

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EARTHQUAKE DATA REPORT
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by

U.S. Geological Survey
NATIONAL EARTHQUAKE INFORMATION CENTER¹

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¹USGS, Denver, Colorado

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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 Bayesian 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_s). 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 $20^\circ \leq \Delta \leq 160^\circ$, 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 $\Delta \leq 5^\circ$. 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.

The pulse distortion of seismic phases that have ray paths that touch a single internal caustic (e.g., PP, pPP, SS and PKPab) can be corrected using the method of Hilbert transformation described by Choy and Richards (1975). Arrival times that are read from the phases that are corrected for pulse distortion are identified by the symbol H preceding the phase identifier (e.g., HPP, HpPP, HSS and HP'ab).

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 ($^{\circ}$) appears as "°". Also note that certain phase codes are abbreviated because the data base and file format limit the length of the codes to five characters. Thus, PKP is occasionally abbreviated to P' and the numbers 2 and 3 are sometimes used to represent the AB (AC for SKKS) and BC branches of core phases, respectively. In some codes, R is used to represent repetition; for example, pRPPK represents the phase pPKPPK and RPPG represents PgPgPg.

References

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- Choy, George L. and P. G. Richards (1975), Pulse Distortion and Hilbert Transformation in Multiply Reflected and Refracted Body Waves, *Bull. Seis. Soc. Am.*, **65**, pp. 55-70.
- 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.

? DEC 01, 1990 00h 01m 51.29± 2.32s
49.110 N ± 22.4km 7.053 E ± 24.9km
DEPTH = 10.0km (geophysicist)
GERMANY (543)
ML 2.7 (BNS).

ENN 1.81 337 iPnc 02 22.20 -0.5
0.6s 22.00nm
eSn 02 41.50
e 02 45.50
BNS 1.86 2 iPgc 02 24.10 0.7
0.5s 73.00nm
iSg 02 44.90
ePg 02 47.30 10.6X
e(Sn) 03 15.40
eSg 03 20.80
SOTA 3.36 123 iPnc 02 45.40 0.4
i 02 46.10
iSn 03 42.70
KHC 4.29 87 ePg 02 57.50 -0.6
eSg 03 47.70
S.D. = 1.1 on 4 of 5 obs.

DEC 01, 1990 00h 31m 28.74± 0.52s
3.633 S ± 6.7km 135.598 E ± 8.8km
DEPTH = 33.0km (normol)
WEST IRIAN REGION (196)

JAY 5.22 78 ePd 32 46.50 -0.1
MTN 10 16 205 eP 33 56.60 1.1
is 35 46.80
KNA 13 79 209 eP 34 43.00 -1.3
0.4s 21 00nm 5.3mb
eS 37 13.00
WB5 16 19 184 eP 35 12.00 -3.5X
i 35 20.50
eS 38 04.90
OIS 17 27 167 e(P) 35 29.00 -0.1
eS 38 30.00
ASPA 19.98 185 iPc 36 01.80 0.4
0.5s 87.80nm 5.3mb
Z 18s 0.40um
eS 39 34.70
LZH 49.42 326 eP 40 18.50 0.7
1.0s 25.00nm 5.2mb
GUN 57.20 307 P 41 15.42 -0.4
PKI 57.43 306 P 41 17.92 0.5
KKN 57.63 306 P 41 18.50 -0.1
DMN 57.70 306 P 41 19.16 0.0
GKN 58.24 306 P 41 22.06 -0.7
CNGB 149.09 132 PKP 51 19.50 6.9X
LPB 149.18 131 (PKP) 51 29.00 16.4X
ZOBO 149.32 131 PKP 51 19.90 6.9X
S.D. = 0.7 on 11 of 15 obs.

% DEC 01, 1990 00h 52m 40.99± 1.14s
40.726 N ± 8.0km 27.532 E ± 8.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

EDC 0.46 146 ePg 52 50.00 -0.3
BNT 0.47 141 iPg 52 49.70 -0.9
CTT 0.80 58 iPg 52 56.00 -0.5
iSg 53 07.00
ISK 1.21 73 iPn 53 03.60 0.2
EZN 1.29 226 iPn 53 04.70 -0.2
DST 1.40 143 iPn 53 07.80 1.2
IZI 1.53 104 ePn 53 09.10 0.7
HRT 1.62 86 iPn 53 09.60 -0.2
S.D. = 0.8 on 8 of 8 obs.

& DEC 01, 1990 01h 38m 41.00s
32.183 N 115.083 W
DEPTH = 6.0km (geophysicist)
CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 2.5 (PAS). MD 2.7
(ECX).

LMX 0.13 125 iPc 38 43.90 0.2
S 38 46.30
CPBX 0.30 321 ePd 38 47.50 0.4
ECBX 0.71 178 iPd 38 54.00 -1.2
S 39 03.80
GLA 0.89 14 eP 38 57.00 -1.5
SPX 1.18 196 eP 39 01.40 -2.2
CBX 1.35 276 ePd 39 04.60 -1.7

ENX 1.38 258 ePd 39 06.04 -0.7
S 39 23.80
PBX 1.46 253 ePd 39 07.00 -1.0
S 39 26.50
PLM 1.90 308 eP 39 15.50 1.1
9 obs. associated

* DEC 01, 1990 02h 01m 44.15± 1.86s
15.384 N ± 15.1km 147.035 E ± 16.5km
DEPTH = 119.7 ± 17.0 km
4.1mb (4 obs.)

MARIANA ISLANDS REGION (215)

GUA 2.76 229 eP 02 27.90 0.0
eS 03 03.80
PJG 2.76 230 eP 02 28.30 0.4
MAT 22.49 341 (P) 06 33.00 -1.3
0.8s 11.94nm 4.3mb
WB5 37.19 200 eP 08 50.90 5.5X
LZH 43.59 306 P 09 37.00 -1.3
FORR 49.44 202 iPc 10 22.30 -1.6
0.3s 13 00nm 5 3mb X
GUN 57.68 293 P 11 25.60 0.6
PKI 58.11 293 P 11 28.34 0.3
KKN 58.22 293 P 11 28.80 0.2
DMN 58.38 293 P 11 30.44 0.7
GKN 58.78 294 P 11 33.08 0.6
GBA 67.14 278 P 12 34.00 6.5X
0.4s 0.90nm 4 0mb
MBC 76.03 14 eP 13 20 50 1 1
1.0s 4.00nm 4.2mb
MAIO 79.12 305 eP 13 43 00 5 7X
YKA 80.31 28 eP 13 41.40 -1 5
1.0s 2.30nm 3 9mb
SES 85.70 39 eP 14 12 00 1 2
KIC 144.66 306 PKP 21 11 40 2 2X
ZOBO 146.19 96 PKP 21 13 00 0 6
LPB 146.23 97 (PKP) 21 30 00 17 8X
CNGB 146.35 97 PKP 21 17 00 4 4X
S.D. = 1.1 on 14 of 20 obs.

DEC 01, 1990 02h 21m 25.56± 1 01s
44.223 N ± 8.2km 8.218 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.7 (GEN).

FIN 0.02 207 P 21 27.53 0.0
S 21 28.42
ROB 0.26 286 P 21 31.14 0 1
S 21 34.70
PCP 0.40 36 P 21 33.63 0.0
S 21 38.38
ENR 0.57 271 P 21 36.82 -0.4
S 21 44.54
STV 0.64 272 P 21 38.75 0.2
BHB 0.92 312 P 21 43.28 0.1
S.D. = 0.3 on 6 of 6 obs.

* DEC 01, 1990 02h 44m 22.47± 0.59s
5.778 S ± 13.2km 154.346 E ± 8.2km
DEPTH = 33.0km (normol)
SOLOMON ISLANDS (193)

SVO 6.37 122 eP 45 56.00 -0.6
eS 47 18.00
HNR 6.63 124 P 46 01.00 0.8
eS 47 21.00
PMG 7.99 243 eP 46 20.00 0.8
DZM 19.98 145 iPc 48 49.90 -5.3X
WB5 23.95 232 eP 49 33.80 -1.1
FORR 35.06 221 eP 51 21.50 7.0X
0.4s 14.00nm 5.2mb
GUN 73.94 301 P 55 57.42 0.3
PKI 74.25 301 P 55 58.78 -0.2
KKN 74.42 301 P 55 59.80 0.0
DMN 74.52 301 P 56 00.62 0.2
GKN 75.02 301 P 56 03.06 -0.1
S.D. = 0.7 on 9 of 11 obs.

& DEC 01, 1990 04h 31m 40.53s
63.971 N 147.518 W
DEPTH = 4.4km
3.3mb (1 obs.)
CENTRAL ALASKA (1)
<AGS-P>.

HDA 0.50 29 iP 31 50.25 -0.3
WRH 0.56 334 iP 31 51.40 -0.4
MCK 0.67 250 eP 31 53.71 -0.3
eS 32 03.33
CCB 0.69 350 iP 31 53.57 -0.7
RND 0.82 227 iP 31 56.17 -0.7
BWN 0.88 284 iP 31 56.26 -1.7
NEA 0.91 313 iP 31 57.83 -0.7
FBA 0.94 353 iPd 31 58.30 -0.7
THY 0.96 124 eP 31 58.64 -0.8
eS 32 12.06

GLM 1.02 3 iP 31 59.74 -0.7
eS 32 13.54
MDM 1.04 343 iP 32 00.13 -0.6
TRF 1.34 248 eP 32 05.70 -0.2
PAX 1.36 137 eP 32 05.52 -0.8
eS 32 25.27
HUR 1.38 225 eP 32 06.26 -0.2
eS 32 25.60
DOT 1.57 100 iP 32 07.39 -1.8
eS 32 29.95
SDG 1.70 147 eP 32 11.76 0.6
eS 32 34.24

TOA 1.97 161 ePd 32 16.50 1.4
CUT 2.01 220 iP 32 15.48 0.0
TMW 2.12 106 eP 32 17.35 0.2
eS 32 46.57
SCM 2.15 178 eP 32 18.11 0.5
TZL 2.16 153 eP 32 19.68 2.0
GHO 2.30 197 eP 32 19.20 -0.6
PLRM 2.50 198 eP 32 22.11 -0.4
PMR 2.50 198 eP 32 22.00 -0.6
PWA 2.57 206 eP 32 23.47 -0.1
KLU 2.59 163 eP 32 25.45 1.5
KNK 2.60 190 eP 32 24.46 0.4
SKT 2.71 224 eP 32 25.08 -0.5
PMS 2.89 200 eP 32 29.24 1.0
VLZ 2.90 169 eP 32 29.21 0.9
VZW 2.96 171 eP 32 29.80 0.7
GLB 3.06 144 iP 32 32.66 2.1
GLI 3.11 176 eP 32 32.22 1.0
IMA 3.36 312 ePc 32 32.40 -2.5
SPU 3.50 219 eP 32 37.47 0.7
BGL 3.53 222 eP 32 37.19 -0.1
CVA 3.54 166 eP 32 37.93 0.7
DWY 3.56 85 P 32 34.70 -2.9
KNIM 3.64 182 eP 32 39.06 0.3
SGAM 3.65 162 eP 32 39.45 0.6
SLKM 3.70 201 eP 32 41.28 1.6
TGL 3.90 144 eP 32 44.70 2.2
LTI 3.95 182 eP 32 44.73 1.6
TTA 3.95 259 eP 32 40.50 -2.8
HMT 3.95 156 eP 32 43.75 0.5
RDT 4.10 216 eP 32 46.38 1.0
SVW 4.72 236 eP 33 06.40 12.2
HYT 5.62 120 P 33 09.00 2.0
INK 7.14 46 P 33 25.00 -3.2
YKA 14.81 81 eP 35 07.40 -4.8
0.8s 0.80nm 3.3mb
50 obs. associated

DEC 01, 1990 04h 34m 54.26± 0.65s
39.635 N ± 5.2km 23.730 E ± 5.5km
DEPTH = 10.6 ± 3.6 km

AEGEAN SEA (365)
ML 2.9 (THE).

PAIG 0.29 352 iPc 35 00.93 0.5
eS 35 06.00
NEO 0.51 230 ePb 35 04.50 -0.1
OUR 0.73 15 ePd 35 08.01 -0.4
eS 35 19.48
PLG 0.77 344 eP 35 09.00 -0.2
LIT 1.06 296 ePc 35 14.60 0.4
THE 1.16 330 ePd 35 16.20 0.4
eS 35 34.20
SOH 1.22 346 ePc 35 16.92 0.0
AGG 1.25 241 ePc 35 17.56 0.2
SRS 1.48 356 ePd 35 20.44 -0.5
KZN 1.65 295 ePb 35 23.60 0.2
KNT 1.65 338 ePd 35 24.10 0.8
eS 35 50.12
GRG 1.67 323 ePc 35 23.72 0.1
eS 35 49.22
VAY 1.90 333 ePn 35 31.60 4.7X
MMB 1.95 360 iPd 35 27.00 -0.7
EZN 2.01 84 ePn 35 28.30 -0.2

01d 04h

ALN 2.17 54 ePd 35 32.12 1.2
 RZN 2.18 20 eP 35 30.00 -1.2
 KKB 2.28 348 iPc 35 32.00 -0.5
 KDZ 2.39 32 iP 35 20.00 -14.0X
 PLD 2.58 16 eP 35 43.00 6.4X
 PGB 2.93 6 eP 35 44.00 2.3
 VTS 2.98 353 eP 35 43.00 0.5
 PTJ 8.48 320 eP 37 09.00 9.1X

S.D. = 0.8 on 19 of 23 obs.

DEC 01, 1990 05h 42m 40.67 ± 0.31s
 43.470 N ± 3.3km 17.495 E ± 2.6km
 DEPTH = 13.3 ± 2.5 km
 3.9mb (1 obs.)

YUGOSLAVIA (383)
 ML 4.2 (THE), 3.8 (ROM), 3.2
 (LJU), MD 4.0 (TRI), 3.8 (TTG).

HVAR 0.82 249 iPg 42 54.40 -1.8
 iSg 43 08.50
 BRY 0.96 126 ePg 42 56.00 -2.6
 iSg 43 11.00
 HCY 1.26 144 ePg 43 01.70 -2.1
 iSg 43 22.00
 NKY 1.28 120 ePg 43 03.00 -1.2
 eSg 43 23.00
 PLE 1.39 95 ePg 43 04.50 -1.3
 iSg 43 24.30
 BDV 1.54 140 ePg 43 07.00 -0.8
 eSg 43 30.50
 TTG 1.66 128 ePn 43 09.70 0.2
 eSn 43 34.20
 IVA 1.86 108 ePn 43 13.30 0.8
 eSn 43 40.00
 ULC 1.98 139 ePn 43 15.50 1.2
 eSn 43 43.20
 PVY 2.02 115 ePn 43 16.80 2.0
 eSn 43 46.40
 BCI 2.19 119 iPn 43 20.30 3.1X
 PUK 2.27 128 iPnc 43 20.50 2.2
 BEO 2.52 57 iPn 43 20.20 -1.7
 iPg 43 27.50
 iSn 43 53.50
 ZAG 2.58 336 iPg 43 27.50 4.7X
 iSn 43 53.20
 iSg 44 01.20
 VBY 2.59 323 iPnc 43 25.30 2.4
 iSg 44 08.60
 PTJ 2.67 336 ePn 43 24.60 0.5
 eS 43 56.10
 TIR 2.75 140 ePn 43 26.50 1.2
 AOI 2.83 273 ePn 43 29.00 2.6X
 DUI 2.88 232 P 43 28.70 1.6
 RIY 2.91 311 ePn 43 30.80 3.4X
 iSg 44 12.30
 ALP 2.95 258 ePn 43 29.39 1.3
 iSn 44 07.35
 SSO 2.98 268 e(Pn) 43 33.15 4.8X
 LCI 3.15 174 P 43 31.50 0.6
 CEY 3.15 317 e(Pn) 43 34.20 3.3X
 eSn 44 15.00
 CID 3.19 267 ePn 43 32.28 0.8
 iSn 44 35.18
 AQU 3.21 251 P 43 32.20 0.5
 SDI 3.24 238 P 43 33.00 0.8
 eSn 44 10.00
 SKO 3.27 116 ePn 43 33.50 0.9
 i 43 36.00
 i 44 12.00
 iS 44 25.00
 ARV 3.31 272 P 43 34.00 0.8
 LJU 3.33 322 e(Pn) 43 34.00 0.6
 eSg 44 31.20
 AZI 3.34 245 P 43 34.50 1.0
 eSn 44 13.40
 RFI 3.39 231 P 43 35.68 1.5
 OHR 3.40 133 iPn 43 35.20 0.7
 iSg 44 20.40
 TRI 3.48 311 P 43 37.60 2.1
 ORI 3.49 193 P 43 36.00 0.3
 ASS 3.55 265 P 43 37.70 1.1
 eSn 44 19.00
 VOY 3.62 316 ePn 43 39.30 1.6
 eSg 44 40.00
 MGR 3.63 204 P 43 37.00 -0.7
 eSn 44 19.10
 BZS 3.65 53 ePc 43 35.50 -2.4

TPE 3.69 149 ePn 43 36.00 -2.5
 MNS 3.70 255 P 43 39.30 0.6
 MMN 3.75 198 P 43 40.20 0.8
 eSg 44 24.00
 KBN 3.77 138 ePn 43 44.00 4.4X
 CSI 3.80 194 P 43 39.00 -1.1
 TDS 3.91 193 P 43 41.20 -0.4
 RDP 3.92 246 P 43 42.50 0.7
 ROI 3.96 190 P 43 41.60 -0.7
 CRE 4.03 274 P 43 43.00 -0.5
 SFI 4.12 278 P 43 46.00 1.5
 BUD 4.16 14 e(P) 43 44.00 -1.1
 VTS 4.28 100 eP 43 48.00 0.9
 VAY 4.33 118 iPn 43 48.00 0.4
 SRO 4.38 7 iPn 43 48.90 0.6
 i 44 04.10
 i 44 46.40
 VVI 4.40 307 P 43 49.10 0.5
 KKB 4.42 109 eP 43 51.00 2.1
 GRG 4.43 123 ePd 43 50.02 1.0
 IGT 4.47 151 ePd 43 47.70 -1.9
 eS 44 37.62
 KZN 4.49 133 eP 43 50.00 0.0
 FVI 4.57 315 P 43 51.70 0.7
 eSn 44 42.50
 KNT 4.62 118 ePd 43 51.38 -0.4
 KBA 4.65 322 iPnc 43 52.60 0.3
 iSn 44 52.40
 i 45 20.10
 iSg 45 25.10
 GRI 4.72 190 P 43 52.40 -0.8
 ZST 4.73 357 ePn 43 50.90 -2.4
 VKA 4.87 351 e(Pn) 44 00.00 4.8X
 iSn 44 52.70
 CTI 4.90 304 P 43 55.60 -0.1
 eSn 44 50.40
 THE 4.96 123 iPd 43 58.06 1.5
 MMB 4.97 110 eP 43 59.00 2.2
 PGB 4.98 98 iP 43 58.00 1.2
 LIT 5.03 130 ePd 43 56.94 -0.6
 SOH 5.10 119 ePc 43 59.82 1.3
 SRS 5.10 115 ePc 43 58.02 -0.5
 BHG 5.34 324 iPc 44 03.90 1.9
 PLG 5.41 123 eP 44 04.00 1.0
 SAL 5.42 296 P 44 03.00 0.0
 PLD 5.48 102 eP 44 06.00 2.1
 ATN 5.52 197 P 44 03.70 -0.8
 EVR 5.59 143 eP 44 05.00 -0.6
 RZN 5.62 106 eP 44 08.00 1.9
 WATA 5.68 315 iPnc 44 07.90 1.0
 iSn 45 14.40
 OGA 5.70 309 ePn 44 08.30 1.1
 PVL 5.72 90 eP 44 06.00 -1.3
 AGG 5.75 139 ePc 44 06.54 -1.1
 eS 45 10.42
 SQTA 5.80 312 iPnc 44 09.80 1.3
 i 44 12.20
 iSn 45 18.00
 PAIG 5.83 125 ePd 44 07.78 -0.9
 BOB 5.94 285 P 44 10.50 0.1
 BMR 5.95 43 ePd 44 39.00 28.6X
 NEO 5.99 132 eP 44 10.00 -1.0
 MDI 6.01 295 P 44 09.80 -1.5
 eSn 45 16.00
 KDZ 6.13 105 iP 44 09.00 -4.0X
 KHC 6.28 336 Pn 44 16.50 1.4
 Pg 44 19.50
 Sg 45 26.20
 PGF 6.30 264 Pn 44 17.10 1.6
 MLR 6.37 69 eP 44 24.00 7.4X
 VAI 6.67 294 P 44 19.00 -1.6
 CKI 6.72 281 P 44 20.00 -1.4
 PRU 6.83 344 Pn 44 30.40 7.6X
 e 45 19.60
 Sg 45 57.50
 SBF 7.31 277 Pn 44 30.00 0.4
 KSP 7.42 354 eP 44 58.00 26.8X
 GRF 7.57 327 e(P) 44 32.00 -1.3
 e(S) 45 59.00
 BRG 7.79 343 e(P) 45 02.00 25.7X
 e 46 25.00
 e 47 02.00
 e 47 02.00
 HOF 7.85 333 ePn 44 08.30 -28.9X
 LFG 7.95 288 Pn 44 38.20 -0.6
 Sn 46 05.30
 LPL 7.96 289 Pn 44 38.50 -0.5
 Sn 46 06.00

FEL 7.97 307 eP 44 36.67 -2.3
 MOX 8.22 333 eP 44 43.00 0.7
 CDF 8.66 308 Pn 44 47.80 -0.8
 BSF 8.67 304 Pn 44 47.80 -0.9
 Sn 46 22.00
 HAU 9.02 304 Pn 44 51.80 -1.6
 Sn 46 30.00
 LBF 10.16 295 Pn 45 06.00 -3.2X
 SMF 10.17 293 Pn 45 07.40 -1.9
 LOR 10.32 296 Pn 45 08.80 -2.5
 BGF 10.82 292 Pn 45 16.60 -1.6
 YKA 67.63 338 eP 53 36.40 -2.4
 0.8s 0.70nm 3.9mb

S.D. = 1.4 on 96 of 112 obs.

* DEC 01, 1990 05h 51m 54.28 ± 1.62s
 35.764 N ± 16.2km 16.509 W ± 14.8km
 DEPTH = 10.0km (geophysicist)
 3.5mb (1 obs.)

NORTH ATLANTIC OCEAN (402)

AVE 7.90 106 ePn 53 52.00 0.1
 i 53 54.50
 iSn 55 17.00
 i 55 20.50
 EVAL 8.05 74 eP 54 02.00 7.9X
 eS 55 21.00
 TIO 9.11 119 iPn 54 09.50 0.6
 iS 55 43.00
 iSg 55 45.00
 IFR 9.64 100 iPn 54 15.50 -0.8
 iSn 55 59.00
 EBAN 10.46 73 eP 54 27.00 -0.3
 GUD 10.87 60 eP 54 34.70 1.6
 eS 56 30.90
 ETOR 12.42 62 eP 54 53.00 -1.1
 eS 57 14.00
 ECP 17.93 21 eP 56 16.50 11.4X
 YKA 62.47 329 eP 02 19.60 -0.1
 0.6s 0.20nm 3.5mb
 S.D. = 1.1 on 7 of 9 obs.

& DEC 01, 1990 07h 37m 32.50s
 32.033 N 114.933 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 2.5 (PAS).

GLA 1.02 5 eP 37 50.00 -2.2
 PLM 2.09 310 eP 38 11.00 2.3
 2 obs. associated

& DEC 01, 1990 07h 39m 40.40s -
 32.083 N 114.967 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 3.0 (PAS), 3.1
 (ECX).

LMX 0.03 12 iPc 39 42.66 0.9
 S 39 44.72
 CPBX 0.44 320 ePc 39 49.56 0.3
 S 39 56.36
 ECBX 0.61 187 iPc 39 51.89 -0.8
 S 40 00.50
 RDX 0.85 260 eP 39 57.20 0.0
 S 40 08.74
 GLA 0.97 7 eP 39 57.40 -1.9
 SPX 1.12 202 ePc 40 01.39 -0.6
 S 40 16.36
 CBX 1.46 280 eP 40 07.80 0.4
 S 40 26.94
 ENX 1.46 263 eP 40 07.94 0.7
 S 40 27.00
 PBX 1.53 258 ePc 40 09.28 0.9
 S 40 29.89
 PLM 2.04 309 eP 40 12.50 -3.3
 10 obs. associated

* DEC 01, 1990 07h 41m 18.44 ± 0.94s
 45.962 N ± 9.4km 14.242 E ± 6.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.1 (LJU).

LJU 0.22 68 iPgc 41 22.60 -0.6
 iSg 41 25.90

VOY 0.25 286 ePg 41 22.90 -0.9
 CEY 0.26 150 e(Pg) 41 24.50 0.6
 TRI 0.42 233 P 41 26.50 -0.5
 VBY 0.85 122 ePg 41 39.50 4.8X
 FVI 1.19 302 P 41 42.10 1.4
 S.D. = 1.4 on 5 of 6 obs.

& DEC 01, 1990 07h 46m 56.13s
 63.463 N 150.811 W
 DEPTH = 16.8km
 CENTRAL ALASKA (1)
 <AGS-P>.

TRF 0.24 93 iP 47 01.63 -0.2
 HUR 0.72 132 eP 47 09.92 0.0
 MCK 0.88 71 eP 47 12.93 0.3
 RND 0.88 93 eP 47 12.73 0.1
 BWN 0.93 39 eP 47 14.36 1.0
 CUT 1.09 167 iP 47 15.89 -0.3
 NEA 1.35 34 eP 47 20.18 -0.1
 SKT 1.52 193 eP 47 22.23 -0.5
 WRH 1.57 49 eP 47 22.38 -0.9
 CCB 1.78 47 eP 47 24.97 -1.3
 MDM 1.88 36 eP 47 26.31 -1.5
 GHO 1.91 152 eP 47 27.96 -0.4
 HDA 1.95 59 eP 47 30.92 2.1
 FBA 1.96 41 eP 47 28.15 -0.8
 PLRM 2.03 157 iP 47 30.12 0.1
 GLM 2.14 43 eP 47 31.55 -0.1
 NCG 2.16 197 eP 47 30.66 -1.3
 CGLM 2.23 195 eP 47 33.35 0.3
 PMS 2.30 165 iP 47 34.86 0.9
 BGL 2.33 199 eP 47 34.29 -0.1
 KNK 2.33 151 eP 47 35.02 0.7
 SPU 2.36 195 eP 47 34.64 -0.2
 PAX 2.47 99 eP 47 37.78 1.4
 TOA 2.53 121 eP 47 38.24 1.0
 SDG 2.58 109 iP 47 38.90 1.0
 SLKM 2.98 174 eP 47 44.46 1.0
 KLU 3.01 129 eP 47 45.38 1.4
 27 obs. associated

? DEC 01, 1990 07h 49m 22.68 ± 1.05s
 40.464 N ± 21.8km 28.913 E ± 6.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.0 (ISK).

YLV 0.37 74 iPg 49 30.00 -0.2
 IZI 0.45 106 ePg 49 32.00 0.2
 KCT 0.48 243 ePg 49 32.00 -0.4
 BNT 0.77 262 ePg 49 38.00 0.4
 S.D. = 0.6 on 4 of 4 obs.

& DEC 01, 1990 07h 54m 44.60s
 32.033 N 114.950 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 3.0 (PAS). MD 3.2 (ECX).

ECBX 0.57 189 eP 54 57.00 1.1
 GLA 1.02 6 eP 55 02.40 -1.9
 SPX 1.08 204 eP 55 06.00 0.5
 ENX 1.47 265 eP 55 12.60 1.0
 CBX 1.48 281 eP 55 12.50 0.6
 PBX 1.54 260 eP 55 13.80 1.2
 PLM 2.08 310 eP 55 23.30 2.7
 7 obs. associated

* DEC 01, 1990 07h 59m 50.18 ± 1.24s
 27.042 N ± 10.7km 35.077 E ± 13.2km
 DEPTH = 10.0km (geophysicist)
 WESTERN ARABIAN PENINSULA (555)

BADA 1.48 357 iPd 00 16.70 -0.1
 WJH 1.59 123 iPc 00 18.20 -0.1
 AYN 2.00 24 iPc 00 25.30 1.0
 HQL 2.22 359 iPd 00 27.30 -0.3
 MBH 2.72 356 iPc 00 34.60 -0.2
 MKT 3.89 1 eP 00 51.00 -0.4
 KOT 4.06 316 ePn 00 54.00 0.4
 JVI 4.88 3 eP 01 05.00 -0.4
 S.D. = 0.6 on 8 of 8 obs.

DEC 01, 1990 08h 17m 24.93 ± 0.68s
 40.548 N ± 8.5km 29.197 E ± 5.4km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.6 (ISK).

YLV 0.14 82 iPg 17 27.40 -0.8
 GBZT 0.31 38 iPg 17 34.10 2.8X
 HRT 0.45 53 iPg 17 33.40 -0.7
 CTT 0.83 316 iPg 17 42.00 0.9
 GPA 0.89 107 ePn 17 43.40 1.4
 BNT 0.99 259 iPn 17 43.40 -0.4
 EDC 1.04 259 ePn 17 44.30 -0.2
 DST 1.04 205 ePn 17 44.30 -0.3
 S.D. = 1.0 on 7 of 8 obs.

& DEC 01, 1990 08h 46m 44.20s
 32.067 N 114.950 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 2.8 (PAS). MD 3.1 (ECX).

LMX 0.04 348 iPc 46 47.00 1.3
 ECBX 0.60 188 iPd 46 55.80 -0.4
 GLA 0.99 6 eP 47 01.40 -1.9
 SPX 1.11 203 eP 47 04.80 -0.8
 ENX 1.47 263 eP 47 11.30 0.1
 CBX 1.47 280 eP 47 11.00 -0.4
 PBX 1.54 258 ePc 47 12.40 0.1
 PLM 2.06 309 eP 47 22.00 2.1
 8 obs. associated

& DEC 01, 1990 08h 48m 05.30s
 32.033 N 114.917 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 2.7 (PAS).

GLA 1.02 4 e(P) 48 23.00 -2.0
 1 obs. associated

& DEC 01, 1990 09h 07m 24.20s
 32.050 N 114.933 W
 DEPTH = 6.0km (geophysicist)
 W. ARIZ. - MEXICO BORDER REGION (46)
 <PAS-P>. ML 2.6 (PAS).

GLA 1.00 5 eP 07 41.70 -1.9
 PLM 2.08 309 e(P) 08 02.50 2.2
 2 obs. associated

* DEC 01, 1990 09h 20m 51.11 ± 0.67s
 32.295 N ± 11.0km 92.876 E ± 10.2km
 DEPTH = 10.0km (geophysicist)
 4.4mb (5 obs.)

TIBET (306)
 GUN 7.47 236 P 22 43.62 0.5
 KKN 7.97 238 P 22 50.06 0.1
 PKI 8.01 236 P 22 50.56 0.0

DMN 8.20 237 P 22 52.92 -0.3
 GKN 8.32 241 P 22 54.52 -0.2
 LZH 9.84 64 eP 24 00.00 44.2X
 HYB 19.67 225 eP 25 21.50 -1.9
 GBA 23.36 221 P 26 02.00 1.4
 JAY 56.98 118 iPd 30 33.10 -6.4X
 HFS 57.32 324 eP 30 40.10 -1.2
 0.5s 1.90nm 4.4mb
 Z 13s 0.16um 4.3mszX

NB2 58.38 326 P 30 42.70 0.7
 0.7s 1.60nm 4.2mb
 WB5 65.33 137 eP 31 35.70 -0.1
 ASPA 68.06 140 iPd 31 53.10 0.0
 1.0s 10.80nm 5.0mb
 BAO 74.41 265 iPd 32 32.50 1.0
 0.9s 5.00nm 4.5mb
 YKA 82.99 12 eP 33 17.20 -0.2
 0.8s 0.50nm 3.8mb
 S.D. = 0.9 on 13 of 15 obs.

* DEC 01, 1990 09h 49m 29.33 ± 0.75s
 34.413 N ± 8.3km 33.274 E ± 11.6km
 DEPTH = 10.0km (geophysicist)
 CYPRUS (372)
 ML 3.0 (CSS).

CSS 0.55 5 eP 49 40.50 0.0
 PPCY 0.90 302 eP 49 46.50 0.0
 ADI 2.10 129 eP 50 05.00 0.0
 DSI 3.34 147 eP 50 22.50 -0.2
 MBH 4.83 163 eP 50 44.00 0.2
 51 40.00
 S.D. = 0.2 on 5 of 5 obs.

& DEC 01, 1990 10h 12m 47.48s
 61.408 N 146.553 W
 DEPTH = 14.6km
 2.8mb (1 obs.)
 SOUTHERN ALASKA (2)
 <AGS-P>.

VLZ 0.30 159 iP 12 53.90 0.0
 KLU 0.32 74 iP 12 54.16 -0.2
 VZW 0.35 180 iP 12 54.67 -0.3
 SCM 0.57 319 iP 12 58.12 -0.5
 GLI 0.59 207 iP 12 58.23 -0.8
 TOA 0.72 14 iP 13 00.60 -0.7
 TZL 0.83 40 iP 13 02.22 -1.0
 KNK 0.92 271 eP 13 03.83 -0.7
 CVA 0.95 155 eP 13 03.56 -1.5
 HIN 1.02 179 iP 13 05.19 -1.1
 SGAM 1.12 144 iP 13 06.27 -1.8
 GHO 1.19 289 eP 13 07.76 -1.6
 KNIM 1.21 209 iP 13 07.91 -1.7
 SDG 1.22 23 iP 13 07.68 -2.1
 13 22.96
 PLRM 1.25 280 iP 13 08.92 -1.3
 13 25.52
 GLB 1.32 87 eP 13 08.57 -2.8
 13 25.84
 RAGM 1.38 137 eP 13 11.02 -1.1
 PMS 1.46 265 iP 13 12.48 -0.8
 13 32.73
 LTI 1.51 206 iP 13 12.56 -1.5
 HMT 1.55 133 eP 13 13.19 -1.5
 PAX 1.65 17 eP 13 14.00 -2.1
 13 34.43

KAIM 1.82 144 eP 13 17.48 -1.0
 TGL 1.92 108 eP 13 17.83 -2.3
 SLKM 2.00 245 eP 13 19.48 -1.7
 SUA 2.01 273 eP 13 20.72 -0.7
 CUT 2.02 301 iP 13 20.75 -0.7
 BALM 2.07 99 eP 13 19.41 -2.8
 HUR 2.14 319 eP 13 21.94 -1.2
 RND 2.27 333 eP 13 24.07 -1.1
 SKT 2.44 286 eP 13 26.08 -1.3

01d 10h

WRG	2.61	120	eP	13	30.30	0.4
CGLM	2.63	270	eP	13	28.75	-1.4
SPU	2.66	268	eP	13	28.94	-1.7
TRF	2.69	321	eP	13	30.17	-0.9
NCG	2.70	272	eP	13	29.32	-1.9
CKL	2.80	268	eP	13	31.45	-1.2
BGL	2.82	270	eP	13	31.63	-1.2
RDT	2.97	256	eP	13	32.54	-2.5
CNPM	2.99	233	eP	13	33.13	-2.1
YKA	14.99	72	eP	16	18.20	-1.9
	0.8s				0.30nm	
	40 obs.				2.8mb	
					40 obs.	associated

* DEC 01, 1990 10h 33m 06.71±1.82s
13.509 N ±20.2km 89.851 W ±26.6km
DEPTH = 85.8 ±11.4 km
3.8mb (2 obs.)

EL SALVADOR (73)
Felt (11) at San Salvador.

YPE	0.63	15	iPd	33	22.00	-0.6
VSS	0.64	69	iPd	33	22.80	0.2
SSS	0.66	75	eP	33	22.30	-0.4
SJAS	0.68	77	iPc	33	22.60	-0.4
TME	0.70	44	eP	33	24.00	0.9
LFU	0.76	71	eP	33	24.40	0.7
OZA	0.83	89	iPc	33	24.00	-0.4
UYO	20.99	349	eP	37	45.00	0.1
MEO	22.61	341	eP	38	01.00	0.0
ALO	26.09	328	eP	38	35.30	0.9
	0.8s				1.87nm	
					3.7mb	
ZOBO	36.56	143	P	40	06.80	0.0
	Z 20s				0.10um	
					3.6msz	
					LR	
SIV	40.85	135	P	40	42.00	0.1
YKA	52.00	346	eP	42	07.90	-1.2
	0.9s				1.30nm	
					4.0mb	
SOB1	53.58	112	eP	42	21.30	-0.2
PDCR	56.55	115	eP	42	43.30	0.3
	S.D.				0.7	on 15 of 15 obs

* DEC 01, 1990 10h 39m 51.94±0.82s
25.196 N ±11.1km 143.933 E ±16.9km
DEPTH = 33.0km (normal)
4.4mb (4 obs.)

VOLCANO ISLANDS REGION (213)

MAT	12.33	338	(P)	42	47.00	-1.0
			(S)	45	03.00	
SSE	20.88	291	P	44	32.00	-1.7
LZH	35.93	297	eP	46	41.50	-10.0X
WB5	45.76	193	eP	48	11.20	-1.0
ASPA	49.54	192	eP	48	41.70	0.0
	1.7s				6.00nm	
					4.3mb	
PKI	52.06	286	P	49	01.58	0.2
KKN	52.13	287	P	49	02.26	0.5
DMN	52.32	286	P	49	03.90	0.7
GKN	52.64	287	P	49	06.24	0.7
YKA	73.06	28	eP	51	19.40	-0.9
	0.9s				1.10nm	
					3.9mb	
SOD	76.73	339	iP	51	28.20	-13.0X
KAF	79.86	335	eP	51	59.80	1.4
HFS	85.78	337	eP	52	29.10	0.2
	0.6s				2.10nm	
					4.5mb	
	Z 12s				0.18um	
					4.7mszX	
					e	
					52 31.10	
					e	
					52 41.20	
					e	
					52 45.20	
					e	
					54 22.60	
NB2	85.94	339	P	52	30.60	0.8
	0.8s				2.50nm	
					4.5mb	
ZOBO	148.80	80	PKP	59	40.00	4.9X
	S.D.				1.0	on 12 of 15 obs.

* DEC 01, 1990 10h 39m 54.60s
37.485 N 118.810 W
DEPTH = 15.0km
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 3.0 (BRK).

FRI	0.87	236	iPc	40	10.50	-0.3
			iS	40	21.70	
CMB	1.36	294	iPc	40	18.80	-0.3
			iS	40	36.30	
TNP	1.40	64	eP	40	19.10	-0.6
KVN	1.66	19	eP	40	24.70	1.3
LLA	1.91	244	iPd	40	28.20	1.2

PRI	2.00	229	eP	40	29.30	1.0
			iS	40	56.50	
ARN	2.17	267	eP	40	31.80	1.1
SAO	2.23	252	iP	40	32.30	0.8
MHC	2.26	267	iPd	40	33.50	1.4
			eS	41	06.30	
PRS	2.35	241	eP	40	33.60	0.3
BCH	2.52	205	eP	40	36.50	0.8
ABL	2.65	187	eP	40	38.90	1.2
BKS	2.75	279	ePc	40	39.70	0.8
ORV	2.95	315	eP	40	42.80	1.0
			eS	41	25.80	

14 obs. associated

DEC 01, 1990 10h 42m 10.35±0.58s
40.034 N ±5.1km 28.801 E ±5.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

MD 3.0 (ISK).

KCT	0.40	302	iPg	42	18.90	0.3
DST	0.45	197	iPg	42	18.30	-1.2
			iSg	42	24.30	
IZI	0.60	59	ePg	42	21.00	-1.5
			iSg	42	28.90	
YLV	0.69	39	iPg	42	22.90	-1.1
			iSg	42	31.90	
BNT	0.75	296	ePg	42	24.40	-0.6
			eSg	42	35.90	
EDC	0.78	294	ePg	42	24.80	-0.8
			eSg	42	37.80	
GBZT	0.90	33	ePn	42	28.80	1.2
			iSg	42	45.00	
HRT	1.03	40	iPn	42	29.00	-0.8
ISK	1.05	11	iPn	42	30.00	-0.1
CTT	1.15	346	iPn	42	31.90	0.1
GPA	1.18	77	iPn	42	33.00	0.5
ALT	1.41	134	ePn	42	36.60	0.5
KHL	1.80	162	iPn	42	43.10	1.4
DMK	1.95	336	ePn	42	46.00	2.1
	S.D.				1.2	on 14 of 14 obs.

* DEC 01, 1990 11h 23m 32.07±1.06s
35.328 N ±12.6km 133.264 E ±9.1km
DEPTH = 10.0km (geophysicist)
4.0mb (1 obs.)

SOUTHERN HONSHU, JAPAN (232)

YONJ	0.21	130	iP+	23	36.70	0.0
			S	23	39.20	
SHK	0.93	211	iPc	23	50.60	0.8
	0.6s				1333.33nm	
MAT	4.19	72	eP	24	38.00	0.5
			(S)	25	28.00	
SSE	10.96	251	P	26	33.50	21.6X
BJI	14.32	294	eP	27	02.00	5.1X
LZH	23.86	280	eP	28	46.50	-0.1
GUN	40.71	273	P	31	00.00	-15.0X
WB5	54.91	179	eP	33	04.00	-1.2
YKA	68.48	28	eP	34	40.80	4.7X
	0.9s				0.90nm	
					4.0mb	
	S.D.				1.1	on 5 of 9 obs.

DEC 01, 1990 15h 34m 25.55±0.40s
43.830 N ±4.0km 16.594 E ±4.5km
DEPTH = 8.7 ±2.8 km

YUGOSLAVIA (383)

ML 3.2 (ZAG), 3.0 (TTG), MD 3.5
(TRI), 2.6 (LJU), Felt at Sinj.

HVAR	0.66	189	iPg	34	36.20	-2.6
			iSg	34	46.50	
BRY	1.70	122	ePn	34	55.60	-0.1
			eSn	35	19.20	
VBY	1.93	331	ePn	34	59.80	1.0
			iSn	35	26.40	
HCY	1.96	134	ePn	34	59.50	0.1
			eSn	35	25.30	
ZAG	2.03	348	i(Pn)	35	00.00	-0.4
PLE	2.10	103	ePn	35	01.00	-0.4
			eSn	35	28.20	
PTJ	2.12	348	ePn	35	00.60	-1.1
			iSn	35	28.00	
RIY	2.19	315	i(Pn)	35	05.30	2.7X
			iSg	35	35.80	
BDV	2.25	133	ePn	35	04.50	0.9
			eSn	35	33.20	

TTG	2.40	125	ePn	35	06.00	0.3
			eSn	35	37.00	
ALP	2.44	246	iPn	35	06.27	-0.1
			iSn	35	37.52	
CEY	2.45	322	ePn	35	07.90	1.4
			eSn	35	40.90	
CIO	2.59	257	ePn	35	08.03	-0.4
			eSn	35	40.25	
LJU	2.65	327	e(Pn)	35	10.50	1.2
			eSn	35	44.10	
ARV	2.67	264	P	35	09.40	-0.2
			eSn	35	43.00	

14 obs. associated

DEC 01, 1990 10h 42m 10.35±0.58s
40.034 N ±5.1km 28.801 E ±5.1km
DEPTH = 10.0km (geophysicist)
AQU VOY (366)

MD 3.0 (ISK).

AZI	2.96	233	P	35	14.50	0.9
ASS	2.96	257	P	35	14.10	0.4
			eSn	35	50.00	
MNS	3.21	245	P	35	17.00	-0.2
CRE	3.37	268	P	35	20.80	1.2
SFI	3.43	273	P	35	21.00	0.7
FVI	3.86	317	P	35	25.90	-0.4
			eSn	36	11.50	
KBA	3.97	326	iPnc	35	28.30	0.2
BZS	4.00	62	eP	35	19.50	-8.8X
OHR	4.13	130	ePn	35	32.80	2.6X
CTI	4.15	304	P	35	30.30	-0.3
			eSn	36	17.50	
ZST	4.38	4	eP	35	34.20	0.4
WATA	4.97	317	iPnc	35	42.20	0.0
SQTA	5.08	314	iPnc	35	44.40	0.6
			i	36	42.00	
			i	36	48.20	
MDI	5.27	294	P	35	44.00	-2.4
KHC	5.70	340	ePg	35	51.50	-0.9
			Sg	36	55.00	
	S.D.				1.1	on 31 of 34 obs.

* DEC 01, 1990 15h 46m 59.96±2.51s
37.064 N ±16.4km 32.013 E ±26.3km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 3.5 (ISK).

BCK	1.20	290	iPg	47	24.00	1.6
			iSg	47	39.00	
ELL	1.72	260	iPn	47	29.00	-1.2
PPCY	2.19	173	eP	47	43.00	6.1X
KHL	2.34	303	iPn	47	38.70	-0.5
CSS	2.35	153	eP	47	48.00	8.7X
ALT	2.49	324	ePn	47	45.20	3.9X
CIN	3.17	281	eP	47	46.00	-4.9X
DST	3.68	315	ePn	47	57.80	-0.3
KOT	7.12	181	ePn	48	47.00	0.4
			eSn	49	56.50	
	S.D.				1.5	on 5 of 9 obs.

* DEC 01, 1990 16h 56m 38.57±0.95s
24.766 N ±13.2km 99.427 E ±10.0km
DEPTH = 33.0km (normal)

YUNNAN PROVINCE, CHINA (318)

KMI	3.03	83	ePn	57	26.00	0.5
			Pg	57	36.00	

JACH	1 90 124	iP	27 13.00	-1.3
		i	27 34.00	
LCCH	1.98 158	eP	27 15.00	-0.4
PEL	2.12 135	iPd	27 17.00	-0.5
		iS	27 44.50	
SAN	2.36 140	eP	27 23.00	2.0
		iS	27 50.50	
TACH	2.38 148	eP	27 21.70	0.5
		i	27 50.00	
LVN	2.47 159	eP	27 22.40	0.0
		iS	28 00.10	
FCH	2.49 133	eP	27 22.70	-0.3
		iS	27 54.20	
PCH	2.57 141	eP	27 24.00	0.1
CHCH	2.75 147	iPd	27 30.10	3.6X
		i	28 07.40	
		i	28 10.60	
RTRS	2.97 61	ePc	27 29.10	-0.4
ZON	3.24 89	eP	27 33.00	-0.4
MDZ	3.30 113	iP	27 38.70	4.3X
		iS	28 19.50	
RTCV	3.36 95	e(P)	27 35.80	0.7
RTLL	3.43 86	eP	27 37.10	1.0
		eS	28 23.30	
CFA	3.61 91	ePd	27 38.50	-0.2
S.D. = 0.9 on 14 of 16 obs.				

? DEC 01, 1990 17h 31m 41.49±4.17s
46.169 N ±32.6km 27.192 E ±10.9km
DEPTH = 10.0km (geophysicist)

ROMANIA (358)				
VRI	0.44 228	iPd	31 50.00	-0.5
BRD	0.66 189	eP	31 55.00	0.4
CVO	0.79 244	iPd	31 57.00	0.1
MLR	1.10 233	ePd	32 02.50	0.2
ISR	1.13 204	eP	32 06.00	3.4X
		e	34 32.00	
CFR	1.19 145	ePd	32 03.50	-0.2
S.D. = 0.5 on 5 of 6 obs.				

? DEC 01, 1990 17h 33m 55.37±6.04s
37.395 N ±58.6km 70.522 E ±23.6km
DEPTH = 33.0km (normal)

AFGHANISTAN-USSR BORDER REGION (717)				
QUE	7.78 203	eP	35 49.30	0.0
		eS	37 06.10	
NDI	10.34 145	iPd	36 24.50	0.0
	0.4s	21.19nm		5.7mb X
		eS	38 05.00	
GKN	15.11 124	P	37 28.50	0.2
KKN	15.68 123	P	37 35.00	-0.7
DMN	15.69 124	P	37 36.14	0.4
PKI	15.91 124	P	37 38.50	-0.2
GUN	16.00 122	P	37 40.28	0.3
S.D. = 0.4 on 7 of 7 obs.				

% DEC 01, 1990 17h 34m 09.37±1.10s
46.060 N ±8.4km 27.197 E ±8.1km
DEPTH = 10.0km (geophysicist)

ROMANIA (358)				
VRI	0.38 240	iPd	34 17.00	-0.2
BRD	0.55 191	ePc	34 32.00	11.4X
CVO	0.75 252	iPd	34 24.00	-0.1
PTI	1.04 328	eP	34 29.00	0.0
MLR	1.05 238	iPd	34 29.50	0.3
CFR	1.10 142	ePd	34 30.00	0.0
IAS	1.16 12	eP	34 50.00	18.9X
S.D. = 0.3 on 5 of 7 obs.				

DEC 01, 1990 18h 09m 28.87±0.16s
40.854 N ±4.0km 73.553 E ±2.6km
DEPTH = 28.8km (2 depth phases)
5.0mb (57 obs.) 4.6MsZ (9 obs.)

KIRGHIZ SSR (716)				
Approximately 3,000 people homeless, 1,100 houses and 10 schools damaged (VI) in the Uzgen area. One hundred kilometers of roads were impaired in the epicentral area. Felt (V) at Dzhalal-Abad; (IV) at Osh and Namangan; (III) at Fergana, Andizhan and Alma-Ata; (II) at Tashkent. Also felt at				

Frunze.
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 10S, 17C
Centroid Location:
Origin Time 18:09:31.6 2.0
Lat 40.62N 0.14 Lon 73.41E 0.16
Dep 32.0 FLX Half-duration 1.5
Moment Tensor: Scale 10**16 Nm
Mrr= 4.98 0.46 Mtt=-6.03 0.56
Mff= 1.04 0.57 Mrt= 4.02 1.65
Mrf=-3.23 1.23 Mlf=-3.34 0.75
Principal Axes:
T Val= 8.61 Plg=54 Azm= 56
N -0.67 33 263
P -7.94 13 164
Best Double Couple: Mo=8.3*10**16
NP1: Strike=218 Dip=43 Slip= 37
NP2: 100 66 127

KSH	2.33 126	Pg	10 10.00	3.9X
		Sg	10 42.50	
WMO	10.88 70	P	12 02.00	-3.8X
		eS	14 07.50	
MAIO	11.90 252	iPd	12 16.00	-3.7X
	0.9s	25.58nm		5.4mb
		eS	14 23.00	
QUE	11.92 209	eP	12 18.00	-2.0
		eS	14 31.80	
NDI	12.51 165	iPc	12 25.30	-2.4
	0.5s	66.90nm		6.0mb X
		iS	14 35.00	
GKN	15.73 141	P	13 05.52	-4.6X
KKN	16.22 140	P	13 11.98	-4.5X
DMN	16.28 141	P	13 12.86	-4.5X
GUN	16.42 138	P	13 14.52	-4.6X
PKI	16.46 140	P	13 15.42	-4.3X
LSA	18.14 122	P	13 42.70	2.0
	N 10s	0.88um		
		PP	14 00.00	
GTA	20.11 86	iPc	14 02.80	-0.5
	Z 12s	3.60um		4.9MsZ X
	N 10s	2.10um		
		PP	14 12.00	
SHI	20.44 243	eP	14 08.00	1.3
TAB	21.17 271	eP	14 16.00	1.8
KER	21.89 261	eP	14 23.00	1.6
BOM	21.89 182	eP	14 26.00	4.7X
		eS	18 29.00	
POO	22.25 179	iPd	14 28.80	3.9X
	1.0s	100.00nm		5.2mb
		eS	18 32.00	
BBU	24.06 240	eP	14 44.80	2.3
	0.5s	78.00nm		5.5mb
LZH	24.12 92	iPc	14 44.00	0.7
	Z 12s	3.00um		5.0MsZ X
	N 12s	2.90um		
		PP	14 54.50	
BEE	24.16 239	eP	14 43.70	0.3
	0.7s	43.00nm		5.1mb
CD2	26.30 103	eP	15 03.50	-0.2
	Z 12s	1.70um		4.8MsZ X
	E 15s	3.80um		
GBA	27.36 172	P	15 13.20	-0.2
		S	17 50.20	
BTO	27.51 78	eP	15 15.50	0.6
	N 14s	1.90um		
	E 12s	1.50um		
RYD	27.63 243	ePc	15 16.00	0.0
HHC	28.60 77	eP	15 25.50	0.8
	Z 15s	2.40um		4.9MsZ X
XAN	28.75 92	P	15 25.00	-1.0
	N 13s	2.40um		
	E 12s	1.00um		
KMI	28.90 114	Pc	15 26.50	-1.2
	Z 15s	1.50um		4.7MsZ X
TIY	30.09 83	eP	15 38.00	0.0
	Z 14s	2.10um		4.9MsZ X
	N 11s	1.65um		
		SP	15 52.00	
KOD	30.69 172	eP	15 44.00	0.3
GYA	30.87 107	P	15 47.40	2.4
BBTK	30.91 282	iPc	15 46.00	0.7
DSI	31.95 265	eP	15 55.00	0.7
BJI	32.21 77	eP	15 59.00	2.5
	Z 18s	2.05um		4.9MsZ
	N 14s	1.28um		

AYN	32.81 261	ePc	16 02.90	1.1
PRNI	32.82 264	eP	16 03.00	1.0
MBH	33.20 263	eP	16 06.00	0.7
IZI	33.21 284	eP	16 05.00	-0.3
YLV	33.22 284	iP	16 05.30	-0.1
DST	34.04 283	eP	16 11.80	-0.7
TIA	34.13 83	eP	16 13.20	-0.1
	Z 19s	1.20um		4.6MsZ
	N 11s	1.20um		
BNT	34.35 284	eP	16 14.80	-0.3
WHN	34.42 94	eP	16 15.50	-0.3
MLR	34.63 294	ePc	16 14.00	-3.6X
KAF	35.19 323	iP	16 21.50	-0.5
	0.4s	3.80nm		4.7mb
		eS	16 21.70	
CMP	35.29 294	ePd	16 26.00	2.9
PVL	35.50 290	iPc	16 26.00	1.1
NUR	35.61 320	iP	16 25.30	-0.3
	0.8s	23.50nm		5.2mb
BMR	35.96 298	ePd	16 35.00	6.3X
PLD	36.22 289	eP	16 32.00	1.0
RZN	36.32 288	iPd	16 23.00	-9.1X
SOD	36.74 332	iP	16 34.60	-0.4
NJ2	37.14 89	Pd	16 39.00	0.3
	Z 18s	0.70um		4.5MsZ
KKB	37.45 289	iPc	16 41.00	-0.3
KEV	37.58 336	eP	16 42.00	0.0
BZS	37.59 295	ePc	16 43.50	1.1
SPC	37.90 301	eP	16 45.20	0.0
CN2	37.97 68	P	16 48.00	2.4
	Z 17s	3.20um		5.2MsZ X
		PP	16 58.00	
VAY	37.97 288	iP	16 46.60	0.9
BEO	38.56 294	i(P)	16 51.50	0.9
SKO	38.60 289	eP	16 51.80	0.8
UPP	39.01 318	iP	16 54.10	0.0
SSE	39.34 89	P	17 00.50	3.3X
SRO	39.39 299	iP	16 59.00	1.6
ZST	40.11 300	e(P)	17 04.20	0.8
KSP	40.18 304	iPd	17 04.30	0.3
	1.0s	31.00nm		5.0mb
BSI	40.24 145	eP	17 05.50	0.8
MDJ	40.65 65	eP	17 09.50	1.7
HFS	40.99 319	eP	17 09.90	-0.6
	0.7s	24.30nm		5.0mb
	Z 18s	0.64um		4.5MsZ
		e	17 12.70	9kmX
		e	17 16.20	
		e	17 20.20	
		e	17 32.50	
		ePP	18 46.40	
		LR	32 49.00	
PRU	41.43 303	iPc	17 14.50	0.3
	Z 13s	1.80um		5.1MsZ X
	N 16s	1.90um		
	E 16s	0.60um		
		e	17 24.50	34km
BRG	41.64 305	iPc	17 16.50	0.6
	1.0s	22.00nm		4.8mb
		i	17 23.60	24km
		e	19 16.00	
CLL	42.15 305	iP	17 20.50	0.4
	0.9s	19.00nm		4.8mb
		i	18 19.80	288kmX
KHC	42.21 302	iPc	17 21.60	0.9
	Z 10s	1.00um		5.0MsZ X
		e	17 48.00	115kmX
NB2	42.22 320	P	17 19.80	-0.8
	0.7s	1.34nm		3.8mb X
WET	42.66 302	iPc	17 25.30	1.0
	0.8s	24.00nm		5.0mb
KBA	42.84 299	iPc	17 26.00	0.0
		iPP	19 09.70	
TRI	42.92 297	ePc	17 26.70	0.3
MOX	43.14 305	eP	17 29.00	0.8
	Z 12s	1.70um		5.2MsZ X
	N 14s	1.20um		
	E 12s	1.00um		
FVI	43.34 299	P	17 29.50	-0.3
GRF	43.59 303	iPc	17 33.40	1.5
	0.8s	42.00nm		5.3mb
	Z 20s	1.00um		4.7MsZ
WATA	43.94 300	iPd	17 34.60	-0.3
		i	19 20.90	604kmX
		i	19 23.10	
ARV	44.12 294	P	17 36.00	-0.3
ATN	44.19 286	P	17 38.00	1.1

MLR	0.82	253	iPc	11	27.50	1.2
CFR	0.95	125	ePd	11	28.00	-0.3
PTT	1.28	339	eP	11	35.00	0.9
IAS	1.50	13	eP	11	48.00	10.8X
S.D. = 1.4 on 5 of 7 obs.						
DEC 01, 1990 18h 25m 41.58± 0.98s						
7.616 N ± 3.7km 126.590 E ± 5.8km						
DEPTH = 77.0 ± 9.1 km						
5.2mb (20 obs.)						
MINDANAO, PHILIPPINE ISLANDS (259)						
DAV	1.14	243	iPd	26	03.00	0.6
BAG	10.53	327	eP	28	12.10	0.0
AAI	11.34	172	eP	28	23.00	0.3
TRT	20.62	223	iPd	30	18.00	1.8
MTN	20.82	167	eP	30	18.00	-1.0
KNA	23.31	175	eP	30	43.90	0.3
	0.3s	35.00nm				5.3mb
KAGJ	23.79	9	P	30	48.20	0.0
SSE	23.90	348	eP	31	01.00	11.8X
KUMJ	25.11	8	P	31	00.00	-0.7
LOE	26.12	294	eP	31	10.50	0.2
PMG	26.56	129	eP	31	14.00	-0.3
SHNJ	26.71	8	eP	31	14.30	-1.2
NNT	26.89	283	eP	31	19.70	2.4
NST	27.10	290	eP	31	01.00	-18.2X
WB5	28.37	164	eP	31	28.20	-2.5
			iPcP	34	42.00	
			eS	36	05.00	
BDT	28.55	292	eP	31	38.50	6.2X
	0.8s	31.10nm				5.0mb
KMI	28.66	310	Pc	31	34.00	0.4
			sP	31	48.50	
MBL	29.36	193	eP	31	38.50	-1.0
MAT	30.68	19	iPc	31	49.00	-2.1
	0.7s	17.12nm				4.9mb
ASPA	31.90	167	iPc	32	00.20	-1.7
	0.5s	27.40nm				5.3mb
			iPcP	34	50.60	
			eS	37	00.70	
YAMJ	32.76	20	P	32	08.90	-0.4
BJI	33.61	345	eP	32	14.50	-2.0
OFUJ	34.14	21	eP	32	21.10	-0.1
MEKA	34.91	193	eP	32	27.20	-0.7
	0.4s	18.00nm				5.4mb
AOMJ	35.04	18	P	32	30.10	1.3
LZH	35.14	327	eP	32	29.00	-1.0
			pP	32	44.50	61kmX
HOQJ	37.63	20	eP	32	52.60	2.0
MRWA	38.02	195	iPd	32	53.80	-0.2
	0.5s	24.00nm				5.4mb
FORR	38.27	178	iPc	32	56.00	-0.1
COOL	38.63	188	eP	32	58.50	-0.7
KUSJ	38.76	21	eP	33	01.20	1.1
ASAJ	38.97	18	P	33	03.10	1.2
BAL	39.17	194	iPd	33	03.60	0.0
KLB	39.89	192	iPd	33	09.80	0.2
NWAO	41.29	192	iPd	33	21.80	0.8
	0.8s	72.00nm				5.6mb
RKG	42.44	192	iPd	33	35.90	5.4X
	0.8s	292.00nm				6.2mb
GUN	43.42	303	P	33	39.26	0.2
PKI	43.70	302	P	33	40.80	-0.5
ADE	43.87	166	iPc	33	42.30	0.2
	0.7s	45.21nm				5.4mb
KKN	43.88	302	P	33	42.32	-0.3
DMN	43.97	302	P	33	43.16	-0.2
GKN	44.49	302	P	33	46.88	-0.6
COO	45.07	149	eP	33	51.00	-0.8
BWA	46.64	155	iPc	34	05.30	1.2
BFD	46.99	163	eP	34	07.00	0.1
CAN	47.65	155	iPc	34	12.20	0.1
HYB	47.78	287	iPc	34	13.40	0.0

IMA 78.91 24 ePc 37 39.00 1.0
0.8s 16.30nm 5.0mb
PMR 80.63 29 ePc 37 47.20 0.2
0.7s 38.60nm 5.4mb
FBA 81.29 25 ePc 37 50.20 -0.3
TOA 82.03 28 ePc 37 56.00 1.5
KVT 85.47 311 iP 38 23.00 10.7X
INK 86.62 22 eP 38 17.50 0.1
GLH 86.72 302 eP 38 20.00 1.4
SOD 86.84 338 eP 38 18.00 -0.5
ZNT 87.30 302 eP 38 22.00 0.6
MBH 87.75 300 iPc 38 24.30 0.6
KAF 88.11 332 iP 38 24.00 -0.7
0.5s 4.50nm 4.9mb
esP 38 24.90
eP 38 25.50 0.5

MBC 88.22 13 eP 38 25.50 0.5
0.6s 6.00nm 4.9mb
NUR 89.26 331 eP 38 29.40 -0.7
DAG 93.42 352 iPc 38 48.00 -1.1
0.8s 6.72nm 5.1mb
HFS 94.53 332 eP 38 52.20 -2.3
0.5s 4.40nm 5.1mb
Z 18s 0.16um 4.5msz
e 38 54.70
e 38 59.50
LR 20 28.00
20 55.90 -2.1

NB2 95.26 334 P 38 55.90 -2.1
0.7s 2.30nm 4.7mb
YKA 96.04 24 eP 39 01.20 -0.2
0.6s 7.50nm 5.4mb
ALO 114.49 46 ePKP 44 15.00 -0.2
1.0s 3.25nm
KIC 129.51 285 PKP 44 44.40 0.2
LIC 129.82 285 PKP 44 44.80 0.0
LNV 148.96 150 ePKP 45 23.00 4.6X
UPA 149.19 58 iPKPc 45 23.40 4.1X
CHCH 149.35 151 iPKPc 45 24.40 5.2X
PCH 149.67 151 ePKP 45 25.00 5.3X
SAN 149.74 151 ePKP 45 25.00 5.3X
ROCH 149.95 149 iPKPc 45 26.20 5.9X
PEL 149.97 150 iPKPc 45 26.00 5.9X
FCH 150.02 151 ePKPd 45 27.10 6.6X
JACH 150.39 150 ePKPd 45 27.10 6.3X
CNCB 163.09 124 PKP 45 40.00 2.5X
LPB 163.13 123 PKP 45 39.00 1.7
ZOBO 163.24 122 PKP 45 39.30 1.7
Z 20s 0.15um
LR 18 10.00
e(PKP) 45 55.20 16.5X
e 46 36.70
S.D. = 1.0 on 75 of 91 obs.

DEC 01, 1990 18h 33m 38.79±0.79s
44.177 N ± 4.1km 8.376 E ± 6.4km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.9 (LDG), 2.8 (GEN), MD 2.3 (STR).

FIN 0.13 285 P 33 42.05 0.2
S 33 43.39
CKI 0.26 344 P 33 44.50 0.2
eSg 33 47.50
ROB 0.38 288 P 33 45.64 -1.0
S 33 49.44
PCP 0.38 18 P 33 48.00 1.3
S 33 53.33
IMI 0.44 233 P 33 48.10 0.3
S 33 53.64
SAOF 0.62 252 Pg 33 51.22 -0.1
Sg 34 00.66
ENR 0.69 274 P 33 51.49 -1.0
S 33 59.18
AUTN 0.71 255 Pg 33 53.01 0.1
SBF 0.75 246 Pg 33 53.70 0.2
Sg 34 03.20
STV 0.76 275 P 33 52.64 -1.1
S 34 01.10
AURF 0.81 249 Pg 33 54.86 0.3
TOUF 0.83 259 Pg 33 55.27 0.3
Sg 34 07.27
REVF 0.85 239 Pg 33 55.31 0.1
PZZ 0.97 290 P 33 56.31 -1.1
S 34 07.13
BHB 1.04 310 P 33 57.51 -0.9
S 34 09.69

CALN 1.15 249 Pg 34 01.51 1.0
RSP 1.26 321 P 34 01.84 -0.4
S 34 15.97
RRL 1.36 304 P 34 03.18 -0.8
S 34 18.28
FRF 1.39 244 Pg 34 04.80 0.5
Sg 34 22.60
LSD 1.55 326 P 34 06.35 -0.3
LMR 1.59 239 Pn 34 07.30 0.2
Pg 34 09.40
Sg 34 29.00
LRG 1.63 244 Pg 34 09.40 1.8
Sg 34 30.20
PGF 1.69 164 Pn 34 06.30 -2.3
Sn 34 28.80
LPG 1.76 319 Pg 34 10.50 0.8
Sg 34 30.70
LPL 1.78 319 Pg 34 10.60 0.6
Sg 34 30.80
CDR 1.95 256 e(Pn) 34 13.20 0.9
e(Sn) 34 35.90
S.D. = 0.9 on 26 of 26 obs.

? DEC 01, 1990 19h 00m 48.52±5.11s
6.027 S ± 46.0km 146.789 E ± 60.3km
DEPTH = 220.4 ± 18.2 km
4.9mb (1 obs.)

EAST PAPUA NEW GUINEA REGION (207)

YYYY 0.85 255 eP 01 20.00 0.1
eS 01 44.00
PMG 3.38 174 iPd 01 44.00 -0.1
1.8s 1090.91nm
eS 02 29.00
OIS 16.04 205 iPd 04 24.00 0.1
WB5 18.31 220 iPd 04 48.20 -0.6
eS 08 10.00
ASPA 21.48 214 iPc 05 21.40 0.8
0.5s 20.90nm 4.9mb
eS 09 08.40
FORR 30.29 213 eP 06 41.00 -0.3
S.D. = 0.8 on 6 of 6 obs.

DEC 01, 1990 19h 10m 01.56±0.90s
38.399 N ± 7.9km 21.742 E ± 8.5km
DEPTH = 10.0km (geophysicist)

GREECE (364)
ML 3.0 (ATH), 3.0 (THE).

EVR 0.52 6 ePg 10 11.30 -0.8
AGG 0.77 36 ePc 10 15.14 -1.5
eS 10 27.74
VLS 0.93 257 ePg 10 17.00 -2.4
NEO 1.47 51 ePb 10 27.50 -0.6
IGT 1.58 316 ePc 10 31.66 2.0
ATH 1.61 105 ePb 10 30.50 0.4
eSb 10 51.00
LIT 1.80 19 ePd 10 32.90 0.1
eS 10 58.29
KZN 1.91 1 ePn 10 35.80 1.4
VLI 1.93 150 ePb 10 36.00 1.3
PAIG 2.14 44 ePd 10 36.14 -1.7
SOH 2.72 27 ePc 10 46.26 0.1
eS 11 21.38
OHR 2.80 345 ePn 10 50.00 2.7X
KNT 2.90 18 eP 10 48.60 0.0
eS 11 25.38
VAY 2.99 12 ePn 10 51.50 1.7
S.D. = 1.5 on 13 of 14 obs.

? DEC 01, 1990 19h 17m 31.36±1.22s
39.841 N ± 9.2km 28.857 E ± 10.2km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

DST 0.29 217 iPg 17 37.40 -0.1
iSg 17 41.80
KCT 0.56 317 iPg 17 42.10 -0.6
IZI 0.68 43 ePg 17 45.00 0.0
BNT 0.88 306 ePn 17 49.00 0.7
S.D. = 0.9 on 4 of 4 obs.

% DEC 01, 1990 19h 18m 47.99±0.72s
39.890 N ± 6.0km 28.795 E ± 6.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 2.4 (ISK).

DST 0.31 204 iPg 18 53.30 -1.2
eSg 18 57.80
KCT 0.49 317 iPg 18 58.00 0.0
IZI 0.69 49 ePg 19 00.80 -0.8
iSg 19 11.30
YLV 0.81 33 ePg 19 02.80 -0.9
BNT 0.82 305 ePg 19 03.30 -0.5
eSg 19 14.80
EDC 0.85 303 ePg 19 05.30 1.0
eSg 19 18.80
HRT 1.14 35 iPn 19 09.30 -0.1
CTT 1.29 348 iPn 19 12.80 1.0
ALT 1.32 129 ePn 19 14.00 1.6
S.D. = 1.1 on 9 of 9 obs.

% DEC 01, 1990 19h 19m 00.36±0.90s
37.091 N ± 8.0km 5.613 W ± 7.8km
DEPTH = 10.0km (geophysicist)

SPAIN (377)
mbLg 1.9 (MDD).

EPRU 0.33 112 ePg 19 06.00 -1.2
eSg 19 11.00
EJIF 0.65 170 ePg 19 13.20 -0.2
eSg 19 22.70
EHOR 0.78 22 ePg 19 14.40 -1.2
eSg 19 25.80
EVAL 1.03 299 ePg 19 20.00 0.2
eSg 19 35.00
ECOG 1.64 83 ePn 19 30.50 1.0
eSn 19 53.50
AFC 1.66 84 ePn 19 30.90 1.1
eSn 19 52.00
EBAN 1.80 53 ePn 19 32.00 0.3
eSn 19 55.00
S.D. = 1.1 on 7 of 7 obs.

? DEC 01, 1990 19h 56m 23.98±3.54s
17.316 S ± 33.9km 178.144 W ± 41.7km
DEPTH = 570.0km (geophysicist)
4.5mb (1 obs.)

FIJI ISLANDS REGION (181)

DZM 15.26 249 iPc 59 34.20 -1.1
BRS 28.64 244 iP 01 37.80 0.5
MMCZ 29.60 198 P 01 45.30 -0.1
MHZ 29.61 198 P 01 44.80 -0.6
TLC 29.78 198 P 01 47.00 0.0
COO 30.29 239 iPd 01 52.10 0.7
0.4s 20.00nm 5.1mb X
CAN 34.26 232 eP 02 25.20 0.5
BWA 34.37 234 eP 02 24.10 -1.5
TOO 37.74 230 ePd 02 54.80 1.5-
1.0s 59.00nm 5.1mb X
ADE 42.17 237 iPd 03 29.30 0.4
WB5 44.97 259 iPd 03 50.30 -0.5
ASPA 45.20 254 iPd 03 52.70 0.1
0.5s 128.80nm 5.7mb X
MTN 49.07 268 eP 04 22.00 0.0
MBL 58.37 255 eP 05 27.60 0.0
0.3s 8.00nm 4.5mb
S.D. = 0.8 on 14 of 14 obs.

* DEC 01, 1990 22h 35m 14.25±1.38s
26.682 S ± 21.2km 131.551 E ± 14.7km
DEPTH = 10.0km (geophysicist)
SOUTH AUSTRALIA (592)
ML 3.9 (QIS).

ASPA 3.68 36 iPd 36 13.90 1.4
0.5s 285.00nm
iS 36 55.00
FORR 5.14 215 eP 36 40.00 6.9X
WB5 7.25 22 eP 37 02.20 -0.6
eS 38 22.00
OIS 9.57 52 iPd 37 34.40 -0.7
iS 39 14.40
e 40 10.00
COOL 10.04 243 eP 37 34.00 -7.6X
0.3s 8.00nm 5.6mb X
eS 39 32.50
MEKA 11.65 267 eP 38 05.30 1.8
0.3s 8.00nm 5.5mb X
eS 40 12.00
MBL 12.04 295 eP 38 08.20 -0.7
0.3s 6.00nm 5.4mb X
eS 40 11.60

01d 22h

KLB 13.01 245 iPd 38 22.00 0.2
0.4s 34.00nm 5.9mb X
eS 49 39.50
BAL 13.61 250 eP 38 30.00 0.3
eS 40 55.00
NWA0 13.90 240 eP 38 44.00 10.5X
0.5s 5.00nm
eS 41 01.00
MRWA 13.98 256 eP 38 33.00 -1.6
0.3s 4.00nm 4.7mb X
eS 41 01.40
RKG 14.54 236 eP 38 46.50 4.5X
eS 41 26.50
S.D. = 1.4 on 8 of 12 obs.

* DEC 01, 1990 23h 46m 56.98±0.63s
18.472 S ±15.7km 173.688 W ±16.7km
DEPTH = 33.0km (normal)
4.8mb (3 obs.)

TONGA ISLANDS

(173)

AFI 4.89 22 eP 48 06.00 -4.3X
eS 49 48.00
DZM 18.98 256 iPc 51 21.10 2.6
MNG 23.96 201 eP 52 06.60 -2.6
THZ 25.89 203 eP 52 29.90 2.3
KHZ 26.22 202 eP 52 32.40 1.8
LTZ 27.00 203 eP 52 39.20 1.4
COO 33.42 242 eP 53 34.00 -1.0
CNB 36.72 235 eP 54 02.70 -0.4
CAN 37.01 235 eP 54 04.20 -1.3
BWA 37.22 237 eP 54 03.90 -3.4X
TOO 40.37 233 eP 54 32.50 -1.0
WB5 48.92 259 eP 55 41.10 -1.1
ASPA 48.96 254 iPc 55 41.70 -0.8
0.7s 39.50nm 5.6mb X
FORR 53.80 245 eP 56 19.00 0.2
MBL 62.19 255 eP 57 17.30 -0.7
0.4s 8.00nm 5.2mb
MAT 71.11 321 eP 58 17.00 2.8X
(S) 08 27.00
ALO 82.98 50 eP 59 19.00 -1.6
1.5s 13.89nm 4.8mb
LRM 84.59 38 eP 59 29.60 1.0
FBA 85.45 11 eP 59 32.60 0.5
IMA 85.63 8 e(P) 59 34.60 1.4
SES 87.87 35 eP 59 45.00 0.7
MEO 88.74 53 eP 59 47.70 -1.1
INK 91.30 14 eP 00 01.00 1.1
YKA 93.01 24 eP 00 12.30 4.4X
0.9s 0.60nm 4.0mb

NAI 144.17 240 iPKP 06 35.00 2.7X
WTS 146.55 359 ePKP 06 41.00 6.2X
0.9s 10.00nm
KSP 146.74 348 ePKP 06 38.00 2.8X
CLL 146.81 352 ePKP 06 28.00 -7.3X
BRG 147.10 351 ePKP 06 38.60 2.8X
1.8s 28.00nm
e 06 45.00
e 06 53.00
SPC 147.36 343 ePKP 06 39.30 2.8X
MOX 147.62 354 ePKP 06 43.00 6.3X
PRU 147.87 350 ePKP 06 41.50 4.4X
MLR 148.50 333 ePKP 06 37.00 -1.4
GRF 148.61 354 e(PKP) 06 45.00 6.7X
BBTK 148.79 319 iPKPd 06 35.00 -4.0X
KHC 148.86 351 ePKP 06 45.90 7.2X
ZST 149.00 346 ePKP 06 44.80 5.8X
e 06 50.60
e 27 40.80
SRO 149.14 344 ePKP 06 43.50 4.4X
BZS 150.09 338 ePKP 06 46.50 5.9X
SOTA 151.05 353 e(PKP) 06 52.00 9.8X
S.D. = 1.5 on 21 of 40 obs.

DEC 02, 1990 00h 38m 45.89±0.64s
38.177 N ±5.6km 27.084 E ±8.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.8 (ISK), 3.1 (ATH).

SMG 0.51 203 iPgC 38 55.30 -0.8
eSg 39 04.40
CIN 0.98 126 eP 39 04.00 -0.5
PRK 1.24 329 iPgC 39 08.00 -1.0
eSb 39 24.80
APE 1.66 229 ePn 39 16.60 1.4

EZN 1.75 340 ePn 39 16.80 0.4
DST 1.87 40 iPn 39 18.00 -0.2
KHL 1.93 85 ePn 39 21.80 2.7X
EDC 2.25 15 ePn 39 24.00 0.3
BNT 2.27 16 ePn 39 23.00 -1.0
KCT 2.29 25 ePn 39 24.00 -0.4
ALT 2.53 69 ePn 39 35.20 7.5X
IZI 2.84 40 ePn 39 34.00 1.8
YLV 2.97 36 iPn 39 39.70 5.7X
CTT 3.14 19 ePn 39 40.00 3.7X
HRT 3.31 36 ePn 39 45.70 6.9X
S.D. = 1.1 on 10 of 15 obs.

* DEC 02, 1990 00h 49m 39.04±0.99s
19.393 N ±11.3km 64.402 W ±7.2km
DEPTH = 10.0km (geophysicist)
3.7mb (1 obs.)

VIRGIN ISLANDS

(91)

LPR 1.76 232 P 50 09.50 -0.3
CPD 1.97 227 P 50 12.90 0.1
SJC 2.09 233 iP 50 14.40 -0.2
PORP 2.50 238 P 50 20.80 0.4
SEG 4.06 137 eP 50 42.00 -0.5
BBL 4.75 144 eP 50 53.00 0.5
SIV 35.31 174 P 56 32.80 -3.7X
YKA 55.05 334 eP 59 13.00 0.0
0.6s 0.50nm 3.7mb
S.D. = 0.4 on 7 of 8 obs.

DEC 02, 1990 00h 58m 37.74±0.86s
38.167 N ±6.9km 27.037 E ±9.7km
DEPTH = 10.0km (geophysicist)

TURKEY

(366)

MD 3.1 (ISK).

SMG 0.48 199 eP 58 47.50 -0.1
eS 58 56.50
CIN 1.01 124 eP 58 56.00 -0.8
PRK 1.23 331 eP 59 00.00 -0.6
eS 59 17.00
EZN 1.75 342 ePn 59 09.80 1.6
DST 1.90 40 ePn 59 09.30 -1.2
KHL 1.96 85 ePn 59 13.30 1.8
BNT 2.29 17 ePn 59 15.00 -1.2
KCT 2.32 26 ePn 59 17.00 0.5
IZI 2.88 40 ePn 59 28.00 3.5X
S.D. = 1.4 on 8 of 9 obs.

* DEC 02, 1990 01h 18m 21.84s
62.643 N 149.070 W
DEPTH = 57.7km
CENTRAL ALASKA
<AGS-P>.

(1)

HUR 0.43 323 iP 18 33.02 0.1
eS 18 41.67
CUT 0.61 247 iP 18 34.74 -0.2
eS 18 44.58
RND 0.77 7 iP 18 36.83 -0.2
eS 18 48.34
GHO 0.88 175 eP 18 38.12 -0.3
TRF 0.98 326 eP 18 39.75 -0.1
eS 18 53.57
PLRM 1.06 182 eP 18 40.47 -0.2
eS 18 54.53
PWA 1.07 201 iP 18 41.00 0.2
eS 18 56.35
MCK 1.10 3 eP 18 41.30 0.0
SCM 1.15 134 eP 18 41.69 -0.4
KNK 1.27 167 eP 18 43.73 0.1
eS 19 01.40
SKT 1.33 241 eP 18 44.39 -0.1
iS 19 02.21
SUA 1.42 214 eP 18 46.10 0.2
eS 19 05.54
PMS 1.42 190 eP 18 45.98 0.2
TOA 1.45 111 eP 18 46.94 0.7
SDG 1.64 93 eP 18 49.23 0.5
eS 19 10.17
PAX 1.69 77 eP 18 49.57 0.1
eS 19 10.55
TZL 1.80 108 eP 18 52.25 1.2
KLU 1.88 126 iP 18 51.90 -0.3
eS 19 15.38
NCG 1.91 231 eP 18 53.15 0.4
CGLM 1.93 227 eP 18 53.54 0.7

VZW 1.99 142 eP 18 52.80 -0.9
VLZ 2.00 138 eP 18 52.88 -0.8
GLI 2.00 151 eP 18 53.12 -0.7
HDA 2.01 27 iP 18 53.09 -0.8
SPU 2.04 225 eP 18 54.83 0.5
CCB 2.09 15 eP 18 53.98 -1.0
BGL 2.09 230 eP 18 56.44 1.3
CKL 2.12 228 eP 18 56.89 1.3
SLKM 2.21 195 eP 18 57.29 0.5
FBA 2.34 13 eP 18 57.61 -0.9
MDM 2.36 9 iP 18 57.91 -0.9
KNIM 2.39 164 eP 18 57.65 -1.6
GLM 2.47 17 eP 18 59.48 -1.0
SEW 2.56 184 eP 19 01.53 0.0
RDT 2.62 219 eP 19 02.62 0.1
GLB 2.76 114 eP 19 03.78 -0.7
RDN 2.77 221 eP 19 05.59 0.8
BALM 3.57 114 eP 19 14.32 -1.8
38 obs. associated

* DEC 02, 1990 01h 35m 47.55±0.63s
36.613 N ±10.9km 71.685 E ±9.9km
DEPTH = 33.0km (normal)
4.1mb (5 obs.)

AFGHANISTAN-USSR BORDER REGION

(717)

QUE 7.53 213 eP 37 36.90 -1.1
eS 38 55.70 5.7mb X
NDI 9.18 148 eP 38 03.50 2.8
0.4s 21.19nm
MAIO 9.83 272 eP 38 12.00 2.3
eS 39 50.00
GKN 13.91 124 P 39 04.96 0.3
0.3s 51.00nm 5.7mb X
KKK 14.47 124 P 39 12.34 0.2
DMN 14.48 125 P 39 12.88 0.7
PKI 14.70 124 P 39 15.24 0.0
GUN 14.80 122 P 39 16.42 -0.2
HYB 20.06 161 eP 40 18.50 -2.5
GBA 23.49 166 Pd 40 54.10 -1.1
0.7s 1.80nm 3.7mb
KAF 37.83 327 eP 43 03.20 0.8
0.3s 1.10nm 4.2mb
NUR 38.06 324 eP 43 04.80 0.5
HFS 43.32 322 eP 43 46.90 -0.8
0.4s 5.20nm 4.6mb
Z 13s 0.11um 3.9mszX
e 43 50.50
NB2 44.62 323 P 43 57.20 -1.1
0.5s 3.70nm 4.5mb
YKA 81.11 3 eP 47 59.50 -0.9-
0.6s 0.50nm 3.7mb
S.D. = 1.5 on 15 of 15 obs.

* DEC 02, 1990 04h 16m 18.81±0.82s
45.579 N ±6.7km 27.095 E ±7.3km
DEPTH = 10.0km (geophysicist)
ROMANIA (358)

BRD 0.07 207 iPc 16 22.50 1.3
VRI 0.39 318 iPd 16 26.50 -0.3
ISR 0.59 222 ePd 16 31.00 0.3
CVO 0.69 291 ePc 16 32.00 -0.5
MLR 0.81 264 eP 16 34.00 -0.7
CFR 0.84 117 iPc 16 34.00 -1.1
CLI 0.98 8 iPd 16 38.50 1.1
CMP 1.48 259 ePc 16 57.00 11.5X
S.D. = 1.1 on 7 of 8 obs.

* DEC 02, 1990 05h 28m 30.15±2.44s
43.153 N ±15.0km 127.079 W ±14.4km
DEPTH = 10.0km (geophysicist)
3.5mb (1 obs.)
OFF COAST OF OREGON (30)

HBO 3.53 77 P 29 26.48 0.2
KMOR 3.57 45 P 29 26.19 -0.7
NLO 3.91 40 P 29 31.47 -0.2
GT2 4.00 58 P 29 33.38 0.6
BMW 4.31 38 P 29 36.68 -0.5
RVW 4.31 44 P 29 37.06 -0.1
VLMM 4.33 55 P 29 37.88 0.2
VBEM 4.39 62 P 29 38.66 0.1
LVP 4.43 47 P 29 39.25 0.3
MTMW 4.51 49 P 29 40.08 0.0

VLL	4.51	57	P	29	40.63	0.5
ERK	4.62	45	P	29	41.53	-0.2
CZM	4.62	43	P	29	41.76	0.1
APM	4.65	54	P	29	42.66	0.6
ESD	4.65	47	P	29	43.28	1.1
APW	4.71	40	P	29	42.57	-0.3
TDL	4.71	46	P	29	42.97	-0.1
GULW	4.80	53	P	29	44.92	0.6
KOSW	4.80	45	P	29	44.38	0.1
VIPM	4.87	72	P	29	44.47	-0.8
LMW	4.89	42	P	29	45.58	0.0
ASR	4.93	51	P	29	46.24	0.1
VTHM	5.11	64	P	29	48.21	-0.4
LON	5.19	44	P	29	49.94	0.2
GL2	5.28	56	P	29	50.86	-0.2
WPW	5.29	46	P	29	51.21	0.0
FMW	5.38	44	P	29	51.85	-0.7
STW	5.54	24	P	29	54.53	-0.1
JBO	5.69	64	P	29	56.24	-0.5
EBG	5.95	49	P	30	00.94	0.5
JCW	6.20	34	P	30	03.93	0.0
MCW	6.27	27	P	30	04.74	-0.2
GBL	6.42	55	P	30	06.65	-0.3
WAH2	6.44	53	P	30	07.33	0.1
CRF	6.57	53	P	30	08.90	-0.3
RC1	6.61	52	P	30	09.72	0.0
YKA	20.72	16	eP	33	13.10	0.3

S.D. = 0.6s 1.40nm 3.5mb
S.D. = 0.4 on 37 of 37 obs.

? DEC 02, 1990 05h 47m 03.96±3.09s
55.170 N ±31.3km 156.914 W ±26.1km
DEPTH = 33.0km (normal)
4.4mb (3 obs.)

SOUTH OF ALASKA (17)

KDC	3.56	42	eP	47	57.60	-0.6
PMR	7.62	29	eP	48	55.60	0.2
TTA	7.80	3	eP	48	58.50	0.5
FBA	10.76	21	eP	49	37.00	-1.6
IMA	11.05	7	eP	49	42.50	-0.2
INK	17.04	30	eP	51	02.00	1.2
MBC	25.30	20	eP	52	30.50	2.1
DAG	45.69	12	eP	55	22.20	-0.4
NB2	63.75	6	P	57	33.20	-1.0

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

? DEC 02, 1990 06h 11m 10.56±3.64s
36.667 N ±35.5km 29.148 E ±15.1km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

MD 3.2 (ISK).

ELL	0.62	82	iPg	11	22.90	-0.2
CIN	1.26	318	ePg	11	34.00	0.0
BCK	1.40	55	iPn	11	36.50	0.3
KHL	1.68	10	iPn	11	40.00	-0.2
ALT	2.50	17	ePn	11	57.30	5.3X

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

& DEC 02, 1990 07h 01m 45.92s
62.379 N 151.141 W
DEPTH = 88.5km
CENTRAL ALASKA (1)
<AGS-P>.

CUT	0.41	86	iP	01	59.49	-0.5
SKT	0.44	205	iP	01	59.42	-0.9
HUR	0.92	48	eP	02	04.04	-0.8
SUA	0.94	168	iP	02	04.78	-0.4
PWA	0.94	140	eP	02	04.83	-0.3
NCG	1.09	207	iP	02	05.94	-1.1
TRF	1.14	20	iP	02	06.70	-1.0
CGLM	1.15	201	eP	02	06.77	-0.9
GHO	1.21	119	eP	02	08.12	-0.3

PLRM	1.23	129	eP	02	25.46	-0.6
BGL	1.27	208	eP	02	08.59	-0.6
SPU	1.28	200	eP	02	08.07	-1.2
CKL	1.32	206	eP	02	25.90	-1.1
PMS	1.36	146	eP	02	09.55	-0.7
RND	1.47	44	eP	02	10.63	-1.1
KNK	1.60	126	eP	02	12.13	-1.2
MCK	1.69	36	eP	02	13.84	-0.7
RDT	1.91	199	eP	02	16.36	-1.1
SLKM	1.93	166	eP	02	16.89	-0.8
NCT	2.02	206	eP	02	18.48	-0.4
RDN	2.03	203	eP	02	18.06	-1.1
TOA	2.34	95	eP	02	24.11	0.8
NEA	2.39	22	eP	02	21.64	-2.3
GLI	2.45	126	eP	02	22.92	-1.8
WRH	2.51	32	eP	02	23.73	-1.8
SDG	2.61	84	eP	02	25.57	-1.3
VLZ	2.61	117	eP	02	24.67	-2.1
KLU	2.62	107	eP	02	25.06	-2.1
PAX	2.68	75	eP	02	28.29	0.3
CCB	2.72	32	eP	02	26.00	-2.4
HDA	2.77	41	eP	02	27.68	-1.5
MDM	2.90	25	iP	02	29.07	-1.8

32 obs. associated

* DEC 02, 1990 07h 08m 36.28±2.74s
8.171 S ±17.6km 108.502 E ±18.4km
DEPTH = 102.4 ± 28.8 km
4.7mb (4 obs.)

JAVA (277)

TRT	4.12	84	iPd	09	38.90	0.7
MBL	16.92	141	eP	12	27.00	-1.2
MRWA	22.09	162	eP	13	24.00	-0.1
MTN	22.72	104	eP	13	31.00	0.7
WB5	27.61	118	eP	14	16.00	-0.2
ASPA	28.80	125	iPc	14	26.80	-0.1
KOD	35.90	300	eP	15	30.00	1.1
GBA	37.67	305	P	15	42.90	-0.5
HYB	39.02	311	eP	15	54.50	-0.2
GUN	42.02	329	P	16	17.80	-1.8
GKN	42.73	328	P	16	23.40	-1.8
POO	43.28	308	eP	16	32.00	2.4
SOB1	144.97	241	ePKP	28	05.20	1.1

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

% DEC 02, 1990 07h 37m 44.06±0.82s
40.755 N ± 6.2km 29.120 E ± 7.0km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.0 (ISK).

YLV	0.27	134	iPg	37	50.00	0.2
ISK	0.31	352	iPg	37	50.60	0.0
HRT	0.42	81	iPg	37	52.60	-0.1
IZI	0.50	147	iPg	37	54.00	-0.2
KCT	0.77	229	iPg	37	59.10	0.0

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

DEC 02, 1990 08h 05m 54.40±1.05s
40.198 N ± 6.6km 143.466 E ± 7.4km
DEPTH = 41.1 ± 7.2 km
5.0mb (38 obs.) 5.2Msz (12 obs.)
OFF EAST COAST OF HONSHU, JAPAN (229)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 9S, 16C

Centroid Location:

Origin Time 08:05:57.8 0.6

Lat 40.34N 0.14 Lon 143.13E 0.10

Dep 16.0 BDY Half-duration 1.7

Moment Tensor: Scale 10**17 Nm

Mrr= 0.49 0.10 Mtt= 0.27 0.14
Mff=-0.76 0.09 Mrt= 0.42 0.17
Mrf= 1.85 0.26 Mtf=-0.32 0.09

Principal Axes:
T Val= 1.83 Plg=55 Azm=280
N 0.36 2 13
P -2.19 35 104

Best Double Couple: Mo=2.0*10**17
NP1: Strike=203 Dip=10 Slip= 100
NP2: 13 80 88

OFUJ	1.78	232	iP+	06	22.90	-0.3
HOOU	2.19	357	P	06	27.20	-1.9
AOMJ	2.39	280	P	06	32.00	0.1
MRRJ	2.86	322	eP	06	39.70	1.1
SAP	3.28	331	eP	06	46.00	1.5
SSE	20.21	250	P-	10	29.00	0.5
Z 10s	37.00nm	4.7mb				
N 12s	2.60um	4.3Msz				
E 15s	1.90um					
BJI	20.85	278	eP	10	30.50	-4.4X
Z 18s	5.27um	5.0Msz				
N 14s	2.98um					
LZH	31.25	275	eP	12	11.00	-1.5
Z 20s	50.00nm	5.0mb				
N 13s	2.39um	4.9Msz				
KMI	37.09	259	Pc	13	02.50	-0.4
Z 15s	8.20um	5.6MszX				
N 14s	2.00um					
IMA	43.15	32	eP	13	52.90	0.5
CHG	43.67	254	eP	13	57.80	0.9
FBA	45.58	34	eP	14	13.70	2.0
GUN	48.49	274	P	14	35.54	0.0
KKN	49.01	274	P	14	39.38	0.0
PKI	49.02	274	P	14	39.44	-0.2
DMN	49.24	274	P	14	41.16	0.0
GKN	49.40	275	P	14	41.98	-0.3
INK	50.84	28	eP	14	52.00	-0.5
MBC	53.04	17	eP	15	08.50	-0.4
NDI	54.69	280	eP	15	21.00	-0.7
HYB	59.91	268	eP	15	58.00	-0.8
YKA	60.27	32	eP	15	59.50	-1.1
WB5	60.36	190	eP	16	01.20	-0.4
KEV	61.06	339	eP	16	15.00	9.1X
QUE	61.56	287	eP	16	09.60	-0.5
SOD	62.68	337	iP	16	15.30	-1.4
DAG	62.77	355	iPd	16	15.50	-1.7
POO	62.86	272	eP	16	19.00	0.4
GBA	63.08	265	P	16	19.80	-0.2
MAIO	63.65	296	eP	16	34.00	10.3X
ASPA	64.16	190	eP	16	27.00	0.1
PNT	64.80	46	eP	16	41.00	10.0X
KOD	65.16	262	eP	16	27.00	-7.0X
KAF	66.24	333	eP	16	38.20	-1.7
NUR	67.91	332	eP	16	49.20	-1.3
FFC	70.18	34	eP	17	04.00	-0.5
LRM	70.78	46	eP	17	08.70	0.0
TAB	71.36	304	eP	17	12.00	-0.2

02d 08h

HFS 71.86 336 eP 17 13.50 -1.1
 0.6s 7.00nm 4.8mb
 Z 18s 1.13um 5.2MsZ
 eP 17 20.30 22kmX
 eP 17 23.10
 ePcP 17 35.50
 LR 47 54.00
 NB2 71.88 338 P 17 14.30 -0.5
 0.9s 13.40nm 4.9mb
 FRB 73.32 14 ePc 17 22.30 -0.8
 SPC 77.89 326 eP 17 49.70 0.3
 MLR 78.00 320 eP 17 46.00 -4.1X
 KSP 78.24 329 iPd 17 51.50 0.4
 BRG 79.13 330 eP 17 56.90 0.9
 2.0s 38.00nm 5.0mb
 e 18 11.00
 CLL 79.14 331 iPc 17 56.00 0.0
 1.0s 10.00nm 4.7mb
 e 18 07.00
 PRU 79.61 329 eP 17 59.00 0.4
 Z 18s 1.90um 5.5MsZ
 N 16s 0.80um
 E 16s 1.30um
 SRO 79.77 326 eP 18 00.80 1.4
 ZST 79.98 327 eP 18 01.80 1.2
 MOX 80.19 331 eP 18 02.00 0.3
 Z 19s 1.70um 5.4MsZ
 KHC 80.67 329 P 18 05.80 1.5
 Z 17s 0.90um 5.2MsZ
 N 16s 0.90um
 E 16s 1.00um
 e 18 27.00
 GRF 81.12 331 ePc 18 07.80 1.2
 Z 18s 1.00um 5.2MsZ
 e 18 29.00
 KBA 82.42 328 iPc 18 10.80 -2.8
 2.4s 66.30nm 5.3mb
 i 18 15.30
 SKO 82.79 320 eP 18 16.60 1.1
 Z 16s 1.94um 5.6MsZ
 N 16s 1.54um
 E 18s 1.51um
 i 18 33.00
 LR 28 40.00
 59 33.00
 SOTA 83.15 329 i(P) 18 18.10 0.7
 i 18 29.40
 CDF 83.62 332 eP 18 19.50 -0.2
 0.8s 6.70nm 4.8mb
 CTI 83.94 329 P 18 20.00 -1.4
 BSF 84.28 332 eP 18 22.40 -0.7
 HAU 84.29 333 eP 18 22.70 -0.3
 0.8s 6.70nm 4.8mb
 Z 19s 0.82um 5.1MsZ
 VAI 85.21 330 P 18 28.00 0.5
 LOR 85.79 334 eP 18 30.50 0.0
 0.8s 13.45nm 5.2mb
 Z 20s 1.15um 5.3MsZ
 FLN 85.86 337 eP 18 30.70 -0.1
 0.7s 6.60nm 5.0mb
 Z 20s 1.40um 5.4MsZ
 LDF 85.90 337 eP 18 30.90 -0.1
 0.7s 4.40nm 4.8mb
 LBF 85.99 334 eP 18 31.40 -0.2
 0.7s 11.00nm 5.2mb
 SSF 86.09 334 eP 18 32.00 0.0
 0.8s 9.40nm 5.1mb
 LPL 86.27 331 eP 18 33.40 0.2
 0.7s 8.25nm 5.1mb
 LPG 86.28 331 eP 18 33.70 0.4
 0.7s 11.00nm 5.2mb
 GRR 86.30 337 eP 18 33.30 0.3
 0.8s 13.45nm 5.2mb
 SMF 86.33 333 eP 18 33.20 0.0
 0.8s 10.75nm 5.1mb
 AVF 86.37 334 eP 18 33.60 0.2
 0.7s 20.95nm 5.5mb
 LPF 86.68 337 eP 18 35.10 0.3
 0.8s 10.75nm 5.1mb
 BNI 86.69 331 P 18 36.00 0.9
 BGF 86.75 334 eP 18 35.20 0.0
 0.7s 7.70nm 5.0mb
 MAF 87.14 334 eP 18 37.70 0.6
 0.8s 16.80nm 5.3mb
 TCF 87.20 334 eP 18 37.90 0.5
 0.8s 4.70nm 4.8mb
 LSF 87.45 335 eP 18 39.00 0.4

MFF 0.8s 20.15nm 5.4mb
 87.68 336 eP 18 40.20 0.5
 0.8s 8.05nm 5.0mb
 RJF 88.29 334 eP 18 43.20 0.5
 0.9s 9.85nm 5.1mb
 Z 21s 1.35um 5.3MsZ
 CAF 88.44 334 eP 18 44.40 1.0
 0.8s 6.70nm 5.0mb
 ZOBO 143.67 58 PKP 25 31.00 3.4X
 LPB 143.88 58 PKP 25 35.00 7.2X
 CNCB 144.16 59 PKP 25 32.00 3.6X
 SIV 147.80 49 PKP 25 35.00 1.3
 SOB1 148.90 8 ePKP 25 38.20 2.6X
 PDCR 152.35 5 ePKP 25 48.30 7.6X
 S.D. = 0.9 on 74 of 85 obs.
 ? DEC 02, 1990 08h 29m 39.72±0.94s
 39.112 N ± 8.3km 27.568 E ± 15.9km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.2 (ISK).
 IZM 0.75 199 iPg 29 54.50 0.0
 iSg 30 06.00
 DST 0.96 59 ePn 29 57.80 -0.2
 EDC 1.25 10 ePn 30 03.00 0.0
 BNT 1.27 12 ePn 30 03.00 -0.3
 KCT 1.29 28 iPn 30 04.10 0.5
 S.D. = 0.4 on 5 of 5 obs.
 DEC 02, 1990 08h 44m 02.03±0.34s
 26.722 S ± 8.2km 114.127 W ± 6.3km
 DEPTH = 10.0km (geophysicist)
 5.3mb (23 obs.) 5.5MsZ (11 obs.)
 EASTER ISLAND REGION (685)
 Ms 5.4 (PAS).
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 125, 30C
 Centroid Location:
 Origin Time 08:44:10.5 0.3
 Lat 26.715 0.03 Lon 114.16W 0.02
 Dep 15.0 FIX Half-duration 2.3
 Moment Tensor: Scale 10**17 Nm
 Mrr=-1.40 0.10 Mtt=-0.18 0.11
 Mff=1.58 0.12 Mrt=-0.22 0.30
 Mrf=0.36 0.34 Mtf=-6.87 0.12
 Principal Axes:
 T Val= 7.64 Plg= 3 Azm=229
 N -1.42 87 30
 P -6.23 1 139
 Best Double Couple: Mo=6.9*10**17
 NP1: Strike=274 Dip=87 Slip=179
 NP2: 4 89 3
 RUV 33.01 284 iP 50 41.80 2.2
 1.1s 50.00nm 5.4mb
 VAH 33.20 283 iP 50 43.20 1.9
 1.1s 45.00nm 5.3mb
 TPT 33.30 284 iP 50 44.50 2.4
 1.1s 50.00nm 5.4mb
 PMO 33.54 284 iP 50 46.10 1.9
 1.1s 55.00nm 5.4mb
 TVO 33.61 278 iP 50 44.70 -0.2
 1.1s 85.00nm 5.6mb
 PPN 33.87 278 iP 50 46.50 -0.5
 1.1s 45.00nm 5.3mb
 PAE 33.95 278 iP 50 47.30 -0.5
 1.1s 120.00nm 5.7mb
 PPT 33.98 278 iP 50 48.00 0.0
 1.1s 90.00nm 5.6mb
 AFR 34.17 278 iP 50 49.20 -0.5
 1.1s 90.00nm 5.6mb
 NNA 37.95 75 eP 51 22.00 0.3
 1.5s 150.00nm 5.5mb
 Z 22s 2.96um 5.1MsZ
 ANT 39.52 96 e(P) 51 36.50 1.7
 ARE 40.77 84 eP 51 46.00 0.5
 LPB 43.77 86 Pc 52 11.00 0.8
 1.8s 327.27nm 5.8mb
 Z 22s 6.67um 5.5MsZ
 S 58 46.00
 LR 03 00.00
 CNCB 43.78 87 P 52 11.50 1.1
 ZOBO 43.84 86 P 52 30.00 19.0X
 1.2s 120.61nm 5.8mb
 Z 24s 4.23um 5.3MsZ

S 58 48.00
 LR 02 44.00
 PSO 45.03 58 eP 52 21.00 0.6
 UPA 48.85 48 ePc+ 52 50.40 0.5
 Z 20s 6.74um 5.6MsZ
 S 00 00.00
 AIA 49.58 155 eP 52 54.80 0.0
 BOG 49.72 57 eP 52 59.00 2.0
 iS 00 14.00
 SIV 50.25 89 P 52 59.40 -1.3
 FUD 50.52 57 eP 53 05.00 1.9
 BAR 59.12 357 eP 54 04.00 -1.0
 GLA 59.45 359 eP 54 14.00 6.7X
 PLM 59.80 357 P 54 10.00 0.1
 PEC 60.35 357 P 54 13.00 -0.5
 VAO 60.42 102 eP 54 13.40 -0.9
 e 54 16.60
 RVR 60.46 357 eP 54 12.00 -2.2
 TPC 60.52 358 eP 54 16.00 1.3
 PAS 60.66 356 eP 54 13.00 -2.5
 Z 20s 2.10um 5.3MsZ
 ePP 56 00.00
 eScS 03 10.00
 eSSS 09 50.00
 eLg 10 10.00
 eLR 12 31.00
 MWC 60.73 356 eP 54 17.00 0.8
 SBB 61.18 357 eP 54 22.00 2.9
 ABL 61.43 355 P 54 23.00 2.0
 GSC 61.74 358 eP 54 23.00 0.0
 ALO 61.76 7 eP 54 22.00 -1.3
 1.0s 11.75nm 5.0mb
 Z 18s 3.52um 5.6MsZ
 ANMO 61.76 7 P 54 19.50 -3.8X
 0.8s 9.33nm 5.0mb
 Z 18s 3.09um 5.5MsZ
 BAO 62.07 94 ePd 54 24.50 -1.2
 CLC 62.29 357 eP 54 27.00 0.4
 MEQ 62.92 14 eP 54 30.00 -0.7
 PRS 63.09 353 eP 54 37.30 5.5X
 LLA 63.33 354 eP 54 38.80 5.4X
 SPA 63.43 180 iPd 54 33.40 -0.7
 1.0s 20.00nm 5.3mb
 Z 20s 2.25um 5.3MsZ
 FRI 63.59 355 eP 54 33.50 -1.6
 ARN 64.11 353 P 54 39.00 0.4
 MHC 64.11 353 eP 54 44.70 6.0X
 TNP 64.53 357 P 54 41.50 0.0
 0.6s 12.78nm 5.3mb
 CMB 64.68 355 eP 54 41.70 -0.6
 PV09 65.05 4 P 54 44.00 -1.0
 GOL 66.58 7 P 54 53.00 -1.7
 1.0s 6.25nm 4.8mb
 Z 18s 2.60um 5.5MsZ
 DUG 66.58 1 P 54 54.00 -0.6
 LBFM 68.10 354 P 55 05.00 0.7
 BW06 69.28 4 P 55 09.00 -2.5
 0.8s 11.90nm 5.1mb
 SOB1 70.98 91 eP 55 21.80 -0.5
 BLA 71.05 28 eP 55 24.00 1.8
 1.1s 44.30nm 5.5mb
 Z 22s 2.96um 5.5MsZ
 PDCR 71.19 95 eP 55 24.10 0.6
 e 55 27.30
 DZM 71.38 254 iPc 55 23.00 -1.7
 LRM 72.21 1 eP 55 29.00 -0.2
 LON 73.45 354 P 55 34.00 -2.3
 DPW 74.34 357 P 55 43.20 1.9
 NEW 74.69 358 P 55 43.00 -0.3
 0.8s 29.17nm 5.4mb
 PGC 75.49 354 eP 55 50.00 2.2
 PNT 75.85 356 eP 55 50.00 0.0
 0.9s 21.00nm 5.2mb
 SES 76.82 2 eP 55 55.00 -0.4
 EDM 79.61 0 eP 56 09.50 -1.1
 RSNY 79.62 28 P 56 09.00 -1.9
 HBVT 80.09 29 P 56 12.50 -0.9
 CAN 80.22 235 eP 56 13.30 -1.2
 BWA 81.04 236 eP 56 16.40 -2.5
 FFC 81.78 7 ePc 56 23.00 1.0
 1.6s 68.00nm 5.5mb
 CBM 84.26 30 P 56 33.50 -1.4
 CMS 84.31 238 eP 56 35.00 -0.7
 RMO 84.31 243 eP 56 36.00 0.2
 YKA 88.90 360 eP 56 55.80 -1.4
 1.1s 7.60nm 4.9mb

PMR 92.43 344 P 57 15.00 1.3
 0.8s 6.90nm 5.1mb
 Z 18s 1.90um 5.6MsZ
 FBA 94.99 346 eP 57 25.90 0.5
 INK 95.83 353 eP 57 27.00 -2.1
 BCAA 129.69 108 ePKPd 03 07.60 -6.3X
 0.3s 3.00nm
 GRF 132.54 46 ePKP 03 20.40 2.1X
 MOX 132.65 45 ePKP 03 22.00 3.6X
 Z 24s 1.70um 5.7MsZ
 SOTA 132.83 49 ePKP 03 20.50 1.5
 1.5s 40.30nm
 i 03 22.80
 CLL 133.40 44 ePKP 03 20.00 0.2
 BRG 134.07 44 ePKP 03 23.60 2.5X
 1.4s 16.00nm
 KHC 134.15 46 ePKP 03 22.50 1.1
 e 05 42.50
 PTJ 136.25 51 ePKP 03 24.50 -1.0
 BJI 136.48 301 ePKP 03 22.00 -4.0X
 Z 24s 1.91um 5.7MsZ
 ePP 05 32.00
 ZST 136.62 47 ePKP 03 25.70 -0.3
 SPC 138.41 45 ePKP 03 30.80 1.2
 MLR 143.16 49 ePKP 03 29.00 -9.1X
 CFR 144.74 49 ePKP 03 33.00 -7.5X
 LOE 145.60 262 ePKP 03 45.50 2.6X
 IZM 145.67 60 iPKP 03 41.00 -1.5
 NST 146.32 258 ePKP 03 49.00 5.0X
 LZH 146.45 296 ePKP 03 45.50 1.5
 Z 21s 1.50um 5.7MsZ
 esPKP 04 00.00
 PP 06 09.00
 SKS 10 50.00
 SKKS 13 00.00
 KMI 146.88 276 PKPd 03 46.00 0.9
 pP 03 52.00
 IZI 147.00 56 ePKP 03 48.00 3.4X
 ALT 147.75 59 ePKP 03 48.50 2.6X
 ELL 147.98 63 iPKP 03 50.90 4.5X
 CHG 148.58 262 ePKP 03 50.40 2.7X
 BBTk 149.56 56 ePKP 03 52.00 3.3X
 RMN 152.36 75 ePKP 03 57.00 3.9X
 DSI 152.98 72 ePKP 03 58.00 4.2X
 MAIO 169.01 28 ePKP 04 12.00 1.5
 QUE 176.42 345 ePKP 04 16.50 2.9X
 S.D. = 1.4 on 79 of 102 obs.

* DEC 02, 1990 08h 44m 18.70±0.91s
 52.900 N ±16.9km 170.845 E ±14.2km
 DEPTH = 33.0km (normol)
 4.3mb (8 obs.)

NEAR ISLANDS, ALEUTIAN ISLANDS (5)

SVW 19.82 52 eP 48 49.90 0.7
 TTA 20.03 47 eP 48 51.00 -0.3
 KDC 21.23 62 eP 49 03.00 -0.6
 IMA 21.93 39 eP 49 10.80 0.1
 1.0s 19.10nm 4.5mb
 PMR 22.99 52 eP 49 23.00 2.0
 BRW 23.36 26 eP 49 24.20 -0.3
 FBA 24.00 44 ePc 49 31.60 0.8
 0.7s 37.80nm 5.0mb
 TOA 24.42 51 eP 49 35.70 0.7
 YKA 38.78 46 eP 51 41.30 0.0
 0.8s 2.50nm 4.0mb
 PNT 42.25 66 eP 52 10.00 -0.1
 TNP 50.44 77 eP 53 14.50 -0.7
 0.8s 2.50nm 4.3mb
 BW06 51.76 67 eP 53 24.00 -1.2
 0.9s 3.53nm 4.3mb
 GOL 56.17 67 eP 53 57.00 -0.6
 0.9s 2.65nm 4.3mb
 ALQ 58.88 72 eP 54 16.00 -0.7
 1.0s 2.00nm 4.2mb
 HFS 65.83 348 eP 55 00.30 -2.1
 0.4s 2.40nm 4.6mb
 Z 13s 0.07um 4.0MsZ
 KHC 76.53 345 eP 56 07.80 1.0
 WB5 79.08 215 eP 56 22.10 1.1
 S.D. = 1.0 on 17 of 17 obs.

% DEC 02, 1990 09h 28m 42.53±1.04s
 39.204 N ± 8.5km 27.408 E ±10.5km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.4 (ISK).

IZM 0.81 188 ePg 28 59.00 0.7
 iSg 29 11.50
 DST 1.03 67 ePn 29 00.30 -1.7
 EZN 1.04 307 ePn 29 01.00 -1.2
 EDC 1.19 17 ePn 29 06.00 1.2
 BNT 1.22 19 ePn 29 06.00 0.8
 KCT 1.27 35 iPn 29 06.30 0.1
 S.D. = 1.5 on 6 of 6 obs.

% DEC 02, 1990 12h 49m 41.82±0.81s
 39.031 N ± 7.2km 29.566 E ± 8.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.6 (ISK).

ALT 0.42 87 iPg 49 50.60 0.1
 iSg 49 56.60
 KHL 0.71 183 iPg 49 55.70 -0.1
 iSg 50 06.70
 DST 0.93 309 ePg 49 59.80 0.3
 eSg 50 11.80
 IZI 1.31 357 ePn 50 05.00 -1.0
 KCT 1.53 323 ePn 50 09.00 -0.3
 YLV 1.54 355 iPn 50 10.50 1.1
 S.D. = 0.9 on 6 of 6 obs.

? DEC 02, 1990 13h 48m 37.30±1.22s
 39.163 N ±10.1km 27.479 E ±19.4km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.4 (ISK).

IZM 0.78 193 iPg 48 52.60 0.0
 iSg 49 04.10
 DST 0.99 63 iPn 48 56.00 -0.2
 BNT 1.24 16 ePn 49 00.00 -0.3
 KCT 1.28 32 ePn 49 01.50 0.5
 S.D. = 0.6 on 4 of 4 obs.

DEC 02, 1990 14h 01m 36.74±0.56s
 35.368 N ± 7.3km 29.634 E ± 5.9km
 DEPTH = 10.0km (geophysicist)

EASTERN MEDITERRANEAN SEA (371)

KSL 0.75 357 eP 01 51.80 0.4
 ELL 1.40 9 iPn 02 01.90 -0.4
 ARG 1.49 305 eP 02 02.80 -0.7
 BCK 2.23 20 iPn 02 14.00 -0.3
 PPCY 2.27 101 eP 02 17.50 2.6
 KHL 2.95 358 ePn 02 32.40 7.8X
 CSS 3.06 97 eP 02 26.00 0.0
 NPS 3.29 269 iPd 02 30.60 1.2
 eS 03 08.00
 IZM 3.57 329 ePn 02 38.00 4.6X
 VAM 4.44 272 iPd 02 46.70 1.0
 HRI 5.47 111 eP 03 00.00 -0.3
 VLI 5.59 286 eP 03 00.70 -1.3
 DSI 6.11 127 eP 03 08.00 -1.3
 MKT 6.39 132 eP 03 13.00 -0.3
 eS 04 21.00
 MBH 7.12 140 eP 03 23.00 -0.6
 S.D. = 1.2 on 13 of 15 obs.

DEC 02, 1990 14h 37m 26.90±0.20s
 21.823 S ± 3.3km 68.333 W ± 5.4km
 DEPTH = 120.7km (6 depth phases)
 5.3mb (38 obs.)

CHILE-BOLIVIA BORDER REGION (124)
 CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN
 L.P.B.: 12S, 26C
 Centroid Location:
 Origin Time 14:37:36.2 0.5
 Lat 21.34S 0.07 Lon 68.80W 0.05
 Dep 133.6 2.5 Half-duration 1.6
 Moment Tensor: Scale 10**17 Nm
 Mrr=-0.51 0.05 Mtt=-0.66 0.08
 Mff= 1.17 0.07 Mrt=-0.25 0.05
 Mrf=-0.37 0.04 Mtf=-0.10 0.07
 Principal Axes:
 T Vol= 1.24 Plg=12 Azm= 88
 N -0.36 48 192
 P -0.89 40 349
 Best Double Couple: Mo=1.1*10**17
 NP1: Strike=137 Dip=53 Slip=-157
 NP2: 33 72 -39

ANT 2.68 225 iPc 38 09.70 0.0
 iS 38 35.50
 CNCB 5.00 4 iPd 38 42.50 1.0
 LPB 5.27 2 Pd 38 45.80 0.8
 1.0s 1100.00nm 6.0mb
 ZOBD 5.53 120 iPd 38 48.20 -0.5
 ARE 6.11 330 iPd 38 51.50 -5.0X
 iS 39 53.50
 CYA 6.98 161 e(P) 39 08.00 -0.1
 RTRS 8.37 187 ePc 39 26.50 -0.4
 SIV 8.99 51 iPc 39 31.60 -3.7X
 RTLL 9.47 181 iPc 39 38.00 -3.7X
 ZON 9.69 182 eP 39 43.00 -1.6
 CFA 9.75 180 ePc 39 43.80 -1.5
 RTCV 10.00 181 ePc 39 47.30 -1.4
 JACH 11.00 190 iPd 40 01.50 -0.5
 MDZ 11.03 182 i(P) 40 05.60 3.3X
 PEL 11.47 190 iPd 40 10.10 2.0
 i(S) 42 42.00
 FCH 11.59 188 eP 40 07.70 -2.3
 SAN 11.77 190 eP 40 12.00 0.0
 e 42 26.00
 PCH 11.91 189 eP 40 11.50 -2.5
 LCCH 11.96 193 eP 40 14.00 -0.5
 TACH 12.01 190 eP 40 12.50 -2.7
 CHCH 12.24 189 eP 40 19.50 1.3
 LNV 12.39 192 eP 40 15.00 -5.1X
 NNA 12.72 319 iPc 40 23.00 -1.6
 0.9s 42.86nm 5.0mb
 i 40 30.30
 eS 42 37.00
 ITB1 13.12 105 eP 40 30.10 0.3
 ITB7 13.40 107 eP 40 34.80 1.3
 VAO 19.79 97 iPc 41 49.10 -1.0
 i 41 53.00 15kmX
 i 42 00.40
 BAO 20.21 76 iPc 41 54.00 -0.6
 TUNG 22.55 333 eP 42 19.00 1.0
 ANGL 23.12 336 eP 42 30.40 6.8X
 VC1 23.23 334 eP 42 27.00 2.2
 GGP 23.73 334 eP 42 31.20 1.4
 COTA 24.09 335 P 42 34.00 0.9
 SOB1 29.20 69 ePc 43 17.60 -1.7
 e 44 13.00 286kmX
 PDCR 29.35 76 eP 43 19.40 -1.2
 e 43 29.40 35kmX
 e 44 12.90
 SDV 30.60 356 iPd 43 29.00 -2.8
 CEOS 30.66 360 iP 43 30.00 -2.2
 TOV 31.44 357 eP 43 36.50 -2.5
 LLAV 32.13 3 iP 43 43.60 -1.4
 CAR 32.16 3 iP 43 43.80 -1.5
 UPA 32.53 339 ePc 43 47.00 -1.3
 AIA 43.49 178 eP 45 23.10 3.7X
 HBF 55.65 348 P 46 51.00 -1.5
 SGS 55.93 348 P 46 53.50 -1.0
 JSC 57.13 347 P 47 02.00 -1.0
 LHS 57.23 348 P 47 02.80 -0.9
 TKL 59.01 345 P 47 14.00 -2.1
 GBTN 59.12 345 P 47 14.60 -2.3
 RSCP 59.40 344 P 47 17.20 -1.6
 BLA 59.81 349 iPd 47 21.20 -0.4
 0.6s 166.67nm 6.3mb
 CBN 60.31 352 eP 47 23.60 -1.3
 1.0s 38.00nm 5.4mb
 UYO 60.98 335 iPc 47 27.80 -1.8
 OLY 61.08 339 P 47 27.60 -2.7
 MBO 61.92 59 iP 47 36.20 0.0
 ELC 62.00 341 P 47 34.30 -2.1
 PNJ 62.64 355 iP 47 39.40 -1.1
 TBR 62.88 355 P 47 40.00 -2.1
 FVM 63.01 341 P 47 41.00 -2.0
 pP 48 11.40 125km
 MEQ 63.20 332 iPd 47 42.50 -1.9
 CLE 64.17 349 iP 47 49.40 -1.1
 WVLY 64.66 352 P 47 52.70 -1.1
 HBVT 66.00 356 P 48 00.80 -1.4
 RSNY 66.29 355 P 48 03.00 -1.1
 0.8s 49.41nm 5.5mb
 pP 48 33.00 122km
 ALO 67.06 327 ePc 48 08.80 -0.6
 0.9s 42.02nm 5.3mb
 epP 48 38.00 118km
 ANMO 67.06 327 P 48 09.00 -0.4
 1.0s 65.00nm 5.5mb
 pP 48 38.00 117km
 LIC 67.96 73 Pc 48 14.74 -0.5

02d 14h

TIC 0.7s 56.00nm 5.5mb
68.16 73 Pc 48 15.98 -0.5
1.0s 117.50nm 5.7mb
KIC 68.28 73 Pc 48 16.88 -0.3
0.7s 111.00nm 5.8mb
S 57 07.00
SPA 68.31 180 iPd 48 19.20 2.4
1.0s 45.00nm 5.3mb
i 48 25.50 20kmx
CBM 68.43 0 P 48 17.00 -0.4
GLD 70.27 331 P 48 29.20 0.1
GOL 70.30 330 P 48 29.00 -0.4
0.7s 29.13nm 5.2mb
pP 48 59.00 120km
GLA 70.33 320 eP 48 30.00 0.6
BAR 71.20 318 eP 48 36.00 1.3
TPC 71.79 320 eP 48 39.00 0.8
PEC 72.32 319 P 48 42.80 1.5
RVR 72.52 319 eP 48 43.00 0.6
GSC 73.07 320 eP 48 47.00 1.3
MWC 73.09 319 eP 48 47.00 1.0
DAU 73.69 327 P 48 50.00 0.5
CLC 73.89 320 eP 48 51.00 0.6
ABL 74.22 318 P 48 53.00 0.4
DUG 74.32 326 P 48 53.50 0.6
SYP 74.48 318 eP 48 55.00 1.0
BW06 74.66 330 P 48 54.50 -0.5
1.0s 25.00nm 5.0mb
BCH 74.98 318 P 48 58.00 1.2
TNP 75.22 322 P 48 59.90 1.7
1.0s 77.50nm 5.4mb
FRI 75.94 320 eP 49 03.90 1.9
PRI 75.96 319 eP 49 03.50 1.2
MNA 75.99 322 P 49 02.00 -0.5
SCH 76.34 1 ePd 49 03.50 -0.3
0.7s 77.00nm 5.6mb
LLA 76.44 319 iPd 49 05.90 1.0
PRS 76.52 318 eP 49 06.30 1.0
SAO 76.84 319 eP 49 07.90 0.8
CMB 77.03 320 eP 49 08.80 0.6
ARN 77.27 319 P 49 10.30 0.8
MHC 77.33 319 eP 49 11.30 1.4
GCC 77.35 319 eP 49 10.80 1.0
BKS 78.04 319 ePd 49 14.40 0.8
BRK 78.05 319 eP 49 14.00 0.3
LRM 78.33 330 iPd 49 16.20 0.8
e 49 36.50 75kmx
ORV 78.68 321 eP 49 18.30 1.2
MIN 79.26 321 eP 49 20.00 -0.4
WDC 79.95 321 iPd 49 23.30 -0.7
LBFM 80.07 322 P 49 25.30 0.4
FHC 80.94 321 eP 49 30.70 1.5
SES 81.20 334 iPd 49 30.60 0.3
0.8s 86.00nm 5.6mb
pP 50 02.00 123km
FFC 81.51 341 iPd 49 31.30 -0.5
1.1s 74.00nm 5.4mb
NEW 82.29 330 P 49 35.80 -0.3
1.0s 28.13nm 5.0mb
DPW 82.53 329 P 49 38.00 0.7
LON 83.57 326 P 49 42.70 0.0
BMW 84.13 325 P 49 45.70 0.2
PNT 84.21 329 ePd 49 46.00 0.3
0.9s 37.00nm 5.3mb
EDM 84.28 335 iPd 49 45.60 -0.4
FRB 85.28 360 ePd 49 50.20 -0.4
PGC 85.65 327 eP 49 54.00 1.1
TOL 85.74 44 iPd 49 56.00 2.4
1.2s 78.13nm 5.5mb
SLR 86.38 116 iPc 49 59.50 2.2
1.0s 35.00nm 5.3mb
BCAO 88.73 85 iPd 50 07.00 -1.6
0.4s 5.00nm 4.9mb
ic 53 11.50
BUL 88.80 111 iPd 50 09.70 0.7
1.0s 20.00nm 5.1mb
ipP 50 12.90 10kmx
KRI 90.96 108 iPd 50 21.00 2.0
ipP 50 24.50 11kmx
LFF 91.40 42 eP 50 20.80 0.6
1.0s 20.00nm 5.3mb
LPO 91.55 42 eP 50 22.30 1.4
1.2s 29.75nm 5.4mb
YKA 91.67 340 eP 50 20.80 -0.3
0.7s 61.20nm 5.9mb
MFF 91.70 40 eP 50 22.10 0.5
1.2s 26.80nm 5.3mb

LPF 91.90 38 eP 50 23.70 1.3
1.1s 19.55nm 5.3mb
RJF 92.06 42 eP 50 23.50 0.2
1.0s 10.00nm 5.0mb
Z 20s 0.13um 4.4MsZ
GRR 92.19 38 eP 50 23.80 0.0
FLN 92.60 38 eP 50 27.00 1.4
1.1s 12.20nm 5.1mb
Z 21s 0.15um 4.4MsZ
LDF 92.72 38 eP 50 27.40 1.2
0.9s 9.85nm 5.1mb
MAF 93.15 41 eP 50 29.50 1.2
1.0s 8.00nm 5.0mb
AVF 93.89 41 eP 50 31.60 0.0
1.1s 9.75nm 5.1mb
SMF 94.12 41 eP 50 33.00 0.3
1.0s 14.00nm 5.3mb
LBF 94.36 41 eP 50 35.10 1.2
1.1s 8.55nm 5.0mb
LOR 94.42 41 eP 50 34.20 0.1
1.2s 11.90nm 5.1mb
Z 20s 0.13um 4.4MsZ
SOTA 98.94 43 iPKPd 50 55.40 0.6
0.7s 9.50nm 5.5mb
i 51 00.30 15kmx
i 51 05.20
INK 101.43 340 ePd151 05.50 0.2
MBC 102.65 349 ePd151 12.50 1.9
1.0s 5.00nm 5.3mb
WB5 132.99 210 ePKP 56 27.70 -2.6X
i 56 31.50
i 57 06.50
e 59 49.90
POO 144.41 88 ePKP 56 54.00 2.9X
KOD 145.25 104 ePKP 56 54.80 1.8
KUSJ 145.30 315 ePKP 56 51.60 -0.3
ASAJ 146.12 318 ePKP 56 59.90 6.7X
GBA 146.44 98 PKP 56 56.70 2.2X
GUA 147.33 261 ePKP 56 59.60 3.6X
0.8s 256.72nm
PJG 147.39 261 ePKP 56 59.50 3.4X
MRRJ 147.97 317 ePKP 57 00.30 4.1X
NDI 148.18 71 ePKP 56 59.00 2.0X
HYB 148.54 92 ePKP 57 00.00 2.1X
e 58 11.00
e 58 35.00
OFUJ 149.13 311 ePKP 57 03.40 5.2X
TRT 150.64 182 ePKPd 57 09.50 8.4X
MAT 152.69 308 iPKPd 57 11.70 8.1X
GKN 154.76 70 PKP 57 08.00 1.2
DMN 155.22 71 PKP 57 08.16 0.6
KKN 155.35 71 PKP 57 09.00 1.3
PKI 155.49 71 PKP 57 08.90 0.8
GUN 155.86 70 PKP 57 09.94 1.3
BJI 161.44 349 ePKP 57 17.00 3.0X
1.2s 34.00nm
S.D. = 1.3 on 137 of 157 obs.
% DEC 02, 1990 15h 46m 01.61 ± 0.84s
44.220 N ± 5.4km 8.221 E ± 6.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).
FIN 0.01 221 P 46 03.69 0.1
S 46 04.71
ROB 0.26 287 P 46 07.28 0.1
S 46 10.73
IMI 0.39 218 P 46 09.74 0.1
S 46 15.38
PCP 0.40 36 P 46 09.64 -0.1
S 46 15.07
ENR 0.58 271 P 46 13.19 -0.2
S 46 20.94
STV 0.65 272 P 46 14.17 -0.4
S 46 22.66
PZZ 0.85 290 P 46 18.25 0.1
S 46 29.22
BHB 0.93 313 P 46 19.22 -0.1
S 46 31.16
RSP 1.16 324 P 46 23.68 0.3
S 46 37.07
S.D. = 0.3 on 9 of 9 obs.
& DEC 02, 1990 16h 00m 50.00s
32.550 N 117.317 W
DEPTH = 6.0km (geophysicist)

CALIFORNIA-MEXICO BORDER REGION (45)
<PAS-P>. ML 2.6 (PAS).

PLM 0.89 25 iPd 01 06.00 -1.5
PEC 1.34 6 eP 01 13.60 -1.6
2 obs. associated

% DEC 02, 1990 16h 10m 08.21 ± 1.58s
44.637 N ± 6.5km 6.826 E ± 14.7km
DEPTH = 10.0km (geophysicist)

FRANCE. (538)
ML 1.8 (GEN).

PZZ 0.24 124 P 10 13.69 0.3
S 10 17.58
RRL 0.28 354 P 10 14.40 0.1
S 10 18.81
BHB 0.37 57 P 10 15.94 0.1
S 10 21.17
STV 0.53 138 P 10 18.81 -0.2
S 10 26.61
ENR 0.59 134 P 10 20.15 -0.1
S 10 28.66
RSP 0.60 31 P 10 20.15 -0.2
S 10 28.66
S.D. = 0.3 on 6 of 6 obs.

? DEC 02, 1990 16h 32m 31.56 ± 4.05s
33.517 S ± 10.7km 71.986 W ± 28.8km
DEPTH = 10.0km (geophysicist)
NEAR COAST OF CENTRAL CHILE (135)

LCCH 0.35 83 iPd 32 39.60 0.8
iS 32 44.50
LNV 0.65 133 iPd 32 44.50 0.0
iS 32 52.50
TACH 0.89 99 iPd 32 47.50 -1.1
iS 32 59.70
ROCH 0.98 57 iP 32 51.00 0.7
iS 33 05.20
SAN 1.11 87 eP 32 51.70 -0.7
iS 33 07.80
CHCH 1.19 111 eP 32 55.40 1.7
iS 33 12.50
PCH 1.23 95 iP 32 53.70 -0.9
iS 33 10.40
FCH 1.43 83 iPd 32 57.50 -0.4
iS 33 16.50
JACH 1.44 55 iPd 32 57.60 -0.1
iS 33 17.60
S.D. = 1.0 on 9 of 9 obs.

& DEC 02, 1990 18h 11m 50.34s
61.767 N 149.807 W
DEPTH = 42.4km
SOUTHERN ALASKA (2)
<AGS-P>.

PWA 0.12 196 iP 11 57.50 1.8
eS 12 03.56
PLRM 0.37 118 iP 11 58.45 -1.1
eS 12 05.69
GHO 0.42 89 iP 11 59.33 -1.0
eS 12 07.53
PMS 0.54 167 eP 12 01.08 -0.7
eS 12 09.55
SUA 0.54 236 iP 12 01.62 -0.3
eS 12 10.91
CUT 0.68 341 iP 12 02.77 -0.8
eS 12 12.52
KNK 0.74 118 iP 12 03.51 -1.0
eS 12 14.37
SKT 0.84 285 iP 12 05.13 -0.8
eS 12 16.84
CGLM 1.15 247 iP 12 10.14 -0.2
eS 12 25.70
SCM 1.18 86 eP 12 09.63 -1.1
eS 12 25.36
NCG 1.18 253 eP 12 10.41 -0.4
eS 12 26.87
HUR 1.22 4 eP 12 10.72 -0.5
eS 12 26.54
SPU 1.23 242 eP 12 11.02 -0.4
eS 12 27.90
SLKM 1.28 189 eP 12 11.39 -0.7
eS 12 27.67
BGL 1.34 249 eP 12 12.94 0.0

GLI	1.58	123	eS	12	28.92	
			eP	12	14.88	-1.5
			eS	12	34.66	
SEW	1.68	174	eP	12	17.84	0.2
RND	1.70	15	eP	12	17.45	-0.7
TRF	1.71	353	eP	12	17.68	-0.6
VZW	1.72	113	eP	12	17.03	-1.3
RDT	1.74	228	eP	12	17.96	-0.7
			eS	12	39.68	
KNIM	1.74	144	eP	12	16.04	-2.6
TOA	1.75	77	eP	12	18.56	-0.3
VLZ	1.79	109	iP	12	17.61	-1.6
KLU	1.88	97	iP	12	19.20	-1.4
REF	1.90	229	eP	12	19.81	-1.3
RDN	1.91	230	eP	12	20.65	-0.4
TZL	2.09	80	eP	12	22.88	-0.7
SDG	2.14	67	eP	12	23.93	-0.4
PAX	2.36	57	eP	12	27.57	0.1
GLB	2.88	94	eP	12	33.02	-2.0
YKA	16.35	72	eP	15	55.50	17.4

0.6s 0.30nm
32 obs. associated

? DEC 02, 1990 18h 16m 45.89± 4.06s
28.568 S ± 27.2km 71.956 W ± 24.1km
DEPTH = 33.0km (normal)
NEAR COAST OF CENTRAL CHILE (135)

RTRS	2.70	127	ePc	17	29.10	1.2
RTLL	4.09	133	iPd	17	47.50	-0.2
ZON	4.11	137	eP	17	47.00	-1.0
JACH	4.27	164	iPd	17	50.60	0.3
			i	18	32.50	
RTCV	4.42	139	ePd	17	52.50	0.1
CFA	4.42	134	ePd	17	52.10	-0.4
			S	18	35.10	
ROCH	4.46	170	eP	17	52.60	-0.6
			eS	18	36.50	
PEL	4.69	167	iPd	17	56.00	-0.2
			i(S)	18	43.00	
LCCH	4.90	176	iPd	17	59.00	-0.2
			iS	18	47.00	
FCH	4.96	164	eP	18	00.50	0.2
			eS	18	49.60	
SAN	4.99	167	eP	18	00.50	-0.1
			i	18	50.20	
MDZ	5.06	149	iP	18	05.20	3.6X
			iS	18	28.50	
TACH	5.14	170	iP	18	02.00	-0.7
			eS	18	52.00	
PCH	5.19	167	eP	18	02.70	-0.6
			eS	18	54.00	
CYA	5.42	90	e(P)	18	06.50	-0.1
CHCH	5.46	169	eP	18	09.30	2.1
			i	19	06.80	

S.D. = 0.9 on 15 of 16 obs.

& DEC 02, 1990 18h 35m 17.11s
60.633 N 151.773 W
DEPTH = 74.6km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NKA	0.29	67	iP	35	30.18	1.4
RDT	0.32	260	iP	35	28.45	-0.7
			eS	35	37.52	
REF	0.48	253	iP	35	29.94	-0.6
			iS	35	40.36	
RDN	0.50	257	iP	35	29.90	-0.8
			eS	35	40.01	
RSO	0.51	251	iP	35	30.26	-0.6
			iS	35	40.89	
RS2	0.52	251	iP	35	30.27	-0.7
			eS	35	40.42	
SPU	0.57	346	iP	35	30.61	-0.6
			eS	35	41.48	
NCT	0.58	263	eP	35	30.70	-0.7
			eS	35	40.83	
CKL	0.63	334	eP	35	31.30	-0.6
			eS	35	42.75	
NNL	0.64	158	iP	35	32.49	0.6
			eS	35	45.27	
CRP	0.66	344	eP	35	32.11	-0.2
CGLM	0.69	351	eP	35	32.04	-0.5
			eS	35	42.44	
BGL	0.70	335	iP	35	32.18	-0.5
			eS	35	44.06	

SLKM	0.78	99	eP	35	32.94	-0.5
			eS	35	45.68	
NCG	0.80	347	eP	35	33.26	-0.5
			eS	35	46.09	
INE	0.86	229	eP	35	33.45	-1.1
			eS	35	46.38	
SUA	0.97	31	eP	35	35.66	-0.2
			eS	35	49.91	
BRLK	0.98	153	eP	35	35.70	-0.2
CNPM	1.14	166	eP	35	37.46	-0.5
			eS	35	52.89	
PMS	1.24	59	eP	35	39.06	-0.2
			eS	35	55.34	
SEW	1.27	114	eP	35	40.19	0.6
SKT	1.36	5	eP	35	40.07	-0.7
PDB	1.48	236	eP	35	40.45	-1.8
PLRM	1.60	52	eP	35	43.33	-0.7
GHO	1.79	49	eP	35	46.36	-0.3
KNK	1.79	63	eP	35	45.63	-1.0
			eS	36	07.21	
CUT	1.92	21	eP	35	48.06	-0.2
KNIM	2.02	96	eP	35	47.38	-2.3
			eS	36	11.57	
GLI	2.31	82	eP	35	50.99	-2.7
TRF	2.91	13	eP	36	01.88	-0.4
KLU	2.97	71	eP	36	00.75	-2.2
TOA	3.07	59	eP	36	05.24	0.9

32 obs. associated

& DEC 02, 1990 19h 35m 12.18s
60.879 N 152.373 W
DEPTH = 115.8km
SOUTHERN ALASKA (2)
<AGS-P>.

RDT	0.31	183	iP	35	28.17	0.8
			eS	35	40.66	
CKL	0.32	3	eP	35	28.32	0.9
			eS	35	40.93	
SPU	0.34	27	iP	35	28.19	-0.9
			eS	35	41.14	
BGL	0.39	359	iP	35	28.91	-0.5
			eS	35	42.06	
CRP	0.40	15	eP	35	28.87	-0.7
RDN	0.41	208	iP	35	28.63	-0.9
			eS	35	41.25	
NCT	0.42	221	iP	35	28.79	-0.8
			eS	35	41.65	
REF	0.42	203	iP	35	28.93	-0.8
			eS	35	41.70	
RS2	0.46	205	eP	35	29.15	-0.8
			eS	35	42.49	
RSO	0.46	204	iP	35	29.24	-0.7
			eS	35	42.41	
CGLM	0.47	22	iP	35	29.11	-0.7
NCG	0.54	11	eP	35	29.51	-0.8
NKA	0.57	103	eP	35	31.51	1.2
INE	0.89	203	iP	35	32.33	-0.9
SUA	0.98	53	eP	35	33.86	-0.3
			eS	35	50.55	
NNL	0.99	147	iP	35	34.74	0.6
SLKM	1.12	108	eP	35	34.78	-0.7
			eS	35	53.23	
SKT	1.18	20	iP	35	35.41	-0.6
HOM	1.28	163	eP	35	37.18	0.1
PMS	1.42	74	iP	35	38.58	-0.2
PWA	1.43	56	eP	35	38.51	-0.4
CNPM	1.47	157	iP	35	39.02	-0.4
SVW	1.60	280	eP	35	40.45	-0.5
			eS	36	00.44	
SEW	1.64	117	eP	35	40.48	-0.9
PLRM	1.72	64	eP	35	41.15	-1.2
CUT	1.83	32	eP	35	43.25	-0.5
			eS	36	06.14	
GHO	1.89	60	eP	35	43.46	-1.1
KNK	1.97	73	iP	35	44.47	-1.1
KNIM	2.35	101	eP	35	48.07	-2.3
GLI	2.58	88	eP	35	51.01	-2.5
SCM	2.61	66	eP	35	52.66	-1.3
TRF	2.76	20	eP	35	55.14	-0.9
VZW	2.84	84	eP	35	55.19	-1.8
VLZ	2.95	82	eP	35	56.55	-1.8
KLU	3.18	76	iP	35	59.77	-1.8
TOA	3.22	65	eP	36	01.34	-0.7
TZL	3.53	68	eP	36	05.37	-0.8
SDG	3.65	60	eP	36	07.00	-0.8
PAX	3.88	54	eP	36	09.37	-1.6

39 obs. associated

DEC 02, 1990 19h 53m 05.02± 1.16s
42.644 N ± 9.0km 5.424 E ± 5.4km
DEPTH = 10.0km (geophysicist)
WESTERN MEDITERRANEAN SEA (387)
ML 2.7 (LDG). MD 2.5 (STR).

BERF	0.70	16	Pg	53	19.30	0.5
GELF	0.74	0	Pg	53	20.05	0.5
			Sg	53	25.27	
PUYF	0.91	13	Pg	53	22.61	0.2
TREF	0.98	358	Pg	53	24.34	0.7
LMR	1.05	49	Pg	53	25.20	0.3
			Sg	53	36.70	
CDR	1.06	14	e(Pg)	53	23.00	-2.0
			e	53	23.70	
			e(Sg)	53	32.50	
LRG	1.06	40	Pg	53	24.50	-0.5
			Sg	53	35.80	
TAVF	1.08	25	Pg	53	25.77	0.5
			Sg	53	35.23	
PRAF	1.17	351	Pg	53	28.24	1.3
VILF	1.23	10	Pg	53	28.46	0.6
			Sg	53	40.46	
FRF	1.28	44	Pg	53	28.80	0.0
			Sg	53	42.00	
CALN	1.54	44	Pg	53	32.60	-0.1
REVF	1.79	52	Pg	53	35.89	-0.4
			Sg	53	58.51	
AURF	1.86	48	Pn	53	36.94	-0.4
			Pg	53	38.73	
			Sg	53	59.86	
SBF	1.91	50	Pn	53	37.80	-0.2
			Pg	53	39.60	
			Sg	54	01.70	
TOUF	1.91	44	Pn	53	37.28	-0.8
			Pg	53	39.08	
			Sg	54	01.33	
AUTN	1.99	47	Pn	53	39.12	-0.2
SAOF	2.05	48	Pn	53	39.40	-0.6
PGF	2.64	91	Pn	53	50.06	1.5
LPG	3.01	18	Pg	53	59.60	5.8X
LPL	3.02	18	Pg	54	00.10	6.1X
CAF	3.33	314	Pn	53	58.20	-0.1
			Sn	54	34.40	
			Sg	54	50.20	
LPO	3.69	305	Pn	54	02.50	-0.8
			Sn	54	43.00	
			Sg	55	02.60	

S.D. = 0.8 on 21 of 23 obs.

? DEC 02, 1990 22h 20m 02.56± 1.50s
8.285 N ± 12.9km 38.511 W ± 29.6km
DEPTH = 10.0km (geophysicist)
4.0mb (1 obs.)
CENTRAL MID-ATLANTIC RIDGE (406)

SOB1	17.54	188	e(P)	24	08.50	-0.4
PDCR	20.69	182	eP	24	45.70	0.1
BAO	25.55	202	ePd	25	34.00	0.5
SIV	32.88	223	P	26	39.00	-0.1
ZOBO	38.14	230	P	27	24.00	-0.6
			Z	24s	0.10um	3.5mszX
			LR	39	04.00	
LPB	38.28	230	P	27	31.00	5.4X
CNCB	38.36	229	P	27	27.00	0.6
YKA	76.28	332	eP	31	52.90	-0.1

1

03d 00h

Mff=-5.44 1.30 Mrt= 3.54 0.92				0.8s 313.00nm 6.0mb X				Z. 20s 0.13um 4.2msz				
Mrf=-6.95 0.95 Mtf= 5.99 1.20				BW06 48.21 324 P 47 03.80 -0.9				LSF 74.43 44 iPc 49 59.30 -1.2				
Principal Axes:				PLM 48.46 309 eP 47 06.00 -0.7				CAF 74.66 45 eP 50 00.80 -1.0				
T Val= 8.14 Plg=64 Azm= 77				PEC 48.90 310 P 47 09.50 -0.4				TCF 74.90 44 eP 50 02.00 -1.2				
N 4.44 7 333				RVR 49.10 310 eP 47 11.00 -0.4				MAF 75.14 44 eP 50 03.50 -1.0				
P -12.58 24 240				GSC 49.20 312 iPd 47 12.00 -0.3				BGF 75.37 44 eP 50 04.70 -1.1				
Best Double Couple:Mo=1.0*10**17				MWC 49.72 310 eP 47 18.00 1.7				DAG 75.66 11 iPd 50 06.30 -0.6				
NP1:Strike=315 Dip=21 Slip= 71				SBB 49.72 310 eP 47 16.00 -0.2				AVF 75.74 44 eP 50 06.60 -1.2				
NP2: 155 70 97				CLC 50.00 312 eP 47 18.00 -0.3				SSF 75.87 43 eP 50 07.40 -1.2				
				ISA 50.59 311 eP 47 23.00 0.2				SMF 76.06 44 eP 50 08.60 -1.1				
				TNP 50.70 315 P 47 23.60 -0.2				LOR 76.12 43 eP 50 08.90 -1.2				
				ABL 50.84 310 P 47 24.00 -0.9				Z 22s 0.15um 4.3msz				
				SYP 51.30 309 eP 47 28.00 -0.3				LBF 76.18 43 eP 50 09.80 -0.6				
				BCH 51.62 310 P 47 30.30 -0.4				TOA 76.21 332 ePc 50 11.60 1.3				
				BLP 51.64 309 P 47 30.00 -0.6				CDR 77.22 47 ePd 50 19.20 3.1X				
				FRI 52.04 312 ePd 47 31.80 -1.8				FBA 77.48 335 ePc 50 17.60 0.5				
				PRI 52.42 311 eP 47 33.40 -3.2X				1.4s 73.30nm 5.2mb				
				LLA 52.81 311 ePd 47 38.30 -1.0				PMR 77.50 332 ePc 50 17.80 0.5				
				CMB 52.95 313 eP 47 39.90 -0.4				ENN 77.77 40 eP 50 18.50 -0.5				
				PRS 53.02 311 eP 47 40.40 -0.4				BNI 77.93 45 P 50 20.00 11.8X				
				FFC 53.19 339 iPd 47 40.80 -0.9				LPL 77.99 45 eP 50 20.40 -0.3				
				0.5s 53.00nm 5.6mb				LPG 78.01 45 eP 50 20.50 -0.3				
				SAO 53.24 311 eP 47 41.70 -0.7				BSF 78.15 43 eP 50 20.10 -1.2				
				ARN 53.52 312 P 47 44.50 0.0				WIT 78.38 38 eP 50 23.00 0.7				
				MHC 53.60 312 eP 47 45.30 0.1				WTS 78.41 38 eP 50 22.00 -0.4				
				GCC 53.74 311 eP 47 46.30 0.2				0.8s 69.00nm 5.4mb				
				SES 53.82 331 iPd 47 46.30 -0.2				CDF 78.50 42 eP 50 22.10 -1.1				
				1.0s 194.00nm 5.9mb				FEL 78.97 43 eP 50 20.58 -5.2X				
				BKS 54.23 312 ePc 47 50.00 0.3				VAI 79.43 45 P 50 27.60 -0.5				
				0.8s 122.00nm 5.8mb				BOB 79.89 46 P 50 32.00 1.2				
				BRK 54.25 312 eP 47 50.10 0.3				MUD 80.05 34 iPd 50 31.80 0.6				
				ZSP 54.28 312 eP 47 50.10 0.1				0.5s 15.00nm 5.0mb				
				ORV 54.35 315 eP 47 50.20 -0.4				IMA 80.08 336 ePc 50 32.00 0.6				
				MIN 54.75 315 eP 47 52.60 -1.0				1.0s 30.63nm 5.0mb				
				LBFM 55.36 316 P 47 57.00 -1.0				SVW 80.56 331 ePc 50 33.70 -0.2				
				pP 48 34.00 160km				TTA 80.84 333 ePc 50 35.30 -0.1				
				WDC 55.50 315 eP 47 56.00 -2.8				0.5s 17.56nm 5.0mb				
				NEW 55.72 326 P 47 59.20 -1.1				GRF 81.13 41 ePd 50 37.90 0.9				
				pP 48 36.60 162km				0.9s 11.00nm 4.6mb				
				DPW 56.12 325 P 48 02.50 -0.7				Z 17s 0.20um 4.5mszX				
				FHC 56.59 315 eP 48 07.00 0.3				NB2 81.30 29 P 50 38.30 0.6				
				FRB 56.96 2 ePc 48 07.60 -1.1				0.7s 292.10nm 6.1mb X				
				0.6s 104.00nm 5.9mb				MOX 81.38 40 eP 50 39.00 0.7				
				PNT 57.67 326 eP 48 13.00 -1.0				CTI 81.44 45 P 50 38.50 -0.4				
				0.8s 90.00nm 5.7mb				BRW 81.63 341 ePc 50 40.10 0.9				
				LON 57.69 322 P 48 13.30 -0.9				FVI 82.21 44 P 50 42.50 -0.2				
				GMW 58.65 323 P 48 19.60 -1.3				WET 82.21 41 iPc 50 43.90 1.2				
				PGC 59.55 324 eP 48 27.00 0.1				CLL 82.25 39 iP 50 42.20 -0.6				
				YKA 63.36 340 eP 48 51.00 -1.2				0.9s 21.00nm 4.9mb				
				0.6s 88.30nm 5.8mb				HFS 82.52 30 eP 50 43.50 -0.5				
				TIC 67.43 86 Pc 49 17.90 -1.3				0.5s 8.30nm 4.8mb				
				0.8s 74.50nm 5.6mb				KHC 82.67 41 P 50 46.10 1.0				
				LIC 67.46 86 Pc 49 18.18 -1.1				1.0s 8.50nm 4.5mb				
				0.6s 117.00nm 5.9mb				BRG 82.85 40 iP 50 46.60 0.7				
				KIC 67.73 86 Pc 49 20.00 -1.0				0.8s 20.00nm 5.0mb				
				0.7s 188.00nm 6.0mb X				e 51 26.00				
				S 58 04.00				i 51 42.60				
				SIT 69.52 329 eP 49 31.70 0.6				SDI 83.15 49 P 50 47.40 -0.3				
				TOL 69.54 50 eP 49 31.50 -0.2				PRU 83.27 40 P 50 48.30 0.2				
				ECP 70.42 37 eP 49 36.70 0.0				0.7s 15.50nm 4.9mb				
				ETA 70.65 36 eP 49 37.30 -0.8				e 50 55.20				
				LPF 72.93 42 iPc 49 50.60 -1.1				LJU 83.45 44 e(P) 50 50.40 1.3				
				0.8s 12.10nm 4.7mb				KSP 84.34 40 iPd 50 54.50 1.1				
				GRR 73.11 42 iPc 49 51.70 -1.0								
				0.6s 11.70nm 4.8mb								
				INK 73.13 340 iPc 49 52.50 0.1								
				0.6s 43.00nm 5.4mb								
				EPF 73.22 47 eP 49 52.80 -0.8								
				0.6s 4.50nm 4.4mb								
				MFF 73.32 43 iPc 49 53.10 -0.9								
				0.6s 12.65nm 4.8mb								
				FLN 73.41 41 iPc 49 53.60 -0.9								
				0.6s 15.35nm 4.9mb								
				Z 21s 0.10um 4.1msz								
				LDF 73.62 41 iPc 49 54.80 -0.9								
				0.6s 10.80nm 4.8mb								
				LFF 73.73 45 eP 49 55.30 -1.1								
				0.8s 10.75nm 4.6mb								
				MBC 73.88 350 iPc 49 57.10 0.4								
				1.0s 224.00nm 5.9mb								
				LPO 74.01 46 eP 49 57.00 -1.1								
				0.6s 7.20nm 4.6mb								
				RJF 74.31 45 eP 49 58.50 -1.3								
				0.6s 5.40nm 4.5mb								

UPP	84.50	30	iP	50 54.30	0.3
ANM	84.97	334	ePc	50 57.60	1.3
ZST	85.06	42	iP	50 57.60	0.5
			e	51 42.50	
			e	52 13.90	
SRO	85.90	42	iP	51 01.80	0.6
KEV	87.14	20	eP	51 07.00	0.2
SOD	87.49	22	iP	51 08.10	-0.4
NUR	87.91	29	iP	51 11.70	1.1
KAF	88.39	28	eP	51 13.00	0.0
	0.9s	23.70nm		5.2mb	
BZS	88.42	44	eP	51 14.50	1.1
BCAO	90.98	85	iPc	51 28.50	2.5
	0.8s	119.00nm		6.1mb X	
			ic	52 12.50	
			iS	03 16.00	
SPA	96.72	180	iPc	51 51.80	0.4
	1.0s	20.00nm		5.5mb	
CNB	131.89	228	iPKPc	57 35.80	1.2
			e	58 16.00	
CAN	132.16	228	ePKP	57 35.90	0.8
BWA	132.98	228	ePKP	57 37.00	0.3
NDI	134.53	38	iPKPc	57 40.50	0.8
LZH	137.27	4	PKPc	57 46.00	1.1
	1.4s	82.00nm			
GKN	139.22	31	PKP	57 40.24	-8.5X
KKN	139.72	31	PKP	57 41.66	-8.1X
DMN	139.78	31	PKP	57 42.10	-7.8X
GUN	139.92	30	PKP	57 40.96	-9.3X
PKI	139.97	31	PKP	57 43.04	-7.3X
HYB	143.00	49	ePKP	57 54.00	-1.5
			e	58 39.00	
			e	59 14.00	
GBA	144.32	55	PKP	57 56.20	-1.5
QIS	145.60	243	iPKPc	58 00.00	0.2
	0.5s	37.00nm			
			i	58 13.20	
			i	58 39.50	
			i	58 57.00	
			i	01 24.70	
KOD	146.06	60	ePKP	58 02.60	1.5
KMI	148.03	7	PKPc	58 04.50	0.6
			pP	58 08.00	
FORR	148.95	217	ePKP	58 06.00	1.1
ASPA	149.20	234	iPKPc	58 05.80	0.2
			i	58 09.80	
			PP	58 49.90	
			iSKP	01 31.90	
			iSKKS	08 11.60	
WRA	150.44	241	PKP	58 07.00	-0.5
	0.5s	126.70nm			
WB5	150.44	241	iPKPc	58 08.00	0.5
			i	58 12.90	
CHG	153.36	17	ePKPc	58 12.80	1.1
	1.0s	25.00nm			
BDT	154.86	18	ePKP	58 15.00	1.3
	1.0s	46.20nm			
BSI	163.10	44	ePKPc	58 26.10	2.9X
	S.D. = 0.9	on 186 of 201 obs.			
* DEC 03, 1990 02h 12m 18.07±0.69s 37.041 N ±11.4km 71.357 E ±9.9km DEPTH = 33.0km (normal) 4.2mb (4 obs.)					
AFGHANISTAN-USSR BORDER REGION (717)					
QUE	7.76	210	eP	14 10.20	-1.5
			eS	15 29.40	
MAIO	9.56	269	eP	14 39.00	2.4
			eS	16 18.00	
NDI	9.68	148	eP	14 40.00	1.9
			eS	16 14.00	
GKN	14.37	125	P	15 41.14	0.0
KKN	14.93	124	P	15 48.86	0.2
DMN	14.94	125	P	15 49.32	0.6
PKI	15.16	124	P	15 51.90	0.1
GUN	15.25	122	P	15 53.54	0.6
POO	18.57	173	eP	16 38.50	4.1X
HY8	20.55	160	eP	16 54.00	-2.6
			eS	20 26.00	
HFS	42.82	322	eP	20 14.00	-0.1
	0.3s	1.70nm		4.3mb	
NB2	44.12	323	P	20 24.40	-0.4
	0.3s	1.00nm		4.1mb	
MBC	66.78	3	eP	23 08.00	0.2
YKA	80.69	3	eP	24 27.30	-1.5
	0.5s	0.40nm		3.7mb	

WB5	82.01	122	eP	24 29.20	-7.1X
WRA	82.04	122	P	24 30.00	-6.5X
	0.7s	1.80nm		4.2mb	
	S.D. = 1.5	on 13 of 16 obs.			
* DEC 03, 1990 02h 20m 48.70s 36.087 N 120.112 W DEPTH = 5.0km (geophysicist) CENTRAL CALIFORNIA (39) <BRK>. ML 2.5 (BRK).					
PKEM	0.03	175	iP	20 52.00	2.1
PRI	0.45	277	iPc	20 57.70	-0.1
			iS	21 05.10	
LLA	0.85	308	eP	21 04.70	-0.9
BCH	0.90	179	eP	21 06.00	-0.5
FRI	0.96	20	iPd	21 06.70	-0.7
			iS	21 19.80	
SAO	1.27	303	iP	21 11.30	-1.4
ABL	1.43	149	eP	21 13.70	-1.9
MHC	1.75	316	eP	21 18.30	-1.8
CMB	1.96	354	eP	21 23.00	0.1
			eS	21 48.30	
BONR	2.36	37	eP	21 29.80	0.8
	10 obs. associated				
* DEC 03, 1990 03h 29m 49.70±1.72s 30.425 S ±8.6km 72.449 W ±17.0km DEPTH = 33.0km (normal) OFF COAST OF CENTRAL CHILE (134)					
JACH	2.75	145	iP	30 32.60	0.1
			i	31 03.50	
			iS	31 11.20	
ROCH	2.82	155	iP	30 33.00	-0.6
			i	31 04.50	
			iS	31 14.50	
PEL	3.10	151	iPc	30 38.00	0.5
			i	31 06.50	
			i(S)	31 20.50	
LCCH	3.13	166	eP	30 38.50	0.6
			i	31 11.50	
			iS	31 24.10	
SAN	3.38	154	eP	30 40.00	-1.5
			i	31 28.30	
ZON	3.42	110	eP	30 41.00	-1.1
			eS	31 21.00	
FCH	3.43	148	eP	30 41.70	-0.7
			i	31 22.80	
TACH	3.46	159	eP	30 42.20	-0.5
RTLL	3.54	106	ePd	30 43.20	-0.5
LNV	3.63	166	eP	30 44.00	-0.9
RTCV	3.65	114	ePd	30 46.10	0.9
CFA	3.80	109	ePd	30 47.80	0.4
CHCH	3.81	157	iPd	30 50.10	2.5
			i	31 36.00	
			i	31 43.00	
MDZ	3.93	130	iP	30 50.30	1.1
			i	31 38.60	
CYA	6.13	73	e(P)	31 16.00	-4.4X
SIV	17.75	38	P	33 56.80	0.8
BAO	26.81	62	ePd	35 28.00	-1.0
	S.D. = 1.1	on 16 of 17 obs.			
* DEC 03, 1990 03h 41m 41.01±5.23s 33.623 S ±16.4km 70.510 W ±22.4km DEPTH = 86.3 ±44.2 km CHILE-ARGENTINA BORDER REGION (127)					
SAN	0.21	323	eP	41 53.90	0.0
			iS	42 04.40	
CHCH	0.33	201	iPc	41 55.20	0.8
			iS	42 07.00	
FCH	0.35	32	iPd	41 54.30	-0.6
			iS	42 06.70	
TACH	0.36	265	iPc	41 54.40	-0.1
			iS	42 05.40	
ROCH	0.77	327	iP	41 58.70	0.3
			iS	42 13.40	
LNV	0.82	246	iPc	41 58.00	-0.6
			iS	42 12.00	
LCCH	0.90	279	iPd	41 59.70	0.2
			iS	42 14.60	
JACH	0.94	356	iPc	42 00.30	0.2
			iS	42 16.10	
	S.D. = 0.6	on 8 of 8 obs.			

* DEC 03, 1990 05h 09m 18.64±1.37s 5.803 S ±14.2km 153.726 E ±15.5km DEPTH = 33.0km (normal) 4.4mb (1 obs.)					
NEW IRELAND REGION (190)					
RAB	2.23	316	iPc	09 54.00	0.0
			iS	10 24.00	
PMG	7.43	241	eP	11 08.00	0.4
			eS	12 32.00	
DZM	20.32	144	iPd	13 55.10	0.2
WB5	23.45	232	e(P)	14 26.80	0.6
			eS	18 11.20	
ASPA	26.07	225	eP	14 49.90	-1.2
	0.3s	3.30nm		4.4mb	
	S.D. = 1.0	on 5 of 5 obs.			
* DEC 03, 1990 05h 23m 00.88±1.98s 32.297 S ±9.8km 71.703 W ±15.4km DEPTH = 10.0km (geophysicist) NEAR COAST OF CENTRAL CHILE (135)					
ROCH	0.89	139	iPd	23 18.20	0.1
			iS	23 32.50	
JACH	1.01	113	iPd	23 19.60	-0.5
			iS	23 34.00	
LCCH	1.18	175	iPd	23 23.50	0.6
			i	23 40.10	
			iS	23 44.10	
PEL	1.20	135	iPc	23 23.60	0.3
			iS	23 41.00	
SAN	1.45	143	eP	23 26.90	-0.2
			iS	23 48.30	
TACH	1.50	155	eP	23 28.00	0.2
LNV	1.67	172	eP	23 29.50	-0.8
			iS	23 56.50	
CHCH	1.85	152	eP	23 37.00	4.0X
			i	24 07.00	
MDZ	2.48	104	iP	23 51.20	9.2X
			iS	24 18.60	
RTCV	2.72	82	eP	23 46.00	0.5
RTLL	2.92	72	ePc	23 47.80	-0.4
			eS	24 27.80	
CFA	3.02	78	ePd	23 50.00	0.3
			(S)	24 31.10	
	S.D. = 0.5	on 10 of 12 obs.			
* DEC 03, 1990 05h 47m 19.94±0.58s 40.740 N ±10.4km 73.710 E ±16.5km DEPTH = 33.0km (normal) 5.0mb (6 obs.)					
KIRGHIZ SSR (716) Additional damage (V) to the event of 12-01-90. Felt (V) at Uzgen and (IV) at Frunze and Kok-Yangak.					
NDI	12.37	165	eP	50 18.00	1.5
			eS	52 26.00	
GKN	15.56	141	P	50 57.26	-1.4
KKN	16.05	140	P	51 04.76	-0.2
DMN	16.12	141	P	51 04.36	-1.5
GUN	16.25	138	P	51 07.88	0.2
PKI	16.30	140	P	51 06.70	-1.5
SHL	21.39	129	eP	52 09.50	2.4
GBA	27.23	172	P	53 04.00	1.2
NB2	42.38	320	P	55 11.20	-1.2
	0.9s	5.30nm		4.3mb	
TSM	53.89	120	ePd	56 51.00	8.7X
BCAO	61.15	249	iPd	57 32.90	-0.7
	1.0s	10.00nm		4.9mb	
MBC	63.00	3	ePc	57 45.00	-0.2
	0.5s	10.00nm		5.2mb	
INK	69.37	10	eP	58 26.00	0.2
JAY	74.43	107	iPc	58 50.60	-6.2X
YKA	76.90	4	eP	59 09.40	-0.6
	0.7s	3.80nm		4.5mb	
FFC	84.84	357	eP	59 52.50	0.5
	0.7s	11.00nm		5.2mb	
FORR	87.20	136	eP	59 41.50	-22.4X
SES	89.15	3	eP	00 14.00	0.8
PNT	89.56	9	eP	00 16.00	0.8
	0.7s	8.00nm		5.1mb	
PKEM	102.53	11	Pdiff	01 26.00	11.8X
	S.D. = 1.2	on 16 of 20 obs.			
DEC 03, 1990 05h 48m 17.90±0.16s					

	1.6s	80.00nm				RDP	151.12	317	PKP	08 12.10	5.5X			eSn	52 43.90		
SKO	145.26	312 ePKP	07 00.00	-1.2		BOB	151.18	325	PKP	08 12.00	5.4X		SDA	2.87 130 ePn	52 10.50	6.5X	
	1.7s	407.00nm				LOR	151.89	335	ePKP	08 08.20	0.7		ASS	2.95 255 P	52 06.10	1.0	
		i	07 56.70				1.4s	74.05nm						eSn	52 40.60		
VKA	145.30	325 iPKPd	07 57.00	-0.1		Z	20s	0.70um		5.5msz		BEO	2.95 71 ePn	52 09.50	4.5X		
	5.0s	1045.00nm				LPL	152.01	329 ePKP	08 09.20	1.2			i(Sg)	52 50.50			
		ic	07 57.60				1.5s	109.70nm				RSM	2.96 272 P	52 06.90	1.7		
		i	08 29.70			LPG	152.02	329 ePKP	08 09.20	1.1		SDI	2.98 223 P	52 05.30	-0.2		
		i	08 39.80				1.5s	141.00nm					eSn	52 40.70			
EDU	145.38	350 ePKPd	07 55.40	-1.6		CKI	152.02	326 PKP	08 14.00	6.2X		PUK	3.08 126 iPnd	52 11.00	4.1X		
SOP	145.51	324 iPKP	07 57.00	-0.5		LBF	152.08	334 ePKP	08 08.90	1.1		MNS	3.21 243 P	52 09.70	0.8		
ELO	145.57	351 ePKPd	07 55.90	-1.4			0.8s	18.80nm					eSn	52 46.50			
ESY	145.92	349 ePKPd	07 57.10	-0.8		FLN	152.09	342 ePKP	08 08.20	0.5		LACI	3.25 133 iPnd	52 10.10	0.8		
	1.1s	227.00nm					1.6s	217.65nm				KKS	3.37 121 ePn	52 13.50	2.4X		
EAB	145.93	351 ePKPd	07 57.50	-0.4		Z	20s	1.15um		5.7msz		SFI	3.39 272 P	52 13.40	2.0		
	1.6s	642.00nm				LDF	152.14	341 ePKP	08 08.80	1.0			eSn	52 51.20			
EDI	146.01	350 ePKPd	07 57.50	-0.5			1.7s	161.75nm				RMP	3.52 235 P	52 13.30	0.2		
	1.4s	309.00nm				SSF	152.20	335 ePKP	08 08.90	1.0		TIR	3.54 135 ePn	52 13.10	-0.3		
OHR	146.03	311 iPKP	07 57.30	-1.4			1.6s	124.40nm				RDP	3.54 234 P	52 14.20	0.7		
MOX	146.03	331 ePKPc	07 58.00	-0.3		BNI	152.38	329 PKP	08 12.00	3.6X			eSn	52 55.50			
	1.8s	369.00nm				SMF	152.41	334 ePKP	08 08.90	0.6		VVI	3.59 307 P	52 15.20	1.0		
EAU	146.13	350 ePKPd	07 58.10	-0.2			1.4s	69.70nm				PHP	3.62 126 ePn	52 26.20	11.6X		
KHC	146.16	328 iPKPc	07 58.80	0.2		AVF	152.48	335 ePKP	08 09.30	1.0		LCI	3.72 163 P	52 15.20	-0.8		
	1.5s	178.50nm					1.3s	68.60nm				SOP	3.78 0 eP	52 16.00	-0.9		
Z	18s	1.00um		5.6msz		GRR	152.54	342 ePKP	08 09.30	1.0		FVI	3.78 317 P	52 17.70	0.8		
N	17s	0.60um					1.6s	136.80nm				FIR	3.83 270 e(Pn)	52 21.00	3.4X		
E	17s	0.50um				BGF	152.87	335 ePKP	08 10.30	1.4			eSn	53 07.00			
WIT	146.31	338 ePKP	08 00.50	1.9			1.5s	73.10nm				MGR	3.84 191 P	52 16.30	-1.4		
WET	146.49	328 iPKPc	07 58.50	-0.6		LPF	152.91	342 ePKP	08 09.90	1.1		KBA	3.89 326 iPnc	52 19.60	1.0		
EKA	146.57	349 PKPc	08 00.90	1.9			1.7s	191.15nm					iSn	53 04.90			
	1.0s	112.80nm				MAF	153.26	335 ePKP	08 11.10	1.6		BUD	3.98 25 eP	52 31.50	11.9X		
PTJ	146.87	321 ePKP	08 00.10	0.2			1.7s	88.25nm				BZS	4.00 63 ePc	52 18.00	-1.9		
GRF	146.89	330 ePKPc	07 59.50	-0.2		TCF	153.34	336 ePKP	08 11.00	1.4		MMN	4.03 186 P	52 20.40	0.0		
Z	20s	0.50um		5.3msz			1.6s	93.30nm					eSn	53 04.00			
		id	08 01.80			LSF	153.63	336 ePKP	08 12.00	2.0		BERA	4.07 141 ePn	52 20.30	-0.7		
ZAG	146.90	321 iPKPd	08 01.50	1.7			1.6s	62.20nm			SKO	4.08 117 iPn	52 21.50	0.4			
WTS	146.93	337 ePKP	08 01.00	1.4			S.D. = 1.1 on 155 of 203 obs.					CTI	4.08 303 P	52 21.50	0.2		
	1.7s	334.00nm					DEC 03, 1990 05h 51m 17.34 ± 0.24s					SRO	4.10 17 iPn	52 20.20	-1.1		
BHG	147.44	326 iPKPd	08 02.60	2.0			43.903 N ± 2.7km 16.548 E ± 2.8km						i	52 27.70			
VBY	147.50	321 ePKP	08 00.40	-0.4			DEPTH = 10.0km (geophysicist)						i	53 06.00			
BNS	147.62	336 iPKPd	08 03.30	2.5X			4.4mb (2 obs.)					CSI	4.13 183 P	52 20.90	-0.9		
	1.1s	178.00nm					YUGOSLAVIA					OHR	4.20 130 iPn	52 23.30	0.4		
TNS	147.70	334 ePKPd	08 03.70	2.7X			ML 4.0 (TTG), 3.9 (VKA), 3.6						iSn	53 18.00			
CEY	147.84	322 ePKP	08 03.50	2.1X			(LJU), MD 4.1 (FIR). Additional					TDS	4.24 182 P	52 22.20	-1.3		
FUR	147.94	328 iPKPd	08 04.40	3.0X			domage in the Sinj area. Also					ZST	4.31 5 iPn	52 23.10	-1.3		
	2.0s	661.00nm					felt in central Dalmatio.						i	53 04.50			
FVI	148.22	325 PKP	08 04.10	2.3X		HVAR	0.73 186 iPgd	51 30.10	-1.6			ROI	4.33 180 P	52 24.30	-0.4		
TRI	148.23	323 PKP	08 04.50	2.6X			i(Sg)	51 42.10				PIL	4.36 270 P	52 27.00	1.9		
ENN	148.25	337 iPKPd	08 05.00	3.2X		BRY	1.77 124 ePn	51 48.50	0.2			VKA	4.37 358 iPnc	52 25.00	-0.2		
	1.7s	471.00nm					eSn	52 13.20					id	52 25.80			
SQTA	148.62	327 iPKPd	08 05.10	2.4X		VBY	1.85 331 iPnc	51 51.20	1.9				iSn	53 16.00			
	1.4s	222.00nm					iSn	52 15.50				TPE	4.43 143 ePn	52 22.00	-4.1X		
		ic	08 06.10			ZAG	1.95 348 ePn	51 51.70	0.8			KBN	4.56 135 ePn	52 29.30	1.4		
OGA	148.95	327 ePKP	08 02.80	-0.5			iPg	51 55.50				BHG	4.60 327 iPnd	52 30.30	1.8		
CTI	149.17	325 PKP	08 07.50	3.9X			iSg	52 20.70				SAL	4.62 294 P	52 29.30	0.6		
ORI	149.48	311 PKP	08 08.50	4.4X		HCY	2.04 135 ePn	51 52.20	0.1			SCE	4.63 314 iPnc	52 30.30	1.2		
CDF	149.58	332 ePKP	08 02.60	-1.5			eSn	52 20.00				PSZ	4.65 29 iPn	52 26.80	-2.4		
	1.4s	113.25nm				PTJ	2.04 348 iPnc	51 52.40	0.2			LSK	4.81 140 ePn	52 31.50	-0.2		
ETA	149.59	351 ePKP	08 06.00	2.2X			eSn	52 19.10				OGA	4.89 309 iPnd	52 33.60	0.8		
	1.5s	257.00nm				RIY	2.11 314 iPn	51 55.10	2.0			WATA	4.89 316 iPnd	52 33.90	1.1		
ROI	149.61	310 PKP	08 09.40	5.1X			iSg	52 27.40					ic	52 34.30			
FEL	149.67	331 ePKP	08 02.72	-1.6		PLE	2.14 105 ePn	51 55.00	1.2				iSn	53 32.40			
CSI	149.72	311 PKP	08 07.60	3.1X			eSn	52 23.50				SQTA	5.01 313 iPnd	52 35.80	1.4		
TDS	149.73	311 PKP	08 09.20	4.7X		BDV	2.33 133 ePn	51 56.60	0.3				iSn	53 34.00			
MMN	149.87	311 PKP	08 07.00	2.4X			eSn	52 27.50				VAY	5.14 118 ePn	52 32.80	-3.3X		
ARV	150.01	320 PKP	08 10.00	5.2X		CEY	2.38 321 iPnc	51 59.10	2.1				i	52 54.70			
SAL	150.05	325 PKP	08 09.00	4.3X			iSn	52 31.80				BOB	5.17 282 P	52 38.10	1.5		
MGR	150.06	312 PKP	08 09.00	4.1X		TTG	2.47 126 ePn	51 59.50	1.2				eSn	53 32.00			
ECP	150.12	351 ePKP	08 09.20	4.6X			eSn	52 30.60				MDI	5.21 293 P	52 36.00	-1.1		

03d 05h

LLS 6.09 302 ePc 52 51.00 1.3
 PRU 6.24 348 ePn 52 51.00 -0.6
 Pg 53 05.00
 Sg 54 15.50
 SLE 6.82 307 ePd 52 58.90 -1.0
 GRF 6.85 330 e(Pn) 52 59.70 -0.5
 e(Pg) 53 07.60
 e(Sn) 54 15.50
 e(Sg) 54 53.50
 KSP 6.95 359 eP 53 08.00 6.4X
 EMS 7.16 291 ePc 53 05.10 0.4
 FEL 7.16 307 eP 53 02.94 -1.8
 HOF 7.16 335 iPnd 52 23.00 -41.6X
 LPG 7.16 286 Pn 53 03.50 -1.4
 Sn 54 21.00
 LPL 7.18 286 Pn 53 04.00 -1.1
 Sn 54 21.50
 FRF 7.18 271 Pn 53 04.30 -0.6
 Sn 54 23.00
 BRG 7.19 347 ePn 53 06.00 1.0
 e 54 12.00
 i 54 40.00
 i 55 20.00
 LMR 7.31 269 Pn 53 06.10 -0.6
 LRG 7.40 270 Pn 53 06.70 -1.3
 MOX 7.53 335 ePn 53 09.00 -0.8
 eSn 54 32.00
 CLL 7.79 343 e(Pn) 53 16.00 2.7X
 e 55 10.00
 e 55 38.00
 TOD 7.80 320 eP 53 11.30 -2.2
 CDF 7.86 308 Pn 53 12.20 -2.3
 BSF 7.86 303 Pn 53 12.60 -1.9
 Sn 54 37.40
 HAU 8.20 304 Pn 53 18.10 -1.2
 Sn 54 47.30
 TNS 8.39 322 ePnc 53 20.50 -1.4
 eSn 54 53.70
 LBF 9.36 294 Pn 53 31.30 -4.0X
 Sn 55 14.50
 SMF 9.37 291 Pn 53 33.10 -2.3
 Sn 55 14.60
 LOR 9.51 295 Pn 53 35.60 -1.7
 Sn 55 17.00
 AVF 9.73 292 Pn 53 38.80 -1.5
 BGF 10.03 290 Pn 53 43.80 -0.6
 Sn 55 29.20
 MAF 10.16 288 Pn 53 44.40 -1.9
 HFS 16.35 355 ePKP 55 01.30 -6.9X
 0.4s 2.50nm 3.7mb
 TIC 41.65 213 P 59 12.00 4.5X
 KIC 41.80 213 P 59 12.00 3.3X
 FFC 68.74 327 iPc 02 20.80 -2.2
 0.6s 7.00nm 5.0mb
 S.D. = 1.2 on 95 of 111 obs.

• DEC 03, 1990 06h 10m 40.47± 0.53s
 24.206 N ± 8.4km 125.030 E ± 9.0km
 DEPTH = 33.0km (normol)
 4.9mb (13 obs.)
 SOUTHWESTERN RYUKYU ISLANDS (246)

SSE 7.66 334 eP 12 33.20 0.7
 Z 20s 1.00um
 N 12s 0.80um
 E 12s 0.20um
 pP 12 36.60
 BAG 8.81 209 eP 12 48.10 -0.6
 MAT 16.72 40 eP 14 38.00 4.1X
 BJI 17.46 337 eP 14 43.00 0.0
 1.0s 12.00nm 4.0mb
 KMI 20.28 277 Pd 15 17.50 1.1
 1.5s 57.00nm 4.7mb
 S 21 11.00
 LZH 21.76 308 eP 15 29.50 -1.9
 1.5s 41.00nm 4.6mb
 pP 15 37.00 27kmX
 SHL 30.06 280 iP 16 48.80 -0.4
 GUN 35.26 285 P 17 34.64 0.0
 PKI 35.70 284 P 17 37.98 -0.4
 KKN 35.80 284 P 17 38.98 -0.1
 DMN 35.97 284 P 17 40.34 -0.2
 GKN 36.36 285 P 17 43.38 -0.3
 NDI 42.82 287 iPc 18 37.00 -0.1
 WB5 44.75 167 eP 18 52.70 0.0
 POO 47.79 274 iPd 19 19.20 2.3
 MAIO 56.92 299 eP 20 25.00 0.0

FBA 67.17 28 eP 21 35.60 2.6
 1.0s 2.10nm 4.2mb
 INK 71.87 23 eP 22 01.50 -0.2
 MBC 72.46 13 eP 22 04.00 -1.1
 0.5s 2.00nm 4.4mb
 DAG 76.88 352 eP 22 28.50 -1.9
 1.0s 10.00nm 4.8mb
 PRNI 78.20 298 eP 22 39.00 0.4
 HFS 79.24 332 eP 22 42.10 -1.5
 1.0s 17.90nm 5.0mb
 NB2 79.82 333 P 22 46.30 -0.5
 1.1s 35.90nm 5.3mb
 YKA 81.56 24 eP 22 54.70 -1.2
 0.8s 6.00nm 4.7mb
 BRG 83.84 324 iP 23 09.50 1.6
 1.0s 12.00nm 5.0mb
 CLL 84.12 324 eP 23 09.00 -0.3
 MOX 85.22 324 eP 23 16.00 1.1
 GRF 85.95 323 eP 23 19.30 0.8
 SES 90.74 32 eP 23 42.00 0.6
 LPG 90.83 322 eP 23 42.00 -0.3
 1.0s 16.00nm 5.3mb
 LPL 90.83 322 eP 23 42.00 -0.2
 1.1s 13.45nm 5.2mb
 FFC 91.67 25 iPc 23 45.90 0.3
 1.0s 29.00nm 5.6mb
 S.D. = 1.1 on 31 of 32 obs.

& DEC 03, 1990 06h 48m 10.90s
 32.467 N 115.417 W
 DEPTH = 6.0km (geophysicist)
 CALIFORNIA-MEXICO BORDER REGION (45)
 <PAS-P>. ML 2.5 (PAS), 2.7 (ECX).

LMX 0.53 133 eP 48 22.20 0.7
 GLA 0.77 40 eP 48 27.00 0.8
 ECBX 1.04 163 iPd 48 31.20 0.3
 S 48 45.00
 CBX 1.07 262 eP 48 31.15 -0.3
 S 48 44.70
 PLM 1.50 306 eP 48 38.50 -0.1
 5 obs. associated

DEC 03, 1990 07h 40m 36.33± 0.34s
 20.211 S ± 10.9km 173.488 W ± 8.5km
 DEPTH = 10.0km (geophysicist)
 5.2mb (13 obs.)
 TONGA ISLANDS (173)

AFI 6.48 15 eP 42 07.00 -7.2X
 e(S) 48 48.00
 SVA 7.89 284 eP 42 37.30 3.4X
 SGE 8.54 286 ePc 42 47.60 4.5X
 RAR 12.87 97 P 43 35.00 -7.1X
 S 45 49.00
 LTZ 25.50 205 eP 46 07.20 0.8
 BRS 31.61 250 iP 47 02.10 0.3
 COO 32.82 245 eP 47 11.00 -1.3
 RMO 35.13 252 eP 47 32.00 -0.3
 CNB 35.92 237 eP 47 38.50 -0.5
 CAN 36.21 237 eP 47 40.70 -0.7
 BWA 36.46 239 eP 47 39.90 -3.6X
 CMS 38.10 245 iPd 47 56.50 -0.7
 PMG 39.44 280 eP 48 07.00 -1.6
 1.1s 75.95nm 5.3mb
 WB5 48.81 261 eP 49 21.20 -2.8X
 FORR 53.25 246 eP 49 57.00 -0.5
 MBL 61.95 256 eP 50 57.00 -2.1
 KLB 62.00 244 eP 50 58.00 -1.3
 MEKA 62.08 250 eP 51 06.00 6.1X
 SPA 69.91 180 iPd 51 52.20 2.7
 1.0s 15.00nm 5.1mb
 MAT 72.57 321 eP 52 04.00 -1.7
 SYP 74.49 44 eP 52 15.00 -2.1
 MWC 75.56 45 eP 52 23.00 -0.4
 PLM 75.85 46 eP 52 25.00 0.0
 SBB 76.00 45 eP 52 25.00 -0.6
 ISA 76.16 43 eP 52 26.00 -0.6
 CMB 76.44 41 P 52 28.00 0.0
 1.1s 9.80nm 4.8mb
 CLC 76.82 44 eP 52 30.00 -0.2
 TPC 76.84 46 eP 52 30.00 -0.4
 GSC 77.03 45 eP 52 31.00 -0.5
 BONR 77.67 42 P 52 35.00 -0.2
 LBFM 77.69 37 P 52 34.70 -0.4
 TNP 78.43 42 P 52 38.60 -0.6

1.1s 15.69nm 5.0mb
 MSU 81.91 44 P 52 58.50 0.6
 MDJ 82.78 323 eP 53 03.00 1.1
 PMR 83.83 11 P 53 07.70 0.8
 1.2s 18.94nm 5.2mb
 ALO 83.96 50 ePc 53 09.00 0.6
 1.2s 18.36nm 5.2mb
 TTA 84.00 8 eP 53 08.70 0.8
 PNT 84.11 32 eP 53 08.00 -0.6
 1.1s 23.00nm 5.3mb
 PTI 84.22 40 P 53 10.00 0.5
 CN2 84.71 320 Pd 53 12.00 0.3
 PP 53 22.40
 WHN 85.72 305 eP 53 19.00 1.9
 LRM 85.84 38 eP 53 18.10 0.4
 BW06 85.90 42 P 53 17.20 -0.8
 1.1s 9.92nm 4.9mb
 TIA 86.25 311 eP 53 20.40 0.8
 1.4s 50.00nm 5.5mb
 FBA 87.11 11 eP 53 22.50 -0.6
 1.0s 26.10nm 5.4mb
 IMA 87.31 8 eP 53 24.70 0.4
 IPM 87.34 276 ePd 53 28.10 2.7X
 BJI 88.71 314 eP 53 31.50 0.2
 1.5s 78.00nm 5.8mb
 SES 89.19 35 eP 53 33.00 -0.4
 MEO 89.64 53 eP 53 35.50 -0.4
 TIY 90.28 310 eP 53 39.80 0.9
 XAN 91.36 306 P 53 45.00 1.1
 KMI 93.02 296 Pd 53 54.00 2.1
 BTO 93.19 312 eP 53 53.50 1.3
 YKA 94.52 23 eP 53 56.90 -0.8
 1.0s 1.40nm 4.3mb
 LZH 95.99 306 eP 54 06.50 1.2
 1.5s 22.00nm 5.4mb
 GUN 108.26 294 PKP 59 00.00 -7.4X
 WIT 147.46 360 ePKP 00 24.00 4.8X
 WTS 148.28 360 ePKP 00 24.50 3.9X
 1.0s 36.00nm
 KSP 148.47 348 ePKP 00 22.00 1.0
 id 00 25.50
 CLL 148.55 352 ePKP 00 23.00 1.9X
 1.3s 45.00nm
 KAS 148.71 318 ePKP 00 27.00 5.2X
 LWI 148.76 227 iPKPd 00 18.30 -4.5X
 BRG 148.84 351 iPKP 00 25.90 4.3X
 1.1s 31.00nm
 e 06 43.00
 SPC 149.07 342 ePKP 00 26.70 4.5X
 MOX 149.36 354 ePKPc 00 27.00 4.6X
 1.3s 32.00nm
 ENN 149.50 1 ePKP 00 27.50 5.0X
 0.9s 12.00nm
 PRU 149.61 350 PKP 00 28.20 5.5X
 e 00 31.20
 GRF 150.35 354 ePKPc 00 30.20 6.3X
 KHC 150.59 351 iPKPc 00 30.50 6.2X
 1.2s 20.00nm
 e 00 42.60
 ZST 150.80 345 ePKP 00 30.90 6.3X
 SRO 150.85 344 ePKP 00 31.00 6.3X
 FLN 150.96 10 ePKP 00 30.60 5.8X
 0.8s 30.90nm
 LDF 151.18 9 ePKP 00 31.30 6.1X
 1.0s 36.00nm
 GRR 151.27 10 ePKP 00 31.40 6.1X
 1.0s 32.00nm
 LPF 151.58 11 ePKP 00 32.20 6.4X
 1.0s 52.00nm
 CDF 151.86 359 ePKP 00 33.20 6.9X
 0.8s 10.75nm
 HAU 152.27 0 ePKP 00 34.10 7.3X
 0.8s 16.10nm
 FEL 152.38 358 ePKP 00 27.65 0.5
 PRNI 152.41 297 ePKP 00 35.00 7.4X
 BSF 152.45 360 ePKP 00 34.30 7.1X
 0.8s 10.75nm
 LOR 152.92 4 ePKP 00 35.80 8.0X
 1.0s 18.00nm
 SSF 153.11 5 ePKP 00 36.10 8.1X
 1.0s 24.00nm
 LBF 153.21 4 ePKP 00 36.30 8.1X
 0.8s 10.75nm
 AVF 153.36 5 ePKP 00 36.10 7.8X
 1.0s 14.00nm
 SMF 153.54 4 ePKP 00 36.50 7.9X
 0.8s 6.05nm

03d 08h

BGF 153.55 6 ePKP 00 36.70 8.1X
0.8s 8.75nm
LSF 153.71 8 ePKP 00 36.80 7.9X
1.0s 12.00nm
TCF 153.75 7 ePKP 00 37.30 8.3X
1.0s 6.00nm
MAF 153.86 6 ePKP 00 37.40 8.3X
0.8s 6.70nm
S.D. = 1.0 on 50 of 90 obs.

& DEC 03, 1990 07h 44m 49.95s
61.380 N 147.711 W
DEPTH = 28.5km
SOUTHERN ALASKA (2)
<AGS-P>.

KNK 0.36 276 iP 44 57.62 -0.6
eS 45 03.64
SCM 0.49 22 iP 44 59.78 -0.5
eS 45 07.13
SML 0.52 326 eP 44 59.94 -0.8
GLI 0.58 149 iP 45 00.57 -1.1
eS 45 09.39
VZW 0.65 119 iP 45 01.57 -1.1
eS 45 11.45
GHO 0.70 305 iP 45 02.42 -1.2
VLZ 0.71 110 iP 45 02.29 -1.4
eS 45 12.54
PLRM 0.71 288 iP 45 02.45 -1.3
KLU 0.87 82 iP 45 04.76 -1.5
eS 45 16.49
PMS 0.90 262 iP 45 05.63 -1.0
eS 45 17.67
TOA 1.03 45 eP 45 08.48 -0.1
KNIM 1.04 181 iP 45 07.14 -1.4
eS 45 21.14
PWA 1.07 286 iP 45 08.05 -1.0
eS 45 22.85
HIN 1.15 149 iP 45 09.92 -0.3
CVA 1.27 130 eP 45 11.92 0.1
TZL 1.28 58 eP 45 09.39 -2.6
LTI 1.35 183 eP 45 12.17 -0.8
MTU 1.40 179 eP 45 13.68 0.0
SUA 1.46 275 eP 45 14.43 -0.3
SLKM 1.51 236 eP 45 15.07 -0.2
eS 45 33.31
SGAM 1.51 125 eP 45 15.09 -0.2
SEW 1.54 214 eP 45 15.19 -0.5
eS 45 35.10
SDG 1.54 41 eP 45 15.65 -0.2
eS 45 35.46
CUT 1.59 311 eP 45 16.07 -0.4
eS 45 37.18
RAGM 1.79 123 eP 45 19.78 0.4
NKA 1.83 251 eP 45 21.67 1.7
HUR 1.84 331 eP 45 20.18 0.0
GLB 1.88 86 eP 45 20.21 -0.5
PAX 1.91 32 eP 45 21.47 0.2
eS 45 46.31
SKT 1.92 290 eP 45 20.89 -0.4
eS 45 44.85
HMT 1.99 120 eP 45 21.45 -0.8
CGLM 2.07 270 eP 45 23.62 0.1
RND 2.10 346 eP 45 22.96 -1.0
SPU 2.11 266 eP 45 23.49 -0.5
NCG 2.14 273 eP 45 24.25 -0.3
CKL 2.24 267 eP 45 25.49 -0.5
BGL 2.26 269 eP 45 24.74 -1.5
TRF 2.40 331 eP 45 27.33 -1.0
RDT 2.43 253 eP 45 27.61 -1.0
TGL 2.45 103 eP 45 29.14 0.1
RDN 2.61 253 eP 45 30.93 -0.4
BALM 2.62 95 eP 45 30.49 -0.9
YKA 15.52 71 eP 48 42.20 14.1
0.4s 0.20nm
43 obs. associated

* DEC 03, 1990 08h 23m 11.47±2.11s
5.373 S ±14.9km 153.682 E ±16.9km
DEPTH = 50.2 ±19.8 km
4.8mb (2 obs.)
NEW IRELAND REGION (190)

RAB 1.91 308 iPd 23 42.00 -0.2
iS 24 08.00
PMG 7.61 238 eP 25 03.00 0.5
eS 26 00.00

DZM 20.69 145 iPd 27 50.00 0.0
WB5 23.69 231 eP 28 18.90 -0.7
e 32 02.30
LZH 62.25 316 Pc 33 27.00 -3.9X
1.5s 28.00nm 5.2mb X
GBA 77.97 285 P 35 07.00 0.4
0.5s 2.30nm 4.5mb
SPA 84.66 180 iPc 35 41.10 0.1
0.8s 12.50nm 5.1mb
i 35 56.10

BCAO 135.31 271 ePd 39 25.50 -5.3X
1.0s 5.00nm
S.D. = 0.7 on 6 of 8 obs.

% DEC 03, 1990 08h 27m 10.27±0.82s
39.158 N ±7.4km 2.759 W ±9.9km
DEPTH = 10.0km (geophysicist)
SPAIN (377)
mbLg 2.8 (MDD).

EVIA 0.56 159 iPg 27 21.90 0.3
iSg 27 30.40
EBAN 1.28 219 ePn 27 34.00 0.0
iSn 27 50.40
ECHE 1.45 72 ePn 27 35.80 -0.8
ETOR 1.75 18 ePn 27 41.90 1.0
iSn 28 02.70
GUD 1.83 325 ePn 27 41.60 -0.5
iSn 28 04.00
S.D. = 1.0 on 5 of 5 obs.

? DEC 03, 1990 10h 16m 37.93±11.99s
30.307 S ±70.4km 72.744 W ±72.2km
DEPTH = 10.0km (geophysicist)
OFF COAST OF CENTRAL CHILE (134)

JACH 3.00 143 iP 17 25.60 -0.8
iS 17 49.00
ROCH 3.04 151 iPd 17 26.70 -0.5
iS 17 52.00
LCCH 3.31 163 iPd 17 32.00 1.1
PEL 3.33 149 iP 17 31.00 -0.1
iS 17 58.00
i 18 02.00
SAN 3.60 151 eP 17 34.00 -1.0
i 18 08.00
TACH 3.67 156 eP 17 35.60 -0.4
LNV 3.81 163 iPc 17 38.10 0.2
iS 18 12.70
RTLL 3.82 107 ePc 17 37.20 -0.9
eS 18 13.80
RTCV 3.93 114 e(P) 17 40.00 0.4
CHCH 4.03 154 iP 17 44.00 3.0X
iS 18 21.70
i 18 34.20
CFA 4.08 110 ePc 17 41.80 0.0
S 18 19.20
MDZ 4.20 129 eP 17 45.40 1.9
S.D. = 1.0 on 11 of 12 obs.

? DEC 03, 1990 10h 24m 57.32±1.01s
39.088 N ±10.6km 27.633 E ±18.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 2.3 (ISK).

IZM 0.75 203 ePg 25 12.00 0.0
eSg 25 23.00
DST 0.93 56 ePn 25 15.00 -0.1
BNT 1.29 10 ePn 25 21.00 -0.2
KCT 1.29 25 ePn 25 21.40 0.2
S.D. = 0.3 on 4 of 4 obs.

% DEC 03, 1990 12h 27m 53.88±0.78s
44.226 N ±5.1km 8.220 E ±6.0km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.2 (GEN).

FIN 0.02 206 Pd 27 55.97 0.1
S 27 56.87
ROB 0.26 285 Pd 27 59.60 0.2
S 28 03.23
PCP 0.39 36 Pc 28 01.84 -0.1
S 28 06.77
IMI 0.40 217 Pc 28 02.03 0.0
S 28 07.07

ENR 0.57 270 P 28 05.35 -0.2
S 28 12.61
STV 0.64 272 P 28 06.85 0.0
S 28 14.61
PZZ 0.85 290 P 28 09.96 -0.4
S 28 20.92
RSP 1.15 324 P 28 15.72 0.2
RRL 1.24 305 P 28 17.26 0.2
S.D. = 0.2 on 9 of 9 obs.

DEC 03, 1990 13h 18m 37.70±0.67s
31.511 S ±7.9km 139.160 E ±7.0km
DEPTH = 10.0km (geophysicist)
SOUTH AUSTRALIA (592)
ML 3.8 (CMS), 3.7 (BFD).

CMS 5.70 91 iPc 20 04.40 0.0
eS 21 07.00
BFD 6.31 155 eP 20 13.00 0.0
eS 21 18.00
CAN 9.06 117 eP 20 50.00 -1.5
eSn 22 35.60
eSg 23 22.80
CNB 9.33 117 e(P) 20 56.00 0.7
eS 22 44.00
FORR 9.50 271 eP 20 58.00 0.5
eS 22 50.00
RMO 9.78 62 eP 21 02.00 0.6
eS 22 48.00
QIS 10.92 2 eP 21 17.00 0.0
eS 23 13.00
COO 10.96 88 e(P) 21 18.00 0.3
eS 23 17.00
WB5 12.36 338 iPd 21 35.80 -0.8
MEKA 18.67 280 eP 23 05.30 7.4X
eS 27 12.00
S.D. = 0.8 on 9 of 10 obs.

* DEC 03, 1990 13h 22m 12.43±1.18s
44.076 N ±7.4km 16.046 E ±14.0km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.8 (LJU).

HVAR 0.94 162 iPg 22 31.10 0.7
iSg 22 49.20
VBY 1.54 339 ePn 22 38.20 -1.7
iSn 23 01.20
RIY 1.73 318 iPn 22 41.60 -1.1
iSg 23 04.20
PTJ 1.83 358 iPnc 22 43.40 -0.8
eSn 23 09.10
CEY 2.02 326 ePn 22 47.50 0.5-
iSn 23 13.00
LJU 2.24 332 ePn 22 50.00 -0.1
eSn 23 17.80
TRI 2.30 316 P 22 53.50 2.5X
ARV 2.32 257 P 22 53.00 1.7
VOY 2.48 323 ePn 22 55.60 2.0
eSn 23 26.50
ASS 2.66 249 P 22 55.00 -1.1
SDI 2.88 215 P 22 54.50 -4.8X
MNS 2.98 237 P 22 59.00 -1.7
eSn 23 38.00
FVI 3.41 319 P 23 08.20 1.5
eSn 23 56.50
CTI 3.69 304 P 23 14.00 3.2X
eSn 24 05.00
SOTA 4.62 315 ePn 23 28.00 3.9X
iSn 24 28.50
S.D. = 1.5 on 11 of 15 obs.

& DEC 03, 1990 14h 40m 39.53s
61.657 N 150.413 W
DEPTH = 43.3km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA 0.25 219 iP 40 47.99 0.2
eS 40 55.02
PWA 0.26 91 iP 40 47.73 0.1
PMS 0.58 135 iP 40 50.82 -0.8
PLRM 0.62 95 iP 40 50.97 -1.0
eS 41 00.81
SKT 0.62 302 eP 40 51.08 -1.0
iS 41 00.83
GHO 0.72 80 iP 40 52.87 -0.6

CRM	0.49	235	iPc	50	03.31	0.1
			S	50	11.40	

MVM	0.62	218	iPc	50	04.87	-0.1
			S	50	14.30	
FDF	0.70	244	iPd	50	06.13	0.0
			S	50	16.40	
BIM	0.76	227	iPd	50	06.97	0.0
			S	50	17.80	
MGG	1.18	318	ePd	50	12.68	-0.2
			S	50	26.90	
DOG	1.46	313	eP	50	16.94	-0.1
			S	50	34.80	
SEG	1.67	325	eP	50	20.17	0.2
	S.D.	= 0.2	on	7	of	7 obs.

? DEC 03, 1990 14h 52m 01.83 ± 1.04s
44.378 N ± 9.8km 7 388 E ± 8.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.9 (GEN).

STV	0.14	199	P	52	05.30	0.1
			S	52	07.97	
ENR	0.15	171	P	52	05.40	-0.1
			S	52	08.07	
PZZ	0.24	302	P	52	07.04	0.0
			S	52	10.94	
ROB	0.36	103	P	52	09.20	0.0
			S	52	15.25	

S.D. = 0.1 on 4 of 4 obs.

? DEC 03, 1990 14h 53m 20.60 ± 1.05s
44.378 N ± 9.8km 7.389 E ± 8.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.5 (GEN).

STV	0.14	199	P	53	24.17	0.2
			S	53	26.94	
ENR	0.15	172	P	53	24.07	-0.2
			S	53	26.84	
PZZ	0.24	302	P	53	25.81	0.0
			S	53	29.30	
ROB	0.36	103	P	53	27.97	0.0
	S.D. = 0.2	on	4	of	4	obs.

DEC 03, 1990 15h 31m 00.29± 0.54s
24.225 S ± 4.7km 66.961 W ± 7.9km
DEPTH = 168.8 ± 7.4 km
4.3mb (3 obs.)
SALTA PROVINCE, ARGENTINA (129)

ANT	3.20	279	iPc	31	51.30	-0.1
			iS	32	26.70	
RTLL	7.20	190	ePd	32	43.80	-0.3
CNCB	7.44	352	P	32	48.50	0.7
CFA	7.44	188	e(P)	32	47.00	-0.2
LPB	7.73	352	P	32	52.00	0.6
RTCV	7.73	190	e(P)	32	51.30	0.2
ZOBO	7.99	352	P	32	55.00	-0.1
			S	34	18.00	
SIV	9.88	35	P	33	18.60	-0.9
VAO	18.36	90	eP	35	05.10	0.2
BAO	19.76	68	ePc	35	19.50	0.1
PDCR	28.80	71	eP	36	43.40	-1.2
SPA	65.92	180	iPd	41	30.50	0.6
	0.8s		8.33nm			4.6mb
KIC	67.79	72	P	41	43.00	0.8
ANMO	69.75	326	eP	41	54.00	-0.1
	0.9s		2.52nm			4.0mb
BUL	86.77	111	iPd	43	28.50	1.4
YKA	94.35	340	eP	44	00.20	-0.9
	0.6s		1.00nm			4.2mb
FBA	107.88	334	ePd _{diff}	44	52.00	-9.8X
WB5	131.49	207	ePKP	49	54.00	-0.9
GBA	144.80	101	PKPc	50	19.30	0.1
	0.8s		2.50nm			

DEC 03, 1990 16h 10m 53.49± 0.40s
39.006 N ± 5.1km 115.328 W ± 4.0km
DEPTH = 5.0km (geophysicist)
NEVADA (37)
ML 3.6 (NEIS).

WRN	1.04	191	P	11	13.80	0.0
SRG	1.14	170	P	11	15.40	0.0
HCR	1.16	229	P	11	15.90	0.1
DLM	1.47	161	P	11	20.50	-0.4

FSU	1.66	64	P	11	23.00	-0.6
IMU	1.74	102	P	11	25.20	0.5
TNP	1.75	239	iPd	11	25.00	0.2
KVN	2.16	272	eP	11	30.80	0.0
DUG	2.28	58	eP	11	32.00	-0.5
BONR	2.56	247	eP	11	36.00	-0.6
DAU	3.44	65	eP	11	50.00	0.8
CMB	4.08	258	e(P)	11	58.50	0.5
BW06	5.77	47	eP	12	22.00	-0.1
ANNO	8.17	117	e(P)	12	57.50	1.7x

S.D. = 0.5 on 13 of 14 obs.

DEC 03, 1990 17h 41m 21.63± 0.25s
43.853 N ± 3.1km 16.598 E ± 3.1km
DEPTH = 10.0km (geophysicist)
4.2mb (1 obs.)
YUGOSLAVIA (383)
ML 4.2 (ZAG), 3.9 (KBA), 3.7
(VKA), MD 4.1 (TRI), 4.1 (FIR),
3.9 (ITG).

HYAR	0.68	189	iPg	41	34.20	-1.0
			i(Sg)	41	45.70	
BRY	1.71	123	iPnc	41	52.20	0.5
			iSn	42	18.00	
VBY	1.91	330	ePnc	41	56.40	1.9
			iSn	42	22.00	
HCY	1.98	135	iPnc	41	56.40	0.9
			eSn	42	24.50	
ZAG	2.01	348	ePn	41	57.00	1.0
			iPg	42	00.20	
			iSg	42	26.00	
PTJ	2.10	348	iPnc	41	57.90	0.6
			iSg	42	27.80	
PLE	2.10	103	iPnd	41	59.00	1.6
			eSn	42	29.00	
RIY	2.17	314	iPnc	42	00.20	1.9
			iSg	42	32.90	
BDV	2.27	133	iPnc	42	00.50	0.8
			eSn	42	31.90	
TTG	2.41	125	iPnc	42	03.00	1.3
			eSn	42	36.00	
CEY	2.44	321	ePn	42	04.00	1.9
			eSn	42	36.90	
IVA	2.60	111	iPnc	42	06.50	2.0
			eSn	42	40.80	
LJU	2.64	327	ePn	42	06.50	1.6
			e	42	07.50	
			eSn	42	39.00	
ARV	2.68	264	P	42	07.00	1.4
DUI	2.70	216	Pc	42	06.80	0.9
ULC	2.71	133	iPnc	42	07.10	1.0
			eSn	42	43.00	
BAI	2.74	176	Pc	42	05.00	-1.4
TRI	2.74	314	ePn	42	07.70	1.3
			iPg	42	14.70	
			iSn	42	43.50	
PVY	2.77	116	ePn	42	08.00	1.0
			eSn	42	45.00	
VOY	2.90	320	ePn	42	13.20	4.4X
			eSn	42	49.00	
BEO	2.93	69	ePg	42	14.50	5.4X
			iSg	42	49.50	
SDI	2.97	225	Pc	42	10.00	0.3
ASS	2.97	256	P	42	11.00	1.3
AZI	2.98	232	P	42	11.00	1.3
LACI	3.19	133	ePn	42	13.10	0.4
MNS	3.22	244	Pc	42	14.60	1.3
KKS	3.31	121	ePn	42	17.50	3.0X
SFI	3.43	273	P	42	18.00	1.8
TIR	3.48	135	ePn	42	16.50	-0.3
RMP	3.52	236	P	42	17.00	-0.4
RDP	3.54	235	P	42	20.00	2.2
PHP	3.56	126	iPnc	42	18.30	0.3
VVI	3.65	307	P	42	20.00	0.6
LCI	3.66	164	P	42	19.20	-0.2
ORI	3.79	182	P	42	20.00	-1.3
MGR	3.79	192	P	42	19.80	-1.6
SOP	3.83	360	eP	42	21.00	-0.9
FVI	3.84	317	P	42	23.50	1.4
			eSn	43	07.00	
FIR	3.87	271	ePn	42	31.50	9.1X
			iSn	43	18.00	
KBA	3.95	326	iPnc	42	24.90	1.1
			iSn	43	13.10	
MMN	3.99	187	P	42	29.50	5.5X
			eSn	43	05.00	

BZS	3.99	62	ePc	42	22.00	-2.1	SMF	9.42	292	Pn	43	37.80	-2.6	CDD	2.12	351	eS	27	28.63	
BUD	4.01	24	e(P)	42	23.00	-1.4				Sn	45	20.30		MCNL	2.46	344	eP	27	11.10	-1.3
BERA	4.01	141	ePn	42	23.90	-0.5	LOR	9.57	295	Pn	43	40.10	-2.3	AUI	2.51	355	eP	27	15.24	-1.9
SKO	4.02	116	ePn	42	24.50	-0.1				Sn	45	25.50		AUE	2.53	356	eP	27	16.48	-1.4
			i	42	26.00		AVF	9.78	292	Pn	43	43.10	-2.2	AGU	2.54	355	eP	27	17.12	-1.1
			iSn	43	30.00		BGF	10.08	290	Pn	43	46.80	-2.6	AUP	2.54	355	eP	27	17.06	-1.3
			i	43	35.50		MAF	10.21	288	Pn	43	48.00	-3.3X	AUH	2.54	355	eP	27	16.73	-1.7
CSI	4.08	183	P	42	28.70	3.3X	YKA	67.03	338	eP	52	13.70	-2.8	XLV	2.70	14	eP	27	17.16	-1.3
SRO	4.14	16	iPn	42	25.10	-1.1				0.6s	1.10nm	4.2mb					eS	27	19.81	-0.9
			i	42	30.50					S.D. = 1.3	on 89 of 102 obs.			OPT	2.82	358	eP	27	20.98	-1.4
			i(Sn)	43	14.60					DEC 03, 1990 18h 12m 03.14 ± 0.71s			CNPM	2.85	18	iP	27	21.53	-1.2	
CTI	4.14	304	P	42	26.80	0.4				43.519 N ± 6.9km	12.445 E ± 8.6km						eS	27	53.02	
			eSn	43	15.50					DEPTH = 10.0km (geophysicist)			HOM	2.91	14	eP	27	22.26	-1.4	
OHR	4.14	130	iPn	42	26.40	0.1				CENTRAL ITALY	(381)		PDB	3.02	348	eP	27	22.79	-2.4	
			eSg	43	22.00		ARV	0.36	93	Pc	12	15.60	5.0X	BRLK	3.13	20	iP	27	25.08	-1.7
TDS	4.20	183	P	42	26.00	-1.1				eSg	12	22.50					eS	27	59.45	
ROI	4.28	180	P	42	28.00	-0.3	ASS	0.48	161	P	12	16.80	4.0X	INE	3.23	359	eP	27	26.38	-1.9
BDI	4.34	275	P	42	30.20	1.0				eSg	12	26.00		NNL	3.33	15	eP	27	28.08	-1.4
ZST	4.36	4	iPn	42	28.70	-0.7	SFI	0.59	313	P	12	22.60	7.6X	RED	3.59	2	eP	27	30.69	-2.6
			i	42	34.70					eSg	12	34.00		RSO	3.63	2	eP	27	31.88	-2.2
			e	43	31.20		CIO	0.60	122	iPg	12	17.11	1.7	RS2	3.63	2	eP	27	31.92	-2.1
			i	43	34.70					iSg	12	26.00		REF	3.66	2	eP	27	32.08	-2.4
VKA	4.42	358	iPnc	42	30.40	0.2	SSO	0.75	107	e(Pg)	12	18.61	0.9	RDN	3.68	2	eP	27	32.52	-2.2
			iSn	43	21.10					iSg	12	29.18		NCT	3.73	0	eP	27	32.79	-2.6
			iSg	43	49.20		AOI	0.84	87	iPg	12	19.97	0.6	RDT	3.75	4	eP	27	33.02	-2.6
KBN	4.50	134	ePn	42	34.50	3.2X				iSg	12	31.78		SEW	3.76	28	eP	27	32.74	-2.9
BHG	4.66	327	iPnd	42	35.70	2.0	ALP	1.11	131	iPg	12	23.23	-0.8	SLKM	3.95	20	eP	27	35.53	-2.8
SAL	4.67	294	P	42	35.50	1.7	MNS	1.15	171	P	12	24.00	-0.6	NKA	4.02	12	eP	27	38.08	-1.2
PSZ	4.67	28	iPn	43	31.50	57.6X	BDI	1.44	293	P	12	33.60	4.2X	LTI	4.19	38	eP	27	38.73	-3.0
SCE	4.69	315	ePn	42	36.00	1.7				eSg	12	52.50		SPU	4.38	6	eP	27	41.42	-3.0
KEK	4.78	149	eP	42	36.00	0.6	SDI	2.08	150	P	12	37.40	-1.1	CKL	4.38	4	eP	27	41.33	-3.2
OGA	4.95	309	ePn	42	38.80	0.8	TRI	2.38	23	P	12	41.00	-1.8	BGL	4.45	4	eP	27	42.78	-2.6
WATA	4.95	316	iPnd	42	39.20	1.3	CTI	2.59	348	P	12	46.00	0.1	KNIM	4.46	36	eP	27	42.54	-3.0
			iSn	43	38.30					eSg	13	16.00		SVW	4.49	343	eP	27	43.13	-2.8
SQTA	5.07	314	iPnd	42	41.10	1.6	MDI	2.98	320	Pc	12	52.50	1.2	CGLM	4.51	6	eP	27	43.87	-2.4
			iSn	43	41.00		FVI	3.08	4	P	12	52.00	-0.7	NCG	4.60	5	eP	27	44.78	-2.7
VAI	5.08	118	ePn	42	39.00	-0.6	VAI	3.52	313	P	12	59.50	0.6	PMS	4.76	20	eP	27	46.85	-2.8
BOB	5.21	283	P	42	42.20	0.6				S.D. = 1.2	on 11 of 15 obs.		SUA	4.78	13	eP	27	47.42	-2.6	
KZN	5.23	131	eP	42	41.00	-0.8				? DEC 03, 1990 18h 19m 22.65 ± 3.65s		GLI	5.07	35	eP	27	51.07	-3.1		
			eS	43	38.50					45.886 N ± 55.8km	154.027 E ± 47.4km		KNK	5.14	25	eP	27	52.09	-3.1	
MDI	5.26	294	Pc	42	41.00	-1.2				DEPTH = 33.0km (normal)		SKT	5.21	8	eP	27	53.94	-2.1		
OSS	5.36	304	ePd	42	44.60	0.8				4.6mb (3 obs.)		GHO	5.36	21	eP	27	54.50	-3.8		
KHC	5.68	340	iPn	42	48.00	-0.1				KURIL ISLANDS REGION	(222)	VZW	5.38	36	eP	27	54.79	-3.8		
			ePg	42	54.00							VLZ	5.51	36	eP	27	55.86	-4.4		
			Sg	43	50.50							SCM	5.78	28	eP	28	01.51	-2.7		
FUR	5.69	321	eP	42	48.30	0.1	KUSJ	7.22	251	eP	21	07.50	-1.0	KLU	5.91	35	eP	28	02.30	-3.7
VDL	5.69	300	ePd	42	49.40	1.0				eS	22	19.20		YKA	19.96	58	eP	31	18.30	9.1
WET	5.88	335	iPnc	42	50.50	-0.4	ASAJ	8.26	262	eP	21	23.10	0.0		0.8s	0.60nm				3.0mb
SPC	5.90	24	eP	43	03.20	11.9X	HOOJ	8.48	249	eP	21	26.30	0.2		45 obs. associated					
VAI	5.92	293	P	42	50.50	-0.8				eS	22	53.00		% DEC 03, 1990 20h 02m 51.09 ± 0.52s						
			eSn	43	55.50									46.531 N ± 6.6km	2.914 E ± 5.6km					
TMA	5.92	295	ePc	42	51.20	-0.5	MRRJ	9.93	254	eP	21	46.30	0.2		DEPTH = 13.5 ± 5.0 km					
CKI	6.01	278	P	42	53.00	0.2	KKN	56.21	277	P	29	02.66	0.6		FRANCE					(538)
SAX	6.12	306	ePd	42	55.00	0.5				0.5s	7.00nm	4.9mb		ML 2.8 (LDG).						
LLS	6.15	302	ePd	42	56.10	1.3	PKI	56.25	276	P	29	02.54	0.0							
PRU	6.30	348	Pn	42	56.30	-0.5	DMN	56.44	276	P	29	04.18	0.4							
			e	43	09.50		GKN	56.52	277	P	29	04.34	0.1							
			Sg	44	13.90		NB2	69.25	342	P	30	27.70	-0.2	BGF	0.05	300	Pg	02	54.20	0.4
EVR	6.30	140	eP	42	55.50	-1.4				0.9s	5.00nm	4.6mb	MAF	0.39	218	Pg	02	59.40	0.1	
VLS	6.42	151	eP	42	55.00	-3.6X	HFS	69.49	340	eP	30	28.90	-0.4				Sg	03	04.10	
ZLA	6.80	305	ePd	43	03.20	-0.7				0.4s	1.90nm	4.5mb	AVF	0.40	49	Pg	02	59.50	0.1	
SLE	6.88	307	ePd	43	03.90	-1.2				S.D. = 0.5	on 10 of 10 obs.					Sg	03	04.70		
GRF	6.91	330	e(P)	43	05.00	-0.4				? DEC 03, 1990 18h 41m 21.50 ± 1.64s		TCF	0.54	244	Pg	03	02.50	0.5		
			e(S)	44	19.40					58.454 N ± 17.2km	150.184 W ± 21.1km					Sg	03	08.90		
KSP	7.00	358	eP	43	05.00	-1.6				DEPTH = 33.0km (normal)		SMF	0.65	80	Pg	03	03.70	0.0		
EMS	7.21	291	ePc	43	10.00	0.2				4.4mb (2 obs.)					Sn	03	16.10			
LPG	7.21	287	Pn	43	07.30	-2.6				GULF OF ALASKA	(15)	SSF	0.67	37	Pg	03	04.90	0.8		
			Sn	44	26.80											Sg	03	13.90		
FEL	7.22	307	eP	43	08.24	-1.6	KDC	1.42	241	eP	41	45.10	0.0	LBF	0.86	58	Pg	03	08.10	0.7
LPL	7.23	287	Pn	43	07.80	-2.3	TTA	5.32	330	eP	42	40.80	0.0				Sn	03	19.10	
			Sn	44	27.80		FBA	6.57	9	e(P)	43	19.00	20.8X	LOR	0.98	41	Pg	03	21.60	1.2
BRG	7.25	347	ePn	43	13.00	2.9X	NB2	59.96	10	P	51	26.80	0.4				Sg	03	23.20	
			i	44	37.00					0.7s	1.60nm	4.3mb				Sn	03	25.40		
			i	44	53.00		HFS	61.08	9	eP	51	33.40	-0.5	LSF	1.00	254	Pn	03	10.30	0.6
			i	45	15.00					0.3s	1.60nm	4.6mb				Pg	03	10.90		
MOX	7.59	335	ePn	43	15.00	0.1				S.D. = 0.6	on 4 of 5 obs.					Sg	03	24.00		
			eSn	44	40.00					& DEC 03, 1990 19h 26m 38.69s		RJF	1.57	219	Pg	03	20.60	2.0		
TOD	7.86	320	eP	43	15.43	-3.2X				56.843 N	152.992 W					Sn	03	37.80		
BSF	7.92	304	Pn	43	18.10	-1.5				DEPTH = 47.1km						Sg	03	40.40		
			Sn	44	44.60					3.0mb (1 obs.)		CAF	1.71	201	Pn	03	20.80	0.1		
CDF	7.92	308	Pn	43	17.80	-1.8				KODIAK ISLAND REGION	(13)				Pg	03	23.10			
HAU	8.26	304	Pn	43	23.00	-1.4				<AGS-P>		MFF	2.11	273	Pn	03	25.30	-1.2		
			Sn	44	52.															

03d 20h

LFF 2.20 225 Pg 03 32.60 4.8X
 Sg 04 00.40
 GRR 3.16 307 Pn 03 41.80 0.4
 Sg 04 32.00
 FLN 3.20 315 Pn 03 44.50 2.5X
 Sn 04 16.50
 Sg 04 32.60
 S.D. = 0.9 on 13 of 15 obs.

ORI 4.01 328 P 40 41.40 -0.2
 eSn 41 20.60
 MMN 4.08 323 P 40 43.40 0.9
 KZN 4.15 28 ePn 40 43.90 0.3
 FAI 4.46 279 P 40 48.10 0.2
 MGR 4.48 322 P 40 47.00 -1.3
 OHR 4.60 15 ePn 40 49.80 -0.2
 S.D. = 0.9 on 15 of 16 obs.

RTLL 4.91 46 ePc 18 11.70 -0.6
 ZOBO 18.91 13 P 21 20.00 0.0
 S.D. = 0.5 on 14 of 14 obs.

& DEC 04, 1990 00h 29m 14.94s
 63.229 N 151.448 W
 DEPTH = 14.3km

CENTRAL ALASKA (1)
 <AGS-P>.

DEC 03, 1990 20h 29m 35.43 ± 0.39s
 43.820 N ± 4.3km 16.687 E ± 4.3km
 DEPTH = 5.0km (geophysicist)
 YUGOSLAVIA (383)
 ML 3.5 (TTG). MD 3.3 (TRI).

& DEC 03, 1990 22h 39m 05.06s
 39.134 N 110.856 W
 DEPTH = 11.7km
 UTAH (478)
 <SLC-P>. CL 2.9 (SLC).

TRF 0.57 66 eP 29 26.04 -0.2
 eS 29 34.98
 HUR 0.86 106 eP 29 31.45 0.3
 eS 29 43.87
 CUT 0.99 146 eP 29 33.45 0.2
 eS 29 47.66
 RND 1.18 80 eP 29 35.27 -1.4
 eS 29 52.57
 MCK 1.24 65 eP 29 35.97 -1.5
 SKT 1.25 182 eP 29 36.22 -1.6
 eS 29 54.04
 BWN 1.29 42 eP 29 39.83 1.4
 PWA 1.74 155 eP 29 43.79 -1.1
 SUA 1.80 169 eP 29 44.92 -0.9
 NCG 1.86 191 eP 29 45.43 -1.3
 GHO 1.87 140 eP 29 45.34 -1.5
 CGLM 1.95 188 eP 29 46.32 -1.6
 PLRM 1.97 146 eP 29 46.73 -1.3
 SPU 2.07 188 eP 29 48.77 -1.0
 CKL 2.08 192 eP 29 48.66 -1.3
 PMS 2.18 155 eP 29 50.53 -0.7
 KNK 2.30 141 eP 29 52.19 -0.7
 RDT 2.70 190 eP 29 56.52 -2.2
 18 obs. associated

HVAR 0.66 195 iPg 29 47.20 -1.5
 iSg 29 58.70
 BLY 1.00 21 Pg 29 53.10 -1.6
 Sg 30 05.10
 BRY 1.64 124 ePn 30 05.20 0.1
 eSn 30 28.00
 HCY 1.91 135 ePn 30 08.90 0.0
 eSn 30 34.00
 VBY 1.97 329 ePn 30 16.00 6.2X
 eSn 30 35.30
 PLE 2.03 103 ePn 30 11.50 0.7
 eSn 30 41.10
 ZAG 2.06 346 e(Pn) 30 10.70 -0.4
 iPg 30 13.20
 iSg 30 38.70
 PTJ 2.14 346 iPnc 30 10.40 -2.0
 eSn 30 36.80
 BDV 2.20 134 ePn 30 13.20 0.1
 eSn 30 42.30
 RIY 2.24 314 e(Pn) 30 15.60 1.9
 iSg 30 45.50
 TTG 2.34 126 ePn 30 15.50 0.3
 eSn 30 46.50
 CEY 2.50 321 eP 30 19.00 1.5
 eSn 30 48.50
 CIO 2.65 258 ePn 30 19.30 -0.4
 iSn 30 52.85
 PVY 2.70 116 ePn 30 21.00 0.6
 eSn 30 56.00
 LJU 2.70 326 eP 30 23.50 3.2X
 e(Sn) 30 51.50
 ARV 2.74 265 P 30 20.00 -0.8
 TRI 2.81 313 e(Pn) 30 22.10 0.3
 i(Sn) 30 55.10
 VOY 2.97 319 e(Pn) 30 25.00 0.8
 eSn 31 05.70
 SDI 2.99 226 P 30 25.00 0.6
 ASS 3.03 257 P 30 26.00 1.1
 MNS 3.27 245 P 30 27.50 -0.8
 eSg 31 06.00
 FVI 3.91 316 P 30 37.50 0.1
 eSg 31 24.00
 SKO 3.95 116 ePn 30 51.00 13.0X
 OHR 4.07 130 ePn 30 34.00 -5.8X
 CTI 4.21 304 P 30 41.50 -0.3
 eSg 31 29.00
 SOTA 5.14 313 iPnd 30 54.80 -0.1
 iSn 31 51.70

MSU 1.20 239 iP 39 27.30 -0.2
 DAU 1.31 347 eP 39 29.20 -0.2
 BW06 3.77 15 eP 40 13.50 9.0
 3 obs. associated

* DEC 03, 1990 23h 31m 11.97 ± 1.12s
 37.359 N ± 10.4km 20.436 E ± 8.1km
 DEPTH = 10.0km (geophysicist)
 IONIAN SEA (399)
 ML 3.5 (ATH).

VLS 0.83 8 ePg 31 28.50 0.5
 ITM 1.20 98 ePg 31 33.00 -1.4
 EVR 1.89 34 iPbd 31 45.80 1.1
 VLI 2.10 107 ePn 31 48.00 0.4
 KEK 2.40 348 ePg 31 59.60 7.6X
 ATH 2.67 76 ePb 31 56.90 1.1
 KZN 3.12 19 ePn 32 03.00 0.8
 LCI 3.55 328 P 32 07.00 -1.1
 OHR 3.76 4 iPn 32 11.00 -0.3
 ATN 4.02 283 P 32 15.60 0.7
 VAY 4.29 22 ePn 32 17.00 -1.7
 SKO 4.67 9 ePn 32 18.00 -6.2X
 i 32 22.50
 HFS 23.20 351 eP 36 16.50 -3.1X
 2.0s 227.20nm 5.4mb X
 S.D. = 1.2 on 10 of 13 obs.

& DEC 04, 1990 00h 48m 50.55s
 63.324 N 151.741 W
 DEPTH = 25.4km

CENTRAL ALASKA (1)
 <AGS-P>.

TRF 0.67 78 eP 49 03.23 -0.4
 iS 49 12.61
 HUR 1.02 109 eP 49 08.70 -0.5
 eS 49 21.06
 CUT 1.14 143 eP 49 10.33 -0.6
 eS 49 24.88
 RND 1.30 85 eP 49 12.59 -0.7
 eS 49 29.47
 BWN 1.32 49 eP 49 13.24 -0.2
 MCK 1.32 71 eP 49 13.90 0.4
 SKT 1.35 176 eP 49 13.23 -0.7
 eS 49 30.79
 NEA 1.72 42 eP 49 19.24 0.0
 SUA 1.92 166 eP 49 23.59 1.3
 NCG 1.94 186 eP 49 21.58 -0.9
 WRH 1.98 53 eP 49 21.13 -1.9
 CGLM 2.03 184 eP 49 24.31 0.5
 GHO 2.03 139 eP 49 22.28 -1.6
 BGL 2.09 189 eP 49 25.40 0.7
 PLRM 2.12 144 eP 49 24.98 0.0
 CKL 2.15 188 eP 49 25.65 0.0
 SPU 2.16 184 eP 49 24.80 -0.8
 MDM 2.25 42 eP 49 25.05 -1.8
 PMS 2.32 153 eP 49 26.88 -1.0
 KNK 2.45 140 eP 49 29.49 -0.3
 VZW 3.33 131 eP 49 43.01 0.8
 21 obs. associated

S.D. = 1.0 on 22 of 26 obs.
 DEC 03, 1990 21h 39m 38.77 ± 1.03s
 36.676 N ± 10.7km 19.192 E ± 5.2km
 DEPTH = 10.0km (geophysicist)
 MEDITERRANEAN SEA (400)
 MD 3.6 (ATH).

? DEC 04, 1990 00h 16m 58.65 ± 6.31s
 34.834 S ± 45.1km 72.581 W ± 29.8km
 DEPTH = 31.5 ± 4.6 km
 NEAR COAST OF CENTRAL CHILE (135)

LNV 1.31 48 iPd 17 20.50 -0.3
 iS 17 44.50
 LCCH 1.59 32 iPd 17 24.50 -0.5
 iS 17 50.00
 TACH 1.80 50 eP 17 27.60 -0.4
 iS 17 57.00
 CHCH 1.83 61 iPc 17 28.20 -0.3
 i 17 34.20
 i 17 56.00
 PCH 2.10 55 iPc 17 32.70 0.3
 iS 18 05.00
 SAN 2.11 50 eP 17 32.50 0.1
 i 18 04.80
 ROCH 2.27 36 eP 17 35.00 0.1
 iS 18 08.00
 PEL 2.31 44 iPc 17 36.00 0.7
 i(S) 18 10.50
 FCH 2.42 52 eP 17 37.00 -0.2
 iS 18 12.00
 JACH 2.71 38 iPd 17 41.50 0.4
 i 18 19.00
 iS 18 20.00
 MDZ 3.66 59 eP 17 54.70 0.1
 eS 18 10.40
 RTCV 4.50 50 e(P) 18 07.00 0.5

DEC 04, 1990 01h 19m 30.02 ± 0.49s
 40.286 N ± 4.7km 29.195 E ± 4.0km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.1 (ISK).

IZI 0.22 76 iPg 19 35.70 0.9
 YLV 0.31 26 iPg 19 37.50 1.0
 GBZT 0.54 21 ePg 19 40.50 -0.4
 iSg 19 48.00
 KCT 0.64 267 iPg 19 44.00 1.1
 HRT 0.65 34 iPg 19 43.00 0.0
 ISK 0.79 352 iPg 19 45.00 -0.3
 iSg 19 55.00
 DST 0.81 213 iPg 19 45.50 -0.2
 iSg 19 59.10
 GPA 0.85 89 ePg 19 45.60 -0.9
 iSg 20 00.10

BNT 0.98 275 iPg 19 48.80 0.2
 EDC 1.02 274 ePg 19 49.00 -0.3
 ALT 1.42 150 ePn 19 55.80 -0.1
 DMK 1.88 325 iPn 20 01.50 -1.0
 KHL 1.98 172 ePn 20 09.30 5.3X
 EZN 2.25 259 iPn 20 13.00 5.2X
 IZM 2.41 219 ePn 20 15.00 4.9X

S.D. = 0.8 on 12 of 15 obs.

DEC 04, 1990 01h 47m 20.15 ± 0.34s
 1.076 S ± 7.4km 119.797 E ± 6.6km
 DEPTH = 33.0km (normal)
 4.8mb (6 obs.) 4.2Msz (1 obs.)
 SULAWESI (268)

BKB2 2.91 266 ePc 48 05.20 0.1
 0.6s 321.50nm
 MNI 5.63 64 eP 48 44.40 0.7
 KKM 7.93 333 ePd 49 15.50 -0.6
 IPM 19.58 287 ePd 51 50.00 1.4
 1.0s 34.60nm 4.6mb
 PSI 21.20 280 ePd 52 07.20 1.8
 WB5 23.51 144 iPd 52 27.80 -0.4
 ASPA 26.29 150 eP 52 53.70 -1.0
 0.7s 18.30nm 4.8mb
 Z 22s 0.30um 3.8MszX

OIS 27.38 136 eP 53 03.00 -1.6
 SSE 32.02 2 Pc 53 47.00 1.2
 1.0s 12.00nm 4.7mb
 Z 22s 0.60um 4.2Msz

ADE 38.05 154 eP 54 37.50 0.1
 CMS 38.99 143 eP 54 45.00 -0.3
 BFD 41.61 152 eP 55 07.50 0.7
 COO 42.27 137 iPc 55 14.00 1.6
 GUN 43.48 314 P 55 22.62 -0.1
 0.7s 63.00nm 5.5mb

CAN 43.58 145 iPd 55 23.20 0.2
 PAI 43.63 313 P 55 23.04 -0.8
 KKN 43.85 314 P 55 23.92 -1.5
 1.0s 30.00nm 5.0mb

DMN 43.87 313 P 55 25.58 -0.1
 GKN 44.43 313 P 55 29.68 -0.5
 GBA 44.44 291 Pc 55 29.70 -0.4
 1.1s 16.50nm 4.8mb

HYB 44.59 296 eP 55 32.00 0.6
 DZM 49.94 118 iPc 56 14.00 0.7
 MAIO 67.10 310 eP 58 13.00 0.1
 MKT 85.95 301 eP 00 02.00 3.2X
 MBH 86.11 300 eP 59 59.00 -0.7
 RMN 86.37 300 eP 00 00.00 -1.0
 YKA 106.66 23 ePKP 05 41.10 -2.1X

S.D. = 1.0 on 25 of 27 obs.

* DEC 04, 1990 03h 28m 43.61 ± 1.72s
 27.551 N ± 13.7km 33.964 E ± 13.9km
 DEPTH = 10.0km (geophysicist)
 ARAB REPUBLIC OF EGYPT (553)

BADA 1.33 43 ePd 29 09.70 1.5
 1.0s 29 41.00
 HOL 1.96 29 eP 29 18.30 1.1
 AYN 2.23 53 eP 29 23.80 2.7X
 1.0s 30 07.00
 MBH 2.35 20 eP 29 23.00 0.0
 WAJH 2.70 120 eP 29 27.40 -0.4
 RMN 2.99 11 eP 29 31.00 -1.1
 1.0s 30 21.00

HLW 3.25 316 eP 29 36.50 0.8
 1.0s 30 14.50

DSI 4.19 17 eP 29 47.00 -2.0

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

* DEC 04, 1990 04h 26m 57.70s
 40.457 N 127.308 W
 DEPTH = 5.0km
 OFF COAST OF NORTHERN CALIFORNIA (34)
 <BRK>. ML 3.8 (BRK).

FHC 2.55 81 eP 27 37.80 -2.7
 1.0s 28 06.70
 WDC 3.64 87 ePc 27 53.30 -2.5
 1.0s 28 33.40

NWRM 3.96 119 eP 27 56.00 -4.4
 LTCM 3.97 92 eP 27 58.50 -2.1
 LBFM 4.20 76 eP 28 02.00 -2.0
 MIN 4.36 90 eP 28 02.90 -3.3
 ORV 4.55 100 eP 28 07.20 -1.6
 BRK 4.70 122 eP 28 07.00 -3.9
 1.0s 28 56.30

BKS 4.71 122 iPc 28 06.70 -4.4
 PCC 4.84 126 eP 28 08.40 -4.6
 GCC 5.38 128 eP 28 15.20 -5.4
 MHC 5.40 123 eP 28 16.70 -4.4
 ARN 5.47 123 eP 28 17.00 -4.9
 SAO 5.89 127 eP 28 22.10 -5.6
 CMB 5.89 112 eP 28 26.40 -1.4
 PRS 6.22 130 eP 28 27.80 -4.6
 LLA 6.29 126 eP 28 28.30 -5.2
 PRI 6.77 127 eP 28 35.80 -4.5
 FRI 6.87 118 eP 28 37.30 -4.3
 BONR 7.43 107 eP 28 51.50 1.8
 TNP 8.18 104 eP 29 00.00 -0.1

21 obs. associated

* DEC 04, 1990 04h 49m 53.78 ± 1.07s
 23.132 S ± 13.0km 66.656 W ± 11.6km
 DEPTH = 33.0km (normal)
 JUJUY PROVINCE, ARGENTINA (128)

ANT 3.50 260 iPc 50 47.50 0.3
 1.0s 51 20.30
 CNCB 6.41 349 P 51 29.70 0.8
 LPB 6.70 348 P 51 33.00 0.1
 ZOBO 6.97 348 P 51 35.70 -1.0
 ARE 8.05 325 eP 51 42.00 -9.6X
 1.0s 52 59.00

SIV 8.84 38 Pc 52 07.60 5.3X
 1.0s 53 28.00

BAO 19.11 70 eP 54 22.50 5.6X
 SOB1 28.28 65 eP 55 48.20 1.7
 LIC 66.87 72 P 00 44.60 -0.6
 KIC 67.19 72 Pc 00 45.90 -1.3
 0.5s 4.50nm 4.8mb

S.D. = 1.3 on 7 of 10 obs.

* DEC 04, 1990 05h 15m 20.05s
 62.472 N 148.632 W
 DEPTH = 7.9km
 CENTRAL ALASKA (1)
 <AGS-P>.

HUR 0.69 318 iP 15 33.43 -0.4
 1.0s 15 43.60

GHO 0.72 191 iP 15 33.96 -0.5
 1.0s 15 33.88

CUT 0.76 266 iP 15 34.58 -0.6
 1.0s 15 45.23

SCM 0.89 136 iP 15 36.14 -1.2
 1.0s 15 50.14

PLRM 0.91 195 iP 15 36.50 -1.2
 1.0s 15 49.00

RND 0.94 354 iP 15 36.98 -1.3
 1.0s 15 48.95

PWA 1.01 216 iP 15 38.47 -0.9
 1.0s 15 53.37

KNK 1.07 175 iP 15 39.14 -1.2
 1.0s 15 53.97

TOA 1.21 107 iP 15 41.52 -1.3
 1.0s 15 59.67

TRF 1.24 323 eP 15 41.27 -2.1
 1.0s 15 41.93

MCK 1.27 354 eP 15 42.00 -1.7
 1.0s 16 01.50

PMS 1.31 200 eP 15 42.80 -1.7
 1.0s 16 04.98

SUA 1.42 226 eP 15 44.90 -1.4
 1.0s 16 04.98

SDG 1.43 86 eP 15 44.64 -1.8
 1.0s 16 04.98

SKT 1.44 251 eP 15 44.40 -2.1
 1.0s 16 04.63

PAX 1.54 70 eP 15 46.42 -1.5
 1.0s 16 04.63

TZL 1.56 105 eP 15 46.85 -1.3
 1.0s 16 08.53

KLU 1.61 126 eP 15 46.60 -2.4
 1.0s 16 07.91

VZW 1.73 144 eP 15 47.97 -2.6
 1.0s 16 11.28

VLZ 1.73 140 eP 15 47.91 -2.7
 1.0s 16 10.83

GLI 1.76 155 eP 15 48.62 -2.4
 1.0s 16 10.92

CGLM 1.98 235 iP 15 52.76 -1.5
 NCG 1.98 239 eP 15 52.28 -2.1
 WRH 2.02 7 eP 15 51.50 -3.3
 SPU 2.08 233 iP 15 53.59 -2.1
 HDA 2.08 20 eP 15 52.76 -2.9
 SLKM 2.11 202 eP 15 54.58 -1.6
 BGL 2.15 237 eP 15 55.08 -1.8
 KNIM 2.17 168 iP 15 55.04 -2.0
 FBA 2.47 8 eP 15 57.11 -4.1
 LTI 2.47 171 eP 15 57.88 -3.3
 GLB 2.50 112 eP 15 59.07 -2.7
 MDM 2.50 4 iP 15 58.32 -3.4
 GLM 2.59 12 eP 16 00.39 -2.5

34 obs. associated

* DEC 04, 1990 05h 30m 20.87 ± 0.95s
 19.320 N ± 11.1km 64.416 W ± 6.9km
 DEPTH = 33.0km (normal)
 3.8mb (1 obs.)
 VIRGIN ISLANDS (91)

LPR 1.71 234 P 30 48.60 -0.2
 S 31 08.60
 CPD 1.91 228 P 30 51.80 0.1
 SJG 2.04 234 iP 30 53.40 -0.2
 PORP 2.45 239 P 30 59.70 0.2
 SEG 4.01 136 eP 31 21.50 -0.1
 BBL 4.70 143 eP 31 31.50 0.1
 YKA 55.11 334 eP 39 51.90 0.0
 0.7s 0.70nm 3.8mb
 S.D. = 0.2 on 7 of 7 obs.

* DEC 04, 1990 05h 31m 46.28s
 62.517 N 151.114 W
 DEPTH = 84.9km
 CENTRAL ALASKA (1)
 <AGS-P>.

CUT 0.41 106 iP 31 59.88 -0.1
 SKT 0.57 200 iP 32 01.41 0.1
 HUR 0.82 55 eP 32 03.54 -0.3
 TRF 1.01 22 iP 32 05.98 -0.2
 PWA 1.05 146 eP 32 06.60 0.2
 SUA 1.07 170 eP 32 06.90 0.0
 1.0s 32 22.58

NCG 1.22 204 iP 32 08.65 -0.1
 GHO 1.27 125 eP 32 09.73 0.4
 1.0s 32 27.73

CGLM 1.29 200 iP 32 09.30 -0.2
 PLRM 1.32 134 eP 32 09.99 0.2
 RND 1.37 48 eP 32 09.95 -0.6
 1.0s 32 28.93

BGL 1.40 206 eP 32 11.29 0.3
 SPU 1.41 199 eP 32 10.89 -0.2
 1.0s 32 30.56

CKL 1.45 204 eP 32 11.80 0.2
 PMS 1.47 149 iP 32 12.17 0.3
 1.0s 32 30.95

KNK 1.68 130 eP 32 14.59 0.1
 NKA 1.78 182 eP 32 18.48 2.6
 BWN 1.82 23 eP 32 16.13 -0.3

SCM 1.90 109 eP 32 17.30 -0.3
 RDT 2.05 198 eP 32 19.98 0.4
 SLKM 2.06 168 eP 32 20.23 0.5

NCT 2.15 205 eP 32 20.07 -0.9
 RDN 2.16 202 eP 32 21.58 0.4
 REF 2.17 201 eP 32 22.50 1.1

NEA 2.26 23 eP 32 20.72 -1.7
 WRH 2.39 33 eP 32 22.92 -1.2
 GLI 2.52 129 eP 32 25.04 -1.0

SEW 2.55 161 eP 32 26.23 -0.1
 SDG 2.58 87 eP 32 27.08 0.2
 CCB 2.60 33 eP 32 25.40 -1.6

VZW 2.61 122 eP 32 26.12 -1.2
 KLU 2.66 110 eP 32 26.38 -1.5
 VLZ 2.66 119 eP 32 26.28 -1.6

HDA 2.66 43 eP 32 26.90 -1.0
 KNIM 2.71 142 eP 32 26.39 -2.2
 MDM 2.77 26 iP 32 28.34 -1.0

LTI 2.94 146 eP 32 29.61 -2.1
 CNPM 3.00 181 eP 32 33.41 0.8
 GLB 3.61 104 eP 32 39.71 -1.4

39 obs. associated

* DEC 04, 1990 05h 41m 01.16s
 60.017 N 152.896 W
 DEPTH = 113.1km

04d 05h

SOUTHERN ALASKA
<AGS-P>.

INE	0.09	298	eP	41	16.25	0.7
			eS	41	28.66	
OPT	0.40	205	eP	41	17.29	-0.8
RED	0.41	9	eP	41	17.40	-0.8
RSO	0.45	9	iP	41	17.91	-0.6
RS2	0.45	9	iP	41	17.94	-0.6
			eS	41	30.51	
REF	0.48	11	iP	41	18.06	-0.7
			eS	41	31.09	
RDN	0.50	8	iP	41	18.14	-0.6
NCT	0.55	358	iP	41	18.34	-0.7
			eS	41	31.24	
RDT	0.61	23	iP	41	18.65	-0.8
			eS	41	31.21	
PDB	0.69	251	eP	41	19.01	-1.0
AUE	0.70	200	eP	41	19.15	-0.9
AUP	0.71	202	eP	41	19.37	-0.9
AUH	0.71	203	eP	41	19.52	-0.8
AGU	0.71	203	eP	41	19.59	-0.7
HOM	0.73	119	eP	41	19.77	-0.5
			eS	41	33.67	
AUI	0.74	202	eP	41	19.38	-1.0
NNL	0.80	88	eP	41	21.12	0.1
XLV	0.82	133	eP	41	20.83	-1.1
CNPM	0.97	120	iP	41	21.81	-0.9
			eS	41	37.59	
BRK	1.04	103	eP	41	22.60	-0.8
NKA	1.10	48	eP	41	24.94	1.0
MCNL	1.11	222	iP	41	22.83	-1.3
CDD	1.16	200	eP	41	22.99	-1.6
CKL	1.22	13	iP	41	24.69	-0.7
SPU	1.24	19	iP	41	24.78	-0.8
BGL	1.28	11	iP	41	25.58	-0.4
CGLM	1.37	18	iP	41	26.43	-0.6
SLKM	1.42	69	eP	41	26.47	-1.2
SYI	1.44	169	eP	41	26.29	-1.4
			eS	41	45.60	
NEG	1.44	14	eP	41	27.41	-0.5
SEW	1.73	86	eP	41	29.82	-1.5
			eS	41	51.49	
SUA	1.80	35	eP	41	31.55	-0.8
			eS	41	54.28	
PMS	2.05	52	eP	41	34.31	-1.2
			eS	41	58.16	
SKT	2.08	18	eP	41	34.51	-1.3
LT1	2.53	87	eP	41	39.92	-1.8
KNK	2.59	55	eP	41	40.20	-2.3
KNIM	2.60	80	eP	41	39.90	-2.7
GHO	2.62	46	eP	41	40.82	-2.1
CUT	2.71	27	eP	41	42.53	-1.5
SCM	3.27	54	eP	41	49.35	-2.3
VZW	3.30	69	eP	41	50.67	-1.4
HUR	3.36	26	eP	41	51.76	-1.0
VLZ	3.43	68	eP	41	51.50	-2.2
KLU	3.73	64	eP	41	54.98	-2.9
TOA	3.88	54	eP	41	57.85	-2.1
GLB	4.68	68	eP	42	08.86	-2.0
NEA	4.91	20	eP	42	11.56	-2.4
WRH	5.00	25	eP	42	12.74	-2.4
HDA	5.21	30	eP	42	15.12	-2.9
CCB	5.22	25	eP	42	15.07	-3.0
MDM	5.41	22	eP	42	17.49	-3.3
GLM	5.60	25	eP	42	19.91	-3.5

52 obs. associated

& DEC 04, 1990 05h 56m 26.36s
59.227 N 152.506 W
DEPTH = 70.1km

SOUTHERN ALASKA
<AGS-P>.

AUE	0.46	287	eP	56	38.46	-0.5
AUI	0.49	283	eP	56	38.80	-0.4
AGU	0.49	287	iP	56	38.84	-0.5
AGU	0.49	286	eP	56	38.77	-0.7
AUH	0.50	286	eP	56	38.94	-0.5
OPT	0.56	319	eP	56	39.26	-0.8
HOM	0.62	45	eP	56	40.15	-0.4
			eS	56	49.59	
SYI	0.62	174	eP	56	39.87	-0.7
			eS	56	50.31	
CDD	0.66	244	eP	56	40.22	-0.8
CNPM	0.72	65	eP	56	40.85	-0.8
			eS	56	51.95	

INE	0.88	342	eP	56	42.84	-1.0
MCNL	0.94	268	eP	56	42.82	-1.6
BRK	0.99	56	eP	56	44.64	-0.4
NNL	1.02	36	eP	56	45.64	0.2
PDB	1.03	304	iP	56	44.47	-1.0
RED	1.20	354	eP	56	46.88	-1.0
RSO	1.25	354	iP	56	47.99	-0.5
RS2	1.25	354	eP	56	47.96	-0.6
			eS	57	04.56	
REF	1.27	356	eP	56	48.03	-0.8
			eS	57	04.25	
RDN	1.30	354	eP	56	48.38	-0.8
			eS	57	05.10	
RDT	1.35	2	iP	56	48.86	-1.0
			eS	57	05.33	
NCT	1.36	351	eP	56	48.11	-1.8
SPU	1.97	6	eP	56	57.67	-0.6
CKL	1.98	2	eP	56	58.00	-0.4
BGL	2.04	2	eP	56	58.81	-0.5
CGLM	2.10	7	eP	56	59.62	-0.5
NCG	2.19	4	eP	57	00.82	-0.5
VZW	3.50	56	eP	57	18.03	-1.5

28 obs. associated

? DEC 04, 1990 07h 38m 58.39±5.46s
35.148 S ±24.7km 176.479 W ±71.7km
DEPTH = 33.0km (normal)
4.8mb (2 obs.)

EAST OF NORTH ISLAND, N.Z. (688)

HBZ	4.87	238	eP	40	11.30	0.1
PUZ	5.14	234	P	40	14.90	-0.2
			S	41	02.60	
NOZ	5.60	230	eP	40	22.70	1.3
WHH	6.74	234	eP	40	37.10	-0.6
PGZ	7.91	224	P	40	55.00	1.0
WDW	9.07	225	eP	41	08.50	-1.5
ASPA	44.31	271	eP	47	06.60	-0.5
	0.8s		8.80nm		4.6mb	
WRA	45.71	276	P	47	18.00	-0.3
	0.6s		10.40nm		4.9mb	
WB5	45.72	276	eP	47	19.10	0.8
BCAO	146.43	208	ePKPc	58	58.50	21.6X
	0.8s		7.00nm			
			ic	59	08.20	
KAF	149.43	339	ePKP	59	04.70	24.6X
	0.4s		1.50nm			

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

DEC 04, 1990 08h 02m 36.93±0.26s
10.915 N ±4.6km 84.849 W ±5.0km
DEPTH = 159.0km (13 depth phases)
4.8mb (40 obs.)

COSTA RICA (78)

Felt (iii) at Puntarenas and
(ii) at San Jose.

UPA	5.58	110	(P)	04	00.00	1.0
BMG	12.24	107	eP	05	30.00	2.8
COTA	12.34	148	eP	05	30.20	1.2
BOG	12.38	120	eP	05	34.00	4.8X
GGP	12.65	150	eP	05	35.30	2.3
QUR	12.68	150	eP	05	35.30	2.1
VC1	13.15	150	iPd	05	27.00	-12.4X
			iS	05	47.50	
ANGL	13.38	147	P	05	34.10	-8.1X
SDV	14.15	97	eP	05	53.00	1.3
TOV	14.86	93	eP	06	02.00	1.6
MORO	16.24	89	iP	06	18.10	0.5
CEOS	16.37	95	iP	06	19.20	-0.1
LLAV	17.73	90	iP	06	35.30	-0.3
TRN	23.03	88	eP	07	29.00	-0.1
PRM	23.17	5	P	07	33.10	2.8
SVB	23.19	82	eP	07	32.51	1.9
BBL	23.20	76	eP	07	32.80	2.1
SEG	23.32	74	eP	07	34.50	2.6
TBH	23.37	89	eP	07	33.00	0.6
SLB	23.43	80	eP	07	34.73	1.7
JSC	23.49	7	P	07	36.00	2.7
LHS	23.74	8	P	07	37.80	2.0
NNA	24.10	161	iPc	07	40.20	0.8
	0.4s		73.73nm		5.6mb	
PWLA	24.13	354	P	07	40.00	0.5
RSCP	24.58	359	P	07	45.00	1.2
GBTN	24.65	1	P	07	46.00	1.7
TKL	24.65	2	P	07	46.00	1.6
OLY	25.21	347	P	07	49.20	-0.3

BLA	26.48	8	P	08	03.00	1.8
ELC	26.55	352	P	08	02.00	0.3
MEO	26.86	334	iPc	08	04.40	-0.2
FVM	27.41	350	P	08	09.00	-0.6
ARE	30.24	154	iPc	08	36.00	0.7
ALO	30.97	324	ePc	08	41.00	-0.4
	0.9s		9.87nm			4.5mb
			eP	09	15.20	163km
ANMO	30.97	324	P	08	41.00	-0.4
	0.9s		62.50nm			5.3mb
			pP	09	15.40	164km
ZOBO	31.68	148	Pc	08	47.40	-0.7
	1.0s		17.00nm			4.8mb
Z	20s		0.20um			3.8msz
			S	14	40.00	
			LR	18	12.00	
LPB	31.91	148	P	08	49.00	-1.0
WVLY	31.91	9	P	08	50.00	0.7
CNCB	32.20	149	P	08	52.00	-0.7
			i	11	38.00	
GOL	33.97	331	P	09	06.60	-0.8
	1.0s		25.00nm			4.9mb
			pP	09	40.00	155km
RSNY	34.67	13	P	09	14.00	0.9
SIV	35.62	138	iPc	09	20.20	-1.1
TPC	36.67	314	eP	09	31.00	0.9
MSU	36.76	323	P	09	30.60	-0.3
PLM	36.87	312	eP	09	33.00	1.1
DAU	37.52	326	P	09	37.00	-0.4
			pP	10	12.00	161km
RVR	37.56	313	eP	09	38.00	0.5
GSC	37.83	315	eP	09	41.00	1.2
SBB	38.23	314	eP	09	44.00	0.8
BW06	38.35	330	P	09	42.80	-1.4
			pP	10	17.50	159km
CBM	38.59	18	P	09	47.20	1.3
CLC	38.65	315	eP	09	48.00	1.4
ISA	39.18	314	eP	09	53.00	2.0
TNP	39.63	319	P	09	55.00	0.2
	0.6s		8.58nm			4.6mb
BONR	40.27	318	P	10	00.90	0.7
FRI	40.71	315	eP	10	04.40	0.9
LLA	41.39	314	eP	10	09.30	0.2
PRS	41.56	314	eP	10	11.70	1.3
CMB	41.71	316	eP	10	12.80	1.1
SAO	41.81	314	eP	10	14.80	2.3
LRM	42.00	331	eP	10	14.00	-0.2
			e	10	49.30	160km
MHC	42.23	315	eP	10	17.00	1.0
GCC	42.33	314	eP	10	18.20	1.5
LBFM	44.43	320	P	10	33.00	-0.9
BAO	45.03	125	ePc	10	37.30	-1.4
JACH	45.44	163	eP	10	42.00	0.3
ROCH	45.59	164	eP	10	43.00	-0.1
FFC	45.76	346	iPc	10	42.90	-1.0
	0.5s		11.00nm			4.7mb
PEL	45.85	163	iPd	10	45.00	0.1
SCH	46.06	14	ePc	10	46.10	-0.2
	0.8s		69.00nm			5.3mb
			pP	11	24.60	174km
FCH	46.13	163	iPc	10	47.70	0.2
SAN	46.14	163	eP	10	47.00	-0.2
TACH	46.26	164	eP	10	47.50	-0.6
PCH	46.34	163	eP	10	49.00	0.1
LNV	46.41	165	iPc	10	48.50	-0.8
PDCR	51.03	116	iPd	11	23.40	-1.7
			e	11	35.10	41km
FRB	54.00	9	ePc	11	44.00	-2.4
	0.5s		42.00nm			5.5mb
YKA	55.77	344	eP	11	56.40	-2.8
	0.5s		2.20nm			4.3mb
INK	65.43	342	eP	13	03.50	-0.8
MBC	67.89	352	eP	13	18.50	-1.2
	1.0s		24.00nm			5.0mb
			pP	13	56.00	156km
FBA	68.86	336	P	13	24.00	-1.8
DAG	74.05	13	iPd	13	54.30	-2.2
	0.7s		8.22nm			4.6mb
			i	14	33.60	161km
ECP	74.39	39	iPd	13	58.00	-0.9
	0.8s		103.00nm			5.6mb
ETA	74.51	38	eP	13	58.30	-1.2
EKA	76.38	36	Pc	14	10.40	0.4
	0.8s		19.80nm			4.9mb
LPF	77.85	43	iPc	14	17.50	-0.8
	1.1s		43.95nm			5.1mb
GRR	77.95	43	iPc	14	18.10	-0.7

FLN	0.8s	34.90nm	5.1mb			Lat 44.15N 0.11	Lan 29.22W 0.09	LBF	23.21	70 eP	17 57.50	-1.2
	78.18	42 eP	14 19.40	-0.7		Dep 15.0	Fix Half-duration 2.1		1.5s	94.00nm		5.1mb
	0.9s	34.40nm	5.1mb			Moment Tensor:	Scale 10**17 Nm	ESEL	23.94	89 iP+	18 10.90	5.1X
Z	20s	0.10um	4.1Msz			Mrr=-2.12 0.09	Mtt= 0.19 0.15	ENN	24.47	61 eP	18 11.00	0.2
LDF	78.43	42 eP	14 20.80	-0.7		Mff= 1.93 0.11	Mrt=-0.35 0.29		1.1s	60.00nm		5.1mb
	0.8s	29.55nm	5.1mb			Mrf= 0.65 0.38	Mtf= 0.83 0.09	VITF	24.50	67 P	18 10.63	-0.5
MFF	78.53	44 iPc	14 21.30	-0.8		Principal Axes:		HAU	24.75	68 eP	18 12.30	-1.3
	0.9s	16.40nm	4.8mb			T Vol= 2.31	Pig= 6 Azm=290		1.0s	28.00nm		4.9mb
TIC	78.82	85 P	14 22.70	-1.6		N	0.01 14 199	Z	19s	3.75um		4.9Msz
LIC	78.88	86 P	14 22.80	-1.8		P	-2.32 74 43	BSF	25.06	68 P	18 15.83	-0.9
KIC	79.14	86 P	14 24.30	-1.7		Best Double Couple: Mo=2.3*10**17		WTS	25.11	58 eP	18 17.00	0.0
EPF	79.15	48 iPc	14 25.10	-0.5		NP1: Strike= 36 Dip=41 Slip= -68			1.1s	52.00nm		5.1mb
	1.1s	22.00nm	4.8mb			NP2	188 53 -108	LOMF	25.12	69 P	18 16.84	-0.4
LFF	79.28	46 iPc	14 25.40	-0.7				BNS	25.27	61 iPc	18 20.80	2.3
	1.2s	29.75nm	4.9mb			PDA	6.45 157 iPd	Z	17s	3.10um		4.9MszX
LPO	79.61	46 iPc	14 27.20	-0.8		EZAM	14.86 89 iP+				22 43.00	
	1.0s	22.00nm	4.8mb			PTO	15.18 93 eP	LPL	25.28	73 eP	18 19.00	0.1
LSF	79.72	45 eP	14 27.20	-1.3					1.0s	18.00nm		4.7mb
RJF	79.79	46 iPc	14 28.20	-0.7				ECH	25.28	67 P	18 18.21	-0.5
	1.0s	16.00nm	4.7mb			EMON	15.61 84 iP+	MOF	25.29	68 P	18 18.31	-0.5
Z	20s	0.10um	4.2Msz			ERUA	15.93 87 iP+	LPG	25.29	73 eP	18 18.90	-0.2
TCF	80.18	45 eP	14 29.90	-1.1		ECP	17.22 53 eP		1.2s	34.20nm		4.9mb
	0.7s	8.80nm	4.6mb				1.3s 287.00nm	BNI	25.31	75 P	18 20.50	1.4
CAF	80.21	46 iPc	14 30.20	-1.0		EPLA	17.34 94 iP+	EMS	25.33	72 eP	18 19.90	0.5
	1.2s	23.80nm	4.8mb			ETA	17.50 51 eP	CDF	25.35	67 P	18 18.73	-0.7
MAF	80.44	45 eP	14 31.20	-1.1			1.0s 151.00nm	WLS	25.40	67 P	18 19.25	-0.6
	1.2s	26.80nm	4.8mb			GUD	18.55 91 iP+	ABH	25.49	63 eP	18 21.30	0.7
BGF	80.60	44 iPc	14 32.00	-1.1		EHOR	18.81 100 iP+	LMR	25.53	79 eP	18 20.20	-0.9
	0.8s	12.75nm	4.7mb			TOL	18.87 93 iP+		0.9s	27.85nm		4.9mb
AVF	80.92	44 iPc	14 33.40	-1.4			ePP	GW	25.55	65 P	18 20.61	-0.6
	1.2s	19.35nm	4.7mb				iS 20 46.00	BBS	25.57	69 P	18 20.81	-0.6
SSF	80.99	44 eP	14 33.90	-1.3		EPRU	19.20 103 iP+	FRF	25.58	78 eP	18 20.90	-0.6
	0.6s	6.30nm	4.5mb			AVE	19.70 115 iP		1.0s	32.00nm		4.9mb
LOR	81.21	44 iPc	14 35.20	-1.1				FEL	25.88	68 P	18 23.47	-0.9
	0.7s	6.60nm	4.5mb			EBAN	19.71 98 iP+	MMK	26.05	72 eP	18 27.60	1.5
Z	21s	0.08um	4.0Msz			LPF	19.79 68 eP	ZLA	26.17	69 eP	18 27.30	0.3
SMF	81.27	44 iPc	14 35.20	-1.4			1.1s 141.65nm	SLE	26.21	68 eP	18 27.50	0.2
	0.6s	5.40nm	4.5mb			MAL	19.90 102 iPd	CKI	26.55	75 P	18 38.00	7.5X
LBF	81.32	44 eP	14 35.40	-1.5		GRR	19.93 67 eP	VAI	26.63	72 P	18 30.50	-0.7
ENN	82.13	40 eP	14 41.00	0.0			1.5s 177.60nm	LLS	26.65	70 eP	18 32.40	0.8
	0.8s	21.00nm	4.9mb			ETOR	20.02 89 iP+	SCH	26.78	308 ePd	18 32.50	0.0
WTS	82.51	39 eP	14 42.50	-0.4		EKA	20.19 46 P		1.1s	62.00nm		5.2mb
	1.0s	35.00nm	5.1mb			FLN	20.20 66 eP	VDL	27.02	71 eP	18 35.70	0.7
							1.8s 276.20nm	MDI	27.30	72 P	18 39.00	1.8
HAU	82.78	43 eP	14 43.60	-0.9			4.75um	BOB	27.30	74 P	18 41.00	3.6X
	0.9s	13.10nm	4.7mb			Z	19s	GRF	27.87	63 ePd	18 42.70	0.2
Z	21s	0.08um	4.0Msz			ECOG	20.24 100 iPd		1.6s	58.00nm		5.1mb
BSF	83.10	43 eP	14 45.00	-1.2		AFC	20.27 100 iP+	Z	20s	2.50um		5.1Msz
	0.9s	11.45nm	4.7mb			MFF	20.40 72 eP			ec	18 50.00	26km
ABH	83.29	41 eP	14 46.42	-0.6			1.7s 220.55nm	MOX	28.09	61 eP	18 44.00	-0.4
CDF	83.34	42 eP	14 46.40	-1.0		LDF	20.43 66 eP		2.3s	92.00nm		5.1mb
	1.0s	12.00nm	4.7mb				1.6s 217.65nm	SQTA	28.10	69 iPd	18 44.90	0.2
NB2	83.46	29 P	14 47.00	-0.7		EVIA	20.44 95 iP+		1.5s	68.00nm		5.2mb
	0.9s	8.80nm	4.6mb			IFR	21.10 111 iP			ic	18 45.10	1kmX
HFS	84.85	30 eP	14 53.00	-1.5				BDI	28.25	75 P	18 46.00	-0.1
	0.4s	2.10nm	4.3mb			LFF	21.16 76 eP	CTI	28.58	71 P	18 48.50	-0.5
MOX	85.72	39 eP	14 59.00	-0.1			1.1s 139.20nm	CLL	28.95	60 eP	18 51.00	-1.1
CLL	86.43	39 iPc	15 03.00	0.4		EPF	21.20 82 eP		2.4s	91.00nm		5.1mb
	1.9s	49.00nm	5.0mb				1.2s 116.20nm	WET	28.99	64 iPc	18 52.50	-0.1
						ECHE	21.20 92 iP+	SFI	29.17	75 P	18 56.00	1.9
BRG	87.11	39 iP	15 06.20	0.3		TIO	21.33 120 iP	FVI	29.26	70 P	18 55.00	0.1
	1.2s	22.00nm	5.0mb			ENIJ	21.35 99 iP+	KHC	29.45	64 iPd	18 56.50	-0.2
						LPO	21.51 77 eP		1.1s	11.50nm		4.6mb
KHC	87.29	41 eP	15 06.80	0.0			0.9s 55.70nm	Z	12s	2.00um		5.0MszX
						LSF	21.58 73 eP		N	12s	3.10um	
ASPA	141.02	246 ePKP	21 44.20	-6.5X		RJF	21.66 75 eP	E	12s	1.80um		
	0.8s	4.60nm					1.2s 53.55nm			e	19 55.90	310kmX
WB5	141.24	252 ePKP	21 44.50	-6.6X		Z	21s					
WRA	141.25	252 PKP	21 44.00	-7.2X		EROO	21.80 88 iP+	BRG	29.56	61 eP	18 56.80	-0.8
	0.6s	8.40nm				EBR	21.87 87 eP		2.0s	85.00nm		5.2mb
FORR	143.59	232 ePKP	21 52.00	-2.9X						i	19 18.80	98kmX
GBA	149.96	36 PKP	22 10.00	4.4X		TCF	22.05 72 eP			i	19 29.50	
KOD	152.60	41 ePKP	22 16.50	6.6X		CAF	22.10 76 eP	ASS	29.96	77 P	19 03.00	1.7
							1.6s 127.50nm	PRU	30.00	63 eP	19 01.00	-0.5
						MAF	22.30 73 eP		Z	18s	2.90um	5.0Msz
							1.2s 98.20nm		N	12s	3.30um	
						BGF	22.47 72 eP		E	13s	3.00um	
						AVF	22.80 71 eP			e	19 08.50	26km
							1.7s 150.70nm	FRB	30.11	326 eP	19 03.00	0.6
						AKU	22.80 12 iP	HFS	30.28	42 eP	19 03.10	-0.8
							1.0s 80.00nm		0.5s	1.20nm		4.0mb X
						SSF	22.88 70 eP	AZI	30.82	78 P	19 15.00	6.2X
						LOR	23.11 70 eP	KSP	31.04	61 eP	19 09.50	-1.3
							1.4s 136.15nm	ZST	31.89	66 e(P)	19 15.60	-2.6
										e	19 41.00	115kmX
						Z	19s					
						SMF	23.14 71 eP	RSNY	32.46	288 eP	19 21.30	-1.9
							1.7s 172.80nm		1.0s	32.54nm		5.2mb

S.D. = 1.2 on 116 of 125 obs.

DEC 04, 1990 09h 12m 51.82±0.15s

43.729 N ± 4.0km 28.864 W ± 1.8km

DEPTH = 16.2km (10 depth phases)

5.2mb (58 obs.) 5.1Msz (15 obs.)

NORTH ATLANTIC RIDGE (403)

Ms 5.7 (BRK).

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 10S, 21C

Centroid Location:

Origin Time 09:13: 1.0 1.0

S.D. = 0.9 an 183 of 198 abs.

DEC 04., 1990 09h 17m 41.25 \pm 0.25s
0.141 S \pm 4.4km 125.097 E \pm 6.3km
DEPTH = 63.9km (2 depth phases)
5.3mb (28 abs.)

MOLUCCA SEA (269)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 12S, 28C

Centroid Location:

Origin Time 09:17:41.1 0.0

Lat 0.03S 0.06 Lon 125.64E 0.00

04d 09h

LZH Z 28s 1.38um 4.7MsZ
 41.11 333 eP 25 20.00 -0.8
 1.5s 160.00nm 5.6mb
 Z 20s 1.20um 4.8MsZ
 N 10s 0.20um
 PP 25 32.00
 PcP 27 20.00
 S 31 29.00
 CAN 41.49 150 eP 25 25.10 1.3
 TOO 41.73 155 eP 25 26.00 0.3
 SNY 41.80 358 Pc 25 25.10 -1.0
 1.1s 60.00nm 5.3mb
 Z 29s 1.20um 4.6MsZ
 eS 31 40.00
 OFUJ 41.89 19 eP 25 27.60 0.7
 HHC 42.61 345 P 25 33.00 0.0
 Z 26s 1.40um 4.7MsZ
 E 12s 0.40um
 BTO 42.81 343 eP 25 34.00 -0.6
 CN2 43.75 0 Pc 25 40.80 -1.2
 1.2s 20.00nm 4.8mb
 Z 22s 1.00um 4.7MsZ
 ePP 25 57.00
 eS 32 13.00
 LSA 43.90 316 eP 25 44.20 0.2
 MDJ 44.74 5 Pc 25 49.50 -0.5
 HYB 49.01 293 eP 26 21.50 -2.5
 1.0s 90.00nm 5.8mb
 GBA 49.13 288 P 26 22.90 -2.0
 WMO 55.02 328 iPc 27 08.50 -0.1
 1.5s 80.00nm 5.5mb
 Z 18s 1.10um 5.0MsZ
 PP 27 17.50
 PcP 28 07.00
 ScP 32 05.00
 S 34 49.50
 MAIO 70.60 309 eP 28 51.00 -1.1
 0.9s 12.36nm 4.8mb
 TAB 81.25 308 eP 29 53.00 0.8
 TTA 85.07 27 iPd 30 12.70 1.5
 0.6s 11.70nm 5.1mb
 KDC 86.06 32 e(P) 30 27.90 11.9X
 BRW 86.34 18 iPd 30 19.20 2.0
 IMA 86.56 24 iP 30 19.70 1.1
 0.8s 10.78nm 5.0mb
 NAI 88.29 269 iPd 30 30.20 2.1
 1.1s 82.28nm 5.8mb
 FBA 88.89 25 e(P) 30 29.00 -0.6
 KVT 89.37 311 iP 30 32.80 0.4
 GLH 89.60 303 eP 30 35.00 1.4
 SPA 89.86 180 iPc 30 35.50 1.2
 1.0s 15.00nm 5.2mb
 MKT 90.02 301 eP 30 37.00 1.3
 MBH 90.26 300 eP 30 38.00 1.2
 INK 94.34 21 eP 30 55.00 0.3
 pP 31 13.00 64km
 BUL 96.04 250 iPc 31 02.80 -0.8
 MBC 96.06 13 eP 31 03.50 1.0
 1.0s 13.00nm 5.4mb
 MLR 96.53 316 ePc 30 59.50 -5.8X
 KRA 99.81 321 eP 31 20.20 0.3
 HFS 100.65 332 ePdiff 31 21.80 -1.6
 0.6s 1.30nm 4.7mb
 OHR 100.85 312 ePdiff 31 13.00 -11.9X
 DAG 100.86 352 ePdiff 31 22.00 -2.0
 0.7s 6.16nm 5.3mb
 KSP 101.90 322 ePdiff 31 29.00 -0.2
 BRG 103.33 323 ePdiff 31 35.80 0.2
 1.2s 22.00nm 5.8mb
 YKA 103.67 24 ePdiff 31 37.20 0.4
 1.1s 1.20nm 4.6mb
 CLL 103.77 323 ePdiff 31 36.00 -1.5
 ANMO 120.81 49 ePKP 36 29.30 0.8
 1.0s 6.75nm
 ALO 120.81 49 ePKP 36 29.00 0.5
 KIC 129.57 278 PKP 36 46.90 1.2
 TIC 129.82 278 PKP 36 47.40 1.2
 LIC 129.86 278 PKP 36 47.40 1.2
 CNCB 158.79 143 PKP 37 36.00 1.6
 LPB 158.93 142 ePKP 37 38.00 3.6X
 ZOBO 159.12 142 PKP 37 37.00 2.2X
 PDCR 159.91 231 ePKP 37 42.90 7.9X
 SIV 162.85 159 PKP 37 39.60 1.7
 S.D. = 1.1 on 77 of 88 obs.

& DEC 04, 1990 09h 46m 10.50s

37.447 N 117.942 W
 DEPTH = 8.0km
 CALIFORNIA-NEVADA BORDER REGION (40)
 <BRK>. ML 2.9 (BRK).

BONR 0.58 331 iP 46 20.90 -1.4
 TNP 0.86 42 iP 46 25.00 -2.3
 FRI 1.48 253 iPc 46 37.10 -0.3
 iS 46 56.10
 KVN 1.61 356 eP 46 37.00 -2.4
 CMB 2.02 288 eP 46 45.00 -0.3
 PRI 2.54 240 eP 46 53.80 0.9
 eS 47 29.20
 ABL 2.79 202 eP 46 58.00 1.5
 BCH 2.84 218 eP 46 58.40 1.3
 ARN 2.86 269 eP 46 59.50 2.2
 SAO 2.88 257 eP 47 01.70 4.1
 10 obs. associated

& DEC 04, 1990 12h 31m 01.50s

64.209 N 148.586 W
 DEPTH = 8.8km
 3.3mb (1 obs.)
 CENTRAL ALASKA (1)
 <AGS-P>. ML 3.6 (PMR).

WRH 0.34 39 iP 31 08.46 0.0
 BWN 0.39 265 iP 31 08.30 -1.1
 eS 31 12.83
 NEA 0.43 330 iP 31 10.18 0.0
 eS 31 16.81
 MCK 0.50 198 iP 31 11.30 -0.4
 CCB 0.55 37 eP 31 12.11 -0.6
 HDA 0.74 74 eP 31 15.51 -0.6
 iS 31 25.34
 MDM 0.77 11 iP 31 16.41 -0.2
 FBA 0.77 26 iPd 31 16.20 -0.5
 RND 0.81 188 iP 31 17.02 -0.4
 GLM 0.94 33 eP 31 19.24 -0.3
 eS 31 32.35
 TRF 1.07 226 eP 31 21.39 -0.5
 HUR 1.32 201 eP 31 26.25 0.2
 eS 31 43.50
 THY 1.49 121 eP 31 27.94 -0.5
 PAX 1.87 130 eP 31 33.85 -0.2
 eS 31 58.57
 CUT 1.96 204 eP 31 34.77 -0.5
 DOT 2.08 104 eP 31 35.10 -1.9
 SDG 2.17 140 eP 31 38.51 0.1
 TOA 2.38 152 eP 31 42.10 0.7
 GHO 2.45 184 eP 31 41.54 -0.9
 SCM 2.45 166 eP 31 42.32 -0.1
 TZL 2.60 145 eP 31 45.91 1.4
 SKT 2.61 212 eP 31 43.99 -0.6
 PWA 2.64 194 eP 31 44.73 -0.2
 TMW 2.64 107 eP 31 44.17 -0.8
 PLRM 2.64 186 eP 31 44.12 -0.8
 PMR 2.64 186 eP 31 44.30 -0.7
 KNK 2.81 179 eP 31 47.06 -0.4
 IMA 2.85 313 eP 31 46.60 -1.5
 SUA 2.93 201 eP 31 49.03 -0.2
 KLU 2.99 155 eP 31 50.77 0.8
 PMS 3.01 189 eP 31 51.07 0.8
 NCG 3.26 212 eP 31 53.03 -0.9
 VLZ 3.26 160 eP 31 53.95 0.2
 VZW 3.30 163 eP 31 54.54 0.1
 CGLM 3.31 210 eP 31 53.19 -1.4
 SPU 3.43 209 eP 31 55.40 -0.9
 BGL 3.44 212 eP 31 55.82 -0.6
 TTA 3.56 252 eP 32 07.50 9.4
 SLKM 3.79 192 eP 32 01.50 0.1
 KNIM 3.90 174 eP 32 02.36 -0.5
 DWY 4.02 88 P 32 02.80 -1.7
 RDT 4.06 208 eP 32 05.20 0.0
 INK 7.33 49 eP 32 48.00 -3.2
 YKA 15.23 81 eP 34 36.40 -1.7
 0.7s 0.90nm 3.3mb
 44 obs. associated

DEC 04, 1990 12h 34m 14.82 ± 1.14s
 36.653 N ± 10.0km 71.141 E ± 7.8km
 DEPTH = 202.0 ± 13.8 km
 4.6mb (8 obs.)
 AFGHANISTAN-USSR BORDER REGION (717)

QUE 7.34 210 eP 36 00.00 -0.5
 eS 37 17.00

MAIO 9.39 271 eP 36 27.00 -0.1
 eS 38 04.00
 NDI 9.45 146 iPc 36 27.70 -0.1
 0.5s 35.21nm 4.9mb
 iS 38 06.00
 GKN 14.29 123 P 37 29.56 0.0
 DMN 14.86 123 P 37 37.04 0.4
 KKN 14.86 122 P 37 36.38 -0.3
 PKI 15.09 123 P 37 39.26 -0.3
 GUN 15.20 121 P 37 40.54 -0.3
 HYB 20.25 159 eP 38 38.50 2.4
 GBA 23.63 165 P 39 09.80 0.8
 HFS 43.02 322 eP 41 54.70 -0.8
 0.5s 3.00nm 4.1mb
 BRW 67.13 15 eP 44 48.40 0.3
 MBC 67.18 3 eP 44 49.00 0.7
 0.6s 8.00nm 4.6mb
 ANM 69.85 23 eP 45 05.40 0.5
 IMA 71.94 18 eP 45 17.10 -0.5
 0.8s 7.00nm 4.4mb
 INK 73.74 9 ePc 45 28.20 0.5
 FBA 74.29 16 ePc 45 31.20 0.2
 0.8s 11.38nm 4.7mb
 TOA 77.07 17 eP 45 47.90 1.2
 YKA 81.09 3 eP 46 07.70 -0.4
 0.5s 1.80nm 4.1mb
 WB5 81.95 122 eP 46 11.80 -1.4
 WRA 81.98 122 P 46 12.00 -1.4
 0.6s 7.80nm 4.6mb
 ASPA 84.25 125 eP 46 23.70 -1.1
 0.6s 9.10nm 4.7mb
 S.D. = 0.9 on 22 of 22 obs.

? DEC 04, 1990 13h 06m 07.20 ± 6.43s
 16.007 N ± 12.2km 60.894 W ± 57.0km
 DEPTH = 33.0km (normol)

LEEWARD ISLANDS (92)
 ML 2.6 (FDF).

SFG 0.38 310 ePd 06 15.56 -0.5
 MGG 0.42 258 iPd 06 16.23 -0.3
 S 06 19.20
 DOG 0.70 272 iPd 06 20.81 0.2
 S 06 27.20
 SEG 0.71 304 iPd 06 21.19 0.5
 S 06 29.70
 BBL 0.74 229 ePc 06 21.29 0.1
 S.D. = 0.5 on 5 of 5 obs.

& DEC 04, 1990 14h 17m 01.49s
 63.886 N 148.336 W

DEPTH = 97.6km
 CENTRAL ALASKA (1)
 <AGS-P>.

MCK 0.31 240 iP 17 15.94 -0.1
 eS 17 26.92
 RND 0.53 206 iP 17 17.23 -0.4
 eS 17 29.29
 BWN 0.57 300 iP 17 17.50 -0.3
 eS 17 28.56
 WRH 0.60 10 iP 17 17.92 -0.1
 eS 17 29.67
 NEA 0.77 335 eP 17 19.17 -0.4
 CCB 0.80 17 iP 17 19.55 -0.3
 eS 17 33.34
 HDA 0.80 49 iP 17 19.63 -0.3
 eS 17 33.21
 TRF 0.97 244 eP 17 21.69 -0.2
 eS 17 37.23
 FBA 1.05 13 iP 17 22.10 -0.4
 eS 17 38.05
 MDM 1.08 2 iP 17 22.53 -0.4
 eS 17 38.80
 HUR 1.08 213 eP 17 22.51 -0.5
 eS 17 38.27
 GLM 1.18 20 iP 17 23.57 -0.6
 eS 17 40.52
 PAX 1.58 124 eP 17 28.88 -0.3
 eS 17 50.62
 CUT 1.73 211 iP 17 30.17 -0.7
 SDG 1.86 136 eP 17 32.42 -0.3
 DOT 1.91 95 eP 17 32.42 -1.0
 eS 17 56.01
 TOA 2.04 150 eP 17 34.87 -0.2
 SCM 2.11 167 eP 17 35.70 -0.3
 GHO 2.14 188 eP 17 35.95 -0.5

04d 14h

TZL	2.28	143	eP	17	39.40	1.2
PLRM	2.33	189	eP	17	38.72	-0.1
PWA	2.35	198	eP	17	39.40	0.2
SKT	2.41	219	eP	17	38.61	-1.3
KNK	2.48	181	eP	17	40.89	-0.1
KLU	2.65	154	eP	17	42.74	-0.5
SUA	2.67	206	eP	17	44.24	0.6
PMS	2.71	193	eP	17	45.11	1.0
VLZ	2.92	161	eP	17	46.47	-0.3
VZW	2.96	163	eP	17	46.24	-1.2
NCG	3.05	217	eP	17	47.82	-1.0
GLI	3.07	169	eP	17	47.13	-1.8
CGLM	3.09	215	eP	17	48.24	-1.1
SPU	3.21	214	eP	17	50.40	-0.5
GLB	3.22	138	eP	17	50.86	-0.2
BGL	3.23	217	eP	17	50.74	-0.5
CKL	3.27	216	eP	17	52.05	0.2
SLKM	3.50	195	eP	17	54.37	-0.5
KNIM	3.56	175	eP	17	54.20	-1.5
RDT	3.83	212	eP	17	58.22	-1.2
SEW	3.83	188	eP	17	58.56	-0.8
RDN	3.97	213	eP	18	00.27	-1.1

41 obs. associated

DEC 04, 1990 15h 32m 50.67± 0.96s
 32.692 S ± 8.1km 70.629 W ± 10.1km
 DEPTH = 73.8 ± 14.6 km
 CHILE-ARGENTINA BORDER REGION (127)

JACH	0.03	72	iPc	33	01.50	-0.3
			iS	33	10.00	
ROCH	0.43	229	iPd	33	03.50	-0.1
			iS	33	14.00	
FCH	0.69	156	iPc	33	07.00	0.6
			iS	33	20.50	
PCH	0.93	174	eP	33	09.50	0.6
			iS	33	24.00	
TACH	0.99	195	iPd	33	09.20	-0.4
			iS	33	24.50	
LCCH	1.11	225	iPd	33	11.20	0.2
CHCH	1.24	181	iP	33	16.50	3.8X
			iS	33	36.00	
LNK	1.42	207	iPd	33	14.50	-0.5
			iS	33	34.00	
RTCV	1.96	65	e(P)	33	22.20	-0.2
RTLL	2.28	54	ePc	33	26.30	-0.6
			eS	33	56.00	
CFA	2.30	63	ePd	33	27.00	-0.1
			S	33	54.90	
RTRS	2.71	22	iPc	33	33.60	0.9

S.D. = 0.6 on 11 of 12 obs.

% DEC 04, 1990 16h 14m 52.27± 1.05s
 44.157 N ± 8.0km 8.194 E ± 7.3km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.2 (GEN).

FIN	0.05	12	P	14	54.18	-0.3
			S	14	55.41	
ROB	0.27	301	P	14	58.08	0.1
			S	15	02.59	
IMI	0.33	222	P	14	59.10	0.0
			S	15	04.13	
PCP	0.46	33	P	15	01.77	0.1
			S	15	08.53	
ENR	0.56	277	P	15	03.41	-0.3
			S	15	11.51	
STV	0.63	278	P	15	05.15	0.1
			S	15	13.97	
PZZ	0.86	294	P	15	08.74	-0.2
			S	15	19.81	

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

* DEC 04, 1990 17h 51m 04.06± 1.01s
 31.188 N ± 28.5km 33.473 E ± 9.4km
 DEPTH = 10.0km (geophysicist)
 ARAB REPUBLIC OF EGYPT (553)

LISJ	1.72	88	Pd	51	40.62	6.5X
MKRJ	1.89	78	Pd	51	35.78	-0.9
JRDJ	1.94	103	Pc	51	48.67	11.2X
MASJ	1.99	74	Pc	51	38.86	0.6
KFNJ	2.00	70	Pd	51	36.81	-1.4
SALJ	2.06	66	Pc	51	39.00	-0.1
QTRJ	2.18	86	Pd	51	41.41	0.5
BURJ	2.25	62	Pc	51	43.14	1.2

JARJ	2.35	63	Pc	51	43.97	0.5
MDSJ	2.42	79	Pc	51	42.84	-1.5
SHMJ	2.48	51	Pc	51	50.91	5.8X
DHLJ	2.66	263	Pc	51	47.68	0.0
CSTJ	2.74	91	Pc	51	50.11	1.1

S.D. = 1.1 on 10 of 13 obs.

% DEC 04, 1990 18h 43m 53.75± 0.79s
 38.203 N ± 7.1km 23.349 E ± 8.8km
 DEPTH = 10.0km (geophysicist)

GREECE (364)
 ML 2.2 (ATH).

ATH	0.37	128	ePb	44	01.20	-0.2
NEO	1.11	355	ePn	44	14.60	0.1
EVR	1.40	301	ePn	44	19.40	0.0
VLI	1.52	193	ePb	44	21.40	0.4
ITM	1.52	228	ePn	44	20.70	-0.3

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

* DEC 04, 1990 21h 53m 06.00± 1.42s
 35.970 N ± 17.4km 30.511 E ± 15.4km
 DEPTH = 10.0km (geophysicist)
 EASTERN MEDITERRANEAN SEA (371)

ELL	0.92	328	iPn	53	23.40	-0.2
BCK	1.49	2	ePn	53	33.00	0.1
KHL	2.48	342	ePn	53	47.10	0.0
CSS	2.51	113	eP	53	47.50	0.0
CIN	2.54	311	eP	53	48.00	0.1

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

DEC 04, 1990 23h 39m 17.21± 0.69s
 37.634 N ± 6.2km 29.758 E ± 7.7km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 3.0 (ISK).

BCK	0.68	104	iPg	39	30.50	-0.3
KHL	0.71	345	iPg	39	30.60	-0.7
			iSg	39	42.60	
ELL	0.89	172	iPn	39	34.40	0.0
CIN	1.33	269	ePn	39	42.00	0.3
			iSg	40	02.00	
ALT	1.45	11	iPn	39	44.60	1.1
DST	2.16	336	ePn	39	53.00	-0.8
IZI	2.71	355	ePn	40	02.00	0.4

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

DEC 04, 1990 23h 46m 19.80± 1.27s
 35.534 N ± 11.0km 11.535 E ± 5.2km
 DEPTH = 6.9 ± 3.3 km
 3.7mb (1 obs.)
 TUNISIA (397)
 ML 4.4 (ROM).

PTS	1.32	16	P	46	45.30	0.8
CVT	2.37	25	P	46	59.40	-0.2
FAI	2.45	44	P	47	01.50	0.7
			eSn	47	34.50	
LVI	2.53	15	P	47	02.40	0.5
ERC	2.64	18	P	47	03.30	-0.3
MCT	2.69	38	P	47	04.60	0.2
PZI	3.11	60	P	47	09.65	-0.6
MEU	3.16	59	P	47	09.00	-1.9
GIB	3.16	38	P	47	10.60	-0.4
			eSn	47	52.50	

MNO	3.49	46	P	47	16.90	1.1
ATN	4.10	49	P	47	24.30	0.1
MSI	4.18	49	P	47	26.89	1.5
GRI	5.09	49	P	47	38.90	0.5
MGR	5.59	33	P	47	44.50	-0.9
TDS	5.61	41	P	47	46.00	0.3
SGO	5.83	30	P	47	47.40	-1.3
RMP	6.33	8	P	47	55.90	0.0
SDI	6.42	15	P	47	57.00	-0.1
PGF	7.28	345	Pn	48	09.00	-0.2
			Sn	49	26.20	

LMR	8.70	335	Pn	48	27.90	-1.1
FRF	8.86	336	Pn	48	29.20	-1.9
LRG	8.86	335	Pn	48	29.70	-1.5
SBF	8.90	340	Pn	48	32.00	0.3
LPG	10.59	341	Pn	48	56.70	1.4
LPL	10.62	341	Pn	48	57.00	1.4
EPF	11.45	314	Pn	49	07.40	0.6
			Sn	51	00.80	
CAF	11.84	325	Pn	49	11.40	-0.6

LPO	12.08	322	Pn	49	16.20	0.9
LFF	12.49	322	Pn	49	21.60	0.9
BGF	12.81	332	Pn	49	24.40	-0.6
MOX	15.11	0	e(P)	50	05.00	9.8X
CLL	15.81	3	eP	50	11.00	6.7X
PRNI	20.34	98	eP	50	59.50	0.0
YKA	73.20	337	eP	57	53.10	0.3

0.8s 0.50nm 3.7mb

S.D. = 1.0 on 32 of 34 obs.

& DEC 05, 1990 00h 44m 03.80s
 37.610 N 118.955 W
 DEPTH = 3.0km
 CALIFORNIA-NEVADA BORDER REGION (40)
 <BRK>. ML 2.5 (BRK).

BONR	0.62	56	eP	44	14.70	-1.5
FRI	0.86	224	iPc	44	19.70	-1.3
			iS	44	31.00	
CMB	1.21	291	eP	44	25.70	-1.3
			eS	44	42.00	
TNP	1.45	71	eP	44	30.50	-0.7
LLA	1.87	239	eP	44	37.30	0.2
			eS	45	00.80	
PRI	2.01	224	eP	44	40.50	1.4
ARN	2.07	264	eP	44	40.00	0.1
SAO	2.16	248	eP	44	42.30	1.1
BCH	2.59	201	eP	44	47.30	-0.1

9 obs. associated

& DEC 05, 1990 03h 36m 44.30s
 34.448 N 106.861 W
 DEPTH = 8.4km
 NEW MEXICO (496)
 <SNM>. MD 2.6 (SNM).

BDNM	0.06	312	P	36	46.85	0.5
LPM	0.23	126	P	36	49.10	-0.2
LAZ	0.23	259	P	36	48.95	-0.4
BNM	0.36	148	P	36	51.35	-0.4
BMNM	0.37	243	P	36	51.50	-0.4
WTX	0.38	191	P	36	51.50	-0.6
CRNM	0.51	168	P	36	54.00	-0.5
SBM	0.54	209	P	36	54.65	-0.6
ALO	0.59	34	iPd	36	55.80	-0.5
			iS	37	03.30	
ANMO	0.60	34	iPd	36	56.00	-0.4
SNM	0.68	191	P	36	57.20	-0.8
MEO	6.83	85	e(P)	38	40.50	13.3

12 obs. associated

% DEC 05, 1990 05h 10m 02.97± 0.90s
 46.291 N ± 11.2km 2.783 E ± 6.8km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 1.8 (LDG).

MAF	0.17	245	Pg	10	07.50	0.7
			Sg	10	10.50	
BGF	0.27	9	Pg	10	09.10	0.4
			Sg	10	13.40	
TCF	0.40	270	Pg	10	11.00	-0.1
			Sg	10	16.40	
AVF	0.64	38	Pg	10	15.40	-0.3
			Sg	10	23.70	
SMF	0.81	64	Pg	10	18.60	-0.1
LSF	0.87	268	Pg	10	19.00	-0.7
			Sg	10	30.00	
SSF	0.92	33	Pg	10	20.20	-0.3
			Sg	10	32.10	
LBF	1.08	49	Pg	10	23.00	-0.3
			Sg	10	36.60	
LOR	1.23	37	Pg	10	26.50	0.7
			Sg	10	41.50	

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

& DEC 05, 1990 05h 21m 04.82s
 63.316 N 151.609 W
 DEPTH = 28.2km
 CENTRAL ALASKA (1)
 <AGS-P>.

TRF	0.61	77	iP	21	16.64	-0.4
			eS	21	25.47	
HUR	0.96	110	eP	21	22.03	-0.3

RND	1.25	85	eS	21	38.33	
			eP	21	25.84	-0.7
			eS	21	42.49	
MCK	1.27	70	eP	21	25.89	-0.9
BWN	1.28	47	eP	21	26.65	-0.3
SKT	1.34	178	eP	21	26.70	-1.1
NEA	1.69	40	eP	21	33.25	0.4
PWA	1.85	154	eP	21	34.27	-0.9
SUA	1.90	167	eP	21	36.38	0.3
NCG	1.94	188	eP	21	34.90	-1.6
WRH	1.94	52	eP	21	34.56	-1.9
GHO	1.99	140	eP	21	35.92	-1.3
CGLM	2.02	185	eP	21	35.96	-1.8
PLRM	2.08	145	eP	21	37.16	-1.3
BGL	2.09	190	eP	21	38.18	-0.6
CCB	2.14	50	eP	21	37.15	-2.2
			eS	22	02.90	
SPU	2.15	186	eP	21	37.73	-1.8
CKL	2.15	189	eP	21	38.87	-0.8
MDM	2.22	40	eP	21	38.52	-1.9
PMS	2.29	154	eP	21	41.19	-0.3
FBA	2.31	45	eP	21	40.99	-0.7
HDA	2.33	60	eP	21	41.81	-0.2
KNK	2.41	141	eP	21	42.24	-1.0
SCM	2.48	125	eP	21	44.64	0.4
GLM	2.50	46	eP	21	42.14	-2.3
RDT	2.78	188	eP	21	49.02	0.6
TOA	2.78	113	eP	21	49.52	1.0
PAX	2.81	94	eP	21	49.48	0.6
NCT	2.83	193	eP	21	50.68	1.4
REF	2.88	191	eP	21	50.14	0.1
SDG	2.89	103	eP	21	51.91	2.0
SLKM	2.89	166	eP	21	48.06	-2.0
KLU	3.22	122	eP	21	53.60	-1.1
VZV	3.28	131	eP	21	53.75	-1.7
VLZ	3.30	129	eP	21	54.52	-1.2
GLB	4.09	114	eP	22	05.98	-1.1

37 obs. associated

DEC 05, 1990 06h 39m 47.45±0.32s
44.577 N ± 2.4km 6.986 E ± 3.6km
DEPTH = 10.0km (geophysicist)

FRANCE (538)
ML 2.4 (GEN), 2.2 (LDG).

PZZ	0.11	131	P	39	50.75	0.3
			S	39	52.91	
RRL	0.37	337	P	39	54.65	-0.5
			S	40	00.50	
STV	0.41	144	P	39	55.37	-0.5
			S	40	01.40	
ENR	0.47	138	P	39	56.61	-0.4
			S	40	02.90	
RSP	0.61	18	P	39	59.90	0.1
			S	40	08.70	
ROB	0.69	114	P	40	01.40	0.2
			S	40	11.20	
SBF	0.78	156	Pg	40	02.80	0.0
			Sg	40	12.60	
LSD	0.89	8	P	40	04.90	0.2
			S	40	17.30	
IMI	0.93	135	P	40	04.90	-0.4
			S	40	17.60	
LPG	0.94	350	Pg	40	05.50	0.0
FIN	0.95	112	P	40	05.72	0.1
			S	40	18.60	
LPL	0.96	349	Pg	40	05.70	-0.1
FRF	1.05	194	Pg	40	06.50	-0.7
			Sg	40	19.80	
PCP	1.12	91	P	40	08.70	0.3
			S	40	24.00	
LRG	1.21	202	Pg	40	11.00	1.0
			Sg	40	26.40	
CDR	1.26	225	eP	40	10.80	0.0
			e	40	26.70	
LMR	1.29	196	Pg	40	11.50	0.2
			Sg	40	27.40	

S.D. = 0.4 on 17 of 17 obs.

& DEC 05, 1990 07h 08m 13.10s
36.632 N 121.298 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

SAO	0.18	318	iP	08	16.50	-0.3
LLA	0.29	93	iPc	08	18.90	0.0

PRS	0.31	191	iP	08	19.40	0.1
			eS	08	23.60	
GCC	0.69	306	iPd	08	26.20	-0.7
			eS	08	36.30	
PRI	0.71	134	eP	08	26.70	-0.6
ARN	0.74	345	eP	08	27.80	-0.1
MHC	0.76	339	eP	08	28.20	-0.2
PKEM	1.12	120	eP	08	35.00	0.6
PCC	1.23	315	eP	08	35.10	-1.1
FRI	1.33	74	iPd	08	37.00	-0.9
BRK	1.46	329	eP	08	41.30	1.4
CMB	1.58	27	eP	08	41.10	-0.6
			eS	09	01.00	
BCH	1.75	145	eP	08	42.30	-1.9
ABL	2.45	136	eP	08	52.80	-1.7
BONR	2.73	60	eP	08	57.50	-1.1
TNP	3.56	65	eP	09	08.00	-2.2

16 obs. associated

DEC 05, 1990 08h 44m 56.33±0.71s
43.424 N ± 4.9km 5.451 E ± 5.6km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.5 (STR).

GELF	0.04	203	Pg	44	57.98	-0.5
TREF	0.21	346	Pg	45	00.84	0.0
BERF	0.21	122	Pg	45	01.44	0.5
PUYF	0.21	59	Pg	45	00.76	-0.2
CDR	0.34	42	ePg	45	03.10	-0.3
			i(Sg)	45	06.90	
PRAF	0.43	332	Pg	45	05.65	0.5
VILF	0.47	24	Pg	45	05.65	-0.2
TAVF	0.48	66	Pg	45	06.25	0.1

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

& DEC 05, 1990 09h 24m 03.47s
60.256 N 151.027 W
DEPTH = 63.3km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

NNL	0.25	212	iP	24	14.36	0.6
SLKM	0.47	57	iP	24	15.22	-0.4
			eS	24	24.37	
BRLK	0.50	172	iP	24	15.32	-0.6
			eS	24	24.47	
NKA	0.50	348	eP	24	17.06	1.2
HOM	0.68	208	eP	24	17.33	-0.5
			eS	24	28.29	
CNPM	0.74	188	iP	24	17.92	-0.7
			eS	24	29.16	
RDT	0.76	296	iP	24	18.11	-0.8
			eS	24	29.45	
SEW	0.80	100	eP	24	18.08	-1.3
REF	0.86	286	eP	24	19.54	-0.8
			eS	24	32.13	
RED	0.88	281	iP	24	19.65	-0.8
			iS	24	32.50	
RSO	0.88	284	eP	24	19.91	-0.7
			eS	24	32.85	
RS2	0.88	284	eP	24	19.96	-0.7
			eS	24	32.87	
RDN	0.90	287	eP	24	19.74	-1.0
			eS	24	32.47	
NCT	0.99	289	eP	24	21.09	-0.8
			eS	24	34.64	
INE	1.04	260	iP	24	21.68	-0.9
			eS	24	35.10	
SPU	1.06	332	iP	24	22.04	-0.7
			eS	24	35.56	
CKL	1.14	326	iP	24	23.31	-0.6
CRP	1.16	332	eP	24	24.12	0.0
CGLM	1.16	336	iP	24	23.66	-0.5
BGL	1.21	327	eP	24	24.36	-0.5
SUA	1.22	6	iP	24	24.26	-0.7
PMS	1.23	35	eP	24	24.34	-0.6
			eS	24	39.59	
OPT	1.26	242	eP	24	25.04	-0.4
			iS	24	41.49	
NCG	1.28	335	iP	24	25.35	-0.4
LT1	1.60	96	eP	24	28.00	-2.0
KNIM	1.64	85	iP	24	28.05	-2.6
			iS	24	48.62	
PDB	1.66	255	eP	24	29.74	-1.1
MTU	1.71	98	iP	24	29.85	-1.7
KNK	1.71	46	eP	24	30.24	-1.4

SKT	1.75	352	eP	24	31.57	-0.5
GHO	1.83	33	eP	24	32.12	-1.2
GLI	2.04	70	iP	24	33.14	-3.0
CUT	2.19	9	eP	24	38.31	0.1
VZW	2.35	68	eP	24	37.88	-2.6
VLZ	2.47	67	eP	24	39.77	-2.3
KLU	2.79	61	iP	24	44.54	-2.2

36 obs. associated

DEC 05, 1990 09h 39m 17.37±0.45s
43.140 N ± 4.4km 26.050 E ± 4.6km
DEPTH = 10.0km (geophysicist)
BULGARIA (359)
Felt (IV) in the Strozhitzo oreo.

PVL	0.53	279	iPg	39	28.00	-0.1
JMB	0.78	150	iPg	39	33.00	0.5
DIM	1.15	199	iPg	39	40.00	1.1
BUC1	1.21	359	ePd	39	56.00	16.2X
PLD	1.43	224	Pg	39	43.00	-0.4
PGB	1.51	248	eP	39	44.00	-0.5
KDZ	1.56	198	iPc	39	46.00	0.8
PSN	1.65	70	iPc	39	45.00	-1.4
RZN	1.76	215	iPc	39	48.00	-0.2
DMK	1.82	136	iPn	39	48.50	-0.5
DRA	2.01	320	ePd	39	56.00	4.3X
ISR	2.03	10	eP	39	52.50	0.5
RDO	2.03	191	ePn	39	52.50	0.5
			eSb	40	18.50	
VTs	2.16	256	iP	39	55.00	1.0
CMP	2.25	341	ePc	40	24.00	28.8X
MMB	2.32	229	iPg	39	54.00	-2.2
MLR	2.35	358	eP	39	57.00	0.2
CFR	2.54	36	eP	40	00.00	0.7
CTT	2.66	138	iPn	40	01.00	-0.1
VRI	2.77	10	ePd	40	07.00	4.4X
BNT	3.11	153	ePn	40	06.00	-1.4
VAY	3.16	236	iPn	41	07.30	59.2X
PLG	3.38	216	ePn	40	11.30	0.0
			eSn	41	07.20	
GBZT	3.45	132	ePn	40	41.00	28.8X
HRT	3.55	129	ePn	40	20.00	6.2X
YLV	3.57	135	eP	40	26.00	12.0X
SKO	3.60	253	ePn	40	24.50	10.1X
BZS	4.03	309	ePc	40	16.00	-4.4X
DST	4.03	150	ePn	40	22.00	1.5
BEO	4.37	295	ePn	40	38.00	12.7X
OHR	4.40	244	ePn	41	06.00	40.2X

S.D. = 1.0 on 19 of 31 obs.

% DEC 05, 1990 10h 07m 14.52±0.89s
62.890 N ± 10.1km 8.086 E ± 8.7km
DEPTH = 10.0km (geophysicist)
SOUTHERN NORWAY (535)
MD 2.4 (BER).

MOL	0.41	218	ePg	07	22.34	-0.5
			eSg	07	29.19	
RGS	1.08	82	eP	07	35.00	0.2
HYA	1.95	208	eP	07	48.90	1.0
			eSg	08	16.73	
NSS	2.39	45	eP	07	54.14	-0.1
			eS	08	23.83	
SUE	2.42	222	eP	07	54.30	-0.4
			eSg	08	29.55	
NRA0	2.71	141	Pn	07	58.50	-0.4
			Pg	08	03.20	
			Lg	08	41.90	
ASK	2.78	211	iPc	07	59.80	-0.1
			eSg	08	40.82	
ODD1	3.07	194	eP	08	04.31	0.3
BLS2	3.65	189	eP	08	12.29	-0.1
S. D. = 0.5			on	9 of	9 obs.	

05d 10h

S.D. = 0.2 on 5 of 5 obs.
 % DEC 05, 1990 10h 39m 58.85 ± 0.91s
 40.497 N ± 11.9km 28.824 E ± 4.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.3 (ISK).
 YLV 0.42 80 iPg 40 07.60 0.1
 KCT 0.43 235 iPg 40 08.10 0.4
 IZI 0.52 108 iPg 40 09.40 0.0
 ISg 40 16.10
 BNT 0.70 259 iPg 40 13.00 0.2
 eSg 40 24.00
 EDC 0.75 259 ePg 40 13.00 -0.5
 DST 0.90 190 ePg 40 16.00 -0.2
 S.D. = 0.4 on 6 of 6 obs.

* DEC 05, 1990 10h 57m 40.37 ± 3.72s
 46.719 N ± 21.3km 112.883 W ± 20.0km
 DEPTH = 5.0km (geophysicist)
 MONTANA (456)
 ML 3.1 (BUT). ML 2.9 event 6.7
 seconds later (BUT).

HRY 0.72 90 iPc 57 55.20 0.3
 BUT 0.74 162 eP 57 55.60 0.4
 iS 58 03.80
 HBMT 0.95 168 iPc 57 59.10 0.0
 LRM 0.95 161 iPc 57 58.90 -0.1
 SXM 1.29 116 ePc 58 04.60 -0.3
 BGMT 1.60 158 ePn 58 09.00 -0.6
 MEMT 1.74 129 ePn 58 11.50 -0.1
 MCMT 1.89 179 ePn 58 14.20 0.3
 NEW 3.26 300 e(P) 58 46.00 12.8X
 S.D. = 0.4 on 8 of 9 obs.

% DEC 05, 1990 11h 36m 35.87 ± 1.08s
 59.821 N ± 9.8km 9.010 E ± 8.3km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN NORWAY (535)
 MD 2.0 (BER).

BLS2 1.19 244 eP 36 58.02 0.0
 eSg 37 13.33
 BLS1 1.19 250 iP 36 58.11 0.0
 eSg 37 14.53
 ODD1 1.21 275 eP 36 57.50 -0.8
 eSg 37 13.22
 NRA0 1.56 53 Pn 37 03.50 -0.2
 Sg 37 24.30
 HYA 1.94 315 eP 37 09.21 0.0
 eSg 37 34.84
 KMY 2.01 254 eP 37 10.56 0.3
 eSg 37 37.62
 ASK 2.02 291 eP 37 11.49 1.2
 eSg 37 37.21
 SUE 2.44 302 eP 37 15.74 -0.6
 eSg 37 49.85
 MOL 2.85 346 eP 37 22.32 0.2
 eSg 38 01.65
 S.D. = 0.7 on 9 of 9 obs.

& DEC 05, 1990 11h 43m 01.45s
 42.467 N 111.057 W
 DEPTH = 5.7km
 EASTERN IDAHO (457)
 <SLC-P>. ML 2.8 (SLC).

BW06 1.15 74 eP 43 24.00 0.5
 DAU 2.06 184 eP 43 38.10 0.8
 2 obs. associated

& DEC 05, 1990 11h 51m 47.22s
 59.497 N 153.733 W
 DEPTH = 105.8km
 SOUTHERN ALASKA (2)
 <AGS-P>.

AUH 0.20 132 eP 52 02.17 1.3
 AUI 0.23 136 eP 52 01.87 1.0
 OPT 0.30 58 iP 52 02.26 -0.5
 eS 52 13.41
 PDB 0.37 322 iP 52 02.16 -0.9
 MCNL 0.44 225 iP 52 02.70 -0.8
 eS 52 15.17
 CDD 0.57 175 iP 52 03.54 -0.9

INE 0.66 31 eP 52 04.37 -0.9
 eS 52 16.70
 XLV 1.03 92 eP 52 07.68 -1.0
 RED 1.04 27 eP 52 08.04 -0.9
 HOM 1.08 80 eP 52 08.51 -0.7
 RS2 1.09 26 eP 52 08.60 -0.9
 RSO 1.09 27 eP 52 08.29 -1.2
 REF 1.12 27 eP 52 08.93 -1.0
 SYI 1.13 141 eP 52 08.61 -1.1
 eS 52 24.99
 RDN 1.13 25 iP 52 09.16 -0.8
 NCT 1.14 20 eP 52 09.07 -1.0
 RDT 1.27 31 iP 52 10.21 -1.3
 eS 52 28.61
 CNPM 1.27 88 eP 52 10.24 -1.2
 eS 52 28.81
 >NNL 1.35 65 eP 52 12.02 -0.3
 NKA 1.77 44 eP 52 16.94 -0.5
 CKL 1.84 22 iP 52 17.30 -1.3
 SPU 1.89 26 iP 52 17.62 -1.5
 BGL 1.89 20 eP 52 18.20 -1.0
 CGLM 2.01 25 eP 52 19.40 -1.3
 SLKM 2.04 59 eP 52 19.52 -1.5
 NCG 2.07 22 eP 52 20.37 -1.1
 SEW 2.25 72 eP 52 21.77 -2.0
 SUA 2.47 36 eP 52 25.04 -1.8
 PMS 2.71 48 eP 52 27.60 -2.4
 SKT 2.72 23 eP 52 28.01 -2.0
 PWA 2.88 40 eP 52 30.14 -2.0
 LTI 3.02 77 eP 52 31.24 -2.9
 KNIM 3.14 72 eP 52 32.05 -3.7
 KNK 3.24 51 eP 52 34.29 -2.9
 GHO 3.29 44 eP 52 34.53 -3.3
 GLI 3.59 64 eP 52 38.46 -3.5
 36 obs. associated

% DEC 05, 1990 12h 14m 38.27 ± 0.95s
 45.307 N ± 8.9km 25.017 E ± 8.1km
 DEPTH = 10.0km (geophysicist)

ROMANIA (358)
 CMP 0.04 159 iPc 14 41.00 0.6
 MTUR 0.09 158 iPc 14 40.00 -0.9
 TNR 0.63 304 ePc 14 51.00 0.1
 MLR 0.68 74 iPc 14 50.50 -1.3
 CVO 0.96 57 ePd 14 57.00 0.4
 ISR 1.09 98 eP 15 00.00 1.2
 DEV 1.59 292 ePc 15 12.00 5.5X
 BZS 2.41 279 ePc 15 23.00 4.6X
 S.D. = 1.2 on 6 of 8 obs.

DEC 05, 1990 12h 35m 18.05 ± 0.29s
 52.548 N ± 6.3km 167.904 W ± 4.1km
 DEPTH = 33.0km (normol)
 4.7mb (20 obs.)

FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK 5.44 266 eP 36 39.50 0.6
 PMR 13.60 41 eP 38 30.00 -0.7
 IMA 15.32 22 eP 38 56.00 2.7
 FBA 16.09 32 eP 39 02.00 -1.1
 INK 22.71 33 eP 40 15.50 -2.0
 0.6s 20.00nm 4.8mb
 YKA 29.45 49 eP 41 13.10 -7.3X
 0.6s 2.10nm 4.1mb
 MBC 30.05 21 ePd 41 25.10 -0.5
 0.5s 12.00nm 4.9mb
 NEW 32.10 77 eP 41 43.00 -1.0
 0.7s 8.00nm 4.7mb

EDM 32.26 67 iPd 41 45.40 0.1
 LBFM 32.81 91 eP 41 51.30 0.8
 WDC 32.87 93 eP 41 51.50 0.8
 MIN 33.58 93 eP 41 57.50 0.4
 ORV 34.12 94 eP 42 01.50 -0.1
 SES 34.70 70 eP 42 06.00 -0.6
 BRK 34.72 97 eP 42 06.90 0.2
 BKS 34.73 97 iPc 42 07.40 0.5
 PCC 34.88 97 eP 42 08.00 -0.1
 CMB 35.75 95 eP 42 16.30 0.7
 SAO 35.93 97 eP 42 17.10 0.0
 PRS 36.26 98 eP 42 20.10 0.2
 LLA 36.33 97 eP 42 21.50 1.0
 PRI 36.81 97 eP 42 25.70 1.1
 FRI 36.84 95 eP 42 25.20 0.6
 BONR 37.07 93 eP 42 27.50 0.5
 TNP 37.65 92 eP 42 32.20 0.4
 0.8s 5.15nm 4.4mb

FFC 37.86 60 iPc 42 33.10 0.1
 0.6s 8.00nm 4.8mb
 ISA 38.46 96 eP 42 38.00 -0.4
 CLC 38.89 95 eP 42 42.00 0.0
 BW06 39.48 80 eP 42 46.50 -0.6
 0.8s 14.88nm 4.8mb
 SBB 39.51 97 eP 42 47.00 -0.1
 MWC 39.68 97 eP 42 49.00 0.3
 GSC 39.71 95 eP 42 49.00 0.1
 DAU 39.85 84 eP 42 50.20 -0.1
 RVR 40.25 97 eP 42 53.00 -0.2
 MAT 40.60 269 (P) 42 57.00 1.0
 TPC 40.98 96 eP 42 59.00 -0.2
 PLM 41.00 97 eP 42 59.00 -0.6
 PV09 42.32 85 eP 43 10.00 -0.5
 GOL 43.85 81 eP 43 22.70 -0.2
 0.6s 5.66nm 4.5mb
 GLD 43.91 81 e(P) 43 23.00 -0.3
 0.6s 49.18nm 5.5mb
 ANMO 46.27 87 eP 43 41.50 -0.6
 ALO 46.27 87 eP 43 41.00 -1.2
 0.8s 2.43nm 4.2mb
 FRB 48.31 36 eP 43 58.00 0.5
 SSE 54.67 276 eP 44 41.60 -4.3X
 SCH 54.72 44 eP 44 45.00 -1.0
 KEV 57.52 354 eP 45 04.00 -1.9
 SOD 59.91 354 iP 45 21.80 -0.7
 LZH 61.35 293 eP 45 32.00 -0.9
 Z 24s 0.30um 4.4MsZx
 KAF 65.13 353 iP 45 56.20 -1.0
 0.6s 8.90nm 5.0mb
 NB2 66.76 0 P 46 06.70 -1.0
 0.7s 4.30nm 4.7mb
 NUR 66.85 353 eP 46 08.00 -0.2
 HFS 67.66 359 eP 46 11.70 -1.6
 0.4s 6.70nm 5.1mb
 EKA 71.75 9 P 46 40.00 1.7
 0.7s 4.10nm 4.6mb
 ETA 74.01 11 eP 46 53.00 1.4
 ECP 74.50 12 eP 46 54.00 -0.4
 CHG 77.17 284 eP 47 16.80 6.7X
 GUN 77.42 299 PKP 47 11.50 -0.3
 KKN 77.84 300 PKP 47 15.20 1.3
 PKI 77.94 300 PKP 47 15.20 0.5
 GKN 78.00 300 PKP 47 14.60 -0.2
 KHC 78.69 359 eP 47 22.50 4.5X
 ZST 79.54 357 eP 47 23.70 1.1
 e 12 10.80
 SSF 80.50 6 eP 47 29.10 1.3
 0.8s 5.35nm 4.6mb
 AVF 80.76 6 eP 47 31.20 2.1
 0.8s 4.05nm 4.5mb
 SMF 80.93 6 eP 47 30.80 0.7
 1.0s 6.00nm 4.5mb
 MAF 81.27 7 eP 47 33.00 1.1
 0.8s 5.35nm 4.6mb
 WB5 87.75 233 eP 48 03.50 -1.1
 WRA 87.82 233 P 48 03.00 -2.0
 0.8s 1.70nm 4.4mb
 ASPA 91.20 231 eP 48 20.20 -0.6
 0.8s 4.20nm 4.9mb
 SLR 150.57 329 iPKPc 55 07.00 4.8X
 Z 20s 2.84um 6.1MsZx
 S.D. = 1.0 on 65 of 70 obs.

DEC 05, 1990 13h 18m 06.90 ± 0.26s
 46.711 N ± 3.0km 112.791 W ± 2.2km
 DEPTH = 5.0km (geophysicist)
 3.0mb (1 obs.)
 MONTANA (456)
 ML 3.5 (NEIS). CL 3.6 (BUT)
 Felt (III) at Deer Lodge. Also
 felt at Elliston, Helena and
 Marysville. Small foreshock 2.5
 seconds earlier (BUT).

HRV 0.66 90 iPc 18 20.70 0.6
 BUT 0.72 167 iPc 18 21.20 0.0
 iS 18 29.70
 LRM 0.92 165 iPd 18 24.60 -0.5
 HBMT 0.93 172 iPc 18 25.10 -0.2
 SXM 1.23 117 iPc 18 30.30 -0.1
 BGMT 1.57 160 iPnc 18 35.90 0.2
 MEMT 1.68 131 ePn 18 37.10 -0.2
 MCMT 1.88 181 ePn 18 40.70 0.4
 NEW 3.32 299 eP 19 01.00 0.4

PTI 3.85 175 eP 19 07.00 -1.3
 DPW 3.86 289 P 19 08.68 0.4
 SES 3.87 17 eP 19 08.00 -0.3
 LNOR 3.90 260 P 19 10.22 1.4
 ET3 4.23 270 P 19 13.50 0.0
 S 20 02.62
 WRD 4.37 276 P 19 15.42 0.0
 OT2 4.43 272 P 19 17.02 0.7
 WIW 4.49 269 P 19 17.29 0.2
 MJ2 4.53 270 P 19 17.67 0.0
 CRF 4.53 274 P 19 17.86 0.1
 BW06 4.56 148 eP 19 18.70 0.4
 RC1 4.57 275 P 19 18.59 0.4
 LOCW 4.57 272 P 19 18.56 0.3
 GBL 4.59 271 P 19 18.76 0.2
 SAW 4.61 285 P 19 18.49 -0.4
 WAH2 4.66 273 P 19 19.74 0.2
 RSW 4.70 269 P 19 20.10 -0.1
 PRW 4.79 267 P 19 21.07 -0.4
 MDW 4.80 271 P 19 21.38 -0.2
 BVW 4.87 274 P 19 22.69 0.0
 PATW 4.90 263 P 19 24.71 1.7X
 DHW2 4.91 288 P 19 22.74 -0.5
 VTG 4.94 275 P 19 23.63 0.0
 BRVW 4.97 270 P 19 24.05 0.1
 WTV 4.98 284 P 19 23.65 -0.5
 CBSW 5.06 285 P 19 24.36 -0.9
 JBO 5.06 258 P 19 24.89 -0.3
 MXC 5.17 271 P 19 26.79 0.0
 ETW 5.22 283 P 19 26.82 -0.8
 PNT 5.27 302 eP 19 29.00 0.8
 NLW 5.30 288 P 19 28.04 -0.8
 EBG 5.34 275 P 19 29.45 0.1
 TBM 5.37 278 P 19 29.63 0.0
 NAC 5.53 273 P 19 32.95 1.1
 TWW 5.55 277 P 19 32.27 0.0
 GL2 5.61 265 P 19 32.76 -0.4
 VTHM 5.63 257 P 19 34.05 0.7
 VGB 5.68 261 eP 19 33.20 -0.8
 VIPM 5.92 251 P 19 38.42 1.0
 FMW 6.10 275 P 19 39.37 -0.7
 ASR 6.11 268 P 19 40.52 0.4
 LON 6.20 274 eP 19 41.00 -0.4
 VBEM 6.36 258 P 19 43.08 -0.6
 DAU 6.39 169 eP 19 45.00 0.6
 RSSD 6.68 110 eP 19 46.50 -1.9X
 GMW 6.87 281 e(P) 19 54.50 3.7X
 FFC 10.54 37 eP 20 36.00 -5.6X
 YKA 15.85 357 eP 21 49.60 -2.5X

0.4s 0.40nm 3.0mb
 S.D. = 0.5 on 52 of 57 obs.

? DEC 05, 1990 13h 18m 32.07±11.80s
 30.390 S ±86.7km 68.454 W ±43.0km
 DEPTH = 22.7 ± 9.7 km
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.94 181 iPd 18 49.00 -0.6
 ZON 1.17 189 iPd 18 52.10 -1.0
 eS 19 08.10
 CFA 1.23 171 iPd 18 53.90 0.0
 eS 19 09.00
 RTCV 1.47 183 ePd 18 58.00 0.6
 JACH 2.93 218 eP 19 19.50 1.2
 FCH 3.32 208 eP 19 25.00 0.9
 e 20 11.00
 iS 20 16.00
 PEL 3.34 214 eP 19 24.00 -0.1
 iS 20 15.00
 ROCH 3.37 220 eP 19 24.00 -0.8
 e 20 15.50
 PCH 3.67 208 eP 19 29.50 0.7
 TACH 3.88 212 eP 19 31.00 -0.7
 CHCH 3.99 207 eP 19 35.50 2.1
 LNV 4.35 214 iPc 19 36.00 -2.4
 i 20 41.00

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

* DEC 05, 1990 15h 02m 24.32±1.23s
 43.782 N ±14.3km 6.898 E ± 8.1km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)

STV 0.55 34 P 02 34.79 -0.9
 S 02 43.44
 ENR 0.58 40 P 02 35.47 -0.7
 S 02 44.19

IMI 0.73 80 P 02 37.25 -1.4
 PZZ 0.74 11 P 02 38.89 0.0
 S 02 51.51
 CDR 0.83 263 eP 02 40.30 0.0
 e 02 52.40
 ROB 0.87 54 P 02 42.79 1.7
 FIN 1.04 65 P 02 44.74 0.8
 PCP 1.41 57 P 02 50.48 0.4
 S.D. = 1.2 on 8 of 8 obs.

& DEC 05, 1990 15h 13m 50.47s
 61.198 N 151.435 W
 DEPTH = 66.7km
 SOUTHERN ALASKA (2)
 <AGS-P>.

CGLM 0.30 292 iP 14 01.22 -0.3
 eS 14 09.98
 SPU 0.30 267 iP 14 01.09 -0.4
 CRP 0.36 282 iP 14 01.74 -0.3
 NCG 0.40 301 iP 14 01.95 -0.5
 eS 14 11.49
 SUA 0.43 51 iP 14 02.35 -0.3
 eS 14 12.16
 CKL 0.44 270 iP 14 02.11 -0.6
 BGL 0.47 279 iP 14 02.32 -0.7
 NKA 0.47 168 eP 14 04.25 1.4
 RDT 0.79 218 iP 14 05.64 -0.8
 eS 14 18.00
 SKT 0.79 357 iP 14 05.41 -1.0
 eS 14 18.26
 PWA 0.88 58 iP 14 07.33 -0.1
 PMS 0.91 86 iP 14 07.57 -0.4
 SLKM 0.91 139 iP 14 07.16 -0.8
 REF 0.94 222 iP 14 07.82 -0.7
 RDN 0.95 224 iP 14 07.54 -1.0
 NCT 0.97 230 iP 14 07.95 -0.8
 eS 14 21.90
 RSO 0.98 222 iP 14 08.20 -0.8
 RS2 0.98 222 iP 14 08.28 -0.8
 RED 1.02 221 iP 14 08.59 -0.8
 NNL 1.16 177 eP 14 11.69 0.5
 PLRM 1.18 69 eP 14 10.24 -1.1
 eS 14 26.55
 CUT 1.33 24 eP 14 12.56 -0.9
 GHO 1.34 63 eP 14 12.57 -1.0
 INE 1.39 216 iP 14 13.14 -1.3
 KNK 1.45 80 eP 14 14.03 -1.1
 eS 14 32.80

SEW 1.47 137 eP 14 13.39 -1.9
 HOM 1.55 184 eP 14 16.05 -0.3
 CNPM 1.68 177 eP 14 17.11 -1.1
 OPT 1.79 211 eP 14 19.09 -0.6
 PDB 1.97 225 eP 14 20.35 -1.8
 HUR 1.98 25 eP 14 22.11 -0.2
 KNIM 2.01 114 eP 14 19.57 -3.1
 SVW 2.03 269 iP 14 21.20 -1.9
 SCM 2.07 70 eP 14 21.86 -1.8
 AUH 2.09 209 eP 14 23.54 -0.5
 LTI 2.11 122 eP 14 21.44 -2.8
 GLI 2.14 97 eP 14 21.38 -3.2
 TRF 2.32 13 eP 14 25.53 -1.8
 VZW 2.37 91 eP 14 25.29 -2.6
 VLZ 2.47 89 eP 14 26.62 -2.6
 RND 2.52 27 eP 14 28.37 -1.6
 CDD 2.53 207 eP 14 29.17 -0.9
 SYI 2.64 191 eP 14 30.24 -1.3
 TOA 2.67 68 eP 14 30.63 -1.4
 KLU 2.67 81 eP 14 29.04 -3.1
 MCK 2.80 23 eP 14 32.40 -1.4
 TZL 2.99 71 eP 14 34.91 -1.6
 SDG 3.09 62 eP 14 36.57 -1.4
 PAX 3.32 55 eP 14 39.89 -1.3
 GLB 3.68 83 eP 14 42.85 -3.4
 HDA 3.82 31 eP 14 46.42 -1.7
 CCB 3.84 24 eP 14 45.22 -3.1
 MDM 4.05 20 eP 14 48.00 -3.3
 FBA 4.07 22 eP 14 48.73 -2.9
 TGL 4.22 92 eP 14 52.26 -1.6
 GLM 4.22 24 eP 14 51.35 -2.5
 BALM 4.41 88 eP 14 52.85 -3.7
 DWY 6.23 57 P 15 20.00 -1.9

58 obs. associated

DEC 05, 1990 16h 08m 51.46±0.15s
 5.264 S ± 3.3km 131.370 E ± 4.1km
 DEPTH = 75.1km (geophysicist)

5.9mb (69 obs.)
 BANDA SEA (280)

Mo=2.0*10**18 Nm (PPT). Two
 events about 5.8 seconds apart.
 Depth from broadband
 displacement seismograms based
 on first event.

FAULT PLANE SOLUTION: P-Waves
 NP1: Strike=320 Dip=65 Slip=-180
 NP2: 50 90 -335

Principal Axes:
 T P1g=17 Azm=278
 P 17 182

Comment: The focal mechanism is
 moderately well controlled and
 corresponds to strike-slip
 faulting with a moderate
 normal component. The
 preferred fault plane is not
 determined.

RADIATED ENERGY
 No. of sta: 5 Focal mech. F
 Energy 4.3±1.9*10**13 Nm

MOMENT TENSOR SOLUTION
 Dep 54 No. of sta: 8
 Moment Tensor: Scale 10**18 Nm
 Mrr=-0.18 Mtt=-0.69
 Mff= 0.87 Mrt= 0.24
 Mrf=-0.08 Mtf= 0.83

Principal axes:
 T Vol= 1.23 P1g= 1 Azm=293
 N -0.11 75 28
 P -1.12 15 203

Best Double Couple: Mo=1.2*10**18
 NP1: Strike=339 Dip=79 Slip=-170
 NP2: 247 80 -12

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 30C

Centroid Location:
 Origin Time 16:08:53.7 0.3
 Lat 5.06S 0.03 Lon 131.37E 0.03
 Dep 46.6 2.1 Half-duration 2.5

Moment Tensor: Scale 10**18 Nm
 Mrr= 0.11 0.02 Mtt=-1.19 0.03
 Mff= 1.08 0.03 Mrt= 0.35 0.04
 Mrf=-0.08 0.03 Mtf= 0.81 0.02

Principal Axes:
 T Vol= 1.34 P1g= 1 Azm=288
 N 0.18 78 24
 P -1.53 12 198

Best Double Couple: Mo=1.4*10**18
 NP1: Strike=333 Dip=80 Slip=-172
 NP2: 242 82 -10

MNI 9.32 315 ePd 11 03.60 -1.8
 eS 12 45.00
 JAY 9.70 74 ePc 11 06.00 -4.6X
 e(S) 12 50.00
 DAV 13.56 335 ePd- 12 02.00 0.0
 1.7s 1846.15nm 6.3mb
 YYYY 14.56 95 eP 12 09.00 -6.1X
 WB5 14.82 169 iPd 12 10.40 -8.0X
 BKB2 14.98 285 iPd 12 24.00 3.5X
 0.8s 584.00nm 5.9mb
 PMG 16.18 106 eP 12 31.00 -4.7X
 QIS 17.18 153 iPd 12 41.80 -6.4X
 eS 15 30.00
 ASPA 18.46 173 iPd 12 58.20 -5.7X
 0.6s 3628.80nm 6.8mb
 eS 16 13.00
 TRT 18.77 262 ePc 13 06.50 -1.0
 0.8s 365.70nm 5.7mb
 eS 16 38.50
 KKM 18.84 306 ePc 13 08.50 0.0
 0.7s 776.40nm 6.0mb
 e 13 24.00
 RAB 20.76 88 iPc+ 13 26.50 -1.9
 0.6s 1786.67nm 6.6mb
 QCP 22.25 333 eP 13 48.00 4.7X
 GUA 23.02 36 eP 13 50.70 -0.1
 0.8s 925.37nm 6.3mb
 pP 14 11.00 93kmX
 eS 17 54.00
 PJG 23.03 35 eP 13 50.60 -0.3
 BAG 24.04 334 ePc+ 14 01.00 0.1
 1.0s 706.00nm 6.0mb

KKN	55.28	309	Pc	18	13.90	-0.3	SLR	0.8s	92.00nm	22	26.50	-1.3	BSF	116.62	322	ePKP	27	28.50	-0.3	
DMN	55.32	309	Pc	18	20.00	-0.3	MBC	99.44	243	iP	22	29.00	1.6	LPG	117.56	319	ePKP	27	30.70	-0.2
KOD	55.85	286	iPc	18	24.00	-0.3		0.8s	17.00nm		5.7mb			0.6s	4.95nm					
	1.2s	281.25nm			6.2mb		KEV	99.87	340	eP	22	29.00	0.4	LPL	117.57	319	ePKP	27	31.00	0.2
GKN	55.88	309	Pc	18	23.90	-0.2	BBTK	99.96	309	eP	22	32.00	2.2X		0.6s	5.40nm				
GBA	56.72	290	Pc	18	28.80	-1.3					22	44.00		BNI	117.78	319	PKP	27	32.00	0.9
	0.9s	107.80nm			6.0mb		BUL	100.10	249	Pdiff	22	30.10	-0.9	RSSD	118.06	42	PKP	27	30.00	-1.8
HYB	56.80	295	iPc	18	29.50	-1.3		0.9s	7.14nm		5.3mb		GOL	118.64	47	PKP	27	30.00	-3.1X	
	1.0s	320.00nm			6.4mb		SOD	100.49	338	iPdiff	22	29.90	-1.5	LOR	118.67	322	ePKP	27	33.10	0.5
		i	18	50.50							22	54.00			0.8s	4.05nm				
		iS	26	16.00			KSR	100.64	243	iPdiff	22	32.50	-0.8	Z	20s	0.93um		5.4msz		
		i	27	10.00			KAF	101.66	332	ePdiff	22	32.90	-3.8X	LBF	118.72	322	ePKP	27	32.80	0.1
POO	61.41	294	iPc	19	01.40	-1.2	SWZ	101.76	241	ePdiff	22	34.00	-4.2X		0.6s	4.95nm				
	1.0s	190.00nm			6.2mb		NUR	102.76	331	ePdiff	22	47.00	5.4X	SSF	118.97	322	ePKP	27	33.50	0.4
		iS	27	13.00			VR1	103.95	316	ePdiff	22	47.00	-0.3		0.6s	8.10nm				
NDI	62.04	306	iPc	19	05.50	-1.1	MLR	104.54	316	ePdiff	22	56.00	5.9X	ALO	119.18	53	ePKP	27	34.00	-0.2
	0.7s	106.16nm			6.1mb		YKA	105.60	26	ePdiff	22	54.70	0.5	Z	20s	1.37um		5.6msz		
		iS	27	21.00			YKA	1.0s	1.60nm		5.0mb		AVF	119.19	322	ePKP	27	33.40	-0.1	
WMO	62.71	326	iPc	19	11.51	0.6		105.60	26	ePKP	27	04.60	-2.6X		0.7s	3.30nm				
	2.0s	1700.00nm			6.8mb			0.8s	1.30nm				BGF	119.60	322	ePKP	27	34.60	0.2	
Z	24s	3.20um			5.4mszX		WDC	105.62	49	ePKP	27	18.70	10.7X		0.6s	10.35nm				
		ec	19	17.47			PRS	107.00	54	e(PKP)	27	28.70	18.0X	FRB	119.87	10	ePKP	27	34.00	-0.3
		epPc	19	30.22	71kmX		VAY	107.56	312	ePdiff	23	02.60	-0.9	TCF	120.12	322	ePKP	27	35.40	0.0
		PcP	19	47.00			CMB	107.58	52	e(Pdiff)	23	15.20	11.4X		0.6s	3.60nm				
		iS	27	36.09			KRA	107.71	321	ePdiff	23	23.20	19.3X	LSF	120.55	322	ePKP	27	36.10	-0.1
		iScS	28	50.25							23	33.90			0.6s	4.50nm				
KSH	67.65	316	P	19	45.00	2.1	SPC	107.71	320	ePdiff	23	11.30	7.1X	MFF	121.41	323	ePKP	27	37.80	0.0
		S	28	39.00							26	36.60			0.7s	17.65nm				
QUE	70.93	304	iPc	20	03.80	0.5					27	42.30		EPF	122.77	319	ePKP	27	41.10	0.5
		eS	29	13.05			HFS	108.08	332	ePdiff	23	05.20	-0.1		0.8s	6.70nm				
ADK	72.00	31	P	20	17.00	8.1X		0.4s	0.90nm		5.3mb		MEO	125.39	51	e(PKP)	27	47.50	1.6	
	0.8s	144.83nm			6.0mb		Z	19s	1.21um		5.5msz		IFR	130.81	311	iPKP	27	59.00	2.5X	
HON	74.03	66	P	20	29.00	7.7X			LR	07	20.00				i	31	16.00			
SBA	74.87	173	iPd	20	26.80	1.6	NB2	108.85	334	Pdiff	23	09.20	0.4	KUK	131.98	274	ePKP	28	03.00	4.0X
AFR	77.82	107	iP	20	44.30	1.5		0.9s	9.50nm		6.0mb				e	31	21.50			
	0.8s	90.00nm			5.8mb		BUD	108.89	318	e(PKP)	27	06.00	-7.9X	AVE	132.62	311	ePKP	28	08.00	8.3X
TBI	78.00	113	iP	20	45.40	1.7	KSP	109.76	322	ePdiff	23	15.00	2.0			i	31	20.50		
	0.9s	120.00nm			5.8mb						26	53.00		TIO	133.54	308	iPKP	28	10.50	8.8X
PAE	78.00	107	iP	20	45.60	1.8					28	01.00				i	30	34.00		
	0.8s	65.00nm			5.6mb		MWC	109.94	56	ePKP	27	26.00	9.4X	LNV	135.44	153	ePKP	27	55.00	-10.0X
PPT	78.01	107	iP	20	45.60	1.7	SBB	110.07	55	ePKP	27	23.00	6.4X	HBVT	135.55	25	PKP	28	06.00	1.1
	0.8s	65.00nm			5.6mb		VKA	110.46	320	e(PKP)	27	20.00	3.1X	TKL	135.73	42	PKP	28	06.00	0.4
PPN	78.15	107	iP	20	46.40	1.8		3.0s	448.00nm				KIC	136.33	274	PKP	27	59.20	-8.1X	
	0.8s	70.00nm			5.6mb						28	04.70		PEL	136.45	153	ePKP	27	57.00	-10.1X
TVO	78.31	107	iP	20	47.50	1.9	PRU	111.08	322	ePKP	27	04.50	-13.5X	TIC	136.61	274	PKP	27	59.80	-8.0X
	0.8s	60.00nm			5.6mb		Z	20s	1.10um		5.4msz		LIC	136.61	273	PKP	28	00.10	-7.7X	
MAIO	78.67	308	iPc	20	48.50	1.2		N	20s	0.60um				Z	20s	0.65um		5.4msz		
	1.2s	76.39nm			5.5mb		E	20s	0.90um				MDZ	137.48	155	e(PKP)	28	06.20	-2.9X	
		eSn	30	45.00							27	28.00		LHS	138.39	41	PKP	28	06.00	-4.6X
CRZF	78.97	224	eP	20	54.00	5.4X	PTJ	111.32	317	ePKP	27	33.90	15.2X	ANT	144.21	144	ePKP	28	20.50	-0.6
		eS	30	45.00			CLL	111.59	324	ePKP	27	23.00	4.2X	NNA	147.12	122	iPKP	28	27.50	1.2
								2.0s	37.00nm						0.7s	85.62nm				
PMO	79.72	104	iP	20	55.00	1.8			eSKS	34	06.00		MBO	147.54	289	ePKP	28	33.20	6.4X	
	0.8s	55.00nm			5.5mb				PKKP	38	24.00		UPA	149.12	81	iPKPd	28	34.10	4.7X	
VAH	79.97	104	iP	20	56.10	1.6	TPC	111.60	55	ePKP	27	37.00	17.5X		1.1s	22.78nm				
	0.8s	35.00nm			5.3mb		LRM	111.86	43	ePKP	27	31.60	11.7X	Z	22s	0.93um		5.5msz		
TPT	79.99	104	iP	20	56.40	1.8	VBY	111.90	317	ePKP	27	20.70	1.1	ITB7	149.32	170	PKPc	28	35.00	5.6X
	0.8s	30.00nm			5.3mb						27	43.60		ITB	149.64	170	PKPc	28	33.50	3.6X
RUV	80.21	104	iP	20	57.50	1.7			e(Sn)	27	43.60		OUR	149.66	99	ePKP	28	34.10	3.3X	
	0.8s	40.00nm			5.4mb		KHC	111.94	321	ePKP	27	33.50	13.8X	ITB1	149.75	170	e(PKP)	28	32.00	2.0
SHI	82.94	301	iPc	21	10.00	-0.1		Z	19s	0.90um		5.4msz	ZOBO	151.19	138	iPKPd	28	35.00	1.8	
DHR	84.48	297	iPc	21	19.00	1.3		N	18s	0.50um				Z	24s	0.58um		5.3mszX		
SPA	84.77	180	iPd	21	19.20	0.6		E	18s	0.90um						LR	20	32.00		
	1.0s	160.00nm			6.0mb		MOX	112.64	323	ePKP	27	38.00	17.1X	ZOBO	151.19	138	ePKPd	28	39.59	6.4X
Z	20s	3.38um			5.7msz			Z	32s	1.80um		5.5mszX		Z	24s	0.58um		5.3mszX		
TTA	86.84	26	P	21	39.20		BCAO	113.10	273	iPdiff	23	14.00	-14.8X			epPKPc	28	56.48		
	0.8s	77.59nm			5.9mb			1.0s	5.00nm							esPKPd	29	03.60		

S.D. = 1.1 on 171 of 233 obs.

? DEC 05, 1990 16h 50m 20.97±2.63s
 1.877 S ±26.5km 79.468 W ±14.7km
 DEPTH = 10.0km (geophysicist)
 3.6mb (1 obs.)
 ECUADOR (107)

05d 16h

TUNG 1.12 66 eP 50 42.00 -0.2
VC1 1.63 41 P 50 50.70 0.4
GGP 1.90 27 Pd 50 54.80 0.5
QUR 1.94 29 eP 50 53.40 -1.3
ANGL 2.42 53 eP 51 09.50 7.8X
CAYA 2.45 37 eP 51 02.50 0.4
COTA 2.47 27 eP 51 02.50 0.1
YKA 69.47 343 eP 01 31.30 0.0
0.8s 0.40nm 3.6mb
S.D. = 0.7 on 7 of 8 obs.

* DEC 05, 1990 17h 46m 49.01 ± 1.59s
37.477 N ± 14.9km 28.049 E ± 13.1km
DEPTH = 33.0km (normal)

TURKEY (366)
MD 3.2 (ISK).

CIN 0.13 14 iPd 46 54.00 -1.0
iSg 47 04.00
IZM 1.11 326 iPn 47 09.20 0.9
ARG 1.26 177 ePb 46 58.40 -12.0X
eSb 47 13.20
KHL 1.44 54 iPn 47 14.40 1.3
ELL 1.65 116 ePn 47 16.00 -0.3
KSL 1.83 137 ePn 47 12.50 -6.2X
BCK 2.02 90 ePn 47 22.00 0.5
DST 2.17 12 ePn 47 23.00 -0.6
ALT 2.26 45 ePn 47 24.00 -0.9
S.D. = 1.1 on 7 of 9 obs.

* DEC 05, 1990 18h 23m 20.71 ± 1.75s
22.866 S ± 17.1km 67.936 W ± 19.8km
DEPTH = 100.0 ± 16.2 km
3.8mb (1 obs.)

CHILE-BOLIVIA BORDER REGION (124)

ANT 2.43 249 iPc 23 59.50 0.0
iS 24 25.00
CCH 5.71 17 P 24 46.50 1.6
CNCB 6.03 360 Pc 24 50.00 0.5
LPB 6.30 359 eP 24 53.00 -0.1
ZOBO 6.56 358 P 24 56.00 -0.9
SIV 9.42 45 P 25 34.50 -0.8
YKA 92.77 340 eP 36 21.20 -1.2
0.8s 0.40nm 3.8mb
WRA 132.22 209 PKP 42 26.00 0.8
0.8s 1.10nm
S.D. = 1.3 on 8 of 8 obs.

DEC 05, 1990 18h 25m 27.96 ± 0.69s
37.850 N ± 6.0km 20.999 E ± 6.3km
DEPTH = 10.0km (geophysicist)
4.0mb (3 obs.)

IONIAN SEA (399)
ML 3.8 (ATH). MD 3.8 (THE).

VLS 0.46 315 ePg 25 37.00 -0.3
ITM 1.00 132 ePg 25 45.00 -1.9
EVR 1.24 31 ePb 25 52.00 0.9
AGG 1.57 41 eP 25 56.64 0.7
iS 26 20.61
IGT 1.76 343 eP 25 58.82 0.2
eS 26 28.42
VLI 1.91 126 ePg 26 03.50 2.6X
KEK 2.08 334 ePb 26 07.00 3.6X
ATH 2.15 86 ePn 26 05.90 1.5
SRN 2.17 339 ePn 26 04.80 0.2
LSK 2.32 352 iPnd 26 07.10 0.3
KZN 2.53 14 ePn 26 11.00 1.3
LIT 2.53 27 eP 26 09.20 -0.6
eS 26 43.61
KBN 2.77 357 ePn 26 15.00 1.8
FNA 2.94 6 eP 26 15.28 -0.4
BERA 2.96 344 ePn 26 15.40 -0.4
PLG 3.16 36 ePb 26 23.50 4.8X
OHR 3.26 357 iPn 26 21.10 0.9
LCI 3.43 317 P 26 22.20 -0.3
eSn 27 00.00

SOH 3.48 31 eP 26 23.24 -0.1
VAM 3.55 132 ePn 26 23.50 -0.7
TIR 3.60 346 ePn 26 24.50 -0.4
KNT 3.62 23 eP 26 25.28 0.1
VAY 3.67 19 ePn 26 25.40 -0.6
SRS 3.83 31 eP 26 27.72 -0.5
PHP 3.86 354 ePn 26 29.80 1.2
SKO 4.13 5 ePn 26 29.50 -2.9
iSn 27 20.00

BRT 4.22 317 LR 28 18.50
P 26 33.20 -0.5
eSn 27 24.70
NPS 4.52 123 ePg 26 51.40 13.3X
BCI 4.57 351 ePn 26 37.30 -1.3
EZN 4.60 63 ePn 26 42.00 2.8X
IZM 4.97 82 ePn 26 44.00 -0.4
HFS 22.78 351 eP 30 28.50 -3.0X
0.4s 1.40nm 3.8mb
NB2 24.01 348 P 30 39.70 -3.8X
0.7s 2.10nm 3.8mb
BCAO 33.34 184 ePd 32 10.50 2.2
0.4s 3.00nm 4.6mb
S.D. = 1.2 on 27 of 34 obs.

* DEC 05, 1990 18h 36m 26.91 ± 1.15s
27.556 N ± 13.0km 56.591 E ± 6.8km
DEPTH = 58.9 ± 14.3 km
4.4mb (12 obs.)

SOUTHERN IRAN (353)

SHI 4.14 301 iPd 37 28.50 -0.7
BEE 5.64 256 iPn 37 51.10 1.0
(Sn) 39 05.30
BBU 5.64 258 iPn 37 51.90 1.8
eSn 39 06.30
MAIO 9.06 15 eP 38 39.00 1.3
eS 40 23.00
RYD 9.40 255 eP 38 39.50 -2.8
QUE 9.45 71 iPd 38 41.50 -1.7
AFIF 12.56 257 ePd 39 25.70 0.7
UOSK 12.85 265 ePd 39 26.00 -2.8X
GKN 24.80 82 P 41 46.30 1.3
0.7s 11.00nm 4.5mb
KKN 25.39 83 P 41 50.70 0.1
0.8s 15.00nm 4.6mb
PKI 25.53 83 P 41 52.00 0.0
0.7s 11.00nm 4.5mb
GUN 25.90 82 P 41 55.80 0.2
0.8s 32.00nm 4.9mb
KHC 39.34 315 eP 43 52.60 0.6
SOTA 40.38 312 iPc 44 00.70 0.0
0.5s 9.50nm 4.9mb
i 44 01.80
i 44 07.80
LPG 43.13 308 eP 44 28.30 4.9X
0.8s 5.35nm 4.4mb
LPL 43.14 308 eP 44 27.50 4.0X
0.8s 4.05nm 4.2mb
HFS 43.62 330 eP 44 26.70 -0.1
0.5s 3.00nm 4.3mb
NB2 45.13 331 P 44 38.10 -0.9
0.6s 3.20nm 4.3mb
SSF 45.54 310 eP 44 42.00 -0.4
1.0s 10.00nm 4.7mb
WRA 88.79 113 P 49 23.00 7.1X
2.0s 1.90nm 4.0mb
YKA 89.99 356 eP 49 27.00 6.1X
0.7s 0.90nm 4.2mb
S.D. = 1.3 on 16 of 21 obs.

DEC 05, 1990 18h 38m 33.47 ± 0.80s
14.229 S ± 6.4km 73.640 W ± 7.4km
DEPTH = 91.8 ± 8.6 km
4.6mb (5 obs.)

PERU (116)

NNA 3.83 305 iPc 39 31.20 -0.2
0.6s 293.33nm
eS 40 01.00
ZOBO 5.70 112 iPc 39 58.20 0.4
LPB 5.82 114 P 40 00.00 0.7
CNCB 6.03 116 iPc 40 03.50 1.1
CCH 7.87 114 Pc 40 25.70 -1.7
SIV 12.26 100 P 41 21.70 -4.6X
ROCH 18.81 173 eP 42 48.60 -0.3
PEL 19.02 172 iPc 42 51.00 0.0
FCH 19.26 171 ePc 42 54.20 0.4
TACH 19.49 173 eP 42 56.00 0.1
LNV 19.74 175 eP 42 58.00 -0.5
ITB1 20.88 123 Pd 43 09.00 -0.3
ITB7 21.26 124 e(P) 43 13.50 -0.6
ANMO 57.98 328 eP 48 19.60 0.6
0.6s 3.17nm 4.6mb
GOL 61.25 332 eP 48 41.00 -0.6
0.9s 7.58nm 4.8mb
BW06 65.61 332 iP 49 10.00 0.0

1.0s 2.50nm 4.1mb
SES 72.22 336 ePd 49 50.70 0.3
FFC 72.77 343 iPc 49 53.50 0.0
0.5s 8.00nm 4.8mb
FRB 77.83 2 eP 50 22.00 0.1
YKA 82.90 342 eP 50 48.10 -0.8
0.8s 4.40nm 4.4mb
WRA 136.29 220 PKP 57 48.00 1.1
0.8s 1.40nm
GBA 151.93 88 PKPd 58 20.60 7.3X
0.7s 15.20nm
GKN 155.59 52 PKP 58 34.70 16.4X
KKN 156.19 52 PKP 58 37.60 18.4X
S.D. = 0.7 on 20 of 24 obs.

* DEC 05, 1990 21h 38m 40.53 ± 0.91s
31.493 S ± 9.5km 68.536 W ± 14.3km
DEPTH = 33.0km (normal)

SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.13 246 iPd 38 46.50 -0.1
eS 38 56.50
RTLL 0.17 19 iPc 38 47.00 0.0
CFA 0.28 114 iPd 38 48.10 0.0
eS 38 59.00
RTCV 0.37 180 iPd 38 48.90 -0.3
MDZ 1.41 191 e(P) 39 04.60 0.4
S.D. = 0.4 on 5 of 5 obs.

& DEC 05, 1990 21h 45m 43.50s
33.183 N 115.633 W
DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43)

<PAS> ML 2.6 (PAS).

GLA 0.69 101 eP 45 56.50 -0.8
PLM 1.04 280 eP 46 02.20 -1.5
PEC 1.46 299 eP 46 10.50 0.1
3 obs. associated

% DEC 05, 1990 22h 41m 47.02 ± 1.02s
44.469 N ± 9.9km 7.311 E ± 6.6km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.0 (ATH).

PZZ 0.15 284 P 41 50.71 0.0
S 41 53.07
STV 0.22 177 P 41 51.94 0.0
S 41 54.81
ENR 0.25 162 P 41 52.35 -0.1
S 41 55.84
ROB 0.44 113 P 41 56.14 0.2
S 42 02.40
FIN 0.69 112 P 42 00.55 -0.2
IMI 0.70 143 P 42 00.96 0.1
S.D. = 0.2 on 6 of 6 obs.

DEC 05, 1990 22h 52m 47.28 ± 0.84s
44.672 N ± 7.0km 146.843 E ± 3.7km
DEPTH = 27.2 ± 6.3 km
5.2mb (56 obs.) 4.2msz (4 obs.)

KURIL ISLANDS (221)

Felt (III) at Kurilsk.

KUSJ 2.20 225 eP 53 21.10 -1.6
eS 53 50.80
ASAJ 3.06 261 eP 53 36.20 1.2
HOOJ 3.45 230 P 53 41.00 0.5
S 54 25.20
MAT 10.44 222 iPd 55 15.10 -3.1X
1.0s 85.00nm 6.0mb
MDJ 12.29 276 Pc 55 46.00 2.7
1.7s 200.00nm 6.0mb
Z 15s 3.60um
N 13s 2.40um
E 13s 3.00um
CN2 15.36 274 Pc 56 23.50 -0.2
Z 15s 8.60um
N 12s 1.60um
E 12s 2.60um
SP 56 35.50
S 59 58.00
SNY 17.17 269 Pc 56 47.00 0.3
Z 14s 2.10um
N 12s 1.10um

E	13s	1.60um				BSI	59.45	245	ePc	02	48.80	-1.3	HRI	80.37	308	eP	04	58.00	0.3	
		SP	56	59.00		SOD	59.53	337	eP	02	51.00	1.0	CDF	80.76	334	eP	04	59.30	-0.2	
		S	59	58.00		PNT	59.94	49	eP	02	52.00	-1.1		1.0s	12.00nm			4.9mb		
DL2	19.63	262	P	57	16.00	-0.5							VAY	80.90	321	eP	05	00.50	0.3	
							EDM	60.87	43	eP	02	58.50	-1.0	DSI	81.83	307	eP	05	06.00	0.8
							NEW	61.89	49	P	03	05.00	-1.5	LDF	82.71	339	eP	05	09.40	-0.1
								0.9s	24.67nm			5.3mb		0.8s	13.45nm			5.1mb		
BJI	23.06	269	eP	57	51.00	-0.3	HYB	62.59	268	eP	03	10.00	-1.4	LOR	82.82	336	eP	05	10.90	0.8
							QUE	62.68	286	eP	03	11.10	-1.0		1.0s	14.00nm			5.0mb	
							LBFM	63.31	57	P	03	15.20	-0.9	Z	20s	0.10um			4.2Msz	
							WDC	63.38	58	eP	03	16.10	-0.2	LBF	83.04	335	eP	05	11.90	0.6
							KAF	63.39	333	ePc	03	06.40	-9.7X		1.0s	14.00nm			5.0mb	
TIA	24.04	260	eP	58	00.00	-0.9		0.4s	2.60nm			4.7mb	GRR	83.09	339	eP	05	11.80	0.3	
														0.9s	31.10nm			5.4mb		
							SES	63.74	44	eP	03	18.00	-0.6	SSF	83.11	336	eP	05	12.60	1.0
SSE	24.24	245	Pc	58	04.50	1.7	MAIO	63.92	296	eP	03	20.00	-0.1		0.8s	8.05nm			4.9mb	
							ORV	64.63	59	ePc	03	25.10	0.6	SMF	83.38	335	eP	05	13.30	0.3
							FFC	65.09	37	eP	03	26.50	-0.8		1.0s	20.00nm			5.2mb	
								0.7s	31.00nm			5.5mb	AVF	83.40	336	eP	05	12.80	-0.3	
NJ2	25.17	250	Pc	58	12.00	0.3	NUR	65.12	333	ePc	03	24.60	-2.7		0.8s	13.45nm			5.2mb	
								0.4s	4.60nm			5.0mb	MBH	83.45	306	eP	05	14.50	0.8	
													LPF	83.47	339	eP	05	13.30	-0.1	
							WB5	65.24	193	eP	03	26.80	-1.7		0.8s	18.80nm			5.3mb	
													LPL	83.49	333	eP	05	13.90	0.0	
							WRA	65.31	193	P	03	27.00	-1.9		0.8s	6.70nm			4.9mb	
								0.8s	26.30nm			5.4mb	LPG	83.51	333	eP	05	13.90	-0.2	
							GCC	65.88	61	eP	03	33.50	0.9		0.8s	8.05nm			4.9mb	
							LRM	65.91	49	eP	03	32.60	-0.4	CLE	83.90	34	iP	05	18.10	2.4
							MHC	65.91	61	e(P)	03	35.80	2.8	MAF	84.14	336	eP	05	17.80	0.9
							GBA	65.94	265	Pd	03	32.10	-1.0		0.9s	27.85nm			5.5mb	
								0.9s	19.80nm			5.2mb	TCF	84.18	336	eP	05	17.80	0.7	
							CMB	66.26	60	ePc	03	34.50	-0.6		0.8s	8.05nm			5.0mb	
							PRS	66.71	61	e(P)	03	37.30	-0.6	LSF	84.41	337	eP	05	18.70	0.4
							LLA	66.80	61	eP	03	37.90	-0.6		1.0s	19.00nm			5.3mb	
							KVN	67.01	57	P	03	40.00	0.0	HBVT	84.51	28	P	05	18.80	0.0
							FRI	67.33	60	eP	03	42.10	0.3	MFF	84.55	338	eP	05	19.10	0.2
							BONR	67.58	58	P	03	43.80	0.0		1.0s	20.00nm			5.3mb	
							TNP	68.16	58	P	03	46.20	-1.1	BNH	84.89	26	P	05	21.50	0.8
								0.9s	31.90nm			5.4mb	CAF	85.47	336	eP	05	24.10	0.5	
							FRB	68.36	16	eP	03	48.00	0.2		1.0s	20.00nm			5.3mb	
							NB2	68.66	339	P	03	47.40	-2.4	LFF	85.84	337	eP	05	25.90	0.5
								0.8s	11.30nm			5.0mb		1.0s	20.00nm			5.3mb		
							HFS	68.76	337	eP	03	47.70	-2.6	LPO	85.94	336	eP	05	26.50	0.6
								0.5s	4.70nm			4.9mb		0.8s	10.75nm			5.1mb		
							Z	16s	0.11um			4.2MszX	TBR	86.97	30	P	05	31.40	0.4	
													BUL	123.85	275	iPKPd	11	43.10	-1.5	
							DZM	68.79	161	iPd	03	52.30	1.3		1.0s	10.00nm				
							ABL	69.01	62	P	03	52.90	0.3	ZOBO	139.17	57	PKP	12	09.00	-5.3X
							ASPA	69.03	193	iPd	03	54.10	1.7		1.2s	9.46nm				
								0.9s	9.40nm			4.9mb	LPB	139.39	58	PKP	12	11.00	-3.5X	
							DUG	69.37	54	P	03	54.20	-0.5	CNCB	139.68	58	PKP	12	09.00	-6.2X
							CLC	69.39	60	eP	03	54.00	-0.7	SIV	142.96	48	PKP	12	15.80	-4.6X
							SBB	69.98	61	eP	03	58.00	-0.3	SOB1	144.04	13	ePKP	12	20.00	-2.3X
							DAU	70.12	53	P	03	58.90	-0.5	PDCR	147.57	11	ePKP	12	28.30	0.3
							MWC	70.14	61	eP	04	02.00	2.5							
							GSC	70.21	60	eP	04	01.00	1.2							
							RVR	70.72	61	eP	04	05.00	2.2	LCCH	148.42	83	ePKP	12	35.70	6.8X
							MSU	70.86	55	P	04	03.60	-0.3	BAO	148.45	28	ePKPc	12	30.50	0.9
							PEC	70.92	61	P	04	04.00	0.0	ROCH	148.55	81	ePKP	12	32.50	3.0X
							PLM	71.46	61	eP	04	10.00	2.5	JACH	148.68	81	ePKP	12	35.50	6.0X
							TPC	71.47	60	eP	04	07.00	-0.4	LNV	148.79	83	ePKP	12	32.50	3.0X
							BAR	72.03	62	eP	04	10.00	-0.7							
							SHI	72.66	295	eP	04	14.00	-0.6	PEL	148.87	81	iPKPd	12	35.50	5.8X
							GLD	73.93	50	P	04	24.20	2.3	TACH	148.96	82	ePKP	12	34.00	4.2X
								1.0s	37.50nm			5.4mb	SAN	149.05	82	ePKP	12	33.50	3.5X	
							KRA	74.96	328	eP	04	26.60	-0.8	PCH	149.25	82	ePKP	12	37.00	6.6X
												0.4	FCH	149.25	81	ePKP	12	35.70	5.0X	
							SPC	75.54	327	e(P)	04	32.20	1.2	CHCH	149.31	83	ePKP	12	36.00	5.6X
							KSP	75.66	330	eP	04	31.00	-0.4							
							MLR	76.10	322	eP	04	30.00	-4.1X							
							CLL	76.39	332	eP	04	35.00	-0.5							
								1.3s	26.00nm			5.1mb								
							BRG	76.45	331	eP	04	36.50	0.7							
							ALO	76.64	54	eP	04	37.20	-0.3							
								0.9s	13.87nm			5.0mb								
							PRU	76.99	331	eP	04	38.00	-0.8							
							EKA	77.18	3											

S.D. = 1.1 on 128 of 147 obs.

* DEC 05, 1990 23h 36m 15.66±0.52s
 14.153 N ±10.3km 91.851 W ±11.8km
 DEPTH = 33.0km (normol)
 4.8mb (17 obs.) 4.1Msz (4 obs.)
 GUATEMALA (70)

UYO 20.07 354 iPc 40 48.60 -0.5
 MEQ 21.42 345 iPd 41 03.00 0.0
 ALO 24.54 330 ePc 41 35.00 1.2
 0.7s 5.99nm 4.3mb
 GOL 28.09 337 eP 42 07.20 0.5
 1.0s 8.00nm 4.4mb
 PLM 29.69 314 eP 42 20.20 -0.9
 BW06 32.35 335 eP 42 44.20 -0.2
 1.1s 7.44nm 4.5mb
 LRM 36.04 335 eP 43 17.00 0.9
 ZOBO 38.25 141 P 43 35.00 -0.4

05d 23h

Z 20s 0.14um 3.8msz				CUT 0.70 238 eS 33 23.37				1.1s 13.70nm 5.1mb			
PNT	41.80	333 eP	55 24.00 1.2	TRF	0.89	319 iP	33 25.80	WB5	63.89	104 eP	27 32.00 1.2
SIV	42.69	133 P	44 10.80 -0.6	MCK	0.95	2 eP	33 16.92 -0.2	VRI	72.03	332 eP	28 29.00 7.8X
YKA	50.91	347 eP	45 15.10 -0.4	GHO	1.02	178 eP	33 29.77 -0.1	RSSD	151.57	346 ePKP	36 56.30 11.2X
FRB	52.13	13 eP	45 24.00 -0.7	PLRM	1.20	183 eP	33 30.90 -0.4	S.D. = 0.9 on 9 of 13 obs.			
SOB1	55.62	112 eP	45 51.10 0.0	PMR	1.20	183 iPd	33 33.31 -0.1	& DEC 06, 1990 02h 44m 24.81s			
PDCR	58.58	114 eP	46 12.60 0.6	PWA	1.21	200 iPd	33 20.87 -0.1	60.098 N 153.625 W			
INK	60.33	343 ePc	46 23.20 -0.1	SCM	1.23	140 eP	33 36.62 0.1	DEPTH = 156.5km			
MBC	63.78	353 eP	46 46.00 -0.3	KNK	1.40	169 eP	33 21.00 0.0	SOUTHERN-ALASKA (2)			
EKA	77.76	36 Pd	48 11.60 0.7	BWN	1.41	352 eP	33 21.10 0.0	INE	0.28	97 eP	44 45.52 0.6
LPF	80.16	43 eP	48 23.10 -1.0	SKT	1.43	237 eP	33 21.16 -0.4	PDB	0.42	223 iP	44 45.83 0.6
FLN	80.40	42 eP	48 24.90 -0.5	TOA	1.48	116 iPc	33 23.91 0.2	OPT	0.49	156 eP	44 46.46 -0.7
LDF	80.66	42 eP	48 26.20 -0.6	SUA	1.56	213 eP	33 42.30 0.3	RED	0.53	53 eP	44 46.50 -0.9
AVF	83.33	44 eP	48 39.90 -0.8	PMS	1.57	190 ePd	33 41.91 -0.2	RS2	0.57	49 eP	44 46.85 -0.9
SSF	83.37	43 eP	48 40.10 -0.8	SDG	1.62	98 iP	33 26.49 0.5	RSO	0.57	50 eP	44 46.82 -0.9
LOR	83.56	43 eP	48 41.20 -0.7	PAX	1.63	82 eP	33 26.70 0.6	NCT	0.58	36 eP	44 46.86 -0.8
NB2	83.94	28 P	48 44.40 0.8	WRH	1.74	13 eP	33 47.77 0.0	RDN	0.60	45 iP	44 47.02 -0.8
HAU	85.00	42 eP	48 49.00 -0.1	NEA	1.80	359 eP	33 46.97 -1.0	REF	0.60	49 iP	44 47.09 -0.8
BSF	85.34	42 eP	48 50.50 -0.4	TZL	1.82	112 eP	33 48.82 -0.9	AUH	0.74	173 eP	44 47.45 -1.2
TIC	85.34	84 P	48 53.00 1.5	HDA	1.87	28 eP	33 49.64 0.8	AGU	0.75	172 eP	44 48.29 -0.4
HFS	85.40	29 eP	48 50.50 -0.3	KLU	1.94	131 eP	33 30.30 0.8	AUI	0.77	172 eP	44 47.98 -0.7
LIC	85.43	85 P	48 53.50 1.6	CCB	1.94	15 iP	33 53.89 -0.9	RDT	0.77	51 eP	44 47.75 -1.1
KIC	85.68	85 P	48 54.40 1.3	NCG	2.03	228 eP	33 29.23 -0.9	MCNL	0.98	202 eP	44 46.73 0.6
WRA	135.57	256 PKP	55 34.00 -1.1	CGLM	2.05	225 eP	33 55.01 -0.8	HOM	1.09	113 eP	44 49.35 -1.0
CHG	145.56	342 ePKP	55 52.30 -0.7	VLZ	2.08	145 eP	33 30.06 -1.1	NNL	1.17	92 eP	44 50.27 -1.0
HYB	147.23	17 ePKP	55 57.00 1.2	VZW	2.08	145 eP	33 32.65 0.1	CDD	1.17	180 iP	44 51.88 -0.1
GBA	150.45	21 PKPd	56 06.60 5.8X	GLI	2.11	154 eP	33 33.66 0.9	CKL	1.27	29 iP	44 50.89 -1.1
S.D. = 0.8 on 33 of 34 obs.				SPU	2.16	223 eP	33 31.88 -1.2	BGL	1.32	27 iP	44 52.35 -0.7
DEC 05, 1990 23h 42m 36.44 ± 0.78s				FBA	2.19	14 iPd	33 32.25 -0.9	SPU	1.33	35 iP	44 53.54 -0.5
38.873 N ± 7.0km 22.204 E ± 6.0km				MDM	2.21	9 eP	33 32.72 -0.9	CNPM	1.34	114 iP	44 52.50 -1.1
DEPTH = 10.0km (geophysicist)				BGL	2.21	228 eP	33 33.70 -1.0	NKA	1.35	60 iP	44 54.19 -1.3
GREECE (364)				CKL	2.24	226 eP	33 33.96 -1.0	CRP	1.38	31 eP	44 52.30 -1.3
MD 3.2 (ATH), 3.1 (THE).				NKA	2.31	208 eP	33 58.30 -1.2	BRLK	1.42	102 iP	44 53.86 0.2
AGG	0.18	33 iP	42 40.50 0.0	GLM	2.32	17 eP	33 35.45 0.0	SEW	2.09	88 eP	44 52.62 -1.5
EVR	0.31	278 ePg	42 41.60 -1.4	SLKM	2.36	195 eP	33 39.51 3.2	SKT	2.15	27 eP	44 53.26 -1.1
NEO	0.90	61 ePg	42 54.50 0.7	DOT	2.40	67 eP	33 35.36 -1.2	PMS	2.31	58 eP	44 54.39 -
LIT	1.25	10 eP	43 00.12 0.5	KNIM	2.52	166 eP	33 38.30 1.3	CUT	2.83	34 eP	44 53.72 -1.1
KZN	1.47	347 ePg	43 04.00 1.0	RDT	2.75	218 eP	33 37.92 0.3	GHO	2.84	52 eP	44 54.57 -0.7
ATH	1.49	127 ePn	43 06.30 3.1X	GLB	2.78	117 eP	33 38.82 -0.4	KNK	2.86	60 eP	44 54.76 -1.7
IGT	1.60	295 eP	43 06.25 1.5	LTl	2.81	168 eP	33 42.16 -0.4	LTl	2.89	89 eP	44 55.05 -1.8
ITM	1.70	187 ePn	43 09.00 2.6X	RDN	2.90	220 eP	33 42.60 -0.5	SUA	1.97	45 eP	44 56.05 -1.8
PLG	1.78	32 ePb	43 07.50 0.0	REF	2.90	219 eP	33 42.99 -0.3	SEW	2.09	88 eP	44 58.89 -1.6
THE	1.85	18 eP	43 06.28 -2.2	INE	3.36	217 eP	33 46.05 1.2	SKT	2.15	27 eP	44 55.54 -1.3
FNA	2.01	342 eP	43 32.38 0.0	SVW	3.55	245 eP	33 47.70 -1.5	PDB	0.42	223 iP	44 56.43 -
KEK	2.05	295 ePg	43 10.89 0.0	TGL	3.57	122 eP	33 50.99 -0.2	INE	3.36	217 eP	44 58.89 -1.6
SDH	2.14	24 eP	43 12.68 0.0	BALM	3.60	116 eP	33 53.10 -0.7	SEW	2.09	88 eP	44 58.89 -1.6
VLI	2.23	165 ePn	43 14.00 0.1	IMA	3.87	330 ePd	33 53.21 -1.4	SKT	2.15	27 eP	44 58.89 -1.6
VAY	2.46	6 ePn	43 16.60 -0.6	50 obs. associated				SEW	2.09	88 eP	44 58.89 -1.6
QHR	2.48	335 ePn	43 18.30 0.7	* DEC 06, 1990 01h 16m 55.14 ± 0.79s				SEW	2.09	88 eP	44 58.89 -1.6
SRS	2.48	25 eP	43 17.28 -0.3	16.690 S ± 14.0km 66.764 E ± 14.8km				SEW	2.09	88 eP	44 58.89 -1.6
SKO	3.15	350 ePn	43 34.00 7.0X	DEPTH = 10.0km (geophysicist)				SEW	2.09	88 eP	44 58.89 -1.6
S.D. = 1.0 on 14 of 18 obs.				5.0mb (3 obs.)				SEW	2.09	88 eP	44 58.89 -1.6
& DEC 06, 1990 00h 32m 59.90s				MID-INDIAN RISE (429)				SEW	2.09	88 eP	44 58.89 -1.6
62.784 N 148.997 W				BUL	36.31	259 eP	24 01.30 0.0	SEW	2.09	88 eP	44 58.89 -1.6
DEPTH = 63.3km				LWI	39.99	287 iPd	24 37.70 5.4X	SEW	2.09	88 eP	44 58.89 -1.6
CENTRAL ALASKA (1)				DMN	47.49	22 P	25 33.10 0.4	SEW	2.09	88 eP	44 58.89 -1.6
<AGS-P>.				PKI	47.57	23 P	25 33.40 0.0	SEW	2.09	88 eP	44 58.89 -1.6
HUR	0.35	304 eP	33 10.93 0.0	GKN	47.68	22 P	25 33.80 -0.3	SEW	2.09	88 eP	44 58.89 -1.6
RND	0.63	6 iP	33 13.49 -0.3	KKN	47.72	22 P	25 33.90 -0.5	SEW	2.09	88 eP	44 58.89 -1.6
				GUN	48.05	23 P	25 37.40 0.2	SEW	2.09	88 eP	44 58.89 -1.6
				BCAO	52.07	289 iPd	26 14.50 6.7X	SEW	2.09	88 eP	44 58.89 -1.6
				ASPA	62.91	108 eP	27 22.70 -1.6	SEW	2.09	88 eP	44 58.89 -1.6
				WRA	63.85	104 P	27 31.00 0.5	SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6
								SEW	2.09	88 eP	44 58.89 -1.6

<AGS-P>.

NCG	0.34	188	eP	44	13.79	0.6
			eS	44	19.55	
SKT	0.35	46	iP	44	13.26	-0.1
			eS	44	18.36	
CGLM	0.43	176	eP	44	15.64	0.6
			eS	44	22.80	
CRP	0.48	185	eP	44	16.38	0.5
			eS	44	24.10	
BGL	0.50	198	iP	44	16.23	-0.2
			iS	44	24.04	
SPU	0.56	180	iP	44	17.79	0.2
			iS	44	26.82	
CKL	0.56	194	eP	44	17.70	0.1
SUA	0.69	113	iP	44	20.47	0.3
PWA	1.04	94	iP	44	26.30	0.0
			eS	44	40.90	
CUT	1.08	51	eP	44	26.07	-0.8
NKA	1.08	158	eP	44	27.92	1.0
RDT	1.18	188	eP	44	28.16	-0.6
			eS	44	44.62	
NCT	1.26	200	eP	44	28.75	-1.3
			eS	44	47.63	
RDN	1.28	196	eP	44	29.97	-0.4
			eS	44	47.19	
REF	1.29	194	eP	44	30.51	-0.2
PMS	1.30	111	eP	44	30.83	0.1
			eS	44	48.93	
RS2	1.33	195	eP	44	31.44	0.2
RSO	1.33	195	eP	44	31.45	0.2
RED	1.37	195	eP	44	31.63	-0.3
PLRM	1.41	95	eP	44	32.21	-0.2
			eS	44	51.28	
GHO	1.49	87	eP	44	33.68	0.0
			eS	44	51.10	
SLKM	1.53	143	eP	44	34.27	0.1
HUR	1.68	41	eP	44	36.77	0.4
INE	1.75	197	eP	44	37.96	0.4
KNK	1.76	99	eP	44	38.04	0.6
SVW	1.82	251	eP	44	36.71	-1.8
			eS	45	00.38	
TRF	1.90	25	eP	44	38.92	-0.8
SEW	2.08	141	eP	44	43.88	1.8
TTA	2.20	305	eP	44	42.94	-0.9
PDB	2.22	209	eP	44	43.47	-0.7
RND	2.24	40	eP	44	43.85	-0.6
SCM	2.25	86	eP	44	45.25	0.6
CNPM	2.26	169	eP	44	45.92	1.2
KNIM	2.53	122	eP	44	48.99	0.5
GLI	2.55	108	eP	44	49.50	0.7
VZW	2.74	102	eP	44	47.33	-4.2
KLU	2.94	92	eP	44	54.94	0.4
MDM	3.66	26	eP	45	01.83	-2.9

38 obs. associated

? DEC 06, 1990 04h 18m 19.25± 3.50s
27.744 N ±36.0km 128.215 E ±17.2km
DEPTH = 33.0km (normal)
4.3mb (3 obs.)

RYUKYU ISLANDS

(238)

KAGJ		4.15	34	P	19	22.40	0.6
KUMJ		5.28	25	P	19	36.60	-1.3
SSE		6.98	300	eP	20	00.00	-1.8
NJ2	N	10s		0.70um			
		9.19	300	Pc	20	31.40	-1.1
	N	12s		0.50um			
	E	10s		0.40um			
				S	22	06.20	
BJ1		15.80	324	eP	22	02.00	1.2
		1.0s		7.00nm			3.8mb
CN2		16.18	353	eP	22	06.00	0.4
	Z	13s		0.90um			
	N	11s		0.20um			
	E	11s		0.30um			
				ePP	22	13.00	
TIY		16.57	311	eP	22	12.50	1.8
	Z	14s		0.50um			
	N	15s		0.90um			
	E	15s		0.80um			
				S	25	02.50	
XAN		17.70	296	P	22	30.50	5.7X
BTO		19.73	315	eP	22	46.00	-3.1X
CD2		21.55	284	eP	23	09.00	1.2
	N	12s		0.68um			
				eS	26	54.00	

LZH	22.25	298 eP	23	21.00	6 0X
	2.0s	29.00nm			4.4mb
GTA	26.26	304 eP	23	52.40	-1.0
	0.8s	10.00nm			4.5mb
Z	10s	0.60um			4.4Mszx
WRA	47.78	172 P	27	07.00	11.6X
	0.8s	2.10nm			
YKA	77.16	25 eP	30	28.30	17.3X
	0.7s	0.40nm			
S.D. = 1.5 on 9 of 14 obs.					

& DEC 06, 1990 04h 26m 17.43s

60.256 N 152.172 W
DEPTH = 94.9 km
SOUTHERN ALASKA (2)
<AGS-P>.

RDT	0.34	340	iP	26	31.24	-0.7
			eS	26	42.55	
RED	0.34	299	iP	26	31.24	-0.7
			eS	26	42.31	
REF	0.35	312	iP	26	31.49	-0.7
			eS	26	42.68	
RSO	0.36	306	iP	26	31.59	-0.6
			eS	26	42.61	
RS2	0.36	306	iP	26	31.61	-0.6
			eS	26	42.71	
RDN	0.39	312	iP	26	31.62	-0.7
			iS	26	42.92	
NCT	0.49	310	eP	26	32.04	-0.9
			eS	26	43.45	
INE	0.49	247	eP	26	32.29	-0.7
NNL	0.49	116	eP	26	33.31	0.5
HOM	0.66	156	eP	26	33.34	-0.8
			eS	26	46.79	
NKA	0.67	43	iP	26	35.77	1.4
OPT	0.81	222	eP	26	34.64	-1.1
			eS	26	48.33	
BRLK	0.81	127	eP	26	35.07	-0.7
			eS	26	49.41	
XLV	0.84	164	eP	26	35.56	-0.4
CNPM	0.87	147	eP	26	35.88	-0.5
			eS	26	50.73	
SPU	0.93	4	iP	26	36.28	-0.8
			eS	26	50.91	
CKL	0.95	355	iP	26	36.41	-0.9
			eS	26	51.57	
SLKM	1.00	75	eP	26	37.23	-0.6
			eS	26	52.80	
CRP	1.01	0	eP	26	37.21	-0.9
BGL	1.02	354	iP	26	37.28	-0.8
			eS	26	52.47	
CGLM	1.06	4	iP	26	37.78	-0.8
			eS	26	53.59	
PDB	1.12	246	eP	26	37.66	-1.5
			eS	26	53.49	
NCG	1.15	0	eP	26	38.92	-0.7
SEW	1.37	95	eP	26	41.08	-1.0
SUA	1.40	29	eP	26	42.27	-0.4
			eS	27	01.05	
CDD	1.53	210	eP	26	42.32	-1.9
			eS	27	02.62	
MCNL	1.54	227	eP	26	42.46	-1.8
			eS	27	02.06	
PMS	1.62	51	eP	26	44.68	-0.7
			eS	27	05.53	
SYI	1.66	184	eP	26	44.65	-1.1
SKT	1.76	10	eP	26	45.86	-1.3
PWA	1.79	38	eP	26	47.84	0.3
PLRM	2.00	47	eP	26	48.56	-1.7
KNK	2.16	56	eP	26	50.51	-2.0
GHO	2.19	45	eP	26	51.21	-1.8
KNIM	2.21	86	eP	26	50.50	-2.6
CUT	2.34	22	eP	26	54.59	-0.3
VZW	2.88	71	eP	26	58.97	-3.3
KLU	3.30	65	eP	27	05.15	-2.9
TRF	3.33	15	eP	27	07.94	-0.6

39 obs. associated

• DEC 06, 1990 04h 42m 17.80± 0.79s
20.391 S ± 9.1km 68.065 W ± 14.8km
DEPTH = 33.0km (normal)

CHILE-BOLIVIA BORDER REGION (124)

CCH	3.50	32	P	43	15.70	4.1X
CNCB	3.56	1	iPc	43	13.00	0.3
LPB	3.84	360	P	43	17.00	0.6

1.0s 92.00nm

ANT	3.95	213	e(P)	43	17.00	-0.6
ZOBO	4.10	359	Pc	43	19.00	-1.3
SIV	7.96	58	iPc	44	18.00	3.9X
BAO	19.66	79	ePd	46	47.80	0.6
SOB1	28.47	71	eP	48	10.60	-1.6
BBTK	110.90	54	ePKP	00	56.00	6.4X
GKN	154.01	68	PKP	02	15.90	8.0X
DMN	154.49	68	PKP	02	09.60	0.9
KKN	154.61	68	PKP	02	09.80	1.1
PKI	154.76	68	PKP	02	06.40	-2.7X
GUN	155.11	67	PKP	02	04.90	-4.7X
S.D. = 1.2 on 8 of 14 obs.						

S.D. = 1.2 on 8 of 14 obs.

& DEC 06, 1990 06h 50m 47.41s
63.146 N 149.819 W

DEPTH = 97.0 km

CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.19	154	iP	51	01.01	1.4
			eS	51	11.25	
TRF	0.37	326	iP	51	02.40	-0.1
			eS	51	13.27	
RND	0.51	59	iP	51	03.07	-0.2
			eS	51	14.11	
MCK	0.71	34	iP	51	04.77	-0.2
			eS	51	16.80	
CUT	0.77	196	eP	51	05.17	-0.3
			eS	51	18.66	
SKT	1.41	215	iP	51	12.27	-0.6
			eS	51	30.54	
GHO	1.44	163	eP	51	13.33	0.1
			eS	51	34.52	
NEA	1.47	13	eP	51	12.86	-0.7
			eS	51	31.84	
PWA	1.50	181	iPd	51	14.50	0.6
WRH	1.54	29	iP	51	13.74	-0.6
			eS	51	33.89	
PLRM	1.59	168	eP	51	15.41	0.4
			eS	51	36.45	
PMR	1.59	168	iPc	51	16.10	1.1
SUA	1.74	195	eP	51	17.53	0.4
			iS	51	41.46	
CCB	1.75	30	iP	51	16.39	-0.7
SCM	1.75	138	eP	51	17.41	0.2
HDA	1.79	44	iP	51	17.18	-0.5
			eS	51	39.30	
KNK	1.85	159	eP	51	18.73	0.3
			eS	51	41.43	
DDM	1.89	68	eP	51	19.30	0.3
			eS	51	41.92	
PMS	1.91	176	iPd	51	19.90	0.6
MDM	1.95	20	iP	51	19.29	-0.5
FBA	1.97	26	iPd	51	19.60	-0.4
TOA	1.98	120	iPd	51	21.30	1.1
PAX	1.99	93	eP	51	21.15	0.8
			eS	51	46.55	
SDG	2.06	106	eP	51	21.60	0.4
NCG	2.06	213	iP	51	20.82	-0.5
			eS	51	46.20	
CGLM	2.11	210	iP	51	21.55	-0.4
GLM	2.14	29	eP	51	21.61	-0.6
SPU	2.23	209	eP	51	23.20	-0.3
BGL	2.24	214	eP	51	23.68	0.0
CKL	2.29	212	eP	51	23.76	-0.5
KLU	2.46	131	eP	51	26.20	-0.5
NKA	2.50	196	eP	51	30.32	3.2
VZW	2.60	142	eP	51	27.64	-0.8
VLZ	2.60	139	eP	51	27.54	-0.9
GLI	2.61	149	eP	51	27.92	-0.7
DOT	2.64	76	eP	51	28.45	-0.5
SLKM	2.65	184	eP	51	29.50	0.3
TTA	2.83	268	iPd	51	30.80	-0.8
RDT	2.86	207	eP	51	32.46	0.5
KNIM	2.98	160	eP	51	32.26	-1.3
NCT	2.98	211	eP	51	35.01	1.3
RDN	2.99	209	eP	51	33.16	-0.7
RS2	3.03	209	eP	51	36.13	1.6
RSO	3.03	209	eP	51	35.62	1.1
SEW	3.06	177	eP	51	33.80	-0.8
RED	3.08	208	eP	51	35.77	0.8
GLB	3.29	119	eP	51	37.62	-0.2
MTU	3.33	161				

50 obs. associated

? DEC 06, 1990 07h 45m 55.25± 2.52s
47.709 N ± 57.2km 152.439 E ± 31.6km
DEPTH = 50.0km (geophysicist)
4.2mb (4 obs.)

KURIL ISLANDS (221)

FBA 35.70 39 eP 52 50.30 0.0
0.6s 0.70nm 3.8mb
pP 53 04.10 53kmX
INK 41.09 33 eP 53 36.00 0.9
YKA 50.43 37 eP 54 48.50 -0.8
0.7s 0.90nm 3.9mb
GUN 54.47 274 P 55 22.70 2.4
KKK 54.95 274 P 55 23.80 0.1
PKI 55.01 274 PKP 55 23.20 -1.0
DMN 55.18 274 PKP 55 24.80 -0.6
GKN 55.25 275 P 55 25.00 -0.7
NB2 67.17 341 P 56 45.80 0.2
0.7s 3.70nm 4.5mb
HFS 67.40 339 eP 56 46.60 -0.4
0.4s 4.30nm 4.8mb
S.D. = 1.1 on 10 of 10 obs.

% DEC 06, 1990 08h 04m 32.18± 0.89s
39.247 N ± 7.8km 29.123 E ± 8.5km
DEPTH = 5.0km (geophysicist)

TURKEY (366)

MD 3.0 (ISK).
DST 0.52 313 iPg 04 42.00 -0.7
iSg 04 49.00
ALT 0.79 104 iPg 04 45.60 -2.5
KHL 0.97 161 iPg 04 52.60 1.4
iSg 05 05.10
IZI 1.12 14 ePn 04 54.00 0.3
KCT 1.16 330 iPn 04 54.20 -0.2
YLV 1.33 8 ePn 04 57.50 0.2
GPA 1.39 41 iPn 05 00.10 1.9
BNT 1.44 320 iPn 04 59.00 0.0
EDC 1.47 319 ePn 04 58.80 -0.5
HRT 1.63 15 iPn 05 01.00 -0.6
IZM 1.68 240 ePn 05 07.00 4.6X
ISK 1.82 358 iPn 05 05.00 0.7
EZK 2.24 286 ePn 05 15.00 4.6X
S.D. = 1.3 on 11 of 13 obs.

? DEC 06, 1990 10h 32m 27.99± 1.51s
15.221 N ± 31.2km 61.078 W ± 71.1km
DEPTH = 120.0km (geophysicist)

LEEWARD ISLANDS (92)

CRM 0.49 161 eP 32 46.29 0.2
FDF 0.49 188 iPc 32 46.40 0.2
S 33 01.90
MVM 0.69 165 iPc 32 47.31 -0.2
BIM 0.70 179 iPc 32 47.45 -0.2
S 33 05.20
DOG 0.96 327 ePd 32 49.90 0.0
S.D. = 0.3 on 5 of 5 obs.

* DEC 06, 1990 11h 29m 00.04± 0.59s
60.601 S ± 13.2km 22.411 W ± 15.1km
DEPTH = 33.0km (normol)
5.0mb (8 obs.)

SOUTH SANDWICH ISLANDS REGION (153)

SPA 29.56 180 iPd 35 04.60 0.9
1.0s 20.00nm 4.8mb
i 35 40.50
EVA 48.59 69 iPc 37 54.50 12.2X
0.6s 22.67nm
PDCR 49.54 338 eP 37 51.80 2.4
e 37 53.80
SIV 52.51 311 P 38 10.60 -1.4
CCH 53.22 304 eP 38 16.00 -1.6
BUL 53.89 65 iPd 38 20.00 -2.2
CNCB 54.49 303 P 38 28.00 0.8
LPB 54.79 303 P 38 36.00 6.7X
ZOBO 55.04 303 P 38 31.00 -0.2
1.0s 12.50nm 4.9mb
LR 55 30.00
LIC 68.01 19 P 39 58.14 0.3
KIC 68.19 19 P 39 59.20 0.2
0.9s 17.50nm 5.2mb
TIC 68.42 19 P 40 00.64 0.2
0.8s 19.50nm 5.2mb

LKO 71.18 18 P 40 17.88 0.6
0.9s 18.50nm 5.1mb
BCAO 72.25 43 iPd 40 25.20 1.5
0.7s 18.00nm 5.2mb
ASPA 93.85 158 iPc 42 15.40 0.3
2.0s 8.70nm 4.8mb
WRA 97.56 158 P 42 32.00 0.0
1.3s 1.60nm 4.4mb
SLL 123.86 20 ePKP 47 53.30 -1.3
1.4s 38.10nm
NB2 124.05 19 PKP 47 54.50 -0.5
0.8s 3.00nm
YKA 141.18 312 ePKP 48 24.80 -2.4X
0.8s 1.60nm
BJI 147.29 110 ePKP 48 41.00 -2.8X
1.4s 33.00nm
MBC 149.18 332 ePKP 48 45.00 4.8X
1.1s 9.00nm
INK 150.87 315 ePKPd 48 48.60 5.7X
S.D. = 1.3 on 16 of 22 obs.

& DEC 06, 1990 13h 36m 27.45s
63.292 N 151.600 W
DEPTH = 36.3km
CENTRAL ALASKA (1)
<AGS-P>.

TRF 0.61 74 iP 36 39.63 -0.2
eS 36 49.00
HUR 0.95 109 iP 36 45.14 0.7
iS 36 57.50
CUT 1.08 145 eP 36 46.64 0.4
eS 37 01.32
RND 1.24 83 eP 36 48.80 0.1
eS 37 05.71
BWN 1.30 46 eP 36 49.32 -0.1
SKT 1.32 179 eP 36 49.41 -0.3
eS 37 06.80
NEA 1.70 40 eP 36 54.09 -1.3
PWA 1.83 153 iPd 36 57.50 0.4
SUA 1.88 167 P 36 58.81 0.9
NCG 1.91 188 eP 36 57.71 -0.7
WRH 1.95 51 eP 36 57.39 -1.4
GHO 1.97 140 eP 36 59.03 -0.1
CGLM 2.00 186 eP 36 59.41 -0.2
PMR 2.06 145 ePd 37 01.00 0.7
PLRM 2.06 145 eP 36 59.59 -0.7
BGL 2.07 191 eP 37 00.84 0.3
SPU 2.13 186 eP 37 00.73 -0.6
CKL 2.13 190 eP 37 02.39 0.9
CCB 2.16 49 eP 37 00.17 -1.5
MDM 2.23 40 eP 37 01.44 -1.4
PMS 2.27 154 iPd 37 04.40 1.1
FBA 2.32 44 iPd 37 02.80 -1.3
KNK 2.39 141 eP 37 05.85 0.8
GLM 2.51 45 eP 37 05.73 -1.1
TOA 2.77 113 eP 37 10.00 -0.5
SLKM 2.87 166 eP 37 12.66 0.8
SDG 2.88 103 eP 37 12.79 0.8
SVW 2.89 222 ePd 37 16.50 4.3
IMA 2.93 343 ePc 37 13.40 0.6
TZL 3.11 111 eP 37 16.77 1.4
KLU 3.20 122 eP 37 16.49 -0.2
VLZ 3.28 129 eP 37 15.62 -2.1
32 obs. associated

DEC 06, 1990 16h 02m 20.54± 0.62s
26.397 S ± 7.2km 27.343 E ± 6.9km
DEPTH = 5.0km (geophysicist)
4.5mb (1 obs.)
REPUBLIC OF SOUTH AFRICA (584)
ML 3.7 (PRE). mbLg 3.6 (BUL).

PRY 0.54 168 eP 02 30.50 -0.9
S 02 36.50
BFS 0.71 225 eP 02 36.00 1.3
SLR 1.07 52 iPc 02 40.50 -0.8
S 02 52.90
EVA 1.56 94 eP 02 50.00 0.9
SWZ 1.97 246 eP 02 55.60 0.6
S 03 20.50
BFT 2.53 74 iPc 03 04.50 1.3
S 03 34.50
BLF 2.89 200 iPc 03 08.50 0.3
S 03 36.50
KIM 3.27 224 iPd 03 14.00 0.4
S 03 50.00

FRS 3.79 208 iPc 03 20.20 -0.6
S 04 05.00
HVD 4.50 201 eP 03 30.80 -0.2
S 04 21.50
BUL 6.33 11 iPnc 03 55.50 -1.5
iSn 05 03.80
iSg 05 36.00
POF 7.19 244 eP 04 06.00 -2.8
CER 9.84 223 eP 04 41.50 -4.3X
WIN 10.08 290 eP 04 51.00 1.8
S 06 51.50
GBA 62.86 57 Pc 12 50.30 0.3
0.5s 1.50nm 4.5mb
S.D. = 1.4 on 14 of 15 obs.

& DEC 06, 1990 16h 05m 55.58s
61.606 N 150.576 W
DEPTH = 46.2km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA 0.16 209 iP 06 03.61 0.1
eS 06 10.68
PWA 0.34 82 iPc 06 04.90 0.2
SKT 0.59 310 iP 06 07.03 -0.8
eS 06 16.31
PMS 0.61 126 iPd 06 07.80 -0.3
PLRM 0.69 91 eP 06 08.04 -1.1
eS 06 18.98
PMR 0.69 91 ePc 06 08.10 -1.0
0.4s 25.10nm
CGLM 0.75 247 iP 06 09.50 -0.5
eS 06 20.28
NCG 0.78 256 iP 06 09.96 -0.6
eS 06 21.28
GHO 0.80 77 eP 06 10.35 -0.4
eS 06 22.42
CUT 0.81 10 iP 06 10.08 -0.7
eS 06 22.08
SPU 0.83 240 iP 06 10.31 -0.8
eS 06 22.04
BGL 0.94 249 eP 06 12.03 -0.6
eS 06 25.51
CKL 0.94 245 iP 06 11.91 -0.8
eS 06 25.11
KNK 1.04 100 eP 06 13.82 -0.1
eS 06 28.69
SLKM 1.12 171 eP 06 14.03 -1.0
RDT 1.37 221 iP 06 17.83 -0.8
eS 06 35.85
REF 1.52 224 eP 06 20.49 -0.5
RDN 1.53 225 eP 06 20.08 -0.9
NCT 1.55 229 eP 06 20.93 -0.3
RSO 1.56 224 eP 06 20.83 -0.7
RS2 1.56 224 iP 06 20.79 -0.8
SCM 1.56 80 iP 06 21.33 -0.1
RED 1.60 223 eP 06 21.31 -0.7
SEW 1.61 159 eP 06 23.04 1.1
NNL 1.61 193 eP 06 22.77 0.8
GLI 1.83 112 eP 06 23.93 -1.3
TRF 1.86 4 eP 06 25.56 -0.1
KNIM 1.87 131 eP 06 26.58 0.8
INE 1.97 219 eP 06 26.87 -0.4
RND 1.98 23 eP 06 27.01 -0.3
VZW 2.02 104 eP 06 27.65 -0.1
TOA 2.15 75 iPc 06 30.10 0.4
KLU 2.23 91 eP 06 29.80 -1.1
OPT 2.36 215 eP 06 32.96 0.4
SVW 2.48 261 iPc 06 33.10 -1.3
SDG 2.54 66 eP 06 34.26 -1.1
PDB 2.55 226 eP 06 33.85 -1.5
FBA 3.54 20 ePd 06 49.00 -0.3
38 obs. associated

* DEC 06, 1990 16h 14m 08.83± 1.08s
19.491 S ± 7.9km 70.903 W ± 10.3km
DEPTH = 38.9 ± 13.1 km
5.0mb (3 obs.)

NEAR COAST OF NORTHERN CHILE (122)

ARE 3.06 349 eP 14 55.00 -1.3
iS 15 33.50
CNCB 3.85 47 Pc 15 12.00 4.3X
LPB 3.97 43 P 15 11.00 1.7
ZOBO 4.16 40 Pc 15 15.00 3.0X
ANT 4.22 174 eP 15 11.70 -0.6
eS 16 25.50

CCH 4.98 66 P 15 24.60 1.1
 NNA 9.40 322 eP 16 25.20 0.3
 0.7s 6.85nm 4.9mb
 SIV 9.99 71 P 16 31.20 -1.9
 MDZ 13.46 173 eP 17 26.60 6.8X
 PEL 13.60 179 eP 17 31.00 9.5X
 LNV 14.41 182 eP 17 33.00 0.9
 SOB1 30.76 75 (P) 20 20.00 -3.1X
 KIC 69.97 75 P 25 18.50 -0.4
 LKO 70.49 72 P 25 21.64 -0.4
 SES 78.07 335 eP 26 06.00 0.9
 YKA 88.69 341 eP 26 58.60 -0.4
 0.8s 5.20nm 4.9mb
 BCAA 90.93 86 iPd 27 14.00 3.4X
 0.8s 9.00nm 5.2mb
 GBA 149.12 96 PKPd 33 56.80 5.7X
 0.6s 3.80nm
 MAT 149.36 310 ePKP 33 57.00 6.0X
 S.D. = 1.3 on 11 of 19 obs.

% DEC 06, 1990 16h 43m 49.52±0.53s
 46.282 N ± 6.9km 2.170 E ± 4.8km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 2.4 (LDG).

TCF 0.03 78 Pg 43 50.70 -0.9
 MAF 0.28 102 Pg 43 55.50 0.1
 Sg 43 59.80
 LSF 0.45 266 Pg 43 57.20 -1.4
 Sg 44 02.50
 BGF 0.54 59 Pg 43 59.80 -0.7
 Sg 44 06.90
 AVF 0.96 58 Pg 44 02.40 -0.4
 Sg 44 19.40
 RJF 1.08 205 Pg 44 10.50 0.7
 Sg 44 24.60
 SSF 1.21 49 Pg 44 11.70 -0.3
 Sg 44 27.40
 SMF 1.21 72 Pg 44 12.50 0.4
 Sg 44 28.50
 CAF 1.36 183 Pn 44 13.80 -0.7
 Pg 44 16.00
 Sg 44 33.00
 LBF 1.43 60 Pg 44 15.80 0.3
 Sg 44 34.20
 LOR 1.52 49 Pg 44 17.40 0.6
 Sg 44 36.60
 MFF 1.63 282 Pg 44 19.80 1.4
 Sg 44 39.30
 S.D. = 0.9 on 12 of 12 obs.

DEC 06, 1990 17h 01m 00.30±1.48s
 18.902 N ± 10.7km 81.306 W ± 9.5km
 DEPTH = 29.2 ± 10.3 km
 4.0mb (6 obs.) 4.4Msz (1 obs.)
 CARIBBEAN SEA (94)
 Felt (III) in the Georgetown
 area, Grand Cayman.

GCM 0.39 350 iP 01 09.50 0.5
 BBJ 3.86 97 P 01 59.06 -0.2
 eS 02 45.43
 PCJ 4.10 106 P 02 02.30 -0.2
 STH 4.34 100 P 02 05.91 -0.1
 eS 02 57.04
 HOJ 4.42 101 P 02 07.28 0.2
 eS 03 02.42
 YHJ 4.68 102 P 02 10.79 0.0
 RSCP 17.06 348 eP 04 56.50 -1.8
 1.1s 3.73nm 3.4mb
 OLY 18.82 333 P 05 20.00 -0.1
 ELC 19.59 341 P 05 30.00 0.9
 FVM 20.61 339 P 05 39.00 -0.8
 BW06 33.70 321 eP 07 40.00 -1.4
 1.0s 3.50nm 4.2mb
 TNP 36.59 309 P 08 07.00 1.0
 0.8s 1.96nm 4.0mb
 BONR 37.35 308 P 08 13.60 1.1
 LPB 37.53 159 eP 08 13.00 -1.3
 CNCB 37.83 159 eP 08 17.00 0.1
 SIV 39.98 149 P 08 33.80 -0.5
 NEW 41.19 324 eP 08 43.00 -0.9
 1.0s 1.75nm 3.7mb
 LON 43.21 319 P 09 01.00 0.5
 SOB1 48.66 122 (P) 09 45.00 0.9

YKA 49.26 340 eP 09 47.40 -0.7
 0.6s 0.90nm 4.0mb
 INK 59.03 340 eP 11 01.00 1.4
 LDF 70.30 44 eP 12 27.30 14.3X
 0.8s 6.70nm
 LSF 71.71 46 eP 12 35.40 13.7X
 TCF 72.17 46 eP 12 38.10 13.7X
 AVF 72.87 46 eP 12 42.20 13.7X
 0.8s 4.05nm
 SSF 72.93 45 eP 12 42.50 13.7X
 0.8s 3.35nm
 LOR 73.13 45 eP 12 43.90 13.9X
 Z 20s 0.22um 4.4Msz
 LKO 73.54 85 P 12 34.38 1.4
 0.7s 7.50nm 4.8mb
 BSF 74.98 44 eP 12 54.20 13.3X
 CDF 75.18 44 eP 12 55.70 13.7X
 ZST 81.57 42 eP 13 30.70 14.0X
 WB5 146.37 262 ePKP 20 43.30 3.8X
 S.D. = 1.0 on 22 of 32 obs.

& DEC 06, 1990 17h 08m 40.24s
 62.334 N 151.399 W
 DEPTH = 91.2km
 CENTRAL ALASKA (1)
 <AGS-P>.

SKT 0.36 190 iP 08 53.65 -0.7
 eS 09 04.18
 CUT 0.53 82 iP 08 54.90 -0.6
 SUA 0.93 160 iP 08 59.14 -0.5
 eS 09 14.16
 PWA 0.99 133 iPc 08 59.90 -0.3
 NCG 1.00 201 iP 08 59.43 -1.0
 HUR 1.04 51 iP 08 59.73 -1.1
 eS 09 15.11
 CGLM 1.07 196 eP 09 00.38 -0.8
 eS 09 16.09
 BGL 1.17 204 eP 09 01.77 -0.7
 SPU 1.20 195 eP 09 01.61 -1.1
 eS 09 19.62
 CKL 1.23 202 iP 09 02.33 -0.8
 eS 09 20.22
 TRF 1.23 24 eP 09 02.03 -1.2
 eS 09 19.07
 GHO 1.30 115 iP 09 03.57 -0.4
 eS 09 22.04
 PLRM 1.30 124 iP 09 03.13 -0.8
 eS 09 21.60
 PMR 1.30 124 iPd 09 03.30 -0.6
 PMS 1.40 141 iPc 09 04.40 -0.8
 RND 1.59 46 eP 09 06.36 -1.3
 eS 09 26.61
 NKA 1.60 177 iP 09 09.01 1.3
 KNK 1.67 122 eP 09 07.54 -1.2
 eS 09 29.05
 RDT 1.83 196 iP 09 10.09 -0.8
 eS 09 33.57
 SLKM 1.92 162 eP 09 11.64 -0.3
 NCT 1.92 203 eP 09 11.87 -0.2
 RDN 1.94 200 eP 09 11.38 -1.0
 eS 09 36.78
 REF 1.95 199 eP 09 12.51 -0.1
 eS 09 37.10
 RSD 1.99 200 eP 09 13.68 0.6
 RED 2.03 200 eP 09 13.29 -0.2
 TTA 2.21 288 ePd 09 14.10 -1.9
 NNL 2.30 179 eP 09 18.00 0.9
 SVW 2.36 240 iPd 09 16.40 -1.5
 INE 2.42 200 eP 09 17.32 -1.5
 SEW 2.43 156 eP 09 17.74 -1.0
 TOA 2.46 93 iPc 09 18.20 -1.1
 WRH 2.61 33 eP 09 19.15 -2.1
 VZW 2.64 117 eP 09 19.62 -2.1
 KNIM 2.66 137 eP 09 18.39 -3.6
 KLU 2.73 106 eP 09 20.44 -2.5
 SDG 2.73 83 eP 09 21.84 -1.1
 PAX 2.81 74 eP 09 22.74 -1.4
 TZL 2.82 93 eP 09 22.76 -1.3
 CNPM 2.82 178 eP 09 23.80 -0.4
 CCB 2.83 33 eP 09 22.26 -1.9
 HDA 2.89 42 eP 09 23.15 -1.9
 PDB 2.89 209 eP 09 23.92 -1.2
 MDM 2.99 27 eP 09 24.53 -2.0
 FBA 3.04 30 iPc 09 25.30 -1.8
 IMA 3.88 346 ePc 09 36.40 -2.5
 0.3s 0.30nm

45 obs. associated

 DEC 06, 1990 17h 46m 03.83±0.84s
 36.653 N ± 8.2km 19.218 E ± 4.3km
 DEPTH = 59.5 ± 18.3 km
 3.8mb (1 obs.)
 MEDITERRANEAN SEA (400)
 MD 3.8 (ATH), 3.4 (THE).

VLS 1.87 35 ePn 46 34.50 0.5
 SOI 2.89 300 P 46 49.10 0.7
 eSn 47 16.80
 VLI 2.99 88 ePn 46 50.00 0.2
 IGT 3.01 17 iP 46 50.37 0.3
 EVR 3.05 41 ePn 46 53.00 2.2
 KEK 3.09 8 ePn 46 51.20 0.0
 ATN 3.35 298 P 46 55.90 1.0
 eSn 47 29.00
 AGG 3.41 45 eP 47 09.20 13.4X
 eS 47 27.30
 MEU 3.47 279 Pd 46 56.60 0.0
 eSn 47 33.20
 CZI 3.54 317 P 46 58.40 1.0
 eSn 47 32.00
 TDS 3.76 324 P 47 01.30 0.6
 LCI 3.81 345 P 47 00.60 -0.6
 eSn 47 42.50
 CSI 3.88 324 P 47 03.50 1.2
 ORI 4.04 328 P 47 04.80 0.2
 eSn 47 47.50
 NEO 4.13 49 ePn 47 07.00 1.2
 KBN 4.16 17 ePg 47 49.50 43.4X
 KZN 4.16 28 ePn 47 07.20 0.9
 VAM 4.22 106 ePn 47 05.00 -2.2
 LIT 4.30 36 eP 47 09.80 1.6
 FNA 4.46 22 eP 47 11.12 0.7
 eS 47 25.57
 FAI 4.48 280 P 47 11.90 1.2
 eSn 47 56.60
 MGR 4.51 322 P 47 10.50 -0.7
 eSn 47 58.00
 OHR 4.62 15 iPn 47 13.40 0.7
 iSg 48 05.80
 TIR 4.71 6 ePg 47 59.00 45.0X
 BAI 4.82 338 P 47 14.00 -1.5
 SGO 4.96 323 P 47 17.30 -0.1
 eSn 48 08.20
 PLG 4.98 40 ePn 47 18.00 0.2
 SOH 5.27 37 iP 47 22.32 0.4
 VAY 5.34 28 ePn 47 22.00 -0.8
 SKO 5.58 17 ePn 48 12.00 45.8X
 iSn 48 27.00
 SRS 5.61 36 eP 47 26.36 -0.3
 BDV 5.63 357 ePn 47 25.00 -1.9
 eSn 48 25.00
 TTG 5.77 0 ePn 47 27.50 -1.3
 eSn 48 30.00
 HCY 5.81 355 ePn 47 27.00 -2.4
 eSn 48 28.50
 PVY 5.96 5 ePn 47 31.50 -0.1
 IVA 6.23 5 ePn 47 36.00 0.6
 eSn 48 42.50
 SDI 6.56 322 P 47 39.00 -0.9
 PLE 6.67 1 ePn 47 41.00 -0.5
 eSn 48 53.00
 KSL 8.38 91 ePn 48 03.90 -1.1
 CTI 10.97 331 Pd 48 38.80 -1.7
 FVI 11.03 336 P 48 39.30 -1.9
 SOTA 12.12 333 iP 48 56.60 0.7
 0.5s 4.80nm 4.7mb X
 i 49 01.00
 HFS 23.77 353 eP 51 13.50 2.2
 0.4s 1.50nm 3.8mb
 S.D. = 1.2 on 39 of 43 obs.

% DEC 06, 1990 18h 05m 24.82±1.92s
 45.743 N ± 10.6km 3.579 E ± 16.1km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 1.8 (LDG).

MAF 0.85 304 Pg 05 41.40 0.1
 Sg 05 53.00
 SMF 0.92 11 Pg 05 42.50 0.1
 Sg 05 54.00
 BGF 0.96 328 Pg 05 43.00 -0.1
 Sg 05 57.60

06d 18h

AVF 1.06 352 Pg 05 44.70 -0.1
Sg 05 59.10
CAF 1.35 233 Pg 05 49.60 0.0
Sg 06 07.00
S.D. = 0.1 on 5 of 5 obs.

* DEC 06, 1990 18h 40m 33.97±1.13s
13.758 N ±13.6km 125.865 E ±15.6km
DEPTH = 33.0km (normol)
4.3mb (5 obs.)

PHILIPPINE ISLANDS REGION (248)

OCP 4.72 281 eP 41 45.50 0.7
BAG 5.75 298 eP 41 58.00 -1.4
0.8s 253.73nm 5.9mb X
SSE 17.78 347 eP 44 42.50 1.9
1.3s 20.00nm 4.1mb
N 10s 0.20um
E 10s 0.20um

esP 44 56.00
eS 47 55.00
sS 48 08.00

CHG 26.31 285 eP 46 10.00 1.3
BJI 27.53 344 eP 46 18.50 -1.1
1.2s 8.00nm 4.3mb

LZH 29.75 322 eP 46 38.50 -1.4
1.5s 23.00nm 4.7mb

ASPA 38.02 168 eP 47 50.90 -0.1
0.9s 5.00nm 4.4mb

GUN 39.74 297 P 48 06.40 0.5
PKI 40.08 297 P 48 08.20 -0.4

KKN 40.24 297 P 48 10.00 0.2
GKN 40.84 297 P 48 14.80 0.2

GBA 46.99 276 Pc 49 08.20 4.0X
0.6s 2.40nm 4.4mb

S.D. = 1.2 on 11 of 12 obs.

* DEC 06, 1990 19h 22m 45.26s
58.498 N 154.245 W
DEPTH = 0.0km
3.6mb (1 obs.)

ALASKA PENINSULA (12)

<AGS-P>

CDD 0.54 36 iP 22 56.02 0.1
MCNL 0.69 356 iP 22 58.28 -0.8

AUI 0.94 26 eP 23 03.53 -0.5
eS 23 16.88

AGU 0.96 26 eP 23 04.23 -0.3
eS 23 19.56

AUH 0.96 25 iP 23 04.27 -0.2
AUP 0.97 26 eP 23 04.25 -0.3

eS 23 17.55

AUE 0.98 27 iP 23 04.62 0.0
SYI 0.98 83 iP 23 03.12 -1.6

iS 23 17.73

BGM 1.03 331 eP 23 03.86 -1.9
KDC 1.20 128 iPc 23 07.10 -1.4

OPT 1.27 24 eP 23 08.93 -0.9
eS 23 26.97

PDB 1.29 1 iP 23 08.28 -1.9
eS 23 24.97

XLV 1.62 53 eP 23 14.46 -0.7
INE 1.68 21 eP 23 14.99 -1.2

eS 23 36.80

HOM 1.78 48 eP 23 15.03 -2.4
CNPM 1.87 55 eP 23 18.10 -0.7

eS 23 41.61

RED 2.07 21 eP 23 21.19 -0.6
eS 23 46.98

RS2 2.11 20 eP 23 22.73 0.2
RSO 2.11 20 eP 23 22.29 -0.2

REF 2.15 21 eP 23 21.41 -1.6
BRLK 2.15 52 eP 23 20.80 -2.1

RDN 2.16 20 eP 23 22.53 -0.6
NNL 2.17 43 eP 23 23.87 0.8

NCT 2.18 17 eP 23 22.61 -0.7
RDT 2.28 23 eP 23 24.26 -0.6

SVW 2.71 346 eP 23 29.60 -1.3
NKA 2.72 33 eP 23 31.31 0.3

CKL 2.87 19 eP 23 32.77 -0.6
SLKM 2.88 44 eP 23 33.40 0.1

SPU 2.91 21 eP 23 33.09 -0.7
BGL 2.93 18 eP 23 34.10 0.0

SEW 2.94 55 eP 23 33.44 -0.7
CGLM 3.04 21 eP 23 35.04 -0.5

NCG 3.10 19 eP 23 37.03 0.6

SUA 3.46 29 eP 23 42.22 0.6
PMS 3.63 39 iPc 23 44.00 0.1

SKT 3.75 20 eP 23 46.69 1.1
KNIM 3.81 58 eP 23 45.50 -1.0

PWA 3.85 33 iPc 23 47.70 0.7
PMR 4.03 37 iPc 23 51.20 1.7

KNK 4.12 42 eP 23 50.33 -0.6
GHO 4.23 37 eP 23 53.10 0.7

CUT 4.39 25 eP 23 51.74 -2.9
TTA 4.53 350 eP 23 56.20 -0.6

0.6s 39.00nm 5.1mb X
VZW 4.66 53 eP 23 57.59 -1.0

SDN 4.66 230 eP 23 56.73 -1.8
KLU 5.15 51 eP 24 03.22 -2.3

TRF 5.33 20 eP 24 09.60 1.4
TOA 5.40 45 eP 24 09.20 0.1

GLB 6.01 56 eP 24 15.96 -1.7
INK 13.44 34 eP 26 01.00 1.5

YKA 19.70 62 eP 27 16.50 -2.2
0.8s 2.80nm 3.6mb

MBC 21.66 22 eP 27 38.00 -0.8
53 obs. associated

? DEC 06, 1990 22h 39m 31.06±2.30s
33.038 S ±12.1km 177.717 W ±31.3km

DEPTH = 33.0km (normol)
4.9mb (2 obs.)

SOUTH OF KERMADEC ISLANDS (179)

HBZ 5.59 214 eP 40 58.80 4.7X
PUZ 6.00 212 eP 40 59.60 -0.3

eS 42 12.60
NOZ 6.55 211 eP 41 07.60 0.1

MRW 10.17 214 eP 42 15.00 17.3X
S 43 45.00

KHZ 11.64 214 eP 42 14.80 -2.9X
eS 44 18.50

DZM 17.77 304 iPc 43 37.00 -0.6
BRS 26.06 275 iPd 45 05.00 1.7

eS 49 48.00
RMO 29.74 274 eP 45 38.00 1.3

e 46 12.00
QIS 39.82 277 eP 47 03.00 0.0

ASPA 43.27 270 iPc 47 30.40 -1.0
1.1s 27.10nm 4.9mb

Z 17s 1.50um 5.0mszx
WRA 44.49 275 P 47 49.00 7.7X

1.1s 20.30nm 4.9mb
WB5 44.50 275 iPc 47 39.80 -1.5

ZOBO 96.86 114 P 52 45.00 -16.2X
Z 24s 0.15um 4.4mszx

LR 25 08.00
QUE 125.64 286 ePKP 58 33.80 2.6X

MAIO 133.42 291 ePKP 58 46.00 0.3
BCAO 147.75 212 iPKPc 59 19.00 7.3X

1.6s 130.00nm
ic 02 46.00

MBH 152.05 272 iPKPc 59 26.60 8.7X
ADI 152.45 279 iPKPc 59 27.00 8.7X

ZNT 152.47 277 iPKPc 59 27.50 9.2X
KIC 152.66 165 PKP 59 31.30 12.2X

BBTK 154.64 294 ePKP 59 32.00 10.8X
LKO 155.52 161 PKP 59 47.62 24.6X

CLL 160.13 340 ePKP 00 06.00 38.7X
2.2s 92.00nm

BRG 160.22 338 iPKPd 00 09.00 41.5X
1.7s 50.00nm

S.D. = 1.2 on 9 of 24 obs.

DEC 06, 1990 22h 57m 13.57±0.49s
45.945 N ±4.9km 6.799 E ±4.4km

DEPTH = 5.0km (geophysicist)
FRANCE (538)

ML 2.5 (LDG).

EMS 0.16 36 iPc 57 15.60 -1.3
DIX 0.45 72 iPd 57 22.10 -0.5

LPG 0.45 184 Pg 57 22.40 -0.2
Sg 57 29.10

MMK 0.82 82 ePc 57 29.10 -1.0
BNI 0.90 186 P 57 31.00 -0.3

eSg 57 43.50
TMA 1.45 83 ePd 57 42.00 1.3

LLS 1.78 58 ePc 57 46.70 1.3
BSF 1.89 360 Pg 57 45.90 -1.0

Sg 58 08.70
HAU 2.08 352 Pg 57 49.30 -0.3

Sg 58 14.30
SLE 2.16 32 ePc 57 52.20 1.5

SMF 2.17 290 Pg 57 50.60 -0.2
Sg 58 15.80

LBF 2.21 299 Pg 57 51.70 0.2
Sg 58 18.30

LOR 2.42 304 Pg 57 54.80 0.3
Sg 58 23.00

AVF 2.53 291 Pg 57 56.20 0.2
Sg 58 26.60

BGF 2.81 284 Pn 57 56.00 -4.0X
Sg 58 37.00

MAF 2.96 277 Pn 57 57.60 -4.5X
Sg 58 40.20

S.D. = 0.9 on 14 of 16 obs.

* DEC 06, 1990 23h 01m 57.42±2.20s
41.168 N ±13.8km 23.568 E ±13.4km

DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

MD 2.6 (THE).

SRS 0.05 160 iP 01 59.65 0.0
SOH 0.38 205 iP 02 05.34 0.1

KNT 0.51 270 eP 02 07.70 0.0
eS 02 15.82

THE 0.70 221 eP 02 11.22 -0.1
VAY 0.77 282 ePn 02 12.40 0.0

eSn 02 25.60
S.D. = 0.1 on 5 of 5 obs.

% DEC 06, 1990 23h 29m 21.36±0.89s
40.272 N ±11.4km 27.561 E ±6.3km

DEPTH = 10.0km (geophysicist)
TURKEY (366)

MD 2.3 (ISK).

EDC 0.24 72 ePg 29 26.30 -0.2
eSg 29 31.80

KGT 0.27 312 iPg 29 28.00 1.0
BNT 0.29 73 iPg 29 27.00 -0.4

KCT 0.61 92 iPg 29 30.50 -3.2X
EZN 1.05 245 ePn 29 40.00 -1.1

DST 1.06 129 iPn 29 42.90 1.6
IZI 1.46 87 ePn 29 47.00 -0.9

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

DEC 06, 1990 23h 32m 34.82±1.14s
6.897 S ±10.0km 155.167 E ±6.1km

DEPTH = 87.6 ±11.5 km
4.8mb (7 obs.)

SOLOMON ISLANDS (193)

SVO 5.12 116 eP 33 50.00 -0.6
eS 35 06.00

HNR 5.36 118 eP 33 55.00 1.0
eS 35 04.00

PMG 8.32 252 eP 34 34.00 -0.7
DZM 18.60 145 iPc 36 42.50 -5.7X

QIS 20.29 226 eP 37 06.00 0.0
WB5 23.96 235 iPc 37 43.10 0.9

ASPA 26.37 228 iPd 38 04.70 -0.1
1.1s 11.60nm 4.3mb

TCW 38.18 156 P 39 47.50 0.1
MTW 38.63 155 P 39 50.40 -0.8

CHG 61.01 296 iPd 42 42.00 0.2
1.0s 12.50nm 4.9mb

GUN 75.21 301 P 44 10.80 0.3
0.8s 28.00nm 5.2mb

PKI 75.52 301 P 44 12.20 0.0
KKN 75.69 301 P 44 13.00 0.0

0.8s 16.00nm 5.0mb
DMN 75.79 301 P 44 14.00 0.3

GKN 76.30 301 P 44 16.20 -0.2
0.8s 17.00nm 5.0mb

GBA 79.79 285 Pd 44 35.60 0.2
0.8s 7.60nm 4.6mb

YKA 96.17 28 eP 45 53.20 -0.6
0.6s 0.90nm 4.5mb

IFR 147.83 328 iPKPd 52 13.00 4.2X
BAO 147.95 134 ePKPd 52 13.00 3.6X

TIO 150.98 328 iPKPd 52 22.00 8.3X
S.D. = 0.6 on 16 of 20 obs.

? DEC 07, 1990 00h 16m 56.28±1.77s
15.524 S ±71.3km 70.233 W ±27.6km

DEPTH = 241.6 ±31.3 km

3.5mb (1 obs.)
SOUTHERN PERU (117)

ZOBO 2.16 110 Pd 17 40.00 -0.6
LPB 2.28 116 Pd 17 41.80 0.2
CNCB 2.51 121 P 17 44.80 0.7
S 18 22.00
CCH 4.34 116 P 18 04.00 -0.6
SIV 8.83 94 P 19 01.40 0.3
YKA 85.16 341 eP 29 06.00 0.0

0.5s 0.40nm 3.5mb
S.D. = 0.8 on 6 of 6 obs.

* DEC 07, 1990 01h 51m 10.79± 1.52s
29.256 N ±12.3km 130.492 E ± 7.2km
DEPTH = 50.2 ± 11.9 km
4.3mb (6 obs.)

RYUKYU ISLANDS (238)

KAGJ 1.95 10 P 51 42.50 0.4
SSE 8.26 285 eP 53 11.50 0.8
Z 20s 1.00um
N 14s 0.40um
E 13s 0.70um

MAT 9.74 40 eP 53 30.00 -1.1
S 54 47.00
NJ2 10.40 288 eP 53 40.00 -0.1
Z 14s 0.70um
N 13s 0.80um
E 11s 1.00um

TIY 17.24 304 Pc 55 14.00 4.3X
Z 14s 1.30um
N 13s 1.00um
E 13s 0.70um

XAN 18.97 290 Pc 55 29.60 -1.2
BTO 20.19 310 eP 55 56.00 12.0X
N 16s 0.90um
E 16s 0.70um

GYA 21.24 268 P 56 12.00
CD2 23.18 281 eP 56 14.50 0.6
LZH 23.40 294 eP 56 34.00 17.9X
Z 15s 32.00nm
0.96um 4.4MsZ

GUN 39.02 279 P 58 34.80 0.0
PKI 39.51 279 P 58 38.80 0.0
KKN 39.57 279 P 58 39.30 0.2
DMN 39.76 279 P 58 40.80 0.0
GKN 40.07 280 P 58 43.00 -0.2
WB5 48.99 175 eP 59 54.20 -0.2
GBA 51.37 264 Pd 00 12.40 -0.3

FBA 60.43 29 eP 01 18.70 1.6
INK 65.33 24 eP 01 49.50 0.1
MBC 66.42 14 eP 01 57.00 0.6
YKA 74.94 26 eP 02 48.50 0.5
HFS 77.07 333 eP 02 59.00 -1.0
NB2 77.48 334 P 03 01.00 -1.3

0.6s 2.80nm 4.5mb
0.5s 0.50nm 3.9mb
0.6s 6.00nm 4.8mb
0.7s 1.00nm 3.9mb
0.4s 1.70nm 4.4mb
0.6s 2.10nm 4.3mb

S.D. = 0.8 on 20 of 23 obs.

* DEC 07, 1990 02h 07m 49.42± 2.68s
15.575 N ±12.7km 60.702 W ±29.4km
DEPTH = 33.0km (normal)

LEEWARD ISLANDS (92)

BBL 0.75 266 eP 08 04.40 0.8
SFG 0.83 325 eP 08 08.10 3.5X
CRM 0.84 194 eP 08 06.40 1.5
FDF 0.84 207 eP 08 06.01 -0.3
S 08 22.60

DOG 0.99 297 eP 08 06.70 -0.4
S 08 23.20
MVM 1.03 190 eP 08 07.42 -0.2
S 08 25.00

PAG 1.04 296 eP 08 07.20 -0.6
S 08 23.60
BIM 1.11 199 eP 08 07.49 -1.2

SEG 1.13 317 ePd 08 09 36 0.4
S.D. = 1.0 on 8 of 9 obs

DEC 07, 1990 02h 24m 30 86± 0.50s
27.804 S ± 4.5km 66 543 W ± 7.9km
DEPTH = 162.3 ± 6.3 km
4.9mb (13 obs.)

CATAMARCA PROVINCE, ARGENTINA (130)

CYA 0.92 134 iPc 24 58.50 2.0
RTLL 3.89 205 iPd 25 31.10 0.3
CFA 4.07 201 iPd 25 33.50 0.5
S 26 14.50

ZON 4.17 206 iPc 25 34.00 -0.3
RTCV 4.40 203 eP 25 38.00 0.6
ANT 5.37 319 iPd 25 51.50 1.4
S 26 51.00

MDZ 5.44 201 iP 25 51.40 0.2
S 26 41.70
JACH 5.99 215 iPd 25 58.50 0.0
S 26 55.00

FCH 6.38 209 iP 26 04.50 0.5
S 27 16.00
PEL 6.41 213 iPc 26 03.00 -1.1
S 27 08.00

SAN 6.65 211 eP 26 06.00 -1.3
S 27 10.00
PCH 6.73 210 iPc 26 08.20 -0.2
S 27 24.00

TACH 6.95 212 iP 26 09.50 -1.8
S 27 26.00
CHCH 7.06 209 iPc 26 14.00 1.2
S 27 32.70

LCCH 7.12 216 iP 26 11.00 -2.5
S 27 21.50
LNV 7.42 213 iP 26 14.00 -3.5X
S 27 18.00

LPA 10.21 136 iPc- 26 54.80 0.4
0.9s 268.91nm 5.8mb
CCH 10.38 2 P 26 54.90 -2.0
CNCB 11.02 353 P 27 06.20 0.6

LPB 11.31 352 P 27 10.00 0.8
S 29 09.00
ZOBO 11.57 352 P 27 12.00 -0.8
S 29 15.00

ARE 12.18 337 eP 27 19.00 -1.4
S 29 25.00
SIV 12.00 24 P 27 27.40 -0.8
NNA 18.46 326 eP 28 39.00 2.1

1.1s 32.91nm 4.6mb
BAO 21.03 59 ePc 29 02.80 -0.4
PDCR 29.79 65 eP 30 23.70 -0.8
S 30 24.50

AIA 37.49 178 eP 31 31.80 1.9
SPA 62.36 180 iPd 34 38.70 0.6
S 34 38.70 5.5mb
LIC 68.28 70 P 35 14.98 -1.5
S 35 14.98 4.6mb

TIC 68.52 70 P 35 17.26 -0.7
S 35 17.26 4.7mb
KIC 68.59 70 P 35 17.10 -1.3
S 35 17.10 5.0mb

LKO 69.65 67 Pc 35 23.56 -1.3
S 35 23.56 4.9mb
ALO 72.92 327 eP 35 44.40 0.2
S 35 44.40 4.2mb

WIN 74.47 108 iPc 35 51.00 -2.5
BLF 79.19 117 iPd 36 20.00 0.4
S 36 20.00 5.1mb
TIO 81.28 48 iPd 36 32.00 1.6
SLR 82.35 115 iPc 36 36.00 -0.2
S 36 36.00 5.6mb

EVA 82.63 116 iPc 36 50.50 12.8X
S 36 50.50 1.4
BFT 83.78 116 iPd 36 45.00 1.2
S 36 45.00 2.6

LRM 84.30 330 eP 36 46.80 1.2
IFR 84.31 47 iP 36 48.50 2.6
BUL 85.18 110 iPd 36 50.30 -0.2
BCAO 87.70 84 iPd 37 05.70 3.0X
S 37 05.70 4.9mb

YKA 97.82 340 eP 37 47.70 -0.4
S 37 47.70 4.4mb
ASPA 125.16 203 iPKPd 43 13.70 -0.3

0.7s 0.90nm
0.8s 4.48nm
e 36 28.00
35 51.00 -2.5
36 20.00 0.4
0.5s 21.62nm 5.1mb
81.28 48 iPd 36 32.00 1.6
82.35 115 iPc 36 36.00 -0.2
0.5s 59.86nm 5.6mb
82.63 116 iPc 36 50.50 12.8X
0.8s 37.31nm 1.4
83.78 116 iPd 36 45.00 1.2
0.7s 27.40nm 5.2mb
84.30 330 eP 36 46.80 1.2
84.31 47 iP 36 48.50 2.6
85.18 110 iPd 36 50.30 -0.2
87.70 84 iPd 37 05.70 3.0X
1.1s 15.00nm 4.9mb
97.82 340 eP 37 47.70 -0.4
0.7s 0.90nm 4.4mb

0.8s 16.00nm 5.1mb
53.78 352 eP 20 36.00 -1.1
1.1s 29.00nm 5.2mb
63.34 348 eP 21 41.00 -2.7
1.0s 5.30nm 4.7mb
72.64 345 ePd 22 41.30 -0.5
76.32 353 eP 23 02.50 -0.3
1.0s 8.00nm 4.8mb
83.66 57 iP 23 43.00 0.0

0.7s 7.70nm
128.41 205 PKP 43 19.00 -1.3
0.8s 11.20nm
128.46 205 ePKP 43 20.00 -0.4
e 44 06.20
GBA 143.62 105 PKP 43 50.00 1.5
TRT 144.69 179 ePKPd 43 50.50 0.1
HYB 146.27 100 iPKP 43 55.30 2.3X
1.0s 50.00nm
e 44 40.00
NDI 148.14 80 iPKPc 43 57.00 1.4
GKN 154.55 83 PKP 44 00.00 -5.2X
S.D. = 1.3 on 47 of 52 obs.

* DEC 07, 1990 03h 52m 26.79± 2.32s
32.090 S ±24.9km 179.160 E ±19.6km
DEPTH = 353.7 ± 25.2 km
3.6mb (1 obs.)

SOUTH OF KERMADEC ISLANDS (179)

HBZ 5.54 187 eP 53 53.30 0.2
PUZ 6.02 187 eP 53 58.30 -0.2
S 55 09.00
NOZ 6.58 188 P 54 04.60 -0.3
PGZ 8.82 194 eP 54 32.00 0.5
KIW 9.40 200 eP 54 38.30 -0.1
MTW 9.52 197 P 54 40.00 0.2
MRW 9.80 200 eP 54 42.80 -0.3
S 56 31.50

MOW 9.83 197 P 54 43.70 0.2
TCW 9.91 202 P 54 44.60 0.1
KHZ 11.24 202 eP 55 00.10 -0.3
S 57 02.50
WRA 41.78 276 P 59 44.00 -0.5
0.6s 2.30nm 3.6mb
WB5 41.79 276 eP 59 45.00 0.5
HFS 150.33 345 PKP 11 31.30 0.0
1.9s 163.50nm
S.D. = 0.4 on 13 of 13 obs.

* DEC 07, 1990 04h 11m 12.38± 0.52s
1.556 N ±10.7km 90.849 W ± 9.1km
DEPTH = 10.0km (geophysicist)
4.8mb (8 obs.) 4.3MsZ (3 obs.)
GALAPAGOS ISLANDS REGION (696)

UPA 13.46 56 eP+ 14 28.00 2.0
Z 20s 8.51um
S 17 00.00
BOG 17.03 79 eP 15 14.00 1.3
S 18 38.00
BMG 18.55 72 eP 15 31.00 -0.3
NNA 19.36 134 eP 15 41.50 0.3
1.0s 12.00nm 4.1mb
SDV 21.40 69 eP 16 02.10 -0.7
TOV 22.48 68 iPc 16 13.30 -0.2
ZOBO 28.59 129 Pc 17 12.00 0.3
1.0s 15.00nm 4.7mb
Z 20s 0.47um 4.1MsZ
LR 23 32.00
LPB 28.77 130 P 17 16.00 2.9
Z 24s 1.55um 4.5MsZ
LR 23 30.00
CNCB 29.02 130 P 17 16.40 0.9
SIV 34.20 122 P 17 59.60 -0.9
ALO 36.26 338 eP 18 18.20 0.2
1.0s 7.50nm 4.5mb
Z 18s 0.86um 4.6MsZ
PLM 39.94 325 eP 18 50.00 1.1
TPC 40.04 327 eP 18 51.00 1.5
MWC 41.26 325 eP 19 01.00 1.3
GSC 41.35 327 eP 19 03.00 2.7
SBB 41.46 326 eP 19 02.00 0.8
BAO 45.67 114 e(P) 19 33.00 -2.6
LRM 47.99 340 eP 19 53.20 -0.5
SES 51.60 344 eP 20 21.00 0.0
PDCR 53.22 107 eP 20 36.10 2.5
PNT 53.57 337 eP 20 35.00 -0.7
0.8s 16.00nm 5.1mb
FFC 53.78 352 eP 20 36.00 -1.1
1.1s 29.00nm 5.2mb
YKA 63.34 348 eP 21 41.00 -2.7
1.0s 5.30nm 4.7mb
INK 72.64 345 ePd 22 41.30 -0.5
MBC 76.32 353 eP 23 02.50 -0.3
1.0s 8.00nm 4.8mb
AVE 83.66 57 iP 23 43.00 0.0

07d 04h

LKO 85.07 81 P 23 49.42 -1.0
1.1s 18.50nm 5.2mb
IFR 85.58 57 iP 23 51.50 -1.3
LIC 85.68 84 P 23 52.60 -0.8
Z 22s 0.15um 4.3msz
TIC 85.68 83 P 23 52.40 -1.1
KIC 85.96 84 P 23 53.70 -1.1
TOL 86.55 50 eP 23 57.50 0.2
WRA 132.21 244 PKP 30 29.00 -0.2
0.6s 1.40nm
GKN 150.29 8 PKP 31 01.00 0.0
KMI 150.39 334 PKPd 31 06.00 4.7X
2.0s 70.00nm
GUN 150.54 6 PKP 31 00.60 -1.0
KKN 150.59 7 PKP 31 01.20 -0.3
DMN 150.74 7 PKP 31 01.40 -0.4
PKI 150.82 7 PKP 31 01.40 -0.6
S.D. = 1.3 on 38 of 39 obs.

* DEC 07, 1990 05h 07m 13.55±1.30s
39.648 N ±10.6km 19.852 E ± 8.1km
DEPTH = 5.0km (geophysicist)
GREECE-ALBANIA BORDER REGION (392)
MD 3.5 (ATH).

KEK 0.08 328 iPg 07 14.00 -1.4
SRN 0.26 26 iPg 07 18.50 -0.3
LSK 0.76 49 ePg 07 26.90 -2.0
BERA 1.06 4 ePn 07 34.80 0.9
KBN 1.22 37 ePn 07 33.00 -3.7X
LCI 1.61 296 P 07 42.10 -0.6
eSn 08 05.80
KZN 1.61 65 ePn 07 43.00 0.2
eSn 08 09.00
OHR 1.63 26 iPn 07 43.40 0.3
iSn 08 11.50
EVR 1.68 115 ePn 07 44.50 0.6
TIR 1.70 0 ePn 07 45.50 1.6
PHP 2.09 12 ePn 07 51.30 1.7
SKO 2.62 27 ePn 07 57.00 -0.2
i 08 05.80
iSg 08 41.50
ORI 2.65 280 P 08 04.50 6.8X
eSg 08 45.00
VAY 2.66 50 ePn 07 57.00 -0.9
MGR 3.34 280 P 08 14.00 6.5X
S.D. = 1.2 on 12 of 15 obs.

* DEC 07, 1990 06h 01m 20.51s
63.261 N 149.921 W
DEPTH = 97.8km
CENTRAL ALASKA (1)
<AGS-P>.

TRF 0.25 319 eP 01 34.90 1.6
eS 01 46.62
HUR 0.31 155 eP 01 34.85 -0.3
eS 01 46.07
RND 0.50 73 eP 01 35.57 -0.8
eS 01 47.38
MCK 0.65 43 eP 01 35.54 -2.0
CUT 0.87 191 eP 01 39.41 -0.3
eS 01 54.14
SKT 1.49 211 eP 01 46.16 -0.7
eS 02 06.31
GHO 1.56 162 eP 01 47.63 -0.3
P 1.62 179 eP 01 48.61 0.1
P M 1.72 167 eP 01 49.43 -0.3
PM 1.72 167 iPd 01 50.40 0.7
SUA 1.84 192 iP 01 52.38 0.8
SCM 1.87 139 eP 01 51.32 -0.6
FBA 1.89 29 iPd 01 50.20 -1.9
KNK 1.98 159 eP 01 52.49 -0.7
PMS 2.03 175 eP 01 53.59 -0.4
PAX 2.04 96 eP 01 53.55 -0.6
TOA 2.08 122 iPc 01 55.30 0.6
NCG 2.14 210 eP 01 54.73 -0.7
SDG 2.14 108 eP 01 53.98 -1.4
CGLM 2.19 207 eP 01 55.16 -1.0
BGL 2.31 211 eP 01 57.54 -0.2
SPU 2.31 207 eP 01 57.05 -0.7
CKL 2.36 210 eP 01 56.55 -1.9
KLU 2.57 132 eP 01 59.21 -2.1
VZW 2.72 143 eP 02 02.00 -1.2
GLI 2.74 150 eP 02 01.40 -2.0
SLKM 2.77 183 eP 02 03.22 -0.6
RDT 2.94 205 eP 02 06.76 0.5

KNIM 3.10 159 eP 02 06.07 -2.3
29 obs. associated

DEC 07, 1990 06h 57m 24.77±0.69s
43.415 N ± 4.4km 5.430 E ± 5.3km
DEPTH = 10.0km (geophysicist)
NEAR SOUTH COAST OF FRANCE (379)
MD 2.8 (STR).

GELF 0.03 183 Pg 57 26.43 -0.4
TREF 0.21 351 Pg 57 29.21 -0.2
BERF 0.22 118 Pg 57 29.73 0.2
PUYF 0.23 59 Pg 57 29.13 -0.6
CDR 0.36 43 iPg 57 31.30 -0.8
i(Sg) 57 35.00
PRAF 0.43 334 Pg 57 34.17 0.6
VILF 0.48 25 Pg 57 34.01 -0.6
TAVF 0.50 66 Pg 57 34.76 -0.2
CALN 1.11 72 Pg 57 46.51 0.8
Sg 58 01.79
REVF 1.44 76 Pn 57 51.71 0.7
Sg 58 12.02
TOUF 1.45 65 Pn 57 51.63 0.4
Sg 58 12.30
AURF 1.46 70 Pn 57 51.58 0.4
Sg 58 12.30
AUTN 1.56 67 Pn 57 53.16 0.3
Sg 58 15.89
SAOF 1.64 69 Pn 57 54.12 0.3
BNI 1.87 28 P 58 00.00 2.8X
eSn 58 26.50
CKI 2.29 63 P 58 07.00 3.8X
eSn 58 33.00
PGF 2.76 107 Pn 58 08.98 -1.0
S.D. = 0.6 on 15 of 17 obs.

* DEC 07, 1990 07h 45m 13.60s
49.719 N 123.581 W
DEPTH = 5.0km (geophysicist)
VANCOUVER ISLAND REGION (25)
<PGC>. ML 2.9 (PGC). Felt at
Sechart, Squamish, Vancouver and
along the coast of the Strait of
Georgia.

SHB 0.23 238 Pc 45 18.18 -0.1
WPB 0.25 104 Pc 45 18.48 -0.2
BIB 0.36 150 Pd 45 20.14 -0.7
NAB 0.57 209 P 45 23.56 -1.4
WHB 0.58 44 Pc 45 23.98 -1.1
HNB 0.79 124 Pd 45 27.53 -1.9
ALB 0.93 242 Pc 45 29.90 -1.9
SNB 0.98 164 P 45 31.21 -1.5
PGC 1.07 175 P 45 32.11 -2.1
MCW 1.15 154 Pd 45 33.90 -1.7
S 45 50.17
VDB 1.19 125 P 45 34.05 -2.2
CBB 1.20 286 P 45 33.94 -2.4
PFB 1.28 206 P 45 35.48 -2.3
BTB 1.29 259 P 45 35.81 -2.2
VGZ 1.32 173 Pd 45 35.99 -2.4
MBW 1.45 130 Pd 45 38.56 -2.1
OZB 1.46 239 P 45 38.29 -2.4
OHW 1.56 153 P 45 40.14 -1.8
STW 1.57 182 P 45 40.13 -2.1
OSP 1.58 205 P 45 40.70 -1.7
GDR 1.59 273 P 45 40.48 -2.0
OTR 1.71 197 P 45 42.84 -1.5
OBC 1.72 191 P 45 43.42 -1.0
BLN 1.76 167 P 45 42.95 -2.0
OFK 1.84 196 P 45 45.40 -0.7
JPW 1.86 132 Pd 45 45.30 -1.2
RCW 1.88 144 P 45 45.05 -1.6
OSD 1.90 182 Pd 45 45.82 -1.4
PGW 2.01 161 P 45 47.35 -1.1
OOW 2.02 192 P 45 48.11 -0.7
HDW 2.10 170 P 45 48.35 -1.6
BLH 2.14 151 P 45 49.34 -1.1
GMW 2.24 166 P 45 51.18 -0.7
HTW 2.26 147 P 45 51.37 -0.9
SPW 2.34 157 P 45 55.02 1.7
SMW 2.41 176 P 45 53.66 -0.7
RMW 2.55 152 P 45 55.98 -0.4
PNT 2.61 97 P 45 59.00 1.8
NLW 2.70 126 P 45 57.63 -0.9
CPW 2.76 174 P 45 58.20 -1.2
GSM 2.78 154 P 45 59.07 -0.7

FMW 3.07 155 P 46 03.15 -0.6
WTV 3.14 129 P 46 04.84 0.1
TWW 3.15 144 P 46 05.44 0.5
LMW 3.17 164 P 46 03.93 -1.3
LON 3.20 158 P 46 04.86 -0.7
TBM 3.23 141 P 46 06.29 0.2
WPW 3.31 155 P 46 07.13 -0.2
CZM 3.36 167 P 46 07.62 -0.3
EBG 3.46 143 P 46 08.54 -0.7
ERK 3.52 166 P 46 09.41 -0.7
ASR 3.81 159 P 46 13.66 -0.7
BVW 3.82 138 P 46 13.13 -1.2
MXC 3.84 144 P 46 13.72 -0.9
WAH2 4.00 136 P 46 15.64 -1.2
MDW 4.02 139 P 46 16.19 -1.0
CRF 4.03 134 P 46 16.32 -0.9
BRVW 4.03 142 P 46 16.30 -1.1
LOCW 4.09 136 P 46 17.33 -0.7
GBL 4.17 137 P 46 18.21 -1.0
RSW 4.27 140 P 46 19.43 -1.4
NEW 4.50 106 e(P) 46 21.00 -3.0
62 obs. associated

DEC 07, 1990 08h 25m 03.03±0.09s
16.993 S ± 2.9km 177.268 W ± 2.7km
DEPTH = 413.5km (41 depth phases)
5.6mb (66 obs.)
FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 29C
Centroid Location:
Origin Time 08:25:14.1 0.4
Lat 16.35S 0.05 Lon 177.14W 0.03
Dep 440.9 1.4 Half-duration 2.5
Moment Tensor: Scale 10¹⁷ Nm
Mrr=-2.77 0.14 Mtt=-2.28 0.27
Mff=5.04 0.25 Mrt=4.92 0.25
Mrf=-4.43 0.24 Mtf=5.12 0.20
Principal Axes:
T Vol=8.05 Plg=12 Azm=111
N 2.34 47 8
P -10.39 40 212
Best Double Couple: Mo=9.2*10¹⁷
NP1:Strike=243 Dip=52 Slip=-23
NP2: 347 72 -140

MBU 3.84 270 iPc 26 17.70 2.6
VUN 4.20 255 iPc 26 21.60 3.2X
S 26 25.00
SVA 4.23 254 iPc 26 23.10 4.5X
eS 26 27.30
SGE 4.63 262 iPc 26 26.00 3.3X
AFI 6.12 61 iPd 26 35.00 -3.2X
eS 27 40.00
PVC 13.79 265 iPc 28 06.70 2.5
DZM 16.16 249 iPd 28 29.80 0.6
iS 31 18.40
ScP 35 57.00
HBZ 20.89 190 P 29 15.70 0.1
WLZ 21.70 195 P 29 25.60 2.4
NOZ 21.93 190 P 29 23.90 -1.4
WHH 22.48 193 eP 29 29.40 -1.1
MOH 22.59 191 P 29 32.90 1.5
HNR 23.40 286 eP 29 41.00 2.0
eS 33 20.00
SVO 23.63 286 eP 29 45.00 3.9X
eS 33 22.00
PGZ 24.20 192 P 29 45.00 -1.0
KIW 24.73 194 P 29 50.30 -0.6
MTW 24.88 193 P 29 50.90 -1.3
CAW 24.93 194 P 29 51.20 -1.4
BLW 25.08 193 P 29 53.00 -1.1
WDW 25.09 194 P 29 52.80 -1.3
MRW 25.13 194 P 29 53.30 -1.1
WEL 25.16 194 P 29 54.00 -0.8
eS 33 51.00
MOW 25.18 193 P 29 53.80 -1.2
TCW 25.21 195 P 29 54.30 -0.9
THZ 26.09 197 P 30 02.20 -1.0
AFR 26.25 95 iP 30 04.80 0.1
1.2s 270.00nm 5.6mb
PAE 26.43 96 iP 30 06.50 0.1
1.2s 415.00nm 5.7mb
PPT 26.44 95 iP 30 06.60 0.1
1.2s 630.00nm 5.9mb
KHZ 26.53 195 P 30 05.90 -1.1

PFN	26.58	95	P	30 07.70	0.0	0.8s	202.96nm	5.5mb	PLM	76.32	40	eP	36 10.00	0.4		
	1.2s	210.00nm			4mb	PJG	48.18	307 eP	33 05.20	-0.7			37 40.00	40.1km		
TVO	26.74	96	P	30 09.50	0.3	AAI	55.07	278 eP	37 55.50	-1.0	SBB	76.33	47	eP	36 09.00	0.5
TBI	26.83	108	P	30 11.70	1.9	DRV	56.88	199 eP	34 09.00	0.6			37 39.00	40.1km		
	1.1s	370.00nm			5.7mb	COOL	57.33	244 iPd	34 10.60	-1.5	PEC	76.38	48	P	36 09.00	0.5
LTZ	27.21	197	P	30 11.60	-1.5	KLB	60.21	243 iPd	34 30.50	-1.1	CMB	76.43	43	eP	36 10.00	0.0
PMO	28.29	90	P	30 23.70	0.9	NWAO	60.60	241 iPd	34 32.50	-1.7			37 41.20	40.7km		
	1.2s	450.00nm			5.7mb			eS	42 24.00		WDC	76.55	40	eP	36 10.20	-0.3
VAH	28.51	91	P	30 24.60	-0.1	BAL	61.16	244 iPd	34 27.00	-10.9X			37 42.30	411km		
	1.2s	360.00nm			5.6mb			0.6s	114.00nm		ORV	76.59	41	eP	36 10.70	-0.1
TPT	28.56	90	iP	30 25.20	0.1	DAV	61.35	288 eP	34 38.00	-1.3	MIN	76.98	40	eP	36 11.50	-1.6
	1.2s	540.00nm			5.8mb			0.8s	298.51nm	5.9mb			37 44.10	413km		
RUV	28.76	91	iP	30 26.90	0.1	SBA	61.40	184 iPd	34 42.00	3.3X	CLC	77.09	46	eP	36 13.00	-0.7
	1.2s	540.00nm			5.8mb	MUN	61.51	242 iPd	34 39.30	-0.9			37 46.00	415km		
BRS	29.53	244	iPc	30 33.60	0.0			0.8s	181.00nm	5.7mb	KDC	77.25	13	ePc	36 13.40	-0.5
				31 48.88	415km	MKS	62.94	273 iPc	34 50.20	0.5			102.30nm	5.6mb		
				33 58.10		KAKJ	66.47	323 P	35 10.10	-1.5	TPC	77.28	48	eP	36 15.00	0.2
				36 00.00		CHJJ	67.04	323 P	35 13.90	-1.3			37 48.00	415km		
MMCZ	30.17	199	P	30 37.50	-1.5	IIDJ	67.29	321 iPd	35 15.60	-1.2	GSC	77.36	47	eP	36 15.00	-0.2
MHZ	30.18	199	P	30 37.90	-1.2	OFUJ	67.72	326 eP	35 17.30	-2.0			37 48.00	415km		
COO	31.18	239	iPd	30 48.50	0.7	MAT	67.84	322 eP	35 19.00	-1.1	LBFM	77.40	39	P	36 15.00	-0.4
	0.8s	222.00nm			5.6mb			1.0s	55.00nm	5.2mb			37 48.00	415km		
				31 55.70	355kmX				eS	43 41.00	GLA	77.64	50	eP	36 18.00	1.3
				33 33.00		NIUJ	67.86	323 eP	35 20.30	0.1			37 51.00	415km		
				36 39.00		MTMJ	68.10	322 P	35 20.60	-1.2	BONR	77.76	44	P	36 17.40	-0.2
RAB	32.56	290	eP	30 57.50	-2.2	OCP	68.48	294 eP	35 26.50	2.2			37 51.00	418km		
RMO	32.86	247	iPd	31 03.60	1.4	TSRJ	68.49	320 P	35 23.20	-0.8	MDJ	78.07	324	Pd	36 18.60	-0.1
	0.4s	124.00nm			5.6mb	ADK	68.58	0 P	35 22.30	-1.9	NJ2	78.21	309	Pd	36 20.20	0.5
				31 17.30	54kmX	TRT	68.81	268 ePd	35 26.50	0.0			100.00nm	5.6mb		
				32 34.00				1.4s	1219.40nm	6.4mb			PcP	36 27.80		
				3												

07d 12h

QUE	54.57	315	eP	26	46.30	-2.4	ELC	145.71	26	PKP	36	54.80	0.2	AOMJ	3.59	23	P	31	09.50	1.6	
MAIO	63.16	317	eP	27	45.00	-2.5	SOB1	145.74	242	ePKP	36	56.20	0.8	WKYJ	3.86	219	P	31	12.10	0.4	
PGZ	68.42	131	P	28	20.10	-0.6	TBR	145.92	4	PKP	36	55.00	0.1	YONJ	4.58	245	P	31	23.20	1.3	
NOZ	69.47	129	eP	28	27.60	0.5	OLY	146.11	30	PKP	36	55.00	-0.4	TKSJ	4.90	229	eP	31	28.10	1.7	
HBZ	69.55	127	P	28	26.90	-0.7	LVNJ	146.21	5	PKP	36	55.70	0.4	SHK	5.47	242	eP	31	37.00	2.5	
PUZ	69.57	128	P	28	26.20	-1.6	NAV	148.61	15	PKP	36	59.40	0.0	MRRJ	5.51	20	eP	31	37.30	2.2	
SBA	76.69	169	iPd	29	10.90	2.5	RSCP	148.66	23	PKP	37	03.20	3.7X				eS	32	50.40		
BUL	78.40	251	iPd	29	17.40	-1.6	SIV	155.02	204	PKP	37	10.00	0.9	HOOJ	6.29	34	P	31	49.20	3.1X	
AYN	78.49	301	iPd	29	19.00	-0.1	ZOBO	156.66	188	PKP	37	13.70	1.7				eS	33	08.80		
MBH	79.66	302	eP	29	25.50	0.0	S.D. = 1.2 on 121 of 138 obs.														
KSR	79.68	245	iPd	29	29.50	3.7X	DEC 07, 1990 12h 34m 48.28 ± 0.33s														
	1.0s	63.00nm			5.3mb		37.169 N ± 5.3km 138.630 E ± 5.2km														
MML	79.89	305	eP	29	27.10	0.5	DEPTH = 33.0km (normal)														
ADI	80.21	305	eP	29	29.50	1.3	4.4mb (10 obs.)														
SPA	83.02	180	iPd	29	43.10	0.8	NEAR WEST COAST OF HONSHU, JAPAN(226)														
	1.0s	82.50nm			5.4mb		NIIJ	0.31	76	P	34	54.30	-1.8	Z	16s			34	01.00		
HRT	86.37	312	iP	29	59.20	-0.1	MAT	0.71	208	iPd	35	00.10	-1.8	N	10s	0.90um		37	08.00		
ISK	86.87	312	iP	30	02.00	0.4				iS	35	09.60		E	10s	0.40um		37	15.00		
KGT	88.06	311	eP	30	06.70	-0.6	MTMJ	0.88	229	P	35	03.40	-1.0					36	04.00	2.2	
BCAO	90.76	274	iPd	30	22.20	1.7				S	35	16.00		Z	18s	0.82um			4.9mb		
	0.8s	70.00nm			5.7mb		CHJJ	1.16	165	P	35	08.60	0.4	N	10s	0.48um				4.4Msz	
DEV	92.12	316	iPc	30	57.00	31.0X	YAMJ	1.50	48	iP+	35	14.00	0.8	E	12s	0.51um					
NUR	93.16	330	eP	30	28.00	-2.5				S	35	34.60						36	40.00		
SOD	93.41	337	eP	30	30.00	-1.5	KAKJ	1.57	127	P	35	15.80	1.7					38	09.10	0.5	
BRW	98.05	19	P	30	52.50	0.0				S	35	38.20		GUN	44.83	274	P	38	26.60	-0.9	
HFS	98.57	330	eP	30	54.10	-1.0	IIDJ	1.78	199	P	35	18.50	1.2		1.2s	30.00nm			5.1mb		
	0.5s	1.60nm			4.7mb					S	35	43.60		KKN	45.36	274	P	38	30.60	-0.9	
TTA	98.59	27	P	30	52.80	-2.4	TSRJ	2.69	233	P	35	31.60	1.5		0.8s	15.00nm			5.0mb		
	0.7s	2.18nm			4.7mb		OFUJ	3.06	51	iP+	35	36.50	1.0	GKN	45.78	275	P	38	33.60	-1.2	
IMA	99.45	24	P	30	59.00	-0.2	AOMJ	3.65	21	P	35	44.40	0.6		1.0s	26.00nm			5.2mb		
	0.6s	4.62nm			5.1mb		WKYJ	3.84	221	P	35	47.00	0.4	BRW	47.12	23	ePc	38	44.70	0.2	
NB2	99.76	331	P	30	59.80	-0.8	YONJ	4.62	246	P	35	57.50	-0.1	IMA	47.67	31	ePd	38	48.80	-0.4	
	0.8s	2.80nm			4.7mb		TKSJ	4.90	231	P	36	01.40	-0.2		1.2s	15.60nm			5.0mb		
FBA	102.02	25	Pdiff	31	11.00	0.5	SHK	5.50	243	eP	36	11.20	1.1	FBA	50.14	32	ePd	39	08.90	0.8	
MBC	106.05	11	ePKP	35	39.00	-0.1	SSE	15.66	252	eP	38	29.30	1.3	INK	55.23	27	ePc	39	45.20	-0.8	
	0.7s	3.00nm					N	10s	0.20um					HYB	55.90	266	eP	39	50.00	-1.5	
INK	106.52	20	ePKPd	35	40.30	0.2	BJI	17.78	286	eP	38	55.50	0.8		56.95	16	eP	39	57.50	-0.8	
KIC	114.01	274	PKP	35	55.20	-0.9				0.7s	11.00nm		4.1mb	WB5	56.97	185	iPc	39	50.80	-8.2X	
LIC	114.28	274	PKP	35	55.60	-1.0	TIY	20.79	279	eP	39	30.40	1.3		57.04	185	P	39	56.00	-3.5X	
TIC	114.31	274	PKP	35	55.30	-1.4	GUN	44.93	274	P	43	01.80	-0.5		1.3s	7.20nm			4.5mb		
LKO	115.07	277	PKPc	35	57.40	-0.7				0.9s	15.00nm		4.9mb	GBA	58.93	263	Pc	40	11.00	-1.9	
	0.5s	13.50nm					KKN	45.46	274	P	43	05.60	-0.7		1.0s	9.80nm			4.9mb		
YKA	116.27	21	ePKP	35	57.90	-1.0				0.8s	9.00nm		4.7mb	ASPA	60.76	185	iPd	40	22.90	-2.4	
	0.6s	5.80nm					GKN	45.88	275	P	43	08.80	-0.7		1.6s	7.80nm			4.6mb		
RMW	121.13	38	PKP	36	09.00	0.3				0.8s	15.00nm		5.0mb	SOD	63.84	336	iP	40	44.80	-0.6	
LON	121.44	39	PKP	36	09.00	-0.3	FBA	50.18	32	eP	43	42.90	0.6		YKA	64.76	29	eP	40	49.40	-2.0
PNT	121.55	35	ePKP	36	10.00	0.6				1.1s	0.70nm		3.6mb		1.2s	3.70nm			4.4mb		
EDM	122.67	29	ePKP	36	11.20	-0.2	INK	55.28	27	eP	44	20.00	-0.3	KAF	67.02	332	eP	41	04.60	-1.3	
FRB	123.35	359	ePKP	36	12.00	-0.3	WB5	56.88	185	eP	44	30.80	-1.5		0.4s	4.40nm			5.0mb		
WDC	123.46	45	ePKP	36	13.80	0.5	WRA	56.95	185	P	44	31.00	-1.7	NUR	68.64	331	eP	41	14.80	-1.2	
NEW	123.51	35	PKP	36	13.00	-0.2				1.1s	3.90nm		4.3mb	PNT	69.60	43	eP	41	22.00	-0.2	
LBFM	123.62	44	PKP	36	14.20	0.3	MBC	57.02	16	eP	44	32.50	-0.2		0.7s	6.00nm			4.9mb		
MIN	124.21	45	ePKP	36	15.30	0.3				0.9s	4.00nm		4.4mb	HFS	72.90	335	eP	41	40.40	-1.4	
ORV	124.58	46	ePKP	36	15.40	-0.1	SOD	63.97	336	iP	45	19.20	-0.9		0.4s	1.80nm			4.5mb		
MHC	125.28	49	ePKP	36	18.40	1.3	YKA	64.80	29	eP	45	24.50	-1.0	NB2	73.06	336	P	41	41.80	-1.0	
SES	125.54	30	ePKP	36	17.00	-0.2				0.9s	1.20nm		4.0mb		0.7s	4.80nm			4.7mb		
PRS	125.83	50	ePKP	36	19.40	1.3	PNT	69.61	43	eP	45	57.00	0.9	FFC	74.74	32	eP	41	52.00	-0.6	
CMB	125.96	48	ePKP	36	18.70	0.3	HFS	73.03	335	eP	46	15.10	-1.2		1.1s	21.00nm			5.1mb		
LLA	126.05	49	ePKP	36	19.90	1.3				0.6s	2.60nm		4.4mb	LRM	75.58	43	eP	41	58.20	0.3	
FFC	126.43	22	iPKPc	36	18.90	0.2	NB2	73.18	336	P	46	16.40	-0.9	KRA	77.58	325	eP	42	08.60	0.0	
	0.6s	20.00nm							0.7s	4.60nm		4.6mb	SPC	78.05	324	e(P)	42	11.50	0.1		
PRI	126.43	50	ePKP	36	21.30	1.9	LRM	75.59	43	eP	46	32.70	1.0	BRG	79.65	328	e(P)	42	20.00	0.1	
FRI	126.84	49	ePKP	36	21.20	1.2	KHC	81.24	327	eP	47	02.10	-0.1		1.5s	20.00nm			4.9mb		
LRM	127.51	36	ePKP	36	19.00	-2.4X	ZOBO	148.49	56	PKP	54	35.00	4.4X	CLL	79.72	329	iPc	42	19.50	-0.7	
TNP	128.23	46	PKP	36	24.00	1.1	S.D. = 1.1 on 32 of 33 obs.														
CLC	128.86	49	ePKP	36	24.00	0.0	DEC 07, 1990 13h 30m 11.02 ± 0.27s														
PAS	129.04	51	ePKP	36	26.00	1.7				37.267 N ± 4.4km 138.515 E ± 4.8km			PRU	80.05	327	eP	42	22.50	0.4		
MWC	129.10	51	ePKP	36	25.00	0.3				DEPTH = 10.0km (geophysicist)			ZST	80.22	325	eP	42	23.70	0.7		
SBB	129.11	50	ePKP	36	26.00	1.5				4.9mb (26 obs.) 4.4Msz (1 obs.)						e	00	45.80			
GSC	129.66	49	ePKP	36	28.00	2.5X	NEAR WEST COAST OF HONSHU, JAPAN(226)														
TPC	130.69	50	ePKP	36	29.00	1.5	NIIJ	0.39	94	P	30	19.20	0.2				e	00	51.60		
BW06	130.96	37	PKP	36	25.00	-3.0X	MAT	0.76	199	iPc	30	25.50	-0.5	KHC	81.11	327	P	42	27.60	-0.2	
MSU	131.57	43	PKP	36	30.00	0.7				eS	30	35.00		GRF	81.69	329	e(P)	42	31.60	0.9	
SCH	132.21	357	ePKPd	36	29.70	0.0	MTMJ	0.89	220	P	30	28.90	0.8	CDF	84.31	330	eP	42	43.90	-0.4	
	0.6s	37																			

SMF 1.0s 6.00nm 4.8mb
87.10 331 eP 42 58.30 0.2
1.2s 8.95nm 4.9mb
AVF 87.17 331 eP 42 58.00 -0.4
1.2s 22.30nm 5.3mb
LSF 88.32 332 eP 43 04.40 0.4
1.0s 10.00nm 5.1mb
BTH 91.62 331 i(P) 43 39.00 19.5X
ZOBO 148.51 56 PKP 50 00.00 3.0X
LPB 148.72 56 PKP 50 02.00 4.9X
SIV 152.62 45 ePKP 50 08.00 5.6X
PDCR 155.28 354 e(PKP) 50 21.00 14.9X
S.D. = 1.2 on 58 of 67 obs.

? DEC 07, 1990 15h 06m 29.48±1.10s
52.753 N ±18.9km 172.895 E ±14.1km
DEPTH = 33.0km (normal)
4.0mb (4 obs.)

NEAR ISLANDS, ALEUTIAN ISLANDS (5)

SMY 0.73 91 iPd 06 44.10 0.7
IMA 21.26 38 eP 11 14.00 -0.8
FBA 23.25 43 eP 11 35.00 0.7
YKA 37.99 46 eP 13 43.80 -1.6
0.4s 0.40nm 3.6mb
NB2 65.62 350 P 17 12.80 1.0
0.6s 1.30nm 4.2mb
HFS 66.23 349 eP 17 16.20 0.5
0.5s 2.00nm 4.5mb
WRA 79.75 217 P 18 35.00 -0.5
0.6s 0.70nm 3.8mb
S.D. = 1.2 on 7 of 7 obs.

* DEC 07, 1990 15h 07m 13.00±1.81s
40.327 N ±10.3km 29.478 E ±17.1km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.1 (ISK).

IZI 0.01 337 iPg 07 14.20 -0.8
YLV 0.25 341 iPg 07 18.60 0.2
iSg 07 22.60
HRT 0.51 16 iPg 07 23.60 0.2
KCT 0.86 265 ePn 07 29.00 -0.6
DST 0.97 222 ePn 07 32.00 0.5
S.D. = 0.8 on 5 of 5 obs.

* DEC 07, 1990 17h 05m 08.65±1.63s
43.746 N ±9.4km 16.540 E ±24.4km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.8 (ZAG).

HVAR 0.57 187 iPg 05 20.30 0.1
iSg 05 31.30
VBY 1.98 333 ePn 05 42.40 -0.2
iSn 06 09.10
ZAG 2.11 349 iPg 05 46.20 1.8
iSg 06 14.20
PTJ 2.19 349 ePn 05 43.50 -2.2
eS 06 10.30
RIY 2.22 317 ePn 05 47.70 1.7
iSg 06 18.50
CEY 2.50 324 eP 05 50.50 0.5
eSn 06 22.90
LJU 2.70 329 e(Pn) 05 58.00 5.1X
e(Sn) 06 34.50
FVI 3.90 318 P 06 09.50 -0.3
eSn 06 55.60
CTI 4.17 305 P 06 12.50 -1.3
SOTA 5.11 315 ePn 06 27.00 -0.2
i 06 32.30
e 07 22.00
e 07 29.00
S.D. = 1.5 on 9 of 10 obs.

& DEC 07, 1990 17h 21m 00.17s
61.583 N 150.444 W
DEPTH = 56.5km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA 0.19 230 eP 21 09.23 -0.2
eS 21 17.38
PWA 0.28 76 iP 21 09.50 -0.3
eS 21 18.01
PMS 0.54 128 iP 21 11.99 -0.5

PLRM 0.63 89 iP 21 21.93
eS 21 12.63 -0.8
SKT 0.65 308 iP 21 23.15
eS 21 23.34
GHO 0.75 75 eP 21 14.32 -0.7
eS 21 26.35
CGLM 0.80 250 iP 21 15.16 -0.5
eS 21 26.92
CUT 0.83 6 iP 21 15.27 -0.7
eS 21 27.15
NCG 0.84 258 iP 21 15.71 -0.5
eS 21 28.23
SPU 0.87 243 iP 21 15.80 -0.8
eS 21 28.21
CRP 0.88 250 eP 21 16.72 -0.1
NKA 0.93 205 eP 21 18.12 0.9
KNK 0.97 99 iP 21 17.26 -0.6
eS 21 30.87
BGL 0.99 252 eP 21 17.51 -0.7
eS 21 31.54
CKL 0.99 248 iP 21 17.42 -0.8
iS 21 31.33
SLKM 1.08 174 iP 21 18.24 -1.2
eS 21 32.97
RDT 1.39 224 iP 21 22.72 -1.0
eS 21 40.65
SCM 1.51 79 eP 21 24.21 -1.1
REF 1.55 226 eP 21 25.20 -0.8
eS 21 45.12
RDN 1.56 227 eP 21 24.83 -1.2
SEW 1.56 161 eP 21 26.12 0.2
NCT 1.58 231 eP 21 25.61 -0.8
RS2 1.59 226 eP 21 25.98 -0.6
RSO 1.59 226 eP 21 25.78 -0.8
RED 1.63 225 eP 21 26.12 -0.9
GLI 1.77 112 eP 21 26.39 -2.5
KNIM 1.81 132 eP 21 26.45 -3.0
TRF 1.88 2 eP 21 30.12 -0.4
VZW 1.95 104 eP 21 29.88 -1.6
INE 1.99 221 eP 21 31.08 -1.1
LTI 2.00 140 eP 21 29.13 -3.0
TOA 2.09 74 iP 21 33.11 -0.4
CNPM 2.10 191 eP 21 33.49 -0.1
KLU 2.17 90 eP 21 32.95 -1.6
34 obs. associated

? DEC 07, 1990 17h 28m 32.15±0.75s
23.734 S ±13.4km 179.585 E ±22.7km
DEPTH = 550.0km (geophysicist)
4.4mb (3 obs.)

SOUTH OF FIJI ISLANDS (171)

THZ 18.83 196 eP 32 19.60 1.3
KHZ 19.30 194 eP 32 22.70 0.1
LTZ 19.94 196 eP 32 28.00 -0.7
ASPA 41.69 261 iPc 35 35.00 0.5
0.6s 14.00nm 4.7mb
WB5 42.03 266 iP 35 37.00 -0.2
WRA 42.04 266 P 35 43.00 5.7X
0.7s 1.50nm 3.6mb
SPA 66.41 180 iPd 38 27.80 -0.6
1.0s 15.00nm 4.5mb
CHG 89.26 291 eP 40 30.10 -0.9
NB2 141.86 351 PKP 46 51.20 -11.1X
0.7s 3.10nm
HFS 142.31 348 ePKP 46 52.50 -10.5X
0.4s 10.00nm
HRI 146.97 295 ePKP 47 11.50 -0.3
PRNI 147.87 290 iPKPd 47 14.00 0.8
MBH 148.00 289 ePKP 47 14.50 1.0
KRA 149.29 334 ePKP 47 14.10 -0.6
CLL 150.58 343 iPKPd 47 17.80 1.2
0.9s 25.00nm
e 47 26.00
BRG 150.71 341 iPKP 47 17.90 1.0
0.8s 21.00nm
i 47 26.80
PRU 151.30 340 ePKP 47 19.50 1.7X
BCAO 153.50 227 iPKPc 47 19.50 -2.4
0.5s 6.00nm
ic 47 45.50
S.D. = 1.1 on 14 of 18 obs.

& DEC 07, 1990 19h 13m 56.30s
40.775 N 125.667 W
DEPTH = 5.0km

OFF COAST OF NORTHERN CALIFORNIA(34)
<BRK>. ML 2.6 (BRK).

FHC 1.28 88 eP 14 18.00 -2.5
eS 14 34.40
WDC 2.39 94 eP 14 34.30 -2.4
eS 15 03.10
LBFM 2.91 77 eP 14 38.00 -6.4
ORV 3.42 110 eP 14 49.00 -2.3
eS 15 27.70
ARN 4.70 135 e(P) 15 12.00 2.5
5 obs. associated

DEC 07, 1990 19h 21m 24.01±0.72s
51.689 N ±4.0km 16.300 E ±7.8km
DEPTH = 10.0km (geophysicist)

POLAND (548)

KSP 0.85 180 iP 21 40.50 0.2
iS 21 49.60
BRG 1.69 242 ePn 21 53.60 -0.1
iPg 21 55.20
iSg 22 14.60
PRU 2.03 214 Pn 21 58.70 0.0
ePg 22 00.90
Sn 22 17.50
Sg 22 24.00
CLL 2.10 261 iPn 22 00.00 0.4
iPg 22 03.10
iSg 22 28.10
KRA 2.83 124 iPd 22 22.50 12.5X
iS 23 00.10
KHC 3.10 215 iPn 22 13.60 -0.2
Pg 22 20.00
Sn 22 50.00
Sg 23 01.70
HOF 3.11 245 iPnc 22 14.30 0.2
MOX 3.13 252 ePn 22 15.00 0.7
iPg 22 23.00
iSg 23 02.00
WET 3.36 222 iPnc 22 17.80 0.2
VKA 3.43 180 ePn 22 15.00 -3.6X
e 22 20.00
i 22 28.70
iSg 23 11.30
ZST 3.53 171 iPn 22 32.00 12.0X
i 23 16.10
SPC 3.55 133 eP 22 31.60 11.1X
GRF 3.80 240 e(Pn) 22 24.20 0.4
e(Pg) 22 37.30
eSg 23 21.20
BHG 4.55 211 eP 22 50.00 15.6X
FUR 4.79 225 iPc 22 37.90 0.0
SOTA 5.57 219 ePn 22 48.50 -0.5
ic 22 49.30
eSn 23 48.00
FVI 5.60 206 P 22 49.00 -0.3
eSn 24 15.50
ABH 5.84 255 ePg 22 52.26 -0.4
RUP 6.20 255 ePg 22 56.88 -0.9
CTI 6.42 210 P 23 01.40 0.4
HFS 8.59 351 eP 23 31.70 0.5
0.4s 0.80nm 4.4mb X
NRA0 9.45 346 Pn 23 42.50 -0.5
Sn 25 25.50
CDR 10.70 226 eP 24 14.40 14.1X
e 24 19.70
S.D. = 0.5 on 17 of 23 obs.

DEC 07, 1990 19h 35m 43.74±0.67s
36.233 N ±8.9km 139.949 E ±7.4km
DEPTH = 77.3 ±5.2 km
4.3mb (4 obs.)

HONSHU, JAPAN (227)

KAKJ 0.18 99 iP+ 35 55.50 0.3
CHJJ 0.79 257 iPd 35 59.30 -1.1
NIJJ 1.26 323 iPd 36 06.50 0.3
S 36 21.70
MAT 1.44 283 iPd 36 07.50 -1.0
eS 36 26.00
MTMJ 1.77 282 iPd 36 13.20 0.2
IIDJ 1.82 246 P 36 14.90 1.2
S 36 36.20
TSRJ 3.29 259 P 36 35.00 1.0
WKYJ 4.09 242 P 36 45.00 -0.3
TKSJ 5.33 247 P 37 02.30 -0.2

07d 19h

YONJ 5.38 261 P 37 03.20 0.0
 GUN 46.06 276 P 44 01.40 -0.6
 PKI 46.58 275 P 44 06.20 0.1
 KKN 46.59 276 P 44 06.40 0.3
 GKN 47.02 276 P 44 09.60 0.2
 0.8s 20.00nm 5.1mb
 FBA 50.41 32 eP 44 33.10 -1.6
 1.0s 0.90nm 3.8mb
 WB5 56.06 186 eP 45 16.90 0.0
 WRA 56.12 186 P 45 17.00 -0.4
 0.5s 5.70nm 4.9mb
 GBA 59.98 265 Pd 45 44.40 -0.1
 YKA 65.09 30 eP 46 19.60 1.8
 0.9s 0.80nm 3.6mb
 S.D. = 0.9 on 19 of 19 obs.

* DEC 07, 1990 20h 28m 04.89± 0.90s
 38.959 N ±24.2km 115.802 W ±12.3km
 DEPTH = 10.0km (geophysicist)
 NEVADA (37)
 ML 3.0 (NEIS).

TNP 1.41 232 iPd 28 30.90 0.0
 BONR 2.20 244 eP 28 42.30 0.0
 DUG 2.62 61 P 28 47.70 -0.4
 MSU 2.87 98 P 28 51.70 -0.1
 DAU 3.80 66 P 29 05.50 0.5
 S.D. = 0.5 on 5 of 5 obs.

* DEC 07, 1990 20h 28m 05.77± 1.16s
 31.283 S ± 9.2km 69.276 W ±13.6km
 DEPTH = 33.0km (normal)
 SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.57 117 eP 28 18.00 0.5
 eS 28 31.00
 RTLL 0.69 94 iPd 28 19.10 0.0
 eS 28 38.30
 RTCV 0.85 133 e(P) 28 21.80 0.4
 CFA 0.94 110 ePd 28 22.10 -0.6
 S 28 37.00
 RTRS 1.12 352 iPd 28 25.20 0.0
 MDZ 1.64 167 iP 28 32.50 -0.2
 iS 29 06.30
 S.D. = 0.5 on 6 of 6 obs.

DEC 07, 1990 20h 31m 03.22± 0.37s
 6.787 S ± 6.3km 132.260 E ± 7.7km
 DEPTH = 33.0km (normal)
 5.2mb (11 obs.)

TANIMBAR ISLANDS REGION (281)

AAI 5.09 307 ePd 32 20.20 1.0
 eS 33 13.00
 JAY 9.42 64 ePd 33 19.50 -0.4
 WB5 13.18 171 eP 34 04.30 -6.4X
 QIS 15.43 153 iPd 34 35.10 -5.1X
 eS 37 15.00
 e 39 23.00
 CTA 18.95 136 iPd 35 23.80 -0.6
 1.0s 39.00nm 4.6mb
 i 35 36.00
 KKM 20.47 308 ePd 35 40.00 -1.0
 0.8s 135.50nm 5.4mb
 QLP 22.75 151 iPd 36 07.20 3.4X
 i 36 18.60
 e 40 43.00
 QCP 24.00 333 eP 36 34.00 18.0X
 RMO 25.11 143 e(P) 36 13.00 -13.7X
 e 36 41.00
 e 42 12.00
 BAG 25.78 333 eP 36 33.00 -0.3
 HNR 27.53 97 eP 37 02.00 12.9X
 BAL 27.83 210 eP 36 51.50 -0.2
 0.5s 34.00nm 5.3mb
 KLB 28.16 207 eP 36 55.00 0.4
 BRS 28.27 139 eP 36 54.00 -1.8
 i 37 44.00
 ADE 28.67 169 eP 36 59.60 0.4
 MUN 29.20 209 eP 37 03.50 -0.5
 NWA0 29.52 206 eP 37 06.70 -0.2
 COO 29.99 145 e(P) 37 11.00 -0.2
 e 37 23.00
 BFD 31.67 164 eP 37 28.00 2.2
 e 43 40.00
 TOO 32.92 160 iPd 37 38.20 1.4
 e 37 49.60

LOE 38.57 309 iPd 38 25.00 0.0
 SSE 39.13 345 P 38 31.00 1.5
 1.0s 30.00nm 5.0mb
 i 38 37.00
 BDT 40.62 306 eP 38 43.20 1.2
 0.8s 51.90nm 5.3mb
 CHG 41.54 308 eP 38 49.90 0.3
 0.9s 72.48nm 5.4mb
 KMI 42.79 319 Pd 39 01.20 1.2
 1.5s 80.00nm 5.2mb
 MAT 43.46 7 iPd 39 04.50 -0.5
 0.9s 10.92nm 4.6mb
 eS 45 52.00
 LZH 50.31 330 eP 40 00.00 1.0
 1.5s 54.00nm 5.3mb
 pP 40 06.50 22kmX

GUN 56.52 310 P 40 45.00 -0.4
 PKI 56.71 309 P 40 46.20 -0.6
 KKN 56.92 309 P 40 47.60 -0.5
 DMN 56.96 309 P 40 48.00 -0.5
 KOD 57.12 287 eP 40 49.50 -0.3
 GKN 57.52 309 P 40 51.90 -0.3
 GBA 58.07 291 Pd 40 55.10 -0.9
 0.8s 11.40nm 5.0mb
 HYB 58.25 295 eP 40 55.50 -1.8
 1.0s 40.00nm 5.5mb
 POO 62.84 295 eP 41 26.80 -1.8
 NDI 63.65 307 iPd 41 32.50 -1.2
 OUE 72.52 304 iPd 42 31.00 1.6
 MAIO 80.30 308 iPd 43 14.60 1.8
 YKA 106.57 26 ePKP 49 39.00 12.9X
 0.4s 0.10nm
 CNCB 149.17 140 PKP 50 54.00 6.8X
 LPB 149.30 139 ePKP 50 58.00 10.8X
 ZOBO 149.47 139 PKP 50 54.00 6.3X
 1.0s 7.50nm
 SIV 153.80 150 PKP 51 02.80 9.5X
 S.D. = 1.1 on 33 of 44 obs.

& DEC 07, 1990 21h 51m 58.80s
 40.670 N 125.333 W
 DEPTH = 9.0km
 4.0mb (4 obs.)
 OFF COAST OF NORTHERN CALIFORNIA (34)
 <BRK>. ML 4.3 (BRK). Felt (V) at
 Eureka and (III) Rio Dell. Also
 felt at Petrolia and Scotia.

FHC 1.03 82 iPd 52 17.29 -1.1
 iS 52 30.28
 WDC 2.13 92 iPd 52 32.76 -2.2
 iS 52 59.67
 LTCM 2.49 100 iPd 52 38.20 -2.0
 LBFM 2.69 74 iPd 52 41.80 -1.5
 MIN 2.86 95 iPd 52 43.02 -2.6
 eS 53 17.37
 NWRM 2.91 139 eP 52 42.80 -3.3
 ORV 3.14 110 iPd 52 46.87 -2.5
 eS 53 22.04
 ZSP 3.62 138 iPd 52 53.10 -3.1
 iS 53 33.50
 BRK 3.67 139 iPd 52 53.50 -3.5
 eS 53 34.50
 BKS 3.68 138 iPd 52 54.10 -3.0
 iS 53 33.50
 HBO 3.88 34 P 52 59.57 -0.5
 S 53 44.50
 PCC 3.91 143 eP 52 56.30 -4.0
 MHC 4.39 138 iPd 53 03.80 -3.5
 ARN 4.44 137 eP 53 03.50 -4.5
 GCC 4.47 143 eP 53 03.80 -4.5
 CMB 4.65 123 iPd 53 09.30 -1.6
 SAO 4.94 141 iPd 53 10.00 -5.0
 GMD 4.96 39 P 53 14.77 -0.6
 GT2 5.02 26 P 53 15.64 -0.4
 KMOR 5.14 15 P 53 16.74 -1.1
 VIPM 5.18 41 P 53 18.10 -0.4
 VBEM 5.18 31 P 53 17.43 -1.0
 PGO 5.24 23 P 53 19.26 0.2
 LLA 5.31 138 eP 53 15.90 -4.3
 PRS 5.33 143 eP 53 15.50 -5.0
 CROR 5.36 35 P 53 20.03 -1.0
 VLMM 5.43 25 P 53 21.49 -0.5
 VFP 5.44 30 P 53 21.85 -0.3
 VLL 5.49 28 P 53 22.49 -0.3
 NLO 5.59 14 P 53 23.45 -0.7
 VTHM 5.71 36 P 53 25.41 -0.4

FRI 5.72 128 iPd 53 24.30 -1.7
 RVW 5.79 18 P 53 26.51 -0.4
 LVP 5.80 21 P 53 25.92 -1.2
 MTMW 5.82 22 P 53 26.22 -1.1
 PRI 5.82 139 eP 53 23.50 -4.0
 VGB 5.88 33 P 53 28.03 -0.2
 GULW 5.92 26 P 53 28.10 -0.7
 JLK 5.94 22 P 53 28.05 -1.1
 CDFW 5.95 23 P 53 27.90 -1.2
 HSR 5.96 22 P 53 28.53 -0.9
 SHW 5.96 21 P 53 28.28 -1.2
 ESD 5.99 22 P 53 29.45 -0.4
 STD 6.01 21 P 53 28.73 -1.3
 SOSW 6.03 22 P 53 29.34 -1.0
 ERK 6.04 20 P 53 29.13 -1.4
 BONR 6.09 114 eP 53 28.80 -2.6
 ASR 6.12 25 P 53 30.65 -1.0
 CZM 6.12 19 P 53 30.47 -1.1
 KOSW 6.22 20 P 53 32.60 -0.4
 GL2 6.23 30 P 53 32.78 -0.3
 JBO 6.25 38 P 53 33.16 -0.4
 APW 6.29 17 P 53 33.03 -0.9
 GLK 6.48 23 P 53 36.00 -0.8
 CPW 6.50 13 P 53 35.63 -1.3
 LON 6.59 22 P 53 36.86 -1.4
 PATW 6.61 36 P 53 37.89 -0.5
 TNP 6.80 110 eP 53 38.40 -2.9
 SMW 6.80 12 P 53 39.60 -1.6
 NAC 6.88 27 P 53 41.54 -0.8
 MXC 6.94 30 P 53 42.53 -0.6
 BRVW 6.99 32 P 53 43.44 -0.4
 RSW 7.08 34 P 53 43.62 -1.5
 GMW 7.12 14 P 53 44.32 -1.2
 EBG 7.13 27 P 53 45.50 -0.2
 HDW 7.17 12 P 53 44.73 -1.6
 LNOR 7.31 42 P 53 47.92 -0.4
 TBM 7.34 26 P 53 48.22 -0.6
 BLN 7.53 12 P 53 50.71 -0.6
 RC1 7.58 32 P 53 51.03 -1.1
 CLC 7.78 126 eP 53 52.00 -2.9
 JCW 7.91 17 P 53 54.66 -2.0
 MCW 8.20 12 P 53 59.02 -1.8
 RPW 8.24 18 P 53 59.67 -1.7
 SBB 8.43 133 eP 54 02.00 -2.0
 GSC 8.60 126 eP 54 04.00 -2.5
 DUG 9.56 89 eP 54 18.30 -1.5
 TPC 9.87 129 eP 54 20.00 -3.9
 PLM 9.96 135 eP 54 23.00 -2.2
 MSU 10.38 98 eP 54 29.40 -1.8
 LRM 10.71 57 eP 54 33.20 -2.5
 BW06 11.98 75 eP 54 50.70 -2.2
 ALQ 15.97 105 eP 55 45.00 -0.4
 0.9s 4.83nm 3.6mb
 FFC 20.95 40 iPd 56 42.00 -2.2
 1.2s 52.00nm 4.8mb
 YKA 22.79 13 eP 57 02.40 -0.1
 1.1s 4.40nm 3.9mb
 PMR 25.45 333 eP 57 26.50 -1.7
 0.8s 3.62nm 4.1mb
 IMA 30.03 337 eP 58 10.00 0.0
 87 obs. associated

? DEC 07, 1990 22h 16m 17.01± 4.65s
 52.435 N ±18.4km 177.834 W ±53.2km
 DEPTH = 33.0km (normal)
 3.6mb (1 obs.)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 Felt (III) on Adak.

ADK 0.90 127 iPd 16 33.30 0.1
 KDC 15.40 60 eP 19 53.10 -0.1
 TTA 15.61 39 eP 20 03.00 7.0X
 IMA 18.24 32 eP 20 33.50 4.6X
 FBA 19.75 39 eP 20 47.00 0.4
 YKA 34.07 48 eP 22 59.50 -0.4
 0.5s 0.40nm 3.6mb
 S.D. = 0.6 on 4 of 6 obs.

DEC 07, 1990 22h 51m 28.74± 0.56s
 43.171 N ± 5.7km 26.124 E ± 4.8km
 DEPTH = 10.0km (geophysicist)
 BULGARIA (359)

PVL 0.58 275 iPd 51 40.00 -0.5
 JMB 0.78 154 ePd 51 43.00 -0.9
 DIM 1.20 201 ePd 51 52.00 0.9
 PLD 1.49 225 eP 51 55.00 -0.6

PGB	1.57	247	iP	51	57.00	0.3	WRA	43.73	263	P	15	29.00	-1.6	KMI	88.88	297	Pd	20	10.00	1.1
PSN	1.59	71	eP	51	57.00	0.1		0.6s	54	40nm			5.3mb		1.5s	120.00nm			5.6mb	
KDZ	1.61	199	iPd	51	58.00	0.7	GUA	49.47	311	eP	16	14.20	0.1	IMA	88.91	10	ePd	20	06.90	-1.2
DMK	1.81	138	ePn	52	00.50	0.3		0.8s	328.36nm			5.9mb			1.1s	31.70nm			5.2mb	
RZN	1.81	216	eP	52	01.00	0.6	PJG	49.54	311	eP	16	14.60	0.0	FBA	88.94	13	ePc	20	06.00	-2.1
DRA	2.02	319	eP	52	24.00	20.8X	KLB	57.09	245	eP	17	07.30	-0.9		0.9s	173.96nm			6.0mb	
VTS	2.22	256	iP	52	07.00	0.7	BAL	58.10	246	eP	17	14.00	-1.0	BDT	89.03	289	iPd	20	11.00	1.6
MLR	2.32	357	eP	52	08.00	0.3		0.5s	15.00nm			4.5mb			1.0s	82.80nm			5.6mb	
MMB	2.38	229	ePc	52	13.00	4.6X	MUN	58.37	245	eP	17	16.30	-0.5	HHC	89.16	315	P	20	10.30	0.6
KKB	2.60	241	eP	52	10.00	-1.5	KAKJ	68.86	325	P	18	21.80	-1.2		1.0s	100.00nm			5.7mb	
CTT	2.65	139	ePn	52	12.00	-0.3	SPA	69.09	180	iPc	18	25.40	1.1	LRM	89.64	40	eP	20	12.50	0.5
VR1	2.73	9	ePc	52	19.00	5.6X		1.0s	20.00nm			4.6mb		CHG	89.67	290	eP	20	13.20	0.8
VAY	3.22	236	ePn	52	28.40	8.1X	CHJJ	69.38	324	P	18	25.10	-1.0		1.0s	57.50nm			5.5mb	
BZS	4.05	309	ePc	52	43.50	11.4X	IIDJ	69.56	323	P	18	26.30	-1.0	BTO	90.07	314	eP	20	14.00	0.1
S.D. = 0.8 on 13 of 18 obs.							MAT	70.17	324	iPc	18	28.90	-1.9	CD2	90.40	303	eP	20	16.00	0.4
DEC 07, 1990 23h 08m 13.31 ± 0.70s								0.9s	43.70nm			5.0mb		LZH	92.46	308	Pd	20	25.50	0.4
21.041 S ± 4.7km 178.861 W ± 4.9km							NIJ	70.26	325	P	18	32.30	1.0		1.4s	47.00nm			5.4mb	
DEPTH = 569.6 ± 8.7 km							MTMJ	70.42	324	P	18	31.50	-0.9	SES	92.78	36	eP	20	26.00	-0.1
5.3mb (36 obs.)							TSRJ	70.69	322	P	18	33.50	-0.3	INK	95.00	15	eP	20	33.50	-2.2
FIJI ISLANDS REGION (181)							ADK	72.63	1	ePc	18	42.90	-1.7	GTA	96.69	310	P	20	44.00	-0.2
CENTROID, MOMENT TENSOR (HRV)								0.6s	20.10nm			4.8mb			1.4s	20.00nm			5.2mb	
Data Used: GDSN							OZH	76.04	304	P	19	04.00	-0.2	YKA	97.34	25	eP	20	44.80	-1.6
L.P.B.: 12S, 24C								0.9s	100.00nm			5.3mb			1.0s	2.40nm			4.5mb	
Centroid Location:							SSE	77.42	310	Pd	19	11.30	-0.3	GKN	105.08	295	PKP	25	29.70	-3.5X
Origin Time 23:08:25.1 0.8								1.0s	37.00nm			4.8mb		QUE	120.66	293	ePKP	26	02.00	-0.9
Lat 20.445 0.08 Lon 179.05W 0.05							SYF	78.63	46	eP	19	14.00	-4.1X	MAIO	127.32	300	iPKPc	26	14.50	-0.9
Dep 616.5 3.6 Half-duration 1.8							PRS	78.76	44	eP	19	19.40	0.8	SOB1	128.92	122	ePKP	26	16.90	-2.1
Moment Tensor: Scale 10**17 Nm							GCC	78.78	43	eP	19	19.00	0.3	KAF	135.44	343	ePKP	26	28.40	-1.4
Mrr=-1.14 0.06 Mtt=0.72 0.10							PCC	78.82	43	eP	19	19.50	0.6	NUR	137.22	343	ePKP	26	31.00	-2.3X
Mff=0.43 0.09 Mrt=-1.11 0.09							SAO	78.97	44	eP	19	20.70	1.0		0.7s	25.40nm				
Mrf=-0.45 0.10 Mtf=-0.50 0.09							PRI	79.11	44	eP	19	22.00	1.4	NB2	139.41	352	PKP	26	28.10	-9.2X
Principal Axes:							BRK	79.12	42	eP	19	21.40	1.0		0.8s	9.60nm				
T Vol=1.32 Plg=20 Azm=200							BKS	79.14	42	iPd	19	21.30	0.8	HFS	139.94	350	ePKP	26	28.40	-9.8X
N 0.51 22 101							MHC	79.19	43	eP	19	22.00	1.0		1.0s	36.40nm				
P -1.83 60 328							LLA	79.21	44	eP	19	21.70	0.7	KVT	144.37	312	iPKP	26	45.00	-1.5
Best Double Couple: Mo=1.6*10**17							GZH	79.29	300	iPc	19	22.80	1.2	LWI	144.38	233	iPKPc	26	48.20	0.6
NP1:Strike=322 Dip=32 Slip=-45							KGM	79.37	276	ePc	19	23.50	1.3	EKA	145.61	4	PKPd	26	48.90	0.8
NP2: 92 68 -114							NJ2	79.61	310	Pd	19	23.00	-0.1		1.0s	55.50nm				
								1.0s	150.00nm			5.4mb		KAS	145.81	314	ePKP	26	50.00	1.0
SGE	4.58	318	iPc	09	47.60	5.9X	MWC	79.76	47	eP	19	24.00	-0.1	CSTJ	146.67	295	PKPd	26	51.30	0.7
AFI	9.79	45	iPc	10	30.80	0.6	BAR	79.88	49	eP	19	23.00	-1.6	MDSJ	146.94	296	PKPc	26	51.58	0.5
			S	10	42.00		FHC	79.88	39	eP	19	25.70	1.3	HRI	147.04	299	ePKP	26	49.00	-2.2
DZM	13.71	263	iPc	11	12.00	2.6X	RVR	80.10	48	eP	19	27.00	1.3	GHZJ	147.04	294	PKPc	26	52.36	1.0
			iS	13	37.30		PLM	80.11	49	eP	19	26.00	0.0	JARJ	147.09	297	PKPd	26	52.00	0.7
PUZ	17.16	188	P	11	44.50	1.7	SBB	80.18	47	eP	19	26.00	-0.1	SHMJ	147.14	298	PKPc	26	53.67	2.4X
WHH	18.23	192	P	11	53.10	0.0	FRI	80.23	44	eP	19	27.10	0.9	BBTK	147.16	312	ePKP	26	49.50	-1.7
PGZ	19.95	191	P	12	09.40	0.3	CMB	80.41	43	eP	19	27.40	0.2	QTRJ	147.20	295	PKPc	26	52.98	1.5
KIW	20.46	194	P	12	13.20	-0.5	MDJ	80.50	325	Pd	19	27.80	0.4	BURJ	147.20	297	PKPc	26	52.25	0.7
MTW	20.62	192	P	12	14.10	-1.1	WDC	80.60	40	eP	19	28.30	0.2	SALJ	147.35	297	PKPc	26	52.50	0.8
BLW	20.83	192	P	12	17.30	0.2	ORV	80.61	41	eP	19	28.70	0.5	MASJ	147.37	296	PKPc	26	52.50	0.7
WDW	20.83	193	P	12	16.00	-1.1	AIA	80.79	157	eP	19	30.20	1.6	KFNJ	147.38	296	PKPc	26	52.51	0.9
MRW	20.86	194	P	12	17.30	0.0	CLC	80.96	46	eP	19	30.00	-0.1	KRA	147.45	337	ePKPd	26	53.50	2.3X
WEL	20.89	194	P	12	17.00	-0.7	TPC	81.09	48	eP	19	31.00	0.2		1.0s	62.00nm				
MOW	20.92	192	P	12	18.00	0.0	GSC	81.22	47	eP	19	31.00	-0.5			i	26	58.10		
TCW	20.94	195	P	12	17.80	-0.3	GLA	81.39	50	eP	19	34.00	1.7	MKRJ	147.47	296	PKPd	26	52.95	1.0
THZ	21.80	197	P	12	26.00	0.0	SNY	82.11	320	iPd	19	35.80	0.2	AYN	147.54	291	PKP	26	51.30	-0.7
KHZ	22.25	195	P	12	28.90	-1.1		1.0s	40.00nm			4.9mb		VRI	147.57	326	ePKPd	26	53.00	1.4
	0.9s	184.00nm					WHN	82.12	307	Pd	19	36.70	0.7	LISJ	147.66	295	PKPd	26	53.66	1.6
LTZ	22.92	197	P	12	34.60	-1.5		1.0s	30.00nm			4.8mb		DSI	147.68	296	ePKP	26	50.00	-2.2X
HNR	23.44	296	eP	12	40.00	-1.0	CN2	82.24	323	Pd	19	36.00	-0.3	KSP	147.96	342	ePKP	26	51.50	-0.5
MOZ	23.68	195	P	12	42.60	-0.3		1.2s	100.00nm			5.2mb			1.0s	93.00nm				
SVO	23.70	297	eP	12	50.00	6.7X	IPM	82.44	278	ePc	19	39.00	1.1			id	26	55.50		
MMCZ	25.87	200	P	13	01.80	-0.6		0.9s	127.60nm			5.5mb				ic	27	00.00		
MHZ	25.88	199	P	13	02.00	-0.4	TIA	83.05	313	eP	19	40.60	0.1	WIT	148.00	354	ePKP	26	56.00	4.1X
COO	27.92	244	iPc	13	21.30	1.0	SVW	83.98	11	ePd	19	43.40	-1.3	SPC	148.05	336	ePKP	26	53.90	1.5
	0.7s	31.00nm						0.9s	21.20nm			4.8mb				i	26	55.60		
RMO	30.08	253	iPd	13	41.00	2.1	PGC	85.15	33	eP	19	50.00	-0.5	MLR	148.23	326	ePKPd	26	56.50	3.7X
			e	15	17.00		TTA	85.62	10	ePd	19	52.20	-0.4	CLL	148.39	346	iPKP	26	51.70	-0.9
CTA	32.64	265	iPc	14	01.20	0.7		1.1s	42.50nm			5.0mb			1.1s	125.00nm				
	0.5s	61.97nm					BJI	85.71	316	eP	19	53.50	0.1			i	26	56.20		
			i	14	56.50			1.4s	88.00nm			5.3mb				pPKP	29	14.00		
			iPcP	16	29.20		PMR	85.73	14	ePc	19	51.70	-1.3	RMN	148.50	294	ePKP			

GUA	20.23	353	eP	42	56.50	12.1X
PJG	20.28	353	eP	42	55.70	10.8X
BRS	21.23	167	iPc	42	54.00	-0.5
			i	43	15.40	
			eS	46	58.00	
ASPA	21.31	216	iPd	42	55.10	-0.3
	0.7s	140.80nm				5.4mb
Z	22s	1.70um				4.4MsZ
			iS	46	52.20	
DZM	23.91	132	iPc	43	21.20	0.3
COO	24.15	171	iPc	43	23.20	0.1
	1.0s	179.00nm				5.5mb
			i	43	28.40	
CMS	24.73	183	eP	43	28.00	-0.6
BWA	27.63	178	eP	43	55.10	-0.2
CAN	28.55	177	eP	44	03.10	-0.5
			i	44	28.00	
ADE	29.28	195	iPd	44	09.40	-0.8
TOO	30.81	183	iPd	44	23.80	0.2
			e	44	42.00	
KLB	37.18	224	iPd	45	17.80	-0.5
BAL	37.36	227	eP	45	19.50	-0.4
NWAO	38.32	223	eP	45	26.80	-1.1
	20s	1.10um				
N	20s	0.90um				
TCW	41.90	149	P	45	58.40	1.1
KHZ	42.44	151	P	46	01.20	-0.5
	1.2s	138.00nm				5.7mb
MTW	42.49	148	P	46	02.50	0.3
MOW	42.55	149	P	46	02.70	0.0
BLW	42.63	148	P	46	04.00	0.7
IIDJ	42.87	349	P	46	04.50	-0.8
CHJJ	43.22	350	P	46	08.00	-0.1
MAT	43.84	349	eP	46	12.00	-1.2
	1.2s	20.31nm				4.8mb
			eS	53	08.00	
NIJJ	44.38	350	P	46	16.60	-0.9
IPM	47.64	282	ePd	46	44.80	1.2
	1.0s	69.30nm				5.5mb
			e	46	50.60	
LOE	51.08	299	eP	47	10.00	0.0
NST	51.82	296	eP	47	17.50	2.0
BDT	53.41	297	eP	47	28.10	0.8
KMI	53.73	308	eP	47	34.50	4.6X
			sP	47	46.00	
CHG	54.07	299	eP	47	33.00	0.8
BJI	54.68	331	eP	47	47.00	10.7X
	1.6s	30.00nm				
LZH	58.98	319	eP	48	22.00	14.9X
	1.5s	48.00nm				
Z	19s	10.49um				6.0MsZ
			i	48	59.50	
			i	49	38.50	-
SHL	62.73	303	eP	48	31.50	-1.2
GUN	68.58	303	P	49	09.70	-0.7
PKI	68.85	303	P	49	11.80	-0.2
KKN	69.03	303	P	49	12.80	-0.2
DMN	69.12	303	P	49	13.60	0.0
GKN	69.64	303	P	49	16.60	0.0
KOD	71.65	283	eP	49	43.10	14.0X
HYB	72.08	291	eP	49	31.00	-0.3
	1.0s	30.00nm				5.2mb
GBA	72.32	286	Pc	49	33.50	0.8
	0.9s	17.20nm				5.0mb
NDI	76.08	302	eP	49	54.00	-0.2
POO	76.69	291	P	49	57.00	-0.9
SPA	83.37	180	iPd	50	34.20	1.4
	1.0s	32.50nm				5.2mb
QUE	85.14	301	eP	50	43.50	1.1
INK	92.12	21	eP	51	14.00	-0.5
			pP	51	31.00	59kmX
MAIO	92.23	306	eP	51	31.00	15.2X
YKA	99.57	28	eP	51	48.30	-0.2
	1.0s	1.20nm				4.4mb
BRG	121.48	327	i(PKP)	57	18.00	19.0X

	0.9s	6.55nm			
Z	20s	0.22um		4.9msz	
BCAO	129.09	270 iPKPc	57	17.00	2.2X
	1.6s	33.00nm			
		id	57	47.00	
CNCB	137.94	124 PKP	57	31.00	-1.1
LPB	137.98	124 PKP	57	34.00	2.0
ZOBO	138.09	123 PKP	57	31.00	-1.4
	1.1s	11.60nm			
SDV	142.25	84 ePKP	57	37.20	-2.3X
TOV	143.06	83 ePKP	57	34.50	-6.2X
IFR	143.11	320 ePKP	57	41.00	0.6
		e	57	52.00	
AVE	144.68	322 iPKP	57	48.00	5.2X
		i	58	05.50	
AVE	144.68	322 iPKP	57	57.00	14.2X
KIC	152.34	271 PKP	58	03.70	8.3X
LIC	152.61	271 PKP	58	03.32	7.6X
TIC	152.62	272 PKP	58	03.40	7.6X
LKO	153.13	278 PKP	58	05.14	8.6X

S.D. = 0.9 on 57 of 78 obs.

DEC 08, 1990 00h 47m 44.53±0.49s
 39.761 N ± 4.2km 21.661 E ± 5.2km
 DEPTH = 10.0km (geophysicist)

GREECE (364)
 MD 3.2 (ATH), 2.9 (THE).

KZN	0.55	9 ePn	47	54.80	-1.0
		eSn	48	04.50	
LIT	0.72	62 iP	47	58.76	0.0
		iS	48	12.06	
EVR	0.85	172 ePn	48	00.00	-1.0
AGG	0.90	145 eP	48	02.17	0.3
		iS	48	16.52	
FNA	1.04	348 iP	48	03.86	-0.4
IGT	1.05	258 eP	48	03.44	-0.9
		iS	48	22.34	
NEO	1.29	110 ePb	48	08.00	-0.5
KEK	1.44	269 ePb	48	13.50	2.9X
PLG	1.50	65 ePb	48	11.50	0.0
OHR	1.50	334 ePn	48	12.30	0.8
SOH	1.67	50 eP	48	14.20	0.2
		iS	48	41.16	
KNT	1.69	34 eP	48	14.08	-0.1
		iS	48	36.58	
VAY	1.70	24 ePn	48	15.40	1.0
VLS	1.79	208 ePn	48	17.10	1.4

S.D. = 0.8 on 13 of 14 obs.

* DEC 08, 1990 02h 21m 28.49±0.66s
 39.011 N ± 17.5km 115.321 W ± 7.5km
 DEPTH = 10.0km (geophysicist)

NEVADA (37)
 ML 3.3 (NEIS).

TNP	1.75	239 iPd	21	59.50	0.2
KVN	2.16	272 e(P)	22	05.20	-0.1
DUG	2.27	58 eP	22	06.20	-0.6
MSU	2.51	100 P	22	10.00	-0.2
BONR	2.57	247 eP	22	11.00	-0.1
DAU	3.43	65 P	22	24.20	0.8

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

& DEC 08, 1990 02h 32m 17.15s
 61.482 N 150.030 W
 DEPTH = 40.2km

SOUTHERN ALASKA (2)
 <AGS-P>.

PWA	0.18	23 iP	32	24.27	-0.1
PMS	0.33	136 eP	32	25.45	-0.4
		eS	32	32.24	
SUA	0.34	267 eP	32	25.95	-0.1
		eS	32	33.77	
PLRM	0.44	75 iP	32	26.24	-0.9
		iS	32	34.19	
GHO	0.60	61 iP	32	28.62	-0.8
		eS	32	38.42	
KNK	0.76	95 iP	32	30.54	-1.0
		eS	32	41.48	
SKT	0.87	306 iP	32	32.19	-0.9
		eS	32	44.80	
CUT	0.93	353 eP	32	33.28	-0.6
		eS	32	46.60	
NKA	0.95	219 eP	32	34.59	0.5
CGLM	0.97	260 eP	32	33.92	-0.6

SLKM	0.98	186 eP	32	33.13	-1.5
		eS	32	46.74	
SPU	1.02	254 iP	32	34.45	-0.8
		iS	32	48.53	
NCG	1.02	267 iP	32	34.74	-0.6
		eS	32	48.95	
CKL	1.15	257 iP	32	36.30	-0.8
		eS	32	51.79	
BGL	1.16	260 iP	32	36.46	-0.8
SCM	1.34	74 iP	32	38.65	-1.1
SEW	1.41	168 eP	32	40.04	-0.7
RDT	1.47	233 eP	32	40.35	-1.3
		eS	32	59.41	
GLI	1.55	112 eP	32	40.41	-2.2
NNL	1.57	204 eP	32	42.33	-0.7
KNIM	1.60	134 eP	32	40.45	-2.9
REF	1.64	234 eP	32	42.75	-1.4
RDN	1.65	235 eP	32	42.83	-1.4
		eS	33	03.48	
RSO	1.68	234 eP	32	43.97	-0.7
RS2	1.68	234 eP	32	43.59	-1.1
NCT	1.69	238 eP	32	43.74	-1.0
		eS	33	04.84	
RED	1.71	233 eP	32	43.84	-1.2
VZW	1.73	103 eP	32	43.63	-1.7
BRLK	1.77	194 eP	32	43.92	-2.0
VLZ	1.82	100 eP	32	44.17	-2.3
TOA	1.94	69 eP	32	47.80	-0.5
KLU	1.97	88 eP	32	46.70	-2.1
TRF	1.98	357 eP	32	49.31	0.3
SDG	2.36	62 eP	32	54.39	0.0

34 obs. associated

DEC 08, 1990 03h 34m 11.79±0.42s
 38.163 N ± 4.1km 23.193 E ± 5.5km
 DEPTH = 8.3 ± 3.3 km

GREECE (364)
 ML 3.3 (ATH), MD 3.3 (THE).

ATH	0.45	115 ePg	34	20.70	-0.3
AGG	1.09	322 eP	34	32.20	-0.3
		eS	34	49.40	
NEO	1.14	1 ePg	34	33.20	-0.1
EVR	1.32	305 ePb	34	35.20	-1.2
ITM	1.40	226 ePg	34	37.20	-0.4
VLI	1.46	188 ePb	34	37.00	-1.3
PAIG	1.80	12 eP	34	42.54	-0.8
LIT	2.01	344 iP	34	45.94	-0.4
VLS	2.05	271 ePn	34	48.10	1.1
APE	2.15	120 ePb	34	50.20	1.7
PLG	2.22	5 ePn	34	48.20	-1.2
OUR	2.25	16 eP	34	48.64	-1.2
KZN	2.41	333 ePn	34	51.70	-0.4
IGT	2.62	302 eP	34	56.64	1.6
PRK	2.64	65 ePg	35	01.70	6.3X
SOH	2.66	3 iP	34	57.01	1.3
VAM	2.87	163 ePn	34	57.20	-1.4
EZN	2.95	55 ePn	35	09.00	9.2X
FNA	2.97	332 eP	34	59.92	-0.2
KNT	3.00	356 eP	35	00.24	-0.3
		eS	35	35.60	
KEK	3.07	301 ePn	35	01.50	0.1
VAY	3.19	352 ePn	35	03.00	-0.1
IYM	3.21	85 ePn	35	15.00	11.5X
OHR	3.48	329 ePn	35	07.00	-0.3
NPS	3.49	145 ePn	35	08.00	0.6

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

? DEC 08, 1990 03h 48m 34.86±0.72s
 2.162 N ± 32.9km 30.738 W ± 13.4km
 DEPTH = 10.0km (geophysicist)

4.7mb (4 obs.)
 CENTRAL MID-ATLANTIC RIDGE (406)

LIC	25.95	80 P	54	10.04	0.6
	1.1s	23.00nm			4.8mb
LKO	26.05	73 P	54	08.78	-1.6
KIC	26.25	80 P	54	13.14	0.9
	1.1s	20.50nm			4.7mb
ZOBO	41.22	242 P	56	03.00	-19.5X
LPB	41.30	242 P	56	23.00	0.0
CNCB	41.31	241 P	56	23.00	-0.2
BCAO	49.24	86 iPc	57	26.00	0.0
	0.8s	7.00nm			4.7mb
YKA	85.25	332 eP	01	13.10	0.3
	0.8s	1.40nm			4.2mb

S.D. = 1.0 on 7 of 8 obs.

* DEC 08, 1990 03h 53m 17.03±2.06s
 11.882 S ± 11.4km 166.640 E ± 17.1km
 DEPTH = 174.4 ± 15.9 km
 5.0mb (9 obs.)

SANTA CRUZ ISLANDS (184)

HNR	7.01	290 eP	54	56.00	-2.2
		eS	56	14.00	
SVO	7.24	291 eP	55	04.00	2.8
		eS	56	19.00	
DZM	10.13	181 iPc	55	39.10	-0.4
		iS	57	30.10	
BRS	20.18	218 iPc	57	30.50	-9.4X
		i	58	37.50	
CTA	21.21	245 iPd	57	49.50	-0.7
	0.7s	8.22nm			4.3mb
RMO	22.24	227 iPc	58	02.00	1.9
COO	23.08	214 eP	58	09.00	0.7
CMS	27.37	221 iPd	58	47.90	-0.1
PGZ	29.86	165 P	59	09.60	-0.4
	0.5s	53.00nm			5.5mb
THZ	30.27	171 P	59	13.80	0.1
LTZ	31.17	172 P	59	21.80	0.2
WB5	32.00	252 eP	59	26.90	-2.1
MOZ	32.13	172 P	59	28.70	-1.1
SSE	61.06	316 P	03	13.50	-1.2
	0.8s	10.00nm			4.7mb
KMI	72.30	301 eP	04	26.00	0.1
	1.1s	40.00nm			5.1mb
LZH	75.96	312 P	04	47.50	0.8
	1.0s	25.00nm			4.9mb
SPA	78.20	180 iPc	04	59.80	1.4
	1.0s	30.00nm			5.0mb
		i	05	41.30	
GUN	87.49	299 P	05	47.20	0.3
PKI	87.81	299 P	05	48.40	0.0
	0.7s	14.00nm			5.0mb
KKN	87.97	299 P	05	49.20	0.2
	0.7s	17.00nm			5.1mb
DMN	88.08	299 P	05	49.60	0.0
GKN	88.57	299 P	05	51.60	-0.2
	0.8s	30.00nm			5.3mb
BUL	127.86	233 iPKPd	12	04.20	-0.3
SOB1	145.53	126 (PKP)	12	37.00	0.1
BCAO	147.60	259 iPKPc	12	44.70	4.4X
	0.5s	55.00nm			
		id	13	17.00	

S.D. = 1.2 on 23 of 25 obs.

* DEC 08, 1990 04h 12m 47.38±1.70s
 37.001 N ± 8.6km 27.475 E ± 18.0km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 3.5 (ATH), 3.8 (ISK).

ARG	0.94	146 ePb	13	05.40	0.1
IZM	1.40	353 iPn	13	16.80	3.8X
APE	1.56	273 ePn	13	27.50	12.3X
KSL	1.91	117 ePb	13	20.30	0.0
ELL	1.97	97 iPn	13	21.00	-0.2
KHL	2.09	50 iPn	13	21.80	-1.2
NPS	2.30	222 ePn	13	34.00	8.1X
PRK	2.43	337 ePn	13	40.00	12.2X
BCK	2.53	79 ePn	13	39.50	10.3X
DST	2.75	19 iPn	13	32.80	0.4
ALT	2.92	45 iPn	13	39.60	4.8X
EZN	2.96	343 ePn	13	49.00	13.8X
EDC	3.35	5 ePn	13	41.00	0.1
BNT	3.37	6 ePn	13	40.70	-0.4
IZI	3.68	25 ePn	13	54.00	8.4X
YLV	3.86	22 ePn	14	01.00	12.9X
BBTK	5.03	54 eP	14	06.00	1.3

S.D. = 0.8 on 8 of 17 obs.

* DEC 08, 1990 04h 31m 54.38±1.16s
 51.659 N ± 6.6km 16.381 E ± 11.7km
 DEPTH = 10.0km (geophysicist)

POLAND (548)

KSP	0.82
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08d 04h

CLL	2.14	262	Sg	32	53.30		
			iPn	32	30.10	-0.5	
			iPg	32	33.30		
			eSg	32	59.00		
KHC	3.10	216	iPn	32	44.00	-0.3	
			iPg	32	51.50		
			Sn	33	19.50		
			Sg	33	27.60		
HOF	3.15	246	iPnc	32	44.30	-0.6	
MOX	3.17	253	ePn	32	46.00	0.8	
			iPg	32	53.00		
			iSg	33	32.00		
WET	3.37	223	ePn	32	47.70	-0.4	
SPC	3.50	134	eP	33	07.50	17.5X	
GRF	3.83	241	e(Pn)	32	54.50	-0.1	
			e(Pg)	33	07.10		
			eSg	33	49.20		
HFS	8.63	351	eP	34	02.10	0.0	
	0.4s		0.80nm			4.4mb X	
	S.D. = 0.6	an	on 10 of 11 obs.				
* DEC 08, 1990 04h 38m 42.26 ± 0.84s							
23.573 S ± 21.0km 179.333 E ± 19.2km							
DEPTH = 543.2 ± 27.4 km							
5.1mb (7 obs.)							
SOUTH OF FIJI ISLANDS (171)							
DZM	11.98	275	iPc	48	05.90	1.4	
HBZ	14.01	183	P	48	24.40	-0.3	
	0.4s		41.00nm			5.2mb	
PUZ	14.48	183	P	48	29.00	-0.5	
NOZ	15.04	184	P	48	35.20	0.2	
WHH	15.45	188	P	48	39.40	0.2	
THZ	18.92	195	P	49	13.10	0.4	
KHZ	19.40	193	P	49	16.10	-1.0	
LTZ	20.03	195	P	49	22.10	-1.0	
BRS	24.26	255	iPc	50	03.40	1.8	
			e	50	48.00		
COO	25.37	248	ePd	50	11.90	0.4	
	0.5s		18.00nm			4.9mb	
RMQ	27.83	258	iPd	50	35.00	2.0	
	0.7s		51.00nm			5.2mb	
CAN	28.78	239	eP	50	42.00	0.8	
BWA	29.01	241	eP	50	41.90	-1.4	
CMS	30.65	248	iPd	50	57.80	0.5	
CTA	30.86	270	iPc	50	59.10	-0.1	
	0.8s		95.52nm			5.5mb	
			iS	55	25.00		
PMG	33.81	289	eP	51	22.00	-2.0	
ASPA	41.49	260	eP	52	26.30	-0.4	
	0.6s		26.20nm			4.9mb	
			ePcP	54	11.40		
			eScP	57	12.10		
			iS	58	01.20		
			iScS	01	30.00		
WB5	41.81	266	eP	52	28.20	-1.0	
			e	57	14.50		
			e	58	05.60		
WRA	41.82	266	P	52	27.00	-2.3	
	0.6s		28.30nm			5.0mb	
SPA	66.57	180	iPd	55	23.50	0.2	
	1.0s		25.00nm			4.7mb	
			i	55	41.20		
AIA	79.11	157	eP	56	35.50	1.2	
BUL	128.01	216	iPKPd	03	29.40	-2.5X	
NUR	139.11	341	ePKP	03	51.00	-0.3	
NB2	141.66	351	PKP	03	49.80	-6.2X	
	0.6s		3.80nm				
HFS	142.10	348	ePKP	03	51.10	-5.6X	
	0.4s		15.20nm				
HRI	146.70	295	ePKP	04	08.00	2.6X	
JVI	147.17	293	ePKP	04	09.50	3.4X	
RMN	147.91	290	ePKP	04	11.50	4.1X	
KRA	149.05	334	iPKPc	04	12.80	4.4X	

KSP	149.76	338	iPKP	04	14.00	4.6X	
			e	06	25.50		
CLL	150.36	343	iPKPc	04	16.10	5.8X	
	1.0s		40.00nm				
BRG	150.48	341	iPKP	04	16.10	5.6X	
	0.6s		29.00nm				
PRU	151.07	340	ePKP	04	17.50	6.1X	
ZST	151.66	335	ePKP	04	18.20	5.9X	
KHC	152.13	340	iPKP	04	20.50	7.5X	
BCAO	153.44	227	iPKPc	04	17.00	1.1	
	1.0s		10.00nm				
LIC	162.25	166	PKP	04	26.02	0.0	
KIC	162.44	166	PKP	04	26.24	0.0	
TIC	162.66	165	PKP	04	26.50	0.0	
	S.D. = 1.1	an	26 of 39 obs.				
* DEC 08, 1990 05h 07m 01.96 ± 0.68s							
22.968 S ± 15.0km 63.742 W ± 9.7km							
DEPTH = 543.5 ± 8.7 km							
4.5mb (3 obs.)							
SALTA PROVINCE, ARGENTINA (129)							
CCH	6.00	337	P	08	37.20	-4.2X	
ANT	6.18	262	iP	08	42.00	-0.7	
CNCB	7.31	326	Pd	08	53.90	-0.3	
			S	10	22.80		
SIV	7.38	20	iPc	08	53.80	-0.5	
LPB	7.60	327	P	08	56.20	-0.7	
			iS	10	28.00		
ZOBO	7.84	327	iPd	08	58.40	-1.0	
			S	10	30.00		
ITB1	8.73	103	Pc	09	08.80	1.1	
ITB	8.91	104	eP	09	09.50	-0.1	
ITB7	9.00	106	Pc	09	11.20	0.7	
ARE	9.75	310	eP	09	20.00	1.5	
			eS	11	07.00		
NNA	16.58	309	eP	10	28.00	1.2	
	0.6s		11.33nm			4.6mb	
LIC	64.28	71	Pd	16	45.32	-0.7	
TIC	64.48	70	P	16	46.62	-0.7	
KIC	64.59	71	Pd	16	47.56	-0.4	
	0.5s		18.00nm			4.9mb	
LKO	65.43	67	Pd	16	52.68	-0.6	
TIO	76.17	48	iPc	17	57.50	1.6	
IFR	79.18	47	iP	18	13.00	1.1	
BUL	84.42	109	iPd	18	37.20	-1.6	
YKA	94.22	339	eP	19	23.30	0.0	
	0.5s		0.30nm			3.7mb	
GBA	142.08	97	PKP	25	32.00	-2.4X	
	0.4s		0.90nm				
GKN	151.07	73	PKP	25	56.00	7.2X	
	0.5s		16.00nm				
DMN	151.50	74	PKP	25	57.60	8.0X	
KKN	151.65	74	PKP	25	57.00	7.3X	
PKI	151.77	74	PKP	25	58.00	7.9X	
GUN	152.17	73	PKP	25	58.60	8.0X	
	S.D. = 1.1	an	18 of 25 obs.				
* DEC 08, 1990 05h 23m 36.52 ± 5.07s							
45.169 N ± 12.6km 6.493 E ± 34.7km							
DEPTH = 10.0km (geophysicist)							
FRANCE (538)							
ML 2.0 (GEN).							
BNI	0.17	132	Pc	23	40.40	-0.1	
			eSg	23	42.80		
RRL	0.32	140	P	23	43.25	-0.1	
			S	23	47.87		
RSP	0.54	92	P	23	47.56	0.1	
			S	23	55.66		
LSD	0.55	58	P	23	47.66	0.0	
			S	23	55.97		
PZZ	0.79	147	P	23	52.17	0.1	
			S	24	02.84		
	S.D. = 0.2	on	5 of 5 obs.				
* DEC 08, 1990 06h 03m 13.46 ± 0.19s							
57.877 S ± 5.6km 25.152 W ± 6.3km							
DEPTH = 33.0km (normal)							
5.4mb (12 obs.) 4.8Msz (3 obs.)							
SOUTH SANDWICH ISLANDS REGION (153)							
CENTROID, MOMENT TENSOR (HRV)							
Data Used: GDSN							
L.P.B.: 14S, 32C							
Centroid Location:							
Origin Time 06:03:19.8 0.5							

Lat 57.65S 0.13 Lan 24.95W 0.12							
Dep 28.4 BDY Half-duration 1.7							
Moment Tensor; Scale 10**16 Nm							
Mrr= 4.67 0.64 Mtt= 2.14 0.85							
Mff=-6.81 0.48 Mrt= 0.68 0.81							
Mrf= 6.16 1.60 Mtf= 1.27 0.67							
Principal Axes:							
T Val= 7.58 Plg=63 Azm=297							
N 1.97 13 181							
P -9.56 23 85							
Best Double Couple:Ma=8.6*10**16							
NP1:Strike=152 Dip=25 Slip= 59							
NP2: 5 69 103							
19.74 232 eP 07 42.90 0.0							
32.30 180 iPc 09 41.20 0.1							
1.0s 60.00nm 5.4mb							
Z	20s 1.80um 4.8Msz						
i 11 05.20							
38.64 288 eP 10 32.50 -2.8							
38.70 315 e(P) 10 36.00 0.2							
39.01 288 eP 10 38.00 -0.3							
39.01 315 e(P) 10 39.00 0.6							
39.01 287 ePc 10 37.60 -0.6							
39.21 315 eP 10 40.00 0.0							
39.29 289 iPd 10 40.00 -0.6							
39.59 289 eP 10 42.50 -0.9							
44.33 184 iPc 11 22.90 1.6							
49.30 73 iPd 11 59.00 -2.1							
1.0s 15.00nm 5.0mb							
Z	20s 3.55um 5.4Msz						
49.64 312 P 12 03.00 -0.7							
50.24 75 iPc 12 08.50 0.1							
1.0s 20.00nm 5.1mb							
50.50 306 P 12 06.10 -4.5x							
51.81 304 P 12 20.00 -0.8							
i 13 34.00							
52.11 304 P 12 22.70 -0.2							
LR 29 24.00							
52.35 304 iPc 12 24.00 -0.9							
1.0s 53.75nm 5.5mb							
LR 25 44.00							
53.70 301 iPd 12 33.50 -1.0							
54.12 69 iPc 12 35.00 -2.4							
60.10 298 iP 13 17.80 -1.9							
1.0s 13.00nm 5.0mb							
65.94 22 Pc 13 58.90 0.7							
0.6s 40.50nm 5.7mb							
Z	20s 0.31um 4.5Msz						
66.13 22 Pc 14 00.04 0.6							
0.8s 38.00nm 5.6mb							
66.35 22 Pc 14 01.46 0.6							
0.6s 40.50nm 5.7mb							
69.06 21 Pc 14 18.68 0.8							
0.4s 18.00nm 5.4mb							
71.32 47 iPd 14 33.50 1.9							
0.8s 18.00nm 5.2mb							
iC 14 45.20							
75.22 319 iPd 14 55.30 0.8							
76.09 313 eP 14 58.70 -0.8							
76.59 315 eP 15 02.00 -0.2							
76.85 324 eP 15 04.21 0.7							
77.30 324 eP 15 07.40 1.3							
77.95 325 eP 15 10.60 1.0							
77.96 324 eP 15 09.90 0.2							
78.14 325 eP 15 11.70 1.1							
78.19 324 eP 15 12.60 1.7							
78.65 193 P 15 13.30 0.0							
79.04 324 ePc 15 16.90 1.4							
79.42 195 P 15 18.30 0.9							
79.56 324 ePc 15 19.50 1.1							
79.58 324 ePc 15 19.50 1.0							
79.58 194 P 15 18.50 0.2							
79.60 195 P 15 18.40 0.0							
79.62 196 P 15 18.30 -0.2							
79.82 196 P 15 19.30 -0.2							
79.85 305 ePc 15 19.20 -0.7							
79.86 195 P 15 20.10 0.4							
79.87 325 ePc 15 20.60 0.6							
79.94 195 P 15 19.90 -0.3							
81.74 196 P 15 30.20 0.4							
81.75 196 P 15 29.90 0.0							
84.59 173 iPd 15 44.70 0.3							
84.74 170 iPd 15 47.20 2.1							
84.79 148 eP 15 45.50 0.1							
87.03 175 eP 15 56.00 -0.5							
89.73 15 iPd 16 13.50 4.2							

IFR	92.59	17	eP	16	23.00	-0.6	PUZ	20.05	189	eP	31	32.70	-1.3	BJI	84.31	315	eP	39	15.00	5.8X		
ASPA	96.90	161	iPc	16	41.80	-0.7	NOZ	20.61	189	eP	31	39.10	0.0	PNT	1.5s	78.00nm			5.1mb			
	0.9s	18.30nm			5.6mb		HNR	23.14	289	eP	32	02.00	-0.2		84.76	34	eP	39	11.00	-0.3		
WRA	100.61	160	Pdiff	16	58.00	-1.1	SVO	23.38	290	P	32	12.00	7.7X		0.8s	21.00nm			4.8mb			
	0.8s	3.30nm			4.9mb		THZ	24.72	196	P	32	15.70	-0.3	NEW	85.52	36	P	39	14.00	-1.0		
GBA	108.11	93	PKP	21	40.00	0.7	KHZ	25.17	195	P	32	18.10	-1.8		1.0s	7.19nm			4.3mb			
ALO	114.56	297	ePKP	21	50.00	-1.4	LTZ	25.84	197	P	32	23.50	-2.3	ALO	85.96	51	eP	39	17.00	-0.6		
GOL	117.89	301	PKP	21	57.00	-0.7	AFR	26.82	93	iP	32	34.40	-0.1		1.0s	4.50nm			4.1mb			
MSU	120.16	295	PKP	22	02.20	0.2		0.6s	40.00nm			5.2mb		ANMO	85.96	51	P	39	18.00	0.4		
RSSD	120.81	305	PKP	22	01.80	-1.2	PAE	27.00	93	iP	32	36.20	0.2	IMA	86.01	10	P	39	16.00	-1.1		
DAU	121.21	297	PKP	22	04.00	0.0		0.6s	20.00nm			4.9mb			0.7s	3.63nm			4.2mb			
HFS	121.57	22	ePKP	22	02.10	-1.5	PPT	27.01	93	iP	32	36.60	0.4	FBA	86.03	12	P	39	15.30	-1.7		
	0.6s	1.70nm						0.6s	30.00nm			5.1mb			0.7s	30.52nm			5.1mb			
DUG	121.78	296	PKP	22	04.80	-0.1	TBI	27.10	106	iP	32	36.80	-0.1	LRM	86.95	40	eP	39	22.20	0.1		
NB2	121.94	20	PKP	22	03.80	-0.6		0.8s	60.00nm			5.3mb		BW06	87.30	43	P	39	23.30	-0.5		
	1.2s	12.30nm					TVO	27.30	94	iP	32	38.50	-0.2	KMI	88.36	297	Pc	39	30.50	1.4		
BW06	122.25	300	PKP	22	04.00	-1.8		0.6s	30.00nm			5.1mb			1.5s	70.00nm			5.3mb			
PRI	122.54	287	ePKP	22	08.20	1.8	PMO	28.97	88	iP	32	53.10	0.0	BDT	88.94	288	eP	39	33.00	1.5		
FRI	122.71	288	ePKP	22	07.30	0.8		0.6s	20.00nm			4.9mb		CHG	89.51	290	iPd	39	35.30	1.1		
PRS	123.05	287	ePKP	22	08.80	1.6	VAH	29.18	89	iP	32	54.60	-0.3		1.0s	20.00nm			5.0mb			
LLA	123.05	287	ePKP	22	08.80	1.6		0.6s	25.00nm			5.0mb		LZH	91.42	308	Pd	39	44.00	1.1		
SAO	123.42	287	ePKP	22	09.00	1.0	TPT	29.24	88	iP	32	55.40	0.0		1.5s	28.00nm			5.1mb			
DMN	123.63	91	PKP	22	08.30	-0.7		0.6s	20.00nm			4.9mb		INK	92.08	15	eP	39	44.00	-1.0		
	0.8s	27.00nm					RUV	29.43	89	iP	32	56.90	-0.1	YKA	94.44	25	eP	39	54.50	-1.4		
GKN	123.69	90	PKP	22	08.20	-0.8		0.6s	40.00nm			5.2mb			0.7s	2.60nm			4.6mb			
	0.8s	48.00nm					COO	29.98	240	iPd	33	02.40	0.7	MBC	100.57	12	ePdiff	40	22.50	-0.7		
PKI	123.76	91	PKP	22	08.50	-0.9	RMO	31.79	249	iPd	33	18.80	1.9	SOD	128.40	348	ePKP	45	45.00	6.4X		
	0.9s	43.00nm						0.3s	39.00nm			5.5mb		KAF	132.99	345	ePKP	45	46.90	-0.6		
CMB	123.86	289	ePKP	22	09.50	0.6	CNB	33.57	233	iPc	33	33.40	1.5		0.4s	2.70nm						
KKN	123.87	91	PKP	22	08.50	-0.9		0.1s	40.00nm			6.0mb		NUR	134.77	344	iPKP	45	49.70	-1.2		
	0.7s	29.00nm					CTA	33.81	261	iPd	33	34.00	0.0		0.7s	13.30nm						
GCC	123.91	287	ePKP	22	10.00	1.1		0.8s	111.94nm			5.5mb		NB2	136.74	353	PKP	45	43.20	-11.5X		
MHC	123.96	287	ePKP	22	10.70	1.5	CAN	33.85	233	iPd	33	35.10	0.9		0.8s	2.50nm						
GUN	124.28	91	PKP	22	09.90	-0.5	BWA	33.98	235	iPd	33	34.20	-1.1	SLL	137.04	352	ePKP	45	42.80	-12.4X		
	0.8s	40.00nm					PMG	34.94	280	eP	33	44.00	0.8		0.5s	1.90nm						
NUR	124.33	27	iPKP	22	09.00	0.1	CMS	35.24	241	iPd	33	46.70	1.1	KRA	145.15	340	iPKPc	46	10.20	0.4		
	0.8s	19.10nm						0.7s	119.00nm			5.6mb		WIT	145.30	355	ePKP	46	11.50	1.6		
PCC	124.46	287	ePKP	22	10.70	0.8	TOO	37.30	231	iPd	34	03.90	1.4	KSP	145.54	344	ePKP	46	09.50	-0.9		
BKS	124.68	287	iPKPd	22	11.60	1.3		0.7s	56.00nm			5.3mb			1.0s	74.00nm						
BRK	124.69	287	ePKP	22	11.70	1.4	BFD	39.38	233	iPd	34	21.80	2.4	SPC	145.79	339	ePKP	46	11.90	0.8		
ORV	125.58	289	ePKP	22	14.00	1.9	OIS	40.01	260	iPd	34	24.00	-0.6	CLL	145.87	348	iPKPd	46	12.10	1.2		
FRB	125.76	338	ePKP	22	11.00	-0.6			e			39 07.00			0.9s	77.00nm						
LRM	125.92	300	ePKP	22	13.30	0.4			e			40 05.00		BRG	146.08	346	iPKP	46	12.70	1.5		
KAF	126.12	27	iPKP	22	12.30	-0.1	RKT	40.41	104	iP	34	28.80	1.1		1.4s	54.00nm						
MIN	126.23	290	ePKP	22	13.80	0.3		1.2s	95.00nm			5.2mb		WTS	146.10	355	iPKPc	46	13.10	1.9X		
WDC	126.87	289	ePKP	22	14.30	-0.2	WB5	44.97	260	eP	35	02.30	-1.2		1.0s	65.00nm						
FFC	128.16	314	ePKP	22	15.50	-1.0			eS			41 01.90		PRU	146.76	345	PKPd	46	14.60	2.2X		
	0.8s	14.00nm					WRA	44.99	260	P	35	02.00	-1.6		1.0s	14.50nm						
SES	128.68	305	ePKP	22	17.00	-0.7			0.5s	105.30nm		5.6mb				e			46 17.50			
		pP			22 30.00		ASPA	45.12	255	iPd	35	04.20	-0.4	MOX	146.77	349	iPKP	46	15.00	2.6X		
NEW	129.88	300	PKP	22	19.00	-1.1			0.7s	164.70nm		5.7mb		HOF	147.04	348	iPKPc	46	15.70	2.9X		
SOD	130.66	24	iPKP	22	21.20	0.3		Z	20s	0.60um		4.5msz			0.8s	16.00nm						
LON	131.02	295	PKP	22	22.30	0.0			iS			40 58.30		ENN	147.39	355	ePKP	46	16.50	3.2X		
EDM	131.71	306	ePKP	22	22.50	-0.9			eScs			43 54.20			0.9s	25.00nm						
PNT	131.79	299	ePKP	22	24.00	0.4	GUA	48.34	308	eP	35	28.80	-0.2	SRO	147.63	339	i(PKP)	46	17.00	3.2X		
LZH	140.18	101	(PKP)	22	38.00	-2.0		0.7s	180.82nm			5.7mb		ZST	147.69	341	ePKP	46	17.50	3.6X		
SSE	144.68	125	iPKPc	22	46.80	-0.9			48.41	308	eP	35	29.30	-0.2	GRF	147.75	349	iPKPd	46	17.70	3.7X	
	1.0s	47.00nm							56.20	245	eP	36	23.80	-1.3			ec		46 22.20			
INK	147.92	318	iPKPc	22	50.00	-1.8			59.06	244	iPc	36	43.20	-1.2	KHC	147.79	346	ePKP	46	14.00	-0.1	
	0.8s	121.00nm							59.44	242	eP	36	46.00	-0.8			i		46 18.00			
BJI	149.53	109	ePKP	22	53.00	-2.2X			60.03	245	eP	36	49.50	-1.3			i		46 22.80			
	1.0s	48.00nm							60.36	243	eP	36	52.20	-0.7	VKA	147.86	342	iPKPd	46	18.00	3.8X	
		i			22 59.00				68.42	323	eP	37	42.00	-1.2	WET	147.94	347	iPKPc	46	18.50	4.2X	
PMR	152.27	302	PKP	23	05.80	7.2X			0.8s	19.40nm		4.7mb		ABH	148.11	353	ePKP	46	18.34	3.8X		
	0.8s	49.14nm							71.88	180	iPc	38	03.60	0.3	FUR	149.21	348	iPKPc	46	21.40	5.1X	
KDC	152.53	292	PKP	23	06.00	6.9X			1.0s	40.00nm		4.9mb			0.7s	27.00nm						
FBA	152.56	309	PKP	23	05.80	6.8X				76.16	43	eP	38	28.20	0.9	BHG	149.28	346	iPKPc	46	21.20	4.8X
	0.9s	145.83nm								76.16	44	eP	38	28.50	1.1		0.6s	14.00nm				
IMA	155.17	311	PKP	23	12.70	10.0X				76.18	43	eP	38	28.20	0.7	FLN	149.48	3	iPKPd	46	21.10	4.5X
	0.9s	52.00nm								76.27	310	eP	38	26.30	-1.8		0.8s	21.50nm				
TTA	155.72	303	PKP	23	13.50	10.0X				1.0s	12.00nm		4.4mb			Z	20s	0.30um		5.1msz		
	1.0s	25.00nm								76.52	44	eP	38	30.70	1.2	CDF	149.59	353	ePKP	46	22.10	5.2X
BRW	156.14	323	PKP	23	14.00	10.3X				76.57	43	eP	38	30.70	0.9		0.9s	21.30nm				
	S.D. = 1.0	on 99 of 108 obs.								77.64	44	eP	38	35.90	0.6	LDF	149.66	3	iPKPd	46	21.60	4.7X
										77.78	43	eP	38	36.80	0.6		1.0s	24.00nm				
										77.91	40	eP	38	37.50	0.8	GRR	149.83	4	iPKPd	46	22.20	5.1X
										77.95	41	eP	38	37.00	0.0		0.8s	12.10nm				

08d 06h

BSF	150.22	354	ePKP	46	23.20	5.3X
	0.6s		9.90nm			
LJU	150.39	342	ePKP	46	23.50	5.4X
VOY	150.58	343	ePKP	46	23.40	4.9X
VBY	150.66	341	ePKP	46	19.20	0.7
			i	46	24.80	
CEY	150.70	342	ePKP	46	24.50	5.9X
LOR	151.00	357	iPKPd	46	25.10	6.1X
	0.8s		17.45nm			
Z	20s		0.43um			5.2Msz
VAY	151.04	327	iPKP	46	24.70	5.5X
	1.2s		28.00nm			
			i	46	36.00	
SSF	151.22	358	iPKPd	46	25.80	6.5X
	1.0s		28.00nm			
LBF	151.28	357	iPKPd	46	25.70	6.3X
	1.0s		18.00nm			
AVF	151.50	358	ePKP	46	26.00	6.3X
	0.8s		4.05nm			
MFF	151.65	3	iPKPd	46	26.30	6.4X
	0.9s		24.55nm			
TCF	152.02	360	iPKPd	46	27.10	6.6X
	0.8s		8.75nm			
LSF	152.06	1	iPKPd	46	26.90	6.4X
	0.8s		14.80nm			
MAF	152.08	359	ePKP	46	27.80	7.2X
	0.8s		9.40nm			
LPG	152.53	353	ePKP	46	29.30	7.7X
	0.8s		6.70nm			
S.D. = 1.1 on 83 of 123 obs.						

& DEC 08, 1990 07h 08m 59.43s						
60.329 N 152.053 W						
DEPTH = 74.9km						
SOUTHERN ALASKA (2)						
<AGS-P>.						
RDT	0.30	325	iP	09	10.74	-0.7
			eS	09	19.92	
REF	0.36	297	iP	09	11.34	-0.6
RED	0.37	284	iP	09	11.23	-0.7
			eS	09	20.83	
RSO	0.37	291	iP	09	11.45	-0.6
			eS	09	21.11	
RS2	0.37	291	iP	09	11.53	-0.6
			eS	09	21.29	
RDN	0.40	298	iP	09	11.46	-0.7
NNL	0.48	127	iP	09	13.08	0.4
NCT	0.49	299	eP	09	12.06	-0.9
INE	0.57	242	eP	09	12.64	-1.1
			eS	09	23.76	
NKA	0.58	44	iP	09	14.93	1.3
			iS	09	25.01	
HOM	0.70	163	eP	09	14.67	-0.2
			eS	09	26.10	
BRLK	0.82	134	eP	09	15.39	-0.9
			eS	09	28.05	
SPU	0.86	360	iP	09	16.15	-0.6
			eS	09	29.58	
CKL	0.88	351	iP	09	16.39	-0.7
			eS	09	30.23	
XLV	0.89	169	eP	09	16.15	-1.0
			eS	09	29.12	
OPT	0.90	222	iP	09	16.34	-0.9
			eS	09	29.16	
CNPM	0.90	153	iP	09	16.59	-0.7
			iS	09	29.95	
SLKM	0.93	78	eP	09	16.70	-0.9
CRP	0.94	357	eP	09	17.13	-0.8
BGL	0.95	350	iP	09	17.36	-0.6
CGLM	0.98	1	iP	09	17.86	-0.5
			eS	09	32.27	
NCG	1.08					

CDD	1.62	211	eP	09 42.70	
MCNL	1.63	226	eP	09 25.15	-1.5
SKT	1.68	8	iP	09 25.08	-1.6
PWA	1.70	38	eP	09 26.30	-1.1
SYI	1.73	186	iP	09 27.24	-0.4
PLRM	1.91	47	iP	09 27.08	-1.0
KNK	1.91	47	iP	09 29.15	-1.3
KNK	2.07	57	eP	09 31.18	-1.5
GHO	2.10	45	eP	09 31.72	-1.5
LTJ	2.12	96	eP	09 30.87	-2.5
KNIM	2.15	88	eP	09 30.76	-3.0
			eS	09 55.67	
CUT	2.25	22	eP	09 34.42	-0.8
VLZ	2.92	72	eP	09 41.65	-2.8
KLU	3.21	66	eP	09 46.15	-2.5
TRF	3.24	14	eP	09 48.15	-1.0
TOA	3.36	55	eP	09 48.82	-1.8
RND	3.44	25	eP	09 50.22	-1.6
47 obs. associated					

* DEC 08, 1990 09h 31m 24.02± 4.11s					
34.396 N ±17.7km 38.128 E ±31.7km					
DEPTH = 10.0km (geophysicist)					
JORDAN - SYRIA REGION (374)					
ML 3.9 (BHL).					
BHL	2.11	257	Pn	32 00.00	0.1
			Sn	32 27.00	
HRI	2.28	241	iPd	32 02.20	-0.2
			eS	32 30.00	
SHMJ	2.58	231	Pc	32 06.79	0.2
JARJ	2.82	221	P	32 10.07	0.0
BURJ	2.90	223	P	32 11.42	0.3
SALJ	3.14	221	Pc	32 13.31	-1.2
MDSJ	3.17	210	Pc	32 15.46	0.4
ZNT	3.37	231	eP	32 18.00	0.3
			eS	32 58.00	
CSTJ	3.49	201	P	32 18.94	-0.5
MKRJ	3.52	217	Pc	32 20.12	0.2
LISJ	3.86	216	Pc	32 24.62	0.0
CSS	3.99	279	eP	32 27.00	0.4
PPCY	4.79	277	eP	32 37.50	-0.5
HQL	5.74	208	eP	32 51.90	0.6
			eS	34 21.30	
BBTK	6.92	323	eP	33 42.00	33.9X
KER	7.42	88	e(P)	34 03.00	47.9X
TAB	7.57	59	e(P)	34 11.00	53.8X
S.D. = 0.5 on 14 of 17 obs.					

* DEC 08, 1990 09h 37m 09.56± 2.05s					
10.126 N ±20.1km 62.603 W ±11.3km					
DEPTH = 10.0km (geophysicist)					
3.6mb (1 obs.)					
NEAR COAST OF VENEZUELA (97)					
MD 3.5 (TRN).					
TCE	1.01	56	iP	37 26.60	-2.1
TPP	1.15	80	eP	37 31.69	0.6
TRN	1.29	66	eP	37 31.65	-1.8
			eS	37 45.94	
TBH	1.55	77	eP	37 38.56	1.3
			eS	38 00.85	
PIG	2.01	59	eP	37 44.68	0.7
BOT	2.12	61	eP	37 46.42	0.9
			eS	38 11.73	
SLB	3.98	22	eP	38 18.42	6.4X
			eS	38 56.57	
BIM	4.61	19	eP	38 21.34	0.3
MVM	4.71	21	eP	38 23.03	0.7
FDF	4.79	17	eP	38 24.27	0.7
			S	39 12.80	
YKA	64.14	336	eP	47 46.50	0.3
	0.5s		0.2		

CHJJ	1.28	162	iPd	39	14.50	-0.3
			S	39	31.70	
YAMJ	1.50	53	iP+	39	18.70	0.7
			S	39	39.10	
KAKJ	1.70	128	P	39	21.40	0.5
			S	39	44.30	
IIDJ	1.85	196	P	39	24.50	1.3
			S	39	48.60	
TSRJ	2.68	231	P	39	40.60	5.6X
OFUJ	3.07	53	P	39	41.70	1.3
AOMJ	3.59	23	P	39	49.10	1.3
			S	40	30.70	
WKYJ	3.86	219	P	39	55.00	3.1X
YONJ	4.59	245	eP	40	02.60	0.6
SSE	15.60	252	e(P)	42	39.70	7.1X
Z	14s	0.30um				
E	10s	0.20um				
BJI	17.67	286	eP	43	01.00	2.3
	1.5s	13.00nm				3.8mb
INK	55.23	27	eP	48	25.50	-0.5
WB5	56.98	185	eP	48	36.30	-2.8
WRA	57.04	185	P	48	36.00	-3.5X
	0.8s	2.70nm				4.3mb
GBA	58.94	263	Pd	48	51.70	-1.3
	0.9s	3.60nm				4.5mb
YKA	64.75	29	eP	49	29.60	-1.8
	0.8s	0.70nm				3.9mb
APO	72.53	335	eP	50	18.00	-1.6
	0.5s	1.30nm				4.3mb
N82	73.06	336	P	50	21.80	-1.0
	0.7s	3.20nm				4.5mb
ZOBO	148.51	56	PKP	58	41.00	4.0X
LPB	148.72	56	PKP	58	49.00	11.9X
CNCB	148.99	56	PKP	58	43.00	5.2X
S.D. = 1.4 on 17 of 24 obs.						

DEC	08, 1990	09h	47m	05.64±	0.58s	
	47.203 N	± 5.6km		6.729 E	± 5.8km	
DEPTH	= 10.0km (geophysicist)					
FRANCE						(538)
BSF	0.63	4	Pg	47	18.50	0.1
HAU	0.84	342	Pg	47	21.60	-0.3
FEL	1.10	52	ePg	47	27.29	0.9
DIX	1.22	157	ePc	47	27.70	-0.8
CDF	1.26	17	Pn	47	29.00	-0.2
			Pg	47	30.00	
			Sn	47	46.20	
			Sg	47	49.10	
SLE	1.32	64	ePd	47	29.70	-0.4
MMK	1.43	143	ePd	47	27.50	-4.4X
LPG	1.71	179	Pg	47	36.40	0.5
			Sg	47	58.80	—
LBF	1.89	264	Pg	47	39.10	0.8
			Sg	48	02.00	
LOR	1.96	273	Pn	47	37.00	-2.2
			Pg	47	39.60	
			Sg	48	04.10	
SMF	2.06	255	Pg	47	41.10	0.4
			Sg	48	06.00	
SSF	2.20	267	Pg	47	44.00	1.2
BGF	2.74	258	Pg	47	54.00	3.5X
			Sg	48	28.80	
S.D. = 1.1 on 11 of 13 obs.						

DEC	08, 1990	10h	16m	23.11±	0.53s	
	40.084 N	± 5.1km		16.142 E	± 5.4km	
DEPTH	= 10.0km (geophysicist)					
SOUTHERN ITALY						(390)
ORI	0.24	95	Pd	16	29.10	0.9
CSI	0.33	160	P	16	30.20	0.3
TDS	0.45					

SOI	2.01	182	P	16	57.50	0.1	GBA	24.71	163	Pc	51	11.30	3.0X	CLC	78.65	46	eP	45	16.00	-0.5	
			eSn	17	20.60			0.6s	2.30nm				3.9mb	TPC	78.85	49	eP	45	17.00	-0.6	
DUI	2.03	322	P	16	57.00	-0.8	LZH	26.71	83	(P)	51	48.50	21.3X	TNP	80.11	45	eP	45	24.10	-0.1	
SDI	2.39	313	P	17	01.70	-1.3	BJI	35.43	72	eP	52	46.00	2.2		1.2s	4.84nm				3.8mb	
S.D. = 0.9 on 11 of 13 obs.								1.0s	12.00nm				4.8mb	PMR	82.70	14	ePc	45	35.40	-1.1	
• DEC 08, 1990 10h 39m 16.34±1.48s							KAF	36.45	327	eP	52	51.20	-0.9		0.5s	3.10nm				4.1mb	
1.991 S ±11.9km 81.020 W ±16.5km							NUR	36.66	324	eP	52	58.00	4.1X	PNT	84.87	34	eP	45	48.00	0.5	
DEPTH = 10.0km (geophysicist)							BRG	41.58	307	e(P)	53	35.00	0.1		0.7s	5.00nm				4.3mb	
3.6mb (1 obs.)								e			53	47.00		FBA	85.90	13	ePc	45	50.40	-1.8	
OFF COAST OF ECUADOR (104)							HFS	41.92	321	eP	53	36.70	-0.8		0.6s	4.00nm				4.3mb	
								0.6s	7.10nm				4.6mb	BW06	87.51	43	eP	46	00.20	-0.4	
TUNG	2.64	78	eP	39	59.00	-1.0	NB2	43.22	322	P	53	47.20	-1.1	CHG	88.88	290	eP	46	08.00	0.9	
VC1	2.94	63	iPd	40	03.50	-0.9		0.6s	3.40nm				4.3mb	LZH	90.81	308	eP	46	16.50	0.7	
OTO	3.05	55	Pd	40	07.20	1.3	BCAO	57.63	248	iPc	55	49.00	10.7X		1.5s	17.00nm				4.8mb	
OUR	3.08	54	iPd	40	07.60	1.3		0.6s	8.00nm					YKA	94.45	25	eP	46	30.60	-1.1	
COTA	3.54	49	iP+	40	12.40	-0.6	MBC	66.26	3	eP	56	35.50	0.3		0.8s	0.60nm				3.9mb	
CAYA	3.67	56	iP	40	09.20	-5.6X		0.9s	9.00nm				4.9mb	SLL	136.70	351	ePKP	52	18.40	-12.1X	
NNA	10.76	158	eP	41	54.00	0.4		pP		56	56.00	79kmX			0.4s	1.10nm					
	0.5s	5.63nm			5.2mb X		ANM	69.19	22	ePc	56	54.60	0.8	CLL	145.49	347	iPKP	52	47.00	0.9	
		eS		43	36.00		IMA	71.21	17	ePc	57	06.00	-0.2		0.9s	21.00nm					
YKA	69.15	344	eP	50	24.30	-0.4		0.8s	3.10nm			4.4mb	BRG	145.69	346	iPKP	52	47.50	1.0		
	0.5s	0.20nm			3.6mb		INK	72.89	9	eP	57	16.00	0.1		1.0s	16.00nm					
S.D. = 1.2 on 7 of 8 obs.							FBA	73.54	16	ePc	57	20.10	0.3	HRI	145.71	303	iPKPd	52	48.70	1.5	
% DEC 08, 1990 10h 41m 17.43±0.77s								0.8s	8.40nm			4.8mb	PRU	146.37	345	ePKP	52	49.50	1.9X		
40.061 N ± 8.0km 16.140 E ± 5.9km							TOA	76.33	17	ePc	57	36.90	0.9	DSI	146.49	300	iPKPd	52	50.50	2.1X	
DEPTH = 10.0km (geophysicist)								0.7s	23.70nm			5.3mb	ZST	147.26	340	ePKP	52	51.90	2.8X		
SOUTHERN ITALY (390)							YKA	80.17	2	eP	57	56.50	-0.2	MBH	147.36	297	iPKPd	52	53.10	3.2X	
								0.6s	2.30nm			4.4mb	FLN	149.25	2	iPKPd	52	56.60	4.5X		
							S.D. = 1.1 on 20 of 26 obs.								0.6s	9.00nm					
ORI	0.24	89	Pc	41	23.10	0.6	DEC 08, 1990 13h 34m 13.44±0.74s							CDF	149.27	352	iPKPd	52	57.10	4.8X	
			eSg	41	26.20		17.975 S ± 8.3km 178.563 W ± 7.5km								0.6s	6.30nm					
TDS	0.43	159	P	41	25.90	-0.3	DEPTH = 591.0 ± 9.5 km							LDF	149.43	2	iPKPd	52	57.00	4.6X	
			eSg	41	31.60		4.5mb (13 obs.)								0.6s	9.00nm					
MGR	0.46	280	Pc	41	26.90	0.2	FIJI ISLANDS REGION (181)							GRR	149.61	3	iPKPd	52	57.70	5.0X	
			eSg	41	32.30										0.4s	6.85nm					
SGO	0.81	308	P	41	33.00	-0.1	MBU	2.78	291	eP	35	31.20	0.1	SOTA	149.75	347	iPKPd	52	57.90	4.8X	
BRT	1.15	44	Pd	41	38.50	-0.5	DZM	14.67	251	iPc	37	20.00	1.5	HAU	149.78	353	iPKPd	52	58.20	5.2X	
			eSg	41	55.50			iS		39	56.80				0.6s	7.20nm					
S.D. = 0.6 on 5 of 5 obs.							PUZ	20.22	187	eP	38	09.60	-1.3	BSF	149.90	353	iPKPd	52	58.30	5.0X	
DEC 08, 1990 10h 55m 16.40±0.56s							WLZ	20.45	193	eP	38	13.30	0.4		0.6s	5.40nm					
40.071 N ± 4.7km 16.171 E ± 5.3km							NOZ	20.78	188	eP	38	15.00	-1.0	LPF	149.95	3	iPKPd	52	58.70	5.5X	
DEPTH = 10.0km (geophysicist)							BRS	28.00	245	iPd	39	20.40	0.3		0.5s	13.10nm					
SOUTHERN ITALY (390)							COO	29.61	239	iPd	39	33.70	-0.3	LOR	150.72	357	iPKPd	53	00.40	6.0X	
							RMO	31.35	248	iPd	39	49.90	1.3		0.4s	7.45nm					
ORI	0.21	92	Pd	55	21.00	-0.1		0.8s	80.00nm			5.4mb	SSF	150.94	357	iPKPd	53	01.00	6.3X		
			eSg	55	24.50		CNB	33.27	232	iPc	40	05.90	1.1		0.5s	5.85nm					
CSI	0.31	163	P	55	22.40	-0.4		0.5s	86.00nm			5.6mb X	LBF	150.99	356	iPKPd	53	01.10	6.2X		
TDS	0.43	163	P	55	24.50	-0.7	CTA	33.29	261	iPd	40	04.90	-0.1		0.6s	7.20nm					
MGR	0.48	278	Pc	55	25.20	-0.9		0.8s	43.28nm			5.1mb	AVF	151.22	357	iPKPd	53	01.20	6.1X		
			eSg	55	34.50		CAN	33.55	233	iPd	40	07.30	0.2		0.6s	2.70nm					
ROI	0.59	148	P	55	31.80	3.5X	BWA	33.66	234	iPd	40	06.50	-1.5	MFF	151.42	2	ePKP	53	01.90	6.5X	
SGO	0.82	307	P	55	32.50	0.3	PMG	34.33	280	eP	40	15.00	1.3		0.6s	5.40nm					
BRT	1.13	44	P	55	36.90	-0.6	TOO	37.01	231	iPd	40	36.80	1.2	TCF	151.76	359	iPKPd	53	02.70	6.7X	
			eSn	55	53.40			0.8s	72.00nm			5.4mb			0.8s	6.05nm					
BAI	1.17	27	P	55	39.00	0.7	BFD	39.08	233	eP	40	54.00	1.6	LSF	151.81	360	iPKPd	53	02.60	6.6X	
LCI	1.39	79	P	55	44.00	2.2X	OIS	39.50	259	iPd	40	55.00	-0.9		0.6s	4.95nm					
ATN	1.99	196	P	55	51.40	1.0	ADE	41.48	237	iPd	41	11.60	0.0	BCAO	158.53	233	ePKPc	53	06.40	0.7	
			eSn	56	16.50		WB5	44.45	260	iPd	41	33.80	-1.2		0.5s	10.00nm					
SOI	2.00	183	P	55	51.30	0.8	ASPA	44.63	254	iPd	41	36.00	-0.4			ic	53	46.10			
S.D. = 0.8 on 9 of 11 obs.								0.8s	375.50nm			6.0mb X	S.D. = 1.0 on 53 of 73 obs.								
DEC 08, 1990 12h 45m 48.86±0.45s								iPcP		43	05.70		DEC 08, 1990 14h 23m 28.03±1.54s								
37.604 N ± 7.2km 70.422 E ± 8.9km							COOL	eS		47	28.60		29.174 N ±10.9km 130.141 E ± 7.6km								
DEPTH = 33.0km (normal)								0.3s	13.00nm			4.7mb	DEPTH = 54.4 ± 12.4 km								
4.6mb (9 obs.)							KLB	58.66	244	iPd	43	15.80	-1.6	4.8mb (17 obs.) 4.0msz (1 obs.)							
AFGHANISTAN-USSR BORDER REGION (717)							NWAO	59.05	242	eP	43	19.00	-0.9	RYUKYU ISLANDS (238)							
Felt (IV) at Kulyab, Moskovskiy								0.4s	8.00nm			4.3mb	KAGJ	2.11	18	P	24	02.20	0.7		
and Obigarm; (III) at Garm and							BAL	59.62	245	eP	43	22.30	-1.4			S	24	29.60			
Dushanbe; (II) at Dzhirgotal,							MUN	59.96	243	iPc	43	26.30	0.4	SHK	5.76	21	eP	24	51.50	-1.5	
USSR.							TRT	67.55	269	ePc	44	14.00	-0.1	SSE	7.99	286	eP	25	23.80	-0.2	
							MAT	67.87	323	iPc	44	13.90	-1.7		0.7s	12.00nm				4.8mb	
								0.9s	8.40nm			4.3mb		Z	20s	0.70um					
QUE	7.94	202	eP	47	44.70	-0.3	SPA	72.14	180	iPd	44	41.40	0.9	E	11s	0.30um					
			e																		

08d 14h

CHG	30.23	257	eP	29	35.20	-0.7
GUN	38.73	279	P	30	49.00	-0.2
PKI	39.21	279	P	30	53.00	-0.1
	0.7s	35.00nm			5.3mb	
KKN	39.28	279	P	30	53.10	-0.4
DMN	39.47	279	P	30	55.00	-0.2
	0.6s	18.00nm			5.1mb	
GKN	39.78	280	P	30	57.20	-0.4
	0.7s	33.00nm			5.3mb	
WB5	48.94	175	eP	32	10.00	-0.8
GBA	51.06	264	Pd	32	26.10	-1.0
	0.8s	3.80nm			4.5mb	
ASPA	52.66	176	eP	32	40.10	1.1
	1.1s	5.10nm			4.5mb	
ANM	53.12	29	ePc	32	42.80	0.8
IMA	58.13	28	ePc	33	18.60	0.4
PMR	60.44	33	ePd	33	33.50	-0.5
	0.5s	2.10nm			4.5mb	
FBA	60.65	29	ePd	33	35.40	0.0
	0.5s	3.90nm			4.8mb	
TOA	61.76	32	ePc	33	43.50	0.5
	0.6s	12.90nm			5.2mb	
INK	65.52	24	eP	34	08.00	0.5
MBC	66.57	14	eP	34	14.00	-0.1
	0.8s	35.00nm			5.4mb	
KEV	67.33	338	eP	34	16.00	-2.9
SOD	68.40	336	eP	34	21.00	-4.7X
NUR	72.19	330	eP	34	48.00	-0.7
YKA	75.15	26	eP	35	06.10	0.2
	0.6s	4.10nm			4.5mb	
HFS	77.00	333	eP	35	14.40	-1.9
	0.6s	3.70nm			4.6mb	
NB2	77.42	334	P	35	17.40	-1.3
	0.8s	3.50nm			4.4mb	
PNT	80.29	39	eP	35	36.00	1.5
	0.8s	6.00nm			4.6mb	
CLL	82.69	326	iP	35	47.90	1.0
	0.7s	9.00nm			4.5mb	
FFC	85.21	27	iPc	36	00.90	1.3
	0.6s	11.00nm			5.2mb	
FRB	86.22	8	eP	36	05.00	0.6
	S.D. = 1.2	on 32	of 33	obs.		

% DEC 08, 1990 14h 25m 50.86±2.63s
40.024 N ±13.2km 29.466 E ±19.4km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 2.3 (ISK).

IZI	0.31	1	iPg	25	57.40	0.0
			iSg	26	01.60	
YLV	0.55	353	iPg	26	01.90	0.0
DST	0.77	237	ePg	26	05.90	0.0
			eSg	26	15.90	
KCT	0.88	285	ePg	26	07.60	-0.2
BNT	1.23	286	ePn	26	13.90	0.2
	S.D. = 0.2	on 5	of 5	obs.		

* DEC 08, 1990 14h 38m 34.24±0.71s
44.506 N ±16.0km 148.337 E ±9.5km
DEPTH = 33.0km (normal)
5.0mb (23 obs.)

KURIL ISLANDS (221)

MAT	11.07	228	iPc	41	14.40	1.1X
	0.9s	15.97nm			5.2mb	
		eS	43	37.00		
BJI	24.12	271	eP	43	50.50	2.7
	1.0s	12.00nm			4.4mb	
ANM	32.48	36	ePc	45	04.40	1.0
TTA	36.30	40	iPd	45	37.70	1.4
	0.8s	16.80nm			5.0mb	
SVW	36.41	43	iPd	45	39.10	1.9
	0.8s	15.80nm			5.0mb	
BRW	37.45	26	iPd	45	46.70	1.0
IMA	37.58	35	iPc	45	48.10	1.1
	0.6s	37.80nm			5.4mb	
PMR	39.52	42	ePc	46	04.10	1.0
	1.1s	18.30nm			4.8mb	
FBA	39.98	37	iPc	46	08.20	1.3
	0.9s	58.00nm			5.3mb	
TOA	40.88	41	ePd	46	16.30	1.9
	1.1s	44.60nm			5.1mb	
INK	45.32	31	ePc	46	51.00	0.8
	0.5s	15.00nm			5.2mb	
MBC	47.83	19	eP	47	10.00	0.0
GUN	51.82	273	P	47	42.60	1.0

KKN	52.32	274	P	47	46.20	1.0
PKI	52.36	273	P	47	46.40	0.7
DMN	52.55	274	P	47	47.80	0.8
GKN	52.66	274	P	47	48.40	0.8
YKA	54.70	34	eP	48	01.30	-0.7
	0.7s	5.90nm			4.7mb	
SOD	60.09	338	eP	48	39.00	-1.0
KAF	64.02	334	iP	49	04.90	-1.4
	0.4s	4.20nm			4.9mb	
FFC	64.58	37	iPc	49	10.00	-0.1
	0.6s	20.00nm			5.4mb	
WB5	65.33	194	eP	49	14.00	-1.2
NUR	65.75	333	eP	49	16.50	-1.0
BONR	66.75	59	P	49	24.00	-0.7
TNP	67.34	58	P	49	27.30	-1.0
FRB	68.21	17	eP	49	31.00	-2.0
WB06	68.76	51	P	49	36.20	-0.9
NB2	69.20	339	P	49	37.80	-1.5
	0.7s	8.70nm			4.9mb	
HFS	69.32	338	eP	49	39.00	-0.9
	0.5s	7.00nm			5.0mb	
MSU	70.08	55	P	49	44.00	-1.2
CLL	77.03	333	iP	50	25.10	-0.1
	1.6s	38.00nm			5.2mb	
LOR	83.40	337	eP	50	59.60	0.4
	0.8s	5.35nm			4.7mb	
LBF	83.62	336	eP	51	00.60	0.2
	1.0s	12.00nm			5.0mb	
SSF	83.69	337	eP	51	01.10	0.4
	1.0s	10.00nm			4.9mb	
SMF	83.97	336	eP	51	01.30	-0.8
	0.8s	8.05nm			4.9mb	
AVF	83.98	337	eP	51	01.80	-0.3
	0.8s	4.05nm			4.6mb	
LPG	84.13	334	eP	51	02.30	-1.0
	1.0s	15.00nm			5.1mb	
MAF	84.72	337	eP	51	03.50	-2.4
	1.0s	12.00nm			5.0mb	
MFF	85.10	339	eP	51	07.10	-0.7
	0.8s	10.75nm			5.1mb	
	S.D. = 1.2	on 38	of 39	obs.		

? DEC 08, 1990 14h 47m 48.04±1.93s
39.990 N ±12.7km 27.603 E ±12.7km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 2.0 (ISK).

BNT	0.44	33	iPg	47	56.90	-0.1
			eSg	48	04.40	
KGT	0.52	334	iPg	47	58.50	0.0
KCT	0.63	66	iPg	48	00.90	0.1
DST	0.88	116	iPg	48	04.90	0.0
			iSg	48	18.40	
	S.D. = 0.2	on 4	of 4	obs.		

* DEC 08, 1990 15h 01m 31.46±0.49s
2.935 S ±9.3km 138.482 E ±11.2km
DEPTH = 33.0km (normal)
4.8mb (6 obs.) 4.2Msz (2 obs.)

WEST IRIAN (201)

PMG	10.75	127	eP	04	06.00	-0.3
WB5	17.31	193	eP	05	32.50	0.1
			i	05	36.00	
			eS	08	41.80	
OIS	17.55	177	iPc	05	33.90	-1.4
			eS	08	28.00	
CTA	18.66	157	iPd	05	52.60	3.5X
	1.1s	18.99nm			4.2mb	
ASPA	21.08	192	eP	06	15.80	0.3
	0.9s	56.50nm			5.0mb	
Z	19s	0.70um			4.1Msz	
		eS	10	11.30		
SVO	22.09	107	P	06	28.00	2.4
HNR	22.28	108	P	06	26.00	-1.6
SSE	37.64	335	eP	08	44.20	-1.0
	Z	20s	0.50um		4.3Msz	
		e(S)	13	36.00		
BJI	47.41	337	eP	10	03.00	-1.6
	1.5s	34.00nm			5.1mb	
LZH	50.52	323	Pc	10	30.00	1.0
	1.5s	20.00nm			4.9mb	
GUN	59.13	305	P	11	32.40	0.4
PKI	59.39	304	P	11	33.60	-0.2
KKN	59.57	305	P	11	35.20	0.3
DMN	59.65	304	P	11	35.90	0.4

GKN	60.18	305	P	11	39.20	0.2
SPA	87.09	180	iPc	14	16.30	1.2
	0.8s	12.50nm			5.2mb	
YKA	100.37	27	ePdiff15	13.50	-2.6X	
	0.7s	0.40nm			4.1mb	
LKO	143.71	282	PKP	21	02.96	-3.0X
	0.7s	8.50nm				
CNCB	147.32	128	PKP	21	14.70	2.2X
LPB	147.39	127	ePKP	21	11.00	-1.5
ZOBO	147.51	127	PKP	21	14.00	1.1
	S.D. = 1.2	on 17	of 21	obs.		

? DEC 08, 1990 15h 47m 56.87±0.51s
3.169 S ±13.3km 126.511 E ±12.9km
DEPTH = 33.0km (normal)
4.8mb (3 obs.)

BURU (271)

AAI	1.76	107	eP	48	25.50	0.0
WB5	18.29	156	eP	52	09.60	-0.4
ASPA	21.59	161	eP	52	46.50	0.4
	0.6s	3.30nm			3.9mb	
GUN	49.83	311	P	56	49.60	0.1
	0.7s	13.00nm			5.1mb	
PKI	50.01	310	P	56	50.80	0.0
KKN	50.22	311	P	56	52.10	-0.2
DMN	50.26	310	P	56	52.60	0.0
GKN	50.82	310	P	56	56.80	0.1
	0.7s	11.00nm			4.9mb	
	S.D. = 0.3	on 8	of 8	obs.		

& DEC 08, 1990 16h 10m 22.02s
59.522 N 153.445 W
DEPTH = 112.4km
SOUTHERN ALASKA (2)
<AGS-P>.

AUH	0.16	180	eP	10	37.99	1.6
AUP	0.16	176	eP	10	37.26	0.9
AGU	0.16	177	eP	10	36.57	0.1
AUE	0.17	167	eP	10	37.19	0.9
OPT	0.17	40	iP	10	37.26	0.9
			eS	10	47.95	
AUI	0.19	177	eP	10	37.26	0.9
PDB	0.46	305	iP	10	38.21	-0.9
			eS	10	50.70	
MCNL	0.57	234	eP	10	38.97	-0.9
INE	0.57	20	iP	10	39.22	-0.9
			eS	10	52.41	
CDD	0.60	190	iP	10	39.19	-0.9
			eS	10	52.71	
XLV	0.88	94	eP	10	41.88	-0.6
HOM	0.93	81	eP	10	42.86	-0.4
			eS	10	57.54	
RED	0.96	20	eP	10	42.43	-1.0
RS2	1.01	20	iP	10	43.11	-0.9
RSO	1.01	20	eP	10	43.15	-0.8
			eS	10	58.89	
REF	1.04	21	iP	10	43.37	-1.0
			eS	11	00.34	
RDN	1.05	19	eP	10	43.37	-1.0
SYI	1.06	149	eP	10	43.24	-1.1
			eS	10	59.40	</

KNIM 2.99 71 eP 11 06.35 -2.3
 KNK 3.11 50 eP 11 07.91 -2.4
 GHO 3.17 43 eP 11 08.56 -2.6
 CUT 3.28 27 eP 11 10.85 -1.7
 KLU 4.21 59 eP 11 22.02 -3.3
 40 obs. associated

& DEC 08, 1990 16h 27m 13.69s
 61.354 N 151.111 W
 DEPTH = 57.8km
 SOUTHERN ALASKA (2)
 <AGS-P>.

SUA 0.21 58 iP 27 23.26 0.1
 eS 27 31.22
 CGLM 0.43 264 iP 27 24.59 -0.4
 eS 27 33.57
 SPU 0.49 250 iP 27 24.98 -0.5
 eS 27 34.31
 NCG 0.51 276 iP 27 25.29 -0.5
 eS 27 34.69
 CRP 0.51 261 eP 27 25.77 -0.1
 CKL 0.61 256 eP 27 26.41 -0.6
 NKA 0.62 186 iP 27 28.25 1.4
 BGL 0.62 262 eP 27 26.67 -0.4
 eS 27 37.37
 SKT 0.66 343 iP 27 26.58 -0.9
 eS 27 36.98
 PWA 0.66 63 iP 27 27.28 -0.1
 eS 27 38.37
 PMS 0.76 98 iP 27 28.41 -0.3
 eS 27 40.85
 SLKM 0.95 153 eP 27 30.19 -1.0
 eS 27 44.90
 PLRM 0.98 75 iP 27 30.74 -0.8
 eS 27 44.26
 PMR 0.98 75 iPc 27 30.80 -0.7
 RDT 1.01 219 iP 27 31.19 -0.8
 eS 27 45.39
 CUT 1.13 20 eP 27 32.61 -0.9
 eS 27 47.34
 GHO 1.13 67 eP 27 32.93 -0.7
 eS 27 48.55
 REF 1.16 223 eP 27 33.62 -0.6
 eS 27 49.07
 RDN 1.17 224 eP 27 33.42 -0.8
 eS 27 48.57
 NCT 1.19 229 eP 27 33.81 -0.7
 eS 27 49.82
 RSO 1.20 223 eP 27 34.22 -0.5
 eS 27 49.98
 RS2 1.20 223 eP 27 34.16 -0.6
 RED 1.24 222 eP 27 34.65 -0.5
 KNK 1.28 86 eP 27 34.89 -0.8
 eS 27 51.46
 >NNL 1.32 184 eP 27 36.57 0.4
 SEW 1.50 146 eP 27 37.44 -1.1
 BRK 1.60 176 eP 27 39.04 -1.0
 INE 1.61 217 eP 27 39.84 -0.6
 eS 28 00.71
 CNPM 1.84 182 eP 27 42.23 -1.1
 eS 28 06.93
 KNIM 1.94 120 eP 27 41.75 -3.0
 OPT 2.00 212 eP 27 45.73 0.0
 GLI 2.01 102 eP 27 43.17 -2.6
 LTI 2.07 128 eP 27 44.05 -2.6
 TRF 2.14 10 eP 27 46.88 -0.9
 PDB 2.19 225 eP 27 45.92 -2.3
 SVW 2.20 266 iPc 27 46.50 -1.9
 VZW 2.23 96 eP 27 47.17 -1.7
 RND 2.31 26 eP 27 49.82 -0.3
 VLZ 2.32 93 eP 27 48.05 -2.1
 eS 28 15.30
 TOA 2.47 70 iPc 27 51.40 -0.9
 KLU 2.50 85 eP 27 50.42 -2.3
 CDD 2.74 209 eP 27 54.87 -1.3
 TTA 2.79 307 iPd 27 54.60 -2.3
 TZL 2.80 73 eP 27 55.50 -1.4
 CCB 3.63 23 eP 28 07.04 -1.6
 MDM 3.85 19 eP 28 10.27 -1.5
 FBA 3.86 21 iPd 28 10.50 -1.5
 BALM 4.25 90 eP 28 14.17 -3.4
 IMA 4.87 348 ePc 28 23.30 -2.9

49 obs. associated
 * DEC 08, 1990 17h 42m 35.12±1.63s
 44.112 N ± 7.7km 15.869 E ± 16.2km

DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 3.0 (TRI). ML 2.6 (LJU).

VBY 1.46 343 ePn 43 02.40 0.9
 iSn 43 21.40
 AOI 1.73 252 e(Pn) 43 06.11 0.6
 eSn 43 29.04
 PTJ 1.79 2 iPn 43 06.20 -0.1
 eSn 43 31.00
 CEY 1.92 328 e(Pn) 43 06.60 -1.6
 eSn 43 35.90
 LJU 2.15 334 e(Pn) 43 12.00 0.5
 eSn 43 39.50
 CIO 2.18 246 ePn 43 11.04 -1.0
 eSn 43 39.43
 TRI 2.19 318 e(Pn) 43 15.80 3.8X
 i(Sg) 43 43.50
 ARV 2.21 255 P 43 12.80 0.5
 eSn 43 40.00
 VOY 2.38 325 ePn 43 16.10 1.3
 eSn 43 49.60
 ASS 2.55 247 P 43 17.80 0.5
 eSn 43 48.10
 SDI 2.84 213 P 43 21.00 -0.4
 eSn 43 54.30
 SFI 2.90 268 P 43 22.50 0.3
 FVI 3.30 320 P 43 27.00 -0.8
 eSn 44 06.50
 CTI 3.56 304 P 43 30.80 -0.8
 eSn 44 11.30
 S.D. = 0.9 on 13 of 14 obs.

* DEC 08, 1990 17h 53m 54.70±0.50s
 3.278 S ± 8.1km 134.528 E ± 10.9km
 DEPTH = 33.0km (normal)
 5.0mb (12 obs.) 4.9msz (1 obs.)
 WEST IRIAN REGION (196)

AAI 6.34 266 eP 55 30.10 1.8
 eS 57 44.00
 WB5 16.50 181 eP 57 42.80 -2.6
 eS 00 37.50
 OIS 17.87 164 eP 58 01.00 -1.6
 eS 00 56.00
 CTA 20.25 147 iPd 58 32.90 2.7
 0.9s 50.42nm 4.9mb
 ASPA 20.28 182 iPd 58 31.90 1.4
 0.6s 68.30nm 5.2mb
 eS 02 07.70
 KKM 20.50 297 ePc 58 33.00 0.1
 BAG 23.93 325 eP 59 07.20 0.1
 SSE 36.47 341 Pd 00 58.00 -0.6
 1.2s 17.00nm 4.8mb
 e 10 08.00
 CHG 41.33 303 eP 01 40.00 0.7
 KMI 41.82 314 eP 01 44.00 0.5
 BJI 46.28 340 eP 02 17.50 -1.5
 1.2s 29.00nm 5.1mb
 LZH 48.53 327 eP 02 37.00 0.1
 1.0s 28.00nm 5.2mb
 GUN 56.13 307 P 03 33.50 -0.6
 0.8s 16.00nm 5.1mb
 PKI 56.36 306 P 03 35.00 -0.8
 KKN 56.56 306 P 03 36.50 -0.5
 DMN 56.62 306 P 03 37.10 -0.4
 GKN 57.17 306 P 03 40.80 -0.5
 0.8s 16.00nm 5.1mb
 GBA 59.06 288 Pc 04 02.60 8.2X
 0.7s 1.00nm 4.1mb
 TTA 83.70 26 ePd 06 22.00 0.6
 0.7s 3.50nm 4.6mb
 IMA 85.68 23 iPc 06 32.10 0.7
 1.1s 10.70nm 5.0mb
 PMR 86.40 28 eP 06 34.00 -0.7
 FBA 87.74 25 ePd 06 41.90 0.7
 0.9s 7.60nm 5.0mb
 TOA 87.88 28 ePd 06 42.40 0.4
 0.8s 16.80nm 5.4mb
 CNCB 150.12 133 ePKP 13 47.00 6.9X
 i 13 48.50
 LPB 150.21 132 PKP 13 48.00 7.9X
 ZOBO 150.36 132 PKP 13 43.00 2.5X
 Z 20s 0.20um 4.9msz
 LR 36 16.00
 CCH 151.06 136 PKP 13 46.60 5.4X
 S.D. = 1.2 on 22 of 27 obs.

* DEC 08, 1990 18h 35m 25.82±1.63s
 41.717 N ± 19.2km 13.213 E ± 10.1km
 DEPTH = 33.0km (normal)

SOUTHERN ITALY (390)
 AZI 0.32 31 P 35 32.90 -0.9
 RMP 0.39 284 Pd 35 34.80 -0.1
 eSg 35 39.80
 SDI 0.45 91 Pd 35 36.10 0.3
 eSg 35 43.60
 AQU 0.65 12 P 35 35.70 -2.9X
 MNS 0.78 329 P 35 39.50 -0.8
 ALP 1.10 14 ePn 35 48.22 3.2X
 ASS 1.41 343 P 35 51.00 1.5
 CIO 1.48 358 iPn 35 54.08 3.6X
 iSn 36 17.09
 S.D. = 1.4 on 5 of 8 obs.

* DEC 08, 1990 19h 13m 58.95±1.65s
 32.243 S ± 8.7km 71.776 W ± 15.3km
 DEPTH = 29.8 ± 5.5 km
 NEAR COAST OF CENTRAL CHILE (135)

IHA 0.79 172 iPd 14 14.30 0.4
 iS 14 25.80
 JACH 1.09 114 iPd 14 17.60 -0.7
 iS 14 31.50
 LCCH 1.24 172 iPc 14 20.00 -0.3
 iS 14 36.00
 PEL 1.29 135 iPc 14 21.00 0.0
 iS 14 37.00
 SAN 1.53 142 iPc 14 24.20 -0.3
 iS 14 43.40
 TACH 1.57 154 iPc 14 55.00 29.8X
 iS 15 45.50
 FCH 1.65 131 eP 14 26.50 -0.1
 iS 14 47.10
 LNV 1.73 170 iPc 14 26.50 -1.0
 i 14 47.60
 CHCH 1.93 151 iPd 14 33.70 3.3X
 iS 15 00.80
 MDZ 2.55 105 iP 14 50.40 11.1X
 iS 15 14.10
 RTCV 2.78 83 e(P) 14 42.50 0.1
 RTRS 2.87 44 iPc 14 43.20 -0.3
 CFA 3.07 79 ePd 14 46.30 -0.3
 (S) 15 22.90
 S.D. = 0.5 on 10 of 13 obs.

DEC 08, 1990 20h 23m 24.70±0.56s
 39.250 N ± 4.3km 28.162 E ± 6.7km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.2 (ISK).

DST 0.51 45 iPg 23 34.50 -0.5
 iSg 23 42.00
 KCT 1.01 8 iPn 23 44.20 0.4
 IZM 1.10 220 iPn 23 45.20 -0.3
 EDC 1.12 348 ePn 23 46.00 0.3
 BNT 1.12 350 iPn 23 45.80 0.1
 KHL 1.41 131 ePn 23 49.70 -0.8
 IZI 1.48 43 ePn 23 51.30 -0.2
 ALT 1.53 97 ePn 23 53.70 1.6
 EZN 1.53 293 ePn 23 55.00 2.9X
 YLV 1.61 35 iPn 23 52.80 -0.5
 CIN 1.65 182 eP 23 54.00 0.2
 ISK 1.94 20 ePn 24 01.00 3.0X
 HRT 1.95 36 iPn 23 57.80 -0.4
 S.D. = 0.7 on 11 of 13 obs.

* DEC 08, 1990 20h 25m 24.76±1.55s
 43.083 N ± 12.1km 10.954 E ± 10.9km
 DEPTH = 10.0km (geophysicist)
 CENTRAL ITALY (381)

PII 0.71 334 P 25 39.50 0.8
 eSg 25 48.00
 BDI 1.01 345 P 25 44.00 0.0
 eSg 25 57.50
 SFI 1.06 38 P 25 44.50 -0.2
 eSg 25 59.50
 PGF 1.53 250 Pn 25 53.30 1.0
 Sn 26 12.80
 SBF 2.68 288 Pn 26 08.10 -0.7
 Sn 26 41.40

08d 20h

FRF 3.18 280 Pn 26 15.80 0.0
 LMR 3.26 276 Pn 26 16.10 -0.8
 LRG 3.38 278 Pn 26 18.40 -0.1
 S.D. = 0.7 on 8 of 8 abs.

* DEC 08, 1990 20h 56m 14.08 ± 0.78s
 11.849 S ± 11.2km 165.077 E ± 12.9km
 DEPTH = 33.0km (normal)
 4.5mb (1 abs.)

SANTA CRUZ ISLANDS (184)

HNR 5.59 295 eP 57 36.00 -1.1
 SVO 5.83 297 eP 57 41.00 0.5
 DZM 10.25 173 iPc 58 41.10 -1.0
 BRS 19.30 215 iPd 00 40.80 1.5
 WB5 30.56 251 eP 02 27.00 -0.1
 BJI 68.70 322 eP 07 16.00 -0.5
 TOA 82.90 21 ePc 08 37.90 1.2
 IMA 83.45 16 ePd 08 41.40 1.9
 FBA 84.29 18 ePd 08 42.80 -0.7
 YKA 95.98 27 eP 09 37.10 -1.7
 0.8s 1.50nm 4.5mb
 S.D. = 1.4 on 10 of 10 abs.

* DEC 08, 1990 21h 22m 46.89 ± 1.19s
 27.982 N ± 12.0km 55.225 E ± 6.5km
 DEPTH = 60.0 ± 16.5 km
 4.3mb (3 abs.)

SOUTHERN IRAN (353)

SHI 2.89 306 iP 23 32.00 0.4
 BBU 4.60 249 iPn 23 59.60 4.2X
 RYD 8.38 249 eP 24 50.00 1.8
 MAIO 9.05 22 eP 25 08.00 10.6X
 MJMA 9.12 259 ePc 24 58.30 -0.1
 KER 9.41 314 eP 25 41.00 38.5X
 QUE 10.49 75 eP 25 16.50 -0.8
 QASM 10.59 262 eP 25 17.70 -0.8
 AFIF 11.50 253 ePc 25 36.00 5.2X
 KRMA 12.38 235 ePc 25 41.30 -1.1
 PRNI 17.02 282 eP 26 58.00 5.7X
 MBH 17.91 281 eP 26 58.00 4.6X
 GKN 25.95 83 P 28 15.20 -0.4
 DMN 26.41 84 P 28 20.80 0.8
 KKN 26.54 83 P 28 21.40 0.3
 PKI 26.68 84 P 28 23.30 0.8
 GUN 27.05 83 P 28 25.60 -0.3
 HFS 42.66 331 eP 30 38.90 0.1
 NB2 44.17 331 P 30 50.60 -0.6
 YKA 89.47 355 eP 35 47.00 8.7X
 WB5 90.06 112 eP 35 56.50 14.8X
 ASPA 91.55 116 eP 36 41.20 52.7X
 QIS 94.69 111 eP 35 59.00 -4.0X
 S.D. = 0.9 on 13 of 23 abs.

* DEC 08, 1990 23h 38m 51.91 ± 3.36s
 51.524 N ± 21.9km 16.164 E ± 19.4km
 DEPTH = 9.1 ± 3.1 km

POLAND (548)
 ML 3.8 (GRF), 3.6 (VKA).

KSP 0.69 173 iP 39 05.50 -0.1
 BRG 1.54 246 ePn 39 19.90 0.4
 PRU 1.85 214 iPn 39 24.00 -0.1
 CLL 1.99 265 iPn 39 25.60 -0.5
 KRA 2.81 120 ePd 39 46.30 8.5X
 0.6s 197.00nm
 iS 39 15.00
 iPg 39 21.40
 iSg 39 41.00
 Pg 39 26.00
 Sn 39 43.00
 Sg 39 49.70
 iPn 39 25.60
 iPg 39 30.00
 iSg 39 55.00
 ePd 39 46.30
 eS 40 22.80

KHC 2.91 216 iP 39 39.00 -0.3
 e 39 45.00
 Sn 40 16.10
 Sg 40 27.70

HOF 2.97 248 ePn 39 39.90 -0.2
 MOX 3.00 255 ePn 39 41.00 0.5
 iPg 39 49.00
 iSg 40 29.00

WET 3.18 223 ePn 39 43.10 0.1
 VKA 3.26 178 ePn 39 44.50 0.2
 iPg 39 53.50
 eSn 40 21.00
 iSg 40 36.20
 i 40 37.50

ZST 3.39 169 eP 40 21.00 35.0X
 e 40 27.20
 e 40 40.80
 i 40 45.40

GRF 3.64 242 ePn 39 49.50 -0.1
 ePg 40 01.50
 eSg 40 45.90

SOTA 5.39 219 iPnc 40 14.60 0.1
 iSn 41 16.30
 FVI 5.41 206 P 40 14.50 -0.2
 eSn 41 32.00
 CTI 6.24 210 P 40 26.50 0.1
 eSn 41 40.00

S.D. = 0.3 on 13 of 15 abs.

DEC 08, 1990 23h 59m 38.23 ± 0.43s
 39.029 N ± 4.7km 115.313 W ± 3.5km
 DEPTH = 10.0km (geophysicist)

NEVADA (37)
 ML 3.8 (NEIS).

WRN 1.07 192 eP 59 58.50 0.0
 SRG 1.16 170 iPc 00 00.10 0.1
 HCR 1.18 228 eP 00 00.40 -0.1
 MTI 1.35 179 iP 00 03.20 0.0
 NPN 1.41 168 iP 00 04.00 0.0
 DLM 1.49 162 eP 00 05.20 0.0
 PRN 1.63 173 iPc 00 07.30 0.1
 TNP 1.77 238 iPd 00 09.50 0.2
 KVN 2.17 271 eP 00 15.10 0.0
 DUG 2.26 58 eP 00 16.10 -0.2
 LSM 2.41 199 eP 00 17.90 -0.5
 MSU 2.51 101 eP 00 20.00 0.1
 BONR 2.58 246 eP 00 18.50 -2.5
 DAU 3.42 65 eP 00 33.80 0.8
 FRI 4.02 241 eP 00 42.40 1.2
 CMB 4.10 258 eP 00 42.40 0.1
 eS 01 44.50
 ORV 4.83 278 eP 00 52.10 -0.6
 MIN 5.03 287 eP 00 55.90 0.3
 PRI 5.13 238 eP 00 58.30 1.2
 BCH 5.41 226 eP 01 02.00 1.0
 LBFM 5.54 297 eP 01 10.50 7.5X
 PLM 5.80 193 eP 01 06.00 -0.5
 MCMT 6.08 17 eP 01 18.40 7.9X
 GOL 7.73 82 e(P) 01 33.20 -0.6
 YKA 23.50 1 eP 04 50.60 1.9X
 0.4s 0.20nm 3.0mb
 S.D. = 0.8 on 22 of 25 abs.

* DEC 09, 1990 00h 18m 42.60 ± 0.46s
 0.984 N ± 16.4km 26.699 W ± 8.2km
 DEPTH = 10.0km (geophysicist)
 4.5mb (7 abs.) 3.9Msz (2 abs.)

CENTRAL MID-ATLANTIC RIDGE (406)

LIC 22.24 76 P 23 40.64 -0.6
 0.9s 19.00nm 4.6mb
 Z 20s 0.15um 3.4Msz
 TIC 22.34 75 P 23 43.26 0.9
 KIC 22.55 76 P 23 44.04 -0.3
 0.6s 14.00nm 4.6mb
 LKO 22.66 67 P 23 45.04 -0.4
 SIV 37.90 242 P 26 02.00 -0.1
 ZOBO 44.33 245 P 26 55.20 -0.5
 1.0s 9.25nm 4.6mb
 Z 21s 0.44um 4.4Msz
 LR 39 54.00
 CNCB 44.38 245 P 26 55.50 -0.5
 LPB 44.39 245 P 26 56.00 0.0
 BAO 45.30 85 iPc 27 04.00 1.1

0.9s 9.00nm 4.7mb
 ic 27 14.00
 id 27 31.20
 SOTA 56.62 30 eP 28 27.00 -1.2
 i 28 36.90

ZST 60.30 32 eP 28 46.40 -7.3X
 NB2 66.49 19 P 29 42.00 7.5X
 0.9s 2.90nm 4.5mb
 HFS 66.68 21 eP 29 35.30 -0.3
 0.6s 0.70nm 4.0mb

ANMO 81.04 305 eP 31 00.70 0.9
 SES 85.63 320 eP 31 24.00 1.2
 YKA 88.16 332 eP 31 34.50 -0.2
 1.0s 0.80nm 4.0mb

CAN 145.60 174 ePKP 38 30.00 6.6X
 S.D. = 0.8 on 14 of 17 abs.

* DEC 09, 1990 00h 54m 41.71 ± 0.95s
 41.751 N ± 9.0km 13.218 E ± 4.9km
 DEPTH = 10.0km (geophysicist)

SOUTHERN ITALY (390)

AZI 0.29 34 P 54 47.80 0.1
 eSg 54 52.00
 RDP 0.38 271 P 54 49.70 0.3
 eSg 54 55.10
 RMP 0.39 279 P 54 49.70 0.0
 eSg 54 55.20
 SDI 0.45 96 Pd 54 50.70 -0.2
 eSg 54 57.50
 AQU 0.62 13 P 54 54.50 0.3
 MNS 0.75 328 P 54 55.50 -0.9
 ASS 1.38 343 P 55 07.50 0.5
 S.D. = 0.6 on 7 of 7 abs.

DEC 09, 1990 01h 16m 37.23 ± 0.70s
 36.219 N ± 4.4km 33.919 E ± 5.3km
 DEPTH = 31.3 ± 7.3 km

TURKEY (366)
 ML 3.8 (CSS), 3.7 (BHL).

FAM 1.22 177 eP 16 58.40 0.2
 CSS 1.34 201 eP 16 58.50 -1.5
 eSb 17 18.00
 PPCY 1.85 224 eP 17 06.50 -0.8
 BHL 2.71 148 Pn 17 18.00 -1.7
 Sn 17 52.00
 GAZ 2.81 69 iPn 17 19.80 -1.2
 BCK 2.94 296 iPn 17 23.50 0.5
 ELL 3.27 280 iPn 17 31.00 3.3X
 HRI 3.30 152 eP 17 28.00 -0.1
 BBTk 3.73 346 eP 17 36.00 -1.9
 e 17 42.00
 eS 18 30.00
 SHMJ 3.80 156 P 17 38.90 3.9X
 ZNT 4.08 167 eP 17 40.00 1.0
 eS 18 27.00
 KHL 4.09 302 ePn 17 39.30 0.1
 ALT 4.14 314 ePn 17 40.30 0.3
 BURJ 4.26 158 Pd 17 46.20 4.5X
 HLBj 4.58 154 P 17 50.30 4.1X
 KFNJ 4.58 161 P 17 50.00 3.8X
 CIN 4.87 288 eP 17 51.00 0.8
 KVT 5.13 18 eP 17 54.00 0.0
 DST 5.38 311 eP 17 56.00 -1.4
 IZI 5.40 321 eP 17 56.00 -1.7
 CSTJ 5.58 155 P 18 01.90 1.6
 IZM 5.73 294 eP 18 02.00 -0.5
 PRNI 5.93 171 eP 18 05.00 -0.2
 eS 19 13.00
 GKN 43.32 86 P 24 38.20 -0.1
 DMN 43.87 86 P 24 42.80 0.0
 KKN 43.93 86 P 24 43.00 -0.2
 PKI 44.13 86 P 24 44.80 -0.2
 GUN 44.36 85 P 24 46.80 -0.1
 S.D. = 1.0 on 23 of 28 abs.

* DEC 09, 1990 03h 12m 21.78 ± 1.86s
 43.053 N ± 12.5km 143.823 E ± 13.6km
 DEPTH = 137.2 ± 21.2 km
 4.4mb (7 abs.)

HOKKAIDO, JAPAN REGION (224)

MAT 7.81 215 iPd 14 13.80 -0.1
 0.8s 11.19nm 4.5mb
 (S) 15 42.00
 BRW 40.17 25 ePd 19 44.80 -0.5

09d 03h

IMA 40.61 34 iPc 19 49.70 0.5
0.5s 4.50nm 4.4mb
PMR 42.77 40 eP 20 06.40 -0.2
FBA 43.08 35 iPc 20 10.10 1.0
0.6s 14.90nm 4.8mb
INK 48.22 30 ePc 20 49.80 0.1
MBC 50.24 18 eP 21 05.00 0.0
YKA 57.71 33 eP 21 59.00 -0.7
0.5s 2.00nm 4.3mb
WRA 63.29 190 P 22 38.00 0.1
0.9s 1.70nm 4.0mb
KAF 63.83 332 eP 22 41.20 0.2
NUR 65.52 332 eP 22 51.90 0.0
NB2 69.35 337 P 23 16.00 0.1
0.7s 3.40nm 4.3mb
HFS 69.36 336 eP 23 16.00 0.1
0.4s 5.20nm 4.7mb
FRB 70.50 15 eP 23 22.00 -0.7
S.D. = 0.5 on 14 of 14 obs.

DEC 09, 1990 03h 40m 52.22±0.75s
36.297 N ± 7.1km 140.627 E ± 7.6km
DEPTH = 103.3 ± 5.3 km
4.5mb (15 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ 0.38 256 iPd 41 07.20 -0.6
S 41 17.40
CHJJ 1.34 260 P 41 16.90 -0.2
S 41 36.40
NIIJ 1.61 306 iP+ 41 20.50 0.1
S 41 43.70
YAMJ 1.93 346 iP+ 41 24.30 -0.2
S 41 49.30
MAT 1.97 278 eP 41 25.00 0.0
(S) 41 48.00
MTMJ 2.29 278 iP+ 41 30.20 0.8
S 41 59.60
IIDJ 2.35 251 iPd 41 31.20 1.1
S 42 00.70
OFUJ 2.90 16 P 41 35.90 -1.5
S 42 09.30
TSRJ 3.84 260 P 41 51.10 0.8
AOMJ 4.26 357 P 41 55.60 -0.4
WKYJ 4.61 245 P 42 00.90 0.0
TKSJ 5.86 249 P 42 18.40 0.3
YONJ 5.93 261 eP 42 19.40 0.3
MDJ 11.81 318 eP 43 41.00 2.6
CN2 13.82 307 eP 44 02.00 -2.7
Z 16s 0.60um
BJI 19.57 288 eP 45 10.50 -3.8X
2.0s 55.00nm 4.5mb
TIY 22.53 282 eP 45 44.40 0.3
Z 12s 0.50um 4.2mszX
E 13s 0.50um
XAN 25.96 274 P 46 16.00 -0.7
LZH 29.57 281 eP 46 55.00 5.5X
GYA 30.48 261 P 46 56.00 -1.4
GTA 32.18 288 eP 47 12.00 -0.3
0.8s 10.00nm 4.6mb
WMO 40.61 297 P 48 24.60 1.3
GUN 46.60 276 P 49 12.00 0.0
PKI 47.12 276 P 49 16.60 0.4
0.6s 15.00nm 5.0mb
KKN 47.13 276 P 49 16.80 0.7
0.6s 8.00nm 4.7mb
DMN 47.35 276 P 49 18.20 0.3
GKN 47.56 277 P 49 20.00 0.6
0.8s 21.00nm 5.0mb
FBA 50.06 32 eP 49 40.10 2.2
0.6s 2.00nm 4.3mb
pP 50 06.20 110kmX
INK 55.33 27 eP 50 17.00 0.1
WB5 56.18 187 eP 50 22.90 -0.6
WRA 56.25 187 P 50 23.00 -1.0
0.8s 8.70nm 4.8mb
MBC 57.41 16 eP 50 32.00 0.4
ASPA 59.98 187 eP 50 49.80 -0.1
1.0s 8.70nm 4.8mb
GBA 60.53 265 Pc 50 51.60 -2.3
0.7s 3.60nm 4.5mb
YKA 64.76 30 eP 51 20.50 -0.8
1.1s 1.50nm 3.8mb
SOD 65.40 337 eP 51 23.00 -2.3
KAF 68.67 333 eP 51 45.50 -0.5
0.4s 3.00nm 4.5mb
NUR 70.30 332 eP 51 55.50 -0.4

HFS 74.50 335 eP 52 20.50 -0.1
0.5s 2.70nm 4.3mb
NB2 74.62 337 P 52 21.20 -0.2
0.7s 5.10nm 4.5mb
TNP 76.83 52 eP 52 36.00 1.5
1.0s 2.50nm 4.0mb
FRB 77.63 13 eP 52 55.00 16.9X
CLL 81.42 330 iPd 52 59.30 0.7
ALQ 85.55 49 eP 53 22.00 1.7
0.9s 2.10nm 4.1mb
ZOBO 147.60 60 PKP 00 28.00 3.8X
Z 22s 0.09um 4.5msz
LR 57 36.00
LPB 147.80 60 PKP 00 28.00 3.7X
CNCB 148.07 60 PKP 00 31.00 6.1X
CCH 149.74 59 ePKP 00 30.00 2.8X
SIV 152.04 49 PKP 00 37.60 7.3X
S.D. = 1.1 on 41 of 49 obs.

* DEC 09, 1990 05h 26m 49.67±0.43s
8.676 S ± 8.4km 110.587 E ± 9.6km
DEPTH = 33.0km (normol)
5.0mb (13 obs.) 4.6msz (4 obs.)
JAVA (277)

KGM 12.86 325 ePc 29 54.90 2.0
e 33 33.00
KKM 15.66 21 ePd 30 39.00 9.2X
IPM 16.26 324 ePc 30 38.30 1.0
0.9s 61.40nm 4.7mb
SNG 18.62 327 eP 30 41.80 -25.0X
WARB 23.14 141 iPd 31 55.90 1.7
KLB 23.76 165 eP 32 06.50 6.5X
OCP 25.39 24 eP 32 24.00 8.2X
WB5 25.56 118 iPc 32 16.90 -0.5
eS 36 55.50
NST 26.31 337 eP 32 32.00 7.6X
BAG 26.82 22 eP 32 30.50 1.3
LOE 27.35 341 eP 32 26.00 -7.9X
CHG 29.63 337 eP 32 54.90 0.4
QIS 30.40 116 eP 32 59.00 -2.3
GYA 35.13 354 eP 33 41.60 -0.9
PMG 36.11 94 eP 33 50.00 -0.8
CTA 36.28 112 iPc 33 52.20 0.0
1.0s 21.00nm 5.0mb
KOD 37.94 299 eP 34 06.00 -0.6
WHN 39.16 5 eP 34 21.00 4.8X
GBA 39.66 304 Pd 34 17.20 -3.3X
0.6s 2.10nm 4.1mb
GBA 39.66 304 P 34 22.00 1.5
CMS 39.85 130 eP 34 22.00 0.1
CD2 39.90 351 eP 34 22.60 0.2
Z 14s 0.99um 4.8mszX
N 15s 0.66um
RMO 40.26 121 eP 34 28.00 2.6X
e 37 10.00
BFD 40.52 139 eP 34 31.00 3.6X
SSE 40.83 14 eP 34 29.50 -0.4
Z 16s 0.30um 4.2mszX
NJ2 41.26 11 Pc 34 34.50 1.1
LSA 42.49 335 P 34 41.30 -2.9
XAN 42.51 358 P 34 41.50 -2.2
BWA 43.13 132 eP 34 52.00 3.1X
PKI 43.51 327 P 34 49.00 -3.3X
GUN 43.52 328 P 34 48.50 -4.0X
DMN 43.70 326 P 34 50.00 -3.8X
KKN 43.75 327 P 34 50.40 -3.7X
BRS 43.95 121 iPc 34 52.00 -3.6X
CAN 43.96 133 eP 34 57.20 1.6
GKN 44.27 326 P 34 53.80 -4.5X
LZH 44.97 352 eP 35 07.00 3.2X
2.5s 34.00nm 4.8mb
Z 20s 0.49um 4.4msz
E 15s 0.81um
S 41 37.50
POO 45.22 307 eP 35 06.50 0.6
TIY 46.18 2 P 35 12.60 -0.6
Z 16s 0.60um 4.6mszX
N 13s 0.50um
E 12s 0.40um
BJI 48.74 6 P 35 34.00 0.8
1.0s 12.00nm 4.9mb
PP 35 42.00
GTA 48.87 349 eP 35 32.60 -1.8
0.6s 10.00nm 5.0mb
Z 20s 0.60um 4.6msz
E 15s 0.80um

BTO 49.03 359 eP 35 32.40 -3.1X
HMC 49.29 1 eP 35 40.00 2.5X
MAT 51.93 28 eP 35 52.00 -5.6X
0.8s 6.72nm 4.7mb
CN2 53.94 13 eP 36 14.40 2.0
Z 20s 0.60um 4.7msz
N 14s 0.30um
E 14s 0.30um
ePP 36 22.00
eS 43 40.00
YAMJ 54.10 29 P 36 16.40 2.8X
DZM 55.20 111 iPd 36 22.40 0.3
OFUJ 55.60 29 P 36 26.90 2.4X
MAW 66.84 198 eP 37 41.60 1.5
1.0s 31.00nm 5.4mb
BFT 77.81 246 iPc 38 47.50 1.4
1.0s 40.00nm 5.4mb
SLR 79.39 245 iPc 38 53.00 -1.7
1.0s 50.00nm 5.5mb
BUL 79.57 251 iPc 38 53.80 -1.9
SEK 79.77 243 iPc 38 57.00 0.3
SPA 81.38 180 iPd 39 05.90 1.4
1.0s 30.00nm 5.3mb
i 40 23.10 332kmX
SWZ 81.90 244 eP 39 05.00 -2.9
BCAO 92.68 274 iPd 40 00.80 0.5
0.6s 11.00nm 5.5mb
ic 40 10.90 31kmX
APO 100.77 330 ePd 40 33.10 -3.0X
0.5s 0.80nm 4.5mb
YKA 117.14 22 ePKP 45 30.60 -2.1X
0.6s 0.90nm
PNT 121.83 36 ePKP 45 43.00 0.9
ALQ 137.20 47 ePKP 46 11.30 -0.9
SOB1 146.50 239 ePKP 46 31.50 2.7X
CCH 153.91 187 PKP 46 44.60 4.4X
SIV 154.14 199 ePKP 46 45.00 4.8X
i 47 04.20
CNCB 154.64 183 PKP 46 50.00 8.5X
LPB 154.92 183 PKP 46 50.00 8.3X
ZOBO 155.18 183 PKP 46 47.00 4.7X
Z 20s 0.09um 4.6msz
LR 44 20.00
S.D. = 1.5 on 35 of 66 obs.

* DEC 09, 1990 05h 53m 14.13±0.40s
49.521 N ± 10.8km 155.699 E ± 8.3km
DEPTH = 33.0km (normol)
4.3mb (13 obs.)

KURIL ISLANDS (221)
MAT 18.16 231 (P) 57 25.00 -0.2X
0.9s 8.40nm 3.9mb
IMA 30.55 38 ePd 59 26.70 0.2
0.5s 1.40nm 4.0mb
FBA 32.92 41 iPc 59 47.60 0.6
0.6s 6.60nm 4.7mb
YKA 47.67 39 eP 01 48.70 0.0
0.8s 1.00nm 3.9mb
CHG 54.44 257 ePc 02 41.40 0.9
0.9s 10.50nm 4.9mb
GUN 56.49 275 P 02 55.40 -0.2
KKN 56.96 275 P 02 58.80 0.0
PKI 57.02 275 P 03 00.00 0.6
DMN 57.19 275 P 03 01.60 1.0
GKN 57.23 276 P 03 00.60 -0.1
TNP 60.53 65 eP 03 23.90 0.4
0.9s 1.76nm 4.2mb
FRB 61.85 21 eP 03 31.00 -0.8
NB2 66.15 342 P 03 59.20 -0.7
0.6s 1.30nm 4.2mb
HFS 66.45 340 eP 04 00.60 -1.2
0.4s 0.90nm 4.2mb
ANMO 68.94 61 eP 04 18.70 0.7
1.0s 3.00nm 4.3mb
ALQ 68.94 61 eP 04 18.20 0.2
0.8s 1.31nm 4.1mb
WB5 71.64 201 eP 04 33.80 -0.4
WRA 71.71 201 P 04 33.00 -1.6
0.6s 4.30nm 4.6mb
GBA 72.17 270 Pd 04 37.80 0.2
0.4s 1.70nm 4.4mb
ASPA 75.40 201 eP 04 56.60 0.5
0.5s 4.00nm 4.7mb
S.D. = 0.8 on 19 of 20 obs.

DEC 09, 1990 06h 29m 21.85±0.55s

09d 06h

3.081 S \pm 7.6km 35.267 E \pm 9.4km
 DEPTH = 33.0km (normal)
 4.3mb (5 obs.)
 TANZANIA (573)
 mblg 4.9 (BUL).

NAI	2.36	41	iPc	29	59.80	0.5
LWI	6.51	277	iPc	30	57.90	-0.2
AAE	12.53	16	eP	32	18.00	-3.0X
BUL	18.16	200	iPnd	33	27.50	-5.9X
			iSn	36	40.50	
			iLg	38	46.90	
BCAO	18.31	294	iPd	33	35.00	-0.2
	0.7s	9.00nm			4.0mb	
			iS	37	45.60	
			Lg	38	57.60	
BFT	23.03	192	iPd	34	25.00	-0.5
			S	39	08.50	
SLR	23.50	196	iPc	34	30.50	0.5
			S	39	32.00	
KSR	24.04	199	iPc	34	33.50	-1.7
			S	39	13.50	
FRS	28.15	199	eP	35	15.00	1.8
TIC	41.36	284	P	37	07.70	0.9
LKO	42.59	288	P	37	17.28	0.4
GBA	45.00	67	Pc	37	27.50	-8.8X
	0.6s	2.40nm			4.3mb	
ZST	53.48	345	eP	38	41.10	0.0
KHC	55.30	343	P	38	52.30	-2.3X
NUR	63.94	354	eP	39	48.00	-5.7X
KAF	65.37	355	eP	40	02.50	-0.5
APD	65.58	349	eP	40	01.10	-3.3X
	0.6s	2.70nm			4.5mb	
NB2	66.60	348	P	40	08.00	-2.9X
	1.2s	12.90nm			4.9mb	
SOD	70.56	356	iP	40	35.00	-0.3
WRA	97.47	110	P	42	52.00	-2.2X
	1.9s	1.00nm			4.0mb	
YKA	116.63	345	ePKP	48	03.20	-0.7
	0.7s	0.20nm				

S.D. = 0.2 on 13 of 21 obs.

? DEC 09, 1990 06h 44m 59.47 \pm 3.82s
 33.627 S \pm 25.5km 178.958 E \pm 48.5km
 DEPTH = 87.1 \pm 20.4 km
 4.8mb (3 obs.)

SOUTH OF KERMADEC ISLANDS (179)

HBZ	4.00	187	eP	46	00.50	0.9
PUZ	4.47	187	eP	46	01.30	-5.0X
NOZ	5.04	188	eP	46	13.00	-1.0
DZM	15.95	313	iPc	48	40.10	0.0
ASPA	40.50	272	eP	52	32.50	1.1
	0.7s	8.80nm			4.7mb	
Z	23s	0.20um			3.9mszx	
WRA	41.79	277	P	52	41.00	-1.0
	0.5s	15.70nm			5.1mb	
WB5	41.79	278	iPc	52	42.00	-0.1
SPA	56.55	180	iPc	54	35.10	0.1
	0.7s	3.91nm			4.6mb	
KEV	140.63	345	ePKP	04	16.00	-3.4X
BCAO	145.70	216	ePKPd	04	20.70	-9.2X
	0.5s	3.00nm				

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

% DEC 09, 1990 07h 10m 44.57 \pm 0.81s
 46.006 N \pm 6.7km 2.937 E \pm 5.9km
 DEPTH = 10.0km (geophysicist)

FRANCE (538)
 ML 1.7 (LDG).

MAF	0.34	310	Pg	10	52.20	0.7
			Sg	10	57.60	
BGF	0.56	354	Pg	10	55.40	-0.5
			Sg	11	03.60	
TCF	0.58	299	Pg	10	56.20	-0.1
			Sg	11	04.20	
AVF	0.84	20	Pg	11	00.40	-0.3
			Sg	11	11.40	
SMF	0.90	44	Pg	11	01.60	-0.1
			Sg	11	13.00	
LSF	1.01	284	Pg	11	03.40	-0.3
			Sg	11	16.70	
LBF	1.21	36	Pg	11	07.80	0.6
			Sg	11	22.90	
CAF	1.24	210	Pn	11	07.70	0.0
			Sg	11	23.80	

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

% DEC 09, 1990 07h 12m 03.62 \pm 0.71s
 46.007 N \pm 5.9km 2.956 E \pm 5.1km

DEPTH = 10.0km (geophysicist)

FRANCE (538)

ML 1.9 (LDG).

MAF	0.35	309	Pg	12	11.20	0.4
			Sg	12	16.50	
BGF	0.56	352	Pg	12	14.60	-0.3
			Sg	12	22.50	
TCF	0.59	299	Pg	12	15.50	-0.1
			Sg	12	23.30	
AVF	0.83	19	Pg	12	19.40	-0.3
			Sg	12	30.50	
SMF	0.89	44	Pg	12	20.60	0.0
			Sg	12	32.30	
LSF	1.02	284	Pg	12	22.80	-0.1
			Sg	12	35.80	
SSF	1.12	20	Pg	12	24.40	-0.2
			Sg	12	39.30	
LBF	1.21	35	Pg	12	26.30	0.2
			Sg	12	42.00	
CAF	1.25	210	Pg	12	26.80	-0.1
			Sg	12	42.20	
LOR	1.41	26	Pg	12	29.80	0.5
			Sg	12	49.40	

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

* DEC 09, 1990 07h 33m 15.71 \pm 0.60s
 8.165 S \pm 13.2km 110.811 E \pm 15.5km

DEPTH = 33.0km (normal)

4.8mb (7 obs.) 4.3msz (1 obs.)

JAVA (277)

KKM	15.11	21	ePc	37	05.00	16.4X
IPM	15.99	322	ePd	37	03.60	3.7X
	1.0s	52.60nm			4.6mb	
WARB	23.40	142	eP	38	21.00	-1.7
			eS	42	33.00	
KLB	24.19	165	eP	38	32.00	1.7
MUN	24.22	169	eP	38	37.00	6.4X
			eS	42	49.00	
ASPA	26.96	128	iPc	38	54.60	-1.8
	1.1s	20.80nm			4.7mb	
Z	23s	0.20um			3.6mszx	
			eS	43	07.50	
OIS	30.43	117	eP	39	26.50	-1.1
KMI	34.01	347	eP	40	11.00	12.0X
CTA	36.27	113	iPc	40	18.10	-0.1
	1.0s	10.00nm			4.7mb	
KOD	37.89	298	eP	40	34.50	2.3X
SHL	38.25	332	eP	40	34.00	-0.9
GBA	39.57	303	Pc	40	43.70	-2.1
	0.2s	0.70nm			4.1mb	
SSE	40.28	14	eP	41	01.80	10.3X
BFD	40.76	140	eP	40	57.00	1.6
PKI	43.20	326	P	41	17.80	1.9
GUN	43.22	327	P	41	19.70	3.7X
DMN	43.40	326	P	41	17.20	-0.2
KKN	43.45	326	P	41	19.90	2.2
GKN	43.97	326	P	41	19.60	-2.3
BRS	44.02	121	iPc	41	23.50	1.3
			i	42	26.80	
CAN	44.15	133	eP	41	31.80	8.6X
LZH	44.50	352	(P)	41	33.50	7.4X
			Z	18s	0.34um	4.3msz
			i	42	33.50	
			i	43	17.50	
POO	45.09	306	eP	41	27.50	-3.4X
BJI	48.22	6	eP	42	03.50	8.4X
SVO	48.43	95	P	42	04.00	6.8X
IIOJ	50.38	29	P	42	18.50	6.6X
MTMJ	51.22	28	P	42	19.50	1.1
CHJJ	51.35	29	P	42	19.70	0.4
MAT	51.38	28	(P)	42	19.00	-0.4
	1.3s	38.46nm			5.2mb	
NIJJ	52.31	28	eP	42	32.60	6.1X
DZM	55.17	111	iPc	42	53.20	5.2X
SPA	81.89	180	iPd	45	32.90	-0.2
	1.0s	12.50nm			4.9mb	
BCAO	92.87	274	ePc	46	28.00	0.8
	0.6s	6.00nm			5.2mb	
			id	46	34.30	
CCH	154.44	187	ePKP	53	12.00	5.0X
SIV	154.69	199	ePKP	53	16.00	9.1X

CNCB 155.16 183 PKP 53 19.10 10.9X
 LPB 155.44 183 ePKP 53 27.00 18.6X
 ZOBO 155.70 182 ePKP 53 16.00 7.0X
 S.D. = 1.5 on 1B of 38 obs.

& DEC 09, 1990 08h 52m 31.60s

34.333 N 116.900 W

DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43)

<PAS-P>. ML 2.6 (PAS).

PEC 0.49 206 iPd 52 41.10 -0.4

PLM 0.98 178 iPd 52 49.90 -0.8

ABL 1.98 286 eP 53 07.00 0.7

3 obs. associated

% DEC 09, 1990 10h 06m 56.98 \pm 0.87s

42.712 N \pm 6.3km 12.674 E \pm 13.0km

DEPTH = 10.0km (geophysicist)

CENTRAL ITALY (381)

MNS 0.33 179 Pc 07 02.60 -1.2

iSg 07 07.30

ASS 0.36 359 P 07 04.00 -0.4

eSg 07 09.40

AQU 0.65 123 Pc 07 09.40 -0.6

eSg 07 21.40

ARV 0.81 14 P 07 12.00 -0.7

eSg 07 24.50

AZI 0.92 142 P 07 15.20 0.7

CRE 1.06 330 P 07 18.00 1.0

eSg 07 33.00

SDI 1.32 139 P 07 22.40 1.1

eSn 07 39.80

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

% DEC 09, 1990 10h 16m 02.28 \pm 0.81s

39.090 N \pm 6.7km 27.572 E \pm 8.3km

DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.3 (ISK).

Izm 0.73 199 ePg 16 16.60 -0.1

eSg 16 28.60

DST 0.97 57 ePn 16 21.10 0.4

EZN 1.21 308 ePn 16 25.00 0.2

EDC 1.28 10 ePn 16 26.00 0.1

KCT 1.31 27 ePn 16 25.90 -0.5

KGT 1.38 351 ePn 16 27.50 0.0

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

% DEC 09, 1990 10h 23m 58.29 \pm 1.51s

40.764 N \pm 9.2km 27.558 E \pm 10.5km

DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.5 (ISK).

KGT 0.37 212 iPg 24 05.50 -0.3

iSg 24 09.00

EDC 0.48 151 ePg 24 07.90 -0.1

BNT 0.49 146 iPg 24 07.90 -0.4

CTT 0.76 60 iPg 24 13.40 0.2

KCT 0.80 130 ePg 24 13.40 -0.4

DST 1.42 144 ePn 24 26.00 1.8

IZI 1.52 106 ePn 24 25.00 -0.6

HRT 1.60 87 iPn 24 26.50 -0.3

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

% DEC 09, 1990 10h 26m 41.92 \pm 0.77s

39.157 N \pm

39.655 N \pm 3.4km 27.576 E \pm 2.9km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.8 (ISK).

EDC	0.73	18	ePg	04 49.90	-0.1
			eSg	05 00.90	
BNT	0.75	21	iPg	04 50.60	0.2
			eSg	05 01.90	
DST	0.81	93	iPg	04 51.30	-0.3
			eSg	05 01.60	
KGT	0.82	345	iPg	04 52.50	0.9
KCT	0.84	45	iPg	04 51.40	-0.6
EZN	0.98	280	iPg	04 49.30	-5.0X
PRK	1.09	248	ePb	04 56.00	-0.2
Izm	1.28	191	iPn	04 59.10	-0.4
IZI	1.61	64	iPn	05 04.40	0.1
CTT	1.63	23	iPn	05 04.50	0.0
ISK	1.81	38	ePn	05 06.50	-0.6
GBZT	1.83	51	ePn	05 07.30	-0.1
			iSg	05 34.60	
KHL	2.02	131	iPn	05 10.50	0.2
ALT	2.05	106	iPn	05 11.20	0.4
RDO	2.15	314	ePn	05 12.50	0.3
			eSn	05 42.50	
DMK	2.17	4	iPn	05 11.00	-1.4
GPA	2.19	72	iPn	05 14.00	1.2
KOZ	2.58	321	iPd	05 19.00	0.7
DIM	2.85	328	eP	05 22.00	-0.1
JMB	2.91	345	iP	05 32.00	9.1X
RZN	2.98	314	iPd	05 24.00	0.0
PLD	3.28	319	iPd	05 29.00	0.9
MMB	3.51	305	eP	05 31.00	-0.4
PVL	3.94	335	eP	05 37.00	-0.5
BBTK	4.00	86	eP	05 52.00	13.5X
			eS	06 47.00	
KKB	4.06	304	iP	05 39.00	-0.3

S.D. = 0.6 on 23 of 26 obs.

* DEC 09, 1990 11h 07m 34.12 \pm 0.57s
 48.300 S \pm 1.3km 31.392 E \pm 16.9km
 DEPTH = 10.0km (geophysicist)
 5.3mb (7 obs.) 4.0Msz (1 obs.)
 SOUTH OF AFRICA (430)

BFT	22.60	357	iPd	12 37.50	1.3
	1.2s		54.69nm		4.9mb
SLR	22.66	353	iPc	12 34.50	-2.2
			i	12 45.00	
KSR	22.67	349	iPc	12 40.50	3.6X
	1.0s		25.00nm		4.7mb
MAW	25.07	152	iP	12 59.20	-0.4
	0.8s		63.00nm		5.4mb
BUL	28.18	354	eP	13 25.90	-2.9X
BCAO	53.71	344	iPc	16 59.10	0.7
	0.5s		20.00nm		5.4mb
			ic	17 07.90	
KUK	61.00	323	eP	17 50.50	0.5
KIC	62.99	319	Pd	18 02.92	-0.4
	1.0s		30.00nm		5.4mb
LIC	63.00	319	P	18 03.28	0.0
	20s		0.11um		4.0Msz
TIC	63.37	319	P	18 05.88	0.1
LKO	66.20	320	Pd	18 24.30	0.1
	0.8s		25.50nm		5.4mb
PDCR	67.79	276	eP	18 34.40	0.1
SIV	79.85	257	P	19 44.40	-0.1
WRA	83.59	113	P	20 12.00	8.1X
	0.8s		11.80nm		5.2mb
WB5	83.65	113	eP	20 04.70	0.4
ALQ	146.21	262	ePKP	27 15.00	-0.1
	1.0s		18.00nm		
MBC	149.57	347	ePKPc	27 24.30	5.4X
	1.0s		14.00nm		
FFC	150.73	300	ePKP	27 26.00	4.8X
	1.0s		16.00nm		
BAR	151.39	249	ePKP	27 30.00	7.0X
TPC	151.94	252	ePKP	27 31.00	7.2X
PLM	151.96	250	ePKP	27 32.00	8.0X
RVR	152.70	250	ePKP	27 33.00	8.2X
GSC	153.18	253	ePKP	27 34.00	8.5X
MWC	153.28	250	ePKP	27 45.00	19.1X
SBH	153.44	251	ePKP	27 34.00	8.1X
CLC	154.00	253	ePKP	27 33.00	6.4X
YKA	156.39	320	ePKP	27 23.00	-5.1X
	1.1s		2.00nm		

S.D. = 0.9 on 13 of 27 obs.

? DEC 09, 1990 11h 08m 58.86 \pm 0.87s
 58.432 S \pm 26.6km 144.767 W \pm 15.6km
 DEPTH = 10.0km (geophysicist)
 4.9mb (3 obs.)

SOUTH PACIFIC CORDILLERA (691)

SPA	31.74	180	iPc	15 24.80	0.0
	1.0s		45.00nm		5.3mb
			i	15 53.90	
ASPA	65.66	264	eP	19 46.50	1.2
	0.6s		5.60nm		4.9mb
WRA	68.49	267	P	20 02.00	-1.2
	0.6s		2.50nm		4.6mb
CNCB	68.92	88	P	20 07.00	0.4
LPB	69.09	88	P	20 08.00	0.5
ZOBO	69.30	87	P	20 08.00	-0.9
			e	22 46.00	
			LR	49 12.00	
CCH	69.42	90	(P)	19 54.00	-15.3X
YKA	122.82	16	ePdiff	24 32.70	6.9X
	0.9s		0.70nm		

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

DEC 09, 1990 11h 17m 37.92 \pm 1.59s
 0.205 N \pm 7.1km 122.151 E \pm 8.5km
 DEPTH = 177.1 \pm 16.5 km
 4.9mb (13 obs.)
 MINAHASSA PENINSULA (265)

TSM	5.70	314	ePd	18 01.50	-60.3X
	0.2s		212.20nm		
KKM	8.29	314	ePd	19 36.00	-0.2
KGM	18.91	276	eP	21 47.00	-0.6
IPM	21.54	282	ePd	22 15.60	1.5
	0.9s		48.00nm		5.0mb
WRA	23.32	150	P	22 39.00	7.7X
	0.3s		12.90nm		5.0mb
ASPA	26.33	155	iPc	22 59.60	0.3
	0.7s		27.90nm		5.1mb
			iPcP	26 20.10	
			eS	27 17.60	
LOE	26.39	311	eP	23 00.00	0.2
WARB	26.59	171	iPc	23 02.00	0.4
	0.4s		13.00nm		5.0mb
QIS	26.79	141	iPc	23 03.70	0.3
	0.5s		21.00nm		5.1mb
BDT	28.39	308	eP	23 18.80	0.9
CHG	29.34	310	ePd	23 27.00	0.6
	1.1s		29.11nm		4.9mb
COOL	30.93	182	eP	23 39.00	-1.2
BAL	31.08	189	eP	23 40.60	-0.8
KLB	31.90	187	iPc	23 48.00	-0.6
	0.3s		8.00nm		5.0mb
SHL	38.59	313	iP	24 45.90	0.2
			eS	30 25.00	
MAT	39.10	21	iPc	24 48.00	-1.5
BRS	40.23	135	iPd	24 59.50	0.6
BFD	41.71	155	iPd	25 14.60	3.7X
TOO	43.33	153	eP	25 25.00	0.9
GUN	44.35	311	P	25 33.00	0.2
PKI	44.52	311	P	25 34.00	-0.1
	0.6s		15.00nm		4.7mb
KKN	44.73	311	P	25 35.60	-0.1
	0.6s		17.00nm		4.8mb
DMN	44.77	311	P	25 36.00	0.0
	0.6s		20.00nm		4.8mb
GKN	45.33	311	P	25 40.40	0.1
	0.6s		25.00nm		4.9mb
HYB	46.17	294	iPd	25 46.50	-0.5
	1.0s		50.00nm		5.0mb
GBA	46.23	289	Pd	25 46.30	-1.0
	0.7s		16.10nm		4.7mb
KHZ	62.63	139	P	27 45.90	0.3
PUZ	64.03	133	P	27 54.70	-0.2
NOZ	64.08	134	eP	27 55.40	0.2

S.D. = 0.7 on 26 of 29 obs.

% DEC 09, 1990 11h 23m 55.19 \pm 0.83s
 39.214 N \pm 6.7km 27.981 E \pm 8.8km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.7 (ISK).

DST	0.64	52	ePg	24 07.60	-0.4
			eSg	24 18.10	
IZM	0.99	215	ePg	24 14.00	0.0

KCT	1.07	16	ePg	24 26.60	
EDC	1.14	355	ePn	24 16.00	-0.4
BNT	1.14	358	ePn	24 16.40	-0.2
KGT	1.34	337	iPn	24 20.00	0.1
IZI	1.61	45	ePn	24 24.00	0.3

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

% DEC 09, 1990 13h 29m 25.56 \pm 2.49s
 39.382 N \pm 8.5km 26.267 E \pm 23.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.1 (ISK).

EZN	0.45	6	iPg	29 34.30	-0.3
			iSg	29 43.30	
IZM	1.25	141	ePn	29 49.00	0.1
KGT	1.33	36	iPn	29 50.90	0.8
EDC	1.56	51	ePn	29 53.40	0.0
BNT	1.60	52	iPn	29 53.80	-0.2
DST	1.84	82	ePn	29 57.00	-0.5

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

DEC 09, 1990 13h 32m 30.73 \pm 0.47s
 40.075 N \pm 3.7km 19.990 E \pm 5.1km
 DEPTH = 5.0km (geophysicist)
 ALBANIA (391)
 MD 3.4 (ATH), 3.3 (THE).

SRN	0.19	178	iPg	32 34.00	-0.7
TPE	0.22	4	iPd	32 35.10	-0.1
KEK	0.39	202	ePg	32 36.60	-2.0
IGT	0.60	154	eP	32 42.32	-0.5
			eS	32 54.16	
OHR	1.20	30	iPnc	32 52.70	-1.0
			iSn	33 12.50	
FNA	1.27	56	eP	32 54.30	-0.5
TIR	1.27	356	ePn	32 54.00	-0.8
KZN	1.38	80	ePb	32 57.00	0.3
LACI	1.57	352	ePn	32 59.50	0.2
LCI	1.58	280	P	33 00.00	0.6
			eSg	33 22.00	
PHP	1.65	12	iPnd	32 59.60	-0.8
EVN	1.82	129	ePb	33 04.50	1.4
LIT	1.92	88	iP	33 05.17	0.8
VLS	1.95	166	ePn	33 06.00	1.1
SDA	1.97	349	ePn	33 08.00	2.9X
KKS	2.02	9	ePn	33 08.00	2.2
AGG	2.09	119	eP	33 08.16	1.2
SKO	2.19	30	ePn	33 07.00	-1.3
			iSg	33 39.50	
BRT	2.27	292	P	33 10.50	1.0
			eSg	33 41.00	
VAY	2.32	57	ePn	33 11.40	1.2
KNT	2.47	63	eP	33 11.16	-1.1
			eS	33 48.44	
SOH	2.67				

09d 15h

Felt (III) at Petropavlovsk-Kamchatskiy.				Z 16s 5.80um 5.4MszX				SES 49.65 57 eP 45 17.00 -1.0			
CENTROID, MOMENT TENSOR (HRV)				E 16s 3.30um				BAG 0.8s 59.00nm 45 20.00 5.7mb			
Data Used: GDSN				PcP 45 47.00				WDC 49.88 236 eP 45 20.00 -0.2			
L.P.B.: 12S, 26C				eS 48 24.00				LBFM 50.03 72 P 45 21.50 0.3			
Centroid Location:				eScS 53 29.00				LTCM 50.20 74 eP 45 22.50 0.3			
Origin Time 15:36:32.9 0.2				SIT 34.00 60 eP 43 10.80 0.7				MIN 50.68 74 P 45 26.00 0.1			
Lat 54.38N 0.05 Lon 162.75E 0.04				0.9s 67.70nm 5.6mb				FFC 50.88 73 eP 45 27.00 -0.5			
Dep 52.6 3.0 Half-duration 2.0				MBC 34.92 24 ePc 43 17.90 0.0				0.9s 53.00nm 5.5mb			
Moment Tensor: Scale 10**17 Nm				pP 43 34.00 66kmX				QCP 51.18 235 eP 45 31.50 1.7			
Mrr=1.56 0.11 Mtt=0.34 0.20				TIA 35.85 257 eP 43 23.80 -2.3				NWRM 51.47 76 P 45 31.80 -0.1			
Mff=-1.90 0.10 Mrt=0.24 0.08				Z 20s 3.40um 5.1Msz				ORV 51.48 74 eP 45 31.40 -0.6			
Mrf=-0.60 0.14 Mtf=-0.56 0.09				N 19s 2.80um				KEY 51.49 342 eP 45 31.00 -0.6			
Principal Axes:				E 19s 2.50um				LRM 52.01 62 ePc 45 35.50 -0.7			
T Val= 1.74 Plg=72 Azm= 39				HHC 35.87 268 Pd 43 25.00 -1.4				BRK 52.24 76 eP 45 37.50 -0.1			
N 0.37 16 190				Z 14s 1.80um 5.0MszX				BKS 52.25 76 iPc 45 37.50 -0.2			
P -2.11 8 282				N 16s 1.10um				e 00 48.00			
Best Double Couple:Mo=1.9*10**17				E 14s 1.00um				KML 52.30 260 eP 45 36.50 -2.1			
NP1:Strike= 30 Dip=39 Slip= 116				BTO 36.93 269 P 43 34.00 -1.3				1.0s 30.00nm 5.2mb			
NP2: 178 55 71				N 17s 2.60um				Z 20s 2.70um 5.3Msz			
E 19s 2.00um				eSP 43 51.00				MHC 52.96 76 eP 45 43.20 0.0			
SMY 7.42 102 P 38 13.30 -2.9				eS 49 11.00				GCC 52.98 76 eP 45 42.80 -0.4			
0.6s 525.45nm 6.8mb X				SSE 37.44 248 eP 43 40.50 1.0				ARN 53.01 76 P 45 43.60 0.1			
ADK 13.00 95 iPc 39 28.60 -3.8X				Z 20s 2.00um 4.9Msz				CMB 53.17 74 eP 45 44.70 0.0			
1.2s 527.70nm 6.5mb				N 18s 0.70um				QIZ 53.20 249 eP 45 46.00 1.0			
KUSJ 16.36 231 P 40 10.50 -5.6X				eS 49 24.00				1.0s 100.00nm 5.7mb			
ASAJ 16.55 237 P 40 21.00 2.4				PcS 49 46.00				N 18s 1.30um			
HOJO 17.57 232 P 40 27.60 -3.7X				TIY 37.47 264 Pd 43 38.50 -1.3				E 19s 1.70um			
MRRJ 18.58 237 P 40 42.40 -1.3				Z 16s 3.00um 5.2MszX				SAO 53.48 76 eP 45 46.70 -0.2			
ANM 18.82 46 iPd 40 47.70 1.1				E 14s 1.50um				SOD 53.62 340 iP 45 46.70 -0.8			
AOMJ 20.35 234 eP 41 02.50 -1.3				S 49 27.00				KVN 53.71 72 P 45 49.10 0.3			
OFUJ 20.96 229 eP 41 09.90 -0.1				NJ2 37.96 251 Pd 43 42.80 -1.1				PRS 53.83 77 eP 45 49.30 -0.2			
SDN 21.23 73 eP 41 14.40 1.7				Z 21s 1.20um 4.7Msz				LLA 53.87 76 eP 45 50.10 0.4			
YAMJ 22.43 231 P 41 26.10 1.3				N 17s 2.20um				FRI 54.29 75 eP 45 52.50 -0.3			
TTA 22.70 52 ePc 41 28.10 0.7				E 17s 1.50um				PRI 54.36 76 eP 45 54.00 0.5			
0.8s 65.20nm 5.2mb				PP 43 49.80				BONR 54.38 73 P 45 54.40 0.5			
SVW 22.91 57 iPd 41 30.90 1.4				SP 43 53.50				TNP 54.89 72 iPc 45 57.80 0.3			
0.9s 33.90nm 4.9mb				YKA 41.05 45 eP 44 08.80 -0.3				0.6s 53.70nm 5.8mb			
MDJ 23.18 257 eP 41 30.50 -1.6				0.7s 42.30nm 5.3mb				pP 46 04.00 20km			
1.5s 200.00nm 5.4mb				WHN 41.60 254 eP 44 12.70 -1.3				sP 46 08.50			
Z 20s 4.20um 4.9Msz				PcP 46 12.00				BCH 55.38 77 P 46 01.00 0.0			
N 14s 1.70um				XAN 42.08 263 eP 44 15.60 -2.4				FRB 55.39 25 ePc 45 59.30 -1.2			
E 14s 2.60um				N 16s 1.60um				0.8s 68.00nm 5.7mb			
PP 41 40.00				E 16s 2.50um				LSA 55.50 274 P 46 01.50 -0.9			
SP 41 45.00				PcP 46 12.60				BW06 55.62 63 iPc 46 02.50 -0.3			
IS 45 41.00				LZH 43.55 269 eP 44 29.00 -1.1				0.8s 50.00nm 5.6mb			
SS 45 56.00				1.0s 38.00nm 5.1mb				pP 46 08.10 18km			
NIIJ 23.66 231 P 41 38.10 1.3				Z 18s 4.35um 5.4Msz				sP 46 11.90			
IMA 23.92 45 iPc 41 39.70 0.4				N 13s 1.93um				DUG 55.76 67 P 46 02.60 -1.1			
0.9s 62.50nm 5.1mb				E 14s 2.05um				0.8s 25.00nm 5.3mb			
KAKJ 24.01 228 P 41 41.30 1.1				SP 44 41.00				DAV 55.89 226 eP 46 05.00 0.4			
BRW 24.10 31 iPc 41 41.60 0.9				S 50 53.50				SYN 55.92 77 eP 46 06.00 1.1			
MAT 24.59 232 iPc 41 47.10 1.2				GTA 43.60 276 iPd 44 29.60 -0.9				ABL 56.11 76 P 46 06.00 -0.4			
1.0s 220.00nm 5.7mb				0.8s 30.00nm 5.1mb				CLC 56.31 74 eP 46 07.00 -0.6			
Z 20s 2.48um 4.7Msz				Z 16s 5.30um 5.5MszX				DAU 56.43 66 P 46 09.00 0.2			
eS 46 05.00				E 14s 3.30um				KSH 56.86 293 eP 46 12.00 0.4			
CHJJ 24.65 230 eP 41 45.10 -1.4				PcP 46 18.20				E 12s 1.90um			
MTMJ 24.74 232 P 41 48.60 1.2				ScP 50 07.60				SBB 57.01 75 eP 46 12.00 -0.6			
KDC 24.98 65 ePd 41 48.40 -1.0				PcS 50 11.40				GSC 57.13 74 eP 46 13.00 -0.5			
0.8s 146.90nm 5.7mb				S 50 54.00				PAS 57.21 76 eP 46 13.00 -1.0			
IIDJ 25.61 231 P 41 56.50 0.9				SS 51 09.00				MWC 57.22 76 eP 46 14.00 -0.3			
PMR 25.98 55 iPd 41 58.40 -0.3				ScS 54 25.00				MSU 57.32 68 P 46 15.40 0.4			
0.8s 25.90nm 4.9mb				PGC 44.47 66 eP 44 32.00 -5.2X				RSSD 57.44 58 iPd 46 15.00 -0.7			
CN2 26.03 260 eP 41 58.20 -1.2				PNT 46.06 63 ePc 44 50.00 0.1				0.8s 80.13nm 5.8mb			
Z 16s 12.00um 5.5MszX				0.7s 21.00nm 5.2mb				pP 46 20.20 17km			
N 16s 1.60um				RMW 46.07 66 P 44 50.50 0.4				sP 46 28.00			
E 16s 4.50um				EDM 46.75 55 eP 44 56.50 1.1				RVR 57.77 76 eP 46 17.00 -0.9			
ePP 42 03.00				CD2 47.33 264 P 44 58.60 -1.6				KAF 58.30 337 iP 46 20.40 -0.8			
eS 46 20.00				1.1s 26.00nm 5.2mb				0.6s 67.70nm 5.9mb			
FBA 26.33 48 iPc 42 01.50 -0.4				Z 20s 3.61um 5.3Msz				TPC 58.43 75 eP 46 21.00 -1.6			
1.1s 64.20nm 5.2mb				N 18s 1.96um				PLM 58.53 76 eP 46 23.00 -0.4			
TSRJ 26.44 234 P 42 03.70 0.5				WMO 47.51 289 iPd 45 01.00 -0.5				LOE 58.98 256 iPc 46 25.80 -0.7			
TOA 27.30 54 iPc 42 10.70 -0.2				1.5s 100.00nm 5.6mb				BAR 59.14 76 eP 46 27.00 -0.5			
0.7s 45.00nm 5.2mb				Z 22s 6.10um 5.5Msz				CHG 59.42 259 ePc 46 29.00 -0.5			
SNY 28.35 259 Pd 42 18.00 -2.5				PcP 46 31.00				0.8s 33.96nm 5.5mb			
1.0s 20.00nm 4.8mb				PcS 50 26.00				AKU 59.76 0 iPc 46 31.90 0.7			
Z 21s 4.40um 5.0Msz				DPW 47.70 64 P 45 02.80 -0.1				0.9s 60.50nm 5.7mb			
N 15s 2.30um				NEW 48.00 63 P 45 04.80 -0.5				GUN 59.88 276 P 46 31.00 -2.1			
E 14s 1.70um				0.8s 11.46nm 5.0mb				GLA 59.89 75 eP 46 34.00 1.3			
PP 42 30.00				GYA 49.04 258 P 45 15.00 1.4				GOL 60.02 63 P 46 34.00 0.2			
SHK 28.83 237 eP 42 25.70 0.8				Z 20s 2.10um 5.1Msz				1.0s 27.50nm 5.3mb			
HYT 31.64 54 P 42 49.90 0.2				N 18s 2.40um				GLD 60.06 63 P 46 35.00 1.0			
INK 31.73 40 iPc 42 49.50 -0.7				E 18s 1.30um				1.0s 55.00nm 5.6mb			
0.7s 39.00nm 5.4mb				S 52 10.00				NUR 60.10 337 iP 46 33.00 -0.6			
pP 45 40.00				FHC 49.24 74 eP 45 15.70 0.8				0.8s 132.00nm 6.1mb			
BJI 33.75 263 eP 43 07.00 -1.1											

KKN	60.32	277	P	46	34.00	-1.9	VRI	72.75	329	ePc	47	55.00	0.7	CEY	76.08	337	ePc	48	13.60	0.1		
RGS	60.38	346	eP	46	34.00	-1.5	ENN	72.86	344	iPc	47	54.90	0.1	LLS	76.11	341	ePd	48	14.60	0.7		
PKI	60.41	277	P	46	34.80	-1.8		1.0s	121.00nm			5.9mb		GRR	76.11	348	iPc	48	13.60	0.0		
GKN	60.53	277	P	46	35.40	-1.8	ECP	72.88	353	eP	47	54.80	-0.1		0.8s	94.05nm			5.9mb			
DMN	60.56	277	P	46	35.80	-1.7		0.7s	89.00nm			5.9mb		VBV	76.12	337	iPc	48	14.30	0.7		
	1.2s	145.00nm			6.0mb		CFR	72.94	328	eP	47	55.00	-0.3	BBTK	76.19	322	iPc	48	15.00	0.7		
BDT	60.64	258	eP	46	38.90	1.1	CVO	72.96	329	ePc	47	57.50	2.0	TRI	76.26	338	P	48	15.50	1.1		
	1.0s	34.50nm			5.4mb		TNS	72.97	343	ePd	47	55.20	-0.4	ISK	76.36	325	iP	48	14.90	-0.2		
KKM	60.96	235	ePd	46	42.00	1.8	GRF	72.98	341	iPc	47	56.30	0.7	HRT	76.38	325	iP	48	16.90	1.6		
NST	61.27	256	eP	46	44.40	2.3		0.8s	215.00nm			6.2mb		CTI	76.38	339	Pc	48	15.10	-0.2		
REY	61.27	2	eP	46	42.90	1.3	Z	24s	0.60um			4.8mszx		VDL	76.39	341	ePc	48	16.40	1.0		
NB2	62.15	344	P	46	45.40	-2.2	KHC	73.04	339	iPc	47	56.50	0.5	LPF	76.48	348	iPc	48	15.90	0.3		
UPP	62.15	341	iPc	46	46.30	-1.2		1.0s	64.00nm			5.6mb			0.8s	61.80nm			5.7mb			
HFS	62.60	343	eP	46	48.90	-1.7	Z	16s	1.20um			5.3mszx		GBZT	76.48	325	eP	48	15.10	-0.7		
	0.6s	48.70nm			5.8mb		N	16s	0.60um					CTT	76.49	326	iP	48	15.30	-0.5		
Z	19s	0.62um			4.8msz		E	15s	0.60um					SHI	76.53	302	eP	48	16.00	-0.4		
		LR	09	44.00				e				48	05.70	30km	LOR	76.58	345	iPc	48	16.20	-0.1	
ANMO	63.03	67	P	46	54.40	0.4	ZST	73.15	336	iP	47	57.40	0.8		0.8s	62.95nm			5.7mb			
	0.8s	55.97nm			5.7mb			0.9s	69.00nm			5.7mb		Z	22s	0.50um			4.8msz			
ALQ	63.04	67	eP	46	53.50	-0.5	WET	73.17	339	iPc	47	57.50	0.8	DIM	76.59	328	iP	48	17.00	0.7		
	1.0s	35.00nm			5.4mb			1.2s	181.00nm			6.0mb		YLV	76.71	325	iPc	48	16.30	-0.8		
SCH	63.54	29	ePc	46	55.50	-1.3	SRO	73.23	335	iP	47	57.50	0.5	DZM	76.73	176	iPc	48	18.00	0.7		
	1.0s	56.00nm			5.6mb		VKA	73.27	337	iPc	47	57.90	0.6	VTS	76.78	330	iP	48	17.00	-0.6		
NDI	64.22	284	iP	47	00.00	-1.6		1.8s	134.00nm			5.7mb		PLD	76.79	329	iPc	48	17.00	-0.4		
PMG	65.27	196	eP	47	08.00	-0.4			i			48	54.00	239kmx	SSF	76.83	345	iPc	48	17.00	0.1	
	1.0s	72.00nm			5.8mb		MLR	73.33	329	ePc	47	59.00	1.2		0.8s	39.65nm			5.5mb			
EDR	67.86	351	ePc	47	23.00	-0.7	ABH	73.45	343	eP	47	57.94	-0.4	LBF	76.84	345	iPc	48	17.50	-0.2		
EDU	68.27	351	ePc	47	26.40	-0.6	GBTN	73.46	51	P	47	57.20	-1.4		0.7s	20.40nm			5.3mb			
ELO	68.41	352	ePc	47	27.30	-0.6	ISR	73.47	329	ePd	48	00.50	2.0	TMA	76.87	341	ePd	48	18.60	0.5		
	0.6s	90.00nm			6.1mb		NAV	73.57	48	P	47	58.00	-1.3	IZI	76.88	325	eP	48	17.00	-1.1		
EBH	68.61	351	ePc	47	28.70	-0.4	TKL	73.66	51	P	47	58.50	-1.2	MDI	77.02	341	Pc	48	18.60	-0.1		
	0.7s	129.00nm			6.2mb		SOP	73.76	337	e(P)	48	01.00	0.9	MMK	77.08	342	ePc	48	20.30	0.9		
QUE	68.78	292	eP	47	29.40	-0.9	CMP	73.80	330	ePd	48	04.00	3.6x	VAI	77.12	341	Pc	48	19.50	0.3		
FVM	68.71	54	iPc	47	28.50	-1.5	BLA	73.82	48	eP	48	00.00	-0.7	AVF	77.12	345	iPc	48	19.50	0.3		
		pP			47	33.00	14kmx		0.8s	70.90nm		5.7mb		DIX	77.16	342	ePd	48	21.00	1.2		
		sP			47	39.70			Z	20s	0.78um		5.0msz		RZN	77.16	329	iPc	48	20.00	0.2	
EAB	68.74	352	ePc	47	29.50	-0.4	COZ	73.95	330	ePc	48	03.00	1.6	SGS	77.18	50	P	48	20.00	0.2		
	0.6s	78.00nm			6.0mb		CVL	73.99	46	P	48	01.50	-0.1	SMF	77.19	345	iPc	48	19.70	0.0		
ESY	68.86	351	ePc	47	30.00	-0.6	POO	74.07	280	iPc	48	00.00	-2.3		1.0s	46.00nm			5.5mb			
	0.6s	87.00nm			6.1mb			0.8s	71.64nm			5.7mb		EMS	77.25	343	ePd	48	21.20	1.0		
EDI	68.90	351	ePc	47	30.20	-0.7	CBN	74.25	45	eP	48	02.00	-1.0	BNT	77.37	326	iP	48	21.60	0.9		
EAU	69.01	351	ePc	47	31.20	-0.4	PSN	74.29	327	iPc	48	17.00	13.8x	EDC	77.40	326	eP	48	21.00	0.1		
	0.8s	84.00nm			5.9mb		GWf	74.32	343	P	48	03.40	0.0	RDO	77.41	328	eP	48	21.80	0.9		
EKA	69.49	351	Pd	47	35.70	1.2	KAS	74.48	322	iPc	48	05.10	0.6	BGF	77.42	346	iPc	48	21.20	0.3		
	0.7s	50.30nm			5.7mb		BHG	74.53	339	iPc	48	05.50	0.9		0.9s	28.65nm			5.3mb			
CLE	69.77	46	iP	47	35.80	-0.6		1.0s	100.00nm			5.8mb		ALN	77.48	327	iP	48	21.21	0.0		
UYO	69.82	59	iPd	47	35.40	-1.5	STR	74.67	343	P	48	06.00	0.7	KKB	77.48	330	iPc	48	22.00	0.7		
ELC	69.83	54	iP	47	35.60	-1.3	CDF	74.92	343	P	48	06.91	0.0	ORX	77.49	342	P	48	21.50	0.1		
IPM	69.92	248	ePc	47	39.10	1.4	KBA	75.04	338	iPKPc	48	08.90	1.1	MMB	77.55	329	iPc	48	22.00	0.3		
	1.0s	45.00nm			5.5mb			0.8s	130.00nm			6.0mb		QIS	77.56	202	iPc	48	21.00	-0.9		
CBM	70.06	34	P	47	36.60	-1.5	ECH	75.13	343	P	48	07.99	-0.1		1.2s	72.00nm			5.6mb			
WVLY	70.14	43	P	47	37.00	-1.7	WATA	75.16	340	iPKPc	48	08.90	0.5	TCF	77.78	346	iPc	48	23.20	0.3		
HBVT	70.61	39	P	47	39.70	-1.8		1.0s	113.00nm			5.8mb			1.0s	34.00nm			5.3mb			
KRA	70.75	335	iPc	47	42.00	-0.2	FEL	75.31	342	eP	48	08.76	-0.5	MFF	77.78	348	iPc	48	23.40	0.5		
	1.1s	93.00nm			5.8mb		VITF	75.33	344	P	48	09.25	0.2		0.8s	51.05nm			5.6mb			
Z	18s	1.40um			5.3msz		SLE	75.33	342	ePd	48	09.50	0.3	MAF	77.79	346	iPc	48	23.70	0.7		
E	18s	1.60um					SQTA	75.35	340	iPKPc	48	10.10	0.7		0.8s	30.90nm			5.4mb			
		e			47	51.80	31km		0.8s	117.00nm		6.0mb		LSD	77.80	342	P	48	24.47	1.1		
WIT	70.76	345	eP	47	44.00	1.8			i			49	19.70	301kmx	ALT	77.82	324	iP	48	23.70	0.4	
KSP	70.85	338	iPc	47	42.50	-0.4	HAU	75.47	343	iPc	48	10.10	0.1	DST	77.82	325	iP	48	23.20	0.0		
	1.0s	173.00nm			6.1mb			0.8s	81.95nm			5.8mb		LPG	77.84	343	iPc	48	25.00	1.4		
		i			47	53.00	34km		Z	22s	0.63um		4.9msz			0.8s	115.45nm			6.0mb		
KGM	70.87	245	eP	47	44.50	1.1	BEO	75.48	333	iP	48	09.00	-1.0	SKO	77.85	331	iP	48	23.50	0.2		
BNH	71.06	37	P	47	43.00	-1.2	MOF	75.49	343	P	48	09.95	-0.3		Z	19s	1.76um			5.4msz		
CLL	71.09	340	iPc	47	44.30	0.0	BSF	75.57	343	P	48	10.31	-0.4			i			48	38.80	54kmx	
	1.2s	185.00nm			6.1mb		PTJ	75.58	336	e(P)	48	04.00	-6.7x			LR			27	05.00		
BRG	71.31	339	iPc	47	45.40	-0.3	PVL	75.58	329	iPc	48	11.00	0.4	BCI	77.86	332	eP	48	23.30	0.0		
	1.2s	100.00nm			5.8mb		PRM	75.61	51	P	48	10.50	-0.5	LSF	77.91	346	iPc	48	23.80	0.2		
		e			47	55.40	32km		FVI	75.63	339	P	48	11.00	0.2		0.8s	40.30nm			5.5mb	
SPC	71.48	335	iP	47	46.70	-0.2	ZAG	75.65	336	eP	48	11.50	0.5	SRS	78.02	329	iP	48	23.89	-0.4		
WTS	71.53	344	iPc	47	47.00	0.1	SAX	75.68	341	ePd	48	12.20	0.7	BOB	78.05	340	P	48	25.80	1.3		
	0.8s	61.00nm			5.7mb		FLN	75.70	348	iPc	48	10.90	-0.3	RSP	78.08	342	P	48	24.88	0.2		
MOX	71.99	341	iP	47	50.00	0.3		0.8s	77.90nm			5.8mb		VAY	78.13	330	iPc	48	25.00	0.2		
	1.1s	124.00nm			5.8mb		Z	22s	0.38um			4.7msz			1.2s	199.00nm			6.0mb			
Z	24s	1.30um			5.1mszx		OGA	75.72	340	iPc	48	12.60	0.9	WB5	78.14	207	iPc	48	25.00	-0.1		
PRU	72.03	339	iPc	47																		

09d 15h

BDI	78.50	339	P	48	28.00	1.1	VLI	82.27	328	eP	48	45.00	-2.0	TTG	2.47	124	ePn	45	34.00	1.6
ARV	78.54	338	Pc	48	28.10	1.0	BRS	82.33	188	iPc	48	47.90	0.6				eSn	46	05.00	
CKI	78.60	341	P	48	27.00	-0.4				i	50	14.70	378kmX	CIO	2.53	256	ePn	45	33.12	-0.3
KOD	78.63	272	iP	48	28.00	-0.4	CSTJ	82.39	315	Pc	48	48.20	0.4				iSn	46	12.95	
CRE	78.63	338	P	48	25.00	-2.7	MKRJ	82.43	316	Pc	48	48.65	0.6	LJU	2.60	328	eP	45	43.50	9.2X
FIR	78.63	339	iPKPd	48	29.00	1.5	DSI	82.52	316	iPc	48	48.60	0.2				eSn	46	09.00	
LACI	78.64	332	iPc	48	27.40	-0.2	NPS	82.76	325	eP	48	47.40	-2.2	TRI	2.69	314	P	45	39.00	3.4X
THE	78.65	329	eP	48	27.24	-0.5	LISJ	82.77	316	Pc	48	50.48	0.9				eSn	46	17.50	
KHL	78.67	324	iP	48	27.60	-0.4	AFR	82.90	134	iP	48	51.20	0.9	VOY	2.86	320	e(Pn)	45	39.50	1.4
PZZ	78.74	342	P	48	27.75	-0.6		0.9s	120.00nm			6.0mb					eSn	46	15.20	
ROB	78.80	341	P	48	28.37	-0.2	PPT	83.01	134	iP	48	51.70	0.8	FVI	3.80	317	P	45	52.50	1.2
FIN	78.82	341	P	48	28.57	-0.1		0.9s	70.00nm			5.8mb					eSn	46	52.00	
PII	78.84	339	P	48	28.50	-0.2	PPN	83.03	134	iP	48	51.70	0.7	CTI	4.08	304	P	45	54.50	-1.0
RJF	78.84	346	iPc	48	29.30	0.6		0.9s	40.00nm			5.5mb		SRO	4.16	17	eP	46	11.40	15.1X
	1.2s	53.55nm			5.4mb		VAM	83.08	327	eP	48	45.00	-6.2X	OHR	4.19	129	e(Pn)	45	58.00	1.0
Z	22s	0.47um			4.8msz		PAE	83.09	134	iP	48	52.10	0.8	SQTA	5.02	314	iPnc	46	08.70	0.0
								0.9s	55.00nm			5.7mb					iSn	47	06.90	
TIR	78.87	332	eP	48	29.00	0.1	MJMA	83.16	306	ePc	48	52.00	0.1		S.D. = 1.3 on 17 of 22 obs.					
PRK	78.91	327	eP	48	28.30	-0.8	EBR	83.38	346	eP	48	54.00	1.3		* DEC 09, 1990 16h 25m 04.25± 0.97s					
ENR	78.95	342	P	48	28.16	-1.3	RYD	83.50	304	iPc	48	53.10	-0.5		24.039 N ±11.5km 121.502 E ± 9.3km					
STV	78.95	342	P	48	28.16	-1.3	QASM	83.78	307	iPc	48	54.70	-0.3		DEPTH = 10.0km (geophysicist)					
FNA	78.97	331	eP	48	29.16	-0.4	MBH	84.31	316	iPc	48	57.80	0.1		4.6mb (2 obs.)					
ASS	79.01	338	Pc	48	30.70	1.0	UQSK	84.57	308	iPc	48	59.00	-0.1	TAIWAN					(244)	
PAIG	79.09	329	iP	48	29.53	-0.6	HOL	84.68	316	iPc	49	00.00	0.6							
CAF	79.13	346	iPc	48	31.40	1.0	TOL	84.87	349	iPd	49	02.00	1.8	ANP	1.14	1	iP	25	09.00	-16.7X
	1.0s	65.00nm			5.6mb			1.8s	727.27nm			6.6mb					eS	25	43.20	
IMI	79.17	341	P	48	30.93	0.3	BADA	85.36	315	iPc	49	03.30	0.5	QZH	2.80	289	iPnc	25	50.90	1.0
LIT	79.28	330	eP	48	30.00	-1.2	COO	85.56	189	iPd	49	04.00	0.4		Z	10s	3.20um			
SBF	79.30	342	iPc	48	31.70	0.4	HLW	85.61	319	eP	49	05.00	0.9		N	10s	1.90um			
	0.8s	67.15nm			5.7mb		AFIF	85.64	307	iPc	49	06.30	1.8		E	10s	1.80um			
KZN	79.30	330	eP	48	30.50	-0.9	WARB	86.29	211	iPc	49	07.80	0.5	SSE	7.03	358	eP	26	50.50	0.7
LFF	79.30	347	iPc	48	32.10	0.9		0.8s	69.00nm			5.9mb			Z	10s	0.50um			
	1.1s	102.55nm			5.8mb		WAJH	86.78	313	iPc	49	10.00	0.1		N	10s	0.40um			
Izm	79.36	325	eP	48	31.00	-0.7	CMS	87.15	194	iPd	49	12.60	1.3	GZH	7.54	264	eP	26	56.00	-0.9
LPO	79.49	346	iPc	48	33.20	0.9	CNB	90.50	190	iPc	49	29.00	1.8	NJ2	8.32	344	Pc	27	07.80	0.1
	0.9s	95.00nm			5.8mb		LKO	114.99	347	PKP	55	06.10	-1.1		0.8s	100.00nm			6.1mb X	
MNS	79.66	337	P	48	33.00	-0.2	TIC	117.76	346	PKP	55	12.20	-0.2		Z	10s	0.50um			3.9mszX
FRF	79.73	342	iPc	48	34.20	0.6	KIC	118.00	345	PKP	55	12.50	-0.4		N	10s	1.00um			
	0.8s	34.90nm			5.4mb		LIC	118.18	345	PKP	55	12.90	-0.3	WHN	9.08	317	eP	27	17.00	-1.2
CDR	79.77	343	ePc	48	34.40	0.6	ZOBO	125.61	65	PKPc	55	27.80	-0.3	XAN	14.83	315	eP	28	42.50	6.7X
NEO	79.80	329	eP	48	33.00	-1.0	LPB	125.84	65	PKP	55	28.00	-0.4	TIY	15.68	332	eP	28	51.40	4.5X
TPE	79.81	331	eP	48	37.00	3.0X	CNCB	126.13	65	PKPc	55	29.20	0.1	BJI	16.57	346	eP	29	08.00	9.8X
AZI	79.87	337	P	48	35.00	0.7	CCH	127.57	64	ePKP	55	27.00	-4.5X	CD2	17.16	297	eP	29	10.00	4.3X
LRG	79.88	342	iPc	48	35.50	1.2	SIV	128.96	58	iPKPc	55	32.40	-1.4	LZH	19.40	312	eP	29	26.50	-7.0X
	0.6s	48.70nm			5.7mb		BUL	130.78	296	iPKPd	55	34.80	-2.5X		Z	12s	0.61um			
Z	22s	0.50um			4.8msz		SOB1	130.91	31	ePKP	55	29.10	-8.5X							
ELL	79.96	323	iP	48	35.00	0.0						55 37.50		CN2	19.98	8	eP	29	39.40	-0.1
LMR	79.98	342	iPc	48	35.70	0.9	PDCR	134.58	30	ePKP	55	36.10	-8.4X	MDJ	21.56	16	eP	29	56.20	0.3
	0.8s	56.40nm			5.6mb						55 44.30		CHG	21.62	260	eP	29	57.90	1.2	
SDI	80.05	336	P	48	36.00	0.6	SLR	135.51	292	ePKP	55	42.50	-3.7X	GTA	23.89	315	eP	30	23.20	4.2X
RDP	80.25	337	P	48	30.50	-5.9X		0.9s	21.01nm						1.0s	10.00nm			4.4mb	
PGF	80.27	340	iPc	48	37.20	0.6	SPA	144.70	180	iPKPc	55	58.80	-2.6X	KKN	32.72	284	P	31	38.90	-0.6
	0.8s	72.55nm			5.8mb			1.0s	75.00nm			56 35.50		DMN	32.88	284	P	31	41.30	0.3
CSS	80.31	319	eP	48	36.50	-0.3								INK	73.25	22	eP	36	37.00	-0.1
LCI	80.32	333	P	48	37.00	0.3		S.D. = 0.9 on 386 of 402 obs.						YKA	82.99	23	eP	37	29.70	-1.0
AGG	80.33	329	eP	48	35.00	-1.7		DEC 09, 1990 15h 44m 50.90± 0.51s							0.8s	5.30nm			4.8mb	
BHL	80.36	317	P	48	37.00	-0.2		43.855 N ± 6.0km 16.506 E ± 6.5km						FFC	93.15	24	eP	38	20.00	0.3
BBU	80.38	302	iP	48	36.80	-0.5		DEPTH = 5.0km (geophysicist)							1.0s	32.00nm			5.7mb X	
	0.5s	15.00nm			5.3mb		YUGOSLAVIA													
EVR	80.58	330	eP	48	37.50	-0.7		ML 3.1 (ZAG), 3.0 (TTG), 2.5							S.D. = 0.8 on 13 of 20 obs.					
PPCY	80.75	320	eP	48	37.50	-1.6		(LJU).							? DEC 09, 1990 16h 43m 26.47± 3.42s					
HRI	80.88	317	iPc	48	40.20	0.2	HVAR	0.68	184	iPg	45	02.70	-1.8		36.694 N ±18.7km 71.047 E ±21.7km					
ORI	80.97	334	P	48	41.50	1.3				iSg	45	14.40			DEPTH = 189.7 ± 37.5 km					
ARG	81.05	324	eP	48	40.00	-0.7	BLV	1.02	28	Pg	45	08.90	-1.7		3.7mb (5 obs.)					
MGR	81.12	335	P	48	41.50	0.5	BRY	1.77	122	ePg	45	22.00	-0.5	AFGHANISTAN-USSR BORDER REGION (717)						
EPF	81.23	347	iPc	48	42.20	0.6				eSg	45	25.00		NDI	9.53	145	eP	45	40.00	-0.6
	1.0s	36.00nm			5.4mb					iSn	45	51.80					eS	47	18.50	
SHMJ	81.35	317	Pd	48	43.54	1.2	VBY	1.87	332	ePn	45	25.20	1.3	GKN	14.38	123	P	46	42.50	-0.2
TDS	81.38	334	Pc	48	43.20	0.9	ZAG	2.00	349	ePn	45	24.00	-1.6	DMN	14.95	123	P	46	50.20	0.3
PMO	81.43	132	iP	48	43.60	0.9	HCY	2.03	133	ePn	45	26.40	0.3	KKN	14.95	122	P	46	50.00	0.2
	0.9s	70.00nm			5.7mb					eSn	45	53.50		PKI	15.18	123	P	46	52.70	-0.1
TPT	81.53	131	iP	48	44.20	0.9	PTJ	2.08	349	ePn	45	25.80	-1.2	GUN	15.28	121	P	46	54.60	0.5
	0.9s	125.00nm			5.9mb					eSn	45	53.00			0.3s	8.00nm			4.6mb	
VLS	81.61	330	eP	48	43.00	-0.6	NKY	2.10	119	ePn	45	26.50	-0.7	GBA	23.69	164	Pc	48	22.20	0.0
JARJ	81.70	316	Pc	48	44.97	0.7				eSn	45									

IGT	0.61	193	eP	18 54.26	-0.3
			eS	19 04.98	
KEK	0.68	233	ePg	18 54.90	-1.1
BERA	0.72	324	iPg	18 54.00	-2.7
FNA	0.94	45	iP	18 59.18	-1.6
			eS	19 14.26	
KZN	0.99	79	ePg	19 00.00	-1.6
OHR	1.01	13	iPg	19 00.10	-1.9
			iSg	19 15.20	
TIR	1.31	339	ePn	19 07.50	0.4
LIT	1.52	90	eP	19 11.02	0.7
PHP	1.56	358	iPnc	19 11.10	0.3
LACI	1.62	339	iPnd	19 12.90	1.2
AGG	1.79	127	eP	19 16.02	1.8
THE	1.95	74	eP	19 16.10	-0.3
KKS	1.95	358	iPn	19 18.50	2.1
LCI	1.96	277	P	19 16.00	-0.6
			eSn	19 42.00	
VAY	1.97	52	iPn	19 17.50	0.7
			iSn	19 41.50	
SKO	1.98	21	iPg	19 18.70	1.8
			iSg	19 44.50	
SDA	2.04	338	ePn	19 18.90	1.2
KNT	2.10	60	eP	19 18.22	-0.4
SOH	2.28	71	iP	19 21.78	0.4
			eS	19 52.70	
PAIG	2.45	94	eP	19 23.18	-0.5
			iS	19 55.81	
TTG	2.49	338	ePn	19 24.00	-0.1
			eSn	19 54.20	
SRS	2.55	66	eP	19 24.06	-1.1
			eS	19 56.06	
KKB	2.62	47	iP	19 17.00	-9.0X
BRT	2.63	288	P	19 30.00	3.8X
			eSn	20 02.20	
HCY	2.77	328	ePn	19 27.00	-1.2
			eSn	20 00.00	
IVA	2.78	351	ePn	19 29.50	1.0
			eSn	20 01.50	
MMB	2.85	58	ePd	19 30.00	0.6
NKY	2.91	338	ePn	19 31.50	1.1
			eSn	20 05.80	
VTG	3.20	39	eP	19 35.00	0.6
RZN	3.55	63	eP	19 40.00	0.5
PGB	3.67	48	iP	19 42.00	0.9
MGR	3.79	272	P	19 45.00	2.2X
PVL	4.76	48	eP	19 55.00	-1.4
VBY	6.62	326	e(Pn)	20 19.50	-3.2X
			e(Sn)	21 31.70	
MLR	6.69	35	eP	20 26.50	2.7X
VRI	7.33	36	eP	20 34.00	1.3
SQTA	9.77	320	iPc	21 03.00	-3.7X
			i	22 39.60	
			i	22 49.70	
KHC	10.26	334	eP	21 13.40	0.1
SLL	20.86	350	eP	23 19.80	-7.6X
	0.4s				3.4mb
NB2	21.71	348	P	23 32.80	-3.3X
	0.8s				3.5mb
	S.D. = 1.2	on 36 of 44 obs.			
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? DEC 10, 1990	01h	06m	40.71±0.95s		
37.516 N ± 9.3km		29.550 E ± 8.8km			
DEPTH = 10.0km		(geophysicist)			
TURKEY					(366)
MD 2.9 (ISK).					
KHL	0.81	358	ePg	06 55.80	-0.6
			eSg	07 08.00	
ELL	0.82	159	ePg	06 56.00	-0.6
			eSg	07 08.00	
BCK	0.83	94	iPn	06 57.50	0.7
CIN	1.17	275	eP	07 03.00	0.5
	S.D. = 1.3	on 4 of 4 obs.			
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DEC 10, 1990	01h	15m	54.93±0.17s		
20.143 S ± 4.6km		177.473 W ± 3.3km			
DEPTH = 376.4km		(3 depth phases)			
5.0mb (31 obs.)					
FIJI ISLANDS REGION					(181)
CENTROID, MOMENT TENSOR					(HRV)

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Moment Tensor;      Scale 10**16 Nm
Mrr=-1.09 0.46      Mtt=-3.01 0.98
Mff= 4.10 0.89      Mrt=-2.78 0.61
Mrf=-6.98 0.65      Mtf=-1.02 0.64
Principal Axes:
  T Val= 9.00      Plg=35      Azm= 95
  N      -1.30      23         202
  P      -7.70      46         318
Best Double Couple:Mo=8.4*10**16
NP1:Strike=127 Dip=24 Slip=-166
NP2:      25      85      -67

 4.34 297 iPc      17 11.00      1.6
 4.79 311 iPc      17 15.00      0.8
 5.04 299 iPc      17 19.00      2.1
 5.36 295 eP      17 22.20      2.0
 8.25 42 eP      17 48.00      -5.3X
      eS      19 15.00
13.66 278 iPc      18 57.30      0.9
15.13 260 iPc      19 13.00      1.5
      iS      21 56.20
17.78 191 eP      19 40.50      1.2
18.25 191 eP      19 44.50      0.5
18.82 191 eP      19 52.50      2.9
21.10 193 eP      20 10.00      -1.0
21.28 195 eP      20 12.90      -0.7
23.05 199 eP      20 30.60      0.4
23.47 197 eP      20 33.40      -0.5
24.26 293 eP      20 42.00      0.6
24.51 293 eP      20 43.00      -0.6
26.33 89 iP      20 59.30      -0.7
0.8s      70.00nm      5.1mb
26.49 89 iP      21 00.00      -0.7
0.8s      45.00nm      4.9mb
26.51 89 iP      21 01.10      -0.6
0.8s      85.00nm      5.2mb
26.65 89 iP      21 02.30      -0.6
0.8s      30.00nm      4.7mb
26.78 90 iP      21 04.50      0.3
0.8s      45.00nm      4.9mb
28.63 84 iP      21 19.90      -0.5
0.8s      55.00nm      4.9mb
28.82 85 iP      21 21.20      -0.9
0.8s      35.00nm      4.7mb
28.90 85 iP      21 22.00      -0.7
0.8s      75.00nm      5.1mb
29.07 85 iP      21 23.50      -0.7
0.8s      90.00nm      5.2mb
29.48 243 iPc      21 27.70      -0.1
0.6s      50.00nm      5.0mb
31.59 252 iPd      21 47.30      1.2
1.0s      206.00nm      5.4mb
32.83 236 iPd      21 57.00      1.1
0.9s      56.00nm      4.9mb
33.12 236 eP      21 58.20      -0.9
33.31 238 eP      21 58.20      -2.5
34.02 264 iPd      22 06.60      -0.2
0.8s      320.90nm      5.7mb
      iS      27 03.00
34.76 244 iPd      22 13.40      0.5
1.0s      144.00nm      5.3mb
35.64 252 iP      22 20.00      -0.3
35.75 282 eP      22 21.00      -0.3
36.51 234 iPc      22 28.40      0.9
0.7s      43.00nm      4.9mb
39.52 102 iP      22 53.60      1.2
1.0s      40.00nm      4.7mb
40.16 262 iPd      22 57.00      -0.7
45.08 256 iPd      23 36.00      -1.1
0.7s      372.90nm      5.8mb
      eP      24 56.80 411kmX
      iS      29 44.60
45.12 262 iPd      23 36.10      -1.3
      eS      29 45.20
45.14 262 P      23 36.00      -1.5
0.7s      69.30nm      5.0mb
49.89 309 eP      24 12.40      -1.5
0.8s      280.60nm      5.6mb
49.96 309 eP      24 12.40      -2.0
51.41 252 iPc      24 24.00      -1.1
0.4s      33.00nm      5.0mb
60.44 247 eP      25 27.00      -1.5
68.88 324 P      26 21.10      -0.7
69.42 323 P      26 24.20      -1.0
69.63 322 P      26 25.90      -0.6
70.15 284 ePd      26 30.00      -0.1
70.22 323 eP      26 29.00      -0.9

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	0.9 s	4.20nm		4.1mb	
OFUJ	70.23	327 P	26	29.00	-0.9
NIIJ	70.28	324 P	26	29.50	-0.7
YAMJ	70.40	326 P	26	30.50	-0.5
MTMJ	70.48	323 P	26	30.50	-1.1
TSRJ	70.79	321 P	26	33.10	-0.2
OZH	76.63	303 Pc	27	06.70	-0.1
SYF	77.07	46 eP	27	10.00	0.7
PRS	77.22	43 eP	27	10.70	0.8
GCC	77.24	43 eP	27	10.60	0.7
BCH	77.38	45 ePc	27	11.80	0.9
SAO	77.43	43 eP	27	11.50	0.5
PRI	77.56	44 eP	27	13.00	1.1
MHC	77.65	42 eP	27	13.30	0.9
ARN	77.73	43 iPd	27	13.30	0.6
ABL	77.77	46 ePc	27	13.40	0.2
SSE	77.84	310 eP	27	13.00	-0.3
	1.0 s	12.00nm		4.6mb	
PAS	78.08	47 eP	27	15.00	0.4
MWC	78.20	47 eP	27	16.00	0.5
RVR	78.54	47 eP	27	17.00	-0.1
PLM	78.55	48 eP	27	19.00	1.7
SBB	78.62	46 eP	27	18.00	0.4
PEC	78.63	47 iPc	27	17.80	0.2
CMB	78.87	43 eP	27	19.30	0.5
ORV	79.09	41 eP	27	20.30	0.5
WDC	79.09	39 eP	27	20.40	0.6
CLC	79.41	46 eP	27	22.00	0.3
MIN	79.50	40 eP	27	22.30	0.1
TPC	79.52	48 eP	27	23.00	0.7
GSC	79.66	46 eP	27	24.00	0.9
LBFM	79.95	39 iPc	27	24.90	0.3
NJ2	80.03	309 Pd	27	25.40	0.5
MDJ	80.51	325 Pc	27	28.00	0.9
TNP	80.93	44 eP	27	30.10	0.3
	1.0 s	8.25nm		4.5mb	
		pP	29	56.00	719kmX
CN2	82.32	322 iPc	27	36.80	0.3
WHN	82.63	306 Pc	27	39.50	1.1
SHW	82.77	35 eP	27	39.80	0.9
GMW	83.33	34 ePc	27	41.70	0.2
MSU	84.51	46 ePc	27	48.40	0.5
TTA	84.51	10 iPc	27	46.30	-0.9
	0.8 s	9.48nm		4.6mb	
PMR	84.56	13 eP	27	45.20	-2.1
TOA	85.67	14 ePc	27	52.30	-0.6
	1.1 s	56.50nm		5.3mb	
BJI	85.99	315 eP	27	55.00	0.3
	1.5 s	52.00nm		5.2mb	
PNT	86.08	34 eP	27	55.00	-0.1
	0.7 s	13.00nm		4.9mb	
ALO	86.79	51 eP	27	59.00	0.0
	0.8 s	5.41nm		4.5mb	
		ePp	29	25.00	370km
TIY	87.41	312 iPc	28	02.40	0.7
FBA	87.79	12 eP	28	01.90	-1.0
		pP	29	30.20	380km
IMA	87.81	9 eP	28	01.60	-1.5
LRM	88.12	39 eP	28	05.40	0.2
XAN	88.31	307 P	28	06.50	0.4
BW06	88.37	43 eP	28	05.70	-0.7
	0.7 s	3.65nm		4.4mb	
HHC	89.46	314 eP	28	11.50	0.2
CHG	90.59	290 iPd	28	18.30	1.5
	1.0 s	15.50nm		4.9mb	
SES	91.29	36 ePc	28	19.60	0.2
RSSD	92.56	44 iP	28	25.40	-0.2
	1.1 s	31.68nm		5.2mb	
		pP	29	54.00	379km
INK	93.80	15 eP	28	29.00	-1.5
SOB1	128.27	120 ePKP	34	18.50	-1.0
NUR	136.73	344 iPKP	34	53.00	18.9X
	0.8 s	26.40nm			
		i	35	02.80	
NB2	138.69	354 PKP	34	37.70	-0.1
	0.6 s	1.10nm			
SLL	138.99	352 ePKP	34	26.00	-12.3X
	0.4 s	0.70nm			
EKA	144.60	6 PKP	34	47.00	-1.3

BRG 148.04 346 iPKP 34 57.20 3.2X
0.8s 19.00nm
e 35 04.60
JVI 148.38 298 iPKPc 34 59.00 3.8X
PRU 148.72 345 ePKP 34 51.50 -3.6X
e 34 58.80
MOX 148.72 349 e(PKP) 35 09.00 13.9X
RMN 149.30 296 iPKPc 35 01.20 4.4X
GRF 149.71 349 ePKP 35 02.70 6.1X

Z 20s 0.10um 4.6Msz
KHC 149.75 346 iPKPc 34 55.40 -1.4
1.0s 17.50nm
i 35 04.70

WET 149.90 346 ePKP 34 58.30 1.3
ABH 150.06 353 ePKP 35 01.99 4.8X
FUR 151.16 348 iPKPc 35 04.80 5.9X
BHG 151.24 345 iPKPc 34 55.80 -3.2X
0.8s 61.00nm

FLN 151.35 4 ePKP 35 04.40 5.3X
0.6s 8.10nm
LDF 151.54 4 ePKP 35 05.20 5.8X
0.7s 6.60nm

CDF 151.54 353 ePKP 35 05.60 6.1X
0.6s 5.40nm
GRR 151.69 5 ePKP 35 05.90 6.3X
0.6s 9.90nm

KBA 151.72 344 iPKPc 34 52.20 -7.8X
0.7s 15.80nm
WATA 151.89 347 iPKPc 35 01.50 1.4
0.9s 33.50nm

LPF 152.03 5 ePKP 35 06.70 6.6X
0.6s 18.05nm
HAU 152.03 355 ePKP 35 06.50 6.3X
0.6s 6.30nm

SOTA 152.08 347 iPKPc 35 03.40 3.0X
0.6s 43.30nm
i 35 15.00
e 37 06.00

BSF 152.16 354 ePKP 35 06.70 6.2X
0.7s 4.40nm
FVI 152.31 345 PKP 34 54.50 -6.0X
ZLA 152.32 351 ePKPd 35 18.40 17.8X

SAX 152.40 350 ePKPc 35 14.10 13.1X
OGA 152.45 347 iPKPc 35 04.70 3.7X
OSS 152.80 348 ePKPc 35 08.50 7.0X
LLS 152.82 350 ePKPc 35 15.30 13.8X

CTI 153.10 346 PKP 34 57.00 -4.8X
VDL 153.12 349 ePKPd 35 11.10 11.1X
TMA 153.59 350 ePKPc 35 14.50 11.9X
MDI 153.76 349 PKPd 35 10.60 8.1X

MMK 153.78 351 ePKPd 35 19.60 16.7X
VAL 153.83 350 PKP 35 14.50 11.9X
ORX 154.18 351 PKP 35 18.21 14.9X
RSP 154.75 352 PKP 35 21.60 17.5X

BOB 154.78 348 PKP 35 11.50 7.4X
SFI 155.04 344 PKP 34 58.00 -6.3X
BHB 155.06 352 PKP 35 21.70 17.3X
MME 155.07 346 PKP 35 03.90 -0.8

PGD 155.12 344 PKP 34 59.20 -5.5X
PCR 155.16 350 PKP 35 13.91 9.3X
BDI 155.22 346 PKP 35 04.00 -0.7
PZZ 155.41 352 PKP 35 22.21 17.2X

STV 155.64 352 PKP 35 21.80 16.5X
ENR 155.64 351 PKP 35 21.60 16.3X
MNS 156.23 341 PKP 34 51.00 -15.1X

S.D. = 1.0 on 111 of 158 obs.

* DEC 10, 1990 01h 23m 07.00 ± 2.04s
32.418 S ± 11.9km 71.613 W ± 21.0km
DEPTH = 31.9 ± 10.1 km

NEAR COAST OF CENTRAL CHILE (135)

IHA 0.61 182 eP 23 19.50 0.3
iS 23 30.50
JACH 0.90 107 iPc 23 23.50 0.0
iS 23 38.50

LCCH 1.05 178 iPc 23 26.40 0.8
iS 23 43.00
PEL 1.07 133 iPc 23 26.60 0.8
iS 23 44.50

SAN 1.31 142 eP 23 20.50 -8.7X
iS 23 51.20
TACH 1.36 155 iP 23 31.50 1.6X
iS 23 52.50

CHCH 1.71 152 iPc 23 32.50 -2.6
iS 23 52.50

ZON 2.64 72 iS 23 54.50
eP 23 48.00 -0.4
eS 24 25.00
RTCV 2.67 79 e(P) 23 50.50 1.8X
S 24 26.00
RTLL 2.89 69 ePd 23 52.00 0.2
RTRS 2.90 40 ePd 23 51.20 -0.8
CFA 2.98 75 ePd 23 53.90 0.7

S.D. = 1.4 on 9 of 12 obs.

* DEC 10, 1990 01h 24m 41.48 ± 1.40s
32.162 S ± 8.3km 71.854 W ± 15.6km
DEPTH = 55.9 ± 12.9 km

NEAR COAST OF CENTRAL CHILE (135)

IHA 0.88 168 eP 24 57.00 -0.9
iS 25 07.70
JACH 1.19 116 iPc 25 00.50 -1.7
iS 25 16.00

LCCH 1.33 170 iPd 25 03.50 -0.6
iS 25 20.50
PEL 1.39 135 iP 25 04.50 -0.4
iS 25 22.00

SAN 1.63 142 eP 25 09.00 0.7
iS 25 29.00
TACH 1.67 153 iP 25 09.50 0.6
iS 25 30.40

LNv 1.83 168 iPd 25 12.00 1.0
iS 25 35.50
PCH 1.84 143 P 25 12.20 0.9
iS 25 36.50

CHCH 2.03 151 iP 25 09.90 -4.1X
iS 25 32.00
ZON 2.77 78 e(P) 25 25.00 0.6
eS 26 02.00

ANT 8.52 9 e(P) 27 09.00 24.2X
ZOBO 16.18 13 P 28 27.00 -0.2
SIV 18.85 34 P 29 00.00 0.9

LIC 74.05 72 P 36 13.00 -0.5
TIC 74.30 72 P 36 15.30 0.3
KIC 74.36 72 P 36 14.60 -0.7

S.D. = 0.9 on 14 of 16 obs.

DEC 10, 1990 01h 27m 29.90 ± 0.87s
28.074 N ± 8.3km 57.010 E ± 4.2km
DEPTH = 51.0 ± 9.4 km

4.7mb (10 obs.)
SOUTHERN IRAN (353)

SHI 4.23 293 iP 28 34.50 0.9
eS 28 52.00
BBU 6.13 254 iPn 29 01.30 1.2
eSn 30 09.00

DHR 6.37 256 eP 29 04.00 0.5
MAIO 8.47 14 eP 29 33.00 0.3
0.8s 9.15nm 4.7mb

QUE 8.94 74 eP 29 40.20 0.8
e(S) 32 30.40
RYD 9.90 253 ePc 29 51.00 -1.5
iS 31 36.50

KER 10.53 309 eP 30 00.00 -1.2
MJMA 10.69 261 eP 30 00.70 -2.5
eS 31 56.10

OASM 12.17 264 ePc 30 20.30 -2.8
eS 32 28.70
AFIF 13.04 255 eP 30 36.30 1.6
UOSK 13.27 263 ePc 30 35.80 -1.9
eS 32 55.70

KMSA 13.75 239 ePc 30 40.70 -3.2X
eS 33 08.00
WAJH 18.30 269 eP 31 42.70 1.0
HRI 19.01 291 iPd 31 51.30 0.9

BHL 19.20 293 P 31 53.00 0.5
PRNI 19.35 282 iPd 31 54.80 0.7
BADA 19.39 277 eP 31 55.30 0.8
RMN 19.67 282 iPd 31 58.90 1.3

HYB 22.49 114 eP 32 30.00 3.8X
BBTK 23.21 307 iPc 32 35.00 1.8
GBA 23.86 123 P 32 50.00 10.5X
GKN 24.37 84 P 32 44.80 0.2

0.6s 15.00nm 4.7mb
ELL 24.40 298 iP 32 46.50 1.7
DMN 24.83 84 P 32 50.40 1.2

ALT 24.86 303 eP 32 50.70 1.5
KKN 24.96 84 P 32 50.20 -0.2
KHL 25.09 301 iP 32 52.30 1.0

PKI 25.10 84 P 32 51.20 -0.6
0.6s 16.00nm 4.7mb
GUN 25.47 84 P 32 55.20 -0.1
IZI 25.74 306 eP 32 58.00 0.6
HRT 25.77 307 iP 32 58.00 0.4
MLR 30.10 314 eP 33 40.00 3.1X
OHR 32.29 303 e(P) 33 55.50 -0.5
KRA 35.67 318 iPd 34 25.00 0.0
0.7s 115.00nm 5.9mb X

i 34 29.20
i 34 34.60
SRO 35.84 314 eP 34 25.20 -1.2
ZST 36.73 314 iP 34 33.30 -0.6
e 36 44.90

e 54 26.20
SOP 36.92 313 eP 34 35.50 0.0
VBY 37.21 309 eP 34 38.80 0.8
AZI 37.88 303 P 34 45.00 1.4
KAF 39.61 338 eP 34 58.00 0.2
0.3s 1.20nm 4.2mb

KMI 40.82 83 eP 35 08.00 -0.5
DIX 42.71 309 ePd 35 23.60 -0.2
TNS 42.74 315 ePd 35 24.60 0.9
LSD 42.82 308 P 35 23.85 -0.8

RRL 43.02 307 P 35 26.01 -0.3
EMS 43.04 309 ePd 35 25.80 -0.6
BNI 43.11 307 P 35 26.40 -0.5
HFS 43.36 330 eP 35 27.40 -1.1
0.4s 7.60nm 4.8mb

SOD 43.39 343 iP 35 27.50 -1.2
WTS 44.14 317 eP 35 35.00 0.1
ENN 44.43 315 e(P) 35 37.50 0.2
1.0s 30.00nm 5.0mb

NB2 44.86 330 P 35 39.10 -1.6
0.8s 6.00nm 4.5mb
KEV 45.15 346 eP 35 42.00 -0.8
MBC 75.91 359 eP 39 11.50 -0.7

0.6s 3.00nm 4.4mb
FRB 79.00 338 eP 39 29.00 -0.5
INK 83.59 4 eP 39 53.00 -0.5
WRA 88.65 113 P 40 20.00 0.8
0.7s 2.50nm 4.6mb

YKA 89.50 356 eP 40 22.10 -0.4
0.6s 2.20nm 4.7mb
S.D. = 1.1 on 54 of 58 obs.

* DEC 10, 1990 02h 34m 08.80s
35.990 N 120.160 W
DEPTH = 15.0km

CENTRAL CALIFORNIA (39)
<BRK>. ML 3.1 (BRK), 3.3 (PAS).

PKEM 0.08 30 iPc 34 11.90 -0.1
PRI 0.44 290 iPd 34 17.65 -0.1
iS 34 26.84

BCH 0.81 176 eP 34 23.30 -0.7
LLA 0.89 315 iPc 34 24.61 -0.8
PRS 1.04 290 iPc 34 26.69 -1.2
iS 34 37.34

SAO 1.29 307 iP 34 31.10 -1.1
ABL 1.37 146 eP 34 30.50 -3.0
BLP 1.44 188 e(P) 34 32.40 -1.9
GCC 1.81 306 eP 34 38.80 -0.8

CMB 2.05 355 eP 34 42.30 -0.8
iS 35 08.80
SBB 2.31 124 ePd 34 44.70 -2.2
BONR 2.46 37 eP 34 49.20 -0.1

BKS 2.51 319 eP 34 39.10 -10.6
eS 35 02.70
TNP 3.15 48 eP 34 58.20 -0.7
PEC 3.23 129 eP 34 56.50 -3.5

PLM 3.78 133 eP 35 05.00 -3.0
16 obs. associated

* DEC 10, 1990 03h 46m 51.88 ± 1.42s
44.000 N ± 19.3km 11.508 E ± 7.3km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

PGD 0.20 129 P 46 56.00 -0.3
eSg 46 59.80
SFI 0.26 107 P 46 57.00 -0.4
eSg 47 01.60

CRE 0.49 139 P 47 01.70 -0.2
eSg 47 10.00
BDI 0.66 276 P 47 05.50 0.4
eSg 47 15.80

10d 03h

PII 0.76 249 P 47 06.20 -0.6
 ASS 1.25 138 P 47 16.00 0.8
 S.D. = 0.7 on 6 of 6 obs.

% DEC 10, 1990 04h 24m 15.63±2.53s
 61.800 N ±13.3km 3.974 E ±18.4km
 DEPTH = 10.0km (geophysicist)
 NORWEGIAN SEA (642)

MD 2.3 (BER).

FOO 0.55 111 iPg 24 26.93 0.2
 iSg 24 32.27
 SUE 0.84 153 eP 24 32.78 1.0
 eS 24 43.20
 HYA 1.24 120 eP 24 37.96 -0.6
 eSg 24 52.53
 ASK 1.45 155 eP 24 43.20 1.4
 eS 24 58.00
 MOL 1.85 64 iPc 24 47.79 0.2
 eSg 25 09.01
 ODD1 2.30 144 eP 24 53.59 -0.6
 eS 25 18.69
 KMY 2.67 166 eP 24 58.51 -0.9
 BLS2 2.91 149 eP 25 01.95 -0.9
 eS 25 33.91
 NRA0 3.81 103 Pn 25 11.40 -4.2X
 Lg 26 13.30
 S.D. = 1.0 on 8 of 9 obs.

* DEC 10, 1990 04h 30m 13.36±1.53s
 31.313 S ±16.3km 68.961 W ±21.1km
 DEPTH = 33.0km (normal)
 SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.33 134 eP 30 23.00 1.4
 RTLL 0.42 92 iPc 30 23.50 0.6
 RTCV 0.65 147 iPc 30 25.00 -0.4
 S 30 38.00
 CFA 0.68 116 iPc 30 25.10 -1.5
 eS 30 37.50
 RTRS 1.22 339 iPc 30 34.00 -0.1
 S.D. = 1.5 on 5 of 5 obs.

* DEC 10, 1990 04h 45m 31.74±1.14s
 40.089 N ±9.2km 20.326 E ±9.3km
 DEPTH = 10.0km (geophysicist)
 GREECE-ALBANIA BORDER REGION (392)

TPE 0.32 311 iPg 45 38.00 -0.3
 SRN 0.33 230 iPg 45 38.70 0.2
 OHR 1.08 19 ePn 45 47.70 -4.4X
 TIR 1.30 345 ePn 45 57.20 1.3
 PHP 1.60 3 iPn 46 00.00 -0.1
 LACI 1.62 343 ePn 45 58.90 -1.4
 SKO 2.06 24 ePn 46 07.50 0.7
 VAY 2.10 53 ePn 46 07.00 -0.4
 S.D. = 1.1 on 7 of 8 obs.

DEC 10, 1990 06h 37m 44.86±0.57s
 46.782 N ±5.0km 6.656 E ±6.0km
 DEPTH = 5.0km (geophysicist)
 SWITZERLAND (544)

ML 2.8 (LDG).

EMS 0.74 165 ePc 37 58.50 -1.1
 BSF 1.05 5 Pg 38 05.00 0.5
 Sg 38 19.50
 Sn 38 20.60
 MMK 1.16 128 ePd 38 06.20 -1.0
 HAU 1.24 350 Pg 38 09.50 1.1
 Sg 38 26.20
 LPG 1.29 177 Pg 38 10.60 1.2
 Sg 38 28.50
 ZLA 1.38 59 ePc 38 10.10 -0.6
 FEL 1.43 40 ePn 38 09.70 -1.9
 SLE 1.59 51 ePd 38 13.70 -0.1
 LLS 1.61 86 ePc 38 15.20 1.0
 TMA 1.68 113 ePd 38 15.90 0.8
 CDF 1.68 14 Pn 38 14.10 -1.1
 Pg 38 16.70
 Sg 38 38.90
 LBF 1.85 277 Pg 38 22.00 4.5X
 Sg 38 46.20
 SAX 1.90 75 ePd 38 20.10 1.6
 SMF 1.94 267 Pg 38 23.70 4.9X
 Sg 38 48.60
 VDL 1.96 98 ePc 38 21.60 2.3X

LOR 1.97 285 Pg 38 23.40 4.1X
 Sg 38 49.20
 SSF 2.18 279 Pg 38 27.70 5.5X
 Sg 38 56.30
 AVF 2.27 271 Pg 38 29.90 6.3X
 Sg 38 59.40
 BGF 2.63 266 Pn 38 28.50 -0.2
 Sg 39 10.00
 MAF 2.88 260 Pn 38 32.20 -0.1
 Pg 38 41.10
 Sn 39 04.70
 Sg 39 18.80
 S.D. = 1.2 on 14 of 20 obs.

* DEC 10, 1990 06h 54m 19.69±1.26s
 39.876 N ±12.9km 142.919 E ±20.0km
 DEPTH = 33.0km (normal)
 4.0mb (2 obs.)
 NEAR EAST COAST OF HONSHU, JAPAN(228)

OFUJ 1.25 231 iP+ 54 41.40 0.4
 YAMJ 2.82 234 P 55 03.70 0.3
 MAT 4.98 230 eP 55 33.00 -1.2
 0.7s 35.62nm
 (S) 56 51.00
 GUN 48.10 274 P 02 59.00 0.3
 0.6s 20.00nm 5.3mb X
 KKN 48.62 274 P 03 03.00 0.5
 0.7s 26.00nm 5.4mb X
 PKI 48.63 274 P 03 02.30 -0.4
 GKN 49.00 275 P 03 05.60 0.2
 WRA 60.04 189 P 04 26.00 0.3
 1.6s 1.20nm 3.8mb
 KEV 61.21 339 eP 04 34.00 0.9
 SOD 62.81 337 eP 04 36.00 -7.8X
 NB2 72.02 338 P 05 40.40 -1.4
 0.8s 2.50nm 4.3mb
 S.D. = 0.9 on 10 of 11 obs.

DEC 10, 1990 07h 06m 15.15±0.50s
 41.126 N ±4.4km 20.497 E ±3.0km
 DEPTH = 94.9 ±8.7 km

ALBANIA (391)
 MD 3.3 (THE).

OHR 0.23 94 iPg 06 28.70 0.0
 iSg 06 37.40
 TIR 0.52 295 iPg 06 31.00 0.2
 PHP 0.56 356 iPg 06 29.70 -1.4
 BERA 0.59 225 iPg 06 31.20 -0.1
 FNA 0.75 117 eP 06 32.30 -0.6
 eS 06 44.22
 LACI 0.78 311 iPg 06 33.00 -0.1
 TPE 0.91 204 ePg 06 36.50 2.0
 KKS 0.95 356 ePg 06 35.50 0.6
 SKO 1.10 40 iPg 06 36.50 -0.2
 0.4s 246.00nm

SDA 1.16 320 ePg 06 51.50
 SRN 1.30 197 ePg 06 37.50 0.2
 KEK 1.51 201 ePb 06 39.90 0.9
 VAY 1.58 82 iPn 06 41.00 -0.6
 iSn 07 01.70
 IGT 1.60 185 eP 06 43.00 0.3
 eS 07 03.46
 KNT 1.81 88 eP 06 45.30 -0.3
 eS 07 04.69
 LIT 1.83 123 eP 06 45.54 -0.3
 THE 1.94 104 eP 06 46.85 -0.3
 eS 07 08.62
 KKB 2.08 68 iP 06 50.00 0.9
 LCI 2.09 249 P 06 47.40 -1.8
 eSn 07 11.00
 SOH 2.18 97 iP 06 50.50 -0.1
 eS 07 15.82
 SRS 2.34 89 iP 06 52.46 -0.1
 EVR 2.43 155 ePb 06 55.00 1.1
 MMB 2.48 78 iPd 06 55.00 0.5
 VTS 2.50 53 iP 06 56.00 1.1
 BRT 2.50 265 P 06 54.50 -0.3
 eSg 07 24.00
 PAIG 2.71 115 eP 06 56.94 -0.6
 eS 07 26.18
 VLS 2.95 179 ePb 06 59.50 -1.4
 PGB 3.09 61 iPd 07 03.00 0.1
 ORI 3.26 252 P 07 04.10 -1.1
 eSn 07 41.30

TDS 3.50 247 P 07 10.00 1.6
 eSn 07 46.50
 KDZ 3.74 80 eP 07 11.00 -0.7
 MGR 3.89 257 P 07 14.50 0.7
 eSg 07 55.00
 SGO 3.98 264 P 07 14.90 -0.1
 eSn 07 56.00
 S.D. = 0.9 on 33 of 33 obs.

DEC 10, 1990 07h 27m 22.14±0.17s
 42.913 N ±3.6km 145.480 E ±2.9km
 DEPTH = 38.4km (16 depth phases)
 5.4mb (79 obs.) 4.4Msz (10 obs.)
 HOKKAIDO, JAPAN REGION (224)
 Felt (III) on Shikotan.

KUSJ 0.59 288 iPd 27 35.20 1.1
 S 27 42.80
 HOOJ 1.70 253 iPd 27 52.30 2.5
 S 28 14.90
 ASAJ 2.39 301 iPd 28 02.70 3.0X
 SAP 3.05 274 eP 28 12.00 3.0X
 eS 28 45.00
 MRRJ 3.29 263 P 28 13.90 1.5
 eS 28 50.30
 OFUJ 4.79 218 P 28 33.30 -0.5
 YAMJ 6.29 223 P 28 54.10 -0.8
 NIIJ 7.53 223 P 29 11.40 -0.9
 KAKJ 7.85 213 P 29 13.30 -3.4X
 S 30 36.60
 MAT 8.48 224 iPc 29 24.30 -1.1
 eS 30 56.00
 CHJJ 8.49 218 P 29 24.20 -1.4
 S 30 53.40
 MTMJ 8.65 226 P 29 27.30 -0.6
 IIDJ 9.46 221 P 29 38.40 -0.6
 eS 31 22.90
 TSRJ 10.41 228 P 29 51.70 -0.3
 MDJ 11.62 284 Pd 30 09.00 0.6
 1.2s 50.00nm 5.5mb
 eS 32 24.00
 CN2 14.60 280 Pc 30 47.80 0.0
 0.8s 30.00nm 4.8mb
 Z 17s 3.30um 5.1MszX
 N 15s 0.40um
 E 15s 1.00um
 SP 30 59.00
 eS 33 24.00
 SNY 16.22 274 Pc 31 07.70 -1.0
 1.0s 100.00nm 4.9mb
 DL2 18.45 266 eP 31 36.00 -0.5
 1.0s 100.00nm 4.9mb
 BJI 22.09 273 Pc 32 14.00 -1.4
 1.0s 130.00nm 5.3mb
 Z 20s 0.60um 4.0Msz
 eS 36 16.00
 SSE 22.62 247 Pc 32 22.00 1.3
 1.2s 84.00nm 5.1mb
 Z 20s 0.80um 4.2Msz
 E 14s 0.30um
 SP 32 35.00
 SS 36 36.00
 TIA 22.80 262 P 32 23.00 0.6
 1.0s 200.00nm 5.5mb
 SP 32 37.50
 eS 36 28.00
 NJ2 23.65 252 Pd 32 32.00 1.3
 1.0s 300.00nm 5.8mb
 Z 22s 0.50um 3.9Msz
 SP 32 44.50
 eS 36 49.00
 HHC 25.24 277 P 32 46.30 0.2
 1.0s 100.00nm 5.3mb
 TIY 25.63 270 iPc 32 50.00 0.3
 Z 32s 0.70um 4.0MszX
 N 17s 0.60um
 S 37 21.50
 BTO 26.44 277 P 32 57.00 -0.2
 PP 33 09.00
 SS 37 39.00
 WHN 27.67 254 Pc 33 09.00 0.6
 1.0s 70.00nm 5.3mb
 PP 33 20.50
 QZH 28.44 240 eP 33 16.50 1.2
 XAN 29.77 265 P 33 27.00 -0.3
 LZH 32.58 272 Pc 33 52.50 0.3
 1.5s 56.00nm 5.2mb

Z	25s	0.49um	4.1Mszx	BKS	66.95	59	eP	38	21.10	39km	0.8s	19.00nm	5.1mb
GTA	34.24	280 PP	34 02.50	KOD	67.02	262 eP	38 25.20	12	4X		e	39 36.00	
	1.0s	20.00nm	34 06.00	FFC	67.09	36 iPc	38 18.60	4	7X		eP	39 41.20	
			5.0mb		0.7s	22.00nm	38 12.90	-0.6		SOP	79.15	328 eP	39 24.50
ANM	34.97	35 ePc	34 12.50	ASPA	67.10	192 iPc	38 13.70	5	3mb	GRF	79.46	332 iPc	39 26.60
GVA	35.53	255 iPc	34 17.00		1.0s	10.10nm		4.9mb		Z	22s	0.20um	4.4Msz
	1.0s	100.00nm	5.7mb	Z	23s	0.10um		4.0Mszx			ec	39 37.80	
											ec	39 42.70	
QIZ	38.30	243 P	34 44.00	CCC	67.61	60 eP	38 18.80	1.8		ALT	79.59	314 eP	39 27.30
TTA	38.85	38 ePc	34 45.40	LRM	67.82	48 ePc	38 19.20	1kmX		ENN	80.27	335 eP	39 29.50
	1.0s	18.75nm	4.8mb			e	38 18.70	0.2			1.0s	29.00nm	5.2mb
SVW	38.98	41 ePc	34 46.30	CMB	68.01	58 eP	38 30.60			ALN	80.28	318 eP	39 30.14
	0.7s	8.70nm	4.6mb			eP	38 20.30	0.7		BHG	80.52	330 iPd	39 32.60
KMI	39.14	257 Pc	34 48.50	PRS	68.43	60 eP	38 22.80	0.6			0.9s	57.00nm	5.5mb
	1.5s	140.00nm	5.5mb			eP	38 34.30	38km		ABH	80.53	334 eP	39 31.28
BRW	39.78	25 iP	34 51.90	UPP	69.01	335 iPc	38 24.10	-1.2		KBA	80.65	307 iPc	39 33.30
IMA	40.05	34 iPc	34 55.00	NB2	69.94	338 P	38 29.80	-1.2			80.89	329 iPc	39 34.60
WMO	41.27	292 P	35 05.20	TNP	69.94	56 iPc					id	39 35.80	
Z	22s	0.90um	4.6Msz		0.8s	152.94nm	38 31.90	0.2		SRS	81.30	320 eP	39 35.58
						iP		6.1mb		WATA	81.33	330 iPc	39 36.20
PMR	42.09	40 eP	35 11.20	HFS	69.98	337 eP	38 43.90	40km		FVI	81.51	329 P	39 36.00
	0.9s	20.83nm	4.9mb	Z	17s	0.17um	38 29.70	-1.5		SQTA	81.56	330 iPc	39 37.30
FBA	42.49	35 iPc	35 15.50					5.8mb			0.9s	40.10nm	5.4mb
TOA	43.43	39 ePc	35 23.40	FRB	70.32	15 eP	08 41.00	-1.2		KNT	81.60	320 eP	39 37.18
	0.9s	50.10nm	5.3mb			pP	38 45.00	45km		VAY	81.63	320 iP	39 38.00
LOE	44.90	249 eP	35 35.00	ABL	70.72	60 eP	38 37.00	0.5		SKO	81.64	321 iP	39 38.30
LSA	45.00	271 P	35 37.10	WARB	70.91	198 iPd	38 48.50	38km			0.9s	102.00nm	5.8mb
CHG	45.88	253 iPc	35 43.90	HYA	71.13	340 eP	38 38.70	1.4		ZNT	81.80	307 eP	39 39.40
	0.9s	56.72nm	5.5mb	CLC	71.14	58 eP	38 37.90	-0.3		CDF	81.90	333 iPc	39 38.80
BDT	46.89	252 eP	35 52.00			e	38 39.00	0.2			0.8s	17.45nm	5.1mb
INK	47.74	30 eP	35 56.00	DUG	71.22	52 eP	38 51.00			OGA	81.92	330 iPc	39 39.60
	0.4s	16.00nm	5.4mb			eP	38 51.50	39km			1.1s	56.00nm	5.5mb
				SBB	71.71	60 eP	38 43.00	0.7		PAIG	82.18	319 eP	39 40.02
NNT	49.65	247 eP	36 14.20			e	38 55.00			ECP	82.20	343 eP	39 58.40
GUN	49												

MAT	42.43	355	iPc	42	24.20	-2.3	N	13s	0.90um		SHI	92.69	299	iPc	47	43.00	-0.7				
	1.1s	63.29nm	eS	48	46.00	5.3mb	E	13s	1.20um		INK	93.33	22	eP	47	45.00	-0.6				
IPM	42.50	283	ePd	42	29.00	1.6			PP	46	12.00	PGC	97.24	42	eP	48	08.00	4.2X			
	1.5s	160.70nm	e	42	41.90	5.5mb	LZH	55.19	322	iPc	44	05.50	0.1	GMW	97.67	43	eP	48	06.20	0.3	
SNG	43.57	287	eP	42	37.00	1.0		1.5s	400.00nm	6.2mb	MBC	97.72	14	eP	48	04.00	-1.5				
			eS	48	32.10		Z	25s	3.89um	5.4MszX		1.0s	12.00nm	5.4mb	WDC	97.76	50	eP	48	07.50	1.1
NJ2	43.88	331	Pc	42	39.20	0.9	N	10s	1.29um		BKS	97.94	53	eP	48	08.80	1.6				
	1.0s	200.00nm				5.9mb	E	11s	1.11um					e	59	04.00					
Z	22s	1.70um				4.9Msz			SP	44	23.00			e	00	59.00					
			PP	42	50.50				PcP	45	00.00			e	06	40.00					
			eS	49	07.00				PP	46	07.00			e	10	08.00					
			SS	52	14.00		GTA	59.77	323	iPc	44	37.80	0.2		eLO	15	32.00				
								1.4s	250.00nm	6.2mb				eLR	19	00.00					
							Z	20s	2.80um	5.4Msz				eLR	19	02.00					
							E	11s	1.00um												
									PP	44	42.00		GCC	98.11	54	eP	48	11.20	3.2X		
									SP	44	45.60		TAB	98.31	307	eP	48	09.00	-0.1		
									S	52	42.00		MHC	98.40	53	eP	48	09.50	0.0		
							LSA	60.50	309	P	44	43.90	0.8	ARN	98.48	53	e(P)	48	10.00	0.2	
							DRV	60.64	181	iPc	44	42.80	-0.1	SAO	98.54	54	eP	48	15.00	5.0X	
							GUN	63.94	305	P	45	06.00	-0.1	PRS	98.59	54	eP	48	12.30	2.0	
							PKI	64.20	304	P	45	07.20	-0.5	PRI	99.16	54	eP	48	13.50	0.5	
							SMY	64.38	21	P	45	14.00	6.0X	CMB	99.40	53	eP	48	15.40	1.4	
							Z	19s	5.88um	5.8Msz				BCH	99.63	55	e(P)	48	15.60	0.5	
							KKN	64.39	305	P	45	09.10	0.3	PNT	99.76	41	eP	48	15.00	-0.3	
							DMN	64.46	304	P	45	09.40	0.1	ABL	100.33	56	ePdiff	48	18.40	-0.2	
							GKN	65.00	304	P	45	12.60	-0.1	BONR	101.05	53	e(Pdiff)	48	21.30	-0.5	
							KOD	66.52	284	eP	45	23.60	0.8	PAS	101.20	56	ePdiff	48	21.00	-1.1	
							HYB	67.06	292	ePc	45	24.00	-1.9	Z	20s	2.10um	5.6Msz				
								1.4s	125.00nm	5.8mb				ePP	52	28.00					
									eS	54	22.00				eSKS	59	04.00				
							GB														

10d 09h

CLL	118.38	326	ePKP	53	19.00	0.1
PTJ	119.02	320	ePKP	53	20.90	0.5
YHC	119.08	324	ePKP	53	19.00	-1.4
Z	18s		1.50um			5.7MsZ
N	18s		1.00um			
E	18s		0.90um			
			e	53	23.00	
MOX	119.47	326	ePKP	53	22.00	1.0
Z	22s		3.00um			5.9MsZ
VBY	119.62	320	e(PKP)	53	23.00	1.6
GRF	120.16	326	ePdiff	49	50.00	3.8X
Z	20s		1.50um			5.6MsZ
FVI	120.72	322	PKP	53	27.00	3.6X
SQTA	121.38	323	iPKPd	53	25.20	0.3
	0.9s		39.80nm			
			i	53	29.10	
OGA	121.66	323	ePKP	53	26.20	0.7
CTI	121.66	322	PKP	53	23.00	-2.4X
ARV	121.96	318	PKP	53	26.00	0.0
ABH	122.09	327	ePKP	53	27.61	1.6
SFI	122.49	319	PKP	53	30.00	3.1X
GWf	122.55	326	PKP	53	27.61	0.7
FVM	122.63	48	ePKP	53	25.80	-1.6
FEL	122.92	325	PKP	53	27.86	0.1
CDF	123.05	326	PKP	53	28.03	0.1
MOF	123.43	325	PKP	53	28.96	0.2
VAI	123.51	323	PKP	53	28.50	-0.3
EKA	123.53	337	PKP	53	32.00	3.4X
	1.2s		28.30nm			
BSF	123.64	325	PKP	53	29.53	0.3
ELC	123.77	49	ePKP	53	28.30	-1.3
HAU	123.79	326	ePKP	53	29.60	0.2
	1.1s		39.05nm			
Z	22s		3.25um			5.9MsZ
VITF	123.87	326	PKP	53	29.96	0.5
LOMF	123.88	325	PKP	53	29.97	0.3
LPG	124.91	323	ePKP	53	32.40	0.4
	0.9s		14.75nm			
BNI	125.19	323	PKP	53	34.50	2.2X
PWLA	125.44	51	ePKP	53	31.80	-1.2
LOR	125.59	326	ePKP	53	33.20	0.3
	1.0s		20.00nm			
Z	22s		2.50um			5.8MsZ
LBF	125.69	326	ePKP	53	33.20	0.0
	1.2s		41.65nm			
SSF	125.91	326	ePKP	53	33.60	0.1
	1.0s		33.00nm			
SCH	125.95	20	ePKP	53	34.00	0.6
SMF	125.97	326	ePKP	53	33.80	0.1
	1.2s		35.70nm			
FRF	125.98	321	ePKP	53	34.10	0.3
	1.0s		32.00nm			
AVF	126.15	326	ePKP	53	34.20	0.2
	0.8s		8.05nm			
LRG	126.22	321	ePKP	53	34.50	0.3
	1.0s		50.00nm			
Z	20s		2.00um			5.8MsZ
BGF	126.57	326	ePKP	53	35.10	0.3
	1.2s		59.50nm			
LDF	126.88	330	ePKP	53	36.50	1.2
	0.9s		26.20nm			
MAF	126.93	326	ePKP	53	35.90	0.4
	1.2s		26.80nm			
FLN	126.95	330	ePKP	53	36.30	0.9
	1.2s		59.50nm			
Z	20s		2.50um			5.9MsZ
TCF	127.09	326	ePKP	53	36.00	0.2
	0.8s		29.55nm			
GRR	127.38	330	ePKP	53	37.80	1.5
	1.0s		36.00nm			
LPF	127.71	330	ePKP	53	37.40	0.5
	1.1s		83.05nm			
CAF	127.98	325	ePKP	53	38.60	1.0
	1.2s		32.75nm			
RJF	128.07	325	ePKP			

PEL	130.11	143	ePKP	53	43.00	1.0
PRM	130.14	50	ePKP	53	41.80	-0.2
BLA	130.20	45	ePKP	53	41.90	-0.2
	0.7s	13.70nm				
NNA	137.21	115	ePKP	53	56.40	0.4
	1.2s	112.50nm				
UPA	138.44	83	(PKP)	53	50.00	-8.2X
Z	21s	3.58um				6.1Msz
IFR	139.17	317	ePKP	54	00.50	1.2
TIO	142.13	315	iPKP	54	04.70	0.1
CNCB	142.50	128	PKP	54	03.00	-3.1X
SHGH	142.53	272	ePKP	54	03.00	-2.6X
LFB	142.56	127	PKP	54	03.00	-3.0X
	1.0s	60.00nm				
Z	22s	2.22um				5.9Msz
		LR	42	04.00		
LEGH	142.66	272	ePKP	54	03.00	-2.8X
ZOBO	142.69	127	PKP	54	02.80	-3.7X
	1.2s	67.57nm				
Z	25s	0.85um				5.4MszX
		SKS	01	46.00		
		LR	42	20.00		
WEGH	142.80	271	ePKP	54	04.00	-2.0
KUK	142.86	272	ePKP	54	04.50	-1.6
KUK	142.86	272	ePKP	54	05.50	-0.6
CCH	143.59	130	PKP	54	02.70	-4.9X
ITB7	145.22	153	ePKP	54	09.30	-0.6
ITB	145.49	153	ePKP	54	10.20	-0.1
ITB1	145.53	153	ePKP	54	10.60	0.3
KIC	147.21	273	PKPc	54	16.00	2.6X
	1.2s	288.50nm				
SDV	147.24	83	iPKPd	54	14.10	0.4
TIC	147.49	273	PKP	54	16.78	2.9X
LIC	147.50	272	PKPc	54	16.74	2.9X
	1.1s	259.00nm				
TOV	148.01	81	ePKP	54	16.20	1.5
SIV	148.23	134	ePKP	54	10.00	-5.0X
		i	54	15.60		
PORP	149.32	64	PKP	54	16.80	0.2
CPD	149.97	64	PKP	54	18.00	0.4
JFO	151.96	169	ePKP	54	26.70	6.1X
		e	54	32.70		
		e	54	37.50		
PDCR	161.60	176	ePKP	54	33.70	1.2
		e	55	17.70		
		e	56	05.60		
SOB1	164.62	168	ePKP	54	37.10	1.6
		e	55	31.60		
S.D. = 0.9 on 193 of 244 obs.						
DEC 10, 1990 09h 42m 16.12± 0.40s						
5.869 S ± 8.0km 142.260 E ± 7.4km						
DEPTH = 33.0km (normal)						
5.5mb (7 obs.)						
PAPUA NEW GUINEA (202)						
MNDI	1.42	102	eP	42	20.50	-19.5X
YYYY	3.70	96	eP	43	18.50	5.9X
		eS	44	07.00		
PMG	5.99	126	iPd	43	44.00	-0.9
		eS	44	50.00		
RAB	10.01	81	iPd	44	41.50	0.7
	0.5s	1746.48nm				7.6mb X
SVO	17.71	102	eP	46	23.00	1.1
HNR	17.88	103	ePc	46	24.00	-0.1
		eS	50	01.00		
GUA	19.46	8	eP	46	44.20	1.0
	0.8s	149.25nm				5.3mb
PJG	19.50	8	eP	46	44.20	0.5
PVC	28.05	117	iPc	48	06.80	0.1
DZM	28.39	127	iPd	48	09.00	-0.8
SSE	41.92	333	Pc			

BRW	86.59	16	iP	54	57.60	0.6
FBA	86.93	24	ePc	54	57.60	-1.1
	1.1s		34.38nm			5.5mb
INK	93.27	22	eP	55	26.00	-2.3
CDF	122.98	326	ePKP	01	11.20	0.4
BSF	123.57	325	ePKP	01	12.40	0.3
	0.8s		9.40nm			
HAU	123.72	326	ePKP	01	13.00	0.7
	0.8s		10.75nm			
LBF	125.62	326	ePKP	01	15.50	-0.5
	1.0s		12.00nm			
TCF	127.02	326	ePKP	01	18.90	0.2
	0.9s		14.75nm			
KIC	147.19	273	PKPc	01	59.16	2.8X
	1.2s		33.50nm			
TIC	147.47	273	PKP	01	59.98	3.2X
	1.0s		30.50nm			
LIC	147.47	272	PKPc	01	59.88	3.1X
	1.2s		46.00nm			
SIV	148.29	134	(PKP)	01	52.00	-6.1X
S.D. = 0.9 on 27 of 33 obs.						
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%	DEC 10, 1990	10h	06m	31.95±	0.62s	
	46.468 N ± 7.5km			2.983 E ± 6.9km		
DEPTH = 10.0km (geophysicist)						
FRANCE (538)						
ML 1.8 (LDG).						
BGF	0.13	314	Pg	06	34.80	-0.3
			Sg	06	36.30	
MAF	0.38	230	Pg	06	40.10	0.4
			Sg	06	45.20	
AVF	0.41	38	Pg	06	40.50	0.2
			Sg	06	45.80	
TCF	0.56	252	Pg	06	43.40	0.0
			Sg	06	50.60	
SSF	0.69	31	Pg	06	45.40	-0.3
			Sg	06	54.60	
LBF	0.86	53	Pg	06	48.80	0.3
			Sn	07	02.80	
LSF	1.03	258	Pg	06	51.70	0.3
			Sg	07	04.60	
CAF	1.67	203	Pn	07	00.90	-0.5
			Pg	07	03.80	
			Sg	07	26.50	
S.D. = 0.4 on 8 of 8 obs.						
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%	DEC 10, 1990	10h	55m	49.15±	0.94s	
	39.115 N ± 8.4km			27.582 E ± 15.9km		
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.3 (ISK).						
IZM	0.76	199	ePg	56	04.00	0.0
			eSg	56	16.00	
DST	0.95	59	ePn	56	07.30	0.1
EDC	1.25	10	ePn	56	12.00	-0.3
BNT	1.27	12	ePn	56	13.20	0.5
KCT	1.28	28	iPn	56	12.70	-0.2
S.D. = 0.5 on 5 of 5 obs.						
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&	DEC 10, 1990	11h	19m	16.74s		
	61.640 N			150.489 W		
DEPTH = 42.4km						
SOUTHERN ALASKA (2)						
<AGS-P>.						
SUA	0.21	215	iP	19	24.96	0.4
			eS	19	32.37	
PWA	0.29	88	iP	19	25.32	0.2
PMS	0.60	131</				

LBF 2.43 306 Pg 36 07.80 8.8X
Sg 36 35.60
LOR 2.66 310 Pg 36 12.10 9.9X
Sg 36 42.20
S.D. = 0.3 on 7 of 10 obs.

% DEC 10, 1990 21h 13m 24.60 ± 0.69s
40.438 N ± 9.5km 28.636 E ± 5.7km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 2.1 (ISK).

KCT 0.29 229 iPg 13 30.30 -0.3
BNT 0.55 262 iPg 13 35.80 0.0
iSg 13 44.50
YLV 0.58 77 iPg 13 36.20 -0.1
iSg 13 45.20

EDC 0.60 262 ePg 13 36.90 0.2
DST 0.83 180 ePg 13 40.90 0.2
eSg 13 53.90
HRT 0.87 64 iPn 13 41.50 0.1
S.D. = 0.3 on 6 of 6 obs.

DEC 10, 1990 22h 35m 15.42 ± 0.48s
40.136 N ± 5.1km 20.483 E ± 4.2km
DEPTH = 10.0km (geophysicist)

GREECE-ALBANIA BORDER REGION (392)
MD 2.9 (THE).

LSK 0.09 81 iPg 35 17.00 -1.1
TPE 0.39 294 iPg 35 24.50 1.0
SRN 0.45 236 iPg 35 24.80 0.2
IGT 0.61 191 eP 35 27.54 -0.3
eS 35 39.26
KEK 0.67 231 ePg 35 28.00 -0.8
BERA 0.70 324 ePg 35 27.00 -2.2
FNA 0.94 46 eP 35 32.22 -1.2
eS 35 46.50

KZN 1.00 80 ePg 35 33.20 -1.2
OHR 1.00 14 iPg 35 33.00 -1.5
iSg 35 47.50
TIR 1.30 339 ePn 35 40.20 0.8
LIT 1.54 91 iP 35 44.06 1.1
iS 36 07.14

PHP 1.55 359 ePn 35 42.70 -0.4
EVR 1.59 139 ePb 35 44.50 0.7
LACI 1.61 339 ePn 35 45.60 1.7
KKS 1.94 358 ePn 35 52.50 3.8X
LCI 1.95 277 P 35 47.00 -1.8
VLS 1.96 178 ePg 35 53.00 4.0X
SKO 1.97 21 ePn 35 50.00 0.8
i 35 51.40
iSg 36 17.10

VAY 1.98 53 ePn 35 50.00 0.7
KNT 2.10 60 eP 35 52.06 0.9
SOH 2.29 72 eP 35 55.38 1.4
eS 36 27.50
PAIG 2.46 94 eP 35 55.62 -0.6
BRT 2.61 288 P 36 00.00 1.7
S.D. = 1.3 on 21 of 23 obs.

* DEC 10, 1990 22h 56m 04.62 ± 1.54s
35.371 N ± 11.2km 140.345 E ± 11.8km
DEPTH = 47.2 ± 11.4 km

4.4mb (5 obs.) 4.5Msz (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)
Felt (III JMA) at Katsuro and
(I JMA) at Yokohama and
Tateyama.

KAKJ 0.84 351 iPd 56 19.00 -1.3
S 56 30.80
CHJJ 1.29 302 P 56 25.60 -0.9
IIDJ 1.99 274 P 56 36.00 -0.5
S 57 02.10

MAT 2.09 305 iPc 56 37.60 -0.3
(S) 57 02.00
NIIJ 2.16 330 P 56 39.30 0.5
MTMJ 2.39 301 P 56 41.90 -0.3
YAMJ 2.81 355 eP 56 48.70 0.6

TSRJ 3.56 274 P 57 00.30 1.5
OFUJ 3.85 16 P 57 02.40 -0.5
WKYJ 4.08 255 P 57 07.90 1.8
TKSJ 5.37 257 P 57 24.10 -0.2
YONJ 5.63 270 P 57 31.60 3.6X
GUN 46.47 277 P 04 31.20 1.9
KKJ 47.01 277 P 04 31.80 -1.6

GKN 47.45 277 P 04 34.40 -2.4
FBA 50.97 31 eP 05 04.60 1.5
0.6s 1.20nm 4.1mb
WB5 55.24 187 eP 05 33.00 -2.3
ASPA 59.03 187 iPd 06 02.80 0.7
1.2s 6.30nm 4.6mb

GBA 60.23 266 P 06 10.00 -0.5
YKA 65.68 29 eP 06 45.20 -0.7
1.0s 0.90nm 3.8mb
NUR 71.01 332 eP 07 19.00 0.0
NB2 75.38 337 P 07 44.60 -0.1
0.9s 4.30nm 4.4mb

FFC 75.57 32 eP 07 47.00 1.2
0.9s 10.00nm 4.8mb
PRNI 84.11 303 eP 08 33.00 1.0
MBH 84.54 303 eP 08 35.00 0.8

ZOBO 148.26 61 PKP 15 52.00 7.2X
Z 20s 0.09um 4.5Msz
LPB 148.46 61 (PKP) 15 58.00 13.1X
LR 33 04.00

CNCB 148.72 61 PKP 15 51.00 5.5X
S.D. = 1.3 on 24 of 28 obs.

* DEC 11, 1990 00h 27m 29.37 ± 0.64s
31.606 S ± 14.6km 69.386 W ± 14.4km
DEPTH = 116.8 ± 20.3 km

SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.61 84 iPd 27 48.00 0.0
MDZ 1.35 161 iP 27 56.70 1.4
iS 28 13.80
JACH 1.48 223 iPd 27 57.50 0.6
iS 28 19.50

PEL 1.89 215 iPd 28 02.00 0.2
iS 28 26.00
ROCH 1.94 225 iPd 28 02.30 -0.3
iS 28 27.50

SAN 2.13 210 iP 28 05.00 0.1
iS 28 32.10
PCH 2.22 205 eP 28 06.50 0.4
iS 28 35.50

IHA 2.38 233 eP 28 07.00 -1.0
eS 28 33.50
TACH 2.42 212 iPd 28 08.00 -0.7
iS 28 38.50

CHCH 2.55 204 iPd 28 03.00 -7.4X
iS 28 28.00
LCCH 2.62 224 iPc 28 10.50 -0.7
iS 28 42.00

CYA 4.43 46 iPd 28 34.00 -1.7
S 29 23.00
CNCB 14.79 5 P 30 56.00 1.7
LPB 15.05 5 eP 31 02.00 4.4X
ZOBO 15.31 5 P 31 01.80 0.8
SIV 17.29 28 P 31 24.00 -1.0

S.D. = 1.1 on 14 of 16 obs.
DEC 11, 1990 01h 09m 12.92 ± 0.65s
40.080 N ± 5.9km 142.627 E ± 9.4km
DEPTH = 59.0 ± 6.6 km
4.4mb (6 obs.)

NEAR EAST COAST OF HONSHU, JAPAN(228)

OFUJ 1.24 217 iPd 09 33.80 -0.6
S 09 49.20
AOMJ 1.79 286 P 09 41.50 -0.4
eS 10 02.90

HOOJ 2.35 12 P 09 50.80 1.0
eS 10 22.50
MRRJ 2.62 334 P 09 53.00 -0.5
S 10 23.30

YAMJ 2.77 227 iP+ 09 56.30 0.5
eS 10 30.40
KUSJ 3.40 27 P 10 03.80 -0.8
S 10 40.80

NIIJ 4.01 226 P 10 13.90 0.7
ASAJ 4.04 0 P 10 13.80 0.2
KAKJ 4.33 207 P 10 16.00 -1.6
eS 11 05.50
CHJJ 4.94 217 P 10 26.00 -0.4
MAT 4.95 226 iPc 10 27.00 0.4
0.7s 35.62nm (S) 11 41.00

MTMJ 5.15 229 P 10 30.50 1.1
IIDJ 5.92 221 P 10 40.80 0.7
FBA 46.03 34 (P) 17 30.50 -1.4
GUN 47.86 274 P 17 47.20 0.0

0.6s 15.00nm 5.2mb
KKN 48.38 274 P 17 51.00 -0.1
0.8s 24.00nm 5.3mb
GKN 48.76 274 P 17 53.60 -0.3
INK 51.25 28 eP 18 14.00 1.8

YKA 60.71 31 eP 19 20.60 0.6
0.8s 0.30nm 3.5mb
GBA 62.42 265 P 19 32.00 -0.2
0.3s 1.10nm 4.4mb
HFS 71.71 336 eP 20 29.50 -0.6
0.4s 1.10nm 4.1mb

NB2 71.75 337 P 20 30.30 -0.1
0.8s 1.90nm 4.1mb
S.D. = 0.9 on 22 of 22 obs.

DEC 11, 1990 01h 11m 03.84 ± 0.32s
22.164 S ± 8.5km 174.306 W ± 5.7km
DEPTH = 38.3km (9 depth phases)
5.1mb (18 obs.) 5.2Msz (4 obs.)

TONGA ISLANDS REGION (174)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 11S, 24C

Centroid Location:

Origin Time 01:11:10.2 0.7

Lat 21.59S 0.12 Lon 174.11W 0.09

Dep 15.0 FIX Half-duration 1.7

Moment Tensor: Scale 10¹⁶Nm

Mrr=6.62 0.43 Mtt=-0.18 0.77

Mff=-6.44 0.73 Mrt=6.19 1.33

Mrf=7.93 1.66 Mtf=-3.29 0.41

Principal Axes:

T Vol=12.00 Plg=61 Azm=320

N 0.83 9 213

P -12.83 27 119

Best Double Couple: Mo=1.2*10¹⁷

NP1: Strike=187 Dip=20 Slip=63

NP2: 36 73 99

SVA 7.90 299 eP 13 01.40 2.2
VUN 7.95 300 ePc 13 00.00 0.1
AFI 8.55 17 eP 13 00.00 -8.3X
eS 15 28.00

RAR 13.54 89 P 14 06.00 -9.8X
S 15 20.00
PUZ 17.10 200 eP 15 01.00 -0.6
DZM 17.84 267 iPc 15 13.70 2.7

MNG 20.33 203 eP 15 39.80 0.3
LTZ 23.42 205 eP 16 11.10 0.8
PPN 23.83 83 eP 16 15.00 0.5
0.8s 25.00nm 4.8mb
TVQ 23.94 84 eP 16 16.00 0.5
0.8s 30.00nm 4.9mb

HNR 27.76 293 eP 16 50.00 -1.2
SVO 28.02 293 P 16 54.00 0.5
RMO 33.86 255 e(P) 17 44.00 -1.1
CTA 36.78 266 iPd 18 08.10 -1.9
0.7s 20.55nm 5.1mb
iS 24 12.00

PMG 39.07 283 eP 18 26.50 -2.7
0.7s 23.29nm 5.1mb
ASPA 47.51 258 iPc 19 35.10 -2.4
0.9s 27.20nm 5.3mb
Z 19s 1.30um 4.9Msz

WB5 47.78 263 eP 19 31.90 -7.8X
MRWA 62.40 248 eP 21 25.00 -0.5
0.8s 12.00nm 5.1mb
MAT 73.61 322 eP 22 33.00 -2.2
0.7s 8.90nm 4.9mb

PRS 76.71 41 eP 22 53.30 0.4
BCH 76.77 43 eP 22 54.20 0.8
GCC 76.78 41 eP 22 53.30 0.1
SAO 76.94 41 eP 22 54.20 0.0

PRI 77.02 42 eP 22 55.70 0.9
LLA 77.15 41 eP 22 58.10 2.7
MHC 77.20 41 eP 22 55.70 -0.1
PLM 77.74 46 eP 22 59.00 0.1
SBB 77.92 45 eP 23 00.00 0.3

ISA 78.10 44 eP 23 00.00 -0.7
FRI 78.15 42 ePc 23 01.30 0.5
e 23 12.50 37km
CMB 78.41 41 ePc 23 01.60 -0.7
e 23 13.70 40km

ORV 78.74 39 eP 23 03.90 -0.1
e 23 15.30 37km
CLC 78.75 44 eP 23 04.00 -0.2
WDC 78.82 38 eP 23 04.70 0.3

GSC	78.95	45	eP	23	16.00	37km	?	DEC 11, 1990	01h	59m	53.81±3.37s	eS	00	07.67				
TNP	80.38	42	eP	23	06.00	0.6		42.246 N ±39.9km		32	632 E ±14.4km	CVA	0.58	155	iP	00	02.29	-1.1
	1.0s			23	12.60	-0.6		DEPTH = 10.0km (geophysicist)				HIN	0.69	190	iP	00	04.32	-0.9
							BLACK SEA				(360)	SGAM	0.77	138	iP	00	05.21	-1.4
KGM	83.69	275	ePc	23	24.50	39km	KAS	1.22	135	ePg	00	16.50	0.0					
ALO	85.80	50	eP	23	40.50	-0.4				iSg	00	29.00						
	1.0s						BBTK	2.40	178	eP	00	37.00	3.1X					
										iS	01	01.00						
							HRT	2.64	238	iPn	00	38.00	0.8					
ANMO	85.80	50	iP	23	40.30	-0.6				ePn	00	47.00	7.3X					
	1.0s						KVT	2.81	113	ePn	00	40.00	-1.2					
							ISK	2.93	247	ePn	00	42.00	0.1					
							YLV	2.97	237	ePn	00	47.00	0.0					
							CTT	3.33	252	ePn	00	52.00	0.4					
PV09	85.82	46	eP	23	40.90	-0.2				ePn	00	52.00	0.4					
TTA	86.03	8	eP	23	40.80	-0.5				S.D. = 0.8	on	6 of	8 obs.					
PNT	86.16	32	eP	23	42.00	-0.1				?	DEC 11, 1990	03h	04m	30.32±3.21s				
	0.9s										18.926 S ±42.1km		72.904 W ±15.5km					
IPM	86.78	276	ePc	23	48.00	2.0					DEPTH = 33.0km (normol)							
	0.8s										3.8mb (1 obs.)							
TOA	86.93	13	eP	23	45.10	-0.6					OFF COAST OF NORTHERN CHILE		(121)					
BW06	87.86	42	iP	23	50.40	-0.4					CNCB	5.14	67	Pc	05	50.00	2.4	
	0.8s										LPB	5.16	63	eP	05	47.00	-0.7	
GOL	88.94	46	eP	23	56.70	0.6												
	0.8s																	
FBA	89.16	11	eP	23	55.30	-1.0					ZOBO	5.27	61	Pc	05	49.30	-0.1	
	1.0s																	
IMA	89.34	8	eP	23	56.70	-0.6												
	1.6s																	
SES	91.22	35	eP	24	06.00	-0.1												
RSSD	92.00	43	eP	24	09.10	-1.0												
KMI	93.17	296	Pc	24	17.00	1.1												
	2.0s																	
					</													

LBF 48.27 334 eP 17 54.30 2.5
0.8s 6.70nm 4.8mb
MOX 48.46 342 eP 17 53.00 -0.2
SSF 48.53 334 eP 17 54.20 0.5
1.0s 10.00nm 4.8mb
LOR 48.54 334 eP 17 53.70 -0.1
0.8s 8.05nm 4.8mb
Z 20s 0.13um 3.9msz
TCF 48.54 332 eP 17 54.90 1.0
1.0s 20.00nm 5.1mb
CLL 48.64 344 e(P) 17 53.00 -1.5
GKN 54.17 59 P 18 36.40 -0.5
1.1s 34.00nm 5.3mb
DMN 54.48 60 P 18 39.20 -0.1
KKN 54.67 60 P 18 40.60 0.0
1.0s 32.00nm 5.3mb
PKI 54.73 60 P 18 40.60 -0.6
GUN 55.22 60 P 18 44.40 -0.4
NB2 57.86 348 P 19 01.20 -1.5
1.2s 10.70nm 4.8mb
S.D. = 1.2 on 19 of 20 obs.

& DEC 11, 1990 05h 26m 55.65s
61.724 N 150.498 W
DEPTH = 49.9km
SOUTHERN ALASKA (2)
<AGS-P>.

SUA 0.29 204 iP 27 05.05 0.2
eS 27 13.00
PWA 0.30 104 iP 27 04.91 0.1
eS 27 12.53
SKT 0.55 298 iP 27 06.92 -0.7
eS 27 16.32
PMS 0.66 137 eP 27 08.18 -0.8
eS 27 19.50
PLRM 0.67 101 iP 27 08.12 -0.9
eS 27 19.43
CUT 0.69 9 iP 27 08.97 -0.4
eS 27 19.41
GHO 0.75 86 eP 27 09.61 -0.7
eS 27 21.63
CGLM 0.84 241 iP 27 10.85 -0.6
S 27 23.26
NCG 0.86 249 eP 27 10.76 -1.0
eS 27 23.32
CRP 0.92 241 eP 27 12.20 -0.4
eS 27 25.56
SPU 0.92 235 iP 27 11.72 -0.9
eS 27 24.56
BGL 1.02 244 eP 27 13.19 -0.8
eS 27 27.33
KNK 1.03 107 eP 27 13.23 -0.7
eS 27 27.77
CKL 1.03 240 iP 27 13.20 -0.9
eS 27 27.00
NKA 1.05 200 eP 27 15.20 1.0
SLKM 1.23 174 eP 27 15.39 -1.4
eS 27 31.68
HUR 1.32 17 eP 27 17.57 -0.5
eS 27 34.51
RDT 1.48 220 iP 27 19.15 -1.2
eS 27 38.37
REF 1.64 222 eP 27 21.56 -1.1
RDN 1.64 223 eP 27 21.32 -1.3
eS 27 40.14
NCT 1.66 226 eP 27 21.91 -1.0
RS2 1.68 222 eP 27 22.34 -0.9
RSO 1.67 222 eP 27 22.51 -0.7
SEW 1.70 162 eP 27 23.24 -0.2
RED 1.71 221 eP 27 22.54 -1.1
eS 27 43.92
TRF 1.74 3 eP 27 23.09 -1.0
RND 1.85 24 eP 27 24.22 -1.4
TOA 2.08 78 eP 27 28.19 -0.7
eS 27 52.94
VLZ 2.09 105 eP 27 26.38 -2.4
KLU 2.20 94 eP 27 28.39 -2.1
eS 27 55.17
TZL 2.42 80 eP 27 32.69 -0.9
SDG 2.46 69 eP 27 32.92 -1.3
GLB 3.21 92 eP 27 42.68 -2.2
TGL 3.83 101 eP 27 51.52 -2.2
BALM 3.98 96 eP 27 52.05 -3.8
35 obs. associated

? DEC 11, 1990 05h 48m 53.91± 3.36s

37.502 S ±28.7km 70.598 W ±23.3km
DEPTH = 111.6 ± 17.4 km
ARGENTINA (146)

CHCH 3.56 359 iPd 49 58.00 9.7X
iS 50 46.70
LNV 3.60 349 iPd 49 49.50 0.7
iS 50 29.50
TACH 3.85 356 iPd 49 52.50 0.3
iS 50 32.60
iS 50 34.60
PCH 3.87 1 eP 49 53.70 1.1
iS 50 38.30
SAN 4.04 359 eP 49 55.00 0.2
LCCH 4.10 349 iP 49 55.00 -0.5
iS 50 38.10
PEL 4.35 359 iPd 49 59.10 0.0
iS 50 47.80
ROCH 4.53 356 iPc 50 01.20 -0.5
iS 50 50.50
iS 50 52.50
IHA 4.55 349 eP 50 01.00 -0.7
e(S) 50 42.00
JACH 4.81 0 eP 50 04.50 -0.9
iS 50 57.50
ITB7 18.65 53 eP 53 06.20 0.4
ITB1 18.86 52 eP 53 08.00 0.1
ITB 18.86 52 eP 53 00.70 -7.3X
CCH 20.42 12 P 53 19.50 -5.1X
CNCB 20.74 7 P 53 29.00 0.9
LPB 21.00 7 eP 53 29.00 -1.5
ZOBO 21.26 7 P 53 34.90 1.6
Z 20s 0.07um 3.1msz
LR 59 22.00
SIV 23.02 24 P 53 49.20 -0.7
PDCR 37.53 57 eP 55 57.90 -0.8
LIC 74.83 70 P 00 24.00 0.1
KIC 75.13 70 P 00 25.90 0.2
S.D. = 0.9 on 18 of 21 obs.

& DEC 11, 1990 05h 52m 25.80s
40.425 N 124.218 W
DEPTH = 24.0km
NEAR COAST OF NORTHERN CALIF. (35)
<BRK>. ML 3.0 (BRK).

FHC 0.42 25 iPc 52 34.36 -0.2
iS 52 39.90
WDC 1.29 83 iPd 52 47.20 -1.2
iS 53 02.30
MIN 2.00 91 e(P) 52 56.30 -2.5
ARN 3.72 145 e(P) 53 26.00 2.9
4 obs. associated

* DEC 11, 1990 06h 46m 26.92± 1.72s
12.248 N ±16.6km 94.331 E ±10.6km
DEPTH = 78.6 ± 26.5 km
4.4mb (6 obs.)
ANDAMAN ISLANDS REGION (703)

NNT 5.29 86 eP 47 45.20 0.1
CHG 7.90 34 eP 48 27.20 6.0X
HYB 16.09 291 eP 50 11.50 1.6
GBA 16.52 277 P 50 14.00 -1.2
e 53 08.00
PKI 17.39 333 P 50 25.60 -0.6
0.6s 20.00nm 4.5mb
GUN 17.47 334 P 50 27.80 0.4
0.4s 10.00nm 4.4mb
DMN 17.56 332 P 50 28.20 -0.1
0.6s 14.00nm 4.4mb
KKN 17.63 333 P 50 28.80 -0.4
GKN 18.11 331 P 50 35.00 0.1
0.5s 26.00nm 4.7mb
LZH 25.24 18 Pc 51 52.00 4.7X
1.5s 28.00nm 4.5mb
pP 51 58.00 21kmX
ASPA 52.64 133 eP 55 47.40 11.9X
0.9s 8.40nm
HFS 74.81 329 eP 58 00.30 0.1
0.4s 1.20nm 4.2mb
S.D. = 1.0 on 9 of 12 obs.

* DEC 11, 1990 08h 42m 52.68± 1.64s
6.028 S ±16.1km 148.939 E ±15.7km
DEPTH = 90.1 ± 18.9 km
4.3mb (1 obs.)

NEW BRITAIN REGION (192)

YYYY 2.96 266 eP 43 51.50 12.8X
RAB 3.70 61 eP 43 49.00 0.3
PMG 3.80 208 iPd 43 49.70 -0.4
0.7s 202.74nm
eS 44 32.00
WB5 19.75 224 eP 47 17.00 -1.1
i 47 21.30
BRS 21.56 171 iPd 47 35.80 -0.6
ASPA 22.74 218 eP 47 50.40 2.4
0.7s 9.60nm 4.3mb
Z 21s 0.20um 3.5msz
iPP 48 10.40
eS 51 53.80
DZM 23.25 135 iPc 47 52.90 -0.1
GKN 70.57 302 P 54 00.00 -0.6
S.D. = 1.6 on 7 of 8 obs.

DEC 11, 1990 08h 57m 34.41± 1.17s
13.161 N ± 7.9km 89.862 W ± 6.0km
DEPTH = 31.9 ± 8.2 km
5.0mb (30 obs.) 4.6msz (8 obs.)
EL SALVADOR (73)

CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 11S, 22C
Centroid Location:
Origin Time 08:57:41.1 1.1
Lat 12.97N 0.09 Lon 89.86W 0.11
Dep 15.0 FIX Half-duration 1.6
Moment Tensor: Scale 10**16 Nm
Mrr= 7.79 0.70 Mtt=-4.88 0.57
Mff=-2.91 1.04 Mrt= 1.15 2.11
Mrf=-8.63 1.58 Mtf= 5.24 0.60
Principal Axes:
T Vol= 12.74 Plg=59 Azm=101
N -1.07 22 329
P -11.66 21 230
Best Double Couple: Mo=1.2*10**17
NP1: Strike=287 Dip=31 Slip= 44
NP2: 157 69 113

TPX 2.90 307 eP 58 18.00 -1.4
iS 58 45.50
SCX 4.45 323 eP 58 47.00 5.6X
EVV 7.46 316 (P) 59 39.00 15.2X
OXX 7.69 301 eP 59 28.00 0.8
(S) 00 53.00
LVVM 9.09 317 eP 59 45.50 -1.0
(S) 01 28.91
PPM 10.26 306 eP 00 04.90 1.7
(S) 01 45.62
ACX 10.34 292 iP 00 01.00 -2.7
III 10.60 301 (P) 00 07.04 -0.4
(S) 01 47.26
UPA 10.95 111 ePn 00 04.00 -8.1X
Z 18s 3.78um
S 03 02.00
CRX 11.28 305 eP 00 26.00 9.1X
MRX 12.66 302 eP 00 35.00 -0.1
BOG 17.75 117 eP 01 47.00 5.7X
eS 05 19.50
SDV 19.34 101 eP 02 01.60 1.1
TOV 19.95 98 eP 02 09.10 2.2
OLY 22.29 357 iP 02 31.50 0.9
RSCP 22.67 9 iP 02 35.50 1.1
BLA 25.40 18 eP 03 02.70 2.1
1.0s 25.00nm 4.8mb
Z 21s 1.58um 4.5msz
ALQ 26.38 328 ePc 03 09.50 -0.5
0.8s 6.16nm 4.3mb
Z 18s 0.86um 4.3msz
ANMO 26.38 328 e(P) 03 09.30 -0.7
CBN 27.30 22 eP 03 19.00 0.9
GOL 29.76 335 iPd 03 39.80 -0.9
1.3s 33.85nm 5.0mb
GLA 30.18 315 eP 03 44.00 -0.2
PV09 30.49 329 iP 03 46.70 -0.4
BAR 31.27 313 eP 03 54.00 0.3
TPC 31.62 316 eP 03 57.00 0.2
PLM 31.76 314 eP 03 58.00 -0.3
PEC 32.26 314 eP 04 02.70 0.2
RVR 32.47 314 eP 04 05.00 0.8
GSC 32.82 317 eP 04 07.00 -0.3
DAU 33.01 329 iP 04 09.10 -0.1
MWC 33.07 314 eP 04 10.00 0.3

CTA 14.51 164 eP 37 50.00 8.5X
 QIS 14.63 190 e(P) 37 42.00 -1.1
 eS 42 04.00
 WB5 15.69 208 eP 37 55.20 -1.8
 HNR 17.94 102 eP 38 29.00 3.7X
 ASPA 19.23 204 iPc 38 41.90 0.9
 0.8s 50.70nm 4.8mb
 Z 18s 1.50um 4.1msz
 iS 42 07.90
 RMQ 21.28 164 eP 39 07.50 5.0X
 e 45 49.00
 BRS 23.50 156 iPd 39 26.40 1.9
 i 40 08.20
 WARB 24.91 215 iPd 39 40.80 2.7
 SSE 42.03 333 P 42 06.30 -0.3
 1.1s 23.00nm 4.8mb
 LZH 55.20 322 eP 43 47.50 -1.4
 FBA 87.13 24 (P) 47 01.00 0.9
 YKA 101.45 27 ePdiff 48 06.10 0.2
 0.7s 0.30nm 4.0mb
 KIC 147.10 272 PKP 54 01.04 4.4X
 LIC 147.38 272 PKP 54 02.04 5.0X
 SIV 148.24 134 PKP 53 57.50 -0.9
 S.D. = 1.7 on 12 of 17 obs.

DEC 11, 1990 13h 25m 43.02±0.56s
 38.229 N ± 7.1km 140.049 E ± 10.3km
 DEPTH = 20.4 ± 4.7 km
 4.8mb (9 obs.)

HONSHU, JAPAN (227)

YAMJ 0.06 190 iP+ 25 44.30 -2.5
 NIJ 1.29 220 iP+ 26 06.00 0.1
 S 26 24.10
 OFUJ 1.53 56 P 26 09.30 0.0
 S 26 29.70
 KAKJ 2.02 177 iP+ 26 17.80 1.3
 S 26 46.40
 MAT 2.23 222 iPc 26 20.00 0.5
 iS 26 50.90
 CHJJ 2.33 201 P 26 22.20 1.3
 AOMJ 2.34 6 P 26 21.20 0.2
 S 26 51.90
 MTMJ 2.43 228 iP+ 26 23.20 0.9
 IJDJ 3.24 213 P 26 35.70 1.9
 MRRJ 4.26 10 P 26 50.30 2.0
 HOOJ 4.83 30 eP 26 57.30 1.0
 eS 27 55.60
 KUSJ 6.02 35 eP 27 11.90 -1.1
 eS 28 20.90
 ASAJ 6.20 18 P 27 15.90 0.3
 LZH 28.82 277 eP 31 43.00 1.0
 2.0s 29.00nm 4.7mb
 GUN 45.98 274 P 34 04.00 -3.0
 0.9s 20.00nm 5.1mb
 KKN 46.50 274 P 34 09.60 -1.4
 0.8s 15.00nm 5.0mb
 GKN 46.91 275 P 34 13.20 -1.0
 1.0s 20.00nm 5.1mb
 INK 53.82 27 eP 35 06.00 0.0
 MBC 55.69 17 eP 35 20.50 0.8
 1.0s 6.00nm 4.6mb
 WB5 58.04 186 eP 35 35.70 -1.2
 WRA 58.11 186 P 35 36.00 -1.4
 0.6s 5.80nm 4.8mb
 GBA 60.25 264 Pc 35 52.90 0.5
 1.3s 13.70nm 4.9mb
 ASPA 61.84 186 eP 36 02.80 -0.2
 2.2s 12.50nm 4.7mb
 YKA 63.32 30 eP 36 10.30 -2.1
 1.5s 2.40nm 4.1mb
 TNP 76.02 52 P 37 31.40 0.6
 ZOBO 146.97 56 ePKP 45 23.00 -1.8
 CNCB 147.45 57 PKP 45 30.00 4.5X
 CCH 149.07 55 (PKP) 45 36.00 8.2X
 SIV 151.08 46 PKP 45 30.60 0.2
 S.D. = 1.4 on 27 of 29 obs.

* DEC 11, 1990 13h 37m 12.05±0.78s
 4.392 N ± 11.0km 127.969 E ± 21.9km
 DEPTH = 33.0km (normal)
 4.7mb (7 obs.)

TALAUD ISLANDS (263)

WB5 24.93 166 eP 42 34.00 0.2
 ASPA 28.48 169 iPd 43 06.30 -0.2
 0.6s 12.20nm 4.8mb

MRWA 35.34 198 eP 44 06.50 0.0
 0.4s 3.00nm 4.6mb
 BJI 37.05 345 eP 44 21.00 0.2
 LZH 38.58 328 eP 44 33.50 -0.4
 1.5s 23.00nm 4.8mb
 pP 44 39.50 20kmX
 GUN 46.35 305 P 45 37.80 0.3
 0.8s 23.00nm 5.2mb
 PKI 46.61 304 P 45 39.80 0.2
 0.9s 7.00nm 4.6mb
 KKN 46.80 305 P 45 40.80 -0.1
 1.0s 16.00nm 5.0mb
 DMN 46.87 304 P 45 41.60 0.0
 GKN 47.40 304 P 45 45.40 -0.2
 0.7s 4.00nm 4.5mb
 S.D. = 0.3 on 10 of 10 obs.

* DEC 11, 1990 13h 50m 29.14±0.79s
 35.989 N ± 18.0km 141.763 E ± 11.8km
 DEPTH = 33.0km (normal)
 4.1mb (4 obs.)

NEAR EAST COAST OF HONSHU, JAPAN(228)

MAT 2.92 282 iPd 51 15.10 0.7
 eS 51 52.00
 GUN 47.55 277 P 59 04.20 0.3
 PKI 48.07 277 P 59 07.80 -0.1
 KKN 48.08 277 P 59 08.00 0.1
 GKN 48.51 278 P 59 11.20 0.1
 FBA 49.84 32 (P) 59 21.40 0.8
 WRA 56.07 188 P 00 07.00 -0.3
 1.0s 1.60nm 4.0mb
 GBA 61.42 266 Pd 00 43.30 -1.4
 0.3s 1.00nm 4.4mb
 YKA 64.57 30 eP 01 03.50 -1.4
 0.8s 0.40nm 3.6mb
 NB2 75.26 338 P 02 09.40 -0.8
 0.6s 1.30nm 4.1mb
 ZOBO 146.95 61 PKP 10 11.00 2.0
 LPB 147.15 62 ePKP 10 13.00 3.9X
 CNCB 147.42 62 PKP 10 14.00 4.3X
 SIV 151.53 52 PKP 10 21.80 6.4X
 S.D. = 1.1 on 11 of 14 obs.

DEC 11, 1990 14h 41m 42.55±0.17s
 15.461 S ± 6.0km 173.117 W ± 4.0km
 DEPTH = 12.8km (geophysicist)
 5.8mb (42 obs.) 6.1msz (31 obs.)

TONGA ISLANDS (173)

Ms 6.0 (PAS), 5.9 (BRK).
 Mo=4.0×10¹⁸ Nm (PPT). Depth
 from broadband displacement
 seismograms.

FAULT PLANE SOLUTION: P-Waves
 NP1:Strike=40 Dip=72 Slip= 23
 NP2: 303 68 161
 Principal Axes:

T P1g=29 Azm=262
 P 3 171

Comment: The focal mechanism is
 poorly controlled and
 corresponds to strike-slip
 faulting with a moderate
 reverse component. The
 preferred fault plane is not
 determined.

RADIATED ENERGY
 No. of sta: 9 Focal mech. M
 Energy 9.4±3.1×10¹² Nm

MOMENT TENSOR SOLUTION
 Dep 4 No. of sta: 15
 Moment Tensor: Scale 10¹⁸ Nm
 Mrr= 1.78 Mtt=-3.89
 Mff= 2.10 Mrt= 0.72
 Mrf= 2.03 Mtf=-0.11

Principal axes:
 T Vol= 4.00 P1g=43 Azm=274
 N 0.00 46 77
 P -4.00 8 176

Best Double Couple:Mo=4.0×10¹⁸
 NP1:Strike=305 Dip=54 Slip= 152
 NP2: 53 68 39
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 12S, 32C
 Centroid Location:
 Origin Time 14:41:55.1 0.3

Lat 14.98S 0.04 Lon 173.14W 0.03
 Dep 15.0 BDY Half-duration 3.0
 Moment Tensor: Scale 10¹⁸ Nm
 Mrr= 0.90 0.03 Mtt= 0.17 0.04
 Mff=-1.07 0.05 Mrt= 0.27 0.06
 Mrf= 2.21 0.09 Mtf= 0.37 0.02
 Principal Axes:
 T Vol= 2.41 P1g=55 Azm=289
 N 0.10 11 183
 P -2.51 33 86
 Best Double Couple:Mo=2.5×10¹⁸
 NP1:Strike=140 Dip=16 Slip= 46
 NP2: 5 79 101

AFI 2.01 40 ePd 42 08.39 -8.3X
 MBU 7.98 258 ePd 43 49.10 8.0X
 VUN 8.45 251 iPd 43 55.10 7.4X
 SVA 8.49 251 ePd 43 56.90 8.7X
 SGE 8.85 255 eP 44 01.60 8.4X
 RAR 13.90 116 P 44 55.00 -6.5X
 S 47 37.00
 PVC 17.94 260 iP 46 01.00 7.5X
 DZM 20.43 248 iPd 46 21.40 -1.1
 AFR 22.47 99 iP 46 42.60 -0.4
 1.3s 220.00nm 5.5mb
 PAE 22.66 99 iP 46 44.40 -0.5
 1.3s 440.00nm 5.8mb
 PPT 22.66 99 iP 46 44.60 -0.4
 1.3s 660.00nm 6.0mb
 PPN 22.80 98 iP 46 45.70 -0.6
 TVO 22.98 99 iP 46 47.80 -0.3
 PMO 24.34 92 iP 47 00.40 -0.8
 1.3s 770.00nm 6.2mb
 NOZ 24.35 197 P 47 04.20 3.0X
 VAH 24.57 93 iP 47 02.20 -1.3
 1.3s 330.00nm 5.8mb
 TPT 24.60 92 iP 47 02.60 -1.2
 1.3s 990.00nm 6.3mb
 RUV 24.82 93 iP 47 04.50 -1.4
 1.3s 440.00nm 6.0mb
 MNG 26.96 199 P 47 25.40 -0.3
 HNR 26.96 280 eP 47 25.00 -0.9
 eS 52 07.00
 SVO 27.16 280 P 47 25.00 -2.7
 SNZO 27.84 200 P 47 33.00 -0.6
 eS 52 24.00
 BRS 33.79 244 iPd 48 25.40 -1.1
 COO 35.37 239 eP 48 38.00 -2.1
 RAB 35.93 285 eP 48 42.50 -2.4
 RMO 37.12 246 eP 48 55.00 0.1
 CTA 38.89 257 iPc+ 49 08.30 -1.5
 1.9s 131.58nm 5.3mb
 iS 54 29.00
 CNB 38.93 232 eP 49 10.00 0.0
 CAN 39.21 233 eP 49 11.80 -0.5
 BWA 39.36 234 eP 49 11.00 -2.6
 CMS 40.63 240 eP 49 23.00 -1.1
 TOO 42.64 231 eP 49 41.00 0.5
 BFD 44.74 232 eP 50 00.00 2.5
 QIS 45.13 256 iPd 49 59.50 -1.3
 ADE 47.21 237 iPd- 50 16.60 -0.6
 1.0s 34.00nm 5.4mb
 WB5 50.07 257 eP 50 37.00 -2.5
 WRA 50.09 257 P 50 37.00 -2.6
 0.5s 31.70nm 5.5mb
 ASPA 50.35 252 iPd 50 39.20 -2.4
 1.0s 98.40nm 5.7mb
 Z 20s 32.00um 6.3msz
 GUA 50.53 303 eP 50 30.20 -12.8X
 e 50 42.70 45kmX
 WARB 56.88 249 eP 51 28.00 -1.9
 DRV 59.63 200 eP 51 50.00 1.6
 SBA 63.21 185 iPd 52 15.80 3.5X
 DAV 64.72 286 eP 52 22.00 -1.2
 SMY 68.80 352 P 53 00.00 11.7X
 Z 20s 16.00um 6.3msz
 MAT 69.16 320 iPc 52 50.30 -0.6
 1.5s 186.11nm 6.0mb
 Z 20s 10.64um 6.1msz
 eS 01 50.00
 KUSJ 69.93 328 eP 52 55.10 -0.3
 SYP 70.84 44 eP 53 01.00 -0.4
 PRS 70.98 42 eP 53 01.40 -0.6
 BCH 71.15 44 eP 53 04.10 0.9
 epP 53 11.90 25kmX
 SAO 71.20 42 eP 53 02.50 -0.8
 PRI 71.33 43 ePc 53 05.80 1.5

			i	54	53.50	
IPM	87.22	275	ePc	54	32.10	1.5
HIA	87.41	323	iPc	54	31.24	0.5
			epPd	54	36.37	16kmX
			ePP	57	53.42	
TIY	87.50	310	Pc	54	33.00	1.5
	2.0s	400.00nm				6.4mb
Z	24s	4.10um				5.8MsZx
N	20s	4.00um				
E	19s	2.10um				
MAW	87.82	199	iPd	54	34.00	2.3
	1.0s	57.00nm				5.8mb
INK	88.26	14	eP	54	33.50	-0.9
	1.3s	65.00nm				5.8mb
Gya	88.31	298	P	54	36.40	0.7
	6.0s	1200.00nm				6.4mb X
XAN	88.89	306	S	05	10.00	
	1.6s	90.00nm				5.8mb
N	21s	4.10um				
E	18s	1.90um				
HHC	89.27	313	Pc	54	41.50	1.6
	1.6s	300.00nm				6.3mb
Z	28s	3.70um				5.7MsZx
		PP		58	10.00	
		SKS		05	08.00	
YKA	90.04	23	eP	54	40.90	-2.0
	1.1s	11.70nm				5.0mb
BTO	90.28	312	iPc	54	46.00	1.3
N	18s	1.50um				
E	18s	1.60um				
LNV	90.88	126	ePc	54	53.00	5.5X
KMI	91.30	296	P+	54	50.00	0.2
TACH	91.35	125	eP	54	51.50	1.7
CHCH	91.48	126	eP	54	55.00	4.6X
PEL	91.72	125	iPc	54	57.50	6.0X
CD2	92.07	301	eP	54	58.00	4.9X
Z	20s	4.60um				5.9MsZ
		PP		58	34.00	
		SKS		05	25.00	
		SS		06	05.00	
OLY	92.23	54	ePc	54	53.90	0.3
		epP		55	04.10	32kmX
NNA	92.78	103	eP	55	04.00	7.4X
	1.2s	20.31nm				5.4mb
Z	18s	0.86um				5.2MsZ
CCM	93.15	52	ePc	54	54.93	-2.9
		esP		55	01.23	
		ePP		58	34.00	
LZH	93.48	306	eP	54	59.50	-0.1
	2.0s	110.00nm				5.9mb
Z	33s	4.90um				5.7MsZx
E	18s	2.27um				-
		PP		55	07.00	
		PP		58	50.00	
		SKS		05	31.00	
		SS		06	18.00	
		SS		12	24.00	
FVM	93.75	52	eP	55	01.10	0.5
	1.2s	44.12nm				5.7mb
		epP		55	10.00	28kmX
ELC	94.47	53	P	55	03.50	-0.4
MBC	96.94	11	eP	55	14.00	-0.3
	1.6s	24.00nm				5.5mb
GTA	97.43	309	eP	55	18.00	0.5
	2.0s	90.00nm				6.0mb
Z	20s	7.50um				6.2MsZ
E	20s	6.20um				
		PP		59	12.00	
		SKS		05	56.00	
		SS		13	16.00	
LPB	99.48	110	P	55	32.00	4.4X
		LR		27	52.00	
CNCB	99.50	110	P	55	33.00	5.1X
ZOBO	99.55	110	P	55	32.00	3.9X
	1.2s	6.08nm				5.0mb
		SKS		06	08.00	
		LR		28	14.00	
BOG	99.93	88				

MAIO	128.99	304	iPKPd	00	53.20	0.9	BZS	147.48	341	ePKP	01	26.00	0.7	N	20s	2.47um			
			e	03	01.00		FEL	147.66	359	PKP	01	26.10	0.3	E	20s	2.80um			
BLF	131.93	203	ePKP	00	57.00	-1.2	MOF	147.70	360	PKP	01	25.50	-0.3			iPP	05	16.00	
BUL	138.67	212	ePKP	01	06.00	-5.1X	BSF	147.72	0	PKP	01	25.94	0.1			i	11	53.00	
CLL	143.90	353	ePKP	01	16.00	-3.2X	HRT	147.91	326	iPKP	01	29.20	2.9X			LR	40	28.00	
	2.2s	61.00nm					WATA	147.98	354	iPKPc	01	29.00	2.7X	VAY	150.87	335	iPKP	01	36.50
Z	18s	2.00um			5.9msz				i	01	39.70				1.6s	119.00nm		5.8X	
		e		16	10.00		KBA	148.02	352	ePKP	01	27.00	0.6			i	01	44.60	
KRA	143.90	346	ePKPd	01	16.70	-2.6			i	01	28.00			IZM	150.94	326	iPKP	01	37.00
		e		01	27.30				i	01	38.90			BADA	150.95	301	PKP	01	32.00
BNS	144.59	360	iPKPc	01	18.80	-1.6	ITU	148.05	327	ePKP	01	28.00	1.6	PTO	151.10	25	ePKP	01	33.50
	1.6s	313.00nm					GBZT	148.05	327	ePKP	01	28.00	1.6	MME	151.18	354	PKP	01	37.60
Z	20s	3.40um			6.1msz		BBS	148.09	359	PKP	01	26.57	0.2	SFI	151.32	353	PKP	01	37.70
SPC	144.63	345	ePKP	01	17.00	-3.8X	SOTA	148.13	354	ePKP	01	28.00	1.5	PGD	151.38	353	PKP	01	38.00
MOX	144.70	355	iPKPd	01	19.50	-1.1			362.00nm				AOI	151.42	350	ePKP	01	35.85	
	1.8s	112.00nm							i	01	30.00		FIR	151.53	353	ePKP	01	38.00	
Z	20s	3.60um			6.1msz				i	01	40.60		ARV	151.58	351	PKPd	01	38.50	
N	20s	2.40um					LOR	148.19	4	ePKP	01	29.80	3.3X	CRE	151.59	352	PKP	01	43.00
E	20s	2.00um							2.0s	291.55nm			OHR	151.73	337	ePKP	01	32.00	
ENN	144.78	1	ePKP	01	19.50	-1.2	Z	20s	5.75um			6.4msz			1.8s	277.00nm			
	1.9s	286.00nm					AAE	148.22	262	ePKP	01	31.00	3.1X			i	01	38.10	
ARO	144.84	268	iPKP+	01	21.50	-0.5	CTT	148.32	328	iPKP	01	30.70	3.8X	BTH	151.77	11	PKP	01	17.50
AFIF	144.86	290	PKP	01	21.00	-0.8	IZI	148.36	326	ePKP	01	29.00	2.0			pPKP	01	26.00	
HOF	145.00	354	ePKP	01	20.40	-0.8	SSF	148.37	4	ePKP	01	30.50	3.8X	CIO	151.84	350	ePKP	01	35.16
PRU	145.01	351	PKPc	01	20.00	-1.1			237.35nm				SDI	153.17	348	PKP	01	51.00	
	2.0s	132.80nm					MFF	148.40	9	ePKP	01	30.10	3.3X	TOL	153.86	19	ePKP	01	35.00
Z	22s	4.70um			6.2msz				62.20nm							ePKP	01	57.00	
N	18s	1.70um					HRI	148.45	309	ePKP	01	31.50	4.1X			ePP	05	3	

11d 16h

5.0mb (19 obs.) 5.4Msz (6 obs.)
TONGA ISLANDS (173)

Mo=6.0*10**17 Nm (PPT).

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 13S, 29C

Centroid Location:

Origin Time 16:09:39.8 1.2

Lat 14.87S 0.16 Lon 173.04W 0.07

Dep 15.0 FIX Half-duration 2.2

Moment Tensor; Scale 10**17 Nm

Mrr= 2.11 0.14 Mtt= 0.27 0.23

Mff=-2.38 0.24 Mrt= 1.53 0.38

Mrf= 4.07 0.49 Mtr= 0.75 0.12

Principal Axes:

T Val= 5.11 Plg=55 Azm=305

N -0.32 16 191

P -4.79 31 92

Best Double Couple: Mo=4.9*10**17

NP1: Strike=141 Dip=20 Slip= 38

NP2: 15 78 106

AFI 1.91 40 P 09 52.00 -9.9X
SVA 8.58 250 eP 11 49.60 13.7X
PVC 18.02 260 iPc 13 45.20 4.5X
DZM 20.52 248 iPc 14 09.80 0.5
TVO 22.93 99 eP 14 26.00 -7.5X
1.2s 35.00nm 4.7mb
PUZ 23.88 197 eP 14 46.50 4.0X
PMO 24.28 92 eP 14 45.00 -1.5
1.2s 40.00nm 4.8mb
VAH 24.52 93 eP 14 47.00 -1.8
1.2s 30.00nm 4.7mb
WLZ 24.53 202 eP 14 51.70 2.9
TPT 24.55 92 eP 14 47.00 -2.1
1.2s 55.00nm 5.0mb
RUV 24.76 93 eP 14 49.00 -2.1
1.2s 40.00nm 4.9mb
MNG 27.06 199 eP 15 12.80 0.4
LTZ 30.08 202 eP 15 38.70 -0.9
PMG 39.27 274 eP 16 58.00 -0.7
CMS 40.73 239 eP 17 08.00 -2.5
WB5 50.15 257 eP 18 23.00 -2.7
WRA 50.18 257 P 18 23.00 -2.9
1.0s 16.00nm 5.0mb
ASPA 50.44 252 iPd 18 25.50 -2.4
1.2s 43.90nm 5.3mb
Z 20s 7.30um 5.7Msz
WARB 56.97 249 eP 19 13.50 -2.6
MAT 69.13 320 eP 20 35.00 -1.3
1.3s 53.85nm 5.5mb
Z 20s 2.48um 5.4Msz
MWC 71.88 46 eP 20 51.00 -2.2
PLM 72.23 47 eP 20 57.00 1.7
SBB 72.29 45 eP 20 57.00 1.5
CLC 73.07 44 eP 21 01.00 1.0
TPC 73.21 47 eP 21 01.00 0.2
TNP 74.59 43 P 21 10.00 1.0
1.0s 8.33nm 4.7mb
KDC 74.81 11 P 21 08.50 -1.0
MSU 78.17 44 P 21 30.50 1.4
PMR 79.03 11 eP 21 31.80 -1.2
1.6s 69.90nm 5.4mb
TTA 79.18 8 eP 21 33.80 -0.1
1.1s 37.50nm 5.3mb
PNT 79.81 32 eP 21 41.00 3.5X
0.7s 9.00nm 4.9mb
ANM 79.91 3 e(P) 21 37.30 -0.3
TOA 80.08 12 eP 21 37.50 -1.3
ALO 80.52 50 eP 21 42.00 0.1
1.6s 16.67nm 4.8mb
Z 18s 1.03um 5.2Msz
ANMO 80.53 50 P 21 43.00 1.1
LRM 81.79 38 eP 21 48.60 0.3
BW06 82.03 42 P 21 48.50 -1.1
FBA 82.31 11 ePc 21 49.30 -1.0
1.0s 53.00nm 5.5mb
IMA 82.49 8 eP 21 50.70 -0.7
1.3s 16.80nm 4.9mb
GOL 83.39 46 P 21 57.00 0.2
1.2s 12.30nm 4.9mb
SES 84.99 35 eP 22 04.00 -0.3
BJI 85.69 313 eP 22 09.00 1.1
1.2s 58.00nm 5.7mb
ePP 25 33.00

eSKS 32 38.00
eS 32 50.00
RSSD 86.21 42 P 22 08.00 -2.7
MAW 87.93 199 iPd 22 19.80 1.4
INK 88.16 14 eP 22 18.50 -0.8
YKA 89.94 23 eP 22 26.30 -1.6
1.1s 4.80nm 4.7mb
FFC 91.89 33 eP 22 36.00 -1.0
1.5s 35.00nm 5.6mb
CHG 93.02 289 eP 22 51.90 8.9X
MAIO 128.99 304 ePKP 28 39.00 1.4
CLL 143.82 354 e(PKP) 29 13.00 8.6X
KRA 143.83 346 ePKP 29 09.30 4.8X
MOX 144.62 355 ePKP 29 05.00 -0.8
1.8s 46.00nm
PRU 144.93 351 ePKP 29 05.50 -0.8
BMR 145.00 340 ePKPd 29 07.00 0.5
KAS 145.23 323 iPKPc 29 08.00 1.6
VRI 145.36 335 ePKP 29 08.00 0.8
ABH 145.58 359 ePKP 29 07.00 -0.5
GRF 145.60 355 ePKPc 29 07.50 0.0
Z 20s 0.50um 5.3Msz
KHC 145.90 352 iPKPc 29 08.60 0.5
1.2s 24.00nm
MLR 145.98 336 ePKPc 29 10.00 1.5
ISR 146.03 335 ePKP 29 10.00 1.5
NAI 146.16 243 iPKPd 29 12.60 2.8
ZST 146.21 348 ePKP 29 10.40 1.8
VKA 146.30 349 ePKP 29 04.00 -4.7X
i 29 16.30
SRO 146.31 346 ePKP 29 09.90 1.2
CMP 146.52 337 ePKPc 29 12.00 2.8
LPF 146.77 10 ePKP 29 10.80 1.4
1.3s 57.75nm
BBTK 146.80 322 ePKP 29 22.00 12.1X
CDF 147.05 360 ePKP 29 12.10 2.1
1.2s 29.75nm
BHG 147.37 353 ePKP 29 13.60 3.1X
1.4s 61.00nm
BZS 147.42 341 ePKP 29 14.00 3.4X
HAU 147.46 1 ePKP 29 13.00 2.4
1.2s 35.70nm
Z 20s 0.63um 5.4Msz
BSF 147.63 0 ePKP 29 13.20 2.2
1.2s 17.85nm
SOTA 148.05 355 i(PKP) 29 12.10 0.4
2.5s 93.70nm
i 29 17.70
LOR 148.09 4 ePKP 29 16.90 5.3X
1.3s 36.10nm
Z 20s 1.05um 5.6Msz
SSF 148.28 4 ePKP 29 17.40 5.5X
1.2s 26.80nm
LBF 148.38 4 ePKP 29 17.20 5.1X
1.2s 19.35nm
HRI 148.44 310 ePKP 29 17.00 4.3X
FVI 148.49 352 PKP 29 20.00 7.8X
AVF 148.53 5 ePKP 29 18.50 6.2X
1.2s 20.85nm
SMF 148.71 4 ePKP 29 19.10 6.5X
1.4s 39.20nm
BGF 148.72 5 ePKP 29 18.20 5.5X
1.6s 55.95nm
LJU 148.77 350 e(PKP) 29 20.00 7.3X
LSF 148.88 7 ePKP 29 21.10 8.2X
1.2s 44.65nm
TCF 148.92 6 ePKP 29 21.80 8.8X
1.2s 20.85nm
MAF 149.03 6 ePKP 29 21.60 8.4X
1.2s 29.75nm
MML 149.07 308 iPKPc 29 18.60 4.9X
CEY 149.08 350 e(PKP) 29 21.50 8.2X
VBY 149.16 349 e(PKP) 29 15.00 1.7
CTI 149.17 354 PKP 29 17.00 3.5X
TRI 149.22 351 PKP 29 17.20 3.8X
VAI 149.56 357 PKP 29 22.00 8.1X
MDI 149.60 356 PKP 29 23.00 9.1X
KHL 149.69 323 ePKP 29 19.00 4.5X
LPG 149.97 0 ePKP 29 20.70 5.7X
1.6s 34.20nm
PRNI 150.27 305 iPKPc 29 20.90 5.4X
BNI 150.41 0 PKP 29 28.70 13.3X
SFI 151.24 353 PKP 29 23.00 6.5X
ARV 151.50 351 PKP 29 25.00 8.0X
OHR 151.68 338 e(PKP) 29 20.80 3.4X
S.D. = 1.6 an 62 of 100 obs.

* DEC 11, 1990 16h 14m 31.89 ± 0.87s
30.917 N ± 12.2km 98.460 E ± 8.2km
DEPTH = 33.0km (normal)

TIBET (306)

LZH 6.84 40 eP 16 13.00 0.3
KMI 6.98 146 eP 16 13.00 -0.5
SHL 7.88 229 eP 16 28.50 1.3
eS 18 05.00
GUN 11.37 258 P 17 16.20 0.8
0.4s 13.00nm 5.5mb
PKI 11.87 257 P 17 22.60 0.4
0.4s 18.00nm 5.6mb
KKN 11.91 258 P 17 22.20 -0.4
0.4s 14.00nm 5.5mb
DMN 12.12 258 P 17 25.20 -0.2
GKN 12.39 260 P 17 27.20 -1.8
S.D. = 1.1 on 8 of 8 obs.

DEC 11, 1990 16h 45m 13.78 ± 0.16s

45.045 N ± 1.4km 7.362 E ± 1.9km

DEPTH = 17.6 ± 2.2 km

NORTHERN ITALY (545)

ML 3.0 (LDG), 3.0 (GEN).

RSP 0.13 325 Pc 45 18.31 0.4
BHB 0.21 199 Pc 45 19.31 0.3
S 45 37.09
RRL 0.43 253 Pc 45 22.59 -0.1
S 45 27.67
LSD 0.44 341 Pd 45 22.92 0.0
S 45 28.29
BNI 0.49 271 Pc 45 23.30 -0.3
eSg 45 30.00
PZZ 0.57 199 Pd 45 24.35 -0.7
S 45 32.27
LPG 0.63 317 Pg 45 25.90 -0.2
Sg 45 33.60
ORX 0.73 36 Pc 45 27.14 -0.6
S 45 35.36
STV 0.80 182 Pc 45 27.74 -1.2
S 45 37.07
ENR 0.82 177 Pc 45 28.11 -1.1
S 45 37.09
ROB 0.83 154 Pc 45 29.61 0.1
S 45 40.94
CKI 0.90 133 Pc 45 31.20 0.6
PCP 0.98 120 Pc 45 32.74 0.8
S 45 45.49
FIN 1.03 144 Pc 45 33.27 0.4
S 45 46.73
TOUF 1.03 185 Pn 45 32.80 -0.2
Sg 45 56.50
DIX 1.04 2 ePd 45 33.30 0.2
AUTN 1.05 177 Pn 45 33.14 -0.2
Sg 45 58.19
SAOF 1.07 172 Pn 45 33.32 -0.1
EMS 1.07 344 ePc 45 34.00 0.4
MMK 1.09 23 ePd 45 34.20 0.2
AURF 1.16 181 Pn 45 34.71 -0.4
SBF 1.18 177 Pn 45 34.50 -1.0
Sg 45 51.10
IMI 1.20 161 P 45 35.26 -0.4
VAI 1.29 50 P 45 37.00 0.1
iSn 45 52.40
REVF 1.30 180 Pn 45 37.54 0.4
CALN 1.34 195 Pn 45 37.57 -0.1
TMA 1.50 44 ePc 45 39.80 -0.3
BOB 1.51 100 P 45 40.00 -0.1
FRF 1.57 199 Pg 45 42.30 1.4
Sn 46 01.00
Sg 46 04.80
LRG 1.75 205 Pn 45 43.40 0.0
Pg 45 45.60
Sg 46 09.80
CDR 1.78 220 e(Pn) 45 45.20 1.2
e 46 46.90
e 46 07.90
MDI 1.81 65 P 45 44.00 -0.3
eSn 46 06.00
LMR 1.82 200 Pg 45 46.10 1.6
Sg 46 10.70
VDL 2.06 45 ePd 45 48.60 0.3
PGF 2.76 154 Pn 45 57.99 -0.2
BSF 2.82 352 Pn 45 59.00 0.1
Sg 46 42.50

SLE 2.83 16 ePc 45 59.10 0.1
 SMF 2.94 304 Pn 46 00.90 0.4
 HAU 3.04 347 Pn 46 01.90 -0.1
 LBF 3.05 311 Pn 46 02.40 0.2
 LOR 3.30 314 Pn 46 05.40 -0.2
 AVF 3.30 303 Pn 46 05.80 0.2
 SSF 3.36 308 Pn 46 06.50 0.0
 CDF 3.37 359 Pn 46 06.00 -0.7
 Sg 46 49.00
 BGF 3.50 297 Pn 46 08.30 -0.2
 Sg 47 04.60
 MAF 3.56 291 Pn 46 09.10 -0.3
 Sg 47 06.50
 CAF 3.76 270 Pn 46 12.60 0.4
 TCF 3.82 291 Pn 46 12.80 -0.3
 RJF 4.14 276 Pn 46 17.90 0.3
 LSF 4.26 288 Pn 46 19.10 -0.3
 MFF 5.47 289 Pn 46 36.00 -0.5
 S.D. = 0.6 on 51 of 51 obs.

% DEC 11, 1990 17h 28m 26.21±0.68s
 42.696 N ± 4.7km 18.704 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 ML 2.3 (TTG).

BRY 0.24 330 iPg 28 31.80 0.5
 iSg 28 36.10
 NKY 0.25 62 iPg 28 32.00 0.5
 iSg 28 37.00
 HCY 0.29 212 iPg 28 32.30 0.0
 iSg 28 37.20
 BDV 0.42 167 iPg 28 35.00 0.2
 iSg 28 42.00
 TTG 0.49 123 iPg 28 36.60 0.5
 iSg 28 44.00
 PLE 0.81 38 iPg 28 40.90 -1.1
 iSg 28 54.70
 ULC 0.84 151 ePg 28 41.50 -0.9
 eSg 28 55.60
 IVA 0.90 78 iPg 28 43.10 -0.3
 iSg 28 59.40
 PVY 0.94 96 iPg 28 45.00 0.7
 iSg 29 01.20
 S.D. = 0.7 on 9 of 9 obs.

* DEC 11, 1990 18h 22m 27.29±1.28s
 14.922 N ± 13.4km 94.145 W ± 8.3km
 DEPTH = 30.2 ± 9.5 km
 4.5mb (3 obs.)
 OFF COAST OF CHIAPAS, MEXICO (68)

TPX 1.82 90 iP 22 57.50 0.4
 iS 23 24.00
 PBJ 1.94 321 iP 22 57.50 -1.2
 iS 23 22.00
 SCX 2.32 39 eP 23 10.00 5.9X
 iS 23 38.50
 OXX 3.28 311 iP 23 19.00 1.0
 (S) 24 10.00
 VHO 3.39 313 (P) 23 18.00 -1.6
 PIO 4.11 291 iP 23 27.00 -2.6
 IISM 5.09 323 (P) 23 48.50 5.0X
 LVMM 5.13 336 eP 23 43.75 -0.3
 IIT 5.70 316 (P) 23 57.00 4.6X
 ACX 5.83 290 eP 23 54.50 0.5
 PPM 5.95 314 eP 23 58.50 2.4
 III 6.15 305 eP 23 59.00 0.3
 TPM 6.20 311 eP 24 04.50 5.1X
 iS 25 18.50
 COLM 10.06 296 iP 24 52.50 -0.5
 OLY 20.63 6 e(P) 27 05.30 -1.6
 TKL 22.65 22 e(P) 27 26.70 -0.5
 ANMO 22.81 333 P 27 30.00 1.0
 GOL 26.58 340 P 28 04.70 -0.2
 RSSD 30.30 346 P 28 38.00 -0.4
 LRM 34.44 337 eP 29 16.10 1.5
 FFC 40.18 353 eP 30 04.00 1.6
 0.5s 3.00nm 4.3mb
 ZOBO 40.26 139 P 30 05.00 0.9
 YKA 49.67 348 eP 31 16.50 -1.6
 0.7s 2.70nm 4.4mb
 FRB 51.91 14 eP 31 34.00 -1.0
 SOB1 57.97 111 eP 32 17.70 -2.1
 INK 58.98 344 eP 32 25.50 -0.6

NB2 84.32 28 P 34 58.70 1.2
 1.4s 19.20nm 5.1mb
 LKO 86.21 81 P 35 07.92 0.2
 GBA 150.46 17 PKPd 42 17.70 4.9X
 0.8s 3.00nm
 S.D. = 1.4 on 24 of 29 obs.

* DEC 11, 1990 18h 34m 16.93±0.90s
 34.780 N ± 10.3km 33.096 E ± 9.7km
 DEPTH = 33.0km (normal)

CYPRUS (372)
 ML 3.5 (CSS). Felt (III) at
 Limassol.

CSS 0.27 47 ePd 34 24.00 -0.3
 eSg 34 30.30
 PPCY 0.63 280 eP 34 29.50 0.2
 FAM 0.78 74 eP 34 24.00 -7.4X
 HRI 2.66 124 eP 34 59.00 0.5
 SHMJ 3.02 132 P 35 12.00 8.4X
 DSI 3.73 148 eP 35 14.00 0.4
 MBH 5.22 163 eP 35 34.00 -0.8
 S.D. = 0.8 on 5 of 7 obs.

* DEC 11, 1990 18h 38m 56.05±1.13s
 27.667 N ± 10.3km 92.236 E ± 11.2km
 DEPTH = 33.0km (normal)
 4.3mb (2 obs.)
 INDIA-CHINA BORDER REGION (313)

SHL 2.12 189 iP 39 30.00 0.0
 0.7s 13.70nm
 GUN 5.64 274 P 40 20.40 0.3
 PKI 6.06 271 P 40 25.30 -0.7
 0.4s 14.00nm 5.0mb X
 KKN 6.17 273 P 40 27.50 0.1
 DMN 6.32 271 P 40 29.70 0.0
 GKN 6.74 275 P 40 35.70 0.3
 HFS 60.79 326 eP 49 06.50 -0.3
 0.4s 1.40nm 4.4mb
 Z 16s 0.18um 4.3msz X
 LR 09 05.00
 NB2 61.91 327 P 49 14.80 0.3
 0.6s 1.30nm 4.2mb
 S.D. = 0.4 on 8 of 8 obs.

* DEC 11, 1990 18h 55m 35.46±0.81s
 14.885 S ± 20.9km 172.802 W ± 12.8km
 DEPTH = 33.0km (normal)
 4.6mb (6 obs.) 4.5msz (1 obs.)
 SAMOA ISLANDS (170)

AFI 1.39 46 P 55 57.00 -1.8
 S 56 16.00
 DZM 20.93 247 iPc 00 16.50 -1.5
 PMO 24.06 94 eP 00 50.00 1.2
 1.0s 25.00nm 4.7mb
 TPT 24.33 94 eP 00 51.00 -0.5
 1.0s 25.00nm 4.7mb
 RUV 24.55 94 eP 00 53.00 -0.6
 1.0s 10.00nm 4.3mb
 WRA 50.52 256 P 04 37.00 4.0X
 0.7s 3.80nm 4.5mb
 ASPA 50.82 251 eP 04 27.20 -8.0X
 1.1s 14.70nm 4.9mb
 Z 21s 0.50um 4.5msz
 FBA 81.79 10 eP 07 53.20 1.2
 YKA 89.40 23 eP 08 30.80 1.0
 0.9s 1.00nm 4.1mb
 GRF 145.13 355 e(PKP) 15 11.00 -0.2
 KHC 145.45 353 PKP 15 12.90 1.1
 15 17.30
 MLR 145.64 336 ePKP 15 18.00 5.7X
 e 17 45.00
 ZST 145.79 348 ePKP 15 18.60 6.3X
 S.D. = 1.4 on 9 of 13 obs.

? DEC 11, 1990 19h 34m 35.39±2.11s
 31.282 S ± 19.4km 69.205 W ± 25.8km
 DEPTH = 33.0km (normal)
 SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 0.63 94 iPc 34 48.20 0.3
 RTCV 0.81 136 ePd 34 50.60 0.2
 CFA 0.89 112 iPd 34 51.10 -0.4
 eS 35 05.00

RTRS 1.13 349 iPd 34 54.90 0.0
 eS 35 08.20
 S.D. = 0.5 on 4 of 4 obs.

% DEC 11, 1990 20h 04m 19.94±1.40s
 40.679 N ± 6.6km 29.659 E ± 13.4km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.2 (ISK).

HRT 0.14 3 iPg 04 23.40 0.1
 GBZT 0.20 304 ePg 04 24.00 -0.3
 YLV 0.24 243 iPg 04 24.60 -0.6
 IZI 0.37 203 ePg 04 27.10 -0.5
 eSg 04 32.10
 KCT 1.08 247 ePn 04 41.10 0.8
 DST 1.33 217 ePn 04 45.00 0.5
 S.D. = 0.7 on 6 of 6 obs.

% DEC 11, 1990 20h 20m 10.74±0.50s
 40.438 N ± 6.2km 29.182 E ± 4.4km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.5 (ISK).

YLV 0.19 48 iPg 20 15.10 0.0
 IZI 0.24 114 iPg 20 15.80 -0.2
 eSg 20 19.10
 GBZT 0.40 30 ePg 20 19.50 0.5
 iSg 20 25.50
 HRT 0.53 44 iPg 20 21.10 -0.4
 KCT 0.66 254 iPg 20 23.10 -0.8
 DST 0.93 207 ePn 20 29.10 0.5
 BNT 0.97 266 iPn 20 29.00 -0.1
 EDC 1.01 265 ePn 20 30.00 0.1
 KGT 1.43 271 iPn 20 37.10 0.3
 S.D. = 0.5 on 9 of 9 obs.

? DEC 11, 1990 20h 48m 22.33±1.19s
 21.261 S ± 13.0km 68.056 W ± 18.3km
 DEPTH = 130.0km (geophysicist)
 CHILE-BOLIVIA BORDER REGION (124)

ANT 3.27 221 eP 49 13.00 -0.1
 CCH 4.26 25 P 49 25.10 -1.6
 CNCB 4.43 1 iPc 49 29.50 0.3
 LPB 4.70 360 P 49 34.00 1.2
 ZOBO 4.97 359 P 49 36.00 -0.5
 SIV 8.44 53 P 50 24.00 0.8
 S.D. = 1.3 on 6 of 6 obs.

% DEC 11, 1990 21h 28m 23.17±2.15s
 38.661 N ± 13.5km 26.803 E ± 19.1km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)
 MD 3.0 (ISK).

IZM 0.45 126 iPg 28 32.20 -0.1
 iSg 28 40.20
 EZN 1.22 342 iPn 28 46.10 0.2
 DST 1.70 56 ePn 28 53.60 0.5
 KGT 1.83 12 iPn 28 54.60 -0.3
 EDC 1.87 26 ePn 28 56.00 0.5
 BNT 1.90 27 ePn 28 55.10 -0.8
 KCT 1.99 37 ePn 29 00.00 2.8X
 S.D. = 0.7 on 6 of 7 obs.

& DEC 11, 1990 21h 30m 58.22s
 61.700 N 146.628 W
 DEPTH = 30.4km
 SOUTHERN ALASKA (2)
 <AGS-P>.

KLU 0.40 121 iP 31 06.71 -0.5
 eS 31 13.72
 TOA 0.46 28 iP 31 07.49 -0.6
 eS 31 14.97
 VLZ 0.59 166 iP 31 08.76 -1.3
 eS 31 18.07
 TZL 0.67 58 iP 31 10.33 -1.0
 eS 31 19.63
 KNK 0.92 253 iP 31 14.05 -1.0
 SDG 0.97 31 eP 31 14.11 -1.7
 eS 31 26.80
 GH0 1.10 275 iP 31 15.95 -1.7
 eS 31 31.86
 PLRM 1.20 266 iP 31 17.75 -1.2

HUR	3.22	9	eP	47	59.22	1.8
HMT	3.30	78	eP	47	59.58	1.1
TZL	3.44	47	eP	48	00.59	0.2
TRF	3.66	3	eP	48	04.80	1.1
SDG	3.72	41	eP	48	04.21	-0.1
RND	3.72	13	iP	48	05.47	1.0
GLB	3.79	61	eP	48	04.37	-1.1
WAX	4.01	77	eP	48	07.27	-1.2
TTA	4.02	323	ePd	48	07.70	-1.0
MCK	4.03	12	eP	48	09.68	0.9
TGL	4.06	73	eP	48	07.91	-1.3
PAX	4.06	36	eP	48	09.29	0.0
THY	4.34	31	eP	48	13.37	0.3
BALM	4.35	70	eP	48	11.75	-1.5
BWN	4.42	7	eP	48	14.70	0.5
DDM	4.62	28	eP	48	18.20	1.2
WRH	4.84	14	eP	48	19.86	-0.3
NEA	4.85	9	eP	48	18.13	-2.1
HDA	4.95	20	eP	48	22.06	0.4
DOT	5.00	37	eP	48	22.02	-0.3
CCB	5.05	15	eP	48	22.61	-0.4
FBA	5.29	14	eP	48	26.40	-0.1
MDM	5.30	12	eP	48	26.30	-0.3
GLM	5.43	15	iP	48	28.37	0.0
BCPM	5.61	84	eP	48	30.74	-0.1
PNL	5.75	87	eP	48	32.18	-0.7
HQN	6.04	88	eP	48	35.79	-1.1
IMA	6.42	349	eP	48	41.60	-0.8
HYT	6.66	76	P	48	55.60	9.8X
DWY	6.83	47	P	48	46.20	-1.7
SDN	6.89	234	e(P)	48	50.60	1.9
ANM	8.32	311	eP	49	08.10	-0.5
INK	11.34	34	P	49	47.00	-2.7X
BRW	11.80	351	eP	49	52.20	-3.6X
MBC	19.77	22	eP	51	37.50	1.7

S.D. = 0.9 on 91 of 94 abs.

* DEC 11, 1990 21h 56m 51.73±1.28s
37.030 N ±11.4km 30.160 E ±12.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.6 (ISK).

ELL	0.35	216	ePn	56	59.50	0.6
BCK	0.55	38	iPn	57	03.50	0.6
KHL	1.39	339	ePn	57	18.30	1.1
CIN	1.75	290	eP	57	22.00	-0.3
ALT	2.02	359	ePn	57	27.70	1.4
IZM	2.67	302	ePn	57	34.20	-1.4
BBTK	3.47	35	eP	57	45.00	-2.0

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

* DEC 11, 1990 23h 00m 53.94s
59.851 N 150.846 W
DEPTH = 37.2km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

BRK	0.09	193	iP	01	00.07	-0.2
NNL	0.30	310	iP	01	02.51	0.5
CNPM	0.38	211	iP	01	02.22	-0.8

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

HOM	0.45	245	iP	01	03.53	-0.3
XLV	0.60	229	iP	01	04.66	-1.3

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

SLKM	0.73	25	iP	01	07.26	-0.6
SEW	0.75	70	iP	01	07.08	-0.9

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

NKA	0.92	348	eP	01	11.65	1.2
RDT	1.06	314	iP	01	11.91	-0.7

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

RED	1.12	301	eP	01	12.69	-0.8
REF	1.13	305	eP	01	12.74	-0.9

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

RSO	1.13	304	eP	01	13.02	-0.7
INE	1.13	282	iP	01	12.61	-1.1
RS2	1.14	304	eP	01	12.88	-0.9
RDN	1.17	306	eP	01	13.08	-1.1
OPT	1.22	262	iP	01	14.41	-0.4
NCT	1.26	305	eP	01	14.52	-1.0
AUE	1.38	250	iP	01	16.66	-0.3
AUP	1.40	251	eP	01	17.20	-0.2
AGU	1.40	251	iP	01	17.28	-0.2
AUH	1.41	251	iP	01	17.34	-0.2
AUI	1.41	250	iP	01	17.16	-0.3
SPU	1.46	336	eP	01	17.84	-0.4
SYI	1.48	213	iP	01	17.49	-0.9
PMS	1.54	24	iP	01	19.04	-0.3
CKL	1.54	332	iP	01	18.98	-0.5
CRP	1.56	336	eP	01	19.89	0.0
CGLM	1.57	339	eP	01	19.67	-0.2
BGL	1.61	332	eP	01	20.16	-0.3
SUA	1.62	2	eP	01	20.48	-0.2
NGC	1.69	338	eP	01	21.32	-0.3
PDB	1.69	269	eP	01	20.70	-0.9
CDD	1.70	238	eP	01	20.90	-0.9
PWA	1.87	14	eP	01	24.36	0.3
MCNL	1.90	251	eP	01	24.07	-0.5
PLRM	1.94	25	eP	01	24.10	-1.0
KNK	1.96	36	iP	01	24.32	-1.1
GHO	2.15	25	eP	01	27.11	-1.0
SKT	2.16	351	eP	01	28.28	0.0
VLZ	2.58	58	eP	01	32.36	-1.8
CUT	2.58	6	eP	01	35.64	1.5
KLU	2.93	54	eP	01	37.45	-1.9
TOA	3.21	43	eP	01	42.45	-0.8
TRF	3.62	4	eP	01	49.30	0.1
RND	3.69	14	eP	01	49.71	-0.4
SDG	3.71	41	eP	01	49.16	-1.2
GLB	3.81	62	eP	01	49.11	-2.7

47 obs. associated

? DEC 11, 1990 23h 02m 12.17±6.51s
18.896 S ±55.7km 70.983 W ±30.8km
DEPTH = 90.0km (geophysicist)
NEAR COAST OF NORTHERN CHILE (122)

ARE	2.47	349	iPc	02	51.60	0.0
CNCB	3.53	55	P	03	07.70	1.3
LPB	3.62	50	P	03	07.00	-0.5
ZOBO	3.78	47	iPc	03	09.20	-0.6
CCH	4.84	73	P	03	41.50	17.1X
SIV	9.89	75	P	04	33.20	-0.2

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

? DEC 11, 1990 23h 08m 58.01±1.29s
44.588 N ±33.7km 148.676 E ±21.6km
DEPTH = 33.0km (normal)
4.4mb (3 abs.)
KURIL ISLANDS (221)

KUSJ	3.23	244	iP+	09	46.30	-1.3
ASAJ	4.35	266	eP	10	05.10	1.6
HOOJ	4.50	243	eP	10	06.00	0.4
FBA	39.77	37	P	16	30.00	1.1
INK	45.12	31	eP	17	13.00	0.5
GUN	52.06	274	P	18	00.00	-7.2X
YKA	54.49	35	eP	18	23.40	-0.9
FFC	64.37	37	eP	19	32.50	0.0
LRM	64.97	50	eP	19	37.50	0.6
NB2	69.21	339	P	20	01.10	-2.0

S.D. = 1.3 on 9 of 10 abs.

DEC 11, 1990 23h 36m 38.37±0.79s
43.784 N ±7.5km 16.622 E ±8.6km
DEPTH = 5.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.6 (TTG).

HVAR	0.62	192	iPg	36	48.70	-2.0
BRY	1.66	122	ePn	37	08.50	0.2
VBY	1.98	331	iPnd	37	14.00	1.2
NKY	1.99	118	ePn	37	14.00	0.9
PTJ	2.17	348	e(Pn)	37	14.20	-1.5
ARV	2.69	265	P	37	24.00	0.9
TRI	2.80	314	P	37	30.00	5.3X
SDI	2.93	226	P	37	28.00	1.5
VOY	2.97	320	ePn	37	26.10	-1.0
ASS	2.97	257	P	37	27.00	-0.1
FVI	3.91	317	P	37	44.00	3.7X

S.D. = 1.5 on 9 of 11 abs.

? DEC 12, 1990 00h 19m 45.64±4.84s
16.592 N ±44.5km 97.193 W ±11.6km
DEPTH = 33.0km (normal)
OAXACA, MEXICO (60)

OXX	0.66	43	iPc	19	58.68	-0.1
IISM	2.39	356	iP	20	13.75	0.3
EVV	2.56	43	(P)	20	34.84	9.2X
IIT	2.64	336	eP	20	26.96	-0.1
III	2.80	310	iPd	20	29.51	0.2
PPM	2.81	331	iPc	20	29.42	-0.3
LVVM	3.21	13	(P)	20	43.38	8.5X

S.D. = 0.4 on 5 of 7 abs.

* DEC 12, 1990 01h 41m 17.10±1.10s
34.831 N ±12.7km 33.067 E ±10.7km
DEPTH = 33.0km (normal)
CYPRUS (372)

ML 3.5 (CSS). Felt at Limassol.

CSS	0.25	59	ePd	41	23.50	-0.8
PPCY	0.60	275	eP	41	29.50	0.4
FAM	0.79	78	eP	41	35.50	3.8X
HRI	2.71	124	eP	42	00.00	0.6
ZNT	3.06	147	eP	42	04.00	-0.3
SHMJ	3.07	132	P	42	06.50	2.0
DSI	3.79	149	eP	42	14.00	-0.5
PRNI	4.76	159	eP	42	27.00	-1.4

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

* DEC 12, 1990 02h 23m 51.00s
59.841 N 150.841 W
DEPTH = 39.7km
KENAI PENINSULA, ALASKA (14)
<AGS-P>.

BRK	0.08	196	iP	23	57.26	-0.3
NNL	0.31	312	iP	23	59.72	0.4
CNPM	0.37	213	iP	23	59.43	-0.7
HOM	0.45	246	iP	24	00.75	-0.2
XLV	0.59	229	eP	24	01.92	-1.1
SLKM	0.74	25	eP	24	04.49	-0.6
SEW	0.75	69	eP	24	04.23	-0.9
NKA	0.93	348	eP	24	09.05	1.4
RDT	1.07	314	iP	24	09.12	-0.7

RED	1.13	302	eS	24 23.47	-0.8	NCT	0.87	257	iP	28 49.26	-0.8	SEW	2.50	195	eP	37 59.51	-0.9
			eP	24 09.81					eS	29 01.65		GLM	2.50	8	eP	37 58.61	-1.9
REF	1.14	306	eS	24 24.69	-0.7	PMS	0.94	59	iP	28 50.73	-0.2	RAGM	2.72	140	eP	38 01.64	-2.0
			eP	24 10.10					eS	29 04.26		RDT	2.81	228	eP	38 03.47	-1.5
INE	1.14	282	iS	24 24.67	-1.1	BRLK	1.03	171	eP	28 51.58	-0.5	HMT	2.89	138	eP	38 03.53	-2.4
			iP	24 09.79					eS	29 05.51		RDN	2.98	230	eP	38 06.49	-0.8
RSO	1.14	304	iS	24 24.48	-0.7	SEW	1.11	127	eP	28 52.22	-0.9	TGL	3.11	122	eP	38 07.61	-1.5
			eP	24 10.22					eS	29 08.36		BALM	3.15	116	eP	38 07.22	-2.5
RS2	1.14	304	eP	24 25.44	-0.7	INE	1.16	233	iP	28 53.10	-1.0	WAX	3.29	127	eP	38 09.54	-2.2
			eS	24 10.32					iS	29 08.73		INE	3.41	226	eP	38 12.22	-1.3
RDN	1.17	306	eS	24 25.42	-1.0	SKT	1.22	353	eP	28 54.16	-0.6	46 obs. associated					
			eP	24 10.28					eS	29 10.81		DEC 12, 1990 03h 20m 43.73± 0.48s					
OPT	1.22	262	iS	24 25.54	-0.3	CNPM	1.25	180	eP	28 54.73	-0.5	47.852 N ± 2.3km 128.721 W ± 4.4km					
			iP	24 11.63					eS	29 11.66		DEPTH = 10.0km (geophysicist)					
NCT	1.27	306	eS	24 27.89	-0.9	PLRM	1.30	50	eP	28 55.46	-0.4	4.7mb (4 obs.)					
			eP	24 11.72					eS	29 12.44		OFF COAST OF WASHINGTON (26)					
AUE	1.38	251	eS	24 28.24	-0.4	KNK	1.49	63	eP	28 57.62	-0.9	ETB	2.10	43	P	21 20.55	1.2
AUP	1.40	251	eP	24 13.64	-0.2	GHO	1.49	47	eP	29 16.66	-1.0	EDB	2.28	27	P	21 22.52	0.5
			eS	24 14.24					eS	29 17.72		OZB	2.42	62	P	21 24.34	0.3
AGU	1.40	251	eP	24 33.22	-0.3	OPT	1.51	223	eP	28 58.48	-0.3	GDR	2.62	42	P	21 27.87	1.0
			eS	24 14.21		CUT	1.70	15	eP	29 01.10	-0.3	BTB	2.67	51	Pc	21 27.97	0.3
AUH	1.41	251	eS	24 33.61	-0.2	PDB	1.78	238	iP	29 01.16	-1.4	MGB	2.92	65	Pc	21 30.92	-0.2
			eP	24 14.34		AUE	1.78	218	eP	29 02.11	-0.5	ALB	2.95	60	P	21 31.58	0.2
AUI	1.41	250	eS	24 33.42	-0.1	AUP	1.80	219	eP	29 02.34	-0.5	PFB	2.95	74	P	21 30.71	-0.8
SYI	1.47	214	eP	24 14.40	-0.8	CDD	2.22	215	eP	29 08.17	-0.6	PHC	2.98	16	P	21 32.59	0.8
			eS	24 14.62		KLU	2.67	72	eP	29 12.97	-2.2	OOW	3.06	90	P	21 32.50	-0.5
SPU	1.47	336	eP	24 34.08	-0.5	TOA	2.77	59	eP	29 15.51	-1.1	CBB	3.11	44	P	21 34.96	1.3
			eS														

ZSP 10.97 152 eP 23 24.00 0.3
 BKS 11.04 152 eP 23 24.20 -0.5
 1.7s 471.00nm 6.6mb X
 eLR 26 12.00
 CMB 11.55 145 eP 23 31.40 -0.2
 KVN 11.69 135 eP 23 34.30 0.6
 MHC 11.72 151 eP 23 33.00 -1.0
 ARN 11.75 151 eP 23 33.80 -0.5
 SES 11.86 71 eP 23 51.00 15.2X
 BONR 12.48 139 eP 23 44.80 0.3
 FRI 12.72 145 ePc 23 47.30 0.0
 TNP 12.88 135 eP 23 50.00 0.3
 PRI 13.14 150 eP 23 52.70 -0.3
 ISA 14.36 144 eP 24 10.00 0.9
 BW06 14.40 104 eP 24 11.50 1.8
 1.3s 22.54nm 4.7mb
 DAU 14.56 114 eP 24 13.50 1.6
 MSU 15.23 122 eP 24 21.50 0.9
 SBB 15.47 144 eP 24 31.00 7.4X
 MWC 15.79 146 eP 24 34.00 6.2X
 RVR 16.26 144 eP 24 37.00 3.4X
 PEC 16.43 144 eP 24 35.00 -0.9
 YKA 16.68 23 eP 24 40.40 1.7X
 0.9s 3.20nm 3.5mb X
 TPC 16.70 141 eP 24 43.00 3.6X
 PLM 17.02 144 eP 24 43.00 -0.5
 BAR 17.69 145 eP 24 53.00 1.3
 FFC 18.01 58 eP 24 54.00 -1.5
 FFC 18.01 58 eP 24 57.00 1.5X
 1.0s 67.00nm 4.7mb
 INK 20.66 355 eP 25 26.00 0.3
 ANMO 21.01 120 P 25 29.10 -0.8
 ALO 21.01 120 eP 25 30.00 0.1
 1.2s 11.33nm 4.1mb
 TTA 21.39 325 eP 25 31.20 -2.2
 1.9s 90.28nm 4.8mb
 S.D. = 0.8 on 88 of 97 obs.

? DEC 12, 1990 03h 23m 03.78±3.33s
 15.117 N ±37.4km 96.053 W ±19.0km
 DEPTH = 33.0km (normal)
 3.7mb (1 obs.)

NEAR COAST OF OAXACA, MEXICO (66)

OXX 2.06 342 iP 23 36.00 -0.9
 iS 23 57.00
 EVV 3.39 11 (P) 23 51.50 -4.1X
 (S) 24 29.50
 SCX 3.66 63 iP 23 59.50 0.0
 iS 24 36.00
 IISM 4.05 342 iP 24 06.00 1.0
 (S) 24 56.84
 ACX 4.05 296 (P) 24 50.50 45.4X
 IIT 4.44 331 (P) 24 16.94 6.1X
 (S) 25 19.03
 III 4.60 315 (P) 24 29.00 15.9X
 PPM 4.63 328 iP 24 20.00 6.2X
 (S) 25 24.04
 YKA 49.11 349 eP 31 49.00 -0.8
 0.5s 0.40nm 3.7mb
 INK 58.29 345 eP 32 58.00 0.6
 S.D. = 1.2 on 5 of 10 obs.

DEC 12, 1990 03h 25m 51.23±0.14s
 27.115 N ±3.5km 126.403 E ±3.0km
 DEPTH = 158.4km (7 depth phases)
 5.4mb (84 obs.)

EAST CHINA SEA (234)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 11S, 20C

Centroid Location:

Origin Time 03:25:52.8 0.8

Lat 27.20N 0.08 Lon 126.12E 0.07

Dep 160.7 2.1 Half-duration 2.0

Moment Tensor: Scale 10¹⁶ Nm

Mrr=-8.82 0.74 Mtt=5.20 0.98

Mff=3.63 0.97 Mrt=-9.12 0.79

Mrf=-6.71 0.80 Mtf=1.78 1.15

Principal Axes:

T Vol=12.39 Plg=28 Azm=145

N 2.47 1 54

P -14.86 62 323

Best Double Couple: Ma=1.4*10¹⁷

NP1: Strike=237 Dip=17 Slip=-87

NP2: 54 73 -91

SSE 6.05 312 iPd 27 21.50 2.1
 1.0s 350.00nm 5.6mb
 Z 11s 1.80um 3.4MsZ
 QZH 7.35 255 P 27 38.00 1.0
 0.5s 100.00nm 5.5mb
 NJ2 8.21 309 Pc 27 50.20 1.8
 0.8s 500.00nm 6.1mb
 S 29 28.00
 WHN 11.11 291 Pc 28 28.50 1.9
 1.0s 200.00nm 5.7mb
 Z 14s 1.20um
 S 30 32.00
 BAG 11.94 208 ePc+ 28 37.10 -0.6
 1.2s 468.75nm 5.9mb
 TIA 12.02 321 Pd 28 40.50 2.0
 S 30 55.50
 QCP 13.37 203 eP 28 44.00 -11.9X
 MAT 13.74 44 eP 29 03.00 2.5
 1.2s 50.00nm 4.8mb
 eS 31 45.00
 SNY 14.86 352 iPd 29 17.00 2.5
 1.2s 800.00nm 5.9mb
 SP 29 57.00
 S 32 02.00
 BJI 15.44 329 Pd 29 24.00 2.3
 1.4s 520.00nm 5.7mb
 N 12s 0.96um
 ePcS 37 46.00
 eScS 41 11.00
 TIY 15.02 315 iPd 29 30.00 3.5X
 1.2s 1010.00nm 6.0mb
 SP 30 11.00
 XAN 16.55 299 Pd 29 36.50 1.0
 4.0s 1200.00nm 5.6mb X
 eS 32 39.00
 CN2 16.67 358 iPd 29 38.00 1.2
 1.0s 400.00nm 5.7mb
 SP 30 20.00
 S 32 42.00
 PcP 34 15.00
 ScP 37 35.00
 QIZ 17.22 246 eP 29 49.40 5.7X
 N 10s 0.40um
 eS 32 51.00
 GYA 17.64 272 P 29 49.00 0.3
 SP 30 39.00
 MDJ 17.65 8 eP 29 47.50 -1.1
 1.0s 400.00nm 5.7mb
 E 10s 0.80um
 S 33 03.00
 ScP 37 38.50
 PcS 37 50.00
 HHC 18.38 322 iPd 29 57.40 0.8
 1.2s 700.00nm 5.9mb
 Z 12s 1.40um 4.5MsZ
 N 11s 0.80um
 PP 30 05.00
 BTO 19.09 319 iPd 30 04.50 0.4
 N 11s 0.80um
 E 12s 0.50um
 DAV 19.93 182 eP 30 20.00 7.2X
 CD2 20.15 286 Pd 30 14.00 -1.0
 1.0s 300.00nm 5.7mb
 Z 16s 2.86um 4.7MsZ
 S 33 50.00
 LZH 21.16 301 iPd 30 25.50 0.4
 1.5s 330.00nm 5.6mb
 Z 16s 0.97um 4.3MsZ
 PP 30 58.00
 PcP 34 25.50
 SS 34 57.00
 ScP 37 49.50
 ScS 41 30.00
 KMI 21.33 270 iPd 30 28.00 1.0
 3.0s 320.00nm 5.2mb
 pP 31 00.00
 sP 31 18.00
 iS 34 14.00
 sS 35 15.00
 PJC 21.89 124 eP 30 33.20 1.0
 GUA 21.95 124 eP 30 33.20 0.4
 1.0s 1900.00nm 6.5mb X
 23.09 207 ePd 30 46.00 2.0
 1.1s 80.20nm 5.1mb
 e 31 16.80 155km
 GTA 25.29 306 iPd 31 04.00 -0.7
 PP 31 38.00

SP 31 54.00
 PcP 34 34.20
 S 35 16.00
 sS 36 12.00
 ScP 37 58.00
 PcS 38 13.40
 ScS 41 46.00
 PCT 26.36 247 iPd 31 15.70 1.3
 0.5s 1.10nm 3.8mb X
 CHG 26.56 258 ePd 31 16.60 0.4
 1.1s 28.48nm 4.8mb
 NST 26.92 250 eP 31 22.00 2.5
 NNT 28.86 245 iPd 31 39.20 2.2
 LSA 31.04 283 P 31 56.40 -0.3
 IPM 32.99 232 ePd 32 15.00 1.8
 1.0s 195.30nm 5.8mb
 KGM 33.35 225 eP 32 17.00 0.7
 WMO 35.29 308 iPd 32 31.70 -0.9
 1.5s 100.00nm 5.3mb
 PP 33 57.50
 PcP 35 00.30
 PcS 38 44.00
 GUN 35.84 281 P 32 37.20 -0.5
 PKI 36.30 280 P 32 40.40 -1.2
 KKN 36.38 281 P 32 41.30 -0.8
 DMN 36.56 281 P 32 42.80 -0.9
 GKN 36.91 281 P 32 45.80 -0.7
 HYB 45.09 268 eP 33 54.00 0.6
 1.0s 40.00nm 5.0mb
 WB5 47.35 170 eP 34 10.20 -0.8
 i 34 45.50 157km
 WRA 47.41 170 P 34 10.00 -1.4
 0.9s 49.50nm 5.1mb
 GBA 47.55 264 Pd 34 11.90 -0.8
 0.7s 22.00nm 4.9mb
 POO 48.90 272 iPd 34 23.50 0.4
 0.9s 47.06nm 5.2mb
 ADK 48.90 44 eP 34 21.00 -1.6
 1.4s 393.40nm 5.9mb
 KOD 48.98 260 eP 34 25.00 0.9
 OIS 49.09 164 iPd 34 23.50 -0.9
 i 34 59.60 159km
 CTA 50.71 156 iPd 34 36.10 -0.7
 1.2s 81.25nm 5.3mb
 ASPA 51.00 171 eP 35 13.70 166km
 0.9s 48.00nm 5.2mb
 Z 22s 0.30um 4.3MsZ
 iPP 35 12.90 158km
 iPPcP 35 51.30
 iS 41 41.90
 WARB 52.99 180 iPd 34 53.90 0.3
 0.4s 8.00nm 4.9mb
 ANM 56.52 29 ePd 35 18.20 -0.6
 MAIO 56.66 297 iPd 35 20.30 0.1
 1.1s 20.61nm 4.9mb
 e 36 14.00 240kmX
 eS 43 10.00
 RMQ 57.47 156 eP 35 25.00 -0.8
 FORR 57.66 178 eP 35 26.00 -1.0
 0.4s 13.00nm 5.2mb
 SDN 58.66 40 eP 35 31.30 -2.5
 e 36 21.20 220kmX
 BRS 59.83 153 iPd 35 40.90 -1.2
 i 38 53.90
 BRW 60.36 21 eP 35 44.90 -0.3
 TTA 60.61 31 eP 35 46.40 -0.7
 SVW 60.89 33 ePd 35 48.90 -0.1
 IMA 61.47 27 ePd 35 51.90 -1.1
 0.9s 55.20nm 5.5mb
 e 36 33.50 178kmX
 DZM 62.38 138 iPd 35 58.60 -0.8
 ADE 62.83 169 e(P) 36 01.60 -0.5
 KDC 62.83 37 eP 36 00.70 -1.2
 PMR 63.94 32 eP 36 07.60 -1.5
 1.2s 217.40nm 5.9mb
 FBA 64.03 28 iPd 36 08.20 -1.5
 BWA 64.66 160 eP 36 15.30 1.2
 TOA 65.23 31 iPd 36 17.40 -0.1
 CAN 65.67 160 eP 36 21.60 1.1
 TAB 66.45 302 eP 36 24.00 -1.7
 BBU 66.82 289 iPd 36 26.00 -2.0
 0.7s 121.00nm 5.8mb
 KEV 68.02 338 iPd 36 34.00 -0.8
 0.7s 17.40nm 5.0mb
 INK 68.72 23 iPd 36 38.60 -0.6
 0.9s 178.00nm 5.9mb

e 45 43.80
 e 45 55.50
 e 46 05.40
 PDCR 160.13 314 ePKP 45 33.60 0.6
 e 46 13.40
 ZOBO 162.73 54 PKPd 45 38.20 1.9
 1.1s 31.90nm
 i 46 20.00
 PS 50 15.00
 LR 00 44.00
 LPB 162.92 55 PKP 45 38.00 1.7
 1.1s 75.95nm
 i 46 26.00
 CNCB 163.19 55 PKPd 45 39.50 2.8
 i 46 28.80
 CCH 164.89 53 PKP 45 40.30 2.3
 i 46 35.80
 SIV 166.93 34 iPKPd 45 40.00 0.7
 i 46 23.20
 i 46 43.20
 JFO 169.21 298 ePKP 45 41.80 1.1
 S.D. = 1.1 on 258 of 267 obs.

DEC 12, 1990 03h 55m 16.81±0.45s
 23.793 N ± 7.6km 121.640 E ± 9.2km
 DEPTH = 10.0km (geophysicist)
 4.8mb (15 obs.)

TAIWAN (244)

ANP 1.39 356 iPd 55 43.10 0.8
 eS 55 57.50
 SSE 7.29 357 eP 57 04.00 -1.8
 pP 57 06.00
 sP 57 10.50
 S 58 21.00
 BJI 16.84 345 eP 59 16.50 2.3
 1.2s 16.00nm 4.0mb
 N 11s 0.86um
 MAT 19.11 45 eP 59 47.00 4.6X
 1.2s 20.31nm 4.2mb
 LZH 19.66 313 eP 59 48.50 -0.5
 2.0s 54.00nm 4.5mb
 Z 13s 1.84um 3.9mszx
 N 10s 0.86um
 E 10s 0.82um
 PP 00 08.00
 eS 03 30.00
 CHG 21.71 261 eP 00 11.90 1.8
 GUN 32.37 285 P 01 49.80 0.6
 0.7s 22.00nm 5.2mb
 PKI 32.79 284 P 01 52.40 -0.5
 KKN 32.90 285 P 01 53.40 -0.3
 1.0s 24.00nm 5.1mb
 DMN 33.06 284 P 01 53.80 -1.3
 GKN 33.47 285 P 01 58.00 -0.5
 1.0s 36.00nm 5.3mb
 PMG 41.36 140 iPd 03 06.40 1.6
 1.2s 62.50nm 5.2mb
 WB5 45.15 163 eP 03 34.50 -1.0
 WRA 45.20 163 P 03 35.00 -0.9
 0.9s 7.10nm 4.6mb
 ASPA 48.65 165 eP 04 02.70 -0.4
 1.3s 9.90nm 4.7mb
 MAIO 54.40 299 eP 04 42.00 -4.4X
 FBA 68.96 27 P 06 22.50 -1.4
 INK 73.43 22 eP 06 49.00 -1.7
 1.1s 41.00nm 5.4mb
 MBC 73.55 13 eP 06 50.50 -0.8
 1.0s 6.00nm 4.6mb
 HFS 78.11 331 eP 07 17.80 0.5
 0.5s 1.10nm 4.2mb
 NB2 78.76 332 P 07 20.40 -0.6
 0.9s 5.20nm 4.6mb
 YKA 83.17 23 eP 07 43.40 -0.7
 1.0s 15.20nm 5.1mb
 PNT 89.14 35 eP 08 15.00 1.2
 SES 92.71 31 eP 08 31.00 0.6
 FFC 93.32 24 eP 08 34.00 0.9
 1.0s 24.00nm 5.6mb
 TNP 97.32 43 P 08 53.00 1.1
 ZOBO 168.16 53 PKP 15 27.00 1.1
 e 16 29.00

S.D. = 1.2 on 25 of 27 obs.

? DEC 12, 1990 04h 54m 14.58±2.62s
 7.297 S ± 27.4km 128.566 E ± 64.9km
 DEPTH = 198.8 ± 41.4 km

5.2mb (1 obs.)
BANDA SEA (280)

MTN 6.07 156 eP 55 44.00 0.6
 0.4s 138.00nm 5.5mb X
 eS 56 48.00
 WB5 13.72 156 eP 57 20.80 -1.4
 eS 59 46.00
 QIS 16.97 142 eP 58 08.00 5.9X
 eS 01 05.00
 ASPA 17.06 163 eP 58 04.30 1.1
 0.5s 49.40nm 5.2mb
 iS 01 04.30
 WARB 18.87 185 eP 58 22.00 -0.2
 GUN 54.09 312 P 03 21.00 -0.6
 PKI 54.25 312 P 03 22.20 -0.5
 KKN 54.46 312 P 03 25.00 0.9
 DMN 54.49 311 P 03 24.90 0.5
 GKN 55.05 312 P 03 28.10 -0.2
 S.D. = 1.0 on 9 of 10 obs.

& DEC 12, 1990 05h 15m 07.10s
47.000 N 66.600 W

DEPTH = 5.0km
 NEW BRUNSWICK (451)
 <OTT-P>. mbLg 3.5 (OTT).

KLN 0.22 135 P 15 12.50 0.9
 CBM 1.04 267 iP 15 27.20 0.0
 GGN 1.89 185 P 15 39.60 -0.6
 EMM 2.35 196 eP 15 47.20 0.3
 MIM 2.44 225 eP 15 48.10 -0.2
 DAQ 3.29 289 P 15 59.00 -1.4
 BNH 4.05 235 eP 16 11.00 -0.1
 HBVT 5.24 242 eP 16 25.40 -2.6
 RSNY 6.06 249 eP 16 38.50 -1.1
 SCH 7.83 359 P 17 01.00 -3.3
 10 obs. associated

DEC 12, 1990 05h 37m 36.10±1.26s
 41.488 N ± 6.4km 24.047 E ± 11.2km
 DEPTH = 10-0km (geophysicist)
 GREECE-BULGARIA BORDER REGION (363)
 MD 2.7 (THE).

MMB 0.26 293 iPg 37 41.00 -0.6
 SRS 0.50 223 eP 37 47.68 1.3
 eS 37 53.68
 KKB 0.81 298 iPg 37 51.00 -0.9
 SOH 0.85 218 eP 37 52.36 -0.1
 KNT 0.92 250 eP 37 54.36 0.6
 PGB 1.06 5 iPc 37 57.00 0.8
 OUR 1.15 182 eP 37 56.52 -1.1
 S.D. = 1.2 on 7 of 7 obs.

DEC 12, 1990 05h 44m 10.26±1.15s
 12.236 N ± 7.9km 93.812 E ± 5.2km
 DEPTH = 55.3 ± 9.7 km
 4.8mb (17 obs.) 4.3msz (3 obs.)
 ANDAMAN ISLANDS REGION (703)

NNT 5.80 86 iPc 45 35.00 -0.8
 NST 7.02 60 eP 45 52.50 -0.4
 BDT 7.07 45 eP 45 52.90 -0.7
 0.6s 77.30nm 5.6mb
 PCT 7.78 71 iPd 46 02.30 -1.1
 0.4s 5.90nm 4.7mb
 CHG 8.20 36 ePc 46 10.90 1.7
 1.0s 82.25nm 5.5mb
 IPM 10.43 136 ePc 46 43.90 4.1X
 KGM 13.85 136 eP 47 32.00 6.5X
 KMI 15.35 32 Pd 47 48.50 3.4X
 Z 12s 2.20um
 SP 47 58.50
 HYB 15.62 291 eP 47 53.50 5.0X
 1.0s 60.00nm 4.7mb
 eS 50 41.00
 GBA 16.02 277 P 47 52.00 -1.5
 KOD 16.16 265 eP 47 58.20 2.6
 QIZ 16.84 64 eP 48 05.60 1.7
 N 14s 1.50um
 E 12s 1.30um
 PKI 17.17 334 P 48 08.30 0.1
 GUN 17.27 336 P 48 08.80 -0.8
 DMN 17.33 333 P 48 10.10 -0.1
 KKN 17.41 334 P 48 11.10 -0.1
 LSA 17.55 352 P 48 13.00 -0.1

GKN 17.88 333 P 48 17.40 0.5
 GYA 18.61 39 iPd 48 22.00 -3.8X
 1.0s 100.00nm 5.0mb
 Z 14s 1.20um 4.0msz
 N 12s 1.50um
 E 12s 2.10um
 PP 48 34.60
 P00 20.23 290 eP 48 43.00 -0.6
 iS 52 26.50
 CD2 20.73 25 P 48 47.50 -1.2
 eS 52 39.00
 BOM 21.27 291 eP 48 50.00 -4.1X
 NDI 22.53 319 iPd 49 08.00 1.5
 0.7s 27.40nm 4.8mb
 eS 53 14.00
 KKM 22.95 104 eP 49 14.80 3.9X
 LZH 25.41 19 eP 49 34.50 0.0
 1.5s 96.00nm 5.1mb
 Z 19s 0.87um 4.3msz
 N 11s 0.56um
 E 12s 0.97um
 PP 49 40.50
 PP 50 14.00
 eS 53 53.00
 XAN 25.70 30 P 49 36.00 -1.1
 N 12s 1.00um
 E 11s 0.60um
 GTA 27.58 10 eP 49 54.80 0.5
 1.2s 30.00nm 4.8mb
 PP 50 00.00
 NJ2 30.31 45 eP 50 20.00 1.3
 SSE 31.47 49 eP 50 33.50 4.6X
 Z 16s 0.90um 4.5mszx
 BTO 31.65 24 eP 50 31.00 0.5
 WMO 31.91 352 eP 50 34.00 1.3
 BJI 34.00 31 eP 50 52.00 1.2
 E 14s 1.15um
 CN2 41.59 35 eP 51 55.00 0.7
 Z 14s 1.80um 5.1mszx
 N 12s 0.30um
 E 12s 0.50um
 ePP 52 01.00
 WB5 51.11 128 eP 53 09.10 -0.7
 ASPA 53.01 132 iPd 53 22.90 -1.1
 0.8s 13.00nm 5.0mb
 Z 21s 0.30um 4.3msz
 PMG 57.20 110 eP 53 55.00 0.5
 BBTk 60.09 309 eP 54 12.00 -2.4
 e 58 32.00
 CTA 60.78 121 iPc 54 20.00 0.8
 1.1s 17.72nm 5.1mb
 KAF 68.79 332 iP 55 10.70 0.3
 0.5s 2.70nm 4.4mb
 NUR 69.20 330 eP 55 10.00 -2.9
 SOD 70.07 338 iP 55 17.70 -0.4
 SRO 71.30 316 eP 55 30.60 4.6X
 ZST 72.13 317 eP 55 30.20 -0.7
 PRU 73.84 319 eP 55 41.50 0.7
 KHC 74.47 318 P 55 46.00 1.4
 HFS 74.56 329 eP 55 43.30 -1.5
 0.5s 3.70nm 4.6mb
 NB2 75.80 330 P 55 50.60 -1.4
 0.6s 2.80nm 4.4mb
 LPG 79.34 314 eP 56 11.80 -0.3
 0.9s 10.65nm 4.8mb
 LBF 81.06 316 eP 56 21.20 0.3
 1.1s 14.65nm 4.8mb
 LOR 81.10 316 eP 56 21.40 0.3
 Z 19s 0.20um 4.5msz
 MAF 82.14 316 eP 56 27.40 0.9
 TCF 82.37 316 eP 56 28.60 0.9
 1.2s 16.35nm 4.9mb
 DAG 83.20 348 eP 56 31.00 -0.4
 0.8s 7.46nm 4.8mb
 MBC 89.51 8 eP 56 56.00 -6.3X
 FBA 90.45 22 (P) 57 05.00 -1.9
 INK 92.91 16 eP 57 19.00 0.8
 TNP 122.12 29 (PKP) 03 01.00 0.1
 ALO 129.30 22 ePKP 03 15.00 0.2
 SIV 155.37 258 ePKP 04 05.00 5.5X
 CNCB 161.80 253 PKP 04 11.00 3.5X
 LPB 161.97 254 PKP 04 08.00 0.5
 ZOBO 162.04 255 PKP 04 09.00 1.2
 S.D. = 1.2 on 50 of 62 obs.

* DEC 12, 1990 06h 36m 53.04±0.76s
 20.072 N ± 7.1km 98.430 E ± 16.0km

PV06 1.46 209 Pc 24 55.61 -0.5
 RW4 1.46 181 P 24 56.27 0.1
 RW5 1.55 188 P 24 57.82 0.4
 PV04 1.60 221 P 24 58.38 0.3
 PV09 1.65 228 P 24 59.31 0.4
 PV01 1.67 208 Pd 25 00.03 0.9
 PV02 1.68 213 Pc 24 59.95 0.8
 PV03 1.69 217 Pc 24 59.70 0.4
 PV10 1.69 223 Pc 25 01.00 1.6
 GOL 1.70 87 eP 24 59.70 0.1
 PV05 1.94 218 Pc 25 02.19 -0.9
 DAU 2.94 287 eP 25 16.60 -0.8
 BW06 3.49 335 eP 25 25.30 0.1
 MSU 3.75 254 eP 25 28.90 0.1
 S.D. = 0.7 on 20 of 20 obs.

* DEC 12, 1990 07h 35m 49.61±0.84s
 40.251 N ±16.2km 74.259 E ±27.1km
 DEPTH = 33.0km (normal)
 4.1mb (4 obs.)
 KIRGHIZ-XINJIANG BORDER REGION (320)
 Felt (IV) at Sufa Kurgan and
 (III) at Gulicha, USSR.

GKN 14.92 142 P 39 20.60 0.6
 KKN 15.41 140 P 39 25.40 -1.0
 DMN 15.48 141 P 39 26.00 -1.3
 GUN 15.61 139 P 39 29.40 0.3
 PKI 15.65 140 P 39 29.20 -0.5
 GBA 26.69 173 P 41 28.00 0.4
 HFS 41.80 319 eP 43 36.60 -0.7
 0.5s 2.30nm 4.2mb
 MBC 63.46 4 eP 46 18.00 0.1
 0.8s 4.00nm 4.6mb
 INK 69.78 11 eP 46 58.00 0.0
 YKA 77.36 4 eP 47 41.50 -0.7
 0.7s 0.50nm 3.7mb
 WRA 81.90 125 P 48 10.00 2.8
 0.8s 1.30nm 4.0mb
 S.D. = 1.2 on 11 of 11 obs.

% DEC 12, 1990 08h 18m 54.33±0.74s
 43.405 N ±5.4km 5.444 E ±6.0km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 MD 2.5 (STR).

GELF 0.03 210 Pg 18 55.83 -0.5
 BERF 0.20 117 Pg 18 59.33 0.5
 TREF 0.22 349 Pg 18 59.21 0.1
 PUYF 0.23 56 Pg 18 58.93 -0.3
 PRAF 0.45 333 Pg 19 03.77 0.3
 VILF 0.49 24 Pg 19 04.10 -0.2
 TAVF 0.49 64 Pg 19 04.24 -0.1
 S.D. = 0.4 on 7 of 7 obs.

% DEC 12, 1990 08h 20m 23.75±0.89s
 39.113 N ±7.7km 27.554 E ±13.4km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.3 (ISK).

IZM 0.75 198 ePg 20 38.50 0.0
 eSg 20 50.00
 DST 0.97 59 ePn 20 42.00 -0.2
 BNT 1.27 13 ePn 20 47.70 0.3
 KCT 1.29 28 ePn 20 47.80 0.1
 KGT 1.35 352 iPn 20 48.30 -0.3
 S.D. = 0.3 on 5 of 5 obs.

% DEC 12, 1990 08h 41m 55.14±0.74s
 44.416 N ±6.2km 7.318 E ±8.2km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 1.8 (GEN).

STV 0.17 178 P 41 59.09 0.0
 S 42 01.24
 PZZ 0.18 300 P 41 59.40 0.2
 S 42 02.16
 ENR 0.20 159 P 41 59.50 -0.2
 S 42 02.37
 ROB 0.41 107 P 42 03.81 0.2
 S 42 10.27
 BHB 0.43 355 P 42 03.70 -0.2
 S 42 09.44
 S.D. = 0.2 on 5 of 5 obs.

% DEC 12, 1990 08h 44m 46.83±1.04s
 38.804 N ±9.5km 27.655 E ±12.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.8 (ISK).

IZM 0.51 217 ePn 44 57.00 -0.2
 DST 1.10 43 ePn 45 08.20 0.7
 EZN 1.45 315 ePn 45 13.90 0.8
 KCT 1.54 20 iPn 45 14.30 -0.1
 BNT 1.56 7 ePn 45 13.80 -0.9
 KGT 1.67 351 iPn 45 15.80 -0.4
 S.D. = 0.8 on 6 of 6 obs.

% DEC 12, 1990 10h 16m 46.70±0.89s
 39.119 N ±7.2km 27.548 E ±12.6km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.2 (ISK).

IZM 0.75 197 ePg 17 01.50 0.0
 eSg 17 12.50
 DST 0.97 60 ePn 17 05.00 -0.1
 BNT 1.27 13 iPn 17 10.30 0.0
 KCT 1.29 29 iPn 17 10.80 0.2
 KGT 1.34 352 iPn 17 11.30 -0.1
 S.D. = 0.2 on 5 of 5 obs.

% DEC 12, 1990 10h 18m 38.29±0.94s
 42.098 N ±6.9km 19.206 E ±10.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 ML 2.2 (TTG).

ULC 0.14 167 iPg 18 41.60 0.0
 iSg 18 44.40
 TTG 0.33 7 iPg 18 45.60 0.4
 iSg 18 51.20
 BDV 0.34 303 iPg 18 45.60 0.3
 iSg 18 50.50
 HCY 0.63 304 iPg 18 50.70 -0.3
 iSg 19 01.30
 NKY 0.73 348 iPg 18 52.00 -0.7
 iSg 19 04.40
 BRY 0.94 329 iPg 18 56.50 0.2
 S.D. = 0.6 on 6 of 6 obs.

% DEC 12, 1990 10h 32m 47.12s
 59.847 N 150.838 W
 DEPTH = 36.6km
 KENAI PENINSULA, ALASKA (14)
 <AGS-P>.

BRK 0.09 196 iP 32 53.19 -0.2
 NNL 0.30 311 iP 32 55.62 0.4
 CNPM 0.38 212 iP 32 55.40 -0.8
 eS 33 02.02
 HOM 0.45 245 iP 32 56.68 -0.3
 eS 33 03.33
 XLV 0.60 229 eP 32 57.88 -1.2
 eS 33 06.57
 SLKM 0.73 25 iP 33 00.37 -0.7
 eS 33 11.41
 SEW 0.74 69 iP 33 00.16 -1.0
 eS 33 11.09
 NKA 0.92 348 iP 33 05.15 1.5
 RDT 1.07 314 iP 33 05.07 -0.8
 eS 33 19.40
 RED 1.13 301 iP 33 05.86 -0.8
 eS 33 20.64
 REF 1.13 305 iP 33 06.08 -0.8
 eS 33 20.67
 INE 1.14 282 iP 33 05.74 -1.2
 eS 33 20.64
 RSO 1.14 304 eP 33 06.19 -0.8
 eS 33 21.39
 RS2 1.14 304 eP 33 06.22 -0.8
 eS 33 21.05
 RDN 1.17 306 eP 33 06.32 -1.1
 iS 33 21.46
 OPT 1.23 262 iP 33 07.60 -0.5
 eS 33 23.64
 NCT 1.27 305 eP 33 07.83 -0.9
 eS 33 24.26
 AUE 1.38 250 eP 33 09.78 -0.4
 AUP 1.40 251 eP 33 10.31 -0.3

AGU 1.41 251 eP 33 10.59 -0.1
 AUH 1.41 251 eP 33 10.29 -0.5
 AUI 1.41 250 eP 33 10.34 -0.4
 SPU 1.47 336 eP 33 10.99 -0.6
 eS 33 30.20
 SYI 1.48 213 eP 33 10.54 -1.1
 PMS 1.54 24 eP 33 12.16 -0.4
 eS 33 33.36
 CKL 1.54 332 eP 33 12.06 -0.7
 eS 33 31.98
 CRP 1.57 336 eP 33 13.39 0.2
 CGLM 1.58 339 eP 33 12.88 -0.3
 BGL 1.62 332 eP 33 13.37 -0.4
 SUA 1.62 2 eP 33 13.52 -0.4
 NCG 1.69 338 eP 33 14.70 -0.2
 PDB 1.70 269 eP 33 14.01 -0.9
 CDD 1.70 239 eP 33 14.36 -0.7
 MCNL 1.90 251 eP 33 17.27 -0.5
 KNK 1.96 36 eP 33 17.37 -1.3
 GH0 2.15 25 eP 33 20.48 -0.8
 SKT 2.17 351 eP 33 21.23 -0.3
 VLZ 2.58 58 eP 33 24.86 -2.4
 KLU 2.93 54 eP 33 30.41 -2.1
 39 obs. associated

? DEC 12, 1990 11h 17m 34.91±0.90s
 41.122 N ±9.8km 28.498 E ±9.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.1 (ISK).

CTT 0.06 296 iPg 17 37.20 0.0
 iSg 17 38.20
 KCT 0.88 187 ePn 17 51.80 0.0
 DMK 0.89 322 ePn 17 52.00 0.0
 HRT 0.94 108 iPn 17 52.80 0.0
 S.D. = 0.1 on 4 of 4 obs.

? DEC 12, 1990 11h 29m 10.05±1.05s
 37.824 N ±10.1km 29.287 E ±8.7km
 DEPTH = 5.0km (geophysicist)
 TURKEY (366)
 MD 3.3 (ISK).

KHL 0.53 20 iPg 29 20.10 -0.6
 iSg 29 28.60
 CIN 0.98 257 ePg 29 29.00 -0.1
 iSg 29 43.00
 BCK 1.10 109 ePn 29 31.00 -0.1
 ELL 1.18 155 iPn 29 36.50 3.8X
 ALT 1.39 27 iPn 29 37.00 0.8
 IZM 1.70 290 ePn 29 44.50 4.0X
 DST 1.85 344 ePn 29 45.00 2.2X
 IZI 2.51 3 ePn 29 59.00 6.7X
 YLV 2.74 1 iPn 30 03.30 7.8X
 BNT 2.74 338 ePn 29 59.00 3.5X
 S.D. = 1.1 on 4 of 10 obs.

* DEC 12, 1990 11h 53m 07.87±0.83s
 14.458 N ±12.0km 94.309 W ±12.7km
 DEPTH = 33.0km (normal)
 4.4mb (3 obs.)
 OFF COAST OF CHIAPAS, MEXICO (68)

TPX 2.03 77 iP 53 40.50 0.1
 SCX 2.78 35 iPd 53 52.00 1.0
 iS 54 25.50
 OXX 3.49 319 eP 54 10.50 9.1X
 EVV 4.10 346 (P) 54 10.00 0.2
 IIT 5.94 320 (P) 54 38.00 1.9X
 ALO 23.15 334 eP 58 13.20 0.7
 0.8s 2.24nm 3.7mb
 ANMO 23.15 334 P 58 13.80 1.3
 -GOL 26.96 341 P 58 48.20 -0.4
 LRM 34.80 338 eP 59 59.20 1.3
 ZOBO 40.02 139 P 00 42.00 -0.3
 Z 22s 0.13um 3.7Msz
 LR 13 04.00
 SIV 44.65 131 eP 01 21.00 1.5
 YKA 50.09 348 eP 02 00.00 -1.4
 0.9s 4.20nm 4.5mb
 FRB 52.39 14 eP 02 16.00 -2.9
 INK 59.38 344 eP 03 08.50 -0.5
 PDCR 60.88 113 eP 03 18.70 -1.4
 FBA 61.95 337 P 03 26.50 -0.1
 MBC 63.20 353 eP 03 34.50 -0.1
 1.0s 5.00nm 4.6mb

12d 12h

LKO 86.43 81 P 05 50.26 1.2
 ZST 92.99 39 eP 06 28.70 9.4X
 GBA 150.95 17 PKP 13 11.00 17.3X
 0.8s 2.70nm
 S.D. = 1.3 on 16 of 20 obs.

& DEC 12, 1990 12h 02m 53.59s
 62.061 N 153.178 W
 DEPTH = 0.1km
 CENTRAL ALASKA (1)
 <AGS-P>. ML 3.0 (PMR).

SKT 0.78 95 iP 03 08.91 -0.3
 eS 03 20.92
 NCG 0.82 143 iP 03 09.64 -0.3
 eS 03 21.88
 BGL 0.88 155 iP 03 10.56 -0.7
 eS 03 24.16
 CRP 0.93 148 eP 03 12.01 -0.2
 CGLM 0.94 143 iP 03 11.92 -0.4
 CKL 0.96 155 eP 03 11.95 -0.8
 SPU 1.03 148 eP 03 13.58 -0.5
 SUA 1.30 116 eP 03 18.62 -0.1
 eS 03 36.88
 CUT 1.41 75 eP 03 19.52 -0.8
 eS 03 38.89
 NCT 1.51 175 eP 03 21.08 -1.0
 eS 03 41.84
 SVW 1.51 232 iPd 03 20.00 -2.0
 RDT 1.54 166 eP 03 21.85 -0.6
 eS 03 43.18
 RDN 1.57 172 eP 03 21.94 -0.9
 eS 03 43.70
 TTA 1.58 305 eP 03 19.40 -3.6
 REF 1.59 171 eP 03 22.71 -0.6
 eS 03 45.38
 RS2 1.62 173 eP 03 23.24 -0.4
 eS 03 45.35
 PWA 1.62 103 eP 03 23.05 -0.4
 eS 03 43.80
 RSO 1.62 173 eP 03 23.06 -0.6
 eS 03 45.05
 NKA 1.62 144 eP 03 24.72 1.3
 RED 1.66 173 eP 03 23.99 -0.2
 HUR 1.88 59 eP 03 26.71 -0.6
 eS 03 51.29
 PMS 1.91 114 eP 03 27.76 0.0
 eS 03 51.94
 TRF 1.93 42 eP 03 27.50 -0.6
 eS 03 54.38
 PLRM 1.98 102 eP 03 28.49 -0.1
 PMR 1.98 102 eP 03 28.70 0.1
 INE 2.01 178 eP 03 29.63 0.4
 GHO 2.03 96 eP 03 29.18 -0.4
 eS 03 57.13
 SLKM 2.11 136 eP 03 31.92 1.2
 PDB 2.33 193 eP 03 33.70 -0.1
 KNK 2.34 104 eP 03 34.70 0.7
 RND 2.41 54 eP 03 33.55 -1.4
 MCK 2.57 47 eP 03 36.45 -0.7
 BWN 2.71 37 eP 03 37.52 -1.6
 CDD 3.15 184 eP 03 46.15 0.7
 TOA 3.30 86 eP 03 49.40 1.8
 VLZ 3.40 103 eP 03 50.15 1.2
 KLU 3.50 96 eP 03 50.16 -0.2
 CCB 3.55 41 eP 03 50.53 -0.5
 SDG 3.60 79 eP 03 52.45 0.7
 HDA 3.67 47 eP 03 53.11 0.3
 PAX 3.69 72 eP 03 53.53 0.4
 FBA 3.73 38 e(P) 03 50.50 -3.2
 eS 03 59.20
 DDM 3.77 59 eP 03 52.99 -1.3
 IMA 4.03 357 eP 03 54.30 -3.7
 ANM 6.04 300 eP 04 22.40 -3.9
 45 obs. associated

? DEC 12, 1990 12h 10m 22.85±3.13s
 31.426 S ±13.9km 68.187 W ±38.8km
 DEPTH = 33.0km (normal)
 SAN JUAN PROVINCE, ARGENTINA (137)

CFA 0.19 194 ePd 10 28.90 -0.5
 eS 10 34.40
 RTLL 0.26 292 iPc 10 29.00 -1.2
 RTCV 0.53 214 e(P) 10 34.40 0.5
 RTRS 1.66 318 iPc 10 50.80 0.7
 eS 11 13.20

S.D. = 1.5 on 4 of 4 obs.
 % DEC 12, 1990 12h 24m 01.82±2.45s
 40.406 N ±11.0km 22.946 E ±21.3km
 DEPTH = 5.0km (geophysicist)
 GREECE (364)
 MD 1.9 (THE).

THE 0.23 4 iP 24 06.85 0.4
 eS 24 09.92
 SOH 0.52 37 eP 24 11.24 -1.0
 PAIG 0.74 130 eP 24 16.53 0.0
 eS 24 27.89
 KNT 0.76 357 eP 24 16.44 -0.5
 SRS 0.86 34 eP 24 20.08 1.2
 S.D. = 1.2 on 5 of 5 obs.

DEC 12, 1990 12h 29m 45.68±0.86s
 43.529 N ±5.7km 7.506 E ±4.8km
 DEPTH = 10.0km (geophysicist)
 NEAR SOUTH COAST OF FRANCE (379)
 ML 2.1 (GEN), 1.8 (LDG), MD 1.7 (STR).

SBF 0.34 351 Pg 29 53.10 0.4
 Sg 29 58.00
 AURF 0.38 340 Pg 29 53.53 0.0
 Sg 29 59.82
 SAOF 0.46 4 Pg 29 54.77 -0.3
 AUTN 0.47 353 Pg 29 55.20 -0.1
 IMI 0.47 36 P 29 55.44 0.2
 S 30 02.41
 CALN 0.50 297 Pg 29 55.85 0.0
 TOUF 0.52 339 Pg 29 56.03 -0.2
 Sg 30 03.52
 FRF 0.63 273 Pg 29 58.10 -0.2
 Sg 30 06.20
 ENR 0.70 355 P 29 59.30 -0.3
 S 30 08.33
 STV 0.73 350 P 29 59.85 -0.2
 S 30 09.15
 LMR 0.75 255 Pg 30 00.50 0.1
 Sg 30 10.20
 ROB 0.81 19 P 30 01.18 -0.2
 S 30 12.15
 LRG 0.84 265 Pg 30 01.80 0.0
 Sg 30 12.80
 FIN 0.85 37 P 30 02.10 0.0
 PZZ 1.02 343 P 30 05.69 0.6
 S 30 18.61
 BHB 1.32 353 P 30 10.28 0.1
 S.D. = 0.3 on 16 of 16 obs.

% DEC 12, 1990 13h 56m 53.11±0.89s
 39.120 N ±7.2km 27.562 E ±12.6km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.7 (ISK).

IZM 0.76 198 ePg 57 08.00 0.0
 eSg 57 20.60
 DST 0.96 59 ePn 57 11.20 -0.2
 BNT 1.26 12 ePn 57 16.60 0.0
 KCT 1.28 28 iPn 57 17.20 0.3
 KGT 1.34 352 iPn 57 17.70 -0.1
 S.D. = 0.3 on 5 of 5 obs.

% DEC 12, 1990 14h 21m 17.46±1.22s
 44.705 N ±5.3km 6.841 E ±11.5km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 2.0 (GEN).

RRL 0.22 349 P 21 22.24 -0.1
 S 21 25.72
 PZZ 0.27 137 P 21 23.16 -0.1
 S 21 27.30
 BHB 0.33 65 P 21 24.23 -0.1
 S 21 28.84
 RSP 0.54 33 P 21 28.49 0.2
 S 21 35.26
 STV 0.58 143 P 21 29.72 0.5
 S 21 37.04
 ENR 0.63 139 P 21 29.87 -0.4
 S 21 38.17
 ROB 0.84 119 P 21 33.76 0.0
 S.D. = 0.3 on 7 of 7 obs.

* DEC 12, 1990 15h 27m 26.10±1.11s
 59.786 N ±24.7km 16.809 E ±6.2km
 DEPTH = 10.0km (geophysicist)
 SWEDEN (536)
 MD 3.9 (BER).

UPP 0.42 80 iPg 27 34.70 0.0
 iSg 27 39.50
 HFS 1.60 284 eP 27 56.40 1.9
 0.2s 325.80nm
 NRA0 2.79 292 Pn 28 11.80 0.2
 Sn 28 46.50
 Sg 28 54.20
 BLS2 5.05 269 eP 28 43.30 -0.5
 eS 29 40.48
 BLS1 5.09 270 eP 28 43.62 -0.7
 eS 29 41.03
 ODD1 5.14 276 eP 28 44.74 -0.1
 eS 29 40.88
 MOL 5.28 306 eP 28 45.92 -0.9
 eS 29 45.48
 HYA 5.43 289 eP 28 48.97 -0.1
 eS 29 51.02
 ASK 5.85 282 eP 28 54.99 0.2
 eS 29 59.29

S.D. = 0.9 on 9 of 9 obs.
 * DEC 12, 1990 15h 42m 50.94±0.66s
 9.156 S ±16.3km 112.356 E ±17.0km
 DEPTH = 33.0km (normal)
 4.4mb (2 obs.)
 SOUTH OF JAVA (282)

WARB 21.69 143 eP 47 50.00 8.9X
 ASPA 25.15 128 eP 48 15.60 0.7
 0.8s 7.70nm 4.4mb
 eS 52 56.50
 GBA 41.39 303 Pd 50 36.60 0.6
 0.8s 5.70nm 4.4mb
 GUN 44.88 326 P 51 04.80 0.1
 PKI 44.88 325 P 51 04.80 0.1
 DMN 45.08 325 P 51 06.60 0.4
 KKN 45.12 325 P 51 06.80 0.3
 GKN 45.65 325 P 51 10.80 0.2
 BJI 49.07 4 eP 51 36.00 -0.9
 BUL 81.07 251 iPd 55 03.90 -1.1
 YKA 116.93 22 ePKP 01 33.00 -0.5
 0.9s 0.80nm
 S.D. = 0.7 on 10 of 11 obs.

? DEC 12, 1990 16h 20m 21.99±1.48s
 4.687 S ±17.6km 152.028 E ±42.3km
 DEPTH = 161.9 ±9.9 km
 4.8mb (2 obs.)
 NEW BRITAIN REGION (192)

RAB 0.51 16 iPd 20 45.00 0.0
 iS 21 02.00
 PMG 6.74 226 eP 21 59.50 -0.1
 0.9s 58.82nm 4.9mb
 eS 23 15.00
 WB5 22.89 227 iPd 25 13.00 0.5
 e 29 16.10
 ASPA 25.72 221 eP 25 39.00 -0.2
 0.3s 5.90nm 4.7mb
 WARB 32.36 226 eP 26 38.00 -0.2
 GUN 71.40 301 P 31 27.20 0.1
 PKI 71.71 301 P 31 28.80 -0.2
 KKN 71.88 301 P 31 29.60 -0.2
 DMN 71.98 301 P 31 30.80 0.3
 GKN 72.49 301 P 31 33.20 -0.1
 S.D. = 0.3 on 10 of 10 obs.

DEC 12, 1990 16h 48m 51.43±0.90s
 14.936 N ±7.7km 94.102 W ±6.5km
 DEPTH = 48.5 ±7.3 km
 5.2mb (34 obs.) 4.9MsZ (6 obs.)
 OFF COAST OF CHIAPAS, MEXICO (68)

TPX 1.78 91 iP 49 20.57 0.3
 eS 49 43.44
 SCX 2.28 38 iP 49 32.65 5.3X
 iS 50 03.51
 EVV 3.70 341 eP 49 49.46 1.9
 IISM 5.10 323 eP 50 08.07 0.7
 (S) 51 17.24

LVMV	5.28	335	(P)	50	08.05	-1.7		1.1s	24.40nm	5.2mb	0.5s	30.00nm	4.9mb			
IIT	5.72	316	eP	50	18.45	2.2	RJF	83.42	45 eP	01 14.60	-0.5	WRA	45.71 259 P	21 43.00	-1.0	
			(S)	51	35.86			0.9s	16.40nm	5.1mb	0.3s	4.90nm			4.3mb	
PPM	5.97	314	eP	50	21.36	1.4	Z	21s	0.60um	4.9Msz		ASPA	45.89 254 iPd	21 44.60	-0.8	
			(S)	51	41.80		TCF	83.64	44 eP	01 15.60	-0.6		0.5s	88.20nm	5.3mb	
IIA	6.05	315	eP	50	27.49	6.9X		1.1s	14.65nm	4.9mb			iS	27 58.40		
			iS	53	53.31		MAF	83.89	44 eP	01 17.00	-0.5	WARB	52.39 250 iPc	22 34.00	-0.4	
III	6.18	304	eP	50	20.74	-1.9		1.5s	65.30nm	5.4mb	0.7s	17.00nm			4.5mb	
			(S)	52	03.15		BGF	83.99	44 eP	01 17.40	-0.6	SPA	72.67 180 iPd	24 45.50	-0.5	
UYO	19.15	359	iPc	53	11.70	-2.0		1.0s	24.00nm	5.2mb	0.8s	10.42nm			4.5mb	
OLY	20.62	6	P	53	26.30	-2.9	AVF	84.27	43 eP	01 18.70	-0.6	TNP	78.92 44 P	25 20.80	-0.3	
RSCP	21.96	19	P	53	48.00	5.3X		0.8s	5.35nm	4.7mb	0.8s	47 P	25 50.80	0.3		
SGS	21.97	32	P	53	43.00	0.3	NB2	84.29	28 P	01 19.90	0.7	ALO	85.01 51 eP	25 52.20	-0.1	
BOG	22.22	115	eP	53	54.00	8.1X		1.1s	17.60nm	5.0mb	1.0s	2.50nm			4.0mb	
			eS	58	00.00		SSF	84.29	43 eP	01 18.90	-0.6	FBA	85.13 12 P	25 51.00	-0.9	
TKL	22.62	22	P	53	48.70	-0.5		0.9s	9.85nm	4.9mb	0.9s	39 eP	25 56.60	-0.1		
ALO	22.81	333	iPc	53	52.00	0.6	LOR	84.47	43 eP	01 20.00	-0.4	CLL	145.21 349 iPKPc	32 51.60	0.5	
	0.8s	8.21nm						1.2s	25.30nm	5.2mb	0.9s	26.00nm				
ANMO	22.82	333	P	53	52.00	0.6	Z	19s	0.50um	4.9Msz		PRU	146.14 346 ePKP	32 54.00	1.3	
	1.0s	30.00nm					LBF	84.63	43 eP	01 20.50	-0.7	KHC	147.17 347 ePKP	32 58.00	3.6X	
LHS	22.86	29	P	53	44.00	-7.5X	ENN	84.78	39 e(P)	01 23.00	1.2	FLN	148.65 4 ePKP	33 00.20	3.5X	
SDV	23.73	102	eP	53	59.00	-1.3		1.0s	62.00nm	5.7mb	0.9s	26.20nm				
TOV	24.28	99	eP	54	07.00	1.4	VITF	85.57	41 P	01 27.11	1.3	Z	19s	0.47um	5.3Msz	
BLA	25.30	26	eP	54	26.00	10.9X	APO	85.71	28 eP	01 27.40	1.1	LDF	148.84 4 ePKP	33 00.80	3.8X	
Z	18s	1.99um						0.5s	1.30nm	4.4mb	0.9s	13.10nm				
GOL	26.58	340	P	54	27.00	-0.2	HAU	85.87	41 eP	01 27.10	-0.3	CDF	148.88 354 ePKP	33 01.30	4.1X	
		e		54	35.00			1.0s	32.00nm	5.5mb	0.6s	7.20nm				
BAR	27.07	315	eP	54	23.00	-8.5X	ABH	86.04	39 eP	01 29.58	1.4	GRR	149.00 5 ePKP	33 01.40	4.1X	
TPC	27.51	318	eP	54	35.00	-0.5	LKO	86.16	81 P	01 29.74	0.3		0.5s	10.20nm		
PLM	27.60	316	eP	54	36.00	-0.5		1.0s	46.50nm	5.7mb	0.6s	5 ePKP	33 02.40	4.6X		
RVR	28.32	316	e													

12d 17h

ENR	0.28	148	P	35	05.05	0.0
			S	35	08.80	
BHB	0.38	5	P	35	06.91	-0.1
			S	35	12.02	
ROB	0.50	109	P	35	09.20	0.1
			S	35	16.12	
RRL	0.55	326	P	35	10.11	-0.1
			S	35	17.56	
IMI	0.73	138	P	35	13.32	0.2
			S	35	22.72	
FIN	0.75	109	P	35	13.76	0.3
			S	35	23.13	
PCP	0.95	85	P	35	17.45	0.5
			S	35	23.13	
S. D. = 0.3 on 9 of 9 obs.						

DEC 12, 1990 18h 24m 09.73± 0.28s
1.096 N ± 5.8km 123.714 E ± 6.7km
DEPTH = 33.0km (normol)

MINAHASSA PENINSULA (265)

DAV	6.23	17	eP	25	42.00	0.1
KKM	8.95	303	ePd	26	18.00	-1.9
QCP	13.70	349	eP	27	23.00	-1.1
BAG	15.53	349	eP	27	48.00	-0.2
KGM	20.41	273	ePd	28	46.70	-0.1
KLM	22.14	276	eP	29	07.00	2.6
IPM	22.92	279	ePd	29	13.40	1.3
	0.9s	37.10nm				4.9mb
WB5	23.32	154	eP	29	15.10	-0.8
SNG	23.81	285	eP	29	22.30	1.6
PMG	25.57	115	eP	29	37.50	-0.1
	1.0s	56.00nm				5.1mb
NNT	26.37	297	eP	29	45.40	0.4
ASPA	26.53	159	eP	29	45.60	-0.9
	0.8s	16.90nm				4.7mb
		e		39	54.80	
OIS	26.56	145	iPd	29	46.60	-0.1
LOE	27.02	308	eP	29	50.50	-0.5
WARB	27.27	174	iPc	29	52.50	-0.6
NST	27.40	303	eP	29	56.00	1.6
BDT	29.13	305	eP	30	10.20	0.2
SSE	29.93	356	P	30	18.00	0.9
Z	20s	0.90um				4.4Msz
E	12s	0.30um				

CHG	30.00	307	1Pc	30	17.50	-0.4
	1.0s	32.50nm				5.1mb
MRWA	31.03	193	1Pc	30	25.30	-1.5
KMI	31.32	321	Pc	30	30.20	0.5
KMI	31.32	321	1Pc	30	30.50	0.8
	2.0s	140.00nm				5.4mb
Z	16s.	1.20um				4.7Mszx

FORR	32.04	173	eP	30	33.00	-2.6
	0.4 s	28.00	nm			5.5 mb
RKG	35.54	190	eP	31	10.00	4.2X
HNR	37.57	107	eP	31	23.00	-0.1
MAT	37.74	19	eP	31	20.00	-4.3X

ADE	38.52	160	iPd	31	31.00	0.0
	0.9s	57.14nm				5.4mb
BJI	39.36	351	eP	31	36.50	-1.3
	1.4s	68.00nm				5.2mb
LZH	39.39	334	iPc	31	39.20	0.8
	1.8s	309.00nm				5.8mb
Z	22s	1.10um				4.6Msz
N	14s	0.60um				

BRS	39.79	138	iPd	31	41.20	-0.4
BWA	42.26	149	eP	32	03.90	2.1

CAN	43.25	149	eP	32	11.00	1.1
			i	32	17.90	
TOO	43.43	155	iPc	32	12.70	1.4
GUN	44.96	310	P	32	24.10	-0.1
PKI	45.15	309	P	32	25.20	-0.5
KKN	45.36	309	P	32	26.80	-0.4
DMN	45.41	309	P	32	27.20	-0.5
GKN	45.96	309	P	32	31.40	-0.5
KOD	46.85	283	eP	32	39.10	-0.2
HYB	47.26	293	ePd	32	41.50	-0.6
	1.0s	35.00nm				5.3mb

GBA	47.44	287	P	32	42.80	-0.7
POO	51.87	293	eP	33	16.50	-1.1
QUE	61.05	304	eP	34	22.00	-1.2
MAIO	68.75	309	iPd	35	12.40	-0.5
ANMO	121.01	47	PKP	43	01.50	0.2
ALO	121.01	47	ePKP	43	01.20	-0.1
KIC	128.02	279	PKP	43	17.40	2.3
LKO	128.43	283	PKP	43	15.10	-0.8

CHCH	144.67	159	ePKP	43	47.00	1.7
TACH	144.82	159	ePKP	43	44.00	-1.6
SAN	145.10	159	ePKP	43	45.00	-1.1
PEL	145.37	158	iPKPc	43	46.50	-0.1
ROCH	145.40	158	ePKP	43	47.00	0.1
CNCB	160.60	144	PKP	44	11.00	2.2
LPB	160.75	143	ePKP	44	03.00	-5.8X
ZOBO	160.94	143	PKP	44	10.00	0.9
	1.2s				8.78nm	
Z	24s				0.13um	

SIV 164.46 163 PKP 44 12.00 0.1
S.D. = 1.1 on 54 of 57 obs.

- DEC 12, 1990 18h 50m 35.20± 0.75s
35.085 N ±15.6km 136.742 E ±12.2km
DEPTH = 33.0km (normol)

SOUTHERN HONSHU, JAPAN (232)

GUN	43.57	275 P	58	38.80	0.6
	0.4 s	18.00nm			5.2mb
PKI	44.09	275 P	58	41.90	-0.5
KKN	44.11	275 P	58	42.40	0.0
DMN	44.32	275 P	58	43.80	-0.4
GKN	44.55	276 P	58	46.30	0.4
	0.8 s	28.00nm			5.2mb
FBA	52.75	31 (P)	59	49.00	0.3
WRA	54.77	183 P	00	04.00	0.0
	0.6 s	1.30nm			4.1mb
INK	57.82	26 eP	00	25.00	-0.3
MBC	59.44	16 eP	00	44.00	7.4 x
NB2	74.46	336 P	02	19.30	7.7 x
	0.6 s	1.10nm			4.0mb

DEC 12, 1990 19h 47m 10.31 \pm 0.74s
66.031 N \pm 7.4km 147.485 W \pm 7.7km
DEPTH = 33.0km (normal)

ALASKA (676)

FBA	1.14	187	iPd	47	30.90	0.9
DWY	3.95	116	P	48	09.00	-1.0
TOA	3.98	171	eP	48	12.80	2.1x
			e	48	17.10	
			i	48	23.80	
PMR	4.52	190	eP	48	18.20	0.1
			e	48	21.80	
				0	5.0	

KLU	4.61	171	eP	48	20.00	0.5
			eS	49	20.00	
TTA	4.82	234	eP	48	20.70	-1.8
INK	5.89	61	P	48	38.00	0.5
SVW	6.13	220	e(P)	48	41.90	1.0
			i	49	03.70	
BRW	6.27	332	i(P)	48	43.10	0.2
HYT	6.87	135	Pd	48	51.20	-0.2
MSU	34.15	126	e(P)	53	57.50	3.2X
S.D.	= 1.1	on	9 of	11 obs.		

DEC 12, 1990 20h 49m 55.29± 0.74s
44.514 N ± 6.0km 7.443 E ± 6.3km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)

ME 1.0 (GEN.)					
PZZ	0.24	268	P	50 00.65	0.1
			S	50 04.72	
STV	0.28	198	P	50 01.16	-0.1
			S	50 05.16	
ENR	0.29	183	P	50 01.37	0.0
			S	50 05.68	
BHB	0.35	339	P	50 02.56	0.0
			S	50 07.62	
ROB	0.38	125	P	50 03.59	0.5
			S	50 09.27	
FIN	0.63	119	P	50 07.42	-0.5

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

? DEC 12, 1990 21h 05m 24.61± 2.91s
18.089 N ±27.2km 76.680 W ±11.8km
DEPTH = 10.0km (geophysicist)

JAMAICA REGION (86)

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MD 2.6 (TRN).
HOJ      0.11 218 iPd   05 27.77   0.3
          eS          05 29.88
STM      0.13 265 iPd   05 27.78   0.0
          eS          05 29.73
YHJ      0.26 138 ePd   05 30.14  -0.1
PCJ      0.58 234 ePd   05 36.05  -0.3
S.D. = 0.5 on 4 of 4 obs.

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% DEC 12, 1990 21h 33m 17.93± 0.63s
37.215 N ± 5.9km 138.592 E ± 6.8km
DEPTH = 10.0km (geophysicist)

NEAR WEST COAST OF HONSHU, JAPAN(226)

NI1J	0.33	85	iPd	33	24.80	0.1
			S	33	29.70	
MAT	0.74	205	iPc	33	32.00	-0.4
			eS	33	42.00	
MTMJ	0.89	225	iP+	33	35.30	0.2
			S	33	48.00	
CHJJ	1.21	164	P	33	40.00	-0.4
			S	33	55.80	
YAMJ	1.49	50	iP+	33	44.40	-0.4
			S	34	04.40	
KAKJ	1.62	128	iPd	33	46.90	0.3
			S	34	09.00	
I1DJ	1.82	198	P	33	50.00	0.5
			S	34	16.30	
TSRJ	2.69	232	P	34	07.90	5.9x
OFUJ	3.06	52	P	34	07.50	0.3
AOMJ	3.62	22	P	34	15.00	-0.1
			eS	34	59.40	

S.D. = 0.4 on 9 of 10 obs.

* DEC 12, 1990 22h 10m 32.22 \pm 3.75s
40.053 N \pm 11.8km 24.169 E \pm 30.4km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)

MD 2.6 (THE).							
OUR	0.32	333	eP	10	37.82	-0.9	
PAIG	0.40	252	iP	10	39.61	-0.7	
			eS	10	47.02		
SOH	0.99	321	eP	10	50.50	-0.5	
			eS	11	04.34		
THE	1.09	303	eP	10	53.30	0.7	
SRS	1.15	338	eP	10	52.97	-0.8	
			eS	11	07.80		
KNT	1.47	319	eP	10	58.94	0.2	
			eS	11	18.86		
AGG	1.76	235	iP	11	02.89	0.0	
VAY	1.76	317	ePn	11	05.00	2.1	

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

DEC 12, 1990 22h 32m 10.48 ± 0.29s
41.798 N ± 3.2km 19.556 E ± 3.0km
DEPTH = 10.0km (geophysicist)

ALBANIA (391)

MD 3.2 (THE), 3.1 (TTG).						
LACI	0.20	145	iPgc	32	14.10	-0.7
SDA	0.22	349	iPgc	32	17.00	1.7
ULC	0.28	306	iPg d	32	17.30	0.9
			eSg	32	23.00	
TIR	0.51	153	iPgc	32	19.50	-1.3
TTG	0.67	341	iPg d	32	23.50	-0.2
			eSg	32	34.00	
BCI	0.68	34	iPgc	32	22.40	-1.6
KKS	0.70	66	iPg	32	23.00	-1.2
BDV	0.73	312	ePg	32	25.50	0.7
			eSg	32	37.30	
PVY	0.85	21	iPg c	32	26.00	-1.0
			iSg	32	39.40	
HCY	1.02	310	ePg	32	30.60	0.8
			eSg	32	48.00	
IVA	1.10	13	ePg	32	31.20	0.0
			eSg	32	48.00	
BERA	1.13	165	iPnc	32	32.30	0.6
OMR	1.16	126	iPg	32	30.80	-1.4
			iSg	32	47.80	

0.7s	361.75nm	6.8mb X
Z 20s	11.00um	6.1MsZ

STV	9.27	321	P	26	43.89	1.6
IZM	9.42	80	iP	26	45.40	1.1
TIM	9.48	25	eP	26	52.00	7.0
MDI	9.49	335	P	26	45.72	0.5
FVI	9.49	349	P	26	45.90	0.7
BZS	9.51	27	eP	26	42.00	-3.5
PZZ	9.57	321	P	26	46.97	0.5
PVL	9.59	49	iPd	26	44.00	-2.7
PUYF	9.69	313	P	26	45.96	-2.0
CDR	9.73	314	ePc	26	46.00	-2.6
			i	26	47.50	
			i	26	51.10	
			i	26	53.70	
			i	28	33.90	
BHB	9.73	323	P	26	50.86	2.2
GELF	9.76	312	P	26	47.85	-1.1
KGT	9.77	68	iP	26	48.00	-1.1
MFT	9.85	66	iP	26	47.50	-2.8
VILF	9.87	315	P	26	48.65	-1.9
KBA	9.89	352	iPd	26	53.10	2.2
VAI	9.91	332	P	26	51.06	0.2
TREF	9.92	313	P	26	49.60	-1.7
RSP	9.97	324	P	26	52.20	0.3
JMB	10.00	55	iP	26	50.00	-2.2
RRL	10.02	322	P	26	53.84	1.0
ORX	10.03	328	P	26	53.74	1.0
TMA	10.07	333	ePd	26	53.50	0.1
OGA	10.10	342	iPd	26	55.80	1.9
ESEL	10.13	288	eP	26	55.00	0.9
PRAF	10.16	313	P	26	51.75	-2.7
EDC	10.16	69	eP	26	50.00	-4.5
OSS	10.17	339	ePc	26	55.00	0.3
BNI	10.17	322	P	26	54.50	-0.3
VDL	10.20	336	ePd	26	56.30	1.2
BNT	10.21	69	eP	26	53.00	-2.1
DEV	10.23	31	ePc	26	57.00	1.6
LSD	10.25	325	P	26	56.50	0.6
MMK	10.37	330	ePc	26	58.40	0.8
SOTA	10.39	344	iPd	26	57.20	-0.6
			i	26	58.60	
			i	27	08.90	
			i	27	15.70	
			i	27	27.00	
			iS	28	57.10	
WATA	10.43	345	iPd	26	58.40	0.2
			iC	26	59.80	
COZ	10.44	37	eP	26	58.00	-0.4
LPG	10.46	324	eP	26	59.00	0.1
	0.9s	204.75nm				6.5mbx
BUD	10.51	13	ePn	26	55.00	-4.3
DMK	10.53	61	eP	26	40.00	-19.5
BHG	10.58	351	eP	27	00.90	0.7
DST	10.60	73	iP	27	00.80	0.2
DIX	10.62	328	ePd	27	02.40	1.4
BUCL	10.67	45	eP	27	00.00	-1.4
LLS	10.69	335	ePd	27	03.10	1.2
SRO	10.72	10	eP	27	00.60	-1.4
			e	27	04.60	
			i	27	12.50	
			i	27	33.50	
CMP	10.74	39	ePc	26	59.00	-3.5
CTT	10.78	65	iP	27	02.00	-1.0
KMR	10.79	355	iP-	27	03.30	0.2
			i	27	45.90	
EMS	10.82	327	ePd	27	05.20	1.5
ETER	10.89	301	eP	27	11.50	7.0
SAX	10.92	338	ePc	27	09.30	4.3
ZST	10.96	6	eP	27	03.60	-1.7
			i	27	08.50	
			e	28	24.40	
			e	28	40.80	
VKA	10.98	3	eP	27	05.50	-0.1
	Z 15s	11.20um				5.6msz
			i	27	13.00	

ISR	11.45	43	eP	27	11.50	-0.6
ELL	11.58	88	iP	27	14.50	0.4
HRT	11.61	68	iP	27	14.50	0.2
ALT	11.68	77	eP	27	17.10	1.7
CVO	11.70	40	eP	27	18.00	2.5
BBS	11.72	333	P	27	13.89	-1.9
LOMF	11.89	330	P	27	17.84	-0.2
FEL	11.89	335	eP	27	17.16	-1.0
KHC	11.90	354	iPd	27	17.40	-0.8
	1.0s	64.00nm			5.9mb	
Z	14s	15.00um				
N	14s	14.00um				
E	14s	11.00um				
		e		27	54.50	
BMR	11.94	27	ePd	27	18.00	-0.7
TLB	11.98	49	eP	27	19.50	0.3
GPA	11.98	71	eP	27	17.50	-1.9
WET	11.98	352	eP	27	18.40	-0.9
VR1	12.02	41	ePd	27	19.50	-0.3
BCK	12.06	85	iP	27	21.50	1.1
LBL	12.11	315	P	27	21.97	1.0
EBR	12.14	291	eP	27	28.00	6.6X
MOF	12.18	333	P	27	20.78	-1.3
EROO	12.20	291	eP	27	28.30	6.0X
BSF	12.29	332	P	27	21.29	-2.3
CFR	12.38	47	eP	27	25.50	0.9
SPC	12.38	15	eP	27	23.10	-1.8
ECH	12.48	334	P	27	22.90	-3.1X
PYM	12.56	316	P	27	27.82	0.7
CDF	12.61	334	P	27	24.66	-3.1X
HAU	12.61	331	eP	27	23.40	-4.3X
Z	18s	9.75um				
CAF	12.63	311	eP	27	26.50	-1.5
PRU	12.70	357	Pd	27	27.70	-1.2
Z	16s	17.90um				
N	16s	5.60um				
E	17s	24.00um				
		e		27	30.50	
		e		29	02.50	
		eS		30	17.50	
SMF	12.70	321	eP	27	28.40	-0.5
GRA1	12.76	348	iPc	27	28.60	-1.0
GRF	12.76	348	ePd	27	28.10	-1.5
	1.4s	90.00nm			5.8mb	
Z	17s	17.00um			4.5MsZ	
		e		27	35.80	
LBF	12.87	322	eP	27	29.60	-1.6
EPF	12.88	301	eP	27	31.40	0.0
	1.7s	242.60nm			6.1mb	
VITF	12.92	331	P	27	29.27	-2.5
LPO	13.04	309	eP	27	33.20	-0.2
	0.8s	59.10nm			5.8mb	
AVF	13.05	320	eP	27	29.60	-3.9X
ECHE	13.07	285	eP	27	40.10	6.2X
MAF	13.09	317	eP	27	30.70	-3.4X
LOR	13.13	323	eP	27	31.90	-2.7
	0.7s	43.05nm			5.7mb	
Z	18s	11.50um				
SSF	13.15	322	eP	27	33.30	-1.6
BGF	13.15	319	eP	27	30.90	-4.0X
KRA	13.16	13	eP	27	35.10	0.2
	1.5s	195.00nm			6.0mb	
Z	12s	4.60um				
E	12s	12.10um				
		e		27	44.90	
		e		27	54.00	
		e		28	08.10	
		e		30	14.00	
RJF	13.16	312	eP	27	33.90	-1.1
	1.4s	243.95nm			6.1mb	
Z	19s	10.50um				
HOF	13.26	350	eP	27	36.50	0.2
BTH	13.29	301	eP	27	39.00	2.2
		e		27	42.00	
		i(PP)		27	50.00	
		i(sPPP)	28	13.00		
		i	28	23.80		
		iS	29	13.00		
TCF	13.33	316	eP	27	36.00	-1.3
JAU	13.37	300	P	27	39.64	1.6
LFF	13.44	309	eP	27	38.40	-0.3
	1.3s	249.10nm			6.1mb	
LHE	13.50	300	P	27	39.66	0.0
ESCF	13.53	300	P	27	40.07	0.1
KSP	13.55	2	eP	27	43.00	2.8
	1.2s	135.00nm			5.8mb	
		id		27	58.50	

CFA 0.98 77 ePd 54 32.30 0.3
S 54 49.90
RTRS 1.66 357 iPc 54 39.20 0.1
eS 55 02.00
S.D. = 0.5 on 4 of 4 obs.

% DEC 13, 1990 08h 08m 28.94 ± 1.1s
41.096 N ± 17.2km 24.862 E ± 6.6km
DEPTH = 10.0km (geophysicist)
GREECE-BULGARIA BORDER REGION (363)

ALN 0.92 102 iP 08 46.40 -0.1
eS 08 58.92
SRS 0.96 272 eP 08 46.77 -0.4
eS 08 59.92
OUR 1.01 222 eP 08 48.20 0.1
SOH 1.17 257 eP 08 50.68 -0.2
KNT 1.48 273 eP 08 56.32 0.6
iS 09 16.32
S.D. = 0.6 on 5 of 5 obs.

DEC 13, 1990 08h 28m 55.76 ± 0.33s
31.573 N ± 6.8km 77.438 E ± 5.2km
DEPTH = 33.0km (normal)
4.7mb (15 obs.)
NORTHERN INDIA (308)
MD 4.2 (NDI).

NDI 2.89 184 iPn 29 40.00 -0.4
GKN 7.20 118 P 30 42.00 0.5
DMN 7.76 119 P 30 49.60 0.2
KKN 7.79 117 P 30 48.80 -1.1
PKI 8.00 118 P 30 52.60 -0.4
GUN 8.19 114 P 30 54.80 -0.9
QUE 9.12 264 eP 31 02.50 -5.8X
eS 32 50.00

BOM 13.29 199 eP 32 15.30 10.6X
eS 34 20.00
POO 13.38 195 iPd 32 00.30 -5.6X
0.5s 28.17nm 5.5mb
iS 36 50.00

HYB 14.13 176 iP 32 08.00 -7.7X
0.8s 57.70nm 5.3mb
eS 35 04.00
e 35 17.00

WMO 14.66 31 P 32 21.20 -1.4
MAIO 15.62 292 eP 32 35.00 -0.1
GBA 17.88 180 P 32 57.00 -6.7X
S 36 03.00

GTA 19.80 61 iPc 33 27.00 0.7
0.6s 10.00nm 4.3mb
KOD 21.23 180 eP 33 34.00 -7.6X
CHG 23.19 118 eP 34 01.50 1.0

BDT 24.21 121 eP 34 11.50 1.1
GYA 26.02 94 P 34 31.00 3.3X
XAN 26.52 76 P 34 30.50 -1.7
BTO 27.70 62 eP 34 45.20 2.2

TIY 29.32 68 eP 34 58.30 0.7
CN2 39.39 58 Pc 36 24.60 0.6
KAF 44.63 329 eP 37 09.70 3.2X
HFS 50.20 324 eP 37 48.70 -1.4

0.4s 5.50nm 4.9mb
NB2 51.49 325 P 37 58.40 -1.6
0.7s 4.80nm 4.6mb
BSF 54.86 309 eP 38 25.70 0.5

0.6s 3.60nm 4.6mb
HAU 55.12 309 eP 38 27.60 0.6
0.7s 6.60nm 4.8mb
LPG 55.32 306 eP 38 29.60 0.8

0.6s 5.40nm 4.8mb
LBF 56.90 308 eP 38 39.80 0.0
0.8s 8.05nm 4.8mb
LOR 56.92 309 eP 38 40.80 0.9

SMF 57.06 308 eP 38 41.40 0.5
0.6s 6.75nm 4.9mb
SSF 57.20 309 eP 38 42.20 0.4
AVF 57.36 308 eP 38 42.80 -0.1

0.8s 3.35nm 4.4mb
TCF 58.24 308 eP 38 50.00 0.8
0.8s 7.40nm 4.8mb
MBC 71.92 4 eP 40 17.00 -0.1

0.9s 8.00nm 4.7mb
WB5 74.80 125 eP 40 34.90 0.1
WRA 74.82 125 P 40 35.00 0.1
0.5s 3.60nm 4.6mb
FBA 77.59 18 P 40 50.00 0.2

INK 77.79 11 eP 40 51.00 0.3

YKA 85.76 6 eP 41 31.50 -1.0
0.6s 3.00nm 4.7mb
ZOBO 145.20 288 ePKP 48 31.00 -1.9
LPB 145.32 287 ePKP 48 37.00 4.1X
CNCB 145.37 287 PKP 48 36.00 2.9X
S.D. = 1.0 on 33 of 43 obs.

DEC 13, 1990 08h 37m 28.80 ± 0.33s
23.736 N ± 5.3km 121.706 E ± 7.5km
DEPTH = 10.0km (geophysicist)
5.0mb (22 obs.) 4.5Msz (2 obs.)
TAIWAN (244)
Felt in the Huolien area.

ANP 1.45 353 iP 37 54.50 -0.7
SSE 7.35 357 P 39 16.00 -2.7
0.5s 10.00nm 5.2mb
Z 12s 4.50um 4.8Msz
N 10s 4.50um
E 10s 1.80um

pP 39 18.90
sP 39 21.00
S 40 37.50

BAG 7.36 188 eP 39 21.00 1.8
QCP 9.07 184 eP 39 43.00 0.3
BJI 16.91 345 eP 41 28.50 1.5
1.0s 18.00nm 4.2mb

KMI 17.33 278 Pd 41 36.50 3.9X
eS 45 13.00
S 45 15.00

MAT 19.11 44 eP 41 55.00 0.6
1.0s 10.00nm 4.0mb
LZH 19.74 313 eP 42 01.00 -0.9

1.5s 57.00nm 4.7mb
Z 12s 4.32um 4.4Msz
E 10s 2.60um

pP 42 09.00 31kmX
sP 42 14.00
PP 42 23.00

eS 45 36.00
sS 54 48.00
CHG 21.76 261 eP 42 22.80 0.2

1.2s 28.52nm 4.6mb
GUN 32.44 285 P 44 02.00 0.2
PKI 32.87 284 P 44 05.90 0.4

KKN 32.98 285 P 44 05.90 -0.4
DMN 33.14 285 P 44 08.00 0.3
GKN 33.54 285 P 44 11.90 0.7

PMG 41.28 140 eP 45 07.00 -9.1X
WB5 45.07 163 eP 45 45.50 -1.4
WRA 45.13 163 P 45 46.00 -1.4

0.6s 5.10nm 4.6mb
ASPA 48.58 165 eP 46 13.80 -0.7
1.2s 8.90nm 4.7mb

WARB 49.85 174 eP 46 23.00 -1.2
MAIO 54.48 299 eP 47 01.00 2.0
TTA 65.66 30 eP 48 15.20 0.0

SVW 66.01 32 ePd 48 19.50 2.1
FBA 68.99 27 eP 48 37.20 1.1
PMR 69.03 31 ePd 48 35.70 -0.6

0.6s 9.80nm 5.2mb
INK 73.46 22 eP 49 03.00 0.2
MBC 73.59 13 eP 49 02.50 -1.0

HFS 78.19 331 eP 49 28.10 -1.6
0.5s 1.10nm 4.2mb
NB2 78.84 332 P 49 33.20 -0.2

0.9s 5.30nm 4.6mb
YKA 83.20 23 eP 49 55.50 -0.8
0.7s 6.20nm 4.9mb

PNT 89.15 35 eP 50 27.00 1.1
0.9s 16.00nm 5.3mb
LPG 89.28 320 eP 50 27.00 0.1

0.7s 6.60nm 5.0mb
LOR 89.91 323 eP 50 28.80 -0.7
1.1s 9.75nm 5.0mb
Z 19s 0.20um 4.6Msz

LBF 90.01 323 eP 50 29.40 -0.6
0.9s 12.30nm 5.1mb
SSF 90.23 323 eP 50 30.60 -0.4

1.0s 10.00nm 5.0mb
SMF 90.29 322 eP 50 30.90 -0.3
0.8s 12.10nm 5.2mb

AVF 90.47 323 eP 50 31.80 -0.3
0.7s 6.05nm 5.0mb
MAF 91.25 323 eP 50 35.80 0.1

0.8s 10.75nm 5.2mb

TCF 91.41 323 eP 50 36.30 -0.1
CAF 92.31 322 eP 50 41.10 0.5
0.9s 9.00nm 5.2mb
RJF 92.39 322 eP 50 41.40 0.5
1.0s 20.00nm 5.5mb
Z 20s 0.13um 4.4Msz

SES 92.72 31 eP 50 44.00 1.6
FFC 93.35 24 iPc 50 46.10 0.9
0.8s 13.00nm 5.4mb
LRM 95.11 35 eP 50 55.70 1.9
ZOBO 168.15 53 ePKP 57 36.00 -1.9

e 58 46.00
S.D. = 1.1 on 42 of 44 obs.

& DEC 13, 1990 09h 01m 55.00s
37.860 N 122.007 W
DEPTH = 6.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.3 (BRK). Felt at
Alamo.

BKS 0.18 275 iP 01 58.70 -0.1
iS 02 02.00

BRK 0.20 274 iPc 01 59.10 -0.1
iS 02 02.60
ZSP 0.21 293 iPc 01 59.30 -0.1
MHC 0.59 151 ePc 02 06.70 -0.2

i 02 11.30
ARN 0.63 143 eP 02 07.30 -0.4
GCC 0.83 179 eP 02 10.70 -0.7

e 02 21.30
iS 02 22.60
NWRM 0.92 311 eP 02 11.40 -1.4
SAO 1.18 158 eP 02 15.90 -1.5

CMB 1.29 82 eP 02 17.80 -1.6
eS 02 34.90
PRS 1.61 161 e(P) 02 21.50 -2.5
FRI 2.02 115 e(P) 02 28.50 -1.5

eS 02 53.80
11 obs. associated

DEC 13, 1990 10h 13m 20.59 ± 0.44s
35.500 N ± 7.1km 140.930 E ± 6.2km
DEPTH = 23.1km (3 depth phases)
5.0mb (17 obs.)

NEAR EAST COAST OF HONSHU, JAPAN(228)
KAKJ 0.93 319 iPd 13 38.10 0.1
S 13 47.30

CHJJ 1.67 290 iPd 13 49.20 0.5
NIJJ 2.33 319 iPd 13 58.80 0.6
MAT 2.44 296 eP 14 01.00 1.2

eS 14 27.00
IIDJ 2.46 270 iPd 14 02.30 2.1
MTMJ 2.75 294 iPd 14 05.50 1.1

YAMJ 2.76 345 P 14 05.60 1.2
OFUJ 3.62 9 iP+ 14 17.60 1.0
eS 14 56.60

TSRJ 4.04 272 P 14 25.20 2.8
WKYJ 4.57 255 P 14 32.20 2.1
AOMJ 5.07 355 eP 14 38.10 1.0

TKSJ 5.86 257 P 14 49.70 1.4
YONJ 6.11 269 eP 14 53.10 1.3
SHK 6.84 264 eP 15 05.00 2.9

BJI 20.06 290 eP 17 48.50 -6.5X
1.5s 39.00nm 4.5mb
LZH 29.97 282 Pd 19 27.00 -2.6

2.0s 54.00nm 5.0mb
Z 27s 0.79um 4.2MszX
E 11s 0.28um

pP 19 34.00 24km
KMI 34.37 263 Pd 20 05.50 -2.7
CHG 40.55 257 eP 20 58.90 -1.0

GUN 46.93 277 P 21 50.40 -1.4
PKI 47.45 277 P 21 54.40 -1.5
0.8s 15.00nm 5.1mb

KKN 47.47 277 P 21 54.60 -1.3
0.8s 32.00nm 5.4mb
DMN 47.68 277 P 21 56.40 -1.2

GKN 47.90 278 P 21 57.40 -1.8
MTN 48.97 193 iPc 22 08.70 1.5
0.3s 20.00nm 5.6mb
FBA 50.61 32 (P) 22 20.00 0.7

NDI 53.59 282 eP 22 40.00 -2.1
WB5 55.43 188 iPc 22 55.90 0.4
WRA 55.49 188 P 22 56.00 0.0

0.4s 8.10nm 5.1mb

13d 10h

INK 55.93 27 eP 22 59.00 0.3
 HYB 57.78 269 ePc 23 10.80 -1.8
 1.0s 40.00nm 5.4mb
 MBC 58.11 16 ePc 23 13.70 -0.3
 0.5s 3.00nm 4.6mb
 ASPA 59.22 188 iPc 23 22.50 0.2
 0.5s 10.50nm 5.2mb
 GBA 60.71 266 P 23 31.60 -1.2
 KOD 62.56 263 eP 23 44.30 -1.3
 WARB 62.82 194 eP 23 48.00 1.3
 KEV 64.74 339 eP 23 55.00 -3.8X
 YKA 65.33 30 eP 24 02.40 -0.3
 0.7s 2.20nm 4.4mb
 SOD 66.23 337 iP 24 07.20 -1.2
 KAF 69.49 333 iP 24 27.10 -1.7
 0.4s 3.90nm 4.9mb
 NUR 71.12 332 eP 24 37.20 -1.5
 SES 73.59 39 ePc 24 54.40 0.8
 FFC 75.21 32 iPc 25 03.50 0.7
 0.6s 10.00nm 5.0mb
 HFS 75.32 336 eP 25 01.70 -1.7
 0.4s 4.10nm 4.8mb
 Z 17s 0.19um 4.5MsZ
 LR 58 59.00
 NB2 75.45 337 P 25 03.00 -1.2
 0.7s 9.20nm 4.9mb
 LRM 75.52 44 ePc 25 06.80 1.7
 TNP 77.12 52 P 25 16.10 1.9
 pP 25 22.90 22km
 FRB 78.35 13 eP 25 20.00 -0.1
 KRA 80.14 326 eP 25 30.00 -0.1
 e 25 48.00 65kmX
 KSP 81.20 328 eP 25 35.00 -0.7
 BRG 82.17 329 eP 25 40.10 -0.6
 0.8s 14.00nm 5.1mb
 CLL 82.23 330 iPc 25 40.10 -0.9
 1.2s 19.00nm 5.0mb
 i 25 47.50 23km
 e 25 59.00
 MKT 83.96 304 eP 25 50.00 -0.4
 GRF 84.20 330 eP 25 51.70 0.5
 PRNI 84.44 303 eP 25 52.00 -0.8
 MBH 84.87 303 eP 25 54.00 -1.0
 VAY 84.93 318 eP 25 53.00 -2.0
 ALO 85.88 49 eP 26 02.00 1.9
 0.9s 3.57nm 4.6mb
 OHR 86.03 319 eP 26 11.80 11.2X
 SPA 125.32 180 ePKP 32 18.00 -2.2
 0.7s 7.42nm
 ZOBO 147.78 61 PKP 33 05.00 1.7
 0.9s 16.44nm
 LPB 147.98 61 PKP 33 09.00 5.6X
 CNCB 148.24 62 ePKP 33 06.00 2.0
 i 33 10.00
 CCH 149.93 60 PKP 33 12.70 6.4X
 SIV 152.36 51 PKP 33 11.00 1.4
 i 33 17.20

S.D. = 1.5 on 59 of 64 obs.

? DEC 13, 1990 11h 28m 58.29±1.05s
 14.769 S ±32.9km 71.350 W ±14.4km
 DEPTH = 147.7 ±27.2 km
 4.0mb (2 obs.)

PERU (116)

ARE 1.69 185 iPd 29 29.40 -1.0
 ZOBO 3.45 116 iPc 29 53.20 0.7
 i 30 34.00
 LPB 3.59 120 P 29 55.00 0.8
 CNCB 3.83 122 Pc 29 59.00 1.5
 CCH 5.64 118 P 30 21.20 -0.2
 NNA 6.02 297 eP 30 26.30 0.1
 0.6s 12.00nm 4.3mb
 iS 31 33.70
 SIV 9.99 98 P 31 17.00 -2.3
 YKA 84.10 341 eP 41 13.80 0.5
 0.7s 0.70nm 3.6mb

S.D. = 1.6 on 8 of 8 obs.

? DEC 13, 1990 12h 23m 51.76±2.04s
 10.342 S ±23.4km 121.352 E ±33.9km
 DEPTH = 33.0km (normal)

SAVU SEA (288)

MTN 9.90 106 eP 26 14.50 -0.4
 0.3s 105.00nm 6.6mb
 eS 28 04.00

TSM 14.83 347 eP 27 21.00 0.0
 0.2s 97.90nm 5.8mb
 e 33 08.00
 WB5 15.73 129 iPc 27 33.80 1.1
 eS 30 37.10
 WARB 16.53 163 eP 27 49.50 6.6X
 ASPA 17.86 139 eP 27 58.70 -0.8
 iS 31 32.90

S.D. = 1.4 on 4 of 5 obs.

DEC 13, 1990 12h 26m 40.75±0.13s
 1.116 N ±3.3km 124.034 E ±3.6km
 DEPTH = 33.0km (normal)
 6.0mb (65 obs.) 5.7MsZ (30 obs.)
 MINAHASSA PENINSULA (265)

Ms 5.5 (BRK). Mo=3.0×10¹⁸ Nm

(PPT).

FAULT PLANE SOLUTION: P-Waves

NP1: Strike=139 Dip=67 Slip= 123

NP2: 260 39 38

Principal Axes:

T Plg=55 Azm= 92

P 16 205

Comment: The focal mechanism is

poorly controlled and

corresponds to reverse

faulting with a moderate left-

lateral strike-slip component.

The preferred fault plane is

NP2.

RADIATED ENERGY

No. of sto: 4 Focal mech. M

Energy 1.5±0.7×10¹⁴ Nm

MOMENT TENSOR SOLUTION

Dep 23 No. of sto: 10

Moment Tensor: Scale 10×18 Nm

Mrr= 2.00 Mtt=-0.70

Mff=-1.30 Mrt=-0.86

Mrf=-0.47 Mtf= 1.62

Principal axes:

T Vol= 2.50 Plg=63 Azm=144

N 0.15 27 318

P -2.65 3 49

Best Double Couple: Mo=2.6×10¹⁸

NP1: Strike=165 Dip=49 Slip= 127

NP2: 296 53 55

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 15S, 35C

Centroid Location:

Origin Time 12:26:46.0 0.7

Lat 1.38N 0.05 Lon 124.01E 0.04

Dep 26.6 2.0 Half-duration 4.1

Moment Tensor: Scale 10×18 Nm

Mrr= 1.43 0.04 Mtt=-0.39 0.04

Mff=-1.04 0.05 Mrt= 0.00 0.09

Mrf=-0.25 0.09 Mtf= 0.73 0.03

Principal Axes:

T Vol= 1.46 Plg=83 Azm=111

N 0.07 6 328

P -1.53 4 237

Best Double Couple: Mo=1.5×10¹⁸

NP1: Strike=321 Dip=41 Slip= 81

NP2: 153 49 97

DAV 6.13 14 eP- 28 13.00 1.6

KKM 9.21 302 ePc 28 55.00 0.5

0.5s 53.90nm 6.0mb

e 29 25.00

e 34 32.20

MTN 15.56 153 eP 30 20.00 0.6

0.3s 122.00nm 5.6mb

BAG 15.57 348 eP+ 30 20.00 0.2

1.2s 468.75nm 5.6mb

KGM 20.73 273 ePc 31 22.50 1.4

1.0s 665.20nm 6.0mb

e 31 49.10 144kmX

MNDI 20.88 110 eP 31 23.00 0.0

KLM 22.46 275 eP 31 41.00 2.4

QIZ 22.59 323 P 31 40.00 0.1

N 15s 22.30um

E 15s 10.30um

SP 31 53.00

PP 32 13.00

YYYY 23.08 109 eP 31 47.00 2.1

HKC 23.14 336 iP 31 47.70 2.5

IPM 23.23 279 ePd 31 48.50 2.3

1.0s 470.90nm 5.9mb
 e 32 31.80
 e 33 51.40
 TATO 23.85 354 ePc 31 50.65 -1.3
 ANP 24.05 354 iPc 31 54.00 -0.1
 eS 36 04.00
 PJG 24.06 58 eP 31 54.50 0.4
 GUA 24.07 58 eP 31 54.50 0.2
 1.7s 1230.77nm 6.2mb
 eS 36 22.00
 SNG 24.11 285 iPc 31 57.20 2.6
 1.4s 1479.07nm 6.3mb
 eS 36 19.50
 GZH 24.18 335 Pc 31 57.00 1.7
 1.0s 440.00nm 6.0mb
 Z 16s 23.40um 5.8MsZ
 N 16s 20.50um
 E 12s 5.40um
 iS 36 15.00
 OZH 24.26 348 iPc 31 57.50 1.4
 Z 16s 11.90um 5.5MsZ
 N 15s 8.70um
 SP 32 10.50
 PMG 25.29 115 iPc 32 06.00 0.0
 1.0s 760.00nm 6.2mb
 PCT 26.10 302 ePc 32 15.50 2.0
 0.5s 6.40nm 4.5mb X
 QIS 26.39 146 iPc 32 15.70 -0.5
 ASPA 26.44 159 iPc 32 16.00 -0.6
 Z 20s 11.89um 5.4MsZ
 eS 36 43.90
 LOE 27.26 308 eP 32 25.00 0.8
 NST 27.66 303 iPc 32 29.50 1.7
 RAB 28.61 101 iPc+ 32 38.00 1.6
 0.5s 1971.83nm 7.1mb X
 BDT 29.38 304 eP 32 41.10 -2.2
 1.1s 467.70nm 6.1mb
 SSE 29.94 355 Pd 32 46.50 -1.6
 2.2s 310.00nm 5.7mb
 Z 20s 9.70um 5.4MsZ
 N 11s 1.45um
 E 13s 5.95um
 GYA 30.23 328 iPc 32 52.00 1.0
 1.2s 300.00nm 6.0mb
 Z 18s 12.70um 5.6MsZ
 N 14s 8.80um
 E 14s 8.00um
 PP 33 48.00
 S 37 50.00
 CHG 30.24 307 iPc+ 32 51.90 0.8
 1.0s 177.50nm 5.8mb
 eS 37 52.00
 CHTO 30.24 307 iPc 32 51.38 0.3-
 e 32 53.70 8kmX
 ed 32 56.85
 ePcP 35 50.89
 CTA 30.31 135 iPc+ 32 51.00 -0.6
 1.3s 311.54nm 5.9mb
 iS 37 55.00
 WHN 30.68 343 Pc 32 56.50 1.9
 5.0s 1500.00nm 6.0mb X
 Z 18s 11.50um 5.6MsZ
 N 16s 11.90um
 E 16s 8.40um
 S 38 00.00
 NJ2 31.16 351 Pc 32 59.50 0.7
 1.5s 400.00nm 6.0mb
 Z 20s 4.90um 5.2MsZ
 N 15s 4.70um
 PP 33 11.20
 iS 38 01.00
 KMI 31.50 321 iPc 33 03.96 1.7
 2.0s 500.00nm 6.0mb
 Z 14s 17.20um 5.9MsZ
 N 13s 6.60um
 E 13s 7.30um
 ePd 33 08.76 17kmX
 esPd 33 11.41
 eS 38 13.56
 e 39 03.06
 FORR 32.02 173 eP 33 04.00 -2.5
 0.4s 129.00nm 6.2mb
 OLP 33.73 146 iPd 33 21.20 -0.2
 0.6s 76.00nm 5.8mb
 e 34 13.00 257kmX
 TKSJ 34.01 15 P 33 18.20 -5.6X
 SHK 34.21 13 ePc 33 24.90 -0.6

GUN 45.19 310 P 49 18.80 0.0
 PKI 45.39 309 P 49 20.00 -0.3
 1.1s 48.00nm 5.3mb
 KKN 45.59 309 P 49 21.60 -0.2
 1.0s 56.00nm 5.4mb
 DMN 45.64 309 P 49 22.40 0.2
 1.2s 118.00nm 5.7mb
 GKN 46.19 309 P 49 26.00 -0.5
 HYB 47.52 293 eP 49 36.50 -0.4
 GBA 47.71 287 Pd 49 37.30 -1.1
 0.7s 6.10nm 4.7mb
 NDI 52.38 306 iPd 50 04.50 -9.4X
 0.5s 14.08nm 5.2mb
 INK 93.64 21 eP 54 23.00 6.6X
 BUL 95.40 250 iPd 54 19.40 -6.2X
 1.0s 10.00nm 5.2mb
 FFC 112.85 27 ePdiff 56 02.00 19.2X
 1.3s 36.00nm
 BW06 115.16 41 Pdiff 55 54.00 0.3
 CHCH 144.53 159 ePKP 00 37.50 -0.3
 PEL 145.23 158 ePKPc 00 38.00 -1.0
 2.0s 117.65nm
 S.D. = 1.0 on 24 of 29 obs.

* DEC 13, 1990 13h 00m 05.97±0.60s
 1.109 N ±14.9km 124.006 E ±18.6km
 DEPTH = 33.0km (normal)
 5.1mb (3 obs.)

MINAHASSA PENINSULA (265)

WB5 23.20 155 eP 05 10.00 -1.1
 OIS 26.40 145 iPd 05 41.00 -0.5
 ASPA 26.44 159 eP 05 41.30 -0.6
 MAT 37.63 19 (P) 07 18.00 -1.7
 LZH 39.51 334 eP 07 37.00 1.4
 1.5s 62.00nm 5.1mb
 BWA 42.12 149 eP 07 43.00 20kmX
 CAN 43.12 150 eP 08 06.00 1.0
 GUN 45.17 310 P 08 22.80 0.7
 PKI 45.37 309 P 08 24.00 0.3
 KKN 45.58 309 P 08 25.60 0.4
 DMN 45.62 309 P 08 26.20 0.6
 GKN 46.18 309 P 08 30.20 0.4
 1.0s 42.00nm 5.3mb
 HYB 47.52 293 eP 08 40.00 -0.5
 GBA 47.72 287 Pd 08 39.60 -2.3
 0.7s 3.10nm 4.4mb
 S.D. = 1.3 on 14 of 14 obs.

& DEC 13, 1990 13h 53m 08.80s
 40.480 N 125.555 W
 DEPTH = 18.0km
 3.8mb (2 obs.)
 OFF COAST OF NORTHERN CALIFORNIA(34)
 <BRK>. ML 3.5 (BRK).

FHC 1.24 74 iPc 53 29.20 -2.0
 iS 53 43.60
 WDC 2.30 87 ePc 53 43.90 -2.6
 eS 54 08.20
 LTCM 2.64 95 eP 53 49.60 -1.7
 LBFM 2.91 71 eP 53 54.00 -1.3
 MIN 3.02 91 iPc 53 54.50 -2.3
 iS 54 32.00
 ORV 3.25 105 eP 53 59.10 -0.8
 iS 54 34.10
 BRK 3.65 134 eP 54 03.10 -2.5
 BKS 3.66 134 eP 54 03.30 -2.5
 MHC 4.37 135 e(P) 54 13.20 -2.8
 GCC 4.43 140 eP 54 13.60 -3.0
 ARN 4.43 134 eP 54 13.00 -3.7
 CMB 4.70 120 e(P) 54 16.90 -3.7
 SAO 4.91 138 eP 54 19.40 -4.1
 FRI 5.75 125 eP 54 33.30 -2.0
 LRM 10.96 57 eP 55 48.30 0.3
 FFC 21.21 40 eP 57 56.00 0.5
 1.5s 38.00nm 4.6mb
 YKA 23.01 13 eP 58 19.50 6.2
 1.0s 0.50nm 3.0mb
 17 obs. associated

% DEC 13, 1990 14h 01m 23.12±0.73s
 10.995 N ±0.1km 60.943 W ±11.4km
 DEPTH = 33.0km (normal)

TRINIDAD (98)

MD 3.7(TRN).

PIG 0.19 31 iP 01 29 82 0.2
 eS 01 34 66
 BOT 0.28 52 iP 01 30 35 -0.3
 eS 01 36 24
 TBH 0.52 194 eP 01 34.18 0.1
 eS 01 42 25
 TRN 0.57 233 iPc 01 34.35 -0.3
 iS 01 42.54
 TCE 0.85 250 eP 01 38 92 0.3
 eS 01 50.51
 SVB 2.28 352 eP 01 58.14 -1.1
 eS 02 24.97
 SLB 2.82 358 eP 02 00.00 1.2
 eS 02 40.50
 S.D. = 0.9 on 7 of 7 obs.

? DEC 13, 1990 14h 38m 47.86±0.89s
 1.295 N ±24.2km 124.339 E ±28.4km
 DEPTH = 33.0km (normal)
 4.6mb (2 obs.)

MINAHASSA PENINSULA (265)

WB5 23.23 155 eP 43 51.50 -1.7
 IPM 23.51 278 ePc 43 56.30 0.3
 OIS 26.37 146 iPd 44 23.00 -0.1
 ASPA 26.50 160 eP 44 23.00 -1.3
 CHG 30.38 307 eP 45 00.00 0.6
 LZH 39.49 334 eP 46 18.50 1.2
 1.5s 42.00nm 5.0mb
 pP 46 23.50 17kmX
 BWA 42.11 150 eP 46 40.60 1.9
 CAN 43.11 150 eP 46 48.10 1.3
 GUN 45.31 309 P 47 04.40 -0.7
 PKI 45.51 309 P 47 05.40 -1.3
 KKN 45.72 309 P 47 07.60 -0.6
 DMN 45.77 308 P 47 08.00 -0.7
 GKN 46.32 309 P 47 11.60 -1.3
 HYB 47.76 292 eP 47 30.00 5.8X
 GBA 47.98 287 P 47 28.30 2.4
 0.5s 1.60nm 4.3mb
 S.D. = 1.4 on 14 of 15 obs.

% DEC 13, 1990 14h 42m 12.56±0.87s
 41.151 N ±9.0km 28.439 E ±6.4km
 DEPTH = 5.0km (geophysicist)

TURKEY (366)

MD 2.3 (ISK).

CTT 0.01 243 iPg 42 12.70 -0.9
 iSg 42 14.70
 ISK 0.48 100 iPg 42 22.20 0.1
 DMK 0.84 323 iPg 42 29.90 0.6
 eSg 42 41.90
 KCT 0.90 184 ePn 42 31.00 0.7
 HRT 0.99 109 iPn 42 31.20 -0.6
 S.D. = 1.0 on 5 of 5 obs.

* DEC 13, 1990 15h 05m 25.72±1.32s
 28.014 N ±8.4km 139.989 E ±11.9km
 DEPTH = 404.3 ±14.4 km
 4.0mb (5 obs.)

BONIN ISLANDS REGION (212)

MAT 8.64 350 iPd 07 28.80 -0.1
 0.5s 10.56nm 4.4mb
 eS 09 06.00
 CHG 38.61 265 eP 12 14.00 0.5
 GUN 47.45 283 P 13 24.20 0.2
 WB5 47.92 187 eP 13 27.50 0.4
 PKI 47.93 283 P 13 28.00 0.3
 WRA 47.99 187 P 13 27.00 -0.6
 0.3s 2.70nm 4.1mb
 KKN 47.99 283 P 13 28.20 0.2
 DMN 48.19 283 P 13 29.60 0.1
 GKN 48.49 284 P 13 30.60 -1.1
 ASPA 51.71 187 iPd 13 55.50 0.1
 YKA 72.26 28 eP 16 09.90 0.4
 0.6s 0.50nm 3.3mb
 KAF 75.80 334 eP 16 30.00 0.5
 HFS 81.80 336 eP 17 01.20 -0.3
 0.4s 2.10nm 4.2mb
 NB2 82.03 337 P 17 02.20 -0.6
 0.6s 1.00nm 3.7mb
 TNP 82.39 51 P 17 12.00 6.8X
 S.D. = 0.6 on 14 of 15 obs.

* DEC 13, 1990 16h 06m 48.17±0.94s

23.849 N ±10.1km 121.598 E ±11.9km
 DEPTH = 10.0km (geophysicist)
 4.2mb (3 obs.)

TAIWAN (244)

ML 4.4 (BJI). Felt in the
 Huolien area.

ANP 1.33 357 iP 07 14.50 1.7
 eS 07 28.50
 QZH 2.95 292 Pn 07 36.60 0.7
 Sn 08 10.50
 SSE 7.23 357 eP 08 34.00 -2.4
 Z 11s 2.30um
 N 10s 2.04um
 GZH 7.62 266 eP 08 39.10 -2.8
 NJ2 8.52 344 Pd 08 54.20 -0.3
 Z 10s 1.60um
 SP 09 02.90
 WHN 9.28 318 eP 09 05.00 0.1
 Z 10s 1.90um
 N 10s 1.70um
 E 10s 2.70um
 GYA 13.77 284 P 10 08.00 2.0
 Z 10s 1.30um
 XAN 15.03 315 P 10 22.50 0.2
 E 11s 1.40um
 TIY 15.89 333 eP 10 40.00 6.5X
 N 10s 0.10um
 E 10s 0.90um
 CD2 17.32 298 eP 10 55.00 3.3X
 CHG 21.68 261 eP 11 49.00 7.8X
 GTA 24.09 315 eP 12 10.40 5.6X
 1.4s 10.00nm 4.2mb
 Z 10s 1.30um 4.7mszX
 E 10s 0.90um
 GUN 32.32 285 P 13 24.80 4.7X
 KKN 32.85 285 P 13 25.00 0.4
 GKN 33.42 285 P 13 29.40 0.0
 WB5 45.21 163 eP 15 05.60 -1.8
 WRA 45.26 163 P 15 10.00 2.2
 0.5s 0.90nm 4.0mb
 INK 73.39 22 eP 18 22.00 0.2
 YKA 83.13 23 eP 19 15.10 -0.2
 1.0s 2.10nm 4.3mb
 S.D. = 1.6 on 14 of 19 obs.

? DEC 13, 1990 16h 27m 01.04±4.87s
 21.988 S ±15.1km 175.981 W ±18.6km
 DEPTH = 209.9 ±44.8 km
 4.7mb (7 obs.)

TONGA ISLANDS (173)

DZM 16.30 266 iPc 30 41.20 1.2-
 PGZ 19.70 198 eP 31 13.90 -2.2
 0.4s 19.00nm 5.0mb
 THZ 21.82 203 eP 31 36.70 -0.4
 KHZ 22.18 201 P 31 40.30 -0.1
 0.3s 3.00nm 4.3mb
 LTZ 22.94 203 eP 31 50.00 2.1
 CTA 35.24 266 iPd 33 38.00 0.6
 0.9s 30.67nm 4.9mb
 PMG 37.52 284 eP 33 56.00 -0.6
 ASPA 46.03 258 iPd 35 05.40 -0.2
 Z 21s 0.06um 3.5mszX
 eS 41 37.40
 WB5 46.26 263 eP 35 06.90 -0.6
 WRA 46.27 263 P 35 06.00 -1.6
 0.6s 11.30nm 4.5mb
 FORR 50.41 248 iPd 35 39.30 0.1
 0.4s 19.00nm 5.0mb
 SPA 68.15 180 iPc 37 44.30 4.0X
 0.8s 12.50nm 4.7mb
 MAT 72.52 323 eP 38 05.00 -1.7
 TNP 81.30 43 P 38 55.40 0.0
 FBA 89.30 12 P 39 33.90 -0.1
 CHG 92.51 289 eP 39 52.30 2.5
 YKA 97.08 24 eP 40 09.40 -0.2
 0.7s 1.10nm 4.3mb
 SOB1 126.14 120 (PKP) 45 42.00 1.2
 KSP 149.64 345 ePKP 46 28.50 6.7X
 CLL 149.91 349 iPKPc 46 29.00 6.8X
 0.9s 19.00nm
 BRG 150.14 347 iPKP 46 29.50 6.9X
 0.9s 14.00nm
 S.D. = 1.4 on 17 of 21 obs.

? DEC 13, 1990 16h 29m 02.93±9.73s

13d 16h

40.663 N \pm 12.2km 29.978 E \pm 64.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.2 (ISK).

HRT 0.28 304 iPg 29 08.70 -0.2
 iSg 29 12.20
 YLV 0.47 258 iPg 29 12.30 -0.2
 iSg 29 20.20
 IZI 0.50 230 iPg 29 12.70 -0.5
 iSg 29 20.90
 KCT 1.30 252 iPn 29 28.00 0.9
 S.D. = 1.1 on 4 of 4 obs.

* DEC 13, 1990 17h 28m 40.62 \pm 0.53s
 23.706 N \pm 8.7km 121.773 E \pm 9.8km
 DEPTH = 10.0km (geophysicist)
 4.3mb (3 obs.)

TAIWAN (244)
 Felt in the Hualien area.

ANP 1.49 351 eP 29 07.70 0.2
 eS 29 24.00
 BJI 16.96 345 eP 32 49.00 9.6X
 LZH 19.81 313 eP 33 13.00 -1.4
 1.5s 23.00nm 4.3mb
 Z 12s 0.63um 3.6msz
 pP 33 18.00 19kmX
 eS 36 50.00
 sS 37 05.00
 eLg 39 03.00
 CHG 21.82 261 eP 33 37.00 2.0
 GUN 32.51 285 P 35 14.80 0.6
 PKI 32.93 285 P 35 17.00 -0.9
 KKN 33.04 285 P 35 18.60 -0.1
 DMN 33.20 285 P 35 20.00 -0.1
 GKN 33.61 285 P 35 23.20 -0.4
 WBS 45.03 163 eP 36 59.10 0.7
 WRA 45.08 163 P 36 59.00 0.2
 0.9s 2.70nm 4.2mb
 ASPA 48.54 165 eP 37 24.20 -1.8
 FBA 68.98 27 P 39 48.60 0.7
 INK 73.46 22 eP 40 15.00 0.3
 MBC 73.61 13 eP 40 15.00 -0.4
 YKA 83.20 23 eP 41 08.60 0.5
 0.9s 4.70nm 4.7mb
 S.D. = 1.0 on 15 of 16 obs.

* DEC 13, 1990 17h 47m 41.66 \pm 1.69s
 40.610 N \pm 12.4km 30.088 E \pm 11.1km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.2 (ISK).

GPA 0.36 152 ePg 47 49.00 -0.1
 HRT 0.38 304 iPg 47 49.70 0.2
 IZI 0.54 240 iPg 47 53.30 0.6
 YLV 0.55 266 iPg 47 52.10 -0.6
 iSg 48 01.60
 KCT 1.37 255 ePn 48 07.00 0.2
 S.D. = 0.7 on 5 of 5 obs.

* DEC 13, 1990 18h 59m 58.00s
 33.190 N 115.560 W
 DEPTH = 0.0km
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 3.1 (PAS). Felt at
 Nilond.

GLA 0.63 102 eP 00 10.30 -0.3
 IKP 0.71 221 eP 00 11.60 -0.6
 TPC 1.00 336 eP 00 16.30 -1.6
 PLM 1.10 279 ePc 00 17.70 -2.1
 PEC 1.51 298 eP 00 23.80 -2.6
 5 obs. associated

* DEC 13, 1990 19h 18m 21.39 \pm 0.47s
 0.863 N \pm 15.4km 123.880 E \pm 16.7km
 DEPTH = 33.0km (normal)
 4.7mb (2 obs.)

MINAHASSA PENINSULA (265)

WBS 23.04 154 eP 23 25.20 0.3
 IPM 23.12 280 ePd 23 30.90 5.2X
 PMG 25.33 114 eP 23 46.00 -1.0
 ASPA 26.26 159 eP 23 54.30 -1.3
 QIS 26.27 145 iPd 23 56.30 0.5

CHG 30 27 308 eP 24 31.90 -0.1
 KMI 31.60 321 eP 24 45.00 1.2
 LZH 39.67 334 eP 25 52.00 -0.4
 1.5s 62.00nm 5.1mb
 pP 25 56.50 15kmX
 BWA 41.97 149 eP 26 14.50 3.4X
 CAN 42.97 149 eP 26 20.80 1.6
 GUN 45.23 310 P 26 38.00 0.0
 PKI 45.43 309 P 26 39.70 0.1
 KKN 45.63 309 P 26 40.90 -0.1
 DMN 45.68 309 P 26 41.60 0.1
 GKN 46.23 309 P 26 45.60 -0.1
 HYB 47.50 293 eP 26 55.50 -0.2
 GBA 47.67 288 Pd 26 56.30 -0.7
 0.8s 2.60nm 4.3mb
 S.D. = 0.8 on 15 of 17 obs.

* DEC 13, 1990 19h 24m 31.07 \pm 0.48s
 1.238 N \pm 12.3km 124.133 E \pm 12.5km
 DEPTH = 33.0km (normal)
 4.9mb (4 obs.)

MINAHASSA PENINSULA (265)

IPM 23.31 279 ePd 29 39.00 1.7
 PMG 25.25 115 eP 29 56.00 0.0
 QIS 26.44 146 eP 30 06.00 -0.9
 ASPA 26.52 160 eP 30 07.30 -0.4
 CHG 30.25 307 eP 30 41.50 0.1
 e 34 14.50
 KMI 31.47 321 Pd 30 53.50 1.2
 MAT 37.47 19 eP 31 43.00 -0.4
 1.0s 8.00nm 4.5mb
 LZH 39.45 334 eP 32 01.50 1.3
 1.5s 85.00nm 5.3mb
 pP 32 08.50 24kmX
 BWA 42.16 150 eP 32 23.70 1.4
 CAN 43.16 150 eP 32 30.80 0.3
 GUN 45.19 309 P 32 47.40 0.0
 PKI 45.39 309 P 32 48.60 -0.3
 KKN 45.59 309 P 32 50.20 -0.2
 DMN 45.64 309 P 32 51.00 0.1
 GKN 46.20 309 P 32 54.80 -0.3
 HYB 47.59 293 eP 33 06.50 0.4
 GBA 47.80 287 Pd 33 05.80 -1.9
 0.7s 3.10nm 4.4mb
 NDI 52.39 306 iPc 33 40.60 -2.1
 0.5s 17.61nm 5.3mb
 S.D. = 1.1 on 18 of 18 obs.

* DEC 13, 1990 19h 28m 03.88 \pm 0.43s
 1.175 N \pm 9.9km 124.120 E \pm 11.0km
 DEPTH = 33.0km (normal)
 5.2mb (6 obs.)

MINAHASSA PENINSULA (265)

KKM 9.25 302 eP 30 17.00 -1.2
 KGM 20.81 273 eP 32 45.00 -0.1
 WBS 23.21 155 eP 33 08.00 -1.1
 IPM 23.31 279 ePc 33 12.00 2.0
 1.0s 31.20nm 4.8mb
 PMG 25.24 115 eP 33 29.50 0.9
 QIS 26.39 146 iPc 33 38.90 -0.4
 ASPA 26.46 160 eP 33 38.90 -1.1
 WARB 27.31 175 eP 33 47.00 -0.7
 BDT 29.42 304 eP 34 07.80 1.0
 FORR 32.07 174 iPd 34 27.80 -2.2
 0.4s 19.00nm 5.3mb
 MAT 37.53 19 (P) 35 14.00 -2.7
 ADE 38.46 161 iPd 35 24.90 0.3
 BJI 39.35 350 eP 35 33.00 1.1
 1.5s 26.00nm 4.8mb
 LZH 39.50 334 Pc 35 35.00 1.6
 1.5s 90.00nm 5.3mb
 sP 35 44.50
 BWA 42.12 150 iPc 35 57.00 2.2
 CAN 43.11 150 iPc 36 04.50 1.6
 TOO 43.33 155 eP 36 06.00 1.4
 GUN 45.22 309 P 36 20.80 0.4
 PKI 45.42 309 P 36 22.00 0.0
 KKN 45.62 309 P 36 23.60 0.1
 1.0s 48.00nm 5.4mb
 DMN 45.67 309 P 36 24.20 0.3
 GKN 46.22 309 P 36 28.20 0.1
 HYB 47.60 293 eP 36 38.50 -0.5
 GBA 47.81 287 P 36 40.00 -0.6
 NDI 52.42 306 iP 37 14.00 -1.7
 0.6s 20.00nm 5.3mb

MAIO 69.02 309 eP 39 09.00 0.3
 BUL 95.57 250 eP 41 21.20 -6.7X
 CNCB 160.42 143 ePKP 48 02.00 -0.8
 e 48 47.00
 LPB 160.56 142 ePKP 48 02.00 -0.7
 ZOBO 160.75 142 PKP 48 03.50 0.4
 SIV 164.41 161 ePKP 48 00.00 -6.0X
 S.D. = 1.2 on 29 of 31 obs.

DEC 13, 1990 19h 50m 17.88 \pm 0.15s
 23.722 N \pm 3.1km 121.627 E \pm 2.8km
 DEPTH = 10.0km (geophysicist)
 5.9mb (64 obs.) 6.3msz (22 obs.)
 TAIWAN (244)

Ms 6.4 (BRK). Mo=1.0 \times 10¹⁹ Nm
 (PPT). Damage (V JMA) at
 Hualien. Felt (III JMA) at
 Chiai, Ilan and Taipei and (II
 JMA) at Hsinchu and Taichung.
 Also felt along the coast of
 Fujian Province, China. Surface
 faulting and landslides occurred
 in the Hualien area.

FAULT PLANE SOLUTION: P-Waves
 NP1: Strike=11 Dip=85 Slip=166
 NP2: 102 76 5
 Principal Axes:

T P1g=13 Azm=326
 P 6 57

Comment: The focal mechanism is
 poorly controlled and
 corresponds to strike-slip
 faulting with a small reverse
 component. The preferred fault
 plane is not determined.

RADIATED ENERGY
 No. of sta: 3 Focal mech. F
 Energy 3.3 \pm 1.6 \times 10¹⁴ Nm

MOMENT TENSOR SOLUTION
 Dep 55 No. of sta: 7
 Moment Tensor: Scale 10¹⁹ Nm
 Mrr=-0.01 Mtt=0.18
 Mff=-0.19 Mrt=0.05
 Mrf=0.15 Mtf=1.14

Principal axes:
 T Val=1.16 P1g=7 Azm=319
 N 0.00 82 171
 P -1.16 4 50

Best Double Couple: Mo=1.2 \times 10¹⁹
 NP1: Strike=95 Dip=83 Slip=2
 NP2: 4 88 173

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 10S, 23C M.W.: 14S, 23C
 Centroid Location:
 Origin Time 19:50:29.0 0.3
 Lat 23.89N 0.02 Lon 121.84E 0.03
 Dep 17.5 1.3 Half-duration 6.0
 Moment Tensor: Scale 10¹⁸ Nm
 Mrr=2.56 0.06 Mtt=-0.46 0.04
 Mff=-2.11 0.05 Mrt=0.61 0.27
 Mrf=2.52 0.34 Mtf=-0.95 0.03

Principal Axes:
 T Val=3.67 P1g=67 Azm=277
 N -0.07 5 19
 P -3.60 23 111
 Best Double Couple: Mo=3.6 \times 10¹⁸
 NP1: Strike=212 Dip=23 Slip=104
 NP2: 17 68 84

ANP 1.46 356 iPc 50 45.20 0.8
 QZH 3.02 294 Pnc 51 05.60 -1.0
 E 10s 1447.00um
 Sn 51 39.10
 HKC 7.01 260 iP 52 03.20 0.1
 iS 53 29.00
 BAG 7.34 188 eP- 52 06.00 -1.9
 SSE 7.35 357 Pc 52 04.00 -3.9X
 N 10s 218.00um
 E 11s 394.00um
 MCO 7.61 259 iP 52 17.00 5.5X
 GZH 7.63 267 iPc 52 10.00 -1.8
 8.0s *****nm 7.3mb X
 N 12s 633.00um
 iS 53 40.00
 NJ2 8.65 344 Pc 52 23.00 -3.0
 0.8s 800.00nm 7.1mb X

			PP	52	29.40		MDJ	21.84	15	eP	55	13.00	0.8			iPP	00	48.70			
			S	53	59.00			1.0s	200.00nm			5.5mb				eS	06	02.30			
QCP	9.05	183	eP	52	23.10	-8.5X		N	14s	275.00um					QUE	48.78	290	eP	59	05.00	-0.4
WHN	9.39	318	eP	52	34.00	-2.2				PP	55	43.00				eS	06	10.50			
	0.7s	300.00nm								iS	59	12.00			SMY	48.93	40	P	59	12.00	6.1X
E	10s	988.00um					BDT	22.14	257	eP	55	17.00	1.6		Z	20s	18.00um			6.1Msz	
			S	54	16.50			1.1s	307.90nm			5.7mb			CTA	49.72	149	iPd-	59	12.00	-0.4
KAGJ	11.08	46	P	52	57.10	-2.4	OFUJ	22.88	43	eP	55	18.50	-4.1X			1.8s	886.36nm			6.4mb	
QIZ	11.93	249	P	53	11.80	0.8	AOMJ	23.03	39	eP	55	26.70	2.7X								
	N	15s	192.00um				GUMO	24.18	111	P	55	34.50	-0.9								
E	11s	178.00um					PJG	24.18	111	eP	55	34.80	-0.6		WARB	49.85	174	iPc	59	17.10	3.8X
			S	55	30.20		GTA	24.20	315	Pc	55	36.60	1.0		HNR	49.89	127	eP	59	12.00	-1.7
KUMJ	11.95	41	P	53	11.30	0.0		2.0s	440.00nm			5.7mb				eS	06	20.00			
TIA	13.04	344	eP	53	27.60	1.8		Z	10s	200.00um			6.9MszX	ADK	54.31	42	P	59	49.20	2.7X	
	9.0s	*****nm					E	10s	127.00um						1.1s	168.75nm				6.0mb	
	N	11s	431.00um						SP	55	46.00			MAIO	54.42	299	iPc	59	48.00	0.3	
SHNJ	13.27	37	eP	53	30.70	1.8			PP	56	12.00					eS	07	28.00			
GYA	13.83	284	P	53	35.40	-1.0			S	59	52.00			QLP	54.58	155	eP	59	48.00	-0.7	
	1.0s	200.00nm							SS	00	04.00			FORR	54.61	173	eP	59	48.00	-0.8	
	N	10s	231.00um						SS	00	46.00				0.4s	37.00nm				5.8mb	
E	10s	357.00um					GUA	24.24	111	eP	55	34.50	-1.6		RMO	56.39	151	eP	00	01.50	-0.3
			PP	53	41.00			2.2s	5415.38nm			6.8mb		RKG	57.64	185	eP	00	13.00	2.5	
			S	56	04.80		SAP	25.24	35	eP	55	53.00	7.6X			0.6s	43.00nm			5.7mb	
SHK	14.45	39	ePd	53	51.50	7.0X	HIA	25.54	357	ePc	55	46.65	-1.6		BRS	59.05	148	iPd	00	39.80	19.3X
TKSJ	14.92	44	eP	53	40.10	-10.4X			eS	00	21.00					e				02	05.00
XAN	15.14	316	P	53	52.00	-1.4	HOJ	25.87	39	P	55	49.20	-2.1			iS	08	33.00			
	N	10s	272.00um				SNG	26.03	234	eP	55	56.00	3.0X		ADE	60.58	164	iPc+	00	29.90	-1.0
E	10s	453.00um							eS	00	29.00				0.8s	149.25nm				6.2mb	
DL2	15.14	0	iPc</																		

13d 20h

[illegible]

RAR	88.56	114	P	03	04.00	-8.5X	PAS	99.14	47	eP	04	08.92	7.9X	ZOBO	168.22	53	ePKP	10	26.00	-1.1	
			S	13	08.00					eS	15	32.75			1.1s	42.63nm	LR	09	00.00		
BMW	88.85	39	P	03	14.90	1.2				eS	15	43.35		LPB	168.40	54	PKP	10	16.00	-11.0X	
RMW	89.10	37	P	03	16.40	1.5				ePS	16	55.41			Z	24s	12.40um	e	10	27.00	
PNT	89.20	35	eP	03	16.00	0.8	MWC	99.17	46	eP	04	09.00	7.6X				e	11	43.00		
	1.3s	257.00nm			6.3mb		GSC	99.34	45	eP	04	03.00	1.0				e	13	22.00		
LPG	89.24	320	eP	03	15.80	-0.1				e	05	49.00					PKS	13	22.00		
LON	89.51	38	P	03	15.10	-1.7				iSKS	14	45.37	5.3X				eLR	09	46.00		
BNI	89.53	320	P	03	18.00	1.0	GSC	99.34	45	eP	04	07.33		CNCB	168.66	54	PKP	10	29.00	1.7	
SHW	89.58	39	P	03	19.00	1.8				eSDIF	15	34.54					i	11	40.80		
EDM	89.81	30	iPd	03	18.30	0.3				eS	15	46.95					PKS	13	22.00		
COR	89.87	40	eP	03	23.07	4.7X				ePS	16	53.50		LPA	168.85	182	ePKP	10	36.00	9.8X	
			iS	14	15.26		PLM	100.49	47	ePdiff04	11.00	3.7X			Z	20s	5.67um	e(PKP)	10	09.00	-17.6X
			e	14	36.94		BUL	100.50	253	ePdiff04	00.60	-7.0X							10	31.10	3.2X
LOR	89.88	323	eP	03	18.00	-0.4				Z	18s	10.31um	6.4Msz	ANT	168.97	92	e(PKP)	10	09.00	-17.6X	
	1.5s	141.00nm			6.0mb					N	18s	4.81um		CCH	170.37	51	PKP	10	31.10	3.2X	
Z	20s	30.00um			6.7Msz					E	18s	5.50um		SIV	171.90	19	PKP	10	28.40	0.1	
LBF	89.98	323	eP	03	18.50	-0.4								PPD	173.27	283	ePKP	10	30.80	2.1	
	1.2s	111.55nm			6.0mb		TPC	100.57	46	ePdiff04	10.00	2.5					e	10	34.30		
SSF	90.19	323	eP	03	19.50	-0.4	RSSD	100.59	32	Pdiff 04	13.20	5.6X									
	1.6s	130.60nm			5.9mb					1.5s	46.08nm	5.8mb									
SMF	90.25	322	eP	03	19.60	-0.6	BAR	101.02	47	ePdiff04	10.00	0.5									
FRF	90.38	319	eP	03	20.70	-0.1	MAL	101.25	319	ePdiff04	18.00	7.7X									
AVF	90.44	323	eP	03	20.40	-0.6				iPP	08	22.00									
LMR	90.59	319	eP	03	21.50	-0.3	SLR	102.77	247	iPdiff04	25.00	7.4X									
LRG	90.61	319	eP	03	22.10	0.3				Z	22s	35.70um	6.8Msz								
DPW	90.82	36	P	03	24.20	1.4	GLD	103.21	35	Pdiff 04	25.00	5.7X									
BGF	90.86	323	eP	03	22.70	-0.2				Z	20s										

WB5 45.01 163 eP 47 41.20 -0.6
 WRA 45.07 163 P 47 42.00 -0.2
 0.7s 3.70nm 4.4mb
 ASPA 48.52 165 eP 48 09.00 -0.4
 FBA 69.01 27 P 50 29.80 -1.8
 INK 73.49 22 eP 50 59.00 0.6
 MBC 73.63 13 eP 51 00.50 1.4
 SLL 78.27 331 eP 51 25.20 -0.3
 1.4s 36.40nm 5.3mb
 YKA 83.22 23 eP 51 45.70 -6.1X
 0.8s 4.40nm 4.7mb
 ZOBO 168.14 53 PKP 59 35.00 1.7
 e 00 42.00
 e 02 51.00

S.D. = 1.2 on 11 of 13 obs.

DEC 13, 1990 20h 42m 37.47±0.33s
 23.665 N ± 5.6km 121.811 E ± 5.9km
 DEPTH = 10.0km (geophysicist)
 5.2mb (20 obs.)

TAIWAN (244)
 Felt in the Hualien area.

BAG 7.31 189 eP 44 28.00 0.9
 NJ2 8.75 343 eP 44 48.50 1.5
 S 46 21.20
 QCP 9.01 185 eP 44 47.00 -3.5X
 QIZ 12.07 250 eP 45 32.30 -0.2
 eS 47 48.90
 GYA 14.01 285 P 45 57.00 -1.4
 1.0s 100.00nm 5.6mb
 Z 10s 18.30um 3.9MszX
 XAN 15.29 315 eP 46 12.50 -2.6
 BJI 17.01 345 eP 46 39.00 2.1
 N 11s 8.61um
 KMI 17.43 279 Pd 46 44.00 1.4
 1.5s 100.00nm 4.7mb
 N 10s 12.80um
 CD2 17.58 298 eP 46 44.20 -0.1
 KKM 18.33 198 eP 46 58.00 4.3X
 MAT 19.09 44 eP 47 00.00 -2.8
 HHC 19.18 336 eP 47 05.50 1.6
 BTO 19.58 332 eP 47 09.00 0.3
 LOE 19.80 255 eP 47 10.00 -1.1
 LZH 19.86 313 eP 47 12.00 0.2
 1.8s 190.00nm 5.1mb
 PP 47 16.00
 PP 47 31.00

CN2 20.31 8 eP 47 15.60 -0.6
 CHG 21.84 262 eP 47 32.00 -0.1
 MDJ 21.85 15 eP 47 32.00 0.1
 NST 21.89 253 eP 47 36.00 3.5X
 BDT 22.29 258 eP 47 37.00 0.5
 GTA 24.36 315 eP 47 56.20 -0.6
 IPM 27.60 230 ePc 48 28.20 1.1
 LSA 28.00 289 P 48 31.40 0.3
 GUN 32.55 285 P 49 10.60 -0.9
 PKI 32.98 285 P 49 14.80 -0.3
 KKN 33.09 285 P 49 14.20 -1.7
 DMN 33.25 285 P 49 16.20 -1.2
 GKN 33.65 285 P 49 19.20 -1.6
 WMO 34.43 314 P 49 28.50 1.3
 NDI 40.16 287 eP 50 15.00 -0.5
 HYB 40.86 270 eP 50 24.00 2.5
 PMG 41.16 140 eP 50 24.50 0.7
 GBA 43.07 265 Pd 50 42.30 2.8
 1.2s 12.30nm 4.5mb
 KOD 44.29 260 eP 50 52.20 2.5
 POO 44.88 273 eP 50 55.00 0.8
 WB5 44.98 163 eP 50 53.90 -0.9
 WRA 45.03 163 P 50 54.00 -1.3
 0.7s 7.60nm 4.7mb
 QIS 47.25 157 iPc 51 12.90 0.1
 ASPA 48.49 165 iPc 51 20.90 -1.6
 QUE 48.96 290 eP 51 25.00 -1.3
 MAIO 54.59 299 eP 52 08.00 -0.5
 RMQ 56.26 151 eP 52 21.00 0.5
 BRS 58.91 148 iP 52 40.00 0.8
 ADE 60.47 164 eP 52 48.80 -1.0
 1.0s 32.00nm 5.4mb
 TAB 64.76 302 e(P) 53 19.00 0.4
 TTA 65.67 30 ePc 53 25.70 1.7
 SVW 66.02 32 ePc 53 28.50 2.3
 0.8s 24.00nm 5.4mb

IMA 66.41 26 ePd 53 28.80 0.0
 PMR 69.04 31 ePd 53 45.10 0.0
 1.0s 35.00nm 5.5mb

TOA 70.30 30 ePc 53 54.80 1.9
 SOD 70.37 336 eP 53 53.00 -0.1
 KAS 73.36 308 eP 54 13.00 1.4
 INK 73.49 22 eP 54 11.00 -0.7
 0.9s 39.00nm 5.5mb
 MBC 73.64 13 eP 54 11.50 -1.0
 1.3s 11.00nm 4.7mb
 HFS 78.30 331 ePKP 54 36.70 -2.3
 1.9s 119.40nm 5.6mb
 NB2 78.95 332 P 54 38.70 -3.9X
 0.9s 5.30nm 4.6mb
 KRA 79.42 320 eP 54 43.80 -1.5
 i 54 51.00
 KSP 81.19 322 eP 54 54.50 -0.3
 VAY 81.28 311 eP 54 55.70 0.3
 SKO 81.79 312 iP 54 59.20 1.1
 BRG 82.50 323 e(P) 55 03.20 1.7
 CLL 82.81 323 eP 55 04.00 0.9
 e 55 18.00
 YKA 83.22 23 eP 55 05.00 -0.1
 0.7s 9.50nm 5.1mb
 CDF 87.48 323 eP 55 29.00 2.3
 0.9s 6.55nm 4.9mb
 PNT 89.15 35 eP 55 37.00 2.4
 0.7s 10.00nm 5.2mb
 LPG 89.39 320 eP 55 45.10 8.9X
 0.6s 5.40nm 5.0mb
 LOR 90.02 323 eP 55 37.40 -1.3
 LBF 90.13 323 eP 55 37.80 -1.4
 SSF 90.34 323 eP 55 38.70 -1.4
 SMF 90.40 323 eP 55 39.00 -1.4
 0.9s 14.75nm 5.3mb
 AVF 90.59 323 eP 55 40.10 -1.2
 0.9s 9.85nm 5.1mb
 BGF 91.00 323 eP 55 41.00 -2.2
 MAF 91.36 323 eP 55 43.10 -1.8
 RJF 92.50 322 eP 55 50.00 -0.1
 0.9s 9.85nm 5.2mb
 SES 92.73 31 eP 55 55.00 3.8X
 FFC 93.37 24 eP 55 54.00 0.0
 1.0s 21.00nm 5.5mb
 TOV 144.87 20 ePKP 02 17.50 0.2
 SDV 145.44 22 ePKP 02 17.50 -0.9
 SIV 171.90 20 PKP 02 49.00 1.1

S.D. = 1.4 on 73 of 79 obs.

* DEC 13, 1990 21h 00m 05.23±0.55s
 23.845 N ± 8.4km 121.780 E ± 8.8km
 DEPTH = 10.0km (geophysicist)
 4.7mb (5 obs.)

TAIWAN (244)
 Felt in the Hualien area.

SSE 7.24 356 eP 01 51.50 -2.1
 Z 12s 15.30um
 N 10s 14.90um
 PP 01 54.50
 S 03 14.00
 NJ2 8.57 343 Pc 02 10.20 -2.1
 Z 10s 14.00um
 WHN 9.39 317 eP 02 21.00 -2.6
 Z 10s 15.20um
 QIZ 12.10 249 eP 03 02.40 1.7
 N 13s 5.70um
 E 10s 5.00um
 eS 05 13.70
 XAN 15.15 315 eP 03 43.00 2.1
 TIY 15.97 332 eP 03 53.50 1.9
 Z 14s 12.40um
 N 10s 16.40um
 BJI 16.83 345 eP 04 09.00 6.6X
 KMI 17.38 278 eP 04 12.50 2.8X
 CD2 17.47 298 eP 04 10.00 -0.7
 MAT 18.99 44 (P) 04 31.00 1.7
 HHC 19.00 336 P 04 33.20 3.7X
 Z 14s 6.60um
 E 10s 2.40um
 BTO 19.41 332 eP 04 36.40 1.9
 LZH 19.72 312 eP 04 41.00 2.9X
 1.4s 66.00nm 4.7mb
 Z 12s 13.95um 5.5Msz
 pP 04 46.00 19kmX
 es 08 25.00
 Lg 10 30.00
 LOE 19.82 255 eP 04 41.00 2.0
 MDJ 21.68 15 eP 04 58.60 0.6
 LSA 27.91 289 eP 06 01.00 2.9X

GUN 32.48 285 PKP 06 39.00 0.4
 PKI 32.91 284 PKP 06 41.40 -0.9
 KKN 33.01 285 PKP 06 42.10 -1.0
 DMN 33.17 284 PKP 06 41.60 -2.9
 GKN 33.58 285 PKP 06 42.40 -5.5X
 WMO 34.28 314 eP 06 53.60 -0.1
 PMG 41.32 140 eP 07 53.00 0.2
 KOD 44.29 260 eP 08 20.00 2.5
 WB5 45.16 163 eP 08 21.70 -2.3
 QIS 47.43 157 iPd 08 41.00 -0.9
 ASPA 48.67 165 iPd 08 50.70 -0.9
 MAIO 54.48 299 eP 09 36.00 0.5
 FBA 68.86 27 P 11 12.00 0.3
 SOD 70.19 336 eP 11 29.00 9.2X
 INK 73.33 22 eP 11 39.00 0.5
 MBC 73.47 13 eP 11 39.00 -0.2
 SLL 78.14 331 eP 12 04.00 -1.9
 0.4s 1.10nm 4.3mb
 NB2 78.78 332 P 12 07.90 -1.6
 1.1s 4.50nm 4.4mb
 KRA 79.27 320 eP 12 22.00 9.7X
 e 12 41.00
 KSP 81.03 322 eP 12 22.50 0.8
 SKO 81.65 312 eP 12 25.00 -0.1
 CLL 82.65 323 eP 12 30.00 -0.1
 YKA 83.07 23 eP 12 31.20 -0.8
 0.8s 9.60nm 5.0mb
 SES 92.59 31 eP 13 20.00 1.7
 FFC 93.22 24 eP 13 22.00 1.0
 0.9s 14.00nm 5.4mb
 TNP 97.20 43 P 13 41.50 1.7

S.D. = 1.6 on 34 of 42 obs.

* DEC 13, 1990 21h 05m 09.30±0.58s
 23.805 N ± 11.3km 121.977 E ± 16.7km
 DEPTH = 10.0km (geophysicist)
 4.5mb (5 obs.)

TAIWAN (244)
 Felt in the Hualien area.

CHG 22.02 261 eP 10 06.50 0.8
 1.2s 23.44nm 4.5mb
 WRA 45.12 163 P 13 27.00 -0.8
 0.7s 4.80nm 4.5mb
 QIS 47.32 157 eP 13 45.00 -0.2
 ASPA 48.59 165 eP 13 55.70 0.6
 INK 73.30 22 eP 16 43.00 0.6
 MBC 73.47 13 eP 16 44.00 0.7
 HFS 78.25 331 eP 17 09.20 -1.3
 0.5s 1.20nm 4.2mb
 NB2 78.90 332 P 17 13.20 -1.0
 1.0s 3.30nm 4.3mb
 YKA 83.04 23 eP 17 36.50 0.6-
 1.2s 5.70nm 4.6mb

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

DEC 13, 1990 21h 30m 31.05±0.33s
 23.812 N ± 6.4km 121.638 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 5.1mb (21 obs.)

TAIWAN (244)
 Felt in the Hualien area.

HKC 7.04 259 iP 32 16.60 0.0
 SSE 7.27 357 P 32 17.50 -2.3
 0.8s 20.00nm 5.3mb
 Z 12s 4.00um 4.8Msz
 N 10s 4.50um
 E 10s 3.00um
 pP 32 20.00
 sP 32 23.00
 eS 33 39.50
 BAG 7.43 188 eP 32 22.60 0.3
 KMI 17.26 278 Pc 34 39.00 5.0X
 1.5s 70.00nm 4.6mb
 pP 34 50.00
 S 37 55.00
 IIDJ 18.28 47 eP 34 48.70 2.2
 KKM 18.42 197 ePc 34 52.00 3.6X
 MTMJ 18.87 44 eP 34 57.50 3.8X
 MAT 19.10 45 (P) 34 56.00 -0.5
 LZH 19.64 313 eP 35 04.00 0.9
 1.5s 85.00nm 4.8mb
 Z 12s 4.15um 4.4Msz
 E 10s 8.10um
 pP 35 10.00 23kmX
 Lg 41 17.00

1.2s 23.80nm 5.3mb
 BGF 90.89 323 eP 09 42.90 -0.6
 MAF 91.25 323 eP 09 44.90 -0.3
 1.0s 15.00nm 5.3mb
 TCF 91.41 323 eP 09 45.40 -0.5
 CAF 92.31 322 eP 09 49.20 -0.9
 1.0s 16.00nm 5.4mb
 RJF 92.39 322 eP 09 50.60 0.2
 0.8s 17.45nm 5.5mb
 Z 22s 0.73um 5.1msz
 SES 92.76 31 eP 09 52.00 -0.1
 FFC 93.38 24 eP 09 54.00 -0.8
 1.0s 22.00nm 5.5mb
 LRM 95.15 35 eP 10 04.30 0.8
 TNP 97.36 43 P 10 14.50 0.9
 TOV 144.87 20 ePKP 16 14.30 -3.8X
 SDV 145.44 22 ePKP 16 17.80 -1.5
 ZOBO 168.19 53 PKP 16 48.00 0.5
 e 17 54.00
 LPB 168.37 54 PKP 16 48.00 0.6
 e 17 58.00
 CNCB 168.64 55 PKP 16 48.00 0.3
 e 17 59.00
 S.D. = 1.2 on 88 of 99 obs.

* DEC 13, 1990 22h 18m 32.85±0.44s
 23.791 N ± 8.8km 121.737 E ± 8.2km
 DEPTH = 10.0km (geophysicist)
 4.9mb (12 obs.)
 TAIWAN (244)
 Felt in the Hualien area.

SSE 7.29 356 eP 20 19.50 -2.5
 Z 10s 4.30um
 N 10s 4.10um
 pP 20 21.80
 sP 20 24.50
 S 21 41.70
 BJI 16.87 345 eP 22 34.50 4.0X
 1.5s 39.00nm 4.3mb
 N 10s 2.10um
 KMI 17.35 278 Pd 22 41.00 4.1X
 pP 22 52.50
 MAT 19.05 44 (P) 22 58.00 0.3
 LZH 19.72 312 eP 23 07.00 1.2
 1.8s 96.00nm 4.8mb
 Z 12s 4.35um 3.9mszx
 E 10s 2.37um
 pP 23 12.00 19kmX
 Lg 29 20.00
 LOE 19.77 255 eP 23 07.00 0.9
 CHG 21.80 261 eP 23 27.30 0.3
 GUN 32.46 285 P 25 05.90 -0.1
 PKI 32.88 284 P 25 09.80 0.1
 KKN 32.99 285 P 25 10.00 -0.5
 DMN 33.15 284 P 25 11.40 -0.5
 GKN 33.55 285 P 25 14.20 -1.1
 WB5 45.12 163 eP 26 50.90 -0.4
 WRA 45.17 163 P 26 51.00 -0.8
 0.9s 4.90nm 4.4mb
 ASPA 48.63 165 iPc 27 18.10 -0.8
 MAIO 54.47 299 iPd 28 03.90 0.9
 PMR 68.97 31 ePc 29 40.40 0.4
 TOA 70.23 30 ePd 29 49.00 1.2
 INK 73.40 22 eP 30 06.00 -0.5
 1.0s 30.00nm 5.3mb
 MBC 73.53 13 eP 30 07.00 -0.2
 1.0s 7.00nm 4.7mb
 HFS 78.15 331 eP 30 35.50 1.9
 1.2s 18.50nm 5.0mb
 NB2 78.81 332 P 30 35.40 -1.8
 1.2s 6.60nm 4.6mb
 KSP 81.05 322 eP 30 36.50 -12.9X
 YKA 83.13 23 eP 31 00.10 0.1
 0.8s 10.10nm 5.1mb
 CDF 87.34 323 eP 31 21.30 -0.1
 LOR 89.88 323 eP 31 32.80 -0.6
 LBF 89.98 323 eP 31 34.30 0.4
 0.9s 6.55nm 4.9mb
 SSF 90.20 323 eP 31 34.50 -0.4
 SMF 90.26 322 eP 31 36.00 0.8
 0.9s 8.20nm 5.0mb
 AVF 90.45 323 eP 31 35.50 -0.5
 0.9s 6.55nm 4.9mb
 MAF 91.22 323 eP 31 39.60 0.0
 SES 92.66 31 eP 31 47.00 0.8
 FFC 93.29 24 eP 31 51.00 2.1

0.8s 13.00nm 5.4mb
 TOV 144.78 20 ePKP 38 09.70 -2.8
 SDV 145.35 22 ePKP 38 13.00 -0.7
 LPB 168.28 54 PKP 38 46.00 4.1X
 CNCB 168.54 54 ePKP 38 45.00 2.8
 e 39 53.00
 S.D. = 1.2 on 33 of 37 obs.

* DEC 13, 1990 22h 28m 09.51±0.59s
 6.013 S ± 9.3km 142.247 E ± 9.1km
 DEPTH = 33.0km (normal)
 PAPUA NEW GUINEA (202)

MNDI 1.41 96 iPd 28 34.00 0.7
 eS 28 55.00
 PMG 5.92 125 eP 29 36.00 -1.2
 MTN 12.89 237 eP 31 11.00 -2.2
 0.3s 73.00nm 6.2mb X
 eS 33 26.00
 QIS 14.68 190 eP 31 38.00 1.2
 eS 34 10.00
 WB5 15.77 208 eP 31 51.10 0.2
 eS 34 38.00
 ASPA 19.30 204 iPd 32 35.10 0.3
 iS 36 00.40
 BJI 51.74 335 eP 37 16.00 0.1
 GUN 63.96 305 P 38 43.20 0.7
 PKI 64.21 304 P 38 45.20 1.0
 KKN 64.40 305 P 38 45.00 -0.3
 DMN 64.48 304 P 38 46.60 0.8
 GKN 65.01 305 P 38 49.20 0.1
 FBA 87.06 24 P 40 50.20 -2.6
 LKO 147.95 278 PKP 47 54.44 3.5X
 0.7s 8.50nm
 SIV 148.21 134 PKP 47 52.60 1.3
 S.D. = 1.3 on 14 of 15 obs.

DEC 13, 1990 22h 39m 22.38±0.36s
 6.020 S ± 8.0km 142.291 E ± 8.4km
 DEPTH = 33.0km (normal)
 5.5mb (8 obs.)
 PAPUA NEW GUINEA (202)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 13S, 20C
 Centroid Location:
 Origin Time 22:39:26.4 1.6
 Lat 6.025 0.18 Lon 142.22E 0.10
 Dep 15.0 FIX Half-duration 2.0
 Moment Tensor: Scale 10**17 Nm
 Mrr=1.40 0.12 Mtt=-0.38 0.12
 Mff=-1.02 0.15 Mrt=-0.69 0.43
 Mrf=-1.31 0.41 Mtf=0.70 0.13
 Principal Axes:
 T Val=2.29 P1g=59 Azm=129
 N -0.58 25 349
 P -1.72 18 251
 Best Double Couple: Mo=2.0*10**17
 NP1:Strike=308 Dip=35 Slip=42
 NP2: 181 67 117

PMG 5.88 125 iPc 40 47.50 -2.0
 1.0s 390.00nm 6.0mb
 eS 41 59.00
 RAB 10.01 80 eP 41 46.50 -0.5
 MTN 12.93 238 eP 42 22.00 -4.5X
 0.3s 233.00nm 6.7mb X
 eS 44 34.00
 CTA 14.50 165 iPd 42 50.90 3.6X
 2.0s 423.53nm 5.6mb
 iS 45 40.00
 QIS 14.68 190 eP 42 47.00 -2.7
 eS 45 25.00
 WB5 15.78 208 eP 43 00.20 -3.8X
 SVO 17.65 101 eP 43 29.00 1.6
 HNR 17.82 102 eP+ 43 30.00 0.4
 eS 46 52.00
 ASPA 19.31 204 iPd 43 45.70 -2.1
 Z 20s 6.63um
 eS 47 14.60
 QLP 20.53 175 eP 44 01.50 0.8
 e 50 27.00
 RMO 21.27 164 eP 44 08.50 0.2
 WARB 25.01 215 iPc 44 45.20 0.3
 FORR 28.07 207 eP 45 11.00 -1.9
 0.4s 43 00nm 5.5mb
 DZM 28.27 127 iPc 45 09 00 -6.1X

BWA 28.83 169 eP 45 21.50 1.6
 ADE 29.00 186 e(P) 45 27.00 5.6X
 CAN 29.81 169 eP 45 30.50 1.8
 MAT 42.51 355 (P) 47 12.00 -4.4X
 0.2s 44.44nm 6.0mb
 IPM 42.53 283 ePc 47 18.60 1.7
 KMI 49.37 310 Pd 48 11.50 0.2
 BJI 51.77 335 eP 48 27.00 -2.0
 1.5s 91.00nm 5.5mb
 N 11s 0.57um

HYB 67.10 292 eP 50 15.00 -0.4
 GBA 67.26 287 P 50 16.00 -0.3
 NDI 71.43 303 eP 50 39.00 -2.8
 SVW 82.24 26 ePc 51 41.20 -0.4
 TTA 82.93 24 ePd 51 44.40 -0.8
 IMA 85.27 22 ePc 51 56.00 -1.0
 1.2s 27.30nm 5.3mb
 PMR 85.28 27 ePd 51 55.60 -1.3
 0.6s 8.50nm 5.1mb
 TOA 86.78 27 eP 52 04.50 0.1
 FBA 87.05 24 iPd 52 03.80 -1.8
 0.6s 7.90nm 5.1mb
 MAIO 87.75 307 eP 52 10.00 0.4
 YKA 101.36 27 ePd diff 53 10.00 -1.4
 1.1s 1.10nm 4.4mb X
 ZST 117.44 322 e(PKP) 58 08.90 2.5X
 e 58 14.20
 BRG 118.13 326 e(PKP) 58 09.90 2.2
 CDF 123.12 326 ePKP 58 17.60 0.2
 BSF 123.71 325 ePKP 58 19.00 0.4
 0.9s 9.85nm
 HAU 123.86 326 ePKP 58 18.20 -0.6
 0.7s 6.60nm
 SSF 125.98 326 ePKP 58 23.60 0.7
 0.9s 9.85nm
 SMF 126.04 326 ePKP 58 23.90 0.8
 TCF 127.16 326 ePKP 58 26.20 1.0
 0.9s 9.85nm
 LPF 127.78 330 ePKP 58 27.40 1.1
 1.1s 24.40nm
 CNCB 142.44 128 PKP 58 53.00 -2.3
 ZOBO 142.63 127 PKP 58 50 00 -5.6X
 KIC 147.23 272 PKP 59 04.70 2.0
 SDV 147.24 83 ePKP 59 02.60 -0.3
 LIC 147.51 272 PKP 59 04.74 1.6
 TIC 147.51 273 PKP 59 05.34 2.2
 LKO 147.99 278 PKPc 59 06.52 2.6X
 TOV 148.01 81 ePKP 59 04.30 0.3
 SIV 148.17 134 PKP 59 04.60 0.5
 PPD 149.10 155 ePKP 59 07.90 2.4X
 e 59 14.90
 OLLA 150.93 80 iPKP 59 14.00 5.5X
 PDCR 161.52 176 e(PKP) 59 23.70 2.0X
 S.D. = 1.5 on 42 of 53 obs.

* DEC 13, 1990 22h 41m 33.84±1.30s
 23.805 N ± 13.5km 121.723 E ± 11.1km
 DEPTH = 10.0km (geophysicist)
 4.4mb (3 obs.)

TAIWAN (244)
 Felt in the Hualien area.
 QZH 3.07 292 Pn 42 22.80 -0.5
 Sn 42 58.00
 SSE 7.28 356 eP 43 23.50 0.7
 eS 44 43.50
 NJ2 8.60 343 Pc 43 40.50 -0.7
 Z 10s 1.00um
 WHN 9.39 317 eP 43 52.00 -0.1
 Z 10s 1.30um
 eS 45 33.00
 GYA 13.89 284 P 44 52.40 -0.9
 E 10s 1.70um
 XAN 15.14 315 P 45 09.50 0.1
 TIY 15.98 332 eP 45 24.90 4.5X
 Z 10s 1.30um
 N 10s 1.30um
 CD2 17.45 298 eP 45 40.60 1.7
 BTO 19.42 332 eP 46 07.00 3.7X
 LZH 19.71 312 eP 46 12.50 5.9X
 2.0s 36.00nm 4.3mb
 Z 12s 1.33um 5.0mszx
 pP 46 17.50 19kmX
 Lg 52 32.00
 CHG 21.79 261 eP 46 28.90 1.0
 e 47 56.50
 GTA 24.20 315 eP 46 52.00 0.4

13d 22h

1.0s 10.00nm 4.4mb
 Z 10s 1.60um 4.8MszX
 E 10s 1.20um
 LSA -27.87 289 P 47 25.00 -1.4
 WMO 34.27 314 eP 48 28.00 5.7X
 BRS 59.07 148 ePd 51 40.90 4.2X
 FBA 68.92 27 (P) 52 31.00 -9.7X
 INK 73.39 22 eP 53 07.00 -0.5
 YKA 83.13 23 eP 54 01.10 0.1
 0.9s 3.80nm 4.6mb
 S.D. = 0.9 on 12 of 18 obs.

* DEC 13, 1990 22h 43m 01.86±1.03s
 23.988 N ±15.2km 121.636 E ±9.6km
 DEPTH = 10.0km (geophysicist)
 4.9mb (6 obs.)

TAIWAN (244)
 ML 5.2 (BJI). Felt in the
 Hualien area.

OZH 2.93 290 Pn 43 51.00 1.6
 HKC 7.07 258 iP 44 47.40 -0.5
 NJ2 8.40 344 Pc 45 05.40 -1.1
 Z 10s 1.50um
 WHN 9.20 317 eP 45 16.00 -1.5
 Z 10s 2.60um
 OIZ 12.03 248 eP 45 51.30 -5.1X
 N 14s 1.20um
 GYA 13.77 283 P 46 18.40 -1.3
 N 10s 1.50um
 E 10s 2.00um
 S 48 49.60
 TIY 15.78 332 eP 46 51.00 5.2X
 Z 10s 1.80um
 CD2 17.29 297 eP 47 06.80 1.8
 BTO 19.22 332 eP 47 33.00 4.2X
 N 10s 2.20um
 E 10s 1.50um
 LOE 19.73 254 eP 47 37.00 2.2X
 CN2 20.01 8 eP 47 38.00 0.5
 MDJ 21.58 16 eP 47 54.30 0.7
 GTA 24.02 315 eP 48 19.60 1.8
 GUN 32.32 285 P 49 33.80 0.0
 PKI 32.74 284 P 49 37.60 0.1
 KKN 32.85 284 P 49 37.80 -0.5
 DMN 33.01 284 P 49 39.60 -0.1
 GKN 33.41 285 P 49 42.60 -0.5
 QUE 48.70 290 eP 51 51.00 2.3X
 SVO 49.75 127 P 52 04.00 7.3X
 FBA 68.79 27 P 54 08.20 0.3
 MBC 73.36 13 eP 54 35.00 -0.2
 SLL 77.95 331 eP 55 00.50 -1.0
 1.3s 15.90nm 4.9mb
 NB2 78.59 332 P 55 03.60 -1.5
 0.9s 2.40nm 4.3mb
 KSP 80.84 322 eP 55 21.00 3.7X
 YKA 82.99 23 eP 55 26.30 -2.0
 0.8s 7.50nm 4.9mb
 LBF 89.77 323 eP 56 03.90 1.9
 0.9s 4.90nm 4.7mb
 SSF 89.99 323 eP 56 03.60 0.7
 TCF 91.17 323 eP 56 07.40 -1.0
 0.9s 9.00nm 5.1mb
 FFC 93.14 24 eP 56 19.00 1.7
 1.0s 17.00nm 5.4mb
 S.D. = 1.2 on 23 of 30 obs.

* DEC 13, 1990 22h 52m 20.79±1.24s
 23.846 N ±13.6km 121.743 E ±14.2km
 DEPTH = 10.0km (geophysicist)
 4.0mb (1 obs.)

TAIWAN (244)
 Felt in the Hualien area.

OZH 3.07 291 ePn 53 09.70 -0.6
 SSE 7.24 356 eP 54 06.70 -2.5
 NJ2 8.56 343 Pc 54 29.20 1.5
 WHN 9.37 317 eP 54 40.00 1.2
 GYA 13.90 284 P 55 39.40 -0.9
 Z 10s 2.20um
 CD2 17.44 298 eP 56 26.40 0.5

WRA 45.22 163 P 00 40.00 -0.1
 1.3s 2.30nm 4.0mb
 INK 73.35 22 eP 03 55.00 0.8
 S.D. = 1.5 on 8 of 8 obs.

* DEC 13, 1990 23h 11m 11.73±1.21s
 24.169 N ±14.7km 121.713 E ±15.0km
 DEPTH = 10.0km (geophysicist)
 4.3mb (1 obs.)

TAIWAN (244)
 ML 4.3 (BJI).

OZH 2.94 286 ePn 11 56.50 -2.9
 NJ2 8.25 343 Pc 13 14.50 0.3
 Z 10s 2.00um
 S 14 49.50
 OIZ 12.17 247 eP 14 09.20 1.1
 N 16s 1.10um
 TIY 15.66 332 eP 15 00.50 6.4X
 Z 10s 2.30um
 BJI 16.50 345 eP 15 12.00 7.3X
 GTA 23.94 315 eP 16 23.00 -3.9X
 1.2s 10.00nm 4.3mb
 PP 16 31.00
 GUN 32.34 284 P 17 44.60 0.7
 PKI 32.77 284 P 17 47.60 0.0
 KKN 32.87 284 P 17 48.60 0.3
 DMN 33.04 284 P 17 50.20 0.4
 GKN 33.44 285 P 17 53.40 0.2
 WMO 34.01 314 eP 17 58.80 0.9
 DZM 63.27 133 iPc 21 42.10 -1.0
 S.D. = 1.3 on 10 of 13 obs.

DEC 13, 1990 23h 18m 59.33±0.25s
 23.681 N ±5.8km 121.625 E ±5.5km
 DEPTH = 10.0km (geophysicist)
 5.4mb (37 obs.) 5.7Msz (2 obs.)

TAIWAN (244)
 Felt in the Hualien area.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 19C
 Centroid Location:
 Origin Time 23:19: 2.7 0.7
 Lat 23.81N 0.08 Lon 122.12E 0.11
 Dep 15.0 FIX Half-duration 3.4
 Moment Tensor: Scale 10**17 Nm
 Mrr=-3.95 0.29 Mtt=-0.71 0.31
 Mff=-3.24 0.48 Mrt=3.40 0.67
 Mrf=7.01 0.79 Mtf=-1.98 0.28
 Principal Axes:
 T Val= 8.64 Plg=59 Azm=294
 N 0.37 1 27
 P -9.01 31 117
 Best Double Couple: Mo=8.8*10**17
 NP1: Strike=212 Dip=14 Slip= 95
 NP2: 26 76 89

HKC 7.00 260 iP 20 43.10 -1.3
 BAG 7.30 188 eP 20 48.50 -0.3
 SSE 7.40 357 eP 20 45.50 -4.4X
 pP 20 48.20
 sP 20 52.30
 QCP 9.01 183 eP 21 02.00 -10.5X
 DAV 16.93 166 eP 22 49.30 -8.7X
 KMI 17.26 279 Pd 23 08.00 5.7X
 1.5s 400.00nm 5.3mb
 Z 16s 29.20um 3.5Msz
 S 26 32.00
 MAT 19.20 44 (P) 23 18.00 -8.0X
 Z 20s 6.38um
 eS 26 52.00
 LOE 19.64 255 eP 23 31.00 -0.3
 e 29 42.00
 LZH 19.72 313 Pc 23 31.50 -0.7
 1.5s 678.00nm 5.7mb
 Z 10s 52.38um 4.4Msz
 pP 23 36.00 17kmX
 PP 23 50.00
 eS 27 06.00
 eS 27 13.50
 PCT 21.07 248 eP 23 47.50 1.4
 CHG 21.68 261 ePc 23 52.40 0.1
 1.2s 167.97nm 5.3mb
 NST 21.73 252 eP 23 58.00 5.2X
 BDT 22.13 257 eP 23 57.80 1.1

1.1s 74.90nm 5.0mb
 GUA 24.23 110 eP 24 20.80 3.4X
 1.0s 264.00nm 5.8mb
 Z 23s 9.97um 5.2MszX
 SNG 26.00 234 eP 24 34.00 -0.2
 eS 29 06.60
 IPM 27.48 229 ePd 24 49.90 2.0
 GUN 32.39 285 P 25 31.20 -0.7
 PKI 32.81 285 P 25 34.40 -1.1
 KKN 32.92 285 P 25 35.40 -0.9
 DMN 33.08 285 P 25 36.80 -1.0
 GKN 33.48 285 P 25 39.60 -1.6
 NDI 39.99 287 iPc 26 35.00 -1.0
 ePP 28 11.00
 eS 32 40.00
 RAB 40.67 129 eP 26 43.50 1.8
 HYB 40.69 269 eP 26 42.50 0.6
 eS 32 52.00
 PMG 41.29 140 eP 26 47.00 0.3
 GBA 42.90 265 P 27 02.00 2.0
 KOD 44.12 260 eP 27 10.20 0.0
 POO 44.70 273 iPd 27 14.50 -0.2
 BOM 45.56 274 eP 27 22.30 0.9
 eS 34 04.80
 ASPA 48.55 165 eP 27 42.80 -2.0
 QUE 48.79 290 eP 27 45.50 -1.4
 SVO 49.58 127 eP 27 57.00 4.2X
 CTA 49.69 149 iPc 27 53.80 0.2
 1.3s 73.08nm 5.5mb
 iS 35 04.00
 WARB 49.81 174 eP 27 52.80 -1.6
 HNR 49.86 127 eP 27 55.00 0.0
 eS 35 06.00
 MAIO 54.44 299 iPc 28 29.00 -0.2
 RMO 56.35 151 eP 28 43.00 0.0
 BRS 59.01 148 iPc 29 02.20 0.4
 ADE 60.54 164 iPd 29 10.90 -1.2
 0.9s 60.50nm 5.7mb
 DZM 63.00 133 iPc 29 28.70 -0.2
 BWA 63.14 155 eP 29 30.00 0.4
 CAN 64.16 155 eP 29 36.50 0.2
 CNB 64.29 155 eP 29 37.00 -0.2
 TAB 64.60 302 eP 29 41.00 1.5
 KER 64.74 298 eP 29 43.00 2.6
 e 38 45.00
 TOO 64.93 159 eP 29 41.00 -0.3
 BRW 65.10 21 eP 29 42.80 0.9
 TTA 65.74 30 iPc 29 45.70 -0.6
 SVW 66.09 32 ePd 29 49.00 0.5
 IMA 66.47 26 ePc 29 50.00 -1.0
 KDC 68.14 35 iPd 30 03.10 1.7
 FBA 69.07 27 ePd 30 09.20 2.1
 1.0s 62.50nm 5.8mb
 PMR 69.11 31 ePd 30 05.30 -2.1
 0.9s 62.50nm 5.8mb
 KEV 69.59 338 eP 30 11.00 0.8
 SOD 70.28 336 iP 30 14.90 0.4
 e 32 53.00
 TOA 70.37 30 ePd 30 15.50 0.3
 KAF 71.79 330 eP 30 28.60 5.0X
 0.5s 3.50nm 4.7mb
 NUR 73.02 329 eP 30 34.50 3.6X
 KAS 73.22 308 eP 30 34.50 1.9
 INK 73.54 22 ePc 30 32.10 -1.7
 0.9s 65.00nm 5.7mb
 MBC 73.66 13 eP 30 33.50 -0.9
 1.0s 20.00nm 5.1mb
 BBTK 74.40 307 eP 30 42.00 2.4
 ADI 74.62 300 eP 30 42.00 1.2
 ZNT 75.04 299 eP 30 47.00 3.8X
 CFR 75.93 313 eP 30 55.00 7.0X
 e 38 54.00
 MBH 75.96 297 eP 30 52.00 3.4X
 UPP 76.53 330 iP 30 51.90 0.8
 VRI 76.64 314 ePd 30 55.00 2.9
 DAG 76.94 351 iPd 30 54.20 1.0
 1.2s 17.19nm 5.0mb
 ISR 77.02 314 eP 30 58.00 3.8X
 e 40 01.00
 MLR 77.29 314 eP 30 58.00 2.2
 BMR 78.07 317 ePc 31 04.00 4.2X
 HFS 78.20 331 ePKP 30 59.50 -0.8
 0.6s 3.90nm 4.7mb
 Z 16s 8.36um 6.2MszX
 LR 16 02.00
 TNR 78.32 315 ePc 31 03.00 1.6
 HLW 78.82 298 eP 31 08.00 3.6X

GBZT	76.46	309	eP	39	56.50	0.2	ORI	85.83	312	P	40	48.70	3.0X	SOB1	157.91	308	ePKP	48	02.30	-1.1
ALT	76.56	307	eP	39	57.70	0.7	BNS	85.94	325	iPc	40	47.60	1.6				e	48	36.70	
VR1	76.59	314	ePd	39	57.00	0.1		Z	20s	0.40um			4.8Msz	PDCR	158.62	298	ePKP	48	08.80	4.7X
ISK	76.64	309	eP	39	59.00	1.7	OGA	85.97	320	eP	40	45.80	-0.7	ZOBO	168.13	53	PKP	48	14.00	0.4
DAG	76.83	351	iPc	39	56.30	-1.4				i	40	47.70			1.2s	14.19nm				
	1.0s	17.00nm			5.1mb		CTI	86.01	319	P	40	47.00	0.4		Z	24s	0.60um			
MLR	77.24	314	ePc	40	01.00	0.3	TDS	86.10	312	P	40	48.00	1.0				LR	38	24.00	
ELL	77.50	305	iP	40	02.50	0.2	ABH	86.34	324	eP	40	46.89	-1.1	LPB	168.31	54	PKP	48	15.00	1.5
BMR	78.01	317	ePc	40	07.00	2.3	SGO	86.37	313	P	40	49.50	1.2		Z	18s	1.37um			
HFS	78.11	331	eP	40	05.70	0.7	ARV	86.49	316	P	40	49.00	0.1				LR	37	18.00	
	0.5s	3.80nm			4.7mb		ENN	86.71	325	eP	40	50.50	0.7				e	49	23.00	
TNR	78.27	315	ePc	40	08.00	1.8		1.1s	77.00nm				5.8mb	CNCB	168.58	54	PKP	48	15.00	1.2
DI1	78.77	311	eP	40	08.00	-1.0	SDI	86.81	314	P	40	51.00	0.5				i	49	21.00	
NB2	78.77	332	P	40	07.20	-1.5	ASS	86.88	316	P	40	52.50	1.6	SIV	171.81	19	ePKP	48	13.00	-1.8
	1.0s	28.80nm			5.3mb		AZI	86.92	315	P	40	53.50	2.6		S.D. = 1.3	on 171 of 190 obs.				
HLW	78.81	298	e(P)	40	10.00	0.6	SOI	87.03	310	P	40	51.50	-0.1							
		eS		50	07.00		CDF	87.29	323	eP	40	51.60	-1.2							
ALN	78.84	310	eP	40	07.88	-1.5		1.5s	83.55nm				5.8mb							
KDZ	79.00	311	iPd	40	11.00	0.7	PGC	87.42	37	eP	40	55.00	1.8							
DEV	79.07	315	ePc	40	14.00	3.5X	BSF	87.89	322	eP	40	54.00	-1.7							
KRA	79.24	320	ePc	40	12.80	1.5		1.2s	20.85nm				5.3mb							
	1.3s	115.00nm			5.7mb		BOB	88.00	319	P	40	56.50	0.3							
	Z	15s	3.20um		5.8MszX		HAU	88.04	323	eP	40	54.60	-1.7							
	E	16s	2.80um					1.2s	32.75nm				5.5mb							
		e		40	21.00		PNT	89.10	35	eP	41	03.00	1.6							
		e		40	29.50			1.5s	253.00nm				6.3mb							
		eS		50	07.00		LPG	89.21	320	eP	41	01.20	-1.1							
PLD	79.32	311	eP	40	11.00	-1.0		1.1s	51.30nm				5.7mb							

DEC 14, 1990 01h 20m 48.86±0.47s
23.942 N ± 5.7km 121.730 E ± 6.8km
DEPTH = 10.0km (geophysicist)
4.6mb (9 obs.)

TAIWAN (244)

ML 4.9 (BJI). Felt in the
Hualien area.

ANP 1.25 351 eP 21 15.00 2.8
eS 21 29.80
QZH 3.03 290 Pnd 21 37.40 -0.3
Sn 22 11.00
SSE 7.14 356 P 22 35.00 -0.9
0.6s 10.00nm 5.2mb
Z 10s 1.90um 3.6Msz
N 10s 1.80um

BAG 7.57 188 eP 22 44.00 1.9
GZH 7.74 265 P 22 43.20 -1.1
Z 10s 1.70um

NJ2 8.47 343 P 22 53.00 -1.4
Z 10s 1.30um
N 10s 2.40um

WHN 9.29 317 eP 23 03.00 -2.8
Z 10s 11.30um
QIZ 12.09 248 eP 23 45.30 1.1
eS 26 03.10

GYA 13.87 284 P 24 07.40 -0.5
Z 10s 1.30um
XAN 15.05 315 P 24 23.50 0.2
BJI 16.72 345 eP 24 49.50 4.8X

KMI 17.32 278 eP 24 58.00 5.4X
Z 11s 2.20um
CD2 17.39 297 eP 24 53.40 0.2
LZH 19.62 312 eP 25 20.00 -0.6
1.5s 30.00nm 4.4mb
Z 12s 1.28um 5.2MszX
E 10s 0.78um

MDJ 21.60 15 eP 25 41.00 0.1
CHG 21.81 261 eP 25 44.10 0.9
GTA 24.11 315 eP 26 07.60 1.9
1.2s 10.00nm 4.3mb

LSA 27.84 289 P 26 42.00 1.0
GUN 32.41 285 P 27 22.00 0.4
0.8s 24.00nm 5.2mb

PKI 32.84 284 P 27 25.20 -0.1
KKN 32.95 285 P 27 26.20 0.1
DMN 33.11 284 P 27 27.60 0.1
GKN 33.51 285 P 27 30.80 -0.1
WB5 45.26 163 eP 29 07.40 -1.1
e 29 32.80

WRA 45.32 163 P 29 07.00 -1.9
1.0s 5.20nm 4.4mb
QIS 47.53 157 eP 29 26.00 -0.4
e 29 52.00

ASPA 48.78 165 iPc 29 35.80 -0.3
1.1s 6.50nm 4.6mb
FBA 68.79 27 P 31 55.20 0.2
INK 73.26 22 eP 32 22.00 0.2
MBC 73.39 13 eP 32 22.00 -0.4
NB2 78.67 332 P 32 52.00 -0.5
1.1s 5.20nm 4.5mb

YKA 83.00 23 eP 33 15.00 -0.3
0.7s 3.00nm 4.6mb
FFC 93.15 24 eP 34 06.00 1.7
0.7s 6.00nm 5.1mb

S.D. = 1.2 on 31 of 33 obs.

DEC 14, 1990 01h 43m 53.13±0.29s
23.822 N ± 5.4km 121.716 E ± 6.5km
DEPTH = 10.0km (geophysicist)
5.1mb (28 obs.) 4.9Msz (3 obs.)

TAIWAN (244)

Felt in the Hualien area.

ANP 1.37 353 eP 44 18.20 -0.1
HKC 7.11 259 iP 45 40.00 0.3
SSE 7.26 356 P 45 39.50 -2.3
0.7s 20.00nm 5.4mb
Z 12s 15.80um 3.6Msz
N 10s 14.90um

BAG 7.45 188 eP 45 45.50 0.8
BJI 16.83 345 eP 47 52.00 1.6
KMI 17.33 278 eP 47 55.00 -1.9
Z 12s 15.50um

MAT 19.04 44 eP 48 04.00
1.0s 15.00nm 4.2mb
LZH 19.69 312 eP 48 22.00 4.1X
1.8s 159.00nm 5.0mb
Z 10s 12.29um 4.4Msz
N 10s 5.62um
E 10s 8.22um

CHG 21.78 261 ePc 48 47.50 0.3
1.2s 42.97nm 4.7mb
NST 21.85 252 eP 48 52.60 4.8X
BDT 22.24 257 eP 48 55.00 3.3X
GUN 32.43 285 P 50 26.40 0.4
PKI 32.86 284 P 50 29.70 0.0
1.2s 82.00nm 5.5mb

KKN 32.96 285 P 50 30.60 0.1
DMN 33.12 284 P 50 31.80 -0.2
1.0s 126.00nm 5.8mb
GKN 33.53 285 P 50 34.20 -1.2
NDI 40.03 287 eP 51 30.00 -0.1
HYB 40.78 269 eP 51 39.00 2.6
PMG 41.34 140 eP 51 42.00 1.1
1.1s 98.73nm 5.5mb

GBA 43.00 264 P 51 58.00 3.4X
1.1s 9.00nm 4.4mb
KOD 44.23 260 eP 52 10.50 5.6X
POO 44.78 273 iPd 52 03.00 -6.1X
WB5 45.15 163 eP 52 10.80 -1.1
WRA 45.21 163 P 52 11.00 -1.3
1.1s 14.50nm 4.8mb

QIS 47.43 157 eP 52 30.00 0.1
ASPA 48.66 165 eP 52 37.60 -1.9
1.0s 24.50nm 5.2mb
e 55 23.80
eS 58 27.70

SVO 49.59 127 eP 52 54.00 7.2X
HNR 49.88 127 P 52 55.00 6.1X
WARB 49.94 174 iPc 52 49.00 -0.2
MAIO 54.44 299 eP 53 24.00 0.9
RMO 56.44 151 eP 53 38.00 0.6
BRS 59.09 148 iPd 53 54.90 -1.2
ADE 60.65 164 iPc 54 06.50 -0.2
0.9s 36.97nm 5.5mb

DZM 63.03 133 iPc 54 23.90 0.9
TAB 64.60 302 eP 54 36.00 2.7
FBA 68.91 27 P 54 59.80 -0.1
SOD 70.19 336 iP 55 06.00 -1.7
i 55 15.70

KAF 71.71 330 eP 55 18.90 2.0
NUR 72.95 329 eP 55 41.00 16.7X
KAS 73.20 308 eP 55 26.00 -0.3
INK 73.38 22 ePc 55 26.40 -0.3
1.0s 45.00nm 5.5mb

MBC 73.50 13 eP 55 26.50 -0.8
1.0s 13.00nm 4.9mb
BBTK 74.39 307 eP 55 32.00 -1.3
VRI 76.61 314 eP 55 47.00 1.3
MLR 77.25 314 eP 55 50.00 0.6
HFS 78.12 331 eP 55 54.90 1.2
0.5s 1.60nm 4.4mb
Z 16s 1.85um 5.5MszX

NB2 78.77 332 P 55 54.40 -2.9X
1.2s 13.90nm 4.9mb
KRA 79.25 320 eP 56 00.00 -0.1
e 56 07.50

KSP 81.02 322 eP 56 09.00 -0.5
SKO 81.62 312 eP 56 09.50 -3.3X
BRG 82.32 322 eP 56 18.90 2.6
1.6s 25.00nm 5.1mb
CLL 82.63 323 eP 56 17.00 -0.9
1.8s 24.00nm 5.0mb

YKA 83.11 23 eP 56 15.50 -4.7X
0.8s 15.40nm 5.2mb
MOX 83.72 323 e(P) 56 34.00 10.5X
GRF 84.42 322 eP 56 33.00 5.9X
Z 18s 0.60um 5.0Msz

LPG 89.22 320 eP 56 50.50 -0.5
0.7s 7.15nm 5.0mb
LOR 89.85 323 eP 56 52.60 -0.9
1.0s 8.00nm 4.9mb
Z 20s 0.40um 4.8Msz

LBF 89.95 323 eP 56 53.00 -1.1
1.1s 12.20nm 5.0mb
SSF 90.16 323 eP 56 54.20 -0.8
SMF 90.22 322 eP 56 54.60 -0.7
0.9s 9.85nm 5.1mb

AVF 90.41 323 eP 56 55.50 -0.6
0.9s 9.85nm 5.1mb
BGF 90.83 323 eP 56 57.20 -0.9
0.9s 10.65nm 5.2mb
MAF 91.18 323 eP 56 59.40 -0.3
1.1s 19.55nm 5.4mb

TCF 91.34 323 eP 57 00.00 -0.5
CAF 92.25 322 eP 57 04.90 0.2
1.1s 13.45nm 5.2mb
RJF 92.32 322 eP 57 05.20 0.2
1.2s 23.80nm 5.5mb

SES 92.64 31 eP 57 07.00 0.6
FFC 93.27 24 eP 57 09.00 -0.1
0.5s 4.00nm 5.1mb
LRM 95.04 35 eP 57 19.30 1.5
TNP 97.25 43 P 57 30.00 2.0
TOV 144.75 20 ePKP 03 33.00 0.2
SDV 145.32 22 ePKP 03 33.10 -0.8
ZOBO 168.09 53 PKP 04 07.00 4.8X
i 05 10.00

LPB 168.28 54 ePKP 04 06.00 3.9X
CNCB 168.54 54 PKP 04 08.00 5.5X
i 05 14.00
SIV 171.78 19 ePKP 04 04.00 0.5
S.D. = 1.1 on 59 of 76 obs.

DEC 14, 1990 01h 49m 17.36s
59.918 N 152.338 W
DEPTH = 83.9km
2.5mb (1 obs.)

SOUTHERN ALASKA (2)
<AGS-P>

INE 0.39 292 iP 49 30.07 -1.0
eS 49 40.07
HOM 0.44 126 eP 49 30.56 -0.6
eS 49 40.85
OPT 0.52 240 iP 49 31.35 -0.6
eS 49 42.41
NNL 0.54 76 eP 49 32.29 0.3
RED 0.55 337 eP 49 31.42 -0.8
RSO 0.58 339 eP 49 31.96 -0.7
eS 49 43.06

RS2 0.59 339 iP 49 32.12 -0.6
eS 49 43.42
REF 0.60 343 iP 49 32.26 -0.5
eS 49 43.46
RDN 0.63 341 iP 49 32.52 -0.5
eS 49 43.85

RDT 0.66 357 iP 49 32.51 -0.7
iS 49 44.28
CNPM 0.68 125 iP 49 32.84 -0.6
iS 49 44.65
NCT 0.71 336 eP 49 33.16 -0.6
eS 49 45.34
BRLK 0.75 101 eP 49 33.30 -0.8
iS 49 45.80

PDB 0.95 263 iP 49 35.29 -1.0
eS 49 48.89
NKA 0.99 33 eP 49 37.95 1.2
CDD 1.19 215 eP 49 38.27 -1.1
eS 49 54.91

SLKM 1.21 60 iP 49 39.18 -0.4
MCNL 1.26 235 iP 49 38.80 -1.3
SPU 1.28 6 eP 49 39.94 -0.4
iS 49 57.51

CKL 1.28 0 iP 49 40.22 -0.3
eS 49 57.32
BGL 1.35 359 eP 49 41.23 -0.2
CGLM 1.40 7 eP 49 41.91 -0.2

1.0s 42.00nm
NDI 150.74 47 iPKPd 42 25.50 1.5
SSE 151.62 322 PKP 42 30.50 5.3X
1.0s 24.00nm
POO 152.26 69 ePKP 42 27.50 1.0
LZH 153.60 355 ePKP 42 29.00 0.9
Z 18s 0.97um 5.7Msz
N 15s 0.89um
i 42 49.00
i 43 00.00
GKN 156.13 38 PKP 42 31.80 0.0
0.8s 32.00nm
GBA 156.58 78 PKP 42 33.40 1.0
KKN 156.68 37 PKP 42 32.40 -0.2
0.8s 28.00nm
DMN 156.71 38 PKP 42 32.60 -0.1
KOD 156.80 87 ePKP 42 31.50 -1.7
HYB 156.87 68 ePKP 42 33.00 0.2
PKI 156.92 38 PKP 42 32.30 -0.7
GUN 156.94 36 PKP 42 32.90 -0.2
0.8s 20.00nm
KMI 164.57 354 PKPd 42 42.50 1.5
2.0s 55.00nm
pP 42 52.00
CHG 170.71 12 ePKP 42 46.00 0.9
S.D. = 1.1 on 139 of 153 obs.

& DEC 14, 1990 11h 41m 33.05s
61.628 N 150.779 W
DEPTH = 48.0km
SOUTHERN ALASKA (2)
<AGS-P>

SUA 0.17 174 iP 41 41.24 0.1
eS 41 48.15
PWA 0.43 87 eP 41 43.24 -0.2
iS 41 51.09
SKT 0.50 315 iP 41 43.63 -0.7
eS 41 52.25
CGLM 0.67 242 iP 41 46.19 -0.3
eS 41 56.38
NCG 0.70 252 iP 41 46.28 -0.6
eS 41 56.78
PMS 0.70 123 eP 41 45.95 -0.9
iS 41 57.21
CRP 0.75 242 eP 41 47.43 -0.3
eS 41 58.59
SPU 0.76 234 iP 41 46.97 -0.7
iS 41 58.08
PLRM 0.79 92 eP 41 46.69 -1.3
eS 41 58.52
CUT 0.82 17 iP 41 47.57 -0.8
eS 41 59.16
BGL 0.86 245 iP 41 48.44 -0.6
iS 42 01.13
CKL 0.87 241 iP 41 48.44 -0.7
eS 42 01.01
GHO 0.90 80 eP 41 48.90 -0.7
eS 42 02.46
NKA 0.92 194 eP 41 50.83 1.1
KNK 1.13 100 iP 41 52.57 -0.3
SS 42 08.33
SLKM 1.16 166 eP 41 51.75 -1.4
RDT 1.32 217 iP 41 54.57 -0.9
eS 42 12.05
HUR 1.46 21 eP 41 57.18 -0.2
REF 1.48 220 eP 41 57.08 -0.7
RS2 1.51 220 eP 41 56.27 -2.1
RSO 1.51 220 eP 41 57.61 -0.7
NNL 1.61 189 eP 42 00.80 1.3
SEW 1.66 156 eP 42 00.40 0.2
INE 1.93 216 eP 42 03.41 -0.8
GLI 1.93 111 eP 42 01.63 -2.4
KNIM 1.96 130 eP 42 01.77 -2.7
VLZ 2.20 101 eP 42 05.59 -2.2
TOA 2.23 76 eP 42 07.16 -1.2
KLU 2.33 91 eP 42 07.77 -2.0
TZL 2.57 78 eP 42 12.26 -0.9
SDG 2.62 68 eP 42 13.12 -0.8

31 obs. associated

DEC 14, 1990 11h 46m 31.95±0.32s
1.403 N ± 6.4km 123.425 E ± 8.6km
DEPTH = 33.0km (normol)
4.7mb (8 obs.) 4.7Msz (1 obs.)
MINAHASSA PENINSULA (265)

DAV 6.04 21 eP 48 01.60 0.2
KKM 8.54 303 eP 48 42.20 5.7X
BAG 15.17 350 eP 50 04.00 -1.8
KGM 20.11 272 eP 51 05.50 -0.4
IPM 22.59 279 ePc 51 38.20 7.1X
SNG 23.45 285 eP 51 49.80 10.4X
eS 55 58.80
WB5 23.72 154 eP 51 41.50 -0.6
PMG 25.96 115 eP 52 03.00 -0.5
ASPA 26.92 158 iPc 52 10.80 -1.5
1.0s 6.60nm 4.2mb
QIS 26.97 145 iPc 52 11.80 -0.9
WARB 27.60 174 eP 52 17.50 -0.9
CHG 29.59 307 eP 52 41.90 5.5X
GYA 29.67 329 P 52 44.00 6.8X
KMI 30.90 321 eP 52 43.50 -4.7X
pP 52 53.50 36kmX
S 57 56.00
TIY 37.52 346 eP 53 47.00 2.2
Z 18s 1.20um 4.7Msz
eS 59 42.00
MAT 37.55 20 (P) 53 52.00 7.1X
1.2s 20.31nm 4.9mb
eS 59 41.00
HNR 37.93 107 eP 53 56.00 7.6X
ADE 38.91 160 eP 54 02.20 5.8X
0.8s 67.16nm 5.5mb
LZH 38.99 334 eP 53 56.00 -1.3
2.0s 36.00nm 4.8mb
N 15s 0.89um

BJI 39.02 351 eP 53 56.50 -0.7
1.0s 12.00nm 4.6mb
BRS 40.21 138 iPc 54 07.00 -0.3
HMC 40.71 346 eP 54 10.80 -0.5
LSA 41.63 316 eP 54 24.80 5.3X
BWA 42.67 149 eP 54 29.00 1.7
e 54 39.30
GTA 43.53 333 Pd 54 35.20 0.8
1.0s 10.00nm 4.5mb
SP 54 45.00
CAN 43.66 149 eP 54 35.90 0.5
e 54 46.30
GUN 44.54 310 P 54 43.60 0.6
PKI 44.74 309 P 54 44.40 -0.2
KKN 44.94 309 P 54 46.40 0.3
DMN 44.99 309 P 54 46.80 0.2
GKN 45.54 309 P 54 48.80 -2.0
KOD 46.50 283 eP 54 59.60 0.9
HYB 46.87 293 ePc 55 10.00 8.7X
GBA 47.07 287 Pd 55 02.50 -0.4
0.8s 2.80nm 4.3mb
WMO 52.83 328 P 55 47.00 0.3
eS 03 16.00
MAIO 68.33 309 eP 57 33.00 0.5
SPA 91.39 180 iPc 59 36.30 0.5
1.1s 11.90nm 5.2mb
GOL 119.51 42 (PKP) 05 21.00 0.4
e 05 33.50
ALO 121.02 47 e(PKP) 05 19.00 -4.6X
SAN 145.49 159 ePKP 06 09.50 0.6
PEL 145.76 159 ePKPd 06 10.50 1.0
1.3s 73.08nm
CNCB 161.02 144 ePKP 06 27.00 -4.4X
LPB 161.16 144 ePKP 06 28.00 -3.4X
ZOBO 161.35 143 PKP 06 33.00 1.2
S.D. = 1.0 on 30 of 44 obs.

DEC 14, 1990 11h 56m 13.83±0.49s
23.701 N ± 6.7km 121.634 E ± 7.7km
DEPTH = 10.0km (geophysicist)
4.7mb (13 obs.)

TAIWAN (244)
ML 5.0 (BJI). Felt in the
Hualien area.

ANP 1.48 356 eP 56 41.00 0.4
OZH 3.04 295 Pn 57 02.00 -0.8
Sn 57 37.00
SSE 7.38 357 Pd 58 04.50 0.4
0.8s 30.00nm 5.5mb
Z 12s 1.80um 3.6Msz
SP 58 08.00
GZH 7.64 267 P 58 07.40 -0.5
Z 14s 4.00um
NJ2 8.67 344 Pd 58 19.60 -2.7
WHN 9.41 318 eP 58 30.50 -1.9
Z 12s 2.40um

OIZ 11.93 249 eP 59 08.60 1.7
N 15s 2.50um
E 15s 1.40um
eS 01 22.00
TIA 13.06 344 eP 59 23.80 1.7
Z 10s 3.10um
N 10s 2.20um
GYA 13.84 285 P 59 32.20 -0.3
Z 10s 2.40um
PP 59 38.00
S 02 03.40
XAN 15.16 316 P 59 49.00 -0.6
E 10s 2.20um
TIY 16.04 333 eP 00 07.00 5.9X
Z 12s 1.90um
BJI 16.93 345 eP 00 16.00 3.7X
KMI 17.27 279 Pd 00 21.50 4.6X
Z 10s 5.40um
CD2 17.42 298 eP 00 17.40 -1.2
HHC 19.08 336 P 00 42.60 3.6X
Z 10s 1.10um 4.7Msz
BTO 19.48 333 eP 00 46.00 2.1
N 10s 2.50um
E 10s 1.70um
LZH 19.72 313 eP 00 50.00 3.3X
2.0s 71.00nm 4.6mb
Z 12s 2.15um 6.0MszX
PP 00 56.00
eS 04 30.00

CN2 20.29 8 eP 00 52.40 -0.1
CHG 21.69 261 ePd 01 08.60 1.7
1.0s 20.00nm 4.5mb
GTA 24.22 315 eP 01 32.40 0.6
1.2s 10.00nm 4.3mb
LSA 27.83 289 eP 02 10.00 4.0X
PMG 41.30 140 eP 04 02.00 0.8
WB5 45.06 163 eP 04 30.70 -1.1
WRA 45.11 163 P 04 30.00 -2.3
1.0s 6.50nm 4.5mb
QIS 47.35 157 eP 04 51.00 1.1
ASPA 48.57 165 eP 04 58.30 -1.1
0.6s 9.20nm 5.0mb
MAIO 54.43 299 eP 05 46.00 2.3
FBA 69.05 27 (P) 07 21.00 -0.5
INK 73.52 22 eP 07 47.50 -0.7
SLL 78.20 331 ePKP 08 13.70 -1.1
0.5s 2.20nm 4.5mb
NB2 78.84 332 P 08 18.00 -0.4
0.8s 2.90nm 4.4mb
YKA 83.25 23 eP 08 40.90 -0.7
1.3s 5.50nm 4.6mb
PNT 89.21 35 eP 09 13.00 1.8
LBF 90.00 323 eP 09 14.80 -0.2-
0.9s 7.35nm 4.9mb
SMF 90.27 322 eP 09 16.20 0.0
0.9s 8.20nm 5.0mb
AVF 90.46 323 eP 09 17.10 0.1
0.9s 8.20nm 5.0mb
CAF 92.30 322 eP 09 21.10 -4.5X
1.1s 12.20nm 5.2mb
TNP 97.39 43 P 09 51.00 1.7
S.D. = 1.3 on 31 of 38 obs.

? DEC 14, 1990 12h 21m 25.53±1.51s
39.271 N ±11.3km 27.450 E ±21.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 2.5 (ISK).

IZM 0.88 190 ePg 21 42.60 0.1
eSg 21 54.00
DST 0.97 69 ePn 21 43.50 -0.5
BNT 1.14 18 ePn 21 46.00 -0.9
KCT 1.20 35 ePn 21 49.30 1.4
S.D. = 1.7 on 4 of 4 obs.

* DEC 14, 1990 12h 36m 56.82±1.55s
24.059 N ±13.2km 121.932 E ±15.8km
DEPTH = 10.0km (geophysicist)
4.3mb (4 obs.)

TAIWAN (244)
ML 4.5 (BJI). Felt in the
Hualien area.

ANP 1.18 342 eP 37 22.00 3.0
eS 37 36.00
OZH 3.17 287 ePn 37 44.40 -3.2X

14d 12h

SSE 7.04 355 eP 38 21.00
Z 12s 2.25um 38 41.70 -0.7
eS 40 03.00
GZH 7.94 265 eP 38 55.00 0.0
NJ2 8.41 342 Pd 39 00.50 -1.1
Z 10s 2.00um 40 35.50
S 39 12.00 -2.4X
WHN 9.33 315 eP 39 12.00 -2.4X
Z 10s 2.90um
E 10s 4.20um
S 40 49.50
GYA 14.02 283 P 40 15.20 -2.7X
Z 10s 2.40um
S 42 40.00
XAN 15.10 314 P 40 30.00 -1.9
E 10s 2.20um
TIY 15.85 331 Pc 40 43.80 2.1
BJI 16.66 344 eP 41 00.00 8.2X
N 10s 0.80um
KMI 17.49 277 Pc 41 07.00 4.3X
Z 10s 2.90um
E 10s 1.80um
CD2 17.50 297 eP 41 01.20 -1.4
Z 10s 4.87um
HHC 18.87 335 eP 41 24.60 5.2X
BTO 19.29 332 eP 41 23.00 -1.7
N 10s 2.90um
E 10s 1.70um
LZH 19.68 312 eP 41 28.00 -1.2
Z 10s 2.00nm 4.2mb
Z 15s 2.43um 4.4Msz
PP 41 34.00
CN2 19.90 7 eP 41 36.00 4.7X
Z 12s 1.80um
N 10s 0.50um
E 10s 0.20um
PP 41 41.00
eS 45 18.00
CHG 22.01 261 eP 41 54.50 1.3
GTA 24.16 315 eP 42 14.80 0.6
Z 10s 30.00nm 4.6mb
Z 10s 1.60um 4.8MszX
E 10s 1.50um
PP 42 18.00
LSA 27.98 288 P 42 51.20 0.9
GUN 32.56 285 P 43 31.60 0.7
KKN 33.10 284 P 43 35.80 0.4
GKN 33.66 285 P 43 39.20 -1.0
WMO 34.23 314 eP 43 48.00 3.1X
Z 12s 0.90um 4.7MszX
FBA 68.61 27 P 48 02.00 0.2
1.0s 2.00nm 4.3mb
YKA 82.82 23 eP 49 21.80 -0.5
0.7s 1.90nm 4.4mb
S.D. = 1.5 on 17 of 25 obs.

DEC 14, 1990 14h 09m 07.30±0.25s
2.982 S ± 4.2km 136.488 E ± 5.5km
DEPTH = 33.0km (normal)
5.2mb (12 obs.) 5.1Msz (5 obs.)
WEST IRIAN REGION (196)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 16S, 35C
Centroid Location:
Origin Time 14:09:15.6 0.6
Lat 2.43S 0.05 Lon 136.36E 0.04
Dep 23.2 2.7 Half-duration 2.2
Moment Tensor: Scale 10¹⁷ Nm
Mrr= 0.97 0.06 Mtt=-1.40 0.06
Mrf= 0.43 0.08 Mrt=-1.85 0.22
Mrf= 0.24 0.09 Mtr= 0.26 0.05
Principal Axes:
T Val= 1.99 Plg=61 Azm=186
N 0.47 1 277
P -2.45 28 8
Best Double Couple: Mo=2.2+10¹⁷
NP1: Strike= 99 Dip=17 Slip= 92
NP2: 277 73 89

YYYY 9.99 109 eP 11 35.00 3.2X
MTN 11.14 208 eP 11 48.00 0.5
eS 13 50.00
PMG 12.37 122 eP 12 05.00 0.9
1.2s 453.13nm 6.5mb X
DAV 14.79 313 eP 12 32.00 -3.9X

KNA 14.79 210 eP 12 36.50 0.5
0.5s 291.00nm 5.9mb
eS 15 16.00
RAB 15.70 95 eP 12 48.00 0.2
WB5 16.92 187 iPc 13 00.30 -3.0
eS 16 03.00
OIS 17.73 170 iPd 13 11.00 -2.4
eS 16 24.00
GUA 18.42 27 eP 13 16.70 -5.2X
CTA 19.49 151 iPc+ 13 34.60 -0.2
1.4s 325.58nm 5.4mb
iS 17 12.00
ASPA 20.72 187 iPc 13 47.00 -0.6
0.9s 863.20nm 6.1mb
Z 18s 31.10um 5.7Msz
eS 17 29.60
iScS 25 51.80
SVO 23.98 106 eP 14 20.00 0.0
HNR 24.17 106 ePc+ 14 22.00 0.2
eS 18 38.00
QLP 24.62 163 eP 14 26.50 0.5
e 19 25.00
BAG 24.87 321 eP 14 29.00 0.3
WARB 24.93 201 iPd 14 30.30 1.2
RMO 26.17 154 eP 14 41.00 0.4
FORR 28.83 195 eP 15 03.50 -1.2
0.5s 50.00nm 5.5mb
MEKA 29.13 215 eP 15 08.50 1.0
CMS 29.69 164 e(P) 15 23.00 10.5X
COOL 31.31 206 eP 15 27.00 0.1
ADE 31.89 177 e(P) 15 32.30 0.4
MRWA 32.56 215 iPc 15 37.50 -0.3
BWA 33.20 162 eP 15 44.90 1.6
CAN 34.21 162 eP 15 52.50 0.4
CNB 34.32 161 eP 15 53.00 0.0
RKG 35.87 208 eP 16 11.00 4.8X
0.6s 15.00nm 5.1mb
SSE 36.89 338 Pc 16 14.00 -0.8
1.0s 40.00nm 5.2mb
Z 20s 2.00um 4.9Msz
N 16s 1.50um
E 16s 1.00um
eS 21 52.00
MAT 39.35 2 eP 16 33.00 -2.4
1.1s 15.19nm 4.7mb
Z 20s 2.48um 5.0Msz
eS 22 27.00
NST 40.46 298 eP 16 51.00 6.3X
CHG 42.82 302 eP 17 04.90 0.7
KMI 43.04 312 eP 17 07.50 1.4
Z 18s 2.10um 5.1Msz
N 20s 1.60um
E 20s 1.40um
S 23 30.00
BJI 46.69 339 eP 17 34.50 -0.3
1.5s 52.00nm 5.3mb
N 20s 4.10um
eS 24 19.00
LZH 49.39 325 Pd 17 57.00 0.8
1.5s 42.00nm 5.2mb
Z 20s 1.85um 5.1Msz
E 20s 1.64um
pP 18 05.00 27kmX
sP 18 09.00
i 18 22.50
S 24 58.00
sS 25 07.00
SNZO 51.31 143 P 18 16.00 5.5X
S 25 52.00
e 28 36.00
GUN 57.53 306 P 18 56.50 -0.2
PKI 57.78 305 P 18 58.00 -0.4
KKN 57.97 305 P 18 59.40 -0.2
DMN 58.04 305 P 19 00.00 -0.1
GKN 58.58 305 P 19 03.60 -0.2
KOD 60.21 283 eP 19 15.60 0.3
HYB 60.61 292 ePd 19 17.00 -0.7
eS 27 32.00
GBA 60.84 287 P 19 18.50 -0.7
POO 65.22 292 iPd 19 47.70 -0.6
QUE 73.95 302 eP 20 43.00 1.2
ANM 79.57 22 e(P) 21 12.90 0.6
MAIO 81.31 307 iPd 21 23.50 1.3
TTA 82.59 25 eP 21 28.90 0.5
IMA 84.65 23 eP 21 39.50 0.7
1.0s 6.20nm 4.7mb
PMR 85.23 28 e(P) 21 41.00 -0.5

1.2s 20.50nm 5.2mb
FBA 86.65 24 eP 21 47.40 -1.2
TOA 86.71 27 e(P) 21 49.90 0.9
INK 92.75 22 eP 22 16.00 -1.1
MBC 96.23 14 eP 22 32.00 -1.1
YKA 101.30 27 ePd iff 22 55.00 -1.1
0.8s 0.80nm 4.4mb
LLA 101.86 53 ePd iff 23 13.00 13.8X
PRI 102.13 54 ePd iff 23 10.90 10.3X
CNCB 148.84 130 PKP 28 53.00 2.2X
LPB 148.92 129 PKP 28 52.00 1.2
ZOBO 149.05 129 PKP 28 52.50 1.3
Z 24s 0.38um 5.1MszX
LR 21 05.00
CCH 149.87 133 PKP 28 56.30 4.3X
SIV 154.37 138 PKP 29 07.00 8.8X
S.D. = 1.0 on 50 of 62 obs.

? DEC 14, 1990 14h 10m 11.71±0.95s
39.103 N ± 8.7km 27.641 E ± 9.5km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 2.3 (ISK).

IZM 0.76 203 ePg 10 26.60 -0.1
eSg 10 38.60
DST 0.92 56 ePn 10 29.50 0.3
EZN 1.25 306 ePn 10 35.00 0.1
KCT 1.27 26 iPn 10 35.00 -0.3
S.D. = 0.4 on 4 of 4 obs.

& DEC 14, 1990 14h 22m 33.20s
36.561 N 117.997 W
DEPTH = 10.0km
CALIFORNIA-NEVADA BORDER REGION (40)
<BRK>. ML 3.4 (BRK), 3.6 (PAS).

MCA 0.58 81 P 22 43.00 -2.0
LCH 0.73 23 P 22 45.80 -1.8
CLC 0.81 156 iPc 22 47.70 -1.3
eS 22 58.30
PPK 0.87 5 P 22 48.40 -1.6
BONR 1.41 350 iP 22 59.00 -0.2
FRI 1.44 288 iP 22 58.90 -0.4
iS 23 17.60
TNP 1.64 22 eP 23 01.20 -1.2
PKEM 1.78 254 eP 23 05.20 1.0
ABL 1.98 211 eP 23 06.30 -1.0
BCH 2.18 232 eP 23 11.40 1.3
CMB 2.41 308 iPd 23 14.80 1.5
iS 23 45.70
PRS 2.73 266 ePd 23 18.40 0.5
PEC 2.75 165 eP 23 16.80 -1.4
SAO 2.78 275 eP 23 18.50 -0.1
ARN 2.94 287 eP 23 21.30 0.5
MHC 3.02 286 ePd 23 23.00 0.9
PLM 3.33 163 eP 23 25.20 -1.4
BKS 3.63 292 iP 23 30.90 0.3
MSU 5.02 65 e(P) 23 53.00 2.4
19 obs. associated

& DEC 14, 1990 14h 39m 42.50s
50.276 N 114.738 W
DEPTH = 5.0km (geophysicist)
ALBERTA PROVINCE, CANADA (24)
<PGC>. ML 2.8 (PGC).

SES 2.37 86 P 40 20.50 -2.2
NEW 2.55 219 eP 40 22.80 -2.4
EDM 3.07 16 P 40 31.00 -1.6
DPW 3.31 225 eP 40 34.50 -1.6
HRY 4.06 150 eP 40 47.20 0.5
HBMT 4.71 162 eP 40 55.10 -1.0
LRM 4.71 160 ePn 40 54.30 -1.9
SXM 4.76 149 ePn 40 55.20 -1.5
YKA 12.25 0 P 42 44.40 4.0
9 obs. associated

* DEC 14, 1990 15h 00m 02.78±1.64s
15.899 S ± 15.9km 167.394 E ± 19.8km
DEPTH = 55.1 ± 14.5 km
4.5mb (3 obs.) 5.0Msz (2 obs.)
VANUATU ISLANDS (186)

BKM 1.94 155 iPc 00 35.70 1.8
iS 01 04.00
PVC 2.03 154 iP 00 34.00 -1.1

15d 04h

SGB 1.96 40 ePc 28 30.68 -1.5
 BKJ 2.11 57 ePc 28 32.70 -1.6
 9 obs. associated

% DEC 15, 1990 04h 30m 32.90± 2.25s
 61.014 N ± 9.0km 3.766 E ± 17.4km
 DEPTH = 10.0km (geophysicist)
 NORWEGIAN SEA (642)
 MD 2.4 (BER).

SUE 0.49 84 iP 30 42.54 -0.2
 iS 30 47.32
 ASK 0.88 127 eP 30 50.42 0.6
 eS 31 01.27
 BER 1.00 129 eP 30 52.63 0.9
 eS 31 03.97
 HYA 1.19 82 eP 30 54.27 -0.7
 eS 31 07.69
 ODD1 1.80 127 eP 31 03.93 -0.3
 eSg 31 28.12
 KMY 1.95 157 eP 31 05.99 -0.4
 BLS2 2.34 136 eP 31 11.63 -0.5
 eSg 31 44.75
 MOL 2.38 47 eP 31 13.09 0.6
 eSg 31 44.29
 NRA0 3.81 91 Pn 31 29.30 -3.6X
 Lg 32 33.60
 S.D. = 0.7 on 8 of 9 obs.

DEC 15, 1990 05h 01m 30.81± 0.36s
 23.636 N ± 5.8km 121.688 E ± 7.8km
 DEPTH = 10.0km (geophysicist)
 4.5mb (7 obs.)
 TAIWAN (244)
 Felt in the Hualien area.

ANP 1.55 354 eP 02 00.20 1.6
 BAG 7.26 188 eP 03 21.40 1.6
 SSE 7.44 357 eP 03 21.50 -0.5
 Z 10s 2.90um
 pp 03 23.20
 DAV 16.87 167 eP 05 38.00 9.3X
 BJI 17.01 345 eP 05 35.50 5.3X
 2.0s 66.00nm 4.4mb
 N 10s 1.45um
 KMI 17.33 279 eP 05 40.50 5.9X
 Z 10s 4.60um
 S 09 04.00
 LZM 19.80 313 eP 06 04.00 -0.4
 2.0s 71.00nm 4.6mb
 Z 11s 2.63um 4.5msz
 sP 06 12.00
 PP 06 25.00
 eS 09 40.00

CHG 21.73 262 eP 06 25.50 1.2
 GUN 32.45 285 P 08 04.00 0.1
 PKI 32.88 285 P 08 08.20 0.6
 KKN 32.99 285 P 08 08.20 -0.2
 DMN 33.14 285 P 08 09.60 -0.2
 GKN 33.55 285 P 08 12.40 -0.9
 WB5 44.98 163 eP 09 47.00 -1.2
 QIS 47.27 157 eP 10 06.00 -0.3
 ASPA 48.49 165 eP 10 15.60 -0.2
 0.9s 5.90nm 4.6mb
 WARB 49.76 174 iPc 10 25.00 -0.5
 ANM 61.59 28 eP 11 51.10 0.6
 BRW 65.12 21 eP 12 12.80 -0.7
 TTA 65.75 30 eP 12 18.80 1.0
 SVW 66.10 32 eP 12 21.10 1.0
 IMA 66.49 26 eP 12 23.10 0.5
 FBA 69.08 27 eP 12 38.30 -0.4
 PMR 69.12 31 eP 12 38.30 -0.6
 TOA 70.38 30 eP 12 47.20 0.5
 INK 73.56 22 ePd 13 04.50 -0.9
 MBC 73.69 13 eP 13 06.00 -0.1
 HFS 78.27 331 eP 13 30.50 -1.7
 0.4s 0.70nm 4.1mb
 Z 16s 0.27um 4.7mszX
 LR 49 18.00

NB2 78.92 332 P 13 35.00 -0.8
 0.9s 4.00nm 4.5mb
 YKA 83.29 23 eP 13 57.50 -1.3
 0.7s 2.10nm 4.4mb
 FFC 93.45 24 eP 14 50.00 2.4
 0.8s 9.00nm 5.2mb
 S.D. = 1.0 on 28 of 31 obs.

& DEC 15, 1990 05h 06m 43.25s
 60.598 N 148.424 W
 DEPTH = 13.5km

KENAI PENINSULA, ALASKA (14)
 <AGS-P>.

KNIM 0.42 126 iP 06 51.80 -0.2
 iS 06 58.68
 SEW 0.71 226 eP 06 56.14 -0.8
 iS 07 06.14
 GLI 0.71 66 eP 06 56.04 -0.9
 eS 07 05.73
 MTU 0.72 148 eP 06 57.37 0.2
 eS 07 07.39
 KNK 0.82 359 eP 06 57.64 -1.1
 iS 07 08.94
 PMS 0.85 320 eP 06 58.47 -0.9
 eS 07 09.88
 SLKM 0.89 265 eP 06 59.23 -0.8
 VZW 1.03 62 eP 07 01.22 -1.1
 PLRM 1.06 341 eP 07 01.64 -1.1
 iS 07 15.76
 VLZ 1.16 61 eP 07 03.68 -0.8
 eS 07 18.27
 GH0 1.20 349 eP 07 04.20 -1.2
 eS 07 19.92
 PWA 1.27 327 eP 07 05.37 -1.1
 eS 07 22.21
 NKA 1.39 277 eP 07 08.52 0.3
 SUA 1.42 309 eP 07 07.40 -1.4
 BRKL 1.49 237 eP 07 08.25 -1.4
 KLU 1.51 53 eP 07 09.06 -1.0
 NNL 1.53 250 eP 07 10.25 0.0
 CNPM 1.77 234 eP 07 12.44 -1.3
 TOA 1.86 35 eP 07 13.92 -1.1
 SPU 1.87 290 eP 07 13.54 -1.6
 iS 07 37.51
 CGLM 1.89 294 eP 07 14.23 -1.2
 RDT 1.97 271 eP 07 15.51 -1.1
 NCG 1.99 296 eP 07 15.78 -1.2
 CKL 2.01 289 eP 07 15.48 -1.7
 eS 07 40.21
 CUT 2.02 335 eP 07 15.49 -1.8
 SKT 2.04 314 eP 07 16.00 -1.7
 BGL 2.05 291 eP 07 16.46 -1.4
 REF 2.12 269 eP 07 17.53 -1.4
 RDN 2.15 270 eP 07 17.61 -1.6
 RS2 2.15 268 eP 07 18.32 -1.0
 NCT 2.22 271 eP 07 18.34 -2.0
 GLB 2.40 67 eP 07 21.23 -1.6
 32 obs. associated

& DEC 15, 1990 05h 24m 13.73s
 60.051 N 140.669 W
 DEPTH = 3.7km

SOUTHEASTERN ALASKA (19)
 <AGS-P>.

BCPM 0.53 100 eP 24 24.66 0.4
 eS 24 33.45
 YAH 0.62 301 iP 24 26.46 0.3
 eS 24 36.37
 YKU 0.69 136 eP 24 28.34 0.8
 PNL 0.75 120 iP 24 28.15 -0.5
 eS 24 40.08
 HQN 1.09 123 eP 24 33.34 -1.4
 eS 24 49.22
 TGL 1.28 304 eP 24 36.47 -1.7
 eS 24 54.63
 BALM 1.29 321 eP 24 36.04 -2.2
 eS 24 54.26
 HYT 1.75 62 P 24 44.70 -0.5
 GLB 2.08 313 eP 24 48.62 -1.3
 eS 25 14.24
 KLU 2.95 302 eP 25 00.90 -1.5
 VLZ 3.00 294 eP 25 01.29 -1.6
 TZL 3.06 313 eP 25 01.54 -2.2
 VZW 3.08 292 eP 25 02.07 -2.0
 GLI 3.29 287 eP 25 05.80 -1.3
 TOA 3.38 310 eP 25 06.21 -2.2
 MTU 3.51 272 eP 25 08.60 -1.6
 KNIM 3.54 278 eP 25 09.70 -0.9
 KNK 4.06 293 eP 25 15.90 -2.1
 18 obs. associated

& DEC 15, 1990 05h 46m 28.71s
 59.817 N 152.907 W

DEPTH = 104.7km
 3.1mb (1 obs.)
 SOUTHERN ALASKA
 <AGS-P>.

(2)

OPT 0.23 225 iP 46 43.19 0.9
 eS 46 53.61
 INE 0.26 342 iP 46 43.31 0.8
 iS 46 55.44
 AUE 0.52 207 eP 46 44.57 -0.7
 AUP 0.53 210 eP 46 44.91 -0.6
 eS 46 57.58
 AGU 0.53 210 eP 46 44.96 -0.6
 AUH 0.53 211 eP 46 44.79 -0.7
 eS 46 56.50
 AUI 0.55 209 eP 46 44.92 -0.7
 eS 46 57.01
 RED 0.61 6 iP 46 45.33 -0.8
 eS 46 58.12
 PDB 0.65 268 iP 46 45.51 -0.9
 eS 46 58.38
 RSO 0.65 7 iP 46 45.96 -0.7
 iS 46 58.94
 RS2 0.65 7 iP 46 46.01 -0.6
 HOM 0.66 103 iP 46 46.02 -0.4
 eS 46 59.79
 REF 0.68 9 iP 46 46.21 -0.7
 iS 46 59.61
 RDN 0.70 6 eP 46 46.33 -0.7
 eS 46 59.60
 XLV 0.70 121 eP 46 45.80 -1.0
 eS 46 59.64
 NCT 0.75 359 eP 46 46.63 -0.7
 eS 47 00.15
 RDT 0.80 18 iP 46 46.93 -0.9
 eS 47 00.79
 NNL 0.84 74 iP 46 48.42 0.3
 CNPM 0.90 108 iP 46 47.87 -0.8
 eS 47 02.65
 MCNL 0.97 230 iP 46 48.38 -1.0
 eS 47 03.18
 CDD 0.97 203 eP 46 48.19 -1.3
 BRKL 1.02 92 iP 46 49.17 -0.9
 eS 47 05.14
 SYI 1.24 167 eP 46 51.41 -1.0
 NKA 1.25 41 eP 46 53.55 1.0
 CKL 1.41 11 iP 46 53.80 -0.9
 eS 47 13.79
 SPU 1.43 17 iP 46 53.86 -1.0
 iS 47 13.54
 BGL 1.47 10 eP 46 54.77 -0.6
 SLKM 1.51 62 eP 46 54.24 -1.5
 eS 47 13.87
 CGLM 1.56 16 iP 46 55.65 -0.8
 NCG 1.63 13 eP 46 56.61 -0.8
 SEW 1.76 79 eP 46 57.47 -1.4
 SUA 1.97 32 iP 47 00.91 -0.7
 eS 47 25.96
 PMS 2.19 48 eP 47 03.32 -1.2
 eS 47 28.78
 SKT 2.27 17 iP 47 04.23 -1.3
 PWA 2.37 38 eP 47 05.75 -1.0
 PLRM 2.57 45 eP 47 07.11 -2.4
 KNIM 2.65 76 eP 47 08.12 -2.4
 eS 47 37.71
 MTU 2.65 84 eP 47 09.18 -1.5
 eS 47 39.54
 KNK 2.72 52 eP 47 09.22 -2.3
 GH0 2.77 43 eP 47 10.03 -2.2
 CUT 2.90 25 eP 47 12.28 -1.6
 VLZ 3.51 65 eP 47 20.79 -1.4
 KLU 3.83 61 eP 47 24.03 -2.6
 TOA 4.01 52 eP 47 26.57 -2.5
 RND 4.09 27 eP 47 28.11 -2.1
 GLB 4.77 66 eP 47 37.30 -2.2
 BALM 5.37 72 eP 47 45.07 -2.9
 YKA 18.49 65 eP 50 35.50 -3.4
 0.3s 0.30nm 3.1mb
 48 obs. associated

& DEC 15, 1990 06h 40m 00.60s
 59.907 N 153.081 W
 DEPTH = 123.4km
 SOUTHERN ALASKA (2)
 <AGS-P>.

INE 0.15 3 eP 40 17.09 0.7

15d 12h

E 10s 0.70um
 TIY 15.94 332 eP 03 32.00 4.7X
 Z 10s 0.80um
 N 10s 0.50um
 CD2 17.43 298 eP 03 47.40 1.1
 LZH 19.68 312 eP 04 14.00 0.2
 Z 2.0s 32.00nm 4.3mb
 Z 10s 0.59um 5.7msz
 CHG 21.82 261 eP 04 36.90 1.2
 GTA 24.17 315 eP 05 00.00 1.2
 WRA 45.25 163 P 08 00.00 -0.8
 0.5s 1.40nm 4.2mb
 FBA 68.85 27 P 10 48.00 0.2
 INK 73.32 22 eP 11 15.00 0.4
 YKA 83.06 23 eP 12 08.00 -0.1
 0.8s 1.60nm 4.3mb
 S.D. = 1.2 on 16 of 17 obs.

DEC 15, 1990 12h 08m 24.28 ± 0.62s
 39.900 N ± 5.4km 24.077 E ± 4.5km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)
 MD 3.3 (THE).

PAIG 0.31 275 iP 08 30.18 -0.5
 eS 08 33.86
 PLG 0.68 315 ePb 08 36.00 -1.7
 NEO 0.89 228 ePn 08 41.00 -0.3
 SOH 1.07 329 eP 08 44.38 -0.1
 THE 1.12 311 eP 08 44.50 -0.8
 eS 08 59.30
 LIT 1.24 280 eP 08 47.02 -0.2
 eS 09 03.34
 SRS 1.27 343 eP 08 47.78 -0.1
 eS 09 04.66
 KNT 1.55 325 eP 08 52.62 0.7
 eS 09 12.14
 AGG 1.61 238 eP 08 52.58 -0.3
 GRG 1.66 310 eP 08 55.02 1.5
 eS 09 18.10
 RDO 1.67 41 ePn 08 53.20 -0.5
 MMB 1.71 351 ePc 08 54.00 -0.3
 EZN 1.73 92 iPn 08 59.40 4.8X
 KZN 1.82 284 ePb 08 55.50 -0.4
 PRK 1.82 110 ePb 09 01.80 6.0X
 EVR 2.01 242 ePn 08 58.50 -0.3
 KDZ 2.02 30 iPc 08 58.00 -0.8
 Sg 09 28.00
 KKB 2.10 339 iP 09 00.00 0.0
 iSg 09 29.00
 FNA 2.25 294 eP 09 03.02 0.9
 PLD 2.25 12 iP 09 03.00 0.9
 KGT 2.53 76 iPn 09 06.90 0.8
 PGB 2.65 1 eP 09 07.00 -0.8
 eS 09 39.00
 VTS 2.77 347 iP 09 10.00 0.4
 iS 09 43.00
 OHR 2.78 297 ePn 09 12.00 2.3
 EDC 2.94 80 ePn 09 22.00 10.1X
 JMB 3.19 36 iP 09 15.00 -0.3
 S.D. = 0.9 on 23 of 26 obs.

% DEC 15, 1990 12h 13m 04.02 ± 1.16s
 39.668 N ± 10.4km 27.590 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.6 (ISK).

EDC 0.71 17 ePg 13 17.70 -0.3
 BNT 0.73 20 ePg 13 18.40 0.0
 eSg 13 28.90
 DST 0.80 94 iPg 13 19.00 -0.7
 eSg 13 30.20
 KGT 0.81 344 iPg 13 19.40 -0.4
 KCT 0.83 45 iPg 13 20.10 0.1
 EZN 0.99 280 iPn 13 22.90 0.2
 YLV 1.64 56 iPn 13 34.10 1.1
 S.D. = 0.7 on 7 of 7 obs.

& DEC 15, 1990 12h 41m 48.99s
 62.616 N 150.654 W
 DEPTH = 85.8km
 CENTRAL ALASKA (1)
 <AGS-P>.

CUT 0.28 140 iP 42 01.80 -0.2
 MUR 0.59 52 eP 42 04.14 -0.2

SKT 0.76 213 eS 42 14.92
 eP 42 05.82 -0.2
 eS 42 18.45
 PWA 1.04 159 eP 42 09.03 0.0
 eS 42 25.16
 RND 1.14 45 eP 42 10.18 -0.3
 eS 42 25.74
 SUA 1.16 182 eP 42 10.70 0.0
 eS 42 27.54
 GHO 1.17 135 eP 42 10.85 0.0
 eS 42 27.78
 PLRM 1.25 144 eP 42 11.31 -0.4
 MCK 1.37 34 eP 42 13.23 0.0
 NCG 1.41 211 eP 42 13.76 -0.1
 CGLM 1.46 207 eP 42 14.51 0.0
 PMS 1.47 159 eP 42 14.21 -0.4
 eS 42 34.62
 SPU 1.58 205 iP 42 15.98 -0.1
 eS 42 37.74
 BGL 1.59 212 eP 42 16.64 0.5
 KNK 1.59 138 iP 42 15.61 -0.6
 eS 42 37.97
 CKL 1.63 210 eP 42 16.81 0.0
 eS 42 39.83
 BWN 1.65 18 iP 42 17.17 0.3
 NKA 1.90 189 eP 42 22.30 2.1
 SLKM 2.13 174 eP 42 23.56 0.2
 TOA 2.15 102 eP 42 23.37 -0.3
 RDT 2.21 203 eP 42 24.27 -0.3
 NCT 2.33 209 eP 42 26.28 0.1
 RDN 2.34 206 eP 42 25.99 -0.3
 REF 2.35 206 eP 42 26.53 0.0
 SDG 2.37 90 eP 42 26.70 0.1
 CCB 2.40 31 eP 42 26.34 -0.7
 PAX 2.41 79 eP 42 27.42 0.2
 GLI 2.43 134 eP 42 25.90 -1.5
 HDA 2.45 41 eP 42 26.88 -0.8
 VZW 2.49 127 eP 42 27.07 -1.3
 KLU 2.50 115 eP 42 26.95 -1.5
 TZL 2.51 101 eP 42 28.26 -0.2
 VLZ 2.53 124 eP 42 27.19 -1.6
 MDM 2.59 24 eP 42 29.09 -0.5
 SEW 2.59 167 eP 42 29.05 -0.5
 KNIM 2.67 147 eP 42 28.30 -2.5
 INE 2.81 205 eP 42 33.32 0.5
 MTU 3.01 150 eP 42 33.67 -1.7
 CNPM 3.11 185 eP 42 36.76 -0.1
 GLB 3.43 107 eP 42 39.65 -1.7
 CDD 3.98 203 eP 42 48.63 -0.2
 SYI 4.11 193 eP 42 50.01 -0.6
 42 obs. associated

& DEC 15, 1990 13h 20m 47.23s
 46.802 N 119.993 W
 DEPTH = 3.4km
 WASHINGTON (29)
 <SEA>. CL 3.1 (SEA).

BVW 0.08 84 Pc 20 49.10 0.1
 VTG 0.16 1 Pd 20 50.76 0.3
 WDG 0.25 140 Pd 20 52.55 0.3
 WAH2 0.30 99 Pd 20 53.71 0.5
 S 20 59.36
 MXC 0.31 223 Pd 20 53.77 0.4
 BRVW 0.32 180 P 20 53.99 0.4
 S 21 00.82
 LOCW 0.39 102 P 20 55.92 0.8
 EBG 0.41 285 Pc 20 56.61 1.2
 S 21 03.93
 RC1 0.41 70 Pd 20 56.13 0.7
 CRF 0.42 87 P 20 56.34 0.8
 S 21 02.89
 GBL 0.42 119 P 20 56.35 0.7
 YAKW 0.46 233 P 20 57.70 1.2
 MJ2 0.50 119 Pc 20 57.98 0.8
 RSW 0.50 146 Pc 20 57.88 0.7
 OT2 0.53 99 Pd 20 58.55 0.8
 TBM 0.55 312 Pc 20 59.23 0.9
 NAC 0.58 264 Pc 20 59.56 0.8
 WRD 0.61 74 Pd 20 59.59 0.2
 WIW 0.61 127 P 21 00.00 0.6
 EPH 0.61 26 Pd 20 59.63 0.1
 PRW 0.63 160 P 21 00.33 0.6
 TWW 0.69 300 P 21 01.69 0.7
 ET3 0.76 107 P 21 02.28 -0.2
 ETW 0.84 344 Pd 21 03.25 -0.6
 WTV 0.90 2 P 21 04.52 -0.6

PATW 0.94 170 P 21 05.69 0.0
 SAW 0.99 24 P 21 05.91 -0.7
 CBSW 1.00 358 P 21 06.47 -0.4
 GL2 1.02 215 P 21 06.53 -0.7
 OD2 1.06 56 P 21 07.12 -0.6
 WPW 1.07 265 P 21 07.51 -0.6
 WG3 1.10 134 P 21 07.79 -0.8
 GLK 1.14 259 P 21 09.29 0.1
 FMW 1.16 277 P 21 09.23 -0.4
 DHW2 1.19 7 P 21 09.81 -0.3
 LON 1.25 268 P 21 10.27 -0.8
 REMR 1.27 271 P 21 11.44 -0.1
 ASR 1.28 240 P 21 12.01 0.3
 GSM 1.30 289 P 21 11.70 -0.2
 NLW 1.30 350 P 21 11.67 -0.3
 JBO 1.35 175 P 21 12.24 -0.5
 RVC 1.36 277 P 21 12.79 -0.3
 VGB 1.40 203 eP 21 13.00 -0.6
 RMW 1.40 299 P 21 13.61 -0.1
 GULW 1.42 232 P 21 13.77 -0.2
 HTW 1.57 310 P 21 16.46 0.4
 TDL 1.60 254 P 21 16.47 -0.1
 DPW 1.62 48 P 21 15.85 -0.9
 JLK 1.63 247 P 21 17.21 0.2
 VTHM 1.67 194 Pd 21 17.42 -0.1
 ERK 1.69 254 P 21 18.00 0.1
 FL2 1.74 250 P 21 18.98 0.4
 CZM 1.77 259 P 21 19.39 0.4
 VLL 1.78 222 P 21 19.54 0.4
 LVP 1.82 247 P 21 20.16 0.4
 JCW 1.91 317 P 21 21.87 0.8
 CROR 1.95 201 P 21 20.91 -0.7
 GMW 2.05 292 P 21 23.75 0.8
 CPW 2.16 276 P 21 25.94 1.3
 HDW 2.25 293 P 21 26.43 0.4
 VIPM 2.34 191 P 21 26.51 -0.8
 NEW 2.43 52 eP 21 27.50 -1.1
 62 obs. associated

DEC 15, 1990 13h 47m 20.84 ± 0.53s
 44.152 N ± 6.8km 10.060 E ± 4.3km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)

BDI 0.40 103 Pc 47 28.60 -0.4
 eSg 47 34.60
 MME 0.46 85 Pc 47 29.50 -0.8
 eSg 47 36.20
 PII 0.55 142 Pc 47 32.70 0.8
 eSg 47 41.60
 BOB 0.75 325 Pc 47 34.70 -1.0
 eSg 47 45.20
 SFI 1.31 100 P 47 46.00 0.9
 MDI 1.64 351 Pd 47 50.50 0.7
 PGF 1.78 206 Pn 47 50.20 -1.8
 Sn 48 12.00
 SBF 1.92 262 Pn 47 54.70 0.8
 Sn 48 19.30
 FRF 2.54 258 Pn 48 02.90 0.2
 Sn 48 32.60
 LMR 2.70 254 Pn 48 05.00 -0.1
 Sn 48 35.60
 LRG 2.77 257 Pn 48 06.60 0.6
 S.D. = 1.0 on 11 of 11 obs.

% DEC 15, 1990 14h 02m 57.54 ± 0.52s
 43.094 N ± 10.6km 0.636 W ± 3.8km
 DEPTH = 10.0km (geophysicist)
 PYRENEES (378)
 MD 2.2 (STR).

ESCF 0.05 109 Pg 02 59.69 0.0
 ATE 0.05 261 Pg 02 59.84 0.1
 Sg 03 01.73
 ISSF 0.13 241 Pg 03 01.09 0.2
 Sg 03 04.39
 OGE 0.14 58 Pg 03 01.08 0.2
 MADF 0.14 291 Pg 03 00.99 0.1
 Sg 03 03.83
 JAU 0.20 106 Pg 03 01.88 -0.2
 ELYF 0.27 286 Pg 03 03.07 -0.2
 Sg 03 07.45
 BOH 0.28 272 Pg 03 03.22 -0.2
 Sg 03 07.58
 S.D. = 0.2 on 8 of 8 obs.

? DEC 15, 1990 14h 47m 08.98 ± 4.37s

40.642 N \pm 9.4km 27.656 E \pm 35.2km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.2 (ISK).

EDC	0.33	152	ePg	47	16.00	0.1
BNT	0.35	145	iPg	47	15.90	-0.3
			iSg	47	21.90	
KCT	0.66	126	iPg	47	21.40	-0.8
CTT	0.77	49	iPg	47	23.90	-0.2
			iSg	47	36.90	
DST	1.28	144	ePn	47	33.30	0.6
YLV	1.31	93	ePn	47	33.80	0.6

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

DEC 15, 1990 15h 59m 24.62 \pm 0.55s
 36.999 N \pm 5.0km 21.289 E \pm 3.2km
 DEPTH = 59.5 \pm 6.8 km
 4.0mb (10 obs.)
 SOUTHERN GREECE (368)
 MD 4.2 (ATH), 3.7 (THE).

VLI	1.35	101	ePn	59	48.00	0.4
EVR	1.96	12	ePb	59	59.50	3.4X
ATH	2.16	63	ePn	59	59.00	0.2
AGG	2.18	22	eP	00	01.64	2.5
NEO	2.76	33	ePn	00	08.00	0.6
VAM	2.84	123	ePn	00	07.50	-1.0
KEK	2.95	337	ePn	00	10.00	-0.1
LIT	3.24	17	eP	00	14.88	0.8
KZN	3.32	6	ePn	00	16.50	1.1
APE	3.39	88	ePn	00	14.00	-2.4
TPE	3.44	343	iPnd	00	19.80	2.9
PAIG	3.47	32	eP	00	17.44	0.1
			eS	00	38.00	

KBN	3.64	354	iPnd	00	22.00	2.3
PLG	3.77	26	ePn	00	22.00	0.4
FNA	3.78	1	iP	00	22.44	0.7
THE	3.86	19	eP	00	22.36	-0.4
			iS	00	47.28	
NPS	3.91	115	ePn	00	24.50	1.0
GRG	4.05	12	eP	00	25.68	0.2
			eS	00	52.88	
OHR	4.12	355	iPnc	00	27.50	0.9
	0.5s	159.00nm				
			iSn	01	09.50	
			Lg	01	18.20	

SOH	4.14	22	eP	00	27.57	0.7
LCI	4.23	323	P	00	26.60	-1.4
			eSn	01	09.70	
SOI	4.30	286	P	00	28.70	-0.2
			eSn	01	10.60	

KNT	4.34	16	eP	00	30.20	0.6
VAY	4.43	13	iPn	00	32.00	1.2
SMG	4.48	79	ePn	00	35.00	3.6X
TIR	4.48	346	ePn	00	30.50	-1.0
SRS	4.49	23	eP	00	31.60	0.0
ROI	4.51	306	P	00	32.00	0.0
			eS	01	15.20	

TDS	4.71	306	P	00	35.40	0.6
PHP	4.73	352	iPnc	00	34.20	-0.8
ATN	4.77	286	Pd	00	35.50	-0.2
LACI	4.79	346	iPnc	00	35.50	-0.4
CSI	4.81	307	P	00	38.90	2.7
EZN	4.86	53	ePn	00	39.00	2.1
MMB	4.96	22	ePc	00	38.00	-0.3
SKO	4.97	1	ePn	00	37.80	-0.6
	0.5s	196.00nm				
			Lg	01	33.50	

8RT	5.01	322	P	00	38.50	-0.6
			eSn	01	31.50	
MMN	5.06	306	P	00	41.40	1.7
			eS	01	28.50	
MEU	5.09	273	Pc	00	39.30	-0.9
			eSn	01	30.50	
KKS	5.12	353	ePn	00	42.90	2.5
ULC	5.20	343	iPnc	00	39.70	-2.0
			eSn	01	35.00	

MNO	5.33	282	P	00	43.30	-0.4
BAI	5.36	321	P	00	42.60	-1.3
ALN	5.38	42	eP	00	43.72	-0.4
BDV	5.61	341	ePn	00	45.50	-1.9
			eSn	01	43.00	
KDZ	5.64	33	iPd	00	47.00	-0.8
TTG	5.64	345	ePn	00	48.00	0.2
			eSn	01	47.60	
PVY	5.68	350	ePn	00	48.50	0.0

PLD	5.74	26	eP	00	50.00	2.8
VTG	5.78	14	iP	00	54.00	4.1X
KGT	5.83	52	ePn	00	48.40	-2.1
HCY	5.85	339	iPnc	00	48.50	-2.3
			eSn	01	50.20	

GIB	5.86	282	P	00	51.30	0.3
SGO	5.87	309	P	00	51.40	0.4
IVA	5.96	350	ePn	00	52.00	-0.4
			eSn	01	55.20	

PGB	5.97	21	eP	00	59.00	6.5X
DIM	6.02	32	eP	00	55.00	1.9
FAI	6.09	275	P	00	54.40	0.3
BNT	6.18	55	eP	00	52.80	-2.5
BRY	6.26	341	ePn	00	54.50	-2.1
			eSn	01	59.20	

DST	6.33	64	eP	00	57.30	-0.2
JMB	6.82	35	eP	01	09.00	4.8X
ELL	6.91	89	ePn	01	07.00	1.3
DUI	7.05	313	Pd	01	08.00	0.4
HVAR	7.20	330	iPn	01	06.90	-2.7
			iSn	02	21.00	

SDI	7.46	311	P	01	12.60	-0.6
ALP	8.27	317	ePn	01	24.15	-0.4
			eSn	02	49.91	
CIO	8.79	317	ePn	01	30.48	-1.1
			eSn	03	03.51	

ASS	8.97	315	P	01	35.20	1.1
ARV	9.10	318	P	01	34.60	-1.2
MLR	9.18	21	eP	01	40.00	3.0X
VBY	9.63	334	eP	01	41.30	-1.7
			iS	03	24.80	

PTJ	9.75	337	ePg	01	41.80	-2.9X
			eSn	02	06.10	
VRJ	9.75	23	eP	01	48.00	3.3X
SFI	9.97	317	P	01	48.50	0.9
CEY	10.14	332	eP	01	49.00	-0.9
			eS	03	36.00	

LJU	10.35	333	e(P)	01	51.00	-1.9
			eS	03	43.00	
TRI	10.37	329	eP	01	50.70	-2.4
VOY	10.59	331	eP	01	53.80	-2.3
			eS	03	46.20	

CTI	11.56	324	P	02	09.30	0.0
MDI	12.34	319	P	02	18.40	-1.1
DSI	12.85	111	eP	02	20.00	-6.3X
			eS	04	31.00	
PRNI	13.20	116	eP	02	27.00	-3.9X
			eS	04	43.00	

MBH	13.44	118	e(P)	02	30.00	-4.2X
GRF	14.63	333	eP	02	57.50	7.9X
BSF	15.20	320	eP	02	57.40	0.4
CDP	15.34	322	eP	02	58.20	-0.6
CLL	15.48	340	eP	03	06.00	5.6X
			e	03	41.00	

HAU	15.54	320	eP	03	01.70	0.4
	0.7s	7.70nm			4.0mb	
LBF	16.25	313	eP	03	11.80	1.4
	0.9s	5.75nm			3.7mb	
LOR	16.47	314	eP	03	14.70	1.6
	0.7s	3.30nm			3.6mb	

SSF	16.57	313	eP	03	15.90	1.6
LDF	19.45	313	eP	03	49.10	0.1
	0.6s	5.40nm			4.0mb	
NUR	23.63	4	eP	04	30.80	0.0
HFS	23.66	351	eP	04	30.70	-0.4
	0.4s	4.40nm			4.3mb	

Z	15s	0.12um			3.5mszX	
		LR			13	40.00
EKA	24.74	326	Pc	04	44.20	2.6
	0.6s	2.30nm			3	8mb
NB2	24.89	348	P	04	43.70	0.6
	0.8s	4.00nm			4	0mb

KAF	25.33	6	iP	04	48.20	1.1
	0.5s	7.70nm			4	5mb
8CAO	32.51	185	iPd	05	51.90	0.1
	0.2s	16.00nm			5	5mb X
TIC	38.58	225	P	06	44.40	0.9
KIC	38.65	224	P	06	45.10	1.0

LIC	38.92	225	P	06	47.20	0.9
GKN	53.32	80	P	08	38.60	-1.4
DMN	53.86	80	P	08	42.90	-1.3
KKN	53.92	80	P	08	43.00	-1.5
GUN	54.34	80	P	08	46.40	-1.4
GBA	54.99	100	P	08	52.00	-0.2
	0.3s	1.10nm			4	4mb
INK	73.33	350	eP	10	52.00	0.9

YKA 74.70 340 eP 11 00.00 0.8
 0.6s 0.50nm 3.6mb
 S.D. = 1.3 on 96 of 109 obs.

% DEC 15, 1990 16h 34m 16.62 \pm 0.78s
 37.757 N \pm 7.4km 15.045 E \pm 6.0km
 DEPTH = 10.0km (geophysicist)
 SICILY (398)

MNO	0.33	302	P	34	23.40	-0.1
			eSg	34	27.80	
ATN	0.52	39	P	34	27.10	-0.1
			iSg	34	34.20	
MEU	0.66	188	P	34	29.80	0.0
			eSg	34	39.90	

GIB	0.84	286	P	34	33.00	0.1
			eSg	34	44.00	
SOI	0.86	68	P	34	33.20	0.1
			eSg	34	45.40	

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

% DEC 15, 1990 16h 38m 01.73 \pm 2.43s
 31.537 S \pm 23.2km 67.609 W \pm 17.9km
 DEPTH = 10.0km (geophysicist)
 SAN JUAN PROVINCE, ARGENTINA (137)

CFA	0.54	262	iPc	38	12.60	-0.1
			eS	38	19.20	
RTCV	0.85	248	e(P)	38	19.00	0.8
ZON	0.91	269	eP	38	18.00	-1.2
			eS	38	31.00	
RTRS	2.10	310	iPd	38	38.10	0.8
			eS	39	04.90	

CYA	3.46	28	e(P)	38	56.50	-0.3
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S.D. = 1.2 on 5 of 5 obs.

% DEC 15, 1990 17h 56m 33.51 \pm 0.51s
 40.626 N \pm 4.2km 27.649 E \pm 4.1km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.0 (ISK).

KGT	0.32	237	iPg	56	40.30	0.2
EDC	0.32	149	ePg	56	40.60	0.4
			eSg	56	45.00	
BNT	0.34	142	iPg	56	40.20	-0.3
KCT	0.66	125	ePg	56	46.30	-0.3
CTT	0.79	48	iPg	56	48.80	-0.1
			iSg	56	57.80	

15d 18h

IFR	4.90	127	eS	35	30.60	-0.8	WMO	50.42	307	P	39	06.70	0.1	BGL	0.84	261	eP	37	50.45	-0.8
			iSn	35	38.50		DZM	50.74	155	iPc	39	10.30	1.1				eS	38	02.59	
EBAN	5.05	70	eP	34	48.90	-0.1	BRS	52.26	172	iP	39	35.00	14.5X	GHO	0.92	66	eP	37	51.66	-0.6
			eS	35	43.00		GUN	53.12	287	P	39	27.60	0.1				eS	38	03.55	
GUD	6.01	46	eP	35	01.90	-0.3	PKI	53.59	287	P	39	30.70	-0.2	SLKM	0.93	166	eP	37	51.43	-1.0
			eS	36	06.80			0.6s	16.00nm				5.2mb				eS	38	04.69	
TIO	6.01	159	iPn	35	02.00	-0.2	KKN	53.66	287	P	39	31.10	-0.2	CUT	1.02	11	eP	37	52.61	-1.0
			iSn	36	04.80			0.6s	22.00nm				5.4mb	KNK	1.07	89	eP	37	53.79	-0.5
EVIA	6.15	68	eP	35	03.70	-0.4	WARB	53.78	201	eP	39	32.00	0.3				eS	38	08.20	
			eS	36	10.00		DMN	53.85	287	P	39	32.40	-0.3	RDT	1.19	226	eP	37	55.46	-0.6
ETOR	7.40	53	eP	35	21.00	-0.2		0.5s	20.00nm				5.4mb				eS	38	11.45	
			eS	36	40.00		GKN	54.18	288	P	39	34.80	-0.2	REF	1.35	228	eP	37	58.00	-0.4
S.D. = 0.5	on	10	of	10	obs.		FORR	57.70	198	eP	39	59.00	-0.9				eS	38	15.76	
								0.4s	13.00nm				5.4mb	RDN	1.36	230	eP	37	57.78	-0.7
DEC 15, 1990	20h	05m	07.23±	0.55s			BWA	58.86	177	eP	40	08.20	0.2				eS	38	14.38	
36.340 N ± 9.3km			26.114 E ± 5.3km					e			40	22.90	54km	NCT	1.39	233	eP	37	58.56	-0.3
DEPTH = 144.0 ± 12.3 km							CAN	59.78	177	eP	40	14.60	0.3				eS	38	15.97	
DODECANESE ISLANDS			(369)					e			40	29.10	53km	RS2	1.39	228	eP	37	59.73	0.8
APE	0.87	327	eP	05	29.80	-0.8	NDI	60.41	290	iPd	40	19.00	0.2	RSO	1.39	228	eP	37	59.15	0.2
NPS	1.15	201	eP	05	33.00	-0.1	HYB	62.40	277	ePc	40	32.00	-0.5				eS	38	16.85	
SMG	1.48	23	eP	05	36.00	-0.4	INK	63.96	24	eP	40	40.50	-1.5	NNL	1.40	193	eP	37	59.46	0.5
ARG	1.63	94	eP	05	38.00	-0.1	GBA	64.72	274	P	40	47.10	-0.6				eS	38	17.99	
VAM	1.81	240	eP	05	41.00	0.8	POO	66.26	280	iPd	40	56.60	-1.0	RED	1.42	227	eP	37	58.91	-0.5
CIN	2.02	51	eP	05	43.00	0.4	MBC	67.41	15	eP	41	03.50	-0.5				eS	38	17.54	
VLI	2.59	279	eP	05	49.70	0.1		0.5s	5.00nm				4.8mb	SEW	1.44	155	eP	37	59.57	0.1
KSL	2.81	93	eP	05	52.50	0.0	QUE	68.66	294	eP	41	12.80	0.0				eS	38	16.99	
ELL	3.08	81	iPn	05	57.00	0.9	MAIO	72.80	302	iPd	41	38.60	1.1	KNIM	1.79	125	iP	38	01.83	-2.6
BCK	3.76	71	ePn	06	04.00	-0.9	YKA	72.80	29	eP	41	35.20	-1.7	INE	1.79	222	eP	38	04.02	-0.5
EVR	4.28	308	eP	06	14.00	2.2		0.6s	7.90nm				4.8mb	GLI	1.82	105	iP	38	02.67	-2.1
CSS	6.03	101	eP	06	34.00	-1.3	PNT	74.70	43	eP	41	48.00	-0.2	VLZ	2.12	96	eP	38	06.97	-2.0
HLW	7.81	144	eP	06	59.00	-0.3	SOD	77.70	340	iP	42	04.80	0.2	KLU	2.29	86	eP	38	09.43	-2.1
			eS	08	20.50		CMB	78.24	54	eP	42	08.80	0.5	PDB	2.38	228	eP	38	10.73	-2.0
ADI	8.18	111	eP	07	03.00	-1.2	FRI	79.14	54	eP	42	14.00	0.9		30	obs. associated				
SOI	8.21	285	P	07	03.30	-1.3	SES	79.39	39	eP	42	14.00	-0.3							
TDS	8.40	296	P	07	06.70	-0.5	TNP	80.53	53	P	42	21.00	0.2	& DEC 15, 1990	20h	43m	21.56s			
CSI	8.47	297	P	07	08.00	-0.2	LRM	80.53	44	eP	42	21.10	0.4	63.325 N			151.762 W			
SHMJ	8.74	112	P	07	13.90	2.2	KAF	80.91	335	iP	42	21.80	-0.3	DEPTH = 34.8km						
BURJ	9.00	114	P	07	16.30	1.0		0.8s	26.70nm				5.2mb	CENTRAL ALASKA			(1)			
DSI	9.05	119	eP	07	14.00	-1.8	FFC	82.15	33	eP	42	29.00	0.4	<AGS-P>. ML 3.3 (PMR).						
			eS	08	50.00			0.7s	16.00nm				5.2mb	TRF	0.68	79	iP	43	34.46	-0.4
KFNJ	9.10	117	P	07	19.20	2.7	NUR	82.52	335	iP	42	30.10	-0.4				eS	43	43.85	
MBH	9.85	129	eP	07	25.00	-1.5	HFS	86.78	338	eP	42	50.40	-1.5	HUR	1.03	109	eP	43	39.90	0.2
S.D. = 1.3	on	22	of	22	obs.			0.7s	15.80nm				5.3mb				eS	43	52.30	
DEC 15, 1990	20h	30m	12.20±	0.24s			NB2	86.92	340	P	42	51.90	-0.7	CUT	1.15	143	iP	43	41.43	0.0
24.699 N ± 4.8km			145.530 E ± 5.2km					0.9s	15.60nm				5.2mb				eS	43	56.40	
DEPTH = 51.5km (6 depth phases)							FRB	87.87	14	ePd	42	57.20	0.1	RND	1.31	85	eP	43	43.59	-0.4
5.2mb (19 obs.)								0.5s	20.00nm				5.6mb				eS	44	00.51	
NORTH PACIFIC OCEAN			(611)				KRA	91.35	328	eP	43	13.40	-0.2	BWN	1.33	49	eP	43	44.46	0.4
MAT	13.37	334	eP	33	17.00	-4.2X		e			43	27.40	47km	MCK	1.33	71	eP	43	43.80	-0.4
	0.6s	22.67nm			5.2mb		KSP	92.49	331	iPc	43	18.80	-0.1	SKT	1.35	175	eP	43	44.28	-0.2
			eS	35	37.00			i			43	33.70	51km				eS	44	02.44	
YAMJ	14.22	342	P	33	26.60	-5.7X	BRG	93.50	332	e(P)	43	23.00	-0.5	NEA	1.73	42	eP	43	48.84	-0.9
			eS	35	58.40			e			43	38.00	51km	PWA	1.89	152	eP	43	51.70	-0.4
OFUJ	14.71	348	eP	33	31.00	-7.6X	LPB	147.56	82	PKP	49	55.00	4.2X	SUA	1.93	165	eP	43	52.29	-0.4
			eS	36	04.80			1.0s	50.00nm					NCG	1.94	186	eP	43	52.84	0.0
MDJ	23.72	331	eP	35	21.50	1.2	CNCB	147.76	82	PKP	49	53.00	1.7	TTA	1.97	260	eP	43	54.40	1.1
NJ2	24.55	293	Pc	35	30.00	1.6		i			49	56.00					i	44	03.50	
SNY	24.96	319	iPc	35	34.40	2.2	CCH	149.61	82	PKP	49	59.00	5.2X	CGLM	2.03	183	eP	43	53.83	-0.3
	1.0s	100.00nm			5.3mb		SIV	153.63	76	PKP	50	07.20	7.8X	GHO	2.04	139	eP	43	53.70	-0.6
CN2	25.16	324	eP	35	34.70	0.6		S.D. = 0.8	on	57	of	64	obs.	BGL	2.09	188	eP	43	55.81	0.8
WHN	28.18	289	eP	36	02.00	0.1		& DEC 15, 1990	20h	37m	35.45s			PLRM	2.13	144	eP	43	54.63	-0.8
BJI	28.97	309	eP	36	11.00	2.1		61.406 N			150.677 W			PMR	2.13	144	eP	43	56.00	0.6
	1.2s	13.00nm			4.4mb			DEPTH = 48.4km						CKL	2.15	187	eP	43	56.35	0.4
TIY	30.97	303	eP	36	25.00	-1.8		SOUTHERN ALASKA			(2)			SPU	2.16	184	eP	43	56.05	0.1
XAN	33.09	295	P	36	44.00	-1.3		<AGS-P>.						CCB	2.19	51	eP	43	55.01	-1.3
BTO	33.58	307	eP	36	49.50	-0.1	SUA	0.07	331	iP	37	43.37	1.8	PMS	2.33	153	eP	43	58.24	-0.1
PMG	33.94	177	eP	36	52.00	-0.7		eS			37	50.39		FBA	2.35	46	eP	43	54.80	-3.8
GYA	35.01	281	P	37	02.00	-0.1	PWA	0.45	57	eP	37	45.76	-0.3	KNK	2.46	140	eP	44	00.44	0.3
			PP	37	14.80			eS			37	54.66		RDT	2.78	187	eP	44	05.80	1.0
CD2	37.30	289	P	37	20.60	-0.7	PMS	0.56	106	iP	37	47.15	-0.3	NCT	2.83	192	eP	44	05.98	0.5
LZH	37.45	298	Pd	37	22.30	-0.3		eS			37	56.88		TOA	2.85	113	eP	44	05.29	-0.5
	1.5s	50.00nm			5.2mb		CGLM	0.65	262	iP	37	48.18	-0.5	RDN	2.86	190	eP	44	04.73	-1.3
GTA	41.00	302	Pd	37	51.80	-0.2		eS			37	58.22		SVW	2.87	221	eP	44	06.20	0.2
	1.0s	10.00nm			4.5mb		SPU	0.70	252	iP	37	48.68	-0.6	IMA	2.88	344	eP	44	07.70	1.5
LOE	41.38	269	eP	37	55.60	0.4		eS			37	59.20		PAX	2.88	94	eP	44	06.93	0.7
BDT	43.91	270	eP	38	16.00	0.2	SKT	0.71	325	iP	37	48.42	-0.9	REF	2.88	189	eP	44	07.05	0.7
	0.7s	27.50nm			5.1mb			eS			37	59.05		SDG	2.95	103	eP	44	06.69	-0.5
CTA	44.52	179	iP	38	21.10	0.5	NCG	0.71	270	iP	37	49.00	-0.5	KLU	3.28	121	eP	44	11.61	-0.3
OIS	45.35	188	iPd	38	27.40	0.2		eS			37	59.69			33	obs. associated	</			

15d 20h

mbLg 4.8 (BUL).						KAF 61.82 358 eP 07 10.60 -0.6						BRS 28.17 261 iPd 13 44.00 0.8									
BCAO	11.77	291	iPc	59	38.50	-2.8	NB2	62.30	350	P	07 14.00 -0.6	RMO	31.84	262	eP	14 16.50 0.8	ASPA	45.59	262	iPd	16 14.70 4.1X
	0.6s	101.00nm			6.3mb	X		1.3s	19.40nm		5.1mb		1.3s	10.60nm		4.6mb		1.3s	10.60nm		4.6mb
						S.D. = 1.1 on 46 of 55 obs.						Z 21s 0.80um 4.6Msz									
AAE	12.72	46	eP	59	53.00	-1.5	& DEC 15, 1990 22h 26m 54.67s						WRA 46.21 267 P 16 14.00 -1.5								
BUL	20.22	182	iPc	01	27.20	-1.2	59.993 N 152.305 W						TNP 84.22 43 P 20 22.30 1.0								
							DEPTH = 81.4km						MAIO 132.38 296 ePKP 27 08.00 3.6X								
						SOUTHERN ALASKA (2)						NB2 144.92 354 PKP 27 25.90 -0.5									
						<AGS-P>						HFS 145.53 352 ePKP 27 25.70 -1.7									
SLR	25.79	183	eP	02	30.00	6.8X	INE	0.39	280	eP	27 07.07 -1.0	EKA	150.44	9	PKP	27 45.00 9.7X					
KIC	34.74	281	P	03	44.56	1.7	HOM	0.47	135	eS	27 08.30 -0.2										
LIC	35.00	281	P	03	46.86	1.8	RED	0.49	332	eS	27 18.42										
TAB	40.75	20	eP	04	38.00	4.9X	NNL	0.51	84	iP	27 09.19 0.4	DSI	151.95	292	e(PKP)	27 40.00 1.6					
									RSO	0.52	335	iS	27 19.31	BBTK	152.75	308	ePKP	27 47.00 7.7X			
VAY	41.43	352	eP	04	39.70	1.3	RS2	0.52	335	iP	27 08.66 -0.5	PRNI	152.76	286	ePKP	27 49.00 9.5X					
MLR	45.23	356	eP	05	10.50	1.1	REF	0.54	338	iP	27 08.72 -0.6	KRA	153.38	337	ePKP	27 48.10 8.4X					
MAIO	45.44	34	eP	05	12.00	0.9	RDN	0.57	337	iS	27 19.89	KSP	153.81	343	ePKPc	27 49.80 9.5X					
TIO	46.39	315	eP	05	20.00	1.2	OPT	0.58	234	iP	27 08.76 -0.7	SPC	154.00	336	e(PKP)	27 49.00 8.1X					
QUE	46.43	47	eP	05	20.50	1.3	RDT	0.59	355	iP	27 08.82 -0.8	CLL	154.13	348	ePKP	27 50.00 9.3X					
IFR	46.45	319	iP	05	26.00	6.7X	XLV	0.62	151	eS	27 20.08										
BMR	47.59	354	ePd	05	30.00	2.2X	NCT	0.65	332	eS	27 08.96 -0.8	BRG	154.35	346	ePKP	27 50.70 9.7X					
ZST	49.03	349	eP	05	44.20	5.2X	CNPM	0.72	130	eS	27 22.25										
GBA	49.27	72	Pc	05	42.00	0.7	BRLK	0.75	107	eP	27 10.64 -0.6										
LPG	49.40	339	eP	05	43.10	0.8	AUE	0.84	221	eS	27 22.95	BCAO	154.40	214	ePKPc	27 41.70 -0.5					
									AGU	0.85	222	eS	27 22.95								
SQTA	49.51	344	e(P)	05	42.00	-0.8	AUH	0.86	223	eS	27 11.40 -0.7										
TOL	49.98	326	eP	05	47.50	1.1	AUI	0.87	221	eS	27 11.62 -0.8										
									NKA	0.92	35	iP	27 11.93 -0.5								
KRA	50.36	352	eP	05	49.40	0.2	PDB	0.97	259	iP	27 11.93 -0.6										
CAF	50.76	335	eP	05	53.20	0.8	SLKM	1.16	63	eS	27 12.60 -1.1										
									SPU	1.20	6	iP	27 12.60 -1.1								
LPO	50.95	334	eP	05	53.60	-0.1	CKL	1.21	359	iP	27 16.16 -0.4										
LFF	51.34	334	eP	05	56.70	0.0	CDD	1.27	213	eS	27 16.36 -0.4										
BSF	51.41	341	eP	05	56.20	-1.1	BGL	1.28	358	iP	27 32.61 -1.2										
SMF	51.45	338	eP	05	57.70	0.1	MCNL	1.31	233	eS	27 33.36 -0.3										
									SYI	1.39	182	eS	27 33.09 -1.1								
MAF	51.60	336	eP	05	58.70	0.0	CGLM	1.33	6	iP	27 17.30 -0.3										
LBF	51.69	338	eP	06	00.20	0.8	SYI	1.39	182	eP	27 17.99 -0.3										
									SGW	1.44	84	eS	27 18.37 -0.6								
HAU	51.71	340	eP	06	00.60	1.1	NCG	1.42	3	iP	27 36.72 -0.3										
KSP	51.71	349	ePd	06	04.50	5.0X	SEW	1.44	84	eP	27 37.30 -0.8										
CDF	51.76	341	eP	05	58.60	-1.4	SUA	1.66	27	eP	27 38.30 -0.2										
GRF	51.76	345	eP	05	58.00	-1.9	PMS	1.85	46	eS	27 44.61 -0.5										
									SVW	1.98	306	iP	27 48.22 -1.5								
AVF	51.76	337	eP	06	00.10	0.2	SKT	2.03	10	eP	27 25.45 -0.7										
TCF	51.80	336	eP	06	00.40	0.2	PWA	2.04	34	eP	27 26.84 -0.5										
									PLRM	2.24	43	eP	27 27.27 -1.2								
SSF	51.93	338	eP	06	00.90	-0.2	KNIM	2.31	79	eP	27 29.15 -2.4										
LOR	51.97	338	eP	06	00.30	-1.2	KNK	2.37	51	eP	27 28.99 -1.6										
Z	20s	0.40um					GHO	2.43	41	eP	27 30.64 -1.3										
									CUT	2.61	21	eP	27 31.83 -1.3								
LSF	52.05	336	eP	06	02.70	0.6	GLI	2.73	69	eP	27 34.54 -1.0										
BRG	52.21	348	eP	06	07.50	4.3X	VLZ	3.16	66	eP	27 34.43 -2.8										
CLL	52.83	347	e(P)	06	08.00	0.2	KLU	3.48	62	eP	27 40.45 -2.7										
									TRF	3.60	15	eP	27 45.56 -2.0								
ABH	52.97	342	eP	06	00.27	-8.7X	TOA	3.66	52	eP	27 49.12 -0.3										
NDI	53.63	54	iPd	06	15.00	0.9	RND	3.80	24	eP	27 48.68 -1.4										
LPF	54.53	335	eP	06	20.60	0.2	47 obs. associated						DEC 16, 1990 03h 52m 23.41±0.40s								
LDF	54.60	336	eP	06	22.00	1.1							52.222 N ±8.8km 169.501 W ±4.7km								
GRR	54.74	336	eP	06	21.60	-0.3							DEPTH = 33.0km (normal)								
FLN	54.88	336	eP	06	22.70	-0.2							4.8mb (34 obs.) 4.2Msz (3 obs.)								
													FOX ISLANDS, ALEUTIAN ISLANDS (9)								
WTS	55.06	343	eP	06	28.50	4.4X							ADK 4.45 268 iPd 53 31.40 1.2								
MUD	58.46	347	eP	06	48.00	-0.3							SDN 6.18 56 e(P) 53 56.90 2.2								
													SVW 11.70 35 eP 55 16.60 5.6X								
GKN	59.52	57	P	06	56.00	-0.4							ANM 12.56 8 e(P) 55 24.40 2.0								
DMN	59.80	58	P	06	58.00	-0.4							TTA 12.91 29 eP 55 29.70 2.6X								
KKN	60.00	58	P	06	59.60	-0.1															
PKI	60.04	58	P	07	00.60	0.4															
NUR	60.28	357	eP	06	59.80	-1.0															
GUN	60.54	58	P	07	03.40	-0.2															
APD	61.39	351	eP	07	06.20	-2.2															

16d 03h

TOA 15.97 43 eP 56 04.70 -2.2X
 IMA 16.00 24 eP 56 12.30 4.9X
 0.8s 2.90nm 3.5mb X
 FBA 16.89 33 eP 56 16.80 -1.7
 HNT 19.46 51 Pd 56 50.90 0.9
 INK 23.52 33 eP 57 29.00 -1.8
 YKA 30.40 49 eP 58 33.70 -0.5
 0.6s 4.20nm 4.4mb
 PNT 31.18 75 eP 58 42.00 0.7
 NEW 33.13 76 eP 58 58.30 0.0
 1.1s 8.64nm 4.6mb
 SES 35.74 69 eP 59 20.00 -0.7
 TNP 38.63 90 eP 59 48.00 2.7X
 0.8s 1.32nm 3.8mb X
 FFC 38.87 59 eP 59 46.00 -0.9
 0.7s 4.00nm 4.3mb
 FFC 38.87 59 eP 59 58.00 11.1X
 0.6s 6.00nm
 MAT 39.61 268 eP 59 53.00 -0.3
 1.0s 8.00nm 4.4mb
 BW06 40.51 79 eP 00 01.00 0.1
 1.0s 3.50nm 4.1mb
 RSSD 43.04 74 eP 00 20.90 -0.6
 ANMO 47.26 86 eP 00 56.00 0.6
 1.2s 2.34nm 4.1mb
 ALQ 47.26 86 e(P) 01 06.50 11.1X
 FRB 49.15 35 eP 01 08.00 -1.3
 DAG 49.94 8 iPd 01 13.90 -1.4
 0.8s 9.70nm 4.9mb
 SSE 53.73 275 Pc 01 44.50 0.2
 1.1s 286.00nm 6.2mb X
 i 02 01.00
 09 16.00
 SOD 60.11 353 iP 02 28.30 -0.9
 LZH 60.57 292 Pc 02 32.50 -0.5
 1.5s 28.00nm 5.2mb
 KAF 65.33 352 iP 03 02.50 -1.3
 0.4s 7.10nm 5.1mb
 NUR 67.05 352 iP 03 13.60 -1.2
 0.7s 17.40nm 5.3mb
 NB2 67.09 350 P 03 14.10 -1.0
 0.7s 6.90nm 4.9mb
 HFS 67.97 358 eP 03 18.80 -1.8
 0.5s 7.00nm 5.0mb
 KMI 69.23 284 Pc 03 29.00 -0.2
 EKA 72.22 8 Pd 03 47.60 1.1
 0.6s 3.60nm 4.5mb
 CHG 76.30 283 eP 04 10.50 -0.1
 GUN 76.72 298 P 04 13.40 0.1
 CLL 76.82 358 eP 04 12.00 -1.0
 KKN 77.14 299 P 04 15.60 0.1
 0.6s 20.00nm 5.3mb
 KSP 77.19 356 iPd 04 15.70 0.6
 BRG 77.24 358 iP 04 15.50 0.2
 1.2s 13.00nm 4.8mb
 PKI 77.24 299 P 04 15.80 -0.4
 0.6s 12.00nm 5.1mb
 GKN 77.32 299 P 04 16.40 0.0
 DMN 77.38 299 P 04 16.90 0.1
 0.8s 25.00nm 5.3mb
 MOX 77.50 359 eP 04 17.50 0.7
 FLN 78.96 7 eP 04 24.20 -0.6
 Z 18s 0.10um 4.2MsZ
 LDF 79.16 7 eP 04 25.40 -0.5
 0.5s 4.35nm 4.7mb
 GRR 79.30 8 eP 04 26.60 -0.1
 LPF 79.64 8 eP 04 28.80 0.3
 CDF 79.71 2 eP 04 29.20 0.2
 ZST 79.80 356 eP 04 30.60 1.2
 HAU 80.09 3 eP 04 31.10 0.1
 1.0s 10.00nm 4.8mb
 SRO 80.12 355 eP 04 32.30 1.2
 BSF 80.28 3 eP 04 32.10 0.0
 1.0s 12.00nm 4.8mb
 LOR 80.73 5 eP 04 34.60 0.3
 0.7s 4.40nm 4.6mb
 Z 18s 0.10um 4.2MsZ
 SSF 80.92 5 eP 04 35.80 0.5
 0.7s 5.50nm 4.7mb
 LBF 81.02 5 eP 04 35.90 0.0
 1.0s 8.00nm 4.7mb
 MFF 81.13 7 eP 04 36.90 0.4
 1.0s 16.00nm 5.0mb
 AVF 81.18 5 eP 04 37.00 0.3
 0.6s 3.60nm 4.6mb
 SMF 81.35 5 eP 04 37.90 0.3
 1.0s 17.00nm 5.0mb

BGF 81.38 5 eP 04 37.90 0.1
 0.7s 6.05nm 4.7mb
 LSF 81.61 6 eP 04 39.20 0.2
 1.1s 22.00nm 5.1mb
 TCF 81.61 6 eP 04 39.20 0.2
 1.1s 8.55nm 4.7mb
 MAF 81.70 6 eP 04 40.00 0.6
 RJF 82.55 6 eP 04 44.20 0.3
 Z 21s 0.13um 4.3MsZ
 LPG 82.61 3 eP 04 45.20 0.7
 LFF 82.85 7 eP 04 46.20 0.8
 0.7s 7.70nm 4.9mb
 CAF 82.96 6 eP 04 46.80 0.7
 1.0s 10.00nm 4.9mb
 LPO 83.14 7 eP 04 47.50 0.6
 EPF 84.72 7 eP 04 55.30 0.3
 1.0s 10.00nm 5.0mb
 WRA 86.85 231 P 05 05.00 -0.7
 0.8s 0.80nm 4.0mb
 GBA 92.87 296 Pd 05 33.50 -0.6
 0.5s 3.60nm 5.1mb
 BUL 145.01 329 iPKPd 11 52.20 -6.7X
 0.6s 8.33nm
 WIN 149.96 348 iPKPc 12 12.50 5.7X
 SLR 150.32 326 iPKPc 12 13.10 5.9X
 0.6s 16.67nm
 S.D. = 0.8 on 63 of 73 obs.

% DEC 16, 1990 04h 40m 01.00±0.71s
 47.162 N ± 9.1km 5.781 E ± 6.7km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 2.3 (LDG).

HAU 0.93 24 Pg 40 18.80 0.1
 Sg 40 31.40
 BSF 0.96 45 Pg 40 18.60 -0.7
 Sg 40 31.40
 LBF 1.25 262 Pg 40 23.40 -0.8
 Sg 40 42.10
 LOR 1.31 275 Pn 40 24.70 -0.6
 Pg 40 25.50
 Sg 40 42.90
 SMF 1.43 249 Pg 40 27.30 0.3
 Sg 40 46.80
 SSF 1.56 267 Pg 40 30.20 1.4
 Sg 40 51.20
 CDF 1.61 38 Pg 40 30.20 0.6
 Sg 40 51.30
 AVF 1.70 258 Pg 40 32.20 1.3
 Sg 40 55.00
 LPG 1.80 158 Pg 40 32.50 0.0
 Sg 40 53.40
 BGF 2.10 254 Pn 40 35.00 -1.7
 Sg 41 08.00
 S.D. = 1.1 on 10 of 10 obs.

? DEC 16, 1990 04h 54m 06.47±2.88s
 31.552 S ± 42.0km 69.095 W ± 59.3km
 DEPTH = 120.0km (geophysicist)
 SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.36 89 eP 54 23.50 -0.4
 eS 54 33.50
 RTCV 0.57 123 iPd 54 25.40 0.2
 S 54 39.00
 CFA 0.73 95 iPd 54 26.50 0.1
 eS 54 40.70
 RTRS 1.41 347 iPd 54 33.30 0.1
 eS 54 53.10
 S.D. = 0.5 on 4 of 4 obs.

* DEC 16, 1990 05h 15m 46.08±1.03s
 24.007 N ± 12.0km 121.606 E ± 11.8km
 DEPTH = 10.0km (geophysicist)
 4.3mb (3 obs.)

TAIWAN (244)
 ML 4.4 (BJI). Felt in the
 Huailien oreo.

ANP 1.18 356 eP 16 14.50 6.4X
 eS 16 27.50
 QZH 2.90 289 Pn 16 32.70 -0.4
 Sn 17 06.90
 SSE 7.07 357 P 17 33.00 0.9
 S 18 54.50
 NJ2 8.37 344 Pd 17 49.50 -0.8

Z 10s 1.20um
 WHN 9.17 317 eP 18 01.00 -0.3
 Z 10s 1.00um
 GYA 13.74 283 P 19 03.00 -0.5
 S 21 32.60
 XAN 14.92 315 eP 19 26.50 7.7X
 TIY 15.76 332 eP 19 39.20 9.5X
 Z 10s 1.00um
 N 10s 1.10um
 BJI 16.63 345 eP 19 49.50 8.8X
 N 10s 0.54um
 CD2 17.26 297 eP 19 49.00 0.2
 HMC 18.79 336 eP 20 15.00 7.2X
 BTO 19.19 332 eP 20 15.00 2.3
 N 10s 1.00um
 E 10s 0.90um
 eS 23 53.00
 LZH 19.49 312 eP 20 20.00 3.6X
 Z 10s 0.80um
 GTA 23.98 315 P 21 07.80 6.1X
 1.5s 20.00nm 4.5mb
 WRA 45.41 163 P 24 08.00 1.1
 1.0s 0.80nm 3.6mb
 INK 73.24 22 ePd 27 17.80 -1.1
 YKA 82.98 23 eP 28 11.10 -1.3
 1.0s 2.60nm 4.4mb
 S.D. = 1.3 on 10 of 17 obs.

DEC 16, 1990 05h 23m 54.82±0.34s
 35.605 N ± 5.4km 140.214 E ± 5.0km
 DEPTH = 70.0km (2 depth phases)
 5.0mb (24 obs.)
 NEAR EAST COAST OF HONSHU, JAPAN (228)

KAKJ 0.60 357 iP+ 24 08.00 -0.8
 S 24 17.40
 CHJJ 1.09 294 iPd 24 14.90 0.2
 S 24 30.50
 MAT 1.87 301 iPd- 24 25.80 0.5
 iS 24 47.40
 IIDJ 1.88 267 iP+ 24 26.20 0.7
 S 24 49.30
 NIJJ 1.90 329 iPd 24 25.60 -0.1
 eS 24 48.70
 MTMJ 2.18 297 iPd 24 30.30 0.6
 eS 24 58.80
 YAMJ 2.57 357 P 24 35.30 0.4
 TSRJ 3.45 270 P 24 47.80 0.5
 OFUJ 3.66 18 P 24 49.00 -1.2
 eS 25 29.90
 WKYJ 4.04 251 P 24 55.30 -0.3
 AOMJ 4.95 1 eP 25 08.90 0.6
 TKSJ 5.33 254 P 25 13.30 -0.3-
 S 26 13.80
 YONJ 5.53 268 P 25 16.60 0.1
 MRRJ 6.84 5 P 25 35.30 0.7
 S 26 51.80
 HOOJ 7.18 19 P 25 36.30 -2.9
 S 26 52.20
 SHNJ 7.63 261 eP 25 48.10 2.6
 KUSJ 8.25 24 P 25 49.70 -4.4X
 S 27 16.80
 KUMJ 8.37 251 P 25 56.60 0.9
 ASAJ 8.70 12 eP 25 57.80 -2.5
 KAGJ 8.95 243 P 26 04.10 0.3
 BJI 19.48 290 eP 28 16.50 -2.2
 1.1s 21.00nm 4.3mb
 e 28 33.00 79km
 GUN 46.34 276 P 32 15.60 -0.5
 0.8s 32.00nm 5.3mb
 PKI 46.86 276 P 32 19.20 -1.0
 0.7s 19.00nm 5.1mb
 KKN 46.88 277 P 32 19.40 -0.7
 0.8s 34.00nm 5.3mb
 DMN 47.09 276 P 32 21.10 -0.8
 GKN 47.31 277 P 32 22.80 -0.7
 0.9s 55.00nm 5.5mb
 FBA 50.83 32 P 32 50.50 0.7
 NDI 53.00 281 iPd 33 06.00 -0.6
 WRA 55.52 187 P 33 23.00 -2.0
 0.6s 13.70nm 5.2mb
 INK 56.10 27 eP 33 29.00 0.4
 HYB 57.20 269 eP 33 35.50 -1.7
 1.0s 40.00nm 5.5mb
 ASPA 59.25 187 eP 33 49.50 -1.7
 0.6s 21.90nm 5.5mb
 GBA 60.14 266 P 33 56.00 -1.5

KOD	61.99	262	eP	34	09.80	-0.7
MEKA	65.19	201	iPd	34	29.30	-1.4
YKA	65.53	29	eP	34	31.90	-0.6
	0.8s	2.00nm			4.1mb	
SOD	65.90	337	iP	34	34.70	-0.2
FORR	67.08	191	iPd	34	41.70	-0.9
	0.4s	28.00nm			5.6mb	
KAF	69.13	333	iP	34	54.40	-0.8
	0.7s	9.00nm			4.8mb	
NUR	70.75	332	iP	35	04.30	-0.7
SES	73.88	39	ePc	35	24.20	0.5
HFS	74.99	335	eP	35	29.00	-0.9
	0.4s	1.30nm			4.2mb	
NB2	75.12	337	P	35	30.50	-0.3
	0.9s	9.30nm			4.7mb	
FFC	75.43	32	iPc	35	33.00	0.5
	0.7s	14.00nm			5.0mb	
LRM	75.85	44	ePc	35	36.60	1.2
			e	35	53.50	61km
TNP	77.52	52	P	35	46.00	1.2
FRB	78.38	13	ePc	35	49.50	0.8
KRA	79.73	326	eP	35	56.80	0.5
KSP	80.80	328	iP	36	02.50	0.5
BRG	81.78	329	iP	36	07.90	0.8
CLL	81.84	330	iPc	36	07.80	0.4
	1.1s	13.00nm			4.8mb	
MKT	83.42	303	eP	36	17.00	1.0
GRF	83.82	329	iPc	36	18.70	1.1
	1.2s	17.00nm			4.9mb	
PRNI	83.89	303	iPc	36	18.80	0.4
EKA	84.15	340	Pd	36	21.00	1.8
	0.7s	1.50nm			4.1mb	
MBH	84.32	303	iPc	36	20.70	0.1
SKO	84.63	319	eP	36	22.50	0.7
OHR	85.57	319	eP	36	25.00	-1.6
CDF	86.43	331	eP	36	30.40	-0.3
	0.7s	5.50nm			4.8mb	
HAU	87.12	331	eP	36	33.20	-0.9
LBF	88.88	332	eP	36	43.00	0.4
LPG	88.98	329	eP	36	43.90	0.5
	0.7s	3.85nm			4.8mb	
SSF	89.00	332	eP	36	43.10	0.1
LDF	89.03	335	eP	36	43.60	0.4
AVF	89.28	332	eP	36	44.40	0.0
	0.7s	5.50nm			4.9mb	
GRR	89.46	335	eP	36	45.00	-0.2
LPF	89.83	335	eP	36	46.90	0.0
	0.6s	6.30nm			5.0mb	
MAF	90.06	332	eP	36	48.40	0.4
LSF	90.42	333	eP	36	49.60	-0.1
	0.7s	7.70nm			5.1mb	
MFF	90.74	334	eP	36	51.20	0.1
	0.7s	6.60nm			5.1mb	
RJF	91.23	332	eP	36	53.70	0.3
CAF	91.34	332	eP	36	54.40	0.4
LFF	91.83	333	eP	36	56.60	0.4
	0.6s	5.40nm			5.1mb	
ZOBO	148.24	60	PKP	43	34.00	2.0
LPB	148.43	60	PKP	43	34.00	1.9
CNCB	148.70	61	PKP	43	35.00	2.2
CCH	150.38	59	PKP	43	40.60	5.6X
SIV	152.75	50	PKP	43	38.80	0.7
	S.D. = 1.1	on	76	of	78	obs.

& DEC 16, 1990 05h 45m 04.51s
60.125 N 140.628 W
SOUTHEASTERN ALASKA (19)
<AGS-P>.

YAH	0.61	294	eP	45	16.76	0.1
			eS	45	26.54	
YKU	0.73	141	eP	45	19.69	0.6
			eS	45	30.50	
BALM	1.25	318	iP	45	26.94	-1.7
TGL	1.26	301	iP	45	27.34	-1.6
			eS	45	45.14	
GLB	2.05	312	eP	45	39.53	-1.1
KLU	2.93	300	eP	45	51.52	-1.9
VLZ	2.99	292	eP	45	51.92	-2.1
VZW	3.07	290	eP	45	52.45	-2.8
TOA	3.34	309	eP	45	57.08	-2.1
KNIM	3.55	277	eP	45	58.45	-3.6
DWY	3.98	8	P	46	08.00	-0.2
KNK	4.05	292	eP	46	07.56	-1.6
	12	obs.	associated			

? DEC 16, 1990 06h 58m 42.30±5.17s
13.847 N ±49.0km 94.224 W ±15.5km
DEPTH = 33.0km (normal)
OFF COAST OF CHIAPAS, MEXICO (68)

TPX	2.17	61	iP	59	16.75	-0.1
			iS	59	39.00	
SCX	3.26	28	iP	59	32.50	0.3
			iS	00	03.50	
OXX	4.02	323	(P)	59	43.50	0.2
EVV	4.71	347	(P)	59	52.50	-0.4
PPM	6.69	321	(P)	00	32.50	11.2X
	S.D. = 0.5	on	4	of	5	obs.

& DEC 16, 1990 07h 48m 53.33s
63.008 N 150.651 W
DEPTH = 99.7km
CENTRAL ALASKA (1)
<AGS-P>.

HUR	0.46	93	eP	49	08.89	-0.2
			eS	49	20.68	
CUT	0.63	164	iP	49	10.32	0.0
			iS	49	23.04	
RND	0.91	63	eP	49	12.77	-0.3
			eS	49	27.85	
MCK	1.06	46	eP	49	14.40	-0.3
			eS	49	30.09	
SKT	1.11	202	iP	49	14.84	-0.4
			eS	49	31.24	
BWN	1.28	24	eP	49	17.24	0.0
			eS	49	35.90	
PWA	1.41	165	eP	49	18.70	-0.1
GHO	1.48	146	eP	49	19.71	-0.1
			eS	49	40.18	
SUA	1.55	182	eP	49	20.62	-0.1
			eS	49	42.10	
PLRM	1.59	153	eP	49	20.31	-0.7
NEA	1.72	23	eP	49	21.90	-0.9
NGC	1.76	204	eP	49	22.80	-0.6
			eS	49	46.29	
CGLM	1.82	201	eP	49	23.89	-0.3
PMS	1.84	163	eP	49	24.08	-0.3
			eS	49	47.46	
KNK	1.90	146	eP	49	24.21	-0.9
BGL	1.93	206	eP	49	25.96	0.4
SPU	1.95	200	eP	49	25.11	-0.7
			eS	49	51.20	
CKL	1.98	204	eP	49	26.08	-0.2
CCB	2.07	36	iP	49	26.34	-1.0
HDA	2.16	48	eP	49	27.44	-1.1
TOA	2.26	112	eP	49	30.12	0.2
PAX	2.37	89	eP	49	30.92	-0.4
SDG	2.40	99	eP	49	31.30	-0.4
SLKM	2.52	175	eP	49	33.12	-0.2
RLT	2.58	200	eP	49	33.49	-0.7
NCT	2.68	205	eP	49	34.83	-0.8
KLU	2.69	122	eP	49	33.39	-2.3
RDN	2.70	203	eP	49	35.15	-0.7
REF	2.71	202	eP	49	36.50	0.4
GLI	2.72	140	eP	49	33.65	-2.4
SEW	2.97	168	eP	49	38.26	-1.1
KNIM	3.01	151	eP	49	37.25	-2.7
CNPM	3.51	185	eP	49	45.42	-1.4
GLB	3.57	113	eP	49	45.61	-2.0
PDB	3.65	209	eP	49	48.21	-0.5
	35	obs.	associated			

? DEC 16, 1990 08h 19m 48.83±12.06s
16.062 N ±20.0km 60.694 W ±99.5km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.3 (FDF).

SFG	0.52	292	iP	19	59.86	0.2
SEG	0.85	294	ePd	20	04.23	-0.1
DOG	0.89	268	iPc	20	05.05	0.1
BBL	0.93	235	ePc	20	05.51	0.0
			S	20	15.70	
PAG	0.95	268	eP	20	05.70	-0.2
			S	20	17.00	
	S.D. = 0.2	on	5	of	5	obs.

? DEC 16, 1990 08h 27m 53.24±1.44s
39.770 N ±83.6km 67.034 E ±71.3km
DEPTH = 33.0km (normal)
4.4mb (10 obs.)

SOUTHEASTERN UZBEK SSR (714)

GKN	18.71	124	P	32	11.20	-0.1
	0.4s	16.00nm			4.6mb	
KKN	19.27	123	P	32	17.80	-0.3
	0.5s	16.00nm			4.5mb	
DMN	19.28	124	P	32	18.60	0.3
	0.4s	7.00nm			4.3mb	
PKI	19.50	123	P	32	21.00	0.1
	0.6s	13.00nm			4.4mb	
GUN	19.58	121	P	32	21.30	-0.5
KAF	33.18	326	iP	34	29.20	0.7
	0.5s	3.40nm			4.5mb	
NUR	33.34	323	eP	34	41.00	11.1X
HFS	38.56	320	eP	35	13.30	-0.9
	0.6s	3.70nm			4.4mb	
NB2	39.88	321	P	35	25.10	-0.2
	0.7s	3.00nm			4.2mb	
EKA	47.77	313	P	36	29.00	0.2
	1.0s	4.20nm			4.4mb	
YKA	78.08	1	eP	39	51.70	2.0X
	0.8s	1.40nm			4.0mb	
WRA	86.35	120	P	40	34.00	0.6
	0.5s	2.30nm			4.7mb	
	S.D. = 0.6	on	10	of	12	obs.

DEC 16, 1990 08h 40m 24.05±0.27s
53.683 N ±5.1km 153.810 E ±5.7km
DEPTH = 516.8km (2 depth phases)
4.8mb (63 obs.)
SEA OF OKHOTSK (663)

MAT	20.29	219	iPd	44	24.90	-0.2
			eS	45	20.00	
BJI	28.75	257	eP	45	40.00	-0.6
	0.7s	32.00nm			5.0mb	
			e	46	07.50	128kmX
FBA	30.68	45	P	45	57.90	0.9
SSE	32.55	239	Pc	46	13.00	-0.1
	1.0s	37.00nm			4.9mb	
INK	35.70	37	iPd	46	40.00	1.0
MBC	37.97	23	eP	46	58.00	0.5
LZH	38.62	264	iPc	47	05.00	1.5
YKA	45.23	41	eP	47	55.40	0.0
	0.6s	6.50nm			4.3mb	
KMI	47.29	254	Pd	48	12.00	0.0
	1.5s	100.00nm			5.1mb	
DAG	49.73	358	iPc	48	28.20	-1.1
	0.7s	9.59nm			4.4mb	
KEV	50.98	339	eP	48	40.00	1.4
KTk1	52.38	340	iPd	48	48.21	-0.6
SOD	52.98	337	iP	48	52.80	-0.3
CHG	54.41	252	iPd	49	04.20	0.3
	0.9s	68.49nm			5.0mb	
GUN	55.10	271	P	49	08.80	-0.3
FFC	55.25	43	iPd	49	09.20	-0.1
	0.6s	17.00nm			4.6mb	
KKN	55.55	271	P	49	12.20	0.1
PKI	55.63	271	P	49	12.70	-0.1
BDT	55.64	251	eP	49	12.80	0.4
	0.6s	24.30nm			4.7mb	
GKN	55.77	272	P	49	13.60	0.0
DMN	55.79	271	P	49	14.00	0.2
KAF	57.37	334	iP	49	23.20	-0.7
	0.5s	18.70nm			4.7mb	
FRB	58.37	21	ePd	49	28.10	-2.5
NUR	59.16	333	iP	49	35.20	

16d 08h

EBH	68.86	347	ePd	50	37.10	-0.3	4.9mb
EAB	69.03	347	ePd	50	38.10	-0.3	5.0mb
ESY	69.06	346	ePd	50	38.10	-0.5	5.1mb
POO	69.37	273	iPd	50	39.70	-1.3	5.0mb
KRA	69.58	330	iPd	50	41.90	0.1	5.0mb
EKA	69.70	346	Pd	50	43.30	0.9	4.9mb
KSP	69.91	333	iPd	50	43.90	0.2	5.0mb
SPC	70.26	330	eP	50	45.60	-0.5	4.9mb
CLL	70.34	335	i(P)	50	45.90	-0.3	5.0mb
WIT	70.40	340	eP	50	48.00	1.5	5.0mb
BRG	70.50	334	iP	50	47.10	-0.1	5.0mb
GBA	71.09	267	Pc	50	50.40	-0.7	5.0mb
WTS	71.14	339	eP	50	51.00	0.2	5.0mb
MOX	71.30	336	iP	50	52.00	0.2	5.0mb
MLR	71.67	324	eP	50	56.00	1.8	5.0mb
SRO	72.07	330	iP	50	57.30	1.0	5.0mb
ZST	72.08	331	eP	50	56.60	0.2	5.0mb
GRF	72.28	336	iPd	50	58.30	0.8	5.0mb
TUL	72.48	53	iP	50	58.50	-0.4	4.7mb
ENN	72.48	339	eP	50	59.00	0.4	4.6mb
ABH	72.96	338	eP	51	02.17	0.7	5.0mb
KOD	73.73	265	eP	51	06.80	0.1	5.0mb
VAL	73.91	350	iP	51	06.70	0.0	5.0mb
KBA	74.14	333	iPKPd	51	09.30	0.9	5.1mb
WATA	74.37	334	iPKPd	51	10.20	0.6	4.7mb
CDF	74.41	338	eP	51	09.50	-0.2	4.7mb
PTJ	74.49	331	eP	51	09.20	-1.0	4.6mb
SQTA	74.57	335	iPKPd	51	11.30	0.6	4.6mb
HAU	75.00	338	eP	51	12.60	-0.3	4.5mb
BSF	75.06	338	eP	51	12.90	-0.5	4.3mb
WRA	75.22	199	P	51	13.00	-1.4	4.9mb
CTI	75.54	334	Pd	51	15.60	-0.4	4.6mb
FLN	75.64	343	eP	51	16.10	-0.3	4.6mb
LDF	75.74	342	eP	51	16.50	-0.4	4.6mb
GRR	76.06	343	eP	51	18.90	0.2	4.9mb
LOR	76.23	339	eP	51	19.40	-0.3	4.8mb
MDI	76.29	335	Pd	51	19.50	-0.5	4.8mb
LPF	76.44	343	eP	51	21.00	0.2	4.8mb
VAI	76.44	336	P	51	21.39	0.6	4.6mb
LBF	76.48	339	eP	51	20.70	-0.4	4.4mb
SSF	76.50	340	eP	51	21.10	-0.1	4.6mb
VAY	76.50	324	eP	51	21.70	0.5	4.7mb
AVF	76.79	340	eP	51	22.70	0.0	4.6mb
SMF	76.83	339	eP	51	22.80	-0.2	4.6mb
ORX	76.85	336	P	51	23.38	0.1	4.5mb
BGF	77.12	340	eP	51	24.50	0.0	4.5mb
LSD	77.22	337	P	51	26.35	1.0	4.9mb
LPG	77.27	337	eP	51	26.50	0.7	4.9mb
OHR	77.30	326	eP	51	25.50	-0.1	4.8mb
BOB	77.30	335	Pd	51	26.40	0.8	4.8mb
SFI	77.46	333	Pd	51	27.70	1.4	4.8mb
RSP	77.48	336	P	51	26.25	-0.4	4.8mb
MAF	77.50	340	eP	51	27.20	0.6	4.8mb
TCF	77.51	340	eP	51	26.90	0.2	4.6mb
MFF	77.66	342	eP	51	27.80	0.4	4.8mb
BDI	77.66	334	P	51	27.95	0.4	5.5mb
LSF	77.68	341	eP	51	27.80	0.2	4.8mb
BNI	77.71	337	Pd	51	28.90	1.0	4.8mb
PCP	77.74	335	P	51	27.58	-0.4	4.8mb
BHB	77.77	336	P	51	27.17	-0.9	4.8mb
RRL	77.81	337	P	51	29.53	1.0	4.8mb
CKI	77.92	335	Pd	51	28.80	0.0	4.8mb
ASS	78.02	332	P	51	30.37	0.9	5.1mb
PZZ	78.13	336	P	51	29.53	-0.6	4.8mb
FIN	78.14	335	P	51	29.63	-0.4	4.8mb
ROB	78.14	336	P	51	29.94	-0.2	4.8mb
HRI	78.21	311	iPd	51	30.90	0.2	4.8mb
ENR	78.31	336	P	51	29.32	-1.7	4.8mb
STV	78.32	336	P	51	29.73	-1.3	4.8mb
IMI	78.50	336	P	51	31.99	0.0	4.8mb
RJF	78.59	340	eP	51	33.10	0.7	4.5mb
SBF	78.65	336	eP	51	32.60	-0.2	4.8mb
CAF	78.84	340	eP	51	34.50	0.7	4.6mb
ASPA	78.93	199	iPd	51	34.40	0.0	5.3mb
LFF	79.09	341	eP	51	36.00	1.0	4.9mb
FRF	79.13	336	eP	51	35.30	0.1	4.1mb
LPO	79.25	340	eP	51	36.70	0.9	4.9mb
LRG	79.29	336	eP	51	36.50	0.5	4.7mb
LMR	79.37	336	eP	51	36.70	0.2	4.5mb
PGF	79.49	334	eP	51	37.20	-0.1	4.7mb
DSI	79.80	310	iPd	51	39.30	0.4	4.8mb
RMO	79.95	185	eP	51	40.50	0.9	4.8mb
TDS	80.06	328	Pd	51	40.60	0.5	4.8mb
EPF	81.01	341	eP	51	45.20	0.1	4.6mb
BTH	81.03	341	eP	51	43.00	-2.1	52.06.50
MBH	81.55	310	eP	51	48.00	-0.1	58.7kmX
TIC	117.30	336	PKP	58	10.60	-1.0	58.10.60
KIC	117.50	336	PKP	58	10.60	-1.4	58.11.50
LIC	117.71	336	PKP	58	11.50	-0.9	58.38.00
LPB	130.69	58	PKP	58	38.00	0.3	58.39.00
CNCB	130.98	58	PKP	58	39.00	0.6	58.57.90
PPD	143.08	41	ePKP	58	57.90	-1.9	59.01.10
SPA	143.50	180	iPKPd	58	51.50	-7.8X	01.46.90
JFO	145.53	29	ePKP	59	04.90	0.9	59.07.60
BMA	146.19	31	ePKP	59	07.60	2.5	59.07.60
S.D. = 0.8 on 128 of 129 obs.							
? DEC 16, 1990 09h 59m 50.00±10.39s							
0.536 N ±68.4km 78.496 W ±23.5km							
DEPTH = 10.0km (geophysicist)							
COLOMBIA-ECUADOR BORDER REGION (106)							
COTA	0.25	142	iPd	59	55.50	-0.1	59.57.00
YANA	0.65	187	P	00	03.00	-0.3	00.12.60
CAYA	0.68	131	eS	00	04.00	0.1	00.14.00
OUR	0.70	183	eP	00	04.30	0.1	00.13.70
QTO	0.74	183	eP	00	05.00	0.2	00.13.70
VC1	1.17	176	P	00	12.30	0.1	00.28.40
S.D. = 0.2 on 6 of 6 obs.							
DEC 16, 1990 10h 06m 55.71±0.41s							
7.021 S ± 6.3km 127.231 E ± 8.2km							
DEPTH = 279.0 ± 4.1 km							
5.0mb (13 obs.)							
BANDA SEA (280)							
MTN	6.95	147	eP	08	37.00	0.2	08.00.20
KNA	8.80	170	iPd	09	00.20	0.3	09.00.20
KKM	17.01	319	ePc	10	40.00	1.5	10.40.00
ASPA	17.75	160	iPd	10	45.70	-0.4	10.45.70
QIS	18.02	140	eP	10	48.00	-0.9	10.48.00
WARB	19.06	182	iPd	11	00.20	0.7	11.00.20
PMG	19.86	98	eP	11	09.50	2.1	11.09.50
MEKA	21.17	202	iPd	11	20.80	0.6	11.20.80
CTA	22.56	127	iPc	11	35.10	1.3	11.35.10
FORR	23.72	178	iPc	11	44.30	-0.2	11.44.30
BRS	31.58	133	eP	12	43.50	-11.3X	12.43.50
BWA	33.55	147	eP	13	13.40	1.8	13.13.40
CAN	34.54	148	eP	13	21.00	1.1	13.21.00
TOO	34.64	154	eP	13	22.70	1.9	13.22.70
BDT	36.87	311	eP	13	41.10	1.5	13.41.10
CHG	37.91	313	eP	13	49.90	1.6	13.49.90
SSE	38.34	352	Pc	13	52.50	0.9	13.52.50
KMI	39.87	324	Pd	14	07.00	2.5	14.07.00
MAT	44.54	13	iPd	14	41.40	-0.4	14.41.40
BJI	47.93	349	eP	15	08.50	0.3	15.08.50
GUN	52.92	313	P	15	46.60	0.2	15.46.60
PKI	53.08	312	P	15	47.80	0.3	15.47.80
THZ	53.17	138	eP	15	47.40	-0.2	15.47.40
KKN	53.29	312	P	15	49.20	0.3	15.49.20
DMN	53.32	312	P	15	49.80	0.6	15.49.80
GBA	53.51	293	P	15	50.00	-0.4	15.50.00
HYB	53.87	297	eP	15	58.00	-15.0X	15.58.00
GKN	53.88	312	P	15	53.20	0.1	15.53.20
KHZ	53.89	138	P	15	52.10	-0.7	15.52.10
MOZ	53.92	140	P	15	52.50	-0.5	15.52.50
MNG	54.42	136	P	15	55.20	-1.4	15.55.20
PGZ	54.97	135	P	16	00.10	-0.5	16.00.10
HBZ	55.31	131	P	16	02.80	-0.2	16.02.80
PUZ	55.44	132	eP	16	03.20	-0.8	16.03.20
NOZ	55.47	133	P	16	03.30	-0.9	16.03.30
POO	58.44	297	eP	16	22.50	-2.7	16.22.50
NDI	59.84	309	iPd	16	34.00	-0.6	16.34.00
FBA	94.17	25	P	19	43.20	-0.5	19.43.20
SLL	107.74	332	ePd	20	43.30	-1.3	20.43.30
SLL	107.74	332	ePKP	24	50.00	-0.9	24.50.00
NB2	108.54	333	PKP	24	51.60	-0.9	

TCF	0.5s	1.80nm				SOI	0.93	31 P	50 47.70	1.7	IFR	17.19	264 iPc	54 30.00	1.1
	118.85	320 ePKP	25 12.60	0.0		GIB	1.33	303 P	50 51.80	-0.1	JVI	17.22	102 eP	54 27.00	-2.2
	0.6s	3.15nm				FAI	1.41	270 Pc	50 52.50	-0.5	PRNI	17.64	107 eP	54 34.00	-0.4
LSF	119.30	320 ePKP	25 13.00	-0.4				eSn	51 11.10		TIO	19.82	258 eP	55 06.00	5.4X
CAF	119.45	318 ePKP	25 14.00	0.3		MCT	1.49	284 Pc	50 55.90	1.7	EKA	22.04	331 P	55 23.00	0.1
	0.6s	2.70nm						eSg	51 14.70			0.8s	2.30nm		3.7mb
LPO	120.12	318 ePKP	25 15.40	0.4		CVT	2.15	281 P	51 05.90	2.2	HFS	22.90	358 eP	55 26.90	-4.5X
	0.6s	3.60nm				USI	2.29	309 P	51 04.60	-1.0		1.5s	29.60nm		4.6mb
LPF	120.18	322 ePKP	25 15.00	0.1		ERC	2.39	289 P	51 05.80	-1.3	NB2	23.93	355 P	55 39.20	-2.2
	0.4s	3.45nm				ROI	2.45	21 P	51 10.50	2.5		0.7s	1.20nm		3.5mb X
MFF	120.23	321 ePKP	25 15.00	-0.1		TDS	2.48	16 P	51 08.80	0.5	GKN	57.84	78 P	00 20.80	0.0
	0.5s	5.10nm				CSI	2.58	15 P	51 12.00	2.2		0.6s	13.00nm		5.1mb
LFF	120.31	319 ePKP	25 16.00	0.7				eSg	51 41.00		DMN	58.39	78 P	00 25.20	0.4
EPF	121.30	317 ePKP	25 17.50	0.2		MMN	2.64	9 P	51 11.60	1.0		0.6s	18.00nm		5.3mb
	0.5s	2.20nm				ORI	2.89	15 P	51 15.90	1.8	KKN	58.44	77 P	00 25.30	0.2
BTH	121.64	317 ePKP	25 13.00	-4.9X		SGO	3.28	358 P	51 20.40	0.8	PKI	58.65	78 P	00 26.40	-0.3
		pPKP	26 08.50			LCI	3.62	32 P	51 25.00	0.4	GUN	58.85	77 P	00 27.40	-0.7
		ePKP	26 25.00			BRT	3.84	20 P	51 27.00	-0.7	S.D. = 1.3 on 56 of 76 obs.				
FRB	122.25	8 ePKP	25 18.00	-0.4				eSn	52 11.00		DEC 16, 1990 14h 07m 42.01±0.29s				
TUL	131.30	48 ePKP	25 37.10	0.4		BAI	3.99	16 P	51 28.50	-1.2	46.903 N ± 2.8km 7.485 E ± 3.3km				
	0.8s	6.30nm				VLS	4.17	76 eP	51 31.50	-0.9	DEPTH = 10.0km (geophysicist)				
LIC	132.59	272 PKP	25 40.20	0.5		KEK	4.19	53 eP	51 31.00	-1.6	SWITZERLAND (544)				
TIC	132.61	273 PKP	25 40.30	0.5		DUI	4.44	350 P	51 37.00	0.7	ML 3.1 (LDG). MD 2.9 (STR).				
ARE	150.21	142 ePKP	26 17.00	6.2X		SDI	4.60	345 Pd	51 38.80	0.3	BBS	0.56	2 Pg	07 54.14	0.7
PPD	151.09	183 ePKP	26 17.80	6.1X		EVR	5.28	70 eP	51 48.80	0.7	LOMF	0.63	315 Pg	07 55.77	1.0
CNCB	151.95	148 PKP	26 16.00	2.3		TIR	5.31	39 ePn	51 46.50	-2.0			Sg	08 05.85	
		i	26 22.00			KBN	5.35	50 ePn	51 49.30	0.3	DIX	0.82	184 ePd	07 56.50	-1.7
LPB	152.11	147 ePKP	26 15.00	1.2		OHR	5.65	46 iPn	51 53.50	0.2	ZLA	0.85	46 ePc	07 58.20	-0.2
		i	26 22.00					iSg	52 51.00		MMK	0.91	159 ePd	07 57.70	-2.0
CCH	152.38	152 ePKP	26 12.00	-2.0				Lg	52 58.20		MOF	0.98	346 Pg	08 02.08	1.4
S.D. = 1.0 on 66 of 71 obs.						SDA	5.67	32 iPn	52 01.70	8.2X			Sg	08 15.18	
& DEC 16, 1990 11h 42m 04.30s						HCY	5.67	23 ePn	51 50.80	-2.7	FEL	1.04	20 ePn	08 01.86	0.2
36.345 N 118.030 W								eSn	52 49.00		LLS	1.04	91 ePc	08 00.60	-1.1
DEPTH = 2.0km						KZN	5.79	57 eP	51 55.50	0.2	BSF	1.04	333 Pg	08 03.23	1.5
CENTRAL CALIFORNIA						PHP	5.85	40 ePn	51 54.00	-2.1			Sg	08 08.28	
<BRK>. ML 3.2 (BRK).						TTG	5.92	29 ePn	51 55.00	-2.0	SLE	1.10	38 ePc	08 02.60	-0.1
								eSn	52 56.60		TMA	1.25	129 ePd	08 03.90	-1.4
FRI	1.50	296 iPc	42 31.20	-1.0		HVAR	5.94	7 ePn	51 58.40	1.1	ORX	1.32	165 P	08 05.64	-0.8
		iS	42 50.50			VLI	6.02	93 eP	51 58.90	0.4			S	08 21.53	
BONR	1.62	352 eP	42 33.90	-0.4		BRY	6.09	22 ePn	51 57.30	-2.4	SAX	1.32	74 ePd	08 06.40	-0.2
PKEM	1.71	261 eP	42 35.50	0.3				eSn	53 01.50		ECH	1.33	351 Pn	08 06.46	-0.1
ABL	1.78	213 eP	42 36.50	0.0		KKS	6.13	37 ePn	52 05.50	5.5X			Sg	08 26.62	
TNP	1.85	20 eP	42 36.00	-1.5		NEO	6.44	69 eP	52 04.00	-0.5	HAU	1.35	325 Pn	08 07.40	0.6
BCH	2.03	236 eP	42 40.00	-0.1		IVA	6.54	30 ePn	52 05.50	-0.4			Pg	08 08.70	
PRI	2.14	265 eP	42 42.30	0.7				eSn	53 13.50		RSL	1.35	206 Pn	08 05.84	-1.2
		iS	43 10.10			SKO	6.58	43 ePn	52 08.00	1.6			Sg	08 27.40	
CMB	2.53	313 eP	42 48.40	1.3				iSn	53 16.00				Pg	08 06.29	
		iS	43 18.80			ATH	6.60	81 eP	52 07.60	0.9	VAI	1.37	139 P	08 08.00	1.0
PEC	2.55	164 eP	42 47.20	-0.2		PLE	6.75	25 ePn	52 07.70	-1.2			eSg	08 19.00	
SAO	2.78	280 iP	42 51.10	0.4				eSn	53 18.50		LSD	1.46	189 P	08 08.46	-0.2
ARN	2.98	291 eP	42 53.90	0.3		VAY	6.84	52 ePn	52 08.40	-1.6			S	08 26.24	
PLM	3.14	162 eP	42 56.20	0.4		PLG	6.97	61 eP	52 10.60	-1.2	LPG	1.50	200 Pn	08 08.90	-0.3
12 obs. associated						VAM	7.31	102 eP	52 17.60	1.0			Sg	08 29.00	
* DEC 16, 1990 12h 12m 13.66±0.57s						NPS	8.45	101 eP	52 34.30	1.7	WLS	1.51	357 Pn	08 09.10	-0.1
1.286 N ± 10.8km 124.278 E ± 16.2km						PTJ	8.62	2 eP	52 34.90	0.0	CDF	1.52	355 Pn	08 08.58	-0.7
DEPTH = 33.0km (normol)						CTI	9.21	343 P	52 42.50	-0.6			Sg	08 32.76	
4.3mb (1 obs.)						SQTA	10.42	344 e(P)	53 05.50	5.8X	VITF	1.66	323 Pn	08 11.23	0.0
MINAHASSA PENINSULA (265)							1.0s	8.90nm		5.0mb	RSP	1.76	185 P	08 13.43	0.6
DAV	5.91	13 eP	13 41.00	-0.2				i	53 09.80				S	08 35.27	
OIS	26.39	146 eP	17 48.00	-1.1		RSL	10.69	325 P	53 17.22	13.8X	OSS	1.84	96 eP	08 14.40	0.4
ASPA	26.51	160 iPd	17 49.10	-1.1		KSL	11.41	92 eP	53 13.10	0.0	MDI	1.91	125 P	08 16.10	1.2
	0.9s	8.30nm				BSF	12.32	332 eP	53 31.10	5.7X	BNI	1.93	197 P	08 18.00	2.6
ADE	38.51	161 eP	19 34.20	-0.6		CDF	12.63	334 eP	53 35.00	5.4X	RRL	2.04	194 P	08 18.86	1.8
BWA	42.13	150 eP	20 07.00	2.3		HAU	12.63	331 eP	53 36.40	6.9X	8HB	2.07	184 P	08 18.72	1.5
CAN	43.13	150 eP	20 13.50	0.7		SMF	12.72	321 eP	53 38.80	8.1X	GWf	2.08	2 Pn	08 16.66	-0.7
GUN	45.27	309 P	20 30.50	-0.1		GRF	12.78	348 eP	53 34.50	3.0X	LBF	2.40	273 Pn	08 22.50	0.4
PKI	45.47	309 P	20 31.80	-0.4		LBF	12.89	322 eP	53 40.60	7.6X			Pg	08 28.00	
KKN	45.68	309 P	20 33.60	-0.1		AVF	13.07	320 eP	53 42.70	7.4X			Sg	08 27.20	
DMN	45.73	308 P	20 35.10	1.0				3.30nm		4.5mb	PZZ	2.41	187 P	08 23.17	0.9
GKN	46.28	309 P	20 38.00	-0.3		MAF	13.11	317 eP	53 44.60	8.7X			S	08 51.92	
S.D. = 1.1 on 11 of 11 obs.								2.75nm		4.4mb	PCP	2.48	162 P	08 24.91	1.8
DEC 16, 1990 13h 50m 28.81±0.57s						LOR	13.15	323 eP	53 41.60	5.2X	LOR	2.50	280 Pn	08 24.80	1.4
37.280 N ± 5.4km 15.448 E ± 4.2km								2.75nm		4.4mb			Pg	08 31.30	
DEPTH = 25.7 ± 4.9 km						SSF	13.17	322 eP	53 43.80	7.1X			Sg	09 00.30	
4.5mb (12 obs.)								3.35nm		4.4mb	SMF	2.52	265 Pn	08 24.60	1.0
SICILY (398)						BGF	13.17	319 eP	53 45.00	8.2X			Pg	08 30.00	
								4.95nm		4.7mb			Sg	09 02.60	
MEU	0.45	247 P	50 36.80	-1.5		TCF	13.35	317 eP	53 46.80	7.7X	SQTA	2.57	82 iPnc	08 25.30	0.9
		eSg	50 44.20					4.10nm		4.4mb			i	08 28.60	
ATN	0.88	1 Pc	50 46.10	0.8		MOX	13.64	350 eP	53 51.00	8.1X			i	08 29.50	
		eSg	50 59.30			CLL	14.13	354 eP	53 57.00	7.7X			iSg	09 02.30	
MNO	0.88	318 Pd	50 44.90	-0.7				15.00nm		4.5mb	SSF	2.73	275 Pn	08 27.40	0.7
		eSg	50 59.50					eSg	10 49.00				Pg	08 34.20	

1	BEO	2.74	43	ePn	40	01.50	2.1
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16d 22h

SHL	36.10	86	iP	25	51.20	-2.1	TCF	41.79	308	eP	26	39.40	-0.8		0.8s	104.00nm		5.9mb			
			iS	31	30.00			1.1s	17.10nm			4.7mb		DAG	57.40	345	iPd	28	38.10	-1.4	
CLL	36.17	319	iP	25	52.80	-0.5	RJF	42.17	307	eP	26	43.30	0.0		0.7s	22.60nm		5.3mb			
	1.3s		50.00nm			5.2mb	Z	22s	4.75um			5.3Msz		TIC	57.46	259	Pc	28	40.06	-0.7	
NUR	36.20	338	iP	25	52.50	-1.0	LPO	42.35	306	eP	26	45.00	0.2		0.8s	87.00nm		5.8mb			
	0.9s		47.30nm			5.4mb		1.2s	23.80nm			4.8mb		LIC	57.68	258	Pc	28	41.66	-0.6	
OSS	36.47	310	ePc	25	55.70	-0.5	LFF	42.69	306	eP	26	47.50	-0.1		0.8s	177.50nm		6.2mb			
BOB	36.53	307	P	25	57.20	0.6		0.8s	26.85nm			5.0mb		Z	20s	4.50um		5.6Msz			
MDI	36.55	309	P	25	56.70	0.1	EPF	42.88	303	eP	26	49.40	0.2			S	36	39.00			
GRF	36.64	316	ePc	25	56.90	-0.5		0.7s	7.70nm			4.5mb		SLR	58.78	204	iPd	28	49.30	-0.6	
	1.0s		30.00nm			5.1mb	RGS	42.96	334	eP	26	49.00	-0.5		1.0s	19.00nm		5.2mb			
Z	22s		2.00um			4.9Msz	KEV	43.07	348	iP	26	50.40	0.1		Z	17s	12.24um		6.1MszX		
MOX	36.73	317	eP	25	58.00	-0.1		1.0s	92.00nm			5.5mb		SSE	59.56	69	P	28	54.00	-1.1	
BSD	36.84	325	iP	25	58.60	-0.3	KTk1	43.20	346	iPd	26	51.24	-0.2		1.1s	17.00nm		5.1mb			
			i	28	23.70		NSS	43.25	336	eP	26	51.55	-0.3		Z	20s	3.70um		5.5Msz		
VDL	36.88	310	ePc	25	59.10	-0.5	MFF	43.44	308	eP	26	52.50	-1.2		N	16s	2.50um				
KAF	36.93	341	eP	25	59.50	0.0		0.7s	11.00nm			4.7mb		E	17s	3.60um					
	0.3s		11.10nm			5.1mb	LDF	43.64	311	eP	26	54.00	-1.3			S	37	06.00			
PCP	37.12	306	P	26	00.46	-1.1		0.5s	13.10nm			5.0mb			SS	41	04.00				
SAX	37.14	311	ePc	26	00.10	-0.8	MOL	43.87	332	eP	26	56.99	0.2		PRY	60.16	205	eP	29	02.00	2.6
VAI	37.22	309	P	25	50.00	-12.2X	ECHE	43.90	298	eP	27	00.50	3.0X		WIN	60.98	216	iPd	29	05.50	0.4
LLS	37.28	310	ePc	26	02.10	-0.9	FLN	43.90	311	eP	26	56.00	-1.3			1.0s	35.00nm		5.4mb		
CKI	37.29	306	P	26	08.00	5.1X		0.7s	29.75nm			5.2mb		FRS	63.51	205	iPd	29	41.00	19.4X	
FIN	37.30	306	P	26	01.79	-1.2	Z	20s	3.25um			5.2Msz			0.9s	21.01nm					
IMI	37.49	305	P	26	06.61	2.0	GRR	44.10	311	eP	26	57.70	-1.3		GDH	68.20	338	iPc	29	51.00	-0.2
ROB	37.56	306	P	26	04.97	-0.2		0.9s	34.40nm			5.2mb			0.9s	16.81nm		5.2mb			
ORX	37.71	308	P	26	10.30	3.8X	LPF	44.19	310	eP	26	58.30	-1.4		CER	69.08	208	iPc	29	42.00	-15.2X

KMI 17.35 278 eP 47 06.00 2.4
 LZH 19.68 312 eP 47 32.50 0.7
 2.0s 53.00nm 4.5mb
 Z 10s 2.10um 3.9mszX
 N 10s 2.60um

LOE 19.80 255 eP 47 33.00 -0.1
 CHG 21.83 261 eP 47 54.70 0.8
 GUN 32.45 285 P 49 32.20 -0.3
 PKI 32.87 284 P 49 35.00 -1.2
 KKN 32.98 285 P 49 36.00 -1.0
 DMN 33.14 284 P 49 36.00 -1.8
 GKN 33.55 285 P 49 41.20 -0.6
 ASPA 48.71 165 eP 51 46.60 0.5
 1.1s 5.20nm 4.5mb
 FBA 68.84 27 eP 54 06.00 0.2
 0.8s 11.03nm 5.1mb
 PMR 68.88 31 eP 54 06.20 0.1
 0.7s 6.98nm 5.0mb

SOD 70.15 336 iP 54 14.80 1.0
 INK 73.31 22 eP 54 31.00 -1.6
 M8C 73.44 13 eP 54 33.00 -0.3
 HFS 78.08 331 eP 54 58.50 -1.3
 0.4s 0.70nm 4.1mb
 YKA 83.05 23 eP 55 26.00 -0.1
 0.8s 5.60nm 4.8mb
 NEW 90.96 35 eP 56 07.50 2.5
 1.0s 8.50nm 5.0mb

S.D. = 1.3 on 20 of 21 obs.
 % DEC 16, 1990 22h 59m 35.39± 1.23s
 37.305 N ± 9.4km 15.255 E ± 9.0km
 DEPTH = 10.0km (geophysicist)
 SICILY (398)

MEU 0.33 232 Pc 59 42.30 0.0
 eSg 59 47.20
 MNO 0.77 325 P 59 50.60 0.1
 eSg 00 01.70
 ATN 0.87 11 Pc 59 51.60 -0.5
 eSg 00 05.20
 SOI 0.99 39 P 59 54.50 0.3
 eSg 00 08.00
 GIB 1.19 305 P 59 58.00 0.3
 FAI 1.26 269 Pd 59 58.50 -0.3
 eSg 00 14.90

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

DEC 16, 1990 23h 25m 03.09± 0.53s
 29.039 N ± 8.6km 51.314 E ± 7.8km
 DEPTH = 33.0km (normal)
 3.9mb (3 obs.)
 SOUTHERN IRAN (353)
 ML 4.0 (8MU).

SHI 1.22 60 eP 25 25.00 1.0
 BBU 2.91 195 ePn 25 48.40 0.3
 (Sn) 26 34.90
 VRI 25.60 318 eP 30 35.50 4.6X
 GKN 29.25 84 P 31 04.30 -0.1
 DMN 29.73 84 P 31 08.40 -0.5
 KKN 29.84 84 P 31 09.40 -0.5
 PKI 30.00 84 P 31 11.20 -0.2
 GUN 30.34 84 P 31 14.20 -0.3
 HFS 40.07 332 eP 32 36.40 -0.3
 0.4s 2.80nm 4.4mb
 SOD 41.13 346 eP 32 45.00 -0.3
 NB2 41.59 332 P 32 48.30 -0.9
 0.6s 1.10nm 3.8mb
 FRB 76.19 337 eP 36 50.00 0.6
 YKA 88.09 354 eP 37 52.50 1.3
 0.6s 0.30nm 3.8mb

S.D. = 0.7 on 12 of 13 obs.

DEC 16, 1990 23h 28m 53.42± 0.80s
 29.127 N ± 4.8km 51.099 E ± 5.6km
 DEPTH = 37.2 ± 7.8 km
 4.4mb (6 obs.)
 SOUTHERN IRAN (353)
 Felt in the Borozjan area.

BBU 2.96 191 iPn 29 38.90 -0.2
 eSn 30 28.30
 TEH 6.60 2 ePd 30 30.50 -0.1
 TAB 9.76 337 eP 31 14.00 -0.6
 QUE 13.83 82 eP 32 04.00 -5.3X

BHL 14.01 294 P 32 22.00 10.4X
 BBTk 18.48 310 eP 33 09.00 0.6
 KAS 18.66 316 eP 33 11.00 0.5
 ALT 19.97 305 eP 33 26.10 0.7
 KHL 20.12 303 eP 33 27.00 0.0
 DST 21.24 305 eP 33 29.10 0.7
 NDI 22.86 85 iPd 33 55.00 0.4
 VRI 25.41 318 eP 34 19.00 0.0
 MLR 25.68 316 eP 34 27.00 5.3X
 VAY 26.17 305 eP 34 26.70 0.6
 OHR 27.38 304 eP 34 34.00 -3.2X
 HYB 27.71 109 eP 34 40.50 0.1
 KSP 33.91 320 eP 35 34.00 -0.8
 SOTA 35.72 312 i(P) 35 50.00 -0.5
 0.6s 5.90nm 4.7mb
 i 35 54.10

CLL 35.99 319 e(P) 35 53.00 0.5
 KAF 36.79 341 eP 35 58.70 -0.4
 0.3s 1.90nm 4.5mb
 BCOA 39.43 238 iPd 36 21.90 0.1
 0.7s 6.00nm 4.5mb
 HFS 39.91 332 eP 36 24.00 -1.2
 0.3s 3.80nm 4.7mb
 SOD 41.00 346 eP 36 35.00 0.9
 NB2 41.43 332 P 36 36.60 -1.2
 0.5s 1.00nm 3.8mb
 KEV 42.95 348 eP 36 50.00 0.0
 KIC 57.21 258 P 38 39.30 -0.3
 TIC 57.30 259 P 38 39.94 -0.3
 LIC 57.52 258 P 38 41.50 -0.3
 FRB 76.04 337 eP 40 39.00 0.7
 INK 82.80 2 eP 41 14.50 -0.1
 FBA 85.13 8 (P) 41 27.20 0.7
 YKA 87.98 353 eP 41 40.00 -0.5
 0.9s 1.00nm 4.1mb

S.D. = 0.6 on 28 of 32 obs.

? DEC 16, 1990 23h 37m 41.22± 1.47s
 29.052 N ± 10.5km 51.239 E ± 40.4km
 DEPTH = 33.0km (normal)
 4.0mb (3 obs.)
 SOUTHERN IRAN (353)
 ML 3.8 (8MU).

BBU 2.91 194 ePn 38 25.90 -0.3
 eSn 39 17.40
 HFS 40.03 332 eP 45 14.00 -0.5
 0.3s 2.20nm 4.4mb
 NB2 41.55 332 P 45 26.40 -0.6
 0.7s 1.80nm 3.9mb
 LIC 57.63 258 P 47 31.30 0.5
 FRB 76.16 337 eP 49 28.00 0.7
 YKA 88.07 353 eP 50 29.40 0.2
 0.9s 0.70nm 4.0mb

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

* DEC 17, 1990 00h 02m 18.61± 1.03s
 22.464 S ± 10.7km 70.008 W ± 23.7km
 DEPTH = 33.0km (normal)
 NEAR COAST OF NORTHERN CHILE (122)

ANT 1.29 197 iPd 02 40.50 0.1
 iS 02 52.80
 CNCB 5.94 19 P 03 48.00 0.8
 ARE 6.13 347 eP 03 49.00 -0.6
 iS 04 59.10
 LPB 6.17 17 P 03 51.00 0.8
 CCH 6.23 36 P 03 49.90 -1.1
 PEL 10.66 183 eP 04 55.00 2.9X
 PPD 17.32 92 eP 06 24.80 5.3X
 e 06 32.70

S.D. = 1.2 on 5 of 7 obs.

& DEC 17, 1990 01h 11m 27.63s
 60.175 N 141.033 W
 DEPTH = 2.2km
 SOUTHEASTERN ALASKA (19)
 <AGS-P>.

YAH 0.40 298 eP 11 36.22 0.5
 eS 11 42.88
 YKU 0.91 133 eP 11 44.83 -0.9
 eS 11 58.63
 TGL 1.06 304 eP 11 47.29 -1.2
 eS 12 02.03
 BALM 1.08 324 iP 11 47.37 -1.4
 eS 12 02.81

GLB 1.86 314 eP 11 59.57 -1.3
 HYT 1.86 68 Pd 11 59.90 -1.0
 KLU 2.73 301 eP 12 11.00 -2.4
 VLZ 2.78 292 eP 12 11.53 -2.4
 VZW 2.86 290 eP 12 13.07 -2.1
 9 obs. associated

* DEC 17, 1990 01h 21m 07.83± 0.54s
 1.412 N ± 8.9km 123.230 E ± 10.7km
 DEPTH = 33.0km (normal)
 5.2mb (5 obs.)

MINAHASSA PENINSULA (265)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 13S, 22C
 Centroid Location:
 Origin Time 01:21: 7.1 0.9
 Lat 1.66N 0.08 Lon 123.42E 0.09
 Dep 33.0 FIX Half-duration 1.5
 Moment Tensor: Scale 10**16 Nm
 Mr= 2.87 0.38 Mtt=-4.72 0.41
 Mff= 1.85 0.65 Mrt=-3.51 0.93
 Mrf= 0.94 0.60 Mtf= 0.47 0.34

Principal Axes:
 T Val= 4.44 Plg=65 Azm=219
 N 1.73 12 101
 P -6.17 21 6
 Best Double Couple: Mo=5.3*10**16
 NP1: Strike= 74 Dip=26 Slip= 61
 NP2: 286 67 104

TSM 5.86 299 ePc 22 34.70 0.0
 e 27 48.50
 DAV 6.10 22 eP 22 38.00 -0.2
 KKM 8.38 304 eP 23 10.00 0.0
 QCP 13.31 351 eP 24 13.00 -4.1X
 BAG 15.13 350 eP 24 39.00 -2.1
 IPM 22.39 279 ePd 26 06.00 1.0
 ASPA 27.00 158 iPc 26 48.10 -0.8
 1.0s 10.30nm 4.4mb
 Z 23s 0.50um 4.0mszX
 eS 31 29.30

QIS 27.09 145 eP 26 49.00 -0.7
 CHG 29.43 308 eP 27 12.00 1.1
 SSE 29.59 356 eP 27 14.00 1.9
 Z 20s 0.60um 4.2msz
 N 10s 0.40um
 S 32 06.00
 FORR 32.42 172 eP 27 35.00 -2.0
 0.5s 26.00nm 5.4mb
 SHL 38.59 311 iP 28 30.40 0.5
 eS 33 17.50
 LZH 38.90 335 eP 28 25.50 -6.9X
 2.5s 53.00nm 4.9mb
 Z 20s 0.90um 4.6msz
 E 15s 0.70um

i 29 07.00
 PP 30 00.00
 i 30 16.50
 eS 34 26.00
 sS 34 40.00
 sS 34 40.00
 BJI 38.98 351 eP 28 33.00 0.3
 2.0s 94.00nm 5.2mb
 eS 34 31.00

BRS 40.35 137 iPd 28 44.50 0.2
 BWA 42.77 149 eP 29 06.70 2.6
 CAN 43.77 149 eP 29 13.50 1.3
 KOD 46.31 283 eP 29 32.00 -1.1
 HYB 46.69 293 eP 29 41.20 5.5X
 GBA 46.89 287 P 29 37.00 -0.2
 KRI 93.87 253 iPd 34 18.50 -5.5X
 BUL 94.82 250 iPd 34 20.80 -7.5X
 1.0s 14.50nm 5.4mb

CNCB 161.13 145 PKP 41 27.00 19.6X
 ZOBO 161.48 143 PKP 41 06.00 -1.8
 e 41 47.00

S.D. = 1.4 on 18 of 24 obs.

& DEC 17, 1990 01h 29m 25.26s
 57.652 N 142.955 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

MID 2.51 317 eP 30 01.49 -5.3
 YKU 2.55 40 eP 30 01.86 -5.4
 eS 30 30.74

17d 01h

YAH 2.79 12 iP 30 05.79 -5.2
 TGL 3.11 1 iP 30 09.82 -5.6
 eS 30 43.85
 MTU 3.38 316 eP 30 13.33 -5.8
 BALM 3.41 5 eP 30 14.05 -5.6
 KNIM 3.66 320 eP 30 16.32 -6.9
 GLB 3.83 354 eP 30 19.62 -5.9
 GLI 3.87 328 eP 30 19.53 -6.6
 VZW 3.88 333 eP 30 20.26 -6.0
 KLU 4.14 340 eP 30 23.65 -6.3
 SEW 4.17 309 eP 30 23.57 -6.7
 BRK 4.65 300 eP 30 31.18 -5.9
 KNK 4.70 326 eP 30 31.66 -6.2
 SLKM 4.72 310 eP 30 31.64 -6.5
 CNPM 4.72 297 eP 30 32.80 -5.4
 TOA 4.75 341 eP 30 32.91 -5.8
 PMS 4.93 320 eP 30 35.72 -5.5
 PLRM 5.04 324 eP 30 36.90 -5.8
 GHO 5.12 326 eP 30 38.35 -5.5
 FBA 7.64 344 (P) 31 20.00 0.9

21 obs. associated

DEC 17, 1990 01h 43m 48.65± 0.25s
 1.298 N ± 5.6km 123.188 E ± 6.7km
 DEPTH = 33.0km (normal)
 5.4mb (19 obs.) 4.7Msz (5 obs.)
 MINAHASSA PENINSULA (265)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 26C
 Centroid Location:
 Origin Time 01:43:45.4 0.6
 Lat 1.37N 0.07 Lon 123.14E 0.06
 Dep 18.1 3.3 Half-duration 2.0
 Moment Tensor: Scale 10¹⁷ Nm
 Mrr= 1.22 0.10 Mtt=-1.43 0.09
 Mff= 0.21 0.13 Mrt=-1.51 0.39
 Mrf= 0.30 0.17 Mtf= 0.24 0.08
 Principal Axes:
 T Vol= 1.92 Plg=65 Azm=194
 N - 0.24 2 100
 P -2.16 24 9
 Best Double Couple: Mo=2.0*10¹⁷
 NP1: Strike= 94 Dip=21 Slip= 84
 NP2: 281 69 92

TSM 5.88 300 ePc 45 15.90 0.1
 e 50 32.50
 DAV 6.22 22 eP 45 19.00 -1.7
 QCP 13.42 351 eP 46 50.00 -9.3X
 BAG 15.24 350 eP 47 14.00 -9.3X
 MTN 16.11 151 eP 47 35.50 1.1
 0.3s 23.00nm 4.8mb
 KNA 17.81 162 eP 47 57.00 1.2
 IPM 22.37 279 ePd 48 46.50 0.9
 e 49 33.60
 SNG 23.25 285 eP 48 55.50 1.3
 1.2s 284.38nm 5.7mb
 eS 53 10.30
 PMG 26.13 115 eP 49 22.00 0.2
 NST 26.85 303 eP 49 31.00 2.7
 ASPA 26.91 158 iPc 49 28.60 -0.3
 1.9s 22.00nm 4.5mb
 Z 18s 1.70um 4.6Msz
 eS 53 55.60
 OIS 27.02 144 iPc 49 29.70 -0.2
 MEKA 28.11 189 eP 49 38.00 -1.7
 BDT 28.58 305 eP 49 45.00 1.0
 CHG 29.46 308 eP 49 52.50 0.5
 SSE 29.70 357 P 49 52.00 -1.9
 1.5s 61.00nm 5.1mb
 Z 20s 1.40um 4.6Msz
 N 20s 2.80um
 E 20s 2.00um
 sP 50 08.00
 PPP 51 04.00
 S 54 48.00
 KMI 30.83 322 eP 50 05.00 0.7
 2.5s 140.00nm 5.3mb
 Z 16s 3.00um 5.0MszX
 N 14s 1.10um
 E 14s 1.10um
 pP 50 19.00 56kmX
 S 55 06.00
 sS 55 18.00
 CTA 31.03 134 iPc 50 06.10 0.2
 1.2s 39.06nm 5.1mb

FORR 32.31 172 iPd 50 15.40 -1.4
 0.5s 70.00nm 5.8mb
 BAL 32.32 190 eP 50 15.30 -1.7
 KLB 33.11 188 eP 50 22.10 -1.8
 MUN 33.75 191 eP 50 28.70 -0.7
 NWA0 34.50 189 eP 50 35.40 -0.5
 Z 20s 1.50um 4.7Msz
 RMO 37.03 140 eP 50 58.00 0.6
 MAT 37.72 20 eP 50 59.00 -4.1X
 2.1s 193.33nm 5.6mb
 Z 20s 1.06um 4.6Msz
 eS 56 48.00
 SHL 38.63 311 iP 51 10.80 -0.3
 eS 57 06.00
 ADE 38.89 160 iPc 51 13.20 0.2
 0.8s 53.73nm 5.4mb
 LZH 38.99 335 eP 51 15.00 1.1
 2.0s 132.00nm 5.4mb
 Z 20s 2.67um 5.1Msz
 E 15s 1.61um
 pP 51 25.00 34kmX
 i 52 00.00
 PP 52 47.50
 i 53 00.00
 eS 57 10.00
 sS 57 26.00
 ScS 01 19.00
 BJI 39.09 351 eP 51 13.50 -0.9
 2.0s 222.00nm 5.6mb
 N 13s 0.73um
 esP 51 28.00
 PP 52 46.00
 eS 57 08.00
 eScS 01 20.00
 BRS 40.30 137 iPd 51 24.70 0.0
 COO 41.85 142 eP 51 39.00 1.6
 BWA 42.70 149 eP 51 46.80 2.5
 KOD 46.29 283 eP 52 13.80 0.0
 HYB 46.69 293 eP 52 16.00 -0.6
 GBA 46.88 287 P 52 17.70 -0.3
 POO 51.31 293 iPd 52 49.80 -2.4
 NDI 51.59 306 eP 52 54.00 -0.2
 QUE 60.51 304 eP 53 57.50 -0.9
 TCW 62.68 139 P 54 12.20 -0.3
 KHZ 62.79 140 P 54 13.40 0.2
 MRW 62.97 138 P 54 14.20 -0.2
 CAW 63.15 138 P 54 15.50 -0.2
 MNG 63.20 138 P 54 16.00 -0.1
 MTW 63.47 138 P 54 17.50 -0.3
 BLW 63.54 138 P 54 18.20 -0.1
 PGZ 63.74 137 P 54 19.50 0.0
 TAB 78.86 308 eP 55 50.00 -0.6
 MAW 80.27 200 iPd 55 57.80 0.4
 1.0s 38.00nm 5.3mb
 PMO 89.28 105 eP 56 49.00 5.5X
 1.2s 40.00nm 5.6mb
 VAH 89.55 105 eP 56 50.00 5.3X
 1.2s 40.00nm 5.6mb
 TPT 89.55 105 eP 56 50.00 5.3X
 1.2s 50.00nm 5.7mb
 RUV 89.78 105 eP 56 52.00 6.2X
 1.2s 45.00nm 5.6mb
 KAF 92.09 332 eP 56 58.90 3.3X
 NUR 93.09 331 eP 57 01.00 0.8
 INK 93.70 21 ePc 57 03.20 0.3
 KRI 93.79 253 iPd 56 59.80 -4.7X
 BUL 94.74 250 iPc 57 01.10 -7.7X
 SLR 94.98 244 eP 57 09.00 -0.8
 MBC 95.08 12 eP 57 10.50 1.4
 KRA 97.50 321 eP 57 12.80 -7.8X
 DAG 99.18 352 iPc 57 27.20 -0.5
 0.9s 9.24nm 5.3mb
 N82 99.35 333 P 57 31.00 2.2
 1.2s 6.90nm 5.1mb
 BRG 101.03 322 ePd i f f 57 48.00 11.5X
 e 02 14.00
 CLL 101.48 323 ePd i f f 57 47.00 8.5X
 YKA 103.15 24 ePd i f f 57 54.50 8.9X
 0.9s 0.80nm 4.5mb
 RSSD 118.25 37 ePKP 02 33.50 -1.2
 0.7s 2.94nm
 ANMO 121.26 47 ePKP 02 41.30 0.6
 1.0s 3.25nm
 ALQ 121.26 47 ePKP 02 41.00 0.3
 TUL 128.15 40 e(PKP) 02 51.00 -2.7
 1.6s 20.70nm

LNV 144.75 159 ePKP 03 23.50 -0.8
 SAN 145.47 159 ePKP 03 26.00 0.4
 PEL 145.75 159 ePKP 03 27.00 0.9
 MDZ 146.60 161 ePKP 03 29.80 2.2
 CNCB 161.07 145 PKP 03 56.00 7.8X
 e 08 14.00
 LPB 161.22 144 PKP 04 00.00 11.9X
 e 04 34.00
 ZOBO 161.41 144 PKP 03 42.00 -6.5X
 i 04 28.00
 SIV 164.81 164 PKP 03 51.40 0.2
 i 04 48.00

S.D. = 1.2 on 60 of 77 obs.

% DEC 17, 1990 01h 45m 47.89± 0.72s
 46.098 N ± 6.0km 2.901 E ± 5.2km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)

ML 1.9 (LDG).

MAF 0.26 298 Pg 45 54.20 0.7
 Sg 45 57.90
 BGF 0.46 355 Pg 45 57.00 -0.3
 Sg 46 02.90
 TCF 0.52 292 Pg 45 58.00 -0.4
 Sg 46 04.10
 AVF 0.76 24 Pg 46 02.60 -0.1
 Sg 46 11.70
 SMF 0.85 50 Pg 46 04.80 0.5
 Sg 46 15.70
 SSF 1.05 23 Pg 46 07.40 -0.3
 Sg 46 20.30
 LBF 1.16 40 Pg 46 09.60 0.1
 Sg 46 24.00
 CAF 1.31 207 Pn 46 12.00 -0.2
 Pg 46 14.60
 Sg 46 30.90
 LOR 1.34 29 Pg 46 12.60 0.0
 Sg 46 29.00

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

% DEC 17, 1990 02h 02m 57.84± 0.96s
 45.949 N ± 10.6km 15.041 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

MD 2.3 (LJU).

LJU 0.37 285 ePg 03 05.50 0.1
 eSg 03 10.60
 VBY 0.47 161 ePg 03 07.20 -0.2
 iSg 03 15.80
 CEY 0.48 244 e(Pg) 03 07.90 0.3
 eSg 03 15.40
 PTJ 0.64 94 ePg 03 10.90 0.1
 eSg 03 20.10
 VOY 0.80 276 ePn 03 13.10 -0.4
 e(Sn) 03 25.50

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

DEC 17, 1990 02h 18m 38.05± 0.96s
 29.079 N ± 4.8km 51.260 E ± 3.6km
 DEPTH = 30.6 ± 7.7 km
 4.8mb (36 obs.) 4.3Msz (3 obs.)
 SOUTHERN IRAN (353)

Felt in the Borozjon area.

SHI 1.24 63 iPd 18 59.00 -0.5
 BBU 2.94 194 iPn 19 23.90 0.2
 0.3s 307.00nm
 RYD 6.01 225 iPc 20 17.60 10.4X
 MJMA 6.20 240 eP 20 10.20 0.2
 TEH 6.64 1 ePc 20 16.00 -0.2
 QASM 7.47 248 eP 20 25.70 -2.1
 UQSK 8.56 250 eP 20 41.00 -2.0
 TAB 9.86 337 e(P) 21 03.00 2.0
 KMSA 10.63 217 ePd 21 09.30 -2.1
 AYN 13.36 273 eP 21 46.80 -1.3
 QUE 13.69 82 eP 21 52.00 -0.6
 eS 26 00.00
 HRI 13.93 291 e(P) 21 52.00 -3.6X
 PRNI 14.19 279 e(P) 22 00.00 1.0
 ZNT 14.32 287 e(P) 22 01.00 0.3
 AKSR 17.22 256 iPc 22 42.00 4.2X
 HLW 17.37 277 eP 22 42.00 2.3
 e 28 04.00
 AGRW 17.39 256 iPc 22 45.50 5.5X
 AGAL 17.46 255 eP 22 45.00 4.1X

17d 02h

AZI 0.59 146 P 59 20.00 0.1
 ASS 0.64 338 P 59 20.10 -0.7
 RMP 0.70 198 P 59 21.70 -0.1
 SDI 0.99 141 P 59 27.20 0.5
 ARV 1.02 358 P 59 28.00 0.8
 S.D. = 0.8 on 6 of 6 obs.

* DEC 17, 1990 03h 07m 07.05±0.63s
 29.213 N ± 9.4km 51.313 E ± 11.0km
 DEPTH = 33.0km (normal)
 4.1mb (3 obs.)
 SOUTHERN IRAN (353)
 ML 4.1 (BMU).

SHI 1.14 68 eP 07 27.00 0.1
 BBU 3.08 194 (Pn) 07 54.40 -0.1
 CLL 36.05 319 e(P) 14 08.00 0.9
 HFS 39.92 332 eP 14 38.80 -0.6
 NB2 41.44 332 P 14 51.20 -0.7
 FRB 76.04 337 eP 18 53.00 0.6
 FBA 85.02 8 (P) 19 40.00 -0.1
 YKA 87.92 354 eP 19 54.30 0.0
 S.D. = 0.6 on 8 of 8 obs.

? DEC 17, 1990 04h 15m 14.41±3.21s
 24.134 S ± 26.2km 179.823 W ± 14.4km
 DEPTH = 628.0 ± 43.0 km
 5.2mb (6 obs.)
 SOUTH OF FIJI ISLANDS (171)

PUZ 13.99 186 eP 18 12.30 0.1
 TAZ 14.40 192 eP 18 19.10 3.0X
 NOZ 14.55 187 eP 18 19.50 1.9
 NGZ 15.49 193 eP 18 27.10 0.3
 PGZ 16.76 190 eP 18 39.30 0.7
 MNG 16.90 192 eP 18 38.60 -1.4
 KIW 17.26 194 eP 18 41.70 -1.6
 MTW 17.42 192 eP 18 43.70 -1.1
 CAW 17.46 193 eP 18 44.90 -0.2
 WDW 17.63 193 eP 18 45.80 -0.9
 BLW 17.63 192 eP 18 45.70 -1.0
 MRW 17.65 194 eP 18 45.10 -1.8
 MOW 17.72 192 P 18 49.20 1.6
 TCW 17.73 195 eP 18 46.90 -0.7
 THZ 18.60 197 eP 18 56.80 1.1
 KHZ 19.05 195 eP 18 59.50 -0.2
 LTZ 19.72 197 eP 19 05.40 -0.5
 MOZ 20.48 196 eP 19 14.20 1.4
 RMO 28.47 259 iPd 20 24.90 1.5

0.7s 39.00nm 5.1mb
 BWA 29.43 242 iPd 20 30.80 -0.8
 CMS 31.16 249 iPd 20 47.00 0.9
 PMG 34.73 289 eP 21 14.00 -1.9
 0.9s 67.23nm 5.2mb
 ASPA 42.16 261 iPd 22 16.30 0.4
 0.6s 47.50nm 5.1mb
 iScP 27 01.10
 iS 27 55.00

WRA 42.55 266 P 22 18.00 -1.0
 0.5s 61.20nm 5.3mb
 FORR 46.34 250 iPd 22 48.50 0.6
 0.5s 116.00nm 5.6mb
 KNA 48.82 270 eP 23 06.00 -0.7
 KLB 55.04 247 iPd 23 52.30 1.3
 BAL 56.09 248 eP 23 59.00 0.7
 MUN 56.29 247 eP 24 01.30 1.8
 CHG 89.91 291 eP 27 13.00 3.5X
 1.0s 12.75nm 4.8mb
 ALO 90.97 52 eP 27 15.80 1.5
 1.0s 1.75nm 4.0mb X

ANMO 90.97 52 (P) 27 16.00 1.7
 NB2 142.34 351 PKP 33 35.60 -2.2
 0.8s 2.10nm
 HFS 142.81 349 ePKP 33 36.60 -2.0
 0.4s 4.50nm
 KRA 149.89 334 ePKP 33 57.90 7.6X
 KSP 150.56 339 iPKP 34 00.30 9.0X
 CLL 151.12 343 iPKPd 34 01.20 9.1X
 0.7s 11.00nm

BRG 151.26 342 iPKP 34 02.00 9.7X
 0.6s 10.00nm
 S.D. = 1.3 on 32 of 38 obs.

* DEC 17, 1990 04h 50m 10.56±0.50s
 29.170 N ± 8.7km 51.237 E ± 9.4km
 DEPTH = 33.0km (normal)
 4.1mb (4 obs.)
 SOUTHERN IRAN (353)
 ML 4.2 (BMU).

SHI 1.22 67 eP 50 31.00 -0.5
 eS 50 46.00
 BBU 3.02 193 iPn 50 56.90 -0.3
 eSn 51 45.90
 HFS 39.93 332 eP 57 42.60 -0.4
 0.3s 1.50nm 4.2mb
 NB2 41.45 332 P 57 54.70 -0.8
 0.7s 1.40nm 3.8mb
 KIC 57.34 258 P 59 58.00 -0.1
 LIC 57.65 258 P 00 00.40 0.1
 FRB 76.05 337 eP 01 56.00 0.0
 FBA 85.07 8 P 02 45.00 1.1
 YKA 87.95 353 eP 02 58.50 0.5
 0.6s 0.60nm 4.1mb
 WRA 93.76 111 P 03 26.00 0.3
 0.6s 0.80nm 4.3mb
 S.D. = 0.6 on 10 of 10 obs.

? DEC 17, 1990 04h 51m 32.19±0.95s
 14.524 N ± 7.5km 61.067 W ± 8.4km
 DEPTH = 5.0km (geophysicist)
 WINDWARD ISLANDS (95)
 ML 1.5 (FDF).

BIM 0.01 212 iPd 51 33.13 -0.1
 S 51 33.90
 MVM 0.17 80 iPc 51 35.80 0.1
 S 51 38.60
 FDF 0.22 339 eP 51 36.86 0.1
 S 51 40.60
 CRM 0.27 33 iPc 51 37.51 -0.2
 S 51 41.80
 S.D. = 0.2 on 4 of 4 obs.

DEC 17, 1990 05h 24m 59.10±0.65s
 40.068 N ± 7.3km 87.044 W ± 5.7km
 DEPTH = 10.0km (geophysicist)
 ILLINOIS (467)

MD 3.2 (SLM). Felt (IV) at
 Crawfordsville, Lafayette and
 Waynetown, Indiana. Felt (III)
 at Boinbridge, Battle Ground,
 Darlington, Kentland, Lodogo,
 Logansport, Mulberry, New
 Market, New Ross, Radnor,
 Roachdale and Veedersburg,
 Indiana. Also felt (III) at
 Danville, Illinois.

BLO 0.98 156 iPc 25 18.20 0.5
 S 25 31.30
 IN1 1.00 61 iPc 25 18.20 0.2
 IN3 1.26 129 iPd 25 23.00 0.5
 WSIL 1.76 207 eP 25 30.76 1.0
 AN9 2.05 71 iPd 25 33.50 -0.5
 BPIL 2.22 213 eP 25 36.94 0.5
 S 26 03.74

AN1 2.27 79 eP 25 39.50 2.3
 DEK 2.27 326 P 26 07.00 29.7X
 NHIL 2.31 203 eP 25 38.03 0.2
 S 26 06.04
 AN12 2.34 68 iPc 25 37.50 -0.8
 AN3 2.52 78 eP 25 44.00 3.3X
 AN7 2.54 72 eP 25 40.00 -1.1
 CSIL 2.79 210 eP 25 44.53 -0.1
 GOIL 3.02 204 eP 25 48.18 0.3
 UTO 3.08 58 P 25 55.30 6.7X
 ELC 3.26 212 eP 25 50.80 -0.5
 FVM 3.36 233 eP 25 51.80 -0.9
 DON 3.67 219 eP 25 57.49 0.4
 CCM 3.84 240 eP 26 00.18 0.7
 S 26 58.04

MFTN 4.32 206 eP 26 05.10 -1.2
 RSCP 4.61 165 eP 26 10.20 -0.3
 GBTN 4.93 152 eP 26 13.60 -1.4
 TKL 5.11 149 eP 26 15.50 -2.0X

PWLA 5.14 189 eP 26 16.50 -1.5X
 NAV 5.61 117 e(P) 26 26.00 1.4X
 BLA 5.92 117 e(P) 26 29.00 0.1X
 S.D. = 0.9 on 19 of 26 obs.

* DEC 17, 1990 05h 55m 12.74±0.76s
 29.184 N ± 12.8km 51.282 E ± 12.8km
 DEPTH = 33.0km (normal)
 4.0mb (3 obs.)
 SOUTHERN IRAN (353)

SHI 1.18 67 eP 55 33.00 -0.1
 RYD 6.09 224 ePd 56 44.00 1.0
 OASM 7.53 248 eP 57 03.70 0.6
 KMSA 10.72 217 eP 57 45.50 -1.6
 HFS 39.93 332 eP 02 45.10 -0.1
 0.4s 2.20nm 4.3mb
 NB2 41.45 332 P 02 56.30 -1.4
 0.6s 1.10nm 3.8mb
 FRB 76.05 337 eP 06 58.00 -0.2
 FBA 85.05 8 (P) 07 47.00 1.0
 YKA 87.94 353 eP 08 00.90 0.8
 0.5s 0.40nm 4.0mb
 S.D. = 1.1 on 9 of 9 obs.

* DEC 17, 1990 05h 56m 30.02±3.08s
 32.827 S ± 15.9km 71.714 W ± 24.3km
 DEPTH = 33.0km (normal)
 NEAR COAST OF CENTRAL CHILE (135)

ROCH 0.61 104 iPd 56 41.40 -1.0
 iS 56 51.50
 LCCH 0.66 169 iPc 56 42.50 -0.3
 iS 56 53.10
 PEL 0.92 110 iPd 56 46.50 -0.2
 iS 57 01.00
 JACH 0.96 82 iPd 56 45.50 -1.7
 iS 56 59.00
 TACH 1.05 142 iPd 56 49.00 0.5
 iS 57 06.00
 SAN 1.08 126 iP 56 49.40 0.5
 LNV 1.15 167 iP 56 49.50 -0.4
 iS 57 08.50
 PCH 1.28 129 iP 56 52.70 0.9
 iS 57 13.50
 FCH 1.30 113 iPd 56 52.50 0.3
 iS 57 11.00
 ZON 2.87 64 eP 57 16.00 1.4
 S.D. = 1.0 on 10 of 10 obs.

? DEC 17, 1990 06h 31m 25.39±3.63s
 47.843 N ± 9.7km 1.366 W ± 39.8km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 1.9 (LDG).

LPF 0.29 49 Pg 31 31.00 -0.4
 Sg 31 35.40
 GRR 0.64 32 Pg 31 38.80 0.5
 FLN 1.09 32 Pn 31 45.20 -0.7
 Pg 31 46.20
 Sg 32 01.80
 LDF 1.12 47 Pg 31 47.00 0.6
 Sg 32 03.00
 MFF 1.49 146 Pg 31 52.20 0.0
 Sg 32 11.80
 S.D. = 0.8 on 5 of 5 obs.

DEC 17, 1990 06h 47m 30.74±0.65s
 40.354 N ± 5.9km 31.338 E ± 5.9km
 DEPTH = 17.2 ± 4.8 km
 3.9mb (3 obs.)
 TURKEY (366)
 MD 4.3 (ISK).

GPA 0.79 266 iPn 47 44.00 -1.6
 BBTK 1.21 115 iPd 47 53.00 0.2
 eS 49 17.00
 HRT 1.35 291 iPn 47 54.60 -0.3
 IZI 1.43 270 iPn 47 56.60 0.7
 GBZT 1.51 287 iPnd 47 57.00 0.0
 iSg 48 21.00
 YLV 1.51 279 iPn 47 57.60 0.4
 ALT 1.61 217 iPn 47 59.30 0.8
 ISK 1.87 293 iPn 48 02.60 0.3
 ITU 1.92 294 iPnd 48 04.50 1.6
 iSg 48 32.00

DST 2.21 251 iPn 48 06.20 -1.1
 KCT 2.28 268 ePn 48 08.10 -0.1
 CTT 2.35 291 iPn 48 09.10 0.0
 KHL 2.47 215 iPn 48 13.00 2.1
 BNT 2.61 271 ePn 48 12.60 -0.3
 EDC 2.65 271 ePn 48 13.00 -0.5
 BCK 2.95 192 ePn 48 18.00 0.3
 DMK 3.08 300 iPn 48 19.00 -0.5
 KVT 3.65 77 ePn 48 27.00 -0.7
 ELL 3.77 198 ePn 48 31.00 1.5
 EZN 3.88 264 iPn 48 30.10 -0.8
 ISR 5.94 325 ePc 49 01.00 1.0
 VRI 6.46 330 ePc 49 07.00 -0.4
 MLR 6.48 324 eP 49 08.50 0.7
 VAY 6.72 281 ePn 49 09.40 -1.6
 CLL 16.78 317 iP 51 28.30 2.0
 1.4s 11.00nm 3.8mb
 BCAO 37.58 201 ePc 54 43.10 -2.9
 0.5s 5.00nm 4.6mb
 YKA 73.90 344 eP 59 05.10 -1.0
 0.6s 0.40nm 3.6mb
 S.D. = 1.2 on 27 of 27 obs.

? DEC 17, 1990 07h 08m 02.20±1.34s
 6.424 S ±23.8km 142.356 E ±18.1km
 DEPTH = 33.0km (normal)
 4.5mb (1 obs.)
 PAPUA NEW GUINEA (202)

MNDI 1.32 78 eP 08 24.50 -0.2
 YYYY 3.59 87 eP 09 01.00 3.9X
 PMG 5.60 122 eP 09 20.00 -5.4X
 MTN 12.77 239 eP 11 00.00 -4.3X
 0.3s 76.00nm 6.3mb X
 eS 13 17.00
 CTA 14.10 165 eP 11 33.00 11.2X
 OIS 14.30 190 e(P) 11 24.00 -0.5
 i 12 41.00
 e 15 53.00
 KNA 16.23 234 eP 11 49.00 -0.4
 ASPA 18.97 204 iPd 12 24.40 0.8
 0.8s 22.80nm 4.5mb
 Z 23s 0.50um 3.4Msz
 eS 15 52.20
 RMO 20.87 164 eP 12 47.00 3.0X
 CMS 25.14 173 e(P) 13 43.00 17.1X
 BWA 28.42 169 eP 14 07.30 11.3X
 i 14 12.40
 CAN 29.40 169 eP 14 16.00 11.2X
 i 14 20.00
 SIV 147.84 134 PKP 27 45.00 1.6
 PPD 148.71 155 ePKP 27 43.40 -1.3
 S.D. = 1.3 on 6 of 14 obs.

* DEC 17, 1990 07h 10m 03.48±1.22s
 39.172 N ±10.9km 22.759 E ±7.4km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)
 MD 2.6 (THE).

AGG 0.37 246 iP 10 10.76 -0.3
 eS 10 16.80
 NEO 0.38 69 ePn 10 11.50 0.1
 eSn 10 18.40
 LIT 0.95 347 eP 10 20.60 -1.0
 eS 10 34.80
 PAIG 1.04 43 eP 10 23.20 0.2
 eS 10 36.96
 PLG 1.31 24 ePn 10 26.60 -1.1
 KZN 1.37 326 ePn 10 27.50 -1.1
 eSn 10 49.00
 SOH 1.71 15 eP 10 33.60 0.1
 GRG 1.80 351 eP 10 37.20 2.4
 FNA 1.93 327 eP 10 37.80 1.1
 KNT 1.99 3 eP 10 36.88 -0.7
 SRS 2.05 18 eP 10 38.56 0.2
 OHR 2.45 323 ePn 10 47.50 3.3X
 S.D. = 1.2 on 11 of 12 obs.

* DEC 17, 1990 07h 14m 57.91±0.58s
 1.232 N ±9.0km 123.013 E ±13.5km
 DEPTH = 33.0km (normal)
 5.0mb (5 obs.) 4.4Msz (3 obs.)
 MINAHASSA PENINSULA (265)

DAV 6.35 24 eP 16 31.00 -0.7
 KKM 8.30 305 eP 16 59.00 0.0

OCP 13.46 352 eP 18 13.00 4.0X
 BAG 15.27 351 eP 18 32.00 -1.1
 WRA 23.80 153 P 20 14.00 5.2X
 0.5s 11.40nm 4.7mb
 ASPA 26.92 158 eP 20 40.10 1.9
 0.9s 16.70nm 4.7mb
 eS 25 06.30
 OIS 27.07 144 eP 20 38.70 -0.9
 SSE 29.75 357 eP 21 05.60 2.0
 Z 20s 0.50um 4.1Msz
 N 10s 0.50um

KMI 30.78 322 eP 21 15.00 1.9
 BAL 32.23 190 eP 21 24.00 -1.4
 FORR 32.27 172 iPd 21 24.30 -1.5
 0.4s 24.00nm 5.4mb
 ADE 38.89 159 eP 22 22.00 -0.3
 0.7s 46.58nm 5.4mb
 LZH 38.97 335 eP 22 19.50 -3.6X
 2.5s 53.00nm 4.9mb
 Z 18s 0.98um 4.7Msz
 E 15s 0.40um

sP 22 34.00
 S 28 20.00
 BJI 39.13 352 eP 22 23.00 -1.0
 Z 20s 0.60um 4.4Msz
 eS 28 19.00
 BRS 40.37 137 iPc 22 33.70 -0.8
 BWA 42.73 148 eP 22 55.60 1.7
 CAN 43.73 149 eP 23 02.80 0.9
 KOD 46.14 283 eP 23 23.00 1.2
 HYB 46.56 293 eP 23 22.00 -2.8
 GBA 46.73 288 P 23 27.00 0.9
 ZOBO 161.46 144 ePKP 34 50.00 -7.8X
 S.D. = 1.5 on 17 of 21 obs.

& DEC 17, 1990 07h 22m 48.50s
 41.953 N 80.122 W
 DEPTH = 5.0km (geophysicist)
 OHIO (471)
 <CLE>. mblg 2.5 (OTT). Felt
 (III) in the Erie, Pennsylvania
 area.

CLE 1.15 247 P 23 08.90 -1.6
 WVLY 1.26 65 P 23 08.60 -3.9
 LDN 1.34 325 P 23 10.20 -3.5
 S 23 26.44
 DLA 1.40 311 P 23 09.48 -5.3
 S 23 25.20
 ELF 1.52 325 P 23 13.62 -2.8
 S 23 31.44
 WEO 2.43 31 P 23 27.20 -2.3
 6 obs. associated

? DEC 17, 1990 07h 25m 32.01±3.62s
 10.995 N ±27.6km 61.905 W ±32.6km
 DEPTH = 70.0km (geophysicist)
 TRINIDAD (98)
 MD 3.1 (TRN).

TCE 0.33 153 iP 25 43.48 -0.1
 eS 25 53.39
 TRN 0.60 125 iP 25 46.11 0.1
 iS 25 57.14
 TPP 0.81 146 eP 25 48.45 0.1
 eS 26 03.37
 TBH 0.97 122 eP 25 50.19 -0.2
 eS 26 06.27
 BOT 1.18 82 iP 25 53.08 0.0
 eS 26 11.14
 S.D. = 0.2 on 5 of 5 obs.

? DEC 17, 1990 07h 51m 50.15±6.10s
 40.336 N ±25.5km 31.087 E ±46.1km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.7 (ISK).

GPA 0.60 266 iPg 52 02.00 -0.2
 iSg 52 15.00
 HRT 1.18 295 ePn 52 12.10 -0.2
 YLV 1.33 281 ePn 52 15.10 0.4
 ALT 1.48 211 ePn 52 17.00 0.0
 S.D. = 0.5 on 4 of 4 obs.

* DEC 17, 1990 07h 53m 51.74±0.73s

23.535 N ±9.3km 121.940 E ±16.3km
 DEPTH = 10.0km (geophysicist)
 4.3mb (4 obs.)
 TAIWAN (244)

ANP 1.69 347 eP 54 21.20 -0.3
 SSE 7.56 355 Pc 55 44.00 -0.6
 0.7s 20.00nm 5.4mb X
 Z 12s 0.50um 4.8Msz
 N 10s 1.10um

Lg 57 56.00
 BJI 17.16 345 eP 57 55.50 2.4
 Z 12s 0.60um
 N 10s 0.54um
 LZH 20.03 313 eP 58 27.50 -0.4
 1.5s 28.00nm 4.4mb
 Z 12s 0.80um 4.3Msz
 E 10s 0.80um

eS 04 37.00
 CHG 21.94 262 eP 58 47.00 -0.4
 WRA 44.87 163 P 02 09.00 0.7
 0.5s 2.50nm 4.4mb
 ASPA 48.34 165 eP 02 35.70 0.1
 1.1s 3.20nm 4.3mb

FBA 69.07 27 P 05 00.30 0.8
 INK 73.57 22 eP 05 25.00 -1.4
 YKA 83.30 23 eP 06 18.00 -0.9
 0.9s 1.90nm 4.3mb
 S.D. = 1.2 on 10 of 10 obs.

? DEC 17, 1990 08h 59m 38.70±3.50s
 54.037 N ±24.4km 162.825 W ±19.5km
 DEPTH = 33.0km (normal)
 3.0mb (1 obs.)
 ALASKA PENINSULA (12)

DRRA 0.94 19 ePd 59 55.28 -0.3
 BALA 1.16 1 ePd 59 58.98 0.3
 eS 00 13.67
 DLG 1.25 27 ePc 59 59.28 -0.6
 eS 00 14.49
 PVV 1.47 24 ePd 00 03.47 0.4
 eS 00 21.11
 SQF 1.77 47 ePc 00 07.65 0.2
 eS 00 27.63

SASA 1.88 45 ePd 00 09.27 0.2
 eS 00 29.93
 NGI 1.89 57 ePc 00 09.35 0.1
 eS 00 30.81
 SGB 2.04 41 ePc 00 11.18 -0.2
 eS 00 33.13

CNBA 2.05 66 ePc 00 11.34 -0.1
 BKJ 2.21 58 ePd 00 13.94 0.2
 YKA 26.15 52 eP 05 11.00 -0.2
 0.5s 0.20nm 3.0mb
 FRB 45.28 39 eP 08 12.00 17.7X
 S.D. = 0.4 on 11 of 12 obs.

* DEC 17, 1990 09h 11m 28.89±0.56s
 45.964 N ±4.8km 2.658 E ±5.1km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 2.2 (LDG).

MAF 0.27 346 Pg 11 34.40 -0.1
 Sg 11 38.60
 TCF 0.45 316 Pg 11 37.90 -0.2
 Sg 11 44.80
 BGF 0.61 12 Pg 11 40.70 -0.5
 Sg 11 49.00
 LSF 0.84 290 Pg 11 45.10 0.1
 Sg 11 58.00

AVF 0.96 30 Pg 11 46.70 -0.4
 Sg 11 58.80
 Sn 12 01.10
 RJF 1.04 231 Pg 11 49.10 0.6
 Sg 12 03.00

SMF 1.07 50 Pg 11 49.00 0.0
 Sg 12 02.10
 CAF 1.12 202 Pg 11 49.20 -0.7
 Sg 12 03.60

SSF 1.24 28 Pg 11 52.00 0.0
 Sg 12 07.80
 LBF 1.37 41 Pg 11 54.10 0.1
 Sg 12 11.00

LOR 1.55 32 Pg 11 57.30 0.8
 Sg 12 16.60

ISK 0.48 99 iPg 36 24.00 0.3
DMK 0.85 324 iPg 36 32.00 1.1
eSg 36 44.00
KCT 0.89 184 iPg 36 32.00 0.4
YLV 0.92 128 iPg 36 33.00 0.9
HRT 0.99 108 iPn 36 33.50 0.2

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

DEC 17, 1990 15h 27m 46.30±0.30s
44.697 N ± 2.9km 6.550 E ± 3.9km
DEPTH = 10.0km (geophysicist)

FRANCE (538)
ML 2.8 (LDG). MD 2.4 (STR).

BNI 0.37 14 Pc 27 53.60 -0.3
eSg 27 59.30
LPG 0.81 10 Pg 28 01.90 -0.4
Sg 28 12.00
TOUF 0.85 144 Pg 28 01.98 -0.8
Sg 28 14.70
AUTN 0.94 138 Pg 28 03.99 -0.4
Sg 28 16.59
CALN 0.98 165 Pg 28 04.89 -0.1
AURF 0.98 145 Pg 28 04.58 -0.5
SAOF 1.01 134 Pg 28 05.32 -0.2
Sg 28 18.18
SBF 1.05 142 Pg 28 06.10 0.0
Sg 28 19.70
FRF 1.14 176 Pg 28 08.00 0.4
Sg 28 22.80
CDR 1.17 209 e(Pg) 28 08.00 -0.1
e 28 08.40
LRG 1.25 186 Pg 28 10.00 0.5
Sg 28 27.20
CKI 1.27 102 P 28 09.70 -0.1
eSg 28 28.40
LMR 1.36 181 Pg 28 11.40 0.1
Sg 28 29.40
VAI 1.96 53 P 28 22.00 2.2
PGF 2.79 140 Pn 28 32.10 0.2
Sh 29 05.10
LBF 2.91 323 Pn 28 33.00 -0.5
Sg 29 17.00
AVF 3.06 314 Pn 28 36.00 0.4
SSF 3.18 319 Pn 28 37.50 0.2
LOR 3.18 325 Pn 28 35.00 -2.4
Pg 28 46.70
Sg 29 25.80
MAF 3.19 300 Pn 28 38.40 0.9
BGF 3.20 307 Pn 28 37.70 0.2
Sg 29 27.70
CAF 3.20 276 Pn 28 38.00 0.4
HAU 3.31 358 Pn 28 39.30 0.1
TCF 3.44 299 Pn 28 41.20 0.1

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

% DEC 17, 1990 16h 47m 34.49±2.11s
61.675 N ± 13.8km 4.946 E ± 19.5km
DEPTH = 30.8 ± 8.2 km

SOUTHERN NORWAY (535)
MD 2.3 (BER).

FOO 0.09 149 ePg 47 39.81 -0.1
eSg 47 44.50
SUE 0.63 188 ePg 47 46.15 -0.8
eSg 47 56.88
HYA 0.79 130 eP 47 50.23 1.0
eS 48 04.12
ASK 1.20 174 eP 47 56.19 1.0
eS 48 12.33
MOL 1.52 53 eP 48 00.28 0.5
eS 48 20.37
ODD1 1.95 154 eP 48 06.01 -0.1
eS 48 30.91
KMY 2.48 176 eP 48 12.46 -1.1
eS 48 40.45
BLS2 2.58 157 eP 48 15.40 0.2
eS 48 45.04
NRA0 3.33 104 Pn 48 23.70 -1.9
Sg 49 21.60

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

DEC 17, 1990 17h 34m 48.81±0.82s
43.283 N ± 5.6km 19.854 E ± 6.6km
DEPTH = 5.0km (geophysicist)

YUGOSLAVIA (383)
ML 2.1 (TTG).

PLE 0.34 278 ePg 34 55.70 0.0
eSg 35 00.00
IVA 0.41 175 ePg 34 57.20 0.1
eSg 35 02.60
PVY 0.69 173 ePg 35 02.50 -0.2
eSg 35 12.60
TTG 0.96 207 ePg 35 07.00 -0.5
eSg 35 21.00
BRY 1.03 249 ePg 35 08.20 -0.7
eSg 35 23.30
BDV 1.25 217 ePg 35 13.00 0.5
eSg 35 31.00
HCY 1.30 231 ePg 35 14.00 0.7
eSg 35 33.00
BZS 2.65 28 ePc 35 33.00 0.0

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

& DEC 17, 1990 17h 44m 21.20s
34.210 N 117.020 W
DEPTH = 6.0km

SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 3.7 (PAS). 3.7
(ECX). Felt (V) at Green Valley
Lake; (IV) at Crest Park, Big
Bear Lake, Lake Arrowhead,
Skyforest and Victorville; (III)
at Blue Jay, Crestline,
Hesperia, Norton Air Force Base,
Redlands and San Bernardino.

PEC 0.34 200 iPd 44 27.60 -0.4
PCF 0.66 256 iPc 44 33.40 -1.0
PEM 0.71 267 iPc 44 34.28 -1.0
VPD 0.73 238 iPc 44 34.78 -1.0
TPC 0.81 97 iPc 44 36.50 -0.9
SBB 0.82 306 iPc 44 36.20 -1.3
MWC 0.86 271 iPc 44 37.00 -1.3
PLM 0.86 171 iPd 44 37.30 -1.0
PAS 0.96 267 iPc 44 38.54 -1.2
S 44 51.52
GSC 1.10 9 iPd 44 41.70 -0.6
FMA 1.16 245 eP 44 42.02 -1.3
SCY 1.19 265 iPc 44 42.38 -1.4
S 44 58.81
PVPS 1.22 250 ePc 44 43.01 -1.3
S 44 59.72
CPE 1.33 183 iPd 44 44.20 -1.9
CIS 1.40 236 eP 44 45.40 -1.9
BAR 1.55 169 iPd 44 48.20 -1.2
CLC 1.67 344 iPd 44 49.80 -1.4
IKP 1.73 154 eP 44 52.80 0.7
CBX 1.91 171 iPd 44 54.40 -0.4
S 45 19.00
ABL 1.93 290 eP 44 54.20 -0.8
GLA 2.16 122 eP 44 57.00 -1.3
ENX 2.34 173 ePn 45 00.40 -0.4
S 45 30.50
SYN 2.47 278 iPc 45 01.50 -1.2
PBX 2.47 174 ePn 45 02.50 -0.2
S 45 34.20
BCH 2.71 292 eP 45 05.50 -0.6
BLP 2.82 278 eP 45 06.00 -1.6
FRI 3.54 322 eP 45 15.70 -2.0
eS 46 08.00
PRI 3.55 304 eP 45 18.10 0.0
eS 46 06.90
TNP 3.87 358 eP 45 21.30 -1.4
BONR 3.88 345 eP 45 22.00 -0.9
PRS 4.14 302 eP 45 26.50 0.2
CMB 4.69 325 eP 45 31.00 -3.2
eS 46 44.50
32 obs. associated

% DEC 17, 1990 17h 53m 07.00±2.12s
39.867 N ± 5.9km 30.568 E ± 21.0km
DEPTH = 10.0km (geophysicist)

TURKEY (366)
MD 3.1 (ISK).

GPA 0.47 335 iPg 53 15.50 -1.0
ISg 53 20.50
ALT 0.89 204 ePg 53 23.20 -0.9
IZI 0.96 300 ePg 53 24.90 -0.5
YLV 1.15 308 iPg 53 28.00 -0.6
ISg 53 43.00
HRT 1.18 324 iPn 53 29.50 0.5
GBZT 1.26 317 ePg 53 30.00 -0.4

iSg 53 47.50
DST 1.52 261 ePn 53 33.80 -0.5
ISK 1.66 317 iPn 53 37.50 1.3
BBTK 1.69 90 eP 53 42.00 5.2X
IS 54 07.00
KCT 1.74 283 ePn 53 37.10 -0.3
KHL 1.74 208 ePn 53 38.20 0.6
BNT 2.09 284 ePn 53 44.00 1.5
EDC 2.13 284 ePn 53 46.00 2.9X

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

DEC 17, 1990 17h 58m 53.59±0.95s
42.876 N ± 9.2km 20.648 E ± 7.2km
DEPTH = 5.0km (geophysicist)

YUGOSLAVIA (383)
ML 2.4 (TTG).

IVA 0.55 270 iPgd 59 04.10 -0.5
ISg 59 14.00
PVY 0.57 241 ePg 59 04.50 -0.5
eSg 59 14.50
PLE 1.02 297 ePg 59 12.30 -1.2
eSg 59 27.00
SKO 1.08 147 iPg 59 12.50 -1.8
ISg 59 26.70
Lg 59 35.70
TTG 1.12 247 ePg 59 14.70 -0.3
eSg 59 32.70
BDV 1.47 247 ePg 59 22.00 1.2
eSg 59 44.00
BRY 1.55 272 ePn 59 22.20 0.2
eSn 59 44.00
HCY 1.64 256 ePn 59 25.20 2.0
eSn 59 50.50
OHR 1.77 176 ePn 59 23.80 -1.3
BEO 1.95 356 e(Pn) 59 32.50 4.9X
VAY 2.11 137 ePn 59 32.40 2.4
BZS 2.83 14 ePc 59 40.00 -0.2

S.D. = 1.5 on 11 of 12 obs.

* DEC 17, 1990 20h 50m 52.25±1.76s
36.913 N ± 11.6km 141.648 E ± 15.9km
DEPTH = 58.5 ± 15.8 km
3.9mb (1 obs.) 4.0Msz (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ 1.38 240 iPd 51 13.90 -1.7
S 51 31.80
YAMJ 1.80 315 P 51 21.40 0.1
S 51 44.70
NIJ 2.14 280 P 51 27.00 0.8
eS 51 53.90
OFUJ 2.16 0 P 51 25.20 -1.3
CHJJ 2.31 249 iPd 51 27.40 -1.1
S 51 53.70
MAT 2.79 263 iPd 51 35.90 0.5
eS 52 09.00
MTMJ 3.10 265 eP 51 39.90 0.0
IIDJ 3.34 246 P 51 44.40 1.1
AOMJ 3.78 345 eP 51 50.00 0.8
TSRJ 4.78 255 eP 52 05.60 2.2
ASAJ 7.24 6 P 52 37.20 -0.5
BJI 20.17 287 eP 55 22.00 -2.2
LZH 30.27 280 P 57 00.00 0.0
Z 18s 0.29um 4.0Msz
WRA 56.97 188 P 00 33.00 -1.0
0.7s 0.90nm 3.9mb
NB2 74.37 337 P 02 36.30 11.1X
0.8s 2.10nm
TNP 75.81 53 P 02 35.50 1.5
FRB 76.85 13 eP 02 40.00 1.0

S.D. = 1.4 on 16 of 17 obs.

? DEC 17, 1990 21h 03m 50.60±2.58s
44.296 N ± 20.8km 7.174 E ± 21.9km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 1.9 (GEN).

STV 0.12 116 P 03 53.66 0.0
S 03 55.25
ENR 0.19 111 P 03 54.87 0.0
S 03 57.30
PZZ 0.22 346 P 03 55.35 0.0
S 03 58.42
ROB 0.50 90 P 04 00.75 0.0

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

DEC 17, 1990 21h 34m 44.04± 0.31s
42.336 N ± 3.6km 19.414 E ± 2.7km
DEPTH = 18.1 ± 3.8 km
YUGOSLAVIA (383)
MD 3.2 (TTG), 3.2 (THE).

TTG 0.15 310 iPg 34 48.90 0.6
iSg 34 52.90
ULC 0.39 198 iPg 34 51.60 -0.6
iSg 34 58.10
BDV 0.44 263 iPg 34 53.60 0.6
iSg 35 01.60
PVY 0.49 58 iPg 34 52.20 -1.7
iSg 34 59.40
IVA 0.64 34 iPg 34 55.60 -0.9
iSg 35 05.60
HCY 0.69 280 iPg 34 57.80 0.6
iSg 35 09.90
BRY 0.86 312 iPg 35 00.40 0.2
iSg 35 15.00
SKO 1.55 103 iPn 35 11.00 0.2
0.3s 257.00nm
iSn 35 30.00
Lg 35 35.80

OHR 1.60 139 iPn 35 11.50 -0.2
1.0s 283.00nm
iSn 35 34.30
Lg 35 37.90
FNA 2.14 136 eP 35 21.20 1.8
BRT 2.21 229 P 35 20.00 -0.4
eSn 35 50.00
BAI 2.26 238 P 35 21.00 -0.1
LCI 2.28 209 Pc 35 19.30 -2.1
HVAR 2.34 292 iPhd 35 23.60 1.3
VAY 2.57 112 ePn 35 25.60 0.1
BEO 2.60 17 ePn 35 32.50 6.6X
e(Sg) 36 04.50

GRG 2.63 121 eP 35 26.68 0.3
KNT 2.86 113 eP 35 29.88 0.3
THE 3.16 121 eP 35 32.48 -1.5
ORI 3.19 226 P 35 33.90 -0.4
LIT 3.22 133 iP 35 35.52 0.7
SRS 3.36 110 eP 35 37.24 0.6
CSI 3.48 224 P 35 37.70 -0.8
eSn 36 12.60

ROI 3.50 219 P 35 38.50 -0.3
TDS 3.55 222 P 35 36.00 -3.4X
MMN 3.56 228 P 35 39.60 0.1
eSn 36 15.80

SGO 3.56 241 P 35 39.20 -0.4
eSn 36 21.30
BZS 3.64 25 ePc 35 41.50 0.7
DUI 3.75 261 P 35 43.70 1.3
AGG 3.98 145 eP 35 46.08 0.5
SDI 4.22 263 P 35 49.30 0.3
eSn 36 39.00

PTJ 4.35 326 eP 35 51.50 0.7
VBY 4.36 318 e(Pn) 35 54.40 3.4X
eSn 36 43.50

ARV 4.89 286 P 35 59.00 0.5
ASS 5.03 281 P 36 00.30 -0.2
eSn 37 00.00

ATN 5.15 217 P 35 58.00 -4.1X
VOY 5.42 315 ePn 36 06.50 0.4
eSn 37 09.70

MLR 5.67 54 eP 36 10.00 0.4
FVI 6.37 314 P 36 16.60 -2.7
CTI 6.70 306 P 36 23.00 -1.1
eSn 37 38.50

S.D. = 1.0 on 36 of 40 obs.

DEC 17, 1990 23h 34m 46.08± 0.62s
46.140 N ± 7.4km 7.646 E ± 5.7km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.4 (LDG).

DIX 0.17 250 iPc 34 50.30 0.1
MMK 0.24 112 iPd 34 51.50 0.2
EMS 0.50 262 iPd 34 55.90 -0.4
RSL 0.84 238 P 35 02.12 -0.4
TMA 0.85 92 ePd 35 02.30 -0.4
LPG 0.90 225 Pg 35 03.70 0.2
Sg 35 15.00
LLS 1.18 52 ePd 35 07.20 -1.1
ZLA 1.44 21 ePd 35 12.80 0.6

SAX 1.61 46 ePd 35 17.30 2.4
SLE 1.73 19 ePd 35 15.10 -1.3
FEL 1.75 8 ePg 35 15.08 -1.8
BSF 1.79 341 Pg 35 19.00 1.7
Sg 35 40.60
CDF 2.29 354 Pg 35 27.60 3.1X
Sg 35 56.50
SMF 2.68 282 Pg 35 35.50 5.4X
Sg 36 09.80

S.D. = 1.3 on 12 of 14 obs.

? DEC 18, 1990 01h 24m 45.74± 0.74s
19.697 N ± 13.4km 121.452 E ± 22.5km
DEPTH = 33.0km (normal)
4.7mb (7 obs.)

PHILIPPINE ISLANDS REGION (248)

BJI 20.78 349 eP 29 28.50 2.1
1.0s 18.00nm 4.4mb
CHG 21.27 271 eP 29 32.70 1.1
LZH 22.50 320 eP 29 41.00 -2.9
Z 16s 0.34um 3.9MszX
OIS 43.78 155 iPd 32 49.80 -0.4
ASPA 44.78 164 iPd 32 57.90 -0.4
0.3s 30.10nm 5.6mb
eS 39 38.80

WARB 45.88 173 iPc 33 07.60 0.6
0.3s 6.00nm 5.0mb

FORR 50.66 173 iPd 33 43.80 -0.1
0.4s 26.00nm 5.6mb

HFS 81.59 331 eP 37 01.50 0.1
0.9s 7.00nm 4.7mb

NB2 82.30 333 P 37 05.50 0.3
0.8s 1.80nm 4.2mb

YKA 86.99 23 eP 37 28.30 -0.4
0.6s 1.60nm 4.4mb

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

& DEC 18, 1990 01h 36m 27.37s
63.349 N 151.020 W
DEPTH = 32.3km

CENTRAL ALASKA (1)

<AGS-P>. ML 3.4 (PMR).

HUR 0.73 120 eP 36 40.66 -0.6
eS 36 51.32

RND 0.98 86 iP 36 44.78 -0.1
iS 36 58.68

CUT 1.01 160 iP 36 45.39 0.1
MCK 1.01 67 eP 36 45.08 -0.3

BWN 1.08 39 eP 36 46.44 0.2
eS 37 02.36

SKT 1.39 190 eP 36 50.63 -0.2
NEA 1.50 34 eP 36 52.04 -0.3

PWA 1.79 162 eP 36 57.58 1.2
GHO 1.86 148 eP 36 58.18 0.6

SUA 1.90 176 eP 36 58.57 0.4
CCB 1.92 46 eP 36 56.82 -1.6

PLRM 1.97 153 eP 36 59.41 0.3
PMR 1.97 153 eP 36 59.30 0.2

NCG 2.02 196 iP 36 59.29 -0.7
MDM 2.03 36 eP 36 58.22 -1.7

eS 37 25.26

HDA 2.09 58 eP 37 02.00 1.2
CGLM 2.10 193 eP 37 00.65 -0.4

FBA 2.10 41 eP 37 03.00 2.0
BGL 2.19 198 eP 37 01.90 -0.4

PMS 2.22 161 eP 37 03.65 1.0
SPU 2.23 193 eP 37 02.38 -0.4

CKL 2.25 197 eP 37 02.97 -0.2
KNK 2.28 147 eP 37 04.80 1.3

eS 37 32.73

TTA 2.31 262 eP 37 04.20 0.3
DDM 2.35 77 eP 37 05.25 0.7

PAX 2.55 96 eP 37 08.50 1.1
TOA 2.56 117 eP 37 09.30 1.8

NKA 2.62 182 eP 37 09.92 1.7
SDG 2.64 106 eP 37 10.04 1.5

RDT 2.86 194 eP 37 10.98 -0.8
SLKM 2.88 172 eP 37 12.51 0.5

NCT 2.94 199 eP 37 13.65 0.7
IMA 2.96 339 ePd 37 10.90 -2.4

RDN 2.96 197 eP 37 13.70 0.4
REF 2.98 196 eP 37 14.58 1.0

RS2 3.01 197 eP 37 16.19 2.1
RSO 3.01 197 eP 37 15.84 1.7
KLU 3.02 126 eP 37 15.78 1.7
RED 3.06 197 eP 37 16.42 1.8
GLI 3.09 142 eP 37 16.27 1.3
VZW 3.11 136 eP 37 16.35 1.0
SVW 3.11 226 eP 37 19.10 3.7
SEW 3.34 166 eP 37 21.19 2.6
KNIM 3.39 151 eP 37 19.17 -0.1
INE 3.44 197 eP 37 21.77 1.6
BRLK 3.60 179 eP 37 24.73 2.5
CNPM 3.84 182 eP 37 27.69 2.1
GLB 3.86 116 eP 37 27.83 1.8
PDB 3.88 204 eP 37 26.19 0.0
BALM 4.68 116 eP 37 38.08 0.4

50 obs. associated

* DEC 18, 1990 01h 47m 56.01± 0.57s
19.680 N ± 9.7km 121.576 E ± 16.6km
DEPTH = 33.0km (normal)
4.7mb (8 obs.)

PHILIPPINE ISLANDS REGION (248)

BJI 20.82 348 eP 52 37.50 0.4
1.0s 12.00nm 4.2mb

CHG 21.38 271 iPc 52 43.00 -0.1
1.0s 25.00nm 4.6mb

LZH 22.58 320 eP 52 50.00 -5.1X
1.5s 28.00nm 4.5mb

Z 15s 0.38um 4.0MszX
ASPA 44.73 164 iPd 56 08.00 -0.1
0.4s 28.00nm 5.5mb

eS 02 46.20

WARB 45.85 174 iPc 56 17.50 0.5
0.4s 10.00nm 5.1mb

FORR 50.63 173 iPd 56 53.80 -0.2
0.4s 19.00nm 5.4mb

HFS 81.66 331 eP 00 12.50 0.4
0.4s 0.70nm 4.0mb

KSP 84.18 322 eP 00 24.60 -0.7
e 00 31.70

YKA 86.96 23 eP 00 38.50 -0.3
0.6s 1.90nm 4.5mb

S.D. = 0.5 on 8 of 9 obs.

DEC 18, 1990 02h 33m 12.37± 0.36s
42.553 S ± 9.1km 16.140 W ± 7.5km
DEPTH = 10.0km (geophysicist)
5.4mb (25 obs.) 5.4Msz (6 obs.)

SOUTH ATLANTIC RIDGE (410)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 175, 31C

Centroid Location:

Origin Time 02:33:18.6 0.3

Lat 42.85S 0.07 Lon 16.21W 0.06

Dep 15.0 FIX Half-duration 1.8

Moment Tensor; Scale 10¹⁷ Nm

Mrr=-0.86 0.06 Mtt=-0.29 0.08

Mff=-1.15 0.05 Mrt=-0.08 0.13

Mrrf=-0.48 0.21 Mtf=-0.14 0.05

Principal Axes:

T Val= 1.27 Plg=13 Azm= 85

N -0.28 9 177

P -0.99 74 303

Best Double Couple: Mo=1.1*10¹⁷

NP1: Strike=163 Dip=33 Slip=107

NP2: 3 58 -79

BMA 30.58 302 e(P) 39 34.00 5.5X
JFO 30.78 304 e(P) 39 31.00 0.7

FRS 35.49 83 iPc 40 28.90 17.9X
1.2s 140.63nm

PPD 35.74 294 eP 40 14.20 1.0
e 40 24.40

PRY 38.63 81 iPd 40 40.00 2.3
1.0s 45.00nm 5.1mb

SOB1 39.68 320 eP 40 46.70 0.3
SLR 39.92 80 iPc 40 45.50 -2.9

1.1s 94.94nm 5.4mb
Z 18s 8.59um 5.6Msz

PEL 43.43 264 iPc 41 17.70 0.7
1.3s 115.38nm 5.5mb

BUL 43.64 73 iPc 41 09.90 -9.0X
KRI 46.56 71 iPc 41 35.90 -6.3X

SIV 46.56 291 P 41 41.00 -1.1
MAW 47.44 149 eP 41 47.00 -1.4

SPA	47.64 180 iPd	41 51.20 0.9	TIBET-INDIA BORDER REGION	(305)	LPO	61.24 307 eP	51 06.30 0.5	
	1.2s 70.42nm	5.6mb			FLN	61.31 312 eP	51 05.60 -0.6	
CCH	49.19 285 P	42 02.90 -0.1	NDI	2.34 226 ePn	41 33.80 6.0X	EKA	61.39 320 Pc	51 04.80 -1.9
LIC	49.59 15 P	42 04.70 -0.9		iSg	42 03.00		1.2s 10.30nm	4.8mb
	1.0s 31.00nm	5.3mb	GKN	5.36 114 P	42 11.80 0.9	LFF	61.48 308 eP	51 08.00 0.6
Z	20s 1.02um	4.8Msz	DMN	5.91 116 P	42 19.60 0.9		1.0s 14.00nm	5.1mb
KIC	49.77 15 P	42 05.98 -1.1	KKN	5.96 114 P	42 19.80 0.4	MFF	61.64 310 eP	51 08.00 -0.5
	1.2s 57.00nm	5.4mb	PKI	6.16 115 P	42 22.20 -0.2	GRR	61.65 312 eP	51 08.00 -0.5
TIC	50.00 14 P	42 07.54 -1.3	GUN	6.39 111 P	42 25.40 -0.2	BCAO	62.48 258 iPd	51 15.90 1.2
	0.7s 10.50nm	4.9mb	LSA	10.45 90 P	43 21.00 -1.1		0.5s 5.00nm	4.9mb
KUK	50.59 20 eP	42 13.00 -0.3		S	45 16.00	KRI	66.85 232 iPDIF	51 39.00 -4.1X
CNCB	50.88 284 P	42 16.00 -0.2	QUE	10.52 272 eP	43 26.50 3.6X		i	57 47.00
LPB	51.15 284 P	42 17.00 -1.1		eS	45 27.50		i	58 39.10
Z	20s 7.09um	5.7Msz	POO	12.69 203 eP	43 49.20 -2.9	BUL	69.84 231 iPDIF	51 55.50 -6.1X
	LR	57 28.00		iS	46 06.00		iPp	52 00.00 14km
ZOBO	51.34 284 P	42 19.00 -0.7	BOM	12.75 208 eP	43 53.00 0.2		iPP	57 22.00
	1.3s 7.89nm	4.5mb		eS	46 12.00	WRA	72.93 126 P	52 20.00 0.0
	S	49 40.00	HYB	12.87 182 eP	43 53.00 -1.5		1.1s 13.40nm	4.9mb
	LR	57 00.00		eS	46 09.00	MBC	73.04 5 eP	52 19.50 -0.3
ARE	53.64 281 eP	42 36.00 -0.6	WMQ	15.09 25 P	44 28.60 5.0X	ASPA	75.14 129 eP	52 26.20 -6.6X
BCAO	56.35 43 iPc	42 55.30 -0.7	Z	12s 0.60um			0.9s 3.60nm	4.4mb
	1.0s 75.00nm	5.7mb		PP	44 37.50		i	52 32.60
	id	42 57.20	GBA	16.72 186 P	44 43.30 -1.4	IMA	75.78 20 eP	52 35.50 -0.5
	ic	43 54.60		S	47 37.00		0.9s 6.30nm	4.7mb
SBA	59.86 181 P	43 21.20 1.4	GTA	19.21 56 Pd	45 14.40 -1.0	TTA	77.25 23 eP	53 01.00 16.9X
TOL	82.78 9 eP	45 39.00 1.4		0.8s 10.00nm	4.1mb	FBA	78.31 19 P	52 48.00 -1.8
EPF	86.48 12 eP	45 56.50 0.4		SS	49 12.80		pP	52 55.20 23km
	1.4s 32.65nm	5.3mb	KOD	20.06 185 eP	45 28.10 2.9X	INK	78.71 12 eP	52 44.00 -7.9X
LPO	88.22 12 eP	46 04.90 0.5	LZH	21.44 68 Pc	45 38.50 -0.7	PMR	80.44 21 eP	52 52.90 -8.5X
	1.4s 43.55nm	5.6mb		1.5s 57.00nm	4.8mb		0.7s 11.50nm	5.0mb
LFF	88.40 12 eP	46 05.70 0.4	KMI	21.53 98 Pd	45 39.50 -0.7	KIC	81.53 272 P	53 09.74 1.8
	1.4s 61.00nm	5.7mb		1.5s 60.00nm	4.8mb	TIC	81.63 273 P	53 10.08 1.6
CAF	88.60 13 eP	46 06.70 0.4	BDT	22.34 121 eP	45 49.00 1.1	LIC	81.85 272 P	53 11.32 1.7
	1.3s 34.30nm	5.5mb	NST	24.17 122 eP	46 08.00 2.1	FRB	82.81 346 eP	53 14.00 0.3
RJF	88.88 12 eP	46 08.00 0.4	GYA	24.51 92 P	46 09.60 0.2	YKA	86.84 6 eP	53 32.50 -1.4
	1.2s 47.60nm	5.6mb	XAN	25.45 74 iPd	46 17.90 -0.2		0.6s 0.70nm	4.1mb
Z	21s 0.63um	5.0Msz	BTO	27.05 59 eP	46 33.00 0.1	RMQ	87.33 123 eP	53 39.00 2.2
LSF	89.80 12 eP	46 12.30 0.4	TIY	28.47 66 eP	46 50.00 4.2X		S.D. = 1.1 on 61 of 73 obs.	
	1.3s 68.60nm	5.7mb	Z	20s 0.63um	4.2Msz			
MFF								

18d 06h

OLY 21.32 358 P 50 41.00
TUL 22.24 348 e(P) 54 07.80 -1.0
0.8s 2.50nm 3.8mb
SCH 44.60 19 eP 57 22.00 0.6
YKA 51.28 346 eP 58 13.50 0.7
0.4s 0.70nm 3.5mb
FRB 51.87 12 eP 58 17.00 -0.1
PPD 52.54 132 eP 58 22.50 -0.1
LIC 84.05 85 P 01 37.10 0.0
KIC 84.30 85 P 01 38.10 -0.2
S.D. = 0.7 on 8 of 9 obs.

? DEC 18, 1990 07h 26m 49.60±1.21s
34.186 S ±33.8km 179.998 E ±25.8km
DEPTH = 33.0km (normal)
4.7mb (2 obs.)

SOUTH OF KERMADEC ISLANDS (179)

DZM 16.97 312 iPd 30 45.80 -0.3
ASPA 41.38 272 eP 34 33.20 -1.2
0.7s 7.60nm 4.5mb

WRA 42.72 277 P 34 47.00 1.6
0.3s 7.80nm 4.9mb
BCAO 145.75 214 iPKPd 46 26.50 -0.5
0.6s 6.00nm

NUR 149.18 336 ePKP 46 26.00 -5.0X
NB2 152.17 348 PKP 46 36.20 0.7
1.0s 3.70nm

HFS 152.54 345 ePKP 46 35.70 -0.3
0.4s 1.00nm
MOX 161.49 336 ePKP 47 06.00 18.7X
S.D. = 1.3 on 6 of 8 obs.

& DEC 18, 1990 09h 14m 59.72s
62.940 N 151.323 W
DEPTH = 101.9km
CENTRAL ALASKA (1)

<AGS-P>

CUT 0.72 137 iP 15 17.76 0.0
HUR 0.77 86 eP 15 18.08 -0.2
0.4s eS 15 32.55

SKT 0.97 186 iP 15 19.88 -0.4
RND 1.21 66 iP 15 22.66 -0.4
0.4s iS 15 40.20

MCK 1.34 52 eP 15 24.30 -0.2
PWA 1.46 152 eP 15 25.58 -0.3
0.4s eS 15 45.63

BWN 1.49 33 eP 15 26.59 0.3
SUA 1.51 169 eP 15 26.36 -0.3
NCG 1.59 195 iP 15 26.92 -0.8
0.4s iS 15 48.61

GHO 1.62 135 iP 15 27.72 -0.3
0.4s iS 15 50.00

CGLM 1.67 191 eP 15 27.75 -0.9
0.4s eS 15 49.78

PLRM 1.70 142 eP 15 27.89 -1.0
BGL 1.76 197 eP 15 29.50 -0.3
SPU 1.80 191 eP 15 29.19 -1.1
0.4s eS 15 52.69

CKL 1.81 196 eP 15 29.80 -0.8
PMS 1.89 153 eP 15 30.46 -1.0
KNK 2.04 137 eP 15 32.02 -1.4

NKA 2.21 179 eP 15 36.20 0.7
CCB 2.32 41 iP 15 35.99 -1.1
RDT 2.43 193 eP 15 37.72 -0.9

SLKM 2.50 167 eP 15 37.93 -1.6
NCT 2.51 198 eP 15 38.73 -1.0
RDN 2.53 196 eP 15 38.83 -1.2

TOA 2.53 107 eP 15 38.98 -1.0
PAX 2.68 87 eP 15 41.04 -0.9
SDG 2.69 96 eP 15 41.21 -0.9

GLI 2.88 134 eP 15 42.46 -2.1
TZL 2.88 106 eP 15 43.65 -1.0
NNL 2.91 180 eP 15 44.36 -0.7

KLU 2.92 117 eP 15 42.49 -2.7
VZW 2.94 128 eP 15 43.00 -2.5
VLZ 2.97 125 eP 15 42.98 -2.8

SEW 2.98 162 iP 15 44.40 -1.6
INE 3.01 197 eP 15 45.13 -1.4
KNIM 3.11 145 eP 15 44.54 -3.3

CNPM 3.43 179 eP 15 50.40 -1.7
GLB 3.83 110 eP 15 55.18 -2.5
CDD 4.18 197 eP 16 01.50 -0.9

SYI 4.38 187 eP 16 03.41 -1.7
TGL 4.58 115 eP 16 05.17 -2.9
BALM 4.64 110 eP 16 05.69 -3.2
41 obs. associated

? DEC 18, 1990 09h 32m 21.63±2.69s
53.377 N ±31.4km 169.298 E ±24.1km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)

KOMANDORSKY ISLANDS REGION (4)

SMY 2.97 101 e(P) 33 07.50 0.0
TTA 20.39 48 eP 36 58.00 0.0
IMA 22.16 41 eP 37 16.00 0.1

FBA 24.31 45 eP 37 37.40 0.7
YKA 39.11 46 eP 39 47.20 0.2
0.6s 1.50nm 3.9mb

FRB 54.88 27 eP 41 49.00 -1.5
NB2 64.60 348 P 42 58.10 0.6
1.0s 3.70nm 4.4mb
S.D. = 0.9 on 7 of 7 obs.

* DEC 18, 1990 10h 28m 25.98±1.13s
34.299 N ±10.9km 24.679 E ±9.2km
DEPTH = 33.0km (normal)
3.8mb (2 obs.)

CRETE (370)

VAM 1.17 341 iPbc 28 45.50 -0.6
0.4s eSb 29 02.60

NPS 1.23 38 ePb 28 46.60 -0.4
VLI 2.80 330 ePn 29 09.70 0.3
APE 2.85 14 ePn 29 11.80 1.7

ARG 3.41 55 ePn 29 18.50 0.4
SMG 3.83 27 ePg 29 34.00 10.1X
KSL 4.41 64 eP 29 32.00 -0.3

IZM 4.59 26 ePn 29 34.00 -0.9
ELL 4.91 59 ePn 29 40.00 0.4
CSS 7.16 82 eP 30 11.00 -0.1

JVI 9.26 102 eP 30 39.00 -1.3
PRNI 9.58 111 eP 30 45.00 0.4
MBH 9.76 115 eP 30 48.50 1.3

KHC 16.95 334 eP 32 23.90 1.8
HFS 26.83 348 eP 34 02.80 -2.1
0.4s 1.00nm 3.8mb

YKA 78.14 342 eP 40 22.50 -0.5
0.4s 0.40nm 3.8mb
S.D. = 1.1 on 15 of 16 obs.

* DEC 18, 1990 10h 37m 32.56±0.81s
8.353 N ±12.2km 122.405 E ±13.4km
DEPTH = 33.0km (normal)
4.9mb (5 obs.)

MINDANAO, PHILIPPINE ISLANDS (259)

TSM 5.95 227 eP 39 01.00 0.3
KKM 6.56 250 ePd 39 07.10 -2.2
IPM 21.57 261 ePd 42 22.50 1.0

SSE 22.66 357 Pd 42 33.00 0.8
1.0s 37.00nm 4.8mb
BJI 32.04 351 eP 43 58.00 -0.3

1.5s 57.00nm 5.2mb
ASPA 33.75 161 eP 44 14.60 1.2
0.7s 6.80nm 4.7mb

GUN 39.56 304 P 45 03.60 0.6
KKN 40.01 304 P 45 07.60 1.1
GKN 40.62 304 P 45 12.00 0.6

FBA 82.42 25 P 49 53.80 1.2
INK 87.45 21 eP 50 16.50 -1.2
MBC 88.39 12 eP 50 21.50 -0.6

1.0s 14.00nm 5.2mb
YKA 97.03 23 eP 50 59.70 -2.5
1.0s 2.70nm 4.7mb
S.D. = 1.4 on 13 of 13 obs.

% DEC 18, 1990 11h 43m 06.51±0.65s
40.658 N ±5.1km 22.828 E ±5.7km
DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 1.6 (THE).

THE 0.11 104 eP 43 09.62 0.3
0.4s eS 43 11.30

SOH 0.43 68 eP 43 15.62 0.3

GRG 0.44 313 eP 43 15.46 0.0

0.4s eS 43 23.46

KNT 0.51 6 eP 43 17.02 0.2

LIT 0.61 205 eP 43 18.90 0.0
0.4s iS 43 27.94
SRS 0.74 51 eP 43 20.34 -0.7
PAIG 0.98 138 eP 43 24.90 -0.2
S.D. = 0.4 on 7 of 7 obs.

? DEC 18, 1990 12h 07m 36.87±4.04s
30.751 S ±26.2km 71.850 W ±29.4km
DEPTH = 33.0km (normal)

NEAR COAST OF CENTRAL CHILE (135)

RTRS 2.14 75 iPc 08 11.10 0.1
IHA 2.27 176 eP 08 12.80 -0.1
0.4s eS 08 43.00

ZON 2.83 107 eP 08 21.00 0.2
0.4s eS 08 58.00
RTLL 2.96 102 ePd 08 21.80 -0.9
0.4s eS 09 02.00

RTCV 3.04 112 e(P) 08 24.50 0.6
CFA 3.21 106 ePd 08 26.00 -0.2
0.4s eS 09 04.90
S.D. = 0.6 on 6 of 6 obs.

* DEC 18, 1990 12h 47m 56.38±1.48s
49.669 N ±19.3km 18.479 E ±8.4km
DEPTH = 10.0km (geophysicist)

CZECHOSLOVAKIA (547)

SPC 1.25 112 iPnd 48 19.20 -0.5
0.4s 0.13nm iSg 48 39.10

ZST 1.73 212 i(Pn) 48 27.40 0.7
0.4s e 48 52.40
0.4s e 49 05.50

VKA 2.00 226 eP 48 30.00 -0.6
0.4s i(Sg) 49 07.50

PRU 2.57 279 ePn 48 40.00 1.3
0.4s Pg 48 43.00
0.4s eSg 49 19.00

KHC 3.25 262 Pn 48 46.90 -1.5
0.4s Pg 48 54.50
0.4s Sg 49 38.50

KCT 11.72 140 ePn 50 47.10 0.5
S.D. = 1.3 on 6 of 6 obs.

% DEC 18, 1990 12h 55m 02.18±1.02s
37.671 N ±8.3km 14.736 E ±8.9km
DEPTH = 10.0km (geophysicist)

SICILY (398)

MNO 0.26 353 Pc 55 07.20 -0.6
0.4s eSg 55 10.90

MEU 0.59 165 P 55 13.70 -0.5
0.4s eSg 55 23.10
0.4s eSg 55 15.80 0.6

GIB 0.65 300 P 55 23.40
ATN 0.75 49 P 55 16.00 -0.9
0.4s eSg 55 27.70

SOI 1.12 69 P 55 24.50 1.4
S.D. = 1.4 on 5 of 5 obs.

% DEC 18, 1990 13h 17m 58.90±1.10s
37.345 N ±8.6km 15.165 E ±9.0km
DEPTH = 10.0km (geophysicist)

SICILY (398)

MEU 0.31 218 P 18 05.40 0.1
0.4s eSg 18 10.80

MNO 0.69 328 P 18 13.70 0.9
0.4s eSg 18 22.40
ATN 0.85 16 P 18 15.50 0.3

SOI 1.01 44 P 18 17.70 -0.3
GIB 1.11 306 P 18 18.50 -1.3
FAI 1.19 267 P 18 21.40 0.3
0.4s eSg 18 38.00
S.D. = 1.0 on 6 of 6 obs.

? DEC 18, 1990 13h 23m 32.53±7.25s
47.087 N ±21.8km 13.567 E ±52.2km
DEPTH = 10.0km (geophysicist)

AUSTRIA (546)

ML 2.3 (VIE).

KBA 0.15 267 iPg 23 35.10 -1.1
0.4s iSg 23 39.40

FVI 0.73 228 P 23 46.50 -0.4

18d 21h

YKA 83.11 23 eP 50 01.40 1.1
0.8s 1.30nm 4.2mb
S.D. = 1.5 on 6 of 8 obs.

DEC 18, 1990 21h 38m 13.17± 0.49s
29.434 S ± 4.9km 68.242 W ± 6.9km
DEPTH = 105.9 ± 5.8 km
4.6mb (10 obs.)

SAN JUAN PROVINCE, ARGENTINA (137)

RTLL 1.90 186 iPc 38 46.90 1.7
ZON 2.14 190 iPc 38 48.50 0.2
CFA 2.17 180 iPd 38 50.00 1.3
eS 39 16.00
CYA 2.36 66 iPc 38 52.00 0.7
RTCV 2.43 186 iPd 38 53.70 1.5
MDZ 3.48 188 iP 39 06.70 0.3
iS 39 38.00
JACH 3.81 211 iPc 39 12.00 1.0
iS 39 46.50
PEL 4.25 209 iPc 39 16.60 -0.3
iS 39 53.00
ROCH 4.25 213 iPc 39 16.50 -0.6
FCH 4.26 204 iPc 39 18.20 0.9
PCH 4.60 204 iPc 39 22.00 0.2
IHA 4.61 218 eP 39 20.50 -1.3
e(S) 40 05.00
TACH 4.79 208 iPc 39 23.20 -1.2
LCCH 4.93 214 iPc 39 24.50 -1.7
i 40 23.50
LNV 5.25 210 iPc 39 28.00 -2.7
iS 40 14.00
i 40 30.00
ANT 6.03 341 eP 39 40.00 -1.3
iS 40 46.70
CCH 12.15 10 P 41 09.00 4.8X
CNCB 12.57 1 P 41 12.00 2.1
LPB 12.84 1 P 41 12.00 -1.4
ZOB0 13.10 0 P 41 16.70 -0.2
SIV 14.92 28 P 41 36.80 -3.0X
PPD 16.93 68 eP 42 03.70 -1.2
e 42 11.20
NNA 19.12 333 eP 42 30.50 -0.1
0.8s 10.45nm 4.2mb
BMA 22.63 78 eP 43 06.00 0.1
BAO 23.15 58 ePc 43 09.50 -1.6
RSCP 66.71 345 P 48 53.70 -1.1
BLA 67.27 349 P 48 57.90 -0.4
OLY 68.20 340 P 49 02.00 -1.2
FVM 70.21 342 P 49 15.50 -0.8
LIC 70.23 71 P 49 16.14 -0.8
TIC 70.47 70 P 49 17.72 -0.7
KIC 70.55 71 P 49 18.20 -0.7
ALO 73.48 328 eP 49 36.80 0.7
0.9s 5.67nm 4.4mb
ANMO 73.49 328 P 49 37.00 1.0
0.7s 5.48nm 4.5mb
RSNY 73.85 355 P 49 38.00 0.3
0.6s 10.87nm 4.8mb
CBM 76.01 0 P 49 49.70 -0.2
GLD 76.95 332 P 49 57.20 1.6
GOL 76.97 331 P 49 56.20 0.4
0.7s 6.43nm 4.6mb
PEC 78.14 320 P 50 03.00 0.8
RSSD 80.19 335 P 50 13.80 0.6
0.8s 10.42nm 4.7mb
BCH 80.73 319 P 50 18.00 1.8
BW06 81.28 331 P 50 18.80 -0.2
0.8s 11.90nm 4.8mb
TNP 81.28 323 P 50 19.80 0.7
0.7s 6.11nm 4.5mb
SCH 83.91 1 eP 50 32.00 0.1
ORV 84.64 322 P 50 37.50 1.6
LRM 84.96 331 eP 50 39.30 1.6
BCAO 89.35 85 iPc 51 01.10 1.7
0.7s 21.00nm 5.4mb
ic 51 31.50
YKA 98.83 340 eP 51 40.40 -1.1
0.6s 1.50nm 4.8mb
WRA 126.30 207 PKP 57 04.00 -1.5
0.4s 17.70nm
GBA 144.56 109 PKP 57 37.70 -1.6
HYB 147.38 104 ePKPd 57 45.50 1.5
1.0s 40.00nm
e 58 16.00
GKN 156.19 87 PKP 57 57.00 0.3
KKN 156.71 88 PKP 57 57.60 0.1

PKI 156.78 88 PKP 57 57.80 0.1
GUN 157.25 87 PKP 57 57.20 -1.1
S.D. = 1.2 on 53 of 55 obs.

& DEC 18, 1990 22h 04m 26.55s
61.557 N 147.832 W
DEPTH = 35.7km

SOUTHERN ALASKA (2)
<AGS-P>. ML 3.5 (PMR).

KNK 0.33 244 iP 04 34.56 -0.4
iS 04 40.29
SML 0.35 317 iP 04 34.38 -0.8
eS 04 41.35
GHO 0.56 293 iP 04 37.18 -1.0
eS 04 45.65
PLRM 0.62 274 iP 04 37.94 -0.9
iS 04 47.61
PMR 0.62 274 iPc 04 38.00 -0.9
GLI 0.77 152 iP 04 40.01 -0.9
VZW 0.79 128 iP 04 40.16 -1.2
iS 04 51.56
VLZ 0.84 120 iP 04 40.45 -1.5
eS 04 52.86
PMS 0.89 250 iP 04 42.31 -0.4
TOA 0.96 54 iPc 04 42.80 -1.0
PWA 0.98 276 iP 04 43.20 -0.8
KNIM 1.21 178 iP 04 46.55 -0.8
TZL 1.24 66 iP 04 47.28 -0.5
HIN 1.33 150 iP 04 48.73 -0.3
eS 05 06.51
SUA 1.40 267 iP 04 49.77 -0.4
eS 05 08.47
CUT 1.43 308 iP 04 49.89 -0.6
CVA 1.43 134 iP 04 50.45 -0.1
SDG 1.45 47 iP 04 50.09 -0.8
SLKM 1.57 229 eP 04 52.10 -0.4
MTU 1.58 177 eP 04 51.63 -1.0
HUR 1.66 330 eP 04 53.18 -0.6
eS 05 14.01
SEW 1.66 209 eP 04 53.38 -0.4
SGAM 1.66 129 eP 04 52.37 -1.5
PAX 1.80 37 eP 04 55.15 -0.7
eS 05 16.80
SKT 1.81 285 iP 04 55.34 -0.6
RND 1.92 346 eP 04 56.87 -0.6
GLB 1.93 92 iP 04 56.35 -1.4
CGLM 2.02 265 iP 04 58.38 -0.7
SPU 2.07 261 iP 04 58.76 -0.9
eS 05 24.29
NCG 2.08 268 iP 04 59.23 -0.7
CRP 2.10 264 eP 05 00.49 0.3
THY 2.10 26 eP 05 01.84 1.7
CKL 2.20 263 eP 05 00.49 -1.0
BGL 2.21 264 eP 05 00.74 -1.0
TRF 2.22 330 eP 05 01.12 -0.7
MCK 2.24 347 eP 05 01.75 -0.3
NNL 2.28 230 eP 05 02.73 0.2
KAIM 2.34 133 eP 05 01.78 -1.7
BRLK 2.34 221 eP 05 03.24 -0.3
DDM 2.42 21 eP 05 05.57 1.0
RDT 2.43 248 eP 05 03.55 -1.2
TGL 2.55 106 eP 05 04.55 -2.1
REF 2.60 248 eP 05 05.73 -1.6
RDN 2.62 249 eP 05 05.80 -1.7
RSO 2.64 248 eP 05 06.51 -1.4
RS2 2.64 248 eP 05 06.70 -1.2
CNPM 2.64 221 eP 05 06.57 -1.2
RED 2.66 247 eP 05 07.19 -1.0
NCT 2.67 250 eP 05 06.81 -1.5
8ALM 2.70 99 eP 05 06.57 -2.1
BWN 2.73 345 eP 05 07.82 -1.2
DOT 2.73 38 eP 05 09.42 0.4
XLV 2.85 224 eP 05 09.75 -1.0
TMW 2.86 50 eP 05 11.65 0.8
HDA 2.89 8 eP 05 10.39 -0.8
WRH 2.93 358 eP 05 10.30 -1.5
INE 2.97 242 eP 05 11.10 -1.4
NEA 3.08 350 eP 05 11.25 -2.8
CCB 3.10 0 eP 05 12.11 -2.2
WRG 3.23 116 eP 05 15.23 -0.8
FBA 3.36 0 ePc 05 16.00 -1.9
MDM 3.42 357 eP 05 16.88 -1.9
GLM 3.45 3 eP 05 17.51 -1.7
SYI 3.74 220 eP 05 21.47 -1.8
SVW 3.78 267 iPc 05 21.40 -2.6
CDD 3.92 230 eP 05 24.04 -1.8

MCNL 4.01 236 eP 05 24.74 -2.4
ITA 4.07 293 iPc 05 25.40 -2.6
KDC 4.49 214 P 05 31.40 -2.5
HYT 5.05 94 P 05 40.00 -2.0
IMA 5.22 333 ePd 05 41.60 -2.7
71 obs. associated

? DEC 18, 1990 22h 36m 51.92± 1.40s
37.660 N ± 10.6km 14.769 E ± 17.6km
DEPTH = 33.0km (normal)

SICILY (398)

MNO 0.28 348 Pd 36 59.90 0.3
eSg 37 06.60
MEU 0.57 167 P 37 03.50 -0.2
eSg 37 12.80
ATN 0.74 47 P 37 04.80 -1.1
eSg 37 13.60
SOI 1.10 68 P 37 12.00 1.0
eSg 37 26.50
S.D. = 1.6 on 4 of 4 obs.

DEC 18, 1990 23h 39m 04.77± 0.29s
44.399 N ± 3.7km 9.354 E ± 2.5km
DEPTH = 8.2 ± 2.2 km

NORTHERN ITALY (545)
ML 2.6 (GEN), 2.6 (LDG).

PCP 0.60 284 P 39 16.54 -0.2
S 39 25.34
CKI 0.77 272 P 39 20.20 0.2
eSg 39 31.70
FIN 0.84 257 P 39 21.75 0.5
S 39 34.57
BDI 0.95 110 P 39 22.90 -0.3
eSg 39 36.50
MME 0.99 102 P 39 25.00 1.1
ROB 1.07 265 P 39 24.76 -0.4
S 39 38.67
PII 1.08 128 P 39 25.10 -0.2
eSg 39 41.40
IMI 1.16 246 P 39 26.40 -0.3
S 39 42.16
ENR 1.40 264 P 39 30.31 -0.3
S 39 47.70
MDI 1.40 10 P 39 30.00 -0.5
eSg 39 49.20
STV 1.46 265 P 39 30.67 -0.9
S 39 48.94
SBF 1.48 249 Pn 39 31.30 -0.5
ORX 1.57 322 P 39 33.13 0.0
S 39 53.55
PZZ 1.62 275 P 39 34.47 0.7
S 39 54.63
RSP 1.67 297 P 39 35.08 0.5
S 39 56.02
PGF 1.87 188 Pn 39 36.50 -0.9
LSD 1.89 305 P 39 37.64 -0.2
RRL 1.91 287 P 39 39.28 1.2
FRF 2.13 248 Pn 39 41.10 0.1
Sn 40 06.50
LPG 2.15 302 Pn 39 42.50 0.9
CTI 2.31 44 P 39 44.00 0.2
LMR 2.32 244 Pn 39 43.50 -0.3
Sn 40 11.40
LRG 2.36 247 Pn 39 45.40 1.0
HAU 4.17 331 Pn 40 09.50 -0.5
Sn 40 57.80
CDF 4.26 341 Pn 40 10.90 -0.6
SMF 4.48 302 Pn 40 14.70 0.2
LBF 4.57 306 Pn 40 15.50 -0.3
LOR 4.79 309 Pn 40 18.50 -0.5
AVF 4.84 302 Pn 40 19.80 0.2
SSF 4.88 305 Pn 40 19.90 -0.3
BGF 5.06 298 Pn 40 22.70 0.0
S.D. = 0.6 on 31 of 31 obs.

DEC 19, 1990 00h 08m 13.21± 0.42s
23.574 N ± 6.6km 121.526 E ± 7.9km
DEPTH = 10.0km (geophysicist)
5.1mb (24 obs.)

TAIWAN (244)

HKC 6.90 261 iP 09 55.50 -1.3
SSE 7.50 358 P 10 03.00 -2.2
1.0s 11.00nm 5.0mb
sP 10 11.00

19d 00h

BFD	63.69	161	eP	31	02.00	3.4x
CAN	64.19	155	eP	31	04.00	2.0
TAB	64.56	302	eP	31	04.00	-0.6
TTA	65.74	30	eP	31	11.70	-0.1
SVW	66.10	32	eP	31	14.70	0.7
IMA	66.47	26	eP	31	16.10	-0.4
	1.1s	26.60nm			5.3mb	
FBA	69.07	27	eP	31	31.70	-0.9
PMR	69.12	31	eP	31	32.00	-0.9
	1.2s	43.00nm			5.5mb	
TOA	70.38	30	eP	31	41.00	0.3
KAS	73.17	308	eP	32	00.00	2.2
INK	73.54	22	eP	31	58.00	-1.3
	1.0s	37.00nm			5.4mb	
MBC	73.65	13	eP	31	59.00	-0.8
	1.0s	11.00nm			4.9mb	
HRI	74.10	300	eP	32	04.00	0.6
ZNT	74.99	299	eP	32	09.00	0.6
RMN	75.88	297	eP	32	14.00	0.3
ALT	76.55	307	eP	32	18.90	1.6
MLR	77.25	314	eP	32	22.00	1.0
ELL	77.49	305	iP	32	22.00	-0.5
HFS	78.16	331	eP	32	24.80	-0.7
	0.7s	8.60nm			4.9mb	
Z	16s	4.16um			5.9MsZx	
		LR		04	52.00	
TNR	78.28	315	ePd	32	29.00	2.4
NB2	78.82	332	P	32	28.30	-0.9
	0.8s	7.80nm			4.8mb	
KRA	79.26	320	eP	32	31.00	-0.8
Z	18s	1.90um			5.5MsZ	
E	18s	2.30um				
		i		32	35.50	
		e		32	45.80	
SPC	79.43	319	eP	32	32.00	-1.0
KSP	81.03	322	eP	32	39.00	-2.2
		ic		32	41.50	
VAY	81.10	311	eP	32	40.40	-1.4
SRO	81.17	318	eP	32	41.90	-0.1
SKO	81.61	312	eP	32	43.00	-1.4
	N 18s	1.11um				
	E 18s	1.15um				
		iPcP		32	47.30	
		iS		42	57.00	
		iPS		44	00.00	
		iSS		48	21.00	
		iSSS		51	58.00	
ZST	81.74	319	eP	32	44.00	-0.9
OHR	82.40	312	eP	32	47.80	-0.8
PRU	82.42	321	eP	32	48.50	0.0
	2.0s	58.60nm			5.4mb	
	Z 14s	1.80um			5.6MsZx	
	N 14s	1.00um				
	E 14s	1.30um				
		e		32	51.00	
CLL	82.65	323	eP	32	49.00	-0.6
YKA	83.27	23	eP	32	51.00	-1.6
	1.1s	13.00nm			5.0mb	
KHC	83.38	321	P	32	53.40	-0.1
	1.3s	15.00nm			5.0mb	
	Z 10s	1.50um			5.7MsZx	
	N 12s	1.30um				
	E 12s	1.10um				
PTJ	83.47	317	eP	32	49.10	-5.0X
MOX	83.74	323	eP	32	56.00	0.7
	2.0s	69.00nm			5.5mb	
HOF	83.76	323	eP	32	55.70	0.3
WET	83.77	321	iPc	32	56.10	0.6
VBY	84.09	317	eP	32	58.20	1.1
GRF	84.44	322	ePc	32	58.50	-0.3
Z	22s	1.00um			5.2MsZ	
BHG	84.47	320	iPc	32	59.50	0.5
VOY	84.68	318	ePc	32	59.90	-0.3
FVI	85.08	319	P	33	03.50	1.5
FUR	85.18	321	eP	33	03.10	0.5

ARV	86.50	316	P	33	12.00	2.7X
ENN	86.75	325	eP	33	10.50	0.3
	0.7s	9.00nm				5.1mb
ASS	86.89	316	P	33	12.50	1.3
AZI	86.93	315	P	33	14.00	2.7X
SAL	86.93	319	P	33	12.50	1.3
SOI	87.03	310	P	33	11.00	-0.8
CRE	87.06	317	P	33	12.00	-0.1
CDF	87.32	323	eP	33	12.90	-0.3
	1.5s	36.55nm				5.4mb
MDI	87.33	319	P	33	15.00	1.9
FIR	87.42	317	eP	33	14.00	0.4
		iS	43	54.00		
MME	87.56	318	P	33	15.00	0.4
BDI	87.69	318	P	33	20.00	5.0X
BSF	87.91	322	eP	33	15.30	-0.8
	1.5s	20.90nm				5.2mb
HAU	88.07	323	eP	33	16.00	-0.7
	1.5s	26.10nm				5.3mb
Z	20s	1.48um				5.4Msz
LPG	89.23	320	eP	33	22.50	-0.2
	0.5s	6.55nm				5.1mb
PNT	89.24	35	eP	33	24.00	1.7
PGF	89.47	317	eP	33	23.40	-0.2
	0.8s	13.45nm				5.2mb
BNI	89.52	320	P	33	23.50	-0.4
EDM	89.85	29	eP	33	25.50	0.4
LOR	89.87	323	eP	33	24.40	-0.9
	1.2s	22.30nm				5.3mb
Z	20s	1.13um				5.3Msz
LBF	89.97	323	eP	33	25.00	-0.8
	1.2s	31.25nm				5.4mb
SSF	90.18	323	eP	33	25.90	-0.8
	1.2s	11.90nm				5.0mb
SMF	90.24	322	eP	33	26.40	-0.6
	1.0s	28.00nm				5.5mb
AVF	90.43	323	eP	33	27.20	-0.6
	1.0s	20.00nm				5.3mb
NEW	91.20	35	P	33	32.30	0.9
MAF	91.20	323	eP	33	31.10	-0.4
	1.3s	39.70nm				5.6mb
TCF	91.36	323	eP	33	31.80	-0.4
	1.5s	36.55nm				5.5mb
LSF	91.76	323	eP	33	33.40	-0.6
CAF	92.26	322	eP	33	36.60	0.2
	1.5s	44.40nm				5.6mb
RJF	92.34	322	eP	33	36.80	0.1
	1.2s	23.80nm				5.5mb
Z	20s	1.17um				5.3Msz
FRB	92.48	4	eP	33	34.00	-2.9
WDC	92.62	43	ePc	33	38.50	0.4
LPO	92.91	322	eP	33	39.30	0.0
LFF	93.00	322	eP	33	39.80	0.1
	1.4s	17.45nm				5.3mb
FFC	93.43	24	eP	33	41.00	-0.5
	0.8s	10.00nm				5.3mb
ORV	93.86	44	eP	33	43.00	-0.8
BKS	94.34	45	eP	33	43.20	-2.9
	1.0s	39.00nm				5.8mb
GCC	94.98	46	eP	33	51.50	2.5
MHC	95.03	46	eP	33	49.00	-0.4
LRM	95.21	35	eP	33	51.20	1.0
CMB	95.45	44	eP	33	52.10	0.9
PRI	96.36	46	eP	33	57.00	1.5
FRI	96.50	45	eP	33	56.00	0.1
TNP	97.43	43	P	34	02.00	1.6
	1.0s	8.00nm				5.3mb
KIC	119.71	293	PKP	39	16.00	-1.5
AIA	138.28	176	ePKP	39	52.10	0.7
ZOBO	168.26	53	PKP	40	27.00	-7.0X
	Z	24s	0.22um			
		i	40	35.00		
		LR	39	36.00		

SKO	2.34	16	ePn	40	18.00	0.4
	S.D. = 1.3	on		5 of	5 obs.	
<hr/>						
? DEC 19, 1990	01h	11m	09.21±	0.97s		
40.242 N ± 8.9km			20.533 E ± 9.6km			
DEPTH = 10.0km (geophysicist)						
GREECE-ALBANIA BORDER REGION						(392)
KEK	0.77	227	ePb	11	24.10	-0.2
			eSn	11	33.80	
OHR	0.89	13	ePg	11	26.50	0.2
			eSg	11	40.00	
KZN	0.95	86	ePn	11	27.00	-0.4
EVR	1.65	143	ePn	11	38.80	0.4
	S.D. = 0.6	on		4 of	4 obs.	
<hr/>						
* DEC 19, 1990	01h	15m	43.09±	2.01s		
31.162 N ± 22.9km			138.299 E ± 13.1km			
DEPTH = 390.0 ± 14.2 km						
4.1mb (6 obs.)						
SOUTH OF HONSHU, JAPAN						(211)
MAT	5.37	359	(P)	17	09.00	0.0
	0.7s	28.08nm				4.3mb
		eS	18	20.00		
BJI	20.01	302	eP	19	48.00	-0.4
CHG	37.54	260	ePd	22	22.90	-0.2
	0.9s	17.44nm				4.4mb
BDT	38.22	258	eP	22	28.90	0.3
GUN	45.38	280	P	23	27.20	0.6
	0.8s	35.00nm				4.7mb
PKI	45.88	280	P	23	30.40	0.0
KKN	45.92	280	P	23	30.80	0.2
DMN	46.12	280	P	23	32.10	-0.1
GKN	46.40	280	P	23	34.60	0.4
FBA	55.45	30	P	24	41.90	1.4
GBA	58.25	267	P	25	00.10	-0.5
INK	60.78	25	eP	25	16.50	-0.4
YKA	70.18	28	eP	26	15.50	-0.6
	0.5s	1.20nm				3.8mb
HFS	78.34	335	eP	27	01.70	-0.5
	0.5s	1.00nm				3.8mb
NB2	78.57	337	P	27	03.80	0.3
	0.5s	0.90nm				3.8mb
TNP	81.54	51	P	27	19.30	-0.4
	S.D. = 0.6	on		16 of	16 obs.	
<hr/>						
% DEC 19, 1990	01h	36m	46.88±	1.48s		
35.333 N ± 18.4km			27.554 E ± 8.4km			
DEPTH = 10.0km (geophysicist)						
DODECANESE ISLANDS						(369)
ARG	1.00	28	ePb	37	05.30	-0.5
			eSg	37	18.80	
NPS	1.59	268	ePb	37	14.90	-0.2
			eSb	37	35.50	
KSL	1.83	64	ePb	37	18.50	-0.1
ELL	2.37	53	eP	37	27.00	0.4
APE	2.38	317	ePn	37	27.00	0.4
VAM	2.74	273	ePb	37	35.60	3.9X
	S.D. = 0.5	on		5 of	6 obs.	
<hr/>						
& DEC 19, 1990	02h	11m	06.40s			
37.990 N			118.645 W			
DEPTH = 5.0km (geophysicist)						
CALIFORNIA-NEVADA BORDER REGION (40)						
—<BRK>. ML 2.5 (BRK).						
BONR	0.27	97	iP	11	10.20	-1.8
TNP	1.13	85	iPc	11	25.50	-2.7
FRI	1.31	221	iPc	11	30.40	-0.6
			iS	11	47.30	
CMB	1.38	272	eP	11	31.50	-0.8
			eS	11	49.40	
ARN	2.38	255	e(P)	11	49.00	2.3
SAO	2.54	242	iP	11	52.90	3.9
6 obs. associated						
<hr/>						
& DEC 19, 1990	03h	57m	33.94s			
61.582 N			150.462 W			
DEPTH = 50.4km						
SOUTHERN ALASKA						(2)
<AGS-P>.						
SUA	0.18	229	iP	57	42.46	0.0</

19d 03h

PWA 0.29 76 eP 57 43.26 -0.2
 PMS 0.55 128 eP 57 45.53 -0.4
 PLRM 0.64 88 iP 57 46.07 -0.9
 SKT 0.65 309 iP 57 46.24 -0.9
 GH0 0.76 75 eP 57 47.93 -0.7
 CGLM 0.79 250 iP 57 48.64 -0.5
 CUT 0.83 6 iP 57 48.67 -0.9
 NCG 0.83 258 iP 57 49.17 -0.5
 SPU 0.87 243 iP 57 49.31 -0.8
 CRP 0.87 250 eP 57 50.21 -0.1
 NKA 0.92 204 eP 57 51.67 0.9
 KNK 0.98 99 iP 57 50.93 -0.7
 BGL 0.98 252 eP 57 51.01 -0.7
 CKL 0.98 248 iP 57 50.93 -0.8
 SLKM 1.08 174 eP 57 52.00 -1.1
 RDT 1.38 224 iP 57 56.34 -1.0
 HUR 1.45 15 eP 57 58.13 -0.1
 RDN 1.55 227 eP 57 58.77 -0.9
 NCT 1.58 231 eP 57 59.43 -0.6
 KNIM 1.82 132 eP 58 00.37 -2.9
 VZW 1.96 104 eP 58 03.46 -1.9
 INE 1.99 221 eP 58 04.87 -1.0
 VLZ 2.04 101 eP 58 04.49 -1.9
 TOA 2.10 74 eP 58 06.56 -0.8
 KLU 2.18 90 eP 58 06.76 -1.7

26 obs. associated

* DEC 19, 1990 04h 14m 49.72±1.09s
 15.865 N ±16.8km 94.150 W ± 9.4km
 DEPTH = 112.6 ± 12.9 km
 3.6mb (1 obs.)

NEAR COAST OF OAXACA, MEXICO (66)
 Felt in Oaxoco.

SCX 1.69 59 iP 15 19.50 0.1
 TPX 2.06 117 eP 15 24.00 0.0
 OXX 2.75 296 iP 15 34.00 0.6
 EVV 2.82 336 eP 15 35.35 1.3
 IISM 4.37 316 (P) 15 55.50 0.3
 LVVM 4.43 331 eP 15 53.50 -2.4
 IIT 5.06 309 (P) 16 10.50 5.7X
 PPM 5.33 307 eP 16 11.75 3.0X
 ACX 5.57 281 (P) 16 10.50 -1.1
 ILL 5.66 297 eP 16 14.00 0.9
 YKA 48.76 348 eP 23 25.70 1.1
 FRB 0.6s 0.60nm 3.6mb
 51.00 14 eP 23 41.00 -0.7
 S.D. = 1.4 on 10 of 12 obs.

DEC 19, 1990 05h 27m 19.47±0.45s
 41.401 N ± 5.1km 21.044 E ± 5.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 ML 3.2 (SKO), 2.9 (TTG), MD 2.8
 (THE). Felt (IV) in the Kicevo-
 Krusovo area.

OHR 0.34 213 iPg 27 24.90 -1.7
 0.6s 630.00nm
 iSg 27 30.20
 Lg 27 32.50
 SKO 0.64 27 iPg 27 31.30 -1.1
 0.4s 946.00nm
 iSg 27 39.80
 Lg 27 41.00
 FNA 0.67 158 eP 27 30.80 -2.0
 eS 27 41.56
 VAY 1.15 93 iPg 27 40.40 -0.6
 0.4s 219.00nm
 i 27 41.40
 i 27 52.40
 iS 27 55.50
 Lg 28 01.40

KZN 1.22 153 ePg 27 40.20 -2.1
 KNT 1.42 99 iP 27 45.06 -0.2
 iS 28 04.16
 PVY 1.44 327 ePg 27 44.70 -0.9
 eSg 28 06.20
 ULC 1.46 293 ePg 27 44.40 -1.4
 eSg 28 06.00
 TTG 1.68 308 ePn 27 49.00 0.0
 eSn 28 13.00
 IVA 1.70 330 ePn 27 49.50 0.1
 eSn 28 12.30
 LIT 1.70 139 eP 27 51.12 1.8
 eS 28 13.20
 SOH 1.84 108 eP 27 53.84 2.5X
 BDV 1.88 299 ePn 27 52.40 0.5
 eSn 28 19.50
 KEK 1.93 210 ePb 27 55.70 3.0X
 IGT 1.94 196 eP 27 54.64 1.8
 eS 28 20.00
 VTS 2.00 53 iP 27 48.00 -5.9X
 Sg 28 12.00
 NKY 2.08 314 ePn 27 55.50 0.6
 eSn 28 23.50
 PLG 2.09 119 ePb 27 56.40 1.4
 HCY 2.17 300 ePn 27 57.50 1.4
 eSn 28 28.00
 BRY 2.39 310 ePn 27 59.80 0.4
 eSn 28 31.50
 EVR 2.55 166 ePn 28 02.00 0.4
 PGB 2.60 63 iP 28 02.00 -0.3
 NEO 2.67 141 ePb 28 05.20 1.8
 RZN 2.77 83 eP 28 05.00 0.1
 S 28 38.00
 KDZ 3.29 84 eP 28 22.00 9.9X
 iS 29 03.00

S.D. = 1.3 on 21 of 25 obs.

* DEC 19, 1990 05h 44m 38.65±1.06s
 20.708 S ±11.9km 67.879 W ±10.7km
 DEPTH = 172.9 ± 10.9 km
 4.3mb (2 obs.)

SOUTHERN BOLIVIA (125)

CCH 3.69 27 Pc 45 37.00 0.5
 ANT 3.80 218 iPc 45 37.50 0.0
 eS 46 18.00
 i 46 21.00
 CNCB 3.88 359 iPc 45 41.20 2.0
 i 50 37.00
 LPB 4.16 357 iPc 45 44.30 1.7
 i 50 34.00
 ZOBO 4.42 357 iPc 45 47.20 1.0
 Z 20s 0.09um
 LR 58 24.00
 ARE 5.44 320 iPc 45 57.20 -2.1
 iS 46 53.50
 SIV 7.99 55 iPc 46 30.60 -2.2
 NNA 12.21 314 eP 47 26.00 -2.1
 0.7s 5.48nm 4.1mb
 iS 49 05.00
 PPD 15.49 98 eP 48 10.30 0.9
 BAO 19.55 78 ePd 48 53.00 -2.4
 ANMO 66.37 326 P 55 11.00 -0.1
 KIC 67.56 74 P 55 18.10 -0.7
 FRB 84.18 360 eP 56 51.00 0.1
 YKA 90.77 340 eP 57 22.70 0.1
 0.7s 2.90nm 4.4mb
 ASPA 131.05 207 ePKP 03 31.80 -0.1
 1.3s 5.30nm
 WRA 134.12 210 PKP 03 39.00 1.2
 0.8s 2.70nm
 GBA 146.17 96 PKP 04 01.70 2.2
 S.D. = 1.6 on 17 of 17 obs.

DEC 19, 1990 06h 16m 33.05±0.62s
 24.053 S ± 5.5km 66.985 W ± 6.9km
 DEPTH = 181.3 ± 7.1 km
 4.5mb (4 obs.)

SALTA PROVINCE, ARGENTINA (129)

ANT 3.16 276 iPd 17 24.20 0.0
 iS 17 59.50
 CCH 6.68 7 P 18 09.60 -0.6
 CNCB 7.27 352 P 18 19.80 1.6
 i 19 35.00
 LPB 7.55 352 P 18 23.00 1.1
 e 19 40.00

ZOBO 7.82 352 P 18 26.00 0.5
 Z 16s 0.18um
 S 19 58.00
 LR 20 08.00
 ARE 8.65 330 eP 18 35.00 -1.2
 iS 20 06.00
 PEL 9.62 199 eP 18 49.00 0.4
 SIV 9.75 36 iPc 18 49.00 -1.3
 LNV 10.60 200 eP 19 00.00 -1.2
 PPD 14.57 85 eP 19 52.20 0.3
 e 19 55.80
 e 19 58.00
 BAO 19.71 68 ePc 20 50.00 -0.7
 BMA 21.00 91 eP 21 03.90 0.4
 PDCR 28.77 71 eP 22 10.70 -5.3X
 e 22 14.80
 TUL 65.57 335 eP 26 58.00 -1.2
 1.0s 9.80nm 4.6mb
 e 27 11.90
 SPA 66.09 180 iPd 27 04.10 1.6
 0.8s 12.50nm 4.8mb
 KIC 67.76 72 P -27 14.00 0.6
 ALQ 69.59 326 eP 27 24.80 0.2
 0.8s 5.60nm 4.4mb
 ANMO 69.60 326 P 27 25.00 0.5
 TNP 77.73 322 P 28 11.00 -0.5
 BUL 86.85 111 iPd 28 52.90 -5.9X
 YKA 94.18 340 eP 29 31.60 -0.1
 0.6s 1.90nm 4.5mb
 ASPA 128.42 205 ePKP 35 20.50 0.3
 0.7s 6.80nm
 WRA 131.58 207 PKP 35 26.00 -0.3
 0.4s 4.90nm
 GBA 144.85 101 PKPd 35 50.10 -0.5
 S.D. = 0.9 on 22 of 24 obs.

DEC 19, 1990 07h 34m 22.18±0.28s
 27.369 S ± 8.2km 175.497 W ± 7.7km
 DEPTH = 41.2km (14 depth phases)
 5.3mb (13 obs.) 5.3msz (1 obs.)

KERMADEC ISLANDS REGION (177)
 CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN
 L.P.B.: 135, 22C
 Centroid Location:
 Origin Time 07:34:22.8 0.7
 Lat 26.75S FIX: Lon 175.91W FIX
 Dep 15.0 FIX Half-duration 1.5
 Moment Tensor: Scale 10**16 Nm
 Mrr=-3.66 0.35 Mtt=-1.15 0.47
 Mff= 4.82 0.50 Mrt=-2.05 1.06
 Mrf=-0.85 1.13 Mtf=-3.40 0.39
 Principal Axes: —
 T Val= 6.36 Plg= 0 Azm=246
 N -0.91 39 156
 P -5.45 51 336
 Best Double Couple: Mo=5.9*10**16
 NP1: Strike= 8 Dip=57 Slip=-41
 NP2: 124 57 -139

RAO 2.84 228 P 35 13.00 6.9X
 S 35 54.50
 PUZ 11.89 205 P 37 12.40 0.3
 S 39 27.20
 PGZ 14.86 205 P 37 51.50 0.4
 e 38 03.10
 RAR 15.59 70 P 37 51.00 -9.6X
 S 40 28.00
 THZ 17.22 211 P 38 21.80 0.5
 eS 41 29.20
 DZM 17.23 284 iPc 38 22.90 1.4
 KHZ 17.48 208 eP 38 22.60 -1.7
 e 38 29.90
 BRS 28.14 263 eP 40 09.00 -3.6X
 CAN 31.22 246 eP 40 41.90 1.9
 BWA 31.63 248 eP 40 43.90 0.3
 RMO 31.82 263 eP 40 46.50 1.2
 CTA 35.65 273 iPd 41 18.60 0.1
 1.0s 40.00nm 5.3mb
 OIS 41.41 269 eP 42 04.00 -2.5
 ASPA 45.57 263 eP 42 35.10 -5.0X
 1.2s 8.70nm 4.5mb
 Z 23s 0.60um 4.5mszX
 eS 48 52.20
 WRA 46.29 268 P 42 43.00 -2.8
 0.8s 48.80nm 5.5mb
 SBA 51.22 185 P 43 33.00 9.8X

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 Bayesian 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 $20^\circ \leq \Delta \leq 160^\circ$, 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 $\Delta \leq 5^\circ$. 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.

The pulse distortion of seismic phases that have ray paths that touch a single internal caustic (e.g., PP, pPP, SS and PKPab) can be corrected using the method of Hilbert transformation described by Choy and Richards (1975). Arrival times that are read from the phases that are corrected for pulse distortion are identified by the symbol H preceding the phase identifier (e.g., HPP, HpPP, HSS and HP'ab).

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 ($^{\circ}$) appears as "°". Also note that certain phase codes are abbreviated because the data base and file format limit the length of the codes to five characters. Thus, PKP is occasionally abbreviated to P' and the numbers 2 and 3 are sometimes used to represent the AB (AC for SKKS) and BC branches of core phases, respectively. In some codes, R is used to represent repetition; for example, pRPPK represents the phase pPKPPK and RPPG represents PgPgPg.

References

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- Jeffreys, Harold and K. E. Bullen (1940), *Seismological Tables*, British Assoc. for the Advancement of Science, Gray Milne Trust.
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LIC 38.68 229 P 46 20.58 -0.1
 DAG 45.96 348 iPc 47 19.80 0.6
 0.8s 7.46nm 4.7mb
 WMO 49.45 59 P 47 47.50 0.5
 PP 49 42.10
 HYB 51.94 95 ePc 48 05.30 -0.9
 GKN 52.09 80 P 48 06.80 -0.5
 DMN 52.62 80 P 48 11.00 -0.5
 KKN 52.69 80 P 48 11.20 -0.8
 PKI 52.89 80 P 48 12.80 -0.7
 GBA 53.05 100 P 48 14.20 -0.2
 GUN 53.13 79 P 48 14.40 -0.9
 KOD 54.98 103 eP 48 29.00 0.0
 LSA 56.61 75 P 48 41.00 0.2
 GTA 59.43 61 eP 48 59.20 -0.7
 1.2s 10.00nm 4.8mb
 FRB 60.08 329 eP 49 05.00 1.1
 LZH 63.68 63 eP 49 27.50 -1.1
 1.6s 29.00nm 5.1mb
 CD2 65.91 68 eP 49 42.60 -0.4
 HHC 67.04 55 eP 49 50.20 0.0
 CHG 67.95 82 eP 49 55.10 -0.9
 XAN 68.32 63 P 49 57.20 -1.0
 TIY 69.10 58 Pd 50 00.60 -2.4
 GYA 70.28 71 iPd 50 10.00 -0.4
 BJI 70.53 54 eP 50 11.50 0.0
 SNY 74.40 50 iPd 50 33.10 -1.3
 1.0s 10.00nm 4.7mb
 CN2 74.47 47 P 50 34.60 -0.2
 INK 75.63 351 ePc 50 41.20 0.3
 YKA 77.19 341 eP 50 49.70 -0.1
 0.7s 3.30nm 4.5mb
 FFC 79.10 331 eP 51 02.00 1.6
 0.7s 12.00nm 5.0mb
 IMA 79.30 359 ePc 51 03.30 1.9
 1.0s 11.30nm 4.8mb
 FBA 80.26 356 eP 51 08.80 2.4
 PWA 83.61 357 ePc 51 25.70 1.9
 SVW 84.31 359 ePc 51 29.60 2.1
 MAT 86.62 47 eP 51 40.00 0.6

S.D. = 1.2 on 142 of 173 obs.

DEC 19, 1990 13h 48m 22.69±0.14s
 52.618 N ± 3.2km 160.716 E ± 2.3km
 DEPTH = 21.7km (geophysicist)
 5.9mb (100 obs.) 5.6Msz (38 obs.)
 OFF EAST COAST OF KAMCHATKA (219)
 Ms 5.7 (BRK), 5.3 (PAS).
 Mo=1.6×10¹⁸ Nm (PPT). Felt
 (III) at Petropavlovsk-
 Kamchatskiy. Depth from
 broadband displacement
 seismograms.
 RADIATED ENERGY
 No. of sta: 8 Focal mech. C
 Energy 6.4±1.8×10¹² Nm
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 16S, 39C
 Centroid Location:
 Origin Time 13:48:28.9 0.2
 Lat 52.68N 0.02 Lon 161.22E 0.03
 Dep 28.6 1.5 Half-duration 4.0
 Moment Tensor: Scale 10¹⁷ Nm
 Mrr=7.48 0.12 Mtt=-1.41 0.16
 Mff=-6.07 0.14 Mrt=2.40 0.34
 Mrf=2.35 0.44 Mtf=-6.18 0.17
 Principal Axes:
 T Vol= 8.15 Plg=78 Azm=339
 N 2.79 7 216
 P -10.94 10 125
 Best Double Couple: Mo=9.5×10¹⁷
 NP1: Strike=207 Dip=35 Slip= 79
 NP2: 41 55 98

SMY 8.14 84 ePd 50 20.10 -2.3
 Z 21s 58.00um
 YSS 12.89 251 P 51 29.00 1.8
 ADK 13.86 84 eP 51 38.90 -1.0
 Z 22s 39.00um
 KUSJ 14.33 235 P 51 40.60 -5.5X
 eS 54 13.30
 MDJ 21.94 261 Pd 53 15.00 -1.3
 1.0s 200.00nm 5.5mb
 Z 20s 14.90um 5.4Msz
 N 14s 34.90um
 E 14s 16.60um

MAJO 22.56 233 iPc 53 23.60 1.1
 e 53 25.09
 iS 57 32.50
 MAT 22.56 233 iPc 53 23.40 0.9
 Z 20s 7.09um 5.1Msz
 eS 57 26.00
 SDN 22.77 68 eP 53 36.70 12.4X
 Z 18s 10.00um 5.3Msz
 TTA 24.78 48 ePc 53 45.20 1.3
 1.0s 147.50nm 5.6mb
 CN2 24.89 263 Pc 53 42.50 -2.5
 1.0s 200.00nm 5.7mb
 Z 16s 70.00um 6.3MszX
 N 16s 27.00um
 E 16s 30.00um
 PP 53 49.00
 eS 57 59.00
 SVW 24.89 53 ePc 53 45.80 0.8
 HIA 25.79 279 iPc 53 51.43 -2.0
 e 53 52.75
 eS 58 31.34
 IMA 26.15 41 ePc 53 56.10 -0.7
 0.8s 36.00nm 5.1mb
 BRW 26.47 29 ePc 53 59.10 -0.4
 KDC 26.76 60 eP 54 01.10 -1.2
 SHK 26.93 239 ePc 54 05.20 1.1
 SNY 27.14 262 iPc 54 04.00 -1.9
 1.8s 400.00nm 5.8mb
 N 14s 19.40um
 E 14s 18.10um
 PP 54 11.50
 SP 54 14.90
 S 58 40.00
 SS 58 52.00
 PMR 28.00 51 eP 54 11.70 -1.8
 Z 20s 13.00um 5.5Msz
 COL 28.50 44 ePc 54 17.30 -0.7
 iPcP 57 26.90
 eS 59 02.94
 PcS 01 01.24
 FBA 28.50 44 eP 54 17.00 -1.0
 1.0s 90.00nm 5.5mb
 TOA 29.35 50 eP 54 25.50 -0.3
 DL2 30.12 259 P 54 31.00 -1.7
 1.0s 100.00nm 5.6mb
 Z 16s 13.20um 5.7MszX
 N 16s 10.90um
 E 17s 26.20um
 BJI 32.70 265 iPc 54 52.81 -2.5
 2.0s 130.00nm 5.5mb
 N 16s 26.20um
 ePd 54 59.27 22kmX
 ePd 55 03.57
 PcP 57 40.00
 eS 00 06.00
 ScP 01 24.50
 eScS 05 23.00
 INK 34.02 37 iPc 55 06.20 -0.3
 1.0s 77.00nm 5.6mb
 TIA 34.58 259 Pc 55 09.80 -1.9
 1.4s 100.00nm 5.5mb
 Z 19s 15.70um 5.8Msz
 N 15s 13.80um
 E 15s 15.80um
 HHC 35.02 270 P 55 13.00 -2.6
 HHC 35.02 270 eP 55 13.50 -2.1
 Z 16s 26.10um 6.1MszX
 N 12s 4.60um
 E 14s 19.30um
 PP 56 36.00
 PcP 57 48.00
 SSE 35.83 249 iPc 55 22.50 0.1
 1.2s 140.00nm 5.8mb
 Z 20s 5.10um 5.3Msz
 N 12s 2.90um
 E 12s 4.90um
 PP 55 30.00
 S 00 58.00
 SS 01 14.00
 PcS 01 40.00
 SIT 35.89 57 eP 55 23.70 1.1
 1.0s 70.00nm 5.5mb
 Z 22s 9.10um 5.5Msz
 BTO 36.11 271 iPc 55 23.50 -1.3
 N 13s 10.80um
 E 12s 17.00um

ePP 55 35.00
 PP 56 47.00
 eS 00 56.00
 TIY 36.43 265 Pc 55 26.50 -1.0
 1.0s 100.00nm 5.6mb
 Z 18s 19.70um 5.9Msz
 E 16s 18.20um
 PP 56 56.00
 S 01 04.00
 NJ2 36.47 252 Pc 55 27.60 -0.1
 1.0s 300.00nm 6.1mb
 Z 19s 6.20um 5.4Msz
 N 14s 14.20um
 E 14s 7.80um
 PP 55 36.00
 S 01 04.00
 MBC 37.33 23 iPc 55 34.60 0.1
 1.0s 229.00nm 5.9mb
 WHN 40.20 255 eP 55 58.00 -0.9
 1.0s 100.00nm 5.5mb
 Z 22s 6.50um 5.4Msz
 N 15s 6.40um
 E 17s 16.70um
 sP 56 08.50
 XAN 41.00 264 P 56 04.00 -1.5
 N 17s 16.80um
 E 17s 19.60um
 QZH 42.02 245 Pc 56 15.00 1.1
 4.0s 2200.00nm 6.2mb X
 Z 15s 7.10um 5.7MszX
 E 15s 3.40um
 PP 56 22.00
 S 02 32.00
 SS 05 36.00
 LZH 42.72 271 iPc 56 19.00 -0.8
 2.0s 160.00nm 5.4mb
 Z 18s 28.50um 6.2Msz
 N 15s 17.90um
 pP 56 32.00 48kmX
 PP 58 00.00
 PcP 58 02.50
 ScP 02 00.00
 S 02 34.00
 sS 02 55.00
 SS 05 44.00
 GTA 43.04 277 iPc 56 21.30 -1.0
 1.0s 110.00nm 5.5mb
 Z 14s 22.30um 6.2MszX
 E 15s 19.70um
 PP 56 33.20
 PP 58 00.00
 PcP 58 12.00
 S 02 47.00
 ScS 06 21.00
 YKA 43.26 42 eP 56 22.80 -0.8
 0.9s 22.70nm 4.9mb
 GZH 46.43 249 Pc 56 49.00 -0.4
 Z 20s 9.20um 5.7Msz
 N 18s 11.30um
 E 16s 16.80um
 S 03 34.00
 HKC 46.57 248 iP 56 53.00 2.5
 KBS 47.41 352 iPc 56 56.70 0.1
 WMO 47.49 290 iPc 56 56.79 -0.9
 N 12s 6.70um
 E 12s 11.40um
 ePd 57 02.91 20kmX
 ed 57 08.04
 ePcP 58 26.91
 ePP 58 50.09
 eS 03 58.69
 eSS 04 07.29
 eScS 06 59.78
 GYA 47.77 259 iPc 56 59.60 -0.6
 1.0s 100.00nm 5.8mb
 Z 18s 9.10um 5.8Msz
 N 15s 6.10um
 E 15s 12.80um
 PP 57 08.00
 PP 58 51.00
 S 03 50.00
 RMW 47.79 63 P 57 00.00 0.0
 PNT 47.86 60 eP 57 00.00 -0.5
 0.8s 41.00nm 5.5mb
 BAG 47.94 236 eP 57 02.00 0.4
 eS 04 01.00
 EDM 48.75 53 iPc 57 06.90 -0.5

HOL	85.70	315	iPc	01	01.60	0.6
ETOR	85.75	347	eP	01	01.50	0.3
MEU	85.82	333	P	01	01.00	-0.6
CVT	85.84	335	P	01	02.70	1.2
ESEL	86.00	343	eP	01	03.20	0.9
PTO	86.16	352	eP	01	03.30	0.2
			eS	11	49.00	
DHLJ	86.29	319	Pc	00	53.58	-10.3
AFIF	86.32	306	iPc	01	06.00	1.7
KDT	86.49	317	eP	01	02.50	-2.4
HLW	86.76	318	eP+	01	06.00	-0.2
			eS	11	42.50	
ECHE	86.80	346	eP	01	07.20	0.9
TOL	86.93	348	iPc	01	06.46	-0.5
	1.1s	126.58nm				6.1mb
			ePP	04	33.00	
			iS	11	47.00	
			ePS	13	06.00	
			eSS	17	35.00	
EPLA	86.98	350	eP	01	07.70	0.5
MEKA	87.06	217	eP	01	07.00	-0.5
BWA	87.34	190	eP	01	11.60	2.9
			e	01	21.10	
WAJH	87.70	312	iPc	01	10.70	-0.1
EVIA	87.96	347	eP	01	12.40	0.4
CAN	88.17	190	eP	01	15.40	2.8
			e	01	26.40	
EBAN	88.59	348	eP	01	15.50	0.6
KMSA	88.77	303	ePc	01	15.40	-0.7
EHOR	89.11	349	eP	01	17.90	0.5
ECOG	89.44	348	eP	01	19.20	0.1
AFC	89.46	347	eP	01	19.40	0.1
EVAL	89.51	350	eP	01	19.30	0.0
ENIJ	89.55	346	eP	01	19.40	-0.1
MAL	90.09	348	iP-	01	24.00	2.0
			iS	12	20.00	
AKSR	91.48	313	iPc	01	29.50	0.9
AGRW	91.57	314	iPc	01	29.50	0.5
AGMR	91.78	314	iPc	01	31.00	1.0
KLB	91.86	216	iPd	01	30.40	0.5
	1.0s	47.00nm				5.8mb
MUN	92.76	217	eP	01	34.00	0.0
NWAO	93.25	215	eP	01	37.00	0.7
	0.8s	12.00nm				5.4mb
Z	20s	0.50um				5.0MsZ
N	20s	0.60um				
E	20s	0.30um				
IFR	93.34	348	iP	01	36.00	-1.3
AVE	93.82	350	iP	01	39.00	-0.2
SNZO	94.33	169	eP	01	56.00	15.0X
TIO	96.15	350	eP	01	50.00	-0.2
BCAO	114.79	318	iPKPc	07	04.00	0.7
	0.9s	18.00nm				
		ic	07	47.30		
TIC	119.73	344	PKP	07	12.62	-0.1
KIC	119.96	343	PKP	07	13.00	-0.1
	0.8s	13.50nm				
LIC	120.14	344	PKP	07	13.40	0.0
	0.8s	14.00nm				
Z	20s	1.35um				5.6MsZ
ZOBO	127.31	65	PKPc	07	28.00	0.1
	Z 22s	1.34um				5.6MsZ
		i	25	36.00		
		LR	51	04.00		
LPB	127.54	66	PKP	07	38.00	9.9X
		LR	49	48.00		
KRI	127.73	294	iPKPc	07	24.00	-4.1X
		i	07	47.00		
		iPP	09	22.00		
CNCB	127.83	66	PKP	07	31.00	2.2
CCH	129.31	64	ePKP	07	30.00	-1.3
SIV	130.86	58	PKP	07	33.90	-0.1
BUL	130.95	293	iPKPd	07	27.00	-7.2X
		i	09	44.00		
		iPP	10	51.00		
BFT	134.45	287				

SEK	137.84	286	ePKP	07 44.40	
	1.5s	1111.11nm		07 30.00	-17.1X
			i	10 33.50	
BLF	139.27	287	ePKP	07 43.00	-6.7X
MAW	139.82	216	e(PKP)	07 50.00	0.8
FRS	140.25	287	iPKPc	08 04.00	12.9X
	1.5s	69.44nm			
PPD	140.82	51	ePKP	07 47.60	-4.9X
POF	143.04	293	ePKP	07 55.00	-1.1
	1.2s	625.00nm			
BMA	144.58	42	ePKP	07 59.30	0.3
			e	08 03.10	
			e	08 26.70	
CER	146.38	290	iPKPc	08 02.50	0.8
	0.8s	262.50nm			
LPA	147.45	73	ePKP-	08 08.00	4.7X
	Z 20s	1.42um			5.8msz
	S.D. = 1.0	on 472 of 503 obs.			

* DEC	19, 1990	14h 07m 58.18±	0.72s		
	10.792 N ±15.2km	85.876 W ±17.9km			
	DEPTH = 23.4km	(4 depth phases)			
	4.7mb (10 obs.)	4.9msz (1 obs.)			
	COSTA RICA				(7B)
	Felt in northern Costo Rico.				
DVD	4.11	124	eP	09 03.20	2.1
UPA	6.50	105	ePc	09 48.00	13.1X
RSCP	24.70	1	P	13 20.00	1.1
OLY	25.12	349	P	13 22.50	-0.4
TUL	26.58	342	ePc	13 34.80	-1.6
	0.8s	26.60nm			4.9mb
	Z 20s	3.36um			4.9msz
			e	13 42.20	26km
			LR	27 47.70	
BLA	26.76	10	P	13 40.00	1.9
	0.6s	6.82nm			4.5mb
FVM	27.38	352	P	13 42.80	-1.0
	0.7s	12.24nm			4.7mb
ALO	30.49	325	eP	14 12.00	0.1
	0.9s	8.40nm			4.6mb
			e	14 19.50	26km
ANMO	30.49	325	P	14 12.80	0.9
	0.7s	7.71nm			4.6mb
			pP	14 19.20	22km
GOL	33.60	332	P	14 39.00	-0.2
SIV	36.21	137	P	15 00.00	-1.4
RSSD	36.73	338	P	15 07.00	1.2
	0.7s	6.92nm			4.6mb
BW06	37.96	331	P	15 15.80	-0.4
TNP	39.06	319	P	15 26.50	1.1
	0.7s	5.89nm			4.4mb
			pP	15 32.30	20km
BCH	39.44	314	P	15 35.00	6.5X
CMB	41.11	317	P	15 43.20	1.1
LRM	41.63	332	eP	15 47.30	0.8
ORV	42.66	318	P	15 57.00	2.3
FFC	45.64	347	eP	16 17.00	-1.6
	0.8s	13.00nm			4.9mb
BAO	45.79	124	ePd	16 19.70	-0.6
SCH	46.44	15	eP	16 24.00	-0.9
PNT	47.52	330	eP	16 33.00	-0.5
	0.8s	14.00nm			5.0mb
INK	65.24	342	eP	18 38.00	-1.8
MBC	67.87	352	eP	18 54.50	-1.9
	0.6s	3.00nm			4.6mb
WRA	140.26	252	PKP	27 26.00	-1.8
	0.6s	1.70nm			
HYB	148.03	29	ePKP	27 42.50	1.4
CHG	150.20	351	ePKP	27 48.50	4.1X
GBA	150.65	35	PKP	27 45.00	-0.1
BDT	151.73	350	ePKP	27 53.00	6.3X
	S.D. = 1.4	on 25 of 29 obs.			

& DEC	19, 1990	15h 08m 21.06s			
	60.078 N	152.713 W			
	DEPTH = 104.0km				
	3.9mb (1 obs.)				
	SOUTHERN ALASKA				(2)
	<AGS-P>.	F			

19d 22h

Pg 11 31.00
 Sn 11 59.50
 Sg 12 07.60
 HOF 3.25 247 ePn 11 25.40 0.0
 MOX 3.27 253 iPg 11 34.00 8.3X
 VKA 3.42 182 iSg 12 13.00
 iSg 12 13.00
 WET 3.45 224 ePn 11 28.30 0.0
 ZST 3.51 174 eP 11 42.30 13.2X
 e 12 25.90
 GRF 3.92 242 iPnc 11 35.10 0.1
 ePg 11 49.20
 e(Sn) 12 12.70
 eSg 12 31.90
 S.D. = 0.1 on 7 of 11 obs.

? DEC 19, 1990 22h 42m 08.30± 2.00s
 47.120 N ± 8.8km 4.016 E ± 18.1km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 1.0 (LDG).

LBF 0.14 191 Pg 42 12.10 0.5
 Sg 42 15.50
 LOR 0.18 324 Pg 42 12.30 -0.1
 Sg 42 15.70
 SSF 0.35 261 Pg 42 15.70 0.1
 Sg 42 21.50
 SMF 0.49 194 Pg 42 17.80 -0.5
 Sg 42 25.30
 S.D. = 0.7 on 4 of 4 obs.

? DEC 19, 1990 23h 00m 34.81± 1.17s
 5.837 S ± 17.1km 102.259 E ± 23.9km
 DEPTH = 33.0km (normol)
 5.1mb (6 obs.)
 SOUTHERN SUMATERA (274)

KGM 7.87 8 eP 02 31.00 1.1
 IPM 10.42 353 ePd 03 07.40 2.3
 NST 21.47 354 eP 05 21.50 -1.3
 CHG 24.71 352 ePc 05 53.00 -1.5
 1.0s 34.50nm 4.9mb
 ASPA 35.22 123 iPd 07 27.10 -1.3
 1.2s 12.40nm 4.7mb
 Z 22s 0.30um 4.0msz
 eS 13 07.30
 PKI 36.99 335 P 07 43.80 0.2
 GUN 37.09 336 P 07 44.60 0.1
 DMN 37.15 334 P 07 45.00 0.1
 KKN 37.24 335 P 07 45.50 0.0
 0.7s 22.00nm 5.1mb
 GKN 37.70 334 P 07 49.40 0.1
 1.0s 62.00nm 5.4mb
 LZH 41.73 2 eP 08 21.00 -1.6
 1.5s 48.00nm 5.0mb
 i 08 43.50
 NDI 41.95 326 iPc 08 25.00 0.7
 BJI 47.42 15 eP 09 06.50 -1.5
 1.0s 24.00nm 5.2mb
 BRS 52.50 120 iPc 09 49.90 2.6
 S.D. = 1.5 on 14 of 14 obs.

DEC 19, 1990 23h 08m 40.13± 0.62s
 48.060 N ± 6.0km 9.257 E ± 5.6km
 DEPTH = 10.0km (geophysicist)
 GERMANY (543)
 ML 2.8 (VIE), 2.7 (LDG), 2.6
 (FUR), 2.4 (GRF).

SLE 0.59 240 iPc 08 50.90 -1.2
 SAX 0.81 176 iPd 08 54.70 -1.4
 ZLA 0.82 226 iPc 08 55.70 -0.4
 FEL 0.86 258 ePn 08 55.92 -0.8
 LLS 1.20 189 ePd 09 02.50 -0.2
 FUR 1.36 85 ePg 09 04.50 -0.6
 CDF 1.37 286 Pg 09 05.90 0.6
 Sg 09 24.10
 OSS 1.50 156 iPd 09 07.20 -0.1
 SOTA 1.56 122 iPg 09 07.70 -0.4
 iSg 09 25.40
 i 09 26.70
 i 09 28.10
 TOD 1.58 349 ePn 09 07.58 -0.6
 VDL 1.58 175 iPd 09 09.30 0.9
 BSF 1.67 263 Pn 09 11.40 1.7

WATA 1.73 114 Pg 09 11.60
 Sg 09 33.40
 iPg 09 10.40 -0.1
 iSg 09 29.50
 i 09 33.10
 HAU 1.95 269 Pn 09 11.40 -2.3
 Pg 09 16.60
 Sg 09 42.10
 TMA 1.97 188 iPd 09 16.20 2.1
 GRF 2.09 38 e(Pn) 09 19.20 3.6X
 e(Pg) 09 21.10
 eSg 09 44.60
 ABH 2.14 329 ePn 09 17.97 1.5
 RUP 2.19 319 ePn 09 21.54 4.4X
 MMK 2.19 204 ePd 09 18.70 1.3
 BHG 2.46 97 iPc 09 27.30 6.4X
 KBA 2.94 108 iPg 09 33.80 5.9X
 i 10 06.60
 iSg 10 10.50
 LPL 3.08 215 Pg 09 47.00 17.1X
 LPG 3.09 215 Pg 09 47.20 17.1X
 LOR 3.73 260 Pg 09 49.80 10.7X
 Sg 10 36.60
 LBF 3.74 255 Pg 09 50.80 11.7X
 Sg 10 37.20
 SSF 4.02 258 Pg 09 54.80 11.8X
 Sg 10 46.50
 S.D. = 1.3 on 17 of 26 obs.

DEC 19, 1990 23h 38m 35.65± 0.18s
 23.669 N ± 3.9km 121.606 E ± 3.5km
 DEPTH = 10.0km (geophysicist)
 5.3mb (44 obs.) 5.2msz (4 obs.)

TAIWAN
 CENTROID, MOMENT TENSOR
 Data Used: GDSN
 L.P.B.: 10S, 19C
 Centroid Location:
 Origin Time 23:38:39.3 0.5
 Lot 23.78N 0.06 Lon 122.20E 0.11
 Dep 15.0 FIX Half-duration 1.9
 Moment Tensor: Scale 10⁻¹⁷ Nm
 Mrr= 1.09 0.06 Mtt= 0.04 0.08
 Mff=-1.13 0.11 Mrt= 0.56 0.16
 Mrf= 1.26 0.22 Mtf=-0.52 0.07
 Principal Axes:
 T Vol= 1.71 Plg=65 Azm=298
 N 0.23 2 203
 P -1.95 24 112
 Best Double Couple: Mo=1.8*10⁻¹⁷
 NP1:Strike=197 Dip=21 Slip= 84
 NP2: 24 69 92

ANP 1.51 357 iPd 39 03.90 1.0
 HKC 6.98 260 iP 40 20.50 0.0
 BAG 7.28 188 eP 40 24.00 -0.9
 SSE 7.41 357 P 40 20.50 -5.9X
 Z 12s 32.00um
 N 10s 41.20um
 E 10s 15.70um
 pP 40 25.60
 S 41 47.00
 Lg 42 29.00
 e 42 37.00
 MCO 7.58 260 eP 40 29.00 0.2
 KAGJ 11.13 46 eP 41 15.80 -2.1
 KUMJ 12.01 41 eP 41 29.90 0.1
 SHNJ 13.33 36 eP 41 47.90 0.6
 SHK 14.51 39 eP 42 09.50 6.6X
 DAV 16.92 166 eP 42 44.00 9.8X
 BJI 16.96 346 eP 42 38.00 3.6X
 2.0s 273.00nm 5.0mb
 Z 14s 16.40um 4.6msz
 N 10s 11.26um
 eS 45 48.00
 KMI 17.25 279 Pd+ 42 39.00 0.5
 1.8s 300.00nm 5.1mb
 Z 12s 47.70um 4.8mszX
 E 10s 34.80um
 sP 42 49.00
 S 46 04.00
 iS 46 10.00
 KKM 18.28 197 ePc 42 54.60 3.4X
 IIDJ 18.40 47 eP 42 54.00 1.4
 MTMJ 18.99 44 eP 43 01.20 1.4
 MAT 19.22 44 (P) 43 01.00 -1.6
 Z 20s 3.55um

CHJJ 19.45 47 eS 46 30.00
 LOE 19.62 255 eP 43 02.80 -2.5
 LZH 19.72 313 iPc 43 08.00 0.6
 43 09.50 1.0
 1.5s 396.00nm 5.5mb
 Z 16s 31.80um 4.6mszX
 31kmX
 pP 43 17.50
 PP 43 28.00
 eS 46 44.00
 sS 46 55.00
 Lg 48 49.00
 e 49 28.00
 PCT 21.04 248 iPc 43 24.00 1.8
 0.1s 1.90nm 4.4mb
 CHG 21.66 261 ePc 43 29.70 1.2
 1.1s 95.57nm 5.1mb
 eS 47 32.00
 NST 21.71 252 eP 43 32.20 3.3X
 BDT 22.11 257 eP 43 34.60 1.7
 OFUJ 22.93 43 eP 43 36.60 -4.3X
 IPM 27.46 229 ePd 44 26.00 2.0
 GUN 32.37 285 P 45 08.40 0.3
 PKI 32.80 285 P 45 11.60 -0.1
 KKN 32.90 285 P 45 12.00 -0.5
 DMN 33.06 285 P 45 14.00 0.0
 GKN 33.47 285 P 45 17.20 -0.2
 MTN 37.47 165 eP 45 49.00 -2.2
 NDI 39.98 287 iPc 46 12.00 -0.2
 HYB 40.68 269 eP 46 18.50 0.4
 PMG 41.29 140 eP 46 24.00 1.0
 GBA 42.88 265 P 46 36.30 0.2
 1.9s 41.00nm 4.8mb
 KOD 44.10 260 eP 46 53.00 6.6X
 MBL 44.59 182 eP 46 39.00 -10.8X
 POO 44.69 273 iPd 46 49.70 -1.2
 OIS 47.33 157 eP 47 11.00 -0.6
 ASPA 48.54 165 eP 47 18.80 -2.3
 0.8s 31.40nm 5.4mb
 iPcP 49 14.90
 eS 53 57.30
 CTA 49.69 149 iPc 47 31.20 1.3
 1.3s 57.69nm 5.4mb
 iS 54 40.00
 HNR 49.87 127 e(P) 47 35.00 3.6X
 ADK 54.37 42 e(P) 48 05.70 1.0
 FORR 54.56 173 eP 48 05.00 -1.2
 KLB 55.07 184 eP 48 08.00 -2.0
 0.6s 10.00nm 5.0mb
 RMQ 56.35 151 eP 48 20.00 0.7
 NWA0 56.43 184 eP 48 18.00 -1.8
 0.5s 5.00nm 4.8mb
 BRS 59.01 148 iPc 48 38.50 0.4
 ADE 60.53 164 eP 48 47.60 -0.8
 1.0s 54.00nm 5.6mb
 ANM 61.60 28 eP 48 55.60 0.3
 DZM 63.00 133 iPc 49 05.10 -0.2
 BWA 63.14 155 eP 49 07.00 1.1
 BFD 63.65 161 ePc 49 14.00 4.8X
 CAN 64.15 155 eP 49 13.90 1.3
 TAB 64.60 302 eP 49 16.00 0.2
 BRW 65.11 21 eP 49 17.90 -0.5
 TTA 65.76 30 ePc 49 22.90 0.2
 1.1s 95.10nm 5.9mb
 SVW 66.11 32 ePc 49 25.70 0.7
 IMA 66.49 26 ePc 49 27.10 -0.3
 1.1s 57.30nm 5.7mb
 FBA 69.09 27 iPc 49 43.00 -0.5
 0.9s 75.40nm 5.9mb
 PMR 69.13 31 ePc 49 42.90 -0.9
 1.4s 140.70nm 6.0mb
 SOD 70.29 336 iP 49 50.00 -0.8
 i 50 07.00
 TOA 70.39 30 ePc 49 51.90 0.3
 KAF 71.79 330 iP 49 59.20 -0.8
 0.4s 2.00nm 4.6mb
 NUR 73.02 329 eP 50 07.20 -0.1
 KAS 73.21 308 eP 50 09.00 0.1
 INK 73.56 22 ePc 50 09.30 -1.0
 1.1s 112.00nm 5.8mb
 MBC 73.68 13 eP 50 10.00 -0.9
 1.0s 12.00nm 4.9mb
 HRI 74.14 300 eP 50 15.00 0.5
 BBTk 74.40 307 eP 50 16.00 0.1
 ZNT 75.03 299 eP 50 20.00 0.5
 MBH 75.95 297 eP 50 25.00 0.1
 ALT 76.59 307 eP 50 27.70 -0.7
 SIT 77.23 33 eP 50 32.00 0.7

HFS	78.20	331	ePKP	50	36.90	0.3	LON	89.56	38	P	51	35.40	0.6	MOX	83.71	323	eP	01	23.00	0.2
	1.0s		17.60nm			5.1mb	BNI	89.56	320	Pc	51	33.90	-1.0		Z	12s	1.90um			5.7Mszx
PVL	78.51	312	iP	50	40.00	1.3	EDM	89.86	29	eP	51	36.50	0.4		N	13s	1.80um			
NB2	78.86	332	P	50	38.50	-1.8	LOR	89.91	323	eP	51	35.10	-1.3		E	13s	1.70um			
	1.1s		11.80nm			4.8mb		1.2s		20.85nm			5.2mb	VBV	84.04	317	eP	01	25.00	0.4
KRA	79.30	320	eP	50	45.50	2.6	Z	20s		0.93um			5.2Msz	BHG	84.43	320	iPd	01	27.60	1.1
	1.2s		50.00nm			5.4mb	LBF	90.01	323	eP	51	35.30	-1.6	VOY	84.63	318	ePc	01	27.10	-0.6
Z	12s		1.80um			5.6Mszx		1.1s		24.40nm			5.3mb	SOTA	85.66	320	iPd	01	32.40	-0.4
E	14s		2.20um				SSF	90.23	323	eP	51	36.80	-1.0		1.1s		11.60nm			5.0mb
								1.0s		11.00nm			5.1mb							
SPC	79.47	319	eP	50	42.90	-1.2	SMF	90.28	322	eP	51	36.90	-1.2	CDF	87.29	323	eP	01	39.80	-0.9
RZN	79.51	311	eP	50	46.00	1.6	AVF	90.47	323	eP	51	37.60	-1.3		0.8s		5.35nm			4.9mb
PGB	79.56	312	iP	50	55.00	10.5X		1.0s		21.00nm			5.4mb	HAU	88.03	323	eP	01	44.00	-0.2
VTS	80.20	312	iP	50	49.00	0.9	BGF	90.89	323	eP	51	39.50	-1.4		0.8s		5.35nm			4.9mb
MMB	80.23	311	eP	50	48.00	-0.1		1.2s		32.75nm			5.5mb	LPG	89.19	320	eP	01	50.40	0.2
KSP	81.07	322	eP	50	52.00	-0.3	NEW	91.21	35	P	51	43.40	1.0		0.7s		12.15nm			5.3mb
			id	51	00.70			1.1s		38.58nm			5.7mb	LPL	89.19	320	eP	01	50.30	0.2
VAY	81.14	311	iP	50	52.30	-0.5	TCF	91.40	323	eP	51	42.50	-0.8		0.8s		9.40nm			5.1mb
	1.2s		52.00nm			5.4mb		1.1s		17.10nm			5.3mb	PNT	89.34	35	eP	01	51.00	0.5
SRO	81.21	318	eP	50	51.20	-1.9	LSF	91.80	323	eP	51	43.70	-1.4		89.83	323	eP	01	52.30	-0.5
SKO	81.65	312	iP	50	55.00	-0.5		1.2s		14.90nm			5.2mb		0.7s		5.50nm			4.9mb
			i	01	11.00		CAF	92.30	322	eP	51	47.10	-0.4	LBF	89.93	323	eP	01	53.00	-0.3
ZST	81.78	319	eP	50	56.00	0.0		1.2s		59.50nm			5.9mb		0.8s		12.10nm			5.2mb
			e	51	04.90		RJF	92.38	322	eP	51	47.50	-0.3	SSF	90.15	323	eP	01	54.00	-0.3
VKA	82.21	319	e(P)	50	58.00	-0.3		1.2s		47.60nm			5.8mb		1.0s		11.00nm			5.1mb
OHR	82.44	312	eP	50	56.00	-3.7X	Z	20s		0.93um			5.2Msz	SMF	90.21	322	eP	01	54.20	-0.3
PRU	82.46	322	eP	50	59.00	-0.6	FRB	92.51	5	eP	51	48.00	0.0		0.8s		17.45nm			5.4mb
	Z	12s				5.5Mszx	LBFM	92.60	42	P	51	51.00	1.9	AVF	90.39	323	eP	01	55.20	-0.2
	N	16s					WDC	92.63	43	eP	51	58.30	9.3X		0.8s		12.10nm			5.2mb
	E	16s									52	08.80		BGF	90.81	323	eP	01	57.30	0.0
							SES	92.83	31	ePd	51	49.80	0.0		0.8s		5.35nm			4.9mb
							LFF	93.04	322	eP	51	50.40	-0.4	MAF	91.17	323	eP	01	59.20	0.2
								1.2s		23.80nm			5.5mb		0.8s		13.45nm			5.3mb
CLL	82.69	323	iPd	51	00.60	-0.1	FFC	93.45	24	eP	51	52.00	-0.5	NEW	91.30	35	P	01	59.50	-0.1
	0.2s		36.00nm			6.2mb		0.8s		19.00nm			5.5mb		1.0s		20.00nm			5.4mb
PTJ	83.51	317	eP	51	04.70	-0.5	LRM	95.22	35	eP	52	01.90	0.7	TCF	91.33	323	eP	01	59.90	0.2
MOX	83.78	323	iPd	51	06.00	-0.4	CMB	95.46	44	ePc	52	03.30	1.2		0.8s		6.70nm			5.0mb
	1.4s		26.00nm			5.3mb	SAO	95.50	46	eP	52	03.50	1.2	CAF	92.23	322	eP	02	04.60	0.7
							PRS	95.79	46	eP	52	05.00	1.4		0.8s		8.05nm			5.2mb
HOF	83.81	323	eP	51	06.50	0.0	LLA	95.91	46	eP	52	04.50	0.3	RJF	92.31	322	eP	02	04.80	0.6
VBV	84.13	317	ePd	51	08.80	0.6	FRI	96.50	45	eP	52	07.80	1.0		0.8s		21.50nm			5.6mb
			e	51	17.30						52	18.50		WDC	92.73	43	eP	02	10.20	3.9X
LJU	84.32	318	eP	51	09.00	-0.2	TNP	97.43	43	P	52	11.00	-0.3	LRM	95.31	35	eP	02	18.50	0.1
GRF	84.48	322	ePc	51	09.60	-0.3	PNJ	114.11	13	e(PKP)	57	19.60	2.7	CMB	95.56	44	eP	02	19.50	0.1
	1.5s		47.00nm			5.5mb	KIC	119.75	293	PKP	57	28.00	-0.5	TNP	97.54	43	P	02	29.10	0.5
Z	22s		0.70um			5.0Msz	ZOBO	168.26	53	PKP	58	45.00	0.1	ZOBO	168.38	53	PKP	09	02.00	0.3
							LPB	168.45	54	PKP	58	47.00	2.2							
							CNCB	168.71	55	PKP	58	47.00	1.9	LPB	168.57	53	PKP	09	05.00	3.4X
											59	56.00		CNCB	168.83	54	PKP	09	07.00	5.0X
BHG	84.51	320	eP	51	10.40	0.3														
CEY	84.53	318	eP	51	10.00	-0.3	SIV	171.96	19	PKP	58	46.40	0.3							
VOY	84.72	318	ePc	51	10.20	-1.1		S.D. = 1.0												
FVI	85.12	319	P	51	12.00	-1.1														
FUR	85.22	321	eP	51	14.40	0.7														
SOTA	85.74	320	iPd	51	15.60	-0.8														
	1.2s		27.30nm			5.3mb														
CTI	86.07	319	P	51	14.00	-4.1X														
CSI	86.12	312	P	51	18.50	0.2														
TDS	86.14	312	P	51	18.00	-0.4														
ABH	86.41	324	eP	51	18.55	-1.0														
SGO	86.42	313	P	51	20.00	0.3														
DUI	86.46	314	P	51	21.00	1.0														
ARV	86.54	316	P	51	20.00	-0.3														
SDI	86.86	314	P	51	21.50	-0.4														
ASS	86.93	316	P	51	22.00	-0.3														
AZI	86.97	315	P	51	22.00	-0.3														
SFI	87.02	317	P	51	23.00	0.5														
SOI	87.07	310	P	51	22.20	-0.7														
CRE	87.10	317	P	51	23.00	-0.2														
CDF	87.36	323	eP	51	20.90	-3.4X														
	1.3s		28.90nm			5.4mb														
PGC	87.57	37	eP	51	26.00	0.9														
MME	87.60	318	P	51	26.30	0.6														
BSF	87.95	322	eP	51	23.60	-3.6X														
BOB	88.06	319	P	51	29.00	1.3														
HAU	88.11	323	eP	51	24.20	-3.6X														
	1.2s		11.90nm			5.1mb														
Z	20s		1.38um			5.4Msz														
RMW	89.16	37	P	51	34.50	1.6														
PNT	89.26	35	ePd	51	34.00	0.8														
	1.0s		50.00nm			5.7mb														
LPG	89.27	320	eP	51	33.10	-0.7														
	0.5s		7.65nm			5.2mb														
LPL	89.27	320	eP	51	32.70	-1.0														
	0.5s		8.00nm			5.2mb														
PGF	89.51	317	eP	51	33.70	-1.0														
	0.8s		10.75nm			5.1mb														
								</												

20d 00h

HFS 78.18 331 ePKP 17 48.10 0.9
1.4s 30.50nm 5.2mb
YKA 83.18 23 eP 18 14.10 0.4
0.8s 4.10nm 4.7mb
FFC 93.33 24 eP 19 03.00 0.4
1.0s 12.00nm 5.3mb
S.D. = 1.2 on 21 of 24 obs.

? DEC 20, 1990 00h 16m 20.40 ± 1.80s
38.901 N ± 11.8km 26.702 E ± 18.6km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

IZM 0.67 139 iPg 16 33.60 -0.1
iSg 16 45.10
EZM 0.97 343 iPn 16 39.00 0.2
DST 1.65 64 ePn 16 50.20 0.6
BNT 1.73 33 ePn 16 50.00 -0.7
S.D. = 0.9 on 4 of 4 obs.

DEC 20, 1990 00h 19m 00.91 ± 0.41s
46.055 N ± 4.3km 6.789 E ± 4.1km
DEPTH = 10.0km (geophysicist)
SWITZERLAND (544)
ML 2.6 (LDG), 2.5 (GEN). MD 2.6 (STR).

EMS 0.10 82 iPc 19 02.10 -1.7
DIX 0.43 86 iPd 19 08.50 -1.3
LPL 0.54 184 Pg 19 11.70 -0.2
Sg 19 18.70
LPG 0.56 183 Pg 19 12.10 -0.4
Sg 19 19.60
LSD 0.65 157 P 19 13.32 -0.8
S 19 22.35
MMK 0.82 90 ePc 19 15.20 -1.7
ORX 0.93 116 P 19 18.77 -0.1
S 19 31.08
RSP 0.96 160 P 19 19.37 0.1
S 19 32.01
BNI 1.01 185 P 19 20.00 -0.1
eSg 19 34.70
RRL 1.14 180 P 19 22.45 0.1
S 19 37.73
TMA 1.45 87 ePd 19 28.20 0.9
PZZ 1.57 172 P 19 30.24 1.3
S 19 50.01
LLS 1.73 61 ePc 19 32.50 1.1
SSB 1.76 245 Pn 19 31.34 -0.3
Pg 19 55.09
BSF 1.78 0 Pg 19 33.00 1.0
Sg 19 54.60
VDL 1.91 76 ePd 19 36.80 2.8
HAU 1.97 351 Pn 19 33.20 -1.6
Sg 20 01.20
FEL 2.00 24 ePn 19 32.87 -2.4
SLE 2.07 34 ePd 19 38.10 1.9
SMF 2.13 287 Pn 19 38.20 1.3
Sg 20 06.60

SAX 2.13 55 ePd 19 39.70 2.5
LBF 2.15 297 Pn 19 37.80 0.4
Pg 19 41.40
Sg 20 10.20
SBF 2.24 168 Pg 19 42.80 4.1X
LOR 2.35 302 Pn 19 41.10 0.9
Sg 20 13.80
CDF 2.38 8 Pn 19 38.20 -2.5
Pg 19 44.20
Sg 20 13.20

OSS 2.41 74 ePd 19 44.40 3.3X
SSF 2.48 295 Pn 19 42.60 0.6
Pg 19 48.20
Sg 20 18.90
AVF 2.49 288 Pn 19 41.60 -0.5
Sg 20 19.00

FRF 2.50 182 Pg 19 48.50 6.3X
LRG 2.62 187 Pg 19 51.00 7.1X
BGF 2.78 282 Pn 19 46.00 -0.3
Sg 20 29.20
MAF 2.94 275 Pn 19 47.40 -1.1
Sg 20 33.60
CAF 3.51 253 Pn 19 56.60 0.0
Sg 20 51.80

S.D. = 1.4 on 29 of 33 obs.

* DEC 20, 1990 00h 56m 10.71 ± 1.69s
23.844 N ± 19.0km 121.683 E ± 12.8km

DEPTH = 10.0km (geophysicist)

4.2mb (1 obs.)
TAIWAN (244)
ML 4.3 (BJI).

ANP 1.34 354 eP 56 41.20 5.7X
QZH 3.02 292 Pn 56 59.20 -0.3
SSE 7.24 357 eP 58 00.00 1.0
NJ2 8.55 344 Pd 58 16.50 -0.9
GYA 13.85 284 eP 59 30.00 0.5
XAN 15.08 315 eP 59 50.50 4.9X
CD2 17.40 298 eP 00 21.50 6.3X
E 10s 0.52um
INK 73.37 22 eP 07 44.00 -0.2
YKA 83.10 23 eP 08 37.70 0.0
0.7s 1.20nm 4.2mb
CDR 90.79 319 eP 09 18.90 3.4X
e 09 24.10
S.D. = 0.8 on 6 of 10 obs.

* DEC 20, 1990 01h 49m 56.09 ± 1.69s
23.694 N ± 19.0km 121.687 E ± 12.8km
DEPTH = 10.0km (geophysicist)
4.1mb (1 obs.)

TAIWAN (244)
ML 4.3 (BJI).

ANP 1.49 354 eP 50 23.80 0.8
QZH 3.09 294 Pn 50 44.40 -1.3
Sn 51 21.50
SSE 7.39 357 eP 51 46.60 0.1
Z 10s 0.95um
NJ2 8.69 344 Pc 52 03.60 -1.2
Z 10s 0.80um
GYA 13.89 285 P 53 14.80 -0.6
N 10s 0.40um
E 10s 1.20um
XAN 15.19 316 P 53 37.00 4.6X
TIY 16.07 333 eP 53 51.80 8.1X
Z 14s 0.80um
N 10s 0.80um
CD2 17.47 298 eP 54 04.10 2.6
E 10s 1.26um
BTO 19.51 333 eP 54 33.00 6.5X
N 11s 0.90um
E 11s 0.60um
GTA 24.26 315 eP 55 17.40 3.0X
FBA 69.03 27 (P) 01 04.00 0.4
INK 73.51 22 eP 01 30.00 -0.4
YKA 83.24 23 eP 02 23.60 -0.2
0.6s 0.80nm 4.1mb
S.D. = 1.4 on 9 of 13 obs.

DEC 20, 1990 02h 38m 29.50 ± 1.44s
33.300 S ± 10.7km 70.073 W ± 7.1km
DEPTH = 116.3 ± 15.8 km

CHILE-ARGENTINA BORDER REGION (127)

FCH 0.18 261 iPd 38 46.70 0.3
iS 38 58.00
PCH 0.49 229 iPd 38 47.90 0.6
iS 39 01.50
PEL 0.54 287 iPc 38 47.50 -0.1
JACH 0.76 325 iPd 38 49.00 -0.3
iS 39 03.40
TACH 0.80 244 iPc 38 50.00 0.3
iS 39 04.00
ROCH 0.85 292 iPc 38 50.10 -0.3
iS 39 04.60
MDZ 1.11 68 iP 38 52.30 -0.4
iS 39 09.80
LCCH 1.26 262 iPc 38 54.50 0.2
iS 39 12.50
LNV 1.29 239 iPc 38 54.10 -0.5
iS 39 13.00
IHA 1.34 281 eP 38 55.00 -0.2
eS 39 13.50
ZON 2.11 34 eP 39 04.50 -0.2
eS 39 30.50
CFA 2.29 43 ePc 39 07.10 0.0
eS 39 34.90
RTLL 2.39 35 iPc 39 08.30 0.0
eS 39 37.70
RTRS 3.16 10 iPd 39 19.20 0.7
S.D. = 0.4 on 14 of 14 obs.

DEC 20, 1990 03h 46m 32.96 ± 0.77s

43.124 N ± 5.1km 13.446 E ± 7.6km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)
MD 2.3 (SSO).

SSO 0.17 354 iPg 46 37.31 0.5
iSg 46 40.90
CIO 0.23 288 iPg 46 37.91 -0.1
iSg 46 42.33
ALP 0.36 164 iPg 46 39.65 -0.7
iSg 46 45.64
AOI 0.44 15 iPg 46 41.52 -0.4
iSg 46 49.37
ARV 0.52 316 Pd 46 42.80 -0.8
eSg 46 51.20
ASS 0.58 265 Pc 46 43.50 -1.2
eSg 46 52.90
AQU 0.77 182 P 46 49.00 1.0
eSg 46 58.40
CRE 1.20 295 P 46 56.70 1.3
eSg 47 13.50
SFI 1.41 305 P 46 59.00 0.4
S.D. = 1.0 on 9 of 9 obs.

DEC 20, 1990 04h 14m 09.23 ± 0.62s
32.438 S ± 7.9km 71.491 W ± 8.5km
DEPTH = 69.5 ± 16.5 km
NEAR COAST OF CENTRAL CHILE (135)

IHA 0.60 192 iP 14 23.50 0.3
iS 14 35.00
ROCH 0.67 143 iPd 14 24.10 -0.1
iS 14 35.00
JACH 0.80 108 iPd 14 24.50 -1.0
iS 14 36.50
PEL 0.98 136 iPd 14 28.00 0.3
LCCH 1.04 184 iP 14 28.50 0.1
iS 14 43.00
SAN 1.23 146 iPd 14 30.90 -0.1
iS 14 46.70
TACH 1.30 159 iPd 14 32.40 0.5
iS 14 49.00
FCH 1.34 132 iPd 14 32.50 -0.3
iS 14 49.00
i 14 50.50
PCH 1.44 145 iPd 14 33.50 -0.3
iS 14 51.70
LNV 1.52 177 iP 14 34.50 -0.3
i 14 50.00
MDZ 2.27 102 eP 14 46.20 0.9
iS 15 16.00
ZON 2.55 70 eP 14 49.50 0.3
RTLL 2.80 68 iPd 14 52.20 -0.4
eS 15 25.00
RTRS 2.85 38 iPd 14 53.90 0.6
CFA 2.88 74 ePd 14 53.80 0.0
eS 15 27.00
CNCB 15.88 12 P 17 50.00 -0.5
LPB 16.13 12 eP 17 55.00 1.5
ZOB0 16.38 12 P 17 55.30 -1.5
S.D. = 0.8 on 18 of 18 obs.

* DEC 20, 1990 04h 21m 44.40s
36.670 N 121.337 W
DEPTH = 2.0km
CENTRAL CALIFORNIA (39)
<BRK>. ML 2.5 (BRK).

SAO 0.13 318 iP 21 46.80 -0.2
LLA 0.32 99 iP 21 50.70 -0.1
iS 21 55.97
PRS 0.34 185 iP 21 51.00 -0.2
iS 21 57.76
GCC 0.64 304 ePc 21 56.40 -0.8
ARN 0.70 347 iPc 21 58.00 -0.3
MHC 0.71 340 eP 21 58.80 0.2
iS 22 09.50
PRI 0.76 134 iPc 21 59.71 0.2
iS 22 12.81
PHAM 1.13 137 eP 22 05.10 -1.2
PCC 1.18 315 iPc 22 05.42 -1.7
FRI 1.35 76 ePd 22 08.30 -1.7
iS 22 25.92
BKS 1.40 330 eP 22 11.10 0.2
e 22 33.50
BRK 1.41 329 eP 22 11.00 0.0
CMB 1.56 29 eP 22 11.50 -1.8

eS 22 28.30
 BCH 1.80 145 eP 22 14.60 -2.2
 14 obs. associated

DEC 20, 1990 05h 01m 21.89±0.65s
 51.521 N ± 5.0km 16.214 E ± 8.1km
 DEPTH = 10.0km (geophysicist)

POLAND (548)
 ML 3.4 (GRF), 2.7 (KRA).

KSP 0.68 176 iPd 01 34.70 -0.7
 0.5s 113.00nm

PRU 1.87 215 Pn 01 54.00 -0.1
 Pg 01 55.70
 e 02 00.00
 eSn 02 13.00
 eSg 02 18.50

CLL 2.02 265 iPn 01 56.60 0.2
 iPg 01 59.20
 eSg 02 26.00

KRA 2.78 120 eP 02 16.20 8.9X
 eS 02 51.40

KHC 2.93 216 iPn 02 09.60 0.2
 iPg 02 15.90
 Sn 02 45.00
 Sg 02 53.00

HOF 3.00 248 iPnc 02 10.10 -0.2
 MOX 3.03 255 ePn 02 11.00 0.3
 iPg 02 18.50
 iSg 02 58.00

WET 3.20 223 iPnd 02 13.00 -0.2
 GRF 3.67 242 iPnc 02 20.00 0.1
 ePg 02 33.30
 eSg 03 16.70

KBA 4.83 204 iPnc 02 36.00 -0.5
 i 03 16.60
 iSn 03 22.90

SQTA 5.40 219 iPnd 02 49.20 4.6X
 i(Sn) 03 51.90

FVI 5.42 206 P 02 45.00 0.3
 OGA 5.77 218 eP 02 49.90 0.2
 CTI 6.25 211 P 02 57.00 0.5
 HFS 8.75 352 eP 03 29.80 -1.5

NUR 1.1s 15.30nm 5.2mb X
 10.16 24 eP 03 52.00 1.3
 S.D. = 0.7 on 14 of 16 obs.

% DEC 20, 1990 05h 18m 50.19±0.77s
 39.204 N ± 7.1km 28.032 E ± 7.6km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 2.7 (ISK).

DST 0.61 49 iPg 19 01.70 -0.9
 eSg 19 15.30

Izm 1.01 217 iPg 19 08.30 -1.0
 EDC 1.15 354 ePn 19 13.00 1.3
 BNT 1.15 356 ePn 19 11.40 -0.4
 EZN 1.46 296 ePn 19 17.00 0.5
 KHL 1.46 127 ePn 19 17.50 0.8
 IZI 1.59 44 ePn 19 17.00 -1.4
 ALT 1.62 95 ePn 19 20.00 1.0

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

DEC 20, 1990 05h 21m 12.91±0.58s
 40.561 N ± 3.7km 23.666 E ± 5.2km
 DEPTH = 10.0km (geophysicist)

GREECE (364)
 MD 2.9 (THE).

PLG 0.25 222 iPg 21 17.80 -0.5
 SOH 0.35 318 iP 21 20.01 -0.2
 eS 21 24.62

THE 0.54 278 iP 21 22.69 -1.1
 eS 21 29.42

SRS 0.56 354 iP 21 24.14 -0.1
 eS 21 32.82

PAIG 0.63 179 iP 21 25.53 -0.1
 iS 21 34.18

KNT 0.84 316 eP 21 28.42 -0.7
 eS 21 39.30

LIT 1.01 243 eP 21 32.01 0.0
 eS 21 45.82

GRG 1.04 293 eP 21 32.38 -0.2
 eS 21 46.94

VAY 1.13 313 iPn 21 34.40 0.4

0.3s 422.00nm
 i 21 45.60
 iSg 21 47.70
 Lg 21 54.00

NEO 1.30 195 ePg 21 36.90 -0.1
 RDO 1.53 67 ePb 21 40.20 -0.1
 eSb 22 04.80

FNA 1.76 278 eP 21 44.66 1.0
 AGG 1.85 214 eP 21 45.34 0.4
 EZN 2.17 109 ePn 21 56.70 7.2X
 SKO 2.19 311 ePn 21 42.50 -7.4X
 OHR 2.24 285 ePn 21 52.00 1.3

S.D. = 0.7 on 14 of 16 obs.

* DEC 20, 1990 05h 46m 49.12±0.86s
 34.845 N ± 16.2km 75.078 E ± 18.6km
 DEPTH = 33.0km (normal)
 4.2mb (4 obs.)

EASTERN KASHMIR (302)

NDI 6.41 163 eP 48 25.00 1.4
 GKN 10.63 127 P 49 22.40 0.0
 KKN 11.20 126 P 49 29.70 -0.5
 0.5s 27.00nm 5.7mb X

PKI 11.43 127 P 49 32.00 -1.4
 GUN 11.53 124 P 49 34.60 -0.1
 GBA 21.25 174 P 51 34.00 -0.7
 HFS 46.40 323 eP 55 12.80 -1.1
 0.4s 3.10nm 4.6mb

NB2 47.69 324 P 55 22.90 -1.2
 0.6s 1.80nm 4.3mb

FBA 75.09 17 P 58 33.00 3.9X
 WRA 78.31 124 P 58 49.00 1.3
 0.7s 1.40nm 4.1mb

YKA 82.69 5 eP 59 12.80 2.5
 0.5s 1.20nm 4.2mb

S.D. = 1.5 on 10 of 11 obs.

& DEC 20, 1990 06h 13m 57.30s
 34.517 N 116.817 W
 DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 2.7 (PAS).

PEC 0.69 205 eP 14 10.40 -0.6
 PLM 1.16 182 iPd 14 19.30 -0.2
 2 obs. associated

DEC 20, 1990 07h 02m 59.35±0.15s
 37.612 N ± 3.5km 70.338 E ± 2.5km
 DEPTH = 8.3km (6 depth phases)
 5.5mb (73 obs.) 5.1msz (10 obs.)

AFGHANISTAN-USSR BORDER REGION (717)
 Felt (V) at Kulyab: (IV) at
 Gorm, Maskavskiy, Obigarm and
 Yaldymch; (III) at Dushanbe,
 Kalaikhum, Kharog, Komarou and
 Namangan; (II) at Tashkent,
 USSR.

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 14S, 30C
 Centroid Location:
 Origin Time 07:03:11.7 0.9
 Lat 38.03N 0.08 Lon 70.48E 0.06
 Dep 76.9 3.0 Half-duration 2.5
 Moment Tensor: Scale 10**17 Nm
 Mrr=-0.23 0.07 Mtt=-0.01 0.13
 Mff=0.24 0.11 Mrt=-0.33 0.10
 Mrf=-0.05 0.10 Mtf=-2.89 0.14

Principal Axes:
 T Val= 3.02 Plg= 3 Azm=226
 N -0.21 83 107
 P -2.81 6 316

Best Double Couple: Mo=2.9*10**17
 NP1: Strike= 1 Dip=83 Slip= -2
 NP2: 91 88 -173

QUE 7.92 202 eP 04 58.00 0.3
 e(S) 05 52.00
 NDI 10.60 145 eP 05 33.30 -1.3
 0.8s 149.25nm 6.4mb

GKN 15.36 124 P 06 34.60 -3.5X
 KKN 15.92 124 P 06 41.40 -4.1X
 DMN 15.93 124 P 06 43.20 -2.4
 PKI 16.15 124 P 06 44.90 -3.7X
 GUN 16.24 122 P 06 45.80 -3.9X

SHI 16.81 247 eP 06 56.00 -0.8
 TAB 18.96 279 eP- 07 24.00 0.6
 KER 19.07 267 eP 07 25.00 0.2
 POO 19.26 170 iPc 07 24.80 -2.3
 1.0s 100.00nm 5.0mb

DHR 20.47 242 iPc 07 40.40 0.4
 HYB 21.38 158 iPd 07 49.00 -0.5
 1.2s 471.40nm 5.8mb

RYD 23.95 244 iPc 08 15.80 1.0
 MJMA 24.24 248 eP 08 16.00 -1.6
 GBA 24.73 163 Pd 08 22.20 -0.2
 1.0s 198.00nm 5.7mb

QASM 25.41 251 eP 08 29.70 0.8
 UQSK 26.46 252 iPd 08 40.70 2.0
 LZH 26.78 83 Pc 08 42.50 0.9
 2.0s 250.00nm 5.6mb
 Z 17s 5.12um 5.1msz X
 E 10s 4.54um

pP 09 22.00 197kmX
 PP 09 46.00
 eS 13 38.00
 sS 14 55.00
 ScP 14 59.00

AFIF 26.81 248 ePd 08 46.30 4.4X
 KOD 28.01 165 eP 08 54.00 0.9
 BHL 28.29 273 P 08 56.00 0.7
 S 14 06.00

KAS 28.34 289 eP 08 56.00 0.4
 HRI 28.42 272 iPc 08 57.50 1.0
 BBTk 29.26 286 iPc 09 05.00 1.0
 DSI 29.29 269 iPc 09 05.00 0.8
 AYN 29.88 263 eP 09 09.80 0.3
 KMI 30.19 105 Pd 09 12.00 -0.6
 2.0s 80.00nm 5.2mb
 Z 12s 3.90um 5.3msz X
 N 12s 5.00um
 E 12s 2.90um

pP 09 24.00 46kmX
 S 14 23.00
 sS 14 43.00

MBH 30.39 266 iPc 09 14.20 0.1
 WAJH 30.71 258 eP 09 17.30 0.5
 BADA 30.82 263 eP 09 15.00 -2.8
 CHG 31.22 119 ePc 09 21.90 0.5
 1.0s 17.00nm 4.9mb
 eS 14 32.00

YLV 31.73 288 iP 09 25.40 -0.4
 ELL 32.05 281 iP 09 29.00 0.3
 BDT 32.33 121 eP 09 31.10 -0.1
 0.9s 84.80nm 5.7mb

CVO 33.61 298 eP 09 44.00 1.9
 MLR 33.79 298 ePd 09 46.50 2.7X
 EZN 34.16 288 eP 09 46.70 -0.1
 NST 34.21 122 eP 09 49.00 1.5
 DIM 34.39 292 eP 09 49.00 0.2
 CMP 34.44 297 ePc 09 50.00 0.8
 KDZ 34.53 291 eP 09 52.00 1.9
 AKSR 34.77 257 iPc 09 55.50 3.3X
 AGRW 34.92 257 iPc 09 55.50 1.9
 TNR 34.95 298 ePc 09 53.00 -0.6
 RZN 35.05 291 iPd 09 54.00 -0.7
 AGMR 35.19 257 iPc 09 58.00 2.2
 PGB 35.33 293 iPd 09 57.00 0.0
 BMR 35.41 302 ePc 09 59.00 1.5
 BJI 35.49 72 eP 09 59.00 0.7
 0.9s 580.00nm 6.4mb
 e 18 02.00
 e 20 19.00

MMB 35.80 291 ePd 10 01.00 0.1
 DEV 35.89 299 ePc 10 03.50 1.9
 VTS 36.02 293 iP 10 03.00 0.0
 NUR 36.62 324 iP 10 08.20 0.7
 0.8s 66.00nm 5.5mb

BZS 36.81 298 eP 10 10.00 0.7
 TIM 37.08 299 eP 10 12.00 0.5
 SKO 37.42 292 iP 10 14.50 0.0
 N 18s 3.15um

i 10 22.20 26kmX
 SPC 37.54 304 iPc 10 15.60 -0.1
 BEO 37.71 297 eP 10 17.00 0.1
 KRA 37.73 306 ePd 10 16.30 -0.7
 1.0s 155.00nm 5.7mb
 Z 16s 3.20um 5.2msz X
 E 16s 3.60um

i 10 19.60 11km
 PSZ 37.83 302 iP 10 18.50 0.6

20d 07h

OHR	38.05	291	eP	10	19.20	-0.7	1.3s	78.30nm	5.4mb	BAG	48.84	101	eP	11	47.50	0.0				
	1.1s	49.00nm				5.2mb		ic	11	06.20	7km	SSF	48.92	304	eP	11	46.80	-0.8		
SOD	38.51	335	iP	10	13.80	-9.5X		i	12	47.00			1.4s	122.00nm			5.7mb			
SRO	38.89	302	eP	10	25.80	-1.0	RMP	43.83	294	P	11	07.00	-0.4	KUMJ	49.03	77	eP	11	48.20	-0.3
KEV	39.57	338	iP	10	32.20	0.0	OGA	43.93	302	iPd	11	07.50	-0.9	AVF	49.09	303	iPd	11	48.10	-0.8
	0.7s	41.40nm				5.2mb		0.8s	25.00nm			5.1mb	BGF	49.49	303	eP	11	51.00	-0.9	
ZST	39.67	303	eP	10	33.30	0.0	CRE	43.94	297	P	11	09.20	0.8		0.8s	38.95nm			5.5mb	
		i				87kmX	SFI	43.94	297	Pd	11	09.00	0.8	LBL	49.57	301	P	11	52.61	0.0
		e				12	MUD	44.10	316	eP	11	09.80	0.4	NAI	49.58	227	eP	11	55.00	1.8
KSP	40.04	307	iP	10	36.50	0.2		1.4s	84.00nm			5.4mb		1.0s	20.00nm			5.1mb		
	1.3s	57.00nm				5.1mb	MCT	44.31	288	P	11	12.00	0.5	PYM	49.59	302	P	11	52.35	-0.5
		e				498kmX	FIR	44.39	297	eP	11	13.00	1.1	KAGJ	49.63	78	eP	11	55.50	2.3
VKA	40.19	303	iPd	10	37.30	-0.3	SAL	44.51	300	P	11	13.40	0.6	MAF	49.76	303	eP	11	53.70	-0.4
	2.0s	209.00nm				5.5mb	OSS	44.56	302	ePd	11	12.90	-0.6	TCF	49.98	303	iPd	11	55.70	-0.1
		i				414kmX	MME	44.69	298	P	11	15.50	0.9	YONJ	50.01	72	eP	11	51.80	-4.3X
		i					BDI	44.79	298	P	11	15.10	-0.2	LSF	50.45	303	iPd	11	58.40	-0.9
AAE	40.26	233	eP	10	41.00	2.2	PII	44.92	297	P	11	16.00	-0.2		1.3s	119.15nm			5.7mb	
LCI	40.33	291	P	10	41.00	2.3	SAX	44.99	303	ePd	11	16.60	-0.5	CAF	50.46	301	eP	11	59.40	-0.1
PTJ	40.71	300	e(P)	10	42.30	0.3	MDI	45.03	300	Pd	11	17.70	0.7		1.2s	71.40nm			5.5mb	
SNG	40.89	130	eP	10	42.80	-0.8	VDL	45.05	301	ePd	11	16.80	-0.7	RJF	50.73	302	eP	12	01.50	0.1
	1.2s	268.75nm				5.8mb	LLS	45.30	302	ePd	11	18.50	-0.9		1.3s	122.75nm			5.7mb	
		eS				16	BOB	45.43	299	P	11	21.20	0.8	Z	20s	0.70um			4.7msz	
PRU	41.21	306	Pd	10	46.20	0.3	SLE	45.46	303	ePd	11	20.00	-0.5	LDF	50.89	306	eP	12	01.60	-1.0
	1.5s	67.00nm				5.1mb	TMA	45.54	301	ePd	11	20.10	-1.2		1.3s	137.20nm			5.7mb	
Z	16s	2.60um				5.2mszX	ZLA	45.58	303	ePd	11	20.80	-0.7	TKSJ	50.92	74	eP	12	03.20	0.2
N	10s	2.00um					VAI	45.66	301	P	11	21.00	-0.9	FLN	51.08	307	eP	12	03.00	-1.0
E	10s	1.40um					FEL	45.76	304	eP	11	22.26	-0.7		1.0s	60.00nm			5.5mb	
		e				10	BNS	45.77	308	iPc	11	22.80	0.0	Z	22s	1.83um			5.1msz	
		e				12		Z	15s	2.20um		5.2mszX	EKA	51.12	315	Pc	12	04.50	0.2	
VBY	41.26	299	ePd	10	46.70	0.4	GWF	45.81	305	P	11	23.38	0.2		1.1s	65.50nm			5.5mb	
BRG	41.52	307	iP	10	48.90	0.5	WTS	45.85	310	eP	11	24.00	0.6	LPO	51.13	301	eP	12	04.20	-0.3
	1.1s	62.00nm				5.3mb		0.8s	32.00nm			5.4mb	LFF	51.36	302	eP	12	05.90	-0.3	
		i				9km	PCP	46.11	299	P	11	26.07	0.4		1.3s	115.55nm			5.6mb	
KMR	41.67	303	iP+	10	51.10	1.4	CDF	46.14	305	P	11	25.25	-0.6	GRR	51.42	306	eP	12	05.60	-1.0
		iPP				12	MMK	46.17	301	ePd	11	26.30	0.0		0.9s	68.80nm			5.6mb	
LJU	41.67	300	eP	10	50.40	0.6	BBS	46.17	303	P	11	25.25	-0.9	MFF	51.46	304	eP	12	05.90	-1.0
CSI	41.70	290	P	10	50.50	0.4	ORX	46.25	301	P	11	24.74	-2.1		1.0s	72.00nm			5.6mb	
CEY	41.80	300	eP	10	51.00	0.2	ECH	46.26	304	P	11	25.89	-0.8	LPF	51.63	306	eP	12	07.10	-1.1
HFS	41.87	321	eP	10	50.10	-1.0	PGF	46.30	296	P	11	25.49	-1.7		0.9s	19.65nm			5.0mb	
	0.7s	110.90nm				5.7mb	CKI	46.33	299	P	11	28.00	0.7	TSRJ	51.77	71	P	12	09.80	0.3
Z	16s	3.38um				5.3mszX	MOF	46.34	304	P	11	27.04	-0.5	WKYJ	52.00	73	eP	12	11.40	0.1
		LR				27	FIN	46.43	299	P	11	26.17	-2.0	EPF	52.24	299	eP	12	11.50	-1.5
KHC	41.91	305	iPd	10	52.40	0.7	DIX	46.53	301	ePd	11	28.90	-0.4		1.4s	61.00nm			5.3mb	
	1.4s	65.00nm				5.2mb	BSF	46.57	304	P	11	28.90	-0.4	BTH	52.58	300	Pd	12	16.20	0.7
Z	16s	1.80um				5.0mszX	ENN	46.59	308	eP	11	29.50	0.3		iP				35kmX	
N	14s	1.20um						1.0s	20.00nm			5.1mb		sP						
E	16s	1.50um					KGM	46.61	132	ePc	11	30.40	0.6	PP				14	19.00	
		e				12	ROB	46.64	299	P	11	30.37	0.5	MTMJ	52.73	69	P	12	16.60	-0.2
TRO	42.04	336	eP	10	52.00	-0.4	IMI	46.73	298	P	11	29.45	-1.1	MRRJ	52.95	61	eP	12	16.90	-1.3
SSE	42.06	83	Pd	10	53.50	0.5	HAU	46.83	304	eP	11	30.50	-0.8	IIDJ	53.24	70	P	12	20.50	0.0
	1.1s	60.00nm				5.2mb		1.3s	93.85nm			5.7mb	NIJ	53.36	68	P	12	20.30	-1.0	
Z	20s	2.00um				5.0msz	LSD	Z	19s	1.67um		5.0msz	ETA	53.51	313	eP	12	23.50	1.3	
N	14s	3.60um					RSP	46.85	301	P	11	31.40	-0.4		1.2s	119.00nm			5.7mb	
E	14s	1.30um					EMS	46.86	300	P	11	29.04	-2.6	DAG	53.54	343	iPc	12	21.10	-1.0
		sP				11	SAOF	46.94	299	P	11	32.14	-0.1		1.1s	103.80nm			5.7mb	
		S				17	ENR	46.97	299	P	11	30.58	-1.9	ECP	53.75	312	eP	12	27.60	3.7X
CLL	42.09	308	iPd	10	53.30	0.3	VITF	47.03	305	P	11	32.41	-0.3		1.1s	145.00nm			5.9mb	
	1.3s	105.00nm				5.4mb	AUTN	47.03	299	P	11	33.25	0.1	YAMJ	53.76	66	P	12	24.00	-0.2
VOY	42.12	300	eP	10	53.70	0.2	STV	47.03	299	P	11	30.37	-2.6	CHJJ	53.82	69	P	12	24.10	-0.6
TRI	42.26	300	P	10	53.00	-1.5	SBF	47.06	298	eP	11	32.90	-0.3	ECRI	54.35	300	eP	12	28.00	-0.6
WET	42.37	305	iPc	10	56.20	0.8		1.4s	339.80nm			6.3mb	ECHE	54.38	296	eP	12	31.00	2.2	
	1.5s	107.00nm				5.4mb	LPG	47.12	301	iPd	11	33.80	-0.1	OFUJ	54.59	65	eP	12	35.30	5.0X
BHG	42.55	303	iPd	10	57.20	0.3	PZZ	47.12	299	P	11	30.99	-2.8	KAKJ	54.63	69	P	12	28.90	-1.7
ATN	42.77	288	P	10	59.00	0.2	AURF	47.12	298	P	11	33.57	-0.2	ETOR	54.69	298	eP	12	32.00	0.8
FVI	42.79	301	P	10	58.80	0.0	LPL	47.13	301	eP	11	33.40	-0.5	TSM	54.75	115	ePc	12	30.30	-1.4
HOF	42.89	307	eP	11	00.30	0.6		1.2s	113.05nm			5.8mb	LWI	55.22	234	iP-	12	35.30	-0.2	
MOX	43.02	307	eP	11	01.50	0.8	TOUF	47.15	299	P	11	33.92	-0.1	ENIJ	56.32	293	eP	12	42.10	-0.8
	1.8s	135.00nm				5.4mb	RRL	47.24	300	P	11	34.27	-0.5	AFC	57.16	294	eP	12	50.00	0.9
		eS				17	BNI	47.28	300	P	11	34.80	-0.2	ECOG	57.17	294	eP	12	48.00	-1.1
SDI	43.05	294	P	11	04.00	2.9X	KBS	47.41	347	eP	11	36.00	0.6	BCAO	57.57	248	iPc	12	51.20	-0.8
NB2	43.18	322	P	11	01.10	-0.8	FRF	47.69	298	eP	11	37.40	-0.7		0.9s	225.00nm			6.2mb	
IPM	43.20	132	ePc	11	03.70	1.2		1.3s	122.75nm			5.8mb			ic				7km	
	1.2s	319.20nm				5.9mb	LMR	47.85	298	eP	11	38.60	-0.7	EPLA	57.81	298	eP	12	53.30	-0.1
		e				12	LRG	47.92	298	eP	11	39.30	-0.5	EHOR	58.15	295	eP	12	55.20	-0.6
						410kmX		1.0s	64.00nm			5.7mb	IFR	59.97	291	iPd	13	07.50	-1.2	
AZI	43.25	294	P	11	06.00	3.3X		Z	21s	0.95um		4.7msz	AVE	61.76	292	iP	13	21.00	0.3	
ARV	43.26	297	P	11	03.40	0.6	CDR	48.27	299	e(P)d	11	41.90	-0.7	TIO	62.78	289	iP	13	29.50	1.8
GRF	43.38	306	iPd	11	04.90	1.3	SHNJ	48.62	75	eP	11	46.10	0.7	GDH	65.79	341	eP	13	46.00	-0.5
	1.3s	88.00nm				5.4mb	LBF	48.63	303	eP	11	44.40	-1.0	MBC	66.25	3	ePc	13	49.60	0.2
Z</																				

	71.22	17 ePc	14 19.80	-0.7		S	20 14.10			DEC 20, 1990 08h 17m 29.67±0.50s			
	1.7s	117.30nm		5.7mb	MVM	3.45 185 iPc	19 41.49	-0.9		54.353 N ± 8.5km 167.541 E ± 6.8km			
INK	72.89	9 eP	14 30.50	0.3		S	20 16.80			DEPTH = 33.0km (normal)			
	0.8s	48.00nm		5.6mb	BIM	3.51 188 eP	19 42.37	-0.8		4.9mb (18 obs.) 4.3Msz (1 obs.)			
TTA	73.17	20 ePc	14 32.40	0.4		S	20 18.30			KOMANDORSKY ISLANDS REGION (4)			
	1.6s	87.20nm		5.6mb	SLB	4.19 186 iP	19 52.31	-0.5		ML 4.7 (PMR).			
FBA	73.55	16 iPc	14 34.30	0.2		eS	20 38.17						
	0.8s	61.50nm		5.7mb	SOA	4.64 187 eP	19 59.94	0.7					
FRB	73.85	342 eP	14 35.00	-0.8		eS	20 51.72			SMY	4.24 110 eP	18 34.80	1.3
KIC	74.33	266 P	14 38.24	-1.2	SVV	4.71 188 eP	19 59.70	-0.4		ADK	9.80 98 eP	19 49.90	-1.4
SLR	74.37	219 iPc	14 39.00	-0.5		eS	20 51.90			ANM	17.00 42 eP	21 28.30	2.2
	1.3s	28.85nm		5.1mb	SVB	4.76 188 iP	20 00.34	-0.5		TTA	20.55 51 eP	22 07.40	-0.3
TIC	74.38	266 P	14 38.46	-1.3		eS	20 53.22				0.9s	21.80nm	4.5mb
LIC	74.64	266 P	14 40.58	-0.6	LPR	5.05 274 P	20 03.10	-1.9		SVW	20.57 56 eP	22 08.10	0.2
Z	20s	2.00um		5.4Msz	CPD	5.09 271 iP	20 04.50	-1.0		IMA	22.12 43 ePc	22 23.80	0.2
SVW	74.74	21 ePc	14 41.70	0.5		S	20 51.00				1.2s	37.70nm	4.7mb
PRY	75.76	219 eP	14 48.00	0.5	SJG	5.31 272 iP	20 07.60	-1.1		BRW	22.97 29 eP	22 32.40	0.7
PMR	76.08	18 ePc	14 48.40	-0.3	PORP	5.77 271 iP	20 14.00	-1.2		PMR	23.70 55 eP	22 40.20	1.4
	1.5s	123.20nm		5.8mb	BOT	6.81 181 eP	20 30.68	1.0		Z	20s	1.00um	4.3Msz
TOA	76.34	17 ePc	14 51.20	0.9	TRN	7.36 186 eP	20 38.51	1.0		FBA	24.37 47 ePd	22 45.50	0.1
SEK	76.84	218 iPc	14 54.50	0.9		eS	21 55.32				0.8s	49.40nm	5.1mb
	1.0s	10.00nm		4.9mb	TBH	7.50 184 eP	20 39.78	0.4		TOA	25.08 53 eP	22 51.90	-0.4
KDC	78.42	22 eP	15 02.00	0.3	BLA	25.89 322 P	24 21.50	1.2		INK	30.13 39 ePd	23 37.60	-0.4
FRS	79.15	219 iPd	15 25.00	19.0X		0.6s	5.00nm	4.3mb		MBC	34.11 24 eP	24 12.50	-0.2
	1.0s	20.00nm			FVM	32.81 313 P	25 22.00	-0.2			0.5s	6.00nm	4.8mb
YKA	80.16	2 eP	15 11.00	0.0		0.5s	8.40nm	4.9mb		YKA	39.17 46 eP	24 55.00	-0.5
	0.8s	31.00nm		5.3mb	CCH	35.59 189 P	25 46.80	0.1			0.4s	2.90nm	4.4mb
SCH	80.86	336 ePc	15 15.40	0.4	ALO	43.99 302 eP	26 57.00	0.9		EDM	44.41 58 iPd	25 38.80	0.2
	1.0s	61.00nm		5.6mb		0.9s	1.47nm	3.8mb		NEW	45.40 65 P	25 46.00	-0.5
WRA	83.03	122 P	15 24.00	-2.7	ANMO	43.99 302 P	26 57.80	1.7			1.0s	17.50nm	4.9mb
	0.9s	21.00nm		5.3mb		0.5s	1.41nm	4.0mb		LZH	46.72 274 eP	25 58.50	1.2
FORR	86.89	133 eP	15 44.00	-1.7	GOL	44.24 309 P	26 58.00	0.0			2.0s	36.00nm	5.0mb
FFC	87.79	356 iPc	15 50.20	0.3		0.7s	1.58nm	4.0mb		LBFM	47.14 76 P	26 01.50	0.9
	1.0s	43.00nm		5.7mb	RSSD	44.71 315 P	27 02.50	0.7		SES	47.25 60 eP	26 01.00	-0.1
EDM	89.48	2 ePc	15 59.00	1.0		0.7s	2.94nm	4.3mb		FFC	48.89 50 eP	26 13.50	-0.2
SES	92.36	1 eP	16 12.00	0.6	FRB	46.02 355 ePc	27 12.80	1.3			1.0s	18.00nm	5.1mb
PNT	93.00	7 eP	16 15.00	0.7	BW06	48.11 312 P	27 30.00	1.4		DAG	49.09 2 iPd	26 14.50	-0.4
	0.9s	25.00nm		5.6mb	SES	51.41 321 eP	27 54.00	0.5			0.6s	8.67nm	5.0mb
NEW	94.24	5 P	16 21.40	1.3	LIC	55.36 95 P	28 12.30	-11.0X		TNP	52.00 76 P	26 38.30	0.3
	1.0s	20.00nm		5.5mb	KIC	55.59 95 P	28 14.00	-10.9X			1.3s	28.91nm	5.1mb
GMW	94.41	9 P	16 22.40	1.5	LPF	56.52 44 eP	28 30.80	-0.3		BW06	53.00 66 P	26 45.10	-0.3
RMW	94.61	8 P	16 23.20	1.3	GRR	56.70 44 eP	28 32.20	-0.2			1.4s	24.65nm	5.0mb
LON	95.31	8 P	16 26.60	1.5		0.8s	10.75nm	4.9mb		FRB	54.49 27 eP	26 55.00	-0.7
LRM	96.91	2 eP	16 33.70	1.1	EPF	56.76 50 eP	28 33.10	0.1		MSU	54.53 72 P	26 57.20	0.5
RSSD	98.49	356 P	16 42.20	2.5		0.9s	11.45nm	4.9mb		RSSD	54.97 62 P	26 59.30	-0.5
CCH	136.92	286 PKP	22 25.80	0.6	MFF	56.88 46 eP	28 33.60	-0.1		GOL	57.40 66 P	27 18.00	0.6
ZOBO	137.74	289 PKP	22 26.00	-1.1	FLN	57.02 43 eP	28 33.80	-0.8			1.4s	32.64nm	5.2mb
Z	22s	0.58um		5.3Msz		0.9s	11.45nm	4.9mb		ANMO	60.28 71 P	27 37.00	-0.2
		PS	37 40.00		LPO	57.55 48 eP	28 38.40	-0.1			1.1s	22.15nm	5.2mb
		LR	10 00.00			0.9s	13.10nm	5.0mb		ALO	60.28 71 eP	27 36.60	-0.7
LPB	137.89	288 PKP	22 28.00	0.8	YKA	57.88 334 eP	28 39.20	-1.3			0.9s	3.78nm	4.5mb
	Z	22s	1.48um	5.7Msz		0.6s	2.90nm	4.5mb		NB2	63.43 347 P	27 56.80	-1.0
		e	25 45.00		LSF	57.98 46 eP	28 41.10	-0.3			0.7s	6.20nm	4.8mb
		LR	14 08.00			0.8s	8.05nm	4.8mb		HFS	63.97 346 eP	27 59.80	-1.5
CNCB	137.97	288 PKP	22 28.20	0.7	CAF	58.20 48 eP	28 42.80	-0.2			0.5s	2.00nm	4.5mb
		i	25 45.00			0.9s	7.35nm	4.7mb		ELC	67.53 57 P	28 23.60	-0.8
PEL	148.07	266 ePKP	22 46.00	2.2	TCF	58.45 46 eP	28 44.60	-0.2		OLY	67.81 60 P	28 24.60	-1.6
SAN	148.15	266 ePKP	22 45.50	1.6		1.2s	14.90nm	5.0mb		KHC	74.58 343 P	29 08.70	2.0
LNV	148.90	265 ePKP	22 46.00	1.0	AVF	59.29 46 eP	28 50.20	-0.4		WRA	79.29 212 P	29 33.00	-0.1
	S.D. = 1.0	on 248 of 265 obs.				1.0s	8.00nm	4.8mb			1.0s	2.70nm	4.2mb
					SSF	59.42 46 eP	28 51.00	-0.5		ASPA	82.92 211 eP	29 52.30	0.1
						1.0s	6.00nm	4.7mb			1.1s	7.20nm	4.7mb
					SMF	59.61 46 eP	28 52.50	-0.3			S.D. = 0.9	on 35 of 35 obs.	
						0.9s	10.65nm	5.0mb		&	DEC 20, 1990 08h 34m 50.58s		
					LOR	59.69 45 eP	28 52.70	-0.6			59.903 N 152.214 W		
						0.9s	10.65nm	5.0mb			DEPTH = 88.3km		
					LBF	59.74 46 eP	28 52.00	-1.7			SOUTHERN ALASKA (2)		
						1.0s	10.00nm	4.9mb			<AGS-P>.		
					LPL	61.53 48 eP	29 06.60	0.4		HOM	0.38 130 iP	35 04.06	-0.4
						0.9s	5.75nm	4.7mb			eS	35 14.15	
					LPG	61.54 48 eP	29 06.80	0.4					
					BSF	61.71 45 eP	29 06.20	-1.1		INE	0.46 291 iP	35 03.95	-1.3
					CDF	62.08 44 eP	29 09.00	-0.7			eS	35 13.84	
					MBC	65.39 347 eP	29 31.50	0.7		NNL	0.48 73 iP	35 05.47	0.2
						0.6s	6.00nm	4.9mb		XLV	0.51 151 eP	35 04.50	-1.0
					NB2	65.59 31 P	29 33.20	0.9			eS	35 15.15	
						0.8s	6.60nm	4.8mb		OPT	0.57 244 iP	35 05.19	-0.8
					CLL	65.91 41 iP	29 34.90	0.4			eS	35 16.71	
						0.9s	9.00nm	4.9mb		RED	0.59 332 iP	35 05.41	-0.8
					BRG	66.50 42 iPc	29 38.60	0.3			eS	35 17.34	
						0.9s	15.00nm	5.1mb		RSO	0.62 335 iP	35 06.00	-0.7
					HFS	66.72 32 eP	29 39.60	0.1			eS	35 17.84	
						0.6s	2.20nm	4.4mb		CNPM	0.62 127 iP	35 05.77	-0.7
					INK	67.11 337 ePd	29 41.20	-0.6			eS	35 17.19	
					BCAO	78.29 89 ePc	30 50.90	2.2		RS2	0.62 334 iP	35 06.03	-0.7
						0.7s	3.00nm	4.4mb			iS	35 17.86	
					S.D. = 0.9	on 61 of 63 obs.							

? DEC 20, 1990 17h 19m 25.97±2.93s
7.256 S ±17.2km 128.862 E ±17.8km
DEPTH = 104.5 ± 31.8 km
4.9mb (4 obs.)

BANDA SEA (280)

MTN	5.99	158	iPc	20	54.80	1.2
	0.4s	208.00nm				5.7mb
KNA	8.44	181	eP	21	26.20	-1.0
		iS	22	52.00		
MBL	16.35	211	eP	23	11.00	0.3
		eS	25	58.00		
OIS	16.83	143	eP	23	16.50	-0.1
		eS	26	12.00		
ASPA	17.02	164	eP	23	17.90	-1.1
	0.4s	22.20nm				4.8mb
		eS	26	11.30		
FORR	23.48	182	eP	24	28.00	0.9
		eS	28	50.00		
GUN	54.28	312	P	28	44.20	0.1
	0.6s	9.00nm				5.0mb
KKN	54.65	312	P	28	46.60	-0.1
GKN	55.25	311	P	28	50.80	-0.1
	0.4s	5.00nm				4.9mb
						S.D. = 1.0 on 9 of 9 obs.

? DEC 20, 1990 17h 27m 16.04±6.43s
31.996 S ±59.1km 69.405 W ±63.9km
DEPTH = 130.0km (geophysicist)

SAN JUAN PROVINCE, ARGENTINA (137)

RTCV	0.75	80	iPc	27	37.00	-0.1
		S	27	53.00		
RTLL	1.04	50	iPd	27	39.30	-0.4
		eS	27	57.20		
CFA	1.07	69	eP	27	40.30	0.4
		eS	27	58.80		
RTRS	1.82	358	e(P)	27	48.30	0.1
						S.D. = 0.5 on 4 of 4 obs.

DEC 20, 1990 18h 27m 17.17±0.86s
38.753 N ±8.5km 21.260 E ±8.3km
DEPTH = 5.0km (geophysicist)

GREECE (364)

MD 2.9 (ATH).

EVR	0.46	69	iPg	27	25.20	-1.2
		eSg	27	33.50		
VLS	0.78	223	ePg	27	31.40	-1.4
		eSg	27	45.00		
KEK	1.49	311	ePg	27	45.80	1.2
KZN	1.60	14	ePb	27	47.00	0.7
NEO	1.63	70	ePb	27	46.80	0.2
ITM	1.66	161	ePg	27	50.00	3.0X
OHR	2.38	352	ePn	27	56.50	-1.0
VLI	2.43	146	ePn	27	59.60	1.5
						S.D. = 1.5 on 7 of 8 obs.

* DEC 20, 1990 18h 37m 44.19±0.69s
0.318 S ±8.6km 29.460 E ±12.5km
DEPTH = 33.0km (normal)

4.5mb (1 obs.) 3.4Msz (1 obs.)

ZAIRE REPUBLIC (567)

mbLg 4.6 (BUL).

NAI	7.40	97	iPc	39	33.00	0.1
	0.8s	18.66nm				5.1mb X
		iS	41	22.00		
AAE	13.12	45	eP	40	49.50	-1.7
KRI	16.41	179	iPc	41	33.50	-0.4
		eSn	44	34.00		
		iLg	46	27.50		
NPA	17.58	147	eP	41	54.00	5.5X
		iSn	44	34.00		
		iSg	45	52.00		
BUL	19.72	182	eP	42	14.00	-0.3
		eSn	45	53.00		
		iLg	48	07.50		
LIC	35.03	281	P	44	42.00	5.8X
	Z 20s	0.08um				3.4Msz
KHC	51.13	347	Pd	46	46.50	0.6
GKN	59.84	57	P	47	50.80	1.4
KKN	60.32	58	P	47	53.40	0.6
GUN	60.86	58	P	47	57.20	0.6
KAF	62.31	358	eP	48	05.20	-0.1
NB2	62.78	350	P	48	07.70	-0.8

0.9s 3.70nm 4.5mb
S.D. = 1.0 on 10 of 12 obs.

DEC 20, 1990 20h 35m 20.99±0.60s
33.915 N ±7.4km 47.140 E ±9.8km
DEPTH = 33.0km (normal)
4.2mb (3 obs.)

WESTERN IRAN (347)

Felt at Bakhtoran.

KER	0.44	356	iPd	35	29.60	-1.2
TAB	4.20	351	eP	36	39.00	14.6X
MJMA	8.19	192	eP	37	19.00	-1.5
OASM	8.40	203	ePc	37	23.80	0.4
UOSK	9.10	208	eP	37	33.70	0.6
AFIF	10.37	201	eP	37	54.30	3.7X
GKN	32.56	90	P	41	51.40	-0.2
DMN	33.09	91	P	41	56.20	-0.1
KKN	33.17	90	P	41	56.80	-0.1
PKI	33.35	90	P	41	59.50	0.8
GUN	33.63	90	P	42	01.20	0.1
HFS	34.10	331	eP	42	05.40	1.1
	0.5s	2.00nm				4.3mb
BCAO	39.59	229	ePd	42	55.10	4.0X
	0.6s	4.00nm				4.4mb
YKA	82.81	352	eP	47	47.70	4.9X
	0.5s	0.40nm				3.8mb
						S.D. = 1.0 on 10 of 14 obs.

% DEC 20, 1990 21h 03m 27.82±0.87s
39.299 N ±7.7km 27.549 E ±8.5km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.4 (ISK).

DST	0.89	70	ePg	03	44.40	-0.5
		eSg	03	54.90		
IZM	0.93	194	ePn	03	45.70	0.1
EZN	1.08	299	ePn	03	48.00	-0.2
BNT	1.09	15	ePn	03	48.00	-0.4
KCT	1.14	33	ePn	03	50.00	0.9
						S.D. = 0.8 on 5 of 5 obs.

% DEC 20, 1990 21h 51m 15.92±2.82s
16.270 N ±13.3km 61.697 W ±22.1km
DEPTH = 10.0km (geophysicist)

LEEWARD ISLANDS (92)

ML 2.1 (FDF).

SEG	0.23	54	iP	51	20.81	0.0
PAG	0.24	176	iPc	51	20.77	-0.3
		S	51	25.20		
DOG	0.25	162	iPc	51	21.21	0.0
SFG	0.48	92	eP	51	25.61	-0.1
BBL	0.77	164	eP	51	31.40	0.4
						S.D. = 0.4 on 5 of 5 obs.

% DEC 20, 1990 22h 42m 35.88±0.79s
39.770 N ±6.7km 29.223 E ±6.5km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.4 (ISK).

DST	0.49	250	iPg	42	45.20	-0.6
		eSg	42	53.40		
IZI	0.60	19	iPg	42	48.10	0.1
		eSg	42	59.90		
YLV	0.80	8	iPg	42	50.90	-0.6
		iSg	43	03.90		
KCT	0.82	306	iPn	42	52.20	0.4
ALT	0.99	136	iPg	42	55.00	0.2
		iSg	43	07.00		
BNT	1.16	301	ePn	42	58.00	0.5
						S.D. = 0.6 on 6 of 6 obs.

? DEC 20, 1990 22h 44m 47.14±0.72s
51.085 S ±23.4km 15.879 E ±21.9km
DEPTH = 10.0km (geophysicist)
4.8mb (4 obs.)

SOUTHWEST OF AFRICA (413)

BUL	32.47	23	iPc	51	20.60	0.7
	0.9s	7.56nm				4.6mb
KRI	35.90	23	iPc	51	48.00	-1.4
BCAO	55.35	3	ePd	54	31.80	8.4X
	1.0s	15.00nm				5.0mb
		ic	54	39.80		

CNCB	73.28	264	P	56	22.00	0.8
LPB	73.56	264	eP	56	20.00	-2.7
		e	56	40.00		
ZOBO	73.78	264	P	56	23.80	-0.3
	Z 24s	0.08um				3.9MszX
		LR	20	20.00		

ASPA	87.82	126	iPc	57	37.10	-0.7
	0.7s	14.70nm				5.4mb
WRA	91.13	124	P	57	53.00	-0.4
	1.1s	2.30nm				4.4mb
TNP	144.76	267	PKP	04	24.00	-1.5
FRI	145.65	263	ePKPd	04	27.50	0.8
LRM	145.92	282	ePKP	04	28.40	1.1
CM8	146.72	264	ePKPd	04	30.70	2.2
SES	147.01	290	ePKP	04	30.00	1.4
ORV	148.32	265	e(PKP)	04	35.50	4.5X
MIN	148.84	267	ePKP	04	36.70	4.7X
MBC	149.39	341	ePKP	04	40.00	8.4X
	1.1s	9.00nm				
WDC	149.56	266	e(PKP)	04	37.80	4.9X
YKA	151.33	313	ePKP	04	41.90	7.1X
	1.0s	3.80nm				
						S.D. = 1.6 on 12 of 18 obs.

& DEC 20, 1990 23h 29m 51.80s

58.790 N 152.487 W

DEPTH = 51.5km

2.7mb (1 obs.)

KODIAK ISLAND REGION (13)

<AGS-P>.

SYI	0.19	164	iP	29	59.79	-0.5
		iS	30	05.93		
CDD	0.62	284	iP	30	03.98	-0.7
AUE	0.73	322	iP	30	05.58	-0.5
		eS	30	15.53		
AUI	0.73	319	iP	30	05.31	-0.8
		eS	30	14.93		
AUP	0.75	320	iP	30	05.83	-0.6
		eS	30	16.01		
AGU	0.75	320	iP	30	05.85	-0.7
		eS	30	16.33		
XLV	0.77	30	eP	30	05.96	-0.7
		eS	30	16.78		
OPT	0.95	337	iP	30	08.19	-0.9
		eS	30	21.25		
HOM	0.97	26	eP	30	08.59	-0.8
		eS	30	22.07		
CNPM	0.98	41	eP	30	08.53	-1.0
MCNL	1.04	293	iP	30	09.24	-1.0
		eS	30	22.06		
KDC	1.05	180	iP	30	09.50	-0.8
INE	1.31	34				

20d 23h

VZW 3.75 50 eP 30 45.25 -3.4
 CUT 3.79 16 eP 30 46.63 -2.4
 VLZ 3.88 50 eP 30 46.84 -3.6
 KLU 4.26 48 eP 30 52.75 -3.0
 TRF 4.80 12 eP 31 00.79 -2.7
 GLB 5.09 55 eP 31 03.71 -3.8
 TGL 5.26 64 eP 31 06.11 -3.9
 PAX 5.41 36 eP 31 08.62 -3.5
 BALM 5.58 62 eP 31 10.26 -4.1
 YAH 5.68 69 iP 31 12.86 -3.1
 YKA 18.75 63 eP 34 17.10 8.5
 0.6s 0.30nm 2.7mb
 50 obs. associated

DEC 21, 1990 00h 22m 43.06 ± 0.37s
 58.254 N ± 4.1km 142.787 W ± 2.1km
 DEPTH = 10.0km (geophysicist)
 4.4mb (3 obs.)
 GULF OF ALASKA (15)
 ML 4.2 (PMR).

KAIM 1.88 334 iP 23 16.99 1.5
 YKU 2.05 49 ePd 23 39.73
 YAH 2.18 14 iP 23 18.20 0.2
 MID 2.19 304 iPc 23 20.80 0.7
 PNL 2.26 50 iP 23 20.70 0.7
 BCPM 2.36 42 eP 23 20.26 -0.8
 HON 2.36 58 iP 23 21.63 -0.8
 TGL 2.51 360 iP 23 21.26 -1.2
 23 25.13 0.5
 23 54.44
 SGAM 2.57 332 iP 23 54.44
 CVA 2.75 328 eP 23 26.55 1.1
 BALM 2.80 4 eP 23 28.18 0.2
 23 29.29 0.5
 24 01.68
 CTGM 2.82 15 eP 23 29.50 0.4
 24 01.49
 24 01.49
 HIN 2.87 320 iP 23 30.55 0.8
 MTU 3.05 307 eP 23 32.49 0.3
 24 08.19
 LTI 3.17 307 eP 23 34.23 0.4
 GLB 3.24 351 iP 23 35.20 0.2
 24 12.19
 KNIM 3.29 312 iP 23 35.46 -0.3
 24 12.39
 24 12.39
 VLZ 3.40 330 iP 23 37.06 -0.1
 24 15.70
 24 15.70
 VZW 3.40 327 eP 23 37.10 -0.2
 24 16.92
 24 16.92
 GLI 3.43 322 iP 23 37.33 -0.2
 PLBC 3.55 67 P 23 37.50 -1.8
 KLU 3.61 335 iP 23 40.47 0.2
 HYT 3.73 44 P 23 41.60 -0.4
 SEW 3.90 301 eP 23 43.55 -0.7
 TZL 4.02 342 iP 23 47.33 1.3
 SIT 4.18 103 eP 23 43.70 -4.6X
 TOA 4.22 338 iPc 23 49.70 0.9
 KNK 4.27 320 eP 23 49.80 0.3
 SLKM 4.42 304 eP 23 50.98 -0.8
 SDG 4.50 343 eP 23 53.00 0.2
 PMS 4.55 314 eP 23 53.30 -0.3
 CNPM 4.57 290 iP 23 54.30 0.6
 PLRM 4.63 319 eP 23 54.61 0.1
 PMR 4.63 319 ePc 23 54.80 0.2
 WHC 4.64 54 P 23 53.80 -1.1
 GHO 4.68 321 eP 23 55.29 -0.2
 NNL 4.73 296 eP 23 57.38 1.2
 XLV 4.79 288 eP 23 56.89 -0.1
 HOM 4.80 291 eP 23 57.92 0.9
 PAX 4.91 346 eP 23 58.31 -0.5
 PWA 4.93 317 eP 23 58.88 0.0
 NKA 4.98 304 eP 23 59.65 0.1
 SYI 5.06 278 eP 24 01.48 0.8
 SUA 5.14 312 eP 24 00.98 -1.0
 KDC 5.19 269 eP 24 02.70 0.2
 RDT 5.44 299 eP 24 05.18 -0.9
 SPU 5.53 306 eP 24 06.23 -1.2
 REF 5.54 298 eP 24 07.50 -0.3
 RED 5.55 297 eP 24 06.61 -1.2
 RSO 5.56 298 eP 24 08.06 0.1
 RS2 5.56 298 eP 24 07.81 -0.2
 CUT 5.58 321 eP 24 08.06 0.0
 RDN 5.58 298 eP 24 06.45 -1.8
 OPT 5.58 289 eP 24 08.77 0.6
 INE 5.59 293 eP 24 08.11 -0.3
 AUP 5.64 286 eP 24 08.93 -0.1
 AUI 5.64 286 eP 24 09.24 0.3

CKL 5.66 305 eP 24 08.13 -1.2
 NCT 5.67 298 eP 24 08.75 -0.8
 NCG 5.68 308 eP 24 08.57 -1.1
 CDD 5.72 281 eP 24 10.83 0.7
 SKT 5.75 314 eP 24 09.48 -1.0
 DDM 5.75 346 eP 24 11.07 0.5
 HUR 5.81 327 eP 24 12.71 1.3
 RND 5.96 333 eP 24 13.02 -0.4
 DWY 6.04 14 P 24 15.10 0.6
 PD8 6.09 289 eP 24 15.26 0.1
 FBA 7.08 342 eP 24 26.10 -3.1X
 SVW 7.10 299 eP 24 28.70 -0.8
 TTA 8.01 311 eP 24 41.30 -1.0
 INK 10.90 18 P 25 21.00 -1.0
 0.7s 2.80nm 4.7mb X
 19.91 16 eP 27 17.50 0.4
 1.0s 18.00nm 4.3mb
 SES 19.96 99 eP 27 17.00 -0.9
 LRM 22.20 111 eP 27 41.80 0.7
 FFC 22.55 81 eP 27 45.00 0.8
 0.7s 10.00nm 4.4mb
 TNP 26.14 129 eP 28 20.50 1.5
 FRB 34.50 49 eP 29 34.00 1.3
 DAG 40.73 17 eP 30 25.50 0.7
 0.8s 7.46nm 4.5mb
 S.D. = 0.8 on 76 of 78 obs.

* DEC 21, 1990 01h 29m 40.65 ± 0.97s
 34.942 N ± 13.6km 139.441 E ± 10.8km
 DEPTH = 160.7 ± 8.3 km
 4.2mb (1 obs.)
 NEAR S. CDAST OF HONSHU, JAPAN (230)

CHJJ 1.16 342 iP+ 30 08.20 0.1
 S 30 27.40
 IIDJ 1.36 294 iPd 30 10.30 0.3
 S 30 31.50
 KAKJ 1.39 25 iP+ 30 10.10 -0.1
 S 30 29.90
 MAT 1.88 328 iPd 30 14.90 -0.6
 iS 30 38.90
 MTMJ 2.11 321 iPd 30 18.10 -0.1
 S 30 44.60
 NIJJ 2.32 351 iPd 30 20.30 -0.2
 S 30 48.70
 YAMJ 3.26 8 eP 30 33.90 1.7
 eS 31 09.70
 OFUJ 4.50 23 eP 30 47.40 -0.9
 eS 31 35.50
 GUN 45.79 277 P 37 48.70 0.4
 PKI 46.30 276 P 37 52.00 -0.3
 KKN 46.32 277 P 37 52.40 0.0
 GKN 46.77 277 P 37 55.60 -0.2
 WRA 54.80 186 P 38 56.00 0.1
 0.5s 2.00nm 4.2mb
 S.D. = 0.7 on 13 of 13 obs.

* DEC 21, 1990 03h 25m 49.46 ± 0.69s
 41.489 N ± 13.6km 142.255 E ± 13.3km
 DEPTH = 33.0km (normol)
 4.7mb (7 obs.)
 HOKKAIDO, JAPAN REGION (224)

MAT 5.86 214 eP 27 16.00 -0.3
 0.7s 30.82nm 5.0mb X
 (S) 28 33.00
 BRW 42.08 25 eP 33 40.00 0.7
 IMA 42.56 33 eP 33 44.20 0.8
 0.9s 10.40nm 4.6mb
 FBA 45.03 35 eP 34 03.80 0.5
 GUN 47.51 272 P 34 24.10 0.3
 0.6s 25.00nm 5.4mb
 KKN 48.02 272 P 34 27.40 -0.3
 0.7s 14.00nm 5.1mb
 DMN 48.25 272 P 34 30.30 0.8
 GKN 48.39 273 P 34 31.00 0.6
 INK 50.15 29 eP 34 43.50 0.3
 MBC 52.08 17 eP 34 58.00 0.2
 YKA 59.65 32 eP 35 50.90 -1.4
 0.5s 1.00nm 4.2mb
 DAG 61.41 355 iPc 36 03.30 -0.8
 0.7s 6.85nm 4.9mb
 HFS 70.31 335 eP 37 00.60 -0.6
 0.4s 3.10nm 4.7mb
 NB2 70.34 337 P 37 00.60 -0.9
 0.8s 4.00nm 4.5mb
 FRB 72.30 14 eP 37 13.00 -0.1

KHC 79.09 329 eP 38 04.00 12.1X
 CCH 145.80 54 (PKP) 45 21.90 -5.0X
 S.D. = 0.7 on 15 of 17 obs.

DEC 21, 1990 03h 26m 43.09 ± 0.24s
 16.626 S ± 8.4km 177.556 W ± 5.7km
 DEPTH = 10.0km (geophysicist)
 5.2mb (16 obs.) 5.5msz (12 obs.)

FIJI ISLANDS REGION (181)
 Mo=1.6*10**18 Nm (PPT).
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 25C
 Centroid Location:
 Origin Time 03:26:46.4 0.6
 Lat 16.53S 0.05 Lon 176.95W 0.05
 Dep 15.0 FIX Half-duration 3.3
 Moment Tensor; Scale 10**17 Nm
 Mrr=-0.45 0.12 Mtt=-6.22 0.16
 Mff= 6.67 0.17 Mrt= 2.16 0.43
 Mrf= 0.74 0.42 Mtf= 0.35 0.14
 Principal Axes:
 T Val= 6.77 Plg= 7 Azm=273
 N 0.17 70 22
 P -6.94 18 180
 Best Double Couple: Mo=6.9*10**17
 NP1: Strike=318 Dip=72 Slip=-171
 NP2: 225 82 -18

NDE 3.00 270 eP 27 29.50 -2.1
 KRO 3.00 256 eP 27 29.50 -2.1
 MBU 3.58 264 iP 27 38.10 -1.8
 eS 28 25.20
 OVA 3.66 253 eP 27 40.00 -1.0
 VUN 4.04 250 eP 27 46.10 -0.3
 SVA 4.08 248 P 27 49.30 2.4
 SGE 4.43 257 iP 27 52.10 0.1
 NDF 4.90 256 eP 28 03.90 5.3X
 DZM 16.04 248 iPd 30 33.40 2.9X
 HNR 23.04 285 eP 31 51.00 1.4
 eS 36 10.00
 SNZO 25.49 194 P 32 12.00 -1.0
 COO 31.13 238 ePd 33 05.00 0.7
 RMO 32.75 247 eP 33 19.00 0.6
 CTA 34.48 259 iPc+ 33 33.30 -0.2
 iS 39 00.00
 CAN 35.13 232 eP 33 37.60 -1.4
 BWA 35.23 233 eP 33 39.30 -0.5
 CMS 36.37 239 eP 33 49.00 -0.5
 TOO 38.61 230 eP 34 08.00 -0.3
 WRA 45.68 258 P 35 04.00 -2.2
 1.1s 4.60nm 4.4mb
 ASPA 45.93 253 iPc 35 06.40 -1.8
 0.8s 43.80nm 5.5mb
 Z 23s 20.30um 6.0msz X
 57.13 199 eP 36 32.40 0.4
 MAT 67.38 323 (P) 37 39.00 -1.8
 1.6s 53.33nm 5.5mb
 Z 20s 2.13um 5.4msz
 eS 46 43.00
 SPA 73.48 180 iPd 38 16.80 -0.8
 1.0s 25.00nm 5.2mb
 Z 20s 2.25um 5.4msz
 i 38 40.20
 PRS 74.75 44 e(P) 38 28.40 3.2X
 PRI 75.11 45 e(P) 38 32.10 4.7X
 FRI 76.22 44 eP 38 32.30 -1.3
 PLM 76.28 49 eP 38 43.00 8.8X
 SBB 76.28 47 eP 38 32.00 -2.1
 ISA 76.34 46 eP 38 33.00 -1.4
 CMB 76.35 43 ePc 38 33.00 -1.4
 WDC 76.44 40 eP 38 33.80 -0.9
 MIN 76.88 41 eP 38 36.30 -1.1
 CLC 77.03 46 eP 38 38.00 -8.2X
 TPC 77.24 48 eP 38 38.00 -1.4
 GLA 77.61 50 eP 38 42.00 0.6
 MDJ 77.62 324 eP 38 41.00 -0.1
 NJ2 77.76 309 Pc 38 46.00 3.8X
 Z 21s 0.50um 4.8msz
 S 48 42.00
 TNP 78.48 44 eP 38 46.00 -0.3
 1.2s 14.11nm 4.9mb
 SVW 79.44 11 eP 38 50.80 -0.1
 CN2 79.51 322 eP 38 54.00 2.4X
 1.0s 20.00nm 5.1mb
 Z 20s 3.40um 5.7msz
 N 15s 0.80um

<BRK>. ML 2.5 (BRK).

FHC 0.53 21 ePc 55 37.88 -0.4
i 55 43.00
iS 55 45.14

WDC 1.32 77 ePc 55 48.69 -2.0
e(S) 56 07.50

MIN 2.01 88 ePd 56 02.50 1.7

LBFM 2.06 59 eP 56 01.00 -0.6

ARN 3.62 144 eP 56 22.50 -1.2
5 obs. associated

DEC 21, 1990 06h 57m 42.99± 0.10s
41.004 N ± 1.7km 22.300 E ± 1.2km
DEPTH = 13.3km (geophysicist)
5.8mb (60 obs.) 5.9Msz (18 obs.)
YUGOSLAVIA (383)
One person killed, at least 60
injured and damage in the
Edhessa-Kilkis area, Greece.
Several people injured and some
buildings damaged (VII) in the
Gevgelija-Strumica area. Felt
(VII) at Begarci and Dajran;
(VI) at Kavadarci and Strumica;
(V) at Bitola, Stip, Berovo,
Ohrid and Titov Veles; (IV) at
Skopje, Gostivar, Tetovo and
Kumonovo. Felt at Lariso, Greece
and Korca, Pogradeci and Tirano,
Albania. Also felt at
Mikhoilovgrad and Plovdiv and
(IV) at Sofia, Bulgaria. Felt
(III) at Bucharest, Romania.
Depth from broadband
displacement seismograms.
FAULT PLANE SOLUTION: P-Waves
NP1:Strike=225 Dip=57 Slip=-63
NP2: 2 42 -125
Principal Axes:
T Plg= 8 Azm=296
P 66 187
Comment: The focal mechanism is
poorly controlled and
corresponds to normal faulting
with a moderate strike-slip
component. The preferred fault
plane is not determined.

RADIATED ENERGY
No. of sta: 13 Focal mech. C
Energy 7.5±1.0*10**12 Nm
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 32C
Centroid Location:
Origin Time 06:57:45.3 0.6
Lat 40.27N 0.06 Lon 22.28E 0.04
Dep 15.0 BDY Half-duration 4.5
Moment Tensor: - Scale 10**18 Nm
Mrr=-1.50 0.03 Mtt= 1.17 0.05
Mff= 0.33 0.03 Mrt=-0.11 0.10
Mrf=-0.40 0.10 Mtf= 0.94 0.03
Principal Axes:
T Val= 1.81 Plg= 5 Azm=146
N -0.22 12 55
P -1.59 77 260
Best Double Couple: Mo=1.7*10**18
NP1:Strike=249 Dip=41 Slip=-72
NP2: 45 52 -105

GRG 0.09 121 iP 57 47.04 1.0
iS 57 47.90

VAY 0.38 33 iPg 57 52.00 1.1

KNT 0.48 71 eP 57 53.32 0.6

THE 0.63 126 eP 57 54.36 -0.9
iS 58 03.74

FNA 0.73 253 eP 57 59.00 1.9

KZN 0.80 210 ePg 57 57.90 -0.4

SOH 0.82 102 eP 57 58.48 -0.1

LIT 0.91 171 eP 57 59.68 -0.5
iS 58 11.14

SRS 0.98 83 eP 58 01.32 -0.1

PLG 1.07 125 ePb 58 01.40 -1.5

OHR 1.14 276 iPg 58 06.40 2.3

SKO 1.16 327 iPg 58 07.20 2.8X
iSg 58 25.10
Lg 58 39.10

MMB 1.22 61 iPg 58 06.00 0.5
Sg 58 22.00

OUR 1.44 117 eP 58 09.12 0.4

PAIG 1.51 135 iP 58 09.72 0.1

LSK 1.55 237 iPnd 58 12.60 2.3

VTS 1.73 23 iPd 58 15.00 2.1

NEO 1.84 157 ePb 58 13.80 -0.7

TIR 1.87 281 ePn 58 19.00 4.1X

TPE 1.88 249 iPnc 58 23.00 8.0X

RZN 1.94 69 iPc 58 17.00 0.9

AGG 1.98 179 iP 58 12.82 -3.7X

LACI 2.05 289 ePn 58 20.30 2.8X

PGB 2.08 41 iPg 58 20.00 2.0
iS 58 48.00

SRN 2.08 238 iPnd 58 22.30 4.3X

IGT 2.10 226 iP 58 13.14 -5.2X

PLD 2.11 58 iPd 58 20.00 1.6
iS 58 51.00

EVR 2.12 190 ePn 58 18.50 -0.1

BCI 2.16 310 ePn 58 21.20 2.2

KEK 2.31 237 ePb 58 24.00 2.8X

PVY 2.36 313 iPnd 58 25.00 3.0X
eSn 58 58.50

KDZ 2.43 74 iPc 58 22.00 -1.0
iS 58 53.00

RDO 2.45 86 ePn 58 22.50 -0.7

ULC 2.48 294 iPnd 58 28.40 4.7X
eSn 59 01.20

IVA 2.59 317 iPnd 58 28.00 2.7X
eSn 59 03.50

DIM 2.64 66 iPc 58 27.00 1.0

TTG 2.68 303 iPnd 58 30.30 3.7X
eSn 59 05.00

ALN 2.84 91 eP 58 29.12 0.4

BDV 2.90 297 iPn 58 30.00 0.4

NKY 3.06 307 iPnd 58 35.30 3.4X
eSn 59 15.00

VLS 3.12 206 ePn 58 33.50 0.8

HCY 3.19 298 iPnd 58 37.00 3.3X
eSn 59 19.00

ATH 3.22 160 ePn 58 34.50 0.3

EZN 3.29 110 iPn 58 34.40 -0.8

LCL 3.37 260 P 58 36.10 -0.2

BRY 3.38 305 iPnd 58 39.90 3.3X
eSn 59 22.00

PRK 3.51 119 ePn 58 38.00 -0.3

JMB 3.52 64 iPd 58 38.00 -0.5

SRE 3.72 10 ePd 58 43.00 1.8
iS 59 46.00

ITM 3.83 184 ePn 58 44.00 1.1

BEO 4.05 341 iPnc 58 45.50 -0.3
iPg 59 02.00
eSn 59 38.40

BAI 4.11 273 Pd 58 47.50 0.8

DMK 4.18 77 iPn 58 47.00 -0.9

EDC 4.28 97 iPn 58 49.00 -0.3

VLI 4.31 173 ePn 58 48.00 -1.6

BNT 4.32 97 iPn 58 49.20 -0.6

BUC1 4.33 38 iPd 58 54.00 4.2X
iS 00 08.00

BUC 4.41 38 iP 58 53.00 2.0

ORI 4.56 260 P 58 54.50 1.3

COZ 4.57 18 iPd 58 55.00 1.6

ROI 4.61 254 P 58 57.50 3.5X

IZM 4.63 123 iPn 58 54.40 0.2

CTT 4.64 86 iPn 58 52.70 -1.6

BZS 4.64 354 iPc 58 56.50 2.2

APE 4.67 146 ePn 58 53.50 -1.3

KCT 4.67 97 ePn 58 54.20 -0.6

MTUR 4.68 25 eP 58 57.00 2.0

CMP 4.71 24 iPc 59 01.00 5.6X

CSI 4.75 257 P 58 56.60 0.6

TDS 4.75 256 P 58 56.90 1.0

TIM 4.80 351 iPc 58 57.00 0.5

SMG 4.82 132 ePn 58 56.80 0.0

FG3 4.83 280 iPc 58 57.82 0.7

TNR 4.86 17 iPd 58 57.00 -0.5

DST 5.04 104 iPn 58 59.80 -0.2

ITU 5.08 87 iPc 59 00.00 -0.5

ISK 5.11 87 iPn 59 00.20 -0.8

PSN 5.12 57 iPd 59 00.00 -1.0

FG4 5.13 274 Pn 59 05.27 4.0X

ISR 5.17 36 iPd 59 04.00 2.1

MLR 5.22 29 iPd 59 06.00 3.4X
iS 00 26.00

BLY 5.30 317 Pn 59 06.30 2.6X
Sn 00 18.30

SGO 5.33 267 P 59 04.90 0.9

YLV 5.39 92 iPn 59 03.70 -1.3

FG2 5.42 281 Pn 59 05.40 0.0

GBZT 5.42 90 ePn 59 04.00 -1.4

IZI 5.50 95 ePn 59 05.70 -0.8

CVO 5.58 29 iPd 59 10.00 2.3

HRT 5.59 89 iPn 59 07.20 -0.6

CIN 5.63 125 iPc 59 08.00 -0.3

SOI 5.65 241 P 59 08.30 -0.2

VAM 5.78 164 ePn 59 10.00 -0.5

VRI 5.83 32 iPd 59 11.50 0.4

MSI 5.91 244 P 59 14.60 2.4

DUI 5.94 279 Pd 59 13.50 0.8

ATN 6.00 244 P 59 13.00 -0.5

GPA 6.13 94 iPn 59 16.00 0.6

KHL 6.18 113 iPn 59 17.00 0.8

NPS 6.30 154 ePn 59 18.00 0.2

ALT 6.30 105 iP 59 17.90 0.0

SDI 6.42 279 Pc 59 20.40 0.8

ARG 6.61 134 ePn 59 22.50 0.4

MNO 6.63 245 P 59 22.30 -0.4

BMR 6.72 7 ePd 59 25.00 1.3

AZI 6.73 281 P 59 24.70 0.9

ALP 6.75 288 ePn 59 23.80 -0.4
iSn 00 39.00

AQU 6.80 284 P 59 25.10 0.3

VBY 6.83 314 iPn 59 26.30 1.1

BUD 6.89 341 ePn 59 24.80 -1.2

MEU 6.93 238 P 59 25.60 -1.2
eSn 00 42.80

AOI 6.93 294 ePn 59 26.60 -0.1
iSn 00 46.16

SSO 6.98 292 ePn 59 28.00 0.6
iSn 00 48.25

GIB 7.07 247 P 59 28.60 -0.1

PSZ 7.12 347 iPn 59 28.70 -0.7

CIO 7.15 291 ePn 59 28.75 -1.1
iSn 00 50.15

RIY 7.23 309 ePnd 59 30.80 0.0
iSn 00 56.10

RDP 7.25 279 P 59 31.20 0.1

RMP 7.26 280 P 59 31.50 0.2

ELL 7.30 123 eP 59 33.50 1.6

BCK 7.34 116 iP 59 32.00 -0.5

ARV 7.38 293 P 59 32.30 -0.6

SRO 7.38 339 iPn 59 32.70 -0.2
i 59 34.80

USI 7.38 255 P 59 32.40 -0.5

CEY 7.43 312 iPn 59 34.40 0.7

ASS 7.47 289 P 59 34.70 0.5

KSL 7.50 128 ePn 59 37.00 2.3

MCT 7.51 246 Pn 59 39.70 4.7X

LJU 7.56 314 iPn 59 36.00 0.5
eSn 01 10.00

UZH 7.63 0 iPc 59 37.00 0.7

KIS 7.65 36 eP 59 34.00 -2.6X
iS 01 06.00

FAI 7.67 244 (P) 59 33.02 -3.9X

TRI 7.80 310 iPnd 59 30.00 -8.7X
i 59 52.80
iSn 01 04.70
i 01 55.90

TRI 7.80 310 Pc 59 38.80 0.1

SOP 7.84 330 eP 59 37.00 -2.3X

RSM 7.84 295 Pn 59 47.29 7.9X

VOY 7.91 312 iPd 59 40.70 0.3

BBTK 8.06 95 iPc 59 42.00 -0.6
i 00 03.00
iS 00 24.00

ERC 8.07 252 P 59 42.80 0.2

CVT 8.08 249 (P) 59 45.14 2.4

ZST 8.09 334 ePn 59 42.60 -0.2
i 59 44.30
i 59 46.80

CRE 8.10 292 P 59 43.10 -0.1

SFI 8.26 294 Pd 59 45.50 0.3

SPC 8.31 351 ePn 59 44.30 -1.8
i(Sn) 01 31.40
LR 03 30.00

PGD 8.33 294 P 59 44.00 -2.4X

RBL 8.34 314 Pn 59 44.33 -2.0

VKA 8.42 332 iPnd 59 48.00 0.6
ic 59 50.70
i 00 17.60
i 01 19.80
i 01 24.10

MAO 8.46 283 P 59 47.30 -0.7

	0.9s	470.00nm		6.0mb				SP	07 45.00		GYA	69.13	73 iPd	08 50.00	-1.1
EDU	22.61	322 eP	02 43.70	-0.6				S	15 31.00			1.2s	100.00nm		5.9mb
EBH	22.69	321 eP	02 44.70	-0.4				SS	19 22.00		Z	20s			2.80um
EVAL	22.69	271 iP	02 44.83	-0.5	SCH	57.32	317 ePd	07 31.20	-1.4		N	18s	5.30um		5.5Msz
SUE	22.77	338 eP	02 49.50	3.7X		1.1s	125.00nm		5.9mb		E	18s	6.20um		
ELO	22.90	321 eP	02 47.10	-0.1	KRI	57.93	172 iPd	07 26.60	-10.7X				PP	11 18.00	
STS	22.96	285 iP	02 49.08	1.2	NPA	57.98	161 e(P)	07 37.00	-0.5				S	17 53.00	
IFR	23.01	260 iPd	02 49.00	0.3		1.0s	310.00nm		6.3mb	SEK	69.15	175 eP		08 52.00	1.0
EZAM	23.16	283 iP	02 51.57	1.8	MBC	60.49	350 eP	07 54.00	-0.3			1.0s	70.00nm		5.8mb
PTO	23.24	281 iPd	02 51.00	0.4		0.8s	41.00nm		5.6mb	LVNJ	69.22	306 P	08 52.00	0.7	
		eS	07 40.00		BUL	61.11	173 iPd	07 51.80	-7.4X	INK	69.51	351 eP	08 52.00	-0.6	
VAL	24.73	307 eP	03 06.00	1.0	LZH	61.74	65 ePd	08 02.94	-0.6			1.1s	144.00nm		6.0mb
		S	07 24.00			1.6s	260.00nm		6.1mb	BLF	69.85	176 iPc	08 56.00	0.7	
AVE	24.82	262 i	03 06.50	0.5		Z	20s	7.29um	5.8Msz	POF	70.06	182 eP	08 58.00	1.7	
		i	03 22.00			E	12s	3.95um		TIA	70.55	59 eP	08 57.70	-1.8	
TIO	25.85	257 iPd	03 16.70	0.8				ipPc	08 06.74	12kmX	Z	18s	8.30um		6.0Msz
		i	04 06.50					isPc	08 08.90		E	13s	6.90um		
		i	04 46.50					PP	10 16.00				S	18 12.00	
RYD	25.96	121 ePd	03 17.00	0.1				S	16 28.00		NST	70.78	86 eP	09 02.50	1.4
SOD	26.53	4 eP	03 21.00	-0.6	CBM	61.82	309 P	08 03.80	0.1	CN2	70.97	48 Pd	09 01.00	-0.9	
SHI	27.01	105 eP	03 27.00	0.4	WIN	63.43	185 iPc	08 15.50	0.8			1.0s	100.00nm		5.9mb
TRO	28.75	358 eP	03 42.60	0.9		1.0s	100.00nm		5.9mb		N	12s	7.60um		
KEV	28.92	3 eP	03 49.76	6.5X		Z	20s	26.60um	6.4Msz		E	12s	4.00um		
		eS	08 37.88		BTO	63.47	58 eP	08 14.00	-0.9				ePP	09 12.00	
AKU	33.53	331 iP	04 26.60	2.7X		N	12s	4.90um					eS	18 18.00	
	1.4s	437.21nm		6.2mb		E	12s	4.50um		SCP	71.10	308 ePc	09 02.32	-0.5	
JNW	33.86	343 eP	04 30.50	3.8X				SP	08 21.00				ePc	09 07.45	16kmX
ARO	34.48	143 ePd	04 34.00	1.3				S	16 47.50				ePc	09 09.28	
AAE	35.03	151 eP	04 39.00	1.3	HHC	64.33	57 Pc	08 20.40	-0.1	SNY	71.12	51 iPd	09 02.00	-0.8	
BCAO	36.57	186 iPc	04 50.90	0.6		1.3s	200.00nm		6.1mb		Z	2.0s	400.00nm		6.2mb
	0.5s	23.00nm		5.3mb		Z	17s	23.10um	6.4MszX			Z	16s	14.90um	6.3MszX
		id	09 23.20			N	11s	3.00um				N	12s	5.10um	
QUE	37.51														

KNT 0.35 77 iSg 50 05.80
 THE 0.60 139 eP 50 03.74 0.1
 SOH 0.73 111 eS 50 09.02
 SRS 0.86 88 eP 50 08.22 -0.4
 FNA 0.87 250 eS 50 15.82
 LIT 0.98 178 eP 50 10.86 -0.1
 PAIG 1.49 141 iS 50 20.50
 S.D. = 0.5 on 9 of 9 obs.

DEC 21, 1990 08h 00m 56.96 ± 0.33s
 40.959 N ± 3.8km 22.380 E ± 3.2km
 DEPTH = 13.5 ± 2.8 km
 3.6mb (1 obs.)
 GREECE (364)
 ML 3.9 (SKO). MD 3.8 (ATH).

GRG 0.02 99 eP 00 59.02 -0.5
 VAY 0.39 22 iPg 01 01.02
 KNT 0.44 62 iP 01 04.20 -0.9
 THE 0.55 126 iP 01 06.06 0.0
 SOH 0.75 100 eS 01 07.61 -0.3
 FNA 0.78 257 iP 01 15.86
 KZN 0.80 216 eP 01 11.46 0.1
 LIT 0.86 174 eS 01 21.46
 SRS 0.93 80 eP 01 11.01 -0.9
 PLG 1.00 125 eS 01 21.06
 MMB 1.20 58 iPg 01 10.80 -1.4
 OHR 1.21 278 iPg 01 12.82 -0.4
 0.8s 635.00nm
 SKO 1.23 325 iPg 01 28.02
 OUR 1.37 117 eP 01 14.46 0.0
 PAIG 1.43 136 eS 01 27.62
 VTS 1.74 21 iPg 01 15.00 -0.6
 NEO 1.77 158 ePb 01 19.00 0.1
 AGG 1.93 181 iP 01 35.00
 PGB 2.08 39 iP 01 35.00
 PLD 2.09 56 eP 01 38.00 6.0X
 EVR 2.09 192 ePb 01 38.00
 KEK 2.33 239 ePb 01 38.00
 KDZ 2.39 72 eP 01 34.50 2.4
 RDO 2.40 84 ePn 01 39.20 3.7X
 PVY 2.43 313 ePn 01 37.00 0.7
 ULC 2.56 294 ePn 01 36.00 -0.4
 TTG 2.76 303 ePn 01 40.00 3.0X
 ALN 2.78 90 eP 02 15.00
 VLS 3.10 207 ePn 02 15.00
 NKY 3.13 307 ePn 02 15.00
 EZN 3.22 109 ePn 02 15.00
 PRK 3.44 119 ePn 02 15.00
 BRY 3.46 305 ePn 02 15.00
 ITM 3.79 185 ePb 02 15.00
 DMK 4.14 76 ePn 02 15.00
 VLI 4.26 174 ePn 02 15.00
 CTT 4.58 86 ePn 02 15.00
 MLR 5.22 29 eP 02 15.00
 SGO 5.39 268 eP 02 15.00
 NB2 21.24 345 P 05 41.80 -2.8
 0.8s 2.30nm 3.6mb

KIC 42.11 223 P 08 49.20 -1.1
 LIC 42.37 223 P 08 51.20 -1.3
 S.D. = 1.2 on 36 of 42 obs.

DEC 21, 1990 08h 12m 39.19 ± 0.76s
 40.790 N ± 7.9km 22.255 E ± 7.1km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

VAY 0.58 24 iPg 12 51.40 0.5
 KZN 0.61 218 ePb 12 55.00
 PLG 1.00 114 ePb 12 52.50 1.0
 OHR 1.15 287 ePb 12 57.00 -1.1
 SKO 1.33 333 ePb 13 11.50
 MMB 1.37 54 eP 12 59.80 -0.9
 VTS 1.94 21 eP 13 16.50
 RZN 2.06 63 eP 12 59.00 -4.7X
 PGB 2.27 39 eP 13 15.70
 S.D. = 1.0 on 7 of 9 obs.

DEC 21, 1990 08h 14m 14.56 ± 0.67s
 41.052 N ± 6.5km 22.339 E ± 5.9km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.9 (SKO).

VAY 0.32 33 iPg 14 20.50 -0.7
 KZN 0.86 210 ePb 14 25.00
 PLG 1.08 128 ePb 14 30.80 -0.4
 SKO 1.14 324 ePb 14 30.80 0.1
 OHR 1.17 273 ePb 14 51.00
 KDZ 2.39 75 iP 14 36.20 0.3
 S.D. = 0.6 on 6 of 6 obs.

DEC 21, 1990 08h 18m 18.40s
 34.533 N 116.817 W
 DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43)

<PAS-P>. ML 2.7 (PAS).

PEC 0.70 204 iPd 18 31.70 -0.7
 PLM 1.18 182 iPd 18 40.50 -0.4
 ABL 2.01 280 eP 18 53.00 -0.4
 GLA 2.22 131 eP 18 59.70 3.4
 4 obs. associated

DEC 21, 1990 08h 20m 37.98 ± 0.80s
 41.039 N ± 6.6km 22.451 E ± 7.5km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.9 (SKO).

VAY 0.30 18 iPg 20 44.00 -0.2
 KZN 0.90 216 ePb 20 48.50
 PLG 1.01 131 ePb 20 55.50 0.3
 SKO 1.20 321 ePb 20 57.00 -0.1
 OHR 1.25 274 ePb 21 12.00
 S.D. = 0.6 on 5 of 5 obs.

DEC 21, 1990 08h 31m 39.23 ± 0.88s
 41.053 N ± 7.2km 22.430 E ± 7.1km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.8 (SKO).

GRG 0.10 193 eP 31 42.82 0.9
 VAY 0.29 22 ePg 31 45.00 -0.3
 KNT 0.37 73 eS 31 49.00
 THE 0.58 136 eP 31 47.46 0.6
 SOH 0.74 108 eP 31 52.90
 FNA 0.84 252 eP 31 49.50 -1.5
 31 54.78 1.0
 31 04.54
 31 55.42 -0.1

SRS 0.88 85 eP 31 55.02 -1.1
 LIT 0.95 177 eS 32 08.62
 PAIG 1.47 139 iP 31 56.42 -1.0
 S.D. = 1.2 on 9 of 9 obs.

DEC 21, 1990 08h 35m 01.40s
 34.533 N 116.817 W
 DEPTH = 6.0km (geophysicist)

SOUTHERN CALIFORNIA (43)

<PAS-P>. ML 2.6 (PAS).

PEC 0.70 204 eP 35 15.30 -0.1
 PLM 1.18 182 eP 35 24.00 0.1
 2 obs. associated

DEC 21, 1990 08h 38m 48.93 ± 0.86s
 41.108 N ± 7.9km 22.415 E ± 7.1km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.2 (SKO).

VAY 0.24 29 iPg 38 54.20 0.1
 SOH 0.77 112 iSg 38 58.10
 FNA 0.85 248 eP 39 04.22 0.3
 SRS 0.89 89 eP 39 13.50
 LIT 1.01 177 eP 39 05.34 0.0
 S.D. = 0.4 on 5 of 5 obs.

DEC 21, 1990 08h 40m 57.27 ± 1.06s
 38.006 N ± 10.2km 14.166 E ± 8.0km
 DEPTH = 10.0km (geophysicist)

SICILY (398)

ML 2.2 (SKO).

MNO 0.42 100 Pd 41 05.50 -0.5
 MCT 0.56 229 P 41 13.90
 ATN 1.03 81 Pd 41 09.00 0.2
 MEU 1.09 146 P 41 16.50
 MSI 1.11 79 P 41 16.70 -0.1
 SOI 1.49 87 Pc 41 17.50 -0.3
 TDS 2.37 45 P 41 34.00
 S.D. = 0.8 on 7 of 7 obs.

DEC 21, 1990 08h 51m 48.55 ± 1.06s
 41.125 N ± 8.1km 22.271 E ± 7.5km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.8 (SKO).

GRG 0.19 150 eP 51 53.84 1.0
 VAY 0.30 49 iPg 51 55.50 0.7
 KNT 0.48 85 eP 51 58.80
 THE 0.72 133 eP 51 57.60 -0.6
 FNA 0.76 244 iP 52 02.48
 SRS 1.00 90 eP 52 01.60 -1.1
 LIT 1.04 171 eP 52 02.98 -0.4
 PAIG 1.61 138 eP 52 02.60 -4.9X
 S.D. = 1.0 on 7 of 8 obs.

DEC 21, 1990 08h 56m 11.41 ± 0.80s
 41.051 N ± 6.9km 22.367 E ± 7.3km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

ML 2.8 (SKO).

VAY 0.31 30 iPg 56 17.40 -0.5
 KZN 0.87 212 ePb 58 21.60
 PLG 1.06 129 ePb 56 27.50 -0.7
 SKO 1.15 323 ePb 56 32.00 0.5
 OHR 1.19 273 ePg 56 32.00 0.2
 56 34.00 0.4

PLG 1.61 133 iSg 31 12.00
ePb 30 57.00 -1.2
eSb 31 12.50
PGB 2.00 57 eP 31 12.00 8.1X
eS 31 37.00
RZN 2.13 83 iP 31 10.00 4.2X
iS 31 35.00
S.D. = 1.2 on 5 of 7 obs.

? DEC 21, 1990 10h 31m 12.74±1.06s
14.550 N ±15.9km 61.062 W ±16.9km
DEPTH = 33.0km (normal)
WINDWARD ISLANDS (95)
ML 1.9 (FDF).

BIM 0.03 194 iPc 31 18.23 -0.1
S 31 19.90
MVM 0.16 89 iPd 31 19.09 0.1
S 31 21.50
FDF 0.20 335 iPd 31 19.46 0.1
S 31 22.20
CRM 0.25 35 iPc 31 19.74 -0.1
S.D. = 0.2 on 4 of 4 obs.

DEC 21, 1990 10h 34m 16.01±0.48s
41.108 N ±4.4km 22.402 E ±3.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (SKO).

GRG 0.15 180 eP 34 18.40 -1.2
eS 34 20.16
VAY 0.25 31 iPg 34 21.20 -0.1
iSg 34 25.00
KNT 0.38 82 eP 34 23.76 0.0
eS 34 29.24
THE 0.64 138 eP 34 27.68 -1.1
eS 34 36.24
SOH 0.78 111 eP 34 30.72 -0.4
eS 34 41.12
FNA 0.84 248 eP 34 32.42 0.1
eS 34 43.12
SRS 0.90 89 iP 34 32.98 -0.3
eS 34 44.88
KZN 0.93 211 ePb 34 33.50 -0.4
eSb 34 51.00
LIT 1.01 176 eP 34 35.32 0.2
eS 34 49.48
PLG 1.08 132 ePg 34 37.80 1.4
eSb 34 53.50
SKO 1.13 320 ePg 34 37.00 -0.1
eSg 34 54.40
OHR 1.21 271 ePg 34 38.80 0.2
eSg 34 55.60
PAIG 1.53 140 eP 34 44.20 0.8
eS 35 04.56
AGG 2.08 182 eP 34 52.32 0.9
S.D. = 0.8 on 14 of 14 obs.

* DEC 21, 1990 10h 35m 33.55±0.98s
51.346 N ±20.6km 179.876 E ±7.5km
DEPTH = 33.0km (normal)
4.3mb (5 obs.)
RAT ISLANDS, ALEUTIAN ISLANDS (6)

ADK 2.21 75 ePd 36 10.40 1.8
SMY 3.83 294 eP 36 29.60 -1.9
SDN 12.38 64 eP 38 29.00 -1.1
SVW 16.66 45 ePd 39 30.10 4.2X
KDC 17.18 57 eP 39 30.80 -1.5
PMR 19.75 47 eP 40 05.30 2.1
0.7s 4.30nm 3.9mb
IMA 19.92 32 eP 40 05.70 0.7
0.9s 4.70nm 3.8mb
TOA 21.25 46 eP 40 18.60 -0.1
FBA 21.48 39 eP 40 21.20 0.2
MBC 33.95 22 eP 42 16.50 1.3
0.6s 6.00nm 4.7mb
YKA 35.85 46 eP 42 30.40 -1.2
0.6s 2.30nm 4.3mb
NEW 39.67 69 eP 43 02.50 -1.4
MCMT 43.98 71 eP 43 29.10 -0.2
TNP 45.27 81 eP 43 50.70 1.0
BW06 47.10 71 eP 44 03.30 -0.9
MSU 48.11 78 e(P) 44 11.50 -0.7
GOL 51.48 72 eP 44 37.50 -0.5
NB2 67.60 354 P 46 27.90 -0.6

0.9s 5.00nm 4.6mb
GUN 71.10 291 P 46 52.00 1.1
KKN 71.54 291 P 46 54.40 1.1
GKN 71.75 292 P 46 55.40 0.9
S.D. = 1.2 on 20 of 21 obs.

? DEC 21, 1990 10h 36m 19.44±4.34s
31.500 S ±28.9km 69.579 W ±37.7km
DEPTH = 33.0km (normal)
SAN JUAN PROVINCE, ARGENTINA (137)

ZON 0.77 94 iPc 36 34.40 0.5
eS 36 49.00
RTCV 0.96 112 iPd 36 36.60 0.0
RTLL 0.96 80 iPc 36 36.60 -0.1
CFA 1.15 96 iPd 36 38.90 -0.4
eS 36 57.00
RTRS 1.33 4 iPd 36 41.80 0.0
(S) 37 00.00
S.D. = 0.5 on 5 of 5 obs.

DEC 21, 1990 10h 37m 42.18±0.53s
41.055 N ±4.5km 22.374 E ±4.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (SKO).

GRG 0.10 168 eP 37 44.72 -0.2
eS 37 46.00
VAY 0.30 29 ePg 37 48.40 -0.1
iSg 37 53.30
KNT 0.41 75 eP 37 50.72 0.2
eS 37 56.68
THE 0.62 133 eP 37 53.96 -0.6
iS 38 02.44
SOH 0.78 107 eP 37 57.12 -0.3
eS 38 07.92
FNA 0.80 251 iP 37 57.44 -0.4
eS 38 08.16
SRS 0.92 86 eP 37 59.64 -0.2
eS 38 11.92
LIT 0.96 175 eP 38 00.72 0.3
eS 38 15.08
SKO 1.15 323 ePg 38 04.00 0.2
eSg 38 19.00
PAIG 1.50 138 eP 38 10.20 1.0
eS 38 31.72
S.D. = 0.5 on 10 of 10 obs.

? DEC 21, 1990 10h 43m 13.18±0.95s
39.621 N ±9.7km 29.362 E ±9.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.57 269 ePg 43 24.50 -0.2
eSg 43 35.50
ALT 0.81 134 ePg 43 29.00 0.0
YLV 0.94 1 iPg 43 31.10 -0.1
iSg 43 44.60
BNT 1.33 304 ePn 43 38.00 0.3
S.D. = 0.4 on 4 of 4 obs.

? DEC 21, 1990 10h 44m 35.83±1.09s
39.749 N ±9.7km 29.303 E ±9.4km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.54 255 ePg 44 46.00 -0.8
eSg 44 58.00
YLV 0.82 4 ePg 44 51.00 -0.7
KCT 0.88 305 ePn 44 54.00 1.2
ALT 0.93 138 ePn 44 54.00 0.3
S.D. = 1.6 on 4 of 4 obs.

* DEC 21, 1990 10h 46m 28.10±1.01s
23.790 N ±10.4km 121.542 E ±12.0km
DEPTH = 33.0km (normal)
4.1mb (1 obs.)
TAIWAN (244)

ANP 1.39 359 eP 46 51.20 -0.3
OZH 2.93 294 Pnc 47 12.80 -0.5
SSE 7.28 358 eP 48 10.50 -4.4X
Z 10s 0.50um
eS 49 30.00
GZH 7.56 266 eP 48 28.40 9.6X
NJ2 8.57 344 Pc 48 27.80 -5.0X

Z 10s 0.70um
S 50 01.00
WHN 9.28 318 eP 48 39.50 -3.2X
E 11s 0.70um
GYA 13.74 284 P 49 43.00 0.0
S 52 20.60
TIY 15.92 333 eP 50 11.00 -0.3
Z 10s 0.80um
CD2 17.31 298 eP 50 28.60 -0.3
LZH 19.59 313 eP 50 58.00 1.3
GTA 24.10 315 eP 51 42.00 0.2
WRA 45.22 163 P 54 44.00 -0.1
0.8s 2.10nm 4.1mb
S.D. = 0.7 on 8 of 12 obs.

? DEC 21, 1990 10h 58m 44.42±10.43s
39.840 N ±56.1km 23.827 E ±53.4km
DEPTH = 10.0km (geophysicist)
AEGEAN SEA (365)

PAIG 0.14 308 iP 58 47.73 0.0
THE 1.03 320 eP 59 04.30 0.4
eS 59 14.02
SOH 1.05 340 iP 59 03.50 -0.7
eS 59 14.58
LIT 1.06 285 eP 59 04.33 -0.1
eS 59 17.14
SRS 1.29 352 eP 59 08.58 0.3
eS 59 23.94
S.D. = 0.6 on 5 of 5 obs.

DEC 21, 1990 11h 03m 59.99±0.41s
41.095 N ±3.7km 22.383 E ±3.6km
DEPTH = 9.9 ±3.6 km
YUGOSLAVIA (383)
MD 3.2 (ATH).

GRG 0.14 174 eP 04 03.68 0.4
VAY 0.27 32 iPg 04 05.70 0.1
iSg 04 09.60
KNT 0.39 80 iP 04 07.96 -0.1
eS 04 12.88
THE 0.64 136 eP 04 12.14 -0.7
eS 04 20.48
SOH 0.78 110 eP 04 14.92 -0.4
eS 04 26.28
FNA 0.82 248 eP 04 16.01 0.0
eS 04 26.92
SRS 0.91 88 iP 04 17.10 -0.4
eS 04 28.96
KZN 0.92 211 ePg 04 16.50 -1.1
LIT 1.00 175 eP 04 18.84 -0.1
eS 04 33.48
PLG 1.08 131 ePg 04 21.50 1.1
SKO 1.13 321 iPg 04 21.80 0.7
0.2s 273.00nm
iSg 04 39.60
Lg 04 40.50
OHR 1.20 271 iPg 04 22.80 0.4
0.9s 171.00nm
iSg 04 39.80
Lg 04 47.50

OUR 1.43 122 eP 04 26.64 0.6
PAIG 1.53 139 eP 04 28.12 0.8
eS 04 47.56
NEO 1.90 160 ePb 04 32.00 -0.8
AGG 2.07 181 eP 04 35.36 0.1
EVR 2.22 192 ePg 04 42.00 4.5X
RDO 2.38 88 ePn 04 44.00 4.3X
BZS 4.55 353 ePc 05 09.50 -1.0
S.D. = 0.7 on 17 of 19 obs.

DEC 21, 1990 11h 10m 20.14±0.48s
41.125 N ±4.5km 22.375 E ±3.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.9 (SKO).

GRG 0.17 173 iP 10 23.69 -0.3
eS 10 25.64
VAY 0.25 37 iPg 10 25.80 0.5
iSg 10 30.10
KNT 0.40 84 eP 10 28.44 0.2
eS 10 31.76
THE 0.66 138 eP 10 32.16 -1.2
eS 10 40.80
SOH 0.80 112 iP 10 35.42 -0.3

Station	Time	Lat	Long	Depth	Obs	Station	Time	Lat	Long	Depth	Obs	Station	Time	Lat	Long	Depth	Obs
LZH	92.40	308	eP	50 27.50	0.5	DST	149.97	315	ePKP	57 02.00	4.6X	RDN	0.85	218	iP	46 41.25	-0.9
INX	94.51	15	eP	50 34.00	-1.7	KHL	150.00	312	iPKP	57 02.70	5.2X	REF	0.85	215	eP	46 41.48	-0.8
GTA	96.62	310	Pd	50 45.80	-0.2	BNT	150.03	317	iPKP	57 02.10	4.7X	NCT	0.87	224	eP	46 41.57	-0.7
	1.2s	10.00nm			5.0mb	WET	150.08	345	iPKPc	56 57.20	0.0	RSO	0.89	215	eP	46 41.87	-0.8
YKA	96.83	25	eP	50 44.70	-1.5	SOP	150.33	339	ePKP	57 03.70	6.2X	RS2	0.89	216	eP	46 41.89	-0.8
	0.7s	2.50nm			4.6mb	ABH	150.38	352	ePKP	57 03.45	5.8X	RED	0.93	214	eP	46 42.20	-0.9
MBC	102.99	12	ePdiff	51 13.00	-0.5	ELL	150.43	309	ePKP	57 03.50	5.3X	PWA	1.00	61	iP	46 43.60	-0.2
GKN	105.15	295	PKP	55 33.60	-1.7	FUR	151.37	346	iPKPc	57 05.70	6.6X						
FRB	117.12	28	ePKP	55 55.00	-1.7					57 17.00		SLKM	1.00	132	eP	46 43.03	-0.8
PRY	126.44	209	iPKPc	56 18.50	2.5X	BHG	151.40	344	ePKP	57 05.60	6.4X	PMS	1.04	86	eP	46 43.91	-0.5
NPA	128.63	229	ePKP	56 20.00	-0.2					57 17.40							
SOB1	128.92	121	ePKP	56 20.60	-0.3	CDF	151.85	352	ePKP	56 59.60	-0.3	NNL	1.17	170	eP	46 46.68	0.7
BUL	131.55	215	iPKPc	56 17.00	-8.8X					5.35nm		PLRM	1.31	71	eP	46 46.45	-1.3
	1.0s	10.50nm				FLN	151.86	3	ePKP	56 59.40	-0.3	INE	1.31	211	eP	46 46.75	-1.3
KRI	133.65	219	iPKPc	56 20.10	-9.8X					43.95nm		CUT	1.40	29	eP	46 48.20	-0.8
				58 54.50		LDF	152.04	2	ePKP	56 59.00	-1.0	GHO	1.46	65	eP	46 48.69	-1.2
NB2	139.01	353	PKP	56 28.10	-10.4X	GRR	152.21	3	ePKP	57 00.00	-0.3	HOM	1.54	179	eP	46 50.85	0.1
	0.7s	11.30nm				SQTA	152.28	346	iPKPd	57 07.50	6.9X	SEW	1.56	133	eP	46 49.61	-1.5
HFS	139.55	351	ePKP	56 29.10	-10.3X					22.20nm							
	0.5s	18.90nm										KNK	1.59	80	eP	46 50.19	-1.4
EDR	143.61	4	iPKPd	56 43.90	-2.7X	LJU	152.43	340	ePKP	57 00.00	-0.7						
	0.6s	76.00nm								57 08.00		CNPM	1.68	172	eP	46 51.80	-1.1
EDU	143.95	4	iPKPd	56 45.40	-1.7	FVI	152.46	343	PKPc	57 07.00	6.4X	PDB	1.87	222	eP	46 53.70	-1.6
	0.6s	138.00nm				BSF	152.49	352	ePKP	57 00.50	-0.3	KNIM	2.13	112	eP	46 55.47	-3.4
ELO	143.97	5	iPKPd	56 45.50	-1.7					5.35nm		GLI	2.27	96	eP	46 57.33	-3.5
	0.8s	66.00nm				VAY	152.65	324	ePKP	57 02.60	1.5	VLZ	2.61	89	eP	47 02.76	-2.7
BSD	144.07	347	iPKPd	56 45.90	-1.4							TOA	2.80	68	eP	47 07.03	-1.2
	0.6s	12.00nm															

21d 12h

SRS 0.84 86 eP 05 18.26 0.2
iS 05 29.62
FNA 0.88 252 eP 05 18.42 -0.3
eS 05 30.50
LIT 0.96 180 eP 05 20.58 0.5
eS 05 34.06
PAIG 1.46 141 eP 05 28.78 0.6
iS 05 47.34
S.D. = 0.7 on 9 of 9 obs.

DEC 21, 1990 12h 19m 14.90±0.92s
41.022 N ± 6.4km 22.409 E ± 6.7km
DEPTH = 9.6 ± 7.3 km
YUGOSLAVIA (383)
ML 2.3 (SKO).

GRG 0.07 185 eP 19 17.68 0.5
eS 19 19.08
VAY 0.32 22 iPg 19 22.00 0.4
iSg 19 26.30
KNT 0.40 69 iP 19 23.44 0.5
eS 19 28.44
THE 0.57 133 eP 19 25.52 -1.0
eS 19 33.72
SOH 0.74 105 iP 19 29.36 -0.2
eS 19 39.40
FNA 0.82 253 eP 19 30.08 -0.7
eS 19 41.32
SRS 0.90 84 eP 19 31.24 -0.9
eS 19 44.08
LIT 0.92 176 eP 19 33.08 0.5
eS 19 46.80
PAIG 1.46 138 iP 19 42.08 0.7
iS 20 01.72
S.D. = 0.9 on 9 of 9 obs.

? DEC 21, 1990 12h 28m 12.45±0.91s
43.397 N ± 8.0km 12.828 E ± 8.0km
DEPTH = 10.0km (geophysicist)
CENTRAL ITALY (381)

ARV 0.13 39 P 28 15.40 -0.2
eSg 28 18.00
CIO 0.31 131 iPg 28 19.15 0.3
iSg 28 26.15
ASS 0.35 201 P 28 19.40 -0.3
eSg 28 25.80
CRE 0.68 290 P 28 26.20 0.2
eSg 28 34.50
S.D. = 0.5 on 4 of 4 obs.

DEC 21, 1990 12h 35m 12.85±0.55s
40.904 N ± 4.8km 22.317 E ± 4.5km
DEPTH = 11.8 ± 5.3 km
GREECE (364)
ML 2.3 (SKO).

GRG 0.08 51 iP 35 16.50 0.9
eS 35 17.42
VAY 0.46 25 ePg 35 21.20 -1.1
iSg 35 26.70
KNT 0.51 59 eP 35 23.02 -0.2
eS 35 29.42
THE 0.56 119 eP 35 24.10 0.0
eS 35 32.22
FNA 0.72 261 iP 35 27.74 0.8
eS 35 38.50
KZN 0.73 215 ePb 35 25.80 -1.2
SOH 0.79 96 iP 35 28.42 0.3
eS 35 38.90
LIT 0.81 171 eP 35 28.78 0.3
eS 35 42.50
SRS 0.99 77 iP 35 30.86 -0.6
eS 35 45.26
PLG 1.01 121 ePb 35 32.50 0.7
eSb 35 47.00
SKO 1.25 329 ePg 35 36.50 0.5
PAIG 1.43 133 iP 35 38.90 0.4
eS 35 58.34
S.D. = 0.8 on 12 of 12 obs.

DEC 21, 1990 12h 48m 01.85±0.70s
41.069 N ± 5.1km 22.461 E ± 5.1km
DEPTH = 9.7 ± 6.8 km
YUGOSLAVIA (383)
ML 2.3 (SKO).

GRG 0.12 202 eP 48 04.80 -0.1
eS 48 06.48
VAY 0.26 18 iPg 48 06.70 -0.7
iSg 48 10.60
KNT 0.34 74 eP 48 09.08 0.2
eS 48 14.16
THE 0.58 139 eP 48 13.08 -0.5
eS 48 21.48
SOH 0.72 110 eP 48 16.08 0.0
eS 48 27.08
SRS 0.86 86 iP 48 18.20 -0.2
eS 48 30.04
FNA 0.87 251 eP 48 17.68 -1.0
eS 48 29.68
LIT 0.97 179 eP 48 20.72 0.4
eS 48 34.96
SKO 1.18 320 ePg 48 25.00 1.0
PAIG 1.47 140 eP 48 28.96 0.5
eS 48 49.76
WRA 119.14 92 Pd iff 03 27.00 13.0X
0.8s 11.80nm
WRA 119.14 92 Pd iff 03 29.00 15.0X
0.8s 11.80nm
S.D. = 0.7 on 10 of 12 obs.

DEC 21, 1990 12h 55m 45.53±0.13s
18.891 S ± 3.3km 177.971 W ± 3.3km
DEPTH = 457.0km (7 depth phases)
5.3mb (51 obs.)

FIJI ISLANDS REGION (181)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 12S, 27C
Centroid Location:
Origin Time 12:55:56.2 0.6
Lat 18.40S 0.07 Lon 177.99W 0.04
Dep 481.4 1.9 Half-duration 2.4
Moment Tensor: Scale 10¹⁷ Nm
Mrr= 0.91 0.06 Mtt=-0.42 0.10
Mff=-0.49 0.10 Mrt=-3.02 0.09
Mrf= 0.17 0.09 Mtf= 0.30 0.08
Principal Axes:
T Val= 3.34 Plg=51 Azm=179
N -0.44 6 276
P -2.90 38 10
Best Double Couple: Mo=3.1*10¹⁷
NP1: Strike=137 Dip= 9 Slip= 131
NP2: 275 84 84

SVA 3.48 282 eP 56 59.40 2.0
eS 57 58.60
VUN 3.50 284 eP 56 59.20 1.6
MBU 3.68 301 iP 57 00.90 1.7
eS 58 00.60
SGE 4.11 288 iP 57 05.10 2.1
NDF 4.49 284 eP 57 09.40 3.1X
S 58 11.90
AFI 7.74 51 eP 57 34.00 -5.6X
S 59 00.00
DZM 14.94 255 iPc 58 57.00 -0.2
iS 01 35.00
ScP 06 28.10
HBZ 18.92 189 eP 59 38.90 2.4
PUZ 19.39 189 P 59 42.90 1.7
WLZ 19.70 195 P 59 46.90 2.8X
TAZ 19.86 193 P 59 47.30 1.6
NOZ 19.96 189 P 59 47.80 1.2
WHH 20.49 192 P 59 51.90 0.1
NGZ 20.97 194 P 59 56.20 -0.2
CNZ 21.00 194 P 59 56.90 0.3
PGZ 22.21 192 eP 00 07.00 -0.6
0.6s 59.00nm 5.3mb
MNG 22.37 193 P 00 07.70 -1.5
0.2s 33.00nm 5.5mb
KIW 22.73 194 P 00 11.50 -1.0
MTW 22.89 193 P 00 12.90 -1.0
CAW 22.93 194 P 00 13.60 -0.7
BLW 23.09 193 P 00 14.60 -1.1
WDW 23.10 194 P 00 15.80 0.0
MRW 23.13 194 P 00 14.80 -1.2
WEL 23.17 194 P 00 16.00 -0.4
eS 03 47.00
MOW 23.19 193 P 00 16.40 -0.2
TCW 23.22 195 eP 00 15.70 -1.1
SVO 23.60 291 eP 00 28.00 7.5X
THZ 24.09 197 eP 00 24.40 -0.4
KHZ 24.54 195 P 00 27.20 -1.5

0.2s 33.00nm 5.5mb
LTZ 25.21 197 P 00 33.30 -1.6
AFR 26.80 92 iP 00 49.40 0.2
0.8s 60.00nm 5.1mb
PAE 26.98 92 iP 00 51.00 0.3
0.8s 75.00nm 5.2mb
PPT 26.99 92 iP 00 51.20 0.3
0.8s 80.00nm 5.2mb
PPN 27.13 92 iP 00 52.30 0.2
0.8s 60.00nm 5.1mb
TVO 27.27 92 iP 00 53.60 0.2
0.8s 45.00nm 5.0mb
BRS 28.15 247 iPd 01 02.00 1.0
i 07 02.00
MMCZ 28.17 200 P 01 00.30 -0.8
e 01 29.30 137kmX
MHZ 28.17 199 P 00 59.70 -1.4
e 01 29.10 139kmX
PMO 29.01 87 iP 01 09.00 0.5
0.8s 125.00nm 5.4mb
VAH 29.21 88 iP 01 10.40 0.1
0.8s 75.00nm 5.2mb
TPT 29.27 87 iP 01 11.20 0.4
0.8s 100.00nm 5.3mb
RUV 29.46 88 iP 01 12.70 0.3
0.8s 165.00nm 5.5mb
COO 29.65 241 iPc 01 14.70 0.6
e 07 07.00
RMO 31.55 250 iPc 01 31.80 1.4
0.8s 128.00nm 5.4mb
CNB 33.17 234 iPd 01 45.80 1.7
0.4s 129.00nm 5.7mb
e 04 15.00
i 07 18.50
CAN 33.45 234 iPc 01 47.70 1.3
BWA 33.60 236 iPc 01 46.70 -1.0
CTA 33.71 262 iPc 01 48.20 -0.5
1.1s 243.04nm 5.6mb
iS 06 37.00
CMS 34.92 242 iP 02 00.00 1.3
0.9s 204.00nm 5.6mb
PMG 35.04 281 eP 01 59.00 -0.9
TOO 36.89 232 iPc 02 16.70 1.7
0.8s 272.00nm 5.7mb
e 07 28.00
YYYY 37.28 285 eP 02 19.00 0.4
BFD 38.99 234 iPc 02 38.80 6.6X
0.9s 221.00nm 5.6mb
OIS 39.89 260 iPc 02 38.90 -0.9
RKT 40.26 104 iP 02 44.30 1.6
1.0s 70.00nm 5.1mb
WRA 44.87 260 P 03 17.00 -2.5
0.7s 78.50nm 5.3mb
ASPA 44.94 255 iPc 03 19.00 -1.0
0.6s 548.60nm 6.2mb
iPcP 04 51.70
eScP 08 01.70
ePcS 08 44.20
iS 09 20.90
iScS 12 27.50
MTN 49.20 269 eP 03 51.50 -1.1
FORR 49.94 245 eP 03 57.30 -0.6
KNA 50.79 265 iPd 04 03.70 -0.7
0.5s 64.00nm 5.2mb
COOL 55.91 245 eP 04 40.00 -1.1
MBL 58.15 256 iPc 04 54.40 -2.1
0.5s 61.00nm 5.3mb
MEKA 58.56 250 eP 04 58.20 -1.0
KLB 58.77 244 iPc 04 59.70 -0.9
0.7s 141.00nm 5.5mb
NWA0 59.12 242 iPc 05 02.40 -0.6
0.8s 61.00nm 5.1mb
RKG 59.24 241 iPd 05 04.10 0.3
0.8s 146.00nm 5.5mb
SBA 59.47 184 iPc 05 07.80 3.2X
BAL 59.74 245 iPc 05 06.30 -0.9
0.5s 28.00nm 4.9mb
e 05 34.00 113kmX
MUN 60.05 243 eP 05 09.00 -0.2
1.0s 160.00nm 5.4mb
i 05 36.50 112kmX
MRWA 60.50 247 eP 05 11.40 -0.8
KAKJ 67.60 324 P 05 56.10 -0.9
TRT 68.09 269 ePc 06 01.50 0.9
CHJJ 68.14 323 P 05 59.00 -1.4
IIDJ 68.36 322 P 06 00.80 -1.0
OFUJ 68.93 327 eP 06 03.80 -1.3

DEC 21, 1990 13h 09m 45.46 \pm 0.37s
40.973 N \pm 3.6km 22.363 E \pm 3.2km
DEPTH = 10.0km (geophysicist)
GREECE (364)

ML 3.1 (SKO).

ML 3.1 (SKO).

DEC 21, 1990 13h 12m 52.79 \pm 0.30s
39.270 N \pm 3.5km 19.857 E \pm 2.5km
DEPTH = 55.3 \pm 8.3 km
4.3mb (6 obs.)

GREECE-ALBANIA BORDER REGION (392)
MD 4.3 (ATH), 4.0 (TTG).

NKY	3.60	350	ePn	13	47.00	-0.5
			eSn	14	27.60	
ATN	3.61	254	Pd	13	46.90	-0.7
			eSn	14	28.20	

SGO	3.73	292	P	13	50.70	1.5
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SGO	3.73	292	P	13	50.70	1.5
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MMB	3.75	51	iPg	13	50.00	0.4
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			i	14	47.80	
			eSn	15	46.40	
RIY	7.30	328	ePn	14	37.80	-1.4
CEY	7.61	330	e(Pn)	14	36.20	-7.3X

e	14	41.30
eSn	15	55.00

e 16 02.00

S.D. = 1.1 on 70 of 83 obs.

? DEC 21, 1990 13h 24m 43.71+ 1.16s

? DEC 21, 1990 13h 24m 43.71 \pm 1.16s
37.988 N \pm 23.6km 15.225 E \pm 8.2km

37.988 N \pm 23.6 km 15.225 E \pm 8.2 km

DEPTH = 10.0 km (geophysicist)

DEC 21, 1990 13h 39m 51.14 ± 0.53s
41.099 N ± 4.1km 22.419 E ± 3.5km
DEPTH = 9.4 ± 5.0 km

YUGOSLAVIA (383)
ML 3.0 (SKO).

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

DEC 21, 1990 13h 44m 49.08 \pm 0.57s

21d 15h

EVR 2.24 193 ePb 42 51.50 2.9X
 RDO 2.34 88 ePb 42 56.00 6.2X
 S.D. = 0.6 on 13 of 15 obs.

? DEC 21, 1990 15h 43m 33.71± 7.01s
 51.603 N ± 153.0km 176.064 W ± 50.9km
 DEPTH = 33.0km (normal)
 ANDREANOF ISLANDS, ALEUTIAN IS. (7)
 Felt (IV) on Adak.

ADK 0.48 306 e(P) 43 44.00 0.0
 NEW 37.20 71 eP 50 44.00 0.7
 SES 39.72 65 eP 51 04.00 -0.4
 MGMT 41.48 74 eP 51 19.10 0.0
 BW06 44.60 74 eP 51 44.50 -0.1
 MSU 45.57 81 e(P) 52 07.00 14.7X
 GOL 48.97 75 eP 52 18.80 -0.2
 S.D. = 0.5 on 6 of 7 obs.

% DEC 21, 1990 15h 57m 02.91± 1.29s
 31.077 S ± 11.6km 117.531 E ± 11.4km
 DEPTH = 10.0km (geophysicist)
 WESTERN AUSTRALIA (590)

KLB 0.55 159 iPc 57 13.60 -0.4
 iS 57 19.40
 MUN 1.44 231 iPd 57 29.10 0.0
 iS 57 46.40
 NWA0 1.86 188 eP 57 35.00 -0.1
 eS 57 57.00
 MRWA 2.28 324 eP 57 45.40 4.2X
 iS 58 15.60
 COOL 3.11 87 eP 57 54.00 1.1
 eS 58 30.00
 WARB 9.37 61 eP 59 20.00 -1.0
 eS 01 00.00
 S.D. = 1.1 on 5 of 6 obs.

DEC 21, 1990 16h 00m 58.20± 0.48s
 40.979 N ± 5.2km 22.336 E ± 4.0km
 DEPTH = 14.0 ± 5.1 km
 GREECE (364)
 ML 2.8 (SKO).

GRG 0.05 114 iP 01 01.05 0.0
 eS 01 02.36
 VAY 0.39 27 iPg 01 06.20 -0.1
 iSg 01 11.70
 KNT 0.46 67 eP 01 07.80 0.2
 eS 01 14.20
 THE 0.59 126 eP 01 09.56 -0.2
 eS 01 17.60
 FNA 0.75 255 iP 01 12.05 -0.6
 eS 01 22.60
 SOH 0.79 101 eP 01 13.20 0.0
 eS 01 24.64
 KZN 0.80 213 ePb 01 14.00 0.6
 SRS 0.96 81 eP 01 15.92 -0.2
 eS 01 29.20
 PLG 1.04 125 ePb 01 18.20 0.8
 eSb 01 33.50
 SKO 1.20 326 ePg 01 20.50 0.3
 eSg 01 36.80
 PAIG 1.47 135 eP 01 23.76 -0.4
 eS 01 43.44
 AGG 1.95 180 eP 01 31.64 0.4
 S.D. = 0.5 on 12 of 12 obs.

% DEC 21, 1990 16h 03m 53.11± 1.42s
 40.465 N ± 8.6km 27.890 E ± 11.7km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.1 (ISK).

BNT 0.11 168 iPg 03 55.50 -0.5
 eSg 03 58.50
 EDC 0.12 190 ePg 03 56.70 0.6
 eSg 03 59.70
 KCT 0.42 121 iPg 04 00.80 -0.8
 CTT 0.80 31 iPg 04 08.00 -0.6
 DST 1.03 146 ePg 04 08.10 -4.5X
 eSg 04 20.10
 YLV 1.13 84 iPn 04 15.50 1.1
 IZI 1.22 96 ePn 04 16.00 0.2
 S.D. = 1.0 on 6 of 7 obs.

& DEC 21, 1990 16h 16m 30.10s

34.533 N 116.817 W
 DEPTH = 6.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 2.9 (PAS).

PEC 0.70 204 iPd 16 43.50 -0.6
 PLM 1.18 182 iPd 16 52.50 -0.1
 GLA 2.22 131 eP 17 11.80 3.8
 3 obs. associated

DEC 21, 1990 16h 19m 48.21± 0.24s
 41.018 N ± 3.1km 22.322 E ± 2.3km
 DEPTH = 10.0km (geophysicist)
 4.6mb (3 obs.)
 YUGOSLAVIA (383)
 ML 3.9 (ATH). 3.7 (TTG).

GRG 0.09 135 iP 19 50.69 -0.1
 KNT 0.46 72 iP 19 56.58 -1.0
 THE 0.62 128 iP 19 59.42 -1.3
 eS 20 08.02
 FNA 0.75 252 iP 20 03.06 0.1
 SOH 0.81 104 iP 20 02.73 -1.2
 iS 20 13.78
 KZN 0.82 211 ePg 20 02.50 -1.7
 LIT 0.93 172 eP 20 05.90 0.0
 eS 20 20.38
 SRS 0.97 84 eP 20 05.42 -1.2
 iS 20 17.82
 PLG 1.07 127 ePg 20 06.80 -1.6
 MM8 1.20 61 iPd 20 10.00 -0.7
 OUR 1.44 118 eP 20 14.70 0.5
 eS 20 33.46
 PAIG 1.50 136 eP 20 15.54 0.3
 eS 20 36.50
 VTS 1.71 23 iPc 20 19.00 0.7
 NEO 1.84 158 ePb 20 19.50 -0.7
 RZN 1.92 69 iPd 20 22.00 0.5
 AGG 1.99 180 iP 20 22.74 0.4
 eS 20 49.42
 PGB 2.06 41 iPc 20 23.00 -0.3
 iS 20 51.00
 PLD 2.09 58 eP 20 25.00 1.3
 iS 20 56.00
 EVR 2.14 191 ePn 20 24.50 0.0
 PVY 2.36 313 ePn 20 29.00 1.3
 eSn 21 01.20
 KDZ 2.41 74 eP 20 28.00 -0.4
 iS 21 03.00
 RDO 2.43 86 ePn 20 27.50 -1.1
 ULC 2.49 293 iPnc 20 32.30 2.8X
 eSn 21 06.80
 IVA 2.59 316 iPnd 20 31.40 0.5
 eSn 21 05.30
 DIM 2.62 66 eP 20 37.00 5.7X
 TTG 2.69 303 iPnd 20 34.30 2.0
 eSn 21 10.00
 ALN 2.82 91 eP 20 34.50 0.3
 BDV 2.91 297 iPnc 20 37.70 2.3
 eSn 21 17.30
 NKY 3.06 307 iPnd 20 39.60 2.0
 eSn 21 17.70
 VLS 3.14 206 ePn 20 39.50 0.9
 PLE 3.17 318 ePn 20 38.90 -0.3
 HCY 3.20 298 iPnc 20 41.30 1.8
 eSn 21 21.30
 ATH 3.23 160 ePb 20 42.50 2.6
 EZN 3.28 110 iPn 20 42.70 2.1
 BRY 3.39 305 iPnd 20 44.20 1.9
 eSn 21 26.60
 LCI 3.39 260 P 20 40.70 -1.5
 JMB 3.50 64 eP 20 45.00 1.2
 eS 21 38.00
 PRK 3.51 119 ePn 20 43.60 -0.2
 ITM 3.85 185 ePb 20 52.20 3.5X
 BRT 3.88 270 P 20 49.50 0.3
 BEO 4.04 341 eP 20 49.00 -2.4
 BAL 4.13 273 P 20 51.50 -1.1
 DMK 4.17 77 ePn 20 51.00 -2.2
 EDC 4.27 97 ePn 20 57.00 2.3
 BUC1 4.31 38 eP 21 18.00 22.8X
 4.31 97 ePn 20 55.50 0.2
 VLI 4.32 173 ePn 20 56.00 0.6
 ORI 4.57 260 P 20 59.20 0.1
 CTT 4.62 86 eP 21 09.00 9.3X
 IZM 4.62 123 ePn 21 00.20 0.4
 BZS 4.63 354 ePc 20 59.00 -0.7

ROI 4.63 254 P 21 00.80 0.9
 CMP 4.69 24 ePd 21 22.00 21.3X
 TDS 4.77 255 P 21 02.40 0.6
 TNR 4.85 16 ePc 21 05.00 2.1
 HVAR 4.87 298 iPn 21 03.40 0.1
 MLR 5.19 29 eP 21 09.00 1.1
 SGO 5.34 267 P 21 09.60 -0.3
 YLV 5.37 93 ePn 21 29.00 18.6X
 CVO 5.56 29 eP 21 17.50 4.5X
 HRT 5.57 90 eP 21 26.00 12.8X
 SOI 5.67 241 P 21 15.00 0.5
 VRI 5.81 32 ePc 21 17.00 0.5
 DUI 5.95 279 P 21 18.50 -0.1
 ATN 6.02 244 P 21 19.00 -0.4
 SDI 6.44 279 P 21 27.00 1.6
 ZAG 6.65 318 eP 21 26.50 -1.9
 BMR 6.71 7 ePc 22 02.00 32.9X
 PTJ 6.73 319 eP 21 27.90 -1.6
 VBY 6.83 313 e(P) 21 32.00 1.1
 RIY 7.23 309 ePn 21 36.00 -0.5
 ARV 7.39 293 P 21 38.00 -0.7
 CEY 7.44 312 eP 21 38.00 -1.4
 e(S) 23 02.00
 ASS 7.48 289 P 21 41.00 1.0
 LJU 7.56 314 eP 21 40.50 -0.6
 e 23 41.00
 TRI 7.80 310 ePn 21 42.90 -1.5
 iSn 23 08.00
 VOY 7.91 312 ePn 21 44.90 -1.2
 eSn 23 12.70
 ZST 8.08 334 eP 22 06.10 17.8X
 CRE 8.11 292 P 21 49.80 0.8
 SFI 8.26 294 P 21 49.50 -1.4
 FVI 8.86 312 P 21 58.70 -0.5
 CTI 9.24 307 P 22 02.00 -2.5
 SOTA 10.11 312 iPnc 22 16.00 -0.5
 iSn 24 05.10
 KHC 10.19 326 eP 22 19.00 1.4
 LPG 12.20 297 eP 22 43.80 -1.4
 0.7s 4.40nm 4.8mb
 NB2 21.17 345 P 24 32.80 -2.9X
 0.7s 3.10nm 3.8mb
 TIC 42.03 223 P 27 40.60 -0.8
 KIC 42.12 222 P 27 41.30 -0.9
 0.8s 15.00nm 4.8mb
 LIC 42.39 223 P 27 43.60 -0.8
 S.D. = 1.2 on 77 of 89 obs.

% DEC 21, 1990 16h 41m 22.26± 0.99s
 41.077 N ± 9.7km 22.467 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 202 iP 41 25.05 -0.4
 iS 41 27.40
 KNT 0.34 75 eP 41 29.08 -0.1
 eS 41 33.84
 THE 0.58 139 eP 41 34.04 0.0
 eS 41 41.20
 SOH 0.72 111 eP 41 36.40 0.0
 eS 41 45.72
 SRS 0.85 87 eP 41 38.88 0.2
 eS 41 50.16
 FNA 0.88 251 iP 41 39.28 0.1
 iS 41 50.72
 LIT 0.98 179 eP 41 41.08 0.3
 eS 41 55.16
 S.D. = 0.3 on 7 of 7 obs.

DEC 21, 1990 17h 16m 22.92± 1.04s
 40.963 N ± 9.4km 22.271 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)
 MD 2.9 (ATH).

GRG 0.10 94 eP 16 25.60 -0.1
 eS 16 27.72
 KNT 0.51 67 eP 16 33.24 -0.1
 eS 16 40.12
 THE 0.62 122 eP 16 34.80 -0.6
 eS 16 44.32
 FNA 0.70 256 iP 16 37.10 0.3
 eS 16 47.40
 KZN 0.76 210 ePg 16 36.50 -1.3
 SOH 0.83 99 iP 16 38.44 -0.6
 eS 16 51.20
 LIT 0.88 169 eP 16 39.00 -0.8

SRS 1.01 81 iP 16 54.00 -0.6
 16 41.46 -0.6
 16 56.88
 PLG 1.07 123 ePg 16 43.00 -0.1
 16 51.36 2.3
 OUR 1.45 115 eP 16 49.88 0.1
 PAIG 1.49 133 eP 17 09.50
 17 11.78
 17 11.78
 NEO 1.81 156 ePb 16 54.00 -0.4
 16 58.16 1.9
 AGG 1.94 179 eP 17 02.00 3.7X
 EVR 2.07 190 ePg 17 11.80 7.9X
 RDO 2.48 85 ePb 17 11.80 7.9X
 S.D. = 1.1 on 13 of 15 obs.

? DEC 21, 1990 17h 34m 19.07 ± 3.93s
 36.543 N ± 38.4km 71.048 E ± 14.4km
 DEPTH = 170.3 ± 16.9 km
 5.0mb (1 obs.)

AFGHANISTAN-USSR BORDER REGION (717)

QUE 7.20 210 eP 36 03.00 0.0
 37 22.00
 36 32.20 0.4
 NDI 9.40 145 iPd 36 32.20 0.4
 0.5s 24.65nm 5.0mb
 38 09.50
 GKN 14.29 123 P 37 34.40 -0.6
 37 42.60 0.3
 DMN 14.86 123 P 37 42.00 -0.3
 KKN 14.87 122 P 37 45.20 0.0
 PKI 15.09 122 P 37 46.60 0.0
 GUN 15.21 120 P 38 42.50 0.4
 HYB 20.18 159 eP 39 15.20 0.1
 GBA 23.55 164 P 43 15.00
 43 15.00
 KOD 26.83 166 eP 39 45.00 -0.7
 CHG 30.21 118 eP 40 16.00 0.5
 S.D. = 0.5 on 11 of 11 obs.

% DEC 21, 1990 17h 37m 06.81 ± 1.39s
 41.094 N ± 12.2km 22.415 E ± 7.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 184 eP 37 08.92 -1.2
 37 10.84
 37 14.96 0.5
 KNT 0.37 79 iP 37 21.00
 37 26.26 -1.2
 THE 0.62 138 iP 37 21.30 -0.4
 37 33.18
 SOH 0.76 111 iP 37 33.36 -1.3
 37 33.36
 FNA 0.85 249 eP 37 23.96 0.1
 37 36.48
 SRS 0.89 88 eP 37 27.00 2.4
 37 24.88 -0.8
 KZN 0.93 212 ePb 37 39.06
 LIT 0.99 177 eP 37 27.50 0.6
 37 44.00
 PLG 1.06 132 ePb 37 34.33 0.4
 37 55.48
 PAIG 1.51 140 eP 37 42.90 0.8
 37 42.90
 AGG 2.07 182 eP 37 42.90 0.8
 S.D. = 1.3 on 11 of 11 obs.

% DEC 21, 1990 17h 39m 40.71 ± 0.96s
 41.006 N ± 9.3km 22.283 E ± 5.9km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.10 119 eP 39 42.92 -0.6
 39 44.36
 39 50.92 0.3
 KNT 0.49 71 eP 39 57.96
 39 53.84 0.3
 THE 0.64 126 eP 39 54.85 -0.1
 40 06.17
 FNA 0.72 252 iP 39 56.10 -0.7
 40 07.88
 SOH 0.83 102 iP 39 57.84 -0.4
 40 11.08
 LIT 0.92 170 eP 39 59.18 -0.4
 40 14.38
 SRS 1.00 83 eP 40 08.24 0.4
 40 29.01
 PAIG 1.52 135 eP 40 29.01
 40 29.01
 S.D. = 0.5 on 8 of 8 obs.

* DEC 21, 1990 17h 48m 08.91 ± 2.39s

41.097 N ± 15.3km 22.191 E ± 12.7km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.21 131 eP 48 12.50 -1.1
 48 14.46
 48 19.22 -0.6
 KNT 0.54 83 eP 48 26.30
 48 23.94 1.3X
 FNA 0.69 243 eP 48 34.38
 48 23.10 -0.5
 THE 0.75 128 eP 48 32.00
 48 25.00 -0.4
 KZN 0.85 202 ePb 48 26.46 -0.1
 SOH 0.92 107 eP 48 39.10
 48 28.72 0.5
 LIT 1.02 167 eP 48 42.28
 48 29.53 0.6
 SRS 1.06 88 iP 48 42.82
 48 32.00 0.8
 PLG 1.20 127 ePb 48 48.00
 48 38.46 0.8
 PAIG 1.63 135 eP 49 00.14
 49 00.14
 S.D. = 0.8 on 9 of 10 obs.

& DEC 21, 1990 17h 52m 12.10s
 34.550 N 116.800 W
 DEPTH = 6.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 2.7 (PAS).

PEC 0.72 205 iPd 52 25.60 -0.9
 52 34.40 -0.5
 PLM 1.19 182 iPd 52 54.00 4.0
 GLA 2.22 132 eP 52 54.00 4.0
 3 obs. associated

DEC 21, 1990 17h 55m 21.77 ± 1.21s
 41.099 N ± 10.5km 22.216 E ± 5.9km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.20 135 eP 55 25.44 -0.7
 55 27.52
 55 32.20 -0.1
 KNT 0.52 83 eP 55 38.76
 55 36.04 0.2
 FNA 0.71 244 eP 55 46.12
 55 35.96 -0.2
 THE 0.73 129 eP 55 44.40
 55 38.00 -0.4
 KZN 0.86 203 ePb 55 38.92 -0.2
 SOH 0.90 107 eP 55 50.32
 55 40.56 -0.5
 LIT 1.02 168 eP 55 54.56
 55 40.88 -0.5
 SRS 1.04 89 eP 55 54.84
 55 45.20 1.4
 PLG 1.18 127 ePb 56 00.50
 56 00.50
 PAIG 1.62 136 eP 55 51.44 1.1
 56 11.40
 S.D. = 0.8 on 10 of 10 obs.

& DEC 21, 1990 17h 58m 17.69s
 58.455 N 142.975 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

YAH 2.02 18 iP 58 47.29 -5.0
 59 10.43
 PNL 2.21 55 eP 58 49.63 -5.4
 BCPM 2.28 47 eP 58 51.32 -4.7
 59 16.15
 TGL 2.31 2 eP 58 51.31 -5.2
 HON 2.35 63 eP 58 51.64 -5.3
 59 19.18
 BALM 2.61 7 eP 58 55.51 -5.2
 GLB 3.03 352 eP 59 01.42 -5.1
 KNIM 3.09 310 eP 59 02.96 -4.4
 VLZ 3.18 329 eP 59 03.93 -4.7
 GLI 3.21 321 eP 59 03.82 -5.3
 10 obs. associated

& DEC 21, 1990 17h 58m 22.13s
 61.777 N 149.007 W
 DEPTH = 21.9km
 SOUTHERN ALASKA (2)

<AGS-P>.

GHO 0.04 97 iP 58 25.86 -0.3
 58 29.28
 PLRM 0.19 198 iP 58 27.22 -0.2
 58 31.23
 SML 0.32 84 eP 58 28.54 -0.8
 58 33.53
 PWA 0.43 253 iP 58 30.72 -0.4
 KNK 0.45 144 eP 58 31.31 -0.1
 58 37.76
 PMS 0.60 207 eP 58 33.16 -0.7
 58 41.70
 CUT 0.87 317 eP 58 36.94 -1.4
 SUA 0.89 250 eP 58 37.98 -0.8
 SKT 1.21 281 iP 58 42.97 -0.9
 HUR 1.24 347 eP 58 43.00 -1.2
 58 58.37
 GLI 1.29 133 eP 58 44.56 -0.3
 VZW 1.38 120 eP 58 46.01 -0.2
 SLKM 1.40 205 eP 58 46.04 -0.5
 VLZ 1.44 116 eP 58 45.58 -1.6
 NKA 1.50 227 eP 58 47.54 -0.3
 KLU 1.50 100 eP 58 46.91 -1.1
 CGLM 1.51 253 eP 58 47.28 -0.9
 NCG 1.55 257 eP 58 48.79 0.0
 KNIM 1.56 156 eP 58 48.32 -0.5
 SPU 1.58 249 eP 58 49.28 0.2
 RND 1.64 2 eP 58 48.97 -1.0
 SEW 1.69 188 eP 58 49.60 -1.1
 CKL 1.70 251 eP 58 49.63 -1.3
 BGL 1.70 254 eP 58 51.06 0.1
 TZL 1.72 79 eP 58 49.97 -1.1
 TRF 1.78 341 eP 58 51.33 -0.8
 SDG 1.79 64 eP 58 52.16 0.0
 PAX 2.04 52 eP 58 55.30 -0.5
 RDT 2.04 235 eP 58 56.20 0.4
 REF 2.21 236 eP 58 57.62 -0.7
 RDN 2.22 237 eP 58 57.42 -1.0
 RSO 2.25 236 eP 58 59.36 0.5
 RS2 2.25 236 eP 58 59.39 0.5
 NCT 2.26 239 eP 59 00.00 1.1
 RED 2.28 235 eP 59 00.30 1.1
 GLB 2.51 95 eP 59 01.38 -1.1
 INE 2.62 231 eP 59 03.11 -1.1
 37 obs. associated

% DEC 21, 1990 18h 09m 12.76 ± 1.20s
 41.127 N ± 10.4km 22.416 E ± 6.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.17 184 iP 09 16.89 0.2
 09 19.68
 KNT 0.37 84 eP 09 20.48 0.2
 09 25.48
 THE 0.65 140 eP 09 25.00 -0.7
 09 33.36
 SOH 0.77 113 eP 09 28.52 0.7
 09 37.76
 FNA 0.86 247 eP 09 29.28 -0.1
 09 40.92
 SRS 0.89 90 eP 09 29.40 -0.4
 09 41.72
 LIT 1.03 177 iP 09 32.24 0.1
 09 47.28
 S.D. = 0.5 on 7 of 7 obs.

% DEC 21, 1990 18h 14m 25.30 ± 1.06s
 41.081 N ± 9.7km 22.432 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 191 iP 14 28.78 0.4
 14 31.52
 KNT 0.36 77 iP 14 32.92 0.2
 14 37.84
 THE 0.60 138 eP 14 36.92 -0.5
 14 45.28
 SOH 0.74 110 eP 14 39.56 -0.4
 14 50.16
 FNA 0.85 250 eP 14 41.60 -0.2
 14 53.40
 SRS 0.88 87 eP 14 42.04 -0.1
 14 53.76
 LIT 0.98 177 iP 14 43.60 -0.3
 14 59.44

CD2 25.55 92 eP 37 29.70 0.7
 GYA 29.63 99 P 38 05.60 -0.6
 HFS 44.97 322 eP 40 14.00 -1.0
 0.4s 4.40nm 4.7mb
 NB2 46.25 323 P 40 25.00 -0.2
 0.6s 2.90nm 4.4mb
 BCAO 59.45 252 iPd 42 04.10 0.4
 0.6s 11.00nm 5.2mb
 ic 42 18.90
 MBC 67.95 3 eP 42 59.00 0.4
 0.5s 4.00nm 4.8mb
 SHGH 73.34 265 eP 43 51.00 18.9X
 LEGH 73.61 265 eP 43 50.00 16.3X
 KSR 75.56 223 iPc 43 46.00 1.2
 0.9s 53.00nm 5.5mb
 i 44 15.00
 FRS 79.47 221 iP 44 13.80 7.7X
 1.0s 220.00nm 6.1mb X
 i 44 44.50
 WRA 79.79 124 P 44 08.00 -0.1
 0.7s 2.80nm 4.4mb
 YKA 81.85 4 eP 44 18.30 0.0
 0.5s 0.70nm 3.9mb
 S.D. = 0.6 on 14 of 23 obs.

DEC 21, 1990 18h 37m 14.47± 0.55s
 41.034 N ± 5.1km 22.380 E ± 4.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 3.5 (ATH).

GRG 0.08 168 iP 37 17.40 0.4
 KNT 0.41 72 eP 37 22.96 0.1
 THE 0.60 132 eP 37 25.29 -1.3
 eS 37 33.28
 SOH 0.77 106 iP 37 28.93 -0.6
 FNA 0.80 252 iP 37 29.85 -0.2
 eS 37 42.04
 KZN 0.86 213 ePg 37 30.50 -0.6
 SRS 0.92 84 iP 37 31.68 -0.4
 eS 37 44.08
 LIT 0.94 175 iP 37 32.04 -0.3
 eS 37 46.72
 PLG 1.04 129 ePg 37 33.80 -0.4
 OUR 1.40 119 eP 37 40.08 0.0
 PAIG 1.48 138 iP 37 41.25 0.1
 eS 38 00.88
 NEO 1.84 159 ePb 37 45.20 -1.2
 EVR 2.16 192 ePn 37 52.70 1.6
 KEK 2.37 237 ePb 38 01.00 7.0X
 RDO 2.39 86 ePn 37 55.80 1.6
 VLS 3.17 206 ePg 38 14.00 8.6X
 PRK 3.48 120 ePg 38 20.00 10.3X
 ITM 3.87 185 ePb 38 21.00 5.7X
 DMK 4.12 77 ePn 38 30.00 11.2X
 EDC 4.22 98 ePn 38 31.00 10.7X
 BNT 4.27 97 ePn 38 24.00 3.1X
 VLI 4.33 174 ePn 38 23.50 1.6
 BZS 4.61 353 ePc 38 26.50 0.7
 MLR 5.16 29 eP 38 37.00 3.3X
 e 51 48.50
 VOY 7.93 312 ePn 39 11.50 -1.2
 eSn 40 40.30
 S.D. = 1.0 on 17 of 25 obs.

% DEC 21, 1990 18h 56m 25.34± 1.47s
 41.065 N ± 10.9km 22.382 E ± 7.2km
 DEPTH = 12.0 ± 9.8 km
 YUGOSLAVIA (383)

GRG 0.11 172 iP 56 28.32 -0.1
 eS 56 30.32
 KNT 0.40 76 eP 56 33.92 0.3
 eS 56 40.04
 THE 0.62 134 eP 56 37.48 -0.1
 eS 56 45.80
 SOH 0.78 108 eP 56 39.64 -0.7
 iS 56 51.48
 FNA 0.81 250 eP 56 40.92 0.0
 eS 56 51.68
 SRS 0.92 86 eP 56 43.16 0.5
 eS 56 56.08
 LIT 0.97 175 iP 56 44.28 0.7
 eS 56 57.84
 S.D. = 0.6 on 7 of 7 obs.

DEC 21, 1990 19h 02m 22.48± 1.05s

41.016 N ± 9.5km 22.363 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.07 153 iP 02 25.02 0.2
 eS 02 26.78
 KNT 0.43 70 eP 02 31.22 0.0
 eS 02 37.14
 THE 0.60 130 eP 02 33.94 -0.6
 eS 02 41.70
 SOH 0.78 104 iP 02 37.25 -0.4
 eS 02 48.02
 FNA 0.78 253 eP 02 38.70 0.9
 eS 02 48.42
 KZN 0.84 213 ePb 02 37.20 -1.5
 LIT 0.92 174 eP 02 39.98 -0.1
 eS 02 53.74
 SRS 0.94 83 eP 02 39.66 -0.7
 eS 02 52.46
 PLG 1.04 128 ePb 02 43.50 1.3
 eSb 02 58.50
 PAIG 1.48 137 eP 02 50.02 0.9
 eS 03 10.34
 S.D. = 1.0 on 10 of 10 obs.

DEC 21, 1990 19h 10m 49.37± 1.27s
 41.145 N ± 10.6km 22.392 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.19 178 eP 10 53.14 -0.4
 KNT 0.38 87 eP 10 57.58 0.4
 eS 11 03.10
 THE 0.67 140 iP 11 01.90 -0.8
 eS 11 10.46
 SOH 0.80 114 eP 11 04.38 -0.5
 eS 11 14.66
 FNA 0.85 245 eP 11 05.22 -0.6
 eS 11 15.62
 SRS 0.91 91 eP 11 06.50 -0.2
 eS 11 19.10
 KZN 0.96 210 ePb 11 09.00 1.3
 LIT 1.05 176 eP 11 08.54 -0.6
 eS 11 24.94
 PLG 1.11 134 ePb 11 11.20 1.0
 eSb 11 28.00
 PAIG 1.56 141 eP 11 17.70 0.5
 eS 11 38.30
 S.D. = 0.8 on 10 of 10 obs.

& DEC 21, 1990 19h 21m 27.50s
 34.533 N 116.817 W
 DEPTH = 6.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 2.5 (PAS).

PEC 0.70 204 eP 21 40.50 -1.0
 PLM 1.18 182 eP 21 49.30 -0.7
 2 obs. associated

DEC 21, 1990 19h 33m 36.11± 1.16s
 41.093 N ± 10.9km 22.451 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 196 eP 33 39.22 -0.2
 eS 33 41.26
 KNT 0.34 78 iP 33 43.42 0.2
 eS 33 48.46
 THE 0.60 140 eP 33 46.82 -1.4
 eS 33 55.34
 SOH 0.74 111 eP 33 50.74 0.2
 eS 34 00.58
 SRS 0.86 88 eP 33 52.50 -0.2
 eS 34 04.42
 FNA 0.87 250 eP 33 52.26 -0.6
 eS 34 03.90
 KZN 0.94 214 ePb 33 55.00 0.9
 LIT 0.99 178 eP 33 54.90 0.0
 eS 34 08.98
 PLG 1.04 133 ePb 33 59.00 3.2X
 eSb 34 12.50
 PAIG 1.49 141 eP 34 04.10 1.1
 eS 34 23.66
 S.D. = 0.9 on 9 of 10 obs.

% DEC 21, 1990 19h 47m 23.25± 1.02s

41.065 N ± 9.1km 22.424 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.11 189 iP 47 25.76 -0.4
 eS 47 27.00
 KNT 0.37 75 eP 47 30.84 0.0
 eS 47 36.60
 THE 0.60 136 eP 47 34.48 -0.8
 eS 47 42.56
 SOH 0.74 109 eP 47 37.48 -0.4
 eS 47 48.20
 FNA 0.84 251 eP 47 39.24 -0.3
 eS 47 49.84
 SRS 0.88 86 eP 47 40.68 0.4
 eS 47 52.40
 LIT 0.96 177 eP 47 41.56 0.0
 eS 47 55.64
 PAIG 1.49 139 eP 47 50.40 0.4
 eS 48 11.60
 AGG 2.04 182 eP 47 59.16 1.1
 S.D. = 0.7 on 9 of 9 obs.

% DEC 21, 1990 19h 59m 33.10± 1.09s
 41.075 N ± 9.8km 22.380 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.12 172 iP 59 36.22 0.1
 eS 59 37.66
 KNT 0.40 77 eP 59 41.06 -0.2
 eS 59 46.70
 THE 0.63 135 eP 59 44.66 -1.0
 eS 59 53.06
 SOH 0.78 109 eP 59 48.38 0.1
 eS 59 58.94
 FNA 0.81 249 eP 59 48.78 -0.1
 eS 00 00.34
 SRS 0.92 87 eP 59 50.90 0.3
 iS 00 02.78
 LIT 0.98 175 eP 59 51.70 0.0
 PAIG 1.52 139 eP 00 01.18 0.9
 S.D. = 0.6 on 8 of 8 obs.

% DEC 21, 1990 20h 09m 11.87± 1.10s
 41.090 N ± 10.4km 22.440 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 192 eP 09 15.20 0.1
 eS 09 17.50
 KNT 0.35 78 eP 09 19.40 0.2
 eS 09 25.20
 THE 0.61 139 eP 09 23.30 -0.8
 eS 09 31.50
 SOH 0.74 111 eP 09 26.50 0.0
 eS 09 36.70
 FNA 0.86 250 eP 09 28.30 -0.2
 eS 09 39.50
 SRS 0.87 88 eP 09 28.60 0.0
 LIT 0.99 178 eP 09 31.30 0.6
 S.D. = 0.5 on 7 of 7 obs.

DEC 21, 1990 20h 09m 40.22± 1.07s
 41.076 N ± 10.2km 22.461 E ± 6.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 201 eP 09 42.26 -1.1
 eS 09 44.62
 KNT 0.34 75 eP 09 46.58 -0.7
 eS 09 51.90
 THE 0.59 139 eP 09 52.02 0.0
 eS 10 00.78
 SOH 0.72 110 eP 09 54.70 0.2
 eS 10 03.42
 SRS 0.86 87 eP 09 56.82 0.1
 eS 10 08.10
 FNA 0.87 251 eP 09 57.66 0.6
 iS 10 09.74
 KZN 0.93 215 ePb 09 58.00 0.0
 LIT 0.97 179 eP 09 58.34 -0.4
 eS 10 12.46
 PLG 1.03 133 ePb 10 05.00 5.4X
 eSb 10 20.00
 PAIG 1.48 141 iP 10 08.14 1.3
 eS 10 27.40

21d 20h

S.D. = 0.8 on 9 of 10 obs.
 % DEC 21, 1990 20h 09m 46.64±0.58s
 40.938 N ± 6.2km 22.473 E ± 4.3km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.06 289 eP 09 48.62 -0.3
 eS 09 49.74
 KNT 0.39 55 eP 09 54.50 -0.2
 eS 10 00.54
 THE 0.48 129 eP 09 56.10 -0.3
 eS 10 03.66
 SOH 0.68 100 eP 10 00.10 0.0
 eS 10 10.62
 LIT 0.84 179 eP 10 02.86 0.1
 eS 10 14.98
 FNA 0.85 260 eP 10 03.18 0.2
 SRS 0.87 78 eP 10 03.74 0.4
 eS 10 15.72
 PAIG 1.37 137 eP 10 11.78 0.1
 S.D. = 0.3 on 8 of 8 obs.

DEC 21, 1990 20h 19m 13.10±0.65s
 38.739 N ± 5.9km 27.510 E ± 8.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.2 (ISK).

IZM 0.39 210 iPg 19 21.30 0.1
 iSg 19 27.80
 PRK 1.09 298 ePb 19 34.00 0.4
 eSb 19 50.50
 SMG 1.16 207 ePb 19 35.00 0.3
 CIN 1.22 158 iPg 19 35.00 -0.9
 iSg 19 49.00
 DST 1.23 45 iPn 19 35.10 -0.8
 EZN 1.42 320 iPn 19 39.00 0.1
 EDC 1.63 10 ePn 19 40.70 -1.2
 KCT 1.64 23 iPn 19 41.40 -0.7
 BNT 1.65 11 iPn 19 40.80 -1.3
 ALT 2.05 80 ePn 19 52.00 3.8X
 IZI 2.20 43 ePn 19 52.00 1.7
 YLV 2.32 38 iPn 19 54.40 2.4
 S.D. = 1.3 on 11 of 12 obs.

% DEC 21, 1990 20h 24m 34.70±0.85s
 41.046 N ± 8.6km 22.522 E ± 5.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 226 iPc 24 37.18 -0.7
 eS 24 39.70
 KNT 0.31 68 ePd 24 41.26 0.2
 iS 24 46.34
 THE 0.53 141 ePc 24 45.38 -0.1
 eS 24 52.82
 SOH 0.67 109 ePc 24 48.02 0.0
 eS 24 58.02
 SRS 0.81 85 ePc 24 50.30 -0.2
 eS 25 01.94
 FNA 0.91 254 ePc 24 52.42 0.3
 eS 25 05.06
 LIT 0.94 181 ePc 24 53.18 0.5
 eS 25 06.74
 S.D. = 0.4 on 7 of 7 obs.

? DEC 21, 1990 20h 25m 14.17±1.07s
 40.957 N ± 20.0km 22.462 E ± 7.4km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.05 269 ePd 25 16.34 0.0
 eS 25 17.62
 KNT 0.39 58 ePd 25 22.06 -0.1
 eS 25 28.22
 SOH 0.69 101 iPd 25 27.78 -0.1
 eS 25 38.10
 SRS 0.87 79 ePc 25 31.06 0.2
 S.D. = 0.2 on 4 of 4 obs.

DEC 21, 1990 20h 29m 29.42±0.68s
 38.710 N ± 5.8km 27.650 E ± 9.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.8 (ISK).

IZM 0.44 224 iPg 29 38.30 0.0
 iSg 29 45.30
 CIN 1.16 163 ePg 29 51.00 -0.1
 iSg 30 09.00
 DST 1.17 40 iPn 29 52.20 0.8
 EZN 1.52 318 ePn 29 57.30 0.7
 KCT 1.63 19 ePn 29 58.40 0.1
 EDC 1.64 6 ePn 29 57.70 -0.7
 BNT 1.66 7 iPn 29 57.80 -0.8
 IZI 2.15 40 ePn 30 10.00 4.1X
 S.D. = 0.8 on 7 of 8 obs.

DEC 21, 1990 20h 34m 43.38±0.29s
 20.296 N ± 6.4km 45.702 W ± 3.7km
 DEPTH = 10.0km (geophysicist)
 5.1mb (35 obs.) 4.6Msz (5 obs.)
 NORTH ATLANTIC RIDGE (403)

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 12S, 23C
 Centroid Location:
 Origin Time 20:34:48.3 0.5
 Lat 20.25N FIX; Lon 45.69W FIX
 Dep 15.0 FIX Half-duration 1.8
 Moment Tensor: Scale 10**16 Nm
 Mrr=-5.87 0.44 Mtt=-3.02 0.62
 Mff= 8.89 0.52 Mrt=-1.23 1.30
 Mrf= 3.95 1.04 Mtf=-0.37 0.56
 Principal Axes:
 T Val= 9.91 Plg=14 Azm=267
 N -2.76 14 173
 P -7.16 70 41
 Best Double Couple: Mo=8.5*10**16
 NP1: Strike= 16 Dip=33 Slip= -64
 NP2: 165 61 -106

CBM 32.25 331 P 41 14.70 0.6
 HBVT 33.05 323 P 41 20.00 -1.1
 RSCP 38.10 302 P 42 06.00 1.8
 PWLA 39.97 301 P 42 21.00 1.1
 TOL 40.54 52 eP 42 27.00 2.5
 eS 48 42.00
 ELC 41.34 304 P 42 32.00 1.0
 LIC 41.85 104 P 42 35.30 -0.2
 Z 20s 1.50um 4.9Msz
 42.41 304 eP 42 40.30 0.5
 1.2s 32.35nm 4.9mb
 PPD 42.42 188 eP 42 40.90 0.9
 ZOBO 42.49 213 P 42 40.00 -1.3
 1.4s 33.15nm 4.9mb
 Z 22s 0.75um 4.5Msz

LPB 42.70 213 Pd 42 41.20 -1.6
 Z 24s 0.78um 4.5MszX
 (S)
 LR 49 13.00
 LR 55 00.00
 OLY 42.81 301 P 42 43.00 -0.1
 CNCB 42.87 212 P 42 45.00 0.6
 EPF 44.58 49 eP 42 57.50 0.0
 LPF 45.27 42 eP 43 03.30 0.5
 MFF 45.34 44 eP 43 03.90 0.5
 1.3s 50.55nm 5.3mb
 LFF 45.40 46 eP 43 05.20 1.3
 1.2s 23.80nm 5.0mb
 LPO 45.63 47 eP 43 05.90 0.1
 RJF 46.03 46 eP 43 08.80 -0.1
 1.3s 28.90nm 5.1mb
 Z 21s 0.43um 4.4Msz

LDF 46.05 41 eP 43 09.20 0.2
 FRB 46.09 346 eP 43 09.00 0.0
 CAF 46.30 47 eP 43 11.10 0.0
 1.2s 17.85nm 5.0mb
 LSF 46.32 45 eP 43 11.30 0.1
 1.2s 23.80nm 5.1mb
 TCF 46.79 45 eP 43 15.00 0.1
 1.2s 29.75nm 5.2mb
 MAF 47.00 45 eP 43 16.60 0.0
 BGF 47.29 45 eP 43 18.80 0.0
 1.2s 29.75nm 5.3mb
 AVF 47.69 45 eP 43 21.80 -0.1
 1.4s 52.30nm 5.4mb
 SSF 47.86 44 eP 43 23.10 -0.3
 1.2s 25.30nm 5.2mb
 SMF 47.97 45 eP 43 24.10 -0.1
 1.1s 22.00nm 5.2mb
 LBF 48.15 44 eP 43 25.00 -0.7

1.2s 16.35nm 5.0mb
 LOR 48.15 44 eP 43 25.50 -0.1
 1.2s 20.85nm 5.1mb
 Z 20s 0.50um 4.5Msz
 BNI 49.50 48 P 43 37.00 0.8
 LPL 49.64 47 eP 43 37.90 0.5
 1.2s 14.90nm 4.9mb
 LPG 49.65 47 eP 43 38.10 0.6
 SBF 49.80 49 eP 43 38.30 -0.2
 HAU 49.97 44 eP 43 38.70 -0.9
 0.9s 8.20nm 4.7mb
 BSF 50.22 44 eP 43 40.60 -1.0
 0.9s 6.55nm 4.6mb
 CDF 50.68 43 eP 43 44.20 -0.9
 0.9s 6.55nm 4.6mb
 FEL 51.03 44 eP 43 47.59 -0.2
 VAI 51.11 47 P 43 47.50 -0.7
 PII 51.99 50 P 43 53.00 -1.9
 OGA 52.83 46 eP 44 01.90 0.4
 SFI 52.97 50 P 44 01.50 -0.8
 CRE 53.00 50 P 44 02.00 -0.7
 SOTA 53.01 46 iPd 44 01.80 -1.0
 1.4s 77.10nm 5.4mb
 ic 44 02.10
 i 44 09.40
 CTI 53.12 47 P 44 09.00 5.4X
 ASS 53.46 51 P 44 06.00 0.0
 ARV 53.71 50 P 44 06.00 -1.8
 AZI 53.93 52 P 44 10.50 1.2
 MOX 53.94 42 eP 44 09.00 -0.4
 FVI 53.98 47 P 44 09.50 -0.1
 GOL 54.19 305 eP 44 11.00 -0.7
 1.1s 8.33nm 4.7mb
 SDI 54.19 53 P 44 12.00 0.6
 BHG 54.22 45 iPc 44 11.30 -0.1
 WET 54.45 44 eP 44 12.80 -0.4
 VOY 54.67 47 eP 44 14.50 -0.4
 DUI 54.67 53 P 44 15.50 0.5
 KHC 54.90 44 eP 44 16.50 0.0
 e 44 22.50
 CLL 54.94 41 iP 44 16.50 -0.2
 1.5s 22.00nm 5.0mb
 CEY 55.00 48 eP 44 17.00 -0.3
 ANMO 55.02 299 P 44 18.00 0.2
 1.3s 69.71nm 5.5mb
 ALO 55.02 299 eP 44 18.00 0.2
 1.2s 10.94nm 4.8mb
 Z 22s 1.30um 5.0Msz
 LJU 55.11 47 eP 44 18.00 -0.1
 SGO 55.25 54 P 44 19.50 0.4
 BRG 55.44 42 eP 44 26.80 6.5X
 1.6s 34.00nm 5.1mb
 VBY 55.56 48 e(P) 44 22.00 0.7
 PRU 55.66 43 eP 44 21.00 -0.9
 e 44 27.50
 CSI 55.98 55 P 44 23.40 -1.1
 TDS 56.02 55 P 44 26.00 1.3
 NB2 56.59 29 P 44 28.20 -0.3
 1.4s 26.50nm 5.1mb
 KSP 56.90 42 eP 44 30.50 -0.4
 ZST 57.09 45 eP 44 31.30 -0.9
 e 44 37.60
 HFS 57.47 31 eP 44 33.00 -1.7
 0.5s 1.70nm 4.3mb
 SRO 57.87 46 iP 44 36.80 -0.8
 DAG 58.11 7 iPc 44 39.60 0.7
 1.6s 66.67nm 5.4mb
 DAU 58.72 306 eP 44 43.50 -0.7
 1.5s 3.00nm 4.2mb
 SES 58.96 317 eP 44 45.00 -0.4
 KRA 59.13 43 eP 44 47.20 0.8
 e 44 53.00
 SPC 59.25 44 eP 44 47.00 -0.6
 MSU 59.48 303 P 44 49.00 -0.4
 VTS 61.19 52 iPd 45 02.00 1.1
 MMB 61.61 53 P 45 04.00 0.3
 PGB 61.90 52 eP 45 07.00 1.4
 RZN 62.35 53 iP 45 10.00 1.2
 YKA 62.47 331 eP 45 06.50 -2.4
 1.3s 8.10nm 4.8mb
 NEW 62.84 315 eP 45 11.00 -0.8
 1.0s 10.00nm 5.0mb
 MLR 63.06 48 eP 45 15.00 1.6
 e 06 11.00
 TNP 63.47 303 P 45 16.00 -0.3
 1.5s 16.41nm 5.0mb

VRI 63.60 48 ePd 45 13.00 -3.7X
 ed 06 17.50
 BCAO 64.33 95 iPc 45 22.80 0.8
 1.0s 28.00nm 5.4mb
 id 45 29.00
 PNT 64.47 316 ePc 45 22.00 -0.4
 BCH 66.12 300 eP 45 35.00 1.6
 MBC 66.55 346 eP 45 36.00 0.8
 1.4s 42.00nm 5.4mb
 INK 70.53 337 eP 45 59.00 -1.0
 FBA 76.82 335 eP 46 37.20 0.4
 1.5s 51.35nm 5.4mb
 IMA 78.66 337 eP 46 48.20 1.1
 1.6s 36.30nm 5.2mb
 SVW 81.60 333 eP 47 03.10 0.4
 KRI 82.61 111 iPc 46 58.70 -10.1X
 DZM 150.00 261 iPKPc 54 37.10 5.8X
 S.D. = 0.9 on 94 of 99 obs.

% DEC 21, 1990 20h 42m 14.16±0.94s
 41.059 N ± 9.6km 22.496 E ± 5.8km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.12 215 iPc 42 16.89 -0.4
 eS 42 19.28
 KNT 0.32 71 ePd 42 21.28 0.5
 eS 42 26.32
 THE 0.56 140 ePc 42 25.76 0.3
 eS 42 33.00
 SOH 0.69 110 ePc 42 27.72 -0.2
 eS 42 38.04
 SRS 0.83 86 ePd 42 29.68 -0.6
 eS 42 42.04
 FNA 0.89 252 ePd 42 31.48 0.2
 eS 42 42.16
 LIT 0.96 180 ePd 42 32.52 0.1
 S.D. = 0.5 on 7 of 7 obs.

DEC 21, 1990 20h 44m 49.65±0.81s
 13.298 N ± 14.3km 89.134 W ± 12.2km
 DEPTH = 78.9 ± 6.5 km
 4.5mb (4 obs.)

EL SALVADOR (73)
 Feit (III) at Son Salvador.

SJAS 0.37 355 iPd 45 01.30 -1.3
 LFU 0.45 2 iPd 45 04.20 1.1
 VSS 0.45 347 iPd 45 04.00 0.8
 CUSS 1.00 308 eP 45 07.70 -1.2
 TPX 3.43 298 iP 45 07.17 -1.7
 iS 46 23.36
 SCX 4.81 316 iP 46 09.00 7.9X
 iS 47 11.50
 DVD 8.15 126 eP 46 48.00 0.6
 OXX 8.24 298 (P) 46 44.00 -4.8X
 IISM 9.73 307 iP 47 08.72 -0.3
 IIT 10.49 304 iP 47 21.56 2.0
 PPM 10.77 303 iP 47 25.42 1.8
 III 11.15 298 iP 47 27.50 -0.9
 FVM 24.61 358 eP 50 06.00 2.1
 0.8s 7.58nm 4.2mb
 ALQ 26.64 327 e(P) 50 25.40 2.4
 GOL 29.94 334 iP 50 52.10 -0.7
 0.9s 11.36nm 4.6mb
 PV09 30.74 328 eP 51 00.00 0.2
 ZOBO 35.98 144 P 51 45.00 -0.5
 LPB 36.20 144 eP 51 56.00 8.7X
 CNCB 36.49 144 P 51 50.00 0.2
 SES 41.09 339 eP 52 28.00 0.9
 YKA 52.37 345 eP 53 53.70 -1.9
 0.9s 8.50nm 4.8mb
 FRB 52.41 11 eP 53 54.00 -1.8
 INK 61.91 343 eP 55 01.50 -1.4
 MBC 64.96 352 eP 55 21.00 -1.7
 0.6s 3.00nm 4.4mb
 CHG 147.11 346 ePKP 04 25.10 1.4
 HYB 147.15 22 ePKP 04 24.00 0.2
 S.D. = 1.5 on 23 of 26 obs.

% DEC 21, 1990 20h 47m 29.95±1.26s
 41.040 N ± 9.5km 22.375 E ± 6.8km
 DEPTH = 9.2 ± 8.1 km

YUGOSLAVIA (383)

GRG 0.09 166 ePc 47 32.52 0.1
 eS 47 34.12

KNT 0.41 73 ePc 47 38.68 0.3
 eS 47 44.56
 THE 0.61 132 ePd 47 41.20 -0.9
 eS 47 49.48
 SOH 0.77 106 ePd 47 44.44 -0.7
 eS 47 55.36
 FNA 0.80 252 ePd 47 45.16 -0.4
 eS 47 55.64
 SRS 0.92 85 ePd 47 47.72 0.0
 eS 47 59.72
 LIT 0.94 175 ePc 47 48.32 0.3
 eS 48 02.56
 PAIG 1.49 138 ePc 47 57.68 0.8
 eS 48 17.76
 S.D. = 0.8 on 8 of 8 obs.

DEC 21, 1990 21h 04m 47.15±0.35s
 40.957 N ± 3.8km 22.350 E ± 3.1km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

MD 3.5 (ATH).

GRG 0.04 90 eP 04 49.56 0.3
 iS 04 50.00
 KNT 0.46 63 eP 04 56.20 -0.4
 THE 0.57 125 eP 04 57.56 -1.1
 eS 05 06.08
 FNA 0.76 257 eP 05 01.72 -0.3
 eS 05 11.60
 SOH 0.77 100 iP 05 01.96 -0.3
 eS 05 12.16
 KZN 0.79 214 ePg 05 01.00 -1.5
 LIT 0.86 173 eP 05 03.28 -0.5
 eS 05 15.88
 SRS 0.95 80 eP 05 04.84 -0.5
 eS 05 17.76
 PLG 1.02 125 ePg 05 06.00 -0.4
 PAIG 1.44 135 eP 05 13.84 0.5
 eS 05 33.24
 VTS 1.76 21 iP 05 19.00 1.1
 iS 05 40.00
 NEO 1.78 158 ePb 05 17.50 -0.7
 AGG 1.93 180 eP 05 21.28 0.9
 eS 05 46.96
 EVR 2.08 192 ePg 05 27.00 4.4X
 PGB 2.09 40 eP 05 23.00 0.3
 KEK 2.31 238 ePn 05 29.50 3.6X
 KDZ 2.41 72 eP 05 27.00 -0.3
 RDO 2.42 84 ePn 05 30.00 2.7X
 ALN 2.80 90 eP 05 32.16 -0.6
 VLS 3.09 207 ePb 05 40.50 3.6X
 EZN 3.24 109 ePn 05 48.00 9.0X
 PRK 3.46 118 ePn 05 43.00 0.9
 ITM 3.79 185 ePb 05 53.50 6.7X
 EDC 4.24 96 ePn 05 54.00 0.8
 VLI 4.26 174 ePn 05 55.50 2.0
 BZS 4.69 354 eP 05 59.50 -0.1
 SGO 5.36 268 P 06 09.50 0.4
 SDI 6.47 279 P 06 25.50 0.7
 VOY 7.97 312 ePn 06 44.20 -1.6
 eSn 08 15.90
 CRE 8.16 293 P 06 49.00 0.5
 S.D. = 0.9 on 24 of 30 obs.

% DEC 21, 1990 21h 25m 19.45±0.83s
 41.000 N ± 8.2km 22.491 E ± 5.4km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.08 237 ePc 25 21.36 -0.6
 eS 25 23.48
 KNT 0.35 62 ePc 25 26.20 -0.4
 eS 25 31.24
 THE 0.51 135 iPd 25 30.06 0.2
 eS 25 37.56
 SOH 0.68 105 ePd 25 32.00 -0.9
 eS 25 41.92
 SRS 0.84 82 ePc 25 36.56 0.9
 eS 25 47.12
 FNA 0.87 256 ePc 25 36.64 0.4
 eS 25 49.72
 LIT 0.90 180 ePc 25 35.72 -1.0
 eS 25 50.20
 PAIG 1.40 139 ePc 25 45.60 0.5
 AGG 1.98 184 ePc 25 54.32 0.9
 eS 26 20.88
 S.D. = 0.9 on 9 of 9 obs.

% DEC 21, 1990 21h 31m 08.11±1.26s
 41.098 N ± 10.2km 22.446 E ± 6.1km
 DEPTH = 13.5 ± 7.2 km

YUGOSLAVIA (383)

GRG 0.14 193 ePd 31 11.80 -0.1
 eS 31 13.48
 KNT 0.35 79 ePc 31 15.48 0.0
 eS 31 20.00
 THE 0.61 140 ePd 31 19.64 -0.4
 eS 31 27.96
 SOH 0.74 112 ePc 31 22.56 0.2
 eS 31 32.80
 SRS 0.87 88 ePd 31 24.56 0.1
 FNA 0.87 249 ePc 31 24.52 0.0
 LIT 1.00 178 ePc 31 27.20 0.5
 eS 31 40.84
 PAIG 1.50 141 ePd 31 34.60 0.0
 S.D. = 0.3 on 8 of 8 obs.

& DEC 21, 1990 21h 37m 40.46s
 65.438 N 149.921 W
 DEPTH = 37.5km

ALASKA (676)

<AGS-P>.

MDM 0.86 123 iP 37 55.99 -0.2
 eS 38 07.67
 NEA 0.94 157 eP 37 57.25 0.0
 eS 38 09.71
 FBA 1.05 120 eP 37 59.01 0.2
 eS 38 12.94
 GLM 1.16 112 eP 38 00.58 0.1
 eS 38 15.68
 CCB 1.20 131 iP 38 01.00 0.0
 eS 38 17.45
 BWN 1.29 171 eP 38 02.24 0.0
 HDA 1.63 128 eP 38 06.94 -0.3
 IMA 1.68 294 eP 38 07.37 -0.6
 eS 38 28.84
 MCK 1.76 166 eP 38 08.95 -0.2
 TRF 2.00 185 eP 38 12.18 -0.5
 RND 2.09 167 eP 38 14.08 0.2
 DDM 2.41 132 eP 38 17.89 -0.5
 CUT 3.05 183 eP 38 26.56 -0.8
 13 obs. associated

% DEC 21, 1990 21h 40m 06.12±0.94s
 41.046 N ± 9.1km 22.434 E ± 5.9km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.09 196 iPc 40 09.14 0.4
 eS 40 11.42
 KNT 0.37 71 ePd 40 13.86 0.1
 eS 40 19.30
 THE 0.58 136 ePd 40 17.62 -0.2
 eS 40 26.02
 SOH 0.73 108 ePc 40 20.34 -0.2
 eS 40 30.78
 FNA 0.84 252 ePd 40 22.26 -0.2
 eS 40 32.22
 SRS 0.88 85 iPd 40 23.06 0.1
 eS 40 35.78
 LIT 0.94 177 ePd 40 24.14 0.0
 S.D. = 0.3 on 7 of 7 obs.

% DEC 21, 1990 22h 18m 36.90±1.55s
 41.059 N ± 12.4km 22.396 E ± 7.1km
 DEPTH = 9.3 ± 8.4 km

YUGOSLAVIA (383)

GRG 0.10 178 iPd 18 39.46 -0.1
 eS 18 40.96
 THE 0.61 134 ePd 18 48.16 -0.9
 eS 18 56.48
 SOH 0.76 108 ePd 18 51.76 -0.2
 eS 19 02.04
 FNA 0.82 251 ePd 18 52.60 -0.3
 eS 19 03.84
 SRS 0.91 86 ePc 18 54.32 0.0
 eS 19 06.40
 LIT 0.96 176 ePc 18 55.48 0.2
 eS 19 09.36
 PAIG 1.50 139 ePc 19 04.72 0.9
 eS 19 25.16

GRG 0.05 333 iPd 20 22.54 0.3
 KNT 0.43 55 ePd 20 28.68 -0.2
 THE 0.50 125 ePc 20 29.36 -0.7
 SOH 0.71 97 ePd 20 34.44 0.4
 FNA 0.81 261 ePd 20 35.40 -0.4
 LIT 0.82 177 ePc 20 36.44 0.6
 SRS 0.90 77 ePd 20 37.44 0.1
 S.D. = 0.6 on 7 of 7 obs.

% DEC 22, 1990 03h 20m 32.14 ± 1.21s
 40.952 N ± 10.0km 22.320 E ± 6.5km
 DEPTH = 14.3 ± 8.3 km
 GREECE (364)

GRG 0.06 86 iPd 20 35.20 0.1
 KNT 0.48 64 ePd 20 41.48 -0.4
 THE 0.58 123 ePd 20 42.32 -1.3
 FNA 0.74 257 ePd 20 46.04 -0.2
 SOH 0.79 99 ePd 20 47.88 0.7
 LIT 0.86 171 ePc 20 48.60 0.3
 SRS 0.98 80 ePd 20 50.48 0.2
 PAIG 1.46 134 ePd 20 58.04 0.1
 S.D. = 0.8 on 8 of 8 obs.

% DEC 22, 1990 03h 35m 36.78 ± 1.09s
 41.101 N ± 9.1km 22.354 E ± 5.8km
 DEPTH = 5.5 ± 5.1 km
 YUGOSLAVIA (383)

GRG 0.15 166 iPc 35 40.28 0.4
 KNT 0.42 81 ePc 35 42.16 0.5
 THE 0.66 135 iPc 35 49.25 -0.7
 FNA 0.81 247 ePd 35 52.58 -0.3
 SOH 0.81 110 iPc 35 52.36 -0.5
 SRS 0.94 89 iPc 35 54.78 -0.3
 LIT 1.00 174 ePd 35 56.04 -0.2
 OUR 1.46 121 ePd 36 04.04 0.4
 PAIG 1.55 139 ePd 36 05.44 0.5
 AGG 2.08 181 ePc 36 13.16 0.5
 S.D. = 0.6 on 10 of 10 obs.

DEC 22, 1990 03h 38m 36.75 ± 1.06s
 41.063 N ± 9.5km 22.435 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.11 193 iPc 38 40.17 0.6
 KNT 0.36 74 ePc 38 44.34 0.1
 THE 0.59 137 ePc 38 48.10 -0.5
 SOH 0.74 109 iPc 38 51.10 -0.1
 FNA 0.85 251 ePd 38 53.50 0.3
 SRS 0.88 86 ePc 38 52.86 -0.7
 KZN 0.91 214 ePb 38 54.00 -0.2
 LIT 0.96 177 ePd 38 54.78 -0.3
 PLG 1.03 132 ePb 38 58.00 1.7
 PAIG 1.48 140 ePc 39 03.74 0.3
 VTS 1.63 20 iPc 38 54.00 -11.8X

RZN 1.83 69 eS 39 06.00
 AGG 2.04 182 iPc 39 10.21 -1.3
 S.D. = 0.9 on 11 of 13 obs.

DEC 22, 1990 03h 39m 43.43 ± 1.01s
 41.096 N ± 8.9km 22.428 E ± 5.2km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 2.9 (ATH).

GRG 0.14 188 ePc 39 47.06 0.3
 KNT 0.36 79 ePc 39 51.14 0.3
 THE 0.62 139 ePc 39 54.90 -0.9
 SOH 0.75 111 ePd 39 57.74 -0.5
 FNA 0.86 249 ePd 40 00.18 0.2
 SRS 0.88 88 ePd 40 00.06 -0.3
 KZN 0.93 213 ePg 40 00.50 -0.8
 LIT 1.00 177 ePc 40 02.74 0.4
 PLG 1.06 133 ePg 40 04.00 0.6
 PAIG 1.51 140 ePc 40 11.22 0.7
 NEO 1.89 161 ePb 40 16.00 0.0
 EVR 2.23 193 ePg 40 25.00 4.0X
 RDO 2.35 88 ePn 40 28.50 5.8X
 S.D. = 0.6 on 11 of 13 obs.

DEC 22, 1990 04h 27m 24.78 ± 0.95s
 41.096 N ± 8.3km 22.402 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 180 iPc 27 28.17 0.1
 KNT 0.38 80 ePd 27 31.92 -0.7
 THE 0.63 137 ePc 27 36.12 -1.3
 SOH 0.77 111 ePc 27 40.00 0.1
 FNA 0.84 248 ePc 27 40.60 -0.4
 SRS 0.90 88 ePd 27 41.08 -1.0
 KZN 0.92 212 ePb 27 42.50 0.0
 LIT 1.00 176 ePc 27 43.80 0.1
 PLG 1.07 132 ePb 27 46.00 1.0
 MMB 1.11 63 iPg 27 45.00 -0.7
 PAIG 1.52 140 ePc 27 52.52 0.5
 VTS 1.61 22 ePg 27 58.00 4.5X
 RZN 1.84 70 eP 27 59.00 2.2
 PLD 2.00 59 iP 28 03.00 4.1X
 KDZ 2.34 75 iS 28 08.00 4.1X
 S.D. = 1.0 on 12 of 15 obs.

DEC 22, 1990 04h 28m 52.74 ± 0.53s
 41.082 N ± 4.5km 22.411 E ± 4.6km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 MD 3.3 (ATH).

GRG 0.13 183 ePd 28 56.40 0.5
 KNT 0.38 78 iPc 28 59.96 -0.5
 THE 0.62 137 ePc 29 04.32 -0.8
 SOH 0.76 110 iPc 29 07.00 -0.6
 FNA 0.84 250 ePc 29 08.72 -0.3
 SRS 0.89 87 ePc 29 09.08 -0.8

KZN 0.92 212 ePn 29 09.50 -0.8
 LIT 0.98 176 ePc 29 11.60 0.2
 PLG 1.06 132 ePn 29 13.50 0.8
 MMB 1.11 63 iPg 29 13.00 -0.6
 PAIG 1.51 140 iPd 29 20.40 0.6
 VTS 1.62 21 iPc 29 22.00 0.4
 RZN 1.84 70 iPg 29 26.00 1.2
 NEO 1.88 160 ePn 29 25.00 -0.2
 PGB 1.97 41 eP 29 26.00 -0.5
 EVR 2.21 192 ePn 29 30.50 0.4
 KDZ 2.33 75 iP 29 33.00 1.2
 RDO 2.36 87 ePn 29 21.80 -10.3X
 ALN 2.76 93 ePc 29 37.52 -0.3
 S.D. = 0.7 on 18 of 19 obs.

DEC 22, 1990 04h 40m 52.92 ± 1.26s
 41.158 N ± 10.8km 22.445 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.20 189 iPc 40 57.22 -0.2
 KNT 0.34 89 ePc 41 00.60 0.6
 THE 0.66 143 ePc 41 04.76 -1.2
 SOH 0.77 116 ePc 41 07.36 -0.6
 SRS 0.87 92 ePc 41 09.76 0.1
 FNA 0.89 246 ePc 41 09.68 -0.4
 KZN 0.99 211 ePb 41 12.50 0.7
 LIT 1.06 178 iPd 41 12.93 0.1
 PLG 1.09 136 ePb 41 14.50 1.0
 PAIG 1.55 142 ePc 41 21.00 0.4
 S.D. = 0.8 on 10 of 10 obs.

% DEC 22, 1990 04h 43m 11.03 ± 1.09s
 41.104 N ± 10.2km 22.434 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 189 iPc 43 14.56 0.0
 KNT 0.36 81 ePd 43 18.36 0.0
 THE 0.62 139 ePc 43 23.76 0.3
 SOH 0.75 112 ePc 43 25.28 -0.5
 FNA 0.86 249 ePc 43 27.64 0.0
 SRS 0.88 89 ePc 43 28.08 0.2
 LIT 1.00 178 ePc 43 29.96 -0.1
 S.D. = 0.3 on 7 of 7 obs.

% DEC 22, 1990 05h 01m 17.53 ± 1.14s
 41.032 N ± 12.1km 22.388 E ± 6.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.08 172 iPd 01 20.41 0.4
 KNT 0.41 71 ePd 01 26.10 0.2
 THE 0.59 132 ePd 01 29.30 -0.2
 SOH 0.76 106 ePd 01 32.14 -0.3
 FNA 0.81 252 ePd 01 33.06 -0.2
 SRS 0.91 84 ePd 01 23.14 -11.9X
 S.D. = 0.4 on 5 of 6 obs.

DEC 22, 1990 05h 02m 28.41 ± 0.95s

37.462 S \pm 19.7km 47.991 E \pm 13.7km
 DEPTH = 10.0km (geophysicist)
 4.5mb (4 obs.)

ATLANTIC-INDIAN RISE (428)

BFT 19.24 302 eP 41 35.00 -2.7
 SEK 19.35 292 iPd 41 40.50 1.4
 SLR 20.41 299 eP 41 49.50 -1.0
 KSR 21.30 297 ePc 41 53.00 -6.7X
 BUL 24.13 310 iPd 42 26.00 -1.5
 0.9s 9.24nm 4.4mb

KRI 26.17 317 iPd 42 48.90 1.9
 i 42 51.00
 MAW 31.34 169 iPd 43 33.10 0.3
 BCAA 49.88 320 iPc 46 08.00 1.9
 0.6s 14.00nm 5.1mb

GBA 57.85 34 Pc 47 06.30 1.7
 0.7s 2.50nm 4.4mb
 KIC 65.65 300 P 47 58.30 1.1
 ASPA 72.92 107 iPc 48 41.00 -0.9
 1.8s 10.30nm 4.6mb

GKN 73.64 33 P 48 45.40 -0.7
 KKN 73.74 34 P 48 46.00 -0.7
 GUN 74.11 34 P 48 48.30 -0.7
 INK 149.09 1 ePKP 56 58.00 3.0X
 YKA 152.74 342 ePKP 57 03.70 3.1X
 1.0s 1.20nm

S.D. = 1.6 on 13 of 16 obs.

& DEC 22, 1990 07h 54m 15.90s
 34.533 N 116.817 W
 DEPTH = 6.0km (geophysicist)
 SOUTHERN CALIFORNIA (43)
 <PAS-P>. ML 2.7 (PAS).

PEC 0.70 204 eP 54 29.10 -0.8
 PLM 1.18 182 iPd 54 38.00 -0.4
 2 obs. associated

* DEC 22, 1990 08h 16m 56.34 \pm 1.64s
 40.986 N \pm 11.2km 22.370 E \pm 10.5km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.04 141 iPd 16 58.74 0.3
 eS 17 01.06
 KNT 0.44 66 ePc 17 05.66 0.4
 eS 17 11.94

THE 0.57 128 ePc 17 07.58 -0.4
 KZN 0.82 214 ePb 17 12.50 0.3
 LIT 0.89 174 ePc 17 12.50 -0.9
 eS 17 25.70

SRS 0.93 82 ePc 17 13.18 -1.0
 PLG 1.02 126 ePb 17 16.40 0.7
 eSb 17 31.00
 PAIG 1.46 136 ePc 17 23.22 0.6
 eS 17 42.30

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

? DEC 22, 1990 09h 07m 48.29 \pm 1.14s
 36.990 N \pm 10.6km 29.500 E \pm 8.9km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

ELL 0.41 126 iPg 07 56.70 0.0
 eSg 08 06.00
 BCK 0.99 61 ePn 08 07.00 -0.1
 CIN 1.28 299 eP 08 12.00 0.0
 KHL 1.33 1 iPn 08 13.00 0.1

ALT 2.12 13 ePn 08 27.00 2.7X
 S.D. = 0.2 on 4 of 5 obs.

% DEC 22, 1990 09h 08m 08.17 \pm 1.04s
 41.096 N \pm 9.6km 22.444 E \pm 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 193 iPc 08 11.30 -0.2
 eS 08 14.00
 KNT 0.35 79 ePc 08 15.44 0.1
 eS 08 20.36

THE 0.61 139 ePc 08 20.12 -0.3
 eS 08 28.28
 SOH 0.74 111 ePd 08 23.12 0.4
 eS 08 33.16

FNA 0.87 249 ePc 08 25.00 0.1

eS 08 35.88
 SRS 0.87 88 ePc 08 24.44 -0.4
 eS 08 37.56
 LIT 0.99 178 ePd 08 26.96 -0.1
 PAIG 1.50 141 ePd 08 35.68 0.6
 S.D. = 0.4 on 8 of 8 obs.

& DEC 22, 1990 09h 15m 03.58s
 48.172 N 122.733 W
 DEPTH = 53.3km

WASHINGTON (29)
 <SEA>. CL 2.7 (SEA).

OHW 0.20 42 Pd 15 11.66 -0.7
 BLN 0.23 224 Pd 15 11.92 -0.7
 S 15 18.07
 PGW 0.36 166 Pc 15 13.48 -0.2
 S 15 21.78

VGZ 0.46 302 Pd 15 13.72 -1.0
 S 15 22.28
 JCW 0.54 87 Pd 15 15.19 -0.4
 S 15 24.04

HDW 0.57 203 Pc 15 15.65 -0.4
 S 15 25.62
 BLH 0.58 125 Pc 15 15.72 -0.3
 GMW 0.63 183 Pc 15 16.37 -0.3

STW 0.63 268 Pd 15 16.05 -0.6
 SNB 0.67 334 P 15 17.15 -0.1
 PGC 0.68 315 Pc 15 16.50 -0.7
 S 15 26.55

SPW 0.70 152 Pc 15 18.16 0.6
 OSD 0.74 242 Pc 15 17.94 -0.4
 HTW 0.75 119 Pc 15 17.92 -0.3
 MBW 0.83 42 Pc 15 19.45 0.0
 RPW 0.86 71 Pc 15 19.60 -0.1

OBC 0.91 262 P 15 19.99 -0.4
 SMW 0.95 206 Pc 15 20.83 -0.1
 RMW 0.95 138 Pc 15 20.77 -0.2
 VDB 0.95 26 Pc 15 20.90 0.0
 S 15 34.06

MEW 0.97 176 P 15 21.61 0.4
 OOW 1.07 247 Pc 15 21.95 -0.6
 OTR 1.08 266 P 15 22.16 -0.6
 HNB 1.11 5 Pc 15 22.84 -0.2
 S 15 37.58

OFK 1.11 259 P 15 22.35 -0.7
 GSM 1.16 146 Pc 15 23.81 -0.1
 GHW 1.17 164 P 15 23.56 -0.4
 CPW 1.23 193 Pc 15 24.37 -0.4

RVC 1.33 157 Pc 15 26.12 -0.1
 NAB 1.35 322 P 15 25.52 -0.8
 FMW 1.43 150 Pc 15 27.52 -0.3
 ONR 1.47 209 Pc 15 27.47 -0.7

REMR 1.48 156 P 15 28.42 0.0
 LMW 1.53 169 Pc 15 28.77 -0.3
 MGB 1.54 303 P 15 28.24 -1.0
 S 15 47.15

LON 1.55 156 P 15 29.14 -0.2
 NLW 1.61 92 P 15 30.05 -0.1
 TWW 1.63 129 P 15 31.63 1.2
 WPW 1.68 151 P 15 31.43 0.3

ETW 1.71 108 Pd 15 31.66 0.0
 BMW 1.73 191 Pc 15 31.01 -0.8
 KOSW 1.75 168 P 15 31.81 -0.3
 TBM 1.76 124 P 15 33.11 0.9

GLK 1.78 154 P 15 32.94 0.4
 TDL 1.86 169 P 15 33.27 -0.4
 ERK 1.89 172 Pc 15 33.58 -0.5
 EBG 1.94 130 P 15 36.83 2.2

NAC 1.93 137 P 15 34.55 -0.1
 WHB 1.96 356 P 15 34.93 -0.1
 STD 1.97 170 P 15 35.14 0.0
 SOSW 1.98 168 P 15 35.14 -0.2

FL2 1.99 172 Pd 15 35.52 -0.1
 DHW2 2.00 94 P 15 34.48 -1.1
 REMW 2.01 169 P 15 36.22 0.3
 SHW 2.01 170 P 15 35.95 0.1

ESD 2.02 168 P 15 35.53 -0.4
 RVW 2.02 180 P 15 35.43 -0.5
 HSR 2.04 169 P 15 36.53 0.3
 JLK 2.06 169 P 15 36.61 0.1

CDFW 2.11 167 Pc 15 37.36 0.2
 LVP 2.12 174 P 15 37.07 -0.2
 ASR 2.17 159 P 15 38.06 0.1

MTMW 2.18 170 P 15 38.20 0.1
 EPH 2.27 110 P 15 39.44 0.1
 MXC 2.30 133 P 15 44.09 4.3

GULW 2.38 161 P 15 41.36 0.4
 KMOR 2.59 192 Pc 15 42.30 -1.6
 PGO 2.71 176 P 15 45.79 0.2
 RSW 2.78 129 P 15 52.39 5.6
 69 obs. associated

DEC 22, 1990 09h 37m 34.40 \pm 0.99s
 41.071 N \pm 8.7km 22.357 E \pm 5.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.12 164 ePd 37 37.22 -0.2
 KNT 0.42 77 ePd 37 43.10 0.1
 eS 37 49.10
 THE 0.64 133 ePd 37 46.30 -0.8
 eS 37 54.78

SOH 0.79 108 iPc 37 49.46 -0.4
 FNA 0.80 249 ePc 37 49.98 0.1
 eS 38 04.18
 KZN 0.88 210 ePb 37 51.00 -0.4
 SRS 0.93 87 ePd 37 52.06 -0.2

eS 38 04.66
 LIT 0.97 174 ePd 37 52.62 -0.3
 eS 38 07.38
 PLG 1.08 130 ePb 37 55.80 1.0
 eSb 38 12.00

PAIG 1.52 138 ePd 38 01.94 0.3
 iS 38 23.02
 AGG 2.05 181 ePd 38 10.14 0.8
 S.D. = 0.6 on 11 of 11 obs.

% DEC 22, 1990 09h 43m 46.21 \pm 0.83s
 39.002 N \pm 9.0km 16.025 E \pm 22.9km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN ITALY (390)

TDS 0.70 20 P 43 59.60 -0.4
 eSg 44 07.80
 ROI 0.71 36 P 44 00.20 0.0
 CSI 0.80 15 P 44 02.20 0.4

eSg 44 13.30
 SOI 0.93 179 P 44 04.00 0.1
 eSg 44 16.60
 ATN 0.95 208 P 44 04.20 -0.1
 eSg 44 17.00

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

% DEC 22, 1990 09h 49m 39.91 \pm 2.98s
 39.053 N \pm 12.7km 26.270 E \pm 26.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.8 (ISK).

EZN 0.77 3 iPg 49 54.60 -0.4
 iSg 50 06.10
 IZM 1.02 130 iPn 49 59.30 0.1
 eSg 50 13.80

EDC 1.78 43 ePn 50 12.00 1.0
 BNT 1.82 44 iPn 50 11.70 0.2
 DST 1.91 72 ePn 50 12.00 -0.9
 KCT 2.01 53 ePn 50 14.00 -0.2

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

% DEC 22, 1990 09h 54m 12.64 \pm 1.02s
 41.060 N \pm 10.3km 22.401 E \pm 6.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.10 180 iP 54 15.62 0.2
 eS 54 17.80
 KNT 0.39 75 iP 54 20.96 0.3
 eS 54 26.84

THE 0.60 135 eP 54 24.56 -0.3
 eS 54 32.96
 SOH 0.76 108 eP 54 27.24 -0.3
 eS 54 37.16

FNA 0.82 251 eP 54 28.52 -0.1
 eS 54 38.76
 SRS 0.90 86 eP 54 29.68 -0.2
 eS 54 42.44

PAIG 1.49 139 eP 54 39.88 0.4
 S.D. = 0.4 on 7 of 7 obs.

% DEC 22, 1990 10h 07m 13.98 \pm 0.90s
 39.076 N \pm 8.4km 27.600 E \pm 15.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

22d 10h

I2M 0.73 201 ePg 07 28.30 0.0
 eSg 07 39.30
 DST 0.96 56 iPn 07 32.30 0.1
 EDC 1.29 9 ePn 07 38.00 0.2
 BNT 1.30 11 iPn 07 38.00 -0.1
 KCT 1.31 26 iPn 07 38.00 -0.2
 S.D. = 0.2 on 5 of 5 obs.

DEC 22, 1990 10h 37m 35.98± 0.64s
 41.087 N ± 5.4km 22.420 E ± 5.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 186 iP 37 39.38 0.2
 eS 37 41.62
 KNT 0.37 78 eP 37 43.38 -0.2
 iS 37 48.50
 THE 0.61 137 eP 37 47.73 -0.6
 eS 37 56.10
 SOH 0.76 110 eP 37 50.66 -0.1
 eS 38 01.34
 FNA 0.85 249 eP 37 51.90 -0.5
 eS 38 03.50
 SRS 0.89 88 iP 37 52.69 -0.3
 eS 38 04.62
 LIT 0.99 177 eP 37 55.06 0.3
 eS 38 09.94
 MMB 1.11 63 iPg 37 57.00 0.2
 Sg 38 11.00
 PAIG 1.50 140 eP 38 03.62 0.6
 eS 38 24.18
 VTS 1.62 21 iP 38 05.00 0.3
 iS 38 27.00
 RZN 1.83 70 eP 38 20.00 12.1X
 iS 38 34.00
 S.D. = 0.5 on 10 of 11 obs.

% DEC 22, 1990 11h 11m 31.33± 1.07s
 41.055 N ± 9.6km 22.376 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.10 169 eP 11 33.90 -0.2
 eS 11 35.14
 KNT 0.41 75 eP 11 39.74 0.0
 eS 11 45.62
 THE 0.61 133 iP 11 43.42 -0.3
 eS 11 50.74
 SOH 0.78 107 eP 11 45.86 -0.6
 eS 11 56.90
 FNA 0.80 251 eP 11 46.94 0.0
 eS 11 58.22
 SRS 0.92 86 eP 11 48.98 0.0
 eS 12 01.38
 LIT 0.96 175 eP 11 49.30 -0.3
 eS 12 03.98
 PAIG 1.50 138 eP 11 59.62 1.3
 eS 12 19.10
 S.D. = 0.7 on 8 of 8 obs.

% DEC 22, 1990 12h 00m 56.95± 1.17s
 41.109 N ± 10.0km 22.424 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 186 iP 01 00.78 0.2
 eS 01 03.12
 KNT 0.36 81 iP 01 04.72 0.3
 eS 01 09.92
 THE 0.63 139 eP 01 08.68 -0.9
 eS 01 17.36
 SOH 0.76 112 iP 01 11.56 -0.3
 iS 01 22.04
 FNA 0.86 248 eP 01 13.32 -0.2
 eS 01 24.44
 SRS 0.88 89 eP 01 13.72 -0.2
 eS 01 25.84
 LIT 1.01 177 eP 01 16.04 0.0
 eS 01 31.52
 PAIG 1.52 141 eP 01 25.24 1.1
 iS 01 45.12
 S.D. = 0.7 on 8 of 8 obs.

% DEC 22, 1990 12h 53m 52.49± 1.05s
 39.170 N ± 11.6km 27.954 E ± 15.9km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.4 (ISK).

DST 0.68 50 ePg 54 04.40 -1.6
 I2M 0.94 215 iPg 54 10.40 -0.1
 iSg 54 23.40
 KCT 1.12 16 ePn 54 14.10 0.6
 BNT 1.18 359 ePn 54 13.90 -0.7
 I2I 1.65 45 ePn 54 23.00 1.3
 YLV 1.77 38 ePn 54 23.90 0.5
 S.D. = 1.3 on 6 of 6 obs.

? DEC 22, 1990 13h 14m 16.54± 5.93s
 40.622 N ± 33.4km 22.919 E ± 27.8km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

THE 0.04 74 iP 14 18.57 0.0
 eS 14 19.94
 SOH 0.39 59 eP 14 24.26 -0.2
 eS 14 29.90
 KNT 0.54 358 eP 14 27.38 -0.1
 SRS 0.71 46 iP 14 30.90 0.3
 eS 14 40.66
 S.D. = 0.4 on 4 of 4 obs.

DEC 22, 1990 13h 24m 36.03± 0.82s
 40.969 N ± 7.7km 22.327 E ± 5.0km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

MD 2.9 (ATH).

GRG 0.06 102 iP 24 38.82 0.5
 eS 24 40.12
 KNT 0.47 66 eP 24 45.64 0.0
 THE 0.59 125 iP 24 47.00 -0.9
 eS 24 55.32
 FNA 0.74 256 eP 24 50.78 0.1
 eS 25 01.40
 KZN 0.79 213 ePb 24 50.50 -0.9
 SOH 0.79 100 eP 24 51.36 -0.1
 iS 25 02.48
 LIT 0.88 172 eP 24 52.60 -0.3
 iS 25 06.92
 SRS 0.97 81 eP 24 54.04 -0.4
 eS 25 06.92
 PLG 1.04 125 ePn 24 56.00 0.3
 PAIG 1.47 135 eP 25 02.92 0.4
 eS 25 22.88
 AGG 1.94 180 eP 25 10.40 0.9
 EVR 2.09 191 ePb 25 17.00 5.4X
 RDO 2.43 85 ePn 25 07.20 -9.2X
 S.D. = 0.6 on 11 of 13 obs.

DEC 22, 1990 13h 32m 16.37± 1.14s
 41.098 N ± 10.2km 22.412 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.14 183 iP 32 19.30 -0.4
 eS 32 20.62
 KNT 0.37 80 eP 32 24.34 0.3
 eS 32 30.06
 THE 0.63 138 eP 32 27.82 -1.1
 eS 32 35.74
 SOH 0.77 111 eP 32 30.70 -0.6
 eS 32 41.06
 FNA 0.84 249 eP 32 32.30 -0.4
 eS 32 43.06
 SRS 0.89 88 eP 32 33.38 -0.1
 eS 32 45.14
 KZN 0.93 212 ePb 32 35.00 0.8
 eSb 32 50.00
 LIT 1.00 177 eP 32 35.02 -0.3
 eS 32 49.26
 PLG 1.07 132 ePb 32 37.50 1.0
 PAIG 1.52 140 eP 32 44.38 0.8
 eS 33 04.54
 S.D. = 0.8 on 10 of 10 obs.

% DEC 22, 1990 13h 42m 25.63± 0.75s
 40.922 N ± 7.4km 22.346 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.05 50 iP 42 28.14 0.3
 eS 42 29.80
 KNT 0.48 60 eP 42 35.00 -0.4

THE 0.55 121 eS 42 41.72
 eP 42 36.92 0.1
 FNA 0.75 260 eP 42 40.36 0.0
 eS 42 51.12
 SOH 0.77 97 eP 42 40.92 0.2
 eS 42 52.28
 LIT 0.83 172 eP 42 41.48 -0.2
 eS 42 52.76
 SRS 0.96 78 iP 42 43.96 0.0
 eS 42 56.96
 S.D. = 0.3 on 7 of 7 obs.

DEC 22, 1990 13h 48m 41.29± 0.64s
 41.082 N ± 5.4km 22.383 E ± 4.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 174 iP 48 44.53 0.1
 eS 48 45.70
 KNT 0.40 78 eP 48 49.46 0.0
 eS 48 55.34
 THE 0.63 135 eP 48 52.82 -1.1
 eS 49 01.14
 SOH 0.78 109 eP 48 56.02 -0.5
 eS 49 05.70
 FNA 0.82 249 eP 48 57.50 0.3
 iS 49 08.38
 KZN 0.90 211 ePb 48 58.00 -0.6
 eSb 49 14.50
 SRS 0.91 87 eP 48 58.50 -0.3
 eS 49 10.90
 LIT 0.98 175 eP 49 00.22 0.3
 eS 49 14.42
 PLG 1.07 131 ePb 49 02.50 1.0
 MMB 1.13 63 iPg 49 03.00 0.5
 Sg 49 17.00
 PAIG 1.52 139 eP 49 09.14 0.6
 eS 49 30.18
 VTS 1.63 22 eP 49 10.00 -0.3
 iS 49 34.00
 RZN 1.86 70 iPg 49 18.00 4.4X
 iS 49 41.00
 PGB 1.98 42 iP 49 20.00 4.7X
 iS 49 44.00
 S.D. = 0.7 on 12 of 14 obs.

* DEC 22, 1990 13h 58m 16.13± 0.86s
 29.296 N ± 21.7km 51.295 E ± 11.3km
 DEPTH = 33.0km (normol)
 3.9mb (2 obs.)
 SOUTHERN IRAN (353)

SHI 1.13 72 eP 58 37.00 1.2
 AFIF 8.91 236 eP 00 26.00 0.3
 GKN 29.24 84 P 04 19.40 2.0
 KKN 29.83 85 P 04 21.80 -1.1
 PKI 29.99 85 P 04 23.00 -1.4
 GUN 30.33 84 P 04 26.20 -1.2
 HFS 39.84 332 eP 05 47.20 -0.6
 0.3s 1.00nm 4.1mb
 YKA 87.83 354 eP 11 03.70 0.7
 0.6s 0.30nm 3.8mb
 S.D. = 1.5 on 8 of 8 obs.

% DEC 22, 1990 14h 11m 22.53± 1.71s
 40.723 N ± 6.6km 29.687 E ± 15.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

MD 2.2 (ISK).

HRT 0.10 352 iPg 11 25.40 0.1
 eSg 11 27.40
 YLV 0.29 237 iPg 11 28.90 0.4
 I2I 0.42 203 iPg 11 30.90 -0.2
 iSg 11 39.40
 ISK 0.59 306 iPg 11 34.40 0.0
 iSg 11 44.90
 CTT 1.04 294 iPn 11 41.90 -0.3
 S.D. = 0.4 on 5 of 5 obs.

% DEC 22, 1990 14h 42m 08.73± 0.85s
 44.061 N ± 9.2km 10.781 E ± 7.0km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)

BDI 0.13 271 P 42 12.10 0.1
 eSg 42 14.90

MME 0.14 336 P 42 12.40 0.1
eSg 42 15.20
PII 0.39 209 P 42 16.40 -0.3
eSg 42 22.40
SFI 0.79 100 P 42 23.00 -1.0
eSg 42 32.60
CRE 0.95 117 P 42 28.00 1.1
S.D. = 1.1 on 5 of 5 obs.

? DEC 22, 1990 14h 57m 46.87± 8.68s
15.661 N ± 32.6km 60.599 W ± 65.9km
DEPTH = 33.0km (normal)
LEEWARD ISLANDS (92)
ML 2.4 (FDF).

MGG 0.74 290 eP 58 00.61 -0.2
S 58 09.90
DEG 0.79 326 eP 58 01.30 -0.2
SFG 0.82 316 eP 58 02.40 0.4
BBL 0.86 261 eP 58 02.63 0.1
S 58 14.00
DOG 1.05 291 eP 58 05.43 0.1
S 58 17.80
PAG 1.10 290 eP 58 06.00 -0.1
S 58 19.20
S.D. = 0.3 on 6 of 6 obs.

DEC 22, 1990 15h 06m 03.09± 0.91s
45.984 N ± 10.8km 15.515 E ± 4.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
ML 2.7 (KBA), 2.4 (ZAG).

PTJ 0.32 105 iPg 06 09.80 0.0
eSg 06 15.00
ZAG 0.37 117 iPg 06 10.70 0.1
iSg 06 15.50
VBY 0.51 201 iPg 06 12.70 -0.8
iSg 06 19.70
LJU 0.69 275 iPg 06 16.50 -0.2
eSg 06 26.00
CEY 0.80 253 ePg 06 18.50 -0.1
eSg 06 29.70
RIY 1.02 231 ePg 06 23.70 1.4
i 06 35.90
iSg 06 37.10
VOY 1.13 273 iPg 06 24.20 -0.1
eSg 06 40.50
TRI 1.25 258 iPg 06 26.20 -0.2
iSg 06 43.30
KBA 1.86 307 iPg 06 38.90 3.5X
iSg 07 03.00
FVI 1.99 289 P 06 40.50 3.4X
eSn 07 06.00
ZST 2.46 26 eP 07 24.60 40.7X
SRO 2.65 45 eP 07 32.80 46.2X
CTI 2.69 273 P 06 57.50 10.1X
SOTA 3.22 294 i(Pg) 07 02.20 7.5X
e(Sg) 07 40.00
SFI 3.32 233 P 07 05.00 8.9X
KHC 3.41 338 ePg 07 01.00 3.6X
Sg 07 50.40
PRU 4.06 351 ePg 07 20.50 14.0X
eSg 08 15.30
S.D. = 0.7 on 8 of 17 obs.

% DEC 22, 1990 15h 47m 32.78± 1.49s
41.146 N ± 12.5km 22.368 E ± 7.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.19 172 iP 47 35.62 -1.4
eS 47 37.56
KNT 0.40 88 iP 47 41.37 0.4
iS 47 47.26
THE 0.68 138 iP 47 47.40 1.1
SOH 0.81 113 eP 47 47.40 -1.2
eS 48 00.17
FNA 0.83 245 iP 47 48.96 0.0
iS 48 00.52
SRS 0.93 91 eP 47 50.08 -0.4
eS 48 04.44
LIT 1.05 175 eP 47 53.20 0.6
PAIG 1.58 140 eP 48 01.68 0.9
S.D. = 1.1 on 8 of 8 obs.

% DEC 22, 1990 15h 54m 38.26± 0.86s

41.018 N ± 10.8km 22.515 E ± 5.6km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.11 235 iP 54 40.33 -0.8
iS 54 42.70
KNT 0.32 63 iP 54 44.50 -0.5
iS 54 49.53
THE 0.51 138 eP 54 48.70 0.0
SOH 0.67 107 eP 54 51.54 0.0
iS 55 01.42
SRS 0.82 83 eP 54 54.70 0.5
eS 55 05.50
FNA 0.89 255 eP 54 56.10 0.7
eS 55 11.26
S.D. = 0.7 on 6 of 6 obs.

& DEC 22, 1990 15h 56m 58.20s
34.533 N 116.817 W
DEPTH = 6.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 2.9 (PAS).

PEC 0.70 204 iPd 57 11.50 -0.7
PLM 1.18 182 iPd 57 20.40 -0.3
GLA 2.22 131 eP 57 39.00 2.9
3 obs. associated

DEC 22, 1990 16h 28m 20.09± 1.10s
41.088 N ± 9.7km 22.398 E ± 5.7km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.13 179 eP 28 22.85 -0.4
eS 28 24.28
KNT 0.39 79 iP 28 28.01 0.0
iS 28 33.60
THE 0.63 136 iP 28 31.50 -1.2
eS 28 39.56
SOH 0.77 110 iP 28 34.52 -0.7
eS 28 45.35
FNA 0.83 249 eP 28 35.92 -0.3
iS 28 47.48
SRS 0.90 88 eP 28 37.73 0.3
eS 28 49.24
KZN 0.91 212 ePb 28 37.50 -0.1
eSb 28 53.00
LIT 0.99 176 eP 28 38.56 -0.3
eS 28 52.08
PLG 1.07 132 ePb 28 41.00 0.7
PAIG 1.52 139 eP 28 47.72 0.5
AGG 2.06 181 eP 28 56.72 1.5
S.D. = 0.8 on 11 of 11 obs.

DEC 22, 1990 16h 32m 10.70± 1.09s
8.603 N ± 4.6km 122.541 E ± 5.5km
DEPTH = 62.2 ± 10.6 km
4.9mb (12 obs.)
MINDANAO, PHILIPPINE ISLANDS (259)

DAV 3.36 116 eP 33 02.90 1.0
OCP 6.17 347 eP 34 19.00 37.7X
BAG 7.99 346 eP 34 06.60 -0.2
OZH 16.68 347 eP 36 07.00 5.2X
GZH 16.89 330 eP 36 07.80 3.4X
E 12s 1.20um
KGM 20.22 252 eP 36 43.00 -0.2
JAY 21.21 121 ePd 36 56.50 3.1X
IPM 21.74 261 ePd 36 59.20 0.5
1.0s 56.80nm 4.9mb
SNG 21.76 268 eP 36 54.10 -4.8X
eS 40 58.00
LOE 22.06 295 eP 37 02.00 0.1
SSE 22.41 357 Pc 37 05.60 0.4
1.0s 40.00nm 4.8mb
Z 20s 0.93um 4.2msz
E 14s 0.88um
NNT 22.76 282 eP 37 09.20 0.5
NST 22.99 290 eP 37 12.50 1.5
WHN 23.13 342 eP 37 17.00 4.8X
E 16s 1.40um
eS 41 24.00
GYA 23.29 322 iPd 37 14.00 0.1
Z 16s 1.20um 4.4msz
N 15s 1.20um
E 15s 1.50um
SP 37 28.00

NJ2 23.58 352 Pc 37 18.00 1.4
Z 15s 0.40um 4.0msz
BDT 24.47 293 eP 37 25.00 -0.3
KMI 25.02 313 eP 37 31.00 0.2
Z 25s 2.30um 4.6msz
XAN 28.25 336 P 37 59.00 -1.1
CD2 28.28 324 P 37 59.70 -0.7
Z 17s 1.80um 4.7msz
TIY 30.39 344 eP 38 19.20 0.0
Z 20s 0.90um 4.4msz
E 15s 0.65um
BJI 31.82 351 eP 38 31.00 -0.5
1.0s 18.00nm 4.8mb
Z 16s 0.23um 4.0msz
LZH 32.23 331 eP 38 34.00 -1.5
2.0s 46.00nm 5.0mb
Z 18s 0.97um 4.5msz
N 13s 0.64um
PP 38 47.50
PP 39 42.50
HHC 33.56 345 eP 38 47.00 0.1
BTO 33.76 343 eP 38 54.60 6.0X
N 14s 0.50um
E 14s 0.80um
ASPA 33.94 161 iPc 38 48.70 -1.5
0.7s 20.40nm 5.2mb
WARB 34.81 174 iPd 38 57.00 -0.6
CN2 35.15 4 eP 38 59.00 -1.4
Z 15s 1.20um 4.8msz
eS 44 40.00
LSA 36.13 310 eP 39 09.60 0.3
MDJ 36.40 8 eP 39 07.70 -3.1X
GTA 36.81 330 eP 39 15.00 0.4
1.2s 10.00nm 4.6mb
Z 16s 1.50um 4.9msz
E 13s 1.00um
PP 39 25.40
GUN 39.54 304 P 39 38.40 0.6
PKI 39.80 303 P 39 40.00 0.0
KKN 39.99 303 P 39 41.40 0.0
DMN 40.06 303 P 39 42.40 0.3
1.0s 88.00nm 5.6mb
KLB 40.23 186 iPc 39 41.60 -1.4
GKN 40.59 303 P 39 46.20 -0.1
0.8s 48.00nm 5.4mb
MUN 40.80 188 iPd 39 46.90 -0.8
NWA0 41.61 187 iPc 39 53.70 -0.5
0.6s 23.00nm 5.1mb
RKG 42.76 187 iPd 40 07.80 4.1X
HYB 43.66 286 ePd 40 10.50 -0.8
e 40 22.50
KOD 44.47 276 eP 40 18.90 0.7
GBA 44.49 281 P 40 18.10 0.1
CMS 45.67 152 eP 40 27.00 -0.1
BRS 46.24 142 iPc 40 31.20 -0.5
WMO 46.37 325 P 40 34.00 1.4
NDI 47.01 301 eP 40 37.00 -0.8
COO 48.07 145 eP 40 46.00 -0.1
POO 48.22 287 eP 40 47.00 -0.4
BFD 49.25 159 eP 41 00.00 5.0X
BWA 49.32 152 eP 40 56.90 1.3
CAN 50.32 152 eP 41 03.70 0.4
TOO 50.70 156 iPd 41 06.60 0.4
DZM 52.74 126 iPc 41 21.00 -0.8
QUE 56.07 301 eP 41 45.50 -0.7
PMR 81.70 29 eP 44 28.80 5.3X
0.9s 8.33nm 4.7mb
FBA 82.13 26 eP 44 24.70 -1.0
INK 87.17 21 ePc 44 50.20 -0.7
MBC 88.12 12 eP 44 36.00 -19.4X
0.7s 4.00nm
HFS 91.79 332 eP 45 11.70 -1.0
0.6s 1.00nm 4.4mb
BRG 94.87 323 eP 45 39.00 11.9X
1.1s 10.00nm
YKA 96.75 23 eP 45 34.60 -0.9
0.7s 2.20nm 4.8mb
NNA 160.64 102 ePKP 52 07.30 1.9
0.8s 10.45nm
CNCB 166.90 130 PKPc 52 13.50 1.7
i 53 18.00
LPB 166.97 128 ePKP 52 13.00 1.4
ZOB0 167.10 127 PKP 52 14.00 2.1
i 53 18.50
S.D. = 0.9 on 53 of 66 obs.

% DEC 22, 1990 16h 34m 29.77± 1.07s

ALL	43.68	160	ePd	36	03.00	2.3X			0.9s	39.30nm	5.4mb		1.0s	17.90nm	5.2mb		
BAO	43.99	125	ePc	36	03.90	0.5	LPO		79.94	46 eP	40 04.10	-0.5		i	40 41.80		
CFA	44.02	160	e(P)	36	06.30	3.0X			0.9s	52.40nm	5.5mb			i	41 31.60		
ORV	44.37	318	e(P)	36	05.60	-0.5	LSF		80.08	45 eP	40 04.50	-0.8	BDI	86.71	46 P	40 46.50	7.2X
ROCH	44.45	164	ePd	36	09.20	2.2X			0.8s	16.10nm	5.1mb		MME	86.76	46 P	40 42.50	2.7X
PEL	44.70	164	ePd	36	11.50	2.7X	RJF		80.13	46 eP	40 05.00	-0.6	CLL	86.91	39 iP	40 39.80	-0.2
FCH	44.98	163	eP	36	13.50	2.0X			0.9s	26.20nm	5.2mb			1.5s	51.00nm	5.5mb	
LNV	45.27	165	iPd	36	15.00	1.7	Z	22s	7.00um	6.0Msz			Z	19s	3.00um	5.7Msz	
PPD	45.30	135	eP	36	14.70	0.9	TCF		80.55	45 eP	40 06.70	-1.1		i	41 35.00		
LBFM	45.57	320	P	36	16.40	0.4			0.7s	18.75nm	5.2mb		CTI	87.08	44 P	40 41.00	-0.1
SES	46.05	336	eP	36	19.00	-0.4	CAF		80.55	46 eP	40 07.30	-0.5	WET	87.28	41 iPd	40 42.00	0.1
FFC	46.90	346	eP	36	25.00	-0.9			0.9s	26.20nm	5.3mb		Z	18s	3.00um	5.7Msz	
	0.6s	18.00nm			5.3mb		MAF		80.80	45 eP	40 08.20	-0.9		i	40 45.50		
SCH	46.94	14	ePd	36	25.10	-1.2			0.9s	22.10nm	5.2mb		UPP	87.47	30 iP	40 41.80	-0.6
	0.6s	40.00nm			5.6mb		BGF		80.96	44 eP	40 09.10	-0.9		i	41 34.90		
PNT	49.08	330	eP	36	43.00	-0.1			0.8s	29.55nm	5.4mb		BHG	87.57	42 iPc	40 43.80	0.5
	1.0s	31.00nm			5.3mb		AVF		81.29	44 eP	40 10.50	-1.1		1.1s	41.00nm	5.6mb	
EDM	49.15	337	eP	36	42.00	-1.6			0.8s	14.80nm	5.1mb		BRG	87.58	39 eP	40 43.10	-0.1
BMA	50.93	130	eP	36	56.50	-1.1	SSF		81.37	44 eP	40 10.80	-1.3		0.9s	11.00nm	5.1mb	
LPA	51.05	152	eP-	37	06.00	7.8X			0.8s	20.15nm	5.2mb		Z	17s	2.50um	5.7MszX	
Z	20s	4.26um			5.5Msz		LOR		81.59	43 eP	40 11.90	-1.3		e	40 47.00		
		eS		44	20.00				0.7s	19.85nm	5.3mb		VVI	87.62	44 P	40 43.00	-0.6
YKA	56.92	344	eP	37	36.70	-4.4X		Z	19s	8.75um	6.1Msz		SFI	87.63	46 P	40 43.50	-0.1
	0.8s	27.90nm			5.3mb		SMF		81.64	44 eP	40 12.20	-1.3	KHC	87.73	41 P	40 44.50	0.5
GDH	62.56	12	eP	38	17.00	-2.7X			0.8s	14.80nm	5.1mb			1.0s	11.00nm	5.1mb	
		e		47	35.00		LBF		81.70	44 eP	40 12.30	-1.5	Z	18s	1.80um	5.5Msz	
		e		51	30.00				0.7s	6.05nm	4.8mb		N	18s	1.30um		
INK	66.59	342	eP	38	44.00	-1.9	ENN		82.58	40 eP	40 17.50	-0.7	E	18s	2.00um		
	0.9s	46.00nm			5.6mb				0.8s	28.00nm	5.4mb			e	41 36.70		
RUV	67.27	249	eP	38	59.00	7.9X				e	41 11.00		FVI	87.74	43 P	40 44.10	0.1</

22d 17h

0.7s 19.00nm
 POO 144.49 37 ePKP 47 27.00 -5.9X
 MTN 145.15 262 ePKP 47 35.00 1.0
 DAV 145.80 298 ePKP 47 38.00 2.8X
 WARB 146.53 237 ePKP 47 39.00 2.9X
 HYB 148.03 32 iPKPd 47 40.50 1.8
 1.0s 115.00nm
 i 48 35.00
 NWA0 149.66 218 ePKP 47 43.00 2.2X
 0.6s 27.00nm
 e 48 42.00
 KLB 150.24 220 ePKP 47 49.00 7.3X
 0.6s 19.00nm
 GBA 150.46 38 PKP 47 43.10 0.7
 MUN 150.94 218 ePKP 47 44.00 1.2
 1.0s 100.00nm
 CHG 151.32 354 ePKP 47 49.80 6.1X
 LOE 152.25 348 ePKP 47 52.00 6.9X
 BDT 152.86 353 ePKP 47 48.00 2.1X
 KOD 153.02 43 ePKP 47 54.50 7.9X
 S.D. = 0.9 on 188 of 275 obs.

% DEC 22, 1990 17h 49m 11.55± 0.90s
 41.043 N ± 8.6km 22.492 E ± 5.5km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.11 218 iP 49 13.88 -0.6
 eS 49 15.88
 KNT 0.33 69 eP 49 18.40 0.0
 eS 49 23.36
 THE 0.55 139 eP 49 22.04 -0.5
 eS 49 30.12
 SOH 0.69 108 eP 49 25.12 -0.1
 eS 49 34.64
 SRS 0.84 85 iP 49 27.48 -0.2
 iS 49 38.76
 FNA 0.88 253 iP 49 28.76 0.2
 eS 49 42.40
 LIT 0.94 180 eP 49 29.60 0.1
 eS 49 44.84
 PAIG 1.44 141 iP 49 38.76 1.1
 eS 49 58.24
 S.D. = 0.6 on 8 of 8 obs.

DEC 22, 1990 18h 09m 52.27± 0.68s
 38.194 N ± 6.0km 23.123 E ± 7.8km
 DEPTH = 10.0km (geophysicist)

GREECE (364)

ML 2.7 (ATH).

ATH 0.52 115 ePn 10 03.50 0.7
 NEO 1.11 4 ePn 10 13.50 0.3
 EVR 1.26 305 ePb 10 16.50 0.8
 ITM 1.39 224 ePb 10 18.00 0.3
 VLI 1.48 186 ePn 10 18.00 -0.9
 PLG 2.19 6 ePn 10 28.20 -1.1
 APE 2.22 120 ePb 10 35.00 5.3X
 KZN 2.36 334 ePn 10 31.50 -0.2
 S.D. = 0.9 on 7 of 8 obs.

DEC 22, 1990 18h 18m 51.74± 2.08s
 18.767 N ± 3.6km 145.527 E ± 5.5km
 DEPTH = 198.3 ± 20.4 km
 5.0mb (30 obs.)

MARIANA ISLANDS (216)

IIDJ 17.96 339 P 22 48.80 -1.1
 S 26 05.70
 KAKJ 18.00 346 P 22 49.40 -0.8
 S 26 04.00
 CHJJ 18.16 343 P 22 50.60 -1.2
 S 26 04.00
 MAT 18.84 341 eP 22 58.00 -1.0
 0.8s 50.00nm 5.1mb
 eS 26 13.00
 MTMJ 19.01 341 P 22 59.70 -1.1
 S 26 26.90
 YAMJ 19.92 347 P 23 10.90 0.9
 OFUJ 20.52 351 P 23 17.50 1.6
 eS 27 12.00
 JAY 21.67 193 ePc 23 30.50 3.0X
 0.9s 93.80nm 5.3mb
 AOMJ 22.17 350 eP 23 34.30 2.3
 MRRJ 23.89 352 eP 23 48.10 -0.4
 SSE 25.19 304 Pc 24 02.00 1.3
 0.7s 40.00nm 5.2mb

ASAJ 25.39 355 eP 24 03.20 0.8
 NJ2 27.40 304 eP 24 17.00 -3.7X
 PMG 28.04 177 eP 24 25.20 -1.4
 MDJ 29.01 336 eP 24 35.70 0.6
 BJI 32.97 316 eP 25 08.00 -1.7
 0.8s 12.00nm 4.6mb
 MTN 34.47 205 eP 25 23.40 0.8
 TIY 34.48 310 eP 25 21.90 -0.8
 XAN 35.93 302 P 25 34.00 -0.9
 HHC 36.44 314 eP 25 36.00 -3.2X
 GYA 36.58 289 P 25 42.00 1.5
 KNA 38.06 207 eP 25 54.00 1.2
 QIS 39.51 189 iPc 26 05.30 0.6
 CD2 39.57 296 eP 26 06.10 0.8
 eS 31 49.00
 LZH 40.47 304 P 26 12.00 -0.8
 SMY 40.55 27 eP 26 14.40 1.5
 ASPA 43.67 196 iPc 26 39.30 0.6
 0.4s 66.20nm 5.5mb
 iS 32 53.50

CHG 44.00 278 eP 26 42.50 1.1
 BDT 44.18 276 eP 26 44.30 1.5
 ADK 44.35 33 iPc 26 44.60 0.9
 0.9s 118.10nm 5.4mb
 GTA 44.38 308 eP 26 43.20 -1.1
 0.8s 10.00nm 4.4mb
 NNT 44.42 269 eP 26 46.00 1.2
 DZM 45.45 152 iPc 26 53.20 0.4
 BRS 46.42 171 iPc 27 00.90 0.6
 e(S) 31 21.00

MBL 46.99 214 iPc 27 05.40 0.6
 0.4s 24.00nm 5.0mb
 WARB 48.30 203 iPc 27 16.50 1.6
 0.5s 40.00nm 5.1mb

COO 49.44 173 iPc 27 23.50 -0.1
 CMS 49.96 180 iPd 27 27.10 -0.4
 BWA 52.97 177 eP 27 50.10 0.2
 CAN 53.89 176 eP 27 56.70 0.0
 WMO 54.14 311 P 27 57.50 -1.2
 SDN 54.49 35 eP 28 00.20 -0.6
 GUN 55.07 291 P 28 06.20 0.3
 0.8s 32.00nm 5.1mb
 PKI 55.51 291 P 28 09.10 0.0
 0.5s 12.00nm 4.9mb

KKN 55.61 291 P 28 09.30 -0.3
 0.8s 27.00nm 5.0mb
 DMN 55.77 291 P 28 10.80 -0.1
 TOO 56.03 180 eP 28 12.00 -0.1
 0.8s 39.00nm 5.2mb
 GKN 56.16 292 P 28 13.00 -0.5
 ANM 56.20 23 ePd 28 12.70 -0.3
 BAL 56.38 210 eP 28 14.00 -0.6
 0.5s 56.00nm 5.6mb

KLB 56.72 208 iPd 28 16.50 -0.5
 0.6s 23.00nm 5.1mb
 MUN 57.75 209 eP 28 24.00 -0.2
 0.6s 18.00nm 5.0mb
 NWA0 58.08 208 eP 28 27.00 0.5
 0.5s 18.00nm 5.1mb

SVW 58.83 29 iPd 28 31.50 0.1
 TTA 59.26 27 iPd 28 34.00 -0.4
 0.8s 17.20nm 4.8mb

KDC 59.43 33 P 28 35.10 -0.3
 1.0s 45.00nm 5.2mb
 IMA 61.28 24 eP 28 47.40 -0.7
 0.8s 13.80nm 4.8mb
 PMR 61.97 29 iPd 28 51.00 -1.5
 0.6s 25.60nm 5.2mb

BRW 62.23 18 ePd 28 53.80 -0.3
 NDI 62.59 293 eP 28 56.50 -0.7
 FBA 63.31 26 eP 28 59.40 -1.9
 0.8s 32.20nm 5.2mb
 HYB 63.32 280 eP 29 01.50 -0.7
 TOA 63.45 29 eP 29 02.10 -0.2

CNZ 64.14 154 P 29 07.20 0.1
 NGZ 64.14 154 P 29 07.30 0.2
 NOZ 64.71 152 eP 29 09.50 -1.1
 GBA 65.26 277 P 29 15.00 0.4
 MNG 65.32 155 P 29 12.70 -1.8
 PGZ 65.64 155 eP 29 15.10 -1.4
 LTZ 66.01 159 P 29 17.50 -1.4
 KHZ 66.14 158 P 29 17.40 -2.2

INK 69.38 23 ePd 29 38.40 -1.0
 0.8s 33.00nm 5.1mb
 MBC 73.13 14 ePd 30 01.10 -0.5
 0.6s 16.00nm 4.9mb

PGC 76.81 43 eP 30 24.00 1.1

YKA 78.00 28 eP 30 28.50 -0.7
 0.6s 16.40nm 4.9mb
 PNT 79.09 42 eP 30 36.00 0.5
 L8FM 79.73 50 P 30 40.50 1.2
 MIN 80.21 51 eP 30 41.90 0.1
 ORV 80.51 52 eP 30 43.60 0.4
 NEW 80.97 42 iP 30 45.80 0.3
 1.0s 15.00nm 4.7mb
 ARN 81.12 54 P 30 46.80 0.4
 PRS 81.53 55 e(P) 30 50.80 2.2
 LLA 81.78 54 eP 30 50.90 1.0
 CMB 81.79 53 ePd 30 50.70 0.8
 KEV 81.82 342 eP 30 49.00 -0.4
 FRI 82.61 54 eP 30 54.70 0.6
 BONR 83.38 52 P 31 00.20 1.8
 TNP 84.15 52 P 31 02.70 0.6
 0.9s 15.63nm 4.7mb
 pP 31 55.60 217kmX

LRM 84.80 43 iPd 31 05.70 0.4
 FFC 87.12 32 iPd 31 16.40 0.3
 0.9s 32.00nm 5.2mb

DAU 87.65 48 iP 31 18.50 -0.9
 1.0s 1.40nm 3.8mb X
 PV09 89.91 49 eP 31 30.00 -0.1
 GOL 92.05 47 eP 31 41.00 1.2
 1.0s 4.00nm 4.4mb

NB2 92.45 340 P 31 39.10 -1.9
 0.5s 1.10nm 4.2mb
 ZOBO 147.84 91 PKP 38 09.00 -3.9X
 S.D. = 1.0 on 91 of 95 obs.

* DEC 22, 1990 18h 38m 51.02± 0.64s
 4.754 N ± 12.1km 125.965 E ± 17.0km
 DEPTH = 33.0km (normal)
 4.5mb (3 obs.)

TALAUD ISLANDS (263)

MTN 18.22 164 eP 43 05.50 2.3
 ASPA 29.29 165 iPc 44 51.40 -1.3
 0.7s 10.50nm 4.7mb
 WARB 30.76 179 iPd 45 05.50 -0.2
 MUN 37.69 194 iPd 46 04.00 -1.2
 NWA0 38.38 192 eP 46 10.00 -1.0
 0.4s 4.00nm 4.6mb

BWA 44.35 153 eP 47 00.70 0.6
 GUN 44.51 306 P 47 01.60 -0.3
 PKI 44.76 305 P 47 04.60 0.7
 KKN 44.95 305 P 47 05.60 0.3
 DMN 45.02 305 P 47 06.40 0.5
 CAN 45.36 153 eP 47 08.60 0.4
 GKN 45.56 305 P 47 10.40 0.4
 DZM 47.75 126 iPd 47 27.30 0.0
 YKA 98.88 24 eP 52 27.80 -1.2
 0.8s 0.50nm 4.1mb

CNCB 161.82 132 PKPd 59 07.20 15.9X
 ZOBO 162.05 131 PKP 59 02.00 10.5X
 S.D. = 1.1 on 14 of 16 obs.

% DEC 22, 1990 18h 39m 05.09± 1.36s
 41.114 N ± 10.8km 22.445 E ± 6.7km
 DEPTH = 11.6 ± 7.0 km

YUGOSLAVIA (383)

GRG 0.16 192 iP 39 08.92 -0.1
 eS 39 11.04
 KNT 0.35 82 iP 39 12.46 0.1
 eS 39 17.44
 THE 0.62 140 eP 39 16.92 -0.5
 eS 39 25.32
 SOH 0.75 113 iP 39 19.44 -0.2
 eS 39 30.52
 SRS 0.87 89 eP 39 21.84 0.2
 eS 39 33.56
 FNA 0.87 248 eP 39 21.76 0.0
 eS 39 33.44
 LIT 1.01 178 eP 39 24.61 0.5
 eS 39 39.12
 PAIG 1.51 141 eP 39 32.44 0.4
 eS 39 54.20
 S.D. = 0.4 on 8 of 8 obs.

% DEC 22, 1990 18h 58m 03.60± 3.55s
 40.322 N ± 9.1km 29.538 E ± 26.7km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.4 (ISK).

IZI 0.05 286 iPg 58 04.30 -1.6	CMS 26.14 227 iPc 07 16.60 1.0	CN2 70.22 329 iPc 12 53.80 -0.6
YLV 0.27 333 iPg 58 09.30 -0.1	1.0s 264.00nm 5.8mb	1.6s 200.00nm 6.0mb
KCT 0.91 266 iPn 58 20.50 -0.5	BWA 26.25 219 iPc 07 16.30 -0.4	eS 22 07.00
DST 1.00 225 ePn 58 23.00 0.4	CNB 26.31 216 iPd 07 18.90 1.6	SNG 70.34 283 eP 12 55.70 0.0
CTT 1.18 315 iPn 58 25.80 0.2	MNG 26.39 167 P 07 17.10 -0.7	1.5s 266.67nm 6.1mb
BNT 1.24 272 iPn 58 26.80 0.2	CAN 26.53 217 iPc 07 20.20 1.0	GYA 72.45 304 iPc 13 08.00 -0.4
EDC 1.28 272 ePn 58 27.00 -0.3	PGZ 26.57 166 P 07 18.40 -1.0	1.4s 100.00nm 5.6mb
S.D. = 0.8 on 7 of 7 obs.	0.8s 213.00nm 5.8mb	PP 13 16.00
DEC 22. 1990 19h 01m 41.81±0.10s	CAW 26.77 168 P 07 19.90 -1.5	LOE 72.86 294 eP 13 11.00 0.2
14.948 S ± 2.7km 168.036 E ± 2.9km	MRW 26.82 169 P 07 21.50 -0.3	BJI 72.90 321 iPc 13 09.61 -0.9
DEPTH = 26.7km (geophysicist)	WEL 26.89 169 P 07 22.00 -0.4	1.5s 210.00nm 5.9mb
5.8mb (45 obs.) 5.4MsZ (18 obs.)	eS 13 18.00	Z 26s 3.30um 5.5MsZ
VANUATU ISLANDS (186)	MTW 26.91 167 P 07 21.40 -1.2	eS 22 36.00
Depth from broadband	BLW 27.10 168 P 07 23.20 -1.2	eSKS 23 07.00
displacement seismograms.	MOW 27.11 168 P 07 23.20 -1.3	NNT 72.94 288 eP 13 11.00 0.8
FAULT PLANE SOLUTION: P-Waves	QIS 27.62 254 iPc 07 29.90 0.6	NST 73.65 292 iPc 13 18.00 2.7X
NP1:Strike=16 Dip=69 Slip=35	KHZ 27.78 171 P 07 27.00 -3.5X	TIY 73.92 317 iPc 13 16.60 -0.1
NP2: 272 58 155	LTZ 27.98 173 P 07 31.10 -1.2	1.4s 200.00nm 5.9mb
Principal Axes:	MMCZ 29.97 178 P 07 49.50 -0.8	Z 25s 1.10um 5.0MsZ
T P1g=39 Azm=238	MHZ 30.03 178 P 07 49.90 -1.0	E 12s 0.40um
P 7 142	TOO 30.12 217 iPc 07 52.50 0.8	XAN 74.38 312 Pc 13 19.00 -0.4
Comment: The focal mechanism is	1.0s 275.00nm 6.0mb	N 16s 2.10um
poorly controlled and	BFD 31.67 221 iPc 08 11.90 6.7X	S 22 49.00
corresponds to strike-slip	1.2s 160.00nm 5.8mb	KMI 75.05 302 Pd 13 24.60 0.9
faulting with a moderate	ASPA 33.29 250 iPc 08 18.80 -0.8	1.6s 220.00nm 5.9mb
reverse component. The	1.3s 471.00nm 6.3mb	Z 30s 1.90um 5.2MsZ
preferred fault plane is not	Z 21s 10.90um 5.5MsZ	S 23 04.00
determined.	iPcP 11 01.00	SPA 75.15 180 iPc 13 23.10 -0.3
RADIATED ENERGY	eS 13 37.50	1.0s 122.50nm 5.9mb
No. of sta: 9 Focal mech. F	ePcS 14 44.10	Z 20s 1.13um 5.2MsZ
Energy 9.9±2.4*10**12 Nm	WARB 40.18 247 iPc 09 18.40 0.7	BDT 75.23 293 eP 13 25.00 0.6
CENTROID, MOMENT TENSOR (HRV)	0.4s 18.00nm 5.2mb	CHG 75.84 294 iPc 13 29.00 1.0
Data Used: GDSN	AFR 40.53 100 eP 09 29.00 8.4X	1.1s 75.95nm 5.6mb
L.P.B.: 12S, 25C	1.2s 100.00nm 5.4mb	CHTO 75.84 294 iPc 13 27.55 -0.4
Centroid Location:	TBI 40.89 108 eP 09 25.00 1.5	epPd 13 35.33 25kmX
Origin Time 19:01:50.8 0.5	1.0s 90.00nm 5.5mb	esPc 13 40.13
Lat 14.27S 0.07 Lon 168.09E 0.06	TVO 41.02 100 eP 09 33.00 8.3X	HHC 76.23 319 Pc 13 30.00 0.1
Dep 15.0 FIX Half-duration 2.8	1.2s 100.00nm 5.4mb	1.0s 90.00nm 5.7mb
Moment Tensor: Scale 10**17 Nm	PMO 42.52 96 iP 09 37.80 0.8	CD2 76.73 307 P 13 33.40 0.6
Mrr=2.66 0.12 Mtt=0.89 0.18	1.2s 125.00nm 5.5mb	1.4s 180.00nm 5.9mb
Mff=-3.55 0.18 Mrt=-0.94 0.36	VAH 42.75 96 iP 09 39.50 0.6	HIA 76.85 330 iPc 13 32.42 -0.6
Mrf=2.90 0.57 Mtf=-0.15 0.12	1.2s 70.00nm 5.3mb	epPd 13 40.70 27kmX
Principal Axes:	42.78 96 iP 09 40.00 0.8	esPc 13 44.34
T Val=4.08 P1g=64 Azm=231	1.2s 120.00nm 5.5mb	BTO 77.07 318 iPc 13 35.00 0.4
N 0.62 14 352	RUV 42.99 96 iP 09 41.60 0.8	N 15s 0.70um
P -4.70 22 88	1.2s 85.00nm 5.4mb	E 15s 0.80um
Best Double Couple:Mo=4.4*10**17	COOL 45.67 241 eP 10 02.00 -0.3	LZH 79.02 312 iPc 13 46.58 1.1
NP1:Strike=203 Dip=26 Slip=124	MBL 46.11 255 iPc 10 06.30 0.5	1.5s 340.00nm 6.1mb
NP2: 346 68 75	0.4s 25.00nm 5.5mb	Z 25s 1.09um 5.1MsZ
BKM 2.71 176 iPd 02 24.50 -0.1	MEKA 47.45 248 eP 10 16.20 -0.3	e 13 49.23
IS 03 01.00	KLB 48.64 241 iPc 10 25.00 -0.6	epPd 13 54.69 26kmX
PVC 2.79 175 iPd 02 25.90 0.3	NWAO 49.27 239 iPc 10 30.20 -0.3	PP 16 51.50
IS 03 09.50	1.0s 300.00nm 6.3mb	eS 23 41.00
DZM 7.24 192 iPc 03 26.90 -1.8	Z 20s 5.10um 5.5MsZ	SVW 81.14 17 ePc 13 55.30 -0.8
IS 04 46.10	N 20s 1.80um	1.6s 71.60nm 5.4mb
NDF 9.46 108 eP 04 02.90 3.5X	E 20s 4.90um	ANM 81.83 11 eP 14 00.20 0.7
HNR 9.62 304 eP 04 04.00 2.3	BAL 49.41 242 eP 10 31.00 -0.6	MAW 81.96 202 e(P) 14 01.00 0.7
eS 05 50.00	RKG 49.64 238 iPc 10 33.90 0.6	1.2s 48.00nm 5.4mb
SVO 9.89 305 eP 04 08.00 2.6	MUN 50.00 241 iPc 10 35.80 -0.3	TTA 82.53 16 eP 14 00.20 -3.1X
eS 05 53.00	1.2s 8.00nm 4.6mb X	GTA 83.35 314 iPc 14 09.00 0.9
VSG 9.91 304 eP 04 05.00 -0.7	RKT 54.21 108 eP 11 08.00 0.4	1.4s 300.00nm 6.3mb
eS 05 56.00	1.1s 65.00nm 5.6mb	Z 18s 0.90um 5.2MsZ
MBU 10.47 103 eP 04 14.20 0.8	BAG 56.27 302 eP 11 21.50 -1.4	E 11s 0.40um
SVA 10.48 109 eP 04 14.20 0.7	MAT 58.44 332 iPc 11 35.90 -1.8	PP 14 17.00
BRS 18.84 226 iPd 06 04.70 2.5	(S) 21 28.00	PMR 83.46 19 ePc 14 07.10 -0.9
e 07 39.20	SSE 64.19 316 P 12 15.00 -1.6	1.4s 137.10nm 5.9mb
IS 09 49.00	1.5s 90.00nm 5.7mb	PCC 83.52 49 ePc 14 07.60 -1.2
RAB 18.93 303 eP 06 08.00 4.6X	Z 20s 1.10um 5.0MsZ	GCC 83.61 49 eP 14 08.60 -0.7
AFI 19.58 90 eP 06 20.00 9.0X	N 11s 0.73um	BRK 83.76 48 eP 14 10.20 0.2
eS 10 00.00	PP 12 25.00	BKS 83.78 48 e(P) 14 11.20 1.0
PMG 21.13 283 iPc 06 28.60 1.5	eS 20 52.00	eLQ 36 24.00
RMQ 21.35 234 iPc 06 32.10 2.8X	1.5s 200.00nm 6.0mb	eLR 40 14.00
1.2s 919.00nm 6.1mb	KGM 66.20 279 eP 12 30.30 0.4	PRS 83.79 50 ePc 14 10.90 0.6
CTA 21.38 253 iP 06 31.00 1.3	NJ2 66.35 315 Pc 12 30.40 -0.1	SAO 83.91 50 eP 14 10.80 -0.1
IS 10 32.00	1.5s 200.00nm 6.0mb	MHC 84.00 49 ePc 14 11.90 0.5
COO 21.49 221 eP 06 31.00 0.3	ADK 67.86 10 eP 12 38.10 -1.6	ARN 84.08 49 P 14 12.30 0.6
i 07 41.90	WHN 68.64 312 Pc 12 44.70 -0.3	LLA 84.22 50 eP 14 13.00 0.6
RIV 24.22 216 iPc 07 00.80 3.4X	1.7s 200.00nm 6.0mb	PRI 84.24 50 ePc 14 13.60 0.9
1.0s 7320.00nm 7.2mb X	MDJ 68.82 332 Pc 12 45.20 -0.6	e 14 17.00
PUZ 24.75 160 P 07 02.70 0.2	1.5s 200.00nm 6.0mb	e 14 20.60
WHH 24.98 164 P 07 05.70 0.9	Z 20s 1.90um 5.3MsZ	BCH 84.31 51 P 14 14.40 1.4
NGZ 25.04 166 P 07 06.70 1.3	IPM 69.15 281 ePc 12 49.10 0.6	TOA 84.79 20 eP 14 15.00 0.2
CNZ 25.05 166 P 07 07.00 1.5	1.2s 190.20nm 6.1mb	ABL 84.84 52 P 14 16.20 0.4
NOZ 25.17 161 P 07 06.60 0.1	SNY 69.80 326 eP 12 50.90 -0.9	ORV 84.99 47 ePc 14 16.60 0.4
TTH 25.69 164 P 07 12.10 0.8	2.0s 170.00nm 5.8mb	CMB 85.19 49 ePc 14 17.24 0.0
	Z 22s 1.30um 5.1MsZ	MIN 85.24 46 eP 14 17.20 -0.4
	S 22 00.00	FRI 85.28 50 ePc 14 17.90 0.2

22d 20h

EPF 62.16 47 eP 14 10.00 1.1
0.8s 22.85nm 5.2mb
LPF 62.27 42 eP 14 09.60 0.2
0.7s 9.90nm 4.9mb
GRR 62.48 41 eP 14 11.20 0.4
0.7s 11.00nm 4.9mb
MFF 62.54 43 eP 14 11.60 0.4
LFF 62.80 45 eP 14 13.80 0.8
0.8s 8.05nm 4.7mb
FLN 62.81 41 eP 14 13.40 0.4
0.6s 13.55nm 5.1mb
YKA 62.89 336 eP 14 09.80 -3.5X
0.4s 3.90nm 4.7mb
LDF 63.00 41 eP 14 14.60 0.3
LPO 63.07 46 eP 14 15.20 0.4
0.8s 20.15nm 5.1mb
RJF 63.41 45 eP 14 17.30 0.3
0.8s 8.05nm 4.7mb
LSF 63.60 44 eP 14 18.50 0.3
0.8s 9.40nm 4.8mb
CAF 63.72 46 eP 14 19.40 0.3
0.8s 10.75nm 4.8mb
TCF 64.07 44 eP 14 21.60 0.3
0.8s 8.05nm 4.7mb
MAF 64.30 44 eP 14 23.00 0.2
1.2s 17.85nm 4.9mb
BGF 64.55 44 eP 14 24.50 0.1
AVF 64.93 44 eP 14 26.70 -0.1
1.0s 12.00nm 4.8mb
SSF 65.08 43 eP 14 27.50 -0.3
SMF 65.24 44 eP 14 29.00 0.2
1.0s 12.00nm 4.8mb
LOR 65.36 43 eP 14 29.20 -0.4
0.7s 6.60nm 4.7mb
LBF 65.39 44 eP 14 30.40 0.6
LRG 66.58 48 eP 14 37.90 0.5
0.8s 10.75nm 4.8mb
FRF 66.80 48 eP 14 39.00 0.2
0.7s 8.80nm 4.7mb
LPL 67.07 45 eP 14 41.60 0.8
0.8s 16.10nm 4.9mb
LPG 67.08 45 eP 14 41.80 0.8
0.8s 13.45nm 4.8mb
HAU 67.13 43 eP 14 40.50 -0.4
0.8s 5.35nm 4.4mb
ENN 67.28 40 eP 14 41.50 -0.2
1.0s 11.00nm 4.7mb
SBF 67.39 47 eP 14 42.90 0.3
0.8s 10.75nm 4.7mb
BSF 67.41 43 eP 14 42.00 -0.7
0.8s 10.75nm 4.7mb
CDF 67.80 42 eP 14 44.70 -0.4
0.8s 6.70nm 4.5mb
WTS 68.04 39 eP 14 46.50 0.2
0.8s 7.00nm 4.6mb
ABH 68.18 41 eP 14 48.32 1.0
PGF 68.43 49 eP 14 49.10 0.0
0.7s 13.25nm 4.9mb
VAI 68.53 45 P 14 49.50 0.0
BOB 68.91 46 P 14 52.50 0.5
PII 69.61 48 P 14 56.00 -0.2
BDI 69.69 47 P 14 56.00 -0.7
SOTA 70.32 44 iPc 15 00.60 0.0
0.9s 33.10nm 5.2mb
GRF 70.52 41 ePc 15 02.00 0.4
CTI 70.55 45 P 15 01.00 -1.0
SFI 70.58 47 P 15 01.50 -0.5
CRE 70.64 48 P 15 04.00 1.4
MBC 71.20 348 eP 15 04.00 -1.2
0.5s 12.00nm 5.0mb
pP 15 43.50 163kmX
ARV 71.36 48 P 15 07.50 0.7
FVI 71.36 45 P 15 06.60 0.0
CLL 71.79 40 iPc 15 09.00 -0.1
1.8s 26.00nm 4.7mb
NB2 71.89 29 P 15 10.60 1.0
0.9s 13.20nm 4.7mb
KHC 72.02 42 P 15 11.00 0.4
e 15 39.10
VOY 72.11 45 iP 15 11.60 0.3
INK 72.34 338 eP 15 10.00 -2.1
BRG 72.35 40 iP 15 12.00 -0.5
0.9s 12.00nm 4.6mb
DUI 72.46 50 P 15 14.50 1.1
CEY 72.47 46 eP 15 13.40 0.1
LJU 72.55 45 eP 15 13.50 -0.3

PRU 72.69 41 Pc 15 15.20 0.8
e 15 46.00
e 16 06.50
HFS 72.98 31 eP 15 15.90 0.0
0.5s 8.20nm 4.7mb
VBY 73.05 46 e(P) 15 17.30 0.7
ZST 74.33 43 eP 15 23.80 -0.2
e 15 56.90
SRO 75.15 43 eP 15 28.70 0.0
KRA 76.17 41 ePc 15 35.20 0.8
SPC 76.40 42 eP 15 36.70 0.8
AIA 76.70 181 eP 15 38.50 1.7
NUR 78.44 30 iP 15 47.40 0.8
KEV 78.90 21 eP 15 49.00 -0.1
IMA 80.01 336 P 15 56.00 0.7
pP 16 34.80 156kmX
BCAO 80.12 87 iPd 15 58.60 1.9
0.8s 56.00nm 5.4mb
id 16 35.00
MLR 80.55 45 ePc 16 04.00 5.5X
LWI 91.49 92 iP- 16 54.70 1.9
BUL 94.75 109 eP 16 58.00 -9.5X
KRI 95.08 106 eP 17 13.10 4.0X
GKN 129.20 39 PKP 22 53.80 -0.4
KKN 129.74 38 PKP 22 53.60 -1.7
DMN 129.77 38 PKP 22 55.40 0.0
PKI 129.98 38 PKP 22 55.20 -0.7
GUN 130.01 38 PKP 22 54.80 -1.2
GBA 132.81 59 PKP 23 01.00 -0.1
KOD 134.46 63 ePKP 23 05.00 0.3
TOO 144.16 219 ePKP 23 18.00 -3.3X
CHG 144.51 32 ePKP 23 21.00 -1.3
BDT 145.84 33 ePKP 23 25.00 0.4
BFD 146.20 217 ePKPc 23 30.50 5.8X
NNT 150.01 37 ePKP 23 36.00 4.8X
ASPA 160.53 230 iPKPc 23 43.80 -0.9
0.9s 7.10nm
S.D. = 0.9 on 167 of 175 obs.
% DEC 22, 1990 20h 19m 33.60±1.24s
41.135 N ±11.7km 22.386 E ± 6.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
GRG 0.18 176 eP 19 37.84 0.2
eS 19 40.96
KNT 0.39 86 iP 19 41.61 0.0
eS 19 47.12
THE 0.67 139 eP 19 46.44 -0.4
eS 19 55.44
SOH 0.80 113 iP 19 49.40 0.3
iS 19 59.64
FNA 0.84 246 eP 19 49.84 0.0
eS 20 00.88
SRS 0.91 91 eP 19 50.96 -0.1
eS 20 02.96
S.D. = 0.3 on 6 of 6 obs.
% DEC 22, 1990 20h 26m 08.57±1.24s
41.137 N ±10.6km 22.402 E ± 6.5km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)
GRG 0.18 180 iP 26 12.97 0.3
eS 26 16.16
KNT 0.38 86 iP 26 16.70 0.4
eS 26 22.12
THE 0.66 140 eP 26 20.84 -0.9
eS 26 30.56
SOH 0.79 113 iP 26 23.76 -0.1
eS 26 34.76
FNA 0.85 246 iP 26 24.84 -0.2
eS 26 35.96
SRS 0.90 91 eP 26 25.80 0.0
iS 26 38.52
LIT 1.04 176 eP 26 28.64 0.5
eS 26 43.88
S.D. = 0.6 on 7 of 7 obs.
& DEC 22, 1990 20h 45m 12.80s
60.172 N 140.783 W
DEPTH = 0.0km
SOUTHEASTERN ALASKA (19)
<AGS-P>.
YAH 0.52 292 iP 45 23.53 0.4
eS 45 31.96

YKU 0.82 139 eP 45 28.77 -0.3
eS 45 42.18
CTGM 0.84 341 iP 45 29.37 -0.2
eS 45 42.18
BALM 1.16 319 iP 45 34.16 -1.3
iS 45 51.19
TGL 1.17 301 eP 45 34.34 -1.3
S 45 50.87
HYT 1.75 67 P 45 45.30 0.6
GLB 1.96 312 iP 45 46.55 -1.1
eS 46 11.42
KLU 2.84 300 eP 45 58.98 -1.4
VLZ 2.90 292 eP 45 59.11 -1.9
TZL 2.93 312 eP 46 01.15 -0.4
VZW 2.98 290 eP 45 59.90 -2.4
GLI 3.20 286 eP 46 03.30 -2.0
TOA 3.25 309 eP 46 04.13 -2.0
SDG 3.29 318 eP 46 03.66 -3.0
14 obs. associated
* DEC 22, 1990 20h 48m 41.94±0.30s
18.480 S ±13.2km 176.392 W ± 8.8km
DEPTH = 33.0km (normal)
5.0mb (10 obs.) 4.9Msz (3 obs.)
FIJI ISLANDS REGION (181)
SVA 4.91 273 eP 49 54.20 -1.1
DZM 16.49 255 iPc 52 37.00 4.4X
BRS 29.68 247 iPc 54 50.30 3.1X
CMS 36.43 242 eP 55 46.50 0.9
TOO 38.32 232 eP 56 03.00 1.6
ASPA 46.49 255 iPd 57 07.30 -0.8
0.8s 29.60nm 5.3mb
KLB 60.29 244 eP 58 49.00 -0.9
NWA0 60.64 242 eP 58 52.00 -0.3
0.8s 8.00nm 4.9mb
MUN 61.57 243 eP 58 58.00 -0.7
SPA 71.64 180 eP 00 00.00 -2.1
0.8s 16.67nm 5.1mb
SAO 75.52 43 e(P) 00 24.50 -0.5
MHC 75.74 42 e(P) 00 25.40 -1.0
PLM 76.68 48 eP 00 32.00 0.2
SBB 76.74 46 eP 00 31.00 -1.0
FRI 76.78 43 eP 00 31.50 -0.5
ISA 76.84 45 eP 00 33.00 0.5
CMB 76.96 42 ePc 00 32.50 -0.6
ORV 77.16 40 e(P) 00 33.90 -0.2
CLC 77.52 45 eP 00 36.00 -0.3
TPC 77.65 48 eP 00 37.00 0.0
GSC 77.78 46 eP 00 38.00 0.3
GLA 77.96 49 eP 00 39.00 0.3
LBFM 78.02 39 P 00 39.40 0.3
BONR 78.25 43 P 00 41.60 1.0
TNP 79.03 44 P 00 45.10 0.4
1.2s 17.47nm 4.9mb
BMW 80.47 34 P 00 52.50 0.4
GMW 81.39 33 P 00 56.40 -0.4
RMW 81.85 34 P 00 59.00 -0.3
MSU 82.62 45 P 01 04.80 1.1
PNT 84.14 33 eP 01 11.00 0.1
ALO 84.96 51 eP 01 15.00 -0.6
1.5s 20.83nm 5.1mb
Z 18s 0.40um 4.8Msz
ANMO 84.96 51 P 01 14.40 -1.2
1.5s 111.11nm 5.8mb
BJI 85.54 315 eP 01 18.00 0.0
1.5s 63.00nm 5.6mb
LRM 86.20 39 eP 01 21.80 0.3
BW06 86.46 43 P 01 21.50 -1.4
1.5s 11.44nm 4.9mb
GOL 87.84 47 P 01 29.60 -0.1
1.5s 11.79nm 5.0mb
SES 89.35 36 ePc 01 36.20 -0.1
YKA 94.05 24 eP 01 56.50 -1.2
0.7s 1.10nm 4.4mb
WIT 145.65 357 ePKP 08 19.50 1.2
KRA 145.89 341 ePKPd 08 19.00 0.2
1.5s 91.00nm
CLL 146.41 349 iPKPc 08 20.20 0.6
1.5s 60.00nm
WTS 146.46 356 iPKPd 08 21.00 1.3
1.0s 26.00nm
SPC 146.55 340 ePKP 08 20.40 0.2
BRG 146.65 348 iPKPc 08 21.10 1.1
1.6s 54.00nm
MOX 147.28 351 ePKP 08 24.00 2.9X
2.0s 74.00nm

NEO	1.90	161	ePb	46	48.00	-0.3
AGG	2.08	182	iP	46	51.52	0.7

23d 01h

[illegible]

FNA 0.87 246 eP 37 41.56 -0.1
 SRS 0.88 91 eP 37 33.72 -0.2
 LIT 1.04 177 eP 37 36.60 -0.2
 PAIG 1.54 141 iP 37 45.72 1.1
 S.D. = 0.6 on 8 of 8 obs.

& DEC 23, 1990 02h 45m 13.48s
 58.269 N 156.088 W
 DEPTH = 149.1km
 ALASKA PENINSULA (12)
 <AGS-P>.

CDD 1.44 62 iP 45 41.53 -1.2
 AGU 1.76 51 iP 45 45.21 -1.1
 AUP 1.77 51 iP 45 45.26 -1.1
 AUE 1.79 51 iP 45 45.46 -1.0
 PDB 1.81 32 iP 45 45.25 -1.5
 KDC 1.98 104 eP 45 46.87 -1.8
 INE 2.38 40 iP 45 51.88 -1.8
 XLV 2.56 60 eP 45 54.72 -1.0
 HOM 2.69 57 eP 45 55.79 -1.6
 RED 2.75 37 eP 45 56.47 -1.7
 RS2 2.78 36 iP 45 57.05 -1.7
 RSO 2.78 36 iP 45 57.14 -1.7
 NCT 2.81 34 eP 45 56.91 -2.1
 RDN 2.82 61 eP 45 57.61 -1.6
 REF 2.82 36 iP 45 57.47 -1.8

SVW 2.86 5 P 45 58.16 -1.4
 RDT 2.98 38 eP 45 59.28 -1.9
 NNL 3.04 52 eP 46 01.05 -0.8
 CKL 3.50 31 eP 46 06.48 -1.4
 NKA 3.50 43 eP 46 07.46 -0.3
 BGL 3.54 30 eP 46 07.32 -1.1
 SPU 3.56 33 eP 46 06.76 -2.0
 CRP 3.61 32 eP 46 07.68 -1.7
 CGLM 3.68 32 eP 46 08.55 -1.7
 NCG 3.72 31 eP 46 09.50 -1.3
 SLKM 3.75 51 eP 46 08.48 -2.6

SDN 3.81 221 eP 46 09.66 -2.1
 SEW 3.88 59 eP 46 10.72 -2.0
 SUA 4.19 38 iP 46 14.93 -2.0

SKT 4.37 30 iP 46 17.67 -1.6
 PMS 4.45 45 iP 46 17.63 -2.8
 MTU 4.68 65 iP 46 21.01 -2.3
 KNIM 4.76 60 eP 46 21.18 -3.3
 PLRM 4.83 43 eP 46 21.52 -3.9
 KKK 4.97 47 eP 46 23.56 -3.8
 GHO 5.02 43 eP 46 23.98 -4.1
 CUT 5.06 32 eP 46 25.49 -2.9
 MID 5.19 73 eP 46 28.21 -2.0
 GLI 5.27 56 eP 46 27.46 -3.8
 VZW 5.58 56 eP 46 32.25 -3.3
 HUR 5.69 31 eP 46 33.46 -3.5
 VLZ 5.71 56 eP 46 34.06 -3.1
 CVA 5.75 62 eP 46 34.64 -3.0
 SGAM 5.99 63 iP 46 38.08 -2.9
 KLU 6.05 53 eP 46 38.44 -3.4
 KAIM 6.24 70 eP 46 42.55 -1.7
 RND 6.25 31 eP 46 40.63 -3.9
 TOA 6.26 48 eP 46 41.25 -3.5
 MCK 6.49 29 eP 46 44.50 -3.2
 TZL 6.53 50 eP 46 45.13 -3.1
 SDG 6.74 46 eP 46 47.96 -3.2
 GLB 6.95 58 eP 46 50.72 -3.3
 PAX 7.03 43 eP 46 50.99 -4.2
 TGL 7.19 64 eP 46 54.36 -2.9
 WRH 7.31 28 eP 46 54.62 -4.1
 DDM 7.43 38 eP 46 57.93 -2.5
 WRG 7.44 70 eP 46 58.34 -2.2
 BALM 7.49 62 eP 46 58.34 -3.0
 CCB 7.52 28 eP 46 56.91 -4.7

HDA 7.56 32 eP 46 57.14 -4.9
 YAH 7.63 68 eP 47 00.88 -2.4
 MDM 7.68 26 eP 46 58.89 -4.8
 FBA 7.73 27 eP 47 01.00 -3.4
 GLM 7.90 28 eP 47 02.07 -4.7
 DOT 7.95 42 eP 47 06.89 -0.5
 CTGM 7.95 64 eP 47 04.86 -2.6
 67 obs. associated

% DEC 23, 1990 02h 46m 01.84 ± 1.14s
 41.102 N ± 10.4km 22.391 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 177 iP 46 05.33 0.1
 KNT 0.39 81 eP 46 10.05 0.3
 THE 0.64 137 eP 46 14.02 -0.6
 SOH 0.78 111 eP 46 16.98 -0.1
 FNA 0.83 248 eP 46 17.78 -0.2
 SRS 0.91 89 eP 46 19.26 0.0
 LIT 1.00 176 eP 46 21.42 0.6
 S.D. = 0.5 on 7 of 7 obs.

% DEC 23, 1990 03h 04m 06.85 ± 1.14s
 41.125 N ± 10.1km 22.448 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.17 192 iP 04 10.86 0.1
 KNT 0.34 84 eP 04 14.25 0.3
 THE 0.63 141 eP 04 19.08 -0.4
 SOH 0.75 114 eP 04 21.52 0.0
 SRS 0.86 90 eP 04 23.32 -0.2
 FNA 0.88 248 iP 04 23.68 -0.1
 LIT 1.02 178 eP 04 26.56 0.3
 S.D. = 0.3 on 7 of 7 obs.

DEC 23, 1990 03h 06m 41.79 ± 0.55s
 46.304 N ± 6.6km 13.298 E ± 5.3km
 DEPTH = 10.0km (geophysicist)
 AUSTRIA (546)
 ML 2.5 (VIE). MD 2.5 (LJU).

FVI 0.46 309 P 06 49.40 -1.7
 VOY 0.50 123 iPg 06 50.20 -1.7
 TRI 0.68 151 iPg 06 54.70 -0.5
 VVI 0.69 242 P 06 54.50 -0.9
 KBA 0.78 2 iPg 06 56.20 -0.8
 LJU 0.90 106 ePg 06 58.50 -0.5
 CEY 0.97 125 eP 07 14.00 13.8X
 CTI 1.17 258 P 07 04.00 0.2
 RIY 1.22 141 ePg 07 05.30 0.7
 VBY 1.58 120 ePn 07 10.60 0.7
 OGA 1.67 291 iPc 07 13.00 1.7
 SOTA 1.70 303 iPg 07 12.90 1.1
 PTJ 1.89 101 ePg 07 16.10 1.6
 KHC 2.84 4 ePg 07 28.20 0.2
 S.D. = 1.2 on 13 of 14 obs.

% DEC 23, 1990 04h 05m 28.57 ± 1.37s
 41.136 N ± 11.5km 22.366 E ± 7.2km

DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.18 172 iPc 05 32.37 -0.3
 KNT 0.40 86 ePd 05 37.20 0.4
 THE 0.68 138 ePd 05 40.80 -1.2
 SOH 0.81 112 ePd 05 43.76 -0.6
 FNA 0.83 245 ePd 05 44.36 -0.3
 SRS 0.93 91 ePc 05 46.16 -0.1
 LIT 1.04 175 ePd 05 48.84 0.7
 PAIG 1.57 140 ePd 05 57.88 1.4
 S.D. = 0.9 on 8 of 8 obs.

% DEC 23, 1990 04h 23m 05.77 ± 1.08s
 41.057 N ± 11.7km 22.406 E ± 6.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.10 182 ePd 23 09.08 0.6
 KNT 0.39 74 iPd 23 13.62 -0.1
 THE 0.60 135 ePd 23 17.36 -0.5
 SOH 0.76 108 iPc 23 20.44 -0.1
 FNA 0.83 251 ePd 23 21.52 -0.3
 SRS 0.90 86 ePc 23 23.40 0.4
 S.D. = 0.5 on 6 of 6 obs.

% DEC 23, 1990 05h 17m 26.31 ± 1.13s
 41.106 N ± 10.4km 22.391 E ± 6.2km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 177 ePc 17 29.86 0.1
 KNT 0.39 82 ePd 17 34.70 0.5
 THE 0.64 137 ePc 17 38.82 -0.4
 SOH 0.78 111 ePd 17 41.42 -0.2
 FNA 0.83 248 ePd 17 42.34 -0.1
 SRS 0.91 89 ePd 17 43.42 -0.3
 LIT 1.01 176 ePd 17 45.78 0.4
 S.D. = 0.4 on 7 of 7 obs.

& DEC 23, 1990 05h 36m 16.20s
 36.828 N 121.553 W
 DEPTH = 2.0km
 CENTRAL CALIFORNIA (39)
 <BRK>. ML 2.5 (BRK).

SAO 0.11 126 iPc 36 18.20 -0.2
 GCC 0.41 300 ePc 36 23.80 -0.6
 PRS 0.52 163 iPd 36 26.00 -0.5
 MHC 0.52 352 iPc 36 27.00 0.5
 ARN 0.52 2 ePc 36 27.00 0.4
 LLA 0.53 113 iPd 36 26.80 -0.1
 PCC 0.94 316 ePd 36 33.90 -1.0
 PRI 0.99 133 ePd 36 35.20 -0.6
 BKS 1.18 333 iPd 36 38.90 0.0
 BRK 1.19 332 e(P) 36 37.50 -1.5
 ZSP 1.25 334 eP 36 38.40 -1.7
 CMB 1.52 37 eP 36 43.70 -0.8
 S.D. = 1.2 on 13 of 14 obs.

% DEC 23, 1990 05h 42m 14.30 ± 0.94s
 41.041 N ± 9.1km 22.434 E ± 5.9km

23d 10h

FNA 0.87 247 iPd 30 08.98 -0.2
 SRS 0.88 90 ePc 30 09.14 -0.1
 LIT 1.02 178 ePc 30 12.18 0.4
 S.D. = 0.5 on 7 of 7 obs.

% DEC 23, 1990 10h 39m 32.25 ± 1.24s
 41.113 N ± 10.5km 22.396 E ± 6.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.16 178 iPc 39 35.82 -0.1
 KNT 0.38 83 ePc 39 39.98 -0.1
 THE 0.65 138 ePd 39 44.46 -0.7
 SOH 0.78 112 ePd 39 48.30 0.8
 FNA 0.84 247 ePc 39 48.58 0.1
 SRS 0.90 89 ePd 39 48.90 -0.7
 LIT 1.01 176 ePd 39 50.94 -0.5
 PAIG 1.54 140 ePc 40 00.90 1.2
 S.D. = 0.8 on 8 of 8 obs.

DEC 23, 1990 12h 46m 39.31 ± 0.70s
 41.029 N ± 6.4km 22.509 E ± 6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.11 228 iPc 46 41.89 -0.3
 KNT 0.32 66 ePd 46 45.20 -0.8
 THE 0.53 139 iPc 46 49.62 -0.3
 SOH 0.67 108 ePc 46 52.26 -0.5
 SRS 0.82 83 ePd 46 54.00 -1.3
 FNA 0.89 254 ePc 46 54.84 -1.6
 LIT 0.93 181 ePc 46 57.28 0.2
 MMB 1.08 58 iPg 46 58.00 -1.6
 PAIG 1.42 141 ePd 47 06.00 0.9
 VTS 1.65 18 iP 47 10.00 1.5
 RZN 1.79 68 iPc 47 12.00 1.4
 PGB 1.96 39 eP 47 14.00 1.0
 PLD 1.97 56 eP 47 32.00 19.0X
 AGG 2.01 184 ePc 47 15.04 1.4
 S.D. = 1.3 on 13 of 14 obs.

% DEC 23, 1990 13h 29m 01.20 ± 1.23s
 41.125 N ± 11.4km 22.431 E ± 6.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.17 188 iPc 29 05.01 -0.1
 KNT 0.35 84 iPd 29 07.72 0.1
 THE 0.64 140 iPd 29 13.30 -0.7
 SOH 0.76 113 ePd 29 16.08 0.0
 FNA 0.87 247 ePc 29 17.88 -0.1
 SRS 0.88 90 ePc 29 17.76 -0.3
 PAIG 1.53 141 ePd 29 29.52 1.0
 S.D. = 0.6 on 7 of 7 obs.

% DEC 23, 1990 13h 53m 26.01 ± 2.44s
 16.087 N ± 9.3km 61.100 W ± 20.3km
 DEPTH = 34.0 ± 24.9 km
 LEEWARD ISLANDS (92)
 ML 1.9 (FDF).

SFG 0.19 331 iPc 53 32.54 0.0
 DEG 0.23 10 iP 53 33.13 0.1
 MGG 0.27 231 iPc 53 33.37 -0.1
 SEG 0.50 309 iPc 53 36.44 -0.1
 DOG 0.50 264 eP 53 36.80 0.2
 PAG 0.56 264 eP 53 37.50 0.0
 BBL 0.67 213 eP 53 38.96 0.0
 S.D. = 0.1 on 7 of 7 obs.

? DEC 23, 1990 14h 12m 10.59 ± 1.06s
 39.101 N ± 10.4km 27.574 E ± 18.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.5 (ISK).

IZM 0.74 199 iPg 12 25.20 0.0
 DST 0.96 58 ePn 12 26.80 -0.1
 BNT 1.28 12 ePn 12 34.20 -0.1
 KCT 1.30 28 iPn 12 34.80 0.2
 S.D. = 0.3 on 4 of 4 obs.

% DEC 23, 1990 14h 22m 11.28 ± 1.18s
 41.039 N ± 9.7km 22.419 E ± 6.6km
 DEPTH = 12.3 ± 6.8 km
 YUGOSLAVIA (383)

GRG 0.08 189 iPc 22 14.62 0.5
 KNT 0.38 71 iPd 22 19.69 0.5
 THE 0.58 134 ePd 22 22.37 -0.5
 SOH 0.74 107 ePd 22 25.36 -0.3
 FNA 0.83 252 ePc 22 27.04 -0.1
 SRS 0.89 85 ePc 22 28.16 0.0
 LIT 0.94 177 ePd 22 29.24 0.2
 PAIG 1.47 139 ePd 22 37.84 0.3
 S.D. = 0.5 on 8 of 8 obs.

* DEC 23, 1990 14h 43m 30.72 ± 1.85s
 10.886 S ± 10.8km 166.357 E ± 14.9km
 DEPTH = 167.8 ± 14.7 km
 4.8mb (11 obs.)
 SANTA CRUZ ISLANDS (184)

HNR 6.47 282 iPc 45 05.50 0.8
 SVO 6.67 284 eP 45 08.00 0.6
 VSG 6.74 283 eP 45 07.00 -1.4
 DZM 11.12 180 iPc 46 08.50 2.3
 PMG 18.96 273 eP 47 40.00 -1.6
 CMS 27.95 220 ePd 49 07.50 0.1
 NOZ 29.52 161 eP 49 19.40 -2.0
 MNG 30.69 166 P 49 30.80 -0.9
 PGZ 30.88 165 P 49 31.90 -1.4
 ASPA 33.40 243 iPd 49 54.30 -1.2
 WARB 40.42 242 iPd 50 55.10 0.9
 MEKA 47.62 244 iPd 51 51.90 0.0
 MAT 54.11 332 eP 52 38.00 -2.5
 SSE 60.16 315 P 53 22.00 -1.0
 NJ2 62.33 315 eP 53 32.00 -5.5X
 TIY 69.85 317 Pd 54 25.40 0.1
 XAN 70.46 312 Pd 54 29.00 0.0
 CHG 72.71 294 eP 54 43.00 0.5
 CD2 72.99 307 P 54 44.40 0.4
 LZH 75.10 312 eP 54 57.00 0.8
 GTA 79.38 314 Pd 55 20.80 1.1
 S.D. = 1.0 on 10.00nm 4.5mb

GUN 86.76 299 P 55 59.00 1.1
 PKI 87.09 299 PKP 56 00.00 0.6
 KKN 87.25 299 P 56 00.70 0.7
 DMN 87.36 299 PKP 56 01.70 1.1
 GKN 87.85 299 P 56 03.20 0.4
 WMO 89.41 315 P 56 10.00 0.3
 GBA 91.48 283 P 56 18.20 -1.5
 YKA 94.56 27 eP 56 32.50 -0.4
 SOB1 146.33 125 ePKP 02 54.70 2.0
 BAO 147.49 261 iPKPd 02 59.10 4.5X
 S.D. = 1.2 on 29 of 31 obs.

? DEC 23, 1990 15h 02m 03.78 ± 10.50s
 34.181 S ± 68.6km 71.850 W ± 52.0km
 DEPTH = 33.0km (normal)
 NEAR COAST OF CENTRAL CHILE (135)

LNV 0.43 58 iPc 02 13.00 -0.3
 LCCH 0.74 18 iPd 02 17.00 -0.8
 TACH 0.92 55 iPc 02 19.70 -0.7
 IHA 1.17 9 eP 02 24.20 0.4
 SAN 1.23 54 iP 02 24.40 -0.3
 PCH 1.24 64 eP 02 24.80 -0.2
 ROCH 1.40 30 iPd 02 27.20 -0.2
 PEL 1.42 44 iPd 02 28.10 0.6
 FCH 1.55 57 iPc 02 29.50 -0.3
 JACH 1.83 35 iPd 02 33.00 -0.5
 RTCV 3.62 51 eP 02 59.70 0.8
 ZON 3.75 46 eP 03 02.00 1.3
 CFA 3.98 51 ePd 03 04.90 0.9
 RTLL 4.02 46 iPc 03 04.00 -0.7
 RTRS 4.48 28 eP 03 11.30 0.1
 S.D. = 0.7 on 15 of 15 obs.

DEC 23, 1990 15h 56m 51.05 ± 1.04s
 41.059 N ± 7.8km 22.463 E ± 6.5km
 DEPTH = 9.7 ± 7.5 km
 YUGOSLAVIA (383)

GRG 0.11 204 ePd 56 53.92 0.0
 KNT 0.34 72 ePd 56 57.57 -0.6
 THE 0.57 138 ePc 57 01.88 -0.7
 SOH 0.72 109 iPd 57 04.80 -0.4
 SRS 0.86 86 iPc 57 06.92 -0.7
 FNA 0.87 252 ePd 57 07.28 -0.5
 LIT 0.96 179 ePc 57 09.68 0.4
 PAIG 1.46 140 ePc 57 18.48 1.0
 VTS 1.63 20 iP 57 20.00 0.0
 RZN 1.81 69 eP 57 24.00 1.3
 S.D. = 0.9 on 10 of 10 obs.

DEC 23, 1990 16h 08m 31.33 ± 1.04s
 41.055 N ± 9.7km 22.440 E ± 7.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.10 197 iPc 08 34.33 0.2
 KNT 0.36 73 iPc 08 37.98 -0.8
 THE 0.58 137 iPc 08 42.40 -0.7
 S.D. = 0.8 on 10 of 10 obs.

23d 16h

SOH 0.73 108 iPc 08 45.12 -0.6
 eS 08 55.40
 FNA 0.85 252 iPd 08 46.98 -0.8
 eS 08 59.24
 SRS 0.87 86 ePd 08 47.37 -0.8
 eS 08 59.12
 LIT 0.95 178 ePc 08 50.08 0.6
 iS 08 04.68
 MMB 1.11 61 ePgD 08 57.00 4.9X
 PAIG 1.47 140 ePd 08 58.60 0.7
 eS 09 18.80
 RZN 1.83 69 eP 09 05.00 1.8
 iS 09 31.00

S.D. = 1.1 on 9 of 10 obs.

% DEC 23, 1990 16h 19m 36.39±0.95s
 41.063 N ± 9.7km 22.500 E ± 5.8km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 215 iPc 19 39.33 -0.2
 eS 19 42.04
 KNT 0.32 72 iPd 19 43.17 0.2
 eS 19 48.20
 THE 0.56 140 ePc 19 47.08 -0.6
 eS 19 54.84
 SOH 0.69 110 ePd 19 50.24 0.1
 eS 19 59.92
 SRS 0.83 86 ePc 19 52.28 -0.1
 eS 20 04.00
 FNA 0.90 252 ePc 19 53.52 -0.1
 eS 20 03.96
 LIT 0.96 180 iPc 19 55.36 0.7
 eS 20 09.20

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

% DEC 23, 1990 16h 34m 50.22±2.27s
 39.621 N ± 8.0km 26.215 E ± 21.5km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 3.6 (ISK).

EZN 0.22 23 iPg 34 58.30 3.3X
 EDC 1.46 60 ePn 35 16.50 -0.1
 IZM 1.47 146 iPn 35 16.80 0.0
 BNT 1.50 60 iPn 35 17.60 0.4
 KCT 1.76 68 iPn 35 21.20 0.2
 DST 1.86 90 iPn 35 22.40 -0.1
 CTT 2.28 47 iPn 35 28.10 -0.3
 DMK 2.49 28 ePn 35 31.50 0.1
 YLV 2.60 68 iPn 35 36.10 3.0X
 IZI 2.60 73 ePn 35 33.00 -0.1
 KHL 2.89 116 ePn 35 41.00 3.8X

S.D. = 0.3 on 8 of 11 obs.

* DEC 23, 1990 16h 39m 16.58±0.44s
 49.231 S ± 9.0km 30.493 E ± 12.7km
 DEPTH = 10.0km (geophysicist)
 5.1mb (8 obs.) 4.4Msz (2 obs.)
 SOUTH OF AFRICA (430)

SEK 20.99 353 iPc 44 04.00 1.5
 1.0s 15.00nm 4.3mb
 PRY 22.39 353 eP 44 17.00 0.4
 SLR 23.52 355 iPd 44 27.00 -0.6
 1.3s 48.00nm 4.9mb
 MAW 24.54 150 eP 44 37.00 0.1
 0.8s 36.00nm 5.1mb
 BUL 29.06 356 iPc 45 17.30 -1.9
 KRI 32.33 358 iPc 45 50.50 2.4
 SPA 40.96 180 iPc 46 59.50 -1.2
 1.0s 65.00nm 5.3mb
 BCAA 54.45 345 iPc 48 46.60 0.3
 0.9s 14.00nm 5.0mb
 BMA 63.26 266 eP 49 48.00 0.4
 LIC 63.31 320 P 49 45.90 -2.0
 KIC 63.32 320 P 49 46.60 -1.3
 1.1s 17.00nm 5.1mb
 TIC 63.69 320 P 49 49.40 -1.0
 1.0s 31.00nm 5.5mb
 PDCR 67.31 277 e(P) 50 12.00 -1.7
 SIV 79.08 258 P 51 23.30 0.6
 ASPA 80.67 115 iPc 51 31.00 -0.2
 0.9s 19.50nm 5.1mb
 Z 18s 0.20um 4.5Msz

CNCB 82.85 253 epP 51 39.00 25kmX
 LPB 83.13 253 Pd 51 44.10 0.8
 ZOBO 83.34 253 P 51 46.00 1.5
 0.7s 2547.95nm 6.8mb X
 Z 20s 0.15um 4.4Msz
 LR 19 32.00
 DMN 90.64 46 P 52 22.40 1.8
 GKN 90.75 46 P 52 20.20 -0.8
 PKI 90.76 47 PKP 52 22.00 0.8
 KKN 90.88 46 P 52 20.80 -0.8
 GUN 91.27 47 P 52 22.60 -1.0
 NUR 109.49 357 ePdiff 53 45.00 0.5
 HFS 109.86 351 ePdiff 53 46.20 0.0
 0.7s 1.80nm

FRB 136.23 321 ePKP 58 39.00 0.4
 ALQ 145.50 262 ePKP 58 56.10 -0.2
 1.0s 19.50nm
 GOL 147.50 270 ePKP 58 59.20 -0.3
 MBC 150.33 346 ePKPc 59 07.50 5.0X
 1.0s 8.00nm
 BAR 150.50 248 ePKP 59 18.00 13.9X
 FFC 150.68 299 ePKP 59 08.00 4.4X
 1.0s 18.00nm
 TPC 151.08 251 ePKP 59 14.00 9.1X
 BW06 151.76 272 ePKP 59 08.20 2.3
 GSC 152.33 252 ePKP 59 17.00 10.2X
 SBB 152.56 250 ePKP 59 17.00 9.9X
 CLC 153.16 252 ePKP 59 28.00 20.1X
 SES 155.33 287 ePKP 59 09.00 -1.3
 YKA 156.70 318 ePKP 59 06.80 -4.9X
 0.8s 1.10nm

S.D. = 1.3 on 30 of 38 obs.

* DEC 23, 1990 17h 06m 08.68±2.37s
 31.912 S ± 12.2km 71.670 W ± 21.2km
 DEPTH = 27.0 ± 6.8 km
 NEAR COAST OF CENTRAL CHILE (135)

IHA 1.11 179 eP 06 29.20 0.7
 e(S) 06 42.50
 JACH 1.19 130 iPd 06 29.00 -0.7
 iS 06 47.50
 ROCH 1.19 152 iPc 06 29.10 -0.8
 iS 07 48.10
 LCCH 1.56 177 eP 06 35.00 0.1
 FCH 1.83 141 ePd 06 39.00 -0.1
 iS 07 05.00
 TACH 1.84 161 eP 06 38.90 -0.1
 iS 07 04.70
 PCH 1.96 151 iPd 06 41.00 0.2
 iS 07 48.10
 RTRS 2.57 48 ePc 06 48.90 -0.5
 ZON 2.57 83 eP 06 49.00 -0.6
 RTCV 2.67 90 e(P) 06 52.90 2.1
 RTLL 2.79 79 ePd 06 52.30 -0.3
 eS 07 34.10
 CFA 2.94 85 ePc 06 54.70 0.1
 eS 07 38.00

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

DEC 23, 1990 17h 48m 40.45±0.61s
 15.182 S ± 3.7km 167.386 E ± 3.4km
 DEPTH = 143.0 ± 5.5 km
 5.6mb (34 obs.)
 VANUATU ISLANDS (186)

BKM 2.61 162 iP 49 22.80 -0.3
 iS 49 57.50
 PVC 2.69 161 iPc 49 23.60 -0.6
 iS 49 58.30
 DZM 6.91 187 iPd 50 20.00 -0.6
 iS 51 39.60
 HNR 9.24 307 eP 50 51.00 -0.7
 eS 52 36.00
 SVO 9.52 308 eP 50 54.00 -1.4
 eS 52 42.00
 VSG 9.54 307 eP 50 56.00 0.4
 eS 52 40.00
 SGE 10.39 105 eP 51 08.40 1.4
 SVA 11.00 107 P 51 16.10 1.2
 MBU 11.04 101 eP 51 17.00 1.5
 BRS 18.22 226 iPc 52 47.00 1.5X
 iS 56 18.00
 ic 57 12.10
 PMG 20.58 284 eP 53 02.00 -7.8X
 RMO 20.70 234 ePc 53 14.00 3.0X
 1.0s 328.00nm 5.7mb

COO 20.90 220 iPd 53 15.40 2.3
 e 57 17.00
 RIV 23.66 215 eP 53 42.50 2.6X
 0.7s 2547.95nm 6.8mb X
 WLZ 23.71 164 Pc 53 41.90 1.6
 TAZ 24.33 162 P 53 48.40 2.2
 HBZ 24.34 159 P 53 46.20 0.0
 PUZ 24.75 159 P 53 49.50 -0.6
 WHH 24.94 163 P 53 52.10 0.1
 NOZ 25.16 160 P 53 53.40 -0.6
 CMS 25.52 227 ePc 53 58.50 1.1
 i 57 26.10
 TTH 25.64 163 P 53 57.80 -0.6
 BWA 25.68 218 iPc 53 58.40 -0.4
 CNB 25.76 216 iPc 54 01.50 1.9
 i 57 27.40
 CAN 25.97 216 iPc 54 02.50 1.0
 MNG 26.31 166 Pc 54 03.60 -0.9
 0.6s 95.00nm 5.6mb
 PGZ 26.50 165 P 54 05.00 -1.2
 0.8s 275.00nm 5.9mb
 MRW 26.72 168 P 54 07.30 -0.9
 WEL 26.79 168 P 54 07.00 -1.8
 WDW 26.82 167 P 54 07.70 -1.4
 MTW 26.83 166 P 54 07.90 -1.3
 THZ 26.91 171 P 54 10.00 0.0
 QIS 26.96 254 iPd 54 10.80 0.2
 BLW 27.02 167 P 54 09.80 -1.1
 MOW 27.02 167 P 54 09.70 -1.3
 KHZ 27.65 170 P 54 15.10 -1.5
 LTZ 27.82 172 Pc 54 18.10 -0.1
 MQZ 28.78 172 P 54 25.90 -0.8
 TOO 29.56 217 eP 54 35.00 1.2
 0.8s 100.00nm 5.6mb
 i 57 36.00

MMCZ 29.76 178 P 54 35.20 -0.3
 MHZ 29.83 177 P 54 35.80 -0.3
 BFD 31.08 221 ePc 54 54.00 6.9X
 ASPA 32.62 250 iPc 54 59.90 -0.8
 0.8s 194.60nm 5.9mb
 Z 21s 1.00um 4.5Msz

iPcP 57 43.40
 iS 00 04.40
 iScP 01 17.70
 iScP 05 12.80
 KNA 37.19 264 iPd 55 39.70 0.1
 WARB 39.51 247 eP 55 59.40 0.6
 AFR 41.11 99 iP 56 12.60 0.6
 PAE 41.29 100 iP 56 13.90 0.4
 PPT 41.30 99 iP 56 14.10 0.5
 1.3s 1210.00nm 6.4mb
 TBI 41.41 108 iP 56 15.10 0.7
 0.9s 110.00nm 5.5mb
 PPN 41.44 99 iP 56 15.10 0.4
 TVO 41.60 100 iP 56 16.60 0.5
 PMO 43.12 96 iP 56 29.30 0.9
 1.3s 1100.00nm 6.4mb
 VAH 43.35 96 iP 56 31.20 1.0
 1.3s 660.00nm 6.1mb
 TPT 43.39 96 iP 56 31.60 1.0
 1.3s 880.00nm 6.3mb
 RUV 43.59 96 iP 56 32.00 -0.2
 1.3s 880.00nm 6.3mb
 COOL 45.01 241 eP 56 43.00 -0.4
 MBL 45.44 255 iPc 56 47.00 0.1
 MEKA 46.79 248 iPc 56 57.70 0.2
 KLB 47.98 241 iPc 57 06.40 -0.3
 NWA0 48.62 239 iPc 57 11.80 0.2
 BAL 48.75 243 eP 57 12.00 -0.7
 RKG 48.98 238 iPd 57 15.80 1.4
 0.8s 125.00nm 5.7mb
 MRWA 49.23 244 eP 57 16.40 0.1
 MUN 49.34 241 iPd 57 17.20 0.0
 TRT 54.06 271 ePc 57 50.60 -2.1
 0.7s 67.30nm 5.6mb
 RKT 54.73 108 iP 57 56.30 -1.2
 1.0s 140.00nm 5.8mb
 BAG 55.86 302 eP 58 04.90 -0.9
 MAT 58.36 333 iPc 58 21.00 -1.9
 0.6s 6.00nm 4.7mb
 eS 06 28.00
 SSE 63.92 316 Pc 58 59.50 -0.8
 1.5s 37.00nm 5.1mb
 Z 20s 0.50um 4.7Msz
 eS 07 23.00
 KGM 65.61 279 ePd 59 12.50 0.9
 NJ2 66.08 316 Pd 59 14.20 0.0

1.0s	40.00nm	5.3mb	0.5s	21.62nm	ORX	145.05	334	PKP	08	01.29	-1.2
WHN	68.33	312 P	59	28.00	-0.3	FLN	145.06	346 ePKP	08	00.60	-1.6
IPM	68.57	281 eP	59	31.00	0.8		0.9s	204.75nm			
	1.1s	126.10nm		5.7mb		Z	20s	0.22um		4.9Msz	
DL2	68.73	323 P	59	30.00	-0.6	SDI	145.08	324 PKP	08	02.30	-0.3
	1.0s	60.00nm		5.4mb		BOB	145.09	332 PKP	08	02.60	0.1
MDJ	68.73	332 P	59	30.00	-0.5	BDI	145.09	330 PKP	08	01.60	-1.0
SNG	69.78	284 eP	59	38.00	0.5	AZI	145.10	325 PKP	08	02.40	-0.1
	1.2s	153.13nm		5.7mb		EMS	145.11	336 ePKP	08	03.10	0.4
CN2	70.09	329 P	59	38.20	-0.6	LDF	145.13	345 ePKP	08	00.80	-1.6
	1.0s	40.00nm		5.2mb		LOR	145.20	340 ePKP	08	01.50	-1.1
		eS	08	38.00			0.9s	255.95nm			
LOE	72.38	294 eP	59	53.00	-0.1	Z	21s	0.22um		4.9Msz	
NNT	72.42	289 eP	59	57.00	3.7X	PII	145.38	330 PKP	08	02.10	-0.8
BJI	72.69	321 eP	59	49.00	-5.4X	LBF	145.41	340 ePKP	08	02.30	-0.7
	2.0s	240.00nm		5.6mb		SSF	145.50	340 ePKP	08	02.70	-0.3
NST	73.16	292 eP	59	59.90	2.4	GRR	145.50	346 ePKP	08	02.30	-0.7
TIY	73.67	317 P	00	01.00	0.7	LSD	145.53	335 PKP	08	03.85	0.3
	1.2s	100.00nm		5.4mb		RSL	145.55	336 PKP	08	03.89	0.5
Z	26s	0.40um		4.6MszX		RMP	145.62	326 PKP	08	04.00	0.6
		S	09	22.00		LPL	145.65	336 ePKP	08	03.50	-0.2
XAN	74.08	313 P	00	02.70	0.0	LPG	145.66	336 ePKP	08	03.50	-0.3
BSI	74.29	280 eP	00	04.50	0.3		1.0s	265.65nm			
KMI	74.64	302 P	00	07.50	1.2	PCP	145.67	333 PKP	08	02.73	-0.8
	1.5s	230.00nm		5.7mb		RSP	145.74	335 PKP	08	02.83	-0.8
		PP	00	17.00		SMF	145.75	340 ePKP	08	03.20	-0.3
SPA	74.92	180 iP	00	07.60	0.5	AVF	145.78	340 ePKP	08	03.40	-0.1
	1.0s	90.00nm		5.5mb		LPF	145.88	346 ePKP	08	03.40	-0.2
		i	00	30.50		CKI	145.88	333 PKP	08	04.10	0.3
CHG	75.37	294 eP	00	11.00	0.7	SOI	145.94	317 PKP	08	05.20	1.2
	0.9s	44.96nm		5.2mb		BNI	146.05	335 PKP	08	06.00	1.8
MHC	76.00	320 eP	00	14.20	0.6	FIN	146.08	333 PKP	08	03.75	-0.4
CD2	76.37	308 P	00	15.80	0.0	RRL	146.12	335 PKP	08	04.67	0.2
	1.0s	60.00nm		5.3mb		BGF	146.15	341 ePKP	08	04.20	0.0
BTO	76.83	319 P	00	19.00	0.8	ROB	146.16	333 PKP	08	04.88	0.5
LZH	78.71	312 eP	00	29.00	0.3	BST	146.23	350 PKP	08	05.24	1.0
	1.8s	190.00nm		5.5mb		ATN	146.27	318 PKP	08	04.90	0.3
MAW	81.51	202 eP	00	44.00	1.3	PZZ	146.32	334 PKP	08	04.37	-0.3
	1.1s	113.00nm		5.5mb		ENR	146.41	334 PKP	08	03.75	-1.0
SVW	81.54	17 eP	00	47.60	4.6X	PLDF	146.42	339 PKP	08	07.01	2.3
TTA	82.92	16 eP	00	50.30	0.1	STV	146.44	334 PKP	08	03.96	-0.9
GTA	83.06	314 iP	00	52.20	0.8	IMI	146.46	333 PKP	08	05.80	1.0
	1.4s	180.00nm		5.7mb		MAF	146.54	341 ePKP	08	05.70	0.9
PMR	83.89	19 eP	00	53.90	-1.0	SAOF	146.55	333 PKP	08	06.64	1.7
	1.3s	47.60nm		5.2mb		TCF	146.59	341 ePKP	08	05.80	0.9
PRS	84.42	50 eP	00	58.30	0.1	AUTN	146.59	333 PKP	08	07.27	2.0
PRI	84.87	51 eP	01	00.60	0.0	TOUF	146.66	334 PKP	08	07.01	1.7
TOA	85.22	20 eP	01	03.00	1.3	SSB	146.69	338 PKP	08	07.20	2.1
CMB	85.81	49 eP	01	04.70	-0.4	SBF	146.70	333 ePKP	08	05.70	0.5
LSA	85.89	302 eP	01	07.20	1.0	AURF	146.72	333 PKP	08	07.07	1.8
IMA	86.06	15 eP	01	05.30	-0.5	PYM	146.81	340 PKP	08	07.91	2.6
SBB	86.48	53 eP	01	07.00	-1.5	REVF	146.83	333 PKP	08	07.07	1.7
FBA	86.75	18 eP	01	07.70	-1.3	LSF	146.84	342 ePKP	08	06.20	0.9
	1.1s	25.20nm		5.1mb		MTF	146.99	344 ePKP	08	06.70	1.2
PLM	86.76	54 eP	01	11.00	1.0	PGF	147.00	330 PKP	08	08.21	2.4
CLC	87.06	52 eP	01	11.00	-0.2	CALN	147.02	334 PKP	08	07.98	2.1
GSC	87.48	53 eP	01	13.00	-0.3	LBL	147.19	339 PKP	08	09.26	3.5X
TPC	87.66	54 eP	01	14.00	-0.1	FRF	147.28	334 ePKP	08	07.50	1.4
GUN	89.71	299 P	-01	24.60	0.2	LRG	147.49	334 ePKP	08	08.20	1.8
PKI	90.01	298 P	01	25.80	0.1		1.2s	202.30nm			
KKN	90.18	299 P	01	26.60	0.2	Z	19s	0.20um		4.9Msz	
DMN	90.28	298 P	01	27.20	0.3	LMR	147.52	334 ePKP	08	08.20	1.8
PNT	90.69	39 eP	01	27.00	-1.0	BCAO	147.55	254 iPKP	08	08.10	0.7
GKN	90.79	299 P	01	29.00	-0.1		0.6s	34.00nm			
AIA	90.92	161 eP	01	28.80	0.0			id	08	43.00	
KOD	92.56	280 eP	01	37.00	-0.6	CDR	147.56	335 iPKP	08	09.30	2.8X
WMQ	93.12	315 iP	01	39.50	0.1	RJF	147.69	341 ePKP	08	09.00	2.3
HYB	93.36	287 eP	01	41.00	0.1	Z	19s	0.15um		4.8Msz	
GBA	93.44	283 P	01	40.80	-0.4	CAF	147.85	340 ePKP	08	09.50	2.5X
	0.9s	23.00nm		5.4mb		LFF	148.26	342 ePKP	08	10.40	2.9X
ALO	95.46	55 eP	01	49.00	-1.5	LPO	148.35	341 ePKP	08	10.80	3.1X
YKA	97.89	27 eP	01	59.30	-1.2	EPF	150.11	341 ePKP	08	15.80	5.3X
	1.0s	5.10nm		5.0mb			0.9s	64.00nm			
CNCB	116.79	118 PKP	07	11.00	0.0	BTH	150.19	342 iPKP	08	16.40	5.8X
ZOBO	116.92	117 PKP	07	10.00	-1.3	ECRI	151.32	344 ePKP	08	20.00	7.6X
	Z	24s		0.10um	4.4MszX	ESEL	152.00	334 ePKP	08	20.00	6.6X
		LR	43	32.00		STS	152.17	354 ePKP	08	21.00	7.5X
FRB	118.27	25 ePKP	07	11.00	-0.7	ETOR	152.85	342 ePKP	08	23.00	8.3X
KEV	120.19	345 iPKP	07	14.70	-0.5	TOL	154.28	345 iPKP	08	18.00	1.4
NPA	120.57	242 iPKP	07	18.00	0.5	EVIA	154.99	341 ePKP	08	18.80	1.1
	1.0s	150.00nm				KIC	168.31	222 PKP	08	31.50	-0.2
SEK	121.80	222 iPKP	07	20.50	0.7		1.1s	73.00nm			
	0.5s	14.00nm				LIC	168.39	221 PKP	08	31.72	0.0
SOD	121.96	343 ePKP	07	17.00	-1.6		1.3s	89.50nm			
PRY	122.84	223 iPKP	07	21.80	0.0	TIC	168.71	222 PKP	08	31.88	0.0
	0.5s	6.76nm					S.D.	= 1.1	on 224	of 263 obs.	
CER	122.92	212 iPKP	07	19.00	-2.6						

23d 21h

KNT 0.35 73 iPc 55 15.34 0.1
 eS 55 20.30
 THE 0.58 138 ePc 55 19.38 -0.4
 eS 55 27.18
 SOH 0.72 109 iPd 55 22.62 0.3
 eS 55 32.18
 SRS 0.86 86 ePd 55 24.46 -0.2
 eS 55 36.02
 FNA 0.86 252 ePd 55 24.58 -0.1
 eS 55 35.30
 S.D. = 0.3 on 6 of 6 obs.

DEC 23, 1990 22h 40m 11.14 ± 0.70s
 41.029 N ± 6.7km 22.492 E ± 5.7km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.10 223 iPc 40 14.06 0.2
 eS 40 16.26
 KNT 0.33 67 ePc 40 17.58 -0.5
 eS 40 22.62
 THE 0.53 138 ePd 40 21.98 0.0
 eS 40 30.06
 SOH 0.69 107 ePd 40 24.78 0.0
 eS 40 33.90
 SRS 0.84 84 ePc 40 26.82 -0.5
 iS 40 38.78
 FNA 0.88 254 ePd 40 26.94 -1.2
 eS 40 39.02
 LIT 0.93 180 ePd 40 29.74 0.9
 eS 40 43.66
 MMB 1.09 59 ePg 40 31.00 -0.6
 eSg 40 45.00
 VTS 1.65 19 eP 40 42.00 1.6
 iSg 41 02.00
 RZN 1.80 68 eP 40 45.00 2.4X
 iS 41 10.00
 PGB 1.97 39 eP 40 47.00 2.1X
 iS 40 52.00
 KDZ 2.29 73 eP 40 53.00 3.5X
 iS 41 22.00
 S.D. = 1.0 on 9 of 12 obs.

% DEC 23, 1990 23h 14m 52.13 ± 1.32s
 41.106 N ± 12.1km 22.476 E ± 7.3km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.16 201 iPc 14 55.02 -0.8
 eS 14 57.68
 KNT 0.32 80 iPc 14 59.29 0.4
 eS 15 04.48
 THE 0.60 142 ePc 15 03.50 -0.8
 eS 15 11.20
 SOH 0.72 113 iPc 15 05.88 -0.5
 eS 15 15.68
 SRS 0.84 89 ePd 15 08.44 0.0
 eS 15 20.08
 FNA 0.89 249 ePd 15 09.16 -0.1
 eS 15 20.20
 LIT 1.00 179 ePc 15 12.88 1.7
 iS 15 24.88
 S.D. = 1.1 on 7 of 7 obs.

% DEC 23, 1990 23h 26m 33.67 ± 2.10s
 15.044 N ± 5.4km 60.507 W ± 22.4km
 DEPTH = 33.0km (normal)

LEEWARD ISLANDS (92)

ML 2.9 (FDF).

CRM 0.49 234 iPc 26 44.27 0.1
 S 26 52.40
 MVM 0.61 218 iPc 26 45.77 -0.2
 S 26 55.20
 FDF 0.69 244 iPd 26 47.11 0.1
 S 26 57.20
 BIM 0.76 226 iPd 26 47.93 0.0
 BBL 1.05 297 eP 26 52.30 0.2
 S 27 06.10
 DEG 1.37 337 eP 26 56.90 0.2
 SFG 1.37 331 eP 26 56.50 -0.2
 DOG 1.45 313 eP 26 57.90 0.0
 S 27 16.60
 PAG 1.50 311 eP 26 58.10 -0.5
 S 27 16.80
 SEG 1.66 325 eP 27 01.10 0.3
 S.D. = 0.2 on 10 of 10 obs.

% DEC 24, 1990 00h 47m 53.26 ± 1.14s
 41.106 N ± 10.2km 22.451 E ± 6.4km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.15 194 iPc 47 57.10 0.2
 eS 47 59.40
 KNT 0.34 80 ePc 48 00.44 0.1
 eS 48 05.60
 THE 0.61 140 ePc 48 04.68 -0.9
 eS 48 13.00
 SOH 0.74 112 ePd 48 08.04 0.2
 eS 48 17.04
 SRS 0.86 89 ePc 48 09.92 0.0
 iS 48 21.72
 FNA 0.88 249 ePc 48 09.84 -0.3
 eS 48 21.48
 LIT 1.00 178 ePc 48 12.76 0.5
 S.D. = 0.6 on 7 of 7 obs.

% DEC 24, 1990 01h 02m 15.16 ± 1.19s
 41.107 N ± 10.6km 22.451 E ± 6.6km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.15 194 iPc 02 18.86 0.1
 eS 02 21.16
 KNT 0.34 81 ePd 02 22.37 0.1
 eS 02 27.44
 THE 0.61 140 ePc 02 26.44 -1.1
 eS 02 35.24
 SOH 0.74 112 ePd 02 30.36 0.6
 eS 02 39.40
 SRS 0.86 89 ePc 02 31.56 -0.2
 eS 02 43.40
 FNA 0.88 249 ePd 02 31.88 -0.2
 eS 02 43.20
 LIT 1.01 178 iPd 02 34.80 0.6
 eS 02 49.20
 S.D. = 0.7 on 7 of 7 obs.

% DEC 24, 1990 01h 42m 10.60s
 63.030 N 149.464 W
 DEPTH = 84.9km

CENTRAL ALASKA (1)

<AGS-P>

HUR 0.09 236 iP 42 22.72 1.6
 eS 42 31.86
 RND 0.47 36 iP 42 24.58 -0.3
 eS 42 35.00
 CUT 0.73 211 iP 42 27.09 -0.1
 eS 42 38.94
 MCK 0.74 18 eP 42 27.27 -0.1
 eS 42 39.22
 BWN 1.15 360 eP 42 31.79 -0.2
 eS 42 47.37
 GHO 1.29 168 eP 42 33.45 -0.4
 eS 42 51.28
 PWA 1.40 188 iP 42 35.18 0.0
 eS 42 54.03
 SKT 1.42 223 eP 42 35.08 -0.5
 eS 42 54.13
 PLRM 1.45 174 iP 42 35.91 0.1
 SUA 1.68 201 eP 42 39.21 0.2
 KNK 1.69 163 eP 42 38.45 -0.6
 HDA 1.78 38 iP 42 39.30 -0.9
 CCB 1.78 24 iP 42 39.27 -0.9
 eS 43 00.26
 TOA 1.78 120 iP 42 40.22 -0.1
 DDM 1.79 63 eP 42 39.92 -0.5
 PMS 1.79 181 eP 42 41.10 0.7
 eS 43 03.55
 PAX 1.82 90 eP 42 40.52 -0.4
 SDG 1.87 104 eP 42 40.93 -0.6
 MDM 2.01 15 eP 42 42.57 -0.8
 eS 43 05.84
 FBA 2.02 21 iP 42 42.56 -0.8
 NCG 2.06 219 iP 42 44.02 -0.1
 CGLM 2.10 216 eP 42 44.74 0.1
 SPU 2.22 214 eP 42 45.97 -0.2
 BGL 2.24 219 eP 42 46.62 0.0
 KLU 2.26 131 eP 42 45.15 -1.7
 CKL 2.28 218 eP 42 47.01 -0.1
 VLZ 2.41 141 eP 42 48.05 -0.6
 GLI 2.43 152 eP 42 47.23 -1.8

SLKM 2.56 188 iP 42 50.78 0.0
 KNIM 2.81 162 eP 42 53.61 -0.7
 RDT 2.83 211 eP 42 54.95 0.3
 RDN 2.97 213 eP 42 56.81 0.2
 INE 3.44 212 eP 43 02.78 -0.3
 33 obs. associated

* DEC 24, 1990 02h 06m 41.90 ± 1.66s
 36.278 N ± 21.1km 32.512 E ± 25.8km
 DEPTH = 33.0km (normal)

TURKEY (366)

PPCY 1.40 186 eP 07 05.50 0.3
 CSS 1.47 153 eP 07 08.70 2.3
 BCK 1.94 308 iPn 07 13.50 0.2
 ELL 2.15 283 iPn 07 17.00 0.8
 KHL 3.14 311 iPn 07 29.40 -0.8
 SHMJ 4.44 142 P 07 56.20 7.4X
 KFNJ 5.13 148 P 08 04.50 6.1X
 DSI 5.27 152 eP 08 01.00 0.7
 PRNI 6.27 160 eP 08 13.00 -1.5
 MBH 6.79 162 eP 08 20.00 -1.8
 S.D. = 1.6 on 8 of 10 obs.

DEC 24, 1990 02h 34m 05.02 ± 0.27s
 41.104 N ± 2.9km 22.464 E ± 2.6km
 DEPTH = 8.7 ± 2.3 km
 3.7mb (1 obs.)

YUGOSLAVIA (383)

ML 4.0 (ATH).

GRG 0.15 198 iP 34 08.62 0.1
 eS 34 10.76
 KNT 0.33 80 iP 34 12.32 0.5
 eS 34 17.36
 THE 0.61 141 eP 34 16.48 -0.7
 eS 34 24.72
 SOH 0.73 112 eP 34 19.24 -0.3
 SRS 0.85 89 iP 34 21.52 -0.1
 eS 34 33.40
 FNA 0.88 249 eP 34 21.08 -1.1
 eS 34 32.88
 KZN 0.95 214 ePg 34 21.30 -2.1
 LIT 1.00 179 eP 34 23.64 -0.5
 eS 34 37.40
 PLG 1.04 134 ePb 34 24.00 -0.8
 MMB 1.07 63 iPg 34 25.00 -0.3
 iSg 34 40.00
 PAIG 1.50 141 eP 34 32.44 0.4
 eS 34 53.00
 VTS 1.59 20 iPg 34 34.00 0.5
 iSg 35 02.00
 RZN 1.79 70 iPc 34 37.00 0.5
 iS 35 02.00
 NEO 1.89 162 ePb 34 37.00 -0.8
 PGB 1.93 41 iPg 34 36.00 -2.4
 iSg 35 04.00
 PLD 1.95 58 eP 34 40.00 1.3
 iS 35 10.00
 eS 41 32.00
 AGG 2.08 183 eP 34 40.48 -0.1
 eS 35 07.44
 EVR 2.24 193 ePn 34 42.50 -0.5
 KDZ 2.29 75 iPc 34 44.00 0.4
 iPg 35 10.00
 RDO 2.32 88 ePn 34 43.80 -0.2
 PVY 2.38 310 ePn 34 46.00 1.0
 eSn 35 20.60
 KEK 2.46 237 ePb 34 48.70 2.7X
 DIM 2.49 67 eP 34 44.00 -2.4
 Sg 35 27.00
 IVA 2.60 314 ePn 34 49.00 0.9
 ALN 2.72 93 eP 34 49.84 0.2
 eS 35 23.88
 TTG 2.74 300 ePn 34 51.30 1.4
 eSn 35 30.00
 PVL 3.00 44 eP 34 52.00 -1.6
 iS 35 39.00
 NKY 3.10 305 ePn 34 57.00 1.9
 eSn 35 37.00
 EZN 3.21 112 ePn 34 57.70 1.1
 VLS 3.26 207 ePn 34 57.00 -0.4
 ATH 3.27 162 ePn 34 57.50 0.0
 JMB 3.37 65 eP 35 00.00 1.1
 iSg 35 55.00
 PRK 3.46 121 ePn 35 00.00 -0.1
 BEO 4.00 339 ePn 35 06.50 -1.2

IZI 2.64 55 ePn 32 44.00 2.7X
 YLV 2.71 50 ePn 32 43.00 0.6
 S.D. = 1.5 an 6 af 7 obs.

& DEC 24, 1990 06h 32m 08.28s
 39.491 N 111.062 W
 DEPTH = 10.2km
 3.1mb (1 obs.)

UTAH <SLC-P>. ML 2.8 (SLC). (478)

EMUT 0.37 30 P 32 15.80 -0.3
 DAU 0.93 351 eP 32 25.70 -0.6
 MSU 1.31 222 eP 32 32.40 -0.2
 DUG 1.52 298 eP 32 36.00 0.3
 BW06 3.48 19 eP 33 05.00 1.3
 GOL 4.40 85 eP 33 20.00 3.1
 TNP 5.01 256 eP 33 28.00 2.5
 ANMO 5.84 140 eP 33 38.50 1.4
 YKA 23.13 356 eP 37 17.70 2.5
 0.5s 0.30nm 3.1mb
 9 obs. associated

DEC 24, 1990 07h 05m 02.46± 0.56s
 29.146 N ±10.4km 51.299 E ± 7.7km
 DEPTH = 33.0km (normal)
 4.0mb (2 obs.)

SOUTHERN IRAN (353)

SHI 1.18 65 eP 05 24.00 1.1
 DHR 3.01 200 ePd 06 00.00 11.1X
 BBU 3.01 195 ePn 05 49.40 0.4
 (Sn) 06 40.40
 BEE 3.19 193 ePn 05 52.40 0.9
 RYD 6.08 225 ePd 06 15.50 -16.9X
 MJMA 6.26 240 ePd 06 33.00 -2.0
 UOSK 8.61 249 ePd 07 07.30 -0.6
 AFIF 8.83 237 ePd 07 12.30 1.4
 KMSA 10.70 217 ePd 07 32.30 -4.2X
 GKN 29.25 84 P 11 03.20 -0.6
 DMN 29.73 85 P 11 08.20 -0.1
 KKN 29.85 84 P 11 08.00 -0.5
 PKI 30.00 85 P 11 10.00 -0.8
 GUN 30.34 84 P 11 13.00 -0.8
 APO 40.11 332 eP 12 36.50 0.2
 0.8s 2.30nm 4.0mb
 YKA 87.98 354 eP 17 51.50 1.5
 0.8s 0.70nm 4.0mb
 S.D. = 1.1 an 13 af 16 obs.

? DEC 24, 1990 08h 17m 35.92± 2.45s
 11.971 N ±19.8km 59.181 W ±17.1km
 DEPTH = 33.0km (normal)
 3.3mb (1 obs.)

NORTH ATLANTIC OCEAN (402)
 MD 3.8 (TRN).

SOA 2.37 306 eP 18 13.80 0.5
 eS 18 40.95
 SVV 2.40 304 eP 18 13.11 -0.6
 eS 18 38.99
 SVB 2.40 303 eP 18 13.74 0.0
 eS 18 39.86
 SLB 2.59 316 eP 18 16.41 0.0
 eS 18 43.56
 MVM 3.06 327 eP 18 23.15 0.0
 BIM 3.13 324 eP 18 24.15 0.0
 S 18 56.00
 CRM 3.24 329 eP 18 25.88 0.2
 S 18 59.40
 FDF 3.35 325 eP 18 27.53 0.3
 S 19 02.30
 BBL 4.18 328 eP 18 39.00 0.0
 PAG 4.71 329 eP 18 47.00 0.5
 S 19 35.00
 SEG 4.95 333 eP 18 49.00 -0.9
 YKA 63.87 335 eP 28 07.40 0.0
 0.7s 0.20nm 3.3mb
 S.D. = 0.4 an 12 af 12 obs.

DEC 24, 1990 08h 22m 46.39± 0.33s
 19.253 S ± 9.1km 173.499 W ± 8.3km
 DEPTH = 30.9km (3 depth phases)
 5.3mb (22 obs.) 5.1msz (11 obs.)
 TONGA ISLANDS (173)
 Mo=4.0*10**17 Nm (PPT).
 CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN
 L.P.B.: 11S, 19C
 Centroid Location:
 Origin Time 08:22:48.8 1.3
 Lat 19.63S 0.11 Lon 172.78W 0.09
 Dep 15.0 FIX Half-duration 1.6
 Moment Tensor: Scale 10**16 Nm
 Mrr=7.27 0.37 Mtt=-0.19 0.50
 Mff=-7.08 0.53 Mrt=0.44 1.22
 Mrf=5.57 1.45 Mti=-3.31 0.39
 Principal Axes:
 T Val= 9.23 Plg=70 Azm=258
 N 0.85 10 16
 P -10.08 17 109
 Best Double Couple: Mo=9.6*10**16
 NP1:Strike=214 Dip=29 Slip= 111
 NP2: 11 63 79

AFI 5.56 18 eP 24 02.00 -7.3X
 eS 25 20.00
 SVA 7.71 277 eP 24 45.40 6.0X
 VUN 7.72 278 ePd 24 55.10 15.5X
 SGE 8.31 280 ePc 24 54.20 6.3X
 NDF 8.72 278 eP 25 00.00 6.6X
 RAR 13.03 101 P 25 38.00 -14.1X
 DZM 18.98 258 iPc 27 08.00 -0.1
 NOZ 20.65 199 eP 27 27.80 1.8
 WLZ 20.82 205 eP 27 27.80 0.0
 PPT 22.76 90 eP 27 49.00 1.6
 1.2s 90.00nm 5.1mb
 MNG 23.30 202 eP 27 50.50 -2.0
 WEL 24.14 202 eP 27 52.00 -8.6X
 eS 32 18.00
 TPT 25.08 84 eP 28 18.00 8.1X
 1.2s 60.00nm 5.1mb
 THZ 25.25 204 eP 28 14.80 3.5X
 KHZ 25.57 203 eP 28 15.80 1.6
 LTZ 26.36 204 eP 28 23.70 2.1
 HNR 27.48 287 eP 28 32.00 0.0
 SVO 27.71 288 eP 28 46.00 11.9X
 RMQ 35.42 251 eP 29 41.00 -0.9
 CNB 36.43 236 iPc 29 49.70 -0.7
 1.0s 80.00nm 5.6mb
 CAN 36.72 236 eP 29 49.90 -2.9X
 8WA 36.95 238 eP 29 51.10 -3.6X
 CMS 38.51 243 ePd 30 06.00 -1.8
 PMG 39.27 279 eP 30 13.00 -1.3
 0.9s 67.23nm 5.4mb
 TOO 40.05 234 eP 30 20.00 -0.6
 ADE 44.91 240 eP 30 58.20 -2.0
 ASPA 48.93 255 iPc 31 30.00 -2.0
 1.0s 120.70nm 5.9mb
 Z 21s 1.70um 5.0msz
 eS 38 32.70
 KNA 54.96 264 eP 32 16.00 -1.3
 WARB 55.24 251 eP 32 17.00 -2.3
 KLB 62.41 244 eP 33 07.00 -2.0
 BAL 63.42 245 eP 33 15.00 -0.7
 MUN 63.67 243 eP 33 27.00 9.7X
 SPA 70.87 180 iPd 34 03.10 0.9
 0.9s 22.73nm 5.3mb
 Z 20s 1.13um 5.1msz
 eS 34 14.50 38km
 MAT 71.82 321 eP 34 07.00 -1.2
 eS 43 44.00
 PRS 74.04 42 ePc 34 21.50 0.3
 PRI 74.36 42 eP 34 20.90 -2.3
 MWC 74.90 45 eP 34 32.00 5.6X
 PLM 75.20 46 eP 34 28.00 -0.2
 SBB 75.33 45 eP 34 34.00 5.3X
 ISA 75.48 44 eP 34 28.00 -1.6
 FRI 75.49 42 eP 34 29.20 -0.3
 CMB 75.72 41 ePc 34 30.80 -0.1
 e 34 41.00 33km
 ORV 76.01 39 e(P) 34 31.80 -0.6
 WDC 76.06 38 ePc 34 32.40 -0.3
 e 34 39.40 22km
 CLC 76.14 44 eP 34 33.00 -0.3
 TPC 76.18 46 eP 34 33.00 -0.6
 GSC 76.36 45 eP 34 39.00 4.4X
 GLA 76.43 48 eP 34 35.00 0.0
 BONR 76.97 42 P 34 38.70 0.5
 TNP 77.73 42 P 34 40.80 -1.5
 1.4s 29.17nm 5.1mb
 SSE 80.21 308 P 34 56.50 0.9
 Z 24s 0.50um 4.8mszX
 eS 45 08.00

AIA 80.43 156 eP 34 41.60 -14.6X
 RMW 80.99 33 P 34 58.70 -0.8
 MDJ 82.01 323 eP 35 07.00 2.2
 NJ2 82.41 308 eP 35 05.50 -1.6
 DAU 82.86 43 eP 35 10.00 0.3
 1.2s 1.10nm 3.8mb X
 PMR 82.89 11 ePc 35 08.10 -0.9
 1.7s 54.10nm 5.4mb
 TTA 83.06 8 ePc 35 09.80 -0.1
 1.2s 19.20nm 5.1mb
 ALO 83.35 50 eP 35 11.00 -1.2
 1.6s 25.00nm 5.1mb
 Z 18s 0.52um 4.9msz
 ANMO 83.35 50 P 35 12.30 0.1
 1.6s 112.50nm 5.7mb
 TOA 83.94 13 eP 35 14.30 -0.2
 CN2 83.97 320 Pc 35 16.20 1.3
 1.0s 20.00nm 5.3mb
 Z 20s 0.90um 5.1msz
 PP 35 30.00
 eS 45 43.00
 SNY 84.05 318 eP 35 16.60 1.3
 2.0s 160.00nm 5.9mb
 KGM 84.22 274 eP 35 19.60 2.8X
 WHN 85.18 304 eP 35 23.00 1.8
 BW06 85.20 42 iP 35 20.00 -1.4
 1.2s 13.70nm 5.0mb
 FBA 86.18 11 ePc 35 24.70 -0.7
 0.9s 28.90nm 5.5mb
 IMA 86.37 8 ePc 35 26.60 0.1
 2.0s 67.90nm 5.5mb
 GOL 86.39 46 eP 35 29.20 1.8
 1.2s 17.21nm 5.2mb
 IPM 87.23 276 ePd 35 34.70 3.0X
 0.9s 30.40nm 5.5mb
 BJI 88.04 314 eP 35 36.50 1.6
 2.0s 250.00nm 6.2mb
 Z 16s 0.29um 4.8mszX
 SES 88.41 35 eP 35 36.00 -0.6
 SNG 88.48 278 eP 35 40.20 2.6X
 TIY 89.65 310 eP 35 45.00 2.2
 Z 22s 0.80um 5.1msz
 GYA 89.76 298 iPc 35 46.00 2.4
 XAN 90.79 306 P 35 50.00 1.9
 HHC 91.56 313 P 35 53.50 1.9
 TUL 91.61 53 eP 35 49.10 -2.7
 2.0s 28.60nm 5.3mb
 Z 20s 0.57um 5.0msz
 LR 09 04.70
 INK 92.01 14 eP 35 52.00 -0.9
 BTO 92.54 312 eP 35 58.00 1.9
 BDT 93.28 287 eP 36 00.00 0.3
 YKA 93.65 23 eP 35 59.00 -1.5
 0.9s 1.50nm 4.4mb
 CHG 93.84 288 eP 36 05.00 2.6X
 LZH 95.42 306 eP 36 06.00 -3.5X
 2.5s 53.00nm 5.5mb
 Z 20s 0.34um 4.8msz
 SOB1 125.40 117 ePd iff 38 34.80 11.0X
 MJMA 143.68 288 ePKPc 42 17.70 -3.0X
 NAI 143.92 239 iPKP 42 23.00 1.4
 QASM 145.24 288 ePKPc 42 20.70 -2.6X
 AFIF 145.64 285 ePKPc 42 29.00 4.9X
 UOSK 146.32 288 ePKPc 42 27.30 2.1
 WIT 146.51 360 ePKP 42 28.00 2.6X
 e 42 38.00
 e 42 44.00
 WTS 147.32 360 ePKP 42 28.00 2.2
 0.8s 24.00nm
 e 42 40.00
 KRA 147.45 344 ePKP 42 28.20 2.1
 e 42 32.70
 e 42 38.70
 KSP 147.53 348 ePKPc 42 29.00 2.8X
 1.5s 133.00nm
 i 42 39.80
 CLL 147.60 352 iPKPc 42 29.40 3.1X
 1.4s 61.00nm
 i 42 40.40
 i 42 46.70
 BRG 147.90 351 iPKPc 42 30.40 3.6X
 2.0s 85.00nm
 e 42 41.00
 KAS 147.98 319 iPKPd 42 31.80 4.5X
 SPC 148.15 343 ePKP 42 31.40 3.9X
 BNS 148.35 359 iPKPc 42 31.20 3.7X
 1.3s 76.00nm

24d 08h

MOX 148.41 354 iPKP 42 31.00 3.4X
1.8s 69.00nm
BMR 148.45 338 ePKPd 42 33.00 5.2X
CFR 148.51 330 ePKP 42 31.00 3.1X
ENN 148.55 1 ePKP 42 31.00 3.2X
1.0s 22.00nm
e 42 45.00
VRI 148.64 332 ePKP 42 19.00 -9.2X
PRU 148.67 350 PKPc 42 32.30 4.2X
1.6s 45.00nm
e 42 39.30
e 42 45.50
HOF 148.71 353 ePKP 42 32.60 4.4X
GRF 149.40 354 ePKPc 42 34.50 5.3X
Z 20s 0.50um 5.3msz
e 42 39.20
e 42 48.40
LWI 149.40 228 iPKPc 42 35.40 4.8X
PSZ 149.40 342 iPKP 42 34.80 5.4X
ABH 149.43 359 ePKP 42 33.80 4.5X
KHC 149.65 351 ePKP 42 30.20 0.5
i 42 35.00
WET 149.74 352 ePKP 42 34.90 5.1X
ZST 149.87 346 ePKP 42 35.50 5.6X
e 42 45.70
SRO 149.93 344 e(PKP) 42 34.80 4.8X
VKA 149.98 347 iPKP 42 38.20 8.1X
i 42 52.10
FLN 150.03 9 ePKP 42 34.70 4.6X
1.3s 61.35nm
Z 20s 0.50um 5.3msz
BUD 150.04 343 ePKP 42 35.00 4.8X
LDF 150.24 9 ePKP 42 35.40 4.9X
1.4s 74.05nm
GRR 150.33 10 ePKP 42 35.80 5.2X
SOP 150.48 346 ePKP 42 37.80 6.9X
LPF 150.65 10 ePKP 42 36.40 5.3X
1.0s 32.00nm
BZS 150.88 338 ePKP 42 39.50 8.0X
FUR 150.90 353 iPKPd 42 38.10 6.6X
CDF 150.91 359 ePKP 42 37.40 5.8X
BHG 151.13 351 iPKPc 42 38.10 6.2X
HAU 151.32 0 ePKP 42 38.30 6.1X
0.9s 19.65nm
Z 19s 0.38um 5.2msz
WAJH 151.47 290 ePKPc 42 40.10 7.1X
AYN 151.48 295 ePKPc 42 40.00 7.1X
BSF 151.49 360 ePKP 42 38.80 6.3X
SOTA 151.84 353 ePKP 42 39.50 6.4X
1.7s 54.10nm
id 42 39.90
i 42 50.00
i 42 57.50
LOR 151.97 4 ePKP 42 39.80 6.6X
1.1s 24.40nm
Z 19s 0.57um 5.4msz
BEO 151.98 339 ePKP 42 40.00 6.8X
SSF 152.16 4 ePKP 42 40.40 7.0X
1.1s 32.95nm
HQL 152.19 296 ePKPc 42 41.70 7.7X
FVI 152.25 351 PKP 42 43.00 9.5X
LBF 152.26 4 ePKP 42 40.50 6.9X
1.0s 16.00nm
PTJ 152.30 346 ePKP 42 39.60 5.8X
BADA 152.41 295 ePKPc 42 42.30 8.0X
LJU 152.47 348 e(PKP) 42 40.00 6.1X
SMF 152.59 4 ePKP 42 40.80 6.8X
BGF 152.60 5 ePKP 42 40.90 6.9X
1.0s 13.00nm
LSF 152.77 8 ePKP 42 41.00 6.7X
1.0s 14.00nm
TCF 152.81 7 ePKP 42 41.20 6.8X
MAF 152.91 6 ePKP 42 41.80 7.3X
1.0s 10.00nm
CTI 152.94 352 PKP 42 48.00 13.3X
VAI 153.39 356 PKP 42 45.00 9.9X
BCAO 161.16 220 iPKPd 42 57.10 11.6X
0.9s 14.00nm
id 43 46.20
S.D. = 1.4 on 67 of 147 obs.

% DEC 24, 1990 08h 36m 21.43±0.72s
44.232 N ± 8.1km 7.420 E ± 6.1km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 1.8 (GEN).

ENR 0.01 180 P 36 22.92 -0.5
S 36 24.15
STV 0.07 280 P 36 23.76 -0.1
S 36 25.60
ROB 0.33 79 P 36 28.58 0.3
S 36 34.01
PZZ 0.36 320 P 36 29.09 0.3
S 36 34.83
IMI 0.47 133 P 36 31.75 0.8
S 36 39.84
FIN 0.57 92 P 36 32.15 -0.8
S 36 40.68
S.D. = 0.8 on 6 of 6 obs.

% DEC 24, 1990 08h 41m 20.38±1.54s
46.235 N ± 16.9km 2.761 E ± 9.2km
DEPTH = 10.0km (geophysicist)
FRANCE (538)
ML 1.6 (LDG).

MAF 0.14 264 Pg 41 24.60 1.0
Sg 41 27.70
BGF 0.33 10 Pg 41 27.40 0.2
Sg 41 32.60
TCF 0.39 278 Pg 41 28.20 -0.1
Sg 41 33.70
SMF 0.85 61 Pg 41 36.60 -0.2
LSF 0.85 271 Pg 41 36.00 -0.9
Sg 41 47.20
S.D. = 0.9 on 5 of 5 obs.

DEC 24, 1990 09h 32m 52.20±1.03s
54.019 N ± 9.1km 164.337 W ± 5.4km
DEPTH = 52.8 ± 7.8 km
4.8mb (20 obs.)
UNIMAK ISLAND REGION (10)

SDN 2.59 58 iPc 33 31.70 -0.8
KDC 7.63 56 eP 34 43.20 -0.1
ADK 7.76 259 eP 34 46.20 1.2
SVW 8.50 30 eP 34 55.00 -0.4
TTA 9.93 23 eP 35 14.90 -0.1
ANM 10.59 358 eP 35 24.90 1.0
PMR 11.08 41 eP 35 28.60 -1.9
TOA 12.53 43 eP 35 45.50 -4.5X
IMA 13.18 19 eP 35 59.80 1.3
FBA 13.72 31 eP 36 01.30 -4.1X
INK 20.30 33 eP 37 22.50 -3.2X
0.8s 39.00nm 4.8mb
YKA 26.86 52 eP 38 31.40 2.2
0.6s 4.40nm 4.2mb
MBC 27.90 21 eP 38 38.50 0.0
0.5s 3.00nm 4.2mb

BONR 35.09 98 eP 39 44.00 357kmX
FFC 35.27 63 eP 39 43.00 0.7
1.0s 7.00nm 4.5mb
TNP 35.63 97 eP 39 48.40 1.5
MAT 42.76 270 eP 40 45.00 -0.8
0.7s 11.64nm 4.7mb
CN2 45.46 287 eP 41 06.60 -0.8
FRB 45.84 38 ePc 41 09.70 -0.4
SCH 52.16 47 eP 41 58.00 -1.1
KEV 56.26 355 eP 42 29.00 0.2
SSE 56.61 278 eP 42 30.00 -1.8
0.8s 10.00nm 4.9mb
XAN 61.47 289 P 43 04.50 -1.0
GTA 62.36 300 eP 43 10.60 -0.9
1.0s 10.00nm 4.9mb
NB2 65.23 2 P 43 28.80 -1.0
0.8s 5.10nm 4.6mb
NUR 65.60 355 eP 43 31.00 -1.0
CD2 66.68 291 iPd 43 39.60 0.1
0.7s 30.00nm 5.4mb
GYA 68.47 286 iPc 43 51.00 0.2
LDF 76.90 11 eP 44 40.60 0.7
LPF 77.35 11 eP 44 42.60 0.2
CDF 77.70 6 eP 44 44.70 0.3
BSF 78.25 6 eP 44 47.60 0.1
GUN 78.51 302 P 44 50.20 0.6
LOR 78.59 8 eP 44 49.40 0.1
1.0s 14.00nm 4.9mb
SSF 78.77 8 eP 44 50.60 0.4
0.8s 6.70nm 4.6mb
MFF 78.86 11 eP 44 51.00 0.3
0.8s 13.45nm 4.9mb
LBF 78.88 8 eP 44 50.80 -0.1

KKN 78.91 302 P 44 52.30 0.7
AVF 79.02 9 eP 44 51.80 0.2
0.8s 6.70nm 4.6mb
PKI 79.03 302 P 44 53.00 0.6
GKN 79.06 303 P 44 53.00 0.7
DMN 79.15 302 P 44 53.90 1.0
0.6s 27.00nm 5.4mb
BGF 79.21 9 eP 44 52.60 0.0
1.0s 17.00nm 4.9mb
SMF 79.21 8 eP 44 52.80 0.2
0.9s 14.75nm 4.9mb
LSF 79.39 10 eP 44 53.70 0.1
0.8s 14.10nm 4.9mb
TCF 79.42 9 eP 44 53.90 0.1
MAF 79.52 9 eP 44 54.50 0.2
1.0s 14.00nm 4.8mb
RJF 80.32 10 eP 44 58.80 0.2
LFF 80.60 11 eP 45 00.60 0.6
CAF 80.75 10 eP 45 01.40 0.5
1.0s 14.00nm 4.8mb
LPO 80.90 10 eP 45 02.00 0.3
GBA 94.74 301 Pd 46 08.50 -0.6
0.6s 2.70nm 4.9mb
BUL 144.76 339 iPKPc 52 22.30 -2.4
0.9s 13.03nm
S.D. = 0.9 on 50 of 53 obs.

* DEC 24, 1990 09h 56m 51.35±1.12s
26.793 S ± 6.6km 26.709 E ± 13.1km
DEPTH = 10.0km (geophysicist)
REPUBLIC OF SOUTH AFRICA (584)
mbLg 3.8 (BUL).

BFS 0.13 147 eP 56 53.60 -0.9
PRY 0.70 101 iPc 57 04.50 -0.7
S 57 13.00
KSR 0.94 10 iPc 57 09.90 0.5
S 57 22.50
SEK 1.73 152 iPc 57 22.00 0.2
S 57 43.00
SLR 1.76 54 iPd 57 23.50 1.3
S 57 47.00
BLF 2.35 191 iPd 57 31.50 0.7
S 57 58.50
FRS 3.19 202 iPd 58 21.00 38.5X
S 58 57.00
BFT 3.19 71 iPd 57 43.50 0.8
JOZ 4.83 99 iPc 57 27.50 -38.3X
S 58 20.00
BUL 6.85 15 iPn 58 32.60 -1.8
iSn 59 46.50
iSg 00 23.00
CER 9.17 223 eP 59 18.00 11.3X
KRI 10.28 16 iPn 59 19.00 -3.0X
iSn 01 08.50
iSg 02 07.00
S.D. = 1.2 on 8 of 12 obs.

? DEC 24, 1990 10h 00m 43.21±1.03s
14.732 N ± 7.7km 60.924 W ± 10.3km
DEPTH = 10.0km (geophysicist)
WINDWARD ISLANDS (95)
ML 2.5 (FDF).

CRM 0.02 21 eP 00 45.26 0.1
MVM 0.18 171 iPc 00 46.99 -0.3
FDF 0.22 270 iPc 00 47.73 -0.2
S 01 00.90
BIM 0.26 214 iPc 00 49.05 0.4
S 01 03.40
S.D. = 0.5 on 4 of 4 obs.

? DEC 24, 1990 10h 11m 21.25±1.08s
39.105 N ± 10.3km 27.548 E ± 18.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 2.2 (ISK).

IZM 0.74 198 iPg 11 35.80 0.0
iSg 11 46.80
DST 0.98 59 ePn 11 39.80 0.0
BNT 1.28 13 ePn 11 45.00 0.0
KCT 1.30 28 ePn 11 45.40 0.0
S.D. = 0.1 on 4 of 4 obs.

DEC 24, 1990 10h 12m 13.06±0.10s
5.376 S ± 2.6km 151.490 E ± 2.7km

24d 10h

SS	35	46.00		MBC	94.98	14	eP	25	30.00	-0.6	HBVT	125.01	38	PKP	31	08.90	-0.3			
LSA	67.49	305	eP	23	07.20	0.6								pP	31	22.80				
GUN	71.31	302	Pc	23	30.00	0.1	TPC	95.02	56	eP	25	32.00	0.3	WTS	125.13	334	ePKP	31	09.50	0.4
PKI	71.61	301	Pc	23	31.50	-0.2	GLA	95.98	57	eP	25	39.00	2.9X		0.7s	31.00nm				
KKN	71.78	301	Pc	23	32.40	-0.2	YKA	96.54	28	eP	25	36.50	-1.4			e	31	22.00		
DMN	71.88	301	Pc	23	33.40	0.2		0.8s	3.70nm			5.0mb		CEY	125.23	324	ePKP	31	08.90	-0.7
SDN	72.29	26	eP	23	33.40	-1.3	EDM	97.37	37	ePc	25	41.50	-0.4	VOY	125.38	325	ePKP	31	09.30	-0.7
GKN	72.39	301	Pc	23	35.80	-0.3	DUG	97.79	50	P	25	44.60	0.4	LVNJ	125.67	42	PKP	31	10.00	-0.6
WMO	75.28	318	iPc	23	52.50	0.0	LRM	98.05	45	eP	25	45.40	0.0	FVI	125.68	326	PKP	31	10.00	-0.4
	1.0s	80.00nm			5.6mb		SES	98.88	40	ePc	25	48.70	-0.1	BNS	125.70	333	iPKPd	31	10.60	0.3
Z	28s	2.10um			5.3mszX		DAU	98.98	50	P	25	49.60	-0.2		1.0s	66.00nm				
		SKS	33	50.00			BW06	100.20	48	Pdiff	25	54.60	-0.7	TBR	125.88	42	PKP	31	11.10	0.1
KOD	75.33	282	eP	23	54.00	0.5		0.9s	18.36nm			5.6mb		BNH	125.98	37	PKP	31	11.60	0.5
HY8	75.45	289	iPc	23	53.00	-0.8	ALO	102.94	56	ePdiff	26	09.00	1.4	PNJ	126.04	42	ePKP	31	11.50	0.2
	1.0s	200.00nm			6.0mb		Z	22s	2.22um			5.6msz		SOTA	126.17	327	ePKP	31	08.00	-3.6X
GBA	75.86	285	Pc	23	55.00	-1.1	ANMO	102.94	56	Pdiff	26	10.30	2.7X		1.2s	75.70nm				
	0.9s	93.00nm			5.7mb			1.0s	25.00nm			5.9mb				id	31	11.10		
ANM	76.71	18	eP	23	59.40	-0.6		Z	20s	1.60um		5.5msz				i	31	24.10		
KDC	77.30	27	eP	24	03.60	0.3	GOL	103.52	51	Pdiff	26	10.80	0.6			i	33	09.80		
SVW	77.85	23	eP	24	06.50	0.1		1.1s	14.42nm			5.7mb		EKA	126.19	342	PKP	31	12.00	0.8
TTA	78.78	22	ePc	24	11.00	-0.5		Z	20s	1.50um		5.5msz			0.8s	16.80nm				
	0.6s	12.40nm			5.0mb		GLD	103.63	51	Pdiff	26	11.00	0.4	ABH	126.28	332	ePKP	31	11.32	-0.2
NDI	78.89	300	iPc	24	11.80	-0.9		Z	20s	2.00um		5.6msz		ENN	126.40	334	ePKP	31	12.00	0.3
	0.9s	71.43nm			5.6mb		SOD	107.82	341	ePKP	30	36.00	0.4		1.0s	53.00nm				
POO	80.05	290	eP	24	18.50	-0.7	MEO	109.40	55	e(PKP)	30	32.30	-7.4X			e	31	24.00		
PMR	80.75	25	eP	24	22.00	0.1	TUL	111.50	54	ePKP	30	43.70	0.1	CBM	126.40	33	PKP	31	10.40	-1.4
	0.8s	19.70nm			5.1mb			0.8s	5.80nm			40	30.20	OGA	126.48	327	iPKPd	31	12.40	0.1
Z	20s	2.00um			5.5msz				e			47	00.90	GWf	126.86	331	PKP	31	12.52	-0.2
IMA	81.43	20	eP	24	26.40	0.7	NUR	112.10	335	iPKP	30	43.00	-0.9	ARV	127.36	323	PKPc	31	14.50	0.7
	0.8s	16.50nm			5.1mb			0.7s	17.40nm					FEL	127.41	330	PKP	31	13.10	-0.8
TOA	82.23	25	eP	24	31.00	1.2	FRB	114.99	18	ePKP	30	49.00	-0.4	CDf	127.41	331	PKP	31	13.10	-0.7
FBA	82.90	22	ePc	24	31.20	-1.9	HFS	116.72	338	ePKP	30	51.20	-1.6	SGO	127.42	318	PKPc	31	13.60	-0.3
	0.7s	68.10nm			5.8mb			0.9s	11.20nm				ECH	127.60	331	PKP	31	12.91	-1.2	
BRW	83.65	15	eP	24	37.80	1.0	NB2	117.00	340	PKP	30	52.30	-1.1	SFI	127.77	324	PKP	31	15.50	1.0
MAW	84.54	203	iPc	24	42.10	0.7		0.8s	8.70nm				SDI	127.80	320	PKP	31	14.00	-0.7	
	0.9s	43.00nm			5.5mb		BUL	118.42	244	iPKPc	30	55.60	-1.9	MOF	127.86	330	PKP	31	14.16	-0.6
SPA	84.66	180	iPc	24	43.30	1.1		0.8s	22.39nm				MDI	127.87	327	PKP	31	13.80	-0.8	
	1.0s	70.00nm			5.7mb		KRI	118.47	248	iPKPc	30	55.80	-1.8	CRE	127.88	323	PKP	31	14.00	-0.9
Z	18s	1.27um			5.3msz		KRA	119.79	326	ePKP	30	48.30	-10.7X	AZI	127.89	321	PKP	31	15.50	0.7
		i	24	57.50	49km				i			31	00.10	BBS	127.94	330	PKP	31	14.00	-0.8
FHC	89.34	49	ePc	25	06.20	0.9	SPC	120.06	325	iPKP	31	01.50	1.7	BSF	128.04	330	PKP	31	14.64	-0.4
JNK	89.46	21	eP	25	05.00	-0.2	KDZ	120.07	316	iPKP	30	58.00	-1.8	HAU	128.14	331	ePKP	31	14.20	-1.0
PCC	90.17	53	eP	25	09.90	0.7	VTs	121.22	317	iPKPd	31	02.00	-0.1		1.2s	80.35nm				
BRK	90.31	52	ePc	25	09.80	0.0	KSP	121.32	328	iPKPc	31	01.70	-0.2	Z	20s	1.77um			5.7msz	
	Z	20s	3.70um		5.8msz				i			31	14.40	VITF	128.17	331	PKP	31	14.78	-0.3
		eLR	52	49.00			KKB	121.59	317	iPKPc	31	02.00	-0.7	MME	128.29	325	PKP	31	15.50	-0.3
BKS	90.33	52	eP	25	10.20	0.3	SRO	121.87	325	ePKP	31	01.50	-1.5	VAI	128.33	327	PKPc	31	15.40	-0.1
	0.9s	58.00nm			5.9mb				i			31	15.40	LOMF	128.35	330	PKP	31	14.95	-0.7
Z	20s	5.00um			5.9msz		SCH	121.89	25	ePKP	31	03.00	0.2	BDI	128.42	325	PKP	31	14.80	-1.1
N	20s	0.40um					LWI	122.26	264	i(PKP)	30	46.00	-19.0X	BOB	128.65	326	PKP	31	16.50	0.2
E	20s	5.00um					ZST	122.35	326	iPKP	31	03.90	0.0	UPA	129.28	83	(PKP)	31	17.20	-1.0
		eLR	53	48.00					e			31	15.10		Z	20s	1.24um			5.6msz
WDC	90.40	49	ePc	25	10.60	0.4			e			34	39.50	LPL	129.64	328	ePKP	31	17.80	-0.5
GCC	90.42	53	ePc	25	11.00	0.6	WVLY	122.38	42	PKP	31	03.40	-0.8		0.8s	12.15nm				
LTCM	90.67	50	P	25	12.00	0.5			pP			31	17.40	LPG	129.64	328	ePKP	31	18.10	-0.3
PGC	90.73	41	eP	25	12.00	0.5	BRG	122.51	330	iPKP	31	03.90	-0.2		0.8s	20.15nm				
MHC	90.74	53	ePc	25	12.60	0.6		1.0s	46.00nm					LOR	129.86	332	ePKP	31	18.00	-0.4
ARN	90.82	53	P	25	12.80	0.5			i			31	05.30		1.0s	41.00nm				
PRS	90.85	54	ePc	25	12.50	0.1	CLL	122.71	330	iPKPc	31	04.30	-0.2		Z	18s	4.50um			6.2msz
LBFM	90.98	49	P	25	14.00	0.9		0.8s	23.00nm					BNI	129.98	328	PKP	31	19.70	0.8
GMW	91.04	43	P	25	13.50	0.5			e			31	17.00	LBF	130.00	331	ePKP	31	18.00	-0.8
		pP	25	29.90	57km		PRU	122.73	328	PKP	31	04.50	-0.1		1.1s	36.65nm				
ORV	91.08	51	ePc	25	13.60	0.2		1.0s	21.70nm					SSF	130.17	332	ePKP	31	18.70	-0.3
MIN	91.08	50	ePc	25	13.50	-0.1		Z	20s	2.90um		5.9msz			1.0s	46.00nm				
LLA	91.22	54	ePc	25	15.00	0.9			e			31	17.00	PGF	130.27	324	ePKP	31	18.80	-0.7
PRJ	91.39	54	ePc	25	16.40	1.4	VKA	122.76	326	ePKP	31	04.00	-0.7		1.2s	133.90nm				
LON	91.61	43	P	25	15.60	-0.1		1.3s	97.00nm					SMF	130.31	331	ePKP	31	18.80	-0.5
RMW	91.69	43	P	25	15.80	-0.3			i			31	06.80		1.1s	54.95nm				
CMB	91.80	52	ePc	25	17.30	0.5	KHC	123.75	328	iPKP	31	06.90	0.2	SBF	130.34	326	ePKP	31	18.70	-0.8
		ePP	29	46.00				1.0s	25.00nm						0.8s	57.75nm				
FRI	92.24	53	ePc	25	19.30	0.6		Z	20s	1.50um		5.6msz		AVF	130.44	332	ePKP	31	18.90	-0.6
ISA	93.13	55	eP	25	23.00	0.0			1.00um						1.1s	20.75nm				
PNT	93.31	41	ePc	25	23.00	-0.5		N	20s	1.00um				LDF	130.63	335	ePKP	31	19.40	-0.4
	0.9s	25.00nm			5.6mb		E	20s	1.40um						1.0s	26.00nm				
MWC	93.36	56	eP	25	25.00	0.8	MOX	123.81	330	ePKP	31	07.00	0.3	FLN	130.64	336	ePKP	31	19.30	-0.5
BONR	93.43	52	P	25	25.40	0.8			1.3s	27.00nm					1.0s	50.00nm				
SBB	93.59	56	eP	25	26.00	0.9	PTJ	124.25	324	e(PKP)	31	05.20	-2.6X		Z	19s	5.00um			6.2msz
KVN	93.67	51	P	25	26.70	1.2	WIT	124.61	335	ePKP	31	09.00	0.9	BGF	130.85	332	ePKP	31	19.90	-0.4

MAF	131.23	332	ePKP	31	20.80	-0.3
	1.3s	39.70nm				
TCF	131.35	332	ePKP	31	21.00	-0.3
	1.0s	51.00nm				
LPF	131.45	336	ePKP	31	21.20	-0.2
	0.8s	47.00nm				
LSF	131.69	332	ePKP	31	21.40	-0.5
	1.1s	24.40nm				
MFF	132.18	334	ePKP	31	22.30	-0.5
	0.7s	17.65nm				
ARE	132.28	118	ePKP	31	25.00	0.7
RJF	132.40	331	ePKP	31	23.30	0.0
	0.7s	9.90nm				
LPO	133.02	331	ePKP	31	24.00	-0.5
	0.8s	24.20nm				
LFF	133.04	332	ePKP	31	24.40	-0.1
	0.8s	13.45nm				
BCAO	133.13	271	ePKPd	31	07.60	-18.0X
	0.7s	65.00nm				
		id		31	26.40	
		id		31	40.50	
EPF	134.65	330	ePKP	31	26.00	-1.7
TOL	139.18	331	iPKPc	31	40.50	4.2X
	1.1s	37.97nm				
SIV	141.41	124	PKP	31	32.80	-8.1X
LIJA	142.17	329	iPKP	31	36.50	-5.3X
ALJ	142.44	329	iPKP	31	38.50	-3.8X
GIBL	142.50	330	iPKP	31	35.00	-7.3X
NEV	144.68	68	ePKP	31	45.25	-1.2
PPD	144.78	141	ePKPc	31	45.20	-1.4
		e		31	55.20	
BPA	145.36	68	ePKP	31	46.76	-0.9
PAG	145.79	69	ePKP	31	47.00	-1.5
SEG	145.86	69	ePKP	31	48.00	-0.5
BBL	146.10	70	ePKP	31	48.00	-0.9
DEG	146.29	69	ePKP	31	49.00	-0.3
SVB	146.78	74	ePKP	31	50.48	0.4
SVV	146.81	74	ePKP	31	50.96	0.9
SLB	146.88	73	ePKP	31	51.79	1.6
TBH	147.37	79	ePKP	31	53.84	2.8X
PIG	147.51	78	ePKP	31	56.04	4.9X
BOT	147.63	78	ePKP	31	54.08	2.7X
BMA	148.18	152	ePKP	31	52.00	-0.1
		i		31	55.60	
		i		32	01.10	
BAO	151.58	138	ePKPc	31	56.50	-1.1
SHGH	151.67	273	ePKP	31	59.00	1.4
LEGH	151.80	272	ePKP	32	04.00	6.2X
WEGH	151.95	272	ePKP	31	59.50	1.4
KUK	151.99	273	ePKP	31	58.00	-0.1
KIC	156.34	274	PKP	32	03.76	-0.3
TIC	156.61	274	PKPc	32	04.16	-0.3
	0.8s	13.00nm				
LIC	156.62	273	PKP	32	04.12	-0.3
	Z 22s	0.98um				5.6Msz
PDCR	159.32	149	ePKP	32	08.00	0.5
		e		32	10.20	
		e		32	44.10	
SOB1	160.97	140	ePKP	32	10.10	0.8
		e		32	52.40	
S.D. = 0.9 on 261 of 289 obs.						
* DEC 24, 1990 10h 23m 46.04±1.42s						
9.817 N ± 5.7km 59.810 W ± 16.7km						
DEPTH = 20.8 ± 7.1 km						
4.3mb (1 obs.)						
NORTH ATLANTIC OCEAN (402)						
TBH	1.40	298	eP	24	10.69	0.2
BOT	1.61	326	eP	24	13.89	0.4
PIG	1.68	323	eP	24	14.73	0.3
TPP	1.69	287	eP	24	15.48	0.8
TRN	1.77	298	eP	24	14.36	-1.5
SVB	3.71	338	eP	24	43.06	-0.5
SVV	3.74	339	eP	24	44.30	0.3
SLB	4.16	343	eP	24	49.54	-0.5
MVM	4.83	347	eP	24	59.26	-0.1
BIM	4.83	345	iPc	24	59.46	0.0
CRM	5.02	348	eP	25	02.25	0.1
FDF	5.06	345	eP	25	02.29	-0.4
		S		25	52.40	
SIV	25.67	183	P	29	27.40	11.0X
ZOBO	27.19	198	eP	29	50.00	18.9X
	Z 25s	6.38um				5.1MszX
		e		31	15.00	
		LR		46	16.00	
LPB	27.43	197	eP	29	33.00	-0.1

			e	31	30.00	
			LR	15	14.00	
CNCB	27.66	197	eP	29	35.00	-0.3
			e	31	15.00	
			i	34	59.00	
PYM	64.14	44	PKP	34	44.22	22.8X
LBL	64.19	44	PKP	34	45.47	23.9X
PLDF	64.61	44	PKP	34	42.66	18.3X
SSB	65.09	45	PKP	34	40.81	13.3X
YKA	65.55	335	eP	34	31.10	1.0
	0.4s	1.00nm			4.3mb	
GKN	129.04	41	PKP	43	00.00	5.0X
S.D. = 0.7 on 15 of 22 obs.						
% DEC 24, 1990 11h 09m 15.18±0.96s						
38.756 N ± 13.4km 27.503 E ± 21.4km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.9 (ISK).						
IZM	0.40	208	iPg	09	23.40	-0.1
			iSg	09	29.90	
DST	1.22	46	iPn	09	37.30	-0.6
EZN	1.41	320	iPn	10	02.50	21.7X
EDC	1.61	10	ePn	09	45.00	1.3
BNT	1.63	11	ePn	09	43.00	-1.0
KCT	1.63	24	ePn	09	43.70	-0.3
IZI	2.19	43	ePn	09	54.00	1.7
YLV	2.31	38	ePn	09	53.00	-1.0
S.D. = 1.3 on 7 of 8 obs.						
? DEC 24, 1990 11h 19m 14.19±3.18s						
38.535 N ± 29.3km 27.847 E ± 22.7km						
DEPTH = 10.0km (geophysicist)						
TURKEY (366)						
MD 2.5 (ISK).						
IZM	0.48	254	iPg	19	23.90	0.0
			iSg	19	30.40	
DST	1.23	29	iPn	19	37.90	0.8
EZN	1.75	318	ePn	19	45.10	0.4
KCT	1.76	13	ePn	19	43.70	-1.2
YLV	2.35	30	ePn	19	56.00	2.5X
S.D. = 1.5 on 4 of 5 obs.						
& DEC 24, 1990 11h 23m 46.40s						
37.397 N 121.758 W						
DEPTH = 2.0km						
CENTRAL CALIFORNIA (39)						
<BRK>. ML 2.5 (BRK).						
MHC	0.11	121	iPc	23	48.90	0.3
ARN	0.19	105	iP	23	50.00	-0.1
GCC	0.41	208	ePd	23	54.40	-0.3
			iS	24	01.20	
PCC	0.51	282	iPc	23	56.10	-0.4
BKS	0.61	322	eP	23	58.70	0.1
			eS	24	08.20	
BRK	0.62	320	ePc	23	58.10	-0.7
			eS	24	07.80	
SAO	0.68	158	iPd	23	59.80	-0.2
LLA	1.02	140	ePc	24	04.90	-1.5
			eS	24	18.90	
PRS	1.11	164	ePc	24	06.60	-1.3
CMB	1.26	59	ePc	24	10.10	-0.5
			iS	24	25.30	
PR1	1.53	145	e(P)	24	13.30	-1.6
FRI	1.69	103	eP	24	15.40	-1.6
			eS	24	36.60	
TNP	3.66	78	eP	24	53.00	7.5
13 obs. associated						
? DEC 24, 1990 12h 25m 30.04±1.91s						
16.529 S ± 52.3km 69.442 W ± 19.3km						
DEPTH = 214.3 ± 18.2 km						
4.2mb (1 obs.)						
PERU-BOLIVIA BORDER REGION (118)						
LPB	1.29	90	iPd	26	03.80	-0.3
	1.0s	320.00nm				
ZOBO	1.29	79	iPd	26	04.50	0.2
CNCB	1.43	101	iPd	26	05.50	0.1
CCH	3.27	106	Pd	26	24.40	0.0
SIV	8.06	87	P	27	25.00	0.0
NNA	8.48	301	iP	27	30.50	0.0
	0.5s	9.15nm			4.2mb	
		eS		28	58.50	

S.D. = 0.3 on 6 of 6 obs.						
DEC 24, 1990 12h 37m 40.12± 1.05s						
39.738 N ± 7.9km 143.075 E ± 6.0km						
DEPTH = 43.8 ± 8.9 km						
4.9mb (18 obs.)						
OFF EAST COAST OF HONSHU, JAPAN (229)						
OFUJ	1.27	239	iP+	38	02.00	0.3
			eS	38	23.00	
AOMJ	2.23	292	P	38	17.60	2.3
HOOJ	2.65	3	P	38	19.00	-2.3
			S	38	51.30	
YAMJ	2.84	238	iP+	38	24.20	0.2
MAT	4.99	232	eP	38	54.00	-0.5
	1.5s	472.22nm				
		eS		39	54.00	
MDJ	11.13	300	eP	40	21.20	1.7
CN2	13.77	293	eP	40	56.00	1.4
	Z 16s	8.00um				
	N 14s	2.90um				
	E 14s	1.70um				
		ePP		41	03.00	
SNY	14.92	284	eP	41	08.00	-1.7
	Z 16s	5.00um				
	N 14s	1.70um				
	E 14s	3.50um				
DL2	16.62	274	eP	41	26.00	-5.4X
	Z 16s	1.74um				
	N 14s	2.70um				
	E 16s	2.50um				
SSE	19.78	251	eP	42	01.50	-7.9X
	Z 20s	1.20um				
	N 12s	1.90um				
	E 12s	1.40um				
		pP		42	09.00	29kmX
		eS		45	54.00	
		sS		46	10.00	
BJI	20.62	280	eP	42	16.00	-2.1
	1.8s	120.00nm				4.9mb
	Z 15s	3.49um				4.8MsZx
	N 12s	1.27um				
	E 15s	2.26um				
T1A	20.73	268	eP	42	17.40	-1.9
	Z 14s	4.70um				5.0MsZx
	N 13s	2.20um				
	E 13s	3.80um				
NJ2	21.03	256	eP	42	17.50	-4.8X
	N 14s	0.60um				
	E 14s	1.90um				
T1Y	23.94	275	eP	42	54.00	2.9X
	Z 17s	2.20um				4.7MsZx
HHC	24.00	283	eP	42	50.00	-1.7
	Z 16s	4.80um				5.1MsZx
	N 13s	0.90um				
	E 16s	3.00um				
WHN	25.13	258	Pc	43	02.50	0.0
	1.0s	50.00nm				5.0mb
	Z 16s	1.20um				4.5MsZx
	E 12s	1.50um				
BTO	25.20	283	eP	43	03.00	-0.2
	N 13s	1.60um				
	E 15s	3.80um				
XAN	27.79	269	P	43	26.50	-0.5
	N 14s	1.70um				
	E 14s	1.70um				
LZH	31.00	276	eP	43	55.50	-0.2
	1.6s	47.00nm				5.0mb
	Z 13s	3.25um				5.2MsZx
	N 12s	1.07um				
	E 14s	2.73um				
		SP		44	09.00	
		PP		44	54.50	
GYA	33.02	258	iPc	44	12.80	-0.7
	Z 16s	1.00um				4.6MsZx
	N 14s	1.00um				
	E 14s	1.70um				
CD2	33.05	267	eP	44	12.80	-0.8
	Z 14s	5.40um				5.4MsZx
	E 12s	3.00um				
		eS		49	28.00	
GTA	33.11	284	P	44	14.60	0.5
	1.4s	30.00nm				5.0mb
	Z 16s	4.70um				5.3MsZx
	E 16s	4.50um				
		SP		44	29.00	
		SS		49	41.00	

24d 12h

KMI	36.71	259	Pd	44	45.50	0.4
	1.5s	60.00nm			5.3mb	
Z	15s	2.00um			5.0mszX	
N	13s	1.00um				
WMO	40.85	294	P	45	20.80	1.6
Z	15s	0.80um			4.7mszX	
		PP		46	53.00	
CHG	43.25	254	eP	45	40.20	1.2
IMA	43.70	32	eP	45	41.10	-1.2
PMR	45.69	38	eP	45	50.70	-7.3X
FBA	46.13	34	eP	46	05.20	3.7X
GUN	48.23	274	P	46	18.80	-0.1
KKN	48.75	274	P	46	23.00	0.3
PKI	48.76	274	P	46	22.80	-0.2
DMN	48.97	274	P	46	25.60	1.1
GKN	49.14	275	P	46	26.80	1.1
INK	51.39	28	eP	46	44.00	1.9
MBC	53.56	17	eP	47	04.00	5.8X
	1.0s	6.00nm			4.6mb	
YKA	60.82	31	eP	47	50.40	0.7
	0.9s	1.70nm			4.2mb	
GBA	62.74	265	Pc	48	01.70	-1.5
	0.9s	5.40nm			4.7mb	
ASPA	63.65	189	eP	48	07.90	-1.1
	0.8s	4.90nm			4.6mb	
DZM	65.25	156	iPc	48	20.50	1.0
NEW	67.30	46	P	48	32.00	-0.4
	1.2s	15.15nm			4.9mb	
NUR	68.18	332	eP	48	30.00	-7.6X
WDC	68.43	55	ePd	48	40.20	0.7
SES	69.26	41	eP	48	43.00	-1.5
ORV	69.67	55	eP	48	42.60	-4.5X
FFC	70.73	34	eP	48	50.00	-3.3X
	1.5s	35.00nm			5.1mb	
CMB	71.26	56	ePd	48	57.90	1.0
LRM	71.31	46	eP	48	55.10	-2.2
HFS	72.16	336	eP	49	00.50	-1.3
	0.4s	3.60nm			4.7mb	
Z	16s	0.53um			4.9mszX	
		LR		18	26.00	
NB2	72.19	338	P	49	01.70	-0.3
	0.8s	9.80nm			4.8mb	
BONR	72.63	55	P	49	06.40	1.1
TNP	73.23	54	P	49	08.70	0.0
FRB	73.84	14	eP	49	10.00	-1.5
ISA	73.90	57	eP	49	13.00	0.5
CLC	74.37	56	eP	49	16.00	0.8
BW06	74.85	47	P	49	18.00	-0.1
	1.2s	28.54nm			5.1mb	
SBB	74.92	57	eP	49	19.00	0.6
GSC	75.20	56	eP	49	21.00	1.0
DAU	75.40	49	eP	49	22.80	1.5
	1.1s	1.00nm			3.7mb X	
KRA	77.58	326	ePd	49	33.60	0.7
SPC	78.10	326	eP	49	49.80	13.8X
KSP	78.48	329	ePd	49	38.70	0.8
BRG	79.38	330	eP	49	54.70	12.0X
	1.7s	25.00nm				
PRU	79.85	329	eP	49	45.00	-0.3
		e		49	58.50	
SRO	79.98	326	eP	49	46.70	0.7
ZST	80.20	327	eP	49	47.80	0.6
		i		18	02.30	
SOP	80.83	327	eP	49	51.60	1.1
KHC	80.91	329	P	50	03.10	12.1X
GRF	81.37	331	eP	49	54.20	0.9
Z	12s	2.00um			5.7mszX	
		e		50	07.50	
ANMO	81.86	51	P	49	55.00	-1.4
	1.5s	76.39nm			5.5mb	
ALO	81.86	51	eP	49	55.00	-1.4
	1.2s	10.55nm			4.7mb	
LBF	86.27	333	eP	50	14.20	-4.1X
SMF	86.61	333	eP	50	19.30	-0.7
	1.0s	8.00nm			4.9mb	
AVF	86.65	334	eP	50	19.60	-0.5
	0.9s	9.00nm			5.0mb	
ZOBO	144.17	58	ePKP	57	11.00	-2.8X
LPB	144.38	58	ePKP	57	16.00	2.0
CNCB	144.66	59	PKP	57	13.00	-1.6
SIV	148.33	49	PKP	57	22.60	2.6X
PDCR	152.83	5	e(PKP)	57	27.00	0.3
S.D. = 1.2 on 62 of 78 obs.						

DEC 24, 1990 13h 39m 02.95±0.78s
 41.032 N ± 6.7km 22.374 E ± 6.0km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)						
GRG	0.08	165	iPd	39	05.72	0.3
KNT	0.42	72	ePd	39	11.24	-0.2
THE	0.60	131	ePd	39	14.20	-0.9
			eS	39	22.52	
SOH	0.77	105	ePd	39	17.56	-0.5
FNA	0.80	252	ePd	39	18.04	-0.4
KZN	0.86	213	ePb	39	19.50	0.0
SRS	0.92	84	ePd	39	20.12	-0.5
LIT	0.93	175	ePd	39	21.48	0.7
KKB	0.99	32	iPg	39	21.00	-0.7
PLG	1.05	129	ePb	39	22.50	-0.2
			eSb	39	40.00	
RZN	1.88	69	iP	39	38.00	2.4
PGD	2.02	41	iP	39	41.00	3.4X
PLD	2.05	58	eP	39	43.00	5.1X
KDZ	2.37	74	iP	39	46.00	3.5X
S.D. = 1.0 on 11 of 14 obs.						
DEC 24, 1990 13h 46m 45.05±0.97s						
41.035 N ± 6.8km 22.384 E ± 6.5km						
DEPTH = 9.9 ± 6.9 km						
YUGOSLAVIA (383)						
GRG	0.08	170	ePd	46	47.40	-0.1
			eS	46	49.64	
KNT	0.41	72	iPc	46	53.50	0.1
			eS	46	59.60	
THE	0.60	132	ePd	46	56.12	-1.0
			eS	47	04.00	
SOH	0.77	106	iPd	46	59.69	-0.3
			eS	47	10.68	
FNA	0.80	252	ePc	47	00.28	-0.4
			eS	47	11.12	
SRS	0.92	84	ePc	47	02.52	-0.1
			eS	47	14.84	
LIT	0.94	175	iPd	47	03.68	0.7
			eS	47	16.56	
KKB	0.98	32	iPg	47	04.00	0.3
PAIG	1.48	138	iPd	47	12.56	0.8
S.D. = 0.7 on 9 of 9 obs.						
% DEC 24, 1990 13h 46m 51.04±1.59s						
37.258 N ± 11.9km 15.329 E ± 10.4km						
DEPTH = 10.0km (geophysicist)						
SICILY (398)						
MEU	0.35	244	P	46	58.50	0.1
			eSg	47	04.70	
MNO	0.84	323	P	47	06.70	-0.7
			eSg	47	21.00	
ATN	0.91	7	Pc	47	07.90	-0.5
			eSg	47	21.80	
MSI	0.96	11	P	47	10.00	0.7
			eSg	47	24.00	
SOI	1.00	35	P	47	09.80	-0.1
			eSg	47	26.50	
GIB	1.27	306	P	47	15.50	0.9
			eSg	47	33.50	
FAI	1.32	271	P	47	15.00	-0.4
			eSg	47	34.90	
S.D. = 0.7 on 7 of 7 obs.						
DEC 24, 1990 14h 51m 01.44±0.84s						
35.117 N ± 6.7km 23.466 E ± 5.5km						
DEPTH = 63.1 ± 7.6 km						
4.3mb (11 obs.)						
CRETE (370)						
VAM	0.67	64	ePg	51	15.80	0.1
NPS	1.76	85	ePn	51	32.00	1.7
APE	2.57	40	ePn	51	45.00	3.5X
ATH	2.86	4	ePn	51	47.20	1.7
VLS	3.83	324	ePn	51	57.50	-1.8
AGG	4.00	347	ePc	52	03.20	1.5
NEO	4.19	357	ePn	52	00.50	-3.8X
PAIG	4.80	2	iPc	52	12.96	0.0
LIT	5.04	351	ePc	52	16.12	-0.1
IGT	5.07	331	ePd	52	15.64	-1.0
OUR	5.22	4	ePc	52	18.00	-0.8
KZN	5.35	346	ePn	52	20.00	-0.7
ELL	5.47	71	iPn	52	22.50	0.0
SOH	5.70	359	ePd	52	25.44	-0.1
QHL	5.82	55	ePn	52	25.00	-2.3
FNA	5.89	344	ePd	52	27.44	-0.8
SRS	5.99	1	ePd	52	29.56	0.0

KNT	6.05	356	ePc	52	30.84	0.4
MMB	6.47	2	iPc	52	36.00	-0.2
RZN	6.63	8	iPc	52	39.00	0.3
KDZ	6.70	13	iP	52	40.00	0.6
KKB	6.75	358	iP	52	40.00	-0.1
PGD	7.44	4	iP	52	49.00	-0.8
KOT	8.75	124	ePn	53	02.50	-5.2X
			eSn	54	29.00	
KHC	15.79	336	iP	54	46.00	4.9X
			e	54	56.80	
WET	16.04	334	iPc	54	48.40	4.1X
	0.8s	14.00nm			4.1mb	
PRU	16.23	339	P	54	50.00	3.3X
			e	54	58.00	
			e	55	24.40	
KSP	16.56	344	iP	54	54.20	3.4X
GRF	17.11	332	iPc	55	00.50	2.8X
	1.3s	33.00nm			4.4mb	
BRG	17.20	339	eP	55	00.90	2.2
			e	55	11.60	
MOX	17.75	335	eP	55	05.00	-0.5
CLL	17.86	338	e(P)	55	20.00	13.1X
MFF	21.14	310	eP	55	44.50	1.5
LDF	22.02	315	eP	55	52.50	0.7
	0.5s	7.30nm			4.4mb	
LPF	22.31	313	eP	55	54.80	0.3
	0.9s	18.00nm			4.5mb	
FLN	22.31	315	eP	55	54.90	0.3
	0.7s	15.45nm			4.5mb	
GRR	22.36	314	eP	55	55.60	0.5
	0.8s	13.45nm			4.4mb	
HFS	25.83	349	eP	56	27.50	-0.7
	0.4s	4.80nm			4.4mb	
NB2	27.11	347	P	56	39.40	-0.6
	0.5s	1.10nm			3.7mb	
BCAO	30.87	190	ePd	57	15.00	1.0
	0.6s	3.00nm			4.2mb	
SOD	32.35	2	eP	57	26.00	-0.4
KEV	34.75	2	eP	57	33.00	-14.1X
KIC	38.64	229	P	58	19.20	-1.3
LIC	38.92	229	P	58	22.10	-0.7
GKN	51.90	80	P	00	06.20	0.2
DMN	52.44	80	P	00	10.50	0.3
KKN	52.51	80	P	00	10.60	-0.1
PKI	52.70	80	P	00	11.30	-0.9
GBA	52.94	100	Pc	00	12.40	-1.2
	0.7s	3.30nm			4.5mb	
GUN	52.94	79	P	00	15.20	1.2
YKA	77.06	341	eP	02	49.50	0.6
	0.6s	0.90nm			3.9mb	
S. D. = 1.0 on 41 of 51 obs.						
<hr/>						
?	DEC	24,	1990	14h	52m 31.28±	0.66s
		52.987	S ±14.2km		22.440	E ±23.0km
		DEPTH = 10.0km (geophysicist)				
		4.8mb (2 obs.)			4.5Msz (1 obs.)	
	SOUTH OF AFRICA					(430)
<hr/>						
SLR	27.57	11	eP	58	20.00	-0.4
BUL	33.13	11	eP	59	07.30	-2.4
SPA	37.20	180	iPd	59	43.50	-0.6
	0.7s	13.67nm			4.8mb	
	20s	0.81um			4.5Msz	
BCAO	57.30	355	ePc	02	24.10	2.6
	0.5s	5.00nm			4.8mb	
BAO	65.89	276	ePc	03	19.00	-0.5
SIV	73.51	265	P	04	05.00	-1.0
CNCB	77.02	259	P	04	27.00	0.3
LPB	77.30	259	P	04	28.00	-0.1
ZOBO	77.52	260	P	04	29.00	-0.5
TPC	145.11	254	ePKP	12	09.00	-1.1
RVR	145.79	252	ePKP	12	11.00	-0.2
MWC	146.35	252	ePKP	12	11.00	-1.3
GSC	146.39	255	ePKP	12	13.00	0.8
DAU	146.44	267	PKP	12	13.00	0.5
SB8	146.55	253	ePKP	12	13.00	0.5
BW06	146.81	272	PKP	12	13.00	0.1
	1.2s	20.55nm				
CLC	147.21	255	ePKP	12	15.00	1.5
DUG	147.24	265	PKP	12	16.00	2.5X
ISA	147.61	253	ePKP	12	17.00	2.9X
FFC	147.89	296	ePKPd	12	15.90	2.0X
	1.0s	19.00nm				
TNP	148.53	258	PKP	12	19.50	3.8X
	1.2s	13.44nm				
BONR	149.08	257	PKP	12	21.70	5.0X
PRI	149.22	252	ePKP	12	21.00	4.3X

FRI 149.25 254 e(PKP) 12 17.60 1.0
 LLA 149.71 252 ePKPc 12 22.90 5.6X
 LRM 150.20 275 ePKP 12 23.90 5.8X
 CMB 150.36 255 ePKPc 12 24.10 5.8X
 MHC 150.61 252 ePKPc 12 25.20 6.4X
 SES 151.44 284 ePKP 12 20.00 0.5
 MBC 152.51 341 ePKP 12 27.00 6.7X
 1.0s 5.00nm
 MIN 152.59 257 ePKPc 12 27.30 5.7X
 WDC 153.29 256 ePKPc 12 29.80 7.4X
 YKA 155.63 310 ePKP 12 19.70 -5.2X
 0.9s 1.10nm

S.D. = 1.2 on 19 of 33 obs.

? DEC 24, 1990 15h 09m 39.08±6.22s
 40.690 N ±14.4km 30.640 E ±41.1km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.5 (ISK).

EYL 0.39 251 iPg 09 47.40 0.3
 GPA 0.47 212 iPg 09 48.70 0.0
 1.0s 0.95nm
 HRT 0.75 280 iPg 09 53.10 -0.7
 IZI 0.96 249 iPg 09 57.40 0.0
 YLV 0.97 263 iPg 09 57.20 -0.4
 1.0s 1.12nm
 ISK 1.26 288 iPg 10 03.10 0.7
 1.0s 1.10nm

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

? DEC 24, 1990 15h 59m 40.95±0.70s
 53.068 S ±22.4km 22.235 E ±20.1km
 DEPTH = 10.0km (geophysicist)
 4.9mb (1 obs.)
 SOUTH OF AFRICA (430)

MAW 24.22 143 eP 04 59.00 0.9
 SPA 37.12 180 iPg 06 26.80 -26.3X
 0.7s 3.91nm
 BCAA 57.37 356 ePc 09 31.90 0.3
 SIV 73.38 265 P 11 13.60 -1.3
 CNCB 76.88 260 P 11 36.70 1.1
 LPB 77.17 260 eP 11 36.00 -1.0
 ZOBO 77.39 260 eP 11 25.00 -13.4X
 1.0s 1.12nm
 ASPA 83.45 121 eP 12 08.00 -2.0
 0.8s 6.50nm
 TPC 144.97 254 ePKP 19 20.00 0.5
 GSC 146.25 255 ePKP 19 22.00 0.3
 SBB 146.41 253 ePKP 19 23.00 1.1
 CLC 147.07 255 ePKP 19 23.00 0.1
 ISA 147.47 254 ePKP 19 26.00 2.4X
 FRI 149.11 254 ePKP 19 31.50 5.5X
 LRM 150.08 275 ePKP 19 32.80 5.2X
 CMB 150.22 255 ePKP 19 33.00 5.2X
 SES 151.34 284 ePKPd 19 34.20 5.2X
 YKA 155.59 310 ePKP 19 55.10 20.6X
 0.8s 3.60nm

S.D. = 1.2 on 10 of 18 obs.

DEC 24, 1990 16h 26m 27.24±0.38s
 21.026 S ±8.2km 11.485 W ±6.3km
 DEPTH = 10.0km (geophysicist)
 4.9mb (16 obs.) 4.5Msz (2 obs.)
 SOUTH ATLANTIC RIDGE (410)

WIN 26.57 99 iPd 32 08.00 0.4
 0.8s 22.39nm
 PDCR 27.74 283 eP 32 18.30 0.2
 LIC 27.81 14 P 32 19.00 0.3
 1.0s 14.00nm
 Z 20s 0.20um 3.7Msz
 KIC 28.01 14 P 32 20.50 0.0
 1.1s 16.00nm
 TIC 28.22 14 P 32 22.60 0.1
 BAO 35.01 273 ePc 33 22.10 -0.3
 SEK 36.15 109 iPg 33 32.50 0.5
 1.0s 15.00nm
 SLR 36.71 105 iPg 33 35.80 -0.8
 PPD 36.99 261 e(P) 33 41.00 2.1
 BUL 37.48 96 iPd 33 41.20 -2.0
 BCAA 38.82 53 iPg 33 56.10 1.8
 1.6s 52.00nm
 id 34 02.60
 SIV 47.14 267 P 35 02.80 0.8
 CNCB 53.38 264 P 35 49.00 -1.3
 LPB 53.56 265 P 35 50.00 -1.4

Z 18s 2.75um 5.4Msz
 LR 52 40.00
 ZOBO 53.65 265 P 35 51.00 -1.2
 1.6s 12.53nm
 Z 16s 0.81um 4.9MszX
 LR 52 04.00
 LSF 67.99 10 eP 37 28.00 -0.5
 1.2s 26.80nm
 LPG 68.25 14 eP 37 30.50 -0.1
 1.1s 13.45nm
 LPL 68.27 14 eP 37 30.40 -0.2
 0.7s 5.50nm
 BGF 68.50 11 eP 37 31.20 -0.5
 SMF 68.76 11 eP 37 32.80 -0.5
 0.7s 4.40nm
 AVF 68.82 11 eP 37 33.40 -0.2
 0.7s 3.30nm
 SPA 69.10 180 iPg 37 36.90 1.4
 1.0s 5.00nm
 SSF 69.10 11 eP 37 35.20 -0.2
 1.1s 14.65nm
 LPF 69.37 7 eP 37 36.70 -0.3
 1.1s 29.30nm
 BSF 70.48 13 eP 37 42.80 -1.1
 FEL 70.78 14 eP 37 45.09 -0.7
 KHC 73.33 17 P 38 01.30 0.5
 ZST 73.51 20 eP 38 02.10 0.3
 SRO 73.56 20 eP 38 02.10 0.0
 PRU 74.37 17 P 38 07.00 0.2
 BRG 75.01 16 eP 38 10.80 0.3
 KRA 76.05 20 eP 38 16.50 0.1
 EKA 76.38 5 P 38 19.70 1.6
 1.7s 52.70nm
 NB2 83.81 11 P 38 58.80 1.0
 1.0s 9.90nm
 S.D. = 0.9 on 34 of 34 obs.

% DEC 24, 1990 16h 35m 47.70±1.07s
 43.081 N ±7.9km 0.401 W ±7.9km
 DEPTH = 10.0km (geophysicist)
 PYRENEES (378)
 ML 1.0 (STR).

JAU 0.05 152 Pg 35 50.05 0.0
 1.0s 5.00nm
 OGE 0.10 329 Pg 35 50.31 -0.1
 ESCF 0.13 269 Pg 35 50.88 0.0
 1.0s 5.00nm
 ATE 0.22 271 Pg 35 52.46 0.0
 1.0s 5.00nm
 LHE 0.23 224 Pg 35 52.81 0.1
 ISSF 0.29 260 Pg 35 53.48 -0.4
 1.0s 5.00nm
 MADF 0.31 282 Pg 35 54.71 0.5
 1.0s 5.00nm
 S.D. = 0.3 on 7 of 7 obs.

DEC 24, 1990 16h 40m 12.67±0.31s
 21.013 S ±6.7km 11.595 W ±5.3km
 DEPTH = 10.0km (geophysicist)
 5.2mb (30 obs.) 4.8Msz (5 obs.)
 SOUTH ATLANTIC RIDGE (410)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 16S, 30C
 Centroid Location:
 Origin Time 16:40:19.8 0.8
 Lat 21.00S 0.14 Lon 11.51W 0.06
 Dep 15.0 FLX Half-duration 1.9
 Moment Tensor: Scale 10**16 Nm
 Mrr=-6.53 0.54 Mtt=-0.94 0.74
 Mff=7.47 0.59 Mrt=0.00 0.00
 Mrrf=0.00 0.00 Mtf=-2.22 0.55
 Principal Axes:
 T Vol= 8.02 Plg= 0 Azm=256
 N -1.49 0 166
 P -6.53 90 180
 Best Double Couple: Mo=7.3*10**16
 NP1: Strike=346 Dip=45 Slip=-90
 NP2: 166 45 -90

WIN 26.67 99 iPg 45 54.00 0.0
 1.0s 80.00nm
 PDCR 27.64 283 eP 46 03.90 1.3
 1.0s 46 10.00
 LIC 27.82 14 P 46 04.58 0.3
 1.1s 30.00nm
 Z 20s 0.90um 4.4Msz

KIC 28.02 15 P 46 06.00 -0.1
 TIC 28.23 14 P 46 08.00 0.0
 BMA 30.23 261 eP 46 22.40 -3.6X
 BAO 34.91 273 ePd 47 04.50 -2.4
 PRY 36.08 107 iPd 47 16.90 0.1
 1.0s 30.00nm
 SEK 36.26 110 iPg 47 18.00 -0.3
 1.0s 35.00nm
 SLR 36.81 105 iPd 47 22.00 -0.9
 1.1s 25.32nm
 PPD 36.89 261 e(P) 47 25.00 1.5
 BUL 37.58 96 iPg 47 27.20 -2.3
 BCAA 38.89 53 iPg 47 41.90 1.5
 1.0s 45.00nm
 ic 47 47.90
 id 48 04.10
 KRI 39.13 91 iPd 47 41.00 -1.5
 LWI 43.54 70 iPg 48 20.20 1.3
 SIV 47.04 267 P 48 47.60 1.0
 NAI 51.09 74 iPg 49 23.00 4.9X
 CCH 51.44 264 P 49 20.20 -0.6
 CNCB 53.28 264 P 49 35.60 0.6
 LPB 53.46 265 P 49 34.00 -2.1
 ZOBO 53.55 265 P 49 36.00 -0.9
 1.2s 13.51nm
 Z 24s 1.51um 5.0MszX
 LR 05 44.00
 ARE 56.63 264 eP 50 00.00 1.0
 NNA 62.85 267 eP 50 46.50 5.0X
 1.2s 46.88nm
 LPO 66.41 10 eP 51 03.80 -0.2
 LFF 66.59 10 eP 51 08.90 3.8X
 CAF 66.79 11 eP 51 05.90 -0.6
 0.8s 6.70nm
 RJF 67.07 10 eP 51 07.70 -0.5
 0.8s 6.60nm
 Z 20s 0.60um 4.8Msz
 LSF 67.99 10 eP 51 13.80 -0.2
 1.4s 67.55nm
 TCF 68.14 10 eP 51 14.80 -0.1
 LPG 68.26 14 eP 51 15.90 -0.2
 1.1s 23.20nm
 LPL 68.28 14 eP 51 15.90 -0.2
 0.8s 12.75nm
 BGF 68.51 11 eP 51 16.80 -0.4
 1.2s 19.35nm
 SMF 68.77 11 eP 51 18.50 -0.3
 1.3s 39.70nm
 AVF 68.82 11 eP 51 18.80 -0.3
 1.4s 30.50nm
 SSF 69.11 11 eP 51 20.50 -0.4
 1.3s 25.25nm
 SPA 69.12 180 iPd 51 22.30 1.3
 1.0s 37.50nm
 LBF 69.12 11 eP 51 20.50 -0.5
 LOR 69.38 11 eP 51 22.00 -0.5
 Z 21s 0.65um 4.8Msz
 LPF 69.37 8 eP 51 22.20 -0.2
 0.8s 13.45nm
 GRR 69.75 8 eP 51 24.20 -0.5
 0.8s 9.40nm
 LDF 70.04 8 eP 51 26.00 -0.5
 0.8s 8.05nm
 FLN 70.16 8 eP 51 26.80 -0.4
 Z 19s 1.05um 5.1Msz
 KKB 70.31 27 iPg 51 29.00 0.7
 MMB 70.36 27 iPg 51 29.00 0.3
 BSF 70.49 13 eP 51 28.30 -1.1
 HAU 70.56 13 eP 51 28.80 -1.0
 Z 21s 0.40um 4.6Msz
 VBY 70.56 20 e(P) 51 30.00 0.2
 OGA 70.58 16 iPg 51 30.20 0.0
 FEL 70.80 14 eP 51 30.44 -0.9
 VTS 70.96 26 eP 51 34.00 1.5
 PTJ 71.14 20 eP 51 33.10 -0.3
 ALT 71.37 33 eP 51 36.60 1.7
 BHG 71.87 17 eP 51 37.00 -0.6
 0.7s 13.00nm
 SOP 72.91 19 eP 51 44.90 1.1
 ENN 73.12 12 eP 51 46.00 1.1
 WET 73.17 17 eP 51 45.00 -0.3
 0.7s 11.00nm
 GRF 73.25 15 ePd 51 45.70 0.0
 1.8s 99.00nm
 Z 24s 0.30um 4.5MszX
 e 51 52.00
 KHC 73.34 17 iPg 51 46.50 0.2

24d 16h

ZST	73.54	20 eP	51 47.30	-0.1
SRO	73.59	21 eP	51 47.10	-0.6
MOX	74.23	15 eP	51 51.00	-0.4
	1.6s	28.00nm		5.0mb
PRU	74.39	17 P	51 52.50	0.2
	1.5s	29.00nm		5.1mb
		e	51 58.50	
		e	52 08.50	
WTS	74.46	12 eP	51 53.50	0.9
	0.8s	10.00nm		4.9mb
MLR	74.47	26 eP	51 54.00	0.9
BRG	75.03	16 iP	51 56.20	0.2
		i	52 02.20	
CLL	75.18	16 eP	51 56.00	-0.9
KSP	75.65	18 eP	51 58.20	-1.4
KRA	76.07	20 iPc	52 02.10	0.2
	0.7s	25.00nm		5.4mb
		i	52 08.20	
EKA	76.38	5 P	52 05.00	1.5
	1.2s	31.80nm		5.3mb
NB2	83.81	11 P	52 44.40	1.2
	1.1s	24.90nm		5.3mb
QUE	91.01	58 eP	53 20.50	1.6
HYB	96.22	74 ePc	53 43.50	0.7
YKA	114.42	330 ePKP	58 53.00	-1.0
	0.6s	0.50nm		
INK	120.97	338 ePKP	59 12.00	5.8X
LZH	122.28	60 PKP	59 14.50	4.5X
	1.2s	13.00nm		
HNR	148.62	164 ePKP	00 02.00	3.4X
MAT	149.50	53 (PKP)	00 01.00	1.6

S.D. = 1.0 on 70 of 77 obs.

DEC 24, 1990 19h 03m 40.26 \pm 1.60s
 38.672 N \pm 9.0km 26.737 E \pm 15.6km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)
 MD 3.1 (ISK).

I2M	0.49	123 iPg	03 50.60	0.3
		iSg	03 58.60	
E2N	1.20	345 iPn	04 02.90	0.4
CIN	1.51	135 eP	04 07.00	-0.3
DST	1.74	57 ePn	04 11.10	0.3
EDC	1.89	27 ePn	04 12.00	-0.8
BNT	1.92	28 ePn	04 13.00	-0.2
KCT	2.01	38 ePn	04 15.00	0.3
IZI	2.69	51 ePn	04 29.00	4.5X

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

DEC 24, 1990 19h 15m 46.82 \pm 0.71s
 5.643 S \pm 3.2km 146.381 E \pm 3.2km
 DEPTH = 56.9 \pm 6.6 km
 5.3mb (27 obs.)

EAST PAPUA NEW GUINEA REGION (207)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 11S, 20C
 Centroid Location:
 Origin Time 19:15:54.2 0.6
 Lat 5.41S 0.06 Lon 146.21E 0.05
 Dep 65.0 FIX Half-duration 1.9
 Moment Tensor: Scale 10¹⁶ Nm
 Mrr= 0.55 0.41 Mtt=-6.31 0.52
 Mff= 5.77 0.58 Mrt=-6.68 0.54
 Mrf= 8.17 0.49 Mtf= 5.41 0.59
 Principal Axes:
 T Val= 11.75 Plg=35 Azm=272
 N 2.72 37 150
 P -14.47 33 30
 Best Double Couple: Mo=1.3 \times 10¹⁷
 NP1: Strike= 62 Dip=37 Slip= 2
 NP2: 331 89 127

YYYY	0.72	215 iPd	16 02.00	0.6
MNDI	2.76	259 iPd	16 33.70	4.0X
PMG	3.82	168 iPd	16 44.20	-0.3
RAB	5.95	76 iPc	17 12.50	-1.9
	0.8s	1623.88nm		6.5mb X
VSG	13.70	106 eP	19 06.00	6.1X
		eS	21 54.00	
SVO	13.77	105 eP	19 01.00	0.1
		eS	21 23.00	
HNR	13.96	106 eP	19 04.00	0.6
		e(S)	21 52.00	
QIS	16.22	203 iPc	19 33.00	0.5
MTN	16.66	243 eP	19 38.00	-0.1

AAI	18.23	275 ePd	19 59.50	2.0
PJG	19.16	356 eP	20 09.40	0.7
KNA	19.99	238 eP	20 16.00	-1.5
RMQ	20.85	174 eP	20 27.00	0.7
		i	20 28.90	
		e	20 28.00	
ASPA	21.58	213 eP	20 33.80	0.2
	1.4s	58.90nm		4.8mb
Z	21s	9.00um		5.1msz
		i	20 49.40	
		eS	24 30.70	
		iScS	31 52.60	
BRS	22.47	165 eP	20 43.40	0.9
		eS	25 29.00	
PVC	24.57	121 iPc	21 03.50	0.6
COO	25.34	169 eP	21 11.00	0.9
DZM	25.36	132 iPc	21 09.00	-1.5
CMS	25.71	181 eP	21 12.50	-1.0
WARB	27.80	221 eP	21 32.00	-0.7
	0.3s	11.00nm		5.0mb
BWA	28.70	176 eP	21 40.60	-0.2
		e	21 45.50	
		e	28 30.50	
CAN	29.63	176 eP	21 48.10	-1.0
		e	21 53.00	
CNB	29.66	175 eP	21 53.00	3.6X
ADE	30.03	193 e(P)	21 51.20	-1.4
	0.6s	37.33nm		5.3mb
BFD	31.58	186 e(P)	22 05.00	-1.2
TOO	31.79	181 e(P)	22 10.00	1.9
MEKA	33.77	229 eP	22 24.70	-0.7
	0.5s	31.00nm		5.5mb
COOL	34.53	220 eP	22 31.00	-0.9
MRWA	37.07	227 iPc	22 53.20	-0.2
KLB	37.21	223 iPd	22 53.50	-1.0
BAL	37.34	225 eP	22 55.00	-0.7
NWAO	38.38	221 eP	23 07.00	2.6X
Z	20s	3.00um		5.1msz
N	20s	1.30um		
E	20s	2.10um		
MUN	38.49	223 eP	23 05.00	-0.3
RKG	39.25	220 eP	23 15.00	3.4X
MAT	42.65	350 (P)	23 37.00	-2.5
	2.0s	82.35nm		5.1mb
		eS	29 55.00	
TCW	43.30	149 P	23 45.50	0.8
PUZ	43.37	143 P	23 45.50	0.2
MNG	43.51	147 P	23 46.20	-0.2
	0.4s	44.00nm		5.6mb
		i	23 58.80	
LTZ	43.51	152 P	23 47.30	0.9
MRW	43.54	149 eP	23 47.10	0.5
OIZ	43.55	305 eP	23 49.30	2.3
NOZ	43.59	143 eP	23 47.10	0.1
CAW	43.64	148 P	23 48.40	1.0
KGM	43.68	279 ePd	23 49.20	1.1
WDW	43.72	149 P	23 48.30	0.3
SSE	43.75	328 P	23 49.50	1.1
	1.0s	25.00nm		4.9mb
Z	24s	1.00um		4.6mszX
E	13s	0.30um		
		eS	30 14.00	
MTW	43.90	148 eP	23 49.40	-0.2
MOW	43.96	148 eP	23 50.10	0.0
NJ2	45.74	327 Pc	24 05.40	1.0
		SP	24 28.00	
		S	30 46.00	
IPM	46.42	282 ePd	24 11.00	1.0
	1.1s	52.60nm		5.4mb
WHN	47.27	321 eP	24 17.50	1.0
SNG	47.41	285 eP	24 17.20	-0.6
LOE	49.69	298 eP	24 35.50	0.1
NNT	49.77	292 eP	24 37.20	1.2
TIA	49.85	329 eP	24 35.50	-0.9
GYA	49.99	312 P	24 38.40	0.7
		PP	24 57.40	
		S	31 48.00	
NST	50.45	296 eP	24 44.00	2.8X
SNY	51.63	338 Pd	24 49.80	0.1
Z	26s	1.40um		4.9mszX
		S	32 08.00	
BDT	52.03	297 eP	24 53.00	-0.2
BSI	52.19	281 eP	24 52.00	-2.5
MDJ	52.26	345 eP	24 52.20	-2.3
KMI	52.29	308 Pd	24 56.50	1.2
		PP	25 14.00	
CHG	52.68	299 ePc	24 57.90	-0.1

CN2	1.0s	20.00nm		5.1mb
	52.72	341 Pc	24 59.00	1.1
	1.0s	10.00nm		4.8mb
Z	20s	1.50um		5.0msz
		ePP	25 15.00	
		eS	32 20.00	
XAN	53.02	321 P	24 59.40	-0.9
		S	32 27.00	
BJI	53.29	331 eP	25 02.00	-0.1
	2.0s	140.00nm		5.6mb
Z	26s	0.99um		4.7mszX
		eS	32 30.00	
TIY	53.47	327 Pd	25 03.30	-0.3
Z	24s	0.80um		4.7mszX
		S	32 31.00	
CD2	54.59	314 eP	25 11.10	-0.8
HHC	56.21	329 P	25 23.50	-0.1
BTO	56.84	327 eP	25 28.00	-0.1
		S	33 19.00	
LZH	57.54	320 eP	25 32.50	-0.7
	1.5s	51.00nm		5.4mb
Z	25s	0.52um		4.5mszX
		PcP	26 25.00	
		eS	33 20.00	
GTA	62.07	320 iPc	26 03.80	-0.4
	1.0s	20.00nm		5.2mb
LSA	63.53	307 eP	26 14.40	0.0
PAE	63.59	107 eP	26 14.00	-0.3
	1.2s	55.00nm		5.5mb
PPN	63.72	107 eP	26 15.00	-0.2
	1.2s	85.00nm		5.7mb
TVO	63.90	107 eP	26 17.00	0.5
	1.2s	125.00nm		5.8mb
TBI	64.08	113 iP	26 18.30	0.8
	1.3s	220.00nm		6.0mb
PMO	65.13	104 iP	26 24.80	0.4
	1.2s	95.00nm		5.7mb
VAH	65.39	104 iP	26 26.40	0.3
	1.2s	45.00nm		5.3mb
TPT	65.40	104 iP	26 26.50	0.4
	1.2s	55.00nm		5.4mb
RUV	65.63	104 iP	26 27.80	0.2
	1.2s	45.00nm		5.3mb
GUN	67.16	303 P	26 37.40	-0.3
PKI	67.44	303 P	26 39.30	-0.1
KKK	67.62	303 P	26 39.80	-0.6
DMN	67.70	303 P	26 41.30	0.3
GKN	68.22	303 P	26 43.80	-0.3
KOD	70.42	283 eP	26 58.00	0.7
HYB	70.76	291 eP	26 58.00	-1.6
		e	27 22.50	
GBA	71.05	286 Pc	27 01.60	0.3
	1.0s	16.90nm		4.9mb
WMO	72.12	319 P	27 02.70	-4.7X
NDI	74.67	302 eP	27 24.50	2.0
POO	75.37	291 eP	27 26.50	-0.2
ANM	78.57	19 eP	27 43.60	0.0
SVW	80.17	25 ePc	27 53.10	0.8
	1.2s	46.30nm		5.3mb
TTA	80.96	23 ePc	27 56.90	0.4
MAW	82.34	203 eP	28 03.50	0.0
	0.9s	23.00nm		5.2mb
PMR	83.15	26 ePc	28 06.80	-0.9
	1.4s	42.20nm		5.3mb
IMA	83.44	21 ePc	28 09.30	-0.1
SPA	84.39	180 iPc	28 13.80	-0.4
	0.8s	5.42nm		4.7mb
		i	28 31.50	
TOA	84.64	26 ePc	28 15.80	0.4
FBA	85.10	23 ePc	28 16.20	-1.3
	1.0s	27.10nm		5.3mb
BRW	85.24	16 ePc	28 18.50	0.4
INK	91.55	21 ePc	28 47.20	-1.0
WDC	94.45	50 eP	29 01.80	-0.3
BKS	94.52	53 eP	29 04.00	1.5
GCC	94.65	53 eP	29 06.10	-3.0X
PRS	95.11	54 eP	29 04.30	-1.0
MIN	95.15	50 eP	29 05.50	-0.1
ORV	95.19	51 eP	29 05.50	-0.1
LLA	95.47	54 eP	29 07.90	0.9
CMB	95.98	52 eP	29 09.20	-0.1
MBC	96.46	14 eP	29 10.00	-0.6
FRI	96.48	54 eP	29 10.50	-1.0
PNT	96.85	41 eP	29 14.00	1.1
MWC	97.74	56 eP	29 17.00	-0.5
SBB	97.94	56 eP	29 19.00	0.8

CNC	98.15	55	eP	29	19.00	-0.1	0.6s	3.00nm	4.5mb	LBF	84.08	333	eP	21	26.70	-0.5					
GSC	98.79	55	eP	29	17.00	-5.0X	53.59	278	iP	18	19.00	-0.2	0.7s	12.15nm	5.0mb						
BCAO	128.05	271	iPKPd	34	55.50	6.3X	59.16	266	iPc	18	58.60	-0.5	SSF	84.17	333	eP	21	27.40	-0.2		
	0.6s	14.00nm					1.0s	40.00nm	5.5mb		0.9s	20.45nm	5.2mb								
		ic	35	07.70			YKA	59.25	32	eP	18	57.80	-1.3	LPL	84.36	330	eP	21	29.00	0.1	
NNA	133.59	112	ePKP	35	15.50	15.8X	0.6s	6.40nm	4.9mb		0.9s	14.75nm	5.0mb								
	0.9s	6.72nm					GBA	62.40	264	Pc	19	19.70	-1.3	LPG	84.37	330	eP	21	29.10	0.1	
CNCB	139.36	124	PKP	35	02.10	-9.0X	0.9s	25.30nm	5.3mb		0.9s	17.20nm	5.1mb								
LPB	139.40	123	PKP	35	02.00	-9.0X	PNT	64.21	46	eP	19	32.00	-0.6	GRR	84.39	336	eP	21	28.50	-0.2	
ZOBO	139.51	123	PKP	35	02.00	-9.4X	0.8s	10.00nm	4.8mb		0.7s	11.00nm	5.0mb								
		LR	22	18.00			KOD	64.58	261	eP	19	36.00	0.3	SMF	84.42	333	eP	21	28.60	-0.3	
CCH	140.56	126	PKP	35	06.20	-6.8X	NUR	66.00	331	iP	19	42.50	-1.3		0.8s	14.80nm	5.1mb				
SDV	143.15	83	ePKP	35	13.50	-4.0X	0.6s	14.30nm	5.1mb		AVF	84.46	333	eP	21	28.90	-0.1				
TOV	143.93	81	ePKP	35	15.40	-3.2X	NEW	66.17	46	P	19	43.60	-1.6		0.7s	23.70nm	5.3mb				
SIV	145.35	129	iPKPd	35	19.60	-1.3	0.9s	9.87nm	4.8mb		LPF	84.76	336	eP	21	30.70	0.2				
SHGH	146.60	272	ePKP	35	27.00	4.0X	WDC	67.63	55	eP	19	55.20	0.7		0.8s	17.45nm	5.1mb				
OLLA	146.85	80	ePKP	35	24.50	0.9	SES	67.98	41	eP	19	56.00	-0.6	BGF	84.83	333	eP	21	30.80	-0.1	
WEGH	146.87	272	ePKP	35	26.00	2.5X	FFC	69.23	34	iPc	20	03.60	-0.5	MAF	85.22	333	eP	21	33.20	0.3	
KUK	146.93	273	ePKP	35	25.00	1.4	0.8s	33.00nm	5.3mb		TCF	85.28	334	eP	21	33.20	0.0				
BMA	150.01	160	ePKP	35	32.00	3.8X	HFS	69.94	335	eP	20	06.90	-1.5		0.7s	4.40nm	4.6mb				
KIC	151.27	273	PKP	35	36.38	6.1X	0.4s	12.60nm	5.2mb		LSF	85.54	334	eP	21	34.50	0.0				
TIC	151.55	274	PKP	35	36.92	6.2X	Z	16s	0.34um	4.7MsZ		0.8s	20.15nm	5.2mb							
BAO	154.51	146	ePKPd	35	43.20	8.3X					MFF	85.76	335	eP	21	35.90	0.3				
	S.D. = 0.9	on 112 of 135 obs.					NB2	69.97	337	P	20	07.70	-0.9		0.8s	18.80nm	5.2mb				
	DEC 24, 1990	21h 09m 03.30±0.62s					LRM	70.19	46	ePc	20	10.60	0.1	TUL	86.05	44	iP	21	37.40	0.2	
	41.921 N ± 6.5km	142.347 E ± 4.4km					CMB	70.50	56	eP	20	12.80	0.6		0.8s	7.60nm	4.8mb				
	DEPTH = 71.3 ± 5.0 km						BONR	71.83	55	P	20	21.30	0.7	RJF	86.37	333	eP	21	39.00	0.3	
	5.0mb (55 obs.)						FR8	71.86	14	eP	20	19.00	-0.8		0.7s	9.90nm	5.0mb				
	HOKKAIDO, JAPAN REGION	(224)					TNP	72.41	55	P	20	24.80	0.9	Z	18s	0.20um	4.6MsZ				
							0.9s	6.51nm	4.6mb		CAF	86.52	333	eP	21	40.10	0.7				
HO0J	0.84	56	iP+	09	19.40	-0.7	DUG	73.65	51	P	20	32.00	1.0		0.7s	19.85nm	5.3mb				
			S	09	31.80		BW06	73.76	47	iP	20	31.20	-0.5	LFF	86.95	334	eP	21	42.20	0.7	
MRRJ	1.07	298	iPd	09	23.00	0.0	0.8s	7.14nm	4.7mb		0.8s	21.50nm	5.3mb								
			S	09	37.70		DAU	74.40	50	eP	20	36.10	0.6	LPO	87.03	333	eP	21	42.50	0.6	
SAP	1.36	327	iP	09	26.80	0.0	1.0s	0.70nm	3.5mb X		0.7s	16.55nm	5.3mb								
			iS	09	44.10		MSU	75.14	51	P	20	41.20	1.5	ZOBO	143.43	55	ePKP	28	30.00	-2.2	
AOMJ	2.02	228	eP	09	37.20	1.4	KRA	75.46	326	iPd	20	41.70	0.7	LPB	143.65	55	PKP	28	37.00	4.6X	
			eS	10	02.70		e	20	55.70		0.7s	16.55nm	5.3mb	CNCB	143.93	55	PKP	28	32.00	-1.0	
MAT	6.26	212 (P)		10	35.00	-0.1	KSP	76.33	328	iPc	20	46.30	0.4	CCH	145.48	54	PKP	28	36.60	1.3	
	1.0s	42.00nm				4.8mb	PV09	76.90	50	eP	20	50.90	1.2	SIV	147.23	45	PKP	28	39.00	1.2	
		eS	11	37.00			BRG	77.22	329	iP	20	51.10	0.3	SOB1	147.29	6	ePKP	28	40.50	2.5	
MDJ	9.69	290	Pd	11	24.50	2.3	CLL	77.22	330	iPc	20	50.70	-0.1	BAO	152.33	22	ePKP	28	53.50	7.7X	
CN2	12.54	284	P	12	01.60	1.1	0.8s	16.00nm	5.0mb						S.D. = 1.0	on 104 of 111 obs.					
Z	14s	1.20um					PRU	77.70	329	Pc	20	54.00	0.6		% DEC 24, 1990	21h 35m 45.10±0.92s					
		ePP	12	09.00			1.0s	14.50nm	4.9mb		SRO	77.87	325	iP	20	55.90	1.5				
		eS	14	26.00			77.87	325	iP	20	55.90	1.5	ZST	78.08	326	eP	20	54.70	-0.9		
BJ1	19.83	273	Pc	13	27.50	-3.2X	78.08	326	eP	20	54.70	-0.9	WIT	78.18	334	eP	20	58.00	2.0		
	1.0s	80.00nm				5.0mb	78.18	334	eP	20	58.00	2.0	MOX	78.27	330	eP	20	57.00	0.4		
SSE	20.10	244	eP	13	29.50	-4.0X	78.27	330	eP	20	57.00	0.4	HOF	78.45	330	iPd	20	58.20	0.6		
TIA	20.36	262	Pc	13	33.70	-2.6	78.45	330	iPd	20	58.20	0.6	KHC	78.76	329	eP	21	00.00	0.6		
	1.0s	50.00nm				4.8mb	78.76	329	eP	21	00.00	0.6	EKA	78.77	341	P	21	00.00	0.8		
NJ2	21.14	250	Pd	13	42.30	-1.8	0.7s	7.40nm	4.7mb		WTS	78.83	334	eP	21	00.00	0.4				
Z	20s	0.20um				3.5MsZ	0.8s	19.00nm	5.1mb		0.8s	19.00nm	5.1mb								
HHC	23.07	278	eP	14	01.60	-1.7	79.02	329	eP	21	01.40	0.6	WET	79.02	329	eP	21	01.40	0.6		
TIY	23.30	270	Pd	14	04.20	-1.3	1.0s	21.00nm	5.0mb		GRF	79.20	330	iPc	21	02.60	0.9				
Z	22s	0.50um				3.9MsZ	79.20	330	iPc	21	02.60	0.9	0.8s	25.00nm	5.2mb						
WHN	25.17	252	eP	14	23.00	-0.3	e	21	23.80		ENN	80.16	334	eP	21	07.00	0.2				
XAN	27.37	264	P	14	42.00	-1.6	80.16	334	eP	21	07.00	0.2	0.7s	13.00nm	5.0mb						
LZH	30.30	272	eP	15	06.00	-4.0X	80.17	328	iPd	21	08.30	1.3	BHG	80.17	328	iPd	21	08.30	1.3		
	1.2s	16.00nm				4.6mb	0.8s	20.00nm	5.1mb		ABH	80.36	332	eP	21	08.01	0.1				
GTA	32.12	280	eP	15	25.40	-0.5	80.36	332	eP	21	08.01	0.1	ALO	80.92	51	eP	21	12.00	0.6		
	0.8s	7.00nm				4.5mb	0.9s	2.31nm	4.1mb		0.9s	2.31nm	4.1mb								
CD2	32.69	263	P	15	29.20	-1.6	81.24	329	iPc	21	13.10	0.4	SQTA	81.24	329	iPc	21	13.10	0.4		
	0.6s	10.00nm				4.8mb	0.9s	11.50nm	4.8mb		0.9s	11.50nm	4.8mb								
GYA	33.03	254	P	15	32.60	-1.3	id	21	13.60		OGA	81.60	329	iPd	21	15.50	0.8				
KMI	36.65	255	Pc	16	07.00	2.0	0.8s	11.00nm	4.8mb		0.8s	11.00nm	4.8mb		PUZ	5.56	209	eP	18	44.00	-1.5
WMO	39.49	292	P	16	28.60	0.3	81.70	332	eP	21	14.80	-0.3	CDF	81.70	332	eP	21	14.80	-0.3		
		PP	16	46.00			0.8s	8.05nm	4.7mb		BSF	82.37	332	eP	21	17.60	-1.0				
BRW	41.66	25	ePc	16	44.50	-1.2	0.7s	4.40nm	4.5mb		0.7s	4.40nm	4.5mb								
IMA	42.16	33	eP	16	49.50	-0.5	82.38	332	eP	21	17.80	-0.7	HAU	82.38	332	eP	21	17.80	-0.7		
	0.6s	4.90nm				4.5mb	0.7s	6.60nm	4.7mb		0.7s	6.60nm	4.7mb		LOR	83.87	333	eP	21	25.70	-0.4
LSA	42.69	270	eP	16	58.60	3.4X	83.87	333	eP	21	25.70	-0.4	0.8s	22.15nm	5.2mb						
CHG	43.37	251	eP	17	01.10	0.9	Z	19s	0.22um	4.6MsZ		Z	19s	0.22um	4.6MsZ						
PMR	44.34	40	eP	17	06.10	-1.4	83.94	336	eP	21	25.80	-0.6	FLN	83.94	336	eP	21	25.80	-0.6		
FBA	44.63	35	eP	17	09.60	-0.3	0.7s	8.80nm	4.9mb		0.7s	8.80nm	4.9mb								
	0.9s	16.80nm				4.9mb	Z	20s	0.20um	4.5MsZ		Z	20s	0.20um	4.5MsZ						
NST	44.67	247	eP	17	14.50	3.8X	83.98	336	eP	21	26.20	-0.5	LDF	83.98	336	eP	21	26.20	-0.5		
TOA	45.66	39	eP	17	18.70	0.5	0.7s	6.60nm	4.8mb		0.7s	6.60nm	4.8mb								
GUN	47.56	272	Pc	17	34.50	0.5															
KKN	48.08	272	Pc	17	38.30	0.5															
PKI	48.10	272	Pc	17	38.30	0.2															
	0.6s	28.00nm				5.4mb															
DMN	48.30	272	Pc	17	40.20	0.6															

24d 22h

FRI	88.70	43	eP	30	13.80	-0.3
TPC	88.90	47	eP	30	16.00	0.8
CMB	89.05	42	eP	30	15.80	0.0
CLC	89.12	45	eP	30	16.00	-0.3
GSC	89.25	46	eP	30	17.00	0.1
WDC	89.69	39	eP	30	20.70	2.0
TNP	90.88	44	eP	30	25.00	0.4
	1.0s	2.75nm			4.6mb	
FRB	127.94	32	ePKP	36	25.00	-1.0
SOD	142.89	344	ePKP	36	51.00	-2.8X
BCAO	147.30	212	iPKPd	37	06.20	3.4X
	0.8s	14.00nm				
		id		37	57.00	
NUR	148.90	338	iPKP	37	06.80	2.9X
	0.8s	55.70nm				
WAJH	149.03	266	ePKPc	37	07.60	2.4X
AYN	150.39	271	ePKPc	37	12.00	4.9X
BADA	151.13	270	ePKPc	37	14.00	5.8X
HQL	151.30	271	ePKPd	37	15.00	6.5X
NB2	151.54	350	PKP	37	12.70	4.7X
	0.8s	8.80nm				
HFS	151.99	347	ePKP	37	13.20	4.6X
	1.1s	23.20nm				
KIC	152.56	166	PKP	37	19.00	8.2X
	S.D. = 1.2	on 18 of 30 obs.				

* DEC 24, 1990 22h 20m 46.71± 0.94s
 33.327 S ±10.6km 179.022 W ±19.0km
 DEPTH = 33.0km (normal)
 4.6mb (1 obs.)

SOUTH OF KERMADEC ISLANDS (179)

HBZ	4.79	206	eP	21	59.70	1.4
			eS	22	58.00	
PUZ	5.23	204	eP	22	04.90	0.3
			eS	23	08.70	
NOZ	5.79	203	eP	22	11.20	-1.4
DZM	17.05	307	iPd	24	45.10	0.9
AFI	20.42	21	eP	25	36.00	12.1X
BRS	25.00	276	iPd	26	13.00	4.0X
ASPA	42.18	271	eP	28	36.10	-2.0
	1.3s	16.60nm			4.6mb	
RVR	88.51	47	eP	33	52.00	14.9X
SBB	88.70	46	eP	33	37.00	-1.1
CLC	89.61	46	eP	33	34.00	-8.3X
GSC	89.74	46	eP	33	35.00	-8.0X
BCAO	146.92	213	iPKPc	40	26.90	0.9
	0.9s	9.00nm				
		id		41	21.40	
NUR	148.72	338	iPKP	40	28.20	0.8
	0.9s	30.40nm				
HFS	151.91	346	ePKP	40	32.50	0.3
	0.6s	3.30nm				
	S.D. = 1.4	on 9 of 14 obs.				

& DEC 24, 1990 22h 27m 52.81s
 61.687 N 150.748 W
 DEPTH = 52.5km
 SOUTHERN ALASKA (2)
 <AGS-P>.

SUA	0.22	179	iP	28	02.20	0.4
			eS	28	10.29	
PWA	0.42	95	iP	28	03.25	-0.1
			eS	28	12.15	
SKT	0.47	309	iP	28	03.14	-0.9
			eS	28	11.61	
CGLM	0.71	238	iP	28	06.54	-0.5
			eS	28	17.96	
PMS	0.72	127	iP	28	06.37	-0.7
			eS	28	17.34	
NCG	0.73	248	eP	28	06.37	-0.9
			eS	28	18.25	
PLRM	0.78	96	iP	28	06.79	-1.0
			eS	28	18.40	
CRP	0.80	239	eP	28	07.74	-0.5
			eS	28	19.97	
SPU	0.81	232	iP	28	07.44	-0.8
			S	28	19.54	
GHO	0.87	84	iP	28	08.56	-0.6
			eS	28	20.98	
BGL	0.90	242	eP	28	08.74	-0.7
CKL	0.91	238	eP	28	08.67	-1.0
			eS	28	22.26	
NKA	0.98	194	iP	28	11.80	1.4
KNK	1.13	103	iP	28	11.78	-0.8
			eS	28	27.28	

SLKM	1.21	168	eP	28	12.36	-1.4
RDT	1.38	216	eP	28	15.11	-1.0
			eS	28	33.27	
HUR	1.40	21	iP	28	15.38	-0.9
			iS	28	33.15	
RDN	1.53	221	eP	28	17.33	-1.0
REF	1.53	219	eP	28	17.61	-0.7
NCT	1.55	224	eP	28	17.72	-0.8
			eS	28	37.69	
RS2	1.57	219	eP	28	18.21	-0.7
			eS	28	38.87	
RSO	1.57	219	iP	28	18.10	-0.8
			eS	28	37.65	
RED	1.61	219	eP	28	18.57	-0.8
			eS	28	39.68	
NNL	1.67	189	eP	28	21.83	1.7
SEW	1.71	158	eP	28	19.91	-0.7
RND	1.94	26	eP	28	22.24	-1.7
GLI	1.94	113	iP	28	21.26	-2.7
INE	1.99	216	eP	28	23.52	-1.2
KNIM	1.99	131	eP	28	21.26	-3.3
VZW	2.12	105	eP	28	23.85	-2.6
CNPM	2.18	187	eP	28	27.77	0.4
VLZ	2.20	103	eP	28	24.64	-2.8
TOA	2.21	77	iP	28	26.68	-1.1
KLU	2.32	93	iP	28	26.75	-2.6
	34 obs. associated					

& DEC 24, 1990 22h 34m 11.42s
 61.972 N 148.917 W
 DEPTH = 15.0km
 SOUTHERN ALASKA (2)
 <AGS-P>.

GHO	0.20	181	iP	34	16.36	0.0
			iS	34	20.19	
SML	0.32	120	iP	34	18.13	-0.2
			eS	34	23.31	
PLRM	0.39	195	iP	34	19.36	-0.2
			eS	34	25.92	
PWA	0.56	235	iP	34	22.00	-0.4
KNK	0.60	158	iP	34	22.72	-0.4
			eS	34	31.07	
CUT	0.77	305	iP	34	24.53	-1.4
			eS	34	35.53	
PMS	0.79	203	eP	34	25.72	-0.7
			eS	34	36.87	
SUA	1.01	240	eP	34	29.47	-0.7
			eS	34	43.20	
HUR	1.06	342	iP	34	29.70	-1.3
			eS	34	43.41	
SKT	1.23	272	iP	34	32.44	-1.4
			eS	34	49.22	
TOA	1.30	83	eP	34	34.00	-1.0
GLI	1.40	141	eP	34	35.76	-0.6
RND	1.44	1	eP	34	35.24	-1.7
VZW	1.46	128	eP	34	37.53	0.3
			eS	34	56.99	
VLZ	1.50	123	eP	34	36.70	-1.0
KLU	1.51	107	eP	34	36.26	-1.6
			iS	34	56.48	
SLKM	1.60	204	eP	34	39.63	0.4
CGLM	1.62	247	eP	34	39.66	0.1
			eS	35	01.56	
NCG	1.65	251	eP	34	39.72	-0.3
			eS	35	02.91	
TZL	1.65	86	eP	34	39.23	-0.7
NKA	1.66	223	eP	34	41.49	1.4
SDG	1.67	69	eP	34	39.27	-1.0
SPU	1.70	244	eP	34	40.93	0.3
			eS	35	03.70	
KNIM	1.73	160	eP	34	41.28	0.2
BGL	1.81	248	eP	34	42.66	0.4
CKL	1.81	246	eP	34	43.09	0.7
			eS	35	07.24	
SEW	1.89	188	eP	34	44.95	1.5
MTU	2.08	162	eP	34	49.04	2.8
RDT	2.19	232	eP	34	48.33	0.5
REF	2.36	233	eP	34	51.34	1.0
RDN	2.37	233	eP	34	50.71	0.3
RSO	2.40	232	eP	34	52.60	1.7
RS2	2.40	233	eP	34	52.84	2.0
NCT	2.40	236	eP	34	51.54	0.7
GLB	2.49	100	eP	34	52.06	0.0
	35 obs. associated					

* DEC 24, 1990 23h 21m 36.84± 0.52s

52.918 S ±15.5km 22.424 E ±15.9km
 DEPTH = 10.0km (geophysicist)
 4.6mb (3 obs.)
 SOUTH OF AFRICA (430)

BUL	33.06	11	eP	28	14.90	0.2
KRI	36.45	12	iPc	28	42.60	-1.2
BCAO	57.23	355	iPd	31	27.10	0.6
	0.6s	6.00nm			4.8mb	
BAO	65.88	276	ePc	32	24.30	-0.6
SIV	73.51	265	eP	33	10.00	-1.6
BFD	76.34	135	eP	33	27.00	-0.5
			e	33	34.00	
CNCB	77.02	259	P	33	32.00	-0.2
LPB	77.31	259	P	33	33.00	-0.6
ZOBO	77.53	260	P	33	34.00	-1.0
GBA	81.28	54	P	33	54.00	-0.4
	0.7s	2.20nm			4.3mb	
ASPA	83.43	121	iPc	34	04.20	-1.5
	2.4s	11.90nm			4.7mb	
GKN	97.01	52	P	35	00.00	-9.8X
SSE	119.22	76	ePd	37	11.70	23.0X
PV09	143.95	266	ePKP	41	11.00	-2.9X
PLM	145.05	252	ePKP	41	23.00	7.3X
TPC	145.12	254	ePKP	41	15.00	-0.6
PEC	145.61	253	ePKP	41	15.90	-0.6
MWC	146.37	252	ePKP	41	19.00	1.1
GSC	146.40	255	ePKP	41	19.00	1.2
DAU	146.43	267	iPKP	41	19.00	1.0
	0.8s	4.50nm				
SBB	146.56	253	ePKP	41	19.00	0.9
8W06	146.80	272	iPKP	41	08.30	-10.1X
	1.0s	11.25nm				
CLC	147.22	255	ePKP	41	20.00	0.9
ISA	147.63	254	ePKP	41	23.00	3.3X
FFC	147.85	296	ePKPc	41	21.60	2.2X
	1.0s	21.00nm				
TNP	148.53	258	ePKP	41	24.00	2.7X
	1.0s	7.75nm				
FRI	149.26	254	ePKP	41	25.30	3.1
LRM	150.19	275	ePKP	41	28.90	5.3X
CMB	150.37	255	ePKP	41	29.30	5.4X
BKS	151.33	253	ePKP	41	32.00	6.7X
SES	151.41	284	ePKP	41	30.00	5.0X
MBC	152.44	341	ePKP	41	31.00	5.3X
	1.0s	12.00nm				
MIN	152.59	257	ePKP	41	33.30	6.1X
WDC	153.29	257	ePKP	41	34.80	6.8X
YKA	155.58	310	ePKP	41	24.80	-5.6X
	1.1s	1.70nm				
	S.D. = 1.2	on 19 of 35 obs.				

% DEC 24, 1990 23h 26m 09.21± 1.21s
 41.131 N ±10.5km 22.427 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (3B3)

GRG	0.18	186	iPc	26	13.38	0.2
KNT	0.36	85	iPc	26	16.80	0.2
			eS	26	21.96	
THE	0.64	141	iPd	26	21.36	-0.7
			eS	26	29.84	
SOH	0.77	113	ePc			

SRS	0.88	90	ePd	46	18.52	0.0	IPM	10.48	135	ePd	09	31.20	5.2X	E	12s	3.90um				
			eS	46	30.36			1.4s	89.80nm				5.8mb	MNI	32.71	107	e(P)	13	28.50	1.8
LIT	1.02	178	ePd	46	21.48	0.5	KGM	13.91	136	eP	10	20.00	8.1X	BJI	34.16	32	eP	13	39.50	0.5
			eS	46	35.88		HYB	15.50	292	ePd	10	39.00	6.3X	E	12s	1.08um				
PAIG	1.53	141	ePd	46	29.40	0.5		1.4s	250.00nm				5.2mb	CN2	41.75	35	eP	14	44.00	1.5
	S.D. = 0.6	on	8	of	8	obs.	KMI	15.50	32	Pd	10	35.00	2.1	N	15s	1.30um				
							Z	15s	5.80um					E	15s	2.00um				
? DEC 25, 1990	00h	32m	16.68±1.93s				GBA	15.87	277	P	10	39.00	1.6			PP	14	49.00		
	21.342 S ±18.1km	67.584 W ±36.1km					KOD	15.99	265	eP	10	32.00	-7.3X			eS	21	02.00		
	DEPTH = 167.2 ± 14.3 km						OIZ	17.03	64	eP	10	56.00	3.8X	SHI	41.90	301	eP	14	45.00	0.8
	3.8mb (1 obs.)						N	11s	2.20um					MAT	46.76	51	(P)	15	30.00	7.0X
	CHILE-BOLIVIA BORDER REGION	(124)					E	11s	3.10um							eS	23	22.00		
								SP	11	03.50				MJMA	47.45	294	ePc	15	30.00	1.4
ANT	3.52	228	iPd	33	11.80	0.0	PKI	17.17	334	P	10	54.60	0.4	KMSA	47.74	286	ePc	15	32.30	1.3
CCH	4.17	19	P	33	20.50	0.0	GUN	17.28	336	P	10	56.20	0.6	MUN	48.92	154	eP	15	40.00	0.2
CNCB	4.52	355	iPc	33	26.10	0.6	DMN	17.33	334	P	10	56.60	0.4	AFIF	49.17	291	ePc	15	45.30	3.3X
			S	34	16.00		KKN	17.41	334	P	10	57.80	0.6	NWAO	50.17	154	eP	15	55.00	5.6X
LPB	4.81	354	iPc	33	29.00	-0.1	LSA	17.61	353	eP	11	00.00	0.2	ASPA	53.08	132	eP	16	11.10	-0.4
	1.0s	180.00nm					Z	20s	8.76um							1.2s	16.40nm			4.9mb
ZOBO	5.07	354	iPc	33	32.10	-0.6		PP	11	17.00				WAJH	55.30	293	ePc	16	29.70	1.9
ARE	6.10	322	eP	33	41.00	-5.1X	GKN	17.88	333	P	11	03.60	0.7	OIS	55.67	125	eP	16	30.00	-0.5
			iS	34	46.00		GYA	18.77	39	iPd	11	14.00	0.1	AYN	55.98	297	ePc	16	32.70	0.1
SIV	8.15	50	iPd	34	12.20	-0.9X		2.0s	300.00nm				5.2mb	DSI	56.77	300	eP	16	39.00	0.7
PPD	15.14	96	eP	35	47.00	3.7X	Z	14s	2.10um				5.0MszX	BADA	56.83	296	ePc	16	39.60	0.9
YKA	91.45	340	eP	45	04.50	0.0	N	10s	3.00um					PRNI	56.97	298	eP	16	41.00	1.2
	0.6s	0.50nm					E	10s	4.30um					MBH	57.03	298	eP	16	41.00	0.7
	S.D. = 0.6	on	6	of	9	obs.	POO	20.10	291	iPc	11	30.20	1.4	KAS	59.53	311	iPc	16	58.40	0.8
							CD2	20.88	25	eP	11	34.30	-2.4	ELL	61.82	305	iP	17	12.00	-1.4
? DEC 25, 1990	00h	51m	11.66±2.80s				Z	10s	3.80um				5.1MszX	VRI	65.32	315	eP-	17	32.50	-3.5X
	33.998 N ±52.8km	137.064 E ±30.6km					GZH	21.67	57	eP	11	44.00	-0.7	KDZ	65.77	310	eP	17	40.00	1.1
	DEPTH = 361.6 ± 9.7 km							5.0s	1660.00nm				5.7mb X	MLR	65.81	314	ePc	17	41.00	1.7
	3.8mb (5 obs.)						Z	12s	2.04um				4.7MszX	RMO	65.89	126	e(P)	17	43.00	3.1X
	NEAR S. COAST OF HONSHU, JAPAN	(230)					N	11s	0.84um					RZN	66.30	310	eP	17	42.00	-0.5
							E	11s	1.90um					KKB	67.53	310	iP	17	49.00	-1.1
MAT	2.71	20	iPd	52	09.80	0.0	HKC	22.02	60	iP	11	52.00	3.7X	NUR	69.19	330	iP	17	51.20	-8.8X
			iS	52	54.80		NDI	22.48	319	iPc	11	55.00	2.3	KRI	69.52	247	eP	18	07.30	4.4X
GUN	43.94	276	P	58	46.30	0.1		0.8s	67.16nm				5.2mb	KRA	70.32	319	eP	18	06.80	-0.3
KKN	44.48	277	P	58	50.20	-0.1			eS	15	58.00					i	18	08.60	6kmX	
GKN	44.94	277	P	58	53.80	0.0	TSM	25.41	106	eP	12	23.00	1.8			e	18	17.60		
GBA	57.42	265	P	00	26.00	0.0	LZH	25.54	19	eP	12	21.00	-1.5							
	0.9s	2.60nm						1.5s	240.00nm				5.6mb	SRO	71.25	316	eP	18	12.50	-0.3
INK	58.68	26	eP	00	34.00	0.1	Z	18s	6.53um				5.2Msz	BUL	71.57	244	eP	18	14.20	-1.2
MBC	60.41	16	eP	00	45.50	-0.1	E	11s	1.62um							0.8s	10.45nm			4.9mb
	0.5s	3.00nm						PP	12	29.00				ZST	72.08	317	eP	18	17.60	-0.1
YKA	68.18	28	eP	01	34.40	-0.9		PP	13	00.00				SOP	72.43	316	eP	18	20.80	1.0
	0.8s	1.50nm						S	16	43.00				KSP	72.69	320	eP	18	20.50	-0.8
HFS	75.34	334	eP	02	16.70	-0.5		SS	17	00.00						ic	18	23.00	8kmX	
	0.5s	0.70nm					XAN	25.86	30	P	12	24.50	-0.7	PRU	73.79	319	P	18	28.50	0.7
NB2	75.56	336	P	02	18.60	0.1	N	10s	1.70um							e	18	35.50	22kmX	
	0.7s	2.10nm					E	10s	1.50um					BRG	74.18	320	iP	18	30.30	0.3
FRB	80.48	11	eP	02	46.00	1.2	WHN	26.50	43	eP	12	28.00	-3.1X			1.3s	32.00nm			5.2mb
	S.D. = 0.6	on	11	of	11	obs.	Z	12s	2.20um				4.9MszX			e	18	37.00	22kmX	
							N	10s	1.90um					KHC	74.42	318	eP	18	29.70	-1.8
							E	12s	2.50um					BCAD	74.54	271	iPc	18	34.10	1.3
DEC 25, 1990	01h	06m	54.82±0.30s					PP	12	41.00						0.9s	20.00nm			5.1mb
	12.156 N ± 5.9km	93.644 E ± 4.0km					GTA	27.69	10	P	12	42.40	0.3	HFS	74.54	329	eP	18	30.50	-1.4
	DEPTH = 33.0km (normal)							1.4s	90.00nm				5.3mb			0.4s	10.20nm			5.2mb
	5.1mb (38 obs.)	4.9Msz (8 obs.)					Z	15s	1.80um				4.8MszX	Z	19s	1.21um				5.2Msz
	ANDAMAN ISLANDS REGION	(703)					N	11s	0.80um							LR	52	38.00		
	CENTROID, MOMENT- TENSOR	(HRV)						PP	12	48.00				CLL	74.77	320	ePd	18	33.00	-0.4
	Data Used: GDSN							PP	13	08.00			1.0	MOX	75.66	319	eP	18	39.00	0.5
	L.P.B.: 11S, 20C						NJ2	30.48	45	Pd	13	08.00				1.6s	34.00nm			5.1mb
	Centroid Location:							Z	12s	1.10um			4.7MszX	SFI	75.79	312	P	18	43.50	4.2X
	Origin Time	01:06:56.3	1.4					N	15s	1.70um				NB2	75.79	330	P	18	37.40	-1.7
	Lat 12.36N 0.11 Lon 93.47E 0.07							E	15s	2.90um						1.0s	9.90nm			4.8mb
	Dep 17.1 3.3 Half-duration 1.7						TIY	30.50	30	eP	13	06.00	-1.2							
	Moment Tensor: Scale 10**16 Nm							Z	30s	1.26um			4.4MszX	CTI	75.82	315	P	18	40.00	0.3
	Mrr=-9.50 0.60 Mtt= 8.56 0.58							SS	18	18.00				GRF	75.95	318	ePd	18	41.50	1.3
	Mff= 0.94 0.96 Mrt= 0.08 2.16						QUE	30.56	310	eP	13	07.00	-1.0			1.3s	21.00nm			5.0mb
	Mrf=-4.52 1.73 Mtf= 1.70 0.56						KSH	31.37	333	P	13	17.00	2.1			Z	22s	0.30um		4.6Msz
	Principal Axes:						N	10s	2.70um											
	T Val= 8.97 Plg= 3 Azm=166						SSE	31.65	49	P	13	16.00	-1.3	OGA	76.21	316	iPc	18	43.10	1.1
	N 2.24 21 75							Z	16s	1.90um			4.9MszX	OSS	76.82	315	eP	18	45.20	-0.2
	P -11.21 69 265							N	13s	1.80um				MDI	77.19	314	P	18	47.50	0.4
	Best Double Couple: Mo=1.0*10**17							E	13s	1.60um				VDL	77.30	315	eP	18	48.20	0.1
	NP1:Strike=277 Dip=46 Slip= -61								eS	18	24.00		SAX	77.33	316	eP	18	48.50	0.2	
	NP2: 58 51 -117								eSS	18	33.00		LLS	77.60	316	eP	18	49.30	-0.4	
KBR	6.03	71	eP	08	26.60	2.5	BTO	31.79	24	eP	13	17.00	-1.5	TMA	77.74	315	eP	18	49.50	-1.0
BSI	6.82	166	ePc	08	41.00	5.9X	N	11s	1.30um					VAI	77.83	315	P	18	50.00	-0.7
NST	7.20	60	eP	08	40.50	-0.1	E	11s	1.20um					SLE	77.87	317	eP	18	52.00	1.1
BDT	7.24	45	eP	08	05.40	-35.7X			PP	14	28.00		ZLA	77.96	316	eP	18	51.70	0.2	
PCT	7.96	71	iPd	08	49.60	-1.6	WMO	31.97	352	P	13	20.50	0.5	CDF	78.62	317	eP	18	53.60	-1.5
	0.3s	2.7																		

				eS	57	57.99	
XLV	0.56	190		eP	57	49.18	-0.9
				eS	57	58.53	
RDT	0.72	323		iP	57	51.37	-0.7
				eS	58	02.94	
RED	0.75	304		iP	57	51.73	-0.7
				eS	58	03.34	
NKA	0.75	11		iP	57	53.93	1.6
REF	0.76	310		iP	57	52.09	-0.6
RSO	0.76	307		iP	57	52.17	-0.5
				eS	58	03.76	
RS2	0.77	307		iP	57	52.23	-0.5
INE	0.77	275		iP	57	51.71	-1.1
				eS	58	03.08	
RDN	0.80	310		iP	57	52.40	-0.7
				eS	58	04.10	
SLKM	0.82	52		eP	57	52.76	-0.5
NCT	0.89	309		iP	57	53.75	-0.5
				eS	58	06.18	
OPT	0.93	248		iP	57	53.77	-0.9
				eS	58	06.91	
SEW	1.05	84		eP	57	55.62	-0.5
AUE	1.14	236		eP	57	56.74	-0.6
				eS	58	11.50	
AUP	1.16	237		eP	57	57.19	-0.5
				eS	58	13.10	
AGU	1.16	237		eP	57	57.08	-0.7
AUH	1.16	237		eP	57	57.27	-0.5
				eS	58	13.41	
AUI	1.17	236		eP	57	57.25	-0.6
				eS	58	12.59	
SPU	1.21	348		iP	57	58.06	-0.4
				eS	58	14.31	
CKL	1.26	342		iP	57	58.77	-0.4
CRP	1.30	347		eP	57	59.91	0.1
CGLM	1.33	350		iP	57	59.97	-0.1
BGL	1.33	342		iP	58	00.02	-0.1
PDB	1.36	262		iP	57	59.22	-1.2
				eS	58	16.83	
NCG	1.44	348		eP	58	01.59	0.0
SYI	1.47	198		eP	58	00.98	-0.9
				eS	58	19.83	
SUA	1.51	14		eP	58	02.66	0.0
CDD	1.53	226		eP	58	01.73	-1.0
				eS	58	20.74	
PMS	1.58	37		eP	58	03.73	0.2
MCNL	1.65	241		eP	58	02.85	-1.6
PWA	1.84	25		eP	58	07.51	0.5
LTI	1.85	87		eP	58	06.43	-0.7
KNIM	1.93	78		eP	58	06.42	-1.9
MTU	1.95	89		iP	58	07.17	-1.4
PLRM	1.98	35		eP	58	08.43	-0.6
SKT	1.98	0		eP	58	09.32	0.2
KNK	2.07	46		eP	58	09.79	-0.5
GHO	2.18	35		eP	58	11.19	-0.8
GLI	2.37	66		eP	58	12.13	-2.3
CUT	2.48	14		eP	58	16.23	0.2
VZW	2.68	65		eP	58	16.81	-2.1
VLZ	2.80	64		eP	58	18.95	-1.7
KLU	3.13	59		eP	58	23.79	-1.6
TOA	3.35	49		eP	58	27.88	-0.6
SDG	3.84	46		eP	58	33.90	-1.4
GLB	4.06	66		eP	58	35.84	-2.5
TGL	4.38	76		eP	58	40.68	-2.3
BALM	4.66	73		eP	58	44.69	-2.1
YAH	4.90	82		eP	58	48.91	-1.5

DEC 25, 1990 01h 57m 52.62 \pm 0.87s
13.746 N \pm 3.7 km 120.217 E \pm 5.2 km
DEPTH = 59.1 \pm 8.2 km
4.8mb (23 obs.)
MINDORO, PHILIPPINE ISLANDS (250)
Felt at Manila and Tagaytoy,
Luzon.

QCP	1.22	43	eP	58	15.00	1.3
BAG	2.67	7	eP	58	33.00	-1.2
DAV	8.46	141	eP	00	00.00	5.0X
QIZ	11.25	299	eP	00	28.50	-4.7X
N	13s		1.00um			
E	17s		2.30um			
			eS	02	29.40	
MNI	13.05	159	eP	01	04.00	6.9X
SSE	17.29	3	eP	01	50.00	-1.5
Z	20s		3.20um			
N	18s		2.10um			

	E	18s		1.40um				
WHN		17.57	343	eP	01	57.50	2.5	
		6.0s		900.00nm			5.1mb	X
	Z	22s		1.80um			5.7msz	X
	E	18s		2.60um				
NJ2		18.26	356	Pc	02	03.00	-0.5	
		1.0s		40.00nm			4.6mb	
	Z	16s		1.00um			4.5msz	X
	N	15s		1.20um				
	E	13s		0.50um				
NST		19.52	278	eP	02	21.00	2.9	X
KMI		19.97	307	eP	02	28.00	4.9	X
	Z	15s		2.60um				
				S	06	10.00		
SNG		20.34	253	eP	02	26.50	-0.2	
				eS	06	16.20		
KGM		20.37	237	eP	02	27.50	0.5	
IPM		21.00	246	ePc	02	34.80	1.3	
		0.9s		28.50nm			4.6mb	
CHG		21.03	287	eP	02	33.50	-0.2	
				e	06	40.20		
TIA		22.54	353	eP	02	47.90	-0.8	
	Z	16s		1.90um			4.6msz	X
	N	14s		1.20um				
	E	14s		0.50um				
XAN		22.65	335	P	02	49.50	-0.3	
	N	13s		1.20um				
	E	12s		0.80um				
CD2		22.83	321	eP	02	52.00	0.4	
TIY		24.86	345	eP	03	11.80	0.7	
	Z	21s		1.50um			4.5msz	
				S	07	30.00		
BJI		26.43	353	eP	03	27.00	1.4	
		1.5s		31.00nm			4.6mb	
LZH		26.66	329	eP	03	28.00	0.0	
		2.0s		57.00nm			4.8mb	
	Z	20s		2.38um			4.7msz	
	N	15s		0.98um				
	E	16s		2.49um				
				S	07	56.00		
SNY		28.13	5	Pc	03	40.20	-0.8	
		0.9s		60.00nm			5.2mb	
MTN		28.55	157	eP	03	44.00	-1.0	
CN2		30.29	8	P	03	59.30	-1.0	
	Z	16s		3.80um			5.1msz	X
	N	14s		1.20um				
	E	14s		0.40um				
				PP	04	08.00		
GTA		31.25	329	P	04	09.00	-0.1	
		1.0s		6.00nm			4.3mb	
	Z	18s		2.40um			4.9msz	
				eS	09	13.00		
GUN		34.91	299	P	04	40.60	-0.6	
PKI		35.22	299	P	04	42.60	-1.2	
		0.6s		14.00nm			5.1mb	
KKN		35.39	299	P	04	43.90	-1.2	
		0.6s		12.00nm			5.0mb	
GKN		35.99	299	P	04	49.30	-0.8	
		0.6s		12.00nm			5.0mb	
QIS		39.06	150	iPd	05	05.40	-10.2	X
ASPA		39.52	160	iPc	05	19.20	-0.3	
		0.7s		79.80nm			5.7mb	
				iS	11	17.60		
MEKA		40.15	182	eP	05	23.90	-0.7	
		0.4s		10.00nm			5.0mb	
WARB		40.18	171	eP	05	25.20	0.3	
		0.3s		7.00nm			5.0mb	
HYB		40.24	281	eP	05	26.00	0.4	

PMR 78.34 29 ePd 09 46.30 -1.5
0.8s 18.00nm 5.1mb
FBA 78.51 26 eP 09 47.70 -1.1
TOA 79.65 28 ePd 09 56.00 0.9
0.7s 40.80nm 5.5mb
INK 83.22 21 eP 10 14.00 0.4
MBC 83.60 12 eP 10 15.50 0.1
0.5s 3.00nm 4.6mb
UPP 84.44 330 iP 10 19.60 -0.2
KRA 86.06 321 eP 10 28.70 0.6
HFS 86.21 331 eP 10 28.00 -0.7
0.6s 2.50nm 4.6mb
NB2 87.00 333 P 10 32.60 0.0
0.8s 10.20nm 5.1mb
KSP 88.03 322 ePd 10 38.80 1.1
e 10 51.00
BRG 89.42 323 eP 10 44.30 0.0
GRF 91.48 322 eP 10 55.00 1.1
Z 15s 0.70um 5.2mszX
YKA 92.91 22 eP 10 59.80 -0.4
0.9s 3.50nm 4.8mb
KIC 121.83 287 PKP 16 42.94 0.3
TIC 121.99 287 PKP 16 42.98 0.0
LIC 122.14 286 PKP 16 43.42 0.2
1.1s 23.50nm
S.D. = 0.9 on 57 of 63 obs.

? DEC 25, 1990 02h 02m 50.51 ± 0.99s
15.093 S ± 29.8km 72.702 W ± 17.3km
DEPTH = 88.5 ± 20.5 km
3.5mb (1 obs.)

SOUTHERN PERU (117)

ARE 1.79 140 iPd 03 20.80 0.1
iS 03 42.50
ZOBO 4.56 105 P 04 03.90 4.8X
Z 22s 0.22um
PS 15 36.00
LR 32 08.00
LPB 4.66 109 P 04 00.00 -0.2
LR 32 48.00
CNCB 4.85 111 Pc 04 08.00 4.9X
NNA 5.07 307 eP 04 05.70 0.0
0.7s 82.19nm 5.1mb X
i 04 09.50
eS 05 05.70
CCH 6.70 111 P 04 35.00 6.5X
SIV 11.24 96 P 05 30.20 0.2
YKA 83.99 342 eP 15 11.80 -0.1
0.8s 0.50nm 3.5mb
S.D. = 0.3 on 5 of 8 obs.

* DEC 25, 1990 02h 24m 38.63 ± 1.12s
16.742 N ± 12.5km 99.685 W ± 7.6km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)

NEAR COAST OF GUERRERO, MEXICO (58)
Felt at Acapulco.

ACX 0.21 307 iP 24 45.00 -0.3
iS 24 49.00
III 1.64 7 iPc 25 06.50 0.8
iS 25 28.00
PPM 2.52 23 iP 25 18.50 -0.2
iS 25 50.14
IIT 2.62 30 iP 25 19.41 -0.4
(S) 25 55.00
CRX 2.65 0 iP 25 21.00 0.7
(S) 26 03.00
OXX 2.86 83 iP 25 23.50 0.4
(S) 26 05.88
IISM 3.13 44 iP 25 26.00 -0.8
(S) 26 10.00
MRX 3.28 334 iP 25 32.00 3.2X
(S) 26 19.00
LVVM 4.28 45 (P) 25 55.00 11.9X
ALO 19.11 343 eP 29 01.00 -0.8
TUL 19.40 10 iP 29 02.00 -2.9X
0.8s 10.70nm 4.2mb
i 29 13.30
LRM 30.89 342 eP 30 55.60 1.0
FFC 37.95 358 iPc 31 54.20 -0.5
0.8s 16.00nm 4.9mb X
YKA 46.89 351 eP 33 06.50 -0.9
0.9s 2.30nm 4.2mb
FRB 51.60 17 eP 33 44.00 0.4
INK 55.83 346 eP 34 15.00 0.2

MBC 60.40 355 eP 34 47.00 0.3
S.D. = 0.7 on 14 of 17 obs.

% DEC 25, 1990 02h 57m 30.17 ± 1.05s
41.045 N ± 11.5km 22.359 E ± 6.4km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.09 160 ePc 57 33.28 0.4
eS 57 35.92
KNT 0.42 74 iPd 57 38.92 0.1
eS 57 45.12
THE 0.62 132 ePd 57 42.08 -0.5
eS 57 51.60
SOH 0.79 106 iPd 57 45.64 0.1
eS 57 55.64
FNA 0.79 251 ePd 57 45.48 -0.1
eS 57 55.44
SRS 0.93 85 ePd 57 47.96 -0.1
eS 58 00.88
S.D. = 0.4 on 6 of 6 obs.

DEC 25, 1990 03h 56m 46.13 ± 1.15s
33.331 N ± 4.4km 75.712 E ± 2.7km
DEPTH = 51.1 ± 10.6 km
5.3mb (69 obs.)

EASTERN KASHMIR (302)

Felt in parts of Himochal
Pradesh, India.

NDI 4.81 164 iPnd 57 57.80 -0.1
eSn 58 47.80
KSH 6.12 2 Pn 58 18.00 1.7
eSn 59 28.00
QUE 8.09 250 eP 58 40.00 -3.9X
e(S) 00 10.50
GKN 9.34 122 P 58 57.00 -4.1X
DMN 9.91 123 P 59 05.00 -3.9X
KKK 9.92 121 P 59 04.40 -4.7X
PKI 10.15 122 P 59 08.00 -4.3X
GUN 10.29 119 P 59 09.60 -4.6X
MAIO 13.65 287 eP 59 55.00 -3.9X
eS 03 15.00
LSA 13.66 101 eP 59 55.30 -4.1X
WMO 14.04 38 P 59 59.60 -4.3X
POO 14.83 187 iPc 00 10.00 -4.3X
0.8s 37.31nm 4.8mb
HYB 16.05 170 iPc 00 24.00 -6.0X
1.2s 71.40nm 4.7mb
i 00 35.70
GBA 19.70 175 Pc 01 10.00 -4.1X
0.6s 13.30nm 4.4mb
SHI 20.10 266 eP 01 17.00 -1.5
GTA 20.31 66 iPc 01 19.20 -1.3
1.0s 150.00nm 5.3mb
Z 10s 1.30um 4.6mszX
N 10s 1.30um
PP 01 23.70
SP 01 31.40
KOD 23.04 176 eP 01 51.00 2.8X
LZH 23.26 75 eP 01 49.50 -0.5
1.5s 100.00nm 5.0mb
Z 20s 0.73um 4.1msz
N 12s 0.10um
E 11s 0.45um
SP 02 02.50
CD2 23.85 88 P 01 55.40 -0.2
1.0s 200.00nm 5.6mb
Z 12s 1.80um 4.8mszX
eS 06 09.00
TAB 24.27 290 eP 02 03.00 3.2X
KMI 24.91 102 Pc 02 06.50 0.4
1.0s 300.00nm 5.8mb
CHG 25.31 119 ePc 02 09.00 -0.6
0.8s 127.80nm 5.5mb
BDT 26.37 122 eP 02 19.00 -0.4
0.7s 176.20nm 5.7mb
GYA 27.63 96 iPc 02 29.80 -1.2
1.2s 100.00nm 5.3mb
N 13s 1.00um
E 13s 0.60um
S 07 10.00
NST 28.22 123 eP 02 38.00 1.8
BTO 28.23 65 P 02 36.50 0.2
N 13s 0.60um
E 13s 0.70um
eS 07 17.00

HHC 29.41 65 eP 02 45.00 -2.0
TIY 30.08 71 eP 02 52.00 -0.9
Z 24s 0.50um 4.1mszX
WHN 32.78 84 Pc 03 16.00 -0.5
N 12s 0.90um
PP 03 28.00
BJI 32.92 66 eP 03 18.00 0.4
0.6s 22.00nm 5.2mb
OIZ 33.61 106 eP 03 25.90 2.1
TIA 33.96 73 eP 03 24.60 -2.1
MKT 34.28 277 eP 03 32.00 2.5
PRNI 34.57 276 iPd 03 34.00 2.0
RMN 34.83 277 iPd 03 36.30 1.9
NJ2 36.14 80 Pd 03 45.50 0.2
0.7s 30.00nm 5.3mb
IPM 37.08 135 ePc 03 54.60 1.3
0.6s 19.70nm 5.2mb
IZI 37.32 294 eP 03 56.00 0.8
YLV 37.38 295 iP 03 56.20 0.5
ELL 37.39 288 iP 03 57.50 1.6
KHL 37.48 291 eP 03 56.80 0.2
SSE 38.31 81 Pc 04 04.00 0.5
1.3s 61.00nm 5.3mb
Z 20s 0.50um 4.3msz
N 12s 0.30um
eS 12 36.00
esS 12 50.00
SNY 38.45 63 eP 04 04.60 0.0
VRI 39.18 303 eP 04 14.00 3.3X
MLR 39.73 303 ePc 04 19.00 3.6X
CN2 39.74 60 iPc 04 15.80 0.5
Z 14s 0.90um 4.8mszX
ePP 04 24.00
CMP 40.37 303 ePc 04 13.00 -7.5X
KGM 40.49 134 eP 04 22.40 0.7
BMR 41.43 306 ePd 04 32.00 2.9X
NUR 42.64 325 iP 04 39.40 0.6
0.8s 29.30nm 5.1mb
MDJ 42.67 58 Pd 04 40.00 0.7
1.0s 80.00nm 5.4mb
KRA 43.81 310 ePd 04 48.90 0.4
0.8s 28.00nm 5.0mb
e 04 57.60
SRO 44.92 306 iP 04 58.40 0.9
KEV 45.17 338 iP 05 00.00 0.9
SHNJ 45.59 73 eP 05 03.30 0.4
ZST 45.72 307 eP 05 03.80 0.0
KUMJ 45.80 75 eP 05 04.60 0.0
UPP 45.93 323 iP 05 05.30 0.0
KSP 46.13 311 eP 05 07.20 0.2
e 06 53.70
KAGJ 46.25 77 eP 05 07.80 -0.4
YONJ 47.18 71 eP 05 14.00 -1.6
PRU 47.29 310 P 05 16.50 0.3
1.0s 21.70nm 5.1mb
BRG 47.62 311 iPc 05 18.90 0.1
1.2s 30.00nm 5.2mb
e 05 28.00
TKSJ 47.98 72 eP 05 21.10 -0.7
KHC 47.98 309 iPd 05 22.50 0.8
CLL 48.19 312 iPd 05 23.50 0.3
BHG 48.59 307 eP 05 26.60 0.3
1.1s 32.00nm 5.3mb
FVI 48.79 305 P 05 28.00 0.2
MOX 49.11 311 eP 05 30.50 0.2
WKYJ 49.14 71 eP 05 30.70 -0.1
ARV 49.17 301 P 05 31.50 0.7
NB2 49.22 325 P 05 30.40 -0.6
1.0s 33.80nm 5.3mb
ASS 49.45 301 P 05 34.00 0.9
GRF 49.46 310 ePc 05 34.00 1.0
CTI 49.65 305 P 05 34.50 -0.1
SQTA 49.77 306 iPc 05 34.50 -1.1
0.8s 11.50nm 5.0mb
i 05 36.50
i 06 56.20
SFI 49.87 302 P 05 37.30 1.2
OGA 49.95 306 iPd 05 36.40 -0.6
SAL 50.50 304 P 05 41.50 0.6
MAT 50.54 68 eP 05 41.00 -0.4
0.9s 82.35nm 5.8mb
OSS 50.58 306 eP 05 41.10 -0.7
MME 50.63 303 P 05 45.00 2.7X
SAX 51.02 307 eP 05 44.80 -0.5
MDI 51.03 305 P 05 45.10 0.2
VDL 51.07 306 eP 05 45.20 -0.3
CHJJ 51.29 68 P 05 46.20 -0.9

25d 04h

LLS 51.32 306 eP 05 46.80 -0.7
 YAMJ 51.50 65 P 05 48.30 -0.4
 SLE 51.51 307 eP 05 48.20 -0.4
 TMA 51.54 305 eP 05 48.00 -1.1
 VAI 51.66 305 P 05 48.80 -0.9
 WTS 51.96 313 eP 05 52.50 0.6
 1.0s 25.00nm 5.2mb
 KAKJ 52.15 68 P 05 51.60 -2.0
 MMK 52.17 305 eP 05 53.80 -0.2
 OFUJ 52.49 64 P 05 55.60 -0.5
 DIX 52.55 305 eP 05 56.30 -0.5
 BSF 52.63 308 eP 05 56.10 -1.0
 0.9s 24.55nm 5.2mb
 EMS 52.88 306 eP 05 58.80 -0.3
 HAU 52.89 308 eP 05 58.00 -1.0
 0.8s 22.85nm 5.3mb
 LPG 53.12 305 eP 06 00.40 -0.6
 0.7s 34.15nm 5.5mb
 LPL 53.13 305 eP 06 00.30 -0.7
 BNI 53.27 304 P 06 02.20 0.3
 FRF 53.63 303 eP 06 04.60 0.2
 1.1s 43.95nm 5.4mb
 LRG 53.86 302 eP 06 06.50 0.5
 0.9s 22.95nm 5.2mb
 LBF 54.67 307 eP 06 10.50 -1.6
 0.8s 60.85nm 5.7mb
 LOR 54.69 308 eP 06 10.60 -1.6
 1.3s 43.30nm 5.3mb
 SMF 54.84 307 eP 06 12.20 -1.1
 0.7s 24.25nm 5.3mb
 SSF 54.97 307 eP 06 12.90 -1.3
 0.8s 19.50nm 5.2mb
 AVF 55.13 307 eP 06 14.30 -1.1
 0.8s 24.20nm 5.3mb
 BGF 55.53 307 eP 06 16.90 -1.3
 1.0s 24.00nm 5.2mb
 MAF 55.80 307 eP 06 19.40 -0.8
 1.1s 47.60nm 5.4mb
 TCF 56.02 307 eP 06 21.20 -0.6
 0.9s 102.35nm 5.9mb
 CAF 56.47 305 eP 06 24.50 -0.6
 0.8s 18.80nm 5.2mb
 LSF 56.49 307 eP 06 24.00 -1.1
 1.0s 115.65nm 5.9mb
 RJF 56.74 306 eP 06 26.60 -0.4
 0.9s 22.95nm 5.2mb
 LDF 56.97 310 eP 06 27.20 -1.4
 1.1s 34.20nm 5.3mb
 LPO 57.14 305 eP 06 29.30 -0.5
 1.1s 29.30nm 5.2mb
 FLN 57.16 310 eP 06 28.20 -1.7
 1.3s 50.55nm 5.4mb
 LFF 57.37 305 eP 06 30.60 -0.8
 0.9s 31.10nm 5.4mb
 GRR 57.50 310 eP 06 30.90 -1.3
 1.0s 46.00nm 5.5mb
 MFF 57.51 308 eP 06 30.80 -1.5
 1.0s 28.00nm 5.3mb
 EPF 58.20 303 eP 06 35.70 -1.6
 0.8s 10.75nm 5.0mb
 BCAO 60.37 255 iPc 06 52.90 0.3
 0.5s 30.00nm 5.7mb
 ic 08 27.20
 ic 09 04.10
 EVIA 61.71 299 eP 07 02.00 0.5
 ENIJ 62.11 298 eP 07 04.40 0.3
 TOL 62.37 301 iPd 07 06.50 0.8
 1.0s 60.00nm 5.7mb
 E8AN 62.82 299 eP 07 09.00 0.3
 AFC 62.99 298 eP 07 10.00 0.0
 EHOR 64.02 300 eP 07 17.00 0.4
 KRI 66.51 229 iPd 07 39.00 6.0X
 BRW 69.32 16 ePd 07 50.40 0.7
 BUL 69.62 227 iPd 07 51.10 -1.3
 0.9s 8.82nm 4.7mb
 MBC 70.27 4 ePc 07 56.00 0.6
 1.0s 71.00nm 5.6mb
 GDH 71.20 343 iPc 08 02.00 0.9
 1.0s 40.00nm 5.3mb
 ANM 71.43 24 eP 08 04.30 1.7
 MEKA 72.18 140 eP 08 07.10 -0.4
 BFT 73.01 222 iPd 08 14.50 1.8
 1.0s 40.00nm 5.3mb
 IMA 73.92 19 ePc 08 17.60 0.2
 1.3s 27.60nm 5.0mb
 SLR 74.06 224 iP 08 19.00 0.3
 BAL 74.47 144 eP 08 20.00 -0.8

SHGH 74.87 267 eP 08 23.00 -0.5
 KSR 74.96 225 eP 08 22.50 -1.5
 KUK 75.00 268 eP 08 24.00 -0.3
 WEGH 75.29 267 eP 08 25.50 -0.4
 MUN 75.36 145 eP 08 25.00 -0.9
 TTA 75.58 22 ePd 08 28.50 1.6
 1.2s 22.50nm 4.9mb
 KLB 75.79 144 eP 08 28.00 -0.4
 INK 76.35 11 ePc 08 31.60 0.6
 0.9s 38.00nm 5.4mb
 FBA 76.37 18 ePc 08 31.90 0.7
 1.2s 221.97nm 6.0mb
 SEK 76.41 222 eP 08 33.00 0.9
 0.5s 8.00nm 4.9mb
 NWAD 76.63 145 eP 08 32.00 -1.0
 SVW 77.05 23 ePd 08 37.60 2.5
 1.3s 53.20nm 5.4mb
 KIC 78.57 270 Pc 08 44.18 0.0
 0.9s 38.00nm 5.4mb
 TIC 78.65 271 P 08 44.54 -0.1
 0.9s 33.00nm 5.3mb
 PMR 78.67 20 ePd 08 43.80 -0.1
 0.8s 9.70nm 4.8mb
 LIC 78.88 270 P 08 45.96 0.0
 0.8s 23.00nm 5.2mb
 TOA 79.08 19 ePd 08 48.30 2.1
 1.4s 148.50nm 5.7mb
 FRB 79.19 345 ePc 08 46.50 -0.2
 ASPA 79.26 128 iPc 08 48.20 0.4
 0.8s 46.20nm 5.5mb
 OIS 81.12 122 iPd 08 58.60 0.9
 0.7s 16.00nm 5.1mb
 YKA 84.15 5 eP 09 12.80 0.2
 0.7s 28.20nm 5.4mb
 CER 84.94 224 eP 09 17.50 0.6
 SCH 86.47 339 eP 09 26.00 1.6
 ADE 89.99 133 eP 09 43.00 1.7
 0.8s 25.37nm 5.6mb
 FFC 92.28 359 iPc 09 53.10 1.4
 0.9s 42.00nm 5.9mb
 EDM 93.45 5 eP 09 58.00 0.8
 PNT 96.59 10 eP 10 13.00 1.3
 CCH 142.29 285 (PKP) 16 02.00 -13.6X
 LPB 143.39 288 PKP 16 18.00 0.4
 CNCB 143.45 288 PKP 16 15.00 -2.9X
 ARE 146.03 292 iPKPc 16 24.30 2.4X
 0.5s 10.56nm
 NNA 147.12 304 ePKP 16 26.80 3.4X
 0.9s 20.17nm
 S.D. = 1.0 on 148 of 172 obs.
 % DEC 25, 1990 04h 07m 31.78±1.45s
 38.899 N ±11.6km 28.983 E ±15.2km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.7 (ISK).
 KHL 0.71 143 ePn 07 46.00 0.1
 DST 0.76 339 iPg 07 45.30 -1.3
 eSg 07 57.30
 ALT 0.89 80 ePn 07 48.50 -0.5
 KCT 1.43 340 iPn 07 58.50 0.7
 IZI 1.49 15 ePn 07 58.00 -0.6
 YLV 1.69 10 iPn 08 03.20 1.6
 S.D. = 1.3 on 6 of 6 obs.
 % DEC 25, 1990 04h 18m 21.69±1.99s
 41.051 N ±14.2km 22.464 E ±13.6km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.11 207 ePd 18 24.44 -0.1
 eS 18 26.76
 KNT 0.35 71 ePd 18 28.76 -0.1
 eS 18 33.32
 THE 0.56 138 ePc 18 32.68 -0.5
 iS 18 40.92
 SRS 0.86 85 ePc 18 38.08 -0.1
 eS 18 49.76
 LIT 0.95 179 ePc 18 39.60 -0.2
 eS 18 53.12
 PAIG 1.46 140 ePd 18 48.88 0.9
 eS 19 09.68
 S.D. = 0.6 on 6 of 6 obs.
 ? DEC 25, 1990 07h 51m 10.30±1.17s
 40.732 S ±21.2km 85.765 W ±10.1km

DEPTH = 10.0km (geophysicist)
 4.7mb (6 obs.) 4.8Msz (3 obs.)
 WEST CHILE RISE (686)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 15S, 34C
 Centroid Location:
 Origin Time 07:51:11.4 0.2
 Lat 41.26S 0.03 Lon 86.41W 0.04
 Dep 15.0 FIX Half-duration 2.6
 Moment Tensor; Scale 10¹⁷ Nm
 Mrr=-0.55 0.09 Mtt= 0.57 0.10
 Mff=-0.02 0.11 Mrt= 1.33 0.28
 Mrf= 0.42 0.27 Mtf=-4.00 0.09
 Principal Axes:
 T Val= 4.38 Plg= 8 Azm= 42
 N -0.23 69 289
 P -4.15 19 134
 Best Double Couple: Mo=4.3*10¹⁷
 NP1: Strike=177 Dip=71 Slip= -8
 NP2: 269 83 -161
 LNV 13.26 64 iPd 54 19.50 -1.7
 TACH 13.76 64 eP 54 27.50 -0.3
 SAN 14.06 64 eP 54 32.00 0.2
 PEL 14.23 63 eP 54 35.00 1.1
 FCH 14.39 64 eP 54 35.00 -1.3
 LPA 22.69 84 eP+ 56 14.00 0.9
 Z 20s 3.55um 4.8Msz
 eS 00 27.00
 ARE 27.16 31 eP 56 57.00 0.9
 CNCB 28.37 38 P 57 07.00 -0.3
 i 57 10.00
 LPB 28.55 38 P 57 10.00 1.2
 LR 05 10.00
 ZOBO 28.77 37 P 57 12.00 1.0
 Z 18s 6.19um 5.3Msz
 S 02 00.00
 LR 05 32.00
 CCH 28.77 42 P 57 11.70 1.0
 NNA 29.69 18 eP 57 18.00 -0.6
 1.0s 7.00nm 4.4mb
 Z 20s 1.24um 4.5Msz
 SIV 32.65 48 P 57 42.00 -2.6X
 PPD 34.53 68 eP 58 00.30 -0.6
 BAO 41.16 64 eP 58 56.00 -0.6
 PDCR 49.49 69 eP 00 03.60 0.7
 UYO 74.96 353 e(P) 02 49.20 -3.9X
 RSCP 75.96 0 eP 02 56.20 -2.6X
 0.9s 10.22nm 4.9mb
 OLY 76.04 355 eP 02 57.00 -2.3
 MEO 76.07 349 e(P) 03 01.50 2.0
 TUL 76.82 352 eP 03 02.20 -1.4
 1.0s 12.80nm 5.0mb
 ALO 77.68 343 eP 03 03.30 -5.4X
 1.0s 7.50nm 4.7mb
 PV09 81.70 342 eP 03 38.00 7.7X
 GOL 82.02 345 eP 03 35.00 3.1X
 TNP 83.55 336 eP 03 41.00 1.2
 1.1s 6.82nm 4.8mb
 BW06 85.86 343 eP 03 50.00 -1.3
 1.0s 3.00nm 4.4mb
 LRM 89.42 342 eP 04 16.90 8.5X
 GBA 149.24 147 PKPd 10 56.70 0.2
 0.9s 6.30nm
 S.D. = 1.2 on 21 of 28 obs.
 % DEC 25, 1990 08h 23m 18.23±1.17s
 41.122 N ±10.5km 22.466 E ±6.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.17 197 iPc 23 22.24 0.1
 eS 23 25.24
 KNT 0.33 83 ePc 23 25.52 0.5
 eS 23 30.40
 THE 0.62 142 ePd 23 30.04 -0.6
 eS 23 38.32
 SOH 0.74 114 iPd 23 32.76 0.0
 eS 23 42.40
 SRS 0.85 90 ePd 23 34.28 -0.4
 eS 23 46.72
 FNA 0.89 248 ePc 23 35.20 -0.2
 eS 23 47.48
 LIT 1.02 179 ePc 23 38.08 0.5
 S.D. = 0.5 on 7 of 7 obs.

25d 11h

S 32 48.50
S.D. = 0.6 on 6 of 6 obs.
% DEC 25, 1990 11h 47m 37.89±0.75s
40.848 N ± 7.5km 22.291 E ± 6.0km
DEPTH = 10.0km (geophysicist)
GREECE (364)

GRG 0.14 38 iPd 47 41.40 0.2
eS 47 43.60
THE 0.56 113 ePc 47 48.60 -0.6
eS 47 58.68
KNT 0.56 55 iPc 47 48.53 -0.7
FNA 0.70 265 ePc 47 51.68 0.0
eS 48 01.64
LIT 0.76 168 ePd 47 52.80 0.0
eS 48 04.80
SOH 0.81 91 ePd 47 54.32 0.7
eS 48 05.00
SRS 1.02 74 ePc 47 57.40 0.2
eS 48 11.04

S.D. = 0.6 on 7 of 7 obs.
DEC 25, 1990 12h 30m 13.79±1.59s
37.230 N ±15.8km 20.925 E ± 8.7km
DEPTH = 47.7 ± 11.8 km
3.6mb (2 obs.)
IONIAN SEA (399)

AGG 2.10 31 ePd 30 49.38 2.1
eS 31 11.82
IGT 2.35 349 ePd 30 51.46 0.8
eS 31 19.50
LIT 3.12 23 ePd 31 02.14 0.5
eS 31 36.50
PAIG 3.45 38 ePc 31 05.74 -0.6
FNA 3.57 6 ePd 31 08.06 0.0
eS 31 47.90
THE 3.75 24 ePd 31 09.54 -1.1
eS 31 51.42
LCI 3.87 324 P 31 11.50 -0.8
GRG 3.89 17 ePd 31 11.18 -1.5
SOI 3.96 284 P 31 15.00 1.5
SOH 4.05 27 ePd 31 15.10 0.2
KNT 4.22 21 iS 31 59.46 0.1
ePc 31 17.26
eS 32 02.82
SRS 4.40 27 ePc 31 19.22 -0.5
eS 32 07.54
ATN 4.43 284 P 31 20.30 0.1
eSn 32 07.00
BRT 4.65 323 P 31 22.50 -0.8
eSn 32 12.80
MEU 4.79 270 P 31 25.00 -0.3
eSn 32 16.30
MNO 5.00 280 Pd 31 28.30 -0.1
eSn 32 22.50
SGO 5.50 309 P 31 36.20 1.0
GIB 5.53 280 P 31 36.00 0.2
FAI 5.78 273 P 31 38.00 -1.2
HFS 23.39 351 eP 35 18.50 -0.2
0.4s 0.80nm 3.5mb
NUR 23.42 5 eP 35 20.00 1.0
NB2 24.61 349 P 35 30.50 -0.2
0.8s 1.70nm 3.6mb
S.D. = 1.0 on 22 of 22 obs.

* DEC 25, 1990 13h 18m 14.90±1.09s
24.041 N ±11.1km 121.635 E ±12.7km
DEPTH = 33.0km (normol)
4.3mb (3 obs.)
TAIWAN (244)

OZH 2.91 289 ePn 18 59.30 -0.7
Sn 19 34.50
SSE 7.04 357 eP 19 59.50 1.3
Z 10s 1.00um
N 10s 0.70um
GZH 7.67 265 Pc 20 04.30 -2.8X
NJ2 8.35 344 Pd 20 16.80 0.2
N 10s 1.50um
E 10s 1.20um
S 21 55.00
QIZ 12.05 248 eP 21 08.60 1.3
GYA 13.76 283 P 21 29.20 -0.9
S 23 58.80
XAN 14.92 315 P 21 43.50 -1.6

TIY 15.74 332 eP 21 56.00 0.2
Z 10s 0.76um
CD2 17.27 297 eP 22 18.90 3.7X
eS 25 24.00
BTO 19.18 332 eP 22 42.00 3.4X
N 10s 0.80um
E 10s 0.60um
eS 26 15.00
LZH 19.49 312 eP 22 40.00 -2.3
CHG 21.74 261 eP 23 07.00 1.5
1.1s 14.87nm 4.3mb
GTA 23.98 315 eP 23 30.00 2.6
PP 23 34.00
ASPA 48.89 165 eP 26 58.70 -1.0
1.3s 5.50nm 4.4mb
INK 73.20 22 ePd 29 44.10 0.1
YKA 82.94 23 eP 30 37.00 -0.5
0.9s 2.20nm 4.3mb
S.D. = 1.5 on 13 of 16 obs.

? DEC 25, 1990 13h 30m 59.31±1.15s
36.984 N ±10.8km 29.499 E ± 8.9km
DEPTH = 10.0km (geophysicist)
TURKEY (366)
MD 3.3 (ISK).

ELL 0.40 125 iPg 31 07.70 0.1
iSg 31 16.50
BCK 0.99 61 ePn 31 18.00 -0.2
CIN 1.28 299 eP 31 23.00 -0.1
KHL 1.34 1 ePn 31 24.20 0.2
ALT 2.12 13 ePn 31 40.00 4.6X
S.D. = 0.3 on 4 of 5 obs.

? DEC 25, 1990 13h 50m 55.37±3.91s
37.412 N ±21.0km 21.356 E ±35.4km
DEPTH = 10.0km (geophysicist)
SOUTHERN GREECE (368)
MD 4.0 (ATH).

VLI 1.44 118 ePn 51 21.50 0.0
EVR 1.54 13 ePb 51 25.00 2.0
ATH 1.95 73 ePn 51 29.00 0.1
NEO 2.39 37 ePn 51 35.50 0.2
KZN 2.91 6 ePn 51 41.50 -1.1
PLG 3.38 28 ePn 51 48.00 -1.2
S.D. = 1.5 on 6 of 6 obs.

DEC 25, 1990 14h 01m 28.98±0.68s
49.134 N ± 4.2km 6.889 E ± 7.0km
DEPTH = 7.2 ± 4.7 km
GERMANY (543)
MD 2.8 (STR).

GWF 0.51 108 Pg 01 39.12 -0.1
RUP 0.58 11 ePg 01 40.98 0.4
CDF 0.77 160 Pg 01 43.54 -0.7
Sg 01 55.39
WLS 0.78 157 Pg 01 44.07 -0.5
Sg 01 55.40
ABH 0.86 30 ePg 01 45.81 -0.1
ECH 0.94 169 Pg 01 46.82 -0.3
VITF 1.10 214 Pg 01 49.24 -0.6
Sg 02 04.18
MOF 1.29 173 Pg 01 53.32 0.0
Sg 02 11.88
BSF 1.30 183 Pg 01 53.58 0.1
TOD 1.34 69 ePg 01 53.16 -0.8
FEL 1.46 149 ePg 01 57.03 1.1
LOMF 1.78 181 Pg 02 02.75 2.3X
GRF 2.88 77 ePg 02 25.50 9.3X
eSg 03 02.10
SOTA 3.47 122 iPnd 02 25.40 0.9
e(Sn) 03 22.00
KHC 4.39 88 eP 02 37.00 -0.6
S.D. = 0.7 on 13 of 15 obs.

DEC 25, 1990 14h 21m 53.22±0.17s
23.766 N ± 3.2km 121.592 E ± 3.3km
DEPTH = 17.7km (4 depth phases)
5.6mb (43 obs.) 5.7msz (10 obs.)
TAIWAN (244)
CENTROID, MOMENT TENSOR (HRV)
Data Used: GDSN
L.P.B.: 9S, 20C
Centroid Location:
Origin Time 14:21:58.5 0.2

Lat 23.96N 0.05 Lon 122.24E 0.08
Dep 15.0 FIX Half-duration 3.3
Moment Tensor: Sacle 10**17 Nm
Mrr= 4.86 0.25 Mtt=-3.98 0.24
Mff=-0.87 0.41 Mrt= 2.99 0.82
Mrf= 2.87 0.73 Mtf=-5.19 0.20
Principal Axes:
T Vol= 6.15 Plg=71 Azm=294
N 2.91 8 50
P -9.06 16 143
Best Double Couple: Mo=7.6*10**17
NP1: Strike=245 Dip=29 Slip= 107
NP2: 46 62 81

ANP 1.42 357 iP 22 19.20 1.0
OZH 2.98 294 Pn 22 40.00 -0.4
Z 10s 252.00um
N 10s 768.00um
Sn 23 15.00
HKC 6.99 259 iP 23 37.20 0.0
iS 24 58.00
SSE 7.31 357 Pc 23 39.30 -2.4X
N 11s 201.00um
E 12s 238.00um
S 25 02.50
BAG 7.38 188 eP 23 42.00 -0.9
GZH 7.60 267 Pd 23 45.40 -0.5
0.9s 100.00nm 6.0mb
Z 13s 89.30um 3.5msz
NJ2 8.60 344 Pd 23 57.50 -2.2
0.7s 300.00nm 6.7mb X
N 10s 526.00um
PP 24 01.50
S 25 32.00
WHN 9.33 318 Pc 24 08.50 -1.4
0.7s 100.00nm 6.2mb
Z 12s 78.20um 4.5mszX
S 25 49.00
KAGJ 11.08 46 eP 24 32.70 -1.1
QIZ 11.91 249 Pc 24 45.00 -0.2
N 13s 31.70um
E 10s 29.40um
KUMJ 11.94 41 eP 24 47.40 1.9
TIA 12.99 344 eP 24 59.40 -0.2
8.0s 8300.00nm 6.9mb X
N 10s 267.00um
SHNJ 13.26 37 eP 25 09.00 5.9X
GYA 13.79 284 P 25 10.00 -0.3
Z 10s 62.80um
N 10s 192.00um
E 10s 45.90um
PP 25 22.00
S 27 38.00
SHK 14.44 40 eP 25 25.20 6.5X
XAN 15.08 316 P 25 26.70 -0.4
7.0s 5600.00nm 6.0mb X
DL2 15.09 0 iPc 25 30.00 2.8X
1.0s 400.00nm 5.7mb
Z 12s 64.80um 5.0mszX
N 12s 67.80um
E 12s 34.80um
TIY 15.96 333 eP 25 39.40 0.9
Z 10s 92.60um 4.4mszX
N 10s 160.00um
BJI 16.86 346 eP 25 52.00 2.2
2.0s 530.00nm 5.3mb
E 11s 37.10um
DAV 17.02 166 eP+ 25 52.00 0.0
KMI 17.22 278 Pd 25 55.00 0.3
1.5s 110.00nm 4.8mb
Z 20s 48.70um 5.0mszX
S 29 09.00
CD2 17.36 298 P 25 56.00 -0.2
S 29 06.00
SNY 18.09 5 iPc 26 08.00 2.9X
2.0s 700.00nm 5.5mb
Z 12s 106.00um 5.0mszX
IIDJ 18.34 47 eP 26 11.60 3.2X
MTMJ 18.93 44 eP 26 14.80 -0.9
HHC 19.00 336 eP 26 18.10 1.6
8.0s 7200.00nm 6.0mb X
Z 15s 50.20um 5.0mszX
N 10s 16.70um
E 10s 17.60um
MAT 19.16 45 (P) 26 17.00 -1.4
1.0s 13.00nm 4.1mb X
Z 20s 20.21um 4.8msz

BUT 1.55 324 ePq 57 07.90 1.2
 eSn 57 28.50
 iSg 57 31.30
 BW06 2.34 148 eP 57 18.00 -0.2
 NEW 5.35 313 eP 57 59.70 -1.0
 GOL 6.68 137 e(P) 58 20.00 0.3
 TNP 8.05 216 e(P) 59 02.50 23.7X
 YKA 17.86 355 eP 00 45.20 -3.6X
 0.7s 0.80nm 3.0mb
 S.D. = 0.6 on 11 of 13 obs.

* DEC 25, 1990 15h 18m 15.29±3.60s
 10.647 N ±19.9km 62.510 W ±28.7km
 DEPTH = 33.0km (normal)
 NEAR COAST OF VENEZUELA (97)
 MD 3.7 (TRN).

TRN 1.09 90 iP 18 34.24 0.0
 eS 18 47.50
 TPP 1.09 107 eP 18 34.80 0.5
 eS 18 50.39
 TBH 1.43 96 eP 18 38.73 -0.4
 eS 18 57.22
 PIG 1.72 73 eP 18 43.33 0.0
 eS 19 06.24
 BOT 1.83 73 iP 18 44.57 -0.4
 eS 19 07.52
 SVB 2.88 25 eP 19 01.97 2.0
 eS 19 32.27
 SVV 2.94 25 eP 19 01.06 0.3
 eS 19 35.22
 SLB 3.47 24 eP 19 08.29 -0.1
 eS 19 49.39
 BIM 4.09 20 iPc 19 16.97 -0.2
 S 20 00.60
 MVM 4.19 22 eP 19 17.95 -0.6
 FDF 4.27 18 eP 19 19.17 -0.6
 CRM 4.37 21 eP 19 20.96 -0.1
 SEG 5.80 10 eP 19 41.50 0.1
 DEG 5.81 14 eP 19 41.00 -0.5
 S.D. = 0.7 on 14 of 14 obs.

* DEC 25, 1990 15h 30m 24.85±3.38s
 2.436 N ±17.1km 128.522 E ±22.4km
 DEPTH = 80.1 ± 27.1 km
 5.0mb (5 obs.)
 HALMAHERA (267)

MNI 3.81 255 iPc 31 22.50 0.1
 eS 32 21.50
 TSM 10.58 280 ePd 32 57.00 1.3
 MTN 15.40 170 eP 33 57.00 -2.0
 TRT 18.78 237 iPc 34 40.00 -0.6
 ASPA 26.47 169 iPd 35 57.10 0.7
 0.6s 9.90nm 4.5mb
 CHG 33.22 301 eP 36 56.30 -0.2
 ADE 38.41 166 ePc 37 42.60 2.3
 LZH 40.52 329 eP 37 57.50 -0.4
 1.5s 28.00nm 4.9mb
 GUN 47.93 306 P 38 58.00 0.2
 PKI 48.17 305 P 38 59.40 -0.2
 KKN 48.36 306 P 39 00.60 -0.4
 0.4s 11.00nm 5.2mb
 DMN 48.43 305 P 39 01.60 0.1
 GKN 48.97 306 P 39 05.70 0.1
 HYB 51.24 290 iPc 39 23.00 0.2
 1.0s 45.00nm 5.5mb
 GBA 51.68 285 Pc 39 24.90 -1.2
 1.0s 12.80nm 4.9mb
 S.D. = 1.1 on 15 of 15 obs.

& DEC 25, 1990 15h 32m 48.09s
 57.618 N 142.699 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

PNL 2.68 39 iP 33 26.81 -5.3
 eS 33 57.06
 HQN 2.72 46 eP 33 27.09 -5.5
 eS 33 57.71
 YAH 2.80 10 iP 33 28.44 -5.5
 eS 33 59.98
 BCPM 2.83 33 eP 33 28.87 -5.3
 eS 34 00.21
 BALM 3.43 3 eP 33 36.00 -6.8

VZW 3.98 332 eS 34 13.60
 eP 33 44.00 -6.4
 KLU 4.22 339 eS 34 25.60
 eP 33 46.80 -7.1
 eS 34 32.00
 7 obs. associated

% DEC 25, 1990 18h 11m 04.24±1.02s
 44.734 N ± 6.8km 8.322 E ± 8.2km
 DEPTH = 10.0km (geophysicist)
 NORTHERN ITALY (545)
 ML 2.2 (GEN).

PCP 0.25 140 P 11 10.36 0.8
 S 11 15.49
 FIN 0.53 189 P 11 13.95 -1.1
 S 11 22.05
 ROB 0.55 217 P 11 15.28 0.0
 S 11 25.23
 ENR 0.82 232 P 11 19.80 -0.4
 STV 0.87 236 P 11 20.92 0.0
 PZZ 0.90 256 P 11 22.87 1.3
 ORX 0.93 345 P 11 21.54 -0.5
 S.D. = 1.0 on 7 of 7 obs.

% DEC 25, 1990 18h 44m 46.11±0.96s
 40.967 N ± 9.9km 22.332 E ± 6.4km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.05 101 ePd 44 48.64 0.3
 iS 44 50.24
 KNT 0.47 65 iPd 44 55.53 -0.1
 eS 45 01.88
 THE 0.59 125 ePc 44 56.92 -1.0
 eS 45 05.32
 FNA 0.75 256 ePd 45 00.56 -0.2
 eS 45 10.48
 SOH 0.79 100 ePc 45 01.20 -0.3
 eS 45 11.60
 LIT 0.87 172 ePc 45 03.60 0.7
 SRS 0.96 81 ePd 45 05.16 0.7
 eS 45 17.28
 S.D. = 0.7 on 7 of 7 obs.

? DEC 25, 1990 18h 56m 07.80±1.04s
 41.873 N ±10.3km 14.011 E ± 8.2km
 DEPTH = 10.0km (geophysicist)
 SOUTHERN ITALY (390)

SDI 0.22 221 Pc 56 12.50 -0.1
 eSg 56 14.30
 DUI 0.40 122 Pd 56 16.00 0.1
 eSg 56 20.80
 AZI 0.44 285 Pd 56 17.10 0.3
 eSg 56 24.60
 AQU 0.66 317 P 56 20.80 -0.2
 eSg 56 31.40
 S.D. = 0.3 on 4 of 4 obs.

DEC 25, 1990 19h 03m 37.22±0.56s
 41.064 N ± 5.3km 22.499 E ± 4.7km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.13 215 ePd 03 39.96 -0.4
 KNT 0.32 72 ePd 03 43.88 0.1
 eS 03 48.28
 THE 0.56 140 iPd 03 47.70 -0.8
 eS 03 55.76
 SOH 0.69 110 iPc 03 50.68 -0.3
 eS 04 00.16
 SRS 0.83 86 ePc 03 52.88 -0.4
 eS 04 04.56
 FNA 0.90 252 ePd 03 53.24 -1.2
 eS 04 05.44
 LIT 0.96 180 ePd 03 55.52 0.0
 eS 04 10.00
 OUR 1.34 122 ePd 04 02.20 0.3
 eS 04 21.24
 PAIG 1.45 141 ePd 04 04.00 0.5
 eS 04 24.00
 AGG 2.04 184 iPd 04 12.04 0.0
 IGT 2.25 228 Pd 04 17.04 1.9
 BZS 4.60 352 eP 04 47.50 -0.8
 VRI 5.70 31 ePd 05 05.00 1.0
 S.D. = 0.9 on 13 of 13 obs.

% DEC 25, 1990 19h 23m 20.20±1.08s
 41.095 N ±10.1km 22.463 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 199 iP 23 23.82 0.2
 eS 23 25.92
 KNT 0.34 78 eP 23 27.42 0.3
 eS 23 32.40
 THE 0.60 140 eP 23 31.28 -1.0
 eS 23 38.92
 SOH 0.73 112 iP 23 34.38 -0.2
 iS 23 43.78
 SRS 0.85 88 eP 23 36.48 -0.2
 eS 23 48.00
 FNA 0.88 250 iP 23 36.84 -0.3
 eS 23 48.84
 LIT 0.99 179 iP 23 39.34 0.3
 eS 23 54.04
 PAIG 1.49 141 eP 23 47.76 0.8
 eS 24 10.56
 S.D. = 0.6 on 8 of 8 obs.

& DEC 25, 1990 19h 27m 05.92s
 60.278 N 152.195 W
 DEPTH = 86.3km
 SOUTHERN ALASKA (2)
 <AGS-P>.

RDT 0.31 341 iP 27 18.58 -0.7
 eS 27 28.95
 RED 0.32 296 iP 27 18.70 -0.6
 eS 27 29.22
 REF 0.33 310 iP 27 18.97 -0.5
 eS 27 29.41
 RSO 0.33 304 iP 27 19.05 -0.5
 RS2 0.34 304 iP 27 19.06 -0.5
 eS 27 29.17
 RDN 0.37 310 iP 27 19.04 -0.6
 eS 27 29.48
 NCT 0.46 308 eP 27 19.37 -0.9
 eS 27 30.79
 INE 0.49 244 iP 27 19.56 -1.0
 eS 27 31.27
 NNL 0.51 117 iP 27 20.89 0.4
 NKA 0.66 45 iP 27 23.22 1.3
 HOM 0.68 156 iP 27 21.91 -0.2
 eS 27 34.51
 OPT 0.82 220 iP 27 22.88 -0.7
 eS 27 35.90
 XLV 0.86 164 eP 27 23.00 -1.0
 eS 27 37.02
 CNPM 0.90 147 iP 27 23.64 -0.8
 eS 27 37.54
 SPU 0.91 4 iP 27 23.91 -0.7
 eS 27 38.09
 CKL 0.92 356 iP 27 24.12 -0.8
 eS 27 38.74
 CRP 0.99 1 eP 27 24.98 -0.7
 BGL 0.99 355 iP 27 25.01 -0.7
 SLKM 1.01 76 eP 27 24.73 -1.0
 CGLM 1.04 5 iP 27 25.52 -0.7
 eS 27 40.79
 AUE 1.10 213 eP 27 25.64 -1.1
 AUP 1.11 215 eP 27 26.37 -0.6
 eS 27 41.28
 PDB 1.12 245 iP 27 25.73 -1.3
 eS 27 41.53
 NCG 1.13 1 eP 27 26.43 -0.9
 eS 27 43.43
 SEW 1.38 96 eP 27 28.84 -1.5
 eS 27 47.33
 SUA 1.39 30 eP 27 30.07 -0.5
 eS 27 48.71
 CDD 1.54 209 eP 27 31.16 -1.3
 eS 27 50.42
 MCNL 1.54 226 iP 27 30.95 -1.5
 eS 27 50.10
 SYI 1.68 184 iP 27 33.10 -1.1
 eS 27 53.56
 SKT 1.74 10 iP 27 33.80 -1.3
 SVW 1.88 298 iP 27 34.99 -2.0
 eS 27 57.34
 PLRM 1.99 47 eP 27 36.82 -1.6
 eS 28 00.52
 KNK 2.16 57 iP 27 38.83 -1.8

25d 19h

GHO 2.19 45 eP 27 39.36 -1.8
KNIM 2.22 86 eP 27 38.48 -3.0
MTU 2.29 95 eP 27 40.44 -2.1
CUT 2.33 23 eP 27 41.99 -1.0
GLI 2.59 74 eP 27 43.16 -3.4
VLZ 3.01 71 eP 27 49.45 -2.8
KLU 3.30 66 iP 27 53.70 -2.7

40 obs. associated

DEC 25, 1990 19h 42m 21.12± 0.56s
27.828 S ± 5.7km 66.963 W ± 8.9km
DEPTH = 159.8 ± 7.2 km
4.6mb (11 obs.)

CATAMARCA PROVINCE, ARGENTINA (130)

CYA 1.20 121 iPd 42 51.20 2.3
RTLL 3.73 200 iPd 43 20.00 1.2
CFA 3.93 196 iPd 43 22.50 1.1
eS 44 01.80
ZON 3.99 202 iPc 43 23.60 1.3
eS 44 04.00
RTCV 4.24 198 ePd 43 26.50 1.0
MDZ 5.30 197 iP 43 40.70 1.2
iS 44 20.00
JACH 5.77 212 iPd 43 47.00 1.3
FCH 6.19 207 eP 43 52.50 0.9
iS 45 02.00
PEL 6.19 210 ePc 43 51.00 -0.4
iS 44 43.00
ROCH 6.20 213 eP 43 50.60 -1.1
i 44 51.50
iS 44 59.50
SAN 6.45 209 eP 43 52.00 -2.8
eS 45 06.00
IHA 6.57 217 eP 43 54.50 -1.9
e(S) 44 37.50
TACH 6.74 210 eP 43 57.50 -1.2
iS 45 12.30
LCCH 6.89 214 iP 43 59.00 -1.7
LNV 7.20 211 iP 44 02.40 -2.5
iS 44 20.50
CCH 10.42 4 P 44 45.80 -2.0
CNCB 11.01 355 P 44 56.00 0.3
LPB 11.29 354 P 44 58.00 -1.3
ZOB0 11.55 354 P 45 02.00 -0.9
ITB1 11.72 77 e(P) 45 11.20 6.7X
ITB7 11.77 80 e(P) 45 10.10 5.0X
ITB 11.83 78 e(P) 45 12.00 6.1X
ARE 12.06 339 iPc 45 11.20 2.0
0.8s 11.19nm 4.4mb
SIV 12.98 26 P 45 19.00 -1.8
PPD 15.32 71 eP 45 52.20 2.0
e 46 00.60
e 46 19.80
NNA 18.28 328 eP 46 26.20 0.8
0.9s 26.05nm 4.6mb
BMA 21.24 81 eP 46 55.20 -0.4
e 47 03.30
BAO 21.36 59 ePc 46 55.00 -1.9
SPA 62.33 180 iPd 52 29.60 1.1
OLY 67.10 338 eP 52 58.80 -0.5
LIC 68.64 70 P 53 07.20 -2.0
KIC 68.95 70 P 53 09.20 -1.9
0.6s 7.00nm 4.6mb
TUL 68.98 335 iPd 53 10.40 -0.5
0.8s 27.80nm 5.1mb
FVM 69.06 340 iP 53 11.00 -0.3
0.9s 46.61nm 5.3mb
MEO 69.08 332 iPd 53 11.50 0.0
ALO 72.74 327 eP 53 34.00 0.3
0.8s 9.51nm 4.6mb
CBM 74.42 359 iP 53 43.80 1.0
GOL 76.11 330 iP 53 53.70 0.7
1.0s 15.00nm 4.7mb
PV09 76.87 327 eP 53 59.00 1.7
PEC 77.65 319 iP 54 02.80 1.5
BW06 80.46 330 iP 54 17.80 1.3
1.0s 8.75nm 4.4mb
TNP 80.70 322 iP 54 19.00 1.2
1.0s 2.75nm 3.9mb
LRM 84.13 330 ePc 54 36.50 1.2
FFC 87.56 341 iPd 54 52.10 0.5
0.8s 12.00nm 4.9mb
NEW 88.07 329 eP 54 54.30 0.0
YKA 97.71 340 eP 55 37.80 -0.4
0.8s 2.30nm 4.7mb
FBA 111.09 333 ePd 56 46.80 8.9X

ASPA 124.99 203 iPKPd 01 04.00 -0.2
0.4s 17.20nm
GBA 143.97 106 PKPc 01 37.10 -2.5X
0.7s 6.90nm
TRT 144.68 179 iPKPc 01 39.30 -1.6
HYB 146.63 101 ePKPd 01 46.00 1.9
0.8s 26.90nm

NDI 148.51 80 iPKPd 01 51.00 4.2X
S.D. = 1.4 on 46 of 52 obs.

* DEC 25, 1990 19h 59m 19.32± 1.80s
5.156 S ± 16.5km 146.483 E ± 13.3km
DEPTH = 121.3 ± 11.7 km
4.9mb (2 obs.)

EAST PAPUA NEW GUINEA REGION (207)

YYYY 1.19 205 iPc 59 43.00 -0.9
MNDI 2.98 250 eP 00 08.00 1.7
PMG 4.28 171 eP 00 19.00 -4.5X
eS 00 58.00
OIS 16.70 203 iPd 03 06.70 -0.8
MTN 16.97 242 eP 03 11.00 0.2
RMO 21.32 174 eP 03 58.00 0.0
ASPA 22.04 212 iPd 04 04.40 -0.7
0.3s 23.80nm 5.0mb
eS 00 00.70
BRS 22.91 166 iPd 04 13.80 0.3
DZM 25.61 133 iPd 04 39.10 -0.2
CMS 26.20 181 eP 04 45.00 0.6
WARB 28.23 220 eP 05 03.10 0.1
0.3s 6.00nm 4.7mb
KLB 37.64 222 eP 06 24.00 -0.2
GUN 66.98 303 P 10 00.00 -1.8
MBC 95.97 14 eP 12 27.00 -6.2X
0.5s 22.00nm 5.9mb X
SIV 145.57 128 PKP 18 47.40 1.6
LIC 151.63 274 PKP 19 05.00 9.7X
S.D. = 1.1 on 13 of 16 obs.

% DEC 25, 1990 19h 59m 44.11± 0.89s
37.067 N ± 6.7km 4.434 W ± 8.1km
DEPTH = 10.0km (geophysicist)

SPAIN (377)

mbLg 2.1 (MDD).

MAL 0.34 177 iPg 59 51.00 -0.1
iSg 59 56.60
ECOG 0.72 73 ePg 59 59.50 1.1
eSg 00 08.80
AFC 0.74 75 ePg 59 58.00 -0.7
eSg 00 09.50
EHOR 0.99 320 ePg 00 03.10 0.2
eSg 00 16.00
EBAN 1.21 25 ePg 00 06.30 -0.4
eSg 00 22.90
EVIA 2.19 44 ePn 00 21.00 -0.2
eSn 00 46.90
S.D. = 0.8 on 6 of 6 obs.

* DEC 25, 1990 20h 09m 10.18± 0.66s
62.635 N ± 10.8km 124.111 W ± 8.9km
DEPTH = 10.0km (geophysicist)
4.3mb (9 obs.)

NORTHWEST TERRITORIES, CANADA (679)

YKA 4.40 88 eP 10 18.60 0.1
0.4s 12.50nm
HYT 6.62 260 P 10 45.70 -4.2X
INK 6.90 330 P 10 55.00 1.2
0.5s 41.10nm 5.8mb X
DWY 7.04 288 P 10 54.00 -1.7
TOA 10.25 277 eP 11 41.90 1.6
FBA 10.70 293 ePd 11 47.00 0.6
0.9s 41.04nm 5.8mb X
EDM 11.02 144 eP 11 42.00 -8.8X
PMR 11.74 276 iPc 12 00.70 0.3
0.8s 33.10nm 5.7mb X
IMA 13.18 298 ePc 12 19.90 0.0
0.8s 2.60nm 4.4mb
FFC 13.91 115 eP 12 21.00 -8.4X
0.8s 13.00nm 4.8mb
SES 14.19 144 eP 12 26.00 -7.1X
TTA 14.52 285 ePd 12 43.10 5.7X
1.6s 74.60nm 5.1mb
SVW 14.86 278 eP 12 48.10 6.3X
1.2s 21.70nm 4.5mb

BRW 15.22 318 ePc 12 44.60 -1.7
BW06 21.66 150 P 14 04.00 1.3
1.4s 14.79nm 4.2mb
FRB 24.42 63 P 14 34.00 4.6X
0.8s 6.60nm 4.3mb
TNP 24.94 167 P 14 35.00 0.1
0.8s 1.47nm 3.7mb
BONR 24.96 169 P 14 34.00 -1.2
MSU 25.23 158 P 14 37.00 -0.6
GOL 25.60 145 P 14 45.60 4.5X
1.0s 3.75nm 4.0mb
ALO 29.84 150 e(P) 15 16.00 -3.7X
0.8s 1.87nm 4.0mb
S.D. = 1.2 on 12 of 21 obs.

DEC 25, 1990 20h 21m 25.67± 0.39s
24.871 S ± 3.5km 179.783 E ± 3.6km
DEPTH = 497.4 ± 5.0 km
5.3mb (43 obs.)

SOUTH OF FIJI ISLANDS (171)

SVA 6.83 349 ePd 23 11.10 0.0
eS 24 36.10
VUN 6.94 350 eP 23 11.10 -1.1
OVA 7.21 352 eP 23 15.30 0.4
SGE 7.45 346 iPd 23 18.10 0.5
KRO 7.53 357 eP 23 18.60 0.3
MBU 7.92 353 iPd 23 23.10 0.7
NDE 8.25 357 eP 23 25.50 -0.4
DZM 12.55 280 iPd 24 13.20 1.9
iS 26 32.00
ScP 31 55.00
PVC 12.83 301 iPc 24 15.50 1.5
PUZ 13.23 185 eP 24 21.30 3.2X
S 26 36.20
WLZ 13.41 194 eP 24 23.10 3.1X
AFI 13.49 38 eP 24 17.00 -4.0X
eS 26 28.00
NOZ 13.79 186 eP 24 23.60 -0.2
NGZ 14.70 193 eP 24 33.90 0.6
CNZ 14.73 193 eP 24 35.00 1.4
PGZ 15.98 190 eP 24 45.20 -0.7
0.5s 158.00nm 5.9mb
MNG 16.11 192 eP 24 44.60 -2.7X
0.2s 23.00nm 5.5mb
e 27 24.70
eS 27 30.20
KIW 16.46 193 eP 24 50.50 -0.3
MTW 16.63 191 P 24 51.60 -0.8
WDW 16.83 193 eP 24 53.90 -0.5
MRW 16.86 193 eP 24 54.60 0.0
eS 27 45.00
WEL 16.90 193 eP 24 54.00 -1.0
S 27 43.00
TCW 16.93 194 eP 24 54.20 -1.2
THZ 17.79 197 P 25 05.50 1.7
eS 28 01.70
KHZ 18.25 195 P 25 08.60 0.5
0.4s 64.00nm 5.6mb
eS 28 07.50
LTZ 18.91 197 P 25 14.80 0.2
MOZ 19.68 196 eP 25 22.60 0.7
HNR 24.34 306 iP 26 03.00 -1.9
BRS 24.36 258 iPc 26 06.50 1.4
id 32 40.90
SVO 24.62 306 P 26 05.00 -2.5
COO 25.30 251 iPd 26 14.80 1.3
0.5s 40.00nm 5.2mb
RMO 27.98 260 iPc 26 39.00 1.9
1.1s 427.00nm 5.9mb
i 28 03.40
TBI 28.09 93 eP 26 38.00 0.0
1.1s 110.00nm 5.3mb
CNB 28.20 241 iPd 26 40.90 1.9
CAN 28.49 241 iPd 26 42.70 1.2
e 28 09.00
BWA 28.78 243 iPd 26 42.90 -1.1
e 28 09.00
AFR 29.26 82 iP 26 47.20 -1.0
1.2s 170.00nm 5.4mb
PAE 29.39 82 iP 26 48.40 -1.0
1.2s 115.00nm 5.3mb
PPT 29.43 82 iP 26 48.90 -0.8
1.2s 180.00nm 5.5mb
PPN 29.57 82 iP 26 50.10 -0.8
1.2s 80.00nm 5.1mb
TVO 29.65 82 iP 26 50.90 -0.8

25d 20h

CMS	1.2s	170.00nm	5.4mb	PGC	1.0s	50.00nm	5.3mb	KZN	0.89	212	ePg	24	32.00	0.1
TOO	30.56	250 iP	27 00.00 0.6	BDT	89.02	34 eP	33 28.00 0.5	PLG	1.06	130	ePg	24	35.00	0.1
	31.76	238 iPd	27 11.10 1.5	KMI	89.09	289 eP	33 29.00 0.5	NEO	1.87	160	ePn	24	47.00	-0.2
	0.4s	35.00nm	5.2mb		89.54	298 Pd	33 32.00 1.2	EVR	2.19	192	ePg	24	57.00	5.1X
PMO	31.86	78 iP	27 09.90 -0.6		1.5s	100.00nm	5.5mb	RDO	2.39	87	ePn	24	54.50	0.0
	1.2s	120.00nm	5.3mb	PMR	89.73	14 eP	33 29.70 -0.8	S.D. = 0.2 on 4 of 5 obs.						
VAH	32.00	79 iP	27 10.90 -0.8		1.0s	12.00nm	4.8mb	CENTROID, MOMENT TENSOR						
	1.2s	90.00nm	5.2mb	CHG	89.83	291 ePd	33 33.00 1.0	Data Used: GDSN						
TPT	32.11	78 iP	27 12.10 -0.5		1.1s	66.46nm	5.5mb	L.P.B.: 9S, 18C						
	1.2s	195.00nm	5.5mb	HHC	90.96	315 eP	33 36.00 -0.8	Centroid Location:						
RUV	32.24	79 iP	27 13.00 -0.7	PNT	91.40	35 eP	33 38.00 -0.5	Origin Time 22:59:19.3 1.0						
	1.2s	145.00nm	5.4mb		0.9s	16.00nm	5.0mb	Lot 0.73S 0.14 Lon 127.36E 0.15						
BFD	33.98	240 iPd	27 31.00 2.8X	CD2	91.45	303 Pd	33 40.40 1.2	Dep 33.0 FLX Half-duration 1.5						
PMG	34.64	291 iPd	27 34.00 0.1		1.0s	90.00nm	5.7mb	Moment Tensor: Scale 10**16 Nm						
	1.0s	620.00nm	6.1mb	PV09	91.62	48 iP	33 40.10 -0.1	Mrr=-3.83 0.73 Mtl=0.75 0.48						
ADE	36.77	244 iPd	27 51.80 0.3	ALO	91.71	52 iPc	33 40.70 0.2	Mff=3.09 1.03 Mtf=-0.79 1.06						
	0.6s	73.33nm	5.4mb		1.0s	11.50nm	4.8mb	Mrf=2.46 0.97 Mtf=1.23 0.71						
QIS	37.22	268 iPd	27 55.10 -0.1			e	35 35.00	Principal Axes:						
	i	33 04.00		ANMO	91.71	52 iP	33 40.30 -0.2	T Vol= 4.14 Plg=15 Azm=287						
					1.1s	17.41nm	5.0mb	N 0.71 15 192						
ASPA	41.69	262 iPd	28 31.40 -0.2			eP	35 35.00 512kmX	P -4.85 68 59						
	1.1s	169.30nm	5.5mb			eP	35 35.00 512kmX	Best Double Couple:Mo=4.5*10**16						
Z	19s	0.30um	4.2Msz			eP	35 35.00 512kmX	NP1:Strike= 37 Dip=33 Slip= -61						
		eScP	33 20.70			eP	35 35.00 512kmX	NP2: 184 62 -108						
		iS	34 10.10			eP	35 35.00 512kmX	MNI 3.38 310 ePc 00 11.70 -1.0						
		iScS	37 37.50			eP	35 35.00 512kmX	eS 00 55.00						
MTN	47.34	275 eP	29 14.00 -1.5			eP	35 35.00 512kmX	DAV 7.98 347 eP 01 19.00 1.6						
WARB	47.69	256 iPd	29 17.20 -0.9			eP	35 35.00 512kmX	TSM 10.58 298 ePc 01 55.50 2.4						
	0.3s	31.00nm	5.2mb			eP	35 35.00 512kmX	MTN 12.58 163 eP 02 17.90 -2.3						
KNA	48.47	271 iPd	29 23.60 -0.5			eP	35 35.00 512kmX	eS 04 35.00						
	0.5s	134.00nm	5.6mb			eP	35 35.00 512kmX	KNA 14.98 175 eP 02 48.00 -3.7X						
COOL	51.68	249 eP	29 46.00 -1.8			eP	35 35.00 512kmX	TRT 16.31 244 ePc 03 09.00 0.3						
KLB	54.43	248 iPd	30 06.20 -1.2			eP	35 35.00 512kmX	BAG 18.33 339 eP 03 34.00 -0.1						
NWAO	54.66	246 iPd	30 07.80 -1.2			eP	35 35.00 512kmX	PMG 21.43 114 eP 04 12.00 4.3X						
RKG	54.68	245 iPc	30 07.80 -1.3			eP	35 35.00 512kmX	QIS 23.02 150 ePd 04 22.60 -0.9						
MEKA	54.72	254 iPd	30 07.80 -1.8			eP	35 35.00 512kmX	ASPA 23.65 165 iPc 04 28.60 -1.0						
	0.5s	15.00nm	4.6mb			eP	35 35.00 512kmX	Z 22s 1.10um 4.3Msz						
BAL	55.49	249 iPd	30 13.80 -1.1			eP	35 35.00 512kmX	iS 08 40.90						
MRWA	56.37	250 iPd	30 19.80 -1.2			eP	35 35.00 512kmX	iScS 15 37.50						
MNI	59.26	288 eP	30 38.00 -2.8			eP	35 35.00 512kmX	WARB 25.32 182 eP 04 46.00 0.4						
TRT	66.09	273 iPd	31 21.70 -3.2X			eP	35 35.00 512kmX	IPM 26.92 282 ePd 05 01.00 0.5						
	0.6s	150.60nm	5.8mb			eP	35 35.00 512kmX	0.8s 33.90nm 5.0mb						
CHJJ	71.80	326 P	31 57.80 -0.8			eP	35 35.00 512kmX	LOE 31.08 307 eP 05 38.00 0.2						
IIDJ	71.92	325 P	31 58.30 -1.1			eP	35 35.00 512kmX	BAL 31.42 198 eP 05 40.00 -0.6						
MAT	72.58	326 iPd	32 02.00 -1.2			eP	35 35.00 512kmX	SSE 32.20 350 Pd 05 47.30 -0.1						
	0.8s	39.55nm	5.0mb			eP	35 35.00 512kmX	1.0s 37.00nm 5.2mb						
MTMJ	72.82	326 P	32 03.90 -0.7			eP	35 35.00 512kmX	Z 24s 0.50um 4.1MszX						
AIA	77.76	157 eP	32 32.70 1.3			eP	35 35.00 512kmX	MUN 32.85 198 eP 05 51.00 -2.0						
NJ2	81.15	311 P	32 50.50 0.8			eP	35 35.00 512kmX	NWAO 33.44 196 eP 06 00.00 1.8						
	1.2s	100.00nm	5.2mb			eP	35 35.00 512kmX	WHN 33.50 339 Pd 05 59.40 0.7						
PRS	82.37	44 eP	32 56.80 1.0			eP	35 35.00 512kmX	1.2s 80.00nm 5.5mb						
GCC	82.41	43 eP	32 57.00 1.0			eP	35 35.00 512kmX	PP 06 06.00						
PCC	82.47	43 eP	32 57.10 0.9			eP	35 35.00 512kmX	NJ2 33.60 347 P 06 00.00 0.5						
SAO	82.59	44 eP	32 57.80 0.9			eP	35 35.00 512kmX	1.2s 60.00nm 5.4mb						
PRI	82.70	45 eP	32 58.60 1.0			eP	35 35.00 512kmX	GYA 33.65 325 P 06 00.20 0.0						
BRK	82.78	43 eP	32 58.50 0.7			eP	35 35.00 512kmX	CHG 34.07 306 eP 06 03.50 -0.4						
BKS	82.80	43 iPc	32 58.90 1.0			eP	35 35.00 512kmX	1.0s 19.50nm 5.0mb						
	0.9s	102.00nm	5.4mb			eP	35 35.00 512kmX	KMI 35.10 319 Pd 06 14.50 1.6						
LLA	82.82	44 eP	32 58.90 0.8			eP	35 35.00 512kmX	2.0s 110.00nm 5.4mb						
MHC	82.83	43 eP	32 59.30 1.1			eP	35 35.00 512kmX	ADE 35.65 164 iPd 06 17.80 0.6						
MWC	83.26	48 eP	33 01.00 0.5			eP	35 35.00 512kmX							
WHN	83.43	308 Pd	33 01.50 0.3			eP	35 35.00 512kmX							
	1.5s	80.00nm	5.1mb			eP	35 35.00 512kmX							
PLM	83.57	49 eP	33 03.00 0.9			eP	35 35.00 512kmX							
RVR	83.59	48 eP	33 03.00 1.1			eP	35 35.00 512kmX							
PEC	83.67	48 iP	33 02.80 0.4			eP	35 35.00 512kmX							
SBB	83.69	47 eP	33 03.00 0.5			eP	35 35.00 512kmX							
FR1	83.83	45 ePc	33 03.50 0.4			eP	35 35.00 512kmX							
ISA	83.83	46 eP	33 04.00 0.8			eP	35 35.00 512kmX							
CMB	84.04	43 iPc	33 04.50 0.3			eP	35 35.00 512kmX							
ORV	84.30	42 eP	33 05.80 0.5			eP	35 35.00 512kmX							
WDC	84.32	40 iPc	33 06.10 0.7			eP	35 35.00 512kmX							
CLC	84.50	46 eP	33 06.00 -0.5			eP	35 35.00 512kmX							
CN2	84.55	324 Pd	33 06.20 -0.2			eP	35 35.00 512kmX							
	1.3s	40.00nm	4.9mb			eP	35 35.00 512kmX							
TPC	84.55	49 eP	33 07.00 0.2			eP	35 35.00 512kmX							
GSC	84.73	47 eP	33 08.00 0.3			eP	35 35.00 512kmX							
MIN	84.73	41 eP	33 08.30 0.7			eP	35 35.00 512kmX							
GLA	84.80	50 eP	33 09.00 1.0			eP	35 35.00 512kmX							
TNP	86.07	45 iP	33 14.20 0.0			eP	35 35.00 512kmX							
	1.0s	48.00nm	5.2mb			eP	35 35.00 512kmX							
NNT	86.41	286 eP	33 18.00 2.0			eP	35 35.00 512kmX							
LOE	86.84	291 iPd	33 18.00 0.0			eP	35 35.00 512kmX							
GYA	87.07	301 P	33 19.20 0.0			eP	35 35.00 512kmX							
NST	87.42	288 eP	33 25.00 4.2X			eP	35 35.00 512kmX							
BJI	87.59	317 eP	33 20.00 -1.1			eP	35 35.00 512kmX							
	1.2s	16.00nm	4.7mb			eP	35 35.00 512kmX							
TIY	88.70	313 eP	33 27.00 0.5			eP	35 35.00 512kmX							
						eP	35 35.00 512kmX							
						eP	35 35.00 512kmX							
						eP	35 35.00 512kmX							
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						eP	35 35.00 512kmX							
						eP	35 35.00 512kmX							
						eP	35 35.00 512							

25d 23h

BRS	0.8s	44.78nm	5.4mb	
	35.97	140 iPc	06 20.00	0.1
		ic	06 39.90	
IIDJ	37.32	14 P	06 34.90	3.7X
COO	37.68	144 eP	06 35.00	0.7
CHJJ	38.14	15 P	06 37.20	-0.8
MTMJ	38.35	13 P	06 38.80	-1.1
MAT	38.40	14 (P)	06 39.00	-1.3
	1.5s	63.89nm	5.3mb	
CD2	38.69	326 P	06 42.90	0.1
	1.0s	50.00nm	5.3mb	
XAN	38.71	335 P	06 42.50	-0.4
BWA	38.84	152 eP	06 46.00	2.0
BFD	38.86	161 e(P)	06 49.00	4.9X
CAN	39.85	152 eP	06 53.40	1.1
TIY	40.69	342 eP	06 58.40	-0.8
	Z 10s	1.00um	5.0mszX	
OFUJ	41.71	17 P	07 07.70	0.2
BJI	41.86	347 eP	07 08.00	-0.7
	1.2s	32.00nm	4.9mb	
SNY	42.50	356 eP	07 12.40	-1.5
	0.9s	30.00nm	5.0mb	
LZH	42.71	331 eP	07 15.00	-0.9
	2.0s	300.00nm	5.7mb	
	Z 30s	0.57um	4.3mszX	
		PP	07 26.50	
		eS	13 40.00	
DZM	43.49	122 iPc	07 23.60	1.2
HHC	43.83	343 Pc	07 25.40	0.5
LSA	45.97	314 eP	07 44.80	2.1
GTA	47.29	331 iPd	07 53.00	0.5
	1.0s	60.00nm	5.5mb	
	Z 18s	0.60um	4.6msz	
		PP	07 59.00	
GUN	48.99	309 P	08 06.20	0.0
PKI	49.20	308 P	08 07.60	-0.2
KKN	49.40	308 P	08 09.20	0.0
DMN	49.45	308 P	08 10.00	0.4
GKN	50.00	308 P	08 13.80	0.1
KOD	50.90	284 eP	08 20.00	-0.9
HYB	51.40	293 eP	08 23.50	-0.8
	1.2s	114.30nm	5.7mb	
GSA	51.55	288 Pc	08 24.60	-0.8
	0.8s	17.40nm	5.1mb	
POO	56.01	293 iPd	08 58.20	-0.1
NDI	56.22	306 iPd	08 58.50	-1.1
WMO	56.79	326 P	09 03.20	-0.3
	1.0s	100.00nm	5.8mb	
QUE	65.16	304 eP	10 00.00	-0.6
SHI	77.27	300 eP	11 12.00	-1.4
TAB	83.45	308 eP	11 46.00	0.0
INK	94.02	22 eP	12 35.00	-0.6
BUL	98.04	250 eP	12 54.30	-0.8
	0.9s	4.20nm	5.0mb	
YKA	103.22	25 ePd	13 18.60	1.4
	0.7s	0.50nm	4.4mb	
ALO	119.42	50 ePKP	18 13.50	5.1X
NNA	152.77	118 iPKP	19 17.50	8.9X
	0.9s	15.97nm		
CNCB	156.87	140 PKP	19 17.50	2.7X
LPB	156.99	139 ePKP	19 16.00	1.2
ZOBO	157.17	138 PKP	19 05.00	-10.2X
SIV	161.38	154 PKP	19 20.60	1.6
	S.D. = 1.1	on 58 of 66 obs.		
DEC 25, 1990 23h 14m 05.01 ± 0.40s				
37.820 N ± 5.9km 101.951 E ± 6.3km				
DEPTH = 33.0km (normal)				
4.7mb (12 obs.)				
QINGHAI PROVINCE, CHINA (325)				
LZH	2.30	138 Pn	14 43.50	1.9
		Pg	14 45.50	
		Sg	15 14.50	
GTA	2.31	314 Pn	14 43.70	2.1
		Pg	14 45.80	
		Sg	15 15.20	
XAN	6.80	122 Pn	15 47.00	1.9
BTO	6.85	64 ePn	15 45.40	-0.5
		ePg	16 02.40	
		Sg	17 33.50	
CD2	7.05	167 ePn	15 47.70	-0.9
HHC	8.04	65 ePn	16 03.60	1.1
		Pg	16 26.70	
		Sg	18 10.20	
TIY	8.30	88 P	16 04.70	-1.5
		S	17 35.60	

BJI	11.30	74 eP	17 28.00	40.8X
	1.0s	18.00nm		
GYA	12.01	159 P	16 55.00	-1.9
WMO	12.34	304 P	17 01.50	0.2
CHG	19.12	189 eP	18 28.70	0.7
GBA	32.51	229 Pc	20 34.80	-0.1
	0.6s	2.80nm	4.3mb	
HFS	57.27	324 eP	23 50.00	-1.4
	0.6s	3.30nm	4.5mb	
NB2	58.10	325 P	23 56.00	-1.2
	0.6s	2.30nm	4.4mb	
IMA	61.49	27 ePc	24 20.30	-0.3
	0.6s	2.90nm	4.6mb	
MBC	63.23	10 eP	24 31.50	-0.3
	0.5s	2.00nm	4.5mb	
FBA	64.19	26 ePc	24 38.40	0.1
	0.7s	25.44nm	5.4mb	
PMR	65.58	30 ePc	24 46.50	-0.7
	0.7s	36.63nm	5.6mb	
TOA	66.42	28 ePc	24 53.40	0.7
	0.7s	30.10nm	5.5mb	
INK	66.43	20 eP	24 52.00	-0.6
LPG	67.44	311 eP	25 00.00	0.2
	0.8s	6.05nm	4.7mb	
LPL	67.45	311 eP	24 59.90	0.2
	1.0s	13.00nm	5.0mb	
YKA	75.79	17 eP	25 48.90	0.0
	0.6s	2.30nm	4.4mb	
FRB	78.49	356 eP	26 04.00	0.2
FFC	85.56	14 eP	26 41.00	0.2
	0.6s	6.00nm	5.0mb	
	S.D. = 1.1	on 24 of 25 obs.		
% DEC 25, 1990 23h 25m 33.70 ± 1.12s				
41.078 N ± 12.0km 22.381 E ± 6.5km				
DEPTH = 10.0km (geophysicist)				
YUGOSLAVIA (383)				
GRG	0.12	173 ePd	25 37.24	0.5
		eS	25 39.12	
KNT	0.40	78 iPd	25 42.06	0.2
		iS	25 47.60	
THE	0.63	135 ePc	25 45.88	-0.4
		eS	25 54.52	
SOH	0.78	109 ePc	25 48.92	0.0
		eS	25 59.28	
FNA	0.82	249 ePc	25 49.40	-0.2
		eS	26 00.28	
SRS	0.92	87 ePc	25 51.20	0.0
		eS	26 03.48	
	S.D. = 0.4	on 6 of 6 obs.		
? DEC 26, 1990 00h 10m 35.11 ± 1.27s				
31.287 S ± 15.0km 138.825 E ± 16.8km				
DEPTH = 10.0km (geophysicist)				
SOUTH AUSTRALIA (592)				
ML 3.1 (CMS), 3.0 (BFD).				
CMS	5.99	94 eP	13 02.50	56.6X
		eS	14 03.50	
BFD	6.63	153 eP	12 15.00	0.0
		eS	13 24.00	
ASPA	8.76	329 eP	12 44.80	0.1
	0.4s	12.00nm	5.6mb X	
		eS	14 21.20	
FORR	9.21	270 eP	12 51.00	0.1
WARB	11.84	292 eP	13 26.80	-0.1
		eS	15 35.00	
	S.D. = 0.2	on 4 of 5 obs.		
? DEC 26, 1990 00h 20m 37.21 ± 2.17s				
23.979 N ± 20.2km 121.554 E ± 22.1km				
DEPTH = 33.0km (normal)				
3.6mb (1 obs.)				
TAIWAN (244)				
ANP	1.20	359 P	20 59.20	1.4
QZH	2.86	290 ePn	21 18.50	-3.1X
		Sn	21 51.20	
SSE	7.10	357 eP	22 19.00	-2.4X
		eS	23 38.50	
NJ2	8.39	344 Pc	22 38.50	-0.9
		S	24 12.50	
GYA	13.70	283 eP	23 51.00	-0.7
CHG	21.66	261 eP	25 28.00	1.0
YKA	83.03	23 eP	32 59.50	-0.8
	0.8s	0.40nm	3.6mb	

S.D. = 1.5 on 5 of 7 obs.					
DEC 26, 1990 01h 24m 34.07± 0.17s					
48.313 N ± 4.3km 153.898 E ± 2.9km					
DEPTH = 87.7km (11 depth phases)					
5.0mb (65 obs.)					
KURIL ISLANDS					(221)
KUSJ	8.28	234	P	26 31.10	-2.1
			S	27 59.30	
ASAJ	8.86	246	P	26 45.00	3.8X
HOQJ	9.53	235	eP	26 48.50	-1.8
			S	28 32.70	
MRRJ	10.77	242	eP	27 07.30	0.3
OFUJ	12.77	228	eP	27 29.50	-4.0X
			eS	29 44.20	
NIJ	15.53	230	eP	28 06.80	-2.3
CHJJ	16.46	227	eP	28 24.10	3.3X
MAT	16.47	230	eP	28 23.00	2.0
	0.8s		37.31nm		4.6mb
TSRJ	18.40	233	eP	28 45.90	1.2
CN2	20.19	268	eP	29 02.20	-1.6
HHC	30.74	272	P	30 44.60	1.7
TTA	30.91	43	ePc	30 44.10	0.0
	0.7s		6.50nm		4.5mb
SVW	31.00	47	ePc	30 45.50	0.6
	0.8s		20.30nm		4.9mb
TIY	31.76	266	eP	30 51.40	-0.4
IMA	32.24	37	ePd	30 55.40	-0.3
	0.5s		4.10nm		4.5mb
BRW	32.33	27	ePc	30 55.40	-0.8
KDC	32.77	53	ePc	30 59.00	-1.2
	0.7s		69.10nm		5.6mb
PMR	34.12	46	ePc	31 12.30	0.5
	0.6s		9.80nm		4.9mb
FBA	34.61	40	ePc	31 16.40	0.3
	0.7s		24.30nm		5.2mb
WHN	34.86	254	eP	31 19.50	1.0
TOA	35.47	45	eP	31 08.70	-14.8X
XAN	36.20	264	P	31 29.80	-0.1
LZH	38.39	270	eP	31 49.00	0.6
	1.3s		40.00nm		5.2mb
			PP	32 10.00	
GTA	39.27	278	eP	31 55.20	-0.4
	0.6s		10.00nm		4.9mb
INK	40.05	33	ePd	32 02.50	1.0
CD2	41.56	264	P	32 14.80	0.4
	1.0s		50.00nm		5.3mb
GYA	42.58	257	iPd	32 23.00	0.1
MBC	42.95	21	ePd	32 25.00	-0.1
	0.7s		7.00nm		4.6mb
WMO	44.87	290	P	32 41.00	-0.2
QIZ	45.96	246	P	32 51.90	2.0
KMI	46.06	259	Pc	32 51.40	0.5
YKA	49.36	38	eP	33 16.00	0.1
	0.9s		14.10nm		5.0mb
CHG	53.00	256	ePd	33 44.50	0.6
	0.8s		16.98nm		5.1mb
PNT	53.86	54	eP	33 49.00	-0.9
	0.8s		14.00nm		5.0mb
EDM	54.86	47	iPc	33 57.00	-0.2
GUN	55.40	274	P	34 00.90	-0.9
	0.4s		19.00nm		5.4mb
NEW	55.82	54	P	34 03.30	-0.9
	1.0s		10.94nm		4.8mb
KKN	55.88	275	P	34 05.00	-0.1
PKI	55.94	274	P	34 05.06	-0.6
	0.6s		16.00nm		5.3mb
DMN	56.11	275	P	34 06.22	-0.6
	0.7s		32.00nm		5.5mb
GKN	56.17	275	P	34 06.30	-0.8
	0.5s		28.00nm		5.6mb
WDC	57.35	64	eP	34 15.80	0.7
SES	57.70	49	ePc	34 17.00	-0.4
ORV	58.61	64	eP	34 23.50	-0.4
FFC	59.20	41	iPc	34 27.80	0.0
	0.9s		32.00nm		5.5mb
BKS	59.23	66	eP	34 28.30	0.1
LRM	59.83	54	ePd	34 33.00	0.4
CMB	60.25	65	eP	34 35.30	0.1
PRS	60.75	67	eP	34 38.80	0.2
LLA	60.82	67	eP	34 39.50	0.4
PRI	61.30	67	eP	34 42.00	-0.5
FRI	61.33	66	eP	34 42.30	-0.2
TNP	62.12	63	P	34 48.10	0.0
	0.7s		6.11nm		4.8mb
			pP	35 10.50	88km

ISA	62.96	66 eP	34 53.00	-0.4	SAL	81.13	335 P	36 40.50	-0.2	DST	0.66	44 ePg	34 03.90	0.0
CLC	63.39	65 eP	34 56.00	-0.3	MDI	81.20	336 P	36 40.60	-0.4			eSg	34 14.90	
		e	35 19.00	91km	GRR	81.23	343 eP	36 41.10	-0.1	Izm	0.95	220 ePg	34 09.00	0.0
BW06	63.40	55 P	34 56.50	0.0		0.7s	17.65nm		5.1mb		eSg	34 23.10		
	0.8s	15.77nm		5.0mb	LOR	81.30	340 eP	36 41.30	-0.3	EDC	1.22	354 ePn	34 13.00	-0.4
FR8	63.40	20 eP	34 53.90	-1.9		0.7s	14.90nm		5.0mb	BNT	1.22	356 ePn	34 14.00	0.5
SBB	64.00	66 eP	35 01.00	0.7	VAI	81.38	336 Pc	36 42.00	0.1		S.D. = 0.6	on	4 of	4 obs.
		e	35 23.00	86km	MMK	81.42	337 ePc	36 43.40	0.9					
MWC	64.17	67 eP	35 01.00	-0.6	LBF	81.54	340 eP	36 42.40	-0.5					
		e	35 25.00	95km		0.7s	11.00nm		4.8mb					
GSC	64.21	65 eP	35 01.00	-0.7	DIX	81.54	337 ePc	36 44.20	1.0					
		e	35 24.00	90km	SSF	81.57	340 eP	36 42.70	-0.3					
MSU	64.80	60 P	35 06.00	0.4		0.8s	16.10nm		5.0mb					
		pP	35 27.00	81km	LPF	81.60	343 eP	36 42.40	-0.7					
TPC	65.48	66 eP	35 09.00	-0.8		0.9s	22.95nm		5.1mb					
BAR	66.07	67 eP	35 13.00	-0.5	EMS	81.67	337 ePc	36 44.50	0.7					
PV09	66.55	58 iP	35 17.00	0.1	ORX	81.80	337 P	36 44.23	-0.2					
NB2	66.92	341 P	35 17.20	-1.4	AVF	81.86	340 eP	36 44.40	-0.1					
	0.5s	3.00nm		4.5mb		0.6s	15.35nm		5.1mb					
GLA	66.94	66 eP	35 20.00	0.9	SMF	81.89	340 eP	36 44.60	-0.1					
		e	35 43.00	90km		0.6s	8.55nm		4.8mb					
HFS	67.18	340 eP	35 17.50	-2.6X	FORR	82.13	202 iPd	36 45.50	-0.3					
	0.4s	3.20nm		4.6mb		0.5s	26.00nm		5.4mb					
HYB	67.50	271 iPc	35 22.50	-0.3	LSD	82.18	337 P	36 47.41	0.9					
	0.6s	43.30nm		5.6mb	BGF	82.20	340 eP	36 46.30	0.0					
GOL	67.80	55 P	35 24.80	0.1		0.5s	1.30nm		4.1mb					
	0.8s	10.42nm		4.8mb	BOB	82.20	335 Pc	36 47.20	0.8					
POO	69.84	275 iPc	35 37.30	0.1	LPL	82.24	337 eP	36 47.10	0.3					
ANMO	70.57	59 P	35 42.00	0.4		0.6s	20.30nm		5.2mb					
	0.9s	16.81nm		4.9mb	LPG	82.25	337 eP	36 47.50	0.6					
		pP	36 04.80	87km		0.6s	22.55nm		5.2mb					
ALO	70.57	59 eP	35 41.00	-0.7	SFI	82.28	333 P	36 47.00	0.3					
	0.9s	4.20nm		4.3mb	MME	82.37	334 P	36 48.70	1.2					
		e	36 04.30	90km	CRE	82.52	333 P	36 49.00	0.9					
DZM	70.96	168 iPd	35 45.10	1.3	BDI	82.52	334 P	36 49.00	0.9					
GBA	70.98	269 Pc	35 4											

26d 02h

KGM 24.16 276 eS 08 55.90
 RAB 25.05 98 ePc 04 56.70 6.4X
 WARB 25.38 181 eP 05 00.20 1.3
 OIZ 26.04 320 P 05 08.80 0.7
 N 14s 1.40um
 E 14s 1.10um
 S 09 27.00
 IPM 26.80 281 ePc 05 15.90 0.8
 0.8s 39.10nm 5.1mb
 OZH 26.83 342 eP 05 16.00 0.8
 N 32s 5.00um
 E 32s 5.00um
 S 09 52.00
 PPI 26.94 270 eP 05 18.50 2.1
 MEKA 27.15 197 eP 05 16.00 -2.2
 GZH 27.26 331 P 05 20.60 1.5
 Z 16s 2.10um 4.8mszX
 N 12s 1.40um
 E 13s 1.30um
 S 09 59.00
 SNG 27.77 287 eP 05 13.00 -10.9X
 eS 10 06.40
 FORR 30.03 179 eP 05 40.30 -3.6X
 KLB 32.06 196 eP 06 03.00 1.1
 SSE 32.12 350 eP 05 53.20 -9.2X
 1.0s 12.00nm 4.7mb
 Z 20s 1.40um 4.6msz
 N 12s 0.80um
 pP 06 02.50 32kmX
 eS 11 14.00
 sS 11 24.00
 SS 13 10.00
 MUN 32.87 198 eP 06 08.00 -0.9
 WHN 33.41 339 eP 06 13.50 -0.1
 1.2s 100.00nm 5.6mb
 Z 16s 1.20um 4.7mszX
 E 13s 1.10um
 PP 06 21.50
 S 11 36.00
 NWA0 33.47 196 eP 06 15.00 0.9
 NJ2 33.52 347 Pd 06 15.00 0.5
 1.0s 50.00nm 5.4mb
 N 15s 1.00um
 E 15s 2.30um
 SP 06 30.00
 S 11 38.00
 GYA 33.54 325 P 06 15.00 0.1
 Z 24s 1.70um 4.7mszX
 N 16s 2.20um
 E 16s 1.80um
 PP 06 27.00
 S 11 37.00
 CHG 33.95 306 ePc 06 18.10 -0.4
 1.3s 69.71nm 5.4mb
 e 12 42.90
 KMI 34.99 319 Pc 06 28.00 0.4
 2.0s 110.00nm 5.4mb
 Z 24s 3.80um 5.1mszX
 E 10s 0.60um
 S 12 00.00
 ADE 35.74 164 iPd 06 36.30 2.7X
 1.1s 81.01nm 5.6mb
 TIA 37.90 347 eP 06 50.60 -1.1
 Z 30s 2.00um 4.7mszX
 N 12s 1.00um
 E 12s 1.40um
 MAT 38.37 14 eP 06 55.00 -0.7
 0.8s 18.66nm 5.0mb
 Z 20s 1.42um 4.8msz
 eS 12 50.00
 CD2 38.58 327 P 06 57.00 -0.5
 1.2s 140.00nm 5.7mb
 Z 28s 3.45um 5.0mszX
 S 12 46.00
 XAN 38.61 335 P 06 57.70 -0.1
 S 12 54.50
 BWA 38.94 152 eP 07 01.50 0.9
 BFD 38.95 161 eP 07 05.00 4.5X
 CAN 39.95 152 eP 07 08.40 -0.5
 TIY 40.60 342 Pc 07 14.00 -0.2
 Z 40s 2.40um 4.7mszX
 S 13 22.00
 BJI 41.78 347 eP 07 23.00 -0.7
 0.8s 15.00nm 4.8mb
 Z 28s 2.06um 4.9mszX
 ePP 09 00.00

LZH 42.61 332 eS 13 36.00
 2.0s 140.00nm 5.3mb
 Z 24s 1.95um 4.9mszX
 N 15s 1.15um
 PP 07 36.50
 SP 07 40.50
 PP 09 16.00
 ScP 13 14.00
 S 13 52.00
 SS 14 02.00
 SS 16 56.00
 DZM 43.61 122 iPc 07 41.00 1.9
 HHC 43.74 343 P 07 40.00 0.1
 1.2s 50.00nm 5.2mb
 Z 28s 3.70um 5.1mszX
 eS 14 10.00
 LSA 45.86 314 eP 07 58.80 1.4
 Z 40s 6.46um 5.3mszX
 GTA 47.18 331 Pc 08 07.60 0.2
 1.0s 50.00nm 5.5mb
 Z 20s 1.80um 5.0msz
 E 10s 0.65um
 PP 08 13.40
 SP 08 16.20
 PcP 09 38.60
 ScP 13 31.50
 PcS 13 33.80
 S 15 00.00
 SS 15 09.50
 ScS 17 58.00
 GUN 48.87 309 P 08 21.22 0.3
 PKI 49.08 308 P 08 22.30 -0.2
 KKN 49.28 308 P 08 24.08 0.1
 DMN 49.33 308 P 08 24.54 0.1
 1.1s 447.00nm 6.4mb X
 GKN 49.88 308 P 08 28.46 -0.1
 KOD 50.78 284 eP 08 37.00 1.3
 HYB 51.28 293 iPc 08 38.00 -1.1
 1.0s 250.00nm 6.2mb
 e 08 54.00
 GBA 51.43 288 Pc 08 38.00 -2.2
 0.8s 19.30nm 5.1mb
 WMO 56.68 326 P 09 18.50 0.0
 Z 20s 1.50um 5.1msz
 PP 11 18.50
 S 17 10.50
 KSH 61.57 317 eP 09 53.50 1.0
 QUE 65.04 304 eP 10 14.50 -1.1
 SHI 77.15 300 eP 11 27.00 -1.4
 TAB 83.33 308 e(P) 12 02.00 0.8
 e 12 05.00
 NAI 90.52 269 eP 12 44.00 7.3X
 INK 94.00 22 eP 12 50.00 -1.3
 MBC 96.08 13 eP 13 00.50 -0.3
 1.0s 5.00nm 5.0mb
 VRI 97.87 316 ePd 13 12.50 3.1X
 YKA 103.22 25 ePd diff 13 32.40 -0.6
 1.3s 1.30nm 4.5mb
 ALO 119.46 50 ePKP 18 24.00 -0.3
 NNA 152.90 118 ePKP 19 29.00 4.4X
 1.1s 15.19nm
 CNCB 156.98 140 PKP 19 36.00 5.3X
 LPB 157.11 139 PKP 19 36.00 5.3X
 ZOBO 157.28 138 PKP 19 35.00 3.9X
 Z 22s 0.53um 5.3msz
 LR 14 04.00
 PPD 157.40 183 ePKP 19 31.90 1.5
 CCH 157.68 144 (PKP) 19 46.00 14.8X
 SIV 161.48 154 PKP 19 38.00 3.1X
 i 20 19.50
 S.D. = 1.1 on 51 of 71 obs.
 % DEC 26, 1990 02h 12m 43.63±1.00s
 41.027 N ±10.2km 22.379 E ±6.2km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.07 167 iPc 12 46.22 0.2
 eS 12 47.48
 KNT 0.41 71 iPd 12 52.25 0.1
 eS 12 58.28
 THE 0.59 131 ePc 12 54.92 -0.7
 eS 13 02.84
 SOH 0.77 105 ePc 12 58.44 -0.2
 eS 13 08.08
 FNA 0.80 253 ePc 12 59.04 -0.1

SRS 0.92 84 eS 13 09.92
 ePd 13 01.20 0.0
 PAIG 1.48 138 eS 13 13.40
 ePd 13 11.08 0.8
 eS 13 29.96
 S.D. = 0.6 on 7 of 7 obs.
 ? DEC 26, 1990 03h 35m 57.69±2.41s
 38.803 N ±15.0km 26.616 E ±22.7km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)
 MD 3.0 (ISK).
 IZM 0.65 128 iPg 36 10.60 -0.1
 eSg 36 23.00
 EZN 1.05 348 iPn 36 17.60 0.2
 DST 1.76 62 ePn 36 29.00 0.6
 BNT 1.85 33 ePn 36 29.00 -0.7
 S.D. = 0.9 on 4 of 4 obs.
 * DEC 26, 1990 04h 36m 42.13±2.06s
 8.229 S ±8.8km 118.651 E ±10.9km
 DEPTH = 116.8 ±19.3 km
 5.0mb (8 obs.)
 SUMBAWA ISLAND REGION (285)
 KNA 12.40 128 iPd 39 35.60 -0.1
 eS 41 47.00
 MTN 13.10 112 iPd 39 45.20 0.3
 eS 41 57.00
 MEKA 18.29 180 eP 40 49.90 0.2
 0.3s 16.00nm 4.8mb
 eS 44 00.00
 WARB 19.41 158 eP 41 01.60 -0.1
 0.4s 17.00nm 4.7mb
 eS 44 32.00
 ASPA 21.19 138 iPd 41 19.60 -0.3
 0.5s 64.40nm 5.2mb
 iS 45 01.80
 BAL 22.34 184 eP 41 31.00 -0.1
 eS 45 35.00
 COOL 22.66 174 eP 41 39.00 4.8X
 eS 45 43.00
 KLB 23.26 182 eP 41 41.00 1.0
 eS 45 58.00
 QIS 23.67 123 ePd 41 44.00 -0.1
 eS 45 49.00
 MUN 23.74 185 eP 41 44.00 -0.7
 eS 46 08.00
 FORR 24.18 160 eP 41 47.00 -1.8
 NWA0 24.61 183 eP 41 53.00 0.0
 eS 46 28.00
 BRS 37.47 125 iPd 43 47.30 1.1
 TOO 37.99 144 iPc 43 51.90 1.5
 GUN 47.91 320 P 45 11.28 0.3
 0.6s 28.00nm 5.3mb
 PKI 47.98 319 P 45 11.52 0.0
 0.3s 9.00nm 5.1mb
 DMN 48.20 319 P 45 13.32 0.2
 0.4s 7.00nm 4.8mb
 KKN 48.21 319 P 45 13.32 0.2
 0.4s 6.00nm 4.8mb
 GKN 48.77 319 P 45 17.28 -0.1
 0.3s 16.00nm 5.3mb
 MOZ 58.68 137 eP 46 29.20 -0.4
 MNG 59.70 132 eP 46 35.20 -1.5
 YKA 113.63 24 ePKP 55 06.50 -1.4
 0.5s 1.90nm
 FFC 123.48 27 ePKP 55 26.00 -0.9
 0.6s 8.00nm
 KIC 123.86 272 PKP 55 28.20 -0.7
 LIC 124.13 272 PKP 55 28.80 -0.7
 TIC 124.16 272 PKP 55 28.90 -0.6
 FRB 124.34 4 ePKP 55 28.00 -0.3
 PPD 148.36 198 ePKP 56 08.90 -4.5X
 e 56 16.10
 CCH 154.12 169 PKP 56 32.00 9.6X
 CNCB 154.27 165 PKP 56 25.50 2.6
 LPB 154.51 165 ePKP 56 28.00 5.0X
 ZOBO 154.75 165 PKP 56 26.00 2.4
 S.D. = 1.1 on 28 of 32 obs.
 ? DEC 26, 1990 05h 00m 28.04±3.32s
 39.986 N ±12.5km 27.768 E ±24.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)

26d 05h

EDC 0.37 11 ePg 00 35.50 -0.1
 eSg 00 40.00
 BNT 0.39 17 ePg 00 36.10 0.1
 eSg 00 41.60
 KCT 0.52 60 ePg 00 38.60 0.0
 DST 0.76 120 ePg 00 43.00 0.0
 iSg 00 54.00
 S.D. = 0.2 on 4 of 4 obs.

& DEC 26, 1990 05h 04m 52.30s
 61.793 N 148.992 W
 DEPTH = 18.3km
 SOUTHERN ALASKA (2)
 <AGS-P>. ML 2.9 (PMR). Felt
 (111) at Palmer.

GHO 0.04 123 iP 04 55.93 0.2
 eS 04 59.13
 PLRM 0.21 198 iP 04 57.29 -0.2
 eS 05 01.30
 PMR 0.21 198 iPc 04 57.30 -0.2
 SML 0.31 87 eP 04 58.62 -0.6
 eS 05 03.84
 KNK 0.46 146 iP 05 01.40 -0.2
 iS 05 07.89
 CUT 0.86 316 iP 05 07.02 -1.3
 SUA 0.90 249 eP 05 07.99 -1.2
 eS 05 21.67
 SKT 1.22 280 iP 05 13.08 -1.3
 HUR 1.23 346 eP 05 13.13 -1.4
 eS 05 28.49
 GLI 1.30 134 eP 05 14.60 -0.9
 eS 05 32.42
 TOA 1.37 76 ePd 05 16.00 -0.6
 VZW 1.38 121 eP 05 15.99 -0.8
 eS 05 33.46
 SLKM 1.42 205 eP 05 16.10 -1.2
 eS 05 33.49
 VLZ 1.44 116 eP 05 16.23 -1.2
 KLU 1.50 100 eP 05 16.97 -1.4
 eS 05 35.85
 NKA 1.51 227 eP 05 18.97 0.5
 CGLM 1.52 253 eP 05 17.92 -0.9
 NCG 1.56 257 eP 05 17.70 -1.7
 KNIM 1.57 157 eP 05 18.11 -1.3
 SPU 1.59 249 eP 05 18.42 -1.3
 eS 05 39.22
 CRP 1.61 252 eP 05 18.61 -1.4
 RND 1.62 2 iP 05 19.11 -1.1
 TZL 1.71 80 eP 05 20.05 -1.3
 SEW 1.71 188 eP 05 19.61 -1.8
 eS 05 44.17
 BGL 1.71 253 eP 05 20.25 -1.3
 CKL 1.71 251 eP 05 21.13 -0.4
 SDG 1.78 64 eP 05 20.87 -1.6
 eS 05 42.53
 MTU 1.93 160 eP 05 23.44 -1.1
 eS 05 48.47
 MCK 1.95 1 eP 05 23.91 -1.0
 PAX 2.02 53 eP 05 24.70 -1.3
 eS 05 50.23
 RDT 2.06 235 eP 05 26.24 -0.3
 >NNL 2.09 214 eP 05 25.72 -1.1
 REF 2.22 236 eP 05 29.43 0.4
 RDN 2.23 237 eP 05 29.22 0.1
 RS2 2.26 236 eP 05 30.38 0.8
 RSO 2.26 235 eP 05 29.96 0.4
 NCT 2.27 239 eP 05 29.83 0.2
 DDM 2.46 34 eP 05 31.23 -1.1
 GLB 2.50 96 eP 05 32.60 -0.2
 eS 06 01.59
 CNPM 2.53 207 eP 05 33.00 -0.2
 INE 2.64 231 eP 05 35.54 0.6
 HDA 2.78 19 eP 05 35.68 -1.1
 CCB 2.91 10 eP 05 36.82 -1.8
 DOT 2.94 48 eP 05 37.73 -1.2
 TGL 3.15 107 eP 05 41.75 -0.4
 FBA 3.17 9 eP 05 40.02 -2.2
 MDM 3.20 6 eP 05 41.01 -1.7
 PDB 3.25 234 eP 05 42.46 -0.9
 SVW 3.26 261 ePd 05 43.30 -0.2
 BALM 3.28 100 eP 05 43.28 -0.7
 GLM 3.29 12 eP 05 41.84 -2.1
 TTA 3.46 292 iPd 05 46.10 -0.4
 IMA 4.76 336 ePd 06 03.20 -1.8
 53 obs. associated

DEC 26, 1990 05h 58m 30.60 ± 0.56s
 5.136 S ± 5.4km 78.303 W ± 12.2km
 DEPTH = 33.0km (normol)
 4.6mb (7 obs.)

NORTHERN PERU (111)

TUNG 3.70 358 eP 59 27.50 0.4
 VC1 4.47 359 eP 59 38.20 -0.1
 ANGL 4.77 9 eP 59 57.60 15.1X
 QTO 4.91 357 eP 59 45.00 0.6
 QUR 4.94 357 eP 59 45.20 0.4
 GGP 4.94 357 eP 59 45.50 0.5
 YANA 4.99 357 eP 59 45.60 -0.1
 CAYA 5.19 4 eP 59 47.50 -1.0
 COTA 5.43 360 P 59 53.50 1.6
 PSO 6.36 9 eP 00 05.00 0.1
 NNA 6.96 168 iPc 00 14.30 1.3
 0.8s 26.12nm 5.2mb X
 eS 02 26.00

BOG 10.58 24 eP 01 05.00 1.6
 eS 04 10.00
 FUQ 11.48 23 eP 01 23.00 7.3X
 BMG 13.20 23 eP 01 36.50 -2.0
 ZOBO 14.90 139 P 02 00.00 -1.3
 1.1s 22.62nm 4.4mb
 Z 20s 0.47um 4.1MsZX
 i 02 06.00
 LR 07 24.00

LPB 15.11 139 P 02 03.00 -0.9
 1.0s 40.00nm 4.7mb
 Z 20s 1.13um 4.6MsZX
 LR 08 06.00
 CNCB 15.39 140 eP 02 09.00 1.3
 i 02 14.00

SDV 15.89 29 eP 02 13.80 0.1
 CCH 17.02 137 P 02 31.00 2.8X
 TOV 17.08 30 eP 02 21.00 -7.7X
 PPD 31.05 125 e(P) 04 41.00 -7.0X
 TUL 44.00 339 eP 06 35.60 -1.2
 1.2s 60.40nm 5.3mb
 e 06 54.70

ALQ 47.87 328 eP 07 07.80 0.0
 1.0s 2.50nm 4.2mb
 SES 62.10 337 eP 08 50.00 -0.6
 PNT 65.02 332 eP 09 11.00 1.3
 YKA 72.91 343 eP 09 55.90 -2.2
 0.5s 0.70nm 3.9mb

TIC 74.07 82 P 10 06.00 0.1
 KIC 74.31 82 P 10 07.60 0.3
 0.7s 6.00nm 4.7mb
 INK 82.60 342 ePc 10 51.20 -0.3
 MBC 84.64 351 eP 11 02.00 0.3
 0.6s 3.00nm 4.7mb
 GKN 152.07 34 PKP 18 20.84 2.7X
 PKI 152.83 33 PKP 18 22.92 3.4X
 S.D. = 1.1 on 25 of 32 obs.

? DEC 26, 1990 06h 52m 09.50 ± 5.00s
 41.000 N ± 22.3km 22.300 E ± 34.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.09 119 iPd 52 12.82 0.7
 eS 52 14.14
 KNT 0.48 70 iPd 52 19.50 0.2
 eS 52 25.78
 THE 0.62 126 ePc 52 22.06 0.0
 eS 52 29.90
 LIT 0.91 171 ePd 52 26.94 0.0
 eS 52 40.58
 SRS 0.98 83 iPd 52 28.26 0.1
 eS 52 41.46

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

* DEC 26, 1990 06h 55m 43.21 ± 1.00s
 28.808 N ± 18.3km 51.386 E ± 17.0km
 DEPTH = 33.0km (normol)
 4.3mb (4 obs.)
 SOUTHERN IRAN (353)

SHI 1.30 50 eP 56 06.00 0.7
 RYD 5.90 227 ePd 57 08.50 -2.2
 MJMA 6.17 243 ePd 57 15.90 1.4
 QASM 7.48 251 ePd 57 32.70 -0.2
 UQSK 8.57 252 ePc 57 49.20 1.1
 AFIF 8.72 239 ePc 58 01.20 11.1X
 KMSA 10.48 218 ePd 58 14.00 -0.3

HFS 40.31 332 eP 03 16.70 -2.0
 0.3s 1.00nm 4.0mb
 KIC 57.39 258 P 05 31.60 0.5
 0.6s 3.00nm 4.5mb
 TIC 57.49 259 P 05 32.40 0.6
 LIC 57.70 258 P 05 33.60 0.3
 0.6s 6.00nm 4.8mb
 YKA 88.33 354 eP 08 32.50 0.0
 0.9s 0.60nm 3.9mb
 S.D. = 1.3 on 11 of 12 obs.

? DEC 26, 1990 07h 01m 01.22 ± 6.14s
 33.894 S ± 48.7km 70.985 W ± 10.6km
 DEPTH = 61.7 ± 35.9 km
 CHILE-ARGENTINA BORDER REGION (127)
 Felt (11) at Santiago, Chile.

TACH 0.24 9 iP 01 11.40 0.2
 SAN 0.52 32 iPc 01 13.70 0.1
 iS 01 23.50
 LCCH 0.64 310 iP 01 14.50 -0.5
 PEL 0.79 19 iPc 01 16.70 -0.1
 iS 01 28.50
 FCH 0.81 46 iP 01 17.30 0.0
 iS 01 29.50
 ROCH 0.92 359 iP 01 18.30 -0.3
 iS 01 31.20
 IHA 1.03 327 iPd 01 20.40 0.6
 eS 01 33.00
 S.D. = 0.5 on 7 of 7 obs.

& DEC 26, 1990 07h 18m 11.88s
 61.755 N 149.947 W
 DEPTH = 36.2km
 SOUTHERN ALASKA (2)
 <AGS-P>.

PLRM 0.42 112 iP 18 20.76 -0.6
 eS 18 28.35
 SUA 0.48 233 iP 18 22.00 -0.3
 eS 18 30.40
 GHO 0.49 88 iP 18 21.88 -0.5
 eS 18 30.00
 CUT 0.67 347 iP 18 24.19 -0.7
 eS 18 33.12
 SKT 0.78 287 iP 18 25.34 -1.2
 iS 18 36.63
 KNK 0.79 115 iP 18 25.79 -0.9
 eS 18 37.34
 CGLM 1.08 246 iP 18 30.11 -0.8
 eS 18 44.45
 NCG 1.11 253 iP 18 30.25 -1.1
 eS 18 45.59
 SPU 1.16 241 iP 18 30.93 -1.0
 eS 18 47.04
 CRP 1.17 246 iP 18 31.74 -0.4
 eS 18 47.41
 NKA 1.19 212 eP 18 33.09 0.8
 eS 18 49.30
 HUR 1.24 7 eP 18 32.56 -0.4
 eS 18 48.63
 SLKM 1.26 186 iP 18 32.04 -1.3
 eS 18 48.44
 BGL 1.27 248 eP 18 32.66 -0.9
 eS 18 50.15
 CKL 1.28 245 iP 18 32.76 -0.9
 eS 18 49.09
 GLI 1.63 121 eP 18 37.08 -1.7
 SEW 1.67 171 eP 18 38.58 -0.7
 RDT 1.68 226 iP 18 38.20 -1.3
 eS 18 59.11
 KNIM 1.77 142 iP 18 37.93 -2.8
 VZW 1.78 112 eP 18 39.44 -1.4
 eS 19 01.79
 TOA 1.82 77 eP 18 41.42 -0.1
 >NNL 1.84 202 eP 18 41.46 -0.2
 REF 1.84 228 eP 18 41.07 -0.9
 VLZ 1.85 108 eP 18 40.03 -1.7
 RDN 1.85 229 eP 18 40.60 -1.3
 eS 19 03.21
 NCT 1.88 232 iP 18 41.29 -1.0
 RS2 1.88 228 iP 18 41.96 -0.5
 eS 19 04.86
 RSO 1.88 228 eP 18 41.61 -0.9
 eS 19 05.54
 RED 1.92 227 eP 18 42.10 -0.8
 KLU 1.94 96 iP 18 41.91 -1.3

26d 07h

MCK	2.04	13	eP	18 43.99	-0.5
TZL	2.16	80	eP	18 46.32	0.1
SDG	2.21	68	iP	18 47.36	0.5
INE	2.28	223	eP	18 46.90	-1.2
CNPM	2.33	196	eP	18 48.30	-0.2
PAX	2.42	58	eP	18 50.15	0.2
GLB	2.95	93	eP	18 56.73	-0.8
HDA	2.99	26	eP	18 57.35	-0.7
CCB	3.06	18	eP	18 57.56	-1.5
TTA	3.06	295	eP	18 56.86	-2.3
FBA	3.30	16	eP	19 00.87	-1.6
MDM	3.31	13	eP	19 00.97	-1.6

42 obs. associated

& DEC 26, 1990 07h 39m 28.73s
59.329 N 152.996 W
DEPTH = 95.7km
SOUTHERN ALASKA (2)
<AGS-P>.

AUE	0.20	279	eP	39 42.10	1.1
AUP	0.22	279	eP	39 42.39	1.2
AUI	0.22	272	eP	39 42.02	0.9
AGU	0.22	278	eP	39 42.25	1.0
OPT	0.35	340	iP	39 42.68	-0.6
			eS	39 53.45	
CDD	0.52	220	iP	39 43.57	-0.9
			eS	39 55.00	
MCNL	0.70	259	iP	39 45.12	-0.9
			eS	39 56.19	
INE	0.74	357	eP	39 45.78	-0.7
			eS	39 58.12	
PDB	0.76	308	iP	39 45.73	-0.9
			eS	39 58.76	
HOM	0.77	64	eP	39 46.69	0.1
			eS	40 00.18	
SYI	0.79	156	eP	39 45.85	-1.0
			eS	39 59.03	
CNPM	0.92	77	eP	39 47.46	-0.8
NNL	1.12	50	eP	39 50.26	-0.2
RSO	1.14	6	eP	39 50.33	-0.7
			eS	40 06.94	
RS2	1.14	6	eP	39 50.30	-0.7
			eS	40 07.17	
REF	1.17	7	eP	39 50.85	-0.5
RDN	1.19	6	eP	39 50.80	-0.7
			eS	40 07.77	
NCT	1.24	2	eP	39 50.97	-1.0
RDT	1.28	13	eP	39 51.51	-1.0
			eS	40 08.58	
SLKM	1.83	49	eP	39 58.49	-1.0
CKL	1.90	10	eP	39 59.87	-0.6
SPU	1.92	14	eP	39 59.98	-0.6
BGL	1.96	9	eP	40 00.96	-0.3
CGLM	2.05	14	eP	40 01.80	-0.6
NCG	2.12	11	eP	40 03.36	0.0
CUT	3.36	22	eP	40 20.05	0.0

26 obs. associated

DEC 26, 1990 08h 12m 28.11± 0.40s
18.927 N ± 6.5km 68.162 W ± 7.0km
DEPTH = 33.0km (normal)
4.5mb (6 obs.)

MONA PASSAGE (89)

NEV	5.61	108	eP	13 57.45	6.0X
			eS	15 21.96	
BPA	6.28	106	eP	14 01.56	0.5
			eS	15 25.98	
PAG	6.82	114	eP	14 09.00	0.4
			S	15 25.00	
SEG	6.82	111	eP	14 10.00	1.5
BBL	7.23	117	eP	14 13.00	-1.2
DEG	7.25	110	eP	14 13.00	-1.6
SLB	8.51	126	eP	14 40.00	7.9X
OLLA	8.95	171	iP	14 37.90	-0.4
TOV	9.22	190	ePn	14 43.80	1.8
SDV	10.26	194	eP	14 56.80	0.3
TRN	10.51	141	eP	15 00.91	1.3
			eS	16 52.98	
OLY	26.40	313	eP	18 05.00	1.5
FVM	27.15	319	eP	18 14.00	3.7X
			1.0s	10.00nm	4.4mb
ZOBO	34.97	180	P	19 18.00	-2.1
LPB	35.24	180	P	19 20.00	-2.2
CNCB	35.51	180	P	19 24.00	-0.7
SCH	35.84	1	eP	19 26.00	-0.5

CCH	36.14	177	P	19 30.00	0.3
ANMO	37.42	303	eP	19 40.50	0.2
GOL	38.12	311	eP	19 47.00	0.8
			1.0s	4.50nm	4.3mb
PV09	40.48	308	iP	20 06.00	0.2
SXM	44.55	317	eP	20 38.80	0.0
FRB	44.79	360	eP	20 40.00	-0.1
SES	46.24	323	ePd	20 52.50	0.5
TNP	46.56	305	eP	20 55.00	0.1
			1.0s	2.50nm	4.1mb
YKA	53.96	335	eP	21 48.30	-2.3X
			0.6s	4.70nm	4.7mb
TIC	62.49	92	(P)	22 53.00	1.8
KIC	62.84	93	(P)	22 52.60	-0.9
MBC	62.93	348	eP	22 52.00	-1.2
			0.9s	8.00nm	4.8mb
INK	63.51	338	eP	22 55.00	-2.0
BCAO	85.46	87	ePc	25 06.00	1.5
			0.5s	3.00nm	4.8mb

S.D. = 1.3 on 27 of 31 obs.

DEC 26, 1990 09h 12m 29.05± 0.66s
39.201 N ± 7.7km 24.526 E ± 4.5km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)

PAIG	0.98	318	ePc	12 48.38	0.8
			eS	13 01.50	
OUR	1.21	340	ePc	12 51.54	0.0
EZN	1.53	65	ePn	12 54.80	-1.5
AGG	1.72	265	ePc	12 58.50	-0.7
			eS	13 22.30	
LIT	1.81	300	ePd	12 59.94	-0.6
			eS	13 22.18	
SOH	1.85	331	ePd	13 01.46	0.3
			eS	13 26.66	
THE	1.87	320	ePc	13 01.50	0.2
			eS	13 25.42	
SRS	2.04	340	ePd	13 03.66	-0.2
			iS	13 30.74	
ALN	2.06	34	ePc	13 04.46	0.4
			iS	13 33.58	
IZM	2.28	110	ePn	13 08.00	0.6
KNT	2.32	328	ePc	13 07.30	-0.6
			iS	13 37.70	
GRG	2.39	318	ePc	13 09.66	0.7
			iS	13 39.02	
EDC	2.81	65	eP	13 23.00	8.1X
BNT	2.86	65	ePn	13 22.00	6.5X
FNA	2.89	304	ePd	13 15.14	-0.9
			eS	13 49.62	
DST	3.20	81	ePn	13 21.00	0.5
IGT	3.27	277	ePd	13 22.18	0.8

S.D. = 0.8 on 15 of 17 obs.

DEC 26, 1990 09h 33m 07.64± 0.60s
39.158 N ± 5.8km 24.479 E ± 6.4km
DEPTH = 10.0km (geophysicist)

AEGEAN SEA (365)

MD 3.1 (ATH).

NEO	0.99	279	ePn	33 27.00	0.6
ATH	1.33	207	ePn	33 32.00	-0.1
PRK	1.40	86	ePb	33 34.20	1.1
PLG	1.45	327	ePn	33 33.80	-0.1
RDO	2.14	22	ePn	33 43.00	-0.9
APE	2.25	158	ePn	33 45.00	-0.4
IZM	2.30	108	ePg	34 11.30	25.0X
			eSg	34 24.30	
KZN	2.38	300	ePn	33 47.50	0.1
VLI	2.72	207	ePn	33 52.00	-0.2
DST	3.25	81	ePn	34 15.00	15.3X

S.D. = 0.7 on 8 of 10 obs.

DEC 26, 1990 09h 53m 01.97± 0.87s
46.451 N ± 6.4km 8.529 E ± 8.3km
DEPTH = 10.0km (geophysicist)

SWITZERLAND (544)

TMA	0.42	145	iPd	53 11.10	0.5
LLS	0.53	37	ePc	53 12.30	-0.4
MMK	0.56	225	ePc	53 13.10	-0.4
VDL	0.65	87	ePd	53 14.80	-0.3
SAX	0.98	35	eP	53 23.90	3.2X
SLE	1.32	359	ePd	53 26.90	0.6

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

% DEC 26, 1990 10h 12m 39.77± 0.86s
39.168 N ± 7.1km 27.590 E ± 8.8km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.1 (ISK).

IZM	0.81	199	iPg	12 55.40	-0.1
			iSg	13 07.90	
DST	0.92	61	ePn	12 57.60	0.3
EZN	1.18	304	ePn	13 02.00	0.3
EDC	1.20	10	ePn	13 02.00	0.0
BNT	1.21	12	ePn	13 02.00	-0.4

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

DEC 26, 1990 10h 20m 35.02± 0.56s
45.529 N ± 5.4km 7.540 E ± 4.5km
DEPTH = 5.0km (geophysicist)

NORTHERN ITALY (545)

ML 2.5 (LDG).

LPG	0.56	267	Pg	20 45.20	-1.0
			Sg	20 52.40	
DIX	0.56	351	eP	20 46.00	-0.2
LPL	0.57	269	Pg	20 45.40	-1.0
			Sg	20 52.80	
MMK	0.60	30	eP	20 46.50	-0.6
EMS	0.69	322	ePd	20 48.70	-0.1
BNI	0.77	232	P	20 49.20	-1.4
			eSg	20 59.20	
VAI	0.93	68	P	20 52.50	-0.6
			eSg	21 06.60	
TMA	1.10	58	ePc	20 54.90	-1.3
MDI	1.54	80	P	21 04.00	0.8
			eSg	21 24.00	
SBF	1.67	183	Pg	21 07.20	2.1
			Sg	21 29.00	
FRF	2.07	198	Pn	21 10.00	-0.8
			Sg	21 36.40	
SLE	2.33	16	eP	21 15.50	0.8
SMF	2.81	295	Pn	21 23.20	1.8
			Sn	21 53.00	
LOR	3.08	306	Pn	21 26.00	0.7
AVF	3.17	295	Pn	21 27.20	0.7
BGF	3.43	289	Pn	21 30.40	0.2

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

% DEC 26, 1990 10h 27m 56.07± 0.88s
39.092 N ± 7.2km 27.647 E ± 9.1km
DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.1 (ISK).

IZM	0.76	204	iPg	28 10.90	0.0
			iSg	28 21.90	
DST	0.92	56	iPn	28 13.60	0.0
EZN	1.26	306	ePn	28 19.40	0.0
EDC	1.26	8	ePn	28 19.50	0.0
BNT	1.28	9	iPn	28 19.90	0.1

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

& DEC 26, 1990 12h 32m 40.81s
60.043 N 152.884 W
DEPTH = 118.2km
SOUTHERN ALASKA (2)
<AGS-P>.

INE	0.09	281	eP	32 56.43	0.6
RED	0.38	8	eP	32 57.41	-0.8
RS2	0.43	8	eP	32 57.90	-0.7
RSO	0.43	9	eP	32 57.88	-0.8
REF	0.46	11	iP	32 58.05	-0.7
RDN	0.48	7	iP	32 58.20	-0.6
NCT	0.52	358	eP	32 58.39	-0.7
			eS	33 12.03	
RDT	0.58	24	iP	32 58.56	-0.9
			eS	33 12.47	
PDB	0.71	249	iP	32 59.42	-0.9
			iS	33 13.95	
AUE	0.73	200	iP	32 59.54	-0.9
AUP	0.74	202	eP	32 59.81	-0.8
HOM	0.74	121	eP	33 00.07	-0.4
			eS	33 14.93	
AGU	0.74	202	eP	32 59.80	-0.9
AUI	0.76	201	eP	32 59.75	-1.0
NNL	0.80	89	iP	33 01.17	0.1
XLV	0.83	135	eP	33 00.23	-1.2
			eS	33 16.02	

CNPM	0.98	121	iP	33	02.00	-0.8	OUR	1.37	117	ePd	06	50.60	0.6		0.5s	46.00nm	5.8mb		
			eS	33	18.22		PAIG	1.44	136	ePd	06	51.20	0.2	PKI	60.02	277 P	29 51.40 -0.8		
BRLK	1.05	105	eP	33	02.76	-0.7			eS	07	11.24			0.7s	40.00nm	5.7mb			
NKA	1.08	49	eP	33	04.66	0.9	VTS	1.73	21	iPg	06	56.00	0.7	KAF	60.12	337 eP	29 51.40 -0.7		
MCNL	1.13	221	iP	33	03.25	-1.1	RZN	1.90	67	iPc	06	59.00	1.3		0.4s	21.70nm	5.6mb		
			eS	33	20.71		PGB	2.06	40	eP	06	59.00	-1.0	GKN	60.17	278 P	29 51.92 -1.1		
CDD	1.18	199	eP	33	03.51	-1.4	PLD	2.07	56	eP	07	02.00	1.9		0.7s	45.00nm	5.7mb		
CKL	1.19	13	iP	33	04.38	-0.7	IGT	2.13	228	ePd	07	02.64	1.7	DMN	60.17	277 P	29 52.60 -0.6		
SPU	1.21	19	iP	33	04.44	-0.9	KDZ	2.38	73	iPg	07	10.00	5.4X		0.6s	56.00nm	5.8mb		
			eS	33	22.47		DIM	2.60	65	iP	07	06.00	-1.6	NUR	61.91	337 eP	30 04.40 0.2		
BGL	1.25	11	iP	33	05.26	-0.5	BZS	4.67	353	ePc	07	36.50	-0.6	NB2	64.13	344 P	30 18.20 -0.7		
			eS	33	24.21			S.D. = 1.1	on	18	of	19	obs.		0.8s	17.90nm	5.2mb		
CRP	1.28	16	eP	33	05.62	-0.5		% DEC 26, 1990	14h	10m	11.23 ± 0.81s			ANMO	64.55	65 P	30 22.00 -0.2		
			eS	33	25.03			36.930 N ± 7.6km		29.776 E ± 7.7km					1.0s	10.00nm	4.9mb		
CGLM	1.34	18	iP	33	06.06	-0.7		DEPTH = 10.0km	(geophysicist)					HFS	64.55	343 eP	30 20.50 -1.1		
			eS	33	25.29		TURKEY			(366)					0.5s	8.80nm	5.1mb		
SLKM	1.41	69	eP	33	06.09	-1.4		MD 3.4	(ISK).					ALO	64.55	65 eP	30 21.90 -0.3		
NCG	1.41	14	eP	33	06.91	-0.7								ELC	71.72	52 P	31 06.00 -0.5		
SYI	1.46	170	eP	33	06.57	-1.4								HYB	71.79	275 iPc	31 06.00 -1.3		
			eS	33	26.89		ELL	0.21	150	iPn	10	16.00	0.1		0.7s	35.70nm	5.5mb		
SEW	1.72	86	eP	33	09.66	-1.5	BCK	0.84	51	iPn	10	27.00	-0.5	KRA	72.50	335 eP	31 12.00 1.0		
SVW	1.72	310	iPc	33	09.90	-1.3	YER	1.21	280	iPn	10	34.30	0.5		e		31 25.60		
SKT	2.05	18	iP	33	14.14	-1.2	KHL	1.41	352	iPn	10	38.20	1.3	KSP	72.67	337 eP	31 11.80 -0.2		
			eS	33	41.19		ALT	2.14	7	ePn	10	47.60	0.1		e		31 28.30		
KDC	2.31	175	iPd	33	15.80	-2.8	IZM	2.47	307	ePn	10	51.00	-1.3	CLL	72.97	340 eP	31 13.00 -0.7		
PLRM	2.41	48	eP	33	17.56	-2.3	DST	2.82	342	ePn	10	57.00	-0.2	PRU	73.88	338 eP	31 19.50 -0.5		
PMR	2.41	48	iPd	33	17.60	-2.3		S.D. = 1.0	on	7	of	7	obs.	CVO	74.55	329 eP	31 25.00 2.0		
KNIM	2.59	81	iP	33	19.65	-2.6								KHC	74.90	339 P	31 25.80 0.8		
			eS	33	50.21			DEC 26, 1990	14h	19m	46.14 ± 0.41s			ZST	74.94	336 eP	31 26.10 0.9		
GHO	2.60	46	iP	33	20.24	-2.2		52.637 N ± 9.3km		160.987 E ± 5.3km				GBA	75.41	273 P	31 28.60 0.3		
			eS	33	51.03			DEPTH = 35.0km	(normal)					CDF	76.87	342 eP	31 35.60 -0.6		
MTU	2.63	89	eP	33	21.51	-1.3		4.9mb (37 obs.)		4.6Msz (1 obs.)					0.8s	6.70nm	4.7mb		
			eS	33	51.62			OFF EAST COAST OF KAMCHATKA		(219)			SQTA	77.22	339 iPc	31 38.50 0.3			
CUT	2.69	27	eP	33	21.98	-1.5	SMY	7.97	84 P	21	40.00	-2.5		PTJ	77.37	336 eP	31 39.00 0.0		
GLI	2.99	71	eP	33	25.94	-1.6	ANM	20.90	42	ePd	24	27.70	0.0	FVI	77.47	338 P	31 39.50 0.1		
			eS	33	58.76		MAT	22.70	234 eP	24	48.00	2.1	BSF	77.52	343 eP	31 39.00 -0.8			
TTA	3.26	334	iPd	33	29.70	-1.6		0.7s	37.67nm		5.0mb				0.8s	5.35nm	4.6mb		
HUR	3.33	26	eP	33	30.99	-1.2			eS	29	00.00		LOR	78.57	344 eP	31 44.80 -0.7			
VLZ	3.41	69	eP	33	31.73	-1.5	TTA	24.65	48	ePc	25	05.50	0.9		0.8s	12.75nm	5.0mb		
			eS	34	08.69			0.8s	10.50nm		4.5mb		LBF	78.83	344 eP	31 46.10 -0.8			
KLU	3.71	64	iP	33	34.69	-2.7	SVW	24.75	53	eP	25	17.90	12.3X	SSF	78.83	345 eP	31 46.30 -0.6		
TOA	3.86	55	iPc	33	37.70	-1.7	CN2	25.05	264 eP	25	07.40	-1.2			0.8s	8.75nm	4.8mb		
RND	3.88	28	eP	33	37.62	-2.0	IMA	26.02	41	ePd	25	18.00	0.4	MDI	78.92	340 P	31 48.00 0.7		
MCK	4.15	25	eP	33	41.82	-1.4		0.7s	2.60nm		3.9mb		VAI	79.02	341 P	31 49.00 1.1			
SDG	4.33	52	eP	33	43.37	-2.3							AVF	79.12	345 eP	31 48.10 -0.3			
BWN	4.44	20	eP	33	45.71	-1.5	BRW	26.37	29 P	25	20.00	-0.6		0.9s	9.00nm	4.8mb			
PAX	4.61	47	eP	33	47.07	-2.5	FBA	28.37	44	eP	25	38.50	-0.3	SMF	79.18	344 eP	31 48.30 -0.5		
GLB	4.67	69	eP	33	48.20	-2.1	INK	33.90	37	eP	26	36.00	-1.5		1.0s	12.00nm	4.8mb		
NEA	4.88	20	eP	33	50.87	-2.3	TIY	36.60	266 eP	26	50.00	-0.8	ASPA	79.57	205 iPd	31 52.80 1.7			
DDM	5.01	38	eP	33	54.10	-0.9	Z	20s	1.00um		4.6Msz			0.9s	6.10nm	4.6mb			
TGL	5.04	77	eP	33	53.34	-2.1	MBC	37.25	23 eP	26	56.00	0.2		79.76	342 eP	31 52.60 0.4			
HDA	5.18	30	eP	33	54.62	-2.7		0.5s	4.00nm		4.5mb		LPL	79.77	342 eP	31 52.80 0.4			
CCB	5.19	25	eP	33	54.47	-2.9	LZH	42.88	271 eP	27	42.00	-1.0		0.7s	14.90nm	5.1mb			
BALM	5.30	75	eP	33	56.99	-2.0		2.0s	25.00nm		4.6mb		LPG	79.77	342 eP	31 52.80 0.4			
MDM	5.38	22	eP	33	57.10	-3.0		Z	15s	1.44um		5.0MszX		0.7s	17.10nm	5.2mb			
FBA	5.42	24	iPc	33	58.10	-2.3		N	12s	0.68um			MAF	79.80	345 eP	31 52.00 -0.2			
YAH	5.57	82	eP	34	01.06	-1.7		E	13s	0.88um				0.7s	7.70nm	4.8mb			
GLM	5.58	25	eP	33	59.97	-2.7			SP	27	55.00		BOB	79.94	340 P	31 55.00 2.0			
CTGM	5.78	76	eP	34	03.81	-1.9	YKA	43.13	43 eP	27	43.70	-0.8	MME	80.21	339 P	31 57.00 2.3			
IMA	6.06	357	ePc	34	07.40	-2.1		0.8s	2.20nm		3.9mb		BNI	80.22	342 P	31 56.00 1.4			
ANM	7.37	313	eP	34	26.40	-0.8	GTA	43.20	277 P	34	45.00	-0.5	ARV	80.36	337 P	31 56.50 1.3			
DWY	7.49	52	P	34	27.00	-1.7		0.8s	10.00nm		4.6mb		BDI	80.36	339 P	31 57.00 1.7			
HYT	7.65	77	P	34	30.00	-1.1	Z	14s	1.80um		5.1MszX		CKI	80.50	341 P	31 56.00 0.1			
INK	11.77	37	eP	35	23.50	-2.3	E	14s	1.40um				CAF	81.14	345 eP	31 59.80 0.5			
	67 obs. associated							PP	27	53.10				0.8s	5.35nm	4.6mb			
	DEC 26, 1990 13h 06m 24.81 ± 0.56s						WMO	47.63	290 P	28	20.00	-0.8	LPO	81.51	346 eP	32 01.70 0.5			
	40.975 N ± 4.8km 22.384 E ± 5.3km						GYA	47.94	259 P	28	23.00	-0.4		0.7s	8.80nm	4.9mb			
	DEPTH = 9.6 ± 3.9 km						NEW	49.66	60 P	28	35.30	-1.1	LRG	81.82	342 eP	32 03.20 0.4			
GREECE						(364)		0.8s	2.60nm		4.3mb			0.9s	19.65nm	5.1mb			
GRG	0.02	144	iPc	06	26.92	0.2	KEV	53.42	342 eP	28	55.00	-9.3X	SDI	81.84	336 P	32 04.00 1.0			
			eS	06	27.84		LRM	53.68	60 eP	29	08.60	1.7	LMR	81.90	341 eP	32 03.40 0.2			
KNT	0.43	64	iPd	06	33.60	0.0	LSA	55.00	274 eP	29	16.80	-0.2		0.8s	8.05nm	4.8mb			
			eS	06	39.72		SOD	55.52	340 iP	29	19.00	-0.7	PGF	82.15	339 eP	32 04.90 0.2			
THE	0.56	128	ePd	06	35.24	-0.9	TNP	56.25	70 P	29	26.00	0.4		1.0s	18.00nm	5.1mb			
			eS	06	43.56			0.8s	4.41nm		4.5mb			S.D. = 1.0	on	73	of	78	obs.
SOH	0.75	101	iPd	06	39.33	-0.3	BW06	57.27	61 P	29	32.80	0.0	% DEC 26, 1990 14h 38m 32.40 ± 0.96s						
			eS	06	50.80			0.8s	3.87nm		4.5mb			39.158 N ± 8.3km		27.651 E ± 9.6km			
FNA	0.79	256	ePd	06	39.08	-1.1	CLC	57.60	72 eP	29	39.00	4.0X		DEPTH = 10.0km	(geophysicist)				(366)
			eS	06	49.52		FRB	57.71	24 eP	29	33.00	-2.3	TURKEY						
LIT	0.88	175	ePd	06	41.00	-0.7	SBB	58.26	73 eP	29	43.00	3.3X		MD 2.2	(ISK).				
			eS	06	56.08		CHG	58.35	259 ePc	29	46.00	5.7X							
SRS	0.92	81	ePc	06	41.92	-0.6		0.8s	13.06nm		5.1mb		IZM	0.82	202 eP	38	48.00	-0.3	
			eS	06	55.40		GSC	58.42	72 eP	29	43.00	2.2		DST	0.88	59 iPn	38	50.20	0.9
KKB	1.03	30	iPc	06	44.00	-0.4	GUN	59.48	277 P	29	47.28	-1.3		BNT	1.21	10 ePn	38	55.00	0.0
MMB	1.18	58	iPac	06	47.00	0.0		0.5s	20.00nm		5.5mb		KCT	1.22	26 ePn	38	54.00	-1.1	
							KKN	59.93	277 P	29	50.76	-0.8							

SMY	7.92	84	iPc	04	12.40	-2.5
MAT	22.76	234	iPd	07	20.10	0.5

26d 15h

XAN 43.61 2 P 45 24.00 -0.9
 LZH 45.73 356 P 45 44.00 2.0
 1.8s 48.00nm 5.1mb
 BRS 46.33 119 iPd 45 49.70 2.9X
 TIY 47.49 6 eP 45 56.40 0.5
 GTA 49.41 352 eP 46 11.60 0.8
 1.0s 10.00nm 4.8mb
 Z 14s 2.90um 5.4MsZ
 E 13s 2.20um
 SP 46 21.60
 BTO 50.19 3 eP 46 17.00 0.3
 N 12s 1.30um
 E 12s 2.00um
 BJI 50.26 9 eP 46 17.50 0.5
 1.8s 25.00nm 4.9mb
 HHC 50.53 4 eP 46 18.00 -1.3
 Z 14s 2.40um 5.4MsZ
 VSG 51.76 94 eP 46 29.00 0.0
 DWY 108.88 25 PKP 55 33.00 -16.1X
 YKA 119.38 21 ePKP 56 08.10 -1.1
 0.6s 0.30nm
 BAO 144.76 225 e(PKP) 56 57.00 -1.2X
 SIV 151.88 205 PKP 57 12.60 3.3
 CCH 152.22 194 PKP 57 19.00 8.9X
 CNCB 153.15 190 PKP 57 20.00 8.3X
 LPB 153.45 190 ePKP 57 11.00 -1.0
 ZOBO 153.71 190 PKP 57 21.50 8.9X
 S.D. = 1.4 on 19 of 27 obs.

DEC 26, 1990 16h 13m 33.98± 0.41s
 40.238 N ± 4.5km 28.910 E ± 3.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)
 MD 3.0 (ISK).

KCT 0.42 272 iPg 13 42.80 0.2
 ISI 13 49.30
 IZI 0.44 77 iPg 13 42.80 -0.2
 YLV 0.48 47 iPg 13 43.30 -0.5
 DST 0.67 199 iPg 13 46.90 -0.4
 eSg 13 56.80
 GBZT 0.69 36 ePg 13 47.50 0.0
 BNT 0.77 279 iPg 13 49.70 0.8
 eSg 14 01.80
 EDC 0.81 278 ePg 13 49.00 -0.6
 eSg 14 02.50
 HRT 0.82 44 iPg 13 50.40 0.5
 eSg 14 01.90
 ISK 0.83 8 iPg 13 49.90 -0.2
 iSg 14 00.90
 EYL 1.01 71 iPg 13 52.70 -0.4
 GPA 1.07 87 iPg 13 55.10 0.9
 ALT 1.50 141 iPn 14 01.10 0.0
 DMK 1.81 332 ePn 14 05.40 0.0
 KHL 1.97 166 ePn 14 11.30 3.5X
 EZN 2.03 259 ePn 14 14.10 5.6X
 IZM 2.24 215 ePn 14 16.00 4.3X
 BBTk 2.98 96 ePg 15 02.00 39.7X
 eSg 15 11.00
 S.D. = 0.5 on 13 of 17 obs.

& DEC 26, 1990 16h 14m 55.84s
 60.333 N 152.643 W
 DEPTH = 104.6km
 SOUTHERN ALASKA (2)
 <AGS-P>.

RSO 0.14 337 iP 15 10.21 0.9
 RS2 0.14 337 iP 15 10.24 0.9
 REF 0.16 350 iP 15 10.24 0.9
 RDN 0.19 342 iP 15 10.12 0.8
 eS 15 21.75
 RDT 0.27 26 iP 15 10.41 0.9
 NCT 0.27 328 iP 15 10.36 0.8
 eS 15 22.08
 INE 0.34 218 iP 15 10.73 -0.9
 >NNL 0.73 113 iP 15 14.10 -0.1
 NKA 0.81 59 iP 15 15.78 0.9
 HOM 0.84 143 iP 15 14.57 -0.7
 eS 15 29.71
 CKL 0.88 10 iP 15 15.18 -0.6
 eS 15 30.68
 SPU 0.90 18 iP 15 15.21 -0.7
 eS 15 30.24
 BGL 0.94 7 iP 15 16.04 -0.4
 PDB 0.95 236 iP 15 15.39 -1.0
 eS 15 30.79

CRP 0.97 14 iP 15 16.31 -0.4
 XLV 1.00 152 eP 15 15.26 -1.6
 CGLM 1.03 17 iP 15 16.64 -0.6
 eS 15 32.27
 AUE 1.04 201 iP 15 16.24 -1.1
 AUP 1.05 202 eP 15 16.09 -1.4
 BRK 1.05 122 eP 15 15.89 -1.6
 eS 15 31.69
 CNPM 1.08 138 iP 15 16.34 -1.4
 eS 15 32.18
 AUI 1.08 202 iP 15 16.73 -1.0
 NCG 1.10 12 eP 15 17.61 -0.5
 SLKM 1.21 81 eP 15 17.73 -1.6
 eS 15 35.36
 MCNL 1.44 217 iP 15 20.69 -1.2
 CDD 1.50 200 iP 15 21.20 -1.5
 SEW 1.61 97 eP 15 22.15 -1.9
 eS 15 42.21
 SVW 1.66 299 iPc 15 23.40 -1.3
 SYI 1.73 176 iP 15 24.07 -1.5
 SKT 1.74 18 iP 15 24.98 -0.8
 PMR 2.13 52 eP 15 29.40 -1.3
 GH0 2.31 50 iP 15 31.36 -2.0
 CUT 2.37 28 eP 15 33.05 -0.9
 KNIM 2.44 88 eP 15 32.48 -2.4
 GLI 2.79 76 eP 15 37.82 -1.8
 TTA 3.06 330 iPd 15 42.00 -1.4
 KLU 3.48 68 eP 15 45.69 -3.4
 RND 3.57 29 eP 15 48.80 -1.5
 TOA 3.60 58 ePd 15 49.10 -1.6
 FBA 5.10 24 iPc 16 09.30 -1.9
 40 obs. associated

? DEC 26, 1990 16h 17m 59.56± 1.88s
 27.389 N ± 23.5km 56.594 E ± 17.8km
 DEPTH = 33.0km (normal)
 4.4mb (7 obs.)

SOUTHERN IRAN (353)

SHI 4.23 303 eP 19 05.00 1.6
 RYD 9.36 256 eP 20 15.20 -0.1
 MJMA 10.23 264 ePc 20 26.00 -1.2
 QASM 11.75 267 ePd 20 45.90 -2.0
 AFIF 12.53 258 ePc 21 00.00 1.6
 KMSA 13.08 240 iPc 21 02.50 -3.3X
 AYN 18.23 279 ePd 22 12.70 1.1
 BADA 19.11 278 ePc 22 25.90 3.5X
 KHC 39.46 315 iP 25 29.10 0.7
 SOTA 40.49 312 iPc 25 36.90 -0.1
 0.6s 14.70nm 4.9mb
 i 25 42.40
 LPG 43.23 308 eP 25 59.40 -0.3
 0.7s 4.40nm 4.3mb
 LPL 43.25 308 eP 25 59.50 -0.2
 0.6s 3.60nm 4.3mb
 HFS 43.77 330 eP 26 02.90 -0.5
 1.0s 21.30nm 4.9mb
 SOD 43.94 344 eP 26 02.00 -2.7
 NB2 45.28 331 P 26 15.00 -0.6
 0.7s 3.80nm 4.4mb
 MBC 76.59 359 eP 29 48.50 0.7
 0.8s 3.00nm 4.4mb
 FRB 79.50 338 eP 30 05.00 1.0
 YKA 90.16 356 eP 30 58.60 1.1
 0.8s 1.30nm 4.3mb
 S.D. = 1.3 on 16 of 18 obs.

DEC 26, 1990 16h 19m 27.84± 1.51s
 10.159 N ± 6.2km 126.030 E ± 13.9km
 DEPTH = 70.3 ± 13.8 km
 4.7mb (10 obs.)

PHILIPPINE ISLANDS REGION (248)

DAV 3.08 188 eP 20 16.00 0.8
 OCP 6.57 313 eP 21 18.00 14.0X
 BAG 8.17 320 eP 21 25.60 -0.7
 SSE 21.31 349 Pd 24 11.00 0.3
 1.0s 39.00nm 4.7mb
 Z 20s 0.90um 4.2MsZ
 N 14s 0.70um
 NJ2 22.78 344 Pc 24 27.20 2.0
 1.0s 80.00nm 5.1mb
 IPM 25.40 259 ePc 24 57.60 7.0X
 XAN 28.48 329 P 25 17.40 -1.1
 CD2 29.23 318 P 25 24.00 -1.4
 BJI 31.02 345 eP 25 40.00 -0.9
 HHC 33.14 340 eP 26 01.10 1.5

OIS 33.32 156 iPc 25 59.20 -2.0
 ASPA 34.49 167 iPd 26 09.50 -1.8
 1.4s 11.30nm 4.6mb
 WARB 36.13 179 eP 26 25.00 -0.1
 0.3s 7.00nm 5.1mb
 e 27 13.50
 MEKA 37.27 191 eP 26 35.00 0.3
 GTA 37.34 326 iPc 26 35.70 0.4
 1.0s 10.00nm 4.7mb
 FORR 40.82 177 eP 27 03.80 -0.3
 KLB 42.26 191 eP 27 16.00 0.0
 MUN 42.94 192 eP 27 22.00 0.5
 NWA0 43.66 191 eP 27 28.00 0.7
 RKG 44.81 191 iPd 27 42.00 5.4X
 BRS 45.45 146 iPc 27 41.80 0.0
 HYB 46.57 284 eP 27 51.50 0.7
 WMO 47.17 322 eP 27 53.00 -2.2
 GBA 47.62 279 Pd 27 59.50 0.5
 0.5s 5.00nm 4.7mb
 BWA 49.16 155 eP 28 11.60 0.9
 CAN 50.18 155 eP 28 18.50 0.0
 DZM 50.96 129 iPd 28 17.20 -7.5X
 INK 84.48 22 eP 31 54.00 0.2
 MBC 85.87 13 eP 32 01.50 0.8
 0.8s 5.00nm 4.6mb
 HFS 92.04 332 eP 32 29.50 -0.6
 0.5s 1.20nm 4.6mb
 NB2 92.75 334 P 32 38.70 5.3X
 0.7s 2.00nm 4.7mb
 YKA 93.95 24 eP 32 39.00 0.1
 0.8s 3.50nm 4.8mb
 KIC 128.30 286 (PKP) 38 29.60 0.6
 LIC 128.61 286 (PKP) 38 30.20 0.6
 S.D. = 1.1 on 29 of 34 obs.

DEC 26, 1990 16h 26m 12.34± 1.18s
 0.229 S ± 7.2km 99.140 E ± 8.7km
 DEPTH = 73.9 ± 10.1 km
 5.0mb (16 obs.)

SOUTHERN SUMATRA (274)

PPI 1.28 100 ePd 26 35.50 0.7
 eS 26 40.50
 KLM 4.15 37 eP 27 15.00 0.4
 KGM 4.74 62 iPd 27 23.00 0.1
 i 27 54.00
 IPM 5.13 22 ePd 27 28.90 0.4
 0.7s 174.70nm 5.4mb
 e 28 05.50
 e 29 35.10
 SNG 7.50 11 eP 27 59.40 -1.9
 1.1s 212.66nm 5.7mb X
 NST 15.83 4 eP 30 01.00 8.8X
 LOE 17.71 8 eP 30 16.00 0.3
 CHG 18.92 359 eP 30 29.00 -1.3
 0.9s 11.13nm 4.1mb
 KMI 25.44 8 Pc 31 37.00 1.7
 GBA 25.52 303 Pd 31 36.00 0.2
 1.0s 25.40nm 4.7mb
 HYB 26.80 312 eP 31 47.00 -0.6
 GYA 27.51 15 P 31 55.00 1.0
 PKI 30.63 336 P 32 22.00 -0.2
 LSA 30.72 346 iPc 32 23.70 0.6
 GUN 30.74 337 P 32 23.60 0.4
 DMN 30.79 335 P 32 23.60 0.1
 KKN 30.87 336 P 32 24.20 0.0
 0.9s 46.00nm 5.2mb
 CD2 31.28 8 eP 32 26.50 -1.0
 0.9s 40.00nm 5.2mb
 Z 20s 1.39um 4.6MsZ
 S 37 30.00
 GKN 31.33 335 P 32 28.20 0.1
 XAN 35.30 14 P 33 02.50 0.2
 MUN 35.46 155 eP 33 11.00 7.4X
 NDI 35.59 326 iPc 33 04.00 -0.7
 LZH 36.39 6 Pc 33 11.00 -0.6
 1.5s 11.00nm 4.6mb
 Z 20s 0.73um 4.5MsZ
 PP 33 25.00
 SP 33 32.70
 PcP 35 34.00
 S 38 50.00
 SS 39 15.00
 GTA 39.45 1 iPc 33 37.70 0.6
 1.8s 190.00nm 5.7mb
 PP 33 48.80
 PcP 35 44.60

NIJJ 2.17 275 iPd 01 26.60 -1.1
 CHJJ 2.42 245 iPd 01 30.30 -1.0
 MAT 2.86 260 iPd 01 37.10 -0.4
 (S) 02 09.00
 MTMJ 3.18 262 P 01 41.70 -0.4
 IIDJ 3.46 244 P 01 46.80 0.6
 S 02 28.10
 MRRJ 5.36 355 eP 02 13.30 0.5
 eS 03 13.70
 HOJJ 5.43 12 eP 02 13.30 -0.5
 eS 03 12.10
 KUSJ 6.43 20 eP 02 26.00 -1.9
 eS 03 34.10
 ASAJ 7.06 5 eP 02 37.50 0.7
 YKA 63.64 30 eP 11 34.50 11.3X
 0.6s 0.60nm
 S.D. = 0.9 on 12 of 13 obs.

? DEC 27, 1990 03h 05m 19.93±1.15s
 14.675 S ±29.3km 72.624 W ±20.4km
 DEPTH = 98.9 ± 21.1 km
 3.7mb (1 obs.)

PERU (116)

ARE 2.09 149 iPc 05 54.80 0.4
 iS 06 19.70
 LPB 4.74 114 P 06 34.00 3.3X
 NNA 4.90 303 iP 06 32.20 -0.4
 0.3s 22.08nm
 i 06 35.00
 eS 07 16.50
 CNCB 4.95 116 Pc 06 37.80 4.0X
 SIV 11.22 98 P 07 59.00 0.3
 PPD 21.50 113 eP 10 01.20 -1.0
 e 10 04.40
 YKA 83.62 342 eP 17 39.00 0.8
 0.6s 0.60nm 3.7mb
 S.D. = 1.5 on 5 of 7 obs.

% DEC 27, 1990 03h 09m 42.71±1.00s
 41.016 N ± 9.7km 22.315 E ± 6.2km
 DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.09 132 iPc 09 45.54 0.2
 eS 09 46.94
 KNT 0.46 72 iPc 09 52.37 0.2
 eS 09 58.90
 THE 0.62 128 ePc 09 54.42 -0.8
 eS 10 02.74
 FNA 0.75 252 ePc 09 57.22 -0.2
 eS 10 08.02
 SOH 0.81 104 ePd 09 58.42 0.0
 eS 10 09.54
 LIT 0.92 172 ePd 10 00.94 0.6
 SRS 0.97 84 ePd 10 01.26 0.1
 eS 10 14.22
 S.D. = 0.5 on 7 of 7 obs.

DEC 27, 1990 08h 36m 52.00±0.35s
 51.400 N ± 8.7km 176.152 W ± 4.3km
 DEPTH = 33.0km (normal)
 4.9mb (21 obs.)

ANDREANOF ISLANDS, ALEUTIAN IS. (7)
Felt (IV) on Adak.

ADK 0.59 326 iPd 37 05.90 2.1
 SDN 10.15 61 eP 39 19.20 0.8
 ANM 14.35 19 ePd 40 19.30 4.8X
 SVW 14.92 41 ePd 40 25.80 3.8X
 KDC 15.07 56 eP 40 27.30 3.4X
 TTA 15.81 35 ePc 40 38.10 4.6X
 0.9s 24.40nm 4.4mb
 PMR 17.93 45 eP 41 04.20 4.2X
 IMA 18.59 29 ePc 41 08.80 0.5
 0.9s 15.60nm 4.2mb
 TOA 19.42 45 eP 41 18.60 0.4
 FBA 19.92 36 ePc 41 22.70 -0.7
 0.7s 29.90nm 4.7mb
 BRW 21.82 17 ePc 41 43.60 0.9
 INK 26.50 34 eP 42 26.00 -1.6
 YKA 34.01 47 eP 43 32.70 -1.7
 0.6s 1.80nm 4.2mb
 LON 35.21 76 eP 43 46.00 1.1
 PNT 35.37 71 eP 43 47.00 0.8

NEW 0.8s 18.00nm 5.1mb
 37.32 71 eP 44 03.20 0.6
 0.7s 19.00nm 5.1mb
 EDM 37.35 62 eP 44 03.00 0.2
 LBFM 37.96 84 eP 44 10.00 1.7
 SES 39.86 65 ePc 44 24.00 0.2
 BONR 42.19 85 eP 44 38.50 -4.9X
 FFC 42.78 55 eP 44 47.00 -0.6
 0.5s 5.00nm 4.5mb
 TNP 42.79 84 eP 44 49.00 0.8
 0.8s 2.21nm 3.9mb
 CLC 43.97 87 eP 45 06.00 8.4X
 SBB 44.55 89 eP 45 03.00 0.7
 BW06 44.71 74 eP 45 03.80 0.0
 0.8s 11.90nm 4.8mb
 GSC 44.79 87 eP 45 05.00 0.7
 MSU 45.66 80 eP 45 12.00 0.7
 PLM 46.03 89 eP 45 14.00 -0.2
 BAR 46.59 90 eP 45 19.00 0.5
 BJI 46.99 284 eP 45 22.00 0.6
 1.5s 39.00nm 5.2mb
 GOL 49.08 75 eP 45 38.50 0.4
 0.7s 9.10nm 4.9mb
 SSE 49.66 271 eP 45 43.00 0.7
 1.0s 12.00nm 4.9mb
 ANMO 51.46 80 eP 45 56.80 0.5
 0.9s 12.08nm 4.9mb
 ALO 51.46 80 eP 45 56.00 -0.3
 1.0s 4.25nm 4.4mb
 FRB 52.13 32 eP 45 59.00 -1.6
 LZH 56.96 288 eP 46 36.00 -0.6
 1.5s 40.00nm 5.2mb
 sP 46 57.50
 FVM 59.03 67 eP 46 49.00 -1.8
 ELC 60.20 67 eP 46 57.40 -1.4
 GBTN 64.20 65 eP 47 24.60 -1.0
 TKL 64.46 64 P 47 26.40 -0.8
 NAV 64.92 61 P 47 30.00 -0.3
 BLA 65.20 61 P 47 32.00 -0.1
 CVL 65.71 59 eP 47 35.00 -0.2
 LHS 66.98 63 eP 47 43.00 -0.4
 GUN 73.38 294 P 48 22.78 0.0
 0.6s 31.00nm 5.5mb
 KKN 73.81 294 P 48 25.08 -0.1
 0.6s 18.00nm 5.2mb
 PKI 73.90 294 P 48 25.64 -0.2
 GKN 74.02 295 P 48 25.96 -0.3
 0.6s 18.00nm 5.3mb
 DMN 74.05 294 P 48 26.68 0.1
 0.8s 15.00nm 5.0mb
 WRA 83.20 226 P 49 16.00 -0.1
 1.0s 3.80nm 4.5mb
 HYB 85.75 293 eP 49 28.00 -1.1
 POO 87.54 297 iP 49 39.50 1.7
 GBA 89.42 291 Pd 49 45.60 -1.2
 0.8s 9.20nm 5.1mb
 KIC 122.00 10 (PKP) 55 44.10 -0.5
 LIC 122.10 10 (PKP) 55 44.40 -0.4
 SLR 148.32 315 iPKPd 56 36.50 3.7X
 1.2s 78.13nm
 S.D. = 0.9 on 48 of 56 obs.

DEC 27, 1990 10h 14m 24.84±0.47s
 19.429 S ± 7.7km 177.482 W ± 7.9km
 DEPTH = 580.7 ± 6.2 km
 5.1mb (12 obs.)

FIJI ISLANDS REGION (181)

KRO 3.64 305 eP 15 45.60 -1.4
 OVA 3.94 295 eP 15 49.00 -0.1
 SVA 4.06 288 ePd 15 50.00 0.2
 VUN 4.09 290 iPd 15 50.00 -0.1
 NDE 4.16 312 eP 15 50.00 -0.7
 MBU 4.36 303 iP 15 52.10 0.0
 SGE 4.73 292 iP 15 55.10 0.0
 NDF 5.09 288 eP 15 59.40 1.6
 AFI 7.74 46 iPd 16 18.50 -3.3X
 DZM 15.26 257 iPc 17 36.20 0.3
 WLZ 19.32 197 P 18 16.60 2.3
 NOZ 19.51 191 eP 18 17.70 1.6
 MNG 21.96 194 eP 18 36.60 -1.9
 0.2s 2.00nm 4.4mb
 THZ 23.72 198 eP 18 54.10 -0.3
 KHZ 24.15 196 P 18 57.10 -1.0
 0.3s 14.00nm 5.1mb
 LTZ 24.84 198 P 19 02.60 -1.6
 AFR 26.33 90 eP 19 36.00 18.5X

BRS 0.8s 40.00nm
 28.37 248 iPd 19 36.00 0.8
 RUV 29.02 86 eP 19 40.00 -0.8
 0.8s 35.00nm 5.0mb
 COO 29.80 242 iPc 19 48.80 1.3
 CNB 33.23 235 iPd 20 18.00 1.6
 CAN 33.52 235 eP 20 19.60 0.8
 BWA 33.69 237 eP 20 18.70 -1.5
 CMS 35.08 243 iPc 20 32.70 1.0
 0.8s 80.00nm 5.4mb
 PMG 35.60 281 eP 20 36.50 0.4
 1.0s 80.00nm 5.3mb
 TOO 36.93 233 iPc 20 48.40 1.6
 0.7s 73.00nm 5.4mb
 BFD 39.05 235 iPc 21 07.10 3.0X
 ADE 41.58 239 iPd 21 24.50 0.1
 0.7s 49.32nm 5.1mb
 WRA 45.24 261 P 21 52.00 -1.1
 0.3s 22.60nm 5.2mb
 ASPA 45.25 256 iPd 21 52.50 -0.6
 1.1s 91.20nm 5.2mb
 iS 27 50.30

WARB 51.62 252 eP 22 39.50 -1.2
 0.4s 16.00nm 4.8mb
 MEKA 58.81 250 eP 23 29.40 -1.2
 KLB 58.95 244 eP 23 31.00 -0.4
 BAL 59.94 245 eP 23 37.00 -1.0
 MUN 60.23 244 eP 23 39.00 -0.9
 PRS 76.71 44 eP 25 19.30 1.0
 GCC 76.72 43 eP 25 18.80 0.5
 BRK 77.06 42 eP 25 24.80 4.6X
 MHC 77.14 43 eP 25 21.50 0.7
 PLM 78.08 48 iP 25 26.10 0.2
 FRI 78.18 44 eP 25 26.00 -0.1
 CMB 78.35 43 eP 25 27.50 0.4
 WDC 78.54 40 eP 25 28.50 0.5
 BONR 79.65 44 eP 25 34.50 0.3
 TNP 80.43 44 iP 25 38.80 0.7
 1.0s 3.25nm 3.8mb X
 PV09 86.09 47 eP 26 06.20 -0.1
 ALO 86.35 51 eP 26 07.00 -0.5
 1.0s 4.75nm 4.2mb
 GOL 89.24 47 eP 26 21.00 0.1
 1.0s 6.00nm 4.5mb
 YKA 95.34 25 eP 26 46.40 -1.5
 0.7s 0.50nm 3.9mb X
 S.D. = 1.0 on 45 of 49 obs.

% DEC 27, 1990 10h 21m 39.32±0.88s
 39.101 N ± 7.7km 27.640 E ± 9.1km
 DEPTH = 10.0km (geophysicist)

TURKEY (366)

MD 2.3 (ISK).
 IZM 0.76 203 iPg 21 54.10 -0.1
 iSg 22 05.10
 DST 0.92 56 ePn 21 57.20 0.3
 EZN 1.25 306 iPn 22 02.80 0.3
 BNT 1.27 10 iPn 22 02.40 -0.5
 KCT 1.27 26 ePn 22 03.00 0.0
 S.D. = 0.5 on 5 of 5 obs.

* DEC 27, 1990 11h 08m 03.22±0.64s
 6.275 S ±10.3km 145.872 E ±10.8km
 DEPTH = 123.7 ± 5.7 km
 4.6mb (4 obs.)

PAPUA NEW GUINEA (202)

YYYY 0.10 71 iPd 08 20.90 -0.8
 MNDI 2.20 273 eP 08 41.00 0.9
 PMG 3.36 158 iPc 08 55.80 0.7
 eS 09 33.00
 ASPA 20.77 212 eP 12 35.30 -0.9
 0.8s 6.30nm 4.0mb
 iS 16 17.20
 CHG 52.54 299 eP 17 06.70 0.4
 LZH 57.69 320 Pd 17 43.50 0.1
 1.5s 34.00nm 5.1mb
 GUN 67.08 304 P 18 46.00 0.0
 PKI 67.35 303 P 18 47.28 -0.5
 KKN 67.54 303 P 18 48.60 -0.2
 0.9s 20.00nm 5.0mb
 DMN 67.62 303 P 18 49.26 -0.1
 GKN 68.14 303 P 18 52.26 -0.2
 YKA 99.93 28 eP 21 35.50 0.5
 0.6s 0.40nm 4.2mb
 SIV 145.35 130 PKP 27 29.20 0.2

27d 11h

KIC 150.79 272 PKP 27 44.20 6.6X
 LIC 151.07 272 PKP 27 44.90 6.9X
 TIC 151.08 272 PKP 27 44.90 6.9X
 S.D. = 0.6 on 13 of 16 obs.

DEC 27, 1990 12h 10m 33.70 ± 0.70s
 45.630 N ± 8.0km 11.108 E ± 4.9km
 DEPTH = 5.0km (geophysicist)

NORTHERN ITALY (545)
 ML 2.6 (KBA).

SAL 0.41 267 P 10 40.50 -1.4
 CTI 0.56 42 P 10 44.00 -1.0
 VVI 0.99 69 P 10 52.30 -0.6
 MDI 0.99 279 P 10 53.50 0.6
 OGA 1.24 357 iPg 10 57.50 0.2
 BOB 1.46 234 P 11 01.00 0.2
 SCE 1.47 16 iPg 11 00.70 -0.3
 FVI 1.51 50 P 11 01.20 -0.2
 SOTA 1.59 2 iPg 11 03.30 0.6
 VAI 1.65 279 P 11 03.80 0.4
 WATA 1.74 11 iPg 11 05.50 0.7
 VOY 1.99 77 ePn 11 09.40 1.0
 KBA 2.12 46 iPg 11 12.90 2.5X
 VBY 2.92 91 eP 11 50.00 28.4X
 S.D. = 0.8 on 12 of 14 obs.

% DEC 27, 1990 12h 35m 32.96 ± 0.95s
 40.886 N ± 7.0km 22.473 E ± 8.2km
 DEPTH = 10.0km (geophysicist)
 GREECE (364)

GRG 0.09 322 ePc 35 35.32 -0.2
 KNT 0.42 49 iPd 35 42.26 0.7
 THE 0.45 124 ePd 35 41.96 -0.2
 LIT 0.78 179 ePc 35 48.56 0.3
 SRS 0.88 74 iPc 35 49.33 -0.5
 S.D. = 0.7 on 5 of 5 obs.

% DEC 27, 1990 12h 39m 29.02 ± 0.86s
 39.138 N ± 7.4km 27.568 E ± 8.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.5 (ISK).

IZM 0.78 198 ePg 39 44.20 0.0
 DST 0.94 60 iPn 39 47.20 0.1
 EZN 1.18 306 ePn 39 51.00 0.0
 BNT 1.25 12 ePn 39 52.60 0.4
 KCT 1.27 28 ePn 39 52.00 -0.5
 S.D. = 0.5 on 5 of 5 obs.

DEC 27, 1990 13h 26m 57.11 ± 0.58s
 36.539 N ± 6.7km 48.907 E ± 8.6km
 DEPTH = 10.0km (geophysicist)
 4.7mb (6 obs.)
 NORTHWESTERN IRAN (345)
 Felt at Rudbor.

TEH 2.16 111 ePd 27 34.00 0.2
 TAB 2.56 307 eP 27 39.50 0.0
 KER 2.63 214 ePc 27 48.00 7.5X
 SHI 7.52 155 eP 28 50.00 0.5
 MJMA 11.09 197 ePd 29 33.70 -5.1X
 OASM 11.38 205 ePd 29 42.00 -0.8
 RYD 11.95 190 ePd 29 50.80 0.3
 UQSK 12.09 209 ePd 29 53.30 0.9
 AFIF 13.34 203 ePd 30 15.70 6.5X
 ALT 15.07 285 eP 30 36.00 4.2X
 EYL 15.21 291 eP 30 38.00 4.4X
 HRT 15.62 292 iP 30 42.60 3.7X
 IZI 15.69 290 eP 30 41.00 1.1
 YLV 15.80 291 eP 30 45.00 3.8X
 ISK 16.11 292 iP 30 47.10 1.9

VR1 19.07 306 eP 31 22.00 0.0
 MLR 19.45 304 eP 31 26.50 -0.3
 CMP 19.98 303 ePc 31 30.00 -2.4
 BMR 21.79 309 ePc 31 51.00 0.1
 SPC 24.36 310 eP 32 12.60 -3.7X
 KRA 24.85 312 eP 32 21.70 0.9
 ZST 26.04 307 eP 32 32.50 0.5
 SOP 26.27 305 eP 32 33.70 -0.4
 KSP 27.31 312 eP 32 43.50 -0.2
 KHC 28.53 307 eP 32 55.00 0.2
 NUR 28.54 335 eP 33 05.00 10.3X
 CLL 29.43 311 e(P) 33 16.00 13.2X
 SOTA 29.76 303 iPc 33 06.00 0.0
 HFS 32.59 328 eP 33 24.70 -5.8X
 NB2 34.11 328 P 33 38.00 -5.7X
 BCAA 42.41 228 ePc 34 58.00 4.4X
 KIC 57.34 252 P 36 47.02 -0.9
 TIC 57.37 252 P 36 47.30 -0.8
 LIC 57.64 252 P 36 49.14 -0.9
 FRB 68.54 335 eP 37 57.00 -4.5X
 TSM 70.79 99 ePd 38 50.80 34.8X
 TRT 74.08 112 iPd 38 52.00 16.7X
 S.D. = 0.9 on 21 of 37 obs.

DEC 27, 1990 13h 35m 10.09 ± 0.10s
 6.873 S ± 2.6km 129.542 E ± 3.4km
 DEPTH = 180.9km (geophysicist)
 5.6mb (51 obs.)

BANDA SEA (280)
 Depth from broadband
 displacement seismograms.
 FAULT PLANE SOLUTION: P-Waves
 NP1: Strike= 55 Dip=65 Slip= 45
 NP2: 302 50 147
 Principal Axes:
 T Plg=49 Azm=276
 P 9 175

Comment: The focal mechanism is
 moderately well controlled and
 corresponds to reverse
 faulting with a large strike-
 slip component. The preferred
 fault plane is not determined.

RADIATED ENERGY
 No. of sta: 5 Focal mech. F
 Energy 4.3 ± 1.2 × 10¹² Nm
 MOMENT TENSOR SOLUTION
 Dep 195 No. of sta: 7
 Moment Tensor: Scale 10¹⁷ Nm
 Mrr= 1.92 Mtt=-5.28
 Mff= 3.36 Mrt= 1.73
 Mrf= 2.57 Mtf= 0.78

Principal axes:
 T Vol= 5.57 Plg=38 Azm=281
 N 0.10 49 77
 P -5.67 12 181
 Best Double Couple: Mo=5.6 × 10¹⁷
 NP1: Strike=314 Dip=54 Slip= 159
 NP2: 57 73 38

CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 18S, 41C
 Centroid Location:
 Origin Time 13:35:14.3 0.4
 Lat 6.82S 0.03 Lon 129.67E 0.03
 Dep 194.1 1.2 Half-duration 2.7
 Moment Tensor: Scale 10¹⁷ Nm
 Mrr= 1.66 0.09 Mtt=-3.44 0.12
 Mff= 1.78 0.15 Mrt= 1.09 0.11
 Mrf= 3.00 0.10 Mtf= 0.17 0.13
 Principal Axes:
 T Vol= 4.82 Plg=45 Azm=279
 N -1.10 41 70
 P -3.72 15 173
 Best Double Couple: Mo=4.3 × 10¹⁷
 NP1: Strike=305 Dip=47 Slip= 154

NP2: 53 72 46
 MTN 6.14 165 iPd 36 40.10 0.4
 KNA 8.85 185 iPd 37 14.70 -0.9
 MNI 9.50 330 iPd 37 27.30 3.2X
 OIS 16.74 145 iPd 38 54.50 -1.2
 MBL 17.03 213 iPd 39 05.60 6.5X
 ASPA 17.22 166 iPd 38 59.10 -2.3
 Z 0.7s 6703.40nm 7.1mb X
 19s 8.60um 3.5msz
 PMG 17.62 99 eP 39 04.00 -1.9
 WARB 19.40 188 eP 39 24.70 0.2
 CTA 20.87 131 iPd 39 40.00 0.7
 1.1s 430.38nm 5.9mb
 CTAO 20.87 131 ePc 39 38.56 -0.7
 MEKA 22.25 207 iPd 39 53.00 0.2
 RAB 22.68 84 eP 39 58.50 1.5
 OCP 22.96 339 eP 40 10.50 10.8X
 BAG 24.78 339 ePc+ 40 16.00 -1.1
 1.4s 748.84nm 6.1mb
 COOL 25.15 197 eP 40 19.00 -1.3
 GUA 25.38 37 eP 40 23.40 0.9
 0.7s 153.42nm 5.7mb
 PJG 25.39 37 eP 40 23.20 0.6
 MRWA 25.64 208 iPc 40 24.10 -0.6
 BAL 26.50 205 iPc 40 32.10 -0.5
 RMO 26.74 139 iPd 40 35.20 0.4
 1.0s 199.00nm 5.8mb
 KLB 26.95 203 iPd 41 24.00 -1.1
 KGM 27.62 288 ePd 40 43.20 0.4
 1.0s 964.60nm 6.5mb
 MUN 27.90 205 iPc 40 44.80 -0.4
 NWA0 28.34 202 iPc 40 48.70 -0.4
 Z 20s 1.10um 4.5msz
 CMS 28.84 150 ePd 40 53.00 -0.6
 ADE 29.21 164 iPd 40 56.60 -0.3
 0.7s 452.05nm 6.3mb
 RKG 29.44 201 iPc 41 03.90 5.0X
 KLM 29.56 289 eP 41 01.00 0.9
 VSG 29.96 97 eP 41 04.00 0.3
 BRS 30.04 136 iPc 41 03.20 -1.1
 SVO 30.06 96 eP 41 09.00 4.5X
 HNR 30.20 97 eP 41 06.00 0.2
 1.2s 375.00nm 6.0mb
 IPM 30.65 291 ePc 41 08.00 -1.0
 1.0s 290.20nm 6.0mb
 COO 31.55 141 iPc 41 18.80 1.3
 0.4s 83.00nm 5.8mb
 SNG 32.05 295 eP 41 21.00 -0.9
 QIZ 32.24 323 P 41 22.50 -1.0
 1.1s 100.00nm 5.4mb
 N 12s 0.90um
 E 12s 0.90um
 SP 42 15.50
 S 46 19.00
 BFD 32.41 160 iPd 41 27.20 2.4
 1.0s 446.00nm 6.1mb
 BWA 32.49 150 iPd 41 27.50 1.9
 TSI 32.59 287 ePc 41 07.00 -19.6X
 RIV 33.46 146 eP 41 37.00 3.1X
 CAN 33.49 150 iPd 41 35.00 0.8
 CNB 33.66 150 iPd 41 36.90 1.2
 0.2s 56.00nm 5.9mb

GZH	33.73	332	Pc	41 35.00	-1.3	TIY	47.14	341	iPc	43 25.60	-0.5	KKN	54.91	311	Pc	44 23.78	-0.9
E	16s		2.20um				0.8s		100.00nm		5.4mb	DMN	54.95	311	Pc	44 24.24	-0.8
			S	46 40.00		BJI	48.28	346	iPc	43 34.48	-0.2	GKN	55.51	311	Pc	44 28.00	-0.9
TOO	33.82	157	iPd	41 38.70	1.7		1.0s		140.00nm		5.5mb	GBA	55.59	292	Pc	44 25.90	-3.5X
	1.0s		284.00nm		5.9mb				epPc	44 15.04	182kmX	HYB	0.8s		58.20nm		5.4mb
			i	47 38.00					esPd	44 34.40			55.85	296	iPc	44 29.00	-2.4
PCT	35.17	308	eP	41 50.00	1.4				eScP	48 35.00			1.0s		165.00nm		5.8mb
LOE	36.57	312	iPc	42 00.00	-0.4				iS	50 16.46		HIA	56.56	352	ePc	44 35.49	-0.4
NST	36.75	308	iPc	42 03.50	1.7				e	51 29.96					esPd	45 35.91	
KAGJ	37.87	2	eP	42 10.80	-0.2				eScS	53 02.66					iS	52 10.12	
BDT	38.54	309	iPc	42 16.50	-0.3				eScS	53 07.00					esS	53 21.96	
SSE	38.59	348	Pd	42 17.20	0.1	SNY	48.77	354	iPc	43 38.00	-0.4				eScS	54 04.01	
	1.2s		84.00nm		5.3mb		1.0s		80.00nm		5.2mb	POO	60.43	296	iP	45 02.00	-1.2
Z	20s		0.90um		4.6Msz		Z	20s	1.20um		4.9Msz	NDI	61.55	308	iPc	45 08.50	-2.0
E	13s		0.60um				N	22s	1.10um				0.6s		226.67nm		6.2mb
			PcP	44 25.50		LZH	49.08	332	iPc	43 41.39	0.3	WMQ	63.04	327	iPc	45 20.24	0.1
			ScP	47 54.00			1.8s		53.00nm		4.8mb		1.5s		200.00nm		5.8mb
			S	47 57.50			Z	22s	1.11um		4.8Msz				PcP	45 57.50	
DZM	38.66	117	iPc	42 18.70	0.8				esPd	44 41.31					PP	46 03.00	
KUMJ	39.21	2	eP	42 22.10	0.0				PP	45 06.00					iS	53 32.32	
CHG	39.52	311	iPc	42 25.10	0.2				PcP	46 02.50					esS	54 50.79	
			e	44 30.00					eScP	48 38.00		KSH	67.58	318	iPc	45 48.00	-1.4
			e	48 22.20					PcS	48 58.00		MAW	74.90	201	iPc	46 32.70	0.5
			eS	51 20.00					iS	50 27.80			1.0s		88.00nm		5.4mb
GYA	39.88	327	iPc	42 27.60	-0.3				SS	51 43.00		SHI	82.20	301	eP	47 12.00	-0.7
	2.0s		200.00nm		5.4mb				eScS	53 08.71		DHR	83.60	297	iPc	47 20.00	0.4
			PcP	44 30.60		HHC	50.28	342	Pc	43 50.00	-0.1	SDN	84.45	33	eP	47 23.80	0.6
			ScP	48 00.20			1.0s		20.00nm		4.7mb	ANM	85.79	23	ePc	47 30.30	0.5
			S	48 15.00					PP	44 25.00		RYD	86.46	295	iPc	47 34.00	0.0
			PcS	48 20.00					SP	44 49.50		KMSA	87.75	291	ePc	47 39.90	-0.3
			ScS	52 13.00					S	50 47.00		OBO	87.76	282	iP+	47 42.12	1.

% DEC 27, 1990 14h 53m 58.86±1.11s
 40.169 N ±25.1km 27.577 E ±12.8km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.6 (ISK)
 EDC 0.28 51 ePg 54 04.50 -0.3
 BNT 0.32 54 iPg 54 05.40 -0.2
 KCT 0.60 82 ePg 54 10.00 -1.0
 EZN 1.02 251 iPn 54 18.00 -0.1
 YLV 1.43 73 iPn 54 26.50 1.6
 S.D. = 1.4 on 5 of 5 obs.

DEC 27, 1990 15h 13m 39.22±0.75s
 41.040 N ± 6.5km 22.476 E ± 7.0km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)
 GRG 0.10 214 ePc 13 41.82 -0.2
 KNT 0.34 69 ePc 13 45.86 -0.4
 THE 0.55 138 iPd 13 49.78 -0.6
 SOH 0.70 108 ePc 13 52.78 -0.3
 SRS 0.85 84 ePc 13 54.94 -0.6
 FNA 0.87 253 ePc 13 55.10 -0.9
 LIT 0.94 179 ePc 13 57.18 0.0
 KKB 0.94 29 iPg 13 56.00 -1.2
 MMB 1.09 59 ePg 13 57.00 -2.7
 OUR 1.34 121 ePd 14 05.22 1.3
 VTS 1.64 19 iP 14 09.00 0.6
 RZN 1.81 68 iPd 14 13.00 2.2
 PGB 1.97 39 iPc 14 15.00 2.0
 PLD 1.98 57 eP 14 17.00 3.9X
 AGG 2.02 183 ePc 14 14.10 0.4
 KDZ 2.30 74 iPd 14 22.00 4.3X
 S.D. = 1.4 on 14 of 16 obs.

DEC 27, 1990 15h 56m 46.61±1.27s
 14.916 S ±13.6km 167.520 E ±16.3km
 DEPTH = 143.0 ± 10.8 km
 4.9mb (5 obs.)
 VANUATU ISLANDS (186)
 BKM 2.82 166 iPd 57 32.20 0.2
 PVC 2.91 165 iPd 57 33.50 0.4
 DZM 7.19 188 iPc 58 29.10 -1.4
 HNR 9.19 306 eP 58 58.00 0.8
 SVO 9.47 306 eP 59 02.00 1.2
 VSG 9.48 306 eP 58 59.00 -2.1
 BRS 18.50 225 iPd 00 55.30 0.7
 CTA 20.92 253 iPc 01 20.00 0.6
 RMO 20.96 234 iPd 01 21.10 1.3
 PUZ 24.95 160 eP 01 58.80 0.6
 NOZ 25.37 161 P 02 03.70 1.7
 CMS 25.79 227 ePd 02 06.50 0.5
 MNG 26.53 166 eP 02 12.50 -0.2
 PGZ 26.72 165 eP 02 12.20 -2.2
 WRA 32.01 256 P 03 11.00 9.4X
 ASPA 32.84 249 iPd 03 07.20 -1.6
 FORR 39.39 239 iPc 04 04.00 0.1
 WARB 39.73 247 eP 04 06.50 -0.3
 MEKA 47.01 247 eP 05 05.00 -0.4
 BCAO 147.75 254 iPKPd 16 25.10 11.2X
 S.D. = 1.3 on 18 of 20 obs.

22.725 S ± 4.1km 70.006 W ± 4.4km
 DEPTH = 63.7km (11 depth phases)
 5.1mb (18 obs.)
 NEAR COAST OF NORTHERN CHILE (122)
 Felt (V) at Colomo and (IV) at
 Tocopillo, Mejillones,
 Antofagosto, Sierrita Gordo, Mario
 Elena and Pedro de Valdivia.
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 16S, 31C
 Centroid Location:
 Origin Time 16:08:41.8 0.3
 Lat 22.42S 0.04 Lon 70.18W 0.05
 Dep 63.9 4.2 Holf-duration 2.0
 Moment Tensor: Scale 10**17 Nm
 Mrr=-0.76 0.05 Mtt=-0.14 0.08
 Mff= 0.90 0.08 Mrt=-0.17 0.05
 Mrf=-1.52 0.06 Mtf= 0.56 0.07
 Principal Axes:
 T Vol= 1.96 Plg=29 Azm=108
 N -0.28 13 10
 P -1.68 58 260
 Best Double Couple: Mo=1.8*10**17
 NP1: Strike=229 Dip=20 Slip=-50
 NP2: 7 75 -103

ANT 1.05 201 iPd 08 52.60 -1.1
 CNCB 6.19 18 iPc 10 10.50 4.4X
 ARE 6.39 347 iPc 10 07.10 -1.5
 LPB 6.42 17 iPc 10 13.00 3.8X
 CCH 6.44 35 P 10 13.00 3.7X
 RTLL 8.68 171 iPd 10 35.50 -4.6X
 CFA 8.99 170 ePc 10 40.00 -4.3X
 JACH 9.93 183 eP 10 57.00 -0.3
 MDZ 10.17 174 i(P) 10 54.50 -6.0X
 IHA 10.36 188 eP 11 16.00 13.0X
 PEL 10.40 183 eP 11 06.50 3.0X
 FCH 10.57 181 eP 11 00.00 -6.1X
 LCCH 10.80 187 eP 11 07.00 -1.9
 LNV 11.26 186 ePc 11 07.00 -8.1X
 NNA 12.51 327 iP 11 29.20 -2.7X
 ITB1 14.44 101 e(P) 11 56.80 -0.3
 ITB 14.61 101 e(P) 11 59.50 0.1
 ITB7 14.67 103 e(P) 11 59.80 -0.4
 PPD 17.31 91 eP 12 33.70 0.1
 BAO 21.94 75 ePc 13 24.50 -0.1
 BMA 23.84 95 eP 13 42.50 -0.5
 PSO 24.82 342 eP 13 56.00 3.1X
 BOG 27.47 351 eP 14 17.00 -0.3
 SOB1 30.97 69 iPc 14 48.70 0.5
 UPA 32.86 342 (P) 15 06.00 1.4
 PRM 57.70 348 P 18 20.00 -1.0
 RKT 59.36 256 iP 18 32.50 -0.3
 TKL 59.51 347 P 18 32.00 -1.6
 GBTN 59.61 347 P 18 32.70 -1.6
 RSCP 59.85 345 P 18 34.00 -1.9
 BLA 60.42 350 P 18 39.00 -0.8
 NAV 60.58 350 P 18 40.00 -0.9
 CVL 60.90 352 P 18 43.00 0.0
 NA2 60.96 353 P 18 43.00 -0.4
 CBN 61.00 353 eP 18 44.00 0.4
 UYO 61.17 337 iPc 18 44.50 -0.4
 OLY 61.38 340 P 18 44.50 -1.8
 ELC 62.38 343 P 18 51.20 -1.7
 MEO 63.30 334 iPd 18 57.50 -1.6
 FVM 63.36 342 P 18 57.50 -1.9
 WVLY 65.35 353 P 19 12.10 -0.2
 pP 19 29.40 64km

HBVT 66.82 358 P 19 21.80 0.2
 ALO 66.98 328 iPd 19 23.20 0.1
 ANMO 66.98 328 P 19 23.70 0.6
 RSNY 67.07 356 P 19 23.00 -0.2
 SPA 67.41 180 iPd 19 25.10 -0.3
 CBM 69.35 1 P 19 37.00 -0.2
 LIC 69.70 74 P 19 40.30 0.2
 TIC 69.90 73 P 19 41.46 0.1
 KIC 70.02 74 Pc 19 42.26 0.2
 GLA 70.03 321 eP 19 43.00 1.2
 GOL 70.34 332 P 19 43.80 0.0
 PV09 71.10 328 eP 19 49.20 0.7
 TPC 71.49 321 eP 19 52.00 1.3
 PEC 72.00 320 P 19 54.00 0.3
 RVR 72.19 320 eP 19 56.00 1.2
 MSU 72.62 327 P 19 58.60 1.1
 MWC 72.76 320 eP 20 03.00 4.7X
 GSC 72.78 321 eP 20 00.00 1.7
 RUV 72.85 260 iP 19 59.10 0.1
 SBB 72.95 320 eP 20 00.00 0.7
 VAH 73.06 260 iP 20 00.30 0.1
 TPT 73.14 261 iP 20 01.00 0.3
 PMO 73.38 260 iP 20 02.30 0.2
 CLC 73.60 321 eP 20 08.00 5.0X
 DAU 73.62 328 eP 20 04.20 0.8
 KUK 73.84 76 eP 20 05.00 0.2
 ISA 74.00 321 eP 20 06.00 0.6
 DUG 74.22 327 P 20 06.80 0.2
 BW06 74.68 331 P 20 09.00 -0.4
 CMB 76.75 321 P 20 21.00 0.1
 LRM 78.35 331 eP 20 30.70 0.8
 ORV 78.42 322 P 20 30.00 0.0
 LBFM 79.84 323 P 20 38.40 0.4
 FFC 81.87 342 eP 20 45.00 -3.1X
 NEW 82.29 330 P 20 50.00 -0.5
 DPW 82.51 330 P 20 52.00 0.4
 MAW 83.45 164 iPc 20 57.00 0.8
 PNT 84.20 330 ePd 21 01.00 0.9
 PGC 85.57 328 eP 21 07.00 0.1
 PRY 86.23 117 eP 21 23.00 11.9X
 SLR 87.37 117 iPc 21 28.00 11.4X
 BCAO 90.35 85 ePc 21 41.00 10.3X
 FORR 123.97 199 ePKP 27 27.00 -0.6
 ASPA 128.36 208 iPKPd 27 35.40 -0.9
 WRA 131.38 211 PKP 27 41.00 -1.1
 GUA 145.65 261 ePKP 28 07.70 -0.5
 PJG 145.71 261 ePKP 28 07.90 -0.4
 POO 145.97 90 iPKP 28 11.00 2.3X
 KOD 146.52 106 ePKP 28 04.00 -6.0X
 GBA 147.82 101 PKPc 28 14.50 2.9X
 TRT 149.65 185 ePKPc 28 17.80 3.3X
 NDI 149.94 72 ePKP 28 16.00 1.4
 HYB 150.04 94 iPKPd 28 20.60 5.5X

DEC 27, 1990 16h 08m 34.67±0.19s

BCAO 113.37 318 iPd_{diff} 25 10.00 2.0
1.0s 23.00nm
ic 25 26.90
KIC 118.33 343 (PKP) 29 11.30 0.9
LPB 127.19 64 ePKP 29 27.00 -0.9
CNCB 127.49 64 PKP 29 29.00 0.4
SPA 144.02 180 iPKPc 29 54.00 -3.2X
1.0s 45.00nm
S.D. = 0.8 on 156 of 164 obs.

% DEC 27, 1990 16h 53m 06.11± 1.27s
41.127 N ±10.7km 22.402 E ± 6.8km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.17 180 ePc 53 10.08 0.1
eS 53 11.56
KNT 0.38 85 iPc 53 14.21 0.4
eS 53 19.40
THE 0.65 139 ePd 53 18.12 -1.0
eS 53 26.68
SOH 0.78 113 ePc 53 21.80 0.4
eS 53 31.48
FNA 0.85 247 ePd 53 22.48 -0.1
eS 53 34.08
SRS 0.90 90 ePd 53 22.56 -0.8
eS 53 35.16
LIT 1.03 176 ePd 53 25.40 -0.1
eS 53 40.76
PAIG 1.54 140 ePc 53 34.80 1.1
S.D. = 0.8 on 8 of 8 obs.

? DEC 27, 1990 17h 01m 21.61± 2.34s
52.356 N ±42.2km 161.067 E ±32.7km
DEPTH = 33.0km (normol)
5.1mb (7 obs.)
OFF EAST COAST OF KAMCHATKA (219)

YKA 43.31 42 eP 09 21.00 -0.4
0.9s 0.60nm 3.3mb X
GUN 59.57 277 P 11 24.14 -0.5
KKN 60.02 277 P 11 27.56 0.0
0.5s 11.00nm 5.3mb
PKI 60.10 277 P 11 28.12 -0.2
0.6s 13.00nm 5.2mb
GKN 60.26 278 P 11 28.96 -0.2
DMN 60.26 277 P 11 29.38 0.1
0.5s 12.00nm 5.3mb
KAF 60.40 337 iP 11 28.30 -1.1
0.4s 12.00nm 5.4mb
NUR 62.19 337 eP 11 28.00 -13.6X
NB2 64.42 344 P 11 54.60 -1.7
0.7s 3.90nm 4.6mb
HFS 64.83 343 eP 11 57.20 -1.7
0.4s 4.80nm 4.9mb
HYB 71.87 275 eP 12 44.00 0.8
CLL 73.25 340 eP 12 51.00 0.2
PRU 74.16 338 eP 12 58.00 1.9
KHC 75.18 339 eP 13 02.90 0.8
ZST 75.22 336 eP 13 05.20 3.0
GBA 75.48 273 Pd 13 03.10 -1.1
0.7s 3.10nm 4.4mb
S.D. = 1.4 on 15 of 16 obs.

DEC 27, 1990 17h 40m 32.25± 0.54s
34.941 N ± 4.9km 26.471 E ± 3.5km
DEPTH = 54.7 ± 6.9 km
4.4mb (17 obs.)
CRETE (370)

MD 4.3 (ATH), 4.0 (HLW).
NPS 0.77 295 eP 40 46.20 -1.1
ARG 1.85 46 eP 41 05.50 3.4X
VAM 1.92 285 eP 41 05.20 2.2
APE 2.26 341 eP 41 07.00 -0.8
YER 2.64 33 iPn 41 13.50 0.3
SMG 2.78 6 eP 41 15.50 0.3
KSL 2.80 64 eP 41 16.40 0.9
ELL 3.32 56 iPn 41 24.50 1.4
VLI 3.37 303 eP 41 23.00 -0.7
IZM 3.51 10 iPn 41 25.40 -0.2
ATH 3.75 325 eP 41 29.40 0.4
BCK 4.17 52 iPn 41 34.50 -0.5
KHL 4.17 35 iPn 41 34.20 -0.8
ITM 4.31 303 eP 41 39.00 2.2
PPCY 4.83 89 eP 41 43.60 -0.5
EZN 4.88 359 iPn 41 43.50 -1.3

DST 4.96 20 iPn 41 46.40 0.3
ALT 5.03 34 ePn 41 46.70 -0.5
NEO 5.07 330 eP 41 48.00 0.4
AGG 5.25 322 eP 41 50.80 0.7
EVR 5.45 318 eP 41 54.00 1.0
KCT 5.51 15 ePn 41 55.00 1.3
EDC 5.51 11 ePn 41 54.00 0.3
BNT 5.53 12 ePn 41 54.50 0.5
CSS 5.63 88 eP 41 54.20 -1.3
eSn 42 58.80
LIT 6.04 330 eP 42 00.80 -0.4
YLV 6.07 21 iPn 42 01.50 -0.1
EYL 6.33 26 eP 42 05.00 -0.3
SOH 6.37 338 eP 42 05.40 -0.3
HRT 6.39 22 ePn 42 03.00 -3.1X
KZN 6.53 327 eP 42 08.50 0.5
HLW 6.53 140 ePn 42 09.00 1.0
eSn 43 19.50
SRS 6.57 341 ePc 42 08.34 -0.2
KOT 6.74 136 ePn 42 10.00 -0.9
eSn 43 22.00
KNT 6.82 337 eP 42 12.40 0.4
KNT 6.82 337 ePd 42 13.58 1.5
BBTK 7.00 44 eP 42 14.00 -0.6
FNA 7.09 327 ePc 42 16.62 0.8
FNA 7.09 327 eP 42 17.60 1.8
ZNT 7.63 108 eP 42 22.00 -1.4
eS 43 35.00
DSI 8.18 112 eP 42 29.00 -1.9
MBH 8.78 124 eP 42 39.00 -0.3
SOI 8.95 293 P 42 46.90 5.4X
eSg 42 54.70
ROI 9.15 303 P 42 52.60 8.3X
TDS 9.34 303 P 42 50.10 3.2X
eSn 43 05.30
MSI 9.36 294 P 42 44.90 -2.3
eSg 42 53.60
ATN 9.42 293 P 42 45.60 -2.4
eSg 42 54.00
CSI 9.43 304 P 42 53.00 4.8X
MMN 9.69 304 P 42 53.50 1.9
MNO 9.95 291 P 42 54.00 -1.4
SGO 10.46 306 P 43 03.70 1.5
KHC 17.07 330 eP 44 30.70 2.2
PRU 17.39 333 iPc 44 32.20 -0.2
KSP 17.53 338 eP 44 33.00 -1.1
BRG 18.33 334 e(P) 44 52.00 8.0X
LPG 18.34 311 eP 44 43.70 -0.7
0.6s 4.95nm 3.9mb
LPL 18.36 311 eP 44 44.20 -0.4
0.6s 7.20nm 4.0mb
CDF 19.59 319 eP 44 57.20 -1.5
0.4s 2.85nm 3.9mb
HAU 19.87 317 eP 45 01.40 -0.1
0.4s 2.85nm 3.9mb
SMF 20.66 311 eP 45 07.40 -2.3
0.6s 10.35nm 4.3mb
LBF 20.73 312 eP 45 08.40 -2.1
0.8s 18.80nm 4.5mb
LOR 20.94 313 eP 45 10.50 -2.0
0.6s 7.20nm 4.2mb
AVF 21.03 311 eP 45 12.00 -1.4
0.8s 11.40nm 4.3mb
SSF 21.06 312 eP 45 12.80 -0.9
0.8s 34.90nm 4.7mb
MFF 23.17 308 eP 45 35.60 1.1
1.2s 29.75nm 4.6mb
LDF 23.92 313 eP 45 41.00 -0.9
1.2s 35.70nm 4.7mb
FLN 24.21 313 eP 45 43.70 -1.0
0.8s 14.80nm 4.5mb
BCAO 31.23 195 iPd 46 48.80 0.0
0.2s 10.00nm 5.2mb
TIC 40.41 233 P 48 08.20 1.4
KIC 40.44 233 P 48 08.50 1.5
LIC 40.73 233 P 48 11.00 1.6
GKN 49.50 81 P 49 21.12 1.6
0.4s 5.00nm 4.9mb
DMN 50.04 81 P 49 24.82 1.1
0.4s 5.00nm 4.9mb
KKN 50.11 81 P 49 25.78 1.6
PKI 50.30 81 P 49 25.76 0.0
GUN 50.54 81 P 49 29.18 1.5
0.4s 2.00nm 4.5mb
YKA 77.98 343 eP 52 25.20 -0.6
0.5s 0.60nm 3.9mb
S.D. = 1.2 on 70 of 77 obs.

% DEC 27, 1990 17h 48m 01.86± 1.02s
41.057 N ±10.3km 22.482 E ± 6.3km
DEPTH = 10.0km (geophysicist)
YUGOSLAVIA (383)

GRG 0.12 211 iPd 48 04.22 -0.6
eS 48 05.82
KNT 0.33 71 iPc 48 07.98 -0.7
iS 48 13.10
THE 0.56 139 ePc 48 12.86 -0.4
SOH 0.70 109 ePd 48 15.86 0.1
eS 48 25.66
SRS 0.84 86 ePd 48 19.02 0.9
eS 48 30.30
FNA 0.88 252 iPd 48 19.10 0.3
eS 48 30.94
LIT 0.96 180 ePc 48 20.50 0.4
S.D. = 0.7 on 7 of 7 obs.

& DEC 27, 1990 17h 53m 08.20s
59.529 N 152.848 W
DEPTH = 92.1km
SOUTHERN ALASKA (2)
<AGS-P>.

AUP 0.34 240 eP 53 21.94 -0.4
AGU 0.34 241 eP 53 21.56 -0.9
AUH 0.35 242 eP 53 21.81 -0.6
AUI 0.35 237 eP 53 21.81 -0.5
INE 0.54 349 eP 53 23.14 -0.8
XLV 0.58 97 eP 53 23.89 -0.1
eS 53 35.32
HOM 0.63 78 eP 53 24.54 0.1
eS 53 36.10
CDD 0.73 215 iP 53 24.52 -0.9
PDB 0.73 291 iP 53 24.60 -0.8
eS 53 36.96
CNPM 0.82 90 eP 53 25.53 -0.9
eS 53 38.37
MCNL 0.84 246 eP 53 25.76 -0.8
eS 53 39.26
RED 0.89 2 eP 53 26.40 -0.8
RSO 0.94 3 eP 53 27.18 -0.7
RS2 0.94 3 eP 53 26.83 -1.0
NNL 0.94 56 eP 53 27.71 0.1
SYI 0.95 165 eP 53 26.83 -0.9
eS 53 40.90
REF 0.97 4 eP 53 27.38 -0.8
RDN 0.99 2 eP 53 27.62 -0.7
NCT 1.04 358 eP 53 27.55 -1.3
RDT 1.07 12 iP 53 28.30 -0.9
CKL 1.69 8 iP 53 36.46 -0.6
SPU 1.70 13 eP 53 36.18 -1.0
BGL 1.76 7 eP 53 37.38 -0.5
SEW 1.81 70 eP 53 37.05 -1.4
CGLM 1.83 13 eP 53 38.29 -0.6
NCG 1.91 10 eP 53 39.35 -0.6
SUA 2.20 27 eP 53 43.36 -0.5
PMS 2.37 42 eP 53 45.31 -0.7
KNIM 2.70 70 eP 53 48.11 -2.4
KNK 2.88 47 eP 53 51.60 -1.4
GHO 2.97 39 eP 53 51.97 -2.2
31 obs. associated

% DEC 27, 1990 17h 53m 13.27± 0.79s
15.348 N ± 6.5km 61.056 W ±18.7km
DEPTH = 33.0km (normol)
LEEWARD ISLANDS (92)
ML 2.5 (FDF).

CRM 0.61 167 eP 53 25.47 0.1
S 53 38.50
FDF 0.62 188 eP 53 25.54 -0.1
S 53 38.80
MGG 0.62 336 eP 53 27.00 1.4
DOG 0.87 322 eP 53 29.09 0.0
PAG 0.91 319 eP 53 29.30 -0.4
S 53 48.90
SFG 0.91 351 iP 53 29.76 0.1
DEG 0.96 360 iP 53 30.10 -0.4
SEG 1.13 338 iP 53 32.11 -0.8
S 53 49.80
S.D. = 0.8 on 8 of 8 obs.

DEC 27, 1990 18h 01m 41.73± 0.70s
19.530 S ± 4.0km 168.814 E ± 3.7km

CTI	147.55	330 PKP	21	20.00	1.8	% DEC 27, 1990 18h 47m 33.61± 1.27s	FCH	9.86 199 ePc	57	17.00	0.7
BSF	148.21	337 ePKP	21	21.80	2.6X	41.122 N ±11.1km 22.455 E ± 6.8km	LNV	10.80 202 eP	57	29.00	0.9
	0.8s	32.25nm				DEPTH = 10.0km (geophysicist)	PPD	14.10 85 eP	58	10.90	1.0
HAU	148.23	337 ePKP	21	21.90	2.8X	YUGOSLAVIA (383)		e	58	15.10	
	0.8s	59.10nm					NNA	15.49 319 iP	58	25.50	
SAL	148.41	330 PKP	21	22.50	3.1X	GRG 0.17 194 iPd		0.9s 22.69nm	58	26.50	-0.6
MDI	148.65	331 PKP	21	21.50	1.7	eS 47 39.04		e(S)	01	15.00	
ARV	148.68	325 PKP	21	19.90	-0.1	KNT 0.34 83 iPd	BAO	19.27 68 ePc	59	09.30	0.2
CIO	148.78	324 ePKP	21	23.16	3.0X	eS 47 40.50	BMA	20.53 91 eP	59	22.60	1.0
ALP	148.81	323 e(PKP)	21	22.35	2.0	THE 0.62 142 ePc	PDCR	28.31 71 eP	00	33.10	-1.4
ROI	148.87	316 PKP	21	26.20	5.8X	eS 47 53.68	UPA	35.19 337 iPc	01	35.30	1.3
SFI	148.97	327 PKP	21	21.30	1.0	SOH 0.74 114 ePc	LIC	66.99 72 P	05	29.80	-0.9
TDS	148.97	316 PKPc	21	24.10	3.6X	eS 47 57.88		0.4s 3.00nm			4.3mb
VAI	149.00	332 PKPc	21	24.00	3.7X	SRS 0.86 90 ePd	KIC	67.30 72 Pc	05	32.00	-0.7
ASS	149.12	325 PKP	21	24.20	3.5X	iS 48 02.10		0.5s 9.00nm			4.8mb
CRE	149.12	326 PKP	21	25.00	4.2X	FNA 0.88 248 ePd	ALO	69.83 326 iPd	05	47.70	-0.4
SGO	149.13	319 PKPc	21	24.40	3.7X	eS 48 04.34		0.8s 11.57nm			4.7mb
SDI	149.35	322 PKP	21	24.80	3.7X	LIT 1.02 179 iPd	ANMO	69.83 326 iP	05	48.80	0.7
MME	149.36	328 PKP	21	26.00	4.7X	eS 48 08.08		0.9s 10.50nm			4.6mb
FIR	149.38	327 ePKP	21	25.00	4.0X	PAIG 1.52 142 ePc	CBM	70.63 359 eP	05	52.10	-0.3
AZI	149.40	322 PKP	21	25.00	4.0X	S.D. = 0.9 on 8 of 8 obs.	GOL	73.05 330 eP	06	07.20	0.1
BDI	149.51	328 PKPc	21	23.70	2.4	% DEC 27, 1990 18h 49m 54.81± 1.16s	PV09	73.93 326 eP	06	12.00	-0.4
ORX	149.53	333 PKP	21	24.42	3.1X	41.110 N ±10.4km 22.456 E ± 6.4km	DAU	76.45 326 iP	06	27.20	0.6
BOB	149.54	330 PKP	21	26.00	4.7X	DEPTH = 10.0km (geophysicist)		1.0s 3.60nm			4.1mb
FLN	149.59	346 ePKP	21	24.80	3.7X	YUGOSLAVIA (383)	BCH	77.75 318 eP	06	33.40	-0.2
	0.8s	43.00nm					TNP	77.99 321 iP	06	35.90	0.9
LDF	149.66	345 ePKP	21	25.00	3.8X	GRG 0.16 195 iPc		0.8s 5.59nm			4.3mb
	0.8s	30.90nm				eS 50 01.18	LRM	81.08 329 eP	06	51.90	0.6
LOR	149.73	339 ePKP	21	25.40	4.0X	KNT 0.34 81 iPd	FFC	84.14 340 iPc	07	06.60	0.2
	0.7s	43.05nm				eS 50 07.22		0.9s 14.00nm			4.7mb
PII	149.79	328 PKP	21	24.80	3.2X	THE 0.61 141 ePd	NEW	85.05 329 eP	07	11.00	-0.1
RMP	149.93	323 PKP	21	27.00	5.1X	iS 50 15.26		0.9s 7.02nm			4.4mb
LBF	149.94	339 ePKP	21	26.00	4.2X	SOH 0.74 113 ePc	BUL	86.42 110 iPd	07	19.80	1.1
	0.7s	31.25nm				eS 50 20.02		0.8s 4.48nm			4.3mb
RDP	149.95	323 PKP	21	27.00	5.0X	SRS 0.86 89 ePc	PNT	86.97 328 e			

CPRN	13.62	244	eP	07 09.00	-0.3	LPG	32.67	298	eP	10 27.40	-0.9					ic	23 57.50	
MBH	14.03	243	eP	07 17.00	2.3		1.0s	29.00nm			5.2mb		CNCB	45.59	247	P	24 04.00	1.1
BADA	14.69	238	ePd	07 23.20	-0.1	LPL	32.69	298	eP	10 27.30	-1.0		LPB	45.63	248	P	24 03.00	-0.1
ALT	15.18	283	eP	07 33.90	4.1X		1.2s	32.75nm			5.1mb		Z	16s		1.35um		5.0MszX
EYL	15.26	289	eP	07 35.00	4.2X	BN1	32.73	298	Pc	10 27.60	-1.0					LR	37 28.00	
KHL	15.64	280	iP	07 39.90	4.1X	FRF	32.81	295	eP	10 28.30	-0.9		SLR	56.32	120	eP	25 23.60	-0.1
HRT	15.66	290	iP	07 37.20	1.3		1.4s	104.55nm			5.6mb		KHC	59.82	28	eP	25 48.00	0.2
GBZT	15.82	290	iPc	07 41.50	3.5X	NB2	33.77	327	P	10 35.90	-1.4		YKA	91.07	332	eP	28 44.50	-1.1
YLV	15.85	289	iP	07 40.20	1.8		0.7s	5.20nm			4.6mb			0.6s		1.70nm		4.6mb
DST	16.35	285	eP	07 45.20	0.4	GBA	34.37	126	Pd	10 41.90	-1.0		GUN	108.44	61	Pdiff	30 00.00	-5.2X
HLW	16.57	249	eP	07 47.75	0.2		1.0s	15.60nm			4.9mb		ASPA	147.59	141	ePKP	35 20.90	-3.3X
			e	11 08.00		SMF	34.69	300	eP	10 43.60	-1.8			1.4s		4.30nm		
				12 42.00			0.7s	7.70nm			4.7mb		WRA	150.48	136	PKP	35 34.00	5.3X
CFR	17.77	304	eP	08 05.50	2.9X	AVF	35.02	301	eP	10 47.40	-0.9			1.1s		2.90nm		S.D. = 0.8 on 10 of 15 obs.
ALN	18.40	289	ePc	08 10.80	0.5		1.0s	11.00nm			4.7mb							* DEC 28, 1990 05h 04m 49.19± 1.65s
CVO	19.30	304	ePd	08 24.00	2.6X	MAF	35.58	300	eP	10 51.50	-1.5							18.122 N ±13.3km 122.821 E ±22.2km
AKSR	19.34	231	iPd	08 22.00	0.0	TCF	35.83	300	eP	10 54.70	-0.4							DEPTH = 33.0km (normal)
MLR	19.35	303	ePd	08 24.50	2.4	CAF	36.01	298	eP	10 56.00	-0.7							4.7mb (2 obs.) 4.1Msz (1 obs.)
ANMR	19.61	232	iPd	08 26.00	0.9	RJF	36.37	298	eP	10 58.50	-1.2							LUZON, PHILIPPINE ISLANDS (249)
CMP	19.89	302	ePc	08 28.00	0.0		1.4s	56.65nm			5.2mb							BAG 2.74 232 eP 05 31.00 -0.9
PAIG	20.17	286	ePd	08 29.54	-1.4	KOD	36.94	129	eP	11 06.20	1.1							OCP 3.85 206 eP 05 55.00 7.5X
SRS	20.26	289	iPd	08 31.29	-0.6	LDF	37.35	304	eP	11 07.40	-0.4							WHN 14.57 330 eP 08 14.60 -0.2
SOH	20.43	288	ePd	08 32.96	-0.8	MFF	37.44	301	eP	11 07.80	-0.8							TIA 18.71 346 eP 09 06.30 -0.9
THE	20.72	288	ePd	08 35.96	-0.7	FLN	37.58	304	eP	11 09.10	-0.7							XAN 20.14 325 P 09 23.00 -0.4
KNT	20.79	289	ePd	08 36.52	-0.9	GRR	37.84	304	eP	11 11.40	-0.6							CD2 21.47 310 P 09 38.00 0.9
LIT	21.08	286	ePd	08 38.72	-1.7		1.0s	40.80nm			5.2mb		Z	13s		0.91um		4.4MszX
GRG	21.16	289	ePd	08 40.12	-1.1	GTA	39.37	71	eP	11 26.80</								

LZH 42.80 332 eP 40 04.00 0.7
 1.5s 28.00nm 4.8mb
 Z 30s 0.57um 4.3mszx
 pP 40 23.00 78kmX
 sP 40 38.00
 GUN 49.01 309 P 40 52.80 -0.1
 0.6s 23.00nm 5.4mb
 PKI 49.22 308 P 40 54.12 -0.4
 KKN 49.42 309 P 40 55.56 -0.4
 DMN 49.47 308 P 40 56.18 -0.2
 GKN 50.02 309 P 41 00.08 -0.4
 HYB 51.37 293 eP 41 11.50 0.8
 S.D. = 0.8 on 11 of 13 obs.

& DEC 28, 1990 10h 39m 41.59s
 58.589 N 137.102 W
 DEPTH = 0.2km
 SOUTHEASTERN ALASKA (19)
 <AGS-P>.

MON 1.26 314 eP 40 03.89 -2.0
 eS 40 20.96
 PNL 1.60 313 eP 40 09.77 -1.5
 eS 40 32.28
 BCPM 1.89 318 eP 40 13.49 -1.9
 eS 40 38.45
 HYT 2.25 355 P 40 15.30 -5.5
 YAH 2.96 309 eP 40 30.03 -1.0
 eS 41 04.57
 BALM 3.61 315 eP 40 38.00 -2.0
 eS 41 20.00
 6 obs. associated

& DEC 28, 1990 10h 46m 29.80s
 57.925 N 155.708 W
 DEPTH = 111.2km
 ALASKA PENINSULA (12)
 <AGS-P>.

MCNL 1.45 29 iP 46 55.36 -1.1
 eS 47 14.80
 CDD 1.48 46 iP 46 55.74 -1.1
 eS 47 16.06
 KDC 1.73 95 eP 46 58.48 -1.3
 eS 47 20.95
 AUI 1.85 39 eP 47 00.13 -1.3
 AUH 1.87 38 eP 47 00.56 -1.1
 AGU 1.87 39 eP 47 00.70 -1.0
 AUP 1.87 39 eP 47 00.42 -1.4
 SYI 1.88 67 iP 47 00.29 -1.5
 eS 47 24.57
 AUE 1.89 39 eP 47 00.79 -1.0
 PDB 2.03 22 eP 47 01.76 -1.9
 OPT 2.16 36 eP 47 03.95 -1.5
 INE 2.54 31 eP 47 09.04 -1.5
 XLV 2.59 52 eP 47 10.27 -0.7
 eS 47 39.66
 HOM 2.74 49 eP 47 11.75 -1.3
 eS 47 43.29
 CNPM 2.83 54 iP 47 12.45 -1.8
 eS 47 44.46
 RS2 2.96 30 eP 47 14.71 -1.6
 RSO 2.96 30 eP 47 14.75 -1.5
 REF 3.00 30 eP 47 14.44 -2.3
 NCT 3.01 27 eP 47 14.43 -2.3
 RDN 3.01 29 eP 47 14.72 -2.0
 >NNL 3.12 45 eP 47 16.80 -1.3
 RDT 3.15 31 eP 47 16.14 -2.5
 NKA 3.64 37 eP 47 24.29 -0.8
 CKL 3.70 26 eP 47 23.94 -2.2
 BGL 3.75 25 eP 47 24.77 -2.0
 SPU 3.76 28 eP 47 24.12 -2.7
 SLKM 3.83 45 eP 47 24.66 -3.1
 CGLM 3.88 27 eP 47 26.09 -2.5
 SEW 3.90 53 eP 47 25.19 -3.6
 NCG 3.93 26 eP 47 27.02 -2.2
 SUA 4.35 33 eP 47 31.81 -3.2
 PMS 4.57 41 eP 47 34.36 -3.5
 SKT 4.58 26 eP 47 35.13 -2.9
 KNIM 4.77 56 eP 47 36.88 -3.7
 KNK 5.07 43 eP 47 40.28 -4.5
 GH0 5.15 39 eP 47 41.34 -4.6
 GLI 5.30 52 eP 47 43.19 -4.8
 HIN 5.35 59 eP 47 45.19 -3.4
 VZW 5.62 52 eP 47 48.30 -4.1
 CVA 5.75 59 eP 47 50.27 -3.7
 VLZ 5.75 52 eP 47 49.97 -4.1

SGAM 5.98 60 eP 47 53.51 -3.7
 KLU 6.11 50 eP 47 54.95 -4.1
 KAIM 6.18 66 eP 47 57.70 -2.3
 RAGM 6.19 62 eP 47 56.72 -3.4
 HMT 6.37 63 eP 47 58.96 -3.6
 GLB 6.98 55 eP 48 06.78 -4.2
 WAX 7.07 64 eP 48 08.45 -3.8
 PAX 7.15 41 eP 48 09.79 -3.6
 TGL 7.17 61 eP 48 09.15 -4.5
 BALM 7.48 60 eP 48 13.95 -3.9
 YAH 7.58 65 eP 48 15.86 -3.5
 52 obs. associated

% DEC 28, 1990 10h 46m 39.61 ± 1.49s
 41.067 N ± 11.2km 22.533 E ± 9.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.15 222 iPc 46 42.53 -0.6
 eS 46 45.12
 KNT 0.29 71 ePd 46 46.12 0.4
 eS 46 50.36
 THE 0.54 143 iPc 46 50.53 -0.1
 eS 46 58.72
 SOH 0.67 111 iPd 46 52.14 -0.8
 SRS 0.80 86 ePd 46 54.82 -0.4
 eS 47 07.40
 LIT 0.97 182 ePd 46 58.28 0.3
 eS 47 13.01
 PAIG 1.44 142 eP 47 06.72 1.1
 eS 47 27.10
 S.D. = 0.8 on 7 of 7 obs.

? DEC 28, 1990 11h 01m 14.82 ± 0.91s
 37.053 N ± 7.8km 29.731 E ± 8.3km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.4 (ISK).

ELL 0.34 155 iPg 01 22.00 0.2
 iSg 01 29.50
 BCK 0.80 59 ePn 01 30.00 -0.4
 YER 1.16 274 ePn 01 36.30 -0.3
 KHL 1.28 353 ePn 01 39.00 0.4
 S.D. = 0.6 on 4 of 4 obs.

DEC 28, 1990 11h 16m 39.72 ± 0.28s
 48.716 N ± 2.6km 128.316 W ± 3.1km
 DEPTH = 10.0km (geophysicist)
 5.1mb (26 obs.) 5.1msz (3 obs.)
 VANCOUVER ISLAND REGION (25)

ETB 1.34 60 P 17 05.63 1.2
 EDB 1.40 34 Pd 17 05.46 0.2
 GDR 1.84 54 Pd 17 12.09 0.6
 OZB 1.88 81 P 17 12.30 0.1
 PHC 2.07 16 Pd 17 14.38 -0.6
 CBB 2.34 55 Pd 17 19.85 1.1
 MGB 2.41 82 P 17 19.85 -0.1
 S 17 51.86
 PFB 2.57 92 P 17 21.51 -0.7
 NAB 2.89 78 P 17 27.60 1.0
 SHB 3.05 72 P 17 29.95 1.1
 PGC 3.22 89 eP 17 31.00 -0.3
 0.6s 90.00nm
 BBB 3.48 2 Pd 17 34.00 -0.9
 HDW 3.68 105 P 17 37.48 -0.5
 GMW 3.88 105 eP 17 40.00 -0.7
 CPW 3.90 115 P 17 39.66 -1.3
 BMW 4.11 121 eP 17 42.40 -1.5
 MBW 4.25 87 P 17 46.77 0.7
 JCW 4.28 95 P 17 47.22 0.8
 BLH 4.29 99 P 17 48.18 1.7
 HTW 4.47 99 P 17 49.62 0.6
 RPW 4.52 91 P 17 51.38 1.5
 LMW 4.56 114 P 17 49.78 -0.6
 RVC 4.63 110 P 17 51.50 0.1
 GSM 4.64 107 P 17 51.66 0.1
 REMR 4.76 111 P 17 53.56 0.2
 TDL 4.76 118 P 17 52.78 -0.6
 S 18 49.38
 LVP 4.81 121 P 17 53.83 -0.1
 LON 4.81 112 P 17 53.66 -0.3
 FMW 4.82 109 P 17 54.40 0.2
 WPW 5.00 111 P 17 56.57 0.0
 GLK 5.02 113 P 17 57.58 0.6
 ASR 5.23 117 P 17 59.97 0.0

TWW 5.25 105 P 18 01.27 1.1
 VLMM 5.33 124 P 18 01.03 -0.4
 TBM 5.41 104 P 18 03.12 0.6
 NAC 5.43 109 P 18 03.38 0.7
 ETW 5.46 99 P 18 03.28 0.1
 GT2 5.46 128 P 18 02.88 -0.3
 EBG 5.52 106 P 18 04.70 0.7
 VLL 5.58 123 P 18 05.09 0.2
 CBSW 5.60 96 P 18 05.14 0.0
 WTV 5.68 97 P 18 06.25 0.0
 DHW2 5.74 94 P 18 07.73 0.6
 PNT 5.76 81 P 18 07.00 -0.2

1.2s 5.40nm 4.1mb
 VFP 5.79 123 P 18 07.95 0.1
 VTG 5.88 104 P 18 08.62 -0.3
 MDW 6.15 107 P 18 13.61 0.9
 RC1 6.24 103 P 18 12.80 -1.2
 CRF 6.31 104 P 18 13.81 -1.2
 GBL 6.35 106 P 18 15.58 0.0
 OD2 6.58 98 P 18 17.31 -1.5
 VIPM 6.77 126 P 18 20.75 -0.9
 DPW 6.80 93 P 18 20.75 -1.3
 LNOR 7.39 109 P 18 30.09 -0.2
 NEW 7.46 89 eP 18 29.80 -1.4
 LBFM 8.66 146 eP 18 48.50 0.4
 WDC 9.11 151 iPc 18 54.30 0.1
 MIN 9.64 148 eP 19 01.30 -0.3
 ORV 10.38 149 eP 19 11.80 0.2
 EDM 10.46 59 ePd 19 11.50 -1.2
 LRM 11.16 99 eP 19 21.90 -0.6
 BKS 11.70 156 eP 19 33.50 3.9X
 eS 21 50.00
 i(SS) 22 10.00
 ePcP 25 26.00
 e 26 48.00

CMB 12.13 149 eP 19 34.00 -1.4
 MHC 12.37 154 eP 19 40.00 1.3
 LLA 13.24 153 eP 19 50.20 -0.1
 FRI 13.30 149 eP 19 50.00 -1.0
 TNP 13.33 139 eP 19 52.00 0.4
 1.0s 41.67nm 5.4mb
 PRI 13.77 153 eP 19 56.80 -0.5
 BW06 14.37 107 eP 20 06.20 0.9
 1.4s 57.53nm 5.0mb
 CLC 15.12 145 eP 20 15.00 0.1
 MSU 15.48 125 eP 20 20.50 0.6
 YKA 15.78 24 eP 20 21.60 -1.6
 1.1s 32.10nm 4.4mb
 GSC 15.88 143 eP 20 25.00 0.2
 SBB 16.03 147 eP 20 26.00 -0.8
 MWC 16.37 148 eP 20 34.00 2.8X
 PAS 16.40 149 eP 20 33.00 1.6
 TOA 16.73 330 iPd 20 38.90 3.5X
 1.1s 121.90nm 4.9mb
 RVR 16.82 147 eP 20 25.00 -11.7X
 e 20 38.00
 KDC 16.98 311 iPd 20 39.10 0.6
 1.2s 146.20nm 5.0mb
 TPC 17.22 143 eP 20 43.00 1.2
 FFC 17.33 60 eP 20 41.00 -2.0
 0.8s 9.00nm 4.0mb X
 FFC 17.33 60 iPd 20 46.00 3.0X
 0.9s 80.00nm 4.8mb
 PMR 17.43 325 iPc 20 44.60 0.4
 1.6s 95.90nm 4.7mb
 PLM 17.58 147 eP 20 47.00 0.5
 GLA 18.63 142 eP 20 59.00 -0.3
 e 21 04.00
 GOL 18.70 110 eP 21 00.00 -0.3
 1.4s 40.80nm 4.4mb
 FBA 19.27 334 ePc 21 06.40 -0.4
 1.7s 190.20nm 5.1mb
 INK 19.82 354 eP 21 13.00 0.1
 SVW 19.82 319 ePc 21 10.90 -2.2
 1.9s 335.90nm 5.3mb
 TTA 20.85 323 iPc 21 20.80 -3.0X
 1.1s 62.50nm 4.9mb
 ANMO 21.22 122 eP 21 27.70 -0.3
 1.3s 288.46nm 5.5mb
 ALO 21.22 122 ePc 21 27.70 -0.4
 1.3s 93.75nm 5.0mb
 IMA 21.84 332 iPc 21 32.40 -1.5
 2.1s 914.40nm 5.8mb
 MEO 25.99 111 eP 22 14.70 0.5
 BRW 26.23 340 ePd 22 15.80 -0.2
 MBC 27.87 5 eP 22 24.00 -6.9X
 1.5s 19.00nm 4.6mb

28d 11h

UYO 28.97 108 e(P) 22 46.00 4.7X
 ELC 30.46 97 eP 22 59.00 4.4X
 FRB 34.98 42 eP 23 34.00 0.4
 LHS 37.65 94 eP 23 56.00 -0.4
 NB2 65.84 20 P 27 27.90 0.9
 1.4s 33.10nm 5.3mb
 CN2 67.50 311 P 27 40.00 2.3
 Z 20s 1.20um 5.1msz
 NUR 68.95 14 eP 27 48.00 1.5
 CLL 75.00 24 iP 28 28.00 5.4X
 1.7s 48.00nm 5.3mb
 MOX 75.22 25 e(P) 28 29.50 5.6X
 BRG 75.65 24 iP 28 31.70 5.4X
 1.3s 38.00nm 5.3mb
 LOR 75.77 31 eP 28 28.10 1.0
 CDF 75.91 29 eP 28 27.50 -0.4
 1.2s 29.75nm 5.2mb
 GRF 75.97 26 eP 28 29.10 0.9
 AVF 76.01 32 eP 28 29.00 0.6
 1.4s 34.85nm 5.3mb
 BSF 76.26 29 eP 28 29.60 -0.4
 1.2s 20.85nm 5.1mb
 KSP 76.28 22 ePc 28 35.50 5.6X
 PRU 76.62 24 eP 28 36.50 4.7X
 RJF 76.62 34 eP 28 38.70 6.8X
 1.4s 47.90nm 5.4mb
 LFF 76.64 35 eP 28 37.60 5.6X
 LPO 77.03 34 eP 28 39.40 5.3X
 KHC 77.14 25 eP 28 34.70 0.0
 e 28 40.40
 CAF 77.14 34 eP 28 40.10 5.3X
 KRA 77.89 20 eP 28 53.50 14.7X
 SOTA 78.18 27 i(P) 28 46.60 6.0X
 1.4s 27.10nm 5.1mb
 i 28 55.20
 LPG 78.30 30 eP 28 48.90 7.4X
 1.5s 41.80nm 5.3mb
 TIY 78.48 315 eP 28 46.00 3.6X
 Z 20s 0.80um 5.0msz
 SPC 78.77 20 eP 28 44.40 0.5
 ZST 78.93 23 eP 28 45.20 0.7
 SRO 79.59 22 eP 28 36.70 -11.4X
 WMO 82.58 335 P 29 10.00 6.0X
 VRI 83.31 17 ePc 29 11.00 3.3X
 LZH 83.67 320 eP 29 13.30 3.4X
 1.2s 16.00nm 5.1mb
 Z 18s 0.78um 5.1msz
 LPB 84.05 123 eP 29 08.00 -4.3X
 CNCB 84.34 123 P 29 11.00 -2.1
 CCH 85.83 122 P 29 22.30 1.3
 SIV 87.63 117 P 29 29.00 -0.5
 SLR 150.67 47 ePKP 36 25.00 -2.8X
 S.D. = 0.9 on 105 of 133 obs.

? DEC 28, 1990 11h 29m 21.83±1.65s
 52.933 N ±34.1km 160.810 E ±24.6km
 DEPTH = 33.0km (normal)
 5.0mb (6 obs.)

OFF EAST COAST OF KAMCHATKA (219)

YKA 42.99 43 eP 37 18.70 -0.3
 0.7s 0.50nm 3.4mb X
 CHG 58.30 259 eP 39 16.10 0.4
 GUN 59.34 277 P 39 22.48 -0.8
 0.5s 5.00nm 4.9mb
 KKN 59.79 277 P 39 25.96 -0.3
 0.6s 9.00nm 5.1mb
 KAF 59.80 337 iP 39 26.50 0.9
 0.4s 5.90nm 5.1mb
 PKI 59.87 277 P 39 26.54 -0.4
 0.7s 9.00nm 5.0mb
 GKN 60.02 278 P 39 27.34 -0.4
 DMN 60.03 277 P 39 27.60 -0.3
 0.7s 13.00nm 5.2mb
 NUR 61.60 337 eP 39 48.00 10.2X
 NB2 63.82 344 P 39 52.30 -0.3
 0.8s 5.40nm 4.7mb
 HYB 71.66 275 eP 40 42.00 -0.2
 GBA 75.29 273 P 41 05.00 1.7
 S.D. = 0.8 on 11 of 12 obs.

& DEC 28, 1990 11h 46m 44.29s
 63.253 N 151.428 W
 DEPTH = 88.9km
 CENTRAL ALASKA (1)
 <AGS-P>.

HUR 0.86 108 eP 47 02.70 0.1
 eS 47 15.73
 CUT 1.00 147 eP 47 04.45 0.2
 eS 47 18.55
 RND 1.17 81 eP 47 06.21 -0.1
 eS 47 22.97
 MCK 1.22 66 eP 47 06.32 -0.5
 eS 47 24.14
 BWN 1.27 43 eP 47 06.98 -0.5
 eS 47 25.87
 SKT 1.28 182 eP 47 07.06 -0.5
 NEA 1.69 37 eP 47 11.28 -1.5
 PWA 1.76 155 eP 47 15.00 1.2
 SUA 1.82 170 eP 47 15.55 0.8
 GH0 1.89 141 eP 47 16.75 1.2
 NCG 1.89 191 eP 47 15.33 -0.3
 CGLM 1.97 188 eP 47 16.33 -0.4
 PLRM 1.98 146 eP 47 17.93 1.2
 PMR 1.98 146 iPc 47 19.90 3.2
 CRP 2.02 190 eP 47 18.25 0.8
 BGL 2.05 193 eP 47 18.07 0.3
 SPU 2.10 188 eP 47 18.52 0.1
 CKL 2.11 192 eP 47 19.59 1.0
 TTA 2.11 263 iPd 47 16.50 -2.1
 CCB 2.12 47 iP 47 17.56 -1.1
 eS 47 44.31
 PMS 2.20 156 eP 47 20.27 0.6
 MDM 2.21 38 iP 47 18.80 -1.1
 HDA 2.30 58 eP 47 20.21 -0.8
 FBA 2.30 42 iPd 47 20.00 -1.0
 KNK 2.31 142 eP 47 22.83 1.6
 GLM 2.48 44 eP 47 22.44 -1.2
 DDM 2.55 75 eP 47 25.05 0.5
 TOA 2.68 113 eP 47 30.30 4.0
 PAX 2.72 93 eP 47 27.90 1.0
 RDT 2.73 190 eP 47 27.68 0.7
 SDG 2.79 102 eP 47 29.65 1.9
 SLKM 2.81 168 eP 47 29.98 1.9
 REF 2.84 193 eP 47 29.57 1.0
 RS2 2.87 193 eP 47 29.35 0.3
 RSO 2.87 193 eP 47 30.57 1.5
 RED 2.92 193 eP 47 31.05 1.5
 SVW 2.92 224 ePc 47 29.30 -0.2
 IMA 2.99 342 iPd 47 29.90 -0.7
 KLU 3.12 122 eP 47 34.29 2.0
 GLI 3.14 137 eP 47 34.60 2.1
 DOT 3.33 80 eP 47 35.55 0.3
 PDB 3.72 202 eP 47 39.78 -0.8
 GLB 3.99 114 eP 47 47.08 2.7
 43 obs. associated

DEC 28, 1990 13h 03m 47.60±0.37s
 29.843 N ± 6.8km 99.043 E ± 4.4km
 DEPTH = 33.0km (normal)
 5.0mb (13 obs.)

SICHUAN PROVINCE, CHINA (307)

CD2 4.21 74 Pn 04 49.40 -1.7
 Pg 04 58.00
 Sg 05 52.00
 KMI 5.73 144 Pnd 05 14.00 1.1
 Sn 06 22.50
 LZH 7.42 32 ePn 05 35.00 -1.5
 1.0s 20.00nm 5.1mb
 Z 15s 0.58um 4.1msz
 Pg 06 01.50
 GYA 7.52 115 Pn 05 37.80 -0.1
 Sn 07 07.00
 GUN 11.70 264 P 06 36.18 0.6
 0.3s 47.00nm 6.1mb X
 PKI 12.18 263 P 06 41.48 -0.6
 0.5s 24.00nm 5.6mb
 KKN 12.24 264 P 06 43.16 0.4
 0.4s 39.00nm 5.9mb
 DMN 12.43 263 P 06 45.26 -0.1
 0.4s 14.00nm 5.4mb
 GKN 12.75 265 P 06 47.86 -1.6
 0.4s 24.00nm 5.6mb
 TIY 13.62 51 Pc 07 05.40 4.6X
 Z 10s 0.50um
 TIA 16.43 63 eP 07 38.00 0.8
 WMO 16.62 330 eP 07 40.50 0.8
 BJI 17.32 49 eP 07 50.00 1.7
 KAF 56.07 327 eP 13 25.00 -0.4
 WRA 60.05 141 P 13 53.00 -0.8
 0.6s 8.90nm 5.1mb
 UPP 60.47 325 iP 13 56.00 -0.2

ASPA 62.87 144 eP 14 12.50 -0.3
 0.5s 5.20nm 4.9mb
 NB2 63.35 327 P 14 14.70 -0.9
 0.8s 6.20nm 4.8mb
 LPG 70.88 312 eP 15 04.60 0.9
 0.7s 6.05nm 4.8mb
 LPL 70.89 312 eP 15 04.30 0.7
 0.7s 7.70nm 4.9mb
 LBF 72.04 314 eP 15 09.40 -0.9
 SMF 72.27 314 eP 15 12.00 0.4
 0.6s 2.70nm 4.4mb
 SSF 72.30 314 eP 15 11.80 0.1
 0.5s 2.90nm 4.5mb
 AVF 72.51 314 eP 15 13.50 0.5
 0.7s 3.85nm 4.5mb
 TCF 73.44 314 eP 15 19.10 0.7
 S.D. = 0.9 on 24 of 25 obs.

DEC 28, 1990 14h 20m 15.12±0.54s
 23.822 N ± 6.3km 125.359 E ± 7.0km
 DEPTH = 33.0km (normal)
 4.7mb (16 obs.)

SOUTHWESTERN RYUKYU ISLANDS (246)

QZH 6.27 282 Pc 21 45.00 -2.7X
 SSE 8.14 334 Pc 22 13.00 -0.8
 0.4s 40.00nm 5.9mb X
 Z 20s 0.90um 4.1msz
 N 13s 1.30um
 E 13s 0.90um
 NJ2 10.01 326 Pc 22 39.60 -0.1
 Z 14s 0.90um
 N 12s 0.60um
 E 12s 1.00um
 WHN 11.86 307 eP 23 10.20 5.2X
 E 13s 0.60um
 TIA 14.25 332 eP 23 38.30 1.7
 QIZ 15.21 255 eP 23 53.40 4.2X
 N 15s 1.20um
 DL2 15.37 349 eP 23 52.00 0.9
 1.0s 80.00nm 4.9mb
 MAT 16.83 38 eP 24 11.00 1.1
 1.3s 76.92nm 4.7mb
 eS 27 39.00
 GYA 17.13 283 iPc 24 17.20 3.4X
 XAN 17.60 309 P 24 20.40 0.8
 E 12s 0.80um
 TIY 17.72 324 Pc 24 22.00 1.0
 Z 14s 1.19um
 N 12s 1.00um
 BJI 17.93 337 eP 24 23.00 -0.5
 1.2s 24.00nm 4.2mb
 Z 16s 1.16um 4.5msz
 N 10s 0.75um
 eS 27 38.00
 SNY 18.02 356 iPc 24 24.00 -0.6
 1.0s 100.00nm 4.9mb
 Z 15s 2.10um 5.0msz X
 N 14s 1.40um
 E 14s 1.20um
 CN2 19.93 0 P 24 44.00 -3.0X
 Z 14s 1.80um
 ePP 24 53.00
 eS 28 24.00
 HHC 20.55 329 Pd 24 52.40 -1.2
 1.2s 110.00nm 5.1mb
 Z 12s 1.50um 4.6msz X
 N 10s 0.50um
 E 10s 0.50um
 KMI 20.63 278 Pc 24 55.60 1.0
 2.0s 70.00nm 4.7mb
 BTO 21.12 326 eP 24 58.00 -1.4
 N 13s 0.90um
 E 13s 0.70um
 ePP 25 04.00
 LZH 22.23 308 eP 25 09.00 -1.7
 2.0s 36.00nm 4.5mb
 Z 15s 0.63um 4.2msz X
 E 10s 0.30um
 SP 25 21.50
 PP 25 35.00
 eS 29 05.00
 LOE 23.00 258 iPd 25 19.00 0.8
 NST 25.06 256 eP 25 41.00 2.9X
 CHTO 25.09 264 iP 25 39.20 0.8
 1.0s 12.00nm 4.4mb
 GTA 26.61 312 eP 25 51.40 -1.1

[illegible]

28d 16h

LFF 76.65 35 eP 45 09.10 6.5X
 KHC 77.15 25 eP 45 10.00 4.6X
 CAF 77.16 34 eP 45 11.70 6.2X
 KRA 77.90 20 ePd 45 15.90 6.5X
 SOTA 78.20 27 i(P) 45 18.00 6.8X
 1.4s 34.60nm 5.2mb
 LPL 78.29 30 eP 45 18.90 7.0X
 1.1s 9.75nm 4.8mb
 SPC 78.78 20 eP 45 18.00 3.5X
 ZST 78.94 23 eP 45 20.80 5.6X
 09 03.30
 SRO 79.60 22 eP 45 23.90 5.2X
 LPB 84.06 123 P 45 47.00 4.1X
 CNCB 84.35 123 P 45 44.00 -0.5
 CCH 85.84 122 P 45 50.90 -0.7
 SIV 87.65 117 P 45 56.00 -4.1X
 KRI 143.47 37 iPKPd 52 41.00 -6.0X
 BUL 146.01 41 iPKPc 52 56.80 5.6X
 SLR 150.68 47 ePKP 53 02.50 4.1X
 S.D. = 0.8 on 101 of 136 obs.

% DEC 28, 1990 16h 42m 55.42±1.02s
 41.053 N ± 9.4km 22.344 E ± 6.1km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.11 156 iPd 42 57.89 -0.4
 eS 43 00.38
 KNT 0.43 75 iPc 43 04.33 0.1
 eS 43 10.98
 THE 0.63 131 ePd 43 08.26 0.2
 eS 43 16.70
 FNA 0.78 250 iPd 43 10.62 -0.1
 eS 43 22.02
 SOH 0.80 106 ePc 43 10.54 -0.4
 eS 43 22.86
 SRS 0.95 86 ePd 43 13.66 0.2
 eS 43 26.58
 LIT 0.96 173 ePc 43 13.98 0.3
 eS 43 29.62
 S.D. = 0.4 on 7 of 7 obs.

% DEC 28, 1990 16h 55m 23.47s
 57.976 N 145.925 W
 DEPTH = 10.0km (geophysicist)
 GULF OF ALASKA (15)
 <AGS-P>.

KAIM 2.11 21 eP 55 54.05 -5.2
 eS 56 17.59
 HIN 2.45 353 eP 55 58.77 -5.3
 eS 56 26.23
 RAGM 2.50 14 eP 55 59.79 -5.1
 S 56 27.18
 HMT 2.52 19 eP 56 00.13 -5.0
 eS 56 28.33
 SGAM 2.56 8 eP 56 00.83 -4.9
 eS 56 30.38
 CVA 2.58 2 eP 56 00.53 -5.4
 eS 56 29.45
 WRG 2.89 43 eP 56 04.97 -5.4
 eS 56 37.27
 WAX 2.94 31 eP 56 05.68 -5.5
 eS 56 38.05
 KLU 3.53 0 eP 56 12.00 -7.5
 BALM 3.57 29 eP 56 13.60 -6.5
 eS 56 53.00
 10 obs. associated

* DEC 28, 1990 17h 45m 22.94±1.17s
 21.479 S ± 11.7km 68.259 W ± 13.9km
 DEPTH = 91.6 ± 19.8 km
 4.2mb (1 obs.)
 CHILE-BOLIVIA BORDER REGION (124)

ANT 2.98 222 iPc 46 09.00 0.0
 CCH 4.54 26 P 46 32.40 1.5
 CNCB 4.65 3 P 46 31.00 -1.7
 LPB 4.92 2 P 46 36.60 0.3
 ARE 5.85 328 iP 46 37.00 -12.2X
 iS 47 35.70
 SIV 8.72 52 P 47 28.00 -0.3
 NNA 12.51 318 eP 48 19.50 0.5
 0.8s 3.73nm 4.2mb
 KIC 68.11 73 (P) 56 15.40 -0.1
 S.D. = 1.4 on 7 of 8 obs.

* DEC 28, 1990 17h 48m 00.21±1.95s
 3.437 N ± 9.1km 128.584 E ± 11.7km
 DEPTH = 37.3 ± 17.9 km
 5.1mb (11 obs.) 3.9Msz (1 obs.)
 NORTH OF HALMAHERA (264)

DAV 4.70 321 eP 49 11.00 0.3
 BAG 15.10 329 eP 51 17.50 -15.4X
 PMG 22.48 125 e(P) 52 59.00 1.2
 ASPA 27.43 169 eP 53 44.50 -0.2
 1.0s 6.50nm 4.2mb
 Z 19s 0.30um 3.9Msz
 eS 58 20.10
 NST 30.52 295 eP 54 14.80 2.3
 MEKA 31.42 197 eP 54 18.80 -1.5
 CHG 32.76 300 ePc 54 32.00 -0.2
 0.9s 18.49nm 5.0mb
 KMI 32.91 313 Pd 54 33.50 -0.1
 FORR 34.10 181 eP 54 43.00 -0.5
 MAT 34.12 14 eP 54 43.00 -0.7
 0.8s 7.46nm 4.7mb
 BJI 38.13 345 eP 55 16.50 -1.0
 1.0s 18.00nm 4.9mb
 LZH 39.71 328 Pc 55 31.50 0.5
 2.0s 107.00nm 5.3mb
 Z 16s 0.53um 4.5MszX
 pP 55 39.00 25kmX
 sP 55 43.00
 GUN 47.40 305 Pc 56 33.36 -0.2
 0.8s 44.00nm 5.5mb
 PKI 47.65 305 Pc 56 34.80 -0.7
 0.8s 13.00nm 5.0mb
 KKN 47.84 305 Pc 56 36.46 -0.4
 DMN 47.91 305 Pc 56 36.96 -0.5
 0.8s 23.00nm 5.3mb
 GKN 48.45 305 Pc 56 41.00 -0.5
 0.8s 20.00nm 5.2mb
 KOD 51.15 280 eP 57 03.50 1.0
 GBA 51.48 285 Pd 57 04.60 0.0
 0.7s 15.70nm 5.1mb
 NDI 54.83 303 iPc 57 28.00 -1.3
 0.5s 28.17nm 5.6mb
 POO 55.55 290 iPc 57 35.40 0.7
 KIC 132.39 282 (PKP) 07 14.30 0.9
 LIC 132.70 282 (PKP) 07 14.90 1.0
 S.D. = 1.0 on 22 of 23 obs.

% DEC 28, 1990 18h 04m 34.14±2.04s
 39.903 N ± 9.8km 23.993 E ± 14.8km
 DEPTH = 10.0km (geophysicist)
 AEGEAN SEA (365)

PAIG 0.24 276 iPd 04 39.14 -0.2
 iS 04 43.05
 OUR 0.43 359 iPd 04 42.50 -0.4
 eS 04 48.48
 SOH 1.04 332 iPc 04 53.50 -0.3
 eS 05 07.00
 THE 1.07 313 ePc 04 54.56 0.3
 eS 05 08.32
 LIT 1.17 280 iPd 04 55.82 -0.2
 eS 05 12.76
 SRS 1.25 346 ePc 04 57.68 0.3
 eS 05 13.84
 KNT 1.51 327 ePc 05 01.69 0.5
 eS 05 21.56
 AGG 1.56 236 ePc 05 02.00 0.0
 eS 05 23.12
 S.D. = 0.4 on 8 of 8 obs.

? DEC 28, 1990 18h 28m 30.21±0.93s
 37.079 N ± 8.4km 29.597 E ± 7.9km
 DEPTH = 10.0km (geophysicist)
 TURKEY (366)
 MD 2.6 (ISK).

ELL 0.41 143 iPg 28 38.50 -0.2
 iSg 28 46.50
 BCK 0.88 64 ePn 28 47.50 0.4
 YER 1.05 273 ePn 28 50.30 0.2
 KHL 1.24 357 ePn 28 53.00 -0.4
 S.D. = 0.6 on 4 of 4 obs.

? DEC 28, 1990 18h 47m 41.99±1.22s
 3.532 N ± 13.7km 128.722 E ± 25.5km
 DEPTH = 33.0km (normal)
 4.6mb (2 obs.)

NORTH OF HALMAHERA (264)

IPM 27.65 273 ePc 53 04.10 -24.9X
 CHG 32.84 300 eP 54 14.50 -0.5
 FORR 34.19 181 eP 54 26.50 0.0
 BJI 38.08 344 eP 54 59.00 -0.3
 LZH 39.70 328 eP 55 14.00 0.8
 1.5s 20.00nm 4.7mb
 pP 55 19.00 17kmX
 GUN 47.46 305 P 56 16.40 0.2
 PKI 47.71 305 P 56 17.60 -0.6
 KKN 47.90 305 P 56 19.40 -0.2
 DMN 47.97 305 P 56 20.40 0.2
 GKN 48.51 305 P 56 23.80 -0.4
 HYB 51.05 289 eP 56 45.00 1.4
 GBA 51.59 284 Pd 56 47.20 -0.5
 0.8s 5.00nm 4.5mb
 S.D. = 0.7 on 11 of 12 obs.

DEC 28, 1990 19h 03m 13.85±0.85s
 30.020 S ± 6.1km 71.210 W ± 10.6km
 DEPTH = 75.0 ± 10.5 km
 NEAR COAST OF CENTRAL CHILE (135)

RTLL 2.70 120 iPc 03 55.80 -0.1
 eS 04 12.10
 JACH 2.71 169 iPc 03 56.00 -0.1
 i 04 10.00
 iS 04 30.00
 ROCH 2.95 177 iP 03 59.50 0.0
 iS 04 38.50
 CFA 3.01 123 e(P) 04 00.80 0.6
 S 04 18.20
 IHA 3.02 187 eP 04 02.00 1.7
 iS 04 40.90
 PEL 3.15 172 iPd 04 01.50 -0.6
 FCH 3.39 167 iPc 04 05.20 -0.6
 i 04 06.50
 iS 04 48.50
 SAN 3.45 172 eP 04 06.00 -0.4
 i 04 47.50
 i 04 53.50
 MDZ 3.50 145 eP 04 08.80 1.8
 i 04 11.00
 i(S) 04 27.90
 i 04 57.20
 TACH 3.63 176 iPc 04 07.50 -1.4
 iS 04 53.00
 PCH 3.64 171 iPc 04 08.70 -0.3
 i 04 59.00
 LNV 3.93 182 iP 04 13.00 0.0
 i 04 28.10
 iS 05 03.50
 CYA 4.99 73 e(P) 04 27.00 -0.9
 CNCB 13.48 13 P 06 25.00 1.2
 LPB 13.72 13 eP 06 26.00 -0.9
 SIV 16.78 36 P 07 05.60 0.1
 PDCR 34.43 67 e(P) 09 56.00 -0.2
 e 10 12.60
 LIC 72.87 72 P 14 36.50 -0.4
 TIC 73.11 72 P 14 38.70 0.4
 KIC 73.18 72 P 14 38.60 -0.1
 GBA 146.77 113 PKPc 23 09.00 21.5X
 0.5s 1.00nm
 S.D. = 0.9 on 20 of 21 obs.

% DEC 28, 1990 19h 14m 38.83±1.24s
 41.122 N ± 10.7km 22.435 E ± 6.6km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.17 189 iPc 14 42.42 -0.2
 iS 14 44.64
 KNT 0.35 83 iPd 14 46.21 0.1
 eS 14 51.40
 THE 0.63 140 ePd 14 50.68 -0.8
 eS 14 59.00
 SOH 0.76 113 ePc 14 53.36 -0.3
 eS 15 03.56
 FNA 0.87 248 iPd 14 55.50 -0.1
 eS 15 08.04
 SRS 0.87 90 ePc 14 55.44 -0.2
 eS 15 07.52
 LIT 1.02 178 ePc 14 58.28 0.1
 iS 15 13.61
 PAIG 1.52 141 iPd 15 07.56 1.4
 eS 15 28.04

			S	52	22.00		SDI	74.51	322	P	43	55.70	-1.1		2.0s	351.60nm	6.0mb			
RZN	68.37	327	iPd	43	20.00	-0.2	AZI	74.91	322	P	43	59.40	0.4			e	44	29.00		
LIT	68.45	325	ePd	43	18.48	-2.0	BWA	74.94	122	eP	44	00.60	1.0			e	47	23.50		
SOH	68.48	326	ePd	43	19.36	-1.3	AQU	75.15	322	Pc	44	00.80	0.4	SOTA	79.28	325	iPc	44	22.70	-0.7
SRS	68.56	326	iPd	43	19.16	-2.0	PSZ	75.18	329	eP	44	00.50	0.0		1.4s	164.00nm			5.9mb	
PLD	68.67	328	iPd	43	21.00	-0.8	RDP	75.21	321	P	44	00.70	-0.1			i	44	28.80		
MMB	68.82	327	iP	43	22.00	-0.8	SPA	75.22	180	iPc	43	58.50	-2.2			iPP	47	16.40		
KNT	68.96	326	ePd	43	22.44	-1.2		2.7s	2055.56nm			6.7mb		MDI	79.30	323	P	44	23.40	0.1
KZN	69.00	325	eP	43	22.80	-1.1	Z	20s	4.77um			5.8Msz		PCP	79.30	322	P	44	23.27	-0.2
GRG	69.09	325	iPc	43	08.02	-16.4X	RMP	75.25	321	Pc	44	01.10	0.1	FIN	79.32	321	P	44	25.01	1.4
OIS	69.11	107	iPd	43	23.60	-1.4	CAN	75.29	123	eP	44	02.50	0.9	IMI	79.35	321	P	44	24.50	0.7
	1.0s	54.00nm			5.7mb		BUD	75.32	329	e(P)	44	01.00	-0.2	CKI	79.39	322	Pc	44	23.50	-0.4
PVL	69.16	329	iPd	43	25.00	0.3	CTA	75.34	107	iPc	44	01.60	-0.4	WET	79.53	327	iPc	44	23.50	-1.1
HHC	69.24	35	P	43	26.00	0.5		1.6s	426.67nm			6.2mb			2.2s	406.00nm			6.0mb	
	1.4s	190.00nm			6.1mb			iS		53	40.00		OSS	79.57	324	ePd	44	25.30	0.2	
N	28s	6.20um			5.7MszX		AOI	75.74	323	eP	44	04.00	0.2	ROB	79.57	321	P	44	25.32	0.4
Z	10s	0.70um					CIO	75.80	323	eP	44	02.75	-1.4	REVf	79.58	321	P	44	24.95	-0.1
E	10s	1.00um					ZAG	75.81	326	eP	44	04.80	0.7	SAOF	79.59	321	P	44	25.47	0.4
		S		52	30.00		PTJ	75.88	326	eP	44	04.10	-0.5	SBF	79.60	321	eP	44	25.00	-0.2
PGB	69.27	328	iP	43	25.00	-0.5	SPC	75.88	331	eP	44	04.20	-0.5		1.4s	348.50nm			6.2mb	
CFR	69.28	332	eP	43	25.00	-0.4			i	46	56.40		AUTN	79.68	321	P	44	26.12	0.3	
		e		11	34.00		SRO	75.89	329	eP	44	03.70	-0.8	AURF	79.68	321	P	44	25.86	0.2
IGT	69.30	323	ePc	43	25.32	-0.4			i	44	04.60		FUR	79.80	326	iPc	44	26.20	0.1	
KKB	69.35	327	iP	43	25.00	-1.0			i	44	15.60			2.0s	1076.00nm			6.5mb		
SHGH	69.36	282	eP	43	26.50	-0.1	CGL	76.00	318	P	44	05.40	-0.1	TOUF	79.80	321	P	44	26.60	0.2
LEGH	69.41	282	eP	43	27.50	0.6	VBY	76.01	325	eP	44	05.00	-0.2	ENR	79.81	321	P	44	25.73	-0.6
SSE	69.41	48	Pd	43	26.00	-0.5	ASS	76.01	3											

29d 07h

FRB 78.27 338 eP 48 29.00 0.4
YKA 89.21 355 eP 49 24.80 0.4
0.8s 2.10nm 4.5mb
ASPA 91.61 116 eP 49 36.50 0.4
0.7s 3.20nm 4.8mb
S.D. = 1.0 on 29 of 37 obs.

DEC 29, 1990 08h 33m 20.37±0.46s
45.565 N ± 6.8km 26.539 E ± 5.4km
DEPTH = 161.6 ± 5.3 km

ROMANIA (358)

VR1 0.33 23 iPc 33 42.00 0.0
CVO 0.36 315 iPc 33 42.00 -0.1
MLR 0.43 260 iPc 33 43.00 0.5
ISR 0.43 179 iPc 33 43.00 0.6
MTUR 1.09 252 ePc 33 48.00 0.6
CMP 1.10 255 iPc 33 47.00 -0.4
CLI 1.11 27 iPd 33 46.50 -1.0
CFR 1.20 108 iPc 33 38.50 -9.7X
TLB 1.44 132 iPd 33 51.00 0.5
COZ 1.57 262 ePc 33 52.50 0.5
SRE 2.53 250 ePc 34 03.00 0.2
DEV 2.57 278 iPc 34 02.50 -0.8
BMR 2.97 316 ePd 34 42.00 33.7X
BZS 3.46 273 ePc 34 14.50 0.0
ISK 4.86 157 iP 34 32.50 -0.3
HRT 5.26 153 iP 34 38.00 -0.3
EDC 5.31 169 eP 34 38.00 -0.8
GKN 48.65 90 P 41 50.40 0.6
GUN 49.58 90 P 41 57.40 0.2
S.D. = 0.6 on 17 of 19 obs.

& DEC 29, 1990 09h 36m 51.60s
60.693 N 151.888 W
DEPTH = 85.9km

KENAI PENINSULA, ALASKA (14)
<AGS-P>

RDT 0.28 245 iP 37 04.00 -0.7
IS 37 14.26
NKA 0.32 81 iP 37 06.32 1.5
REF 0.45 243 iP 37 05.29 -0.7
eS 37 16.40
RDN 0.47 248 iP 37 05.16 -0.9
eS 37 16.17
RSO 0.49 242 iP 37 05.61 -0.6
RS2 0.49 242 iP 37 05.62 -0.6
SPU 0.50 351 iP 37 05.38 -0.8
eS 37 16.28
RED 0.52 238 iP 37 05.68 -0.7
NCT 0.53 256 iP 37 05.64 -0.9
eS 37 16.93
CKL 0.55 337 iP 37 05.94 -0.8
CRP 0.59 347 eP 37 06.53 -0.6
eS 37 18.38
CGLM 0.62 355 iP 37 06.64 -0.6
eS 37 18.30
BGL 0.62 337 eP 37 06.57 -0.8
eS 37 18.18
NNL 0.72 156 iP 37 08.65 0.5
eS 37 21.77
NCG 0.73 350 eP 37 07.75 -0.6
eS 37 20.77
SLKM 0.84 102 iP 37 08.80 -0.7
eS 37 22.03
INE 0.86 223 eP 37 08.74 -1.1
eS 37 22.34
SUA 0.95 35 iP 37 10.57 -0.3
eS 37 25.37
HOM 1.05 173 iP 37 11.68 -0.1
BRLK 1.06 151 eP 37 11.22 -0.8
CNPM 1.22 164 iP 37 13.24 -0.7
eS 37 30.01
OPT 1.24 213 iP 37 13.72 -0.5
eS 37 30.15
XLV 1.25 176 iP 37 13.43 -0.9
PMS 1.26 63 iP 37 14.17 -0.4
eS 37 31.73
SKT 1.30 7 iP 37 14.03 -1.0
eS 37 31.32
SEW 1.35 115 eP 37 14.11 -1.4
eS 37 32.99
PWA 1.37 44 eP 37 15.95 0.1
PDB 1.47 233 iP 37 15.78 -1.3
eS 37 34.47
AUE 1.53 210 eP 37 17.23 -0.7

eS 37 34.87
AUP 1.54 211 eP 37 17.71 -0.5
AUH 1.55 211 eP 37 17.68 -0.5
AUI 1.57 210 eP 37 18.03 -0.4
PLRM 1.61 55 eP 37 17.68 -1.3
PMR 1.61 55 ePc 37 17.70 -1.3
GHO 1.80 52 iP 37 20.20 -1.4
eS 37 42.57
KNK 1.82 65 eP 37 20.44 -1.4
eS 37 42.77

SVW 1.87 284 iPd 37 20.60 -1.9
CUT 1.88 24 eP 37 21.68 -0.9
MCNL 1.95 220 iP 37 22.30 -1.3
CDD 1.98 207 eP 37 22.77 -1.2
KNIM 2.08 98 eP 37 22.49 -2.8
eS 37 47.49
SYI 2.11 187 eP 37 24.48 -1.1
MTU 2.22 107 eP 37 24.98 -2.2
GLI 2.36 83 eP 37 26.06 -3.0
HUR 2.53 24 eP 37 31.80 0.4
VZW 2.63 80 eP 37 30.42 -2.5
VLZ 2.75 78 eP 37 31.87 -2.5
KDC 2.97 186 ePd 37 34.70 -2.7
TTA 2.98 321 iPd 37 35.80 -1.9
KLU 3.01 72 iP 37 35.71 -2.4
TOA 3.09 60 iPc 37 38.10 -1.1
TZL 3.39 64 eP 37 41.50 -1.8
SDG 3.55 56 eP 37 44.23 -1.2
PAX 3.81 50 eP 37 47.55 -1.6
HDA 4.37 29 eP 37 54.99 -1.9
CCB 4.39 24 eP 37 54.61 -2.6
MDM 4.60 20 eP 37 57.41 -2.7
FBA 4.62 22 ePc 37 58.60 -1.8
IMA 5.46 352 iPd 38 10.00 -2.1
ANM 7.32 308 ePd 38 36.60 -1.1
60 obs. associated

DEC 29, 1990 09h 38m 16.53±1.12s
41.102 N ±11.5km 22.467 E ± 6.3km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.15 199 iPc 38 20.26 0.1
eS 38 23.20
KNT 0.33 79 ePd 38 23.17 -0.2
eS 38 28.24
THE 0.60 141 ePd 38 28.44 -0.2
eS 38 36.76
SOH 0.73 112 ePc 38 30.96 0.1
eS 38 41.08
SRS 0.85 89 ePc 38 33.24 0.3
iS 38 45.52
FNA 0.89 249 ePd 38 33.48 -0.1
eS 38 44.32
S.D. = 0.3 on 6 of 6 obs.

* DEC 29, 1990 10h 49m 44.58±2.05s
10.920 S ±11.7km 166.506 E ±17.6km
DEPTH = 151.3 ± 15.8 km
4.2mb (2 obs.)

SANTA CRUZ ISLANDS (184)

HNR 6.62 282 eP 51 20.00 -0.7
0.9s 168.07nm 5.4mb X
eS 52 40.00
SVO 6.82 284 eP 51 24.00 0.6
eS 52 44.00
VSG 6.89 283 eP 51 28.00 3.6X
eS 52 45.00
DZM 11.09 180 iPc 52 20.20 0.1
iS 54 22.90
BRS 20.86 216 iPd 54 16.50 0.4
ASPA 33.52 243 eP 56 07.80 -4.1X
1.1s 11.90nm 4.5mb
FORR 40.72 235 eP 57 11.00 -1.0
PKI 87.23 299 P 02 16.20 0.4
KKK 87.40 299 P 02 17.00 0.5
DMN 87.50 299 P 02 17.20 0.2
GKN 88.00 299 P 02 19.20 -0.1
YKA 94.52 27 eP 02 48.00 -0.5
0.6s 0.40nm 3.9mb
BCAO 147.63 261 iPKPd 09 14.50 3.8X
0.5s 15.00nm
ic 09 17.90
S.D. = 0.7 on 10 of 13 obs.

DEC 29, 1990 10h 59m 25.66±0.78s

46.366 N ± 6.3km 12.533 E ± 7.3km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.4 (VIE).

FVI 0.28 37 Pc 59 31.10 -0.5
eSg 59 36.80
VVI 0.39 191 P 59 34.50 0.8
CTI 0.69 243 P 59 38.00 -1.4
eSg 59 47.00
SCE 0.88 320 ePg 59 43.00 0.3
VOY 1.00 109 ePg 59 47.30 2.6X
eSg 00 01.00
TRI 1.08 127 P 59 46.00 0.0
eSg 00 04.00
SOTA 1.25 314 iPg 59 49.70 0.8
iSg 00 04.30
LJU 1.43 102 eP 59 53.60 2.0X
eSg 00 15.90
MDI 2.05 254 P 59 52.00 -8.5X
VBY 2.09 113 eP 00 34.30 33.2X
S.D. = 1.1 on 6 of 10 obs.

? DEC 29, 1990 11h 00m 15.04±1.08s
30.828 S ±10.8km 117.045 E ±14.0km
DEPTH = 10.0km (geophysicist)

WESTERN AUSTRALIA (590)

BAL 0.36 307 eP 00 22.30 -0.2
eS 00 27.00
KLB 0.98 141 iPc 00 33.50 -0.1
eS 00 45.70
MUN 1.35 212 eP 00 40.00 0.1
eS 00 59.00
MRWA 1.84 330 eP 00 47.20 0.2
iS 01 10.30
NWA0 2.10 176 eP 01 20.00 29.3X
S.D. = 0.4 on 4 of 5 obs.

? DEC 29, 1990 11h 15m 58.08±2.78s
44.405 N ±17.7km 7.098 E ±30.1km
DEPTH = 10.0km (geophysicist)

NORTHERN ITALY (545)
ML 1.7 (GEN).

PZZ 0.10 1 P 16 00.90 0.0
S 16 02.85
STV 0.23 135 P 16 03.46 0.4
S 16 07.05
ENR 0.29 128 P 16 03.67 -0.6
S 16 09.10
ROB 0.56 101 P 16 09.77 0.2
S 16 18.02
S.D. = 0.7 on 4 of 4 obs.

% DEC 29, 1990 11h 24m 01.46±1.05s
41.063 N ±12.2km 22.470 E ± 6.4km
DEPTH = 10.0km (geophysicist)

YUGOSLAVIA (383)

GRG 0.12 206 iPc 24 05.17 0.7
eS 24 08.22
KNT 0.34 73 ePc 24 08.66 0.2
eS 24 13.50
THE 0.57 139 ePc 24 12.54 -0.5
eS 24 21.54
SOH 0.71 110 ePd 24 15.54 0.0
eS 24 26.74
SRS 0.85 86 ePc 24 17.82 0.0
eS 24 29.54
FNA 0.87 252 ePd 24 17.90 -0.4
eS 24 29.10

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

DEC 29, 1990 11h 36m 10.25±0.33s
44.111 N ± 8.2km 149.092 E ± 4.6km
DEPTH = 33.0km (normal)
4.8mb (32 obs.) 4.0msz (2 obs.)

KURIL ISLANDS (221)

MAT 11.22 231 eP 38 51.00 -0.4
0.6s 7.33nm 5.0mb
eS 41 03.00
MDJ 13.96 279 eP 39 29.20 1.4
CN2 17.02 277 eP 40 08.50 1.3
Z 14s 1.50um
ePP 40 14.00

RSO 3.11 198 eP 54 29.42 1.8
 SEW 3.39 169 eP 54 33.18 1.9
 KNIM 3.40 154 eP 54 31.62 0.1
 GLB 3.80 118 eP 54 38.86 1.7
 CNPM 3.92 183 eP 54 40.02 1.2
 PDB 3.99 206 eP 54 39.73 -0.2
 ANM 6.52 287 eP 55 11.20 -4.3
 48 obs. associated

DEC 29. 1990 13h 23m 54.32±0.15s
 8.257 N ± 3.7km 94.061 E ± 3.0km
 DEPTH = 18.0km (12 depth phases)
 5.6mb (76 obs.) 6.0Msz (17 obs.)
 NICOBAR ISLANDS REGION (704)

CENTROID, MOMENT TENSOR (HRV)

Data Used: GDSN

L.P.B.: 18S, 41C

Centroid Location:

Origin Time 13:23:55.2 0.3

Lat 8.14N 0.02 Lon 93.93E 0.03

Dep 21.0 FIX Half-duration 4.4

Moment Tensor: Scale 10**18 Nm

Mrr=-0.14 0.03 Mtt=-0.58 0.03

Mff= 0.72 0.04 Mrt= 0.10 0.07

Mrf= 0.06 0.06 Mtf= 1.35 0.03

Principal Axes:

T Vol= 1.57 Plg= 3 Azm=302

N -0.14 86 90

P -1.43 2 212

Best Double Couple: Mo=1.5*10**18

NP1:Strike=347 Dip=86 Slip= 179

NP2: 77 89 4

BSI 3.00 156 eP 24 43.50 1.6
 TSI 6.51 136 eP 25 30.00 -1.6
 IPM 7.83 117 ePd 25 47.50 -2.6
 e 27 12.00
 e 28 31.00

KLM 9.12 124 eP 26 04.50 -3.5X
 BDT 10.15 28 eP 26 21.00 -1.2
 e 26 04.50 -3.5X
 e 26 21.00 -1.2

KGM 11.11 123 ePc 26 33.40 -2.0
 CHG 11.52 24 ePd 26 41.90 0.9
 e 26 00.00
 e 26 00.00

LOE 11.77 39 eP 26 44.00 -0.4
 KOD 16.50 278 eP 27 36.00 -10.8X
 e 50 56.00

GBA 17.16 289 Pc 27 57.20 2.3
 e 26 00.00
 e 26 00.00

HYB 17.64 303 eP 28 03.00 2.1
 1.2s 171.40nm 5.1mb
 QIZ 18.69 53 eP 28 14.70 0.9
 5.5s 5880.00nm 6.0mb X

S 31 41.00
 SS 31 50.00
 KMI 18.71 25 iPd 28 17.00 2.8X
 3.0s 2000.00nm 5.8mb
 Z 16s 30.00um 5.0MszX
 N 10s 10.20um
 E 10s 37.20um

SS 31 50.00
 PKI 20.88 338 P 28 37.88 -0.6
 1.7s 6682.00nm 6.8mb X
 GUN 21.02 339 P 28 39.10 -0.8
 1.5s 4088.00nm 6.6mb

DMN 21.03 337 P 28 39.38 -0.5
 0.9s 1314.00nm 6.3mb
 KKN 21.13 338 P 28 40.02 -0.8
 1.6s 4250.00nm 6.6mb

LSA 21.51 353 P 28 44.00 -0.9
 Z 30s 54.80um 5.8MszX
 E 15s 10.30um

S 32 38.00
 GKN 21.56 337 P 28 44.92 -0.3
 0.7s 853.00nm 6.3mb
 GYA 21.70 32 iPd 28 48.00 1.5
 6.0s 3000.00nm 5.9mb X
 Z 12s 20.00um 5.7MszX
 N 11s 33.80um
 E 11s 34.60um

SP 28 59.00
 PP 29 17.00
 KKM 22.09 94 ePc 28 52.50 2.0
 1.3s 213.70nm 5.4mb
 POO 22.13 300 iPd 28 52.20 1.4
 BOM 23.17 299 iP 29 01.70 0.7

GZH 23.66 49 Pd 29 06.00 0.3
 5.0s 4140.00nm 6.2mb X
 Z 16s 53.90um 6.1MszX
 N 14s 62.00um
 E 15s 45.70um
 PP 29 16.00

HKC 23.86 52 iP 29 08.00 0.4
 TSM 24.20 98 ePc 29 11.70 0.7
 NDI 25.78 324 iPd 29 26.50 0.5
 0.6s 97.33nm 5.6mb

BAG 27.12 70 eP 29 36.00 -2.6
 eS 34 18.00
 MKS 28.66 117 iPd 29 56.00 3.6X
 QZH 28.69 52 P 29 52.50 0.0
 6.0s 900.00nm 5.7mb X
 Z 14s 64.20um 6.4MszX
 N 12s 33.00um
 E 12s 27.50um

XAN 29.08 26 P 29 54.50 -1.6
 1.0s 100.00nm 5.5mb
 N 13s 50.00um
 E 12s 24.50um

S 34 46.00
 SS 36 18.00
 LZH 29.11 16 eP 29 55.60 -0.8
 1.5s 140.00nm 5.5mb
 Z 17s 27.20um 5.9MszX
 E 16s 32.40um

PP 30 06.00
 SP 30 09.00
 PP 30 52.00
 S 34 45.00
 SS 34 58.00
 SS 36 16.00

WNN 29.18 38 Pd 29 57.00 0.1
 4.0s 1200.00nm 6.0mb X
 Z 15s 22.50um 5.9MszX
 N 12s 19.30um
 E 12s 33.60um

PP 30 07.00
 iS 34 52.00
 DAV 31.25 90 eP 30 17.00 1.5
 GTA 31.45 9 Pd 30 16.20 -0.9
 4.0s 750.00nm 5.9mb X
 Z 22s 24.80um 5.8Msz
 E 15s 19.70um

PP 30 22.00
 SS 37 16.00
 NJ2 33.03 41 Pd 30 31.40 0.6
 1.0s 100.00nm 5.7mb
 N 11s 11.40um
 E 12s 24.30um

PP 30 36.50
 QUE 33.47 314 ePb 30 34.50 -0.4
 TIY 33.71 27 eP 30 36.50 -0.3
 Z 16s 50.80um 6.3MszX
 N 13s 29.30um
 E 14s 35.90um

S 36 01.50
 SSE 34.00 44 P 30 39.50 0.2
 1.4s 31.00nm 5.0mb
 Z 12s 27.50um 6.2MszX
 N 11s 25.20um
 E 11s 22.70um

PP 30 45.00
 PcP 33 19.50
 S 36 05.00
 TIA 34.88 34 P 30 46.10 -0.7
 Z 16s 20.20um 6.0MszX
 E 11s 20.80um

PP 30 59.00
 PP 32 07.00
 S 36 20.00
 eSS 38 38.00
 ScS 41 05.00

WMO 35.86 352 P 30 54.70 -0.4
 Z 16s 10.10um 5.7MszX
 N 15s 10.50um
 S 36 32.00
 HHC 36.00 23 eP 30 56.80 0.4
 1.1s 180.00nm 5.9mb
 Z 18s 30.20um 6.1Msz

N 14s 10.30um
 E 11s 15.60um
 PP 31 07.00
 SP 31 11.00
 PP 32 24.50
 S 36 37.00
 BJI 37.31 28 eP 31 08.00 0.8
 1.5s 100.00nm 5.4mb
 Z 22s 24.60um 6.0Msz
 N 12s 14.30um
 ePP 32 38.00
 eS 37 00.00

MBL 38.67 139 eP 31 18.00 -0.9
 DL2 39.30 35 iPd 31 25.00 1.0
 5.0s 1500.00nm 5.9mb X
 Z 12s 12.90um 6.0MszX
 N 10s 4.00um
 E 12s 18.10um

PP 31 34.00
 SP 31 38.00
 S 37 29.00
 MEKA 42.02 146 eP 31 45.00 -1.5
 SNY 42.40 33 Pd 31 49.40 0.1
 1.4s 300.00nm 5.8mb
 Z 16s 18.60um 6.1MszX
 N 13s 11.70um
 E 13s 19.30um

PP 31 54.20
 S 38 06.00
 SS 41 18.00
 BAL 44.33 152 eP 32 05.00 -0.2
 SHI 44.34 304 eP 32 06.00 0.4
 CN2 44.75 32 Pc 32 09.00 0.5
 1.0s 100.00nm 5.7mb
 Z 17s 31.00um 6.3MszX
 N 12s 13.50um
 E 12s 4.30um

SP 32 22.00
 PcP 33 56.00
 S 38 45.00
 ScS 41 59.00
 BEE 44.94 299 eP 32 13.10 2.9X
 1.2s 106.00nm 5.6mb
 BBU 45.05 299 eP 32 17.10 6.0X
 0.7s 97.00nm 5.8mb

MUN 45.26 153 eP 32 12.00 -0.7
 KLB 45.65 151 eP 32 16.00 0.2
 NWA0 46.52 153 eP 32 23.00 0.4
 WARB 46.62 138 eP 32 22.00 -1.6
 COOL 46.78 148 eP 32 25.00 0.2
 MDJ 47.54 34 eP 32 31.00 0.5
 1.5s 120.00nm 5.7mb
 Z 20s 50.40um 6.5Msz
 N 12s 9.07um
 E 12s 17.40um

SP 32 40.50
 S 39 30.00
 SS 39 41.00
 JAY 47.73 101 ePc 32 34.20 1.7
 RYD 48.09 296 ePd 32 35.70 0.5
 IIDJ 48.32 49 P 32 38.10 1.2
 MAT 48.96 48 eP 32 42.00 0.2
 2.2s 138.46nm 5.6mb
 Z 18s 9.97um 5.8Msz
 eS 39 47.00

KMSA 49.33 290 ePc 32 46.70 1.8
 CHJJ 49.35 49 P 32 44.00 -0.7
 ASPA 50.22 130 iPd 32 48.50 -3.1X
 1.1s 31.80nm 5.2mb
 Z 21s 13.40um 5.9Msz

KAKJ 50.29 49 P 32 49.70 -2.2
 ARO 50.51 278 iPd 32 59.00 5.0X
 FORR 50.76 142 eP 32 53.00 -2.5
 YAMJ 50.95 47 eP 32 57.90 1.0
 AFIF 51.05 294 eP 33 00.00 2.0
 TAB 52.19 312 e(P) 33 06.00 -0.5
 OFUJ 52.49 46 eP 33 09.30 0.8
 OIS 53.15 123 ePd 33 12.50 -1.2
 i 33 31.00 73kmX

YYYY 53.72 104 eP 33 18.00 -0.2
 AAE 54.63 275 eP 33 26.50 1.4
 HOJJ 54.92 43 eP 33 28.40 2.0
 ASAJ 55.21 41 eP 33 30.00 1.5
 PMG 55.71 107 iP 33 32.00 -0.5
 1.0s 80.00nm 5.7mb
 KUSJ 56.16 43 eP 33 35.30 0.0
 CTA 58.56 119 iPd 33 51.60 -1.1

LFF 38.27 303 eP 41 32.20 -0.1
 EBR 38.49 296 eP 41 36.00 1.8
 MFF 38.97 305 eP 41 37.40 -0.8
 KEV 39.00 349 eP 41 33.00 -5.1X
 LDF 39.12 309 eP 41 38.40 -1.0
 0.7s 11.00nm 4.8mb
 BCAA 39.23 231 iPd 41 41.50 0.9
 0.7s 24.00nm 5.2mb
 FLN 39.37 309 eP 41 40.90 -0.6
 0.5s 10.95nm 5.0mb
 GRR 39.59 308 eP 41 42.50 -0.8
 1.0s 48.00nm 5.3mb
 LPF 39.68 308 eP 41 43.20 -0.8
 ECHE 39.70 294 iPc 41 46.00 1.6
 ETOR 40.42 296 eP 41 50.70 0.4
 TRO 40.46 345 eP 41 50.10 0.0
 EVIA 40.99 293 iPc 41 56.10 1.0
 ENIJ 41.01 291 iPd 41 55.90 0.8
 EKA 41.99 318 P 42 04.00 1.1
 1.6s 90.90nm 5.3mb
 AFC 42.01 291 eP 42 03.60 0.1
 GUD 42.02 296 iPd 42 04.40 0.9
 TOL 42.03 295 eP 42 04.00 0.6
 EBAN 42.05 293 iPc 42 04.40 0.7
 GTA 42.07 66 eP 42 05.00 1.1
 1.1s 10.00nm 4.5mb
 EHOR 43.25 292 eP 42 13.50 0.1
 EPRU 43.39 291 iPd 42 13.90 -0.7
 ETA 43.39 314 eP 42 14.30 0.0
 ECP 43.44 313 eP 42 14.60 -0.1
 0.7s 104.00nm 5.7mb
 EPLA 43.55 296 iPc 42 16.30 0.4
 EVAL 44.46 292 iPc 42 23.50 0.3
 LZH 45.79 69 P 42 34.50 0.5
 1.5s 51.00nm 5.2mb
 Z 22s 0.51um 4.4msz
 CHG 47.58 94 eP 42 42.30 -0.2
 1.2s 16.80nm 4.9mb
 BDT 48.36 96 eP 42 54.00 -0.1
 BTO 49.60 62 eP 43 04.40 0.8
 XAN 50.33 71 P 43 09.00 -0.2
 GYA 50.95 81 P 43 13.20 -0.9
 TIY 52.09 65 eP 43 22.00 -0.5
 KRI 52.17 202 iPc 43 13.10 -10.2X
 BJI 54.31 61 eP 43 38.50 -0.2
 KIC 55.38 254 P 43 46.30 -0.5
 1.0s 15.50nm 5.0mb
 TIC 55.44 254 P 43 46.50 -0.8
 BUL 55.60 202 iPc 43 47.60 -0.8
 0.8s 4.48nm 4.5mb
 LIC 55.69 254 P 43 48.46 -0.6
 1.0s 20.50nm 5.1mb
 WHN 55.80 73 eP 43 47.50 -2.1
 TIA 56.12 66 eP 43 51.00 -0.9
 IPM 56.81 108 ePc 43 57.20 0.1
 0.9s 50.40nm 5.6mb
 DL2 58.68 61 eP 44 09.50 -0.3
 NJ2 58.87 70 P 44 11.40 0.2
 CN2 59.90 55 eP 44 17.00 -1.1
 MBC 71.12 357 eP 45 31.00 1.3
 0.6s 6.00nm 4.7mb
 FRB 71.75 335 ePc 45 34.10 0.4
 BRW 74.92 8 ePc 45 53.00 0.9
 ANM 79.70 14 ePc 46 19.50 0.9
 IMA 80.25 9 ePc 46 22.20 0.5
 0.8s 5.00nm 4.5mb
 FBA 82.05 7 ePd 46 32.50 1.5
 0.7s 28.78nm 5.4mb
 TTA 82.89 11 P 46 36.00 0.5
 1.0s 10.00nm 4.8mb
 YKA 84.19 352 eP 46 41.20 -0.8
 0.9s 3.40nm 4.4mb
 PMR 85.13 8 eP 46 48.00 1.3
 0.8s 8.62nm 4.9mb
 KLU 85.57 7 P 46 50.00 0.9
 FFC 89.24 343 eP 47 07.00 0.1
 0.8s 10.00nm 5.2mb
 WRA 97.62 109 P 47 49.00 3.3X
 0.8s 1.80nm 4.7mb
 S.D. = 0.9 on 231 of 262 obs.

SOUTH OF FIJI ISLANDS (171)

NDF 2.89 47 iP 45 47.10 0.5
 eS 46 41.00
 SGE 3.34 50 iP 45 53.20 0.1
 SVA 3.46 62 ePd 45 54.50 -0.2
 VUN 3.51 61 iP 45 54.50 -1.0
 MBU 4.31 51 iP 46 07.60 0.7
 DZM 8.54 253 iPd 47 05.80 -0.4
 BRS 21.93 245 iPd 49 54.20 0.5
 RMQ 25.23 250 eP 50 27.50 1.7
 WRA 38.40 263 P 52 20.00 -1.5
 0.8s 9.70nm 4.7mb
 ASPA 38.51 257 iPc 52 22.00 -0.4
 1.0s 23.60nm 5.0mb
 Z 23s 0.30um 4.0mszX
 CLL 145.55 340 ePKP 04 43.00 5.8X
 BRG 145.61 339 i(PKP)04 45.20 7.9X
 KHC 147.21 338 ePKP 04 54.00 14.0X
 S.D. = 1.1 on 10 of 13 obs.

? DEC 29, 1990 16h 25m 32.67± 1.67s
 17.952 S ±29.9km 175.489 W ±33.0km
 DEPTH = 250.0km (geophysicist)
 5.0mb (6 obs.)

TONGA ISLANDS (173)

AFI 5.38 42 P 26 42.00 -11.7X
 eS 27 40.00
 DZM 17.46 253 iPc 29 22.40 0.3
 BRS 30.68 246 iPc 31 27.00 0.7
 COO 32.16 241 iPc 31 40.70 1.5
 0.5s 23.00nm 5.1mb
 RMQ 34.08 249 eP 31 57.00 1.3
 CMS 37.43 241 eP 32 24.00 0.3
 WRA 47.35 259 P 33 43.00 -0.8
 0.7s 23.00nm 4.6mb
 ASPA 47.46 254 iPd 33 44.20 -0.3
 0.9s 135.40nm 5.3mb
 eS 40 21.20
 FORR 52.47 245 eP 34 21.00 -1.2
 KNA 53.23 263 iPd 34 27.80 -0.2
 0.4s 28.00nm 5.1mb
 WARB 53.89 250 eP 34 32.10 -0.7
 0.6s 28.00nm 5.0mb
 KLB 61.29 243 eP 35 23.00 -1.2
 BAL 62.27 244 eP 35 30.00 -0.7
 MUN 62.58 243 eP 35 32.00 -0.7
 MAT 69.63 322 eP 36 16.00 -1.0
 0.8s 4.48nm 4.2mb
 CHG 91.63 289 eP 38 15.00 2.0
 CLL 146.04 350 iPKP 44 43.70 0.6
 S.D. = 1.1 on 16 of 17 obs.

DEC 29, 1990 16h 43m 09.43± 0.33s
 24.000 N ±5.7km 121.654 E ± 4.2km
 DEPTH = 10.0km (geophysicist)
 5.2mb (20 obs.)

TAIWAN (244)

OZH 2.94 289 ePn 43 57.50 0.4
 Z 10s 9.80um
 S 44 36.00
 SSE 7.08 357 P 44 54.00 -1.6
 Z 12s 1.80um
 N 10s 1.10um
 PP 44 59.00
 S 46 15.00
 GZH 7.68 265 P 45 03.90 -0.1
 NJ2 8.39 343 iPc 45 13.00 -1.0
 0.8s 70.00nm 6.0mb
 PP 45 18.00
 S 46 46.00
 WHN 9.20 317 eP 45 24.00 -1.1
 1.0s 40.00nm 5.7mb
 Z 10s 1.50um 4.3msz
 S 47 08.00
 OIZ 12.05 248 eP 46 09.80 5.6X
 eS 48 28.30
 TIA 12.78 343 eP 46 14.50 0.5
 Z 11s 1.90um
 N 10s 1.40um
 E 10s 0.90um
 GYA 13.79 283 P 46 27.00 -0.4
 Z 10s 2.20um
 XAN 14.96 315 eP 46 43.30 0.7
 E 11s 1.40um

TIY 15.78 332 eP 46 54.00 0.6
 Z 10s 2.00um
 N 10s 1.70um
 E 10s 1.10um
 BJI 16.65 345 eP 47 08.00 3.7X
 Z 10s 0.64um
 KMI 17.24 278 eP 47 16.50 4.3X
 SNY 17.85 5 eP 47 22.60 3.2X
 Z 13s 1.20um
 E 12s 0.90um
 HHC 18.81 336 eP 47 34.80 3.4X
 Z 12s 1.20um
 MAT 18.96 45 (P) 47 32.00 -1.1
 BTO 19.22 332 eP 47 38.00 1.6
 N 10s 2.00um
 E 10s 1.30um
 ePP 47 42.00
 eS 51 14.00
 LZH 19.53 312 P 47 40.00 -0.2
 2.5s 110.00nm 4.7mb
 Z 10s 1.71um 5.0mszX
 SP 47 54.00
 PP 48 02.00
 eS 51 22.00
 CN2 20.00 8 eP 47 45.00 0.1
 Z 12s 1.20um 5.8mszX
 ePP 47 49.00
 eS 51 25.00
 MDJ 21.56 16 eP 48 01.00 -0.1
 CHG 21.75 261 ePc 48 04.00 0.8
 1.2s 19.53nm 4.4mb
 GTA 24.02 315 eP 48 26.10 0.7
 1.0s 10.00nm 4.4mb
 Z 11s 0.90um 4.5mszX
 E 11s 1.10um
 PP 48 33.00
 SS 52 50.00
 LSA 27.75 288 eP 49 02.30 1.4
 GUN 32.33 285 P 49 41.50 0.0
 1.4s 90.00nm 5.5mb
 PKI 32.76 284 P 49 44.68 -0.5
 1.4s 40.00nm 5.1mb
 KKN 32.86 284 P 49 45.54 -0.4
 1.0s 50.00nm 5.4mb
 DMN 33.02 284 P 49 47.04 -0.4
 1.1s 55.00nm 5.4mb
 GKN 33.43 285 P 49 50.36 -0.4
 0.9s 34.00nm 5.3mb
 WMO 34.09 314 eP 49 55.50 -0.8
 WRA 45.39 163 P 51 27.00 -3.1X
 0.9s 7.40nm 4.6mb
 QIS 47.61 157 iPd 51 47.80 0.2
 ASPA 48.85 165 eP 51 55.50 -1.7
 1.1s 10.00nm 4.8mb
 ANM 61.29 28 ePc 53 27.40 0.4
 BRW 64.79 21 eP 53 49.50 -0.6
 SVW 65.81 32 ePd 53 57.30 0.5
 FBA 68.77 27 ePc 54 15.70 0.3
 1.0s 96.00nm 5.9mb
 PMR 68.83 31 ePd 54 14.80 -0.9
 0.8s 29.83nm 5.5mb
 TOA 70.09 30 ePd 54 23.90 0.4
 0.8s 28.40nm 5.5mb
 KLU 70.35 31 P 54 24.00 -1.2
 KAF 71.53 330 eP 54 16.90 -15.3X
 0.6s 3.10nm
 INK 73.23 22 eP 54 41.20 -1.0
 0.9s 26.00nm 5.3mb
 MBC 73.34 13 eP 54 36.00 -6.7X
 NB2 78.59 332 P 55 11.50 -1.1
 0.9s 4.30nm 4.5mb
 NB2 78.59 332 P 54 53.20 -19.4X
 0.8s 4.30nm
 YKA 82.97 23 eP 55 34.90 -0.8
 0.9s 8.60nm 4.9mb
 GMW 88.27 38 P 56 03.50 1.2
 BMW 88.62 39 P 56 05.00 0.9
 RMW 88.87 37 P 56 06.00 0.7
 PNT 88.96 35 eP 56 06.00 0.4
 LON 89.27 38 P 56 07.00 -0.2
 NEW 90.91 35 P 56 15.80 1.0
 1.0s 9.38nm 5.1mb
 WDC 92.36 43 eP 56 23.10 1.6
 MIN 93.08 43 eP 56 25.00 0.6
 FFC 93.13 24 eP 56 25.00 0.2
 1.0s 17.00nm 5.4mb
 ORV 93.60 44 eP 56 27.40 0.1

? DEC 29, 1990 15h 45m 01.98± 1.77s
 19.759 S ±47.9km 175.242 E ±25.1km
 DEPTH = 41.2 ± 23.7 km
 4.8mb (2 obs.)

29d 16h

CMB 95.19 44 eP 56 36.00 1.3
 TNP 97.16 43 P 56 45.00 1.2
 TOV 144.61 20 ePKP 02 48.00 -0.8
 SDV 145.18 22 ePKP 02 48.50 -1.5
 S.D. = 0.9 on 49 of 58 obs.

* DEC 29, 1990 17h 17m 59.17± 1.29s
 32.383 S ± 17.0km 70.072 W ± 15.5km
 DEPTH = 33.0km (normal)
 CHILE-ARGENTINA BORDER REGION (127)

MDZ 1.15 116 eP 18 18.90 -0.1
 SAN 1.18 205 eP 18 20.50 1.1
 TACH 1.46 210 iPc 18 23.70 0.2
 RTLL 1.72 53 iPc 18 28.00 0.7
 CFA 1.74 64 ePc 18 26.90 -0.7
 LNV 1.93 215 iP 18 29.00 -1.2
 RTRS 2.27 14 ePd 18 40.00 5.0X
 GBA 144.93 115 PKPc 37 38.50 3.4X
 1.3s 3.20nm
 S.D. = 1.1 on 6 of 8 obs.

* DEC 29, 1990 18h 20m 44.91± 1.83s
 17.207 N ± 14.7km 101.109 W ± 15.0km
 DEPTH = 24.6 ± 8.2 km
 4.4mb (3 obs.)
 NEAR COAST OF GUERRERO, MEXICO (58)

ACX 1.24 106 iP 21 06.44 -0.4
 III 1.95 53 iP 21 17.74 0.6
 CRX 2.57 32 (P) 21 26.30 0.1
 UNM 2.80 41 (P) 21 31.30 2.0
 PPM 3.00 52 iP 21 32.45 0.1
 IIA 3.03 50 iP 21 32.53 0.2
 IIT 3.22 55 iP 21 34.14 -1.2
 IISM 3.97 63 (P) 21 51.56 5.9X
 OXX 4.20 91 iP 21 49.00 -0.1
 LVVM 5.09 60 (P) 22 12.67 11.1X
 TUL 19.22 13 eP 25 07.30 -2.7
 0.8s 16.10nm 4.3mb
 YKA 46.22 351 eP 29 08.60 -0.9
 0.8s 3.60nm 4.4mb
 INK 55.04 346 eP 30 18.00 1.4
 MBC 59.82 355 eP 30 51.00 0.8
 1.0s 7.00nm 4.7mb
 HYB 145.59 1 ePKP 40 23.50 -0.1
 S.D. = 1.4 on 13 of 15 obs.

DEC 29, 1990 18h 54m 34.69± 1.19s
 52.102 N ± 12.4km 170.532 W ± 7.0km
 DEPTH = 58.2 ± 9.2 km
 5.0mb (27 obs.)
 FOX ISLANDS, ALEUTIAN ISLANDS (9)

ADK 3.81 269 iPc 55 32.50 0.3
 SDN 6.78 57 iPd 56 12.70 -1.1
 SVW 12.17 36 ePd 57 35.40 8.0X
 0.6s 8.80nm 4.9mb
 ANM 12.78 10 ePd 57 38.70 3.3X
 TTA 13.32 30 ePd 57 44.60 2.0
 1.2s 32.60nm 5.0mb
 PMR 15.01 42 ePc 58 09.70 5.3X
 0.6s 3.69nm 3.8mb X
 IMA 16.37 25 iPc 58 27.10 5.2X
 0.8s 4.30nm 3.6mb X
 BRW 20.24 13 eP 59 06.10 -1.0
 INK 23.96 33 eP 59 42.00 -2.0
 MBC 31.04 21 eP 00 48.00 -0.5
 0.5s 3.00nm 4.3mb
 PNT 31.83 74 eP 00 56.00 0.3
 SES 36.37 68 eP 01 35.00 0.3

MAT 38.97 267 (P) 01 58.00 1.4
 FFC 39.47 58 iPc 02 00.80 0.3
 0.6s 7.00nm 4.7mb
 BJI 50.17 287 eP 03 26.00 0.0
 SSE 53.11 275 P 03 47.50 -0.7
 1.0s 25.00nm 5.2mb
 LZH 60.02 291 eP 04 36.50 -1.2
 1.0s 23.00nm 5.3mb
 SOD 60.15 352 iP 04 36.40 -1.5
 NB2 67.20 359 P 05 23.10 -1.1
 0.5s 2.90nm 4.5mb
 HFS 68.07 358 eP 05 27.50 -2.0
 0.4s 12.20nm 5.2mb
 CHG 75.70 282 ePc 06 15.80 0.2
 GUN 76.22 298 P 06 18.80 0.0
 0.4s 33.00nm 5.6mb
 KKN 76.64 298 P 06 20.78 -0.2
 0.6s 15.00nm 5.2mb
 PKI 76.74 298 P 06 21.28 -0.4
 0.9s 15.00nm 5.0mb
 GKN 76.82 299 P 06 21.52 -0.4
 0.6s 25.00nm 5.4mb
 BDT 76.87 281 eP 06 22.70 0.6
 DMN 76.88 298 P 06 22.32 0.0
 0.7s 25.00nm 5.3mb
 CLL 76.92 358 iP 06 21.80 0.0
 KSP 77.27 356 iP 06 23.40 -0.4
 BRG 77.33 357 iP 06 24.10 0.0
 1.1s 22.00nm 5.1mb
 MOX 77.61 359 eP 06 26.00 0.3
 PRU 78.20 357 ePc 06 29.00 0.1
 KHC 79.09 357 P 06 34.20 0.4
 1.0s 6.00nm 4.5mb
 LDF 79.35 6 eP 06 34.80 -0.4
 LOR 80.89 4 eP 06 43.70 0.2
 0.8s 6.70nm 4.6mb
 SOTA 81.05 359 iPd 06 45.20 0.8
 0.8s 10.30nm 4.8mb
 SSF 81.08 4 eP 06 44.70 0.2
 0.9s 14.75nm 4.9mb
 LBF 81.18 4 eP 06 44.90 -0.1
 1.0s 16.00nm 4.9mb
 AVF 81.35 4 eP 06 46.20 0.4
 SMF 81.51 4 eP 06 47.00 0.3
 0.9s 16.40nm 5.0mb
 LSF 81.79 6 eP 06 48.30 0.1
 1.0s 24.00nm 5.1mb
 MAF 81.88 5 eP 06 49.00 0.4
 LFF 83.05 6 eP 06 55.40 0.7
 CAF 83.14 5 eP 06 56.00 0.8
 LPO 83.33 6 eP 06 56.70 0.6
 0.5s 2.90nm 4.5mb
 FIR 84.49 359 eP 07 04.00 2.1
 FRF 84.69 2 eP 07 03.70 0.7
 LRG 84.79 2 eP 07 03.90 0.5
 LMR 84.91 2 eP 07 05.10 1.0
 0.9s 11.45nm 5.0mb
 EPF 84.92 7 eP 07 04.60 0.4
 1.0s 16.00nm 5.1mb
 PGF 85.73 0 iPc 07 09.10 0.7
 1.0s 36.00nm 5.5mb
 HYB 88.63 297 eP 07 22.50 -0.2
 ASPA 89.68 229 eP 07 26.60 -0.7
 1.0s 12.30nm 5.2mb
 GBA 92.35 296 Pd 07 39.80 -0.1
 0.6s 2.70nm 4.9mb
 BUL 144.78 328 iPKPc 14 04.50 -2.1
 0.9s 12.18nm
 S.D. = 0.9 on 51 of 55 obs.

DEC 29, 1990 19h 10m 46.98± 0.82s
 36.015 N ± 8.1km 11.080 E ± 4.1km
 DEPTH = 10.0km (geophysicist)
 5.0mb (7 obs.)
 TUNISIA (397)

PTS 1.08 43 P 11 06.00 -1.3
 0.6s eSn 11 23.50
 CVT 2.15 39 P 11 26.90 3.5X
 ERC 2.35 30 P 11 24.60 -1.7
 FAI 2.44 58 P 11 27.00 -0.4
 MCT 2.61 51 P 11 30.60 0.5
 GIB 3.07 49 P 11 36.20 -0.3
 USI 3.17 31 P 11 39.20 1.5
 MEU 3.28 70 P 11 41.50 1.9
 MNO 3.47 55 Pd 11 42.90 0.6

ATN 4.11 57 P 11 50.00 -1.1
 MSI 4.19 57 P 11 52.00 -0.3
 SOI 4.48 61 P 11 56.00 -0.4
 TDS 5.53 47 P 12 11.50 0.2
 SGO 5.62 35 P 12 12.10 -0.5
 RDP 5.88 12 P 12 18.00 1.8
 RMP 5.92 12 P 12 17.20 0.4
 SDI 6.07 20 P 12 18.20 -0.7
 PGF 6.72 347 Pn 12 29.00 0.8
 Sn 13 36.00
 ASS 7.15 9 P 12 32.00 -2.2
 ARV 7.61 10 P 12 41.50 0.9
 PII 7.71 357 P 12 42.50 0.6
 BDI 8.05 358 P 12 48.00 1.3
 LMR 8.11 336 Pn 12 46.40 -1.2
 Sn 14 08.00
 LRG 8.27 335 Pn 12 48.80 -1.0
 FRF 8.27 337 Pn 12 49.00 -0.8
 SBF 8.32 341 Pn 12 49.40 -1.2
 Sn 14 13.40
 CDR 8.67 334 e(Pn)c 12 55.70 0.3
 e(Sn) 12 56.30
 BNI 9.63 341 P 13 10.00 1.3
 LPG 10.02 342 Pn 13 15.00 0.7
 LPL 10.05 342 Pn 13 15.20 0.7
 FVI 10.65 6 P 13 23.00 0.5
 EPF 10.85 313 P 13 26.40 1.0
 CAF 11.23 325 Pn 13 30.00 -0.6
 LPO 11.48 322 Pn 13 33.60 -0.3
 RJF 11.77 325 Pn 13 37.20 -0.7
 LFF 11.88 322 Pn 13 39.00 -0.4
 MAF 12.04 330 Pn 13 40.40 -1.1
 BGF 12.21 332 Pn 13 44.00 0.3
 TCF 12.24 330 Pn 13 44.40 0.2
 MLR 14.69 45 eP 14 11.00 -5.7X
 e 33 48.50
 HFS 24.20 3 eP 16 04.70 0.5
 0.5s 2.00nm 4.0mb
 NB2 25.04 0 P 16 13.00 0.5
 0.7s 2.30nm 4.0mb
 GKN 61.55 75 P 21 06.52 -0.4
 0.8s 9.00nm 5.0mb
 DMN 62.11 75 P 21 10.88 0.1
 0.8s 15.00nm 5.2mb
 KKN 62.16 75 P 21 11.12 0.0
 0.7s 9.00nm 5.1mb
 PKI 62.36 75 P 21 12.34 -0.2
 1.4s 18.00nm 5.1mb
 GUN 62.57 74 P 21 14.06 0.1
 1.0s 30.00nm 5.5mb
 YKA 72.61 337 eP 22 20.20 4.2X
 0.6s 0.40nm 3.7mb X
 S.D. = 0.9 on 45 of 48 obs.

DEC 29, 1990 19h 24m 12.15± 0.34s
 26.619 N ± 6.3km 92.579 E ± 4.0km
 DEPTH = 33.0km (normal)
 5.0mb (7 obs.)
 EASTERN INDIA (317)

LSA 3.32 338 ePn 25 07.80 4.4X
 Pg 25 16.40
 Sg 25 57.40
 GUN 6.10 284 P 25 42.40 -0.3
 PKI 6.46 280 P 25 47.00 -0.8
 KKN 6.60 282 P 25 48.80 -0.9
 DMN 6.73 280 P 25 51.20 -0.3
 GKN 7.20 283 P 25 57.20 -0.7
 KMI 9.27 97 eP 26 27.00 0.2
 CHG 9.74 142 eP 26 33.20 0.2
 BDT 11.07 146 eP 26 50.00 -1.2
 GYA 12.61 88 P 27 12.20 0.0
 LZH 13.47 43 eP 27 23.50 0.0
 1.5s 25.00nm 4.9mb
 Z 12s 0.99um 4.3msz
 PP 27 30.50
 SP 27 37.50
 NDI 13.77 282 eP 27 30.00 2.6
 0.5s 14.08nm 5.0mb
 IS 29 46.00
 GTA 14.12 24 P 27 30.20 -1.8
 PP 27 38.70
 HYB 15.89 238 eP 27 56.50 1.4
 XAN 15.92 58 P 27 54.30 -1.1
 OIZ 17.60 112 Pc 28 20.50 3.9X
 WMO 17.61 348 P 28 20.00 3.3X

POD	19.06	249	eS	31	33.50				NP1:Strike=208	Dip=16	Slip= 118				sP	13	36.60				
GBA	19.20	231	P	28	36.50	2.0			NP2:	359	76	82			PcP	14	59.20				
			S	31	53.00	4.8X									ScP	18	38.10				
WHN	19.51	73	eP	28	40.50	0.9		DAV	1.41	346	iPc+	05	54.00	-0.2	PcS	18	47.60				
			PP	28	50.00			TSM	7.95	260	ePc	07	27.90	5.7X	ScS	22	52.20				
TIY	20.08	52	eP	28	44.80	-0.9			1.0s	1144.20nm			6.5mb	X	CMS	41.59	154	eP	13	06.00	0.1
BTO	20.08	42	eP	28	45.00	-0.7			9.65	272	ePd	07	50.00	4.7X	BRS	41.92	143	iPc	13	18.90	10.1X
HHC	21.17	43	eP	28	56.90	0.0			1.1s	76.80nm			5.4mb					i	14	47.80	
KOD	21.67	224	eP	29	00.30	-2.0		QCP	10.07	332	eP	07	36.00	-14.7X				i	17	44.90	
TIA	22.97	59	eP	29	15.70	0.9		BAG	11.85	334	eP	08	16.00	1.5	ADE	42.22	164	iPc	13	12.10	1.0
IPM	23.36	158	ePd	29	21.60	2.9X		MKS	12.61	211	iPc	08	29.00	4.7X				0.7s	164.38nm		5.9mb
NJ2	23.51	70	Pc	29	21.00	1.0		JAY	16.88	119	ePc	09	16.00	-2.6	COO	43.82	147	e(P)	13	25.00	0.8
BJI	23.74	50	eP	29	25.00	2.8		MTN	19.15	164	eP	09	43.90	-1.0				i	13	29.00	
SSE	25.42	73	P	29	48.00	9.7X		QIZ	20.51	312	Pd	09	59.80	0.9				i	15	11.20	
	1.0s	15.00nm			4.5mb				SS	14	18.00				GUN	43.92	305	P	13	25.60	0.1
Z	16s	0.60um			4.2MsZ			KNA	21.50	172	iPc	10	09.00	0.1	PKI	44.18	304	P	13	27.20	-0.4
E	13s	0.30um						KGM	22.83	262	ePc	10	25.00	3.1X	KKK	44.37	304	P	13	28.60	-0.3
SNY	29.59	51	eP	30	17.00	0.7		IPM	24.81	269	ePc	10	43.20	2.3	DMN	44.44	304	P	13	29.40	-0.2
CN2	31.59	49	eP	30	34.00	0.1		SSE	0.9s	3.30nm			3.8mb	X	GKN	44.97	304	P	13	33.20	-0.5
KNA	54.86	136	iPd	33	41.40	-0.4			25.64	351	P	10	50.30	1.8	BWA	45.22	154	eP	13	37.40	2.1
KAF	55.76	329	eP	33	46.70	-1.1			0.8s	20.00nm			4.7mb					i	14	05.00	
NUR	56.38	327	eP	33	40.00	-12.2X		PMG	25.95	125	iPc	10	49.00	-2.5	BFD	45.40	161	iPc	13	38.40	1.8
SOD	56.49	335	eP	33	53.00	0.0		LOE	26.35	298	eP	10	56.00	0.9				0.6s	28.00nm		5.2mb
HFS	61.82	326	eP	34	29.00	-1.0		NJ2	27.03	347	Pd	11	04.00	2.9X	CAN	46.23	154	eP	13	44.40	1.1
	0.5s	5.50nm			4.9mb		MBL	27.36	192	iPc	11	03.80	-0.4				i	14	12.20		
NB2	62.95	327	P	34	36.40	-1.1			0.8s	135.00nm			5.6mb		CNB	46.39					

29d 21h

SIV 167.70 147 PKP 25 23.00 0.7
i 26 30.20
S.D. = 1.1 on 88 of 100 obs.

? DEC 29, 1990 21h 05m 45.17± 2.35s
26.861 N ± 21.8km 56.005 E ± 29.5km
DEPTH = 33.0km (normal)
4.2mb (2 obs.)
SOUTHERN IRAN (353)

SHI 4.14 313 eP 06 46.00 -1.8
BBU 5.01 264 (Pn) 07 02.00 2.0
(Sn) 07 38.60

SOTA 40.45 312 iPd 13 21.90 -0.4
0.5s 10.00nm 4.8mb X
e 15 26.00

HFS 43.97 331 eP 13 51.90 1.3
0.7s 2.50nm 4.1mb

NB2 45.48 331 P 14 04.40 1.6
1.0s 4.20nm 4.3mb

KIC 61.09 262 P 15 57.90 -0.8
TIC 61.21 263 P 15 58.70 -0.8
LIC 61.41 262 P 15 59.90 -1.0

S.D. = 1.6 on 8 of 8 obs.

DEC 29, 1990 22h 44m 36.53± 1.36s
8.803 S ± 5.2km 118.826 E ± 9.3km
DEPTH = 138.5 ± 14.0 km
4.8mb (12 obs.)
SUMBAWA ISLAND REGION (285)

MKS 3.62 10 iPd 45 32.90 0.7
KNA 11.91 126 iPc 47 18.30 -4.8X
eS 49 25.00

MBL 12.32 176 iPc 47 23.90 -4.5X
eS 49 30.00

MTN 12.74 109 eP 47 29.00 -4.8X
MEKA 17.72 181 eP 48 35.00 -1.1
eS 51 35.00

WARB 18.81 158 eP 48 47.10 -1.0
0.3s 9.00nm 4.6mb
eS 52 09.00

MRWA 20.48 187 eP 49 04.80 -0.5
eS 52 40.30

ASPA 20.66 137 iPd 49 06.00 -1.1
0.8s 134.80nm 5.4mb
Z 22s 0.30um 3.6msz

iS 52 43.20
iScP 56 38.20
iScS 00 18.40

BAL 21.78 185 eP 49 18.00 -0.2
COOL 22.08 175 iPc 49 20.60 -0.5
eS 53 20.00

IPM 22.17 306 ePd 49 24.00 1.9
KLB 22.70 182 eP 49 27.00 -0.1
eS 53 35.00

MUN 23.19 186 eP 49 32.00 0.2
eS 53 43.00

OIS 23.22 123 iPd 49 31.90 -0.3
FORR 23.58 160 eP 49 35.30 -0.3
NWA0 24.05 183 eP 49 41.00 0.9
eS 54 06.00

BDT 32.46 323 eP 50 55.60 -0.2
CHG 33.73 325 eP 51 08.20 1.4
CMS 33.76 136 iPd 51 07.10 0.1

BFD 35.49 146 eP 51 23.00 1.4
GYA 36.99 342 P 51 36.00 1.6
PcP 53 54.40

BRS 37.01 124 iPc 51 35.60 1.1
TOO 37.43 144 eP 51 39.00 1.1
COO 37.69 130 iPc 51 43.00 2.7X
0.7s 34.00nm 5.2mb

WHN 39.35 354 eP 51 55.70 1.8
SVO 40.47 94 eP 52 02.00 -1.4
HNR 40.59 94 eP 52 04.00 -0.3

NJ2 40.62 0 P 52 07.00 2.7X
LSA 46.64 326 eP 52 54.80 1.5
TIY 46.66 353 eP 52 53.40 0.5

GBA 46.73 298 Pd 52 50.70 -3.0X
0.6s 3.60nm 4.2mb
LZH 46.82 343 eP 52 54.50 0.1
2.0s 36.00nm 4.7mb

SP 53 20.00
HYB 47.57 303 eP 52 57.00 -3.3X
GUN 48.45 320 P 53 06.00 -1.3
PKI 48.52 319 P 53 05.40 -2.4
0.7s 29.00nm 5.2mb

BIJ 48.66 357 eP 53 08.50 0.3
DMN 48.74 319 P 53 08.00 -1.5
KKK 48.75 319 P 53 07.20 -2.3
0.9s 49.00nm 5.3mb

GKN 49.31 319 P 53 12.00 -1.7
SNY 50.57 5 Pc 53 22.40 -0.4
0.8s 10.00nm 4.7mb

GTA 51.11 341 eP 53 26.20 -1.0
0.8s 10.00nm 4.7mb
CN2 52.70 6 eP 53 38.00 -0.7
MDJ 54.05 9 eP 53 48.50 -0.2
MAW 69.36 200 eP 55 32.50 1.8
1.0s 27.00nm 5.0mb

SPA 81.26 180 iPd 56 38.50 0.2
0.5s 10.19nm 4.8mb
KRI 86.75 254 iPd 57 02.20 -4.7X
BUL 87.21 250 iPd 57 09.20 0.1
0.8s 7.46nm 4.7mb

YKA 114.08 24 ePKP 02 59.30 -1.2
0.4s 0.70nm
KIC 124.05 272 (PKP) 03 22.00 1.0
CNCB 153.68 165 PKP 04 25.00 11.2X
LPB 153.91 165 PKP 04 24.00 10.0X
SIV 155.37 180 PKP 04 17.20 1.8
i 04 43.20

S.D. = 1.2 on 42 of 52 obs.

% DEC 29, 1990 22h 51m 30.97± 1.09s
41.075 N ± 9.3km 22.418 E ± 6.2km
DEPTH = 6.8 ± 6.6 km
YUGOSLAVIA (383)

GRG 0.12 186 iPc 51 33.96 0.3
eS 51 35.32
KNT 0.37 76 ePc 51 39.00 0.5
eS 51 44.28

THE 0.61 137 iPd 51 42.56 -0.6
eS 51 51.04
SOH 0.75 109 ePd 51 45.64 -0.4
FNA 0.84 250 ePc 51 47.28 -0.3
eS 51 57.84

SRS 0.89 87 ePc 51 48.04 -0.3
eS 52 00.12
LIT 0.97 177 ePc 51 49.96 0.2
PAIG 1.50 140 ePd 51 58.88 0.6
S.D. = 0.6 on 8 of 8 obs.

& DEC 29, 1990 22h 54m 31.70s
34.150 N 116.717 W
DEPTH = 6.0km (geophysicist)
SOUTHERN CALIFORNIA (43)
<PAS-P>. ML 2.7 (PAS).

PEC 0.45 235 iPd 54 40.20 -0.5
PLM 0.80 189 iPd 54 46.70 -1.1
2 obs. associated

% DEC 29, 1990 23h 22m 00.70± 0.78s
39.264 N ± 7.4km 29.320 E ± 9.0km
DEPTH = 10.0km (geophysicist)
TURKEY (366)

DST 0.64 303 iPg 22 12.80 -0.7
eSg 22 21.80
ALT 0.65 108 iPg 22 13.20 -0.6
iSg 22 22.20
KHL 0.95 170 iPg 22 19.50 0.6
iSg 22 31.50
IZI 1.08 6 ePn 22 21.60 0.6
KCT 1.23 323 ePn 22 25.00 1.4
YLV 1.30 2 iPn 22 24.60 -0.2
BNT 1.53 316 ePn 22 27.10 -1.0
S.D. = 1.1 on 7 of 7 obs.

DEC 29, 1990 23h 24m 30.73± 0.54s
11.380 S ± 8.0km 118.294 E ± 9.9km
DEPTH = 33.0km (normal)
5.4mb (6 obs.)
SOUTH OF SUMBAWA ISLAND (291)

MBL 9.84 172 iPc 26 51.00 -2.0
eS 28 31.50
KNA 11.07 114 eP 27 08.00 -1.9
eS 29 09.00
MTN 12.64 98 eP 27 30.20 -0.8
iS 29 42.50

MEKA 15.16 179 eP 28 02.80 -1.3
eS 30 33.00
WARB 16.70 153 eP 28 23.20 -0.7
0.4s 66.00nm 5.1mb
eS 31 18.00
MRWA 17.88 187 eP 28 37.50 -1.1
eS 31 38.00
BAL 19.19 184 eP 28 55.00 0.4
eS 29 12.00
ASPA 19.23 132 iPd 28 56.30 1.1
0.5s 32.50nm 4.8mb
Z 18s 0.10um 3.6msz
eS 32 19.30
COOL 19.59 173 eP 29 00.00 0.8
eS 33 19.00
KLB 20.12 181 eP 29 07.00 2.2
eS 32 34.00
MUN 20.59 185 eP 29 13.00 3.4X
eS 32 43.00
FORR 21.40 156 eP 29 20.00 2.2
OIS 22.41 117 eP 29 30.00 2.0
RKG 22.62 183 eP 29 40.00 10.0X
eS 32 46.00
GBA 47.52 300 Pc 33 05.00 -0.1
HYB 48.58 306 eP 33 13.00 -0.4
GUN 50.11 322 P 33 25.60 0.2
PKI 50.15 321 P 33 25.40 -0.3
0.6s 27.00nm 5.4mb
DMN 50.37 321 P 33 27.20 0.0
0.7s 45.00nm 5.6mb
KKK 50.39 321 P 33 27.20 -0.1
0.8s 31.00nm 5.4mb
GKN 50.94 321 P 33 31.40 0.0
0.6s 32.00nm 5.5mb
CNCB 151.31 167 PKP 44 29.00 11.1X
LPB 151.56 167 ePKP 44 27.00 8.9X
S.D. = 1.3 on 19 of 23 obs.

* DEC 29, 1990 23h 25m 16.17± 2.58s
10.927 N ± 12.0km 62.372 W ± 23.9km
DEPTH = 33.0km (normal)
NEAR COAST OF VENEZUELA (97)
MD 3.6 (TRN).

TRN 0.99 106 eP 25 33.88 0.1
eS 25 48.49
TPP 1.09 124 eP 25 35.30 0.2
eS 25 53.10
TBH 1.36 109 eP 25 38.63 -0.3
eS 25 58.11
PIG 1.52 81 eP 25 41.65 0.3
eS 26 01.39
BOT 1.64 82 eP 25 42.77 -0.3
eS 26 05.15
SVB 2.57 25 eP 25 56.75 0.3
eS 26 31.38
SVV 2.63 25 eP 25 57.36 0.1
eS 26 30.33
BIM 3.79 19 eP 26 13.55 -0.1
MVM 3.88 22 eP 26 14.87 -0.2
FDF 3.97 17 eP 26 16.20 -0.1
S 26 58.00
S.D. = 0.3 on 10 of 10 obs.

* DEC 30, 1990 00h 24m 38.77± 0.56s
32.594 N ± 13.1km 49.154 E ± 8.8km
DEPTH = 10.0km (geophysicist)
4.4mb (5 obs.)
WESTERN IRAN (347)

SHI 4.12 135 eP 25 44.00 0.7
TAB 5.93 338 eP 26 19.00 10.1X
GKN 30.89 89 P 30 58.00 0.2
DMN 31.40 90 P 31 02.80 0.3
KKK 31.49 89 P 31 02.60 -0.6
0.7s 7.00nm 4.7mb
PKI 31.67 89 P 31 04.80 -0.1
GUN 31.96 89 P 31 07.00 -0.5
SOTA 32.22 308 iPd 31 09.40 0.1
0.5s 5.00nm 4.7mb
HFS 36.07 330 eP 31 42.60 0.5
0.4s 2.50nm 4.4mb
NB2 37.59 331 P 31 55.20 0.2
0.9s 3.20nm 4.1mb
KIC 56.40 255 (P) 34 22.30 -0.6
YKA 84.35 353 eP 37 16.60 4.7X
0.5s 0.40nm 3.9mb

S.D. = 0.5 on 10 of 12 obs.
 % DEC 30, 1990 00h 37m 47.52±0.82s
 41.012 N ± 8.4km 22.470 E ± 5.3km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.08 223 ePd 37 50.14 0.2
 eS 37 52.10
 KNT 0.36 65 ePc 37 55.17 0.3
 eS 38 00.50
 THE 0.53 135 ePd 37 58.18 -0.1
 eS 38 05.42
 SOH 0.70 106 iPd 38 00.78 -0.5
 eS 38 10.74
 SRS 0.86 83 ePc 38 04.14 0.1
 eS 38 15.50
 FNA 0.86 255 ePc 38 03.82 -0.3
 eS 38 14.94
 LIT 0.91 179 iPc 38 05.34 0.4
 iS 38 18.66

S.D. = 0.4 on 7 of 7 obs.
 DEC 30, 1990 00h 39m 38.53±0.43s
 5.546 S ± 2.9km 147.145 E ± 3.1km
 DEPTH = 200.4 ± 4.0 km
 5.2mb (40 obs.)
 EAST PAPUA NEW GUINEA REGION (207)
 CENTROID, MOMENT TENSOR (HRV)
 Dato Used: GDSN
 L.P.B.: 15S, 28C
 Centroid Location:
 Origin Time 00:39:43.9 0.8
 Lat 5.47S 0.08 Lon 146.98E 0.06
 Dep 190.4 1.9 Half-duration 2.0
 Moment Tensor: Scale 10**16 Nm
 Mrr= 7.59 0.53 Mtt=-9.56 0.74
 Mff= 1.98 0.81 Mrt=-0.20 0.62
 Mrf=-7.15 0.58 Mtf=-4.87 0.75
 Principal Axes:
 T Val= 12.78 Plg=53 Azm= 78
 N -1.01 35 240
 P -11.77 9 336
 Best Double Couple: Mo=1.2*10**17
 NP1:Strike=100 Dip=47 Slip= 142
 NP2: 218 63 50

YYYY 1.36 239 iPc 40 10.90 -0.6
 MNDI 3.52 260 iPd 40 35.90 0.7
 eS 41 58.00
 PMG 3.84 180 iPd+ 40 36.40 -2.4
 eS 41 15.00
 RAB 5.18 75 iPc+ 40 54.50 -1.5
 JAY 7.09 295 iPc 41 22.00 1.2
 0.7s 121.90nm 5.2mb
 SVO 13.07 107 eP 42 36.00 -1.9
 eS 45 13.00
 HNR 13.27 108 iPc 42 39.00 -1.5
 eS 45 12.00
 CTA 14.48 183 iPd- 42 56.90 1.3
 1.0s 440.00nm 5.8mb
 OIS 16.62 205 iPd 43 21.60 -0.2
 i 46 24.30
 GUA 19.09 353 eP 43 48.70 0.4
 1.0s 576.00nm 6.1mb
 PJG 19.14 353 eP 43 49.30 0.4
 KNA 20.69 239 eP 44 05.80 1.4
 eS 47 44.00
 RMO 20.88 176 iPd 44 08.20 1.9
 0.9s 302.00nm 5.8mb
 BRS 22.38 167 iPc 44 21.30 0.4
 ic 44 35.00
 i 48 10.90
 iS 48 27.00
 PVC 23.98 122 iPd 44 36.70 0.5
 DZM 24.87 133 iPc 44 43.30 -1.3
 COO 25.30 170 iPc 44 49.90 1.5
 CMS 25.84 183 eP 44 53.00 -0.2
 WARB 28.37 221 eP 45 17.20 1.0
 0.5s 58.00nm 5.6mb
 BWA 28.76 178 eP 45 19.80 0.2
 e 45 57.00
 e 48 24.60
 eScP 51 51.20

CAN 29.68 177 eP 45 27.80 0.1
 e 46 33.00
 eScP 51 53.90
 CNB 29.69 176 eP 45 28.00 0.1
 e 46 31.00
 ADE 30.30 194 eP 45 33.30 0.2
 MBL 30.69 237 iPc 45 36.80 0.1
 0.6s 32.00nm 5.2mb
 FORR 30.89 213 eP 45 37.00 -1.2
 BFD 31.76 187 iPd 45 47.90 2.1
 0.8s 43.00nm 5.2mb
 TOO 31.91 182 iPc 45 48.00 0.8
 e 47 08.00
 MEKA 34.40 229 iPc 46 09.30 0.6
 COOL 35.10 221 eP 46 08.00 -6.5X
 MRWA 37.69 228 eP 46 37.00 0.7
 KLB 37.80 223 iPc 46 37.30 0.1
 BAL 37.95 225 eP 46 39.00 0.5
 NWA0 38.96 222 eP 46 47.00 0.2
 MUN 39.09 224 eP 46 48.00 0.2
 QZH 41.11 319 Pd 47 05.20 0.8
 0.7s 50.00nm 5.2mb
 AFI 41.28 105 iPc 47 06.00 -0.1
 IIDJ 41.72 349 eP 47 09.60 0.2
 KAKJ 42.04 352 P 47 11.60 -0.3
 CHJJ 42.07 350 P 47 12.90 0.7
 TSRJ 42.19 346 eP 47 13.60 0.5
 MAT 42.69 349 iPc 47 17.00 -0.2
 1.0s 34.00nm 4.8mb
 PUZ 42.98 143 P 47 19.90 0.3
 TCW 43.00 150 P 47 20.20 0.6
 MNG 43.18 148 P 47 21.40 0.2
 NOZ 43.21 144 eP 47 21.70 0.3
 NIJJ 43.24 351 P 47 22.20 0.6
 MTW 43.59 149 P 47 24.00 -0.4
 YAMJ 43.99 352 P 47 28.40 0.7
 SSE 44.08 327 iPc 47 29.50 1.1
 0.8s 41.00nm 5.0mb
 Z 20s 0.50um 4.4MsZ
 N 14s 0.40um
 eS 53 40.00
 QIZ 44.12 305 eP 47 26.80 -2.1
 OFUJ 44.69 354 P 47 34.10 1.0
 NJ2 46.08 326 P 47 45.40 1.1
 0.8s 80.00nm 5.2mb
 S 54 18.00
 WHN 47.67 321 P 47 58.00 1.3
 1.0s 40.00nm 4.8mb
 PP 48 40.00
 GYA 50.49 311 P 48 19.40 0.9
 NST 51.10 295 eP 48 25.00 2.0
 SNY 51.82 338 P 48 27.20 -0.9
 KMI 52.84 307 eP 48 47.50 11.4X
 CN2 52.88 340 P 48 35.00 -0.8
 CHG 53.30 298 eP 48 39.00 -0.3
 XAN 53.43 320 P 48 39.10 -1.0
 1.0s 80.00nm 5.3mb
 BJI 53.58 331 eP 48 40.50 -0.5
 1.5s 39.00nm 4.8mb
 TIY 53.81 326 eP 48 42.50 -0.4
 HHC 56.53 328 P 49 02.40 0.1
 BTO 57.17 327 eP 49 07.00 0.1
 LZH 57.96 319 P 49 13.00 0.5
 1.5s 85.00nm 5.3mb
 PP 49 54.00
 GTA 62.49 320 eP 49 43.00 -0.1
 1.0s 40.00nm 5.2mb
 PPN 63.02 107 iP 49 46.90 0.2
 0.9s 55.00nm 5.4mb
 TVO 63.21 107 iP 49 48.30 0.3
 0.9s 50.00nm 5.3mb
 TBI 63.41 113 iP 49 49.90 0.7
 0.9s 130.00nm 5.8mb
 LSA 64.09 307 eP 49 54.00 -0.1
 PMO 64.42 104 iP 49 56.10 0.3
 0.9s 105.00nm 5.7mb
 VAH 64.68 104 iP 49 57.60 0.1
 0.9s 40.00nm 5.2mb
 TPT 64.68 104 iP 49 57.70 0.2
 0.9s 65.00nm 5.5mb
 RUV 64.91 104 iP 49 59.20 0.2
 0.9s 60.00nm 5.4mb
 GUN 67.74 303 P 50 16.66 -0.6
 0.6s 27.00nm 5.2mb
 PKI 68.02 303 P 50 18.20 -0.7
 0.6s 5.00nm 4.4mb

KKN 68.20 303 P 50 19.20 -0.7
 0.7s 14.00nm 4.8mb
 DMN 68.29 302 P 50 20.20 -0.3
 0.8s 32.00nm 5.1mb
 GKN 68.81 303 P 50 22.80 -0.7
 0.8s 17.00nm 4.8mb
 HYB 71.44 290 eP 50 38.50 -0.9
 GBA 71.75 286 P 50 42.00 0.8
 0.6s 2.60nm 4.1mb X
 WMQ 72.54 319 P 50 46.00 0.5
 PP 51 32.50
 SDN 74.43 28 eP 50 55.90 -0.1
 1.2s 172.00nm 5.7mb
 RKT 76.71 112 iP 51 09.80 0.3
 1.0s 65.00nm 5.3mb
 ANM 78.23 19 ePc 51 17.80 0.7
 KDC 79.46 28 P 51 24.00 0.3
 SVW 79.76 25 iPd 51 27.20 1.8
 0.9s 55.50nm 5.3mb
 TTA 80.58 23 ePc 51 30.40 0.7
 1.4s 46.60nm 5.0mb
 PMR 82.74 26 ePd 51 41.00 0.2
 0.9s 41.60nm 5.2mb
 IMA 83.08 21 ePc 51 43.00 0.3
 1.0s 36.20nm 5.1mb
 KLU 84.10 26 iP 51 49.20 1.4
 TOA 84.23 26 ePd 51 49.80 1.4
 0.9s 109.50nm 5.6mb
 QUE 84.33 301 eP 51 49.00 -0.8
 FBA 84.71 23 ePc 51 49.40 -1.3
 0.9s 58.80nm 5.3mb
 BRW 84.94 16 ePd 51 52.80 1.1
 INK 91.18 21 ePd 52 21.50 0.1
 PCC 93.71 53 eP 52 35.00 1.3
 WDC 93.81 50 ePd 52 35.00 0.9
 BRK 93.83 52 eP 52 35.50 1.3
 BKS 93.85 52 eP 52 35.90 1.5
 GCC 93.99 53 eP 52 34.40 -0.6
 GMW 94.10 43 P 52 36.00 0.7
 LBFM 94.35 49 P 52 37.30 0.4
 PRS 94.44 54 eP 52 36.50 -0.6
 MIN 94.50 50 eP 52 37.50 0.0
 ORV 94.54 51 eP 52 38.00 0.5
 LON 94.71 44 P 52 38.00 -0.2
 RMW 94.75 43 P 52 39.00 0.6
 LLA 94.80 54 eP 52 40.00 1.2
 PRI 95.00 54 eP 52 40.80 1.0
 CMB 95.32 52 eP 52 41.50 0.3
 FRI 95.81 53 e(P) 52 43.50 0.2
 PNT 96.28 41 ePd 52 46.00 0.8
 0.8s 54.00nm 5.9mb
 ISA 96.76 55 eP 52 49.00 1.3
 BONR 96.97 53 P 52 49.70 0.8
 MWC 97.05 56 eP 52 50.00 0.8
 SBB 97.26 56 eP 52 50.00 0.0
 CLC 97.47 55 eP 52 52.00 1.1
 RVR 97.61 57 eP 52 53.00 1.5
 PEC 97.78 57 P 52 53.00 0.6
 TNP 97.82 52 P 52 52.70 0.0
 0.9s 5.53nm 5.0mb
 NEW 97.93 42 P 52 53.00 0.3
 0.8s 52.00nm 6.0mb
 PLM 98.02 57 eP 52 55.00 1.4
 GSC 98.11 55 eP 52 54.00 0.1
 YKA 98.70 28 eP 52 55.00 -0.8
 1.1s 6.80nm 5.0mb
 TPC 98.71 56 eP 52 57.00 0.4
 GLA 99.72 58 eP 53 05.00 3.8X
 SES 101.78 40 ePd iff 53 11.00 1.0
 MSU 101.79 52 Pd iff 53 08.00 -2.6
 BW06 103.51 47 Pd iff 53 17.70 -0.4
 ALO 106.59 55 ePd iff 53 33.00 1.0
 GOL 106.97 50 Pd iff 53 34.00 0.4
 NUR 110.37 334 ePKP 57 43.00 -4.9X
 BUL 114.45 245 ePKP 57 54.80 -2.4
 TUL 115.07 53 ePKP 57 56.30 -1.5
 1.2s 16.60nm
 NB2 115.59 338 PKP 57 56.50 -1.5
 0.9s 7.80nm
 FRB 116.46 17 ePKP 57 59.00 -0.5
 KRA 117.47 325 ePKP 58 01.60 -0.3
 KSP 119.15 327 iPKPd 58 05.00 0.0
 SRO 119.45 323 iPKP 58 04.80 -0.9
 BRG 120.40 328 iPKP 58 07.00 -0.4
 0.9s 25.00nm
 PRU 120.55 327 PKP 58 07.00 -0.7
 0.8s 13.80nm

CHG	5.75	49 eP	32 20.00	0.0	BLN	0.95	305 Pd	21 13.16	-1.4	eS	22 58.20			
	1.1s	13.29nm		4.4mb	OHW	0.98	331 P	21 13.80	-1.3		22 42.90	0.9		
CHTO	5.75	49 eP	32 20.00	0.0	RPW	1.00	12 Pd	21 14.33	-1.1	MDZ	1.56	53 i(P)	22 53.50	-0.2
	1.0s	10.00nm		4.4mb	NAC	1.00	137 Pd	21 14.76	-0.8	RTVC	2.48	38 ePc	22 58.00	-0.3
PKI	14.99	328 P	34 27.40	1.3	ETW	1.01	82 Pc	21 15.04	-0.7	CFA	2.83	39 ePc	23 30.80	
	0.6s	11.00nm		4.3mb	EBG	1.02	123 ePd	21 15.31	-0.5				22 59.30	-0.6
GUN	15.03	330 P	34 26.40	-0.3	CPW	1.03	241 Pd	21 15.15	-0.9	RTLL	2.95	33 ePc	23 33.30	
	0.8s	38.00nm		4.7mb	KOSW	1.05	194 P	21 13.56	-2.7				23 10.60	0.4
DMN	15.18	327 P	34 29.60	1.1	SMW	1.05	262 P	21 15.58	-0.8	RTRS	3.72	12 ePd	23 53.00	
	1.0s	51.00nm		4.7mb	CZM	1.14	205 Pd	21 16.94	-1.0		S.D. = 0.7	on	8 of	8 obs.
KKN	15.23	328 P	34 29.00	-0.2	TDL	1.16	194 Pd	21 16.94	-1.4		& DEC 30, 1990 02h 55m 03.01s			
	0.8s	23.00nm		4.5mb	NLW	1.16	58 ePd	21 17.43	-1.0		59.506 N		151.703 W	
HYB	15.38	281 eP	34 42.50	11.6X	ERK	1.22	197 Pd	21 17.98	-1.4		DEPTH = 51.9km			
GKN	15.74	327 P	34 33.80	-1.9	CBSW	1.24	74 P	21 19.01	-0.6		KENAI PENINSULA, ALASKA	(14)		
	0.8s	32.00nm		4.5mb	WTV	1.28	79 P	21 19.48	-0.6		<AGS-P>.			
GBA	16.48	267 P	34 45.00	0.0	YAKW	1.30	137 Pd	21 19.58	-0.7					
	0.9s	2.60nm		3.4mb X	ESD	1.30	190 Pd	21 19.48	-1.0					
	S.D. = 1.1	on	8 of	9 obs.	MBW	1.31	357 Pd	21 19.85	-0.8	XLV	0.05	190 iP	55 10.05	0.6
					SHW	1.31	193 Pd	21 19.77	-0.9	HOM	0.16	11 iP	55 11.05	-0.3
? DEC 30, 1990 01h 40m 56.01±3.80s					OSD	1.32	286 P	21 20.14	-0.7					
7.263 N ±20.6km 126.922 E ±31.2km					HSR	1.33	191 Pd	21 19.94	-0.9	CNPM	0.24	85 iP	55 11.46	-0.5
DEPTH = 62.6 ±29.1 km					FL2	1.33	196 Pd	21 19.81	-1.1					
4.7mb (4 obs.)					ASR	1.33	173 Pd	21 20.30	-0.6	BRLK	0.49	58 eP	55 13.90	-0.5
MINDANAD, PHILIPPINE ISLANDS (259)					VTG	1.35	112 P	21 20.46	-0.5	NNL	0.58	21 iP	55 15.90	0.5
					JLK	1.35	190 Pd	21 20.20	-0.9	OPT	0.79	281 iP	55 17.54	-0.6
DAV	1.35	263 iPd	41 18.00	-1.1	MXC	1.37	130 Pd	21 20.82	-0.5	AUE	0.87	261 eP	55 18.37	-0.7
MNI	6.14	200 eP	42 28.00	1.7	BMW	1.39	225 P	21 20.94	-0.7	INE	0.88	310 iP	55 18.33	-1.2
KNA	22.94	175 eP	45 54.00	-1.7	STW	1.42	299 P	21 20.55	-1.5					
LZH	35.62	327 eP	47 54.00	4.1X	ONR	1.46	247 P	21 22.75	0.1	AUP	0.89	261 eP	55 18.98	-0.6
	2.0s	32.00nm		4.9mb	LVP	1.46	196 Pd	21 22.16	-0.6					
		sP	48 06.00		DHW2	1.47	69 P	21 22.11	-0.7	AUI	0.90	260 eP	55 18.72	-0.8
GUN	43.89	303 P	48 59.20	0.5	RVW	1.47	206 P	21 21.96	-0.8	AUH	0.90			

DEC 30, 1990 09h 34m 05.45± 1.31s
35.318 N ± 9.9km 140.351 E ± 7.7km
DEPTH = 40.9 ± 9.4 km
4.6mb (11 obs.) 4.3Msz (1 obs.)
NEAR EAST COAST OF HONSHU, JAPAN(228)

KAKJ 0.90 351 iPd 34 20.00 -1.7
CHJJ 1.32 304 iPd 34 26.60 -1.2
IIDJ 2.00 275 P 34 37.40 -0.1
MAT 2.12 306 iPc 34 38.70 -0.6
(S) 35 07.00
NIJ 2.21 331 P 34 40.50 0.1
MTMJ 2.42 302 iP+ 34 43.20 -0.4
YAMJ 2.86 355 P 34 49.60 -0.1
TSRJ 3.57 275 eP 35 01.20 1.4
OFUJ 3.90 15 iPd 35 03.80 -0.6
eS 35 51.50
TKSJ 5.36 257 P 35 24.40 -0.7
YONJ 5.64 271 P 35 30.70 1.7
MDJ 12.41 322 eP 37 05.00 2.8
CN2 14.26 311 eP 37 28.00 1.4
SNY 14.63 301 Pc 37 32.40 1.0
BJI 19.69 291 eP 38 39.00 5.0X
Z 24s 0.64um
TIY 22.53 284 eP 39 06.40 3.3X
Z 18s 1.10um 4.3Msz
N 13s 0.90um
XAN 25.83 276 P 39 32.60 -2.1
LZH 29.55 282 eP 40 07.30 -1.3
1.3s 16.00nm 4.6mb
SP 40 24.50
GYA 30.11 262 P 40 10.00 -3.7X
OIZ 31.45 247 eP 40 29.60 4.3X
N 14s 3.60um
GTA 32.29 289 eP 40 32.00 -0.6
WMO 40.87 298 P 41 45.10 0.0
PP 41 57.50
FBA 51.01 31 eP 43 06.50 1.5
1.0s 6.50nm 4.6mb
INK 56.30 26 eP 43 43.00 -1.0
MBC 58.41 16 eP 43 58.50 -0.2
1.0s 7.00nm 4.7mb
WARB 62.53 194 eP 44 27.00 -0.3
YKA 65.72 29 eP 44 45.70 -2.0
1.0s 2.00nm 4.1mb
SOD 66.21 337 eP 44 50.00 -0.8
BWA 69.79 173 eP 45 20.50 7.0X
NUR 71.06 332 eP 45 21.00 0.1
NEW 71.96 43 eP 45 26.20 -0.4
1.0s 7.00nm 4.6mb
SES 74.03 39 eP 45 39.00 0.4
NB2 75.43 337 P 45 45.70 -0.8
1.0s 11.90nm 4.8mb
FFC 75.61 32 iPd 45 47.80 0.2
1.1s 16.00nm 4.9mb
LRM 75.98 44 eP 45 51.20 1.0
TNP 77.61 52 iP 46 00.50 1.2
1.0s 4.50nm 4.5mb
FRB 78.64 13 eP 46 04.00 -0.2
CLC 78.67 54 eP 46 14.00 9.0X
SBB 79.17 55 eP 46 09.00 1.2
BW06 79.48 45 eP 46 10.00 0.5
1.0s 2.00nm 4.0mb
GSC 79.49 54 eP 46 10.00 0.5
KRA 80.03 326 eP 46 12.10 0.1
PLM 80.59 56 eP 46 12.00 -3.6X
KSP 81.10 328 eP 46 18.30 0.7
e 48 32.00
CLL 82.15 330 iPc 46 22.00 -1.0
1.3s 17.00nm 4.9mb
KHC 83.55 328 eP 46 30.90 0.5
GOL 83.87 45 eP 46 32.50 0.0
PRNI 84.14 303 eP 46 34.00 0.3
MBH 84.57 303 eP 46 36.00 0.0
ALO 86.36 49 eP 46 46.00 1.1
1.1s 5.06nm 4.7mb
LPB 148.48 61 PKP 53 45.00 -1.5
CNCB 148.75 61 PKPd 53 53.00 5.8X
CCH 150.43 60 ePKP 53 54.00 4.6X
SIV 152.84 50 PKP 54 00.00 7.4X
S.D. = 1.1 on 44 of 54 obs.

DEC 30, 1990 09h 36m 43.76± 0.65s
B.419 N ± 8.5km 94.123 E ± 7.4km
DEPTH = 33.0km (normol)

4.6mb (9 obs.)
NICOBAR ISLANDS REGION (704)

BSI 3.13 158 eP 37 32.00 0.1
SNG 6.55 100 eP 38 16.20 -4.1X
NNT 6.90 53 eP 38 36.00 10.8X
IPM 7.85 119 ePd 38 37.60 -0.9
BDT 9.98 28 eP 39 07.20 -0.8
CHG 11.34 24 eP 39 27.40 0.7
1.1s 32.28nm 5.4mb
LOE 11.60 39 eP 39 30.50 0.3
KOD 16.54 278 eP 40 37.00 1.8
GBA 17.17 289 P 40 44.00 1.2
0.9s 7.50nm 3.8mb
HYB 17.60 302 eP 40 48.50 0.2
PKI 20.76 338 P 41 23.50 -1.3
0.6s 14.00nm 4.5mb
GUN 20.89 339 P 41 25.00 -1.2
0.8s 40.00nm 4.9mb
DMN 20.91 337 P 41 25.40 -0.8
0.6s 17.00nm 4.6mb
KKN 21.00 338 P 41 26.00 -1.2
0.6s 23.00nm 4.8mb
LSA 21.35 353 eP 41 30.00 -1.0
GKN 21.44 337 P 41 30.80 -0.7
0.6s 32.00nm 4.9mb
GYA 21.53 32 iPc 41 33.60 1.2
N 14s 1.20um
E 14s 0.60um
CD2 24.12 21 P 41 58.80 1.1
Z 12s 1.30um 4.6MszX
eS 46 14.00
NDI 25.69 324 eP 42 15.00 2.4
WHN 29.02 38 eP 42 43.50 0.6
NJ2 32.87 41 Pc 43 17.50 0.6
TIY 33.54 27 eP 43 24.70 2.0
Z 14s 1.10um 4.7MszX
E 14s 0.80um
WMO 35.71 352 P 43 41.00 -0.3
PP 43 53.00
eS 49 19.80
BJI 37.14 29 eP 43 54.00 0.8
SNY 42.23 33 Pd 44 35.10 -0.3
NUR 72.66 331 eP 48 13.00 3.1X
HFS 77.98 330 eP 48 38.20 -1.9
0.5s 1.70nm 4.3mb
NB2 79.25 331 P 48 44.60 -2.6
0.8s 2.30nm 4.2mb
YKA 105.90 13 ePKP 55 10.50 5.1X
0.4s 0.10nm
S.D. = 1.3 on 25 of 29 obs.

? DEC 30, 1990 09h 41m 06.67± 6.03s
15.779 N ± 21.0km 60.736 W ± 49.1km
DEPTH = 33.0km (normol)
LEEWARD ISLANDS (92)
ML 2.4 (FDF).

DEG 0.62 330 eP 41 18.87 -0.1
S 41 25.80
SFG 0.65 317 eP 41 19.30 0.0
BBL 0.76 251 eP 41 21.00 0.1
S 41 28.80
DOG 0.89 287 eP 41 22.90 0.1
S 41 32.20
PAG 0.94 285 eP 41 23.30 -0.3
S 41 33.40
SEG 0.97 310 eP 41 24.18 0.3
S.D. = 0.3 on 6 of 6 obs.

DEC 30, 1990 09h 47m 57.80± 0.57s
39.647 N ± 5.5km 21.226 E ± 5.7km
DEPTH = 8.9 ± 7.9 km
GREECE (364)
MD 3.2 (ATH).

IGT 0.70 261 ePd 48 10.74 -1.0
eS 48 21.94
KZN 0.78 32 ePg 48 12.40 -0.8
EVR 0.86 148 ePb 48 14.00 -0.5
AGG 1.06 126 ePd 48 18.17 0.3
iS 48 34.14
LIT 1.07 65 ePd 48 18.62 0.5
eS 48 35.62
KEK 1.10 274 ePg 48 19.70 1.1
FNA 1.14 6 ePc 48 19.10 -0.2
eS 48 36.58

VLS 1.55 199 ePb 48 26.00 0.4
GRG 1.59 34 ePc 48 26.66 0.5
eS 48 48.18
THE 1.66 53 ePd 48 28.22 1.1
eS 48 49.50
PLG 1.85 66 ePn 48 31.00 1.0
PAIG 1.91 81 ePc 48 30.30 -0.5
iS 48 55.06
KNT 1.98 40 ePc 48 31.86 0.0
iS 48 57.86
SOH 2.01 54 ePd 48 32.06 -0.2
eS 49 00.06
SRS 2.33 50 iPd 48 36.58 -0.3
eS 49 07.06
S.D. = 0.8 on 15 of 15 obs.

DEC 30, 1990 10h 11m 50.55± 0.31s
44.834 N ± 2.7km 7.309 E ± 3.8km
DEPTH = 10.0km (geophysicist)
NORTHERN ITALY (545)
ML 2.8 (LDG). 2.7 (GEN).

RSP 0.32 353 P 11 57.41 0.2
S 12 00.89
PZZ 0.36 204 P 11 57.82 -0.2
S 12 02.23
RRL 0.38 283 P 11 57.92 -0.6
S 12 02.02
BNI 0.50 296 Pc 11 59.90 -0.8
eSg 12 05.70
STV 0.59 179 P 12 00.69 -1.9
S 12 08.28
ENR 0.61 172 P 12 01.12 -1.8
S 12 08.40
LSD 0.63 350 P 12 03.15 -0.3
S 12 10.43
ROB 0.67 143 P 12 03.87 -0.1
S 12 12.99
LPG 0.77 329 Pg 12 05.30 -0.5
Sg 12 15.00
LPL 0.79 329 Pg 12 05.80 -0.4
Sg 12 15.70
CKI 0.81 120 P 12 06.70 0.5
eSg 12 18.20
TOUF 0.82 183 Pg 12 07.35 0.8
AUTN 0.84 174 Pg 12 06.57 -0.4
SAOF 0.87 168 Pg 12 08.15 0.9
FIN 0.90 134 P 12 07.46 -0.3
S 12 20.38
ORX 0.93 31 P 12 07.15 -1.2
S 12 17.61
PCP 0.93 108 P 12 08.99 0.7
S 12 22.35
AURF 0.95 179 Pg 12 08.12 -0.5
SBF 0.97 175 Pg 12 08.40 -0.7
Sg 12 22.20
IMI 1.01 156 P 12 09.51 -0.3
S 12 22.96
CALN 1.12 196 Pg 12 13.76 2.1
FRF 1.36 201 Pn 12 16.20 0.7
Pg 12 17.50
Sg 12 33.60
VAI 1.46 44 P 12 18.80 1.9
LRG 1.54 207 Pn 12 19.00 1.0
Pg 12 21.20
Sg 12 39.00
LMR 1.61 201 Pn 12 20.40 1.4
Pg 12 22.20
Sg 12 41.20
PGF 2.59 151 Pn 12 32.00 -1.3
SMF 3.03 308 Pn 12 39.80 0.4
Sn 13 12.20
LBF 3.17 314 Pn 12 41.60 0.2
AVF 3.39 307 Pn 12 44.50 0.0
LOR 3.42 317 Pn 12 45.30 0.3
Sn 13 23.60
BGF 3.57 300 Pn 12 47.20 0.1
TCF 3.87 294 Pn 12 51.80 0.5
S.D. = 1.0 on 32 of 32 obs.

* DEC 30, 1990 10h 31m 17.57± 0.88s
23.944 N ± 7.3km 121.860 E ± 10.9km
DEPTH = 10.0km (geophysicist)
5.2mb (8 obs.)
TAIWAN (244)
QZH 3.14 289 eP 32 06.00 -2.0

[illegible]

BIM	147.11	71	ePKP	33	42.00	1.2
CRM	147.21	71	ePKP	33	45.10	4.2X
SVB	147.21	73	ePKP	33	41.56	0.6
SVV	147.23	73	ePKP	33	41.78	0.8
MVM	147.27	71	ePKP	33	42.50	1.4
SLB	147.29	72	ePKP	33	45.24	4.1X
PDA	147.36	355	iPKPc	33	44.40	3.8X
TPP	147.47	79	ePKP	33	47.09	5.7X
TRN	147.48	78	ePKP	33	45.15	3.7X
TBH	147.83	78	ePKP	33	47.93	5.9X
PIG	147.96	77	ePKP	33	47.67	5.5X
BOT	148.08	77	ePKP	33	45.46	3.1X
BMA	148.67	152	ePKP	33	46.80	3.6X
			i	33	50.80	
			i	34	41.30	
			i	34	50.30	
SHGH	151.13	273	ePKP	33	50.00	2.9
			e	40	05.00	
LEGH	151.27	272	ePKP	33	48.00	0.7
			e	46	05.00	
WEGH	151.42	272	ePKP	33	47.00	-0.5
KUK	151.46	274	ePKP	33	47.00	-0.6
BAO	152.13	138	ePKPc	33	47.40	-1.2
BDF	152.17	138	iPKPc	33	49.06	0.4
			ic	33	55.02	
			i	34	00.48	
CHIE	155.15	336	iPKP	33	55.20	2.9X
KIC	155.80	274	PKP	33	52.22	-1.4
TIC	156.06	275	PKP	33	52.60	-1.4
LIC	156.09	274	PKP	33	52.52	-1.5
SQB1	161.51	140	ePKP	33	59.00	-1.1
			i	34	04.40	
			i	34	46.70	
MBO	164.94	309	iPKPc	34	07.90	4.7X
			S.D.	= 1.2	on 341 of 701 obs.	
			* DEC 30, 1990	19h 58m 37.86±1.00s		
				20.275 S ±13.3km 168.581 E ±23.5km		
				DEPTH = 33.0km (normal)		
			LOYALTY ISLANDS	(188)		
PVC	2.53	354	iP	59	17.30	-0.3
			iS	59	49.00	
BKM	2.61	353	iP	59	18.30	-0.4
DZM	2.68	228	iPd	59	17.00	-2.7
			iS	59	49.00	
RMO	19.21	247	iPc	03	04.00	2.0
CNB	22.60	224	eP	03	38.00	1.0
BRG	143.51	333	e(PKP)	18	06.00	-4.7X
CLL	143.58	334	e(PKP)	18	04.00	-6.7X
KHC	144.95	331	ePKP	18	11.70	-1.5
GRF	145.55	334	ePKP	18	13.30	-0.9
VBY	146.60	325	e(PKP)	18	16.20	0.2
LJU	146.63	326	e(PKP)	18	16.50	0.4
ABH	146.83	337	ePKP	18	17.62	1.3
VOY	146.97	327	ePKP	18	17.00	0.3
SOTA	147.43	331	iPKPd	18	18.10	0.6
			1.0s	8.70nm		
			i	18	29.70	
CDF	148.14	336	ePKP	18	21.00	2.5X
			1.1s	14.65nm		
BSF	148.80	336	ePKP	18	21.70	2.1X
HAU	148.83	337	ePKP	18	21.80	2.2X
			1.1s	19.55nm		
LOR	150.34	339	ePKP	18	25.50	3.6X
			1.0s	17.00nm		
LBF	150.55	338	ePKP	18	25.80	3.6X
			1.0s	12.00nm		
SSF	150.64	339	ePKP	18	26.30	4.0X
			0.9s	12.30nm		
LPL	150.71	333	ePKP	18	26.80	4.1X
LPG	150.72	333	ePKP	18	27.10	4.2X
			0.8s	5.35nm		
MAF	151.69	339	ePKP	18	29.50	5

GTA	82.43	314	iPc	35	09.50	1.4					S.D. = 1.4 on 9 of 9 obs.
	1.2s		30.00nm			4.9mb	LPG	144.83	336	ePKP	42 21.70 0.1
SBB	85.96	53	eP	35	26.00	-0.2		1.0s		72.00nm	% DEC 31, 1990 13h 41m 07.08±0.78s 40.964 N ± 8.4km 22.417 E ± 4.9km DEPTH = 10.0km (geophysicist)
PLM	86.26	54	eP	35	27.00	-0.4	PCP	144.86	333	PKP	42 21.19 -0.2
CLC	86.52	52	eP	35	29.00	0.5	RMP	144.87	326	PKPc	42 21.80 0.4
				36	19.00		RDP	144.90	326	PKP	42 22.00 0.5
TPC	87.14	54	eP	35	32.00	0.5	SMF	144.90	340	ePKP	42 21.20 -0.1
GUN	89.26	299	P	35	41.58	-0.5	RSP	144.91	335	PKP	42 21.08 -0.4
PKI	89.57	298	P	35	43.60	0.2	AVF	144.93	341	ePKP	42 21.20 -0.1
	0.9s		26.00nm			5.2mb		1.1s		79.35nm	GRG 0.01 240 iPd 41 09.12 0.1 eS 41 10.44
KKN	89.74	299	P	35	43.62	-0.4	LPF	145.00	346	ePKP	42 21.50 0.1
	0.9s		26.00nm			5.2mb		0.8s		69.85nm	KNT 0.41 61 iPc 41 15.72 0.2 eS 41 21.40
DMN	89.83	298	P	35	45.16	0.6	CKI	145.07	333	PKPc	42 21.80 0.1
GKN	90.34	299	Pc	35	46.52	-0.2	BNI	145.23	336	PKPc	42 23.70 1.6
WMO	92.48	315	P	35	57.20	1.1	SOI	145.26	318	PKP	42 23.50 1.4
GBA	93.22	283	Pc	36	00.20	0.3	FIN	145.28	333	PKP	42 22.21 0.2
	0.9s		14.50nm			5.1mb	RRL	145.30	335	PKP	42 23.75 1.4
YKA	97.11	27	eP	36	13.30	-3.4X	BGF	145.30	341	ePKP	42 25.00 3.0X
	0.8s		0.90nm			4.2mb		1.0s		74.00nm	LIT 0.86 176 ePc 41 23.08 -0.6 iS 41 36.12
SOD	121.10	343	ePKP	41	29.00	-7.2X	BST	145.34	350	PKP	42 23.18 1.2
KAF	124.81	339	iPKP	41	43.90	0.4	ROB	145.35	334	PKP	42 22.62 0.4
	0.5s		3.30nm				PZZ	145.51	335	PKP	42 22.21 -0.4
NUR	126.49	338	ePKP	41	48.00	1.1	ENR	145.60	334	PKP	42 22.21 -0.5
NB2	130.22	345	PKP	41	54.80	0.8	STV	145.63	334	PKP	42 22.21 -0.5
	0.9s		4.60nm				IMI	145.65	333	PKP	42 23.75 1.0
KSP	136.68	333	ePKP	42	09.50	2.9X	MAF	145.69	341	ePKP	42 23.80 1.2
BRG	137.64	333	iPKP	42	11.00	2.6X		1.1s		37.85nm	IGT 2.14 229 iPd 41 45.20 1.8 S.D. = 0.9 on 10 of 10 obs.
	1.2s		22.00nm				TCF	145.74	342	ePKP	42 23.70 0.9
CLL	137.68	336	iPKP	42	09.00	0.6		1.4s		61.00nm	* DEC 31, 1990 13h 41m 55.10±1.13s 38.464 N ± 8.3km 26.732 E ±11.3km DEPTH = 10.0km (geophysicist)
	0.9s		14.00nm				SSB	145.85	338	PKP	42 25.36 2.4X
PRU	138.07	334	PKP	42	11.60	2.4X	SBF	145.89	334	ePKP	42 24.10 1.0
KHC	139.13	334	ePKP	42	11.90	0.7		0.9s		95.00nm	AEGEAN SEA (365) MD 3.1 (ISK), 3.1 (ATH).
ABH	140.86	333	ePKP	42	17.71	3.4X	PYM	145.96	340	PKP	42 25.67 2.5X
LJU	140.96	330	e(PKP)	42	10.50	-4.0X	LSF	145.98	342	ePKP	42 24.30 1.2
VOY	141.27	330	ePKP	42	11.20	-4.0X		0.9s		35.20nm	Izm 0.42 99 iPg 42 03.10 -0.6 iSg 42 10.10
FVI	141.39	332	PKP	42	11.00	-4.2X	MFF	146.12	344	ePKP	42 24.90 1.6
TRI	141.57	330	iPKPc	42	15.50</						

PORP 5.37 91 P 59 10.80 0.1
 CPD 6.06 90 P 59 20.80 0.4
 PAG 10.36 100 eP 00 19.50 -0.9
 S 03 00.00
 eTT 10 00.00
 UPA 11.54 219 iPc 00 36.00 -0.4
 0.5s 29.58nm 5.9mb X
 ZOBO 34.48 173 P 04 47.00 7.5X
 Z 20s 0.20um 3.9msz
 LR 15 00.00
 CNCB 35.03 173 P 04 45.00 0.8
 SIV 35.71 161 eP 04 56.00 6.6X
 YKA 53.05 337 eP 07 07.30 -0.5
 1.0s 1.80nm 4.0mb
 MBC 62.86 349 eP 08 17.00 0.5
 S.D. = 0.8 on 7 of 9 obs.

& DEC 31, 1990 20h 12m 06.92s
 64.369 N 148.089 W
 DEPTH = 0.4km
 CENTRAL ALASKA (1)
 <AGS-P>. ML 3.2 (PMR).

CCB 0.30 24 iP 12 12.47 -0.5
 NEA 0.48 296 eP 12 16.42 0.0
 eS 12 22.70
 HDA 0.49 85 iP 12 16.32 -0.5
 iS 12 23.34
 FBA 0.55 13 iPd 12 17.20 -0.7
 MDM 0.60 354 iP 12 18.19 -0.6
 iS 12 26.63
 BWN 0.63 252 iP 12 18.50 -1.0
 eS 12 27.02
 MCK 0.74 211 eP 12 21.73 0.0
 RND 1.02 200 eP 12 26.96 -0.3
 eS 12 40.64
 DDM 1.14 120 eP 12 28.68 -0.5
 eS 12 46.21
 THY 1.41 132 eP 12 33.76 0.0
 HUR 1.56 207 eP 12 35.45 -0.5
 eS 12 56.69
 PAX 1.83 139 eP 12 39.71 -0.2
 SDG 2.17 147 eP 12 45.03 0.2
 CUT 2.20 207 eP 12 45.84 0.6
 TOA 2.43 158 eP 12 50.10 1.5
 TZL 2.63 151 eP 12 50.93 -0.3
 GHO 2.63 189 eP 12 50.40 -1.1
 PLRM 2.83 190 eP 12 53.79 -0.4
 PMR 2.83 190 eP 12 59.80 5.7
 IMA 2.91 308 eP 12 58.20 2.8
 KNK 2.97 183 eP 12 56.60 0.4
 KLU 3.05 160 eP 12 57.06 -0.3
 PMS 3.21 193 eP 13 00.23 0.7
 TTA 3.82 251 eP 13 18.90 10.6
 24 obs. associated

& DEC 31, 1990 20h 28m 12.20s
 44.729 N 111.210 W
 DEPTH = 5.0km
 HEBGEN LAKE REGION (458)
 <SLC-P>. ML 3.5 (BUT).

YPDC 0.03 227 P 28 13.40 -0.2
 GCR 0.10 48 P 28 14.70 0.2
 YMC 0.15 78 P 28 15.60 0.2
 NJW 0.37 90 P 28 19.90 0.2
 LTMT 0.67 253 iPc 28 25.50 -0.2
 BGMT 0.78 311 ePc 28 26.70 -1.2
 MEMT 0.89 11 iPc 28 28.70 -1.2
 MCMT 1.17 275 iPnc 28 34.20 -0.5
 LRM 1.40 322 ePn 28 37.90 -0.8
 SXM 1.42 0 ePn 28 37.60 -1.3
 HBMT 1.45 318 ePn 28 39.10 -0.3
 BUT 1.60 324 ePg 28 41.90 0.5
 eSn 29 01.70
 eSg 29 04.90
 HRY 2.03 348 ePnc 28 47.50 -0.1
 PTI 2.04 205 eP 28 48.50 0.7
 BW06 2.29 148 eP 28 52.50 1.0
 DAU 4.31 180 eP 29 21.50 1.2
 DUG 4.68 195 eP 29 25.00 -0.4
 NEW 5.40 313 eP 29 35.00 -0.4
 DPW 5.77 305 eP 29 39.20 -1.5
 19 obs. associated

* DEC 31, 1990 20h 33m 06.33±0.76s
 24.189 N ± 9.8km 126.296 E ± 11.9km

DEPTH = 33.0km (normal)
 4.6mb (11 obs.)
 RYUKYU ISLANDS (238)

SSE 8.24 328 eP 35 05.00 -1.4
 Z 10s 1.40um
 N 10s 1.40um
 E 10s 1.20um
 BJI 17.96 334 eP 37 15.50 0.5
 Z 16s 0.58um
 N 10s 0.54um
 E 10s 0.43um
 KMI 21.43 277 Pc 37 55.00 1.0
 LZH 22.69 307 eP 38 05.50 -0.9
 2.0s 25.00nm 4.3mb
 Z 13s 0.60um 4.2mszX
 CHTO 25.98 263 eP 38 38.20 0.3
 0.9s 3.20nm 3.9mb
 GUN 36.39 285 Pc 40 10.36 0.3
 0.8s 15.00nm 4.9mb
 PKI 36.82 284 Pc 40 13.52 -0.2
 0.8s 6.00nm 4.5mb
 KKN 36.92 285 Pc 40 14.40 0.0
 0.8s 15.00nm 4.9mb
 DMN 37.09 284 Pc 40 15.86 0.0
 0.8s 12.00nm 4.8mb
 GKN 37.48 285 Pc 40 18.88 -0.1
 0.8s 10.00nm 4.8mb
 WRA 44.56 169 P 41 16.00 -1.0
 0.8s 3.50nm 4.3mb
 HFS 79.80 332 eP 45 13.00 0.5
 1.1s 17.60nm 5.0mb
 NB2 80.36 333 P 45 15.80 0.2
 0.8s 5.20nm 4.6mb
 YKA 81.10 24 eP 45 20.20 0.8
 0.8s 1.10nm 3.9mb
 S.D. = 0.8 on 14 of 14 obs.

% DEC 31, 1990 21h 26m 54.23±1.39s
 42.285 N ± 6.6km 13.739 E ± 13.6km
 DEPTH = 10.0km (geophysicist)
 CENTRAL ITALY (381)

AQU 0.26 286 P 26 59.60 -0.1
 eSg 27 04.00
 AZI 0.37 217 P 27 02.10 0.2
 eSg 27 07.70
 SDI 0.58 174 P 27 05.90 -0.1
 eSg 27 15.20
 ASS 1.12 315 P 27 15.00 -0.2
 ARV 1.35 335 P 27 19.30 0.3
 eSg 27 39.00
 S.D. = 0.3 on 5 of 5 obs.

% DEC 31, 1990 21h 32m 29.32±2.20s
 41.436 N ± 16.6km 22.329 E ± 7.5km
 DEPTH = 10.0km (geophysicist)
 YUGOSLAVIA (383)

GRG 0.48 173 iPc 32 38.97 -0.2
 eS 32 47.54
 KNT 0.51 122 ePd 32 39.06 -0.6
 iS 32 47.26
 THE 0.94 149 ePd 32 47.62 0.5
 iS 32 59.66
 FNA 0.97 228 ePc 32 47.62 -0.2
 eS 33 00.70
 SOH 0.99 128 ePd 32 47.70 -0.4
 eS 33 01.62
 SRS 1.00 108 ePc 32 48.86 0.5
 eS 33 01.82
 LIT 1.34 175 ePc 32 54.38 0.4
 S.D. = 0.5 on 7 of 7 obs.

? DEC 31, 1990 21h 47m 21.84±2.32s
 0.450 N ± 76.2km 126.422 E ± 46.3km
 DEPTH = 33.0km (normal)
 5.0mb (1 obs.)
 MOLUCCA PASSAGE (266)

MNI 1.86 302 iPd 47 52.00 0.0
 eS 48 10.50
 GUN 47.46 309 P 55 56.06 0.0
 PKI 47.67 308 P 55 57.80 0.1
 KKN 47.87 308 P 55 59.52 0.3
 DMN 47.93 308 P 55 59.72 0.1
 GKN 48.47 308 P 56 03.36 -0.4

1.0s 15.00nm 5.0mb
 HYB 50.00 292 eP 56 15.50 0.0
 S.D. = 0.3 on 7 of 7 obs.

& DEC 31, 1990 21h 56m 36.08s
 59.375 N 152.669 W
 DEPTH = 74.0km
 SOUTHERN ALASKA (2)
 <AGS-P>.

KDC 1.63 177 eP 57 02.20 -1.1
 SVW 2.28 321 iPc 57 10.70 -1.6
 PMR 2.83 37 eP 57 18.60 -1.3
 VZW 3.49 58 eP 57 26.00 -3.1
 eS 58 06.00
 TTA 3.92 337 eP 57 33.20 -1.9
 KLU 3.96 55 eP 57 33.00 -2.8
 eS 58 16.00
 TOA 4.20 47 eP 57 37.80 -1.4
 BALM 5.41 68 eP 57 54.00 -2.1
 FBA 6.00 20 eP 58 01.90 -2.2
 IMA 6.74 356 e(P) 58 12.70 -1.8
 10 obs. associated

% DEC 31, 1990 22h 11m 27.17±3.14s
 49.519 N ± 24.2km 0.229 W ± 13.1km
 DEPTH = 10.0km (geophysicist)
 FRANCE (538)
 ML 2.7 (LDG).

FLN 0.78 192 Pg 11 42.40 0.1
 Sg 11 51.60
 LDF 0.93 176 Pg 11 45.90 1.0
 Sg 11 57.40
 GRR 1.21 200 Pn 11 49.50 -0.1
 Pg 11 50.20
 Sg 12 04.60
 LPF 1.58 200 Pn 11 55.00 -0.3
 Pg 11 57.60
 Sg 12 16.40
 MFF 2.92 179 Pg 12 22.60 8.1X
 Sg 12 57.00
 SSF 3.50 133 Pn 12 22.80 0.1
 Pg 12 35.00
 Sg 13 19.40
 LOR 3.53 128 Pn 12 23.20 0.0
 Pg 12 35.00
 Sg 13 20.40
 BGF 3.61 144 Pn 12 24.20 -0.1
 Pg 12 37.00
 Sg 13 23.00
 TCF 3.63 152 Pn 12 24.00 -0.5
 AVF 3.63 137 Pn 12 24.00 -0.6
 Pg 12 37.40
 Sg 13 24.00
 SMF 3.96 135 Pn 12 29.00 -0.3
 Pg 12 43.40
 Sg 13 34.20
 HAU 4.61 107 Pn 12 39.20 0.7
 Sg 13 56.00
 S.D. = 0.6 on 11 of 12 obs.

DEC 31, 1990 22h 11m 30.33±0.17s
 21.953 S ± 4.0km 174.818 E ± 4.2km
 DEPTH = 10.2km (6 depth phases)
 5.5mb (30 obs.) 5.1msz (6 obs.)
 VANUATU ISLANDS REGION (185)
 CENTROID, MOMENT TENSOR (HRV)
 Data Used: GDSN
 L.P.B.: 12S, 2BC
 Centroid Location:
 Origin Time 22:11:39.0 0.4
 Lat 21.96S 0.05 Lon 174.86E 0.04
 Dep 15.0 FIX Half-duration 2.2
 Moment Tensor: Scale 10**17 Nm
 Mrr=-1.41 0.07 Mtt= 0.62 0.07
 Mff= 0.78 0.09 Mrt= 0.00 0.21
 Mrf=-2.16 0.21 Mtf= 1.36 0.07
 Principal Axes:
 T Vol= 2.77 Plg=24 Azm=122
 N 0.13 26 20
 P -2.90 54 249
 Best Double Couple: Mo=2.8*10**17
 NP1: Strike=253 Dip=32 Slip=-33
 NP2: 12 73 -117
 NDF 4.85 31 eP 12 47.10 2.0

[illegible]

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
OLLA													X	XX	X		X			XX		X	XX			X	X					X			
OLY			X		X			X	XX			X	XXX	X	X	X		X	XXX	X	X	X	X			X	XXX		X	X		X			
OPT				XXX	XX	X	XX	X	XX		X	XXX	X	X	XXX	X	X				X	X	XX		X	X	X	X		X	X	X	XXX		
ORI	X		XXX				X	XX	X	X			XX	XX	X		X	X		X	X	XX		XX		X	X		X	XXX		XX	X		
ORV	X		X	XX	XX		XX		XXX	X	X	XX	XXX	X	X	XX	X		X	XXXXX		XXXXX	XX	XXX	XXX	XXXXXX	X	X	XX	X	XX	X			
ORX							X		X	XX	X	X	X		X	XXX			X	X	XX	XX	X	X	XX	X	XX	X	X	X	X	X	X		
OSS		X	X	X				X		X				X	X						XX	XX	XX			X	X	X	XX	X	X	X	X		
OUR	X							X				X	XXX	X						XXXX		XXXXX	X		X	X	XX	X	X	X	X	XX	X		
OVA												X									X			X		X	X	X							
OXx											X	XXX					X	XX		XX	X		X	XX	X		XX	X	X	X		XXX	XX	X	
PAE		X				X		X	X	X	X		X									XXXX	X	X	X	X							X	X	
PAF		X									X		X	XX			X					X		X						X	X				
PAG							X	X	X	X	X	X	X	X	X	X	X	X	XXX	X	XX	X	XX	XX	XXXX	X	XX	XXX	X	XXXX	X				
PAIG	X	X					XX	X	XXXX	X	X	XXX	XX	X	X	XX	XXX	XX	X	XX	XX	X	XXXXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	
PAS		X					XX		X	XX	XX	X	X	X	XX	XX					X	X	XX	XX					X	X	X		X		
PAX	XX	XX	X	X	X	X	XXX	X		X	XX	XX	X		X	XX	X			XXXX	XX	XX	X	X	X		XXX		X	XX	XX		XXXX		
PBX	XX		X				X	X		X	X		X		X							X	X	X		X			X		X	XX	X		
PCC			X		XX		X	X	XX											X	X	X	XX	X	XX	X		X		X	X		X	X	X
PCH	XX	XXX	XXX	XX		X			XX	XXX	XX	XX	XX		X		X	X		XX	XX		X	X	X				X	X		X		X	
PCP	X	X	X	X	X	XX			X	XX	X	X	X	X		X	XXX			X	X	X	XX	X			XX	X	XX	X	X	XX	X	X	X
PCT													XX	X	XX						X	XX			X	X	X		X						
PDA			X		XX	XX		X		X	XX		X		X		X	X	X					X	X			XX		X		X	X	X	
PDB			X	XXX	XX	X	XX	X	XX																										

[illegible]

The following stations each reported less than 10 readings:

[illegible]