00	0.9	
KRP	18.16	195	P	37 18.00	-1.0	
BRS	27.14	250	iPc	38 41.50	0.7	
COO	28.51	243	iPc	38 54.00	1.3	
CAN	32.17	236	eP	39 24.80	0.9	
BWA	32.36	238	eP	39 24.10	-1.4	
CTA	33.07	264	iPd	39 32.00	0.5	
	0.8s		49.25nm		5.2mb	
CMS	33.79	244	iPc	39 38.50	1.0	
	0.9s		25.00nm		4.8mb	
PMG	34.92	283	eP	39 47.00	-0.1	
TOO	35.57	234	iPc	39 53.20	0.9	
ASPA	44.11	257	iPd	41 00.00	-1.2	
	1.0s		53.00nm		5.0mb	
			eS	47 02.50		
WB5	44.16	262	eP	41 00.50	-1.2	
WRA	44.18	262	Pd	41 00.70	-1.1	
	0.6s		16.80nm		4.7mb	
MTN	48.74	271	iPc	41 35.40	-1.2	
	0.7s		52.00nm		5.1mb	
WARB	50.43	252	iPc	41 48.50	-0.5	
	0.6s		19.00nm		4.7mb	
SNG	84.06	280	eP	45 14.80	0.4	
HRI	147.09	300	ePKP	52 20.00	-0.1	
KSP	147.53	343	ePKP	52 19.00	-1.2	
CLL	147.93	346	iPKPc	52 19.60	-1.1	
BRG	148.12	345	i(PKP)	52 20.00	-1.1	
	1.0s		12.00nm			
PRNI	148.32	295	ePKP	52 23.00	0.9	
MBH	148.52	294	iPKP	52 24.00	1.7	
PRU	148.79	344	ePKP	52 22.00	-0.1	
MEM	149.72	354	PKPc	52 23.90	0.5	
KHC	149.82	344	iPKPd	52 24.50	0.7	
DOU	150.34	356	PKP	52 25.40	1.0	
	S.D. = 1.0		on 26 of 26 obs.			

* SEP 16, 1989 09h 22m 14.46± 0.71s
22.578 S ±18.6km 174.190 E ±11.9km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)
LOYALTY ISLANDS REGION (189)

DZM	7.19	273	iPc	23 59.00	-1.1	
			iS	25 18.90		
BRS	19.99	252	iPd	26 48.50	1.4	
			i	26 52.00		
			i	26 56.50		
COO	21.45	243	eP	27 06.00	3.9X	
MSZ	22.63	192	P	27 23.00	9.3X	
RMQ	23.45	255	eP	27 23.50	1.6	
CNB	25.08	234	eP	27 39.00	1.4	
CAN	25.36	234	eP	27 42.20	2.0	
BWA	25.46	237	eP	27 41.00	-0.2	
CTA	26.12	270	iP	27 49.00	1.6	

ASPA 36.98 260 iPc 29 21.80 -1.0
1.0s 12 00nm 4.7mb
WB5 37.14 267 eP 29 22.20 -2.0
WRA 37.16 266 Pd 29 22.30 -2.0
0.5s 1.40nm 4.1mb
FORR 41.75 249 iPd 30 02.10 -0.2
0.3s 22.00nm 5.4mb
WARB 43.27 255 eP 30 14.00 -0.8
GUMO 46.02 319 eP 30 38.00 1.2
MBL 50.23 261 iPd 31 08.80 -0.9
0.5s 5.00nm 4.8mb
SPA 67.56 180 e(P) 33 08.00 -1.7
FRI 85.92 47 e(P) 34 54.30 1.8
CMB 86.03 46 eP 34 53.20 0.1
e 35 02.80
WDC 86.03 43 eP 34 52.10 -0.8
e 35 03.10
SBB 86.03 50 eP 35 04.00 10.8X
ISA 86.08 49 eP 35 03.00 9.6X
ORV 86.12 44 e(P) 34 54.20 0.8
e 35 03.00
MIN 86.49 44 eP 35 04.60 9.2X
CLC 86.77 49 eP 35 06.00 9.3X
TPC 87.01 51 eP 35 07.00 9.1X
GLA 87.38 53 eP 35 09.00 9.2X
KVN 88.08 46 eP 35 02.00 -1.2
CLL 147.81 338 e(PKP) 42 03.00 8.7X
e 42 24.00
eSg 48 55.00
BRG 147.83 336 e(PKP) 42 03.00 8.6X
KHC 149.37 335 PKP 42 10.30 13.4X
BNG 150.32 236 ePKPd 42 10.20 10.8X
0.5s 6.00nm
id 42 21.60
S.D. = 1.4 on 20 of 32 obs.

SEP 16, 1989 09h 57m 57.28± 0.29s
10.621 N ± 4.7km 140.935 E ± 6.0km
DEPTH = 33.0km (normol)
4.9mb (5 obs.) 4.1Msz (1 obs.)
WEST CAROLINE ISLANDS (209)

GUMO 4.85 52 iP 59 10.20 0.4
0.5s 142.86nm
PJG 4.85 52 iP 59 10.00 0.2
GUA 4.85 53 eP 59 10.10 0.2
0.5s 118.31nm
eS 00 02.20
PMG 20.84 163 eP 02 48.00 9.2X
MTN 25.26 203 eP 03 22.00 -0.2
0.5s 23.00nm 5.0mb
MAT 25.92 355 (P) 03 24.00 -4.3X
SSE 27.40 321 eP 03 41.50 -0.3
CTA 30.96 170 iPd 04 14.00 0.2
1.0s 10.00nm 4.6mb
WB5 30.99 192 eP 04 13.10 -1.0
WRA 31.06 192 Pc 04 13.70 -1.0
0.8s 7.20nm 4.5mb
ASPA 34.76 191 iPc 04 46.50 -0.4
0.6s 19.00nm 5.2mb
Z 22s 0.27um 3.9MszX
LR 18 14.80
CN2 35.68 341 Pc 04 53.00 -1.5
Z 20s 0.30um 4.1Msz
esP 05 09.00
eS 10 24.00
BJI 36.61 327 eP 05 02.00 -0.3
TIY 37.18 321 eP 05 07.50 0.2
WARB 39.13 201 eP 05 25.00 1.3
0.4s 18.00nm 5.2mb
BRS 39.49 163 iP 05 09.00 -17.6X
CD2 39.93 306 eP 05 31.00 0.7
BTO 40.46 323 eP 05 35.00 0.4
DZM 41.01 142 iPc 05 39.40 0.2
BWA 45.36 171 eP 06 14.90 0.6
CAN 46.32 171 eP 06 22.90 0.9
GTA 46.41 315 eP 06 22.70 -0.1
WMQ 56.48 316 eP 07 40.00 1.4
HYB 60.69 284 eP 08 08.50 0.3
PNT 88.12 40 eP 10 56.00 10.0X
SES 93.09 38 eP 11 08.00 -1.2
LRM 93.77 42 eP 11 12.90 0.3
BNG 120.73 282 ePKPc 16 48.70 0.1
0.4s 4.00nm
LPB 151.19 105 ePKP 17 48.00 3.9X
ZOBO 151.20 104 PKPc 17 50.80 6.5X
CNCB 151.26 106 ePKP 17 43.00 -1.4

i 17 51.60
CCH 152.90 107 (PKP) 17 56.00 9.6X
S.D. = 0.8 on 25 of 32 obs.

% SEP 16, 1989 11h 28m 24.61± 6.56s
10.560 N ±39.4km 60.302 W ±61.3km
DEPTH = 80.0km (geophysicist)
TRINIDAD (98)
MD 3.5 (TRN).

BOT 0.73 326 eP 28 40.82 0.1
eS 28 53.09
TBH 0.76 264 eP 28 40.82 -0.3
eS 28 52.29
TRN 1.09 275 eP 28 44.59 -0.4
eS 28 59.72
TPP 1.16 258 eP 28 46.15 0.3
eS 29 01.92
TCE 1.43 276 eP 28 49.64 0.2
eS 29 07.52
S.D. = 0.4 on 5 of 5 obs.

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* SEP 16, 1989 11h 53m 55.56± 0.61s
17.977 S ±15.4km 176.536 W ±11.1km
DEPTH = 33.0km (normol)
4.7mb (6 obs.)
FIJI ISLANDS REGION (181)

PVC 14.43 269 iPc 57 22.00 2.5
DZM 16.50 253 iPc 57 48.50 2.2
KRP 21.05 198 eP 58 38.00 -1.1
HNR 24.35 287 eP 59 10.00 -1.8
eS 03 22.00
SVO 24.58 288 P 59 21.00 7.0X
BRS 29.76 246 eP 00 06.50 5.0X
e(S) 05 12.00
CAN 35.09 234 eP 00 55.70 7.8X
CTA 35.19 260 iPc 00 47.80 -1.1
0.9s 55.46nm 5.5mb
eS 06 28.00
BWA 35.24 235 eP 00 54.00 4.8X
CMS 36.55 241 eP 01 01.00 0.8
WB5 46.35 259 eP 02 18.90 -1.8
WRA 46.37 259 Pc 02 18.50 -2.3
1.2s 12.00nm 4.7mb
ASPA 46.49 254 iPc 02 20.60 -1.2
0.8s 96.00nm 5.8mb X
GUMO 49.33 307 eP 02 44.00 0.1
PJG 49.33 307 eP 02 44.10 0.2
MTN 50.58 268 eP 02 54.30 0.8
WARB 52.94 250 eP 03 09.60 -1.7
MAT 69.04 322 (P) 05 02.00 1.8
0.9s 7.56nm 4.8mb
SPA 72.14 180 e(P) 05 21.00 2.3
1.0s 10.00nm 4.8mb
RVR 76.43 47 eP 05 46.00 2.2
SBB 76.49 46 eP 05 43.00 -1.2
ISA 76.59 45 eP 05 47.00 2.3
CMB 76.68 42 eP 05 43.80 -1.4
WDC 76.86 39 eP 05 45.10 -0.9
CLC 77.27 46 eP 05 50.00 1.5
KVN 78.73 43 eP 05 52.90 -3.7X
CN2 81.17 322 eP 06 10.00 0.7
PNT 83.80 33 eP 06 22.00 -0.8
ALQ 84.75 51 eP 06 33.50 5.4X
1.3s 5.77nm 4.6mb
pP 06 41.00 24kmX
BJI 85.09 315 eP 06 29.00 -0.4
FBA 85.50 12 eP 06 29.10 -1.9
0.8s 1.30nm 4.2mb
e 06 33.70
LRM 85.89 39 eP 06 36.80 3.1X
XAN 87.72 307 P 06 43.50 0.9
EDM 89.25 32 eP 06 48.00 -1.4
KRA 145.37 341 ePKP 13 35.20 3.6X
KSP 145.65 346 ePKP 13 32.00 -0.1
0.9s 27.00nm
i 13 36.00
e 13 49.50
CLL 145.89 349 iPKPc 13 36.20 3.8X
1.2s 20.00nm
BRG 146.13 348 ePKP 13 33.60 0.8
i 13 37.10
e 13 54.40
MLR 146.79 331 ePKP 13 39.00 4.7X
PRU 146.85 347 ePKP 13 38.00 4.0X
SRO 147.86 341 ePKP 13 39.70 4.0X

KHC 147.86 347 PKP 13 39.10 3.4X
1.4s 22.00nm
ZST 147.87 343 e(PKP) 13 40.80 5.1X
FLN 149.13 5 ePKP 13 45.60 7.9X
0.8s 9.40nm
CDF 149.48 355 ePKP 13 46.80 8.4X
0.8s 8.05nm
HAU 149.96 356 ePKP 13 48.00 9.0X
1.0s 10.00nm
LJU 150.54 344 e(PKP) 13 45.50 5.6X
VOY 150.71 345 e(PKP) 13 47.50 7.2X
LOR 150.79 359 iPKPc 13 50.00 9.7X
0.8s 6.05nm
VBY 150.84 343 e(PKP) 13 45.80 5.4X
SSF 150.99 360 iPKPc 13 50.90 10.3X
0.9s 8.20nm
LBF 151.07 359 iPKPc 13 50.70 10.0X
0.8s 6.05nm
AVF 151.27 0 ePKP 13 51.00 10.0X
SMF 151.41 359 ePKP 13 51.40 10.2X
BGF 151.49 1 ePKP 13 51.70 10.4X
0.7s 7.15nm
TCF 151.75 2 iPKPc 13 52.20 10.4X
LSF 151.76 3 iPKPc 13 52.10 10.3X
MAF 151.83 1 ePKP 13 52.60 10.7X
LPG 152.42 355 ePKP 13 54.90 11.8X
OHR 152.55 331 ePKP 13 52.00 8.9X
S.D. = 1.6 on 29 of 60 obs.

SEP 16, 1989 12h 01m 53.81± 0.70s
40.175 N ± 8.7km 24.904 E ± 6.2km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PLG 1.13 281 ePb 02 16.40 1.3
PRK 1.40 131 ePb 02 18.30 -1.1
RZN 1.52 355 iPc 02 21.00 -0.2
KDZ 1.52 15 iP 02 20.00 -1.1
NEO 1.56 237 ePb 02 21.00 -0.6
MMB 1.67 328 eP 02 23.00 -0.3
KKB 2.18 321 eP 02 36.00 5.4X
EDC 2.27 85 ePn 02 32.60 0.7
BNT 2.31 85 iPn 02 32.20 -0.4
KCT 2.64 87 ePn 02 39.00 1.7
S.D. = 1.2 on 9 of 10 obs.

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* SEP 16, 1989 13h 47m 58.79± 0.58s
6.368 S ±13.4km 71.182 E ±11.7km
DEPTH = 10.0km (geophysicist)
4.6mb (3 obs.)
CHAGOS ARCHIPELAGO REGION (426)

KOD 17.64 21 eP 52 12.00 5.3X
GBA 20.79 17 Pc 52 41.00 -1.8
1.1s 12.10nm 4.2mb
HYB 24.73 17 eP 53 23.00 1.2
BUL 43.49 247 iPd 56 05.30 0.8
SLR 45.23 240 eP 56 18.00 -0.5
BLF 48.06 236 eP 56 46.00 5.2X
FRS 48.98 236 eP 56 47.00 -0.6
BNG 53.63 280 ePd 57 23.30 0.2
0.8s 7.00nm 4.7mb
BJI 62.03 38 eP 58 22.50 0.7
WRA 62.64 109 Pd 58 25.60 -0.6
0.7s 3.90nm 4.7mb
WB5 62.66 109 eP 58 26.10 -0.3
CTA 73.84 109 eP 59 37.00 0.9
KHC 74.53 325 P 59 43.20 3.7X
CLL 75.93 327 eP 59 52.00 4.6X
e 00 41.00
KVN 146.40 13 e(PKP) 07 43.50 2.5X
S.D. = 1.1 on 10 of 15 obs.

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* SEP 16, 1989 15h 06m 04.53± 0.66s
20.787 S ±14.9km 168.770 E ±12.4km
DEPTH = 33.0km (normol)
4.6mb (4 obs.)
LOYALTY ISLANDS (188)

DZM 2.52 239 iPd 06 42.00 -2.1
iS 07 13.20
PVC 3.06 352 iP 06 55.00 3.3X
iS 07 44.00
BRS 16.01 243 iP 09 49.00 0.0
i 09 55.00
COO 18.05 234 e(P) 10 16.00 1.4
KRP 18.06 163 eP 10 23.00 8.5X

16d 15h

RMQ	19.19	249	eP	10	30.00	1.6
CTA	21.11	268	iPc	10	50.10	1.3
	1.2s	44.53nm			4.7mb	
			iS	14	52.00	
CNB	22.36	226	eP	11	05.00	3.7X
BWA	22.52	229	eP	11	03.00	0.1
CAN	22.61	226	eP	11	06.10	2.3X
CMS	23.14	238	eP	11	11.00	2.1X
OLP	23.18	251	ePd	11	11.00	1.7
TOO	26.21	225	eP	11	38.00	-0.2
WB5	32.24	265	eP	12	31.20	-1.1
WRA	32.25	265	Pc	12	30.60	-1.8
	1.1s	5.40nm			4.4mb	
ASPA	32.36	258	iPd	12	32.00	-1.3
	0.9s	27.00nm			5.1mb	
Z	17s	0.66um			4.4MszX	
		LR		26	36.40	
MTN	36.81	276	eP	13	11.00	-0.5
SPA	69.34	180	e(P)	17	10.00	-0.8
	1.0s	5.00nm			4.5mb	
BJI	77.86	321	eP	18	00.00	-0.5
CHG	78.90	295	eP	18	07.50	0.8
SRO	144.03	326	e(PKP)	25	35.30	-3.0X
BRG	144.05	333	iPKP	25	35.10	-3.1X
	0.8s	10.00nm				
CLL	144.12	334	iPKPd	25	34.90	-3.4X
ZST	144.42	327	ePKP	25	36.70	-2.2X
PRU	144.43	331	ePKP	25	35.50	-3.4X
EKA	144.97	352	PKP	25	36.00	-3.6X
	1.1s	15.10nm				
SKO	145.33	315	e(PKP)	25	40.00	-0.7
KHC	145.48	331	iPKPc	25	40.00	-0.8
	1.0s	11.00nm				
WET	145.78	332	ePKP	25	41.00	-0.3
OHR	146.15	314	ePKP	25	38.30	-3.9X
BNG	146.81	245	iPKPd	25	45.00	1.0
	0.6s	14.00nm				
			id	25	49.50	
VBY	147.12	325	e(PKP)	25	43.60	0.1
TOD	147.12	336	ePKP	25	44.45	1.0
LJU	147.15	326	e(PKP)	25	44.00	0.4
ENN	147.17	340	ePKP	25	47.00	3.6X
	1.0s	20.00nm				
MEM	147.28	340	PKPc	25	46.20	2.7X
ABH	147.37	337	ePKP	25	45.20	1.4X
CEY	147.41	326	e(PKP)	25	45.50	1.5X
VOY	147.49	327	e(PKP)	25	44.50	0.3
RUP	147.69	338	ePKP	25	46.19	1.8X
SNF	147.91	341	PKP	25	49.20	4.6X
WLF	148.04	338	PKP	25	47.10	2.3X
DOU	148.18	341	PKPc	25	47.20	2.2X
CDF	148.68	336	ePKP	25	47.60	1.5X
BSF	149.34	336	ePKP	25	50.10	3.0X
HAU	149.37	337	ePKP	25	50.00	3.0X
LOR	150.88	339	ePKP	25	51.60	2.3X
LPG	151.25	333	ePKP	25	54.30	4.0X
	0.9s	3.90nm				

S.D. = 1.1 on 23 of 48 obs.

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* SEP 16, 1989 15h 38m 05.07± 1.82s
38.976 N ±12.1km 22.448 E ±15.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.1 (ATH).

NEO	0.69	61	ePn	38	18.00	-0.7
LIT	1.12	2	ePbc	38	35.20	9.1X
			eSb	38	55.70	
PAIG	1.35	45	ePg	38	28.90	-0.9
			eSg	38	42.20	
ATH	1.41	135	ePb	38	31.00	0.2
			eSn	38	44.50	
KZN	1.43	339	ePn	38	30.00	-1.1
PLG	1.59	29	ePb	38	34.80	1.4
THE	1.70	13	ePb	38	39.60	4.7X
OUR	1.80	41	ePbc	38	35.40	-0.9
GRG	1.98	359	ePn	38	46.30	7.3X
KNT	2.21	9	ePn	38	47.70	5.4X
SRS	2.31	22	ePnc	38	45.70	1.9
OHR	2.48	330	e(Pn)	39	31.50	45.3X

S.D. = 1.5 on 7 of 12 obs.

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* SEP 16, 1989 16h 08m 44.55± 1.92s
34.825 N ± 6.8km 4.758 W ±28.8km
DEPTH = 10.0km (geophysicist)
MOROCCO (395)
MD 2.7 (RBA).

NKM	0.82	319	iPgc	09	01.00	0.6
			iSg	09	10.50	
			i	09	16.50	
IFR	1.34	193	iPg	09	10.00	0.6
			iSg	09	28.00	
OJEN	1.42	334	iP	09	11.00	0.5
SRO	1.52	341	iP	09	09.00	-2.7
ALJ	1.97	340	iP	09	20.00	1.6
LIJA	2.14	346	iP	09	21.00	0.2
AVE	2.68	236	iPn	09	28.00	-0.5
			iSn	10	00.00	
TIO	4.42	209	iPn	09	55.00	-0.3
			iSn	10	45.50	

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

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* SEP 16, 1989 16h 13m 30.68± 0.64s
30.128 N ±10.5km 99.566 E ± 8.5km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	3.70	77	Pn	14	29.50	2.5
			Pg	14	37.00	
			Sg	15	27.80	
KMI	5.72	150	ePg	15	13.50	17.7X
			Sg	15	56.00	
LZH	6.94	30	eP	15	12.00	-0.9
	1.5s	0.02nm			1.8mb X	
Z	11s	1.90um			4.3Msz	
			pP	15	15.00	
			eLg	17	12.00	
			e	17	18.00	
GYA	7.25	119	P	15	18.00	0.9
LSA	7.32	269	P	15	20.00	1.6
			eS	16	47.00	
GTA	9.26	1	eP	15	46.80	1.7
Z	11s	1.10um				
CHG	11.28	183	eP	16	24.00	11.4X
BTO	13.47	36	eP	16	41.00	-1.0
WMQ	16.61	329	eP	17	26.20	3.6X
Z	12s	0.70um				
BJI	16.79	49	eP	17	34.00	9.3X
			eS	22	28.00	
NDI	19.52	271	eP	17	56.50	-1.8
HYB	22.97	241	eP	18	34.30	0.9
CN2	24.65	49	P	18	49.50	0.0
GBA	26.23	236	Pc	19	05.80	1.3
	0.9s	4.80nm			4.1mb	
WB5	59.95	142	eP	23	34.40	-1.8
WRA	59.99	142	Pd	23	34.40	-2.1
	1.0s	4.70nm			4.6mb	
HFS	62.38	326	eP	23	51.00	-1.2
	0.5s	1.70nm			4.4mb	
NB2	63.36	327	P	23	57.80	-0.9
	0.7s	2.10nm			4.4mb	
BUL	84.57	243	iPd	26	02.90	0.6

S.D. = 1.6 on 15 of 19 obs.

? SEP 16, 1989 17h 04m 15.81± 8.30s
42.831 N ±42.3km 19.283 E ±48.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

NKY	0.21	265	iPgd	04	20.80	0.4
			iSg	04	25.70	
TTG	0.40	182	ePg	04	24.00	0.0
			eSg	04	29.50	
BRY	0.55	278	ePg	04	26.60	-0.3
			eSg	04	34.50	
HCY	0.69	237	ePg	04	29.50	0.0
			eSg	04	38.50	

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

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* SEP 16, 19B9 17h 05m 45.19± 0.57s
40.401 N ± 9.1km 51.756 E ±12.8km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
CASPIAN SEA (338)

TEH	4.66	184	eP	06	54.00	0.7
TAB	4.82	243	eP	07	00.00	4.6X
MHI	7.33	121	ePn	07	30.00	-0.7
			eSn	08	47.00	
NUR	26.18	329	eP	11	17.00	0.9
SUF	27.09	334	eP	11	25.00	0.6
SOD	30.36	341	eP	11	54.00	0.2
HFS	30.70	323	eP	11	56.10	-0.7
	0.4s	4.90nm			4.7mb	
NB2	32.17	324	P	12	09.00	-0.8
	0.8s	2.90nm			4.2mb	
GBA	34.91	133	Pc	12	34.40	0.6
	0.7s	2.60nm			4.3mb	
BNG	46.63	229	ePc	14	09.40	-0.9
	0.7s	3.00nm			4.4mb	

S.D. = 0.9 on 9 of 10 obs.

& SEP 16, 1989 17h 13m 36.99s
60.145 N 140.931 W
DEPTH = 0.0km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

CYK	0.78	266	iP	13	52.32	-0.2
			eS	14	04.48	
SNH	0.95	273	iP	13	55.25	-0.8
			iS	14	09.73	
WAX	1.00	289	iP	13	55.80	-1.2
			eS	14	11.02	
KAIM	1.76	264	eP	14	07.37	-1.6
			eS	14	31.71	
HYT	1.83	67	P	14	09.20	-0.9
RAGM	1.88	279	eP	14	08.92	-1.8
			eS	14	33.71	
SGAM	2.16	281	eP	14	13.24	-1.5
			eS	14	43.90	
CVA	2.43	282	eP	14	18.26	-0.3
			eS	14	48.60	
HIN	2.79	278	eP	14	21.63	-2.1
DWY	3.99	10	P	14	39.60	-1.1

10 obs. associated

& SEP 16, 1989 17h 18m 00.91s
58.123 N 148.154 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

HIN	2.43	20	eP	18	52.90	11.5
KAIM	2.65	45	eP	18	35.57	-8.8
			eS	19	00.07	
CVA	2.73	26	eP	18	46.31	0.8
			eS	19	18.95	
SGAM	2.82	31	eP	18	42.46	-4.4
			eS	19	11.65	
RAGM	2.89	37	eP	18	37.99	-9.9
			eS	19	02.48	

5 obs. associated

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* SEP 16, 1989 17h 32m 19.62± 0.69s
40.351 N ±10.4km 51.818 E ±11.9km
DEPTH = 33.0km (normal)
4.5mb (4 obs.)
CASPIAN SEA (338)

TEH	4.62	184	eP	33	29.00	0.0
TAB	4.84	244	eP	33	38.00	5.9X
MHI	7.26	121	ePn	34	06.00	-0.2
			eSn	35	23.00	
HFS	30.77	323	eP	38	33.90	0.1
	0.9s	7.70nm			4.5mb	
NB2	32.24	324	P	38	46.70	-0.1
	0.7s	1.70nm			4.1mb	
GBA	34.84	133	Pc	39	10.00	0.4
	0.8s	5.00nm			4.5mb	
BNG	46.64	229	ePc	40	46.70	0.0
	0.4s	4.00nm			4.7mb	
			id	41	01.60	

S.D. = 0.3 on 6 of 7 obs.

SEP 16, 1989 17h 59m 00.72± 0.59s
30.117 N ± 9.5km 99.529 E ± 6.7km
DEPTH = 10.0km (geophysicist)
4.7mb (4 obs.)
SICHUAN PROVINCE, CHINA (307)

CD2	3.73	77	Pn	00	02.30	2.6
			Pg	00	13.00	
			Sg	00	55.40	
KMI	5.73	149	ePg	00	45.50	17.4X
			Sg	01	27.50	
LZH	6.97	30	eP	00	46.00	0.5
	1.5s	0.02nm			2.0mb X	
Z	10s	0.90um			4.3Msz	
			pP	00	48.50	

GYA 7.27 118 P 00 48.60 -1.1
S 02 06.40
LSA 7.29 269 P 00 52.00 1.8
eS 02 17.00
XAN 8.88 61 P 01 10.00 -2.0
GTA 9.27 1 eP 01 19.80 2.2
Z 10s 0.90um
CHG 11.27 183 eP 01 51.10 6.3X
BTO 13.50 36 eP 02 14.00 -0.8
N 10s 0.70um
E 10s 0.30um
WMQ 16.60 329 eP 02 55.00 -0.1
Z 10s 0.70um
BJI 16.82 49 eP 03 01.00 3.3X
eS 08 06.00
NDI 19.49 271 eP 03 29.50 -1.4
KSH 21.42 302 eP 03 52.30 1.3
HYB 22.94 241 eP 04 06.50 0.3
CN2 24.69 49 Pc 04 23.40 0.5
GBA 26.20 236 Pc 04 38.10 0.8
0.5s 1.70nm 4.0mb
WB5 59.96 142 eP 09 10.70 1.0
UPP 60.49 325 iP 09 11.40 -1.4
HFS 62.37 326 eP 09 24.00 -1.6
0.9s 7.90nm 4.9mb
LPG 71.01 312 eP 10 20.40 -0.6
0.7s 7.70nm 4.9mb
SMF 72.38 314 eP 10 28.60 -0.2
SSF 72.41 315 eP 10 28.00 -1.0
AVF 72.62 314 eP 10 29.30 -0.9
0.7s 2.60nm 4.4mb
VAO 149.28 275 ePKP 18 51.10 3.8X
S.D. = 1.4 on 20 of 24 obs.

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* SEP 16, 1989 18h 10m 10.98± 1.75s
4.051 S ±21.6km 130.293 E ±14.8km
DEPTH = 33.0km (normal)
4.1mb (2 obs.)
BANDA SEA (280)

AAI 2.12 280 eP 10 45.00 0.1
TLE 2.91 123 ePc 10 56.30 0.3
MTN 8.78 175 eP 12 19.50 0.9
eS 14 05.70
WB5 16.23 166 eP 13 58.00 -0.2
eS 16 57.20
WRA 16.28 166 Pc 14 01.40 2.5X
0.5s 2.20nm 3.5mb
ASPA 19.81 170 iPc 14 40.80 -1.1
0.9s 27.00nm 4.6mb
S.D. = 1.0 on 5 of 6 obs.

& SEP 16, 1989 18h 41m 24.90s
37.347 N 121.685 W
DEPTH = 8.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.9 (BRK).

ARN 0.12 89 iPc 41 27.50 -0.2
GCC 0.40 218 iPd 41 32.40 -0.7
eS 41 39.00
SAO 0.61 162 iPd 41 36.83 -0.4
iS 41 45.70
BKS 0.69 321 iPc 41 37.77 -0.9
eS 41 48.40
BRK 0.70 319 eP 41 37.70 -1.1
eS 41 49.20
LLA 0.94 141 eP 41 41.60 -1.4
PRS 1.04 166 eP 41 43.80 -1.0
CMB 1.24 56 eP 41 47.50 -0.7
eS 42 03.30
FRI 1.62 102 eP 41 52.50 -1.3
KVN 3.30 58 eP 42 21.00 2.9
10 obs. associated

SEP 16, 1989 18h 46m 27.84± 0.51s
42.570 N ± 7.2km 142.404 E ±11.3km
DEPTH = 104.6 ± 6.7 km
4.5mb (10 obs.)
HOKKAIDO, JAPAN REGION (224)

HOOJ 0.68 106 iPd 46 46.80 1.1
S 47 00.20
MRRJ 1.00 262 iP+ 46 48.30 -0.5
S 47 03.00
ASAJ 1.56 6 iP+ 46 54.70 -0.7
S 47 13.80
KUSJ 1.78 72 iP+ 46 58.50 0.3
S 47 20.60
AOMJ 2.52 218 iP+ 47 09.00 1.0
OFUJ 3.53 189 P 47 21.00 -0.7
S 48 01.40
YAMJ 4.75 203 P 47 38.70 0.3
eS 48 32.10
NIIJ 5.93 207 P 47 54.70 0.0
KAKJ 6.59 196 P 48 00.40 -3.3
S 49 13.60
MAT 6.84 210 iPc 48 07.00 -0.1
1.1s 18.99nm 4.5mb X
MTMJ 6.95 212 P 48 09.70 0.9
CHJJ 7.03 203 P 48 09.10 -0.6
IIDJ 7.89 208 P 48 21.60 0.0
TSRJ 8.61 218 P 48 33.00 1.7
KEV 58.56 338 eP 56 18.00 2.8
SOD 60.19 336 iP 56 24.80 -1.5
GBA 62.52 263 P 56 44.00 1.4
0.5s 0.50nm 3.7mb
SUF 63.41 332 iP 56 46.60 -1.3
NUR 65.45 331 eP 57 00.00 -1.1
HFS 69.37 335 eP 57 24.30 -1.3
0.5s 8.80nm 4.8mb
NB2 69.39 337 P 57 25.00 -0.8
0.7s 6.80nm 4.6mb
CDF 81.15 332 eP 58 32.50 -0.3
LOR 83.31 333 eP 58 43.40 -0.5
0.8s 4.50nm 4.4mb
LBF 83.52 333 eP 58 44.50 -0.5
0.9s 5.50nm 4.5mb
LPG 83.82 330 eP 58 47.10 0.2
0.7s 4.40nm 4.5mb
SMF 83.86 333 eP 58 46.60 -0.1
AVF 83.90 333 eP 58 47.00 0.1
0.7s 5.50nm 4.6mb
MAF 84.66 333 eP 58 51.20 0.5
0.7s 5.50nm 4.6mb
LSF 84.97 334 eP 58 52.50 0.2
0.6s 2.70nm 4.3mb
CAF 85.96 333 eP 58 58.30 1.0
0.7s 3.70nm 4.5mb
LFF 86.39 334 eP 59 00.30 1.0
LPO 86.47 333 eP 59 00.50 0.8
S.D. = 1.2 on 32 of 32 obs.

SEP 16, 1989 19h 07m 04.86± 0.60s
41.022 N ± 4.8km 20.077 E ± 6.3km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MG 2.4 (TIR).

BERA 0.33 197 iPgc 07 11.60 -0.2
TIR 0.36 334 iPgc 07 12.70 0.4
OHR 0.55 81 iPg 07 16.10 0.0
iSg 07 24.70
LACI 0.67 336 ePg 07 17.00 -1.2
VLO 0.71 219 iPg 07 19.10 0.3
PHP 0.72 22 iPgc 07 18.20 -0.8
SDA 1.08 337 ePn 07 26.30 1.1
SRN 1.14 183 ePn 07 28.80 2.6X
SKO 1.40 47 iPn 07 31.00 0.6
iSn 07 50.00
LCI 1.76 248 P 07 35.20 -0.3
eSn 07 55.00
S.D. = 0.8 on 9 of 10 obs.

SEP 16, 1989 20h 23m 53.47± 0.58s
19.563 S ± 7.7km 65.821 W ± 8.2km
DEPTH = 33.0km (normal)
SOUTHERN BOLIVIA (125)
Felt at Cochabambo.

CCH 2.19 352 P 24 29.90 1.3
i 24 31.20
(S) 24 57.30
CNCB 3.42 323 Pd 24 46.70 0.3
LPB 3.71 324 P 24 51.00 0.7
ZOBO 3.94 326 P 24 53.00 -0.7
SLA 5.15 177 ePd 25 12.00 1.6
S 26 02.00
ARE 6.21 299 eP 25 24.00 -1.7
ITB1 11.74 118 e(P) 26 41.80 0.1
TCA 11.78 175 eP 26 42.00 -0.2
ITB 11.95 118 e(P) 26 43.20 -1.4
PPD 13.79 103 e(P) 27 09.00 0.0
BAO 17.44 80 eP 27 56.00 -0.1
S.D. = 1.1 on 11 of 11 obs.

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* SEP 16, 1989 20h 43m 39.18± 2.03s
4.652 N ±10.2km 126.771 E ±18.1km
DEPTH = 65.4 ± 20.9 km
4.8mb (3 obs.) 4.4Msz (1 obs.)
TALAUD ISLANDS (263)

DAV 2.70 334 eP 44 21.00 -0.1
MTN 17.92 166 eP 47 45.00 -0.5
GUMO 19.94 62 eP 48 10.00 1.4
KGM 23.56 264 eP 48 49.50 4.8X
WB5 25.50 163 eP 49 02.80 -0.4
e 49 12.10
WRA 25.55 163 Pd 49 03.50 -0.2
0.4s 9.70nm 4.7mb
ASPA 28.99 166 eP 49 35.30 0.3
0.5s 9.00nm 4.7mb
MEKA 32.09 194 eP 50 03.00 0.7
XAN 33.62 333 P 50 13.00 -2.6
CD2 33.93 323 eP 50 19.00 0.7
TIY 35.42 340 eP 50 33.00 2.0
E 17s 0.50um
BJI 36.51 346 eP 50 38.00 -2.0
BRS 40.57 143 iP 51 12.00 -2.0
GTA 42.33 329 eP 51 28.00 -0.5
Z 18s 0.50um 4.4Msz
BWA 43.90 154 eP 51 42.90 1.7
HYB 48.85 289 eP 52 21.50 1.0
WMQ 52.00 325 eP 52 46.00 1.8
SLL 97.27 333 eP 57 04.60 -1.4
0.9s 9.60nm 5.3mb
S.D. = 1.6 on 17 of 18 obs.

? SEP 16, 1989 21h 07m 45.74± 2.60s
4.597 S ±30.9km 127.127 E ±39.6km
DEPTH = 310.7 ± 21.3 km
BANDA SEA (280)

AAI 1.40 50 ePd 08 29.50 -0.1
eS 08 53.30
TLE 5.69 101 iPc 09 12.10 -0.2
S 10 15.10
MTN 9.10 155 eP 09 55.10 1.4
eS 11 32.30
WB5 16.75 156 iP 11 22.00 -1.8
eS 14 28.40
WRA 16.80 156 Pc 11 22.60 -1.6
0.3s 21.00nm 5.0mb
ASPA 20.05 162 iPc 11 57.10 -0.1
0.4s 18.00nm 4.8mb
BWA 35.65 149 eP 14 18.20 1.6
CAN 36.65 149 iPd 14 25.70 0.7
S.D. = 1.7 on 8 of 8 obs.

SEP 16, 1989 22h 52m 00.47± 0.41s
51.795 N ± 7.9km 167.066 W ± 5.8km
DEPTH = 33.0km (normal)
4.9mb (33 obs.)
FOX ISLANDS, ALEUTIAN ISLANDS (9)
ML 4.7 (PMR).

SNKA 3.72 42 eP 52 55.60 -1.4
DRRA 4.25 41 eP 53 03.68 -0.7
BALA 4.26 35 eP 53 05.28 0.7
DLG 4.58 41 eP 53 08.46 -0.8
eS 54 00.88
PS4 4.72 39 eP 53 10.56 -0.6
PVV 4.77 39 eP 53 11.77 0.0
eS 54 05.42
SASA 5.28 45 eP 53 18.47 -0.6
eS 54 16.35
SDN 5.28 45 iP 53 18.50 -0.6
NGI 5.30 49 eP 53 17.52 -1.8
eS 54 16.06
SGB 5.44 44 eP 53 20.07 -1.2
eS 54 20.09
ADK 5.96 275 iP 53 23.80 -4.9X
IVF 6.06 44 eP 53 28.92 -1.2
KDC 10.31 49 eP 54 26.30 -2.7
SVW 11.26 30 eP 54 42.50 0.5
TTA 12.63 24 e(P) 55 02.40 1.9
PMS 13.48 39 iPc 55 08.30 -3.3X
PMR 13.85 38 eP 55 14.00 -2.5
TOA 15.30 39 e(P) 55 32.80 -2.6
IMA 15.83 20 eP 55 41.00 -1.4
FBA 16.47 30 eP 55 46.00 -4.3X

16d 22h

INK 23.07 32 eP 57 04.00 0.5
0.6s 27.00nm 4.9mb
RMW 29.27 80 eP 58 03.00 1.5
LON 29.58 82 eP 58 06.00 1.7
MBC 30.57 20 eP 58 14.00 1.4
0.8s 11.00nm 4.7mb
KVN 35.98 91 eP 59 01.30 1.2
TNP 37.12 92 eP 59 10.80 1.1
FFC 37.80 59 eP 59 15.50 0.5
0.6s 6.00nm 4.6mb
PLM 40.39 97 eP 59 38.00 1.0
RSSD 41.70 75 eP 59 47.50 -0.2
GLA 41.85 96 eP 59 50.00 1.2
GOL 43.46 81 eP 00 02.50 0.3
RSON 44.03 61 eP 00 05.20 -1.1
CN2 44.54 288 P 00 07.60 -2.9
pP 00 17.00 31kmX
ALO 45.79 87 eP 00 21.00 0.2
FVM 53.58 73 eP 01 18.00 -2.2
BTO 55.50 294 eP 01 33.20 -1.2
KEV 58.33 354 eP 01 53.00 -0.9
BLA 59.93 67 eP 02 04.00 -1.6
SOD 60.71 354 iP 02 09.80 -0.6
JSC 61.51 70 eP 02 14.30 -1.9
GTA 62.00 299 iPd 02 17.00 -2.7
WMO 65.00 310 P 02 38.00 -1.2
SUF 65.35 353 iP 02 40.80 -0.2
0.6s 7.40nm 5.0mb
NUR 67.65 354 iP 02 55.40 -0.3
0.7s 17.40nm 5.3mb
HFS 68.42 360 eP 02 59.30 -1.2
0.9s 13.50nm 5.0mb
EKA 72.41 10 Pd 03 25.80 1.1
0.8s 13.60nm 5.0mb
CLL 77.27 360 iPd 03 53.10 0.6
KSP 77.70 358 eP 03 55.60 0.7
BRG 77.70 359 iP 03 55.80 0.9
0.8s 10.00nm 4.9mb
MEM 77.80 5 P 03 56.40 0.9
SNF 77.81 6 P 03 56.50 1.0
DOU 78.24 5 Pc 03 58.80 0.9
0.8s 11.70nm 5.0mb
PRU 78.59 359 eP 04 00.20 0.4
FLN 79.17 9 eP 04 03.40 0.4
1.1s 21.40nm 5.1mb
SPC 79.20 355 iP 04 04.60 1.1
LDF 79.37 9 eP 04 04.30 0.2
0.8s 19.80nm 5.2mb
KHC 79.45 360 iPd 04 05.60 1.0
GRR 79.50 9 eP 04 05.30 0.5
LPF 79.84 9 eP 04 07.30 0.7
0.7s 7.40nm 4.8mb
CDF 80.06 4 eP 04 08.50 0.6
0.7s 5.20nm 4.6mb
ZST 80.32 357 iP 04 10.30 1.1
HAU 80.42 4 eP 04 10.40 0.6
BSF 80.61 4 eP 04 11.50 0.6
0.9s 9.80nm 4.8mb
SRO 80.66 356 eP 04 12.10 1.1
LOR 81.01 6 eP 04 13.50 0.6
0.8s 5.90nm 4.6mb
SSF 81.19 7 eP 04 14.60 0.8
0.7s 10.30nm 4.9mb
LBF 81.30 6 eP 04 14.90 0.4
0.7s 6.60nm 4.8mb
MFF 81.34 9 eP 04 15.50 0.9
0.8s 18.80nm 5.1mb
AVF 81.45 7 eP 04 15.90 0.7
0.7s 9.90nm 4.9mb
KBA 81.51 360 iPd 04 17.00 1.3
0.7s 25.20nm 5.3mb
SMF 81.63 6 eP 04 16.80 0.7
0.7s 11.00nm 5.0mb
BGF 81.64 7 eP 04 16.90 0.7
0.7s 6.60nm 4.8mb
LSF 81.84 8 eP 04 17.90 0.6
0.8s 18.80nm 5.2mb
TCF 81.86 7 eP 04 17.90 0.5
0.8s 6.70nm 4.7mb
MAF 81.96 7 eP 04 18.90 1.0
0.8s 8.00nm 4.8mb
RJF 82.78 8 eP 04 22.50 0.3
LPG 82.94 4 eP 04 25.00 1.7
VBY 83.06 358 eP 04 24.50 0.9
LFF 83.07 9 eP 04 24.30 0.7
0.9s 19.60nm 5.2mb
CAF 83.20 8 eP 04 25.50 1.1
0.9s 9.80nm 4.9mb
LPO 83.37 8 eP 04 26.10 0.9
0.8s 9.10nm 4.9mb
MTN 83.51 240 iPc 04 24.00 -2.2
SBF 84.60 4 eP 04 32.20 0.7
0.9s 22.90nm 5.4mb
FRF 84.87 5 eP 04 33.90 1.2
0.8s 9.10nm 5.0mb
EPF 84.92 9 eP 04 33.30 0.2
0.8s 7.20nm 4.9mb
LRG 84.96 5 eP 04 34.50 1.3
LMR 85.09 5 eP 04 34.60 0.8
WRA 87.78 233 Pc 04 44.80 -2.4
0.8s 1.70nm 4.4mb
HYB 90.66 300 eP 04 59.50 -1.6
ASPA 91.14 232 eP 05 00.00 -2.9
GBA 94.40 298 Pc 05 16.10 -2.1
0.9s 3.60nm 4.8mb
BUL 146.11 333 iPKPd 11 38.90 1.1
1.0s 5.50nm
MAW 151.30 218 ePKP 11 49.00 4.8X
S.D. = 1.3 on 89 of 93 obs.

SEP 16, 1989 23h 20m 53.22± 0.14s
16.497 N ± 3.0km 93.671 W ± 2.7km
DEPTH = 108.3km (geophysicist)
6.0mb (73 obs.)
CHIAPAS, MEXICO (61)
mb 6.6 (BRK), 6.3 (PAS).
Mo=3.0*10**18 Nm (PPT). Felt in the central and southern regions of the country including Mexico City, Oaxoco, Tuxtla Gutierrez ond Villahermosa. Depth from broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=170 Dip=83 Slip= 90
NP2: 350 7 90
Principal Axes:
T Plg=52 Azm= 80
P 38 260
Comment: The focal mechanism is poorly controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sta: 4 Focal mech. M
Energy 0.2±0.1*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 107 No. of sta: 11
Moment Tensor; Scale 10**18 Nm
Mrr= 0.14 Mtt= 0.04
Mff=-0.17 Mrt= 0.42
Mrf=-1.76 Mtf=-0.15
Principal axes:
T Val= 1.84 Plg=47 Azm= 71
N -0.04 6 167
P -1.80 43 262
Best Double Couple:Mo=1.8*10**18
NP1:Strike= 59 Dip= 6 Slip= 162
NP2: 167 88 84
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 32C
Centroid Location:
Origin Time 23:20:57.1 0.4
Lat 16.05N 0.04 Lon 93.70W 0.03
Dep 112.4 1.9 Half-duration 4.2
Moment Tensor; Scale 10**18 Nm
Mrr=-0.20 0.03 Mtt= 0.02 0.05
Mff= 0.17 0.06 Mrt= 0.57 0.03
Mrf=-1.16 0.03 Mtf=-1.21 0.05
Principal Axes:
T Val= 2.02 Plg=30 Azm= 51
N -0.66 44 174
P -1.36 32 300
Best Double Couple:Mo=1.7*10**18
NP1:Strike= 86 Dip=44 Slip=-178
NP2: 355 89 -46

SCX 1.02 76 iPd 21 20.83 6.1X
SBG 2.07 131 iPd 21 30.00 2.2
TPX 2.09 139 iP 21 29.70 2.0
(S) 21 48.98
KKG 2.18 134 iPd 21 31.00 1.9
OC2 2.40 143 iPc 21 33.50 1.7
SOG 2.64 130 iPc 21 38.00 2.6
SOG2 2.69 131 iPc 21 39.00 3.1X
JAT 2.92 138 iPd 21 40.00 1.1
OXX 2.98 282 iP 21 38.87 -1.0
LHG 3.15 130 iPd 21 43.50 1.5
ITG 3.31 124 iPc 21 46.00 1.5
FUG 3.40 126 iPc 21 47.50 1.9
RDG 3.42 115 iPc 21 48.00 2.2
MMG 3.48 124 iPc 21 49.00 2.3
GCG 3.57 122 iPd 21 51.00 3.1X
PCG 3.59 125 iPd 21 51.50 3.2X
TER 3.61 127 iPc 21 51.00 2.7
REC 3.66 124 iPd 21 49.50 0.4
SLP 3.70 118 iPd 21 51.70 2.1
PSG2 3.74 132 iPc 21 53.00 3.0X
IXG 3.87 126 iPd 21 54.50 2.6
LVVM 4.17 321 (P) 21 54.28 -1.5
IISM 4.31 306 iP 21 56.63 -1.2
YUP 4.37 121 iPc 22 00.00 1.2
LPS 4.87 116 iP 22 07.50 1.9
IIT 5.08 300 iP 22 09.65 1.0
PPM 5.37 299 iP 22 12.50 -0.4
III 5.84 290 iP 22 17.80 -1.3
ACX 5.94 274 iPd 22 16.42 -3.8X
eS 23 12.50
UNM 5.96 299 iP 22 20.50 -0.2
(S) 23 02.50
IIC 6.23 302 iP 22 24.79 0.3
CRX 6.41 298 iPd 22 27.00 0.0
MRX 7.83 295 iP 22 46.50 0.4
(S) 23 45.50
AGX 9.75 305 iP 23 13.00 0.9
SRA 11.01 124 iPd 23 30.20 1.2
SJS 11.40 124 iPd 23 35.80 1.6
JCR 12.21 121 iPd 23 25.40 -19.4X
UPA 15.67 117 iPc 24 28.30 -1.0
1.0s 240.00nm 5.4mb
UYO 17.61 358 iPd 24 54.20 1.1
MEO 18.74 347 iPd 25 06.00 -0.4
OLY 19.03 6 P 25 09.60 0.2
PWLA 19.08 14 P 25 09.60 -0.3
SIO 19.31 354 iPc 25 11.90 -0.5
eLg 28 39.10
TUL 19.43 355 iPc+ 25 12.80 -0.8
1.3s 63.00nm 4.8mb X
Z 19s 3.77um 4.6Msz
eS 28 49.00
eSg 28 49.20
eLR 31 38.00
PRM 20.25 28 P 25 21.80 -0.2
LST 20.25 9 P 25 22.20 0.2
HBF 20.30 34 P 25 23.00 0.4
SGS 20.43 33 P 25 23.00 -0.9
GBTN 20.87 22 P 25 28.30 0.0
JSC 20.92 30 P 25 25.20 -3.6X
LHS 21.30 30 P 25 32.90 0.3
CCM 21.58 5 ePd 25 36.27 0.9
eS 29 29.29
e 29 47.83
FVM 21.59 7 P 25 34.90 -0.6
ALQ 21.64 330 iPd 25 38.00 1.7
0.5s 181.34nm 5.7mb
Z 20s 4.61um 4.9Msz
pP 25 59.20 102kmX
sP 31 46.20
ANMO 21.65 330 ePd 25 38.41 2.1
eS 29 33.43
COTA 22.05 135 eP 25 43.40 2.6
PSO 22.15 132 iP 25 44.00 2.4
BMG 22.21 113 iPd 25 51.00 9.1X
GGP 22.26 137 eP 25 45.60 2.7
QUR 22.30 137 Pd 25 47.40 4.3X
CAYA 22.48 135 eP 25 48.10 3.1X
BOG 22.57 119 iPc 25 48.00 2.4
iS 29 49.00
RECU 22.63 137 eP 25 51.00 4.6X
SDV 23.70 106 iPc 26 00.00 3.6X
0.6s 94.10nm 5.4mb
BLA 23.73 27 P 25 58.00 1.6
FISA 24.18 99 eP 26 01.00 0.1
GLA 25.23 315 eP 26 12.00 1.3
GLD 25.26 339 P 26 12.70 1.6
pP 26 37.00 114kmX
GOL 25.27 338 P 26 12.40 1.2
CEOS 25.78 104 iPd 26 13.00 -2.9
IKP 25.89 312 eP 26 19.20 2.3

CBN	25.94	30	eP	26	17.00	-0.1	MHC	32.25	316	iPd	27	14.50	0.9					epPc	30	40.77	101kmX
			e	26	26.00	32kmX				epP	27	38.50	107kmX					esPd	30	53.19	
			e	26	54.00					esP	27	52.00						ePP	32	22.16	
BAR	26.31	312	eP	26	21.00	0.4	RSNY	32.29	26	P	27	12.30	-1.4	ITB1	56.04	136	eP	30	20.70	-2.5	
			e	26	47.00	122kmX		1.4s	82.51nm				5.3mb	ITB	56.25	136	eP	30	22.00	-2.8	
GUAC	26.42	100	iPc	26	20.00	-1.9				pP	27	39.50	124kmX	RKT	56.40	227	iP	30	23.20	-2.6	
CAR	26.66	99	iP	26	21.00	-3.0	GCC	32.32	315	iPd	27	14.40	0 4		1.2s	315.00nm				6.2mb	
TPC	26.67	315	eP	26	25.00	1.1				epP	27	38.50	107kmX	PPD	56.46	131	iPc	30	24.50	-1.8	
			e	26	49.00	110kmX				ePcP	29	59.80					i	30	31.00	21kmX	
			e	29	44.00					eScP	33	33.30					e	30	38.00		
CPE	26.72	312	eP	26	26.10	1.8	NNA	32.83	149	iPc	27	19.30	0 6				i	30	50.10		
PLM	26.81	313	eP	26	26.00	0.7		1.2s	46.88nm				5.2mb	ITB7	56.50	136	eP	30	23.90	-2.6	
			e	27	50.00		BKS	32.93	316	ePd	27	20.30	1 0	INK	57.60	344	iPc	30	33.20	-0.5	
			e	29	45.00			1.8s	1429.00nm				6.5mb		0.6s	126.00nm				6.1mb	
			e	30	16.00					epP	27	44.20	106kmX				pP	30	59.00	105kmX	
OLLA	26.91	100	iPd	26	24.00	-2.3				ePcP	30	01.70		PFH	58.09	283	P	30	37.00	-0.8	
MSU	27.29	327	P	26	31.10	1.4				eS	32	36.00		GDH	58.33	16	eP	30	20.00	-18.7X	
PEC	27.31	314	P	26	30.80	1.1				esS	33	14.00					i	30	55.00	149kmX	
RVR	27.52	314	eP	26	32.00	0.5				e	35	02.00					e	38	24.00		
			e	26	55.00	105kmX	BRK	32.95	316	iPd	27	20.40	1.0				e	44	10.00		
			e	29	47.00					epP	27	44.50	107kmX	TOA	58.42	334	iPd	30	40.60	1.0	
GSC	27.88	317	eP	26	35.00	0.2				ePcP	30	01.70		PMR	59.47	333	iPd	30	46.80	0.1	
			e	27	13.00	187kmX	LRM	33.19	336	ePc	27	23.00	1.2		1.2s	153.00nm				6.0mb	
			e	29	48.00		ORV	33.39	319	iPd	27	24.60	1.3	PMS	59.52	332	iPd	30	47.50	0.3	
CIS	27.93	312	eP	26	36.90	1.6				ePcP	30	03.60		KDC	59.70	328	iPd	30	48.50	0.2	
MWC	28.12	313	eP	26	38.00	0.9				eScP	33	36.40					i	31	15.60	111kmX	
			e	27	01.00	104kmX				e	34	29.00					e	31	27.70		
PAS	28.16	313	ePd	26	38.28	1.0	RSON	34.28	360	P	27	29.30	-1.4	VAO	60.23	129	iPc	30	51.40	-1.1	
			eS	31	20.26		WDC	34.64	320	iPd	27	32.60	-1.4				i	30	52.20	3kmX	
			esS	31	59.66					ePcP	30	05.50					e	31	04.30		
			ePcS	33	16.00					epPcP	30	34.20					e	31	17.00		
			eSS	36	08.00					eScP	33	39.70					e	31	28.90		
			eScS	37	10.00					e	34	32.70		COL	60.33	337	ePc	30	52.00	-0.5	
SBB	28.21	314	eP	26	38.00	0.2	FHC	35.67	319	ePd	27	43.90	1.2				epPc	31	18.16	106kmX	
			e	27	02.00	110kmX				epP	28	08.60	106kmX				esP	31	30.74		
DAU	28.30	331	P	26	40.30	1.5				esP	28	21.80					ePP	33	02.43		
CLC	28.70	317	eP	26	43.00	0.8				eScP	33	46.00					e	33	31.23		
			e	27	19.00	175kmX	LNOR	35.78	330	P	27	56.90	13.3X				e	33	46.46		
DUG	28.88	329	P	26	45.20	1.3	SES	36.60	341	iPc	27	51.10	0.7				eS	38	59.48		
	1.1s	43.42nm			5.0mb			1.1s	444.00nm				6.3mb				esS	39	44.17		
RSSD	28.90	344	P	26	44.60	0.5	CBM	37.00	29	P	27	52.80	-0.9				eScS	40	29.25		
ISA	29.20	316	eP	26	47.00	0.3				pP	28	20.70	122kmX				esScS	41	18.91		
			e	27	30.00	213kmX	LON	38.13	328	ePd	28	03.65	0.3	FBA	60.33	337	iPd	30	52.50	0.0	
			e	29	52.00					epPc	28	27.99	105kmX	KIP	60.69	286	ePd	30	55.10	-0.6	
PNJ	29.60	31	iP	26	57.00	6.9X				esPc	28	39.91					epPc	31	22.25	110kmX	
SYP	29.63	312	eP	26	51.00	0.4	RMW	38.61	329	P	28	08.00	0.6				ePP	31	26.74		
			e	27	14.00	103kmX	BMW	38.68	327	P	28	08.90	1.0				eS	39	07.10		
			e	29	53.00		FFC	38.69	352	iPc	28	08.30	0.5				esS	39	53.78		
TBR	29.75	30	P	26	50.00	-1.4		0.9s	312.00nm				6.1mb	PDCR	61.15	115	iPc	30	55.80	-3.0	
			pP	27	17.70	129kmX	PNT	38.93	333	iPd	28	11.10	1.2				e	31	09.40	49kmX	
INY	29.75	26	iP	26	49.50	-1.9		1.0s	415.00nm				6.2mb				i	31	26.80		
			pP	27	16.50	125kmX				pP	28	39.00	123kmX				i	31	41.00		
			S	31	36.00		GMW	39.16	329	P	28	12.90	1.0	MBC	61.25	353	iPc	30	58.50	-0.2	
TNP	29.85	321	P	26	53.80	1.2	ARE	39.38	145	eP	28	15.00	0.7		1.0s	236.00nm				6.2mb	
BLP	29.94	312	P	26	53.80	0.6	EDM	39.77	342	iPc	28	17.50	0.7				pP	31	25.20	108kmX	
BCH	30.04	313	P	26	55.10	0.9		1.0s	593.00nm				6.4mb	RUV	61.66	242	iP	31	00.50	-1.7	
PKEM	30.52	315	P	26	59.60	1.3				pP	28	42.50	108kmX		1.4s	605.00nm				6.4mb	
PHAM	30.60	314	P	27	00.20	1.2	MCW	39.95	330	P	28	19.30	0.9				ipP	31	27.40	109kmX	
			pP	27	23.90	106kmX	PGC	40.23	329	eP	28	21.00	0.4	TPT	61.76	242	iP	31	01.00	-1.9	
PTI	30.75	333	P	27	01.60	1.1		0.8s	121.00nm				5.8mb		1.4s	405.00nm				6.2mb	
PRI	30.95	314	iPd	27	02.70	0.5	ZOBO	41.17	141	iPc	28	29.50	0.2				ipP	31	27.90	109kmX	
			ePcP	29	56.30			Z 24s	2.97um				5.1MszX	VAH	61.89	242	iP	31	02.00	-1.8	
			epPcP	30	25.50					S	34	36.00			1.4s	540.00nm				6.4mb	
			eScP	33	28.80					LR	38	02.00					ipP	31	28.80	108kmX	
KVN	31.00	321	P	27	04.00	1.3	LPB	41.39	141	P	28	32.20	1.3	PMO	62.01	243	iP	31	02.80	-1.7	
FDF	31.35	89	eP	27	03.00	-2.8		Z 18s	3.44um				5.3Msz		1.4s	405.00nm				6.2mb	
LLA	31.39	315	iPd	27	05.90	0.0				S	34	40.00					ipP	31	29.80	109kmX	
			epP	27	29.70	106kmX				LR	38	06.00		SVW	62.24	331	iPd	31	04.80	-0.7	
			esP	27	43.20		CNCB	41.67	141	iPc	28	34.00	0.5	TTA	62.96	333	P	31	09.50	-0.8	
			ePcP	29	57.60		CCH	43.23	140	Pc	28	46.40	0.6		0.8s	79.31nm				5.7mb	
			epPcP	30	26.20					i	29	12.40	113kmX	IMA	63.05	337	eP	31	10.00	-0.9	
			eScP	33	30.00		SCH	43.50	22	eP	28	45.00	-2.3		1.0s	157.10nm				5.9mb	
BIM	31.46	89	eP	27	04.70	-2.0		1.5s	503.00nm				6.1mb	SDN	63.43	324	eP	31	12.70	-0.7	
PRS	31.53	314	ePd	27	07.30	0.1				pP	29	13.00	122kmX	TVO	64.47	241	iP	31	18.90	-1.9	
			epP	27	31.30	107kmX	SLA	49.34	146	ePd	29	33.70	0.0		1.4s	540.00nm				6.3mb	
			ePcP	29	57.90		FRB	50.28	14	ePc	29	38.90	-1.2				ipP	31	46.00	109kmX	
			epPcP	30	26.60			1.1s	283.00nm				6.2mb	PPN	64.50	241	iP	31	18.90	-2.0	
			eScP	33	30.40		SIT	51.10	332	e(P)	29	47.90	1.5		1.4s	195.00nm				5.8mb	
SAO	31.81	315	eP	27	09.40	-0.2	ZON	53.45	153	eP	30	04.00	-0.4				ipP	31	46.00	109kmX	
			epP	27	34.60	114kmX				i	30	32.00	118kmX	PPT	64.64	241	iP+	31	19.90	-1.9	
			esP	27	48.00		CFA	53.70	153	iPd	30	06.00	-0.1		1.4s	200.00nm				5.9mb	
HRV	32.09	32	ePc	27	10.58	-1.3	PEL	54.03	156	iPd	30	08.10	-0.5		Z 30s	6.00um				5.6MszX	
			epPc	27	37.40	122kmX	FCH	54.34	156	iPd	30	11.20	0.0				ipP	31	47.00	109kmX	
			esPc	27	46.50		TACH	54.38	157	iPd	30	11.50	0.4	PAE	64.69	241	iP	31	20.30	-1.8	
			ePP	28	20.51		CHCH	54.74	157	eP	30	13.50	-0.3		1.4s	420.00nm				6.2mb	
			eS	32	09.97		BAO	55.24	123	eP	30	15.30	-2.4				ipP	31	47.30	109kmX	
ARN	32.18	316	P	27	14.00	1.2	BDF	55.32	123	ePc	30	16.11	-2.2	AFR	64.79	241	iP	31	20.90	-1.9	

16d 23h

	1.4s	270.00nm		6.0mb				e	33 40 50	118kmX		IMI	86.78	45 P	33 25.75	-0.9
		ipP	31 48.00	109kmX				e	33 49 00			TIC	86.85	84 Pc	33 25.40	-2.1
ADK	72.92	320 iPd	32 11.30	-1.0		LBF	83.21	43 eP	33 06.50	-2.3		VDL	86.94	42 ePc	33 27.70	0.1
	1.1s	575.00nm		6.3mb			1.5s	153.50nm		5.7mb		LIC	86.96	84 Pc	33 26.20	-1.8
		i	32 38.50	106kmX		SMF	83.22	43 eP	33 06.40	-2.4		Z	20s	0.68um		5.0Msz
		e	32 51.20				1.2s	69.60nm		5.4mb				S	43 48.00	
RAR	74.86	242 P	32 24.00	-0.1		LBL	83.22	45 P	33 09.74	1.0		PCP	87.01	44 P	33 26.98	-0.8
DMU	74.96	38 eP	32 24.70	0.6		PLDF	83.26	44 P	33 09.89	0.8		HOF	87.04	38 iPc	33 27.80	0.1
DLE	75.25	38 eP	32 26.30	0.6		ENN	83.31	39 ePc	33 09.00	-0.1			1.8s	404.00nm		6.1mb
ECP	75.51	39 iPd	32 28.20	1.0			0.9s	158.00nm		5.9mb		KIC	87.20	84 Pc	33 27.40	-1.7
	1.4s	407.00nm		6.0mb				i	33 37.50	110kmX		OSS	87.31	42 ePc	33 29.30	0.0
ETA	75.53	39 iPd	32 28.20	0.9				i	34 01.60			CLL	87.31	37 iPc	33 28.80	-0.1
	1.5s	638.00nm		6.2mb				e	36 49.00				2.0s	360.00nm		6.0mb
LIS	75.67	53 iPd	32 29.80	1.4		MEM	83.41	39 P	33 09.40	-0.2				ipP	33 58.30	113kmX
PTO	75.69	51 eP	32 26.50	-2.0				i	33 11.30	6kmX				eSKS	43 47.00	
EAB	76.10	35 iPd	32 31.20	0.7		WTS	83.46	38 ePc	33 10.00	0.2				eS	44 04.00	
	1.1s	251.00nm		5.9mb			1.1s	306.00nm		6.1mb				P'P'	59 25.00	
ELO	76.40	35 iPd	32 33.00	0.8				e	33 38.50	110kmX		MDI	87.35	43 P	33 29.80	0.6
EBH	76.55	35 iPd	32 33.90	0.9				e	36 50.50			MDI	87.35	43 Pd	33 25.90	-3.3X
	1.0s	192.00nm		5.9mb		WLF	83.79	40 Pc	33 11.60	0.1		BOB	87.54	44 Pd	33 30.10	-0.2
EAU	76.64	35 iPd	32 34.30	0.8		VITF	84.13	42 P	33 14.47	1.2		OGA	87.80	42 iPc	33 32.00	0.3
	1.1s	190.00nm		5.8mb		HFS	84.20	29 eP	33 14.40	1.0			1.7s	206.00nm		5.9mb
EDU	76.77	35 iPd	32 35.30	1.1			1.4s	557.90nm		6.3mb		CVF	87.92	46 P	33 32.67	0.6
EDI	76.78	35 iPd	32 35.20	1.0		Z	20s	1.04um		5.2Msz		SAL	87.95	43 P	33 30.50	-1.6
	1.0s	148.00nm		5.8mb				LR	03 28.00			BRG	88.03	37 iPc	33 32.40	0.0
KBS	76.88	11 iP+	32 36.00	1.5		RUP	84.34	40 eP	33 14.53	0.1			1.4s	200.00nm		6.0mb
EBL	76.89	35 iPd	32 35.60	0.7		HAU	84.43	42 eP	33 13.20	-1.7				i	34 00.30	105kmX
EKA	76.90	36 P	32 34.00	-0.9			1.2s	297.50nm		6.1mb				i	37 25.70	
	1.2s	258.30nm		5.9mb		AIA	84.50	168 eP	33 15.20	0.6				i	43 48.00	
EDR	76.96	34 iPd	32 36.10	0.8		ABH	84.58	40 eP	33 15.82	0.2		WET	88.09	39 iPc	33 33.60	0.8
ESY	77.10	35 iPd	32 37.10	1.1		KEV	84.60	18 ePc	33 15.52	0.3		SUF	88.25	24 iP	33 33.90	0.7
TIO	78.70	61 iPc	32 44.50	-1.1			1.4s	1151.00nm		6.6mb			0.7s	66.10nm		5.8mb
		i	32 47.50	10kmX				epPc	33 43.33	106kmX		CTI	88.51	42 Pd	33 34.40	-0.6
		i	33 15.50					esPd	33 54.92			KHC	88.51	39 iPc	33 35.30	0.5
LPF	79.65	43 eP	32 47.80	-2.3				eSKS	43 27.14				1.0s	67.50nm		5.7mb
GRR	79.69	43 eP	32 48.40	-1.9				eS	43 37.07			BDI	88.56	44 P	33 33.70	-1.5
	1.5s	323.80nm		5.9mb				esS	44 23.92			MME	88.58	44 iPc	33 35.70	0.2
AAPN	79.84	54 eP	32 50.70	-0.9		BSF	84.77	42 P	33 17.40	0.7		PII	88.64	45 Pd	33 33.90	-1.5
FLN	79.85	42 eP	32 49.60	-1.5		ECH	84.88	41 P	33 17.75	0.6		BHG	88.64	40 iPd	33 37.10	1.6
	1.6s	286.00nm		5.8mb		CDF	84.89	41 P	33 18.11	0.8		PRU	88.74	38 ePc	33 36.00	0.2
IFR	79.89	58 iP	32 51.00	-1.0		GWF	84.92	40 P	33 18.38	1.1			1.1s	84.10nm		5.7mb
		i	32 54.00	10kmX		WLS	84.94	41 P	33 17.95	0.5				e	34 05.00	110kmX
		i	33 21.50			LOMF	84.95	42 P	33 18.11	0.5		NUR	88.85	26 iPc	33 36.80	0.7
ALOJ	79.90	54 eP	32 51.00	-0.9		MOF	84.98	42 P	33 18.43	0.7			1.1s	359.90nm		6.4mb
ATEJ	80.02	54 eP	32 52.00	-0.5		TNS	85.01	39 ePc	33 17.80	0.0				i	34 04.80	106kmX
ACHM	80.12	54 eP	32 53.00	0.0		STR	85.14	41 P	33 20.04	1.7				e	43 52.00	
LDF	80.12	42 eP	32 50.80	-1.8		COP	85.30	33 iPc	33 20.20	1.2				e	44 58.00	
	1.3s	202.10nm		5.8mb			1.0s	228.00nm		6.1mb		FIR	89.11	44 iPd	33 38.50	0.8
ASMO	80.13	54 eP	32 52.50	-0.6				ipP	33 48.20	107kmX				S	43 58.00	
APHE	80.26	54 eP	32 53.50	-0.3		BBS	85.35	42 P	33 20.31	0.8		KBA	89.19	41 iPc	33 37.90	-0.4
CRT	80.28	54 eP	32 55.00	1.2		TOD	85.44	40 eP	33 19.64	-0.3			1.3s	93.80nm		5.7mb
MFF	80.58	44 eP	32 53.00	-2.1		LPG	85.49	44 eP	33 19.60	-1.0				id	33 39.30	4kmX
	1.6s	248.70nm		5.8mb			1.5s	489.70nm		6.2mb				i	34 07.80	
LFF	81.59	46 eP	32 58.50	-1.9		FEL	85.53	41 P	33 19.99	-0.5				i	37 37.50	
	1.5s	302.90nm		5.9mb		BNI	85.59	44 Pd	33 21.10	0.2		KMR	89.28	40 iP+	33 39.00	0.5
LSF	81.79	44 eP	32 59.10	-2.3		RRL	85.70	44 P	33 21.55	0.0				ipP	34 05.60	100kmX
	1.3s	84.40nm		5.4mb		DIX	85.74	43 ePc	33 21.90	0.1				isP	34 26.40	
EPF	81.80	48 eP	32 59.50	-2.1		LSD	85.78	44 P	33 22.16	0.2				i	34 52.20	
	1.7s	275.70nm		5.8mb		SOD	85.82	20 iP	33 21.50	0.1				i	34 59.10	
LPO	81.96	46 eP	33 00.40	-1.9				i	33 50.00	109kmX				iPP	36 35.00	
	1.7s	338.20nm		5.9mb		FOUF	85.83	45 ePd	33 22.03	0.2		KSP	89.39	37 ePc	33 38.70	-0.2
RJF	82.03	45 eP	33 00.60	-2.1				i	33 24.05	6kmX			1.1s	95.00nm		5.8mb
	1.6s	286.00nm		5.8mb		SLE	85.87	41 ePc	33 21.50	-0.6				i	33 39.70	3kmX
TRO	82.23	19 iP+	33 04.90	1.7		LRG	85.89	46 eP	33 20.70	-1.5				e	37 36.50	
TCF	82.23	44 eP	33 01.50	-2.2			1.7s	735.20nm		6.4mb		SFI	89.45	44 Pd	33 38.10	-1.2
UCC	82.35	39 Pd+	33 05.00	0.8		ZLA	85.91	42 ePc	33 21.70	-0.6		MAO	89.55	46 P	33 39.00	-0.8
		iS	43 16.00			LMR	86.03	46 eP	33 21.30	-1.6		RBL	89.58	41 P	33 39.30	-0.7
SNF	82.39	40 P	33 03.60	-0.8		FRF	86.05	46 eP	33 21.60	-1.4		VOY	89.96	42 ePc	33 41.60	-0.2
		i	33 05.60	6kmX		PZZ	86.05	45 P	33 23.09	-0.1		TRI	90.00	42 iP	33 41.80	0.0
		e	33 38.40			MMK	86.11	43 ePc	33 24.10	0.5				e	44 08.10	
DBN	82.47	38 eP	33 04.00	-0.7		DOI	86.15	45 Pd	33 23.60	0.0		ASS	90.32	45 P	33 41.80	-1.7
EBR	82.48	50 eP	33 04.00	-1.1		CALN	86.15	46 P	33 25.13	1.4		ARV	90.35	44 Pd	33 42.20	-1.3
		e	33 34.00	117kmX		ORO	86.27	44 Pd	33 23.50	-0.7		LJU	90.36	41 ePc	33 44.00	0.5
MAF	82.49	44 eP	33 02.90	-2.2		MVIF	86.29	45 P	33 25.48	1.1				eS	44 07.00	
CAF	82.50	45 eP	33 03.00	-2.2		STV	86.29	45 P	33 23.40	-0.9		CEY	90.42	42 ePc	33 44.00	0.2
	1.7s	198.50nm		5.7mb		TOUF	86.31	45 P	33 25.48	0.9				e(pP)	34 13.00	110kmX
BGF	82.58	44 eP	33 03.20	-2.3		ENR	86.36	45 P	33 23.29	-1.4		VKA	90.53	39 iPc	33 45.50	1.3
DOU	82.70	40 Pc+	33 06.10	0.1		AURF	86.41	45 P	33 25.70	0.8			4.0s	1552.00nm		6.5mb X
	1.0s	202.80nm		6.0mb		AUTN	86.44	45 P	33 25.99	0.8				i	34 26.20	161kmX
		S	43 19.00			REVF	86.49	45 P	33 26.28	1.1				i	37 38.50	
AVF	82.85	43 eP	33 04.50	-2.4		SBF	86.49	45 eP	33 23.10	-2.2		RIY	90.55	42 eP	33 44.80	0.5
	1.2s	95.20nm		5.6mb			1.8s	586.90nm		6.3mb		MNS	90.60	45 Pd	33 45.00	0.3
SSF	82.88	43 eP	33 04.80	-2.2		LLS	86.51	42 ePc	33 25.50	0.1		AOI	90.77	44 eP	33 46.24	0.8
PYM	82.91	44 P	33 06.37	-1.0		SAOF	86.53	45 P	33 26.28	0.9		RMP	90.84	46 P	33 45.70	-0.1
LOR	83.05	43 eP	33 05.70	-2.2		SAX	86.59	42 ePc	33 25.70	-0.3		RDP	90.87	46 Pd	33 44.60	-1.4
	1.2s	185.90nm		5.9mb		ROB	86.64	45 P	33 25.45	-0.5		SOP	90.92	39 eP	33 50.30	4.3X
WIT	83.12	37 eP	33 10.00	1.9		VAI	86.71	43 P	33 25.40	-0.7		ZST	91.03	39 iP	33 47.30	0.8

			e	34 16.20	109kmX
			e(PP)	37 50.90	
			e	44 30.80	
VBY	91.04	42	eP	33 47.80	1.2
AOU	91.11	45	P	33 48.50	1.4
AZI	91.28	45	Pd	33 47.80	0.1
PTJ	91.32	41	eP	33 48.20	0.2
ZAG	91.37	41	ePc	33 48.50	0.4
FRA	91.83	36	eP	33 50.00	-0.1
	1.2s	299.00nm			6.4mb
	Z 18s	2.00um			5.6Msz
			i	33 51.30	4kmX
			e	34 19.20	
			eS	44 14.00	
SRO	91.93	39	P	33 51.60	1.0
LVI	92.07	49	P	33 50.70	-0.8
DUI	92.11	45	P	33 51.80	0.1
SPC	92.42	37	iPc	33 54.00	0.9
BUD	92.50	39	e(P)	33 53.00	-0.3
HVAR	92.81	43	iPc	33 55.50	0.7
PSZ	92.82	38	eP	33 50.30	-4.6X
SGO	93.15	46	Pd	33 55.60	-0.8
MCT	93.15	49	P	33 56.00	-0.7
MGR	93.50	46	P	33 57.60	-0.4
TDS	94.24	47	P	34 00.10	-1.4
MEU	94.31	49	P	34 00.30	-1.7
BEO	94.64	41	eP	34 03.30	0.1
SOI	94.72	48	P	34 03.40	-0.3
BZS	94.97	40	eP	34 05.00	0.3
LCI	95.07	46	Pd	34 07.20	2.0
SOA	95.34	43	eP	34 08.20	1.8
BCI	95.55	43	iP	34 06.80	-0.6
DEV	95.62	39	ePc	34 05.00	-2.7
LACI	95.66	44	iPd	34 09.50	1.6
TIR	95.90	44	eP	34 10.50	1.5
KKS	95.91	43	eP	34 11.00	1.9
BERA	96.25	44	eP	34 11.10	0.5
OHR	96.63	44	iP	34 12.70	0.3
	1.5s	340.00nm			6.6mb
			eS	44 40.00	
SKO	96.64	43	iP	34 13.00	0.6
LSK	96.95	45	eP	34 14.50	0.6
CMP	97.22	39	ePc	34 14.00	-1.0
VTS	97.47	42	iPd	34 17.00	0.7
MLR	97.64	38	iPd	34 18.00	1.0
KKB	97.75	42	iPc	34 19.00	1.6
PGB	98.10	41	iP	34 20.00	1.0
MMB	98.31	42	eP	34 21.00	1.0
PVL	98.48	40	iP	34 22.00	1.4
RZN	98.90	42	iP	34 24.00	1.2
DIM	99.23	41	iPc	34 16.00	-8.0X
KDZ	99.36	42	eP	34 25.00	0.3
MAT	108.04	318	ePKP	39 25.00	14.9X
BJI	117.26	335	ePKP	39 26.00	-1.5
	Z 20s	0.60um			5.2Msz
			ePP	40 42.50	
			eSS	56 54.00	
BRS	118.04	247	ePKP	39 29.00	-0.5
BTO	119.08	340	ePKP	39 31.00	-0.2
WMQ	119.97	359	ePKP	39 31.20	-1.5
TIY	120.75	336	PKPc	39 34.10	-0.3
	Z 26s	0.60um			5.1MszX
CAN	121.51	238	ePKP	39 35.20	-0.7
			ePKKP	49 35.80	
RMO	121.55	249	ePKP	39 35.50	-0.6
KMZ	121.66	96	iPKPd	39 37.00	0.2
			i	40 06.00	
MHI	121.68	25	ePKP	39 36.00	-0.2
			e	40 05.00	
BWA	122.01	239	ePKP	39 35.20	-1.6
			e	40 04.20	
			ePKKP	49 35.50	
SSE	122.02	325	ePKP	39 36.20	-0.7
	Z 20s	0.50um			5.2Msz
FRS	122.94	115	iPKPc	39 36.00	-2.7
	1.0s	140.00nm			
			i	40 05.00	
GTA	122.98	348	PKP	39 38.30	-0.4
	Z 18s	0.60um			5.3Msz
HVD	123.10	116	iPKPc	39 54.50	15.3X
			i	40 23.00	
CTA	123.25	257	iPKP	39 38.40	-1.2
	1.0s	59.00nm			
			i	41 17.60	
KSH	123.51	10	ePKP	39 40.50	0.8
BLF	123.68	114	iPKPc	39 42.00	1.6
	0.9s	61.54nm			

			i	40 10.20	
MZZ	124.10	92	iPKPc	39 43.00	1.4
			i	40 11.00	
LSZ	124.24	97	iPKPc	39 42.00	0.2
			i	40 11.00	
CMS	124.24	243	iPKPd	39 40.10	-1.1
PRY	124.76	112	iPKPc	39 42.20	-0.3
	0.9s	23.08nm			
			i	40 10.50	
BUL	125.31	103	iPKPc	39 43.50	-0.3
	1.0s	50.00nm			
XAN	125.33	337	PKP	39 42.50	-0.8
SLR	125.44	110	iPKPc	39 44.50	0.6
	1.3s	105.77nm			
			i	40 12.30	
OLP	125.60	249	ePKP	39 43.50	-0.5
KRI	125.83	99	iPKPc	39 51.20	6.3X
WHN	126.01	330	PKPc	39 44.50	-0.2
MAW	126.72	169	ePKP	39 44.00	-0.9
PTZ	127.06	96	iPKPd	39 48.00	0.8
			i	40 17.20	
STK	127.84	242	ePKP	39 47.00	-1.1
			e	40 18.00	
ARO	128.77	60	iPKPd	39 53.00	2.6
NAI	128.96	78	ePKP	39 52.40	1.3
CD2	129.98	340	PKP	39 52.40	0.1
GYA	132.95	335	PKP	39 57.80	-0.4
LSA	133.84	354	PKP	40 01.30	1.1
WB5	134.35	258	ePKP	39 53.30	-7.6X
			i	39 59.90	
			i	40 28.00	
			e	42 30.60	
			e	43 19.80	
WRA	134.38	258	PKP	39 44.00	-16.9X
	0.9s	1.10nm			
ASPA	134.92	253	iPKP	40 00.00	-1.9
			e	40 30.70	
			iPKS	43 30.30	
			iPPS	58 52.80	
MTN	136.57	269	ePKP	39 52.30	-12.8X
			i	40 04.00	
			e	40 35.10	
QIZ	137.80	326	ePKP	40 04.00	-3.4X
WARB	141.37	249	ePKP	40 06.00	-7.7X
CHG	142.78	340	iPKPc	40 11.80	-4.5X
	1.4s	37.79nm			
LOE	143.05	335	ePKP	40 12.00	-4.8X
BDT	144.22	339	ePKP	40 15.40	-3.3X
	0.8s	17.10nm			
			i	40 45.00	
COOL	145.21	239	ePKP	40 18.00	-2.2
NST	145.25	336	iPKPd	40 22.00	1.5
			i	40 50.00	
HYB	145.44	13	iPKPc	40 19.80	-1.1
	1.0s	600.00nm			
MKS	145.64	285	iPKPc	40 20.50	-0.8
RKG	147.38	232	ePKP	40 25.00	1.4
	0.9s	222.00nm			
NWAO	147.67	234	ePKP	40 23.00	-1.1
KLB	147.74	236	ePKP	40 24.00	-0.2
MBL	147.99	256	ePKP	40 24.00	-0.9
NNT	148.21	335	ePKP	40 27.00	1.6
MEKA	148.48	246	ePKP	40 25.00	-0.6
			e	40 28.00	
GBA	148.83	17	PKP	40 27.00	0.7
MUN	148.83	235	ePKP	40 25.00	-0.9
	0.9s	306.00nm			
BAL	148.93	238	ePKP	40 29.00	2.9
MRWA	149.97	240	ePKP	40 31.00	3.3X
NANU	151.86	253	ePKP	40 30.00	-0.7
			e	40 36.70	
			e	41 06.60	
KOD	152.03	19	iPKPc	40 34.00	2.4
	0.8s	141.79nm			
IPM	154.51	324	ePKPd	40 35.00	0.3
			e	40 58.80	
TPI	154.98	301	ePKPc	40 36.00	0.8
			e	43 00.00	
KGM	155.10	316	ePKP	40 37.00	1.6
PSI	157.23	326	iPKPc	40 38.00	-0.2
			e	43 00.00	

S.D. = 1.3 on 415 of 447 obs.

SEP 17, 1989 00h 02m 44.42± 0.39s
43.645 N ± 2.6km 127.614 W ± 4.1km
DEPTH = 10.0km (geophysicist)
4.6mb (12 obs.)

OFF COAST OF OREGON (30)

GROR	3.30	58	eP	03 36.84	-0.4
			eS	04 18.15	
KMOR	3.55	55	eP	03 40.27	-0.5
			eS	04 25.16	
NLO	3.84	49	eP	03 45.21	0.3
			eS	04 32.15	
FHC	3.92	135	eP	03 45.30	-0.6
PGO	4.11	62	eP	03 49.28	0.6
GT2	4.12	67	eP	03 49.29	0.5
BMW	4.20	46	eP	03 49.50	-0.5
ONR	4.22	39	eP	03 50.03	-0.1
RVW	4.27	52	eP	03 51.08	0.1
TCO	4.37	82	eP	03 52.30	-0.3
VLMM	4.41	63	eP	03 53.48	0.5
LVP	4.42	55	eP	03 53.65	0.5
TDH	4.48	66	eP	03 54.46	0.4
MTMW	4.52	56	ePc	03 55.00	0.5
FL2	4.53	54	eP	03 55.20	0.5
OBH	4.53	34	eP	03 54.24	-0.3
			eS	04 47.65	
VBEM	4.55	70	eP	03 55.02	0.0
CPW	4.59	42	eP	03 54.97	-0.5
			S	04 49.61	
ERK	4.59	53	eP	03 55.69	0.1
SHW	4.59	54	eP	03 56.40	0.8
VLL	4.61	65	eP	03 56.58	0.7
JLK	4.62	55	eP	03 56.57	0.6
STD	4.62	54	eP	03 56.49	0.4
APW	4.62	48	eP	03 55.85	-0.1
YEL	4.63	54	eP	03 56.90	0.7
ESD	4.64	55	eP	03 57.13	0.7
WDC	4.86	127	eP	04 00.90	1.6
LON	5.14	51	ePc	04 03.70	0.3
GMW	5.17	39	eP	04 03.00	-0.6
VGB	5.23	67	eP	04 04.40	-0.2
MIN	5.56	124	eP	04 10.60	1.3
RMW	5.58	45	eP	04 09.60	0.0
MCW	6.03	32	eP	04 15.70	-0.1
ORV	6.14	130	eP	04 18.40	1.1
LNOR	7.00	68	eP	04 28.00	-1.6
ARN	7.81	142	eP	04 38.50	-2.3
DPW	7.82	54	eP	04 39.80	-1.2
PNT	7.91	41	iPc	04 41.50	-0.7
	0.5s	62.00nm			6.1mb X
KVN	8.50	119	eP	04 50.00	-0.6
LLA	8.68	142	eP	04 52.30	-0.6
TNP	9.63	122	eP	05 05.00	-1.3
	0.8s	7.70nm			5.2mb
ISA	10.63	135	eP	05 20.00	0.1
CLC	10.97	132	eP	05 26.00	1.5
PTI	11.15	89	eP	05 27.60	0.6
SBB	11.73	136	eP	05 35.00	0.2
GSC	11.79	131	eP	05 40.00	4.4X
MWC	11.98	139	eP	05 39.00	0.6
RVR	12.50	137	eP	05 45.00	-0.2
DAU	12.58	99	eP	05 46.30	-0.3
TPC	13.10	133	eP	05 58.00	4.9X
SES	13.15	53	eP	05 52.00	-1.8
PLM	13.27	137	eP	05 57.30	1.7
BAR	13.91	138	eP	06 03.00	-0.8
GOL	17.07	96	eP	06 44.00	-0.9
	1.0s	51.00nm			4.6mb
GLD	17.16	95	eP	06 45.70	-0.2
	1.2s	60.61nm			4.6mb
ALO	18.50	111	eP	07 03.00	0.4
	1.5s	30.41nm			4.3mb
FFC	19.97	47	iPc	07 19.30	-0.1
	0.9s	140.00nm			5.3mb
KDC	20.99	321	eP	07 29.70	-0.2
	0.8s	27.59nm			4.7mb
PMR	22.03	332	eP	07 40.70	0.3
	1.0s	20.00nm			4.5mb
RSON	23.96	61	eP	07 59.50	0.1
	1.1s	31.06nm			4.8mb
MEO	24.07	102	iPd	08 02.30	1.6
FBA	24.12	339	eP	08 01.50	0.6
	1.0s	10.00nm			4.4mb
INK	24.92	355	eP	08 10.00	1.5
TTA	25.35	329	eP	08 12.40	-0.4
	1.0s	20.00nm			4.8mb
IMA	26.63	336	eP	08 24.40	-0.3
	1.0s	6.25nm			4.3mb
FVM	28.54	89	eP	08 48.40	6.3X
PWLA	31.55	92	eP	09 08.50	-0.5
BLA	36.10	84	eP	09 47.40	-0.9

17d 00h

0.6s 6.82nm 4.7mb
JSC 36.83 89 eP 09 53.40 -0.9
LHS 37.06 88 eP 09 55.20 -1.0
SOD 67.60 10 eP 13 43.00 0.2
i 13 50.00
BRG 80.11 24 iP 15 04.20 8.6X
ZOBO 80.65 123 P 14 58.00 -1.7
KSP 80.80 22 eP 15 00.00 0.7
CCH 82.71 122 P 15 10.10 0.0
S.D. = 0.8 on 71 of 75 obs.

SEP 17, 1989 00h 17m 51.02± 0.77s
36.434 N ± 5.0km 71.140 E ± 4.9km
DEPTH = 218.4 ± 8.5 km
4.4mb (29 obs.)
AFGHANISTAN-USSR BORDER REGION (717)

KSH 4.87 50 iPd 19 04.50 -0.5
S 20 01.00
NDI 9.27 145 iPc 20 00.60 -0.9
0.6s 213.33nm 5.6mb X
iS 20 36.00
MHI 9.39 273 ePn 20 04.00 0.8
eSn 21 25.00
WMQ 14.64 55 Pc 21 08.10 -1.2
Z 28s 1.20um
POO 17.99 172 iPd 21 56.50 8.5X
iS 25 42.00
HYB 20.05 159 eP 22 10.00 1.0
GTA 22.77 74 iPc 22 37.70 2.0
GBA 23.42 164 Pc 22 42.30 0.5
0.4s 5.30nm 4.5mb
KOD 26.71 166 eP 23 13.50 1.1
NUR 37.95 324 iP 24 49.70 1.0
0.6s 26.10nm 5.0mb
SUF 38.04 328 iP 24 50.00 0.6
0.7s 23.10nm 4.9mb
SPC 38.74 306 eP 24 57.00 1.3
e 26 08.00
KRA 38.94 307 eP 24 57.50 0.5
0.8s 33.00nm 5.0mb
e 25 01.10
SOD 39.85 335 iP 25 05.10 0.9
SRO 40.07 303 eP 25 07.80 1.5
ZST 40.86 304 eP 25 12.40 -0.4
KEV 40.90 338 iP 25 13.60 0.7
KSP 41.27 308 eP 25 16.80 0.7
PRU 42.42 307 P 25 27.00 1.5
BRG 42.75 308 iPd 25 28.70 0.6
0.8s 20.00nm 4.6mb
KHC 43.11 306 P 25 32.20 1.0
HFS 43.19 322 eP 25 31.20 -0.4
0.6s 16.50nm 4.7mb
CLL 43.32 309 iPd 25 33.40 0.7
1.4s 14.00nm 4.2mb
CDF 47.34 306 eP 26 04.50 -0.1
BSF 47.77 305 eP 26 07.30 -0.6
0.7s 11.00nm 4.4mb
MEM 47.79 309 Pd 26 08.50 0.6
WLF 47.85 307 P 26 08.90 0.5
HAU 48.03 305 eP 26 09.30 -0.5
0.6s 4.30nm 4.0mb
LPG 48.28 302 eP 26 11.90 -0.2
0.7s 8.80nm 4.3mb
FOUF 48.48 301 ePd 26 13.40 0.1
DOU 48.77 308 Pc 26 16.30 0.9
1.0s 19.40nm 4.5mb
SNF 48.89 309 Pd 26 16.70 0.4
LBF 49.81 304 eP 26 22.50 -1.0
0.7s 3.30nm 3.9mb
LOR 49.83 305 eP 26 22.40 -1.1
SMF 49.98 304 eP 26 23.90 -0.8
0.7s 12.50nm 4.5mb
SSF 50.11 305 eP 26 25.10 -0.6
AVF 50.28 304 eP 26 26.10 -0.8
0.8s 14.70nm 4.5mb
BGF 50.67 304 eP 26 29.10 -0.8
0.7s 5.50nm 4.2mb
MAF 50.94 304 eP 26 31.60 -0.4
0.9s 13.10nm 4.4mb
TCF 51.16 304 eP 26 33.20 -0.5
0.7s 7.70nm 4.3mb
CAF 51.63 302 eP 26 36.90 -0.3
0.7s 6.60nm 4.3mb
LSF 51.63 304 eP 26 36.10 -1.1
0.7s 7.70nm 4.3mb
RJF 51.90 303 eP 26 38.90 -0.2

LDF 52.11 307 eP 26 39.70 -0.9
FLN 52.30 307 eP 26 40.90 -1.1
0.6s 5.40nm 4.3mb
LPO 52.30 302 eP 26 41.50 -0.5
EKA 52.41 316 Pc 26 42.60 -0.1
0.7s 9.20nm 4.4mb
LFF 52.53 303 eP 26 43.30 -0.4
0.7s 7.40nm 4.4mb
EPF 53.38 300 eP 26 48.20 -1.9
0.7s 2.60nm 3.9mb
BNG 57.73 249 iPd 27 20.00 -1.4
0.9s 29.00nm 5.0mb
ic 27 22.20
ic 28 09.90
MZZ 61.82 228 eP 27 50.00 0.7
PTZ 62.86 224 iPd 27 56.90 0.9
LSZ 65.49 226 iPc 28 13.00 0.0
MBC 67.40 3 eP 28 25.00 0.8
0.8s 28.00nm 5.0mb
BUL 69.15 223 iPc 28 36.20 0.4
IMA 72.15 18 eP 28 52.70 -0.5
0.8s 5.10nm 4.3mb
INK 73.95 9 eP 29 03.00 -0.4
FBA 74.50 16 eP 29 06.80 0.2
KIC 74.89 267 P 29 08.70 -1.0
TOA 77.28 17 eP 29 23.30 1.0
WB5 81.84 122 eP 29 46.00 -1.1
WRA 81.86 122 Pc 29 46.10 -1.1
0.8s 4.60nm 4.3mb
ASPA 84.12 125 iPc 29 58.10 -0.5
0.7s 7.00nm 4.5mb
FFC 89.02 356 eP 30 22.50 0.6
0.9s 13.00nm 4.9mb
S.D. = 0.9 on 63 of 64 obs.

SEP 17, 1989 00h 53m 39.77± 0.09s
40.203 N ± 2.1km 51.749 E ± 1.3km
DEPTH = 51.4km (37 depth phases)
6.1mb (99 obs.)
CASPIAN SEA (338)
Felt in northwestern Iran. Also felt at Tehran. Complex event, observed on broadband displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=290 Dip=67 Slip= -90
NP2: 110 23 -90
Principal Axes:
T Plg=22 Azm= 20
P 68 200
Comment: The focal mechanism is poorly controlled and corresponds to normal faulting. The preferred fault plane is NP1.
RADIATED ENERGY
No. of sta: 10 Focal mech. C
Energy 0.7±0.2*10**14 Nm
MOMENT TENSOR SOLUTION
Dep 42 No. of sta: 15
Moment Tensor; Scale 10**18 Nm
Mrr=-1.68 Mtt= 2.01
Mff=-0.33 Mrt= 0.56
Mrf= 0.75 Mtf=-0.48
Principal axes:
T Val= 2.16 Plg= 7 Azm= 9
N -0.02 26 276
P -2.14 63 112
Best Double Couple:Mo=2.1*10**18
NP1:Strike=125 Dip=45 Slip= -52
NP2: 257 57 -121
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 43C M.W.: 12S, 24C
Centroid Location:
Origin Time 00:53:43.0 0.2
Lat 40.10N 0.02 Lon 51.77E 0.02
Dep 38.2 1.2 Half-duration 4.8
Moment Tensor; Scale 10**18 Nm
Mrr=-1.90 0.04 Mtt= 1.26 0.04
Mff= 0.64 0.04 Mrt=-0.29 0.07
Mrf= 0.92 0.09 Mtf=-1.06 0.04
Principal Axes:
T Val= 2.21 Plg=11 Azm=220
N -0.01 14 313
P -2.20 72 93
Best Double Couple:Mo=2.2*10**18

NP1:Strike=292 Dip=36 Slip=-115
NP2: 142 58 -73

TEH 4.47 184 ePd 54 47.00 0.2
TAB 4.72 245 iPc+ 54 50.50 0.1
SLY 6.75 229 iPnd 55 18.50 -0.1
iP* 55 31.00
iPg 55 51.50
eSn 56 35.00
S* 56 58.00
Sg 57 15.00
KER 6.91 214 ePc 55 19.50 -1.6
MHI 7.23 120 iPnd 55 22.70 -2.8
0.6s 1306.67nm 6.9mb
eSn 56 43.00
MSL 7.76 243 iPnd 55 32.50 -0.3
eSn 56 47.50
iLR 57 18.50
BHD 9.09 223 iPnd 55 47.00 -4.1X
iP* 56 11.00
iPg 56 31.00
iSn 57 28.50
iSg 58 31.00
KVT 11.97 279 eP 56 32.00 1.8
KAS 13.68 281 iPd 56 53.70 0.8
BRF 14.13 184 iP 56 55.90 -2.7
0.5s 374.00nm 6.3mb
BJA 14.21 184 iP 56 57.20 -2.5
0.5s 436.00nm 6.3mb
ANTO 14.53 275 ePc 57 05.02 1.0
BBTK 14.56 275 iPc 57 05.00 0.6
HRI 14.57 247 ePc 57 05.00 0.4
SHMJ 14.86 245 P 57 11.10 2.9X
HLBJ 14.87 242 Pd 57 14.80 6.4X
FAM 14.99 255 eP 57 11.30 1.4
BURJ 15.11 243 Pd 57 13.30 1.7
KFNJ 15.42 242 P 57 18.10 2.7
MASJ 15.47 242 P 57 17.20 1.0
CSS 15.50 256 eP 57 17.30 0.7
OUTJ 15.55 240 P 57 18.50 1.4
MKRJ 15.63 242 P 57 19.00 0.7
OASM 15.65 208 iPd 57 18.00 -0.6
DSI 15.80 242 eP 57 20.00 -0.3
QUE 15.92 124 iP 57 22.00 -0.1
eS 00 03.40
RYD 16.03 197 iP+ 57 20.00 -3.3X
PPCY 16.27 257 eP 57 27.00 0.8
GPA 16.37 277 eP 57 29.20 1.6
ALT 16.71 273 iP 57 31.30 -0.6
BCK 16.71 267 eP 57 32.00 0.1
HRT 16.80 279 iP 57 32.80 -0.2
GBZT 16.97 279 ePn 57 38.00 2.9X
YLV 17.05 278 iP 57 35.30 -0.8
AYN 17.18 234 eP+ 57 36.90 -0.8
ISK 17.24 280 eP 57 38.80 0.4
ITU 17.27 280 iPc 57 38.00 -0.8
MBH 17.28 238 iPc 57 38.00 -0.8
KHL 17.31 271 eP 57 38.40 -1.0
ELL 17.44 266 eP 57 41.60 0.6
HOL 17.50 237 eP+ 57 41.30 -0.3
SRFA 17.65 236 eP+ 57 42.30 -1.1
CTT 17.71 281 iP 57 43.80 -0.4
KCT 17.86 278 iP 57 45.30 -0.8
KSL 17.89 264 eP 57 46.80 0.3
CVD 18.01 291 eP 57 52.00 4.1X
CFR 18.02 294 iPd 57 36.50 -11.5X
TLB 18.04 292 eP 57 48.00 -0.2
BADA 18.05 235 eP+ 57 48.00 -0.3
BNT 18.18 278 iP 57 50.70 0.7
EDC 18.22 278 iP 57 50.70 0.2
YER 18.57 268 eP 57 53.50 -1.3
CIN 18.59 270 eP 57 54.00 -1.0
KSH 18.62 84 Pd 57 53.00 -2.5
Z 12s 38.50um
S 01 18.00
IAS 18.79 300 eP 57 55.50 -1.9
BRD 18.84 295 iPd 57 59.60 1.6
JMB 19.02 285 iP 58 00.00 -0.1
IZM 19.03 272 iP 57 58.10 -2.2
VRI 19.11 295 iPd 57 59.60 -1.6
KOT 19.22 244 eP 58 07.50 5.1X
EZN 19.46 277 iP 58 04.30 -0.7
SMG 19.52 271 eP 58 04.50 -1.1
PTT 19.52 299 iPd 58 03.50 -2.1
HLW 19.60 245 iP 58 07.00 0.5
eS 01 34.00
MLR 19.61 294 iPc 58 07.00 0.3

PRK	19	61	275	iPc	58	06.50	-0.1	BDV	24.76	286	iPd	58	57.60	-0.2		N	16s	5.50um											
DIM	19	81	284	iPd	58	08.00	-0.7				eS	03	18.80			E	23s	22.50um											
PVL	19	92	287	iPd	58	10.00	0.2	BRY	24.91	287	iPd	58	59.80	0.4				e	59	43.50	52km								
KAP	19.92	264	eP		58	09.50	-0.4				eS	03	22.50		LPI	28.40	279	P	59	30.63	-0.7								
KDZ	19	93	283	iPd	58	10.00	0.0	HCY	24.98	286	iPd	58	59.70	-0.3	KBA	28.41	297	iPd	59	32.10	0.6								
CMP	20.22	293	iPd		58	11.00	-2.0				eS	03	21.00			0.9s	335.00nm				6.0mb								
PLD	20.43	284	iPd		58	14.00	-1.1	SRO	25.07	299	iPd	59	01.80	1.1				i	59	42.50	38kmX								
RZN	20	45	283	iPd	58	14.00	-1.6		0.6s	902.00nm			6.5mb					i	03	30.80										
APE	20.69	270	iPc		58	17.00	-1.0				i	59	15.70	58km				i	04	43.30									
KMSA	20.72	200	iPd		58	17.50	-0.8				i(S)	02	27.80		AOI	28.43	289	iPd	59	31.17	-0.4								
DRA	20.73	292	iPd		58	19.00	0.8				i	02	37.70		RFI	28.49	285	P	59	31.21	-0.8								
PGB	20.80	286	iPd		58	19.00	0.0				i	03	15.50			1.2s	769.30nm				6.2mb								
MMB	21.19	283	iPd		58	23.00	0.0	LCI	25.70	281	P	59	04.20	-2.4	ALP	28.55	288	ePd	59	32.34	-0.4								
TAIF	21.21	211	ePd		58	24.40	1.0	ZST	25.92	300	iPd	59	09.20	0.6	SSO	28.60	289	e(P)	59	33.96	1.0								
NPS	21.22	265	eP		58	21.00	-2.2				i	59	20.30	43km	MNO	28.73	278	P	59	34.50	0.0								
SRS	21.35	282	ePd		58	24.70	0.2				e(S)	03	44.50		BHG	28.73	298	iPd	59	34.10	-0.1								
VTS	21.50	286	iPd		58	26.00	-0.2	NUR	26.35	329	iP	59	12.10	-0.3	AQU	28.74	287	P	59	34.40	0.1								
PLG	21.56	280	iPd		58	26.50	-0.2		0.8s	319.80nm			5.9mb		AZI	28.77	286	P	59	34.90	0.4								
KKB	21.65	284	iPd		58	28.00	0.5	Z	22s	36.20um			5.9Msz		WET	28.78	301	iPd	59	34.00	-0.6								
DEV	21.77	295	iPc		58	25.00	-3.6X				i	59	28.70	71kmX	POO	28.79	132	iPd	59	36.00	1.0								
ATH	21.84	273	iPc		58	30.80	1.4				e	03	40.00			1.1s	273.42nm				5.8mb								
KNT	21.86	282	ePd		58	29.70	0.1				LR	10	44.00					iS	04	31.00									
THE	21.88	281	ePd		58	30.00	0.2	HVAR	26.41	288	iPd	59	12.30	-0.9	MEU	28.79	276	eP	59	34.60	-0.3								
NEO	21.91	277	eP		58	30.00	-0.2	VKA	26.45	300	iPd	59	14.50	1.0	CIO	28.81	289	ePd	59	34.62	-0.4								
VAM	22.25	266	eP		58	31.50	-2.0		1.8s	2646.00nm			6.5mb		BRL	28.90	308	eP	59	37.00	1.5								
CEI	22.28	299	eP		58	28.00	-5.7X				i	59	26.70	48km	CLL	28.90	306	iPd	59	36.20	0.6								
LIT	22.32	279	ePd		58	34.50	0.3				i	59	30.20			1.5s	170.00nm				5.5mb								
BZS	22.65	294	iPc		58	37.00	-0.3				i	00	27.70			Z 20s	22.50um				5.8Msz								
			e		21	26.00					i	03	47.00					i	59	49.60	53km								
AGG	22.65	277	ePd		58	37.70	0.2				i	04	13.20					eS	04	24.00									
AMAN	22.67	230	iPd		58	40.00	2.3				LR	10	16.00					e	04	49.00									
KZN	22.83	280	eP		58	39.50	0.2	ZAG	26.60	294	iPd	59	15.50	0.7	ARV	28.92	289	P	59	36.25	0.3								
SKO	22.86	284	iPd		58	40.00	0.6	PTJ	26.61	294	iPd	59	15.20	0.1		1.1s	438.80nm				6.0mb								
	Z 21s	********	um				8.4MszX	KSP	26.78	305	iPd	59	17.00	0.5	BRN	28.94	308	iPd	59	37.00	1.1								
	N 13s	********	um						0.8s	300.00nm			5.9mb		UPP	28.95	324	iP	59	34.90	-1.0								
	E 13s	********	um								i	59	30.80	56km		1.0s	200.00nm				5.7mb								
			i		58	53.00	54km				i	00	20.20					i	59	48.80	56km								
			i		59	09.00					iS	03	45.00					iS	04	21.00									
			i		00	22.00		WMQ	26.82	70	ePd	59	18.10	1.1	OBO	29.08	197	iPd	59	39.52	2.0								
			iS		02	47.00					S	03	50.00		ASS	29.18	289	P	59	38.79	0.5								
			i		02	50.00		TDS	27.05	280	P	59	18.62	-0.5		1.3s	2480.80nm				6.7mb								
			i		08	36.00			1.1s	196.10nm			5.6mb		GIB	29.22	278	P	59	37.70	-1.1								
TIM	22.93	294	iPd		58	41.00	1.0	VBY	27.11	293	iPd	59	20.00	0.4	MNS	29.26	287	Pd	59	39.00	-0.1								
AGAL	23.12	229	iPd		58	44.00	1.9	GRI	27.19	279	P	59	19.45	-0.9	RDP	29.34	286	P	59	39.65	-0.1								
AGMR	23.20	230	iPc		58	42.00	-0.9		0.9s	258.70nm			5.9mb			1.2s	4858.60nm				7.0mb X								
ITM	23.42	272	iPd		58	43.50	-1.5	SUF	27.26	334	iP	59	20.30	-0.4	RMP	29.34	286	P	59	39.70	0.0								
OHR	23.44	282	iP		58	45.70	0.6		0.6s	115.10nm			5.7mb		TDD	29.34	198	iPd	59	41.84	1.9								
	1.3s	470.00nm				5.8mb		MGR	27.54	282	P	59	22.94	-0.6	HOF	29.51	303	iPd	59	41.00	-0.1								
			i		59	09.10	110kmX		1.2s	983.80nm			6.3mb		SCE	29.53	297	iPd	59	40.90	-0.7								
			iS		03	01.00		LJU	27.60	295	iPd	59	24.50	0.5	CTI	29.61	295	Pd	59	41.40	-0.8								
BEO	23.44	292	iP		58	44.50	-0.5				eS	04	00.00		ATA	29.61	197	iPd	59	44.26	2.0								
			iS		02	26.00		SGO	27.64	283	P	59	24.29	-0.1	MCT	29.62	277	P	59	44.15	1.7								
KKS	23.61	285	iP		58	48.80	2.1		1.1s	223.10nm			5.7mb			1.4s	462.40nm				6.0mb								
PHP	23.63	284	iPc		58	48.10	1.2	SOI	27.66	277	P	59	23.78	-0.8	ARO	29.63	198	iPd	59	44.21	1.7								
LSK	23.74	280	iPd		58	49.50	1.4		0.7s	129.90nm			5.7mb		ARO	29.63	198	iPd	59	44.30	1.8								
NDI	23.86	111	iPd		58	50.50	1.3	CEY	27.69	294	iPd	59	25.00	0.2	DAF	29.63	199	iPd	59	44.00	1.5								
	1.4s	209.30nm				5.5mb		RIY	27.73	293	eP	59	24.40	-0.7	SFI	29.65	290	P	59	42.65	0.2								
			iPcP		03	00.00		PRU	27.77	303	iPd	59	25.50	0.0		1.0s	1039.40nm				6.5mb								
			iS		03	05.50			Z 24s	30.70um			5.8MszX		USI	29.67	280	P	59	42.24	-0.4								
PVY	23.88	286	iPd		58	50.70	1.2		N 14s	12.80um						1.8s	1590.70nm				6.4mb								
			eS		03	05.00			E 22s	21.90um					FAI	29.69	277	P	59	44.27	1.4								
IVA	23.92	287	iPd		58	51.00	1.2				e	59	48.50	105kmX		1.6s	738.80nm				6.1mb								
			eS		03	04.00					eS	04	22.00		OGA	30.00	296	iPd	59	45.20	-0.6								
SPC	23.98	302	iPd		58	51.20	0.7	GMB	27.78	277	P	59	26.02	0.2	COP	30.06	314	iPd	59	46.10	0.2								
TIR	24.10	283	iPc		58	51.70	0.2		1.1s	258.60nm			5.8mb			0.9s	302.52nm				6.0mb								
			iS		03	07.00		KMR	27.90	299	iP-	59	26.90	0.3				i	00	00.00	55km								
BERA	24.14	282	iPc		58	52.00	0.2				iPP	00	15.70					eS	04	40.00									
VLS	24.18	275	eP		58	52.00	-0.3				iPPP	00	30.40		GBR	30.08	198	iPd	59	48.43	1.9								
LACI	24.18	284	iPd		58	52.00	-0.2				iPcP	02	43.90		FIR	30.10	290	iPd	59	47.50	1.1								
SRN	24.25	280	iP		58	53.30	0.4				iS	04	08.70					iS	04	34.00									
SDA	24.29	285	iP		58	53.00	-0.3				iScS	10	12.30		CVT	30.24	278	eP	59	47.20	-0.5								
KRA	24.34	304	eP		58	53.20	-0.5	BOM	27.92	133	iPd	59	27.80	0.8	MAO	30.37	288	P	59	48.43	-0.4								
	1.0s	341.00nm				5.8mb					iS	04	10.00			1.2s	336.20nm				5.9mb								
	Z 22s	35.60um				5.8Msz		MSI	28.00	278	P	59	27.70	0.1	SAL	30.42	294	Pd	59	48.50	-0.7								
			e		58	54.20	4kmX	VOY	28.05	295	iPd	59	28.00	-0.2	MME	30.44	291	iPc	59	50.50	0.8								
			i		58	58.60		DUI	28.07	285	P	59	28.94	0.5	LVI	30.50	279	P	59	56.00	6.0X								
			eS		03	08.00			1.1s	773.10nm			6.2mb		BDI	30.53	291	P	59	50.04	-0.3								
			i		03	30.00		TRI	28.15	294	iPd	59	28.60	-0.3		1.0s	1147.20nm				6.6mb								
TTG	24.43	286	iPd		58	55.00	0.4				e(S)	04	09.80		SOD	30.55	341	iP	59	49.70	-0.4								
			eS		03	12.00		BRG	28.25	305	iPd	59	29.10	-0.7	OSS	30.62	296	ePd	59	50.50	-0.7								
KEK	24.43	279	iPd		58	54.50	-0.2		1.2s	260.00nm			5.7mb		PII	30.63	290	P	59	50.34	-0.7								
ULC	24.48	285	iPd		58	55.00	-0.2				i	59	41.00	46km		0.5s	84.00nm				5.7mb								
			eS		03	11.00					i	04	08.00		HFS	30.85	323	eP	59	52.00	-0.9								
VLO	24.52	281	iPd		58	56.30	0.8	RBL	28.26	295	Pd	59	25.40	-4.7X		0.7s	341.50nm				6.2mb								
BUD	24 57	298	iPd		58	57.00	1.1	KHC	28.32	301	iPd	59	30.50	0.0		Z 18s	20.01um				5.8Msz								
NKY	24.58	287	iPd		58	56.90	0.6		1.0s	85.50nm			5.3mb					LR	11	45.00									
			eS		03	17.50			Z 22s	23.10um			5.7Msz		MDI	30.98	294	Pd	59	53.30	-0.8								

17d 00h

VDL	31.09	296	ePd	59 54.80	-0.6
PTS	31.12	277	P	59 56.34	0.9
	1.4s	997.70nm			6.4mb
SAX	31.13	297	ePd	59 54.60	-1.2
STU	31.20	300	iPd	59 55.90	-0.1
	1.2s	875.00nm			6.4mb
Z	20s	17.73um			5.7Msz
BOB	31.27	293	P	59 57.13	0.4
	1.2s	928.90nm			6.4mb
LLS	31.39	297	ePd	59 56 70	-1.3
TOD	31.46	302	ePd	59 58 32	0.0
TMA	31.53	295	ePd	59 58.10	-1.1
VAI	31.63	295	P	59 57.22	-2.6
	1.2s	1604.20nm			6.7mb
SLE	31.69	298	ePd	59 59.10	-1.3
TNS	31.70	303	iPd	00 01.00	0.5
ZLA	31.77	298	ePd	59 59.90	-1.3
PCP	31.93	292	P	00 01.69	-0.9
FEL	32.01	299	P	00 02.14	-1.2
CVF	32.01	288	P	00 02.57	-0.7
NRA0	32.07	323	P	00 01.90	-1.6
STR	32.15	300	P	00 04.24	-0.1
MMK	32.17	295	ePd	00 03.60	-1.3
ORO	32.20	294	P	00 02.50	-2.5
GWF	32.23	301	P	00 05.17	0.0
ABH	32.28	302	ePd	00 06.14	0.7
KEV	32.34	344	eP	00 05.91	0.1
Z	20s	39.60um			6.1Msz
			LR	14 20.00	
BBS	32.37	298	P	00 05.02	-1.3
WLS	32.43	300	P	00 05.93	-0.9
HYB	32.44	127	iPd	00 07.60	0.4
	1.2s	1181.80nm			6.6mb
ROB	32.45	292	P	00 05.66	-1.4
CDF	32.48	300	P	00 06.50	-0.8
IMI	32.49	291	P	00 07.09	-0.4
DIX	32.55	295	ePd	00 07.30	-0.9
ECH	32.56	299	P	00 07.42	-0.6
RUP	32.59	302	ePd	00 08.82	0.6
MOF	32.60	299	P	00 07.48	-0.9
SAOF	32.72	291	P	00 09.40	0.0
ENR	32.78	292	P	00 09.35	-0.6
LSD	32.80	294	P	00 09.45	-0.9
WTS	32.80	306	ePd	00 11.00	1.0
	0.9s	231.00nm			6.0mb
			i	00 24.30	52km
			e	12 12.00	
AUTN	32.81	291	P	00 10.55	0.1
SBF	32.82	291	iPd	00 10.10	-0.2
BSF	32.83	299	P	00 09.37	-1.1
LOMF	32.84	298	P	00 09.36	-1.1
STV	32.84	292	P	00 09.45	-1.1
DOI	32.86	292	P	00 08.80	-1.9
EMS	32.88	295	ePd	00 09.80	-1.2
REVF	32.89	291	P	00 10.70	-0.2
AURF	32.89	291	P	00 11.07	0.1
TOUF	32.93	292	P	00 11.76	0.3
WIT	32.94	308	eP	00 12.00	0.8
			i	00 25.00	50km
PZZ	32.96	292	P	00 09.71	-1.9
MVIF	33.02	291	P	00 12.20	0.0
LPG	33.07	294	iPd	00 12.20	-0.6
	0.5s	68.30nm			5.7mb
HAU	33.12	299	iPd	00 11.90	-0.9
	0.8s	314.80nm			6.2mb
RRL	33.13	293	P	00 12.86	-0.3
AAE	33.13	204	iPd	00 15.70	2.2
			S	05 24.00	
WLF	33.18	302	iPd	00 14.40	1.1
FOUF	33.18	293	ePd	00 12.93	-0.4
			i	00 27.70	59km
BNI	33.18	294	P	00 12.88	-0.7
	0.5s	77.10nm			5.8mb
CALN	33.23	291	P	00 13.82	-0.2
MEM	33.27	304	iPd	00 15.27	1.3
			e	00 28.00	49km
ENN	33.32	304	iPd	00 15.40	0.9
	0.9s	265.00nm			6.1mb
			i	00 28.60	51km
			e	12 12.00	
VITF	33.35	299	P	00 14.21	-0.5
RGS	33.43	327	eP	00 14.00	-1.3
FRF	33.44	291	iPd	00 15.30	-0.3
NSS	33.46	330	eP	00 14.90	-0.7
LMR	33.57	290	iPd	00 16.30	-0.5
LRG	33 66	291	iPd	00 17.20	-0.3
	0.9s	102.30nm			5.7mb
LSA	33.71	96	P	00 19 60	0.9
N	10s	6.80um			
			S	05 39.60	
			SS	07 45.00	
DBN	33.82	306	eP	00 20.00	1.3
Z	20s	11.00um			5.6Msz
			eS	05 40.00	
BLS1	33.91	320	eP	00 20.40	0.7
ODD1	34.14	320	eP	00 22.40	0.8
TRO	34.15	340	iP	00 21.10	-0.3
DOU	34.18	303	Pd	00 12.90	-9.0X
	1.0s	102.80nm			5.7mb
			e	00 25.00	45km
			S	05 47.00	
SNF	34.37	304	iPd	00 24.24	0.7
			e	00 37.00	48km
MOL	34.50	325	iP	00 24.70	0.2
KMY	34.66	319	eP	00 26.40	0.5
HYA	34.68	323	eP	00 26.40	0.3
LOF	34.75	336	iPc	00 25.40	-1.3
GBA	34.78	132	P	00 29.00	1.6
LBF	34.81	297	iPd	00 26.90	-0.6
LOR	34.86	298	iPd	00 27.10	-0.7
	0.7s	103.30nm			5.9mb
BER	34.88	321	eP	00 26.50	-1.3
SMF	34.94	297	iPd	00 28.20	-0.4
ASK	34.97	321	eP	00 29.00	0.4
SSF	35.12	298	iPd	00 29.70	-0.4
PLDF	35.18	296	P	00 30.43	-0.3
AVF	35.26	297	iPd	00 31.00	-0.2
SUE	35.32	322	eP	00 31.70	0.1
AGO	35.51	296	P	00 33.30	-0.1
LBL	35.56	294	P	00 33.64	-0.1
BGF	35.63	297	iPd	00 34.00	-0.4
PYM	35.64	295	P	00 34.69	0.1
MAF	35.87	296	iPd	00 36.80	0.3
TCF	36.11	296	iPd	00 38.60	0.1
ETER	36.42	290	eP	00 40.00	-1.1
CAF	36.43	294	iPd	00 41.70	0.5
GTA	36.57	75	iPd	00 43.60	1.0
	1.2s	0 10nm			2.6mb X
Z	16s	39.10um			6.3MszX
			pP	00 50.00	22kmX
			PP	02 11.00	
			iS	06 23.00	
			SS	08 46.00	
LSF	36.58	297	iPd	00 42.40	0.0
RJF	36.75	295	iPd	00 44.50	0.7
ESEL	37.05	286	iPd	00 46.00	-0.4
LPO	37.09	294	iPd	00 47.00	0.3
	0.9s	93.00nm			5.7mb
LFF	37.36	295	iPd	00 49.40	0.5
LDF	37.37	301	iPd	00 48.90	0.0
KOD	37.56	136	iPd	00 52.00	0.8
	0.6s	480.00nm			6.6mb
FLN	37.58	301	iPd	00 51.00	0.3
	0.5s	45.50nm			5.7mb
MFF	37.67	297	iPd	00 51.30	-0.2
GRR	37.88	300	iPd	00 53.20	0.0
LPF	38.05	300	iPd	00 54.40	-0.3
EPF	38.05	292	iPd	00 53.60	-1.2
	0.6s	25.20nm			5.3mb
EDR	38.48	314	iPd	00 58.20	0.0
ESY	38.50	313	ePd	00 58.50	0.1
	0.8s	363.00nm			6.3mb
EBR	38.51	288	eP	00 59.00	0.4
			e	02 40.00	586kmX
			e	06 48.00	
ESCF	38.69	292	P	01 00.42	0.3
EDU	38.73	314	ePd	01 00.20	-0.1
	0.8s	343.00nm			6.3mb
EBL	38.74	312	ePd	01 00.50	0.1
	0.6s	296.00nm			6.3mb
LHE	38.76	292	P	01 00.80	-0.1
ATE	38.78	292	P	01 00.76	-0.1
EKA	38.81	312	P	01 01.00	0.1
	0.5s	80.20nm			5.8mb
MADF	38.85	292	P	01 00.19	-1.3
ISSF	38.86	292	P	01 01.74	0.1
BOH	38.99	292	P	01 02.92	0.1
EBH	39.00	313	ePd	01 02.40	-0.2
	0.7s	298.00nm			6.2mb
ELO	39.12	314	ePd	01 03.40	-0.1
ACU	39.89	285	eP	01 10.20	0.0
ETOR	40.37	289	eP	01 13.00	-1.1
LZH	40.70	79	ePd	01 18.43	1.5
	5.0s	2.84nm			3.3mb X
Z	16s	23.10um			6.1MszX
			pP	01 33.00	56km
			sP	01 39.00	
			ePP	02 58.74	
			PcS	07 04.00	
			S	07 22.50	
			sS	07 41.00	
			SS	10 17.00	
ETA	40.76	308	iPc	01 17.80	0.8
	0.7s	108.00nm			5.7mb
ETA	40.76	308	eP	01 30.00	13.0X
EALH	40.86	284	eP	01 18.20	0.1
DLE	40.90	309	eP	01 18.70	0.5
	0.6s	65.00nm			5.6mb
DLE	40.90	309	eP	01 32.60	14.4X
	0.8s	379.00nm			
ECP	40.91	307	iPd	01 18.50	0.2
	0.8s	242.00nm			6.0mb
ECP	40.91	307	eP	01 31.00	12.7X
DMU	41.06	310	eP	01 20.10	0.6
EVIA	41.39	286	iPd	01 23.00	0.4
KBS	41.87	349	iP	01 27.40	1.5
GUD	41.94	289	iPd	01 26.60	-0.5
EBAN	42.50	286	iPd	01 31.30	-0.3
AFC	42.65	284	iPd	01 32.00	-1.0
CRT	42.71	284	eP	01 36.40	3.0X
TAF	42.75	281	iPd	01 40.00	6.3X
ASMO	42.76	285	iPc	01 33.00	-0.8
CD2	42.79	86	iPd	01 35.00	0.9
	1.2s	0.60nm			3.2mb X
Z	22s	24.30um			6.1Msz
N	11s	17.50um			
			PP	03 16.00	
			iS	07 57.00	
			sS	08 12.00	
APHE	42.87	284	iPd	01 34.50	-0.2
ACHM	42.92	284	iPd	01 34.50	-0.5
EMEL	42.96	282	eP	01 35.00	-0.3
AAPN	43.06	285	iPd	01 34.70	-1.5
ALOJ	43.12	285	iPd	01 35.70	-1.1
ATEJ	43.12	284	iPc	01 35.50	-1.3
VAL	43.32	307	eP	01 38.00	0.1
			e	01 52.00	53km
			S	08 03.00	
EMON	43.35	294	iPd	01 39.00	0.6
NAI	43.48	202	iPd	01 53.80	13.9X
MAL	43.49	284	iPd	01 38.30	-1.3
			iPP	03 42.00	
			iS	08 02.00	
EPLA	43.52	289	iPd	01 40.00	0.2
ERUA	43.53	293	iPd	01 40.10	0.2
BTO	43.66	70	iPd	01 42.50	1.5
Z	17s	23.30um			6.2MszX
N	14s	15.10um			
			sP	01 58.00	
			PP	03 27.00	
			S	08 11.00	
			SS	11 21.00	
EHOR	43.70	286	iPd	01 41.00	-0.3
EPRU	44.01	285	iPd	01 42.20	-1.6
STS	44.37	294	iPd	01 47.30	0.7
EJIF	44.38	284	eP	01 45.30	-1.5
SRO	44.39	284	eP	01 46.00	-0.9
OJEN	44.57	284	eP	01 50.00	1.6
MOMI	44.62	284	eP	01 48.00	-0.8
HHC	44.68	69	iPd	01 50.00	0.7
Z	20s	27.10um			6.2Msz
			sP	02 06.00	
			PP	03 31.00	
			S	08 25.00	
EZAM	44.70	293	eP	01 50.00	0.7
NKM	44.74	283	iPd	01 49.00	-0.7
			i	01 53.00	13kmX
			i	02 05.00	
KMI	44.89	94	ePd	01 51.68	0.4
Z	26s	19.90um			5.9MszX
N	11s	5.90um			
			pP	02 23.00	139kmX
			sP	02 38.00	
			PcP	03 25.00	
			PP	03 38.50	
			eS	11 43.94	
EVAL	44.89	286	iPd	01 50.40	-0.5
PTO	44.96	292	eP	01 52.00	0.6
			eS	08 22.00	
XAN	45.33	79	iPd	01 54.60	0.1
IFR	45.33	280	iPd	01 55.00	0.3

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CHG     45.65 104 iPd    01 56.60  -0.5
        1.0s   187.50nm          5.9mb
                  eS     08 36.00
AKU     46.02 327 iP     02 01.20   1.8
        1.2s   406.25nm          6.2mb
                  i      02 14.70  50km
LIS     46.22 289 iPd    02 02.00   0.7
TIY     46.45  73 iPd    02 03.50   0.2
        0.6s     0.10nm          2.9mb X
                  sP     02 20.00
                  S      08 46.00
                  ScS    11 50.00
BNG     46.50 229 iPd    02 03.80   0 0
        0.8s   798.00nm          6.7mb
                  ic     03 26.60 421kmX
                  id     05 02.50
                  id     08 42.00
                  ic     09 23.80
BDT     46.67 105 iPd    02 04.90  -0.2
        0.9s   478.30nm          6.4mb
AVE     47.15 281 iP     02 09.50   0.7
                  i      02 21.00  41kmX
GYA     47.19  89 iPd    02 09.00  -0.4
        1.0s     0.10nm          2.7mb X
     Z  22s     13.30um          5.9Msz
     N  16s     19.90um
     E  16s      9.90um
                  PP     04 05.00
                  S      08 56.00
HIA     47.64  55 ePd    02 13.48   1.0
                  ePP    03 43.42
                  ePP    04 12.00
                  eS     09 06.95
                  e      09 12.00
                  eScS   12 00.76
                  eSS    12 39.92
REY     47.75 325 iP     02 27.80  14.7X
TIO     48.11 278 iPd    02 16.50   0.0
                  i      02 30.50  53km
                  i      02 41.00
BJI     48.25  68 ePd    02 18.09   0.8
                  eS     12 33.00
NST     48.50 106 iPd    02 21.80   2.4
LOE     48.59 103 eP     02 18.60  -1.6
NNT     50.23 109 iPd    02 32.60  -0.1
TIA     50.49  72 Pd     02 34.80   0.3
     N  13s      7.30um
     E  20s     20.10um
                  PcP    03 53.20
                  S      09 46.50
WHN     51.01  80 iPd    02 39.00   0.5
        1.2s     0.90nm          3.7mb X
     Z  20s     13.20um          6.0Msz
     N  10s      9.90um
     E  10s     10.20um
                  sP     02 53.40
                  PP     04 42.00
                  S      09 54.00
                  SS     13 26.00
DL2     52.57  67 Pd     02 50.00  -0.2
     Z  20s     12.70um          6.0Msz
     N  10s      8.40um
                  PcP    03 58.00
                  S      10 15.00
SNY     52.72  63 iPd    02 50.00  -1.3
        6.0s     1.00nm          3.0mb X
     Z  20s     28.50um          6.3Msz
                  sP     03 06.50
                  PP     04 53.50
                  iS     10 12.00
                  SS     13 48.00
CN2     53.19  60 iPd    02 54.00  -0.7
        4.0s     1.30nm          3.3mb X
     Z  14s     34.20um          6.6MszX
     N  10s     12.40um
     E  10s     15.30um
                  pP     03 03.50  31kmX
                  ePP    04 54.00
                  iS     10 19.00
                  ScS    12 39.00
NJ2     53.66  76 iPd    03 00.00   1.7
        1.0s     0.30nm          3.3mb X
     E  15s     12.20um
                  S      10 30.00
OIZ     53.75  95 eP     02 58.40  -0.7
     N  12s      2.90um
     E  13s      5.00um
                  pP     03 11.50  47km
                  sP     03 15.50
                  PcP    04 05.00
                  S      10 30.00
GZH     54.11  89 iPd    03 00.30  -1.4
        5.0s     2.40nm          3.5mb X
     Z  22s     19.00um          6.1Msz
     N  21s     21.60um
     E  22s     19.70um
                  sP     03 14.20
                  iS     10 34.50
SNG     54.57 113 ePd    03 04.10  -1.0
        1.5s   883.33nm          6.6mb
                  eS     10 42.00
MCO     54.81  90 eP     03 07.00   0.1
HKC     55.18  89 iP     03 09.60   0.0
                  S      10 52.00
MZZ     55.31 208 iPc    03 10.90   0.3
                  i      03 25.10  52km
                  i      04 11.00
MDJ     55.58  58 ePd    03 11.09  -1.1
     Z  20s     50.40um          6.6Msz
                  ePPP   06 24.42
                  eS     10 54.89
                  eScS   12 55.32
                  SS     14 40.00
TSI     55.79 118 eP     03 13.00  -1.0
GGC     55.84 280 iP     03 15.50   1.2
SSE     55.86  76 Pd     03 13.00  -1.4
        1.0s     0.53nm          3.5mb X
     Z  18s     12.70um          6.0Msz
     N  13s      5.80um
     E  14s      9.20um
                  pP     03 27.00  51km
                  sP     03 34.00
                  PP     05 17.00
                  S      10 58.50
                  sS     11 22.00
                  ScS    12 56.00
                  SS     14 45.00
CTFE    56.12 281 iPd    03 16.70   0.4
                  iPP    05 22.70
                  iS     11 04.50
IPM     56.69 115 ePd    03 19.80  -0.7
        1.2s   678.50nm          6.6mb
                  e      03 33.00  47km
QZH     57.11  84 Pd     03 22.00  -1.3
        4.0s     0.70nm          3.1mb X
     Z  18s     11.10um          6.0Msz
     N  15s      9.60um
                  sP     03 40.00
                  iS     11 15.00
TBT     57.26 282 iP     03 24.00  -0.4
                  iPcP   04 13.50
                  iPP    05 29.00
PTZ     57.40 204 iPc    03 26.00   0.5
                  i      03 41.00  55km
                  i      04 19.00
GDH     58.08 336 iPc    03 19.00 -10.5X
        0.8s    89.55nm
                  i      03 32.00  46km
                  e      05 14.00
                  i      11 11.00
KMZ     58.56 210 iPc    03 33.90   0.2
                  i      03 49.00  56km
                  i      04 43.20
ANP     59.20  82 eP-    03 39.00   0.9
                  eS     11 47.00
TATO    59.29  82 ePd    03 39.19   0.6
LSZ     59.39 207 iPd    03 40.00   0.6
                  i      03 56.00  60km
                  i      04 13.00
                  i      07 46.00
PPI     59.94 120 eP     03 42.00  -1.1
                  e      07 56.00
KGM     60.12 115 ePd    03 43.50  -0.8
KRI     60.37 205 iPd    03 53.00   7.0X
KIC     60.59 252 Pd     03 47.00  -0.6
TIC     60.60 253 Pd     03 47.00  -0.7
LIC     60.89 252 Pd     03 49.00  -0.6
     Z  20s      4.00um          5.6Msz
                  S      12 02.00
SHK     62.45  67 iPd    03 59.80  -0.1
        1.1s   632.91nm          6.7mb
YONJ    62.66  66 eP     03 59.20  -2.1
BAG     63.51  90 eP-    04 06.90  -0.5
        1.1s   281.01nm          6.3mb
                  eS     12 37.00
MBC     63.69 358 eP     04 08.00   0.5
        0.6s    55.00nm          5.8mb
TKSJ    63.70  67 eP     04 07.60  -0.6
SAP     63.80  55 eP     04 10.00   1.3
MRRJ    63.97  55 P      04 08.30  -1.5
ASAJ    64.06  53 P      04 09.30  -1.1
TSRJ    64.23  64 iPd    04 11.00  -0.6
AOMJ    64.50  58 eP     04 13.30   0.0
WKYJ    64.66  66 P      04 13.20  -1.3
MTMJ    64.92  62 P      04 15.20  -1.0
OCP     64.97  92 eP     04 11.00  -5.6X
MAT     65.21  62 iPd    04 15.90  -2.1
        1.2s   203.13nm          6.0mb
     Z  20s     14.18um          6.2Msz
                  eS     12 53.00
NIIJ    65.37  61 iPd    04 17.80  -1.1
HOOJ    65.38  55 P      04 17.70  -1.2
YAMJ    65.56  60 eP     04 19.20  -0.9
IIDJ    65.58  63 P      04 18.90  -1.5
KUSJ    65.87  53 P      04 20.50  -1.5
CHJJ    66.01  62 iPd    04 21.80  -1.3
OFUJ    66.14  58 eP     04 22.20  -1.6
TPI     66.54 116 ePd    04 25.70  -0.9
                  e      09 00.00
KKM     66.70 102 ePd    04 27.20  -0.6
        1.0s   114.90nm          5.9mb
                  i      05 14.00 199kmX
                  e      12 07.00
KAKJ    66.72  62 P      04 25.70  -1.9
BRW     66.95  10 eP     04 29.60   1.1
SLR     69.14 203 ePd    04 42.69  -0.1
        1.0s   492.00nm          6.4mb
     Z  20s     32.98um          6.6Msz
                  ePP    07 18.78
TSM     69.28 102 ePd    04 42.90  -0.8
PRY     70.51 203 iPc    04 50.10  -1.0
        1.0s   250.00nm          6.1mb
INK     71.74   2 iPd    04 56.60  -1.2
        1.0s   134.00nm          5.8mb
                  pP     05 10.00  46km
SCH     71.79 328 ePd    04 58.20  -0.2
        0.6s    51.00nm          5.6mb
                  pP     05 12.00  48km
IMA     72.25  11 iPd    05 01.50   0.4
        1.0s   125.00nm          5.8mb
BLF     72.93 203 iPc    05 06.50   0.9
        0.9s   369.23nm          6.3mb
DAV     73.11  95 eP     05 06.00  -0.8
TRT     73.52 115 iPd    05 07.70  -1.4
        0.9s   401.00nm          6.3mb
FRS     73.80 204 iPd    05 09.00  -1.3
        1.0s   340.00nm          6.2mb
PCI     74.00 105 ePd    05 11.60  -0.3
FBA     74.12   9 iPd    05 12.70   0.9
HVD     74.54 203 iPd    05 30.00  15.1X
        1.0s   420.00nm
TTA     74.83  13 ePd    05 16.90   0.8
SMY     74.86  32 e(P)   05 07.00  -9.3X
KHKI    76.06 114 ePd    05 21.00  -2.6
                  e      10 06.00
MNI     76.18 100 eP     05 24.60   0.2
TOA     77.02   9 iPd    05 29.90   1.5
PMR     77.15  10 iPd    05 29.60   0.6
        1.0s   400.00nm          6.4mb
     Z  20s     15.00um          6.3Msz
                  eS     15 14.00
CBM     78.06 323 P      05 35.70   1.3
CER     79.11 207 iPd    05 41.00   0.9
        0.3s    50.00nm          5.9mb
KDC     80.32  13 iPd    05 47.30   1.0
SDN     80.93  18 e(P)   05 49.90   0.3
HBVT    82.28 324 P      05 59.30   2.4
RSNY    82.79 324 P      06 01.20   1.6
        1.2s   157.92nm          5.9mb
     Z  22s     18.31um          6.4Msz
FFC     82.80 345 iPd    05 59.70   0.3
        0.7s   128.00nm          6.1mb
SIT     82.92   4 eP     06 01.50   1.6
KUG     82.98 110 ePd    06 06.00   5.2X
        1.0s   665.60nm          6.6mb
HRV     83.00 321 ePd    06 02.40   1.8
                  eSKS   16 17.12
                  eS     16 20.93
                  e      16 43.28
GUMO    83.71  78 eP     06 03.00  -1.6
        1.4s   261.54nm          6.1mb
```

17d 01h

GUA	83.77	78	eP	06	04.00	-1.0	ANMO	102.57	342	ePdiff	07	34.42	2.2X		1.2s	340.00nm							
	1.0s	80.00nm			5.7mb					eSKS	18	08.46		PPT	150.87	45	iPKP+	13	30.50	8.1X		
	Z 19s	5.14um			5.9Msz					eS	19	15.51			1.2s	415.00nm						
RSON	84.40	339	P	06	08.00	0.4				eSP	20	50.36			Z 21s	7.00um			6.4Msz			
	Z 22s	12.17um			6.2Msz		ALQ	102.57	342	iPdiff	07	33.80	1.5	PPN	150.91	45	iPKP	13	30.60	8.1X		
INY	85.33	324	iPd	06	13.50	1.1		1.1s	7.91nm			5.3mb			1.2s	210.00nm						
			(pP)	06	27.50	48km		Z 20s	13.30um			6.5Msz		PAE	150.94	46	iPKP	13	30.70	8.2X		
			SKS	16	32.00					pP	08	07.00			1.2s	360.00nm						
			S	16	44.00					sP	11	40.00		TVO	151.22	45	iPKP	13	31.50	8.5X		
			PS	17	09.00					PPS	20	51.50			1.2s	395.00nm						
			SS	23	30.00		GCC	102.93	355	e(Pdif	07	35.00	1.5		S.D. = 1.0 on 533 of 583 obs.								
			SSS	26	15.00		LLA	103.26	354	ePdiff	07	36.80	1.7										
PNJ	85.47	322	iP	06	14.90	1.8	PRI	103.71	354	e(Pdif	07	39.00	1.8		SEP 17, 1989 01h 21m 29.22± 0.20s								
EDM	86.06	351	iPd	06	16.90	1.0	CLC	103.72	351	ePdiff	07	39.00	1.8		40.243 N ± 3.6km 51.694 E ± 2.5km								
	0.7s	267.00nm			6.6mb		GSC	104.13	350	ePdiff	07	55.00	15.9X		DEPTH = 53.1km (5 depth phases)								
NANU	86.13	124	iPd	06	17.20	0.7	SBB	104.86	351	ePdiff	07	47.00	4.7X		5.0mb (43 obs.)								
	0.6s	132.00nm			6.3mb		TPC	105.21	350	ePdiff	07	43.00	-0.8		CASPIAN SEA							(338)	
TLE	86.76	100	ePd	06	21.00	1.2	TPC	105.21	350	ePKP	12	06.00	8.0X										
MBL	87.93	120	iPd	06	25.30	0.1	CTA	106.03	103	iPdiff	07	47.10	-0.6	TEH	4.50	183	ePc	22	36.00	-0.7			
SES	88.52	349	iPd	06	28.50	0.6		1.3s	31.73nm			6.2mb		TAB	4.70	244	eP	22	36.00	-3.5X			
	0.6s	209.00nm			6.6mb					iPP	12	09.00		SLY	6.74	229	eP	23	08.50	0.6			
CBN	89.13	322	eP	06	31.00	0.1				i	19	37.00		KER	6.92	213	eP	23	11.00	0.4			
MTN	90.25	107	eP	06	36.20	-0.1				i	27	15.00		MHI	7.29	120	ePn	23	12.00	-3.7X			
KNA	90.44	110	iPd	06	37.00	-0.1	PLM	106.06	350	ePdiff	07	50.00	2.2X		0.6s	160.00nm				5.9mb			
	1.1s	15.00nm			5.3mb		GLA	106.06	348	ePdiff	07	50.00	2.3X				eSn	24	26.00			
PNT	90.54	354	ePd	06	38.00	0.7	BAR	106.69	350	ePdiff	07	54.00	3.5X	MSL	7.74	243	eP	23	23.50	1.6		
			pP	06	54.00	55km	BAR	106.69	350	ePKP	12	05.00	4.2X	KVT	11.92	279	eP	24	19.00	0.1		
MEKA	90.93	125	eP	06	39.00	-0.2	RMQ	111.65	107	ePKP	12	11.00	0.7	KAS	13.63	281	eP	24	45.00	3.4X		
MRWA	91.22	128	eP	06	40.60	0.1	PPD	113.60	261	iPKPd	12	15.40	1.2	BBTK	14.51	275	iPd	24	53.00	-0.2		
MCW	91.37	356	P	06	42.30	1.1				e	12	21.70		HRI	14.55	246	eP	24	55.00	1.4		
PGC	91.43	357	eP	06	43.00	1.7	BRS	115.12	105	iPKPc	12	18.00	1.0	DSI	15.78	242	eP	25	10.00	0.6		
DPW	91.86	353	P	06	44.70	1.2				ipP	12	31.50		GPA	16.32	277	eP	25	17.00	0.7		
GMW	92.50	356	P	06	48.40	2.1				e(PP)	13	18.00		ALT	16.67	273	eP	25	20.30	-0.4		
RMW	92.53	356	P	06	47.40	0.8	TOO	115.47	119	ePKP	12	18.00	0.6	BCK	16.67	267	eP	25	20.00	-0.7		
BAL	92.65	129	eP	06	46.10	-0.9	BWA	115.81	114	ePKP	12	18.30	0.2	HRT	16.75	279	eP	25	21.20	-0.5		
LRM	93.20	349	eP	06	50.80	0.9				e	12	32.20		YLV	17.00	278	iP	25	24.80	-0.1		
LON	93.24	356	eP	06	50.00	0.2	COO	116.22	109	ePKP	12	19.00	0.0	MBH	17.26	238	eP	25	30.00	2.0		
RSSD	93.27	343	P	06	51.40	1.1	CAN	116.69	115	ePKP	12	19.70	-0.1	KHL	17.27	271	eP	25	26.40	-1.8		
MUN	93.34	130	iPd	06	49.30	-0.9				e	12	33.50		ELL	17.40	265	eP	25	30.80	0.9		
LHS	93.76	322	P	06	53.40	1.1	SNA	116.91	198	iPKPd	12	28.90	9.9X	PSN	17.81	289	iP	25	35.00	0.3		
SHW	93.82	356	P	06	53.20	0.6		0.9s	61.34nm					KCT	17.81	278	iP	25	34.80	0.0		
KLB	93.98	129	eP	06	52.00	-1.1	CCH	122.21	274	PKP	12	30.60	-0.5	CFR	17.97	294	iPd	25	35.00	-1.6		
TKL	94.12	325	P	06	54.70	0.7	DZM	122.48	93	iPKPc	12	31.90	0.7	BNT	18.13	278	iP	25	38.30	-0.4		
JSC	94.14	323	P	06	54.00	-0.1	ZOBO	123.05	276	PKP	12	33.20	0.2	EDC	18.17	278	iP	25	38.70	-0.5		
GBTN	94.31	325	P	06	55.00	0.1		1.1s	61.19nm					YER	18.53	268	eP	25	43.00	-0.6		
NWAO	94.62	130	eP	06	55.50	-0.5				eLR	50	48.00		JMB	18.96	285	iP	25	49.00	0.2		
	0.8s	42.00nm			5.9mb		LPB	123.19	276	PKP	12	35.00	1.9	EZN	19.42	277	iP	25	53.30	-0.5		
	Z 20s	2.60um			5.7Msz			1.0s	124.00nm					MLR	19.55	294	ePc	25	56.00	0.6		
SGS	94.68	321	P	06	58.00	1.4				LR	50	48.00		DIM	19.76	284	iPc	25	58.00	0.5		
PRM	94.81	323	P	06	58.20	1.0	CNCB	123.27	276	ePKP	12	30.00	-3.4X	PVL	19.87	287	iPc	26	00.00	1.4		
FVM	94.82	331	P	06	57.50	0.3				i	12	34.90		KDZ	19.88	283	iPd	25	59.00	0.3		
HBF	94.83	321	P	06	58.40	1.1	ARE	125.73	279	iPKPd	12	39.00	1.1	RZN	20.40	283	iPd	26	04.00	-0.3		
COOL	95.55	126	eP	06	59.00	-1.4		1.0s	99.00nm					PGB	20.75	285	iP	26	08.00	0.2		
WARB	95.90	119	iPd	07	02.60	0.5	NNA	126.88	287	iPKPc	12	40.50	0.6	MMB	21.14	283	iPd	26	12.00	0.2		
WB5	97.17	110	iPd	07	07.20	-0.7		1.2s	46.88nm					SRS	21.30	282	eP	26	14.00	0.7		
			i	07	21.70	49km	NNA	126.88	287	ePKP	12	36.76	-3.1X	VTS	21.45	286	iPd	26	15.00	0.0		
			i	11	05.80			1.2s	732.50nm					KKB	21.60	284	iPd	26	17.00	0.7		
WRA	97.19	110	Pd	07	07.60	-0.4	TCA	128.57	259	ePKPd	12	42.70	0.0	DEV	21.71	295	iPd	26	14.00	-3.3X		
	1.3s	117.80nm			6.3mb		MRA	129.92	258	ePKPd	12	45.90	0.8	KNT	21.81	282	eP	26	18.90	0.5		
GLD	97.70	342	P	07	11.60	1.1	SPA	130.01	180	ePKPd	12	43.50	-0.9	THE	21.83	280	eP	26	19.00	0.4		
	1.6s	106.48nm			6.1mb			1.0s	99.50nm					LIT	22.28	279	eP	26	24.30	1.2		
	Z 21s	13.86um			6.4Msz			Z 18s	3.61um			6.1Msz		SKO	22.81	284	eP	26	29.00	0.8		
GOL	97.78	342	P	07	11.30	0.3				i	13	00.00					i	26	30.00	4kmX		
	1.0s	48.25nm			6.0mb		MSZ	133.75	118	PKP	12	55.00	3.0X	OHR	23.39	282	eP	26	32.30	-1.6		
	Z 21s	13.02um			6.4Msz					PP	16	40.00			1.2s	1000.00nm				6.2mb X		
DAU	98.28	347	P	07	14.70	1.4	SAN	134.11	259	ePKP	12	53.50	0.4	KKS	23.56	285	eP	26	37.50	2.0		
TUL	98.58	334	iPd+	07	14.80	0.5	LNV	134.88	259	iPKPd	12	54.90	0.4	PHP	23.58	284	eP	26	37.10	1.4		
	1.0s	73.30nm			6.2mb		KRP	136.92	106	PKP	12	47.00	-11.2X	LSK	23.69	280	eP	26	40.20	3.3X		
	Z 21s	26.79um			6.7Msz					eSKP	16	26.50		BCI	23.79	286	eP	26	38.30	0.7		
			e	07	29.20	49km	SNZO	137.45	111	(PKP)	12	56.00	-3.1X	SPC	23.93	302	iP	26	40.50	1.3		
			LR	43	31.00					PP	15	56.00					i	27	40.00			
LBFM	98.63	355	P	07	16.30	1.6				PKS	16	44.00					i	28	45.00			
PDCR	98.63	261	eP	07	14.70	0.1				PPP	18	56.00		BERA	24.09	281	eP	26	41.10	0.5		
			e	07	31.40	58km	RAR	147.19	64	PKP	13	20.00	3.4X	LACI	24.13	284	iPd	26	41.50	0.5		
			e	07	39.20		PMO	149.59	40	iPKP	13	27.60	7.1X	SRN	24.20	279	iP	26	42.30	0.6		
			e	08	49.80			1.2s	225.00nm					KRA	24.28	304	eP	26	41.80	-0.7		
SIO	98.90	334	ePd	07	16.20	0.5				ipP	13	42.40					e	26	49.30	27kmX		
ASPA	99.25	113	iPd	07	16.60	-0.7	TPT	149.71	39	iPKP	13	27.80	7.1X	VLO	24.47	281	iP	26	45.30	1.0		
	1.2s	22.00nm			5.6mb			1.2s	360.00nm					SRO	25.02	299	iP	26	51.10	1.6		
			ipP	07	30.40	46km				ipP	13	42.60					e	56	03.60			
WDC	99.43	356	ePDIF	07	18.50	0.4	VAH	149.92	40	iPKP	13	28.00	7.0X	LCI	25.65	281	P	26	53.20	-2.3		
UYO	99.69	332	iPd	07	20.40	1.0		1.2s	195.00nm					ZST	25.86	299	iPd	26	58.00	0.7		
PMG	100.11	94	ePdiff	07	21.00	-0.5				ipP	13	42.80					e	56	06.50			
ORV	100.38	355	ePdiff	07	22.90	0.7	RUV	150.00	39	iPKP	13	28.40	7.3X	NUR	26.29	329	iP	27	01.60	0.4		
			eSKKP	23	37.20			1.2s	270.00nm						0.7s	34.70nm				5.0mb		
KVN	100.58	352	Pdiff	07	24.50	1.2				ipP	13	43.40					i	27	14.00	49km		
TNP	101.44	351	Pdiff	07	28.40	1.2	AFR	150.73	46	iPKP	13	30.10	7.9X	HVAR	26.36	288	iP	27	01.20	-0.8		

ZAG 26.54 294 eP 27 04.00 0.4
PTJ 26.56 294 eP 27 04.10 0.2
KSP 26.72 305 iP 27 05.80 0.6
0.7s 40.00nm 5.1mb
e 32 50.70
WMQ 26.85 70 iPd 27 07.00 0.5
TDS 27.00 280 P 27 08.00 0.1
VBY 27.06 293 ePd 27 08.90 0.6
SUF 27.21 334 iP 27 09.30 -0.2
0.3s 7.10nm 4.8mb
MGR 27.49 282 P 27 12.00 -0.3
LJU 27.55 295 eP 27 13.00 0.2
SGO 27.59 283 P 27 13.50 0.3
SOI 27.61 277 P 27 16.00 2.6
CEY 27.63 294 eP 27 14.50 0.9
RIY 27.68 293 eP 27 13.50 -0.4
PRU 27.71 303 P 27 14.50 0.3
VOY 27.99 295 ePd 27 17.00 0.1
DUI 28.02 285 P 27 15.20 -2.0
TRI 28.10 294 P 27 10.00 -7.7X
TRI 28.10 294 eP 27 17.50 -0.2
BRG 28.20 305 iP 27 19.20 0.6
1.4s 60.00nm 5.0mb
KHC 28.26 301 iPc 27 19.80 0.5
1.2s 15.00nm 4.5mb
e 27 32.10 48km
KBA 28.35 297 iPd 27 21.50 1.2
0.7s 32.50nm 5.1mb
i 27 25.00 12kmX
CLL 28.84 306 iPc 27 24.90 0.5
ARV 28.86 289 P 27 24.90 0.2
ASS 29.12 289 P 27 27.80 0.7
MNS 29.21 287 P 27 27.80 0.0
RDP 29.29 286 P 27 27.00 -1.6
CTI 29.55 295 P 27 31.00 0.0
OGA 29.95 296 iPd 27 34.30 -0.3
0.5s 53.00nm 5.5mb
SAL 30.37 294 P 27 45.00 7.0X
MME 30.39 291 P 27 39.00 0.5
BDI 30.48 291 P 27 38.40 -0.7
SOD 30.50 341 iP 27 38.70 -0.2
OSS 30.56 296 ePd 27 39.70 -0.2
PII 30.58 290 P 27 39.40 -0.5
HFS 30.80 323 eP 27 41.20 -0.4
0.8s 29.70nm 5.1mb
SAX 31.08 297 ePd 27 43.60 -1.0
BOB 31.21 292 P 27 45.60 0.0
LLS 31.34 297 ePd 27 45.70 -1.1
TOD 31.40 302 eP 27 47.12 0.0
TMA 31.48 295 ePd 27 47.30 -0.7
VAI 31.57 295 P 27 46.40 -2.2
SLE 31.63 298 ePd 27 48.10 -1.1
PCP 31.88 292 P 27 50.55 -0.8
FEL 31.95 299 P 27 50.88 -1.2
CVF 31.96 288 eP 27 52.10 0.0
0.5s 4.90nm 4.6mb
MMK 32.11 295 ePd 27 52.40 -1.2
ORO 32.15 294 P 27 52.00 -1.8
GWF 32.18 301 P 27 54.36 0.5
ABH 32.22 302 eP 27 55.52 1.3
KEV 32.29 344 iP 27 55.00 0.4
WLS 32.37 300 P 27 54.92 -0.7
ROB 32.39 292 P 27 55.16 -0.7
CDF 32.42 300 P 27 55.57 -0.5
IMI 32.44 291 P 27 55.98 -0.3
DIX 32.49 295 ePd 27 56.40 -0.6
HYB 32.50 127 eP 27 57.00 0.0
ECH 32.51 299 P 27 56.23 -0.6
RUP 32.53 302 eP 27 58.10 1.1
MOF 32.54 299 P 27 56.71 -0.5
ENR 32.72 292 P 27 58.24 -0.5
LSD 32.74 294 P 27 58.55 -0.6
WTS 32.75 306 eP 28 02.00 3.3X
0.7s 7.00nm 4.6mb
S8F 32.77 291 eP 27 58.70 -0.4
0.7s 11.00nm 4.8mb
BSF 32.77 299 eP 27 58.10 -1.1
0.9s 17.60nm 4.9mb
LOMF 32.78 298 P 27 58.67 -0.6
STV 32.79 292 P 27 58.44 -0.9
DOI 32.80 292 P 27 57.80 -1.7
PZZ 32.91 292 P 27 58.55 -1.9
LPG 33.02 294 eP 28 00.80 -0.8
0.7s 13.20nm 4.9mb
HAU 33.06 299 eP 28 00.90 -0.7
0.6s 56.60nm 5.6mb
RRL 33.07 293 P 28 01.72 -0.3

WLF 33.12 302 Pd 28 03.40 1.4
BNI 33.13 293 P 28 01.80 -0.6
MEM 33.21 304 Pc 28 04.60 1.8
ENN 33.26 304 e(P) 28 07.00 3.7X
1.0s 12.00nm 4.7mb
VITF 33.29 299 P 28 03.35 -0.2
RGS 33.37 327 iP 28 03.60 -0.5
FRF 33.38 291 eP 28 04.00 -0.4
0.6s 34.20nm 5.4mb
LMR 33.52 290 eP 28 05.40 -0.2
LRG 33.61 291 eP 28 05.80 -0.5
0.9s 22.90nm 5.1mb
TRO 34.09 340 iP+ 28 10.00 -0.2
DOU 34.12 303 P 28 12.90 2.2
0.6s 16.40nm 5.1mb
SNF 34.31 303 P 28 15.50 3.2X
L8F 34.75 297 eP 28 15.40 -0.9
0.7s 18.00nm 5.1mb
LOR 34.80 298 eP 28 15.60 -1.0
0.4s 7.60nm 5.0mb
GBA 34.84 132 Pd 28 16.40 -0.7
0.7s 10.70nm 4.9mb
SMF 34.89 297 eP 28 17.00 -0.4
0.7s 11.40nm 4.9mb
SSF 35.06 298 eP 28 18.30 -0.5
0.6s 7.20nm 4.8mb
AVF 35.20 297 eP 28 19.70 -0.3
0.9s 31.10nm 5.2mb
MAF 35.82 296 eP 28 25.30 0.0
0.7s 16.50nm 5.1mb
TCF 36.05 296 eP 28 27.30 0.1
0.6s 10.80nm 5.0mb
CAF 36.38 294 eP 28 30.20 0.2
0.6s 7.20nm 4.8mb
LSF 36.52 296 eP 28 31.20 0.0
0.7s 23.10nm 5.2mb
GTA 36.61 75 eP 28 32.30 0.2
RJF 36.69 295 eP 28 33.20 0.6
LPO 37.04 294 eP 28 35.80 0.3
LFF 37.30 294 eP 28 38.20 0.5
0.6s 33.10nm 5.4mb
LDF 37.31 301 eP 28 38.00 0.3
0.5s 11.60nm 5.1mb
FLN 37.53 301 eP 28 39.60 0.1
0.5s 12.20nm 5.1mb
MFF 37.61 297 eP 28 39.90 -0.4
0.5s 5.80nm 4.8mb
GRR 37.82 300 eP 28 41.90 -0.1
0.5s 13.70nm 5.1mb
LPF 37.99 300 eP 28 43.50 0.1
0.3s 3.40nm 4.8mb
EPF 38.00 292 eP 28 42.10 -1.5
EKA 38.75 312 Pd 28 49.70 0.0
0.5s 8.40nm 4.9mb
YRH 39.73 308 eP 28 59.00 1.1
ETA 40.70 308 eP 29 00.80 -5.0X
DLE 40.84 309 eP 29 08.10 1.1
ECP 40.86 307 eP 29 08.10 1.0
DMU 41.00 310 eP 29 09.70 1.4
EVIA 41.34 286 iPc 29 12.00 0.6
ENIJ 41.72 283 eP 29 13.50 -0.9
K8S 41.83 349 eP 29 20.80 6.0X
GUD 41.88 289 iPc 29 15.80 -0.1
E8AN 42.45 286 eP 29 20.00 -0.4
AFC 42.60 284 eP 29 20.60 -1.2
CD2 42.83 86 eP 29 24.10 0.5
EMON 43.29 294 eP 29 28.00 0.8
EPLA 43.46 289 iPc 29 29.00 0.4
EHOR 43.65 286 eP 29 29.80 -0.3
EJIF 44.33 284 eP 29 42.00 6.3X
NKM 44.69 283 iP 29 38.00 -0.5
i 29 39.00 3kmX
IFR 45.28 280 iP 29 44.00 0.5
XAN 45.36 79 iPc 29 44.00 0.0
CHG 45.70 104 eP 29 46.20 -0.5
TIY 46.47 73 Pc 29 53.60 0.8
BNG 46.49 229 iPd 29 52.60 -0.4
0.6s 19.00nm 5.2mb
ic 31 26.80 497kmX
BDT 46.72 105 eP 29 54.00 -0.8
GYA 47.23 89 P 29 58.20 -0.8
NST 48.55 106 eP 30 10.50 1.4
CN2 53.21 60 eP 30 43.80 -0.3
PSI 56.68 119 ePc 31 07.00 -2.7
e 33 00.00 589kmX
PTZ 57.42 204 iP 31 14.50 -0.4
e 31 30.00 58km

KMZ 58.58 210 iPd 31 23.00 0.0
i 31 38.10 56km
LSZ 59.41 207 iPc 31 29.10 0.4
i 31 44.00 55km
KIC 60.56 252 Pd 31 35.80 -0.8
0.6s 18.00nm 5.4mb
TIC 60.58 252 Pd 31 35.90 -0.8
0.7s 15.00nm 5.2mb
LIC 60.86 252 Pd 31 38.00 -0.7
MBC 63.65 358 eP 31 57.00 0.5
0.5s 6.00nm 4.9mb
INK 71.70 2 eP 32 46.00 -0.8
SCH 71.73 328 eP 32 47.00 -0.3
IMA 72.22 11 eP 32 50.30 0.1
FBA 74.08 9 eP 33 01.70 0.8
TOA 76.98 9 eP 33 18.70 1.2
PMR 77.12 10 eP 33 18.50 0.4
0.7s 17.10nm 5.2mb
KDC 80.29 13 eP 33 36.20 0.8
FFC 82.75 345 iPc 33 48.70 0.3
0.6s 11.00nm 5.1mb
SES 88.48 349 eP 34 17.00 0.1
PNT 90.49 354 eP 34 27.00 0.7
0.6s 4.00nm 5.0mb
ZOBO 123.01 276 ePKP 40 25.00 2.8X
LPB 123.15 276 PKP 40 24.00 1.8
CNCB 123.22 276 PKP 40 24.00 1.4
S.D. = 0.9 on 195 of 209 obs.

SEP 17, 1989 01h 50m 35.47± 0.45s
40.340 N ± 7.5km 51.847 E ± 7.2km
DEPTH = 33.0km (normal)
4.5mb (5 obs.)
CASPIAN SEA (338)

TAB 4.85 244 eP 51 48.00 -0.2
MHI 7.24 121 ePn 52 22.00 0.2
eSn 53 35.00
NUR 26.27 329 eP 56 09.00 -0.2
i 56 33.60
KSP 26.76 305 eP 56 14.30 0.5
e 56 26.80
SUF 27.17 334 eP 56 17.00 -0.4
BRG 28.24 305 iP 56 27.60 0.4
1.1s 12.00nm 4.5mb
KHC 28.31 301 eP 56 28.40 0.4
CLL 28.88 305 e(P) 56 50.00 17.0X
SOD 30.44 341 iP 56 47.20 0.5
HFS 30.79 323 eP 56 49.20 -0.7
0.5s 9.60nm 4.9mb
KEV 32.23 344 eP 56 56.00 -6.4X
GBA 34.82 133 P 57 25.00 -0.3
0.5s 3.20nm 4.5mb
EKA 38.77 312 P 57 58.00 -0.3
0.4s 2.80nm 4.4mb
BNG 46.65 229 ePd 59 02.70 0.0
0.7s 5.00nm 4.6mb
LIC 61.01 252 P 00 56.80 8.6X
S.D. = 0.4 on 12 of 15 obs.

? SEP 17, 1989 01h 52m 35.04± 2.32s
23.596 S ±19.7km 175.823 W ±31.6km
DEPTH = 33.0km (normal)
4.8mb (3 obs.)
TONGA ISLANDS REGION (174)

RAO 5.94 198 eP 54 03.00 0.0
eS 55 14.10
DZM 16.42 272 iPc 56 33.90 9.2X
BWA 32.93 243 eP 59 08.70 0.0
CTA 35.31 268 iPd 59 30.80 1.5
0.7s 13.70nm 5.0mb
WB5 46.23 265 eP 00 59.10 -0.1
WRA 46.24 264 Pc 00 58.50 -0.8
0.5s 1.80nm 4.3mb
MTN 51.26 272 eP 01 38.00 -0.1
WARB 51.89 254 eP 01 42.00 -0.8
SPA 66.55 180 e(P) 03 24.00 0.2
1.0s 10.00nm 4.9mb
KSP 151.22 344 ePKP 12 24.50 4.4X
e 12 31.30
CLL 151.50 348 ePKP 12 25.00 4.5X
1.7s 21.00nm
KHC 153.46 346 PKP 12 30.30 6.9X
S.D. = 0.9 on 8 of 12 obs.

SEP 17, 1989 02h 23m 06.86± 0.82s

17d 02h

45.306 N ± 8.9km 27.669 E ± 7.2km
DEPTH = 10.0km (geophysicist)
ROMANIA (358)

CFR	0.36	109	iPc	23 13.50	-0.8
BRD	0.48	296	eP	23 15.30	-1.4
TLB	0.76	160	iPc	23 22.50	0.8
ISR	0.81	258	iPc	23 23.00	0.4
VRI	0.87	311	eP	23 25.30	1.7
PPE	0.91	358	eP	23 24.50	0.2
MLR	1.23	279	eP	23 29.00	-0.8

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

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* SEP 17, 1989 03h 27m 25.07± 0.67s
40.309 N ± 9.3km 51.751 E ±11.9km
DEPTH = 33.0km (normal)
4.8mb (3 obs.)
CASPIAN SEA (338)

TEH	4.57	184	eP	28 35.00	1.1
TAB	4.77	244	e(P)	28 44.00	7.4X
MHI	7.29	121	ePn	29 12.00	0.0
			eSn	30 26.00	
SRO	25.02	299	i(P)	32 50.80	3.5X
ZST	25.87	299	iP	32 55.90	0.7
NUR	26.26	329	eP	32 59.00	0.3
KSP	26.72	305	eP	33 04.40	1.4
SUF	27.17	334	eP	33 05.80	-1.2
KHC	28.27	301	eP	33 18.00	0.8
SOD	30.45	341	eP	33 49.00	12.6X
HFS	30.77	323	eP	33 39.40	0.1
	0.8s	10.20nm			4.7mb
BNG	46.57	229	ePd	35 51.10	-0.6
	0.6s	6.00nm			4.7mb
KIC	60.63	252	P	37 34.30	-0.9
TIC	60.64	252	P	37 34.30	-1.0
LIC	60.93	252	Pd	37 36.40	-0.8
	0.7s	8.50nm			5.0mb

S.D. = 1.0 on 12 of 15 obs.

? SEP 17, 1989 03h 31m 51.84±24.27s
42.433 N ±108.km 129.906 W ±161.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)

BMW	6.26	48	eP	33 25.60	-0.9
RVW	6.34	52	eP	33 27.51	-0.1
VLMM	6.47	59	eP	33 29.35	-0.2
LVP	6.49	53	iP	33 29.74	-0.2
TOH	6.52	61	eP	33 30.19	-0.2
VBEM	6.57	64	eP	33 31.08	0.0
MTMW	6.59	54	eP	33 30.97	-0.3
ERK	6.66	52	eP	33 32.24	0.0
SHW	6.66	53	eP	33 32.49	0.2
VLL	6.67	60	eP	33 32.47	0.1
APW	6.68	48	eP	33 32.39	-0.1
HSR	6.68	53	eP	33 33.04	0.4
JLK	6.69	54	eP	33 32.66	0.1
STD	6.69	53	eP	33 32.75	0.0
YEL	6.70	53	eP	33 32.99	0.1
ESD	6.72	53	eP	33 33.27	0.2
CDFW	6.74	54	eP	33 32.98	-0.3
VFP	6.75	62	eP	33 33.94	0.4
TDL	6.76	52	eP	33 33.62	0.0
KOSW	6.83	51	eP	33 34.72	0.1
LMW	6.89	50	eP	33 35.27	-0.2
GULW	6.92	57	eP	33 35.99	0.1
ASR	7.03	55	eP	33 37.32	-0.1
VIPM	7.07	70	eP	33 37.80	-0.2
LON	7.21	50	eP	33 39.50	-0.4
GLK	7.23	52	eP	33 40.43	0.3
RVC	7.23	49	eP	33 40.46	0.3
WPW	7.33	52	eP	33 41.71	0.0
FMW	7.39	50	eP	33 42.59	0.0
GSM	7.48	48	eP	33 44.13	0.4
RMW	7.63	46	eP	33 46.06	0.3

S.D. = 0.3 on 31 of 31 obs.

? SEP 17, 1989 04h 05m 06.48± 1.63s
8.307 S ±15.6km 111.319 E ±18.2km
DEPTH = 136.1 ± 17.2 km
4.7mb (5 obs.)
JAVA (277)

TRT	1.43	65	iPc	05 36.00	1.4
			eS	05 57.10	
KHKI	4.24	91	iPd	06 09.10	-1.3
			iS	06 53.10	
			e	09 54.00	
TPI	6.61	326	ePd	06 50.00	7.5X
			e	09 40.00	
NANU	14.74	165	eP	08 29.00	-0.4
	0.3s	21.00nm			4.9mb
			eS	11 04.00	
MBL	15.19	148	eP	08 34.00	-1.1
			eS	11 08.00	
MEKA	19.45	160	eP	09 26.00	1.0
			e	09 33.00	
			eS	12 54.00	
MRWA	21.26	169	eP	09 59.00	15.8X
	0.3s	9.00nm			
			eS	13 39.00	
BAL	22.75	168	eP	10 18.50	20.8X
WARB	22.98	143	eP	10 21.10	21.1X
	0.3s	4.00nm			
			eS	14 14.00	
KLB	23.93	166	eP	10 32.00	22.8X
MUN	23.99	170	eP	10 34.50	24.8X
COOL	24.26	159	eP	10 34.00	21.6X
	0.3s	5.00nm			
			eS	14 45.00	
WB5	25.10	120	eP	10 21.20	0.9
WRA	25.10	120	Pc	10 19.90	-0.4
	0.5s	14.50nm			4.7mb
ASPA	26.48	128	iPd	10 32.50	-0.4
	0.4s	13.00nm			4.9mb
			e	11 10.60	
GBA	40.07	303	Pd	12 28.90	-1.3
	0.5s	1.80nm			4.1mb
SPA	81.75	180	e(P)	17 12.80	1.7
	0.5s	4.63nm			4.5mb

S.D. = 1.4 on 10 of 17 obs.

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* SEP 17, 1989 04h 14m 34.27± 0.72s
53.595 N ± 9.6km 163.704 W ± 8.2km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
UNIMAK ISLAND REGION (10)

SNKA	1.04	31	eP	14 52.37	-0.1
			eS	15 08.36	
DRRA	1.57	31	eP	14 59.22	-1.0
BALA	1.69	18	eP	15 04.03	2.1
DLG	1.90	34	eP	15 04.57	-0.3
PS4	2.06	31	eP	15 08.10	0.8
PVV	2.10	31	eP	15 09.19	1.4
			eS	15 33.80	
SASA	2.56	46	eP	15 14.19	-0.1
			eS	15 43.32	
NGI	2.57	54	eP	15 12.83	-1.7
SGB	2.72	43	eP	15 16.12	-0.4
			eS	15 47.90	
IVF	3.34	45	eP	15 24.71	-0.7
KDC	7.58	52	eP	16 20.00	-5.1X
ADK	8.06	263	eP	16 33.00	1.1
IMA	13.46	18	eP	17 40.00	-5.3X
FBA	13.90	29	e(P)	17 58.30	7.5X
INK	20.46	32	eP	19 10.00	-1.1
RMW	27.02	86	eP	20 15.50	0.5
LON	27.37	87	eP	20 19.00	0.9
PNT	27.46	81	eP	20 20.00	1.1
KVN	34.05	96	eP	21 17.50	0.0
GOL	41.21	85	eP	22 17.50	-0.1
MAT	43.13	271	(P)	22 31.00	-2.0
	0.8s	9.70nm			4.6mb
SOD	59.11	355	eP	24 45.00	11.8X
SUF	63.77	355	ePc	25 08.50	3.9X
	0.6s	3.50nm			4.6mb
HFS	66.60	1	eP	25 22.50	-0.3
	1.1s	12.90nm			4.9mb
KHC	77.62	2	P	26 37.00	8.6X
BUL	145.29	339	ePKP	34 12.40	2.2X

S.D. = 1.1 on 19 of 26 obs.

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* SEP 17, 1989 05h 00m 13.26± 1.19s
4.566 S ±17.8km 151.777 E ±18.3km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)
NEW BRITAIN REGION (192)

RAB	0.54	46	iP-	00 24.00	-0.2
			iS	00 38.00	
PMG	6.65	223	eP	01 52.00	-1.4
CTA	16.34	199	eP	04 09.00	4.5X
DZM	22.47	142	iPc	05 14.10	-0.2
BRS	22.72	178	eP	05 17.00	0.4
WB5	22.79	227	eP	05 18.80	1.4
WRA	22.85	227	P	05 21.00	3.0X
	0.8s	2.10nm			3.7mb

S.D. = 1.5 on 5 of 7 obs.

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* SEP 17, 1989 05h 23m 05.73± 0.88s
19.310 S ±15.5km 169.393 E ±13.1km
DEPTH = 232.9 ± 8.6 km
5.0mb (2 obs.)
VANUATU ISLANDS (186)

PVC	1.87	327	iP	23 45.80	-0.1
			iS	24 16.00	
DZM	3.89	225	iPc	24 08.10	0.0
			iS	24 57.60	
BRS	17.24	239	iPc	26 54.00	0.2
CTA	21.80	264	iPc	27 41.00	1.2
	1.1s	24.05nm			4.6mb
WRA	32.99	263	Pd	29 00.00	-20.9X
	0.8s	0.50nm			
ASPA	33.25	256	iPd	29 21.80	-1.4
	0.4s	39.00nm			5.4mb
GCC	85.50	48	e(P)	35 16.50	-2.1
PRS	85.61	49	eP	35 19.80	0.6
BRK	85.71	48	e(P)	35 19.90	0.3
SAO	85.76	49	eP	35 20.70	0.8
MHC	85.89	48	eP	35 20.90	0.2
WDC	86.81	45	eP	35 24.70	-0.2
ORV	87.02	46	eP	35 25.80	-0.1
FRI	87.10	49	eP	35 26.40	0.1
MIN	87.32	46	eP	35 27.00	-0.6
ISA	87.41	51	eP	35 28.00	0.0
SBB	87.47	52	eP	35 28.00	-0.3
BAR	87.49	54	eP	35 29.00	0.6
RVR	87.51	53	eP	35 28.00	-0.4
PLM	87.63	54	eP	35 29.00	-0.2
CLC	88.12	51	eP	35 32.00	0.6
TPC	88.56	53	eP	35 34.00	0.5
GLA	89.06	55	eP	35 36.00	0.2
NUR	131.85	337	ePKP	42 08.60	16.4X
	0.2s	1.10nm			
KHC	144.46	332	PKP	42 13.50	-2.1X
VBY	146.24	326	e(PKP)	42 18.80	0.1X
BNG	147.95	246	iPKPd	42 25.10	2.7X
	0.8s	11.00nm			
			ic	43 21.80	

S.D. = 0.8 on 22 of 27 obs.

SEP 17, 1989 05h 48m 01.89± 0.29s
61.435 S ± 5.3km 153.988 E ± 7.8km
DEPTH = 10.0km (geophysicist)
5.5mb (10 obs.) 5.9Msz (1 obs.)
BALLENY ISLANDS REGION (702)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 41C
Centroid Location:
Origin Time 05:48:15.6 0.3
Lat 61.02S 0.03 Lon 153.79E 0.05
Dep 15.0 FIX Half-duration 3.2
Moment Tensor; Scale 10**17 Nm
Mrr= 0.35 0.13 Mtt= 5.47 0.15
Mff=-5.82 0.16 Mrt= 0.86 0.40
Mrf=-0.60 0.50 Mtf=-4.39 0.15
Principal Axes:
T Val= 7.13 Plg= 8 Azm= 19
N 0.21 81 184
P -7.34 2 289
Best Double Couple:Mo=7.2*10**17
NP1:Strike= 64 Dip=82 Slip= 176
NP2: 154 86 8

DRV	8.06	223	eP	50 00.80	-0.8
SBA	17.00	171	iPd	51 57.20	-3.6X
	0.7s	268.49nm			5.5mb
MSZ	18.69	32	P	52 21.00	-0.9
MHZ	18.70	36	P	52 22.10	0.0
TCW	23.70	41	P	53 14.20	0.0
WEL	23.79	42	eP	53 16.30	1.2
MRW	23.81	41	eP	53 16.30	1.0
MOW	23.82	42	eP	53 15.20	-0.2
WDW	23.87	42	eP	53 15.80	-0.1
BLW	23.94	43	eP	53 16.80	0.2
TOO	24.47	344	e(P)	53 23.00	1.2
CNB	26.31	351	eP	53 40.00	0.8

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CAN     26.33 351 eP     53 41.00    1.7
                  eTT    19 00.00
KRP     27.10  40 e(P)   53 44.00   -2.3
BWA     27.26 350 eP     53 47.00   -0.9
                  eTT    19 45.00
SPA     28.73 180 ePc    54 01.70    0.6
        1.9s    520.83nm          6.0mb
COO     30.89 356 eP     54 20.00   -0.5
BRS     34.05 358 iPc    54 49.00    1.0
                  eS     00 25.00
RMO     35.12 352 eP     54 57.00   -0.2
QLP     35.46 345 eP     55 01.00    0.9
MAW     36.26 220 eP     55 08.00    1.6
WARB    39.78 320 eP     55 36.50    0.1
ASPA    40.19 331 iPd    55 40.20    0.4
        0.9s     30.00nm          5.0mb
                  iPcP   57 56.00
DZM     40.27  18 iPc    55 39.30   -1.3
CTA     41.66 349 iPc    55 53.00    1.1
        2.0s    294.12nm          5.7mb
                  iS     02 00.00
QIS     42.06 340 eP     55 54.90   -0.2
        1.0s     18.00nm          4.8mb
WRA     43.68 333 Pc     56 06.60   -1.7
        0.7s     28.90nm          5.2mb
WB5     43.74 333 eP     56 08.20   -0.6
                  e      57 55.50
MTN     51.27 331 eP     57 06.30   -1.4
        0.8s     86.00nm          5.7mb
PMG     52.17 351 eP     57 16.00    1.5
GUA     75.07 351 eP     59 45.50    0.2
        0.8s     53.73nm          5.6mb
GUMO    75.12 351 eP     59 45.90    0.3
        1.5s    135.14nm          5.8mb
PSI     76.47 303 e(P)   00 02.00    8.7X
                  e      01 30.00
PCH     78.63 143 ePd    00 05.30    0.1
SAN     78.74 143 eP     00 05.50   -0.2
PEL     79.02 143 iPd    00 07.00   -0.3
ROCH    79.09 143 eP     00 07.50   -0.4
HVD     79.26 223 eP     00 04.00   -4.8X
SNG     79.88 306 eP     00 10.90   -1.1
FRS     80.11 224 e(P)   00 19.50    6.4X
QCP     80.19 328 eP     00 11.50   -2.1
BAG     82.02 328 e(P)   00 13.00  -10.4X
TCA     82.40 147 ePd    00 25.00   -0.2
SLR     82.78 228 iPd    00 35.50    8.1X
    Z   20s      5.67um          5.9Msz
CHG     91.16 309 eP     01 10.00    2.2
CNCB    95.18 140 P      01 28.00    0.7
CCH     95.20 142 P      01 28.30    1.3
LPB     95.40 140 P      01 29.00    0.9
    Z   24s      2.33um          5.6MszX
                  eLR    33 00.00
ZOBO    95.64 140 P      01 28.20   -1.2
        1.2s     13.51nm          5.3mb
    Z   24s      1.38um          5.3MszX
                  LR     33 08.00
INK    139.49  33 ePKP   07 36.00    6.6X
KDZ    143.63 261 iPKPc  07 35.00   -2.6
RZN    143.99 260 iPKPd  07 36.00   -2.5
MMB    144.38 259 ePKPd  07 36.00   -2.9X
KKB    144.90 259 ePKPd  07 38.00   -1.8
PGB    144.91 261 ePKP   07 40.00    0.2
CFR    144.98 268 ePKPd  07 41.50    1.8
SOI    145.10 248 PKP    07 42.50    2.4X
GMB    145.26 247 PKP    07 52.60   11.9X
        0.4s     16.90nm
OHR    145.38 256 ePKP   07 40.50   -0.2
VTS    145.40 260 ePKP   07 40.00   -0.8
GRI    145.54 249 PKP    07 42.68    1.7
        0.7s     28.80nm
SKO    145.75 257 ePKP   07 40.00   -1.2
MCT    145.79 244 PKP    07 41.30   -0.3
MCT    145.79 244 PKP    07 51.84   10.2X
        1.1s     68.50nm
GIB    145.92 245 PKP    07 49.50    7.8X
LPI    145.94 247 PKP    07 50.43    8.8X
LCI    146.08 252 PKP    07 53.50   11.8X
VRI    146.17 267 ePKP   07 43.00    1.2
TDS    146.27 249 PKP    07 44.00    1.9X
MLR    146.27 266 ePKP   07 43.00    0.9
MGR    147.01 249 PKP    07 45.00    1.7
TIO    147.09 211 ePKP   07 47.00    3.1X
                  i      07 49.00
                  i      08 08.50
SGO    147.46 249 PKP    07 47.43    3.5X
        0.8s     16.20nm
MBC    147.64  27 ePKP   07 45.00    1.8X
        0.7s     24.00nm
DEV    148.01 264 ePKPc  07 53.50    8.8X
BZS    148.43 262 ePKP   07 49.00    3.7X
DUI    148.73 250 PKP    07 58.47   12.4X
        0.4s      6.20nm
IFR    148.99 215 ePKP   07 52.00    5.1X
                  i      07 57.00
TAF    149.40 220 ePKP   08 04.00   16.6X
AZI    149.45 249 PKP    07 53.00    6.0X
RDP    149.58 248 PKP    07 54.00    6.6X
MNS    150.10 248 PKP    07 52.70    4.6X
ASS    150.65 249 PKP    07 55.00    6.1X
ARV    150.86 250 PKP    07 56.00    6.8X
ARV    150.86 250 PKP    08 04.17   15.0X
        0.7s     10.30nm
NKM    150.89 216 ePKP   08 01.00   11.6X
PTJ    151.31 257 ePKP   07 43.60   -6.3X
VBY    151.34 255 e(PKP)08 04.10   14.3X
SRO    151.59 262 ePKP   08 10.60   20.5X
APHE   151.77 220 ePKP   07 58.00    7.1X
ATEJ   151.84 219 ePKP   07 55.50    4.5X
CVF    151.92 244 ePKP   08 06.20   15.4X
        0.8s      8.00nm
AAPN   152.23 220 ePKP   07 57.00    5.5X
VOY    152.37 255 e(PKP)08 04.10   12.7X
CTI    153.41 252 PKP    07 52.00   -0.9
KHC    154.76 259 ePKP   08 08.00   13.5X
                  e      08 27.50
LPG    155.18 245 ePKP   08 11.50   16.0X
BRG    155.77 262 ePKP   08 17.40   21.6X
      S.D. = 1.2  on  57 of  98 obs.
-------------------------------------
%  SEP  17, 1989  07h 29m 03.74± 0.76s
   39.735 N ± 7.9km   27.655 E ± 8.2km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                          (366)

EDC      0.63  15 iPg    29 16.70    0.3
                  eSg    29 24.70
BNT      0.65  18 iPg    29 16.90    0.1
KCT      0.74  46 iPg    29 17.80   -0.5
EZN      1.03 276 ePn    29 23.00   -0.2
IZM      1.37 193 ePn    29 29.00    0.1
YLV      1.56  57 iPn    29 31.80    0.2
      S.D. = 0.4  on   6 of   6 obs.
-------------------------------------
%  SEP  17, 1989  08h 24m 04.68± 0.94s
   36.608 N ± 9.6km  139.258 E ±11.2km
   DEPTH =  33.0km  (normal)
 HONSHU, JAPAN                   (227)

CHJJ     0.60 201 iPd    24 16.70    0.0
                  S      24 26.10
NIIJ     0.66 342 P      24 16.00   -1.6
                  S      24 24.00
KAKJ     0.84 118 P      24 19.60   -0.5
                  S      24 31.00
MAT      0.85 266 iPd    24 20.80    0.6
                  iS     24 32.20
IIDJ     1.57 224 P      24 34.40    3.8X
YAMJ     1.68  21 eP     24 33.60    1.4
      S.D. = 1.6  on   5 of   6 obs.
-------------------------------------
&  SEP  17, 1989  08h 47m 16.90s
   47.340 N          113.870 W
   DEPTH =  19.0km
 MONTANA                         (456)
      <BUT>. ML 3.6 (BUT). A second
      event, ML 3.6, followed 35.4
      seconds later.


DMMT     0.92 121 iP     47 33.40   -0.8
HRY      1.53 114 iPc    47 43.70    0.2
BUT      1.60 145 ePg    47 47.20    2.6
                  eSn    48 06.30
                  eSg    48 06.80
LRM      1.81 147 ePn    47 47.30   -0.3
LCCM     2.04 137 ePn    47 50.60   -0.2
SXM      2.18 122 ePn    47 52.60   -0.4
MEMT     2.65 130 ePn    47 58.80   -0.9
DPW      2.98 282 eP     48 03.50   -0.6
PNT      4.31 299 eP     48 28.00    4.9
EDM      5.90   3 eP     48 43.00   -2.4
      10 obs. associated
-------------------------------------
&  SEP  17, 1989  09h 01m 48.98s
   60.820 N          144.710 W
   DEPTH =   2.0km
 SOUTHERN ALASKA                 (  2)
      <AGS-P>.

CVA      0.58 242 eP     02 01.13    0.6
                  eS     02 10.91
HIN      0.98 245 eP     02 05.88   -2.5
                  eS     02 21.66
WAX      0.99 111 iP     02 07.66   -0.9
                  iS     02 22.64
SNH      1.13 124 eP     02 08.57   -2.3
                  eS     02 24.22
CYK      1.33 123 eP     02 11.61   -2.6
                  eS     02 29.83
      5 obs. associated
-------------------------------------
   SEP  17, 1989  09h 39m 04.69± 0.23s
   40.259 N ± 4.8km   51.652 E ± 3.1km
   DEPTH =  33.0km  (normal)
   5.1mb ( 40 obs.)
 CASPIAN SEA                     (338)

TEH      4.52 183 eP     40 14.00    1.3
TAB      4.68 244 eP     40 16.00    1.0
SLY      6.73 228 ePnd   40 46.50    2.8X
                  eSn    42 02.00
                  e      42 28.00
MHI      7.33 120 iPnd   40 51.60   -0.6
                  eSn    42 05.00
MSL      7.72 243 ePc    40 38.00  -19.7X
BHD      9.08 222 eP     41 28.00   11.5X
KAS     13.60 280 ePg    42 22.00    4.4X
                  iSg    42 27.00
BBTK    14.48 274 eP     42 31.00    1.8
QUE     16.02 124 eP     42 52.80    3.6X
                  eS     48 32.00
GPA     16.29 277 eP     42 56.80    4.3X
ALT     16.63 273 eP     42 57.20    0.2
BCK     16.64 267 eP     42 58.00    1.0
YLV     16.97 278 iP     43 03.40    2.3
KHL     17.24 271 eP     43 03.80   -0.7
ELL     17.37 265 eP     43 08.00    1.8
KSL     17.82 264 eP     43 12.60    0.9
CFR     17.93 294 eP     43 10.00   -3.0
KSH     18.69  85 eP     43 22.00   -0.5
JMB     18.93 285 eP     43 26.00    0.7
VRI     19.02 295 ePd    43 16.00  -10.3X
EZN     19.38 277 iP     43 30.30   -0.3
PTT     19.43 298 eP     43 30.00   -1.1
MLR     19.52 294 iP     43 33.00    0.8
PRK     19.53 275 eP     43 32.40    0.2
DIM     19.73 284 eP     43 35.00    0.6
PVL     19.83 287 iPc    43 36.00    0.6
KDZ     19.84 283 iPc    43 36.00    0.4
KAP     19.86 264 eP     43 34.60   -1.1
CMP     20.13 293 eP     43 38.00   -0.6
RZN     20.36 283 iPd    43 41.00   -0.2
APE     20.62 270 eP     43 44.00    0.2
PGB     20.71 285 iPc    43 45.00    0.3
MMB     21.11 283 iPd    43 49.00    0.3
VTS     21.42 286 iPc    43 52.00    0.1
PLG     21.48 279 eP     43 53.10    0.7
DEV     21.67 295 ePd    43 51.00   -3.3X
VAM     22.18 266 eP     43 58.60   -0.8
BZS     22.56 294 eP     44 03.50    0.5
KZN     22.75 280 eP     44 06.00    0.9
SKO     22.77 284 eP     44 06.20    0.9
                  i      44 07.70    5kmX
ITM     23.35 272 eP     44 10.10   -0.8
BEO     23.35 292 eP     44 11.00    0.2
OHR     23.36 282 iP     44 12.60    1.6
        1.3s    100.00nm          5.2mb
PHP     23.55 284 iPd    44 14.10    1.4
LSK     23.66 280 iPd    44 15.80    1.8
BCI     23.75 285 eP     44 16.30    1.6
SPC     23.89 302 iP     44 17.70    1.5
                  i      44 24.00   22kmX
PSZ     23.93 299 eP     44 18.10    1.5
TIR     24.02 283 eP     44 17.70    0.4
VLS     24.10 275 eP     44 18.30    0.2
LACI    24.10 284 eP     44 18.10    0.0
SRN     24.16 279 eP     44 19.70    1.0
SDA     24.21 285 eP     44 19.40    0.3
KRA     24.25 304 ePc    44 19.90    0.4
        1.0s     62.00nm          5.1mb
```

```
                    e     44 26.60   24kmX
KEK    24.35 279 eP     44 20.80     0.2
SRO    24.98 299 iP     44 28.70     2.2
LCI    25.62 281 P      44 30.00    -2.6
ZST    25.83 299 eP     44 34.30    -0.2
                 i      44 48.00   56kmX
NUR    26.26 329 iP     44 38.60     0.3
       0.7s   25.40nm             4.9mb
                 i      44 44.40   21kmX
HVAR   26.32 288 iP     44 38.20    -0.9
ZAG    26.50 294 eP     44 42.00     1.3
PTJ    26.52 294 eP     44 40.80    -0.2
KSP    26.69 305 eP     44 42.50     0.1
       0.8s   38.00nm             5.1mb
                 id     44 43.30    3kmX
                 ic     44 56.70
                 e      50 05.30
WMQ    26.87  70 P      44 47.50    3.3X
TDS    26.97 280 P      44 50.00    4.9X
VBY    27.02 293 eP     44 46.50     1.0
SUF    27.18 334 eP     44 47.00     0.3
MGR    27.46 282 P      44 49.20    -0.3
LJU    27.51 295 eP     44 50.80     0.8
SGO    27.55 283 P      44 55.00    4.7X
SOI    27.57 277 P      44 49.00    -1.5
CEY    27.60 294 eP     44 51.50     0.8
PRU    27.68 303 eP     44 51.50     0.1
VOY    27.96 295 iP     44 54.30     0.2
TRI    28.06 294 eP     44 54.90     0.0
BRG    28.16 305 iP     44 56.80     1.0
       1.2s   54.00nm             5.1mb
                 i      45 09.80   52kmX
RBL    28.17 295 P      44 56.80     0.5
KHC    28.23 301 iPd    44 56.70     0.3
       1.2s   19.00nm             4.7mb
KBA    28.32 297 eP     44 57.00    -0.4
       0.7s   32.50nm             5.1mb
                 id     44 58.20    4kmX
BHG    28.64 298 iPd    45 00.40     0.3
AZI    28.69 286 P      45 01.00     0.5
CLL    28.81 306 iPd    45 01.90     0.4
       1.2s   24.00nm             4.8mb
ARV    28.83 289 P      45 00.60    -1.3
ASS    29.09 288 P      45 05.00     0.8
HOF    29.41 303 iPc    45 07.80     0.7
CTI    29.52 295 P      45 07.50    -0.7
OGA    29.91 296 iPc    45 11.20    -0.6
       0.7s   57.00nm             5.5mb
SAL    30.33 294 P      45 16.00     0.8
MME    30.35 291 P      45 15.10    -0.6
BDI    30.44 291 P      45 16.00    -0.3
SOD    30.47 341 iP     45 16.30     0.1
PII    30.54 290 P      45 16.70    -0.4
HFS    30.76 323 eP     45 17.50    -1.4
       0.6s   32.50nm             5.3mb
MDI    30.89 294 P      45 19.00    -1.1
BOB    31.18 292 P      45 22.50    -0.3
TOD    31.36 302 ePd    45 24.66     0.3
VAI    31.53 295 P      45 22.00    -3.8X
PCP    31.84 292 P      45 27.67    -0.9
FEL    31.92 298 eP     45 28.78    -0.5
CVF    31.92 288 eP     45 28.60    -0.7
       0.8s   10.70nm             4.8mb
GWF    32.14 301 P      45 31.60     0.5
ABH    32.18 302 ePd    45 32.32     0.8
KEV    32.27 344 eP     45 32.00     0.1
                 e      45 40.00   28kmX
WLS    32.33 300 P      45 32.01    -0.8
ROB    32.36 292 P      45 32.08    -1.0
CDF    32.39 300 P      45 32.48    -0.9
IMI    32.40 291 P      45 32.80    -0.7
ECH    32.47 299 P      45 33.42    -0.6
RUP    32.50 302 eP     45 34.89     0.6
MOF    32.51 299 P      45 34.00    -0.4
HYB    32.54 127 eP     45 35.50     0.6
ENR    32.69 292 P      45 35.05    -0.9
LSD    32.70 294 P      45 36.08    -0.3
SBF    32.73 291 eP     45 35.80    -0.6
       0.9s   24.20nm             5.1mb
BSF    32.74 298 P      45 35.78    -0.7
LOMF   32.75 298 P      45 35.30    -1.2
STV    32.75 292 P      45 35.26    -1.3
DOI    32.77 292 P      45 34.50    -2.2
PZZ    32.87 292 P      45 35.36    -2.3
LPG    32.98 294 eP     45 37.90    -0.9
       0.6s   12.00nm             5.0mb
HAU    33.03 299 eP     45 37.90    -0.9

       0.8s    88.60nm             5.7mb
RRL    33.03 293 P      45 38.64    -0.6
WLF    33.09 302 Pc     45 41.00     1.7
FOUF   33.09 292 eP     45 39.54     0.2
BNI    33.09 293 P      45 37.50    -2.1
VITF   33.26 299 P      45 40.64    -0.1
FRF    33.35 291 eP     45 41.10    -0.5
       0.7s    44.90nm             5.5mb
LMR    33.49 290 eP     45 42.30    -0.5
LRG    33.57 291 eP     45 43.10    -0.4
       0.9s    20.90nm             5.1mb
DOU    34.09 303 Pc     45 49.60     1.7
       0.8s    10.00nm             4.8mb
                 e      46 08.40   79kmX
                 e      47 02.30
LBF    34.72 297 eP     45 52.60    -0.9
       0.8s    30.80nm             5.3mb
LOR    34.77 298 eP     45 52.70    -1.2
       0.8s    23.30nm             5.2mb
SMF    34.85 297 eP     45 54.10    -0.5
       0.8s    17.90nm             5.0mb
GBA    34.87 132 Pd     45 54.50    -0.5
       0.8s    13.80nm             4.9mb
SSF    35.03 297 eP     45 55.40    -0.7
       0.9s    18.00nm             5.0mb
AVF    35.17 297 eP     45 57.00    -0.2
       0.9s    41.60nm             5.4mb
BGF    35.54 297 eP     46 00.10    -0.4
       0.7s    12.50nm             5.0mb
MAF    35.78 296 eP     46 02.60     0.1
       0.7s    20.20nm             5.2mb
TCF    36.02 296 eP     46 04.50     0.0
       0.8s    21.40nm             5.1mb
CAF    36.34 294 eP     46 07.40     0.1
       0.7s    13.60nm             5.0mb
LSF    36.49 296 eP     46 08.30    -0.2
       0.7s    32.40nm             5.3mb
GTA    36.63  75 eP     46 10.30     0.4
RJF    36.66 295 eP     46 10.50     0.6
       1.0s    21.60nm             5.0mb
LPO    37.00 294 eP     46 12.80     0.0
       0.7s     6.60nm             4.6mb
LFF    37.26 294 eP     46 15.40     0.5
       0.7s    53.70nm             5.5mb
LDF    37.27 301 eP     46 14.70    -0.3
FLN    37.49 301 eP     46 16.60    -0.2
       0.8s    18.80nm             5.0mb
MFF    37.58 297 eP     46 17.10    -0.4
       0.8s    13.40nm             4.9mb
GRR    37.79 300 eP     46 19.10    -0.2
       0.8s    18.80nm             5.0mb
LPF    37.96 300 eP     46 20.60    -0.1
EPF    37.96 291 eP     46 20.00    -0.9
       0.7s     3.30nm             4.3mb
EKA    38.72 312 Pc     46 27.40     0.4
       0.6s     8.50nm             4.7mb
CD2    42.86  86 eP     47 02.20     0.7
BTO    43.71  70 eP     47 09.40     1.1
XAN    45.39  79 P      47 21.50    -0.4
BNG    46.48 229 iPc    47 30.10    -0.5
       0.8s    66.00nm             5.6mb
                 ic     47 45.80   61kmX
WHN    51.07  80 eP     48 06.00     0.1
CN2    53.23  60 eP     48 24.00     2.0
PSI    56.72 119 eP     48 45.90    -1.7
                 e      50 00.00  346kmX
KRI    60.39 204 iPc    49 14.00     0.8
KIC    60.54 252 P      49 13.00    -1.2
       0.6s    29.00nm             5.6mb
TIC    60.55 252 P      49 13.10    -1.2
LIC    60.84 252 Pc     49 15.20    -1.1
MAT    65.25  62 eP     49 50.00    4.7X
       0.8s     5.22nm             4.7mb
SLR    69.17 203 iPc    50 10.00     0.0
       1.0s    30.00nm             5.3mb
PRY    70.53 203 eP     50 15.00   -3.3X
INK    71.69   2 eP     50 27.00     2.4
FRS    73.82 204 iPd    50 37.40    -0.1
EDM    86.00 351 ePd    51 43.30     0.6
ZOBO  122.97 276 PKP    58 00.00    -0.1
LPB   123.11 276 ePKP   58 03.00    2.8X
CNCB  123.19 276 PKP    58 01.50     1.0
SPA   130.07 180 e(PKP)58 10.50    -1.3
       1.0s     5.00nm
     S.D. = 1.0  on 158 of 173 obs.
-----------------------------------------
• SEP 17, 1989  10h 07m 04.98± 0.93s

   21.812 S ±12.6km   66.315 W ±19.0km
   DEPTH = 118.1 ± 49.7 km
  SOUTHERN BOLIVIA                   (125)

SLA     3.00 166 iPd    07 52.00    -0.1
CCH     4.41   2 P      08 11.30     0.0
CNCB    5.22 342 P      08 24.20     1.6
                 S      09 48.00
LPB     5.52 342 P      08 26.00    -0.5
                 S      09 54.00
ZOBO    5.77 342 iPd    08 28.80    -1.4
                 S      09 55.50
ARE     7.23 317 eP     08 50.00     0.2
                 eS     10 35.00
ITB1   11.32 107 Pc     09 45.30     0.9
ITB7   11.62 109 Pc     09 47.50    -0.8
     S.D. = 1.3   on   8 of   8 obs.
-----------------------------------------
   SEP 17, 1989  12h 01m 31.80± 0.33s
   79.081 N ± 4.7km    2.626 E ± 5.8km
   DEPTH =  10.0km  (geophysicist)
   4.8mb ( 26 obs.)
  GREENLAND SEA                      (640)
      CENTROID, MOMENT TENSOR        (HRV)
      Data Used: GDSN
      L.P.B.: 12S, 23C
      Centroid Location:
      Origin Time         12:01:39.1 0.9
      Lat 79.03N 0.13 Lon    2.20E 0.30
      Dep  15.0 FIX Half-duration    1.6
      Moment Tensor;    Scale 10**16 Nm
        Mrr=-3.79 0.37  Mtt= 0.97 0.47
        Mff= 2.82 0.30  Mrt= 0.00 0.00
        Mrf= 0.00 0.00  Mtf= 2.32 0.38
       Principal Axes:
        T  Val=  4.40   Plg= 0   Azm=124
        N       -0.61        0        34
        P       -3.79       90       180
      Best Double Couple:Mo=4.1*10**16
       NP1:Strike=214 Dip=45 Slip= -90
       NP2:        34     45      -90
KBS     1.79  91 iP+    02 01.00    -1.9
                 iS     02 19.00
DAG     5.03 253 iP-    03 50.00   61.1X
KEV    11.27 133 eP     04 14.00    -1.7
                 e      04 26.00
SOD    13.45 137 iP     04 43.40    -1.4
                 i      04 54.00
GDH    17.25 267 ePd    05 16.00  -17.7X
       1.0s     90.00nm
                 i      05 24.00
                 e      10 45.00
SUF    17.87 143 eP     05 40.50    -1.0
       0.7s      7.60nm            3.9mb
NB2    18.32 167 P      05 45.90    -1.3
       1.4s     22.80nm            4.1mb
HFS    19.35 163 eP     05 59.50    -0.3
       0.6s     17.70nm            4.5mb
NUR    19.86 147 iP     06 05.90     0.6
       0.7s     17.40nm            4.5mb
     Z  20s      0.60um           4.0Msz
                 e      06 15.00
                 LR     12 30.00
WTS    27.24 174 eP     07 23.00    5.7X
       1.0s     15.00nm            4.7mb
                 e      08 05.00
CLL    28.13 166 iPc    07 26.10     0.8
       1.7s     29.00nm            4.8mb
                 e      07 37.00
ENN    28.45 176 e(P)   07 29.00     0.7
       0.9s     12.00nm            4.7mb
                 e      07 40.00
                 e      08 08.50
BRG    28.61 165 e(P)   07 30.70     1.0
       1.4s     24.00nm            4.8mb
                 e      07 40.00
KSP    28.76 162 eP     07 32.70     1.6
                 ed     07 42.80
PRU    29.52 164 eP     07 39.00     1.1
KRA    29.79 157 ePc    07 41.20     0.9
       1.3s     77.00nm            5.4mb
                 e      07 51.70
KHC    30.33 166 P      07 47.10     2.0
LDF    30.62 184 eP     07 46.00    -1.7
INK    30.66 330 eP     08 04.00   16.1X
SPC    30.68 157 iP     07 50.00     1.6
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		e	08	00.00		
CDF	30.83	174	eP	07	49.40	-0.2
GRR	30.84	185	eP	07	48.20	-1.3
HAU	31.23	175	eP	07	52.80	-0.2
ZST	31.45	161	eP	07	56.00	1.0
SRO	31.91	160	eP	08	01.50	2.5
LOR	31.94	178	eP	07	58.20	-1.0
	0.8s	8.00nm			4.7mb	
SSF	32.14	179	eP	08	00.50	-0.5
	0.7s	3.70nm			4.4mb	
LBF	32.22	178	eP	08	00.90	-0.9
	0.8s	9.40nm			4.8mb	
AVF	32.41	179	eP	08	02.70	-0.6
	1.2s	24.90nm			5.0mb	
SMF	32.56	178	eP	08	03.60	-1.1
MFF	32.62	184	eP	08	04.20	-0.9
BGF	32.64	180	eP	08	04.90	-0.5
	1.1s	36.60nm			5.2mb	
TCF	32.91	181	eP	08	07.00	-0.8
	1.0s	16.00nm			4.9mb	
LSF	32.95	181	eP	08	07.10	-1.0
	0.8s	16.10nm			5.0mb	
MAF	32.98	180	eP	08	07.60	-0.7
	0.9s	8.80nm			4.7mb	
LPG	33.74	175	eP	08	15.60	0.3
	0.8s	6.70nm			4.6mb	
RJF	33.90	181	eP	08	15.80	-0.5
	1.0s	21.60nm			5.0mb	
LFF	34.27	182	eP	08	19.00	-0.5
	0.8s	11.80nm			4.9mb	
CAF	34.28	181	eP	08	19.10	-0.5
VRI	34.52	150	ePd	08	23.00	1.3
MLR	34.82	151	eP	08	20.00	-4.5X
CMP	34.96	152	iPc	08	27.00	1.5
SBF	35.39	174	eP	08	29.40	0.2
	1.0s	36.00nm			5.2mb	
ARV	35.92	167	P	08	42.20	8.6X
		eSg		08	46.40	
EPF	36.18	183	eP	08	35.10	-0.8
	1.2s	54.70nm			5.3mb	
ASS	36.34	168	P	08	40.70	3.5X
		eSg		08	44.80	
SKO	37.94	157	eP	08	51.50	0.9
OHR	38.75	158	eP	08	58.50	1.0
EDM	42.77	307	eP	09	31.50	1.1
WMQ	46.43	84	eP	09	59.20	-0.8
PNT	47.49	311	eP	10	19.00	10.8X
DSI	49.59	143	e(P)	10	25.00	0.5
LRM	49.82	304	eP	10	27.80	1.3
PRNI	50.75	143	iPc	10	35.00	1.5
MBH	51.31	144	eP	10	38.00	0.4
CN2	52.97	50	Pd	10	49.60	-0.5
GTA	52.97	74	eP	10	50.60	0.3
SNY	54.63	52	iPd	11	02.40	0.2
BJI	55.21	59	eP	11	06.00	-0.5
TUL	56.59	286	eP	11	15.50	-1.1
	0.8s	4.00nm			4.5mb	
SIO	56.85	286	e(P)	11	17.40	-1.0
TIY	56.86	63	Pc	11	19.60	1.1
UYO	58.04	284	iPd	11	26.80	0.0
MEO	58.20	288	e(P)	11	27.00	-0.9
MAT	61.82	40	iPc	11	52.40	-0.4
	1.3s	34.62nm			5.4mb	
GYA	66.82	71	P	12	26.00	0.5
HYB	70.35	100	eP	12	47.00	-0.3
KIC	72.78	188	(P)	13	02.00	0.2
CHG	72.85	80	eP	13	02.00	-0.3
LIC	72.93	188	(P)	13	02.90	0.3
GBA	73.86	102	Pd	13	07.50	-0.6
	1.1s	13.10nm			4.9mb	
BNG	75.04	164	iPc	13	16.00	1.1
	0.6s	8.00nm			4.9mb	
PSI	88.57	83	e(P)	14	15.00	-10.6X
		e		15	40.00	
SNA	149.23	183	e(PKP)	21	20.90	5.5X
	1.0s	27.00nm				

S.D. = 1.0 on 64 of 74 obs.

SEP 17, 1989 13h 20m 27.35± 0.70s
40.681 N ± 6.4km 15.243 E ±10.6km
DEPTH = 11.2 ± 5.1 km
SOUTHERN ITALY (390)

SGO	0.13	158	Pc	20	30.60	0.0
MGR	0.59	156	P	20	38.50	-0.7
DUI	1.14	329	P	20	50.20	1.5
		eSg		21	06.00	
TDS	1.32	140	P	20	52.00	0.4
LCI	2.10	99	P	21	01.90	-0.9
			eSn	21	28.50	
ALP	2.44	330	e(Pn)	21	07.95	0.1
			iSn	21	39.88	
HVAR	2.65	19	iPn	21	09.30	-1.4
SOI	2.68	166	P	21	11.40	0.3
ARV	3.30	329	P	21	19.00	-0.9
OHR	4.23	82	ePn	21	35.00	1.8
VBY	4.82	0	ePn	21	43.10	1.6
			eSn	22	33.00	
TRI	5.14	348	e(P)	22	33.40	47.4X
			e	22	39.60	
PTJ	5.24	5	eP	21	46.10	-1.4
VOY	5.44	350	ePn	21	50.60	0.3
			eSn	22	47.40	

S.D. = 1.3 on 13 of 14 obs.

• SEP 17, 1989 14h 22m 10.84± 1.23s
36.404 N ± 9.8km 140.865 E ±12.6km
DEPTH = 58.0 ± 9.4 km
3.9mb (2 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Mito.

MIT	0.32	265	iP+	22	20.00	-0.9
			iS	22	27.40	
KAKJ	0.59	251	iPd	22	23.20	-0.5
			S	22	30.60	
CHJJ	1.55	257	iPd	22	35.80	-0.8
			S	22	52.70	
NIIJ	1.71	300	iPd	22	38.50	-0.3
YAMJ	1.89	340	iPd	22	41.60	0.4
			eS	22	56.50	
MAT	2.14	274	iPd	22	45.00	0.1
			eS	23	09.00	
MTMJ	2.47	275	iPd	22	49.70	0.2
IIDJ	2.57	250	P	22	51.90	1.1
			eS	23	22.90	
OFUJ	2.75	13	P	22	54.30	1.0
			S	23	23.30	
TSRJ	4.05	259	eP	23	12.90	1.1
WRA	56.38	187	P	31	49.00	0.6
	0.8s	0.60nm			3.7mb	
SUF	68.35	333	eP	33	06.20	-1.5
NB2	74.60	337	P	33	44.60	-0.5
	0.7s	1.50nm			4.0mb	

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

SEP 17, 1989 14h 51m 01.67± 1.13s
14.064 N ±13.7km 91.915 W ± 6.7km
DEPTH = 53.9 ± 6.7 km
4.6mb (5 obs.)
GUATEMALA (70)

JAT	0.37	47	iPd	51	12.30	0.4
OC2	0.56	332	iPd	51	13.50	-0.4
SOG	0.78	24	iPd	51	16.40	-0.6
			S	51	29.40	
LHG	0.81	62	iPd	51	16.80	-0.3
TPX	0.90	338	iPc	51	18.00	-0.3
			iS	51	32.50	
KKG	0.91	353	iPd	51	17.50	-1.1
SBG	1.07	353	iPd	51	20.00	-1.0
PSG2	1.07	96	iPd	51	20.00	-0.6
FUG	1.11	70	iPc	51	21.30	0.0
TER	1.22	79	iPd	51	22.00	-0.7
PCG	1.27	75	iPd	51	24.00	0.3
MMG	1.29	68	iPc	51	24.30	0.4
BVA	1.38	64	iPd	51	26.00	0.9
REC	1.40	74	iPd	51	25.30	-0.1
IXG	1.42	85	iPc	51	24.20	-1.5
GCG	1.44	69	iPd	51	27.20	1.3
			S	51	48.00	
RDG	1.68	56	iP	51	31.50	2.1
SLP	1.72	67	Pd	51	31.30	1.5
YUP	2.06	86	iP	51	34.00	-0.6
SCX	2.75	345	eP	51	48.00	3.8X
OXX	5.52	304	eP	52	23.00	-0.6
			iS	53	31.30	
IISM	7.17	314	eP	52	46.50	0.1
			iS	54	10.00	
PPM	8.13	309	ePc	53	02.00	1.7
MRX	10.50	304	(P)	53	39.00	6.7X
UYO	20.15	354	iPd	55	33.50	-0.6
MEO	21.49	345	iPd	55	46.80	-1.0
ALQ	24.58	330	iPd	56	20.20	1.9
	1.0s	10.00nm			4.3mb	
			pP	56	53.00	163kmX
LRM	36.09	335	eP	58	01.40	1.0
PNT	41.86	333	eP	58	49.00	1.0
	0.6s	9.00nm			4.7mb	
INK	60.40	344	eP	01	07.00	-0.4
EKA	77.87	36	P	02	53.00	-2.0
	2.0s	68.00nm			5.3mb	
NB2	84.05	28	P	03	26.80	-0.8
	0.9s	2.10nm			4.2mb	
APO	85.47	28	eP	03	33.60	-1.1
	0.7s	7.10nm			4.9mb	
CHG	145.62	342	ePKP	10	36.00	-0.5
LOE	145.95	336	ePKP	10	37.40	0.4
HYB	147.34	17	ePKP	10	40.70	1.4
GBA	150.56	21	PKP	10	50.00	5.7X

S.D. = 1.1 on 34 of 37 obs.

SEP 17, 1989 15h 11m 43.08± 0.47s
43.657 N ± 6.2km 72.200 E ± 4.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 3.1 (SSO).

SFI	0.36	316	Pc	11	49.80	-0.8
			eSg	11	55.90	
PGD	0.41	302	P	11	51.10	-0.4
			eSg	11	57.60	
ARV	0.56	106	P	11	53.50	-1.0
			eSg	12	02.40	
ASS	0.68	150	P	11	57.00	0.5
			eSg	12	08.30	
CIO	0.83	124	iPg	11	58.67	-0.5
			iSg	12	12.90	
AOI	1.02	96	ePg	12	02.08	-0.4
			iSg	12	19.12	
MME	1.21	297	P	12	06.00	0.2
PII	1.22	274	P	12	06.50	0.8
BDI	1.23	290	P	12	06.00	0.0
MNS	1.32	164	P	12	08.00	0.5
			eSg	12	27.60	
ALP	1.33	131	ePg	12	07.93	0.2
			iSg	12	31.19	
BOB	2.27	300	P	12	20.20	-1.1
TRI	2.34	28	eP	12	28.30	6.2X
			e	12	58.90	
VOY	2.66	26	ePn	12	29.40	2.5
			eSn	13	08.00	
VBY	2.86	49	eP	12	28.90	-0.7
			e(Pn)	12	37.00	

S.D. = 1.0 on 14 of 15 obs.

• SEP 17, 1989 15h 37m 10.56± 2.81s
33.332 S ±12.1km 72.267 W ±24.3km
DEPTH = 33.0km (normal)
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.60	104	iPd	37	21.50	-1.1
			iS	37	30.20	
IHA	0.61	60	iPc	37	23.20	0.5
			iS	37	33.20	
LNV	0.95	131	iPd	37	26.80	-0.7
			iS	37	39.50	
ROCH	1.11	72	iPd	37	30.70	0.6
			iS	37	46.50	
TACH	1.16	106	iPd	37	30.40	-0.1
			iS	37	46.30	
TACH	1.16	106	iPd	37	37.60	7.1X
			iS	37	59.80	
PEL	1.34	82	iPc	37	34.40	1.3
			iS	37	53.90	
SAN	1.35	96	iPd	37	34.00	0.7
			iS	37	52.00	
CHCH	1.47	114	iPd	37	35.20	0.1
			iS	37	54.00	
PCH	1.49	102	iPc	37	36.00	0.6
			iS	37	56.20	
FCH	1.65	90	iPd	37	39.00	1.0
			iS	38	02.50	
MRA	5.59	82	ePd	38	37.20	3.6X
TCA	6.79	75	ePd	38	49.40	-1.2
			i	38	55.00	
CYA	7.39	50	ePd	38	56.20	-2.7
CCH	16.81	21	P	41	10.50	5.1X
CNCB	16.90	14	eP	41	18.00	11.2X
LPB	17.14	14	eP	41	23.00	13.3X
ZOBO	17.40	13	P	41	14.00	1.0

17d 15h

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

? SEP 17, 1989 15h 39m 10.81± 4.06s
33.494 S ±10.1km 72.220 W ±29.1km
DEPTH = 11.3 ± 5.4 km
OFF COAST OF CENTRAL CHILE (134)

LCCH	0.54	88	iPd	39	21.60	-0.2
			iS	39	31.30	
IHA	0.67	46	iP	39	24.40	0.4
			iS	39	33.50	
LNV	0.82	125	iPd	39	27.00	0.5
			iS	39	40.00	
TACH	1.08	99	iPd	39	31.40	0.3
			iS	39	47.00	
TACH	1.08	99	iPd	39	38.80	7.7X
			iS	40	00.00	
ROCH	1.14	63	iPd	39	31.20	-1.0
			iS	39	46.40	
SAN	1.30	89	iPd	39	34.50	-0.3
			iS	39	53.50	
PEL	1.33	75	iP	39	36.10	0.8
			iS	39	54.60	
CHCH	1.38	109	iP	39	34.70	-1.2
			iS	39	53.50	
PCH	1.43	96	iP	39	37.00	0.3
			iS	39	57.30	
FCH	1.62	85	iPd	39	40.10	0.4
			iS	40	03.00	

S.D. = 0.8 on 10 of 11 obs.

? SEP 17, 1989 15h 43m 44.68± 3.52s
18.945 S ±13.0km 169.236 E ±53.5km
DEPTH = 233.7 ± 12.2 km
4.7mb (3 obs.)
VANUATU ISLANDS (186)

PVC	1.49	324	iPd	44	22.00	0.4
			iS	44	49.00	
DZM	4.06	220	iPc	44	48.10	-1.0
			iS	45	38.00	
HNR	13.05	315	ePc	46	43.00	0.1
BRS	17.30	238	iPc	47	34.00	0.6
RMQ	20.31	245	iPd	48	05.80	1.6
CTA	21.69	263	iPd	48	19.20	1.5
	0.9s	22.69nm			4.7mb	
CNB	23.98	223	iPc	48	40.60	1.0
8WA	24.09	226	eP	48	39.10	-1.5
CAN	24.22	224	eP	48	42.80	1.0
OLP	24.25	247	iPd	48	42.10	0.1
CMS	24.52	235	iPc	48	44.90	0.3
STK	28.00	237	iPd	49	16.20	0.1
WB5	32.87	263	eP	49	57.20	-1.6
WRA	32.89	262	Pd	49	57.10	-1.8
	0.7s	20.00nm			4.9mb	
ASPA	33.20	256	iPd	50	00.70	-0.9
	0.5s	239.00nm			6.1mb	X
WARB	39.85	252	iPd	50	57.40	0.2
	0.3s	7.00nm			4.6mb	

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

% SEP 17, 1989 19h 12m 57.04± 1.03s
43.742 N ±15.7km 12.280 E ± 9.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

SFI	0.36	300	P	13	04.50	0.1
			eSg	13	09.80	
ARV	0.54	117	P	13	08.00	0.0
			eSg	13	16.90	
ASS	0.73	157	P	13	11.30	-0.1
			eSg	13	23.00	
BDI	1.26	285	P	13	20.10	-0.4
PII	1.27	270	P	13	20.90	0.3
			eSg	13	38.10	

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

SEP 17, 1989 19h 43m 58.55± 0.54s
37.299 N ± 5.0km 26.805 E ± 5.4km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
ML 3.5 (ATH).

SMG	0.41	4	iPbc	44	06.80	-0.1
APE	1.04	258	iPbc	44	18.90	0.6
			eSg	44	35.30	
CIN	1.06	73	iPgc	44	15.00	-3.6X
			iSg	44	30.00	
IZM	1.16	18	iPg	44	19.60	-0.6
			iSg	44	34.10	
YER	1.19	97	iPg	44	19.30	-1.5
KAP	1.77	170	ePn	44	27.40	-2.0
PRK	1.99	348	ePn	44	31.80	-0.8
NPS	2.25	206	ePn	44	36.60	0.2
KHL	2.38	64	ePn	44	38.30	-0.1
KSL	2.52	117	ePb	44	42.10	1.9
ATH	2.54	286	ePn	44	41.30	0.8
ELL	2.54	102	ePn	44	42.00	1.3
EZN	2.55	352	iPn	44	39.30	-1.3
VAM	2.83	229	ePg	44	52.10	7.5X
8CK	3.02	86	ePn	44	47.20	-0.1
ALT	3.14	55	ePn	44	48.00	-1.1
EDC	3.15	15	ePn	44	50.70	1.5
BNT	3.17	16	ePn	44	52.00	2.5
KCT	3.19	22	ePn	44	50.00	0.4
KDZ	4.48	347	iPc	45	07.00	-0.9
RZN	4.67	340	iP	45	10.00	-0.9
PGB	5.62	340	eP	45	23.00	-1.3
VTS	5.96	334	eP	45	30.00	0.9
PVL	6.02	350	eP	45	30.00	0.3

S.D. = 1.2 on 22 of 24 obs.

& SEP 17, 1989 20h 07m 56.00s
40.550 N 125.672 W
DEPTH = 11.0km
OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 3.5 (BRK).

FHC	1.31	78	iPc	08	18.00	-2.1
			eS	08	33.80	
WDC	2.39	88	eP	08	34.00	-1.6
			iS	09	01.80	
LTCM	2.73	96	eP	08	38.70	-1.9
LBFM	2.97	73	eP	08	42.80	-1.4
MIN	3.11	92	iPd	08	44.00	-2.0
			eS	09	19.40	
ORV	3.35	106	eP	08	46.80	-2.6
			eS	09	25.50	
ZSP	3.71	133	e(P)	08	52.00	-2.5
MHC	4.49	134	eP	09	02.50	-3.1
GCC	4.54	140	eP	09	03.00	-3.2
ARN	4.54	133	eP	09	03.00	-3.3
KVN	6.02	102	eP	09	24.20	-3.1

11 obs. associated

SEP 17, 1989 20h 22m 10.98± 0.52s
46.418 N ± 5.2km 1.880 E ± 3.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG). MD 2.1 (STR).

TCF	0.26	120	Pg	22	16.50	-0.1
			Sg	22	20.10	
LSF	0.30	235	Pg	22	16.70	-0.5
			Sg	22	20.50	
MAF	0.52	112	Pg	22	21.00	-0.4
			Sg	22	28.00	
BGF	0.68	78	Pg	22	24.00	-0.5
			Sg	22	33.20	
AGO	0.94	112	Pg	22	28.69	-0.3
			Sg	22	41.19	
PYM	1.03	130	Pg	22	30.43	-0.1
			Sg	22	43.20	
AVF	1.08	69	Pg	22	31.20	-0.1
			Sg	22	44.40	
SSF	1.29	60	Pn	22	34.20	-0.7
			Pg	22	35.20	
			Sg	22	51.60	
SMF	1.37	80	Pg	22	36.00	-0.2
			Sg	22	54.00	
MFF	1.41	278	Pg	22	36.60	-0.1
			Sg	22	55.00	
CAF	1.50	175	Pg	22	38.40	0.4
			Sg	22	57.60	
LBL	1.52	141	Pg	22	38.94	0.7
			Sg	22	59.10	
LBF	1.55	68	Pg	22	39.50	0.8
			Sg	22	58.80	
LOR	1.60	57	Pg	22	40.40	1.0
			Sg	23	00.40	

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

& SEP 17, 1989 21h 46m 15.19s
61.234 N 150.498 W
DEPTH = 36.7km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA	0.26	333	iP	46	22.91	0.0
			eS	46	29.89	
PMS	0.45	88	iP	46	24.68	-0.6
PWA	0.51	35	iP	46	25.21	-0.8
			eS	46	33.92	
NKA	0.61	217	eP	46	28.69	1.4
CGLM	0.73	276	eP	46	28.78	-0.4
			eS	46	39.81	
SLKM	0.74	169	eP	46	28.27	-1.0
PLRM	0.75	61	iP	46	27.92	-1.4
			eS	46	39.92	
PME	0.81	60	iP	46	28.99	-1.2
			S	46	40.88	
SKT	0.90	327	iP	46	30.69	-0.8
			eS	46	43.42	
GHO	0.93	54	iP	46	30.77	-1.2
			eS	46	43.75	
KNK	1.00	79	eP	46	32.01	-0.9
			eS	46	45.73	
RDT	1.14	235	iP	46	34.31	-0.7
			eS	46	49.74	
SEW	1.25	155	eP	46	35.69	-0.7
NNL	1.26	199	eP	46	37.40	0.8
			eS	46	54.00	
ILIM	1.68	227	eP	46	42.09	-0.6
			eS	47	05.22	
GLI	1.69	101	eP	46	40.57	-2.3
			eS	47	02.08	
CNPM	1.75	192	eP	46	42.99	-0.8
VZW	1.92	94	eP	46	44.15	-2.0
FID	2.02	102	eP	46	44.62	-2.9
VLZ	2.02	91	eP	46	45.34	-2.1
OPT	2.09	222	eP	46	48.67	0.2
KLU	2.22	81	eP	46	48.30	-2.1

22 obs. associated

? SEP 17, 1989 21h 59m 18.09± 4.08s
32.742 S ±17.9km 71.877 W ±28.1km
DEPTH = 15.0 ± 6.3 km
NEAR COAST OF CENTRAL CHILE (135)

IHA	0.35	145	iPc	59	26.70	1.3
			iS	59	31.30	
ROCH	0.76	108	iPd	59	33.10	0.4
			iS	59	43.20	
LCCH	0.78	161	iPd	59	32.80	0.1
			iS	59	45.10	
TACH	1.20	139	iPc	59	37.50	-2.6
			iS	59	51.50	
TACH	1.20	139	iPd	59	40.00	-0.1
			iS	59	57.20	
SAN	1.24	125	ePd	59	40.50	-0.2
			iS	59	59.70	
LNV	1.27	162	iPd	59	41.00	-0.1
			iS	59	57.00	
PCH	1.44	128	iPc	59	44.10	0.4
			iS	00	05.60	
FCH	1.46	114	iPd	59	44.30	0.2
			iS	00	03.50	
CHCH	1.57	140	iP	59	47.00	1.5
			iS	00	07.80	
MRA	5.22	88	e(P)	00	38.50	1.1
TCA	6.34	79	ePd	00	52.20	-1.2
			S	02	07.60	

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

SEP 17, 1989 22h 22m 01.51± 0.90s
42.351 N ± 6.4km 13.044 E ± 8.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.6 (SSO).

AQU	0.27	89	P	22	07.10	0.0
			eSg	22	11.70	
AZI	0.46	141	P	22	11.10	0.1
ALP	0.58	42	ePg	22	12.82	-0.6
			iSg	22	22.08	
RDP	0.64	203	P	22	14.40	0.0
			eSg	22	23.70	
ASS	0.77	339	P	22	15.40	-1.2
			eSg	22	27.20	
ARV	1.15	356	P	22	24.70	1.7
			eSg	22	40.50	

MGR	2.91	139	P	23	24.30	35.6X
			eSg	23	38.80	
TDS	3.67	136	P	23	22.00	22.5X
			eSg	23	34.30	
SOI	4.86	151	P	23	26.10	9.8X
			eSg	23	39.50	

S.D. = 1.2 an 6 of 9 obs.

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* SEP 17, 1989 23h 21m 36.35± 0.90s
28.984 N ±10.3km 129.899 E ±21.3km
DEPTH = 33.0km (normal)
4.1mb (4 obs.)
RYUKYU ISLANDS (238)

KAGJ	2.36	21	P	22	13.70	0.2
			eS	22	42.70	
KUMJ	3.63	12	P	22	32.80	1.2
			S	23	14.60	
SHNJ	5.23	11	P	22	53.60	-0.7
BJI	15.78	318	eP	25	18.50	0.9
WB5	48.77	174	eP	30	18.50	-1.6
WRA	48.83	174	P	30	23.00	2.4
	0.6s		0.50nm			3.7mb
MBC	66.81	14	eP	32	26.00	-0.4
	0.7s		4.00nm			4.6mb
UPP	75.61	331	iP	33	23.20	3.9X
	1.6s		1200.00nm			6.6mb X
			i	33	51.40	
HFS	77.07	333	eP	33	26.40	-1.2
	0.4s		1.30nm			4.3mb
NB2	77.50	334	P	33	29.20	-0.8
	0.7s		1.00nm			4.0mb

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

? SEP 18, 1989 00h 53m 21.23± 3.59s
37.420 N ±28.8km 20.952 E ±27.5km
DEPTH = 10.0km (geophysicist)
IONIAN SEA (399)
ML 3.4 (ATH).

VLS	0.81	339	ePg	53	36.70	-0.2
ITM	0.81	107	ePg	53	36.90	-0.1
			eSg	53	52.00	
ATH	2.26	75	ePn	54	02.50	3.3X
KEK	2.46	339	ePg	54	12.20	10.2X
SRN	2.57	343	ePn	54	14.60	11.1X
NEO	2.60	43	ePn	54	04.40	0.4
LSK	2.74	354	ePn	54	07.10	1.0
KZN	2.95	12	ePg	54	17.50	8.4X
KBN	3.20	358	ePn	54	23.00	10.5X
BERA	3.37	347	ePn	54	26.80	11.9X
OHR	3.69	358	ePn	54	20.30	0.7
SKO	4.56	5	ePn	54	30.00	-1.9

S.D. = 1.3 an 6 of 12 obs.

SEP 18, 1989 02h 27m 34.71± 0.51s
38.957 N ± 5.1km 35.554 E ± 5.9km
DEPTH = 10.0km (geophysicist)
4.3mb (15 obs.)
TURKEY (366)
At leost 225 houses damaged in the Kayseri area.

KVT	2.15	10	ePn	28	12.00	0.8
BBTK	2.34	293	iPc	28	15.00	1.1
			iS	28	51.00	
BBTK	2.34	293	iP	28	24.00	10.1X
KAS	2.77	331	ePn	28	21.00	1.0
FAM	4.14	198	eP	28	34.00	-5.4X
BCK	4.19	251	ePn	28	42.00	1.9
ALT	4.24	273	ePn	28	40.50	-0.4
GPA	4.26	290	ePn	28	41.50	0.3
CSS	4.37	205	eP	28	40.00	-2.6
KHL	4.76	264	ePn	28	50.30	1.9
PPCY	4.81	213	eP	28	50.50	1.6
HRT	4.90	294	ePn	28	51.00	0.9
ELL	4.98	245	ePn	28	56.00	4.6X
YLV	5.03	291	iPn	28	51.50	-0.5
ISK	5.41	295	ePn	28	57.60	0.2
ITU	5.46	295	ePn	28	59.00	0.9
			iSg	30	30.00	
HRI	5.68	178	eP	29	03.00	1.7
KCT	5.71	285	iPn	29	01.00	-0.6
CTT	5.89	294	ePn	29	04.00	-0.1
EDC	6.10	286	ePn	29	03.00	-4.0X
MSL	6.55	111	ePd	29	31.00	17.5X
			eS	31	04.50	
EZN	7.20	280	iPn	29	21	90	-0.6
DSI	7.37	181	e(P)	29	25.00	0.1
CFR	8.31	321	eP	29	25.50	-12.5X
TAB	8.49	93	e(P)	30	18.00	37.2X
SLY	8.61	110	ePd	29	49.00	6.8X
			eS	32	16.00	
			e	32	33.00	
BHD	9.12	126	eP	30	12.00	22.7X
			i	32	41.00	
			i	33	02.00	
MBH	9.18	184	eP	30	01.00	10.9X
MLR	9.66	316	eP	29	58.00	1.1
CMP	10.04	312	iP	30	47.00	45.1X
SKO	11.17	290	eP	30	10.00	-7.4X
OHR	11.52	285	eP	30	21.00	-1.2
ZST	16.22	311	eP	31	28.80	4.8X
VOY	17.44	301	e(P)	31	42.30	2.7
KSP	18.03	317	eP	31	46.50	-0.3
PRU	18.55	313	eP	31	54.00	0.8
KHC	18.72	310	P	31	52.00	-3.4X
MHI	19.14	90	iPc	32	01.50	0.9
OGA	19.57	302	eP	32	06.70	0.8
	1.0s		24.00nm			4.4mb
CLL	20.04	315	eP	32	10.00	-0.5
CVF	20.50	289	eP	32	12.80	-2.6
FEL	21.81	303	eP	32	28.62	-0.2
LPG	22.23	296	eP	32	31.90	-1.4
	0.9s		9.80nm			4.3mb
CDF	22.42	304	eP	32	34.80	-0.1
BSF	22.60	302	eP	32	36.20	-0.5
	0.6s		4.30nm			4.1mb
NUR	22.64	346	iP	33	05.30	28.6X
	1.0s		34.00nm			
HAU	22.93	303	eP	32	39.60	-0.2
LBF	24.33	300	eP	32	52.50	-1.0
	0.8s		9.90nm			4.5mb
SMF	24.38	299	eP	32	53.20	-0.7
	0.9s		8.10nm			4.4mb
LOR	24.45	300	eP	32	53.50	-1.1
	0.7s		8.10nm			4.5mb
SUF	24.47	350	eP	32	54.50	-0.1
SSF	24.66	300	eP	32	55.90	-0.7
	0.8s		6.70nm			4.3mb
AVF	24.73	299	eP	32	56.50	-0.8
	0.9s		7.20nm			4.3mb
MAF	25.22	297	eP	33	01.20	-0.7
	0.7s		3.30nm			4.1mb
HFS	25.27	334	eP	33	03.20	0.9
	1.4s		32.60nm			4.8mb
TCF	25.47	298	eP	33	03.40	-0.9
	0.7s		5.50nm			4.4mb
CAF	25.49	294	eP	33	03.90	-0.7
	0.8s		4.50nm			4.2mb
NB2	26.78	334	P	33	20.40	4.1X
	0.9s		2.90nm			4.0mb
SOD	28.90	353	eP	33	50.00	14.6X
BNG	37.68	208	ePc	34	52.10	0.1
	0.4s		5.00nm			4.6mb
GBA	44.70	113	Pd	35	48.60	-1.1
	0.6s		2.50nm			4.3mb

S.D. = 1.2 on 44 of 61 obs.

SEP 18, 1989 04h 29m 46.32± 0.77s
39.984 N ± 6.2km 23.882 E ± 6.8km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.2 (ATH).

PLG	0.51	320	iPbd	29	56.20	-0.5
NEO	0.85	217	ePb	30	01.60	-1.1
			eSb	30	13.30	
THE	0.95	313	ePg	30	06.60	2.1
			eSg	30	19.40	
LIT	1.08	277	ePg	30	06.50	-0.1
SRS	1.15	349	ePb	30	07.70	-0.2
			eSb	30	24.30	
KNT	1.40	328	ePb	30	12.40	0.6
			eSb	30	33.40	
MMB	1.61	356	ePc	30	14.00	-0.9
KZN	1.65	282	ePb	30	15.60	0.1
RZN	1.82	20	iPc	30	17.00	-1.0
KKB	1.98	342	iPc	30	20.00	-0.2
PRK	1.99	111	ePn	30	21.50	1.2
PGB	2.57	5	eP	30	33.00	4.2X
OHR	2.61	297	eP	30	42.00	12.7X
VTS	2.65	349	iP	30	30.00	0.0

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

? SEP 18, 1989 04h 53m 19.17± 0.80s
21.709 N ± 9.9km 112.264 E ± 8.1km
DEPTH = 33.0km (normal)
NEAR SOUTHEASTERN COAST OF CHINA(242)
ML 4.7 (BJI).

MCO	1.27	71	eP	53	39.70	-1.0
			eS	53	57.00	
GZH	1.70	36	Pnc	53	37.20	-9.7X
			Pg	53	39.80	
			Sg	53	55.20	
HKC	1.87	71	iP	53	50.10	0.7
			iS	54	12.90	
QIZ	3.50	221	Pn	54	13.70	1.0
			Pg	54	27.00	
			Sn	55	00.40	
			Sg	55	15.60	
QZH	6.65	60	ePn	54	52.00	-5.1X
			Sn	56	04.50	
WHN	8.99	12	eP	55	25.50	-4.2X
			sP	55	32.50	
LOE	10.81	249	eP	55	53.50	-1.3
CD2	11.92	322	eP	56	10.40	0.6
SSE	12.29	39	eP	56	07.00	-7.8X
			Lg	59	38.00	
TIY	15.95	0	eP	57	03.00	0.2
E	11s		1.40um			
LZH	16.10	335	P	57	04.50	-0.3
	0.5s		0.05nm			1.9mb
N	12s		1.40um			
			eLg	01	35.00	
GTA	20.61	332	Pd	57	53.80	-4.5X
Z	12s		0.70um			4.2MszX
N	10s		0.30um			

S.D. = 1.1 an 7 of 12 obs.

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* SEP 18, 1989 05h 42m 37.10± 3.40s
30.947 S ±14.9km 177.678 W ±14.7km
DEPTH = 103.2 ± 29.1 km
4.7mb (1 obs.)
KERMADEC ISLANDS (178)

KRP	8.93	217	eP	44	57.00	12.1X
WEL	11.98	209	eP	45	25.00	-0.6
			S	47	26.00	
DZM	16.72	298	iPd	46	27.20	0.7
MSZ	17.77	216	P	46	34.00	-5.1X
BRS	26.01	270	iPd	48	03.20	1.1
COO	26.12	263	iPc	48	06.30	3.2X
CAN	28.17	252	eP	48	22.90	1.2
BWA	28.67	254	eP	48	24.20	-2.0
RMQ	29.70	270	eP	48	36.30	0.8
CTA	34.16	280	iPd	49	14.50	0.1
	1.0s		32.00nm			5.1mb X
STK	34.63	258	eP	49	19.20	0.9
ASPA	43.36	267	eP	50	30.20	-0.7
Z	18s		0.96um			4.7Msz
			LR	08	15.30	
WRA	44.39	273	Pc	50	37.20	-2.0
	0.7s		24.60nm			5.1mb X
WB5	44.40	273	eP	50	38.70	-0.6
SPA	59.22	180	e(P)	52	30.80	1.2
	0.9s		5.45nm			4.7mb
			e	52	39.20	
FRI	86.66	43	eP	55	10.30	0.1
WDC	87.57	39	e(P)	55	13.40	-1.1
SUF	144.71	341	iPKP	01	59.70	-2.7X
MSL	145.78	290	ePKP	02	05.00	-0.1
NUR	146.92	340	iPKP	02	06.90	0.8
	1.0s		48.00nm			
			i	02	18.00	
NB2	149.33	352	PKP	02	12.80	2.8X
	0.9s		14.00nm			
BNG	149.52	213	iPKPd	02	16.70	5.0X
	0.6s		11.00nm			
			ic	02	23.20	
HFS	149.83	349	ePKP	02	12.60	1.9X
	0.7s		4.20nm			
DSI	151.79	280	e(PKP)	02	21.00	6.5X
MBH	151.93	276	ePKP	02	22.00	7.2X

S.D. = 1.2 on 16 of 25 obs.

? SEP 18, 1989 06h 19m 01.40± 5.54s
30.457 S ±36.0km 179.576 W ±34.3km
DEPTH = 278.1 ± 50.8 km
3.9mb (2 obs.)

18d 06h

KERMADEC ISLANDS REGION (177)

DZM	15.06	300	iPc	22 22.40	-0.3
BRS	24.37	270	iP	23 58.00	1.8
CAN	26.77	251	eP	24 25.80	7.9X
BWA	27.24	253	eP	24 21.20	-1.0
CTA	32.47	280	eP	25 09.00	0.9
WRA	42.74	273	Pc	26 32.30	-1.1
	0.5s		2.00nm	3.7mb	
WB5	42.74	273	eP	26 32.90	-0.5
SPA	59.71	180	e(P)	28 39.30	0.2
	0.9s		4.55nm	4.0mb	
			e	28 44.40	
SUF	143.71	340	iPKP	37 54.00	-9.9X
	0.8s		6.30nm		
NUR	145.88	339	ePKP	38 03.00	-4.7X
			i	38 15.20	
NUR	145.88	339	ePKP	38 12.90	5.2X
NB2	148.59	350	PKP	38 07.60	-4.5X
	0.9s		3.30nm		
BNG	148.98	217	ePKPd	38 14.00	-0.1
	0.9s		7.00nm		
			id	38 26.50	
HFS	149.01	347	ePKP	38 07.40	-5.3X
	0.6s		2.30nm		

S.D. = 1.3 on 8 of 14 obs.

SEP 18, 1989 06h 53m 33.72± 1.47s
44.580 N ± 7.7km 6.738 E ±15.8km
DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 2.3 (GEN).

FOUF	0.06	148	iPgd	53 35.95	0.0
			eSg	53 36.99	
PZZ	0.27	106	P	53 39.73	0.2
			S	53 43.19	
RRL	0.34	6	P	53 40.48	-0.4
			S	53 44.85	
BNI	0.47	355	P	53 43.80	0.4
			eSg	53 50.50	
STV	0.54	128	P	53 44.65	0.0
			S	53 51.50	
ENR	0.60	126	P	53 45.75	-0.2
			S	53 53.71	
LSD	0.93	19	P	53 51.55	0.0

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

? SEP 18, 1989 07h 01m 06.75± 9.09s
7.875 S ±75.8km 130.168 E ±29.2km
DEPTH = 204.5 ± 37.1 km
4.6mb (5 obs.)

TANIMBAR ISLANDS REGION (281)

MTN	5.03	169	eP	02 23.50	1.2
			eS	03 30.00	
KNA	7.95	190	eP	02 59.00	-1.4
			eS	04 35.00	
WB5	12.61	162	eP	03 59.50	-0.8
			eS	06 27.20	
WRA	12.66	162	Pc	03 59.80	-1.1
	0.6s		13.80nm	4.5mb	
OIS	15.57	145	eP	04 37.30	0.3
	0.3s		13.00nm	4.8mb	
			eS	07 33.00	
ASPA	16.11	168	iPd	04 45.30	1.7
	0.6s		36.00nm	5.0mb	
			eS	07 56.80	
WARB	18.51	190	eP	05 11.00	0.7
	0.3s		2.00nm	4.2mb	
CTA	19.75	130	iPc	05 22.60	-0.4
	0.7s		12.67nm	4.6mb	
STK	26.15	158	eP	06 23.20	-0.7
BWA	31.31	150	eP	07 10.70	0.8
CAN	32.31	150	eP	07 18.20	-0.4

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

SEP 18, 1989 07h 43m 06.80± 0.25s
0.968 N ± 4.0km 126.144 E ± 6.2km
DEPTH = 24.6km (2 depth phases)
4.9mb (21 obs.) 4.7Msz (15 obs.)

MOLUCCA PASSAGE (266)

MNI	1.39	290	ePd	43 31.60	0.9
AAI	5.06	156	ePd	44 24.00	1.0
DAV	6.11	355	eP	44 40.00	2.2
PCI	6.58	254	ePc	44 46.40	1.9
			e(S)	45 02.50	
TSM	8.69	292	ePc	45 17.00	3.0X
MKS	9.07	227	iPc	45 21.60	2.4
KKM	11.12	297	ePd	45 53.50	6.0X
	0.3s		50.00nm	6.2mb X	
MTN	14.59	160	eP	46 31.00	-2.6
TRT	15.99	237	ePc	46 56.70	4.8X
	1.0s		48.20nm	4.6mb	
BAG	16.30	341	eP+	46 57.60	1.6
			eS	50 02.00	
KNA	16.81	171	eP	47 02.00	-0.3
	0.7s		54.00nm	4.8mb	
WB5	22.23	159	eP	48 02.00	-1.4
			eS	52 06.00	
WRA	22.28	159	Pc	48 02.70	-1.2
	0.6s		48.50nm	5.1mb	
GUMO	22.38	55	eP	48 03.70	-1.1
	0.7s		54.64nm	5.1mb	
PJG	22.38	55	eP	48 04.20	-0.7
GUA	22.39	55	eP	48 04.50	-0.5
	0.7s		54.79nm	5.1mb	
MBL	22.84	195	eP	48 08.00	-1.4
	0.6s		18.00nm	4.8mb	
PMG	23.33	117	eP	48 15.00	0.8
OIZ	24.03	319	Pc	48 21.00	0.0
Z	20s		1.80um	4.5Msz	
N	15s		1.10um		
			eS	52 54.00	
OIS	25.13	149	eP	48 30.30	-1.3
	0.8s		83.00nm	5.4mb	
GZH	25.26	331	P	48 30.10	-2.6
Z	19s		2.40um	4.7Msz	
N	15s		1.80um		
E	13s		0.80um		
			eS	53 00.50	
IPM	25.34	279	ePd	48 32.90	-0.7
	0.5s		18.90nm	5.0mb	
NANU	25.57	203	eP	48 36.00	0.3
ASPA	25.62	163	iPd	48 35.70	-0.5
	0.7s		76.00nm	5.4mb	
			eS	53 02.00	
SNG	26.19	284	eP	48 49.80	8.3X
			eS	53 08.00	
WARB	27.00	179	eP	48 49.00	0.2
	0.5s		15.00nm	4.9mb	
CTA	28.75	138	eP	49 04.00	-0.8
	1.1s		20.25nm	4.8mb	
			iS	53 54.00	
LOE	29.04	306	eP	49 06.00	-1.4
NST	29.53	301	eP	49 12.00	0.2
SSE	30.33	352	eP	49 21.60	2.9X
Z	20s		1.30um	4.6Msz	
			eS	54 12.00	
			esS	54 28.00	
BDT	31.22	303	eP	49 25.00	-1.7
GYA	31.52	325	P	49 27.60	-1.9
Z	20s		0.90um	4.4Msz	
E	16s		1.10um		
			S	54 41.00	
MRWA	31.55	197	eP	49 29.50	0.0
FORR	31.70	177	eP	49 30.00	-0.7
COOL	32.03	188	eP	49 31.00	-2.8
CHG	32.03	305	ePc	49 33.00	-1.0
	0.9s		9.45nm	4.7mb	
OLP	32.47	149	eP	49 36.00	-1.6
BAL	32.66	195	eP	49 38.00	-1.2
KMI	32.98	319	Pd+	49 45.50	3.2X
Z	18s		2.90um	5.0Msz	
			pP	49 51.00	19km
			eS	54 45.00	
			SS	55 18.00	
KLB	33.34	193	eP	49 46.00	0.8
MUN	34.09	195	eP	49 51.90	0.3
NWAO	34.75	193	eP	49 57.00	-0.3
Z	20s		1.00um	4.6Msz	
TSRJ	35.59	14	P	49 56.40	-8.0X
STK	35.80	157	eP	50 06.00	-0.2
IIDJ	36.04	16	P	50 08.70	0.4
TIA	36.05	348	eP	50 09.40	1.1
Z	27s		1.40um	4.6MszX	
			eS	55 44.00	
CD2	36.56	327	eP	50 10.50	-2.3
Z	20s		1.10um	4.6Msz	
			PP	51 34.00	
			eS	55 54.00	
XAN	36.64	336	P	50 10.50	-2.9X
CHJJ	36.89	17	P	50 14.10	-1.2
MTMJ	37.05	16	P	50 16.20	-0.6
MAT	37.12	16	iPc	50 16.00	-1.3
	0.7s		26.03nm	5.2mb	
Z	20s		1.06um	4.6Msz	
			eS	55 58.00	
ADE	37.63	163	e(P)	50 22.30	0.6
DL2	37.98	354	P	50 26.00	1.5
Z	20s		0.90um	4.6Msz	
E	15s		2.10um		
			eS	56 18.00	
NIIJ	38.00	17	P	50 23.80	-0.8
BRS	38.09	140	iP	50 25.00	-0.6
TIY	38.69	342	eP	50 29.30	-1.2
Z	14s		0.78um	4.7MszX	
N	14s		0.80um		
			sS	56 37.00	
			ScS	00 40.80	
COO	39.81	144	eP	50 43.50	3.6X
BJI	39.93	348	eP	50 42.00	1.2
Z	26s		1.06um	4.6MszX	
LZH	40.61	332	eP	50 45.50	-1.1
	6.0s		0.50nm	2.4mb X	
Z	25s		2.40um	5.0MszX	
			pP	50 54.50	30km
			sP	51 00.50	
			ePP	52 17.00	
			PcP	52 52.00	
SNY	40.74	357	Pc	50 47.00	-0.3
	6.0s		1.00nm	2.7mb X	
Z	20s		1.50um	4.8Msz	
N	20s		1.30um		
E	20s		0.70um		
			S	56 57.00	
BWA	40.94	151	eP	50 50.30	1.1
			e	52 24.20	
HHC	41.84	343	eP	50 54.00	-2.6
Z	28s		2.10um	4.9MszX	
			eS	57 05.00	
CAN	41.94	152	eP	50 58.10	0.7
			e	52 40.00	
BTO	42.08	342	eP	50 53.00	-5.5X
N	13s		0.30um		
E	13s		0.30um		
CNB	42.11	151	eP	51 01.50	2.7X
TOO	42.32	157	eP	51 02.00	1.6
CN2	42.65	359	Pc	51 03.40	0.4
	5.0s		0.60nm	2.6mb X	
Z	22s		0.90um	4.6Msz	
N	12s		0.40um		
			eS	57 24.00	
MDJ	43.57	4	eP	51 10.50	0.0
Z	32s		1.60um	4.7MszX	
			S	57 40.00	
GTA	45.18	331	eP	51 22.40	-1.4
Z	20s		1.80um	5.0Msz	
N	15s		1.00um		
DZM	45.49	123	iPd	51 26.00	-0.4
			i	53 08.20	
KOD	49.25	283	eP	51 53.00	-3.2X
HYB	49.55	292	iPc	51 55.50	-2.7
	1.0s		60.00nm	5.6mb	
GBA	49.80	287	Pc	51 56.60	-3.4X
	0.7s		13.30nm	5.1mb	
WMQ	54.66	327	P	52 34.50	-1.7
Z	22s		1.40um	5.0Msz	
KSH	59.57	316	eP	53 16.00	4.9X
MHI	70.73	308	eP	54 22.00	-1.3
SDN	79.78	34	eP	55 15.10	0.8
MAW	80.98	200	eP	55 21.00	0.5
BHD	82.57	303	ePc	55 31.50	2.0
SVW	83.47	29	ePc	55 35.70	2.1
TTA	83.61	27	ePc	55 35.90	1.6
KDC	84.57	32	eP	55 41.10	2.0
PMR	86.64	28	eP	55 49.80	0.5
	0.7s		5.70nm	4.9mb	
FBA	87.45	25	eP	55 53.80	0.6
	0.7s		2.90nm	4.7mb	
NAI	89.36	269	eP	55 48.50	-15.2X
SPA	90.96	180	e(P)	56 11.50	1.6
	0.9s		5.00nm	4.8mb	
Z	20s		0.59um	5.0Msz	
KEV	92.27	340	eP	56 16.00	0.3
SOD	92.78	338	eP	56 19.00	0.9
			i	56 29.00	
INK	92.93	21	eP	56 19.00	0.3
SUF	93.73	333	eP	56 22.70	0.2
	0.4s		1.50nm	4.8mb	

MBC	94.76	13	eP	56	28	00	0.9
	1.0s		5.00nm			4.9mb
NUR	94.82	331	eP	56	23.30	-4.2X
	Z 21s		0.50um			5.0Msz
			LR	45	50.00	
BUL	97.40	250	eP	56	42.40	2.1
NB2	100.98	333	Pdiff	56	54.60	-0.9X
	0.9s		2.50nm			4.7mb
ALQ	119.30	48	ePKP	01	57.00	0.6
KIC	130.44	279	(PKP)	02	18.70	0.6
LIC	130.74	279	(PKP)	02	19.30	0.7
TCA	148.13	162	ePKPd	02	52.70	3.2X
PPD	158.92	187	ePKP	03	07.50	3.0
CNCB	158.99	139	PKP	03	08.00	2.6
LPB	159.12	139	PKP	03	09.00	3.6X
ZOBO	159.29	138	PKP	03	08.00	2.2
			LR	59	20.00	

S.D. = 1.4 on 83 of 102 obs.

? SEP 18, 1989 08h 14m 43.55± 1.67s
2.157 S ±23.6km 128.233 E ±33.0km
DEPTH = 33.0km (normal)
4.7mb (3 obs.)
CERAM SEA (270)

AAI	1.52	181	iPc	15	08.10	-0.6
			iS	15	10.20	
WB5	18.61	162	eP	19	05.00	4.5X
			e	19	08.20	
WRA	18.66	162	Pc	19	05.60	4.5X
	0.8s		27.10nm			4.5mb
OIS	21.39	150	eP	19	33.80	3.1X
ASPA	22.08	166	eP	19	39.40	1.8
	1.0s		20.00nm			4.5mb
BWA	37.22	152	eP	21	52.90	-0.9
CAN	38.22	152	eP	22	02.00	-0.3
HYB	52.68	294	eP	23	57.50	0.0
	1.0s		50.00nm			5.4mb

S.D. = 1.5 on 5 of 8 obs.

& SEP 18, 1989 08h 22m 00.28s
59.863 N 140.472 W
DEPTH = 0.2km
SOUTHEASTERN ALASKA (19)
<AGS-P>.

CYK	1.04	283	eP	22	19.62	-1.1
			eS	22	33.06	
CTGM	1.19	339	eP	22	21.91	-1.5
			eS	22	39.41	
SNH	1.23	286	eP	22	22.82	-1.3
			eS	22	39.25	
WAX	1.33	297	iP	22	23.92	-1.9
			eS	22	40.77	
TGL	1.48	308	iP	22	26.16	-2.1
			eS	22	46.54	
BALM	1.50	323	eP	22	26.47	-2.1
			eS	22	46.78	
HYT	1.76	56	P	22	35.30	2.9
KAIM	1.99	274	eP	22	34.99	-0.5
			eS	22	58.81	
RAGM	2.17	286	eP	22	36.74	-1.4
			eS	23	02.41	
GLB	2.28	315	eP	22	38.09	-1.8
SGAM	2.45	287	eP	22	40.64	-1.6
			eS	23	10.68	
CVA	2.72	287	eP	22	44.31	-1.7
HIN	3.06	283	eP	22	49.21	-1.7
FID	3.12	289	eP	22	50.15	-1.5
KLU	3.14	304	eP	22	50.15	-1.9
VLZ	3.17	296	eP	22	49.66	-2.6
VZW	3.24	294	eP	22	50.82	-2.6
GLI	3.44	290	eP	22	53.24	-3.0

18 obs. associated

SEP 18, 1989 09h 12m 50.01± 0.36s
51.627 N ± 8.4km 173.269 W ± 4.3km
DEPTH = 33.0km (normal)
4.7mb (14 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)
ML 4.4 (PMR). Felt (III) on Atko.

ADK	2.14	278	eP	13	23.30	-0.7
SDN	8.48	59	eP	14	54.50	1.2
KDC	13.46	55	eP	16	01.80	1.0
TTA	14.61	33	e(P)	16	16.50	0.5
PMR	16.51	43	eP	16	38.10	-2.2
TOA	18.00	44	eP	16	59.00	0.0
FBA	18.69	35	e(P)	17	07.00	-0.3
INK	25.30	34	eP	18	13.50	-1.0
	0.5s		14.00nm			4.8mb
MBC	32.10	21	eP	19	15.50	-0.1
	0.5s		2.00nm			4.3mb
LON	33.40	78	eP	19	28.00	0.6
PNT	33.59	72	eP	19	29.00	0.1
	0.5s		6.00nm			4.8mb
EDM	35.64	63	eP	19	46.50	0.0
	0.5s		14.00nm			5.1mb
WDC	36.18	87	eP	19	51.70	0.6
MAT	37.25	265	eP	20	00.00	-0.1
LRM	39.51	74	eP	20	20.80	1.5
KVN	39.84	86	eP	20	22.00	0.0
TNP	40.98	87	eP	20	31.20	-0.1
PLM	44.23	92	eP	20	57.50	-0.4
RSSD	45.44	71	eP	21	07.50	0.0
GOL	47.28	77	eP	21	22.00	-0.2
RSON	47.44	58	eP	21	21.70	-1.2
SSE	51.45	273	P	22	07.80	13.9X
	1.0s		39.00nm			
BTO	51.98	290	eP	21	58.40	0.4
TIY	52.40	286	eP	22	02.00	0.8
XAN	56.98	285	P	22	33.50	-1.0
FVM	57.28	69	eP	22	34.80	-1.7
GTA	58.64	295	eP	22	47.80	1.6
CD2	62.28	285	eP	23	10.60	-0.4
GYA	63.71	280	P	23	20.20	-0.4
			sP	23	32.60	
KMI	67.09	282	Pc	23	54.50	12.0X
NB2	67.63	358	P	23	43.90	-1.2
	0.5s		0.60nm			3.9mb
HFS	68.45	356	eP	23	48.40	-1.8
	0.3s		2.00nm			4.7mb
CHG	74.13	280	eP	24	26.50	1.7
BRG	77.69	355	i(P)	24	44.40	0.0
	0.8s		10.00nm			4.9mb
KHC	79.45	355	P	24	54.50	0.3
			e	25	07.40	
CDF	80.34	360	eP	24	59.10	0.1
BSF	80.92	360	eP	25	02.00	-0.1
	0.7s		5.20nm			4.6mb
SSF	81.65	2	eP	25	06.20	0.4
	0.6s		3.60nm			4.6mb
LBF	81.74	2	eP	25	06.20	-0.1
MLR	81.85	346	eP	25	08.50	1.5
AVF	81.92	2	eP	25	07.40	0.3
	0.8s		4.00nm			4.5mb
SMF	82.08	2	eP	25	08.30	0.3
LSF	82.40	4	eP	25	10.80	1.1
	0.7s		7.70nm			4.9mb
MAF	82.47	3	eP	25	11.20	1.2
	0.6s		2.70nm			4.5mb
LFF	83.68	4	eP	25	17.40	1.2
	0.6s		7.20nm			5.0mb
CAF	83.74	3	eP	25	16.20	-0.5
LPO	83.95	4	eP	25	17.90	0.2
WB5	84.61	228	eP	25	21.00	-0.2
WRA	84.68	228	Pd	25	20.60	-0.9
	0.7s		0.80nm			4.0mb
SKO	85.91	349	eP	25	27.50	0.0
PSI	86.54	270	ePc	25	24.00	-7.0X
			e	26	30.00	
OHR	86.83	349	eP	25	23.30	-8.8X
HYB	87.31	295	eP	25	34.50	-0.2
			e	25	46.50	
ASPA	88.10	227	eP	25	52.70	14.5X
BNG	123.25	346	ePKPd	31	58.00	13.0X
	0.5s		5.00nm			
BUL	144.21	323	iPKPd	32	22.80	-1.4
			i	32	35.80	

S.D. = 0.9 on 50 of 56 obs.

SEP 18, 1989 09h 29m 03.05± 0.97s
44.359 N ±10.0km 7.560 E ± 6.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

ENR	0.17	217	P	29	06.13	-0.8
			S	29	07.36	
STV	0.20	236	P	29	07.15	-0.4
			S	29	08.69	
PZZ	0.36	294	P	29	11.36	0.9
			S	29	16.48	
IMI	0.51	152	P	29	14.33	1.0
			S	29	21.92	
CLL	7.86	26	iP	31	37.70	37.7X
CMP	12.45	80	iPc	31	57.00	-6.1X
MLR	13.08	79	eP	32	10.00	-1.6
KCT	15.92	98	iPn	32	49.60	1.0
YLV	16.53	96	iPn	32	47.10	-9.3X

S.D. = 1.4 on 6 of 9 obs.

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* SEP 18, 1989 10h 28m 33.14± 0.83s
39.771 S ± 7.4km 72.287 W ±14.1km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)
CENTRAL CHILE (136)
Felt at Osorno and Valdivia.

LNV	5.85	7	iP	29	59.00	-0.8
			iS	31	07.00	
CHCH	5.97	13	iP	30	02.00	0.4
			iS	31	12.30	
TACH	6.20	10	ePc	29	17.60	-47.2X
			iS	31	37.40	
PCH	6.30	14	iPd	30	06.20	-0.1
			iS	31	20.00	
LCCH	6.31	5	eP	30	05.50	-0.8
			iS	31	16.00	
SAN	6.44	12	eP	30	07.50	-0.7
			iS	31	23.00	
PEL	6.74	12	iPc	30	11.40	-1.0
			iS	31	28.50	
IHA	6.75	5	eP	30	21.50	9.0X
			iS	31	25.00	
ROCH	6.86	9	iPd	30	12.70	-1.6
			iS	31	30.70	
ZON	8.72	21	eP	30	40.00	0.1
CFA	8.79	23	e(P)	30	41.00	0.1
MRA	9.07	38	ePd	30	48.00	3.3X
TCA	10.49	39	ePd	31	06.20	1.9
ITB7	21.08	52	eP	33	15.10	-1.9
ITB	21.31	51	eP	33	17.70	-1.5
ITB1	21.31	50	eP	33	18.20	-1.0
CNCB	23.18	11	P	33	40.00	1.5
ARE	23.23	2	eP	33	40.00	1.3
LPB	23.44	10	P	33	43.00	2.2
ZOBO	23.70	10	iPc	33	44.30	0.8
	1.1s		23.20nm			4.6mb
	Z 24s		0.35um			3.7MszX
			S	38	16.00	
			LR	41	35.00	
VAO	27.19	60	eP	34	16.60	0.9
			e	34	35.60	
BAO	32.06	48	eP	34	58.80	-0.5
PDCR	39.88	56	iPc	36	06.30	0.7
			e	36	18.70	
			e	36	25.20	
SPA	50.42	180	e(P)	37	28.00	-1.2
	1.0s		11.00nm			4.8mb
LIC	76.85	70	Pc	40	24.20	0.6
TIC	77.14	70	P	40	25.80	0.5
KIC	77.15	70	Pc	40	25.90	0.6
	0.5s		8.50nm			5.0mb
TUL	78.36	341	eP	40	43.80	12.3X
	1.0s		5.70nm			
ALQ	80.76	332	eP	40	44.00	-0.7
	1.0s		5.25nm			4.5mb
BUL	85.34	112	eP	41	23.20	14.6X
KRI	88.22	110	eP	41	27.40	4.8X
HYB	146.32	123	ePKP	48	11.50	0.4

S.D. = 1.1 on 26 of 32 obs.

SEP 18, 1989 10h 41m 31.65± 0.87s
23.477 N ± 6.8km 121.585 E ± 9.7km
DEPTH = 58.3 ± 9.3 km
4.0mb (3 obs.)
TAIWAN (244)

TWD	0.60	1	iPd	41	43.70	-1.0
			eS	41	52.30	
TWG	0.81	216	ePc	41	47.10	-0.1
TWK	1.03	258	ePc	41	51.20	1.0
			eS	42	05.60	
TWQ	1.05	319	iPc	41	51.70	1.2
			eS	42	06.60	
TWC	1.15	12	ePc	41	52.00	0.2
			eS	42	07.60	
TWZ	1.61	360	ePc	41	58.60	0.4
ANP	1.70	358	eP	42	04.00	4.5X
QZH	3.10	299	Pnd	42	18.30	-0.9

18d 10h

Z 12s 1.00um
iSn 42 52.60
GZH 7.59 269 eP 43 19.80 -2.3
SSE 7.60 357 eP 43 22.60 0.4
Lg 45 47.00
e 46 04.00
WHN 9.54 319 eP 43 48.80 -0.2
eS 45 28.50
QIZ 11.81 250 eP 44 21.50 1.8
S 46 28.00
CN2 20.52 8 eP 46 07.40 0.0
WB5 44.86 163 eP 49 41.80 -0.3
WRA 44.91 163 Pd 49 42.50 0.0
0.6s 0.60nm 3.6mb
SLL 78.37 331 eP 53 28.00 0.9
0.4s 3.00nm 4.6mb
NB2 79.02 332 P 53 30.10 -0.6
0.6s 1.10nm 4.0mb
S.D. = 1.1 on 16 of 17 obs.

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* SEP 18, 1989 11h 32m 07.54± 1.07s
17.529 N ±18.9km 94.376 W ±10.0km
DEPTH = 176.0 ± 15.1 km
3.9mb (2 obs.)
CHIAPAS, MEXICO (61)

SCX 1.84 115 eP 32 43.76 0.8
iS 33 09.17
VHO 2.27 263 iP 32 47.00 -1.0
OXX 2.29 259 iP 32 47.75 -0.4
iS 33 18.93
LVVM 2.95 319 eP 32 53.97 -1.8
IISM 3.20 297 iP 32 58.59 -0.4
iS 33 34.91
TPX 3.31 142 (P) 33 36.00 35.7X
IIT 4.02 292 eP 33 10.30 0.6
PPM 4.32 291 iP 33 15.00 1.2
iS 34 05.00
III 4.92 281 iP 33 21.50 0.2
(S) 34 13.16
TAC 4.94 293 (P) 33 11.50 -10.1X
iS 34 19.00
IIC 5.14 296 eP 33 25.12 0.8
ACX 5.28 264 (P) 33 24.00 -1.9
CRX 5.37 291 iP 33 29.00 1.7
MRX 6.82 290 iP 33 47.00 0.9
SIO 18.23 355 e(P) 36 07.90 -2.1
TUL 18.35 356 eP 36 12.40 1.1
0.9s 4.00nm 3.8mb
ALQ 20.42 330 eP 36 33.50 0.8
0.8s 3.73nm 3.9mb
PNT 37.71 333 eP 39 07.00 -0.5
S.D. = 1.3 on 16 of 18 obs.

% SEP 18, 1989 11h 33m 00.02± 0.78s
44.317 N ± 9.5km 7.457 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

ENR 0.09 196 P 33 02.64 -0.1
S 33 04.10
STV 0.12 233 P 33 03.23 0.1
S 33 04.55
ROB 0.30 94 P 33 06.39 0.1
S 33 10.88
PZZ 0.32 307 P 33 06.61 0.0
S 33 11.43
FIN 0.55 101 P 33 11.12 -0.1
S 33 21.78
S.D. = 0.2 on 5 of 5 obs.

SEP 18, 1989 11h 52m 16.58± 1.12s
42.586 N ± 9.0km 13.111 E ± 8.2km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.6 (SSO).

MNS 0.38 238 Pc 52 24.30 0.0
eSg 52 29.50
ALP 0.39 60 iPg 52 24.50 -0.2
iSg 52 30.25
ASS 0.59 326 P 52 28.00 -0.5
eSg 52 36.90
CIO 0.61 2 ePg 52 28.46 -0.5
iSg 52 38.13
ARV 0.92 352 P 52 35.10 0.9
eSg 52 48.50
AOI 1.03 20 ePg 52 36.13 0.1
iSg 52 54.27
S.D. = 0.7 on 6 of 6 obs.

? SEP 18, 1989 12h 06m 07.08± 4.70s
8.006 S ±53.3km 128.664 E ±16.9km
DEPTH = 192.6 ± 18.1 km
4.4mb (5 obs.)
TIMOR SEA (290)

MTN 5.39 153 iPd 07 26.10 -0.9
KUG 5.45 246 ePd 07 28.50 0.7
eS 08 29.50
WB5 13.03 155 iPc 09 06.80 0.4
eS 11 27.20
WRA 13.08 156 P 09 06.00 -0.9
0.3s 6.00nm 4.5mb
MBL 15.61 212 eP 09 38.00 -0.4
0.3s 4.00nm 4.3mb
eS 12 25.00
QIS 16.36 141 eP 09 47.70 0.2
eS 12 44.60
ASPA 16.36 163 iPc 09 48.80 1.2
0.4s 18.00nm 4.8mb
eS 12 44.70
WARB 18.18 186 eP 10 09.30 1.3
0.3s 4.00nm 4.3mb
eS 13 32.00
NANU 19.21 220 iPc 10 17.80 -0.8
0.3s 5.00nm 4.5mb
eS 13 54.00
MRWA 24.23 208 eP 11 07.00 -0.8
S.D. = 1.1 on 10 of 10 obs.

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* SEP 18, 1989 12h 33m 04.87± 1.46s
33.477 N ±13.8km 24.548 E ±10.2km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
MEDITERRANEAN SEA (400)

VAM 1.95 352 ePn 33 37.00 0.8
NPS 1.99 26 ePn 33 36.70 -0.1
KAP 3.00 46 ePn 33 52.40 1.2
YER 4.76 39 iPn 34 15.80 -0.4
KSL 4.91 56 ePn 34 18.00 -0.3
ELL 5.47 52 eP 34 26.00 -0.3
BCK 6.33 49 eP 34 38.00 -0.4
YLV 8.06 27 iPn 35 22.60 20.0X
OHR 8.18 340 e(Pn) 34 57.00 -7.3X
DSI 9.34 99 eP 35 19.00 -1.2
e(S) 36 57.00
PRNI 9.41 107 eP 35 23.00 1.7
eS 37 01.00
KHC 17.65 336 iPc 37 13.30 3.6X
e 37 20.50
PRU 18.08 339 eP 37 16.50 1.5
BRG 19.04 339 e(P) 37 20.00 -6.7X
CLL 19.71 338 iP 37 34.20 -0.1
1.3s 19.00nm 4.2mb
DOU 22.18 324 P 38 04.30 4.8X
0.9s 20.00nm 4.6mb
HFS 27.61 348 eP 38 50.40 -0.5
1.0s 8.70nm 4.4mb
NB2 28.90 347 P 39 00.70 -1.9
0.9s 2.60nm 3.9mb
S.D. = 1.2 on 13 of 18 obs.

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* SEP 18, 1989 13h 10m 20.20± 1.68s
45.496 N ±16.5km 15.395 E ± 9.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.5 (TRI), 3.0 (LJU).

VBY 0.10 275 iPgc 10 21.90 -1.0
iSg 10 23.20
PTJ 0.56 44 iPgd 10 31.80 0.1
eSg 10 41.40
CEY 0.72 290 e(Pg) 10 34.50 0.1
e 10 35.50
eSg 10 45.00
RIY 0.73 258 eP 10 35.00 0.5
iSg 10 42.80
LJU 0.81 313 ePg 10 35.50 -0.5
eSg 10 48.00
TRI 1.16 281 ePg 10 42.00 0.1
i(Sg) 10 58.10
VOY 1.18 298 ePg 10 43.00 0.7
eSg 10 58.50
S.D. = 0.7 on 7 of 7 obs.

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* SEP 18, 1989 13h 10m 21.20± 0.99s
17.781 N ± 8.5km 99.402 W ±11.7km
DEPTH = 10.0km (geophysicist)
GUERRERO, MEXICO (59)

III 0.59 354 iP 10 32.50 -0.9
iS 10 41.50
ACX 1.01 206 iP 10 40.50 0.2
iS 10 54.50
PPM 1.47 30 eP 10 43.00 -5.3X
iS 11 06.00
IIT 1.61 40 iP 10 51.00 1.0
(S) 11 12.00
IISM 2.27 58 eP 10 59.50 0.2
MRX 2.56 319 eP 11 07.00 3.7X
OXX 2.65 105 eP 11 04.00 -0.9
iS 11 37.00
S.D. = 1.2 on 5 of 7 obs.

? SEP 18, 1989 13h 28m 51.77±13.91s
8.343 S ±121.km 129.290 E ±22.9km
DEPTH = 123.2 ± 44.2 km
4.3mb (2 obs.)
TIMOR SEA (290)

MTN 4.83 158 eP 30 04.00 0.5
eS 31 04.00
KNA 7.38 184 eP 30 38.00 -0.3
eS 32 05.00
WB5 12.48 157 eP 31 45.10 -1.1
eS 34 05.00
MBL 15.67 215 eP 32 27.00 -0.1
0.4s 3.00nm 3.9mb
eS 35 20.00
ASPA 15.87 164 eP 32 30.30 0.8
0.3s 12.00nm 4.6mb
eS 35 24.60
WARB 17.92 188 eP 32 55.00 0.2
eS 36 15.00
S.D. = 1.1 on 6 of 6 obs.

SEP 18, 1989 15h 09m 28.61± 0.31s
42.625 N ± 2.7km 13.061 E ± 3.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 3.4 (SSO), 3.2 (TRI).

AQU 0.37 137 P 09 37.00 0.8
MNS 0.37 230 Pc 09 35.30 -0.9
ALP 0.41 68 iPgc 09 35.74 -1.3
iSg 09 42.05
ASS 0.53 327 P 09 39.10 -0.3
eSg 09 47.90
CIO 0.57 6 iPgc 09 39.53 -0.8
iSg 09 49.53
AZI 0.69 156 P 09 42.60 0.3
eSg 09 54.40
SSO 0.72 21 iPgc 09 42.55 -0.2
iSg 09 55.52
RMP 0.86 198 P 09 45.40 0.3
eSg 09 59.20
ARV 0.88 354 P 09 46.90 1.4
eSg 10 00.20
RDP 0.90 197 P 09 46.30 0.4
eSg 10 00.70
AOI 1.01 23 iPgc 09 47.07 -0.6
iSg 10 04.59
DUI 1.42 132 P 09 55.70 1.2
eSn 10 15.70
MAO 1.43 262 Pc 09 53.90 -0.6
SFI 1.57 326 P 09 57.90 1.4
PGD 1.59 322 P 09 57.10 0.1
BDI 2.30 309 P 10 07.80 0.5
MME 2.33 313 P 10 07.00 -0.8
HVAR 2.55 76 iPn 10 10.70 0.0
SGO 2.67 140 P 10 11.20 -1.1
RIY 2.88 19 eP 10 15.80 0.4
iSn 10 50.60
MGR 3.11 142 P 10 19.00 0.4
TRI 3.12 9 ePn 10 18.90 0.1
eSg 10 54.90
CEY 3.26 17 eP 10 32.00 11.1X
eSn 11 00.40

```
VBY     3.29  28 e(Pn) 10 24.20   3.1X
               eSn   11 02.70
BOB     3.38 310 P     10 22.00  -0.6
VOY     3.46  10 ePn   10 22.90  -0.7
               e(Sn) 10 57.00
CTI     3.57 344 P     10 25.20   0.0
LJU     3.58  17 e(Pn) 10 27.00   1.7
               eSn   11 08.00
PTJ     3.88  31 eP    10 37.40   7.8X
OHR     5.97 102 e(Pn) 10 58 20  -1.0
     S.D. = 0.9  on  27 of  30 obs.
-------------------------------------
   SEP 18, 1989  15h 21m 12.13± 0.74s
   42.617 N ± 5.6km   13.083 E ± 7.1km
   DEPTH =  10.0km  (geophysicist)
 CENTRAL ITALY                  (381)
     MD 2.6 (SSO).

MNS     0.38 232 Pc    21 19.40  -0.5
               iSg   21 25.20
ALP     0.40  66 iPgc  21 19.71  -0.6
               iSg   21 25.82
ASS     0.55 326 P     21 23.10  -0.2
               eSg   21 31.90
CIO     0.58   4 e(Pg) 21 23.00  -0.9
               iSg   21 32.78
AZI     0.68 157 P     21 26.20   0.6
               eSg   21 35.60
ARV     0.89 353 P     21 30.50   1.3
               eSg   21 43.20
AOI     1.01  22 e(Pg) 21 31.47   0.3
               eSg   21 49.15
     S.D. = 1.0  on   7 of   7 obs.
-------------------------------------
*  SEP 18, 1989  16h 49m 55.88± 0.93s
   21.472 S ± 7.7km   67.284 W ±16.3km
   DEPTH =  10.0km  (geophysicist)
 CHILE-BOLIVIA BORDER REGION    (124)

SLA     3.64 153 ePc   50 53.80   0.2
ANT     3.65 232 iP    50 53.30  -0.3
               eS    51 33.00
CCH     4.21  15 P     51 01.00  -0.8
CNCB    4.68 352 iPc   51 09.90   1.0
LPB     4.97 351 P     51 14.00   1.2
      0.9s    67.23nm
ZOBO    5.24 351 iPc   51 15.20  -1.4
     S.D. = 1.4  on   6 of   6 obs.
-------------------------------------
%  SEP 18, 1989  18h 02m 26.59± 0.71s
   40.070 N ± 5.9km   29.079 E ± 5.5km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                         (366)

YLV     0.54  24 iPg   02 37.70   0.1
               iSg   02 44.70
KCT     0.58 288 iPg   02 38.30  -0.1
               iSg   02 45.20
GBZT    0.77  21 ePg   02 41.70   0.1
HRT     0.87  31 ePn   02 43.20  -0.2
BNT     0.93 288 iPn   02 44.70   0.3
EDC     0.97 287 iPn   02 44.80  -0.2
ISK     0.99 359 ePn   02 45.50   0.1
KHL     1.78 169 ePn   02 57.70   0.0
     S.D. = 0.2  on   8 of   8 obs.
-------------------------------------
*  SEP 18, 1989  18h 04m 37.08± 2.88s
   5.924 S ±12.2km  104.995 E ±15.6km
   DEPTH =  99.9 ± 24.9 km
   4.7mb (  5 obs.)
 SOUTHERN SUMATERA              (274)

TRT     7.79 104 ePd   06 31.00   1.5
               eS    07 56.50
IPM    11.16 339 ePd   07 25.10  10.1X
NANU   19.42 149 iPc   08 55.80  -2.3
      0.3s     4.00nm          4.2mb
               eS    12 10.00
KNA    25.28 115 eP    09 54.00  -1.8
CHG    25.29 346 eP    09 55.00  -1.0
MTN    26.67 107 iPc   10 08.90   0.3
WARB   28.86 137 eP    10 26.00  -2.4
WB5    31.74 119 eP    10 53.00  -0.8
WRA    31.74 119 P     10 54.00   0.2
GYA    32.23   3 P     11 01.60   3.5X
QIS    36.58 117 eP    11 35.00  -0.4
CTA    42.45 113 iPd   12 25.00   1.0
       1.0s    16.00nm          4.8mb
QLP    42.65 123 iPc   12 26.40   0.9
STK    42.84 132 iPc   12 27.30   0.4
       0.3s    12.00nm          5.2mb
NDI    43.59 324 iPd   12 32.70  -0.3
GUMO   44.08  64 eP    12 36.00  -1.2
       0.7s    38.12nm          5.3mb
PJG    44.08  64 eP    12 36.20  -1.0
GTA    45.36 354 eP    12 47.60   0.4
RMQ    46.42 121 eP    12 56.70   1.0
BWA    49.09 131 iPc   13 18.10   1.7
CAN    49.90 132 eP    13 23.10   0.5
BRS    50.12 121 iPc   13 26.00   1.7
                 ipP   13 32.20  21kmX
WMQ    51.92 344 P     13 37.90   0.1
MAT    52.45  34 iPc   13 41.30  -0.4
MLR    86.56 316 eP    17 12.00   1.5
OHR    89.49 311 eP    17 24.30  -0.2
SUF    90.13 333 eP    17 27.10   0.2
       0.5s     1.00nm          4.2mb
SOD    90.97 338 eP    17 36.00   5.3X
SIO   144.44  31 ePKP  24 03.70   0.0
TUL   144.57  30 iPKPc 24 04.00   0.1
       0.8s    17.60nm
ZOBO  156.92 197 ePKP  24 14.00  -9.5X
     S.D. = 1.2  on  27 of  31 obs.
-------------------------------------
   SEP 18, 1989  18h 14m 19.01± 1.50s
   43.383 N ± 8.8km    5.401 E ± 9.7km
   DEPTH =  10.0km  (geophysicist)
 NEAR SOUTH COAST OF FRANCE     (379)
     MD 2.5 (STR).

GELF    0.02  87 Pg    14 20.60  -0.4
BERF    0.22 108 Pg    14 24.10   0.2
TREF    0.24 357 Pg    14 23.52  -0.7
PRAF    0.45 338 Pg    14 28.54   0.3
VILF    0.52  26 Pg    14 28.69  -0.9
TAVF    0.53  64 Pg    14 28.91  -0.9
GANF    0.72  31 Pg    14 33.30   0.1
CALN    1.14  71 Pg    14 41.05   0.5
               Sg    14 57.63
MVIF    1.37  67 Pn    14 44.24  -0.1
               Sg    15 02.44
TOUF    1.48  64 Pg    14 45.93   0.0
               Sg    15 07.17
AURF    1.49  70 Pn    14 46.36   0.5
               Sg    15 06.93
FOUF    1.52  41 ePgc  14 47.65   1.5
               eSg   15 06.65
AUTN    1.59  67 Pn    14 48.16   0.6
               Sg    15 09.83
SAOF    1.68  68 Pn    14 48.47  -0.1
               Sg    15 12.86
CVF     2.67 107 Pn    15 02.07  -0.8
     S.D. = 0.7  on  15 of  15 obs.
-------------------------------------
*  SEP 18, 1989  19h 03m 50.77± 1.08s
   4.034 S ±12.5km  134.536 E ±18.1km
   DEPTH =  33.0km  (normal)
   4.3mb (  1 obs.)
 WEST IRIAN REGION              (196)

MTN     9.38 201 eP    06 07.50   0.7
KNA    12.95 206 eP    06 54.00  -1.2
      0.7s    94.00nm          6.0mb X
WB5    15.75 181 eP    07 33.00   1.1
               eS    10 24.90
WRA    15.82 181 Pc    07 31.80  -1.0
      0.8s     2.50nm          3.4mb X
QIS    17.15 164 eP    07 50.20   0.6
CTA    19.62 145 iPc   08 18.90  -0.8
       1.0s    18.00nm          4.3mb
WARB   23.29 198 eP    08 57.00   0.3
CNCB  149.60 134 iPKPc 23 35.00  -0.4
LPB   149.70 133 PKP   23 35.50   0.1
ZOBO  149.85 133 PKP   23 32.00  -3.8X
CCH   150.51 137 ePKP  23 37.00   0.5
     S.D. = 0.9  on  10 of  11 obs.
-------------------------------------
   SEP 18, 1989  19h 47m 51.79± 0.60s
   18.332 N ± 3.7km   64.290 W ± 3.5km
   DEPTH = 105.9 ±  6.2 km
   4.7mb ( 19 obs.)
 VIRGIN ISLANDS                 ( 91)
     Felt in many parts of the Virgin
     Islands.

PAG     3.39 132 iPd   48 43.36  -0.4
               S     49 24.00
DEG     3.68 123 eP    48 43.00  -4.8X
BBL     3.88 136 eP    48 50.25  -0.2
FDF     4.68 139 eP    49 00.49  -0.9
               S     49 53.70
CRM     4.81 137 eP    49 02.76  -0.4
BIM     4.89 140 eP    49 03.59  -0.8
MVM     4.97 139 eP    49 05.03  -0.4
BOT     7.92 154 eP    49 46.71   0.9
TCE     7.98 162 eP    49 49.22   2.5
TRN     8.13 160 eP    49 49.92   1.1
TBH     8.40 158 eP    49 53.11   0.6
TPP     8.43 161 eP    49 56.76   3.9X
PRM    22.50 318 P     52 43.10  -0.2
BLA    23.55 326 P     52 52.00  -1.4
OLY    29.52 311 P     53 47.20  -1.1
FVM    30.07 316 P     53 52.50  -0.6
UYO    31.17 306 iPd   54 02.70  -0.1
ZOBO   34.59 186 P     54 31.80  -1.4
      1.0s    18.75nm          4.9mb
LPB    34.85 186 P     54 36.00   0.8
CNCB   35.11 186 iPc   54 37.00  -0.6
CCH    35.54 183 P     54 41.50   0.6
PDCR   39.46 139 ePc   55 13.20  -0.2
ALQ    40.83 302 P     55 24.80   0.0
       0.8s    10.43nm          4.7mb
RSSD   42.02 317 P     55 34.00  -0.5
PPD    42.08 162 eP    55 34.20  -0.6
SLA    42.81 182 iPd   55 40.20  -0.8
DAU    45.83 309 P     56 05.10  -0.1
FFC    46.32 331 eP    56 08.00  -0.5
       0.8s    12.00nm          4.8mb
GLA    47.41 298 P     56 18.00   0.5
LRM    48.20 316 eP    56 24.20   0.5
TPC    48.52 300 eP    56 27.00   0.9
BAR    48.93 298 eP    56 30.00   0.8
PLM    49.14 298 eP    56 32.00   1.0
GSC    49.26 301 eP    56 32.00   0.2
RVR    49.61 299 eP    56 35.00   0.6
TNP    49.92 305 P     56 37.00   0.1
       0.7s    4.22nm           4.5mb
CLC    49.95 302 eP    56 37.00   0.0
SB8    50.04 300 eP    56 38.00   0.3
ISA    50.65 301 eP    56 43.00   0.7
KVN    50.74 306 P     56 41.50  -1.6
ROCH   51.42 187 eP    56 47.00  -1.2
FCH    51.69 186 eP    56 49.80  -0.6
SYP    51.80 300 eP    56 51.00  -0.1
SAN    51.85 187 eP    56 51.00  -0.3
BCH    51.92 301 P     56 52.00  -0.1
PCH    52.00 187 iPd   56 52.80   0.3
TACH   52.08 187 eP    56 52.70  -0.3
CHCH   52.32 187 iPc   56 55.20   0.4
LNV    52.44 187 eP    56 53.50  -2.0
MHC    53.33 303 eP    57 03.10   0.7
ORV    53.42 306 eP    57 03.10   0.2
TIC    58.80  93 Pc    57 41.60  -0.1
LIC    58.91  94 Pc    57 42.70   0.2
KIC    59.14  94 Pc    57 44.20   0.1
       0.6s    34.50nm          5.6mb
EPF    59.27  50 eP    57 45.10   0.5
       0.9s     9.80nm          4.9mb
LFF    59.68  48 eP    57 47.40   0.1
LPO    59.98  49 eP    57 49.40   0.1
RJF    60.25  48 eP    57 51.00  -0.2
       0.8s     8.00nm          4.9mb
LSF    60.32  47 eP    57 51.70   0.0
CAF    60.62  48 eP    57 53.80   0.1
       0.9s     6.50nm          4.7mb
TCF    60.80  47 eP    57 54.70  -0.2
       0.8s     9.40nm          4.9mb
AVF    61.62  46 eP    58 00.10  -0.3
       1.0s     6.00nm          4.6mb
SSF    61.73  46 eP    58 01.10  -0.1
       0.9s     3.90nm          4.4mb
SMF    61.94  46 eP    58 02.40  -0.2
       1.0s     6.80nm          4.6mb
LOR    61.99  46 eP    58 02.10  -0.8
       0.9s     3.90nm          4.4mb
LBF    62.05  46 eP    58 02.90  -0.5
       1.2s    14.80nm          4.9mb
FRF    63.88  50 eP    58 15.50   0.1
LPG    63.94  48 eP    58 16.70   0.5
       0.7s     4.40nm          4.5mb
BSF    63.99  45 eP    58 15.40  -0.8
       0.7s     5.20nm          4.6mb
```

18d 19h

CDF 64.33 45 eP 58 17.90 -0.4
SBF 64.45 50 eP 58 19.10 -0.1
1.0s 20.00nm 5.0mb
NB2 67.12 31 P 58 36.20 0.3
0.8s 4.40nm 4.4mb
CLL 68.01 41 eP 58 42.00 0.5
KHC 68.48 44 P 58 45.30 0.7
BRG 68.62 42 i(P) 58 45.80 0.5
eSg 26 39.50
PRU 69.05 43 eP 58 49.00 1.0
e 26 27.00
eSg 26 30.00
SOD 73.60 24 eP 59 13.00 -1.8
MLR 77.32 46 eP 59 38.50 2.0
BNG 81.83 88 iPc 00 02.00 0.9
0.6s 18.00nm 5.1mb
CAN 146.02 233 ePKP 07 21.70 1.5
e 07 45.00
S.D. = 0.8 on 78 of 80 obs.

? SEP 18, 1989 20h 43m 34.06± 9.29s
11.942 S ±44.3km 77.181 W ±75.0km
DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)

PT10 0.25 122 iP 43 41.00 -0.2
iS 43 55.00
NNA 0.33 98 iPc 43 41.70 -0.6
0.5s 17.61nm
iS 43 53.70
PT02 1.23 144 iP 43 54.00 -1.1
iS 44 15.00
HUA 1.82 93 eP 44 04.40 0.4
eS 44 38.30
PT06 2.05 156 iP 44 06.50 -0.4
PT03 2.44 147 iP 44 14.00 1.5
iS 44 49.00
S.D. = 1.2 on 6 of 6 obs.

% SEP 18, 1989 20h 44m 49.88± 0.51s
40.550 N ± 5.2km 28.206 E ± 4.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT 0.29 228 iPg 44 56.20 0.2
iSg 44 59.20
KCT 0.32 159 iPg 44 56.70 0.1
iSg 45 03.20
EDC 0.33 232 iPg 44 56.30 -0.4
eSg 45 00.80
CTT 0.62 16 ePg 45 02.20 -0.2
MFT 0.74 289 iPg 45 04.70 0.2
iSg 45 14.20
ISK 0.83 51 ePg 45 06.00 0.1
eSg 45 17.20
YLV 0.89 89 iPn 45 07.00 0.0
HRT 1.14 76 ePn 45 11.20 -0.1
S.D. = 0.3 on 8 of 8 obs.

• SEP 18, 1989 21h 06m 25.25± 0.82s
42.869 N ± 5.7km 12.847 E ± 7.7km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 1.9 (SSO).

ASS 0.24 326 P 06 30.60 0.1
eSg 06 34.50
CIO 0.39 34 e(Pg) 06 33.56 0.3
iSg 06 39.51
MNS 0.50 194 P 06 35.40 0.0
eSg 06 43.30
ALP 0.54 99 ePg 06 36.25 0.0
eSg 06 44.31
ARV 0.63 6 P 06 37.60 -0.4
eSg 06 47.20
S.D. = 0.3 on 5 of 5 obs.

SEP 18, 1989 21h 16m 28.21± 0.15s
66.779 N ± 2.4km 136.028 W ± 3.1km
DEPTH = 23.7km (17 depth phases)
5.1mb (34 obs.) 4.8Msz (2 obs.)
NORTHERN YUKON TERRITORY, CANADA(677)
Felt at Aklavik, Inuvik and Fort McPherson, Northwest Territories.

INK 1.81 31 eP 16 59.20 0.9

DWY 3.08 209 P 17 16.20 -0.3
KBT 3.22 333 (P) 17 20.00 1.6
GLM 4.99 254 P 17 43.20 -0.4
DDM 5.10 239 P 17 44.70 -0.4
HDA 5.12 247 P 17 44.50 -0.8
FBA 5.19 254 eP 17 46.50 0.2
CCB 5.31 252 P 17 47.00 -1.0
PAX 5.55 231 P 17 50.30 -1.1
HYT 6.01 187 P 17 56.50 -1.6
WHC 6.08 176 P 17 57.20 -1.7
8ALM 6.40 209 P 18 02.30 -1.2
TOA 6.42 228 eP 18 03.50 -0.2
IMA 7.11 272 eP 18 13.50 0.0
PMR 7.72 234 P 18 06.60 -15.2X
PMS 8.12 233 eP 18 28.70 1.2
BRW 8.67 311 eP 18 34.70 -0.3
TTA 9.32 255 eP 18 42.30 -1.8
SIT 9.76 178 eP 18 48.00 -2.1
SVW 10.29 246 ePc 18 56.90 -0.5
MBC 10.81 21 ePc 19 00.20 -4.1X
0.5s 67.00nm 6.2mb X
KDC 11.82 228 eP 19 17.50 -0.6
SDN 16.33 237 eP 20 18.50 1.3
0.6s 50.80nm 4.8mb
EDM 17.54 130 eP 20 28.00 -4.4X
PNT 19.43 146 eP 20 55.00 -0.4
FFC 20.22 110 eP 21 01.00 -2.8
SES 20.71 130 eP 21 08.00 -0.9
RMW 20.75 152 P 21 09.30 -0.1
LON 21.43 152 P 21 17.30 0.9
BMW 21.45 155 P 21 16.10 -0.4
SHW 21.89 154 P 21 23.50 2.4
VGB 22.81 152 P 21 32.10 2.0
LRM 24.44 137 eP 21 47.00 0.8
ADK 24.93 253 P 21 52.40 2.0
1.1s 93.75nm 5.3mb
RSON 26.38 106 P 22 03.80 -0.2
1.0s 41.21nm 5.0mb
FRB 27.15 64 eP 22 10.00 -1.0
WDC 27.31 157 eP 22 12.60 0.0
MIN 27.69 156 eP 22 16.80 0.6
RSSD 28.47 127 P 22 22.90 -0.4
ORV 28.47 156 eP 22 22.70 -0.4
KVN 29.57 151 P 22 33.90 0.7
pP 22 43.60 34km
DUG 29.62 142 P 22 35.50 1.8
0.6s 5.84nm 4.6mb
ARN 30.63 157 P 22 43.00 0.6
pP 22 51.40 29km
TNP 30.68 150 P 22 43.60 0.5
0.6s 10.80nm 4.9mb
pP 22 53.60 36kmX
FRI 31.27 154 eP 22 47.70 -0.3
MSU 31.37 142 P 22 50.60 1.4
LLA 31.44 156 eP 22 50.10 0.6
PRI 31.95 156 eP 22 55.20 1.1
ISA 32.79 153 eP 23 12.00 10.6X
CLC 32.80 152 eP 23 03.00 1.5
GSC 33.45 151 eP 23 08.00 0.8
SYP 33.64 156 eP 23 27.00 18.2X
SBB 33.85 152 eP 23 11.00 0.4
SCH 33.91 76 eP 23 10.00 -0.9
MWC 34.26 153 eP 23 24.00 9.7X
RVR 34.61 152 eP 23 16.00 -1.1
TPC 34.76 150 eP 23 20.00 1.6
PLM 35.33 152 eP 23 31.00 7.5X
BAR 36.02 152 eP 23 36.00 6.9X
e 24 12.00 164kmX
GLA 36.02 149 eP 23 26.00 -3.1X
ALQ 36.22 137 iPc 23 32.00 1.0
1.0s 11.25nm 4.7mb
Z 18s 1.55um 4.8Msz
pP 24 19.00 222kmX
SIO 38.55 123 eP 23 51.60 1.3
FVM 38.57 115 P 23 56.60 6.1X
TUL 38.57 123 eP 23 50.40 -0.1
0.9s 7.40nm 4.5mb
Z 20s 1.45um 4.8Msz
LR 37 00.00
MEO 38.70 127 eP 23 50.00 -1.6
KEV 43.23 9 eP 24 29.00 0.6
0.7s 9.30nm 4.6mb
i 24 35.80 23km
SOD 45.57 9 iP 24 47.70 0.5
SUF 50.15 11 eP 25 22.80 -0.1
0.4s 8.40nm 5.1mb
HFS 51.44 19 eP 25 32.00 -0.8

0.5s 48.20nm 5.7mb
Z 16s 0.13um 4.0MszX
LR 44 10.00
UPP 52.18 16 iP 25 38.20 -0.1
NUR 52.22 12 iP 25 38.10 -0.6
0.7s 46.70nm 5.5mb
i 25 46.00 26km
EKA 53.18 32 Pc 25 45.60 -0.3
0.6s 7.70nm 4.8mb
DMU 53.70 35 eP 25 51.00 1.2
CN2 53.80 297 Pd 25 50.40 -0.2
pP 25 58.00 25km
DLE 54.35 35 eP 25 42.00 -12.5X
MAT 55.40 283 (P) 26 04.00 1.5
1.8s 77.27nm 5.4mb
WIT 57.45 26 eP 26 20.50 3.7X
WTS 58.26 26 eP 26 23.00 0.5
0.8s 5.00nm 4.6mb
e 26 30.50 25km
SNF 59.22 28 Pc 26 29.30 0.1
ENN 59.28 27 eP 26 30.00 0.4
0.9s 24.00nm 5.3mb
e 26 37.00 23km
e 26 45.50
MEM 59.45 27 Pc 26 31.20 0.4
e 26 38.20 23km
DOU 59.68 28 P 26 39.80 7.4X
CLL 59.92 22 iP 26 34.10 0.1
1.2s 24.00nm 5.2mb
FLN 59.93 32 eP 26 32.70 -1.5
1.1s 29.30nm 5.3mb
LDF 60.17 32 eP 26 34.30 -1.5
1.0s 20.00nm 5.2mb
GRR 60.21 33 eP 26 34.70 -1.4
BJI 60.32 303 eP 26 43.50 6.6X
MOX 60.35 23 iPc 26 37.70 0.6
1.0s 32.00nm 5.4mb
e 26 44.00 21km
WLF 60.38 27 P 26 38.10 0.9
ABH 60.42 26 eP 26 37.69 0.1
BRG 60.48 21 iP 26 37.80 -0.1
1.0s 16.00nm 5.1mb
LPF 60.51 33 eP 26 37.00 -1.1
RUP 60.51 27 eP 26 38.41 0.2
HOF 60.72 23 iPc 26 39.90 0.4
KSP 60.84 20 eP 26 40.00 -0.3
e 26 47.50 25km
PRU 61.43 21 Pd 26 44.30 -0.1
1.0s 11.60nm 5.0mb
e 27 03.00 72kmX
CDF 61.79 27 eP 26 45.80 -1.1
WET 62.01 23 iPc 26 49.20 0.9
1.3s 40.00nm 5.4mb
HAU 62.01 28 eP 26 47.00 -1.3
MFF 62.05 33 eP 26 47.60 -1.0
KRA 62.07 17 iPc 26 48.70 0.1
0.7s 25.00nm 5.5mb
e 26 55.60 22km
KHC 62.13 22 iPc 26 50.30 1.2
i 26 56.50 20km
LOR 62.24 30 eP 26 48.40 -1.5
1.2s 26.70nm 5.3mb
BSF 62.26 27 eP 26 48.80 -1.3
SSF 62.37 30 eP 26 49.80 -0.9
0.9s 21.20nm 5.3mb
LBF 62.54 30 eP 26 50.60 -1.3
AVF 62.60 30 eP 26 51.00 -1.2
1.3s 33.90nm 5.3mb
BGF 62.72 31 eP 26 51.60 -1.4
0.5s 9.40nm 5.2mb
LSF 62.75 32 eP 26 52.10 -1.1
1.1s 15.60nm 5.1mb
SMF 62.84 30 eP 26 52.50 -1.3
1.3s 23.10nm 5.2mb
TCF 62.85 31 eP 26 52.60 -1.3
1.2s 20.80nm 5.1mb
SPC 62.96 17 eP 26 55.00 0.2
MAF 62.99 31 eP 26 53.50 -1.3
ZST 63.54 20 eP 26 58.00 -0.4
i 27 05.70 25km
RJF 63.64 32 eP 26 58.10 -1.0
LFF 63.83 33 eP 26 59.40 -0.9
OGA 63.93 25 eP 27 02.40 1.2
KBA 64.09 23 iPc 27 03.00 0.8
1.1s 20.20nm 5.2mb
i 27 09.80 22km
CAF 64.12 32 eP 27 01.10 -1.2

	1.1s	9.70nm		4.9mb		
LPO	64.17	33 eP	27 01.50	-1.1		
LPG	64.50	28 eP	27 04.80	-0.3		
VAI	64.51	27 P	27 07.90	3.2X		
ORO	64.60	27 P	27 06.30	0.8		
RBL	64.75	23 P	27 13.60	7.2X		
MDI	64.76	26 P	27 09.40	3.1X		
WMQ	64.79	326 P	27 08.00	1.3		
CTI	64.83	24 P	27 10.00	3.1X		
SAL	65.07	25 P	27 12.80	4.5X		
VOY	65.20	23 e(P)	27 09.00	-0.3		
LJU	65.28	22 e(P)	27 09.00	-0.7		
TRI	65.49	23 eP	27 10.80	-0.2		
TRI	65.49	23 P	27 17.00	6.0X		
DOI	65.55	28 P	27 08.50	-3.1X		
EPF	65.56	34 eP	27 10.10	-1.5		
	1.0s	6.00nm		4.7mb		
CEY	65.56	22 e(P)	27 11.50	-0.1		
PTJ	65.63	21 eP	27 12.30	0.2		
BOB	65.70	26 P	27 13.00	0.5		
VBY	65.91	22 e(P)	27 12.90	-0.9		
GTA	65.92	315 eP	27 15.00	0.9		
SBF	66.21	28 eP	27 14.80	-0.9		
	1.1s	19.50nm		5.2mb		
FRF	66.35	29 eP	27 15.90	-0.7		
LRG	66.40	29 eP	27 16.10	-0.7		
LMR	66.54	29 eP	27 17.10	-0.7		
BDI	66.58	26 P	27 18.70	0.6		
GUD	66.78	38 e(P)	27 19.50	-0.1		
PII	66.90	26 P	27 19.00	-1.0		
VRI	66.91	13 eP	27 20.00	-0.1		
SFI	66.93	25 P	27 23.00	2.8X		
PGD	66.95	25 P	27 22.10	1.5		
MLR	67.21	14 eP	27 22.00	-0.2		
CMP	67.35	14 ePc	27 24.00	1.1		
CVF	67.72	27 eP	27 24.00	-1.3		
LZH	67.84	311 P	27 27.50	1.1		
	1.5s	0.03nm		2.2mb X		
		pP	27 34.00	21km		
		sP	27 39.50			
ASS	67.89	24 P	27 26.70	0.3		
XAN	68.16	306 P	27 27.00	-1.2		
MNS	68.56	24 P	27 30.00	-0.5		
EVIA	69.09	37 e(P)	27 35.00	1.1		
WHN	69.55	300 eP	27 37.00	0.3		
		pP	27 43.00	19km		
AAPN	69.95	39 eP	27 40.50	1.3		
ASMO	70.00	39 eP	27 40.70	1.2		
ALOJ	70.14	39 eP	27 41.70	1.3		
SKO	70.21	18 iP	27 41.00	0.4		
	1.0s	********nm		8.3mb X		
		i	27 48.00	22km		
ACHM	70.21	39 eP	27 42.50	1.7		
ATEJ	70.35	39 eP	27 43.00	1.3		
APHE	70.39	39 eP	27 43.40	1.4		
EJIF	70.42	41 e(P)	27 43.20	1.3		
ENIJ	70.74	38 e(P)	27 44.80	0.9		
SGO	70.76	23 P	27 45.00	1.1		
OHR	70.98	18 eP	27 38.00	-7.4X		
MGR	71.21	23 P	27 46.00	-0.7		
TDS	71.80	22 P	27 50.00	-0.2		
BBTK	73.36	9 eP	28 01.00	1.5		
GYA	75.89	305 P	28 17.40	3.1X		
MHI	76.56	347 eP	28 20.00	2.1		
KMI	78.39	308 Pc	28 38.00	9.7X		
QUE	81.77	340 eP	28 48.00	1.8		
CHG	B5.49	309 eP	29 15.00	9.9X		
	S.D. = 1.1	on 151 of 177 obs.				

SEP 18, 1989 21h 37m 39.13± 0.42s
13.553 N ± 6.1km 147.551 E ± 8.0km
DEPTH = 33.0km (normal)
5.1mb (8 obs.) 4.8Msz (1 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUA	2.57	270 iPd	38 17.80	-1.5		
		eS	38 38.30			
GUMO	2.61	271 iPd	38 18.60	-1.3		
		eS	38 49.30			
PJG	2.61	271 iPd	38 18.50	-1.4		
PMG	22.82	181 eP	42 41.00	0.6		
	1.0s	46.00nm		4.9mb		
IIDJ	23.50	340 P	42 46.40	-0.6		
CHJJ	23.68	343 P	42 46.90	-1.8		
MAT	24.38	342 (P)	42 54.00	-1.5		
	0.7s	6.85nm		4.3mb		
MTMJ	24.54	341 P	42 55.40	-1.8		
QCP	25.70	276 eP	43 20.00	11.9X		
BAG	26.20	280 eP	43 13.90	0.9		
QZH	29.53	297 Pd	43 43.80	0.9		
QIS	34.78	193 eP	44 27.60	-1.3		
WB5	35.67	202 eP	44 35.00	-1.4		
WRA	35.73	202 Pd	44 35.50	-1.5		
	0.5s	14.80nm		5.2mb		
BJI	38.13	320 eP	44 56.00	-0.9		
ASPA	39.33	200 iPd	45 06.60	-0.5		
TIY	39.40	314 eP	45 08.30	0.6		
	Z 14s	1.20um		4.9MszX		
DZM	39.96	152 iPc	45 12.80	0.4		
QLP	40.02	185 eP	45 11.60	-1.2		
GYA	40.34	295 P	45 17.60	2.0		
BRS	41.01	173 iP	45 21.50	0.5		
HHC	41.53	318 P	45 25.60	0.4		
	Z 20s	1.26um		4.8Msz		
BTO	42.42	317 eP	45 33.20	0.6		
KMI	43.64	292 Pd	45 45.00	2.2		
CD2	43.75	301 eP	45 43.20	-0.2		
MBL	43.94	219 iPd	45 44.40	-0.5		
	0.4s	4.00nm		4.6mb		
WARB	44.43	207 eP	45 49.10	0.3		
LZH	45.09	308 P	45 54.00	-0.3		
	1.5s	0.08nm		2.4mb X		
		ePP	47 37.00			
NST	45.86	279 eP	46 03.50	3.1X		
NNT	46.53	275 eP	46 07.00	1.3		
SNG	46.54	267 eP	46 07.20	1.4		
BDT	46.86	281 eP	46 09.00	0.8		
CHG	46.86	283 eP	46 09.00	0.7		
NANU	47.67	222 iPd	46 14.40	-0.2		
	0 4s	13.00nm		5.3mb		
GTA	49.16	311 eP	46 26.00	-0.1		
LSA	54.34	297 P	47 06.70	1.1		
WMQ	59.06	313 P	47 38.50	-0.1		
HYB	66.29	283 eP	48 26.80	-0.2		
QUE	75.29	298 eP	49 21.50	0.1		
MHI	80.57	305 eP	49 52.00	1.8		
CLC	86.06	54 eP	50 30.00	11.8X		
SBB	86.14	55 eP	50 24.00	5.4X		
KEV	87.35	343 iP	50 24.00	0.3		
	0.5s	11.20nm		5.4mb		
8AR	87.56	57 eP	50 42.00	16.5X		
TPC	87.71	56 eP	50 24.00	-2.2		
SOD	88.78	341 iP	50 30.60	0.0		
SUF	91.54	337 eP	50 42.50	-1.0		
	0.6s	13.30nm		5.5mb		
NUR	93.38	335 eP	50 51.30	-0.8		
APO	97.43	339 eP	51 09.00	-1.6		
	0.6s	4.00nm		5.1mb		
ZOBO	145.45	99 PKP	57 18.00	0.9		
		LR	03 12.00			
LPB	145.47	99 ePKP	57 11.00	-5.9X		
CNCB	145.58	100 PKP	57 19.30	2.0		
KIC	146.11	304 PKP	57 19.30	1.7		
TIC	146.17	305 PKP	57 19.20	1.5		
LIC	146.42	304 PKP	57 19.30	1.2		
	S.D. = 1.2	on 49 of 55 obs.				

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* SEP 18, 1989 21h 38m 35.55± 2.50s
13.597 S ± 9.6km 34.500 E ±25.3km
DEPTH = 33.0km (normal)
MALAWI (577)
MG 3.6 (BUL).

SONG	2.60	220 ePg	39 21.30	5.0X		
		i	39 30.30			
		iSg	39 59.30			
PTZ	3.14	258 iPn	39 25.00	1.1		
IKZ	3.86	332 iP	39 34.00	-0.2		
KRI	5.71	235 iPn	40 01.00	0.6		
		iSn	41 00.00			
		iSg	41 34.20			
MZZ	6.01	293 ePn	40 05.00	0.3		
		i	40 33.50			
		iSn	41 10.10			
		iSg	41 36.00			
LSZ	6.34	254 iPn	40 08.00	-1.3		
		iSn	41 17.40			
		iSg	41 51.00			
BUL	8.61	220 iPn	40 39.80	-1.2		
SLR	13.42	205 eP	41 47.00	0.7		
		S	44 07.50			
	S.D. = 1.2	on 7 of 8 obs.				

SEP 18, 1989 21h 42m 47.83± 0.22s
37.154 N ± 2.6km 136.963 E ± 2.5km
DEPTH = 261.5 ± 2.2 km
5.0mb (78 obs.)
NEAR WEST COAST OF HONSHU, JAPAN(226)
Felt (I JMA) at Aikawa.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 18C
Centroid Location:
Origin Time 21:42:51.4 1.4
Lat 36.62N 0.11 Lon 136.65E 0.17
Dep 240.2 7.7 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 3.68 0.74 Mtt= 4.34 1.15
Mff=-8.02 1.29 Mrt= 1.92 1.20
Mrf=-7.58 0.98 Mtf= 1.85 1.15
Principal Axes:
T Val= 7.67 Plg=61 Azm= 53
N 4.45 11 165
P -12.12 26 260
Best Double Couple:Mo=9.9*10**16
NP1:Strike= 16 Dip=21 Slip= 123
NP2: 161 72 78

MTMJ	0.88	130 iPd	43 24.40	0.5		
		S	43 52.40			
MAT	1.17	121 iPd	43 25.10	-0.2		
		iS	43 53.70			
AIK	1.33	49 iPd	43 26.70	0.4		
		iS	43 56.00			
NIIJ	1.63	86 iPd	43 27.90	-0.6		
TSRJ	1.80	206 iP+	43 30.60	0.8		
		S	44 04.20			
IIDJ	1.84	155 iP+	43 29.90	-0.3		
		S	44 03.30			
CHJJ	1.97	123 iPd	43 30.40	-0.9		
		S	44 03.80			
YAMJ	2.64	66 iPd	43 37.40	-0.3		
KAKJ	2.75	109 iPd	43 36.30	-2.4		
		S	44 13.70			
WKYJ	3.13	201 iP+	43 43.90	1.0		
		S	44 25.70			
YONJ	3.44	236 iPd	43 47.60	1.3		
		eS	44 32.20			
TKSJ	3.96	218 iP+	43 53.40	1.3		
		S	44 41.20			
OFUJ	4.18	61 iPd	43 53.20	-1.5		
		S	44 41.00			
AOMJ	4.32	37 iPd	43 57.30	1.0		
		S	44 49.90			
SHK	4.35	234 iPd	43 58.40	1.6		
	1.1s	1873.42nm				
SHNJ	5.64	239 P	44 14.00	1.7		
		eS	45 20.50			
MRRJ	6.14	30 P	44 18.40	0.0		
		eS	45 28.70			
SAP	6.78	28 eP	44 26.00	-0.4		
		eS	45 38.00			
KUMJ	6.83	229 P	44 28.80	1.7		
HOOJ	7.14	41 P	44 28.80	-2.1		
		eS	45 44.00			
KAGJ	7.79	222 P	44 41.10	1.9		
ASAJ	8.18	30 iPd	44 41.60	-2.5		
		eS	46 07.30			
KUSJ	8.39	43 eP	44 42.70	-4.0X		
		eS	46 12.40			
MDJ	9.31	325 iPc	45 00.50	2.1		
		S	46 46.00			
CN2	10.99	311 Pc	45 20.40	0.8		
	4.0s	0.60nm		2.1mb X		
		S	47 19.00			
SNY	11.34	298 iPd	45 26.00	2.0		
	2.0s	1.60nm		2.9mb X		
		iS	47 34.50			
DL2	12.22	283 P	45 37.00	2.1		
	Z 20s	0.40um				
	N 10s	0.90um				
	E 10s	1.10um				
		eS	47 52.00			
SSE	14.39	250 Pc	46 02.00	0.5		
	3.0s	3.70nm		3.2mb X		
	Z 20s	0.70um		3.8MszX		
		S	48 36.00			
		SS	48 54.00			
NJ2	15.75	256 iPd	46 16.80	-1.0		
	1.0s	0.30nm		2.7mb X		
	Z 18s	0.90um		4.5MszX		

18d 21h

TIA		15.95	273	Pd	46	18.90	-1.2	KNA	53.18	190	eP	51	40.00	-1.3	FRI	77.71	53	eP	54	17.30	0.2
	Z	25s		1.20um			4.6Msz	HYB	54.66	266	iPd	51	51.50	-0.7	KSP	78.07	326	iPd	54	19.80	0.9
BJI		16.50	286	eP	46	24.00	-2.0		0.9s		291.60nm			5.8mb		0.9s		55.00nm			5.3mb
		1.5s		0.75nm			2.9mb X	WRA	56.84	183	Pc	52	06.30	-1.2				e	55	21.30	
	Z	20s		0.60um					0.7s		60.40nm			5.3mb				e	57	20.00	
	E	10s		0.31um				QIS	57.45	177	iPc	52	10.10	-1.6	BCH	78.56	55	P	54	19.00	-3.0X
				eS	49	23.00			0.6s		57.00nm			5.3mb	HRI	78.58	303	iPd	54	23.00	0.9
ANP		17.78	232	e(P)	46	38.50	-1.1				ipP	52	57.00	206kmX	TNP	78.61	51	P	54	22.20	-0.1
TIY		19.48	279	Pd	46	55.00	-1.9	CTA	57.60	170	iPd	52	11.80	-1.0	SYP	79.03	55	eP	54	25.00	0.5
	N	14s		1.00um					1.0s		23.00nm			4.7mb	BRG	79.08	327	iPd	54	24.70	0.4
	E	15s		0.90um				GBA	57.69	263	Pc	52	13.40	-0.2		1.0s		32.00nm			5.0mb
OZH		19.86	237	Pd	46	58.70	-1.8		1.0s		236.40nm			5.7mb				i	55	25.70	
WHN		19.88	257	Pd	47	00.00	-0.8	KOD	59.65	259	iPd	52	27.00	-0.4	BZS	79.15	320	eP	54	25.00	0.3
		1.0s		0.20nm			2.6mb X		0.8s		126.87nm			5.6mb	CLL	79.16	328	iPd	54	25.30	0.6
				eS	50	20.00		MBL	60.21	198	iPc	52	29.40	-1.2		1.1s		73.00nm			5.3mb
HHC		20.06	288	Pd	47	00.60	-2.1		0.4s		13.00nm			4.9mb				epP	55	25.00	251kmX
BTO		21.23	288	P	47	12.00	-2.1	MHI	60.36	295	iPd	52	32.00	0.2	SRO	79.28	323	iPd	54	27.60	2.2
	N	12s		0.80um				ASPA	60.56	183	iPc	52	32.20	-0.8	ISA	79.31	53	eP	54	25.00	-0.9
	E	12s		0.50um					0.4s		52.00nm			5.5mb	BCK	79.34	309	eP	54	25.00	-1.0
				pP	47	14.50	9kmX				eS	00	26.90		KHL	79.45	310	eP	54	26.70	0.1
XAN		22.98	271	iPd	47	29.50	-1.5	KEV	62.04	338	iP	52	42.00	-0.3	PRU	79.47	326	Pd	54	27.00	0.6
PJG		24.51	161	eP	47	44.00	-1.2		0.6s		7.80nm			4.5mb		0.9s		26.60nm			5.0mb
				i	47	46.90		NANU	62.74	202	eP	52	47.00	-0.3				e	55	11.50	
GUMO		24.51	161	eP	47	43.90	-1.3		0.5s		10.00nm			4.8mb	ZST	79.58	324	iP	54	28.20	1.2
GUA		24.57	161	eP	47	44.00	-1.8	SOD	63.44	336	eP	52	43.00	-8.5X				e	04	30.40	
		0.7s	619.18nm				6.2mb X				i	52	51.20		CLC	79.78	53	eP	54	28.00	-0.4
GZH		24.69	242	Pd	47	45.20	-1.6	SOD	63.44	336	iP	52	51.20	-0.3				e	55	32.00	
GYA		27.76	256	iPd	48	13.40	-1.4	WARB	63.74	190	iPc	52	54.00	0.1	DSI	79.84	302	iPd	54	30.00	1.3
	Z	18s		0.43um			4.1Msz		0.5s		28.00nm			5.2mb	ELL	80.21	309	eP	54	31.20	0.5
				S	52	36.20		OLP	63.77	173	iPc	52	53.10	-0.8	MOX	80.24	328	iPd	54	31.50	1.0
CD2		28.12	267	P	48	15.60	-2.2	RMO	64.27	168	iPc	52	57.00	-0.2		1.0s		30.00nm			5.0mb
GTA		29.12	286	iPd	48	25.60	-1.0		0.7s		74.00nm			5.5mb				e	55	34.00	
		0.8s		0.10nm			2.5mb X	DZM	65.13	150	iPc	53	03.10	0.2	SBB	80.33	54	eP	54	31.00	-0.3
	Z	14s		0.60um			4.4MszX	BRS	65.90	165	iP	53	07.00	-0.7	HOF	80.38	328	iPd	54	31.80	0.6
	E	10s		0.40um				SUF	66.24	332	iP	53	09.10	-0.3		0.9s		44.00nm			5.2mb
				ScS	58	37.00			0.6s		49.30nm			5.4mb	KHC	80.52	326	iPd	54	32.90	0.9
QIZ		29.81	240	Pd	48	33.20	0.4	NUR	68.13	330	iP	53	21.00	-0.2		1.0s		25.00nm			4.9mb
	E	18s		1.10um					0.7s		53.40nm			5.4mb				e	55	35.50	
KMI		31.49	257	Pd	48	46.00	-1.6				i	54	23.10		WIT	80.55	332	eP	54	33.50	1.6
	Z	22s		1.20um			4.5Msz	TAB	68.76	302	eP	53	26.00	0.4				e	55	36.50	
				pP	48	55.00	31kmX	PGC	68.78	45	eP	53	26.00	0.7	GSC	80.60	53	eP	54	33.00	0.3
				sP	49	01.00		CMS	68.79	172	iPc	53	25.50	0.1	DAU	80.68	46	P	54	33.90	0.6
				PP	49	44.00		COO	68.81	166	eP	53	25.50	-0.2	WET	80.82	327	iPd	54	34.50	1.0
				eS	53	43.00		MRWA	68.89	200	iPc	53	26.00	-0.1		1.0s		27.00nm			5.0mb
ADK		35.54	51	eP	49	21.00	-0.5	NSS	69.87	338	iP	53	31.06	-0.7	YER	80.97	310	eP	54	35.60	1.0
		1.0s		45.00nm			5.0mb	KER	70.16	298	iPc	53	34.00	-0.2	WTS	81.14	331	iPd	54	35.40	0.4
KKM		36.30	217	ePd	49	29.00	0.6	PNT	70.53	42	iP	53	36.00	0.0		0.8s		19.00nm			4.9mb
		0.9s	158.00nm				5.5mb		0.7s		17.00nm			4.9mb				e	54	52.00	
LOE		36.69	247	iPd	49	30.50	-1.1	SLY	70.62	300	ePc	53	36.00	-0.7				e	55	37.50	
TSM		37.07	212	ePd	49	35.70	1.0	LON	70.75	46	P	53	36.80	-0.6	MBH	81.28	301	iPd	54	37.00	0.8
		1.0s	892.50nm				6.2mb X	UPP	71.24	332	iP	53	39.50	-0.4	HOL	81.46	300	ePd	54	37.90	0.7
WMQ		37.60	296	iPd	49	39.00	0.0	BWA	72.01	170	iPc	53	45.50	0.7	SRFA	81.58	300	iPd	54	38.70	0.9
	Z	20s		0.70um			4.5Msz	HFS	72.47	334	eP	53	46.30	-0.9	SKO	81.72	317	iP	54	39.50	1.2
				pP	50	36.00	281kmX		0.6s		37.90nm			5.3mb				i	55	41.50	
				PP	51	17.00		MOL	72.66	338	iP	53	48.19	0.0	PTJ	81.78	323	eP	54	38.80	0.2
				PcP	51	51.00		NRA0	72.77	335	P	54	30.00	41.1X	PLM	81.79	54	eP	54	40.00	0.9
				eS	55	08.30		CAN	72.97	170	iPc	53	50.90	0.6	TPC	81.84	53	eP	54	39.00	-0.1
				ScS	59	20.00		WDC	73.81	51	iPc	53	55.70	0.4	BHG	81.88	326	iPc	54	40.50	1.5
CHG		37.91	252	iPd	49	41.90	0.1	MIN	74.53	51	eP	53	59.50	-0.1		1.3s		69.00nm			5.2mb
		0.8s	37.31nm				4.9mb	KAS	75.01	311	eP	54	03.50	1.3	BADA	81.95	300	ePd	54	40.10	0.4
BDT		38.82	250	eP	49	48.00	-1.2	ORV	75.05	52	iPc	54	02.40	0.0	KBA	82.14	325	iPc	54	41.20	0.6
		0.8s	26.00nm				4.8mb	FFC	75.48	31	iPc	54	09.20	4.7X		0.8s		15.70nm			4.8mb
NST		38.97	247	eP	49	52.00	1.6		0.8s		31.00nm			5.1mb				i	54	43.90	
PCI		41.06	207	ePc	50	02.40	-5.2X	BRK	75.56	53	eP	54	05.10	-0.1				i	54	53.50	
NNT		41.30	244	iPd	50	10.00	0.5	BKS	75.57	53	eP	54	05.70	0.3				e	55	24.50	
SNG		44.51	237	iPd	50	36.00	0.7		0.9s		84.00nm			5.5mb				e	55	42.00	
		1.0s	182.00nm				5.4mb	PPE	75.58	317	eP	54	05.00	-0.3				e	57	29.00	
LAT		44.58	166	eP	50	37.00	1.2	PCC	75.70	54	eP	54	05.70	-0.3				i	57	56.00	
MKS		45.20	205	iPc	50	41.60	0.8	COP	76.16	331	iPd	54	08.80	0.6	FUR	82.26	327	iPd	54	42.00	1.0
IPM		46.17	234	ePd	50	48.70	0.2		0.7s		95.89nm			5.6mb		1.0s		73.00nm			5.4mb
		0.5s	56.60nm				5.2mb	GCC	76.22	54	eP	54	09.00	0.1	BAR	82.34	55	eP	54	42.00	0.3
KGM		46.71	230	ePc	50	53.50	0.9	MHC	76.27	54	eP	54	09.80	0.4	LJU	82.35	324	eP	54	41.80	0.3
KSH		47.10	292	iPd	50	57.00	1.4	VRI	76.28	318	eP	54	09.00	-0.2	VBY	82.40	323	eP	54	42.00	0.3
PMG		47.29	166	eP	50	56.00	-1.0	TLB	76.38	316	eP	54	10.00	0.4	ENN	82.45	331	iPd	54	42.00	0.2
TTA		47.36	35	ePc	50	57.50	0.3	LRM	76.50	42	ePc	54	11.20	0.5		0.7s		28.00nm			5.1mb
SVW		47.57	37	ePc	50	59.90	1.1	BBTK	76.54	310	iPd	54	11.50	0.7				e	55	44.00	
IMA		48.40	31	ePc	51	05.40	0.2	SAO	76.73	54	eP	54	11.60	-0.2	PHP	82.46	317	eP	54	41.90	-0.2
		1.2s	25.40nm				4.5mb	ISR	76.85	317	eP	54	13.00	0.7	ABH	82.51	330	ePd	54	42.73	0.5
PSI		48.95	235	ePd	51	09.00	-0.9	MLR	76.95	318	ePd	54	13.00	0.0	PUK	82.51	318	eP	54	39.70	-2.6
				e	52	55.00		KRA	76.95	324	iPd	54	13.20	0.5	MEM	82.54	331	iPd	54	42.48	0.2
KDC		49.44	42	eP	51	12.50	-0.5		0.7s		72.00nm			5.5mb	CEY	82.63	323	e(P)	54	45.60	2.7X
MTN		50.03	187	iPc	51	17.30	-0.7				e	54	24.20		OHR	82.66	317	eP	54	42.00	-1.2
PMR		50.65	36	ePc	51	21.70	-0.5	PRS	77.04	54	eP	54	13.90	0.4		1.0s		110.00nm			5.6mb
		0.8s	80.50nm				5.2mb	LLA	77.15	54	eP	54	14.50	0.4	VOY	82.66	324	eP	54	42.80	-0.4
FBA		50.90	32	ePc	51	24.10	0.1	SPC	77.40	323	iP	54	16.50	1.0	KRP	82.77	150	P	54	45.30	1.8
HNR		51.11	150	P	51	25.00	-1.1	KVN	77.47	50	P	54	16.00	-0.1	RUP	82.84	330	ePd	54	44.31	0.3
TQA		51.97	36	ePc	51	32.70	0.6	PRI	77.61	54	eP	54	17.60	0.8	TRI	82.96	324	eP	54	43.70	-0.9

		e	55 47.80			
TIR	83.01	318 eP	54 44.50	-0.4		
GWF	83.18	329 P	54 46.24	0.5		
WLF	83.23	330 P	54 46.60	0.8		
SNF	83.28	332 iPc	54 46.50	0.4		
GLA	83.30	53 eP	54 48.00	1.4		
OGA	83.35	326 iPc	54 47.60	0.8		
BERA	83.41	317 eP	54 47.50	0.6		
DOU	83.50	331 iPc	54 47.50	0.3		
	0.5s	15.40nm		5.0mb		
HVAR	83.50	321 iPd	54 46.80	-0.5		
CTI	83.69	325 P	54 48.00	-0.4		
WLS	83.74	329 P	54 48.67	0.2		
SLE	83.77	328 eP	54 49.00	0.4		
CDF	83.77	329 P	54 49.05	0.3		
SAX	83.80	327 ePd	54 49.60	0.5		
FEL	83.88	328 P	54 49.37	0.0		
OSS	83.88	326 ePd	54 50.10	0.7		
SRN	83.96	316 iP	54 50.70	1.1		
ECH	83.97	329 P	54 49.80	0.1		
ZLA	84.03	328 eP	54 50.50	0.5		
DMU	84.10	339 eP	54 50.90	0.8		
LLS	84.25	327 eP	54 51.80	0.5		
MOF	84.27	329 P	54 51.35	0.1		
VDL	84.34	327 ePd	54 52.30	0.6		
BSF	84.43	329 P	54 52.37	0.3		
HAU	84.47	329 eP	54 51.10	-1.1		
	0.5s	9.30nm		4.9mb		
SAL	84.54	325 P	54 52.50	0.0		
LCI	84.75	318 P	54 54.00	0.4		
TMA	84.89	327 ePd	54 54.60	0.1		
ARV	85.00	323 P	54 55.00	0.1		
MNG	85.07	152 P	54 55.10	0.1		
	0.4s	7.00nm		4.8mb		
VAI	85.12	327 P	54 54.80	-0.6		
SFI	85.20	324 P	54 55.00	-0.8		
PGD	85.30	324 P	54 57.80	1.2		
MMK	85.33	327 eP	54 57.50	0.7		
PGZ	85.38	151 P	54 57.00	0.6		
ASS	85.45	323 P	54 57.00	-0.2		
MME	85.54	324 P	54 58.40	0.6		
DIX	85.55	327 eP	54 58.40	0.5		
DUI	85.61	321 P	54 58.20	0.2		
ORO	85.66	327 P	54 58.70	0.5		
BOB	85.67	325 P	54 56.80	-1.4		
BDI	85.69	324 P	54 58.40	0.1		
MNS	85.96	322 P	54 59.20	-0.4		
PII	85.98	324 P	54 59.00	-0.6		
SGO	85.98	319 P	55 00.50	0.8		
LOR	86.07	330 eP	54 59.10	-1.0		
	0.7s	13.20nm		4.9mb		
TDS	86.10	318 P	55 00.10	-0.2		
MSZ	86.13	158 P	55 01.00	1.0		
	0.7s	60 00nm		5.5mb		
LSD	86.15	327 P	55 02.27	1.5		
SCH	86.15	14 eP	55 01.00	0.7		
MGR	86.16	319 P	55 00.00	-0.6		
LBF	86.25	330 eP	54 59.90	-1.1		
	0.7s	10.30nm		4.8mb		
PCP	86.25	326 P	55 01.55	0.5		
LPG	86.29	327 eP	55 00.90	-0.6		
	0.8s	17.40nm		4.9mb		
SSF	86.38	330 eP	55 00.10	-1.4		
	0.7s	8.10nm		4.7mb		
FLN	86.48	333 eP	55 01.00	-1.0		
	0.5s	11.60nm		5.0mb		
LDF	86.49	333 eP	55 01.00	-1.0		
	0.5s	11.60nm		5.0mb		
SMF	86.58	330 eP	55 01.00	-1.5		
	0.6s	4.80nm		4.5mb		
AVF	86.66	330 eP	55 01.50	-1.4		
	1.0s	24.00nm		5.0mb		
FIN	86.66	326 P	55 02.17	-0.8		
BNI	86.68	327 P	55 03.60	0.4		
RRL	86.73	327 P	55 03.71	0.1		
ROB	86.75	326 P	55 02.79	-0.7		
PZZ	86.92	327 P	55 03.30	-1.1		
GRR	86.93	333 eP	55 03.50	-0.6		
	0.7s	22.90nm		5.1mb		
ENR	87.00	326 P	55 02.79	-1.9		
IMI	87.04	326 P	55 04.12	-0.7		
BGF	87.05	330 eP	55 03.60	-1.2		
	0.5s	3.60nm		4.5mb		
ALQ	87.18	47 iPd	55 07.30	1.4		
	1.0s	10.00nm		4.6mb		
		pP	56 19.50	304kmX		
SBF	87.28	326 eP	55 04.30	-1.7		

	0.5s	11.60nm		5.0mb		
LPF	87.29	333 eP	55 05.50	-0.4		
	0.7s	22.90nm		5.1mb		
SOI	87.40	317 P	55 07.00	0.5		
MAF	87.44	330 eP	55 06.00	-0.7		
	0.5s	6.50nm		4.7mb		
PMO	87.52	111 iP	55 09.00	1.7		
	0.8s	25.00nm		5.1mb		
TCF	87.52	330 eP	55 05.80	-1.3		
	0.7s	8.80nm		4.7mb		
CVF	87.64	324 eP	55 06.40	-1.3		
	0.7s	5.20nm		4.5mb		
TPT	87.71	111 iP	55 10.00	1.8		
	0.8s	20.00nm		5.0mb		
LSF	87.82	331 eP	55 07.10	-1.4		
	0.6s	13.50nm		5.0mb		
VAH	87.87	111 iP	55 10.40	1.4		
	0.8s	15.00nm		4.9mb		
FRF	87.87	326 eP	55 07.50	-1.3		
	0.5s	3.40nm		4.5mb		
PPT	87.91	114 iP	55 11.30	2.1		
	0.8s	40.00nm		5.3mb		
RUV	88.02	111 iP	55 11.60	1.9		
	0.8s	15.00nm		4.9mb		
LRG	88.08	326 eP	55 08.60	-1.1		
	0.9s	27.50nm		5.1mb		
LMR	88.11	326 eP	55 08.80	-1.1		
	0.9s	16.30nm		4.9mb		
MFF	88.17	332 eP	55 10.10	0.0		
	0.9s	22.90nm		5.0mb		
TVO	88.28	114 iP	55 13.00	2.0		
	0.8s	30.00nm		5.2mb		
RJF	88.61	330 eP	55 11.60	-0.7		
	0.6s	3.60nm		4.4mb		
CAF	88.70	330 eP	55 11.70	-1.0		
	0.8s	7.20nm		4.6mb		
LFF	89.22	331 eP	55 14.90	-0.2		
	0.7s	19.80nm		5.2mb		
LPO	89.26	330 eP	55 14.20	-1.1		
	0.7s	6.60nm		4.7mb		
EPF	90.97	330 eP	55 22.30	-1.0		
	0.8s	9.90nm		4.8mb		
SPA	126.97	180 e(PKP)	01 21.20	0.0		
	0.6s	6.50nm				
ARE	147.50	58 e(PKP)	02 04.00	3.9X		
ZDBO	149.59	54 PKP	02 04.90	1.2		
	0.9s	20.55nm				
	Z 22s	0.11um		4.6Msz		
		i	02 09.00			
		LR	45 18.00			
LPB	149.80	54 PKP	02 11.00	7.1X		
CNCB	150.08	54 PKP	02 06.20	1.7		
		i	02 11.20			
	S.D. = 1.0	on 276 of 285 obs.				

& SEP 18, 1989 22h 10m 54.40s
35.680 N 117.560 W
DEPTH = 3.0km
CENTRAL CALIFORNIA (39)
<PAS-P>. ML 3.1 (PAS). Felt (III) at Ridgecrest.

CLC	0.14	348 iPd	10 57.30	0.1		
OSM	0.63	63 iPc	11 06.20	-0.8		
GSC	0.72	121 iPc	11 08.00	-0.8		
ISA	0.74	269 iPc	11 08.60	-0.7		
PANV	0.81	27 iPc	11 09.60	-0.9		
GWY	0.88	55 eP	11 10.60	-1.5		
MCA	0.99	13 eP	11 12.50	-1.4		
SBB	1.01	192 iPd	11 13.00	-1.3		
TMO	1.13	6 eP	11 15.10	-1.3		
AMR	1.13	51 eP	11 15.20	-1.1		
FMT	1.15	33 eP	11 15.60	-1.0		
NDP	1.23	68 eP	11 16.20	-1.7		
YMT5	1.51	36 eP	11 21.30	-1.2		
ABL	1.59	239 eP	11 23.50	-0.2		
GMN	1.64	8 eP	11 23.30	-1.1		
TMBR	1.65	35 eP	11 23.40	-1.2		
PEC	1.81	169 eP	11 26.40	-0.4		
MZP	2.02	4 eP	11 29.30	-0.7		
PKEM	2.10	281 eP	11 32.00	1.0		
BCH	2.12	257 eP	11 30.40	-0.9		
PHAM	2.31	275 eP	11 33.10	-0.9		
PLM	2.39	166 eP	11 33.00	-2.3		
TNP	2.41	6 iPn	11 36.10	0.5		
		iPg	11 38.40			
KVN	3.39	353 eP	11 48.50	-1.0		

GLA	3.46	138 eP	11 47.00	-3.4		
	25 obs. associated					

SEP 18, 1989 22h 44m 56.93± 0.68s
44.359 N ± 7.3km 7.335 E ± 7.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

STV	0.12	184 P	45 00.02	0.1		
		S	45 01.66			
ENR	0.15	155 P	45 00.53	0.1		
		S	45 03.20			
DOI	0.16	336 P	45 01.00	0.4		
		iSg	45 03.60			
PZZ	0.22	311 P	45 01.46	-0.3		
		S	45 04.33			
ROB	0.39	99 P	45 05.25	0.3		
		S	45 10.99			
FIN	0.64	103 P	45 09.35	-0.5		
		S	45 18.38			
	S.D. = 0.5	on 6 of 6 obs.				

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* SEP 18, 1989 22h 52m 22.84± 0.87s
36.132 N ±12.0km 24.926 E ± 7.6km
DEPTH = 33.0km (normal)
4.4mb (1 obs.)
SOUTHERN GREECE (368)

VAM	0.93	219 eP	52 40.00	0.4		
NPS	1.03	147 eP	52 40.00	-1.0		
KAP	1.92	107 eP	52 55.50	1.7		
YER	2.88	69 eP	53 18.40	10.9X		
KSL	3.77	89 eP	53 20.50	0.5		
ELL	4.06	80 eP	53 20.00	-4.4X		
KHL	4.27	58 eP	53 27.00	-0.3		
BCK	4.73	72 eP	53 09.00	-24.8X		
SOI	7.35	288 P	54 10.50	0.0		
DSI	9.81	115 eP	54 23.00	-21.6X		
KHC	15.42	331 eP	56 17.00	17.5X		
BHD	16.26	94 eP	56 09.00	-1.2		
		e	57 56.00			
CLL	17.41	334 e(P)	56 38.00	13.4X		
HFS	25.09	347 eP	57 53.80	8.2X		
	1.2s	11.80nm		4.4mb		
	S.D. = 1.2	on 7 of 14 obs.				

SEP 18, 1989 23h 40m 34.62± 0.68s
44.199 N ± 4.1km 15.730 E ± 7.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.8 (LJU). MD 3.4 (TRI), 3.3 (SSO).

HVAR	1.15	153 iPg	40 56.70	0.6		
		iSg	41 15.50			
VBY	1.35	346 ePg	40 58.80	-0.6		
		iSg	41 15.70			
RIY	1.49	321 ePn	41 01.90	0.5		
		iSn	41 21.80			
ZAG	1.63	6 iPn	41 03.30	-0.1		
		iSn	41 24.20			
AOI	1.67	248 ePn	41 04.43	0.4		
		iSn	41 27.11			
PTJ	1.71	5 iPnc	41 04.10	-0.6		
		eSn	41 25.10			
CEY	1.80	329 iPnc	41 06.50	0.6		
		eSg	41 28.50			
SSO	1.90	242 e(Pn)	41 04.81	-2.6		
		eSn	41 27.36			
LJU	2.03	336 iPnc	41 09.90	0.7		
		iSn	41 34.50			
TRI	2.06	318 ePn	41 10.00	0.4		
ALP	2.11	229 ePn	41 11.82	1.2		
		eSn	41 38.31			
CIO	2.13	243 e(Pn)	41 11.28	0.5		
		e(Sn)	41 37.25			
ARV	2.14	252 P	41 10.50	-0.3		
VOY	2.25	325 ePn	41 12.00	-0.5		
		e	41 13.50			
		eSn	41 44.10			
ASS	2.50	244 P	41 16.00	0.0		
		eSn	41 46.60			
DUI	2.70	201 P	41 18.00	-1.0		
RBL	2.71	327 P	41 17.40	-1.7		
		eSg	41 50.20			
SFI	2.81	266 P	41 21.20	0.8		

18d 23h

MNS	2.87	232	P	41 21.60	0.3
PGD	2.91	265	P	41 21.80	-0.2
			eSn	41 56.30	
KBA	3.33	331	e(Pn)	41 30.00	2.1
			e	41 36.00	
			i	41 40.20	
			i	42 09.80	
			i	42 14.20	
KHC	5.15	344	eP	41 53.00	-0.6
			e	42 48.50	

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

SEP 19, 1989 01h 13m 30.92± 0.61s
66.830 N ± 7.5km 136.025 W ± 7.3km
DEPTH = 10.0km (geophysicist)
3.8mb (2 obs.)
NORTHERN YUKON TERRITORY, CANADA (677)

INK	1.77	32	eP	14 03.50	1.8
DWY	3.13	209	P	14 21.80	0.6
FBA	5.20	254	eP	14 50.30	-0.3
HYT	6.07	187	P	15 02.40	-0.5
IMA	7.11	272	ePc	15 17.50	-0.1
PMR	7.75	234	eP	15 26.90	0.5
SVW	10.31	245	eP	16 01.60	-0.3
MBC	10.76	22	eP	16 06.50	-1.4
PNT	19.47	146	eP	18 01.00	0.6
	0.7s		8.00nm		4.1mb
FFC	20.24	110	eP	18 07.50	-1.0
	0.4s		1.00nm		3.5mb
SES	20.74	130	eP	18 08.00	-5.8X

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

& SEP 19, 1989 01h 14m 16.57s
64.934 N 142.666 W
DEPTH = 27.0km
CENTRAL ALASKA (1)
<AGS-P>.

DOT	1.43	206	eP	14 41.86	1.0
			S	14 58.08	
TMW	1.62	185	eP	14 41.99	-1.7
DDM	1.81	232	eP	14 47.87	1.5
HDA	1.92	256	eP	14 48.88	0.9
GLM	2.01	274	eP	14 47.52	-1.9
CCB	2.22	265	eP	14 51.65	-0.6
PAX	2.33	213	eP	14 55.40	1.5
RDS	2.34	270	eP	14 52.08	-1.9
WRH	2.38	261	eP	14 54.48	0.0
NEA	2.77	265	eP	14 58.73	-1.4

10 obs. associated

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* SEP 19, 1989 01h 43m 17.03± 1.52s
42.935 N ±15.0km 0.365 W ± 6.4km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
ML 2.6 (LDG). Felt (III) at Asson and Arthez d'Asson, France.

LHE	0.19	263	Pg	43 22.13	0.8
			Sg	43 25.81	
ESCF	0.21	313	Pg	43 21.14	-0.5
			Sg	43 24.45	
OGE	0.25	341	Pg	43 20.87	-1.4
			Sg	43 23.87	
ATE	0.29	301	Pg	43 22.68	-0.4
			Sg	43 26.98	
ISSF	0.33	286	Pg	43 24.06	0.2
			Sg	43 29.29	
MADF	0.39	302	Pg	43 24.60	-0.5
			Sg	43 30.20	
EPF	0.53	79	Pg	43 25.80	-1.9
			Sg	43 32.70	
LPO	2.08	32	Pg	43 54.20	1.9
			Sg	44 20.00	
LFF	2.16	21	Pg	43 55.40	1.9
			Sg	44 22.60	
CAF	2.65	41	Pg	44 04.40	3.8X
			Sg	44 37.00	
RJF	2.73	29	Pg	44 06.80	5.1X
			Sg	44 39.00	
BGF	4.28	31	Pg	44 35.30	11.6X
			Sg	45 28.00	

S.D. = 1.5 on 9 of 12 obs.

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* SEP 19, 1989 02h 01m 11.23± 2.32s
42.989 N ±19.5km 18.786 E ± 6.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (TTG).

BRY	0.20	244	iPgc	01 15.40	-0.3
			iSg	01 20.00	
NKY	0.24	138	iPgc	01 16.30	0.0
			eSg	01 21.30	
HCY	0.58	202	ePg	01 23.40	0.4
			eSg	01 34.60	
TTG	0.66	148	iPgd	01 23.50	-0.8
			iSg	01 34.00	
BDV	0.71	177	ePg	01 25.40	0.2
			iSg	01 40.50	
PVY	0.96	114	ePg	01 30.00	0.4
			eSg	01 46.50	
ULC	1.08	161	ePg	01 36.70	5.1X
			eSg	01 52.00	
OHR	2.40	141	ePn	01 55.00	3.7X
VOY	4.64	313	e(Pn)	03 20.00	57.0X
			eSn	03 43.10	

S.D. = 0.6 on 6 of 9 obs.

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* SEP 19, 1989 02h 04m 34.84± 0.74s
32.243 S ±14.4km 69.067 W ±11.7km
DEPTH = 33.0km (normal)
MENDOZA PROVINCE, ARGENTINA (139)

ZON	0.77	26	iPd	04 50.00	0.7
			eS	05 03.00	
CFA	0.95	48	iPc	04 52.00	0.1
FCH	1.49	223	iPd	05 03.00	3.1X
			iS	05 26.00	
PEL	1.63	236	iPd	05 02.50	0.8
			iS	05 25.00	
ROCH	1.79	246	iPc	05 03.20	-1.0
			iS	05 27.20	
PCH	1.84	221	iPd	05 06.30	1.6
			iS	05 33.10	
TACH	2.11	228	iPc	04 58.50	-10.0X
			iS	05 19.00	
TACH	2.11	228	iPc	05 08.20	-0.3
			iS	05 36.80	
CHCH	2.15	218	iPc	05 10.10	1.0
			iS	05 39.90	
LCCH	2.44	239	iPd	05 11.20	-2.0
			iS	05 41.90	
MRA	2.85	94	iPc	05 18.00	-0.9
TCA	3.92	78	iPc	05 30.10	-4.1X

S.D. = 1.3 on 9 of 12 obs.

SEP 19, 1989 02h 15m 10.17± 0.42s
41.088 N ± 4.0km 20.290 E ± 4.5km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 3.3 (ATH). ML 3.0 (SKO).

OHR	0.39	86	iPgd	15 16.80	-1.3
			iSg	15 22.40	
TIR	0.41	309	iPgc	15 18.20	-0.4
BERA	0.46	214	iPgd	15 18.30	-1.3
KBN	0.61	139	iPgc	15 20.50	-2.0
PHP	0.61	11	iPgc	15 20.50	-2.0
LACI	0.70	322	iPgc	15 22.60	-1.4
VLO	0.86	225	ePg	15 26.80	0.0
KKS	0.99	5	iPg	15 28.50	-0.4
PUK	1.00	343	iPgd	15 28.70	-0.4
SDA	1.10	328	iPgc	15 31.30	0.5
ULC	1.17	319	ePg	15 31.70	-0.4
			eSg	15 53.00	
SRN	1.23	190	ePn	15 35.20	2.2
SKO	1.24	44	iPgd	15 33.30	0.2
			i	15 35.30	
			e	15 47.00	
			iSg	15 50.00	
KZN	1.37	124	ePn	15 35.00	-0.4
KEK	1.42	195	ePn	15 38.00	1.9
PVY	1.52	351	iPnd	15 37.90	0.3
			eSn	16 01.60	
TTG	1.55	330	ePn	15 38.50	0.8
			eSn	16 03.00	
GRG	1.60	94	ePb	15 39.40	0.8
BDV	1.62	318	ePn	15 40.30	1.4
			eSn	16 05.50	
IVA	1.81	351	ePn	15 44.50	2.9X
			eSn	16 12.00	
HCY	1.91	316	ePn	15 44.00	1.0
			eSn	16 11.00	
LCI	1.93	248	P	15 43.50	0.2
			eSn	16 04.20	
LIT	1.94	120	ePg	15 44.10	0.5
			eSg	16 12.50	
KNT	1.97	87	ePb	15 45.20	1.2
			eSb	16 10.50	
NKY	1.97	331	ePn	15 46.10	2.0
			eSn	16 14.20	
THE	2.08	102	ePg	15 47.90	2.4
NEO	2.87	127	ePb	16 00.00	3.2X
VLS	2.92	175	ePn	15 57.00	-0.5
SGO	3.82	264	P	16 09.40	-0.8
ITM	4.10	161	ePn	16 11.50	-2.8
BZS	4.63	12	eP	17 16.00	54.3X
VOY	6.78	319	ePn	16 50.70	-1.5
			eSn	18 08.30	

S.D. = 1.4 on 29 of 32 obs.

SEP 19, 1989 02h 15m 15.92± 0.81s
38.271 N ± 6.4km 26.650 E ± 9.0km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.2 (ATH).

IZM	0.50	75	iPg	15 25.30	-0.7
			iSg	15 32.30	
SMG	0.58	165	ePg	15 27.40	-0.3
PRK	1.02	343	ePb	15 34.00	-1.1
APE	1.49	217	ePg	15 43.00	0.2
EZN	1.57	351	iPn	15 44.44	0.6
YER	1.72	131	ePn	15 46.00	-0.1
KHL	2.26	88	ePn	15 55.00	1.0
EDC	2.28	24	ePn	15 56.80	2.7
BNT	2.30	25	ePn	15 54.00	-0.5
KCT	2.38	33	ePn	15 54.00	-1.6

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

? SEP 19, 1989 02h 37m 51.56± 5.66s
5.782 N ±14.0km 94.815 E ±50.3km
DEPTH = 92.9 ± 32.5 km
4.0mb (1 obs.)
NORTHERN SUMATERA (706)

PSI	5.12	127	ePd	39 07.20	-0.1
SNG	5.93	76	eP	39 18.30	-0.2
			eS	40 21.00	
IPM	6.30	101	ePc	39 23.90	0.2
NNT	8.33	35	eP	39 51.50	0.1
CHG	13.56	17	eP	41 08.80	7.4X
WB5	46.51	124	eP	46 11.30	-0.4
WRA	46.52	124	Pc	46 12.10	0.4
	0.7s		1.70nm		4.0mb

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

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* SEP 19, 1989 02h 38m 28.39± 1.25s
8.955 S ±16.3km 116.603 E ±12.9km
DEPTH = 33.0km (normal)
4.6mb (5 obs.)
SUMBAWA ISLAND REGION (285)

TRT	4.12	287	iPd	39 30.50	-0.1
			iS	40 24.00	
MKS	4.68	38	i(P)	39 25.00	-13.5X
KUG	6.99	100	eP	40 19.60	8.4X
MBL	12.53	166	eP	41 26.00	-1.2
	0.3s		5.00nm		5.1mb
			eS	43 36.00	
NANU	13.57	184	iPd	41 40.60	-0.4
	0.4s		8.00nm		4.9mb
			eS	43 58.00	
MEKA	17.66	174	eP	42 35.00	1.4
	0.4s		23.00nm		4.7mb
			eS	45 38.00	
WARB	19.61	152	eP	43 01.30	4.2X
	0.3s		5.00nm		4.3mb
			eS	46 32.00	
WB5	20.32	124	eP	43 04.00	-0.6
WRA	20.33	124	Pc	43 04.30	-0.4
	0.4s		2.20nm		3.9mb
BAL	21.54	180	eP	43 26.00	9.0X
ASPA	22.09	134	eP	43 23.90	1.4
KLB	22.55	177	eP	43 39.00	12.0X
MUN	22.91	181	eP	43 47.50	17.0X

S.D. = 1.2 on 7 of 13 obs.

SEP 19, 1989 02h 59m 16.75± 0.95s
40.782 N ± 6.9km 139.123 E ±11.8km
DEPTH = 26.2 ± 7.0 km
4.7mb (3 obs.)
NEAR WEST COAST OF HONSHU, JAPAN(226)

AOMJ	0.98	103	P	59 34.20	-0.5
MRRJ	2.20	41	eP	59 51.90	-0.3
			eS	00 16.50	
OFUJ	2.59	130	iPd	59 57.80	-0.1
YAMJ	2.70	165	P	59 59.90	0.5
HOOJ	3.51	62	eP	00 11.60	0.7
ASAJ	4.23	37	eP	00 22.30	1.2
MAT	4.29	190	iPc	00 23.10	1.1
			eS	01 11.00	
CHJJ	4.73	181	P	00 33.50	5.3X
KUSJ	4.77	59	eP	00 28.20	-0.5
INK	51.90	28	eP	08 34.00	9.3X
WB5	60.51	185	eP	09 26.30	-0.5
WRA	60.58	185	Pc	09 26.60	-0.7
	0.4s		1.10nm	4.3mb	
SUF	63.84	332	iP	09 48.30	-0.4
	0.5s		3.20nm	4.7mb	
NUR	65.81	330	iP	10 01.30	-0.1
	0.5s		7.00nm	5.0mb	

S.D. = 0.8 on 12 of 14 obs.

SEP 19, 1989 04h 08m 57.13± 0.72s
4.164 S ± 4.4km 128.986 E ± 6.1km
DEPTH = 146.3 ± 7.4 km
5.0mb (16 obs.)
BANDA SEA (280)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 19C
Centroid Location:
Origin Time 04:08:59.2 1.2
Lat 4.26S 0.08 Lon 128.83E 0.15
Dep 127.2 6.8 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 2.92 0.60 Mtt= 3.62 0.70
Mff=-6.55 1.02 Mrt=-3.73 0.54
Mrf=-2.50 0.62 Mtf=-1.13 0.92
Principal Axes:

	Val=	Plg=	Azm=
T	7.08	44	175
N	0.48	42	27
P	-7.56	17	282

Best Double Couple:Mo=7.3*10**16
NP1:Strike=329 Dip=46 Slip= 23
NP2: 222 74 134

AAI	0.92	301	iPc	09 22.60	1.5
MNI	6.94	323	ePc	10 37.00	-0.6
			eS	10 49.50	
MTN	8.88	166	iPd	11 03.40	-0.1
MKS	9.54	263	iPc	11 20.00	7.7X
PCI	9.70	289	iPd	11 18.00	3.7X
	1.0s		74.00nm	5.3mb X	
KNA	11.51	181	iPc	11 38.20	0.0
	0.5s		262.00nm	6.1mb X	
			eS	13 42.00	
TSM	13.72	307	ePd	12 11.50	4.7X
KKM	16.29	308	ePd	12 39.50	0.4
	0.8s		72.90nm	5.1mb	
WB5	16.48	162	eP	12 39.20	-2.1
			eS	15 29.00	
TRT	16.64	257	iPd	12 44.00	0.8
	0.5s		50.90nm	5.1mb	
PMG	18.77	107	eP	13 08.00	0.3
MBL	19.09	207	iPd	13 10.20	-0.9
	0.5s		81.00nm	5.3mb	
QIS	19.30	148	iPc	13 12.20	-1.0
			eS	16 37.60	
ASPA	19.96	167	iPc	13 20.20	0.1
	1.0s		694.00nm	6.0mb	
Z	22s		0.56um	4.2Msz	
			eS	16 52.50	
			LR	20 11.20	
WARB	22.01	186	eP	13 42.10	1.7
	0.3s		12.00nm	4.9mb	
NANU	22.46	214	eP	13 45.00	0.3
	0.6s		53.00nm	5.1mb	
CTA	23.10	135	iPc	13 51.90	0.9
	0.7s		73.29nm	5.2mb	
			iS	17 51.00	
GUMO	23.65	42	eP	13 55.50	-0.9
	1.3s		114.38nm	5.2mb	
PJG	23.65	42	eP	13 55.70	-0.7
MEKA	24.46	203	eP	14 03.00	-1.0
	0.5s		18.00nm	4.8mb	
FORR	26.56	182	eP	14 23.00	-0.2
QLP	26.64	148	eP	14 24.00	-0.1
COOL	27.59	195	eP	14 30.00	-2.6
MRWA	27.80	205	eP	14 33.00	-1.4
	0.3s		3.00nm	4.5mb	
BAL	28.74	202	eP	14 42.20	-0.7
RMQ	29.17	142	eP	14 47.00	0.2
IPM	29.25	287	ePd	14 48 10	0.4
	0.8s		44.30nm	5.2mb	
			e	15 20.10	
KLB	29.25	200	eP	14 47.00	-0.5
STK	30.01	158	iPc	14 53.70	-0.4
	0.6s		13.00nm	4.8mb	
ANP	30.06	346	eP	14 42.00	-12.7X
MUN	30.16	202	eP	14 54.00	-1.4
SNG	30.47	292	eP	15 11.70	13.3X
NWAO	30.65	200	eP	15 00.00	0.2
PSI	30.80	282	ePd	15 02.00	0.7
ADE	31.95	165	ePd	15 11.30	0.2
	0.6s		73.33nm	5.7mb	
BRS	32.38	138	iPd	15 14.00	-1.0
COO	34.02	143	eP	15 30.00	0.9
LOE	34.40	309	eP	15 33.00	0.6
BWA	35.10	151	iPc	15 39.90	1.6
CAN	36.11	152	iPc	15 47.40	0.7
CNB	36.28	151	iPc	15 49.90	1.7
BDT	36.46	307	eP	15 49.60	-0.1
TOO	36.52	158	iPc	15 51.80	1.7
			e	17 17.00	
GYA	37.33	326	P	15 57.80	0.6
CHG	37.37	309	iPd	15 58.50	1.0
	1.0s		18.00nm	4.8mb	
KMI	38.70	320	eP	16 10.50	1.8
MAT	41.40	11	(P)	16 28.00	-2.5
XAN	42.46	335	P	16 38.50	-0.7
TIY	44.41	341	eP	16 55.00	0.0
Z	14s		0.70um	4.7MszX	
BJI	45.54	346	eP	17 03.00	-0.7
LZH	46.44	332	eP	17 09.50	-1.7
			PP	17 44.00	
			PP	17 56.00	
GTA	51.02	331	eP	17 45.80	-0.5
MSZ	52.83	146	P	18 00.00	0.5
KRP	54.09	135	P	18 10.00	1.1
GBA	54.11	290	Pc	18 07.90	-1.5
	0.6s		4.20nm	4.5mb	
HYB	54.19	295	eP	18 09.00	-1.0
MNG	55.29	138	eP	18 15.90	-1.7
HBZ	55.93	133	eP	18 22.10	-0.1
MAW	77.21	201	eP	20 36.00	0.0
SPA	85.86	180	ePc	21 21.20	-0.2
	0.7s		8.98nm	4.7mb	
KIC	133.88	275	PKP	28 00.70	1.2
TIC	134.16	275	PKP	28 01.20	1.2
LIC	134.17	275	PKP	28 01.20	1.2
NNA	149.72	122	iPKP	28 32.50	5.4X
	1.0s		10.00nm		
HUA	150.96	124	ePKP	28 37.70	8.2X
ARE	151.19	136	ePKP	28 36.00	6.4X
VAO	152.71	188	ePKP	28 38.10	6.7X
			e	28 50.40	
CNCB	153.25	142	PKP	28 34.30	1.4
			i	28 42.00	
LPB	153.39	141	ePKP	28 35.00	2.1
ZOBO	153.57	141	PKP	28 33.00	-0.4
CCH	153.90	146	PKP	28 43.90	10.4X
PPD	153.96	179	ePKP	28 36.90	3.8X
			e	28 42.00	
			e	28 55.00	

S.D. = 1.1 on 61 of 72 obs.

SEP 19, 1989 04h 12m 01.91± 0.77s
43.022 N ± 4.7km 13.457 E ± 7.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (SSO).

ALP	0.26	160	iPgc	12 07.72	0.3
			iSg	12 12.23	
SSO	0.27	354	e(Pg)	12 08.17	0.5
			eSg	12 12.56	
CIO	0.29	307	iPgc	12 08.55	0.6
			iSg	12 13.05	
AOI	0.54	11	ePg	12 12.19	-0.6
			iSg	12 21.25	
ASS	0.59	275	P	12 13.60	-0.2
			iSg	12 24.00	
ARV	0.61	322	P	12 13.90	-0.3
			eSg	12 23.90	
MNS	0.86	222	P	12 18.10	-0.3
			eSg	12 32.40	

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

% SEP 19, 1989 04h 21m 11.99± 1.16s
36.105 N ±14.9km 139.906 E ± 9.7km
DEPTH = 33.0km (normal)
HONSHU, JAPAN (227)

KAKJ	0.24	65	iP+	21 19.00	0.0
			S	21 26.10	
CHJJ	0.74	266	iPd	21 26.10	0.1
			S	21 38.60	
NIIJ	1.35	328	P	21 34.50	-0.1
MAT	1.44	288	iPc	21 36.10	0.1
			eS	21 57.00	
IIDJ	1.74	250	P	21 40.20	-0.2

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

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* SEP 19, 1989 04h 24m 10.20± 1.75s
25.367 S ± 8.2km 65.803 W ±26.2km
DEPTH = 33.0km (normal)
SALTA PROVINCE, ARGENTINA (129)

ANT	4.51	291	e(P)	25 18.00	0.0
			eS	25 34.50	
CNCB	8.75	346	P	26 18.00	0.0
PEL	8.84	208	iPc	26 26.70	7.9X
FCH	8.84	205	eP	26 29.50	10.5X
LPB	9.05	346	eP	26 22.00	0.0
SAN	9.10	207	eP	26 23.50	1.2
PCH	9.19	205	iPc	26 22.40	-1.2
ZOBO	9.31	346	P	26 22.00	-3.7X
TACH	9.39	207	eP	26 20.00	-6.3X
LNV	9.85	208	eP	26 14.60	-17.9X
			iS	27 14.90	

S.D. = 1.2 on 5 of 10 obs.

? SEP 19, 1989 04h 41m 25.04± 5.08s
15.885 N ±45.9km 99.006 W ±16.7km
DEPTH = 33.0km (normal)
OFF COAST OF GUERRERO, MEXICO (65)

ACX	1.28	320	iP	41 46.00	-0.7
			iS	42 04.00	
OXX	2.49	61	iP	42 05.00	0.6
			iS	42 33.00	
III	2.52	350	iP	42 06.00	1.3
			iS	42 37.00	
PPM	3.18	6	eP	42 15.00	0.6
			iS	42 54.50	
IIT	3.19	12	(P)	42 55.00	40.7X
IISM	3.46	27	eP	42 16.00	-1.8
			(S)	42 58.00	
CRX	3.56	350	(P)	42 32.50	12.9X
MRX	4.33	332	(P)	42 58.00	27.7X
LVVM	4.54	32	(P)	42 42.00	8.8X

S.D. = 1.8 on 5 of 9 obs.

? SEP 19, 1989 05h 07m 22.72± 3.60s
15.932 N ±32.9km 98.978 W ±12.0km
DEPTH = 33.0km (normal)
OFF COAST OF GUERRERO, MEXICO (65)

ACX	1.26	318	iP	07 44.00	-0.1
			iS	08 01.00	
OXX	2.45	62	iP	08 01.50	0.1
			iS	08 30.00	
III	2.48	349	iP	08 02.00	0.2
			iS	08 31.00	
PPM	3.14	6	iP	08 11.50	0.1
			(S)	08 51.00	
IIT	3.14	12	(P)	08 15.00	3.8X
IISM	3.40	26	eP	08 14.50	-0.3
			(S)	08 59.00	
CRX	3.52	349	(P)	08 52.00	35.3X
MRX	4.30	331	(P)	08 34.00	6.5X
LVVM	4.49	32	(P)	08 40.00	9.8X

S.D. = 0.2 on 5 of 9 obs.

? SEP 19, 1989 05h 18m 17.93± 1.16s
15.147 N ±13.9km 61.422 W ±30.1km

19d 05h

DEPTH = 120.0km (geophysicist)
LEEWARD ISLANDS (92)

BBL	0.38	352	eP	18 35.30	-0.2
			S	18 50.30	
FDF	0.49	147	iPc	18 36.72	0.6
			S	18 53.00	
CRM	0.63	129	iPc	18 36.53	-0.4
			S	18 52.50	
BIM	0.71	152	iPc	18 38.23	0.6
			S	18 55.60	
MVM	0.78	139	iPc	18 37.89	-0.3
			S	18 54.90	
TRN	4.47	180	eP	19 24.50	-0.3
			eS	20 15.28	

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

SEP 19, 1989 05h 18m 51.33± 0.41s
44.764 N ± 3.8km 10.668 E ± 3.8km
DEPTH = 12.7 ± 2.7 km
NORTHERN ITALY (545)
ML 3.2 (LDG).

MME	0.57	178	Pd	19 02.90	0.0
BDI	0.70	184	P	19 04.60	-0.4
			eSg	19 16.00	
SAL	0.85	353	P	19 08.40	1.0
			eSg	19 22.20	
BOB	0.87	271	P	19 08.30	0.4
			eSg	19 21.90	
PII	1.05	186	R	19 11.00	0.2
			eSg	19 26.20	
PGD	1.17	139	P	19 15.20	2.2
SFI	1.20	134	P	19 14.20	0.9
MDI	1.22	327	P	19 14.40	0.7
			eSg	19 32.00	
PCP	1.53	262	P	19 20.24	1.8
			S	19 41.80	
VAI	1.73	310	P	19 21.90	0.6
			eSn	19 45.00	
FIN	1.85	253	P	19 22.91	-0.1
			S	19 45.58	
ROB	2.06	258	P	19 25.92	-0.1
ORO	2.09	295	P	19 27.00	0.4
IMI	2.17	248	P	19 27.45	-0.3
			S	19 53.66	
TRI	2.38	66	e(Pn)	19 30.10	-0.6
			i(Sg)	19 58.30	
ENR	2.39	258	P	19 31.23	0.4
			S	19 59.43	
STV	2.45	259	P	19 31.78	0.1
			S	20 00.20	
DOI	2.46	265	P	19 31.80	0.0
SBF	2.49	250	Pn	19 32.60	0.3
			Sn	20 03.20	
CVF	2.55	211	Pn	19 31.50	-1.7
			Sn	20 03.00	
PZZ	2.56	265	P	19 34.70	1.4
LSD	2.58	287	P	19 35.81	2.0
			S	20 01.48	
VOY	2.60	60	iPn	19 33.40	-0.5
			eSn	20 05.20	
LPL	2.89	287	Pn	19 37.20	-0.8
FRF	3.13	249	Pn	19 41.20	-0.1
			Sn	20 17.50	
LMR	3.32	246	Pn	19 43.20	-0.8
			Sn	20 21.60	
LRG	3.37	249	Pn	19 45.00	0.4
			Sn	20 24.40	
CDF	4.33	329	Pn	19 57.30	-1.2
			Sn	20 45.00	
HAU	4.41	319	Pn	19 58.50	-1.0
			Sn	20 47.50	
KHC	4.80	23	eP	20 21.50	16.4X
			e	21 27.50	

S.D. = 1.0 on 29 of 30 obs.

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* SEP 19, 1989 05h 43m 58.07± 0.55s
0.010 S ±16.7km 24.702 W ±13.5km
DEPTH = 10.0km (geophysicist)
4.9mb (4 obs.) 4.8Msz (1 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

TIC	20.72	71	P	48 40.00	-1.4
BNG	43.43	84	iPd	52 03.80	0.6
	0.9s	14.00nm			4.7mb
CCH	44.28	245	P	52 09.90	-0.5
ZOBO	45.76	247	P	52 21.00	-1.6
	1.2s	15.88nm			4.9mb
	Z 20s	1.17um			4.8Msz
			LR	06 12.00	
CNCB	45.78	246	eP	52 24.00	1.3
LPB	45.81	247	eP	52 13.00	-9.8X
	Z 16s	1.35um			5.0MszX
			LR	06 10.00	
VOY	57.02	31	eP	53 47.10	0.5
VBY	57.39	32	e(P)	53 49.00	-0.1
KHC	58.97	28	eP	54 00.00	-0.1
MOX	59.15	26	eP	54 02.00	0.7
ZST	60.09	31	eP	54 07.50	-0.3
CLL	60.23	26	eP	54 08.00	-0.7
	1.6s	21.00nm			5.0mb
KRA	62.71	31	eP	54 26.20	0.8
ALQ	83.24	305	eP	56 09.00	-17.7X
	2.5s	27.78nm			
SPA	89.99	180	e(P)	56 59.80	0.8
	1.0s	7.00nm			4.8mb
ASPA	148.61	140	ePKP	03 43.40	-0.6X
	2.0s	26.00nm			
WRA	151.46	135	PKPd	03 51.70	3.3X
	0.9s	2.20nm			

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

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* SEP 19, 1989 05h 45m 02.99± 1.06s
52.289 S ±12.9km 160.022 E ±15.2km
DEPTH = 10.0km (geophysicist)
4.4mb (4 obs.) 4.7Msz (1 obs.)
MACQUARIE ISLANDS REGION (167)

MSZ	9.25	38	eP	47 18.00	-1.2
TOO	17.90	320	eP	49 12.00	-1.5
CNB	18.60	332	eP	49 24.00	1.9
CAN	18.70	331	eP	49 23.30	0.0
			eTT	05 39.00	
BWA	19.70	330	eP	49 34.00	-1.3
			eTT	06 30.00	
COO	22.50	341	eP	50 07.00	3.1X
DZM	30.57	12	iPc	51 20.20	1.2
CTA	33.88	336	iPd	51 49.80	2.0
	1.2s	21.09nm			4.9mb
ASPA	34.85	315	eP	51 55.50	-0.7
	1.6s	15.00nm			4.6mb
	Z 21s	1.41um			4.7Msz
			LR	04 25.50	
SPA	37.90	180	e(P)	52 21.40	-0.3
	1.0s	3.50nm			4.1mb
WRA	37.97	318	Pd	52 22.30	-0.2
	1.0s	4.60nm			4.2mb
WB5	38.01	319	eP	52 22.20	-0.7
CHG	88.37	304	eP	57 57.00	0.9
OHR	150.27	264	ePKP	04 55.00	5.2X

S.D. = 1.4 on 12 of 14 obs.

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* SEP 19, 1989 06h 36m 12.70± 2.11s
36.449 N ±15.3km 140.682 E ±18.3km
DEPTH = 45.5 ± 19.5 km
NEAR EAST COAST OF HONSHU, JAPAN(228)
MG 3.8 (JMA). Felt (III JMA) at Mito and (I JMA) at Utsunomiya.

MIT	0.18	248	iPd	36 21.20	0.8
			iS	36 27.50	
KAKJ	0.48	240	iPd	36 22.90	-0.5
			S	36 29.70	
UTS	0.66	278	eP	36 25.00	-0.8
			S	36 34.50	
CHJJ	1.42	254	iPd	36 35.10	-1.4
			S	36 51.30	
NIIJ	1.56	301	P	36 38.50	0.1
YAMJ	1.80	344	iPd	36 42.60	0.8
MAT	2.00	273	iPc	36 44.30	-0.3
			eS	37 07.00	
MTMJ	2.32	274	P	36 40.20	-9.1X
IIDJ	2.45	248	P	36 51.60	0.5
			S	37 21.50	
OFUJ	2.74	16	P	36 54.50	-0.7
TSRJ	3.92	258	P	37 13.30	1.4

S.D. = 1.1 on 10 of 11 obs.

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* SEP 19, 1989 06h 41m 22.84± 0.80s
9.753 S ±18.6km 72.270 W ±31.8km
DEPTH = 33.0km (normal)
PERU-BRAZIL BORDER REGION (112)

ARE	6.71	174	eP	43 02.00	0.0
ZOBO	7.63	148	P	43 15.00	-0.1
	1.1s	7.25nm			4.6mb
LPB	7.87	149	P	43 19.00	0.7
CNCB	8.16	150	P	43 22.00	-0.5
CCH	9.64	143	P	43 36.90	-5.8X
QUR	11.37	326	iP+	44 07.10	0.5
			S	44 39.70	
GGP	11.41	326	iP+	44 06.70	-0.5
			eS	44 40.80	

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

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* SEP 19, 1989 06h 47m 16.05± 0.71s
20.700 S ±12.8km 169.362 E ±13.1km
DEPTH = 33.7km (3 depth phases)
4.8mb (4 obs.)
VANUATU ISLANDS (186)

DZM	3.04	243	iPd	48 02.00	-1.1
			iS	48 37.10	
PVC	3.11	341	iP	48 05.00	1.1
			iS	48 42.00	
BRS	16.54	243	eP	51 08.50	1.3
RMQ	19.74	249	iPd	51 47.10	1.1
	0.9s	68.00nm			5.0mb
CTA	21.67	268	eP	52 07.00	1.1
BWA	23.00	229	eP	52 19.70	0.7
			e	52 28.40	31km
CAN	23.07	227	eP	52 21.80	2.1
			e	52 31.70	37km
WB5	32.80	265	eP	53 46.20	-2.4
WRA	32.81	265	P	53 48.00	-0.7
	0.9s	1.70nm			3.9mb
ASPA	32.92	258	eP	53 47.90	-1.7
	0.9s	7.00nm			4.6mb
			e	53 57.50	33km
MTN	37.36	276	eP	54 26.50	-1.0
SPA	69.43	180	ePc	58 21.90	-0.8
	1.0s	23.50nm			5.2mb
			e	58 35.60	48kmX
CHG	79.36	295	eP	59 21.00	0.4
KSP	143.22	331	ePKP	06 43.20	-5.1X
BRG	144.22	333	iPKP	06 46.80	-3.1X
			i	06 57.70	
CLL	144.28	334	iPKP	06 46.80	-3.2X
	1.0s	19.00nm			
			i	06 57.10	
ZST	144.64	327	ePKP	06 47.90	-2.8X
EKA	144.96	353	PKP	06 48.00	-3.1X
	1.0s	18.30nm			
MOX	145.35	335	iPKP	06 50.00	-1.9
	1.1s	27.00nm			
SKO	145.66	315	ePKP	06 51.00	-1.7
KHC	145.67	331	iPKPc	06 51.70	-0.9
	1.0s	15.50nm			
			i	07 02.60	
GRF	146.25	334	ePKP	06 53.40	-0.1
			e	07 04.30	
OHR	146.49	314	ePKP	06 53.50	-0.7
BNG	147.35	244	iPKPc	06 57.50	1.2
	0.7s	18.00nm			
			ic	07 11.30	
VBY	147.36	325	e(PKP)	06 56.40	1.1
MEM	147.39	340	PKP	06 51.40	-3.8X
CEY	147.65	326	e(PKP)	06 56.50	0.7
VOY	147.72	327	ePKP	06 56.60	0.6
WLF	148.16	339	PKP	06 59.00	2.6X
DOU	148.28	341	PKPc	06 58.30	1.7
CDF	148.82	337	ePKP	07 00.10	2.4X
	0.9s	9.85nm			
BSF	149.49	337	ePKP	07 01.40	2.6X
HAU	149.50	337	ePKP	07 01.50	2.8X
	0.8s	8.05nm			
FLN	150.84	346	ePKP	07 04.40	3.8X
	0.7s	13.25nm			
LDF	150.92	346	ePKP	07 04.60	3.9X
	0.6s	5.40nm			
LOR	151.00	339	ePKP	07 05.00	4.1X
	0.8s	6.70nm			
LBF	151.21	339	ePKP	07 05.20	3.9X
GRR	151.28	346	ePKP	07 05.60	4.3X
	0.6s	9.90nm			
SSF	151.30	340	ePKP	07 05.90	4.5X
	0.7s	7.70nm			
LPG	151.42	334	ePKP	07 06.70	4.7X
	0.7s	6.60nm			
LPF	151.65	346	ePKP	07 06.60	4.8X

0.6s 13.55nm

MFF 152.78 344 ePKP 07 09.90 6.4X
S.D. = 1.3 on 23 of 42 obs.

SEP 19, 1989 07h 57m 08.93± 0.29s
39.434 N ± 3.0km 21.295 E ± 1.9km
DEPTH = 36.3 ± 5.2 km
4 6mb (23 obs) 3.8Msz (1 obs.)
GREECE (364)
Felt at Arto and Preveza.

LSK	0.89	323	iPgd	57	24.30	-0.9
KZN	0.95	23	ePg	57	24.20	-1.7
SRN	1.09	294	iPg	57	28.50	0.6
LIT	1.14	54	ePg	57	27.80	-0.8
			eSg	57	43.30	
KEK	1.19	284	ePg	57	30.00	0.7
KBN	1.24	343	iPnc	57	30.70	0.6
VLS	1.37	204	ePb	57	32.10	0.1
NEO	1.50	94	ePb	57	34.00	0.1
BERA	1.63	321	ePn	57	38.10	2.3
OHR	1.72	347	iPnc	57	39.40	2.3
GRG	1.74	29	iPbd	57	37.20	-0.2
			eSb	57	59.60	
THE	1.75	46	ePb	57	37.30	-0.2
			iSb	57	59.30	
PLG	1.90	60	ePb	57	39.20	-0.5
PAIG	1.91	74	iPbd	57	39.10	-0.6
			iSb	58	04.50	
KNT	2.12	35	iPnd	57	42.90	0.3
			iSn	58	08.50	
VAY	2.12	27	iPn	57	42.70	0.0
TIR	2.20	331	ePn	57	47.50	3.7X
OUR	2.25	66	iPnd	57	44.60	0.0
ITM	2.31	167	ePb	57	48.70	3.4X
PHP	2.34	344	ePn	57	47.60	1.8
ATH	2.39	127	ePn	57	48.00	1.5
SRS	2.43	46	iPnd	57	47.10	0.0
			iSn	58	17.50	
LACI	2.51	332	iPnc	57	51.50	3.3X
SKO	2.54	2	iPnd	57	49.70	1.1
			i	57	52.00	
			iSn	58	20.00	
			iSg	58	26.00	
			i	58	32.00	
			LR	58	49.50	
KKS	2.72	346	ePn	57	54.50	3.3X
LCI	2.72	290	P	57	50.60	-0.6
			eSn	58	26.20	
KKB	2.79	29	iPd	57	53.00	0.9
PUK	2.82	338	iPnd	57	56.20	3.7X
MMB	2.84	40	iPd	57	53.00	0.0
SDA	2.92	333	iPnc	57	57.20	3.2X
ULC	2.97	329	iPnd	57	57.00	2.3
			eSn	58	32.50	
BCI	3.07	343	iPnc	58	00.10	3.9X
PVY	3.31	343	iPnd	58	03.20	3.5X
			eSn	58	44.30	
TTG	3.37	333	ePn	58	02.60	2.3
			eSn	58	43.20	
BDV	3.41	327	ePn	58	02.20	1.3
			eSn	58	41.70	
RZN	3.44	48	iPd	58	02.00	0.4
VTS	3.47	24	iPd	58	03.00	1.0
IVA	3.59	343	ePn	58	06.80	3.1X
			eSn	58	51.00	
HCY	3.68	326	iPnc	58	05.60	0.7
			eSn	58	48.00	
NKY	3.80	334	ePn	58	08.60	2.0
			eSn	58	53.20	
PGB	3.80	34	iPd	58	06.00	-0.6
TDS	3.84	275	P	58	08.80	1.7
GRI	3.84	262	P	58	07.42	0.3
KDZ	3.84	54	iPc	58	06.00	-1.2
PRK	3.86	91	ePn	58	08.70	1.3
EZN	3.90	83	iP	58	06.90	-1.1
ALN	3.92	67	ePnd	58	06.90	-1.4
BRY	4.04	330	ePn	58	10.80	0.8
			eSn	58	59.00	
APE	4.09	124	ePn	58	11.50	0.8
DIM	4.15	50	iP	58	12.00	0.5
SOI	4.32	253	P	58	12.60	-1.3
GMB	4.43	255	P	58	15.76	0.2
MGR	4.48	281	P	58	17.10	0.9
VAM	4.64	149	ePn	58	19.50	1.1
SMG	4.67	110	ePn	58	18.50	-0.4
SGO	4.73	286	P	58	20.70	0.9
IZM	4.77	101	iP	58	20.80	0.4
MFT	4.78	72	iP	58	20.30	-0.3
PVL	4.85	38	iPd	58	19.00	-2.4
JMB	5.02	51	ePn	58	24.00	0.1
LPI	5.05	261	P	58	23.89	-0.4
EDC	5.13	78	iP	58	23.80	-1.7
BNT	5.18	78	iP	58	25.20	-0.9
MNO	5.38	256	P	58	28.70	-0.4
NPS	5.40	139	ePn	58	29.50	0.3
BEO	5.42	354	e(P)	58	31.00	1.6
KCT	5.50	79	iP	58	29.80	-0.8
MEU	5.52	247	P	58	28.30	-2.7
PZI	5.57	246	P	58	27.73	-3.8X
DUI	5.66	295	P	58	33.80	0.8
DRA	5.69	22	eP	58	33.00	-0.1
CTT	5.72	70	eP	58	33.00	-0.7
RFI	5.89	291	P	58	36.79	0.8
YER	5.96	110	eP	58	37.90	0.8
BUC	6.13	34	eP	58	40.00	0.6
ISK	6.16	72	eP	58	38.00	-1.9
MCT	6.27	256	P	58	39.30	-2.3
YLV	6.31	77	iP	58	41.30	-0.7
USI	6.36	266	P	58	40.90	-1.8
FAI	6.36	253	P	58	39.30	-3.5X
GBZT	6.39	75	eP	58	52.00	8.8X
AZI	6.49	296	P	58	45.70	1.1
DEV	6.55	10	ePc	58	45.00	-0.4
HRT	6.57	75	eP	58	46.40	0.8
PSN	6.69	48	eP	58	50.00	2.8
ALP	6.72	302	ePnd	58	47.26	-0.6
			iSn	59	00.04	
ISR	6.90	33	eP	58	50.00	-0.3
RDP	6.93	292	P	58	50.30	-0.4
RMP	6.95	293	P	58	51.40	0.3
MLR	6.96	28	ePd	58	51.00	-0.2
GPA	6.99	80	eP	58	51.00	-0.6
SSO	7.07	306	e(Pn)	58	52.57	0.0
			e(Sn)	59	07.30	
AOI	7.09	308	ePn	58	51.74	-1.2
			eSn	59	06.26	
MNS	7.16	297	P	58	54.20	0.2
TLB	7.19	42	eP	58	20.00	-34.3X
CIO	7.19	304	ePn	58	53.46	-1.0
			eSn	59	10.10	
ELL	7.30	109	eP	59	02.00	6.0X
ASS	7.45	302	P	58	57.40	-0.6
ARV	7.47	306	P	58	57.27	-1.0
ZAG	7.48	330	iPg	59	32.00	33.6X
			iSg	01	09.00	
VBY	7.53	326	ePn	58	57.90	-1.1
			iSn	00	20.00	
BCK	7.56	102	eP	59	01.70	2.2
PTJ	7.56	330	ePn	58	58.00	-1.6
VRI	7.57	30	eP	58	59.50	-0.2
CFR	7.67	39	eP	59	04.00	3.0X
RIY	7.81	321	iPnc	59	01.40	-1.5
			iSn	00	28.20	
CEY	8.08	323	ePn	59	05.50	-1.3
			eSn	00	35.50	
BUD	8.21	349	eP	59	09.80	1.2
LJU	8.27	325	ePn	59	09.00	-0.3
			eSn	00	38.00	
SFI	8.37	305	P	59	10.20	-0.5
TRI	8.38	321	ePn	59	08.60	-2.2
			eSg	00	26.30	
PGD	8.43	305	P	59	11.50	-0.2
PSZ	8.54	354	eP	59	13.00	-0.2
VOY	8.55	323	ePnc	59	12.20	-1.1
			eSn	00	45.90	
RBL	9.00	324	P	59	18.80	-0.8
KAS	9.71	75	eP	59	31.50	2.1
CVF	9.90	292	eP	59	30.70	-1.2
	0.5s		6.40nm			5.1mb
BOB	10.29	305	P	59	36.20	-1.0
OGA	10.55	318	iPc	59	39.80	-1.2
MDI	10.63	310	P	59	41.10	-0.7
KRA	10.66	355	eP	59	44.20	2.0
KHC	11.15	333	P	59	50.50	1.5
			e	00	40.20	
VAI	11.24	309	P	59	48.70	-1.3
PRU	11.59	338	eP	59	45.00	-9.8X
KSP	11.94	345	eP	59	52.50	-7.0X
			e	00	01.50	
LPG	12.32	304	eP	59	56.20	-8.8X
	0.5s		12.30nm			5.3mb
GRF	12.51	328	e(P)	00	16.00	8.9X
MOX	13.12	332	ePn	59	59.00	-16.2X
			e	00	24.00	
CLL	13.22	337	e(P)	00	27.00	10.5X
	1.4s		23.00nm			
DSI	13.89	120	e(P)	00	25.00	-0.4
			eS	02	55.00	
PRNI	14.43	125	eP	00	31.00	-1.6
SMF	14.64	305	eP	00	26.90	-8.3X
	0.8s		17.90nm			4.6mb
LBF	14.69	307	eP	00	27.70	-8.3X
	0.7s		13.20nm			4.5mb
LOR	14.89	307	eP	00	29.50	-9.0X
	0.4s		4.20nm			4.1mb
SSF	15.02	306	eP	00	32.30	-7.9X
	0.7s		20.90nm			4.5mb
BGF	15.24	304	eP	00	37.10	-6.0X
	0.7s		21.30nm			4.5mb
MEM	15.51	321	P	00	54.00	7.5X
ENN	15.65	321	e(P)	00	59.00	10.7X
	1.0s		14.00nm			
DOU	15.91	318	P	00	59.80	8.2X
	0.7s		8.90nm			4.0mb
WTS	16.09	326	e(P)	01	04.00	10.2X
	0.9s		17.00nm			
MFF	17.21	302	eP	01	10.30	2.3
	0.9s		13.10nm			4.1mb
LDF	17.87	308	eP	01	14.20	-2.0
	1.3s		57.70nm			4.5mb
FLN	18.16	308	eP	01	17.10	-2.7
	0.8s		21.40nm			4.3mb
LPF	18.24	305	eP	01	20.60	-0.1
	0.9s		16.30nm			4.2mb
GRR	18.25	307	eP	01	20.10	-0.8
	1.1s		26.30nm			4.3mb
EVIA	18.50	275	e(P)	01	24.80	0.6
GUD	19.51	282	e(P)	01	36.80	0.7
EBAN	19.58	274	e(P)	01	37.00	0.2
ASMO	19.72	272	eP	01	38.00	-0.4
APHE	19.78	271	eP	01	41.50	2.5
AAPN	20.02	272	eP	01	41.50	-0.1
ATEJ	20.04	271	eP	01	42.50	0.7
ALOJ	20.06	271	eP	01	42.00	0.0
UPP	20.58	355	iP	01	46.70	-0.3
	0.7s		100.00nm			5.3mb
NUR	21.20	5	iP	01	52.00	-1.4
	0.9s		37.20nm			4.8mb
HFS	21.27	349	eP	01	52.70	-1.3
	0.7s		20.50nm			4.6mb
Z	15s		0.21um			3.7MszX
			LR	10	46.00	
NKM	21.54	268	eP	01	58.00	1.0
IFR	22.01	263	iP	02	07.00	5.1X
NRA0	22.18	347	eP	02	02.50	-0.6
NB2	22.52	347	P	02	06.30	-0.3
	0.7s		19.40nm			4.7mb
EKA	22.78	322	P	02	10.00	0.9
	0.8s		10.50nm			4.4mb
SUF	23.50	6	iP	02	15.80	-0.2
	0.9s		32.60nm			4.8mb
TIO	24.76	259	iP	02	31.00	2.3
SOD	28.15	4	iP	02	59.20	-0.2
KEV	30.54	4	eP	03	20.00	-0.7
BNG	34.93	185	iPc	04	00.20	0.8
	0.5s		25.00nm			5.4mb
			ic	04	03.80	
LIC	40.69	223	P	04	48.60	1.0
Z	20s		0.15um			3.8Msz
NDI	46.89	85	iPd	05	37.60	0.0
CHG	68.92	83	ePc	08	11.20	-1.3
INK	70.93	350	eP	08	25.00	1.1
FBA	75.65	355	(P)	08	54.50	2.9X
	1.0s		8.75nm			4.7mb
PMR	79.02	355	eP	09	12.40	2.1
	0.9s		6.58nm			4.6mb
PNT	85.12	336	eP	09	48.00	5.7X
TUL	85.23	314	eP	09	47.70	4.7X
	1.0s		8.30nm			4.9mb
S.D. = 1.2 on 139 of 174 obs.						

SEP 19, 1989 08h 00m 55.77± 0.55s
43.349 N ± 4.9km 13.031 E ± 4.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 3.5 (SSO).

ARV	0.16	337	P	00	58.30	-1.2
			iSg	01	04.60	
CIO	0.17	152	iPg	00	59.71	-0.1

19d 08h

			iSg	01	03.44	
SSO	0.29	101	iPg	01	02.84	1.0
			iSg	01	08.61	
ASS	0.39	224	P	01	03.80	0.1
			eSg	01	10.40	
AOI	0.46	64	iPg	01	04.86	-0.3
			iSg	01	12.96	
ALP	0.70	145	iPg	01	09.58	0.0
			iSg	01	21.55	
MNS	1.00	195	P	01	14.70	0.0
			eSg	01	29.70	
SFI	1.03	304	P	01	15.20	0.0
PGD	1.09	299	P	01	17.80	1.5
RDP	1.61	188	P	01	23.40	-0.9

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

SEP 19, 1989 08h 32m 25.43± 0.54s
31.467 S ± 4.9km 67.488 W ± 5.4km
DEPTH = 44.1 ± 6.1 km
4.8mb (6 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)
Felt (IV) in the Morayes area.

CFA	0.66	257	iPd	32	32.00	-6.5X
ZON	1.02	265	eP	32	39.00	-4.6X
			eS	32	50.00	
MRA	1.78	122	ePc	32	55.00	0.7
TCA	2.48	88	iPd	33	05.30	0.9
FCH	3.01	231	iPc	33	13.40	1.3
			iS	33	54.50	
PEL	3.18	237	iPc	33	14.50	0.2
SAN	3.33	233	iPc	33	17.00	0.5
			iS	34	02.00	
PCH	3.34	229	iPd	33	17.00	0.4
			iS	34	04.20	
ROCH	3.34	242	iP	33	16.40	-0.4
			iS	33	57.80	
CYA	3.35	26	ePd	33	17.10	0.4
CHCH	3.63	226	iPc	33	22.20	1.6
			iS	34	10.20	
TACH	3.64	232	iPc	33	11.10	-9.6X
			iS	34	50.40	
TACH	3.64	232	iP	33	20.50	-0.2
IHA	3.85	245	eP	33	22.00	-1.6
			iS	34	13.30	
LCCH	3.99	239	iPc	33	24.10	-1.6
			iS	34	21.00	
LNV	4.13	232	iPd	33	26.00	-1.7
			iS	34	27.00	
SLA	6.94	15	ePc	34	07.60	0.3
			S	35	56.50	
ANT	8.16	341	eP	34	24.50	0.4
ITB7	13.32	65	e(P)	35	28.00	-6.1X
ITB1	13.41	63	e(P)	35	30.50	-4.7X
ITB	13.47	64	e(P)	35	29.50	-6.5X
CCH	14.08	5	P	35	48.90	4.5X
CNCB	14.60	358	P	35	50.00	-1.5
LPB	14.88	358	P	35	57.00	2.0
Z	16s		1.68um			
			LR	40	28.00	
ZOBO	15.14	358	P	35	59.00	0.4
Z	22s		0.88um			
			eLR	40	16.00	
ARE	15.38	345	eP	36	01.00	-0.4
PPD	17.22	61	eP	36	22.10	-2.2
			e	36	25.80	
			e	36	32.20	
VAO	20.08	70	eP	36	56.10	-1.9
			e	37	01.30	
			e	37	14.60	
HUA	20.64	338	eP	37	05.50	1.1
NNA	21.22	334	eP	37	09.00	-0.8
	1.2s	10.94nm			4.1mb	
BMA	22.50	73	eP	37	14.90	-7.6X
			e	37	26.60	
SPA	58.71	180	ePd	42	20.90	0.0
	1.0s	15.00nm			5.1mb	
			e	42	25.00	
OLY	70.32	339	P	43	35.90	-0.4
KIC	70.62	69	(P)	43	39.00	0.4
TUL	72.09	336	eP	43	50.20	3.2X
	1.5s	17.90nm			4.8mb	
FVM	72.33	341	P	43	47.00	-1.4
MAW	74.47	162	eP	44	00.00	-0.5
ALQ	75.54	328	eP	44	08.00	0.7
	1.5s	19.44nm			4.8mb	
CBM	78.04	360	P	44	18.00	-2.6
GLD	79.04	331	P	44	28.00	1.4
PLM	79.55	320	P	44	30.00	0.5
MSU	81.11	326	eP	44	39.00	1.3
			epP	44	43.90	16kmX
BCH	82.69	319	P	44	45.00	-0.8
TNP	83.29	323	P	44	49.60	0.6
	1.2s	10.08nm			4.8mb	
KVN	84.47	323	P	44	55.00	0.1
BUL	84.69	110	iPc	44	58.00	1.6
RSON	85.18	344	eP	44	58.00	0.1
LRM	87.05	330	eP	45	08.50	0.9
KRI	87.23	108	eP	45	15.20	6.2X
BNG	88.91	84	iPd	45	23.40	6.5X
	1.0s	15.00nm			5.3mb	
			id	45	26.90	
MSZ	88.98	216	P	45	17.30	0.5
WRA	124.76	205	PKPd	51	22.10	-0.3
	0.7s	2.50nm				
WB5	124.81	205	ePKP	51	22.20	-0.3
HYB	146.22	106	ePKP	52	07.50	5.4X
	1.4s	100.00nm				
NDI	149.41	86	ePKP	52	17.00	10.1X

S.D. = 1.2 on 42 of 55 obs.

% SEP 19, 1989 08h 54m 57.31± 1.23s
43.069 N ±19.0km 0.603 W ± 7.3km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

ESCF	0.02	67	Pg	54	58.98	-0.3
ATE	0.07	283	Pg	54	59.43	-0.3
			Sg	55	00.64	
OGE	0.14	44	Pg	55	00.87	0.3
			Sg	55	04.34	
ISSF	0.15	254	Pg	55	01.23	0.4
			Sg	55	04.24	
MADF	0.18	296	Pg	55	01.22	-0.1

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

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* SEP 19, 1989 08h 56m 02.21± 0.49s
19.243 S ±19.1km 175.277 W ±10.7km
DEPTH = 33.0km (normal)
5.1mb (11 obs.)
TONGA ISLANDS (173)

AFI	6.28	33	P	57	36.50	1.5
			S	58	33.00	
DZM	17.34	258	iPc	00	12.90	9.4X
PAE	24.42	90	iP	01	17.80	-1.3
	0.8s	25.00nm			4.8mb	
PPT	24.44	90	iP	01	18.00	-1.3
	0.8s	35.00nm			5.0mb	
TVO	24.72	91	iP	01	20.70	-1.3
	0.8s	20.00nm			4.7mb	
BRS	30.37	249	iPc	02	16.00	2.4
RMO	33.83	251	iPc	02	45.70	1.9
	0.4s	8.00nm			5.0mb	
CAN	35.33	236	eP	02	58.80	2.2
BWA	35.53	237	eP	02	58.20	-0.1
CTA	36.18	262	iPd	03	04.00	0.1
	0.6s	29.33nm			5.4mb	
RKT	37.70	103	eP	03	04.00	-12.5X
	1.2s	45.00nm				
OLP	37.88	251	iPc	03	19.20	1.1
WB5	47.31	260	iPd	04	33.30	-1.6
ASPA	47.31	255	iPd	04	34.40	-0.5
	0.7s	85.00nm			5.9mb	
			e	06	01.90	
WRA	47.32	260	Pg	04	33.80	-1.2
	0.6s	19.90nm			5.3mb	
MTN	51.74	269	iPc	05	06.50	-2.5
KNA	53.30	264	iPd	05	08.30	-12.3X
	0.7s	69.00nm				
WARB	53.65	251	eP	05	22.00	-1.1
NANU	64.20	254	eP	06	34.00	-2.4
	0.7s	39.00nm			5.6mb	
MAT	70.77	322	eP	07	11.00	-6.4X
	0.8s	9.70nm			4.9mb	
SPA	70.88	180	iPd	07	19.20	1.4
	1.0s	9.00nm			4.8mb	
SNG	86.81	279	eP	08	44.10	-1.0
CHG	92.24	289	ePd	09	08.00	-2.5
	0.9s	13.87nm			5.4mb	
KSP	147.16	346	ePKP	15	38.00	-3.1X
CLL	147.34	350	iPKP	15	38.10	-3.3X
	1.1s	16.00nm				
			epP	16	28.00	
PRU	148.34	348	ePKP	15	41.00	-2.0
GRR	150.58	8	ePKP	15	46.20	-0.3
	0.5s	7.30nm				
CDF	150.83	357	ePKP	15	47.00	0.0
LPF	150.90	8	ePKP	15	46.90	-0.1
	0.5s	7.30nm				
HAU	151.28	358	ePKP	15	48.00	0.4
LOR	152.04	1	ePKP	15	49.70	0.9
	0.6s	4.50nm				
SSF	152.24	2	ePKP	15	50.40	1.4
	0.8s	4.70nm				
LBF	152.32	1	ePKP	15	50.40	1.2
	0.5s	4.35nm				
MFF	152.42	7	ePKP	15	50.40	1.1
BGF	152.71	3	ePKP	15	51.30	1.6
	0.6s	4.95nm				
MAF	153.04	3	ePKP	15	52.20	2.0
	0.7s	3.85nm				

S.D. = 1.6 on 30 of 36 obs.

& SEP 19, 1989 09h 24m 53.83s
63.111 N 144.542 W
DEPTH = 5.0km
CENTRAL ALASKA (1)
<AGS-P>. ML 3.2 (PMR).

PAX	0.45	252	iP	25	02.48	-0.3
DOT	0.58	22	iP	25	04.91	-0.6
SDG	0.75	219	iP	25	07.98	-0.7
			eS	25	17.62	
DDM	0.90	319	iP	25	10.92	-0.7
DMW	1.09	331	eP	25	14.17	-0.6
			S	25	29.19	
TOA	1.26	217	iPd	25	17.50	-0.2
HDA	1.69	322	eP	25	23.06	-1.0
			eS	25	47.02	
GLB	1.71	168	iP	25	24.06	-0.4
			eS	25	46.26	
KLU	1.75	202	iP	25	24.81	-0.2
			eS	25	48.29	
RND	1.97	281	eP	25	29.51	1.2
			eS	25	55.50	
WRH	2.08	313	eP	25	29.52	-0.3
			eS	25	59.24	
CCB	2.11	318	eP	25	28.52	-1.7
			eS	26	00.06	
VLZ	2.16	204	eP	25	29.52	-1.4
GLM	2.26	328	iP	25	30.74	-1.8
			eS	26	02.96	
VZW	2.27	206	eP	25	32.06	-0.5
FBA	2.30	323	ePd	25	30.70	-2.2
BALM	2.33	153	eP	25	33.50	0.0
RDS	2.34	319	eP	25	33.51	-0.1
			eS	26	06.79	
GHO	2.44	239	eP	25	35.13	0.1
DWY	2.47	65	P	25	34.30	-1.1
TGL	2.50	160	eP	25	36.89	1.0
FID	2.54	202	eP	25	37.15	0.8
GLI	2.54	209	eP	25	36.32	-0.1
PMR	2.63	237	eP	25	38.40	0.8
CVA	2.64	193	eP	25	38.91	1.2
			eS	26	17.92	
SGAM	2.64	187	eP	25	38.88	1.1
			eS	26	17.10	
RAGM	2.73	181	eP	25	41.05	1.8
			eS	26	19.66	
WAX	2.79	163	eP	25	42.50	2.5
HIN	2.88	200	eP	25	42.18	0.9
			eS	26	22.32	
PWA	2.89	242	eP	25	43.63	2.4
KTH	2.91	282	eP	25	42.88	1.1
SNH	3.05	164	eP	25	48.54	4.9
KAIM	3.20	179	eP	25	46.73	1.1
SUA	3.34	243	eP	25	50.42	2.6
SKT	3.43	254	eP	25	51.17	2.1
PCA	3.65	144	eP	25	55.99	3.7
CGLM	3.94	246	eP	25	59.03	2.7
NCG	3.95	248	eP	26	01.34	4.8
CRP	4.02	246	eP	26	03.05	5.5
HYT	4.04	121	P	26	00.90	3.2
BGL	4.12	247	eP	26	06.49	7.6
ILIM	5.04	237	eP	26	11.24	-0.6
SVW	5.58	254	e(P)	26	20.20	0.7
INK	6.91	36	eP	26	35.00	-3.2

44 obs. associated

SEP 19, 1989 09h 41m 59.22± 0.65s
43.363 N ± 5.2km 13.050 E ± 5.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.5 (SSO).

ARV	0.16	330	P	42 02.00	-0.9
			eSg	42 04.30	
CIO	0.18	158	iPgd	42 03.54	0.2
			iSg	42 06.16	
ASS	0.41	224	P	42 07.50	-0.1
			eSg	42 14.30	
AOI	0.44	65	iPg	42 08.48	0.2
			iSg	42 16.66	
ALP	0.70	146	ePg	42 12.97	-0.2
			iSg	42 24.53	
MNS	1.02	196	P	42 18.20	-0.3
			eSg	42 32.50	
PGD	1.09	298	P	42 20.80	0.9

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

SEP 19, 1989 09h 46m 00.79± 0.37s
36.663 N ± 3.8km 112.407 W ± 3.6km
DEPTH = 5.0km (geophysicist)
WESTERN ARIZONA (42)
ML 3.7 (NEIS). Felt (III) at Konob, Utah and (II) at Fredonia, Arizona.

WMZ	1.50	177	P	46 29.00	0.3
			S	46 51.00	
FLAG	1.62	157	P	46 31.00	0.7
			S	46 52.00	
MSU	1.86	6	eP	46 33.80	0.1
NPN	2.25	297	eP	46 39.50	0.1
WRN	2.86	298	eP	46 47.50	-0.6
MCY	2.86	271	eP	46 48.00	0.0
JON	2.98	267	eP	46 50.60	0.9
OCS	3.01	293	eP	46 50.20	0.0
NOP	3.07	261	eP	46 51.30	0.4
YMT5	3.26	275	eP	46 53.90	0.2
KRNA	3.35	290	eP	46 54.70	-0.4
DUG	3.54	355	eP	46 57.00	-0.7
PANV	3.79	267	eP	47 01.50	0.2
DAU	3.85	13	eP	47 04.00	1.7
TNP	4.09	292	eP	47 05.00	-0.5
GLA	4.11	210	eP	47 05.50	-0.2
PEC	4.77	236	eP	47 15.00	-0.1
PLM	4.93	229	eP	47 17.20	-0.2
KVN	5.10	300	eP	47 19.40	-0.5
ALO	5.13	108	eP	47 19.00	-1.3
GOL	6.32	59	eP	47 37.20	0.0

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

? SEP 19, 1989 09h 46m 30.36± 4.21s
21.249 S ±24.3km 179.020 W ±26.2km
DEPTH = 596.5 ± 49.6 km
4.8mb (10 obs.)
FIJI ISLANDS REGION (181)

DZM	13.54	264	iP	49 07.80	-16.5X
			iS	49 45.90	
PGZ	19.72	191	P	50 22.80	-0.2
	0.4s		11.00nm		4.8mb
MNG	19.87	192	eP	50 23.90	-0.5
	0.2s		5.00nm		4.8mb
MHZ	25.63	199	P	51 15.50	-0.6
BRS	26.39	251	iPd	51 24.50	1.8
CTA	32.47	266	iPd	52 15.50	0.7
	0.6s		33.33nm		5.1mb
PMG	34.60	285	eP	52 33.00	0.5
QIS	38.58	263	iPd	53 04.90	-0.2
	0.4s		5.00nm		4.4mb
ASPA	43.43	258	iPd	53 43.60	0.0
	0.7s		27.00nm		4.9mb
			eS	59 25.30	
			e	02 34.50	
WB5	43.54	263	iPd	53 44.00	-0.5
WRA	43.56	263	Pd	53 44.00	-0.6
	0.3s		10.10nm		4.8mb
MTN	48.22	272	iPc	54 19.50	-0.8
	0.8s		98.00nm		5.4mb
MBL	56.67	258	iPd	55 19.80	-0.7
	0.4s		20.00nm		4.7mb
SPA	68.88	180	iPc	56 39.20	1.2
	0.9s		15.91nm		4.5mb
MAT	70.25	324	eP	56 46.00	-0.2
	1.2s		26.56nm		4.6mb

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

% SEP 19, 1989 09h 49m 47.15± 0.91s
39.666 N ± 7.5km 29.483 E ±14.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.78	141	ePg	50 01.20	-1.2
			eSg	50 13.20	
YLV	0.90	355	iPn	50 04.80	0.3
KCT	1.04	304	iPn	50 06.00	-0.8
HRT	1.16	7	ePn	50 09.40	0.5
KHL	1.34	179	ePn	50 13.20	1.3

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

% SEP 19, 1989 11h 01m 37.05± 2.72s
43.847 N ±16.5km 6.998 E ±12.5km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)

STV	0.46	31	P	01 46.28	-0.2
			S	01 55.31	
ENR	0.49	39	P	01 46.79	-0.2
			S	01 55.72	
IMI	0.65	84	P	01 49.46	-0.6
			S	02 00.13	
PZZ	0.66	6	P	01 50.18	-0.1
			S	02 01.46	
DOI	0.68	15	P	01 51.00	0.4
			eSg	02 02.50	
ROB	0.77	54	P	01 51.92	-0.2
FIN	0.95	67	P	01 55.92	0.8
RRL	1.08	352	P	01 56.74	-0.8
PCP	1.31	58	P	02 01.36	0.0
LSD	1.61	4	P	02 06.89	1.0

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

? SEP 19, 1989 12h 08m 19.34± 9.62s
13.682 N ±33.2km 95.543 E ±79.1km
DEPTH = 33.0km (normal)
ANDAMAN ISLANDS REGION (703)

NNT	4.22	104	iPn	09 22.90	-0.1
			eSg	10 12.10	
			e	23 48.80	
NST	4.86	65	ePn	09 33.10	1.0
			ePg	09 47.50	
			eSg	10 44.00	
BDT	4.87	43	ePn	09 31.00	-1.1
CHG	6.06	32	ePn	09 49.80	0.8
			ePg	10 12.00	
			eSg	11 18.00	
LOE	7.02	57	ePn	10 02.00	-0.5
			eSg	11 14.00	

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

? SEP 19, 1989 13h 19m 18.71± 2.75s
19.399 N ±95.0km 85.455 E ±29.5km
DEPTH = 33.0km (normal)
INDIA (314)

NNT	15.30	114	eP	22 54.00	0.0
SNG	19.09	127	eP	23 41.50	0.0
SGH	41.94	266	iPd	27 07.98	-0.4
DAF	41.99	266	iPd	27 09.34	0.6
GBR	42.18	265	iPd	27 10.19	-0.2

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

SEP 19, 1989 13h 54m 26.10± 0.69s
23.204 N ± 5.3km 121.141 E ± 7.7km
DEPTH = 25.3 ± 6.3 km
3.7mb (1 obs.)
TAIWAN (244)

TWG	0.39	189	iPc	54 34.10	-0.4
			eS	54 41.10	
TWK	0.60	276	ePc	54 37.90	-0.1
TWC	1.54	25	iPd	54 53.00	0.8
			eS	55 13.40	
ANP	2.00	10	iPc	55 02.00	3.1X
QZH	2.90	307	ePn	55 11.40	-0.2
SSE	7.86	0	eP	56 20.50	-1.1
			Lg	56 30.70	
NJ2	9.04	348	Pc	56 39.00	1.0
WHN	9.49	322	eP	56 44.00	-0.3
	E 11s		0.50um		
			eS	58 41.50	
OIZ	11.33	251	eP	57 10.20	0.7
CHG	21.17	262	eP	59 16.00	4.1X
GTA	24.26	317	eP	59 46.00	3.6X
WB5	44.72	162	eP	02 39.60	0.4
WRA	44.78	162	P	02 40.00	0.4
	0.6s		0.60nm		3.7mb
WARB	49.38	173	eP	03 15.00	-0.7

S.D. = 0.8 on 11 of 14 obs.

SEP 19, 1989 14h 12m 48.83± 0.73s
59.899 N ± 6.8km 6.154 E ± 6.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.1 (8ER).

ODD1	0.24	87	iPg	12 53.78	-0.2
			iSg	12 56.89	
ASK	0.76	321	eP	13 03.47	-0.1
			eS	13 12.92	
KMY	0.83	214	eP	13 04.81	0.0
			eS	13 20.36	
HYA	1.27	1	eP	13 12.19	-0.2
			eS	13 31.05	
SUE	1.35	330	iP	13 13.95	0.3
			iS	13 31.93	
NRA0	2.81	70	eP	13 34.90	0.3
			iPg	13 38.10	
			eS	14 08.70	
			iSg	14 14.50	

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

% SEP 19, 1989 14h 36m 21.40± 1.28s
43.394 N ± 7.5km 5.415 E ±10.1km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.01	141	Pg	36 22.82	-0.5
BERF	0.22	112	Pg	36 26.41	0.3
TREF	0.23	354	Pg	36 25.74	-0.6
PRAF	0.45	337	Pg	36 30.89	0.4
VILF	0.51	25	Pg	36 31.10	-0.6
TAVF	0.52	64	Pg	36 31.02	-0.9
GANF	0.70	31	Pg	36 35.62	0.3
FOUF	1.50	41	ePgc	36 49.78	1.4
			eSg	37 08.65	

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

SEP 19, 1989 14h 55m 12.89± 1.29s
45.530 N ± 7.6km 3.569 E ±11.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
MD 2.3 (STR). ML 2.8 (LDG).

LBL	0.37	217	Pg	55 18.93	-1.6
			Sg	55 24.35	
PLDF	0.44	5	Pg	55 20.60	-1.3
			Sg	55 27.21	
PYM	0.45	299	Pg	55 21.91	-0.2
			Sg	55 29.21	
AGO	0.61	330	Pg	55 24.49	-0.6
			Sg	55 33.71	
MAF	0.98	315	Pg	55 31.60	0.0
			Sg	55 45.60	
SMF	1.13	10	Pg	55 33.20	-0.9
			Sg	55 49.00	
BGF	1.14	334	Pg	55 34.20	-0.1
			Sg	55 50.20	
TCF	1.21	309	Pn	55 34.20	-1.3
			Pg	55 35.70	
			Sg	55 52.00	
CAF	1.22	241	Pn	55 34.20	-1.5
			Pg	55 35.20	
			Sg	55 51.40	
AVF	1.27	353	Pg	55 36.20	-0.3
			Sg	55 53.20	
RJF	1.46	262	Pg	55 40.00	0.7
			Sg	55 59.60	
LBF	1.48	11	Pg	55 39.60	0.0
			Sg	55 58.40	
SSF	1.53	358	Pg	55 41.40	1.1
			Sg	56 00.20	
LSF	1.60	298	Pg	55 43.10	1.9
			Sg	56 04.60	
LOR	1.75	6	Pg	55 45.20	1.7
			Sg	56 06.80	

19d 14h

LPO 1.89 244 Pg 55 48.00 2.5
Sg 56 13.00
S.D. = 1.4 on 16 of 16 obs.

SEP 19, 1989 14h 56m 02.35± 0.48s
39.577 N ± 4.0km 27.752 E ± 6.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC 0.77 6 iPg 56 16.80 -0.6
iSg 56 26.80
BNT 0.79 9 iPg 56 17.90 0.2
iSg 56 26.40
KCT 0.82 35 iPg 56 18.80 0.6
EZN 1.13 283 iPn 56 23.50 0.0
IZM 1.24 198 iPn 56 25.30 -0.1
YLV 1.59 51 iPn 56 29.80 -0.9
GBZT 1.77 46 ePn 56 34.20 0.9
KHL 1.86 132 iPn 56 34.60 -0.1
ALT 1.90 105 ePn 56 39.00 3.8X
CIN 1.99 172 ePn 56 36.00 -0.4
iSg 57 01.00
GPA 2.09 69 ePn 56 37.50 -0.4
YER 2.47 170 ePn 56 44.00 0.6
BBTK 3.87 84 eP 57 19.00 15.7X
eS 58 08.00
S.D. = 0.6 on 11 of 13 obs.

SEP 19, 1989 15h 24m 50.85± 0.59s
60.625 N ± 5.0km 6.229 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

ASK 0.53 255 eP 25 01.49 -0.1
eS 25 09.42
HYA 0.54 358 iP 25 01.08 -0.8
iS 25 09.95
ODD1 0.74 164 eP 25 04.20 -1.2
eS 25 14.94
SUE 0.84 302 iP 25 07.09 0.1
eS 25 18.09
BLS2 1.38 165 iP 25 16.51 0.3
iS 25 34.29
KMY 1.50 200 iP 25 18.57 0.8
iS 25 38.48
MOL 2.05 17 iP 25 26.31 0.6
eS 25 52.60
NRA0 2.62 85 eP 25 34.20 0.3
iSg 26 11.10
S.D. = 0.8 on 8 of 8 obs.

SEP 19, 1989 16h 47m 34.73± 0.19s
5.527 S ± 3.4km 153.620 E ± 4.3km
DEPTH = 54.3km (4 depth phases)
5.4mb (22 obs.)
NEW IRELAND REGION (190)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 17S, 36C
Centroid Location:
Origin Time 16:47:41.3 0.2
Lat 5.67S 0.03 Lon 153.19E 0.03
Dep 27.9 2.0 Half-duration 3.0
Moment Tensor; Scale 10**17 Nm
Mrr= 4.90 0.11 Mtt=-2.64 0.12
Mff=-2.26 0.14 Mrt= 3.02 0.34
Mrf=-0.70 0.26 Mtf= 2.68 0.12
Principal Axes:
T Val= 5.97 Plg=70 Azm=355
N -0.14 13 126
P -5.83 15 219
Best Double Couple:Mo=5.9*10**17
NP1:Strike=327 Dip=33 Slip= 115
NP2: 118 61 75

RAB 1.96 312 iPc 48 07.50 1.3
0.7s 1643.84nm
iS 48 18.00
LAT 6.68 260 eP 49 13.00 0.4
SVO 7.12 121 eP 49 20.00 1.2
eS 50 48.00
HNR 7.38 122 eP 49 22.00 -0.3
1.0s 400.00nm 6.1mb
eS 50 50.00
PMG 7.48 239 eP 49 22.00 -1.8
MNDI 9.93 266 eP 50 01.00 3.2X

CTA 16.15 206 iPd- 51 19.20 -0.5
2.1s 1793.33nm 5.8mb
Z 22s 6.89um
i 51 55.00
iS 54 05.00
i 54 53.00
iScS 03 27.90
PVC 18.80 131 iPc 51 52.50 -0 1
OIS 20.21 221 iPd 52 06.60 -1.3
0.9s 126.00nm 5.2mb
DZM 20.60 144 iPd 52 10.40 -1.6
iS 55 58.60
GUA 20.82 336 eP 52 14.00 -0.2
1.2s 887.50nm 6.0mb
GUMO 20.88 335 eP 52 14.30 -0.5
1.2s 816.67nm 5.9mb
e 52 34.30
PJG 20.88 335 eP 52 15.00 0.2
RMO 21.36 192 iPd 52 19.10 -0.4
0.8s 167.00nm 5.5mb
BRS 21.76 182 iPc+ 52 23.00 -0.6
ipP 52 29.50 23kmX
i(sP) 52 37.50
i 52 50.00
eS 56 16.00
e 57 41.00
QLP 22.78 202 iPd 52 33.70 0.1
e 56 27.00
MTN 23.35 250 eP 52 40.00 0.8
e 52 49.00
e 56 54.00
WB5 23.54 231 iPd 52 41.00 -0.1
ePP 53 02.80
iPcP 56 32.80
eS 56 54.60
eScP 00 05.10
WRA 23.60 231 Pc 52 46.10 4.4X
0.9s 38.50nm 4.9mb
COO 24.97 184 ePc 52 56.00 1.2
AAI 25.41 273 eP 53 09.00 10.0X
ASPA 26.19 225 ePd 53 05.70 -0.5
1.2s 76.00nm 5.1mb
Z 22s 9.88um 5.3MszX
e 56 32.60
eS 57 35.80
LR 02 25.90
e 04 00.40
KNA 26.42 245 eP 53 08.00 -0.4
eS 57 55.00
CMS 26.84 195 eP 53 11.50 -0.5
STK 28.54 202 eP 53 26.40 -1.0
BWA 29.16 189 eP 53 32.30 -0.7
ePcP 56 39.70
eScP 00 20.80
CNB 29.90 187 eP 53 40.00 0.3
CAN 29.95 188 eP 53 40.50 0.4
ePcP 56 43.10
DAV 30.66 294 eP 53 44.00 -2.6
TOO 32.75 192 eP 54 05.50 0.9
e 56 50.00
e 00 33.00
MKS 34.00 269 iPc 54 31.00 15.3X
PCI 34.03 277 iPc 54 17.60 1.6
1.0s 6.00nm 4.5mb
FORR 34.78 221 eP 54 21.00 -1.1
MBL 36.24 241 eP 54 34.00 -0.7
0.6s 18.00nm 5.2mb
TSM 36.80 285 ePc 54 42.10 2.6
KRP 37.92 151 P 54 49.00 0.4
BAG 39.28 304 eP 55 00.00 -0.5
eS 01 00.00
MEKA 39.48 234 eP 55 01.00 -0.8
COOL 39.57 226 eP 55 02.00 -0.5
TCW 40.05 156 P 55 06.60 0.4
MNG 40.07 154 P 55 05.80 -0.6
0.2s 8.00nm 5.2mb
MRW 40.24 155 eP 55 08.40 0.6
CAW 40.29 155 eP 55 07.90 -0.4
SNZO 40.31 155 P 55 08.00 -0.3
S 01 12.00
WDW 40.39 155 eP 55 08.70 -0.4
PGZ 40.42 153 P 55 09.20 -0.1
0.4s 45.00nm 5.6mb
NANU 40.48 241 eP 55 10.00 0.0
0.6s 13.00nm 4.9mb
MTW 40.52 154 P 55 09.00 -1.1
MSZ 40.95 164 P 55 15.00 1.4

MRWA 42.64 232 eP 55 27.00 -0.7
0.4s 2.00nm 4.2mb X
BAL 42.72 230 eP 55 27.00 -1.4
NWAO 43.47 226 eP 55 38.00 3.6X
Z 20s 7.10um 5.6Msz
N 20s 2.70um
E 20s 6.60um
CHJJ 43.57 343 P 55 34.50 -0.6
ANP 43.66 316 eP 55 36.00 -0.1
MUN 43.75 228 eP 55 36.50 -0.2
TSRJ 44.08 339 P 55 38.50 -0.8
MAT 44.27 342 eP 55 38.00 -2.8
1.5s 58.33nm 5.1mb
Z 20s 2.13um 5.1Msz
eS 02 29.00
MAT 44.27 342 eP 55 44.00 3.2X
MTMJ 44.43 342 eP 55 40.90 -1.3
NIIJ 44.68 343 P 55 42.70 -1.4
OZH 45.59 313 Pc 55 52.00 0.6
Z 19s 1.70um 5.0Msz
E 20s 2.40um
S 02 32.00
HKC 47.49 307 (P) 56 08.50 2.0
SSE 47.81 322 Pc 56 08.00 -0.9
2.5s 0.88nm 3.3mb X
Z 20s 1.90um 5.1Msz
N 15s 1.20um
pP 56 22.00 53km
sP 56 32.80
S 03 00.00
GZH 48.55 307 eP 56 13.50 -1.2
Z 20s 3.70um 5.4Msz
N 18s 1.50um
E 18s 3.70um
OIZ 49.54 301 eP 56 23.40 1.0
E 22s 2.10um
sP 56 41.50
eS 03 28.00
sS 03 44.00
NJ2 49.92 321 Pc 56 25.20 0.1
5.0s 1.00nm 3.1mb X
Z 22s 2.20um 5.1Msz
S 03 38.00
WHN 51.94 316 Pc 56 41.50 1.0
5.0s 1.40nm 3.2mb X
Z 20s 1.90um 5.1Msz
E 22s 2.80um
pP 56 55.70 53km
eS 04 00.00
DL2 53.21 329 P 56 49.00 -0.8
Z 19s 1.50um 5.1Msz
N 16s 1.30um
eS 04 24.00
IPM 53.48 280 ePc 56 51.30 -0.9
TIA 53.78 323 Pc 56 53.40 -0.6
Z 25s 1.80um 5.0MszX
eS 04 23.50
SNG 54.37 283 eP 56 59.00 0.3
eS 04 37.00
MDJ 54.38 339 eP 56 56.70 -1.6
HON 54.41 59 P 57 10.00 11.1X
Z 20s 2.66um 5.3Msz
SNY 54.52 333 iPc 56 58.00 -1.3
6.0s 0.70nm 2.9mb X
Z 24s 1.80um 5.1MszX
N 22s 1.60um
E 22s 1.40um
pP 57 14.00 61km
PP 59 00.00
S 04 32.00
PSI 55.24 277 ePd 57 04.50 -0.6
CN2 55.29 335 iPc 57 03.50 -1.5
5.0s 0.60nm 2.9mb X
Z 20s 1.90um 5.2Msz
N 15s 0.80um
pP 57 17.50 51km
PcP 58 04.00
eS 04 46.00
GYA 55.48 307 P 57 07.00 0.2
Z 22s 1.90um 5.1Msz
E 20s 2.80um
sP 57 25.00
S 04 52.00
sS 05 09.00
LOE 56.07 295 iPc 57 11.50 0.5
BJI 56.95 326 eP 57 16.00 -0.9
1.5s 0.07nm 2.5mb X

	Z 22s	2.15um		5.2Msz		
	N 14s	0.86um				
	E 14s	0.70um				
		eS	05 08.00			
NST	56.99	293 eP	57 20.00	2.5		
TIY	57.60	322 Pc	57 21.50	-0.1		
	1.2s	0.10nm		2.8mb X		
	E 19s	2.20um				
		pP	57 32 00	35kmX		
XAN	57.71	316 iPc	57 22.10	-0.3		
		S	05 13.00			
KMI	58.07	304 iPc	57 26.50	1.2		
	N 15s	1.00um				
		sP	57 45.00			
		PP	59 32.00			
		PPP	00 53.00			
		S	05 28.00			
PMO	58.17	104 iP	57 30.20	4.4X		
	0.8s	35.00nm		5.5mb		
TPT	58.43	104 iP	57 31.80	4.1X		
	0.8s	30.00nm		5.5mb		
VAH	58.43	104 iP	57 31.90	4.2X		
	0.8s	20.00nm		5.3mb		
RUV	58.67	104 iP	57 33.50	4.2X		
	0.8s	35.00nm		5.5mb		
CHG	59.04	296 iPc	57 32.60	0.7		
	1.1s	121.52nm		5.9mb		
		eS	05 43.80			
CD2	59.83	311 iPc	57 37.60	0.4		
	3.0s	1.00nm		3.4mb X		
	Z 20s	1.90um		5.2Msz		
		PP	59 47.00			
HHC	60.11	324 Pc	57 39.00	0.0		
	Z 28s	2.70um		5.2MszX		
	N 10s	0.70um				
	E 10s	0.80um				
		S	05 52.00			
BTO	60.87	323 iPc	57 44.50	0.3		
	N 16s	1.00um				
	E 16s	0.90um				
		sP	57 58.00			
		S	06 00.00			
		sS	06 16.00			
DRV	61.76	186 eP	57 42.00	-7.7X		
LZH	62.32	316 iPc	57 54.50	0.4		
	3.0s	0.88nm		3.4mb X		
	Z 22s	3.80um		5.5Msz		
	E 20s	1.10um				
		pP	58 02.00	24kmX		
		sP	58 05.50			
		eS	06 08.00			
ADK	62.56	20 P	57 52.40	-2.8X		
GTA	66.74	317 iPc	58 24.00	1.3		
	5.0s	1.20nm		3.2mb X		
	Z 20s	1.50um		5.2Msz		
	E 20s	2.10um				
		S	07 13.50			
LSA	69.32	304 eP	58 40.90	1.5		
		S	07 46.00			
RKT	70.76	112 eP	58 47.00	-0.7		
	1.2s	60.00nm		5.4mb		
SBA	72.61	177 Pd	59 00.20	2.4		
WMQ	76.83	317 iPc	59 24.00	1.3		
	4.0s	1.30nm		3.3mb X		
	Z 22s	1.10um		5.1Msz		
		iS	09 11.00			
		SKS	09 21.00			
KOD	77.43	282 eP	59 28.00	1.2		
HYB	77.50	289 ePc	59 26.50	-0.3		
GBA	77.95	285 Pc	59 29.80	0.6		
	1.7s	121.20nm		5.6mb		
TTA	78.15	21 P	59 29.40	-0.2		
PMR	80.01	24 eP	59 38.50	-1.0		
	1.6s	2.50nm		3.9mb X		
	Z 21s	3.10um		5.6Msz		
NDI	80.80	300 iPc	59 44.50	0.0		
		eS	09 50.00			
POO	82.10	289 iPc	59 51.00	-0.4		
FBA	82.25	22 eP	59 49.60	-1.7		
BOM	83.12	290 eP	59 48.50	-8.1X		
		eS	10 10.00			
KSH	84.01	310 Pc	00 04.00	3.0X		
		sP	00 21.00			
SPA	84.51	180 ePc	00 02.80	-0.2		
	1.2s	65.49nm		5.6mb		
	Z 19s	1.14um		5.3Msz		
		e	00 29.00			

MAW	85.22	203 eP	00 07.00	0.7		
INK	88.84	21 eP	00 22.00	-1.8		
QUE	89.87	300 iPc	00 30.50	0.7		
CMB	90.22	52 ePd	00 47.30	16.3X		
LON	90.27	43 P	00 46.50	15.4X		
MWC	91.69	56 eP	00 47.00	9.0X		
		e	01 02.00			
SBB	91.92	56 eP	00 47.00	8.1X		
KVN	92.11	51 P	00 39.00	-0.9		
CLC	92.21	54 eP	00 40.00	-0.2		
		e	01 01.00			
RVR	92.23	56 eP	00 40.00	-0.3		
		e	01 01.00			
PLM	92.60	57 eP	00 48.00	5.8X		
		e	01 03.00			
BAR	92.70	58 eP	00 45.00	2.5		
		e	01 04.00			
GLA	94.28	57 eP	00 52.00	2.2		
		e	01 12.00			
GLD	102.09	51 Pdiff	01 30.00	4.8X		
	Z 22s	2.32um		5.7Msz		
MEO	107.74	55 e(PKP)	06 08.50	10.4X		
RSON	108.50	38 PKP	06 10.00	11.1X		
	Z 20s	3.39um		5.9Msz		
SLR	118.55	237 iPKPd	06 20.00	0.9		
	0.6s	10.67nm				
PTZ	119.48	250 iPKPd	06 21.50	0.5		
		i	06 27.10			
KSR	119.65	236 ePKP	06 19.00	-2.2		
MLR	119.73	320 ePKP	06 20.00	-0.7		
BUL	120.25	243 iPKPc	06 23.40	1.0		
		ipPKP	06 28.40			
KRI	120.37	247 iPKPd	06 24.70	2.0		
LSZ	122.13	248 iPKPc	06 27.00	0.9		
		i	06 32.10			
MZZ	122.57	253 iPKPd	06 28.10	1.1		
		i	06 33.00			
BRG	123.70	330 ePKP	06 29.10	1.2		
	1.4s	17.00nm				
		e	08 10.50			
CLL	123.88	331 ePKP	06 29.00	0.7		
SKO	124.21	318 ePKP	06 29.50	0.3		
KHC	124.98	329 PKP	06 31.50	1.0		
	Z 20s	0.90um		5.4Msz		
	N 20s	0.40um				
	E 20s	0.40um				
		e	06 43.00			
OHR	125.02	317 ePKP	06 21.50	-9.4X		
LJU	126.34	326 e(PKP)	06 34.00	0.7		
VOY	126.71	326 e(PKP)	06 34.50	0.4		
CNCB	133.27	119 PKP	06 45.00	-3.0X		
LPB	133.28	119 PKP	06 49.00	1.2		
	Z 22s	0.56um		5.2Msz		
		PKS	10 18.00			
		LR	52 06.00			
ZOBO	133.37	118 PKP	06 40.00	-8.2X		
		i	06 48.00			
		LR	51 18.00			
BNG	135.24	271 ePKPd	06 41.00	-10.1X		
	1.3s	88.00nm				
		ic	06 50.80			
		ic	10 20.00			
PPD	143.31	139 ePKP	07 03.90	-1.7		
		e	07 19.00			
		e	07 26.50			
TAF	143.40	326 e(PKP)	07 03.00	-2.4		
VAO	145.23	145 ePKP	07 09 80	0.9		
		e	07 13.70			
		e	07 23.90			
IFR	145.86	327 iPKP	07 11.00	1.2		
BMA	147.00	149 ePKP	07 12.50	0.8		
		e	07 15.10			
		e	07 37.90			
TIO	149.00	327 iPKP	07 19.50	4.7X		
		i	07 20.50			
		i	07 40.50			
BAO	150.00	135 e(PKP)	07 14.00	-2.7X		
LIC	158.75	273 PKP	07 34.20	5.8X		
	Z 20s	0.89um		5.6Msz		
	S.D. = 1.1	on 123 of 153 obs.				

SEP 19, 1989 17h 07m 46.15± 1.15s
26.793 N ± 6.4km 92.794 E ± 6.0km
DEPTH = 67.9 ± 12.3 km
4.6mb (11 obs.)
EASTERN INDIA (317)

LSA	3.24	334 P	08 37.00	0.9		
KMI	9.10	98 Pc	09 56.00	-1.5		
		pP	10 06.50			
CHG	9.76	143 eP	10 04.30	-1.9		
	1.0s	21.25nm		5.1mb		
CD2	10.45	64 eP	10 15.20	-0.4		
BDT	11.11	148 eP	10 18.00	-6.4X		
GYA	12.41	88 P	10 38.00	-4.0X		
LZH	13.21	43 P	10 48.50	-4.0X		
	2.0s	0.06nm		2.0mb X		
	Z 32s	1.60um				
		pP	10 56.50			
		eLg	14 48.50			
GTA	13.88	23 eP	11 04.40	3.2X		
NDI	13.92	281 iPc	10 53.50	-8.2X		
		eS	13 20.00			
NNT	15.56	154 eP	11 23.20	0.3		
XAN	15.67	59 P	11 21.00	-3.2X		
HYB	16.15	238 eP	11 31.50	1.2		
		eS	14 11.00			
WMQ	17.49	348 P	11 48.50	1.6		
		sP	11 57.00			
QIZ	17.49	113 eP	11 48.60	1.6		
WHN	19.28	74 Pd	12 08.50	0.3		
POO	19.30	249 eP	12 06.00	-2.6		
GBA	19.46	231 P	12 12.00	1.8		
		S	14 26.00			
TIY	19.82	52 Pc	12 12.00	-2.0		
BTO	19.82	42 eP	12 12.30	-1.7		
SNG	20.88	158 eP	12 24.30	-0.6		
HHC	20.91	43 eP	12 24.50	-0.7		
IPM	23.45	159 ePd	12 51.00	0.7		
	0.8s	24.50nm		4.7mb		
BJI	23.48	50 eP	12 52.00	1.6		
SSE	25.18	73 P	13 07.80	1.0		
CN2	31.33	49 P	14 04.20	2.1		
ELL	53.54	297 eP	17 01.00	-1.2		
MLR	55.54	308 eP	17 18.00	1.2		
WB5	61.46	135 eP	17 58.10	0.0		
WRA	61.49	135 Pd	18 00.20	1.9		
	0.5s	1.10nm		4.2mb		
HFS	61.79	326 eP	17 58.80	-1.0		
	0.6s	6.30nm		4.9mb		
NB2	62.91	327 P	18 06.20	-1.1		
	0.6s	1.50nm		4.2mb		
KHC	63.39	314 P	18 22.90	12.3X		
CDF	67.61	314 eP	18 37.60	-0.2		
LPG	68.77	311 eP	18 45.20	-0.1		
	0.7s	4.80nm		4.5mb		
CTA	69.69	126 iPd	19 04.50	13.6X		
	0.9s	10.08nm				
LOR	70.15	314 eP	18 52.60	-0.7		
SMF	70.35	313 eP	18 54.30	-0.3		
	0.8s	5.90nm		4.6mb		
SSF	70.44	313 eP	18 55.00	-0.1		
	0.8s	6.70nm		4.6mb		
AVF	70.63	313 eP	18 56.10	-0.1		
MAF	71.32	313 eP	19 00.90	0.4		
	0.8s	4.00nm		4.4mb		
TCF	71.54	313 eP	19 01.90	0.1		
	0.7s	4.40nm		4.5mb		
BNG	73.95	267 ePd	19 15.90	-0.6		
	0.6s	6.00nm		4.7mb		
		id	19 25.80			
BRS	78.91	128 eP	19 50.00	6.1X		
INK	79.24	16 eP	19 38.00	-7.0X		
SLR	81.18	235 eP	20 06.40	10.2X		
	S.D. = 1.3	on 34 of 45 obs.				

SEP 19, 1989 17h 39m 28.68± 0.67s
25.897 N ± 8.0km 99.736 E ± 8.8km
DEPTH = 33.0km (normal)
4.5mb (4 obs.)
YUNNAN PROVINCE, CHINA (318)
ML 4.3 (BJI).

KMI	2.82	105 Pn	40 14.50	1.9		
		Pg	40 20.00			
		Sg	40 58.00			
CD2	6.12	34 ePn	41 01.20	1.9		
	Z 10s	1.40um				
		Pg	41 20.30			
		Sg	42 40.80			
GYA	6.25	83 Pn	41 01.00	-0.2		
CHG	7.09	186 ePn	41 13.40	0.6		
		ePg	41 40.00			
		eSg	43 46.00			

19d 17h

```
LSA      8.49 298 P      41 32.80    0.0
      N  10s      0.60um
                  S      43 10.00
BDT      8.64 185 eP     41 32.20   -2.2
BDT      8.64 185 eP     42 09.00   34.6X
         0.8s      7.50nm
LOE      8.65 167 iPd    42 08.00   33.4X
NST     10.18 178 eP     42 37.80   42.2X
LZH     10.75  18 eP     42 04.50    1.0
XAN     11.36  42 eP     42 10.50   -1.3
      N  12s      2.52um
      E  12s      1.04um
GTA     13.48   0 eP     42 50.00    9.9X
WHN     13.69  67 eP     42 37.00   -5.8X
TIY     15.96  39 eP     43 10.00   -2.4
      N  15s      2.00um
BTO     16.98  28 eP     43 30.00    4.7X
      N  10s      0.90um
      E  10s      0.40um
TIA     18.07  51 eP     43 37.80   -1.1
BJI     19.68  40 eP     43 57.00   -0.9
                  eS     50 00.00
WMQ     20.39 334 P      44 05.00   -0.4
      Z  16s      0.40um          3.9MszX
HYB     21.40 251 eP     44 15.50   -0.3
KSH     24.05 310 eP     44 46.90    5.0X
CN2     27.47  43 eP     45 18.50    4.8X
WB5     56.59 140 eP     49 11.90    1.1
WRA     56.62 140 Pd     49 14.30    3.3X
         0.7s      3.10nm          4.4mb
CTA     64.26 131 eP     50 07.00    3.9X
NB2     67.00 328 P      50 22.50    2.3
         0.8s      2.00nm          4.3mb
CDF     72.65 316 eP     51 01.20    6.2X
LPG     73.99 313 eP     51 06.50    3.4X
         0.8s      5.35nm          4.6mb
LBF     75.24 315 eP     51 15.10    5.1X
         0.9s      5.75nm          4.6mb
SSF     75.51 315 eP     51 16.80    5.3X
      S.D. = 1.6  on  15 of  29 obs.
-----------------------------------------
   SEP  19, 1989  18h 02m 09.52± 0.90s
   37.045 N ±11.2km   28.435 E ± 8.1km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                              (366)

YER      0.15 306 iPg     02 13.40    0.3
                  iSg     02 17.50
CIN      0.62 333 iPgc    02 21.00   -1.0
                  iSg     02 28.00
ELL      1.22 104 ePn     02 33.20    0.9
KSL      1.31 135 ePn     02 32.50   -1.2
                  eSn     02 55.00
SMG      1.44 298 ePn     02 36.30    0.8
KHL      1.54  34 ePn     02 36.60   -0.5
BCK      1.77  76 ePn     02 41.10    0.7
      S.D. = 1.1  on   7 of   7 obs.
-----------------------------------------
&  SEP  19, 1989  18h 56m 30.62s
   59.985 N          141.359 W
   DEPTH =   0.0km
 SOUTHEASTERN ALASKA                 ( 19)
      <AGS-P>.

PCA      0.56  78 iP     56 42.73    0.8
                  eS     56 53.87
CYK      0.57 280 eP     56 42.31    0.2
                  iS     56 52.29
SNH      0.77 285 iP     56 45.66   -0.3
                  iS     56 57.78
WAX      0.88 303 iP     56 47.34   -0.8
                  eS     57 03.67
CTGM     0.98   1 iP     56 49.65   -0.7
                  eS     57 03.33
TGL      1.06 317 iP     56 50.42   -1.2
BALM     1.16 336 iP     56 52.07   -1.3
                  eS     57 08.92
KAIM     1.54 269 eP     56 57.54   -1.9
                  eS     57 20.78
RAGM     1.71 285 eP     56 59.85   -2.0
                  eS     57 22.23
GLB      1.89 322 eP     57 02.85   -1.7
SGAM     1.99 287 eP     57 04.00   -1.9
                  eS     57 30.91
HYT      2.09  65 P      57 06.90   -0.6
CVA      2.26 286 eP     57 07.18   -2.6
FID      2.66 289 eP     57 13.19   -2.3
KLU      2.70 306 eP     57 14.23   -2.0
VZW      2.79 295 eP     57 14.34   -3.0
        16 obs. assqciated
-----------------------------------------
%  SEP  19, 1989  20h 34m 44.93± 2.04s
   40.226 N ±20.4km   28.964 E ± 9.3km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                              (366)

YLV      0.46  42 iPg     34 54.40    0.1
                  iSg     34 58.90
KCT      0.47 273 iPg     34 54.90    0.5
                  iSg     35 01.90
HRT      0.80  42 ePg     35 00.50    0.0
BNT      0.81 280 iPg     35 00.50   -0.1
EDC      0.85 279 iPg     35 00.90   -0.4
                  eSg     35 11.90
CTT      1.01 336 ePg     35 04.00    0.0
      S.D. = 0.4  on   6 of   6 obs.
-----------------------------------------
   SEP  19, 1989  22h 51m 13.86± 0.74s
   40.529 N ± 8.1km   22.492 E ± 5.6km
   DEPTH =  10.0 ±  4.7 km
 GREECE                              (364)
      MD 3.6 (ATH).

KZN      0.59 248 ePg     51 24.00   -1.9
PLG      0.74 102 ePg     51 29.50    1.0
KBN      1.28 275 ePg     51 35.70   -1.9
NEO      1.34 155 ePg     51 39.50    0.9
KKB      1.41  18 iPd     51 38.00   -1.5
OHR      1.41 295 iPn     51 37.20   -2.4
MMB      1.41  41 ePd     51 38.00   -1.6
PHP      1.93 307 iPnd    51 46.60   -0.5
BERA     1.94 276 ePn     51 48.40    1.2
VTS      2.13  14 iP      51 50.00   -0.1
TIR      2.15 293 ePn     51 51.00    0.8
KEK      2.22 249 ePg     51 55.50    4.2X
LACI     2.38 299 ePn     51 55.50    2.0
PGB      2.38  31 eP      51 53.00   -0.6
PUK      2.47 309 ePn     51 54.50   -0.3
KDZ      2.48  62 iP      51 54.00   -0.9
BCI      2.59 316 ePn     51 58.40    2.0
SDA      2.70 304 ePn     52 00.40    2.3
BZS      5.13 353 eP      52 32.00   -0.4
MLR      5.57  26 eP      52 40.00    1.2
VRI      6.17  29 eP      52 48.00    0.8
      S.D. = 1.6  on  20 of  21 obs.
-----------------------------------------
*  SEP  19, 1989  22h 55m 16.41± 1.07s
   36.972 N ±13.2km   29.439 E ± 7.6km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                              (366)

ELL      0.44 121 iPg     55 24.70   -0.7
                  eSg     55 33.00
YER      0.94 280 ePn     55 34.50    0.1
BCK      1.04  62 ePn     55 37.50    1.4
CIN      1.25 301 eP      55 40.00    0.4
KHL      1.35   3 ePn     55 40.00   -1.3
      S.D. = 1.5  on   5 of   5 obs.
-----------------------------------------
*  SEP  19, 1989  22h 57m 38.57± 1.09s
   36.926 N ±13.6km   29.399 E ± 7.1km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                              (366)

ELL      0.45 113 iPg     57 47.20   -0.5
                  eSg     57 57.00
YER      0.92 283 ePn     57 57.00    0.8
BCK      1.09  60 ePn     58 00.00    0.9
CIN      1.24 303 eP      58 01.00   -0.7
KHL      1.40   4 ePn     58 03.60   -0.6
      S.D. = 1.1  on   5 of   5 obs.
-----------------------------------------
&  SEP  19, 1989  23h 19m 36.30s
   38.810 N          122.765 W
   DEPTH =   5.0km
 NORTHERN CALIFORNIA                 ( 36)
      <BRK>. ML 4.0 (BRK).
      Mo=8.3*10**14 Nm (BRK). Felt (V)
      at Lach Lamand and (IV) at Cabb.

NWRM     0.37 195 iPd     19 44.00    0.4
ZSP      0.95 155 iPd     19 54.00   -0.9
                  eS     20 09.00
BRK      1.02 157 iPd     19 55.40   -0.6
                  iS     20 09.70
BKS      1.02 156 ePd     19 55.50   -0.6
                  iS     20 10.55
ORV      1.23  52 eP      19 57.50   -2.2
PCC      1.34 167 eP      20 00.10   -1.4
LTCM     1.48  19 eP      20 01.60   -2.0
MHC      1.71 148 eP      20 05.10   -2.0
                  eS     20 28.15
WDC      1.78   6 eP      20 08.80    0.9
GCC      1.88 161 eP      20 06.80   -2.5
CMB      2.02 112 iPc     20 10.40   -1.1
                  eS     20 37.00
FHC      2.20 335 eP      20 24.30   10.3
SAO      2.29 152 iP      20 13.10   -2.3
LLA      2.62 146 iPd     20 18.10   -2.0
PRS      2.71 155 eP      20 19.40   -1.9
FRI      3.02 126 iPc     20 25.50   -0.2
PRI      3.14 147 eP      20 27.50    0.0
BCH      4.21 149 eP      20 39.50   -3.1
TNP      4.42  98 eP      20 44.00   -1.7
ISA      4.65 131 eP      20 50.00    1.1
CLC      5.09 124 eP      21 05.00    9.9
SBB      5.71 135 eP      21 01.00   -3.0
        22 obs. associated
-----------------------------------------
&  SEP  19, 1989  23h 21m 04.00s
   38.793 N          122.767 W
   DEPTH =   4.0km
   4.1mb (  1 obs.)
 NORTHERN CALIFORNIA                 ( 36)
      <BRK> ML 4.1 (BRK).
      Mo=1.2*10**15 Nm (BRK). Felt (V)
      at Loch Lomand and (IV) at Cobb.

NWRM     0.35 196 iPd     21 11.20    0.2
ZSP      0.94 154 iPc     21 21.90   -0.5
                  iS     21 37.00
BRK      1.00 156 iPd     21 23.30   -0.2
                  iS     21 37.10
BKS      1.01 155 iPd     21 23.40   -0.2
                  eS     21 37.00
ORV      1.24  52 iPd     21 25.60   -2.1
PCC      1.33 167 iPc     21 27.30   -1.8
LTCM     1.50  19 eP      21 29.70   -2.0
MHC      1.70 148 iPd     21 33.50   -1.2
CMB      2.02 111 iPc     21 37.90   -1.4
                  iS     22 04.00
TNP      4.41  98 e(P)    22 13.00   -0.5
FFC     21.24  35 eP      25 52.00   -1.1
         1.0s     10.00nm          4.1mb
        11 obs. associated
-----------------------------------------
   SEP  19, 1989  23h 37m 23.01± 0.69s
   38:298 N ± 6.0km   22.714 E ± 7.4km
   DEPTH =  10.0km  (geophysicist)
 GREECE                              (364)
      ML 3.2 (ATH).

ATH      0.85 112 ePb     37 40.30    0.8
NEO      1.08  21 ePn     37 43.00   -0.4
ITM      1.28 209 ePn     37 46.00   -0.7
VLS      1.68 267 ePn     37 52.70    0.2
KZN      2.14 340 ePn     37 58.80   -0.4
PLG      2.15  15 ePn     37 58.00   -1.4
OHR      3.17 333 ePn     38 14.30    0.3
BERA     3.22 319 ePn     38 20.10    5.6X
TIR      3.75 325 ePn     38 29.00    6.8X
SKO      3.80 346 ePn     38 23.50    0.7
PHP      3.81 333 ePn     38 28.70    5.8X
LACI     4.06 326 ePn     38 34.30    7.9X
PUK      4.32 331 ePn     38 31.20    1.0
SDA      4.46 327 ePn     38 40.50    8.4X
BCI      4.54 334 ePn     38 38.40    5.1X
      S.D. = 0.9  on   9 of  15 obs.
-----------------------------------------
&  SEP  20, 1989  00h 19m 16.33s
   60.102 N          151.633 W
   DEPTH =  54.7km
 KENAI PENINSULA, ALASKA             ( 14)
      <AGS-P>.

NNL      0.18 109 iP      19 26.20    1.0
CNPM     0.61 161 iP      19 28.64   -0.7
                  eS     19 38.94
ILIM     0.67 269 eP      19 28.89   -1.1
                  eS     19 40.44
NKA      0.67  17 eP      19 31.24    1.2
```

```
OPT      0.92 241 eP     19 32.37  -1 0
                 eS     19 45.95
SEW      1.09  89 eP     19 33.63  -2 0
CKL      1.15 343 eP     19 34.89  -1 7
AUL      1.16 232 eP     19 35.91  -0.7
AUW      1.19 233 eP     19 36.18  -0.7
                 eS     19 53.19
CRP      1.20 348 eP     19 37.17   0.0
                 eS     19 53.94
BGL      1.22 343 eP     19 36.99  -0.5
CGLM     1.22 352 iP     19 36.90  -0.6
NCG      1.33 349 iP     19 38.45  -0.6
                 eS     19 56.60
SHU      1.52 194 eP     19 39.69  -1.9
PMS      1.53  41 iP     19 40.86  -0.9
                 eS     19 59.63
CDD      1.56 222 eP     19 40.64  -1.5
                 S      20 00.66
PWA      1.78  28 eP     19 44.03  -1.1
                 eS     20 05.18
SKT      1.89   1 iP     19 45.67  -1.0
PLRM     1.93  38 eP     19 43.51  -3.8
PME      1.99  39 eP     19 46.44  -1.7
KNK      2.04  48 eP     19 46.86  -2.0
                 eS     20 11.42
GHO      2.13  37 eP     19 48.38  -1.9
                 eS     20 13.84
GLI      2.38  69 eP     19 49.96  -3.6
FID      2.64  74 eP     19 52.99  -4.3
                 eS     20 22.22
KLU      3 13  61 eP     20 01.31  -3.1
KTH      3.48   5 iP     20 08.91  -0.4
WRH      4.69  19 eP     20 23.55  -2.6
PCA      5.69  85 eP     20 36.95  -3.5
        28 obs. associated
-----------------------------------------
*  SEP  20, 1989  00h 20m 23.98± 2.34s
    9.380 S ±21.2km  125.212 E ±16.3km
    DEPTH =  77.5 ± 21.6 km
    4.6mb (  7 obs.)
 TIMOR                                (289)

KUG      1.78 244 ePd    20 53.50   0.2
                 eS     21 05.00
MTN      6.75 121 iPd    22 07.40   4.9X
                 eS     23 20.50
KNA      7.22 152 eP     22 09.00   0.1
                 eS     23 25.00
TLE      8.35  64 ePd    22 03.00 -21.5X
MBL     12.81 203 eP     23 19.00  -5.5X
        0.4s      5.00nm          4.6mb
                 eS     25 27.00
WB5     13.68 141 eP     23 35.60  -0.4
                 eS     25 59.00
WRA     13.71 141 Pd     23 36.20  -0.2
        0.6s     31.40nm          4.9mb
NANU    16.06 214 eP     24 03.00  -3.6X
        0.4s      4.00nm          3.9mb
ASPA    16.46 151 iPd    24 11.20  -0.3
        0 7s     61.00nm          4.9mb
      Z  19s      0.27um          4.7Msz
                 eS     27 04.40
                 LR     30 38.30
WARB    16.77 176 eP     24 12.50  -2.9X
        0.3s      8.00nm          4.4mb
                 eS     27 09.00
QIS     17.78 130 iPd    24 31.40   3.4X
                 eS     27 39.00
FORR    21.53 173 eP     25 10.20   1.8
MRWA    21.55 202 eP     25 08.00  -0.6
                 eS     28 51.00
PMG     21.65  92 eP     25 22.00  12.3X
CTA     22.94 120 iPd    25 40.30  17.9X
        1.0s     16.00nm
                 i      25 51.00
KLB     23.16 196 eP     25 35.00  10.6X
                 eS     29 28.00
CHG     38.16 317 eP     27 39.40   1.7
        0.9s     10.71nm          4.8mb
GBA     52.63 295 Pd     29 30.50  -2.1
        0.5s      1.60nm          4.3mb
CNCB   150.89 153 PKP    40 19.00  14.1X
LPB    151.08 153 PKP    40 30.00  25.0X
ZOBO   151.30 153 ePKP   40 28.00  22.5X
      S.D. = 1.5  on   9 af  21 abs.
-----------------------------------------
   SEP  20, 1989  00h 26m 15.00± 0.33s
    25.470 N ± 5.0km  103.214 E ± 5.4km
    DEPTH =  33.0km  (normal)
    4.7mb ( 14 obs.)
 YUNNAN PROVINCE, CHINA               (318)

GYA      3.26  72 Pn     27 07.00   1.9
                 Pg     27 17.00
                 Sn     27 51.00
CD2      5.44   5 iPnd   27 37.70   1.8
                 Sn     28 39.50
CHG      7.72 212 ePn    28 09.10   1.2
                 ePg    28 39.50
                 eSg    30 24.00
LOE      8.14 190 ePn    28 12.40  -1.5
QIZ      8.87 135 eP     28 22.00  -2.0
      N  10s      2.70um
BDT      9.08 206 eP     27 29.00 -57.7X
GZH      9.54 102 P      28 30.50  -2.6
      N  10s     16.60um
      E  10s      6.20um
XAN      9.87  29 P      28 36.50  -1.2
      N  10s      7.90um
      E  10s      6.50um
MCO     10.04 107 eP     28 53.40  13.4X
NST     10.17 197 eP     28 41.00  -0.7
                 e      30 31.00
LZH     10.60   3 iPc    28 47.50  -0.3
        1.0s     0.04nm          2.6mb X
      Z  14s      2.90um          3.9MszX
      N  10s      3.10um
      E  10s      6.70um
WHN     11.06  60 Pd     28 56.00   2.1
                 S      30 55.00
LSA     11.50 294 P      29 01.50   1.1
GTA     14.19 349 eP     29 34.50  -1.3
      Z  14s      1.23um
      N  11s      2.09um
      E  10s      2.24um
NJ2     15.20  61 Pc     29 49.00   0.2
TIA     16.02  45 eP     30 00.00   0.5
BTO     16.12  19 eP     29 59.00  -1.8
      N  11s      3.20um
      E  11s      5.20um
                 esP    30 05.00
                 eS     32 57.00
HHC     16.84  22 P      30 08.80  -1.1
      E  10s      2.10um
BJI     18.13  34 eP     30 28.00   2.2
        1.5s     71.00nm          4.6mb
      Z  14s      1.17um          5.7MszX
      N  10s      1.90um
                 eS     33 45.00
DL2     20.50  45 eP     30 58.00   5.2X
                 eS     34 46.00
WMQ     22.25 329 P      31 11.00   0.4
      Z  16s      0.90um          4.3MszX
      N  10s      1.30um
                 pP     31 21.80  42kmX
PSI     23.02 191 ePd    31 20.40   2.2
        0.7s     12.70nm          4.5mb
NDI     23.35 284 eP     31 20.00  -1.4
                 eS     35 43.00
SNY     23.44  41 Pc     31 23.50   1.5
      N  19s      1.30um
      E  21s      1.00um
                 S      35 32.00
HYB     24.28 256 ePd    31 31.00   0.5
CN2     25.73  39 P      31 44.00  -0.1
      Z  12s      1.00um          4.6MszX
                 pP     31 48.00  14kmX
KSH     26.75 308 eP     31 53.00  -0.7
GBA     26.95 249 P      31 58.00   2.5
        0.7s      3.30nm          4.1mb
MBL     49.08 159 eP     35 02.00   0.8
        0.8s      8.00nm          4.8mb
WB5     54.31 143 eP     35 40.70   0.1
WRA     54.34 143 Pc     35 41.30   0.5
        1.3s     10.90nm          4.7mb
KEV     61.58 337 eP     36 30.00  -1.1
SOD     61.61 335 iP     36 30.40  -0.9
SUF     61.78 329 eP     36 30.00  -2.5
        0.9s     11.80nm          5.0mb
NUR     62.59 327 eP     36 44.00   6.1X
VRI     63.03 310 eP     36 41.00  -0.1
MLR     63.63 310 ePc    36 45.50   0.3
KRA     66.72 316 eP     37 04.70  -0.2
                 e      37 08.70
SKO     67.58 307 eP     37 09.50  -1.0
HFS     68.03 327 eP     37 11.50  -1.5
        0.6s      7.30nm          5.0mb
      Z  16s      0.12um          4.2MszX
                 LR     04 50.00
KSP     68.81 317 ePc    37 18.20   0.2
NB2     69.01 329 P      37 18.20  -0.9
        0.5s      2.10nm          4.5mb
PRU     70.11 317 eP     37 26.50   0.5
BRG     70.23 318 eP     37 26.60  -0.1
        1.2s     22.00nm          5.1mb
CLL     70.68 318 eP     37 29.00  -0.4
KHC     70.96 316 P      37 32.40   1.2
GRF     72.25 317 eP     37 39.80   0.9
LPG     76.56 314 eP     38 00.40  -3.7X
        0.8s      5.30nm          4.6mb
SBF     76.73 312 eP     38 05.20   0.3
        1.0s     12.00nm          4.9mb
INK     77.72  19 eP     38 11.00   1.3
SMF     77.96 316 eP     38 12.00   0.5
        0.8s      4.00nm          4.5mb
AVF     78.21 316 eP     38 13.20   0.4
        1.0s      8.00nm          4.7mb
BNG     83.30 272 iPc    38 40.90   0.5
        0.6s      6.00nm          4.9mb
BUL     85.46 245 eP     38 58.10   6.9X
BAO    151.37 284 ePKP   45 59.00  -2.4
ZOBO   167.78 317 ePKP   46 20.00  -0.2
      S.D. = 1.3  on  50 of  56 obs.
-----------------------------------------
?  SEP  20, 1989  00h 49m 34.01± 1.13s
    36.917 N ±12.5km   29.510 E ± 8.1km
    DEPTH =  10.0km  (geophysicist)
 TURKEY                               (366)

ELL      0.36 118 iPg    49 41.20  -0.3
                 eSg    49 48.70
YER      1.01 283 ePn    49 53.40   0.3
BCK      1.02  57 ePn    49 54.00   0.7
KHL      1.40   0 ePn    49 59.00  -0.7
      S.D. = 1.1  on   4 of   4 obs.
-----------------------------------------
*  SEP  20, 1989  01h 29m 12.22± 1.04s
    7.457 S ± 9.1km  129.366 E ±13.2km
    DEPTH = 141.0 ± 18.1 km
    4.8mb (  5 obs.)
 BANDA SEA                            (280)

TLE      3.82  62 iPc    30 10.40  -0.1
                 iS     30 49.10
AAI      3.92 343 ePd    30 12.80   0.8
MTN      5.63 162 iPd    30 36.40   1.5
KNA      8.26 184 iPd    31 10.30  -0.1
        0.3s    107.00nm          6.0mb X
                 eS     32 39.00
WB5     13.27 159 iPd    32 14.00  -2.3
                 eS     34 36.30
WRA     13.32 159 Pc     32 15.00  -1.9
        0.7s     39.00nm          4.9mb
QIS     16.37 144 eP     32 54.90  -0.4
                 eS     35 48.00
MBL     16.45 213 eP     32 56.00  -0.2
        0.3s      5.00nm          4.3mb
                 eS     35 47.00
ASPA    16.70 165 eP     32 59.10  -0.2
        0.5s     81.00nm          5.3mb
                 eS     35 53.50
WARB    18.80 188 eP     33 24.70   1.2
        0.3s      6.00nm          4.5mb
                 eS     36 51.00
NANU    20.08 220 eP     33 37.00   0.3
        0.3s.    14.00nm          4.9mb
CTA     20.63 129 eP     33 44.00   1.7
FORR    23.30 183 eP     34 10.10   1.7
QLP     23.70 145 eP     34 15.70   3.4X
CHG     39.77 311 eP     36 31.10  -1.9
CNCB   150.41 145 PKP    48 51.60   7.1X
LPB    150.56 144 PKP    48 53.00   8.5X
PPD    150.69 179 e(PKP) 48 49.00   4.9X
ZOBO   150.75 144 PKP    48 52.00   7.0X
      Z  20s      0.09um          4.6Msz
                 LR     54 24.00
CCH    150.95 148 PKP    48 53.50   8.5X
      S.D. = 1.5  on  14 of  20 obs.
-----------------------------------------
*  SEP  20, 1989  02h 38m 05.19± 1.07s
    17.755 S ±10.9km   70.450 W ±11.1km
```

20d 02h

DEPTH = 33.0km (normal)
NEAR COAST OF PERU (115)

ARE	1.63	322	iPd	38 32.30	0.1
			iS	38 51.70	
CNCB	2.54	69	iPd	38 45.90	0.4
LPB	2.56	62	iPd	38 46.70	1.1
ZOBO	2.67	57	iPd	38 45.90	-1.5
			S	39 20.00	
CCH	4.13	85	Pc	39 18.40	10.6X
			S	39 24.40	
ANT	5.92	180	iP	39 32.80	-0.1
			iS	40 41.20	

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

% SEP 20, 1989 03h 35m 54 86± 0.82s
38.256 N ± 7.8km 22.757 E ± 9.5km
DEPTH = 33.0km (normal)
GREECE (364)
ML 3.0 (ATH).

ATH	0.81	110	ePn	36 10.60	0.8
ITM	1.26	212	ePn	36 15.50	-0.8
VLS	1.71	268	ePn	36 23.00	0.2
PLG	2.18	14	ePn	36 28.00	-1.6
KZN	2.19	340	ePn	36 30.00	0.3
OHR	3.23	333	ePn	36 45.50	1.1
SKO	3.85	345	ePn	36 53.00	-0.1

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

• SEP 20, 1989 04h 20m 24.44± 0.86s
22.165 S ± 8.0km 68.519 W ± 9.1km
DEPTH = 121.7 ± 8.5 km
4.3mb (4 obs.)
NORTHERN CHILE (123)

ANT	2.32	228	eP	21 02.00	-0.6
			i	21 03.80	
			iS	21 27.50	
CCH	5.26	26	P	21 43.30	1.0
CNCB	5.35	6	P	21 43.00	-0.8
LPB	5.62	4	P	21 49.00	1.7
ZOBO	5.88	4	P	21 50.00	-1.1
ITB1	13.21	104	Pc	23 34.70	6.3X
ITB	13.39	104	e(P)	23 35.50	4.7X
PPD	15.95	93	eP	24 03.90	0.6
			e	24 06.10	
VAO	19.92	97	eP	24 47.50	-1.4
ALO	67.25	327	P	31 07.50	-0.5
	0.9s		4.26nm		4.3mb
SPA	67.97	180	e(P)	31 14.00	1.8
	0.8s		2.92nm		4.2mb
KIC	68.54	73	P	31 15.30	-1.0
GLD	70.48	331	P	31 27.90	0.1
GOL	70.51	331	P	31 27.50	-0.6
	0.7s		4.61nm		4.4mb
RSSD	73.55	334	P	31 46.00	0.1
TNP	75.38	322	P	31 56.60	0.0
	0.8s		2.65nm		4.1mb
KVN	76.55	322	P	32 03.50	0.4
LRM	78.54	330	eP	32 14.20	0.2

S.D. = 1.1 on 16 of 18 obs.

SEP 20, 1989 04h 59m 46.03± 0.58s
13.622 N ± 3.3km 120.783 E ± 4.2km
DEPTH = 152.3 ± 5.6 km
5.0mb (23 obs.)
MINDORO, PHILIPPINE ISLANDS (250)

QCP	1.05	16	iP+	00 12.00	0.3
BAG	2.78	356	eP	00 30.10	-1.3
			iS	01 03.10	
DAV	8.02	144	eP	01 45.90	5.0X
KKM	8.77	211	ePc	01 52.50	1.6
OIZ	11.79	299	eP	02 30.20	-0.4
	E 12s		0.40um		
			S	04 39.80	
SSE	17.40	1	eP	03 40.20	-0.7
			pP	03 50.80	
			esS	06 50.00	
WHN	17.86	342	P	03 46.50	0.3
			eS	07 02.00	
GYA	18.39	316	P	03 53.00	0.8
NJ2	18.43	355	Pd	03 52.60	0.2
LOE	18.74	284	eP	03 54.70	-1.1
NST	20.08	278	iPd	04 11.50	1.9
KMI	20.48	307	eP	04 14.50	0.6
SNG	20.83	254	eP	04 27 50	10 3X
			eS	08 04.00	
BDT	21.30	283	eP	04 21.80	0.0
	0.7s		91.10nm		5.3mb
IPM	21.46	247	ePd	04 23.90	0.5
	0.7s		43.60nm		5.0mb
CHG	21.59	287	iPd	04 25.20	0.5
	0.9s		67.44nm		5.1mb
TRT	22.68	201	iPd	04 38.50	3.2X
	1.0s		200.80nm		5 5mb
TIA	22.73	352	Pc	04 35.60	-0.1
XAN	23.00	334	P	04 37 60	-0 8
CD2	23.27	320	P	04 41.80	0 8
			S	08 40.30	
GUMO	23.41	87	eP	04 44.10	1.7
PJG	23.41	87	eP	04 44.20	1 8
GUA	23.45	87	eP	04 44.20	1 4
	1.0s		56.00nm		5 0mb
TKSJ	23.58	28	eP	04 44.90	1 0
PSI	24.18	245	iPd	04 50.20	0.5
	0.6s		88.60nm		5.5mb
YONJ	24.33	26	eP	04 51.60	0 5
WKYJ	24.51	31	eP	04 53.70	0 9
PPI	24.57	237	eP	04 54.50	1 1
TSRJ	25.76	29	eP	05 03.80	-0.4
BJI	26.63	352	eP	05 11.50	-0.6
	1.0s		0.08nm		2.3mb X
LZH	27.05	329	iPc	05 15.50	-0.7
	1.0s		0.22nm		2.8mb X
N	15s		12.20um		
E	12s		0.80um		
			S	09 42.00	
SNY	28.21	4	eP	05 24.60	-1.7
HHC	28.30	345	P	05 27.40	0.1
CN2	30.34	7	P	05 43.00	-2.2
OFUJ	31.36	32	eP	05 52.80	-1.4
GTA	31.65	328	iPc	05 56.90	0.0
	1.0s		0.10nm		2.6mb X
MDJ	31.79	12	eP	05 57.50	-0 4
MBL	34.58	182	iPc	06 21.40	-0 7
	0.4s		23.00nm		5.3mb
WB5	35.87	158	iPc	06 31.70	-1 4
			i	07 04.60	
WRA	35.92	158	Pc	06 32.10	-1 4
	0.5s		15.50nm		5.0mb
ASPA	39.22	161	iPc	07 00.50	-0.6
	0.6s		22.00nm		5.1mb
			eS	12 47.70	
WARB	39.97	172	eP	07 07.30	0.1
	0.3s		10.00nm		5.0mb
MEKA	40.05	183	iPc	07 07.60	-0.2
	0.6s		45.00nm		5.4mb
HYB	40.81	281	iPc	07 15.10	0.9
	0.8s		35.70nm		5.1mb
WMO	41.32	323	P	07 19.00	0.8
			eS	13 22.00	
			ScS	17 05.00	
CTA	41.83	143	iPc	07 23.10	0.5
	0.8s		41.79nm		5.1mb
GBA	42.09	275	Pd	07 24.70	0.0
	0.7s		25.20nm		5.0mb
COOL	44.25	180	iPc	07 40.60	-1.4
	0.4s		10.00nm		4.8mb
FORR	44.77	171	eP	07 45.00	-1.0
KLB	45.05	184	eP	07 47.00	-1.2
NWAO	46.41	184	iPd	07 58.80	-0.2
	0.6s		23.00nm		5.0mb
ADE	51.23	161	iPc	08 35.00	-1.1
BRS	51.24	143	iPc	08 36.00	-0.3
BWA	54.53	152	eP	09 00.80	0.4
CAN	55.54	152	eP	09 07.20	-0.5
DZM	57.12	128	iPc	09 19.30	0.1
TTA	74.89	28	eP	11 12.50	1.0
SVW	75.09	30	eP	11 14.00	1.4
PMR	78.18	29	eP	11 29.70	0.1
	0.8s		19.00nm		4.9mb
FBA	78.38	26	eP	11 30.50	-0.3
KEV	78.63	339	iP	11 31.80	-0.2
	0.5s		8.40nm		4.7mb
SOD	79.13	337	iP	11 34.30	-0.5
TOA	79.50	29	eP	11 38.10	1.2
PRNI	79.67	299	e(P)	11 39.00	0.6
MBH	79.86	298	iPc	11 40.00	0.6
SUF	80.12	332	iP	11 39.40	-0.7
NUR	81.26	330	eP	11 48.00	2 0
INK	83.14	21	eP	11 55.50	-0.2
	0.7s		12.00nm		4.8mb
VRI	83.15	315	ePd	11 56.00	-0.2
MLR	83.76	315	ePd	11 59.50	0.0
KRA	86.50	321	eP	12 12.80	0.0
			e	12 47.80	
HFS	86.58	331	eP	12 12.00	-1.0
	0.5s		13.60nm		5.1mb
NB2	87.37	333	P	12 15.40	-1.4
	0.9s		14.40nm		4.9mb
KSP	88.47	322	eP	12 22.20	0.0
			e	13 06.30	
PRU	89.82	322	eP	12 27.50	-1.1
KHC	90.71	321	P	12 33.30	0.5
CDF	94.81	322	eP	12 51.30	-0.4
	0.8s		5.30nm		4.9mb
BSF	95.36	322	eP	12 53.30	-1.0
LPG	96.44	320	eP	12 59.10	-0.4
	0.8s		4.00nm		4.9mb
PNT	97.89	35	eP	13 06.00	0.4
KIC	122.39	287	PKP	18 25.20	-0.3
TIC	122.55	287	PKP	18 25.40	-0.4
LIC	122.71	287	PKP	18 25.80	-0.3
LPB	170.95	110	PKP	19 42.00	4.0X
CNCB	170.97	112	PKP	19 40.00	1.8
ZOBO	171.00	108	PKP	19 40.00	1.8
	1.3s		12.62nm		
			i	21 01.80	
CCH	172.35	120	(PKP)	19 42.00	3.6X

S.D. = 0.9 on 82 of 87 obs.

? SEP 20, 1989 05h 30m 50.19± 6.21s
12.378 S ±17.6km 77.650 W ±48.9km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF PERU (115)

PT10	0.73	66	iP	31 04.00	-0.5
			iS	31 17.00	
NNA	0.88	64	iPd	31 05.10	-2.0X
	0.6s		76.67nm		
			iS	31 17.50	
PT02	1.31	116	iP	31 14.40	-0.1
			iS	31 34.30	
PT06	1.93	138	iP	31 23.20	-0.2
HUA	2 30	82	ePd	31 29.90	0.8
			eS	31 45.40	
PT03	2 41	132	iP	31 30.40	0.0
			iS	32 02.30	

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

? SEP 20, 1989 06h 30m 14.71± 0.92s
37.788 N ± 8.8km 29.206 E ± 7.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KHL	0.59	25	iPg	30 26.80	0.1
			eSg	30 36.60	
CIN	0.91	258	ePg	30 32.00	-0.1
			iSg	30 44.00	
YER	0.98	229	ePn	30 42.70	9.3X
BCK	1.15	106	ePn	30 36.00	-0.2
ELL	1.18	151	ePn	30 37.00	0.2

S.D. = 0.3 on 4 of 5 obs.

SEP 20, 1989 06h 53m 30.67± 0.78s
39.344 N ± 6.9km 20.782 E ± 7.0km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.5 (ATH).

SRN	0.81	312	iPg	53 45.40	-0.9
KEK	0.85	296	ePn	53 45.20	-1.8
VLS	1.17	187	ePn	53 53.30	0.7
KZN	1.23	38	ePn	53 51.50	-2.0
KBN	1.28	1	ePg	53 55.00	0.7
VLO	1.50	319	ePn	54 01.40	3.9X
BERA	1.50	335	ePn	53 58.40	0.8
OHR	1.77	0	iPn	54 01.90	0.4
NEO	1.89	90	ePn	54 03.50	0.1
TIR	2.12	341	ePn	54 07.00	0.4
PLG	2.29	63	ePn	54 08.20	-1.0
PHP	2.36	354	ePn	54 11.30	1.3
LACI	2.43	341	ePn	54 11.00	0.0
SKO	2.67	11	iPn	54 15.70	1.2
			i	54 45.50	
SDA	2.84	340	ePn	54 20.50	3.6X

S.D. = 1.2 on 13 of 15 obs.

SEP 20, 1989 06h 55m 22.14± 0.74s

39.404 N ± 6.7km 20.750 E ± 5.5km
DEPTH = 15.7 ± 5.4 km
GREECE-ALBANIA BORDER REGION (392)
MD 3.7 (ATH).

SRN	0.75	310	iPg	55 37.10	0.8
LSK	0.75	351	iPgd	55 35.70	-0.8
KEK	0.80	293	ePn	55 37.20	0.0
KZN	1.20	41	iPn	55 43.30	-0.7
KBN	1.22	2	iPgc	55 45.50	1.2
VLS	1.23	186	ePn	55 45.80	1 3
BERA	1.44	335	ePn	55 49.20	1.8
VLO	1.44	318	ePn	55 48.20	0 7
OHR	1.71	1	iPn	55 53.50	2.1
NEO	1.92	92	ePn	55 54.50	0.0
TIR	2.05	341	ePn	55 58.00	1.6
PLG	2.29	64	ePn	55 59.70	-0.2
PHP	2.29	354	ePn	56 01.80	1.9
LCI	2.34	294	P	56 02.20	1.6
			eSn	56 32.00	
LACI	2.37	341	ePn	56 01.00	0.1
SKO	2.62	11	iPn	56 05.50	1.0
			i	56 10.20	
			i	56 37.00	
ULC	2.80	336	ePn	56 07.00	-0.1
			eSn	56 37.00	
KKB	3.03	35	eP	56 09.00	-1.4
MMB	3.15	45	ePd	56 12.00	-0.1
BDV	3.22	334	ePn	56 12.50	-0.6
			eSn	56 48.50	
TTG	3.23	340	ePn	56 13.90	0.8
			eSn	56 50.00	
PVY	3.24	350	ePn	56 14.20	0.7
			eSn	56 52.50	
TDS	3.42	276	P	56 14.80	-1.1
HCY	3.49	331	ePn	56 15.20	-1.6
			eSn	56 54.00	
NKY	3.65	339	ePn	56 19.60	0.3
			eSn	57 01.00	
VTS	3.69	30	iP	56 21.00	1.1
RZN	3.79	52	eP	56 13.00	-8.3X
BRY	3.87	335	ePn	56 21.00	-1.4
			eSn	57 04.30	
MGR	4.07	282	P	56 25.00	-0.1
			eSn	57 11.00	
HVAR	4.97	321	i(Pn)	56 34.50	-3.3
PVL	5.14	41	eP	56 55.00	14.8X
MLR	7.19	31	eP	57 13.00	3.7X
VBY	7.32	328	ePn	57 07.50	-3.5X
			eSn	58 27.50	
VOY	8.32	325	ePn	57 21.00	-4.1X
			eSn	58 51.40	

S.D. = 1.3 on 29 of 34 obs.

% SEP 20, 1989 08h 46m 03.31± 0.90s
41.847 N ± 8.4km 12.714 E ±10.9km
DEPTH = 14.1 ± 9.7 km
SOUTHERN ITALY (390)

RMP	0.04	194	P	46 05.80	-0.3
			eSg	46 07.70	
RDP	0.09	179	P	46 06.70	0.2
			eSg	46 09.50	
MNS	0.54	357	P	46 14.00	0.0
			eSg	46 21.80	
AZI	0.56	75	P	46 14.20	-0.1
			eSg	46 22.80	
ASS	1.22	358	P	46 25.80	0.1
			eSg	46 43.20	
MAO	1.29	297	P	46 26.80	-0.1

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

SEP 20, 1989 09h 32m 43.44± 0.48s
40.527 N ± 5.3km 19.558 E ± 3.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MD 3.6 (ATH).

KEK	0.83	167	ePb	33 00.00	0.4
OHR	1.11	58	iPg	33 03.20	-1.1
			iSg	33 21.20	
LCI	1.24	262	P	33 05.50	-1.0
ULC	1.45	351	ePg	33 09.80	0.1
			eSg	33 28.20	
KZN	1.70	97	ePn	33 14.20	0.8
			eSn	33 41.70	
BRT	1.82	282	P	33 15.60	0.5
BDV	1.84	343	ePn	33 14 00	-1.3
			eSn	33 38.20	
TTG	1.91	353	ePn	33 17.00	0.7
			eSn	33 42.00	
SKO	2.02	44	iPn	33 18.50	0.5
			i	33 19.70	
			i	33 23.00	
			e	33 46.00	
HCY	2.08	338	ePn	33 20.10	1.4
			eSn	33 46.00	
PVY	2.09	8	ePn	33 20.00	1.0
			eSn	33 47 00	
IVA	2.36	6	ePn	33 23.00	0.2
			eSn	33 54.00	
KKB	2.98	62	eP	33 30.00	-1.6
MGR	3.08	264	P	33 33.50	0.4
			eSn	34 00.00	
MMB	3.33	70	ePc	33 37.00	0.4
HVAR	3.52	320	i(Pn)	33 39.00	-0.3
SOI	3.66	229	P	33 47.40	6.1X
RZN	4.07	72	eP	33 47.00	-0.2
SDI	4.49	287	P	33 52.40	-0.8
PVL	5.08	56	eP	33 51.00	-10.4X
VOY	6.88	325	ePn	34 23.40	-3.5X
			eSn	35 42.50	

S.D. = 0.9 on 18 of 21 obs.

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* SEP 20, 1989 10h 15m 36.68± 1.67s
33.599 S ±16.9km 70.186 W ±10.8km
DEPTH = 116.1 ± 20.0 km
CHILE-ARGENTINA BORDER REGION (127)

PCH	0.27	265	iPc	15 53.40	-0.1
			iS	16 05.50	
FCH	0.28	342	iP	15 53.70	-0.2
			iS	16 05.60	
SAN	0.42	290	iPc	15 53.70	-0.3
			iS	16 05.80	
CHCH	0.51	229	iPc	15 53.50	-1.1
			iS	16 06.10	
PEL	0.62	317	iPc	15 55.00	-0.3
			iS	16 07.50	
TACH	0.63	265	iPc	15 55.10	-0.3
			iS	16 08.10	
TACH	0.63	265	iPc	15 58.50	3.1
			iS	16 14.00	
ROCH	0.93	312	iPc	15 57.90	-0.4
			iS	16 12.60	
LNV	1.08	250	iPc	15 59.00	-0.5
			iS	16 15.00	
LCCH	1.16	276	iP	16 00.00	-0.4
			iS	16 17.50	
IHA	1.35	295	eP	16 02.50	0.1
			iS	16 20.00	
CFA	2.58	40	iPc	16 18.20	0.2
			S	16 48.00	
MRA	3.94	74	iPc	16 37.00	0.7
TCA	5.24	66	ePc	16 53.30	-0.7
			(S)	17 50.00	

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

? SEP 20, 1989 10h 32m 01.90± 1.95s
23.364 S ±17.3km 66.529 W ±22.9km
DEPTH = 180.2 ± 35.3 km
4.4mb (1 obs.)
JUJUY PROVINCE, ARGENTINA (128)

ANT	3.58	264	iPc	32 58.20	-0.1
			iS	33 40.50	
CCH	5.96	4	P	33 30.80	1.3
CNCB	6.66	348	P	33 38.50	-0.5
			S	34 50.00	
LPB	6.95	347	P	33 43.80	1.1
			S	34 55.00	
ZOBO	7.22	348	Pc	33 44.60	-1.7
	0.8s		15.05nm	4.4mb	X
			S	35 02.00	
PPD	14.11	88	eP	35 19.20	4.1X
VAO	17.99	93	eP	36 01.20	-0.5
			e	36 04.10	
BAO	19.08	70	eP	36 06.50	-6.7X
SPA	66.78	180	e(P)	42 36.20	0.4
	1.0s		7.00nm	4.4mb	
WB5	132.43	207	ePdiff	48 04.80	12.5X

S.D. = 1.5 on 7 of 10 obs.

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* SEP 20, 1989 10h 53m 21.30± 3.92s
33.271 S ± 9.5km 72.174 W ±28.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

IHA	0.51	61	iPc	53 32.20	0.6
			iS	53 39.00	
LCCH	0.55	112	iPd	53 32.70	0.4
			iS	53 40.00	
LNV	0.93	137	iPc	53 39.50	0.4
			iS	53 51.50	
ROCH	1.02	73	iPd	53 40.40	-0.4
			iS	53 53.20	
TACH	1.10	111	iPd	53 41.70	-0.3
			iS	53 55.50	
PEL	1.25	85	iPd	53 44.40	-0.3
			iS	53 59.90	
SAN	1.28	99	iP	53 44.60	-0.4
			iS	54 02.90	
CHCH	1.43	118	iPd	53 47.10	-0.3
			iS	54 06.00	
PCH	1.43	105	iPd	53 47.00	-0.4
			iS	54 06.30	
FCH	1.58	93	iPc	53 49.70	0.0
			iS	54 09.50	
ZON	3.42	61	eP	54 20.00	4.2X
			eS	55 11.00	
MRA	5.51	83	e(P)	54 47.20	1.9
TCA	6.70	75	ePd	55 01.00	-1.3
			(S)	56 17.40	

S.D. = 0.8 on 12 of 13 obs.

SEP 20, 1989 11h 05m 57.28± 0.68s
36.337 N ± 7.6km 139.736 E ± 6.6km
DEPTH = 33.0km (normal)
HONSHU, JAPAN (227)

KAKJ	0.38	110	iP+	06 06.30	0.2
			S	06 13.70	
CHJJ	0.67	245	iPd	06 09.80	-0.4
			S	06 20.10	
NIIJ	1.08	327	P	06 16.50	0.4
			S	06 33.90	
MAT	1.25	280	iPd	06 18.40	-0.1
			eS	06 35.00	
IIDJ	1.71	241	P	06 25.50	0.2
			S	06 48.30	
YAMJ	1.85	7	P	06 27.40	0.2
			eS	06 50.40	
OFUJ	3.14	29	P	06 44.90	-0.6
			S	07 20.40	

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

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* SEP 20, 1989 11h 27m 43.81± 0.76s
37.090 N ± 6.8km 29.796 E ± 6.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.35	165	iPg	27 51.10	0.0
			eSg	27 57.30	
BCK	0.73	59	ePn	27 58.30	0.0
YER	1.21	273	ePn	28 06.50	0.1
KHL	1.25	350	ePn	28 07.10	0.0
CIN	1.45	291	eP	28 10.00	-0.1

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

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* SEP 20, 1989 11h 32m 58.97± 0.88s
17.757 N ±14.8km 94.103 W ±11.9km
DEPTH = 33.0km (normal)
3.6mb (2 obs.)
CHIAPAS, MEXICO (61)

SCX	1.73	126	iP	33 25.54	-1.7
			iS	33 48.02	
OXX	2.59	255	iP	33 43.72	4.0X
			iS	34 16.59	
LVVM	2.97	312	(P)	33 43.00	-1.9
IISM	3.34	292	eP	33 49.95	-0.2
			(S)	34 32.50	
TPX	3.34	148	eP	33 51.56	1.4
			iS	34 30.50	
IIT	4.19	288	(P)	34 12.00	9.6X
PPM	4.49	288	iP	34 07.50	0.5
			iS	35 12.00	
TPM	4.86	285	iP	34 12.00	0.1
CRX	5.54	288	(P)	33 51.50	-30.1X
ACX	5.57	262	(P)	34 40.00	18.3X
MRX	6.99	287	(P)	34 42.00	0.3

20d 11h

```
TUL    18.14 356 eP     37 11.50    1.4.
       1.1s      5.70nm          3.6mb
ALO    20.35 330 eP     37 38.50    2.9X
       1.0s      2.50nm          3.5mb
     S.D. = 1.5  on   8 of  13 obs.
-----------------------------------------
   SEP  20, 1989  13h 19m 31.98± 0.13s
   51.184 N ± 3.5km  178.821 E ± 2.2km
   DEPTH =  33.0km  (normal)
   5.5mb ( 70 obs.) 5.8Msz ( 34 obs.)
 RAT ISLANDS, ALEUTIAN ISLANDS   ( 6)
      Ms 5.8 (BRK). Felt on Amchitka.
      CENTROID, MOMENT TENSOR    (HRV)
      Dato Used: GDSN
      L.P.B.: 16S, 44C  M.W.: 12S, 21C
      Centroid Locotion:
      Origin Time          13:19:34.3 0.1
      Lot 51.54N 0.01 Lon 179.05E 0.03
      Dep  15.0 FIX Half-duration  4.8
      Moment Tensor;   Scale 10**18 Nm
        Mrr= 0.89 0.02   Mtt=-0.98 0.02
        Mff= 0.09 0.02   Mrt= 2.30 0.06
        Mrf= 0.42 0.05   Mtf=-0.38 0.02
       Principal Axes:
        T  Val=  2.44   Plg=56   Azm=354
        N         0.19      3       259
        P        -2.64     34       166
       Best Double Couple:Mo=2.5*10**18
        NP1:Strike=242 Dip=12 Slip=  73
        NP2:         79     79       93

ADK     2.89  74 eP    20 17.30   0.6
SMY     3.30 300 eP    20 22.50  -0.1
PET    12.53 286 iPc   22 31.00   0.4
                iS     24 45.00
SDN    13.05  63 eP    22 37.30  -0.1
ILT    16.81   3 iPd   23 30.80   4.7X
                iS     26 50 00
SVW    17.24  45 ePd   23 34.30   2.7
KDC    17.83  57 eP    23 36.70  -2.0
TTA    17.90  39 eP    23 41.20   1.5
PMR    20.35  47 eP    24 05.70  -2.1
     Z  20s     45.00um          5.8Msz
IMA    20.41  33 eP    24 07.80  -0.8
TOA    21.84  46 eP    24 21.80  -1.3
FBA    22.03  39 eP    24 23.70  -1.1
BRW    23.02  20 eP    24 35.30   0.8
YSS    23.85 274 iPc   24 45.00   2.3
                iS     29 02.00
KUSJ   24.39 264 P     24 47.40  -0.7
ASAJ   25.18 268 P     24 55.80   0.2
HOOJ   25.66 264 P     25 01.10   1.0
MRRJ   27.03 266 eP    25 12.90   0.2
INK    28.48  35 eP    25 24.00  -1.6
TIK    30.07 331 eP    25 39.50  -0.3
                eS     30 39.00
NIIJ   31.35 259 P     25 51.30  -0.1
CHJJ   32.11 258 P     25 58.50   0.4
MAT    32.28 259 eP    25 59.00  -0.6
       1.2s    225.00nm         5.9mb
     Z  20s     12.41um          5.6Msz
                eS     31 14.00
MDJ    33.13 278 eP    26 04.50  -2.4
     E  18s     15.70um
                ePP    27 22.00
                S      31 21.00
IIDJ   33.15 258 P     26 08.60   1.4
TSRJ   34.30 260 eP    26 16.40  -0.7
MBC    34.35  22 eP    26 16.00  -1.1
       1.0s    372.00nm         6.3mb
HON    34.88 140 P     26 45.00  22.9X
     Z  21s     20.97um          5.9Msz
WKYJ   35.41 258 eP    26 28.00   1.3
YONJ   36.10 262 eP    26 33.10   0.7
CN2    36.11 280 iPc   26 31.60  -0.9
       6.0s      1.70nm         3.1mb X
     Z  20s     24.80um          6.0Msz
     N  17s      8.70um
     E  17s      4.30um
                pP     26 41.50  33kmX
                iPP    27 59.00
                ePcP   28 52.00
                S      32 15.00
                ScP    32 35.00
                ScS    36 45.00
PGC    36.44  71 eP    26 36.00   0.9
TKSJ   36.52 260 eP    26 36.40   0.4

MCW    36.79  70 eP    26 38.50   0.3
SHK    37.01 261 eP    26 40.00  -0.1
GMW    37.34  72 eP    26 43.00   0.3
BMW    37.58  74 eP    26 44.50  -0.4
RMW    37.97  72 eP    26 49.00   0.9
SHNJ   38.26 262 eP    26 51.40   0.9
LON    38.30  73 eP    26 50.50  -0.4
SHW    38.32  74 eP    26 52.50   1.3
SNY    38.33 278 iPc   26 51.00  -0.1
     Z  22s     15.30um          5.8Msz
     N  18s      5.40um
     E  20s      7.60um
                PP     28 20.00
PNT    38.40  68 eP    26 51.00  -0.6
       0.9s    142.00nm         5.8mb
                pP     27 04.00  49kmX
KUMJ   39.49 261 eP    27 01.50   0.6
VGB    39.54  74 eP    27 02.00   0.8
DPW    39.91  69 eP    27 03.00  -1.2
FHC    40.12  82 eP    27 04.50  -1.6
EDM    40.21  60 ePd   27 04.80  -1.8
KAGJ   40.38 259 eP    27 09.00   0.8
WDC    41.15  81 iPc   27 15.80   1.4
DL2    41.23 276 Pc    27 15.00   0.0
       5.0s      1.80nm         3.1mb X
     Z  20s      5.70um          5.4Msz
     N  14s      4.60um
     E  15s      5.70um
                PP     28 53.00
                S      33 30.00
                sS     33 47.00
LTCM   41.62  81 eP    27 20.00   1.7
MIN    41.86  81 iPc   27 21.10   0.6
ORV    42.39  82 iPc   27 24.90   0.2
SES    42.78  62 eP    27 25.50  -2.3
                pP     27 59.00 150kmX
ZSP    42.89  84 eP    27 29.00   0.3
BRK    42.93  84 eP    27 29 40   0.4
BKS    42.94  84 eP    27 30.60   1.4
       1.0s    152.00nm         5.7mb
     Z  20s     13.00um          5.8Msz
     N  20s      5.00um
     E  20s     13.00um
                eS     33 55.00
                e      35 06.00
                eLQ    37 18.00
                eLR    39 21.00
PCC    43.08  85 eP    27 30.50   0.2
GCC    43.61  85 eP    27 34.80   0.2
MHC    43.64  85 iPc   27 35.50   0.5
BJI    43.95 281 Pc+   27 36.00  -1.2
       5.0s      2.42nm         3.2mb X
     Z  20s     15.60um          5.9Msz
     N  18s     10.90um
                ePP    27 48.00  43kmX
                ePP    29 24.00
                S      34 12.00
                esS    34 29.00
CMB    44.00  83 iPc   27 38.70   0.9
                epP    27 53.00  55kmX
                esP    28 08.00
                e      28 32.00
                e      28 55.00
                ePP    29 24.00
                ePcP   29 37.00
                ePPP   30 04.00
                e      30 29.00
                e      30 57.00
                eScP   33 12.00
                ePcS   33 24.00
                eS     34 12.00
                e      34 27.00
                e      37 42.00
                eScS   38 47.00
                e      39 36.00
                eLR    40 00.00
IRK    44.25 302 iPc   27 39.00  -0.6
                eS     34 13.00
LRM    44.34  69 ePc   27 39.90  -0.8
PRS    44.44  85 eP    27 41.90   0.5
LLA    44.53  85 ePc   27 42.90   0.8
KVN    44.81  80 eP    27 44.30  -0.2
PRI    45.00  85 eP    27 46.70   0.7
FRI    45.07  84 iPc   27 46.90   0.6
PHAM   45.36  85 eP    27 50.00   1.3
FFC    45.46  53 eP    27 48.00  -1.2
       0.6s     13.00nm         5.0mb

FFC    45.46  53 eP    28 01.00  11.8X
       0.8s     33.00nm
TIA    45.70 276 P     27 50.20  -1.2
       8.0s      1.60nm          3.0mb X
     Z  17s      6.90um          5.7MszX
     N  17s      6.10um
     E  16s      4.70um
                pP     28 01.50  40kmX
                S      34 23.90
TNP    45.95  81 eP    27 53.50   0.0
BCH    45.98  86 eP    27 54.00   0.3
PTI    46.05  72 eP    27 55.00   0.8
HHC    46.30 285 P     27 51.80  -4.4X
     Z  23s      8.00um          5.6MszX
     N  17s     10.00um
     E  17s      6.10um
                pP     28 08.00  64kmX
                PP     29 46.50
                S      34 42.50
GUMO   46.45 229 eP    27 55.80  -1.6
       1.0s     66.00nm          5.5mb
PJG    46.45 229 eP    27 56.50  -0.9
GUA    46.47 228 eP    27 55.80  -1.8
       0.8s     47.76nm          5.5mb
     Z  19s      6.53um          5.6Msz
SYP    46.47  86 eP    27 59.80   2.2
SSE    46.50 267 Pc    27 57.00  -0.7
       5.0s      2.40nm          3.4mb X
     Z  22s      4.80um          5.4Msz
     N  16s      2.40um
     E  16s      2.40um
                pP     28 08.00  38kmX
                sP     28 14.00
                S      34 45.00
                sS     35 06.00
                ScS    37 50.00
ISA    46.68  84 eP    27 59.50   0.3
CLC    47.13  83 eP    28 03.00   0.3
NJ2    47.32 270 Pd    28 03.40  -0.8
       5.0s      2.10nm          3.4mb X
     Z  24s      7.50um          5.6MszX
     N  15s      1.00um
     E  14s      2.90um
                pP     28 16.60  49kmX
                S      34 51.00
DUG    47.37  75 eP    28 04.00  -0.7
BTO    47.39 285 P     28 05.00   0.2
       6.0s      3.20nm          3.5mb X
     N  15s      6.60um
     E  14s      5.70um
                sP     28 16.00
                PP     29 55.00
                iS     35 01.00
                sS     35 13.00
TIY    47.68 281 iPc   28 07.50   0.4
       6.5s      2.20nm          3.3mb X
     N  15s      6.40um
                pP     28 18.00  36kmX
                sP     28 22.00
                PP     30 00.00
                S      35 05.00
                sS     35 18.00
                SS     38 27.00
SBB    47.71  85 eP    28 07.00  -0.4
PAS    47.85  85 eP    28 08.00  -0.3
                epP    28 46.00 170kmX
                ePcP   29 32.00
                ePP    30 16.00
                ePcS   33 26.00
                iS     35 05.00
                eScS   38 01.00
                eSS    38 12.00
                eLg    38 52.00
                eLR    42 00.00
MWC    47.87  85 eP    28 09.50   0.8
GSC    47.96  83 eP    28 10.00   0.7
DAU    48.18  74 eP    28 10.80  -0.5
RVR    48.45  85 eP    28 13.00   0.0
PLM    49.19  85 eP    28 19.00   0.1
TPC    49.21  84 eP    28 18.00  -0.9
BAR    49.76  86 eP    28 23.70   0.6
KBS    49.92 357 eP    28 23.50  -0.2
ANP    50.44 261 eP    28 29.00   0.6
GLA    50.67  84 eP    28 30.00   0.0
WHN    51.17 272 Pd    28 33.00  -0.8
       5.0s      2.50nm          3.4mb X
     Z  20s      3.10um          5.3Msz
```

N 14s 2.80um
E 16s 4.30um
pP 28 43.00 33kmX
PP 30 36.00
S 35 50.00
ScS 38 20.00
RSON 51.78 54 eP 28 35.80 -2.4
0.9s 113.85nm 5.8mb
GOL 52.16 71 eP 28 40.70 -0.9
Z 18s 6.93um 5.7Msz
GLD 52.22 71 eP 28 41.60 -0.3
Z 19s 9.53um 5.9Msz
XAN 52.22 279 P 28 40.40 -1.4
N 14s 7.70um
E 14s 5.60um
PP 30 41.50
OZH 52.44 264 Pd 28 40.00 -3.4X
6.0s 2.30nm 3.3mb X
Z 22s 3.00um 5.3Msz
pP 28 52.00 43kmX
iS 36 12.00
sS 36 26.00
FRB 53.96 31 eP 28 53.00 -1.2
0.7s 79.00nm 5.9mb
LZH 54.00 285 P 28 53.50 -1.5
5.0s 2.84nm 3.6mb X
Z 20s 15.00um 6.1Msz
N 15s 6.79um
E 15s 2.50um
pP 29 01.50 26kmX
sP 29 04.50
PcP 30 04.50
PP 31 52.50
S 36 33.00
S 40 16.00
GTA 54.24 290 iPc 28 55.60 -1.2
6.0s 2.30nm 3.4mb X
Z 16s 21.30um 6.3MszX
E 16s 15.40um
pP 29 02.50 23kmX
sP 29 05.50
S 36 30.00
ALQ 54.60 76 iPd 28 58.50 -1.0
1.0s 47.50nm 5.5mb
Z 21s 8.60um 5.8Msz
pP 29 19.10 82kmX
sP 36 59.50
GZH 57.08 266 iP 29 17.50 0.3
Z 18s 3.14um 5.5Msz
N 16s 3.04um
E 15s 2.82um
S 37 12.00
HKC 57.13 265 P 29 18.00 0.4
S 37 16.00
CD2 57.55 280 eP 29 18.80 -1.7
Z 20s 5.10um 5.6Msz
E 15s 4.90um
pP 29 29.50 36kmX
PP 31 28.30
S 37 16.50
ScS 39 05.00
BAG 57.58 255 eP+ 29 19.50 -1.5
eS 37 17.60
KEV 57.63 349 eP 29 20.00 -0.6
Z 24s 5.50um 5.6MszX
e 31 34.00
e 37 40.00
LR 52 08.00
WMQ 58.18 302 Pc 29 23.60 -1.3
5.0s 2.80nm 3.6mb X
Z 20s 34.10um 6.5Msz
N 18s 24.00um
E 18s 17.40um
PP 31 34.00
S 37 23.00
ScS 39 11.20
TRO 58.60 352 eP 29 28.30 1.0
OCP 58.65 253 eP 29 29.00 0.7
APA 58.78 345 eP 29 24.10 -4.6X
eS 38 57.50
GYA 58.85 274 P 29 29.00 -0.8
N 16s 2.29um
E 16s 3.62um
sP 29 40.00
S 37 31.00
sS 37 45.00
MEO 59.46 71 iPc 29 33.20 -0.6
RAB 59.69 211 e(P) 29 36.00 0.5
SOD 59.93 348 iP 29 36.00 -0.6
TUL 60.34 69 iPc+ 29 38.90 -0.9
1.3s 127.30nm 5.9mb
Z 18s 12.25um 6.1Msz
i 29 41.50
eS 37 36.00
LR 51 56.00
FVM 61.98 64 eP 29 49.50 -1.4
DAV 62.03 244 eP 29 51.00 -0.4
OIZ 62.26 266 eP 29 53.60 0.7
E 18s 2.30um
pP 30 03.50 32kmX
KMI 62.27 276 Pc 29 52.00 -1.2
Z 22s 7.00um 5.8Msz
E 15s 4.10um
pP 30 12.00 77kmX
PP 32 10.00
e 37 21.00
S 38 18.00
sS 38 35.00
PS 38 39.00
SVO 62.30 201 eP 29 52.00 -1.1
UYO 62.34 69 iPd 29 51.90 -1.4
HNR 62.54 201 eP 29 59.00 4.3X
eS 38 20.00
JAY 62.56 224 ePd 29 57.20 2.3
AKU 62.74 8 iPd 29 56.60 1.1
1.2s 143.75nm 6.0mb
OLY 63.14 66 eP 29 57.00 -1.5
REY 63.88 10 iP 30 03.70 0.7
SUF 64.40 346 iP 30 05.30 -1.2
0.8s 24.70nm 5.4mb
AFI 65.33 170 P 30 16.00 3.0X
S 39 00.00
PWLA 65.46 64 eP 30 12.20 -1.4
RSNY 65.52 49 eP 30 12.00 -2.0
1.0s 75.92nm 5.7mb
Z 20s 16.95um 6.2Msz
FRU 65.62 308 iPc 30 15.00 0.4
eS 39 03.00
RGS 65.77 354 eP 30 14.30 -0.9
LSA 66.09 288 P 30 19.00 0.7
N 17s 3.42um
E 16s 3.02um
pP 30 29.00 32kmX
S 39 08.00
INY 66.15 52 iP 30 17.30 -0.7
eS 39 00.00
ScS 40 12.00
PMG 66.27 214 eP 30 20.00 1.0
HBVT 66.35 48 eP 30 17.10 -2.2
PUL 66.51 343 ePc 30 17.00 -3.0
eS 39 18.00
CBM 66.61 43 eP 30 19.00 -1.8
NUR 66.74 346 iP 30 21.00 -0.4
0.8s 26.40nm 5.4mb
Z 20s 5.00um 5.7Msz
e 34 40.00
e 39 34.00
LR 01 30.00
BNH 67.02 47 eP 30 21.80 -1.7
MNI 67.08 241 ePc 30 24.00 -0.2
GBTN 67.11 61 eP 30 22.20 -2.0
TKL 67.36 61 eP 30 24.50 -1.3
KSH 67.45 305 iPc 30 26.50 0.1
Z 16s 16.10um 6.3MszX
E 15s 16.80um
S 39 17.00
MIM 67.52 45 eP 30 24.30 -2.3
NB2 67.69 354 P 30 25.40 -2.1
0.9s 36.20nm 5.5mb
BLA 68.03 58 eP 30 28.90 -1.1
0.8s 43.62nm 5.6mb
TBR 68.24 51 eP 30 30.00 -1.2
UPP 68.27 350 iP 30 28.90 -2.1
1.0s 100.00nm 5.9mb
HFS 68.39 352 eP 30 29.20 -2.6
0.7s 18.50nm 5.3mb
Z 18s 3.49um 5.6Msz
LR 55 17.00
LOE 68.57 271 eP 30 31.60 -2.0
EMM 68.60 45 eP 30 31.00 -2.3
MRX 68.68 85 iP 30 36.50 2.3
CBN 68.88 55 eP 30 35.00 -0.2
TLE 68.98 230 ePc 30 36.50 0.5
CHG 69.28 274 eP 30 36.50 -1.4
1.0s 37.50nm 5.4mb
eS 39 44.00
OBN 69.51 338 eP 30 33.80 -4.9X
1.0s 100.00nm 5.8mb
Z 18s 24.00um 6.5Msz
iS 39 40.00
JSC 69.77 60 eP 30 39.00 -1.6
CRX 69.85 84 iP 30 43.50 1.7
LHS 69.86 60 eP 30 40.80 -0.4
BDT 70.41 273 eP 30 32.90 -11.9X
1.0s 51.80nm
NST 70.88 271 eP 30 49.00 1.4
SGS 70.99 61 eP 30 48.50 0.4
VAH 72.34 146 eP 30 57.00 0.8
0.8s 20.00nm 5.2mb
NNT 73.46 270 iPc 31 02.40 -0.6
DZM 73.74 192 iPd 31 05.40 1.0
AFR 73.75 149 eP 31 05.00 0.6
0.8s 35.00nm 5.4mb
EKA 73.84 1 P 31 05.00 0.5
1.2s 59.90nm 5.5mb
NDI 74.94 297 iPc 31 11.50 0.1
eS 40 46.00
DMU 75.18 4 eP 31 11.50 -0.8
MKS 75.56 242 iPd 31 18.00 3.0X
DLE 75.81 3 eP 31 13.00 -2.9
MTN 76.02 228 eP 31 16.30 -1.2
1.0s 190.00nm 6.0mb
i 31 30.60
WIT 76.17 355 eP 31 17.00 -0.9
ETA 76.41 3 eP 31 27.00 7.7X
CTA 76.51 211 iPc 31 19.80 -0.4
1.2s 78.13nm 5.6mb
i 31 33.70
iS 41 04.00
ECP 76.92 3 eP 31 26.00 3.9X
DBN 76.95 356 eP 31 18.00 -4.3X
Z 20s 2.00um 5.4Msz
e(SPP) 42 08.00
eSS 46 00.00
WTS 76.98 355 eP 31 22.50 0.1
1.0s 16.00nm 5.0mb
e 32 03.50
SNG 77.05 265 eP 31 19.80 -3.6X
CLL 77.18 351 iPd 31 24.10 0.5
3.2s 260.00nm 5.7mb X
Z 18s 4.50um 5.8Msz
e 31 33.00
KSP 77.27 349 eP 31 23.30 -0.8
BRG 77.51 350 iP 31 25.10 -0.3
1.2s 22.00nm 5.1mb
e 31 36.00
i 43 04.00
KRA 77.55 346 eP 31 25.70 0.1
0.8s 28.00nm 5.3mb
Z 17s 7.40um 6.1MszX
N 16s 6.20um
i 31 40.70
eS 42 04.00
MHI 77.94 314 eP 31 29.00 0.8
e 34 24.00
eS 41 40.00
MOX 77.97 352 eP 31 28.00 0.0
2.0s 78.00nm 5.4mb
Z 16s 3.00um 5.7MszX
N 17s 3.40um
E 17s 3.50um
e 41 30.00
ENN 78.25 355 iPc 31 29.20 -0.2
0.9s 36.00nm 5.4mb
i 31 58.50
PRU 78.32 350 P 31 30.00 0.1
Z 19s 6.80um 6.0Msz
N 19s 4.00um
E 17s 5.50um
e 31 42.00
eS 42 13.00
SPC 78.34 346 eP 31 32.00 1.7
MEM 78.40 355 P 31 31.50 1.2
UZH 78.55 344 iPc 31 30.00 -1.2
eS 41 30.00
SNF 78.58 356 P 31 32.50 1.3
TNS 78.64 354 ePd 31 32.50 0.8
IPM 78.80 263 ePd 31 33.00 -0.1
1.0s 35.30nm 5.3mb
GRF 78.95 352 eP 31 34.00 0.6
Z 22s 4.00um 5.7Msz

20d 13h

DOU	78.98	356	Pc	31	32.80	-0.7		1.1s	117.10nm		5.9mb				LR	15	32.00						
	0.8s	15	00nm		5.0mb		MDI	82.96	352	P	31	55.00	0.5	REVF	85.17	354	P	32	05.65	-0.2
			i	31	40.20		SAL	83.06	352	P	31	56.20	1.1	CIO	85.18	350	eP	32	07.96	2.0
			e	47	06.00		QLP	83.22	211	eP	31	57.00	1.1	CALN	85.19	354	P	32	05.87	-0.2
KHC	79.27	350	P	31	34.50	-0.7	LPG	83.46	354	eP	31	59.50	2.0	ASS	85.36	350	P	32	06.90	0.1
	1.3s	30	00nm		5.1mb			1.0s	28.80nm		5.4mb			FRF	85.39	354	eP	32	08.30	1.4
Z	20s	4.80	um		5.8Msz		LSD	83.47	354	P	31	59.03	1.5		1.0s	32.00nm			5.5mb	
N	20s	3.20	um				RJF	83.87	358	eP	32	00.60	1.4	LRG	85.52	355	eP	32	09.10	1.6
E	20s	4.30	um					0.9s	19.60nm		5.3mb				1.0s	21.60nm			5.3mb	
QUE	79.29	305	iPc	31	36.80	1.0	BNI	83.90	354	P	32	01.74	2.1	ALP	85.54	349	eP	32	08.90	1.1
			eS	41	40.10			0.3s	2.20nm		4.8mb			LMR	85.63	354	eP	32	09.40	1.4
QIS	79.30	217	iPc	31	34.10	-1.4	BOB	83.99	352	P	31	59.80	-0.1		1.0s	44.00nm			5.6mb	
WLF	79.34	355	P	31	31.50	-3.9X	RRL	84.03	354	P	32	00.67	0.3	MNS	86.03	350	P	32	09.00	-1.2
SIM	79.49	335	eP	31	56.00	19.6X	PGB	84.07	341	eP	32	01.00	0.6	OHR	86.10	344	eP	32	10.30	-0.3
			eS	41	44.00		VTS	84.22	342	iP	32	01.00	-0.3		2.2s	240.00nm			6.0mb	
BKR	79.60	328	iPc	31	39.00	1.8	CAF	84.23	358	eP	32	01.50	0.4				eS	42	19.50	
			iS	41	45.00			1.2s	44.60nm		5.5mb			EPF	86.16	359	eP	32	11.10	0.3
PSZ	79.63	346	eP	31	38.20	1.0	LFF	84.24	359	eP	32	01.50	0.4		1.0s	18.00nm			5.3mb	
KNA	79.66	229	eP	31	37.00	-0.5		1.2s	71.40nm		5.7mb			CVF	86.22	353	P	32	11.05	0.0
BUD	80.19	346	e(P)	31	40.00	0.0	PCP	84.28	353	P	32	01.49	0.1	AZI	86.34	349	P	32	13.35	1.8
KMR	80.27	350	iP+	31	40.30	-0.2	ASPA	84.35	221	iPc	32	01.70	-0.1		0.2s	8.40nm			5.6mb	
			LR	11	12.00			1.5s	51.00nm		5.5mb			GBA	86.51	287	Pd	32	11.70	-1.1
SOP	80.34	348	eP	31	44.10	3.2X				eS	42	20.50			1.0s	92.20nm			6.0mb	
VRI	80.37	341	eP	31	41.00	-0.1	SLY	84.35	323	ePd	32	02.00	0.2	SDI	86.57	349	P	32	12.60	-0.2
FLN	80.43	360	eP	31	41.10	-0.2				ePcP	32	17.00		RMP	86.60	350	P	32	14.30	1.4
	1.0s	41.60	nm		5.4mb					ePP	35	11.00		RDP	86.65	350	P	32	14.50	1.3
CDF	80.52	354	eP	31	41.50	-0.4				eS	42	25.00		SHI	86.67	315	eP	32	14.00	0.3
	1.0s	8.00	nm		4.7mb					ePS	42	44.00		BHD	86.84	323	iPd	32	14.00	-0.1
LDF	80.60	359	eP	31	41.70	-0.5				ePSP	43	25.00					iPP	35	37.00	
	0.8s	24.10	nm		5.2mb		ITU	84.38	338	iPc	32	00.00	-1.9				iS	42	40.00	
WB5	80.78	222	eP	31	41.60	-1.9	RKT	84.40	138	iP	32	19.00	17.0X				iPS	43	44.00	
			i	31	56.40			1.4s	95.00nm					KHL	86.89	336	eP	32	13.00	-1.5
GRR	80.81	360	eP	31	43.40	0.1	ISK	84.41	338	eP	31	54.00	-8.0X	RFI	86.95	349	P	32	15.53	1.0
	1.2s	83.30	nm		5.6mb		DOI	84.42	354	P	32	01.00	-1.1		0.1s	21.90nm			6.3mb	
WRA	80.85	222	Pd	31	42.60	-1.2	PZZ	84.42	354	P	32	00.57	-1.6	CMS	87.30	208	eP	32	15.00	-1.1
	1.2s	82.80	nm		5.6mb		MME	84.45	351	P	32	02.80	0.3	SGO	87.51	348	P	32	16.40	-0.9
HAU	80.98	355	eP	31	44.00	-0.3	LPO	84.49	358	eP	32	02.60	0.2	PTO	87.83	6	eP	32	18.00	-0.8
	1.0s	12.00	nm		4.8mb			0.8s	29.50nm		5.5mb						eS	42	39.00	
SLE	81.08	353	ePc	31	45.50	0.7	HRT	84.49	337	eP	32	02.00	-0.5	MGR	87.89	347	P	32	17.80	-1.3
ISR	81.11	341	eP	31	47.00	2.0	MSL	84.52	325	ePd	32	02.50	-0.1	TDS	88.24	347	P	32	23.50	2.6
BSF	81.13	355	eP	31	44.90	-0.3				ePcP	32	15.00		ELL	88.28	335	eP	32	22.00	0.7
	1.0s	13.60	nm		4.9mb					ePP	35	13.00		YER	88.33	337	eP	32	21.00	-0.4
LPF	81.17	360	eP	31	45.50	0.3				eS	42	26.00		MBL	88.64	233	eP	32	23.00	0.2
	1.2s	53.50	nm		5.4mb		ROB	84.58	353	P	32	02.72	-0.2		0.8s	15.00nm			5.4mb	
CMP	81.29	342	ePc	31	32.00	-13.9X	BDI	84.59	352	P	32	01.80	-1.2	KRP	88.78	183	P	32	25.00	2.0
TRT	81.47	246	ePc	31	44.70	-2.5	SFI	84.60	351	P	32	01.30	-1.6	GRI	89.06	346	P	32	24.47	-0.4
	1.1s	114.10	nm		5.8mb		BBTK	84.61	334	eP	32	04.00	0.8		0.1s	6.60nm			5.9mb	
SAX	81.53	353	ePc	31	49.50	2.0	FIN	84.64	353	P	32	03.44	0.3	BHL	89.29	330	Pc	32	26.00	-0.1
BRS	81.54	203	iPc	31	47.50	0.2	PGD	84.66	351	P	32	03.60	0.1				PP	36	00.00	
			i	31	56.00		STV	84.67	354	P	32	01.60	-1.8				SKS	42	56.00	
RMO	81.75	207	iPc	31	48.70	0.3	ENR	84.68	354	P	32	03.24	-0.2	BWA	89.34	205	eP	32	26.50	0.6
	1.4s	171.00	nm		5.9mb		KDZ	84.68	340	iP	32	05.00	1.6	WARB	89.67	225	eP	32	28.70	1.1
OGA	81.77	352	eP	31	50.00	1.4	POO	84.76	293	iPc	32	03.80	-0.4	SOI	89.84	346	P	32	26.60	-1.8
TAB	81.86	324	iP+	31	51.00	1.8	AOI	84.78	349	eP	32	05.89	2.0	HRI	89.84	330	e(P)	32	24.00	-4.7X
FVI	81.86	350	P	31	49.90	1.1	HVAR	84.78	347	iP	32	03.00	-0.8	CNB	89.94	204	eP	32	31.10	2.4
RBL	81.93	350	P	31	48.70	-0.6	COO	84.80	203	eP	32	04.00	0.1	CAN	90.04	204	eP	32	27.20	-2.0
LLS	81.94	353	ePc	31	50.50	1.0				e	32	18.00		UPA	90.29	75	eP	32	32.60	1.8
BUC1	81.97	341	iPc	31	50.00	0.6	GPA	84.84	336	eP	32	05.00	0.8	Z	20s	2.48	um		5.6Msz	
PTJ	82.17	348	eP	31	51.30	0.7	KER	84.84	322	ePc	32	05.00	0.6	DSI	91.53	329	e(P)	32	36.00	-0.3
LJU	82.21	349	eP	31	51.00	0.3	TOUF	84.90	354	P	32	04.87	0.2	SNZO	92.18	183	P	32	48.00	9.3X
ZAG	82.25	348	ePc	31	51.51	0.6	ARV	84.90	350	P	32	05.46	1.0				SKS	43	15.00	
VDL	82.28	353	ePd	31	52.40	1.1		0.7s	51.10nm		5.8mb						PS	45	02.00	
VOY	82.30	349	eP	31	51.20	-0.1	AUTN	84.91	354	P	32	04.72	0.0				SS	49	12.00	
AVF	82.33	357	eP	31	52.10	0.8	SAOF	84.91	354	P	32	04.38	-0.1				SSS	52	28.00	
	1.2s	50.50	nm		5.4mb		PII	84.93	352	P	32	05.20	0.7	MAL	92.42	3	eP	32	42.00	1.7
SMF	82.46	357	eP	31	53.00	1.0	KKB	84.95	342	eP	32	05.00	0.3				eS	43	48.00	
	1.1s	46.30	nm		5.5mb		IMI	84.96	353	P	32	05.39	0.6				iPS	44	06.00	
KVT	82.54	333	eP	31	43.00	-9.5X	AURF	85.02	354	P	32	05.59	0.4	MBH	93.35	329	e(P)	32	44.00	-0.7
BEO	82.56	345	iP	31	53.50	1.0	MVIF	85.03	354	P	32	04.92	-0.3	HLW	94.36	332	eP	32	50.00	0.6
BGF	82.58	357	eP	31	52.70	0.1	SBF	85.04	354	eP	32	06.40	1.2				e	36	38.00	
	1.0s	20.00	nm		5.1mb			1.0s	60.00nm		5.7mb			FISA	94.53	66	eP	32	52.00	1.6
MFF	82.59	359	eP	31	52.70	0.1	BOM	85.08	294	iPc	32	06.00	0.4	TOV	95.45	67	P	32	56.50	1.8
	1.0s	24.00	nm		5.2mb					eS	42	23.00		SDV	95.68	68	eP	32	57.30	1.4
TRI	82.63	350	eP	31	53.20	0.4	MMB	85.09	342	ePd	32	07.00	1.5	CAR	96.51	64	eP	33	04.00	4.4X
			e(S)	43	16.00		SKO	85.15	343	iPc	32	06.50	0.8	GUAC	96.57	65	eP	33	01.00	1.1
			e(SS)	50	38.00		Z	17s	6524.00	um		9.1MszX		LLAV	96.61	64	eP	33	00.10	0.1
VBY	82.65	348	eP	31	54.90	1.9	N	17s	4164.00	um				CEOS	96.90	66	eP	33	00.10	-1.2
TMA	82.70	353	ePd	31	54.00	0.5	E	17s	5536.00	um				GUAN	97.69	64	eP	33	06.00	1.1
MMK	82.83	354	ePd	31	56.30	2.1				i	32	28.50		ZOBO	116.94	82	PKP	38	15.00	-0.6
DIX	82.83	354	ePd	31	55.60	1.3				iPP	35	24.00					LR	16	22.00	
HYB	82.87	289	iPc	31	53.70	-0.9				i	36	28.00		LPB	117.16	83	ePKP	38	14.00	-1.8
	1.0s	270.00	nm		6.3mb					i	38	24.00		Z	22s	2.96	um		5.9Msz	
			i	32	11.00					iS	42	30.00					LR	15	08.00	
KAS	82.91	334	iPc	31	56.80	2.3				i	43	10.00		CNCB	117.44	83	PKP	38	17.80	1.3
MAF	82.92	357	eP	31	55.50	1.1				iPS	43	37.00		BNG	122.07	337	iPKPd	38	24.40	-0.4
	1.3s	43.30	nm		5.4mb					i	46	05.00			1.6s	91.00	nm			
VAI	82.95	353	P	31	55.54	1.1				iSS	48	05.00					ic	40	00.50	

		id	48	32.30		
TIC	122.31	5 PKP	38	24.58	-0.6	
	0.8s	8.50nm				
KIC	122.60	4 PKP	38	25.10	-0.6	
	0.7s	8.00nm				
LIC	122.73	5 PKP	38	25.34	-0.6	
	0.7s	9.00nm				
	Z 20s	3.00um			5.9Msz	
BAO	128.55	64 ePKP	38	30.00	-7.3X	
SBA	128.98	183 PKPc	38	39.00	2.8X	
PDCR	130.71	52 ePKP	38	41.30	0.0	
		e	38	57.00		
		e	42	01.00		
		e	42	16.90		
LSZ	137.13	316 ePKP	38	50.00	-3.6X	
		i	41	39.90		
		i	42	27.00		
KRI	137.85	313 ePKP	38	58.10	3.1X	
		i	42	28.10		
SPA	140.99	180 e(PKP)	38	55.10	-4.0X	
	1.0s	9.00nm				
	Z 20s	2.61um			6.0Msz	
		e	39	00.40		
BUL	141.19	312 iPKPc	38	58.40	-2.5X	
		i	42	05.70		
MAW	145.42	217 ePKP	39	05.00	-1.5	
	1.1s	80.00nm				
AIA	145.57	138 e(PKP)	39	03.00	-3.9X	
SLR	146.08	307 iPKPc	39	09.00	-0.2	
	1.2s	304.69nm				
KSR	146.88	309 iPKPd	39	11.30	0.8	
	1.1s	114.86nm				
PRY	147.47	307 iPKPc	39	14.50	3.1X	
	1.2s	114.00nm				
FRS	150.87	307 iPKPc	39	21.30	5.0X	
	1.0s	90.00nm				
SNA	160.80	179 e(PKP)	39	27.70	-0.1	
	0.8s	13.43nm				
	S.D. = 1.1	on 352 of 386 obs.				

% SEP 20, 1989 13h 30m 00.16± 1.03s
59.372 N ± 9.3km 6.049 E ± 6.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

BLS1	0.40	87 iP	30	08.38	0.0	
		eS	30	13.73		
KMY	0.44	249 iPc	30	09.22	0.1	
		iS	30	15.07		
ODD1	0.62	28 iP	30	12.33	-0.3	
		iS	30	21.11		
ASK	1.19	339 eP	30	22.93	0.5	
		eS	30	38.52		
HYA	1.80	2 iP	30	32.25	0.8	
		iS	30	53.80		
SUE	1.81	340 eP	30	30.39	-1.1	
		eS	30	52.29		
	S.D. = 0.9	on 6 of 6 obs.				

% SEP 20, 1989 14h 05m 14.05± 0.74s
44.366 N ± 7.7km 7.374 E ± 8.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

STV	0.13	196 P	05	17.30	0.1	
		S	05	19.90		
ENR	0.14	167 P	05	17.36	-0.1	
		S	05	20.54		
DOI	0.17	326 P	05	17.80	-0.1	
		eSg	05	20.40		
PZZ	0.24	306 P	05	19.36	0.1	
		S	05	23.32		
ROB	0.36	101 P	05	21.61	0.1	
		S	05	27.09		
	S.D. = 0.2	on 5 of 5 obs.				

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* SEP 20, 1989 14h 11m 33.25± 1.55s
42.000 N ±12.6km 19.049 E ± 9.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.4 (TTG).

ULC	0.15	104 iPgc	11	36.90	0.0	
		iSg	11	39.50		
BDV	0.33	330 iPgd	11	40.10	0.1	
		eSg	11	46.00		
TTG	0.46	20 ePg	11	42.30	-0.3	
		eSg	11	49.60		
HCY	0.61	318 iPgd	11	45.00	-0.5	
		eSg	11	55.00		
NKY	0.81	357 ePg	11	49.10	0.0	
		eSg	12	02.00		
BRY	0.98	338 ePg	11	52.50	0.6	
		eSg	12	08.50		
OHR	1.58	123 ePn	12	08.00	6.5X	
	S.D. = 0.5	on 6 of 7 obs.				

% SEP 20, 1989 14h 18m 52.84± 0.85s
41.796 N ± 7.2km 12.716 E ± 6.6km
DEPTH = 13.8 ± 5.5 km
SOUTHERN ITALY (390)

RMP	0.02	326 Pc	18	55.20	-0.2	
		eSg	18	56.20		
RDP	0.04	179 P	18	56.00	0.4	
		eSg	18	57.50		
AZI	0.57	70 P	19	03.80	-0.3	
MNS	0.59	357 P	19	03.40	-1.0	
AQU	0.76	42 P	19	07.00	-0.3	
		eSg	19	18.90		
SDI	0.83	96 P	19	07.90	-0.6	
ALP	1.17	33 ePn	19	16.10	1.6	
ASS	1.27	358 P	19	16.20	0.0	
		eSg	19	33.30		
MAO	1.32	299 P	19	16.60	-0.2	
ARV	1.71	6 P	19	22.70	0.3	
	S.D. = 0.9	on 10 of 10 obs.				

? SEP 20, 1989 15h 03m 32.68± 5.71s
33.276 S ±10.3km 72.032 W ±45.2km
DEPTH = 21.8 ± 8.0 km
OFF COAST OF CENTRAL CHILE (134)

IHA	0.41	53 iPc	03	41.80	0.5	
		iS	03	48.10		
LCCH	0.44	117 iPd	03	41.60	-0.1	
		iS	03	49.30		
LNV	0.85	143 iP	03	48.50	-0.2	
		iS	04	00.60		
ROCH	0.91	71 iPd	03	49.50	-0.3	
		iS	04	02.30		
TACH	0.99	113 iPd	03	50.60	-0.4	
		iS	04	05.10		
PEL	1.14	84 iPd	03	53.60	0.2	
		iS	04	10.00		
SAN	1.16	99 iPc	03	54.20	0.5	
		iS	04	14.70		
PCH	1.32	106 iP	03	56.20	0.3	
		iS	04	15.30		
CHCH	1.32	120 iPc	03	56.00	0.0	
		iS	04	15.10		
JACH	1.35	64 iPd	03	50.50	-5.9X	
		iS	04	15.50		
FCH	1.46	93 iPc	03	59.00	0.8	
		iS	04	19.00		
ZON	3.32	60 eP	04	29.00	4.5X	
		eS	05	20.00		
MRA	5.39	83 e(P)	04	55.00	1.2	
TCA	6.59	75 eP	05	08.30	-2.5	
	S.D. = 1.1	on 12 of 14 obs.				

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* SEP 20, 1989 15h 31m 59.96± 2.65s
45.415 N ±21.9km 15.606 E ±11.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.9 (LJU).

VBY	0.26	290 iPgc	32	04.40	-1.1	
		iSg	32	09.50		
ZAG	0.48	33 Pg	32	10.20	0.5	
		iSg	32	17.50		
PTJ	0.54	27 ePg	32	10.40	-0.6	
		eSg	32	19.80		
RIY	0.86	266 iPg	32	16.10	-0.4	
		iSg	32	26.90		
CEY	0.89	292 e(Pg)	32	18.00	1.0	
		eSg	32	31.50		
LJU	0.98	310 iPgd	32	18.90	0.3	
		iSg	32	35.00		
TRI	1.33	283 e(Pg)	32	24.90	0.5	
		iSg	32	43.10		
VOY	1.35	298 ePn	32	24.80	0.0	
		eSn	32	44.40		
KHC	3.97	340 eP	33	05.50	3.4X	
		e	33	57.00		
	S.D. = 0.8	on 8 of 9 obs.				

SEP 20, 1989 16h 20m 07.98± 0.37s
53.302 N ± 8.9km 170.321 E ± 5.6km
DEPTH = 33.0km (normal)
4.7mb (18 obs.)
NEAR ISLANDS, ALEUTIAN ISLANDS (5)

SMY	2.36	103 eP	20	45.10	0.0	
ADK	8.04	95 eP	22	02.90	-2.4	
TTA	19.99	48 eP	24	39.50	-0.7	
FBA	23.93	45 eP	25	20.00	0.6	
	1.0s	20.00nm			4.6mb	
MDJ	27.79	268 eP	25	54.50	-1.1	
		eS	30	30.00		
CN2	30.72	270 eP	26	21.40	-0.4	
	Z 10s	1.40um			4.9MszX	
		pP	26	28.40	24kmX	
MBC	34.41	24 eP	26	54.00	0.4	
	0.9s	5.00nm			4.4mb	
PNT	42.38	66 eP	28	01.00	0.6	
	0.5s	7.00nm			4.6mb	
LON	42.59	70 eP	28	03.30	1.1	
EDM	43.58	58 eP	28	10.00	-0.2	
FHC	44.91	79 e(P)	28	28.50	7.4X	
WDC	45.90	78 e(P)	28	32.90	4.0X	
WHN	46.03	263 P	28	31.50	1.5	
	E 10s	1.60um				
ORV	47.17	78 e(P)	28	42.10	3.2X	
LRM	48.35	66 eP	28	48.20	-0.2	
LLA	49.45	81 e(P)	29	00.50	3.9X	
KVN	49.49	76 eP	28	58.00	0.8	
TNP	50.65	77 eP	29	06.00	-0.1	
	0.7s	5.00nm			4.6mb	
ISA	51.56	80 eP	29	10.00	-2.8X	
DAU	52.52	70 eP	29	25.70	5.4X	
SBB	52.62	80 eP	29	23.00	2.2	
GYA	53.62	266 P	29	28.60	0.4	
RSSD	54.00	63 eP	29	30.80	-0.2	
RSON	54.61	51 eP	29	33.60	-1.6	
GLA	55.54	79 eP	29	42.00	-0.1	
GOL	56.30	67 eP	29	48.80	0.9	
	0.6s	15.02nm			5.2mb	
GLD	56.35	67 eP	29	49.50	1.4	
SOD	56.61	344 eP	29	47.00	-2.4	
ALQ	59.05	72 eP	30	07.00	-0.2	
	1.0s	5.00nm			4.6mb	
SUF	60.95	342 eP	30	19.90	0.4	
NUR	63.27	342 eP	30	34.00	-1.0	
NB2	64.80	349 P	30	44.80	-0.3	
	0.7s	6.10nm			4.8mb	
HFS	65.37	347 eP	30	47.90	-0.8	
	0.6s	5.80nm			4.9mb	
FVM	65.55	59 eP	30	49.10	-1.1	
EKA	71.60	356 P	31	28.00	0.7	
	0.8s	13.50nm			5.0mb	
PRU	75.07	344 Pd	31	46.40	-1.3	
CTA	76.00	203 iPc	31	53.30	0.0	
	1.0s	17.00nm			5.0mb	
KHC	76.06	345 P	31	52.70	-0.7	
LOR	79.15	351 eP	32	11.10	0.6	
	0.8s	5.90nm			4.6mb	
WB5	79.23	214 eP	32	11.00	-0.1	
		e	33	02.00		
WRA	79.30	214 Pc	32	11.40	-0.1	
	1.0s	6.40nm			4.6mb	
SSF	79.38	351 eP	32	12.70	1.0	
	0.8s	5.30nm			4.6mb	
LBF	79.42	351 eP	32	12.60	0.7	
	0.8s	4.00nm			4.5mb	
AVF	79.67	351 eP	32	13.90	0.7	
	0.8s	16.10nm			5.1mb	
MAF	80.30	351 eP	32	17.70	1.0	
	0.8s	5.30nm			4.6mb	
LPG	80.58	348 eP	32	19.40	0.9	
	1.0s	10.00nm			4.8mb	
BOB	80.94	346 P	32	20.90	0.7	
RRL	81.14	348 P	32	23.65	2.2	
PCP	81.29	347 P	32	22.93	1.0	
PZZ	81.51	348 P	32	22.42	-0.8	
ROB	81.62	347 P	32	24.06	0.4	
FIN	81.66	347 P	32	23.75	-0.1	
IMI	82.00	347 P	32	22.73	-2.9	
ASPA	82.90	213 iPc	32	31.40	1.0	

20d 16h

1.0s 11.00nm 4.9mb .
MAW 143.88 218 ePKP 39 37.50 -2.3
S.D. = 1.2 on 49 of 55 obs.

% SEP 20, 1989 16h 21m 50.32± 1.23s
59.246 N ±11.6km 5.965 E ± 5.8km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
ML 2.7 (NAO) MD 2.4 (BER).
Felt.

BLS3	0.33	57	eP	21	58.60	1.3
			eS	22	04.13	
KMY	0.37	265	eP	21	58.36	0.4
			eS	22	03.39	
BLS1	0.47	71	eP	22	00.08	0.3
			eS	22	06.88	
BLS2	0.50	84	eP	21	59.43	-1.0
			eS	22	05.10	
ODD1	0.75	27	eP	22	05.67	0.7
			eS	22	17.12	
ASK	1.30	343	eP	22	15.56	1.2
			eS	22	30.80	
SUE	1.91	342	eP	22	22.12	-1.1
			eS	22	44.87	
HYA	1.93	3	eP	22	22.86	-0.6
			eS	22	47.90	
NB2	3.18	53	P	22	46.60	5.2X
MOL	3.42	12	iP	22	43.48	-1 3
			eS	23	23.06	

S.D. = 1.2 on 9 of 10 obs.

SEP 20, 1989 16h 22m 00.94± 0.32s
39.088 N ± 7.7km 97.107 E ± 4.9km
DEPTH = 33.0km (normol)
4.9mb (6 obs.)
GANSU PROVINCE, CHINA (322)

GTA	2.13	80	iPnd	22	35.00	0.0
Z	10s		47.50um			
			Sg	23	01.50	
LZH	6.13	117	Pn	23	29.20	-2.6
	1.5s		0.05nm			2.0mb X
E	10s		4.60um			
			Lg	25	06.00	
			e	25	23.00	
WMQ	8.50	307	P	24	02.80	-2.0
			S	25	33.00	
CD2	9.81	144	eP	24	24.20	1.4
Z	10s		3.80um			
BTO	10.05	77	eP	24	24.50	-1.6
N	10s		2.60um			
E	10s		2.30um			
XAN	10.75	114	P	24	31.60	-4.1X
N	15s		2.50um			
E	12s		5.60um			
HHC	11.24	76	eP	24	41.00	-1.4
TIY	12.11	92	eP	24	49.90	-4.2X
N	11s		3.80um			
KMI	14.71	159	Pd	25	33.50	4.8X
BJI	14.74	80	eP	25	30.50	1.7
			Lg	29	25.50	
GYA	14.93	145	P	25	29.00	-2.4
			S	28	23.00	
TIA	16.11	94	eP	25	47.30	0.8
N	12s		3.40um			
E	12s		0.80um			
KSH	16.37	278	eP	25	50.50	0.6
E	12s		3.00um			
WHN	16.51	116	eP	25	54.00	2.5
NDI	19.46	244	eP	26	27.50	-0.3
CHG	20.27	175	eP	26	35.30	-1.1
	0.9s		12.18nm			4.2mb
			e	30	41.00	
SNY	20.30	74	eP	26	36.70	0.1
Z	16s		1.10um			4.3MszX
N	10s		3.00um			
			S	30	19.00	
SSE	21.21	105	P	26	47.00	1.0
	1.3s		0.07nm			1.9mb X
Z	12s		1.40um			4.6MszX
E	11s		0.90um			
			esS	30	50.00	
LOE	21.98	168	eP	26	54.00	0.2
QIZ	22.83	147	eP	27	02.80	0.6
E	14s		1.00um			
			eS	31	00.00	

QUE	26.26	259	P	27	35.00	-0.1
MLR	51.46	302	eP	31	06.00	0.9
SPC	53.85	308	eP	31	24.50	1.6
NB2	54.85	324	P	31	29.00	-1.0
	0.9s		6.20nm			4.6mb
KSP	55.64	311	eP	31	36.30	0.5
ZST	56.15	307	iP	31	40.50	1.1
BRG	57.01	311	eP	31	44.80	-0.8
	1.1s		21.00nm			5.1mb
			e	32	45.40	
CLL	57.38	312	eP	31	47.00	-1.2
MOX	58.45	312	eP	31	55.50	-0.2
SGO	60.57	300	P	32	10.60	0.2
MGR	60.60	299	Pc	32	10.60	-0.1
ASS	61.15	304	P	32	15.80	1.4
SOI	61.24	297	P	32	15.00	0.0
SFI	61.28	305	P	32	17.00	1.9
PGD	61.38	305	P	32	15.80	-0.3
MNS	61.46	303	Pc	32	16.40	-0.1
MME	61.88	306	P	32	19.90	0.3
LSD	63.48	308	P	32	28.57	-1.6
CVF	63.84	305	eP	32	31.00	-1.3
	1.0s		12.00nm			5.0mb
ASPA	71.29	145	iPc	33	19.10	0.0
	1.4s		30.00nm			5.1mb
BNG	78.34	266	iPd	34	00.20	0.4
	0.8s		12.00nm			5.0mb
ZOBO	153.85	326	PKP	41	52.00	0.9

S.D. = 1.2 on 39 of 42 obs.

? SEP 20, 1989 16h 46m 30.43± 2.81s
32.288 S ±15.8km 71.765 W ±17.7km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.93	137	iP	46	48.50	0.1
JACH	1.07	112	iPd	46	50.70	0.1
			iS	47	05.60	
LCCH	1.20	172	iPc	46	52.20	-0.5
			iS	47	06.60	
PEL	1.25	133	iPd	46	53.50	-0.1
			iS	47	10.20	
TACH	1.53	153	iPd	46	57.60	-0.2
			iS	47	16.00	
FCH	1.62	130	iPd	46	59.60	0.2
			iS	47	20.50	
LNV	1.69	170	iPc	47	00.70	0.6
			iS	47	23.50	
TCA	6.18	83	ePc	48	03.80	-0.2
			S	49	13.20	

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

? SEP 20, 1989 16h 57m 44.47± 4.11s
31.526 S ±38.7km 70.581 W ±29.2km
DEPTH = 160.1 ± 26.7 km
CHILE-ARGENTINA BORDER REGION (127)

JACH	1.15	181	iPc	58	11.00	-0.9
			iS	58	27.50	
PEL	1.62	183	iPc	58	16.10	-0.3
			iS	58	36.30	
ZON	1.62	91	eP	58	17.00	0.5
			eS	58	36.00	
FCH	1.81	172	iPc	58	19.50	0.7
			iS	58	42.00	
CFA	2.00	93	e(P)	58	02.20	-18.4X
LCCH	2.12	203	iPc	58	22.40	0.5
			iS	58	48.50	
TACH	2.14	188	iPc	58	22.40	0.1
			iS	58	47.50	
LNV	2.52	196	iPd	58	26.50	-0.3
			iS	58	54.50	
MRA	4.23	103	ePd	58	48.50	-0.2
TCA	5.12	89	ePc	59	00.30	-0.2
			(S)	59	53.20	

S.D. = 0.6 on 9 of 10 obs.

? SEP 20, 1989 17h 23m 11.38± 4.18s
15.391 S ±45.5km 75.151 W ±42.7km
DEPTH = 33.0km (normol)
NEAR COAST OF PERU (115)

HUA	3.34	357	eP	24	02.30	-0.6
			eS	24	51.70	
ARE	3.68	107	eP	24	06.00	-1.6
			iS	24	56.40	
NNA	3.76	334	eP	24	09.00	0.5

0.7s 13.70nm
eS 24 52.70

ZOBO	6.82	98	P	24	53.00	0.7
LPB	6.88	100	P	24	54.00	1.0
CNCB	7.03	103	P	24	57.00	1.7X

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

? SEP 20, 1989 17h 52m 16.50± 4.86s
24.049 S ±19.8km 177.012 W ±17.9km
DEPTH = 237.2 ± 44.5 km
4.2mb (5 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	15.35	274	iPc	55	42.00	-0.9
RMQ	31.00	258	eP	58	15.20	1.2
CTA	34.21	269	iPd	58	42.00	0.3
	1.0s		15.00nm			4.6mb
PMG	37.14	287	eP	59	07.00	0.7
ASPA	44.71	260	eP	00	10.20	2.2
WB5	45.11	265	eP	00	10.50	-0.7
			e	02	00.20	
WRA	45.12	265	Pd	00	10.50	-0.8
	0.4s		1.10nm			3.6mb
WARB	50.72	255	eP	00	53.00	-1.4
SPA	66.09	180	e(P)	02	39.30	-0.8
	0.9s		3.18nm			4.0mb
MAW	78.55	200	eP	03	54.00	1.4
CMB	81.46	42	ePd	04	08.70	0.2
WDC	81.83	39	eP	04	09.40	-0.9
TNP	83.45	43	iP	04	19.30	0.4
	1.0s		5.50nm			4.3mb
KVN	83.49	42	eP	04	19.20	0.2
ALQ	88.91	51	eP	04	46.00	0.5
	1.2s		3.91nm			4.2mb
			pP	05	10.00	89kmX
FBA	91.50	12	iP	04	58.00	1.5
RSSD	95.07	44	eP	05	14.00	0.3
NB2	142.60	353	PKP	11	20.90	-1.4
	0.9s		3.10nm			
HFS	143.17	351	ePKP	11	21.00	-2.2
	0.4s		5.60nm			
KAS	149.09	311	ePKP	11	41.50	7.9X
HRI	149.93	295	ePKP	11	45.00	9.9X
BBTK	150.41	309	ePKP	11	44.00	8.3X
KRA	150.87	337	ePKP	11	44.60	8.7X
			e	11	54.30	
MBH	151.05	288	ePKP	11	46.00	9.2X
KSP	151.33	342	iPKPd	11	46.20	9.6X
			ic	11	55.00	
CLL	151.71	347	iPKP	11	46.90	9.8X
	1.3s		23.00nm			
			i	11	55.00	
BRG	151.91	345	iPKP	11	47.20	9.8X
	0.7s		12.00nm			
			i	11	56.70	
PRU	152.58	344	ePKP	11	48.50	10.1X
			e	11	56.00	

S.D. = 1.3 on 19 of 28 obs.

• SEP 20, 1989 17h 53m 29.03± 0.61s
51.025 N ±13.1km 178.883 E ± 8.2km
DEPTH = 33.0km (normol)
4.3mb (2 obs.)
RAT ISLANDS, ALEUTIAN ISLANDS (6)

ADK	2.90	71	eP	54	15.80	1.9
SMY	3.42	302	eP	54	22.90	1.6
KDC	17.88	57	e(P)	57	34.00	-2.5
TTA	18.00	39	e(P)	57	37.00	-1.0
FBA	22.13	38	eP	58	23.00	0.1
INK	28.59	35	eP	59	25.00	1.4
MBC	34.48	22	eP	00	14.50	-0.8
	0.6s		3.00nm			4.4mb
LON	38.32	73	eP	00	45.00	-3.1X
KVN	44.80	80	eP	01	41.90	0.4
TNP	45.93	80	e(P)	01	50.50	0.0
MSU	48.79	77	eP	02	13.50	0.6
PLM	49.17	85	eP	02	16.30	0.5
MTN	75.95	228	eP	05	14.00	-0.2
			i	05	26.40	
QUE	79.42	305	eP	05	32.00	-1.5
WB5	80.69	222	eP	05	39.80	-0.3
WRA	80.76	222	Pc	05	40.10	-0.3
	0.6s		1.40nm			4.1mb
HYB	82.96	289	eP	05	52.00	-0.1

S.D. = 1.2 on 16 of 17 obs.

* SEP 20, 1989 21h 01m 11.36± 2.86s
35.967 N ±21.8km 140.503 E ±19.9km
DEPTH = 88.1 ± 20.6 km
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	0.36	312	P	01	25.30	0.3
			S	01	34.70	
CHJJ	1.23	274	iP+	01	33.30	-0.6
NIIJ	1.75	317	iP+	01	40.50	-0.2
MAT	1.94	288	iPc	01	43.10	-0.2
			iS	02	05.10	
IIDJ	2.16	258	iPd	01	46.80	0.5
			S	02	11.60	
YAMJ	2.23	351	iPd	01	47.70	0.5
			S	02	13.80	
OFUJ	3.24	16	iP+	02	00.30	-0.7
			S	02	35.90	
AOMJ	4.59	359	eP	02	20.10	0.5

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

% SEP 20, 1989 22h 07m 55.56± 3.57s
41.223 N ±26.3km 23.339 E ±15.6km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

MMB	0.47	38	ePg	08	05.00	-0.1
KKB	0.67	343	ePg	08	08.00	-0.9
RZN	1.13	65	eP	08	17.00	0.1
VTS	1.37	356	eP	08	22.00	1.2
KDZ	1.62	74	iP	08	24.00	-0.2

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

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* SEP 20, 1989 23h 19m 27.29± 0.78s
42.548 N ± 6.4km 13.203 E ± 6.9km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.1 (SSO).

ALP	0.36	50	iPg	19	34.42	-0.3
			iSg	19	39.82	
MNS	0.42	247	Pc	19	35.60	-0.3
ASS	0.66	323	P	19	40.60	0.2
			eSg	19	50.10	
SDI	0.96	151	P	19	45.80	0.3
			eSg	20	00.00	
ARV	0.97	349	P	19	45.90	0.2

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

SEP 20, 1989 23h 28m 11.82± 0.53s
6.327 S ± 4.4km 128.047 E ± 6.9km
DEPTH = 366.3 ± 7.0 km
4.9mb (13 obs.)
BANDA SEA (280)

AAI	2.63	3	ePd	29	09.00	-0.7
			eS	29	58.70	
TLE	4.73	82	iPc	29	29.20	-0.6
			iS	30	20.80	
KUG	5.83	229	ePd	29	46.20	4.3X
MTN	7.16	155	iPd	29	56.20	-0.9
			eS	31	14.00	
MNI	8.36	337	ePc	30	11.00	-0.2
MKS	8.60	277	iPc	30	17.00	2.9
WB5	14.81	156	iPd	31	25.10	-1.0
			eS	34	01.00	
WRA	14.85	156	Pd	31	25.40	-1.2
	0.6s	110.40nm			5.4mb	
MBL	16.75	208	iPd	31	45.70	-0.9
	0.3s	27.00nm			5.1mb	
QIS	18.05	143	iPc	31	59.80	0.1
			eS	35	07.40	
ASPA	18.14	163	ePd	32	00.00	-0.6
	0.2s	65.00nm			5.6mb	
			iS	35	08.60	
			iScS	42	55.30	
PMG	19.17	100	eP	32	13.00	2.2
	1.0s	160.00nm			5.3mb	
WARB	19.79	184	iPd	32	18.60	1.7
	0.3s	7.00nm			4.6mb	
NANU	20.16	216	iPd	32	21.20	0.8
	0.4s	47.00nm			5.2mb	
MEKA	22.12	203	iPd	32	39.30	0.1
	0.4s	50.00nm			5.2mb	
CTA	22.35	129	iPc	32	42.90	1.4
	1.3s	115.38nm			5.1mb	
COOL	25.27	194	iPc	33	07.40	-0.7
	0.3s	4.00nm			4.3mb	
MRWA	25.45	205	eP	33	09.00	-0.7
	0.4s	11.00nm			4.6mb	
BAL	26.40	202	eP	33	17.00	-1.2
KLB	26.92	200	iPd	33	22.30	-0.6
RMQ	28.14	138	eP	33	33.00	-0.7
NWAO	28.31	199	eP	33	34.00	-1.2
	0.5s	11.00nm			4.4mb	
CMS	30.06	149	eP	33	51.00	0.6
			e	34	47.00	
BWA	33.71	149	iPc	34	24.20	2.4
CAN	34.70	149	iPc	34	31.70	1.6
SSE	37.78	350	P	34	55.70	0.0
	1.0s	0.04nm			1.6mb X	
CHG	38.04	312	eP	34	58.90	0.9
WHN	38.94	341	iPd	35	06.50	1.3
NJ2	39.16	348	Pd	35	06.50	-0.5
	0.8s	0.05nm			1.8mb X	
KMI	39.79	323	Pd	35	13.50	0.9
DZM	40.23	117	iPc	35	17.00	0.9
TIA	43.54	347	eP	35	41.40	-0.9
MAT	43.69	12	eP	35	43.00	-0.6
	0.9s	11.76nm			4.1mb	
CD2	43.72	329	eP	35	43.60	-0.3
XAN	44.04	337	Pd	35	45.50	-0.9
BJI	47.42	348	eP	36	12.00	-0.5
	1.0s	0.03nm			1.4mb X	
LZH	47.92	333	Pd	36	16.50	-0.2
	1.5s	0.09nm			1.8mb X	
SNY	48.09	356	Pd	36	17.30	-0.4
HHC	49.33	344	P	36	27.20	-0.1
MDJ	50.73	1	eP	36	37.00	-0.5
GTA	52.47	332	iPd	36	50.60	0.0
MNG	54.35	136	P	37	03.50	-0.6
	0.4s	7.00nm			4.4mb	
PGZ	54.90	136	eP	37	08.10	0.1
WMQ	61.79	328	P	37	55.50	0.5
			eS	45	48.00	
PPD	151.81	181	ePKP	47	26.40	7.6X
CNCB	152.08	146	PKP	47	23.00	3.0X
LPB	152.23	145	ePKP	47	24.00	3.9X
ZOBO	152.43	145	PKP	47	19.00	-1.5

S.D. = 1.1 on 44 of 48 obs.

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* SEP 20, 1989 23h 58m 25.00± 1.46s
1.956 N ± 9.4km 127.057 E ±12.5km
DEPTH = 140.8 ± 12.3 km
4.7mb (9 obs.)
HALMAHERA (267)

MNI	2.27	257	ePd	59	03.00	-0.3
MTN	15.25	165	iPd	01	55.50	1.3
WB5	22.86	162	iPc	03	16.50	-0.5
WRA	22.91	162	Pd	03	17.40	-0.1
	0.5s	78.20nm			5.4mb X	
MBL	24.04	197	iPc	03	29.30	0.9
	0.4s	13.00nm			4.8mb	
QIS	25.53	152	iPd	03	41.50	-0.8
	0.3s	15.00nm			5.0mb X	
ASPA	26.32	166	iPc	03	48.40	-1.2
	0.4s	39.00nm			5.4mb X	
WARB	27.98	181	eP	04	04.70	0.2
	0.3s	5.00nm			4.8mb	
MEKA	29.57	196	iPd	04	19.20	0.5
	0.3s	28.00nm			5.5mb	
CHTO	32.24	303	iP	04	42.50	0.3
	0.8s	11.90nm			4.7mb	
FORR	32.64	178	eP	04	44.20	-1.2
	0.3s	25.00nm			5.5mb	
MRWA	32.76	198	iPd	04	46.90	0.3
	0.3s	4.00nm			4.7mb	
COOL	33.14	189	eP	04	49.00	-0.9
	0.4s	5.00nm			4.6mb	
BAL	33.85	196	eP	04	56.00	0.0
	0.3s	4.00nm			4.6mb	
KLB	34.51	194	eP	05	01.00	-0.6
NWAO	35.92	194	eP	05	14.00	0.6
	0.3s	8.00nm			5.0mb X	
STK	36.37	159	iPc	05	16.70	-0.6
	0.4s	11.00nm			5.0mb X	
BJI	39.18	347	eP	05	40.50	-0.1
BWA	41.38	153	eP	06	00.30	1.4
CAN	42.39	153	eP	06	07.70	0.6
HYB	50.04	291	eP	07	08.50	1.0
GBA	50.40	286	Pc	07	09.30	-0.9
	0.8s	5.40nm			4.4mb	

S.D. = 0.8 on 22 of 22 obs.

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* SEP 21, 1989 00h 11m 34.61± 1.74s
27.887 S ±11.0km 67.225 W ±21.5km
DEPTH = 163.3 ± 39.4 km
CATAMARCA PROVINCE, ARGENTINA (130)

CYA	1.38	114	iPc	12	04.40	0.0
SLA	3.51	27	ePd	12	29.70	0.0
CFA	3.81	193	iPd	12	34.50	1.1
			S	13	18.00	
ZON	3.86	199	e(P)	12	33.00	-1.1
			eS	13	23.00	
TCA	4.13	147	ePc	12	37.20	-0.5
			(S)	13	13.80	
MRA	4.70	164	ePc	12	45.40	0.4

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

SEP 21, 1989 00h 30m 35.80± 0.36s
36.549 N ± 5.6km 141.360 E ± 4.4km
DEPTH = 41.5km (4 depth phases)
4.9mb (7 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (II JMA) at Fukushimo, Mito and Onahamo, (I JMA) at Sendoi, Shirokawo and Utsunomiyo.

ONA	0.54	318	P	30	46.70	-0.4
			S	30	53.40	
MIT	0.74	257	iP+	30	49.00	-0.8
			iS	30	58.30	
KAKJ	1.02	251	iP+	30	52.30	-1.5
			S	31	03.60	
SHR	1.07	302	eP	30	00.00	-54.6X
UTS	1.20	270	eP	30	56.00	-0.3
			S	31	08.60	
FKS	1.40	330	iPd	30	59.40	0.2
			iS	31	15.90	
SEN	1.75	348	iPd	31	04.60	0.5
			iS	31	24.70	
YAMJ	1.93	327	iPd	31	06.80	0.0
			S	31	29.00	
CHJJ	1.97	256	iP+	31	06.00	-1.4
			S	31	28.00	
NIIJ	2.01	291	iPd	31	07.40	-0.5
			S	31	31.50	
MAT	2.54	271	iPc	31	15.30	-0.1
			eS	31	46.00	
OFUJ	2.54	5	P	31	14.80	-0.6
			eS	31	44.40	
MTMJ	2.86	272	iPd	31	20.20	0.1
IIDJ	2.99	250	P	31	22.60	0.6
			S	31	56.70	
AOMJ	4.08	349	eP	31	41.20	3.9X
TSRJ	4.47	259	eP	31	43.90	1.0
WKYJ	5.25	245	P	31	55.50	1.5
MRRJ	5.87	358	eP	32	04.00	1.4
			eS	33	08.70	
HOOJ	6.01	14	P	32	02.40	-2.2
			eS	33	05.60	
TKSJ	6.50	249	eP	32	11.10	-0.4
YONJ	6.55	260	P	32	13.70	1.5
KUSJ	7.03	20	eP	32	15.20	-3.6X
			S	33	29.50	
SHK	7.36	257	eP	32	25.30	1.8
ASAJ	7.62	7	eP	32	25.20	-1.9
			eS	33	49.70	
MDJ	12.03	316	eP	33	31.00	3.6X
CN2	14.15	306	eP	33	53.80	-1.6
			eS	36	36.00	
SNY	14.76	296	eP	34	03.80	0.4
TIA	19.51	276	eP	35	04.00	1.5
BJI	20.05	288	eP	35	07.50	-0.6
	N 10s	0.54um				
TIY	23.06	282	eP	35	40.60	2.1
	E 13s	0.40um				
GYA	31.10	261	P	36	55.00	2.4
CD2	31.63	271	eP	37	02.20	5.0X
GTA	32.67	288	eP	37	04.00	-2.2
WMQ	41.02	297	eP	38	11.20	-5.4X
PMR	49.04	36	P	39	21.00	0.8
	0.9s	12.50nm			4.9mb	
FBA	49.54	32	P	39	25.00	1.0
	0.9s	12.50nm			4.9mb	
MTN	50.07	193	eP	39	26.80	-1.7
INK	54.84	27	eP	40	03.50	-0.2
WB5	56.51	188	eP	40	14.00	-2.2
HYB	58.15	269	eP	40	29.50	1.5
ASPA	60.30	188	iPc	40	40.80	-1.8

21d 00h

	0.9s	11.00nm		5.0mb	
GBA	61.14	266 Pc	40	46.20	-2.3
	1.2s	5.40nm		4.6mb	
SUF	68.40	333 eP	41	33.60	-1.3
LON	68.61	47 P	41	37.00	0.4
		pP	41	49.20	41km
BWA	70.91	174 eP	41	50.40	-0.2
WDC	71.40	53 ePc	41	54.00	0.4
CAN	71.86	173 eP	41	55.50	-0.7
MIN	72 12	53 e(P)	41	58.20	0.1
ORV	72.62	53 ePc	42	01.00	0.1
BRK	73 04	55 e(P)	42	02.40	-0.9
MHC	73.75	55 ePc	42	08.10	0.5
FFC	74.14	33 eP	42	09.50	0.1
	1.1s	20.00nm		5.0mb	
CMB	74.19	54 ePc	42	10.80	0.7
		e	42	23.20	42km
LLA	74.61	56 ePc	42	13.20	0.7
NB2	74.62	337 P	42	11.00	-1.1
	1.0s	7.90nm		4.6mb	
KVN	75.09	52 eP	42	16.20	0.7
FRI	75.22	55 eP	42	15.40	-0.5
TNP	76.21	53 eP	42	22.50	0.6
DAU	78.51	48 P	42	35.80	1.1
KRA	79.47	326 eP	42	51.20	12.0X
	0.7s	21.00nm			
KSP	80.49	328 eP	42	44.50	-0.2
		ec	42	56.70	41km
BRG	81.45	329 eP	43	01.80	12.1X
	0.8s	10.00nm			
CLL	81.49	330 iPc	43	01.60	11.7X
	1.1s	22.00nm			
PRU	81.87	329 P	43	04.40	12.5X
KHC	82.93	328 iPc	43	10.00	12.5X
GRF	83.47	330 iPc	43	13.10	12.9X
	1.0s	24.00nm			
ALO	84.94	50 P	43	09.90	1.8
	1.0s	6.00nm		4.7mb	
		pP	43	22.50	42km
CDF	86.05	331 eP	43	25.10	11.8X
	0.8s	8.00nm			
HAU	86.74	332 eP	43	28.20	11.6X
	0.8s	5.30nm			
AVF	88.88	333 eP	43	39.00	12.1X
	0.8s	8.00nm			
LSF	90.01	333 eP	43	44.20	12.0X
	0.8s	8.00nm			
LFF	91.41	333 eP	43	51.30	12.6X
ZOBO	146.97	60 PKP	50	16.60	2.0
LPB	147.16	60 ePKP	50	24.00	9.3X
CNCB	147.43	61 PKP	50	19.00	3.7X
CCH	149.10	59 PKP	50	27.90	10.3X
	S.D. = 1.2	on 56 of 76 obs.			

? SEP 21, 1989 00h 54m 39.30± 1.05s
46.267 N ±29.6km 12.705 E ±14.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
MD 2.7 (LJU), 2.3 (TRI).

VOY	0.86	105 ePg	54	56.20	0.3
		eSg	55	06.80	
TRI	0.93	127 e(Pg)	54	56.90	-0.1
		iSg	55	10.50	
LJU	1.29	99 eP	55	03.00	-0.2
		eSg	55	22.00	
OGA	1.31	298 ePg	55	03.60	0.0
	S.D. = 0.4	on 4 of 4 obs.			

% SEP 21, 1989 01h 21m 55.55± 1.32s
42.301 N ± 5.8km 13.735 E ±12.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

AZI	0.38	216 P	22	03.40	0.0
		eSg	22	09.10	
SDI	0.60	174 P	22	07.60	-0.1
		eSg	22	16.40	
MNS	0.79	276 P	22	10.50	-0.4
RDP	0.93	235 P	22	13.70	0.3
		eSg	22	27.00	
ASS	1.10	315 P	22	16.50	0.2
		eSg	22	32.90	
ARV	1.33	334 P	22	20.10	0.0
	S.D. = 0.3	on 6 of 6 obs.			

• SEP 21, 1989 01h 25m 18.46± 2.56s
15.122 N ±15.4km 60.925 W ±29.4km
DEPTH = 24.9 ± 14.4 km
LEEWARD ISLANDS (92)
ML 2.8 (FDF).

CRM	0.37	178 iPc	25	26.52	0.0
		S	25	31.20	
FDF	0.44	209 iPc	25	27.79	0.0
		S	25	34.40	
MVM	0.56	177 iPc	25	29.72	0.0
BIM	0.62	193 iPc	25	30.54	-0.1
		S	25	39.70	
BBL	0.67	307 eP	25	31.40	0.0
		S	25	40.00	
SLB	1.29	185 eP	25	41.08	0.0
		eS	25	58.05	
	S.D. = 0.1	on 6 of 6 obs.			

& SEP 21, 1989 01h 26m 13.80s
38.800 N 122.800 W
DEPTH = 3.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 2.9 (BRK).

NWRM	0.35	191 eP	26	21.60	0.8
ZSP	0.95	153 ePc	26	32.40	-0.2
		iS	26	48.20	
BRK	1.02	155 ePc	26	33.50	-0.2
		eS	26	49.00	
BKS	1.02	154 ePc	26	33.80	0.0
ORV	1.26	53 ePc	26	35.80	-2.1
PCC	1.34	166 ePc	26	38.30	-0.9
MHC	1.72	148 eP	26	44.10	-0.8
ARN	1.76	145 eP	26	43.80	-1.6
WDC	1.79	6 e(P)	26	47.40	1.6
MIN	1.80	31 ePc	26	46.80	0.7
GCC	1.88	160 ePc	26	45.50	-1.6
CMB	2.04	111 ePc	26	48.20	-1.4
SAO	2.30	152 eP	26	51.40	-1.8
LLA	2.63	145 ePc	26	57.10	-0.8
KVN	3.67	85 eP	27	10.00	-2.9
	15 obs. associated				

% SEP 21, 1989 01h 37m 30.80± 0.69s
34.973 N ± 8.2km 135.577 E ± 7.4km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF SOUTHERN HONSHU(233)
MG 3.1 (JMA). Felt (II JMA) at Kyoto.

KYO	0.13	73 iPd	37	33.90	-0.1
		iS	37	36.20	
TSRJ	0.65	30 iPd	37	43.20	-0.6
		S	37	51.40	
WKYJ	0.75	179 P	37	45.10	-0.4
		S	37	55.00	
TKSJ	1.60	232 P	37	59.40	0.2
		eS	38	21.30	
YONJ	1.75	278 iP+	38	01.50	0.2
		S	38	24.20	
IIDJ	1.98	75 P	38	05.50	0.8
		S	38	31.00	
	S.D. = 0.6	on 6 of 6 obs.			

• SEP 21, 1989 02h 02m 55.06± 1.35s
35.533 N ±11.9km 139.012 E ± 8.0km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF HONSHU, JAPAN (230)
MG 3.6 (JMA). Felt (I JMA) at Kawaguchi-ko.

CHJJ	0.51	358 iP+	03	05.60	0.1
		S	03	12.60	
IIDJ	0.90	267 iPd	03	11.70	-0.6
		S	03	23.40	
KAKJ	1.16	54 P	03	16.10	-0.6
		S	03	31.50	
MAT	1.20	327 iPd	03	16.80	-0.6
		iS	03	32.10	
NIIJ	1.70	360 P	03	25.30	0.4
		S	03	47.40	
TSRJ	2.47	271 eP	03	36.80	0.8
OFUJ	4.12	30 eP	03	59.90	0.5
	S.D. = 0.7	on 7 of 7 obs.			

& SEP 21, 1989 02h 30m 50.30s
40.365 N 124.657 W
DEPTH = 12.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.3 (BRK).

FHC	0.67	49 ePc	31	03.00	-0.5
		iS	31	12.20	
		e	31	13.50	
WDC	1.63	82 ePc	31	16.10	-2.8
		e	31	47.20	
LTCM	1.94	94 eP	31	22.30	-1.1
MIN	2.33	90 ePc	31	26.10	-3.1
		e	31	53.20	
ORV	2.56	107 eP	31	29.50	-2.7
		e	32	00.50	
KVN	5.22	102 eP	32	07.50	-2.8
	6 obs. associated				

? SEP 21, 1989 02h 43m 30.72± 3.27s
35.324 N ±23.1km 140.505 E ±19.0km
DEPTH = 10.0km (geophysicist)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	0.92	343 iPd	43	48.40	0.1
		S	43	59.40	
CHJJ	1.43	301 P	43	56.30	-0.3
IIDJ	2.12	275 P	44	06.60	-0.2
MAT	2.22	304 (P)	44	09.00	0.8
		(S)	44	33.00	
NIIJ	2.27	328 P	44	08.60	-0.2
YAMJ	2.87	353 eP	44	16.70	-0.6
OFUJ	3.86	14 eP	44	31.80	0.4
	S.D. = 0.6	on 7 of 7 obs.			

% SEP 21, 1989 03h 59m 19.95± 0.73s
46.223 N ± 7.4km 1.668 E ± 6.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.2 (LDG).

LSF	0.10	286 Pg	59	21.60	-1.1
TCF	0.38	80 Pg	59	27.30	-0.5
		Sg	59	32.60	
MAF	0.62	90 Pg	59	31.40	-1.1
		Sg	59	39.80	
BGF	0.88	67 Pg	59	35.60	-1.3
		Sg	59	47.50	
RJF	0.92	187 Pg	59	37.50	-0.1
		Sg	59	49.00	
AVF	1.29	63 Pg	59	43.60	-0.3
		Sg	59	59.60	
CAF	1.33	168 Pg	59	44.80	0.3
		Sg	00	01.80	
LFF	1.44	207 Pg	59	46.70	0.7
		Sg	00	05.20	
SSF	1.52	56 Pg	59	47.60	0.4
		Sg	00	07.00	
LBF	1.77	64 Pg	59	51.90	1.1
		Sg	00	14.40	
LOR	1.83	54 Pg	59	53.60	1.8
		Sg	00	16.00	
	S.D. = 1.1	on 11 of 11 obs.			

% SEP 21, 1989 03h 59m 50.11± 0.79s
46.198 N ± 6.9km 1.650 E ± 7.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (LDG).

LSF	0.10	302 Pg	59	52.20	-0.6
TCF	0.40	77 Pg	59	57.80	-0.5
		Sg	00	03.10	
MAF	0.64	88 Pg	00	02.00	-0.9
		Sg	00	10.40	
RJF	0.90	186 Pg	00	07.20	-0.1
		Sg	00	19.00	
BGF	0.90	66 Pg	00	06.50	-0.9
		Sg	00	18.40	
CAF	1.31	167 Pg	00	14.80	0.5
		Sg	00	32.00	
AVF	1.32	63 Pg	00	13.80	-0.6
		Sg	00	29.90	
SSF	1.54	55 Pg	00	18.10	0.4
		Sg	00	37.50	
LBF	1.79	63 Pg	00	22.30	1.0
		Sg	00	44.70	
LOR	1.86	54 Pg	00	24.00	1.7
		Sg	00	46.60	

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

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* SEP 21, 1989 04h 16m 01.71± 0.47s
7.418 S ± 9.3km 125.598 E ±12.9km
DEPTH = 33.0km (normal)
4.6mb (7 obs.)
BANDA SEA (280)

MTN	7.66	135	eP	17	51.00	-2.9
			eS	19	14.00	
PCI	8.65	318	e(P)c	18	07.10	-0.5
KNA	8.84	160	eP	18	06.00	-4.3X
			eS	19	43.00	
WB5	15.03	146	eP	19	27.00	-6.5X
			eS	22	05.00	
ASPA	18.02	155	eP	20	08.00	-3.4X
	0.6s		7.00nm		4.0mb	
WARB	18.69	177	eP	20	18.50	-1.1
	0.5s		13.00nm		4.4mb	
QIS	18.83	135	iPc	20	07.70	-13.7X
	0.8s		24.00nm			
MEKA	20.24	199	eP	20	37.00	0.0
	0.6s		28.00nm		4.8mb	
PMG	21.41	97	eP	20	50.00	0.9
CTA	23.65	124	iPc	21	10.90	-0.3
	1.0s		15.00nm		4.5mb	
BWA	34.13	145	eP	22	47.80	2.0
TOO	35.03	152	eP	22	54.40	0.9
CAN	35.10	146	eP	22	55.50	1.3
CHG	37.02	315	ePc	23	11.60	1.2
	1.2s		18.75nm		4.8mb	
GYA	38.36	332	P	23	22.80	1.0
WHN	39.26	345	P	23	30.50	1.5
MAT	45.30	14	(P)	24	04.00	-14.3X
	1.0s		8.00nm			
LZH	47.86	336	eP	24	39.00	0.3
	1.5s		0.04nm		2.2mb X	
BJI	48.02	350	eP	24	37.50	-2.1
MDJ	51.92	4	eP	25	08.50	-0.9
GBA	52.18	293	Pc	25	10.70	-1.1
	0.8s		9.50nm		4.8mb	
GTA	52.36	335	eP	25	12.60	-0.4
WMQ	61.45	330	P	26	17.00	-0.4
SPA	82.63	180	e(P)	28	23.80	0.8
	0.8s		5.83nm		4.7mb	
CNCB	152.43	151	PKP	35	58.00	7.4X
LPB	152.61	150	(PKP)	36	00.00	9.4X
ZOBO	152.83	150	PKP	35	51.00	-0.1

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

? SEP 21, 1989 05h 12m 58.25± 6.87s
6.353 S ±53.3km 147.334 E ±59.2km
DEPTH = 67.8 ± 11.1 km
4.5mb (1 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.45	228	iPd	13	10.50	0.0
			eS	13	22.00	
PMG	3.04	183	eP	13	45.00	0.0
			eS	14	31.00	
MNDI	3.66	273	eP	14	01.00	7.1X
WB5	18.43	222	eP	17	10.70	0.0
ASPA	21.52	215	iPd	17	43.60	0.0
	0.5s		11.00nm		4.5mb	
WARB	27.90	223	eP	18	44.00	0.0

S.D. = 0.0 on 5 of 6 obs.

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* SEP 21, 1989 06h 39m 15.59± 2.72s
32.122 S ±20.7km 70.844 W ±21.9km
DEPTH = 115.0 ± 23.1 km
CHILE-ARGENTINA BORDER REGION (127)

JACH	0.60	159	iPc	39	32.70	-1.3
			iS	39	45.00	
ROCH	0.86	189	iPd	39	35.70	-0.7
			iS	39	49.50	
FCH	1.29	159	iPd	39	41.40	0.4
			iS	39	58.60	
SAN	1.34	173	eP	39	41.50	0.3
LCCH	1.48	204	iPc	39	43.00	0.2
			iS	40	03.70	
PCH	1.52	170	iPc	39	43.70	0.3
			iS	40	04.20	
TACH	1.53	183	iPd	39	43.50	0.0
			iS	40	02.50	
CHCH	1.81	175	iPc	39	47.90	0.9
			iS	40	10.50	
LNV	1.89	194	iPd	39	47.60	-0.2
			iS	40	11.20	
ZON	1.93	73	eP	39	50.00	1.5
			eS	40	13.00	
CFA	2.27	78	iPc	39	53.50	0.6
			S	40	20.00	
MRA	4.36	95	ePd	40	19.90	-0.9
TCA	5.38	83	ePd	40	33.80	-1.1
			(S)	41	30.30	

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

SEP 21, 1989 06h 41m 20.72± 0.79s
14.100 N ± 8.8km 92.251 W ± 5.7km
DEPTH = 54.2 ± 6.8 km
4.0mb (5 obs.)
NEAR COAST OF CHIAPAS, MEXICO (69)

JAT	0.63	70	iPd	41	34.20	0.3
TPX	0.80	359	iP	41	35.00	-1.0
			iS	41	52.00	
SOG2	0.90	47	ePc	41	37.00	-0.6
SOG	0.93	44	eP	41	37.00	-1.1
LHG	1.09	72	iPd	41	39.25	-0.8
PSG2	1.40	96	ePd	41	44.00	-0.2
FUG	1.41	76	iPc	41	43.50	-1.1
ITG	1.45	70	ePd	41	45.10	-0.1
TER	1.53	82	iPc	41	46.00	-0.2
PCG	1.58	80	iPc	41	47.10	0.1
MMG	1.58	74	iPc	41	47.00	-0.1
BVA	1.66	70	iPd	41	48.90	0.7
REC	1.71	78	ePd	41	43.75	-5.0X
GCG	1.73	74	ePd	41	50.20	1.1
			S	42	16.00	
IXG	1.74	87	iPc	41	48.60	-0.6
RDG	1.94	62	iPd	41	53.75	1.6
SLP	2.01	71	iPd	41	54.50	1.5
MYT	2.12	91	ePc	41	54.50	0.0
			S	42	23.70	
YUP	2.38	87	ePc	41	57.90	-0.3
SCX	2.65	352	iP	42	04.00	2.2
			iS	42	38.50	
OXX	5.23	305	eP	42	37.00	-1.6
LVVM	6.90	325	(P)	42	55.50	-6.1X
IISM	6.91	315	eP	43	01.50	-0.3
IIT	7.59	311	(P)	43	16.50	4.9X
PPM	7.86	310	eP	43	16.00	0.5
SRA	8.61	117	eP	43	26.50	1.0
SJS	9.02	116	eP	43	31.50	0.3
MRX	10.21	304	eP	43	47.50	0.2
UYO	20.08	355	iPd	45	51.20	-1.2
MEO	21.37	346	eP	46	04.00	-1.7
PRM	21.82	23	P	46	09.00	-1.1
SIO	21.86	351	e(P)	46	16.30	5.8X
TUL	21.95	352	eP	46	17.50	6.1X
	1.0s		9.70nm		4.2mb	
ALQ	24.39	331	iPc	46	36.30	0.9
	0.9s		2.31nm		3.7mb	
GOL	27.99	338	P	47	09.00	0.3
	0.7s		3.64nm		4.1mb	
DAU	31.04	331	P	47	36.50	0.5
TNP	32.56	322	P	47	50.00	0.8
	0.7s		1.11nm		3.8mb	
KVN	33.72	322	P	48	00.10	0.9
CMB	34.50	319	eP	48	06.00	0.2
LRM	35.92	336	ePc	48	18.40	0.4
LON	40.88	329	P	49	00.00	0.9
PNT	41.68	333	eP	49	06.00	0.5
	0.7s		13.00nm		4.8mb	
PDCR	58.92	114	ePc	51	15.20	-1.8
INK	60.27	344	eP	51	24.50	-1.1
CHG	145.48	341	ePKP	00	55.30	0.1
GBA	150.64	21	PKP	01	09.00	5.6X

S.D. = 1.0 on 40 of 46 obs.

SEP 21, 1989 07h 16m 27.67± 0.53s
38.967 N ± 5.0km 22.307 E ± 4.5km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.3 (ATH).

NEO	0.79	64	ePn	16	44.80	1.8
LIT	1.14	7	iPgc	16	49.20	0.2
KZN	1.40	343	ePn	16	52.40	-0.9
PAIG	1.43	48	ePb	16	53.80	0.2
			eSb	17	13.00	
ATH	1.49	131	ePn	16	55.50	1.1
VLS	1.56	240	ePn	16	53.50	-2.0
PLG	1.66	32	ePn	16	56.40	-0.5
THE	1.74	17	ePb	16	57.20	-0.8
			eSb	17	19.80	
LSK	1.77	312	ePn	16	59.30	0.7
ITM	1.81	190	ePn	16	58.60	-0.5
OUR	1.88	43	ePn	17	00.60	0.5
GRG	1.99	2	ePn	17	01.50	-0.2
SRN	2.01	298	ePn	17	02.00	0.1
KBN	2.01	326	ePn	17	03.00	1.0
KEK	2.08	292	ePb	17	04.90	1.8
KNT	2.24	12	ePnd	17	04.90	-0.4
			eSg	17	32.50	
SRS	2.36	24	ePn	17	06.90	-0.2
			eSn	17	35.60	
OHR	2.43	332	iPn	17	07.60	-0.5
BERA	2.51	314	ePn	17	10.30	1.2
MMB	2.84	22	iPc	17	13.00	-0.8
KKB	2.96	11	iP	17	17.00	1.5
TIR	3.02	323	ePn	17	26.00	9.6X
PHP	3.07	333	iPnc	17	16.60	-0.4
SKO	3.07	348	iPn	17	19.70	2.6X
			i	17	29.00	
RZN	3.28	33	iP	17	20.00	-0.3
PUK	3.58	330	ePn	17	24.50	0.2
KDZ	3.58	41	eP	17	23.00	-1.4
VTS	3.68	10	iPd	17	25.00	-1.0
VRI	7.63	24	eP	18	24.00	2.5X

S.D. = 1.0 on 26 of 29 obs.

SEP 21, 1989 09h 41m 38.67± 0.33s
38.171 N ± 5.8km 74.227 E ± 6.7km
DEPTH = 167.7km (2 depth phases)
5.0mb (7 obs.)
TAJIK-XINJIANG BORDER REGION (719)

KSH	1.88	46	iPd	42	15.00	1.0
			S	42	39.50	
NDI	9.79	164	iPc	43	54.50	-2.0
	0.6s		46.67nm		5.2mb	
			eS	45	30.50	
WMQ	11.63	57	iPd	44	19.30	-1.4
			S	46	25.00	
MHI	11.89	265	eP	44	19.00	-5.1X
			eS	46	21.00	
SHL	19.52	125	iP	45	56.00	0.6
			eS	49	22.00	
POO	19.57	181	iPc	46	01.20	5.4X
			iS	49	42.80	
GTA	19.97	78	eP	45	58.80	-1.0
HYB	21.02	168	iP	46	11.50	1.2
	1.0s		80.00nm		5.1mb	
GBA	24.63	172	Pd	46	45.90	0.8
	0.6s		54.70nm		5.3mb	
KOD	27.97	173	eP	47	17.00	1.2
SUF	37.92	326	eP	48	40.60	-0.2
NUR	38.03	322	eP	48	34.00	-7.7X
SOD	39.36	333	iP	48	53.30	0.6
HFS	43.38	321	eP	49	25.30	-0.2
	0.5s		13.50nm		4.8mb	
NB2	44.63	322	P	49	35.40	-0.2
	0.5s		4.50nm		4.3mb	
MEM	48.65	308	iP	49	58.30	-8.8X
BNG	60.64	251	iPc	51	33.00	-1.2
	0.6s		36.00nm		5.4mb X	
MBC	65.53	4	iPd	52	06.00	0.6
	0.5s		40.00nm		5.5mb	
			pP	52	46.00	168km
PTZ	65.83	226	iP	52	08.00	-0.2
LSZ	68.48	228	eP	52	24.00	-0.8
INK	71.82	10	iPd	52	44.60	0.5
			pP	53	25.00	167km
BUL	72.10	225	iPc	52	46.40	-0.2
KIC	77.43	268	Pc	53	17.00	0.0
	0.6s		9.00nm		4.7mb	
TIC	77.48	269	Pc	53	17.40	0.1
LIC	77.74	268	Pc	53	19.00	0.3
WB5	80.72	124	eP	53	34.60	0.1
FORR	85.09	136	iPd	53	57.10	0.6
	0.4s		17.00nm		5.2mb X	

S.D. = 0.9 on 23 of 27 obs.

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* SEP 21, 1989 11h 13m 27.29± 0.85s
24.405 S ±10.0km 67.139 W ±13.3km
DEPTH = 197.4 ± 16.6 km
CHILE-ARGENTINA BORDER REGION (127)

SLA	1.53	102	iPd	14	01.40	-0.1

21d 11h

		S	14 28.00		
ANT	3.08	282 iPc	14 17.70	-0.4	
		iS	14 55.50		
TCA	7.27	162 ePc	15 12.40	0.5	
CNCB	7.60	354 P	15 17.00	0.2	
		S	16 41.00		
LPB	7.88	353 P	15 22.00	1.5	
ZOBO	8.15	353 P	15 23.00	-1.1	
VAO	18.53	90 e(P)	17 31.00	-0.5	

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

SEP 21, 1989 11h 27m 25.08± 0.82s
34.908 N ±10.2km 118.745 W ± 7.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
ML 2.5 (NEIS).

ABL	0.39	262 eP	27 34.60	1.4	
BCH	1.13	285 eP	27 44.20	-2.2	
BLP	1.41	256 eP	27 51.10	0.4	
PEC	1.66	127 eP	27 54.20	-0.1	
PLM	2.20	134 eP	28 05.20	2.8X	
TNP	3.40	21 eP	28 19.00	-0.4	
GLA	3.75	119 e(P)	28 24.00	-0.2	
KVN	4.17	7 eP	28 31.50	1.2	

S.D. = 1.5 on 7 of 8 obs.

SEP 21, 1989 11h 37m 37.35± 0.45s
12.241 N ± 6.6km 143.326 E ± 9.2km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUMO	2.01	48 eP	38 09.30	-0.4	
PJG	2.01	48 eP	38 09.40	-0.3	
GUA	2.01	50 eP	38 09.90	0.2	
		eS	38 32.80		
PMG	21.84	170 eP	42 28.00	-1.0	
CTA	32.25	175 eP	44 05.00	-0.2	
WB5	33.11	196 eP	44 12.20	-0.5	
ASPA	36.86	194 iPd	44 45.10	0.4	
	0.5s	9.00nm		4.9mb	
BRS	40.45	167 iP	45 15.00	0.4	
CD2	40.94	303 eP	45 19.80	1.1	
DZM	40.95	146 iPc	45 19.50	0.7	
GTA	46.97	313 eP	46 06.00	-1.3	
WMQ	56.99	315 P	47 27.90	5.6X	
INK	76.18	22 eP	49 23.00	-0.6	
		pP	49 33.00	32kmX	
PNT	85.37	41 eP	50 13.00	0.3	
	0.5s	2.00nm		4.6mb	
EDM	88.12	36 ePc	50 27.00	1.0	
LRM	91.00	43 eP	50 26.50	-13.5X	
ZOBO	149.27	101 ePKP	57 16.00	-5.5X	
	1.1s	8.41nm			
		e	57 28.00		

S.D. = 0.8 on 14 of 17 obs.

& SEP 21, 1989 11h 48m 13.10s
39.375 N 120.467 W
DEPTH = 24.0km
NORTHERN CALIFORNIA (36)
<BRK>. ML 4.0 (BRK).
Mo=1.4*10**15 Nm (BRK). Felt (V) at Nevada City; (IV) at Grass Valley, Norden, Sierra City, Sierraville and Soda Springs; (III) at Oroville and Washington. Also felt at Auburn, Foresthill, Jackson and Truckee.

ORV	0.82	283 iPc	48 28.00	-0.6	
MIN	1.31	318 iPc	48 36.40	0.3	
CMB	1.34	177 iPd	48 36.90	0.5	
		eS	48 53.60		
LTCM	1.52	304 eP	48 40.30	1.3	
KVN	1.87	99 eP	48 43.90	-0.3	
WDC	2.00	308 iPc	48 46.90	1.0	
		eS	49 13.50		
ZSP	2.00	225 eP	48 46.90	1.0	
		iS	49 16.10		
BKS	2.04	223 eP	48 47.30	0.8	
		eS	49 13.00		
BRK	2.05	224 ePc	48 47.60	0.9	
		eS	49 15.30		
NWRM	2.10	245 eP	48 48.70	1.3	
ARN	2.19	203 eP	48 49.50	0.8	
MHC	2.23	205 ePd	48 50.58	1.2	
		eS	49 18.60		
		i	49 23.75		
PCC	2.40	219 eP	48 53.00	1.4	
FRI	2.45	166 iPd	48 54.20	1.8	
GCC	2.63	208 eP	48 55.20	0.2	
SAO	2.72	197 iPc	48 57.20	1.0	
		eS	49 32.75		
		e	49 41.65		
LLA	2.78	188 ePd	48 58.00	0.9	
TNP	2.85	116 eP	48 59.20	1.0	
FHC	3.05	299 e(P)	49 02.50	1.5	
PRS	3.12	194 ePd	49 02.80	0.9	
PRI	3.23	183 ePc	49 05.50	1.9	
PKEM	3.32	175 eP	49 06.50	1.8	
BCH	4.19	176 eP	49 18.50	1.3	
ABL	4.62	167 eP	49 24.00	0.5	
DUG	5.95	80 eP	49 43.50	1.4	
MSU	6.52	95 eP	49 50.30	0.0	
LON	7.44	353 eP	50 05.00	2.2	

27 obs. associated

SEP 21, 1989 13h 22m 33.73± 0.84s
6.389 S ± 4.4km 129.848 E ± 6.8km
DEPTH = 165.8 ± 9.2 km
4.8mb (14 obs.)
BANDA SEA (280)

AAI	3.15	328 ePd	23 26.30	2.2	
		e(S)	24 06.50		
MTN	6.54	169 iPd	24 07.10	-1.5	
KUG	7.24	238 ePd	24 25.00	7.0X	
		eS	25 43.00		
KNA	9.36	186 eP	24 44.00	-2.1	
		eS	26 22.00		
MKS	10.39	276 ePd	25 14.00	14.4X	
WB5	14.11	162 iPd	25 43.20	-4.4X	
		eS	28 12.50		
QIS	16.97	147 eP	26 21.60	-1.3	
		eS	29 18.00		
PMG	17.40	101 eP	26 29.00	0.9	
MBL	17.60	212 eP	26 30.00	-0.3	
	0.3s	11.00nm		4.7mb	
		eS	29 36.00		
ASPA	17.62	168 iPc	26 29.30	-1.2	
	0.7s	184.00nm		5.6mb X	
		eS	29 38.50		
KKM	18.38	312 ePd	26 39.50	0.7	
	0.8s	68.70nm		5.1mb	
WARB	19.92	188 iPd	26 56.00	1.3	
	0.3s	19.00nm		5.0mb	
		eS	30 35.00		
CTA	20.96	132 iPd	27 05.70	0.7	
	1.0s	67.00nm		5.1mb	
NANU	21.20	219 eP	27 08.40	1.0	
		eS	31 03.00		
MEKA	22.82	207 iPd	27 26.00	2.8X	
	0.4s	7.00nm		4.5mb	
FORR	24.39	184 eP	27 38.10	0.0	
COOL	25.70	197 eP	27 50.00	-0.3	
	0.5s	4.00nm		4.3mb	
MRWA	26.20	208 iPc	27 55.10	0.2	
	0.3s	3.00nm		4.4mb	
		e	28 30.00		
		eS	32 57.00		
RMQ	26.91	140 eP	28 01.00	-0.3	
BAL	27.07	206 eP	28 03.00	0.3	
		e	28 40.00		
		eS	33 18.00		
KLB	27.51	203 iPc	28 07.20	0.6	
		e	28 47.40		
STK	27.64	158 iPd	28 07.50	-0.3	
CMS	29.11	151 eP	28 21.00	0.0	
ADE	29.59	165 iPd	28 25.70	0.4	
	0.8s	59.70nm		5.4mb	
PPI	29.97	280 e(P)	28 29.00	0.2	
BRS	30.18	136 iPc	28 29.50	-1.0	
COO	31.74	142 iPc	28 45.00	0.8	
BWA	32.75	151 iPd	28 54.50	1.6	
CAN	33.76	151 iPd	29 02.10	0.5	
CNB	33.93	151 eP	29 04.00	0.9	
TOO	34.15	158 iPd	29 06.30	1.4	
	0.6s	13.00nm		4.8mb	
LOE	36.48	311 eP	29 24.00	-0.7	
SSE	38.18	348 eP	29 39.00	0.2	
BDT	38.48	308 eP	29 41.50	0.1	
	0.7s	38.70nm		5.2mb	
CHG	39.44	310 iPc	29 49.90	0.6	
	1.0s	25.50nm		4.9mb	
WHN	39.61	339 P	29 50.70	0.1	
KMI	40.95	321 Pc	30 03.00	1.1	
MAT	43.42	10 eP	30 20.00	-1.6	
	0.9s	16.81nm		4.6mb	
XAN	44.82	335 Pc	30 32.00	-0.9	
TIY	46.78	341 eP	30 47.50	-0.9	
BJI	47.89	346 eP	30 56.50	-0.3	
LZH	48.80	332 eP	31 04.00	-0.1	
	1.5s	0.02nm		1.5mb X	
CN2	50.11	356 P	31 12.50	-1.3	
GTA	53.37	331 iPc	31 38.30	0.0	
GBA	55.69	291 Pc	31 53.80	-1.6	
	1.0s	17.50nm		4.9mb	
HYB	55.91	296 eP	31 56.00	-1.0	
WMQ	62.80	327 Pc	32 44.00	0.2	
SPA	83.65	180 e(P)	34 45.20	0.5	
	0.6s	3.25nm		4.3mb	
CNCB	150.98	143 PKP	42 12.00	8.2X	
LPB	151.12	142 ePKP	42 09.00	5.1X	
ZOBO	151.31	142 PKP	41 58.50	-5.8X	

S.D. = 1.0 on 44 of 51 obs.

? SEP 21, 1989 13h 41m 16.21± 5.17s
62.337 N ±14.5km 1.453 E ±44.0km
DEPTH = 10.0km (geophysicist)
NORWEGIAN SEA (642)
MD 2.7 (BER).

SUE	2.03	128 iP	41 51.44	0.6	
		eS	42 12.83		
HYA	2.54	115 iP	41 58.90	0.8	
		eS	42 26.39		
ASK	2.59	134 eP	41 59.59	0.8	
		eS	42 25.89		
BER	2.71	135 eP	41 58.13	-2.4	
		eS	42 29.86		
MOL	2.84	83 iP	42 03.09	0.7	
		eS	42 32.72		
ODD1	3.50	132 iP	42 12.17	0.5	
		iS	42 48.95		
KMY	3.65	148 iP	42 14.04	0.2	
		eS	42 52.60		
BLS1	3.95	136 iP	42 18.46	0.2	
		eS	42 56.61		
RGS	4.20	77 eP	42 21.00	-0.6	
		eS	43 04.00		
NRA0	5.09	104 iPd	42 33.50	-0.7	
		iS	43 26.30		
NSS	5.21	60 iP	42 36.07	0.1	
		eS	43 26.58		
HFS	6.31	105 eP	42 51.30	-0.2	
	0.2s	5.50nm		5.1mb	

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

SEP 21, 1989 13h 45m 12.81± 1.15s
44.288 N ± 8.6km 8.349 E ± 8.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.6 (GEN).

FIN	0.13	232 P	45 16.02	0.1	
		S	45 18.99		
PCP	0.29	29 P	45 18.99	0.1	
		S	45 23.70		
ROB	0.34	271 P	45 20.44	0.5	
		S	45 25.98		
IMI	0.50	221 P	45 22.75	-0.3	
		S	45 30.77		
ENR	0.67	265 P	45 26.74	0.5	
		S	45 36.42		
DOI	0.82	286 P	45 27.80	-1.0	
PZZ	0.92	284 P	45 30.52	0.0	
		S	45 43.60		

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

SEP 21, 1989 13h 53m 06.49± 0.45s
39.303 N ± 4.3km 22.520 E ± 3.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.4 (ATH).

NEO	0.55	89 ePg	53 17.50	0.0	
LIT	0.80	358 ePg	53 21.60	-0.4	
		iSg	53 34.60		
PAIG	1.09	55 ePb	53 27.60	0.6	

			eSb	53 44.10		
KZN	1.16	330	iPbd	53 27.00	-1.2	
PLG	1.29	33	ePb	53 30.00	-0.3	
THE	1.37	14	ePb	53 31.50	-0.1	
			eSb	53 51.70		
OUR	1.53	47	ePbc	53 34.00	0.2	
ATH	1.63	144	ePb	53 35.80	0.6	
GRG	1.65	357	ePn	53 35.90	0.2	
KBN	1.86	316	ePn	53 39.50	0.9	
KNT	1.88	9	ePn	53 38.80	-0.1	
			eSn	54 04.40		
VLS	1.88	234	ePb	53 37.00	-2.0	
SRS	1.99	24	ePn	53 40.20	-0.3	
			eSn	54 08.80		
SRN	2.03	287	ePn	53 40.90	-0.2	
KEK	2.15	282	ePn	53 41.50	-1.3	
ITM	2.17	193	ePb	53 44.00	0.8	
OHR	2.24	324	iPn	53 44.30	0.1	
BERA	2.42	306	ePn	53 48.70	2.0	
MMB	2.46	22	iPd	53 47.00	-0.3	
KKB	2.60	9	iP	53 54.00	4.8X	
SKO	2.79	343	iPn	53 55.00	3.0X	
			i	53 58.70		
PHP	2.86	327	ePn	53 52.20	-0.8	
TIR	2.88	316	ePn	53 54.50	1.3	
PRK	2.91	90	ePg	54 02.00	8.3X	
LACI	3.17	318	ePn	54 04.00	6.7X	
KDZ	3.22	42	eP	53 58.00	-0.1	
VTS	3.33	9	iPd	54 00.00	0.3	
PUK	3.39	325	ePn	54 00.50	0.1	
BCI	3.58	329	ePn	54 04.70	1.5	
MLR	6.68	21	eP	54 46.00	-1.2	
VRI	7.26	24	iPc	54 55.00	-0.1	

S.D. = 0.9 on 27 of 31 obs.

? SEP 21, 1989 15h 31m 09.45± 0.98s
40.889 N ±13.1km 21.650 E ± 7.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.0 (SKO).

GRG	0.57	83	ePg	31 20.90	-0.2	
			eSg	31 30.80		
OHR	0.68	289	iPg	31 23.00	0.0	
			iSg	31 33.50		
KNT	0.98	73	ePg	31 28.30	0.2	
			eSg	31 42.80		
LIT	1.01	141	ePg	31 28.70	0.0	
			eSg	31 42.80		

S.D. = 0.3 on 4 of 4 obs.

SEP 21, 1989 16h 46m 34.97± 0.57s
10.164 S ± 3.0km 161.061 E ± 3.2km
DEPTH = 120.3 ± 5.3 km
5.2mb (31 obs.)
SOLOMON ISLANDS (193)
Felt (III) at Honiaro and (II) on Guadalcanal.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 23C
Centroid Location:
Origin Time 16:46:40.4 1.1
Lat 9.80S 0.07 Lon 160.59E 0.10
Dep 103.4 3.2 Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-6.14 0.40 Mtt= 2.47 0.84
Mff= 3.67 0.86 Mrt= 0.28 0.43
Mrf= 2.67 0.45 Mtf= 3.63 0.56
Principal Axes:

	Val=	Plg=	Azm=
T	7.12	10	308
N	-0.26	13	216
P	-6.86	74	75

Best Double Couple:Mo=7.0**16
NP1:Strike= 54 Dip=37 Slip= -68
NP2: 207 56 -106

HNR	1.32	303	iPd-	47 00.50	-0.2	
			i(S)	47 10.00		
SVO	1.59	309	iP	47 04.50	0.7	
			iS	47 16.00		
PVC	10.30	138	iPc	49 01.00	0.1	
RAB	10.63	303	eP	49 04.00	-1.2	
			eS	51 36.00		
DZM	12.92	157	iPc	49 37.00	1.7	
			iS	51 54.80		
PMG	13.73	272	eP	49 49.00	3.2X	
LAT	14.34	283	eP	50 02.00	8.4X	
CTA	17.35	234	iPd	50 34.40	3.2X	
	0.9s		65.55nm		4.9mb	
			iS	53 50.00		
MNDI	17.68	282	eP	50 42.00	6.6X	
BRS	18.83	203	iPc	50 48.50	0.3	
			i	50 58.50		
			i	51 13.50		
RMQ	19.98	214	iPd	51 01.70	1.6	
	0.6s		118.00nm		5.4mb	
JAY	21.60	289	ePd	51 16.50	0.0	
COO	22.03	201	iPc	51 22.10	1.4	
QIS	23.10	241	iPd	51 32.00	0.9	
	0.9s		26.00nm		4.6mb	
CMS	25.49	211	iPc	51 54.70	1.0	
BWA	26.78	204	iPd	52 05.10	-0.4	
CAN	27.35	202	iPd	52 11.00	0.3	
WB5	27.49	246	iPd	52 12.30	0.2	
WRA	27.53	246	Pd	52 12.40	-0.1	
GUA	28.48	325	eP	52 15.80	-5.2X	
GUMO	28.55	325	eP	52 15.00	-6.6X	
ASPA	29.18	239	iPd	52 26.40	-0.8	
	0.9s		57.00nm		5.3mb	
Z	23s		0.65um		4.2MszX	
			LR	02 45.40		
MTN	29.44	262	iPc	52 29.40	-0.2	
			eS	57 17.80		
TOO	30.68	205	eP	52 41.00	0.7	
	0.6s		14.00nm		4.9mb	
ADE	32.02	216	iPd-	52 52.30	0.2	
	0.8s		89.55nm		5.6mb	
MNG	32.91	160	eP	52 57.70	-2.0	
TCW	33.05	162	P	53 00.30	-0.6	
PGZ	33.19	159	eP	53 00.50	-1.6	
MRW	33.20	161	eP	53 01.50	-0.7	
CAW	33.21	160	eP	53 00.80	-1.5	
WDW	33.33	161	eP	53 01.60	-1.7	
MTW	33.40	160	eP	53 02.10	-1.8	
MOW	33.55	161	eP	53 03.40	-1.9	
MSZ	34.89	171	P	53 15.70	-0.9	
WARB	36.22	239	iPd	53 28.40	0.2	
	0.6s		53.00nm		5.6mb	
FORR	36.88	231	eP	53 34.00	0.5	
MBL	41.06	249	iPd	54 08.60	0.3	
	0.4s		13.00nm		5.0mb	
COOL	42.38	235	iPc	54 19.20	0.1	
	0.7s		60.00nm		5.5mb	
MEKA	43.31	242	iPd	54 28.00	1.3	
	0.6s		38.00nm		5.3mb	
NANU	45.22	248	iPd	54 43.00	1.0	
	0.3s		10.00nm		5.0mb	
KL8	45.35	235	eP	54 42.00	-0.9	
BAL	45.91	237	iPd	54 47.80	0.4	
	0.8s		125.00nm		5.7mb	
MRWA	46.13	239	iPc	54 49.70	0.6	
	0.3s		6.00nm		4.8mb	
NWAO	46.20	234	iPd	54 50.00	0.4	
	0.7s		54.00nm		5.4mb	
Z	20s		0.50um		4.5Msz	
N	20s		0.20um			
E	20s		0.20um			
MUN	46.72	235	eP	54 54.00	0.2	
	0.8s		56.00nm		5.4mb	
AFR	48.18	104	iP	55 05.20	-0.1	
	0.8s		35.00nm		5.2mb	
PAE	48.38	105	iP	55 06.20	-0.6	
	0.8s		35.00nm		5.2mb	
PPT	48.38	104	iP	55 06.80	0.0	
	0.8s		35.00nm		5.2mb	
PPN	48.51	104	iP	55 07.80	0.0	
	0.8s		15.00nm		4.9mb	
TVO	48.69	105	iP	55 09.50	0.2	
	0.8s		60.00nm		5.5mb	
TBI	48.93	112	iP	55 11.40	0.4	
	0.8s		30.00nm		5.2mb	
PMO	49.96	101	iP	55 19.40	0.4	
	0.8s		50.00nm		5.5mb	
IIDJ	50.39	335	P	55 21.20	-0.8	
CHJJ	50.45	337	P	55 23.30	0.9	
RUV	50.46	101	iP	55 22.90	0.2	
	0.8s		35.00nm		5.3mb	
MAT	51.19	336	iPd	55 26.40	-1.6	
	0.7s		16.44nm		5.0mb	
			(S)	02 27.00		
TSRJ	51.26	334	P	55 28.40	-0.1	
NIIJ	51.50	337	P	55 30.80	0.5	
SSE	56.08	318	P	56 02.70	-1.2	
	0.5s		0.02nm		2.3mb X	
			pP	56 26.60	97kmX	
NJ2	58.22	318	Pd	56 18.80	-0.1	
WHN	60.41	314	P	56 33.50	-0.5	
DL2	61.08	326	eP	56 38.00	-0.4	
MDJ	61.51	335	eP	56 40.50	-0.8	
SNY	62.13	329	eP	56 44.20	-1.2	
CN2	62.70	332	iPd	56 48.40	-0.8	
			pP	57 13.00	98kmX	
8JI	64.96	323	eP	57 03.00	-1.0	
			esP	57 27.00		
			eS	05 28.00		
XAN	66.17	314	Pc	57 10.90	-1.0	
KMI	66.76	303	eP	57 16.00	0.0	
			pP	57 41.00	99kmX	
			sP	57 57.00		
CHG	67.67	295	eP	57 21.00	-0.6	
HHC	68.23	322	P	57 25.00	0.2	
CD2	68.44	309	eP	57 25.00	-1.2	
BTO	69.04	321	P	57 30.40	0.6	
LZH	70.79	314	eP	57 41.00	0.4	
	1.5s		0.02nm		1.7mb X	
			pP	58 05.00	93kmX	
GTA	75.16	315	Pd	58 06.00	-0.1	
SHL	76.06	300	eP	58 10.80	-0.7	
			eS	01 22.80		
KDC	77.54	23	eP	58 18.30	-0.4	
LSA	78.01	303	eP	58 24.00	1.5	
SVW	78.78	20	iPd	58 26.00	0.4	
SPA	79.90	180	ePd	58 31.80	0.1	
	0.7s		26.56nm		5.1mb	
			i	58 59.10		
TTA	79.98	18	eP	58 32.00	-0.1	
PMR	81.38	22	eP	58 38.00	-1.2	
	0.8s		27.00nm		5.1mb	
TOA	82.79	22	eP	58 47.30	0.6	
IMA	82.96	17	eP	58 47.50	-0.1	
MAW	83.79	202	eP	58 51.00	-0.6	
FBA	83.98	20	eP	58 51.60	-1.0	
WMO	85.24	316	P	58 59.20	-0.2	
			pP	59 25.00	97kmX	
GCC	85.82	51	ePd	59 02.80	0.5	
BRK	85.85	51	eP	59 02.90	0.5	
BKS	85.87	51	eP	59 03.10	0.5	
	0.9s		58.00nm		5.5mb	
PRS	86.12	52	eP	59 04.50	0.7	
MHC	86.18	51	ePd	59 04.70	0.4	
GBA	86.26	284	P	59 08.00	3.2X	
	0.9s		3.30nm		4.3mb	
WDC	86.40	48	ePd	59 05.50	0.4	
LLA	86.52	52	eP	59 06.60	0.8	
PRI	86.62	53	ePd	59 07.40	1.0	
SYP	86.75	54	eP	59 08.00	0.9	
BCH	86.83	54	P	59 08.50	1.1	
ORV	86.89	49	eP	59 07.10	-0.4	
MIN	87.02	48	eP	59 07.70	-0.6	
CMB	87.32	51	ePd	59 09.70	0.0	
FRI	87.58	52	ePd	59 11.20	0.4	
MWC	88.22	55	eP	59 15.00	0.8	
ISA	88.22	53	eP	59 15.00	0.9	
SBB	88.51	55	eP	59 15.00	-0.5	
LON	88.65	42	P	59 16.50	0.6	
RVR	88.71	55	eP	59 16.00	-0.4	
PLM	88.99	56	eP	59 18.00	0.1	
BAR	89.00	57	eP	59 18.00	0.2	
KVN	89.31	50	P	59 20.20	0.9	
GSC	89.46	54	eP	59 20.00	0.0	
TNP	89.76	51	P	59 22.00	0.5	
	0.9s		6.84nm		4.7mb	
			pP	59 50.70	109kmX	
TPC	89.81	55	eP	59 22.00	0.4	
GLA	90.59	57	eP	59 26.00	0.8	
INK	90.60	20	eP	59 23.00	-1.4	
			pP	59 50.00	101kmX	
PNT	90.76	40	iP	59 25.00	-0.5	
	0.8s		19.00nm		5.3mb	
LRM	94.77	44	eP	59 44.70	0.3	
ALQ	97.76	56	P	59 58.50	0.4	
	1.0s		4.00nm		4.9mb	
BUL	124.35	237	iPKPd	05 21.80	-0.5	
NB2	124.57	343	PKP	05 19.80	-1.5	
	0.9s		2.30nm			
ZOBO	124.70	118	PKP	05 22.80	-0.8	
BNG	142.41	264	iPKPc	05 51.20	-5.0X	
	0.7s		14.00nm			
			ic	06 21.90		
EMON	145.35	345	e(PKP)	06 00.40	0.0	

21d 17h

ETOR	146.01	337	ePKP	06	02.20	0.6
STS	146.16	346	e(PKP)	06	02.50	0.8
GUD	146.94	339	ePKP	06	05.20	2.0
EVIA	148.05	335	ePKP	06	08.00	3.0X
ASMO	149.65	336	ePKP	06	12.00	4.5X
PDCR	149.83	138	ePKP	06	07.60	-0.6
			e	06	11.40	
			e	06	43.80	
APHE	149.98	335	ePKP	06	12.20	4.1X
ALOJ	150.01	336	ePKP	06	11.00	2.9
ATEJ	150.14	336	ePKP	06	12.50	4.2X
EVAL	150.57	340	ePKP	06	14.20	5.5X
EPRU	150.58	337	ePKP	06	14.80	6.0X

S.D. = 0.9 on 119 of 133 obs.

SEP 21, 1989 16h 56m 11.09± 1.81s
41.976 N ±11.6km 15.461 E ±16.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

DUI	0.81	248	P	56	28.10	1.2
			eSg	56	42.50	
SDI	1.26	258	P	56	34.70	0.2
			eSn	56	54.40	
SGO	1.42	185	P	56	36.80	-0.1
			eSn	56	57.90	
ALP	1.61	301	ePn	56	38.48	-1.3
			iSn	57	04.37	
MGR	1.84	178	P	56	42.80	-0.1
AOI	2.09	320	ePn	56	48.30	1.8
			eSn	57	18.82	
MNS	2.11	282	P	56	45.30	-1.6

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

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* SEP 21, 1989 16h 56m 57.79± 1.17s
13.467 N ± 6.2km 61.615 W ±41.8km
DEPTH = 138.7 ± 20.9 km
WINDWARD ISLANDS (95)

SVB	0.40	119	eP	57	16.61	-1.0
			eS	57	31.24	
SVV	0.42	111	eP	57	16.71	-0.9
			eS	57	31.33	
SSV	0.43	109	eP	57	16.68	-1.2
			eS	57	31.28	
SOA	0.46	102	eP	57	16.36	-1.5
			eS	57	30.90	
SLB	0.66	57	eP	57	17.56	-1.6
			eS	57	32.25	
BIM	1.17	27	eP	57	22.89	-0.5
			S	57	40.40	
MVM	1.29	33	iPc	57	23.11	-1.5
			S	57	41.80	
FDF	1.34	20	iPc	57	24.68	-0.5
			S	57	44.80	
CRM	1.45	28	eP	57	24.98	-1.3
BBL	2.05	4	eP	57	33.00	-0.3
TCE	2.76	183	eP	57	42.24	0.1
			eS	58	14.47	
TRN	2.81	176	eP	57	42.35	-0.5
			eS	58	14.49	
TBH	3.01	170	eP	57	46.05	0.6
			eS	58	20.39	
TPP	3.13	177	eP	57	45.04	-2.0

S.D. = 0.8 on 14 of 14 obs.

& SEP 21, 1989 17h 41m 18.00s
40.327 N 124.705 W
DEPTH = 16.0km
4.8mb (18 obs.) 4.7Msz (1 obs.)
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 4.8 (BRK). Felt (V) at Eureka, Ferndale, Honeydew, Hydesville, Loleta, Phillipsville, Rio Dell, Scotia and Weott; (IV) at Alderpoint, Bayside, Blocksburg, Bridgeville, Carlotta, Fields Landing, Fortuna, Garberville, Kneeland, Leggett, Miranda, Myers Flat, Piercy, Redcrest, Redway and Westport.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Location:
Origin Time 17:41:29.9 1.2
Lat 40.99N 0.11 Lon 125.06W 0.10
Dep 16.0 FIX Half-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr=-0.54 0.54 Mtt=-2.24 0.82
Mff= 2.78 0.67 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf=-5.64 0.50
Principal Axes:
T Val= 6.44 Plg= 0 Azm=237
N -0.54 90 180
P -5.90 0 147
Best Double Couple:Mo=6.2*10**16
NP1:Strike=282 Dip=90 Slip= 180
NP2: 12 90 0

FHC	0.73	49	iPc	41	31.30	-0.5
WDC	1.67	81	iPc	41	44.50	-2.2
LTCM	1.98	93	eP	41	48.50	-2.7
NWRM	2.34	142	eP	41	53.30	-3.0
LBFM	2.37	64	iPc	41	56.70	-0.3
MIN	2.37	89	iPc	41	54.30	-2.7
ORV	2.58	106	iPd	41	56.20	-3.6
ZSP	3.05	141	iPd	42	03.50	-2.9
BRK	3.10	141	iPd	42	03.90	-3.3
BKS	3.11	141	iPd	42	04.20	-3.1
			eS	42	43.50	
PCC	3.35	147	ePd	42	06.50	-4.3
MHC	3.82	140	iPd	42	14.35	-3.2
GCC	3.92	146	iPd	42	14.20	-4.5
CMB	4.06	123	iPd	42	18.60	-2.3
			eS	43	24.00	
SAO	4.38	143	ePd	42	20.93	-4.4
GMO	4.96	33	eP	42	32.31	-1.4
GROR	5.08	8	eP	42	37.07	1.8
FRI	5.14	129	ePd	42	39.90	3.9
GT2	5.15	20	eP	42	35.15	-1.1
VIPM	5.16	35	eP	42	34.86	-1.6
PRI	5.25	141	eP	42	34.20	-3.6
KVN	5.25	102	iPd	42	34.80	-3.1
VBEM	5.26	25	eP	42	36.44	-1.5
KMOR	5.38	9	eP	42	39.44	-0.1
VFP	5.53	24	eP	42	41.09	-0.7
VLMM	5.56	20	eP	42	42.31	0.1
PKEM	5.59	138	eP	42	39.60	-2.9
VLL	5.59	22	eP	42	42.26	-0.3
VTHM	5.73	31	eP	42	42.86	-1.6
NLO	5.83	9	eP	42	45.42	-0.4
APM	5.84	21	eP	42	45.92	-0.1
VGB	5.93	28	eP	42	46.00	-1.3
LVP	5.98	16	eP	42	46.43	-1.5
MTMW	5.98	17	eP	42	45.66	-2.3
RVW	5.99	13	eP	42	46.85	-1.2
GULW	6.04	21	eP	42	48.28	-0.5
CDFW	6.10	18	eP	42	48.69	-1.0
JLK	6.11	17	eP	42	50.46	0.7
HSR	6.13	17	eP	42	50.50	0.4
SHW	6.13	16	eP	42	50.00	-0.2
TNP	6.23	109	eP	42	48.50	-3.2
BCH	6.30	143	eP	42	47.50	-5.2
LON	6.76	17	eP	42	58.00	-0.9
ISA	6.77	131	iPd	42	57.30	-1.9
SYP	6.90	146	iPd	42	57.20	-3.9
ABL	6.99	140	eP	42	57.80	-4.6
SBB	7.84	134	eP	43	10.00	-4.2
GSC	8.01	126	eP	43	14.00	-2.6
MWC	8.07	137	eP	43	15.00	-2.5
PGC	8.37	6	eP	43	25.00	3.6
RVR	8.61	135	eP	43	22.00	-2.8
PEC	8.80	134	eP	43	24.10	-3.4
DUG	9.09	87	eP	43	29.20	-2.5
TPC	9.28	129	iPd	43	31.20	-3.0
PLM	9.37	135	eP	43	18.00	-17.6
PNT	9.69	20	eP	43	38.00	-1.6
	0.7s		36.00nm			5.9mb X
BAR	10.00	137	eP	43	42.00	-2.0
DAU	10.27	85	eP	43	46.00	-2.0
LRM	10.51	54	eP	43	48.00	-3.2
GLA	10.75	129	eP	43	51.00	-3.3
SES	13.89	39	eP	44	32.00	-4.4
GOL	14.83	86	eP	44	47.00	-2.0
EDM	15.04	27	iP	44	48.50	-2.8
ALQ	15.42	105	iPd	44	55.20	-1.4
	1.4s		34.80nm			4.5mb
			eLg	49	31.80	
RSSD	15.77	69	eP	44	56.00	-5.1
FFC	20.91	39	iPd	45	58.20	-3.7
	0.7s		67.00nm			5.1mb
MEO	21.40	97	iPd	46	04.00	-3.1
SIO	22.78	92	e(P)	46	23.40	2.6
TUL	23.12	92	eP	46	24.40	0.3
	0.9s		9.20nm			4.3mb
RSON	23.95	54	eP	46	28.50	-3.5
	0.8s		60.10nm			5.2mb
Z	20s		2.82um			4.7Msz
PMR	25.97	333	eP	46	51.00	-0.2
INK	28.44	353	eP	47	13.00	-0.6
TTA	29.30	331	eP	47	21.70	0.2
	1.0s		17.50nm			4.8mb
BLA	34.40	81	eP	48	05.30	-1.1
	0.8s		26.85nm			5.2mb
MBC	36.09	2	eP	48	21.00	0.7
	1.0s		19.00nm			4.9mb
SCH	40.48	49	eP	48	55.00	-2.2
SOD	70.44	11	eP	52	40.00	7.1
MAT	72.17	303	(P)	52	50.00	6.1
	0.9s		9.24nm			4.8mb
NB2	72.79	21	P	52	45.20	-2.0
	1.2s		14.30nm			4.9mb
HFS	74.22	20	eP	52	54.10	-1.3
	1.0s		8.10nm			4.7mb
Z	16s		0.23um			4.6MszX
			LR	19	20.00	
SUF	74.67	13	eP	53	04.80	6.9
	0.6s		5.20nm			4.7mb
CN2	75.13	315	eP	53	06.50	5.6
LOR	81.52	33	eP	53	34.40	-1.4
	0.8s		3.20nm			4.4mb
CLL	81.56	25	iP	53	36.60	0.7
			i	53	42.80	
TCF	81.60	34	eP	53	34.60	-1.7
	1.0s		8.00nm			4.7mb
GUA	81.66	281	eP	53	35.70	-1.3
GUMO	81.67	281	eP	53	35.80	-1.2
AVF	81.69	33	eP	53	35.70	-1.0
	1.0s		4.00nm			4.4mb
MAF	81.81	34	eP	53	36.30	-1.0
	1.0s		8.00nm			4.7mb
BRG	82.24	25	e(P)	53	39.00	-0.5
	0.7s		8.00nm			4.9mb
			e	53	47.40	
BSF	82.24	31	eP	53	39.20	-0.5
CAF	82.61	35	eP	53	40.20	-1.4
	1.0s		6.00nm			4.7mb
KSP	83.00	24	eP	53	51.80	8.3
LPG	84.13	32	eP	53	50.60	0.9
	1.0s		6.00nm			4.8mb
HHC	84.38	321	eP	53	55.40	4.6
KRA	84.78	22	eP	53	51.70	-0.8
TIY	86.35	318	eP	54	00.60	0.0
Z	14s		0.60um			5.1MszX
XAN	90.99	318	P	54	24.00	1.3
WMQ	91.29	337	eP	54	26.10	2.2
BWA	109.17	241	ePdiff	55	47.20	2.8
LSZ	145.65	51	iPKP	01	06.50	B.9
PTZ	146.63	46	ePKP	01	08.00	B.8
KRI	147.71	51	iPKPd	01	04.70	3.7
MAW	152.35	186	ePKP	00	59.00	-7.3

104 obs. assaciated

SEP 21, 1989 17h 50m 44.35± 0.56s
40.147 S ± 4.6km 176.550 E ± 8.4km
DEPTH = 49.7 ± 4.9 km
4.7mb (4 obs.) 5.0Msz (1 obs.)
NORTH ISLAND, NEW ZEALAND (159)
Felt at Napier.

PGZ	0.52	204	iPc	50	56.80	1.0
TTH	0.64	19	P	50	57.80	0.4
MNG	0.94	240	Pc	51	02.50	1.0
			S	51	15.70	
MOH	1.11	25	Pd	51	03.80	0.0
KETZ	1.25	326	iPd	51	07.30	1.4
WHH	1.26	358	iPd	51	06.20	0.2
MTW	1.29	218	P	51	06.00	-0.3
HATZ	1.30	344	iPc	51	07.20	0.7
RATZ	1.41	334	iPd	51	08.90	0.8
KIW	1.44	240	P	51	09.00	0.6
BLW	1.47	213	P	51	08.40	-0.4
CAW	1.48	229	P	51	08.90	-0.1
TUTZ	1.50	343	P	51	07.50	-1.8
HUTZ	1.55	347	P	51	10.50	0.5
HITZ	1.56	337	iPd	51	10.60	0.5
MOW	1.61	217	P	51	09.90	-0.9
WDW	1.63	226	P	51	10.40	-0.7
WEL	1.77	229	P	51	12.60	-0.4

			S	51	35.20	
MRW	1.77	232	P	51	12.80	-0.3
			S	51	35.20	
UTU	1.99	352	P	51	15.90	-0.2
TCW	2.03	238	P	51	16.30	-0.4
HBZ	2.89	29	P	51	26.40	-2.5
MHZ	7.27	225	P	52	26.70	-4.0X
DZM	19.96	332	iPc	55	17.10	1.8
BRS	23.42	296	eP	55	45.00	-4.8X
			i	56	05.50	
ASPA	39.35	282	eP	58	10.20	-0.4
			i	58	22.50	
FORR	40.10	268	eP	58	20.00	3.3X
	0.4s		13.00nm			5.1mb
WRA	41.25	287	Pc	58	25.60	-0.6
	0.6s		2.90nm			4.2mb
WB5	41.27	287	eP	58	25.90	-0.5
			i	58	38.30	
COOL	45.40	264	eP	58	59.00	-0.8
	0.4s		4.00nm			4.6mb
MUN	48.64	260	eP	59	24.00	-1.2
SPA	50.04	180	e(P)	59	37.60	1.8
	1.0s		9.00nm			4.8mb
			e	00	36.20	
CHG	92.87	292	eP	04	07.00	13.9X
MBC	122.91	15	ePKP	09	34.00	-1.1
	1.0s		6.00nm			
			pP	09	48.50	
LIC	146.20	177	PKPc	10	21.36	1.3
	0.9s		11.50nm			
	Z .22s		0.28um			5.0Msz
KEV	146.31	341	ePKP	10	18.00	-0.6
KIC	146.34	178	PKPc	10	21.82	1.5
	0.9s		33.50nm			
TIC	146.61	177	PKPc	10	22.34	1.6
	1.1s		19.50nm			
PRNI	147.33	265	ePKP	10	24.00	2.5X
SOD	148.09	338	ePKP	10	20.00	-1.5
SUF	151.29	332	iPKP	10	31.50	5.0X
	0.5s		17.20nm			
NUR	153.21	329	iPKP	10	36.60	7.3X
	0.5s		11.20nm			
	S.D. = 1.1		on 35 of 42 obs.			

? SEP 21, 1989 20h 06m 10.58± 6.16s
8.453 S ±63.1km 74.214 W ±13.0km
DEPTH = 161.4 ± 39.4 km
4.2mb (1 obs.)
PERU-BRAZIL BORDER REGION (112)

HUA	3.73	197	eP	07	09.40	0.7
			iS	07	57.20	
NNA	4.36	216	iPc	07	16.00	-0.6
	0.7s		73.97nm			
			iP	07	26.00	
			iS	07	56.00	
ZOBO	9.78	143	P	08	28.90	-0.3
LPB	10.01	144	P	08	32.00	0.1
CNCB	10.29	144	P	08	36.00	0.1
CCH	11.86	139	P	08	55.80	-0.2
PPD	25.84	124	e(P)	11	29.00	0.1
SPA	81.60	180	ePc	18	11.40	-0.1
	1.0s		5.00nm			4.2mb
MTN	147.11	230	ePKP	25	34.70	0.2
	S.D. = 0.5		on 9 of 9 obs.			

& SEP 21, 1989 21h 24m 43.24s
59.595 N 153.702 W
DEPTH = 107.2km
SOUTHERN ALASKA (2)
<AGS-P>.

RDT	1.18	33	iP	25	06.80	0.3
			eS	25	24.80	
SPU	1.79	26	iP	25	12.80	-1.1
			eS	25	36.80	
SVW	1.79	329	iPd	25	12.80	-1.2
KDC	1.96	161	iPc	25	14.80	-1.2
PMS	2.64	49	eP	25	23.00	-2.1
PWA	2.79	41	eP	25	24.50	-2.6
PMR	3.02	46	eP	25	26.30	-3.8
TTA	3.53	343	eP	25	34.30	-2.8
TOA	4.46	52	eP	25	47.00	-2.9
FBA	5.99	25	eP	26	06.60	-4.3
IMA	6.50	0	eP	26	14.70	-3.3
	0.9s		17.10nm			4.4mb X
INK	12.38	37	eP	27	34.00	-2.6

12 obs. associated

& SEP 21, 1989 21h 28m 48.50s
36.232 N 120.348 W
DEPTH = 8.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.6 (BRK).

PKEM	0.26	131	eP	28	53.80	-0.1
PRI	0.27	251	iPd	28	53.70	-0.5
PHAM	0.40	186	iP	28	56.40	-0.2
LLA	0.61	309	ePc	28	59.60	-1.3
PRS	0.83	277	eP	29	03.10	-1.7
FRI	0.92	34	iPd	29	03.70	-2.5
			eS	29	15.20	
SAO	1.03	301	iPd	29	06.55	-1.6
BCH	1.07	168	eP	29	06.80	-2.1
ARN	1.47	320	eP	29	12.70	-2.6
MHC	1.52	317	iPd	29	13.40	-2.7
ABL	1.66	146	eP	29	14.70	-3.5
CMB	1.80	359	ePd	29	17.90	-2.2
			eS	29	40.50	
BKS	2.23	318	e(P)	29	29.20	2.9
TNP	3.11	53	eP	29	37.00	-1.9
KVN	3.33	32	eP	29	40.90	-1.2
	15 obs. associated					

& SEP 21, 1989 21h 31m 02.10s
36.230 N 120.350 W
DEPTH = 9.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

PKEM	0.26	131	eP	31	07.00	-0.5
PRI	0.27	251	iPd	31	07.50	-0.3
PHAM	0.40	186	eP	31	09.60	-0.6
LLA	0.61	309	iPd	31	13.10	-1.4
PRS	0.83	277	eP	31	16.50	-1.8
FRI	0.92	34	iPd	31	17.30	-2.4
			eS	31	29.30	
SAO	1.03	302	iPd	31	20.20	-1.5
			eS	31	36.35	
BCH	1.06	168	eP	31	20.20	-2.1
ARN	1.47	320	eP	31	26.30	-2.4
MHC	1.52	317	e(P)	31	27.00	-2.6
ABL	1.66	146	eP	31	28.30	-3.3
CMB	1.80	359	eP	31	31.50	-2.1
			eS	31	53.10	
TNP	3.11	53	eP	31	50.40	-2.0
KVN	3.33	32	eP	31	54.80	-0.8
	14 obs. associated					

SEP 21, 1989 22h 17m 19.77± 0.88s
46.493 N ±10.4km 1.258 E ± 6.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.3 (LDG).

LSF	0.31	142	Pg	17	26.20	0.0
			Sg	17	31.20	
TCF	0.69	107	Pg	17	33.50	0.0
			Sg	17	41.60	
MAF	0.95	106	Pg	17	37.80	0.0
			Sg	17	49.60	
MFF	0.97	277	Pg	17	38.20	-0.1
			Sg	17	50.20	
BGF	1.10	86	Pg	17	39.60	-0.8
			Sg	17	53.50	
AVF	1.47	78	Pg	17	44.60	-1.7
			Sg	18	04.20	
SSF	1.65	69	Pg	17	48.40	-0.4
			Sg	18	09.20	
SMF	1.79	84	Pg	17	52.60	1.7
			Sg	18	14.40	
LBF	1.93	74	Pg	17	53.60	0.5
			Sg	18	18.00	
LOR	1.95	66	Pg	17	54.00	0.8
			Sg	18	17.80	
	S.D. = 1.0		on 10 of 10 obs.			

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* SEP 21, 1989 22h 44m 12.73± 1.08s
32.259 N ±10.1km 142.187 E ±24.7km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ	4.27	338	P	45	17.30	0.2
			S	46	03.30	
CHJJ	4.61	326	P	45	21.90	-0.1
			S	46	16.60	
IIDJ	4.79	313	eP	45	25.20	0.7
MAT	5.39	324	eP	45	32.00	-0.9
	0.8s		11.94nm			4.5mb
			eS	46	33.00	
NIIJ	5.62	333	P	45	35.60	-0.5
MTMJ	5.63	321	eP	45	36.40	0.0
WB5	52.38	189	eP	53	23.80	-0.2
WRA	52.45	189	Pd	53	24.10	-0.4
	0.7s		2.10nm			4.2mb
GBA	61.61	269	P	54	30.00	0.3
	0.6s		2.10nm			4.4mb
NB2	78.84	338	P	56	14.50	0.8
	0.8s		1.60nm			4.1mb
	S.D. = 0.6		on 10 of 10 obs.			

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* SEP 22, 1989 00h 22m 04.65± 0.84s
54.974 N ±18.6km 163.855 W ±11.8km
DEPTH = 169.9 ± 7.9 km
4.7mb (3 obs.)
UNIMAK ISLAND REGION (10)

BALA	0.65	70	ePc	22	29.35	0.1
			eS	22	46.55	
SNKA	0.80	128	iPd	22	30.21	0.0
			eS	22	48.07	
DRRA	0.91	93	iPd	22	30.67	-0.3
DLG	1.17	81	iPd	22	33.12	0.1
			eS	22	52.68	
PS4	1.20	71	ePd	22	33.42	0.1
PVV	1.25	70	eP	22	33.55	-0.1
			eS	22	54.02	
SQF	1.91	81	eP	22	40.76	0.4
			eS	23	05.48	
SASA	1.96	78	eP	22	40.87	0.0
			eS	23	06.19	
SGB	2.03	72	eP	22	41.80	0.1
			eS	23	07.58	
NGI	2.18	87	eP	22	43.50	0.1
CNBA	2.47	92	eP	22	46.67	-0.1
IVF	2.63	68	eP	22	48.57	-0.2
SUF	62.39	355	iP	32	10.90	0.2
	0.3s		4.40nm			4.8mb
NB2	64.27	3	P	32	23.20	0.1
	0.8s		2.10nm			4.1mb
NUR	64.67	355	eP	32	12.00	-13.5X
HFS	65.22	1	eP	32	28.80	-0.3
	0.5s		6.50nm			4.8mb
	S.D. = 0.2		on 15 of 16 obs.			

? SEP 22, 1989 01h 13m 10.11± 1.42s
32.103 N ±15.6km 141.857 E ±40.6km
DEPTH = 33.0km (normal)
4.3mb (5 obs.)
SOUTH OF HONSHU, JAPAN (211)

MAT	5.36	327	(P)	14	29.00	-0.9
	0.5s		9.15nm			4.5mb
			(S)	15	29.00	
GUMO	18.63	171	eP	17	43.70	16.4X
	0.9s		68.20nm			
PJG	18.63	171	eP	17	44.00	16.7X
WB5	52.18	189	eP	22	20.40	0.5
WRA	52.25	189	Pc	22	19.00	-1.4
	0.6s		3.30nm			4.5mb
GBA	61.32	268	P	23	26.00	0.9
	0.5s		1.20nm			4.3mb
HFS	78.73	336	eP	25	10.70	0.3
	0.5s		1.00nm			4.1mb
NB2	78.87	338	P	25	11.80	0.5
	0.8s		2.10nm			4.2mb
ZOBO	148.57	67	ePKP	33	00.00	7.3X
CNCB	149.00	68	ePKP	32	59.00	5.7X
	S.D. = 1.2		on 6 of 10 obs.			

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* SEP 22, 1989 01h 14m 12.33± 1.29s
19.554 N ±13.5km 97.607 E ±16.4km
DEPTH = 10.0km (geophysicist)
BURMA (296)

CHG	1.46	120	iPn	14	36.90	-1.9
			iPg	14	41.00	
			iSg	14	59.00	
BDT	2.65	150	ePn	14	57.00	1.1
			ePg	15	03.00	

22d 01h

	eSg	15 44.00		S	29 18.00
LOE 4.46 118	ePg	15 22.00	0.5	LSA 9.90 262	iPd 28 16.00 -0.1
	eSg	16 11.00		E 10s 46.80um	
NST 4.55 148	ePn	15 12.00	-10.8X		pP 28 21.00
	ePg	15 37.00			S 30 08.00
	eSg	16 40.00		TIY 10.26 51	Pd 28 18.30 -2.3
NNT 7.22 163	eP	16 06.60	6.1X	1.0s 0.30nm	3.6mb X
KMI 7.30 40	Pgc	16 02.50	0.7	WHN 10.27 93	iPd 28 19.00 -1.7
	Sg	17 21.50		4.0s 5.30nm	4.3mb X
SHL 7.98 320	eP	16 11.00	-0.4		S 30 13.00
	eS	18 09.00		BTO 10.88 32	iPd 28 28.70 -0.5
S.D. = 1.7	on 5 of	7 obs.			pP 28 36.70
				HHC 11.82 36	iPd 28 40.00 -1.9
SEP 22, 1989 02h 25m 50.88± 0.10s				N 11s 48.40um	
31.583 N ± 2.4km 102.433 E ± 2.1km				E 11s 40.00um	
DEPTH = 14.6km (geophysicist)				GZH 12.86 128	iPd 28 53.00 -2.8X
6.1mb (83 obs.) 6.1Msz (14 obs.)				Z 16s 96.40um	
SICHUAN PROVINCE, CHINA (307)				N 12s 191.00um	
At leost 54 people injured, about 4,270 houses destroyed, more thon 300 animals killed ond domage caused to bridges, highways and to o phosphorus mine in Xioojin County. Depth from broodband displocement seismograms.				TIA 13.05 65	Pd 28 58.40 0.1
				E 14s 90.60um	
					S 31 27.20
				CHG 13.10 195	iPd 29 01.10 2.1
				1.1s 161.39nm	6.1mb
					eS 31 40.00
				MCO 13.68 131	eP 29 03.50 -3.2X
				HKC 13.96 129	iP 29 10.00 -0.3
					iS 31 38.80
FAULT PLANE SOLUTION: P-Waves				BJI 13.97 49	eP 29 10.50 0.1
NP1:Strike=227 Dip=70 Slip= 152				5.0s 1.46nm	3.0mb X
NP2: 327 64 22				E 12s 93.60um	
Principal Axes:					ePP 29 23.00
T Plg=34 Azm=186					eS 31 52.00
P 4 278				NJ2 13.97 84	Pc 29 09.80 -0.7
Comment: The focol mechonism is moderotely well controlled and corresponds to strike-slip faulting with o moderote reverse component. The preferred fault plane is not determined.				E 17s 110.00um	
				LOE 14.13 183	eP 29 12.00 -0.6
				QIZ 14.18 150	iPd 29 12.50 -0.7
				E 13s 148.00um	
					S 31 49.00
				BDT 14.61 193	eP 29 18.10 -0.8
RADIATED ENERGY				0.7s 124.60nm	5.6mb
No. of sto: 5 Focol mech. F				GUN 14.84 260	P 29 19.34 -2.9X
Energy 0.8±0.3*10**14 Nm				0.9s 427.00nm	5.9mb
MOMENT TENSOR SOLUTION				PKI 15.34 259	P 29 26.20 -2.6X
Dep 14 No. of sto: 12				0.8s 715.00nm	6.0mb
Moment Tensor; Scole 10**18 Nm				KKN 15.38 260	P 29 25.78 -3.4X
Mrr= 0.09 Mtt= 1.41				DMN 15.58 260	P 29 28.74 -3.1X
Mff=-1.49 Mrt=-0.68				0.8s 945.00nm	6.1mb
Mrf=-0.03 Mtf=-0.37				OZH 15.69 111	iPd 29 30.50 -2.4X
Principal oxes:				7.0s 16.70nm	3.4mb X
T Vol= 1.73 Plg=22 Azm=186				Z 12s 67.90um	5.0MszX
N -0.18 67 19				E 10s 56.90um	
P -1.55 5 278					S 32 20.00
Best Double Couple:Mo=1.6*10**18				GKN 15.86 262	P 29 30.76 -4.5X
NP1:Strike=325 Dip=71 Slip= 13				NST 15.98 188	iPc 29 37.00 0.3
NP2: 230 78 161				SSE 16.03 87	Pd 29 37.00 -0.4
CENTROID, MOMENT TENSOR (HRV)				6.0s 12.10nm	3.2mb X
Dota Used: GDSN					S 32 28.00
L.P.B.: 11S, 27C					sS 32 44.00
Centroid Location:				WMQ 16.86 321	eP 29 45.88 -1.9
Origin Time 02:25:56.8 0.2					eS 33 08.07
Lat 30.87N 0.05 Lon 102.83E 0.04				DL2 17.28 60	iPd 29 56.00 2.9X
Dep 15.0 FIX Half-durotion 3.8				6.0s 9.10nm	3.1mb X
Moment Tensor; Scale 10**18 Nm				Z 18s 44.70um	5.4Msz
Mrr= 0.71 0.03 Mtt= 0.38 0.04				N 14s 80.40um	
Mff=-1.10 0.04 Mrt=-0.54 0.08				E 14s 62.80um	
Mrf=-1.37 0.14 Mtf=-0.32 0.04					S 33 08.00
Principol Axes:				KBR 17.69 189	eP 30 00.00 1.7
T Vol= 1.54 Plg=60 Azm=125				ANP 17.95 106	iP- 30 04.00 2.4
N 0.41 9 20					eS 33 32.00
P -1.96 29 285				NNT 19.07 188	iPc 30 15.00 -0.3
Best Double Couple:Mo=1.8*10**18				SNY 19.75 53	iPc 30 21.00 -2.0
NP1:Strike=352 Dip=18 Slip= 61				7.0s 5.00nm	2.9mb X
NP2: 202 74 99				Z 13s 38.60um	5.0Msz
				N 10s 24.60um	
CD2 1.32 120	iPgd 26 15.00	0.2			iS 34 04.00
LZH 4.64 14	Pn 27 05.00	2.7X		IRK 20.72 3	iPd 30 34.00 0.9
6.0s 6.98nm					eS 34 35.00
XAN 5.99 64	Pn 27 21.80	0.7		CN2 21.84 50	Pc 30 44.70 0.2
	Sn 28 28.00			2.5s 5.10nm	3.5mb X
GYA 6.31 143	iPnc 27 24.60	-1.1		Z 10s 46.00um	6.2MszX
	Sn 28 38.00				eS 34 47.00
KMI 6.44 178	P+ 27 27.50	-0.2		HIA 21:95 31	eP 30 46.84 1.3
KMI 6.44 178	iPc 27 28.00	0.3			eS 34 54.23
	sP 27 43.00			NDI 21.99 269	iPd 30 46.00 -0.1
	S 28 42.00			1.0s 250.00nm	5.6mb
	iS 28 43.00				eS 34 42.00
GTA 8.10 345	iPd 27 50.70	-0.1		BAG 22.38 128	iPc+ 30 52.00 1.8

		eS	34 53.80		
KSH 22.86 297	iPd	30 58.00	3.2X		
	iS	35 09.00			
QCP 23.99 130	iP	30 58.00	-7.7X		
KUMJ 24.06 80	eP	31 07.30	0.9		
	S	35 36.00			
SHNJ 24.19 76	eP	31 09.70	2.1		
KAGJ 24.27 83	eP	31 09.10	0.6		
SNG 24.34 184	iPc	31 09.40	0.2		
1.1s 1002.53nm			6.3mb		
	eS	35 28.50			
FRU 24.73 305	ePd	31 15.50	2.7X		
	iS	35 37.00			
MDJ 24.89 51	eP	31 15.00	0.7		
	ePP	31 51.00			
	S	35 35.00			
MDJ 24.89 51	ePd	31 23.42	9.1X		
	ePP	31 51.00			
	eS	35 40.77			
YONJ 26.10 74	P	31 24.20	-1.6		
TKSJ 26.64 76	P	31 32.50	1.8		
IPM 26.89 183	ePd	31 32.90	-0.3		
1.3s 312.50nm			5.8mb		
WKYJ 27.90 76	P	31 44.10	1.8		
TSRJ 28.16 73	eP	31 44.20	-0.3		
GBA 29.09 238	Pc	31 52.20	-0.8		
1.2s 265.70nm			5.9mb		
KGM 29.42 178	eP	31 55.50	-0.5		
MTMJ 29.61 71	eP	31 58.30	0.6		
IIDJ 29.73 73	eP	31 57.20	-1.6		
MAJO 29.94 71	ePc	31 57.39	-3.2X		
	epPd	32 02.02	16kmX		
	esP	32 02.85			
MAT 29.94 71	eP	31 58.00	-2.6		
2.1s 633.33nm			6.1mb		
Z 20s 7.09um			5.3Msz		
	eS	36 56.00			
QUE 30.40 277	iPd-	32 05.50	0.5		
	eS	37 00.00			
NIIJ 30.56 69	eP	32 04.60	-1.4		
CHJJ 30.59 72	eP	32 05.70	-0.6		
DAV 32.57 134	eP+	32 25.00	1.2		
ASAJ 33.80 57	eP	32 33.60	-0.7		
YSS 34.36 52	eP	32 40.00	1.0		
	eS	38 08.00			
KUSJ 35.18 59	eP	32 45.30	-0.8		
MHI 35.72 289	eP	32 53.00	2.1		
	eS	38 32.00			
PCI 36.28 150	ePd	32 57.30	1.6		
1.0s 5.00nm			4.3mb X		
MKS 40.04 153	iPc	33 29.50	2.4		
TRT 40.26 164	ePd	33 29.50	0.5		
1.2s 437.60nm			6.0mb		
KHKI 41.67 160	ePd	33 41.00	0.5		
	e	40 52.10			
TIK 42.56 12	iPc	33 47.00	-0.2		
	eS	40 09.00			
SHI 42.70 281	eP	33 49.00	-0.1		
GUMO 42.76 105	ePc	33 47.31	-2.2		
1.0s 144.00nm			5.7mb		
	esP	33 54.10			
PJG 42.76 105	eP	33 49.50	0.0		
AAI 42.80 140	eP	33 56.90	7.1X		
GUA 42.83 105	eP	33 49.00	-1.1		
0.9s 53.78nm			5.3mb		
Z 22s 10.81um			5.7Msz		
PET 45.41 45	eP	34 10.00	-0.5		
	eS	40 50.00			
TAB 45.92 294	eP-	34 17.00	2.1		
KER 46.02 289	eP	34 17.00	1.3		
KUG 46.19 151	ePd	34 02.50	-14.5X		
0.8s 375.50nm					
BKR 47.51 300	iPd	34 30.00	2.5		
	iS	41 30.00			
BHD 48.47 288	iPc	34 35.00	0.2		
	iPcP	35 59.00			
	iPP	36 29.00			
	iPcS	39 56.00			
	iS	41 34.00			
MSL 48.73 293	ePc	34 36.50	-0.3		
	ePP	36 36.50			
	eS	41 41.00			
OBN 51.15 318	iPc	34 54.50	-0.5		
1.4s 700.00nm			6.4mb		
Z 12s 17.70um			6.3MszX		
	iS	42 08.00			
MTN 52.05 144	eP	35 00.00	-2.2		

APA	53.26	333	iPd	35	10.60	-0.1	AMAN	61.07	282	eP	36	07.00	0.4				e	38	50.00										
			iS	42	45.40		RZN	61.23	303	iPc	36	07.00	-0.7				e	44	56.00										
KNA	53.42	148	iPc	35	10.90	-1.5	DEV	61.23	308	ePd	36	02.50	-4.9X				e	45	18.00										
	0.7s	132.00nm				6.0mb	PGB	61.35	304	iPc	36	08.00	-0.4				LR	06	26.00										
PUL	54.40	324	ePc	35	20.00	0.9	AGAL	61.37	281	eP	36	08.50	-0.1	TIR	64.78	304	eP	36	30.50	-0.5								
			eS	43	00.00		KAP	61.40	296	eP	36	07.50	-1.2	ITM	64.78	299	eP	36	30.50	-0.6								
SMY	54.76	45	eP	35	22.30	0.4	GZR	61.46	308	iPd	36	07.50	-1.6	LACI	64.79	305	eP	36	30.00	-1.0								
MBL	55.03	160	iPc	35	22.50	-1.7	AGMR	61.56	281	eP	36	12.00	2.0	SDA	64.80	305	eP	36	30.40	-0.7								
	0.8s	62.00nm				5.7mb	MRWA	61.83	167	eP	36	11.00	-0.6	SOP	64.81	312	eP	36	31.30	0.2								
NANU	55.28	165	eP	35	24.00	-1.9	WARB	61.92	155	eP	36	11.50	-0.8	TTG	64.82	306	eP	36	31.00	-0.2								
	0.6s	37.00nm				5.6mb		0.7s	48.00nm				5.8mb				eS	45	12.00										
BHL	55.30	292	P	35	28.00	1.7	MMB	61.96	304	eP	36	12.00	-0.5	BERA	64.95	304	eP	36	30.20	-1.8								
			S	43	12.00		SPC	62.00	313	iPc	36	13.80	0.9	SRN	65.21	303	eP	36	31.90	-1.8								
HRI	55.43	291	eP	35	28.00	0.8	VTS	62.01	305	iPc	36	13.00	0.0	BRN	65.23	318	iPd	36	35.80	2.1								
KEV	55.71	336	ePd	35	29.71	1.1	BZS	62.17	308	eP	36	14.50	0.8	PRU	65.27	315	P	36	33.50	-0.5								
	1.7s	1024.50nm				6.6mb	SRS	62.21	303	eP	36	12.50	-1.6		1.6s	187.50nm				6.0mb								
	Z 14s	23.30um				6.4MszX	KKB	62.33	304	iPc	36	04.00	-10.9X		Z 16s	31.40um				6.6MszX								
			epPc	35	33.85	14kmX	PLG	62.56	302	eP	36	15.40	-1.0		N 14s	9.50um												
			eS	43	18.41		HFS	62.57	326	eP	36	14.80	-1.4		E 16s	26.00um												
			e	47	06.00			1.2s	234.70nm				6.2mb				e	36	57.50										
			LR	02	18.00			Z 17s	7.47um				5.9MszX				S	45	20.00										
SOD	55.84	333	iP	35	28.80	-0.7				LR	00	02.00		BRG	65.32	316	iP	36	33.50	-0.9								
ANTO	55.85	299	eP	35	29.38	-0.7	PSZ	62.60	311	eP	36	31.30	14.6X		1.5s	240.00nm				6.1mb								
			epPc	35	34.02	15kmX	ASPA	62.65	147	iPc	36	16.20	-1.0		N 22s	24.00um												
			esP	35	36.67			Z 23s	5.38um				5.6MszX		E 22s	11.00um												
			ePP	37	29.89					eS	44	47.10					i	36	47.00										
			ePPP	38	54.59					LR	54	56.90					e	40	28.00										
BBTK	55.89	299	eP	35	30.00	-0.4	NPS	62.69	296	eP	36	15.00	-2.4				eS	45	18.00										
SUF	56.23	327	iP	35	31.40	-1.0	KNT	62.69	303	eP	36	17.00	-0.3				e	46	32.00										
	0.9s	131.60nm				6.0mb	THE	62.82	303	eP	36	16.50	-1.6				e	52	32.00										
DSI	56.25	289	eP	35	33.00	0.1	OIS	62.91	141	iPc	36	17.00	-1.9				e	05	21.00										
CSS	56.82	294	eP	35	36.50	-0.5		1.8s	616.00nm				6.5mb	VLS	65.40	301	eP	36	32.50	-2.6								
PRNI	56.97	288	iPd	35	36.50	-1.7	AAE	62.92	264	eP	36	19.50	-0.1	KEK	65.41	303	eP	36	34.10	-1.0								
NUR	57.16	325	eP	35	38.00	-1.1	NEO	63.08	301	eP	36	17.00	-2.9X	NWAO	65.67	166	eP	36	36.22	-0.4								
	1.1s	177.50nm				6.0mb	ATH	63.17	300	eP	36	20.00	-0.4		1.0s	70.00nm				5.8mb								
	Z 16s	13.40um				6.1MszX				eS	44	51.20			Z 22s	7.80um				5.9Msz								
			eS	43	32.00					eSS	49	04.40			N 22s	6.30um												
			LR	01	22.00					eSSS	52	21.60			E 22s	5.80um												
GPA	57.58	300	iP	35	42.00	-0.3	BEO	63.20	308	iP	36	20.00	-0.5				epP	36	40.52	14kmX								
PPCY	57.61	294	eP	35	41.50	-1.0	RGS	63.24	329	eP	36	21.90	1.3				esPc	36	42.68										
CFR	57.86	306	eP	35	44.00	-0.1	BUD	63.29	311	iPd	36	21.70	0.5	CLL	65.73	316	iP	36	36.10	-0.8								
PPE	57.98	308	eP	35	54.50	9.5X		1.7s	331.40nm				6.2mb		1.6s	270.00nm				6.2mb								
TLB	58.09	306	eP	35	46.00	0.3	BAL	63.31	166	iPd	36	20.70	-0.7		Z 18s	11.00um				6.1Msz								
CLI	58.12	308	iPc	35	48.00	2.0	LIT	63.34	302	eP	36	20.70	-0.9				i	36	53.00										
BCK	58.18	297	iP	35	45.00	-1.6	NRA0	63.42	327	P	36	19.40	-2.5				iPcP	37	09.60										
YLV	58.19	301	iP	35	47.00	0.4	SKO	63.46	305	iPc	36	21.60	-0.7				eS	45	22.00										
ARO	58.20	264	iP+	35	46.20	-0.9		Z 16s	6812.00um				8.9MszX	PTJ	65.81	310	eP	36	37.40	-0.3								
PSN	58.21	305	iPd	35	48.00	1.4		N 15s	5457.00um					ZAG	65.83	310	eP	36	37.70	0.1								
ISK	58.28	302	eP	35	47.00	-0.1		E 15s	6649.00um								i	36	38.60										
BRD	58.53	307	eP	35	52.00	3.1X				ipP	36	45.00	92kmX				iS	45	28.00										
TRO	58.53	336	iP	35	50.80	2.2				iPP	38	30.00		KHC	66.16	314	iPc	36	39.60	-0.2								
VRI	58.66	308	ePc	35	51.50	1.7				iPPP	40	25.00			1.5s	116.50nm				5.8mb								
KHL	58.73	298	eP	35	48.90	-1.5				iS	44	54.00			Z 17s	17.30um				6.3MszX								
ELL	58.91	297	eP	35	50.80	-1.0				iPS	45	18.00			N 18s	18.50um												
ISR	58.97	307	eP	35	53.50	1.5				iScS	46	16.00			E 16s	13.50um												
PMG	59.09	126	eP	35	52.00	-1.1				iSS	48	50.00					e	39	02.40										
RAB	59.18	118	iP+	35	52.00	-1.8				iSSS	51	35.00					S	45	40.00										
			iS	44	06.00					LR	08	13.00		KMR	66.21	313	iP-	36	41.60	1.5								
MLR	59.29	307	iPc	35	55.50	1.2	NB2	63.48	327	P	36	20.40	-1.9				i	38	41.50										
BNT	59.32	301	iP	35	54.50	0.1		1.3s	290.10nm				6.3mb				LR	06	57.00										
KBS	59.35	347	eP	35	54.00	-0.2	SRO	63.65	312	iPd	36	24.50	1.0	CTA	66.37	135	iPc+	36	40.00	-1.4								
KSL	59.36	296	eP	35	54.00	-0.7				e	38	03.00			1.9s	789.47nm				6.6mb								
BUC	59.47	306	ePd	35	57.50	2.1	VAM	63.72	297	eP	36	24.00	-0.1				iS	45	33.00										
BUC1	59.54	306	iPc	35	57.00	1.2	KZN	63.79	303	eP	36	23.00	-1.6	CTAO	66.37	135	ePc	36	39.86	-1.6								
WB5	59.64	145	iPc	35	55.70	-1.1	AGG	63.83	301	eP	36	23.60	-1.2	VBY	66.42	310	ePd	36	43.00	1.6								
			eS	44	06.80		KSP	63.93	315	eP	36	25.00	-0.3	BER	66.43	327	iP	36	42.90	1.7								
JMB	59.67	304	iPc	35	57.00	0.2		1.5s	236.00nm				6.1mb	HVAR	66.48	307	iP	36	41.40	-0.5								
WRA	59.68	145	Pc	35	58.90	1.8				ic	36	27.50		WET	66.58	314	iPd	36	42.70	0.2								
	0.7s	111.10nm				6.1mb	OHR	64.20	304	eP	36	25.70	-1.6		1.9s	574.00nm				6.4mb								
MEKA	59.88	163	eP	35	57.80	-0.6		1.3s	18.00nm				5.1mb		Z 17s	26.60um				6.5MszX								
CMP	59.96	307	ePd	35	55.00	-3.8X				eS	44	56.50					eS	45	40.30										
YER	60.03	297	eP	35	58.00	-1.4	PHP	64.25	305	eP	36	26.50	-1.0	LJU	66.69	311	eP	36	43.90	0.7								
HLW	60.10	289	iP	36	00.00	0.1	BCI	64.28	305	iPd	36	30.20	2.5	HOF	66.76	316	iPc	36	43.00	-0.6								
			iS	44	16.00		ZST	64.29	312	iP	36	27.50	-0.2		1.4s	279.00nm				6.2mb								
PVL	60.34	305	iPd	36	03.00	1.7	KBN	64.36	303	eP	36	27.00	-1.2				eS	45	41.70										
IZM	60.40	299	iP	36	01.50	-0.3	KLB	64.49	166	eP	36	28.00	-1.1	MOX	66.79	316	eP	36	43.00	-0.8								
EZN	60.64	301	iP	36	03.70	0.3	PUK	64.52	305	eP	36	28.20	-1.0		1.8s	323.00nm				6.2mb								
DRA	60.66	307	ePc	36	00.00	-3.5X	MUN	64.55	167	iPd	36	29.20	-0.3		Z 12s	11.20um				6.3MszX								
UPP	60.73	325	iPd	36	02.90	-0.9		1.0s	140.00nm				6.1mb		N 22s	20.50um												
			iS	44	20.00			Z 20s	8.80um				5.9Msz		E 24s	16.60um												
KDZ	60.74	303	iPc	36	06.00	1.9		N 20s	5.90um								i	36	44.50										
UZH	60.86	312	iP	36	05.50	0.7		E 20s	4.40um								e	36	57.00										
			iS	44	22.00		COOL	64.61	162	eP	36	29.00	-0.9	BRT	66.82	305	P	36	45.30	1.2								
PRK	60.86	300	eP	36	05.00	0.1		0.6s	15.00nm				5.3mb	CEY	66.87	310	eP	36	43.50	-0.9								
SMG	60.93	298	eP	36	05.40	0.0	VKA	64.76	313	iPc	36	30.50	-0.3	IMA	66.90	26	eP	36	43.60	-0.9								
ASW	61.05	282	iPd	36	08.00	1.5		3.4s	1218.00nm				6.5mb X		1.5s	361.10nm				6.3mb								
			eS	44	28.00			Z 15s	14.00um				6.3MszX	KBA	67.06	312	iPc	36	43.90	-1.9								

22d 02h

	2.0s	280.00nm			6.1mb
			i	36 47.50	
			i	36 52.10	
VOY	67.11	311	eP	36 44.60	-1.4
			e	36 46.10	
BHG	67.11	313	eP	36 46.40	0.5
	1.7s	633.00nm			6.5mb
RBL	67.16	311	P	36 45.60	-0.7
TRI	67.31	311	eP	36 46.50	-0.6
			e(S)	45 46.00	
			e(SS)	50 12.00	
			e(SSS)	53 40.00	
TTA	67.34	29	eP	36 46.40	-0.8
GRF	67.38	315	iPc	36 47.80	0.2
Z	16s	25.00um			6.5MszX
			e	36 50.30	
FVI	67.60	312	P	36 47.60	-1.3
TDS	67.90	304	P	36 50.50	-0.5
FUR	67.94	314	iPc	36 51.20	0.1
	1.5s	809.00nm			6.7mb
Z	15s	16.60um			6.4MszX
			eS	45 55.50	
SVO	68.17	116	eP	36 53.00	0.1
AOI	68.26	308	eP	36 52.90	-0.3
SGO	68.27	305	P	36 52.30	-0.9
DUI	68.42	306	P	36 53.70	-0.6
HNR	68.44	117	eP+	36 54.00	-0.6
			eS	45 46.00	
SSO	68.48	308	e(P)	36 53.80	-0.7
OGA	68.61	313	iPd	36 55.00	-0.5
	1.5s	274.00nm			6.2mb
CIO	68.70	308	e(P)	36 55.67	-0.3
ARV	68.72	309	P	36 55.60	-0.4
SOI	68.74	302	P	36 55.20	-1.0
WIT	68.77	320	ePd	36 57.50	1.4
TNS	68.82	317	ePc	36 56.70	0.1
SDI	68.85	307	P	36 55.70	-1.2
TOD	68.86	316	eP	36 55.81	-1.0
RFI	68.89	306	P	36 57.60	0.5
AZI	68.99	307	P	36 57.10	-0.6
WTS	69.03	319	iPd	36 57.90	0.2
	1.0s	139.00nm			6.1mb
OSS	69.23	313	ePd	36 59.10	-0.2
SFI	69.27	309	P	37 00.10	0.8
MBC	69.28	10	eP	36 59.00	0.1
	1.4s	436.00nm			6.4mb
MNS	69.34	308	P	36 58.30	-1.6
PGD	69.37	309	P	37 00.60	0.4
SAL	69.44	311	P	37 00.80	0.5
ABH	69.49	317	eP	37 00.09	-0.6
SAX	69.50	313	ePd	37 00.40	-0.7
RMP	69.56	307	P	36 59.50	-1.7
COL	69.62	25	ePc	37 00.61	-0.6
			epPc	37 06.07	18kmX
			iS	46 10.13	
FBA	69.62	25	P	37 00.50	-0.7
FIR	69.72	309	eP	37 04.50	2.4
			iS	46 15.00	
VDL	69.74	313	ePd	37 02.20	-0.3
SLE	69.81	314	ePd	37 02.40	-0.2
GWF	69.82	316	P	37 02.04	-0.7
RUP	69.85	316	eP	37 02.80	-0.1
LLS	69.88	313	ePd	37 02.80	-0.5
MDI	69.89	312	P	37 01.60	-1.4
DBN	69.90	319	eP	37 04.00	1.0
Z	16s	25.00um			6.6MszX
			eS	46 21.00	
			eSS	51 10.00	
			eSSS	54 01.00	
MME	69.91	310	P	37 04.00	0.4
ZLA	69.99	314	ePd	37 03.50	-0.3
BDI	70.03	310	P	37 04.20	0.1
ENN	70.05	318	ePd	37 04.00	0.0
	1.0s	101.00nm			5.9mb
FEL	70.06	314	P	37 04.39	0.1
MEM	70.07	318	P	37 04.30	0.2
NAI	70.09	256	iPc	37 06.00	1.0
WLS	70.23	315	P	37 04.88	-0.3
CDF	70.27	315	P	37 04.83	-0.7
TMA	70.28	312	ePd	37 04.90	-0.8
MAO	70.36	308	P	37 05.50	-0.6
ECH	70.43	315	P	37 06.03	-0.4
VAI	70.44	312	P	37 04.60	-1.8
BOB	70.48	311	P	37 06.00	-0.9
USI	70.53	304	P	37 05.60	-1.5
BBS	70.54	314	P	37 07.49	0.4
MQF	70.60	315	P	37 07.03	-0.5

MCT	70.67	303	P	37 08.40	0.2
PMR	70.81	29	eP	37 07.60	-0.8
	1.2s	520.80nm			6.5mb
BSF	70.82	315	P	37 08.07	-0.8
MMK	70.87	313	ePd	37 09.40	0.0
UCC	70.93	318	P	37 10.00	0.7
			S	46 29.00	
LOMF	71.01	314	P	37 09.69	-0.3
HAU	71.01	315	eP	37 09.30	-0.6
	1.2s	121.30nm			5.9mb
SNF	71.10	318	iP	37 07.30	-3.1X
DOU	71.11	318	P	37 10.20	-0.3
	1.0s	155.50nm			6.1mb
			S	46 32.00	
			e	47 22.00	
VITF	71.13	315	P	37 09.79	-0.8
PCP	71.16	311	P	37 10.59	-0.4
DIX	71.20	313	ePd	37 11.80	0.3
KDC	71.28	33	eP	37 10.50	-0.8
LVI	71.44	304	P	37 13.00	0.4
EMS	71.51	313	ePd	37 13.00	-0.2
FIN	71.52	311	P	37 12.03	-1.1
LSD	71.64	312	P	37 14.08	0.0
ROB	71.70	311	P	37 14.49	0.3
TOA	71.73	27	eP	37 14.20	0.1
CVF	71.82	309	P	37 15.14	0.3
IMI	71.86	311	P	37 14.90	-0.3
LPG	71.88	313	eP	37 15.40	-0.1
	1.2s	325.40nm			6.3mb
DOI	72.01	311	P	37 13.50	-2.6
ENR	72.02	311	P	37 15.00	-1.2
EDU	72.06	326	eP	37 15.50	-0.5
STV	72.08	311	P	37 14.80	-1.7
PZZ	72.10	312	P	37 15.10	-1.6
RRL	72.12	312	P	37 16.64	-0.3
AUTN	72.12	311	P	37 17.02	0.1
BNI	72.13	312	P	37 15.70	-1.1
INK	72.17	19	ePc	37 15.80	-0.7
	1.1s	342.00nm			6.3mb
SBF	72.18	311	eP	37 16.70	-0.4
ESY	72.18	325	eP	37 15.70	-1.1
PTS	72.20	303	P	37 16.40	-0.8
TOUF	72.23	311	P	37 17.75	0.2
AURF	72.23	311	P	37 17.33	-0.1
REVF	72.28	311	P	37 17.65	0.0
MVIF	72.34	311	P	37 18.28	0.1
ELO	72.43	326	eP	37 17.60	-0.7
EBH	72.45	326	eP	37 17.60	-0.7
EDI	72.46	325	eP	37 17.60	-0.8
	0.6s	44.00nm			5.7mb
EBL	72.46	325	eP	37 17.90	-0.5
	0.9s	71.00nm			5.7mb
CALN	72.58	311	P	37 19.62	0.1
EAU	72.63	325	eP	37 18.90	-0.5
	0.5s	33.00nm			5.7mb
RMO	72.72	137	ePc	37 20.50	0.2
EKA	72.74	325	P	37 20.00	-0.1
	1.3s	176.30nm			6.0mb
ESK	72.78	325	ePd	37 21.00	0.7
	1.5s	240.00nm			6.0mb
FRF	72.82	311	eP	37 20.40	-0.4
	1.6s	203.90nm			5.9mb
LOR	72.84	315	eP	37 19.80	-1.1
	1.3s	112.80nm			5.8mb
AKU	72.85	338	iP	37 22.30	1.8
	1.9s	589.47nm			6.3mb
LBF	72.91	315	eP	37 20.30	-1.0
CGL	72.96	306	P	37 22.60	0.8
LMR	73.02	311	eP	37 21.60	-0.3
	1.6s	410.40nm			6.3mb
LRG	73.06	311	eP	37 22.40	0.3
	1.7s	390.40nm			6.2mb
SMF	73.15	315	eP	37 22.00	-0.7
SSF	73.15	315	eP	37 22.10	-0.6
STK	73.20	146	eP	37 22.00	-1.0
AVF	73.37	315	eP	37 23.00	-0.9
PLDF	73.60	314	P	37 24.88	-0.5
BGF	73.79	315	eP	37 25.80	-0.6
AGO	73.86	314	P	37 26.67	-0.1
PYM	74.08	314	P	37 28.01	-0.2
MAF	74.12	315	eP	37 28.10	-0.2
LBL	74.19	314	P	37 28.84	0.2
TCF	74.31	315	eP	37 29.00	-0.4
ADE	74.47	150	eP	37 29.50	-0.9
LDF	74.54	318	eP	37 30.20	-0.5
	1.4s	212.50nm			6.0mb
FLN	74.66	318	eP	37 31.00	-0.3

	1.4s	217.80nm			6.0mb
LSF	74.74	315	eP	37 31.50	-0.4
	1.4s	119.30nm			5.7mb
YRH	74.79	323	eP	37 32.60	0.6
	1.4s	350.00nm			6.2mb
GRR	75.07	318	eP	37 33.20	-0.5
CAF	75.07	314	eP	37 34.20	0.4
REY	75.09	338	iP	37 37.10	3.6X
RJF	75.22	314	eP	37 35.10	0.5
LPF	75.35	318	eP	37 35.20	-0.1
	1.3s	194.90nm			6.0mb
DMU	75.36	325	eP	37 36.60	1.4
DLE	75.51	324	eP	37 37.10	1.0
	1.3s	205.00nm			6.0mb
MFF	75.56	316	eP	37 36.40	-0.2
ETA	75.67	323	eP	37 37.90	0.9
	1.5s	754.00nm			6.5mb
LPO	75.73	314	eP	37 38.00	0.4
	1.4s	209.10nm			6.0mb
ETER	75.87	311	e(P)	37 40.00	1.6
LFF	75.87	314	eP	37 38.80	0.4
	1.2s	154.70nm			5.9mb
ECP	76.04	323	eP	37 40.20	1.1
	1.4s	415.00nm			6.3mb
EPF	77.10	313	eP	37 45.10	-0.2
	1.4s	126.30nm			5.8mb
ESEL	77.11	309	eP	37 48.20	2.8X
COO	77.61	138	iPc	37 49.90	1.7
VAL	78.14	324	eP	37 53.00	2.3
			S	47 48.00	
EBR	78.15	311	eP	37 52.00	1.0
			eS	47 48.00	
EROO	78.20	311	eP	37 52.40	1.0
BWA	78.64	143	eP	37 54.60	0.8
SIT	79.18	28	eP	37 57.80	1.5
CAN	79.64	143	eP	37 59.70	0.5
TOO	79.69	147	iPd	38 00.20	0.8
	1.3s	266.00nm			6.1mb
ECHE	79.75	310	e(P)	38 02.40	2.5
ETOR	79.79	312	eP	38 00.30	0.2
CNB	79.82	143	iPc	38 00.30	0.1
	1.1s	107.00nm			5.8mb
GUD	81.21	312	eP	38 08.00	0.2
DZM	81.25	122	iPc	38 09.30	1.2
EVIA	81.27	310	eP	38 08.80	0.8
EMON	81.56	316	eP	38 11.80	2.5
PTZ	81.91	248	iPd	38 11.50	-0.1
			i	38 20.00	
			i	38 51.00	
PTZ	81.91	248	iPd	38 11.90	0.3
ENIJ	82.00	309	eP	38 13.60	1.9
ERUA	82.05	315	e(P)	38 15.00	3.1X
EBAN	82.37	310	eP	38 15.00	1.3
BNG	82.49	271	iPc	38 14.40	-0.3
	0.7s	170.00nm			6.3mb
			id	39 42.90	
BCAO	82.50	271	ePc	38 13.72	-1.0
			epPc	38 18.85	16kmX
STS	82.60	316	e(P)	38 17.00	2.3
AFC	82.72	309	eP	38 16.00	0.3
EPLA	82.75	313	eP	38 17.20	1.6
ASMO	82.79	310	iP	38 16.00	0.0
APHE	82.99	309	iP	38 17.00	0.0
ACHM	82.99	309	iP	38 17.20	0.2
AAPN	83.07	310	iP	38 17.20	-0.2
ALOJ	83.17	309	iP	38 19.00	1.0
ATEJ	83.22	309	iP	38 18.00	-0.3
TAF	83.32	307	iPd	38 21.00	2.3
EHOR	83.51	311	eP	38 20.00	0.5
MAL	83.59	309	iPc	38 19.80	-0.1
			iS	48 39.00	
PTO	83.67	315	eP	38 20.50	0.2
			eS	48 44.00	
EPRU	83.99	310	eP	38 23.00	0.9
EJIF	84.45	310	eP	38 25.00	0.7
EVAL	84.62	311	eP	38 26.80	1.7
KRI	84.75	247	iP	38 27.20	1.1
NKM	84.99	309	iPd	38 27.00	0.0
			i	38 29.00	
LSZ	85.00	249	iPc	38 27.00	-0.4
			i	38 36.00	
			i	38 44.00	
			i	39 42.20	
LIS	85.47	313	iPd	38 31.70	2.4
KMZ	85.87	252	iPc	38 32.20	0.4
IFR	85.91	307	iP	38 33.00	1.1
HON	86.78	67	P	38 40.00	4.0X

	Z 19s 2.50um 5.6Msz			eSKP 49 11.34		
BUL	87.42 245 iPc 38 39.80 0.5	VAO	151.57 280	ePKP 45 40.60	0.5	
	1.0s 110.00nm 6.1mb			e 45 47.60		
AVE	87.59 308 iP 38 41.00 1.2	PPD	154.76 286	ePKP 45 44.70	0.3	
TIO	88.89 306 iP 38 48.00 1.7			e 45 46.80		
	i 38 50.00			e 46 11.10		
	i 39 09.50	CCH	162.47 321	PKP 45 54.20	0.4	
EDM	89.99 21 iPc 38 51.70 0.7	ZOBO	162.50 328	PKPc 45 54.20	0.0	
	1.4s 783.00nm 6.7mb		2.0s 354.91nm			
PGC	90.22 28 eP 38 54.00 2.0			SKS 54 06.00		
MCW	90.45 28 P 38 54 40 1.2	LPB	162.72 328	PKPc 45 56.00	1.8	
SLR	90.85 240 iPd 38 55.20 -0.2		Z 24s 2.71um			
	0.7s 12.33nm 5.3mb			PP 50 25.00		
	Z 18s 12.03um 6.4Msz			SKS 54 08.00		
PNT	91.18 26 eP 38 58.00 1.5	CNCB	162.90 327	PKPc 45 55.90	1.4	
GMW	91.37 29 P 38 56.60 -0.8			SKS 54 10.00		
FFC	91.51 14 eP 38 58 00 0.1	ARE	163.96 338	iPKPd 45 58.20	2.9X	
	1.6s 418.00nm 6.5mb	TCA	168.91 268	ePKPd 45 59.10	0.7	
RMW	91.84 28 P 38 59.20 -0.4			i 47 09.20		
BMW	92.04 30 P 39 02.00 1.5	FCH	173.61 252	ePKP 46 02.00	1.1	
PRY	92.12 240 eP 38 51.00 -10.2X	SAN	173.88 250	ePKP 46 03.00	2.4	
LON	92.41 29 ePc 39 03.46 1.2	PEL	173.97 253	iPKP 46 01.70	1.0	
	esP 39 09.59	LNV	174.30 244	ePKP 46 01.50	0.9	
SHW	92.68 29 P 39 03.80 0.2	LCCH	174.59 248	ePKP 46 02.00	1.2	
SES	93.16 21 eP 39 06.00 0.3		S.D. = 1.1 on 441 of 484 obs.			
	1.0s 86.00nm 6.1mb	----------				
SCH	93.45 354 eP 39 09.00 2.1	& SEP 22, 1989 05h 03m 53.70s				
AFI	93.65 104 eP 39 08.89 0.6	31.710 N 115.580 W				
BLF	94.28 238 eP 39 12.50 1.4	DEPTH = 6.0km (geophysicist)				
HVD	95.61 238 e(P) 39 09.60 -7.6X	BAJA CALIFORNIA (48)				
RSON	96.69 10 P 39 22.00 0.3	<PAS-P>. ML 3.3 (PAS).				
	1.0s 48.81nm 6.0mb					
	Z 20s 9.04um 6.3Msz	IKP	1.04 335	iPd 04 13.20	-0.5	
LRM	96.72 24 eP 39 23.00 0.7			eS 04 25.40		
WDC	97.02 33 eP 39 25.20 1.8	BAR	1.34 317	iPd 04 18.20	-0.6	
	ePP 43 22.30	GLA	1.48 25	eP 04 19.30	-1.7	
MIN	97.63 32 eP 39 27.70 1.3	CPE	1.74 313	ePd 04 24.30	-0.3	
	ePP 43 27.30	PLM	1.96 327	iPc 04 26.90	-1.1	
ORV	98.31 33 eP 39 30.40 1.2	BCH	5.12 314	eP 05 12.10	-0.7	
	ePP 43 27.20	KVN	7.61 345	eP 05 57.30	9.3	
SNZO	98.45 133 eP 39 42.00 12.5X		7 obs. associated			
	PP 43 28.00	----------				
	SKS 50 14.00	& SEP 22, 1989 05h 34m 24.37s				
	S 51 00.00	54.330 N 161.622 W				
	PS 52 28.00	DEPTH = 3.4km				
	SS 57 40.00	ALASKA PENINSULA (12)				
	SSS 02 12.00	<PAL>.				
CMB	100.05 33 ePdiff39 36.80 -0.3X					
	epPd 39 41.77	SNKA	0.69 283	ePd 34 37.12	-1.0	
KVN	100.26 31 Pdiff 39 40.20 2.0			eS 34 46.69		
RSSD	100.88 19 Pdiff 39 42.10 1.2	DRRA	0.71 327	iPd 34 37.78	-0.7	
FRI	101.21 33 ePdiff39 43.80 1.6	DLG	0.82 351	iPd 34 39.31	-1.5	
	ePP 43 52.00			eS 34 50.34		
RSNY	104.18 358 Pdiff 40 00.00 4.7X	PS4	1.04 352	eP 34 43.17	-1.4	
	Z 20s 7.91um 6.2Msz	PVV	1.05 355	eP 34 43.16	-1.6	
GOL	104.53 22 Pdiff 39 59.20 1.9			eS 34 57.27		
	Z 19s 6.13um 6.2Msz	SQF	1.08 34	eP 34 43.80	-1.5	
GLD	104.53 22 Pdiff 40 00.00 2.8X			eS 34 58.09		
	Z 19s 8.10um 6.3Msz	BALA	1.10 323	eP 34 44.52	-1.1	
TPC	105.28 32 ePKP 44 03.00 -11.7X	NGI	1.15 51	eP 34 44.87	-1.6	
PLM	105.52 33 ePKP 44 16.00 0.7			eS 34 59.91		
GLA	106.71 32 ePKP 44 16.00 -1.4	SASA	1.20 32	eP 34 45.66	-1.7	
ALQ	108.47 25 PKP 44 24.00 3.1X			eS 35 01.02		
	2.0s 75.00nm	IVF	1.98 37	eP 34 57.08	-1.9	
	Z 19s 3.82um 6.0Msz		10 obs. associated			
	e 44 46.00	----------				
	PKKP 55 41.70	• SEP 22, 1989 05h 43m 18.01± 2.50s				
ALQ	108.47 25 Pdiff 40 18.20 3.4X	3.836 S ±10.4km 80.679 W ±26.3km				
	2.0s 29.41nm 6.1mb	DEPTH = 64.5 ± 18.2 km				
TUL	110.72 16 e(PKP)44 28.00 3.2X	4.4mb (3 obs.)				
	1.4s 16.10nm	PERU-ECUADOR BORDER REGION (110)				
	Z 19s 12.84um 6.5Msz					
SBA	115.53 168 ePKPc 44 33.40 0.6	RECU	3.81 34	P 44 17.90	1.8	
SPA	121.41 180 ePKPc 44 42.90 -1.5	GGP	4.19 30	P+ 44 20.90	-0.6	
	1.0s 36.00nm	QUR	4.23 31	Pd 44 21.60	-0.3	
	Z 20s 6.71um 6.3Msz			eS 45 15.00		
SNA	124.33 203 iPKPd 44 49.20 -0.6	CAYA	4.73 35	P 44 28.70	-0.3	
	0.9s 51.26nm	COTA	4.76 29	eP 44 28.70	-0.7	
TRN	135.24 337 ePKP 45 12.58 0.3	NNA	8.94 155	eP 45 10.50	-16.6X	
TBH	135.28 337 ePKP 45 13.06 0.7		1.3s 48.08nm			
TPP	135.57 337 ePKP 45 12.76 -0.1			e 47 21.50		
PDCR	139.91 289 ePKP 45 15.60 -5.3X	HUA	9.72 147	ePc 45 39.70	1.6	
	e 45 20.70			eS 47 35.40		
BMG	141.33 353 ePKP 45 33.00 9.3X	ARE	15.46 145	e(P) 46 59.00	5.1X	
AIA	145.33 190 ePKP 45 29.70 0.9	ZOBO	17.46 136	P 47 17.00	-2.4	
PSO	147.40 360 ePKP 45 35.50 1.2		1.0s 11.25nm	4.0mb		
BDF	148.68 293 ePKP 45 35.41 -0.5		Z 20s 0.42um	4.7Msz		

			LR	54 10.00		
LPB	17.66 136	P	47 24.00	2.3X		
		i	52 09.00			
CNCB	17.93 137	P	47 26.00	0.8		
		i	52 19.00			
PPD	33.73 125	eP	49 53.90	-1.7		
TUL	42.00 342	eP	51 03.70	-0.8		
	1.1s 8.00nm			4.4mb		
SIO	42.01 341	e(P)	51 05.00	0.3		
LIC	76.19 83	P	55 02.50	0.8		
TIC	76.24 82	P	55 02.80	0.8		
KIC	76.49 83	P	55 04.20	0.8		
	0.8s 9.50nm			4.8mb		
GKN	152.19 29	PKP	03 08.00	6.3X		
	S.D. = 1.4 on 14 of 18 obs.					

SEP 22, 1989 06h 09m 41.08± 0.40s						
37.586 N ± 5.6km 118.966 W ± 3.3km						
DEPTH = 5.0km (geophysicist)						
CALIFORNIA-NEVADA BORDER REGION (40)						
ML 2.6 (BRK).						
FRI	0.84 225	iPc	09 56.70	-1.0		
		iS	10 07.40			
PPK	0.86 100	eP	09 58.00	-0.2		
SVP	0.93 82	eP	09 59.50	-0.1		
LCH	1.11 108	eP	10 02.50	0.1		
MGM	1.18 97	eP	10 03.30	-0.4		
CMB	1.21 292	ePc	10 02.70	-1.4		
		iS	10 18.40			
TNP	1.47 70	eP	10 08.80	0.3		
KVN	1.61 25	eP	10 10.60	0.1		
LLA	1.85 239	ePc	10 14.10	0.3		
PRI	1.98 224	eP	10 16.60	0.8		
ARN	2.06 264	eP	10 16.80	0.1		
SAO	2.14 248	eP	10 18.40	0.4		
BCH	2.56 201	eP	10 23.30	-0.7		
ABL	2.74 184	eP	10 27.30	0.6		
NWRM	3.22 287	P	10 34.30	1.1		
	S.D. = 0.7 on 15 of 15 obs.					

• SEP 22, 1989 06h 59m 39.74± 0.73s						
43.373 N ± 6.3km 13.036 E ± 7.1km						
DEPTH = 10.0km (geophysicist)						
CENTRAL ITALY (381)						
ARV	0.14 331	Pd	59 43.10	0.0		
		eSg	59 45.30			
CIO	0.19 156	iPgd	59 44.18	0.1		
		iSg	59 47.62			
AOI	0.45 67	iPgd	59 48.85	0.0		
		iSg	59 57.26			
MNS	1.02 195	P	59 59.00	-0.1		
		eSg	00 13.50			
PGD	1.08 298	P	00 00.20	0.0		
		eSg	00 16.80			
	S.D. = 0.1 on 5 of 5 obs.					

SEP 22, 1989 07h 02m 59.39± 0.42s						
31.018 S ± 6.0km 67.797 W ± 6.9km						
DEPTH = 5.0km (geophysicist)						
5.0mb (7 obs.)						
SAN JUAN PROVINCE, ARGENTINA (137)						
CFA	0.70 213	iPd	03 11.50	-1.9		
ZON	0.92 235	iPd	03 15.50	-2.0		
MRA	2.26 129	iPd	03 40.00	2.1		
TCA	2.77 97	iPd	03 47.30	2.0		
JACH	2.90 234	iPc	03 49.40	2.2		
		iS	04 27.00			
CYA	3.10 35	ePc	03 53.10	3.2X		
FCH	3.13 222	iPd	03 53.10	2.5X		
		iS	04 34.40			
PEL	3.24 228	iPc	03 53.30	1.4		
ROCH	3.35 234	iPd	03 54.70	0.9		
		iS	04 36.70			
SAN	3.43 224	ePc	03 56.00	1.3		
		iS	04 37.20			
PCH	3.47 221	iPc	03 56.70	1.5		
		iS	04 36.60			
TACH	3.74 225	iPd	03 59.80	0.8		
		iS	04 40.50			
CHCH	3.78 219	iPc	04 01.00	1.4		
		iS	04 48.00			
IHA	3.83 237	eP	04 01.00	0.7		
		iS	04 55.40			
LCCH	4.03 232	iPc	04 03.60	0.6		

22d 07h

			iS	04	57.00	
LNV	4.23	225	iPd	04	05.00	-0.9
			iS	04	52.80	
SLA	6.59	19	iPd	04	43.00	3.5X
ANT	7.65	342	e(P)	04	53.00	-1.1
ITB7	13.38	67	e(P)	06	05.50	-7.0X
ITB1	13.45	65	e(P)	06	21.50	8.1X
ITB	13.52	66	e(P)	06	25.40	11.1X
CCH	13.66	7	P	06	27.90	11.4X
CNCB	14.15	359	P	06	26.00	2.8
LPB	14.42	359	P	06	28.00	1.3
	1.0s	70.00nm			5.3mb	
			i	06	37.00	
ZOBO	14.68	359	P	06	31.30	1.0
	Z 18s	0.31um				
			i	06	38.00	
			LR	12	20.00	
ARE	14.88	346	eP	06	34.00	1.5
PPD	17.24	63	eP	07	04.90	2.4
			e	07	07.90	
			e	07	13.10	
VAO	20.18	72	eP	07	35.90	-1.9
SPA	59.15	180	ePc	13	00.90	-2.5
	1.0s	11.00nm			4.9mb	
			e	13	49.00	
LIC	70.41	70	P	14	15.40	-1.5
KIC	70.72	70	P	14	17.50	-1.3
TUL	71.58	336	iP	14	22.00	-1.5
	1.0s	15.70nm			5.1mb	
SIO	71.61	336	eP	14	22.10	-1.6
FVM	71.82	341	P	14	22.60	-2.3
	0.8s	25.76nm			5.4mb	
MAW	74.98	162	eP	14	40.50	-2.5
ALQ	75.02	328	eP	14	43.60	-0.4
	1.0s	6.25nm			4.6mb	
CBM	77.59	360	P	14	57.90	0.2
GLA	77.69	321	P	14	58.60	-0.2
GLD	78.52	331	P	15	03.70	0.4
TNP	82.77	323	P	15	25.60	-0.4
	0.9s	4.88nm			4.7mb	
KVN	83.96	323	P	15	31.20	-0.8
BUL	85.10	110	iPd	15	37.90	-0.2
BNG	89.13	84	iPc	15	57.10	-0.6
	0.6s	6.00nm			5.0mb	
			i	16	02.10	
LON	91.46	326	P	16	06.50	-1.2
WRA	125.05	206	PKPc	21	59.80	-3.1X
	0.5s	1.40nm				
WB5	125.10	206	ePKP	22	00.00	-3.0X
			e	22	05.70	
HYB	146.60	106	ePKP	22	43.00	0.3
	S.D. = 1.6	on 38 of 47 obs.				

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* SEP 22, 1989 07h 40m 44.64± 0.85s
32.547 S ±13.1km 69.578 W ± 9.6km
DEPTH = 118.4 ± 16.9 km
MENDOZA PROVINCE, ARGENTINA (139)

JACH	0.87	261	iPd	41	05.90	0.2
			iS	41	21.40	
FCH	0.98	217	iPd	41	08.50	1.5
			iS	41	25.40	
PEL	1.11	237	iPd	41	08.10	0.1
			iS	41	25.00	
ZON	1.26	38	iPd	41	10.00	0.4
			eS	41	28.00	
ROCH	1.28	250	iPd	41	09.80	-0.3
			iS	41	28.00	
SAN	1.28	225	iPd	41	17.00	7.1X
			iS	41	29.50	
PCH	1.33	216	iPd	41	11.70	1.3
			iS	41	32.00	
CFA	1.47	51	iPd	41	12.50	0.4
TACH	1.59	226	iPd	41	13.90	0.5
			iS	41	35.50	
CHCH	1.65	213	iPd	41	15.20	1.0
			iS	41	37.70	
IHA	1.80	254	eP	41	14.70	-1.3
			iS	41	37.80	
LCCH	1.91	241	iPd	41	14.70	-2.7
			iS	41	41.00	
LNV	2.08	227	iPd	41	18.70	-0.8
			iS	41	44.50	
MRA	3.27	89	iPd	41	35.50	0.3
TCA	4.41	75	ePd	41	49.80	-0.9
CYA	5.23	40	eP	41	59.30	-2.6
CCH	15.42	12	P	44	15.40	-1.8
CNCB	15.74	6	P	44	22.90	1.4
LPB	16.00	5	P	44	27.00	2.4
ZOBO	16.26	5	P	44	28.70	0.7
	S.D. = 1.5	on 19 of 20 obs.				

SEP 22, 1989 08h 40m 36.50± 0.4Bs
27.765 S ± 5.5km 66.862 W ± 8.5km
DEPTH = 176.6 ± 11.3 km
4.2mb (1 obs.)
CATAMARCA PROVINCE, ARGENTINA (130)

CYA	1.16	126	ePd	41	05.90	0.4
CFA	4.01	197	iPc	41	38.80	0.5
TCA	4.07	151	iPd	41	38.80	-0.3
ZON	4.09	202	iPc	41	40.00	0.7
MRA	4.74	168	ePc	41	47.20	-0.4
JACH	5.87	212	ePc	42	03.10	0.5
FCH	6.28	207	iP	42	09.90	1.6
PEL	6.29	211	iPc	42	08.00	-0.2
ROCH	6.31	214	eP	42	07.70	-0.8
SAN	6.55	209	eP	42	11.50	0.0
PCH	6.63	207	ePd	42	13.00	0.4
			iS	43	29.00	
CHCH	6.96	207	iPc	42	17.20	0.2
LCCH	6.99	214	eP	42	16.40	-0.9
LNV	7.30	211	eP	42	18.90	-2.6
CCH	10.36	4	P	43	01.50	-0.5
CNCB	10.95	354	P	43	09.20	-0.8
LPB	11.24	354	P	43	15.00	1.4
ZOBO	11.50	354	P	43	17.00	-0.1
PPD	15.22	71	eP	44	04.40	0.8
VAO	18.59	80	eP	44	41.10	-1.7
SPA	62.39	180	e(P)	50	44.10	1.6
	0.9s	3.18nm			4.2mb	
	S.D. = 1.1	on 21 of 21 obs.				

SEP 22, 1989 08h 52m 22.95± 0.86s
44.597 N ± 7.2km 8.312 E ± 4.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.5 (GEN).

PCP	0.18	108	P	52	26.96	0.0
			S	52	29.60	
FIN	0.39	191	P	52	30.96	-0.1
			S	52	36.40	
ROB	0.44	226	P	52	31.73	-0.2
			S	52	37.86	
ENR	0.74	240	P	52	37.73	0.2
			S	52	46.89	
IMI	0.75	204	P	52	37.83	0.1
			S	52	47.99	
DOI	0.77	263	Pd	52	38.20	0.2
			eSg	52	48.50	
STV	0.79	244	P	52	38.30	-0.1
			S	52	48.40	
PZZ	0.87	264	P	52	39.66	-0.1
			S	52	50.61	
RRL	1.13	287	P	52	44.29	-0.1
			S	52	58.90	
	S.D. = 0.2	on 9 of 9 obs.				

% SEP 22, 1989 09h 04m 23.41± 2.00s
41.240 N ±19.4km 23.136 E ± 7.5km
DEPTH = 13.0 ± 9.5 km
GREECE-BULGARIA BORDER REGION (363)

KNT	0.20	247	iPgd	04	28.00	0.0
			iSg	04	30.00	
SRS	0.37	109	ePg	04	30.80	-0.3
			eSg	04	35.70	
THE	0.62	192	ePg	04	35.10	-0.5
			eSg	04	42.60	
GRG	0.62	243	ePg	04	35.80	0.1
			eSg	04	43.80	
OUR	1.11	144	ePg	04	44.40	0.5
PAIG	1.38	162	ePb	04	48.40	0.2
	S.D. = 0.5	on 6 of 6 obs.				

& SEP 22, 1989 09h 29m 54.40s
54.677 N 161.904 W
DEPTH = 51.2km
ALASKA PENINSULA (12)
<PAL>.

DRRA	0.33	319	iPc	30	03.47	-0.5
DLG	0.47	5	ePc	30	04.64	-0.8
			eS	30	12.84	
SNKA	0.55	249	eP	30	05.92	-0.4
PS4	0.68	2	iPc	30	07.47	-0.6
PVV	0.70	5	ePc	30	07.67	-0.6
			eS	30	18.50	
BALA	0.73	316	ePc	30	08.32	-0.3
			eS	30	17.86	
SOF	0.95	54	eP	30	10.93	-0.7
			eS	30	23.99	
SASA	1.05	50	eP	30	12.29	-0.7
			eS	30	25.91	
NGI	1.12	70	eP	30	13.53	-0.5
			eS	30	27.14	
SGB	1.21	43	eP	30	13.96	-1.2
			eS	30	29.33	
	10 obs. associated					

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* SEP 22, 1989 09h 32m 43.42± 0.84s
20.057 S ± 8.6km 69.254 W ± 9.8km
DEPTH = 137.3 ± 9.6 km
4.4mb (2 obs.)
NORTHERN CHILE (123)

CNCB	3.45	21	iPd	33	38.20	0.8
LPB	3.67	18	P	33	43.20	3.0X
	1.1s	331.65nm				
ANT	3.79	196	iP	33	41.70	0.5
ZOBO	3.92	16	iPd	33	43.90	0.3
			S	34	24.00	
CCH	3.97	48	Pc	33	44.00	-0.1
			i	33	49.00	
ARE	4.16	329	eP	33	44.00	-2.6X
			iS	34	30.00	
HUA	9.88	323	e(P)	35	58.50	54.9X
NNA	10.84	317	eP	35	14.20	-1.8
	1.0s	10.00nm			4.5mb	
			e	37	17.00	
PPD	16.86	100	eP	36	32.50	-0.2
VAO	20.94	102	eP	37	16.20	-0.7
BMA	23.51	101	eP	37	33.70	-8.4X
PDCR	29.84	80	eP	38	39.00	-0.9
LIC	68.30	74	P	43	32.40	0.3
TIC	68.48	74	P	43	33.60	0.4
KIC	68.62	74	P	43	33.60	-0.4
SPA	70.07	180	e(P)	43	46.00	3.8X
	1.0s	5.50nm			4.3mb	
EDM	82.32	335	eP	44	52.50	1.7
	S.D. = 1.1	on 12 of 17 obs.				

SEP 22, 1989 09h 51m 49.91± 0.53s
44.267 N ± 6.1km 7.493 E ± 4.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

ENR	0.07	232	P	51	52.27	-0.1
			S	51	53.53	
STV	0.12	259	P	51	53.40	0.4
			S	51	55.79	
ROB	0.27	84	P	51	55.76	0.1
			S	51	59.57	
DOI	0.30	323	P	51	55.00	-1.1
			eSg	52	00.00	
PZZ	0.37	310	P	51	58.13	0.6
			S	52	03.38	
IMI	0.46	141	P	51	59.04	-0.2
			S	52	05.92	
FIN	0.52	96	P	51	59.86	-0.5
			S	52	07.48	
PCP	0.80	70	P	52	06.32	0.8
			S	52	16.81	
RRL	0.83	322	P	52	06.15	0.1
			S	52	17.02	
	S.D. = 0.7	on 9 of 9 obs.				

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* SEP 22, 1989 10h 14m 53.69± 1.85s
49.065 N ± 7.6km 128.841 W ±18.6km
DEPTH = 10.0km (geophysicist)
4.4mb (1 obs.)
VANCOUVER ISLAND REGION (25)

EDB	1.38	54	Pn	15	19.03	0.0
ETB	1.54	77	iPnc	15	21.16	0.0
PHC	1.88	28	Pn	15	27.40	1.3
BTB	2.21	78	iPnc	15	30.53	-0.6
			Sn	15	59.38	
CBB	2.46	66	iPnc	15	34.76	0.3

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BBB      3.16    8 Pn     15 43.50   -0.8
                  Sn     16 23.00
MCW      3.98   93 eP     15 54.90   -1.2
BMW      4.59  122 eP     16 04.00   -0.7
LON      5.26  113 eP     16 13.60   -0.7
SHW      5.31  120 eP     16 18.80    3.8X
PNT      6.05   84 eP     16 27.00    1.6
WDC      9.59  150 eP     17 12.40   -2.3
MIN     10.12  147 eP     17 21.50   -0.7
EDM     10.58   61 eP     17 27.50   -0.9
KVN     12.63  138 eP     17 59.00    2.7
TNP     13.82  138 eP     18 14.00    2.0
DAU     15.17  118 e(P)   18 35.50    5.7X
FFC     17.46   61 iPd    19 01.40    2.8X
        1.1s     37.00nm          4.4mb
RSSD    17.72   97 eP     19 05.50    3.4X
GOL     19.14  110 eP     19 23.00    3.3X
ALQ     21.70  122 eP     19 51.00    4.1X
      S.D. = 1.5   on  15 of  21 obs.
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*  SEP  22, 1989  10h 39m 49.56± 0.58s
   36.760 N ± 9.0km   71.637 E ±14.0km
   DEPTH =  33.0km  (normal)
   4.5mb (  5 obs.)
 AFGHANISTAN-USSR BORDER REGION   (717)

QUE      7.63  212 eP     41 42.53    1.1
                  S      43 02.00
NDI      9.32  148 iPd    42 05.80    1.1
        0.4s     25.42nm          5.8mb X
                  eS     45 42.80
POO     18.26  173 eP     43 42.50  -19.7X
HYB     20.21  161 eP     44 23.00   -1.6
SHL     20.56  117 iP     44 29.20    0.9
                  eS     48 04.60
GBA     23.64  166 Pc     44 57.10   -1.6
        0.5s     6.70nm           4.4mb
NUR     37.92  324 eP     47 06.00    0.9
SUF     37.97  328 iP     47 06.30    0.7
        0.3s     1.70nm           4.4mb
SOD     39.72  335 eP     47 20.00   -0.1
HFS     43.18  322 eP     47 48.00   -0.5
        0.7s    14.50nm           4.8mb
NB2     44.48  323 P      47 58.20   -1.0
        0.6s     6.60nm           4.7mb
MBC     67.05    3 eP     50 41.00    0.0
        0.5s     2.00nm           4.5mb
      S.D. = 1.2   on  11 of  12 obs.
-----------------------------------------
*  SEP  22, 1989  12h 19m 59.81± 1.59s
   42.307 N ±12.7km   24.587 E ±20.1km
   DEPTH =  10.0km  (geophysicist)
 BULGARIA                         (359)

SRS      1.40  212 ePn    20 26.60    1.2
                  eSn    20 46.50
KNT      1.71  228 ePn    20 29.20   -0.5
                  eSn    20 50.00
SKO      2.36  263 ePn    20 38.00   -1.3
VRI      3.88   23 ePc    21 00.00   -0.8
BZS      3.94  328 ePc    21 03.00    1.4
      S.D. = 1.7   on   5 of   5 obs.
-----------------------------------------
*  SEP  22, 1989  13h 58m 00.72± 0.93s
   33.138 N ±12.8km  140.346 E ±14.7km
   DEPTH = 175.1 ± 21.2 km
   4.8mb (  1 obs.)
 SOUTH OF HONSHU, JAPAN           (211)

KAKJ     3.06  357 P      58 50.20   -0.2
                  S      59 28.60
IIDJ     3.08  320 P      58 50.50   -0.2
CHJJ     3.11  339 iP+    58 51.30    0.3
                  S      59 28.80
MAT      3.82  333 iPc    58 59.90   -0.1
                  eS     59 45.00
MTMJ     4.02  329 P      59 02.90    0.2
NIIJ     4.24  345 iP+    59 04.90   -0.4
                  eS     59 54.60
YAMJ     5.03  357 P      59 16.20    0.5
                  eS     00 14.40
OFUJ     6.03   10 P      59 28.50   -0.3
                  S      00 36.90
PJG     19.89  167 eP     02 20.50    0.0
GUMO    19.89  167 eP     02 20.40   -0.1
        0.7s     45.74nm          5.1mb X
GUA     19.95  167 eP     02 21.30    0.2
        0.7s     27.40nm          4.8mb
WRA     53.09  187 Pc     07 01.90   -0.2
        0.3s      6.80nm          4.9mb X
ASPA    56.82  187 iPc    07 29.10    0.1
        0.6s     31.00nm          5.3mb X
      S.D. = 0.3   on  13 of  13 obs.
-----------------------------------------
?  SEP  22, 1989  14h 02m 39.21± 3.90s
   29.601 S ±25.7km   71.755 W ±26.3km
   DEPTH =  33.0km  (normal)
 NEAR COAST OF CENTRAL CHILE      (135)

JACH     3.23  162 iPc    03 29.60    0.7
                  iS     04 02.50
ZON      3.29  127 eP     03 31.00    1.4
ROCH     3.42  169 iPc    03 31.60   -0.1
                  iS     04 08.00
CFA      3.63  124 iP     03 35.00    0.5
PEL      3.65  166 iPc    03 35.00    0.2
                  i(S)   04 11.00
LCCH     3.87  178 iPc    03 37.00   -0.8
                  iS     04 17.00
FCH      3.92  162 iPd    03 40.00    1.1
                  iS     04 22.00
TACH     4.10  170 iPd    03 41.30    0.1
                  iS     04 24.60
PCH      4.15  166 iPd    03 42.00    0.1
                  iS     04 24.50
LNV      4.35  176 iPc    03 43.50   -1.2
                  iS     04 28.40
CHCH     4.42  168 iPc    03 46.00    0.2
                  iS     04 32.50
CYA      5.35   79 ePd    03 59.90    1.1
MRA      5.90  120 iPd    04 05.10   -1.5
TCA      6.42  107 iPd    04 11.90   -2.1
                  S      05 19.00
      S.D. = 1.1   on  14 of  14 obs.
-----------------------------------------
*  SEP  22, 1989  15h 02m 05.52± 0.89s
    6.165 S ±13.3km   150.371 E ±17.9km
   DEPTH =  33.0km  (normal)
    3.7mb (  1 obs.)
 NEW BRITAIN REGION               (192)

RAB      2.66   43 iPd    02 47.20    0.3
        0.5s    788.73nm
                  iS     03 40.00
LAT      3.39  262 eP     03 05.00    7.7X
KDB      4.57  224 eP     03 16.00    1.8
GUA     20.31  345 e(P)   06 41.70    0.1
GUMO    20.37  344 e(P)   06 26.50  -15.7X
      Z  23s      0.16um           3.3MszX
WB5     20.68  227 eP     06 44.80   -0.7
                  i      06 51.50
WRA     20.74  227 Pd     06 44.70   -1.4
        0.5s     1.80nm           3.7mb
BRS     21.23  174 eP     06 51.00   -0.1
ASPA    23.53  221 eP     07 14.60    0.8X
        0.4s     9.00nm           4.6mb X
      S.D. = 1.4   on   6 of   9 obs.
-----------------------------------------
   SEP  22, 1989  15h 16m 04.04± 1.09s
    6.158 S ± 7.0km   150.488 E ± 9.8km
   DEPTH =  75.2 ± 11.8 km
    4.3mb (  6 obs.)
 NEW BRITAIN REGION               (192)

RAB      2.57   41 iPc    16 43.00   -1.3
                  iS     17 24.00
LAT      3.50  262 eP     17 00.00    2.8
KDB      4.66  225 eP     17 12.00   -1.5
CTA     14.45  196 iPc    19 26.10    0.0
        1.0s    15.00nm           4.2mb
                  i      19 32.20
QIS     17.79  215 iPc    20 06.70   -1.5
        0.7s    14.00nm           4.3mb
MTN     20.21  249 iPd    20 34.20   -1.2
RMO     20.29  184 iPd    20 36.90    0.7
        0.9s   156.00nm           5.3mb X
GUA     20.34  344 eP     20 37.20    0.5
        1.0s   184.00nm           5.4mb X
GUMO    20.40  344 eP     20 37.90    0.6
      Z  22s      0.36um           3.7Msz
PJG     20.40  344 eP     20 38.00    0.7
WB5     20.77  227 eP     20 40.70   -0.5
                  i      20 47.20
                  eS     24 30.90
WRA     20.83  227 Pc     20 41.40   -0.4
        0.7s    24.70nm           4.6mb
BRS     21.23  174 iPc    20 46.10    0.3
DZM     22.09  137 iPc    20 55.10    0.7
ASPA    23.61  221 eP     21 10.80    1.6
        0.5s    10.00nm           4.5mb
      Z  25s      0.24um           3.6MszX
                  eS     25 22.20
                  LR     29 28.50
CMS     25.57  189 eP     21 29.00    1.3
WARB    30.24  226 eP     22 10.00    0.0
MBL     33.22  240 eP     22 35.00   -1.1
        0.4s     2.00nm           4.3mb
GBA     75.11  286 Pc     27 38.20   -2.1
        0.9s     2.70nm           4.2mb
IKZ    116.01  256 ePdiff30 43.00  -11.4X
                  iSg    32 40.00
BNG    132.13  270 ePKPc  35 12.10    0.2
        0.4s     4.00nm
PPD    144.77  143 e(PKP)35 35.00    0.3
BAO    151.65  140 e(PKP)35 54.30    8.5X
KIC    155.38  272 PKP    36 01.30   10.4X
      S.D. = 1.3   on  21 of  24 obs.
-----------------------------------------
   SEP  22, 1989  15h 43m 39.23± 0.56s
   16.618 S ± 8.7km   69.487 W ± 7.6km
   DEPTH = 210.0 ±  5.7 km
   4.6mb (  7 obs.)
 PERU-BOLIVIA BORDER REGION       (118)

LPB      1.33   87 iPd    44 15.00    1.8
ZOBO     1.35   75 iPd    44 13.80    0.2
CNCB     1.46   98 iPd    44 15.70    1.3
ARE      1.93  274 iPc    44 15.60   -2.9
                  i(S)   44 44.50
CCH      3.29  104 iPc    44 33.00   -0.6
        0.3s    12.00nm
                  S      45 13.90
HUA      7.26  308 eP     45 32.70    8.5X
                  eS     46 53.80
NNA      8.48  302 iPc    45 35.50   -4.2X
        0.6s    80.00nm           5.1mb
                  i      45 38.70
                  iS     47 04.50
PEL     16.49  184 iP     47 20.90    0.5
        1.2s    39.06nm           4.7mb
LCCH    16.89  186 iP     47 25.10    0.1
LNV     17.35  185 eP     47 29.50   -0.5
PPD     17.97  110 eP     47 35.80   -0.9
                  e      47 37.30
                  i      47 38.80
                  e      47 42.40
BAO     20.67   90 eP     48 02.80   -1.5
VAO     22.10  110 eP     48 19.50    1.3
                  e      48 21.50
                  e      48 24.50
                  e      48 28.00
                  e      48 34.10
BMA     24.59  108 eP     48 42.40    0.5
PDCR    29.65   86 eP     49 25.90   -1.5
FVM     57.77  340 eP     53 09.00   -1.5
        0.9s     9.32nm           4.5mb
ALQ     62.14  326 eP     53 40.00   -0.5
LIC     67.64   76 Pc     54 15.28   -0.7
TIC     67.80   75 Pc     54 16.14   -0.8
KIC     67.96   76 Pc     54 17.48   -0.4
        0.4s    38.00nm           5.5mb
RSSD    68.19  334 eP     54 19.00    0.0
YMT3    69.13  321 eP     54 25.50    0.7
TNP     70.47  322 iP     54 33.80    0.8
        0.9s     4.10nm           4.2mb
PRI     71.36  318 eP     54 39.20    0.9
KVN     71.62  322 eP     54 40.00    0.1
LLA     71.83  319 eP     54 41.80    0.9
PRS     71.93  318 eP     54 41.80    0.3
CMB     72.36  320 eP     54 44.70    0.7
SPA     73.49  180 ePd    54 52.30    2.0
        1.0s    12.00nm           4.6mb
                  e      55 07.00
ORV     73.98  321 eP     54 54.80    1.4
PNT     79.20  329 eP     55 23.00    0.8
BNG     89.37   85 ePc    56 19.00    5.2X
        0.6s     4.00nm           4.5mb
WB5    136.82  214 ePKP   02 36.90   -2.3
                  e      02 40.00
GBA    147.95   91 PKP    03 04.00    5.5X
        0.8s     4.20nm
```

22d 16h

```
MAT    148.45 314 (PKP) 03 03.00    4.2X
       0.9s     21.85nm
HYB    149.45  84 ePKP  03 11.50   10.6X
     S.D. = 1.2  on  30 of  36 obs.
-------------------------------------
•  SEP  22, 1989  16h 20m 57.91± 0.94s
   21.967 S ± 9.0km   68.609 W ±13.0km
   DEPTH =  33.0km  (normol)
   4.6mb (  1 obs.)
 CHILE-BOLIVIA BORDER REGION      (124)

ANT      2.40 224 eP     21 35.50   -0.2
                  iS     21 59.00
CCH      5.12  27 P      22 13.00   -1.6
CNCB     5.16   7 eP     22 16.00    0.5
                  i      22 37.00
LPB      5.43   5 P      22 19.00    0.0
ZOBO     5.69   5 P      22 23.80    1.0
       0.9s     17.30nm          4.6mb
                  S      23 15.90
ITB1    13.34 104 eP     24 07.90    0.5
     S.D. = 1.2  on   6 of   6 obs.
-------------------------------------
?  SEP  22, 1989  16h 34m 17.36± 1.21s
   40.650 N ± 6.9km   22.431 E ±12.0km
   DEPTH =  10.0km  (geophysicist)
 GREECE                           (364)

GRG      0.31 356 ePg    34 23.60   -0.2
                  eSg    34 29.10
THE      0.41  92 ePg    34 25.50   -0.2
                  eSg    34 31.80
LIT      0.55 175 ePg    34 28.50   -0.1
                  eSg    34 37.10
KNT      0.62  35 ePg    34 30.10    0.2
                  eSg    34 38.80
     S.D. = 0.3  on   4 of   4 obs.
-------------------------------------
   SEP  22, 1989  19h 20m 43.80± 1.20s
   40.301 N ± 8.0km   51.755 E ± 8.3km
   DEPTH =  58.5 ± 12.9 km
   4.5mb (  8 obs.)
 CASPIAN SEA                      (338)

TEH      4.56 184 ePc    21 51.00   -1.0
TAB      4.77 244 eP     21 56.00    1.0
KER      7.00 213 eP     22 43.00   16.9X
MHI      7.28 121 ePn    22 30.00    0.0
                  eSn    23 42.00
VRI     19.07 295 eP     25 10.00    5.8X
MLR     19.57 294 eP     25 09.00   -0.7
OHR     23.42 282 eP     25 49.50    1.2
SRO     25.03 299 iP     26 19.00   15.4X
ZST     25.87 299 iPd    26 27.00   15.5X
NUR     26.27 329 eP     26 16.00    1.0
KSP     26.73 305 eP     26 32.50   13.2X
SUF     27.18 334 eP     26 23.80    0.5
       0.3s     1.80nm          4.2mb
PRU     27.72 303 eP     26 45.00   16.7X
BRG     28.20 305 iP     26 46.10   13.4X
       1.2s    13.00nm
KHC     28.27 301 eP     26 44.60   11.2X
CLL     28.85 305 e(P)   26 50.00   11.5X
SOD     30.46 341 iP     26 52.80    0.2
                  e      27 56.00
HFS     30.78 323 eP     26 54.70   -0.8
       0.4s     4.30nm          4.5mb
KEV     32.25 344 eP     26 53.00  -15.3X
NB2     32.25 324 P      27 06.90   -1.6
       0.5s     1.90nm          4.2mb
HAU     33.08 299 eP     27 27.80   12.0X
       0.8s    16.10nm
LBF     34.77 297 eP     27 42.60   12.2X
       0.8s     8.00nm
LQR     34.82 298 eP     27 42.80   12.0X
       0.8s     6.70nm
GBA     34.84 132 P      27 32.00    0.8
SMF     34.90 297 eP     27 44.00   12.5X
       0.8s     5.30nm
SSF     35.08 297 eP     27 45.60   12.6X
       0.9s     4.90nm
AVF     35.22 297 eP     27 46.60   12.5X
       0.8s     9.40nm
MAF     35.83 296 eP     27 52.60   13.2X
       0.8s     7.20nm
TCF     36.07 296 eP     27 54.40   13.0X
       0.8s     5.30nm

LSF     36.54 296 eP     27 58.40   13.1X
       0.8s     12.00nm
GRR     37.83 300 eP     28 09.00   12.9X
       0.4s      2.20nm
LPF     38.00 300 eP     28 11.00   13.4X
       0.4s      2.20nm
EKA     38.75 312 Pd     28 08.30    4.6X
       0.4s      2.50nm          4.4mb
BNG     46.57 229 iPd    29 07.60    0.0
       0.6s     13.00nm          5.0mb
                  i      29 22.40
BCAO    46.58 229 iP     29 07.50   -0.2
       1.0s      3.00nm          4.2mb
                  epP    29 22.50   58kmX
KIC     60.63 252 Pd     30 50.56   -0.5
       0.5s      5.50nm          4.9mb
LIC     60.93 252 Pd     30 52.58   -0.5
       0.6s     10.50nm          5.2mb
BUL     63.88 204 iPd    31 13.30    0.6
     S.D. = 0.9  on  16 of  38 obs.
-------------------------------------
?  SEP  22, 1989  20h 20m 17.10± 4.48s
   31.303 S ±34.7km   71.304 W ±30.8km
   DEPTH = 149.6 ± 33.1 km
 NEAR COAST OF CENTRAL CHILE      (135)

JACH     1.50 156 iPd    20 46.00   -1.1
                  iS     21 06.40
ROCH     1.68 172 iPc    20 47.90   -1.3
                  iS     21 11.60
IHA      1.74 189 eP     20 50.80    1.2
                  iS     21 15.00
PEL      1.91 164 iPc    20 51.00   -0.6
                  i      21 08.00
                  i(S)   21 17.00
LCCH     2.18 186 iPd    20 54.10   -0.6
                  iS     21 28.00
FCH      2.19 157 iPd    20 56.00    0.8
                  iS     21 25.00
ZON      2.26  97 eP     20 57.00    1.3
TACH     2.36 173 iPd    20 57.10    0.1
                  iS     21 28.50
PCH      2.41 164 iPd    20 58.00    0.4
                  iS     21 32.50
LNV      2.65 182 iPc    21 00.50    0.0
                  iS     21 36.40
CHCH     2.68 168 iP     21 01.60    0.6
                  iS     21 34.60
MRA      4.89 105 ePc    21 30.00    0.2
TCA      5.74  92 ePc    21 40.30   -1.1
     S.D. = 1.0  on  13 of  13 obs.
-------------------------------------
   SEP  22, 1989  20h 21m 08.57± 0.18s
   40.306 N ± 4.0km   51.627 E ± 2.4km
   DEPTH =  52.0km  (  9 depth phases)
   4.9mb ( 47 obs.)
 CASPIAN SEA                      (338)

TEH      4.56 182 ePc    22 16.50   -0.4
TAB      4.69 243 ePc    22 18.00   -0.6
KER      6.95 213 eP     22 51.00    0.6
MHI      7.37 120 ePn    22 54.00   -2.2
                  eSn    24 10.00
MSL      7.73 242 eP     23 02.50    1.4
                  eS     25 03.00
BHD      9.11 222 eP     23 18.00   -2.1
                  eS     25 03.00
                  e      27 37.00
KAS     13.57 280 eP     24 21.50    1.3
BHL     14.25 248 P      24 30.00    0.9
                  S      30 10.00
BBTK    14.46 274 eP     24 38.00    6.1X
                  e      25 16.00
HRI     14.53 246 eP     24 35.00    2.2
DSI     15.77 242 eP     24 49.00    0.4
BCK     16.62 267 eP     25 00.30    0.8
KHL     17.22 271 eP     25 01.00   -6.0X
MBH     17.25 238 e(P)   25 07.00   -0.3
TLB     17.91 292 eP     25 15.00   -0.4
PPE     18.42 297 eP     25 21.50   -0.2
KSH     18.70  85 P      25 23.40   -1.8
                  S      28 53.00
CLI     18.71 298 eP     25 24.50   -0.7
JMB     18.90 285 eP     25 29.00    1.5
VRI     18.98 295 eP     25 30.00    1.5
MLR     19.48 294 eP     25 35.00    0.9
DIM     19.70 284 eP     25 38.00    1.7

KDZ     19.81 282 eP     25 38.00    0.5
KAP     19.84 264 ePn    25 36.90   -0.9
CMP     20.09 293 ePd    25 40.00   -0.4
RZN     20.33 283 iPc    25 43.00   -0.1
APE     20.60 269 ePb    25 46.30    0.5
PGB     20.68 285 iP     25 46.00   -0.5
MMB     21.08 283 eP     25 51.00    0.4
NPS     21.14 265 ePn    25 52.70    1.6
VTS     21.39 285 iP     25 54.00    0.2
PLG     21.45 279 ePb    25 55.50    1.2
KK8     21.53 284 iP     25 57.00    1.9
DEV     21.64 294 ePd    25 48.00   -8.1X
ATH     21.74 273 ePn    25 58.40    1.2
BZS     22.52 294 eP     26 05.00    0.2
SKO     22.74 284 iP     26 08.00    0.9
OHR     23.33 282 eP     26 13.30    0.5
SPC     23.85 302 eP     26 21.00    3.1X
NDI     23.98 111 eP     26 20.50    1.4
KRA     24.21 304 iPd    26 21.40    0.3
       1.0s     50.00nm          5.0mb
                  e      26 34.50   53km
SRO     24.94 299 iP     26 30.00    1.8
                  i      26 43.00   53km
ZST     25.79 299 iP     26 37.10    1.0
       0.8s     27.00nm          4.8mb
                  i      26 51.00   57km
NUR     26.21 329 iPc    26 40.00    0.1
       0.9s     38.90nm          5.0mb
HVAR    26.29 288 iP     26 40.30   -0.5
PTJ     26.48 294 eP     26 43.00    0.3
KSP     26.64 305 iPd    26 44.20    0.2
       0.8s     25.00nm          4.9mb
                  i      26 57.50   54km
                  e      32 31.00
WMQ     26.87  71 Pd     26 47.00    0.8
V8Y     26.99 293 eP     26 48.00    0.9
SUF     27.13 334 iP     26 48.00   -0.3
       1.0s     32.80nm          4.9mb
LJU     27.48 294 eP     26 52.00    0.4
CEY     27.56 294 eP     26 53.00    0.6
PRU     27.64 303 eP     26 53.00    0.0
                  e      27 10.00   73kmX
VOY     27.92 294 eP     26 55.60   -0.1
TRI     28.02 294 eP     26 56.30   -0.2
BRG     28.12 305 iP     26 58.00    0.7
       1.5s     40.00nm          4.8mb
                  i      27 11.00   52km
KHC     28.19 301 iP     26 58.20    0.2
       1.2s     15.00nm          4.5mb
                  e      27 51.00  273kmX
SDI     28.42 285 P      27 02.00    1.8
BHG     28.60 298 iPc    27 02.20    0.5
       0.8s     20.00nm          4.8mb
FVI     28.68 296 P      27 02.30    0.0
CLL     28.76 305 iPd    27 03.30    0.2
       1.3s     25.00nm          4.7mb
                  i      27 16.40   52km
                  eS     31 56.00
ARV     28.79 289 P      27 03.30   -0.2
UPP     28.81 324 iP     27 02.10   -1.3
ASS     29.05 288 Pd     27 07.00    1.1
MNS     29.14 287 P      27 06.80    0.1
MQX     29.57 304 iPd    27 11.00    0.6
       1.3s     49.00nm          5.0mb
PGD     29.63 290 P      27 12.20    1.0
GRF     29.76 302 eP     27 12.80    0.7
       0.7s      5.40nm          4.4mb
OGA     29.87 296 iPd    27 12.90   -0.5
       0.7s     30.00nm          5.1mb
SOD     30.42 341 iP     27 17.90    0.2
QSS     30.49 296 ePd    27 18.50   -0.3
HFS     30.72 323 eP     27 18.80   -1.6
       0.5s      8.00nm          4.7mb
MDI     30.85 294 P      27 20.50   -1.2
VDL     30.96 296 ePc    27 22.80   -0.2
SAX     31.00 297 ePd    27 22.60   -0.8
STU     31.06 300 e(PKP) 27 23.50   -0.1
       0.9s     67.23nm          5.4mb
BQB     31.14 292 P      27 24.80    0.4
LLS     31.26 296 eP+    27 24.70   -0.9
TQD     31.32 302 eP     27 26.08    0.2
TMA     31.41 295 ePd    27 26.10   -0.7
VAI     31.50 295 P      27 26.50   -0.9
SLE     31.56 298 ePc    27 27.20   -0.8
ZLA     31.64 298 ePd    27 28.60   -0.2
PCP     31.81 292 P      27 29.21   -1.0
MMK     32.04 295 ePc    27 31.50   -1.0
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FIN	32.09	292	P	27	31.26	-1.4	KMI	44.99	94	Pd	29	21	50	0.7				eS	31	16.40			
GWF	32.10	301	P	27	32.44	-0.3	XAN	45.40	79	Pd	29	24	20	0.4	WARB	20.94	188	eP	28	22.60	2.1		
ABH	32.14	302	eP	27	33.73	0.7	CHG	45.76	104	iPc	29	27	00	0.3				eS	32	18.00			
KEV	32.22	344	eP	27	33.00	-0.4		1.0s		13.75nm				4.8mb	CTA	21.68	134	iPc	28	31.00	3.4X		
	0.7s		14.70nm			4.9mb	BNG	46.50	229	iPd	29	32	40	-0.1		1.0s		20.00nm			4.6mb		
WLS	32.29	299	P	27	33.08	-1.3		0.7s		51.00nm				5.6mb	NANU	22.00	218	iPc	28	31.40	0.7		
ROB	32.32	292	P	27	33.82	-0.9				i	29	45	00	46km	MUN	29.41	204	eP	29	38.00	-0.6		
CDF	32.35	299	P	27	33.21	-1.7	TIY	46.50	73	eP	29	33	80	1.3				e	30	31.00			
IMI	32.37	291	P	27	34.54	-0.6	BDT	46.79	105	eP	29	34	00	-0.7				eS	35	35.00			
DIX	32.42	295	ePc	27	35.30	-0.5		0.9s		38.10nm				5.3mb	LOE	35.80	310	eP	30	33.50	-0.2		
ECH	32.43	299	P	27	34.76	-0.8	GYA	47.28	89	P	29	39	00	0.2	BDT	37.83	307	eP	30	50.60	-0.1		
RUP	32.46	302	eP	27	36.58	0.8	BJI	48.30	68	eP	29	47	00	0.6	CHG	38.76	309	iPc	30	59.00	0.5		
MOF	32.47	298	P	27	34.67	-1.3	TIA	50.54	72	Pd	30	04	00	0.3		1.0s		58.00nm			5.1mb		
HYB	32.58	127	eP	27	37.50	0.3	WHN	51.08	80	Pd	30	08	50	0.7	KMI	40.14	320	Pc	31	11.00	1.1		
ENR	32.65	292	P	27	36.80	-0.8	CN2	53.22	60	Pd	30	23	50	-0.2	CD2	43.83	327	eP	31	39.50	-0.1		
LSD	32.67	294	P	27	37.00	-1.0				ePcP	31	29	50		XAN	43.88	335	Pc	31	39.00	-0.9		
SBF	32.70	291	eP	27	37.80	-0.2	NJ2	53.73	76	Pc	30	27	40	-0.1	TIY	45.80	341	Pd	31	55.40	0.3		
	0.7s		8.80nm			4.7mb	SSE	55.93	76	Pc	30	43	40	-0.2	Z	13s		0.50um			4.6MszX		
BSF	32.70	298	P	27	36.79	-1.2		1.0s		0.02nm				2.2mb X	BJI	46.88	346	eP	32	03.50	0.1		
LOMF	32.71	298	P	27	36.12	-2.0	KIC	60.54	252	Pd	31	15	12	-0.8	LZH	47.88	331	eP	32	11.50	0.1		
STV	32.72	292	P	27	37.00	-1.2		0.6s		10.00nm				5.1mb		1.5s		0.03nm			1.4mb X		
PZZ	32.84	292	P	27	37.31	-2.0	TIC	60.55	252	Pd	31	15	02	-1.0	GTA	52.45	331	Pc	32	41.00	-4.8X		
LPG	32.95	294	eP	27	39.80	-0.6		0.8s		11.50nm				5.1mb	GBA	55.31	290	Pd	33	05.20	-1.6		
	0.6s		7.20nm			4.7mb	LIC	60.84	252	Pd	31	17	08	-0.9		1.1s		22.60nm			4.7mb		
HAU	32.99	299	eP	27	39.80	-0.6		0.6s		15.50nm				5.3mb	HYB	55.45	295	eP	33	05.00	-2.9X		
	0.8s		49.40nm			5.4mb	MBC	63.59	358	eP	31	36	00	0.5	WMQ	61.93	327	eP	33	52.30	0.3		
RRL	33.00	293	P	27	40.39	-0.4		0.6s		4.00nm				4.7mb	CNCB	151.81	142	PKP	43	27.70	9.8X		
BNI	33.06	293	P	27	40.60	-0.6	BUL	63.85	204	iPc	31	37	80	-0.2				i	44	23.00			
MEM	33.13	304	P	27	43.10	1.5	KSI	63.89	120	eP	31	35	50	-2.8	LPB	151.95	141	PKP	43	25.00	7.1X		
			e	27	56.20	51km				e	32	30	00	237kmX	ZOBO	152.13	141	PKP	43	26.50	8.1X		
VITF	33.22	299	P	27	40.16	-2.2	MAT	65.25	62	(P)	31	45	00	-1.9		S.D. = 0.9		on	24	of	32 obs.		
FRF	33.31	291	eP	27	42.80	-0.5	SLR	69.20	202	iP	32	02	00	-9.9X	----------								
	0.7s		19.80nm			5.1mb	KSR	69.74	204	eP	32	02	50	-12.7X		SEP 22, 1989 23h 30m 42.46± 0.55s							
DOU	34.04	303	Pc	27	50.90	1.4	PRY	70.56	203	eP	32	06	20	-14.0X		40.327 N ± 6.9km 51.878 E ± 7.9km							
	1.0s		27.80nm			5.1mb	BLF	72.99	203	eP	32	30	00	-4.6X		DEPTH = 33.0km (normal)							
			e	28	04.10	51km	FFC	82.68	345	iPd	33	28	00	0.5		4.7mb (14 obs.)							
SNF	34.23	303	P	27	53.20	2.1		0.8s		15.00nm				5.1mb	CASPIAN SEA							(338)	
LBF	34.68	297	eP	27	54.30	-0.8	CCH	122.11	274	(PKP)	40	06	00	6.4X									
	0.8s		22.00nm			5.1mb	ZOBO	122.95	276	PKP	39	57	00	-4.5X	TEH	4.60	185	ePc	31	52.00	0.4		
LOR	34.73	298	eP	27	54.60	-0.9	LPB	123.09	276	(PKP)	40	10	00	8.4X	TAB	4.87	244	eP	31	55.00	-0.4		
	0.8s		14.70nm			5.0mb	CNCB	123.17	276	PKP	40	03	20	1.3X	KER	7.07	214	eP	32	37.00	10.6X		
SMF	34.81	297	eP	27	55.80	-0.4		S.D. = 1.0		on 160 of 172 obs.					MHI	7.21	121	ePn	32	30.00	1.6		
	0.8s		10.70nm			4.8mb	----------											eSn	33	44.00			
GBA	34.92	132	Pd	27	57.20	-0.1	%	SEP 22, 1989 21h 11m 51.11± 0.83s							DSI	15.95	242	e(P)	34	29.00	3.1X		
	0.8s		24.40nm			5.2mb		39.340 N ± 6.3km 28.000 E ±11.9km							PRNI	16.97	239	eP	34	41.00	2.1		
SSF	34.99	297	eP	27	57.20	-0.5		DEPTH = 10.0km (geophysicist)							MBH	17.42	238	eP	34	46.00	1.5		
	0.8s		9.40nm			4.8mb	TURKEY							(366)	ELL	17.55	265	eP	34	47.00	0.8		
PLDF	35.05	296	P	27	56.43	-1.9									JMB	19.08	285	eP	35	10.00	5.2X		
AVF	35.13	297	eP	27	58.40	-0.4	KCT	0.95	17	iPg	12	09	50	0.3	VRI	19.15	295	eP	35	08.00	2.4		
	1.0s		38.00nm			5.3mb				iSg	12	22	50		RZN	20.52	283	eP	35	20.00	-0.6		
AGO	35.38	296	P	28	01.00	0.0	EDC	1.01	354	iPn	12	10	20	0.0	VTS	21.56	285	eP	35	31.00	-0.2		
LBL	35.43	294	P	28	01.22	-0.1	BNT	1.02	357	iPn	12	11	00	0.7	KKB	21.72	284	eP	35	33.00	0.4		
BGF	35.50	297	eP	28	02.20	0.1	IZM	1.10	212	iPn	12	11	50	-0.4	ZST	25.94	299	iP	36	14.00	0.7		
	0.6s		5.40nm			4.7mb	EZN	1.38	291	ePn	12	19	00	2.6X				i	36	27.50			
PYM	35.51	295	P	28	02.12	-0.1	KHL	1.56	130	ePn	12	19	80	0.7	NUR	26.29	329	eP	36	18.00	1.6		
MAF	35.74	296	eP	28	04.40	0.3	YLV	1.62	40	iPn	12	18	50	-1.3	KSP	26.79	305	ePc	36	21.80	0.7		
	0.6s		9.90nm			4.9mb		S.D. = 1.0		on 6 of 7 obs.					SUF	27.20	334	eP	36	28.10	3.5X		
TCF	35.98	296	eP	28	06.30	0.2	----------									0.3s		0.80nm			3.8mb		
	0.8s		12.00nm			4.9mb		SEP 22, 1989 21h 23m 54.77± 0.79s							BRG	28.27	305	eP	36	35.50	1.0		
CAF	36.31	294	eP	28	09.30	0.4		5.345 S ± 6.0km 129.833 E ±11.6km							KHC	28.34	301	P	36	35.00	-0.2		
	0.6s		7.20nm			4.8mb		DEPTH = 234.0 ± 8.7 km							SOD	30.46	341	eP	36	54.00	0.1		
LSF	36.45	296	eP	28	10.00	0.0		4.9mb (8 obs.)							HFS	30.81	323	eP	36	55.70	-1.4		
	0.8s		24.10nm			5.2mb	BANDA SEA							(280)		0.4s		2.10nm			4.3mb		
RJF	36.62	295	eP	28	12.20	0.7									KEV	32.25	344	eP	36	55.00	-14.6X		
	0.8s		13.40nm			4.9mb	AAI	2.32	315	ePd	24	40	10	0.7	HAU	33.15	299	eP	37	17.00	-0.6		
GTA	36.64	75	iPd	28	13.00	1.2				eS	25	06	50			0.8s		11.80nm			4.8mb		
Z	16s		0.40um			4.3MszX	MTN	7.56	170	iPc	25	43	10	-0.1	GBA	34.79	133	Pc	37	31.70	-0.3		
LPO	36.97	294	eP	28	14.60	0.2	KUG	7.82	232	ePd	25	51	50	5.0X		0.4s		1.70nm			4.3mb		
LFF	37.23	294	eP	28	17.00	0.5				eS	27	15	50		LBF	34.84	297	eP	37	31.80	-0.5		
	0.6s		28.80nm			5.4mb	KNA	10.39	186	iPc	26	18	50	-1.0		0.8s		6.70nm			4.6mb		
LDF	37.23	300	eP	28	17.00	0.4				eS	28	08	00		LOR	34.89	298	eP	37	31.90	-0.8		
	0.6s		11.50nm			5.0mb	PCI	10.91	294	ePc	26	31	00	4.9X		0.8s		4.50nm			4.5mb		
FLN	37.45	301	eP	28	18.30	-0.1	WB5	15.11	163	iPd	27	17	90	-0.4	AVF	35.29	297	eP	37	35.70	-0.4		
	0.6s		15.10nm			5.1mb				e	27	26	00			1.0s		10.00nm			4.7mb		
MFF	37.54	297	eP	28	18.70	-0.4				eS	30	00	10		TCF	36.14	296	eP	37	43.00	-0.3		
	0.6s		5.40nm			4.7mb	WRA	15.16	164	Pc	27	17	80	-1.1		0.8s		4.50nm			4.4mb		
GRR	37.75	300	eP	28	20.80	0.0		0.9s		30.90nm				4.7mb	LSF	36.61	296	eP	37	46.60	-0.7		
	0.8s		16.10nm			5.0mb	TRT	17.25	261	iPc	27	43	40	0.5		0.8s		5.30nm			4.5mb		
LPF	37.92	300	eP	28	23.00	0.7	KKM	17.69	310	ePd	27	46	50	-1.2	LFF	37.39	294	eP	37	54.00	0.2		
	0.8s		13.40nm			4.9mb		1.0s		138.50nm				5.4mb		0.6s		9.00nm			4.8mb		
EKA	38.67	312	Pd	28	28.60	0.1	QIS	17.85	149	iPd	27	49	40	0.1	BNG	46.66	229	iPd	39	08.30	-1.4		
	0.7s		11.30nm			4.8mb		0.2s		17.00nm				5.2mb		0.8s		21.00nm			5.2mb		
LZH	40.77	79	eP	28	48.00	1.7				eS	31	03	00					i	39	23.30			
	2.0s		0.05nm			1.9mb X	MBL	18.47	211	iPc	27	55	30	-0.4	PTZ	57.55	204	iPd	40	31.00	-0.3		
CD2	42.88	86	P	29	04.90	1.4		0.7s		17.00nm				4.7mb				i	40	45.00			
BTO	43.71	70	P	29	11.50	1.3	ASPA	18.63	168	iPd	27	58	60	1.2	LSZ	59.54	207	iPd	40	45.00	-0.2		
HHC	44.73	69	eP	29	20.00	1.6		0.9s		37.00nm				4.9mb	KIC	60.72	252	Pd	40	51.66	-1.6		

22d 23h

0.6s 8.50nm 5.1mb
TIC 60.74 253 Pd 40 51.58 -1.8
0.7s 6.50nm 4.9mb
LIC 61.02 252 Pd 40 53.66 -1.6
0.5s 11.00nm 5.2mb
BUL 63.94 204 iPc 41 14.40 -0.3
S.D. = 1.1 on 32 of 37 obs.

• SEP 23, 1989 01h 11m 41.98± 0.88s
42.873 N ± 5.6km 13.146 E ±10.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

CIO 0.32 360 iPg 11 49.02 0.3
iSg 11 53.14
ASS 0.41 299 P 11 50.50 0.2
eSg 11 55.60
AQU 0.55 160 P 11 53.30 0.1
MNS 0.60 215 P 11 54.00 -0.1
eSg 12 03.10
ARV 0.64 347 P 11 54.40 -0.5
eSg 12 04.10
S.D. = 0.4 on 5 of 5 obs.

? SEP 23, 1989 01h 13m 09.10± 2.69s
44.769 S ±25.9km 81.612 W ±35.9km
DEPTH = 10.0km (geophysicist)
WEST CHILE RISE (686)

LNV 13.36 40 iP 16 23.00 1.8
TACH 13.83 40 ePd 16 27.00 -0.4
PCH 14.05 41 iPd 16 29.00 -1.5
ROCH 14.37 39 eP 16 35.50 0.8
PEL 14.37 40 iPc 16 34.40 -0.2
0.5s 22.54nm 5.1mb X
FCH 14.40 41 eP 16 34.50 -0.8
PPD 33.65 58 eP 19 53.10 1.0
VAO 35.64 64 eP 20 07.40 -1.8
BMA 37.68 67 e(P) 20 26.00 -0.3
BAO 40.58 55 eP 20 52.50 1.9
PDCR 48.38 62 iPd 21 57.80 4.7X
e 22 04.80
BOG 49.63 10 eP 22 02.60 -0.5
S.D. = 1.4 on 11 of 12 obs.

• SEP 23, 1989 03h 06m 39.64± 1.23s
31.036 S ±14.7km 68.137 W ±12.7km
DEPTH = 10.0km (geophysicist)
SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.58 189 iPc 06 50.00 -1.3
ZON 0.69 222 iPd 06 51.00 -2.3
MRA 2.48 124 iPc 07 22.00 1.3
JACH 2.66 231 eP 07 25.00 1.6
FCH 2.92 218 eP 07 31.60 4.2X
iS 08 06.40
PEL 3.02 225 eP 07 30.00 1.6
i(S) 08 06.50
i 08 11.20
ROCH 3.11 231 eP 07 30.50 0.6
iS 08 08.10
PCH 3.27 217 eP 07 34.60 2.6X
iS 08 16.50
CYA 3.29 39 ePd 07 31.30 -1.0
TACH 3.53 222 eP 07 35.00 -0.6
iS 08 19.10
S.D. = 1.8 on 8 of 10 obs.

SEP 23, 1989 04h 07m 15.50± 0.54s
38.305 N ± 4.5km 23.660 E ± 9.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.6 (ATH).

ATH 0.34 172 ePb 07 22.70 0.3
NEO 1.06 341 ePb 07 36.20 0.8
PAIG 1.62 1 ePn 07 44.00 -0.2
ITM 1.77 231 ePn 07 46.00 -0.4
APE 1.93 129 ePn 07 48.80 0.1
LIT 2.01 333 ePn 07 49.00 -0.9
eSn 08 21.50
OUR 2.04 7 ePn 07 50.30 0.0
PLG 2.07 355 ePn 07 50.00 -0.8
KNT 2.91 349 ePn 08 02.90 0.2
OHR 3.57 323 ePn 08 13.00 0.9
S.D. = 0.7 on 10 of 10 obs.

• SEP 23, 1989 04h 16m 59.92± 2.17s
12.131 S ±14.1km 167.010 E ± 8.8km
DEPTH = 268.7 ± 21.4 km
4.4mb (11 obs.)
SANTA CRUZ ISLANDS (184)

PVC 5.72 167 iP 18 49.50 23.9X
DZM 9.90 183 iPc 19 16.90 -1.2
BRS 20.22 219 iPc 21 16.50 0.6
CTA 21.44 246 iPd 21 29.20 1.4
0.9s 26.47nm 4.7mb
RMQ 22.34 228 iPd 21 38.00 1.5
0.5s 30.00nm 5.0mb
W85 32.26 252 iPd 23 04.90 -0.9
WRA 32.30 252 Pc 23 05.30 -0.8
0.5s 3.20nm 4.2mb
ASPA 33.44 245 iPd 23 14.70 -1.2
0.5s 12.00nm 4.7mb
WARB 40.43 244 iPd 24 14.90 0.8
0.3s 9.00nm 4.6mb
MBL 45.94 252 iPc 24 58.80 0.5
0.3s 3.00nm 4.1mb
NANU 50.01 251 eP 25 30.00 0.5
MAT 55.50 332 eP 26 09.00 -0.6
1.0s 11.00nm 4.3mb
CHTO 73.79 294 eP 28 08.00 0.8
1.0s 2.50nm 3.9mb
SPA 77.95 180 e(P) 28 30.10 0.4
0.7s 3.13nm 4.1mb
PMR 81.15 20 eP 28 47.10 0.7
FBA 83.97 18 iP 29 00.50 -0.3
0.9s 54.17nm 5.4mb
CMB 84.10 49 eP 29 02.40 0.3
PLM 85.30 55 eP 29 09.00 0.7
KVN 86.13 49 iP 29 12.50 0.2
TNP 86.48 50 eP 29 14.80 0.8
1.0s 2.00nm 3.9mb
YMT3 86.69 51 eP 29 14.00 -0.9
PRN 87.91 51 eP 29 22.00 1.2
PNT 88.55 39 eP 29 24.00 0.6
LRM 92.11 44 eP 29 41.00 0.8
SOD 118.95 344 ePKP 35 28.00 10.6X
SUF 122.33 340 iPKP 35 24.00 0.1
0.5s 3.50nm
NUR 124.38 339 iPKP 35 28.70 0.7
HFS 128.18 343 ePKP 35 34.90 -0.4
0.4s 0.50nm
LPG 142.73 337 ePKP 36 02.10 -1.2
0.8s 4.00nm
TCF 143.60 342 ePKP 36 03.10 -1.3
0.8s 4.00nm
SBF 143.81 335 ePKP 36 03.40 -1.4
0.8s 29.50nm
LSF 143.83 343 ePKP 36 03.50 -1.2
1.0s 16.00nm
MFF 143.97 345 ePKP 36 04.00 -0.9
1.0s 12.00nm
CVF 144.22 332 ePKP 36 04.70 -0.8
0.8s 17.10nm
FRF 144.39 335 ePKP 36 05.40 -0.3
0.8s 18.00nm
LRG 144.59 335 ePKP 36 06.50 0.4
1.0s 16.00nm
LMR 144.63 335 ePKP 36 06.10 0.0
1.0s 20.00nm
RJF 144.70 342 ePKP 36 06.90 0.7
0.8s 10.70nm
LFF 145.26 343 ePKP 36 08.50 1.4X
0.8s 10.70nm
LPO 145.36 342 ePKP 36 08.80 1.5X
0.6s 3.60nm
BNG 147.90 259 iPKPc 36 16.00 3.6X
0.5s 9.00nm
S.D. = 0.9 on 36 of 41 obs.

? SEP 23, 1989 04h 56m 55.42± 1.12s
5.215 N ±14.0km 127.496 E ±29.3km
DEPTH = 33.0km (normal)
4.9mb (4 obs.)
PHILIPPINE ISLANDS REGION (248)

KNA 20.87 177 eP 01 38.00 0.8
WB5 25.84 165 eP 02 25.20 -0.5
WRA 25.89 165 Pc 02 26.30 0.1
0.6s 4.60nm 4.3mb
WARB 31.22 181 eP 03 04.00 -10.2X
MRWA 35.97 197 iPd 03 55.10 -0.1
0.3s 4.00nm 4.8mb
BAL 37.08 196 eP 04 04.00 -0.5
0.4s 8.00nm 4.9mb
KLB 37.76 194 eP 04 10.00 -0.2
MUN 38.52 195 iPd 04 16.70 0.1
NWAO 39.16 194 iPd 04 22.40 0.4
0.6s 15.00nm 4.9mb
SUF 90.58 333 eP 09 55.50 0.1
S.D. = 0.5 on 9 of 10 obs.

• SEP 23, 1989 05h 45m 31.15± 0.51s
56.176 S ±12.2km 26.977 W ±13.2km
DEPTH = 100.0km (geophysicist)
5.1mb (7 obs.)
SOUTH SANDWICH ISLANDS REGION (153)

SNA 17.79 152 e(P) 49 33.40 0.2
0.9s 31.09nm 4.5mb
SPA 34.00 180 ePc 52 07.50 0.6
0.9s 23.64nm 5.0mb
VAO 36.26 328 e(P) 52 27.00 0.8
PCH 37.33 289 eP 52 34.00 -1.2
LNV 37.55 287 eP 52 36.00 -0.9
PEL 37.79 289 ePd 52 38.00 -1.0
1.0s 42.00nm 5.3mb
ROCH 38.09 289 ePd 52 41.00 -0.8
PPD 38.56 322 eP 52 44.90 -0.6
e 52 46.70
MAW 39.98 143 eP 52 56.00 -0.6
CCH 48.69 307 P 54 06.80 -0.4
CNCB 50.02 305 P 54 18.50 0.7
LPB 50.32 305 P 54 22.00 2.1
1.0s 50.00nm 5.5mb
ZOBO 50.56 305 iPc 54 22.00 0.1
1.0s 40.00nm 5.4mb
Z 24s 0.18um 4.0MszX
LR 11 00.00
ARE 51.97 301 iPd 54 33.00 0.8
NNA 58.41 299 iPd 55 18.50 0.1
0.9s 13.45nm 5.0mb
BNG 70.92 49 ePd 56 38.10 -1.1
0.2s 6.00nm 5.1mb
GBA 109.21 94 Pdiff 00 00.00 12.9X
MBC 144.14 336 ePKPd 04 54.90 0.2
0.8s 15.00nm
INK 145.97 320 ePKP 04 59.00 1.0
S.D. = 1.0 on 18 of 19 obs.

• SEP 23, 1989 07h 42m 37.32± 0.69s
37.357 S ±13.9km 78.390 E ±13.7km
DEPTH = 10.0km (geophysicist)
4.8mb (5 obs.) 4.6Msz (1 obs.)
MID-INDIAN RISE (429)

ASPA 49.09 90 eP 51 26.60 -0.3
1.4s 12.00nm 4.7mb
Z 19s 0.59um 4.6Msz
LR 09 22.20
WRA 51.35 86 Pd 51 44.40 0.2
1.1s 8.40nm 4.6mb
WB5 51.40 86 eP 51 44.70 0.1
SPA 52.83 180 e(P) 51 54.80 -0.2
1.0s 8.50nm 4.6mb
HYB 54.48 0 eP 52 07.50 0.2
POO 55.75 355 eP 52 15.50 -1.1
BCAO 69.35 293 ePd 53 47.80 0.4
0.9s 9.00nm 4.9mb
i 53 53.90
i 57 37.00
LZH 76.79 21 eP 54 31.50 0.7
2.0s 23.00nm 4.9mb
S.D. = 0.6 on 8 of 8 obs.

& SEP 23, 1989 08h 15m 18.10s
40.513 N 124.883 W
DEPTH = 14.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.1 (BRK).

FHC 0.74 67 iPc 15 32.00 -0.3
eS 15 41.60
WDC 1.79 87 iPc 15 47.00 -1.7
eS 16 08.10
LTCM 2.13 97 eP 15 52.00 -1.7
LBFM 2.42 69 eP 15 56.70 -1.3
BKS 3.34 141 ePc 16 07.83 -3.1
eS 16 44.30

```
MHC      4.05 140 iPc    16 18.27  -2.8
ARN      4.10 139 eP     16 18.80  -2.9
KVN      5.43 103 eP     16 37.70  -3.0
TNP      6.42 110 eP     16 52.40  -2.3
         9 obs. associated
-----------------------------------------
%  SEP 23, 1989  08h 17m 14.85± 0.80s
   37.732 N ± 6.1km   14.953 E ± 7.7km
   DEPTH =  10.0km  (geophysicist)
 SICILY                              (398)

MNO      0.29 314 P      17 21.10   0.2
                  eSg    17 24.70
MEU      0.63 182 P      17 27.60   0.0
                  eSg    17 36.80
GIB      0.78 290 P      17 30.00  -0.1
                  eSg    17 42.30
MCT      1.05 265 P      17 54.50  19.7X
FAI      1.11 246 P      17 35.70   0.0
TDS      2.21  29 P      17 52.40   0.3
MGR      2.45  11 P      17 55.00  -0.4
     S.D. = 0.3  on   6 of   7 obs.
-----------------------------------------
   SEP 23, 1989  08h 19m 02.42± 0.66s
   38.308 N ± 5.8km   23.605 E ±10.8km
   DEPTH =  10.0km  (geophysicist)
 GREECE                              (364)
      ML 2.4 (ATH).

ATH      0.35 165 ePb    19 09.80   0.2
NEO      1.04 343 ePn    19 22.40   0.3
ITM      1.74 230 ePn    19 32.90   0.0
APE      1.97 128 ePn    19 35.90  -0.3
LIT      1.99 335 ePn    19 35.90  -0.6
PLG      2.07 357 ePn    19 37.90   0.3
     S.D. = 0.5  on   6 of   6 obs.
-----------------------------------------
%  SEP 23, 1989  08h 20m 51.26± 2.31s
   37.717 N ±21.3km   14.904 E ±11.0km
   DEPTH =  10.0km  (geophysicist)
 SICILY                              (398)

MNO      0.27 322 P      20 57.90   0.9
                  eSg    21 02.00
MSI      0.71  46 P      21 05.40   0.2
GIB      0.75 292 P      21 06.30   0.4
                  eSg    21 16.70
MCT      1.01 266 P      21 11.10   0.6
USI      1.68 307 P      21 18.80  -2.0
     S.D. = 1.6  on   5 of   5 obs.
-----------------------------------------
?  SEP 23, 1989  08h 43m 33.01± 1.18s
   39.188 N ± 8.6km   27.769 E ±13.4km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                              (366)

IZM      0.88 207 ePg    43 50.00   0.0
                  eSg    44 05.00
KCT      1.15  23 iPn    43 54.50  -0.1
BNT      1.17   6 iPn    43 55.00   0.1
EZN      1.29 300 iPn    43 56.80   0.0
     S.D. = 0.1  on   4 of   4 obs.
-----------------------------------------
   SEP 23, 1989  08h 47m 29.36± 0.58s
   61.198 N ± 6.5km  150.270 W ± 5.5km
   DEPTH =  33.0km  (normal)
 SOUTHERN ALASKA                     (  2)
      ML 3.0 (PMR).

PMS      0.35  82 iPc    47 38.30   0.5
PWA      0.49  22 iPc    47 39.90   0.0
PMR      0.68  54 iPc    47 41.80  -0.6
TOA      2.16  63 eP     48 03.50  -0.2
SVW      2.60 270 iPc    48 10.00   0.0
TTA      3.21 305 iPc    48 18.60  -0.1
KDC      3.64 199 e(P)   48 24.70   0.0
FBA      3.88  16 eP     48 28.70   0.5
IMA      5.12 344 eP     48 45.80  -0.1
     S.D. = 0.4  on   9 of   9 obs.
-----------------------------------------
?  SEP 23, 1989  08h 58m 39.56± 3.52s
   17.324 N ±22.1km  101.055 W ±27.4km
   DEPTH =  33.0km  (normal)
 NEAR COAST OF GUERRERO, MEXICO  ( 58)

ACX      1.23 111 iP     59 00.50   0.0
                  iS     59 19.50
III      1.84  55 iP     59 11.00   1.4
MRX      2.37 357 iP     59 17.00   0.0
                  iS     59 47.00
CRX      2.45  32 eP     59 20.50   2.1X
                  (S)    00 03.50
UNM      2.67  41 eP     59 25.50   4.0X
                  iS     00 02.50
PPM      2.89  53 eP     59 23.00  -1.7
IIT      3.11  57 eP     59 28.00   0.3
                  (S)    00 18.00
IISM     3.87  64 eP     59 44.00   5.8X
OXX      4.15  93 (P)    59 49.50   7.1X
AGX      4.68 346 (P)    00 03.00  13.3X
     S.D. = 1.6  on   5 of  10 obs.
-----------------------------------------
   SEP 23, 1989  09h 16m 33.78± 0.33s
   44.275 N ± 2.6km    7.481 E ± 3.0km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                      (545)
      ML 2.3 (GEN).

ENR      0.06 222 P      16 35.37  -0.8
                  S      16 36.95
STV      0.12 255 P      16 36.40  -0.4
                  S      16 38.56
ROB      0.28  86 P      16 39.89   0.2
                  S      16 44.71
AUTN     0.28 188 Pg     16 39.85   0.1
                  Sg     16 45.03
DOI      0.28 324 Pd     16 40.00   0.2
                  iSg    16 44.60
SAOF     0.29 169 Pg     16 39.67  -0.3
TOUF     0.31 213 Pg     16 40.37   0.1
PZZ      0.36 310 P      16 40.81  -0.4
                  S      16 45.98
AURF     0.40 196 Pg     16 41.93  -0.1
MVIF     0.45 212 Pg     16 43.29   0.4
IMI      0.47 141 P      16 42.97  -0.4
                  S      16 49.21
FIN      0.53  97 P      16 43.98  -0.5
                  S      16 51.89
PCP      0.81  70 P      16 49.84   0.3
                  S      17 00.19
RRL      0.81 323 P      16 49.53  -0.2
                  S      16 59.27
BNI      0.97 324 P      16 53.00   0.7
                  eSg    17 05.50
LSD      1.21 349 P      16 55.27  -1.1
     S.D. = 0.5  on  16 of  16 obs.
-----------------------------------------
%  SEP 23, 1989  09h 56m 04.05± 0.67s
   37.803 N ± 6.1km    3.533 W ± 6.4km
   DEPTH =  10.0km  (geophysicist)
 SPAIN                               (377)
      mbLg 2.8 (MDD).

EBAN     0.41 331 ePg    56 12.50   0.0
                  eSg    56 17.50
EVIA     1.16  44 ePg    56 26.00   0.2
                  eSg    56 41.60
MAL      1.28 213 iPnc   56 27.80   0.0
                  iSg    56 47.50
ENIJ     1.34 128 ePn    56 28.50  -0.2
                  eSn    56 47.50
EHOR     1.36 271 ePn    56 28.50  -0.5
                  eSn    56 47.80
EJIF     2.05 229 ePn    56 39.50   0.5
GUD      2.88 351 ePg    57 00.20   9.3X
                  eSg    57 35.90
     S.D. = 0.4  on   6 of   7 obs.
-----------------------------------------
?  SEP 23, 1989  10h 28m 48.44± 4.71s
   37.952 N ±18.6km   15.393 E ±35.6km
   DEPTH =  10.0km  (geophysicist)
 SICILY                              (398)

MNO      0.55 268 Pc     28 59.90   0.1
                  eSg    29 03.60
MEU      0.93 204 P      29 06.20   0.0
                  eSg    29 16.10
GIB      1.08 272 P      29 08.60  -0.2
                  eSg    29 19.00
USI      1.90 294 P      29 21.20   0.1
     S.D. = 0.3  on   4 of   4 obs.
-----------------------------------------
*  SEP 23, 1989  11h 00m 15.06± 0.68s
   40.248 N ± 9.9km   51.613 E ±12.0km
   DEPTH =  60.0km  (geophysicist)
   4.2mb (  7 obs.)
 CASPIAN SEA                         (338)

TEH      4.51 182 eP     01 22.00  -0.5
MHI      7.35 120 ePn    02 02.00  -0.2
                  eSn    03 14.00
NUR     26.26 330 eP     05 47.00   1.0
SUF     27.18 334 eP     05 56.00   1.6
FEL     31.89 299 P      06 37.16   0.4
CVF     31.90 288 P      06 40.76   4.1X
GWF     32.12 301 P      06 37.46  -1.1
NB2     32.23 324 P      06 38.50  -0.9
        0.7s      1.40nm          3.9mb
BBS     32.26 298 P      06 39.17  -0.6
WLS     32.31 300 P      06 38.90  -1.4
CDF     32.37 300 P      06 39.22  -1.5
ECH     32.45 299 P      06 39.76  -1.7
MOF     32.49 299 P      06 40.53  -1.3
SAOF    32.60 291 P      06 44.07   1.3
AUTN    32.69 291 P      06 44.94   1.1
BSF     32.72 299 P      06 41.66  -2.2
LOMF    32.73 298 P      06 41.97  -1.9
REVF    32.78 291 P      06 45.00   0.7
AURF    32.78 291 P      06 45.28   0.9
TOUF    32.82 291 P      06 45.67   0.8
HAU     33.01 299 eP     06 47.00   0.7
        0.8s      5.30nm          4.4mb
CALN    33.12 291 P      06 47.30  -0.1
VITF    33.24 299 P      06 44.41  -3.8X
LBF     34.70 297 eP     07 01.60   0.7
        1.0s      4.00nm          4.3mb
LOR     34.74 298 eP     07 01.60   0.3
        0.8s      3.20nm          4.3mb
SMF     34.83 297 eP     07 03.00   1.0
        0.8s      2.60nm          4.2mb
PLDF    35.07 296 P      06 57.08  -7.0X
AVF     35.14 297 eP     07 05.80   1.2
        0.8s      2.60nm          4.2mb
AGO     35.40 296 P      06 58.87  -8.0X
LBL     35.44 294 P      06 59.70  -7.4X
PYM     35.53 295 P      06 59.83  -8.2X
BCAO    46.46 229 eP     08 38.40   0.5
        1.0s      2.20nm          4.0mb
                  epP    08 53.40  58kmX
KIC     60.51 252 P      10 21.80   0.5
TIC     60.52 252 P      10 21.60   0.2
LIC     60.81 252 P      10 23.80   0.5
     S.D. = 1.1  on  29 of  35 obs.
-----------------------------------------
   SEP 23, 1989  11h 11m 53.11± 0.41s
    6.886 N ± 5.8km   76.561 W ±12.3km
   DEPTH =  10.0km  (geophysicist)
   4.5mb (  8 obs.)  3.8Msz (  1 obs.)
 NORTHERN COLOMBIA                   ( 99)

HOBC     2.55 170 iPd    12 34.65  -0.7
CLMC     2.98 180 iPc    12 41.90   0.4
BOG      3.35 132 eP     12 52.00   5.1X
                  eS     13 34.00
HOQC     3.40 181 iPc    12 47.30  -0.2
BMG      3.47  87 eP     13 01.00  12.7X
DIAC     3.59 174 eP     12 50.50   0.4
UPA      3.61 305 eP     12 48.90  -1.3
                  e      13 33.00
SALC     3.89 182 eP     12 54.73   0.3
PSO      5.71 188 eP     13 26.50   6.1X
DVD      6.04 285 eP     12 56.80 -27.8X
COTA     6.74 195 eP     13 39.00   3.9X
CAYA     6.91 192 eP     13 41.50   4.1X
RECU     7.74 195 eP     13 52.00   2.9X
ZOBO    24.47 160 P      17 13.20  -1.1
        1.2s      7.77nm          4.2mb
     Z  20s      0.29um          3.8Msz
                  LR     24 28.00
LPB     24.73 160 P      17 21.00   4.5X
CNCB    25.03 160 P      17 22.20   2.6X
CCH     26.22 157 P      17 34.70   4.3X
OLY     31.60 336 P      18 17.20  -1.1
FVM     33.42 340 P      18 32.40  -1.7
TUL     33.84 331 eP     18 37.80   0.0
        1.2s     11.40nm          4.7mb
SIO     33.96 331 e(P)   18 37.10  -1.7
ALO     39.19 320 P      19 23.90   0.5
        1.4s      4.81nm          4.0mb
GLD     41.62 326 P      19 44.80   1.5
        1.1s     14.46nm          4.6mb
```

23d 11h

GOL	41.67	326	P	19	44.40	0.6
	1.0s	12.50nm			4.6mb	
RSSD	44.19	332	P	20	05.00	0.8
PLM	45.66	311	eP	20	21.00	4.9X
YMT3	46.93	315	eP	20	29.00	3.0X
TNP	48.12	316	P	20	37.50	2.0
	0.7s	1.52nm			4.2mb	
LRM	49.64	327	eP	20	47.70	0.6
EDM	55.02	334	ePc	21	25.50	-1.6
PNT	55.61	327	eP	21	33.00	1.6
LIC	71.00	86	P	23	14.00	0.3
KIC	71.28	86	P	23	14.60	-0.8
MBC	73.14	350	eP	23	25.00	-0.3
	1.0s	6.00nm			4.6mb	
NB2	82.95	29	P	24	19.40	-0.1
	1.2s	5.30nm			4.6mb	
KHC	84.94	41	Pd	24	31.40	1.6
HYB	145.54	45	ePKP	31	34.50	0.3X
ASPA	146.33	237	ePKP	31	36.70	1.3X
	0.9s	6.00nm				
GBA	147.12	52	PKP	31	43.00	6.2X
WB5	147.33	244	ePKP	31	36.30	-0.8X
WRA	147.34	244	PKP	31	39.00	1.9X
	1.2s	5.30nm				

S.D. = 1.1 on 24 of 41 obs.

SEP 23, 1989 11h 40m 57.96± 0.50s
37.119 N ± 8.2km 24.040 E ± 5.1km
DEPTH = 160.5 ± 10.7 km
SOUTHERN GREECE (368)

ATH	0.89	343	eP	41	22.20	-0.9
			eS	41	37.40	
APE	1.19	92	eP	41	24.80	-0.9
ITM	1.69	273	eP	41	31.80	1.1
PRK	2.76	39	eP	41	43.50	0.3
VLS	2.94	292	eP	41	45.90	0.5
KAP	2.98	121	eP	41	46.70	0.8
LIT	3.21	338	ePn	41	49.80	0.8
KEK	4.22	309	eP	42	01.90	-0.1
KCT	4.60	46	iPn	42	20.50	13.5X
OHR	4.72	329	ePn	42	07.20	-1.4
SKO	5.25	338	ePn	42	30.00	14.4X
YLV	5.40	49	iPn	42	18.50	0.8
TDS	6.56	295	P	42	32.50	-0.6
MEU	7.28	273	P	42	42.40	-0.5
MGR	7.29	297	P	42	43.90	0.9
SGO	7.63	299	P	42	47.30	-0.1
PRNI	11.35	123	eP	43	36.00	-0.4
MBH	11.64	126	iPc	43	40.00	-0.2

S.D. = 0.9 on 16 of 18 obs.

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* SEP 23, 1989 12h 19m 33.08± 0.85s
6.513 N ± 8.4km 77.018 W ±12.2km
DEPTH = 64.2 ± 10.9 km
3.8mb (1 obs.)
NEAR WEST COAST OF COLOMBIA (102)

HOBC	2.32	158	eP	20	08.80	-1.0
CLMC	2.65	170	iPd	20	15.10	0.6
DIAC	3.30	166	iPd	20	23.85	0.2
UPA	3.50	315	e(P)	20	26.20	0.0
SALC	3.53	175	eP	20	20.30	-6.6X
BMG	3.95	82	eP	20	33.00	0.2
PSO	5.29	183	eP	21	04.00	12.1X
ZOBO	24.29	159	eP	24	45.00	-1.4
Z	18s	0.21um			3.7Msz	
		LR		32	58.00	
LPB	24.54	159	eP	24	49.00	0.3
CNCB	24.84	159	P	24	53.00	1.3
ALQ	39.18	320	eP	26	58.00	1.2
	1.0s	1.25nm			3.8mb	
LRM	49.71	328	eP	28	20.60	-0.4
PNT	55.68	328	eP	29	04.00	-1.0

S.D. = 1.1 on 11 of 13 obs.

& SEP 23, 1989 12h 38m 45.80s
52.604 N 162.852 W
DEPTH = 6.1km
SOUTH OF ALASKA (17)
<PAL>.

SNKA	1.87	1	eP	39	16.43	-2.2
DRRA	2.35	8	eP	39	22.95	-2.6
BALA	2.59	1	eP	39	28.16	-0.8
			eS	39	57.59	
DLG	2.61	13	eP	39	27.45	-1.8
			eS	39	57.67	
BKJ	3.22	36	eP	39	35.76	-2.0
IVF	3.83	29	eP	39	44.64	-1.9
			eS	40	27.25	

6 obs. associated

SEP 23, 1989 13h 17m 52.26± 0.64s
37.799 N ± 6.3km 14.955 E ± 5.4km
DEPTH = 27.5 ± 5.9 km
4.3mb (1 obs.)
SICILY (398)

MNO	0.24	303	Pc	17	58.70	-0.3
MSI	0.62	49	P	18	05.70	1.2
MEU	0.70	182	P	18	04.90	-1.0
			eSg	18	14.10	
GIB	0.76	285	P	18	06.60	-0.3
			eSg	18	18.60	
MCT	1.06	261	P	18	11.90	0.4
FAI	1.14	243	P	18	13.50	1.0
			eSg	18	28.30	
USI	1.67	304	P	18	19.50	-0.5
CVT	1.72	267	P	18	20.80	0.1
ERC	1.89	278	P	18	23.80	0.6
LVI	2.08	276	P	18	25.80	-0.1
TDS	2.15	30	P	18	27.40	0.4
MGR	2.38	11	P	18	30.20	0.0
BRT	3.53	29	P	18	46.50	-0.2
SRO	10.31	13	iPg	20	20.00	-1.3
	0.2s	0.39nm			4.3mb	
		i(Sg)		20	21.10	

S.D. = 0.8 on 14 of 14 obs.

? SEP 23, 1989 13h 41m 04.61± 0.82s
37.692 N ± 6.5km 14.860 E ± 7.5km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.27	331	Pc	41	10.60	0.2
			eSg	41	15.40	
MEU	0.59	175	P	41	16.70	0.0
			eSg	41	25.50	
GIB	0.72	294	P	41	18.70	-0.2
			eSg	41	29.60	
MSI	0.75	47	P	41	19.20	-0.1
			eSg	41	28.60	
FAI	1.03	247	P	41	24.10	0.0

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

? SEP 23, 1989 13h 44m 48.09± 4.40s
37.774 N ±19.4km 15.082 E ±33.3km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.34	297	Pc	44	55.40	0.1
			eSg	45	00.30	
MEU	0.68	190	P	45	01.70	0.0
			eSg	45	11.10	
GIB	0.86	285	P	45	04.60	-0.2
FAI	1.22	246	P	45	10.90	0.0

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

SEP 23, 1989 15h 31m 16.09± 0.16s
39.493 N ± 3.6km 29.848 W ± 1.9km
DEPTH = 12.6km (5 depth phases)
5.1mb (54 obs.) 4.9Msz (3 obs.)
AZORES ISLANDS (405)
Felt (III) on Foiol.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 22C
Centroid Location:
Origin Time 15:31:22.2 1.2
Lat 39.27N 0.16 Lon 29.24W 0.11
Dep 15.0 FIX Half-duration 1.5
Moment Tensor: Scale 10**16 Nm
Mrr=-3.99 0.37 Mtt= 2.74 0.55
Mff= 1.25 0.44 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf= 2.71 0.48
Principal Axes:
T Val= 4.80 Plg= 0 Azm=143
N -0.81 0 53
P -3.99 90 180
Best Double Couple:Mo=4.4*10**16
NP1:Strike=233 Dip=45 Slip= -90
NP2: 53 45 -90

HOR	1.35	135	iPc	31	36.10	-4.5X
			iS	31	51.00	
ADH	2.20	112	iP	31	48.90	-3.9X
			eS	32	13.40	
PDA	3.71	117	iPd	32	09.60	-4.8X
			iS	32	49.50	
EZAM	16.23	74	e(P)	35	09.80	4.5X
PTO	16.29	77	eP	35	06.20	0.2
STS	16.38	71	eP	35	11.70	4.5X
EMON	17.32	70	e(P)	35	22.50	3.4X
EPLA	18.27	81	e(P)	35	30.80	-0.1
VAL	18.43	41	eP	35	35.00	2.3
EJIF	19.44	91	e(P)	35	45.80	0.6
GUD	19.68	78	eP	35	48.00	0.0
NKM	19.79	94	iPd	35	50.00	1.0
MAL	20.19	90	iPd	35	55.00	1.9
			iS	39	44.00	
AAPN	20.26	88	eP	35	54.00	-0.1
TIO	20.30	108	iPc	35	54.50	0.0
			i	35	56.00	6km
ALOJ	20.32	89	eP	35	55.00	0.2
ATEJ	20.44	89	eP	35	56.70	0.7
ACHM	20.54	88	eP	35	58.00	1.1
ASMO	20.54	88	eP	35	57.70	0.7
APHE	20.69	89	eP	35	59.40	0.9
IFR	20.72	99	iPd	35	59.00	0.1
AFC	20.72	88	e(P)	36	02.00	3.1X
DLE	21.05	41	eP	36	02.10	0.1
DMU	21.20	40	eP	36	03.90	0.4
EVIA	21.22	84	e(P)	36	04.00	0.0
ETOR	21.25	77	eP	36	04.00	-0.2
TAF	22.32	93	iP	36	16.00	1.1
LPF	22.38	58	eP	36	15.40	0.0
	1.2s	101.10nm			5.2mb	
GRR	22.58	57	eP	36	17.60	0.3
	1.2s	77.30nm			5.1mb	
MFF	22.75	62	eP	36	18.90	-0.1
	1.2s	29.70nm			4.7mb	
FLN	22.90	56	eP	36	20.80	0.3
	1.1s	70.30nm			5.1mb	
EPF	22.91	71	eP	36	21.90	1.3
	1.3s	115.50nm			5.2mb	
LDF	23.10	57	eP	36	22.50	0.1
	1.1s	53.70nm			5.0mb	
EBR	23.18	77	eP	36	24.00	0.8
			e	40	42.00	
LFF	23.22	66	eP	36	23.50	-0.1
	1.2s	83.30nm			5.2mb	
LPO	23.52	67	eP	36	27.50	0.9
	1.1s	53.70nm			5.0mb	
EAB	23.71	37	iPd	36	28.00	-0.2
	1.6s	169.00nm			5.4mb	
RJF	23.78	66	eP	36	29.50	0.4
	1.2s	29.70nm			4.7mb	
EKA	23.81	39	P	36	30.00	0.8
	1.3s	85.40nm			5.2mb	
LSF	23.86	63	eP	36	30.40	0.6
	1.3s	93.80nm			5.2mb	
EAU	23.93	38	eP	36	30.00	-0.4
	1.1s	125.00nm			5.4mb	
EBL	24.09	39	eP	36	31.50	-0.5
	1.2s	100.00nm			5.3mb	
EBH	24.13	37	eP	36	31.90	-0.4
ELO	24.15	37	eP	36	32.00	-0.6
CAF	24.16	67	eP	36	32.50	-0.2
	1.3s	46.90nm			4.9mb	
TCF	24.33	63	eP	36	35.00	0.5
	1.3s	102.50nm			5.3mb	
ESY	24.38	39	ePd	36	34.00	-0.7
EDU	24.52	37	ePd	36	35.20	-0.9
MAF	24.58	63	eP	36	37.10	0.3
	1.2s	47.60nm			5.0mb	
BGF	24.80	63	eP	36	39.10	0.2
	1.0s	56.00nm			5.2mb	
PYM	24.85	65	P	36	39.32	-0.2
AGO	24.96	64	P	36	40.40	-0.1
LBL	25.00	66	P	36	41.19	0.4
AVF	25.16	62	eP	36	42.20	-0.2
	1.2s	41.60nm			5.0mb	
SSF	25.29	62	eP	36	43.50	-0.1
	1.2s	57.70nm			5.1mb	
PLDF	25.29	64	P	36	42.77	-0.9
SMF	25.49	63	eP	36	45.50	0.1
	1.2s	74.30nm			5.2mb	
LOR	25.55	61	eP	36	45.50	-0.5
	1.2s	41.60nm			5.0mb	
LBF	25.60	62	eP	36	46.40	-0.2

1.0s 20.00nm 4.8mb
SNF 26.30 54 iPc 36 52.96 0.0
UCC 26.41 53 P 36 54.00 0.1
DOU 26.42 55 P 36 54.00 0.0
e 36 58.00 14km
S 41 42.00
VITF 27.06 59 P 36 59.16 -0.8
HAU 27.29 60 eP 37 01.30 -0.8
1.2s 41.60nm 5.0mb
ENN 27.38 54 ePc 37 02.50 -0.3
1.1s 19.00nm 4.7mb
LMR 27.40 70 eP 37 03.70 0.7
1.2s 20.20nm 4.7mb
MEM 27.40 54 P 37 03.00 0.0
i 37 06.50 12km
LPG 27.48 65 eP 37 04.50 0.4
1.0s 20.00nm 4.8mb
FRF 27.48 70 eP 37 03.60 -0.2
1.2s 35.70nm 5.0mb
LOMF 27.57 61 P 37 03.86 -0.8
BSF 27.57 60 P 37 03.86 -0.9
MOF 27.81 60 P 37 05.81 -1.0
ECH 27.85 60 P 37 06.17 -1.0
DOI 27.85 67 P 37 07.80 0.5
DIX 27.94 64 ePc 37 09.10 0.9
RUP 27.93 56 ePd 37 07.69 -0.2
CDF 27.94 59 P 37 07.29 -0.8
WLS 27.99 59 P 37 07.22 -1.3
BBS 28.04 61 P 37 08.37 -0.5
WTS 28.16 51 ePc 37 10.10 0.3
0.9s 12.00nm 4.7mb
GWF 28.22 58 P 37 09.86 -0.6
ABH 28.27 56 ePd 37 10.70 -0.2
MMK 28.32 64 ePd 37 13.60 1.9
FEL 28.40 60 P 37 11.08 -1.1
ZLA 28.63 61 ePc 37 14.30 0.0
SLE 28.72 61 ePc 37 14.80 -0.2
VAI 28.89 65 P 37 16.70 0.3
TMA 28.95 64 ePc 37 17.80 0.5
LLS 29.04 62 ePc 37 18.70 0.6
TOD 29.05 57 eP 37 09.22 -8.7X
SAX 29.28 62 ePc 37 20.80 0.5
VDL 29.36 63 ePc 37 21.80 0.8
BOB 29.41 67 P 37 21.90 0.6
MDI 29.55 65 Pd 37 22.00 -0.4
OSS 29.82 63 ePc 37 25.60 0.5
SAL 30.12 65 P 37 27.00 -0.5
MME 30.35 68 P 37 29.20 -0.7
OGA 30.43 62 iPc 37 31.00 0.5
FUR 30.60 60 eP 37 31.40 -0.4
GRF 30.62 57 iPd 37 31.40 -0.6
1.4s 75.00nm 5.4mb
CTI 30.89 64 P 37 34.00 -0.4
MOX 30.95 55 ePd 37 34.00 -0.8
1.3s 58.00nm 5.3mb
e 38 28.00 274kmX
HOF 31.09 56 eP 37 35.70 -0.3
1.4s 88.00nm 5.5mb
PGD 31.11 68 P 37 35.20 -1.3
FVI 31.64 63 Pd 37 40.60 -0.3
BHG 31.67 61 eP 37 41.20 0.0
1.5s 55.00nm 5.2mb
WET 31.68 58 eP 37 40.40 -0.9
1.5s 57.00nm 5.3mb
CLL 31.88 54 iPd 37 42.30 -0.6
1.4s 29.00nm 5.0mb
ASS 31.90 70 P 37 41.80 -1.5
MNS 32.01 71 Pd 37 43.00 -1.3
KHC 32.14 58 Pd 37 44.40 -0.9
1.2s 25.00nm 5.0mb
RDP 32.15 72 P 37 45.00 -0.5
RBL 32.19 63 P 37 44.80 -1.0
RBL 32.19 63 P 37 39.70 -6.1X
BRG 32.44 55 eP 37 47.00 -0.8
1.6s 50.00nm 5.2mb
VOY 32.45 64 eP 37 47.40 -0.7
AZI 32.64 71 P 37 49.80 0.2
PRU 32.78 57 ePd 37 50.30 -0.5
1.5s 62.60nm 5.3mb
Z 14s 0.50um 4.4MszX
N 10s 0.30um
E 14s 0.50um
CEY 32.84 64 eP 37 51.00 -0.4
LJU 32.89 64 eP 37 51.00 -0.8
SDI 32.97 72 P 37 51.50 -1.1
NRA0 33.18 36 P 37 55.80 1.6
VBY 33.44 65 eP 37 56.40 -0.2

DUI 33.45 72 P 37 56.80 0.0
TBR 33.60 287 P 37 58.00 -0.1
PTJ 33.89 64 eP 37 56.60 -4.0X
KSP 33.92 55 iPc 38 00.80 0.0
HFS 33.99 38 eP 38 01.00 -0.2
1.3s 29.10nm 5.0mb
SGO 34.31 73 P 38 04.00 -0.1
ZST 34.49 60 e(P) 38 05.00 -0.7
MGR 34.59 74 Pd 38 06.20 -0.4
TDS 35.29 75 P 38 12.00 -0.6
SRO 35.33 60 iPc 38 12.90 0.1
1.2s 78.10nm 5.5mb
GRI 35.58 76 P 38 14.20 -0.9
UPP 35.83 39 iP 38 16.90 0.0
KRA 36.26 56 ePc 38 21.40 0.7
Z 14s 0.90um 4.7MszX
N 15s 1.40um
e 38 26.10 16km
SPC 36.51 58 iPc 38 24.20 1.2
OHR 38.22 71 eP 38 37.70 0.4
1.3s 0.06nm 2.2mb X
SKO 38.47 69 iPc 38 39.60 0.2
N 15s 0.48um
NUR 39.39 39 iPc 38 47.20 0.4
1.2s 72.30nm 5.2mb
TIC 39.61 139 P 38 48.72 -0.3
LIT 39.73 72 eP 38 41.50 -8.4X
KNT 39.74 70 eP 38 50.00 0.1
LIC 39.96 139 Pc 38 51.46 -0.5
Z 20s 1.50um 4.8Msz
KIC 39.99 139 Pc 38 51.94 -0.3
1.3s 41.50nm 4.9mb
CMP 40.29 63 ePc 38 54.00 -0.4
SUF 40.40 36 eP 38 55.90 0.9
0.4s 30.00nm 5.3mb
MLR 40.87 63 eP 39 00.00 0.7
SOD 41.46 29 iP 39 04.40 0.7
KEV 42.18 26 iP 39 10.00 0.5
1.0s 26.00nm 4.9mb
RSON 45.08 307 P 39 35.50 2.1
1.0s 35.25nm 5.3mb
KHL 45.47 72 eP 39 37.00 0.2
ELC 45.86 287 P 39 40.80 1.1
OLY 48.22 286 P 39 56.80 -1.5
FFC 49.18 313 eP 40 05.00 -0.4
0.9s 20.00nm 5.1mb
TUL 51.25 288 eP 40 21.00 -0.5
0.8s 30.80nm 5.3mb
Z 22s 3.01um 5.3Msz
e 40 25.60 15km
LR 55 11.00
MBC 51.93 342 eP 40 26.00 -0.2
1.1s 44.00nm 5.3mb
HRI 52.14 75 eP 40 29.00 0.6
PDCR 52.47 191 eP 40 28.90 -1.9
DSI 52.64 77 eP 40 32.00 -0.1
MBH 53.12 79 iPc 40 36.00 0.4
RSSD 53.75 301 P 40 38.80 -1.6
SES 55.77 310 eP 40 54.00 -0.8
BCAO 55.87 116 iPc 40 54.90 -1.0
0.4s 5.00nm 4.9mb
EDM 56.03 314 eP 40 56.50 -0.1
MSL 56.17 68 ePc 40 57.00 -0.8
GLD 56.35 296 P 40 58.80 -0.6
GOL 56.48 296 P 40 59.90 -0.5
1.0s 20.00nm 5.1mb
BAO 57.40 201 eP 41 07.00 0.2
LRM 58.50 306 eP 41 14.00 -0.5
BHD 58.53 71 ePd 41 13.00 -1.5
INK 58.67 335 eP 41 15.00 0.0
ALQ 59.44 292 iPc 41 19.80 -1.4
1.0s 8.25nm 4.8mb
Z 22s 0.96um 4.9Msz
DAU 60.18 300 P 41 26.20 -0.1
PNT 61.25 312 eP 41 37.00 4.0X
MSU 61.71 298 P 41 36.90 0.3
VAO 64.19 198 e(P) 41 53.00 0.2
TNP 65.35 300 P 41 59.70 -0.8
1.1s 31.39nm 5.4mb
KVN 65.43 301 P 41 59.80 -1.2
CCH 65.95 218 eP 42 05.00 0.5
ZOBO 65.98 221 P 42 05.00 0.0
LPB 66.19 220 (P) 42 07.00 0.8
IMA 66.26 338 eP 42 06.10 0.3
1.3s 9.40nm 4.8mb
CNCB 66.36 220 eP 42 04.00 -3.5X
GLA 66.38 294 eP 42 07.00 0.1

GSC 66.55 297 eP 42 10.00 2.0
TPC 66.67 296 eP 42 10.00 1.2
CMB 67.49 301 eP 42 13.80 -0.1
ISA 67.49 298 eP 42 15.00 1.0
SBB 67.58 297 eP 42 15.00 0.4
MHI 67.63 61 iPc 42 15.50 0.5
PLM 67.64 295 P 42 15.10 0.0
RVR 67.65 296 eP 42 14.00 -0.9
BAR 67.88 295 eP 42 17.00 0.6
PMR 67.96 333 P 42 10.60 -5.8X
1.1s 14.06nm 5.1mb
MWC 68.00 297 eP 42 19.00 1.6
MHC 68.70 301 e(P) 42 24.30 2.7X
SYP 69.15 298 eP 42 14.00 -10.4X
KSH 76.26 50 eP 43 07.10 0.8
WMQ 79.74 41 Pd 43 26.10 0.8
ePP 46 25.00
BTO 92.29 29 P 44 28.20 0.9
LZH 93.53 36 eP 44 34.50 1.4
2.0s 0.07nm 2.7mb X
BJI 94.98 26 eP 44 40.00 0.5
TIY 95.72 29 Pc 44 43.70 0.6
SPA 129.30 180 e(PKP)50 26.00 1.1
1.0s 9.00nm
MTN 148.58 38 iPKP 51 05.60 4.7X
S.D. = 0.8 on 189 of 206 obs.

? SEP 23, 1989 15h 51m 38.78± 0.97s
28.547 S ±12.3km 178.067 W ±21.1km
DEPTH = 33.0km (normal)
4.7mb (4 obs.)
KERMADEC ISLANDS REGION (177)

MNG 13.16 202 eP 54 44.30 -1.5
eS 56 57.70
TCW 14.10 204 eP 54 59.90 1.7
DZM 15.41 291 iPc 55 28.00 12.5X
ASPA 43.18 265 iPc 59 38.30 -0.1
0.5s 7.00nm 4.7mb
WB5 44.00 270 iPc 59 44.90 -0.1
WRA 44.00 270 Pc 59 44.90 -0.1
0.5s 1.60nm 4.1mb
SPA 61.62 180 e(P) 01 55.60 0.2
0.9s 5.00nm 4.6mb
MAT 76.69 325 eP 03 29.00 0.8
0.9s 11.76nm 4.9mb
SUF 142.34 342 ePKP 11 03.00 -6.0X
NUR 144.55 341 iPKP 11 10.80 -2.0
0.7s 32.00nm
UPP 146.91 346 iPKP 11 17.30 0.6
NB2 146.92 352 PKP 11 17.50 0.7
0.7s 6.30nm
BCAO 151.30 216 iPKPd 11 28.50 3.5X
0.4s 18.00nm
KSP 155.23 338 ePKP 11 55.00 25.7X
S.D. = 1.2 on 10 of 14 obs.

% SEP 23, 1989 17h 05m 19.79± 0.96s
37.768 N ± 8.7km 14.919 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.24 313 Pc 05 27.00 2.0
eSg 05 31.00
MSI 0.66 49 P 05 35.10 2.1
MEU 0.67 179 P 05 33.20 0.1
eSg 05 42.40
GIB 0.74 288 P 05 35.10 0.7
eSg 05 45.70
MCT 1.03 263 P 05 38.80 -0.5
FAI 1.10 244 P 05 40.50 0.0
USI 1.66 305 P 05 47.70 -1.3
TDS 2.19 30 P 05 55.50 -1.2
MGR 2.42 12 P 05 58.20 -1.8
S.D. = 1.6 on 9 of 9 obs.

SEP 23, 1989 17h 51m 38.23± 0.14s
22.621 N ± 2.6km 121.971 E ± 2.6km
DEPTH = 31.3km (13 depth phases)
5.5mb (59 obs.) 5.1Msz (2 obs.)
TAIWAN REGION (243)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 20C
Centroid Location:
Origin Time 17:51:37.4 0.5
Lat 22.20N 0.05 Lon 121.79E 0.08

23d 17h

Dep 15.9 6.0 Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr= 0.33 0.06 Mtt= 1.01 0.07
Mff=-1.34 0.09 Mrt= 0.81 0.36
Mrf=-0.90 0.44 Mtf=-0.96 0.08
Principal Axes:
T Val= 2.05 Plg=33 Azm= 25
N -0.19 51 170
P -1.86 18 283
Best Double Couple:Mo=2.0*10**17
NP1:Strike= 60 Dip=53 Slip= 167
NP2: 157 80 38

TWG 0.85 284 iPd 51 52.90 -1.1
eS 52 05.80
TWF1 0.96 320 iPd 51 54.50 -1.0
eS 52 09.30
TWK 1.51 295 iPc 52 04.40 1.0
eS 52 25.10
TWC 1.98 357 ePc 52 10.50 0.3
TWZ 2.49 352 ePc 52 18.10 0.6
ANP 2.58 351 iPc 52 19.50 0.6
0.9s 5176.47nm
eS 52 50.00
QZH 3.86 307 Pn 52 36.30 -0.6
Z 16s 13.80um
iSn 53 18.50
BAG 6.32 192 eP 53 08.00 -3.8X
HKC 7.22 269 iP 53 23.00 -1.3
iS 54 42.00
GZH 7.97 275 iPd 53 33.00 -1.8
N 12s 11.40um
E 10s 7.80um
S 55 02.00
QCP 7.99 186 eP 53 23.00 -12.1X
SSE 8.47 355 P 53 38.80 -2.9
0.9s 0.12nm 3.0mb X
N 10s 5.80um
E 10s 12.90um
NJ2 9.79 344 Pd 53 57.00 -3.0
Z 12s 13.40um
S 55 42.00
WHN 10.43 321 P 54 06.50 -2.1
1.0s 0.10nm 3.0mb X
Z 12s 12.00um 3.8Msz
E 12s 41.90um
pP 54 14.00
S 55 58.50
KAGJ 11.66 41 eP 54 20.00 -5.5X
QIZ 11.89 255 P 54 27.00 -1.7
N 20s 12.20um
S 56 40.80
KUMJ 12.61 37 eP 54 34.20 -4.0X
SHNJ 13.99 33 eP 54 55.00 -1.4
TIA 14.18 344 eP 54 58.90 -0.1
Z 13s 8.80um
N 12s 5.20um
E 10s 13.40um
S 57 37.00
GYA 14.44 288 iPd 55 02.00 -0.6
Z 10s 5.10um
PP 55 11.00
S 57 49.00
SHK 15.13 36 eP 55 07.10 -4.2X
TKSJ 15.52 41 eP 55 10.00 -6.4X
DAV 15.83 167 eP 55 24.00 3.5X
YONJ 16.05 36 eP 55 15.90 -7.3X
XAN 16.15 318 P 55 25.00 0.4
N 14s 27.30um
E 14s 19.40um
DL2 16.24 359 Pc 55 27.00 1.4
Z 12s 5.00um
N 12s 2.00um
E 11s 5.40um
S 58 26.00
WKYJ 16.63 43 P 55 23.80 -6.8X
TIY 17.14 334 Pc 55 39.70 2.7
5.0s 1.80nm 2.5mb X
N 11s 9.10um
E 13s 17.70um
S 58 52.00
KKM 17.39 199 ePd 55 41.00 0.6
1.4s 256.70nm 5.2mb
TSRJ 17.74 40 eP 55 46.80 2.3
KMI 17.76 282 Pd- 55 45.00 -0.1
Z 14s 7.60um
pP 55 57.50

S 59 02.00
sS 59 13.00
BJI 18.05 346 Pc 55 50.00 1.8
6.0s 1.20nm 2.2mb X
Z 10s 5.10um 5.4Msz
N 11s 6.40um
eS 59 12.00
CD2 18.22 301 iPd 55 50.20 -0.4
Z 12s 5.90um
S 59 17.50
TSM 18.67 192 eP 55 55.20 -0.9
IIDJ 18.90 44 eP 56 04.00 5.2X
SNY 19.20 4 iPc 56 01.00 -1.2
Z 18s 6.00um
N 11s 3.90um
E 11s 4.60um
sP 56 15.00
S 59 35.00
sS 59 47.50
MTMJ 19.54 41 eP 56 06.10 -0.2
LOE 19.71 258 eP 56 08.70 0.5
MAT 19.76 42 iPd 55 50.80 -17.7X
MAT 19.76 42 eP 56 08.00 -0.5
0.9s 141.18nm 5.3mb
Z 18s 1.37um 4.2MszX
eS 59 55.00
CHJJ 19.94 44 eP 56 11.70 1.2
HHC 20.19 337 Pc 56 14.00 0.9
N 12s 6.50um
E 13s 5.20um
BTO 20.57 333 iPc 56 16.50 -0.7
N 11s 6.80um
E 11s 7.10um
PP 56 38.00
S 00 06.00
LZH 20.68 314 eP 56 20.00 1.6
2.0s 0.30nm 2.3mb X
N 15s 10.00um
E 13s 6.20um
sP 56 26.50
PP 56 50.50
eS 00 10.00
eSS 01 14.00
NIIJ 20.69 41 eP 56 16.30 -1.9
KAKJ 20.80 45 eP 56 16.50 -2.9
CN2 21.32 7 iPc 56 23.40 -1.2
4.0s 0.90nm 2.5mb X
Z 15s 9.10um 5.3MszX
N 12s 4.20um
pP 56 31.40 29km
eS 00 19.00
NST 21.74 255 eP 56 31.00 2.0
CHG 21.86 264 iPd 56 31.10 0.8
1.2s 171.88nm 5.4mb
eS 00 38.00
YAMJ 21.92 41 eP 56 29.60 -1.1
BDT 22.23 260 eP 56 34.30 0.4
0.9s 59.90nm 5.0mb
MDJ 22.82 14 eP 56 39.00 -0.5
Z 10s 14.50um 5.7MszX
E 12s 6.30um
S 00 46.00
NNT 23.39 249 iPc 56 46.80 1.5
GUMO 23.52 109 ePd- 56 46.70 0.2
1.3s 1294.12nm 6.3mb
PJG 23.52 109 ePd 56 46.70 0.2
pP 56 56.40 35km
GUA 23.58 109 ePd 56 47.00 -0.1
0.7s 498.63nm 6.1mb
pP 56 56.90 36km
GTA 25.21 317 P 57 03.00 0.2
1.4s 0.10nm 2.2mb X
Z 14s 5.10um 5.2MszX
N 11s 4.40um
eS 01 20.50
MRRJ 25.38 34 P 57 03.50 -0.7
SNG 25.66 237 eP 57 05.80 -1.3
eS 01 32.20
SAP 25.96 34 eP 57 10.00 0.4
IPM 27.06 232 ePc 57 20.00 0.0
1.0s 47.80nm 5.1mb
e 57 29.10 32km
KGM 27.34 224 eP 57 25.00 2.5
ASAJ 27.38 34 P 57 22.70 0.0
KLM 27.66 228 eP 57 27.00 1.6
MKS 27.78 185 ePd 57 27.00 0.6
KUSJ 27.80 37 P 57 26.80 0.3

LSA 28.49 291 P 57 35.20 1.8
E 10s 0.70um
pP 57 45.00 35km
PP 57 58.00
iS 02 23.00
ScS 08 07.00
TRT 31.49 198 ePd 57 58.00 -1.6
WMQ 35.26 315 Pd 58 33.10 0.9
Z 16s 3.70um 5.2MszX
N 14s 10.00um
PP 59 55.00
S 04 06.00
MTN 36.37 165 eP 58 46.50 4.9X
LAT 38.03 137 eP 58 59.00 3.4X
KNA 38.71 170 eP 58 57.00 -4.2X
KDB 40.33 140 eP 59 15.00 0.3
NDI 40.61 288 eP 59 17.00 0.0
eS 05 28.00
HYB 41.02 271 eP 59 21.00 0.5
KSH 42.35 304 eP 59 34.00 2.7
Z 16s 4.10um 5.4MszX
N 13s 4.10um
GBA 43.13 266 Pd 59 38.00 0.3
1.6s 28.10nm 4.8mb
WB5 43.94 163 eP 59 42.90 -1.3
i 59 51.20 28km
iPcP 01 39.10
WRA 44.00 163 Pc 59 42.70 -1.9
1.6s 23.20nm 4.7mb
POO 45.09 274 iPc 59 54.30 0.7
QIS 46.24 157 eP 00 01.70 -0.8
0.8s 41.00nm 5.4mb
ASPA 47.45 165 eP 00 10.40 -1.7
Z 22s 0.65um 4.6MszX
e 00 19.30 30km
e 01 51.30
LR 21 20.70
CTA 48.62 149 iPd 00 21.20 0.0
1.7s 173.08nm 5.8mb
i 00 30.50 31km
iS 07 25.00
SVO 48.69 126 eP 00 33.00 11.1X
WARB 48.73 174 eP 00 20.10 -1.8
0.3s 8.00nm 5.2mb
HNR 48.98 126 eP 00 35.00 11.0X
MEKA 49.06 184 eP 00 21.50 -3.0X
QUE 49.46 291 eP 00 28.80 0.9
SMY 49.57 39 e(P) 00 29.80 1.7
COOL 53.20 181 eP 00 56.00 0.2
MHI 55.23 299 eP 01 12.00 1.1
eS 09 08.00
RMO 55.28 151 eP 01 11.00 -0.1
BRS 57.95 148 iP 01 26.00 -4.1X
i 01 39.00 46kmX
CMS 58.45 156 e(P) 01 33.00 -0.6
COO 60.19 150 eP 01 46.00 0.4
DZM 62.05 133 iPc 01 58.70 0.3
BWA 62.05 155 eP 01 59.20 1.0
i 02 06.90 25km
CAN 63.07 155 eP 02 10.30 5.4X
i 02 18.70 27km
CNB 63.20 155 eP 02 14.50 8.7X
TOO 63.83 159 eP 02 09.40 -0.5
SDN 64.67 38 eP 02 13.70 -1.4
TAB 65.44 303 eP 02 22.00 1.4
TTA 66.50 30 iPc 02 27.70 0.8
1.0s 152.50nm 6.1mb
SLY 66.56 300 ePd 02 27.00 -0.6
ePcP 02 45.00
eS 11 11.00
IMA 67.28 26 iPc 02 32.80 0.9
BHD 67.96 298 ePd 02 35.00 -1.5
ePcP 02 52.50
eS 11 34.00
MSL 68.26 302 ePd 02 28.50 -9.9X
e 02 53.00 96kmX
eS 11 41.00
KDC 68.82 35 iPc 02 41.40 0.1
e 03 09.10 110kmX
PMR 69.86 31 iPc 02 47.30 -0.3
1.3s 217.00nm 6.1mb
FBA 69.86 27 ePc 02 48.00 0.3
KEV 70.69 338 iP 02 52.40 -0.2
0.9s 45.60nm 5.6mb
TOA 71.13 30 iPc 03 06.60 11.1X
SOD 71.38 336 iP 02 56.60 -0.2
SUF 72.77 331 eP 03 03.70 -1.4

0.7s 67.70nm 5.8mb
NUR 74.09 329 iP 03 12.80 0.0
0.9s 54.10nm 5.6mb
Z 16s 1.30um 5.3MszX
LR 36 08.00
INK 74.40 22 iPc 03 14.50 0.0
MBC 74.62 13 ePc 03 15.00 -0.7
1.0s 88.00nm 5.7mb
BHL 74.83 301 P 03 18.50 0.7
S 12 56.00
HRI 74.95 300 iPc 03 20.00 1.5
BBTK 75.30 307 iPc 03 20.50 0.1
e 03 32.00 38km
DSI 75.75 298 iPc 03 24.00 1.0
LFK 76.08 303 iP 03 23.90 -1.0
MBH 76.72 297 iPc 03 29.00 0.6
CFR 76.89 314 eP 03 29.00 -0.1
CLI 77.02 315 eP 03 30.00 0.2
TLB 77.16 313 eP 03 31.00 0.4
YLV 77.54 309 iP 03 32.50 -0.4
VRI 77.61 315 ePc 03 33.50 0.4
BCK 77.65 305 eP 03 32.50 -1.1
SIT 77.92 33 ePc 03 36.30 1.8
ISR 77.98 314 eP 03 36.00 0.8
KHL 78.16 307 eP 03 36.00 -0.4
MLR 78.25 314 iPd 03 37.00 0.2
ELL 78.40 305 eP 03 37.00 -0.8
CMP 78.93 314 Pc 03 40.00 -0.4
MSZ 79.02 149 eP 03 41.00 0.4
pP 03 50.00 29km
PVL 79.46 312 iPc 03 43.00 -0.2
YER 79.49 306 eP 03 42.00 -1.6
ALN 79.80 310 eP 03 45.00 -0.1
NB2 79.94 332 P 03 44.60 -0.9
0.8s 33.30nm 5.4mb
KDZ 79.97 311 iP 03 47.00 0.9
PRK 80.23 308 eP 03 47.80 0.4
KRA 80.31 320 iPd 03 48.10 0.4
0.9s 70.00nm 5.7mb
Z 16s 2.10um 5.6MszX
N 16s 3.80um
e 03 58.20 32km
eS 13 51.00
RZN 80.45 311 iPc 03 49.00 0.2
SPC 80.48 319 iP 03 49.50 0.7
PGB 80.51 312 iPc 03 49.00 0.1
KAP 80.89 305 eP 03 51.10 0.1
VTS 81.15 312 iPc 03 53.00 0.6
MMB 81.17 311 eP 03 52.00 -0.4
SRS 81.44 311 eP 03 53.20 -0.6
KKB 81.51 312 iPc 03 55.00 0.8
PLG 81.83 310 eP 03 55.60 -0.3
PAIG 81.84 310 eP 03 55.30 -0.5
KNT 81.91 311 eP. 03 55.60 -0.6
KSP 82.10 322 iPc 03 57.50 0.5
0.9s 40.00nm 5.5mb
NPS 82.18 305 eP 03 58.10 0.3
SRO 82.22 319 iP 03 58.00 0.4
0.5s 23.40nm 5.5mb
GRG 82.34 311 eP 03 57.90 -0.6
SKO 82.60 312 iPc 04 00.10 0.3
1.0s 102.00nm 5.9mb
Z 18s 0.69um 5.1Msz
N 17s 0.97um
E 16s 1.09um
iPcP 04 14.00
iS 14 10.00
LR 41 58.00
LIT 82.61 310 ePc 03 59.20 -0.7
ZST 82.79 319 eP 04 01.00 0.4
Z 16s 2.03um 5.6MszX
LR 42 00.00
KZN 83.03 311 eP 04 01.50 -0.7
VAM 83.19 305 eP 04 03.40 0.4
OHR 83.38 312 eP 03 56.20 -7.7X
BRG 83.41 323 iP 04 04.00 0.2
1.3s 42.00nm 5.4mb
PRU 83.49 322 Pc 04 04.50 0.3
1.1s 30.60nm 5.4mb
Z 14s 1.50um 5.5MszX
N 18s 1.90um
E 18s 1.30um
e 06 29.00 703kmX
PUK 83.62 313 eP 04 06.00 1.0
CLL 83.73 323 iPc 04 05.50 0.1
1.3s 64.00nm 5.6mb
i 04 22.50 61kmX

SDA 83.90 313 eP 04 04.20 -2.2
TIR 83.93 312 eP 04 07.10 0.5
BERA 84.14 312 eP 04 07.60 0.0
ITM 84.18 308 eP 04 07.00 -1.0
KHC 84.44 321 iPc 04 09.50 0.4
1.1s 16.50nm 5.1mb
Z 16s 1.20um 5.4MszX
N 16s 1.60um
E 16s 1.00um
e 04 23.80 49kmX
PTJ 84.51 318 e(P) 04 09.60 0.1
KEK 84.66 311 eP 04 09.70 -0.6
VLS 84.74 309 eP 04 11.10 0.3
MOX 84.82 323 ePc 04 11.00 0.1
1.5s 56.00nm 5.5mb
Z 15s 2.50um 5.7MszX
e 04 27.00 56kmX
HOF 84.84 323 iPc 04 11.30 0.3
1.1s 42.00nm 5.6mb
WET 84.84 321 eP 04 11.60 0.5
1.3s 29.00nm 5.3mb
VBY 85.12 317 ePc 04 13.10 0.6
LJU 85.32 318 ePc 04 13.80 0.3
HVAR 85.42 315 iPc 04 13.40 -0.6
GRF 85.51 322 iPc 04 14.20 -0.2
1.2s 41.00nm 5.5mb
e 04 18.30 13kmX
e 04 26.60
CEY 85.53 318 ePc 04 15.00 0.4
VOY 85.72 318 ePc 04 15.30 -0.3
NAI 86.02 267 eP 04 20.00 2.2
FVI 86.13 319 P 04 15.60 -1.9
FUR 86.25 321 eP 04 18.70 0.6
WIT 86.32 327 iPd 04 20.00 1.7
WTS 86.69 326 iPd 04 20.60 0.5
0.9s 13.00nm 5.2mb
TNS 86.78 324 ePd 04 21.40 0.7
OGA 87.04 320 iPc 04 22.00 -0.3
1.0s 19.00nm 5.3mb
TDS 87.08 312 P 04 22.00 -0.3
ABH 87.45 324 eP 04 24.13 0.2
ARV 87.53 316 P 04 20.90 -3.5X
RUP 87.81 324 eP 04 25.98 0.3
ENN 87.84 325 iPd 04 25.90 0.2
1.0s 22.00nm 5.4mb
GWF 87.90 323 P 04 26.13 0.1
PGD 88.12 317 P 04 27.30 -0.1
PGC 88.20 37 ePd 04 29.40 2.0
MNS 88.24 316 P 04 26.10 -1.8
WLS 88.35 323 P 04 27.99 -0.3
CDF 88.40 323 P 04 28.13 -0.4
ECH 88.57 323 P 04 28.91 -0.4
MME 88.59 318 P 04 26.10 -3.7X
MOF 88.78 322 P 04 29.69 -0.7
SNF 88.84 326 Pc 04 30.80 0.3
DOU 88.92 325 P 04 30.90 0.0
0.8s 26.70nm 5.6mb
BSF 88.98 322 P 04 30.29 -1.1
HAU 89.14 323 eP 04 31.60 -0.4
0.8s 10.70nm 5.2mb
VITF 89.22 323 P 04 31.59 -0.8
EKA 89.42 332 Pd 04 33.10 -0.1
1.1s 12.50nm 5.1mb
PCP 89.73 319 P 04 33.79 -1.2
PNT 89.92 35 ePc 04 37.00 1.3
1.0s 75.00nm 5.9mb
LSD 90.07 320 P 04 37.17 0.4
FIN 90.12 319 P 04 35.74 -1.0
ROB 90.27 319 P 04 36.56 -0.9
LPG 90.29 320 iPc 04 37.90 0.1
0.8s 22.80nm 5.5mb
IMI 90.47 319 P 04 36.97 -1.4
CVF 90.58 317 eP 04 39.20 0.4
1.3s 36.10nm 5.5mb
ENR 90.58 319 P 04 37.07 -1.9
RRL 90.59 320 P 04 38.41 -0.7
EDM 90.61 30 iPc 04 40.00 1.2
0.9s 100.00nm 6.1mb
PZZ 90.62 320 P 04 39.23 0.1
STV 90.63 319 P 04 38.71 -0.4
SBF 90.77 319 eP 04 39.40 -0.4
1.2s 38.00nm 5.6mb
LOR 90.94 323 iPc 04 39.90 -0.5
0.8s 13.40nm 5.3mb
LBF 91.04 323 iPc 04 40.60 -0.3
1.0s 40.00nm 5.7mb
SSF 91.26 323 iPc 04 41.80 -0.1

0.8s 10.70nm 5.3mb
SMF 91.31 323 iPc 04 41.80 -0.3
0.8s 33.50nm 5.8mb
AVF 91.50 323 iPc 04 42.50 -0.5
0.8s 23.30nm 5.6mb
LMR 91.62 319 eP 04 43.80 0.2
1.2s 23.80nm 5.5mb
LRG 91.65 319 eP 04 44.00 0.3
1.0s 20.00nm 5.5mb
PLDF 91.83 322 P 04 44.77 0.2
BGF 91.92 323 eP 04 44.70 -0.2
0.8s 8.00nm 5.2mb
AGO 92.06 322 P 04 45.75 0.2
MAF 92.28 323 iPc 04 46.00 -0.6
1.0s 30.00nm 5.7mb
PYM 92.31 322 P 04 46.94 0.1
TCF 92.44 323 iPc 04 47.30 0.0
1.0s 20.00nm 5.5mb
LBL 92.47 322 P 04 47.62 0.2
LSF 92.84 323 eP 04 48.90 -0.3
0.9s 8.10nm 5.2mb
WDC 93.16 44 ePc 04 51.50 0.8
CAF 93.33 322 eP 04 52.00 0.5
1.0s 20.00nm 5.5mb
RJF 93.42 322 iPc 04 52.40 0.6
0.8s 29.50nm 5.8mb
SES 93.55 31 eP 04 53.00 0.6
MIN 93.88 43 eP 04 54.50 0.2
LPO 93.98 322 eP 04 54.80 0.4
1.0s 12.00nm 5.3mb
LFF 94.07 322 eP 04 55.20 0.4
1.0s 16.00nm 5.4mb
FFC 94.27 24 iPc 04 55.20 -0.4
1.2s 43.00nm 5.8mb
FFC 94.27 24 eP 05 05.00 9.4X
0.8s 45.00nm 6.0mb
ORV 94.39 44 eP 04 56.70 0.3
MHC 95.53 46 eP 05 02.80 0.9
LRM 95.89 35 ePc 05 04.50 1.0
CMB 95.96 45 ePc 05 04.50 0.7
e 08 50.50
PRS 96.27 47 eP 05 05.80 0.7
LLA 96.39 46 eP 05 06.60 0.9
FRI 97.00 45 eP 05 08.80 0.5
LSZ 99.15 257 iP 05 18.00 -0.4
SBB 99.58 46 eP 05 21.00 0.8
BAR 101.54 47 ePdiff05 34.00 5.1X
ALQ 106.60 40 ePKP 10 02.50 0.1X
1.0s 2.50nm
KIC 120.46 292 PKPc 10 27.90 -1.1X
0.9s 13.50nm
TIC 120.55 293 PKP 10 27.98 -1.3X
LIC 120.77 292 PKPc 10 28.42 -1.2X
0.8s 7.50nm
Z 20s 0.39um 5.0Msz
BMG 147.02 28 ePKP 11 31.00 12.7X
LPB 168.74 59 ePKP 11 49.00 4.9X
i 12 57.00
CNCB 168.99 60 PKP 11 48.00 3.5X
i 12 57.30
PPD 173.75 274 e(PKP)11 47.00 1.1X
S.D. = 1.0 on 233 of 268 obs.

SEP 23, 1989 18h 30m 36.02± 0.62s
40.501 N ± 6.8km 28.425 E ± 5.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KCT 0.26 192 iPg 30 40.60 -0.9
BNT 0.41 250 iPg 30 44.60 0.2
iSg 30 50.10
EDC 0.46 250 iPg 30 44.30 -1.0
eSg 30 49.30
CTT 0.65 0 ePg 30 49.10 0.2
eSg 30 56.10
YLV 0.73 85 iPg 30 49.50 -0.8
iSg 30 58.00
ISK 0.74 40 ePg 30 49.60 -0.9
GBZT 0.83 69 ePg 30 53.20 1.2
iSg 31 06.60
EZN 1.74 248 iPn 31 07.80 1.3
KHL 2.34 158 ePn 31 16.00 0.8
S.D. = 1.1 on 9 of 9 obs.

SEP 23, 1989 18h 37m 24.85± 1.03s
7.069 S ± 8.2km 155.592 E ± 6.0km
DEPTH = 69.1 ± 9.3 km

23d 18h

4.5mb (5 obs.)
SOLOMON ISLANDS (193)

SVO	4.66	117	eP	38	34.00	-0.4
			eS	40	38.00	
HNR	4.91	119	ePc	38	38.00	0.2
			eS	39	40.00	
LAT	8.54	272	eP	39	28.00	-0.2
KDB	8.68	253	eP	39	32.00	1.9
CTA	15.80	214	iPc	41	05.00	0.4
	1.1s		30.38nm		4.4mb	
DZM	18.22	146	iPc	41	39.60	4.8X
RMQ	20.38	198	eP	41	57.50	-1.0
BRS	20.39	187	iP	41	57.00	-1.6
WB5	24.21	236	eP	42	36.80	0.4
WRA	24.26	236	Pc	42	34.80	-2.1
	0.9s		5.70nm		4.0mb	
MTN	24.76	255	eP	42	42.00	0.4
CMS	25.95	199	ePd	42	53.00	0.4
QIZ	52.01	301	eP	46	30.30	0.6
CN2	57.51	334	eP	47	07.00	-2.3
LOE	58.50	295	eP	47	16.40	-0.2
NNT	58.85	289	eP	47	18.00	-1.1
TIY	60.02	321	eP	47	26.60	-0.3
CHG	61.47	296	iPc	47	37.00	0.0
	1.2s		27.73nm		5.3mb	
CD2	62.31	310	eP	47	42.50	0.0
GTA	69.20	317	eP	48	27.00	0.5
HYB	79.85	289	eP	49	28.00	0.0
FBA	82.97	21	eP	49	48.00	4.6X
	1.0s		6.00nm		4.5mb	
SPA	82.98	180	e(P)	49	44.00	0.4
	1.0s		11.50nm		4.8mb	
INK	89.58	21	eP	50	16.00	0.3
NB2	119.96	341	PKP	56	08.50	-0.3
	0.9s		2.70nm			
BUL	121.27	241	iPKPd	56	13.90	1.3
KSP	124.86	330	ePKP	56	18.00	-0.4
BRG	125.99	331	ePKP	56	21.50	0.8
	1.2s		8.00nm			
CLL	126.16	332	iPKPd	56	21.90	0.9
KHC	127.30	329	PKPd	56	24.00	0.7
VBY	128.62	325	ePKP	56	27.70	1.9
LJU	128.71	326	e(PKP)	56	27.00	1.0
CNCB	130.81	119	PKP	56	32.00	0.5
LPB	130.83	119	PKP	56	33.00	1.6
			LR	23	10.00	
ZOBO	130.92	119	PKP	56	32.90	1.1
Z	25s		0.43um		5.0MszX	
			LR	22	08.00	
ASMO	144.47	331	ePKP	56	54.20	-1.3
AAPN	144.69	331	ePKP	56	55.00	-0.9
ACHM	144.71	331	ePKP	56	55.00	-0.8
APHE	144.77	331	ePKP	56	55.50	-0.5
ALOJ	144.84	331	ePKP	56	55.30	-0.9
ATEJ	144.96	331	ePKP	56	55.50	-0.9
BAO	147.53	134	ePKP	57	01.00	-0.1
PDCR	155.65	143	ePKP	57	13.60	0.8X

S.D. = 1.0 on 40 of 43 obs.

SEP 23, 1989 19h 00m 16.34± 0.30s
44.566 N ± 1.9km 6.828 E ± 3.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (LDG).

PZZ	0.20	107	P	00	21.48	0.6
			S	00	24.21	
DOI	0.30	102	P	00	22.80	0.1
			eSg	00	27.40	
RRL	0.36	355	P	00	23.91	0.2
			S	00	29.51	
STV	0.48	132	P	00	26.15	0.0
			S	00	32.92	
BNI	0.50	347	P	00	26.30	-0.2
			eSg	00	33.10	
ENR	0.54	128	P	00	26.97	-0.4
			S	00	34.54	
TOUF	0.63	151	Pg	00	28.93	-0.2
MVIF	0.71	161	Pg	00	30.44	0.0
			Sg	00	40.12	
AUTN	0.71	143	Pg	00	30.25	-0.3
			Sg	00	40.47	
AURF	0.77	152	Pg	00	31.40	0.0
SAOF	0.78	138	Pg	00	31.55	0.0
			Sg	00	42.14	
ROB	0.79	110	P	00	31.79	0.0
			S	00	43.02	
SBF	0.83	148	Pg	00	32.20	-0.2
			Sg	00	44.40	
LSD	0.92	14	P	00	34.23	0.1
			S	00	46.21	
LPG	0.93	357	Pg	00	34.20	-0.2
			Sg	00	47.20	
LPL	0.95	356	Pg	00	34.60	0.0
			Sg	00	48.00	
IMI	1.01	130	P	00	35.48	0.0
			S	00	48.76	
FRF	1.01	187	Pg	00	35.60	0.1
			Sg	00	50.00	
FIN	1.05	109	P	00	36.17	0.0
			S	00	50.88	
LRG	1.16	197	Pn	00	37.70	-0.3
			Sg	00	53.60	
PCP	1.23	91	P	00	39.21	0.0
			S	00	55.21	
LMR	1.25	191	Pg	00	40.30	0.7
			Sg	00	56.00	
BGF	3.43	307	Pg	01	21.60	10.6X

S.D. = 0.3 on 22 of 23 obs.

? SEP 23, 1989 19h 50m 19.92± 1.38s
44.313 N ±12.5km 7.416 E ±13.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

ENR	0.09	178	P	50	22.25	-0.3
			S	50	24.09	
STV	0.10	224	P	50	22.86	0.2
			S	50	24.81	
PZZ	0.30	311	P	50	26.14	0.0
			S	50	30.14	
IMI	0.53	140	P	50	30.76	0.1
			S	50	37.53	

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

SEP 23, 1989 20h 03m 26.74± 0.61s
38.248 N ± 4.4km 8.609 W ± 6.5km
DEPTH = 10.0km (geophysicist)
PORTUGAL (376)
mbLg 4.1 (MDD). MD 3.7 (RBA).

LIS	0.63	318	iPgd	03	41.50	2.1
			iSg	03	49.50	
EVAL	1.62	114	eP	03	56.50	1.1
			eS	04	17.50	
EPLA	2.68	46	iPnc	04	11.00	0.3
			eSn	04	42.00	
EHOR	2.69	98	ePn	04	12.00	1.2
			eSn	04	42.20	
PTO	2.89	0	iPnc	04	14.20	0.6
			iPg	04	24.80	
			iSn	04	41.50	
			iSg	04	59.50	
EPRU	2.97	114	ePn	04	15.80	1.0
			eSn	04	50.80	
EJIF	3.08	125	ePn	04	17.30	1.0
			eSn	04	52.00	
MAL	3.67	113	iPnd	04	28.00	3.3X
			iSg	05	09.50	
NKM	3.79	136	iPn	04	26.80	0.3
			iSn	05	11.00	
EBAN	3.80	90	ePn	04	26.80	0.2
			eSn	05	11.20	
EZAM	3.90	359	ePn	04	27.70	-0.2
			eSn	05	10.40	
AFC	4.14	102	ePn	04	32.40	0.9
			eSn	05	19.00	
GUD	4.20	54	iPn	04	31.90	-0.4
			eSn	05	20.00	
ERUA	4.29	15	eP	04	33.00	-0.5
			eS	05	20.50	
STS	4.63	1	eP	04	37.50	-0.9
			eS	05	27.50	
EVIA	4.81	83	ePn	04	40.40	-0.6
			eSn	05	33.30	
AVE	5.03	169	iPn	04	43.50	-0.6
			iSn	05	37.50	
			i	05	43.50	
ENIJ	5.23	102	ePn	04	47.30	0.4
			eSn	05	45.00	
EMON	5.27	10	ePn	04	46.50	-1.0
IFR	5.50	148	iPn	04	50.00	-0.9
			i	04	55.50	
			iSn	05	50.00	
ETOR	5.68	61	ePn	04	52.40	-0.9
			eSn	05	55.00	
ECHE	6.11	75	ePn	04	58.20	-1.0
TIO	7.39	171	iPn	05	15.50	-1.9
			iSn	06	32.50	
EPF	8.31	52	Pn	05	30.00	-0.2
LFF	9.68	43	Pn	05	46.60	-2.4X
CAF	10.41	47	Pn	05	55.20	-3.9X
			Sn	07	45.00	
MFF	10.43	34	Pn	05	56.00	-3.2X
LSF	10.96	40	Pn	06	03.40	-3.2X
			Sn	07	57.00	
TCF	11.34	41	Pn	06	08.00	-3.8X
MAF	11.48	43	Pn	06	09.90	-3.8X
			Sn	08	10.60	
BGF	11.85	42	Pn	06	14.80	-3.9X
			Sn	08	18.00	
SSF	12.52	41	Pn	06	24.00	-3.7X

S.D. = 1.0 on 23 of 32 obs.

SEP 23, 1989 20h 46m 15.67± 0.74s
44.636 N ± 6.2km 7.261 E ± 5.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

PZZ	0.17	221	P	46	19.78	0.1
			S	46	22.85	
STV	0.39	173	P	46	23.78	0.0
			S	46	29.31	
ENR	0.43	164	P	46	24.29	-0.1
			S	46	29.83	
RRL	0.44	310	P	46	24.70	-0.1
			S	46	30.13	
ROB	0.55	128	P	46	26.95	0.0
			S	46	34.03	
IMI	0.86	148	P	46	32.18	0.0
PCP	0.92	95	P	46	33.41	0.1

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

SEP 23, 1989 21h 07m 03.03± 0.64s
37.776 N ± 5.9km 14.981 E ± 5.4km
DEPTH = 21.9 ± 6.2 km
SICILY (398)

MNO	0.27	304	Pc	07	10.00	0.4
			eSg	07	15.10	
MSI	0.62	47	P	07	14.90	-0.2
MEU	0.68	183	P	07	16.10	0.0
			eSg	07	25.70	
GIB	0.78	286	P	07	18.00	0.0
			eSg	07	30.20	
MCT	1.08	263	P	07	23.10	0.1
FAI	1.15	245	P	07	24.60	0.8
USI	1.70	304	P	07	30.80	-0.8
CVT	1.74	267	P	07	33.10	0.9
ERC	1.91	279	P	07	35.20	0.4
LVI	2.10	277	P	07	37.70	0.2
TDS	2.16	29	P	07	39.20	0.9
MGR	2.40	11	P	07	41.40	-0.3
PTS	2.57	249	P	07	43.10	-1.1

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

? SEP 23, 1989 21h 09m 22.73± 4.50s
37.879 N ±20.7km 15.234 E ±39.5km
DEPTH = 33.0km (normal)
SICILY (398)

MNO	0.43	277	Pc	09	31.60	-0.9
			eSg	09	35.10	
MEU	0.81	197	P	09	37.70	-0.1
			eSg	09	47.40	
GIB	0.96	277	P	09	40.10	0.1
			eSg	09	51.40	
FAI	1.38	245	P	09	46.30	0.5
USI	1.82	298	P	09	52.60	0.4
			eSg	10	13.80	

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

% SEP 23, 1989 21h 57m 06.35± 0.95s
37.762 N ± 7.3km 14.982 E ± 8.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.28	307	Pc	57	13.90	1.5

		eSg	57	18.10	
MEU	0.66	184 P	57	20.00	0.4
		eSg	57	29.60	
GIB	0.79	287 P	57	22.30	0.5
		eSg	57	33.60	
MCT	1.08	263 P	57	25.60	-1.1
FAI	1.15	245 P	57	28.00	0.2
USI	1.71	304 P	57	34.80	-1.5
TDS	2.17	29 P	57	43.00	0.0
MGR	2.41	10 P	57	46.40	-0.1

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

? SEP 23, 1989 22h 14m 37.26± 5.94s
37.971 N ±21.2km 15.503 E ±44.1km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.64	267 Pc	14	50.90	0.7
		eSg	14	56.00	
MEU	0.98	208 P	14	56.70	0.8
		eSg	15	06.70	
GIB	1.17	271 P	14	59.40	0.3
FAI	1.61	245 P	15	03.90	-1.9
USI	1.97	293 P	15	11.10	0.1

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

? SEP 23, 1989 22h 18m 57.51± 4.30s
37.968 N ±16.4km 15.416 E ±31.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.57	267 Pc	19	09.60	0.4
MEU	0.95	204 P	19	15.90	0.3
		eSg	19	25.20	
GIB	1.10	272 P	19	18.30	0.1
		eSg	19	29.40	
MCT	1.45	257 P	19	23.60	-0.3
FAI	1.55	244 P	19	24.80	-0.3
		eSg	19	40.10	
USI	1.91	293 P	19	30.50	0.1
		eSg	19	52.40	

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

% SEP 23, 1989 22h 22m 34.32± 1.42s
37.834 N ±21.2km 14.948 E ±12.6km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MSI	0.61	52 P	22	47.40	0.9
GIB	0.74	282 P	22	49.40	0.4
		eSg	23	01.60	
MCT	1.06	259 P	22	54.60	0.2
FAI	1.15	242 P	22	55.50	-0.4
		eSg	23	11.00	
TDS	2.12	30 P	23	09.20	-1.1

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

SEP 23, 1989 22h 37m 46.76± 0.73s
32.993 N ± 4.6km 140.705 E ± 5.8km
DEPTH = 73.3 ± 6.2 km
5.0mb (17 obs.)
SOUTH OF HONSHU, JAPAN (211)
Felt (II JMA) on Hachijo-jima.

HJJ	0.78	278 iP	38	02.80	-0.2
		iS	38	13.00	
KAKJ	3.23	352 P	38	35.10	-1.1
		S	39	12.10	
CHJJ	3.36	336 P	38	37.10	-0.8
		S	39	16.40	
IIDJ	3.39	318 P	38	39.50	1.0
MAT	4.09	331 iPc	38	47.90	-0.4
		eS	39	34.00	
MTMJ	4.31	327 P	38	52.50	1.2
WKYJ	4.44	287 P	38	53.60	0.4
NIIJ	4.46	342 P	38	51.50	-1.9
		eS	39	40.70	
TSRJ	4.66	304 P	38	56.50	0.3
YAMJ	5.20	354 eP	39	01.10	-2.6
		S	39	55.80	
TKSJ	5.65	282 P	39	10.80	0.8
OFUJ	6.12	7 P	39	12.60	-4.0X
		S	40	16.40	
YONJ	6.39	292 P	39	21.00	0.6
SHK	6.86	285 eP	39	27.90	1.1
SHNJ	8.09	281 eP	39	45.10	1.4
CN2	16.08	317 eP	41	32.50	2.9
		epP	41	42.50	
SSE	16.66	269 eP	41	41.20	4.3X
	1.0s	12.00nm		4.0mb	
Z	16s	0.40um		5.2Msz	
GUMO	19.69	168 eP	42	13.60	0.9
	0.7s	63.53nm		5.0mb	
PJG	19.69	168 eP	42	13.60	0.9
GUA	19.74	168 eP	42	13.30	0.0
	0.6s	117.33nm		5.4mb	
WHN	22.52	271 P	42	43.00	1.8
HHC	24.50	297 eP	43	00.80	0.3
BTO	25.63	296 eP	43	11.00	-0.1
XAN	26.47	281 P	43	17.10	-1.7
GTA	33.40	293 eP	44	17.80	-2.6
CHG	39.87	260 eP	45	14.20	-0.8
WMO	42.27	301 P	45	35.00	0.5
NNT	42.54	251 eP	45	35.50	-1.3
PMR	52.24	35 eP	46	51.00	-1.1
FBA	52.85	30 eP	46	57.30	0.7
	1.0s	5.50nm		4.5mb	
WB5	52.92	187 iPc	46	56.60	-1.0
		i	48	24.00	
WRA	52.99	188 Pc	46	56.90	-1.2
	0.4s	30.70nm		5.7mb	
CTA	53.05	173 eP	46	57.00	-1.5
QIS	53.26	181 iPc	46	59.00	-1.0
	1.0s	18.00nm		5.1mb	
ASPA	56.71	187 ePd	47	24.30	-0.8
	0.6s	51.00nm		5.8mb	
HYB	57.59	271 eP	47	29.50	-2.0
INK	58.26	26 eP	47	35.00	-0.5
WARB	60.35	195 iPd	47	50.60	0.3
GBA	60.38	267 Pd	47	49.20	-1.6
	0.8s	7.50nm		4.9mb	
MBC	60.56	16 ePc	47	51.00	-0.2
	1.0s	29.00nm		5.4mb	
FORR	64.61	192 iPd	48	18.10	-0.4
	0.5s	79.00nm		5.9mb	
KEV	67.02	340 eP	48	32.00	-1.5
8WA	67.45	173 eP	48	37.80	1.1
SOD	68.47	338 iP	48	42.30	-0.3
SUF	71.33	334 eP	48	59.30	-0.8
	0.8s	5.80nm		4.6mb	
PNT	71.50	43 eP	49	02.00	0.6
NUR	73.24	332 eP	49	11.00	-0.4
WDC	73.99	52 ePc	49	17.00	0.9
ORV	75.19	52 eP	49	23.40	0.3
SES	75.64	39 eP	49	26.00	0.5
UPP	76.33	334 iP	49	28.20	-0.8
CMB	76.72	53 ePc	49	32.50	0.8
PRS	76.93	55 eP	49	33.70	0.8
FFC	77.42	32 eP	49	35.00	-0.2
	0.9s	10.00nm		4.8mb	
NB2	77.68	337 P	49	36.00	-0.6
	0.9s	7.90nm		4.7mb	
FRI	77.72	54 eP	49	37.80	0.6
YMT3	80.05	53 eP	49	51.00	1.0
KRA	82.11	326 eP	50	00.80	0.4
	0.8s	24.00nm		5.2mb	
KSP	83.22	328 ePd	50	06.80	0.7
BRG	84.22	329 eP	50	11.50	0.3
	1.0s	10.00nm		4.8mb	
CLL	84.30	330 iPd	50	11.70	0.2
	1.0s	19.00nm		5.1mb	
		i	50	28.60	
SRO	84.44	325 iP	50	13.80	1.5
PRU	84.62	328 eP	50	13.50	0.3
		e	50	30.50	
ZST	84.75	326 eP	50	15.50	1.7
GOL	85.30	45 eP	50	17.50	0.3
	1.0s	6.50nm		4.6mb	
MOX	85.38	330 eP	50	17.00	0.0
KHC	85.67	328 iPd	50	19.00	0.5
TDS	91.24	320 P	51	03.00	17.8X
MGR	91.32	321 P	51	05.00	19.5X
MSI	92.72	320 P	50	41.80	-10.1X
USI	93.61	322 P	50	55.20	-0.8
GIB	93.70	321 P	50	41.40	-15.2X
		eSg	50	54.20	
MEU	93.86	319 P	50	39.90	-17.5X
		eSg	50	49.20	
MCT	94.17	321 P	50	47.40	-11.5X
FAI	94.41	320 P	50	48.60	-11.2X
		eSg	51	02.70	
CVT	94.58	321 P	50	54.90	-5.6X
SPA	122.82	180 e(PKP)	56	35.30	0.3
	0.9s	4.55nm			
TIC	128.87	314 PKP	56	48.10	0.0
KIC	128.93	314 PKP	56	48.10	-0.1
LIC	129.21	314 PKP	56	48.90	0.2
ZOBO	149.10	64 PKP	57	26.00	1.0
LPB	149.28	65 PKP	57	28.00	2.9X
CNCB	149.53	65 PKP	57	27.00	1.4
CCH	151.27	64 PKP	57	24.90	-3.0X

S.D. = 1.1 on 72 of 84 obs.

& SEP 23, 1989 22h 44m 15.30s
40.768 N 124.280 W
DEPTH = 23.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.4 (BRK). Felt (IV) at Arcata and Eureka; (III) at Rio Dell, Somoa, Scotia and Trinidad.

FHC	0.23	81 iPc	44	21.00	-0.2
		eS	44	24.20	
WDC	1.34	98 iPc	44	36.80	-1.8
		eS	44	51.70	
LTCM	1.74	108 eP	44	42.80	-1.6
LBFM	1.90	71 eP	44	45.80	-1.2
MIN	2.08	101 iPc	44	47.10	-2.5
ORV	2.45	119 ePc	44	51.60	-3.1
		eS	45	20.00	
NWRM	2.55	155 eP	45	01.50	5.5
BKS	3.29	151 e(P)	45	03.52	-3.1
		iS	45	42.60	
MHC	3.99	148 eP	45	14.80	-1.8
ARN	4.03	147 eP	45	15.70	-1.4
CMB	4.07	131 eP	45	16.70	-1.0
GCC	4.14	154 eP	45	15.10	-3.5
VGB	5.39	27 eP	45	35.00	-1.4
SHW	5.62	15 eP	45	38.30	-1.4
BMW	5.76	7 eP	45	37.30	-4.2
BCH	6.48	148 eP	45	50.80	-1.1
GMW	6.86	8 eP	45	54.50	-2.6
MSU	9.61	100 eP	46	34.50	-1.0
ALO	15.22	107 eP	47	50.00	-0.6

19 obs. associated

? SEP 23, 1989 23h 13m 12.21± 6.96s
33.049 S ±17.2km 70.247 W ±32.3km
DEPTH = 104.8 ± 52.6 km
CHILE-ARGENTINA BORDER REGION (127)

FCH	0.28	187 iPd	13	27.80	-0.3
		iS	13	40.20	
PEL	0.38	256 iPd	13	28.00	0.0
		iS	13	39.70	
JACH	0.47	321 iPc	13	28.70	0.1
		iS	13	41.20	
SAN	0.53	221 eP	13	29.00	0.0
		iS	13	41.70	
PCH	0.61	201 iPd	13	30.00	0.3
		iS	13	43.30	
ROCH	0.65	277 iPc	13	30.00	-0.1
		iS	13	43.50	
TACH	0.83	224 iPc	13	31.50	-0.1
		iS	13	46.20	
CHCH	0.94	201 iPc	13	32.90	0.2
		iS	13	48.60	
LCCH	1.19	249 iP	13	35.70	0.4
		iS	13	52.10	
LNV	1.33	227 iP	13	36.50	-0.5
		iS	13	54.20	

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

% SEP 23, 1989 23h 54m 52.72± 1.35s
44.574 N ± 9.7km 6.850 E ±14.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

PZZ	0.19	111 P	54	57.66	0.6
		S	55	00.79	
RRL	0.35	352 P	55	00.23	0.2
		S	55	05.83	
STV	0.47	134 P	55	02.60	0.2
		S	55	09.10	
BNI	0.49	345 P	55	02.60	-0.2
		eSg	55	09.30	
ENR	0.54	130 P	55	03.53	-0.1
		S	55	10.58	
ROB	0.78	111 P	55	07.53	-0.5

23d 23h

		S	55	18.17		
IMI	1.00 131	P	55	11.71	0.0	
		S	55	24.37		
FIN	1.04 110	P	55	11.94	-0.4	
		S	55	25.22		
PCP	1.21 91	P	55	15.42	0.1	
		S	55	30.70		

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

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* SEP 23, 1989 23h 56m 03.66± 1.00s
40.697 N ±10.1km 123.887 W ± 9.6km
DEPTH = 15.0km (geophysicist)
NORTHERN CALIFORNIA (36)
ML 2.6 (BRK).

FHC	0.13 325	iPc	56	07.60	0.2	
		eS	56	09.80		
WDC	1.03 96	eP	56	23.20	0.5	
LTCM	1.43 109	eP	56	29.50	0.5	
LBFM	1.64 66	eP	56	32.00	-0.3	
MIN	1.77 101	iPc	56	33.60	-0.5	
		eS	56	58.70		
ORV	2.16 121	eP	56	40.50	1.0	
		eS	57	07.70		
PCC	3.40 159	eP	56	56.80	-0.4	
KVN	4.75 108	eP	57	15.60	-0.9	

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

SEP 24, 1989 00h 47m 56.72± 0.58s
40.305 N ± 7.3km 51.802 E ± 8.9km
DEPTH = 33.0km (normal)
4.4mb (9 obs.)
CASPIAN SEA (338)

TEH	4.57 184	ePc	49	06.00	0.5	
TAB	4.81 244	eP	49	09.00	0.2	
MHI	7.25 121	ePn	49	44.00	0.8	
		eSn	50	58.00		
BBTK	14.59 274	eP	51	29.00	6.3X	
		eS	52	31.00		
VRI	19.10 295	eP	52	21.50	2.1	
MLR	19.60 294	eP	52	26.00	0.8	
NUR	26.28 329	eP	53	30.00	-0.6	
SUF	27.19 334	iP	53	39.30	0.5	
SOD	30.46 341	eP	54	09.00	0.8	
KEV	32.25 344	eP	54	22.00	-1.9	
LPG	33.07 294	eP	54	30.80	-0.8	
	0.6s 2.10nm			4.2mb		
HAU	33.10 299	eP	54	31.50	0.0	
	0.8s 8.00nm			4.7mb		
LBF	34.80 297	eP	54	46.00	-0.2	
	0.8s 4.00nm			4.4mb		
GBA	34.82 133	Pd	54	59.50	13.0X	
	0.9s 2.90nm					
LOR	34.85 298	eP	54	46.20	-0.4	
	0.6s 1.80nm			4.2mb		
AVF	35.25 297	eP	54	50.10	0.1	
	1.0s 4.80nm			4.4mb		
MAF	35.86 296	eP	54	55.90	0.7	
	0.8s 4.00nm			4.4mb		
LSF	36.57 296	eP	55	02.00	0.8	
	0.8s 4.00nm			4.4mb		
BCAO	46.61 229	iPd	56	23.00	-0.6	
	0.8s 10.00nm			4.8mb		
KIC	60.66 252	Pd	58	06.20	-0.9	
	0.4s 4.50nm			5.0mb		
TIC	60.67 252	P	58	06.00	-1.2	
LIC	60.96 252	Pd	58	08.30	-0.8	

S.D. = 1.0 on 20 of 22 obs.

% SEP 24, 1989 00h 54m 36.31± 1.68s
33.768 S ± 6.6km 71.594 W ±12.5km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LNV	0.24 141	iPd	54	41.70	0.3	
		iS	54	50.70		
LCCH	0.29 4	iPd	54	42.50	0.1	
		iS	54	52.00		
TACH	0.56 78	iP	54	47.80	0.1	
		iS	55	02.20		
CHCH	0.80 102	iPc	54	51.00	-0.9	
		iS	55	08.80		
SAN	0.84 68	iPc	54	53.10	0.6	
		iS	55	10.00		
PCH	0.91 81	iPc	54	53.90	0.1	
		iS	55	13.00		
ROCH	0.93 32	iP	54	53.50	-0 8	
		iS	55	12.60		
PEL	0.98 51	iPc	54	55.20	0.2	
		iS	55	14.60		
FCH	1.17 68	iPd	54	58.50	0.0	
JACH	1.37 38	iP	55	01.80	0.3	
		iS	55	26.50		

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

& SEP 24, 1989 01h 12m 47.10s
50.906 N 125.509 W
DEPTH = 5.0km (geophysicist)
VANCOUVER ISLAND REGION (25)
<PGC>. ML 3.8 (PGC).

KBB	0.62 213	Pc	12	58.10	-1.4	
CBB	0.88 174	Pc	13	02.65	-1.8	
		S	13	13.98		
GDR	1.18 197	Pc	13	07.20	-2.3	
		S	13	21.50		
PHC	1.24 261	Pd	13	08.30	-2.2	
		S	13	24.00		
BTB	1.44 180	Pc	13	11.74	-2.3	
		S	13	30.12		
EDB	1.46 226	Pc	13	11.67	-2.4	
ETB	1.67 204	P	13	15.74	-1.3	
SHB	1.68 141	P	13	15.60	-1.7	
ALB	1.69 165	P	13	15.39	-2.0	
		S	13	37.25		
WPB	1.93 129	Pd	13	21.06	0.1	
NAB	1.94 149	P	13	19.85	-1.2	
		S	13	44.98		
OZB	1.95 180	Pc	13	19.51	-1.7	
BIB	2.06 136	P	13	21.80	-1.0	
HNB	2.50 130	Pd	13	28.94	-0.1	
PGC	2.62 149	P	13	29.76	-1.0	
MCW	2.82 141	eP	13	33.64	-0.1	
VGZ	2.87 150	P	13	33.70	-0.6	
VDB	2.89 129	Pd	13	34.61	-0.1	
OTR	2.93 165	eP	13	35.07	-0.1	
		eS	14	17.32		
STW	3.01 156	iP	13	36.16	-0.1	
MBW	3.16 131	eP	13	38.46	-0.1	
		eS	14	25.62		
OHW	3.23 142	eP	13	39.74	0.4	
CMW	3.32 137	eP	13	40.77	-0.1	
BLN	3.34 149	eP	13	41.22	0.2	
RPW	3.58 132	eP	13	44.06	-0.3	
JCW	3.58 138	eP	13	44.55	0.1	
HDW	3.63 153	eP	13	44.59	-0.7	
OBH	3.74 163	eP	13	45.27	-1.5	
GMW	3.81 151	eP	13	47.85	0.2	
SMW	3.86 158	eP	13	47.52	-1.0	
PNT	4.11 110	eP	13	52.00	0.0	
LON	4.82 148	eP	14	02.00	-0.2	
		eS	15	13.00		

32 obs. associated

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* SEP 24, 1989 01h 27m 58.20± 1.15s
14.908 S ±18.0km 71.439 W ±11.5km
DEPTH = 33.0km (normal)
PERU (116)

ARE	1.55 182	eP	28	24.00	0.0	
ZOBO	3.47 113	iPc	28	52.00	0.2	
LPB	3.60 117	Pc	28	55.00	1.6	
Z	20s 0.71um					
		LR	58	10.00		
CNCB	3.83 120	Pc	28	57.00	0.2	
CCH	5.65 117	P	29	20.40	-2.0	
NNA	6.00 298	eP	29	27.20	0.0	
	0.6s 6.67nm			4.5mb X		
		iS	30	34.50		

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

? SEP 24, 1989 01h 30m 41.60± 7.12s
29.564 S ±30.9km 178.018 W ±55.7km
DEPTH = 197.3 ± 55.8 km
4.4mb (1 obs.)
KERMADEC ISLANDS (178)

PGZ	11.97 201	eP	33	29.20	2.1	
KIW	12.66 205	eP	33	34.20	-1.7	
MTW	12.71 203	eP	33	36.80	0.3	
CAW	12.82 204	eP	33	36.20	-1.7	
MRW	13.06 205	eP	33	40.60	-0.2	
		eS	36	02.30		
TCW	13.21 206	P	33	43.80	1.1	
DZM	15.85 294	iPc	34	15.50	-0.1	
WB5	44.06 271	eP	38	32.00	0.3	
SPA	60.60 180	e(P)	40	41.80	8.3X	
	1.0s 7.50nm			4.4mb		
SUF	143.31 342	iPKP	49	49.50	-3.5X	
NUR	145.52 340	iPKP	49	56.70	-0.1	
	0.6s 15.60nm					
BCAO	150.50 215	iPKPc	50	14.40	8.3X	
	0.2s 8.00nm					
		i	50	21.80		

S.D. = 1.5 on 9 of 12 obs.

SEP 24, 1989 01h 37m 19.72± 1.08s
44.551 N ± 6.3km 6.785 E ± 9.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ	0.23 101	P	37	25.15	0.4	
		S	37	28.84		
DOI	0.33 98	P	37	27.10	0.5	
RRL	0.37 360	P	37	27.71	0.3	
		S	37	33.04		
STV	0.49 128	P	37	29.97	0.2	
		S	37	36.53		
BNI	0.51 351	P	37	29.80	-0.3	
		eSg	37	37.00		
ENR	0.56 125	P	37	30.58	-0.5	
		S	37	37.66		
ROB	0.82 108	P	37	35.20	-0.4	
		S	37	46.07		
SBF	0.83 146	Pg	37	36.20	0.4	
		Sg	37	48.50		
IMI	1.02 129	P	37	38.99	-0.1	
		S	37	52.63		
FIN	1.08 108	P	37	39.81	-0.2	
		S	37	53.47		
PCP	1.26 90	P	37	42.78	-0.4	
		S	37	59.40		

S.D. = 0.4 on 11 of 11 obs.

? SEP 24, 1989 01h 39m 43.29± 2.66s
26.426 S ±47.7km 111.865 W ±41.4km
DEPTH = 10.0km (geophysicist)
4.8mb (4 obs.) 4.4Msz (3 obs.)
EASTER ISLAND REGION (685)

LPB	41.73 85	P	47	33.00	-1.8	
Z	20s 0.35um			4.2Msz		
		LR	58	10.00		
CNCB	41.73 86	eP	47	34.00	-1.0	
ZOBO	41.80 85	P	47	40.50	4.9X	
	1.3s 18.14nm			4.6mb		
Z	20s 0.47um			4.4Msz		
		LR	58	28.00		
VAO	58.50 102	eP	49	44.80	2.5	
BAR	58.95 355	eP	49	45.00	-0.2	
GLA	59.22 357	eP	49	48.00	1.0	
RVR	60.31 355	eP	49	53.00	-1.4	
TPC	60.33 356	eP	49	55.00	0.4	
SBB	61.04 354	eP	50	05.00	5.5X	
ALQ	61.25 5	iPd	50	01.80	0.7	
	1.0s 5.00nm			4.6mb		
		pP	50	13.50	40kmX	
GSC	61.57 355	eP	50	03.00	-0.1	
ISA	62.07 354	eP	50	07.00	0.6	
FRI	63.51 353	eP	50	14.40	-1.4	
SIO	63.56 14	eP	50	16.90	0.7	
TUL	63.83 15	eP	50	19.00	1.0	
	1.2s 15.00nm			5.1mb		
Z	21s 0.66um			4.8Msz		
		LR	11	47.00		
CMB	64.62 353	eP	50	22.50	-0.6	
WDC	67.40 351	eP	50	48.70	7.9X	
PDCR	69.19 94	eP	50	52.60	0.0	
LRM	71.90 360	eP	51	12.50	3.9X	
PNT	75.71 355	eP	51	31.00	0.5	
SES	76.48 1	eP	51	36.00	1.2	
EDM	79.32 359	eP	51	50.50	0.2	
FFC	81.26 6	eP	52	05.00	4.4X	
	0.8s 11.00nm			5.0mb		
INK	95.80 352	eP	53	08.00	-2.3	
ELL	146.04 63	ePKP	59	26.00	1.5X	
KMI	148.86 275	PKPc	59	38.00	8.5X	
CHG	150.62 261	ePKP	59	36.00	4.0X	

S.D. = 1.3 on 19 of 27 obs.

SEP 24, 1989 02h 00m 52.75± 0.28s
2.849 N ± 4.3km 128.340 E ± 5.4km
DEPTH = 38.3km (4 depth phases)
5.1mb (11 obs.) 4.4Msz (1 obs.)
HALMAHERA (267)

MNI	3.77	248	ePc	01	49.80	-0.1
AAI	6.49	181	eP	02	33.80	5.4X
TSM	10.34	278	ePc	03	22.20	0.5
MKS	11.95	228	ePc	03	43.00	-0.6
KKM	12.50	285	ePd	03	51.50	0.5
JAY	13.46	113	iPc	04	17.00	13.3X
			e	05	45.00	
MTN	15.84	170	eP	04	34.00	-0.7
GUMO	19.51	56	eP	05	20.30	0.4
	0.9s	98.89nm			5.1mb	
PJG	19.51	56	eP	05	20.50	0.6
GUA	19.52	56	eP	05	21.00	0.9
	0.8s	89.55nm			5.1mb	
LAT	20.88	117	eP	05	39.00	4.7X
WB5	23.35	166	iPd	05	59.20	0.4
WRA	23.40	166	Pd	05	59.90	0.6
	0.7s	117.10nm			5.5mb	
QIZ	24.21	313	eP	06	09.10	2.0
QIS	25.75	155	ePd	06	20.90	-0.9
	0.7s	42.00nm			5.1mb	
ASPA	26.91	169	iPd	06	31.90	-0.5
	1.5s	48.00nm			4.9mb	
SNG	27.94	280	eP	06	41.20	-0.7
CTA	28.79	143	iP	06	51.00	1.6
	0.8s	9.70nm			4.5mb	
SSE	28.90	347	eP	06	48.40	-1.8
WARB	28.91	183	eP	06	50.00	-0.4
LOE	29.86	301	eP	07	01.00	1.9
NST	30.56	296	eP	07	08.00	2.7X
WHN	30.56	336	eP	07	11.00	5.9X
			pP	07	20.20	32km
MEKA	30.78	197	eP	07	06.50	-0.7
GYA	31.36	320	P	07	18.20	5.8X
CHTO	32.85	301	iP	07	25.90	0.6
	1.0s	20.00nm			4.9mb	
TSRJ	33.29	11	P	07	29.00	0.1
FORR	33.51	180	eP	07	29.00	-1.8
CHJJ	34.47	15	P	07	38.70	-0.5
MTMJ	34.69	13	P	07	39.30	-1.8
MAT	34.74	14	eP	07	39.00	-2.5
	1.1s	24.05nm			5.0mb	
Z	20s	0.71um			4.4Msz	
			eS	13	10.00	
RMQ	35.21	147	eP	07	46.00	0.4
NIIJ	35.60	15	P	07	48.90	0.1
XAN	35.93	332	Pd	07	51.20	-0.5
CD2	36.31	323	eP	07	55.60	0.7
STK	36.76	161	iPc	07	58.80	0.2
TIY	37.64	339	eP	08	05.70	-0.3
BRS	38.19	143	iP	08	09.50	-1.2
			iPP	09	42.00	
BJI	38.63	345	eP	08	13.00	-1.2
ADE	38.86	166	ePd	08	17.00	0.8
	1.0s	62.00nm			5.4mb	
LZH	40.08	329	P	08	28.50	2.0
	1.1s	0.03nm			2.0mb X	
Z	13s	0.30um			4.3MszX	
			pP	08	42.50	54kmX
HHC	40.75	340	eP	08	34.60	2.7X
			pP	08	45.00	36km
MDJ	41.61	1	eP	08	39.50	0.8
BWA	41.61	155	eP	08	40.80	1.9
			e	08	52.50	42km
CAN	42.62	155	eP	08	48.00	0.8
			e	09	00.00	44km
LSA	44.22	311	P	09	03.20	2.4
GTA	44.68	328	eP	09	04.40	0.4
HYB	50.93	290	eP	09	52.00	-0.8
GBA	51.40	285	Pd	09	55.10	-1.3
	1.1s	15.90nm			4.9mb	
WMQ	54.37	325	P	10	18.50	0.3
			pP	10	33.80	57kmX
NDI	54.94	303	eP	10	22.00	-0.6
POO	55.53	290	iPc	10	26.00	-1.0
KSH	59.77	315	eP	10	56.20	-0.4
MHI	71.32	307	eP	12	10.00	-1.0
INK	90.39	22	eP	14	04.00	12.9X
SPA	92.83	180	e(P)	14	03.20	0.6
	1.0s	9.00nm			5.2mb	
ZOBO	159.02	131	ePKP	21	07.00	17.5X

S.D. = 1.1 on 48 of 57 obs.

% SEP 24, 1989 03h 33m 57.06± 0.92s
37.725 N ± 7.6km 14.958 E ± 7.9km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.29	315	Pc	34	03.20	-0.1
			eSg	34	08.30	
MEU	0.62	182	P	34	09.40	-0.3
			eSg	34	18.40	
MSI	0.67	44	P	34	10.50	0.1
MCT	1.05	265	P	34	16.40	-0 7
FAI	1.11	247	P	34	18.80	0.9

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

% SEP 24, 1989 06h 03m 15.30± 0.77s
37.799 N ± 7.2km 14.956 E ± 6.4km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO	0.24	303	Pc	03	22.30	1.7
			eSg	03	26.50	
MSI	0.62	49	P	03	29.50	1.7
			eSg	03	39.60	
MEU	0.70	182	Pc	03	28.50	-0.6
			eSg	03	38.10	
GIB	0.76	285	P	03	30.20	0.0
			eSg	03	42.30	
MCT	1.06	261	P	03	36.10	0.7
FAI	1.14	243	P	03	37.80	1.1
			eSg	03	52.20	
USI	1.67	303	P	03	43.10	-1.5
CVT	1.72	267	P	03	45.50	0.1
ERC	1.89	278	P	03	48.00	0.1
LVI	2.08	276	P	03	49.10	-1.5
			eSg	04	14.60	
TDS	2.15	30	P	03	51.20	-0.4
MGR	2.38	11	P	03	53.90	-1.1
SGO	2.77	6	P	04	00.40	-0.1

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

? SEP 24, 1989 06h 08m 18.37± 4.04s
37.846 N ±20.0km 15.135 E ±37.7km
DEPTH = 33.0km (normal)
SICILY (398)

MNO	0.36	284	Pc	08	26.50	-0.6
MEU	0.76	192	P	08	32.70	0.0
			eSg	08	42.20	
FAI	1.29	244	P	08	40.40	0.2
USI	1.76	300	P	08	47.40	0.4

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

SEP 24, 1989 06h 15m 58.61± 0.43s
42.553 N ± 3.4km 12.530 E ± 4.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

MNS	0.20	147	Pc	16	02.60	-0.5
AQU	0.68	107	P	16	11.60	-0.5
RMP	0.75	170	P	16	13.40	0.1
			eSg	16	25.60	
CIO	0.78	35	iPgc	16	12.52	-1.4
			iSg	16	25.68	
RDP	0.81	170	P	16	14.20	-0.1
			eSg	16	26.80	
AZI	0.88	130	P	16	15.20	-0.2
			eSg	16	29.20	
SSO	0.99	41	ePg	16	17.81	0.5
			iSg	16	34.52	
ARV	0.99	18	P	16	17.00	-0.4
			eSg	16	34.30	
MAO	1.03	263	P	16	18.60	0.6
AOI	1.27	38	iPg	16	21.86	-0.3
			iSg	16	42.53	
SDI	1.28	131	P	16	22.60	0.2
			eSg	16	41.80	
SFI	1.45	340	P	16	25.50	0.6
DUI	1.69	121	P	16	29.00	0.6
MME	2.11	321	P	16	33.90	-0.8
HVAR	2.95	76	iPn	16	46.40	0.1
RIY	3.10	25	ePg	16	49.50	1.2
			iSn	17	25.60	
BOB	3.15	316	P	16	48.60	-0.6
MGR	3.32	136	P	17	05.60	14.0X
CEY	3.46	23	e(Pg)	17	05.50	11.8X
			eSn	17	35.00	
VBY	3.55	33	e(Pg)	17	03.00	8.2X
			eSn	17	37.40	
VOY	3.61	15	e(Pn)	16	55.50	-0.4
			eSn	17	38.50	
LJU	3.77	22	e(Pn)	17	00.50	2.4
			e	17	08.00	
			eSn	17	42.50	
USI	3.87	172	P	16	54.90	-4.6X
FVI	4.04	2	P	17	00.70	-1.1
KHC	6.62	6	eP	17	44.50	6.2X
			e	18	54.50	

S.D. = 0.9 on 20 of 25 obs.

? SEP 24, 1989 06h 16m 20.07± 5.43s
37.998 N ±24.5km 15.562 E ±35.8km
DEPTH = 5.0km (geophysicist)
SICILY (398)

MNO	0.69	265	Pc	16	33.90	0.0
MEU	1.03	209	P	16	40.10	0.1
			eSg	16	50.50	
MCT	1.57	257	P	16	48.80	0.0
FAI	1.66	245	P	16	49.70	-0.3
			eSg	17	04.50	
ERC	2.35	272	P	17	00.10	0.1

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

• SEP 24, 1989 06h 20m 03.84± 1.09s
12.313 N ±18.3km 143.316 E ±26.1km
DEPTH = 33.0km (normal)
4.0mb (1 obs.)
SOUTH OF MARIANA ISLANDS (210)

GUMO	1.97	50	eP	20	35.70	0.1
PJG	1.97	50	eP	20	35.30	-0.3
GUA	1.98	52	eP	20	35.60	0.0
			eS	20	59.80	
WB5	33.18	196	eP	26	40.00	0.2
WRA	33.25	196	Pd	26	39.70	-0.6
	0.6s	1.40nm			4.0mb	
BRS	40.52	167	eP	27	42.00	0.4
INK	76.12	22	eP	31	50.00	0.2

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

SEP 24, 1989 06h 55m 47.73± 0.46s
42.814 N ± 4.5km 18.640 E ± 4.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.5 (TTG).

BRY	0.11	321	iPgc	55	50.30	-0.4
			iSg	55	53.10	
NKY	0.26	90	ePg	55	52.70	-0.6
			eSg	55	57.50	
HCY	0.38	196	iPgd	55	54.70	-0.9
			eSg	56	01.50	
BDV	0.55	165	iPgd	55	58.10	-0.7
			eSg	56	07.70	
TTG	0.60	130	ePg	55	58.80	-1.0
			eSg	56	08.70	
PLE	0.76	47	ePg	56	01.60	-1.0
			eSg	56	14.00	
IVA	0.93	86	ePg	56	06.00	0.5
			eSg	56	21.00	
ULC	0.96	152	ePg	56	05.50	-0.6
			eSg	56	21.80	
PVY	1.01	102	ePg	56	06.50	-0.4
			eSg	56	22.50	
SDA	1.02	141	ePg	56	07.50	0.5
PUK	1.21	129	iPnc	56	11.10	0.9
HVAR	1.65	283	iPn	56	16.70	-0.1
			iSn	56	38.10	
			iSg	56	39.50	
TIR	1.73	148	ePn	56	19.70	1.7
OHR	2.34	136	ePn	56	28.00	1.1
VBY	3.63	319	ePn	56	46.10	1.0
			eSn	57	31.20	
VOY	4.68	315	ePn	57	00.20	0.0
			eSn	57	58.20	

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

? SEP 24, 1989 07h 35m 54.16± 3.72s
44.506 N ±16.7km 6.713 E ±29.8km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.4 (GEN).

24d 07h

PZZ 0.28 90 P 35 59.96 -0.1
S 36 03.65
RRL 0.42 7 P 36 02.73 0.0
S 36 08.22
STV 0.51 121 P 36 04.78 0.3
S 36 11.21
ENR 0.58 119 P 36 05.51 -0.4
S 36 13.09
S.D. = 0.5 on 4 of 4 obs.

% SEP 24, 1989 07h 56m 09.55± 3.62s
44.482 N ±15.7km 6 693 E ±27.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (GEN).

PZZ 0.29 85 P 56 15.78 0.0
S 56 19.77
RRL 0.44 8 P 56 18.65 0.0
S 56 24.08
STV 0.51 118 P 56 19.98 0.0
S 56 27.26
ENR 0.58 116 P 56 21.42 0.0
S 56 29.62
ROB 0.86 102 P 56 26.13 -0.1
S.D. = 0.1 on 5 of 5 obs.

% SEP 24, 1989 08h 03m 09.87± 3.92s
44.505 N ±16.0km 6.668 E ±30.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.4 (GEN).

PZZ 0.31 90 P 03 16.34 0.0
S 03 19.93
RRL 0.42 11 P 03 18.59 0.0
S 03 24.44
STV 0.54 119 P 03 20.85 0.1
S 03 27.92
ENR 0.61 117 P 03 22.08 -0.1
S 03 29.77
ROB 0.89 103 P 03 27.00 0.1
S 03 38.49
S.D. = 0.1 on 5 of 5 obs.

% SEP 24, 1989 08h 15m 41.71± 0.76s
37.771 N ± 6.9km 14.970 E ± 6.2km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.27 306 Pc 15 48.40 0.9
iSg 15 52.60
MSI 0.63 47 P 15 55.50 1.1
MEU 0.67 183 P 15 54.70 -0.4
eSg 16 04.30
GIB 0.78 287 P 15 56.40 -0.5
eSg 16 09.10
MCT 1.07 263 P 16 01.90 -0.1
FAI 1.14 245 P 16 04.00 0.9
eSg 16 19.00
USI 1.69 304 P 16 10.50 -0.9
CVT 1.73 268 P 16 11.90 -0.1
TDS 2.17 29 P 16 17.30 -1.0
S.D. = 0.9 on 9 of 9 obs.

? SEP 24, 1989 08h 33m 23.86± 2.97s
44.558 N ±19.9km 6.850 E ±32.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

PZZ 0.19 106 P 33 28.16 0.0
S 33 32.06
RRL 0.37 353 P 33 31.44 0.0
S 33 36.67
STV 0.46 133 P 33 33.49 0.2
S 33 39.75
ENR 0.53 129 P 33 34.31 -0.2
S 33 41.49
S.D. = 0.3 on 4 of 4 obs.

SEP 24, 1989 10h 05m 06.79± 1.03s
25.079 N ± 5.6km 123.698 E ±11.7km
DEPTH = 132.6 ± 8.6 km
4.8mb (8 obs.)
NORTHEAST OF TAIWAN (245)

TWC 1.74 255 iPc 05 38.10 -0.1
eS 06 03.10
TWZ 1.92 271 iPc 05 41.10 0.7
ANP 1.98 273 iPc 05 41.80 0.6
0.7s 547.95nm
eS 06 10.00
TWD 2.16 243 ePd 05 42.20 -1.0
TWF1 2.79 232 ePc 05 50.00 -1.3
TWK 3.44 239 ePc 06 00.20 0.2
QZH 4.63 269 ePg 06 15.40 -0.5
Sn 07 01.80
SSE 6.39 340 Pnc 06 39.30 -0.5
eSn 07 52.00
NJ2 8.15 330 Pc 07 03.40 -0.1
XAN 15.64 308 P 08 42.00 0.8
TIY 15.83 325 eP 08 46.00 2.5
BJI 16.20 339 eP 08 49.00 1.0
CD2 18.53 293 P 09 15.20 -0.6
BTO 19.24 327 eP 09 22.00 -1.2
LZH 20.27 307 eP 09 40.00 6.0X
1.5s 37.00nm 4.6mb
CHG 23.77 260 eP 10 09.00 0.7
MTN 38.38 168 iPd 12 16.10 -0.7
0.6s 24.00nm 5.2mb
HYB 42.60 269 eP 12 52.50 0.9
GBA 44.92 264 Pd 13 10.70 0.6
0.8s 10.40nm 4.6mb
WB5 45.88 166 iPc 13 17.80 0.2
WRA 45.93 166 Pc 13 18.20 0.2
0.4s 12.10nm 5.0mb
MBL 46.11 185 iPc 13 18.80 -0.6
0.5s 4.00nm 4.4mb
ASPA 49.45 168 iPc 13 45.90 0.5
0.4s 15.00nm 5.2mb
WARB 51.04 177 iPc 13 58.10 0.7
0.3s 7.00nm 5.0mb
BWA 63.66 157 eP 15 27.20 1.2
CAN 64.67 157 eP 15 33.00 0.5
KEV 69.00 338 eP 15 58.00 -1.3
SOD 69.79 336 eP 16 04.00 -0.1
SUF 71.38 331 eP 16 12.00 -1.8
NUR 72.80 329 eP 16 22.60 0.5
HFS 77.90 331 (P) 16 49.00 -2.0
0.4s 0.90nm 3.9mb X
NB2 78.50 333 P 16 48.50 -5.9X
0.4s 0.90nm 3.9mb
S.D. = 1.0 on 30 of 32 obs.

SEP 24, 1989 10h 53m 54.28± 0.74s
9.977 N ± 5.4km 59.851 W ± 5.5km
DEPTH = 47.1 ± 5.8 km
5.1mb (15 obs.) 4.5Msz (1 obs.)
NORTH ATLANTIC OCEAN (402)
MD 5.2 (TRN)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 13S, 24C
Centroid Location:
Origin Time 10:53:53.9 0.7
Lat 9.56N 0.07 Lon 59.16W 0.07
Dep 41.7 6.3 Half-duration 1.6
Moment Tensor; Scale 10**16 Nm
Mrr= 1.42 0.30 Mtt= 3.08 0.38
Mff=-4.50 0.47 Mrt= 2.17 0.71
Mrf= 0.74 0.66 Mtf= 6.23 0.42
Principal Axes:
T Val= 7.43 Plg=21 Azm=331
N 0.59 69 143
P -8.02 3 240
Best Double Couple:Mo=7.7*10**16
NP1:Strike= 14 Dip=74 Slip= 167
NP2: 108 78 17

TBH 1.30 293 eP 54 17.83 1.5
eS 54 32.44
BOT 1.46 324 eP 54 17.99 -0.6
eS 54 32.54
PIG 1.53 320 eP 54 19.93 0.4
eS 54 36.93
TPP 1.61 282 eP 54 22.15 1.4
eS 54 45.44
TRN 1.67 294 eP 54 21.30 -0.2
eS 54 44.42
TCE 2.00 291 eP 54 26.08 -0.2
eS 54 50.05
GRW 2.80 321 eP 54 35.99 -1.8
eS 55 11.29

BDH 3.22 5 eP 54 43.50 -0.1
eS 55 23.00
MVM 4.66 347 iPc 55 00.06 -3.9X
BIM 4.67 345 iPc 55 00.53 -3.5X
S 55 52.70
CRM 4.86 348 iPc 55 02.91 -3.8X
FDF 4.89 345 iPc 55 03.90 -3.4X
S 55 59.10
GUAN 5.71 270 eP 55 15.60 -3.3X
eS 56 21.50
BBL 5.74 344 eP 55 15.31 -3.9X
PAG 6.27 344 eP 55 23.30 -3.4X
GUAC 7.31 272 eP 55 37.20 -4.2X
MORO 8.37 277 eP 55 53.10 -2.9X
eS 57 25.00
CEOS 8.42 264 iP 55 51.30 -5.4X
eS 57 23.60
FISA 9.41 279 eP 56 05.60 -4.7X
eS 57 50.00
TOV 9.80 270 eP 56 12.00 -3.6X
iS 58 00.40
SDV 10.69 265 eP 56 23.50 -4.5X
eS 58 15.60
BMG 13.39 259 eP 57 12.00 8.0X
FUQ 14.47 253 eP 57 18.00 -0.4
UPA 19.44 269 e(P) 58 18.50 -1.5
e 58 30.10
DVD 22.36 268 (P) 58 55.00 5.2X
ZOBO 27.33 198 P 59 38.30 0.7
1.2s 270.27nm 5.8mb
Z 18s 1.25um 4.5Msz
S 04 24.00
LR 10 22.00
LPB 27.57 197 P 59 43.00 3.4X
Z 16s 1.35um 4.6MszX
S 04 48.00
SS 08 25.00
LR 11 12.00
NNA 27.59 218 eP 59 49.70 10.3X
0.8s 9.70nm
CCH 27.89 193 P 59 52.10 9.8X
BAO 28.03 155 eP 59 44.00 0.6
PDCR 30.40 137 eP 00 11.60 7.1X
e 00 24.00
BLA 32.86 329 P 00 27.30 1.4
1.2s 45.45nm 5.2mb
PPD 32.89 165 eP 00 24.50 -1.8
e 00 26.80
e 00 36.90
e 01 00.70
NAV 33.13 329 P 00 28.80 0.5
TBR 33.54 340 P 00 30.80 -0.9
PWLA 35.80 318 P 00 50.90 -0.2
BMA 35.93 155 e(P) 00 52.00 -0.4
ELC 37.96 320 P 01 09.30 0.1
TUL 41.59 314 eP 01 38.60 -0.7
1.2s 15.00nm 4.6mb
SIO 41.87 314 e(P) 01 45.30 3.7X
MEO 43.09 311 e(P) 01 50.00 -1.7
SCH 45.06 354 ePc 02 07.60 0.3
0.7s 33.00nm 5.3mb
ALQ 49.15 308 iPd 02 40.00 0.2
1.0s 19.25nm 5.1mb
GOL 50.06 314 P 02 45.60 -1.2
1.0s 17.50nm 5.0mb
RSSD 51.08 320 P 02 54.10 -0.4
FRB 54.04 355 eP 03 16.00 0.2
LIC 54.36 89 P 03 18.10 -0.9
DAU 54.52 313 P 03 20.40 0.1
MSU 54.61 310 P 03 21.10 0.2
GLA 55.37 303 eP 03 26.00 -0.2
DUG 55.59 312 P 03 27.30 -0.5
0.6s 4.93nm 4.7mb
FFC 55.67 332 eP 03 27.00 -0.9
0.8s 19.00nm 5.2mb
TPC 56.58 304 eP 03 35.00 0.1
BAR 56.83 303 eP 03 36.00 -0.7
PLM 57.10 303 eP 03 39.00 0.2
LRM 57.22 319 eP 03 39.80 0.3
GSC 57.42 306 eP 03 42.00 1.1
RVR 57.64 304 eP 03 40.00 -2.3
SBB 58.13 305 eP 03 46.00 0.2
SES 58.17 324 eP 03 46.00 0.2
MWC 58.24 304 eP 03 48.00 1.3
TNP 58.34 309 P 03 47.40 0.0
0.8s 14.22nm 5.1mb
ISA 58.83 306 eP 03 52.00 1.3

KVN	59.23	310	P	03	52.90	-0.7
BCH	60.04	305	P	04	00.20	1.1
FRI	60.05	307	eP	03	58.90	-0.1
EDM	60.67	326	eP	04	02.00	-1.0
CMB	60.77	308	eP	04	04.20	0.2
PRS	61.26	306	eP	04	07.50	0.2
ARN	61.55	307	P	04	10.40	1.1
ORV	61.91	310	eP	04	12.00	0.4
MIN	62.14	310	eP	04	13.00	-0.3
LBFM	62 55	311	P	04	16.80	0.8
VGB	62 68	316	P	04	16.20	-0.4
PNT	62.95	321	eP	04	22.00	3.7X
FHC	64 01	311	P	04	26.60	1.2
CLL	71.56	39	e(P)	05	24.00	11.6X
VOY	71 60	45	eP	05	13.40	0.5
			i	06	15.20	
			i	06	48.00	
KHC	71.68	42	P	05	26.00	12.7X
			i	06	14.10	
CEY	71.95	45	eP	05	28.00	13.1X
			i	06	13.60	
			i	06	46.50	
LJU	72.05	45	e(P)	05	24.00	8.5X
			i	06	13.00	
			i	06	46.00	
BRG	72.10	40	e(P)	05	38.00	22.3X
NB2	72.19	29	P	05	12.70	-3.3X
	0.8s	5.80nm			4.6mb	
PRU	72.39	41	eP	05	31.00	13.6X
			i	06	10.00	
VBY	72.52	45	eP	05	09.10	-9.1X
			i	06	10.80	
			i	06	43.40	
HFS	73.22	30	(P)	05	21.00	-1.0
	0.5s	3.70nm			4.6mb	
MBC	73.34	348	eP	05	23.00	0.5
	0.7s	13.00nm			5.0mb	
KSP	73.58	40	eP	05	38.80	14.5X
	1.1s	58.00nm				
			ic	06	02.10	
			i	06	35.70	
INK	74.77	338	eP	05	31.00	0.1
OHR	76.49	50	eP	05	43.20	1.9
	1.0s	0.07nm			2.6mb	X
			i	06	21.00	
			eS	14	11.20	
SKO	76.94	49	iP	05	43.30	-0.4
			i	06	15.50	
BCAO	77.82	88	iPc	05	50.20	1.1
	0.8s	83.00nm			5.8mb	
			i	06	00.10	
			i	06	53.30	
			i	07	26.10	
SRS	78.59	50	eP	05	33.70	-19.1X
NUR	78.68	30	iP	06	04.60	11.8X
	0.9s	23.70nm				
SUF	79.37	28	iP	06	02.50	5.9X
	0.6s	38.80nm			5.5mb	
SOD	79.51	23	iP	06	05.80	8.6X
KEV	79.62	21	iP	06	08.90	11.1X
	0.8s	30.80nm				
BUL	91.96	110	iPd	06	59.80	0.0
	1.0s	38.00nm			5.8mb	
			ipP	07	31.00	119kmX
CHG	144.56	36	ePKP	13	38.50	10.3X
RMQ	148.37	235	ePKP	13	43.00	8.8X
CTA	152.90	245	iPKPd	14	02.60	21.4X
	1.0s	10.00nm				

S.D. = 0.9 on 63 of 101 abs.

SEP 24, 1989 10h 55m 20.91± 0.10s
20.697 N ± 2.8km 94.968 E ± 2.2km
DEPTH = 134.0km (19 depth phases)
5.3mb (66 obs.)

BURMA (296)

Felt at Magwe.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Location:
Origin Time 10:55:25.9 0.6
Lat 20.22N 0.07 Lon 94.75E 0.08
Dep 144.0 2.3 Half-duration 1.7
Moment Tensor; Scale 10**16 Nm
Mrr= 6.38 0.59 Mtt=-3.95 0.83
Mff=-2.43 0.83 Mrt= 3.01 0.71
Mrf=-3.71 0.68 Mtf=-9.55 0.94

Principal Axes:

T	Val= 11.16	Plg=45	Azm= 48
N	1.62	45	226
P	-12.78	1	317

Best Double Couple:Mo=1.2**10**17
NP1:Strike= 83 Dip=59 Slip= 145
NP2: 192 61 36

CHG	4.19	116	iPn	56	24.00	-0.1
BDT	5.13	131	iPg	56	35.50	-1.3
NST	7.00	135	ePn	57	01.00	-1.3
			ePg	57	13.50	
			eSg	58	00.00	
LOE	7.18	116	iPd	57	04.00	-0.7
KMI	8.41	57	iPc+	57	25.50	4.1X
Z	10s	1.50um				
N	14s	3.10um				
			sP	57	51.50	
			S	58	59.00	
NNT	9.26	150	iPd	57	31.50	-1.1
LSA	9.61	340	P	57	35.80	-1.8
			S	59	23.20	
GYA	12.16	60	iPc	58	11.80	0.9
			pP	58	19.00	
			S	00	28.00	
QIZ	14.09	94	P	58	36.30	0.5
			sP	59	11.00	
			S	01	14.00	
			PcP	03	47.40	
HYB	15.86	261	iPd	59	00.50	2.5
	0.6s	137.50nm			5.4mb	
			i	59	12.50	
			iS	01	39.50	
IPM	17.07	159	ePd	59	12.00	-0.9
	0.8s	328.20nm			5.7mb	
LZH	17.19	25	Pc	59	15.50	1.0
	3.0s	0.80nm			2.5mb	X
Z	13s	0.80um			4.0Msz	
N	12s	0.80um				
E	10s	0.80um				
			PP	59	30.00	
			eS	02	22.00	
			sS	02	41.00	
NDI	17.97	300	iPd	59	23.00	-0.7
	0.8s	104.48nm			5.2mb	
			iPP	59	37.50	
			iS	02	29.00	
XAN	18.14	40	iPc	59	24.30	-1.4
	1.0s	0.30nm			2.5mb	X
			S	02	42.00	
GBA	18.17	250	Pc	59	25.90	-0.1
	0.5s	18.80nm			4.6mb	
KLM	18.66	159	eP	59	30.50	-0.7
GTA	19.11	12	Pc	59	35.60	-0.4
	1.2s	0.10nm			2.0mb	X
Z	12s	0.60um			5.2Msz	
E	10s	0.80um				
			eS	03	01.50	
POO	20.01	267	iP	59	47.00	1.7
	0.7s	56.16nm			5.1mb	
			eS	03	19.00	
WHN	20.01	57	iPc	59	46.00	0.8
	1.0s	0.70nm			3.0mb	X
KGM	20.28	155	ePc	59	48.00	0.0
BOM	20.92	269	eP	59	56.00	1.6
			eS	03	18.00	
TIY	22.74	38	iPc	00	12.50	0.3
	0.8s	0.10nm			2.3mb	X
N	12s	0.40um				
			sP	00	56.00	
			S	04	13.00	
			SS	05	05.00	
BTO	23.62	30	P	00	21.00	0.2
N	11s	0.80um				
E	11s	0.60um				
			S	04	27.00	
WMQ	23.84	347	iPc	00	24.50	1.6
			S	04	30.00	
NJ2	24.15	57	Pc	00	25.40	-0.4
	4.0s	0.90nm			2.6mb	X
			PcP	04	03.80	
			S	04	39.00	
			sS	05	21.00	
HHC	24.55	31	Pc	00	30.40	0.7
N	11s	0.50um				
			S	04	41.00	
BAG	24.64	96	eP	00	31.00	0.2
TIA	24.78	47	P	00	31.40	-0.4
			sP	01	12.00	
KSH	24.80	323	P	00	34.00	2.0
			S	04	46.00	
KKM	25.23	122	ePc	00	37.00	0.8
	0.9s	52.30nm			5.1mb	
SSE	25.70	61	Pc	00	40.00	-0.3
	0.7s	0.31nm			3.0mb	X
Z	16s	0.40um			4.0MszX	
			pP	01	08.00	134km
			sP	01	17.50	
			eS	05	42.00	
BJI	26.46	39	iPc	00	48.00	0.9
	1.0s	0.14nm			2.5mb	X
			ePcP	04	09.00	
			eS	05	13.00	
			esS	06	00.00	
			ePcS	07	50.00	
QUE	26.95	296	eP	00	52.50	0.6
			eS	01	28.20	
			e	06	04.20	
DL2	29.24	46	eP	01	12.20	0.0
SNY	32.03	42	iPc	01	35.90	-0.7
Z	16s	0.60um			4.4MszX	
CN2	34.25	41	iPc	01	55.20	-0.6
			epP	02	31.00	168kmX
			PcP	04	28.80	
			eS	07	08.00	
MAIO	34.61	304	iPd	02	00.40	1.3
			e	02	32.00	146kmX
			eS	07	20.00	
YONJ	36.70	59	eP	02	16.10	-0.5
TKSJ	36.93	61	eP	02	17.40	-1.1
MDJ	37.23	42	Pc	02	20.50	-0.4
WKYJ	38.23	61	eP	02	29.30	-0.2
TSRJ	38.79	59	P	02	34.80	0.7
SHI	39.25	292	eP	02	39.00	0.8
IIDJ	40.33	59	P	02	46.10	-0.7
MTMJ	40.44	58	P	02	47.60	-0.2
MAT	40.75	58	iPc	02	49.60	-0.6
	1.0s	40.00nm			5.1mb	
BJA	40.92	286	eP	02	53.10	1.4
	0.6s	48.00nm			5.4mb	
BRF	40.94	286	eP	02	52.00	0.2
	0.5s	40.00nm			5.4mb	
KER	44.19	298	eP	03	18.00	-0.4
TAB	45.25	303	eP	03	18.00	-8.7X
SLY	45.62	300	ePc	03	30.50	1.1
			i	04	01.50	137km
			eS	10	03.00	
BHD	46.38	297	eP	03	35.00	-0.5
			e	04	04.00	126km
			eS	10	10.00	
MSL	47.58	301	ePd	03	44.50	-0.5
			e	04	14.00	128km
			eS	10	28.00	
GUMO	48.05	90	eP	03	48.20	-0.6
PJG	48.05	90	eP	03	48.80	0.0
MBL	48.18	148	eP	03	49.00	-0.6
	0.6s	49.00nm			5.4mb	
KNA	49.13	135	iPc	03	55.90	-1.1
	0.8s	65.00nm			5.5mb	
MEKA	52.29	153	eP	04	21.00	0.2
	0.5s	10.00nm			4.9mb	
MRWA	53.61	157	iPd	04	30.50	0.1
BHL	53.67	297	P	04	32.00	0.9
			PP	05	03.00	
DSI	54.01	295	e(P)	04	34.00	0.5
PRNI	54.43	293	iPc	04	37.00	0.3
MBH	54.59	292	ePc	04	37.00	-0.7
BAL	55.12	157	eP	04	41.00	-0.4
KAS	55.19	307	iPc	04	42.20	0.1
WB5	55.80	134	iPc	04	45.30	-1.2
			iPcP	05	43.20	
WARB	55.82	145	iPd	04	46.30	-0.3
	0.3s	5.00nm			4.9mb	
WRA	55.82	134	Pc	04	45.60	-1.1
	0.8s	41.70nm			5.4mb	
BBTK	55.92	305	iPc	04	47.00	-0.4
MUN	56.19	158	eP	04	49.00	-0.1
COOL	57.12	153	eP	04	55.00	-0.7
NWAO	57.41	158	eP	04	57.00	-0.6
ALT	57.98	304	eP	05	01.00	-0.9
ASPA	58.16	137	iPc	05	02.40	-0.7
	1.0s	40.00nm			5.3mb	
			iPcP	05	52.80	
			eS	12	53.70	

24d 11h

eScS 14 35.80
ELL 58.24 301 iP 05 03.20 -0.5
HRT 58.28 306 eP 05 04.00 0.1
KHL 58.47 303 eP 05 04.00 -1.3
YLV 58.51 306 iP 05 04.60 -0.9
KCT 59.30 305 iP 05 10.10 -0.8
TLB 59.48 310 iPc 05 11.00 -0.9
YER 59.51 302 eP 05 11.00 -1.5
OIS 59.89 130 iPc 05 14.20 -0.8
1.0s 35.00nm 5.3mb
i 06 59.30 521kmX
CLI 60.03 313 ePc 05 15.50 -0.2
FORR 60.33 147 eP 05 17.50 -0.3
0.5s 36.00nm 5.6mb
VRI 60.41 312 iPc 05 18.00 -0.3
KAP 60.53 300 eP 05 18.60 -0.7
ISR 60.54 311 eP 05 20.00 0.7
JMB 60.56 308 iPc 05 19.00 -0.4
NAI 60.92 256 iPc 05 22.50 0.0
MLR 60.96 311 iPc 05 22.00 -0.2
ALN 61.03 306 eP 05 22.20 -0.4
PVL 61.45 309 iPc 05 25.00 -0.4
KDZ 61.46 307 eP 05 26.00 0.5
CMP 61.60 311 ePc 05 25.00 -1.4
NPS 61.83 300 eP 05 27.20 -0.9
RZN 61.98 307 iPc 05 29.00 -0.2
SUF 62.11 331 iP 05 28.80 -0.6
0.8s 38.80nm 5.4mb
NUR 62.53 328 iP 05 31.30 -0.9
1.0s 40.00nm 5.3mb
OUR 62.63 306 eP 05 32.80 -0.5
MMB 62.73 307 iPc 05 33.00 -1.0
SOD 62.76 336 iP 05 33.00 -0.7
PAIG 62.90 305 eP 05 34.40 -0.6
VAM 62.96 300 eP 05 35.10 -0.5
PLG 63.04 306 eP 05 35.20 -0.8
VTS 63.04 308 iPc 05 35.00 -1.2
KEV 63.15 339 iP 05 35.60 -0.6
1.0s 68.00nm 5.5mb
KKB 63.19 307 iPc 05 36.00 -1.0
NEO 63.31 304 eP 05 35.30 -2.5
THE 63.38 306 eP 05 36.70 -1.5
KNT 63.39 307 eP 05 37.30 -1.0
GRG 63.78 306 eP 05 39.50 -1.4
BZS 63.99 312 eP 05 41.00 -1.1
KZN 64.32 306 eP 05 42.60 -1.8
CTA 64.51 126 iPc 05 45.10 -0.6
1.1s 50.63nm 5.4mb
i 06 19.10 141km
ITM 64.56 302 eP 05 44.10 -1.9
SPC 64.72 316 iP 05 47.50 0.5
i 06 21.00 139km
KRA 64.88 317 eP 05 46.80 -0.9
1.0s 50.00nm 5.4mb
e 06 20.50 140km
PSZ 65.03 314 eP 05 48.70 -0.1
VLS 65.48 303 eP 05 50.10 -1.8
KEK 65.89 305 eP 05 52.10 -2.3
UPP 65.99 327 iPc 05 53.80 -0.8
i 06 27.10 137km
SRO 66.10 314 iPd 05 55.50 -0.1
1.0s 87.00nm 5.6mb
ZST 66.87 315 eP 06 00.00 -0.5
i 06 03.00 10kmX
i 06 33.00
SMY 67.28 40 eP 06 02.20 -0.7
HVAR 67.92 309 iP 06 05.40 -1.8
i 06 38.40 135km
HFS 67.96 328 eP 06 06.30 -0.7
1.0s 84.10nm 5.6mb
BRG 68.63 318 iPc 06 11.20 -0.2
1.3s 68.00nm 5.3mb
i 06 44.60 137km
STK 68.75 138 iPd 06 12.80 0.5
NRA0 68.98 328 P 06 12.20 -1.1
RIY 69.08 312 eP 06 12.80 -1.4
NB2 69.11 329 P 06 08.90 -5.3X
0.8s 37.70nm 5.3mb
CLL 69.17 318 iPc 06 14.00 -0.6
1.3s 45.00nm 5.1mb
epP 06 47.00 134km
eS 15 07.00
P'P' 34 23.00
TRI 69.45 312 eP 06 15.90 -0.6
RBL 69.48 313 P 06 16.20 -0.5
WET 69.54 316 iPc 06 17.10 0.1
1.2s 65.00nm 5.3mb
BHG 69.75 315 iPc 06 18.00 -0.3
1.0s 59.00nm 5.4mb
FVI 69.99 313 P 06 18.70 -1.0
HOF 70.01 317 iPc 06 19.70 -0.2
1.0s 34.00nm 5.1mb
MOX 70.13 318 iPc 06 20.30 -0.2
1.3s 51.00nm 5.2mb
i 06 53.00 133km
RMO 70.13 130 iPc 06 22.30 1.4
1.1s 144.00nm 5.7mb
ARV 70.40 310 P 06 22.30 0.0
HNR 70.52 108 eP 06 23.00 -0.4
FUR 70.74 315 iPc 06 24.50 0.2
1.0s 29.00nm 5.1mb
OGA 71.13 314 iPc 06 26.20 -0.7
1.0s 65.00nm 5.4mb
CMS 71.20 136 iPd 06 27.90 0.7
PGD 71.20 311 P 06 28.00 0.6
OSS 71.76 314 ePc 06 30.40 -0.3
TOD 72.09 317 ePc 06 32.28 0.0
SAX 72.19 314 ePc 06 32.80 -0.5
TNS 72.19 318 iPKPc 06 33.20 0.2
MDI 72.23 313 P 06 32.40 -0.8
VDL 72.26 314 ePd 06 33.70 0.1
LLS 72.50 314 ePc 06 34.70 -0.3
SLE 72.65 315 ePc 06 35.30 -0.4
TMA 72.74 313 iPc 06 35.90 -0.5
WIT 72.78 321 iPc 06 37.50 1.3
i 07 11.30 136km
ZLA 72.78 315 ePd 06 36.50 0.1
ABH 72.83 317 ePc 06 36.77 0.1
WTS 72.86 320 iPc 06 37.20 0.5
0.9s 46.00nm 5.2mb
i 07 10.60 135km
VAI 72.86 313 P 06 35.90 -0.9
RUP 73.18 317 ePc 06 39.09 0.4
PCP 73.30 312 P 06 38.85 -0.7
CDF 73.31 316 iPc 06 39.40 -0.2
1.0s 44.00nm 5.2mb
MMK 73.37 313 ePc 06 40.10 0.0
CVF 73.51 310 iPc 06 40.90 0.2
1.0s 48.00nm 5.2mb
BRS 73.58 128 iPd 06 41.30 0.0
e 13 39.00
FIN 73.61 312 P 06 40.39 -0.9
ENN 73.66 319 iPc 06 41.90 0.5
1.0s 38.00nm 5.1mb
i 07 14.20 129km
DIX 73.74 314 ePc 06 42.90 0.6
BSF 73.76 315 iPc 06 41.70 -0.5
1.0s 28.00nm 5.0mb
ROB 73.83 312 P 06 41.51 -1.1
IMI 73.90 311 P 06 42.64 -0.4
HAU 74.01 316 iPc 06 43.40 -0.1
1.0s 48.00nm 5.2mb
LSD 74.05 313 P 06 44.28 0.1
EMS 74.07 314 ePd 06 44.70 0.6
ENR 74.16 312 P 06 43.26 -1.3
KRI 74.17 245 iPc 06 46.30 1.3
i 07 18.50 129km
STV 74.22 312 P 06 43.15 -1.8
SBF 74.23 311 iPc 06 45.10 0.1
1.0s 45.60nm 5.2mb
PZZ 74.31 312 P 06 43.97 -1.6
LPG 74.32 313 iPc 06 46.00 0.3
RRL 74.43 313 P 06 45.61 -0.7
BNI 74.48 313 P 06 46.20 -0.3
DOU 74.64 318 Pd 06 47.60 0.5
1.3s 92.80nm 5.4mb
e 07 20.90 133km
SNF 74.74 319 iPc 06 47.20 -0.4
e 07 21.70 139km
COO 74.76 131 iPd 06 50.00 1.9
FRF 74.86 311 iPc 06 48.80 0.3
1.0s 65.60nm 5.3mb
TOO 74.95 141 iPc 06 50.00 1.0
0.7s 40.00nm 5.3mb
LMR 75.01 311 iPc 06 49.60 0.3
1.0s 60.00nm 5.3mb
LRG 75.09 311 iPc 06 50.40 0.6
0.9s 75.30nm 5.5mb
LBF 75.82 315 iPc 06 53.80 -0.1
LOR 75.82 315 iPc 06 53.70 -0.2
1.0s 34.00nm 5.1mb
SMF 76.00 315 iPc 06 54.70 -0.2
SSF 76.11 315 iPc 06 55.90 0.4
AVF 76.28 315 iPc 06 56.30 -0.1
1.2s 86.20nm 5.4mb
BGF 76.68 315 iPc 06 59.00 0.3
1.2s 50.50nm 5.2mb
MAF 76.96 315 iPc 07 00.90 0.7
1.0s 64.00nm 5.3mb
TCF 77.18 315 iPc 07 02.10 0.6
LSF 77.64 315 iPc 07 04.20 0.2
1.2s 74.30nm 5.3mb
CAF 77.67 313 iPc 07 05.10 0.9
1.0s 30.00nm 5.0mb
EKA 77.72 325 Pd 07 05.20 1.0
0.8s 35.10nm 5.2mb
RJF 77.93 314 iPc 07 06.50 0.9
1.0s 64.00nm 5.3mb
LDF 78.02 317 iPc 07 06.30 0.3
1.0s 40.00nm 5.1mb
FLN 78.19 318 iPc 07 07.10 0.2
1.0s 32.00nm 5.0mb
LPO 78.34 313 iPc 07 08.60 0.8
0.9s 52.40nm 5.3mb
GRR 78.55 317 iPc 07 09.30 0.4
1.0s 28.00nm 5.0mb
LFF 78.56 314 iPc 07 09.90 0.9
0.9s 50.40nm 5.3mb
ESEL 78.60 308 eP 07 10.90 1.6
MFF 78.64 316 iPc 07 09.90 0.5
1.2s 47.60nm 5.1mb
LPF 78.78 317 iPc 07 10.80 0.7
1.0s 65.60nm 5.3mb
SLR 79.49 237 iPc 07 15.00 0.5
0.9s 147.06nm 5.7mb
i 07 47.00 126km
IMA 79.53 23 iPc 07 14.30 0.3
1.2s 43.80nm 5.1mb
EBR 80.02 310 eP 07 28.00 11.1X
TTA 80.05 26 ePc 07 17.10 0.3
EROQ 80.08 310 eP 07 18.20 0.9
DMU 80.26 324 eP 07 19.30 1.4
DLE 80.28 323 eP 07 19.10 1.1
MBC 81.02 8 ePc 07 21.80 0.3
0.8s 69.00nm 5.5mb
SVW 81.02 28 ePc 07 23.00 1.1
ECHE 81.48 309 eP 07 26.00 1.3
DZM 81.68 117 iPc 07 27.20 1.2
ETOR 81.84 310 eP 07 27.20 0.6
FBA 82.24 23 iPc 07 28.10 0.0
BLF 82.73 235 eP 07 30.90 -0.5
EVIA 82.93 309 eP 07 33.60 1.3
ENIJ 83.30 307 eP 07 34.70 0.6
GUD 83.40 311 iPc 07 36.00 1.3
PMR 83.51 26 ePc 07 34.60 0.0
0.8s 59.90nm 5.5mb
KDC 84.02 30 eP 07 36.90 -0.3
EBAN 84.04 308 eP 07 39.00 1.2
ASMO 84.30 308 eP 07 39.00 -0.3
TOA 84.40 24 iPc 07 40.50 1.3
APHE 84.41 307 eP 07 40.50 0.7
ACHM 84.46 307 eP 07 40.00 0.0
INK 84.52 16 iPc 07 39.60 0.0
1.1s 160.00nm 5.8mb
AAPN 84.60 308 eP 07 40.50 -0.2
ALOJ 84.66 308 eP 07 40.70 -0.4
ATEJ 84.67 307 eP 07 41.00 -0.1
EHOR 85.24 309 eP 07 45.00 1.2
STS 85.56 314 eP 07 47.00 1.7
EJIF 85.92 307 eP 07 48.00 0.8
NKM 86.26 306 iPc 07 49.50 0.6
i 07 50.00 2kmX
IFR 86.79 305 iPc 07 53.80 2.1
TIO 89.47 303 iP 08 06.40 1.9
MAW 91.18 192 eP 08 12.00 0.8
YBT 91.68 303 iPc 08 21.50 7.0X
SIT 91.87 25 eP 08 16.40 1.6
SES 105.58 17 ePKP 13 30.00 0.5
LRM 109.27 20 ePKP 13 37.00 0.1
MIN 110.37 29 ePKP 13 40.40 1.3
SPA 110.57 180 ePKPc 13 39.40 0.8
0.7s 16.02nm
e 34 12.70
ORV 111.05 29 ePKP 13 40.30 0.1
MHC 112.75 31 e(PKP) 13 44.40 0.8
CMB 112.79 30 ePKP 13 44.00 0.4
e 14 27.00
e 24 31.00
e 25 18.80
GCC 112.83 31 e(PKP) 13 44.20 0.6
KVN 112.98 27 PKP 13 44.30 0.2

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PRS   113.69  32 ePKP   13 46.20   0.8
FRI   113.95  30 ePKP   13 46.30   0.5
DUG   114.12  23 PKP    13 46.80   0.5
        0.8s      5.56nm
TNP   114.17  27 PKP    13 47.40   0.9
        0.7s      2.63nm
PRI   114.18  31 ePKP   13 47.70   1.2
DAU   114.48  22 PKP    13 47.90   0.7
ISA   115.61  30 ePKP   13 50.00   0.9
MSU   115.83  23 PKP    13 51.00   1.3
GSC   116.67  29 ePKP   13 52.00   0.8
SBB   116.71  30 ePKP   13 52.00   0.7
MWC   116.98  30 ePKP   13 53.00   1.1
GOL   116.98  18 PKP    13 51.10  -0.8
        0.7s      3.64nm
RVR   117.49  30 ePKP   13 53.00   0.3
PEC   117.68  30 PKP    13 53.80   0.7
TPC   118.01  29 ePKP   13 54.00   0.3
PLM   118.26  30 ePKP   13 55.00   0.6
BAR   118.91  30 ePKP   13 56.00   0.6
GLA   119.45  29 ePKP   13 58.00   1.5
ALQ   121.04  21 iPKPc  14 00.50   0.8
        1.0s     33.75nm
FVM   121.41   5 PKP    13 59.60  -0.4
NAV   122.16 356 PKP    14 01.20  -0.3
ELC   122.20   4 PKP    14 01.00  -0.5
BLA   122.24 356 PKP    14 01.40  -0.2
TUL   122.79  10 iPKPd  14 03.20   0.5
        0.7s     30.30nm
SIO   122.86  11 ePKPd  14 03.40   0.6
MEO   123.34  13 iPKPd  14 03.90   0.1
OLY   123.78   6 PKP    14 03.80  -0.8
GBTN  123.94 359 PKP    14 05.50   0.5
TKL   123.94 359 PKP    14 04.90  -0.1
PWLA  124.56   3 PKP    14 05.40  -0.7
GUAN  144.07 326 ePKP   14 41.20  -2.0
LLAV  144.21 328 iPKP   14 42.00  -1.4
BAO   144.50 272 ePKP   14 42.50  -1.4
MORO  144.58 331 iPKPd  14 43.20  -0.8
GUAC  144.68 329 iPKP   14 44.50   0.2
FISA  144.69 333 iPKP   14 44.00  -0.1
CEOS  146.20 329 ePKP   14 47.20   0.4
SDV   147.37 333 iPKP   14 49.40   0.6
        1.0s    172.40nm
PPD   148.60 261 ePKP   14 53.10   2.8X
                  i     14 55.50
                  e     15 29.70
UPA   150.02 349 e(PKP) 14 53.20   0.6
PEL   162.21 223 ePKPc  15 08.50   1.0
        1.0s     22.00nm
                  i     15 55.70
                  i     16 30.00
ROCH  162.53 223 ePKP   15 09.50   1.4
      S.D. = 0.9  on 292 of 298 obs.
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?  SEP  24, 1989  11h 44m 08.64± 9.05s
   41.942 N ±64.4km   23.046 E ±16.8km
   DEPTH =  10.0km  (geophysicist)
 GREECE-BULGARIA BORDER REGION    (363)

KNT     0.79 188 iPgc   44 23.70  -0.3
                 iSg    44 34.20
SRS     0.92 153 ePg    44 26.00  -0.2
                 eSg    44 37.70
GRG     1.10 206 ePg    44 29.20  -0.1
                 eSg    44 43.70
SKO     1.20 272 ePn    44 24.00  -7.0X
THE     1.31 183 ePb    44 33.30   0.4
                 eSb    44 49.50
OUR     1.75 156 ePb    44 39.40   0.1
      S.D. = 0.4  on   5 of   6 obs.
-------------------------------------
?  SEP  24, 1989  13h 52m 09.21± 3.77s
   44.499 N ±16.7km    6.706 E ±29.7km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                           (538)
      ML 2.0 (GEN).

PZZ     0.28  89 P      52 14.68  -0.5
                 S      52 18.57
RRL     0.42   8 P      52 17.45  -0.5
                 S      52 22.98
STV     0.51 120 P      52 19.39  -0.2
                 S      52 25.55
ENR     0.58 118 P      52 20.22  -0.8
                 S      52 26.68
      S.D. = 0.4  on   4 of   4 obs.
-------------------------------------
   SEP  24, 1989  14h 05m 46.52± 0.60s
   58.533 N ± 6.5km  152.707 W ± 7.7km
   DEPTH =  64.9 ±  9.4 km
   4.5mb (  2 obs.)
 KODIAK ISLAND REGION             ( 13)
      Felt (III) at Port Lions.

KDC     0.80 172 iPd    06 02.10  -0.3
PMS     3.15  29 iPd    06 35.20   0.4
MID     3.42  72 e(P)   06 38.30  -0.2
PWA     3.43  23 iPc    06 39.20   0.5
PMR     3.55  29 iPd    06 40.00  -0.4
TTA     4.70 341 iPc    06 57.10   0.5
TOA     4.83  39 iPc    06 58.70   0.2
SDN     5.33 236 eP     07 05.10  -0.2
YKU     6.78  76 eP     07 26.60   1.2
FBA     6.80  18 eP     07 24.80  -1.0
IMA     7.58 357 ePd    07 37.10   0.4
SIT     9.40  92 ePd    07 57.40  -4.2X
INK    12.96  33 eP     08 48.00  -1.2
MBC    21.33  21 eP     10 29.50   0.2
        0.6s     16.00nm          4.6mb
EDM    22.46  87 eP     10 45.00   4.2X
KVN    29.50 116 eP     12 02.00  15.4X
HFS    61.19   8 (P)    15 54.90  -1.2
        0.3s      1.00nm          4.4mb
PKI    81.60 310 P      18 00.00   1.2
     S.D. = 0.8  on  15 of  18 obs.
-------------------------------------
   SEP  24, 1989  14h 52m 59.64± 3.01s
   19.036 S ±18.0km  168.288 E ±72.8km
   DEPTH = 146.6 ± 22.1 km
   4.8mb (  2 obs.)
 VANUATU ISLANDS                  (186)

PVC     1.29   1 iPc    53 27.00  -0.1
                 iS     53 50.00
DZM     3.48 209 iPd    53 53.90   0.2
                 iS     54 36.10
CTA    20.79 263 i(P)   57 35.20   4.4X
BWA    23.38 225 eP     57 54.60  -1.6
CAN    23.54 223 eP     57 58.70   1.0
WB5    31.96 263 eP     59 13.80   0.0
ASPA   32.31 256 iPd    59 16.00  -0.8
        0.6s     17.00nm          5.0mb
WARB   38.97 252 iPc    00 14.10   0.9
MBL    45.42 259 iPd    01 06.00   0.5
        0.4s      5.00nm          4.5mb
     S.D. = 1.1  on   8 of   9 obs.
-------------------------------------
&  SEP  24, 1989  14h 56m 20.70s
   39.987 N          120.798 W
   DEPTH =  19.0km
 NORTHERN CALIFORNIA              ( 36)
      <BRK>. ML 3.0 (BRK).

ORV     0.69 232 iPc    56 33.10  -0.9
                 eS     56 42.30
MIN     0.71 300 iPc    56 33.60  -0.8
LTCM    1.04 283 eP     56 39.50  -0.4
WDC     1.46 295 eP     56 46.10   0.0
LBFM    1.59 329 eP     56 49.00   0.7
CMB     1.98 170 eP     56 54.10   0.4
                 eS     57 19.30
NWRM    2.23 227 eP     56 57.70   0.5
KVN     2.29 113 eP     56 57.40  -0.9
ZSP     2.33 210 e(P)   57 00.20   1.5
BKS     2.39 208 iPd    57 00.90   1.4
                 iS     57 30.40
BRK     2.40 209 e(P)   57 00.20   0.6
ARN     2.70 193 eP     57 04.50   0.5
PCC     2.77 207 eP     57 06.00   1.0
FRI     3.11 164 eP     57 10.90   1.2
TNP     3.37 123 eP     57 12.00  -1.7
      15 obs. associated
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   SEP  24, 1989  16h 50m 09.92± 0.20s
   44.572 N ± 1.8km    6.851 E ± 2.9km
   DEPTH =   9.0 ±  2.4 km
 FRANCE                           (538)
      MD 2.1 (STR).

PZZ     0.19 110 P      50 14.95   0.8
                 S      50 17.93
DOI     0.29 103 Pc     50 16.30   0.3
                 eSg    50 21.20
RRL     0.35 352 P      50 17.52   0.3
                 S      50 23.26
STV     0.47 134 P      50 19.57   0.1
                 S      50 26.44
BNI     0.50 345 Pc     50 19.90  -0.1
                 eSg    50 26.70
ENR     0.53 130 P      50 20.59  -0.1
                 S      50 28.07
TOUF    0.63 153 Pg     50 22.45  -0.1
AUTN    0.71 144 Pg     50 24.03  -0.1
                 Sg     50 33.97
MVIF    0.71 162 Pg     50 23.92  -0.2
                 Sg     50 33.67
AURF    0.77 153 Pg     50 25.00   0.0
                 Sg     50 35.17
SAOF    0.77 139 Pg     50 25.18   0.1
                 Sg     50 35.44
ROB     0.78 110 P      50 25.31   0.0
                 S      50 36.49
CALN    0.82 178 Pg     50 25.96   0.0
SBF     0.82 149 Pg     50 26.00   0.0
                 Sg     50 38.00
REVF    0.91 156 Pg     50 28.08   0.6
LSD     0.91  14 P      50 27.77   0.1
                 S      50 40.48
LPG     0.93 356 Pg     50 28.00   0.1
                 Sg     50 40.80
LPL     0.95 355 Pg     50 28.40   0.2
                 Sg     50 41.60
IMI     1.00 131 P      50 28.90  -0.1
                 S      50 43.04
FRF     1.02 188 Pg     50 29.30   0.0
                 Sg     50 42.40
FIN     1.04 110 P      50 29.62   0.0
                 S      50 44.38
LRG     1.17 198 Pn     50 31.70  -0.2
                 Pg     50 32.60
                 Sg     50 48.00
PCP     1.21  91 P      50 32.59   0.0
                 S      50 49.10
LMR     1.26 191 Pg     50 33.90   0.5
                 Sg     50 50.60
CVF     2.48 143 Pn     50 49.84  -1.3
SMF     2.96 316 Pg     51 05.30   7.4X
                 Sg     51 44.60
LBF     3.14 321 Pn     50 59.30  -1.2
                 Pg     51 08.80
                 Sn     51 37.30
                 Sg     51 49.80
AVF     3.31 313 Pn     51 03.20   0.3
                 Pg     51 12.90
                 Sg     51 57.20
LOR     3.41 323 Pg     51 13.20   8.8X
                 Sn     51 43.60
                 Sg     51 57.80
SSF     3.42 318 Pn     51 04.80   0.4
                 Pg     51 15.20
MAF     3.44 300 Pn     51 05.20   0.4
                 Pg     51 15.00
BGF     3.44 307 Pn     51 05.20   0.4
                 Pg     51 14.40
                 Sg     52 00.00
HAU     3.45 354 Pn     51 04.80  -0.1
CDF     3.85   4 Pn     51 09.90  -0.8
      S.D. = 0.5  on  32 of  34 obs.
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   SEP  24, 1989  16h 52m 25.00± 0.24s
   44.564 N ± 2.0km    6.860 E ± 2.9km
   DEPTH =  10.0km  (geophysicist)
 FRANCE                           (538)
      MD 2.5 (STR).

PZZ     0.18 109 P      52 29.76   0.6
                 S      52 33.45
DOI     0.28 102 Pc     52 31.10   0.1
                 eSg    52 35.20
RRL     0.36 351 P      52 32.53   0.0
                 S      52 38.17
STV     0.46 134 P      52 34.38   0.0
                 S      52 41.25
BNI     0.51 345 Pc     52 34.80  -0.5
                 eSg    52 41.70
ENR     0.52 130 P      52 35.30  -0.4
                 S      52 42.99
TOUF    0.62 153 Pg     52 37.60   0.0
                 Sg     52 44.40
AUTN    0.70 144 Pg     52 39.10   0.1
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24d 16h

		Sg	52 48.80			
MVIF	0.70	162 Pg	52 39.00	0.1		
		Sg	52 48.70			
AURF	0.76	153 Pg	52 40.00	0.2		
		Sg	52 51.00			
SAOF	0.76	139 Pg	52 40.00	0.1		
		Sg	52 50.50			
ROB	0.77	110 P	52 40.02	-0.1		
		S	52 51.07			
CALN	0.81	178 Pg	52 40.90	0.1		
SBF	0.81	149 Pg	52 41.00	0.2		
		Sg	52 52.50			
LSD	0.92	13 P	52 42.58	-0.1		
		S	52 54.76			
LPG	0.94	355 Pg	52 42.80	-0.3		
		Sg	52 55.60			
LPL	0.96	355 Pg	52 43.10	-0.3		
		Sg	52 56.30			
IMI	0.99	131 P	52 43.71	-0.1		
		S	52 56.92			
FRF	1.01	189 Pg	52 44.20	0.0		
		Sg	52 58.00			
FIN	1.03	110 P	52 44.32	-0.2		
		S	52 57.84			
LRG	1.17	198 Pn	52 46.60	-0.2		
		Pg	52 47.80			
		Sg	53 03.30			
PCP	1.21	90 P	52 47.30	-0.2		
		S	53 02.76			
LMR	1.26	192 Pn	52 48.20	-0.1		
		Pg	52 49.00			
		Sg	53 05.20			
ORO	1.33	36 P	52 47.90	-1.6		
EMS	1.51	2 ePd	52 53.50	1.3		
DIX	1.57	14 ePc	52 54.10	1.0		
MMK	1.68	27 ePc	52 56.70	1.9		
VAI	1.88	45 P	52 55.40	-2.0		
		eSn	53 18.60			
TMA	2.10	42 ePd	53 00.30	-0.5		
CVF	2.47	143 Pn	53 05.20	-0.8		
		Sn	53 33.50			
VDL	2.66	43 ePd	53 08.80	0.0		
LLS	2.75	32 ePd	53 12.80	2.7		
SMF	2.97	316 Pn	53 13.20	0.2		
		Pg	53 20.00			
		Sg	53 59.20			
OSS	3.13	46 ePc	53 15.90	0.4		
LBF	3.15	321 Pn	53 15.60	0.0		
		Pg	53 24.00			
		Sn	53 51.80			
		Sg	54 04.60			
AVF	3.32	313 Pn	53 17.60	-0.4		
		Pg	53 27.60			
		Sg	54 11.20			
SLE	3.40	19 ePc	53 18.20	-0.9		
LOR	3.42	323 Pn	53 19.10	-0.3		
		Pg	53 29.10			
		Sn	53 58.20			
		Sg	54 12.80			
SSF	3.43	318 Pn	53 20.00	0.5		
		Pg	53 30.00			
		Sn	54 00.00			
		Sg	54 12.60			
MAF	3.45	300 Pn	53 20.00	0.2		
		Pg	53 29.80			
		Sg	54 15.00			
BGF	3.45	307 Pn	53 20.00	0.1		
		Pg	53 29.60			
		Sg	54 15.50			
HAU	3.46	354 Pn	53 19.50	-0.5		
CDF	3.86	4 Pn	53 24.60	-1.2		

S.D. = 0.8 on 43 of 43 obs.

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* SEP 24, 1989 16h 56m 52.29± 1.58s
10.380 N ± 8.9km 59.888 W ±13.1km
DEPTH = 59.4 ± 10.0 km
4.5mb (3 obs.)
NORTH ATLANTIC OCEAN (402)
MD 4.5 (TRN).

BOT	1.13	314 eP	57 13.56	1.4		
		eS	57 31.24			
TBH	1.16	275 eP	57 13.09	0.4		
		eS	57 30.60			
TRN	1.51	280 eP	57 16.68	-0.8		
		eS	57 39.76			
TPP	1.54	268 eP	57 17.59	-0.2		
		eS	57 40.98			
TCE	1.86	280 eP	57 21.50	-0.8		
		eS	57 45.05			
GRW	2.48	316 eP	57 31.72	0.6		
		eS	58 08.51			
SVB	3.17	335 eP	57 40.96	0.1		
		eS	58 21.94			
SSV	3.20	337 eP	57 41.36	0.1		
		eS	58 22.60			
SVV	3.20	336 eP	57 41.23	0.0		
		eS	58 22.07			
SOA	3.22	338 eP	57 42.03	0.5		
		eS	58 23.12			
SLB	3.61	342 eP	57 46.85	-0.2		
		eS	58 29.13			
MVM	4.26	347 eP	57 55.66	-0.6		
BIM	4.27	344 eP	57 56.25	-0.1		
		S	58 47.30			
CRM	4.46	347 eP	57 58.44	-0.5		
FDF	4.50	344 eP	57 59.93	0.4		
		S	58 52.60			
BBL	5.34	343 eP	58 10.70	-0.7		
ZOBO	27.70	197 eP	02 38.00	0.3		
ALO	48.87	308 iPd	05 35.10	0.7		
	0.9s	2.31nm		4.2mb		
GOL	49.75	314 eP	05 40.00	-1.2		
	1.0s	5.50nm		4.5mb		
TNP	58.06	308 eP	06 42.80	0.7		
	1.0s	4.25nm		4.5mb		
KVN	58.94	309 eP	06 48.00	-0.2		

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

SEP 24, 1989 17h 18m 42.97± 0.19s
33.298 N ± 2.8km 134.933 E ± 2.7km
DEPTH = 33.0km (normal)
5.0mb (18 obs.) 4.5Msz (2 obs.)
SHIKOKU, JAPAN (236)
Felt (II JMA) at Murato-misaki and Tokushima; (I JMA) at Kochi. Felt (II JMA) at Wakayomo; (I JMA) at Hiroshima, Kobe and Osoko, Honshu. Also felt (II JMA) at Sumoto, Awaji-shimo.
CENTROID, MOMENT TENSOR (HRV)
Dato Used: GDSN
L.P.B.: 8S, 14C
Centroid Location:
Origin Time 17:18:43.6 1.1
Lat 33.39N 0.10 Lon 134.91E 0.26
Dep 37.212.4 Holf-duration 1.5
Moment Tensor; Scale 10**16 Nm
Mrr= 1.39 0.57 Mtt=-4.84 0.63
Mff= 3.45 0.95 Mrt=-1.07 1.29
Mrf= 2.35 0.91 Mtf=-2.96 0.61
Principal Axes:
T Val= 5.87 Plg=30 Azm=251
N -0.06 60 77
P -5.80 3 343
Best Double Couple:Mo=5.8*10**16
NP1:Strike= 31 Dip=67 Slip= 20
NP2: 293 71 156

MRT	0.63	266 iP+	18 55.50	0.0		
		iS	19 04.10			
TKS	0.82	339 iPd	18 57.40	-0.7		
		iS	19 08.30			
WKY	0.95	12 iPd	18 59.60	-0.3		
		S	19 11.10			
TKSJ	1.01	313 iPd	19 00.30	-0.5		
		eS	19 11.10			
SUM	1.03	359 eP	19 00.00	-1.2		
WKYJ	1.07	31 iPd	19 00.90	-0.9		
		S	19 14.20			
KOC	1.20	283 iP+	19 03.30	-0.1		
		iS	19 17.90			
KOB	1.40	8 P	19 05.80	-0.6		
		iS	19 22.50			
OSA	1.46	19 iPd	19 06.60	-0.7		
		iS	19 24.50			
SHK	2.24	304 iPd	19 17.00	-1.5		
	0.7s	684.93nm				
YONJ	2.24	328 iPd	19 17.10	-1.4		
HIR	2.33	298 eP	19 19.00	-0.8		
		S	19 41.80			
TSRJ	2.40	21 iPd	19 19.80	-0.9		
		S	19 48.10			
IIDJ	3.29	48 P	19 32.10	-1.3		
SHNJ	3.29	286 iP+	19 32.40	-1.0		
		S	20 08.70			
KUMJ	3.54	259 iP+	19 36.70	-0.2		
		S	20 17.20			
KAGJ	4.02	240 P	19 43.20	-0.6		
		eS	20 26.40			
MTMJ	4.04	35 P	19 43.80	-0.3		
MAT	4.21	39 iPd	19 45.90	-0.5		
		eS	20 42.00			
CHJJ	4.33	50 P	19 49.50	1.4		
NIIJ	5.15	39 P	19 59.30	-0.5		
KAKJ	5.20	55 P	20 00.90	0.5		
YAMJ	6.39	39 eP	20 17.80	0.5		
OFUJ	7.93	41 eP	20 39.80	1.0		
AOMJ	8.45	29 eP	20 46.20	0.1		
SSE	11.85	263 P	21 31.80	-0.8		
	1.0s	0.04nm		2.5mb X		
Z	16s	3.10um		4.5Msz		
N	10s	1.30um				
E	11s	1.90um				
		sP	21 38.00			
		eS	23 19.50			
MDJ	12.04	341 eP	21 36.00	0.9		
Z	15s	2.60um		4.6MszX		
SNY	12.39	317 Pc	21 40.70	1.0		
Z	10s	1.70um				
E	12s	1.00um				
		sP	21 54.20			
		eS	24 00.00			
CN2	12.84	328 Pc	21 48.00	2.3		
Z	17s	2.90um				
N	11s	1.20um				
E	11s	1.00um				
		pP	21 56.00			
		eS	24 13.00			
NJ2	13.60	269 Pc	21 55.00	-0.9		
Z	16s	1.50um				
ANP	14.22	239 eP	22 08.00	3.9X		
TIA	14.93	286 eP	22 13.70	0.5		
Z	15s	3.30um				
N	13s	4.80um				
		S	25 04.00			
BJI	16.47	299 eP	22 35.00	1.9		
Z	14s	2.30um				
N	10s	1.36um				
		eS	25 36.00			
QZH	16.51	244 eP	22 35.50	1.9		
Z	20s	1.30um				
N	14s	1.10um				
WHN	17.69	267 eP	22 48.00	-0.3		
Z	16s	1.80um		4.4MszX		
N	13s	2.70um				
		S	26 08.00			
TIY	18.83	290 iPd	23 03.80	1.3		
N	13s	2.50um				
HHC	20.08	299 eP	23 16.60	0.1		
Z	19s	2.50um		4.6Msz		
N	12s	0.90um				
E	12s	0.90um				
		S	27 01.00			
BTO	21.16	297 eP	23 28.00	0.4		
N	13s	0.90um				
E	15s	2.40um				
		sP	23 40.00			
		S	27 22.00			
BAG	21.23	221 eP	23 28.00	-0.5		
GZH	21.54	247 P	23 30.90	-0.5		
		eS	27 27.50			
PJG	21.61	153 eP	23 32.00	-0.2		
GUMO	21.61	153 eP	23 32.00	-0.2		
	1.3s	163.40nm		5.3mb		
XAN	21.65	279 Pc	23 32.30	-0.2		
E	14s	0.80um				
GUA	21.67	153 eP	23 32.10	-0.7		
	1.2s	250.00nm		5.5mb		
GYA	25.39	262 P	24 09.00	-0.1		
N	15s	2.00um				
E	15s	1.10um				
LZH	25.66	285 eP	24 12.50	0.9		
	2.0s	0.12nm		2.1mb X		
		eS	28 28.00			
		sS	28 45.00			
CD2	26.47	273 P	24 18.60	-0.4		
Z	16s	0.70um		4.3MszX		
N	12s	1.40um				
		S	28 50.00			
QIZ	26.54	244 eP	24 21.20	1.6		

E 14s 0.50um
GTA 28.81 292 eP 24 39.30 -0.9
Z 16s 1.50um 4.7MszX
N 15s 1.60um
eS 29 29.00
LOE 33.74 250 iPc 25 23.50 -0.2
BDT 36.00 253 eP 25 42.50 -0.4
0.7s 25.80nm 5.3mb
WMQ 37.94 300 P 26 00.00 0.8
Z 20s 0.70um 4.5Msz
ePP 27 27.00
eS 31 50.00
NNT 38.14 246 iPc 26 01.50 0.5
SNG 41.04 238 eP 26 26.70 1.7
IPM 42.59 235 ePd 26 38.90 1.2
0.9s 52.30nm 5.3mb
MTN 46.03 185 ePc 27 05.00 -0.2
NDI 49.16 281 eP 27 29.50 -0.3
TTA 51.48 33 eP 27 47.90 0.8
IMA 52.56 29 eP 27 55.10 -0.2
1.0s 15.00nm 4.9mb
HYB 52.75 267 eP 27 55.50 -1.7
WB5 52.88 181 eP 27 57.10 -0.8
WRA 52.94 181 Pd 27 57.80 -0.6
1.0s 34.20nm 5.3mb
QIS 53.74 175 iPd 28 03.30 -0.9
0.9s 15.00nm 5.0mb
CTA 54.17 167 iPd 28 07.20 -0.2
0.9s 10.08nm 4.8mb
PMR 54.75 35 eP 28 10.50 -0.7
0.8s 12.00nm 5.0mb
FBA 55.05 31 eP 28 14.10 0.7
GBA 55.58 264 Pc 28 16.40 -1.4
0.8s 9.00nm 4.9mb
MBL 56.04 197 eP 28 20.00 -0.9
0.4s 3.00nm 4.7mb
ASPA 56.65 181 iPc 28 24.20 -1.2
0.6s 13.00nm 5.1mb
WARB 59.68 189 eP 28 46.00 -0.4
INK 60.08 25 eP 28 55.00 6.2X
pP 29 09.00 51kmX
MAIO 60.52 296 eP 28 52.00 -0.3
RMQ 60.89 166 ePd 28 54.50 -0.2
MBC 61.56 15 eP 28 58.00 -0.8
0.9s 19.00nm 5.2mb
pP 29 09.50 39kmX
BRS 62.69 162 iP 29 07.00 0.2
i 29 18.00
FORR 64.13 187 eP 29 15.50 -0.6
0.5s 17.00nm 5.4mb
KEV 65.01 339 eP 29 21.00 -0.5
SOD 66.29 336 eP 29 25.00 -4.8X
i 29 37.80
BWA 68.55 168 eP 29 45.20 0.9
e 29 56.80
SUF 68.86 332 eP 29 45.00 -0.9
0.7s 4.40nm 4.6mb
NUR 70.66 331 eP 29 57.00 0.1
HFS 75.19 334 eP 30 31.90 8.3X
0.5s 5.90nm 4.8mb
Z 16s 0.14um 4.3MszX
LR 03 37.00
NB2 75.46 335 P 30 23.90 -1.3
0.7s 4.70nm 4.6mb
VRI 77.99 317 ePc 30 40.50 1.0
MLR 78.66 317 eP 30 40.00 -3.3X
ORV 78.77 50 e(P) 30 51.90 8.0X
KSP 80.33 326 eP 30 54.00 2.0
CMB 80.35 51 e(P) 30 53.50 1.0
LRM 80.48 41 eP 30 54.60 1.3
KVN 81.23 49 P 30 58.10 0.8
CLL 81.53 327 e(P) 31 00.00 1.7
e 31 13.00
PRU 81.73 326 eP 31 10.00 10.6X
Z 16s 0.40um 4.9MszX
BCH 82.18 53 P 31 02.00 -0.2
TNP 82.36 49 P 31 03.60 0.4
0.8s 5.59nm 4.7mb
KHC 82.78 326 P 31 05.90 1.0
MSZ 83.20 157 P 31 08.50 1.6
SKO 83.39 316 eP 31 07.50 -0.7
i 31 19.00
DAU 84.57 45 P 31 15.00 0.4
PLM 85.41 53 P 31 17.00 -1.8
GLA 86.95 52 P 31 29.00 2.8X
TIC 125.04 309 PKP 37 41.80 -0.2
KIC 125.06 308 PKP 37 41.90 -0.2

ZOBO 153.16 56 PKP 38 33.00 0.7
LPB 153.36 57 ePKP 38 41.00 8.6X
CNCB 153.63 57 PKP 38 35.00 2.1
S.D. = 1.0 on 96 of 105 obs.

% SEP 24, 1989 17h 43m 56.23± 1.60s
44.572 N ± 8.5km 6.846 E ±15.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.3 (GEN).

PZZ 0.19 110 P 44 01.12 0.5
S 44 04.71
RRL 0.35 353 P 44 03.68 0.1
S 44 09.01
STV 0.47 134 P 44 05.83 -0.1
S 44 12.50
ENR 0.54 130 P 44 06.96 -0.2
S 44 14.15
ROB 0.78 110 P 44 11.68 0.1
S 44 22.25
LSD 0.91 14 P 44 13.73 -0.1
S 44 26.35
IMI 1.00 131 P 44 15.16 -0.1
S 44 28.92
FIN 1.04 110 P 44 15.88 0.0
S 44 30.56
PCP 1.21 91 P 44 18.56 -0.3
S.D. = 0.3 on 9 of 9 obs.

? SEP 24, 1989 17h 49m 30.98± 2.18s
44.653 N ±12.6km 7.291 E ±19.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

PZZ 0.20 222 P 49 35.51 0.0
S 49 38.15
STV 0.41 177 P 49 39.25 -0.1
S 49 44.80
ENR 0.44 168 P 49 40.02 0.1
S 49 45.25
RRL 0.45 307 P 49 40.18 0.0
S 49 45.59
S.D. = 0.2 on 4 of 4 obs.

% SEP 24, 1989 17h 56m 11.65± 0.99s
44.723 N ± 6.0km 7.264 E ±12.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

PZZ 0.25 208 P 56 16.92 -0.1
S 56 20.40
RRL 0.39 300 P 56 19.79 0.0
S 56 24.91
STV 0.48 175 P 56 21.84 0.4
ENR 0.51 167 P 56 21.63 -0.4
LSD 0.74 354 P 56 26.35 0.0
S.D. = 0.4 on 5 of 5 obs.

SEP 24, 1989 18h 45m 45.76± 0.88s
16.118 N ± 6.2km 96.738 W ± 4.5km
DEPTH = 44.3 ± 6.5 km
5.0mb (32 obs.)
OAXACA, MEXICO (60)

OXX 0.96 1 iP 46 03.50 0.3
iS 46 18.00
EVV 2.68 30 eP 46 28.50 1.1
IISM 2.92 348 iP 46 32.50 1.7
ACX 3.09 284 iP 46 32.50 -0.7
iS 47 05.00
IIT 3.25 333 iP 46 15.00 -20.9X
IIT 3.25 333 iP 46 35.00 -0.9
III 3.44 311 iP 46 36.00 -2.5X
PPM 3.44 329 iP 46 39.00 0.3
(S) 47 27.00
LVVM 3.61 4 iP 46 43.00 2.4
MEX 3.95 324 (P) 46 57.00 11.2X
UNM 3.96 324 eP 46 45.00 -0.8
(S) 47 47.00
SCX 3.99 81 (P) 46 49.50 3.5X
iS 47 36.00
CRX 4.31 320 (P) 47 11.50 20.7X
TPX 4.48 105 (P) 47 12.00 19.0X
MRX 5.54 311 eP 47 08.50 0.6

AGX 7.78 318 (P) 47 47.50 8.3X
UYO 18.09 6 iPc 49 54.30 -1.2
MEO 18.66 355 iPd 50 01.00 -1.5
SIO 19.55 1 eP 50 10.50 -2.3
TUL 19.73 2 iP+ 50 12.80 -1.9
1.1s 88.10nm 5.0mb
Z 19s 0.48um 3.7MszX
i 50 15.60
e 50 25.10
e 54 00.00
LR 55 27.00
OLY 19.87 13 P 50 14.40 -1.7
PWLA 20.33 21 P 50 19.10 -1.8
ALQ 20.67 337 iPc 50 24.70 0.0
1.0s 27.50nm 4.6mb
pP 50 52.10 150kmX
eLR 56 52.00
RSCP 21.81 25 P 50 34.60 -1.4
0.7s 190.31nm 5.6mb
PRM 22.08 33 P 50 37.60 -1.0
ELC 22.11 16 P 50 39.00 0.1
GBTN 22.45 28 P 50 41.90 -0.4
FVM 22.48 13 P 50 42.80 0.2
GLA 23.49 319 eP 50 54.00 1.5
BAR 24.45 316 eP 51 03.00 1.2
GOL 24.68 344 P 51 04.70 0.5
0.7s 40.78nm 5.1mb
GLD 24.68 344 P 51 05.20 1.0
1.1s 53.04nm 5.0mb
TPC 24.95 319 eP 51 07.00 0.4
PLM 24.99 317 eP 51 08.00 0.8
BLA 25.50 31 P 51 12.70 1.0
0.7s 38.89nm 5.1mb
PEC 25.52 318 P 51 12.10 0.1
RVR 25.73 318 eP 51 14.00 0.2
MSU 26.11 332 P 51 18.00 0.4
GSC 26.21 321 eP 51 22.00 3.6X
MWC 26.31 317 eP 51 20.00 0.5
SBB 26.45 318 eP 51 20.00 -0.6
ISA 27.48 319 eP 51 30.00 0.0
TNP 28.35 324 P 51 38.00 0.0
0.9s 9.05nm 4.4mb
RSSD 28.59 349 P 51 40.20 0.1
PRI 29.17 318 eP 51 46.20 0.9
KVN 29.53 325 P 51 49.20 0.6
LLA 29.64 318 ePc 51 48.50 -0.8
CMB 30.17 321 ePc 51 53.80 -0.3
MHC 30.52 319 eP 51 57.20 -0.1
TBR 31.63 33 P 52 04.20 -2.6X
ORV 31.81 322 eP 52 09.00 0.5
LRM 32.41 339 ePc 52 14.10 0.2
e 52 23.30
LBFM 33.21 324 P 52 20.60 -0.3
PTN 33.80 28 P 52 24.40 -1.2
RSNY 33.99 29 P 52 27.00 -0.3
1.0s 90.38nm 5.7mb
pP 52 36.30 32kmX
FHC 34.08 322 ePc 52 28.60 0.4
HBVT 34.55 31 P 52 31.40 -0.7
RSON 34.74 3 P 52 31.80 -1.9
1.4s 40.77nm 5.2mb
pP 52 41.60 34kmX
SES 36.09 344 eP 52 45.00 -0.2
LON 36.97 331 P 52 53.00 0.4
PNT 37.99 336 eP 53 01.00 -0.1
GMW 38.01 331 P 53 00.90 -0.4
FFC 38.74 355 eP 53 07.00 -0.3
0.8s 23.00nm 5.1mb
EDM 39.26 344 iPc 53 11.40 -0.3
ZOBO 42.81 137 P 53 41.80 -0.1
1.1s 8.12nm 4.4mb
Z 24s 0.25um 4.0MszX
LR 08 54.00
LPB 43.02 138 P 53 52.00 8.6X
CNCB 43.30 138 eP 53 45.00 -0.9
CCH 44.92 137 P 53 57.30 -1.3
INK 57.16 345 eP 55 29.00 -1.1
BAO 57.54 121 eP 55 32.30 -1.4
PMR 58.48 334 P 55 39.00 -0.5
0.8s 12.07nm 5.1mb
pP 55 48.60 31kmX
FBA 59.52 337 P 55 45.20 -1.5
0.8s 29.66nm 5.5mb
pP 55 55.40 34kmX
MBC 61.30 354 ePc 55 58.20 -0.4
0.8s 31.00nm 5.5mb
TTA 61.97 334 P 56 01.80 -1.6

24d 18h

	0.8s	15.52nm			5.2mb	
PDCR	63.69	113	eP	56 13.50	-1.9	
EKA	78.92	36	P	57 46.00	-0.1	
	0.9s	8.70nm			4.7mb	
LPF	81.93	42	eP	58 02.40	0.3	
	0.9s	9.80nm			4.8mb	
GRR	81.95	42	eP	58 02.90	0.6	
	0.8s	16.10nm			5.1mb	
FLN	82.09	42	eP	58 03.70	0.7	
	0.9s	19.60nm			5.1mb	
MAL	82.36	54	eP	58 06.60	2.0	
LDF	82.37	42	eP	58 05.00	0.6	
	0.8s	10.70nm			4.9mb	
AAPN	82.44	53	eP	58 06.20	1.0	
ALOJ	82.51	54	eP	58 07.50	1.9	
ATEJ	82.62	54	eP	58 07.60	1.4	
ACHM	82.72	54	eP	58 08.20	1.6	
ASMO	82.72	53	eP	58 08.00	1.3	
APHE	82.87	54	eP	58 08.00	0.5	
LFF	83.95	45	eP	58 13.00	0.4	
	0.8s	8.00nm			4.8mb	
RJF	84.37	45	eP	58 14.70	-0.1	
NB2	84.44	28	P	58 15.60	0.8	
	0.9s	9.40nm			4.9mb	
TCF	84.54	43	eP	58 16.00	0.4	
	1.0s	12.00nm			5.0mb	
MAF	84.80	43	eP	58 17.40	0.5	
	0.9s	7.20nm			4.8mb	
DOU	84.87	39	Pc	58 18.30	1.2	
BGF	84.88	43	eP	58 17.70	0.4	
	0.8s	8.00nm			4.9mb	
AVF	85.14	43	eP	58 18.50	0.0	
	0.8s	5.30nm			4.8mb	
SSF	85.15	42	eP	58 19.00	0.4	
	1.0s	8.00nm			4.8mb	
LOR	85.32	42	eP	58 19.70	0.2	
	0.8s	13.40nm			5.2mb	
ENN	85.45	38	iPc	58 20.80	0.8	
	0.9s	17.00nm			5.2mb	
		e		58 30.50		
LBF	85.48	42	eP	58 20.50	0.2	
	0.8s	5.30nm			4.8mb	
WTS	85.55	37	eP	58 21.50	1.1	
	0.9s	5.00nm			4.7mb	
		e		58 31.50		
HAU	86.66	41	eP	58 26.60	0.5	
	0.6s	3.60nm			4.8mb	
BSF	87.00	41	eP	58 27.90	0.0	
SOD	87.14	19	eP	58 36.00	7.9X	
SUF	89.75	23	eP	58 40.00	-0.5	
BRG	90.10	36	e(P)	58 42.80	0.4	
KHC	90.64	38	P	58 45.00	0.0	
PRU	90.83	37	eP	58 45.80	0.0	
WB5	131.40	258	ePKP	05 02.50	6.7X	
WRA	131.43	257	PKPd	05 02.60	6.7X	
	1.0s	3.90nm				
POO	144.34	15	iPKP	05 17.80	-1.8	
HYB	146.36	8	ePKPc	05 22.60	-0.4	
	1.0s	60.00nm				
NNT	147.15	329	iPKPc	05 25.50	1.2	
GBA	149.91	11	PKPd	05 28.00	-0.6	
	0.5s	1.70nm				

S.D. = 1.0 on 100 of 113 obs.

SEP 24, 1989 18h 45m 49.09± 0.41s
42.530 N ± 3.6km 12.544 E ± 4.4km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

RMP	0.73	171	P	46 03.70	0.3
			eSg	46 14.30	
RDP	0.78	170	P	46 04.40	0.0
			eSg	46 17.00	
CIO	0.80	33	iPgc	46 03.29	-1.4
			iSg	46 16.01	
AZI	0.86	129	P	46 05.50	0.0
SSO	1.00	40	ePg	46 08.10	0.1
			i(Sg)	46 24.64	
ARV	1.01	17	P	46 07.40	-0.8
MAO	1.04	264	P	46 09.10	0.5
SDI	1.25	131	P	46 12.80	0.4
AOI	1.28	37	iPg	46 12.61	-0.3
			iSg	46 33.28	
PGD	1.47	336	P	46 16.00	0.2
SFI	1.48	340	P	46 16.70	1.0
DUI	1.67	121	P	46 17.80	-0.8
BDI	2.09	318	P	46 24.20	-0.4
MME	2.14	322	P	46 26.00	0.5
HVAR	2.94	76	iPn	46 36.70	0.0
BOB	3.17	316	P	46 40.10	0.1
TRI	3.30	15	eP	46 41.30	-0.5
			e	47 18.50	
CEY	3.48	22	eP	46 46.00	1.6
			eSn	47 25.00	
VBY	3.56	32	eP	46 49.60	4.1X
			eSn	47 27.90	
VOY	3.63	15	ePn	46 45.60	-1.0
			eSn	47 28.80	
LJU	3.79	21	e(Pn)	46 49.00	0.2
			eSn	47 33.00	
MDI	3.83	329	P	46 47.80	-1.5
FVI	4.07	2	P	46 51.70	-0.9
			(Sn)	47 37.70	
PTJ	4.17	35	eP	47 08.10	13.9X
KBA	4.58	7	eP	47 01.50	1.3
			e	47 54.00	
			e	48 22.00	
BNI	4.94	303	P	47 03.70	-1.5
KHC	6.64	6	eP	47 31.40	2.3
MOX	8.14	356	e(P)	47 51.00	0.9
EPF	8.99	277	Pg	48 11.20	9.3X
			Sg	48 14.00	

S.D. = 1.0 on 26 of 29 obs.

SEP 24, 1989 19h 29m 56.78± 0.28s
44.573 N ± 2.0km 6.862 E ± 3.2km
DEPTH = 11.5 ± 3.2 km
FRANCE (538)
ML 2.2 (GEN).

PZZ	0.18	112	P	30 01.75	0.6
			S	30 04.90	
DOI	0.28	104	P	30 03.10	0.2
			eSg	30 07.50	
RRL	0.35	351	P	30 04.25	0.1
			S	30 09.61	
STV	0.47	135	P	30 06.40	0.0
			S	30 12.33	
BNI	0.50	345	P	30 06.70	-0.3
			eSg	30 13.70	
ENR	0.53	131	P	30 07.35	-0.2
			S	30 14.79	
TOUF	0.62	153	Pg	30 09.19	-0.1
AUTN	0.71	145	Pg	30 10.72	0.0
MVIF	0.71	163	Pg	30 10.79	0.1
AURF	0.76	154	Pg	30 11.72	0.1
SAOF	0.77	139	Pg	30 11.96	0.3
			Sg	30 22.42	
ROB	0.77	111	P	30 12.14	0.4
			S	30 22.81	
SBF	0.82	150	Pg	30 12.60	0.0
			Sg	30 24.70	
LSD	0.91	13	P	30 14.47	0.3
			S	30 26.84	
LPG	0.93	355	Pg	30 14.90	0.3
			Sg	30 27.80	
LPL	0.95	354	Pg	30 15.20	0.4
IMI	0.99	132	P	30 15.71	0.2
			S	30 28.86	
FRF	1.02	189	Pg	30 15.90	-0.1
			Sg	30 28.60	
FIN	1.03	110	P	30 16.25	0.1
			S	30 29.54	
LRG	1.18	198	Pn	30 19.60	1.0
			Sg	30 34.40	
PCP	1.20	91	P	30 19.25	0.1
			S	30 34.80	
LMR	1.27	192	Pg	30 20.50	0.4
			Sg	30 36.70	
BGF	3.45	307	Pn	30 51.20	-0.2
			Pg	31 01.00	

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

? SEP 24, 1989 19h 55m 19.87±10.97s
32.229 S ±78.8km 71.601 W ±46.4km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

ROCH	0.89	146	iPd	55 35.50	-0.8
			iS	55 48.10	
JACH	0.96	118	iPd	55 37.30	0.1
			iS	55 51.30	
LCCH	1.24	179	iPc	55 40.20	-0.8
			iS	55 55.30	
SAN	1.45	147	eP	55 42.50	-1.6
			iS	56 04.20	
TACH	1.53	159	iPd	55 35.50	-9.6X
			iS	55 48.10	
FCH	1.56	135	iPd	55 46.10	0.2
			iS	56 07.20	
PCH	1.66	147	iPd	55 48.10	0.9
			iS	56 10.00	
LNV	1.73	175	iP	55 48.80	0.8
			iS	56 11.10	
CHCH	1.88	155	iP	55 51.40	1.1
			iS	56 16.40	

S.D. = 1.1 on 8 of 9 obs.

SEP 24, 1989 20h 16m 02.83± 0.46s
41.250 N ± 5.1km 1.174 W ± 5.1km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
ML 3.2 (LDG). mbLg 3.1 (MDD).

ETOR	0.79	237	iPgc	16 18.30	0.0
			eSg	16 28.00	
EROO	1.27	109	iPgc	16 25.90	-0.5
			eSg	16 42.20	
EBR	1.33	108	ePg	16 27.00	-0.4
			eSg	16 45.00	
ECHE	1.67	175	ePn	16 33.20	1.0
			eSn	16 53.00	
EPF	2.11	32	Pn	16 39.80	1.2
			Pg	16 43.20	
			Sg	17 10.50	
GUD	2.34	256	iPn	16 42.40	0.3
			eSn	17 10.50	
LPO	3.84	26	Pg	17 02.80	-0.5
			Sn	17 46.60	
EPLA	3.91	254	ePn	17 03.40	-0.9
			eSn	17 49.80	
LFF	3.95	20	Pn	17 04.40	-0.3
			Sn	17 49.60	
CAF	4.37	32	Pn	17 11.20	0.4
			Sn	17 59.00	
LSF	5.37	20	Pn	17 25.40	0.5
			Sn	18 22.40	
BGF	6.05	27	Pn	17 33.60	-0.8
			Sn	18 39.20	

S.D. = 0.8 on 12 of 12 obs.

% SEP 24, 1989 20h 22m 23.30± 1.57s
44.555 N ± 9.8km 6.805 E ±14.9km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

PZZ	0.22	103	P	22 28.58	0.5
			S	22 31.88	
RRL	0.37	358	P	22 31.05	0.2
			S	22 35.86	
STV	0.48	130	P	22 33.30	0.1
			S	22 39.56	
BNI	0.51	350	P	22 33.50	-0.1
			eSg	22 40.40	
ENR	0.55	126	P	22 34.22	-0.2
			S	22 41.40	
ROB	0.81	108	P	22 39.15	0.2
			S	22 49.49	
IMI	1.01	129	P	22 42.63	0.1
			S	22 55.80	
FIN	1.06	108	P	22 43.07	-0.3
			S	22 57.16	
PCP	1.24	90	P	22 46.11	-0.4

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

% SEP 24, 1989 20h 30m 00.46± 2.14s
44.560 N ±13.7km 6.849 E ±22.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ	0.19	107	P	30 05.49	0.8
			S	30 09.00	
RRL	0.36	353	P	30 08.02	0.0
			S	30 13.36	
STV	0.46	133	P	30 09.76	-0.2
			S	30 16.23	
ENR	0.53	129	P	30 11.27	0.1
ROB	0.78	110	P	30 14.90	-0.8
IMI	0.99	131	P	30 19.62	0.3

FIN 1.04 109 P 30 19.82 -0.2
S.D. = 0.6 on 7 of 7 obs.

% SEP 24, 1989 20h 35m 18.96± 2.35s
44.514 N ±10.4km 6.729 E ±18.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ 0.27 92 P 35 25.14 0.5
S 35 28.67
RRL 0.41 6 P 35 27.48 0.1
S 35 32.23
STV 0.51 122 P 35 29.78 0.6
S 35 36.05
ENR 0.57 120 P 35 30.81 0.2
S 35 37.91
ROB 0.85 105 P 35 35.34 0.0
S 35 45.88
IMI 1.03 125 P 35 38.21 -0.3
FIN 1.10 106 P 35 39.03 -0.7
PCP 1.30 88 P 35 42.72 -0.3
S.D. = 0.5 on 8 of 8 obs.

SEP 24, 1989 20h 37m 12.07± 0.57s
6.989 N ± 8.9km 73.123 W ± 8.6km
DEPTH = 175.7 ± 8.8 km
4.8mb (1 obs.)
NORTHERN COLOMBIA (99)

BMG 0.09 30 eP 37 46.00 9.1X
FUQ 1.63 202 eP 37 46.00 0.4
BOG 2.53 202 iPd 37 55.50 -0.2
iS 38 26.00
CEOS 5.16 67 iP 38 28.20 -0.6
iS 39 25.60
MORO 6.12 51 iPd 38 42.20 0.7
GUAC 6.60 61 iP 38 48.00 0.0
UPA 6.65 288 ePd 38 47.90 -0.5
1.0s 56.00nm 4.8mb
PSO 7.12 216 eP 38 56.00 0.9
LLAV 7.14 61 iP 38 54.60 -0.4
eS 40 03.50
ZOBO 23.63 168 eP 42 09.00 -0.3
LPB 23.89 168 eP 42 10.00 -1.6
BAO 33.54 132 eP 43 38.00 0.6
KIC 67.86 86 P 47 55.00 1.0
S.D. = 0.9 on 12 of 13 obs.

? SEP 24, 1989 20h 41m 16.57± 1.42s
44.726 N ±10.9km 7.256 E ±11.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.4 (GEN).

PZZ 0.25 207 P 41 22.00 0.1
S 41 25.18
RRL 0.39 300 P 41 24.57 0.0
S 41 29.80
STV 0.48 174 P 41 26.31 -0.1
S 41 32.67
ROB 0.62 134 P 41 29.08 0.1
S.D. = 0.2 on 4 of 4 obs.

SEP 24, 1989 21h 27m 54.97± 0.24s
41.264 N ± 2.6km 19.483 E ± 2.1km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 4.1 (ATH). Felt (V) at Kryemadh, Karpen, Gose and Qerret; (IV) at Kavajo and Durres.

TIR 0.30 74 iPgd 28 01.50 0.3
LACI 0.41 25 iPgd 28 03.50 0.2
BERA 0.66 148 iPgd 28 08.80 0.7
ULC 0.72 346 ePg 28 10.00 0.8
eSg 28 22.00
SDA 0.75 1 iPgc 28 11.00 1.4
VLO 0.79 179 iPgc 28 13.10 2.7X
PHP 0.84 59 iPgc 28 09.00 -2.1
PUK 0.84 21 iPgc 28 11.00 -0.1
OHR 1.01 98 iPgd 28 13.00 -1.0
iSg 28 27.00
KKS 1.07 40 iPg 28 14.50 -0.6
BDV 1.13 335 iPgd 28 18.10 2.0
eSg 28 35.50
TTG 1.18 352 ePg 28 18.20 1.3
iSg 28 35.60
BCI 1.19 21 iPg 28 17.30 0.3
KBN 1.19 122 iPg 28 18.20 1.0
PVY 1.38 15 ePg 28 20.50 0.2
eSg 28 40.20
HCY 1.39 328 iPgd 28 21.50 1.1
eSg 28 42.00
SRN 1.44 164 iPn 28 22.70 1.7
KEK 1.57 171 iPnd 28 23.90 1.0
NKY 1.59 347 ePn 28 25.30 2.0
eSn 28 47.60
SKO 1.63 64 ePn 28 23.10 -0.7
iPg 28 24.70
iSn 28 46.80
iSg 28 48.00
IVA 1.64 11 ePn 28 25.30 1.3
eSn 28 47.60
BRT 1.77 258 P 28 26.90 1.1
eSn 28 55.20
BRY 1.78 337 ePn 28 28.00 1.9
eSn 28 53.20
KZN 1.98 118 iPbd 28 30.40 1.4
PLE 2.07 358 ePn 28 32.20 2.0
eSn 29 00.00
GRG 2.23 97 ePn 28 33.10 0.6
eSn 28 59.70
LIT 2.57 116 ePn 28 37.80 0.5
eSn 29 08.40
KNT 2.58 91 ePn 28 37.50 0.0
eSn 29 06.70
THE 2.71 102 ePn 28 39.20 -0.2
eSn 29 11.80
KKB 2.77 76 iPc 28 41.00 0.8
TDS 2.89 237 P 28 41.70 -0.1
HVAR 2.96 311 iPn 28 42.40 -0.4
iSn 29 18.80
VTS 3.08 63 iPc 28 45.00 0.3
SRS 3.10 91 ePn 28 44.50 -0.4
PLG 3.14 105 ePn 28 45.50 0.1
MGR 3.19 251 P 28 46.90 0.8
VLS 3.20 164 ePn 28 45.10 -1.2
MMB 3.21 83 ePc 28 47.00 0.6
SGO 3.24 259 P 28 47.00 0.2
PAIG 3.46 111 ePn 28 49.80 -0.2
NEO 3.47 123 ePn 28 49.50 -0.6
OUR 3.54 104 ePn 28 50.70 -0.4
BEO 3.63 11 ePn 28 51.00 -1.3
PGB 3.72 68 iPc 28 54.00 0.2
DUI 3.80 278 P 28 55.50 0.6
RZN 3.95 82 iPc 28 57.00 -0.2
PLD 4.00 76 eP 28 58.00 0.4
SDI 4.28 278 P 29 02.90 1.2
KDZ 4.48 83 iPc 29 04.00 -0.4
ITM 4.50 154 ePn 29 04.10 -0.6
AZI 4.59 281 P 29 06.20 0.2
DIM 4.60 78 eP 29 07.00 0.8
BZS 4.62 19 ePd 29 05.00 -1.4
ATH 4.64 134 ePn 29 06.60 -0.1
AQU 4.67 285 P 29 04.30 -3.0
PVL 4.76 64 iPd 29 07.00 -1.5
GZR 4.78 29 ePd 29 07.50 -1.2
DRA 4.89 44 eP 29 11.00 0.8
AOI 4.92 300 iPn 29 10.00 -0.7
eSn 30 02.22
ALN 4.97 92 ePn 29 11.20 -0.2
CIO 5.09 294 iPn 29 11.98 -1.1
iSn 30 09.40
MNS 5.20 285 P 29 14.60 -0.2
ZAG 5.21 332 iPb 29 27.50 12.7X
iSg 30 45.00
VBY 5.24 325 ePn 29 14.70 -0.5
eSn 30 04.20
DEV 5.24 27 ePc 29 06.50 -8.7X
PTJ 5.29 332 ePn 29 16.60 0.6
ARV 5.33 297 P 29 13.10 -3.5X
JMB 5.44 75 eP 29 17.00 -1.0
MEU 5.46 222 P 29 14.70 -3.7X
eSn 30 16.20
RIY 5.52 319 ePn 29 18.40 -0.7
iSn 30 21.80
CMP 5.70 44 ePc 29 35.00 13.3X
CEY 5.79 322 ePn 29 22.50 -0.5
eSn 30 28.50
LJU 5.97 325 e(Pn) 29 26.00 0.5
e(Sn) 30 33.00
TRI 6.08 319 ePn 29 27.20 0.1
eSn 30 35.80
VOY 6.26 321 ePn 29 28.30 -1.3
eSn 30 38.70
PGD 6.30 297 P 29 29.20 -1.1
MLR 6.32 46 eP 29 31.00 0.3
SRO 6.60 353 e(Pn) 29 54.50 20.1X
i(Sn) 31 47.50
PSZ 6.66 2 eP 29 33.80 -1.5
RBL 6.71 322 P 29 34.60 -1.4
eSn 30 49.40
VAM 6.92 146 ePn 29 38.10 -0.8
VRI 6.99 46 eP 29 40.00 0.2
MME 7.10 297 P 29 41.40 -0.2
ZST 7.13 347 e(Pn) 29 56.00 14.2X
FVI 7.19 320 P 29 41.20 -1.5
CTI 7.42 313 P 29 43.30 -2.7X
BOB 8.14 299 P 29 54.40 -1.7
MDI 8.41 306 P 29 56.30 -3.4X
KHC 8.90 334 P 30 08.50 2.0
PRU 9.38 340 eP 30 19.50 6.4X
LPG 10.19 299 eP 30 20.60 -4.0X
0.6s 5.40nm 5.2mb
MOX 10.86 332 e(P) 30 38.00 4.6X
BSF 11.18 310 eP 30 35.00 -2.9X
LBF 12.52 302 eP 30 51.20 -4.7X
LOR 12.70 303 eP 30 54.90 -3.4X
NUR 19.53 8 eP 32 23.00 -2.3
SUF 21.85 8 eP 32 50.00 0.8
S.D. = 1.1 on 81 of 97 obs.

• SEP 24, 1989 21h 29m 57.68± 2.64s
41.091 N ± 9.3km 19.122 E ±23.8km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 3.0 (SKO).

TIR 0.62 65 iPgd 30 08.80 -1.3
LACI 0.70 39 iPgc 30 11.00 -0.5
BERA 0.74 121 iPgd 30 17.70 5.6X
SDA 0.97 17 ePn 30 23.00 7.0X
PUK 1.11 31 iPgc 30 19.00 0.5
OHR 1.27 89 ePg 30 22.00 0.7
iSg 30 36.00
SRN 1.38 151 iPn 30 22.70 -0.3
SKO 1.95 62 iPg 30 32.00 0.8
iSn 30 53.20
iSg 30 54.70
S.D. = 1.1 on 6 of 8 obs.

? SEP 24, 1989 21h 51m 00.22± 4.34s
44.462 N ±17.4km 6.654 E ±31.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.4 (GEN).

PZZ 0.32 82 P 51 07.19 0.2
S 51 10.99
RRL 0.47 11 P 51 09.86 0.1
S 51 15.30
STV 0.53 114 P 51 11.50 0.6
S 51 18.06
ENR 0.60 113 P 51 12.42 0.0
S 51 18.99
ROB 0.89 100 P 51 16.42 -0.9
S.D. = 0.8 on 5 of 5 obs.

SEP 24, 1989 22h 09m 49.23± 1.03s
25.370 S ± 7.6km 178.380 E ± 5.0km
DEPTH = 570.9 ± 14.0 km
5.0mb (13 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM 11.42 284 iPc 12 23.00 0.7
iS 14 31.20
HBZ 12.19 180 eP 12 28.40 -1.5
KRP 12.75 190 P 12 37.00 1.6
PGZ 15.31 186 eP 13 00.80 0.1
MNG 15.40 188 eP 13 00.10 -1.5
KIW 15.72 190 eP 13 04.40 -0.3
MTW 15.93 188 eP 13 06.30 -0.4
CAW 15.94 189 P 13 06.60 -0.2
WDW 16.10 189 P 13 08.10 -0.3
MRW 16.11 190 eP 13 07.10 -1.3
S 15 47.60
BLW 16.14 188 eP 13 07.70 -1.0
WEL 16.15 190 P 13 10.10 1.2
TCW 16.16 191 P 13 09.10 0.1

24d 22h

			S	15 49.60		
MOW	16.22	188	P	13 10.10	0.6	
			S	15 54.10		
CCW	16.70	191	P	13 14.90	0.7	
MHZ	20.98	198	P	13 53.20	-1.2	
MSZ	21.04	201	eP	13 55.00	0.2	
BRS	23.02	259	iPd	14 13.10	0.2	
COO	23.94	251	iPc	14 22.80	1.6	
RMO	26.64	261	iPc	14 46.10	1.1	
	0.7s	131.00nm		5.7mb		
			eS	20 39.00		
CNB	26.85	241	iPd	14 48.20	1.4	
	0.8s	75.00nm		5.4mb		
CAN	27.14	242	iPc	14 50.60	1.3	
BWA	27.42	244	iPc	14 50.80	-0.9	
CMS	29.20	250	iPc	15 07.60	0.5	
CTA	30.05	273	iPc	15 14.90	0.4	
	0.7s	108.90nm		5.6mb		
			i	16 00.80		
			iS	19 35.00		
			iScP	20 50.10		
OIS	35.94	270	iPc	16 03.20	-0.5	
			eS	21 10.10		
ASPA	40.37	263	iPc	16 39.70	-0.1	
	0.8s	91.00nm		5.4mb		
			iS	22 07.50		
			eScS	25 40.90		
WB5	40.86	268	iPc	16 43.20	-0.5	
			iScP	21 29.20		
			eS	22 13.10		
WRA	40.86	268	Pd	16 43.50	-0.3	
	0.5s	41.00nm		5.2mb		
FORR	44.39	251	iPc	17 11.00	-0.3	
WARB	46.34	257	iPc	17 25.80	-0.6	
	0.4s	25.00nm		5.1mb		
KNA	47.20	272	iPc	17 32.60	-0.4	
	0.8s	119.00nm		5.5mb		
COOL	50.32	250	eP	17 55.00	-1.1	
SBA	52.83	183	Pd	18 16.50	2.9	
KLB	53.07	248	eP	18 15.00	-0.9	
NWAO	53.30	247	eP	18 18.00	0.5	
MBL	53.59	262	iPc	18 18.50	-1.3	
	0.4s	9.00nm		4.5mb		
BAL	54.13	249	eP	18 22.00	-1.4	
MUN	54.30	248	eP	18 24.00	-0.6	
MRWA	55.00	251	eP	18 29.00	-0.5	
SPA	64.78	180	e(P)	19 35.10	1.3	
	1.0s	14.00nm		4.4mb		
SYP	83.43	47	eP	21 19.00	0.6	
PRS	83.62	45	ePd	21 19.60	0.5	
GCC	83.65	44	ePd	21 19.50	0.3	
PCC	83.70	43	ePd	21 19.40	0.0	
SAO	83.84	44	eP	21 19.80	-0.3	
PRI	83.95	45	ePd	21 21.40	0.5	
BRK	84.01	43	eP	21 20.40	-0.5	
LLA	84.06	45	eP	21 21.50	0.2	
MHC	84.07	44	ePd	21 21.80	0.4	
PLM	84.85	49	eP	21 25.00	-0.4	
RVR	84.87	49	eP	21 25.00	-0.2	
SBB	84.96	48	eP	21 25.00	-0.8	
FRI	85.08	45	ePd	21 25.90	-0.3	
ISA	85.10	47	eP	21 27.00	0.6	
CMB	85.28	44	ePd	21 26.90	-0.3	
ORV	85.52	42	ePd	21 28.20	0.0	
WDC	85.53	41	ePd	21 28.50	0.3	
TPC	85.84	49	eP	21 30.00	0.1	
GSC	86.00	48	eP	21 31.00	0.2	
GLA	86.10	51	eP	21 32.00	0.8	
TNP	87.32	45	iP	21 37.10	0.0	
	0.8s	10.29nm		4.6mb		
CHTO	88.82	291	iP	21 46.00	1.8	
	1.0s	2.50nm		4.1mb		
DAU	92.47	46	eP	22 00.00	-0.9	
FBA	93.72	14	eP	22 04.50	-1.2	
	0.8s	3.45nm		4.6mb		
GOL	96.04	49	iP	22 17.00	-0.1	
	0.9s	6.82nm		4.9mb		
SLR	121.56	212	iPdiff	24 07.00	-3.9X	
	1.0s	50.00nm				
			i	25 45.00		
KEV	132.52	347	ePKP	27 50.00	-9.8X	
SUF	138.33	341	ePKP	28 02.00	-8.9X	
NUR	140.51	340	ePKP	28 09.00	-5.9X	
			e	28 15.00		
UPP	143.03	344	iPKP	28 15.30	-3.9X	
NB2	143.28	350	PKP	28 16.30	-3.4X	
	0.6s	19.70nm				
HFS	143.67	347	ePKP	28 17.00	-3.3X	
	0.5s	65.50nm				
VRI	149.45	319	ePKPc	28 35.00	4.9X	
EKA	150.05	2	PKPc	28 35.70	5.0X	
	0.5s	6.40nm				
MLR	150.11	319	ePKP	28 36.00	4.7X	
KRA	150.24	331	ePKP	28 36.40	5.3X	
KSP	151.08	336	ePKP	28 33.00	0.6	
	0.6s	47.00nm				
			id	28 39.00		
			ic	28 49.20		
DMU	151.23	7	ePKP	28 38.30	5.8X	
BCAO	151.58	226	iPKPd	28 41.00	6.7X	
	1.1s	22.00nm				
			i	28 52.90		
			i	30 56.00		
CLL	151.78	340	ePKP	28 33.00	-0.4	
BRG	151.86	339	iPKPd	28 40.70	7.2X	
	0.6s	44.00nm				
			e	30 49.60		
DLE	151.87	6	ePKP	28 39.60	6.2X	
WIT	151.89	349	ePKP	28 41.50	8.1X	
PRU	152.42	337	iPKP	28 41.90	7.6X	
			e	28 54.50		
WTS	152.65	349	ePKP	28 42.00	7.5X	
	0.8s	15.00nm				
KHC	153.48	337	ePKP	28 35.00	-0.9	
			e	28 44.30		

S.D. = 0.9 on 69 of 87 obs.

? SEP 25, 1989 00h 02m 43.59±27.66s
44.182 N ±144.km 7.059 E ±128.km
DEPTH = 5.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN)

STV	0.20	72	P	02 47.61	-0.1	
			S	02 49.56		
ENR	0.26	80	P	02 48.74	-0.2	
			S	02 51.51		
PZZ	0.32	5	P	02 50.17	0.0	
			S	02 53.76		
ROB	0.59	79	P	02 55.81	0.3	
			S	03 01.45		

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

SEP 25, 1989 01h 15m 12.62± 0.75s
41.213 N ± 8.2km 20.837 E ± 6.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 1.5 (SKO)

OHR	0.11	196	iPgc	15 14.90	-0.6	
			iSg	15 17.30		
TIR	0.74	281	ePg	15 26.50	-0.7	
SKO	0.88	31	ePg	15 29.00	-0.6	
			iSg	15 38.50		
LACI	0.95	297	ePg	15 30.50	-0.1	
PUK	1.09	320	ePg	15 34.40	1.3	
SDA	1.28	309	ePg	15 32.00	-4.4X	
KNT	1.56	91	ePn	15 39.50	-0.9	
			eSg	15 59.50		
LIT	1.68	131	ePn	15 43.70	1.5	
			eSg	16 06.50		

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

SEP 25, 1989 01h 33m 12.41± 0.84s
41.682 N ± 7.4km 20.127 E ± 6.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.0 (SKO)

LACI	0.32	262	iPgc	33 17.50	-1.5	
TIR	0.39	210	ePg	33 21.80	1.4	
PUK	0.40	334	iPgc	33 20.80	0.2	
SDA	0.58	306	ePg	33 24.50	0.4	
OHR	0.76	138	ePg	33 26.50	-0.8	
			eSg	33 41.00		
SKO	1.02	73	ePg	33 32.00	0.2	
			iSg	33 49.50		

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

SEP 25, 1989 01h 46m 31.72± 0.83s
33.717 S ± 8.1km 68.615 W ± 6.0km
DEPTH = 52.0 ± 10.5 km
4.5mb (4 obs.)
MENDOZA PROVINCE, ARGENTINA (139)

Felt (III) at Mendozo.

FCH	1.45	285	iPd	46 55.50	-0.8	
PCH	1.59	273	iPd	46 58.00	0.0	
CHCH	1.71	262	iPd	46 59.50	-0.1	
			iS	47 22.00		
SAN	1.73	278	iPd	46 59.80	-0.1	
			iS	47 22.00		
PEL	1.82	288	iPd	47 01.60	0.4	
TACH	1.94	271	iPd	47 02.70	-0.1	
			iS	47 28.00		
JACH	1.95	301	iP	47 03.70	0.6	
			iS	47 28.80		
CFA	2.13	9	iPc	47 06.00	0.5	
ROCH	2.14	290	iPd	47 06.20	0.3	
			iS	47 35.20		
ZON	2.17	359	iPc	47 07.00	0.9	
LNV	2.34	263	iPd	47 07.80	-0.6	
			iS	47 39.30		
IHA	2.62	284	eP	47 12.80	0.3	
			iS	47 48.20		
MRA	2.77	63	iPd	47 15.60	1.1	
CYA	5.79	25	ePc	47 56.00	-1.2	
CCH	16.42	8	P	50 19.50	-0.9	
CNCB	16.85	2	P	50 26.00	-0.1	
LPB	17.12	2	P	50 30.00	0.7	
			eLR	57 08.00		
ARE	17.38	351	eP	50 25.00	-7.4X	
ZOBO	17.38	2	P	50 32.60	-0.1	
	0.9s	22.06nm		4.3mb		
	Z 18s	4.24um		5.7MszX		
			i	50 34.00		
			LR	57 40.00		
PPD	19.19	57	eP	50 52.40	-1.7	
VAO	21.79	66	eP	51 21.40	0.3	
			e	51 23.40		
			e	51 36.90		
			e	58 16.10		
BAO	25.90	51	eP	52 00.00	-0.7	
PDCR	34.15	59	e(P)	53 27.00	13.0X	
SPA	56.46	180	e(P)	56 19.00	8.5X	
	0.9s	8.64nm		4.8mb		
LIC	71.99	69	P	57 53.00	0.8	
KIC	72.30	70	Pd	57 54.90	0.9	
	0.8s	11.50nm		4.9mb		
TNP	84.51	324	eP	59 10.10	9.7X	
	1.0s	2.75nm		4.3mb		

S.D. = 0.8 on 23 of 27 obs.

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* SEP 25, 1989 01h 55m 42.04± 0.90s
18.017 N ± 9.2km 145.382 E ±10.8km
DEPTH = 321.1 ± 10.3 km
4.1mb (6 obs.)
MARIANA ISLANDS (216)

GUMO	4.43	186	eP	56 54.70	0.1	
PJG	4.43	186	eP	56 54.70	0.1	
GUA	4.48	186	eP	56 54.70	-0.4	
	0.4s	54.24nm				
SSE	25.50	305	eP	00 42.50	-1.3	
	1.0s	0.01nm		1.2mb X		
BJI	33.42	317	eP	01 54.00	0.9	
WB5	39.18	197	eP	02 41.10	-0.2	
WRA	39.25	197	Pd	02 41.80	-0.1	
	0.6s	3.00nm		3.8mb		
CD2	39.78	297	eP	02 47.00	0.8	
ASPA	42.92	196	iPc	03 11.90	0.2	
	0.6s	9.00nm		4.2mb		
CHTO	43.97	279	iP	03 20.50	0.4	
	0.6s	1.40nm		3.4mb		
GTA	44.73	308	eP	03 27.00	1.0	
BWA	52.23	177	eP	04 22.70	-0.3	
FBA	64.04	26	eP	05 43.00	-0.8	
	0.8s	3.10nm		4.0mb		
INK	70.12	23	eP	06 20.50	-1.0	
CMB	82.35	53	eP	07 30.00	0.1	
KVN	83.76	51	iP	07 38.20	1.1	
TNP	84.72	52	iP	07 43.00	1.1	
	1.0s	5.25nm		4.3mb		
LRM	85.44	43	eP	07 45.90	0.5	
HFS	92.90	338	ePKP	08 17.50	-2.3	
	1.1s	6.60nm		4.6mb		
ZOBO	147.96	92	PKP	14 53.00	4.0X	
LPB	148.02	93	(PKP)	14 51.00	2.1X	
CNCB	148.17	93	PKP	14 54.20	4.9X	

S.D. = 1.0 on 19 of 22 obs.

• SEP 25, 1989 02h 09m 07.93± 1.40s
23.020 N ±14.6km 94.598 E ±13.4km
DEPTH = 85.3 ± 16.6 km
3.8mb (3 obs.)
BURMA-INDIA BORDER REGION (294)

SHL	3.54	316	iP	10	00.90	-1.0
			iS	10	44.00	
CHG	5.83	135	eP	10	34.50	0.8
BDT	7.08	143	eP	10	50.70	-0.1
HYB	16.05	253	eP	12	52.00	2.0
GBA	18.78	243	Pc	13	21.30	-1.9
	0.5s	2.30nm			3.7mb	
WB5	57.65	135	eP	18	50.50	-1.3
SUF	59.93	330	eP	19	08.00	1.0
HFS	65.82	327	eP	19	46.10	0.1
	0.4s	1.50nm			4.3mb	
NB2	66.96	328	P	19	53.80	0.5
	0.5s	0.50nm			3.7mb	
S.D. = 1.6 on 9 of 9 obs.						

% SEP 25, 1989 02h 12m 53.67± 2.42s
38.274 N ± 9.5km 27.065 E ±26.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.20	51	iPg	12	58.70	0.6
CIN	1.05	129	ePn	13	12.00	-1.5
			iSg	13	31.00	
YER	1.49	139	ePn	13	22.00	1.4
KHL	1.93	88	ePn	13	31.00	4.0X
EDC	2.16	16	ePn	13	29.40	-0.8
BNT	2.18	17	ePn	13	31.00	0.5
KCT	2.21	27	iPn	13	30.70	-0.3
S.D. = 1.4 on 6 of 7 obs.						

? SEP 25, 1989 02h 28m 29.44± 3.29s
46.699 N ±38.9km 5.884 E ±32.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (LDG).

LBF	1.34	283	Pg	28	54.00	-0.2
			Sg	29	12.40	
LPG	1.34	153	Pg	28	54.40	0.0
SMF	1.41	269	Pg	28	55.20	0.1
			Sg	29	14.70	
LOR	1.50	293	Pg	28	56.50	0.1
			Sg	29	16.60	
S.D. = 0.2 on 4 of 4 obs.						

? SEP 25, 1989 02h 28m 44.11± 3.08s
46.705 N ±40.4km 5.876 E ±31.1km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (LDG).

LBF	1.33	283	Pg	29	08.20	-0.5
			Sg	29	26.80	
LPG	1.35	153	Pg	29	09.20	0.0
SMF	1.40	268	Pg	29	10.00	0.3
			Sg	29	29.80	
LOR	1.49	293	Pg	29	11.20	0.2
			Sg	29	32.00	
S.D. = 0.6 on 4 of 4 obs.						

SEP 25, 1989 02h 32m 30.05± 0.43s
3.198 S ± 5.9km 134.577 E ± 7.5km
DEPTH = 33.0km (normal)
4.0mb (4 obs.)
WEST IRIAN REGION (196)

JAY	6.16	84	ePd	34	00.50	-0.7
AAI	6.39	265	ePd	34	05.00	0.6
MTN	10.17	199	iPc	34	56.60	-0.4
			iS	36	51.90	
KNA	13.72	204	eP	35	43.30	-1.4
	0.5s	137.00nm			6.0mb X	
PMG	13.94	117	eP	35	47.00	-0.5
WB5	16.58	181	eP	36	19.60	-2.2
			eS	39	12.50	
WRA	16.65	181	Pd	36	21.60	-1.0
	0.7s	3.00nm			3.5mb	
OIS	17.94	165	eP	36	36.00	-2.7X
			eS	39	51.00	
CTA	20.29	147	iPc	37	08.40	2.5
	0.9s	40.34nm			4.8mb	
ASPA	20.36	182	iPc	37	08.10	1.4
	0.8s	86 00nm			5.2mb X	
			eS	40	48.90	
MBL	22.90	218	eP	37	34.00	1.8
WARB	24.09	198	eP	37	46.50	2.8X
QLP	25.03	159	eP	37	56.00	3.3X
BRS	29.69	146	iP	38	36.00	0.7
SSE	36.41	340	eP	39	33.00	-0.5
	1.1s	0.01nm			1.8mb X	
CHTO	41.33	303	eP	40	14.00	-0.6
	0.9s	2.56nm			4.0mb	
XAN	44.23	329	P	40	37.50	-0.7
CD2	44.87	321	eP	40	43.40	0.0
BJI	46.22	340	eP	40	54.00	0.2
	1.0s	0 01nm			1.8mb X	
MDJ	47.81	355	eP	41	05.50	-0.8
SHL	50.28	307	eP	41	25.50	-0.4
GTA	53.10	326	Pd	41	47.20	0.3
WMQ	62.89	324	eP	42	56.20	0.8
FBA	87.64	25	eP	45	17.00	0.9
	1.0s	1.20nm			4.1mb	
CNCB	150.14	132	PKP	52	23.00	7.5X
LPB	150.23	132	PKP	52	23.00	7.5X
ZOBO	150.37	131	PKP	52	24.00	8.1X
	1.0s	8.00nm				
CCH	151.08	136	PKP	52	26.00	9.4X
S.D. = 1.2 on 21 of 28 obs.						

% SEP 25, 1989 03h 16m 20.72± 3.35s
44.491 N ±15.4km 6.725 E ±26.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.8 (GEN).

PZZ	0.27	87	P	16	26.63	0.2
			S	16	30.22	
RRL	0.43	6	P	16	29.61	0.0
			S	16	34.53	
STV	0.50	120	P	16	31.02	0.2
ENR	0.56	118	P	16	32.27	0.0
			S	16	40.79	
ROB	0.84	103	P	16	36.58	-0.5
			S	16	48.17	
S.D. = 0.4 on 5 of 5 obs.						

? SEP 25, 1989 03h 18m 03.00± 4.29s
44.497 N ±17.3km 6.660 E ±32.7km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.6 (GEN).

PZZ	0.32	88	P	18	09.57	0.0
			S	18	13.15	
RRL	0.43	12	P	18	11.92	0.0
			S	18	17.46	
STV	0.54	118	P	18	14.18	0.3
			S	18	20.95	
ENR	0.61	116	P	18	15.10	-0.2
S.D. = 0.4 on 4 of 4 obs.						

? SEP 25, 1989 04h 05m 04.32±20.61s
33.071 S ±33.4km 73.299 W ±161.km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

IHA	1.39	89	iP	05	29.60	-0.1
			iS	05	40.50	
LNV	1.81	120	iPc	05	35.60	-0.1
			iS	05	57.40	
ROCH	1.92	88	iPc	05	37.50	-0.1
			iS	05	58.30	
TACH	2.06	107	iPd	05	39.10	-0.3
			iS	05	58.00	
PEL	2.19	93	iPc	05	41.50	0.1
			iS	06	04.00	
SAN	2.24	100	iP	05	41.70	-0.4
			iS	06	06.10	
JACH	2.31	81	eP	05	43.20	0.1
CHCH	2.37	112	eP	05	44.20	0.3
PCH	2.39	104	iPd	05	44.60	0.3
FCH	2.53	97	iPd	05	46.80	0.3
S.D. = 0.3 on 10 of 10 obs.						

& SEP 25, 1989 04h 05m 18.83s
60.775 N 144.506 W
DEPTH = 0.0km
SOUTHERN ALASKA (2)
<AGS-P>. ML 3.3 (PMR).

TGL	0.82	91	eP	05	34.00	-1.3
			eS	05	47.20	
TOA	1.56	330	iP	05	45.70	-2.2
CTGM	1.56	82	eP	05	47.20	-0.9
			eS	06	08.80	
PMR	2.39	292	iP	05	57.90	-1.9
PMS	2.51	283	eP	06	00.20	-1.4
PWA	2.74	291	eP	06	02.90	-2.0
SPU	3.70	280	eP	06	16.00	-2.6
			eS	07	00.00	
KDC	5.10	237	eP	06	34.60	-3.7
8 obs. associated						

• SEP 25, 1989 04h 31m 06.57± 0.91s
35.520 N ±11.0km 31.310 E ±11.9km
DEPTH = 96.7 ± 25.7 km
CYPRUS (372)

PPCY	1.06	127	eP	31	28.50	0.8
ELL	1.67	318	ePn	31	36.00	0.7
CSS	1.75	108	eP	31	36.00	-0.2
LFK	1.83	97	iPn	31	36.70	-0.7
BCK	2.02	344	ePn	31	38.00	-1.9
FAM	2.26	103	eP	31	50.00	7.0X
YER	2.93	304	ePn	31	53.00	0.9
KHL	3.14	333	ePn	31	54.00	-1.1
HRI	4.30	120	e(P)	32	11.00	0.0
BBTK	4.47	14	eP	32	15.00	1.7
			eS	32	39.00	
DSI	5.20	138	eP	32	24.00	0.6
			eS	33	23.00	
MBH	6.48	151	eP	32	40.00	-0.9
S.D. = 1.3 on 11 of 12 obs.						

& SEP 25, 1989 04h 59m 38.00s
34.168 N 119.155 W
DEPTH = 6.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 2.8 (PAS). Felt at Oxnard and Ventura.

ABL	0.68	355	eP	59	52.20	0.5
BLP	1.10	291	eP	59	59.00	0.0
BCH	1.27	323	eP	00	02.20	0.2
PEC	1.68	99	eP	00	07.30	-0.8
PLM	2.08	112	eP	00	13.00	-1.0
KVN	4.95	10	eP	00	55.20	0.4
6 obs. associated						

SEP 25, 1989 06h 35m 39.20± 1.14s
44.583 N ± 6.1km 6.855 E ±11.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.1 (GEN).

PZZ	0.19	114	P	35	44.14	0.6
			S	35	47.72	
RRL	0.34	352	P	35	46.49	0.2
			S	35	51.93	
STV	0.48	135	P	35	48.75	-0.2
			S	35	55.62	
ENR	0.54	131	P	35	49.67	-0.5
			S	35	57.88	
ROB	0.78	111	P	35	54.39	-0.1
			S	36	04.89	
SBF	0.83	150	Pg	35	55.60	0.3
			Sg	36	07.50	
LSD	0.90	14	P	35	56.34	-0.3
			S	36	08.34	
IMI	1.00	132	P	35	58.32	0.1
			S	36	11.66	
FIN	1.04	111	P	35	58.59	-0.3
			S	36	11.97	
PCP	1.21	91	P	36	01.98	0.2
S.D. = 0.4 on 10 of 10 obs.						

SEP 25, 1989 07h 31m 53.98± 0.35s
44.577 N ± 2.5km 6.873 E ± 4.0km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.5 (GEN).

PZZ	0.18	114	P	31	58.76	0.7
			S	32	02.45	
RRL	0.35	350	P	32	01.53	0.3

25d 07h

		S	32 06.66			
STV	0.46	136 P	32 03.17	-0.3		
		S	32 10.14			
BNI	0.50	344 P	32 03.80	-0.3		
		eSg	32 10.50			
ENR	0.53	132 P	32 04.09	-0.6		
		S	32 11.78			
ROB	0.77	111 P	32 08.91	-0.1		
		S	32 19.99			
SBF	0.82	150 Pg	32 10.40	0.5		
		Sg	32 22.00			
LSD	0.90	13 P	32 11.58	0.1		
		S	32 23.37			
LPG	0.92	355 Pg	32 11.60	-0.3		
		Sg	32 24.40			
LPL	0.94	354 Pg	32 12.20	0.1		
IMI	0.99	132 P	32 12.71	-0.1		
		S	32 25.12			
FIN	1.03	111 P	32 13.12	-0.3		
		S	32 26.04			
FRF	1.03	189 Pg	32 13.00	-0.4		
		Sg	32 26.00			
LRG	1.18	198 Pn	32 16.40	0.4		
		Sg	32 32.60			
PCP	1.20	91 P	32 16.50	0.2		
		S	32 31.68			
LMR	1.27	192 Pg	32 17.60	0.0		
		Sg	32 34.00			

S.D. = 0.4 on 16 of 16 obs.

SEP 25, 1989 07h 35m 46.26± 0.49s
36.868 N ± 4.2km 21.497 E ± 2.6km
DEPTH = 45.7 ± 5.8 km
4.2mb (18 obs.)
SOUTHERN GREECE (368)
Felt in the Pilos oreo.

VLS	1.49	331 ePb	36 12.90	1.9		
ATH	2.08	57 ePb	36 20.40	1.0		
VAM	2.63	123 ePn	36 28.00	0.8		
NEO	2.79	29 ePn	36 30.60	1.1		
KEK	3.14	335 ePn	36 36.00	1.6		
SRN	3.23	339 iPn	36 37.80	2.1		
APE	3.24	85 ePn	36 35.00	-0.9		
LIT	3.32	13 ePnd	36 38.00	1.0		
		eSn	37 16.20			
LSK	3.35	348 iPnd	36 39.30	1.8		
KZN	3.44	3 ePn	36 40.20	1.5		
PAIG	3.50	29 ePn	36 40.70	1.2		
		eSn	37 21.70			
NPS	3.70	114 ePn	36 43.00	0.6		
KBN	3.79	352 iPnc	36 45.70	2.1		
PLG	3.82	23 ePn	36 44.50	0.4		
THE	3.93	17 ePn	36 46.50	0.9		
		eSn	37 30.00			
OUR	3.97	29 ePn	36 47.10	0.9		
BERA	4.02	343 ePn	36 47.80	1.0		
GRG	4.14	10 ePnc	36 49.60	0.9		
		eSn	37 35.50			
OHR	4.27	353 iPnd	36 51.60	1.1		
KNT	4.42	14 ePnc	36 53.50	0.9		
		eSn	37 43.80			
PRK	4.45	56 ePn	36 52.30	-0.7		
SRS	4.55	20 ePnd	36 54.90	0.6		
		eSn	37 46.80			
TIR	4.65	345 ePn	36 56.00	0.3		
KAP	4.78	104 ePn	36 56.80	-0.7		
IZM	4.82	70 iP	36 56.70	-1.6		
PHP	4.88	351 ePn	37 00.50	1.5		
MSI	4.91	288 P	36 58.90	-0.5		
TDS	4.92	306 P	36 59.30	-0.3		
MMB	5.02	19 iPd	37 01.00	0.0		
SKO	5.10	360 iPn	37 02.00	0.0		
Z	10s	2.67um				
		iSn	37 57.00			
		LR	38 14.00			
KKB	5.14	13 iP	37 03.00	0.3		
BRT	5.22	321 Pc	37 03.60	-0.2		
		eSn	37 57.90			
MEU	5.26	274 P	37 03.40	-1.1		
		eSn	38 00.30			
PUK	5.31	347 ePn	37 05.00	-0.1		
ALN	5.36	40 ePn	37 04.80	-1.0		
SDA	5.37	344 ePn	37 05.00	-0.9		
ULC	5.38	342 ePn	37 05.20	-0.9		
		eSn	38 03.50			
RZN	5.42	26 iPd	37 07.00	0.2		
YER	5.44	85 eP	37 07.90	0.9		
MNO	5.52	283 P	37 07.40	-0.9		
BCI	5.60	349 iPnc	37 09.40	0.2		
KDZ	5.66	31 eP	37 10.00	0.0		
MGR	5.69	307 P	37 10.40	-0.1		
PLD	5.79	24 eP	37 13.00	1.2		
BDV	5.79	340 ePn	37 10.20	-1.6		
		eSn	38 13.50			
TTG	5.82	343 ePn	37 11.40	-0.8		
		eSn	38 14.50			
VTS	5.87	12 iPd	37 14.00	1.0		
MFT	5.97	47 eP	37 14.20	-0.3		
HCY	6.03	338 ePn	37 13.80	-1.4		
		eSn	38 20.00			
GIB	6.05	283 P	37 15.70	0.1		
EDC	6.08	53 eP	37 15.40	-0.4		
SGO	6.08	309 P	37 16.30	0.4		
NKY	6.24	343 ePn	37 16.50	-1.7		
		eSn	38 25.00			
FAI	6.27	276 P	37 18.70	0.2		
MCT	6.32	279 P	37 18.00	-1.4		
KCT	6.35	56 iP	37 18.70	-1.0		
BRY	6.44	340 ePn	37 19.20	-1.8		
		eSn	38 29.50			
KHL	6.54	75 eP	37 22.80	0.4		
KSL	6.56	94 ePn	37 22.50	-0.1		
ELL	6.75	89 eP	37 25.00	-0.4		
USI	6.84	288 P	37 24.30	-2.2		
PVL	6.99	24 iPd	37 28.00	-0.6		
YLV	7.18	57 iP	37 30.70	-0.7		
ITU	7.22	52 eP	37 41.00	9.1X		
BCK	7.28	83 iP	37 34.40	1.5		
HVAR	7.40	330 iPn	37 32.00	-2.3		
		iSn	38 49.50			
HRT	7.50	56 eP	37 35.20	-2.6		
SDI	7.67	311 P	37 37.10	-1.1		
AZI	8.06	312 P	37 43.00	-0.6		
BUC1	8.23	23 eP	38 28.00	42.2X		
AQU	8.31	314 P	37 47.10	0.1		
BZS	8.74	1 eP	37 51.50	-1.4		
MNS	8.75	312 P	37 51.90	-1.2		
CMP	8.81	17 ePc	38 01.00	7.2X		
MLR	9.24	20 eP	38 00.00	0.1		
ARV	9.31	318 P	37 59.90	-0.9		
VBY	9.82	333 ePn	38 06.10	-1.7		
		eSn	39 49.20			
LFK	9.87	96 eP	37 52.00	-16.6X		
PTJ	9.93	337 e(P)	38 07.60	-1.8		
RIY	10.02	330 iPn	38 10.70	0.3		
		iSn	39 57.00			
SFI	10.18	317 P	38 11.00	-1.6		
PGD	10.22	316 P	38 12.20	-1.2		
CEY	10.33	331 ePn	38 15.90	1.2		
		eSn	40 04.00			
LJU	10.55	333 e(P)	38 17.50	-0.2		
		eS	40 10.00			
TRI	10.57	329 e(Pn)	38 16.50	-1.5		
		i(Sg)	40 08.30			
VOY	10.78	330 eP	38 19.20	-1.8		
		eS	40 12.60			
MME	11.00	315 P	38 22.70	-1.3		
FVI	11.69	329 P	38 32.50	-0.6		
CTI	11.77	324 P	38 33.50	-0.8		
		eSn	40 35.40			
BOB	12.06	315 P	38 36.00	-2.1		
MDI	12.55	319 P	38 42.60	-1.9		
DSI	12.64	111 e(P)	38 40.00	-5.9X		
SBF	12.79	307 eP	38 48.60	0.7		
	1.0s	24.00nm		5.1mb X		
PRNI	12.99	116 eP	38 45.00	-5.6X		
KHC	13.55	337 P	39 05.00	7.2X		
		e	41 21.50			
LPG	14.04	312 eP	39 07.60	3.0X		
	1.0s	4.00nm		4.1mb		
PRU	14.04	341 eP	39 06.00	1.8		
		e	39 23.30			
KSP	14.46	347 eP	39 17.00	7.3X		
		e	41 42.20			
BRG	15.01	341 eP	39 26.20	9.4X		
	1.2s	12.00nm		4.0mb		
BSF	15.41	320 eP	39 24.20	2.1		
	0.8s	10.70nm		4.1mb		
MOX	15.49	336 e(P)	39 35.00	11.9X		
CDF	15.55	322 eP	39 25.40	1.5		
	0.8s	5.30nm		3.8mb		
CLL	15.66	340 eP	39 29.00	3.8X		
	1.7s	24.00nm		4.1mb		
		e	39 41.00			
		i	41 55.60			
HAU	15.75	320 eP	39 27.60	1.2		
	1.0s	13.60nm		4.1mb		
LBF	16.46	313 eP	39 37.40	1.9		
	0.8s	5.30nm		3.7mb		
SSF	16.78	313 eP	39 41.80	2.4		
	1.0s	10.00nm		3.9mb		
TCF	17.19	309 eP	39 44.60	0.0		
	1.0s	12.00nm		4.0mb		
DOU	17.98	323 P	39 53.50	-0.8		
LDF	19.66	313 eP	40 15.20	1.1		
	0.8s	5.30nm		3.9mb		
NKM	21.75	274 eP	40 38.00	2.4		
IFR	21.99	269 iP	40 43.00	4.8X		
UPP	23.14	355 iP	40 49.00	0.0		
NUR	23.75	4 iP	40 54.90	0.0		
	0.8s	26.40nm		4.8mb		
HFS	23.82	350 eP	40 56.00	0.4		
	0.4s	13.30nm		4.8mb		
Z	15s	0.36um		4.0MszX		
		LR	51 29.00			
AVE	23.88	270 eP	40 45.00	-11.5X		
EKA	24.94	326 P	41 08.00	1.5		
	1.2s	10.80nm		4.3mb		
NB2	25.05	348 P	41 07.30	-0.3		
	0.6s	4.70nm		4.2mb		
SUF	26.04	5 iP	41 16.80	0.2		
	0.4s	6.40nm		4.5mb		
MAIO	30.39	79 eP	41 55.00	-1.2		
BCAO	32.39	186 iPd	42 15.00	1.1		
	0.7s	9.00nm		4.7mb		
		i	44 40.50			
TIC	38.60	225 P	43 08.92	2.2		
	0.6s	4.50nm		4.5mb		
KIC	38.68	225 P	43 08.44	1.1		
LIC	38.95	225 P	43 10.82	1.2		
NDI	46.99	83 iPd	44 15.00	0.3		
WMO	49.73	60 P	44 35.50	-0.4		
GBA	54.81	100 Pd	45 12.40	-1.7		
	0.7s	11.60nm		5.0mb		
GTA	59.77	61 eP	45 47.40	-1.6		
CD2	66.54	68 iPc	46 33.30	-0.4		
XAN	68.73	63 Pd	46 46.60	-0.9		
CHG	69.11	82 eP	46 49.00	-0.9		
INK	73.48	351 eP	47 16.00	0.7		
CN2	74.21	47 Pd	47 19.00	-1.0		

S.D. = 1.2 on 118 of 132 obs.

SEP 25, 1989 07h 38m 11.86± 0.57s
36.829 N ± 5.2km 21.497 E ± 3.7km
DEPTH = 54.6 ± 6.3 km
4.6mb (5 obs.)
SOUTHERN GREECE (368)
MD 4.4 (ATH).

VLI	1.16	95 ePn	38 32.00	-0.1		
VLS	1.53	332 ePn	38 39.00	1.8		
ATH	2.10	56 ePn	38 46.00	0.7		
AGG	2.29	17 ePn	38 50.50	2.6X		
VAM	2.61	122 ePn	38 52.70	0.3		
NEO	2.82	28 ePn	38 56.00	0.5		
KEK	3.17	336 ePn	39 00.00	-0.5		
APE	3.24	85 ePn	39 00.00	-1.5		
LIT	3.36	13 ePn	39 04.50	1.4		
KZN	3.48	3 ePn	39 06.00	1.2		
PAIG	3.54	28 ePn	39 05.90	0.3		
		eSn	39 46.50			
PLG	3.85	23 ePn	39 09.40	-0.7		
THE	3.97	16 ePn	39 10.60	-1.0		
		eSn	39 56.30			
OUR	4.01	28 ePn	39 12.50	0.4		
GRG	4.18	9 ePn	39 15.50	0.8		
OHR	4.31	353 ePn	39 17.00	0.5		
SMG	4.35	77 ePn	39 20.00	3.0X		
KNT	4.46	14 ePn	39 19.40	0.8		
		eSn	40 08.90			
SRS	4.58	20 ePn	39 20.20	-0.1		
		eSn	40 12.40			
KAP	4.77	104 ePn	39 23.00	0.1		
TDS	4.95	306 P	39 26.20	0.7		
SKO	5.14	360 ePn	39 28.00	-0.1		
		iSn	40 23.50			
		LR	40 36.00			
BRT	5.25	322 P	39 29.50	-0.2		
		eSn	40 26.10			
MEU	5.27	275 P	39 28.70	-1.3		

			eSn	40	24.90	
ALN	5.39	40	ePn	39	31.70	0.0
MGR	5.71	307	P	39	36.10	-0.1
SGO	6.11	309	P	39	41.90	0.3
KHL	6.55	74	eP	39	48.00	0.1
KSL	6.55	94	ePn	39	47.50	-0.4
USI	6.85	288	P	39	49.60	-2.5
SDI	7.69	312	P	40	02.60	-1.3
MNS	8.78	312	P	40	17.90	-0.9
VOY	10.82	331	e(P)	40	44.10	-2.6
			eS	42	38.40	
DOU	18.01	323	P	42	21.50	1.8
UPP	23.18	355	iP	43	14.10	0.0
NUR	23.78	4	iP	43	19.80	-0.2
	0.8s		32.30nm			4.9mb
HFS	23.86	350	eP	43	20.80	0.1
	Z 15s		0.36um			4.0MszX
			LR	51	33.00	
EKA	24.98	326	P	43	30.00	-1.5
NB2	25.09	348	P	43	32.70	0.0
	0.7s		11.80nm			4.5mb
SUF	26.08	5	iP	43	42.00	0.3
	0.5s		10.30nm			4.6mb
MAIO	30.39	79	eP	44	20.00	-1.0
SOD	30.73	4	eP	44	25.00	1.5
KEV	33.12	4	eP	44	44.00	-0.3
TIC	38.57	225	P	45	32.86	1.7
KIC	38.65	225	P	45	33.58	1.8
	0.8s		5.00nm			4.5mb
LIC	38.92	225	Pc	45	36.08	2.0
	0.6s		6.50nm			4.6mb
NDI	47.00	83	iPd	46	40.00	0.6
GKN	53.18	80	P	47	25.92	-0.9
DMN	53.73	80	P	47	30.28	-0.7
PKI	53.98	80	P	47	31.92	-1.0
GUN	54.20	80	P	47	33.40	-1.2
	0.4s		12.00nm			5.2mb X
GBA	54.80	100	P	47	36.00	-2.6X
	S.D. = 1.1		on	49	of 52	obs.

? SEP 25, 1989 08h 49m 21.62± 1.35s
44.430 N ±11.4km 7.479 E ± 7.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

ENR	0.21	192	P	49	26.24	0.0
			S	49	28.49	
STV	0.22	211	P	49	26.34	0.0
			S	49	28.59	
PZZ	0.28	286	P	49	27.57	0.0
			S	49	31.77	
ROB	0.31	116	P	49	28.13	0.0
	S.D. = 0.0		on	4	of 4	obs.

% SEP 25, 1989 09h 27m 58.32± 0.80s
44.228 N ±12.6km 7.437 E ± 4.1km
DEPTH = 5.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.0 (GEN).

ENR	0.01	262	P	27	59.35	-0.1
			S	28	00.48	
STV	0.08	281	P	28	00.38	0.1
			S	28	01.61	
ROB	0.32	78	P	28	05.07	0.3
			S	28	11.01	
PZZ	0.37	319	P	28	05.71	0.0
			S	28	09.91	
FIN	0.55	92	P	28	09.35	-0.1
			S	28	17.19	
PCP	0.85	68	P	28	15.04	-0.2
			S	28	26.73	
	S.D. = 0.2		on	6	of 6	obs.

% SEP 25, 1989 09h 57m 13.45± 2.51s
44.524 N ±11.0km 6.726 E ±21.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ	0.27	94	P	57	19.57	0.4
			S	57	23.16	
RRL	0.40	6	P	57	22.14	0.5
			S	57	27.67	
STV	0.51	123	P	57	24.19	0.3
			S	57	30.03	
ENR	0.58	121	P	57	25.31	0.0
			S	57	33.01	
ROB	0.85	105	P	57	29.42	-0.5
			S	57	40.29	
LSD	0.98	18	P	57	31.78	-0.5
			S	57	44.80	
IMI	1.04	126	P	57	33.01	-0.1
			S	57	47.36	
FIN	1.11	106	P	57	34.13	-0.2
			S	57	49.23	
	S.D. = 0.4		on	8	of 8	obs.

? SEP 25, 1989 10h 08m 02.22± 2.88s
44.580 N ±24.0km 6.885 E ±39.5km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ	0.17	116	P	08	06.31	0.1
			S	08	09.90	
RRL	0.35	348	P	08	09.49	0.0
			S	08	14.41	
STV	0.46	137	P	08	11.95	0.3
			S	08	17.90	
ENR	0.52	132	P	08	12.36	-0.4
			S	08	19.44	
	S.D. = 0.6		on	4	of 4	obs.

? SEP 25, 1989 11h 05m 26.92± 3.54s
44.617 N ±40.5km 6.908 E ±69.6km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.9 (GEN).

PZZ	0.18	129	P	05	30.63	-0.4
			S	05	34.22	
RRL	0.32	344	P	05	33.60	0.0
			S	05	38.73	
STV	0.48	141	P	05	36.27	-0.4
			S	05	42.32	
ENR	0.54	137	P	05	38.52	0.7
			S	05	44.47	
	S.D. = 0.9		on	4	of 4	obs.

SEP 25, 1989 11h 14m 07.70± 0.30s
44.571 N ± 2.6km 6.888 E ± 4.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.9 (LDG).

DOI	0.26	105	P	14	13.80	0.5
			eSg	14	18.20	
BNI	0.50	343	P	14	17.30	-0.7
			eSg	14	23.20	
TOUF	0.61	155	Pg	14	19.99	-0.2
AUTN	0.69	146	Pg	14	21.58	0.0
			Sg	14	31.24	
MVIF	0.70	164	Pg	14	21.38	-0.3
			Sg	14	30.74	
AURF	0.75	155	Pg	14	22.57	0.1
			Sg	14	32.54	
SAOF	0.76	140	Pg	14	22.59	0.1
			Sg	14	33.06	
SBF	0.81	151	Pg	14	23.50	0.0
			Sg	14	35.40	
CALN	0.82	180	Pg	14	23.61	-0.1
			Sg	14	34.19	
REVF	0.90	157	Pg	14	25.37	0.4
LPG	0.93	354	Pg	14	25.60	-0.1
			Sg	14	37.80	
LPL	0.95	353	Pg	14	26.00	0.0
FRF	1.03	190	Pg	14	26.90	-0.2
			Sg	14	41.60	
LRG	1.18	199	Pn	14	29.40	-0.3
			Sg	14	46.00	
LMR	1.27	193	Pg	14	31.50	0.3
			Sg	14	47.20	
CVF	2.47	144	Pn	14	48.18	-0.4
MAF	3.46	300	Pn	15	03.60	0.9
			Pg	15	14.00	
BGF	3.46	306	Pn	15	02.80	0.1
			Pg	15	13.20	
	S.D. = 0.4		on	18	of 18	obs.

• SEP 25, 1989 12h 15m 03.59± 1.19s
39.579 N ±16.8km 119.108 W ± 9.5km
DEPTH = 5.0km (geophysicist)
NEVADA (37)
ML 2.7 (BRK).

KVN	0.94	124	iPc	15	21.70	-0.5
CMB	1.84	213	ePd	15	35.90	-0.2
			iS	15	59.20	
ORV	1.85	270	ePc	15	36.40	0.2
			eS	15	59.60	
MIN	2.07	293	eP	15	39.40	-0.1
MIN	2.07	293	iPd	15	41.60	2.1X
TNP	2.10	135	eP	15	40.70	0.6
FRI	2.63	191	ePc	15	51.90	4.5X
WDC	2.82	292	ePd	15	54.60	4.5X
	S.D. = 0.6		on	5	of 8	obs.

% SEP 25, 1989 12h 54m 33.08± 1.19s
37.029 N ±16.0km 28.847 E ± 7.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

YER	0.46	283	ePg	54	42.70	0.2
			eSg	54	56.00	
CIN	0.83	313	ePg	54	49.00	-0.1
			iSg	55	05.00	
ELL	0.90	108	iPn	54	49.60	-0.7
KHL	1.40	22	ePn	54	58.00	-0.7
BCK	1.46	72	iPn	55	00.80	1.3
	S.D. = 1.2		on	5	of 5	obs.

& SEP 25, 1989 13h 40m 33.20s
40.410 N 124.437 W
DEPTH = 24.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.4 (BRK).

FHC	0.52	41	iPd	40	42.70	-1.0
			i	40	45.70	
			iS	40	50.50	
WDC	1.46	83	iPc	40	55.80	-2.4
			iS	41	12.20	
LTCM	1.78	96	eP	40	58.00	-4.9
LBFM	2.15	63	eP	41	07.00	-1.4
MIN	2.16	91	ePc	41	05.50	-3.1
			i	41	07.30	
			eS	41	31.20	
ORV	2.41	110	eP	41	08.80	-3.1
			eS	41	36.50	
ARN	3.80	143	eP	41	29.50	-2.2
GCC	3.88	150	ePc	41	30.90	-1.8
SAO	4.33	146	eP	41	37.80	-1.3
KVN	5.07	103	eP	41	46.30	-3.5
	10 obs. ossociated					

% SEP 25, 1989 14h 05m 11.64± 2.14s
40.233 N ±26.1km 28.152 E ± 6.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KCT	0.16	84	iPg	05	14.70	-0.6
BNT	0.22	305	iPg	05	15.70	-0.6
EDC	0.25	297	iPg	05	16.40	-0.5
			iSg	05	21.40	
MFT	0.86	310	iPg	05	29.70	1.4
			iSg	05	43.70	
YLV	0.99	70	iPn	05	30.70	0.2
ISK	1.08	39	ePn	05	31.00	-0.9
HRT	1.30	63	ePn	05	36.80	1.1
	S.D. = 1.1		on	7	of 7	obs.

• SEP 25, 1989 14h 10m 22.29± 1.05s
9.512 S ±12.1km 154.108 E ±10.4km
DEPTH = 33.0km (normol)
4.6mb (2 obs.)
DENTRECASTEAUX ISLANDS REGION (194)

PMG	6.86	270	eP	12	04.00	0.8
CTA	12.96	215	iPd	13	38.50	11.6X
	1.0s		32.50nm			
DZM	17.21	138	iPc	14	22.80	0.8
RMQ	17.63	196	eP	14	27.40	0.3
	0.9s		60.00nm			4.7mb
QIS	17.78	230	eP	14	30.10	1.1
BRS	17.83	184	e(P)	14	28.00	-1.6
QLP	19.38	208	iPc	14	49.10	0.7
WB5	21.67	239	eP	15	11.60	-0.7
MTN	22.78	260	eP	15	23.00	-0.3
CMS	23.18	198	eP	15	27.20	0.2

25d 14h

BWA 25.34 191 eP 15 47.10 -0.8
KNA 25.48 253 eP 15 49.30 0.0
CAN 26.11 190 eP 15 51.00 -4.1X
CHTO 61.24 298 eP 20 35.80 -1.1
1.0s 3.00nm 4.4mb
BAO 146.78 139 ePKP 30 02.70 0.8
S.D. = 0.9 on 13 of 15 obs.

SEP 25, 1989 14h 17m 47.08± 0.09s
20.355 S ± 2.9km 169.277 E ± 2.6km
DEPTH = 33.9km (geophysicist)
6.1mb (46 obs.) 6.3Msz (24 obs.)
VANUATU ISLANDS (186)
Ms 6.4 (BRK), 6.1 (PAS). Depth from broodbond displacement seismograms.
FAULT PLANE SOLUTION: P-Woves
NP1:Strike=156 Dip=50 Slip= 90
NP2: 336 40 90
Principal Axes:
T Plg=85 Azm= 66
P 5 246
Comment: The focal mechanism is moderately well controlled and corresponds to reverse faulting. The preferred fault plane is NP2.
RADIATED ENERGY
No. of sto: 10 Focal mech. F
Energy 0.5±0.1•10••14 Nm
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.8.: 16S, 45C M.W.: 12S, 28C
Centroid Location:
Origin Time 14:17:58.8 0.2
Lat 20.52S 0.02 Lon 169.00E 0.02
Dep 54.4 0.8 Half-duration 6.5
Moment Tensor; Scale 10••18 Nm
Mrr= 5.24 0.08 Mtt=-0.74 0.06
Mff=-4.51 0.07 Mrt= 0.67 0.10
Mrf=-1.98 0.11 Mtf= 2.16 0.06
Principol Axes:
T Val= 5.64 Plg=79 Azm= 77
N 0.24 2 336
P -5.88 11 246
Best Double Couple:Mo=5.8•10••18
NP1:Strike=333 Dip=34 Slip= 86
NP2: 158 56 93

PVC 2.76 341 iPd 18 33.50 3.6X
iS 19 07.00
DZM 3.15 237 iPd 18 33.30 -2.2
NDF 8.15 73 eP 19 50.60 4.6X
SGE 8.63 73 eP 19 58.00 5.2X
SVA 8.95 77 iPd 20 01.50 4.4
VUN 8.99 76 eP 20 00.50 2.8X
eS 20 42.00
HNR 14.11 319 eP 21 10.00 3.3X
eS 23 53.00
SVO 14.41 319 eP 21 15.00 4.3X
eS 24 04.00
BRS 16.63 242 iPd- 21 40.90 1.6
i 21 44.10
i 21 52.00
i 22 11.00
e 23 06.00
e 23 38.00
eS 24 08.00
e(SS) 24 43.00
e 25 13.00
ePcP 26 25.00
iScP 30 01.80
eTT 34 08.00
KRP 18.33 164 P 22 03.50 3.1X
COO 18.69 234 eP 22 08.00 3.1X
e 30 06.50
HBZ 18.89 157 eP 22 0B.70 1.5
AFI 19.20 73 eP 22 09.99 -1.1
eS 25 42.12
RATZ 19.28 164 eP 22 13.20 1.2
HATZ 19.39 164 P 22 14.70 1.6
KETZ 19.47 165 P 22 15.90 1.7
WHH 19.49 163 P 22 14.40 0.1
RMQ 19.79 248 eP 22 18.60 1.1
e(S) 26 15.40
e 30 12.B0
e 34 24.10

MOH 19.91 162 P 22 18.90 0.2
MNG 20.88 167 P 22 27.40 -1.4
0.6s 251.00nm 5.8mb
S 26 24.40
RIV 20.94 226 eP 22 34.20 4.8X
Z 22s 29.56um 5.6Msz
eS 26 33.20
KIW 21.00 168 eP 22 29.60 -0.4
PGZ 21.06 165 P 22 28.90 -1.7
0.9s 933.00nm 6.2mb
TCW 21.22 170 eP 22 31.90 -0.3
CAW 21.27 168 P 22 32.00 -0.7
MRW 21.32 169 eP 22 32.50 -0.7
WEL 21.38 169 P+ 22 34.00 0.2
S 26 31.00
(PcS) 30 13.00
WDW 21.41 168 eP 22 33.00 -1.1
BLW 21.60 167 P 22 34.80 -1.3
CTA 21.60 267 iPd+ 22 37.90 1.7
1.0s 415.00nm 5.8mb
iS 26 31.00
CTAO 21.60 267 ePc 22 38.16 1.9
CNB 23.00 225 eP 22 52.70 2.6
1.0s 665.00nm 6.1mb
RAB 23.14 312 iP+ 22 52.00 0.5
BWA 23.16 228 eP 22 51.60 0.0
iScP 27 10.30
CAN 23.25 226 eP 22 54.60 2.1
iPcP 23 06.70 114kmX
i 23 18.50
iScP 27 11.90
QLP 23.77 250 eP 22 59.00 1.5
CMS 23.77 237 iPd 22 58.60 1.1
PMG 23.96 294 eP 23 02.00 2.6
eS 23 18.00
MSZ 24.27 182 eP 23 03.00 0.8
eScP 29 03.00
LAT 25.54 299 eP 23 17.00 2.5
STK 27.30 240 eP 23 32.50 1.9
eS 26 50.00
QIS 27.79 264 iPd 23 44.20 9.1X
epP 24 11.00 125kmX
ePcP 26 51.20
eS 28 18.40
MNDI 28.59 296 eP 23 45.00 2.3
RAR 28.93 97 P 23 44.00 -1.4
S 28 36.00
ADE 30.59 235 iPc 24 01.20 1.0
0.8s 164.18nm 5.9mb
WB5 32.75 265 eP 24 17.20 -2.0
iPcP 27 04.00
iS 29 35.50
e 55 40.20
JAY 33.04 299 ePc 24 22.00 0.3
0.7s 138.10nm 6.0mb
MTN 37.24 275 iPc 24 57.00 -0.6
TBI 38.32 102 eP 25 09.00 2.4
0.6s 20.00nm 5.1mb
FORR 38.39 246 eP 25 06.90 -0.1
KNA 38.72 270 eP 25 09.80 -0.2
0.8s 486.00nm 6.3mb
AFR 38.76 93 iP 25 11.10 0.8
0.8s 130.00nm 5.8mb
PAE 38.92 93 iP 25 12.40 0.7
0.8s 55.00nm 5.4mb
PPT 38.94 93 iP+ 25 12.80 0.9
0.8s 125.00nm 5.7mb
Z 30s 107.00um 6.5MszX
PPN 39.09 93 iP 25 13.70 0.7
0.8s 60.00nm 5.4mb
TVO 39.21 93 iP 25 14.80 0.7
0.8s 100.00nm 5.6mb
WARB 39.46 253 eP 25 15.30 -0.8
0.3s 28.00nm 5.5mb
PMO 41.06 90 iP 25 29.20 -0.1
0.8s 90.00nm 5.6mb
ipP 25 50.10 87kmX
VAH 41.26 90 iP 25 30.50 -0.4
0.8s 60.00nm 5.4mb
ipP 25 51.20 86kmX
TPT 41.33 90 iP 25 31.20 -0.3
ipP 25 52.00 87kmX
GUA 41.33 323 eP 25 32.50 1.0
0.8s 208.96nm 5.9mb
GUMO 41.40 323 ePc 25 32.52 0.5
0.7s 139.77nm 5.8mb
epP 25 41.79 31kmX

esP 25 45.43
PJG 41.40 323 eP 25 32.00 0.0
RUV 41.50 90 iP 25 32.80 -0.1
ipP 25 53.60 87kmX
AAI 43.29 287 e(P)c 25 47.50 -0.1
COOL 44.36 246 eP 25 56.00 -0.1
MBL 46.09 260 eP 26 09.00 -1.0
0.8s 200.00nm 6.1mb
MEKA 46.71 252 eP 26 14.20 -0.7
KLB 47.27 245 eP 26 18.00 -1.2
NWAO 47.74 244 ePc 26 22.39 -0.5
0.8s 171.00nm 6.1mb
esP 26 37.95
RKG 47.97 242 eP 26 24.10 -0.6
0.6s 106.00nm 6.0mb
BAL 48.17 247 eP 26 26.00 -0.3
1.0s 208.00nm 6.1mb
MUN 48.59 245 eP 26 29.00 -0.5
MNI 48.61 291 ePd 26 30.60 0.7
0.9s 700.60nm 6.7mb
MRWA 48.83 249 eP 26 31.50 0.2
0.7s 95.00nm 5.9mb
e 27 57.00 432kmX
NANU 49.85 257 eP 26 40.00 0.7
0.3s 39.00nm 5.9mb
DRV 49.97 195 eP 26 39.80 0.3
MKS 50.63 280 iPd 26 48.50 3.2X
1.4s 2184.30nm 7.0mb
DAV 50.89 298 ePc+ 26 47.00 -0.2
RKT 51.60 104 iP 26 53.00 0.4
HON 52.33 40 P 27 01.00 3.0X
Z 18s 10.31um 5.9Msz
KIP 52.41 39 ePc 26 59.09 0.5
esP 27 14.16
eS 34 23.44
eSP 34 46.95
PFH 52.88 44 P 27 02.00 -0.2
TSM 55.87 290 ePc 27 26.50 2.4
TRT 56.12 274 iPd 27 26.40 0.4
1.1s 626.70nm 6.6mb
QCP 58.76 302 eP 27 55.00 10.5X
BAG 60.18 304 eP+ 27 52.00 -2.5X
eS 35 04.00
KAKJ 62.63 334 eP 28 10.40 0.0
IIDJ 62.99 332 eP 28 12.20 -0.7
CHJJ 62.99 333 eP 28 12.50 -0.4
WKYJ 63.04 329 P 28 13.00 -0.2
KAGJ 63.12 323 eP 28 14.00 0.2
TKSJ 63.61 328 eP 28 17.10 0.2
MAJO 63.75 332 ePc 28 16.42 -1.4
epPd 28 26.02 31kmX
esPd 28 30.49
MAT 63.75 332 iPc+ 28 17.30 -0.6
1.1s 520.25nm 6.5mb
Z 20s 7.45um 5.9Msz
eS 36 45.00
TSRJ 63.92 330 eP 28 18.90 -0.1
MTMJ 63.96 332 eP 28 18.20 -1.2
NIIJ 64.00 333 eP 28 20.30 0.8
KUMJ 64.17 324 eP 28 19.90 -0.8
YAMJ 64.37 335 eP 28 22.10 0.2
OFUJ 64.53 336 P 28 22.80 -0.1
SHK 64.73 327 iP 28 24.00 -0.3
0.8s 537.31nm 6.7mb
ANP 64.84 312 iP+ 28 26.00 0.7
iS 37 04.00
YONJ 64.B6 328 P 2B 24.60 -0.5
SHNJ 65.24 326 eP 28 26.60 -0.9
AOMJ 66.30 336 eP 28 35.10 0.9
QZH 66.75 310 eP 28 37.50 0.1
8.0s 6.40nm 3.8mb X
Z 38s 10.60um 5.8MszX
N 24s 5.90um
S 37 24.00
HOOJ 66.88 339 P 28 38.50 0.6
KUSJ 67.07 341 P 28 38.60 -0.5
MRRJ 67.68 338 eP 28 41.70 -1.2
KGM 68.29 281 ePc 28 4B.00 0.7
1.0s 654.10nm 6.7mb
HKC 68.49 305 P 28 49.40 1.0
S 37 50.00
ASAJ 68.64 340 P 28 50.00 1.1
SSE 68.90 317 iPc 28 50.00 -0.8
6.0s 3.70nm 3.6mb X
Z 20s 4.20um 5.7Msz
E 22s 6.20um
pP 29 06.00 58kmX

sP 29 18.00
S 37 44.00
sS 38 12.00
ScS 38 42.00
SS 42 20.00
GZH 69.56 306 iPc 28 56.00 1.0
8.0s 3.20nm 3.4mb X
Z 34s 12.80um 5.9MszX
pP 29 10.50 51kmX
eS 37 53.00
SPA 69.77 180 ePc 28 52.90 -2.9
1.0s 376.00nm 6.4mb
Z 20s 18.56um 6.3Msz
OIZ 70.16 300 Pc 28 59.00 0.2
9.0s 4.30nm 3.5mb X
N 21s 4.20um
E 20s 4.10um
S 38 05.00
KLM 70.25 281 eP 29 00.20 0.8
NJ2 71.03 316 Pc 29 03.40 -0.4
8.0s 4.20nm 3.5mb X
S 38 18.00
YSS 71.21 341 iPc 29 04.00 -0.5
eS 38 20.00
IPM 71.39 282 ePd 29 05.60 -0.7
1.0s 295.00nm 6.3mb
SMY 72.89 3 P 29 12.20 -2.1
Z 20s 25.00um 6.5Msz
ADK 72.97 9 P 29 13.00 -1.8
WHN 73.12 312 iPc 29 16.50 0.3
6.0s 5.20nm 3.7mb X
Z 24s 6.90um 5.9MszX
N 20s 6.60um
E 20s 6.90um
pP 29 31.00 51kmX
PP 32 00.00
S 38 34.00
PET 73.64 353 iP 29 18.00 -0.7
eS 38 47.00
DL2 73.92 323 P 29 20.00 -0.7
Z 24s 10.90um 6.1MszX
N 22s 8.20um
E 22s 7.10um
pP 29 34.00 49kmX
PP 32 04.00
S 38 46.00
MDJ 74.12 332 ePc 29 21.26 -0.4
esP 29 36.65
eSKS 38 53.62
TIA 74.80 319 P 29 25.60 -0.2
7.0s 3.70nm 3.5mb X
Z 26s 6.50um 5.8MszX
N 20s 4.30um
E 20s 2.90um
PcP 29 41.30
S 38 59.00
SNY 74.93 326 iPc 29 26.00 -0.4
Z 33s 8.90um 5.8MszX
N 27s 9.80um
E 27s 6.40um
pP 29 42.00 57kmX
sP 29 49.00
S 39 00.00
sS 39 24.00
CN2 75.43 329 iPc 29 28.00 -1.2
5.0s 5.00nm 3.8mb X
Z 25s 14.40um 6.2MszX
N 17s 3.50um
epP 29 40.00 40kmX
S 39 05.00
NNT 75.80 289 ePc 29 32.50 0.5
LOE 76.15 295 iPd 29 34.00 0.1
GYA 76.48 305 P 29 36.00 0.2
N 21s 3.40um
E 21s 4.38um
PP 32 27.00
S 39 16.00
NST 76.76 292 iPd 29 38.90 1.6
BJI 77.82 321 ePc 29 42.43 -0.3
Z 37s 21.40um 6.2MszX
N 16s 3.62um
epPd 29 51.70 30kmX
esPd 29 57.17
ePP 32 36.56
eS 39 33.61
eSKS 39 50.17
TIY 78.67 317 Pc 29 48.00 0.4

1.2s 0.80nm 3.6mb X
E 20s 5.40um
pP 30 03.00 53kmX
S 39 43.00
sS 40 02.00
XAN 78.89 313 P 29 48.10 -0.7
8.0s 5.50nm 3.6mb X
N 22s 5.30um
E 21s 4.30um
S 39 43.00
KMI 78.89 302 ePc 29 49.66 0.4
Z 20s 10.70um 6 2Msz
N 20s 4.40um
epP 29 59.92 33kmX
esPd 30 05.22
eS 39 48.26
CHG 79.15 295 iPc 29 50.50 0.0
1.0s 262.50nm 6.2mb
eS 39 54.00
CD2 80.94 308 P 30 00.50 0.6
Z 28s 10.80um 6.1MszX
N 19s 4.00um
PP 33 08.00
S 40 06.00
SS 45 26.00
HHC 81.09 320 iPc 30 02.00 1.5
N 17s 2.50um
E 18s 2.70um
PP 33 04.00
BTO 81.89 319 P 30 04.50 -0.2
N 22s 5.90um
E 22s 6.10um
pP 30 22.00 63kmX
PP 33 15.00
S 40 16.00
sS 40 37.50
SS 45 40.50
HIA 82.09 330 ePc 30 04.85 -0.5
epPd 30 16.11 37kmX
esPd 30 19.92
ePP 33 11.90
eSKS 40 17.32
LZH 83.50 312 ePc 30 13.70 0.5
Z 24s 5.20um 5.8MszX
N 20s 3.20um
E 18s 1.90um
esP 30 28.60
ePP 33 28.52
S 40 30.10
SS 40 36.00
SSS 46 05.00
KDC 84.07 19 P 30 14.30 -1.0
AIA 85.47 160 eP 30 22.00 -0.4
PCC 86.23 48 ePc 30 27.30 0.8
BLP 86.24 51 P 30 27.60 0.9
GCC 86.27 48 ePc 30 27.40 0.7
NWRM 86.34 47 P 30 28.00 0.9
PRS 86.38 49 ePc 30 28.40 1.1
BRK 86.49 48 ePc 30 28.70 0.9
eP'P' 56 34.00
BKS 86.51 48 iPc 30 28.00 0.1
0.7s 97.00nm 6.1mb
Z 20s 16.00um 6.4Msz
N 20s 9.00um
E 20s 12.00um
eS 41 04.80
eLQ 53 13.60
e 53 44.00
SAO 86.53 49 ePc 30 28.63 0.6
Z 20s 16.00um 6.4Msz
N 20s 6.00um
E 20s 13.00um
eS 41 07.00
e(PPS)42 18.00
eLQ 53 46.00
eLR 57 36.00
SYP 86.54 51 eP 30 29.00 0.7
MHC 86.67 48 ePc 30 29.70 0.8
Z 20s 18.00um 6.5Msz
N 20s 8.00um
E 20s 16.00um
ePP 33 59.00
iS 41 10.00
e(PPS)42 26.00
eSS 46 47.00
e 48 28.00
e 50 28.00

eLQ 54 04.00
e 55 25.00
eP'P' 56 32.30
eLR 57 39.00
ARN 86.75 48 P 30 28.70 -0.4
BCH 86.76 51 P 30 30.00 0.6
FHC 86.78 44 ePc 30 30.70 1.5
PRI 86.79 50 ePc 30 30.60 1.1
eP'P' 56 33.50
LLA 86.81 49 ePc 30 30.20 0.7
PHAM 86.84 50 P 30 30.40 0.8
ABL 87.24 51 P 30 32.50 0.7
TTA 87.40 15 P 30 28.70 -3.1X
WDC 87.62 45 ePc 30 33.50 0.3
eP'P' 56 28.50
PAS 87.70 52 ePc 30 34.86 1.1
esP 31 38.00
eSKS 40 56.98
eSKS 41 06.00
eS 41 14.36
eSP 42 34.70
ePS 42 39.00
eSS 47 00.00
esSS 48 27.00
eSSS 51 00.00
RScS 53 48.00
eLg 55 36.00
eLR 58 05.00
LTCM 87.72 46 P 30 34.30 0.6
MWC 87.82 52 eP 30 34.00 -0.6
ORV 87.82 46 ePc 30 34.30 0.1
eP'P' 56 28.30
FRI 87.87 49 ePc 30 35.00 0.5
eP'P' 56 27.70
CMB 87.87 48 ePc 30 33.48 -1.1
esPd 30 48.38
ePP 34 02.78
SHL 87.90 298 iP 30 35.20 0.0
eS 41 17.50
GTA 87.91 313 eP 30 35.50 0.7
9.0s 3.50nm 3.6mb X
Z 30s 6.90um 5.9MszX
E 19s 3.70um
PP 34 01.50
S 41 04.00
MIN 88.13 46 ePc 30 36.20 0.3
ISA 88.15 51 eP 30 35.00 -1.0
PMR 88.17 19 P 30 32.70 -2.7X
Z 20s 17.00um 6.5Msz
BAR 88.19 54 eP 30 36.00 -0.2
SBB 88.20 52 eP 30 36.00 -0.2
RVR 88.23 53 eP 30 36.00 -0.3
PLM 88.33 54 eP 30 37.00 -0.1
PEC 88.34 53 P 30 36.40 -0.5
LBFM 88.42 45 P 30 37.80 0.5
GSC 89.22 52 eP 30 42.00 0.9
TPC 89.27 53 eP 30 41.00 -0.3
TPC 89.27 53 eP 30 42.20 0.9
GLA 89.75 55 eP 30 45.00 1.4
SIT 89.91 27 P 30 44.40 0.7
1.2s 15.15nm 5.1mb
Z 20s 15.00um 6.4Msz
KVN 89.93 48 P 30 43.10 -1.4
TNP 90.12 49 P 30 44.50 -0.9
LSA 90.14 302 P 30 46.80 0.8
PP 34 20.00
IMA 90.58 14 P 30 47.00 0.1
PGC 91.05 38 ePc 30 49.60 0.5
1.0s 259.00nm 6.6mb
LON 91.08 40 ePc 30 48.48 -1.0
esP 31 02.55
VGB 91.13 41 P 30 50.00 0.4
COL 91.13 17 ePc 30 47.13 -2.1
epPd 30 57.56 32kmX
eSKS 41 13.71
eS 41 37.16
eSP 43 10.96
FBA 91.13 17 P 30 46.70 -2.5X
MCW 91.42 38 P 30 50.60 -0.3
RMW 91.43 39 P 30 50.80 -0.2
PNT 93.59 38 eP 31 01.00 0.1
1.0s 113.00nm 6.3mb
GUN 93.76 298 P 31 02.78 0.2
1.0s 184.00nm 6.5mb
MSU 93.92 50 P 31 05.80 2.9X
PKI 94.03 298 P 31 03.32 -0.5
1.3s 477.00nm 6.8mb

25d 14h

DUG	94.11	49	P	31	04.30	0.6	FISA	123.13	90	ePKP	36	41.30	-1.4	CTT	140.91	311	ePKP	37	11.00	-4.6X
KKN	94.21	298	P	31	04.08	-0.4	VAO	124.26	139	ePKP	36	43.40	-1.4	KHL	140.97	306	ePKP	37	09.00	-6.9X
	0.9s	208.00nm			6.5mb					e	36	45.40		ELL	141.07	304	ePKP	37	12.00	-4.2X
DMN	94.29	298	P	31	04.80	-0.1	BUL	124.30	226	iPKPd	36	44.60	-0.4	BUC	141.21	317	ePKPd	37	08.00	-7.9X
	1.1s	668.00nm			7.0mb			1.0s	110.00nm					KCT	141.26	310	iPKP	37	11.20	-5.0X
GKN	94.82	298	P	31	06.32	-0.9	APA	125.33	341	iPKPd	36	39.00	-6.3X	BUC1	141.28	317	ePKPd	37	10.00	-6.1X
	1.0s	318.00nm			6.7mb		KEV	125.62	345	iPKP	36	44.80	-1.1	UZH	141.32	325	iPKP	37	12.00	-4.0X
DAU	95.30	49	P	31	10.00	0.7		1.1s	213.50nm					CMP	141.49	318	ePKPc	37	10.00	-6.5X
GBA	96.32	282	P	31	15.00	1.0				ePP	38	30.00		BNT	141.54	310	iPKP	37	12.70	-4.0X
LRM	96.53	44	eP	31	14.20	-0.6				eSKP	40	00.00		EDC	141.59	310	iPKP	37	12.40	-4.4X
HYB	96.56	286	eP	31	15.10	0.0				ePPS	50	08.00		KRA	141.69	328	ePKP	37	07.80	-8.8X
			e	31	29.50	49kmX	SCH	125.82	36	ePKP	36	45.00	-1.7		1.3s	183.00nm				
ALO	96.90	55	eP	31	16.00	-0.6	KRI	125.84	230	iPKPd	36	49.00	0.9				e	37	14.20	
	1.0s	19.00nm			5.6mb		PTZ	126.22	234	iPKP	36	49.10	0.3				i	37	17.80	
	Z 20s	6.83um			6.1Msz					i	37	03.20					i	40	20.70	
ANMO	96.90	55	ePc	31	15.95	-0.6				i	39	44.00		JMB	141.71	314	iPKPc	37	12.00	-4.9X
			epPd	31	24.39	26kmX	SOD	127.41	343	ePKP	36	45.00	-4.4X	MFT	141.85	311	iPKP	37	11.20	-6.2X
			esPd	31	30.19					i	36	48.50		SPC	142.08	327	iPKP	37	13.50	-4.1X
			ePP	35	13.39		KER	127.41	298	ePKPc	36	49.50	-1.1				e	40	29.00	
INK	97.59	18	eP	31	17.00	-1.6	TRO	127.55	347	ePKP	36	48.50	-1.0	PVL	142.23	315	ePKP	37	15.00	-2.8X
	1.1s	97.00nm			6.2mb		LSZ	127.89	230	ePKP	36	41.00	-11.0X	YER	142.24	305	ePKP	37	14.00	-4.1X
			pP	31	34.00	59kmX				i	36	53.00		DRA	142.26	318	ePKPc	37	16.00	-1.8
WMO	98.00	314	ePDIFc	31	21.79	0.6	TAB	127.96	303	iPKP+	36	51.00	-0.6	DEV	142.49	321	iPKPc	37	04.50	-13.7X
	Z 20s	11.70um			6.4Msz		SLY	128.72	300	iPKPc	36	53.00	0.2	IZM	142.65	307	iPKP	37	15.70	-3.1X
			ePP	35	19.90					e	37	17.50		ALN	142.68	312	ePKP	37	14.20	-4.4X
			eSKS	41	55.76					iPP	39	03.50		KDZ	142.83	313	ePKP	37	15.00	-3.9X
			eS	42	42.11					iSKP	40	14.00		EZN	142.87	310	iPKP	37	14.10	-4.9X
			esS	42	53.97					i	40	38.00		KSP	142.88	331	ePKP	37	14.00	-4.7X
			eSP	44	13.69		NAI	128.74	251	iPKPd	36	48.00	-5.8X		1.1s	449.00nm				
EDM	98.80	36	eP	31	25.00	0.5		1.0s	5.00nm								ic	37	14.80	
SES	99.10	40	eP	31	27.00	1.1	BAO	128.82	132	ePKP	36	37.50	-16.2X				id	37	16.10	
GOL	99.28	51	P	31	28.80	1.5	BDF	128.86	132	ePKP	36	51.39	-2.4	BRN	143.00	336	ePKPd	37	15.50	-3.3X
	Z 20s	7.00um			6.2Msz					ePP	38	57.75		PSZ	143.04	325	iPKP	37	22.60	3.4X
GLD	99.41	51	P	31	30.00	2.2	BHD	129.68	297	ePKP	36	55.00	0.3	PRK	143.11	309	ePKP	37	16.00	-3.4X
	Z 20s	9.60um			6.3Msz					e	39	05.00		SMG	143.18	306	ePKP	37	18.00	-1.6
NDI	101.23	296	Pdiffd	31	36.00	-0.1				iSKP	40	16.00		PGB	143.29	315	iPKPd	37	16.00	-3.7X
			ePP	34	45.00					iPKS	40	27.00		BZS	143.39	321	ePKP	37	15.50	-4.2X
			eS	42	14.00		MZZ	130.03	235	iPKPd	36	56.00	-0.1	EDU	143.41	353	iPKPd	37	15.50	-3.9X
MEO	103.01	58	e(Pdif	31	45.40	1.5				i	37	05.00			0.5s	183.00nm				
KSH	105.11	307	ePdiff	31	51.00	-2.3				i	39	08.00		KAP	143.51	303	ePKP	37	17.50	-2.7X
	Z 20s	7.50um			6.2Msz					i	40	17.50		TIM	143.56	321	iPKPc	37	15.60	-4.4X
	N 18s	3.40um					TPP	130.24	94	ePKP	36	56.72	0.4	ELO	143.56	353	iPKPd	37	16.70	-3.0X
MBC	105.31	14	ePdiff	31	55.00	1.9	OBN	130.43	326	iPKPc	36	57.00	1.6	EBH	143.76	353	iPKPd	37	17.70	-2.3
	0.9s	5.00nm			5.5mb			1.3s	270.00nm					BUD	143.77	325	iPKPc	37	17.80	-2.5X
MBC	105.31	14	ePKP	36	05.50	-1.4	MSL	130.59	301	ePKPc	36	57.00	0.6	BRG	143.88	333	iPKP	37	16.10	-4.3X
	0.5s	6.00nm								e	39	09.50			Z 20s	1.00um			5.6Msz	
TUL	105.51	57	Pdiff	31	55.10	0.1				eSKP	40	22.00			N 24s	5.00um				
	1.3s	5.60nm			5.4mb					ePKS	40	37.00			E 24s	1.00um				
	Z 18s	14.13um			6.6Msz		SUF	130.75	339	ePKP	36	42.00	-13.8X				i	37	17.20	
		eSKS	45	23.00				0.7s	5.60nm								i	37	26.30	
		LR	07	00.00			KMZ	130.79	230	iPKP	36	58.50	1.0				i	41	00.00	
TCA	107.13	134	e(PKP)	35	57.80	-14.0X				i	37	28.20		EAB	143.90	354	iPKPd	37	17.40	-2.8X
ANT	107.21	124	e(Pdif	31	47.00	-15.7X	AAE	130.99	264	ePKP	37	00.00	1.8	VTS	143.91	316	iPKPd	37	18.00	-2.9X
NNA	107.48	110	ePdiff	32	04.00	-0.2	NUR	132.77	337	ePKP	36	45.00	-14.7X	CLL	143.94	335	iPKP	37	19.60	-0.8
	Z 20s	0.19um			4.7MszX					i	36	58.80			1.6s	1400.00nm				
CCM	109.53	56	ePdiff	32	13.08	0.3X				ePP	39	26.00		SRO	143.94	326	iPKPc	37	19.00	-1.6
			ePP	36	46.85					eSKP	40	24.00		ESY	143.97	352	iPKPd	37	17.30	-3.1X
PSO	112.31	97	ePKP	36	24.50	2.0				ePPS	51	10.00			0.7s	322.00nm				
CNCB	112.75	119	PKP	36	23.00	-0.4	UPP	135.66	340	iPKP	36	49.60	-15.6X	EDI	144.04	353	iPKPd	37	19.40	-1.1
			SKS	47	13.00					i	37	04.60		EAU	144.15	353	iPKPd	37	17.20	-3.5X
LPB	112.80	119	PKP	36	24.00	0.7	NB2	136.52	345	PKP	36	54.90	-12.0X		0.6s	314.00nm				
	Z 24s	2.91um			5.8MszX			1.3s	106.50nm					EBL	144.17	353	iPKPd	37	18.40	-2.3
		SKS	46	50.00			PDCR	137.01	137	ePKP	36	54.50	-14.7X	PRU	144.27	332	ePKP	37	18.00	-3.1X
		Lg	05	20.00						e	36	57.90					iP'P'	37	19.50	
		LR	10	48.00						e	37	05.70		SRS	144.30	313	ePKP	37	18.20	-3.2X
ZOBO	112.91	119	Pdiff	32	32.00	3.0X				i	37	23.50		ZST	144.31	328	iPKP	37	20.00	-1.2
ZOBO	112.91	119	PKP	36	23.00	-0.8				e	40	40.20			Z 22s	11.32um			6.6Msz	
	1.2s	27.03nm					KAS	137.01	309	ePKP	37	02.00	-6.5X				e	40	34.00	
		SKS	46	48.00			PRNI	137.74	293	e(PKP)	36	55.00	-15.2X				eS	51	04.00	
		LR	10	08.00			MBH	137.87	292	e(PKP)	37	01.00	-9.4X				e	53	08.00	
BOG	116.57	95	e(Pdif	32	38.00	-7.1X	ANTO	138.11	307	ePKP	37	02.46	-8.2X	KKB	144.32	315	iPKPc	37	17.00	-4.5X
			ePP	37	38.00					ePP	40	03.01		OUR	144.35	312	ePKP	37	18.90	-2.6X
MAIO	117.41	301	ePdiff	32	44.00	-4.0X	BBTK	138.14	307	ePKP	37	03.00	-7.8X	APE	144.37	306	ePKP	37	19.00	-2.7X
MAIO	117.41	301	ePKP	36	31.00	-0.3	LFK	138.48	301	ePKP	37	00.60	-10.8X	BEO	144.51	321	iPKP	37	18.80	-2.8X
PRY	120.17	220	iPKPc	36	35.90	-1.0	CLI	139.51	319	ePKP	37	07.00	-5.9X	EKA	144.61	353	PKPc	37	18.30	-3.2X
	0.8s	26.25nm					CFR	139.56	317	ePKP	37	07.00	-5.9X		0.9s	295.00nm				
KBS	120.45	355	ePKP	36	35.00	-0.7	ASW	139.57	284	iPKPc	37	06.00	-7.6X	ESK	144.63	353	ePKP	37	17.48	-4.0X
BFS	120.61	219	iPKPd	36	36.50	-1.2				eS	40	08.00		VIE	144.64	328	iPKP+	37	21.60	-0.1
	1.0s	160.00nm					GPA	139.83	309	ePKP	37	09.00	-4.7X				i	37	34.60	
SDV	121.19	92	iPKPd	36	37.80	-1.4	PTT	139.87	320	ePKP	37	10.50	-3.0X				i	38	27.80	
	0.7s	71.40nm					HRT	140.13	310	ePKP	37	04.30	-9.9X	VKA	144.65	328	iPKPc	37	21.10	-0.7
KSR	121.31	220	iPKPc	36	37.90	-1.2	VRI	140.16	318	ePKPc	37	07.50	-6.6X		2.8s	5642.00nm				
	1.1s	47.30nm					BCK	140.38	305	ePKP	37	07.80	-7.0X		Z 23s	3.40um			6.1MszX	
PPD	122.15	135	ePKP	36	39.30	-1.3	YLV	140.43	310	ePKP	37	07.00	-7.8X				i	37	23.70	
			e	36	41.20		ISK	140.49	310	ePKP	37	08.00	-6.8X				i	37	35.10	
TOV	122.26	91	ePKP	36	39.40	-1.6	ITU	140.51	311	iPKPc	37	04.00	-10.8X				i	38	28.40	
SHI	122.54	293	ePKP	36	40.00	-1.3	MLR	140.82	318	ePKP	37	10.00	-5.4X				iPP	40	46.30	

25d 14h

PLG	144.71	312	iPKPd	37	19.90	-2.3
PAIG	144.72	311	ePKP	37	19.50	-2.7X
KNT	144.75	314	ePKP	37	20.60	-1.6
NPS	144.81	303	ePKP	37	21.20	-1.3
WIT	144.92	342	iPKPd	37	21.50	-0.5
SOP	144.92	327	iPKP	37	22.60	0.3
THE	144.93	313	ePKP	37	20.70	-1.8
MOX	145.00	335	PKPc+	37	20.00	-2.3
	0.8s	2000.00nm				
	Z 25s	8.30um			6.4MszX	
	N 24s	3.30um				
	E 24s	4.30um				
HOF	145.16	334	iPKPc	37	20.80	-1.8
	Z 20s	6.00um			6.4Msz	
GRG	145.18	314	ePKP	37	21.30	-1.7
NEO	145.29	310	ePKP	37	20.80	-2.4
KHC	145.33	332	iPKPc	37	21.50	-1.5
	1.0s	521.00nm				
	N 22s	4.00um				
	E 24s	3.80um				
SKO	145.36	316	iPKPc	37	21.50	-1.7
	8.0s	******nm				
	Z 21s	5.83um			6.3Msz	
	N 21s	6.34um				
		i		37	22.60	
		i		37	39.50	
		iPP		40	31.00	
		iPPP		43	56.00	
		iSP		51	10.00	
		i		53	20.00	
		i		54	40.00	
		iSS		00	00.00	
ATH	145.43	308	iPKPc	37	24.00	0.6
		eS		40	42.00	
LIT	145.49	312	ePKP	37	22.30	-1.2
WTS	145.59	341	iPKPd	37	23.00	-0.2
	1.1s	1207.00nm				
WET	145.63	332	iPKPc	37	22.50	-1.0
	Z 22s	7.00um			6.4Msz	
KMR	145.85	330	iPKP+	37	23.00	-0.9
		i		37	35.60	
		iPP		40	48.40	
		eSKSP		50	42.00	
VAM	145.89	304	ePKP	37	25.00	0.7
KZN	145.90	313	ePKP	37	23.00	-1.3
PLE	145.96	319	ePKP	37	25.20	0.9
DBN	145.98	342	iPKP+	37	23.00	-0.9
	Z 24s	9.10um			6.5MszX	
		ePP		40	48.00	
		eSPP		53	30.00	
		e		54	34.00	
		eSSS		05	40.00	
KKS	145.98	317	iPKP	37	25.00	0.8
PVY	145.99	318	ePKP	37	24.00	-0.4
AGG	146.04	310	ePKP	37	23.60	-0.9
PHP	146.15	316	iPKPc	37	24.70	0.2
OHR	146.19	315	ePKP	37	23.10	-1.6
	1.2s	0.21nm				
		i		37	24.90	
PUK	146.33	317	iPKP	37	25.90	1.1
DMU	146.39	356	ePKP	37	23.60	-0.9
KBN	146.41	314	iPKPc	37	26.20	1.3
PTJ	146.41	325	iPKPc	37	24.20	-0.7
VLI	146.45	306	iPKPd	37	25.00	-0.2
ZAG	146.45	325	iPKPc	37	24.70	-0.2
NKY	146.49	319	ePKP	37	25.00	-0.2
TTG	146.53	318	ePKP	37	26.50	1.4
		e(S)		48	16.00	
TNS	146.54	338	ePKP	37	24.50	-0.5
SDA	146.59	317	iPKPd	37	25.20	0.0
BHG	146.68	331	ePKP	37	25.00	-0.2
TIR	146.69	316	iPKPc	37	26.00	0.6
BRY	146.72	319	ePKP	37	25.30	-0.3
KBA	146.93	329	iPKPd	37	25.30	-0.5
	1.7s	1200.00nm				
		ic		37	27.00	
		i		37	29.50	
		i		37	32.80	
		i		37	43.70	
		i		38	25.40	
		i		38	39.70	
		e		40	48.00	
ENN	146.93	341	iPKPd	37	26.80	1.4
	1.2s	1294.00nm				
BERA	146.95	315	ePKP	37	26.40	0.6
DLE	146.97	355	ePKP	37	24.40	-1.0
	1.3s	820.00nm				

VBY	147.04	326	ePKP	37	25.00	-0.8
MEM	147.04	340	PKPc	37	25.30	-0.3
			i	37	27.17	
ITM	147.04	308	ePKP	37	26.70	0.6
LJU	147.06	327	ePKP	37	23.50	-2.4
			i	37	27.50	
FUR	147.07	333	iPKPd	37	26.20	0.4
SRN	147.30	313	iPKP	37	27.70	1.3
CEY	147.32	327	iPKP	37	25.50	-0.8
UCC	147.37	342	PKPd+	37	26.00	-0.1
			i	37	28.60	
			e	37	36.80	
VOY	147.39	327	iPKPc	37	25.20	-1.3
BCAO	147.43	245	iPKPc	37	26.50	-0.9
	1.0s	300.00nm				
			i	37	29.00	
			i	38	54.30	
			i	40	31.30	
KEK	147.52	313	ePKP	37	27.50	0.7
ETA	147.53	355	ePKP	37	27.70	1.4
	1.0s	841.00nm				
FVI	147.54	329	PKP	37	25.30	-1.2
VLS	147.63	310	ePKP	37	30.00	3.0X
SNF	147.65	342	PKPc	37	25.80	-0.8
			i	37	28.32	
TRI	147.68	327	ePKP	37	25.20	-1.6
			e(SKKS	48	48.00	
			e	51	18.00	
			e	53	56.00	
			e(SS)	01	00.00	
HVAR	147.82	321	iPKPc	37	26.80	-0.4
GWF	147.88	337	PKP	37	26.47	-0.6
ECB	147.90	355	ePKP	37	26.30	-0.6
	0.8s	296.00nm				
DOU	147.93	341	PKPc	37	28.30	1.2
	Z 22s	6.70um			6.4Msz	
			i	37	31.00	
			e	41	02.00	
			e	55	07.00	
ECP	148.06	355	ePKP	37	26.80	-0.4
	0.7s	603.00nm				
VVI	148.15	329	PKP	37	29.00	1.4
WLS	148.45	337	PKP	37	27.91	-0.2
VAL	148.48	359	ePKP	37	30.00	2.1
			S	45	30.00	
CDF	148.48	337	PKP	37	27.82	-0.3
CTI	148.48	330	PKP	37	26.50	-1.8
SLE	148.54	335	ePKPd	37	26.90	-1.3
SAX	148.60	333	ePKPd	37	27.90	-0.8
FEL	148.64	335	PKP	37	28.54	0.0
BRT	148.66	317	PKP	37	29.20	0.6
ECH	148.68	337	PKP	37	28.17	-0.3
OSS	148.69	332	ePKPd	37	27.80	-0.9
ZLA	148.81	335	ePKPd	37	27.80	-0.9
MOF	149.00	336	PKP	37	29.14	0.1
LLS	149.05	333	ePKPd	37	28.60	-0.7
VITF	149.11	338	PKP	37	29.53	0.5
BSF	149.14	337	PKP	37	29.50	0.2
VDL	149.14	332	ePKPd	37	29.70	0.3
HAU	149.16	337	ePKP	37	28.20	-1.0
	1.2s	77.35nm				
BBS	149.17	336	PKP	37	29.61	0.4
SAL	149.33	330	PKP	37	29.90	0.5
MDI	149.58	331	PKP	37	30.40	0.6
ARV	149.61	325	PKP	37	29.50	-0.5
TMA	149.70	332	ePKPd	37	29.40	-0.8
SFI	149.90	326	PKP	37	30.30	0.0
DUI	149.91	321	PKP	37	30.90	0.3
VAI	149.93	332	PKP	37	29.70	-0.6
SGO	150.04	318	PKP	37	31.00	0.4
MGR	150.11	317	PKP	37	30.90	0.1
MMK	150.13	333	ePKPd	37	30.80	-0.2
SDI	150.27	321	PKP	37	32.00	0.9
MME	150.29	328	(PKP)	37	30.50	-0.8
			i	37	36.80	
			ePP	41	14.00	
FIR	150.30	327	iPKPc	37	31.00	0.1
			iPP	41	16.00	
			iSKS	45	24.00	
AZI	150.31	322	PKP	37	30.60	-0.4
DIX	150.34	334	ePKPd	37	31.10	-0.2
BDI	150.43	328	PKP	37	29.50	-1.8
ORO	150.46	333	PKP	37	31.20	-0.1
BOB	150.47	330	PKP	37	30.30	-1.0
MNS	150.49	323	PKP	37	30.00	-1.4
FLN	150.49	346	ePKP	37	30.30	-0.8
	1.4s	19.17nm				

EMS	150.54	335	ePKPd	37	31.20	-0.3
LDF	150.56	346	ePKP	37	30.50	-0.7
	1.4s	122.00nm				
LOR	150.65	340	ePKP	37	30.60	-0.8
	1.4s	82.75nm				
PII	150.72	328	PKP	37	30.00	-1.6
RMP	150.84	322	PKP	37	32.10	0.2
LBF	150.86	339	ePKP	37	31.00	-0.8
	1.3s	50.55nm				
RDP	150.87	322	PKP	37	31.50	-0.5
GRR	150.92	346	ePKP	37	31.30	-0.4
	1.6s	186.55nm				
LSD	150.95	334	PKP	37	33.96	1.7
SSF	150.95	340	ePKP	37	31.30	-0.5
	1.3s	79.40nm				
PCP	151.06	331	PKP	37	32.22	0.1
LPG	151.08	334	ePKP	37	31.80	-0.7
	1.6s	105.70nm				
SMF	151.20	339	ePKP	37	31.20	-1.1
	1.7s	102.95nm				
AVF	151.23	340	ePKP	37	31.10	-1.2
	1.5s	47.00nm				
LPF	151.30	346	ePKP	37	31.80	-0.5
	1.6s	354.50nm				
MAO	151.30	325	PKP	37	32.80	0.3
FIN	151.47	331	PKP	37	32.73	0.0
BNI	151.47	334	PKP	37	34.70	1.8
RRL	151.53	333	PKP	37	34.89	1.8
ROB	151.56	331	PKP	37	33.24	0.3
BGF	151.60	340	ePKP	37	32.30	-0.6
	1.7s	158.05nm				
DOI	151.67	332	PKP	37	30.40	-2.7X
PZZ	151.73	332	PKP	37	33.96	0.7
ENR	151.81	332	PKP	37	33.14	-0.2
STV	151.84	332	PKP	37	33.55	0.2
IMI	151.84	331	PKP	37	33.76	0.4
MNO	151.86	314	PKP	37	36.50	2.7X
PLDF	151.86	339	PKP	37	33.19	-0.2
SAOF	151.94	331	PKP	37	34.98	1.5
AGO	151.96	339	PKP	37	33.19	-0.2
AUTN	151.99	331	PKP	37	35.32	1.5
MAF	151.99	340	ePKP	37	32.80	-0.7
	1.6s	108.85nm				
TCF	152.04	341	ePKP	37	32.80	-0.8
	1.6s	155.45nm				
TOUF	152.05	332	PKP	37	35.32	1.5
SBF	152.09	331	ePKP	37	32.90	-0.8
	1.4s	235.25nm				
AURF	152.12	331	PKP	37	35.43	1.6
MEU	152.12	312	PKP	37	38.70	4.7X
MVIF	152.19	332	PKP	37	35.51	1.5
REVF	152.21	331	PKP	37	35.37	1.5
PYM	152.26	339	PKP	37	34.06	0.1
LSF	152.29	342	ePKP	37	33.00	-0.9
CVF	152.39	328	PKP	37	33.72	-0.4
CALN	152.42	332	PKP	37	35.93	1.6
MFF	152.43	344	ePKP	37	33.60	-0.4
	1.6s	273.65nm				
USI	152.44	317	PKP	37	34.10	-0.2
LBL	152.63	338	PKP	37	34.75	0.4
GANF	152.65	333	PKP	37	35.82	1.3
FRF	152.68	332	ePKP	37	33.90	-0.6
	1.4s	128.60nm				
MCT	152.73	314	PKP	37	34.40	-0.6
VILF	152.85	333	PKP	37	36.08	1.3
LRG	152.89	332	ePKP	37	34.20	-0.5
	1.4s	191.70nm				
TAVF	152.89	333	PKP	37	35.98	1.1
LMR	152.92	332	ePKP	37	34.10	-0.7
	1.3s	144.40nm				
PRAF	153.11	334	PKP	37	36.71	1.6
RJF	153.14	341	ePKP	37	34.50	-0.6
	1.6s	186.55nm				
TREF	153.17	333	PKP	37	36.82	1.6
CVT	153.27	315	PKP	37	36.80	1.4
BERF	153.30	333	PKP	37	36.61	1.1
CAF	153.30	340	ePKP	37	34.90	-0.5
	1.6s	186.55nm				
GELF	153.35	333	PKP	37	36.69	1.2
LVI	153.39	316	PKP	37	35.70	0.1
LFF	153.71	341	ePKP	37	35.40	-0.5
	1.2s	116.05nm				
LPO	153.80	341	ePKP	37	35.70	-0.3
	1.4s	191.70nm				
PTS	154.28	314	PKP	37	39.00	2.1
EPF	155.56	340	ePKP	37	38.00	-0.5
	1.4s	136.15nm				

25d 14h

OGE	155.68	342	PKP	37	38.43	-0.2
ESCF	155.79	342	PKP	37	40.73	1.9
MADF	155.80	342	PKP	37	39.16	0.4
ATE	155.82	342	PKP	37	38.94	0.1
ELYF	155.83	342	PKP	37	39.83	1.0
BOH	155.90	342	PKP	37	40.54	1.5
ISSF	155.90	342	PKP	37	40.12	1.0
LHE	155.96	342	PKP	37	39.18	0.1
EMON	156.81	354	e(PKP)	37	41 50	1.4
ESEL	157 40	332	ePKP	37	43.00	2.1
STS	157.46	356	ePKP	37	40.80	-0.1
ERUA	157.82	353	ePKP	37	42.20	0.8
ETOR	158.30	342	ePKP	37	43.00	0.9
GUD	159.01	346	ePKP	37	43.00	0.1
ECHE	159.08	338	ePKP	37	43.00	0.1
PTO	159.20	355	ePKP	37	43.00	0.1
			ePP	41	29.00	
EPLA	159.95	350	ePKP	37	44.80	1.0
EVIA	160.44	340	ePKP	37	45.80	1.3
EBAN	161.26	343	ePKP	37	45.50	0.3
ENIJ	161.86	338	ePKP	37	47.10	1.3
EHOR	161.96	346	ePKP	37	46.00	0.2
ASMO	162.00	342	ePKP	37	45.50	-0.6
AFC	162.04	341	ePKP	37	45.00	-1.2
AAPN	162.16	343	ePKP	37	45.20	-1.0
ACHM	162.26	342	ePKP	37	40.00	-6.3X
ALOJ	162.34	342	ePKP	37	45.50	-1.0
APHE	162.36	341	ePKP	37	46.10	-0.4
EVAL	162.49	349	ePKP	37	46.50	0.1
ATEJ	162.49	342	ePKP	37	46.10	-0.5
EPRU	162.77	345	ePKP	37	48.00	1.2
MAL	162.78	343	iPKPd	37	48.00	1.3
EJIF	163.32	345	ePKP	37	48.00	0.7
TAF	163.83	335	iPKPd	37	49.00	1.1
			i	38	42.00	
NKM	164.25	344	ePKP	37	49.50	1.3
			i	37	51.50	
			i	37	53.50	
LIC	164.90	202	PKPc	37	48.82	-0.6
	1.3s	214.50nm				
	Z 20s	5.00um				
KIC	164.93	203	PKPc	37	48.82	-0.6
	1.3s	178.50nm				
TIC	165.29	203	PKP	37	49.24	-0.5
IFR	165.98	340	iPKP	37	51.00	1.0
AVE	166.78	348	ePKP	37	51.50	1.1
TIO	169.02	344	iPKPc	37	52.20	0.1
			i	38	07.00	
TBT	169.44	37	PKP	37	53.40	1.2
			PP	39	05.50	
			iS	43	23.40	
CVVD	170.07	40	iPKP	37	55.60	2.9X
CTFE	170.47	31	iPKP	37	55.70	2.9X
			ePP	39	12.00	
YBT	170.49	354	iPKPd	37	53.00	0.2
			i	39	08.00	
GGC	171.07	29	iPKP	37	55.20	2.0
			iPP	39	18.90	
			iS	43	27.50	
S.D. = 1.0 on 455 of 560 obs.						

SEP 25, 1989 15h 19m 07.75± 0.73s
43.407 N ± 4.5km 5.424 E ± 5.6km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.6 (STR).

GELF	0.02	173	Pg	19	09.42	-0.3
BERF	0.22	116	Pg	19	12.52	0.0
TREF	0.22	352	Pg	19	12.25	-0.3
PRAF	0.44	335	Pg	19	17.34	0.6
VILF	0.49	25	Pg	19	16.59	-1.2
TAVF	0.51	65	Pg	19	17.70	-0.3
GANF	0.69	31	Pg	19	21.48	0.1
CALN	1.12	72	Pg	19	29.29	0.4
			Sg	19	45.67	
MVIF	1.35	68	Pn	19	33.08	0.4
			Sg	19	52.32	
TOUF	1.46	65	Pn	19	34.73	0.5
AURF	1.46	70	Pn	19	34.51	0.2
			Sg	19	55.94	
AUTN	1.57	67	Pn	19	36.07	0.2
			Sg	19	59.19	
SAOF	1.65	69	Pn	19	37.08	0.2
CVF	2.66	107	Pn	19	50.78	-0.7
S.D. = 0.6 on 14 of 14 obs.						

% SEP 25, 1989 15h 32m 52.06± 0.79s
38.316 N ± 6.8km 28.072 E ± 9 6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.64	278	iPg	33	05.20	0.2
			i$g	33	16.70	
CIN	0.71	179	ePg	33	05.00	-1.1
			i$g	33	15.00	
KHL	1.14	89	iPg	33	13 80	0.3
			e$g	33	27.30	
YER	1.19	172	ePn	33	15.20	0.9
KCT	1.94	6	ePn	33	24.00	-1.4
EDC	2.03	356	ePn	33	26.00	-0.7
BNT	2.04	357	iPg	33	28 70	1.9
YLV	2.46	24	iPn	33	35.70	2.7X
S.D. = 1.4 on 7 of 8 obs.						

SEP 25, 1989 16h 48m 27.17± 0.37s
33.517 S ± 6.6km 179.150 E ±12.3km
DEPTH = 222.5km (2 depth phases)
4.8mb (4 obs.)
SOUTH OF KERMADEC ISLANDS (179)

HBZ	4.13	189	P	49	32.70	0.8
RAO	4.94	31	ePg	49	22.50	-19.4X
			i$	50	08.70	
KRP	5.29	213	P	49	53.50	7.2X
WHH	5.77	201	eP	49	54.70	2.1
MOH	5.83	196	eP	49	54.90	1.6
HITZ	5.86	207	eP	49	58.40	4.8X
HATZ	5.91	204	eP	49	57.00	2.8
RATZ	6.00	206	eP	50	00.70	5.3X
TTH	6.30	197	P	50	03.00	3.8X
PGZ	7.45	197	eP	50	13.50	-0.5
MNG	7.67	201	eP	50	16.60	-0.3
	0.2s	402.00nm			6.2mb X	
			e$	51	45.70	
KIW	8.07	204	eP	50	21.60	-0.6
MTW	8.16	200	eP	50	22.00	-1.3
CAW	8.25	202	eP	50	23.30	-1.1
BLW	8.36	199	eP	50	24.80	-1.2
WDW	8.41	202	eP	50	25.40	-1.2
MRW	8.47	203	eP	50	26.40	-1.0
MOW	8.48	200	eP	50	26.20	-1.3
WEL	8.50	203	eP	50	26.90	-0.9
TCW	8.60	205	eP	50	28.20	-0.9
MSZ	14.13	215	P	51	40.00	1.1
			e$	54	17.00	
SVA	15.35	358	eP	51	46.30	-7.6X
VUN	15.46	358	iPc	51	46.40	-8.9X
NDF	15.77	354	eP	51	54.90	-4.1X
SGE	15.90	356	eP	51	54.60	-6.1X
DZM	15.99	312	iPd	52	03.30	1.5
BRS	23.51	278	iP	53	27.00	8.5X
			i	53	30.00	
			iPP	53	48.00	96kmX
8WA	25.46	259	eP	53	48.70	12.2X
HNR	29.78	319	eP	54	15.00	-0.2
SVO	30.09	319	P	54	15.00	-2.9
CTA	32.12	286	iPd	54	41.20	5.6X
	0.8s	18.66nm			4.8mb	
			i	55	27.20	225km
			i$	59	46.00	
OIS	37.29	280	iPd	55	24.80	5.3X
	1.0s	19.00nm			4.6mb	
			e	56	10.90	216km
WB5	41.94	277	eP	56	03.00	5.3X
			e	56	12.00	30kmX
SPA	56.66	180	e(P)	57	56.30	7.0X
	0.9s	26.82nm			4.9mb	
			e	58	35.50	170kmX
MAT	79.49	328	(P)	00	10.00	-0.2
SYP	88.53	46	eP	00	56.00	0.3
PRS	88.95	44	ePd	00	57.20	-0.3
GCC	89.07	43	ePd	00	57.50	-0.5
PCC	89.18	43	ePd	00	58.00	-0.5
PRI	89.23	45	eP	00	59.10	0.2
MHC	89.49	43	eP	00	59.90	-0.2
BKS	89.53	42	ePc	01	00.40	0.3
	0.8s	38.00nm			5.4mb	
PLM	89.66	49	eP	01	01.00	-0.1
RVR	89.76	48	eP	01	01.00	-0.3
SB8	89.95	47	eP	01	01.00	-1.2
ISA	90.20	46	eP	01	03.00	-0.4
FRI	90.37	45	eP	01	03.60	-0.4
TPC	90.66	49	eP	01	06.00	0.5

CMB	90.69	43	ePd	01	05.00	-0.5
GLA	90.76	50	eP	01	07.00	1.1
GSC	90.98	47	eP	01	07.00	0.0
ORV	91.11	42	eP	01	06.70	-0.6
WDC	91.25	40	eP	01	07.70	-0.3
SOD	142.52	343	ePKP	07	31.00	-3.0X
BCAO	145.89	216	ePKPd	07	46.20	4.8
	0.5s	7.00nm				
			i	08	55.00	
SUF	146.18	338	iPKP	07	42.00	1.7
	0.6s	22.60nm				
NUR	148.29	336	iPKP	07	48.60	4.9X
	0.7s	20.00nm				
HFS	151.71	345	ePKP	07	55.30	6.4X
	0.7s	11.80nm				
KIC	152.74	172	PKP	08	03.00	11.2X
S.D. = 1.4 on 40 of 59 obs.						

SEP 25, 1989 18h 47m 17.98± 0.83s
35.063 S ±10.0km 178.861 E ± 5.6km
DEPTH = 190.6 ± 9.0 km
5.3mb (7 obs.)
OFF E. COAST OF N. ISLAND, N.Z. (160)

HBZ	2.57	190	P	48	01.90	-0.6
			eS	48	35.70	
G8Z	2.98	246	P	48	07.70	0.3
KRP	3.91	222	Pc	48	21.00	2.1
WHH	4.26	206	P	48	22.30	-1.0
MOH	4.29	198	P	48	22.50	-1.1
HITZ	4.40	213	P	48	26.00	0.9
HATZ	4.42	209	P	48	25.40	0.1
RATZ	4.53	212	P	48	27.60	0.8
TTH	4.75	199	eP	48	28.10	-1.5
KETZ	4.78	212	eP	48	30.00	0.0
NEZ	5.67	221	P	48	45.00	3.4X
			S	50	05.00	
PGZ	5.91	199	eP	48	41.00	-3.6X
MNG	6.16	205	P	48	44.30	-3.6X
			eS	49	54.80	
RAO	6.41	26	eP	48	37.70	-13.4X
			iS	49	46.80	
KIW	6.58	207	P	48	49.60	-3.8X
MTW	6.64	203	eP	48	49.40	-4.7X
CAW	6.74	205	eP	48	51.50	-3.9X
BLW	6.84	202	eP	48	53.10	-3.6X
WDW	6.90	205	eP	48	53.20	-4.4X
MRW	6.97	207	P	48	54.10	-4.4X
			eS	50	14.40	
WEL	7.00	206	P	48	55.50	-3.4X
			S	50	15.00	
TCW	7.12	209	P	48	56.30	-4.2X
MSZ	12.74	218	eP	50	09.00	-4.4X
			eS	52	30.00	
COO	23.07	274	ePd	52	11.50	3.8X
BRS	23.54	282	iPc	52	13.60	1.4
			i	52	26.50	
CAN	24.37	261	eP	52	23.50	3.6X
BWA	24.98	263	eP	52	26.00	0.4
RMQ	27.16	280	iPd	52	46.80	1.3
	1.0s	129.00nm				5.6mb
CMS	27.78	268	iPc	52	52.60	1.7
	0.6s	26.00nm				5.1mb
HNR	30.82	321	eP	53	15.00	-2.9
SVO	31.13	321	eP	53	15.00	-5.6X
CTA	32.35	289	iPd	53	31.80	0.5
	1.0s	82.00nm				5.3mb
OIS	37.36	282	iPd	54	13.50	-0.3
	0.6s	26.00nm				5.1mb
PMG	38.60	304	eP	54	24.00	-0.1
WB5	41.92	279	eP	54	51.00	-0.4
FORR	42.43	261	eP	54	55.80	0.4
	0.4s	19.00nm				5.0mb
SBA	43.21	184	P	55	07.20	6.1X
WARB	45.37	266	eP	55	18.70	-0.3
MTN	48.36	285	ePd	55	41.50	-0.8
MRWA	52.79	258	eP	56	15.00	-0.6
MBL	53.18	269	eP	56	17.00	-1.6
SPA	55.12	180	iPd	56	36.70	4.3X
	0.9s	106.36nm				5.6mb
			e	57	03.30	
NANU	56.05	265	eP	56	38.00	-1.3
MAW	67.02	202	eP	57	52.00	0.2
PRS	90.22	44	ePd	59	58.10	0.4
GCC	90.36	43	eP	59	57.90	-0.4
PCC	90.47	43	e(P)	59	58.80	0.0
SAO	90.48	44	e(P)	59	58.80	-0.1

```
PRI     90.49  45 ePd    00 00.00    0.9
MWC     90.71  48 eP     00 00.00   -0.3
MHC     90.78  43 eP     59 58.90   -1.5
BKS     90.82  43 ePc    00 01.10    0.7
         0.7s     25.00nm                5.4mb
PLM     90.86  49 eP     00 01.00    0.0
RVR     90.97  48 eP     00 02.00    0.8
SBB     91.17  47 eP     00 02.00   -0.2
ISA     91.44  46 eP     00 04.00    0.5
FRI     91.63  45 eP     00 04.30    0.1
TPC     91.86  49 eP     00 06.00    0 6
GLA     91.93  50 eP     00 07.00    1.3
CMB     91.97  44 ePd    00 05.60   -0.2
FHC     91.98  40 ePd    00 06.10    0.4
ORV     92.42  42 ePd    00 07.50   -0.2
WDC     92.58  41 ePd    00 08.50    0.0
TNP     93.82  45 iP     00 14.50    0.0
KVN     93.97  44 iP     00 15.00   -0.2
PDCR   120.54 136 ePKP   05 48.70    0.0
SOD    143.92 342 ePKP   06 27.00   -4.0X
BCAO   144.50 215 ePKPc  06 32.00   -1.6
         0.6s      8.00nm
                    i    07 11.20
SUF    147.51 337 iPKP   06 36.70   -0.3
         0.6s     17.20nm
NUR    149.59 335 ePKP   06 43.00    2.7X
         0.7s     24.00nm
KIC    151.24 173 PKP    06 45.10    0.9
TIC    151.49 172 PKP    06 45.64    1.0
NB2    152.82 347 PKP    06 50.50    5.3X
         0.5s      2.90nm
HFS    153.12 344 ePKP   06 49.90    4.4X
         0.5s      3.00nm
      S.D. = 1.0   on  52 of  74 obs.
-------------------------------------------
%  SEP  25, 1989  19h 24m 06.92± 0.76s
    37.095 N ± 7.1km     4.204 W ± 7.3km
    DEPTH =  10.0km  (geophysicist)
 SPAIN                                (377)

MAL      0.40 204 iPgd   24 14.20   -0.9
                  iSg    24 20.50
AFC      0.55  73 iPgc   24 19.60    1.4
                  eSg    24 28.80
EPRU     0.83 261 ePg    24 25.00    2.0
EHOR     1.10 311 ePg    24 27.50   -0.1
                  eSg    24 43.30
EBAN     1.12  17 ePg    24 28.00    0.1
                  eSg    24 44.00
EJIF     1.20 238 ePg    24 28.80   -0.5
                  eSg    24 44.00
EVIA     2.04  41 ePn    24 41.00   -0.9
                  eSn    25 05.00
EPLA     3.31 334 ePn    24 59.40   -0.5
                  eSn    25 38.00
GUD      3.54   1 ePn    25 02.60   -0.6
                  eSn    25 43.50
      S.D. = 1.2   on   9 of   9 obs.
-------------------------------------------
%  SEP  25, 1989  20h 45m 17.00± 2.08s
    44.538 N ±10.1km     6.771 E ±17.8km
    DEPTH =  10.0km  (geophysicist)
 FRANCE                               (538)
      ML 2.1 (GEN).

PZZ      0.24  98 P      45 22.46    0.3
RRL      0.38   1 P      45 24.91    0.0
                  S      45 30.12
STV      0.49 126 P      45 27.04    0.0
                  S      45 33.65
ENR      0.56 124 P      45 28.30   -0.1
                  S      45 35.36
ROB      0.82 107 P      45 32.51   -0.5
                  S      45 43.25
IMI      1.02 128 P      45 36.69    0.4
FIN      1.08 107 P      45 37.20   -0.2
PCP      1.27  89 P      45 40.76    0.2
      S.D. = 0.3   on   8 of   8 obs.
-------------------------------------------
*  SEP  25, 1989  22h 11m 41.41± 0.86s
     0.065 N ± 9.9km    38.483 E ±16.1km
    DEPTH =  10.0km  (geophysicist)
    4.2mb (  1 obs.)
 KENYA                                (570)

NAI      2.14 232 iPd    12 18.50    0.6
         1.0s   195.00nm

AAE      8.91   2 eP     13 54.50    1.0
MZZ     14.67 220 ePn    15 10.00   -1.1
                  iPg    15 25.40
                  iSn    17 56.50
                  iSg    19 14.00
PTZ     15.88 206 iPn    15 28.90    2.0
                  iSn    18 51.00
                  iSg    19 57.60
LSZ     18.33 213 iPn    15 59.50    1.8
                  iSn    19 38.00
                  iSg    21 08.80
KMZ     18.37 223 iPn    15 57.00   -1.2
                  eSn    18 22.00
                  iSg    20 16.00
KRI     18.93 207 iPn    16 04.00   -1.1
                  i      16 07.80
                  iSn    19 35.80
BCAO    20.39 283 iPc    16 21.20   -0.2
         0.9s   212.00nm          5.5mb X
                  i      20 49.40
                  i      22 07.80
KSR     28.10 203 eP     17 34.90   -0.8
GBA     40.85  69 Pd     19 25.10   -0.3
         0.7s      3.70nm          4.2mb
KHC     53.37 340 eP     21 02.40   -0.9
      S.D. = 1.3   on  11 of  11 obs.
-------------------------------------------
%  SEP  25, 1989  22h 34m 56.99± 2.42s
    44.520 N ±11.4km     6.741 E ±20.5km
    DEPTH =  10.0km  (geophysicist)
 FRANCE                               (538)
      ML 2.0 (GEN).

PZZ      0.26  93 P      35 02.73    0.2
                  S      35 06.00
RRL      0.40   4 P      35 05.29    0.0
                  S      35 10.62
STV      0.50 123 P      35 07.23    0.1
                  S      35 13.29
ENR      0.57 121 P      35 08.57    0.0
                  S      35 15.65
ROB      0.84 105 P      35 13.09   -0.2
                  S      35 23.61
IMI      1.03 126 P      35 16.57    0.1
FIN      1.10 106 P      35 17.39   -0.2
      S.D. = 0.2   on   7 of   7 obs.
-------------------------------------------
%  SEP  25, 1989  22h 37m 32.31± 2.54s
    44.550 N ±12.8km     6.768 E ±23.4km
    DEPTH =  10.0km  (geophysicist)
 FRANCE                               (538)
      ML 1.9 (GEN).

PZZ      0.24 101 P      37 37.68    0.1
                  S      37 40.95
RRL      0.37   2 P      37 39.83   -0.2
                  S      37 45.27
STV      0.50 127 P      37 42.34   -0.2
                  S      37 49.27
ENR      0.57 124 P      37 43.12   -0.8
                  S      37 50.91
ROB      0.83 108 P      37 47.94   -0.5
IMI      1.03 128 P      37 52.04    0.2
FIN      1.09 108 P      37 52.55   -0.2
      S.D. = 0.4   on   7 of   7 obs.
-------------------------------------------
?  SEP  25, 1989  22h 52m 38.79± 1.55s
    41.011 N ±10.9km    23.709 E ±14.1km
    DEPTH =  10.0km  (geophysicist)
 GREECE-BULGARIA BORDER REGION        (363)

SRS      0.14 320 ePg    52 42.10    0.0
                  eSg    52 44.80
KNT      0.63 284 ePg    52 51.40   -0.1
                  eSg    53 00.50
THE      0.68 236 ePg    52 52.30    0.0
                  eSg    53 02.50
OUR      0.71 163 ePg    52 52.70    0.0
      S.D. = 0.1   on   4 of   4 obs.
-------------------------------------------
   SEP  25, 1989  23h 23m 28.42± 0.44s
    44.398 N ± 9.1km    28.333 W ± 5.1km
    DEPTH =  10.0km  (geophysicist)
    4.5mb ( 24 obs.)
 NORTH ATLANTIC RIDGE                 (403)

GRR     19.32  68 eP     27 57.20    0.8
         0.8s     10.70nm                4.2mb
EKA     19.46  47 P      27 59.00    1.1
         0.9s      6.70nm                3.9mb
MAL     19.68 105 eP     28 07.00    6.5X
LDF     19.82  68 eP     28 02.20    0.4
         0.8s      5.30nm                3.9mb
MFF     19.84  74 eP     28 02.10    0.0
         1.0s     16.00nm                4.3mb
LFF     20.64  78 eP     28 09.70   -0.8
         1.0s     13.60nm                4.3mb
IFR     20.99 113 iP     28 16.00    1.6
LPO     21.00  79 eP     28 13.30   -0.9
         1.0s      8.00nm                4.0mb
LSF     21.02  74 eP     28 14.20   -0.3
         1.4s     56.60nm                4.7mb
TIO     21.35 122 iP     28 18.60    0.6
                    i    28 23.00
TCF     21.49  74 eP     28 19.40    0.2
         1.4s     91.40nm                5.0mb
MAF     21.74  74 eP     28 22.10    0.4
         1.0s     16.00nm                4.4mb
BGF     21.90  73 eP     28 23.50    0.2
         1.0s     32.00nm                4.7mb
AVF     22.22  73 eP     28 26.80    0.3
         1.2s     41.60nm                4.8mb
SSF     22.30  72 eP     28 27.80    0.5
         1.4s     82.70nm                5.0mb
LOR     22.53  71 eP     28 29.70    0.2
         1.3s     54.10nm                4.9mb
SMF     22.57  73 eP     28 30.30    0.3
         1.2s     14.80nm                4.3mb
LBF     22.63  72 eP     28 30.70    0.1
         1.2s     16.00nm                4.4mb
DOU     22.94  64 P      28 32.60   -0.9
         0.9s     22.50nm                4.7mb
                    e    28 40.30
MEM     23.86  63 P      28 41.40   -1.0
HAU     24.15  69 eP     28 45.00   -0.3
         1.0s     16.00nm                4.6mb
BSF     24.46  69 eP     28 48.00   -0.5
         0.8s      8.00nm                4.4mb
CDF     24.74  68 eP     28 50.60   -0.5
         1.0s     12.00nm                4.5mb
ABH     24.85  64 eP     28 52.48    0.4
FEL     25.27  69 eP     28 56.20   -0.1
CLL     28.28  61 e(P)   29 25.00    1.3
KHC     28.82  66 P      29 27.70   -0.9
                    e    30 18.00
OHR     35.80  78 eP     30 29.00   -0.6
MLR     37.82  69 eP     30 46.00   -0.7
MBC     47.63 341 eP     32 06.00    0.1
         1.2s     14.00nm                4.9mb
BCAO    57.17 120 iPd    33 16.10   -1.8
         0.7s     11.00nm                5.0mb
ALQ     58.75 290 eP     33 29.50    0.4
         1.0s      3.00nm                4.4mb
DAU     58.82 298 eP     33 30.00    0.4
TNP     63.94 299 eP     34 03.20   -0.9
         0.9s      3.52nm                4.6mb
MAIO    64.35  64 eP     34 07.00    0.4
ZOBO    70.43 221 P      34 46.00    0.5
         1.5s      8.06nm                4.6mb
       Z 24s       0.08um                3.9MszX
                    LR   57 38.00
      S.D. = 0.8   on  35 of  36 obs.
-------------------------------------------
   SEP  26, 1989  00h 18m 50.02± 0.44s
    76.175 N ± 9.5km   134.246 E ± 5.8km
    DEPTH =  10.0km  (geophysicist)
    4.5mb ( 13 obs.)
 LAPTEV SEA                           (655)

MBC     22.15  38 eP     23 47.00    0.2
         1.1s     20.00nm                4.5mb
IMA     23.59  76 ePc    24 01.60    0.4
         1.1s     14.10nm                4.4mb
FBA     25.93  73 eP     24 26.00    2.6
INK     26.16  57 eP     24 28.00    2.5
KEV     27.73 314 eP     24 40.00    0.2
BJI     37.11 203 eP     26 02.00    0.2
       Z 12s       0.60um                4.6MszX
       N 11s       0.29um
NB2     38.36 319 P      26 12.10   -0.1
         0.9s      8.00nm                4.5mb
GTA     39.88 223 eP     26 25.60    0.4
KSP     47.22 310 eP     27 24.50    0.3
KRA     47.29 307 eP     27 25.70    0.9
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26d 00h

```
CLL     47.36 313 eP     27 25.00   -0.3
BRG     47.62 312 e(P)   27 27.00   -0.3
LON     48.32  63 P      27 32.50   -0.5
KHC     49.36 312 P      27 42.10    1.2
CDF     51.14 317 eP     27 55.00    0.5
LRM     51.15  56 eP     27 59.60    4.7X
MAIO    51.45 265 eP     27 58.00    0.9
HAU     51.68 318 eP     27 59.00    0.4
LOR     52.80 319 eP     28 06.80   -0.2
        1.0s      6.00nm          4.5mb
SSF     53.05 320 eP     28 08.40   -0.5
LBF     53.05 319 eP     28 08.00   -1.0
        1.0s      8.00nm          4.6mb
BGF     53.65 320 eP     28 13.40    0.2
        1.0s     10.00nm          4.8mb
TCF     54.01 320 eP     28 15.20   -0.7
        1.0s      6.00nm          4.6mb
WDC     54.05  66 e(P)   28 16.40    0.2
LPG     54.05 316 eP     28 17.50    0.9
        0.8s      2.60nm          4.3mb
CAF     55.36 320 eP     28 25.60   -0.3
        1.0s      4.00nm          4.4mb
LPO     55.73 321 eP     28 28.00   -0.5
        1.0s      8.00nm          4.7mb
KVN     56.48  63 P      28 33.70   -0.5
DAU     56.59  56 P      28 34.00   -1.1
TNP     57.60  62 P      28 41.00   -1.2
GOL     58.42  51 P      28 45.00   -3.0X
        0.7s      7.52nm          4.9mb
CHG     60.20 219 eP     28 58.90   -1.2
ALQ     62.82  54 eP     29 16.00   -1.9
        1.0s      3.00nm          4.4mb
TUL     63.81  44 eP     29 22.50   -1.6
        1.0s      7.70nm          4.8mb
      S.D. = 1.0  on  32 of  34 obs.
-------------------------------------------
*  SEP  26, 1989   00h 49m 17.00± 0.88s
   0.099 N ±10.4km   38.470 E ±15.9km
   DEPTH =  10.0km  (geophysicist)
   4.3mb (  1 obs.)
 KENYA                              (570)

NAI      2.15 231 P      49 52.50   -1.1
        1.0s     80.00nm
AAE      8.88   2 eP     51 29.50    0.9
PTZ     15.91 206 iPn    53 05.00    2.2
                  iSn    55 43.00
                  iSg    57 01.50
LSZ     18.35 213 iPn    53 33.00   -0.5
                  iSn    57 14.00
                  iSg    57 48.00
KMZ     18.39 222 iPn    53 35 00    1.0
                  iSn    56 50.00
                  iSg    58 50.00
KRI     18.95 207 iPn    53 40.50   -0.4
                  i      53 43.40
                  iSn    57 24.00
BCAO    20.37 282 iPc    53 56.20   -0.6
        0.7s     48.00nm          5.0mb X
                  i      58 24.10
                  i      59 42.00
BUL     22.31 205 iP     54 16.00   -0.6
GBA     40.85  69 Pd     57 00.10   -0.8
        0.6s      4.10nm          4.3mb
      S.D. = 1.3  on   9 of   9 obs.
-------------------------------------------
?  SEP  26, 1989   01h 00m 11.68± 0.87s
   40.414 N ±23.0km   28.618 E ±11.0km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                             (366)

KCT      0.26 231 iPg     00 17.20    0.0
EDC      0.58 264 iPg     00 23.40    0.0
                  eSg    00 34.40
YLV      0.60  75 iPg     00 23.70   -0.1
                  iSg    00 36.70
HRT      0.90  63 ePn    00 29.00    0.1
      S.D. = 0.1  on   4 of   4 obs.
-------------------------------------------
?  SEP  26, 1989   01h 21m 17.13± 5.34s
   32.934 S ±18.9km   72.086 W ±35.3km
   DEPTH =  10.0km  (geophysicist)
 OFF COAST OF CENTRAL CHILE         (134)

LCCH     0.69 141 eP     21 30.50   -0.3
                  iS     21 40.00
ROCH     0.90  93 iPd    21 34.50   -0.1
                  iS     21 46.50
LNV      1.16 151 iPc    21 38.50   -0.4
                  iS     21 53.50
PEL      1.19 100 iPd    21 39.20   -0.2
                  iS     21 55.60
TACH     1.20 127 iP     21 39.30   -0.2
                  iS     21 54.50
JACH     1.28  79 iPd    21 40.50   -0.5
                  iS     21 58.00
SAN      1.30 114 eP     21 41.80    0.6
                  iS     22 00.00
PCH      1.48 118 iPc    21 44.00    0.0
                  iS     22 04.80
FCH      1.56 105 iPc    21 45.80    0.6
                  iS     22 07.00
CHCH     1.56 130 iPc    21 45.50    0.5
                  iS     22 06.60
      S.D. = 0.5  on  10 of  10 obs.
-------------------------------------------
?  SEP  26, 1989   01h 45m 49.80± 8.78s
   51.500 N ±52.6km   16.271 E ±56.5km
   DEPTH =  10.0km  (geophysicist)
 POLAND                             (548)

KSP      0.66 179 iP     46 02.80   -0.1
        0.5s     39.00nm
                  iS     46 11.70
                  i      46 16.40
BRG      1.59 248 iPg    46 17.60   -0.5
                  iSg    46 37.30
PRU      1.87 217 Pg     46 23.60    1.5
                  Sn     46 40.00
                  Sg     46 46.50
CLL      2.06 266 iPg    46 25.00    0.2
                  eSg    46 51.00
KHC      2.93 217 Pn     46 36.20   -1.1
                  Pg     46 42.50
                  Sn     47 12.00
                  Sg     47 20.20
MOX      3.06 256 ePg    46 45.50    6.4X
                  iSg    47 25.00
VRI      8.92 125 ePc    48 16.50   15.0X
      S.D. = 1.4  on   5 of   7 obs.
-------------------------------------------
&  SEP  26, 1989   02h 13m 09.10s
   38.752 N          122.895 W
   DEPTH =   7.0km
 NORTHERN CALIFORNIA                ( 36)
      <BRK>. ML 3.4 (BRK).
      Mo=4.4*10**14 Nm (BRK). Felt
      (IV) at Cloverdale.

NWRM     0.29 179 iPc    13 15.40    0.3
ZSP      0.95 148 eP     13 26.30   -1.1
                  eS     13 43.10
BRK      1.01 150 eP     13 27.70   -0.8
                  eS     13 40.90
BKS      1.02 149 ePd    13 27.90   -0.7
                  iS     13 42.10
PCC      1.31 162 ePc    13 31.20   -2.5
ORV      1.35  53 eP     13 32.00   -2.2
LTCM     1.57  22 eP     13 35.20   -2.2
MHC      1.72 145 ePd    13 37.90   -1.8
ARN      1.77 142 eP     13 38.50   -1.8
WDC      1.85   8 eP     13 41.70    0.3
GCC      1.86 157 eP     13 39.20   -2.4
MIN      1.88  32 ePc    13 40.30   -1.7
CMB      2.10 109 ePc    13 43.70   -1.4
                  eS     14 09.90
SAO      2.29 149 eP     13 45.30   -2.6
LLA      2.63 143 ePc    13 50.70   -2.1
LBFM     2.70  16 eP     13 52.00   -2.0
KVN      3.75  84 eP     14 07.20   -1.7
TNP      4.51  97 e(P)   14 20.00    0.4
      18 obs. associated
-------------------------------------------
   SEP  26, 1989   02h 24m 12.41± 0.21s
   31.394 S ± 6.0km  178.521 W ± 5.1km
   DEPTH =  33.0km  (normal)
   5.4mb ( 10 obs.)
 KERMADEC ISLANDS REGION            (177)

RAO      2.20  14 eP     24 47.60    0.3
                  iS     25 11.00
HBZ      6.72 202 eP     25 50.70   -0.6
KRP      8.15 215 P      26 19.20    7.9X
PGZ     10.12 203 eP     26 32.50   -6.0X
MNG     10.40 206 eP     26 35.90   -6.5X
                  eS     28 30.20
KIW     10.83 207 eP     26 41.90   -6.4X
BLW     11.06 204 eP     26 47.50   -3.9X
WEL     11.25 207 eP     26 49.00   -4.9X
                  S      28 50.00
TCW     11.39 209 eP     26 48.10   -7.6X
DZM     16.31 301 iPd    28 05.90    5.2X
MSZ     16.99 215 eP     28 10.00    1.0
BRS     25.29 272 iP     29 40.70    3.2X
COO     25.35 264 eP     29 42.00    4.0X
CAN     27.34 253 eP     30 00.10    3.7X
BWA     27.85 255 eP     30 01.30    0.3
RMO     28.99 271 eP     30 13.30    2.0
        0.8s     64.00nm          5.4mb
OLP     32.82 269 eP     30 47.00    1.9
CTA     33.53 281 iPc    30 52.30    1.0
        1.2s    146.88nm          5.8mb
PMG     38.64 297 eP     31 35.00    0.4
OIS     38.95 276 iPd    31 38.00    0.8
        1.2s     50.00nm          5.2mb
ASPA    42.62 268 iPc    32 07.60    0.2
        1.1s    110.00nm          5.5mb
      Z 22s      0.31um          4.1MszX
                  LR     47 44.90
WRA     43.70 273 Pc     32 14.50   -1.7
        0.6s     98.60nm          5.8mb
WB5     43.70 274 eP     32 14.60   -1.6
                  i      32 16.20
FORR    45.31 256 eP     32 29.60    0.6
        0.4s     18.00nm          5.3mb
WARB    47.93 262 eP     32 48.60   -1.2
MTN     49.70 280 eP     33 02.00   -1.5
KNA     50.31 275 eP     33 07.50   -0.6
GUMO    56.88 316 eP     33 57.30    0.8
SPA     58.78 180 ePc    34 10.60    1.0
        1.0s     29.00nm          5.3mb
                  e      34 15.50
MAW     71.22 201 eP     35 29.00   -0.7
        1.1s     20.00nm          5.1mb
BCH     86.03  44 P      36 51.00    0.1
PRS     86.05  43 eP     36 51.20    0.3
GCC     86.18  42 ePc    36 52.00    0.5
PCC     86.29  41 ePc    36 52.00    0.0
SAO     86.31  42 ePc    36 52.80    0.6
PRI     86.34  43 ePc    36 53.00    0.5
PEL     86.43 127 eP     36 53.50    0.4
        1.0s     21.00nm          5.3mb
LLA     86.50  43 ePc    36 53.00   -0.1
MHC     86.60  42 ePc    36 54.10    0.4
MWC     86.61  46 eP     36 54.00    0.1
PLM     86.78  48 eP     36 55.00    0.2
RVR     86.88  47 eP     36 55.00    0.0
SBB     87.06  46 eP     36 56.00    0.0
ISA     87.32  45 eP     36 57.00   -0.2
FRI     87.48  43 ePc    36 57.70   -0.1
TPC     87.79  47 eP     37 01.00    1.6
CMB     87.80  42 ePc    36 59.20   -0.2
GLA     87.89  49 eP     37 01.00    1.1
GSC     88.10  46 eP     37 01.00    0.1
ORV     88.22  40 eP     37 01.20   -0.1
WDC     88.37  39 ePc    37 01.80   -0.2
MIN     88.71  40 eP     37 03.30   -0.6
TNP     89.68  44 P      37 08.10   -0.5
                  pP     37 21.20   43kmX
KVN     89.80  43 P      37 07.50   -1.6
CN2     90.66 323 eP     37 11.00   -1.7
GYA     91.66 300 P      37 17.80    0.0
LON     93.07  35 P      37 29.50    5.7X
ALQ     94.54  52 P      37 38.00    7.0X
PNT     95.91  34 eP     37 36.00   -0.7
FBA     98.93  13 P      37 46.50   -3.5X
        1.0s     11.50nm          5.4mb
BUL    122.52 211 iPKPc   43 06.40   -0.2
PTZ    126.32 217 iPKPd   43 14.00   -0.1
LSZ    126.98 213 iPKPd   43 15.00   -0.4
KMZ    129.65 211 iPKPd   43 21.00    0.5
MZZ    130.21 216 iPKPd   43 21.00   -0.6
KEV    138.99 347 ePKP    43 39.00    2.7X
SUF    144.90 340 ePKP    43 43.40   -3.5X
        0.7s     17.10nm
MSL    145.25 290 ePKP    43 47.50   -0.8
                  iS*    44 06.50
NUR    147.08 339 iPKP    43 50.80    0.3
        0.8s     32.30nm
BCAO   148.75 214 ePKPd   43 53.80   -0.9
        0.5s     45.00nm
```

			i	43	57.40	
UPP	149.55	344	iPKP	43	56.00	1.6
HFS	150.12	348	ePKP	43	57.90	2.6X
	0.4s		2.10nm			
BBTK	153.31	297	iPKPd	44	07.00	6.2X
LIC	154.23	165	PKP	44	02.64	0.0
KIC	154.42	166	PKP	44	03.00	0.1
TIC	154.64	165	PKP	44	03.40	0.2
BRG	158.45	338	ePKP	44	05.80	-1.1
KHC	160.07	336	PKP	44	08.40	-0.4
OHR	161.68	307	ePKP	44	05.00	-5.7X
	S.D. = 0.8		on 60 of 79 obs.			

? SEP 26, 1989 02h 39m 59.24± 2.04s
4.123 N ±22.2km 123.460 E ±34.5km
DEPTH = 570.2 ± 25.3 km
4.6mb (4 obs.)
CELEBES SEA (262)

KKM	7.46	285	iPc	41	53.00	-0.2
	0.6s		676.40nm		5.9mb	X
WB5	26.15	156	iPc	44	52.00	1.1
			eS	48	37.80	
			eScP	50	41.20	
WRA	26.20	156	Pd	44	50.00	-1.3
	0.2s		42.40nm		5.7mb	X
QIS	29.20	148	iPc	45	21.20	3.8X
	0.6s		25.00nm		5.0mb	
ASPA	29.44	160	iPc	45	20.60	1.2
			iS	49	29.50	
WARB	30.28	174	eP	45	25.90	-0.7
GBA	46.36	285	Pc	47	31.70	-5.1X
	0.8s		7.50nm		4.3mb	
SOD	88.86	337	eP	51	55.00	1.2
SUF	89.72	333	eP	51	59.00	1.2
	0.4s		4.40nm		4.7mb	
HYT	90.83	29	P	52	02.00	-1.2
HFS	96.14	332	(P)	52	26.80	-0.4
	0.4s		1.00nm		4.4mb	
KIC	127.25	281	PKP	58	01.30	-0.6
LIC	127.55	281	PKP	58	01.90	-0.5
	S.D. = 1.2		on 11 of 13 obs.			

% SEP 26, 1989 03h 40m 33.01± 3.36s
44.529 N ±16.5km 6.755 E ±29.1km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (GEN).

PZZ	0.25	95	P	40	38.35	0.0
			S	40	42.00	
RRL	0.39	3	P	40	41.14	0.0
			S	40	46.21	
STV	0.50	125	P	40	43.33	0.2
			S	40	49.89	
ENR	0.56	122	P	40	44.32	-0.2
			S	40	52.12	
ROB	0.83	106	P	40	49.17	0.0
	S.D. = 0.2		on 5 of 5 obs.			

SEP 26, 1989 04h 40m 50.47± 0.58s
30.232 S ± 5.3km 68.436 W ± 6.7km
DEPTH = 57.4 ± 10.3 km
4.4mb (3 obs.)
SAN JUAN PROVINCE, ARGENTINA (137)

ZON	1.33	189	iPc	41	12.80	-0.3
			eS	41	28.00	
CYA	2.91	53	iPd	41	37.20	1.8
JACH	3.06	216	iPc	41	38.80	1.2
MRA	3.19	134	ePc	41	39.90	0.7
FCH	3.47	207	iPc	41	45.30	1.8
			iS	42	31.00	
PEL	3.48	213	iPd	41	43.50	0.1
			i	41	49.90	
TCA	3.49	109	iPd	41	43.30	-0.3
ROCH	3.51	218	iPc	41	48.60	4.7X
			iS	42	32.60	
SAN	3.73	210	iPc	41	47.20	0.3
			iS	42	42.00	
PCH	3.81	207	iPc	41	48.60	0.5
			iS	42	32.60	
TACH	4.02	211	iPc	41	50.40	-0.6
			iS	42	29.50	
CHCH	4.14	206	eP	41	52.70	0.0
LCCH	4.19	219	iPc	41	52.00	-1.3
			iS	42	54.40	
LNV	4.49	213	iPc	41	55.20	-2.3
			iS	43	01.50	
ANT	6.74	344	eP	42	28.00	-1.0
CNCB	13.37	2	P	44	00.00	0.3
ITB7	13.62	71	e(P)	44	01.20	-1.3
LPB	13.64	1	P	44	05.00	1.9
			SS	48	20.00	
			LR	49	10.00	
ITB1	13.65	69	e(P)	44	07.50	4.6X
ITB	13.73	70	e(P)	44	00.50	-3.4X
ZOBO	13.90	1	P	44	04.50	-2.2
	1.0s		23.00nm		4.8mb	X
			i	44	09.80	
			LR	49	48.00	
PPD	17.40	66	eP	44	50.90	0.1
			e	45	05.50	
NNA	19.76	335	eP	45	20.00	1.4
	0.6s		3.33nm		3.8mb	
VAO	20.48	75	eP	45	24.90	-1.2
			e	45	37.50	
BMA	22.97	77	eP	45	57.50	6.6X
			e	46	03.40	
BAO	23.72	57	eP	45	57.20	-1.1
PDCR	32.34	63	eP	47	17.10	0.6
SPA	59.94	180	e(P)	50	53.30	0.4
	0.8s		3.33nm		4.5mb	
			e	51	07.30	
TUL	70.64	337	e(P)	52	05.20	3.4X
	0.7s		6.90nm		4.7mb	
KIC	70.97	70	P	52	04.70	0.5
MAW	75.89	163	eP	52	32.00	0.0
BCAO	89.59	85	ePd	54	06.00	22.4X
	0.8s		4.00nm			
WRA	125.51	207	PKPd	00	04.20	16.9X
	0.5s		0.90nm			
GBA	144.46	110	PKPd	00	23.00	0.5X
	0.9s		2.80nm			
	S.D. = 1.2		on 26 of 34 obs.			

? SEP 26, 1989 05h 31m 51.71± 3.50s
61.912 N ±17.8km 4.368 E ±31.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.5 (BER).

SUE	0.88	167	iP	32	10.08	1.5
			eS	32	20.30	
			iSg	32	22.16	
HYA	1.15	130	iP	32	13.37	0.2
			eS	32	27.87	
ASK	1.49	164	eP	32	19.82	1.4
			eS	32	38.55	
MOL	1.63	65	eP	32	20.78	0.3
			eS	32	42.17	
ODD1	2.29	150	iP	32	29.03	-1.1
			iS	32	54.79	
KMY	2.74	171	iP	32	35.31	-1.2
			eS	33	04.94	
BLS1	2.80	153	eP	32	36.50	-1.0
			eS	33	09.39	
			eSg	33	17.39	
RGS	3.03	66	eP	32	44.00	3.5X
			eS	33	17.00	
NRA0	3.65	106	iPg	32	57.30	7.8X
			iS	33	27.00	
			iSg	33	40.60	
	S.D. = 1.4		on 7 of 9 obs.			

* SEP 26, 1989 05h 41m 16.96± 1.07s
4.716 S ±13.3km 138.696 E ±16.9km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)
WEST IRIAN (201)

TLE	5.99	261	ePc	43	04.40	18.7X
MTN	11.00	222	ePc	43	55.50	0.3
			eS	46	00.00	
KNA	14.68	221	eP	44	45.20	1.1
			eS	47	25.00	
WB5	15.65	195	eP	44	54.80	-2.0
			i	45	02.50	
			eS	47	47.90	
WRA	15.72	195	P	44	56.00	-1.7
	0.4s		1.20nm		3.4mb	
QIS	15.77	177	eP	44	54.60	-3.8X
CTA	16.96	155	iPd	45	14.80	1.4
	1.0s		24.00nm		4.3mb	
ASPA	19.40	193	ePd	45	43.50	0.1
	1.0s		31.00nm		4.5mb	
			eS	49	17.30	
WARB	24.26	207	eP	46	34.20	1.9
	0.3s		5.00nm		4.5mb	
CHG	45.60	302	eP	49	36.00	-0.2
CNCB	146.05	130	PKPc	00	55.50	-0.5
LPB	146.12	129	PKP	00	57.00	1.1
ZOBO	146.26	129	PKP	00	55.00	-1.4
	S.D. = 1.5		on 11 of 13 obs.			

* SEP 26, 1989 05h 53m 11.62± 2.09s
24.058 S ±12.8km 179.847 W ± 9.7km
DEPTH = 535.5 ± 26.4 km
4.8mb (8 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.77	276	iPc	56	00.50	1.7
PGZ	16.83	190	eP	56	37.40	-1.5
MNG	16.97	192	eP	56	39.80	-0.5
BRS	24.87	256	iP	57	54.20	0.6
RMQ	28.46	258	iPd	58	26.00	0.9
	0.7s		36.00nm		5.1mb	
CAN	29.18	240	eP	58	32.80	1.5
BWA	29.45	242	eP	58	32.80	-0.8
CMS	31.17	249	eP	58	49.00	0.8
PMG	34.68	289	eP	59	17.00	-0.9
ASPA	42.15	261	iPd	00	18.40	-0.2
	1.1s		56.00nm		5.0mb	
WB5	42.52	266	iPd	00	20.80	-0.8
WRA	42.53	266	Pc	00	20.90	-0.7
	0.7s		45.00nm		5.1mb	
FORR	46.35	250	eP	00	50.80	-0.3
	0.5s		70.00nm		5.4mb	
WARB	48.21	256	eP	01	04.40	-1.0
	0.3s		3.00nm		4.4mb	
KNA	48.80	270	eP	01	08.80	-1.1
MBL	55.39	260	eP	01	56.00	-1.3
NANU	58.88	257	iPd	02	21.00	-0.2
SPA	66.09	180	e(P)	03	09.70	2.6
	1.0s		14.00nm		4.5mb	
MAT	72.11	326	(P)	03	39.00	-4.1X
	1.0s		10.00nm		4.3mb	
PRI	81.89	45	ePc	04	36.90	0.8
MHC	82.01	43	ePc	04	36.70	0.0
FRI	83.02	44	ePc	04	41.20	-0.3
CMB	83.22	43	ePc	04	42.20	-0.4
ORV	83.47	41	eP	04	43.30	-0.5
WDC	83.49	40	eP	04	43.50	-0.3
MIN	83.90	41	eP	04	46.20	0.1
CN2	84.10	324	P	04	46.00	-0.7
TIA	84.44	314	P	04	48.80	0.2
TIY	88.40	313	Pc	05	08.30	0.8
CHG	89.86	291	eP	05	16.00	1.4
	1.0s		10.50nm		4.7mb	
HFS	142.73	349	ePKP	11	39.50	-5.2X
	0.3s		2.60nm			
	S.D. = 1.0		on 29 of 31 obs.			

* SEP 26, 1989 07h 02m 53.18± 1.10s
4.802 S ±13.6km 136.989 E ±13.2km
DEPTH = 33.0km (normal)
4.0mb (2 obs.)
WEST IRIAN REGION (196)

TLE	4.30	259	ePc	03	58.00	0.0
JAY	4.35	59	ePd	03	58.20	-0.5
			e	06	12.00	
MTN	9.87	216	eP	05	15.50	-0.4
			eS	07	07.00	
KNA	13.55	216	eP	06	03.80	-1.8
			eS	08	30.00	
WB5	15.20	189	eP	06	25.90	-1.3
			i	06	28.50	
			eS	09	11.80	
WRA	15.27	190	Pc	06	28.20	0.1
	0.3s		0.70nm		3.4mb	
QIS	15.87	171	eP	06	35.00	-0.8
CTA	17.67	150	iPd	07	04.50	6.0X
ASPA	18.99	189	iPd	07	17.10	2.3
	0.7s		23.00nm		4.5mb	
			eS	10	42.80	
WARB	23.45	204	eP	08	02.70	2.0
ZOBO	147.51	131	PKP	22	35.00	0.4
	S.D. = 1.5		on 10 of 11 obs.			

% SEP 26, 1989 08h 13m 44.66± 3.33s

26d 08h

44.517 N ±15.6km 6.732 E ±27.3km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 2.0 (GEN).

PZZ	0.26	92	P	13 50.50	0.2
			S	13 53.99	
RRL	0.41	5	P	13 53.06	0.0
			S	13 58.60	
STV	0.50	122	P	13 55.22	0.3
			S	14 01.57	
ENR	0.57	120	P	13 56.24	-0.1
			S	14 03.93	
ROB	0.85	105	P	14 00.55	-0.5
			S	14 11.73	

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

? SEP 26, 1989 08h 15m 46.07± 3.57s
44.511 N ±16.4km 6.724 E ±29.1km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.7 (GEN).

PZZ	0.27	91	P	15 51.80	0.0
			S	15 55.49	
RRL	0.41	6	P	15 54.56	0.0
			S	15 59.69	
STV	0.51	122	P	15 56.51	0.2
			S	16 03.69	
ENR	0.57	119	P	15 57.64	-0.1
			S	16 05.02	
RSP	0.74	30	P	16 12.86	12.1X

S.D. = 0.2 on 4 of 5 obs.

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* SEP 26, 1989 09h 43m 46.53± 0.94s
19.693 N ±12.4km 108.831 W ±15.9km
DEPTH = 33.0km (normal)
4.3mb (5 obs.)
REVILLA GIGEDO ISLANDS REGION (53)

GLA	14.34	339	eP	47 09.00	-0.3
BAR	14.72	333	eP	47 13.00	-1.1
ALQ	15.33	7	eP	47 23.00	0.6
	1.0s	10.00nm			4.0mb
TPC	15.72	337	eP	47 29.00	1.7
RVR	16.14	334	eP	47 34.00	1.4
MWC	16.63	332	eP	47 41.00	2.0
SBB	16.93	334	eP	47 46.00	3.4X
MEO	17.56	29	e(P)	47 49.70	-0.7
SIO	19.43	32	e(P)	48 16.90	3.8X
TNP	19.72	340	eP	48 15.50	-1.1
	1.5s	151.52nm			5.1mb
TUL	19.82	33	eP	48 16.90	-0.4
	1.2s	18.20nm			4.3mb
	Z 19s	0.45um			3.9MszX
		eS	52 14.00		
		LR	53 46.00		
GOL	20.16	8	eP	48 21.00	-0.2
	1.0s	9.00nm			4.1mb
DAU	20.76	355	eP	48 29.10	1.7
MHC	20.84	330	e(P)	48 27.20	-0.9
CMB	20.86	334	e(P)	48 27.00	-1.1
KVN	20.89	339	eP	48 28.00	-0.6
RSSD	24.68	8	eP	49 08.00	2.0
LRM	26.23	354	eP	49 24.40	3.9X
EDM	33.65	355	P	50 24.50	-1.7
INK	51.00	348	eP	52 54.00	7.0X
ZOBO	53.65	129	P	53 08.00	-0.1
	Z 24s	0.18um			4.0MszX
		LR	10 46.00		
LPB	53.84	129	eP	53 11.00	1.7
CNCB	54.10	129	eP	53 11.00	-0.4
MBC	56.84	357	eP	53 27.00	-2.8
	1.0s	5.00nm			4.5mb
QIZ	125.97	313	ePKP	02 56.40	8.7X
	N 15s	2.20um			
GBA	146.34	349	PKPd	03 25.10	0.0
	1.1s	81.80nm			

S.D. = 1.4 on 21 of 26 obs.

SEP 26, 1989 09h 44m 58.14± 0.68s
35.920 N ± 7.6km 25.418 E ± 6.2km
DEPTH = 10.0km (geophysicist)
CRETE (370)

NPS	0.67	166	eP	45 13.00	1.5
VAM	1.12	243	eP	45 18.00	-1.1
APE	1.15	4	eP	45 21.20	1.5
KAP	1.48	104	eP	45 25.00	0.3
YER	2.61	61	ePn	45 40.00	-1.1
ITM	3.08	295	eP	45 47.70	0.0
KSL	3.38	85	eP	45 51.20	-0.8
ELL	3.72	76	iPn	45 56.80	-0.2
BCK	4.43	68	ePn	46 07.00	0.0
KCT	4.90	27	iPn	46 18.30	4.7X

S.D. = 1.1 on 9 of 10 obs.

SEP 26, 1989 09h 59m 15.04± 0.32s
12.534 N ± 5.5km 95.467 E ± 5.6km
DEPTH = 21.8km (4 depth phases)
4.9mb (14 obs.)
ANDAMAN ISLANDS REGION (703)

NNT	4.17	89	iPc	00 19.10	0.2
NNT	4.17	89	iPc	00 11.00	-7.9X
KBR	4.22	69	eP	00 22.20	2.5
NST	5.50	55	eP	00 38.00	0.2
CHG	7.08	28	eP	00 58.50	-1.6
SNG	7.35	136	eP	01 02.50	-1.3
	0.2s	250.00nm			7.0mb X
		eS		02 43.00	
LOE	7.75	51	eP	01 09.50	0.0
IPM	9.62	145	ePd	01 34.40	-1.0
	0.8s	26.10nm			5.6mb
		e		04 15.00	
KGM	13.03	143	eP	02 23.00	1.4
KMI	14.28	28	PcP	02 41.50	3.2X
	Z 14s	2.60um			
	N 10s	1.30um			
	E 10s	2.40um			
		pP		02 48.00	
		sP		02 53.00	
		PP		03 01.00	
		S		05 40.00	
GYA	17.40	36	P	03 21.00	2.7X
	N 12s	2.40um			
	E 12s	3.50um			
LSA	17.55	347	P	03 18.50	-1.9
CD2	19.83	21	eP	03 45.00	-2.4
	Z 12s	0.90um			
	E 12s	1.60um			
		eS		07 31.00	
GZH	19.97	56	eP	03 55.00	6.1X
	N 15s	1.50um			
	E 15s	0.90um			
POO	21.65	289	iPd	04 06.20	-0.1
	1.3s	173.08nm			5.3mb
NDI	23.40	316	eP	04 22.00	-1.3
		eS		08 40.00	
LZH	24.64	16	P	04 35.50	0.0
	1.5s	0.06nm			2.0mb X
	Z 15s	1.79um			4.7MszX
	N 15s	1.83um			
	E 10s	0.79um			
		pP		04 43.00	27km
		sP		04 45.50	
		PP		05 12.00	
		PPP		05 33.50	
		eS		09 09.00	
XAN	24.67	28	P	04 34.00	-1.7
	N 10s	0.90um			
	E 12s	0.60um			
		S		09 00.00	
WHN	25.02	41	eP	04 43.50	4.5X
	Z 16s	1.20um			4.5MszX
	N 14s	1.80um			
	E 14s	1.30um			
		eS		09 06.00	
QZH	25.09	57	eP	04 45.00	5.3X
	Z 16s	1.10um			4.5MszX
	N 15s	1.20um			
SSE	30.06	48	eP	05 31.60	6.6X
	Z 16s	0.50um			4.2MszX
	N 11s	0.70um			
	E 10s	0.70um			
		eS		10 22.00	
BTO	30.74	22	eP	05 29.50	-1.6
	N 11s	0.80um			
	E 12s	0.40um			
HHC	31.55	24	eP	05 40.40	2.3
	N 12s	0.50um			
	E 12s	1.90um			
QUE	31.70	308	eP	05 40.00	0.2
BJI	32.92	30	eP	05 54.00	4.0X
	Z 12s	0.90um			4.7MszX
	N 12s	0.65um			
	E 12s	0.52um			
		eS	11 16.00		
SNY	38.10	35	eP	06 39.40	5.4X
	Z 16s	1.10um			4.8MszX
	N 17s	0.90um			
	E 15s	0.90um			
MAIO	40.05	312	eP	06 51.00	0.5
		eS	12 36.00		
CN2	40.43	34	eP	06 57.50	4.0X
	Z 15s	0.90um			4.7MszX
	N 14s	0.80um			
		epP	07 11.00		51kmX
MAT	45.14	50	eP	07 40.00	8.0X
MUN	48.51	156	eP	07 58.70	0.3
COOL	49.72	151	eP	08 07.00	-0.8
NWAO	49.76	156	eP	08 08.00	0.0
WB5	50.04	130	iPc	08 10.00	-0.4
		i		08 17.70	26km
		i		09 36.80	
WRA	50.05	130	Pd	08 10.60	0.1
	0.7s	7.10nm			4.8mb
RKG	50.68	157	eP	08 18.40	3.4X
ASPA	52.03	134	iPc	08 24.90	-0.6
	0.9s	12.00nm			4.8mb
	Z 22s	0.42um			4.4MszX
		LR	30 20.10		
NAI	59.80	261	eP	09 32.00	10.2X
ELL	63.07	305	eP	09 42.00	-1.4
RMQ	64.69	127	eP	09 55.20	1.2
VRI	66.32	315	ePc	10 04.50	0.3
MLR	66.82	314	eP	10 00.00	-7.6X
PTZ	68.87	249	eP	10 24.00	3.2X
SUF	69.49	333	eP	10 24.00	0.3
	0.8s	5.00nm			4.7mb
MZZ	70.16	253	iPd	10 32.00	3.3X
		i		10 49.20	63kmX
SOD	70.41	337	iP	10 31.00	1.8
KRA	71.21	319	eP	10 34.60	0.3
		e		10 38.60	13km
LSZ	72.09	249	eP	10 34.00	-6.3X
UPP	73.14	329	iP	10 50.60	5.0X
BUL	73.33	244	iPd	10 45.10	-2.5
		i		10 52.00	22km
KSP	73.56	320	iPc	10 49.00	0.8
BRG	75.05	320	iP	10 57.80	1.0
	1.1s	16.00nm			5.0mb
KHC	75.34	318	P	10 59.00	0.4
SLR	75.62	239	iPc	11 05.00	4.3X
MOX	76.53	319	e(P)	11 05.00	-0.3
KSR	76.83	239	iPc	11 10.70	3.1X
	1.1s	20.27nm			5.1mb
BLF	78.58	237	iPd	11 22.50	5.3X
HAU	80.22	317	eP	11 25.70	0.2
	1.0s	8.00nm			4.7mb
LPG	80.29	314	eP	11 27.00	0.7
	0.8s	13.40nm			5.0mb
LBF	81.96	316	eP	11 35.10	0.4
	1.2s	17.80nm			5.0mb
LOR	82.00	317	eP	11 35.20	0.3
	1.2s	7.10nm			4.6mb
SSF	82.27	316	eP	11 37.00	0.7
MAF	83.06	316	eP	11 41.40	1.0
	0.8s	4.00nm			4.6mb
MAW	83.33	192	eP	11 40.00	-1.2
LDF	84.37	318	eP	11 47.80	0.8
	1.0s	9.60nm			5.0mb
MFF	84.82	316	eP	11 50.20	1.0
LPF	85.09	318	eP	11 51.80	1.2
	1.0s	8.00nm			4.9mb
INK	92.18	16	eP	12 30.00	6.0X
ALQ	128.41	23	ePKP	18 25.30	2.8X
	1.0s	10.00nm			

S.D. = 1.2 on 45 of 68 obs.

% SEP 26, 1989 10h 48m 41.68± 0.92s
39.264 N ± 8.0km 27.683 E ±10.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

IZM	0.92	201	iPg	48 59.20	-0.2
			iSg	49 13.70	
EDC	1.09	7	ePn	49 01.40	-0.8
KCT	1.11	28	iPn	49 02.80	0.2
EZN	1.19	299	iPn	49 04.20	0.3
YLV	1.84	44	ePn	49 14.00	0.4

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

% SEP 26, 1989 10h 54m 12.45± 0.97s
39.644 N ± 8.8km 29.487 E ±12.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ALT	0.76	140	ePg	54 27.40	0.0
			iSg	54 39.60	
YLV	0.93	355	iPn	54 30.30	0.1
KCT	1.06	305	iPn	54 32.30	-0.1
HRT	1.18	7	ePn	54 34.30	-0.3
ISK	1.46	347	ePn	54 39.00	0.2

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

% SEP 26, 1989 11h 08m 38.73± 1.11s
43.072 N ±18.3km 0.603 W ± 6.9km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

ESCF	0.02	74	Pg	08 40.39	-0.3
			Sg	08 42.27	
ATE	0.07	281	Pg	08 40.79	-0.4
			Sg	08 41.98	
OGE	0.14	45	Pg	08 42.27	0.3
			Sg	08 46.20	
ISSF	0.15	253	Pg	08 42.71	0.4
			Sg	08 46.04	
MADF	0.17	295	Pg	08 42.61	-0.1

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

SEP 26, 1989 11h 13m 49.95± 0.62s
42.235 N ± 4.3km 13.616 E ± 6.5km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

AQU	0.20	307	Pd	13 53.90	-0.4
			eSg	13 56.80	
AZI	0.28	209	P	13 55.90	0.1
			eSg	14 00.90	
SDI	0.55	164	P	14 00.90	-0.2
			eSg	14 10.20	
MNS	0.71	282	P	14 03.30	-0.7
			eSg	14 14.70	
RMP	0.80	238	P	14 06.00	0.5
RDP	0.82	235	P	14 06.70	0.8
DUI	0.85	132	P	14 05.90	-0.5
CIO	1.02	340	ePg	14 08.15	-1.1
			iSg	14 23.32	
AOI	1.31	360	ePn	14 16.05	1.8
			eSn	14 39.88	
ARV	1.36	339	P	14 15.00	0.1
PGD	2.15	320	P	14 26.20	-0.3

S.D. = 0.9 on 11 of 11 obs.

% SEP 26, 1989 11h 36m 04.66± 3.02s
44.528 N ±16.0km 6.791 E ±26.4km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.4 (GEN).

PZZ	0.22	96	P	36 09.58	0.0
			S	36 13.69	
RRL	0.39	359	P	36 12.76	0.0
			S	36 18.20	
STV	0.48	126	P	36 14.40	0.0
			S	36 21.99	
ENR	0.54	124	P	36 15.63	0.0
			S	36 24.15	
RSP	0.71	28	P	36 36.17	17.5X
ROB	0.81	106	P	36 20.25	-0.1
FIN	1.07	107	P	36 24.84	0.1

S.D. = 0.1 on 6 of 7 obs.

SEP 26, 1989 11h 55m 21.44± 0.75s
46.827 N ± 5.5km 7.226 E ± 8.8km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
MD 1.0 (STR).

EMS	0.78	195	ePd	55 36.20	-0.6
MMK	0.93	146	ePd	55 39.70	0.4
FEL	1.18	27	Pg	55 41.82	-1.7
			Sg	55 58.82	
LLS	1.22	87	ePc	55 44.80	0.6
SLE	1.28	42	ePc	55 45.00	-0.1
CDF	1.59	1	Pn	55 50.24	0.5
			Sg	56 10.69	
WLS	1.59	3	Pn	55 50.49	0.8
			Sg	56 10.76	
VITF	1.63	329	Pn	55 50.44	0.3
			Sg	56 12.33	

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

SEP 26, 1989 13h 19m 31.76± 0.89s
39.522 N ± 8.7km 25.698 E ± 8.1km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
MD 3.1 (ATH).

PRK	0.52	122	ePb	19 42.30	0.0
EZN	0.57	58	iPg	19 45.20	1.9
			iSg	19 58.20	
IZM	1.66	132	ePn	20 04.00	3.0X
BNT	1.90	63	ePn	20 03.00	-1.5
NEO	1.93	264	ePn	20 04.30	-0.7
SMG	2.02	153	ePn	20 07.20	1.0
KDZ	2.14	354	eP	20 08.00	0.1
KCT	2.17	70	ePn	20 07.00	-1.5
RZN	2.29	341	eP	20 11.00	0.7
MMB	2.55	325	eP	20 20.00	6.1X
CTT	2.64	51	ePg	20 20.10	4.9X
HRT	3.31	66	ePn	20 36.80	12.1X

S.D. = 1.4 on 8 of 12 obs.

• SEP 26, 1989 13h 36m 06.41± 0.63s
28.632 N ± 9.8km 43.690 W ±13.3km
DEPTH = 10.0km (geophysicist)
4.6mb (8 obs.) 3.9Msz (1 obs.)
NORTH ATLANTIC RIDGE (403)

RSCP	35.95	292	eP	43 10.00	0.8
	1.0s		13.02nm		4.8mb
TUL	44.22	293	eP	44 18.00	0.5
	1.3s		31.80nm		5.0mb
	Z 21s		0.15um		3.9Msz
			LR	57 00.00	
SIO	44.65	293	e(P)	44 13.30	-7.7X
KHC	47.81	48	P	44 34.50	-11.4X
ZOBO	50.51	211	P	45 07.20	-0.4
	1.2s		7.43nm		4.5mb
	Z 24s		0.08um		3.6MszX
			LR	01 40.00	
LPB	50.73	211	eP	45 10.00	1.0
CNCB	50.92	211	eP	45 10.00	-0.7
GOL	51.32	300	eP	45 14.00	0.8
	0.8s		2.38nm		4.2mb
EDM	55.62	317	eP	45 44.00	-0.6
DAU	55.67	301	eP	45 44.00	-1.4
MBC	59.01	344	eP	46 09.00	0.8
	1.0s		4.00nm		4.5mb
TNP	60.69	300	eP	46 20.50	0.1
	0.8s		1.62nm		4.2mb
KVN	61.11	301	eP	46 22.50	-0.8
CMB	63.11	301	ePc	46 36.70	0.2
BCAO	63.57	100	iPd	46 40.00	0.1
	1.2s		14.00nm		5.0mb
			i	54 17.00	
INK	63.67	335	eP	46 39.00	-0.7
FBA	70.14	334	eP	47 21.00	0.4
	1.0s		4.00nm		4.5mb

S.D. = 0.8 on 15 of 17 obs.

• SEP 26, 1989 13h 54m 34.31± 0.88s
39.218 N ± 8.5km 22.007 E ±10.3km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.3 (ATH).

NEO	0.95	84	ePb	54 52.00	-0.4
KZN	1.10	351	ePb	54 55.60	0.5
VLS	1.52	227	ePb	55 00.50	-1.1
PLG	1.60	43	ePb	55 02.50	-0.2
KEK	1.78	287	ePg	55 10.00	4.7X
ITM	2.04	182	ePb	55 10.20	1.2
OHR	2.11	334	iPn	55 15.20	5.1X
SKO	2.78	351	ePn	55 24.00	4.3X

S.D. = 1.2 on 5 of 8 obs.

? SEP 26, 1989 14h 17m 03.27± 4.07s
58.783 N ±33.6km 6.131 E ±10.6km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

KMY	0.63	314	eP	17 15.22	-0.7
			eS	17 23.01	
BLS1	0.71	30	iP	17 16.82	-0.5
			eS	17 24.56	
ODD1	1.16	12	eP	17 24.86	-0.1
			eS	17 40.84	
ASK	1.77	345	eP	17 35.31	1.2
			eS	17 56.71	
NRA0	3.37	52	iPd	17 57.00	0.1
			iSg	18 45.50	

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

? SEP 26, 1989 14h 52m 03.44± 1.03s
40.336 N ±14.1km 28.747 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KCT	0.31	254	iPg	52 09.80	-0.1
			iSg	52 15.80	
YLV	0.53	64	iPn	52 13.30	-0.9
HRT	0.85	55	ePn	52 20.80	0.9
ALT	1.66	140	ePn	52 32.90	0.1

S.D. = 1.3 on 4 of 4 obs.

? SEP 26, 1989 15h 12m 00.23± 5.40s
35.060 N ±59.2km 24.082 E ±26.4km
DEPTH = 53.7 ± 20.7 km
CRETE (370)

VAM	0.36	16	ePb	12 10.00	-0.3
NPS	1.27	80	ePb	12 22.00	0.0
VLI	1.90	331	ePb	12 31.20	0.5
YER	3.98	57	iPn	13 00.40	0.1
KHC	16.05	334	eP	15 43.40	-0.4

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

? SEP 26, 1989 15h 22m 15.39± 3.96s
34.936 N ±43.1km 23.923 E ±19.4km
DEPTH = 72.0 ± 14.6 km
3.9mb (1 obs.)
CRETE (370)
MD 3.6 (ATH).

VAM	0.52	26	eP	22 28.50	-0.3
NPS	1.42	76	eP	22 39.30	-0.5
VLI	1.95	336	eP	22 50.00	3.0X
ITM	2.76	325	eP	22 59.00	0.8
YER	4.16	57	ePn	23 18.90	1.0
NEO	4.40	353	eP	23 20.50	-0.7
HFS	26.08	348	eP	27 43.30	-0.3
	0.6s		2.50nm		3.9mb

S.D. = 1.1 on 6 of 7 obs.

SEP 26, 1989 15h 54m 10.79± 1.06s
41.633 N ± 9.5km 19.524 E ± 9.1km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.2 (TTG).

SDA	0.38	357	iPgc	54 19.50	0.9
TIR	0.38	138	ePg	54 19.50	0.8
ULC	0.39	328	iPgd	54 17.00	-1.8
			iSg	54 22.40	
PUK	0.49	34	ePg	54 19.70	-1.1
PHP	0.69	85	iPgd	54 23.80	-0.6
TTG	0.82	346	ePg	54 27.50	0.9
			eSg	54 36.00	
BDV	0.83	322	ePg	54 26.00	-0.9
OHR	1.09	118	ePn	54 29.50	-1.8
HCY	1.12	317	ePg	54 32.50	0.8
			eSg	54 40.00	
BRY	1.46	330	ePg	54 38.00	0.7
			eSg	54 57.50	
SKO	1.47	76	iPn	54 39.50	2.1
			iSn	55 00.00	
LSK	1.69	151	ePKP	54 36.00	-4.6X

S.D. = 1.4 on 11 of 12 obs.

? SEP 26, 1989 16h 04m 58.30± 5.83s
4.288 S ±37.1km 152.607 E ±20.8km
DEPTH = 104.9 ± 38.1 km
5.0mb (2 obs.)
NEW BRITAIN REGION (192)

PMG	7.43	226	eP	06 46.00	0.3

26d 16h

QIS 20.53 217 iPc 09 29.70 -0.7
DZM 22.19 144 iPc 09 43.10 -3.9X
MTN 22.86 247 eP 09 54.00 0.6
BRS 22.98 180 iPd 09 54.20 -0.4
WB5 23.58 227 eP 10 01.00 0.5
ASPA 26.40 221 eP 10 26.70 -0.2
WARB 33.05 226 eP 11 26.00 0.1
MBL 35.97 239 eP 11 50.00 -0.9
NANU 40.20 240 eP 12 26.00 -0.2
MSZ 42.41 164 P 12 43.50 -0.4
0.8s 68.00nm 5.5mb
SPA 85.74 180 e(P) 17 29.20 2.4
0.9s 5.45nm 4 5mb
PPD 144.90 139 ePKP 24 24.50 -1.0
BAO 151.58 135 e(PKP)24 42 00 5.7X
S.D. = 1.1 on 12 of 14 obs.

? SEP 26, 1989 16h 05m 01.08± 6.35s
40.081 N ±53.0km 28.158 E ±12.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

KCT 0.23 42 iPg 05 05.80 -0.2
iSg 05 09.80
BNT 0.33 326 iPg 05 08.30 0.4
iSg 05 13.80
EDC 0.35 320 ePg 05 07.90 -0.4
YLV 1.05 62 ePn 05 21.00 0.1
S.D. = 0.6 on 4 of 4 obs.

% SEP 26, 1989 16h 38m 10.52± 0.88s
38.544 N ± 7.0km 14.636 E ± 9.0km
DEPTH = 10.0km (geophysicist)
SICILY (398)

MNO 0.61 176 P 38 23.00 0.0
eSg 38 32.70
GIB 0.73 221 P 38 25.80 0.8
eSg 38 35.70
USI 1.15 279 P 38 31.50 -0.6
MCT 1.21 221 P 38 33.20 0.1
MEU 1.46 171 P 38 36.40 -0.6
MGR 1.74 24 P 38 41.30 0.3
eSn 39 01.80
S.D. = 0.7 on 6 of 6 obs.

% SEP 26, 1989 18h 12m 57.60± 2.27s
45.329 N ±10.7km 7.336 E ±20.9km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

LSD 0.18 315 P 13 01.93 0.1
S 13 04.44
LPG 0.45 293 Pg 13 06.60 -0.2
Sg 13 12.00
RRL 0.57 224 P 13 09.22 0.0
S 13 16.30
PZZ 0.84 192 P 13 14.35 0.4
S 13 25.25
STV 1.08 180 P 13 17.68 -0.4
S.D. = 0.4 on 5 of 5 obs.

% SEP 26, 1989 20h 59m 09.22± 1.24s
37.670 N ± 9.1km 2.522 W ±11.8km
DEPTH = 10.0km (geophysicist)
SPAIN (377)

ENIJ 0.74 161 iPg 59 23.40 -0.3
eSg 59 32.00
AFC 0.91 243 ePg 59 28.30 1.5
eSg 59 41.00
EVIA 0.97 1 ePg 59 28.20 0.5
eSg 59 41.70
EBAN 1.11 297 iPgc 59 30.00 -0.1
eSg 59 44.30
EHOR 2.16 275 ePn 59 44.20 -1.6
eSn 00 11.00
S.D. = 1.6 on 5 of 5 obs.

SEP 26, 1989 21h 12m 04.83± 0.54s
38.417 N ± 4.6km 23.828 E ± 7.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 2.9 (ATH).

ATH 0.45 191 iPgd 12 12.30 -1.7

NEO 1.01 332 ePg 12 24.30 0.4
eSg 12 40.00
VLI 1.84 203 ePb 12 35.10 -1.6
APE 1.91 134 ePn 12 38.50 0.8
ITM 1.95 231 ePb 12 38.00 -0.3
PLG 1.98 352 ePn 12 38.50 -0.2
PRK 2.08 66 ePb 12 43.80 3.6X
EZN 2.40 53 eP 12 46.00 1.3
KZN 2.47 320 ePn 12 46.50 0.7
VLS 2.56 266 ePb 12 48.50 1.5
VAM 3.02 174 ePb 12 55.50 2.0
MMB 3.17 359 eP 12 55.00 -0.7
RZN 3.34 12 eP 12 57.00 -1.3
KDZ 3.45 20 eP 13 00.00 0.3
NPS 3.46 155 ePb 13 06.00 6.2X
KKB 3.49 351 eP 13 00.00 -0.3
OHR 3.56 320 ePn 13 02.20 0.9
PVL 4.93 13 eP 13 19.00 -1.6
S.D. = 1.2 on 16 of 18 obs.

SEP 26, 1989 21h 24m 56.83± 0.40s
50.057 S ± 7.7km 114.151 E ± 9.0km
DEPTH = 10.0km (geophysicist)
5.2mb (5 obs.) 5.2Msz (6 obs.)
SOUTH OF AUSTRALIA (437)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 25C
Centroid Location:
Origin Time 21:25: 5.5 0.6
Lat 49.84S 0.05 Lon 114.10E 0.11
Dep 15.0 FIX Half-duration 2.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.33 0.06 Mtt= 1.09 0.05
Mff=-0.76 0.09 Mrt= 0.00 0.00
Mrf= 0.00 0.00 Mtf= 0.71 0.06
Principal Axes:
T Val= 1.33 Plg= 0 Azm=161
N -0.33 90 180
P -1.00 0 71
Best Double Couple:Mo=1.2*10**17
NP1:Strike=206 Dip=90 Slip= 180
NP2: 296 90 0

MUN 18.13 6 eP 29 11.00 0.9
BAL 19.52 7 eP 29 26.00 -1.2
MRWA 20.86 5 eP 29 41.00 -0.2
ADE 23.41 59 iPd 30 07.10 0.4
0.8s 56.72nm 5.2mb
TOO 25.63 73 eP 30 28.00 0.1
WARB 25.71 27 eP 30 28.00 -0.8
ASPA 30.53 38 iPd 31 10.00 -2.4
1.4s 48.00nm 5.2mb
Z 21s 1.27um 4.5Msz
LR 41 18.90
MAW 30.61 216 eP 31 11.00 -1.6
SBA 33.89 162 eP 31 42.70 1.5
WB5 34.14 35 iPd 31 43.00 -0.9
i 31 49.90
RMQ 35.45 61 eP 31 55.00 -0.1
QIS 35.68 44 ePd 31 56.00 -1.1
BRS 37.10 67 eP 32 10.00 1.0
e($) 42 40.00
CTA 39.26 52 iPd 32 26.20 -1.0
1.7s 138.46nm 5.4mb
iS 38 29.00
SPA 40.13 180 e(P) 32 33.20 -1.0
1.2s 49.30nm 5.1mb
Z 19s 5.61um 5.4Msz
PMG 48.89 46 eP 33 45.00 0.4
IPM 55.59 344 ePd 34 34.50 -0.3
SNG 58.20 344 eP 34 39.20 -14.1X
NST 66.60 345 eP 35 49.00 -0.2
BFS 68.25 254 iPd 36 04.00 4.0X
QIZ 68.88 356 eP 36 04.40 0.8
eS 45 13.00
KSR 68.93 255 eP 36 01.70 -2.5
CHG 69.87 345 eP 36 09.70 0.0
BUL 72.01 260 iPd 36 29.10 6.2X
KRI 73.81 263 eP 36 35.10 1.6
PTZ 74.62 266 eP 36 37.00 -1.2
KMI 75.53 349 Pc+ 36 45.00 1.8
Z 20s 2.70um 5.5Msz
N 20s 2.20um
pP 36 51.50 21kmX
sP 36 59.00
S 46 31.00

LSZ 75.88 263 eP 36 46.00 0.6
GYA 76.46 353 P 36 49.60 1.3
Z 28s 0.60um 4.8MszX
S 46 37.00
MZZ 78.53 266 iP 37 07.00 6.9X
WHN 80.24 0 P 37 10.00 1.3
pP 37 16.50 21kmX
CD2 81.13 351 P 37 14.50 1.0
XAN 83.86 356 Pc 37 28.00 0.5
LZH 86.25 352 P 37 34.50 -5.1X
2.0s 0.05nm 2.4mb X
Z 22s 0.95um 5.1Msz
TIY 87.41 359 Pc 37 45.00 0.0
Z 22s 0.65um 5.0Msz
eS 48 27.00
MAT 88.81 19 eP 37 52.00 0.3
1.2s 17.19nm 5.2mb
BJI 89.73 2 eP 37 54.50 -1.4
Z 24s 0.38um 4.7MszX
eSKS 48 26.00
eS 48 50.00
ePS 50 00.00
GTA 89.98 349 eP 37 56.70 -0.6
Z 22s 0.80um 5.1Msz
CN2 93.99 8 Pc 38 16.00 0.5
Z 25s 0.40um 4.8MszX
N 25s 0.50um
epP 38 22.70 21kmX
MDJ 95.25 11 eP 38 21.00 -0.2
SUF 131.93 322 ePKP 44 16.00 5.3X
INK 143.21 35 ePKP 44 34.00 2.7X
ETA 143.60 298 ePKP 44 36.00 3.6X
ECB 143.81 297 ePKP 44 36.50 3.7X
DLE 143.99 299 ePKP 44 37.00 3.9X
DMU 144.40 299 ePKP 44 38.20 4.4X
MBC 146.52 20 ePKP 44 38.00 1.3
0.6s 11.00nm
ALQ 146.92 102 ePKP 44 40.00 1.1
LRM 148.89 80 ePKP 44 45.90 4.1X
SES 151.42 72 ePKP 44 51.00 5.9X
MEO 151.70 110 iPKPc 44 52.40 6.4X
S.D. = 1.1 on 37 of 51 obs.

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* SEP 26, 1989 21h 46m 29.72± 1.00s
59.305 N ± 8.5km 13.893 E ±13.2km
DEPTH = 10.0km (geophysicist)
SWEDEN (536)
ML 2.8 (UPP). Felt in the
Varmland district.

UDD 0.80 350 iPg 46 45.90 0.6
i 46 47.30
iSg 46 58.60
HFS 0.84 353 eP 46 46.60 0.7
0.1s 16.20nm
NRA0 1.86 322 iPd 47 00.60 -1.3
iPg 47 05.20
iS 47 25.70
iSg 47 29.90
UPP 1.98 72 iPg 47 03.00 -0.6
i 47 10.80
iSg 47 27.50
DEL 2.84 180 iPg 47 16.40 0.5
i 47 50.80
iSg 47 53.40
S.D. = 1.2 on 5 of 5 obs.

? SEP 26, 1989 22h 17m 22.77± 6.89s
44.553 N ±27.2km 129.441 W ±48.3km
DEPTH = 10.0km (geophysicist)
OFF COAST OF OREGON (30)

KMOR 4.35 74 eP 18 29.50 -1.0
NLO 4.50 68 eP 18 32.88 0.4
ONR 4.60 58 eP 18 34.19 0.2
BMW 4.77 64 eP 18 36.17 -0.3
OBH 4.78 53 eP 18 36.39 -0.1
OOW 4.84 47 eP 18 37.37 -0.1
RVW 4.98 69 eP 18 39.38 0.0
OTR 4.99 43 eP 18 39.73 0.2
OSP 5.02 40 eP 18 40.25 0.5
CPW 5.03 59 eP 18 39.85 -0.3
SMW 5.07 55 eP 18 40.41 -0.3
GT2 5.13 81 eP 18 41.44 -0.1
OSD 5.15 49 eP 18 41.83 -0.2
LVP 5.19 71 eP 18 42.04 -0.3
APW 5.21 64 eP 18 42.46 -0.1

ERK	5.30	68	eP	18	44.64	0.7
MTMW	5.31	71	eP	18	43.87	-0.2
SHW	5.33	70	eP	18	44.66	0.2
VLMM	5.34	77	eP	18	44.62	0.1
STD	5.36	69	eP	18	44.59	-0.2
HSR	5.37	70	eP	18	45.35	0.4
YEL	5.37	69	eP	18	45.18	0.1
STW	5.38	46	eP	18	44.84	-0.1
TDL	5.39	68	eP	18	45.00	-0.3
ESD	5.39	70	eP	18	45.36	0.0
HDW	5.41	53	eP	18	45.53	0.0
SOSW	5.41	69	eP	18	45.48	-0.1
MEW	5.43	58	eP	18	46.63	0.9
CDFW	5.44	71	eP	18	45.88	-0.1
KOSW	5.44	67	eP	18	45.80	-0.1
LMW	5.44	65	eP	18	46.18	0.2
TDH	5.48	80	eP	18	46.64	0.0
GMW	5.52	55	eP	18	46.81	-0.1
VLL	5.58	78	eP	18	48.00	0.1
GHW	5.60	61	eP	18	48.22	0.2
VBEM	5.61	82	eP	18	48.65	0.2
APM	5.62	75	eP	18	48.75	0.3
BLN	5.66	50	eP	18	49.39	0.4
LON	5.78	65	eP	18	50.50	-0.2
PGC	5.82	43	eP	18	50.50	-0.5
RMW	6.06	59	eP	18	54.90	0.3
MCW	6.14	45	eP	18	55.50	-0.3

S.D. = 0.3 on 42 of 42 obs.

SEP 26, 1989 22h 28m 19.85± 0.54s
42.294 N ± 4.7km 20.004 E ± 4.9km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (TTG).

PUK	0.26	198	iPgc	28	24.70	-0.7
PVY	0.30	356	iPgc	28	25.90	-0.3
			iSg	28	31.60	
KKS	0.37	126	ePg	28	27.70	0.2
SDA	0.47	234	iPgd	28	29.50	0.2
TTG	0.57	284	iPgd	28	30.10	-1.2
			iSg	28	40.50	
ULC	0.65	240	ePg	28	32.80	-0.1
			eSg	28	44.00	
PHP	0.69	152	iPgc	28	31.60	-1.8
BDV	0.87	270	ePg	28	36.50	-0.1
			eSg	28	51.00	
NKY	0.91	305	ePg	28	37.30	0.0
			eSg	28	53.00	
TIR	0.95	186	ePg	28	39.20	1.2
SKO	1.12	106	iPn	28	41.00	0.2
			iSn	28	58.00	
HCY	1.13	278	iPgd	28	40.90	-0.1
			eSg	28	59.00	
PLE	1.13	337	ePg	28	40.50	-0.6
			eSg	28	59.00	
BRY	1.24	300	ePg	28	42.70	-0.2
			eSg	29	03.00	
OHR	1.32	153	ePn	28	43.30	-1.0
LSK	2.19	168	ePn	28	59.10	2.2
BZS	3.52	19	eP	29	29.00	13.4X
VBY	4.70	315	eP	29	36.60	4.2X
VOY	5.77	312	ePn	29	49.80	2.2
			eSn	30	57.70	

S.D. = 1.1 on 17 of 19 obs.

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* SEP 26, 1989 22h 44m 13.16± 0.65s
49.998 S ±13.2km 114.058 E ±15.4km
DEPTH = 10.0km (geophysicist)
4.6mb (2 obs.) 5.2Msz (3 obs.)
SOUTH OF AUSTRALIA (437)

MRWA	20.81	5	eP	48	57.00	0.0
ADE	23.43	59	iPd	49	22.90	-0.3
	0.9s		28.57nm		4.8mb	
TOO	25.67	73	eP	49	47.00	2.4
ASPA	30.52	38	iPd	50	26.80	-1.8
	Z 22s		2.31um		4.8MszX	
			LR	00	30.60	
MAW	30.62	216	eP	50	28.00	-1.0
WB5	34.12	36	eP	50	58.70	-1.4
			i	51	06.20	
BRS	37.13	67	eP	51	17.00	-8.6X
			e(S)	57	20.00	
SPA	40.19	180	ePc	51	50.40	-0.6
	0.6s		4.47nm		4.3mb	
	Z 20s		4.41um		5.3Msz	
DZM	49.40	75	iPc	53	04.30	-0.7
BOM	77.67	320	eP	56	12.50	1.2
			eS	04	49.00	
XAN	83.79	356	P	56	43.50	0.0
LZH	86.19	352	eP	56	55.50	-0.1
	1.0s		0.02nm		2.3mb X	
	Z 22s		1.11um		5.2Msz	
			pP	57	03.50	25kmX
TIY	87.35	359	eP	57	08.80	7.8X
	N 15s		0.50um			
BJI	89.68	2	eP	57	20.00	8.1X
	Z 28s		0.55um		4.8MszX	
			eSKS	08	00.00	
			eS	09	08.00	
GTA	89.91	349	eP	57	13.00	-0.3
	Z 22s		0.90um		5.2Msz	
CN2	93.94	8	eP	57	39.00	7.4X
	Z 25s		0.40um		4.8MszX	
	N 25s		0.50um			
CLL	132.25	304	e(Pdif	00	13.00	-9.5X
MBC	146.48	20	ePKP	03	55.00	2.0
	1.0s		12.00nm			
ALQ	146.99	102	ePKP	03	56.00	0.7
	1.2s		22.27nm			
LRM	148.94	80	ePKP	04	01.80	3.6X
BW06	149.42	87	PKP	04	02.50	3.5X
GOL	150.53	95	PKP	04	06.00	5.2X
	0.9s		20.08nm			
MEO	151.77	110	e(PKP)	04	08.70	6.2X
RSSD	153.60	88	PKP	04	18.00	13.0X

S.D. = 1.3 on 14 of 24 obs.

SEP 26, 1989 23h 30m 12.73± 0.41s
39.417 N ± 3.9km 27.673 E ± 4.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.94	9	iPg	30	30.90	0.2
			eSg	30	43.40	
BNT	0.96	11	iPg	30	31.30	0.4
KCT	0.98	32	iPg	30	31.30	-0.1
			iSg	30	44.30	
IZM	1.07	198	iPg	30	31.70	-1.1
			iSg	30	44.70	
PRK	1.10	262	ePb	30	33.70	0.3
			eSb	30	49.00	
EZN	1.12	292	iPn	30	33.80	0.1
KHL	1.81	127	ePn	30	45.60	1.3
SMG	1.83	201	ePn	30	45.70	1.3
ALT	1.93	100	ePn	30	47.30	1.3
GBZT	1.93	44	ePn	30	45.50	-0.4
ISK	1.96	32	ePn	30	45.70	-0.6
HRT	2.08	47	iPn	30	47.40	-0.7
YER	2.33	168	ePn	30	50.00	-1.7
KDZ	2.82	323	eP	30	59.00	0.4
BCK	3.01	130	ePn	31	01.00	-0.4
JMB	3.16	345	eP	31	13.00	9.6X
RZN	3.20	316	iPd	31	05.00	0.8
BBTK	3.95	82	eP	31	27.00	12.2X
			eS	32	20.00	
PVL	4.19	336	eP	31	17.00	-1.0
VTS	4.63	315	eP	31	24.00	-0.5

S.D. = 0.9 on 18 of 20 obs.

SEP 26, 1989 23h 34m 38.90± 0.49s
36.839 N ± 4.8km 27.249 E ± 4.8km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.8 (ATH).

YER	0.88	70	ePn	34	54.70	-1.1
KAP	1.29	183	ePn	35	02.00	-0.7
APE	1.40	280	ePn	35	05.20	0.8
IZM	1.56	0	iPn	35	06.20	-0.5
KSL	2.01	110	ePn	35	13.70	0.4
NPS	2.06	221	ePn	35	14.10	0.2
ELL	2.14	92	iPn	35	16.60	1.4
KHL	2.34	50	iPn	35	18.40	0.3
PRK	2.52	343	ePn	35	20.70	0.1
BCK	2.74	76	iPn	35	24.90	1.1
ATH	3.03	293	ePb	35	38.50	10.7X
EZN	3.07	347	ePn	35	27.00	-1.3
ALT	3.16	45	ePn	35	33.00	3.2X
KCT	3.51	14	ePn	35	36.00	1.3
EDC	3.54	8	ePn	35	33.40	-1.5
KDZ	5.01	344	eP	35	56.00	0.1
RZN	5.23	339	iP	35	59.00	-0.1
BBTK	5.27	54	eP	36	00.00	0.3
LFK	5.32	105	eP	35	59.00	-1.4
KKB	5.97	329	ePd	36	10.00	0.6

S.D. = 1.0 on 18 of 20 obs.

SEP 27, 1989 00h 26m 34.46± 0.67s
39.177 N ± 6.1km 22.059 E ± 8.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)
MD 3.0 (ATH).

NEO	0.91	81	ePn	26	51.70	-0.3
LIT	0.98	20	ePg	26	53.70	0.6
			eSg	27	08.30	
KZN	1.15	349	ePn	26	55.50	-0.5
VLS	1.52	230	ePn	27	01.50	-0.2
OUR	1.88	51	ePb	27	06.40	-0.5
ITM	2.00	183	ePn	27	09.00	0.4
KNT	2.08	18	ePn	27	10.40	0.5
			eSn	27	38.70	
OHR	2.16	334	ePn	26	53.00	-18.0X

S.D. = 0.6 on 7 of 8 obs.

SEP 27, 1989 00h 29m 20.24± 1.00s
43.236 N ±10.9km 4.809 E ± 4.5km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 3.0 (LDG).

GELF	0.47	72	Pg	29	29.52	-0.4
TREF	0.57	47	Pg	29	31.84	0.0
PRAF	0.63	25	Pg	29	32.79	-0.1
			Sg	29	43.30	
BERF	0.65	83	Pg	29	33.75	0.5
			Sg	29	44.11	
VILF	0.90	47	Pg	29	37.78	0.2
			Sg	29	51.61	
TAVF	0.99	67	Pg	29	39.19	0.2
			Sg	29	53.21	
LRG	1.15	79	Pn	29	42.10	0.3
			Pg	29	42.80	
			Sg	29	58.50	
LMR	1.25	85	Pn	29	43.00	-0.4
			Pg	29	44.20	
			Sg	30	00.80	
FRF	1.38	76	Pn	29	45.10	-0.4
			Pg	29	46.30	
			Sg	30	04.50	
SBF	2.01	71	Pg	29	59.20	4.6X
			Sg	30	24.40	
CAF	2.60	311	Pn	30	02.80	-0.3
			Pg	30	10.00	
			Sg	30	43.80	
LPO	2.99	300	Pn	30	08.80	0.3
			Sg	30	55.80	

S.D. = 0.4 on 11 of 12 obs.

% SEP 27, 1989 00h 36m 48.43± 1.17s
39.418 N ± 6.7km 27.490 E ±17.7km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.97	17	iPg	37	07.40	0.5
			eSg	37	20.40	
BNT	0.99	19	iPg	37	07.30	0.0
IZM	1.03	190	iPg	37	07.80	-0.2
			iSg	37	20.80	
KCT	1.06	39	iPg	37	07.80	-0.7
			iSg	37	22.30	
KHL	1.93	124	ePn	37	22.00	0.3

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

? SEP 27, 1989 01h 15m 48.65± 3.75s
36.472 S ±29.5km 71.480 W ±19.1km
DEPTH = 90.6 ± 17.3 km
CENTRAL CHILE (136)

LNV	2.51	1	iPc	16	28.90	0.6
			iS	16	56.90	
CHCH	2.62	15	iPc	16	30.20	0.3
			iS	16	59.50	
TACH	2.85	9	iP	16	33.00	0.1
			iS	17	02.50	
PCH	2.95	16	iPc	16	35.10	0.6
			iS	17	07.90	
LCCH	2.99	359	iPd	16	33.50	-1.4
			iS	17	03.00	

27d 01h

SAN	3.09	13	iP	16	36.20	0.0
			iS	17	09.00	
FCH	3.29	18	iPd	16	40.40	1.1
			iS	17	16.50	
PEL	3.38	11	iPd	16	40.50	0.1
			iS	17	07.90	
ROCH	3.51	6	iPd	16	42.00	-0.3
			iS	17	20.50	
JACH	3.85	11	iPc	16	46.00	-0.9
			iS	17	28.30	
MRA	6.26	51	ePd	17	21.00	0.9
TCA	7.68	50	ePd	17	38.30	-1.5
CNCB	19.83	10	P	20	16.00	0.7
LPB	20.09	9	eP	20	18.00	0.2
ZOBO	20.34	9	P	20	20.00	-0.6
PPD	22.67	56	eP	20	42.60	-0.4
LIC	75.14	71	Pc	27	23.00	0.1
KIC	75.45	71	Pc	27	24.80	0.2

S.D. = 0.8 on 18 of 18 obs.

? SEP 27, 1989 01h 21m 07.29± 12.06s
43.394 N ±74.7km 0.580 W ±14.7km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

OGE	0.24	161	Pg	21	12.43	0.0
MADF	0.30	215	Pg	21	13.62	0.0
			Sg	21	18.43	
ESCF	0.32	179	Pg	21	13.74	-0.1
ATE	0.32	196	Pg	21	14.22	0.3
			Sg	21	19.50	
ISSF	0.40	203	Pg	21	15.38	-0.1
			Sg	21	22.39	

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

• SEP 27, 1989 01h 50m 55.73± 0.89s
5.343 S ±10.1km 152.186 E ±14.3km
DEPTH = 33.0km (normal)
4.9mb (1 obs.)
NEW BRITAIN REGION (192)

RAB	1.14	359	iPd	51	15.50	0.0
			iS	51	28.00	
PMG	6.42	231	eP	52	30.00	-0.5
			eS	53	48.00	
DZM	21.61	142	iPc	55	45.00	-0.1
WB5	22.57	229	iPc	55	55.70	1.1
ASPA	25.34	222	eP	56	21.70	0.3
	0.5s		17.00nm			4.9mb
MBL	35.08	240	eP	57	35.00	-13.1X
NANU	39.32	241	eP	58	23.00	-0.7

S.D. = 0.8 on 6 of 7 obs.

• SEP 27, 1989 01h 59m 06.77± 1.17s
49.143 N ± 9.6km 7.048 E ±11.1km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
MD 2.1 (UCC).

RUP	0.56	1	ePg	59	18.27	0.1
ABH	0.81	24	ePg	59	23.78	1.3
TOD	1.24	67	ePn	59	28.39	-1.4
FEL	1.42	153	ePn	59	33.40	0.6
DOU	1.86	302	P	59	38.20	-0.7
			e	59	40.50	

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

SEP 27, 1989 02h 10m 21.52± 0.44s
35.577 N ± 4.2km 5.594 W ± 6.3km
DEPTH = 89.5 ± 7.5 km
STRAIT OF GIBRALTAR (385)
MD 3.7 (RBA).

NKM	0.20	130	iPgc	10	31.50	-3.1
			iSg	10	38.00	
			i	10	40.00	
PLAT	0.56	346	iP	10	38.00	1.1
MOMI	0.75	352	iP	10	40.00	1.3
EJIF	0.88	7	iPgd	10	40.00	-0.1
			eSg	10	51.20	
EPRU	1.42	12	iPnd	10	47.10	0.5
			eS	11	03.30	
MAL	1.50	39	ePn	10	47.00	-0.6
			iSg	11	04.20	
RBA	1.87	214	iPn	10	53.00	0.5
			iSn	11	16.50	
IFR	2.09	169	iPn	10	56.00	0.4
			iSn	11	21.00	
EVAL	2.21	336	iPnd	10	56.40	-0.6
			eS	11	20.50	
EHOR	2.26	7	ePn	10	57.60	-0.1
			eS	11	23.80	
AFC	2.35	44	ePn	11	01.00	1.8
			eS	11	29.58	
AVE	2.73	214	iPn	11	04.50	0.4
			iS	11	32.50	
			iSn	11	35.00	
EBAN	2.96	29	ePn	11	07.60	0.2
			eS	11	39.00	
ENIJ	3.06	62	ePn	11	09.50	0.7
			eS	11	45.40	
EVIA	3.93	38	ePn	11	21.20	0.4
LIS	4.23	319	eP	11	25.00	0.2
			iS	12	10.50	
EPLA	4.50	355	ePn	11	28.60	0.0
			eS	12	14.70	
TIO	4.84	197	iPn	11	33.50	0.0
			iSn	12	26.00	
GUD	5.18	12	ePn	11	38.00	-0.3
			eS	12	30.80	
ECHE	5.43	41	ePn	11	41.60	-0.1
			eS	12	39.50	
ETOR	5.93	27	ePn	11	48.50	-0.1
			eS	12	52.00	
PTO	6.03	338	iPnc	11	49.50	-0.4
			iSn	12	52.30	
EPF	8.75	30	Pn	12	26.80	-0.4
			Sn	13	59.20	
LFF	10.53	25	Pn	12	50.60	-0.6
CAF	11.01	30	Pn	12	57.60	-0.1
MAF	12.29	28	Pn	13	14.20	-0.3
BGF	12.67	27	Pn	13	19.50	-0.1
GRR	13.27	14	Pn	13	26.60	-0.8

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

• SEP 27, 1989 02h 10m 46.01± 0.72s
35.569 N ± 8.8km 5.456 W ±18.6km
DEPTH = 80.0km (geophysicist)
STRAIT OF GIBRALTAR (385)

EPLA	4.52	354	ePn	11	53.40	0.0
			eS	12	39.90	
TIO	4.87	199	iPn	11	58.50	0.0
			iSn	12	50.50	
GUD	5.17	11	eP	12	02.80	0.2
			eS	12	54.50	
ETOR	5.89	26	ePn	12	12.90	0.3
EPF	8.70	29	Pn	12	51.40	0.2
			Sn	14	23.50	
LFF	10.48	25	Pn	13	14.90	-0.5
CAF	10.96	29	Pn	13	22.00	0.1
MAF	12.24	27	Pn	13	38.60	-0.2
BGF	12.63	27	Pn	13	43.90	0.0
GRR	13.25	13	Pn	13	41.30	-10.8X

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

& SEP 27, 1989 02h 48m 12.78s
42.326 N 111.364 W
DEPTH = 2.9km
EASTERN IDAHO (457)
<SLC-P>. ML 2.9 (SLC). Felt (IV) at Georgetown and (III) at Fish Haven, Geneva, Montpelier and Ovid.

BEI	0.37	236	P	48	20.02	-0.3
BMUT	0.38	165	P	48	20.40	0.0
HDU	0.60	210	P	48	24.73	-0.1
MLI	0.64	242	P	48	25.16	-0.4
BW06	1.41	71	eP	48	39.00	-0.6
DAU	1.91	178	eP	48	50.00	3.1
LRM	3.58	348	eP	49	14.00	3.4
	7 obs. associated					

? SEP 27, 1989 04h 05m 18.16± 2.97s
14.099 S ±17.3km 166.102 E ±35.8km
DEPTH = 186.2 ± 28.4 km
4.5mb (1 obs.)
VANUATU ISLANDS (186)

SVO	7.88	308	eP	06	40.00	-30.9X
DZM	7.94	178	iPc	07	11.40	-0.3
			iS	08	22.20	
RMQ	20.38	230	eP	09	42.00	-0.1
GUA	34.56	322	eP	11	51.10	0.1
GUMO	34.63	322	eP	11	51.80	0.3
	Z 20s		0.09um			3.5Msz
PJG	34.63	322	eP	11	51.80	0.3
SPA	75.99	180	ePd	16	47.70	1.6
	1.0s		9.00nm			4.5mb
CNCB	118.40	118	ePKP	23	54.00	7.4X
LPB	118.42	118	ePKP	23	53.00	6.6X
BCAO	146.62	256	iPKPd	24	36.50	-1.9
	0.4s		7.00nm			

S.D. = 1.4 on 7 of 10 obs.

SEP 27, 1989 04h 27m 22.05± 0.34s
29.288 N ± 5.3km 130.527 E ± 4.4km
DEPTH = 37.4km (5 depth phases)
5.0mb (5 obs.) 4.1Msz (2 obs.)
RYUKYU ISLANDS (238)

KAGJ	1.92	9	iPd	27	54.00	1.1
			eS	28	17.50	
KUMJ	3.25	4	iPd	28	13.30	1.5
			S	28	52.20	
SHNJ	4.85	6	eP	28	34.60	0.1
			eS	29	32.60	
SHK	5.54	19	eP	28	44.20	0.0
TKSJ	5.56	32	P	28	44.00	-0.5
			S	29	41.90	
YONJ	6.39	22	P	28	55.30	-0.9
			eS	30	04.20	
WKYJ	6.54	40	P	28	56.30	-2.1
			eS	30	05.70	
TSRJ	7.75	35	P	29	14.40	-0.9
SSE	8.28	285	P	29	23.00	0.4
	0.8s		0.02nm			2.2mb X
	N 14s		1.00um			
			e(S)	31	08.00	
			i	31	40.00	
			Lg	32	21.50	
IIDJ	8.78	43	P	29	27.90	-1.7
MAT	9.69	40	eP	29	41.00	-1.1
			eS	31	53.00	
CHJJ	9.81	44	P	29	42.80	-1.0
NJ2	10.42	288	iPc	29	52.80	0.7
	Z 15s		2.70um			
	E 13s		1.70um			
SNY	13.72	338	eP	30	42.90	6.6X
	Z 15s		3.00um			4.8MszX
	N 14s		1.60um			
	E 12s		0.80um			
WHN	14.09	279	eP	30	41.60	0.5
	Z 16s		1.20um			5.2Msz
	N 12s		0.60um			
	E 16s		2.10um			
CN2	15.04	346	Pc	30	58.80	5.2X
	Z 16s		2.50um			4.8MszX
	N 12s		1.30um			
			epP	31	03.00	
			eS	33	38.00	
BJI	15.93	316	eP	31	06.50	1.5
	Z 14s		2.93um			
	N 14s		1.89um			
	E 13s		1.28um			
			eS	34	12.00	
TIY	17.25	304	P	31	25.00	3.2X
	N 12s		1.50um			
	E 12s		1.20um			
			PP	31	41.00	
XAN	18.98	290	P	31	41.50	-1.6
	N 11s		0.50um			
	E 11s		0.90um			
HHC	19.29	312	eP	31	45.80	-1.0
	Z 16s		2.20um			4.5MszX
	N 11s		0.60um			
			iS	35	27.00	
BTO	20.20	309	eP	31	58.00	1.6
	N 15s		1.30um			
	E 15s		1.00um			
			pP	32	04.00	23kmX
PJG	20.51	137	eP	32	01.00	1.3
GUMO	20.51	137	eP	32	00.70	1.0
	1.2s		250.00nm			5.4mb
	Z 22s		0.36um			3.7Msz
			e	32	12.70	52kmX
GUA	20.58	137	eP	32	00.70	0.3
			e	32	11.70	46km
GYA	21.28	268	P	32	07.40	-0.2

```
      N  14s      1.10um
      E  14s      1.80um
QIZ     21.43 246 eP      32 08.20   -0.8
      N  15s      0.60um
CD2     23.20 281 eP      32 26.60    0.0
      E  12s      1.50um
                  eS      36 34.60
LZH     23.41 294 P       32 29.00    0.3
         2.5s     0.09nm             1.8mb X
      Z  16s      3.47um             4.9MszX
      N  15s      1.39um
                  pP      32 39.00   37km
                  PP      33 01.50
                  eS      36 38.00
KMI     25.03 267 eP      32 44.50    0.0
KMI     25.03 267 Pc      32 45.00    0.5
      Z  16s      2.60um             4.8MszX
      N  11s      0.80um
                  S       37 26.00
GTA     27.18 300 eP      33 03.40   -0.7
      Z  16s      1.50um             4.7MszX
      E  15s      1.40um
CHG     30.58 257 eP      33 33.50   -1.2
NNT     33.07 246 iPc     33 57.00    0.5
WMO     36.92 305 eP      34 29.00   -0.2
      Z  20s      0.70um             4.4Msz
MTN     41.89 179 eP      35 09.00   -1.5
NDI     46.29 283 iPd     35 44.80   -1.2
         1.0s    35.00nm             5.3mb
WB5     49.02 175 eP      36 05.50   -1.8
                  e       36 17.00   41km
GBA     51.40 264 Pd      36 23.90   -1.7
         0.8s     5.70nm             4.6mb
PMR     60.16  33 P       37 34.90    6.9X
FBA     60.39  29 P       37 36.40    6.8X
INK     65.28  24 ePd     38 01.60   -0.3
MBC     66.38  14 eP      38 0B.50   -0.3
         0.9s    14.00nm             5.0mb
SOD     68.43 336 eP      38 21.00   -0.9
SUF     70.61 332 eP      38 34.00   -1.2
NUR     72.26 330 eP      38 41.00   -4.1X
HFS     77.06 333 eP      39 11.60   -1.1
         0.4s     1.60nm             4.4mb
KRA     79.97 322 eP      39 28.70   -0.1
                  e       39 38.30   31km
LON     80.15  42 P       39 30.70    0.8
EDM     80.93  33 eP      39 35.50    1.6
KSP     81.43 324 eP      39 37.00    0.6
BRG     82.60 325 eP      39 45.00    2.5
CLL     82.79 326 eP      39 42.00   -1.5
                  e       40 08.00   99kmX
PRU     82.84 324 eP      39 44.00    0.2
WDC     83.02  47 e(P)    39 46.70    1.8
KHC     83.86 324 P       39 50.00    0.9
CMB     85.81  48 eP      39 59.90    0.8
                  e       40 10.50   33km
LRM     85.97  39 eP      40 01.40    1.4
KVN     86.71  47 P       40 04.00    0.3
TNP     87.83  47 P       40 10.00    0.8
RSSD    91.56  36 P       40 29.00    2.5
ZOBO   158.51  57 PKP     47 30.00   12.1X
                  LR      45 38.00
LPB    158.70  57 ePKP    47 31.00   13.1X
CNCB   158.96  58 ePKP    47 33.00   14.7X
      S.D. = 1.2  on  54 of  63 obs.
-----------------------------------------
%  SEP  27, 1989  05h 07m 15.69± 1.09s
   44.682 N ±10.0km    7.137 E ±12.7km
   DEPTH =  10.0km  (geophysicist)
 NORTHERN ITALY                    (545)
      ML 1.8 (GEN).

PZZ      0.18 188 P       07 20.38    0.6
                  S       07 23.56
RRL      0.35 314 P       07 22.82   -0.1
                  S       07 28.10
STV      0.46 163 P       07 24.17   -0.9
                  S       07 30.64
ENR      0.50 156 P       07 25.83    0.0
                  S       07 32.43
ROB      0.65 126 P       07 29.09    0.3
      S.D. = 0.8  on   5 of   5 obs.
-----------------------------------------
   SEP  27, 1989  05h 15m 48.94± 0.27s
   44.574 N ± 1.9km    6.859 E ± 2.9km
   DEPTH =  10.1 ±  3.0 km
 FRANCE                            (538)

      ML 2.6 (LDG), 2.6 (GEN).

PZZ      0.19 112 Pc      15 53.80    0.6
                  S       15 56.90
DOI      0.28 104 P       15 55.20    0.2
                  eSg     15 59.90
RRL      0.35 351 Pd      15 56.30    0.1
                  S       16 01.20
STV      0.47 135 Pc      15 58.48    0.0
                  S       16 04.38
BNI      0.50 345 P       15 58.70   -0.4
                  eSg     16 03.50
ENR      0.53 131 P       15 59.30   -0.4
                  S       16 07.05
TOUF     0.63 153 Pg      16 01.23   -0.4
AUTN     0.71 145 Pg      16 02.79   -0.3
MVIF     0.71 163 Pg      16 03.25    0.2
                  Sg      16 12.41
AURF     0.76 154 Pg      16 03.83   -0.1
SAOF     0.77 139 Pg      16 03.90   -0.1
                  Sg      16 14.51
ROB      0.78 111 Pc      16 03.98   -0.1
                  S       16 14.36
CALN     0.82 178 Pg      16 04.74   -0.2
SBF      0.82 150 Pg      16 05.20    0.3
                  Sg      16 16.60
LSD      0.91  13 Pc      16 06.45    0.0
                  S       16 18.94
LPG      0.93 355 Pg      16 06.90    0.1
                  Sg      16 19.40
LPL      0.95 355 Pg      16 07.10    0.0
IMI      0.99 132 Pc      16 07.72   -0.1
                  S       16 20.28
FRF      1.02 189 Pg      16 08.30    0.0
                  Sg      16 21.80
FIN      1.03 110 P       16 08.58    0.1
                  S       16 21.15
LRG      1.18 198 Pg      16 10.80    0.0
                  Sg      16 25.90
PCP      1.21  91 P       16 11.51    0.1
                  S       16 26.97
LMR      1.26 192 Pg      16 12.90    0.5
                  Sg      16 28.70
BGF      3.45 307 Pn      16 44.00    0.3
                  Pg      16 53.40
      S.D. = 0.3  on  24 of  24 obs.
-----------------------------------------
?  SEP  27, 1989  07h 23m 44.02± 0.94s
   40.481 N ± 8.0km   23.067 E ± 8.6km
   DEPTH =  10.0km  (geophysicist)
 GREECE                            (364)

THE      0.17 333 iPg     23 48.10    0.2
                  iSg     23 51.10
LIT      0.58 230 ePg     23 55.80    0.0
                  eSg     24 05.80
KNT      0.69 349 ePg     23 57.50   -0.2
OUR      0.71 102 ePg     23 58.10    0.0
                  eSg     24 09.10
      S.D. = 0.3  on   4 of   4 obs.
-----------------------------------------
   SEP  27, 1989  07h 45m 24.06± 0.63s
   38.411 N ± 5.0km   23.627 E ±12.2km
   DEPTH =   7.4 ±  5.8 km
 GREECE                            (364)
      ML 3.1 (ATH).

ATH      0.44 171 ePg     45 31.00   -2.0
NEO      0.95 341 ePb     45 43.00    0.6
PAIG     1.51   2 ePg     45 50.70   -0.8
ITM      1.82 228 ePg     45 56.50    0.5
LIT      1.90 333 ePb     45 57.40    0.2
                  eSb     46 17.20
OUR      1.94   8 ePb     45 56.10   -1.6
PLG      1.97 356 ePn     45 57.00   -1.1
PRK      2.23  67 ePn     46 04.00    2.1
THE      2.28 347 ePn     46 02.60    0.0
KZN      2.38 323 ePn     46 05.00    0.9
SRS      2.70 359 ePn     46 07.30   -1.4
                  eSn     46 35.80
KNT      2.80 349 ePn     46 10.00   -0.1
                  eSn     46 40.70
VAM      3.03 171 ePn     46 14.00    0.7
NPS      3.52 153 ePn     46 20.50    0.2
      S.D. = 1.3  on  14 of  14 obs.
-----------------------------------------
   SEP  27, 1989  08h 13m 02.99± 0.80s
   38.714 N ± 7.5km   21.094 E ± 8.6km
   DEPTH =  10.0km  (geophysicist)
 GREECE                            (364)
      MD 3.3 (ATH).

VLS      0.67 217 ePg     13 14.50   -1.7
KEK      1.42 315 ePn     13 29.50    0.7
SRN      1.44 324 ePn     13 30.30    1.2
LSK      1.48 345 ePn     13 29.20   -0.6
ITM      1.67 156 ePg     13 35.00    2.6X
KZN      1.68  18 ePb     13 28.20   -4.3X
LIT      1.76  38 ePn     13 33.00   -0.7
                  eSn     13 57.30
NEO      1.76  70 ePb     13 33.60   -0.2
BERA     2.17 336 ePn     13 46.00    6.3X
GRG      2.46  24 ePn     13 45.20    1.5
PLG      2.46  47 ePn     13 42.00   -1.8
VLI      2.47 143 ePb     13 46.00    2.1
KNT      2.81  29 ePn     13 48.60   -0.2
                  eSn     14 23.00
SKO      3.27   5 ePn     13 55.00   -0.2
      S.D. = 1.4  on  11 of  14 obs.
-----------------------------------------
&  SEP  27, 1989  09h 04m 47.27s
   62.529 N          151.596 W
   DEPTH = 100.7km
 CENTRAL ALASKA                    (  1)
      <AGS-P>.

SKT      0.55 177 iP      05 03.56   -0.2
                  eS      05 15.30
CUT      0.63 101 iP      05 04.22   -0.1
                  eS      05 17.63
HUR      1.01  63 eP      05 07.84   -0.3
                  eS      05 22.77
KTH      1.07  16 iP      05 08.58   -0.3
                  eS      05 23.75
SUA      1.14 159 eP      05 09.68   -0.1
                  eS      05 27.29
NCG      1.16 193 iP      05 09.62   -0.3
PWA      1.20 137 eP      05 09.10   -1.1
CRP      1.29 192 iP      05 11.45   -0.1
                  eS      05 29.29
GHO      1.47 120 iP      05 13.54   -0.1
                  eS      05 34.27
PLRM     1.49 128 eP      05 13.32   -0.5
PMR      1.49 128 eP      05 13.40   -0.4
PME      1.51 126 P       05 13.75   -0.3
                  eS      05 35.02
RND      1.53  54 iP      05 14.05   -0.4
                  eS      05 33.41
NKA      1.B0 174 eP      05 19.57    1.8
KNK      1.86 126 eP      05 18.06   -0.5
TTA      2.07 283 eP      05 22.60    1.2
SLKM     2.13 161 eP      05 23.23    1.1
NCA      2.30 101 eP      05 23.46   -0.9
SVW      2.38 235 eP      05 25.50    0.0
ILIM     2.54 196 eP      05 28.09    0.4
TOA      2.57  97 eP      05 27.50   -0.5
FBA      2.92  34 eP      05 31.90   -0.8
IMA      3.67 347 eP      05 42.50   -0.5
      23 obs. associated
-----------------------------------------
?  SEP  27, 1989  10h 01m 27.06± 1.06s
   39.678 N ± 9.4km   29.455 E ±12.9km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

ALT      0.80 141 ePg     01 42.70    0.0
                  eSg     01 54.00
YLV      0.89 356 iPn     01 43.90   -0.3
KCT      1.02 304 iPn     01 46.40    0.1
HRT      1.15   8 ePn     01 48.90    0.2
      S.D. = 0.4  on   4 of   4 obs.
-----------------------------------------
%  SEP  27, 1989  10h 05m 34.87± 0.80s
   39.678 N ± 6.9km   29.516 E ±13.2km
   DEPTH =  10.0km  (geophysicist)
 TURKEY                            (366)

ALT      0.77 143 ePn     05 49.40   -0.6
YLV      0.89 353 iPn     05 51.90   -0.2
HRT      1.15   6 ePn     05 56.90    0.5
KHL      1.35 180 ePn     06 00.50    0.7
EDC      1.43 298 ePn     06 00.50   -0.4
      S.D. = 0.8  on   5 of   5 obs.
-----------------------------------------
```

27d 10h

? SEP 27, 1989 10h 57m 47.84± 4.38s
8.246 S ±48.2km 127.983 E ±15.6km
DEPTH = 181.9 ± 22.2 km
4.5mb (2 obs.)
TIMOR (289)

KUPT	4.72	246	ePd	58	59.50	0.6
			eS	59	55.50	
MTN	5.52	146	ePc	59	09.00	-0.3
KNA	7.50	174	eP	59	35.30	-0.2
	0.2s	38.00nm			5.4mb	X
			eS	01	01.00	
WB5	13.11	153	eP	00	46.80	-1.7
			eS	03	12.00	
MBL	15.06	211	eP	01	12.40	-0.4
	0.3s	3.00nm			4.2mb	
			eS	03	58.00	
ASPA	16.35	160	iPc	01	30.80	2.1
	0.5s	21.00nm			4.8mb	
			eS	04	31.40	
QIS	16.61	139	eP	01	32.00	0.1
			eS	04	35.00	
WARB	17.89	184	eP	01	47.50	1.1
			eS	05	09.00	
NANU	18.60	219	eP	01	52.50	-1.4
			eS	05	20.00	

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

SEP 27, 1989 11h 51m 56.26± 0.68s
31.124 S ±10.5km 70.365 W ± 8.5km
DEPTH = 160.3 ± 19.9 km
CHILE-ARGENTINA BORDER REGION (127)

ZON	1.50	107	iPd	52	27.00	0.0
			eS	52	47.00	
JACH	1.56	187	iPd	52	27.50	-0.2
			iS	52	48.00	
ROCH	1.92	196	iPc	52	31.10	-0.7
			iS	52	55.00	
PEL	2.03	188	iPd	52	32.50	-0.3
			iS	52	57.10	
FCH	2.20	178	iPd	52	36.10	1.0
			iS	53	02.60	
SAN	2.34	186	iPd	52	36.50	0.1
			iS	53	04.10	
PCH	2.49	183	iPd	52	39.00	0.7
			iS	53	08.50	
LCCH	2.56	203	iPd	52	39.00	0.0
			iS	53	08.10	
CHCH	2.81	185	iPc	52	42.10	-0.1
			iS	53	15.00	
LNV	2.96	197	iP	52	43.80	-0.2
			iS	53	17.80	
MRA	4.17	109	iPc	52	59.20	-0.4
CYA	4.79	57	iPd	53	08.30	0.5
TCA	4.95	94	eP	53	09.80	-0.2
			(S)	54	01.20	
ZOBO	14.93	8	eP	55	21.00	-0.1

S.D. = 0.5 on 14 of 14 obs.

% SEP 27, 1989 12h 22m 52.94± 0.93s
38.357 N ± 6.7km 24.098 E ±10.4km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.8 (ATH).

ATH	0.49	218	ePg	23	02.40	-0.4
NEO	1.17	325	ePb	23	14.40	-0.4
APE	1.72	138	ePb	23	23.00	-0.1
PLG	2.08	346	ePn	23	28.50	0.2
ITM	2.08	236	ePn	23	29.00	0.6

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

% SEP 27, 1989 12h 30m 03.87± 0.81s
38.347 N ± 5.7km 24.076 E ± 9.4km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)
ML 2.9 (ATH).

ATH	0.47	217	ePb	30	13.50	0.1
NEO	1.17	325	ePb	30	25.50	-0.2
APE	1.72	137	ePn	30	34.00	-0.1
VLI	1.86	209	ePn	30	36.00	0.0
ITM	2.06	236	ePn	30	39.00	0.0
PLG	2.08	347	ePn	30	39.50	0.2

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

? SEP 27, 1989 12h 34m 09.12± 2.60s
34.877 S ±20.9km 179.135 E ±19.8km
DEPTH = 194.3 ± 21.0 km
4.6mb (4 obs.)
SOUTH OF KERMADEC ISLANDS (179)

H8Z	2.80	194	P	34	56.80	0.3
KRP	4.20	223	P	35	19.50	5.7X
WHH	4.52	207	eP	35	20.30	2.3
HITZ	4.68	214	eP	35	24.40	4.5X
HATZ	4.69	210	P	35	23.40	3.3X
RATZ	4.81	213	P	35	26.50	4.9X
PGZ	6.16	201	eP	35	39.30	0.2
MNG	6.42	206	P	35	42.60	0.1
			eS	37	08.50	
KIW	6.85	208	eP	35	48.10	0.1
MTW	6.90	203	eP	35	47.70	-1.0
CAW	7.00	206	eP	35	49.80	-0.3
WDW	7.17	206	P	35	50.90	-1.3
MOW	7.21	204	eP	35	51.80	-1.1
TCW	7.39	210	eP	35	55.10	-0.2
BGA	36.13	317	eP	40	54.00	-0.4
QIS	37.54	282	eP	41	05.00	-1.1
ASPA	40.70	273	eP	41	33.50	1.3
	0.7s	13.00nm			4.6mb	
WB5	42.12	279	eP	41	43.10	-0.7
			i	41	45.20	
FORR	42.68	261	eP	41	52.10	3.9X
	0.4s	10.00nm			4.7mb	
WARB	45.60	266	eP	42	13.40	1.8
	0.3s	2.00nm			4.0mb	
SPA	55.30	180	e(P)	43	30.70	6.2X
	0.9s	13.18nm			4.7mb	
SOD	143.81	342	iPKP	52	58.70	-22.8X
BCAO	144.78	215	iPKPc	53	23.60	-1.2
	0.6s	27.00nm				
			i	53	25.20	
SUF	147.43	337	ePKP	53	22.00	-5.6X
NUR	149.52	335	ePKP	53	29.00	-1.9
LIC	151.23	171	PKP	53	35.98	1.1
	Z 20s	0.22um			5.0Msz	
KIC	151.40	172	PKP	53	36.10	0.9
TIC	151.64	171	PKP	53	36.58	1.0
NB2	152.69	347	PKP	53	35.70	0.0
	0.8s	3.60nm				

S.D. = 1.2 on 21 of 29 obs.

% SEP 27, 1989 12h 59m 35.24± 0.68s
60.293 N ± 5.4km 5.397 E ± 8.9km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.5 (BER).

BER	0.10	341	ePg	59	37.66	-0.2
			iSg	59	39.55	
ASK	0.22	332	iPg	59	39.48	-0.4
			eSg	59	42.86	
ODD1	0.73	121	iP	59	49.29	-0.2
			eS	00	03.94	
SUE	0.83	338	eP	59	51.66	0.4
			eS	00	03.02	
HYA	0.96	24	iP	59	53.68	0.2
			iS	00	08.38	
KMY	1.09	184	iP	59	55.82	0.2
			eS	00	10.43	
MOL	2.51	23	eP	00	16.70	0.0
			eS	00	44.91	

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

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* SEP 27, 1989 14h 35m 44.30± 0.48s
35.253 N ±10.0km 36.588 W ± 8.4km
DEPTH = 10.0km (geophysicist)
4.7mb (11 obs.) 4.7Msz (1 obs.)
NORTH ATLANTIC RIDGE (403)

CLL	38.71	50	e(P)	43	19.00	9.1X
KHC	38.96	53	eP	43	21.00	8.9X
RSCP	39.59	285	eP	43	18.30	0.8
	1.1s	26.09nm			4.8mb	
PRU	39.61	52	eP	43	18.50	1.1
NB2	39.69	34	P	43	18.30	0.3
	1.0s	6.20nm			4.2mb	
FVM	42.80	290	eP	43	44.00	0.2
	1.0s	11.00nm			4.5mb	
TUL	47.49	289	eP	44	22.50	1.2
	0.8s	5.50nm			4.7mb	
	Z 21s	0.78um			4.7Msz	
			e	44	28.20	
			LR	57	56.00	
FFC	48.26	315	eP	44	34.00	6.9X
	1.1s	18.00nm			5.1mb	
GOL	53.55	297	eP	45	08.00	0.3
	1.0s	15.00nm			4.9mb	
MBC	54.37	343	eP	45	12.50	-0.4
	1.0s	7.00nm			4.6mb	
BW06	55.57	301	eP	45	22.00	-0.5
	1.0s	3.75nm			4.4mb	
ALQ	56.01	292	eP	45	26.00	0.4
	1.0s	5.00nm			4.5mb	
LRM	56.60	306	eP	45	30.20	0.4
MSU	58.93	297	P	45	46.70	0.5
BCAO	59.29	108	ePd	45	48.00	-0.7
	0.4s	5.00nm			5.0mb	
			i	51	01.90	
ZOBO	59.34	216	iPc	45	50.10	0.5
	1.2s	20.27nm			5.1mb	
	Z 25s	0.22um			4.2MszX	
			LR	04	52.00	
LPB	59.55	216	P	45	51.00	0.1
CNCB	59.73	215	P	45	52.00	-0.3
KVN	62.96	300	P	46	13.40	-0.1
CMB	65.01	300	eP	46	25.90	-0.9
			e	46	33.20	
ORV	65.13	302	e(P)	46	26.10	-1.4
WDC	65.40	303	eP	46	27.80	-1.4

S.D. = 0.8 on 19 of 22 obs.

% SEP 27, 1989 14h 50m 20.85± 2.87s
59.037 N ±27.2km 5.933 E ± 7.2km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.6 (BER).

KMY	0.39	297	eP	50	28.73	-0.2
			eS	50	33.41	
BLS1	0.58	52	iP	50	32.46	-0.2
			eS	50	40.14	
ODD1	0.95	22	eP	50	38.70	-0.2
			eS	50	50.85	
ASK	1.50	346	eP	50	48.16	0.4
			eS	51	03.85	
NRA0	3.30	57	iPd	51	13.80	0.2
			iSg	52	00.80	
MOL	3.63	12	eP	52	13.52	55.3X
			eS	52	34.91	
NSS	6.21	25	eP	52	07.83	13.2X
			eS	52	23.07	

S.D. = 0.4 on 5 of 7 obs.

? SEP 27, 1989 15h 04m 16.73± 1.30s
50.671 N ±22.7km 5.377 E ± 8.8km
DEPTH = 10.0km (geophysicist)
BELGIUM (541)
MD 2.2 (UCC).

ENN	0.36	74	iPgd	04	24.90	0.8
	0.7s	48.00nm				
			eSg	04	29.50	
			e	04	36.70	
MEM	0.41	99	iPc	04	24.16	-0.9
			iS	04	28.40	
SNF	0.71	258	iPc	04	30.20	-0.6
DOU	0.76	221	iP	04	32.30	0.7
			iS	04	44.00	

S.D. = 1.5 on 4 of 4 obs.

& SEP 27, 1989 15h 33m 09.44s
59.998 N 152.593 W
DEPTH = 79.3km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.20	294	iP	33	20.99	1.2
			eS	33	30.92	
RED	0.43	348	iP	33	22.35	-0.5
			eS	33	33.17	
OPT	0.47	223	iP	33	22.48	-0.6
			eS	33	32.77	
RDT	0.59	9	eP	33	23.66	-0.5
NNL	0.65	86	iP	33	25.25	0.5
XLV	0.70	141	eP	33	24.74	-0.5
			eS	33	37.37	
AUE	0.75	212	iP	33	24.78	-1.0
			eS	33	37.26	

AUW	0.77	216	eP	33 25.16	-0.9
CNPM	0.83	124	iP	33 26.10	-0.7
BRLK	0.89	105	eP	33 26.88	-0.6
NKA	1.01	41	iP	33 30.00	1.3
CKL	1.21	6	iP	33 30.74	-0.7
SPU	1.22	12	iP	33 30.76	-0.7
			eS	33 47.12	
SLKM	1.29	66	iP	33 31.59	-0.8
			eS	33 49.44	
SEW	1.58	85	eP	33 34.91	-1.2
			eS	33 55.94	
SUA	1.73	31	eP	33 37.64	-0.7
			eS	34 00.87	
SVW	1.87	308	Pd	33 38.10	-2.0
PMS	1.95	49	eP	33 40.40	-0.8
SKT	2.06	14	eP	33 41.27	-1.4
PWA	2.13	38	eP	33 42.80	-0.8
PLRM	2.33	45	eP	33 44.46	-1.9
PMR	2.33	45	eP	33 44.80	-1.6
PME	2.39	45	eP	33 45.56	-1.7
KNK	2.48	53	eP	33 46.50	-2.0
GHO	2.53	44	eP	33 47.39	-1.8
			S	34 16.94	
CUT	2.66	24	eP	33 50.18	-0.8
GLI	2.87	70	eP	33 50.38	-3.4
FID	3.13	73	eP	33 53.39	-4.1
VZW	3.17	68	eP	33 55.09	-3.0
TTA	3.37	332	eP	33 58.70	-2.1
NCA	3.45	52	eP	33 59.53	-2.4
KLU	3.60	63	eP	34 01.07	-3.0
KTH	3.66	12	eP	34 04.17	-0.7
TOA	3.77	53	eP	34 04.40	-2.0
FBA	5.40	22	eP	34 26.70	-2.4

35 obs. associated

% SEP 27, 1989 16h 15m 29.49± 0.59s
60.635 N ± 4.7km 6.233 E ± 8.0km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

HYA	0.53	358	iPd	15 39.85	-0.4
			eS	15 48.66	
ODD1	0.75	165	iP	15 43.72	-0.5
			eS	15 52.56	
SUE	0.84	301	iP	15 45.49	-0.1
			eS	15 56.28	
BLS1	1.28	166	iP	15 53.15	-0.2
			eS	16 09.64	
KMY	1.51	200	eP	15 57.22	0.7
			eS	16 14.80	
MOL	2.04	17	iP	16 04.73	0.5
			eS	16 32.05	
NRA0	2.61	85	iPc	16 12.60	0.1
			iPg	16 15.40	
			iS	16 48.90	

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

% SEP 27, 1989 16h 29m 38.45± 0.65s
44.395 N ± 6.4km 7.406 E ± 5.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

STV	0.16	201	P	29 42.17	-0.1
			S	29 44.76	
ENR	0.17	177	P	29 42.60	0.2
			S	29 44.65	
PZZ	0.24	297	P	29 43.70	0.0
			S	29 47.60	
ROB	0.35	107	P	29 46.29	0.6
			S	29 52.21	
IMI	0.60	144	P	29 50.34	-0.2
FIN	0.61	108	P	29 50.09	-0.6
RRL	0.69	320	P	29 52.28	0.1

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

SEP 27, 1989 16h 33m 27.73± 0.83s
47.474 N ± 6.6km 7.268 E ± 5.8km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
MD 1.0 (STR).

BBS	0.16	93	Pg	33 31.31	-0.2
LOMF	0.32	248	Pg	33 34.55	0.1
MOF	0.39	346	Pg	33 35.39	-0.3
FEL	0.64	51	Pg	33 40.94	0.2
ECH	0.75	354	Pg	33 42.04	-0.3
			Sg	33 53.76	
CDF	0.94	0	Pg	33 45.97	0.3
			Sg	33 59.37	
WLS	0.94	3	Pg	33 45.97	0.3
			Sg	33 59.25	

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

? SEP 27, 1989 17h 00m 30.65± 9.13s
44.395 N ±27.5km 6.410 E ±55.0km
DEPTH = 5.0km (geophysicist)
FRANCE (538)
ML 1.8 (GEN).

PZZ	0.51	77	P	00 40.84	0.0
			S	00 44.43	
RRL	0.59	27	P	00 42.48	0.0
			S	00 48.84	
STV	0.67	103	P	00 44.43	0.3
			S	00 51.41	
ENR	0.74	103	P	00 45.25	-0.3

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

? SEP 27, 1989 18h 25m 06.91± 8.45s
44.121 N ±69.7km 7.422 E ±18.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

ENR	0.11	359	P	25 09.48	-0.3
			S	25 11.47	
STV	0.14	330	P	25 09.82	-0.5
			S	25 11.86	
ROB	0.37	62	P	25 14.35	-0.1
			S	25 19.60	
PZZ	0.45	329	P	25 16.15	0.1
			S	25 20.82	

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

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* SEP 27, 1989 18h 37m 50.12± 1.03s
23.221 N ± 9.3km 99.678 E ±18.2km
DEPTH = 33.0km (normal)
4.2mb (1 obs.)
BURMA-CHINA BORDER REGION (297)

KMI	3.38	55	ePn	38 41.50	-0.6
			Pg	38 51.50	
			Sn	39 22.50	
			Sg	39 26.50	
CHG	4.44	189	iPn	38 57.00	0.0
			iPg	39 13.00	
			iSg	40 11 00	
BDT	5.98	186	ePn	39 17.50	-1.2
			ePg	39 41.00	
			eSg	40 58.50	
LOE	6.10	161	ePn	39 22.00	1.6
			ePg	39 43.50	
			eSg	41 05.00	
GYA	7.12	62	ePg	39 33.20	-1.6
NST	7.52	177	eP	39 40.00	-0.3
CD2	8.48	25	P	39 59.60	6.0X
WHN	14.98	58	eP	41 09.50	-11.6X
	E 10s		0.50um		
TIY	18.12	34	eP	42 01.20	0.2
	N 10s		0.60um		
BJI	21.81	36	eP	42 43.50	2.3
	E 11s		0.31um		
NB2	69.24	329	P	48 55.00	-0.6
	0.9s		2.30nm	4.2mb	
INK	80.85	18	eP	50 05.00	3.2X
			pP	50 17.00	40kmX

S.D. = 1.4 on 9 of 12 obs.

SEP 27, 1989 18h 39m 33.06± 0.49s
30.344 N ± 5.8km 131.444 E ± 5.3km
DEPTH = 33.0km (normal)
4.1mb (1 obs.) 4.0Msz (1 obs.)
KYUSHU, JAPAN (235)

KAGJ	0.97	330	iP+	39 51.10	0.8
			S	40 03.40	
KUMJ	2.25	347	P	40 09.50	0.9
			S	40 35.20	
SHNJ	3.78	356	P	40 30.90	0.5
			S	41 12.20	
TKSJ	4.25	31	P	40 37.20	0.1
			S	41 24.00	
SHK	4.30	14	eP	40 38.60	0.7
YONJ	5.12	19	P	40 49.30	-0.2
			eS	41 45.50	
WKYJ	5.22	41	P	40 50.20	-0.8
			S	41 45.60	
TSRJ	6.43	35	P	41 07.80	-0.1
			S	42 18.50	
IIDJ	7.47	45	P	41 22.00	-0.5
MTMJ	8.18	39	P	41 32.20	-0.3
MAT	8.37	41	iPc	41 34.50	-0.6
CHJJ	8.51	46	P	41 37.10	0.2
SSE	8.86	277	eP	41 40.40	-1.4
Z	20s		0.50um		
E	10s		0.20um		
			esP	41 56.00	
			e(S)	43 30.00	
			i	44 12.00	
CN2	14.25	342	eP	43 02.60	8.1X
Z	16s		0.90um	4.8MszX	
N	12s		0.50um		
			epP	43 08.00	
TIY	17.37	300	eP	43 39.10	4.5X
BTO	20.18	306	eP	44 15.20	7.6X
GYA	22.13	266	P	44 27.20	-0.3
LZH	23.75	291	(P)	44 52.50	9.1X
Z	20s		0.54um	4.0Msz	
GTA	27.37	298	eP	45 16.80	-0.5
SNG	36.97	238	eP	46 37.40	-3.8X
WB5	50.01	176	eP	48 26.80	0.4
WARB	56.39	185	eP	49 14.70	1.1
NB2	76.86	334	P	51 23.00	-0.2
	0.5s		0.90nm	4.1mb	
CLL	82.36	326	eP	51 53.00	0.2

S.D. = 0.7 on 19 of 24 obs.

& SEP 27, 1989 18h 40m 20.18s
59.863 N 153.494 W
DEPTH = 133.2km
3.8mb (1 obs.)
SOUTHERN ALASKA (2)
<AGS-P>.

OPT	0.25	148	iP	40 38.15	0.9
			eS	40 52.85	
ILIM	0.35	51	iP	40 38.35	0.8
			S	40 53.36	
AUL	0.48	176	iP	40 38.83	-0.9
AUW	0.49	179	eP	40 38.86	-0.9
AUE	0.51	173	iP	40 38.90	-1.0
RED	0.66	33	iP	40 40.26	-0.8
			eS	40 56.48	
RDT	0.90	37	iP	40 42.19	-0.6
XLV	0.99	114	eP	40 42.76	-0.8
			S	41 00.77	
NNL	1.12	80	eP	40 45.14	0.3
CNPM	1.19	105	iP	40 44.65	-0.9
BRLK	1.32	93	eP	40 46.16	-0.8
SHU	1.37	154	eP	40 45.74	-1.6
CKL	1.46	23	iP	40 47.98	-0.5
CRP	1.56	25	eP	40 49.27	-0.4
			eS	41 12.80	
SVW	1.63	321	iPd	40 48.90	-1.5
SLKM	1.76	67	eP	40 50.89	-1.0
			eS	41 14.83	
SEW	2.05	81	eP	40 54.33	-1.0
SUA	2.10	39	iP	40 55.42	-0.7
			eS	41 23.34	
KDC	2.18	166	iPd	40 53.90	-3.1
SKT	2.33	23	eP	40 57.94	-1.0
PMS	2.39	53	eP	40 59.70	0.1
PWA	2.52	43	eP	40 59.90	-1.4
PMR	2.76	49	P	41 02.50	-1.8
MTU	2.94	85	eP	41 06.19	-0.6
GHO	2.95	47	eP	41 04.42	-2.5
			S	41 39.99	
CUT	2.99	30	eP	41 06.02	-1.3
TTA	3.31	340	eP	41 09.00	-2.6
GLI	3.34	69	eP	41 10.24	-1.7
VLZ	3.76	67	eP	41 15.67	-1.9
NCA	3.89	54	eP	41 16.85	-2.6
KTH	3.90	17	eP	41 17.83	-1.7
RND	4.19	30	eP	41 21.09	-2.3
TOA	4.22	55	eP	41 22.10	-1.6
FBA	5.71	25	eP	41 40.70	-3.1
IMA	6.23	359	eP	41 49.00	-2.1
HYT	7.99	76	P	42 14.90	0.0
INK	12.10	37	eP	43 07.00	-2.0

27d 18h

MBC 20.24 23 eP 44 45.50 -0.7
0.5s 2.00nm 3.8mb
38 obs. associated

• SEP 27, 1989 18h 43m 13.62± 0.76s
38.299 N ± 6.5km 23.610 E ±11.7km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2 5 (ATH).

ATH	0.34	166	ePb	43 21.00	0.4
NEO	1.05	343	ePb	43 34.00	0.6
ITM	1.74	231	ePn	43 43.80	-0.3
APE	1.96	128	ePn	43 47.00	-0.2
PLG	2.08	357	ePn	43 48.50	-0.4

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

% SEP 27, 1989 18h 44m 25.33± 0.70s
38.302 N ± 6.1km 23.624 E ±11.5km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (ATH).

ATH	0.34	167	ePg	44 32.50	0.2
NEO	1.05	343	ePb	44 46.20	1.0
ITM	1.75	231	ePn	44 55.80	-0.1
APE	1.95	129	ePn	44 58.80	0.0
LIT	2.00	334	eP	44 59.10	-0.5
PLG	2.07	356	ePn	45 00.00	-0.6
PRK	2.27	65	ePb	45 11.00	7.5X

S.D. = 0.8 on 6 of 7 obs.

SEP 27, 1989 18h 50m 54.70± 0.63s
38.263 N ± 5.6km 23.568 E ±10.8km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 3.0 (ATH).

ATH	0.31	158	ePg	51 02.20	1.0
NEO	1.08	346	ePb	51 15.00	0.0
VLI	1.62	198	ePb	51 22.50	-0.9
ITM	1.69	231	ePg	51 24.00	-0.5
APE	1.96	127	ePn	51 28.00	-0.4
LIT	2.02	336	eP	51 28.70	-0.5
PLG	2.11	357	ePn	51 29.50	-1.0
PRK	2.33	64	ePb	51 40.50	6.8X
VAM	2.90	170	ePn	51 42.00	0.3
OHR	3.56	324	ePn	51 53.00	1.9

S.D. = 1.1 on 9 of 10 obs.

? SEP 27, 1989 19h 23m 09.46± 1.17s
36.923 N ±13.7km 29.306 E ± 7.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.51	110	ePg	23 19.80	-0.1
			iSg	23 26.60	
YER	0.85	285	ePn	23 25.90	0.1
BCK	1.16	62	ePn	23 31.40	0.3
KHL	1.41	7	ePn	23 35.00	-0.2

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

SEP 27, 1989 20h 00m 21.12± 1.28s
36.006 N ± 5.2km 11.057 W ±12.5km
DEPTH = 33.0km (normal)
NORTH ATLANTIC OCEAN (402)
mbLg 3.7 (MDD).

EVAL	3.80	64	iPnc	01 19.50	0.7
			eSn	01 57.60	
RBA	3.99	119	ePn	01 22.00	0.5
			iSn	02 00.00	
AVE	4.04	131	iPn	01 23.00	0.8
			iSn	02 03.00	
EJIF	4.54	83	ePn	01 30.00	0.7
			eSn	02 17.80	
NKM	4.63	95	iPnc	01 31.50	1.0
			iSn	02 14.50	
EPRU	4.79	77	ePn	01 33.40	0.5
			eSn	02 22.50	
EHOR	4.99	67	iPnc	01 35.60	-0.2
			eSn	02 26.00	
MAL	5.41	80	iPnc	01 43.00	1.4
IFR	5.48	115	iPn	01 42.00	-0.7
			iSn	02 36.00	
EPLA	5.64	43	ePn	01 45.00	0.1
			eSn	02 43.00	
TIO	5.98	147	iPnc	01 49.50	-0.2
			iS	02 47.60	
			iSn	02 49.00	
AFC	6.17	76	ePn	01 52.60	0.1
			eSn	02 56.00	
EBAN	6.20	68	iPnd	01 51.90	-0.9
			eSn	02 54.40	
YBT	6.28	168	iPn	01 53.00	-0.9
			iSn	02 57.00	
EZAM	6.40	16	ePn	01 57.50	1.9
			eSn	03 03.80	
TOL	6.75	53	iPn	02 00.50	0.0
			eSn	03 11.00	
GUD	7.13	47	ePn	02 05.20	-0.7
			eSn	03 19.80	
ENIJ	7.19	80	ePn	02 07.00	0.4
			eSn	03 21.80	
EVIA	7.30	66	ePn	02 07.00	-1.3
			eSn	03 22.00	
EMON	7.96	20	ePn	02 19.00	1.7
			eSn	03 41.00	
ETOR	8.54	53	ePn	02 25.00	-0.6
EPF	11.25	48	Pn	03 02.00	-0.6
			Sn	04 58.80	
LFF	12.65	42	Pn	03 20.60	-0.8
LPO	12.73	43	Pn	03 22.00	-0.5
CAF	13.37	44	Pn	03 28.40	-2.6

S.D. = 1.1 on 25 of 25 obs.

% SEP 27, 1989 20h 51m 20.45± 1.94s
35.234 N ±18.2km 27.095 E ±10.5km
DEPTH = 10.0km (geophysicist)
DODECANESE ISLANDS (369)
MD 3.4 (ATH).

KAP	0.32	12	ePg	51 26.80	-0.3
NPS	1.21	272	ePb	51 43.00	-0.1
YER	2.13	27	ePn	51 57.30	0.8
APE	2.23	326	ePn	51 58.00	0.0
BCK	3.59	51	eP	52 17.00	-0.4

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

% SEP 27, 1989 21h 00m 22.22± 0.78s
43.394 N ± 5.3km 5.432 E ± 6.8km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.01	198	Pg	00 23.94	-0.2
BERF	0.21	113	Pg	00 27.00	0.2
TREF	0.23	351	Pg	00 26.79	-0.4
PRAF	0.45	335	Pg	00 31.81	0.4
VILF	0.50	24	Pg	00 32.12	-0.3
TAVF	0.51	64	Pg	00 32.19	-0.3
GANF	0.70	30	Pg	00 36.58	0.6

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

SEP 27, 1989 21h 52m 34.46± 0.57s
41.611 N ± 6.3km 24.789 E ± 4.7km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

KDZ	0.47	85	iP	52 43.00	-1.1
			iS	52 49.00	
MMB	0.80	269	iPgd	52 49.00	-1.0
			Sg	53 00.00	
SRS	1.03	242	ePg	52 54.00	0.1
			eSg	53 07.40	
PGB	1.05	334	iP	52 54.00	-0.2
			iSg	53 08.00	
ALN	1.19	127	ePg	52 57.50	0.9
KKB	1.30	282	iP	52 58.00	-0.6
			iSg	53 15.00	
OUR	1.41	206	ePb	52 59.70	-0.5
KNT	1.49	253	ePb	53 02.20	0.9
			eSb	53 22.10	
VTS	1.53	310	iP	53 03.00	1.0
			iSg	53 24.00	
PVL	1.65	14	iPd	53 04.00	0.4

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

SEP 27, 1989 23h 31m 34.74± 1.26s
10.415 N ± 9.1km 60.489 W ±12.9km
DEPTH = 114.5 ± 8.4 km
TRINIDAD (98)
MD 4.4 (TRN).

TBH	0.57	277	eP	31 52.67	-0.1
			eS	32 10.27	
BOT	0.78	343	eP	31 53.39	-1.1
			eS	32 12.79	
TPR	0.82	340	eP	31 53.59	-1.2
			eS	32 11.36	
TRN	0.93	285	eP	31 56.19	0.3
			eS	32 18.04	
TPP	0.95	264	eP	31 57.18	1.1
			eS	32 19.24	
TCE	1.27	283	eP	32 00.97	1.4
			eS	32 27.17	
GRW	2.08	327	eP	32 10.64	1.1
			eS	32 42.58	
FCV	2.82	345	eP	32 18.74	-0.5
			eS	32 58.51	
SVB	2.94	345	eP	32 19.93	-0.8
			eS	33 01.16	
SVV	2.97	346	eP	32 20.19	-1.0
			eS	33 01.39	
SSV	2.98	347	eP	32 20.49	-0.9
			eS	33 02.31	
SOA	3.01	348	eP	32 21.15	-0.6
			eS	33 02.81	
CUM	3.62	271	iPd	31 32.30	-57.7X
			iS	32 22.30	
BIM	4.12	352	eP	32 38.17	1.4
			S	33 30.40	
MVM	4.13	355	eP	32 37.65	0.7
			S	33 29.60	
CRM	4.33	355	eP	32 40.61	0.9
FDF	4.34	352	iPd	32 42.10	2.3
			S	33 35.60	
GUAN	5.10	265	iPc	32 51.00	0.7
			iS	33 56.00	
BBL	5.17	349	eP	32 50.00	-1.1
PAG	5.70	348	eP	32 58.00	-0.5
			S	34 06.50	
LLAV	6.22	271	eP	33 06.00	0.4
			eS	34 21.50	
OLLA	6.23	267	eP	33 04.00	-1.8
			eS	33 20.00	
GUAC	6.68	269	eP	33 12.00	0.0
			iS	34 34.00	
CEOS	7.86	261	iPc	33 26.50	-1.4
			iS	34 59.00	
TOV	9.18	267	ePn	33 46.80	0.9
			iSn	35 35.10	
SDV	10.12	262	eP	33 57.90	-0.6
			eS	35 52.60	
ZOBO	27.57	196	eP	37 11.00	-2.7X
Z 24s 0.15um 3.5MszX					
			LR	47 14.00	
LPB	27.81	196	P	37 21.00	5.3X
			SS	45 18.00	
CNCB	28.05	195	P	37 18.20	0.2

S.D. = 1.1 on 26 of 29 obs.

SEP 27, 1989 23h 46m 06.74± 0.56s
23.194 S ± 7.0km 66.631 W ± 6.5km
DEPTH = 220.5 ± 6.4 km
4.6mb (6 obs.)
JUJUY PROVINCE, ARGENTINA (128)

SLA	1.85	146	iPd	46 47.70	1.8
ANT	3.51	261	iPc	47 03.50	-0.4
			iS	47 44.70	
CNCB	6.48	348	P	47 42.00	0.3
			S	48 53.00	
LPB	6.77	348	P	47 47.00	1.7X
			S	48 55.00	
ZOBO	7.03	348	P	47 47.90	-0.9
			S	49 02.00	
ARE	8.11	325	eP	47 58.00	-4.6X
			eS	49 26.00	
TCA	8.31	168	ePc	48 04.00	-1.0
			(S)	49 35.00	
MRA	9.22	175	ePd	48 15.50	-1.0
ITB1	11.29	100	Pd	48 49.40	6.3X
ITB	11.47	100	e(P)	48 46.60	1.2
PPD	14.20	88	eP	49 18.60	-0.9
			e	49 22.10	
			e	49 36.70	
			e	49 53.40	
VAO	18.09	93	iPc	50 03.60	-1.1
			i	50 06.50	
			e	50 08.00	

			e	50	13.40	
BAO	19.11	70	eP	50	14.50	-0.8
BMA	20.71	93	eP	50	31.20	0.0
PDCR	28.20	73	eP	51	37.70	-3.4X
			e	52	09.80	
MVM	37.93	9	eP	53	05.48	0.8
FDF	38.07	9	eP	53	06.57	0.7
RSCP	61.17	342	iP	55	57.00	-3.2X
	0.8s	33.65nm			5.1mb	
FVM	64.83	339	iP	56	22.00	-2.0
	0.8s	227.27nm			6.0mb X	
TUL	64.94	334	eP	56	23.40	-1.3
	0.8s	8.30nm			4.6mb	
SIO	65.00	334	eP	56	23.90	-1.2
LIC	66.87	72	P	56	37.40	0.0
SPA	66.95	180	ePd	56	37.80	0.4
	1.0s	8.00nm			4.4mb	
TIC	67.07	72	P	56	39.40	0.7
KIC	67.18	72	P	56	39.00	-0.4
ALQ	69.07	326	eP	56	50.50	-0.3
	0.8s	9.33nm			4.6mb	
RSSD	75.24	333	eP	57	26.10	-0.9
FRI	78.00	319	e(P)	57	43.90	1.8
PRI	78.03	318	eP	57	43.60	1.1
KVN	78.43	322	iP	57	44.80	0.1
LLA	78.50	318	eP	57	45.70	0.8
CMB	79.09	320	e(P)	57	47.70	-0.4
MHC	79.40	318	eP	57	51.00	1.1
GCC	79.42	318	e(P)	57	50.70	0.9
LRM	80.30	329	eP	57	55.00	0.4
ORV	80.74	320	ePd	57	57.60	0.9
WDC	82.01	320	ePd	58	02.40	-0.8
PNT	86.19	328	eP	58	24.00	0.0
	0.7s	9.00nm			4.7mb	
BUL	86.84	110	iPd	58	30.00	1.9
	0.9s	4.20nm			4.3mb	
GBA	144.68	99	PKPd	05	17.50	-1.8
	0.7s	5.90nm				
	S.D. = 1.1	on	35 of	40	obs.	

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* SEP 28, 1989 00h 28m 10.11± 2.05s
6.362 S ± 8.7km 147.785 E ±22.7km
DEPTH = 59.2 ± 19.4 km
4.8mb (2 obs.)
EAST PAPUA NEW GUINEA REGION (207)

LAT	0.83	250	iPd	28	27.00	1.0
			eS	28	41.00	
PMG	3.09	192	eP	28	57.00	-0.5
MNDI	4.11	273	eP	29	17.00	5.0X
WB5	18.72	223	eP	32	25.50	-1.1
GUA	19.97	352	eP	32	40.20	-0.2
GUMO	20.03	352	eP	32	40.60	-0.4
	0.8s	41.00nm			4.8mb	
OLP	20.39	189	eP	32	44.00	-0.7
BRS	21.45	168	iPd	32	54.70	-0.7
ASPA	21.78	216	iPc	32	58.90	0.2
	0.6s	30.00nm			4.9mb	
			eS	36	59.40	
BWA	27.93	179	eP	33	59.00	2.1
NB2	116.58	338	Pdiff	42	56.70	-7.1X
	0.6s	4.80nm				
DMU	128.35	341	ePdiff	43	55.40	-0.8X
PPD	146.14	147	ePKP	47	45.70	0.6
KIC	152.70	272	PKP	48	03.00	7.7X
	S.D. = 1.2	on	10 of	14	obs.	

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* SEP 28, 1989 00h 32m 43.20± 0.71s
55.551 N ±14.9km 161.556 E ± 9.9km
DEPTH = 33.0km (normal)
4.6mb (6 obs.)
NEAR EAST COAST OF KAMCHATKA (218)

TTA	22.55	54	P	37	42.80	1.5
IMA	23.67	46	P	37	53.20	0.9
MAT	24.77	230	eP	38	04.00	1.0
	0.8s	11.94nm			4.5mb	
FBA	26.11	49	P	38	15.90	0.6
INK	31.42	40	eP	39	03.00	0.2
MBC	34.44	25	eP	39	30.00	0.9
	0.8s	4.00nm			4.4mb	
PNT	46.03	63	eP	41	05.00	0.0
LRM	51.98	62	eP	41	51.10	-0.2
KVN	53.81	72	P	42	05.00	0.2
TNP	54.98	72	P	42	12.00	-1.5
	0.9s	7.81nm			4.7mb	
BW06	55.60	63	P	42	17.20	-0.8
SUF	57.06	337	iP	42	27.50	-0.3
	0.4s	1.70nm			4.4mb	
RSSD	57.36	59	P	42	29.70	-0.8
HFS	61.87	342	eP	42	58.90	-2.1
	0.4s	2.70nm			4.7mb	
ALQ	63.07	67	eP	43	09.00	-0.5
EKA	68.77	351	P	43	45.00	-0.4
	0.6s	4.30nm			4.7mb	
KSP	70.11	337	eP	43	48.00	-5.6X
CLL	70.35	340	e(P)	43	56.00	0.9
PRU	71.29	338	eP	44	01.00	0.2
WB5	78.61	206	eP	45	01.00	18.1X
ASPA	82.35	205	iPc	45	21.40	18.7X
	1.0s	9.00nm				
SPA	145.37	180	e(PKP)	52	35.40	17.6X
	0.9s	12.27nm				
	S.D. = 1.0	on	18 of	22	obs.	

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* SEP 28, 1989 01h 38m 25.57± 0.78s
40.455 N ±10.5km 51.921 E ±11.6km
DEPTH = 33.0km (normal)
4.1mb (3 obs.)
CASPIAN SEA (338)

TEH	4.73	185	eP-	39	35.00	-1.5
TAB	4.95	243	e(P)	39	41.00	1.2
MAIO	7.25	122	eP	40	12.00	0.0
			eSn	41	30.00	
NUR	26.20	329	eP	44	12.00	13.4X
SUF	27.09	334	eP	44	07.00	0.2
HFS	30.73	323	eP	44	39.00	-0.5
	0.4s	1.90nm			4.2mb	
NB2	32.21	323	P	44	51.80	-0.7
	0.7s	1.70nm			4.1mb	
GBA	34.85	133	P	45	17.00	1.3
	0.2s	0.50nm			4.1mb	
	S.D. = 1.2	on	7 of	8	obs.	

% SEP 28, 1989 02h 12m 05.05± 0.84s
43.674 N ±16.7km 3.357 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.6 (LDG).

CAF	1.56	324	Pn	12	32.80	-0.1
			Pg	12	35.10	
			Sg	12	58.90	
LPO	1.86	304	Pg	12	40.40	3.2X
			Sg	13	06.60	
RJF	2.10	322	Pg	12	45.30	4.7X
			Sg	13	15.00	
LRG	2.19	95	Pg	12	42.40	0.4
			Sg	13	10.00	
EPF	2.29	255	Pg	12	43.60	0.1
			Sg	13	12.80	
LMR	2.32	97	Pg	12	43.00	-0.9
FRF	2.39	92	Pg	12	45.40	0.5
			Sg	13	15.00	
MAF	2.61	348	Pg	12	56.00	8.0X
			Sg	13	32.00	
TCF	2.74	343	Pg	12	57.80	8.0X
			Sg	13	36.00	
LSF	2.88	334	Pg	13	00.60	8.7X
			Sg	13	40.70	
BGF	2.91	353	Pg	13	01.00	8.8X
			Sg	13	41.40	
	S.D. = 0.7	on	5 of	11	obs.	

? SEP 28, 1989 02h 38m 49.52± 1.01s
38.435 N ±14.9km 73.619 E ±29.4km
DEPTH = 33.0km (normal)
4.3mb (4 obs.)
TAJIK-XINJIANG BORDER REGION (719)

NDI	10.18	162	iPc	41	17.00	0.6
MAIO	11.44	264	eP	41	40.00	6.3X
			eS	43	46.00	
GBA	24.96	171	P	44	11.00	-0.4
	0.8s	5.70nm			4.2mb	
NB2	44.12	322	P	46	57.40	1.2
	0.7s	2.60nm			4.2mb	
BCAO	60.28	250	iPd	48	56.70	-0.7
	0.6s	9.00nm			5.1mb	
MBC	65.30	3	eP	49	29.00	-0.8
	0.5s	2.00nm			4.5mb	
			pP	50	02.50	138kmX
	S.D. = 1.2	on	5 of	6	obs.	

? SEP 28, 1989 03h 13m 49.19± 2.36s
51.380 N ±19.4km 177.243 E ±26.6km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)
RAT ISLANDS, ALEUTIAN ISLANDS (6)

ADK	3.82	80	eP	14	48.00	1.0
SVW	17.82	46	eP	17	56.50	0.6
TTA	18.38	41	eP	18	03.10	0.2
PMS	20.66	49	eP	18	26.40	-2.0
IMA	20.79	34	eP	18	29.50	-0.2
	0.5s	2.70nm			3.9mb	
FBA	22.50	40	eP	18	46.40	-0.3
INK	28.89	36	eP	19	46.00	-0.5
MBC	34.54	22	eP	20	38.00	2.1
	1.0s	7.00nm			4.5mb	
LON	39.19	72	eP	21	15.50	0.0
PNT	39.24	67	eP	21	14.00	-1.9
	0.6s	4.00nm			4.4mb	
LBFM	42.05	79	eP	21	40.00	0.7
KVN	45.75	79	eP	22	09.00	-0.2
TNP	46.89	80	eP	22	18.20	0.0
PLM	50.16	84	eP	22	44.00	0.4
	S.D. = 1.1	on	14 of	14	obs.	

? SEP 28, 1989 03h 56m 22.51± 4.60s
36.230 N ±31.4km 30.107 E ±21.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ELL	0.54	343	ePg	56	33.70	0.2
			eSg	56	45.00	
BCK	1.29	17	ePn	56	46.80	0.4
YER	1.72	302	ePn	56	53.00	0.3
KHL	2.14	348	ePn	56	58.00	-0.8
	S.D. = 1.0	on	4 of	4	obs.	

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* SEP 28, 1989 04h 57m 52.74± 1.10s
40.394 N ±12.3km 27.236 E ± 9.3km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC	0.48	95	iPg	58	01.50	-1.0
			eSg	58	08.50	
BNT	0.52	94	iPg	58	02.40	-1.0
			iSg	58	21.90	
EZN	0.90	231	iPg	58	09.00	-1.0
			iSg	58	21.50	
CTT	1.18	50	ePg	58	14.70	0.0
ISK	1.54	64	ePn	58	20.00	-0.2
YLV	1.64	83	iPn	58	22.90	1.1
GBZT	1.73	76	ePg	58	47.00	24.0X
HRT	1.90	76	iPn	58	26.50	1.0
IZM	1.99	179	ePn	58	28.00	1.1
	S.D. = 1.1	on	8 of	9	obs.	

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* SEP 28, 1989 05h 16m 03.11± 2.35s
24.631 S ±16.2km 179.789 E ±17.5km
DEPTH = 550.4 ± 23.4 km
4.9mb (5 obs.)
SOUTH OF FIJI ISLANDS (171)

DZM	12.52	279	iPc	18	47.90	0.4
PGZ	16.21	190	eP	19	24.10	0.2
	0.4s	15.00nm			4.9mb	
MNG	16.35	192	eP	19	23.80	-1.5
	0.2s	6.00nm			4.8mb	
			eS	22	14.40	
WDW	17.07	192	eP	19	31.60	-0.6
MRW	17.09	193	eP	19	33.10	0.7
TCW	17.16	194	eP	19	34.30	1.2
BWA	28.89	243	eP	21	19.30	-0.2
OLP	32.06	259	eP	21	47.00	0.6
PMG	34.56	290	eP	22	07.00	-0.5
ASPA	41.73	261	iPc	23	06.40	0.6
	0.4s	27.00nm			5.1mb	
			eS	28	47.60	
WB5	42.16	267	iPd	23	08.90	-0.3
			e	28	52.00	
FORR	45.84	250	iPc	23	37.80	0.1
	0.3s	33.00nm			5.3mb	
MTN	47.32	275	eP	23	48.00	-1.2
WARB	47.75	256	iPc	23	52.20	-0.1
KNA	48.47	270	eP	23	57.50	-0.3
MBL	54.97	261	eP	24	44.00	-0.8
	0.3s	7.00nm			4.5mb	

28d 05h

MRWA	56.45	250	eP	24 54.80	-0.2
NANU	58.44	258	eP	25 09.00	0.5
CHG	89.75	291	eP	28 06.00	1.8
SUF	138.04	342	ePKP	34 26.00	-0.3
NUR	140.24	341	ePKP	34 30.00	-0.3
NB2	142.77	351	PKP	34 30.20	-4.6X
	1.1s		6.00nm		
HFS	143.22	348	ePKP	34 30.70	-4.8X
	0.4s		7.30nm		
CLL	151.49	343	iPKP	34 55.50	6.6X
	0.7s		19.00nm		
BRG	151.61	341	iPKP	34 55.60	6.5X
	0.6s		18.00nm		

S.D. = 0.8 on 21 of 25 obs.

? SEP 28, 1989 05h 18m 20.24± 1.04s
43.214 N ±10.8km 19.247 E ±13.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (3B3)
ML 2.1 (TTG).

PLE	0.16	43	ePg	18 24.00	0.0
			eSg	18 26.50	
NKY	0.44	205	ePg	18 29.50	0.2
			eSg	18 36.50	
BRY	0.60	239	ePg	18 32.40	-0.1
			eSg	18 41.60	
TTG	0.78	179	ePg	1B 35.30	-0.2
			eSg	18 48.60	

S.D. = 0.3 on 4 of 4 obs.

* SEP 28, 1989 06h 07m 06.98± 1.32s
34.341 N ±13.2km 26.400 E ± 6.0km
DEPTH = 55.5 ± 11.5 km
3.9mb (9 obs.)
CRETE (370)

NPS	1.12	325	ePn	07 27.50	0.8
KAP	1.36	28	ePb	07 31.00	1.0
VAM	2.10	301	ePn	07 43.60	3.3
APE	2.81	346	ePn	07 51.00	0.5
KSL	3.15	55	ePn	07 54.40	-0.9
YER	3.18	28	ePn	07 55.80	0.1
ELL	3.73	49	iPn	08 03.90	0.3
IZM	4.11	10	iP	08 09.80	1.1
BCK	4.61	46	iP	08 15.00	-0.8
KHL	4.71	31	eP	08 19.00	1.8
CSS	5.75	82	eP	08 31.00	-0.8
LFK	5.94	79	ePn	08 33.10	-1.4
TDS	9.64	306	P	09 25.00	-0.7
MEU	9.72	290	P	09 24.40	-2.5
MGR	10.40	307	P	09 34.30	-1.7
SGO	10.78	308	P	09 38.60	-2.5
KHC	17.57	331	eP	11 09.80	0.5
KSP	18.06	339	eP	11 15.30	-0.1
LPG	18.69	312	eP	11 22.90	-0.5
	0.5s		3.60nm	3.8mb	
BSF	19.93	318	eP	11 36.90	0.0
	0.6s		3.60nm	3.9mb	
CDF	20.01	320	eP	11 38.00	0.3
	0.7s		7.40nm	4.1mb	
HAU	20.27	318	eP	11 40.50	0.2
	0.7s		6.60nm	4.1mb	
SMF	21.02	313	eP	11 47.70	-0.3
	0.9s		6.50nm	4.0mb	
LBF	21.10	313	eP	11 48.50	-0.3
	0.9s		8.10nm	4.1mb	
LOR	21.31	314	eP	11 50.40	-0.5
	0.5s		2.10nm	3.8mb	
AVF	21.38	312	eP	11 51.70	0.1
SSF	21.42	313	eP	11 52.40	0.4
	0.7s		2.60nm	3.7mb	
NUR	26.21	358	eP	12 34.00	-3.9X
SUF	28.40	360	eP	12 57.00	-0.8
NB2	28.45	344	P	12 57.90	-0.5
	0.5s		0.70nm	3.5mb	
KIC	40.03	233	P	14 41.10	2.8
INK	76.57	352	eP	18 54.00	1.5

S.D. = 1.4 on 31 of 32 obs.

? SEP 2B, 1989 08h 06m 25.27± 3.68s
15.009 N ±16.3km 61.089 W ±46.9km
DEPTH = 108.2 ± 31.4 km
LEEWARD ISLANDS (92)

FDF	0.2B	192	iPc	06 41.45	-0.6
			S	06 51.00	
CRM	0.30	146	iPc	06 40.46	-0.6
BIM	0.49	178	iPd	06 42.57	0.5
			S	06 54.20	
MVM	0.49	157	iPc	06 41.75	-0.3
			S	06 52.60	
BBL	0.63	324	eP	06 42.75	-0.4
			S	06 55.60	
PAG	1.16	331	eP	06 48.40	-0.1
			S	07 05.00	
SOA	1.63	182	eP	06 53.77	-0.1
			eS	07 15.40	
SVV	1.69	184	eP	06 54.29	-0.4
			eS	07 17.02	
SVB	1.73	185	eP	06 55.08	-0.2
			eS	07 17.84	

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

SEP 28, 1989 09h 31m 05.18± 0.42s
41.878 N ± 4.4km 20.146 E ± 3.9km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 3.3 (SKO), MD 2.9 (TTG).

PUK	0.25	311	iPgc	31 10.90	0.4
KKS	0.28	45	iPg	31 11.50	0.5
PHP	0.29	131	iPgc	31 10.10	-1.2
SDA	0.50	286	iPgd	31 16.00	0.6
TIR	0.57	202	iPgc	31 16.20	-0.5
ULC	0.67	278	iPgd	31 18.80	0.2
			iSg	31 29.40	
PVY	0.73	350	iPgc	31 19.50	-0.1
			iSg	31 31.20	
PVY	0.73	350	iPgd	31 30.00	10.4X
			eSg	31 50.00	
TTG	0.86	310	ePg	31 21.30	-0.4
			eSg	31 35.30	
SKO	0.97	84	iPg	31 23.50	-0.1
			iSg	31 35.60	
			i	31 37.20	
BDV	1.06	293	iPgd	31 25.30	0.1
			eSg	31 41.60	
BERA	1.18	187	ePn	31 26.90	-0.3
NKY	1.26	318	ePg	31 28.50	-0.2
			eSg	31 48.00	
KBN	1.35	158	ePn	31 33.10	3.1X
PLE	1.55	339	ePn	31 31.00	-2.0
			eSn	31 56.00	
BRY	1.57	311	ePn	31 34.10	0.9
			eSn	32 00.00	
KNT	2.19	108	ePn	31 42.60	0.5
			eSg	32 18.50	
LIT	2.51	134	ePn	31 48.30	1.6
			eSn	32 21.70	

S.D. = 0.9 on 16 of 18 obs.

* SEP 28, 1989 10h 27m 21.80± 2.37s
36.036 N ±19.8km 140.105 E ±15.7km
DEPTH = 63.5 ± 20.7 km
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ	0.18	18	iP+	27 31.70	0.1
			S	27 38.70	
CHJJ	0.90	271	iPd	27 38.60	-0.3
			S	27 51.10	
NIIJ	1.49	324	P	27 47.00	0.1
			S	28 08.50	
MAT	1.61	289	iPd	27 48.60	0.0
			eS	28 10.00	
IIDJ	1.B7	253	iPd	27 52.30	0.2
			S	28 15.60	
OFUJ	3.28	22	eP	28 11.80	-0.1
			eS	28 49.20	

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

* SEP 28, 1989 10h 40m 03.14± 3.07s
37.B97 S ±18.0km 175.786 E ±14.3km
DEPTH = 330.2 ± 24.8 km
NORTH ISLAND, NEW ZEALAND (159)

KRP	0.20	262	P	40 44.90	0.1
	0.3s		107.00nm		
UTU	0.43	131	eP	40 45.00	-0.2
HITZ	0.81	181	P	40 46.30	0.1
RATZ	0.97	181	P	40 46.60	-0.2
HATZ	1.02	166	eP	40 47.10	0.1
WHH	1.13	151	P	40 47.00	-0.8
KETZ	1.21	185	eP	40 48.60	0.4
MOH	1.63	140	P	40 50.60	0.2
TTH	1.83	154	P	40 52.40	0.7
HBZ	2.02	82	Pd	40 53.00	0.0
MNG	2.73	185	Pd	40 58.80	-0.1
			S	41 37.70	
PGZ	2.74	172	Pd	40 59.20	0.2
KIW	3.04	193	Pc	41 01.70	-0.1
CAW	3.26	190	Pc	41 03.80	0.0
MTW	3.27	184	Pc	41 03.60	-0.3
WDW	3.42	190	Pd	41 05.20	-0.3
MRW	3.43	194	Pc	41 05.50	-0.1
			eS	41 50.30	
WEL	3.47	193	eP	41 05.80	-0.2
BLW	3.48	184	P	41 05.90	-0.1
TCW	3.51	199	Pc	41 06.50	0.2
MOW	3.54	187	P	41 06.50	-0.2
CCW	4.03	197	P	41 12.40	0.6

S.D. = 0.3 on 22 of 22 obs.

& SEP 28, 1989 11h 33m 39.21s
60.124 N 153.482 W
DEPTH = 161.1km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.27	99	iP	34 00.39	0.7
			eS	34 17.78	
RED	0.46	50	iP	34 01.25	0.8
OPT	0.49	165	iP	34 01.36	-0.7
			eS	34 18.36	
RDT	0.70	49	iP	34 02.51	-0.7
AUL	0.74	178	iP	34 02.57	-0.9
AUE	0.77	176	iP	34 02.60	-1.0
NNL	1.10	93	eP	34 06.03	-0.1
XLV	1.12	126	iP	34 05.16	-1.1
SPU	1.27	33	iP	34 07.05	-0.7
			S	34 28.84	
CNPM	1.28	117	iP	34 06.99	-0.9
			S	34 28.56	
CRP	1.32	29	iP	34 07.87	-0.5
BRLK	1.36	104	iP	34 08.01	-0.5
SVW	1.45	314	iPd	34 08.10	-1.3
SHU	1.61	158	iP	34 09.30	-1.7
			eS	34 32.88	
SLKM	1.67	75	eP	34 10.58	-1.2
SUA	1.90	44	eP	34 13.24	-1.2
			eS	34 41.07	
SEW	2.02	89	eP	34 14.81	-0.8
PMS	2.23	58	iP	34 16.60	-1.6
PWA	2.33	47	P	34 17.60	-1.7
KDC	2.44	167	iPc	34 17.30	-3.2
PMR	2.59	53	eP	34 19.90	-2.5
CUT	2.77	33	eP	34 23.72	-0.8
GHO	2.77	51	eP	34 22.41	-2.3
TTA	3.07	338	eP	34 26.70	-1.7
GLI	3.25	74	eP	34 29.44	-1.2
TOA	4.06	58	eP	34 40.00	-1.3
FBA	5.47	26	ePc	34 57.60	-2.1
IMA	5.97	359	eP	35 05.70	-0.8
INK	11.89	38	eP	36 25.00	0.5

29 obs. associated

SEP 28, 1989 11h 49m 42.19± 0.80s
34.021 N ±10.3km 135.187 E ± 6.3km
DEPTH = 10.0km (geophysicist)
NEAR S. COAST OF SOUTHERN HONSHU(233)
MG 3.9 (JMA). Felt (II JMA) at Wakayama.

WKY	0.21	355	iP+	49 46.20	-0.5
			iS	49 49.30	
WKYJ	0.39	59	iP+	49 48.70	-1.5
			S	49 53.90	
TKSJ	0.95	268	P	50 00.50	0.3
			S	50 13.70	
TSRJ	1.65	23	P	50 10.90	-0.4
			S	53 43.00	
YONJ	1.84	310	P	50 14.90	0.9
			S	50 38.00	
SHK	2.14	284	eP	50 18.00	-0.4
IIDJ	2.67	56	P	50 27.40	1.3
MTMJ	3.34	39	P	50 37.80	2.3
SHNJ	3.39	273	eP	50 35.10	-1.0
MAT	3.53	44	iPc	50 37.00	-1.1
			eS	51 35.00	
CHJJ	3.72	56	P	50 40.90	0.0
KUMJ	3.94	249	P	50 44.40	0.4

KAGJ 4.60 233 eP 50 53.20 -0.2
S.D. = 1.1 on 13 of 13 obs.

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* SEP 28, 1989 12h 13m 15.17± 1.00s
38.201 N ± 9.2km 27.471 E ±10.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.3 (ATH).

IZM	0.26	320	iPg	13 18.80	-1.8
YER	1.24	149	ePn	13 38.50	0.2
PRK	1.40	318	ePb	13 42.00	1.3
KHL	1.62	85	ePn	13 42.00	-1.9
EZN	1.85	332	ePn	13 48.00	0.8
KCT	2.16	18	iPn	13 53.00	1.3
EDC	2.16	8	ePn	13 50.50	-1.3
BNT	2.18	9	iPn	13 52.50	0.5
ELL	2.42	126	ePn	13 56.00	0.5
MFT	2.59	357	ePn	13 57.00	-0.8
KSL	2.68	140	ePn	14 03.50	4.4X
YLV	2.78	31	ePn	14 02.00	1.3
GBZT	3.00	30	ePn	14 13.50	9.9X

S.D. = 1.4 on 11 of 13 obs.

? SEP 28, 1989 12h 27m 41.24± 0.97s
41.611 N ± 8.3km 20.807 E ± 8.5km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 2.7 (SKO).

PHP	0.28	286	iPgc	27 46.70	-0.5
KKS	0.55	328	ePg	27 53.00	0.6
SKO	0.60	52	iPg	27 53.00	-0.3
			iSg	28 01.50	
TIR	0.75	250	ePg	28 01.50	5.5X
KBN	0.99	180	ePg	28 00.10	0.2
BERA	1.11	216	ePn	28 06.00	3.9X

S.D. = 0.9 on 4 of 6 obs.

% SEP 28, 1989 13h 03m 42.29± 0.69s
60.720 N ± 5.3km 5.554 E ± 7.3km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.8 (BER).

ASK	0.30	217	iP	03 48.28	-0.2
			iS	03 52.43	
SUE	0.51	311	iP	03 52.69	0.0
			eS	03 59.73	
HYA	0.54	34	eP	03 53.27	0.0
			eS	04 00.94	
ODD1	0.97	146	eP	04 00.28	-0.5
			eS	04 12.99	
			eSg	04 17.08	
BLS3	1.39	159	eP	04 08.27	0.5
			eS	04 25.14	
KMY	1.52	186	eP	04 09.70	0.2
			eS	04 30.25	
NRA0	2.94	87	ePg	04 34.40	4.5X
			iSg	05 12.90	

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

SEP 28, 1989 13h 10m 20.12± 0.85s
41.201 N ± 8.2km 20.385 E ± 8.6km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
MG 2.5 (TIR).

TIR	0.42	291	iPgc	10 28.00	-0.6
PHP	0.49	5	iPgc	10 29.00	-1.0
KBN	0.66	150	ePg	10 33.00	-0.3
PUK	0.92	336	iPg	10 38.00	0.4
SDA	1.05	321	ePg	10 41.00	1.1
SKO	1.10	45	ePg	10 44.00	3.2X
			iSg	10 57.00	
KCT	6.13	96	iPn	12 05.00	12.1X
YLV	6.84	92	iPn	12 03.50	0.5

S.D. = 1.0 on 6 of 8 obs.

& SEP 28, 1989 14h 54m 31.52s
58.103 N 142.656 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

YAH	2.32	11	iP	55 05.24	-5.3
			eS	55 31.76	
PCA	2.35	31	eP	55 05.73	-5.1
			eS	55 32.15	
HON	2.39	54	eP	55 05.74	-5.6
			eS	55 32.64	
BCPM	2.43	39	eP	55 06.58	-5.2
			eS	55 33.64	
HYT	3.79	42	P	55 26.30	-5.0

5 obs. assocloted

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* SEP 28, 1989 15h 07m 10.40± 2.81s
40.493 N ±23.4km 27.981 E ±13.8km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

BNT	0.14	199	iPg	07 13.50	-0.3
EDC	0.17	212	iPg	07 13.50	-0.8
			iSg	07 15.50	
KCT	0.38	130	iPg	07 17.50	-0.6
YLV	1.06	86	iPn	07 30.50	0.0
CIN	2.89	178	ePg	07 59.00	1.7
			iSg	08 05.00	

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

& SEP 28, 1989 15h 42m 37.60s
36.555 N 121.133 W
DEPTH = 10.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.8 (BRK).

LLA	0.16	68	iPd	42 41.10	-0.3
PRS	0.29	221	iPd	42 43.50	-0.2
SAO	0.33	310	iPc	42 43.88	-0.5
			iS	42 45.40	
PRI	0.56	137	iPc	42 48.70	-0.3
			iS	42 58.40	
GCC	0.84	305	iPc	42 52.70	-1.1
			eS	43 04.80	
ARN	0.86	338	iPc	42 53.70	-0.4
MHC	0.88	333	iPc	42 54.18	-0.5
			eS	43 06.10	
			i	43 07.50	
			iS	43 07.85	
PHAM	0.93	140	eP	42 54.80	-0.6
PKEM	0.96	120	eP	42 55.50	-0.4
FRI	1.22	69	ePd	42 58.80	-1.6
			iS	43 14.60	
PCC	1.37	314	ePd	43 00.90	-1.9
BKS	1.59	327	ePd	43 04.15	-1.6
			eS	43 24.60	
CMB	1.59	22	ePc	43 04.70	-1.2
			eS	43 25.00	
BRK	1.59	326	ePc	43 03.80	-2.1
BCH	1.61	148	eP	43 04.30	-2.0
BLP	2.08	163	eP	43 10.50	-2.4
ABL	2.31	137	eP	43 15.00	-1.4
KVN	3.46	43	eP	43 33.00	0.2
TNP	3.47	63	eP	43 34.00	1.0

19 obs. assocloted

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* SEP 28, 1989 16h 12m 41.19± 1.81s
20.608 S ±16.7km 169.687 E ±17.9km
DEPTH = 144.0 ± 14.6 km
VANUATU ISLANDS (186)

PVC	3.13	335	iPd	13 31.00	0.4
			iS	14 09.50	
DZM	3.36	244	iPd	13 33.00	-0.6
			iS	14 12.40	
BWA	23.29	229	eP	17 36.70	-0.3
CAN	23.36	227	eP	17 39.50	1.8
WB5	33.11	265	eP	19 04.50	-1.1
ASPA	33.23	258	iPd	19 06.10	-0.6
	0.5s		22.00nm		5.2mb X
NANU	50.17	257	iPd	21 24.60	0.4
CHTO	79.60	295	iP	24 35.60	1.4
PRS	86.25	49	e(P)	25 08.20	0.4
PRI	86.66	49	e(P)	25 10.00	0.1
FRI	87.74	49	eP	25 14.80	-0.1
CMB	87.75	48	eP	25 15.00	0.0
EKA	144.91	353	PKPc	32 00.40	-1.9
	0.6s		6.40nm		
BCAO	147.67	244	iPKPd	32 10.40	2.3X
	0.5s		12.00nm		
CDF	148.86	337	ePKP	32 16.30	7.2X
	0.7s		4.40nm		
BSF	149.52	337	ePKP	32 17.80	7.7X
LPG	151.47	334	ePKP	32 18.70	5.4X
	0.6s		3.00nm		

S.D. = 1.1 on 13 of 17 obs.

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* SEP 28, 1989 16h 49m 26.80± 1.54s
34.958 N ±17.3km 27.383 E ± 6.7km
DEPTH = 33.0km (normol)
EASTERN MEDITERRANEAN SEA (371)
MD 4.0 (ATH).

NPS	1.48	282	ePn	49 51.80	0.4
KSL	2.14	57	ePn	50 01.50	0.7
YER	2.29	18	eP	50 03.00	-0.1
APE	2.59	325	ePn	50 07.50	0.2
VAM	2.65	281	ePn	50 08.70	0.6
ELL	2.72	48	eP	50 08.90	-0.3
SMG	2.78	351	ePn	50 10.70	0.8
BCK	3.60	45	eP	50 21.10	-0.6
KHL	3.77	27	eP	50 24.00	-0.1
VLI	4.02	297	ePn	50 26.00	-1.6

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

SEP 28, 1989 20h 51m 41.14± 1.02s
40.180 N ± 8.1km 23.930 E ± 8.4km
DEPTH = 10.0km (geophysicist)
GREECE (364)

PAIG	0.32	217	ePg	51 47.10	-0.6
			eSg	51 50.70	
THE	0.86	302	ePg	51 59.10	1.3
			eSg	52 11.30	
SRS	0.97	345	ePg	51 59.90	0.3
			eSg	52 14.30	
LIT	1.11	266	ePg	52 02.00	0.1
			eSg	52 17.60	
KNT	1.26	322	ePb	52 05.30	0.8
			eSb	52 24.20	
MMB	1.42	354	ePd	52 06.00	-1.0
RZN	1.62	21	eP	52 09.00	-1.0
ALN	1.76	65	ePn	52 13.40	1.5
KKB	1.80	339	eP	52 11.00	-1.5
KDZ	1.85	37	eP	52 18.00	4.8X

S.D. = 1.2 on 9 of 10 obs.

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* SEP 28, 1989 21h 43m 10.77± 0.84s
20.214 N ± 5.8km 98.746 E ±18.4km
DEPTH = 33.0km (normol)
4.1mb (2 obs.)
BURMA (296)

CHG	1.40	172	iP	43 35.00	0.7
BDT	2.96	175	ePn	43 56.00	-0.6
			ePg	44 01.00	
LOE	3.97	134	ePn	44 11.00	0.1
			ePg	44 21.00	
			eSn	44 48.00	
			eSg	45 06.00	
NST	4.71	163	ePn	44 21.10	-0.2
			ePg	44 39.50	
			eSg	45 42.00	
KMI	6.12	36	Pg	45 02.00	20.5X
			Sg	46 21.00	
KBR	6.21	173	eP	45 33.40	50.8X
			e	53 54.40	
NNT	7.64	173	eP	44 16.00	-46.6X
CD2	11.57	22	eP	45 55.00	-1.7
Z	10s		0.80um		
XAN	16.47	31	P	47 02.50	1.5
GTA	19.15	3	eP	47 35.00	0.7
Z	10s		0.50um		
E	11s		1.00um		
TIY	21.11	31	eP	47 54.50	-0.5
NDI	21.31	297	eP	48 02.50	5.5X
GBA	21.41	255	P	48 06.00	8.0X
	0.9s		6.80nm		4.1mb
WMQ	25.29	341	P	48 40.00	4.2X
NB2	71.35	329	P	54 29.10	-0.1
	0.8s		1.60nm		4.1mb

S.D. = 1.1 on 9 of 15 obs.

SEP 28, 1989 21h 52m 17.08± 0.15s
20.329 N ± 3.2km 98.822 E ± 3.2km
DEPTH = 10.8km (8 depth phases)
5.4mb (63 obs.) 5.7Msz (11 obs.)
BURMA (296)
CENTROID, MOMENT TENSOR (HRV)
Dota Used: GDSN
L.P.B.: 14S, 30C

28d 21h

Centroid Location:
Origin Time 21:52:21.3 0.2
Lat 20.32N 0.04 Lon 99.06E 0.04
Dep 15.0 FIX Half-duration 3.1
Moment Tensor; Scale 10**17 Nm
Mrr=-0.97 0.18 Mtt=-2.22 0.19
Mff= 3.19 0.22 Mrt=-0.09 0.54
Mrf= 1.94 0.70 Mtf= 5.20 0.19
Principal Axes:
T Val= 6.69 Plg=12 Azm=300
N -1.05 72 170
P -5.64 14 33
Best Double Couple:Mo=6.2*10**17
NP1:Strike= 76 Dip=72 Slip= -1
NP2: 167 89 -162

CHG		1.51	176	iPn	52	44.00	-0.1
BDT		3.07	177	iPd	53	05.00	-1.4
				eS	53	10.50	
NST		4.80	165	ePn	53	30.20	-0.8
				ePg	53	32.00	
				eSg	53	47.10	
KMI		5.99	36	Pnc	53	50.00	2.0
	Z	10s		38.90um			
				Pg	54	12.00	
				Sg	55	23.00	
KBR		6.31	174	eP	53	34.00	-18.4X
				e	53	54.44	
NNT		7.74	173	ePn	54	11.00	-1.5
				eSg	56	04.00	
GYA		9.44	48	P	54	35.00	-1.1
	N	12s		237.00um			
	E	12s		203.00um			
QIZ		10.46	95	eP	54	47.00	-3.2X
	E	12s		69.00um			
				S	56	48.00	
CD2		11.44	22	iPd	55	02.20	-1.2
				iS	57	15.00	
LSA		11.63	325	P	55	06.10	-0.4
	E	11s		44.90um			
				S	57	20.00	
SNG		13.19	172	iPc	55	30.30	3.3X
		1.5s		450.00nm			6.4mb X
				eS	57	57.30	
GZH		13.77	76	eP	55	35.00	0.3
	Z	10s		68.10um			
				S	58	00.00	
MCO		13.86	80	eP	55	55.20	19.4X
HKC		14.44	79	P	55	42.00	-1.4
				S	58	25.00	
IPM		15.80	172	ePd	56	05.00	3.7X
		0.8s		82.30nm			5.0mb
				e	00	52.50	
				e	01	58.90	
LZH		16.31	15	Pd	56	08.50	0.7
		4.0s		3.70nm			2.9mb X
	Z	15s		14.00um			4.2MszX
				pP	56	20.00	
				PP	56	25.00	
				S	59	12.00	
				sS	59	23.00	
XAN		16.33	31	P	56	04.50	-3.5X
	E	10s		44.50um			
TSI		16.73	181	ePd	56	13.50	0.4
WHN		17.31	51	iPd	56	18.00	-2.3
		3.0s		1.90nm			2.7mb X
	Z	10s		27.40um			5.7MszX
	E	10s		45.50um			
				pP	56	27.00	
PSI		17.53	180	iPd	56	27.30	4.2X
		0.7s		106.00nm			5.1mb
				e	01	40.00	
				e	10	00.00	
KGM		18.72	166	ePd	56	39.60	1.6
				e	02	29.00	
QZH		18.81	72	P	56	38.50	-0.5
		5.0s		1.90nm			2.6mb X
				S	00	08.00	
GTA		19.04	2	eP	56	42.00	0.2
		5.0s		2.00nm			2.6mb X
	Z	11s		25.30um			3.7Msz
	E	11s		96.20um			
				sP	56	52.00	
				PP	57	01.50	
HYB		19.40	265	iPc	56	47.50	1.3
		1.0s		150.00nm			5.2mb
				iS	00	16.00	
PPI		20.71	176	eP	57	01.50	1.3
TIY		20.98	31	iPd	57	02.20	-0.6
		1.1s		0.30nm			2.6mb X
	E	12s		68.60um			
				S	00	56.00	
BAG		21.01	97	ePc+	57	04.50	1.1
				eS	01	02.00	
NDI		21.32	297	iPc	57	04.00	-2.3
		0.6s		23.33nm			4.8mb
NJ2		21.39	53	Pc	57	07.20	0.2
	N	12s		68.80um			
GBA		21.51	255	Pd	57	06.90	-1.3
		0.7s		13.20nm			4.4mb
KKM		22.06	128	ePc	57	16.50	2.5
		1.5s		1366.10nm			6.2mb X
BTO		22.35	23	iPd	57	17.00	0.3
	N	11s		14.80um			
	E	11s		18.90um			
				pP	57	25.50	30kmX
				PP	57	48.00	
TIA		22.53	42	Pd	57	17.60	-0.7
	E	10s		36.00um			
				pP	57	27.20	35kmX
				S	01	22.90	
SSE		22.78	57	Pd	57	20.00	-0.8
		1.0s		0.12nm			2.4mb X
	N	10s		10.90um			
	E	10s		2.47um			
				S	01	30.00	
HHC		23.16	25	iPd	57	25.00	0.4
	Z	12s		19.00um			5.7MszX
	N	12s		19.50um			
	E	12s		29.40um			
POO		23.61	270	iPd	57	30.60	1.5
				iS	01	46.00	
BOM		24.53	271	iPd	57	38.50	0.6
				iS	02	00.50	
BJI		24.63	33	eP	57	39.00	0.3
		2.0s		650.00nm			5.9mb
	Z	15s		26.80um			5.9MszX
	N	11s		23.00um			
				eS	02	00.00	
TSM		24.65	128	ePc	57	37.40	-1.7
WMQ		25.20	341	P	57	46.00	1.7
	Z	16s		20.70um			5.7MszX
	N	12s		25.00um			
DL2		27.00	42	eP	58	00.00	-0.9
	Z	13s		15.00um			5.7MszX
	N	12s		20.40um			
	E	12s		32.40um			
KSH		27.35	319	P	58	05.40	1.1
	E	12s		29.80um			
				S	02	44.00	
DAV		29.07	113	eP	58	21.00	1.2
				e	03	42.00	
PCI		29.48	133	ePc	58	26.40	2.9X
		1.0s		4.00nm			4.2mb X
SNY		29.96	39	eP	58	25.10	-2.5
	Z	20s		22.00um			5.8Msz
	N	18s		33.40um			
	E	12s		17.30um			
				PP	59	30.00	
				S	03	19.00	
FRU		30.28	323	eP	58	28.00	-2.5
QUE		30.36	295	eP	58	30.00	-1.6
				eS	03	08.00	
TRT		30.99	153	iPd	58	39.50	2.6X
		1.2s		114.20nm			5.6mb
MNI		31.60	123	eP	58	44.00	1.7
IRK		32.17	6	iPd	58	48.00	1.1
CN2		32.26	37	Pd	58	47.50	-0.3
	Z	15s		16.00um			5.8MszX
	N	15s		19.00um			
				pP	58	53.00	19km
				eS	03	58.00	
MKS		32.50	139	iPc	58	53.00	2.9X
				e	59	55.00	319kmX
MDJ		35.15	39	eP	59	12.50	-0.3
	Z	15s		22.70um			6.0MszX
				ePP	00	36.00	
				S	04	40.00	
IIDJ		37.43	58	P	59	32.70	0.4
MAT		37.92	56	eP	59	35.00	-1.3
		1.2s		117.10nm			5.5mb
	Z	20s		5.67um			5.4Msz
				eS	05	27.00	
CHJJ		38.42	57	P	59	41.10	0.6
KUPT		38.88	139	ePc	59	50.50	6.0X
		0.6s		258.40nm			6.1mb
TLE		42.16	124	ePc	00	09.70	-1.8
SHI		42.74	292	iP	00	16.00	-0.4
YSS		44.39	43	eP	00	29.00	-0.3
GUMO		44.44	91	eP	00	32.00	1.9
GUA		44.49	91	eP	00	32.00	1.4
	Z	19s		3.75um			5.3Msz
NANU		45.64	158	eP	00	39.50	0.0
		0.6s		30.00nm			5.4mb
MTN		45.79	133	eP	00	39.50	-1.3
MBL		46.07	152	iPc	00	42.20	-0.7
		0.6s		35.00nm			5.5mb
KNA		46.38	138	eP	00	44.10	-1.3
JAY		46.92	114	ePc	00	51.00	1.1
				e	03	28.00	
TAB		48.47	303	eP	01	03.00	1.1
SLY		48.93	300	iP	01	07.00	1.7
				ePP	01	54.00	
				eS	08	22.50	
BHD		49.77	297	ePd	01	09.00	-2.8
				ePP	03	07.50	
				iS	08	23.00	
				ePS	08	43.00	
				eScS	10	50.00	
				eSS	12	06.00	
				eSSS	13	36.00	
MEKA		50.43	157	iP	01	15.50	-1.3
MSL		50.87	301	ePc	01	19.20	-1.0
				e	01	49.00	128kmX
				ePP	03	16.00	
				eS	08	44.50	
MRWA		51.97	161	eP	01	28.00	-0.5
WB5		52.99	137	eP	01	34.90	-1.4
				i	01	36.80	6km
				i	01	54.80	
BAL		53.48	161	eP	01	39.00	-0.7
COOL		55.25	157	eP	01	52.00	-0.7
ASPA		55.51	140	iPd	01	53.30	-1.4
		1.3s		211.00nm			6.0mb
	Z	21s		5.57um			5.6Msz
				iPcS	06	55.20	
				LR	28	25.20	
NWAO		55.80	161	eP	01	56.00	-0.6
	Z	20s		6.60um			5.7Msz
	N	20s		5.60um			
	E	20s		5.60um			
PMG		55.98	117	eP	02	13.00	14.8X
		0.7s		82.19nm			
OIS		56.95	133	ePd	02	03.00	-2.1
		1.4s		325.00nm			6.2mb
BHL		57.04	298	P	02	06.00	0.2
				PPP	05	30.00	
				S	10	00.00	
OBN		57.72	323	eP	02	08.60	-1.5
		1.6s		200.00nm			5.9mb
	Z	20s		3.90um			5.5Msz
				eS	10	08.00	
FORR		58.14	150	eP	02	12.00	-1.2
KAS		58.31	307	eP	02	15.00	0.4
BBTK		59.10	305	eP	02	19.00	-1.2
BCK		60.92	302	eP	02	27.00	-5.6X
CTA		61.39	128	iPd	02	37.00	1.1
		1.3s		246.15nm			6.2mb
				iS	11	00.00	
ELL		61.52	302	eP	02	34.70	-2.1
APA		62.07	337	eP	02	38.00	-1.8
TLB		62.47	310	eP	02	43.00	0.2
YER		62.78	302	eP	02	44.00	-1.1
VRI		63.34	312	eP	02	47.50	-1.1
ISR		63.50	311	eP	02	50.60	0.9
BUC		63.86	310	eP	02	48.00	-4.0X
MLR		63.91	312	eP	02	50.50	-2.0
QLP		64.14	135	eP	02	54.00	0.1
SUF		64.20	331	eP	02	53.20	-0.6
		0.5s		39.00nm			5.8mb
NAI		64.37	258	eP	03	01.00	5.0X
CMP		64.56	311	ePc	03	01.00	4.4X
SOD		64.56	336	iP	02	55.70	-0.5
NUR		64.74	328	iP	02	57.20	-0.2
		0.7s		28.00nm			5.6mb
	Z	18s		7.60um			5.9Msz
				e	16	42.00	
				LR	33	08.00	
KEV		64.81	339	iP	02	58.20	0.5
				i	03	10.80	43kmX
				e	11	46.00	

			e	13	54.00		OGA	73.98	314	eP	03	54.10	-0.6	EBL	79.87	326	ePd	04	28.70	1.5
NPS	65.14	300	eP	03	01.50	0.9	OSS	74.61	314	ePd	03	57.60	-0.8	ELO	79.96	327	eP	04	29.10	1.4
PLG	66.18	306	eP	03	06.20	-0.9	PTZ	74.69	248	eP	03	40.00	-19.2X		1.0s	57.00nm			5.5mb	
UZH	66.20	315	iP	03	10.00	3.0X				i	04	02.00	83kmX	TCF	79.99	316	eP	04	27.90	-0.1
VAM	66.27	301	eP	03	07.50	-0.2				i	04	34.50			1.2s	47.60nm			5.3mb	
ADE	66.77	145	iPd	03	11.60	0.8	TOD	74.81	318	eP	04	07.80	8.6X	EAU	80.06	326	iPd	04	29.90	1.7
	1.1s	108.86nm			6.0mb		TNS	74.89	318	ePc	04	01.80	2.1		0.9s	44.00nm			5.4mb	
BZS	66.93	312	eP	03	11.50	-0.2	SAX	75.01	315	ePd	04	00.20	-0.6	EKA	80.09	325	Pd	04	29.20	0.9
RMQ	67.16	132	eP	03	13.00	-0.4	VDL	75.11	314	ePd	04	00.60	-0.7		1.0s	57.50nm			5.5mb	
KZN	67.46	306	eP	03	14.00	-1.3	SLE	75.45	316	ePd	04	02.60	-0.4	EAB	80.39	326	eP	04	31.70	1.8
SKO	67.48	308	eP	03	12.20	-3.1X	WTS	75.46	320	eP	04	03.50	0.6	LSF	80.45	316	eP	04	30.00	-0.5
Z	16s	1.70um			5.4MszX			0.9s	22.00nm			5.2mb			1.2s	29.70nm			5.2mb	
N	16s	1.38um					ABH	75.53	318	eP	04	02.20	-1.2	CAF	80.53	314	eP	04	31.10	0.1
E	16s	2.86um					MZZ	75.55	252	eP	04	06.00	1.8		0.9s	16.30nm			5.0mb	
		iPcP	03	39.50	155kmX					i	04	32.00	100kmX	LDF	80.71	318	eP	04	31.70	-0.1
		i	03	49.50			ZLA	75.58	316	ePd	04	02.80	-1.0		1.3s	72.20nm			5.5mb	
		eS	12	17.00			TMA	75.60	314	ePd	04	02.90	-1.2	RJF	80.77	315	eP	04	32.40	0.2
		iPS	16	34.00			GWF	75.71	317	P	04	04.21	-0.2		0.9s	29.40nm			5.3mb	
		i	31	31.00			FEL	75.73	316	P	04	04.35	-0.4	MBC	80.87	9	eP	04	33.50	1.4
		LR	31	48.00			RUP	75.88	318	eP	04	03.70	-1.7		0.9s	14.00nm			5.0mb	
SPC	67.51	316	iPc	03	17.00	1.4	WLS	76.02	317	P	04	05.81	-0.4	FLN	80.88	319	eP	04	32.70	0.0
KRA	67.62	317	eP	03	17.00	0.9	CDF	76.07	317	P	04	06.22	-0.4		1.1s	31.20nm			5.2mb	
	1.4s	67.00nm			5.6mb		ECH	76.20	316	P	04	07.21	0.0	FBA	81.17	23	eP	04	34.10	0.2
Z	24s	4.30um			5.6MszX		PCP	76.22	313	P	04	07.00	-0.5	LPO	81.20	314	eP	04	34.40	0.0
N	24s	12.20um					MMK	76.23	314	ePd	04	07.00	-0.7		0.9s	26.20nm			5.3mb	
		e	03	26.30	30kmX		ENN	76.31	319	eP	04	10.00	2.3	GRR	81.24	318	eP	04	34.70	0.1
		eS	12	17.00				1.0s	23.00nm			5.2mb		LFF	81.41	315	eP	04	35.70	0.2
ITM	67.81	303	eP	03	14.00	-3.5X				e	04	19.00	29kmX		1.0s	25.60nm			5.2mb	
BEO	67.83	311	e(P)	03	18.00	0.5	MOF	76.31	316	P	04	07.35	-0.6	MFF	81.42	316	eP	04	35.60	0.1
PSZ	67.87	315	eP	03	35.90	18.2X	BSF	76.54	316	P	04	08.45	-0.8		1.1s	26.30nm			5.2mb	
OHR	68.08	307	eP	03	15.20	-4.0X	FIN	76.54	312	P	04	08.33	-0.9	LPF	81.48	318	eP	04	36.10	0.3
UPP	68.25	328	iP	03	19.40	-0.3	DIX	76.59	314	ePd	04	09.60	-0.2		1.1s	55.60nm			5.5mb	
		i	03	23.60	14km		LOMF	76.64	316	P	04	10.17	0.4	YRH	81.83	323	eP	04	40.00	2.5
CMS	68.45	138	eP	03	22.90	1.5	ROB	76.75	312	P	04	11.30	0.9	PMR	82.25	27	eP	04	40.00	0.5
	1.1s	72.00nm			5.8mb		HAU	76.78	316	eP	04	09.80	-0.7	Z	20s	3.00um			5.7Msz	
BUD	68.50	314	e(P)	03	22.00	0.4		1.3s	24.50nm			5.1mb		SLR	82.37	239	iPc	04	41.00	0.0
SRO	68.94	315	iP	03	24.50	0.3	IMI	76.84	312	P	04	11.51	0.5		0.9s	21.01nm			5.3mb	
ZST	69.69	315	iP	03	29.50	0.6	LSD	76.93	314	P	04	10.99	-0.7	DMU	82.66	325	eP	04	44.20	2.4
KSP	69.85	318	eP	03	27.80	-2.0	VITF	76.96	317	P	04	10.54	-0.8	DLE	82.71	324	eP	04	43.80	1.7
	1.1s	50.00nm			5.6mb		ENR	77.08	312	P	04	11.51	-0.8		1.3s	82.00nm			5.7mb	
		i	03	31.60	12km		STV	77.14	313	P	04	10.99	-1.7	ETA	82.77	324	eP	04	45.60	3.2X
SOP	70.13	315	eP	03	35.90	4.4X	SBF	77.17	312	eP	04	11.70	-1.1		1.2s	179.00nm			6.1mb	
HFS	70.19	328	eP	03	31.90	0.2		1.1s	55.60nm			5.6mb		ECP	83.07	323	eP	04	47.80	3.9X
	0.5s	16.30nm			5.4mb		LPG	77.19	314	eP	04	12.70	-0.5		1.0s	139.00nm			6.1mb	
VKA	70.20	315	e(P)	03	31.50	-0.5		0.6s	22.00nm			5.4mb		TOA	83.21	25	eP	04	46.70	2.0
Z	16s	1.80um			5.4MszX		PZZ	77.23	313	P	04	12.23	-0.9	ECB	83.22	324	eP	04	48.00	3.2X
		i	03	39.40	25kmX		RRL	77.33	313	P	04	13.66	-0.2		1.4s	196.00nm			6.1mb	
		LR	39	22.00			FRF	77.80	312	eP	04	15.50	-0.7	INK	83.83	17	eP	04	48.00	0.4
BRS	70.55	130	iPc	03	34.50	0.1		0.7s	13.20nm			5.1mb			0.9s	30.00nm			5.5mb	
		i	03	38.40	13km		LSZ	77.88	249	iP	04	18.00	0.9	BFS	84.08	239	eP	04	52.50	2.7
		e	03	47.50						i	04	41.00	87kmX	VAL	85.33	324	iP	04	59.00	3.6X
		e	04	34.00			LMR	77.96	312	eP	04	16.30	-0.7				S	15	30.00	
		eS	13	00.00				0.8s	16.10nm			5.2mb		BLF	85.53	237	eP	05	04.00	7.0X
		e	17	30.00			LRG	78.03	312	eP	04	17.10	-0.3	GUD	86.35	312	eP	05	02.00	1.1
		e	20	50.00				1.2s	67.80nm			5.6mb		EMON	87.34	316	e(P)	05	08.70	3.2X
PRU	71.09	317	ePd	03	37.00	-0.3	DZM	78.32	119	iPc	04	23.80	4.3X	EPLA	87.93	312	e(P)	05	11.20	2.8X
	1.1s	24.50nm			5.2mb		IMA	78.45	23	eP	04	20.40	0.9	MAL	88.11	309	eP	05	10.50	1.2
Z	18s	3.70um			5.7Msz		LOR	78.60	316	eP	04	19.60	-0.9				eS	15	36.00	
N	20s	8.80um						1.2s	24.90nm			5.1mb		EHOR	88.27	310	eP	05	12.80	2.8X
E	18s	2.60um					LBF	78.61	316	eP	04	19.90	-0.7	EPRU	88.61	309	eP	05	14.00	2.2
		e	04	06.10	116kmX			1.1s	43.90nm			5.4mb		EJIF	89.00	309	e(P)	05	16.00	2.4
NRA0	71.18	329	P	03	36.70	-0.9	TTA	78.77	27	eP	04	22.50	1.3	PTO	89.19	314	ePKP	05	18.00	3.6X
NB2	71.29	329	P	03	37.40	-1.0	SMF	78.80	316	eP	04	21.00	-0.6	NKM	89.37	308	iPd	05	15.50	0.2
	1.1s	111.10nm			5.9mb			1.1s	42.40nm			5.4mb		EVAL	89.45	310	eP	05	18.80	3.1X
CLL	71.83	319	iPc	03	43.20	1.4	SSF	78.90	316	eP	04	21.80	-0.3	IFR	89.95	306	iPd	05	20.00	1.6
	1.3s	2.00nm			4.1mb X			1.2s	48.70nm			5.4mb		MSZ	90.17	138	P	05	23.00	4.3X
		eS	13	09.00			AVF	79.08	316	eP	04	22.40	-0.7	MAW	91.60	193	eP	05	28.00	3.2X
COO	71.85	133	eP	03	44.00	1.8		1.1s	30.20nm			5.2mb		KRP	92.34	130	P	05	32.20	3.4X
KHC	71.85	316	P	03	41.00	-1.0	GRC	79.11	316	P	04	23.36	0.2	TIO	92.68	304	iP	05	34.00	3.1X
Z	20s	4.20um			5.7Msz		PLDF	79.16	315	P	04	23.58	-0.1	CMB	111.24	32	e(PKP)	11	09.50	16.5X
N	22s	5.70um					EDR	79.20	327	ePd	04	25.00	1.5	KVN	111.56	30	PKP	11	00.00	6.3X
E	20s	2.90um					BCAO	79.37	271	iPc	04	24.80	-0.6	ALQ	120.02	24	ePKP	11	09.00	-1.0
		i	03	43.50	8km			0.8s	14.00nm			5.0mb		Z	18s	1.72um			5.7Msz	
BWA	72.03	139	eP	03	44.80	1.6				i	04	27.10	7km	FVM	121.35	9	PKP	11	18.00	5.8X
LWI	72.12	261	ePd	03	46.60	2.2				i	05	50.40		BAO	148.13	273	ePKP	12	00.00	-2.2
TOO	72.42	143	eP	03	48.00	2.6X	AGO	79.45	315	P	04	24.10	-1.1	BMG	151.63	343	ePKP	12	21.00	13.4X
MOX	72.82	318	iPc	03	49.50	1.9	BGF	79.48	316	eP	04	24.80	-0.5	PPD	152.12	261	ePKP	12	13.50	5.5X
	1.2s	35.00nm			5.3mb			1.3s	43.30nm			5.3mb		PSO	158.28	350	ePKP	12	20.50	3.6X
Z	24s	3.10um			5.5MszX		EDU	79.58	327	eP	04	27.00	1.5	CCH	165.47	279	PKP	12	19.80	-4.0X
N	19s	3.10um					ESY	79.59	326	eP	04	27.00	1.3	ZOBO	166.96	286	PKP	12	26.00	0.7
E	18s	2.40um					BUL	79.61	244	iPd	04	27.70	1.1		1.2s	14.19nm				
		e	13	15.00				0.7s	3.42nm			4.5mb					e	13	13.00	
CNB	73.20	139	eP	03	53.70	3.6X	PYM	79.63	315	P	04	26.01	-0.2				LR	13	28.00	
	1.1s	70.00nm			5.6mb		LBL	79.63	314	P	04	24.96	-1.1	CNCB	167.01	283	PKP	12	28.00	2.7X
GRF	73.25	317	eP	03	50.30	0.1	SVW	79.65	28	eP	04	27.60	1.7	LPB	167.03	285	PKP	12	28.00	2.8X
		e	03	52.70	8km		MAF	79.77	315	eP	04	26.90	0.0	Z	22s	1.67um			6.4Msz	
FUR	73.53	316	eP	03	53.80	1.9		1.3s	46.90nm			5.3mb					LR	13	20.00	

28d 22h

S.D. = 1.2 on 211 of 261 obs.

? SEP 28, 1989 22h 09m 58.20± 1.34s
19.353 N ±44.2km 97.673 E ±40.1km
DEPTH = 33.0km (normal)
4.6mb (2 obs.)
BURMA (296)

LOE	4.31	116	ePn	11 03.00	-0.2
			ePg	11 13.00	
			eSg	11 57.00	
GBA	20.22	257	P	14 55.00	21.7X
	1.0s		15.00nm		
SSE	24.22	57	e(P)	15 06.40	-6.6X
WB5	53.05	135	eP	19 14.90	0.3
SUF	64.52	331	eP	20 33.40	-0.4
	0.5s		1.90nm	4.4mb	
NUR	65.00	329	eP	20 32.00	-4.9X
SOD	65.01	336	eP	20 38.00	1.1
KEV	65.32	339	eP	20 39.00	0.1
NB2	71.57	329	P	21 17.00	-0.9
	0.9s		8.00nm	4.7mb	

S.D. = 0.9 on 6 of 9 obs.

SEP 28, 1989 22h 50m 11.97± 0.60s
20.205 N ± 7.0km 98.510 E ± 9.1km
DEPTH = 33.0km (normal)
4.3mb (2 obs.)
BURMA (296)

NST	4.76	161	eP	51 22.50	-0.8
NNT	7.66	171	eP	52 03.50	-0.6
GYA	9.74	49	P	52 31.40	-1.6
N	10s		5.20um		
E	10s		4.40um		
QIZ	10.75	94	eP	52 48.40	1.7
N	12s		3.30um		
E	12s		1.90um		
			eS	54 46.60	
LSA	11.57	326	P	52 58.90	0.6
CD2	11.66	23	eP	52 55.40	-3.7X
LZH	16.50	15	P	54 03.00	0.3
	2.0s		0.12nm	1.7mb X	
Z	10s		1.34um	4.7Msz	
			pP	54 14.00	
			eS	57 05.00	
XAN	16.59	32	P	54 02.00	-1.7
WHN	17.61	51	eP	54 18.50	2.0
HYB	19.09	265	eP	54 43.00	8.2X
NDI	21.12	298	eP	54 56.00	-0.3
GBA	21.19	255	Pd	55 03.90	6.8X
	0.9s		6.80nm	4.1mb	
TIY	21.23	32	eP	54 55.50	-1.9
E	13s		1.20um		
BTO	22.58	23	eP	55 10.00	-0.9
TIA	22.81	42	eP	55 11.10	-2.0
POO	23.32	270	eP	55 22.50	4.3X
HHC	23.40	26	P	55 20.80	1.9
BJI	24.90	34	eP	55 34.50	1.3
WMQ	25.22	341	eP	55 37.60	1.2
MAIO	37.64	304	eP	57 39.00	13.2X
WB5	53.11	136	eP	59 29.10	0.3
ASPA	55.60	140	eP	59 48.00	1.0
VRI	63.21	312	eP	00 42.50	3.2X
MLR	63.77	312	eP	00 43.00	-0.2
SUF	64.16	331	eP	00 42.00	-3.2X
SOD	64.56	336	eP	00 48.00	0.2
NUR	64.69	328	eP	00 40.00	-8.7X
NB2	71.25	329	P	01 29.40	-0.3
	0.8s		3.60nm	4.5mb	

S.D. = 1.3 on 20 of 28 obs.

? SEP 28, 1989 23h 27m 44.35± 0.99s
43.096 N ± 9.4km 0.593 W ± 9.5km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

ESCF	0.02	143	Pg	27 46.41	0.1
			Sg	27 48.06	
ATE	0.08	263	Pg	27 46.90	0.0
			Sg	27 48.84	
OGE	0.11	50	Pg	27 47.22	0.0
			Sg	27 49.63	
LHE	0.18	187	Pg	27 48.43	-0.1
			Sg	27 51.39	

S.D. = 0.1 on 4 of 4 obs.

SEP 29, 1989 00h 25m 15.42± 0.38s
43.812 N ± 3.7km 8.738 E ± 2.8km
DEPTH = 10.6 ± 2.2 km
CORSICA (380)
ML 3.0 (LDG).

FIN	0.55	316	Pd	25 27.02	0.4
			S	25 34.08	
IMI	0.62	279	Pc	25 28.53	0.6
			S	25 36.24	
PCP	0.74	349	P	25 30.25	0.3
			S	25 39.56	
ROB	0.79	308	P	25 31.00	0.2
			S	25 40.35	
SAOF	0.87	282	Pg	25 32.58	0.4
			Sg	25 44.05	
SBF	0.94	274	Pg	25 33.90	0.5
			Sg	25 44.00	
AUTN	0.96	281	Pg	25 34.30	0.4
			Sg	25 46.86	
REVF	1.00	266	Pg	25 34.64	0.4
AURF	1.02	275	Pg	25 34.86	0.1
ENR	1.04	294	P	25 35.60	0.6
			S	25 47.02	
BOB	1.08	28	Pc	25 37.20	1.4
			eSg	25 52.80	
TOUF	1.10	281	Pg	25 36.64	0.6
			Sg	25 51.57	
STV	1.11	293	P	25 36.96	0.8
			S	25 48.98	
MVIF	1.15	275	Pg	25 37.19	0.2
			Sg	25 53.93	
CVF	1.25	176	Pg	25 38.89	0.3
			Sg	25 54.75	
DOI	1.28	303	P	25 39.60	0.5
			eSg	25 55.50	
PII	1.30	93	P	25 39.80	0.4
			eSg	25 58.10	
CALN	1.34	268	Pg	25 40.00	-0.1
BDI	1.37	79	P	25 40.10	-0.4
PZZ	1.37	301	P	25 40.21	-0.3
			S	25 55.26	
FRF	1.54	261	Pn	25 42.50	-0.3
			Sn	26 00.40	
LMR	1.69	254	Pn	25 44.20	-0.8
			Sn	26 03.40	
LRG	1.76	259	Pn	25 46.00	-0.1
			Pg	25 46.70	
			Sn	26 06.30	
RRL	1.79	309	P	25 46.03	-0.6
ORO	1.89	344	P	25 47.60	-0.5
BNI	1.93	311	P	25 48.20	-0.4
			eSn	26 12.40	
LSD	2.00	326	P	25 48.84	-0.9
MDI	2.08	19	P	25 51.30	0.6
LPG	2.20	321	Pn	25 53.60	0.8
LPL	2.23	321	Pn	25 53.80	0.8
CTI	3.05	42	P	26 03.90	-0.6
			eSn	26 38.50	
HAU	4.51	339	Pn	26 23.80	-1.5
BGF	4.99	305	Pn	26 30.80	-1.2

S.D. = 0.7 on 33 of 33 obs.

SEP 29, 1989 01h 33m 09.20± 0.50s
35.642 N ± 5.2km 27.306 E ± 4.0km
DEPTH = 64.3 ± 6.6 km
4.2mb (21 obs.)
DODECANESE ISLANDS (369)

NPS	1.43	255	iPnc	33 34.80	1.3
YER	1.69	28	iPn	33 36.60	-0.4
KSL	1.91	75	ePn	33 41.30	1.2
APE	2.02	315	iPnd	33 41.20	-0.5
ELL	2.38	62	iPn	33 48.20	1.5
VAM	2.54	266	ePn	33 49.00	0.1
IZM	2.75	359	iPn	33 51.00	-0.9
BCK	3.21	55	iPn	33 59.50	1.2
KHL	3.21	33	iPn	33 58.50	0.1
PRK	3.69	347	ePn	34 04.50	-0.5
ATH	3.70	310	ePn	34 06.00	0.8
PPCY	4.19	99	ePn	34 12.50	0.4
			eSn	35 01.50	
EZN	4.25	350	iPn	34 12.60	-0.3
ITM	4.60	291	ePn	34 20.70	2.8X
KCT	4.67	10	iPn	34 18.00	-0.9
EDC	4.72	5	iPn	34 17.60	-1.9
BNT	4.73	6	iPn	34 19.00	-0.7
NEO	4.89	320	ePn	34 22.20	0.2
CSS	4.97	96	ePn	34 22.00	-1.1
			eSn	35 22.50	
LFK	5.09	92	iPn	34 24.00	-0.9
YLV	5.18	18	iPn	34 24.00	-2.1
ALN	5.34	350	eP	34 28.70	0.5
FAM	5.51	95	eP	34 37.00	6.4X
LIT	5.86	321	eP	34 35.50	0.0
VLS	5.95	297	ePn	34 38.50	1.8
BBTK	6.02	44	eP	34 38.00	0.1
THE	6.04	327	eP	34 39.30	1.3
KDZ	6.18	347	eP	34 42.00	2.1
RZN	6.37	342	eP	34 42.00	-0.7
KZN	6.39	318	iPnd	34 44.00	1.1
KNT	6.51	329	eP	34 46.80	2.3
GRG	6.56	325	eP	34 45.80	0.6
MMB	6.57	336	eP	34 45.00	-0.3
HLW	6.69	148	eP	34 47.00	-0.1
KOT	6.85	145	eP	34 48.50	-0.7
KKB	7.04	333	eP	34 51.00	-0.8
SKO	7.80	326	eP	35 07.50	5.1X
LCI	8.74	305	P	35 12.80	-2.5
TLB	8.95	3	eP	35 14.00	-4.2X
HQL	9.12	132	eP	36 19.00	58.5X
SRFA	9.45	133	eP	36 24.00	59.0X
TDS	9.58	298	P	35 23.70	-3.1
BADA	9.64	135	eP	36 26.00	58.4X
MLR	9.89	354	eP	35 32.60	1.4
VRI	10.23	358	eP	35 32.50	-3.2X
MGR	10.31	299	P	35 35.30	-1.6
SGO	10.65	301	P	35 37.30	-4.1X
KHC	16.83	327	P	37 06.00	4.1X
KSP	17.15	336	eP	37 10.30	4.4X
LPG	18.41	309	eP	37 17.10	-4.6X
	0.7s		6.60nm	3.9mb	
CDF	19.53	317	eP	37 34.10	0.0
	0.8s		8.00nm	4.1mb	
HAU	19.84	315	eP	37 37.10	-0.2
	0.7s		6.60nm	4.1mb	
SMF	20.73	309	eP	37 45.70	-0.8
	0.9s		11.40nm	4.2mb	
LBF	20.79	310	eP	37 46.30	-0.8
	0.7s		6.60nm	4.1mb	
LOR	20.98	311	eP	37 48.10	-0.9
	0.7s		5.50nm	4.0mb	
AVF	21.10	309	eP	37 49.60	-0.6
	0.8s		8.00nm	4.1mb	
SSF	21.11	310	ePn	37 50.10	-0.3
	0.7s		18.00nm	4.5mb	
CAF	21.30	303	eP	37 51.60	-0.7
	0.8s		6.70nm	4.1mb	
BGF	21.33	308	eP	37 52.20	-0.4
	0.8s		9.90nm	4.2mb	
MAF	21.39	307	eP	37 52.30	-0.9
	1.1s		10.70nm	4.1mb	
LPO	21.83	302	eP	37 57.10	-0.5
	0.7s		6.60nm	4.2mb	
LFF	22.21	303	eP	38 01.20	-0.1
	0.9s		14.40nm	4.4mb	
MFF	23.28	306	eP	38 12.60	0.8
	0.7s		4.40nm	4.0mb	
LDF	23.96	311	eP	38 20.10	1.8
FLN	24.25	311	eP	38 22.60	1.5
	0.9s		32.70nm	4.8mb	
LPF	24.33	309	eP	38 23.30	1.4
	0.6s		7.20nm	4.3mb	
GRR	24.34	310	eP	38 23.50	1.5
	0.7s		27.30nm	4.8mb	
NUR	24.94	357	eP	38 45.00	17.4X
MAIO	26.00	79	eP	38 44.00	6.2X
HFS	26.04	344	eP	38 38.40	0.5
	0.4s		2.40nm	4.1mb	
SUF	27.11	359	eP	38 47.90	0.3
NB2	27.42	343	P	38 50.50	0.0
	0.5s		1.10nm	3.7mb	
BCAO	32.09	197	iPd	39 37.10	4.7X
	0.2s		4.00nm	4.9mb	
KIC	41.41	233	P	40 56.00	5.1X
GBA	49.96	103	Pc	42 02.00	3.2X
	0.8s		3.70nm	4.5mb	
SES	86.78	335	eP	45 51.00	3.6X

S.D. = 1.2 on 58 of 76 obs.

? SEP 29, 1989 01h 34m 42.17± 2.02s
42.962 N ±15.9km 0.858 W ±13.3km
DEPTH = 10.0km (geophysicist)

PYRENEES (378)
MD 1.0 (STR).

ISSF	0.08	35	Pg	34 44.77	0.0	
			Sg	34 46.82		
BOH	0.18	321	Pg	34 46.28	0.0	
			Sg	34 49.01		
LHE	0.18	106	Pg	34 46.28	0.0	
MADF	0.19	9	Pg	34 46.33	0.0	
			Sg	34 49.11		

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

SEP 29, 1989 01h 43m 10.09± 0.81s
51.562 N ± 7.7km 7.536 E ± 7.4km
DEPTH = 10.0km (geophysicist)

GERMANY (543)

WTS	0.63	314	iPgd	43 22.50	-0.2	
WTS	0.63	314	iPn	43 24.50	1.8X	
	0.6s		51.00nm			
ENN	1.29	233	iPnd	43 34.40	0.4	
	0.4s		19.00nm			
			iSn	43 53.00		
TNS	1.46	156	ePn	43 36.70	0.2	
			eSn	43 55.60		
ABH	1.68	180	ePn	43 39.39	-0.3	
RUP	1.89	189	ePn	43 42.48	-0.2	
TOD	2.12	157	ePn	43 45.92	-0.1	
MOX	2.73	108	(Pg)	43 55.00	0.2	
			iSg	44 36.00		
GRF	3.00	127	e(Pg)	44 06.30	7.7X	
			e	44 09.50		
			e(Sg)	44 50.00		

S.D. = 0.3 on 7 of 9 obs.

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* SEP 29, 1989 01h 52m 50.65± 2.93s
35.711 N ±20.5km 141.030 E ±18.3km
DEPTH = 10.0km (geophysicist)
NEAR EAST COAST OF HONSHU, JAPAN (228)

KAKJ	0.85	306	iPd	53 06.90	-0.2	
			eS	53 20.20		
CHJJ	1.69	282	P	53 19.60	-0.7	
			S	53 44.90		
NIIJ	2.24	314	P	53 27.80	-0.5	
MAT	2.43	291	(P)	53 32.00	1.0	
			eS	53 59.00		
IIDJ	2.55	266	iPd	53 33.10	0.3	
YAMJ	2.58	342	eP	53 34.00	0.8	
MTMJ	2.75	289	eP	53 35.40	-0.3	
OFUJ	3.40	8	P	53 44.40	-0.4	
			eS	54 22.90		

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

SEP 29, 1989 03h 30m 41.26± 0.43s
41.906 N ± 4.9km 20.139 E ± 4.2km
DEPTH = 10.0km (geophysicist)
ALBANIA (391)
ML 3.3 (SKO). MD 3.0 (TTG).

PUK	0.23	307	iPgc	30 46.50	0.4	
KKS	0.26	50	iPg	30 46.80	0.0	
PHP	0.31	134	iPgc	30 45.20	-2.6	
SDA	0.49	283	iPgd	30 51.40	0.2	
TIR	0.60	200	ePg	30 52.00	-1.3	
ULC	0.67	275	iPgd	30 54.00	-0.5	
			iSg	31 05.20		
PVY	0.70	350	iPgd	30 54.80	-0.4	
			eSg	31 07.00		
TTG	0.84	309	ePg	30 56.80	-0.6	
			eSg	31 11.30		
SKO	0.97	86	iPg	30 59.00	-0.7	
			iSg	31 11.00		
			i	31 12.90		
BDV	1.05	292	ePg	31 00.50	-0.5	
			eSg	31 19.00		
NKY	1.24	317	ePg	31 05.50	1.1	
			eSg	31 25.00		
HCY	1.33	294	ePg	31 05.50	-0.3	
			eSg	31 27.50		
KBN	1.38	158	ePn	31 07.00	0.5	
BRY	1.54	311	ePn	31 10.00	1.0	
			eSn	31 35.00		
LSK	1.79	169	ePn	31 13.50	1.0	
GRG	1.95	118	ePn	31 15.20	0.5	
			eSn	31 36.00		
KNT	2.20	109	ePn	31 14.00	-4.4X	
			eSn	31 38.50		
THE	2.48	120	ePn	31 24.10	1.8	
			eSn	31 48.70		
LIT	2.53	135	ePn	31 24.50	1.4	
			eSn	31 50.50		
HVAR	3.01	296	i(Pn)	31 34.10	4.3X	
BZS	3.86	16	eP	31 41.00	-0.9	

S.D. = 1.1 on 19 of 21 obs.

SEP 29, 1989 04h 02m 52.31± 1.09s
43.831 N ± 5.7km 8.729 E ± 9.3km
DEPTH = 10.0km (geophysicist)
CORSICA (380)
ML 2.1 (GEN), 2.2 (LDG).

FIN	0.53	315	P	03 03.42	0.3	
			S	03 10.70		
IMI	0.61	278	P	03 05.06	0.4	
			S	03 13.16		
PCP	0.72	350	P	03 06.70	0.1	
			S	03 15.82		
ROB	0.77	307	P	03 07.52	0.1	
			S	03 16.95		
SBF	0.94	272	Pg	03 11.40	1.2	
			Sg	03 21.60		
ENR	1.02	293	P	03 11.72	0.0	
STV	1.09	293	P	03 11.93	-1.0	
CVF	1.27	175	Pn	03 16.00	0.1	
			Sn	03 31.20		
PZZ	1.35	300	P	03 16.90	-0.4	
FRF	1.53	261	Pn	03 18.80	-0.9	
			Sn	03 37.60		
LMR	1.69	254	Pn	03 21.30	-0.7	
LRG	1.76	258	Pn	03 23.80	0.8	

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

? SEP 29, 1989 04h 33m 36.60± 1.05s
20.265 N ± 8.5km 99.152 E ±40 6km
DEPTH = 33.0km (normoi)
BURMA (296)

CHTO	1.46	188	iPn	34 02.00	1.1	
BDT	3.01	183	ePn	34 21.30	-1.7	
			ePg	34 27.50		
			eSg	34 51.50		
LOE	3.75	139	ePn	34 40.00	6.5X	
			ePg	34 49.00		
			eSg	35 40.00		
NST	4.66	168	ePn	34 47.00	0.5	
			ePg	35 07.10		
			eSg	36 11.20		
KMI	5.86	34	Pgc	35 28.50	24.8X	
NNT	7.65	176	eP	36 26.50	57.9X	
SHL	8.53	310	eP	35 59.20	18.2X	
CD2	11.38	20	eP	36 19.00	-1.0	
GTA	19.09	2	eP	37 59.40	0.0	
	E 12s		0.50um			
TIY	20.87	31	eP	38 18.50	0.1	
	N 11s		0.30um			
BTO	22.29	22	eP	38 33.60	0.9	

S.D. = 1.3 on 7 of 11 obs.

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* SEP 29, 1989 06h 16m 29.91± 0.80s
30.532 S ± 9.2km 28.849 E ±12.4km
DEPTH = 5.0km (geophysicist)
4.9mb (6 obs.) 4.1Msz (1 obs.)
REPUBLIC OF SOUTH AFRICA (584)

BLF	2.71	301	iPc	17 18.00	2.9	
			S	17 47.00		
HVD	2.89	268	iPc	17 46.00	28.3X	
BFS	4.05	333	iPc	17 36.00	2.0	
			S	17 46.00		
SUR	7.11	253	iPd	18 16.00	-1.3	
			S	18 37.00		
POF	7.81	276	iPd	18 26.00	-0.9	
			S	19 47.00		
BUL	10.35	359	iPnd	19 01.00	-1.2	
			iSn	20 54.50		
			i	21 49.90		
WIN	13.16	304	eP	19 39.00	-1.4	
	1.2s		54.69nm		5.6mb X	
			S	22 09.00		
LSZ	15.20	358	iPn	20 03.30	-3.8X	
			iSn	22 53.00		
			iSg	24 25.60		
PTZ	16.37	9	iPn	20 22.30	0.1	
			iSn	23 21.00		
			iSg	24 52.00		
KMZ	17.22	350	ePn	20 30.00	-3.0	
			i	20 36.00		
			iSn	23 35.00		
			iSg	25 29.00		
MZZ	19.29	0	iPn	20 55.00	-3.7X	
			iSn	23 25.20		
			iSg	25 27.10		
LWI	28.14	360	ePc	22 26.40	1.1	
BCAO	36.14	342	iPc	23 35.00	-0.1	
	0.5s		5.00nm		4.6mb	
KIC	48.79	313	P	25 17.48	-0.6	
	0.8s		11.00nm		5.0mb	
LIC	48.87	313	P	25 18.14	-0.6	
	0.6s		3.50nm		4.6mb	
	Z 20s		0.20um		4.1Msz	
TIC	49.19	313	Pd	25 20.68	-0.5	
	0.7s		16.00nm		5.1mb	
SPA	59.64	180	e(P)	26 35.50	-1.7	
	1.1s		11.90nm		4.9mb	
SBA	69.00	171	eP	27 39.00	1.1	
BAO	71.06	263	eP	27 51.70	0.2	
VRI	76.06	358	ePc	28 21.00	1.1	
CLL	82.67	350	eP	28 57.00	1.6	
	2.0s		28.00nm		5.1mb	
CCH	85.50	253	(P)	29 11.00	0.1	
CNCB	87.31	252	P	29 21.20	1.1	
LPB	87.54	252	P	29 23.00	1.9	
ZOBO	87.70	253	P	29 22.20	0.2	
	Z 24s		0.11um		4.2MszX	
			LR	56 16.00		
ALQ	142.38	289	ePKP	36 02.00	-3.9X	
	1.0s		3.00nm			
SES	144.17	315	ePKPc	36 06.30	-1.9	
LRM	146.33	308	ePKP	36 15.20	2.9X	
PNT	149.71	317	ePKP	36 23.00	5.8X	

S.D. = 1.5 on 23 of 29 obs.

SEP 29, 1989 07h 34m 00.66± 0.84s
38.370 N ± 5.8km 23.859 E ±12.1km
DEPTH = 10.0km (geophysicist)
GREECE (364)
ML 2.6 (ATH).

ATH	0.41	196	ePg	34 08.00	-1.1	
NEO	1.06	332	ePg	34 20.80	0.2	
VLI	1.80	204	ePb	34 31.50	-0.5	
APE	1.86	134	ePn	34 33.50	0.7	
ITM	1.94	233	ePb	34 35.50	1.5	
PLG	2.03	351	ePn	34 34.70	-0.6	
LIT	2.03	329	ePn	34 35.10	-0.2	

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

% SEP 29, 1989 08h 30m 45.22± 0.69s
44.253 N ± 7.9km 7.435 E ± 5.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

ENR	0.03	201	P	30 46.79	-0.5	
			S	30 47.92		
STV	0.08	263	P	30 47.61	-0.2	
			S	30 49.05		
ROB	0.32	82	P	30 51.84	0.0	
PZZ	0.35	317	P	30 52.63	0.2	
			S	30 57.25		
IMI	0.47	136	P	30 55.46	0.6	
FIN	0.56	94	P	30 56.07	-0.5	
			S	31 04.43		

S.D. = 0.5 on 6 of 6 obs.

% SEP 29, 1989 08h 30m 51.77± 1.15s
40.651 N ±10.1km 29.876 E ± 9.2km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

HRT	0.23	317	iPg	30 57.10	0.3	
GBZT	0.36	293	iPgd	30 59.30	0.2	
			iSg	31 05.10		
YLV	0.39	258	iPg	31 00.50	0.7	
GPA	0.49	137	iPg	31 02.00	0.3	
			iSg	31 09.00		
ISK	0.74	304	ePg	31 06.10	-0.2	
			eSg	31 16.00		
CTT	1.20	295	ePn	31 14.60	0.4	
KCT	1.23	251	iPn	31 16.00	1.4	
BNT	1.52	259	ePn	31 18.00	-1.0	

29d 08h

EDC 1.56 259 ePn 31 17.60 -2.0
S.D. = 1.2 on 9 of 9 obs.

SEP 29, 1989 08h 39m 46.31± 0.26s
44.480 N ± 2.0km 7.317 E ± 2.7km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 3.1 (LDG).

DOI	0.06	295	Pd	39 48.90	0.3
			eSg	39 50.60	
PZZ	0.16	279	P	39 49.84	-0.2
			S	39 51.13	
STV	0.24	179	P	39 51.50	0.1
			S	39 54.00	
ENR	0.26	164	P	39 52.11	0.2
			S	39 54.92	
ROB	0.44	115	P	39 55.91	0.7
			S	40 01.69	
TOUF	0.47	186	Pg	39 55.55	-0.3
AUTN	0.49	171	Pg	39 56.22	-0.1
SAOF	0.52	161	Pg	39 56.84	-0.1
RRL	0.58	319	P	39 57.61	-0.6
			S	40 05.89	
AURF	0.59	179	Pg	39 57.92	-0.4
MVIF	0.60	192	Pg	39 58.00	-0.5
			Sg	40 05.75	
SBF	0.62	172	Pg	39 58.70	-0.2
			Sg	40 05.40	
FIN	0.69	113	P	40 00.32	0.2
			S	40 10.07	
IMI	0.70	144	P	40 00.15	-0.1
			S	40 09.48	
BNI	0.73	322	P	40 00.30	-0.5
			eSg	40 09.70	
CALN	0.79	203	Pg	40 01.57	-0.2
			Sg	40 11.62	
PCP	0.88	86	P	40 04.09	0.8
			S	40 15.91	
LSD	0.98	353	P	40 05.82	0.7
			S	40 18.40	
FRF	1.04	208	Pg	40 05.70	-0.2
			Sg	40 18.70	
LPG	1.09	339	Pn	40 06.90	-0.2
			Pg	40 07.20	
			Sg	40 22.80	
LPL	1.12	338	Pn	40 07.40	0.0
			Pg	40 07.80	
			Sg	40 23.50	
GANF	1.12	245	Pg	40 07.86	0.5
			Sg	40 23.17	
LRG	1.24	214	Pg	40 09.30	0.0
			Sg	40 25.20	
TAVF	1.25	227	Pg	40 10.12	0.5
			Sg	40 27.67	
LMR	1.29	207	Pn	40 09.30	-0.8
			Pg	40 10.00	
			Sg	40 26.10	
VILF	1.31	242	Pg	40 11.43	0.8
			Sg	40 29.93	
BOB	1.55	79	P	40 17.00	3.0X
			eSn	40 40.00	
TREF	1.64	239	Pg	40 17.66	2.4X
			Sg	40 39.46	
BERF	1.66	226	Pg	40 17.22	1.6
CVF	2.22	149	Pn	40 22.61	-1.1
HAU	3.59	350	Pn	40 42.00	-1.2
BGF	3.77	305	Pn	40 46.00	0.3

S.D. = 0.6 on 30 of 32 obs.

? SEP 29, 1989 09h 29m 57.37± 7.37s
10.044 S ±78.0km 164.110 E ±71.4km
DEPTH = 61.5 ± 25.1 km
4.8mb (2 obs.) 3.7Msz (1 obs.)
SANTA CRUZ ISLANDS REGION (183)

HNR	4.15	278	eP	30 59.00	-0.6
			eS	31 42.00	
SVO	4.33	281	eP	31 03.00	0.8
			eS	31 49.00	
DZM	12.17	170	iPc	32 49.90	-0.3
			iS	34 58.90	
CTA	19.90	238	iPc	34 26.00	-0.8
	0.9s		54.62nm		4.9mb
BRS	20.30	210	iPc	34 30.10	-0.7
RMQ	21.87	220	eP	34 48.00	1.3
CMS	27.25	216	iPc	35 38.60	0.8
BWA	28.20	208	eP	35 46 70	0.3
ASPA	31.84	241	iPc	36 17.80	-1.0
	1.0s		15.00nm		4.8mb
	Z 21s		0.19um		3.7Msz
			LR	46 42.80	
BCAO	145.42	263	iPKPc	49 37.70	6.6X
	0.6s		7.00nm		

S.D. = 1.1 on 9 of 10 obs.

SEP 29, 1989 09h 32m 17.68± 0.69s
36.988 N ± 7.2km 21.161 E ± 4.9km
DEPTH = 60.2 ± 9.0 km
3.9mb (2 obs.)
SOUTHERN GREECE (368)

ITM	0.64	72	ePn	32 30.00	-1.4
VLS	1.27	339	ePn	32 40.30	0.8
ATH	2.26	63	ePn	32 53.00	-0.3
NEO	2.83	34	ePn	33 02.00	0.6
VAM	2.92	122	ePn	33 03.80	1.1
KEK	2.92	339	ePn	33 03.80	1.1
SRN	3.03	343	iPnd	33 02.50	-1.6
LSK	3.19	352	iPnd	33 07.60	1.1
LIT	3.28	18	ePn	33 09.00	1.3
KZN	3.35	8	ePn	33 10.00	1.2
APE	3.50	87	ePn	33 09.80	-1.0
PLG	3.82	27	ePn	33 14.70	-0.7
NPS	3.99	114	ePb	33 27.00	9.2X
KNT	4.38	17	ePn	33 19.10	-4.1X
TIR	4.47	347	ePn	33 25.10	0.7
TDS	4.64	307	P	33 27.80	1.0
			eSn	34 09.30	
SKO	4.98	2	ePn	33 31.00	-0.7
MEU	4.99	273	P	33 31.80	0.0
SDA	5.18	346	ePn	33 34.40	0.0
MGR	5.40	307	P	33 37.60	0.0
			eSn	34 27.70	
SGO	5.80	310	P	33 42.70	-0.3
KSL	6.83	95	ePn	33 57.90	0.4
HVAR	7.16	331	iPn	34 00.40	-1.6
			iSn	35 15.10	
MLR	9.23	21	eP	34 35.50	4.9X
VBY	9.60	334	ePn	34 35.00	-0.6
			eSn	36 17.20	
VOY	10.55	331	eP	34 47.40	-1.2
			eS	36 40.00	
NUR	23.65	4	eP	37 24.00	0.1
HFS	23.65	351	eP	37 23.60	-0.4
	0.6s		3.20nm		4.0mb
NB2	24.88	348	P	37 36.20	0.3
	0.9s		3.90nm		3.9mb
SUF	25.94	5	eP	37 46.00	0.3

S.D. = 1.0 on 27 of 30 obs.

? SEP 29, 1989 10h 30m 12.21± 1.45s
42.715 N ±10.0km 19.115 E ±12.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
MD 2.1 (TTG).

NKY	0.13	319	ePg	30 15.60	0.1
			eSg	30 19.00	
TTG	0.30	159	iPgc	30 18.50	-0.1
			iSg	30 23.50	
BRY	0.46	294	ePg	30 21.40	-0.2
			eSg	30 31.00	
HCY	0.53	240	ePg	30 23.00	0.1
			eSg	30 34.00	

S.D. = 0.3 on 4 of 4 obs.

% SEP 29, 1989 11h 24m 43.90± 0.55s
44.610 N ± 4.8km 7.244 E ± 5.5km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

PZZ	0.15	224	P	24 47.85	0.4
			S	24 50.76	
STV	0.37	171	P	24 51.54	0.0
			S	24 57.39	
ENR	0.40	162	P	24 51.72	-0.5
			S	24 57.65	
RRL	0.45	314	P	24 52.88	-0.3
			S	24 58.41	
ROB	0.55	125	P	24 55.17	0.2
			S	25 03.13	
FIN	0.80	120	P	24 59.54	0.1
LSD	0.85	356	P	25 00.57	0.1
			S	25 10.15	
PCP	0.93	94	P	25 01.70	0.0

S.D. = 0.3 on 8 of 8 obs.

SEP 29, 1989 11h 37m 41.45± 0.52s
51.644 N ±10.3km 173.411 W ± 6.1km
DEPTH = 33.0km (normol)
4.5mb (4 obs.)
ANDREANOF ISLANDS, ALEUTIAN IS. (7)

ADK	2.05	278	iPc	38 14.70	0.5
KDC	13.52	55	eP	41 02.00	8.9X
TTA	14.64	33	eP	41 13.00	5.1X
IMA	17.57	27	eP	41 46.00	0.9
FBA	18.72	35	eP	41 58.60	-0.6
INK	25.34	34	ePd	43 06.20	-0.1
LON	33.49	78	eP	44 20.00	0.5
PNT	33.67	72	eP	44 21.00	0.0
	0.7s		8.00nm		4.7mb
WDC	36.26	87	eP	44 44.10	0.9
ORV	37.51	88	eP	44 53.70	0.0
SES	38.20	66	iPd	44 59.90	0.5
LRM	39.59	74	eP	45 11.80	0.4
LLA	39.66	91	eP	45 12.20	0.5
KVN	39.93	86	eP	45 14.40	0.3
FRI	40.19	90	eP	45 16.30	0.2
TNP	41.06	87	eP	45 23.50	0.0
	0.7s		3.33nm		4.2mb
BW06	42.99	76	eP	45 38.50	-0.8
MSU	43.93	82	eP	45 47.00	0.1
PLM	44.32	92	eP	45 49.90	-0.2
RSSD	45.52	71	eP	45 59.20	-0.4
GLA	45.79	90	eP	46 01.00	-0.6
GOL	47.36	77	eP	46 14.00	-0.2
	0.8s		12.50nm		5.0mb
GLD	47.42	76	eP	46 14.00	-0.6
HFS	68.43	356	eP	48 39.60	-1.9
	0.7s		1.80nm		4.3mb
KHC	79.43	355	eP	49 46.80	1.3
OHR	86.80	349	eP	50 24.00	0.6
BUL	144.14	323	iPKPd	57 14.30	-1.2
	1.0s		7.00nm		
			ipP	57 27.10	

S.D. = 0.7 on 25 of 27 obs.

? SEP 29, 1989 12h 08m 04.79± 4.03s
72.528 N ±42.7km 2.548 W ±24.4km
DEPTH = 10.0km (geophysicist)
4.4mb (13 obs.)
JAN MAYEN ISLAND REGION (639)

KEV	9.89	92	eP	10 29.00	-0.8
SOD	11.16	103	iP	10 49.20	2.0
SUF	14.50	118	iP	11 32.00	0.4
	0.5s		3.30nm		4.2mb
NUR	15.98	125	eP	11 50.00	-0.8
	Z 21s		0.40um		
			LR	17 20.00	
EKA	17.27	181	P	12 08.00	0.9
	1.0s		14.70nm		4.1mb
CLL	22.37	154	iP	13 03.80	-0.2
	1.4s		26.00nm		4.5mb
MOX	22.84	156	eP	13 06.00	-2.7
			e	13 11.00	
KSP	23.30	149	eP	13 10.80	-2.3
GRF	23.73	157	eP	13 18.10	0.7
			e	13 20.10	
PRU	23.87	152	eP	13 20.50	1.8
			e	13 44.50	
KHC	24.58	154	eP	13 29.30	3.7X
LOR	25.51	170	eP	13 35.20	0.7
	0.8s		8.50nm		4.5mb
SSF	25.70	170	eP	13 37.10	0.9
	0.7s		3.70nm		4.2mb
LBF	25.80	170	eP	13 37.40	0.2
	0.8s		12.00nm		4.6mb
AVF	25.96	171	eP	13 38.60	-0.1
	0.7s		3.30nm		4.1mb
SMF	26.13	170	eP	13 40.30	0.0
	0.9s		7.20nm		4.4mb
BGF	26.17	172	eP	13 41.30	0.7
	0.7s		8.80nm		4.6mb
TCF	26.42	173	eP	13 42.40	-0.5
	1.0s		14.80nm		4.6mb
LSF	26.43	174	eP	13 42.20	-0.8
MAF	26.50	172	eP	13 43.30	-0.3

0.8s 8.50nm 4.5mb
RJF 27.37 174 eP 13 51.90 0.3
0.8s 8.00nm 4.5mb
EPF 29.61 176 eP 14 11.90 0.0
0.9s 9.80nm 4.6mb
S.D. = 1.2 on 21 of 22 obs.

? SEP 29, 1989 12h 46m 25.77± 8.43s
9.107 S ±81.3km 124.578 E ±28.4km
DEPTH = 193.0 ± 30.5 km
4.6mb (1 obs.)
TIMOR (289)

MTN 7.43 121 iPd 48 12.80 0.3
eS 49 39.20
KNA 7.77 149 eP 48 17.40 0.3
eS 49 51.00
MBL 12.83 200 eP 49 22.00 -0.4
WB5 14.29 140 eP 49 40.00 -0.8
eS 52 23.00
NANU 15.95 212 eP 49 55.00 -6.2X
ASPA 17.00 149 iPc 50 13.80 -0.2
0.6s 16.00nm 4.6mb
eS 53 23.90
WARB 17.10 174 iPc 50 15.90 0.9
S.D. = 0.9 on 6 of 7 obs.

% SEP 29, 1989 12h 59m 46.37± 0.71s
44.649 N ± 5.3km 7.283 E ± 7.6km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

PZZ 0.19 222 P 59 50.73 0.0
S 59 53.19
STV 0.41 176 P 59 54.63 -0.1
S 00 00.06
ENR 0.43 167 P 59 55.24 0.0
S 00 00.78
RRL 0.45 308 P 59 55.65 0.1
S 00 00.98
ROB 0.55 130 P 59 57.60 0.1
S 00 04.88
LSD 0.81 354 P 00 02.21 -0.1
S 00 12.98
S.D. = 0.1 on 6 of 6 obs.

? SEP 29, 1989 13h 00m 09.14± 1.03s
37.898 N ± 8.4km 3.386 W ± 9.4km
DEPTH = 10.0km (geophysicist)
SPAIN (377)

EBAN 0.41 310 iP 00 17.10 -0.5
eS 00 23.40
AFC 0.65 191 eP 00 22.00 -0.3
eS 00 36.00
EVIA 1.01 43 eP 00 28.50 0.1
eS 00 44.00
EHOR 1.48 268 eP 00 36.40 0.7
eS 00 56.90
S.D. = 0.9 on 4 of 4 obs.

% SEP 29, 1989 13h 15m 54.62± 0.57s
60.634 N ± 4.7km 6.213 E ± 6.1km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 1.7 (BER).

ASK 0.53 254 eP 16 05.32 0.1
eS 16 13.11
HYA 0.53 359 eP 16 04.70 -0.7
eS 16 12.02
ODD1 0.75 164 eP 16 08.70 -0.7
eS 16 17.50
SUE 0.83 301 iP 16 10.37 -0.2
eS 16 21.66
BLS1 1.28 166 iP 16 18.24 -0.3
eS 16 34.95
KMY 1.51 199 eP 16 22.43 0.8
eS 16 42.13
MOL 2.05 18 eP 16 30.27 0.8
eS 16 56.48
NRA0 2.62 85 iPc 16 37.90 0.2
iPg 16 40.30
iSg 17 14.60
S.D. = 0.7 on 8 of 8 obs.

? SEP 29, 1989 13h 37m 49.39± 1.83s
41.152 N ±20.0km 28.960 E ± 8.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

ISK 0.11 139 ePg 37 52.50 0.2
eSg 37 58.10
CTT 0.40 270 iPg 37 57.60 0.0
HRT 0.63 121 ePg 38 01.90 -0.2
KCT 1.01 207 iPn 38 08.50 -0.1
S.D. = 0.3 on 4 of 4 obs.

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* SEP 29, 1989 14h 40m 51.94± 1.11s
19.218 N ± 9.8km 99.232 E ±14.4km
DEPTH = 33.0km (normal)
SOUTHEAST ASIA (299)

CHG 0.49 214 eP 41 02.60 0.2
BDT 1.97 186 ePn 41 22.80 -0.9
ePg 41 28.50
eSg 41 49.00
LOE 2.98 127 ePn 41 38.00 0.0
ePg 41 48.00
eSg 42 37.00
NST 3.63 166 ePn 41 50.00 2.8X
ePg 42 07.00
eSg 43 08.00
NNT 6.61 176 eP 42 30.00 0.7
KMI 6.72 28 Pgd 42 31.00 0.0
Sg 43 51.50
S.D. = 0.8 on 5 of 6 obs.

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* SEP 29, 1989 14h 41m 25.17± 0.61s
23.052 S ± 7.2km 65.666 W ±10.9km
DEPTH = 289.5 ± 10.6 km
4.5mb (4 obs.)
JUJUY PROVINCE, ARGENTINA (128)

ANT 4.41 261 iPc 42 34.80 -1.2
iS 43 27.60
CYA 5.37 181 ePc 42 49.00 1.7
CCH 5.66 355 P 42 49.50 -1.5
CNCB 6.58 340 P 43 03.00 0.5
S 44 18.00
LPB 6.88 340 P 43 08.00 2.0
1.0s 50.00nm 4.4mb
S 44 26.40
ZOBO 7.13 341 P 43 08.70 -0.6
1.1s 38.57nm 4.3mb
S 44 28.00
TCA 8.31 174 iPc 43 23.30 0.0
(S) 44 55.80
MRA 9.32 180 eP 43 34.20 -1.6
PPD 13.30 88 eP 44 25.80 0.8
e 44 30.30
VAO 17.21 93 eP 45 08.80 -0.6
BAO 18.23 69 eP 45 19.80 -0.1
KIC 66.29 72 Pc 51 44.00 -1.2
0.4s 5.00nm 4.6mb
SPA 67.09 180 e(P) 51 51.00 1.4
0.5s 6.02nm 4.6mb
YMT3 76.36 320 iP 52 25.50 -18.8X
KVN 78.87 321 iP 52 59.00 0.9
WB5 133.06 206 ePKP 00 07.70 -0.8
S.D. = 1.3 on 15 of 16 obs.

% SEP 29, 1989 14h 43m 38.26± 2.26s
42.281 N ±18.5km 18.688 E ±10.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

BDV 0.10 88 ePg 43 41.00 0.0
eSg 43 43.50
HCY 0.22 320 ePg 43 43.00 0.0
eSg 43 46.40
TTG 0.45 70 ePg 43 47.50 0.1
eSg 43 54.20
NKY 0.58 23 ePg 43 50.00 -0.1
eSg 43 58.00
BRY 0.63 350 ePg 43 51.00 0.0
eSg 44 00.00
S.D. = 0.1 on 5 of 5 obs.

SEP 29, 1989 15h 14m 59.98± 0.53s
44.043 N ± 4.9km 7.583 E ± 4.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.1 (GEN).

SAOF 0.06 200 Pg 15 01.73 -0.6
Sg 15 03.79
AUTN 0.12 247 Pg 15 03.01 -0.2
Sg 15 05.35
ENR 0.22 327 P 15 04.75 0.0
S 15 07.75
TOUF 0.24 263 Pg 15 06.09 0.8
Sg 15 10.75
IMI 0.26 121 P 15 05.57 0.1
S 15 08.99
STV 0.27 317 P 15 06.08 0.3
S 15 09.80
ROB 0.33 39 P 15 06.80 0.0
S 15 11.30
PZZ 0.58 323 P 15 11.00 -0.8
S 15 18.77
PCP 0.85 54 P 15 16.59 0.1
S 15 26.86
S.D. = 0.5 on 9 of 9 obs.

% SEP 29, 1989 17h 01m 29.19± 0.84s
40.500 N ± 7.8km 27.350 E ± 6.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

MFT 0.29 350 iPg 01 35.30 0.0
iSg 01 37.30
EDC 0.42 111 ePg 01 37.60 -0.2
eSg 01 43.10
BNT 0.46 108 iPg 01 38.50 0.0
iSg 01 43.50
KCT 0.81 108 iPg 01 45.10 0.2
EZN 1.03 230 ePg 01 48.70 0.0
S.D. = 0.2 on 5 of 5 obs.

SEP 29, 1989 17h 33m 05.86± 0.53s
38.860 N ± 4.7km 27.513 E ± 6.6km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.3 (ATH).

IZM 0.50 203 iPg 33 14.90 -1.1
PRK 1.04 292 ePg 33 27.00 1.5
eSg 33 42.10
SMG 1.27 205 ePb 33 30.00 0.6
eSg 33 48.90
EZN 1.33 317 iPn 33 29.70 -0.7
EDC 1.51 10 iPn 33 32.60 -0.3
BNT 1.53 12 iPn 33 33.00 -0.2
KCT 1.53 25 iPn 33 33.60 0.3
KHL 1.66 108 ePn 33 36.70 1.4
YER 1.83 160 ePn 33 37.00 -0.6
MFT 1.93 355 iPn 33 38.50 -0.7
YLV 2.23 39 iPn 33 42.10 -1.3
APE 2.38 222 ePb 33 51.50 6.0X
CTT 2.39 17 ePn 33 45.60 -0.1
GBZT 2.43 37 ePn 33 55.50 9.2X
ISK 2.50 28 ePn 33 49.00 1.8
HRT 2.57 40 ePn 33 47.60 -0.6
PLG 3.49 297 ePg 34 13.50 12.2X
BBTK 4.18 75 eP 34 29.00 17.7X
iS 35 23.00
S.D. = 1.1 on 14 of 18 obs.

? SEP 29, 1989 18h 11m 36.94± 3.22s
43.087 N ±12.8km 6.212 E ±25.2km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

MVIF 1.06 40 Pg 11 56.62 -0.4
Sg 12 12.13
REVF 1.07 52 Pg 11 57.12 0.1
AURF 1.14 45 Pg 11 57.92 -0.4
Sg 12 15.27
TOUF 1.19 39 Pg 11 58.46 -0.9
Sg 12 16.36
AUTN 1.27 44 Pg 12 00.54 -0.1
Sg 12 19.39
SAOF 1.33 47 Pg 12 01.75 0.3
STV 1.41 35 P 12 01.92 -0.8
S 12 20.99
ENR 1.44 37 P 12 02.54 -0.6
S 12 21.92

29d 18h

IMI 1.47 55 P 12 04.38 0.8
S 12 23.76
PZZ 1.56 24 P 12 05.30 0.5
S 12 25.15
ROB 1.70 44 P 12 07.61 0.7
FIN 1.83 52 P 12 10.23 1.5
CVF 2.02 104 Pn 12 10.87 -0.6
S.D. = 0.8 on 13 of 13 obs.

? SEP 29, 1989 18h 15m 31.02± 2.35s
30.888 N ±15.4km 141.978 E ±36.1km
DEPTH = 33.0km (normal)
4.3mb (1 obs.)
SOUTH OF HONSHU, JAPAN (211)

KAKJ 5.51 345 P 16 52.70 -0.2
eS 17 54.70
IIDJ 5.71 324 eP 16 59.00 3.3X
eS 18 07.40
CHJJ 5.72 335 P 16 56.10 0.3
eS 17 59.50
MAT 6.45 332 iPc 17 06.20 0.0
0.7s 37.67nm 5.3mb X
eS 18 20.00
MTMJ 6.66 330 P 17 10.20 1.0
NIIJ 6.80 340 P 17 10.20 -0.8
BJI 22.85 301 eP 20 31.50 -0.8
e 20 43.00
WB5 51.00 189 eP 24 28.90 -3.0X
MAIO 66.92 299 eP 26 23.00 0.5
SOD 70.82 338 eP 26 51.00 5.1X
SUF 73.69 334 eP 27 03.00 0.0
0.6s 2.20nm 4.3mb
NUR 75.60 333 eP 27 26.00 12.0X
NB2 80.04 338 P 27 50.60 12.1X
0.9s 4.10nm
ZOBO 148.93 69 PKP 35 18.00 3.8X
LPB 149.10 69 (PKP) 35 21.00 6.7X
CNCB 149.34 70 ePKP 35 21.00 6.2X
S.D. = 0.7 on 8 of 16 obs.

% SEP 29, 1989 19h 21m 03.02± 0.61s
42.500 N ± 4.6km 13.248 E ± 6.3km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.6 (SSO).

AQU 0.19 142 P 21 07.30 0.1
eSg 21 10.00
ALP 0.37 41 iPgc 21 09.86 -0.8
iSg 21 15.57
MNS 0.44 255 Pc 21 12.00 0.1
eSg 21 18.50
CIO 0.70 354 iPg 21 16.41 -0.5
iSg 21 27.84
ASS 0.72 323 P 21 16.90 -0.2
eSg 21 27.30
SSO 0.80 9 ePg 21 18.55 0.0
eSg 21 32.26
SDI 0.90 152 P 21 20.20 -0.1
eSg 21 33.30
ARV 1.02 347 P 21 22.10 -0.3
eSg 21 37.00
AOI 1.08 14 e(Pg) 21 25.08 1.7
e(Sg) 21 41.34
S.D. = 0.8 on 9 of 9 obs.

SEP 29, 1989 19h 24m 44.05± 0.17s
15.860 S ± 3.6km 98.038 E ± 4.0km
DEPTH = 10.0km (geophysicist)
5.4mb (18 obs.) 4.8Msz (10 obs.)
SOUTH INDIAN OCEAN (425)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 21C
Centroid Location:
Origin Time 19:24:52.5 0.8
Lat 15.48S 0.08 Lon 97.69E 0.07
Dep 15.0 FIX Half-duration 1.8
Moment Tensor; Scale 10**16 Nm
Mrr= 1.89 0.39 Mtt= 5.61 0.33
Mff=-7.51 0.56 Mrt= 4.24 1.22
Mrf= 8.84 1.01 Mtf=-1.58 0.43
Principal Axes:
T Val= 9.56 Plg=45 Azm=334
N 3.93 28 212
P -13.49 32 103

Best Double Couple:Mo=1.2*10**17
NP1:Strike=139 Dip=29 Slip= 15
NP2: 36 83 118

NANU 17.80 115 eP 28 50.10 -3.5X
PSI 18.46 3 e(P) 29 00.00 -1.7
e 32 00.00
KGM 18.51 17 ePc 29 02.90 0.5
KLM 19.18 11 eP 29 11.00 0.5
IPM 20.52 9 ePc 29 26.20 0.9
0.9s 185.90nm 5.4mb
MRWA 21.22 132 iPc 29 32.30 -0.1
eS 33 11.00
MBL 21.32 108 iPd 29 33.40 -0.1
0.4s 75.00nm 5.4mb
i 29 40.00
eS 33 18.00
MEKA 21.86 123 eP 29 39.00 0.1
i 29 46.00
eS 32 25.00
BAL 22.53 134 eP 29 46.00 0.5
eS 33 40.00
SNG 23.03 7 eP 29 52.10 1.6
eS 34 10.00
MUN 23.04 137 iPc 29 50.90 0.4
eS 33 43.00
KLB 23.84 135 eP 29 58.00 -0.2
eS 34 12.00
NWAO 24.31 138 eP 30 02.00 -0.8
eS 34 22.00
RKG 24.91 140 eP 30 13.50 4.8X
eS 34 43.00
COOL 25.88 129 eP 30 20.00 2.2
eS 34 56.00
NNT 28.32 3 iPc 30 42.00 1.9
WARB 28.55 116 iPd 30 43.20 1.0
i 31 15.20
eS 36 09.00
KNA 29.56 94 eP 30 49.90 -1.4
e 31 33.00
FORR 31.25 124 iPc 31 06.00 -0.2
0.5s 36.00nm 5.5mb
e 31 52.00
MTN 32.18 89 iPd 31 13.80 -0.7
e 32 10.20
LOE 33.25 6 iPc 31 23.00 -0.8
CHG 34.47 2 iPc 31 34.00 -0.3
1.0s 22.50nm 5.0mb
ASPA 34.56 109 iPd 31 34.80 -0.4
0.8s 129.00nm 5.9mb
Z 23s 3.20um 5.0MszX
e 32 36.40
e 38 28.20
LR 44 01.60
WB5 34.76 102 iPd 31 36.10 -0.8
e 38 38.00
GBA 35.66 324 Pc 31 44.70 0.2
1.0s 32.80nm 5.2mb
QIZ 36.56 19 eP 31 53.00 0.9
N 17s 0.80um
S 37 38.00
HYB 38.24 329 ePc 32 08.00 1.8
1.0s 80.00nm 5.4mb
QIS 39.69 103 ePd 32 18.50 0.2
1.0s 57.00nm 5.2mb
e 33 35.00
KMI 40.99 7 Pc 32 31.00 1.8
E 14s 0.90um
pP 32 42.50 41kmX
PP 34 09.00
eS 38 24.00
sS 38 37.00
ADE 41.02 125 iPd 32 28.90 -0.3
1.0s 60.00nm 5.3mb
SHL 41.61 352 iP 32 35.20 1.0
POO 41.66 324 iPd 32 35.60 1.1
1.2s 106.25nm 5.4mb
GYA 42.89 11 P 32 45.00 0.4
E 19s 1.10um
S 39 11.00
QLP 44.16 112 iPd 32 55.80 0.9
LSA 45.78 352 Pd 33 09.00 0.8
N 10s 0.50um
E 11s 0.20um
S 39 52.00
CTA 45.94 103 iPd 33 09.50 0.3
1.0s 50.00nm 5.5mb

iS 40 00.00
CMS 46.09 119 ePd 33 10.50 0.3
CD2 46.82 7 P 33 15.40 -0.6
Z 20s 0.90um 4.7Msz
TOO 47.00 127 eP 33 17.80 0.4
0.9s 30.00nm 5.4mb
i 34 49.20
RMO 48.20 111 eP 33 27.00 0.1
NDI 48.65 335 iPc 33 30.50 0.3
0.9s 79.83nm 5.8mb
BWA 48.69 122 iPd 33 32.80 2.1
e 34 55.80
WHN 48.73 19 P 33 31.20 0.3
Z 20s 0.90um 4.8Msz
CAN 49.31 123 iPd 33 35.70 0.3
e 34 57.10
CNB 49.60 123 eP 33 37.30 -0.4
COD 51.17 117 eP 33 50.00 0.3
SSE 51.72 25 P 33 53.50 -0.1
1.0s 24.00nm 5.1mb
Z 18s 0.50um 4.6Msz
N 12s 0.30um
E 12s 0.30um
(S) 41 13.00
BRS 51.81 113 iPc 33 54.50 -0.1
i 34 00.00
i 34 07.50
i 37 25.00
e 51 00.00
LZH 51.95 6 iPc 33 55.50 -0.1
2.0s 0.16nm 2.6mb X
Z 20s 1.23um 4.9Msz
pP 34 03.00 25kmX
eS 41 15.00
ScS 43 39.00
QUE 54.71 327 eP 34 16.00 -0.1
TIA 54.84 19 Pc 34 15.50 -1.3
Z 25s 1.00um 4.8MszX
S 41 56.00
TIY 54.98 14 eP 34 17.00 -0.9
N 16s 0.70um
S 41 54.50
GTA 55.00 2 iPc 34 17.60 -0.5
Z 27s 0.70um 4.6MszX
E 15s 0.50um
MAW 56.47 195 eP 34 27.00 -1.2
BTO 57.26 11 P 34 32.50 -1.7
N 19s 1.60um
E 19s 0.80um
pP 34 39.50 23kmX
S 42 31.50
HHC 57.80 12 eP 34 38.20 0.2
E 17s 0.90um
eS 42 39.00
BJI 58.12 16 eP 34 40.00 -0.1
Z 18s 1.47um 5.1Msz
N 18s 0.84um
eS 42 40.00
e 44 26.00
KSH 58.76 340 P 34 45.00 0.3
Z 24s 1.40um 5.0MszX
E 14s 1.80um
eS 42 42.00
DL2 58.78 21 eP 34 44.00 -0.7
Z 20s 0.40um 4.5Msz
eS 42 47.00
WMQ 60.14 351 iPc 34 53.20 -0.9
Z 20s 0.70um 4.8Msz
eS 43 06.00
ScS 44 43.00
SNY 62.06 21 eP 35 02.70 -4.4X
Z 22s 0.80um 4.8Msz
N 23s 0.60um
eS 43 24.00
MAIO 63.38 326 iPc+ 35 15.70 -0.4
eS 44 08.00
CN2 64.45 22 Pc 35 22.00 -0.8
4.0s 0.30nm 2.8mb X
Z 18s 0.70um 4.9Msz
N 18s 1.20um
eS 44 01.00
MAT 64.45 35 iPd 35 22.40 -0.6
1.5s 38.89nm 5.4mb
eS 44 00.00
MSZ 64.75 132 eP 35 24.00 -0.9
KRI 65.35 258 iPc 35 30.00 0.6
i 35 35.20

BUL	65.75	255	iPc	35 37.40	5.5X
	1.0s	10.00nm		5.0mb	
LSZ	66.98	260	iPc	35 40.00	0.2
			i	35 44.60	
MZZ	67.16	264	iPc	35 41.00	0.0
			i	35 45.60	
			i	36 08.50	
LWI	69.42	274	iPc	35 55.60	0.4
KMZ	69.58	261	iPc	35 56.50	0.5
BHD	70.76	314	eP	36 01.50	-1.2
SLY	71.36	317	ePd	36 05.00	-1.2
			eS	45 21.00	
TAB	72.31	319	ePc	36 11.00	-1.1
MSL	73.36	316	ePd	36 13.00	-5.1X
SPA	74.24	180	ePc	36 22.20	-0.8
	0.9s	41.36nm		5.5mb	
	Z 20s	1.35um		5.2Msz	
			i	36 29.20	
BHL	77.28	311	Pc	36 42.50	1.9
BCAO	81.14	277	iPc	37 02.00	0.1
	0.7s	27.00nm		5.4mb	
			id	37 07.20	
BBTK	82.15	315	iPc	37 07.00	0.3
ELL	82.75	311	eP	37 10.00	0.1
RZN	88.46	314	iP	37 37.00	-1.1
VRI	88.79	319	eP	37 39.50	0.1
SRS	89.02	313	eP	37 40.20	-0.4
MMB	89.10	314	iP	37 41.00	0.0
MLR	89.13	318	iPc	37 41.30	0.1
LIT	89.43	312	eP	37 42.40	-0.2
KNT	89.52	313	eP	37 42.80	-0.2
CMP	89.63	318	ePc	37 44.00	0.6
KKB	89.65	314	iP	37 43.00	-0.6
GRG	89.80	313	eP	37 44.30	0.0
VTS	89.84	315	iPc	37 45.00	0.4
SKO	90.84	313	e(P)	37 47.50	-1.5
	Z 22s	750.00um		8.1MszX	
	N 22s	611.00um			
	E 22s	751.00um			
			LR	16 13.00	
BZS	92.00	317	eP	37 54.50	0.2
ISA	141.96	52	ePKP	44 18.00	-0.5
SBB	142.81	53	ePKP	44 16.00	-4.0X
RSON	143.83	13	PKP	44 17.00	-4.1X
TPC	144.38	53	ePKP	44 21.00	-1.7
BAR	144.41	56	ePKP	44 22.00	-0.7
DAU	144.71	40	PKP	44 22.50	-0.9
CNCB	144.73	204	PKP	44 24.50	0.1
LPB	145.03	204	PKP	44 26.00	1.3
MSU	145.17	44	PKP	44 24.30	0.2
ZOBO	145.28	204	PKP	44 25.20	-0.1
	1.0s	45.00nm			
	Z 24s	0.08um		4.4MszX	
			LR	33 40.00	
GLA	145.73	54	ePKP	44 26.00	1.0
RSSD	146.18	29	PKP	44 26.00	0.4
GOL	148.67	36	PKP	44 33.00	3.2X
RSNY	150.72	349	PKP	44 36.50	4.1X
ALQ	150.97	45	ePKP	44 39.00	5.6X
	S.D. = 0.9	on	98 of 108 obs.		

? SEP 29, 1989 20h 44m 38.04± 9.87s
40.267 N ±61.9km 20.817 E ±66.4km
DEPTH = 10.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
ML 3.0 (SKO).

OHR	0.84	359	iPg	44 53.90	-0.4
			iSg	45 04.90	
LIT	1.29	97	ePn	45 02.00	0.0
SKO	1.77	15	iPn	45 09.50	0.6
			eSn	45 29.50	
KNT	1.82	60	ePn	45 09.40	-0.2
	S.D. = 0.8	on	4 of 4 obs.		

% SEP 29, 1989 21h 07m 18.18± 0.83s
43.400 N ± 5.4km 5.430 E ± 7.4km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.6 (STR).

GELF	0.02	187	Pg	07 19.81	-0.3
BERF	0.21	115	Pg	07 23.08	0.3
TREF	0.23	351	Pg	07 22.64	-0.4
PRAF	0.45	335	Pg	07 27.70	0.4
VILF	0.50	24	Pg	07 27.79	-0.5
TAVF	0.51	64	Pg	07 28.10	-0.3
GANF	0.69	30	Pg	07 32.62	0.7
	S.D. = 0.6	on	7 of 7 obs.		

? SEP 29, 1989 21h 23m 22.44± 2.78s
35.376 N ±27.7km 26.704 E ±17.8km
DEPTH = 10.0km (geophysicist)
CRETE (370)
MD 3.4 (ATH).

NPS	0.90	263	ePg	23 38.60	-1.1
APE	1.94	331	ePb	23 56.00	0.2
VAM	2.05	272	ePg	23 59.00	1.7
YER	2.17	36	eP	23 59.00	-0.2
VLI	3.33	295	ePn	24 15.00	-0.7
	S.D. = 1.5	on	5 of 5 obs.		

SEP 29, 1989 21h 31m 05.46± 0.25s
45.334 N ± 6.0km 28.023 W ± 2.8km
DEPTH = 10.0km (geophysicist)
4.8mb (28 obs.) 4.5Msz (5 obs.)
NORTH ATLANTIC RIDGE (403)

PTO	14.76	100	eP	34 32.00	-3.9X
DLE	16.06	53	eP	34 53.90	1.1
DMU	16.10	50	eP	34 57.00	3.8X
GUD	18.06	97	e(P)	35 19.00	0.9
EHOR	18.58	106	e(P)	35 23.80	-0.6
EKA	18.66	49	P	35 26.00	0.8
	0.9s	5.90nm		3.8mb X	
LPF	18.67	72	eP	35 25.60	0.2
	0.9s	29.40nm		4.5mb	
GRR	18.79	71	eP	35 26.80	0.0
	1.2s	41.60nm		4.5mb	
FLN	19.04	70	iPc	35 29.60	-0.2
	1.3s	53.40nm		4.6mb	
LDF	19.27	70	eP	35 31.90	-0.9
	0.8s	10.70nm		4.2mb	
MAL	19.73	108	iP+	35 38.00	0.0
NKM	19.80	112	iPd	35 39.00	0.3
AFC	20.03	105	eP	35 41.00	-0.4
EVIA	20.07	100	e(P)	35 41.60	-0.1
LFF	20.25	81	eP	35 41.90	-1.6
	1.2s	47.60nm		4.7mb	
EPF	20.43	86	eP	35 46.40	1.0
	1.5s	57.40nm		4.7mb	
LSF	20.58	77	eP	35 45.70	-1.2
	1.6s	130.50nm		5.0mb	
LPO	20.62	81	iPc	35 48.10	0.8
	1.2s	59.50nm		4.8mb	
ECHE	20.72	97	eP	35 47.70	-0.7
RJF	20.72	79	eP	35 49.20	0.8
	0.9s	19.60nm		4.5mb	
TCF	21.04	77	iPc	35 50.80	-0.9
ENIJ	21.09	104	eP	35 51.80	-0.4
CAF	21.18	80	eP	35 51.40	-1.7
	1.5s	47.00nm		4.6mb	
IFR	21.18	116	iPd	35 55.00	1.6
EBR	21.26	92	eP	35 53.00	-0.9
MAF	21.29	77	iPc	35 53.40	-0.8
	1.3s	98.90nm		5.0mb	
BGF	21.44	76	iPc	35 54.80	-0.9
GRC	21.50	74	P	35 55.49	-0.8
PYM	21.68	78	P	35 57.00	-1.2
TIO	21.68	124	iP	35 58.00	-0.3
			i	36 02.50	
AGO	21.71	77	P	35 57.66	-0.8
AVF	21.75	75	iPc	35 58.00	-0.8
SSF	21.82	74	iPc	35 59.20	-0.3
LBL	21.94	79	P	36 00.62	0.0
LOR	22.03	73	iPc	36 01.10	-0.6
	0.8s	62.90nm		5.1mb	
PLDF	22.06	77	P	36 01.49	-0.5
SMF	22.10	75	iPc	36 01.70	-0.7
	1.0s	62.00nm		5.0mb	
TAF	22.15	109	eP	36 05.00	2.1
LBF	22.15	74	iPc	36 02.20	-0.6
ENN	23.20	64	e(P)	36 16.00	3.0X
	1.0s	12.00nm		4.4mb	
HAU	23.62	71	eP	36 17.30	0.1
	1.0s	33.60nm		4.9mb	
WTS	23.78	61	e(P)	36 24.00	5.3X
BSF	23.94	71	P	36 20.16	-0.3
LOMF	24.03	73	P	36 21.22	0.0
ECH	24.14	70	P	36 22.26	0.0
MOF	24.16	71	P	36 23.09	0.5
CDF	24.20	70	P	36 22.81	-0.1
WLS	24.25	70	P	36 23.18	-0.1
LPG	24.30	77	eP	36 25.30	1.1
	1.2s	14.80nm		4.5mb	
GWF	24.37	69	P	36 24.30	-0.2
BBS	24.47	72	P	36 25.34	-0.1
DIX	24.64	75	ePd	36 28.30	0.9
FEL	24.75	71	P	36 27.78	-0.5
MMK	25.02	75	ePd	36 30.80	-0.2
ZLA	25.06	72	ePc	36 31.90	0.7
SLE	25.09	71	ePd	36 31.50	0.1
SBF	25.17	81	eP	36 33.10	0.8
	1.0s	28.00nm		4.9mb	
SAX	25.74	72	ePd	36 39.80	2.0
VDL	25.96	74	ePc	36 40.80	1.0
GRF	26.65	66	eP	36 46.60	0.7
	1.1s	24.00nm		4.8mb	
	Z 21s	1.70um		4.6Msz	
			e	36 51.10	
MOX	26.82	64	eP	36 48.00	0.6
	1.8s	46.00nm		4.9mb	
	Z 18s	1.30um		4.5Msz	
	N 18s	0.70um			
	E 18s	1.20um			
CLL	27.65	63	ePd	36 56.00	1.0
	2.0s	40.00nm		4.8mb	
	Z 17s	1.00um		4.5MszX	
WET	27.79	67	eP	36 55.80	-0.5
KHC	28.24	67	iPc	37 01.00	0.6
	Z 16s	1.00um		4.5MszX	
	N 14s	0.50um			
	E 16s	1.00um			
			e	37 05.10	
PRU	28.75	65	eP	37 02.00	-2.9X
	Z 16s	1.90um		4.8MszX	
	E 17s	1.80um			
			e	37 06.50	
			S	42 00.00	
KSP	29.76	63	eP	37 13.00	-1.0
ZST	30.71	68	e(P)	37 23.00	0.6
SRO	31.58	69	eP	37 34.00	3.9X
KRA	32.18	64	eP	37 30.10	-5.2X
	Z 18s	1.80um		4.8Msz	
			e	37 39.00	
SPC	32.54	66	eP	37 49.00	10.3X
			i	38 44.00	
NUR	34.15	45	eP	37 55.00	2.8
BZS	34.36	71	eP	37 53.50	-0.8
SUF	34.98	41	eP	37 58.50	-0.9
	0.8s	7.50nm		4.6mb	
SKO	35.50	77	e(P)	38 04.50	0.4
SOD	35.75	33	eP	38 05.00	-0.9
CMP	36.75	71	ePc	38 24.00	9.4X
MLR	37.28	70	eP	38 19.20	0.0
VRI	37.67	69	eP	38 22.00	-0.3
TIC	43.41	146	P	39 14.60	4.7X
KIC	43.78	145	P	39 13.40	0.5
LIC	43.79	146	P	39 13.70	0.7
	Z 20s	0.49um		4.4Msz	
FFC	46.33	310	eP	39 39.00	6.1X
	1.3s	44.00nm		5.3mb	
MBC	46.82	341	ePd	39 37.00	0.5
	1.0s	18.00nm		5.1mb	
TUL	50.91	284	e(P)	40 08.00	-0.6
	0.9s	9.60nm		4.7mb	
EDM	53.06	311	eP	40 24.50	-0.2
INK	53.99	334	eP	40 29.00	-2.2
GLD	55.11	294	eP	40 40.20	0.0
	0.8s	30.59nm		5.4mb	
GOL	55.24	294	eP	40 40.00	-1.2
	1.0s	15.50nm		5.0mb	
BCAO	57.45	121	iPd	40 55.00	-1.9
	0.9s	27.00nm		5.3mb	
			id	40 56.60	
			id	43 43.10	
ALQ	58.65	290	eP	41 07.00	1.7
PRN	62.75	297	eP	41 33.10	-0.1
KVN	63.64	300	eP	41 38.50	-0.6
TNP	63.69	298	eP	41 38.80	-0.7
	1.0s	8.75nm		4.9mb	
MAIO	63.74	64	eP	41 42.00	2.4
YMT3	63.99	297	eP	41 41.00	-0.3
GSC	65.16	296	eP	41 50.00	1.1
GLA	65.30	293	eP	41 50.00	0.2
WDC	65.35	303	eP	41 49.10	-0.8
TPC	65.43	294	eP	41 50.00	-0.6
CMB	65.67	300	eP	41 52.00	-0.1
FRI	65.92	299	eP	41 53.30	-0.2
ISA	65.99	297	eP	41 55.00	0.9

29d 21h

SBB	66.20	296	eP	41 55.00	-0.5	
BAR	66.74	293	eP	42 01.00	2.1	
MHC	66.88	300	eP	42 00.70	0.8	
LLA	66.92	299	eP	42 00.60	0.6	
ZOBO	71.29	221	P	42 26.20	-1.5	
	Z 22s		0.13um		4.2Msz	
			LR	06 52.00		
LPB	71.50	221	P	42 22.50	-6.3X	
CNCB	71.69	220	eP	42 25.00	-5.1X	
MZZ	76.00	122	iPc	42 55.00	0.3	
LSZ	78.87	125	iPd	43 11.00	0.4	
KRI	80.93	125	iPc	43 25.20	3.6X	
BUL	83.00	128	eP	43 35.40	3.1X	
WB5	150.73	36	ePKP	50 58.60	4.9X	
	S.D. = 0.9	on	98 of 114 obs.			

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* SEP 29, 1989 21h 33m 49.93± 1.26s
44.890 N ±35.8km 28.015 W ± 6.4km
DEPTH = 10.0km (geophysicist)
4.5mb (11 obs.)
NORTH ATLANTIC RIDGE (403)

LSF	20.68	76	eP	38 31.90	-0.5	
	1.4s		39.20nm		4.6mb	
TCF	21.14	75	eP	38 36.80	-0.4	
	1 0s		18.80nm		4.4mb	
MAF	21.40	76	eP	38 39.60	-0.1	
	1.3s		23.10nm		4.4mb	
BGF	21.55	75	eP	38 41.00	-0.2	
	0.7s		8.80nm		4.3mb	
AVF	21.87	74	eP	38 44.00	-0.4	
	1.0s		16.00nm		4.4mb	
SSF	21.94	73	eP	38 45.20	0.0	
	1.1s		22.90nm		4.5mb	
LOR	22.16	72	eP	38 47.10	-0.3	
	1.1s		22.90nm		4.5mb	
SMF	22.22	74	eP	38 47.90	0.0	
	1.0s		14.80nm		4.4mb	
LBF	22.27	73	eP	38 48.10	-0.4	
	1.2s		17.80nm		4.4mb	
HAU	23.76	70	eP	39 03.40	0.3	
BSF	24.08	71	eP	39 07.90	1.7	
CDF	24.35	69	eP	39 09.40	0.6	
MBC	47.24	341	eP	42 24.00	-0.3	
	1.0s		6.00nm		4.6mb	
KVN	63.86	300	eP	44 25.20	0.2	
TNP	63.91	299	eP	44 25.20	-0.2	
	1.0s		5.25nm		4.7mb	
YMT3	64.19	297	eP	44 27.20	0.1	
	S.D. = 0.6	on	16 of 16 obs.			

& SEP 29, 1989 22h 03m 39.35s
61.668 N 148.064 W
DEPTH = 6.6km
SOUTHERN ALASKA (2)
<AGS-P>.

PWE	0.46	265	iP	03 48.66	0.0	
NCA	0.67	60	iP	03 52.42	-0.4	
			S	04 02.11		
PMS	0.83	240	P	03 55.54	-0.3	
PWA	0.87	270	eP	03 55.37	-0.9	
			eS	04 07.05		
GLI	0.92	149	eP	03 56.08	-1.2	
			S	04 09.90		
VZW	0.95	129	eP	03 56.88	-0.9	
VLZ	0.99	122	eP	03 56.93	-1.5	
			S	04 11.53		
KLU	1.04	99	eP	03 58.06	-1.3	
			S	04 12.78		
FID	1.20	140	eP	04 00.78	-1.2	
CUT	1.28	306	eP	04 02.31	-1.0	
			S	04 19.26		
SUA	1.30	262	eP	04 02.44	-1.4	
HUR	1.51	332	eP	04 06.25	-0.6	
			S	04 25.39		
SLKM	1.57	223	eP	04 07.33	-0.4	
SKT	1.67	282	eP	04 08.32	-0.9	
SEW	1.71	204	eP	04 09.93	0.2	
PAX	1.78	42	iP	04 10.09	-0.8	
RND	1.78	349	eP	04 11.29	0.4	
NKA	1.80	240	eP	04 13.50	2.5	
CGLM	1.93	261	eP	04 13.26	0.3	
KTH	2.31	326	eP	04 18.28	-0.2	
RED	2.61	243	eP	04 22.97	0.2	
CNPM	2.66	217	eP	04 24.29	0.9	
TGL	2.69	108	eP	04 24.04	0.0	

23 obs. associated

SEP 29, 1989 22h 56m 51.38± 0.40s
44.014 N ± 3.8km 7.595 E ± 3.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.3 (GEN).

SAOF	0.04	226	Pg	56 52.56	-0.9	
AUTN	0.12	261	Pg	56 54.38	-0.2	
			Sg	56 56.57		
AURF	0.23	237	Pg	56 56.44	0.1	
			Sg	57 00.19		
IMI	0.24	116	P	56 56.31	-0.2	
			S	57 00.23		
ENR	0.25	330	P	56 56.84	0.2	
			S	57 00.84		
TOUF	0.25	270	Pg	56 57.12	0.3	
			Sg	57 01.64		
STV	0.30	320	P	56 57.76	0.1	
			S	57 02.07		
REVF	0.32	211	Pg	56 58.65	0.6	
			Sg	57 03.68		
MVIF	0.34	250	Pg	56 58.81	0.3	
			Sg	57 03.83		
ROB	0.34	35	P	56 58.88	0.4	
			S	57 03.92		
FIN	0.48	66	P	57 01.03	-0.2	
			S	57 07.82		
PZZ	0.61	324	P	57 02.95	-0.8	
			S	57 11.10		
PCP	0.86	52	P	57 08.32	0.3	
			S	57 18.28		
	S.D. = 0.5	on	13 of 13 obs.			

SEP 30, 1989 00h 16m 51.68± 0.44s
11.417 N ± 7.2km 85.554 W ± 6.0km
DEPTH = 197.7 ± 5.9 km
4.5mb (17 obs.)
NICARAGUA (75)
Felt (II) at Liberia and San Jose, Costa Rica.

SJS	2.08	135	iPd	17 31.00	-0.4	
			S	18 01.00		
LCR2	2.26	137	ePc	17 32.90	-0.4	
QCR	2.39	145	eP	17 34.00	-0.6	
			S	18 06.50		
LIO	2.85	119	iPd	17 40.10	0.3	
ACR	3.62	139	iPc	17 49.00	-0.1	
			S	18 32.00		
UPA	6.40	112	eP	18 26.50	1.6	
	0.6s		24.00nm		4.6mb	
IISM	13.66	305	iP	19 57.80	-0.9	
PRM	22.75	7	P	21 40.00	2.3	
JSC	23.09	9	P	21 43.50	2.5X	
UYO	24.06	342	iPd	21 49.30	-1.0	
RSCP	24.08	360	P	21 51.40	1.0	
GBTN	24.17	3	P	21 52.50	1.2	
TKL	24.19	4	P	21 52.70	1.3	
POW	25.15	349	P	21 59.70	-0.6	
TUL	26.09	341	eP	22 07.60	-1.3	
	0.9s		24.30nm		4.9mb	
LNO	26.09	341	eP	22 07.30	-1.5	
BLA	26.10	9	P	22 10.00	1.0	
	0.8s		45.30nm		5.2mb	
SIO	26.11	340	eP	22 08.30	-0.8	
FVM	26.81	351	P	22 14.20	-1.2	
ALQ	30.16	324	eP	22 44.00	-1.6	
	1.0s		7.25nm		4.4mb	
GOL	33.20	331	P	23 11.00	-1.0	
PTN	34.27	13	P	23 21.00	0.3	
RSNY	34.35	14	P	23 21.50	0.1	
GLA	34.41	313	eP	23 23.00	0.9	
TPC	35.83	314	eP	23 35.00	0.9	
MSU	35.94	323	P	23 35.30	0.1	
PLM	36.02	312	eP	23 36.00	0.1	
PEC	36.51	313	P	23 40.40	0.6	
RVR	36.71	313	eP	23 42.00	0.5	
MWC	37.32	313	eP	23 48.00	1.2	
SBB	37.39	314	eP	23 48.00	0.8	
ISA	38.34	314	eP	23 56.00	0.9	
TNP	38.80	319	P	23 59.50	0.4	
	0.8s		9.80nm		4.5mb	
FRI	39.87	315	eP	24 07.30	-0.3	
			ePcP	26 11.70		
KVN	39.92	319	P	24 08.00	-0.2	
PRI	40.12	314	eP	24 10.10	0.3	
			ePcP	26 12.30		
LLA	40.55	314	eP	24 13.00	-0.2	
			ePcP	26 13.50		
PRS	40.71	314	eP	24 14.70	0.2	
			ePcP	26 13.90		
CMB	40.87	316	eP	24 15.70	-0.2	
			ePcP	26 14.20		
ARN	41.31	315	P	24 20.00	0.5	
MHC	41.39	315	eP	24 21.00	0.8	
GCC	41.48	314	eP	24 21.20	0.4	
BKS	42.06	315	ePc	24 26.10	0.6	
	0.8s		25.00nm		4.8mb	
ORV	42.40	318	eP	24 28.80	0.5	
FFC	45.11	347	eP	24 49.00	-0.7	
	0.7s		8.00nm		4.3mb	
PPD	47.26	135	e(P)	25 07.00	0.0	
			e	25 46.30		
EDM	47.26	338	eP	25 04.50	-2.2	
INK	64.74	342	eP	27 10.00	-0.5	
MBC	67.30	352	ePc	27 26.50	-0.1	
	0.5s		3.00nm		4.3mb	
			pP	28 12.00	193kmX	
EKA	76.38	36	P	28 20.00	-0.5	
	0.8s		5.50nm		4.3mb	
LPF	77.95	43	eP	28 28.40	-0.9	
	0.8s		9.10nm		4.6mb	
GRR	78.05	43	eP	28 29.80	-0.1	
	0.8s		13.40nm		4.7mb	
FLN	78.28	42	eP	28 30.30	-0.8	
	0.9s		6.50nm		4.4mb	
LDF	78.53	42	eP	28 31.60	-0.9	
	0.9s		7.80nm		4.4mb	
TIC	79.47	85	Pc	28 38.54	0.3	
	0.9s		10.00nm		4.5mb	
LIC	79.54	86	Pc	28 38.94	0.4	
	0.8s		15.50nm		4.8mb	
KIC	79.79	86	Pc	28 40.30	0.4	
	0.9s		11.50nm		4.6mb	
NB2	83.36	29	P	28 57.80	0.2	
	0.9s		3.10nm		4.0mb	
KHC	87.36	40	P	29 15.80	-1.7	
ASPA	140.59	247	ePKP	36 00.90	0.9	
	0.8s		12.00nm			
WB5	140.73	253	ePKP	35 54.50	-5.8X	
WB5	140.73	253	iPKP	36 01.50	1.2	
FORR	143.35	233	ePKP	36 02.50	-2.0	
WARB	146.29	240	ePKP	36 13.20	3.5X	
GBA	149.96	35	PKPd	36 20.00	4.4X	
	0.9s		4.20nm			
	S.D. = 0.9	on	61 of 65 obs.			

& SEP 30, 1989 00h 28m 52.50s
37.495 N 121.643 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

MHC	0.15	180	iPd	28 55.60	-0.2	
			eS	28 57.80		
ARN	0.17	149	iPc	28 55.70	-0.4	
GCC	0.54	211	ePd	29 03.00	-0.4	
PCC	0.59	271	eP	29 03.60	-0.7	
BKS	0.60	309	iPc	29 04.20	-0.4	
BRK	0.62	308	eP	29 04.50	-0.4	
SAO	0.75	168	iPc	29 06.90	-0.5	
CMB	1.13	61	eP	29 12.70	-1.4	
			eS	29 28.60		
KVN	3.19	60	eP	29 45.50	1.1	
	9 obs. associated					

? SEP 30, 1989 00h 29m 57.71± 0.60s
23.931 S ±10.5km 178.426 E ±46.6km
DEPTH = 561.7 ± 14.3 km
5.0mb (2 obs.)
SOUTH OF FIJI ISLANDS (171)

VUN	5.89	0	ePd	31 35.90	-0.7	
MBU	6.93	2	iPc	31 47.00	0.8	
HBZ	13.63	180	eP	32 52.60	-0.2	
KRP	14.17	189	P	33 03.90	5.7X	
PGZ	16.74	186	eP	33 24.30	1.0	
	0.3s		19.00nm		5.1mb	
MNG	16.82	188	eP	33 22.40	-1.7	
	0.2s		8.00nm		4.9mb	
MTW	17.35	187	eP	33 28.90	-0.4	
CAW	17.36	189	eP	33 30.60	1.3	

WDW	17.53	189	eP	33	31.30	0.4
TCW	17.58	190	eP	33	31.10	-0.3
MHC	83.01	44	eP	41	25.70	0.2
FRI	84.04	45	eP	41	30.00	-0.4
CMB	84.22	44	eP	41	30.90	-0.5
WDC	84.42	41	eP	41	32.70	0.5
ORV	84.43	42	eP	41	32.40	0.1
KER	136.59	295	ePKP	47	49.00	-29.2X
HFS	142.28	348	ePKP	48	27.30	-0.1
	0.4s		5.80nm			
KSP	149.78	337	iPKPc	48	51.00	11.1X
CLL	150.44	341	iPKPd	48	51.90	11.1X
	0.8s		10.00nm			

S.D. = 0.9 on 15 of 19 obs.

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* SEP 30, 1989 00h 32m 03.47± 0.88s
43.709 N ± 8.2km 19.367 E ±12.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (TTG).

PLE	0.38	177	iPgd	32	10.40	-0.9
			iSg	32	16.50	
NKY	0.94	197	ePg	32	20.00	-1.4
			eSg	32	34.30	
BRY	1.01	217	ePg	32	21.00	-1.6
			eSg	32	35.00	
TTG	1.28	184	ePg	32	27.60	0.4
			eSg	32	46.00	
BEO	1.36	35	iPn	32	29.50	1.1
			iSg	32	47.70	
HCY	1.41	207	ePg	32	30.00	0.8
			eSg	32	52.00	
BDV	1.48	196	ePg	32	31.00	0.9
			eSg	32	55.00	
SDA	1.69	177	ePn	32	35.00	1.8
PUK	1.71	167	ePn	32	28.80	-4.6X
ULC	1.75	183	ePn	32	38.00	4.0X
			eSn	33	03.00	
HVAR	2.19	257	i(Pn)	32	41.10	0.7
			iSg	33	11.60	
SKO	2.31	138	ePn	32	46.00	3.8X
TIR	2.39	171	ePn	32	50.00	6.7X
BZS	2.49	39	ePc	32	43.00	-1.7
OHR	2.80	157	ePn	33	04.00	14.8X
PTJ	3.27	313	eP	33	05.10	9.2X
DEV	3.33	48	iPd	32	50.00	-6.6X
MMB	3.85	122	eP	33	16.00	11.9X
RZN	4.43	115	eP	33	25.00	12.6X
MLR	5.02	67	eP	33	39.00	18.2X
VRI	5.66	65	eP	33	36.00	6.3X
KHC	6.74	326	eP	34	06.20	21.3X
			e	35	12.20	

S.D. = 1.4 on 10 of 22 obs.

SEP 30, 1989 00h 47m 20.75± 0.36s
40.047 N ± 3.9km 27.284 E ± 3.7km
DEPTH = 17.2 ± 4.8 km
TURKEY (366)

EDC	0.54	56	iPg	47	30.80	-0.5
			iSg	47	37.60	
BNT	0.58	57	iPg	47	31.10	-0.9
EZN	0.77	254	iPg	47	34.30	-1.0
PRK	1.12	225	eP	47	41.90	0.7
CTT	1.40	38	iPg	47	45.60	0.1
IZM	1.65	181	iPn	47	48.90	-0.2
ITU	1.69	51	ePn	47	51.00	1.4
			iSg	48	14.00	
ISK	1.69	52	iPn	47	48.60	-1.1
GBZT	1.81	65	ePn	47	51.00	-0.4
			eSg	48	19.70	
HRT	1.98	66	iPn	47	53.30	-0.6
KDZ	2.14	319	iPc	47	56.00	-0.2
SMG	2.36	189	eP	47	59.00	-0.3
DIM	2.40	327	eP	48	02.00	2.2
KHL	2.45	134	iPn	48	01.60	1.0
RZN	2.55	311	iP	48	02.00	-0.1
PLG	2.96	278	eP	48	06.70	-1.1
SRS	3.01	292	eP	48	08.30	-0.2
YER	3.01	165	ePn	48	08.60	0.0
MMB	3.11	301	ePd	48	09.00	-1.0
NEO	3.22	258	eP	48	10.00	-1.6
APE	3.28	205	eP	48	12.50	0.1
PVL	3.49	336	iPd	48	17.00	1.7
KNT	3.52	290	ePn	48	16.00	0.2
BCK	3.65	134	iPn	48	18.80	1.0
KKB	3.66	301	iP	48	20.00	2.1
BBTK	4.21	91	iPc	48	40.00	14.2X
			iS	49	39.00	
TLB	4.57	7	eP	48	30.00	-0.7
MLR	5.53	350	eP	48	47.00	2.6X
VRI	5.83	356	eP	48	47.60	-0.9
BZS	6.95	325	ePc	49	04.00	-0.2

S.D. = 1.0 on 28 of 30 obs.

? SEP 30, 1989 01h 00m 53.10± 3.12s
71.121 N ±24.5km 1.050 W ±22.7km
DEPTH = 10.0km (geophysicist)
4.5mb (4 obs.) 4.3Msz (1 obs.)
JAN MAYEN ISLAND REGION (639)

TRO	6.88	93	eP	02	36.20	-0.1
NSS	8.23	137	eP	02	55.04	-0.1
MOL	9.22	154	eP	03	07.32	-1.6
KEV	9.46	85	eP	03	12.00	-0.2
SOD	10.45	98	iP	03	24.40	-1.4
			i	03	34.80	
NRA0	11.59	148	eP	03	40.70	-0.6
			eS	06	07.30	
SUF	13.45	115	iP	04	07.50	1.3
	0.7s		6.40nm		4.7mb	
NUR	14.80	123	eP	04	26.00	2.1
EKA	15.88	184	P	04	39.00	1.1
	1.1s		17.50nm		4.1mb	
CLL	20.89	155	iP	05	36.80	-0.6
	1.4s		27.00nm		4.4mb	
			i	05	40.30	
			e	05	45.00	
MOX	21.35	157	eP	05	42.00	-0.2
	1.6s		46.00nm		4.6mb	
ABH	21.68	165	eP	05	44.18	-1.4
KSP	21.84	149	eP	05	47.40	0.3
PRU	22.40	153	P	05	54.00	1.4
KHC	23.10	155	P	06	07.00	7.4X
KRA	23.25	144	eP	05	52.60	-8.4X
Z	20s		1.10um		4.3Msz	
			e	05	57.10	
			e	06	05.00	

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

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* SEP 30, 1989 01h 30m 30.38± 1.18s
44.778 N ± 7.0km 111.105 W ±13.3km
DEPTH = 5.0km (geophysicist)
HEBGEN LAKE REGION (458)
ML 3.0 (BUT).

BGMT	0.80	305	iPc	30	46.20	-0.4
MEMT	0.83	7	ePd	30	46.50	-0.6
LCCM	1.19	333	iPc	30	53.30	0.1
SXM	1.37	357	ePnc	30	56.70	0.3
LRM	1.41	318	ePn	30	57.30	0.3
BUT	1.61	321	ePg	31	02.00	2.3X
			eSn	31	21.50	
			eSg	31	23.80	
HRY	2.00	346	ePn	31	05.60	0.3
PTI	2.12	206	eP	31	07.00	0.0

S.D. = 0.5 on 7 of 8 obs.

SEP 30, 1989 01h 46m 36.71± 0.66s
44.780 N ± 5.3km 111.127 W ± 9.5km
DEPTH = 5.0km (geophysicist)
HEBGEN LAKE REGION (458)
ML 3.4 (BUT).

BGMT	0.79	305	iPc	46	52.40	-0.3
MEMT	0.83	8	ePd	46	52.70	-0.7
LCCM	1.18	334	iPc	46	59.60	0.2
SXM	1.37	358	iPnc	47	02.80	0.2
LRM	1.40	319	iPnc	47	03.50	0.3
BUT	1.60	321	ePg	47	08.20	2.4X
			eSn	47	28.00	
			eSg	47	30.00	
HRY	1.99	346	ePn	47	11.90	0.4
PTI	2.11	206	eP	47	13.00	-0.3
BW06	2.30	150	eP	47	16.40	0.2

S.D. = 0.5 on 8 of 9 obs.

SEP 30, 1989 02h 18m 11.61± 0.70s
44.868 N ± 5.1km 111.124 W ± 8.4km
DEPTH = 5.0km (geophysicist)
HEBGEN LAKE REGION (458)
ML 3.5 (BUT).

MEMT	0.74	8	eP	18	26.20	-0.3
BGMT	0.75	300	eP	18	26.00	-0.5
LCCM	1.11	332	ePc	18	33.20	0.3
SXM	1.28	357	ePn	18	36.50	0.5
LRM	1.34	316	ePn	18	37.00	0.1
BUT	1.53	319	ePg	18	44.30	4.5X
			eSg	19	03.60	
HRY	1.91	345	eP	18	45.40	0.2
PTI	2.19	205	eP	18	50.20	0.8
BW06	2.38	151	eP	18	51.50	-0.6

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

& SEP 30, 1989 03h 26m 28.90s
57.421 N 143.003 W
DEPTH = 10.0km (geophysicist)
GULF OF ALASKA (15)
<AGS-P>.

MID	2.67	320	eP	27	05.89	-6.8
HON	2.98	45	iP	27	11.26	-5.7
			eS	27	44.89	
YAH	3.02	12	iP	27	12.61	-5.3
			eS	27	46.37	
PCA	3.04	27	iP	27	12.64	-5.3
			eS	27	47.29	
BCPM	3.09	33	iP	27	13.15	-5.4
			eS	27	45.97	
TGL	3.35	1	eP	27	16.24	-6.2
			eS	27	53.17	
MTU	3.54	319	eP	27	18.19	-6.8
BALM	3.64	5	eP	27	20.75	-5.9
			eS	27	58.38	
CTGM	3.66	13	eP	27	21.03	-5.8
			eS	28	02.20	
FID	3.79	333	eP	27	21.80	-6.8
GLB	4.05	355	eP	27	25.95	-6.4
GLI	4.06	330	eP	27	25.07	-7.3
			eS	28	05.60	
VZW	4.08	335	eP	27	25.48	-7.2
VLZ	4.09	337	eP	27	27.67	-5.1
SEW	4.30	311	eP	27	28.72	-7.1
			eS	28	12.73	
KLU	4.35	341	eP	27	29.52	-7.1
			eS	28	16.97	
HYT	4.44	37	P	27	32.30	-5.6
CNPM	4.81	299	eP	27	35.64	-7.4
SLKM	4.85	313	eP	27	36.11	-7.6
NNL	5.06	305	eP	27	39.88	-6.6
PME	5.22	327	iP	27	43.44	-5.3
PLRM	5.22	326	eP	27	55.26	6.5
RDT	5.80	307	eP	27	49.27	-7.7
OPT	5.80	297	eP	27	51.26	-5.8
AUL	5.83	294	eP	27	51.52	-5.8
ILIM	5.83	301	eP	27	49.51	-7.9
CDD	5.83	289	eP	27	50.98	-6.5
RED	5.88	305	eP	27	50.88	-7.4
SPU	5.97	313	eP	27	52.23	-7.3
CRP	6.06	313	eP	27	54.20	-6.7
CKL	6.10	312	eP	27	53.93	-7.3
NCG	6.14	314	iP	27	55.35	-6.6
BGL	6.15	313	eP	27	55.27	-6.8
CUT	6.19	327	iP	27	56.60	-5.9
SKT	6.28	320	iP	27	57.02	-6.9

35 obs. associated

SEP 30, 1989 03h 30m 04.23± 0.24s
58.134 N ± 3.1km 153.645 W ± 3.0km
DEPTH = 74.7km (4 depth phases)
4.7mb (14 obs.)
KODIAK ISLAND REGION (13)
Felt (III) at Karluk and Larsen Bay.

KDC	0.73	122	iPc	30	20.60	0.7
CDD	0.80	0	iP	30	22.16	1.3
SHU	0.84	53	iP	30	22.44	1.2
MCNL	1.11	341	iP	30	25.85	1.2
AUI	1.21	5	iP	30	27.36	1.5
			iS	30	43.65	
AUE	1.24	6	iP	30	27.95	1.7
			iS	30	45.35	
AUW	1.24	4	iP	30	27.92	1.6
			eS	30	43.67	
AUL	1.26	5	iP	30	28.02	1.5
OPT	1.54	8	iP	30	31.73	1.4
			eS	30	51.19	
XLV	1.66	36	eP	30	33.19	1.3

30d 03h

			eS	30	52.96		PAX	6.31	36	eP	31	35.34	-1.3		Origin Time		04:16:48.5	0.4					
CNPM	1.88	41	iP	30	35.80	0.9	BALM	6.43	58	eP	31	36.85	-1.6		Lat 6.19S	0.05	Lon 150.12E	0.06					
			eS	30	58.25		DDM	6.82	30	eP	31	44.02	0.4		Dep 15.0	FIX	Half-duration	2.3					
ILIM	1.98	10	iP	30	37.04	0.6	NEA	6.83	17	eP	31	42.35	-1.4		Moment Tensor;		Scale 10**17	Nm					
			eS	31	00.26		CTGM	6.87	60	iP	31	43.74	-0.7		Mrr= 1.19	0.09	Mtt=-1.60	0.10					
BRLK	2.17	40	eP	30	39.49	0.5	WRH	6.90	20	eP	31	42.91	-1.8		Mff= 0.41	0.11	Mrt= 3.16	0.34					
			iS	31	04.01		HDA	7.07	24	eP	31	46.29	-0.8		Mrf= 0.46	0.21	Mtf=-0.35	0.09					
NNL	2.27	31	iP	30	41.75	1.5	CCB	7.11	21	eP	31	45.61	-2.0		Principal Axes:								
			eS	31	07.29		PCA	7.17	68	eP	31	50.52	2.0		T Val= 3.27		Plg=57	Azm=353					
RED	2.34	11	eP	30	42.07	0.8	RDS	7.21	19	eP	31	48.30	-0.7		N 0.47		1	261					
			iS	31	10.76		FBA	7.34	20	eP	31	48.50	-2.3		P -3.74		33	171					
RDT	2.53	14	iP	30	44.40	0.5	YKU	7.36	73	e(P)	31	50.70	-0.3		Best Double Couple:Mo=3.5**17								
			eS	31	13.79		GLM	7.49	21	eP	31	51.28	-1.7		NP1:Strike=258		Dip=12	Slip= 87					
NKA	2.89	24	iP	30	51.48	2.6	IMA	7.96	360	eP	32	00.20	0.6		NP2: 82		78	91					
			eS	31	27.10		HYT	8.64	65	P	32	08.10	-0.8										
SEW	2.93	46	iP	30	48.80	-0.6	SIT	9.89	88	e(P)	32	22.80	-2.9X	LAT	2.84	260	eP	17	31.00	1.5			
SLKM	2.96	35	eP	30	49.64	-0.2	INK	13.56	33	eP	33	19.00	4.6X	KDB	4.20	219	iPc	17	49.00	0.3			
			eS	31	22.21		BMW	21.75	109	eP	34	52.50	1.8				eS	18	38.00				
CKL	3.14	12	iP	30	53.14	0.6	PNT	21.77	99	eP	34	54.00	3.2X	MNDI	6.12	270	eP	18	30.00	14.0X			
SVW	3.15	342	iPd	30	53.00	0.5	RMW	21.80	105	eP	34	52.50	1.2	SVO	10.34	107	eP	19	14.00	-0.1			
SPU	3.16	14	iP	30	53.17	0.4	MBC	21.88	21	eP	34	55.00	3.3X	CTA	14.26	194	iPc	20	07.00	0.6			
			eS	31	30.09			0.6s	9.00nm			4.4mb			1.0s	54.00nm			5.1mb				
BGL	3.20	11	eP	30	54.04	0.7	EDM	22.98	85	eP	35	05.00	2.3		Z 19s	1.74um			3.6MszX				
CRP	3.23	13	eP	30	54.63	0.8	KVN	29.77	114	eP	36	07.30	1.5				iS	22	48.00				
CGLM	3.29	14	eP	30	55.29	0.7	TNP	30.96	114	eP	36	17.90	1.6	OIS	17.39	214	iPd	20	45.30	-1.1			
NCG	3.37	12	eP	30	56.18	0.6	BW06	31.33	100	eP	36	20.20	0.7		0.8s	61.00nm			4.8mb				
MTU	3.61	56	eP	30	58.73	-0.2				epP	36	37.70	74km	MTN	19.58	249	eP	21	11.00	-1.4			
SUA	3.65	22	eP	31	00.53	1.0	MSU	33.12	108	eP	36	37.00	1.9				e	22	37.80				
			eS	31	41.24					epP	36	55.00	76km	RMQ	20.23	183	iPd	21	19.00	-0.2			
IVF	3.92	238	iPc	31	03.64	0.4	RSSD	33.31	93	eP	36	37.40	0.6		0.9s	359.00nm			5.7mb	X			
			eS	31	46.94			0.8s	50.08nm			5.4mb		GUMO	20.24	346	eP	21	19.00	-0.4			
SKT	4.00	14	eP	31	04.23	-0.2				epP	36	55.00	73km		1.7s	926.83nm			5.8mb	X			
MID	4.02	68	ePd	31	04.00	-0.6	GOL	35.74	100	eP	36	59.50	2.0	WB5	20.27	226	iPd	21	19.20	-0.5			
PMR	4.15	31	eP	31	05.70	-0.7		0.7s	3.03nm			4.3mb					eS	25	04.00				
PME	4.21	32	iP	31	06.72	-0.6	ALQ	38.78	106	eP	37	24.30	1.2	QLP	20.98	194	iPd	21	26.80	-0.1			
HIN	4.31	55	eP	31	07.86	-0.9		0.7s	1.71nm			4.1mb		BRS	21.29	173	iPc+	21	29.00	-1.1			
			eS	31	53.63					e	37	42.80	76km				i	21	37.00				
GLI	4.33	48	eP	31	07.24	-1.8	SOD	54.81	360	eP	39	27.00	-0.9				eS	25	28.00				
			iS	31	52.33		SUF	59.48	0	iP	40	00.10	-0.9				e(SS)	25	36.00				
BKJ	4.42	230	eP	31	09.37	-0.9		0.5s	3.30nm			4.7mb		DZM	22.54	136	iPc	21	43.00	0.4			
			eS	31	56.84		NB2	60.58	8	P	40	07.60	-1.0	KNA	22.73	244	eP	21	45.00	0.6			
FID	4.50	51	eP	31	07.55	-3.9X		0.6s	2.90nm			4.6mb		ASPA	23.17	220	eP	21	50.10	1.4			
			iS	31	55.99		HFS	61.65	7	eP	40	14.00	-1.8		0.5s	40.00nm			5.1mb				
SGB	4.55	238	ePc	31	12.21	0.1		0.4s	3.60nm			4.9mb			Z 22s	2.81um			4.7MszX				
			eS	32	01.70		NUR	61.69	1	iP	40	15.20	-0.8				eS	25	59.30				
CUT	4.60	20	eP	31	12.95	0.1	HAU	72.94	14	eP	41	26.80	0.0				LR	30	17.70				
			eS	31	59.71		LOR	73.33	16	eP	41	29.20	0.2				e	33	18.70				
VZW	4.65	48	iP	31	12.05	-1.4	SSF	73.48	16	eP	41	29.80	-0.1	COO	24.35	176	eP	22	00.50	0.4			
			iS	32	01.97			0.6s	1.80nm			4.2mb		CMS	25.46	188	eP	22	10.00	-0.5			
CNBA	4.68	227	eP	31	12.85	-1.0	AVF	73.72	16	eP	41	31.20	0.0	BWA	28.14	182	eP	22	34.40	-0.7			
SDN	4.70	236	eP	31	14.20	0.1		0.6s	3.60nm			4.5mb					e	22	39.80				
SASA	4.70	236	eP	31	13.77	-0.3	BGF	73.87	17	eP	41	32.30	0.2				e	25	48.80				
			eS	32	04.59			0.7s	4.40nm			4.5mb		CAN	29.02	181	eP	22	42.00	-1.0			
CVA	4.71	56	eP	31	13.30	-1.0	GUN	80.99	309	P	42	12.34	0.1				e	22	49.50				
			eS	32	01.11		KKN	81.34	310	Pc	42	14.06	0.2	WARB	29.75	225	eP	22	50.00	0.4			
NGI	4.71	232	eP	31	13.52	-0.9		0.5s	12.00nm			5.1mb		ADE	30.43	198	eP	23	00.20	4.6X			
			eS	32	04.44		GKN	81.41	310	Pc	42	14.24	0.1	TOO	31.50	187	eP	23	04.30	-0.6			
VLZ	4.78	48	eP	31	14.34	-0.9		0.6s	17.00nm			5.2mb		MBL	32.63	240	eP	23	14.10	-0.8			
			eS	32	04.76		PKI	81.48	310	P	42	14.56	-0.2	MEKA	36.07	232	eP	23	34.20	-10.2X			
SQF	4.80	236	eP	31	15.46	-0.2		0.7s	21.00nm			5.2mb		COOL	36.43	224	eP	23	47.00	-0.5			
SGAM	4.93	58	eP	31	16.48	-0.9	DMN	81.57	310	Pc	42	15.44	0.3	NANU	36.86	240	eP	23	51.70	0.6			
			eS	32	10.06			0.5s	19.00nm			5.3mb		KLB	39.21	226	eP	24	10.00	-0.7			
TTA	4.95	347	eP	31	18.20	0.4		S.D. = 1.1		on	106	of	111 obs.	NWAO	40.32	224	eP	24	20.00	0.1			
KAIM	5.10	65	eP	31	18.56	-1.1	----------							MUN	40.53	226	iPd	24	21.70	0.1			
			eS	32	12.00		• SEP 30, 1989 03h 45m 32.15± 0.89s							MAT	43.86	346	(P)	24	48.00	-0.7			
RAGM	5.13	60	iP	31	19.37	-0.8	62.770 N ±11.8km 124.832 W ±10.7km								1.8s	136.36nm			5.4mb				
			eS	32	13.92		DEPTH = 10.0km (geophysicist)								Z 19s	1.39um			4.9Msz				
KLU	5.15	46	iP	31	19.60	-1.0	NORTHWEST TERRITORIES, CANADA (679)										eS	30	47.00				
NCA	5.16	39	eP	31	19.75	-0.9								SSE	46.07	325	eP	25	10.00	3.6X			
PVV	5.27	242	eP	31	21.97	-0.1	HYT	6.32	258	P	47	08.70	1.0		Z 20s	1.60um			5.0Msz				
			eS	32	18.67		INK	6.62	331	eP	47	12.50	0.7		E 17s	1.20um							
PS4	5.31	242	eP	31	22.91	0.1	FBA	10.34	292	eP	48	01.50	-1.9				epP	25	20.00	33kmX			
DLG	5.42	240	eP	31	23.58	-0.7	EDM	11.33	142	eP	48	17.70	0.8				eS	32	14.00				
			eS	32	22.17		MBC	13.66	6	eP	48	48.50	0.5				SS	35	38.00				
TOA	5.46	40	ePc	31	24.90	0.0		0.5s	2.00nm			4.3mb		QIZ	46.67	303	eP	25	15.40	4.1X			
KTH	5.60	13	eP	31	27.00	0.2	FFC	14.27	114	eP	48	55.00	-1.1	WHN	49.86	319	eP	25	38.70	2.8			
DRRA	5.76	240	eP	31	27.90	-1.1		S.D. = 1.6		on	6	of	6 obs.		Z 20s	1.30um			4.9Msz				
			eS	32	29.91		----------							TIA	52.13	326	eP	25	52.60	-0.5			
RND	5.79	22	eP	31	28.86	-0.6	SEP 30, 1989 04h 16m 45.55± 1.31s							MDJ	53.73	342	eP	26	03.50	-1.3			
SNH	5.93	65	iP	31	30.78	-0.6	6.173 S ± 5.8km 149.815 E ± 7.3km								Z 28s	1.00um			4.7MszX				
GLB	5.97	52	eP	31	30.48	-1.5	DEPTH = 50.5 ± 11.5 km										S	33	29.00				
WAX	6.00	63	eP	31	30.48	-1.9	5.1mb (6 obs.) 4.9Msz (6 obs.)							CN2	54.40	338	Pc	26	07.00	-2.7			
MCK	6.07	20	eP	31	34.37	1.1	NEW BRITAIN REGION (192)								4.0s	0.30nm			2.7mb	X			
CYK	6.07	67	iP	31	32.89	-0.4	CENTROID, MOMENT TENSOR (HRV)								Z 20s	0.90um			4.8Msz				
TGL	6.11	60	eP	31	32.66	-1.3	Data Used: GDSN								N 20s	0.90um							
SNKA	6.27	238	eP	31	34.55	-1.4	L.P.B.: 13S, 28C								E 20s	0.90um							
			eS	32	40.94		Centroid Location:										epP	26	21.00	51kmX			

BJI	55.46	329	eP	26	31.00	13.6X	
	Z 28s		1.04um			4.8MszX	
			eS	34	17.00		
TIY	55.84	324	eP	26	19.20	-1.2	
	N 17s		1.00um				
			PcS	31	16.50		
CHG	55.94	298	eP	26	33.00	11.7X	
CD2	57.42	313	eP	26	31.00	-0.7	
HHC	58.48	327	eP	26	40.00	0.9	
	Z 22s		0.60um			4.7Msz	
LZH	60.19	318	eP	26	48.00	-3.0X	
	Z 30s		1.40um			4.9MszX	
			(S)	35	15.00		
DRV	60.77	184	eP	26	54.80	0.6	
MAW	83.17	203	eP	29	07.00	-0.3	
SPA	83.87	180	ePc	29	11.80	0.7	
	1.0s		24.00nm			5.2mb	
			e	29	21.90		
FBA	84.27	22	eP	29	21.00	8.1X	
	0.8s		2.07nm			4.2mb	
YMT3	96.67	54	eP	30	18.30	6.3X	
KHC	123.52	327	iPKP	35	38.40	-0.6	
			e	35	48.50		
CNCB	136.21	122	PKP	36	03.20	-1.7	
LPB	136.24	122	ePKP	36	06.00	1.3	
ZOBO	136.34	121	PKP	36	04.30	-0.8	
	1.0s		13.75nm				
IFR	144.21	323	ePKP	36	13.00	-5.3X	
			i	36	28.00		
PPD	145.15	144	iPKPc	36	18.80	-1.2	
			i	36	29.30		
			e	36	36.90		
			e	36	50.40		
VAO	146.68	151	ePKP	36	22.30	-0.3	
			e	36	34.00		
TIO	147.31	322	iPKP	36	26.00	2.5	
			i	36	36.00		
BMA	148.22	155	ePKP	36	26.50	1.5	
			e	36	38.70		
FDF	148.42	72	ePKP	36	28.39	2.9X	
BIM	148.54	72	ePKP	36	28.31	2.6X	
CRM	148.64	72	ePKP	36	27.99	2.2	
MVM	148.70	72	ePKP	36	27.70	1.8	
BAO	152.06	141	ePKP	36	32.00	0.9	
KIC	154.71	272	PKP	36	42.24	7.6X	
TIC	154.99	272	PKPd	36	43.40	8.4X	
LIC	154.99	271	PKP	36	42.80	7.8X	
	Z 20s		0.20um			4.9Msz	
PDCR	159.40	154	ePKP	36	50.00	9.6X	
			e	36	50.90		

S.D. = 1.2 on 48 of 65 obs.

& SEP 30, 1989 04h 33m 02.36s
59.931 N 153.169 W
DEPTH = 125.2km
SOUTHERN ALASKA (2)
<AGS-P>.

ILIM	0.18	35	iP	33	18.99	0.7
			iS	33	32.64	
OPT	0.28	186	iP	33	19.38	0.8
			iS	33	32.84	
RED	0.53	22	eP	33	20.79	-0.6
			eS	33	35.48	
AUL	0.57	194	iP	33	20.90	-0.6
			iS	33	35.32	
AUE	0.58	190	iP	33	20.67	-1.0
			eS	33	34.92	
AUW	0.58	195	eP	33	20.88	-0.8
			eS	33	34.08	
RDT	0.75	30	iP	33	22.39	-0.6
			eS	33	37.46	
XLV	0.88	122	eP	33	22.98	-1.0
			eS	33	39.33	
NNL	0.95	82	iP	33	25.01	0.4
			eS	33	44.51	
CDD	1.03	194	iP	33	24.10	-1.4
			eS	33	40.54	
CNPM	1.06	112	iP	33	24.91	-0.8
			eS	33	42.31	
NKA	1.26	49	eP	33	29.51	1.8
			eS	33	47.16	
CKL	1.33	18	iP	33	28.40	-0.3
			eS	33	48.84	
SPU	1.37	23	iP	33	28.54	-0.5
			iS	33	49.37	
SHU	1.37	162	eP	33	27.97	-1.0
			eS	33	47.62	
BGL	1.39	16	eP	33	29.24	-0.1
CRP	1.43	20	iP	33	29.68	-0.2
			eS	33	50.90	
CGLM	1.50	22	iP	33	30.18	-0.4
			eS	33	52.33	
NCG	1.56	18	eP	33	31.16	-0.1
			eS	33	54.27	
SLKM	1.58	67	eP	33	30.89	-0.6
SVW	1.69	315	eP	33	31.47	-1.3
SEW	1.88	83	eP	33	34.07	-0.9
			eS	33	57.61	
SUA	1.95	37	eP	33	35.51	-0.5
			eS	34	01.15	
SKT	2.21	21	eP	33	38.36	-0.8
KDC	2.22	171	eP	33	36.43	-2.8
			eS	34	04.67	
PME	2.65	48	eP	33	42.78	-2.0
			eS	34	14.64	
MTU	2.78	86	eP	33	45.85	-0.7
CUT	2.85	28	eP	33	46.45	-1.0
			eS	34	20.09	
GLI	3.16	70	eP	33	50.26	-1.3
			eS	34	25.12	
TTA	3.30	337	eP	33	51.95	-1.6
FID	3.43	73	eP	33	53.40	-1.7
			eS	34	29.19	
VZW	3.46	68	eP	33	54.56	-1.1
			eS	34	30.44	
VLZ	3.59	67	eP	33	55.96	-1.3
NCA	3.72	53	eP	33	57.19	-1.9
KTH	3.79	15	eP	33	58.82	-1.3
KLU	3.89	63	eP	33	59.17	-2.3
RND	4.05	29	eP	34	02.01	-1.6
PAX	4.79	47	eP	34	11.81	-1.8
GLB	4.84	68	eP	34	12.80	-1.5
WRH	5.14	25	iP	34	16.03	-2.2
DDM	5.19	39	eP	34	19.22	0.2
HDA	5.35	30	eP	34	19.00	-2.1
CCB	5.35	26	iP	34	18.71	-2.4
RDS	5.44	23	eP	34	20.05	-2.3
BALM	5.47	74	eP	34	21.58	-1.2
FBA	5.58	24	eP	34	22.20	-2.0
GLM	5.74	25	eP	34	24.01	-2.5

47 obs. associated

SEP 30, 1989 04h 41m 02.74± 0.18s
46.390 N ± 1.8km 7.336 E ± 1.9km
DEPTH = 15.4 ± 2.3 km
SWITZERLAND (544)
ML 4.2 (GRF), 4.3 (LDG).

DIX	0.31	170	ePd	41	07.40	-2.3
EMS	0.43	221	ePc	41	10.20	-1.4
MMK	0.55	128	ePd	41	11.50	-2.2
ORO	0.89	149	P	41	17.00	-2.4
LSD	0.94	188	P	41	18.61	-1.8
LPL	0.97	206	Pg	41	19.80	-1.1
			Sg	41	31.90	
LPG	0.98	205	Pg	41	20.00	-1.1
			Sg	41	32.00	
LOMF	1.02	340	Pg	41	23.25	1.6
			Sg	41	38.89	
BBS	1.08	6	Pg	41	24.09	1.5
			Sg	41	40.79	
TMA	1.10	104	ePc	41	22.00	-1.1
VAI	1.13	117	P	41	22.10	-1.2
			eSg	41	42.20	
ZLA	1.31	33	ePc	41	26.90	0.5
BNI	1.42	199	P	41	27.40	-0.6
			eSg	41	44.90	
MOF	1.47	355	Pn	41	29.43	0.8
VDL	1.48	85	ePc	41	28.90	0.0
BSF	1.49	346	Pn	41	29.95	1.0
RRL	1.52	195	P	41	29.24	-0.3
			S	41	47.14	
FEL	1.56	17	Pn	41	29.85	-0.1
SLE	1.59	29	ePd	41	30.10	-0.2
SAX	1.63	57	ePc	41	32.30	1.2
HAU	1.75	338	Pn	41	33.70	1.0
			Pg	41	36.20	
			Sg	42	00.80	
MDI	1.76	109	P	41	33.60	0.8
			eSg	41	56.50	
ECH	1.83	356	Pn	41	34.14	0.3
DOI	1.89	182	P	41	33.80	-0.9
			eSg	41	58.00	
PZZ	1.89	185	P	41	34.26	-0.6
			S	41	55.26	
OSS	1.96	80	ePc	41	37.60	1.7
CDF	2.02	359	Pn	41	36.83	0.1
WLS	2.02	0	Pn	41	36.87	0.2
PCP	2.03	155	P	41	37.45	0.6
			S	42	01.69	
VITF	2.05	334	Pn	41	38.01	1.1
ROB	2.13	170	P	41	38.17	0.0
			S	42	02.54	
STV	2.15	180	P	41	37.40	-1.1
			S	42	01.52	
ENR	2.16	178	P	41	37.86	-0.9
			S	42	02.22	
BOB	2.20	137	P	41	40.60	1.4
FIN	2.27	164	P	41	40.53	0.4
			S	42	05.41	
SAL	2.36	108	Pd	41	42.20	0.8
TOUF	2.38	182	Pn	41	42.69	0.8
LBF	2.39	286	Pn	41	42.80	0.9
			Pg	41	48.10	
			Sg	42	18.10	
AUTN	2.40	178	Pn	41	42.47	0.3
SAOF	2.41	176	Pn	41	41.97	-0.2
SMF	2.43	277	Pn	41	42.90	0.5
			Pg	41	48.90	
			Sg	42	19.80	
MVIF	2.50	183	Pn	41	44.05	0.5
AURF	2.50	180	Pn	41	44.08	0.5
IMI	2.51	171	P	41	44.13	0.5
			S	42	09.64	
SBF	2.53	178	Pn	41	44.00	0.1
			Sn	42	12.60	
LOR	2.54	291	Pn	41	44.90	0.8
			Pg	41	51.80	
			Sg	42	22.00	
OGA	2.59	78	ePn	41	46.80	1.9
GANF	2.60	203	Pn	41	45.10	0.2
			Pg	41	50.84	
			Sg	42	24.52	
GWF	2.60	4	Pn	41	44.41	-0.4
PLDF	2.61	262	Pn	41	45.09	-0.1
REVF	2.65	180	Pn	41	46.65	1.0
CALN	2.66	187	Pn	41	46.57	0.7
STU	2.70	27	ePnc	41	44.40	-1.8
	0.2s		100.00nm			
SSF	2.72	286	Pn	41	48.20	1.6
			Pg	41	54.80	
			Sg	42	28.20	
AVF	2.78	280	Pn	41	47.80	0.4
			Pg	41	55.20	
VILF	2.78	205	Pn	41	48.09	0.5
			Pg	41	54.24	
FRF	2.87	190	Pn	41	48.20	-0.5
TAVF	2.92	199	Pn	41	49.29	-0.1
			Pg	41	56.50	
AGO	2.94	265	Pn	41	49.45	-0.2
KTD	2.98	9	ePnd	41	49.13	-1.0
PRAF	3.01	211	Pn	41	50.53	-0.1
CTI	3.01	95	Pd	41	52.20	1.4
LRG	3.02	194	Pn	41	50.80	0.1
GRC	3.06	289	Pn	41	53.04	1.7
SCE	3.08	76	iPnc	41	53.50	1.7
PYM	3.08	260	Pn	41	52.55	0.8
LBL	3.09	249	Pn	41	50.87	-0.8
TREF	3.09	207	Pg	42	02.29	10.5X
BGF	3.11	275	Pn	41	52.30	0.3
			Pg	42	01.50	
			Sg	42	42.00	
LMR	3.11	191	Pn	41	51.40	-0.7
			Pg	41	59.90	
			Sn	42	27.60	
FUR	3.22	55	iPnc	41	53.20	-0.5
BDI	3.27	134	P	41	55.70	1.2
			eSn	42	32.80	
BERF	3.29	201	Pn	41	55.34	0.6
GELF	3.30	205	Pn	41	54.43	-0.4
MAF	3.31	269	Pn	41	54.90	-0.1
			Pg	42	05.30	
RUP	3.32	357	ePn	41	55.72	0.6
HYF	3.34	287	Pn	41	56.50	1.1
			Sg	42	50.70	
TOD	3.37	16	ePn	41	53.60	-2.1
PII	3.50	139	Pd	41	57.50	0.0
			eSn	42	37.80	
ABH	3.50	2	ePn	41	57.19	-0.4
TCF	3.55	270	Pn	41	58.20	-0.2

30d 04h

		Pg	42 09.60			
		Sg	42 55.00			
FVI	3.77	85 P	42 03.40	2.0		
GRC1	3.85	46 iPnc	42 00.40	-2.2		
		ePg	42 15.00			
		eSg	43 04.70			
TNS	3.91	11 iPn	42 02.20	-1.2		
		e	42 47.30			
		eSn	43 08.40			
CAF	3.98	250 Pn	42 04.00	-0.4		
		Sg	43 08.60			
CVF	3.98	163 Pn	42 02.60	-1.8		
PGD	3.99	127 P	42 04.60	-0.2		
		eSn	42 51.70			
BHG	4.02	69 iPnd	42 05.30	0.4		
LSF	4.03	270 Pn	42 04.80	-0.3		
		Pg	42 18.40			
		Sg	43 10.40			
SFI	4.04	126 P	42 07.10	1.9		
		eSn	42 51.00			
KBA	4.19	78 iPnd	42 08.40	0.8		
		i	42 08.90			
		i	42 21.40			
		eSn	42 56.50			
RJF	4.21	257 Pn	42 07.40	-0.3		
		Sg	43 14.60			
ENN	4.48	348 iPnc	42 12.10	0.6		
	0.5s	30.00nm				
		iPg	42 30.00			
		iSn	42 43.20			
TRI	4.53	96 i(Pn)	42 12.10	-0.1		
		i(Sg)	43 03.80			
VOY	4.57	92 ePnd	42 12.90	0.0		
		eSn	43 04.80			
SNF	4.60	335 iPnc	42 14.02	0.8		
		Sn	43 28.50			
WET	4.64	52 iPnc	42 11.90	-2.0		
LFF	4.85	255 Pn	42 15.80	-0.9		
		Sg	43 36.20			
ARV	4.92	124 Pd	42 16.50	-1.3		
CEY	4.98	95 eP	42 25.50	6.9X		
		e(Sn)	43 16.50			
LJU	5.01	91 e(Pn)	42 19.00	0.0		
		eSn	43 16.50			
KHC	5.02	55 iPn	42 17.50	-1.8		
		e	42 37.00			
RIY	5.03	99 i(Pn)	42 19.00	-0.3		
		iSn	43 17.50			
ASS	5.04	129 P	42 19.60	0.1		
		eSn	43 16.30			
MOX	5.12	32 ePn	42 17.50	-3.1X		
		ePg	42 39.00			
		iSg	43 47.00			
MFF	5.17	275 Pn	42 20.80	-0.5		
		Sn	43 18.00			
		Sg	43 46.20			
LDF	5.51	296 Pn	42 25.60	-0.6		
		Sg	43 55.00			
MNS	5.54	134 P	42 25.40	-1.2		
VBY	5.59	96 ePn	42 27.60	0.3		
		eSn	43 31.00			
WTS	5.62	357 ePn	42 28.50	0.9		
	0.5s	5.00nm		4.4mb		
		ePg	42 54.00			
		eSn	43 32.00			
FLN	5.80	297 Pn	42 29.40	-0.7		
		Sg	44 05.20			
GRR	5.91	293 Pn	42 31.30	-0.4		
LPF	5.94	289 Pn	42 31.80	-0.3		
EPF	6.01	239 Pn	42 31.50	-1.7		
		Pg	42 54.00			
		Sg	44 11.80			
PTJ	6.01	92 eP	42 32.80	-0.4		
PRU	6.01	51 Pn	42 30.90	-2.3		
		Pg	42 54.50			
		Sg	44 13.50			
CLL	6.18	35 e(Pn)	42 59.00	23.5X		
		iSg	44 19.50			
VKA	6.39	70 iPnc	42 36.40	-2.1		
		i	42 37.20			
		i	42 54.00			
		i	43 10.20			
		i	43 26.80			
		iSn	43 45.30			
		i	43 48.80			
		e	44 25.50			
		i	44 33.00			

ZST	6.88	71 i(Pn)	42 43.00	-2.4		
		e	43 10.00			
		i	44 44.00			
		i	44 52.50			
KSP	7.42	50 eP	43 15.50	22.5X		
		e	43 22.50			
		eS	44 58.20			
DLE	11.30	313 eP	43 44.00	-2.5		
		e	45 53.00			
DMU	11.82	315 eP	43 49.00	-4.5X		
		e	46 02.00			
	S.D. = 1.1	on 116 of 122 obs.				
SEP 30, 1989 04h 54m 10.12± 0.67s						
44.777 N ± 5.3km 111.104 W ± 9.6km						
DEPTH = 5.0km (geophysicist)						
HEBGEN LAKE REGION (458)						
ML 3.1 (BUT).						
BGMT	0.81	305 eP	54 25.70	-0.7		
MEMT	0.83	7 eP	54 26.40	-0.5		
LCCM	1.19	333 iPc	54 33.20	0.2		
SXM	1.37	357 ePn	54 36.30	0.2		
LRM	1.41	318 ePn	54 37.00	0.2		
HRY	2.00	346 ePnc	54 45.50	0.4		
PTI	2.11	206 e(P)	54 47.00	0.2		
BW06	2.29	150 eP	54 49.20	-0.2		
	S.D. = 0.5	on 8 of 8 obs.				
? SEP 30, 1989 05h 04m 02.06± 1.08s						
1.086 S ± 6.9km 78.380 W ±21.4km						
DEPTH = 10.0km (geophysicist)						
ECUADOR (107)						
TUNG	0.34	191 iP	04 09.10	-0.1		
		S	04 13.50			
RECU	0.48	337 iPd	04 11.70	-0.3		
		S	04 17.10			
CAYA	1.22	19 eP	04 24.70	-0.5		
		eS	04 42.20			
COTA	1.41	2 eP	04 29.10	0.8		
	S.D. = 1.0	on 4 of 4 obs.				
SEP 30, 1989 05h 26m 44.05± 0.36s						
46.305 N ± 3.1km 7.343 E ± 4.8km						
DEPTH = 10.0km (geophysicist)						
SWITZERLAND (544)						
ML 2.7 (LDG).						
DIX	0.23	168 ePc	26 48.60	-0.5		
EMS	0.37	231 ePc	26 51.30	-0.4		
MMK	0.50	120 ePd	26 52.80	-1 5		
ORO	0.81	147 P	26 58.50	-1.4		
		eSg	27 08.00			
LSD	0.86	189 P	27 00.35	-0.4		
		S	27 10.60			
LPL	0.90	209 Pg	27 00.90	-0.5		
		Sg	27 12.80			
LPG	0.91	207 Pg	27 01.30	-0.3		
		Sg	27 13.10			
TMA	1.08	100 ePd	27 03.50	-1.0		
LOMF	1.10	342 Pg	27 04.64	-0.2		
		Sg	27 20.08			
BBS	1.17	6 Pg	27 05.41	-0.4		
		Sg	27 21.61			
BNI	1.34	201 P	27 08.90	0.1		
		eSg	27 24.40			
ZLA	1.38	31 ePd	27 09.00	-0.4		
RRL	1.44	196 P	27 11.12	0.7		
		S	27 25.60			
VDL	1.48	82 ePc	27 10.30	-0.7		
MOF	1.55	355 Pn	27 12.58	0.7		
		Sg	27 32.37			
BSF	1.57	346 Pn	27 12.93	0.8		
		Sg	27 33.42			
FEL	1.64	16 Pn	27 11.12	-2.0		
		Sg	27 34.57			
SLE	1.66	28 ePc	27 14.50	1.2		
SAX	1.67	55 ePd	27 15.00	1.3		
PZZ	1.81	185 P	27 17.27	1.7		
		S	27 35.40			
HAU	1.83	339 Pg	27 17.60	1.8		
		Sg	27 41.60			
ECH	1.92	356 Pn	27 16.20	-0.9		
		Sg	27 43.38			
PCP	1.96	154 P	27 19.32	1.7		
OSS	1.97	78 ePc	27 19.70	1.7		

ROB	2.04	169 P	27 19.63	0.7		
CDF	2.11	359 Pg	27 23.00	3.1		
CDF	2.11	359 Pn	27 17.81	-2.1		
WLS	2.11	0 Pn	27 17.93	-1.9		
		Sg	27 49.42			
FIN	2.18	163 P	27 22.19	1.2		
LBF	2.42	288 Pg	27 29.20	4.9X		
		Sg	27 59.30			
IMI	2.43	171 P	27 24.06	-0.4		
SBF	2.44	178 Pn	27 24.30	-0.4		
SMF	2.44	279 Pg	27 30.10	5.5X		
		Sg	27 59.80			
LOR	2.58	293 Pg	27 32.80	6.2X		
		Sg	28 04.20			
AVF	2.80	281 Pn	27 29.10	-0.5		
BGF	3.12	276 Pn	27 33.40	-0.8		
	S.D. = 1.3	on 33 of 36 obs.				
SEP 30, 1989 06h 51m 59.98± 0.71s						
44.787 N ± 5.7km 111.114 W ±10.3km						
DEPTH = 5.0km (geophysicist)						
HEBGEN LAKE REGION (458)						
ML 3.1 (BUT).						
BGMT	0.79	305 eP	52 15.00	-1.1		
MEMT	0.82	7 iPd	52 15.90	-0.7		
LCCM	1.18	333 iPc	52 22.90	0.3		
SXM	1.36	357 ePnc	52 26.00	0.2		
LRM	1.40	318 ePn	52 27.00	0.6		
BUT	1.60	321 ePg	52 35.60	6.5X		
		eSn	52 51.30			
		eSg	52 53.20			
HRY	1.99	346 ePnc	52 35.40	0.6		
PTI	2.12	206 eP	52 37.00	0.3		
BW06	2.30	150 eP	52 39.20	-0.2		
	S.D. = 0.7	on 8 of 9 obs.				
? SEP 30, 1989 07h 09m 43.14±10.69s						
18.957 N ±72.8km 66.982 W ±34.0km						
DEPTH = 14.1 ± 10.6 km						
PUERTO RICO REGION (90)						
LRS	0.67	169 P	09 56.20	0.1		
		S	10 01.40			
MGP	0.95	186 P	10 00.80	0.0		
		S	10 09.80			
CSB	1.03	130 P	10 02.20	0.0		
SJG	1.15	137 iP	10 04.30	-0.1		
CPD	1.36	132 P	10 07.70	0.0		
	S.D. = 0.1	on 5 of 5 obs.				
SEP 30, 1989 07h 13m 07.16± 0.65s						
44.786 N ± 5.1km 111.106 W ± 9.3km						
DEPTH = 5.0km (geophysicist)						
HEBGEN LAKE REGION (458)						
ML 3.4 (BUT).						
BGMT	0.80	304 iPc	13 22.90	-0.4		
MEMT	0.82	7 ePc	13 23.30	-0.4		
LCCM	1.18	333 iPc	13 30.00	0.2		
SXM	1.37	357 iPnc	13 33.20	0.2		
LRM	1.41	318 iPnc	13 33.90	0.2		
BUT	1.60	321 ePg	13 38.00	1.7X		
		eSn	13 58.20			
		iSg	14 00.40			
HRY	1.99	345 ePnc	13 42.30	0.3		
PTI	2.12	206 eP	13 44.00	0.1		
BW06	2.30	150 eP	13 46.50	-0.1		
	S.D. = 0.3	on 8 of 9 obs.				
SEP 30, 1989 07h 43m 38.91± 1.00s						
1.919 S ± 7.6km 102.215 E ± 9.5km						
DEPTH = 208.2 ± 10.0 km						
4.9mb (10 obs.)						
SOUTHERN SUMATERA (274)						
KGM	4.06	16 ePd	44 42.70	0.4		
	0.9s	1439.70nm				
PSI	5.64	324 eP	45 02.00	-0.4		
	0.8s	181.30nm		5.3mb		
IPM	6.56	350 ePd	45 14.40	0.1		
	1.1s	411.70nm		5.5mb X		
SNG	9.17	350 ePd	45 46.70	-1.6		
TRT	11.86	119 ePc	46 23.10	0.2		
KKM	16.06	60 ePd	47 17.00	1.8		
MKS	17.53	101 eP	47 34.00	2.2		
NST	17.60	353 eP	47 31.50	-1.0		

LOE 19.21 359 iPd 47 48.00 -1.3
CHG 20.85 351 eP 48 07.00 1.2
NANU 24.26 149 eP 48 39.80 1.3
MBL 25.70 139 eP 48 52.00 0.2
0.5s 23.00nm 5.1mb
GYA 28.54 8 P 49 18.40 0.9
GBA 29.01 303 Pd 49 20.80 -0.8
0.6s 5.40nm 4.4mb
KNA 29.56 119 eP 49 44.20 17.8X
MTN 30.62 112 iPd 49 34.00 -1.8
0.6s 29.00nm 5.2mb
WARB 33.67 138 eP 50 01.40 -0.7
WB5 36.14 122 eP 50 22.00 -1.1
ASPA 37.53 128 eP 50 33.50 -1.2
0.5s 136.00nm 5.8mb X
eS 56 01.30
FORR 37.79 142 iPd 50 37.10 0.4
0.3s 38.00nm 5.5mb
LZH 37.84 2 Pc 50 38.00 0.7
1.5s 0.04nm 1.8mb X
OIS 40.91 120 eP 51 01.50 -1.1
GTA 41.19 357 Pd 51 05.40 0.7
OLP 47.18 125 eP 51 53.00 0.4
ADE 47.25 138 iPc 51 52.80 -0.3
0.7s 57.53nm 5.1mb
WMO 47.36 346 P 51 54.00 0.1
eS 58 31.00
CN2 50.06 22 Pc 52 14.00 -0.4
4.0s 0.20nm 2.0mb X
eS 59 04.00
MAT 50.84 38 (P) 52 20.00 -0.5
BWA 53.81 132 eP 52 34.60 -7.9X
i 52 44.60
BRS 54.57 123 iP 52 47.00 -1.1
CAN 54.63 133 eP 52 48.80 0.3
i 52 49.80
COO 54.93 127 eP 52 51.00 0.3
BUL 73.95 250 iPd 54 56.30 2.6
1.0s 5.00nm 4.2mb
i 55 42.80
MNG 76.08 131 eP 55 04.60 -0.7
0.4s 4.00nm 4.5mb
PGZ 76.67 131 P 55 08.10 -0.4
0.5s 29.00nm 5.3mb
VRI 81.31 317 eP 55 34.00 0.7
HFS 90.91 330 eP 56 19.70 -0.1
0.6s 1.20nm 4.1mb
UYO 144.34 24 iPKPd 02 50.30 -1.9X
PPD 144.86 226 ePKP 02 54.30 0.9X
e 02 55.50
e 02 57.30
e 06 14.80
BAO 145.77 238 ePKP 02 54.50 -0.7X
S.D. = 1.1 on 35 of 40 obs.

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* SEP 30, 1989 07h 47m 13.00± 1.96s
35.033 N ±15.8km 23.047 E ±10.0km
DEPTH = 51.7 ± 14.3 km
4.0mb (2 obs.)
CRETE (370)

VAM 1.02 68 ePn 47 32.00 0.8
NPS 2.12 83 ePn 47 47.80 1.2
ITM 2.33 337 ePb 47 59.50 9.9X
APE 2.86 44 ePn 47 56.90 -0.3
ATH 2.98 10 ePn 48 00.50 1.6
VLS 3.71 329 ePn 48 09.50 0.3
NEO 4.27 2 ePn 48 16.20 -0.9
YER 4.73 62 eP 48 24.00 0.4
PAIG 4.91 6 ePn 48 26.00 -0.1
PRK 4.93 31 ePn 48 25.50 -0.9
LIT 5.08 355 ePn 48 28.30 -0.2
eSn 49 22.80
KEK 5.34 332 ePn 48 32.90 0.8
PLG 5.34 3 ePn 48 31.80 -0.4
OUR 5.34 8 ePn 48 32.10 -0.1
KZN 5.36 349 ePn 48 32.50 0.0
KSL 5.44 77 ePn 48 32.00 -1.5
ELL 5.83 71 eP 48 38.00 -1.1
GRG 5.94 355 ePn 48 39.70 -0.8
eSn 49 42.60
SRS 6.09 4 ePn 48 42.20 -0.5
KNT 6.12 359 ePn 48 42.60 -0.5
eSn 49 46.60
KHL 6.15 56 eP 48 43.60 0.0
MMB 6.57 4 eP 48 49.00 -0.4
KKB 6.82 0 eP 48 53.00 0.1

KDZ 6.86 15 eP 48 49.00 -4.5X
SKO 7.04 350 e(Pn) 48 54.50 -1.5
e 49 10.70
MLR 10.68 11 eP 49 48.00 1.9
VRI 11.18 13 eP 49 55.00 2.2
KHC 15.72 337 iP 50 57.60 5.1X
PRU 16.19 340 eP 50 58.00 -0.3
HFS 25.84 349 eP 52 41.30 0.3
0.5s 4.00nm 4.2mb
NB2 27.11 347 P 52 52.50 -0.2
0.5s 1.40nm 3.8mb
S.D. = 1.0 on 28 of 31 obs.

SEP 30, 1989 08h 40m 22.43± 0.25s
20.349 N ± 4.1km 98.821 E ± 4.0km
DEPTH = 23.9km (2 depth phases)
4.9mb (21 obs.) 4.6Msz (5 obs.)
BURMA (296)

CHG 1.53 176 iPn 40 48.40 -0.1
LOE 4.02 136 ePn 41 23.00 -1.0
ePg 41 33.00
eSg 41 54.00
NST 4.82 165 ePn 41 27.00 -8.3X
ePg 42 27.00
eSg 42 45.00
KMI 5.97 37 ePn 41 50.50 -1.3
Pg 42 15.00
Sg 43 27.00
NNT 7.76 173 ePn 42 15.50 -1.3
eSg 44 23.00
GYA 9.42 48 P 42 39.60 -0.3
N 11s 11.50um
E 11s 11.30um
OIZ 10.47 95 eP 42 55.00 0.8
N 10s 10.00um
S 44 46.80
CD2 11.42 22 iPd 43 07.40 0.3
eS 45 19.00
LSA 11.62 325 P 43 09.50 -0.7
GZH 13.77 76 eP 43 35.00 -3.6X
LZH 16.29 15 Pd 44 12.50 1.1
3.0s 0.93nm 2.4mb X
Z 17s 2.66um 3.9MszX
N 12s 2.20um
E 11s 5.30um
pP 44 24.50
PP 44 29.00
sP 44 34.00
eS 47 06.00
sS 47 14.00
Lg 49 09.00
XAN 16.32 31 P 44 09.00 -2.6
N 10s 6.20um
E 10s 13.00um
WHN 17.29 51 eP 44 24.50 0.5
PSI 17.55 180 ePc 44 30.50 3.3X
0.7s 40.90nm 4.7mb
GTA 19.02 2 P 44 45.50 0.2
Z 11s 2.00um
E 11s 10.10um
S 48 18.00
HYB 19.40 265 ePc 44 54.40 4.5X
1.0s 50.00nm 4.7mb
e 45 05.00
TIY 20.96 31 iPd 45 06.20 0.0
Z 14s 3.33um 4.9MszX
N 12s 4.53um
BAG 21.01 97 eP 45 10.00 3.0X
NDI 21.31 297 iPd 45 07.80 -2.0
0.6s 30.00nm 4.9mb
NJ2 21.38 53 Pc 45 12.40 1.9
GBA 21.51 255 Pd 45 11.90 0.0
0.8s 15.30nm 4.5mb
KKM 22.08 128 ePd 45 19.50 1.8
1.2s 84.50nm 5.1mb
BTO 22.33 23 eP 45 20.50 0.4
Z 11s 1.60um 4.7MszX
N 11s 3.70um
E 11s 2.30um
sP 45 24.00
PP 45 52.50
TIA 22.51 42 P 45 21.60 -0.1
Z 10s 2.30um 4.9MszX
N 10s 2.50um
E 10s 2.40um
S 49 28.50

SSE 22.77 57 P 45 25.00 0.7
1.0s 0.05nm 1.9mb X
N 11s 1.80um
E 10s 1.10um
pP 45 32.50 27km
S 49 36.00
i 52 25.00
HHC 23.14 25 iPd 45 29.40 1.4
Z 15s 2.40um 4.8MszX
E 10s 2.10um
POO 23.61 270 iPd 45 34.80 2.2
BOM 24.53 271 iPd 45 43.00 1.5
eS 50 10.00
BJI 24.62 33 P 45 43.00 0.8
1.0s 0.02nm 1.7mb X
Z 22s 2.15um 4.6Msz
N 10s 1.63um
eS 50 00.00
WMO 25.18 341 eP 45 48.20 0.5
Z 16s 1.70um 4.7MszX
KSH 27.34 319 eP 46 06.50 -1.2
Z 18s 2.40um 4.8Msz
N 10s 1.50um
eS 50 54.00
SNY 29.94 39 eP 46 30.00 -0.9
Z 16s 1.80um 4.8MszX
N 12s 0.80um
E 12s 1.00um
CN2 32.24 37 eP 46 50.00 -1.2
Z 16s 2.10um 4.9MszX
N 11s 0.90um
E 11s 0.60um
epP 46 56.00 21km
eS 52 03.00
MDJ 35.14 39 eP 47 18.00 1.8
Z 16s 1.31um 4.8MszX
MAIO 37.80 303 eP 47 39.00 0.1
eS 53 28.00
MAT 37.91 56 iPd 47 39.00 -0.7
eS 53 39.00
WB5 53.01 137 eP 49 38.50 -1.3
ASPA 55.52 140 iPc 49 57.30 -0.9
0.7s 17.00nm 5.2mb
Z 20s 0.42um 4.5Msz
LR 16 22.60
OIS 56.97 133 eP 50 07.50 -1.1
CTA 61.41 128 iPc 50 40.00 0.7
VRI 63.33 312 eP 50 51.50 -0.4
MLR 63.89 312 eP 50 55.00 -0.8
SUF 64.18 331 iP 50 56.70 -0.4
0.8s 32.00nm 5.5mb
SOD 64.55 336 iP 50 59.10 -0.4
NUR 64.72 328 eP 51 00.00 -0.6
Z 20s 0.30um 4.5Msz
LR 21 40.00
RMO 67.17 132 eP 51 17.50 0.6
KSP 69.84 318 eP 51 33.00 -0.1
HFS 70.17 328 eP 51 35.00 0.1
0.6s 26.30nm 5.5mb
PRU 71.07 317 P 51 40.50 -0.1
NB2 71.27 329 P 51 41.10 -0.5
0.7s 21.90nm 5.4mb
CLL 71.82 319 eP 51 44.00 -1.0
1.4s 11.00nm 4.7mb
e 52 40.00
KHC 71.83 316 P 51 48.80 3.5X
MOX 72.80 318 eP 51 51.00 0.1
GRF 73.24 317 eP 51 53.60 0.1
1.4s 24.00nm 5.0mb
Z 19s 0.30um 4.6Msz
CDF 76.06 317 eP 52 09.20 -0.6
LPG 77.18 314 iPc 52 16.30 -0.1
0.6s 7.20nm 4.9mb
LBF 78.60 316 iPc 52 23.40 -0.5
0.8s 7.20nm 4.8mb
SMF 78.79 316 eP 52 24.40 -0.5
0.5s 4.30nm 4.7mb
SSF 78.88 316 eP 52 25.30 -0.1
0.6s 3.90nm 4.6mb
AVF 79.06 316 iPc 52 26.10 -0.2
0.5s 2.40nm 4.5mb
BUL 79.62 244 eP 52 32.00 2.1
TCF 79.97 316 eP 52 31.70 0.4
EKA 80.07 325 Pd 52 32.90 1.3
0.7s 12.30nm 5.0mb
CAF 80.51 314 eP 52 34.60 0.4
0.7s 6.60nm 4.8mb

30d 08h

LDF	80.70	318	eP	52 34.80	-0.2
RJF	80.75	315	eP	52 36.10	0.7
	0.8s		6.40nm		4.7mb
LPO	81.18	314	eP	52 38.10	0.4
	0.7s		8.80nm		4.9mb
LPF	81.47	318	eP	52 39.70	0.6
	0.8s		13.40nm		5.0mb
INK	83.81	17	eP	52 51.00	0.2
CNCB	167.00	284	ePKP	00 26.00	-2.6X
			e	01 37.00	
LPB	167.02	285	(PKP)	00 27.00	-1.4X
			e	01 35.00	
S.D. = 1.0 on 63 of 71 obs.					

& SEP 30, 1989 09h 21m 03.50s
36.512 N 120.525 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 3.7 (BRK).

LLA	0.35	287	iPc	21 10.25	-0.4
PRI	0.39	197	iPd	21 11.00	-0.3
PKEM	0.56	143	iPc	21 14.60	-0.2
PHAM	0.68	171	eP	21 16.20	-1.0
PRS	0.70	255	iPc	21 16.55	-1.1
SAO	0.78	289	ePc	21 17.70	-1.4
			eS	21 34.70	
FRI	0.81	54	iPd	21 17.70	-1.9
ARN	1.16	316	eP	21 23.80	-1.8
MHC	1.22	313	iPc	21 24.72	-1.9
GCC	1.29	294	ePc	21 25.00	-2.8
BCH	1.37	165	eP	21 26.70	-2.5
CMB	1.52	4	iPd	21 29.80	-1.6
PCC	1.78	304	ePc	21 31.60	-3.4
BKS	1.93	315	eP	21 34.20	-3.0
			e	21 39.50	
BRK	1.94	315	ePc	21 34.30	-3.0
BLP	1.95	177	eP	21 36.50	-1.0
NWRM	2.70	317	eP	21 46.10	-2.1
TNP	3.07	58	eP	21 52.40	-1.2
ORV	3.13	346	eP	21 53.40	-0.9
KVN	3.18	36	eP	21 54.00	-1.2
PEC	3.80	133	eP	22 03.00	-0.9
MIN	3.92	348	eP	22 07.40	1.7
PLM	4.36	135	eP	22 08.00	-3.9
23 obs. ossociated					

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* SEP 30, 1989 09h 58m 01.30± 1.43s
24.838 N ±16.3km 109.136 W ±12.0km
DEPTH = 10.0km (geophysicist)
4.6mb (2 obs.)
GULF OF CALIFORNIA (49)

MZX	2.97	123	eP	58 49.00	-0.3
GLA	9.58	330	eP	00 21.00	-1.3
BAR	10.23	321	eP	00 44.00	12.7X
ALQ	10.33	12	eP	00 32.00	-0.8
	2.0s		33.82nm		5.4mb
PLM	10.84	323	eP	00 54.00	14.2X
GSC	12.36	329	eP	01 01.00	0.8
SBB	12.38	324	eP	01 01.00	0.6
ISA	13.46	325	eP	01 13.00	-1.9
FRI	15.12	326	e(P)	01 37.20	0.7
SIO	15.51	43	e(P)	01 40.20	-1.4
TUL	15.93	43	eP	01 48.70	1.6
	1.2s		7.70nm		3.7mb
CMB	16.27	327	e(P)	01 51.80	0.4
LRM	21.11	354	eP	02 50.40	1.8
S.D. = 1.4 on 11 of 13 obs.					

SEP 30, 1989 10h 13m 13.68± 0.24s
30.110 N ± 5.3km 42.700 W ± 3.4km
DEPTH = 10.0km (geophysicist)
4.9mb (29 obs.) 4.7Msz (5 obs.)
NORTH ATLANTIC RIDGE (403)

SCH	30.13	332	eP	19 25.00	-0.6
TIO	30.46	79	eP	19 30.00	1.0
NKM	31.67	70	iP	19 41.00	1.6
IFR	32.00	74	iPd	19 41.50	-1.0
BLA	32.03	293	P	19 44.50	1.9
AAPN	32.72	67	eP	19 49.00	0.4
ALOJ	32.72	67	eP	19 50.00	1.2
ATEJ	32.80	68	eP	19 48.00	-1.4
ASMO	33.02	67	eP	19 51.00	-0.3
APHE	33.06	68	eP	19 55.00	3.4X
RSCP	36.23	290	P	20 19.00	0.3
LPF	36.44	49	eP	20 20.70	0.4
	1.0s		20.00nm		4.9mb
EPF	36.51	57	eP	20 21.70	0.7
	1.1s		20.50nm		4.9mb
GRR	36.64	48	eP	20 22.20	0.2
MFF	36.71	51	eP	20 23.10	0.5
LFF	37.04	54	eP	20 25.50	0.1
	1.3s		50.50nm		5.1mb
LDF	37.17	48	eP	20 26.30	-0.1
	0.8s		10.70nm		4.7mb
LPO	37.32	55	eP	20 27.90	0.2
	1.2s		32.10nm		5.0mb
RJF	37.63	54	eP	20 30.20	-0.2
	1.3s		36.10nm		5.0mb
EKA	37.68	37	Pc	20 31.50	0.9
	0.8s		4.90nm		4.3mb
LSF	37.79	52	eP	20 31.90	0.2
	1.0s		22.80nm		4.9mb
CAF	37.97	54	eP	20 33.00	-0.3
TCF	38.26	52	eP	20 35.90	0.2
AVF	39.12	52	eP	20 42.90	0.1
SSF	39.26	51	eP	20 44.40	0.4
	0.7s		5.50nm		4.3mb
SMF	39.43	52	eP	20 45.90	0.5
	1.2s		38.60nm		4.9mb
LOR	39.53	51	eP	20 46.30	0.0
	0.8s		9.90nm		4.5mb
LBF	39.57	51	eP	20 46.50	-0.1
	0.8s		10.70nm		4.6mb
HAU	41.30	50	eP	21 01.00	0.2
LPG	41.32	54	eP	21 02.70	1.3
BSF	41.58	51	eP	21 03.10	-0.1
SBF	41.72	57	eP	21 05.10	0.7
	1.1s		29.30nm		4.9mb
CDF	41.97	50	eP	21 06.40	0.0
TIC	42.39	116	Pc	21 08.58	-1.5
	0.9s		21.50nm		4.9mb
PDCR	42.53	175	eP	21 10.50	-0.6
LIC	42.64	116	Pc	21 10.94	-1.2
	0.9s		62.50nm		5.3mb
Z	20s		1.11um		4.8Msz
			S	27 48.00	
KIC	42.78	116	Pc	21 12.04	-1.2
	1.0s		48.00nm		5.2mb
TNS	42.97	47	ePc	21 14.90	0.4
UYO	43.64	289	iPd	21 20.50	0.4
LNO	44.44	292	eP	21 26.50	0.0
TUL	44.45	292	iPc	21 26.80	0.2
	0.7s		17.20nm		5.0mb
			i	21 29.20	
GRF	44.69	48	iPc	21 28.10	-0.3
	1.9s		73.00nm		5.3mb
Z	18s		0.80um		4.7Msz
SIO	44.89	292	e(P)	21 30.50	0.3
MOX	45.03	47	eP	21 32.00	0.8
BAO	45.76	187	eP	21 37.70	0.4
CLL	45.97	46	eP	21 38.00	-0.5
	2.2s		43.00nm		5.0mb
KHC	46.18	49	iPc	21 40.40	0.1
	1.2s		12.00nm		4.8mb
NB2	46.81	33	P	21 44.50	-0.6
	1.3s		31.10nm		5.2mb
PRU	46.85	48	eP	21 44.00	-1.5
Z	18s		0.70um		4.7Msz
E	17s		0.80um		
			e	22 16.50	
KSP	48.01	47	eP	21 54.80	0.1
FFC	48.44	318	eP	21 58.00	0.1
	0.7s		8.00nm		4.9mb
ZST	48.50	51	eP	21 59.00	0.5
SRO	49.33	51	eP	22 08.00	3.2X
KRA	50.33	48	eP	22 15.50	3.0X
			e	22 32.00	
BZS	51.75	54	eP	22 20.50	-2.8X
ZOBO	52.22	211	P	22 27.80	0.0
	1.0s		22.50nm		5.1mb
Z	23s		0.59um		4.6MszX
			LR	39 28.00	
LPB	52.43	211	P	22 31.40	2.2
	1.2s		140.63nm		5.8mb
Z	20s		0.71um		4.7Msz
			eLR	39 10.00	
CNCB	52.63	211	iPd	22 31.00	0.2
ALQ	53.18	293	eP	22 34.50	0.1
	0.9s		8.40nm		4.7mb
Z	20s		0.53um		4.6Msz
NUR	53.21	35	eP	22 31.00	-3.0X
BW06	53.95	303	P	22 38.50	-1.5
SUF	54.05	32	eP	22 40.00	-0.1
	0.6s		3.80nm		4.6mb
SOD	54.65	26	eP	22 43.00	-1.5
MLR	54.78	53	eP	22 46.30	0.4
EDM	55.15	316	eP	22 47.00	-1.4
VRI	55.26	53	eP	22 48.00	-1.3
MSU	56.78	299	P	23 00.80	0.2
MBC	57.83	344	eP	23 11.50	4.3X
	1.4s		26.00nm		5.1mb
PNT	59.62	312	eP	23 19.00	-1.0
TNP	60.72	299	P	23 27.00	-0.8
	1.0s		7.50nm		4.8mb
KVN	61.10	301	P	23 29.00	-1.4
INK	62.69	335	eP	23 39.50	-1.0
CMB	63.12	300	e(P)	23 43.70	-0.1
FBA	69.19	334	eP	24 21.80	-0.4
IMA	70.78	336	eP	24 32.40	0.4
	0.9s		6.20nm		4.7mb
PMR	71.27	331	e(P)	24 37.30	2.5
LWI	75.20	101	iPc	24 58.40	-0.5
MZZ	80.04	109	iP	25 25.00	-0.5
MAIO	81.59	53	eP	25 33.00	-0.3
LSZ	81.77	113	iP	25 35.60	1.1
IKZ	82.63	106	iPc	25 31.20	-7.9X
NST	122.08	43	ePKP	32 05.00	-5.6X
DZM	152.68	280	iPKPc	33 15.00	9.6X
S.D. = 0.9 on 74 of 83 obs.					

% SEP 30, 1989 10h 54m 37.32± 1.38s
43.983 N ±11.3km 7.579 E ± 6.4km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
ML 2.2 (GEN).

IMI	0.24	108	P	54 42.34	-0.1
			S	54 46.44	
ENR	0.27	335	P	54 42.75	-0.3
			S	54 46.85	
STV	0.32	325	P	54 43.67	-0.3
			S	54 48.39	
ROB	0.38	34	P	54 44.90	-0.2
			S	54 50.85	
FIN	0.51	63	P	54 47.16	-0.4
			S	54 54.64	
PZZ	0.62	327	P	54 49.82	-0.2
			S	54 58.13	
PCP	0.89	51	P	54 55.15	0.7
			S	55 06.69	
RRL	1.10	329	P	54 58.79	0.7
S.D. = 0.5 on 8 of 8 obs.					

% SEP 30, 1989 11h 39m 08.88± 0.76s
41.858 N ± 7.4km 12.788 E ± 6.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN ITALY (390)

RMP	0.08	234	Pc	39 11.00	-0.4
			eSg	39 13.60	
RDP	0.11	208	P	39 12.20	0.4
			eSg	39 13.80	
AZI	0.50	75	P	39 19.10	0.1
			eSg	39 28.10	
MNS	0.53	351	P	39 19.70	0.0
			eSg	39 29.00	
SDI	0.78	101	P	39 24.00	-0.2
			eSg	39 36.60	
S.D. = 0.4 on 5 of 5 obs.					

& SEP 30, 1989 13h 12m 17.76s
62.771 N 149.116 W
DEPTH = 64.1km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.32	311	iP	12 28.53	-0.1
			iS	12 36.68	
CUT	0.65	236	iP	12 31.71	-0.1
			eS	12 42.46	
RND	0.65	11	iP	12 31.59	-0.4
			eS	12 41.33	
MCK	0.97	5	eP	12 35.68	-0.2
			eS	12 48.83	
GHO	1.01	175	iP	12 35.97	-0.4
			eS	12 50.98	
KTH	1.13	315	iP	12 38.13	0.0
			eS	12 53.85	

PME	1.15	178	iP	12	37.99	-0.2
			eS	12	54.96	
PWA	1.18	198	eP	12	38.57	0.0
			eS	12	57.59	
PLRM	1.18	180	eP	12	38.37	-0.3
			eS	12	54.55	
NCA	1.32	125	eP	12	40.45	-0.1
			eS	12	58.79	
SKT	1 38	236	iP	12	41.18	-0.1
			eS	12	59.08	
KNK	1.40	167	eP	12	41.72	0.1
			eS	13	01.04	
SUA	1.52	211	eP	12	43.93	0.6
			eS	13	05.89	
PMS	1.55	188	eP	12	44.02	0.4
			eS	13	04.55	
SDG	1.67	97	iP	12	45.68	0.4
			eS	13	08.21	
PAX	1.68	82	eP	12	45.81	0.2
			eS	13	08.45	
WRH	1.77	15	eP	12	45.65	-1.0
			eS	13	06.33	
DDM	1.79	54	eP	12	48.08	1.0
			eS	13	12.63	
NEA	1.81	1	eP	12	46.27	-1.0
			eS	13	07.04	
HDA	1.90	30	eP	12	47.89	-0.7
			eS	13	13.78	
CCB	1.97	17	eP	12	48.32	-1.1
			eS	13	16.33	
KLU	1.97	129	eP	12	48.95	-0.7
NCG	1.98	228	eP	12	50.18	0.4
DMW	2.00	48	eP	12	50.68	0.9
CGLM	2.00	224	eP	12	50.63	0.6
CRP	2.08	225	eP	12	52.41	1.2
			eS	13	18.27	
VZW	2.10	144	eP	12	50.44	-0.9
			eS	13	15.33	
VLZ	2.11	140	eP	12	50.14	-1.2
			eS	13	19.66	
RDS	2.11	11	eP	12	50.41	-1.0
			eS	13	13.60	
SPU	2.11	222	eP	12	51.79	0.3
			eS	13	18.95	
GLI	2.13	152	eP	12	50.78	-0.9
			eS	13	18.61	
BGL	2.16	227	eP	12	53.70	1.5
CKL	2.19	225	eP	12	53.72	1.0
			eS	13	22.97	
FBA	2.22	15	eP	12	51.88	-1.0
			eS	13	17.48	
NKA	2.27	207	eP	12	56.98	3.3
SLKM	2.33	194	eP	12	55.24	0.7
			eS	13	26.58	
GLM	2.35	18	eP	12	53.86	-1.0
			eS	13	20.59	
FID	2.38	147	eP	12	54.17	-1.1
			eS	13	23.08	
DOT	2.45	67	eP	12	56.22	0.0
			eS	13	26.69	
SEW	2.68	184	eP	12	59.92	0.5
HIN	2.69	151	eP	12	58.24	-1.3
			eS	13	34.17	
RDT	2.71	217	eP	13	00.91	1.1
CVA	2.75	143	eP	12	59.48	-0.9
			eS	13	34.82	
GLB	2.83	116	eP	13	00.78	-0.8
NNL	2.93	202	eP	13	05.90	2.9
RED	2.94	218	eP	13	05.20	2.1
SGAM	2.94	139	eP	13	01.64	-1.5
			eS	13	39.97	
TTA	3.17	276	eP	13	04.94	-1.4
RAGM	3.20	136	eP	13	05.14	-1.6
			eS	13	46.99	
ILIM	3.27	216	eP	13	08.62	0.9
CNPM	3.41	198	eP	13	09.51	-0.2
TGL	3.61	121	eP	13	10.98	-1.5
KAIM	3.64	139	eP	13	10.82	-2.1
BALM	3.65	115	eP	13	11.28	-1.8
WAX	3.79	125	eP	13	12.96	-2.1
CTGM	4.11	113	eP	13	18.77	-0.8
DWY	4.54	69	P	13	22.00	-3.5

57 obs. assaciated

• SEP 30, 1989 14h 42m 15.21± 1.13s
8.463 S ±10.1km 115.892 E ±14.6km
DEPTH = 33.0km (normal)

4.9mb (2 obs.)

BALI ISLAND REGION (283)

MKS	4.80	48	iPc	43	26.00	-1.0
MBL	13.18	164	eP	45	18.70	-4.0X
	0.3s	8.00nm				5.2mb X
			eS	47	42.00	
NANU	14.02	181	eP	45	31.00	-2.8
			eS	48	02.00	
KNA	14.52	121	eP	45	39.40	-0.9
MTN	15.59	108	eP	45	54.00	-0.3
			eS	48	47.80	
MEKA	18.23	172	eP	46	27.50	0.1
			eS	49	41.00	
WB5	21.18	124	eP	46	59.80	-0.4
			eS	50	57.20	
BAL	22.04	178	eP	47	09.00	0.2
COOL	22.84	168	eP	47	16.00	-0.7
ASPA	22.93	133	iPc	47	18.40	0.7
	0.5s	20.00nm				4.9mb
			eS	51	29.90	
KLB	23.08	176	eP	47	19.00	0.0
MUN	23.40	179	eP	47	23.00	0.9
NWAO	24.38	177	eP	47	32.00	0.4
FORR	25.02	155	eP	47	37.00	-0.7
TOO	39.44	142	iPd	49	46.10	2.0
	0.7s	16.00nm				4.9mb
BWA	39.49	136	eP	49	45.00	0.5
BRS	39.60	123	iP	49	46.50	0.9
			i	49	50.00	
CAN	40.38	136	eP	49	53.20	1.3
MAT	49.43	24	eP	51	04.00	-0.1

S.D. = 1.1 on 18 of 19 obs.

SEP 30, 1989 14h 53m 30.19± 0.90s
34.653 N ± 3.7km 23.945 E ± 2.6km
DEPTH = 28.2 ± 7.0 km
4.4mb (33 obs.) 3.9Msz (1 obs.)

CRETE (370)

MD 4.6 (ATH).

VAM	0.78	15	ePb	53	46.00	0.9
NPS	1.50	66	ePn	53	59.60	4.1X
VLI	2.22	339	ePn	54	07.80	2.0
APE	2.73	28	ePn	54	14.10	1.0
ATH	3.32	357	ePn	54	22.50	1.1
SMG	3.84	37	ePn	54	30.00	1.2
YER	4.31	54	iP	54	38.10	2.6X
VLS	4.44	323	ePn	54	36.50	-0.8
AGG	4.55	344	ePn	54	39.80	0.8
IZM	4.59	35	iP	54	40.90	1.3
NEO	4.68	353	ePn	54	41.00	0.2
KSL	4.83	71	ePn	54	44.50	1.6
PRK	4.95	21	ePn	54	44.50	0.0
ELL	5.28	65	iP	54	51.00	1.6
LIT	5.56	348	ePnc	54	53.30	0.1
			eSn	55	52.50	
PLG	5.72	356	ePn	54	55.00	-0.5
KHL	5.80	49	iP	54	58.10	1.5
KZN	5.90	344	ePn	54	57.50	-0.6
THE	6.02	353	ePnc	54	59.60	0.0
			eSn	56	04.10	
KEK	6.04	328	ePn	54	58.50	-1.4
BCK	6.07	61	iP	55	01.30	0.9
SRN	6.09	330	ePn	55	00.00	-0.6
LSK	6.10	335	ePn	55	00.40	-0.5
KBN	6.46	338	ePn	55	07.20	1.4
SRS	6.46	358	ePn	55	06.00	0.1
			eSn	56	14.60	
EDC	6.48	28	eP	55	08.70	2.6X
BNT	6.51	28	iP	55	11.10	4.5X
KNT	6.55	353	ePn	55	07.00	-0.1
			eSn	56	19.00	
KCT	6.60	31	iP	55	09.10	1.3
BERA	6.82	334	ePn	55	10.00	-0.8
OHR	6.91	340	iPn	55	10.10	-2.1
PPCY	6.92	86	eP	55	10.00	-2.3
MMB	6.93	359	eP	55	12.00	-0.4
RZN	7.05	5	eP	55	15.00	0.7
KDZ	7.08	9	iPd	55	15.00	0.4
KKB	7.23	355	eP	55	16.00	-0.7
YLV	7.31	35	iP	55	28.60	10.8X
LCI	7.40	322	P	55	16.10	-2.9
			eSn	56	26.70	
TIR	7.42	335	ePn	55	19.20	0.0
PLD	7.46	4	eP	55	23.00	3.1X
DIM	7.49	9	eP	55	21.00	0.7
PHP	7.55	340	ePn	55	18.80	-2.2
SKO	7.57	346	ePn	55	19.70	-1.7
	Z 11s	3579.00um				
	N 11s	3951.00um				
	E 11s	5154.00um				
			i	57	09.00	
			LR	58	29.00	
ISK	7.57	31	eP	55	20.00	-1.4
ITU	7.59	30	eP	55	22.00	0.4
HRT	7.65	35	eP	55	14.00	-8.5X
MEU	7.71	291	P	55	22.50	-1.0
CSS	7.73	85	ePn	55	20.60	-3.0X
			eSn	56	40.00	
TDS	7.86	312	P	55	24.20	-1.3
HLW	7.88	125	ePn	55	24.00	-1.7
			eSn	56	47.00	
PGB	7.89	1	eP	55	25.00	-0.9
LFK	7.90	83	ePn	55	23.20	-2.9X
VTS	7.95	356	iP	55	28.00	1.2
SDA	8.14	336	ePn	55	28.00	-1.3
MNO	8.15	296	P	55	29.60	-0.2
			eSn	56	48.00	
KOT	8.17	123	ePd	55	27.60	-2.1
			eS	56	49.40	
ULC	8.18	335	ePn	55	28.00	-1.9
			eSn	56	49.00	
FAM	8.28	85	eP	55	30.00	-1.3
PVY	8.52	340	ePn	55	32.30	-2.4
			eSn	57	01.50	
TTG	8.59	336	ePn	55	32.50	-3.0X
			eSn	57	01.00	
BDV	8.61	334	ePn	55	31.50	-4.4X
			eSn	56	59.00	
PVL	8.62	7	iPc	55	38.00	2.0
MGR	8.63	312	P	55	35.40	-0.8
GIB	8.67	295	P	55	36.80	0.0
BBTK	8.73	51	iP	55	39.00	1.3
HCY	8.87	333	ePn	55	36.50	-3.0X
			eSn	57	06.00	
SGO	9.04	313	P	55	40.70	-1.0
BRY	9.25	335	ePn	55	41.50	-3.3X
			eSn	57	12.60	
PLE	9.36	339	iPnc	55	42.90	-3.4X
			eSn	57	16.00	
PSN	9.60	19	eP	55	56.00	6.5X
BHL	9.72	91	Pn	55	50.00	-1.3
			Sn	57	28.00	
BUC	9.89	9	ePd	56	24.50	31.0X
DRA	10.02	1	eP	56	02.00	6.8X
SALJ	10.17	102	P	55	54.40	-3.1X
BURJ	10.20	100	P	55	55.50	-2.4
DUI	10.23	316	P	55	57.80	-0.5
KAS	10.24	46	eP	55	58.50	0.0
MASJ	10.29	103	P	55	56.50	-2.6
TLB	10.41	16	eP	56	00.00	-0.6
BEO	10.50	346	eP	56	13.50	11.6X
			eS	59	32.00	
SDI	10.63	314	P	56	04.40	0.7
CMP	10.64	4	iPc	56	07.00	3.2X
ISR	10.66	10	eP	56	11.00	6.9X
MLR	10.93	7	eP	56	10.00	2.1
BZS	11.09	351	eP	56	07.00	-3.0X
VRI	11.40	10	eP	56	13.50	-0.7
CLI	12.15	11	eP	56	40.00	15.7X
ARV	12.28	319	P	56	25.80	-0.3
VBY	12.71	331	ePn	56	29.40	-2.3
			eSn	58	39.30	
PTJ	12.77	334	e(P)	56	28.00	-4.7X
			e(S)	58	45.30	
RIY	12.94	328	iPn	56	30.70	-4.0X
CEY	13.24	330	e(P)	56	37.50	-1.2
			eS	58	56.00	
AMAN	13.24	141	eP	56	38.00	-0.9
AGMR	13.38	144	eP	56	41.00	0.4
LJU	13.44	331	e(P)	56	36.00	-5.4X
			e	56	40.00	
			eS	59	01.00	
TRI	13.50	328	e(Pn)	56	40.00	-2.1
			i(Sn)	58	58.90	
AKSR	13.53	142	eP	56	43.00	0.3
	0.7s	•••••••nm				8.7mb X
PSZ	13.60	348	eP	56	46.30	2.8X
AGAL	13.61	143	eP	56	35.00	-8.7X
VOY	13.69	329	eP	56	42.30	-2.5
			eS	59	05.20	
SRO	13.81	344	e(P)	56	57.00	10.8X
			e	57	42.00	

30d 14h

ZST		14.46	341	e(P)	57	14.00	19.2X			0.8s	8.00nm		4.1mb		LZH	63.32	63	P	03	58.00	-1.1
				e	57	31.00			SSF	19.75	315	eP	58	00.70	0.1		CD2	65.50	68	eP	04	13.20	0.0
				e	58	24.00			BGF	19.88	313	eP	58	01.30	-0.7		HHC	66.75	56	eP	04	20.80	-0.3
				e(S)	02	24.00				0.8s	14.70nm		4.4mb			CHG	67.45	82	eP	04	25.20	-0.5
FVI		14.61	328	P	56	56.60	-0.1		MAF	19.89	312	eP	58	01.70	-0.4		TIY	68.78	58	eP	04	33.40	-0.5
				eSn	59	20.80				1.2s	22.00nm		4.4mb			NST	70.03	84	eP	04	42.00	0.3
KBA		14.76	330	eP	57	06.50	7.7X		LPO	20.12	307	eP	58	04.50	-0.1		BJI	70.24	55	(P)	04	42.00	-0.6
				e	57	13.50				0.7s	15.40nm		4.5mb			NNT	71.33	87	iPc	04	49.00	-0.6
SPC		14.78	350	e(P)	57	09.00	9.9X		TCF	20.14	312	eP	58	03.90	-0.9		TIA	72.79	58	eP	04	57.00	-1.0
				e	57	28.00				0.8s	12.60nm		4.3mb			SNY	74.16	50	eP	05	10.40	4.6X
BOB		15.03	317	P	57	02.80	0.5		RJF	20.15	309	eP	58	04.40	-0.5		CN2	74.26	47	eP	05	06.40	0.0
MDI		15.52	320	P	57	11.00	2.5X			0.9s	13.10nm		4.3mb			PDCR	75.96	244	eP	05	07.40	-9.1X
KRA		15.67	350	eP	57	23.00	12.5X		EPF	20.15	302	eP	58	06.40	1.4		INK	75.98	352	eP	05	14.00	-1.8
	Z	14s		2.00um						0.8s	7.20nm		4.1mb			IMA	79.59	359	eP	05	37.20	1.4
	N	14s		1.90um					LFF	20.51	307	eP	58	08.10	-0.5		PWA	83.91	357	eP	05	59.40	1.1
				e	57	30.20				0.6s	13.30nm		4.5mb			SPA	124.47	180	e(PKP)	12	44.00	16.5X
SBF		15.73	311	eP	57	13.60	2.2		ENN	20.76	326	eP	58	11.50	0.4			1.0s		5.00nm			
		0.7s		22.00nm			4.4mb			1.0s	20.00nm		4.5mb			DZM	144.90	79	iPKPc	13	07.10	0.4
OSS		15.91	323	ePd	57	19.20	5.4X				i		58	22.90				S.D. = 1.2		on 155 of 218 obs.			
LMR		16.07	308	eP	57	18.00	2.4		WTS	21.26	330	eP	58	16.00	-0.1		---						
FRF		16.08	309	eP	57	18.60	2.8X			0.8s	10.00nm		4.3mb			%	SEP 30, 1989		16h 43m		56.17±	1.16s
		0.7s		7.40nm			3.9mb				e		58	23.50			44.774 N ± 9.2km				7.610 E ± 6.2km	
VAI		16.08	319	P	57	18.50	2.8X		SNF	21.36	324	iP	58	16.87	-0.3		DEPTH = 10.0km (geophysicist)					
VDL		16.11	322	ePc	57	22.00	5.6X		EVIA	21.56	288	e(P)	58	26.00	6.5X		NORTHERN ITALY					(545)
TMA		16.18	320	ePc	57	20.40	3.2X		MFF	21.74	311	eP	58	20.70	-0.4		ML 2.1 (GEN).					
LRG		16.22	308	eP	57	20.60	3.1X			0.7s	26.40nm		4.8mb										
		1.1s		21.40nm			4.2mb		AFC	22.38	285	eP	58	29.80	2.1	PZZ	0.45	234	P	44	05.73	0.3
KHC		16.37	335	P	57	18.00	-1.5		APHE	22.50	284	eP	58	31.00	2.1				S	44	12.39	
				i	57	22.30			ASMO	22.53	285	eP	58	30.00	0.8	ROB	0.51	159	P	44	07.27	0.7
FUR		16.48	329	eP	57	23.80	3.0X		EBAN	22.56	287	eP	58	30.00	0.7				S	44	15.37	
		1.3s		86.00nm			4.7mb		ACHM	22.61	284	eP	58	33.20	3.3X	ENR	0.56	194	P	44	07.78	0.1
SAX		16.70	323	ePd	57	26.60	2.7X		LDF	22.63	315	eP	58	28.90	-1.0				S	44	15.47	
PRU		16.81	339	P	57	26.70	1.8			0.7s	39.60nm		5.0mb			STV	0.57	201	P	44	07.47	-0.3
	Z	10s		1.00um					ATEJ	22.76	284	eP	58	33.50	2.0				S	44	15.37	
	N	12s		0.70um					ALOJ	22.83	284	eP	58	33.20	1.1	RRL	0.61	284	P	44	08.50	-0.1
	E	13s		1.30um					AAPN	22.83	285	eP	58	37.00	4.9X				S	44	17.11	
				e	57	32.00			LPF	22.91	313	eP	58	31.50	-1.1	PCP	0.71	109	P	44	10.24	0.1
DIX		16.96	317	ePd	57	31.10	3.9X			0.9s	55.60nm		5.1mb						S	44	19.88	
LPG		17.01	315	eP	57	28.60	0.8		FLN	22.92	315	eP	58	30.20	-2.5X	IMI	0.89	167	P	44	12.39	-0.8
		1.2s		19.00nm			4.1mb			0.7s	57.30nm		5.2mb						S	44	23.06	
BHD		17.02	89	ePd	57	27.00	-0.7		GRR	22.96	314	eP	58	31.40	-1.7		S.D. = 0.6		on 7 of 7 obs.			
				eS	00	44.00				0.7s	28.60nm		4.9mb			---						
KSP		17.11	343	eP	57	30.00	1.2		GUD	22.98	293	e(P)	58	36.40	2.8X		SEP 30, 1989		17h 32m		19.52±	0.24s
		1.0s		33.00nm			4.4mb		EJIF	23.96	283	e(P)	58	47.00	4.1X		13.759 N ± 3.8km				125.521 E ± 5.3km	
				i	57	37.00			NKM	24.01	280	iP	58	49.00	5.6X		DEPTH = 33.0km (normal)					
EMS		17.23	317	ePd	57	33.50	3.0X		IFR	24.07	276	eP	58	47.00	2.7X		4.9mb (12 obs.) 4.1Msz (1 obs.)					
ZLA		17.33	322	ePd	57	33.80	2.2				i		58	59.00			PHILIPPINE ISLANDS REGION					(248)
SLE		17.47	323	ePd	57	35.90	2.6X		NUR	25.87	1	eP	59	02.00	1.1							
SLY		17.66	81	ePd	57	37.00	1.3			Z 21s	0.40um		3.9Msz			BAG	5.45	300	eP	33	37.80	-3.0
				eS	00	58.00					LR		10	10.00		DAV	6.63	180	eP	34	12.00	14.8X
GRF		17.70	332	eP	57	36.00	-0.1		HFS	26.36	348	eP	59	04.20	-1.2	TSM	11.99	218	ePc	35	12.90	1.7
		2.2s		283.00nm			5.0mb			0.5s	9.00nm		4.6mb			QIZ	15.93	291	eP	36	03.50	0.6
	Z	18s		0.90um					TIO	26.44	271	eP	59	11.00	4.3X	SSE	17.71	348	P	36	25.70	0.5
				e	57	43.60			NB2	27.65	347	P	59	15.40	-1.8		Z 20s		0.50um			
BBS		17.77	321	P	57	36.14	-0.9			0.5s	3.70nm		4.3mb				N 10s		0.40um			
FEL		17.78	323	P	57	36.37	-0.9		EKA	27.89	326	P	59	22.00	2.6X		E 11s		0.70um			
LOMF		18.06	320	P	57	38.73	-1.9			0.7s	4.20nm		4.3mb						pP	36	29.50	
MOF		18.21	321	P	57	41.74	-0.8		SUF	28.12	2	eP	59	22.00	0.6				eS	39	08.00	
MOX		18.33	334	eP	57	45.00	1.1		DLE	28.46	320	eP	59	20.40	-4.1X				i	39	48.00	
	Z	12s		1.00um					MAIO	28.90	76	eP	59	38.00	9.1X	PJG	18.80	88	eP	36	39.00	0.2
	N	10s		0.80um							eS		04	20.00		GUA	18.85	88	eP	36	39.50	0.1
	E	10s		0.80um					DMU	28.95	321	eP	59	20.90	-8.0X	WHN	19.62	330	eP	36	49.30	1.0
				e	57	50.00			BCAO	30.48	191	iPd	59	44.10	1.1		N 10s		0.40um			
				e	57	52.00				0.6s	41.00nm		5.4mb						sP	37	03.00	
TAB		18.34	73	eP	57	39.00	-5.3X				ic		01	15.30		MKS	19.79	198	ePd	36	51.50	1.4
BSF		18.38	321	P	57	43.18	-1.4		NSS	30.79	350	eP	59	44.64	-0.5	GYA	21.72	308	P	37	11.60	1.6
CLL		18.44	338	eP	57	44.00	-1.2		SOD	32.80	2	iP	00	01.30	-1.4	TIA	23.59	343	eP	37	28.10	-0.1
		1.3s		49.00nm			4.5mb		TIC	38.60	230	P	00	53.08	0.4	IIDJ	24.34	25	P	37	36.10	0.6
				i	57	51.80			KIC	38.64	230	P	00	53.40	0.4	TRT	24.87	212	iPd	37	41.00	0.3
				e	01	26.00			LIC	38.92	230	P	00	55.82	0.5		0.9s		27.20nm			4.8mb
ECH		18.44	322	P	57	45.74	0.5		WMO	49.12	59	P	02	17.50	0.3	CHJJ	25.28	26	P	37	44.00	-0.5
WLS		18.47	323	P	57	47.05	1.4			Z 24s	0.40um		4.3MszX			DL2	25.28	353	eP	37	45.00	0.6
CDF		18.51	323	eP	57	44.70	-1.5				PP		04	12.00		MAT	25.38	24	eP	37	38.00	-7.4X
		0.8s		17.10nm			4.3mb				S		09	20.00		CHG	25.99	285	eP	37	51.00	-0.3
HAU		18.72	321	eP	57	47.00	-1.7				sS		09	44.00		TIY	26.55	336	eP	37	56.10	-0.2
		0.5s		13.10nm			4.4mb		GKN	51.60	80	Pc	02	35.94	-0.5	MTN	27.01	168	eP	38	00.30	-0.3
GWF		18.73	325	P	57	49.33	0.6			0.7s	53.00nm		5.6mb X			BJI	27.44	344	eP	38	03.00	-1.3
VITF		19.04	321	P	57	52.16	-0.4		DMN	52.14	80	Pc	02	40.32	-0.3	SNY	28.02	357	Pc	38	09.80	0.3
SMF		19.33	314	eP	57	55.80	-0.3			0.8s	65.00nm		5.6mb X				E 15s		0.80um			
		0.6s		6.30nm			4.1mb		KKN	52.20	80	Pc	02	40.58	-0.5				pP	38	21.40	45kmX
LBF		19.43	315	eP	57	55.70	-1.5			0.7s	39.00nm		5.5mb X						eS	42	48.00	
		0.8s		22.80nm			4.5mb		PKI	52.40	80	Pc	02	42.00	-0.7	LZH	29.54	323	P	38	23.00	-0.6
CAF		19.64	308	eP	57	59.40	-0.2			0.9s	51.00nm		5.5mb X				2.0s		0.05nm			1.9mb X
		1.2s		24.90nm			4.4mb		GBA	52.47	100	P	02	43.20	0.3		Z 18s		0.43um			4.1Msz
LOR		19.65	316	eP	57	58.20	-1.4		GUN	52.64	79	Pc	02	43.90	-0.6	HHC	29.62	338	eP	38	24.00	-0.1
		0.9s		14.70nm			4.3mb		BUL	54.67	175	eP	03	11.00	11.9X	CN2	29.94	360	eP	38	25.60	-1.2
AVF		19.70	314	eP	57	58.70	-1.4		GTA	59.08	61	P	03	30.20	-0.1	BTO	29.98	336	eP	38	26.00	-1.4

MDJ	30.95	6	eP	38	35.50	-0.2
GTA	34.14	323	eP	39	03.00	-0.7
WB5	34.54	165	eP	39	05.20	-2.0
			ePcP	41	41.00	
QIS	36.81	158	ePd	39	25.00	-1.4
ASPA	38.09	167	eP	39	37.40	0.2
	0.8s	19.00nm			5.0mb	
			eS	45	28.90	
CTA	39.34	148	iPc	39	48.00	0.4
	1.1s	45.57nm			5.1mb	
WARB	39.72	178	iPd	39	51.00	0.3
MEKA	40.70	190	eP	39	57.00	-1.8
WMQ	44.06	320	P	40	26.80	0.6
FORR	44.42	177	eP	40	28.30	-0.7
	0.4s	17.00nm			5.2mb	
MUN	46.34	191	eP	40	43.00	-1.3
GBA	46.66	276	Pc	40	46.20	-0.9
	0.8s	12.60nm			4.9mb	
BRS	48.71	147	iPd	41	03.00	0.0
CMS	49.03	157	ePd	41	06.00	0.7
ADE	50.05	166	iPc	41	13.60	0.4
	0.9s	36.97nm			5.4mb	
KSH	50.38	310	eP	41	18.20	2.4
BWA	52.63	156	eP	41	34.00	1.2
CAN	53.64	156	eP	41	36.90	-3.3X
DZM	53.65	131	iPc	41	40.40	-0.1
TOO	54.40	161	eP	41	45.40	-0.3
	0.8s	26.00nm			5.3mb	
MAIO	62.73	304	iPc	42	44.00	0.0
TTA	72.60	28	eP	43	46.00	0.6
IMA	73.79	25	eP	43	53.00	0.7
	1.0s	12.50nm			4.9mb	
PMR	75.80	29	eP	44	03.10	-0.6
	1.0s	11.30nm			4.8mb	
FBA	76.25	26	eP	44	05.70	-0.6
	1.0s	7.50nm			4.7mb	
TOA	77.17	29	eP	44	12.00	0.5
SOD	80.80	337	eP	44	38.00	6.9X
INK	81.33	22	iPc	44	34.00	0.2
SUF	82.13	333	eP	44	38.00	0.0
	0.7s	4.40nm			4.6mb	
MBC	82.49	13	ePc	44	40.00	0.3
	0.8s	9.00nm			4.9mb	
VRI	86.26	316	eP	45	01.30	2.0
MLR	86.89	316	eP	45	02.80	0.3
LPB	166.56	104	PKP	52	27.00	3.2X
ZOBO	166.58	102	PKP	52	24.00	-0.1
CNCB	166.63	105	ePKP	52	28.00	3.9X

S.D. = 1.0 on 54 of 60 obs.

SEP 30, 1989 18h 16m 00.65± 0.60s
45.103 N ± 4.5km 14.977 E ± 5.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

MD 3.8 (LJU), 3.5 (TRI). ML 3.4 (VKA), 3.4 (ZAG). Felt at Novi and Senj.

VBY	0.45	26	iPgd	16	10.20	0.4
			iSg	16	16.00	
RIY	0.48	300	iPgc	16	10.60	0.2
			iSg	16	17.50	
CEY	0.74	329	ePgd	16	15.30	0.0
			eSg	16	27.00	
LJU	0.99	342	iPg	16	20.20	0.8
			eSg	16	35.30	
ZAG	1.01	44	iPg	16	20.90	1.2
			iSg	16	35.00	
TRI	1.05	306	iPg	16	21.00	0.6
			iSg	16	36.50	
PTJ	1.05	41	iPg	16	21.70	1.1
			iSg	16	35.70	
VOY	1.20	321	iPnc	16	23.00	-0.1
			ePg	16	24.80	
			eSn	16	41.40	
			eSg	16	43.00	
AOI	1.84	213	ePn	16	35.22	2.7
			eSn	16	57.71	
FVI	2.14	315	P	16	38.40	1.6
			eSn	17	03.70	
ARV	2.17	223	P	16	38.70	1.4
KBA	2.28	331	iPnd	16	40.70	1.6X
			iPg	16	51.70	
			i	17	11.70	
CTI	2.52	293	P	16	42.90	0.5
			eSn	17	13.40	
SFI	2.53	243	P	16	43.10	0.7
ALP	2.53	204	ePn	16	47.89	5.3X
			iSn	17	18.09	
ASS	2.63	220	P	16	44.00	0.1
PGD	2.63	243	P	16	44.90	0.8
			eSn	17	14.50	
SOP	2.80	22	eP	16	50.90	4.6X
SCE	2.99	312	iPnc	16	50.30	1.2
BHG	2.99	332	iPnd	16	51.00	2.0
SAL	3.18	281	P	16	51.00	-0.6
MNS	3.19	212	P	16	51.40	-0.4
OGA	3.27	304	ePn	16	54.10	0.9
VKA	3.30	16	ePn	16	54.00	0.7
Z	15s	1.10um			4.9MszX	
			i(Pg)	17	10.60	
			i	17	28.50	
			iSn	17	31.20	
			i	17	34.60	
			iSg	17	49.50	
			e	31	20.00	
			i	31	37.10	
			LR	06	10.00	
ZST	3.42	25	i(Pn)	16	59.50	4.4X
			i(Sn)	17	49.40	
PII	3.48	248	P	16	56.10	0.3
SRO	3.56	39	e(Pn)	17	12.00	15.0X
			e(Pb)	17	23.50	
			i(Pg)	17	33.50	
			e(Sg)	18	12.00	
BUD	3.68	48	e(P)	17	26.00	27.2X
OSS	3.73	297	ePc	17	02.90	3.2
MDI	3.77	282	P	16	59.90	-0.1
			eSn	17	42.50	
BOB	3.94	267	P	17	02.50	0.0
FUR	3.99	322	iPd	17	16.40	13.3X
VDL	4.09	292	ePc	17	06.60	1.8
KHC	4.14	347	Pn	17	05.20	-0.1
			Sg	17	52.50	
WET	4.29	341	iPnc	17	07.40	-0.1
TMA	4.40	285	ePc	17	09.60	0.4
PSZ	4.41	49	eP	16	50.90	-18.3X
VAI	4.43	282	P	17	08.40	-1.0
SAX	4.46	301	ePd	17	10.90	0.8
GRC1	4.55	330	iPnd	17	10.70	-0.5
			e(Pg)	17	34.80	
			e(Sn)	18	09.50	
			e(Sg)	18	29.40	
BZS	4.71	81	ePc	17	28.00	14.6X
			e	30	17.00	
PRU	4.90	357	Pnd	17	15.20	-0.8
			Pg	17	55.30	
			Sn	18	37.50	
MMK	5.01	283	ePc	17	18.90	1.0
SLE	5.21	303	ePd	17	20.30	-0.2
DIX	5.40	283	ePd	17	24.00	0.6
SBF	5.54	260	Pn	17	25.40	0.2
FEL	5.55	302	ePn	17	24.12	-1.3
HOF	5.62	339	eP	17	23.70	-2.5
SKO	5.64	121	eP	17	52.60	26.0X
	1.4s	*******	nm			
			i	19	08.50	
			i	19	13.00	
KSP	5.81	8	eP	17	29.50	0.6
			eS	18	30.30	
			e	18	44.50	
LPG	5.82	277	Pn	17	30.50	1.2
			Sn	18	34.80	
LPL	5.83	277	Pn	17	31.20	1.8
			Sn	18	36.00	
OHR	5.84	131	ePn	17	26.00	-3.3
BNI	5.88	272	P	17	27.70	-2.3
MOX	5.99	339	(Pn)	17	30.50	-0.9
			(Sn)	18	45.00	
			eSg	19	18.00	
FRF	6.17	258	Pn	17	34.00	0.0
CDF	6.24	305	Pn	17	34.10	-1.0
BSF	6.28	299	Pn	17	34.60	-1.0
			Sn	18	44.10	
LMR	6.34	257	Pn	17	35.10	-1.3
HAU	6.62	299	Pn	17	39.10	-1.3
			Sn	18	52.40	
ABH	6.94	316	ePn	17	41.93	-2.9
LBF	7.88	288	Pn	17	56.50	-1.6
SMF	7.92	285	Pn	17	57.00	-1.6
LOR	8.01	290	Pn	17	58.00	-1.9
AVF	8.28	286	Pn	18	02.20	-1.3
BGF	8.60	284	Pn	18	07.40	-0.6
WMQ	50.25	64	eP	24	53.00	-5.9X

Z 16s 14.70um 6.1MszX
N 12s 16.40um
S.D. = 1.4 on 56 of 67 obs.

SEP 30, 1989 18h 19m 23.33± 0.18s
20.236 N ± 3.9km 98.848 E ± 3.3km
DEPTH = 13.1km (8 depth phases)
5.3mb (60 obs.) 5.6Msz (14 obs.)
BURMA (296)

Damage in the Muang District, Thailand. Felt in the Thailand-Burma border region.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 14S, 32C
Centroid Location:
Origin Time 18:19:58.0 0.3
Lat 20.26N 0.04 Lon 99.23E 0.04
Dep 15.0 FIX Half-duration 2.9
Moment Tensor; Scale 10**17 Nm
Mrr=-0.44 0.16 Mtt= 1.41 0.15
Mff=-0.97 0.18 Mrt=-0.93 0.41
Mrf=-1.20 0.55 Mtf=-4.87 0.17
Principal Axes:

	Val=	Plg=	Azm=
T	5.24	0	38
N	0.04	73	129
P	-5.27	17	308

Best Double Couple:Mo=5.3*10**17
NP1:Strike= 85 Dip=78 Slip=-168
NP2: 352 78 -13

CHG	1.42	176	iPn	19	50.10	1.3
LOE	3.92	135	ePn	20	23.00	-1.5
			ePg	20	30.00	
			eSg	21	27.00	
NST	4.70	165	ePn	20	35.00	-0.6
			ePg	20	50.00	
			eSg	34	10.00	
KMI	6.05	36	ePn	20	55.50	0.7
			Pg	21	18.00	
			Sg	22	28.00	
NNT	7.65	173	ePg	21	48.00	30.9X
			eSn	22	19.80	
			eSg	22	38.50	
GYA	9.48	48	P	21	42.00	-0.7
N	12s	146.00um				
E	12s	113.00um				
QIZ	10.43	95	eP	21	53.00	-2.7
E	10s	57.90um				
			S	23	46.80	
CD2	11.51	22	P	22	09.00	-1.4
Z	10s	27.30um				
E	10s	83.30um				
LSA	11.72	325	P	22	13.60	-0.1
N	12s	17.70um				
E	14s	13.80um				
			pP	22	17.50	
			S	24	27.00	
SNG	13.09	172	ePc	22	35.00	3.3X
	1.1s	106.33nm			5.9mb X	
			e	23	22.70	
			eS	24	57.20	
			e	26	20.90	
GZH	13.77	76	eP	22	42.00	1.4
HKC	14.43	79	(P)	22	52.00	2.7
			(S)	25	40.00	
IPM	15.71	172	ePd	23	10.50	4.5X
			e	27	55.30	
			e	28	43.20	
LZH	16.39	14	Pd	23	15.00	0.2
	1.5s	0.52nm			2.4mb X	
Z	12s	17.90um			3.8Msz	
N	14s	31.00um				
E	12s	51.50um				
			pP	23	24.00	
			PP	23	27.50	
			S	26	11.00	
			sS	26	32.50	
			PcP	28	11.00	
XAN	16.40	31	P	23	10.00	-4.8X
E	10s	60.80um				
KLM	17.25	171	eP	23	30.00	4.5X
WHN	17.35	51	eP	23	27.50	0.8
	6.0s	2.10nm			2.4mb X	
Z	12s	13.90um			4.7MszX	
E	10s	33.20um				
			pP	23	33.00	

30d 18h

			S	26	44.00				Z	20s	13.70um		5.6Msz		HNR	66.93	110	eP	30	21.00	3.0
PSI	17.43	180	ePc	23	33.00	5	1X		N	18s	18.40um				RMQ	67.08	132	iPd	30	19.30	0.5
	0.8s		24.90nm			4.4mb			E	11s	8.00um					1.0s		76.00nm			5.8mb
KGM	18.63	166	ePd	23	48.00	5.3	X				S	30	21.00		SPC	67.59	316	eP	30	24.00	2.0
			e	29	24.30						sS	30	38.00		KRA	67.71	317	eP	30	21.00	-1.4
QZH	18.82	72	Pc	23	45.00	0.1		CN2	32.32	37	P	25	54.00	-0.2		1.1s		43.00nm			5.5mb
	5.0s		2.90nm			2.7mb	X		Z	15s	21.40um		6.0MszX					e	30	29.00	26kmX
			S	27	10.00				N	15s	15.20um				PSZ	67.95	315	eP	30	40.00	15.9X
GTA	19.13	2	Pd	23	40.00	-8.8	X				epP	25	59.00	17km	UPP	68.34	328	iP	30	25.70	-0.4
	6.0s		1.20nm			2.3mb	X				PP	27	02.00		CMS	68.37	138	eP	30	26.50	-0.3
	Z 16s		16.90um			4.1Msz	X				eS	31	00.00		SRO	69.02	315	iP	30	32.50	1.9
	E 11s		63.50um					MKS	32.41	139	ePd	25	53.50	-1.7				i	30	58.00	100kmX
			S	27	17.00			MDJ	35.21	39	eP	26	19.50	0.3	ZST	69.77	315	e(P)	30	36.00	0.8
HYB	19.41	265	iPc	23	53.30	1.0			Z	12s	15.30um		6.0MszX					e(S)	40	20.00	
	1.0s		160.00nm			5.2mb			E	11s	9.50um				KSP	69.94	318	ePd	30	36.00	-0.2
			e	24	29.50						ePP	27	36.00			1.2s		51.00nm			5.5mb
			iS	27	24.00						S	31	50.00					i	30	38.90	9km
BAG	20.97	97	eP	24	09.50	0.6		TSRJ	35.95	57	eP	26	23.70	-1.9	SOP	70.21	315	eP	30	40.00	2.1
	1.0s		176.00nm			5.4mb		IIDJ	37.46	58	eP	26	37.10	-1.3	HFS	70.28	328	eP	30	37.60	-0.5
			eS	28	04.00			MTMJ	37.65	56	P	26	40.90	0.9		1.4s		170.00nm			6.0mb
TIY	21.04	31	Pc	24	06.00	-3.4	X	MAIO	37.89	303	eP	26	42.00	0.0				LR	01	56.00	
	1.2s		0.27nm			2.5mb	X				eS	32	36.00		BRS	70.47	130	iPc	30	40.00	0.2
	Z 13s		36.30um			5.9Msz	X	MAT	37.95	56	eP	26	41.00	-1.4				i	30	43.50	11km
	N 11s		42.40um						1.0s		34.00nm		5.1mb					e	31	04.00	
	E 12s		38.90um						Z 20s		3.90um		5.2Msz					e	31	27.50	
			S	28	03.00						eS	32	29.00					e	35	19.00	
NDI	21.39	297	iPc	24	10.50	-2.4		CHJJ	38.45	57	P	26	46.00	-0.6				e	38	00.00	
	1.0s		142.00nm			5.3mb		GUMO	44.41	91	eP	27	39.80	4.0X				e	39	00.00	
			eS	28	04.00			GUA	44.47	91	eP	27	40.50	4.2X	PTJ	70.90	313	eP	30	37.70	-4.5X
NJ2	21.43	53	Pc	24	11.60	-1.7			Z 18s		3.30um		5.3Msz		PRU	71.17	317	P	30	43.50	-0.2
	E 10s		50.10um					MBL	45.98	152	eP	27	44.00	-4.1X		1.5s		44.60nm			5.4mb
GBA	21.51	256	Pd	24	13.20	-0.9			0.7s		43.00nm		5.5mb			Z 19s		2.90um			5.6Msz
	0.9s		55.70nm			5.0mb					e	27	47.00	10km		N 20s		6.30um			
KKM	21.99	128	ePc	24	20.20	1.1		KER	47.61	298	eP	28	02.00	0.9		E 18s		2.10um			
	1.0s		90.00nm			5.2mb		TAB	48.54	303	eP	28	10.00	1.7				e	31	28.00	186kmX
BTO	22.43	23	eP	24	23.00	-0.3					e	28	12.00	7km				eS	40	00.00	
	Z 12s		14.30um			5.6Msz	X	SLY	49.00	300	iP	28	14.00	2.3	NRA0	71.27	329	P	30	39.00	-5.0X
	N 13s		30.50um								ePP	30	08.50		NB2	71.38	329	P	30	43.80	-1.0
	E 12s		9.70um								eS	35	05.00			1.1s		81.60nm			5.8mb
			sP	24	28.00						ePS	35	20.00		VBY	71.45	313	eP	30	44.70	-0.8
			PP	24	52.00						eSS	39	00.00		COO	71.77	133	eP	30	49.00	1.4
			S	28	28.50						eSSS	40	40.00		IKZ	71.78	252	iPc	30	40.00	-8.1X
			sS	28	35.00			BHD	49.83	297	ePd	28	16.00	-2.1				i	31	08.00	110kmX
TIA	22.58	41	eP	24	23.80	-0.9					ePP	30	10.00		LJU	71.85	313	e(P)	30	47.00	-0.9
	Z 10s		22.00um			5.9Msz	X				eS	35	26.00		CLL	71.92	319	eP	30	47.00	-1.1
	E 10s		23.30um								ePS	35	47.00			1.3s		43.00nm			5.4mb
			S	28	25.00						eSS	39	15.00			Z 16s		2.00um			5.5Msz
SSE	22.81	57	Pd	24	28.00	1.0		MEKA	50.33	157	eP	28	22.00	0.0				e	31	06.00	71kmX
	5.0s		1.70nm			2.8mb	X	WB5	52.91	137	iPc	28	39.70	-1.9	KHC	71.93	316	iPd	30	47.80	-0.6X
	Z 12s		15.00um			5.7Msz	X	MUN	54.52	162	eP	28	53.00	-0.1		1.3s		18.00nm			5.0mb
	N 10s		4 90um					COOL	55.16	157	eP	28	57.00	-0.9		Z 20s		2.80um			5.5Msz
	E 10s		16.00um					ASPA	55.42	140	iPc	28	58.40	-1.5		N 23s		3.80um			
			pP	24	35.50	27kmX			0.7s		58.00nm		5.7mb			E 20s		1.90um			
			esP	24	39.00				Z 21s		4.66um		5.5Msz					e	31	09.00	80kmX
			i	26	10.00						LR	55	22.90					S	40	10.00	
			S	28	36.00			KDB	55.95	117	eP	29	04.00	0.2	BWA	71.95	139	eP	30	49.60	1.0
			sS	28	50.00			QIS	56.87	133	iPc	29	09.00	-1.4	CEY	71.98	313	e(P)	30	50.50	1.8
			i	29	40.00				0.5s		29.00nm		5.6mb		VOY	72.29	313	e(P)	30	49.40	-1.2
HHC	23.23	25	eP	24	31.60	0.4		BHL	57.11	298	P	29	14.00	1.9	TOO	72.33	143	eP	30	52.00	1.2
	Z 10s		22.20um			5.9Msz	X				S	37	16.00		CAN	72.89	139	eP	30	54.50	0.4
	N 10s		15.50um					FORR	58.05	150	iPd	29	17.80	-0.6	MOX	72.90	318	eP	30	53.00	-1.0
	E 10s		16.20um						0.4s		15.00nm		5.4mb			1.4s		41.00nm			5.3mb
			pP	24	37.00	19km		KAS	58.39	307	eP	29	19.50	-1.5		Z 18s		2.00um			5.4Msz
POO	23.64	270	iPd	24	37.30	2.1		BBTK	59.17	305	eP	29	24.50	-2.0		N 18s		2.40um			
	1.2s		253.13nm			5.7mb		BCK	60.99	302	eP	29	56.00	17.1X		E 18s		2.10um			
			iS	28	52.00			CTA	61.32	128	iP	29	40.70	-0.5	GRF	73.34	317	eP	30	55.80	-0.8
BOM	24.56	271	iP	24	45.00	0.9			1.0s		41.00nm		5.5mb			Z 19s		3.30um			5.6Msz
			iS	29	06.40						iS	38	04.00					e	30	58.90	10km
TSM	24.57	128	ePd	24	42.00	-2.3		HRT	61.50	306	eP	29	44.00	1.7	PTZ	74.68	248	iP	31	05.00	0.0
BJI	24.70	33	eP	24	46.00	0.8		ELL	61.58	302	eP	29	41.00	-2.1				i	32	18.50	321kmX
	9.0s		0.79nm			2.4mb	X	KHL	61.76	303	eP	29	42.00	-2.2	OSS	74.69	314	ePd	31	04.10	-0.6
	Z 20s		23.40um			5.7Msz		YER	62.85	302	eP	29	52.00	0.6	TNS	74.97	318	ePc	31	08.00	1.9
	N 10s		10.90um					VRI	63.42	312	eP	29	54.00	-1.0	SAX	75.09	315	ePc	31	06.00	-1.1
	E 10s		7.51um					MLR	63.99	312	eP	29	57.50	-1.4	VDL	75.19	314	ePc	31	07.00	-0.6
			eS	28	56.00			QLP	64.05	135	eP	29	59.00	-0.3	SLE	75.53	316	ePc	31	09.00	-0.3
DL2	27.05	42	eP	25	08.00	0.7		SUF	64.29	331	iP	30	00.20	-0.1	MZZ	75.55	252	iP	31	10.00	0.0
	Z 14s		9.90um			5.5Msz	X		1.0s		85.90nm		5.9mb					i	31	41.50	125kmX
	N 10s		11.40um					NAI	64.37	258	eP	30	11.00	9.1X				i	33	08.00	
	E 10s		8.40um					CMP	64.64	311	ePc	30	02.00	-1.0				i	34	54.00	
			S	29	42.00			SOD	64.66	336	iP	30	02.40	-0.3	WTS	75.55	320	eP	31	11.00	1.8
KSH	27.44	319	eP	25	12.20	1.2		NUR	64.83	328	iP	30	05.20	1.4		1.0s		18.00nm			5.1mb
	Z 18s		24.80um			5.8Msz			1.2s		80.90nm		5.8mb		ABH	75.62	318	eP	31	11.32	1.6
	N 10s		13.60um								e	38	44.00		TMA	75.68	314	ePd	31	09.50	-0.9
			S	29	56.00			KEV	64.90	339	eP	30	04.00	-0.2	VAI	75.81	314	P	31	07.60	-3.2X
DAV	29.01	113	eP	25	24.00	-1.2			0.8s		20.50nm		5.4mb		FEL	75.82	316	eP	31	10.14	-0.9
SNY	30.02	39	P	25	34.00	0.0					e	38	48.00		RUP	75.97	318	eP	31	11.03	-0.7
	5.0s		0.60nm			2.7mb	X	ADE	66.68	145	eP	30	16.60	0.5	CDF	76.16	317	eP	31	11.60	-1.3

1.0s 16.00nm 5.1mb
MMK 76.31 314 ePd 31 14.00 0.0
ENN 76.40 319 eP 31 12.00 -2.0
1.0s 11.00nm 4.9mb
e 32 07.50 234kmX
BSF 76.62 316 eP 31 14.20 -1.3
1.1s 14.60nm 5.0mb
DIX 76.68 314 ePc 31 16.10 0.0
HAU 76.86 316 eP 31 15.70 -1.1
1.1s 16.60nm 5.0mb
EMS 77.00 314 ePc 31 19.00 1.2
SBF 77.25 312 eP 31 17.80 -1.3
1.1s 29.30nm 5.3mb
LPG 77.28 314 eP 31 18.90 -0.6
1.1s 41.50nm 5.4mb
LSZ 77.87 249 iPc 31 23.20 0.3
i 31 42.30 70kmX
i 32 02.10
i 32 15.00
FRF 77.88 312 eP 31 21.30 -1.2
1.0s 16.00nm 5.1mb
LMR 78.04 312 eP 31 22.20 -1.1
1.2s 23.80nm 5.1mb
LRG 78.11 312 eP 31 23.10 -0.6
1.1s 29.30nm 5.3mb
DZM 78.26 119 iPc 31 25.40 0.5
IMA 78.53 23 eP 31 27.00 1.3
LOR 78.69 316 eP 31 25.90 -0.9
1.3s 32.40nm 5.2mb
LBF 78.70 316 eP 31 26.00 -0.9
1.3s 44.70nm 5.4mb
TTA 78.84 27 P 31 29.50 2.1
SMF 78.89 316 eP 31 26.90 -1.0
1.3s 50.50nm 5.4mb
SSF 78.98 316 eP 31 27.90 -0.5
1.1s 25.30nm 5.2mb
AVF 79.16 316 eP 31 28.50 -0.9
1.3s 39.70nm 5.3mb
KMZ 79.20 251 eP 31 35.00 4.8X
BCAO 79.40 271 iPd 31 30.50 -0.8
0.9s 31.00nm 5.3mb
id 32 06.20 143kmX
ic 33 33.50
BGF 79.57 316 eP 31 31.00 -0.6
BUL 79.59 244 iPd 31 33.50 1.2
i 31 40.20 21km
MAF 79.86 315 eP 31 32.90 -0.3
TCF 80.07 316 eP 31 34.00 -0.3
1.5s 73.10nm 5.4mb
EKA 80.18 325 Pd 31 35.60 0.9
1.2s 67.20nm 5.5mb
LSF 80.53 316 eP 31 36.20 -0.6
1.5s 52.20nm 5.3mb
CAF 80.61 314 eP 31 37.00 -0.2
1.1s 21.90nm 5.1mb
LDF 80.80 318 eP 31 37.70 -0.4
1.1s 24.40nm 5.1mb
RJF 80.85 315 eP 31 38.60 0.1
1.5s 94.00nm 5.6mb
MBC 80.95 9 eP 31 40.00 1.6
0.9s 11.00nm 4.9mb
FLN 80.96 319 eP 31 38.60 -0.4
1.4s 60.90nm 5.4mb
FBA 81.25 23 P 31 42.00 1.8
0.8s 5.17nm 4.6mb
LPO 81.28 314 eP 31 40.50 -0.2
1.0s 20.00nm 5.1mb
GRR 81.33 318 eP 31 40.50 -0.4
1.4s 52.20nm 5.4mb
LFF 81.49 315 eP 31 41.70 -0.1
1.1s 26.30nm 5.2mb
MFF 81.50 316 eP 31 41.70 -0.1
1.2s 23.80nm 5.1mb
LPF 81.57 318 eP 31 42.30 0.2
1.1s 43.90nm 5.4mb
PMR 82.32 27 eP 31 46.B0 1.0
0.8s 6.80nm 4.8mb
SLR 82.34 239 iPd 31 47.50 0.8
0.9s 37.82nm 5.5mb
Z 22s 5.56um 5.9Msz
KDC 82.58 31 P 31 46.00 -1.1
DMU 82.75 325 eP 31 52.40 4.3X
DLE 82.80 324 eP 31 52.40 4.0X
ETA 82.86 324 eP 31 52.60 3.9X
1.4s 196.00nm 6.1mb
ECP 83.16 323 eP 31 54.30 4.1X
1.1s 143.00nm 6.1mb

ECB 83.31 324 eP 31 52.60 1.5
1.2s 166.00nm 6 1mb
INK 83.91 17 eP 31 55.00 1.1
BFS 84.06 239 iPd 31 55.00 -0.5
VAL 85.42 324 iP 32 06.00 4.4X
BLF 85.50 237 eP 32 08.00 5.3X
EVIA 86.04 310 e(P) 32 08.80 3.6X
GUD 86.43 312 eP 32 08.10 1.0
HVD 86.69 236 e(P) 32 18.10 9.6X
TAF 87.45 306 iP 32 16.00 3.9X
EPLA 88.00 312 e(P) 32 18.80 4.2X
EHOR 88.35 310 e(P) 32 17.20 0.9
EJIF 89.07 309 e(P) 32 20.00 0.2
NKM 89.44 308 iP 32 23.00 1.5
EVAL 89.52 310 e(P) 32 25.80 3.9X
IFR 90.03 306 iPd 32 27.00 2.4
MSZ 90.09 138 eP 32 26.00 1.9
KRP 92.26 130 P 32 35.80 1.5
TIO 92.76 304 iP 32 39.50 2.4
GOL 116.23 21 PKP 38 15.00 6.4X
Z 18s 1.30um 5.6Msz
ALQ 120.09 24 e(PKP)38 12.00 -4.0X
Z 18s 1.29um 5.6Msz
LLAV 146.38 334 ePKP 39 04.00 -1.3
TOV 148.14 338 ePKP 39 11.80 3.8X
VAO 148.14 259 ePKP 39 22.20 14.4X
BAO 148.15 273 ePKP 39 12.10 4.0X
CEOS 148.30 335 ePKP 39 09.00 0.7
SDV 149.27 339 ePKP 39 13.30 3.3X
UPA 150.92 357 ePKP 39 15.00 2.8X
Z 20s 0.71um 5.5Msz
PPD 152.13 261 ePKP 39 16.80 3.0X
e 39 26.20
CCH 165.51 279 PKP 39 29.90 0.3
ZOBO 167.01 286 PKP 39 31.00 -0.2
i 40 38.00
LR 41 10.00
CNCB 167.05 283 PKP 39 33.00 1.8
i 40 39.00
LPB 167.07 284 PKP 39 34.00 3.0X
Z 22s 0.74um
i 40 41.00
SS 06 22.00
S.D. = 1.2 on 164 of 205 obs.

% SEP 30, 1989 18h 40m 19.04± 1.61s
44.292 N ±10.7km 11.161 E ±14.2km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)

MME 0.35 254 P 40 26.20 -0.1
eSg 40 32.00
BDI 0.47 241 P 40 27.90 -0.6
eSg 40 35.70
PII 0.73 219 P 40 33.90 0.5
eSg 40 46.20
BOB 1.31 292 P 40 43.80 0.4
eSg 41 02.30
CTI 1.79 11 P 40 50.10 -0.2
S.D. = 0.7 on 5 of 5 obs.

? SEP 30, 1989 21h 04m 03.58± 1.76s
44.861 N ±20.4km 150.735 E ±23.2km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
KURIL ISLANDS REGION (222)

KUSJ 4.69 250 P 05 13.20 -0.6
eS 06 01.30
ASAJ 5.84 266 P 05 32.20 2.1X
HOOJ 5.95 248 P 05 33.10 1.5
eS 06 35.70
MRRJ 7.42 254 P 05 53.10 0.9
eS 07 10.40
OFUJ 8.88 233 eP 06 11.90 -0.7
MAT 12.61 233 eP 07 03.00 -0.4
CN2 18.11 276 eP 08 13.00 -1.0
TIY 29.44 269 eP 10 06.60 0.2
LZH 36.30 273 P 11 05.50 -0.5
CD2 39.07 266 eP 11 29.50 0.3
INK 44.13 31 eP 12 15.00 4.9X
NB2 69.46 340 P 15 08.70 -1.5
0.6s 1.00nm 4.1mb
CLL 77.47 334 iP 15 57.70 0.8
KHC 79.19 333 eP 16 07.50 1.0
S.D. = 1.0 on 12 of 14 obs.

% SEP 30, 1989 22h 06m 07.37± 0.65s
42.634 N ± 4.9km 18.764 E ± 6.2km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.0 (TTG).

NKY 0.25 44 ePg 06 13.00 0.3
eSg 06 18.00
HCY 0.27 227 iPgd 06 13.20 0.1
iSg 06 18.50
BRY 0.31 329 iPgc 06 13.90 0.0
iSg 06 19.40
BDV 0.35 172 ePg 06 14.50 -0.2
eSg 06 20.50
TTG 0.42 119 ePg 06 16.00 0.1
eSg 06 22.00
PLE 0.84 33 ePg 06 23.30 -0.3
eSg 06 37.50
S.D. = 0.3 on 6 of 6 obs.

* SEP 30, 1989 22h 44m 39.72± 1.57s
0.383 S ± 6.9km 80.790 W ±16.4km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF ECUADOR (105)
Felt in Monobi Province.

GGP 2.20 85 Pd 45 16.10 -1.4
eS 45 46.00
RECU 2.24 97 iP 45 20.00 2.1
iS 45 48.00
OUR 2.27 85 eP 45 17.10 -1.2
S 45 40.50
COTA 2.55 74 P 45 22.40 0.1
eS 45 53.00
TUNG 2.56 114 P 45 21.70 -0.6
eS 45 51.00
CAYA 2.84 81 P 45 26.70 0.2
PSO 3.80 66 eP 45 31.50 -8.5X
PURC 5.18 59 ePd 46 01.14 1.5
SALC 5.28 51 eP 46 00.72 0.0
ANCC 5.51 45 eP 46 03.90 0.0
HOOC 5.65 47 eP 46 06.07 0.0
DIAC 5.86 51 eP 46 09.04 0.1
CLMC 5.98 45 eP 46 10.08 -0.6
UPA 9.39 8 eP 46 40.40 -17.7X
NNA 12.18 161 eP 47 37.00 0.7
0.6s 3.33nm 4.8mb
eS 49 47.50
HUA 12.79 155 e(P) 47 45.30 0.5
ZOBO 20.13 142 P 49 17.00 -0.5
Z 21s 0.19um 3.4Msz
eLR 55 16.00
LPB 20.35 143 P 49 22.80 3.2X
CNCB 20.63 143 P 49 22.00 -0.8
CCH 22.21 140 P 49 38.30 -0.1
S.D. = 0.9 on 17 of 20 obs.

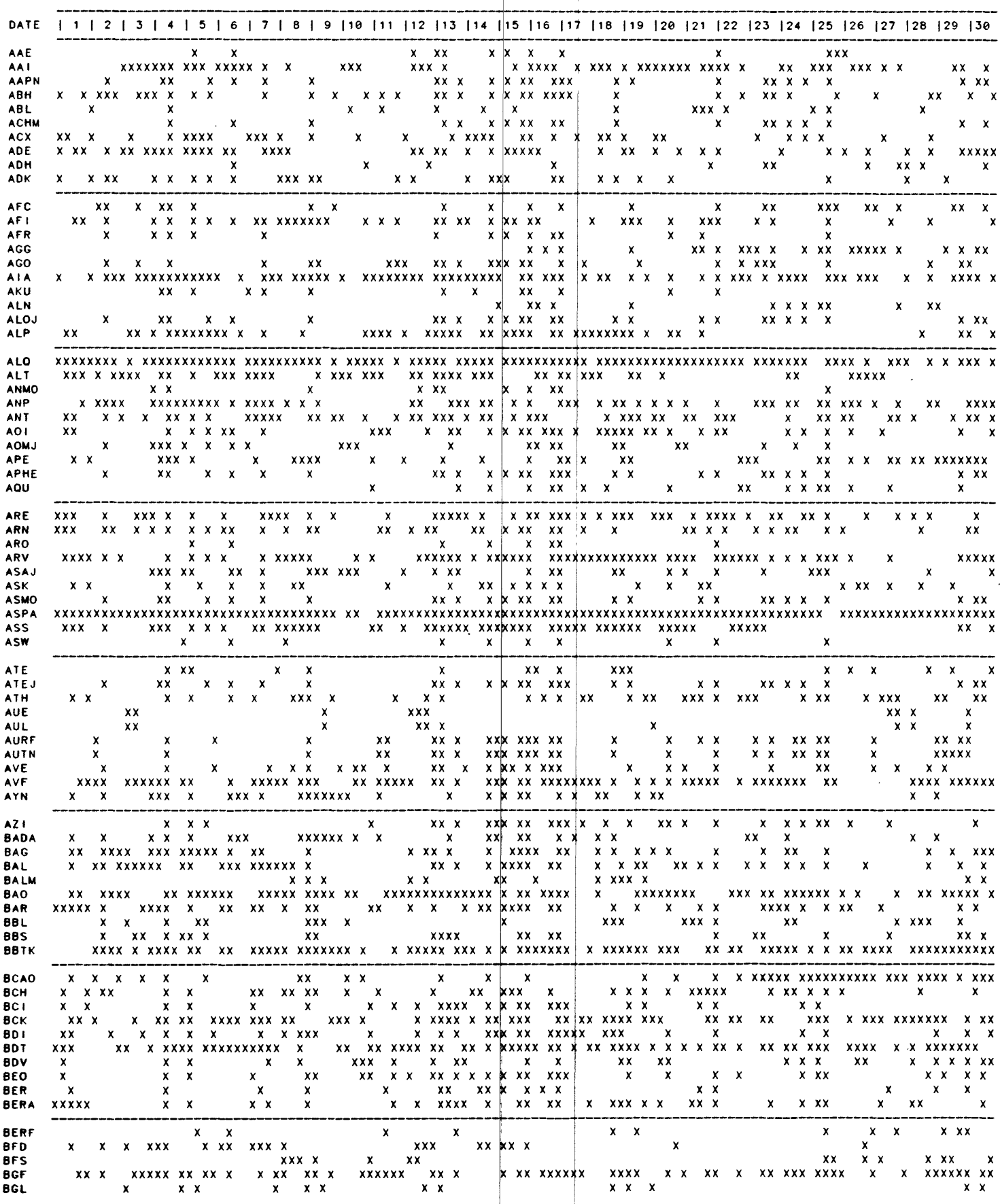
% SEP 30, 1989 23h 48m 46.72± 4.92s
43.374 N ±31.0km 0.607 W ±10.7km
DEPTH = 10.0km (geophysicist)
PYRENEES (378)
MD 1.0 (STR).

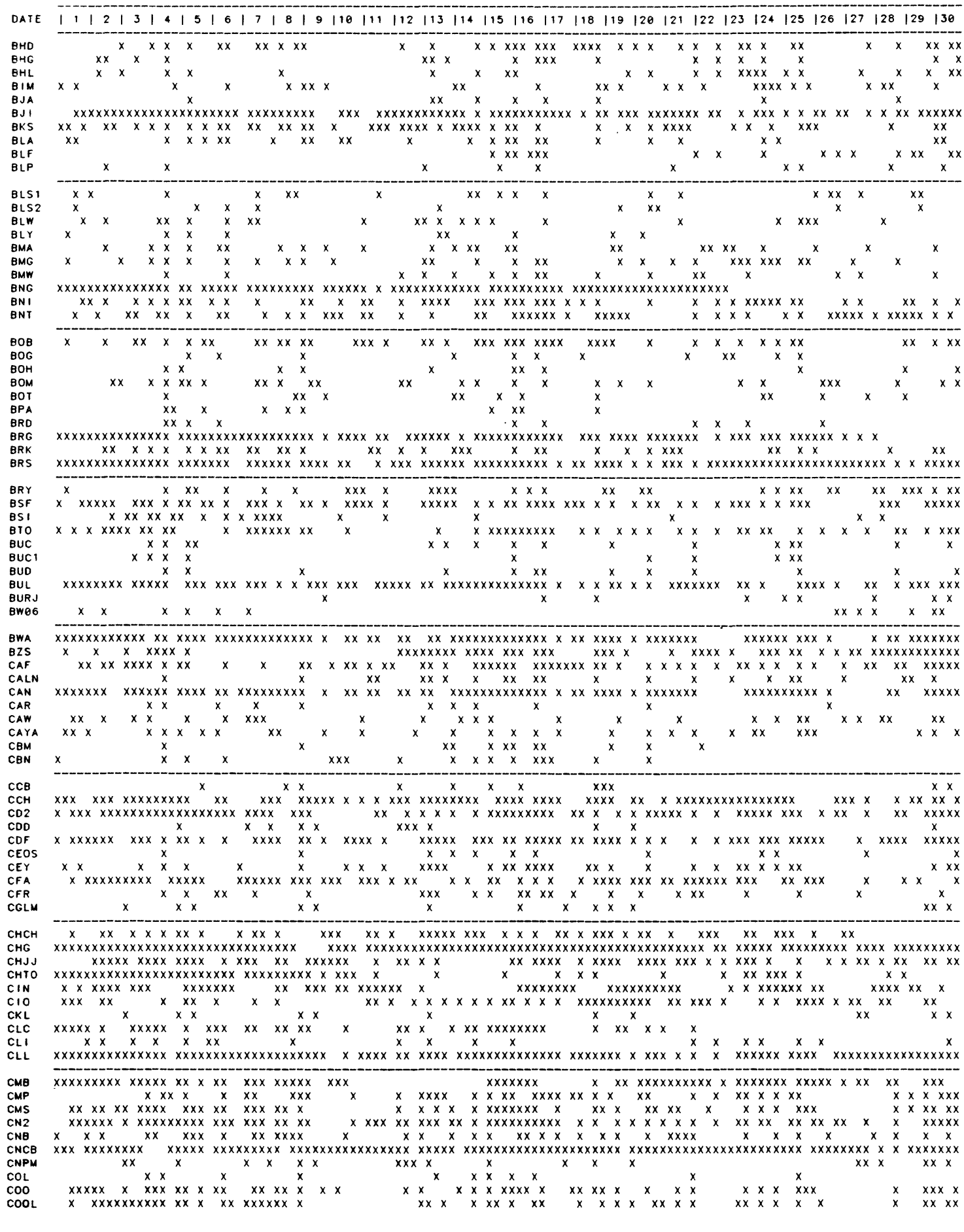
OGE 0.23 154 Pg 48 51.45 -0.2
MADF 0.28 214 Pg 48 52.42 -0.1
Sg 48 58.29
ATE 0.30 194 Pg 48 52.88 0.0
Sg 48 58.41
ESCF 0.30 175 Pg 48 53.26 0.3
Sg 48 57.58
ELYF 0.35 234 Pg 48 54.24 0.3
ISSF 0.37 202 Pg 48 54.36 0.0
Sg 49 01.46
BOH 0.40 228 Pg 48 54.67 -0.3
S.D. = 0.3 on 7 of 7 obs.

STATION DATA REPORT FOR SEPTEMBER, 1989

1333 stations reported 55949 reading arrival groups

X = data received for this 6-hour time period

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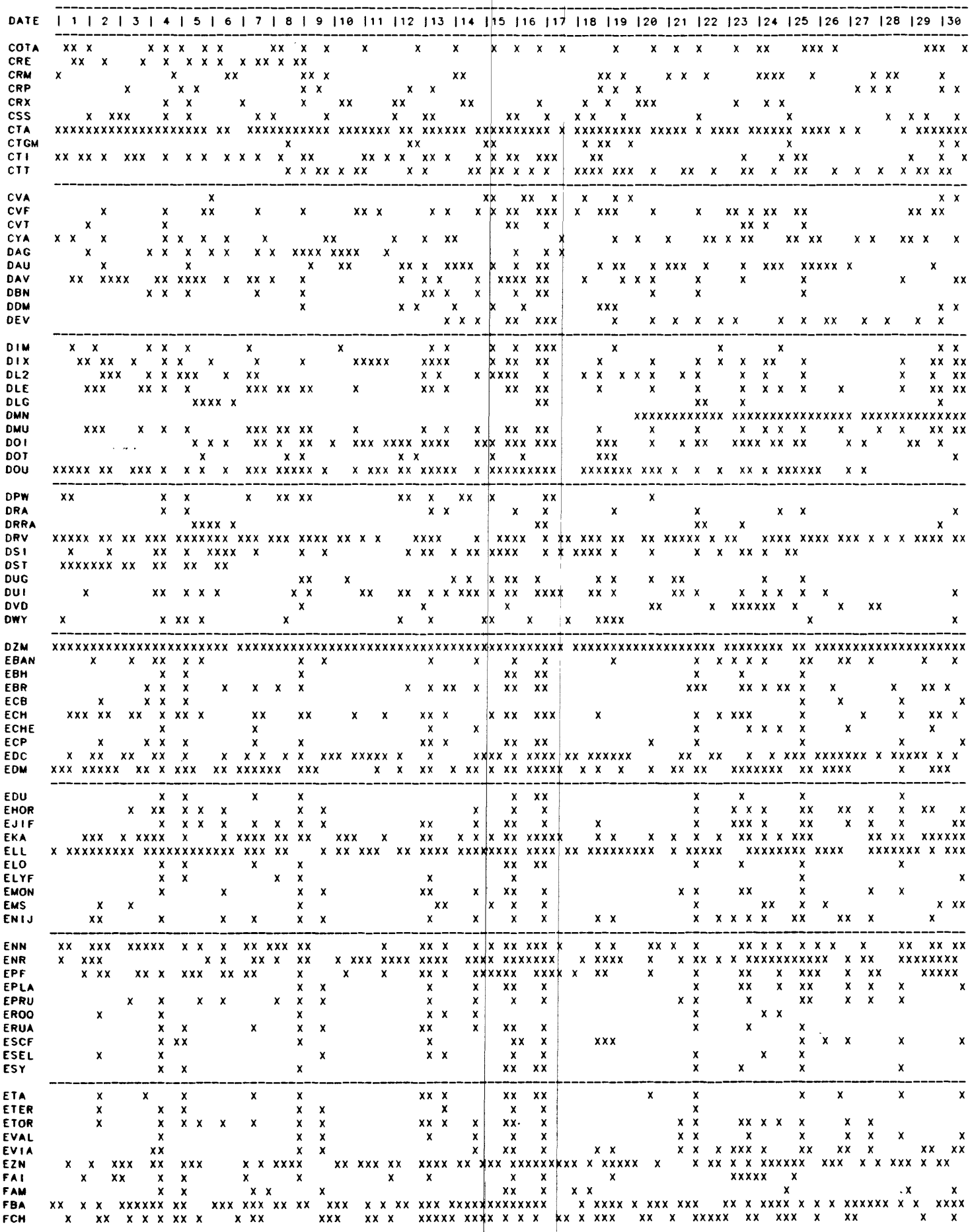
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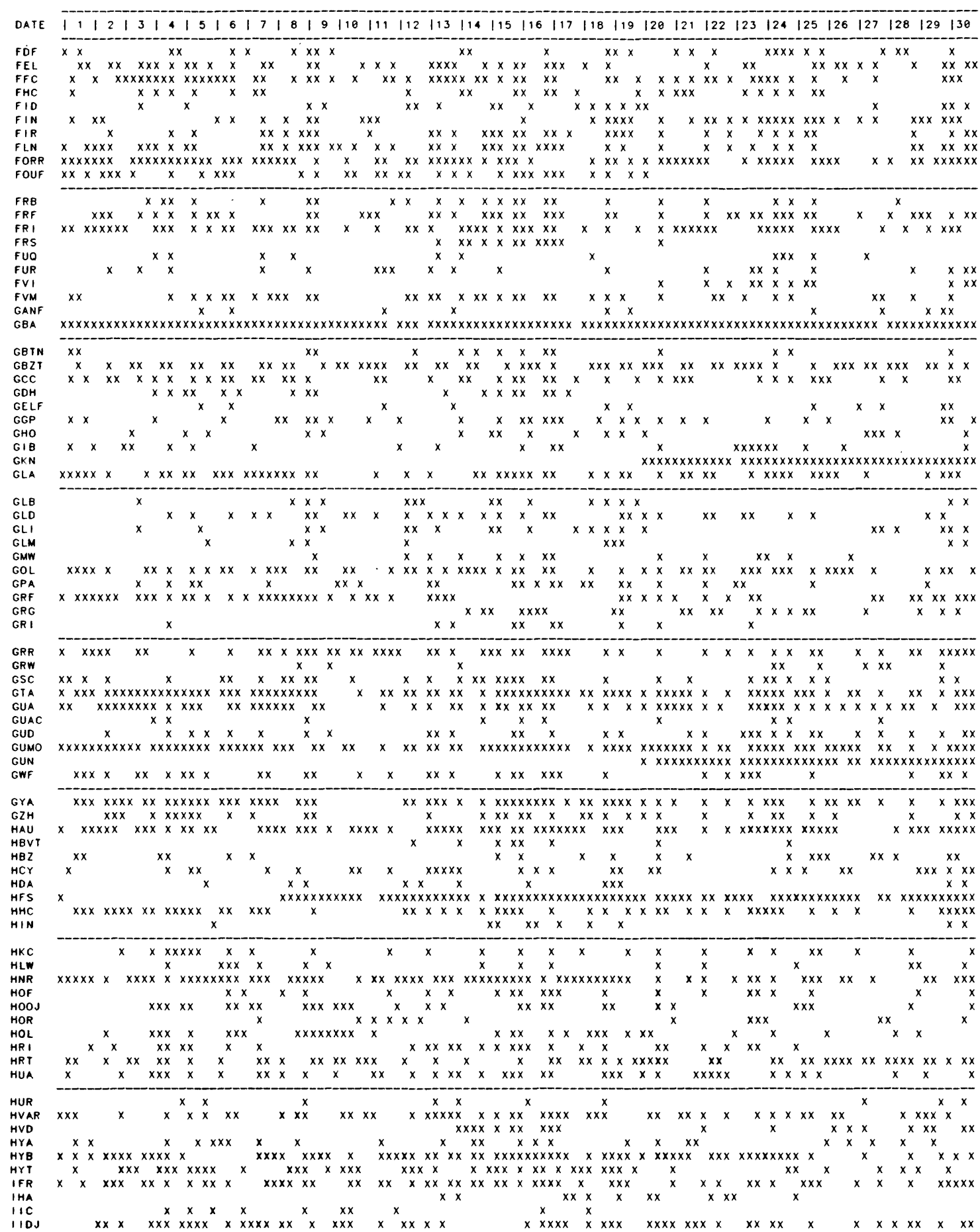
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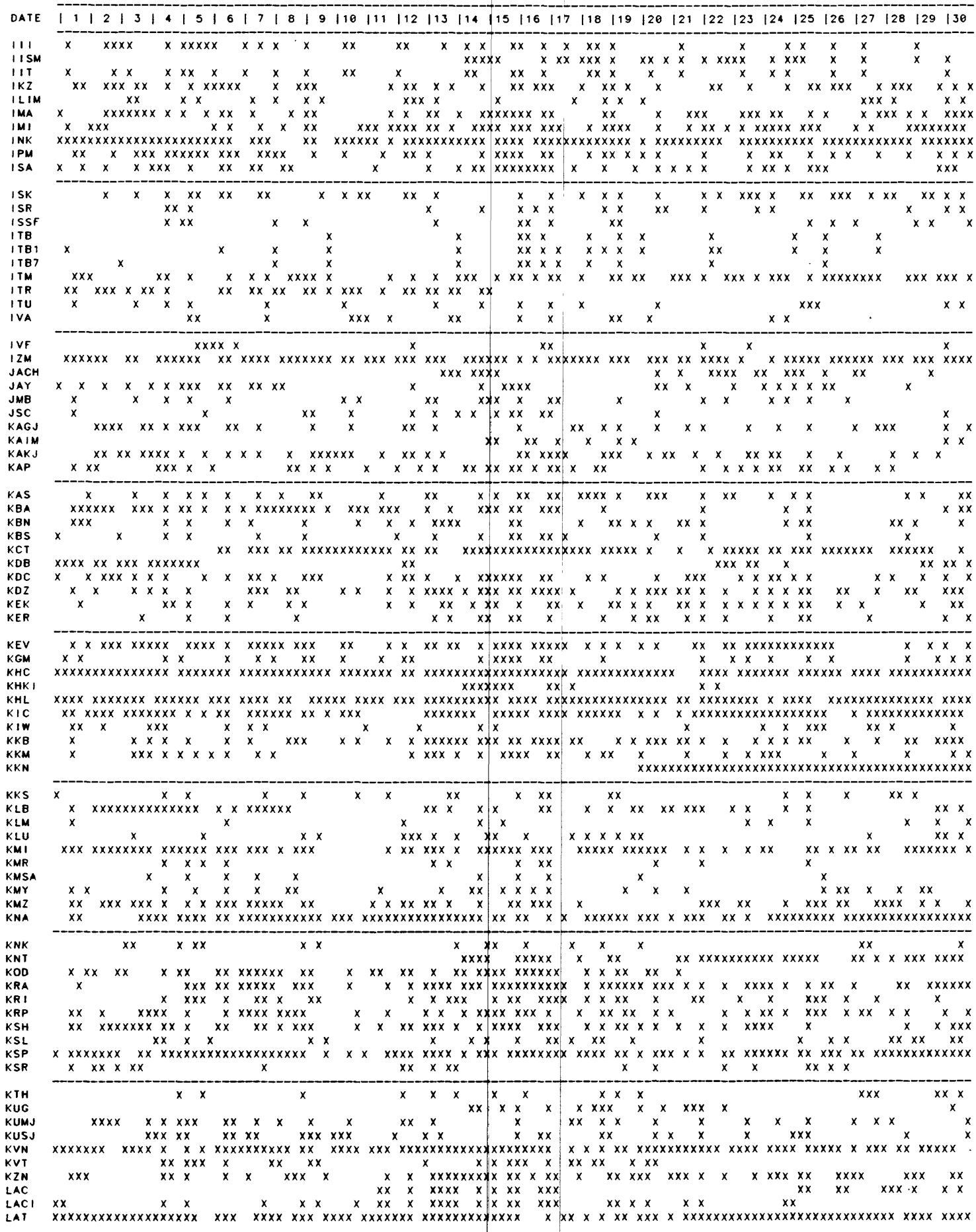
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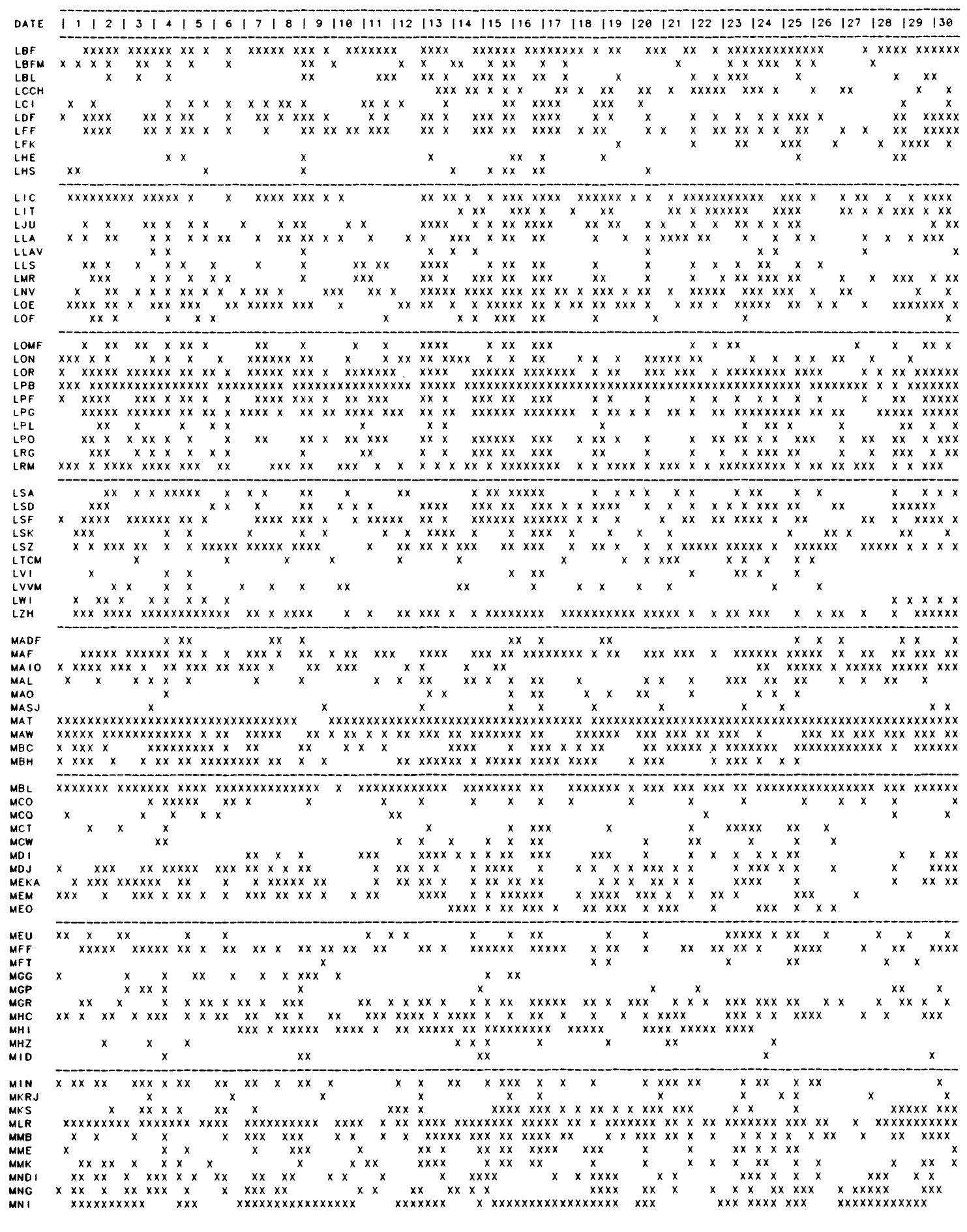
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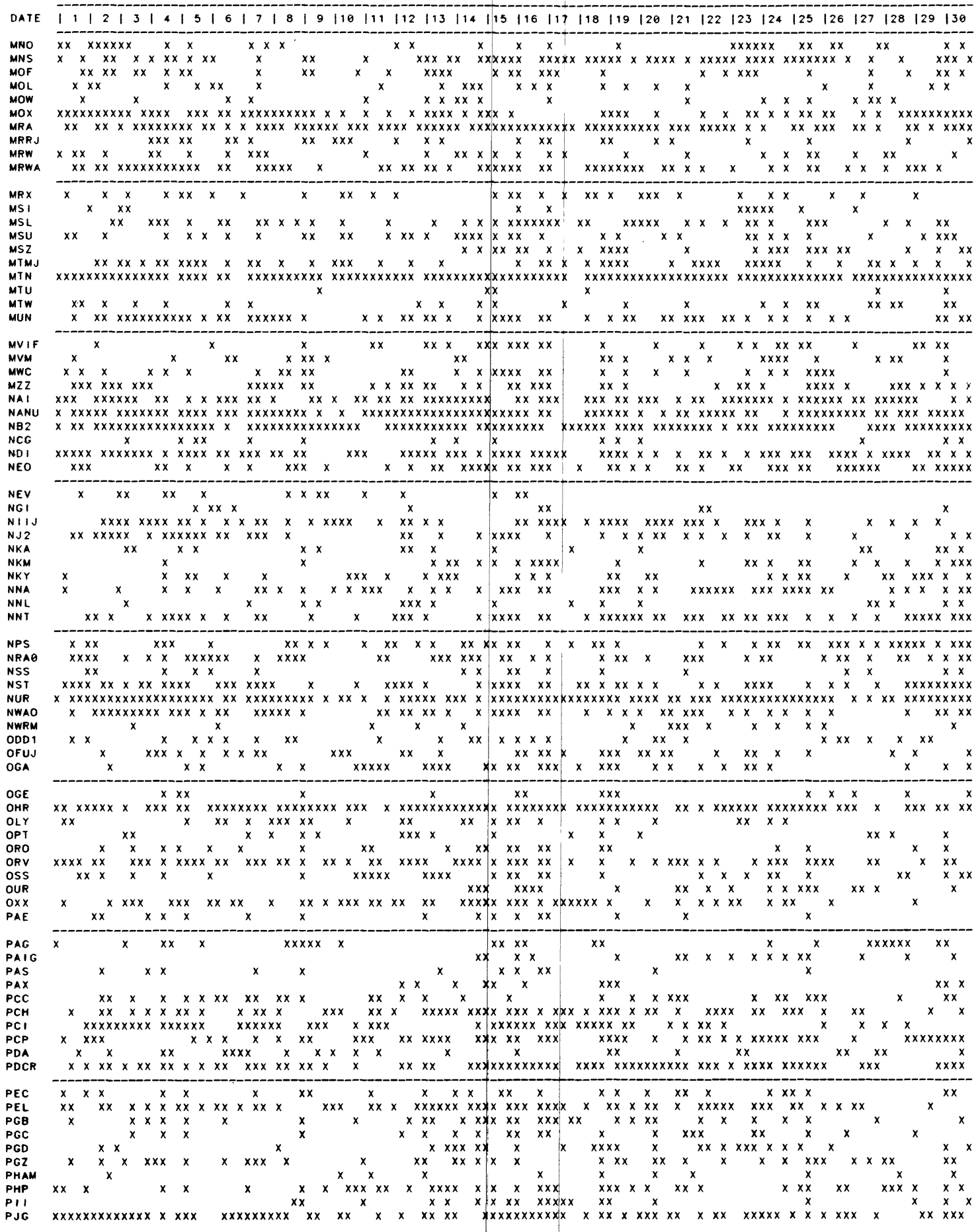
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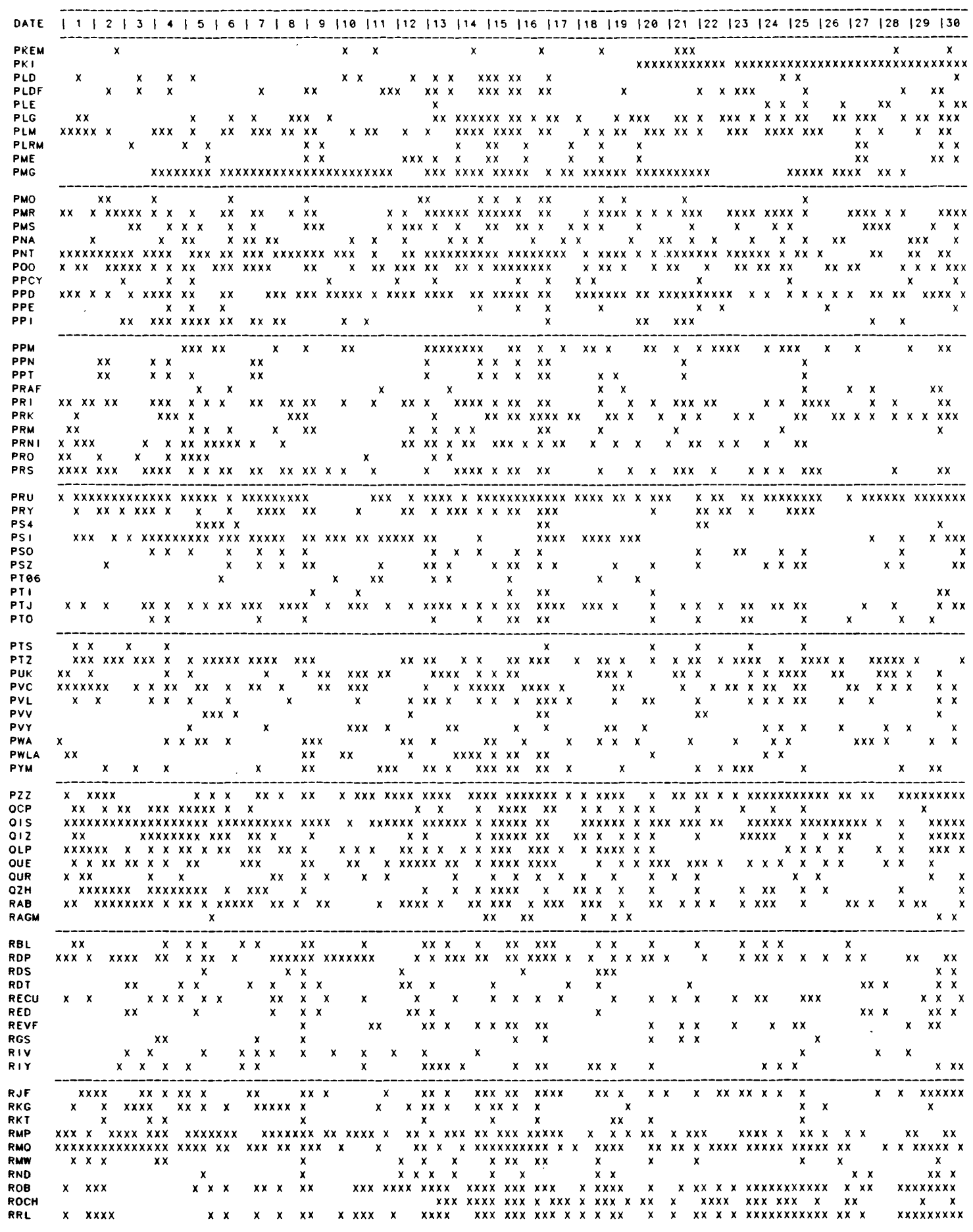
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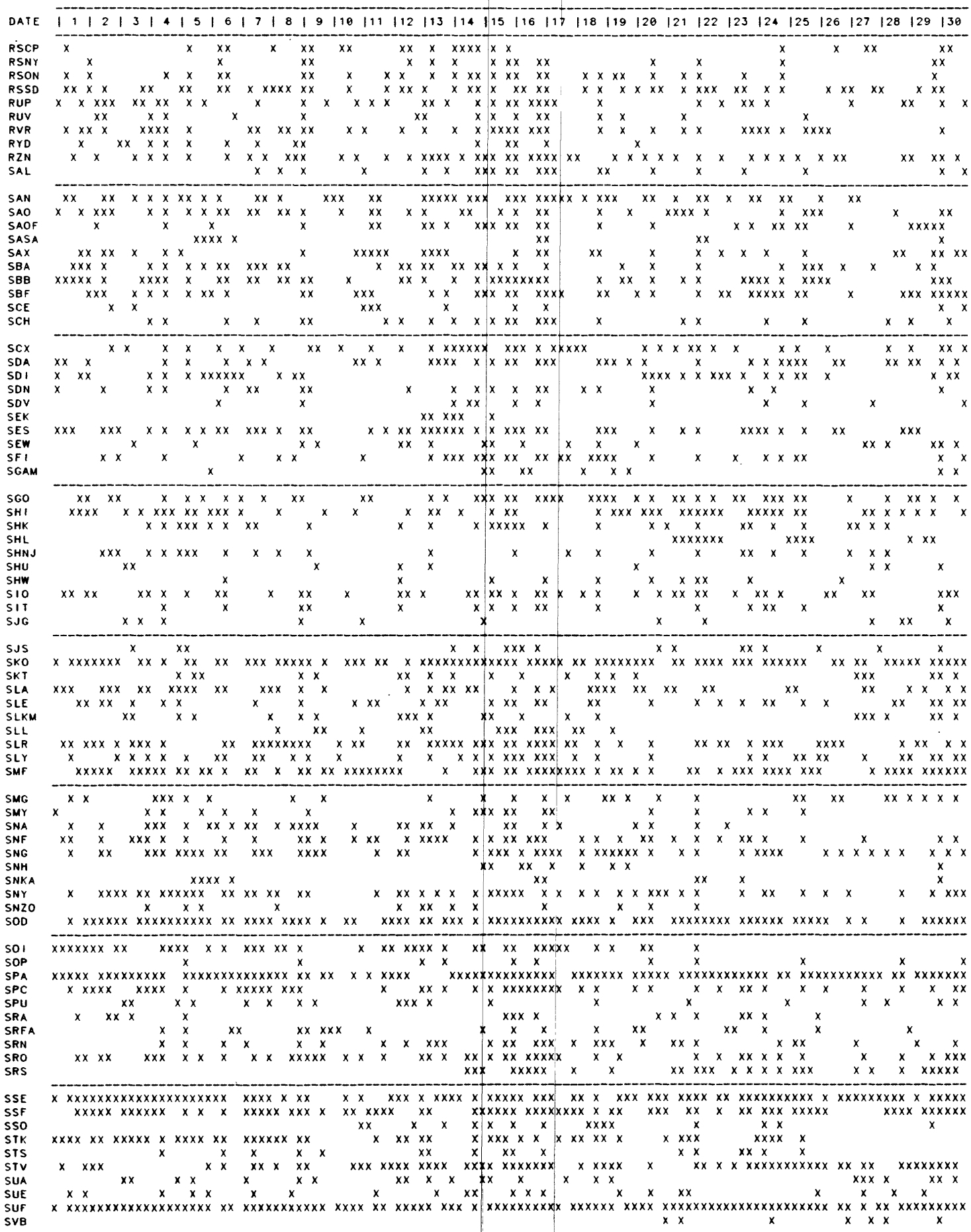
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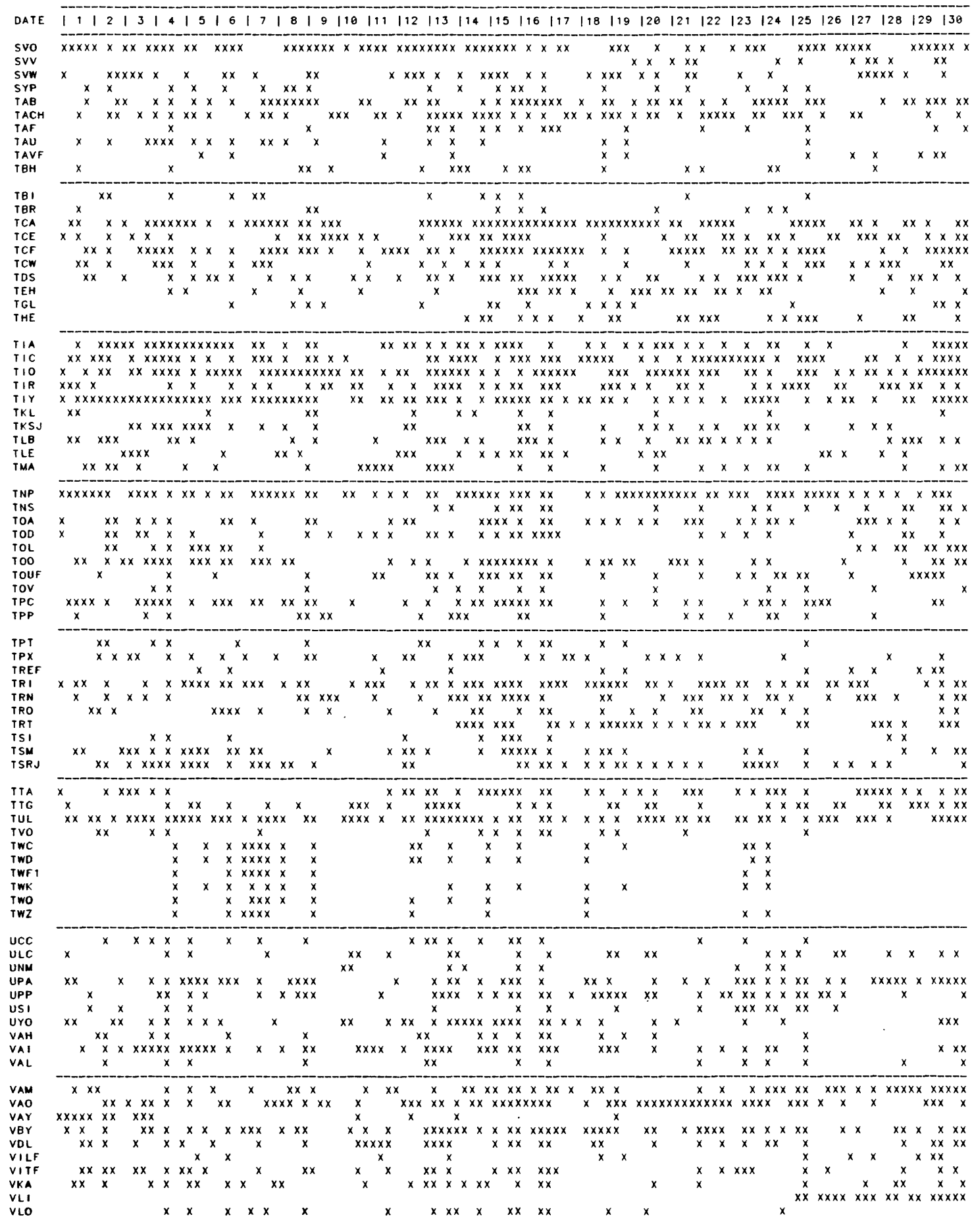
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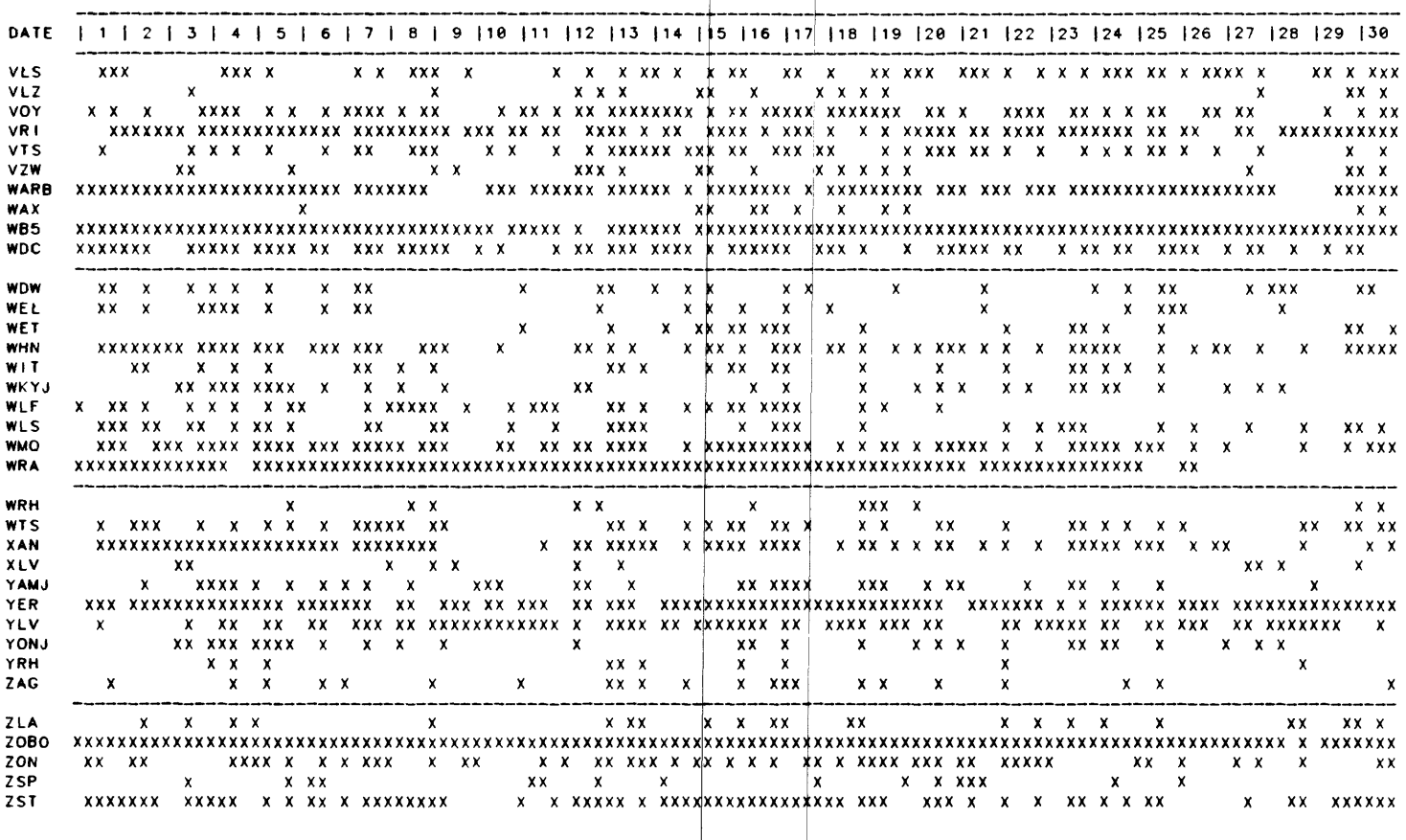

The following stations each reported less than 10 readings:

ABHA	ACI	ACO	ACR	ACU	ADI	AFAR	AGAL	AGMR	AGX	AIK	AJI	AKSR	ALB	ALJ	AMAN	AMR	ANCC
ANG	ANTO	APA	APM	APO	APR	APW	ASH	ASR	ATA	ATN	ATZ	AUC	AUI	AUW	AVN	BAK	BALA
BBB	BCPM	BDF	BDH	BEE	BEI	BGA	BGB	BGMT	BIB	BIR	BKB2	BKJ	BKR	BLH	BLN	BLS3	BLT
BMK	BMUT	BNH	BRF	BRL	BRLK	BRN	BRT	BRW	BTB	BTG	BUS	BUT	BVA	CBB	CCM	CCW	CDFW
CDH1	CEI	CER	CGL	CHO	CIS	CLMC	CMW	CNBA	CNIL	COB	COP	CPD	CPE	CPW	CRO	CRT	CSB
CTAO	CTFE	CUM	CUMC	CUT	CVD	CVL	CVO	CVVD	CYK	CZM	DAF	DEG	DEL	DHN	DHR	DIAC	DLA
DLM	DMMT	DMW	DNZ	DOR	DPMT	DSH	DWM	EAB	EALH	EAU	EBL	EBZ	ECRI	EDB	EDI	EDR	ELC
ELF	ELT	EMEL	EMM	ERC	ERK	ESD	ESK	ETB	EVV	EZAM	FCV	FG2	FG3	FG4	FISA	FKS	FL2
FLAG	FMT	FMW	FOC	FRU	FUG	FUN	GAC	GAZ	GBR	GBZ	GCG	GDR	GGC	GHW	GIBL	GL2	GLK
GLR	GMB	GMN	GMO	GMR	GRB1	GRC	GRC1	GRC4	GRO	GROR	GRS	GSH	GSM	GT2	GUAN	GULW	GVN
GWY	GZR	HAC	HATZ	HBF	HDU	HDW	HIA	HIR	HITZ	HJJ	HLBJ	HMT	HNB	HOBC	HOGG	HON	HOOC
HQN	HRV	HRY	HSHJ	HSR	HTW	HUG	HUTZ	HYF	IAS	ICR	IKP	ILT	IMW	INY	IRK	ITG	IXG
JAT	JAU	JBO	JCK	JCR	JCW	JLK	JMI	JNE	JNW	JON	KAG	KBB	KBR	KBT	KETZ	KFNJ	KHI
KIP	KKG	KLI	KMG	KMOR	KNIM	KOB	KOC	KOF	KOSW	KOT	KRNA	KRV	KSI	KTD	KUL	KUPT	KYO
LCCM	LCH	LCR2	LDN	LGAR	LHG	LIJA	LIO	LIS	LMW	LNO	LNOR	LPI	LPR	LPS	LRDO	LRS	LST
LVP	MAJO	MAK	MBET	MBU	MBW	MCA	MCK	MCNL	MCY	MEMT	MEW	MEX	MGM	MILT	MIM	MIT	MIY
MKT	MLI	MMG	MML	MOH	MOMI	MOO	MORO	MRT	MSJ	MTA	MTMW	MYK	MYT	MZP	MZX	NA2	NAB
NAV	NCA	NDF	NEA	NEZ	NGO	NLO	NOH	NOP	NPN	NRN	NZJ	OBC	OBH	OBN	OBO	OC2	OHW
OJEN	OLLA	ONA	ONR	OOW	OPA	OSA	OSD	OSG	OSH	OSP	OTR	OZB	PAA	PANV	PBX	PCA	PCG
PCY	PET	PFH	PFO	PGO	PGW	PHC	PIG	PLAT	PLH	PNJ	POF	PORP	POW	PPK	PRIN	PRN	PSG2
PSN	PT02	PT03	PT08	PT10	PTN	PTT	PUL	PURC	PYA	PZI	QASM	QCR	QCS	OSM	QUTJ	RAO	RAR
RATZ	RBA	RDG	REC	REY	RFI	RPW	RSM	RSP	RVC	RVW	SALC	SALJ	SAM	SAP	SBG	SCP	SDG
SEN	SFTN	SGB	SGE	SGH	SGS	SHB	SHE	SHMJ	SHR	SIM	SKI	SLB	SLP	SMW	SOA	SOF	SOG
SOG2	SONG	SOSW	SPW	SQF	SRQ	SSR	SSS	SSV	STD	STR	STU	STW	SUM	SUR	SVA	SVP	SXM
TAC	TAIF	TAS	TATO	TBT	TCO	TDD	TDH	TDL	TER	THI	TIE	TIK	TIM	TKS	TLG	TMBR	TMO
TMW	TNE	TNO	TOK	TPE	TPI	TPM	TPR	TPZ	TTH	TUNG	TUTZ	TWG	UDD	UTS	UTU	UZH	VBEM
VDB	VFP	VGB	VGZ	VHO	VIE	VIPM	VLL	VLMM	VSG	VTHM	VUN	VVI	WAJH	WAR	WHC	WHH	WIN
WKY	WLA	WMZ	WPB	WPW	WRN	YAH	YBT	YEL	YKA	YKU	YMT3	YMT5	YOK	YSS	YUP	ZNT	